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Naval Facilities Engineering Command

Groundwater Sample Results, Level 4 Laboratory Report, Electronic Data Deliverable, SDG BSI15

Marine Corps Ballistics Base Barstow
Barstow, California

November 2019

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DoD Type I Data Package

Prepared for:

Gutierrez Canales Engineering
2655 Camino del Rio North
Suite 100
San Diego CA 92108

Project: Barstow Site Inspection
Soil Samples
Collected on 11/01/18

SDG# BSI15

GROUP	SAMPLE NUMBERS
2006158	9885078, 9885080-9885082, 9885085-9885095, 9885098-9885101, 9885104-9885106

A2LA (DoD) Cert. # 0001.01
PA Cert. # 36-00037
NY Cert. # 10670
NJ Cert. # PA011
NC Cert. # 521
TX Cert. # T104704194-18-27
AZ Cert. # AZ0780

Through our technical processes and second person review of data, we have established that our data/deliverables are in compliance with the methods and project requirements unless otherwise noted or previously resolved with the client.

Authorized by: Dana M Kauffman **Date: 01/28/2019**

Dana M. Kauffman
Manager

Any questions or concerns you might have regarding this data package should be directed to your client representative, Lyssa Longenecker at (717) 556-7321.

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Table of Contents for SDG# BSI15

1. Sample Reference List 3
2. Methodology Summary/Reference 4
3. Analysis Reports / Field Chain of Custody 5
4. PFAS by LC/MS/MS Data 57
   a. Case Narrative/Conformance Summary 58
   b. Quality Control and Calibration Summary Forms 62
   c. Sample Data 117
   d. Standards Data 457
   e. Raw QC Data 1736
   f. Preparation Logs 1947
5. Moisture Data 1954

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Sample Reference List for SDG Number BSI15 with a Data Package Type of I-DOD

43806 - Gutierrez Canales Engineering

Project: Barstow Site Inspection

Lab Sample Number	Client Sample ID	Collection Date	Date Received
9885078	OU1-Bldg2-S-01-08	11/01/2018 14:15	11/06/2018 10:35
9885080	OU1-Bldg2-S-02-01	11/01/2018 14:45	11/06/2018 10:35
9885081	OU1-Bldg2-S-02-03	11/01/2018 14:57	11/06/2018 10:35
9885082	OU1-Bldg2-S-02-08	11/01/2018 15:03	11/06/2018 10:35
9885085	OU1-Bldg27-S-01-01	11/01/2018 15:40	11/06/2018 10:35
9885086	OU1-Bldg27-S-01-03	11/01/2018 16:00	11/06/2018 10:35
9885087	OU1-Bldg27-S-01-03 MS	11/01/2018 16:00	11/06/2018 10:35
9885088	OU1-Bldg27-S-01-03 MSD	11/01/2018 16:00	11/06/2018 10:35
9885089	OU1-Bldg27-S-01-07	11/01/2018 16:05	11/06/2018 10:35
9885090	OU1-Bldg27-S-01-11	11/01/2018 16:08	11/06/2018 10:35
9885091	OU1-Bldg27-S-01-12	11/01/2018 16:10	11/06/2018 10:35
9885092	OU1-Bldg27-S-02-01	11/01/2018 16:39	11/06/2018 10:35
9885093	OU1-Bldg27-S-02-03	11/01/2018 17:00	11/06/2018 10:35
9885094	OU1-Bldg27-S-02-06	11/01/2018 17:07	11/06/2018 10:35
9885095	OU1-Bldg27-S-02-08	11/01/2018 17:11	11/06/2018 10:35
9885098	OU1-Bldg50-S-01-01	11/01/2018 17:34	11/06/2018 10:35
9885099	OU1-Bldg50-S-01-03	11/01/2018 17:38	11/06/2018 10:35
9885100	OU1-Bldg50-S-01-05	11/01/2018 17:44	11/06/2018 10:35
9885101	OU1-Bldg50-S-01-08	11/01/2018 17:46	11/06/2018 10:35
9885104	OU1-Bldg50-S-02-01	11/01/2018 18:09	11/06/2018 10:35
9885105	OU1-Bldg50-S-02-03	11/01/2018 18:13	11/06/2018 10:35
9885106	OU1-Bldg50-S-02-08	11/01/2018 18:16	11/06/2018 10:35

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14478 PFAS in Soil by LC/MS/MS-DoD
14510 PFAS Solid Prep - DoD

A 1 gram sample of soil/sediment is sonicated with an acetonitrile/methanol solution followed by dispersive cleanup of the extract using graphitized carbon. The resultant extract is analyzed by LC/MS/MS in negative electrospray ionization (ESI) mode.

Reference: Determination of Selected Perfluorinated Alkyl Acids in Drinking Water by Solid Phase Extraction and Liquid Chromatography/Tandem Mass Spectrometry (LCMSMS), EPA 537 Version 1.1, September 2009, Modified. Department of Defense Quality System Manual Version 5.1, Table B-15.

00111 Moisture
00118 Moisture
00121 Moisture Duplicate

A well-mixed sample is heated by reflected infrared in an aluminum pan and dried to a constant weight. The decrease in weight in weight after drying is calculated as the moisture content.

Reference: SM 2540 G-1997 %Moisture Calculation for Dry Weight Determination

Analysis Reports / Field Chain of Custody

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ANALYSIS REPORT

Prepared by:

Eurofins Lancaster Laboratories Environmental
2425 New Holland Pike
Lancaster, PA 17601

Prepared for:

Gutierrez Canales Engineering
2655 Camino del Rio North
Suite 100
San Diego CA 92108

Report Date: January 18, 2019 14:26

Project: Barstow Site Inspection

Account #: 43806
Group Number: 2006158
SDG: BSI15
State of Sample Origin: CA

Electronic Copy To Gutierrez Canales Engineering Attn: Jesse MacNeill

Respectfully Submitted,

Lyssa M. Longenecker
Specialist

(717) 556-7321

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SAMPLE INFORMATION

Client Sample Description	Sample Collection Date/Time	ELLE#
OU1-Bldg2-S-01-08 Grab Soil	11/01/2018 14:15	9885078
OU1-Bldg2-S-01-12 Grab Soil	11/01/2018 14:18	9885079
OU1-Bldg2-S-02-01 Grab Soil	11/01/2018 14:45	9885080
OU1-Bldg2-S-02-03 Grab Soil	11/01/2018 14:57	9885081
OU1-Bldg2-S-02-08 Grab Soil	11/01/2018 15:03	9885082
OU1-Bldg2-S-02-11 Grab Soil	11/01/2018 15:12	9885083
OU1-Bldg2-S-02-12 Grab Soil	11/01/2018 15:15	9885084
OU1-Bldg27-S-01-01 Grab Soil	11/01/2018 15:40	9885085
OU1-Bldg27-S-01-03 Grab Soil	11/01/2018 16:00	9885086
OU1-Bldg27-S-01-03 MS Grab Soil	11/01/2018 16:00	9885087
OU1-Bldg27-S-01-03 MSD Grab Soil	11/01/2018 16:00	9885088
OU1-Bldg27-S-01-07 Grab Soil	11/01/2018 16:05	9885089
OU1-Bldg27-S-01-11 Grab Soil	11/01/2018 16:08	9885090
OU1-Bldg27-S-01-12 Grab Soil	11/01/2018 16:10	9885091
OU1-Bldg27-S-02-01 Grab Soil	11/01/2018 16:39	9885092
OU1-Bldg27-S-02-03 Grab Soil	11/01/2018 17:00	9885093
OU1-Bldg27-S-02-06 Grab Soil	11/01/2018 17:07	9885094
OU1-Bldg27-S-02-08 Grab Soil	11/01/2018 17:11	9885095
OU1-Bldg27-S-02-10 Grab Soil	11/01/2018 17:14	9885096
OU1-Bldg27-S-02-12 Grab Soil	11/01/2018 17:16	9885097
OU1-Bldg50-S-01-01 Grab Soil	11/01/2018 17:34	9885098
OU1-Bldg50-S-01-03 Grab Soil	11/01/2018 17:38	9885099
OU1-Bldg50-S-01-05 Grab Soil	11/01/2018 17:44	9885100
OU1-Bldg50-S-01-08 Grab Soil	11/01/2018 17:46	9885101
OU1-Bldg50-S-01-10 Grab Soil	11/01/2018 17:50	9885102
OU1-Bldg50-S-01-12 Grab Soil	11/01/2018 17:52	9885103
OU1-Bldg50-S-02-01 Grab Soil	11/01/2018 18:09	9885104
OU1-Bldg50-S-02-03 Grab Soil	11/01/2018 18:13	9885105
OU1-Bldg50-S-02-08 Grab Soil	11/01/2018 18:16	9885106
OU1-Bldg50-S-02-10 Grab Soil	11/01/2018 18:20	9885107
OU1-Bldg50-S-02-12 Grab Soil	11/01/2018 18:24	9885108

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

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Project Name: Barstow Site Inspection
ELLE Group #: 2006158

General Comments:

All analyses have been performed in accordance with DOD QSM Version 5.0 unless otherwise noted below.

See the Laboratory Sample Analysis Record section of the Analysis Report for the method references.

All QC met criteria unless otherwise noted in an Analysis Specific Comment below.
Refer to the QC Summary for specific values and acceptance criteria.

Project specific QC samples are included in this data set.

Matrix QC may not be reported if site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

Surrogate recoveries (if applicable) which are outside of the QC window are confirmed unless attributed to a dilution or otherwise noted in an Analysis Specific Comment below.

The samples were received at the appropriate temperature and in accordance with the chain of custody unless otherwise noted.

Analysis Specific Comments:

EPA 537 mod QSM 5.1 table B-15, LC/MS/MS Miscellaneous

Sample #s: 9885091

The following analytes were manually integrated due to incorrect integrations:
Perfluorohexanesulfonate, Perfluoro-octanesulfonate

Sample #s: 9885080, 9885085, 9885089, 9885090, 9885092, 9885093

The following analytes were manually integrated due to incorrect integrations:
Perfluoro-octanesulfonate

Sample #s: 9885087

The recovery for labeled compounds used as extraction standards d3-NMeFOSAA and d5-NEtFOSAA is outside of QC acceptance limits as noted on the QC Summary. The recovery for labeled compounds d3-NMeFOSAA and d5-NEtFOSAA is also outside of QC acceptance limits in the associated background and matrix spike duplicate samples, indicating a matrix effect.

The following analytes were manually integrated due to incorrect integrations:
Perfluorotetradecanoic acid, Perfluoro-octanesulfonate

Sample #s: 9885088

The recovery for labeled compounds used as extraction standards d3-NMeFOSAA and d5-NEtFOSAA is outside of QC acceptance limits as noted on the QC Summary. The recovery for labeled compounds d3-NMeFOSAA and d5-NEtFOSAA is also outside of QC acceptance limits in the associated background and matrix spike samples,

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indicating a matrix effect.

The following analytes were manually integrated due to incorrect integrations:
Perfluorotridecanoic acid, Perfluoro-octanesulfonate

Sample #s: 9885086

The recovery for labeled compounds used as extraction standards d3-NMeFOSAA and d5-NEtFOSAA is outside of QC acceptance limits as noted on the QC Summary. The recovery for labeled compounds d3-NMeFOSAA and d5-NEtFOSAA is also outside of QC acceptance limits in the associated matrix spike and matrix spike duplicate samples, indicating a matrix effect.

The following analytes were manually integrated due to incorrect integrations:
Perfluoro-octanesulfonate

Batch #: 18316011 (Sample number(s): 9885080-9885082, 9885085-9885090, 9885092-9885095, 9885098-9885101, 9885104-9885106 UNSPK: 9885086)

The recovery(ies) for the following analyte(s) in the MS and/or MSD exceeded the acceptance window indicating a positive bias: Perfluorononanoic acid

The recovery(ies) for the following analyte(s) in the MS and/or MSD were below the acceptance window:
Perfluoro-octanesulfonate

The relative percent difference(s) for the following analyte(s) in the MS/MSD were outside acceptance windows: Perfluoro-octanesulfonate, NMeFOSAA

The recovery(ies) for one or more surrogates were below the acceptance window for sample(s) 9885086, 9885087, 9885088, MS, MSD

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Analysis Report

Sample Description: **OU1-Bldg2-S-01-08 Grab Soil MCLB Barstow**

Project Name: **Barstow Site Inspection**

Submittal Date/Time: 11/06/2018 10:35
Collection Date/Time: 11/01/2018 14:15
SDG#: BSI15-01

Gutierrez Canales Engineering
ELLE Sample #: SW 9885078
ELLE Group #: 2006158
Matrix: Soil

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Detection Limit*	Dry Limit of Detection	Dry Limit of Quantitation	DF
LC/MS/MS Miscellaneous	**EPA 537 mod QSM 5.1 table B-15**		**ng/g**	**ng/g**	**ng/g**	**ng/g**	
14478	NEtFOSAA	2991-50-6	N.D.	0.51	2.0	3.0	1
	NEtFOSAA is the acronym for N-ethyl perfluorooctanesulfonamidoacetic Acid.						
14478	NMeFOSAA	2355-31-9	N.D.	0.51	2.0	3.0	1
	NMeFOSAA is the acronym for N-methyl perfluorooctanesulfonamidoacetic Acid.						
14478	Perfluorobutanesulfonate	375-73-5	N.D.	0.20	0.61	0.81	1
14478	Perfluorodecanoic acid	335-76-2	N.D.	0.30	0.69	1.0	1
14478	Perfluorododecanoic acid	307-55-1	N.D.	0.20	0.69	0.81	1
14478	Perfluoroheptanoic acid	375-85-9	N.D.	0.20	0.69	0.81	1
14478	Perfluorohexanesulfonate	355-46-4	N.D.	0.20	0.65	0.81	1
14478	Perfluorohexanoic acid	307-24-4	N.D.	0.20	0.69	0.81	1
14478	Perfluorononanoic acid	375-95-1	N.D.	0.20	0.69	0.81	1
14478	Perfluoro-octanesulfonate	1763-23-1	N.D.	0.20	0.66	0.81	1
14478	Perfluorooctanoic acid	335-67-1	N.D.	0.20	0.69	0.81	1
14478	Perfluorotetradecanoic acid	376-06-7	N.D.	0.20	0.69	0.81	1
14478	Perfluorotridecanoic acid	72629-94-8	N.D.	0.20	0.69	0.81	1
14478	Perfluoroundecanoic acid	2058-94-8	N.D.	0.20	0.69	0.81	1
Wet Chemistry	**SM 2540 G-1997 %Moisture Calc**		**%**	**%**	**%**	**%**	
00111	Moisture	n.a.	3.4	0.50	0.50	0.50	1
	Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.						

Sample Comments

CA ELAP Lab Certification No. 2792

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14478	PFAS in Soil by LC/MS/MS-DoD	EPA 537 mod QSM 5.1 table B-15	1	18316029	11/13/2018 23:24	Marissa C Drexinger	1
14510	PFAS Solid Prep - DoD	EPA 537 mod QSM 5.1 table B-15	2	18316029	11/12/2018 16:00	Anthony C Polaski	1
00111	Moisture	SM 2540 G-1997 %Moisture Calc	1	18313820006A	11/09/2018 10:40	Larry E Bevins	1

*=This limit was used in the evaluation of the final result

Sample Description: **OU1-Bldg2-S-01-12 Grab Soil**
MCLB Barstow

Gutierrez Canales Engineering
ELLE Sample #: **SW 9885079**
ELLE Group #: **2006158**

Project Name: **Barstow Site Inspection**

Submittal Date/Time: 11/06/2018 10:35
Collection Date/Time: 11/01/2018 14:18
SDG#: BSI15-02

Sample Comments

CA ELAP Lab Certification No. 2792

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Analysis Report

Sample Description: **OU1-Bldg2-S-02-01 Grab Soil MCLB Barstow**

Project Name: **Barstow Site Inspection**

Submittal Date/Time: 11/06/2018 10:35
Collection Date/Time: 11/01/2018 14:45
SDG#: BSI15-03

Gutierrez Canales Engineering
ELLE Sample #: SW 9885080
ELLE Group #: 2006158
Matrix: Soil

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Detection Limit*	Dry Limit of Detection	Dry Limit of Quantitation	DF
LC/MS/MS Miscellaneous	**EPA 537 mod QSM 5.1 table B-15**		**ng/g**	**ng/g**	**ng/g**	**ng/g**	
14478	NEtFOSAA	2991-50-6	N.D.	0.50	2.0	3.0	1
	NEtFOSAA is the acronym for N-ethyl perfluorooctanesulfonamidoacetic Acid.						
14478	NMeFOSAA	2355-31-9	N.D.	0.50	2.0	3.0	1
	NMeFOSAA is the acronym for N-methyl perfluorooctanesulfonamidoacetic Acid.						
14478	Perfluorobutanesulfonate	375-73-5	N.D.	0.20	0.59	0.79	1
14478	Perfluorodecanoic acid	335-76-2	N.D.	0.30	0.67	0.99	1
14478	Perfluorododecanoic acid	307-55-1	N.D.	0.20	0.67	0.79	1
14478	Perfluoroheptanoic acid	375-85-9	N.D.	0.20	0.67	0.79	1
14478	Perfluorohexanesulfonate	355-46-4	N.D.	0.20	0.63	0.79	1
14478	Perfluorohexanoic acid	307-24-4	N.D.	0.20	0.67	0.79	1
14478	Perfluorononanoic acid	375-95-1	N.D.	0.20	0.67	0.79	1
14478	Perfluoro-octanesulfonate	1763-23-1	N.D.	0.20	0.64	0.79	1
14478	Perfluorooctanoic acid	335-67-1	0.75 J	0.20	0.67	0.79	1
14478	Perfluorotetradecanoic acid	376-06-7	N.D.	0.20	0.67	0.79	1
14478	Perfluorotridecanoic acid	72629-94-8	N.D.	0.20	0.67	0.79	1
14478	Perfluoroundecanoic acid	2058-94-8	N.D.	0.20	0.67	0.79	1
Wet Chemistry	**SM 2540 G-1997 %Moisture Calc**		**%**	**%**	**%**	**%**	
00111	Moisture	n.a.	3.9	0.50	0.50	0.50	1
	Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.						

Sample Comments

CA ELAP Lab Certification No. 2792

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14478	PFAS in Soil by LC/MS/MS-DoD	EPA 537 mod QSM 5.1 table B-15	1	18316011	11/13/2018 17:14	Marissa C Drexinger	1
14510	PFAS Solid Prep - DoD	EPA 537 mod QSM 5.1 table B-15	2	18316011	11/12/2018 09:50	Courtney J Fatta	1
00111	Moisture	SM 2540 G-1997 %Moisture Calc	1	18313820006A	11/09/2018 10:40	Larry E Bevins	1

*=This limit was used in the evaluation of the final result

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Analysis Report

Sample Description: **OU1-Bldg2-S-02-03 Grab Soil MCLB Barstow**

Project Name: **Barstow Site Inspection**

Submittal Date/Time: 11/06/2018 10:35
Collection Date/Time: 11/01/2018 14:57
SDG#: BSI15-04

Gutierrez Canales Engineering
ELLE Sample #: SW 9885081
ELLE Group #: 2006158
Matrix: Soil

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Detection Limit*	Dry Limit of Detection	Dry Limit of Quantitation	DF
LC/MS/MS Miscellaneous	**EPA 537 mod QSM 5.1 table B-15**		**ng/g**	**ng/g**	**ng/g**	**ng/g**	
14478	NEtFOSAA	2991-50-6	N.D.	0.48	1.9	2.9	1
	NEtFOSAA is the acronym for N-ethyl perfluorooctanesulfonamidoacetic Acid.						
14478	NMeFOSAA	2355-31-9	N.D.	0.48	1.9	2.9	1
	NMeFOSAA is the acronym for N-methyl perfluorooctanesulfonamidoacetic Acid.						
14478	Perfluorobutanesulfonate	375-73-5	N.D.	0.19	0.57	0.76	1
14478	Perfluorodecanoic acid	335-76-2	N.D.	0.29	0.65	0.95	1
14478	Perfluorododecanoic acid	307-55-1	N.D.	0.19	0.65	0.76	1
14478	Perfluoroheptanoic acid	375-85-9	N.D.	0.19	0.65	0.76	1
14478	Perfluorohexanesulfonate	355-46-4	N.D.	0.19	0.61	0.76	1
14478	Perfluorohexanoic acid	307-24-4	N.D.	0.19	0.65	0.76	1
14478	Perfluorononanoic acid	375-95-1	N.D.	0.19	0.65	0.76	1
14478	Perfluoro-octanesulfonate	1763-23-1	N.D.	0.19	0.62	0.76	1
14478	Perfluorooctanoic acid	335-67-1	0.24 J	0.19	0.65	0.76	1
14478	Perfluorotetradecanoic acid	376-06-7	N.D.	0.19	0.65	0.76	1
14478	Perfluorotridecanoic acid	72629-94-8	N.D.	0.19	0.65	0.76	1
14478	Perfluoroundecanoic acid	2058-94-8	N.D.	0.19	0.65	0.76	1
Wet Chemistry	**SM 2540 G-1997 %Moisture Calc**		**%**	**%**	**%**	**%**	
00111	Moisture	n.a.	2.8	0.50	0.50	0.50	1
	Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.						

Sample Comments

CA ELAP Lab Certification No. 2792

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14478	PFAS in Soil by LC/MS/MS-DoD	EPA 537 mod QSM 5.1 table B-15	1	18316011	11/13/2018 17:23	Marissa C Drexinger	1
14510	PFAS Solid Prep - DoD	EPA 537 mod QSM 5.1 table B-15	2	18316011	11/12/2018 09:50	Courtney J Fatta	1
00111	Moisture	SM 2540 G-1997 %Moisture Calc	1	18313820006A	11/09/2018 10:40	Larry E Bevins	1

*=This limit was used in the evaluation of the final result

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Analysis Report

Sample Description: **OU1-Bldg2-S-02-08 Grab Soil MCLB Barstow**

Project Name: **Barstow Site Inspection**

Submittal Date/Time: 11/06/2018 10:35
Collection Date/Time: 11/01/2018 15:03
SDG#: BSI15-05

Gutierrez Canales Engineering
ELLE Sample #: SW 9885082
ELLE Group #: 2006158
Matrix: Soil

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Detection Limit*	Dry Limit of Detection	Dry Limit of Quantitation	DF
LC/MS/MS Miscellaneous	**EPA 537 mod QSM 5.1 table B-15**		**ng/g**	**ng/g**	**ng/g**	**ng/g**	
14478	NEtFOSAA	2991-50-6	N.D.	0.50	2.0	3.0	1
	NEtFOSAA is the acronym for N-ethyl perfluorooctanesulfonamidoacetic Acid.						
14478	NMeFOSAA	2355-31-9	N.D.	0.50	2.0	3.0	1
	NMeFOSAA is the acronym for N-methyl perfluorooctanesulfonamidoacetic Acid.						
14478	Perfluorobutanesulfonate	375-73-5	N.D.	0.20	0.60	0.80	1
14478	Perfluorodecanoic acid	335-76-2	N.D.	0.30	0.68	1.0	1
14478	Perfluorododecanoic acid	307-55-1	N.D.	0.20	0.68	0.80	1
14478	Perfluoroheptanoic acid	375-85-9	N.D.	0.20	0.68	0.80	1
14478	Perfluorohexanesulfonate	355-46-4	N.D.	0.20	0.64	0.80	1
14478	Perfluorohexanoic acid	307-24-4	N.D.	0.20	0.68	0.80	1
14478	Perfluorononanoic acid	375-95-1	N.D.	0.20	0.68	0.80	1
14478	Perfluoro-octanesulfonate	1763-23-1	N.D.	0.20	0.65	0.80	1
14478	Perfluorooctanoic acid	335-67-1	N.D.	0.20	0.68	0.80	1
14478	Perfluorotetradecanoic acid	376-06-7	N.D.	0.20	0.68	0.80	1
14478	Perfluorotridecanoic acid	72629-94-8	N.D.	0.20	0.68	0.80	1
14478	Perfluoroundecanoic acid	2058-94-8	N.D.	0.20	0.68	0.80	1
Wet Chemistry	**SM 2540 G-1997 %Moisture Calc**		**%**	**%**	**%**	**%**	
00111	Moisture	n.a.	3.6	0.50	0.50	0.50	1
	Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.						

Sample Comments

CA ELAP Lab Certification No. 2792

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14478	PFAS in Soil by LC/MS/MS-DoD	EPA 537 mod QSM 5.1 table B-15	1	18316011	11/13/2018 17:32	Marissa C Drexinger	1
14510	PFAS Solid Prep - DoD	EPA 537 mod QSM 5.1 table B-15	2	18316011	11/12/2018 09:50	Courtney J Fatta	1
00111	Moisture	SM 2540 G-1997 %Moisture Calc	1	18313820006A	11/09/2018 10:40	Larry E Bevins	1

*=This limit was used in the evaluation of the final result

Sample Description: **OU1-Bldg2-S-02-11 Grab Soil**
MCLB Barstow

Gutierrez Canales Engineering
ELLE Sample #: **SW 9885083**
ELLE Group #: **2006158**

Project Name: **Barstow Site Inspection**

Submittal Date/Time: 11/06/2018 10:35
Collection Date/Time: 11/01/2018 15:12
SDG#: BSI15-06

Sample Comments

CA ELAP Lab Certification No. 2792

Sample Description: **OU1-Bldg2-S-02-12 Grab Soil**
MCLB Barstow

Gutierrez Canales Engineering
ELLE Sample #: **SW 9885084**
ELLE Group #: **2006158**

Project Name: **Barstow Site Inspection**

Submittal Date/Time: 11/06/2018 10:35
Collection Date/Time: 11/01/2018 15:15
SDG#: BSI15-07

Sample Comments

CA ELAP Lab Certification No. 2792

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Analysis Report

Sample Description: **OU1-Bldg27-S-01-01 Grab Soil MCLB Barstow**

Project Name: **Barstow Site Inspection**

Submittal Date/Time: 11/06/2018 10:35
Collection Date/Time: 11/01/2018 15:40
SDG#: BSI15-08

Gutierrez Canales Engineering
ELLE Sample #: SW 9885085
ELLE Group #: 2006158
Matrix: Soil

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Detection Limit*	Dry Limit of Detection	Dry Limit of Quantitation	DF
LC/MS/MS Miscellaneous	**EPA 537 mod QSM 5.1 table B-15**		**ng/g**	**ng/g**	**ng/g**	**ng/g**	
14478	NEtFOSAA	2991-50-6	N.D.	0.52	2.1	3.1	1
	NEtFOSAA is the acronym for N-ethyl perfluorooctanesulfonamidoacetic Acid.						
14478	NMeFOSAA	2355-31-9	N.D.	0.52	2.1	3.1	1
	NMeFOSAA is the acronym for N-methyl perfluorooctanesulfonamidoacetic Acid.						
14478	Perfluorobutanesulfonate	375-73-5	N.D.	0.21	0.63	0.83	1
14478	Perfluorodecanoic acid	335-76-2	N.D.	0.31	0.71	1.0	1
14478	Perfluorododecanoic acid	307-55-1	N.D.	0.21	0.71	0.83	1
14478	Perfluoroheptanoic acid	375-85-9	N.D.	0.21	0.71	0.83	1
14478	Perfluorohexanesulfonate	355-46-4	N.D.	0.21	0.67	0.83	1
14478	Perfluorohexanoic acid	307-24-4	N.D.	0.21	0.71	0.83	1
14478	Perfluorononanoic acid	375-95-1	N.D.	0.21	0.71	0.83	1
14478	Perfluoro-octanesulfonate	1763-23-1	0.24 J	0.21	0.68	0.83	1
14478	Perfluorooctanoic acid	335-67-1	N.D.	0.21	0.71	0.83	1
14478	Perfluorotetradecanoic acid	376-06-7	N.D.	0.21	0.71	0.83	1
14478	Perfluorotridecanoic acid	72629-94-8	N.D.	0.21	0.71	0.83	1
14478	Perfluoroundecanoic acid	2058-94-8	N.D.	0.21	0.71	0.83	1
Wet Chemistry	**SM 2540 G-1997 %Moisture Calc**		**%**	**%**	**%**	**%**	
00111	Moisture	n.a.	5.1	0.50	0.50	0.50	1
	Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.						

Sample Comments

CA ELAP Lab Certification No. 2792

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14478	PFAS in Soil by LC/MS/MS-DoD	EPA 537 mod QSM 5.1 table B-15	1	18316011	11/13/2018 17:41	Marissa C Drexinger	1
14510	PFAS Solid Prep - DoD	EPA 537 mod QSM 5.1 table B-15	2	18316011	11/12/2018 09:50	Courtney J Fatta	1
00111	Moisture	SM 2540 G-1997 %Moisture Calc	1	18313820006A	11/09/2018 10:40	Larry E Bevins	1

*=This limit was used in the evaluation of the final result

Sample Description: **OU1-Bldg27-S-01-03 Grab Soil MCLB Barstow**

Project Name: **Barstow Site Inspection**

Submittal Date/Time: 11/06/2018 10:35
Collection Date/Time: 11/01/2018 16:00
SDG#: BSI15-09BKG

Gutierrez Canales Engineering
ELLE Sample #: SW 9885086
ELLE Group #: 2006158
Matrix: Soil

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Detection Limit*	Dry Limit of Detection	Dry Limit of Quantitation	DF
LC/MS/MS Miscellaneous	**EPA 537 mod QSM 5.1 table B-15**		**ng/g**	**ng/g**	**ng/g**	**ng/g**	
14478	NEtFOSAA	2991-50-6	N.D.	0.50	2.0	3.0	1
	NEtFOSAA is the acronym for N-ethyl perfluorooctanesulfonamidoacetic Acid.						
14478	NMeFOSAA	2355-31-9	N.D.	0.50	2.0	3.0	1
	NMeFOSAA is the acronym for N-methyl perfluorooctanesulfonamidoacetic Acid.						
14478	Perfluorobutanesulfonate	375-73-5	N.D.	0.20	0.60	0.79	1
14478	Perfluorodecanoic acid	335-76-2	N.D.	0.30	0.67	0.99	1
14478	Perfluorododecanoic acid	307-55-1	N.D.	0.20	0.67	0.79	1
14478	Perfluoroheptanoic acid	375-85-9	N.D.	0.20	0.67	0.79	1
14478	Perfluorohexanesulfonate	355-46-4	N.D.	0.20	0.63	0.79	1
14478	Perfluorohexanoic acid	307-24-4	N.D.	0.20	0.67	0.79	1
14478	Perfluorononanoic acid	375-95-1	N.D.	0.20	0.67	0.79	1
14478	Perfluoro-octanesulfonate	1763-23-1	4.1	0.20	0.64	0.79	1
14478	Perfluorooctanoic acid	335-67-1	N.D.	0.20	0.67	0.79	1
14478	Perfluorotetradecanoic acid	376-06-7	N.D.	0.20	0.67	0.79	1
14478	Perfluorotridecanoic acid	72629-94-8	N.D.	0.20	0.67	0.79	1
14478	Perfluoroundecanoic acid	2058-94-8	N.D.	0.20	0.67	0.79	1
	The recovery for labeled compounds used as extraction standards d3-NMeFOSAA and d5-NEtFOSAA is outside of QC acceptance limits as noted on the QC Summary. The recovery for labeled compounds d3-NMeFOSAA and d5-NEtFOSAA is also outside of QC acceptance limits in the associated matrix spike and matrix spike duplicate samples, indicating a matrix effect.						
Wet Chemistry	**SM 2540 G-1997 %Moisture Calc**		**%**	**%**	**%**	**%**	
00111	Moisture	n.a.	4.9	0.50	0.50	0.50	1
	Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.						

Sample Comments

CA ELAP Lab Certification No. 2792

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14478	PFAS in Soil by LC/MS/MS-DoD	EPA 537 mod QSM 5.1 table B-15	1	18316011	11/13/2018 17:50	Marissa C Drexinger	1
14510	PFAS Solid Prep - DoD	EPA 537 mod QSM 5.1 table B-15	2	18316011	11/12/2018 09:50	Courtney J Fatta	1

*=This limit was used in the evaluation of the final result

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Analysis Report

Sample Description: **OU1-Bldg27-S-01-03 Grab Soil MCLB Barstow**

Project Name: **Barstow Site Inspection**

Submittal Date/Time: 11/06/2018 10:35
Collection Date/Time: 11/01/2018 16:00
SDG#: BSI15-09BKG

Gutierrez Canales Engineering
ELLE Sample #: SW 9885086
ELLE Group #: 2006158
Matrix: Soil

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
00111	Moisture	SM 2540 G-1997 %Moisture Calc	1	18313820006A	11/09/2018 10:40	Larry E Bevins	1

*=This limit was used in the evaluation of the final result

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Analysis Report

Sample Description: **OU1-Bldg27-S-01-03 MS Grab Soil MCLB Barstow**

Project Name: **Barstow Site Inspection**

Gutierrez Canales Engineering
ELLE Sample #: SW 9885087
ELLE Group #: 2006158
Matrix: Soil

Submittal Date/Time: 11/06/2018 10:35
Collection Date/Time: 11/01/2018 16:00
SDG#: BSI15-09MS

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Detection Limit*	Dry Limit of Detection	Dry Limit of Quantitation	DF
LC/MS/MS Miscellaneous	**EPA 537 mod QSM 5.1 table B-15**		**ng/g**	**ng/g**	**ng/g**	**ng/g**	
14478	NEtFOSAA	2991-50-6	1.4 J	0.48	1.9	2.9	1
	NEtFOSAA is the acronym for N-ethyl perfluorooctanesulfonamidoacetic Acid.						
14478	NMeFOSAA	2355-31-9	1.5 J	0.48	1.9	2.9	1
	NMeFOSAA is the acronym for N-methyl perfluorooctanesulfonamidoacetic Acid.						
14478	Perfluorobutanesulfonate	375-73-5	1.2	0.19	0.58	0.77	1
14478	Perfluorodecanoic acid	335-76-2	1.5	0.29	0.66	0.96	1
14478	Perfluorododecanoic acid	307-55-1	1.4	0.19	0.66	0.77	1
14478	Perfluoroheptanoic acid	375-85-9	1.6	0.19	0.66	0.77	1
14478	Perfluorohexanesulfonate	355-46-4	1.3	0.19	0.62	0.77	1
14478	Perfluorohexanoic acid	307-24-4	1.6	0.19	0.66	0.77	1
14478	Perfluorononanoic acid	375-95-1	1.7	0.19	0.66	0.77	1
14478	Perfluoro-octanesulfonate	1763-23-1	5.1	0.19	0.63	0.77	1
14478	Perfluorooctanoic acid	335-67-1	1.6	0.19	0.66	0.77	1
14478	Perfluorotetradecanoic acid	376-06-7	1.4	0.19	0.66	0.77	1
14478	Perfluorotridecanoic acid	72629-94-8	1.5	0.19	0.66	0.77	1
14478	Perfluoroundecanoic acid	2058-94-8	1.4	0.19	0.66	0.77	1
	The recovery for labeled compounds used as extraction standards d3-NMeFOSAA and d5-NEtFOSAA is outside of QC acceptance limits as noted on the QC Summary. The recovery for labeled compounds d3-NMeFOSAA and d5-NEtFOSAA is also outside of QC acceptance limits in the associated background and matrix spike duplicate samples, indicating a matrix effect.						
Wet Chemistry	**SM 2540 G-1997 %Moisture Calc**		**%**	**%**	**%**	**%**	
00118	Moisture	n.a.	4.9	0.50	0.50	0.50	1

Sample Comments

CA ELAP Lab Certification No. 2792

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14478	PFAS in Soil by LC/MS/MS-DoD	EPA 537 mod QSM 5.1 table B-15	1	18316011	11/13/2018 17:59	Marissa C Drexinger	1
14510	PFAS Solid Prep - DoD	EPA 537 mod QSM 5.1 table B-15	2	18316011	11/12/2018 09:50	Courtney J Fatta	1
00118	Moisture	SM 2540 G-1997 %Moisture Calc	1	18313820006A	11/09/2018 10:40	Larry E Bevins	1

*=This limit was used in the evaluation of the final result

Sample Description: **OU1-Bldg27-S-01-03 MSD Grab Soil MCLB Barstow**

Project Name: **Barstow Site Inspection**

Submittal Date/Time: 11/06/2018 10:35
Collection Date/Time: 11/01/2018 16:00
SDG#: BSI15-09MSD

Gutierrez Canales Engineering
ELLE Sample #: SW 9885088
ELLE Group #: 2006158
Matrix: Soil

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Detection Limit*	Dry Limit of Detection	Dry Limit of Quantitation	DF
LC/MS/MS Miscellaneous	**EPA 537 mod QSM 5.1 table B-15**		**ng/g**	**ng/g**	**ng/g**	**ng/g**	
14478	NEtFOSAA	2991-50-6	1.6 J	0.51	2.0	3.1	1
	NEtFOSAA is the acronym for N-ethyl perfluorooctanesulfonamidoacetic Acid.						
14478	NMeFOSAA	2355-31-9	1.1 J	0.51	2.0	3.1	1
	NMeFOSAA is the acronym for N-methyl perfluorooctanesulfonamidoacetic Acid.						
14478	Perfluorobutanesulfonate	375-73-5	1.3	0.20	0.61	0.82	1
14478	Perfluorodecanoic acid	335-76-2	1.4	0.31	0.69	1.0	1
14478	Perfluorododecanoic acid	307-55-1	1.5	0.20	0.69	0.82	1
14478	Perfluoroheptanoic acid	375-85-9	1.6	0.20	0.69	0.82	1
14478	Perfluorohexanesulfonate	355-46-4	1.3	0.20	0.65	0.82	1
14478	Perfluorohexanoic acid	307-24-4	1.5	0.20	0.69	0.82	1
14478	Perfluorononanoic acid	375-95-1	1.6	0.20	0.69	0.82	1
14478	Perfluoro-octanesulfonate	1763-23-1	3.0	0.20	0.66	0.82	1
14478	Perfluorooctanoic acid	335-67-1	1.6	0.20	0.69	0.82	1
14478	Perfluorotetradecanoic acid	376-06-7	1.5	0.20	0.69	0.82	1
14478	Perfluorotridecanoic acid	72629-94-8	1.7	0.20	0.69	0.82	1
14478	Perfluoroundecanoic acid	2058-94-8	1.4	0.20	0.69	0.82	1
	The recovery for labeled compounds used as extraction standards d3-NMeFOSAA and d5-NEtFOSAA is outside of QC acceptance limits as noted on the QC Summary. The recovery for labeled compounds d3-NMeFOSAA and d5-NEtFOSAA is also outside of QC acceptance limits in the associated background and matrix spike samples, indicating a matrix effect.						
Wet Chemistry	**SM 2540 G-1997 %Moisture Calc**		**%**	**%**	**%**	**%**	
00118	Moisture	n.a.	4.9	0.50	0.50	0.50	1
00121	Moisture Duplicate	n.a.	5.1	0.50	0.50	0.50	1
	The duplicate moisture value is provided to assess the precision of the moisture test. For comparability purposes, the initial moisture determination is the value used to perform dry weight calculations.						

Sample Comments

CA ELAP Lab Certification No. 2792

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14478	PFAS in Soil by LC/MS/MS-DoD	EPA 537 mod QSM 5.1 table B-15	1	18316011	11/13/2018 18:08	Marissa C Drexinger	1

*=This limit was used in the evaluation of the final result

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Analysis Report

Sample Description: **OU1-Bldg27-S-01-03 MSD Grab Soil MCLB Barstow**

Project Name: **Barstow Site Inspection**

Submittal Date/Time: 11/06/2018 10:35
Collection Date/Time: 11/01/2018 16:00
SDG#: BSI15-09MSD

Gutierrez Canales Engineering
ELLE Sample #: SW 9885088
ELLE Group #: 2006158
Matrix: Soil

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14510	PFAS Solid Prep - DoD	EPA 537 mod QSM 5.1 table B-15	2	18316011	11/12/2018 09:50	Courtney J Fatta	1
00118	Moisture	SM 2540 G-1997 %Moisture Calc	1	18313820006A	11/09/2018 10:40	Larry E Bevins	1
00121	Moisture Duplicate	SM 2540 G-1997 %Moisture Calc	1	18313820006A	11/09/2018 10:40	Larry E Bevins	1

*=This limit was used in the evaluation of the final result

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Analysis Report

Sample Description: **OU1-Bldg27-S-01-07 Grab Soil MCLB Barstow**

Project Name: **Barstow Site Inspection**

Submittal Date/Time: 11/06/2018 10:35
Collection Date/Time: 11/01/2018 16:05
SDG#: BSI15-10

Gutierrez Canales Engineering
ELLE Sample #: SW 9885089
ELLE Group #: 2006158
Matrix: Soil

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Detection Limit*	Dry Limit of Detection	Dry Limit of Quantitation	DF
LC/MS/MS Miscellaneous	**EPA 537 mod QSM 5.1 table B-15**		**ng/g**	**ng/g**	**ng/g**	**ng/g**	
14478	NEtFOSAA	2991-50-6	N.D.	0.50	2.0	3.0	1
	NEtFOSAA is the acronym for N-ethyl perfluorooctanesulfonamidoacetic Acid.						
14478	NMeFOSAA	2355-31-9	N.D.	0.50	2.0	3.0	1
	NMeFOSAA is the acronym for N-methyl perfluorooctanesulfonamidoacetic Acid.						
14478	Perfluorobutanesulfonate	375-73-5	N.D.	0.20	0.60	0.80	1
14478	Perfluorodecanoic acid	335-76-2	N.D.	0.30	0.68	1.0	1
14478	Perfluorododecanoic acid	307-55-1	N.D.	0.20	0.68	0.80	1
14478	Perfluoroheptanoic acid	375-85-9	N.D.	0.20	0.68	0.80	1
14478	Perfluorohexanesulfonate	355-46-4	N.D.	0.20	0.64	0.80	1
14478	Perfluorohexanoic acid	307-24-4	N.D.	0.20	0.68	0.80	1
14478	Perfluorononanoic acid	375-95-1	N.D.	0.20	0.68	0.80	1
14478	Perfluoro-octanesulfonate	1763-23-1	1.7	0.20	0.65	0.80	1
14478	Perfluorooctanoic acid	335-67-1	N.D.	0.20	0.68	0.80	1
14478	Perfluorotetradecanoic acid	376-06-7	N.D.	0.20	0.68	0.80	1
14478	Perfluorotridecanoic acid	72629-94-8	N.D.	0.20	0.68	0.80	1
14478	Perfluoroundecanoic acid	2058-94-8	N.D.	0.20	0.68	0.80	1
Wet Chemistry	**SM 2540 G-1997 %Moisture Calc**		**%**	**%**	**%**	**%**	
00111	Moisture	n.a.	5.5	0.50	0.50	0.50	1
	Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.						

Sample Comments

CA ELAP Lab Certification No. 2792

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14478	PFAS in Soil by LC/MS/MS-DoD	EPA 537 mod QSM 5.1 table B-15	1	18316011	11/13/2018 18:17	Marissa C Drexinger	1
14510	PFAS Solid Prep - DoD	EPA 537 mod QSM 5.1 table B-15	2	18316011	11/12/2018 09:50	Courtney J Fatta	1
00111	Moisture	SM 2540 G-1997 %Moisture Calc	1	18313820006A	11/09/2018 10:40	Larry E Bevins	1

*=This limit was used in the evaluation of the final result

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Analysis Report

Sample Description: **OU1-Bldg27-S-01-11 Grab Soil MCLB Barstow**

Project Name: **Barstow Site Inspection**

Submittal Date/Time: 11/06/2018 10:35
Collection Date/Time: 11/01/2018 16:08
SDG#: BSI15-11

Gutierrez Canales Engineering
ELLE Sample #: SW 9885090
ELLE Group #: 2006158
Matrix: Soil

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Detection Limit*	Dry Limit of Detection	Dry Limit of Quantitation	DF
LC/MS/MS Miscellaneous	**EPA 537 mod QSM 5.1 table B-15**		**ng/g**	**ng/g**	**ng/g**	**ng/g**	
14478	NEtFOSAA	2991-50-6	N.D.	0.50	2.0	3.0	1
	NEtFOSAA is the acronym for N-ethyl perfluorooctanesulfonamidoacetic Acid.						
14478	NMeFOSAA	2355-31-9	N.D.	0.50	2.0	3.0	1
	NMeFOSAA is the acronym for N-methyl perfluorooctanesulfonamidoacetic Acid.						
14478	Perfluorobutanesulfonate	375-73-5	N.D.	0.20	0.60	0.80	1
14478	Perfluorodecanoic acid	335-76-2	N.D.	0.30	0.68	1.0	1
14478	Perfluorododecanoic acid	307-55-1	N.D.	0.20	0.68	0.80	1
14478	Perfluoroheptanoic acid	375-85-9	N.D.	0.20	0.68	0.80	1
14478	Perfluorohexanesulfonate	355-46-4	N.D.	0.20	0.64	0.80	1
14478	Perfluorohexanoic acid	307-24-4	N.D.	0.20	0.68	0.80	1
14478	Perfluorononanoic acid	375-95-1	N.D.	0.20	0.68	0.80	1
14478	Perfluoro-octanesulfonate	1763-23-1	0.55 J	0.20	0.65	0.80	1
14478	Perfluorooctanoic acid	335-67-1	N.D.	0.20	0.68	0.80	1
14478	Perfluorotetradecanoic acid	376-06-7	N.D.	0.20	0.68	0.80	1
14478	Perfluorotridecanoic acid	72629-94-8	N.D.	0.20	0.68	0.80	1
14478	Perfluoroundecanoic acid	2058-94-8	N.D.	0.20	0.68	0.80	1
Wet Chemistry	**SM 2540 G-1997 %Moisture Calc**		**%**	**%**	**%**	**%**	
00111	Moisture	n.a.	5.7	0.50	0.50	0.50	1
	Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.						

Sample Comments

CA ELAP Lab Certification No. 2792

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14478	PFAS in Soil by LC/MS/MS-DoD	EPA 537 mod QSM 5.1 table B-15	1	18316011	11/13/2018 18:35	Marissa C Drexinger	1
14510	PFAS Solid Prep - DoD	EPA 537 mod QSM 5.1 table B-15	2	18316011	11/12/2018 09:50	Courtney J Fatta	1
00111	Moisture	SM 2540 G-1997 %Moisture Calc	1	18313820006A	11/09/2018 10:40	Larry E Bevins	1

*=This limit was used in the evaluation of the final result

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Analysis Report

Sample Description: **OU1-Bldg27-S-01-12 Grab Soil MCLB Barstow**

Project Name: **Barstow Site Inspection**

Submittal Date/Time: 11/06/2018 10:35
Collection Date/Time: 11/01/2018 16:10
SDG#: BSI15-12

Gutierrez Canales Engineering
ELLE Sample #: SW 9885091
ELLE Group #: 2006158
Matrix: Soil

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Detection Limit*	Dry Limit of Detection	Dry Limit of Quantitation	DF
LC/MS/MS Miscellaneous	**EPA 537 mod QSM 5.1 table B-15**		**ng/g**	**ng/g**	**ng/g**	**ng/g**	
14478	NEtFOSAA	2991-50-6	N.D.	0.49	2.0	3.0	1
	NEtFOSAA is the acronym for N-ethyl perfluorooctanesulfonamidoacetic Acid.						
14478	NMeFOSAA	2355-31-9	N.D.	0.49	2.0	3.0	1
	NMeFOSAA is the acronym for N-methyl perfluorooctanesulfonamidoacetic Acid.						
14478	Perfluorobutanesulfonate	375-73-5	N.D.	0.20	0.59	0.79	1
14478	Perfluorodecanoic acid	335-76-2	N.D.	0.30	0.67	0.98	1
14478	Perfluorododecanoic acid	307-55-1	N.D.	0.20	0.67	0.79	1
14478	Perfluoroheptanoic acid	375-85-9	N.D.	0.20	0.67	0.79	1
14478	Perfluorohexanesulfonate	355-46-4	0.64 J	0.20	0.63	0.79	1
14478	Perfluorohexanoic acid	307-24-4	N.D.	0.20	0.67	0.79	1
14478	Perfluorononanoic acid	375-95-1	N.D.	0.20	0.67	0.79	1
14478	Perfluoro-octanesulfonate	1763-23-1	1.2	0.20	0.64	0.79	1
14478	Perfluorooctanoic acid	335-67-1	0.54 J	0.20	0.67	0.79	1
14478	Perfluorotetradecanoic acid	376-06-7	N.D.	0.20	0.67	0.79	1
14478	Perfluorotridecanoic acid	72629-94-8	N.D.	0.20	0.67	0.79	1
14478	Perfluoroundecanoic acid	2058-94-8	N.D.	0.20	0.67	0.79	1
Wet Chemistry	**SM 2540 G-1997 %Moisture Calc**		**%**	**%**	**%**	**%**	
00111	Moisture	n.a.	7.6	0.50	0.50	0.50	1
	Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.						

Sample Comments

CA ELAP Lab Certification No. 2792

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14478	PFAS in Soil by LC/MS/MS-DoD	EPA 537 mod QSM 5.1 table B-15	1	18332003	11/29/2018 19:43	Marissa C Drexinger	1
14510	PFAS Solid Prep - DoD	EPA 537 mod QSM 5.1 table B-15	1	18332003	11/28/2018 09:45	Courtney J Fatta	1
00111	Moisture	SM 2540 G-1997 %Moisture Calc	1	18337820002B	12/03/2018 10:37	Larry E Bevins	1

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Analysis Report

Sample Description: **OU1-Bldg27-S-02-01 Grab Soil MCLB Barstow**

Project Name: **Barstow Site Inspection**

Submittal Date/Time: 11/06/2018 10:35
Collection Date/Time: 11/01/2018 16:39
SDG#: BSI15-13

Gutierrez Canales Engineering
ELLE Sample #: SW 9885092
ELLE Group #: 2006158
Matrix: Soil

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Detection Limit*	Dry Limit of Detection	Dry Limit of Quantitation	DF
LC/MS/MS Miscellaneous	**EPA 537 mod QSM 5.1 table B-15**		**ng/g**	**ng/g**	**ng/g**	**ng/g**	
14478	NEtFOSAA	2991-50-6	N.D.	0.51	2.0	3.1	1
	NEtFOSAA is the acronym for N-ethyl perfluorooctanesulfonamidoacetic Acid.						
14478	NMeFOSAA	2355-31-9	N.D.	0.51	2.0	3.1	1
	NMeFOSAA is the acronym for N-methyl perfluorooctanesulfonamidoacetic Acid.						
14478	Perfluorobutanesulfonate	375-73-5	N.D.	0.20	0.61	0.82	1
14478	Perfluorodecanoic acid	335-76-2	N.D.	0.31	0.70	1.0	1
14478	Perfluorododecanoic acid	307-55-1	N.D.	0.20	0.70	0.82	1
14478	Perfluoroheptanoic acid	375-85-9	N.D.	0.20	0.70	0.82	1
14478	Perfluorohexanesulfonate	355-46-4	N.D.	0.20	0.65	0.82	1
14478	Perfluorohexanoic acid	307-24-4	N.D.	0.20	0.70	0.82	1
14478	Perfluorononanoic acid	375-95-1	N.D.	0.20	0.70	0.82	1
14478	Perfluoro-octanesulfonate	1763-23-1	0.36 J	0.20	0.66	0.82	1
14478	Perfluorooctanoic acid	335-67-1	N.D.	0.20	0.70	0.82	1
14478	Perfluorotetradecanoic acid	376-06-7	N.D.	0.20	0.70	0.82	1
14478	Perfluorotridecanoic acid	72629-94-8	N.D.	0.20	0.70	0.82	1
14478	Perfluoroundecanoic acid	2058-94-8	N.D.	0.20	0.70	0.82	1
Wet Chemistry	**SM 2540 G-1997 %Moisture Calc**		**%**	**%**	**%**	**%**	
00111	Moisture	n.a.	6.0	0.50	0.50	0.50	1
	Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.						

Sample Comments

CA ELAP Lab Certification No. 2792

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14478	PFAS in Soil by LC/MS/MS-DoD	EPA 537 mod QSM 5.1 table B-15	1	18316011	11/13/2018 18:44	Marissa C Drexinger	1
14510	PFAS Solid Prep - DoD	EPA 537 mod QSM 5.1 table B-15	2	18316011	11/12/2018 09:50	Courtney J Fatta	1
00111	Moisture	SM 2540 G-1997 %Moisture Calc	1	18313820006A	11/09/2018 10:40	Larry E Bevins	1

*=This limit was used in the evaluation of the final result

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Analysis Report

Sample Description: **OU1-Bldg27-S-02-03 Grab Soil MCLB Barstow**

Project Name: **Barstow Site Inspection**

Submittal Date/Time: 11/06/2018 10:35
Collection Date/Time: 11/01/2018 17:00
SDG#: BSI15-14

Gutierrez Canales Engineering
ELLE Sample #: SW 9885093
ELLE Group #: 2006158
Matrix: Soil

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Detection Limit*	Dry Limit of Detection	Dry Limit of Quantitation	DF
LC/MS/MS Miscellaneous	**EPA 537 mod QSM 5.1 table B-15**		**ng/g**	**ng/g**	**ng/g**	**ng/g**	
14478	NEtFOSAA	2991-50-6	N.D.	0.47	1.9	2.8	1
	NEtFOSAA is the acronym for N-ethyl perfluorooctanesulfonamidoacetic Acid.						
14478	NMeFOSAA	2355-31-9	N.D.	0.47	1.9	2.8	1
	NMeFOSAA is the acronym for N-methyl perfluorooctanesulfonamidoacetic Acid.						
14478	Perfluorobutanesulfonate	375-73-5	N.D.	0.19	0.57	0.75	1
14478	Perfluorodecanoic acid	335-76-2	N.D.	0.28	0.64	0.94	1
14478	Perfluorododecanoic acid	307-55-1	N.D.	0.19	0.64	0.75	1
14478	Perfluoroheptanoic acid	375-85-9	N.D.	0.19	0.64	0.75	1
14478	Perfluorohexanesulfonate	355-46-4	N.D.	0.19	0.60	0.75	1
14478	Perfluorohexanoic acid	307-24-4	N.D.	0.19	0.64	0.75	1
14478	Perfluorononanoic acid	375-95-1	N.D.	0.19	0.64	0.75	1
14478	Perfluoro-octanesulfonate	1763-23-1	N.D.	0.19	0.61	0.75	1
14478	Perfluorooctanoic acid	335-67-1	N.D.	0.19	0.64	0.75	1
14478	Perfluorotetradecanoic acid	376-06-7	N.D.	0.19	0.64	0.75	1
14478	Perfluorotridecanoic acid	72629-94-8	N.D.	0.19	0.64	0.75	1
14478	Perfluoroundecanoic acid	2058-94-8	N.D.	0.19	0.64	0.75	1
Wet Chemistry	**SM 2540 G-1997 %Moisture Calc**		**%**	**%**	**%**	**%**	
00111	Moisture	n.a.	2.7	0.50	0.50	0.50	1
	Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.						

Sample Comments

CA ELAP Lab Certification No. 2792

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14478	PFAS in Soil by LC/MS/MS-DoD	EPA 537 mod QSM 5.1 table B-15	1	18316011	11/13/2018 18:53	Marissa C Drexinger	1
14510	PFAS Solid Prep - DoD	EPA 537 mod QSM 5.1 table B-15	2	18316011	11/12/2018 09:50	Courtney J Fatta	1
00111	Moisture	SM 2540 G-1997 %Moisture Calc	1	18313820006A	11/09/2018 10:40	Larry E Bevins	1

*=This limit was used in the evaluation of the final result

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Analysis Report

Sample Description: **OU1-Bldg27-S-02-06 Grab Soil MCLB Barstow**

Project Name: **Barstow Site Inspection**

Submittal Date/Time: 11/06/2018 10:35
Collection Date/Time: 11/01/2018 17:07
SDG#: BSI15-15

Gutierrez Canales Engineering
ELLE Sample #: SW 9885094
ELLE Group #: 2006158
Matrix: Soil

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Detection Limit*	Dry Limit of Detection	Dry Limit of Quantitation	DF
LC/MS/MS Miscellaneous	**EPA 537 mod QSM 5.1 table B-15**		**ng/g**	**ng/g**	**ng/g**	**ng/g**	
14478	NEtFOSAA	2991-50-6	N.D.	0.50	2.0	3.0	1
	NEtFOSAA is the acronym for N-ethyl perfluorooctanesulfonamidoacetic Acid.						
14478	NMeFOSAA	2355-31-9	N.D.	0.50	2.0	3.0	1
	NMeFOSAA is the acronym for N-methyl perfluorooctanesulfonamidoacetic Acid.						
14478	Perfluorobutanesulfonate	375-73-5	N.D.	0.20	0.60	0.80	1
14478	Perfluorodecanoic acid	335-76-2	N.D.	0.30	0.68	1.0	1
14478	Perfluorododecanoic acid	307-55-1	N.D.	0.20	0.68	0.80	1
14478	Perfluoroheptanoic acid	375-85-9	N.D.	0.20	0.68	0.80	1
14478	Perfluorohexanesulfonate	355-46-4	N.D.	0.20	0.64	0.80	1
14478	Perfluorohexanoic acid	307-24-4	N.D.	0.20	0.68	0.80	1
14478	Perfluorononanoic acid	375-95-1	N.D.	0.20	0.68	0.80	1
14478	Perfluoro-octanesulfonate	1763-23-1	N.D.	0.20	0.65	0.80	1
14478	Perfluorooctanoic acid	335-67-1	N.D.	0.20	0.68	0.80	1
14478	Perfluorotetradecanoic acid	376-06-7	N.D.	0.20	0.68	0.80	1
14478	Perfluorotridecanoic acid	72629-94-8	N.D.	0.20	0.68	0.80	1
14478	Perfluoroundecanoic acid	2058-94-8	N.D.	0.20	0.68	0.80	1
Wet Chemistry	**SM 2540 G-1997 %Moisture Calc**		**%**	**%**	**%**	**%**	
00111	Moisture	n.a.	5.9	0.50	0.50	0.50	1
	Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.						

Sample Comments

CA ELAP Lab Certification No. 2792

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14478	PFAS in Soil by LC/MS/MS-DoD	EPA 537 mod QSM 5.1 table B-15	1	18316011	11/13/2018 19:02	Marissa C Drexinger	1
14510	PFAS Solid Prep - DoD	EPA 537 mod QSM 5.1 table B-15	2	18316011	11/12/2018 09:50	Courtney J Fatta	1
00111	Moisture	SM 2540 G-1997 %Moisture Calc	1	18313820006A	11/09/2018 10:40	Larry E Bevins	1

*=This limit was used in the evaluation of the final result

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Analysis Report

Sample Description: **OU1-Bldg27-S-02-08 Grab Soil MCLB Barstow**

Project Name: **Barstow Site Inspection**

Submittal Date/Time: 11/06/2018 10:35
Collection Date/Time: 11/01/2018 17:11
SDG#: BSI15-16

Gutierrez Canales Engineering
ELLE Sample #: SW 9885095
ELLE Group #: 2006158
Matrix: Soil

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Detection Limit*	Dry Limit of Detection	Dry Limit of Quantitation	DF
LC/MS/MS Miscellaneous	**EPA 537 mod QSM 5.1 table B-15**		**ng/g**	**ng/g**	**ng/g**	**ng/g**	
14478	NEtFOSAA	2991-50-6	N.D.	0.48	1.9	2.9	1
	NEtFOSAA is the acronym for N-ethyl perfluorooctanesulfonamidoacetic Acid.						
14478	NMeFOSAA	2355-31-9	N.D.	0.48	1.9	2.9	1
	NMeFOSAA is the acronym for N-methyl perfluorooctanesulfonamidoacetic Acid.						
14478	Perfluorobutanesulfonate	375-73-5	N.D.	0.19	0.57	0.76	1
14478	Perfluorodecanoic acid	335-76-2	N.D.	0.29	0.65	0.95	1
14478	Perfluorododecanoic acid	307-55-1	N.D.	0.19	0.65	0.76	1
14478	Perfluoroheptanoic acid	375-85-9	N.D.	0.19	0.65	0.76	1
14478	Perfluorohexanesulfonate	355-46-4	N.D.	0.19	0.61	0.76	1
14478	Perfluorohexanoic acid	307-24-4	N.D.	0.19	0.65	0.76	1
14478	Perfluorononanoic acid	375-95-1	N.D.	0.19	0.65	0.76	1
14478	Perfluoro-octanesulfonate	1763-23-1	N.D.	0.19	0.62	0.76	1
14478	Perfluorooctanoic acid	335-67-1	N.D.	0.19	0.65	0.76	1
14478	Perfluorotetradecanoic acid	376-06-7	N.D.	0.19	0.65	0.76	1
14478	Perfluorotridecanoic acid	72629-94-8	N.D.	0.19	0.65	0.76	1
14478	Perfluoroundecanoic acid	2058-94-8	N.D.	0.19	0.65	0.76	1
Wet Chemistry	**SM 2540 G-1997 %Moisture Calc**		**%**	**%**	**%**	**%**	
00111	Moisture	n.a.	2.8	0.50	0.50	0.50	1
	Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.						

Sample Comments

CA ELAP Lab Certification No. 2792

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14478	PFAS in Soil by LC/MS/MS-DoD	EPA 537 mod QSM 5.1 table B-15	1	18316011	11/13/2018 19:11	Marissa C Drexinger	1
14510	PFAS Solid Prep - DoD	EPA 537 mod QSM 5.1 table B-15	2	18316011	11/12/2018 09:50	Courtney J Fatta	1
00111	Moisture	SM 2540 G-1997 %Moisture Calc	1	18313820006A	11/09/2018 10:40	Larry E Bevins	1

*=This limit was used in the evaluation of the final result

Sample Description: **OU1-Bldg27-S-02-10 Grab Soil**
MCLB Barstow

Gutierrez Canales Engineering
ELLE Sample #: **SW 9885096**
ELLE Group #: **2006158**

Project Name: **Barstow Site Inspection**

Submittal Date/Time: 11/06/2018 10:35
Collection Date/Time: 11/01/2018 17:14
SDG#: BSI15-17

Sample Comments

CA ELAP Lab Certification No. 2792

Sample Description: **OU1-Bldg27-S-02-12 Grab Soil**
MCLB Barstow

Gutierrez Canales Engineering
ELLE Sample #: **SW 9885097**
ELLE Group #: **2006158**

Project Name: **Barstow Site Inspection**

Submittal Date/Time: 11/06/2018 10:35
Collection Date/Time: 11/01/2018 17:16
SDG#: BSI15-18

Sample Comments

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Analysis Report

Sample Description: **OU1-Bldg50-S-01-01 Grab Soil MCLB Barstow**

Project Name: **Barstow Site Inspection**

Submittal Date/Time: 11/06/2018 10:35
Collection Date/Time: 11/01/2018 17:34
SDG#: BSI15-19

Gutierrez Canales Engineering
ELLE Sample #: SW 9885098
ELLE Group #: 2006158
Matrix: Soil

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Detection Limit*	Dry Limit of Detection	Dry Limit of Quantitation	DF
LC/MS/MS Miscellaneous	**EPA 537 mod QSM 5.1 table B-15**		**ng/g**	**ng/g**	**ng/g**	**ng/g**	
14478	NEtFOSAA	2991-50-6	N.D.	0.50	2.0	3.0	1
	NEtFOSAA is the acronym for N-ethyl perfluorooctanesulfonamidoacetic Acid.						
14478	NMeFOSAA	2355-31-9	N.D.	0.50	2.0	3.0	1
	NMeFOSAA is the acronym for N-methyl perfluorooctanesulfonamidoacetic Acid.						
14478	Perfluorobutanesulfonate	375-73-5	N.D.	0.20	0.60	0.81	1
14478	Perfluorodecanoic acid	335-76-2	N.D.	0.30	0.69	1.0	1
14478	Perfluorododecanoic acid	307-55-1	N.D.	0.20	0.69	0.81	1
14478	Perfluoroheptanoic acid	375-85-9	N.D.	0.20	0.69	0.81	1
14478	Perfluorohexanesulfonate	355-46-4	N.D.	0.20	0.65	0.81	1
14478	Perfluorohexanoic acid	307-24-4	N.D.	0.20	0.69	0.81	1
14478	Perfluorononanoic acid	375-95-1	N.D.	0.20	0.69	0.81	1
14478	Perfluoro-octanesulfonate	1763-23-1	N.D.	0.20	0.66	0.81	1
14478	Perfluorooctanoic acid	335-67-1	N.D.	0.20	0.69	0.81	1
14478	Perfluorotetradecanoic acid	376-06-7	N.D.	0.20	0.69	0.81	1
14478	Perfluorotridecanoic acid	72629-94-8	N.D.	0.20	0.69	0.81	1
14478	Perfluoroundecanoic acid	2058-94-8	N.D.	0.20	0.69	0.81	1
Wet Chemistry	**SM 2540 G-1997 %Moisture Calc**		**%**	**%**	**%**	**%**	
00111	Moisture	n.a.	6.4	0.50	0.50	0.50	1
	Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.						

Sample Comments

CA ELAP Lab Certification No. 2792

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14478	PFAS in Soil by LC/MS/MS-DoD	EPA 537 mod QSM 5.1 table B-15	1	18316011	11/13/2018 19:20	Marissa C Drexinger	1
14510	PFAS Solid Prep - DoD	EPA 537 mod QSM 5.1 table B-15	2	18316011	11/12/2018 09:50	Courtney J Fatta	1
00111	Moisture	SM 2540 G-1997 %Moisture Calc	1	18313820006B	11/09/2018 10:40	Larry E Bevins	1

*=This limit was used in the evaluation of the final result

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Analysis Report

Sample Description: **OU1-Bldg50-S-01-03 Grab Soil MCLB Barstow**

Project Name: **Barstow Site Inspection**

Submittal Date/Time: 11/06/2018 10:35
Collection Date/Time: 11/01/2018 17:38
SDG#: BSI15-20

Gutierrez Canales Engineering
ELLE Sample #: SW 9885099
ELLE Group #: 2006158
Matrix: Soil

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Detection Limit*	Dry Limit of Detection	Dry Limit of Quantitation	DF
LC/MS/MS Miscellaneous	**EPA 537 mod QSM 5.1 table B-15**		**ng/g**	**ng/g**	**ng/g**	**ng/g**	
14478	NEtFOSAA	2991-50-6	N.D.	0.48	1.9	2.9	1
	NEtFOSAA is the acronym for N-ethyl perfluorooctanesulfonamidoacetic Acid.						
14478	NMeFOSAA	2355-31-9	N.D.	0.48	1.9	2.9	1
	NMeFOSAA is the acronym for N-methyl perfluorooctanesulfonamidoacetic Acid.						
14478	Perfluorobutanesulfonate	375-73-5	N.D.	0.19	0.58	0.77	1
14478	Perfluorodecanoic acid	335-76-2	N.D.	0.29	0.65	0.96	1
14478	Perfluorododecanoic acid	307-55-1	N.D.	0.19	0.65	0.77	1
14478	Perfluoroheptanoic acid	375-85-9	N.D.	0.19	0.65	0.77	1
14478	Perfluorohexanesulfonate	355-46-4	N.D.	0.19	0.61	0.77	1
14478	Perfluorohexanoic acid	307-24-4	N.D.	0.19	0.65	0.77	1
14478	Perfluorononanoic acid	375-95-1	N.D.	0.19	0.65	0.77	1
14478	Perfluoro-octanesulfonate	1763-23-1	N.D.	0.19	0.62	0.77	1
14478	Perfluorooctanoic acid	335-67-1	N.D.	0.19	0.65	0.77	1
14478	Perfluorotetradecanoic acid	376-06-7	N.D.	0.19	0.65	0.77	1
14478	Perfluorotridecanoic acid	72629-94-8	N.D.	0.19	0.65	0.77	1
14478	Perfluoroundecanoic acid	2058-94-8	N.D.	0.19	0.65	0.77	1
Wet Chemistry	**SM 2540 G-1997 %Moisture Calc**		**%**	**%**	**%**	**%**	
00111	Moisture	n.a.	2.7	0.50	0.50	0.50	1
	Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.						

Sample Comments

CA ELAP Lab Certification No. 2792

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14478	PFAS in Soil by LC/MS/MS-DoD	EPA 537 mod QSM 5.1 table B-15	1	18316011	11/13/2018 19:29	Marissa C Drexinger	1
14510	PFAS Solid Prep - DoD	EPA 537 mod QSM 5.1 table B-15	2	18316011	11/12/2018 09:50	Courtney J Fatta	1
00111	Moisture	SM 2540 G-1997 %Moisture Calc	1	18313820006B	11/09/2018 10:40	Larry E Bevins	1

*=This limit was used in the evaluation of the final result

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Analysis Report

Sample Description: **OU1-Bldg50-S-01-05 Grab Soil MCLB Barstow**

Project Name: **Barstow Site Inspection**

Submittal Date/Time: 11/06/2018 10:35
Collection Date/Time: 11/01/2018 17:44
SDG#: BSI15-21

Gutierrez Canales Engineering
ELLE Sample #: SW 9885100
ELLE Group #: 2006158
Matrix: Soil

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Detection Limit*	Dry Limit of Detection	Dry Limit of Quantitation	DF
LC/MS/MS Miscellaneous	**EPA 537 mod QSM 5.1 table B-15**		**ng/g**	**ng/g**	**ng/g**	**ng/g**	
14478	NEtFOSAA	2991-50-6	N.D.	0.46	1.9	2.8	1
	NEtFOSAA is the acronym for N-ethyl perfluorooctanesulfonamidoacetic Acid.						
14478	NMeFOSAA	2355-31-9	N.D.	0.46	1.9	2.8	1
	NMeFOSAA is the acronym for N-methyl perfluorooctanesulfonamidoacetic Acid.						
14478	Perfluorobutanesulfonate	375-73-5	N.D.	0.19	0.56	0.74	1
14478	Perfluorodecanoic acid	335-76-2	N.D.	0.28	0.63	0.93	1
14478	Perfluorododecanoic acid	307-55-1	N.D.	0.19	0.63	0.74	1
14478	Perfluoroheptanoic acid	375-85-9	N.D.	0.19	0.63	0.74	1
14478	Perfluorohexanesulfonate	355-46-4	N.D.	0.19	0.59	0.74	1
14478	Perfluorohexanoic acid	307-24-4	N.D.	0.19	0.63	0.74	1
14478	Perfluorononanoic acid	375-95-1	N.D.	0.19	0.63	0.74	1
14478	Perfluoro-octanesulfonate	1763-23-1	N.D.	0.19	0.60	0.74	1
14478	Perfluorooctanoic acid	335-67-1	N.D.	0.19	0.63	0.74	1
14478	Perfluorotetradecanoic acid	376-06-7	N.D.	0.19	0.63	0.74	1
14478	Perfluorotridecanoic acid	72629-94-8	N.D.	0.19	0.63	0.74	1
14478	Perfluoroundecanoic acid	2058-94-8	N.D.	0.19	0.63	0.74	1
Wet Chemistry	**SM 2540 G-1997 %Moisture Calc**		**%**	**%**	**%**	**%**	
00111	Moisture	n.a.	1.9	0.50	0.50	0.50	1
	Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.						

Sample Comments

CA ELAP Lab Certification No. 2792

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14478	PFAS in Soil by LC/MS/MS-DoD	EPA 537 mod QSM 5.1 table B-15	1	18316011	11/13/2018 19:38	Marissa C Drexinger	1
14510	PFAS Solid Prep - DoD	EPA 537 mod QSM 5.1 table B-15	2	18316011	11/12/2018 09:50	Courtney J Fatta	1
00111	Moisture	SM 2540 G-1997 %Moisture Calc	1	18313820006B	11/09/2018 10:40	Larry E Bevins	1

*=This limit was used in the evaluation of the final result

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Analysis Report

Sample Description: **OU1-Bldg50-S-01-08 Grab Soil MCLB Barstow**

Project Name: **Barstow Site Inspection**

Submittal Date/Time: 11/06/2018 10:35
Collection Date/Time: 11/01/2018 17:46
SDG#: BSI15-22

Gutierrez Canales Engineering
ELLE Sample #: SW 9885101
ELLE Group #: 2006158
Matrix: Soil

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Detection Limit*	Dry Limit of Detection	Dry Limit of Quantitation	DF
LC/MS/MS Miscellaneous	**EPA 537 mod QSM 5.1 table B-15**		**ng/g**	**ng/g**	**ng/g**	**ng/g**	
14478	NEtFOSAA	2991-50-6	N.D.	0.50	2.0	3.0	1
	NEtFOSAA is the acronym for N-ethyl perfluorooctanesulfonamidoacetic Acid.						
14478	NMeFOSAA	2355-31-9	N.D.	0.50	2.0	3.0	1
	NMeFOSAA is the acronym for N-methyl perfluorooctanesulfonamidoacetic Acid.						
14478	Perfluorobutanesulfonate	375-73-5	N.D.	0.20	0.60	0.80	1
14478	Perfluorodecanoic acid	335-76-2	N.D.	0.30	0.68	1.0	1
14478	Perfluorododecanoic acid	307-55-1	N.D.	0.20	0.68	0.80	1
14478	Perfluoroheptanoic acid	375-85-9	N.D.	0.20	0.68	0.80	1
14478	Perfluorohexanesulfonate	355-46-4	N.D.	0.20	0.64	0.80	1
14478	Perfluorohexanoic acid	307-24-4	N.D.	0.20	0.68	0.80	1
14478	Perfluorononanoic acid	375-95-1	N.D.	0.20	0.68	0.80	1
14478	Perfluoro-octanesulfonate	1763-23-1	N.D.	0.20	0.65	0.80	1
14478	Perfluorooctanoic acid	335-67-1	N.D.	0.20	0.68	0.80	1
14478	Perfluorotetradecanoic acid	376-06-7	N.D.	0.20	0.68	0.80	1
14478	Perfluorotridecanoic acid	72629-94-8	N.D.	0.20	0.68	0.80	1
14478	Perfluoroundecanoic acid	2058-94-8	N.D.	0.20	0.68	0.80	1
Wet Chemistry	**SM 2540 G-1997 %Moisture Calc**		**%**	**%**	**%**	**%**	
00111	Moisture	n.a.	6.4	0.50	0.50	0.50	1
	Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.						

Sample Comments

CA ELAP Lab Certification No. 2792

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14478	PFAS in Soil by LC/MS/MS-DoD	EPA 537 mod QSM 5.1 table B-15	1	18316011	11/13/2018 19:47	Marissa C Drexinger	1
14510	PFAS Solid Prep - DoD	EPA 537 mod QSM 5.1 table B-15	2	18316011	11/12/2018 09:50	Courtney J Fatta	1
00111	Moisture	SM 2540 G-1997 %Moisture Calc	1	18313820006B	11/09/2018 10:40	Larry E Bevins	1

*=This limit was used in the evaluation of the final result

Sample Description: **OU1-Bldg50-S-01-10 Grab Soil**
MCLB Barstow

Gutierrez Canales Engineering
ELLE Sample #: **SW 9885102**
ELLE Group #: **2006158**

Project Name: **Barstow Site Inspection**

Submittal Date/Time: 11/06/2018 10:35
Collection Date/Time: 11/01/2018 17:50
SDG#: BSI15-23

Sample Comments

CA ELAP Lab Certification No. 2792

Sample Description: **OU1-Bldg50-S-01-12 Grab Soil**
MCLB Barstow

Gutierrez Canales Engineering
ELLE Sample #: **SW 9885103**
ELLE Group #: **2006158**

Project Name: **Barstow Site Inspection**

Submittal Date/Time: 11/06/2018 10:35
Collection Date/Time: 11/01/2018 17:52
SDG#: BSI15-24

Sample Comments

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Analysis Report

Sample Description: **OU1-Bldg50-S-02-01 Grab Soil MCLB Barstow**

Project Name: **Barstow Site Inspection**

Submittal Date/Time: 11/06/2018 10:35
Collection Date/Time: 11/01/2018 18:09
SDG#: BSI15-25

Gutierrez Canales Engineering
ELLE Sample #: SW 9885104
ELLE Group #: 2006158
Matrix: Soil

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Detection Limit*	Dry Limit of Detection	Dry Limit of Quantitation	DF
LC/MS/MS Miscellaneous	**EPA 537 mod QSM 5.1 table B-15**		**ng/g**	**ng/g**	**ng/g**	**ng/g**	
14478	NEtFOSAA	2991-50-6	N.D.	0.50	2.0	3.0	1
	NEtFOSAA is the acronym for N-ethyl perfluorooctanesulfonamidoacetic Acid.						
14478	NMeFOSAA	2355-31-9	N.D.	0.50	2.0	3.0	1
	NMeFOSAA is the acronym for N-methyl perfluorooctanesulfonamidoacetic Acid.						
14478	Perfluorobutanesulfonate	375-73-5	N.D.	0.20	0.60	0.80	1
14478	Perfluorodecanoic acid	335-76-2	N.D.	0.30	0.68	1.0	1
14478	Perfluorododecanoic acid	307-55-1	N.D.	0.20	0.68	0.80	1
14478	Perfluoroheptanoic acid	375-85-9	N.D.	0.20	0.68	0.80	1
14478	Perfluorohexanesulfonate	355-46-4	N.D.	0.20	0.64	0.80	1
14478	Perfluorohexanoic acid	307-24-4	N.D.	0.20	0.68	0.80	1
14478	Perfluorononanoic acid	375-95-1	N.D.	0.20	0.68	0.80	1
14478	Perfluoro-octanesulfonate	1763-23-1	N.D.	0.20	0.65	0.80	1
14478	Perfluorooctanoic acid	335-67-1	N.D.	0.20	0.68	0.80	1
14478	Perfluorotetradecanoic acid	376-06-7	N.D.	0.20	0.68	0.80	1
14478	Perfluorotridecanoic acid	72629-94-8	N.D.	0.20	0.68	0.80	1
14478	Perfluoroundecanoic acid	2058-94-8	N.D.	0.20	0.68	0.80	1
Wet Chemistry	**SM 2540 G-1997 %Moisture Calc**		**%**	**%**	**%**	**%**	
00111	Moisture	n.a.	4.6	0.50	0.50	0.50	1
	Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.						

Sample Comments

CA ELAP Lab Certification No. 2792

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14478	PFAS in Soil by LC/MS/MS-DoD	EPA 537 mod QSM 5.1 table B-15	1	18316011	11/13/2018 19:56	Marissa C Drexinger	1
14510	PFAS Solid Prep - DoD	EPA 537 mod QSM 5.1 table B-15	2	18316011	11/12/2018 09:50	Courtney J Fatta	1
00111	Moisture	SM 2540 G-1997 %Moisture Calc	1	18313820006B	11/09/2018 10:40	Larry E Bevins	1

*=This limit was used in the evaluation of the final result

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Analysis Report

Sample Description: **OU1-Bldg50-S-02-03 Grab Soil MCLB Barstow**

Project Name: **Barstow Site Inspection**

Submittal Date/Time: 11/06/2018 10:35
Collection Date/Time: 11/01/2018 18:13
SDG#: BSI15-26

Gutierrez Canales Engineering
ELLE Sample #: SW 9885105
ELLE Group #: 2006158
Matrix: Soil

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Detection Limit*	Dry Limit of Detection	Dry Limit of Quantitation	DF
LC/MS/MS Miscellaneous	**EPA 537 mod QSM 5.1 table B-15**		**ng/g**	**ng/g**	**ng/g**	**ng/g**	
14478	NEtFOSAA	2991-50-6	N.D.	0.51	2.0	3.1	1
	NEtFOSAA is the acronym for N-ethyl perfluorooctanesulfonamidoacetic Acid.						
14478	NMeFOSAA	2355-31-9	N.D.	0.51	2.0	3.1	1
	NMeFOSAA is the acronym for N-methyl perfluorooctanesulfonamidoacetic Acid.						
14478	Perfluorobutanesulfonate	375-73-5	N.D.	0.20	0.61	0.82	1
14478	Perfluorodecanoic acid	335-76-2	N.D.	0.31	0.70	1.0	1
14478	Perfluorododecanoic acid	307-55-1	N.D.	0.20	0.70	0.82	1
14478	Perfluoroheptanoic acid	375-85-9	N.D.	0.20	0.70	0.82	1
14478	Perfluorohexanesulfonate	355-46-4	N.D.	0.20	0.65	0.82	1
14478	Perfluorohexanoic acid	307-24-4	N.D.	0.20	0.70	0.82	1
14478	Perfluorononanoic acid	375-95-1	N.D.	0.20	0.70	0.82	1
14478	Perfluoro-octanesulfonate	1763-23-1	N.D.	0.20	0.66	0.82	1
14478	Perfluorooctanoic acid	335-67-1	N.D.	0.20	0.70	0.82	1
14478	Perfluorotetradecanoic acid	376-06-7	N.D.	0.20	0.70	0.82	1
14478	Perfluorotridecanoic acid	72629-94-8	N.D.	0.20	0.70	0.82	1
14478	Perfluoroundecanoic acid	2058-94-8	N.D.	0.20	0.70	0.82	1
Wet Chemistry	**SM 2540 G-1997 %Moisture Calc**		**%**	**%**	**%**	**%**	
00111	Moisture	n.a.	5.1	0.50	0.50	0.50	1
	Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.						

Sample Comments

CA ELAP Lab Certification No. 2792

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14478	PFAS in Soil by LC/MS/MS-DoD	EPA 537 mod QSM 5.1 table B-15	1	18316011	11/13/2018 20:14	Marissa C Drexinger	1
14510	PFAS Solid Prep - DoD	EPA 537 mod QSM 5.1 table B-15	2	18316011	11/12/2018 09:50	Courtney J Fatta	1
00111	Moisture	SM 2540 G-1997 %Moisture Calc	1	18313820006B	11/09/2018 10:40	Larry E Bevins	1

*=This limit was used in the evaluation of the final result

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Analysis Report

Sample Description: **OU1-Bldg50-S-02-08 Grab Soil MCLB Barstow**

Project Name: **Barstow Site Inspection**

Submittal Date/Time: 11/06/2018 10:35
Collection Date/Time: 11/01/2018 18:16
SDG#: BSI15-27

Gutierrez Canales Engineering
ELLE Sample #: SW 9885106
ELLE Group #: 2006158
Matrix: Soil

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Detection Limit*	Dry Limit of Detection	Dry Limit of Quantitation	DF
LC/MS/MS Miscellaneous	**EPA 537 mod QSM 5.1 table B-15**		**ng/g**	**ng/g**	**ng/g**	**ng/g**	
14478	NEtFOSAA	2991-50-6	N.D.	0.49	2.0	3.0	1
	NEtFOSAA is the acronym for N-ethyl perfluorooctanesulfonamidoacetic Acid.						
14478	NMeFOSAA	2355-31-9	N.D.	0.49	2.0	3.0	1
	NMeFOSAA is the acronym for N-methyl perfluorooctanesulfonamidoacetic Acid.						
14478	Perfluorobutanesulfonate	375-73-5	N.D.	0.20	0.59	0.79	1
14478	Perfluorodecanoic acid	335-76-2	N.D.	0.30	0.67	0.99	1
14478	Perfluorododecanoic acid	307-55-1	N.D.	0.20	0.67	0.79	1
14478	Perfluoroheptanoic acid	375-85-9	N.D.	0.20	0.67	0.79	1
14478	Perfluorohexanesulfonate	355-46-4	N.D.	0.20	0.63	0.79	1
14478	Perfluorohexanoic acid	307-24-4	N.D.	0.20	0.67	0.79	1
14478	Perfluorononanoic acid	375-95-1	N.D.	0.20	0.67	0.79	1
14478	Perfluoro-octanesulfonate	1763-23-1	N.D.	0.20	0.64	0.79	1
14478	Perfluorooctanoic acid	335-67-1	N.D.	0.20	0.67	0.79	1
14478	Perfluorotetradecanoic acid	376-06-7	N.D.	0.20	0.67	0.79	1
14478	Perfluorotridecanoic acid	72629-94-8	N.D.	0.20	0.67	0.79	1
14478	Perfluoroundecanoic acid	2058-94-8	N.D.	0.20	0.67	0.79	1
Wet Chemistry	**SM 2540 G-1997 %Moisture Calc**		**%**	**%**	**%**	**%**	
00111	Moisture	n.a.	1.9	0.50	0.50	0.50	1
	Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.						

Sample Comments

CA ELAP Lab Certification No. 2792

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14478	PFAS in Soil by LC/MS/MS-DoD	EPA 537 mod QSM 5.1 table B-15	1	18316011	11/13/2018 20:23	Marissa C Drexinger	1
14510	PFAS Solid Prep - DoD	EPA 537 mod QSM 5.1 table B-15	2	18316011	11/12/2018 09:50	Courtney J Fatta	1
00111	Moisture	SM 2540 G-1997 %Moisture Calc	1	18313820006B	11/09/2018 10:40	Larry E Bevins	1

*=This limit was used in the evaluation of the final result

Sample Description: **OU1-Bldg50-S-02-10 Grab Soil**
MCLB Barstow

Gutierrez Canales Engineering
ELLE Sample #: **SW 9885107**
ELLE Group #: **2006158**

Project Name: **Barstow Site Inspection**

Submittal Date/Time: 11/06/2018 10:35
Collection Date/Time: 11/01/2018 18:20
SDG#: BSI15-28

Sample Comments

CA ELAP Lab Certification No. 2792

Sample Description: **OU1-Bldg50-S-02-12 Grab Soil**
MCLB Barstow

Gutierrez Canales Engineering
ELLE Sample #: **SW 9885108**
ELLE Group #: **2006158**

Project Name: **Barstow Site Inspection**

Submittal Date/Time: 11/06/2018 10:35
Collection Date/Time: 11/01/2018 18:24
SDG#: BSI15-29

Sample Comments

CA ELAP Lab Certification No. 2792

Quality Control Summary

Client Name: Gutierrez Canales Engineering
Reported: 01/18/2019 14:26

Group Number: 2006158

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

All Inorganic Initial Calibration and Continuing Calibration Blanks met acceptable method criteria unless otherwise noted on the Analysis Report.

Method Blank

Analysis Name	Result	DL**	LOD	LOQ
	ng/g	ng/g	ng/g	ng/g
Batch number: 18316011	Sample number(s): 9885080-9885082,9885085-9885090,9885092-9885095,9885098-9885101,9885104-9885106			
NEtFOSAA	N.D.	0.50	2.0	3.0
NMeFOSAA	N.D.	0.50	2.0	3.0
Perfluorobutanesulfonate	N.D.	0.20	0.60	0.80
Perfluorodecanoic acid	N.D.	0.30	0.68	1.0
Perfluorododecanoic acid	N.D.	0.20	0.68	0.80
Perfluoroheptanoic acid	N.D.	0.20	0.68	0.80
Perfluorohexanesulfonate	N.D.	0.20	0.64	0.80
Perfluorohexanoic acid	N.D.	0.20	0.68	0.80
Perfluorononanoic acid	N.D.	0.20	0.68	0.80
Perfluoro-octanesulfonate	N.D.	0.20	0.65	0.80
Perfluorooctanoic acid	N.D.	0.20	0.68	0.80
Perfluorotetradecanoic acid	N.D.	0.20	0.68	0.80
Perfluorotridecanoic acid	N.D.	0.20	0.68	0.80
Perfluoroundecanoic acid	N.D.	0.20	0.68	0.80
Batch number: 18316029	Sample number(s): 9885078			
NEtFOSAA	N.D.	0.50	2.0	3.0
NMeFOSAA	N.D.	0.50	2.0	3.0
Perfluorobutanesulfonate	N.D.	0.20	0.60	0.80
Perfluorodecanoic acid	N.D.	0.30	0.68	1.0
Perfluorododecanoic acid	N.D.	0.20	0.68	0.80
Perfluoroheptanoic acid	N.D.	0.20	0.68	0.80
Perfluorohexanesulfonate	N.D.	0.20	0.64	0.80
Perfluorohexanoic acid	N.D.	0.20	0.68	0.80
Perfluorononanoic acid	N.D.	0.20	0.68	0.80
Perfluoro-octanesulfonate	N.D.	0.20	0.65	0.80
Perfluorooctanoic acid	N.D.	0.20	0.68	0.80
Perfluorotetradecanoic acid	N.D.	0.20	0.68	0.80
Perfluorotridecanoic acid	N.D.	0.20	0.68	0.80
Perfluoroundecanoic acid	N.D.	0.20	0.68	0.80
Batch number: 18332003	Sample number(s): 9885091			
NEtFOSAA	N.D.	0.50	2.0	3.0
NMeFOSAA	N.D.	0.50	2.0	3.0
Perfluorobutanesulfonate	N.D.	0.20	0.60	0.80
Perfluorodecanoic acid	N.D.	0.30	0.68	1.0
Perfluorododecanoic acid	N.D.	0.20	0.68	0.80
Perfluoroheptanoic acid	N.D.	0.20	0.68	0.80
Perfluorohexanesulfonate	N.D.	0.20	0.64	0.80

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.
(3) The surrogate spike amount was less than the LOD.

Quality Control Summary

Client Name: Gutierrez Canales Engineering
Reported: 01/18/2019 14:26

Group Number: 2006158

Method Blank (continued)

Analysis Name	Result ng/g	DL** ng/g	LOD ng/g	LOQ ng/g
Perfluorohexanoic acid	N.D.	0.20	0.68	0.80
Perfluorononanoic acid	N.D.	0.20	0.68	0.80
Perfluoro-octanesulfonate	N.D.	0.20	0.65	0.80
Perfluorooctanoic acid	N.D.	0.20	0.68	0.80
Perfluorotetradecanoic acid	N.D.	0.20	0.68	0.80
Perfluorotridecanoic acid	N.D.	0.20	0.68	0.80
Perfluoroundecanoic acid	N.D.	0.20	0.68	0.80

LCS/LCSD

Analysis Name	LCS Spike Added ng/g	LCS Conc ng/g	LCSD Spike Added ng/g	LCSD Conc ng/g	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Batch number: 18316011	Sample number(s): 9885080-9885082,9885085-9885090,9885092-9885095,9885098-9885101,9885104-9885106								
NEtFOSAA	1.36	1.27			93		70-130		
NMeFOSAA	1.36	1.22			90		70-130		
Perfluorobutanesulfonate	1.20	1.17			97		70-130		
Perfluorodecanoic acid	1.36	1.33			98		70-130		
Perfluorododecanoic acid	1.36	1.26			93		70-130		
Perfluoroheptanoic acid	1.36	1.57			115		70-130		
Perfluorohexanesulfonate	1.29	1.20			93		70-130		
Perfluorohexanoic acid	1.36	1.51			111		70-130		
Perfluorononanoic acid	1.36	1.49			110		70-130		
Perfluoro-octanesulfonate	1.30	0.978			75		70-130		
Perfluorooctanoic acid	1.36	1.46			107		70-130		
Perfluorotetradecanoic acid	1.36	1.45			107		70-130		
Perfluorotridecanoic acid	1.36	1.49			110		70-130		
Perfluoroundecanoic acid	1.36	1.34			98		70-130		
Batch number: 18316029	Sample number(s): 9885078								
NEtFOSAA	1.36	1.60			117		70-130		
NMeFOSAA	1.36	1.34			99		70-130		
Perfluorobutanesulfonate	1.20	1.26			105		70-130		
Perfluorodecanoic acid	1.36	1.49			109		70-130		
Perfluorododecanoic acid	1.36	1.50			110		70-130		
Perfluoroheptanoic acid	1.36	1.59			117		70-130		
Perfluorohexanesulfonate	1.29	1.31			102		70-130		
Perfluorohexanoic acid	1.36	1.48			109		70-130		
Perfluorononanoic acid	1.36	1.50			111		70-130		
Perfluoro-octanesulfonate	1.30	1.22			94		70-130		
Perfluorooctanoic acid	1.36	1.47			108		70-130		

*- Outside of specification
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(3) The surrogate spike amount was less than the LOD.

Quality Control Summary

Client Name: Gutierrez Canales Engineering
Reported: 01/18/2019 14:26

Group Number: 2006158

LCS/LCSD (continued)

Analysis Name	LCS Spike Added ng/g	LCS Conc ng/g	LCSD Spike Added ng/g	LCSD Conc ng/g	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Perfluorotetradecanoic acid	1.36	1.50			110		70-130		
Perfluorotridecanoic acid	1.36	1.56			115		70-130		
Perfluoroundecanoic acid	1.36	1.50			110		70-130		
Batch number: 18332003	Sample number(s): 9885091								
NEtFOSAA	1.36	1.24			91		70-130		
NMeFOSAA	1.36	1.13			83		70-130		
Perfluorobutanesulfonate	1.20	1.12			93		70-130		
Perfluorodecanoic acid	1.36	1.23			90		70-130		
Perfluorododecanoic acid	1.36	1.25			92		70-130		
Perfluoroheptanoic acid	1.36	1.28			94		70-130		
Perfluorohexanesulfonate	1.29	1.06			82		70-130		
Perfluorohexanoic acid	1.36	1.29			95		70-130		
Perfluorononanoic acid	1.36	1.31			97		70-130		
Perfluoro-octanesulfonate	1.30	0.910			70		70-130		
Perfluorooctanoic acid	1.36	1.15			85		70-130		
Perfluorotetradecanoic acid	1.36	1.26			93		70-130		
Perfluorotridecanoic acid	1.36	1.36			100		70-130		
Perfluoroundecanoic acid	1.36	1.35			100		70-130		
	%	%	%	%					
Batch number: 18313820006A	Sample number(s): 9885078,9885080-9885082,9885085-9885090,9885092-9885095								
Moisture	89.5	89.32			100		99-101		
Moisture	89.5	89.32			100		99-101		
Moisture Duplicate	89.5	89.32			100		99-101		
Batch number: 18313820006B	Sample number(s): 9885098-9885101,9885104-9885106								
Moisture	89.5	89.32			100		99-101		
Batch number: 18337820002B	Sample number(s): 9885091								
Moisture	89.5	89.37			100		99-101		

MS/MSD

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike

Analysis Name	Unspiked Conc ng/g	MS Spike Added ng/g	MS Conc ng/g	MSD Spike Added ng/g	MSD Conc ng/g	MS %Rec	MSD %Rec	MS/MSD Limits	RPD	RPD Max
Batch number: 18316011	Sample number(s): 9885080-9885082,9885085-9885090,9885092-9885095,9885098-9885101,9885104-9885106 UNSPK: 9885086									
NEtFOSAA	N.D.	1.25	1.31	1.32	1.54	105	117	70-130	16	30

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(3) The surrogate spike amount was less than the LOD.

Quality Control Summary

Client Name: Gutierrez Canales Engineering
Reported: 01/18/2019 14:26

Group Number: 2006158

MS/MSD (continued)

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike

Analysis Name	Unspiked Conc ng/g	MS Spike Added ng/g	MS Conc ng/g	MSD Spike Added ng/g	MSD Conc ng/g	MS %Rec	MSD %Rec	MS/MSD Limits	RPD	RPD Max
NMeFOSAA	N.D.	1.25	1.41	1.32	1.02	113	77	70-130	32*	30
Perfluorobutanesulfonate	N.D.	1.11	1.16	1.17	1.19	105	102	70-130	3	30
Perfluorodecanoic acid	N.D.	1.25	1.46	1.32	1.37	117	103	70-130	6	30
Perfluorododecanoic acid	N.D.	1.25	1.35	1.32	1.38	108	105	70-130	2	30
Perfluoroheptanoic acid	N.D.	1.25	1.54	1.32	1.56	124	118	70-130	1	30
Perfluorohexanesulfonate	N.D.	1.18	1.28	1.25	1.26	108	101	70-130	1	30
Perfluorohexanoic acid	N.D.	1.25	1.50	1.32	1.45	120	110	70-130	3	30
Perfluorononanoic acid	N.D.	1.25	1.65	1.32	1.51	132*	114	70-130	9	30
Perfluoro-octanesulfonate	3.87	1.19	4.84	1.26	2.82	82	-82*	70-130	53*	30
Perfluorooctanoic acid	N.D.	1.25	1.49	1.32	1.53	120	116	70-130	3	30
Perfluorotetradecanoic acid	N.D.	1.25	1.36	1.32	1.42	109	108	70-130	4	30
Perfluorotridecanoic acid	N.D.	1.25	1.45	1.32	1.59	116	121	70-130	9	30
Perfluoroundecanoic acid	N.D.	1.25	1.36	1.32	1.36	109	103	70-130	0	30

Laboratory Duplicate

Background (BKG) = the sample used in conjunction with the duplicate

Analysis Name	BKG Conc %	DUP Conc %	DUP RPD	DUP RPD Max
Batch number: 18313820006A	Sample number(s): 9885078,9885080-9885082,9885085-9885090,9885092-9885095 BKG: 9885086			
Moisture	4.88	5.11	5	5
Moisture	4.88	5.11	5	5
Moisture Duplicate	4.88	5.11	5	5

Labeled Isotope Quality Control

Labeled isotope recoveries which are outside of the QC window are confirmed unless otherwise noted on the analysis report.

Analysis Name: PFAS in Soil by LC/MS/MS-DoD
Batch number: 18316011

	13C3-PFBS		13C5-PFHxA		13C3-PFHxS		13C4-PFHpA		13C8-PFOA		13C8-PFOS	
	%Rec	LOD (ng/g)	%Rec	LOD (ng/g)	%Rec	LOD (ng/g)	%Rec	LOD (ng/g)	%Rec	LOD (ng/g)	%Rec	LOD (ng/g)
9885080	65	0.57	69	0.38	66	0.57	68	0.57	76	0.57	72	0.86
9885081	72	0.56	79	0.37	75	0.56	75	0.56	83	0.56	78	0.83
9885082	74	0.58	78	0.38	77	0.58	72	0.58	84	0.58	78	0.87

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(3) The surrogate spike amount was less than the LOD.

Quality Control Summary

Client Name: Gutierrez Canales Engineering
Reported: 01/18/2019 14:26

Group Number: 2006158

Labeled Isotope Quality Control

Labeled isotope recoveries which are outside of the QC window are confirmed unless otherwise noted on the analysis report.

Analysis Name: PFAS in Soil by LC/MS/MS-DoD
Batch number: 18316011

	13C3-PFBS		13C5-PFHxA		13C3-PFHxS		13C4-PFHpA		13C8-PFOA		13C8-PFOS	
	%Rec	LOD (ng/g)	%Rec	LOD (ng/g)	%Rec	LOD (ng/g)	%Rec	LOD (ng/g)	%Rec	LOD (ng/g)	%Rec	LOD (ng/g)
9885085	73	0.59	75	0.40	72	0.59	74	0.59	81	0.59	81	0.89
9885086	70	0.57	74	0.38	71	0.57	74	0.57	78	0.57	71	0.85
9885087	71	0.55	71	0.37	71	0.55	73	0.55	74	0.55	74	0.83
9885088	70	0.58	74	0.39	70	0.58	69	0.58	75	0.58	71	0.87
9885089	67	0.57	72	0.38	69	0.57	73	0.57	77	0.57	72	0.85
9885090	77	0.57	78	0.38	76	0.57	75	0.57	80	0.57	76	0.85
9885092	73	0.58	73	0.38	73	0.58	75	0.58	79	0.58	76	0.87
9885093	64	0.55	65	0.37	62	0.55	65	0.55	69	0.55	69	0.83
9885094	74	0.57	78	0.38	75	0.57	77	0.57	85	0.57	78	0.85
9885095	72	0.56	76	0.37	72	0.56	72	0.56	77	0.56	73	0.83
9885098	76	0.57	75	0.38	67	0.57	72	0.57	77	0.57	79	0.85
9885099	62	0.56	71	0.37	68	0.56	71	0.56	75	0.56	65	0.84
9885100	73	0.55	73	0.36	70	0.55	72	0.55	76	0.55	79	0.82
9885101	65	0.56	75	0.37	77	0.56	71	0.56	77	0.56	70	0.84
9885104	70	0.57	77	0.38	73	0.57	72	0.57	79	0.57	71	0.86
9885105	78	0.58	81	0.39	80	0.58	75	0.58	82	0.58	81	0.87
9885106	74	0.58	80	0.39	78	0.58	81	0.58	84	0.58	80	0.87
Blank	66	1.2	70	0.80	70	1.2	70	1.2	73	1.2	71	1.8
LCS	77	1.2	77	0.80	77	1.2	72	1.2	81	1.2	80	1.8
MS	71	0.55	71	0.37	71	0.55	73	0.55	74	0.55	74	0.83
MSD	70	0.58	74	0.39	70	0.58	69	0.58	75	0.58	71	0.87
Limits:	50-150		50-150		50-150		50-150		50-150		50-150	

	13C9-PFNA		13C6-PFDA		d3-NMeFOSAA		13C7-PFUnDA		d5-NEtFOSAA		13C2-PFDoDA	
	%Rec	LOD (ng/g)	%Rec	LOD (ng/g)	%Rec	LOD (ng/g)	%Rec	LOD (ng/g)	%Rec	LOD (ng/g)	%Rec	LOD (ng/g)
9885080	71	0.38	68	0.57	75	0.86	72	0.57	66	0.86	68	0.57
9885081	78	0.37	77	0.56	77	0.83	81	0.56	68	0.83	77	0.56
9885082	79	0.38	80	0.58	79	0.87	77	0.58	65	0.87	80	0.58
9885085	81	0.40	73	0.59	58	0.89	78	0.59	54	0.89	74	0.59
9885086	73	0.38	73	0.57	43*	0.85	70	0.57	40*	0.85	68	0.57
9885087	74	0.37	74	0.55	37*	0.83	76	0.55	44*	0.83	69	0.55
9885088	74	0.39	71	0.58	43*	0.87	73	0.58	47*	0.87	68	0.58
9885089	75	0.38	70	0.57	63	0.85	69	0.57	60	0.85	67	0.57
9885090	80	0.38	74	0.57	74	0.85	76	0.57	61	0.85	76	0.57
9885092	76	0.38	74	0.58	55	0.87	75	0.58	55	0.87	74	0.58
9885093	68	0.37	68	0.55	50	0.83	69	0.55	53	0.83	65	0.55
9885094	83	0.38	80	0.57	75	0.85	81	0.57	75	0.85	77	0.57
9885095	73	0.37	72	0.56	75	0.83	76	0.56	69	0.83	76	0.56

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(3) The surrogate spike amount was less than the LOD.

Quality Control Summary

Client Name: Gutierrez Canales Engineering
Reported: 01/18/2019 14:26

Group Number: 2006158

Labeled Isotope Quality Control (continued)

Labeled isotope recoveries which are outside of the QC window are confirmed unless otherwise noted on the analysis report.

Analysis Name: PFAS in Soil by LC/MS/MS-DoD
Batch number: 18316011

	13C9-PFNA		13C6-PFDA		d3-NMeFOSAA		13C7-PFUnDA		d5-NEtFOSAA		13C2-PFDoDA	
	%Rec	LOD (ng/g)	%Rec	LOD (ng/g)	%Rec	LOD (ng/g)	%Rec	LOD (ng/g)	%Rec	LOD (ng/g)	%Rec	LOD (ng/g)
9885098	85	0.38	80	0.57	81	0.85	83	0.57	73	0.85	80	0.57
9885099	67	0.37	59	0.56	63	0.84	61	0.56	51	0.84	57	0.56
9885100	80	0.36	75	0.55	75	0.82	82	0.55	69	0.82	76	0.55
9885101	75	0.37	73	0.56	69	0.84	75	0.56	62	0.84	67	0.56
9885104	73	0.38	74	0.57	73	0.86	73	0.57	63	0.86	72	0.57
9885105	82	0.39	84	0.58	90	0.87	85	0.58	73	0.87	79	0.58
9885106	82	0.39	77	0.58	86	0.87	79	0.58	72	0.87	78	0.58
Blank	74	0.80	72	1.2	70	1.8	75	1.2	63	1.8	70	1.2
LCS	83	0.80	74	1.2	72	1.8	79	1.2	66	1.8	78	1.2
MS	74	0.37	74	0.55	37*	0.83	76	0.55	44*	0.83	69	0.55
MSD	74	0.39	71	0.58	43*	0.87	73	0.58	47*	0.87	68	0.58
Limits:	50-150		50-150		50-150		50-150		50-150		50-150	

	13C2-PFTeDA	
	%Rec	LOD (ng/g)
9885080	65	0.57
9885081	75	0.56
9885082	74	0.58
9885085	69	0.59
9885086	63	0.57
9885087	70	0.55
9885088	67	0.58
9885089	69	0.57
9885090	72	0.57
9885092	69	0.58
9885093	60	0.55
9885094	75	0.57
9885095	72	0.56
9885098	77	0.57
9885099	57	0.56
9885100	74	0.55
9885101	65	0.56
9885104	71	0.57
9885105	75	0.58
9885106	74	0.58
Blank	63	1.2
LCS	69	1.2
MS	70	0.55

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(3) The surrogate spike amount was less than the LOD.

Quality Control Summary

Client Name: Gutierrez Canales Engineering
Reported: 01/18/2019 14:26

Group Number: 2006158

Labeled Isotope Quality Control (continued)

Labeled isotope recoveries which are outside of the QC window are confirmed unless otherwise noted on the analysis report.

Analysis Name: PFAS in Soil by LC/MS/MS-DoD
Batch number: 18316011

	13C2-PFTeDA %Rec	LOD (ng/g)
MSD	67	0.58
Limits:	50-150	

Analysis Name: PFAS in Soil by LC/MS/MS-DoD
Batch number: 18316029

	13C3-PFBS %Rec	LOD (ng/g)	13C5-PFHxA %Rec	LOD (ng/g)	13C3-PFHxS %Rec	LOD (ng/g)	13C4-PFHpA %Rec	LOD (ng/g)	13C8-PFOA %Rec	LOD (ng/g)	13C8-PFOS %Rec	LOD (ng/g)
9885078	98	0.59	103	0.39	98	0.59	101	0.59	110	0.59	104	0.88
Blank	87	1.2	93	0.80	91	1.2	94	1.2	97	1.2	93	1.8
LCS	83	1.2	88	0.80	85	1.2	87	1.2	93	1.2	91	1.8
Limits:	50-150		50-150		50-150		50-150		50-150		50-150	

	13C9-PFNA %Rec	LOD (ng/g)	13C6-PFDA %Rec	LOD (ng/g)	d3-NMeFOSAA %Rec	LOD (ng/g)	13C7-PFUnDA %Rec	LOD (ng/g)	d5-NEtFOSAA %Rec	LOD (ng/g)	13C2-PFDoDA %Rec	LOD (ng/g)
9885078	110	0.39	107	0.59	110	0.88	107	0.59	98	0.88	101	0.59
Blank	98	0.80	89	1.2	84	1.8	89	1.2	79	1.8	86	1.2
LCS	90	0.80	89	1.2	102	1.8	87	1.2	88	1.8	84	1.2
Limits:	50-150		50-150		50-150		50-150		50-150		50-150	

	13C2-PFTeDA %Rec	LOD (ng/g)
9885078	94	0.59
Blank	81	1.2
LCS	83	1.2
Limits:	50-150	

Analysis Name: PFAS in Soil by LC/MS/MS-DoD
Batch number: 18332003

	13C3-PFBS %Rec	LOD (ng/g)	13C5-PFHxA %Rec	LOD (ng/g)	13C3-PFHxS %Rec	LOD (ng/g)	13C4-PFHpA %Rec	LOD (ng/g)	13C8-PFOA %Rec	LOD (ng/g)	13C8-PFOS %Rec	LOD (ng/g)
9885091	84	0.55	76	0.36	88	0.55	78	0.55	85	0.55	87	0.82
Blank	94	1.2	102	0.80	111	1.2	100	1.2	105	1.2	97	1.8

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(3) The surrogate spike amount was less than the LOD.

Quality Control Summary

Client Name: Gutierrez Canales Engineering
Reported: 01/18/2019 14:26

Group Number: 2006158

Labeled Isotope Quality Control (continued)

Labeled isotope recoveries which are outside of the QC window are confirmed unless otherwise noted on the analysis report.

Analysis Name: PFAS in Soil by LC/MS/MS-DoD
Batch number: 18332003

	13C3-PFBS %Rec	LOD (ng/g)	13C5-PFHxA %Rec	LOD (ng/g)	13C3-PFHxS %Rec	LOD (ng/g)	13C4-PFHpA %Rec	LOD (ng/g)	13C8-PFOA %Rec	LOD (ng/g)	13C8-PFOS %Rec	LOD (ng/g)
LCS	79	1.2	82	0.80	94	1.2	82	1.2	91	1.2	85	1.8
Limits:	50-150		50-150		50-150		50-150		50-150		50-150	

	13C9-PFNA %Rec	LOD (ng/g)	13C6-PFDA %Rec	LOD (ng/g)	d3-NMeFOSAA %Rec	LOD (ng/g)	13C7-PFUnDA %Rec	LOD (ng/g)	d5-NEtFOSAA %Rec	LOD (ng/g)	13C2-PFDoDA %Rec	LOD (ng/g)
9885091	80	0.36	85	0.55	92	0.82	83	0.55	84	0.82	80	0.55
Blank	91	0.80	103	1.2	131	1.8	104	1.2	104	1.8	103	1.2
LCS	74	0.80	85	1.2	106	1.8	88	1.2	94	1.8	84	1.2
Limits:	50-150		50-150		50-150		50-150		50-150		50-150	

	13C2-PFTeDA %Rec	LOD (ng/g)
9885091	75	0.55
Blank	95	1.2
LCS	82	1.2
Limits:	50-150	

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.
(3) The surrogate spike amount was less than the LOD.

Environmental Analysis Request/Chain of Custody

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Acct. # 438016 Group # 20016158 Sample # 9808078-08

COC # 568584

Client Information

Client: GCE

Acct. #:

Project Name/#: 14G-C719-006 Barstow Site Inspections

PWSID #:

Project Manager: Eric Rider

P.O. #:

Sampler: Haydar Azzouz

Quote #:

State where samples were collected: CA

For Compliance: Yes ☐ No ☒

Sample Identification	Collected Date	Collected Time	Grab	Composite	Matrix: Soil ☒ Sediment ☐ Tissue ☐	Water: Potable ☐ Ground ☐ Surface ☐ NPDES ☐	Other:	Total # of Containers	PFAs (EPA 537 MOD)											Remarks
OU1-Bldg 2-S-01-08	11/1/18	14:15	X		S			2	✓											
OU1-Bldg 2-S-01-12	11/1/18	14:18	X		S			2	ARCHIVE											ARCHIVE
OU1-Bldg 2-S-02-01	11/1/18	14:45	X		S			2	✓											
OU1-Bldg 2-S-02-03	11/1/18	14:57	X		S			2	✓											
OU1-Bldg 2-S-02-08	11/1/18	15:03	X		S			2	✓											
OU1-Bldg 2-S-02-11	11/1/18	15:12	X		S			2	ARCHIVE											ARCHIVE
OU1-Bldg 2-S-02-12	11/1/18	15:15	X		S			2	ARCHIVE											ARCHIVE
OU1-Bldg 27-S-01-01	11/1/18	15:40	X		S			2	✓											
OU1-Bldg 27-S-01-03	11/1/18	16:00	X		S			6	✓											MS/MSD
OU1-Bldg 27-S-01-07	11/1/18	16:05	X		S			2	✓											

Analysis Requested

Preservation and Filtration Codes

For Lab Use Only

FSC:

SCR#:

Preservation Codes

H=HCl T=Thiosulfate
N=HNO_3 B=NaOH
S=H_2SO_4 P=H_3PO_4
F=Field Filtered O=Other

Turnaround Time (TAT) Requested (please circle)

Standard Rush

(Rush TAT is subject to laboratory approval and surcharge.)

Requested TAT in business days:

E-mail address: jmacneill@neiaw.com

Data Package Options (circle if required)

Type I (EPA Level 3 Equivalent/non-CLP) Type VI (Raw Data Only)

Type III (Reduced non-CLP) NJ DKQP TX TRRP-13

NYSDEC Category A or B MA MCP CT RCP

Relinquished by	Date	Time	Received by	Date	Time
[signature]	11/5/18	1700	[signature]		
			[signature]	11-6-18	1035

EDD Required? Yes No

If yes, format: NEBO, EDF

Site-Specific QC (MS/MSD/Dup)? Yes No

(If yes, indicate QC sample and submit triplicate sample volume.)

Relinquished by Commercial Carrier:

UPS _____ FedEx _____ Other _____

Temperature upon receipt 0.4 2.8°C

Environmental Analysis Request/Chain of Custody

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Acct. # 43806 Group # 2006158 Sample # 9808078-08

COC # 568581

Client Information

Client: GCE

Acct. #:

Project Name/#: 146-C719-006 Barstow Site Inspections

PWSID #:

Project Manager: Eric Rider

P.O. #:

Sampler: Haydar Azzouz

Quote #:

State where samples were collected: CA

For Compliance: Yes ☐ No ☒

Matrix

☐ Tissue ☐ Sediment ☒ Soil

☐ Ground ☐ Potable ☐ Surface ☐ NPDES Water

Other: ____

Analysis Requested

Preservation and Filtration Codes

For Lab Use Only

FSC: ____

SCR#: ____

Preservation Codes

H=HCl T=Thiosulfate
N=HNO_3 B=NaOH
S=H_2SO_4 P=H_3PO_4
F=Field Filtered O=Other

Sample Identification	Collected Date	Collected Time	Grab	Composite	Soil/Sediment	Total # of Containers	PFAS (EPA 537 MOD)	Remarks
OU1-Bldg 27-S-01-11	11/1/18	16:08	X		S	2	✓	
OU1-Bldg 27-S-01-12	11/1/18	16:10	X		S	2	ARCHIVE	ARCHIVE
OU1-Bldg 27-S-02-01	11/1/18	16:39	X		S	2	✓	
OU1-Bldg 27-S-02-03	11/1/18	17:00	X		S	2	✓	
OU1-Bldg 27-S-02-06	11/1/18	17:07	X		S	2	✓	
OU1-Bldg 27-S-02-08	11/1/18	17:41	X		S	2	✓	
OU1-Bldg 27-S-02-10	11/1/18	17:14	X		S	2	ARCHIVE	ARCHIVE
OU1-Bldg 27-S-02-12	11/1/18	17:16	X		S	2	ARCHIVE	ARCHIVE
OU1-Bldg 50-S-01-01	11/1/18	17:34	X		S	2	✓	
OU1-Bldg 50-S-01-03	11/1/18	17:38	X		S	2	✓	

Turnaround Time (TAT) Requested (please circle)

Standard Rush

(Rush TAT is subject to laboratory approval and surcharge.)

Requested TAT in business days: ____

E-mail address: jmacneill@neiaw.com

Data Package Options (circle if required)

Type I (EPA Level 3 Equivalent/non-CLP) Type VI (Raw Data Only)

Type III (Reduced non-CLP) NJ DKQP TX TRRP-13

NYSDEC Category A or B MA MCP CT RCP

Relinquished by	Date	Time	Received by	Date	Time
[signature]	11/5/18	1700			
			[signature]	11-6-18	1025

EDD Required? Yes No

If yes, format: NEIBO, EDF

Site-Specific QC (MS/MSD/Dup)? Yes No

(If yes, indicate QC sample and submit triplicate sample volume.)

Relinquished by Commercial Carrier:

UPS ____ FedEx ____ Other ____

Temperature upon receipt 0.9-2.8 °C

Environmental Analysis Request/Chain of Custody

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Acct. # 430010 Group # 2006158 Sample # 9885070-08

COC # 568582

Client Information

Client: GCE

Acct. #:

Project Name/#: 14G-C919-006 Barstow Site Inspections

PWSID #:

Project Manager: Eric Rider

P.O. #:

Sampler: Haydar Azzouz

Quote #:

State where samples were collected: CA

For Compliance: Yes ☐ No ☒

For Lab Use Only

FSC:

SCR#:

Preservation Codes

H=HCl T=Thiosulfate
N=HNO_3 B=NaOH
S=H_2SO_4 P=H_3PO_4
F=Field Filtered O=Other

Sample Identification	Collected Date	Collected Time	Grab	Composite	Matrix: Soil ☒ Sediment ☐ Tissue ☐	Water: Potable ☐ Ground ☐ Surface ☐ NPDES ☐ Other:	Total # of Containers	PFAs (EPA 537 MOD)	Remarks
OU1-Bldg 50-S-01-05	11/1/18	17:44	X		S		2	✓	
OU1-Bldg 50-S-01-08	11/1/18	17:46	X		S		2	✓	
OU1-Bldg 50-S-01-10	11/1/18	17:50	X		S		2	ARCHIVE	ARCHIVE
OU1-Bldg 50-S-01-12	11/1/18	17:52	X		S		2	ARCHIVE	ARCHIVE
OU1-Bldg 50-S-02-01	11/1/18	18:09	X		S		2	✓	
OU1-Bldg 50-S-02-03	11/1/18	18:13	X		S		2	✓	
OU1-Bldg 50-S-02-08	11/1/18	18:16	X		S		2	✓	
OU1-Bldg 50-S-02-10	11/1/18	18:20	X		S		2	ARCHIVE	ARCHIVE
OU1-Bldg 50-S-02-12	11/1/18	18:24	X		S		2	ARCHIVE	ARCHIVE
~~OU1-Bldg 50-S-03~~	~~11/1/18~~		~~X~~		~~S~~		~~2~~		

Turnaround Time (TAT) Requested (please circle)

Standard Rush

(Rush TAT is subject to laboratory approval and surcharge.)

Requested TAT in business days: _____

E-mail address: jmacneill@neiaw.com

Data Package Options (circle if required)

Type I (EPA Level 3 Equivalent/non-CLP) Type VI (Raw Data Only)

Type III (Reduced non-CLP) NJ DKQP TX TRRP-13

NYSDEC Category A or B MA MCP CT RCP

Relinquished by	Date	Time	Received by	Date	Time
[signature]	11/5/18	1700			

EDD Required? Yes No

If yes, format: NEIBO, EDF

Site-Specific QC (MS/MSD/Dup)? Yes No

(If yes, indicate QC sample and submit triplicate sample volume.)

Relinquished by Commercial Carrier:

UPS _____ FedEx _____ Other _____

Temperature upon receipt 0.9-2.8 °C

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Sample Administration Receipt Documentation Log

Doc Log ID: 232250

Group Number(s): 2006158

Client: GCE

Delivery and Receipt Information

Delivery Method:	Fed Ex	Arrival Timestamp:	11/06/2018 10:35
Number of Packages:	4	Number of Projects:	4
State/Province of Origin:	CA		

Arrival Condition Summary

Shipping Container Sealed:	Yes	Sample IDs on COC match Containers:	Yes
Custody Seal Present:	Yes	Sample Date/Times match COC:	Yes
Custody Seal Intact:	Yes	VOA Vial Headspace ≥ 6mm:	N/A
Samples Chilled:	Yes	Total Trip Blank Qty:	0
Paperwork Enclosed:	Yes	Air Quality Samples Present:	No
Samples Intact:	Yes		
Missing Samples:	No		
Extra Samples:	No		
Discrepancy in Container Qty on COC:	No		

Unpacked by Melvin Sanchez (8943) at 17:10 on 11/06/2018

Samples Chilled Details

Thermometer Types: DT = Digital (Temp. Bottle) IR = Infrared (Surface Temp) All Temperatures in °C.

Cooler #	Thermometer ID	Corrected Temp	Therm. Type	Ice Type	Ice Present?	Ice Container	Elevated Temp?
1	DT131	1.1	DT	Wet	Y	Bagged	N
2	DT131	1.4	DT	Wet	Y	Bagged	N
3	DT131	2.8	DT	Wet	Y	Bagged	N
4	DT131	0.9	DT	Wet	Y	Bagged	N

2425 New Holland Pike
Lancaster, PA 17605-2425
T | 717-656-2300
F | 717-656-2681
www.LancasterLabs.com

Explanation of Symbols and Abbreviations

The following defines common symbols and abbreviations used in reporting technical data:

BMQL	Below Minimum Quantitation Level	**mL**	milliliter(s)
C	degrees Celsius	**MPN**	Most Probable Number
cfu	colony forming units	**N.D.**	non-detect
CP Units	cobalt-chloroplatinate units	**ng**	nanogram(s)
F	degrees Fahrenheit	**NTU**	nephelometric turbidity units
g	gram(s)	**pg/L**	picogram/liter
IU	International Units	**RL**	Reporting Limit
kg	kilogram(s)	**TNTC**	Too Numerous To Count
L	liter(s)	**µg**	microgram(s)
lb.	pound(s)	**µL**	microliter(s)
m3	cubic meter(s)	**umhos/cm**	micromhos/cm
meq	milliequivalents	**MCL**	Maximum Contamination Limit
mg	milligram(s)		

<	less than
>	greater than
ppm	parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg) or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter per liter of gas.
ppb	parts per billion
Dry weight basis	Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.

Analytical test results meet all requirements of the associated regulatory program (i.e., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis.

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff.

This report shall not be reproduced except in full, without the written approval of the laboratory.

Times are local to the area of activity. Parameters listed in the 40 CFR Part 136 Table II as “analyze immediately” are not performed within 15 minutes.

WARRANTY AND LIMITS OF LIABILITY - In accepting analytical work, we warrant the accuracy of test results for the sample as submitted. THE FOREGOING EXPRESS WARRANTY IS EXCLUSIVE AND IS GIVEN IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED. WE DISCLAIM ANY OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING A WARRANTY OF FITNESS FOR PARTICULAR PURPOSE AND WARRANTY OF MERCHANTABILITY. IN NO EVENT SHALL EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL, LLC BE LIABLE FOR INDIRECT, SPECIAL, CONSEQUENTIAL, OR INCIDENTAL DAMAGES INCLUDING, BUT NOT LIMITED TO, DAMAGES FOR LOSS OF PROFIT OR GOODWILL REGARDLESS OF (A) THE NEGLIGENCE (EITHER SOLE OR CONCURRENT) OF EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL AND (B) WHETHER EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL HAS BEEN INFORMED OF THE POSSIBILITY OF SUCH DAMAGES. We accept no legal responsibility for the purposes for which the client uses the test results. No purchase order or other order for work shall be accepted by Eurofins Lancaster Laboratories Environmental which includes any conditions that vary from the Standard Terms and Conditions, and Eurofins Lancaster Laboratories Environmental hereby objects to any conflicting terms contained in any acceptance or order submitted by client.

Data Qualifiers

Qualifier	Definition
C	Result confirmed by reanalysis
D1	Indicates for dual column analyses that the result is reported from column 1
D2	Indicates for dual column analyses that the result is reported from column 2
E	Concentration exceeds the calibration range
K1	Initial Calibration Blank is above the QC limit and the sample result is ND
K2	Continuing Calibration Blank is above the QC limit and the sample result is ND
K3	Initial Calibration Verification is above the QC limit and the sample result is ND
K4	Continuing Calibration Verification is above the QC limit and the sample result is ND
J (or G, I, X)	Estimated value >= the Method Detection Limit (MDL or DL) and < the Limit of Quantitation (LOQ or RL)
P	Concentration difference between the primary and confirmation column >40%. The lower result is reported.
P^	Concentration difference between the primary and confirmation column > 40%. The higher result is reported.
U	Analyte was not detected at the value indicated
V	Concentration difference between the primary and confirmation column >100%. The reporting limit is raised due to this disparity and evident interference.
W	The dissolved oxygen uptake for the unseeded blank is greater than 0.20 mg/L.
Z	Laboratory Defined - see analysis report

Additional Organic and Inorganic CLP qualifiers may be used with Form 1 reports as defined by the CLP methods.
Qualifiers specific to Dioxin/Furans and PCB Congeners are detailed on the individual Analysis Report.

PFAS by LC/MS/MS Data

Case Narrative/Conformance Summary

PFAS by LC/MS/MS

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Case Narrative/Conformance Summary

CLIENT: Gutierrez Canales Engineering
SDG: BSI15

PFAS Group

Fraction: PFAS by LC/MS/MS

Sample #	Client ID	Matrix Liquid	Matrix Solid	DF	Comments
9885078	OU1-Bldg2-S-01-08		X	1	
9885080	OU1-Bldg2-S-02-01		X	1	
9885081	OU1-Bldg2-S-02-03		X	1	
9885082	OU1-Bldg2-S-02-08		X	1	
9885085	OU1-Bldg27-S-01-01		X	1	
9885086	OU1-Bldg27-S-01-03		X	1	Unspiked
9885087	OU1-Bldg27-S-01-03 MS		X	1	Matrix Spike
9885088	OU1-Bldg27-S-01-03 MSD		X	1	Matrix Spike Duplicate
9885089	OU1-Bldg27-S-01-07		X	1	
9885090	OU1-Bldg27-S-01-11		X	1	
9885091	OU1-Bldg27-S-01-12		X	1	
9885092	OU1-Bldg27-S-02-01		X	1	
9885093	OU1-Bldg27-S-02-03		X	1	
9885094	OU1-Bldg27-S-02-06		X	1	
9885095	OU1-Bldg27-S-02-08		X	1	
9885098	OU1-Bldg50-S-01-01		X	1	
9885099	OU1-Bldg50-S-01-03		X	1	
9885100	OU1-Bldg50-S-01-05		X	1	
9885101	OU1-Bldg50-S-01-08		X	1	
9885104	OU1-Bldg50-S-02-01		X	1	
9885105	OU1-Bldg50-S-02-03		X	1	
9885106	OU1-Bldg50-S-02-08		X	1	

All analyses have been performed in accordance with DOD QSM Version 5.0 unless otherwise noted below.
See QC Reference List for Associated Batch QC Samples

SAMPLE RECEIPT:

Samples were received in good condition and within temperature requirements.

HOLDING TIME:

All holding times were met.

PREPARATION/EXTRACTION/DIGESTION:

No problems were encountered.

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Case Narrative/Conformance Summary

CLIENT: Gutierrez Canales Engineering
SDG: BSI15

PFAS Group

Fraction: PFAS by LC/MS/MS

CALIBRATION/STANDARDIZATION:

All criteria were met.

QUALITY CONTROL AND NONCONFORMANCE SUMMARY:

MS/MSD

Batch#: 18316011 (Sample number(s): 9885080-9885082, 9885085-9885090, 9885092-9885095, 9885098-9885101, 9885104-9885106, UNSPK: 9885086)
The relative percent difference(s) for the following analyte(s) in the MS/MSD is outside the acceptance window: NMeFOSAA, Perfluoro-octanesulfonate
The recovery(ies) for the following analyte(s) in the MS exceeded the acceptance window indicating a positive bias: Perfluorononanoic acid
The recovery(ies) for the following analyte(s) in the MSD were below the acceptance window: Perfluoro-octanesulfonate

Surrogate

Surrogate recoveries that are noncompliant are confirmed unless attributed to a dilution or otherwise noted.

Batch#: 18316011 (Sample number(s): 9885080-9885082, 9885085-9885090, 9885092-9885095, 9885098-9885101, 9885104-9885106, UNSPK: 9885086)
The recovery(ies) for the following surrogate(s) were below the acceptance window: d3-NMeFOSAA (9885086 UNSPK, 9885087, 9885088), d5-NEtFOSAA (9885086 UNSPK, 9885087, 9885088)

(Sample number(s): 9885086: Analysis: 14478)
The recovery for labeled compounds used as extraction standards d3-NMeFOSAA and d5-NEtFOSAA is outside of QC acceptance limits as noted on the QC Summary.
The recovery for labeled compounds d3-NMeFOSAA and d5-NEtFOSAA is also outside of QC acceptance limits in the associated matrix spike and matrix spike duplicate samples, indicating a matrix effect.

(Sample number(s): 9885087: Analysis: 14478)
The recovery for labeled compounds used as extraction standards d3-NMeFOSAA and d5-NEtFOSAA is outside of QC acceptance limits as noted on the QC Summary.
The recovery for labeled compounds d3-NMeFOSAA and d5-NEtFOSAA is also outside of QC acceptance limits in the associated background and matrix spike duplicate samples, indicating a matrix effect.

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Case Narrative/Conformance Summary

CLIENT: Gutierrez Canales Engineering
SDG: BSI15

PFAS Group

Fraction: PFAS by LC/MS/MS

(Sample number(s): 9885088: Analysis: 14478)
The recovery for labeled compounds used as extraction standards d3-NMeFOSAA and d5-NEtFOSAA is outside of QC acceptance limits as noted on the QC Summary.
The recovery for labeled compounds d3-NMeFOSAA and d5-NEtFOSAA is also outside of QC acceptance limits in the associated background and matrix spike samples, indicating a matrix effect.

SAMPLE ANALYSIS:

No problems were encountered with the analysis of the samples.

Abbreviation Key

UNSPK = Unspiked (for MS/MSD)	LOQ = Limit of Quantitation
+MS = Matrix Spike	MDL = Method Detection Limit
MSD = Matrix Spike Duplicate	ND = Not Detected
BKG = Background (for Duplicate)	J = Estimated Value
D = Duplicate (DUP)	E= out of calibration range
LCS = Lab Control Sample	RE = Repreparation/Reanalysis
LCSD = Lab Control Sample Duplicate	* = Out of Specification

Quality Control and Calibration Summary Forms

PFAS by LC/MS/MS

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Quality Control Reference List
PFAS Group

CLIENT: Gutierrez Canales Engineering
SDG: BSI15

Fraction: PFAS by LC/MS/MS

Analysis	Batch Number	Sample Number	Analysis Date
PFAS in Soil by LC/MS/MS-DoD	18316011	BLK316011B	11/13/2018 16:56
		LCS316011Q	11/13/2018 17:05
		9885080	11/13/2018 17:14
		9885081	11/13/2018 17:23
		9885082	11/13/2018 17:32
		9885085	11/13/2018 17:41
		9885086 UNSPK	11/13/2018 17:50
		9885087 MS	11/13/2018 17:59
		9885088 MSD	11/13/2018 18:08
		9885089	11/13/2018 18:17
		9885090	11/13/2018 18:35
		9885092	11/13/2018 18:44
		9885093	11/13/2018 18:53
		9885094	11/13/2018 19:02
		9885095	11/13/2018 19:11
		9885098	11/13/2018 19:20
		9885099	11/13/2018 19:29
		9885100	11/13/2018 19:38
		9885101	11/13/2018 19:47
		9885104	11/13/2018 19:56
		9885105	11/13/2018 20:14
		9885106	11/13/2018 20:23
PFAS in Soil by LC/MS/MS-DoD	18316029	BLK316029B	11/13/2018 23:06
		LCS316029Q	11/13/2018 23:15
		9885078	11/13/2018 23:24
PFAS in Soil by LC/MS/MS-DoD	18332003	BLK332003B	11/29/2018 18:04
		LCS332003Q	11/29/2018 18:13
		9885091	11/29/2018 19:43

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Quality Control Summary
Method Blank
PFAS Group
SDG: BSI15
Matrix: SOLID

Fraction: PFAS by LC/MS/MS

18316011 / BLK316011B **Analyte**	**Analysis Date**	**Blank Results**	**Units**	**DL**	**LOD**	**LOQ**
Perfluorooctanoic acid	11/13/18	N.D.	ng/g	0.20	0.68	0.80
Perfluorononanoic acid	11/13/18	N.D.	ng/g	0.20	0.68	0.80
Perfluorodecanoic acid	11/13/18	N.D.	ng/g	0.30	0.68	1.0
Perfluoroundecanoic acid	11/13/18	N.D.	ng/g	0.20	0.68	0.80
Perfluorododecanoic acid	11/13/18	N.D.	ng/g	0.20	0.68	0.80
Perfluorotridecanoic acid	11/13/18	N.D.	ng/g	0.20	0.68	0.80
Perfluorotetradecanoic acid	11/13/18	N.D.	ng/g	0.20	0.68	0.80
Perfluorohexanoic acid	11/13/18	N.D.	ng/g	0.20	0.68	0.80
Perfluoroheptanoic acid	11/13/18	N.D.	ng/g	0.20	0.68	0.80
Perfluorobutanesulfonate	11/13/18	N.D.	ng/g	0.20	0.60	0.80
Perfluorohexanesulfonate	11/13/18	N.D.	ng/g	0.20	0.64	0.80
Perfluoro-octanesulfonate	11/13/18	N.D.	ng/g	0.20	0.65	0.80
NEtFOSAA	11/13/18	N.D.	ng/g	0.50	2.0	3.0
NMeFOSAA	11/13/18	N.D.	ng/g	0.50	2.0	3.0

18316029 / BLK316029B **Analyte**	**Analysis Date**	**Blank Results**	**Units**	**DL**	**LOD**	**LOQ**
Perfluorooctanoic acid	11/13/18	N.D.	ng/g	0.20	0.68	0.80
Perfluorononanoic acid	11/13/18	N.D.	ng/g	0.20	0.68	0.80
Perfluorodecanoic acid	11/13/18	N.D.	ng/g	0.30	0.68	1.0
Perfluoroundecanoic acid	11/13/18	N.D.	ng/g	0.20	0.68	0.80
Perfluorododecanoic acid	11/13/18	N.D.	ng/g	0.20	0.68	0.80
Perfluorotridecanoic acid	11/13/18	N.D.	ng/g	0.20	0.68	0.80
Perfluorotetradecanoic acid	11/13/18	N.D.	ng/g	0.20	0.68	0.80
Perfluorohexanoic acid	11/13/18	N.D.	ng/g	0.20	0.68	0.80
Perfluoroheptanoic acid	11/13/18	N.D.	ng/g	0.20	0.68	0.80
Perfluorobutanesulfonate	11/13/18	N.D.	ng/g	0.20	0.60	0.80
Perfluorohexanesulfonate	11/13/18	N.D.	ng/g	0.20	0.64	0.80
Perfluoro-octanesulfonate	11/13/18	N.D.	ng/g	0.20	0.65	0.80
NEtFOSAA	11/13/18	N.D.	ng/g	0.50	2.0	3.0
NMeFOSAA	11/13/18	N.D.	ng/g	0.50	2.0	3.0

18332003 / BLK332003B **Analyte**	**Analysis Date**	**Blank Results**	**Units**	**DL**	**LOD**	**LOQ**
Perfluorooctanoic acid	11/29/18	N.D.	ng/g	0.20	0.68	0.80
Perfluorononanoic acid	11/29/18	N.D.	ng/g	0.20	0.68	0.80
Perfluorodecanoic acid	11/29/18	N.D.	ng/g	0.30	0.68	1.0
Perfluoroundecanoic acid	11/29/18	N.D.	ng/g	0.20	0.68	0.80
Perfluorododecanoic acid	11/29/18	N.D.	ng/g	0.20	0.68	0.80
Perfluorotridecanoic acid	11/29/18	N.D.	ng/g	0.20	0.68	0.80
Perfluorotetradecanoic acid	11/29/18	N.D.	ng/g	0.20	0.68	0.80
Perfluorohexanoic acid	11/29/18	N.D.	ng/g	0.20	0.68	0.80
Perfluoroheptanoic acid	11/29/18	N.D.	ng/g	0.20	0.68	0.80
Perfluorobutanesulfonate	11/29/18	N.D.	ng/g	0.20	0.60	0.80
Perfluorohexanesulfonate	11/29/18	N.D.	ng/g	0.20	0.64	0.80

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Quality Control Summary
Method Blank
PFAS Group
SDG: BSI15
Matrix: SOLID

Fraction: PFAS by LC/MS/MS

18332003 / BLK332003B **Analyte**	**Analysis Date**	**Blank Results**	**Units**	**DL**	**LOD**	**LOQ**
Perfluoro-octanesulfonate	11/29/18	N.D.	ng/g	0.20	0.65	0.80
NEtFOSAA	11/29/18	N.D.	ng/g	0.50	2.0	3.0
NMeFOSAA	11/29/18	N.D.	ng/g	0.50	2.0	3.0

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FORM 02A
SURROGATES
LC/MS/MS

SDG No.: BSI15
Matrix: SOIL

18316011		13C2-PFDODA	13C2-PFTEDA	13C3-PFBS	13C3-PFHXS	13C4-PFHPA
	Limits	50-150	50-150	50-150	50-150	50-150
LAB SAMPLE ID	**DATE/TIME**	% Recovery	% Recovery	% Recovery	% Recovery	% Recovery
BLK316011	11/13/18 16:56	70	63	66	70	70
LCS316011	11/13/18 17:05	78	69	77	77	72
9885080	11/13/18 17:14	68	65	65	66	68
9885081	11/13/18 17:23	77	75	72	75	75
9885082	11/13/18 17:32	80	74	74	77	72
9885085	11/13/18 17:41	74	69	73	72	74
9885086	11/13/18 17:50	68	63	70	71	74
9885087MS	11/13/18 17:59	69	70	71	71	73
9885088MSD	11/13/18 18:08	68	67	70	70	69
9885089	11/13/18 18:17	67	69	67	69	73
9885090	11/13/18 18:35	76	72	77	76	75
9885092	11/13/18 18:44	74	69	73	73	75
9885093	11/13/18 18:53	65	60	64	62	65
9885094	11/13/18 19:02	77	75	74	75	77
9885095	11/13/18 19:11	76	72	72	72	72
9885098	11/13/18 19:20	80	77	76	67	72
9885099	11/13/18 19:29	57	57	62	68	71
9885100	11/13/18 19:38	76	74	73	70	72
9885101	11/13/18 19:47	67	65	65	77	71
9885104	11/13/18 19:56	72	71	70	73	72

* Outside QC Limits

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FORM 02A
SURROGATES
LC/MS/MS

SDG No.: BSI15
Matrix: SOIL

18316011		13C2-PFDODA	13C2-PFTEDA	13C3-PFBS	13C3-PFHXS	13C4-PFHPA
	Limits	50-150	50-150	50-150	50-150	50-150
LAB SAMPLE ID	**DATE/TIME**	% Recovery	% Recovery	% Recovery	% Recovery	% Recovery
9885105	11/13/18 20:14	79	75	78	80	75
9885106	11/13/18 20:23	78	74	74	78	81

* Outside QC Limits

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FORM 02A
SURROGATES
LC/MS/MS

SDG No.: BSI15
Matrix: SOIL

18316029		13C2-PFDODA	13C2-PFTEDA	13C3-PFBS	13C3-PFHXS	13C4-PFHPA
	Limits	50-150	50-150	50-150	50-150	50-150
LAB SAMPLE ID	**DATE/TIME**	% Recovery	% Recovery	% Recovery	% Recovery	% Recovery
BLK316029	11/13/18 23:06	86	81	87	91	94
LCS316029	11/13/18 23:15	84	83	83	85	87
9885078	11/13/18 23:24	101	94	98	98	101

* Outside QC Limits

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FORM 02A
SURROGATES
LC/MS/MS

SDG No.: BSI15
Matrix: SOIL

18316011		13C5-PFHXA	13C6-PFDA	13C7-PFUNDA	13C8-PFOA	13C8-PFOS
	Limits	50-150	50-150	50-150	50-150	50-150
LAB SAMPLE ID	**DATE/TIME**	% Recovery	% Recovery	% Recovery	% Recovery	% Recovery
BLK316011	11/13/18 16:56	70	72	75	73	71
LCS316011	11/13/18 17:05	77	74	79	81	80
9885080	11/13/18 17:14	69	68	72	76	72
9885081	11/13/18 17:23	79	77	81	83	78
9885082	11/13/18 17:32	78	80	77	84	78
9885085	11/13/18 17:41	75	73	78	81	81
9885086	11/13/18 17:50	74	73	70	78	71
9885087MS	11/13/18 17:59	71	74	76	74	74
9885088MSD	11/13/18 18:08	74	71	73	75	71
9885089	11/13/18 18:17	72	70	69	77	72
9885090	11/13/18 18:35	78	74	76	80	76
9885092	11/13/18 18:44	73	74	75	79	76
9885093	11/13/18 18:53	65	68	69	69	69
9885094	11/13/18 19:02	78	80	81	85	78
9885095	11/13/18 19:11	76	72	76	77	73
9885098	11/13/18 19:20	75	80	83	77	79
9885099	11/13/18 19:29	71	59	61	75	65
9885100	11/13/18 19:38	73	75	82	76	79
9885101	11/13/18 19:47	75	73	75	77	70
9885104	11/13/18 19:56	77	74	73	79	71

* Outside QC Limits

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FORM 02A
SURROGATES
LC/MS/MS

SDG No.: BSI15
Matrix: SOIL

18316011		13C5-PFHXA	13C6-PFDA	13C7-PFUNDA	13C8-PFOA	13C8-PFOS
	Limits	50-150	50-150	50-150	50-150	50-150
LAB SAMPLE ID	**DATE/TIME**	% Recovery	% Recovery	% Recovery	% Recovery	% Recovery
9885105	11/13/18 20:14	81	84	85	82	81
9885106	11/13/18 20:23	80	77	79	84	80

* Outside QC Limits

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FORM 02A
SURROGATES
LC/MS/MS

SDG No.: BSI15
Matrix: SOIL

18316029		13C5-PFHXA	13C6-PFDA	13C7-PFUNDA	13C8-PFOA	13C8-PFOS
	Limits	50-150	50-150	50-150	50-150	50-150
LAB SAMPLE ID	**DATE/TIME**	% Recovery	% Recovery	% Recovery	% Recovery	% Recovery
BLK316029	11/13/18 23:06	93	89	89	97	93
LCS316029	11/13/18 23:15	88	89	87	93	91
9885078	11/13/18 23:24	103	107	107	110	104

* Outside QC Limits

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FORM 02A
SURROGATES
LC/MS/MS

SDG No.: BSI15
Matrix: SOIL

18316011		13C9-PFNA	D3-NMEFOSAA	D5-NETFOSAA
	Limits	50-150	50-150	50-150
LAB SAMPLE ID	**DATE/TIME**	% Recovery	% Recovery	% Recovery
BLK316011	11/13/18 16:56	74	70	63
LCS316011	11/13/18 17:05	83	72	66
9885080	11/13/18 17:14	71	75	66
9885081	11/13/18 17:23	78	77	68
9885082	11/13/18 17:32	79	79	65
9885085	11/13/18 17:41	81	58	54
9885086	11/13/18 17:50	73	43 *	40 *
9885087MS	11/13/18 17:59	74	37 *	44 *
9885088MSD	11/13/18 18:08	74	43 *	47 *
9885089	11/13/18 18:17	75	63	60
9885090	11/13/18 18:35	80	74	61
9885092	11/13/18 18:44	76	55	55
9885093	11/13/18 18:53	68	50	53
9885094	11/13/18 19:02	83	75	75
9885095	11/13/18 19:11	73	75	69
9885098	11/13/18 19:20	85	81	73
9885099	11/13/18 19:29	67	63	51
9885100	11/13/18 19:38	80	75	69
9885101	11/13/18 19:47	75	69	62
9885104	11/13/18 19:56	73	73	63

* Outside QC Limits

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FORM 02A
SURROGATES
LC/MS/MS

SDG No.: BSI15
Matrix: SOIL

18316011		13C9-PFNA	D3-NMEFOSAA	D5-NETFOSAA		
	Limits	50-150	50-150	50-150		
LAB SAMPLE ID	**DATE/TIME**	% Recovery	% Recovery	% Recovery	% Recovery	% Recovery
9885105	11/13/18 20:14	82	90	73		
9885106	11/13/18 20:23	82	86	72		

* Outside QC Limits

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FORM 02A
SURROGATES
LC/MS/MS

SDG No.: BSI15
Matrix: SOIL

18316029		13C9-PFNA	D3-NMEFOSAA	D5-NETFOSAA
	Limits	50-150	50-150	50-150
LAB SAMPLE ID	**DATE/TIME**	% Recovery	% Recovery	% Recovery
BLK316029	11/13/18 23:06	98	84	79
LCS316029	11/13/18 23:15	90	102	88
9885078	11/13/18 23:24	110	110	98

* Outside QC Limits

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FORM 02A
SURROGATES
LC/MS/MS

SDG No.: BSI15
Matrix: SOIL

18332003		13C2-PFDODA	13C2-PFTEDA	13C3-PFBS	13C3-PFHXS	13C4-PFHPA
	Limits	50-150	50-150	50-150	50-150	50-150
LAB SAMPLE ID	**DATE/TIME**	% Recovery	% Recovery	% Recovery	% Recovery	% Recovery
BLK332003	11/29/18 18:04	103	95	94	111	100
LCS332003	11/29/18 18:13	84	82	79	94	82
9885091	11/29/18 19:43	80	75	84	88	78

* Outside QC Limits

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FORM 02A
SURROGATES
LC/MS/MS

SDG No.: BSI15
Matrix: SOIL

18332003		13C5-PFHXA	13C6-PFDA	13C7-PFUNDA	13C8-PFOA	13C8-PFOS
	Limits	50-150	50-150	50-150	50-150	50-150
LAB SAMPLE ID	**DATE/TIME**	% Recovery	% Recovery	% Recovery	% Recovery	% Recovery
BLK332003	11/29/18 18:04	102	103	104	105	97
LCS332003	11/29/18 18:13	82	85	88	91	85
9885091	11/29/18 19:43	76	85	83	85	87

* Outside QC Limits

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FORM 02A
SURROGATES
LC/MS/MS

SDG No.: BSI15
Matrix: SOIL

18332003		13C9-PFNA	D3-NMEFOSAA	D5-NETFOSAA
	Limits	50-150	50-150	50-150
LAB SAMPLE ID	**DATE/TIME**	% Recovery	% Recovery	% Recovery
BLK332003	11/29/18 18:04	91	131	104
LCS332003	11/29/18 18:13	74	106	94
9885091	11/29/18 19:43	80	92	84

* Outside QC Limits

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Quality Control Summary
Matrix Spike/Matrix Spike Duplicate

SDG: BSI15
Matrix: SOLID

PFAS Group
Fraction: PFAS by LC/MS/MS

UNSPK: 9885086 MS: 9885087 MSD: 9885088 **Analyte**	Batch: **18316011** (Sample number(s): 9885080-9885082, 9885085-9885090, 9885092-9885095, 9885098-9885101, 9885104-9885106)								
	Spike Added ng/g MS/MSD	**Unspiked Conc ng/g**	**MS Conc ng/g**	**MSD Conc ng/g**	**MS %Rec**	**MSD %Rec**	**%Rec Limits**	**%RPD**	**%RPD Limits**
Perfluorooctanoic acid	1.25 / 1.32	N.D.	1.49	1.53	120	116	70-130	3	30
Perfluorononanoic acid	1.25 / 1.32	N.D.	1.65	1.51	132 *	114	70-130	9	30
Perfluorodecanoic acid	1.25 / 1.32	N.D.	1.46	1.37	117	103	70-130	6	30
Perfluoroundecanoic acid	1.25 / 1.32	N.D.	1.36	1.36	109	103	70-130	0	30
Perfluorododecanoic acid	1.25 / 1.32	N.D.	1.35	1.38	108	105	70-130	2	30
Perfluorotridecanoic acid	1.25 / 1.32	N.D.	1.45	1.59	116	121	70-130	9	30
Perfluorotetradecanoic acid	1.25 / 1.32	N.D.	1.36	1.42	109	108	70-130	4	30
Perfluorohexanoic acid	1.25 / 1.32	N.D.	1.50	1.45	120	110	70-130	3	30
Perfluoroheptanoic acid	1.25 / 1.32	N.D.	1.54	1.56	124	118	70-130	1	30
Perfluorobutanesulfonate	1.11 / 1.17	N.D.	1.16	1.19	105	102	70-130	3	30
Perfluorohexanesulfonate	1.18 / 1.25	N.D.	1.28	1.26	108	101	70-130	1	30
Perfluoro-octanesulfonate	1.19 / 1.26	3.87	4.84	2.82	82	-82 *	70-130	53 *	30
NEtFOSAA	1.25 / 1.32	N.D.	1.31 J	1.54 J	105	117	70-130	16	30
NMeFOSAA	1.25 / 1.32	N.D.	1.41 J	1.02 J	113	77	70-130	32 *	30

Comments:
(2) The unspiked sample result is greater than four times the spike added.
* = Out of Specification

Results are being reported on an as received basis.

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Quality Control Summary
Laboratory Control Standard (LCS)
Laboratory Control Standard Duplicate(LCSD)

SDG: BSI15
Matrix: SOLID

PFAS Group
Fraction: PFAS by LC/MS/MS

LCS: LCS316011Q	Batch: **18316011** (Sample number(s): 9885080-9885082, 9885085-9885090, 9885092-9885095, 9885098-9885101, 9885104-9885106)							
Analyte	**Spike Added ng/g**	**LCS Conc ng/g**	**LCSD Conc ng/g**	**LCS %Rec**	**LCSD %Rec**	**%Rec Limits**	**%RPD**	**%RPD Limits**
Perfluorooctanoic acid	1.36	1.46	NA	107	NA	70-130	NA	NA
Perfluorononanoic acid	1.36	1.49	NA	110	NA	70-130	NA	NA
Perfluorodecanoic acid	1.36	1.33	NA	98	NA	70-130	NA	NA
Perfluoroundecanoic acid	1.36	1.34	NA	98	NA	70-130	NA	NA
Perfluorododecanoic acid	1.36	1.26	NA	93	NA	70-130	NA	NA
Perfluorotridecanoic acid	1.36	1.49	NA	110	NA	70-130	NA	NA
Perfluorotetradecanoic acid	1.36	1.45	NA	107	NA	70-130	NA	NA
Perfluorohexanoic acid	1.36	1.51	NA	111	NA	70-130	NA	NA
Perfluoroheptanoic acid	1.36	1.57	NA	115	NA	70-130	NA	NA
Perfluorobutanesulfonate	1.20	1.17	NA	97	NA	70-130	NA	NA
Perfluorohexanesulfonate	1.29	1.20	NA	93	NA	70-130	NA	NA
Perfluoro-octanesulfonate	1.30	0.978	NA	75	NA	70-130	NA	NA
NEtFOSAA	1.36	1.27 J	NA	93	NA	70-130	NA	NA
NMeFOSAA	1.36	1.22 J	NA	90	NA	70-130	NA	NA

LCS: LCS316029Q	Batch: **18316029** (Sample number(s): 9885078)							
Analyte	**Spike Added ng/g**	**LCS Conc ng/g**	**LCSD Conc ng/g**	**LCS %Rec**	**LCSD %Rec**	**%Rec Limits**	**%RPD**	**%RPD Limits**
Perfluorooctanoic acid	1.36	1.47	NA	108	NA	70-130	NA	NA
Perfluorononanoic acid	1.36	1.50	NA	111	NA	70-130	NA	NA
Perfluorodecanoic acid	1.36	1.49	NA	109	NA	70-130	NA	NA
Perfluoroundecanoic acid	1.36	1.50	NA	110	NA	70-130	NA	NA
Perfluorododecanoic acid	1.36	1.50	NA	110	NA	70-130	NA	NA
Perfluorotridecanoic acid	1.36	1.56	NA	115	NA	70-130	NA	NA
Perfluorotetradecanoic acid	1.36	1.50	NA	110	NA	70-130	NA	NA
Perfluorohexanoic acid	1.36	1.48	NA	109	NA	70-130	NA	NA
Perfluoroheptanoic acid	1.36	1.59	NA	117	NA	70-130	NA	NA
Perfluorobutanesulfonate	1.20	1.26	NA	105	NA	70-130	NA	NA
Perfluorohexanesulfonate	1.29	1.31	NA	102	NA	70-130	NA	NA
Perfluoro-octanesulfonate	1.30	1.22	NA	94	NA	70-130	NA	NA
NEtFOSAA	1.36	1.60 J	NA	117	NA	70-130	NA	NA
NMeFOSAA	1.36	1.34 J	NA	99	NA	70-130	NA	NA

LCS: LCS332003Q	Batch: **18332003** (Sample number(s): 9885091)							
Analyte	**Spike Added ng/g**	**LCS Conc ng/g**	**LCSD Conc ng/g**	**LCS %Rec**	**LCSD %Rec**	**%Rec Limits**	**%RPD**	**%RPD Limits**
Perfluorooctanoic acid	1.36	1.15	NA	85	NA	70-130	NA	NA
Perfluorononanoic acid	1.36	1.31	NA	97	NA	70-130	NA	NA
Perfluorodecanoic acid	1.36	1.23	NA	90	NA	70-130	NA	NA

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Quality Control Summary
Laboratory Control Standard (LCS)
Laboratory Control Standard Duplicate(LCSD)

SDG: BSI15
Matrix: SOLID

PFAS Group
Fraction: PFAS by LC/MS/MS

LCS: LCS332003Q	Batch: **18332003** (Sample number(s): 9885091)							
Analyte	**Spike Added ng/g**	**LCS Conc ng/g**	**LCSD Conc ng/g**	**LCS %Rec**	**LCSD %Rec**	**%Rec Limits**	**%RPD**	**%RPD Limits**
Perfluoroundecanoic acid	1.36	1.35	NA	100	NA	70-130	NA	NA
Perfluorododecanoic acid	1.36	1.25	NA	92	NA	70-130	NA	NA
Perfluorotridecanoic acid	1.36	1.36	NA	100	NA	70-130	NA	NA
Perfluorotetradecanoic acid	1.36	1.26	NA	93	NA	70-130	NA	NA
Perfluorohexanoic acid	1.36	1.29	NA	95	NA	70-130	NA	NA
Perfluoroheptanoic acid	1.36	1.28	NA	94	NA	70-130	NA	NA
Perfluorobutanesulfonate	1.20	1.12	NA	93	NA	70-130	NA	NA
Perfluorohexanesulfonate	1.29	1.06	NA	82	NA	70-130	NA	NA
Perfluoro-octanesulfonate	1.30	0.910	NA	70	NA	70-130	NA	NA
NEtFOSAA	1.36	1.24 J	NA	91	NA	70-130	NA	NA
NMeFOSAA	1.36	1.13 J	NA	83	NA	70-130	NA	NA

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LOQ/MDL Summary
PFAS Group

SDG: BSI15

Fraction: PFAS by LC/MS/MS

14478: PFAS in Soil by LC/MS/MS-DoD Analyte Name	Default DL	Default LOD	Default LOQ	Units
Perfluorooctanoic acid	.2	.68	0.80	ng/g
Perfluorononanoic acid	.2	.68	0.80	ng/g
Perfluorodecanoic acid	.3	.68	1.0	ng/g
Perfluoroundecanoic acid	.2	.68	0.80	ng/g
Perfluorododecanoic acid	.2	.68	0.80	ng/g
Perfluorotridecanoic acid	.2	.68	0.80	ng/g
Perfluorotetradecanoic acid	.2	.68	0.80	ng/g
Perfluorohexanoic acid	.2	.68	0.80	ng/g
Perfluoroheptanoic acid	.2	.68	0.80	ng/g
Perfluorobutanesulfonate	.2	.6	0.80	ng/g
Perfluorohexanesulfonate	.2	.64	0.80	ng/g
Perfluoro-octanesulfonate	.2	.65	0.80	ng/g
NEtFOSAA	.5	2	3.0	ng/g
NMeFOSAA	.5	2	3.0	ng/g

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FORM 06
INITIAL CALIBRATION AREA RATIO SUMMARY
LC/MS/MS

SDG No.: BSI15

Instrument ID: 27631
Init. Calib. Date/Times: 11/12/2018 15:05 11/12/2018 16:00
Lab File Names: CAL1= 18NOV12DCAL-42.WIFF; CAL2= 18NOV12DCAL-43.WIFF; CAL3= 18NOV12DCAL-44.WIFF;
CAL4= 18NOV12DCAL-45.WIFF; CAL5= 18NOV12DCAL-46.WIFF; CAL6= 18NOV12DCAL-47.WIFF;
CAL7= 18NOV12DCAL-48.WIFF; CAL8= ;

Perfluorobutanoic acid	Area Ratio	Specified Amount	Calculated Amount	% Difference	Limit
CAL1	0.042	0.20	0.235	17.3	±30
CAL2	0.104	0.60	0.577	-3.8	±30
CAL3	0.413	2.00	2.291	14.5	±30
CAL4	1.471	8.00	8.148	1.9	±30
CAL5	3.863	20.00	21.403	7.0	±30
CAL6	9.099	50.00	50.404	0.8	±30
CAL7	17.644	100.00	97.743	-2.3	±30

Perfluoropentanoic acid	Area Ratio	Specified Amount	Calculated Amount	% Difference	Limit
CAL1	0.042	0.20	0.245	22.5	±30
CAL2	0.114	0.60	0.661	10.2	±30
CAL3	0.421	2.00	2.435	21.8	±30
CAL4	1.502	8.00	8.694	8.7	±30
CAL5	3.622	20.00	20.969	4.8	±30
CAL6	8.759	50.00	50.702	1.4	±30
CAL7	16.773	100.00	97.094	-2.9	±30

Perfluorobutanesulfonate	Area Ratio	Specified Amount	Calculated Amount	% Difference	Limit
CAL1	0.040	0.18	0.192	8.5	±30
CAL2	0.107	0.53	0.510	-4.0	±30
CAL3	0.404	1.77	1.921	8.5	±30
CAL4	1.452	7.08	6.906	-2.5	±30
CAL5	3.809	17.70	18.121	2.4	±30
CAL6	9.475	44.20	45.072	2.0	±30
CAL7	18.318	88.40	87.136	-1.4	±30

4:2 fluorotelomersulfonate	Area Ratio	Specified Amount	Calculated Amount	% Difference	Limit
CAL1	0.071	0.19	0.192	2.5	±30
CAL2	0.191	0.56	0.518	-7.5	±30
CAL3	0.720	1.87	1.954	4.5	±30
CAL4	2.675	7.47	7.263	-2.8	±30
CAL5	6.655	18.70	18.070	-3.4	±30
CAL6	17.824	46.70	48.392	3.6	±30
CAL7	34.069	93.40	92.499	-1.0	±30

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FORM 06
INITIAL CALIBRATION AREA RATIO SUMMARY
LC/MS/MS

SDG No.: BSI15

Instrument ID: 27631
Init. Calib. Date/Times: 11/12/2018 15:05 11/12/2018 16:00
Lab File Names: CAL1= 18NOV12DCAL-42.WIFF; CAL2= 18NOV12DCAL-43.WIFF; CAL3= 18NOV12DCAL-44.WIFF;
CAL4= 18NOV12DCAL-45.WIFF; CAL5= 18NOV12DCAL-46.WIFF; CAL6= 18NOV12DCAL-47.WIFF;
CAL7= 18NOV12DCAL-48.WIFF; CAL8= ;

Perfluorohexanoic acid	Area Ratio	Specified Amount	Calculated Amount	% Difference	Limit
CAL1	0.059	0.20	0.246	22.8	±30
CAL2	0.149	0.60	0.622	3.7	±30
CAL3	0.544	2.00	2.272	13.6	±30
CAL4	1.973	8.00	8.239	3.0	±30
CAL5	5.022	20.00	20.968	4.8	±30
CAL6	11.605	50.00	48.453	-3.1	±30
CAL7	21.693	100.00	90.577	-9.4	±30

Perfluoropentanesulfonate	Area Ratio	Specified Amount	Calculated Amount	% Difference	Limit
CAL1	0.022	0.19	0.209	11.4	±30
CAL2	0.048	0.56	0.470	-16.4	±30
CAL3	0.202	1.88	1.960	4.3	±30
CAL4	0.773	7.50	7.508	0.1	±30
CAL5	1.906	18.80	18.506	-1.6	±30
CAL6	4.880	46.90	47.375	1.0	±30
CAL7	9.641	93.80	93.602	-0.2	±30

Perfluoroheptanoic acid	Area Ratio	Specified Amount	Calculated Amount	% Difference	Limit
CAL1	0.071	0.20	0.235	17.7	±30
CAL2	0.178	0.60	0.591	-1.5	±30
CAL3	0.706	2.00	2.342	17.1	±30
CAL4	2.590	8.00	8.586	7.3	±30
CAL5	6.218	20.00	20.612	3.1	±30
CAL6	14.612	50.00	48.434	-3.1	±30
CAL7	27.372	100.00	90.732	-9.3	±30

Perfluorohexanesulfonate	Area Ratio	Specified Amount	Calculated Amount	% Difference	Limit
CAL1	0.039	0.18	0.190	4.5	±30
CAL2	0.097	0.55	0.470	-14.1	±30
CAL3	0.396	1.82	1.920	5.5	±30
CAL4	1.518	7.30	7.361	0.8	±30
CAL5	3.681	18.20	17.849	-1.9	±30
CAL6	9.372	45.60	45.444	-0.3	±30
CAL7	18.895	91.20	91.615	0.5	±30

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FORM 06
INITIAL CALIBRATION AREA RATIO SUMMARY
LC/MS/MS

SDG No.: BSI15

Instrument ID: 27631
Init. Calib. Date/Times: 11/12/2018 15:05 11/12/2018 16:00
Lab File Names: CAL1= 18NOV12DCAL-42.WIFF; CAL2= 18NOV12DCAL-43.WIFF; CAL3= 18NOV12DCAL-44.WIFF;
CAL4= 18NOV12DCAL-45.WIFF; CAL5= 18NOV12DCAL-46.WIFF; CAL6= 18NOV12DCAL-47.WIFF;
CAL7= 18NOV12DCAL-48.WIFF; CAL8= ;

6:2 fluorotelomersulfonate	Area Ratio	Specified Amount	Calculated Amount	% Difference	Limit
CAL1	0.076	0.19	0.183	-3.6	±30
CAL2	0.226	0.57	0.547	-3.8	±30
CAL3	0.886	1.90	2.143	12.8	±30
CAL4	3.371	7.58	8.157	7.6	±30
CAL5	8.392	19.00	20.308	6.9	±30
CAL6	18.720	47.40	45.301	-4.4	±30
CAL7	31.980	94.80	77.388	-18.4	±30

Perfluoroheptanesulfonate	Area Ratio	Specified Amount	Calculated Amount	% Difference	Limit
CAL1	0.040	0.19	0.213	12.0	±30
CAL2	0.093	0.57	0.491	-14.0	±30
CAL3	0.397	1.90	2.089	10.0	±30
CAL4	1.378	7.61	7.252	-4.7	±30
CAL5	3.704	19.00	19.496	2.6	±30
CAL6	9.168	47.60	48.262	1.4	±30
CAL7	17.908	95.20	94.267	-1.0	±30

Perfluorooctanoic acid	Area Ratio	Specified Amount	Calculated Amount	% Difference	Limit
CAL1	0.045	0.20	0.243	21.4	±30
CAL2	0.113	0.60	0.603	0.4	±30
CAL3	0.424	2.00	2.262	13.1	±30
CAL4	1.537	8.00	8.207	2.6	±30
CAL5	4.087	20.00	21.830	9.2	±30
CAL6	9.558	50.00	51.047	2.1	±30
CAL7	18.088	100.00	96.608	-3.4	±30

Perfluoro-octanesulfonate	Area Ratio	Specified Amount	Calculated Amount	% Difference	Limit
CAL1	0.046	0.19	0.202	9.3	±30
CAL2	0.119	0.56	0.520	-6.4	±30
CAL3	0.430	1.85	1.881	1.7	±30
CAL4	1.679	7.40	7.341	-0.8	±30
CAL5	4.296	18.50	18.789	1.6	±30
CAL6	10.528	46.30	46.040	-0.6	±30
CAL7	21.179	92.60	92.617	0.0	±30

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FORM 06
INITIAL CALIBRATION AREA RATIO SUMMARY
LC/MS/MS

SDG No.: BSI15

Instrument ID: 27631
Init. Calib. Date/Times: 11/12/2018 15:05 11/12/2018 16:00
Lab File Names: CAL1= 18NOV12DCAL-42.WIFF; CAL2= 18NOV12DCAL-43.WIFF; CAL3= 18NOV12DCAL-44.WIFF;
CAL4= 18NOV12DCAL-45.WIFF; CAL5= 18NOV12DCAL-46.WIFF; CAL6= 18NOV12DCAL-47.WIFF;
CAL7= 18NOV12DCAL-48.WIFF; CAL8= ;

Perfluorononanoic acid	Area Ratio	Specified Amount	Calculated Amount	% Difference	Limit
CAL1	0.062	0.20	0.223	11.4	±30
CAL2	0.179	0.60	0.644	7.4	±30
CAL3	0.663	2.00	2.391	19.5	±30
CAL4	2.279	8.00	8.218	2.7	±30
CAL5	6.168	20.00	22.243	11.2	±30
CAL6	14.066	50.00	50.720	1.4	±30
CAL7	26.723	100.00	96.360	-3.6	±30

Perfluorononanesulfonate	Area Ratio	Specified Amount	Calculated Amount	% Difference	Limit
CAL1	0.024	0.19	0.169	-11.9	±30
CAL2	0.075	0.58	0.523	-9.2	±30
CAL3	0.271	1.92	1.893	-1.4	±30
CAL4	1.009	7.68	7.057	-8.1	±30
CAL5	2.715	19.20	18.997	-1.1	±30
CAL6	6.755	48.00	47.262	-1.5	±30
CAL7	13.960	96.00	97.666	1.7	±30

Perfluorodecanoic acid	Area Ratio	Specified Amount	Calculated Amount	% Difference	Limit
CAL1	0.045	0.20	0.238	18.9	±30
CAL2	0.106	0.60	0.562	-6.3	±30
CAL3	0.415	2.00	2.198	9.9	±30
CAL4	1.539	8.00	8.159	2.0	±30
CAL5	3.946	20.00	20.920	4.6	±30
CAL6	9.190	50.00	48.722	-2.6	±30
CAL7	16.908	100.00	89.640	-10.4	±30

8:2 fluorotelomersulfonate	Area Ratio	Specified Amount	Calculated Amount	% Difference	Limit
CAL1	0.088	0.19	0.206	7.1	±30
CAL2	0.225	0.58	0.524	-8.8	±30
CAL3	0.899	1.92	2.096	9.2	±30
CAL4	2.969	7.66	6.923	-9.6	±30
CAL5	8.524	19.20	19.873	3.5	±30
CAL6	20.513	47.90	47.825	-0.2	±30
CAL7	35.402	95.80	82.540	-13.8	±30

* Outside QC Limits

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FORM 06
INITIAL CALIBRATION AREA RATIO SUMMARY
LC/MS/MS

SDG No.: BSI15

Instrument ID: 27631
Init. Calib. Date/Times: 11/12/2018 15:05 11/12/2018 16:00
Lab File Names: CAL1= 18NOV12DCAL-42.WIFF; CAL2= 18NOV12DCAL-43.WIFF; CAL3= 18NOV12DCAL-44.WIFF;
CAL4= 18NOV12DCAL-45.WIFF; CAL5= 18NOV12DCAL-46.WIFF; CAL6= 18NOV12DCAL-47.WIFF;
CAL7= 18NOV12DCAL-48.WIFF; CAL8= ;

Perfluorooctanesulfonamide	Area Ratio	Specified Amount	Calculated Amount	% Difference	Limit
CAL1	0.045	0.20	0.217	8.7	±30
CAL2	0.112	0.60	0.545	-9.1	±30
CAL3	0.429	2.00	2.098	4.9	±30
CAL4	1.526	8.00	7.455	-6.8	±30
CAL5	4.189	20.00	20.460	2.3	±30
CAL6	10.242	50.00	50.024	0.0	±30
CAL7	18.353	100.00	89.642	-10.4	±30

NMeFOSAA	Area Ratio	Specified Amount	Calculated Amount	% Difference	Limit
CAL1	0.027	0.20	0.150	-25.0	±30
CAL2	0.074	0.60	0.421	-29.9	±30
CAL3	0.351	2.00	1.983	-0.8	±30
CAL4	1.424	8.00	8.048	0.6	±30
CAL5	3.462	20.00	19.564	-2.2	±30
CAL6	8.928	50.00	50.461	0.9	±30
CAL7	17.725	100.00	100.173	0.2	±30

Perfluorodecanesulfonate	Area Ratio	Specified Amount	Calculated Amount	% Difference	Limit
CAL1	0.021	0.19	0.190	-1.3	±30
CAL2	0.060	0.58	0.543	-6.0	±30
CAL3	0.206	1.93	1.869	-3.2	±30
CAL4	0.838	7.70	7.592	-1.4	±30
CAL5	2.167	19.30	19.633	1.7	±30
CAL6	5.189	48.20	47.020	-2.4	±30
CAL7	10.744	96.30	97.353	1.1	±30

Perfluoroundecanoic acid	Area Ratio	Specified Amount	Calculated Amount	% Difference	Limit
CAL1	0.091	0.20	0.238	19.2	±30
CAL2	0.211	0.60	0.551	-8.1	±30
CAL3	0.810	2.00	2.119	5.9	±30
CAL4	3.310	8.00	8.654	8.2	±30
CAL5	7.672	20.00	20.055	0.3	±30
CAL6	18.813	50.00	49.183	-1.6	±30
CAL7	34.057	100.00	89.032	-11.0	±30

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FORM 06
INITIAL CALIBRATION AREA RATIO SUMMARY
LC/MS/MS

SDG No.: BSI15

Instrument ID: 27631
Init. Calib. Date/Times: 11/12/2018 15:05 11/12/2018 16:00
Lab File Names: CAL1= 18NOV12DCAL-42.WIFF; CAL2= 18NOV12DCAL-43.WIFF; CAL3= 18NOV12DCAL-44.WIFF;
CAL4= 18NOV12DCAL-45.WIFF; CAL5= 18NOV12DCAL-46.WIFF; CAL6= 18NOV12DCAL-47.WIFF;
CAL7= 18NOV12DCAL-48.WIFF; CAL8= ;

NEtFOSAA	Area Ratio	Specified Amount	Calculated Amount	% Difference	Limit
CAL1	0.028	0.20	0.149	-25.7	±30
CAL2	0.121	0.60	0.636	6.0	±30
CAL3	0.461	2.00	2.418	20.9	±30
CAL4	1.449	8.00	7.596	-5.1	±30
CAL5	3.724	20.00	19.520	-2.4	±30
CAL6	9.630	50.00	50.481	1.0	±30
CAL7	18.030	100.00	94.517	-5.5	±30

Perfluorododecanoic acid	Area Ratio	Specified Amount	Calculated Amount	% Difference	Limit
CAL1	0.041	0.20	0.207	3.4	±30
CAL2	0.112	0.60	0.571	-4.8	±30
CAL3	0.432	2.00	2.198	9.9	±30
CAL4	1.541	8.00	7.847	-1.9	±30
CAL5	4.136	20.00	21.062	5.3	±30
CAL6	9.606	50.00	48.914	-2.2	±30
CAL7	17.225	100.00	87.711	-12.3	±30

10:2-fluorotelomersulfonate	Area Ratio	Specified Amount	Calculated Amount	% Difference	Limit
CAL1	0.069	0.19	0.229	18.4	±30
CAL2	0.188	0.58	0.627	8.6	±30
CAL3	0.634	1.93	2.111	9.4	±30
CAL4	2.056	7.71	6.849	-11.2	±30
CAL5	6.339	19.30	21.113	9.4	±30
CAL6	15.209	48.20	50.658	5.1	±30
CAL7	27.838	96.40	92.724	-3.8	±30

NMePFOSAE	Area Ratio	Specified Amount	Calculated Amount	% Difference	Limit
CAL1	0.051	0.20	0.214	7.1	±30
CAL2	0.133	0.60	0.554	-7.6	±30
CAL3	0.533	2.00	2.216	10.8	±30
CAL4	1.886	8.00	7.850	-1.9	±30
CAL5	5.021	20.00	20.896	4.5	±30
CAL6	12.781	50.00	53.193	6.4	±30
CAL7	23.037	100.00	95.876	-4.1	±30

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FORM 06
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LC/MS/MS

SDG No.: BSI15

Instrument ID: 27631
Init. Calib. Date/Times: 11/12/2018 15:05 11/12/2018 16:00
Lab File Names: CAL1= 18NOV12DCAL-42.WIFF; CAL2= 18NOV12DCAL-43.WIFF; CAL3= 18NOV12DCAL-44.WIFF;
CAL4= 18NOV12DCAL-45.WIFF; CAL5= 18NOV12DCAL-46.WIFF; CAL6= 18NOV12DCAL-47.WIFF;
CAL7= 18NOV12DCAL-48.WIFF; CAL8= ;

NMePFOSA	Area Ratio	Specified Amount	Calculated Amount	% Difference	Limit
CAL1	0.030	0.20	0.150	-25.2	±30
CAL2	0.114	0.60	0.562	-6.3	±30
CAL3	0.390	2.00	1.923	-3.8	±30
CAL4	1.632	8.00	8.049	0.6	±30
CAL5	4.385	20.00	21.631	8.2	±30
CAL6	9.828	50.00	48.485	-3.0	±30
CAL7	17.679	100.00	87.214	-12.8	±30

Perfluorododecanesulfonate	Area Ratio	Specified Amount	Calculated Amount	% Difference	Limit
CAL1	0.012	0.19	0.218	12.3	±30
CAL2	0.033	0.58	0.580	-0.3	±30
CAL3	0.107	1.94	1.876	-3.3	±30
CAL4	0.440	7.74	7.707	-0.4	±30
CAL5	1.081	19.40	18.940	-2.4	±30
CAL6	2.811	48.40	49.234	1.7	±30
CAL7	5.510	96.80	96.500	-0.3	±30

NEtPFOSAE	Area Ratio	Specified Amount	Calculated Amount	% Difference	Limit
CAL1	0.075	0.20	0.240	20.2	±30
CAL2	0.178	0.60	0.573	-4.6	±30
CAL3	0.687	2.00	2.204	10.2	±30
CAL4	2.595	8.00	8.324	4.0	±30
CAL5	6.492	20.00	20.830	4.1	±30
CAL6	15.157	50.00	48.629	-2.7	±30
CAL7	27.283	100.00	87.532	-12.5	±30

NEtPFOSA	Area Ratio	Specified Amount	Calculated Amount	% Difference	Limit
CAL1	0.045	0.20	0.207	3.7	±30
CAL2	0.139	0.60	0.637	6.1	±30
CAL3	0.463	2.00	2.124	6.2	±30
CAL4	1.801	8.00	8.269	3.4	±30
CAL5	4.664	20.00	21.421	7.1	±30
CAL6	10.701	50.00	49.142	-1.7	±30
CAL7	21.557	100.00	98.999	-1.0	±30

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SDG No.: BSI15

Instrument ID: 27631
Init. Calib. Date/Times: 11/12/2018 15:05 11/12/2018 16:00
Lab File Names: CAL1= 18NOV12DCAL-42.WIFF; CAL2= 18NOV12DCAL-43.WIFF; CAL3= 18NOV12DCAL-44.WIFF;
CAL4= 18NOV12DCAL-45.WIFF; CAL5= 18NOV12DCAL-46.WIFF; CAL6= 18NOV12DCAL-47.WIFF;
CAL7= 18NOV12DCAL-48.WIFF; CAL8= ;

Perfluorotridecanoic acid	Area Ratio	Specified Amount	Calculated Amount	% Difference	Limit
CAL1	0.037	0.20	0.234	16.8	±30
CAL2	0.090	0.60	0.569	-5.1	±30
CAL3	0.335	2.00	2.117	5.8	±30
CAL4	1.293	8.00	8.159	2.0	±30
CAL5	3.309	20.00	20.884	4.4	±30
CAL6	7.738	50.00	48.838	-2.3	±30
CAL7	13.241	100.00	83.569	-16.4	±30

Perfluorotetradecanoic acid	Area Ratio	Specified Amount	Calculated Amount	% Difference	Limit
CAL1	0.040	0.20	0.223	11.6	±30
CAL2	0.102	0.60	0.572	-4.6	±30
CAL3	0.398	2.00	2.228	11.4	±30
CAL4	1.458	8.00	8.171	2.1	±30
CAL5	3.737	20.00	20.945	4.7	±30
CAL6	8.923	50.00	50.021	0.0	±30
CAL7	17.596	100.00	98.638	-1.4	±30

Perfluorohexadecanoic acid	Area Ratio	Specified Amount	Calculated Amount	% Difference	Limit
CAL1	0.019	0.20	0.231	15.7	±30
CAL2	0.048	0.60	0.575	-4.2	±30
CAL3	0.177	2.00	2.109	5.4	±30
CAL4	0.654	8.00	7.793	-2.6	±30
CAL5	1.653	20.00	19.691	-1.5	±30
CAL6	4.347	50.00	51.786	3.6	±30
CAL7	8.277	100.00	98.615	-1.4	±30

Perfluorooctadecanoic acid	Area Ratio	Specified Amount	Calculated Amount	% Difference	Limit
CAL1	0.015	0.20	0.204	2.1	±30
CAL2	0.038	0.60	0.528	-11.9	±30
CAL3	0.147	2.00	2.045	2.3	±30
CAL4	0.559	8.00	7.786	-2.7	±30
CAL5	1.434	20.00	19.971	-0.1	±30
CAL6	3.601	50.00	50.157	0.3	±30
CAL7	7.188	100.00	100.107	0.1	±30

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FORM 06
INITIAL CALIBRATION AREA RATIO SUMMARY
LC/MS/MS

SDG No.: BSI15

Instrument ID: 27631
Init. Calib. Date/Times: 11/28/2018 13:42 11/28/2018 14:36
Lab File Names: CAL1= 18NOV28DCAL-06.WIFF; CAL2= 18NOV28DCAL-07.WIFF; CAL3= 18NOV28DCAL-08.WIFF;
CAL4= 18NOV28DCAL-09.WIFF; CAL5= 18NOV28DCAL-10.WIFF; CAL6= 18NOV28DCAL-11.WIFF;
CAL7= 18NOV28DCAL-12.WIFF; CAL8= ;

Perfluorobutanoic acid	Area Ratio	Specified Amount	Calculated Amount	% Difference	Limit
CAL1	0.043	0.20	0.237	18.4	±30
CAL2	0.107	0.60	0.584	-2.7	±30
CAL3	0.406	2.00	2.225	11.2	±30
CAL4	1.463	8.00	8.021	0.3	±30
CAL5	3.811	20.00	20.892	4.5	±30
CAL6	8.910	50.00	48.841	-2.3	±30
CAL7	15.845	100.00	86.862	-13.1	±30

Perfluoropentanoic acid	Area Ratio	Specified Amount	Calculated Amount	% Difference	Limit
CAL1	0.046	0.20	0.225	12.5	±30
CAL2	0.103	0.60	0.505	-15.8	±30
CAL3	0.466	2.00	2.284	14.2	±30
CAL4	1.556	8.00	7.634	-4.6	±30
CAL5	4.107	20.00	20.152	0.8	±30
CAL6	9.020	50.00	44.258	-11.5	±30
CAL7	16.145	100.00	79.219	-20.8	±30

Perfluorobutanesulfonate	Area Ratio	Specified Amount	Calculated Amount	% Difference	Limit
CAL1	0.040	0.18	0.194	9.4	±30
CAL2	0.098	0.53	0.475	-10.6	±30
CAL3	0.401	1.77	1.948	10.1	±30
CAL4	1.393	7.08	6.761	-4.5	±30
CAL5	3.638	17.70	17.661	-0.2	±30
CAL6	9.036	44.20	43.864	-0.8	±30
CAL7	18.326	88.40	88.956	0.6	±30

4:2 fluorotelomersulfonate	Area Ratio	Specified Amount	Calculated Amount	% Difference	Limit
CAL1	0.075	0.19	0.200	6.8	±30
CAL2	0.202	0.56	0.540	-3.7	±30
CAL3	0.800	1.87	2.142	14.5	±30
CAL4	2.854	7.47	7.640	2.3	±30
CAL5	7.396	18.70	19.798	5.9	±30
CAL6	17.601	46.70	47.117	0.9	±30
CAL7	34.162	93.40	91.451	-2.1	±30

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FORM 06
INITIAL CALIBRATION AREA RATIO SUMMARY
LC/MS/MS

SDG No.: BSI15

Instrument ID: 27631
Init. Calib. Date/Times: 11/28/2018 13:42 11/28/2018 14:36
Lab File Names: CAL1= 18NOV28DCAL-06.WIFF; CAL2= 18NOV28DCAL-07.WIFF; CAL3= 18NOV28DCAL-08.WIFF;
CAL4= 18NOV28DCAL-09.WIFF; CAL5= 18NOV28DCAL-10.WIFF; CAL6= 18NOV28DCAL-11.WIFF;
CAL7= 18NOV28DCAL-12.WIFF; CAL8= ;

Perfluorohexanoic acid	Area Ratio	Specified Amount	Calculated Amount	% Difference	Limit
CAL1	0.058	0.20	0.233	16.5	±30
CAL2	0.146	0.60	0.586	-2.4	±30
CAL3	0.551	2.00	2.211	10.5	±30
CAL4	2.004	8.00	8.042	0.5	±30
CAL5	4.915	20.00	19.728	-1.4	±30
CAL6	11.061	50.00	44.400	-11.2	±30
CAL7	20.035	100.00	80.421	-19.6	±30

Perfluoropentanesulfonate	Area Ratio	Specified Amount	Calculated Amount	% Difference	Limit
CAL1	0.020	0.19	0.207	10.1	±30
CAL2	0.054	0.56	0.549	-2.4	±30
CAL3	0.213	1.88	2.157	14.7	±30
CAL4	0.735	7.50	7.436	-0.9	±30
CAL5	1.909	18.80	19.314	2.7	±30
CAL6	4.502	46.90	45.538	-2.9	±30
CAL7	9.335	93.80	94.429	0.7	±30

Perfluoroheptanoic acid	Area Ratio	Specified Amount	Calculated Amount	% Difference	Limit
CAL1	0.078	0.20	0.240	19.9	±30
CAL2	0.184	0.60	0.567	-5.5	±30
CAL3	0.725	2.00	2.238	11.9	±30
CAL4	2.537	8.00	7.829	-2.1	±30
CAL5	6.457	20.00	19.926	-0.4	±30
CAL6	14.179	50.00	43.759	-12.5	±30
CAL7	23.161	100.00	71.480	-28.5	±30

Perfluorohexanesulfonate	Area Ratio	Specified Amount	Calculated Amount	% Difference	Limit
CAL1	0.039	0.18	0.181	-0.6	±30
CAL2	0.093	0.55	0.435	-20.6	±30
CAL3	0.391	1.82	1.831	0.6	±30
CAL4	1.405	7.30	6.580	-9.9	±30
CAL5	3.854	18.20	18.044	-0.9	±30
CAL6	9.382	45.60	43.929	-3.7	±30
CAL7	20.044	91.20	93.850	2.9	±30

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FORM 06
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LC/MS/MS

SDG No.: BSI15

Instrument ID: 27631
Init. Calib. Date/Times: 11/28/2018 13:42 11/28/2018 14:36
Lab File Names: CAL1= 18NOV28DCAL-06.WIFF; CAL2= 18NOV28DCAL-07.WIFF; CAL3= 18NOV28DCAL-08.WIFF;
CAL4= 18NOV28DCAL-09.WIFF; CAL5= 18NOV28DCAL-10.WIFF; CAL6= 18NOV28DCAL-11.WIFF;
CAL7= 18NOV28DCAL-12.WIFF; CAL8= ;

6:2 fluorotelomersulfonate	Area Ratio	Specified Amount	Calculated Amount	% Difference	Limit
CAL1	0.087	0.19	0.226	18.9	±30
CAL2	0.227	0.57	0.591	3.9	±30
CAL3	0.823	1.90	2.149	13.1	±30
CAL4	3.275	7.58	8.546	12.7	±30
CAL5	7.342	19.00	19.156	0.8	±30
CAL6	17.619	47.40	45.972	-3.0	±30
CAL7	33.528	94.80	87.481	-7.7	±30

Perfluoroheptanesulfonate	Area Ratio	Specified Amount	Calculated Amount	% Difference	Limit
CAL1	0.042	0.19	0.209	10.2	±30
CAL2	0.097	0.57	0.485	-15.1	±30
CAL3	0.396	1.90	1.976	4.0	±30
CAL4	1.490	7.61	7.439	-2.2	±30
CAL5	3.788	19.00	18.906	-0.5	±30
CAL6	9.599	47.60	47.909	0.6	±30
CAL7	19.064	95.20	95.147	-0.1	±30

Perfluorooctanoic acid	Area Ratio	Specified Amount	Calculated Amount	% Difference	Limit
CAL1	0.041	0.20	0.213	6.6	±30
CAL2	0.103	0.60	0.533	-11.1	±30
CAL3	0.425	2.00	2.197	9.8	±30
CAL4	1.618	8.00	8.361	4.5	±30
CAL5	3.950	20.00	20.411	2.1	±30
CAL6	9.499	50.00	49.084	-1.8	±30
CAL7	17.301	100.00	89.401	-10.6	±30

Perfluoro-octanesulfonate	Area Ratio	Specified Amount	Calculated Amount	% Difference	Limit
CAL1	0.041	0.19	0.172	-7.0	±30
CAL2	0.109	0.56	0.457	-17.6	±30
CAL3	0.450	1.85	1.888	2.1	±30
CAL4	1.627	7.40	6.826	-7.8	±30
CAL5	4.356	18.50	18.273	-1.2	±30
CAL6	10.840	46.30	45.472	-1.8	±30
CAL7	22.481	92.60	94.301	1.8	±30

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FORM 06
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LC/MS/MS

SDG No.: BSI15

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Init. Calib. Date/Times: 11/28/2018 13:42 11/28/2018 14:36
Lab File Names: CAL1= 18NOV28DCAL-06.WIFF; CAL2= 18NOV28DCAL-07.WIFF; CAL3= 18NOV28DCAL-08.WIFF;
CAL4= 18NOV28DCAL-09.WIFF; CAL5= 18NOV28DCAL-10.WIFF; CAL6= 18NOV28DCAL-11.WIFF;
CAL7= 18NOV28DCAL-12.WIFF; CAL8= ;

Perfluorononanoic acid	Area Ratio	Specified Amount	Calculated Amount	% Difference	Limit
CAL1	0.060	0.20	0.229	14.7	±30
CAL2	0.156	0.60	0.599	-0.1	±30
CAL3	0.588	2.00	2.253	12.6	±30
CAL4	2.104	8.00	8.064	0.8	±30
CAL5	5.611	20.00	21.504	7.5	±30
CAL6	12.565	50.00	48.151	-3.7	±30
CAL7	23.016	100.00	88.201	-11.8	±30

Perfluorononanesulfonate	Area Ratio	Specified Amount	Calculated Amount	% Difference	Limit
CAL1	0.031	0.19	0.193	0.7	±30
CAL2	0.077	0.58	0.486	-15.7	±30
CAL3	0.295	1.92	1.864	-2.9	±30
CAL4	1.249	7.68	7.885	2.7	±30
CAL5	3.037	19.20	19.177	-0.1	±30
CAL6	7.581	48.00	47.867	-0.3	±30
CAL7	15.220	96.00	96.096	0.1	±30

Perfluorodecanoic acid	Area Ratio	Specified Amount	Calculated Amount	% Difference	Limit
CAL1	0.039	0.20	0.222	11.2	±30
CAL2	0.108	0.60	0.612	2.0	±30
CAL3	0.417	2.00	2.360	18.0	±30
CAL4	1.454	8.00	8.227	2.8	±30
CAL5	3.687	20.00	20.868	4.3	±30
CAL6	8.633	50.00	48.868	-2.3	±30
CAL7	17.604	100.00	99.643	-0.4	±30

8:2 fluorotelomersulfonate	Area Ratio	Specified Amount	Calculated Amount	% Difference	Limit
CAL1	0.104	0.19	0.197	2.4	±30
CAL2	0.284	0.58	0.536	-6.9	±30
CAL3	1.067	1.92	2.011	4.8	±30
CAL4	3.846	7.66	7.253	-5.3	±30
CAL5	10.368	19.20	19.551	1.8	±30
CAL6	21.098	47.90	39.786	-16.9	±30
CAL7	39.430	95.80	74.355	-22.4	±30

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FORM 06
INITIAL CALIBRATION AREA RATIO SUMMARY
LC/MS/MS

SDG No.: BSI15

Instrument ID: 27631
Init. Calib. Date/Times: 11/28/2018 13:42 11/28/2018 14:36
Lab File Names: CAL1= 18NOV28DCAL-06.WIFF; CAL2= 18NOV28DCAL-07.WIFF; CAL3= 18NOV28DCAL-08.WIFF;
CAL4= 18NOV28DCAL-09.WIFF; CAL5= 18NOV28DCAL-10.WIFF; CAL6= 18NOV28DCAL-11.WIFF;
CAL7= 18NOV28DCAL-12.WIFF; CAL8= ;

Perfluorooctanesulfonamide	Area Ratio	Specified Amount	Calculated Amount	% Difference	Limit
CAL1	0.042	0.20	0.212	5.9	±30
CAL2	0.111	0.60	0.562	-6.3	±30
CAL3	0.420	2.00	2.128	6.4	±30
CAL4	1.562	8.00	7.914	-1.1	±30
CAL5	4.013	20.00	20.329	1.6	±30
CAL6	9.802	50.00	49.655	-0.7	±30
CAL7	17.627	100.00	89.294	-10.7	±30

NMeFOSAA	Area Ratio	Specified Amount	Calculated Amount	% Difference	Limit
CAL1	0.030	0.20	0.193	-3.7	±30
CAL2	0.091	0.60	0.582	-3.0	±30
CAL3	0.348	2.00	2.220	11.0	±30
CAL4	1.243	8.00	7.928	-0.9	±30
CAL5	3.230	20.00	20.602	3.0	±30
CAL6	7.997	50.00	51.010	2.0	±30
CAL7	15.405	100.00	98.267	-1.7	±30

Perfluorodecanesulfonate	Area Ratio	Specified Amount	Calculated Amount	% Difference	Limit
CAL1	0.022	0.19	0.171	-11.6	±30
CAL2	0.059	0.58	0.471	-18.5	±30
CAL3	0.260	1.93	2.060	6.8	±30
CAL4	0.956	7.70	7.582	-1.5	±30
CAL5	2.461	19.30	19.512	1.1	±30
CAL6	5.967	48.20	47.309	-1.8	±30
CAL7	12.246	96.30	97.096	0.8	±30

Perfluoroundecanoic acid	Area Ratio	Specified Amount	Calculated Amount	% Difference	Limit
CAL1	0.062	0.20	0.222	10.9	±30
CAL2	0.157	0.60	0.563	-6.2	±30
CAL3	0.626	2.00	2.236	11.8	±30
CAL4	2.346	8.00	8.387	4.8	±30
CAL5	5.860	20.00	20.945	4.7	±30
CAL6	14.523	50.00	51.912	3.8	±30
CAL7	27.007	100.00	96.536	-3.5	±30

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FORM 06
INITIAL CALIBRATION AREA RATIO SUMMARY
LC/MS/MS

SDG No.: BSI15

Instrument ID: 27631
Init. Calib. Date/Times: 11/28/2018 13:42 11/28/2018 14:36
Lab File Names: CAL1= 18NOV28DCAL-06.WIFF; CAL2= 18NOV28DCAL-07.WIFF; CAL3= 18NOV28DCAL-08.WIFF;
CAL4= 18NOV28DCAL-09.WIFF; CAL5= 18NOV28DCAL-10.WIFF; CAL6= 18NOV28DCAL-11.WIFF;
CAL7= 18NOV28DCAL-12.WIFF; CAL8= ;

NEtFOSAA	Area Ratio	Specified Amount	Calculated Amount	% Difference	Limit
CAL1	0.040	0.20	0.194	-3.2	±30
CAL2	0.115	0.60	0.560	-6.7	±30
CAL3	0.407	2.00	1.980	-1.0	±30
CAL4	1.473	8.00	7.175	-10.3	±30
CAL5	4.109	20.00	20.014	0.1	±30
CAL6	10.300	50.00	50.166	0.3	±30
CAL7	20.679	100.00	100.712	0.7	±30

Perfluorododecanoic acid	Area Ratio	Specified Amount	Calculated Amount	% Difference	Limit
CAL1	0.045	0.20	0.249	24.6	±30
CAL2	0.107	0.60	0.589	-1.9	±30
CAL3	0.446	2.00	2.442	22.1	±30
CAL4	1.434	8.00	7.854	-1.8	±30
CAL5	3.673	20.00	20.121	0.6	±30
CAL6	9.045	50.00	49.545	-0.9	±30
CAL7	16.657	100.00	91.243	-8.8	±30

10:2-fluorotelomersulfonate	Area Ratio	Specified Amount	Calculated Amount	% Difference	Limit
CAL1	0.097	0.19	0.214	10.9	±30
CAL2	0.277	0.58	0.610	5.6	±30
CAL3	1.087	1.93	2.396	24.1	±30
CAL4	3.492	7.71	7.701	-0.1	±30
CAL5	10.411	19.30	22.957	18.9	±30
CAL6	21.857	48.20	48.197	0.0	±30
CAL7	41.828	96.40	92.235	-4.3	±30

NMePFOSAE	Area Ratio	Specified Amount	Calculated Amount	% Difference	Limit
CAL1	0.049	0.20	0.207	3.7	±30
CAL2	0.139	0.60	0.587	-2.2	±30
CAL3	0.532	2.00	2.239	12.0	±30
CAL4	1.893	8.00	7.968	-0.4	±30
CAL5	5.008	20.00	21.073	5.4	±30
CAL6	12.293	50.00	51.733	3.5	±30
CAL7	23.048	100.00	96.993	-3.0	±30

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FORM 06
INITIAL CALIBRATION AREA RATIO SUMMARY
LC/MS/MS

SDG No.: BSI15

Instrument ID: 27631
Init. Calib. Date/Times: 11/28/2018 13:42 11/28/2018 14:36
Lab File Names: CAL1= 18NOV28DCAL-06.WIFF; CAL2= 18NOV28DCAL-07.WIFF; CAL3= 18NOV28DCAL-08.WIFF;
CAL4= 18NOV28DCAL-09.WIFF; CAL5= 18NOV28DCAL-10.WIFF; CAL6= 18NOV28DCAL-11.WIFF;
CAL7= 18NOV28DCAL-12.WIFF; CAL8= ;

NMePFOSA	Area Ratio	Specified Amount	Calculated Amount	% Difference	Limit
CAL1	0.038	0.20	0.203	1.3	±30
CAL2	0.108	0.60	0.575	-4.1	±30
CAL3	0.411	2.00	2.179	9.0	±30
CAL4	1.485	8.00	7.873	-1.6	±30
CAL5	3.882	20.00	20.577	2.9	±30
CAL6	9.378	50.00	49.716	-0.6	±30
CAL7	18.802	100.00	99.677	-0.3	±30

Perfluorododecanesulfonate	Area Ratio	Specified Amount	Calculated Amount	% Difference	Limit
CAL1	0.013	0.19	0.181	-6.8	±30
CAL2	0.037	0.58	0.531	-8.6	±30
CAL3	0.132	1.94	1.892	-2.5	±30
CAL4	0.539	7.74	7.744	0.0	±30
CAL5	1.303	19.40	18.718	-3.5	±30
CAL6	3.225	48.40	46.320	-4.3	±30
CAL7	6.940	96.80	99.670	3.0	±30

NEtPFOSAE	Area Ratio	Specified Amount	Calculated Amount	% Difference	Limit
CAL1	0.068	0.20	0.245	22.4	±30
CAL2	0.166	0.60	0.596	-0.6	±30
CAL3	0.706	2.00	2.540	27.0	±30
CAL4	2.364	8.00	8.504	6.3	±30
CAL5	6.065	20.00	21.818	9.1	±30
CAL6	13.925	50.00	50.088	0.2	±30
CAL7	26.969	100.00	97.008	-3.0	±30

NEtPFOSA	Area Ratio	Specified Amount	Calculated Amount	% Difference	Limit
CAL1	0.048	0.20	0.217	8.3	±30
CAL2	0.118	0.60	0.530	-11.6	±30
CAL3	0.473	2.00	2.122	6.1	±30
CAL4	1.779	8.00	7.975	-0.3	±30
CAL5	4.417	20.00	19.796	-1.0	±30
CAL6	11.703	50.00	52.452	4.9	±30
CAL7	21.801	100.00	97.709	-2.3	±30

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FORM 06
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SDG No.: BSI15

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CAL4= 18NOV28DCAL-09.WIFF; CAL5= 18NOV28DCAL-10.WIFF; CAL6= 18NOV28DCAL-11.WIFF;
CAL7= 18NOV28DCAL-12.WIFF; CAL8= ;

Perfluorotridecanoic acid	Area Ratio	Specified Amount	Calculated Amount	% Difference	Limit
CAL1	0.041	0.20	0.249	24.7	±30
CAL2	0.103	0.60	0.621	3.5	±30
CAL3	0.427	2.00	2.576	28.8	±30
CAL4	1.410	8.00	8.500	6.2	±30
CAL5	3.304	20.00	19.916	-0.4	±30
CAL6	8.119	50.00	48.938	-2.1	±30
CAL7	14.467	100.00	87.197	-12.8	±30

Perfluorotetradecanoic acid	Area Ratio	Specified Amount	Calculated Amount	% Difference	Limit
CAL1	0.039	0.20	0.221	10.5	±30
CAL2	0.103	0.60	0.583	-2.8	±30
CAL3	0.406	2.00	2.303	15.2	±30
CAL4	1.418	8.00	8.033	0.4	±30
CAL5	3.685	20.00	20.882	4.4	±30
CAL6	8.609	50.00	48.777	-2.4	±30
CAL7	15.696	100.00	88.936	-11.1	±30

Perfluorohexadecanoic acid	Area Ratio	Specified Amount	Calculated Amount	% Difference	Limit
CAL1	0.022	0.20	0.251	25.6	±30
CAL2	0.051	0.60	0.588	-1.9	±30
CAL3	0.206	2.00	2.359	17.9	±30
CAL4	0.728	8.00	8.321	4.0	±30
CAL5	1.973	20.00	22.560	12.8	±30
CAL6	4.311	50.00	49.281	-1.4	±30
CAL7	8.524	100.00	97.440	-2.6	±30

Perfluorooctadecanoic acid	Area Ratio	Specified Amount	Calculated Amount	% Difference	Limit
CAL1	0.016	0.20	0.219	9.6	±30
CAL2	0.042	0.60	0.565	-5.8	±30
CAL3	0.165	2.00	2.201	10.0	±30
CAL4	0.598	8.00	7.964	-0.4	±30
CAL5	1.619	20.00	21.571	7.9	±30
CAL6	3.728	50.00	49.663	-0.7	±30
CAL7	7.403	100.00	98.616	-1.4	±30

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FORM 06A DOD - EPA 537 mod QSM 5.1 table B-15
INITIAL CALIBRATION RESPONSE FACTOR SUMMARY
LC/MS/MS

SDG No.: BSI15

Instrument ID: 27631

Init. Calib. Date/Times: 11/12/2018 15:05 11/12/2018 16:00

Lab File Names: CAL1=18NOV12DCAL-42.WIFF; CAL2=18NOV12DCAL-43.WIFF; CAL3=18NOV12DCAL-44.WIFF;
CAL4=18NOV12DCAL-45.WIFF; CAL5=18NOV12DCAL-46.WIFF; CAL6=18NOV12DCAL-47.WIFF;
CAL7=18NOV12DCAL-48.WIFF;

Analyte	RF							RF
	CAL1	CAL2	CAL3	CAL4	CAL5	CAL6	CAL7	%RSD
Perfluorobutanoic acid	1.059	0.868	1.034	0.919	0.966	0.910	0.882	7
Perfluoropentanoic acid	1.058	0.952	1.052	0.939	0.906	0.876	0.839	8
Perfluorobutanesulfonate	1.061	0.938	1.061	0.954	1.001	0.997	0.964	5
4:2 fluorotelomersulfonate	1.764	1.591	1.797	1.672	1.662	1.782	1.703	4
Perfluorohexanoic acid	1.470	1.241	1.361	1.233	1.255	1.160	---	8
Perfluoropentanesulfonate	0.534	0.400	0.499	0.479	0.471	0.484	0.478	8
Perfluoroheptanoic acid	1.776	1.486	1.766	1.619	1.555	1.461	---	8
Perfluorohexanesulfonate	1.019	0.838	1.029	0.984	0.957	0.972	0.980	6
6:2 fluorotelomersulfonate	1.892	1.888	2.214	2.112	2.098	1.876	---	7
Perfluoroheptanesulfonate	1.007	0.773	0.988	0.856	0.922	0.911	0.890	8
Perfluorooctanoic acid	1.136	0.940	1.059	0.960	1.022	0.956	0.904	7
Perfluoro-octanesulfonate	1.194	1.024	1.112	1.084	1.110	1.087	1.093	4
Perfluorononanoic acid	1.545	1.489	1.658	1.424	1.542	1.407	1.336	7
Perfluorononanesulfonate	0.602	0.621	0.674	0.628	0.676	0.673	0.695	5
Perfluorodecanoic acid	1.122	0.883	1.037	0.962	0.987	0.919	---	8
8:2 fluorotelomersulfonate	2.201	1.873	2.243	1.857	2.127	2.051	---	7
Perfluorooctanesulfonamide	1.113	0.931	1.074	0.954	1.047	1.024	---	6
NMeFOSAA	0.663	0.620	0.877	0.890	0.865	0.893	0.886	13
Perfluorodecanesulfonate	0.521	0.496	0.511	0.520	0.537	0.515	0.533	2
Perfluoroundecanoic acid	2.280	1.757	2.026	2.069	1.918	1.881	---	8
NEtFOSAA	0.709	1.011	1.153	0.906	0.931	0.963	---	14
Perfluorododecanoic acid	1.015	0.935	1.079	0.963	1.034	0.961	---	5
10:2-fluorotelomersulfonate	1.703	1.561	1.573	1.278	1.573	1.511	1.383	9
NMePFOSAE	1.287	1.110	1.331	1.179	1.255	1.278	1.152	6
NMePFOSA	0.758	0.950	0.975	1.020	1.096	0.983	---	11
Perfluorododecanesulfonate	0.306	0.272	0.264	0.272	0.266	0.278	0.272	5
NEtPFOSAE	1.873	1.487	1.717	1.622	1.623	1.516	---	8
NEtPFOSA	1.129	1.156	1.156	1.125	1.166	1.070	1.078	3
Perfluorotridecanoic acid	0.925	0.751	0.839	0.808	0.827	0.774	---	7
Perfluorotetradecanoic acid	0.996	0.851	0.994	0.911	0.934	0.892	0.880	6
Perfluorohexadecanoic acid	0.486	0.402	0.442	0.409	0.413	0.435	0.414	6
Perfluorooctadecanoic acid	0.367	0.316	0.367	0.349	0.358	0.360	0.359	5

--- Calibration point does not apply

* = % RSD > 20

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FORM 06A DOD - EPA 537 mod QSM 5.1 table B-15
INITIAL CALIBRATION RESPONSE FACTOR SUMMARY
LC/MS/MS

SDG No.: BSI15

Instrument ID: 27631

Init. Calib. Date/Times: 11/28/2018 13:42 11/28/2018 14:36

Lab File Names: CAL1=18NOV28DCAL-06.WIFF; CAL2=18NOV28DCAL-07.WIFF; CAL3=18NOV28DCAL-08.WIFF;
CAL4=18NOV28DCAL-09.WIFF; CAL5=18NOV28DCAL-10.WIFF; CAL6=18NOV28DCAL-11.WIFF;
CAL7=18NOV28DCAL-12.WIFF;

Analyte	RF							RF
	CAL1	CAL2	CAL3	CAL4	CAL5	CAL6	CAL7	%RSD
Perfluorobutanoic acid	1.080	0.888	1.015	0.915	0.953	0.891	---	7
Perfluoropentanoic acid	1.146	0.858	1.164	0.972	1.027	---	---	11
Perfluorobutanesulfonate	1.048	0.856	1.054	0.915	0.956	0.951	0.964	7
4:2 fluorotelomersulfonate	1.863	1.681	1.998	1.784	1.847	1.760	1.708	6
Perfluorohexanoic acid	1.451	1.216	1.377	1.252	1.229	---	---	7
Perfluoropentanesulfonate	0.506	0.448	0.528	0.456	0.472	0.446	0.463	6
Perfluoroheptanoic acid	1.943	1.531	1.813	1.585	1.614	---	---	9
Perfluorohexanesulfonate	1.004	0.803	1.016	0.911	1.002	0.973	1.040	8
6:2 fluorotelomersulfonate	2.165	1.891	2.059	2.052	1.835	1.766	---	7
Perfluoroheptanesulfonate	1.044	0.805	0.986	0.926	0.943	0.954	0.947	7
Perfluorooctanoic acid	1.031	0.860	1.063	1.011	0.988	0.950	---	7
Perfluoro-octanesulfonate	1.059	0.938	1.163	1.051	1.126	1.119	1.160	7
Perfluorononanoic acid	1.496	1.303	1.470	1.315	1.403	1.256	---	6
Perfluorononanesulfonate	0.763	0.638	0.735	0.777	0.756	0.755	0.758	6
Perfluorodecanoic acid	0.983	0.901	1.042	0.908	0.922	0.863	0.880	6
8:2 fluorotelomersulfonate	2.600	2.366	2.661	2.405	2.587	---	---	5
Perfluorooctanesulfonamide	1.045	0.925	1.050	0.976	1.003	0.980	---	4
NMeFOSAA	0.755	0.760	0.870	0.777	0.807	0.800	0.770	5
Perfluorodecanesulfonate	0.533	0.491	0.644	0.594	0.609	0.592	0.608	8
Perfluoroundecanoic acid	1.551	1.312	1.564	1.466	1.465	1.452	1.350	6
NEtFOSAA	0.994	0.958	1.016	0.921	1.027	1.030	1.034	4
Perfluorododecanoic acid	1.137	0.896	1.115	0.896	0.918	0.904	---	11
10:2-fluorotelomersulfonate	2.409	2.294	2.697	2.170	2.584	2.172	2.078	9
NMePFOSAE	1.232	1.162	1.330	1.183	1.252	1.229	1.152	5
NMePFOSA	0.955	0.904	1.028	0.928	0.970	0.938	0.940	4
Perfluorododecanesulfonate	0.310	0.304	0.325	0.333	0.321	0.319	0.343	4
NEtPFOSAE	1.702	1.382	1.766	1.478	1.516	1.392	1.348	10
NEtPFOSA	1.208	0.986	1.184	1.112	1.104	1.170	1.090	6
Perfluorotridecanoic acid	1.034	0.859	1.068	0.881	0.826	0.812	---	11
Perfluorotetradecanoic acid	0.975	0.858	1.016	0.886	0.921	0.861	---	6
Perfluorohexadecanoic acid	0.549	0.429	0.516	0.455	0.493	0.431	0.426	10
Perfluorooctadecanoic acid	0.411	0.354	0.413	0.374	0.405	0.373	0.370	6

--- Calibration point does not apply

* = % RSD > 20

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FORM 07
CALIBRATION VERIFICATION SUMMARY
LC/MS/MS

SDG No.: BSI15

Instrument ID: 27631 Lab File ID: 18NOV12DCAL-52.WIFF

Date/Time Analyzed: 11/12/2018 16:36 Lab Sample ID: CCV1_CAL3

Init. Calib. Date/Times: 11/12/2018 15:05 11/12/2018 16:00

Analytes	Specified Amount	Calculated Amount	% Difference	Limit
Perfluorobutanoic acid	2.00	2.29	14.39	±30
Perfluoropentanoic acid	2.00	2.35	17.52	±30
Perfluorobutanesulfonate	1.77	1.85	4.70	±30
4:2 fluorotelomersulfonate	1.87	1.97	5.23	±30
Perfluorohexanoic acid	2.00	2.37	18.39	±30
Perfluoropentanesulfonate	1.88	1.99	5.89	±30
Perfluoroheptanoic acid	2.00	2.33	16.60	±30
Perfluorohexanesulfonate	1.82	1.97	8.45	±30
6:2 fluorotelomersulfonate	1.90	2.38	25.21	±30
Perfluoroheptanesulfonate	1.90	2.05	7.87	±30
Perfluorooctanoic acid	2.00	2.34	17.00	±30
Perfluoro-octanesulfonate	1.85	2.05	10.87	±30
Perfluorononanoic acid	2.00	2.25	12.52	±30
Perfluorononanesulfonate	1.92	2.04	6.21	±30
Perfluorodecanoic acid	2.00	2.21	10.29	±30
8:2 fluorotelomersulfonate	1.92	1.86	-3.14	±30
Perfluorooctanesulfonamide	2.00	1.66	-17.08	±30
NMeFOSAA	2.00	2.20	10.04	±30
Perfluorodecanesulfonate	1.93	2.17	12.52	±30
Perfluoroundecanoic acid	2.00	2.13	6.44	±30
NEtFOSAA	2.00	1.83	-8.35	±30
Perfluorododecanoic acid	2.00	2.34	17.18	±30
10:2-fluorotelomersulfonate	1.93	1.71	-11.18	±30
NMePFOSAE	2.00	2.39	19.28	±30
NMePFOSA	2.00	2.07	3.39	±30
Perfluorododecanesulfonate	1.94	2.27	16.87	±30
NEtPFOSAE	2.00	2.32	15.96	±30
NEtPFOSA	2.00	2.04	2.16	±30
Perfluorotridecanoic acid	2.00	2.35	17.54	±30
Perfluorotetradecanoic acid	2.00	2.36	18.05	±30
Perfluorohexadecanoic acid	2.00	2.15	7.32	±30
Perfluorooctadecanoic acid	2.00	2.13	6.56	±30

* Outside QC Limits.

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FORM 07
CALIBRATION VERIFICATION SUMMARY
LC/MS/MS

SDG No.: BSI15

Instrument ID: 27631 Lab File ID: 18NOV13D-05.WIFF

Date/Time Analyzed: 11/13/2018 09:44 Lab Sample ID: CCV1_ISC_CAL2

Init. Calib. Date/Times: 11/12/2018 15:05 11/12/2018 16:00

Analytes	Specified Amount	Calculated Amount	% Difference	Limit
Perfluorobutanoic acid	0.60	0.58	-3.65	±30
Perfluoropentanoic acid	0.60	0.59	-1.76	±30
Perfluorobutanesulfonate	0.53	0.47	-11.94	±30
4:2 fluorotelomersulfonate	0.56	0.48	-14.95	±30
Perfluorohexanoic acid	0.60	0.57	-4.93	±30
Perfluoropentanesulfonate	0.56	0.51	-9.98	±30
Perfluoroheptanoic acid	0.60	0.57	-5.10	±30
Perfluorohexanesulfonate	0.55	0.52	-4.07	±30
6:2 fluorotelomersulfonate	0.57	0.61	7.89	±30
Perfluoroheptanesulfonate	0.57	0.51	-9.92	±30
Perfluorooctanoic acid	0.60	0.59	-1.97	±30
Perfluoro-octanesulfonate	0.56	0.53	-3.87	±30
Perfluorononanoic acid	0.60	0.55	-8.00	±30
Perfluorononanesulfonate	0.58	0.43	-24.60	±30
Perfluorodecanoic acid	0.60	0.57	-4.55	±30
8:2 fluorotelomersulfonate	0.58	0.46	-20.29	±30
Perfluorooctanesulfonamide	0.60	0.59	-1.95	±30
NMeFOSAA	0.60	0.54	-9.90	±30
Perfluorodecanesulfonate	0.58	0.47	-18.38	±30
Perfluoroundecanoic acid	0.60	0.55	-8.64	±30
NEtFOSAA	0.60	0.65	8.80	±30
Perfluorododecanoic acid	0.60	0.57	-4.64	±30
10:2-fluorotelomersulfonate	0.58	0.51	-11.94	±30
NMePFOSAE	0.60	0.61	1.33	±30
NMePFOSA	0.60	0.46	-23.31	±30
Perfluorododecanesulfonate	0.58	0.49	-15.84	±30
NEtPFOSAE	0.60	0.57	-5.79	±30
NEtPFOSA	0.60	0.60	-0.38	±30
Perfluorotridecanoic acid	0.60	0.59	-1.21	±30
Perfluorotetradecanoic acid	0.60	0.53	-12.31	±30
Perfluorohexadecanoic acid	0.60	0.54	-10.36	±30
Perfluorooctadecanoic acid	0.60	0.54	-10.25	±30

* Outside QC Limits.

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FORM 07
CALIBRATION VERIFICATION SUMMARY
LC/MS/MS

SDG No.: BSI15

Instrument ID: 27631 Lab File ID: 18NOV13D-47.WIFF

Date/Time Analyzed: 11/13/2018 16:38 Lab Sample ID: CCV5_CAL3

Init. Calib. Date/Times: 11/12/2018 15:05 11/12/2018 16:00

Analytes	Specified Amount	Calculated Amount	% Difference	Limit
Perfluorobutanoic acid	2.00	2.27	13.37	±30
Perfluoropentanoic acid	2.00	2.30	15.04	±30
Perfluorobutanesulfonate	1.77	1.95	10.11	±30
4:2 fluorotelomersulfonate	1.87	2.34	25.22	±30
Perfluorohexanoic acid	2.00	2.24	11.91	±30
Perfluoropentanesulfonate	1.88	1.98	5.35	±30
Perfluoroheptanoic acid	2.00	2.33	16.39	±30
Perfluorohexanesulfonate	1.82	1.99	9.21	±30
6:2 fluorotelomersulfonate	1.90	2.00	5.45	±30
Perfluoroheptanesulfonate	1.90	2.01	5.97	±30
Perfluorooctanoic acid	2.00	2.34	16.77	±30
Perfluoro-octanesulfonate	1.85	2.11	14.20	±30
Perfluorononanoic acid	2.00	2.42	21.09	±30
Perfluorononanesulfonate	1.92	2.20	14.80	±30
Perfluorodecanoic acid	2.00	2.21	10.55	±30
8:2 fluorotelomersulfonate	1.92	2.34	21.63	±30
Perfluorooctanesulfonamide	2.00	2.14	6.93	±30
NMeFOSAA	2.00	2.12	6.07	±30
Perfluorodecanesulfonate	1.93	2.02	4.46	±30
Perfluoroundecanoic acid	2.00	2.16	7.97	±30
NEtFOSAA	2.00	1.83	-8.36	±30
Perfluorododecanoic acid	2.00	2.28	14.05	±30
10:2-fluorotelomersulfonate	1.93	2.11	9.09	±30
NMePFOSAE	2.00	2.32	15.79	±30
NMePFOSA	2.00	2.03	1.57	±30
Perfluorododecanesulfonate	1.94	1.96	1.08	±30
NEtPFOSAE	2.00	2.19	9.57	±30
NEtPFOSA	2.00	2.05	2.58	±30
Perfluorotridecanoic acid	2.00	2.20	10.05	±30
Perfluorotetradecanoic acid	2.00	2.21	10.42	±30
Perfluorohexadecanoic acid	2.00	2.16	8.24	±30
Perfluorooctadecanoic acid	2.00	2.08	4.18	±30

* Outside QC Limits.

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FORM 07
CALIBRATION VERIFICATION SUMMARY
LC/MS/MS

SDG No.: BSI15

Instrument ID: 27631 Lab File ID: 18NOV13D-59.WIFF

Date/Time Analyzed: 11/13/2018 18:26 Lab Sample ID: CCV6_CAL4

Init. Calib. Date/Times: 11/12/2018 15:05 11/12/2018 16:00

Analytes	Specified Amount	Calculated Amount	% Difference	Limit
Perfluorobutanoic acid	8.00	8.06	0.80	±30
Perfluoropentanoic acid	8.00	8.35	4.42	±30
Perfluorobutanesulfonate	7.08	7.07	-0.08	±30
4:2 fluorotelomersulfonate	7.47	8.29	10.96	±30
Perfluorohexanoic acid	8.00	8.35	4.32	±30
Perfluoropentanesulfonate	7.50	7.14	-4.75	±30
Perfluoroheptanoic acid	8.00	8.70	8.75	±30
Perfluorohexanesulfonate	7.30	7.26	-0.60	±30
6:2 fluorotelomersulfonate	7.58	8.17	7.80	±30
Perfluoroheptanesulfonate	7.61	7.45	-2.06	±30
Perfluorooctanoic acid	8.00	7.89	-1.39	±30
Perfluoro-octanesulfonate	7.40	7.02	-5.18	±30
Perfluorononanoic acid	8.00	8.78	9.80	±30
Perfluorononanesulfonate	7.68	7.14	-7.06	±30
Perfluorodecanoic acid	8.00	7.95	-0.58	±30
8:2 fluorotelomersulfonate	7.66	6.99	-8.76	±30
Perfluorooctanesulfonamide	8.00	8.08	0.99	±30
NMeFOSAA	8.00	8.42	5.24	±30
Perfluorodecanesulfonate	7.70	7.28	-5.40	±30
Perfluoroundecanoic acid	8.00	8.61	7.57	±30
NEtFOSAA	8.00	7.45	-6.89	±30
Perfluorododecanoic acid	8.00	7.91	-1.09	±30
10:2-fluorotelomersulfonate	7.71	7.80	1.21	±30
NMePFOSAE	8.00	8.05	0.67	±30
NMePFOSA	8.00	7.18	-10.27	±30
Perfluorododecanesulfonate	7.74	7.10	-8.21	±30
NEtPFOSAE	8.00	8.05	0.65	±30
NEtPFOSA	8.00	7.84	-1.97	±30
Perfluorotridecanoic acid	8.00	8.19	2.37	±30
Perfluorotetradecanoic acid	8.00	8.37	4.66	±30
Perfluorohexadecanoic acid	8.00	8.22	2.80	±30
Perfluorooctadecanoic acid	8.00	8.63	7.89	±30

* Outside QC Limits.

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FORM 07
CALIBRATION VERIFICATION SUMMARY
LC/MS/MS

SDG No.: BSI15

Instrument ID: 27631 Lab File ID: 18NOV13D-70.WIFF

Date/Time Analyzed: 11/13/2018 20:05 Lab Sample ID: CCV7_ISC_CAL2

Init. Calib. Date/Times: 11/12/2018 15:05 11/12/2018 16:00

Analytes	Specified Amount	Calculated Amount	% Difference	Limit
Perfluorobutanoic acid	0.60	0.58	-3.70	±30
Perfluoropentanoic acid	0.60	0.59	-1.33	±30
Perfluorobutanesulfonate	0.53	0.48	-9.78	±30
4:2 fluorotelomersulfonate	0.56	0.57	1.88	±30
Perfluorohexanoic acid	0.60	0.60	0.39	±30
Perfluoropentanesulfonate	0.56	0.45	-19.89	±30
Perfluoroheptanoic acid	0.60	0.60	0.70	±30
Perfluorohexanesulfonate	0.55	0.47	-13.26	±30
6:2 fluorotelomersulfonate	0.57	0.51	-9.75	±30
Perfluoroheptanesulfonate	0.57	0.55	-4.55	±30
Perfluorooctanoic acid	0.60	0.57	-4.95	±30
Perfluoro-octanesulfonate	0.56	0.45	-18.54	±30
Perfluorononanoic acid	0.60	0.56	-6.87	±30
Perfluorononanesulfonate	0.58	0.48	-16.78	±30
Perfluorodecanoic acid	0.60	0.56	-6.54	±30
8:2 fluorotelomersulfonate	0.58	0.53	-7.27	±30
Perfluorooctanesulfonamide	0.60	0.47	-21.91	±30
NMeFOSAA	0.60	0.51	-14.43	±30
Perfluorodecanesulfonate	0.58	0.46	-20.36	±30
Perfluoroundecanoic acid	0.60	0.55	-7.93	±30
NEtFOSAA	0.60	0.63	5.40	±30
Perfluorododecanoic acid	0.60	0.50	-16.22	±30
10:2-fluorotelomersulfonate	0.58	0.57	-0.74	±30
NMePFOSAE	0.60	0.60	-0.44	±30
NMePFOSA	0.60	0.50	-17.13	±30
Perfluorododecanesulfonate	0.58	0.51	-12.09	±30
NEtPFOSAE	0.60	0.58	-3.75	±30
NEtPFOSA	0.60	0.48	-20.34	±30
Perfluorotridecanoic acid	0.60	0.57	-5.34	±30
Perfluorotetradecanoic acid	0.60	0.56	-6.34	±30
Perfluorohexadecanoic acid	0.60	0.58	-3.02	±30
Perfluorooctadecanoic acid	0.60	0.57	-5.47	±30

* Outside QC Limits.

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FORM 07
CALIBRATION VERIFICATION SUMMARY
LC/MS/MS

SDG No.: BSI15

Instrument ID: 27631 Lab File ID: 18NOV13D-75.WIFF

Date/Time Analyzed: 11/13/2018 20:50 Lab Sample ID: CCV8_CAL3

Init. Calib. Date/Times: 11/12/2018 15:05 11/12/2018 16:00

Analytes	Specified Amount	Calculated Amount	% Difference	Limit
Perfluorobutanoic acid	2.00	2.27	13.74	±30
Perfluoropentanoic acid	2.00	2.40	20.19	±30
Perfluorobutanesulfonate	1.77	1.84	3.75	±30
4:2 fluorotelomersulfonate	1.87	2.18	16.55	±30
Perfluorohexanoic acid	2.00	2.31	15.27	±30
Perfluoropentanesulfonate	1.88	1.99	5.66	±30
Perfluoroheptanoic acid	2.00	2.41	20.60	±30
Perfluorohexanesulfonate	1.82	1.92	5.32	±30
6:2 fluorotelomersulfonate	1.90	2.13	12.22	±30
Perfluoroheptanesulfonate	1.90	2.16	13.48	±30
Perfluorooctanoic acid	2.00	2.21	10.53	±30
Perfluoro-octanesulfonate	1.85	2.02	9.22	±30
Perfluorononanoic acid	2.00	2.47	23.65	±30
Perfluorononanesulfonate	1.92	2.13	11.11	±30
Perfluorodecanoic acid	2.00	2.20	10.00	±30
8:2 fluorotelomersulfonate	1.92	2.65	37.92 *	±30
Perfluorooctanesulfonamide	2.00	1.96	-1.76	±30
NMeFOSAA	2.00	2.38	19.06	±30
Perfluorodecanesulfonate	1.93	2.27	17.54	±30
Perfluoroundecanoic acid	2.00	2.21	10.53	±30
NEtFOSAA	2.00	1.99	-0.28	±30
Perfluorododecanoic acid	2.00	2.20	9.94	±30
10:2-fluorotelomersulfonate	1.93	2.13	10.45	±30
NMePFOSAE	2.00	2.15	7.29	±30
NMePFOSA	2.00	2.05	2.47	±30
Perfluorododecanesulfonate	1.94	2.05	5.89	±30
NEtPFOSAE	2.00	2.17	8.34	±30
NEtPFOSA	2.00	2.15	7.30	±30
Perfluorotridecanoic acid	2.00	2.19	9.66	±30
Perfluorotetradecanoic acid	2.00	2.32	16.00	±30
Perfluorohexadecanoic acid	2.00	2.28	14.20	±30
Perfluorooctadecanoic acid	2.00	2.21	10.44	±30

* Outside QC Limits.

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FORM 07
CALIBRATION VERIFICATION SUMMARY
LC/MS/MS

SDG No.: BSI15

Instrument ID: 27631 Lab File ID: 18NOV13D-87.WIFF

Date/Time Analyzed: 11/13/2018 22:38 Lab Sample ID: CCV9_CAL4

Init. Calib. Date/Times: 11/12/2018 15:05 11/12/2018 16:00

Analytes	Specified Amount	Calculated Amount	% Difference	Limit
Perfluorobutanoic acid	8.00	8.14	1.80	±30
Perfluoropentanoic acid	8.00	8.46	5.75	±30
Perfluorobutanesulfonate	7.08	6.97	-1.61	±30
4:2 fluorotelomersulfonate	7.47	7.10	-4.93	±30
Perfluorohexanoic acid	8.00	8.39	4.90	±30
Perfluoropentanesulfonate	7.50	7.29	-2.84	±30
Perfluoroheptanoic acid	8.00	8.55	6.82	±30
Perfluorohexanesulfonate	7.30	7.38	1.08	±30
6:2 fluorotelomersulfonate	7.58	7.83	3.33	±30
Perfluoroheptanesulfonate	7.61	7.92	4.05	±30
Perfluorooctanoic acid	8.00	8.05	0.64	±30
Perfluoro-octanesulfonate	7.40	6.99	-5.59	±30
Perfluorononanoic acid	8.00	8.82	10.19	±30
Perfluorononanesulfonate	7.68	7.21	-6.13	±30
Perfluorodecanoic acid	8.00	8.21	2.67	±30
8:2 fluorotelomersulfonate	7.66	8.56	11.81	±30
Perfluorooctanesulfonamide	8.00	7.66	-4.20	±30
NMeFOSAA	8.00	8.23	2.85	±30
Perfluorodecanesulfonate	7.70	7.87	2.27	±30
Perfluoroundecanoic acid	8.00	8.08	1.04	±30
NEtFOSAA	8.00	7.71	-3.59	±30
Perfluorododecanoic acid	8.00	8.04	0.48	±30
10:2-fluorotelomersulfonate	7.71	8.47	9.88	±30
NMePFOSAE	8.00	8.32	3.98	±30
NMePFOSA	8.00	7.64	-4.53	±30
Perfluorododecanesulfonate	7.74	6.96	-10.06	±30
NEtPFOSAE	8.00	7.87	-1.67	±30
NEtPFOSA	8.00	7.55	-5.63	±30
Perfluorotridecanoic acid	8.00	8.44	5.55	±30
Perfluorotetradecanoic acid	8.00	7.89	-1.35	±30
Perfluorohexadecanoic acid	8.00	8.45	5.60	±30
Perfluorooctadecanoic acid	8.00	8.74	9.19	±30

* Outside QC Limits.

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FORM 07
CALIBRATION VERIFICATION SUMMARY
LC/MS/MS

SDG No.: BSI15

Instrument ID: 27631 Lab File ID: 18NOV13D-99.WIFF

Date/Time Analyzed: 11/14/2018 00:27 Lab Sample ID: CCV10_ISC_CAL2

Init. Calib. Date/Times: 11/12/2018 15:05 11/12/2018 16:00

Analytes	Specified Amount	Calculated Amount	% Difference	Limit
Perfluorobutanoic acid	0.60	0.60	-0.34	±30
Perfluoropentanoic acid	0.60	0.61	2.07	±30
Perfluorobutanesulfonate	0.53	0.44	-16.29	±30
4:2 fluorotelomersulfonate	0.56	0.57	1.93	±30
Perfluorohexanoic acid	0.60	0.58	-3.41	±30
Perfluoropentanesulfonate	0.56	0.50	-10.42	±30
Perfluoroheptanoic acid	0.60	0.62	2.72	±30
Perfluorohexanesulfonate	0.55	0.45	-18.17	±30
6:2 fluorotelomersulfonate	0.57	0.55	-3.00	±30
Perfluoroheptanesulfonate	0.57	0.50	-12.69	±30
Perfluorooctanoic acid	0.60	0.56	-7.38	±30
Perfluoro-octanesulfonate	0.56	0.49	-11.61	±30
Perfluorononanoic acid	0.60	0.60	-0.17	±30
Perfluorononanesulfonate	0.58	0.47	-18.36	±30
Perfluorodecanoic acid	0.60	0.57	-5.44	±30
8:2 fluorotelomersulfonate	0.58	0.65	13.45	±30
Perfluorooctanesulfonamide	0.60	0.54	-10.25	±30
NMeFOSAA	0.60	0.49	-18.09	±30
Perfluorodecanesulfonate	0.58	0.53	-7.97	±30
Perfluoroundecanoic acid	0.60	0.58	-3.71	±30
NEtFOSAA	0.60	0.51	-15.69	±30
Perfluorododecanoic acid	0.60	0.59	-1.69	±30
10:2-fluorotelomersulfonate	0.58	0.44	-24.23	±30
NMePFOSAE	0.60	0.57	-5.46	±30
NMePFOSA	0.60	0.45	-25.37	±30
Perfluorododecanesulfonate	0.58	0.42	-28.05	±30
NEtPFOSAE	0.60	0.57	-5.24	±30
NEtPFOSA	0.60	0.57	-5.50	±30
Perfluorotridecanoic acid	0.60	0.60	0.67	±30
Perfluorotetradecanoic acid	0.60	0.59	-1.40	±30
Perfluorohexadecanoic acid	0.60	0.55	-8.72	±30
Perfluorooctadecanoic acid	0.60	0.54	-10.35	±30

* Outside QC Limits.

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FORM 07
CALIBRATION VERIFICATION SUMMARY
LC/MS/MS

SDG No.: BSI15

Instrument ID: 27631 Lab File ID: 18NOV28DCAL-16.WIFF

Date/Time Analyzed: 11/28/2018 15:12 Lab Sample ID: CCV1_CAL3

Init. Calib. Date/Times: 11/28/2018 13:42 11/28/2018 14:36

Analytes	Specified Amount	Calculated Amount	% Difference	Limit
Perfluorobutanoic acid	2.00	2.29	14.50	±30
Perfluoropentanoic acid	2.00	2.15	7.30	±30
Perfluorobutanesulfonate	1.77	1.90	7.57	±30
4:2 fluorotelomersulfonate	1.87	2.10	12.26	±30
Perfluorohexanoic acid	2.00	2.32	16.20	±30
Perfluoropentanesulfonate	1.88	2.10	11.73	±30
Perfluoroheptanoic acid	2.00	2.13	6.53	±30
Perfluorohexanesulfonate	1.82	1.84	1.19	±30
6:2 fluorotelomersulfonate	1.90	2.35	23.67	±30
Perfluoroheptanesulfonate	1.90	2.07	8.75	±30
Perfluorooctanoic acid	2.00	2.15	7.45	±30
Perfluoro-octanesulfonate	1.85	1.89	2.39	±30
Perfluorononanoic acid	2.00	2.37	18.31	±30
Perfluorononanesulfonate	1.92	1.96	2.24	±30
Perfluorodecanoic acid	2.00	2.38	18.95	±30
8:2 fluorotelomersulfonate	1.92	1.87	-2.39	±30
Perfluorooctanesulfonamide	2.00	2.10	4.85	±30
NMeFOSAA	2.00	2.08	3.82	±30
Perfluorodecanesulfonate	1.93	2.07	7.49	±30
Perfluoroundecanoic acid	2.00	2.39	19.73	±30
NEtFOSAA	2.00	1.90	-5.08	±30
Perfluorododecanoic acid	2.00	2.49	24.44	±30
10:2-fluorotelomersulfonate	1.93	2.22	14.77	±30
NMePFOSAE	2.00	2.10	5.15	±30
NMePFOSA	2.00	2.11	5.69	±30
Perfluorododecanesulfonate	1.94	1.96	1.21	±30
NEtPFOSAE	2.00	2.30	14.93	±30
NEtPFOSA	2.00	2.22	10.99	±30
Perfluorotridecanoic acid	2.00	2.59	29.28	±30
Perfluorotetradecanoic acid	2.00	2.29	14.59	±30
Perfluorohexadecanoic acid	2.00	2.22	11.22	±30
Perfluorooctadecanoic acid	2.00	2.22	11.09	±30

* Outside QC Limits.

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FORM 07
CALIBRATION VERIFICATION SUMMARY
LC/MS/MS

SDG No.: BSI15

Instrument ID: 27631 Lab File ID: 18NOV29D-05.WIFF

Date/Time Analyzed: 11/29/2018 10:33 Lab Sample ID: CCV1_ISC_CAL2

Init. Calib. Date/Times: 11/28/2018 13:42 11/28/2018 14:36

Analytes	Specified Amount	Calculated Amount	% Difference	Limit
Perfluorobutanoic acid	0.60	0.59	-1.98	±30
Perfluoropentanoic acid	0.60	0.52	-14.14	±30
Perfluorobutanesulfonate	0.53	0.47	-10.86	±30
4:2 fluorotelomersulfonate	0.56	0.49	-13.37	±30
Perfluorohexanoic acid	0.60	0.58	-2.77	±30
Perfluoropentanesulfonate	0.56	0.57	0.99	±30
Perfluoroheptanoic acid	0.60	0.56	-6.28	±30
Perfluorohexanesulfonate	0.55	0.48	-12.13	±30
6:2 fluorotelomersulfonate	0.57	0.64	12.30	±30
Perfluoroheptanesulfonate	0.57	0.49	-14.63	±30
Perfluorooctanoic acid	0.60	0.53	-11.76	±30
Perfluoro-octanesulfonate	0.56	0.51	-8.84	±30
Perfluorononanoic acid	0.60	0.55	-7.57	±30
Perfluorononanesulfonate	0.58	0.45	-21.13	±30
Perfluorodecanoic acid	0.60	0.58	-4.04	±30
8:2 fluorotelomersulfonate	0.58	0.51	-11.58	±30
Perfluorooctanesulfonamide	0.60	0.53	-10.95	±30
NMeFOSAA	0.60	0.54	-9.99	±30
Perfluorodecanesulfonate	0.58	0.56	-3.35	±30
Perfluoroundecanoic acid	0.60	0.58	-3.79	±30
NEtFOSAA	0.60	0.52	-12.77	±30
Perfluorododecanoic acid	0.60	0.60	0.40	±30
10:2-fluorotelomersulfonate	0.58	0.59	1.43	±30
NMePFOSAE	0.60	0.59	-1.65	±30
NMePFOSA	0.60	0.52	-14.03	±30
Perfluorododecanesulfonate	0.58	0.49	-15.15	±30
NEtPFOSAE	0.60	0.58	-3.30	±30
NEtPFOSA	0.60	0.50	-17.33	±30
Perfluorotridecanoic acid	0.60	0.66	9.17	±30
Perfluorotetradecanoic acid	0.60	0.60	0.18	±30
Perfluorohexadecanoic acid	0.60	0.61	2.42	±30
Perfluorooctadecanoic acid	0.60	0.56	-5.99	±30

* Outside QC Limits.

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FORM 07
CALIBRATION VERIFICATION SUMMARY
LC/MS/MS

SDG No.: BSI15

Instrument ID: 27631 Lab File ID: 18NOV29D-52.WIFF

Date/Time Analyzed: 11/29/2018 17:37 Lab Sample ID: CCV5_CAL3

Init. Calib. Date/Times: 11/28/2018 13:42 11/28/2018 14:36

Analytes	Specified Amount	Calculated Amount	% Difference	Limit
Perfluorobutanoic acid	2.00	2.24	12.08	±30
Perfluoropentanoic acid	2.00	2.10	5.00	±30
Perfluorobutanesulfonate	1.77	1.97	11.32	±30
4:2 fluorotelomersulfonate	1.87	2.13	14.12	±30
Perfluorohexanoic acid	2.00	2.37	18.38	±30
Perfluoropentanesulfonate	1.88	2.13	13.27	±30
Perfluoroheptanoic acid	2.00	2.24	11.85	±30
Perfluorohexanesulfonate	1.82	1.82	-0.10	±30
6:2 fluorotelomersulfonate	1.90	2.31	21.74	±30
Perfluoroheptanesulfonate	1.90	1.97	3.62	±30
Perfluorooctanoic acid	2.00	2.19	9.74	±30
Perfluoro-octanesulfonate	1.85	1.73	-6.32	±30
Perfluorononanoic acid	2.00	2.29	14.58	±30
Perfluorononanesulfonate	1.92	1.84	-3.91	±30
Perfluorodecanoic acid	2.00	2.26	13.23	±30
8:2 fluorotelomersulfonate	1.92	1.83	-4.47	±30
Perfluorooctanesulfonamide	2.00	2.11	5.65	±30
NMeFOSAA	2.00	2.25	12.29	±30
Perfluorodecanesulfonate	1.93	1.88	-2.44	±30
Perfluoroundecanoic acid	2.00	2.24	12.04	±30
NEtFOSAA	2.00	2.27	13.26	±30
Perfluorododecanoic acid	2.00	2.24	11.88	±30
10:2-fluorotelomersulfonate	1.93	2.14	10.97	±30
NMePFOSAE	2.00	2.24	11.91	±30
NMePFOSA	2.00	2.27	13.75	±30
Perfluorododecanesulfonate	1.94	1.84	-5.06	±30
NEtPFOSAE	2.00	2.43	21.53	±30
NEtPFOSA	2.00	2.13	6.63	±30
Perfluorotridecanoic acid	2.00	2.51	25.70	±30
Perfluorotetradecanoic acid	2.00	2.29	14.50	±30
Perfluorohexadecanoic acid	2.00	2.31	15.50	±30
Perfluorooctadecanoic acid	2.00	2.20	10.10	±30

* Outside QC Limits.

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FORM 07
CALIBRATION VERIFICATION SUMMARY
LC/MS/MS

SDG No.: BSI15

Instrument ID: 27631 Lab File ID: 18NOV29D-64.WIFF

Date/Time Analyzed: 11/29/2018 19:25 Lab Sample ID: CCV6_CAL4

Init. Calib. Date/Times: 11/28/2018 13:42 11/28/2018 14:36

Analytes	Specified Amount	Calculated Amount	% Difference	Limit
Perfluorobutanoic acid	8.00	8.16	2.03	±30
Perfluoropentanoic acid	8.00	7.11	-11.08	±30
Perfluorobutanesulfonate	7.08	7.07	-0.12	±30
4:2 fluorotelomersulfonate	7.47	7.32	-2.02	±30
Perfluorohexanoic acid	8.00	8.16	1.96	±30
Perfluoropentanesulfonate	7.50	7.77	3.53	±30
Perfluoroheptanoic acid	8.00	7.80	-2.52	±30
Perfluorohexanesulfonate	7.30	6.78	-7.11	±30
6:2 fluorotelomersulfonate	7.58	8.06	6.29	±30
Perfluoroheptanesulfonate	7.61	7.48	-1.72	±30
Perfluorooctanoic acid	8.00	8.14	1.75	±30
Perfluoro-octanesulfonate	7.40	6.68	-9.71	±30
Perfluorononanoic acid	8.00	7.92	-0.97	±30
Perfluorononanesulfonate	7.68	7.11	-7.42	±30
Perfluorodecanoic acid	8.00	8.89	11.08	±30
8:2 fluorotelomersulfonate	7.66	7.36	-3.88	±30
Perfluorooctanesulfonamide	8.00	7.93	-0.83	±30
NMeFOSAA	8.00	7.77	-2.92	±30
Perfluorodecanesulfonate	7.70	7.14	-7.33	±30
Perfluoroundecanoic acid	8.00	8.04	0.51	±30
NEtFOSAA	8.00	7.69	-3.84	±30
Perfluorododecanoic acid	8.00	8.51	6.41	±30
10:2-fluorotelomersulfonate	7.71	8.18	6.04	±30
NMePFOSAE	8.00	8.01	0.07	±30
NMePFOSA	8.00	8.07	0.88	±30
Perfluorododecanesulfonate	7.74	7.30	-5.64	±30
NEtPFOSAE	8.00	8.53	6.66	±30
NEtPFOSA	8.00	7.51	-6.10	±30
Perfluorotridecanoic acid	8.00	9.20	14.98	±30
Perfluorotetradecanoic acid	8.00	8.37	4.65	±30
Perfluorohexadecanoic acid	8.00	8.82	10.29	±30
Perfluorooctadecanoic acid	8.00	8.26	3.28	±30

* Outside QC Limits.

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FORM 07
CALIBRATION VERIFICATION SUMMARY
LC/MS/MS

SDG No.: BSI15

Instrument ID: 27631 Lab File ID: 18NOV29D-72.WIFF

Date/Time Analyzed: 11/29/2018 20:38 Lab Sample ID: CCV7_ISC_CAL2

Init. Calib. Date/Times: 11/28/2018 13:42 11/28/2018 14:36

Analytes	Specified Amount	Calculated Amount	% Difference	Limit
Perfluorobutanoic acid	0.60	0.58	-3.74	±30
Perfluoropentanoic acid	0.60	0.53	-12.23	±30
Perfluorobutanesulfonate	0.53	0.47	-10.95	±30
4:2 fluorotelomersulfonate	0.56	0.54	-3.07	±30
Perfluorohexanoic acid	0.60	0.58	-3.41	±30
Perfluoropentanesulfonate	0.56	0.51	-9.82	±30
Perfluoroheptanoic acid	0.60	0.59	-2.01	±30
Perfluorohexanesulfonate	0.55	0.43	-21.05	±30
6:2 fluorotelomersulfonate	0.57	0.66	15.67	±30
Perfluoroheptanesulfonate	0.57	0.51	-10.49	±30
Perfluorooctanoic acid	0.60	0.56	-6.71	±30
Perfluoro-octanesulfonate	0.56	0.47	-15.33	±30
Perfluorononanoic acid	0.60	0.61	1.85	±30
Perfluorononanesulfonate	0.58	0.51	-10.95	±30
Perfluorodecanoic acid	0.60	0.59	-1.84	±30
8:2 fluorotelomersulfonate	0.58	0.44	-23.93	±30
Perfluorooctanesulfonamide	0.60	0.52	-13.07	±30
NMeFOSAA	0.60	0.60	0.77	±30
Perfluorodecanesulfonate	0.58	0.51	-11.72	±30
Perfluoroundecanoic acid	0.60	0.57	-4.74	±30
NEtFOSAA	0.60	0.53	-11.48	±30
Perfluorododecanoic acid	0.60	0.55	-8.02	±30
10:2-fluorotelomersulfonate	0.58	0.51	-12.52	±30
NMePFOSAE	0.60	0.53	-11.19	±30
NMePFOSA	0.60	0.55	-8.90	±30
Perfluorododecanesulfonate	0.58	0.51	-12.78	±30
NEtPFOSAE	0.60	0.63	5.33	±30
NEtPFOSA	0.60	0.51	-15.34	±30
Perfluorotridecanoic acid	0.60	0.63	4.33	±30
Perfluorotetradecanoic acid	0.60	0.59	-1.38	±30
Perfluorohexadecanoic acid	0.60	0.60	0.60	±30
Perfluorooctadecanoic acid	0.60	0.56	-6.95	±30

* Outside QC Limits.

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FORM 08A DOD
INTERNAL STANDARDS
LC/MS/MS

SDG No.: BSI15
Matrix: SOIL

Batch: 18316011 File Name:18NOV13D-05.WIFF		13C2-PFDA Area	13C2-PFOA Area	13C3-PFBA Area	13C4-PFOS Area
CAL3 Area/ CCV Area		295382	466903	661127	247447
LOWER LIMIT		147691	233452	330564	123724
UPPER LIMIT		443073	700355	991691	371171
LAB SAMPLE ID	**DATE ANALYZED**				
BLK316011	11/13/18 16:56	319901	523346	750418	279166
LCS316011	11/13/18 17:05	327789	506243	712565	269394
9885080	11/13/18 17:14	326733	521744	748317	278626
9885081	11/13/18 17:23	311720	501168	737049	269270
9885082	11/13/18 17:32	317185	517234	739459	274462
9885085	11/13/18 17:41	315438	502568	702913	258582
9885086	11/13/18 17:50	326421	497531	724652	275243
9885087MS	11/13/18 17:59	327487	528432	732530	275959
9885088MSD	11/13/18 18:08	315878	504925	724611	272509
9885089	11/13/18 18:17	327634	517841	736998	275137
9885090	11/13/18 18:35	334922	504006	720310	280084
9885092	11/13/18 18:44	323957	522948	723621	279074
9885093	11/13/18 18:53	320874	535321	745894	281239
9885094	11/13/18 19:02	318772	519420	742262	279023
9885095	11/13/18 19:11	325557	529911	744488	287049
9885098	11/13/18 19:20	315057	553900	715057	266826
9885099	11/13/18 19:29	362054	501847	758028	285956
9885100	11/13/18 19:38	321411	540582	735208	272970
9885101	11/13/18 19:47	321993	494490	746585	278347
9885104	11/13/18 19:56	327164	496816	728141	279628

AREA: Upper limit: 150% of the internal standard area.
Lower Limit: 50% of the internal standard area.

* Outside QC Limits

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FORM 08A DOD
INTERNAL STANDARDS
LC/MS/MS

SDG No.: BSI15
Matrix: SOIL

Batch: 18316011 File Name:18NOV13D-05.WIFF		13C2-PFDA	13C2-PFOA	13C3-PFBA	13C4-PFOS
		Area	Area	Area	Area
CAL3 Area/ CCV Area		295382	466903	661127	247447
LOWER LIMIT		147691	233452	330564	123724
UPPER LIMIT		443073	700355	991691	371171
LAB SAMPLE ID	**DATE ANALYZED**				
9885105	11/13/18 20:14	324956	531124	737669	287083
9885106	11/13/18 20:23	325542	518556	756299	279121

AREA: Upper limit: 150% of the internal standard area.
Lower Limit: 50% of the internal standard area.

* Outside QC Limits

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FORM 08A DOD
INTERNAL STANDARDS
LC/MS/MS

SDG No.: BSI15
Matrix: SOIL

Batch: 18316029 File Name:18NOV13D-05.WIFF		13C2-PFDA	13C2-PFOA	13C3-PFBA	13C4-PFOS
		Area	Area	Area	Area
CAL3 Area/ CCV Area		295382	466903	661127	247447
LOWER LIMIT		147691	233452	330564	123724
UPPER LIMIT		443073	700355	991691	371171
LAB SAMPLE ID	**DATE ANALYZED**				
BLK316029	11/13/18 23:06	335561	517903	737180	276059
LCS316029	11/13/18 23:15	317119	535274	741385	279158
9885078	11/13/18 23:24	318179	524478	748389	278024

AREA: Upper limit: 150% of the internal standard area.
Lower Limit: 50% of the internal standard area.

* Outside QC Limits

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FORM 08A DOD
INTERNAL STANDARDS
LC/MS/MS

SDG No.: BSI15
Matrix: SOIL

Batch: 18332003 File Name:18NOV29D-05.WIFF		13C2-PFDA	13C2-PFOA	13C3-PFBA	13C4-PFOS
		Area	Area	Area	Area
CAL3 Area/ CCV Area		451203	495984	906425	296262
LOWER LIMIT		225602	247992	453213	148131
UPPER LIMIT		676805	743976	1359638	444393
LAB SAMPLE ID	**DATE ANALYZED**				
BLK332003	11/29/18 18:04	538786	583595	1052099	370221
LCS332003	11/29/18 18:13	557510	600874	1066377	371549
9885091	11/29/18 19:43	586772	639341	1056848	364463

AREA: Upper limit: 150% of the internal standard area.
Lower Limit: 50% of the internal standard area.

* Outside QC Limits

Sample Data

PFAS by LC/MS/MS

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LC-MS/MS
DOD Analysis Report

Printed: 11/14/2018 6:48:00 PM
Template: DOD-Sample-18JUN22.docx

ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM
Result Table: 18316029 11/14/2018 6:48:04 PM
Acquisition Method: 18AUG13_3uL.dam

Sample Name:	9885078			**Data File:**		18NOV13D-92.wiff
Sample ID:	EPA 537 mod QSM 5.1 table B-15 18316029 OU1-Bldg2-S-01-08 Grab Soil			**Acquis Date:**		2018-11-13T23:24:02
Sample Type:	Unknown			**Instrument:**		LM27631
Vial Position:	86			**Acquis Method:**		18AUG13_3uL.dam
Injection Vol:	3.00			**Result Table:**		18316029
QMethod File:	18AUG20QM			**ICAL Name:**		18NOV12DCAL
Batch Number:	18316029			**Operator:**		MCD7824
Sample Wt.:	1.02000			**Dilution Factor:**		1.00
Sample Vol.:	1.000			**Prep Factor:**		2.000

Injection Standard Peak Table

Injection Standard Area Reference File: 18NOV13D-05

Injection Standard Name	Inj Std Conc	Injection Std Peak Area	Rreference Injection Standard Area	Injection Std %Diff	Injection Std %Diff Limit	Injection Std %Diff OOS
13C3-PFBA	5.0	748388.6	661126.9	13	50	
13C2-PFOA	5.0	524477.5	466902.6	12	50	
13C4-PFOS	4.8	278024.2	247446.9	12	50	
13C2-PFDA	5.0	318179.0	295381.6	8	50	

Extraction Standard Peak Table

Extraction Standard Name	Ext Std Area	Inj Std Name	Inj Std Area	Area Ratio	Ext Std Conc	Ext Std Result	Ext Std %REC	Ext Std %REC Limit	Ext Std OOS
E13C3-PFBS	485168.0	13C3-PFBA	748388.6	0.648	9.118	8.973	98	50-150	
E13C5-PFHxA	748998.0	13C2-PFOA	524477.5	1.428	9.804	10.115	103	50-150	
E13C3-PFHxS	356085.6	13C2-PFOA	524477.5	0.679	9.275	9.135	98	50-150	
E13C4-PFHpA	586703.8	13C2-PFOA	524477.5	1.119	9.804	9.882	101	50-150	
E13C8-PFOA	1051099.4	13C2-PFOA	524477.5	2.004	9.804	10.827	110	50-150	
E13C8-PFOS	310522.4	13C4-PFOS	278024.2	1.117	9.373	9.703	104	50-150	
E13C9-PFNA	546897.6	13C4-PFOS	278024.2	1.967	9.804	10.754	110	50-150	
E13C6-PFDA	726767.8	13C2-PFDA	318179.0	2.284	9.804	10.452	107	50-150	
Ed3-NMeFOSAA	97358.8	13C2-PFDA	318179.0	0.306	9.804	10.830	110	50-150	
E13C7-PFUnDA	292132.5	13C2-PFDA	318179.0	0.918	9.804	10.452	107	50-150	
Ed5-NEtFOSAA	73521.1	13C2-PFDA	318179.0	0.231	9.804	9.585	98	50-150	
E13C2-PFDoDA	616715.5	13C2-PFDA	318179.0	1.938	9.804	9.868	101	50-150	
E13C2-PFTeDA	426811.8	13C2-PFDA	318179.0	1.341	9.804	9.234	94	50-150	

APPROVED
By MCD at 6:55 pm, 11/14/18

REVIEWED
By HMK at 11:03 am, 11/15/18

ICAL Name: 18NOV12DCAL **Result Table:** 18316029 11/14/2018 6:48:04 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

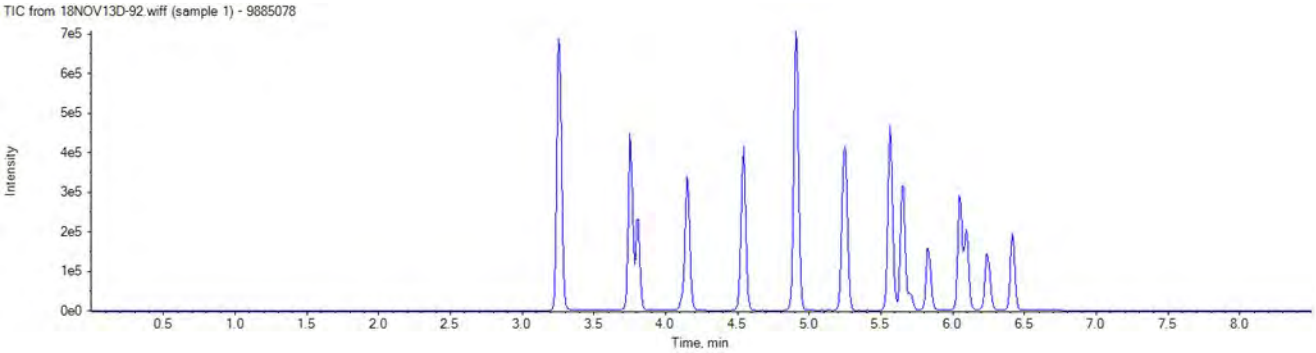
Analyte Quantitation Peak Table

Sample Name: 9885078 **Instrument Name:** LM27631 **File Name:** 18NOV13D-92.wiff

Sample Wt	Sample Vol	Dilution Factor	PrepFactor
1.02000	1.000	1.00	2.000

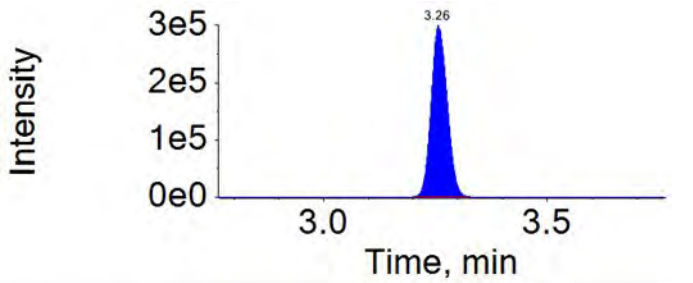
Analyte Name	RT	RRT	Analyte Area Response	E	Int Typ	ES Name	ES RT	ES Area Response	Area Ratio	Sample Result (ng/g)
PFBS	N/A	N/A	N/A		A	13C3-PFBS	3.80	485168.0	N/A	
PFHxA	N/A	N/A	N/A		A	13C5-PFHxA	4.15	748998.0	N/A	
PFHpA	N/A	N/A	N/A		A	13C4-PFHpA	4.54	586703.8	N/A	
PFHxS	N/A	N/A	N/A		A	13C3-PFHxS	4.54	356085.6	N/A	
PFOA	N/A	N/A	N/A		A	13C8-PFOA	4.91	1051099.4	N/A	
PFOS	N/A	N/A	N/A		A	13C8-PFOS	5.24	310522.4	N/A	
PFNA	N/A	N/A	N/A		A	13C9-PFNA	5.26	546897.6	N/A	
PFDA	N/A	N/A	N/A		A	13C6-PFDA	5.56	726767.8	N/A	
NMeFOSAA	N/A	N/A	N/A		A	d3-NMeFOSAA	5.71	97358.8	N/A	
PFUnDA	N/A	N/A	N/A		A	13C7-PFUnDA	5.83	292132.5	N/A	
NEtFOSAA	N/A	N/A	N/A		A	d5-NEtFOSAA	5.84	73521.1	N/A	
PFDoDA	N/A	N/A	N/A		A	13C2-PFDoDA	6.05	616715.5	N/A	
PFTrDA	N/A	N/A	N/A		A	13C2-PFDoDA	6.05	616715.5	N/A	
PFTeDA	N/A	N/A	N/A		A	13C2-PFTeDA	6.42	426811.8	N/A	

Total Ion Chromatogram

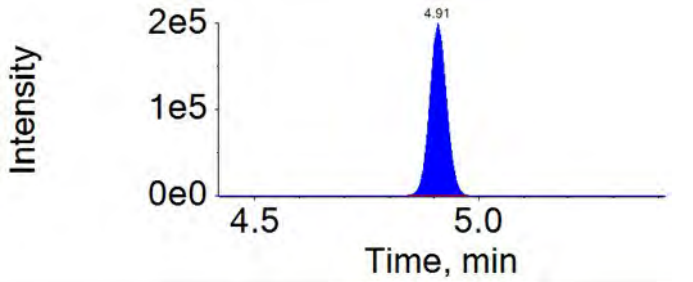


ICAL Name: 18NOV12DCAL **Result Table:** 18316029 11/14/2018 6:48:04 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

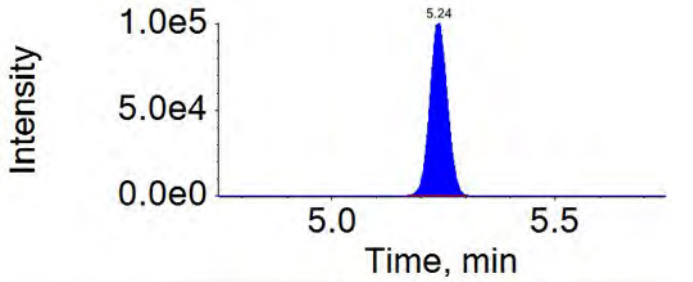
Injection Standard: 13C3-PFBA
216.0 / 172.0



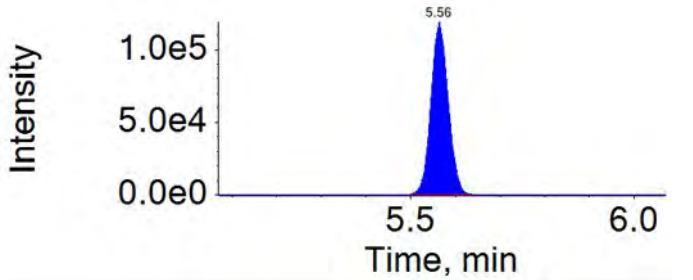
Injection Standard: 13C2-PFOA
415.0 / 370.0



Injection Standard: 13C4-PFOS
503.0 / 80.0

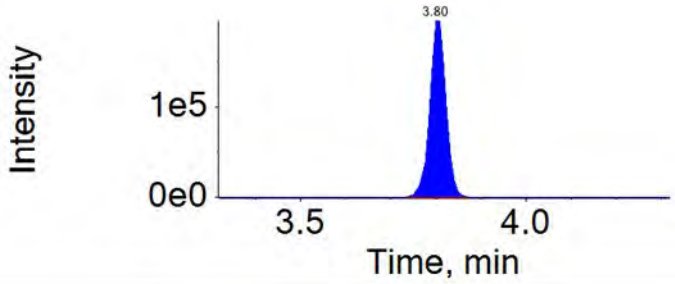


Injection Standard: 13C2-PFDA
515.0 / 470.0

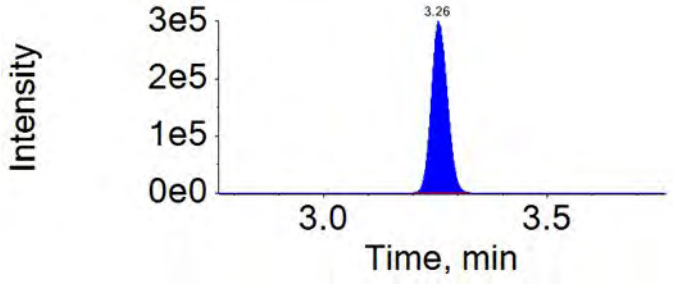


ICAL Name: 18NOV12DCAL **Result Table:** 18316029 11/14/2018 6:48:04 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

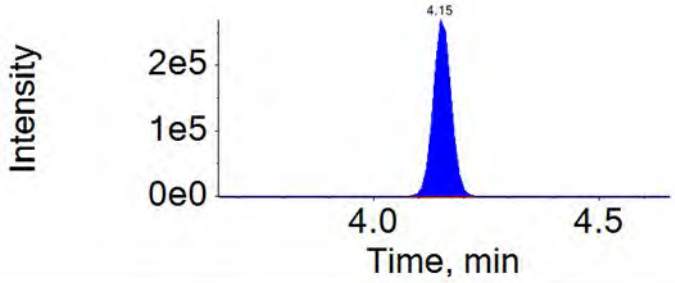
Extraction Standard: E13C3-PFBS
302.0 / 80.0



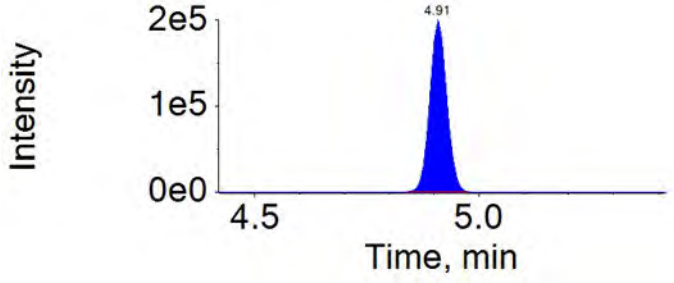
Injection Standard: 13C3-PFBA
216.0 / 172.0



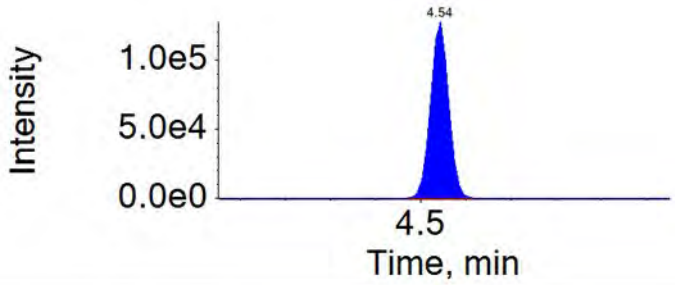
Extraction Standard: E13C5-PFHxA
318.0 / 273.0



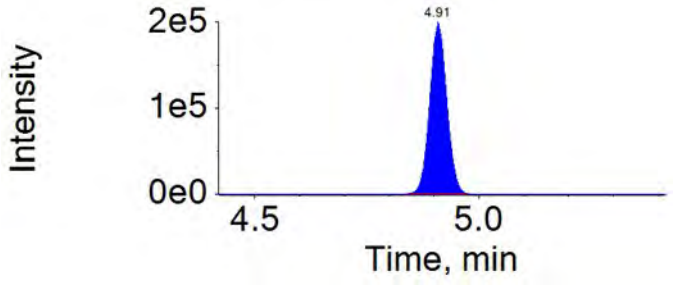
Injection Standard: 13C2-PFOA
415.0 / 370.0



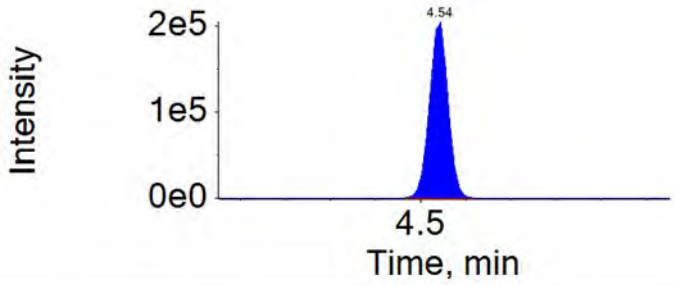
Extraction Standard: E13C3-PFHxS
402.0 / 80.0



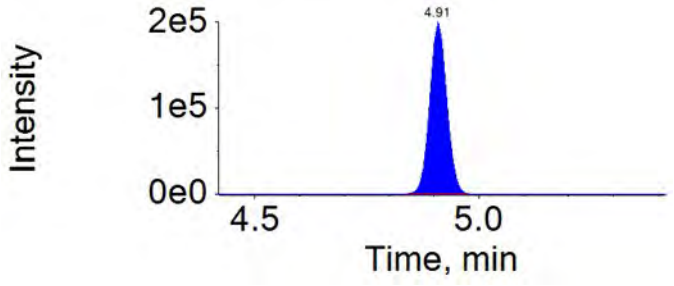
Injection Standard: 13C2-PFOA
415.0 / 370.0



Extraction Standard: E13C4-PFHpA
367.0 / 322.0



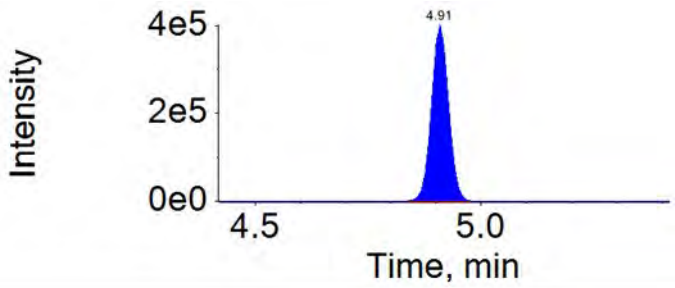
Injection Standard: 13C2-PFOA
415.0 / 370.0



ICAL Name: 18NOV12DCAL **Result Table:** 18316029 11/14/2018 6:48:04 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

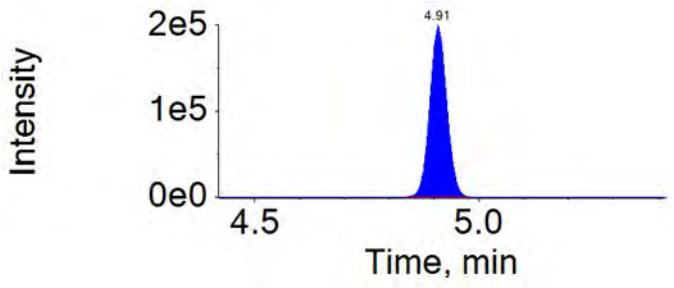
Extraction Standard: E13C8-PFOA

421.0 / 376.0



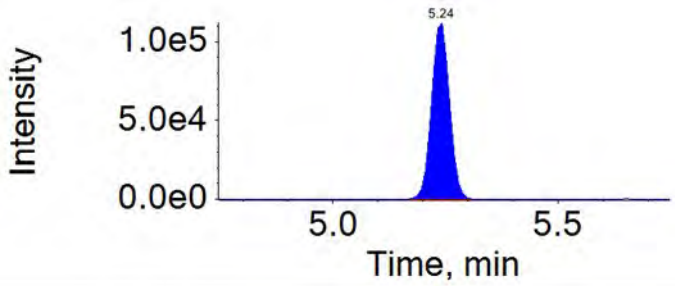
Injection Standard: 13C2-PFOA

415.0 / 370.0



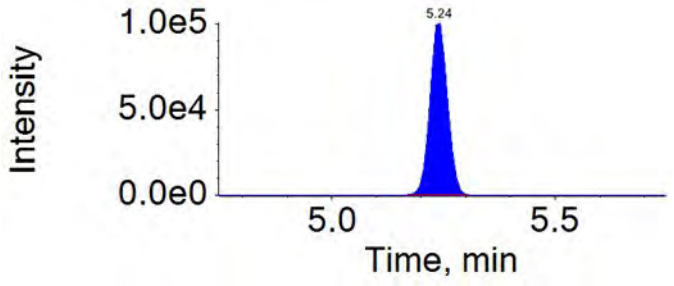
Extraction Standard: E13C8-PFOS

507.0 / 80.0



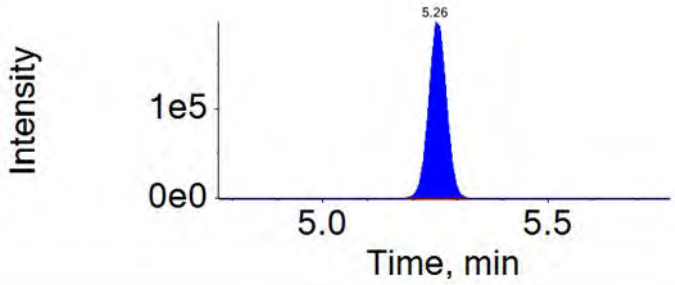
Injection Standard: 13C4-PFOS

503.0 / 80.0



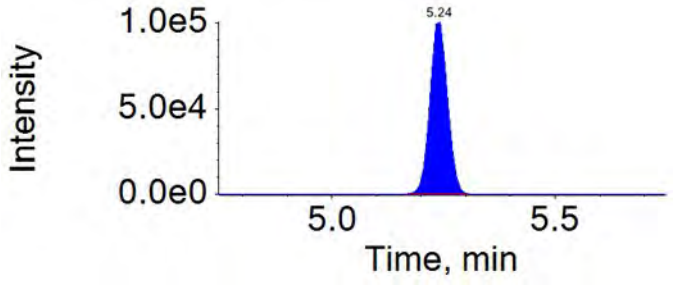
Extraction Standard: E13C9-PFNA

472.0 / 427.0



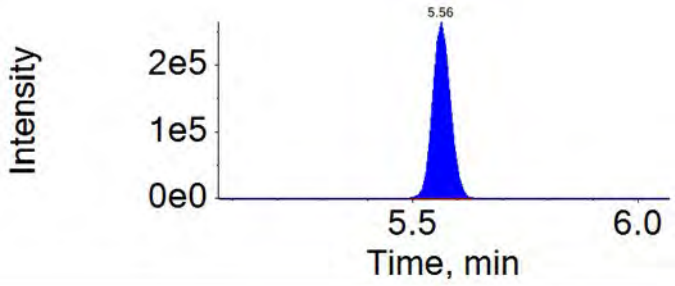
Injection Standard: 13C4-PFOS

503.0 / 80.0



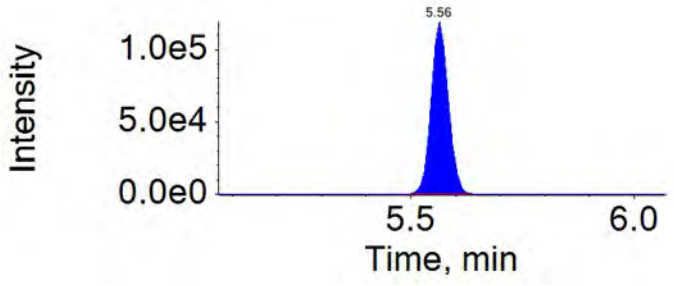
Extraction Standard: E13C6-PFDA

519.0 / 474.0



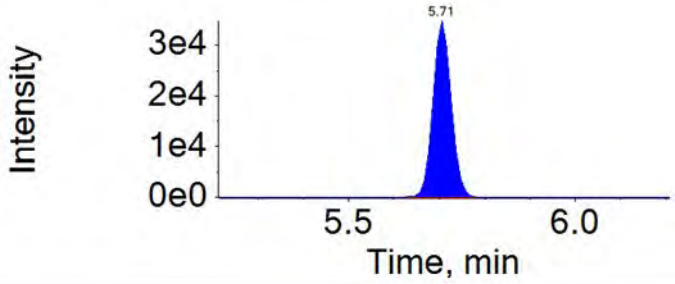
Injection Standard: 13C2-PFDA

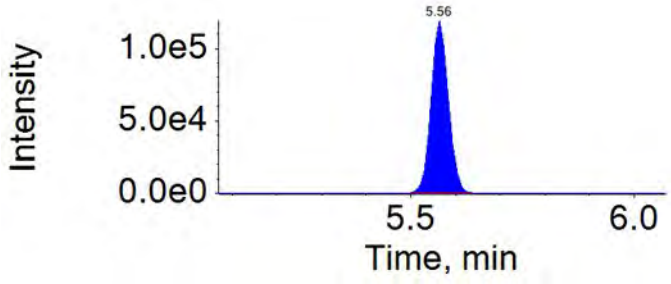
515.0 / 470.0



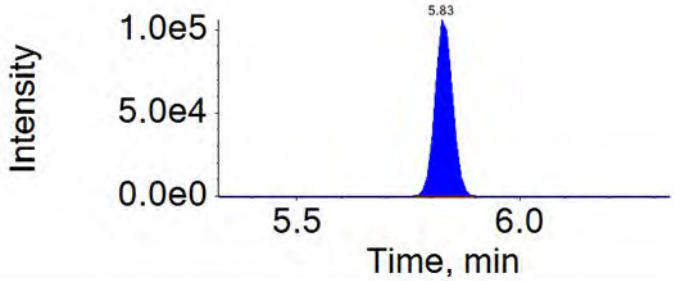
ICAL Name: 18NOV12DCAL **Result Table:** 18316029 11/14/2018 6:48:04 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

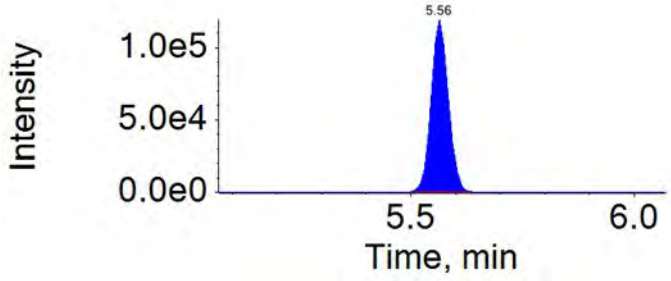
Extraction Standard: Ed3-NMeFOSAA	Injection Standard: 13C2-PFDA
573.0 / 419.0	515.0 / 470.0



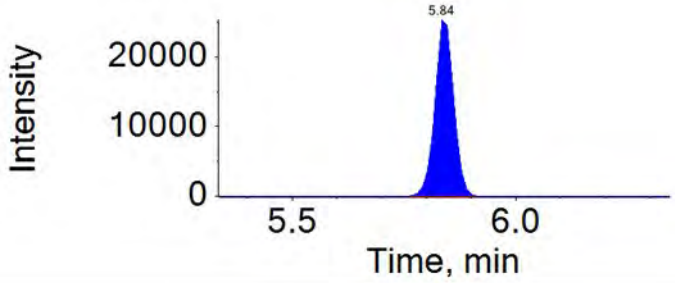


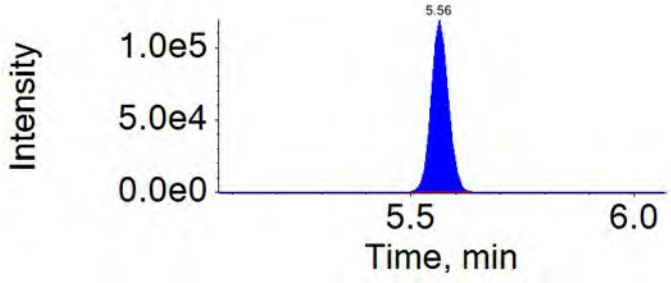
Extraction Standard: E13C7-PFUnDA	Injection Standard: 13C2-PFDA
570.0 / 525.0	515.0 / 470.0



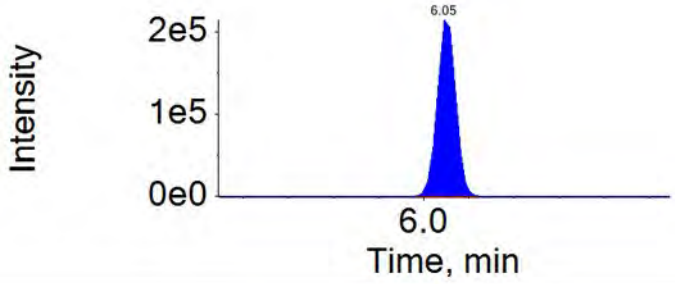


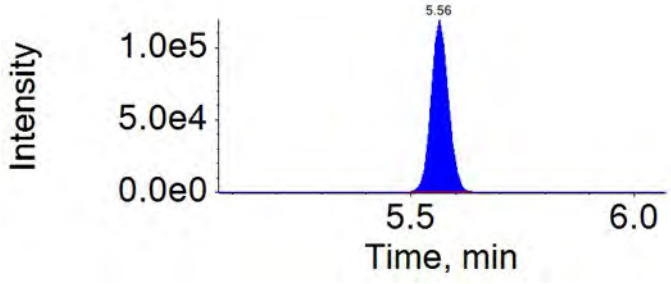
Extraction Standard: Ed5-NEtFOSAA	Injection Standard: 13C2-PFDA
589.0 / 419.0	515.0 / 470.0





Extraction Standard: E13C2-PFDoDA	Injection Standard: 13C2-PFDA
615.0 / 570.0	515.0 / 470.0

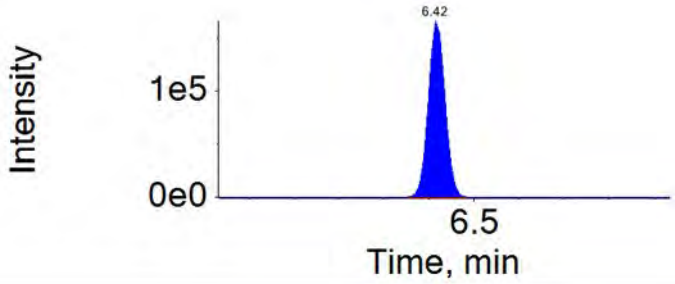
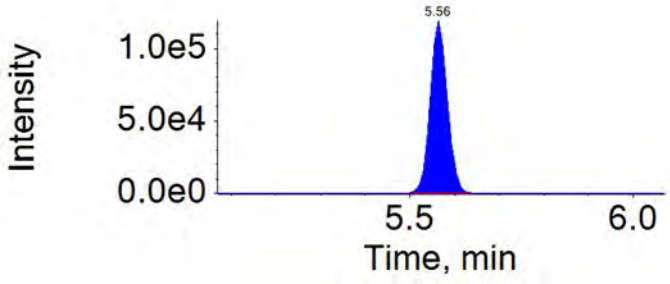




APPROVED
By MCD at 6:55 pm, 11/14/18

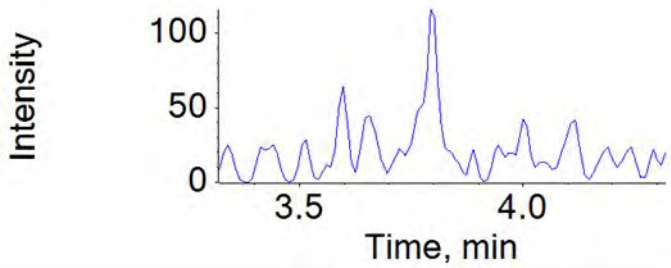
REVIEWED
By HMK at 11:03 am, 11/15/18

ICAL Name: 18NOV12DCAL **Result Table:** 18316029 11/14/2018 6:48:04 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

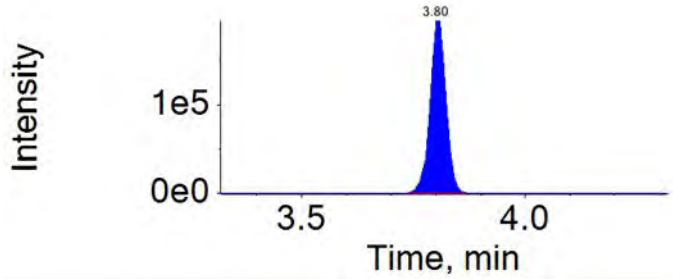
Extraction Standard: E13C2-PFTeDA	Injection Standard: 13C2-PFDA
715.0 / 670.0 	515.0 / 470.0 

ICAL Name: 18NOV12DCAL **Result Table:** 18316029 11/14/2018 6:48:04 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

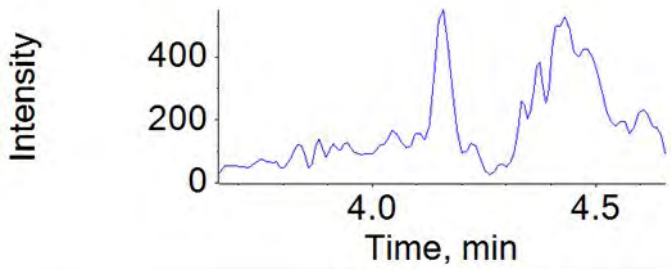
Analyte: PFBS
299.0 / 80.0



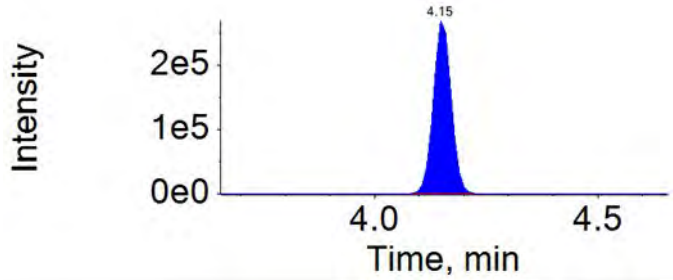
Extraction Standard: 13C3-PFBS
302.0 / 80.0



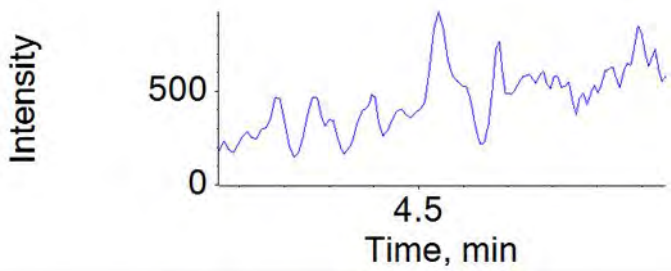
Analyte: PFHxA
313.0 / 269.0



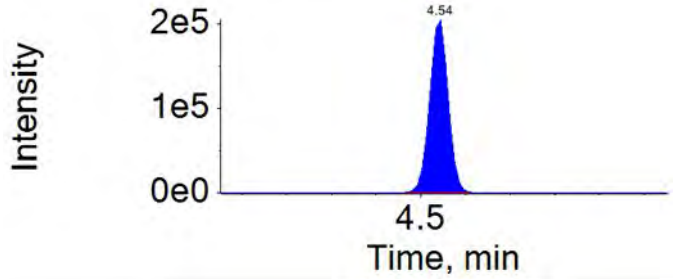
Extraction Standard: 13C5-PFHxA
318.0 / 273.0



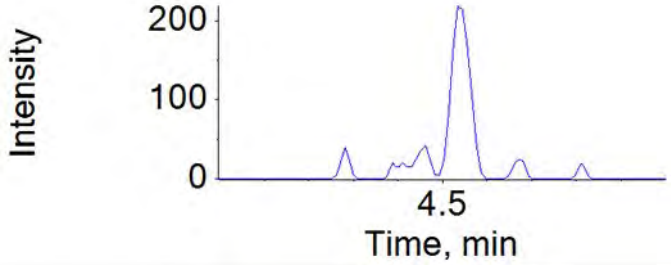
Analyte: PFHpA
363.0 / 319.0



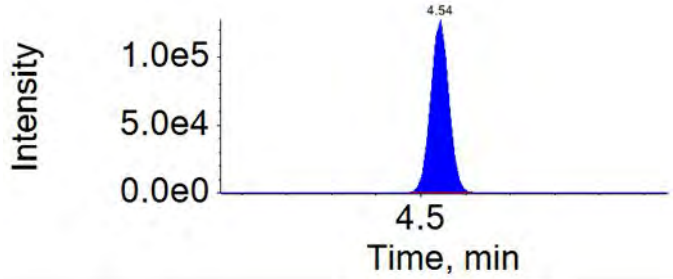
Extraction Standard: 13C4-PFHpA
367.0 / 322.0



Analyte: PFHxS
399.0 / 80.0

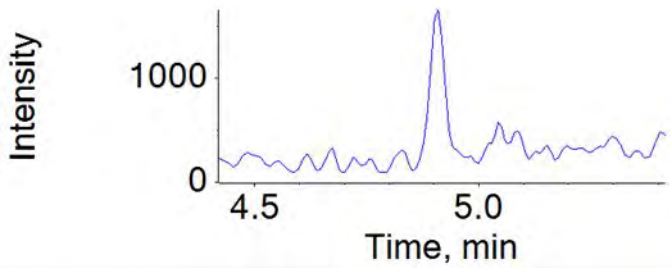


Extraction Standard: 13C3-PFHxS
402.0 / 80.0

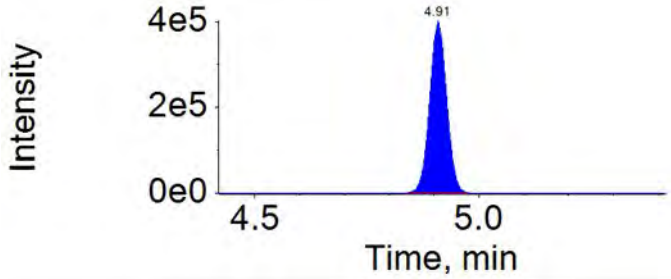


ICAL Name: 18NOV12DCAL **Result Table:** 18316029 11/14/2018 6:48:04 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

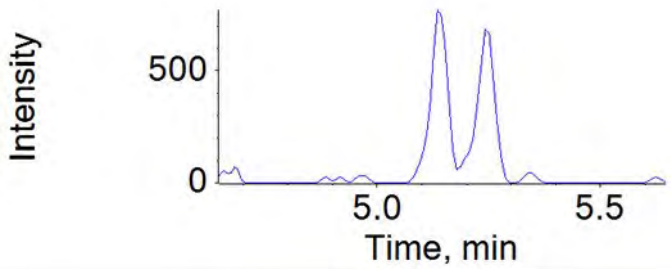
Analyte: PFOA
413.0 / 369.0



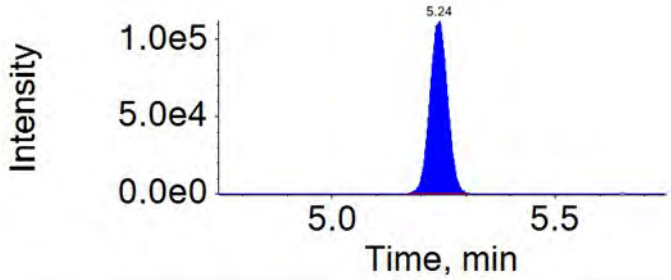
Extraction Standard: 13C8-PFOA
421.0 / 376.0



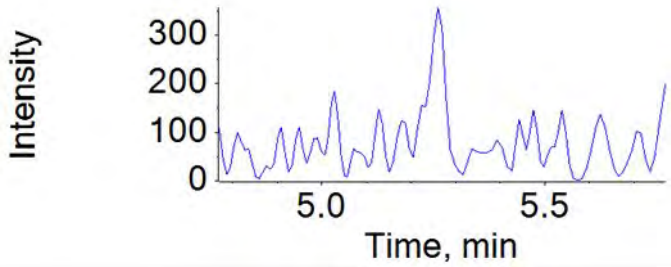
Analyte: PFOS
499.0 / 80.0



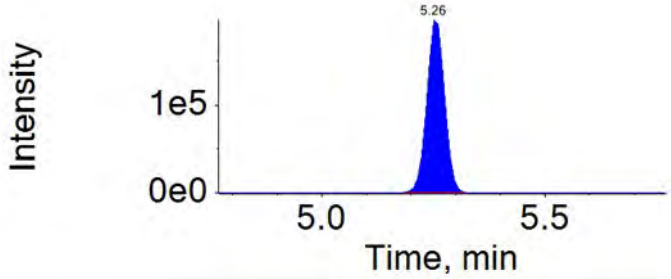
Extraction Standard: 13C8-PFOS
507.0 / 80.0



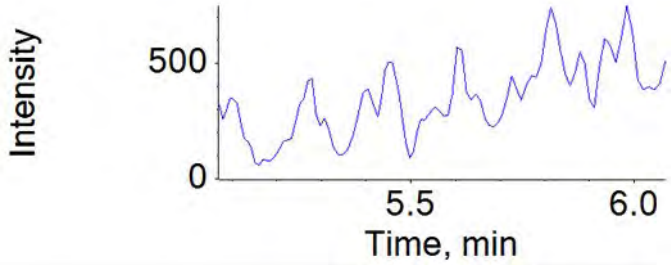
Analyte: PFNA
463.0 / 419.0



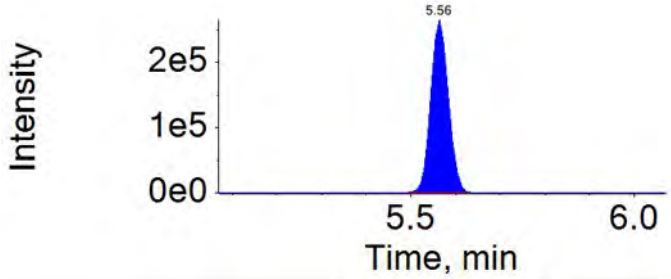
Extraction Standard: 13C9-PFNA
472.0 / 427.0



Analyte: PFDA
513.0 / 469.0



Extraction Standard: 13C6-PFDA
519.0 / 474.0

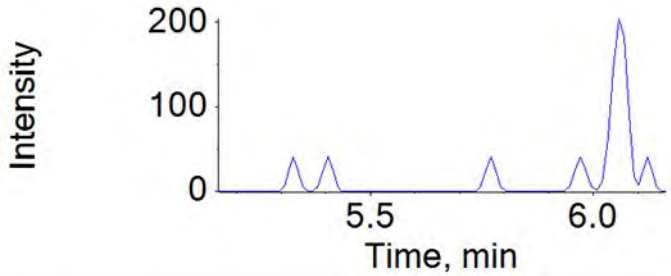


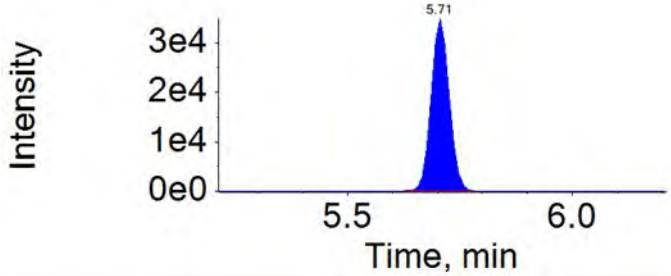
APPROVED
By MCD at 6:55 pm, 11/14/18

REVIEWED
By HMK at 11:03 am, 11/15/18

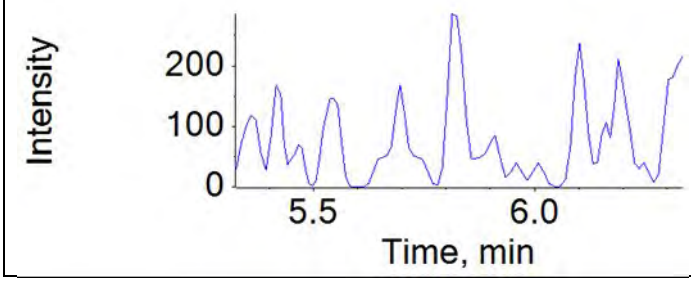
ICAL Name: 18NOV12DCAL **Result Table:** 18316029 11/14/2018 6:48:04 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

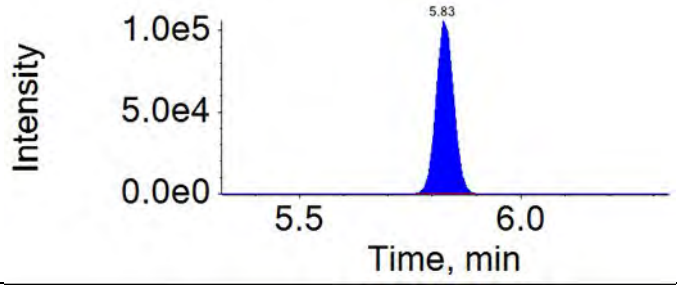
Analyte: NMeFOSAA	Extraction Standard: d3-NMeFOSAA
570.0 / 419.0	573.0 / 419.0



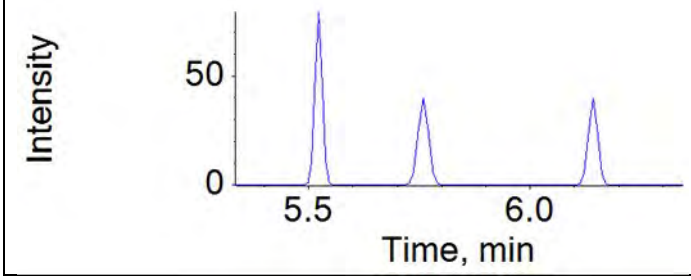


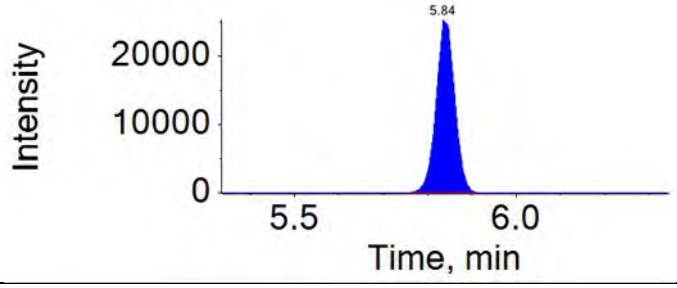
Analyte: PFUnDA	Extraction Standard: 13C7-PFUnDA
563.0 / 519.0	570.0 / 525.0



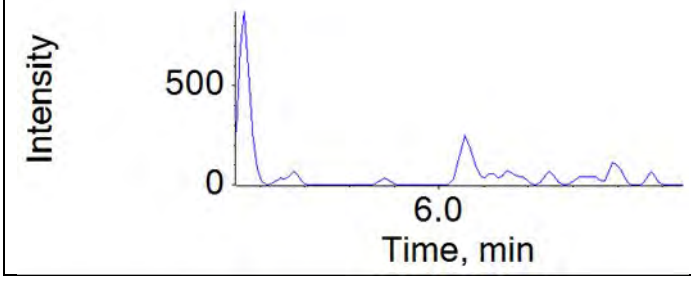


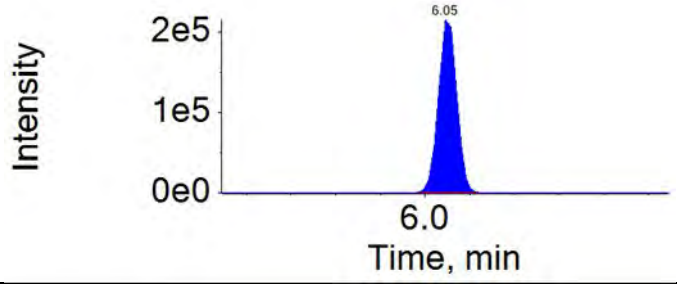
Analyte: NEtFOSAA	Extraction Standard: d5-NEtFOSAA
584.0 / 419.0	589.0 / 419.0





Analyte: PFDoDA	Extraction Standard: 13C2-PFDoDA
613.0 / 569.0	615.0 / 570.0



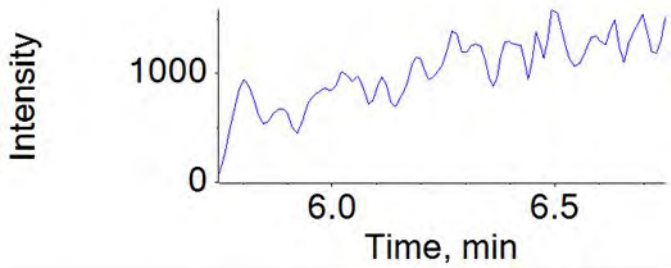


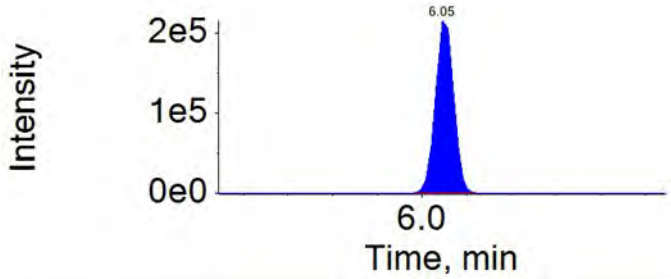
APPROVED
By MCD at 6:55 pm, 11/14/18

REVIEWED
By HMK at 11:03 am, 11/15/18

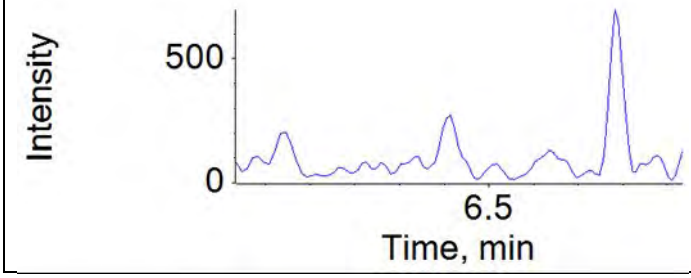
ICAL Name: 18NOV12DCAL **Result Table:** 18316029 11/14/2018 6:48:04 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

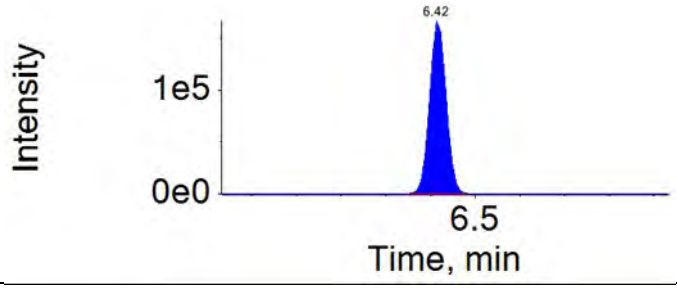
Analyte: PFTrDA	Extraction Standard: 13C2-PFDoDA
663.0 / 619.0	615.0 / 570.0





Analyte: PFTeDA	Extraction Standard: 13C2-PFTeDA
713.0 / 669.0	715.0 / 670.0





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LC-MS/MS Analysis Report

Printed: 11/14/2018 6:49:00 PM
Template: IonRatio18OCT10

Ion Ratio Report

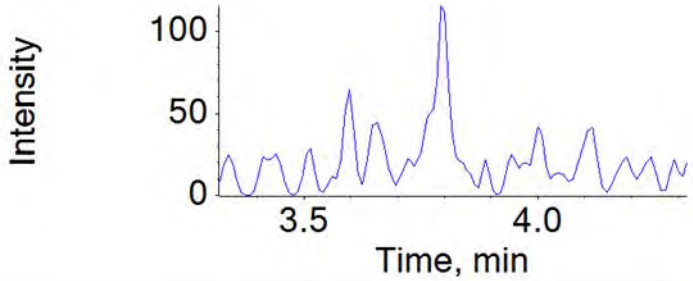
Sample Name: 9885078 **Instrument Name:** LM27631 **File Name:** 18NOV13D-92.wiff

Component Name	RT	RRT	Analyte Area Response	Int Typ	Expected Ion Ratio	Ion Ratio	Ion Ratio % Diff	Ion Ratio Limit	Ion Ratio OOS
PFBS	N/A	N/A	N/A	A	N/A	N/A			
PFBS_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFHxA	N/A	N/A	N/A	A	N/A	N/A			
PFHxA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFHpA	N/A	N/A	N/A	A	N/A	N/A			
PFHpA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFHxS	N/A	N/A	N/A	A	N/A	N/A			
PFHxS_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFOA	N/A	N/A	N/A	A	N/A	N/A			
PFOA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFOS	N/A	N/A	N/A	A	N/A	N/A			
PFOS_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFNA	N/A	N/A	N/A	A	N/A	N/A			
PFNA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFDA	N/A	N/A	N/A	A	N/A	N/A			
PFDA_2	N/A	N/A	N/A	A	N/A	N/A		50	
NMeFOSAA	N/A	N/A	N/A	A	N/A	N/A			
NMeFOSAA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFUnDA	N/A	N/A	N/A	A	N/A	N/A			
PFUnDA_2	N/A	N/A	N/A	A	N/A	N/A		50	
NEtFOSAA	N/A	N/A	N/A	A	N/A	N/A			
NEtFOSAA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFDoDA	N/A	N/A	N/A	A	N/A	N/A			
PFDoDA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFTrDA	N/A	N/A	N/A	A	N/A	N/A			
PFTrDA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFTeDA	N/A	N/A	N/A	A	N/A	N/A			
PFTeDA_2	N/A	N/A	N/A	A	N/A	N/A		50	

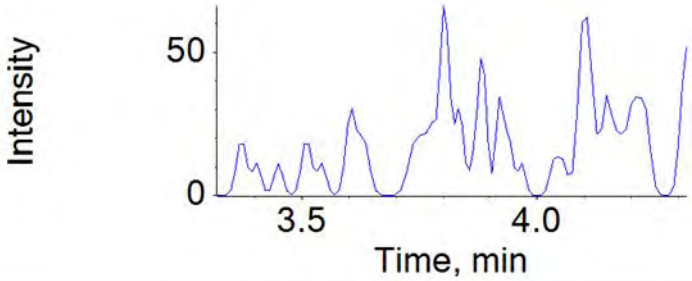
APPROVED
By MCD at 6:55 pm, 11/14/18

REVIEWED
By HMK at 11:03 am, 11/15/18

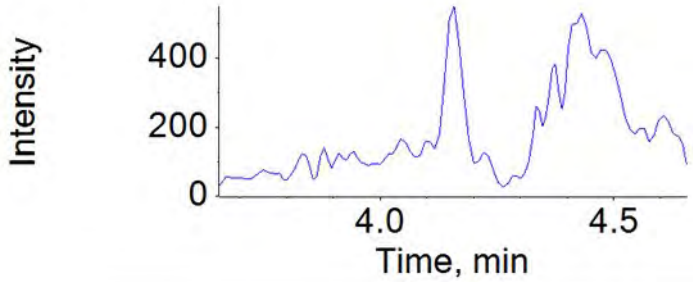
Component: PFBS
Primary Mass: 299.0 / 80.0



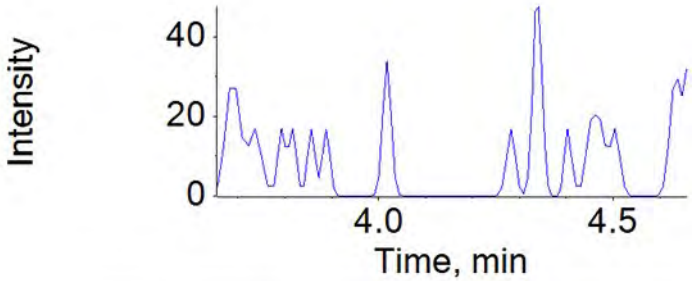
Component: PFBS_2
Secondary Mass: 299.0 / 99.0



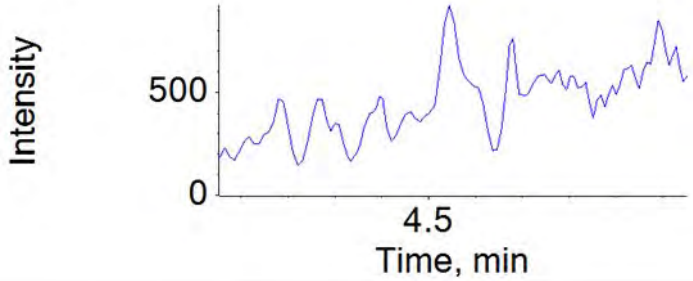
Component: PFHxA
Primary Mass: 313.0 / 269.0



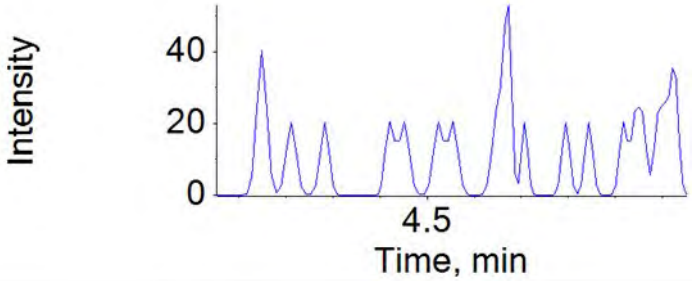
Component: PFHxA_2
Secondary Mass: 313.0 / 119.0



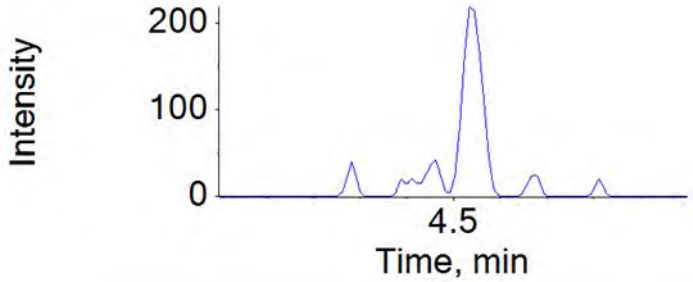
Component: PFHpA
Primary Mass: 363.0 / 319.0



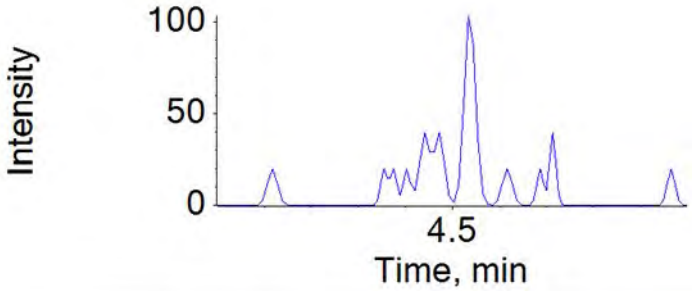
Component: PFHpA_2
Secondary Mass: 363.0 / 169.0



Component: PFHxS
Primary Mass: 399.0 / 80.0



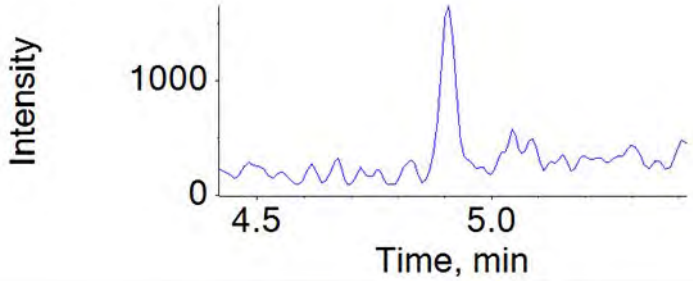
Component: PFHxS_2
Secondary Mass: 399.0 / 99.0



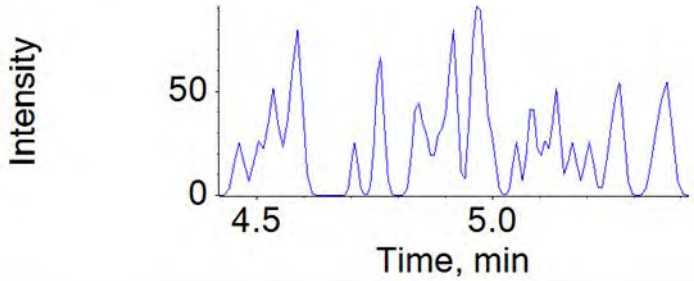
APPROVED
By MCD at 6:55 pm, 11/14/18

REVIEWED
By HMK at 11:03 am, 11/15/18

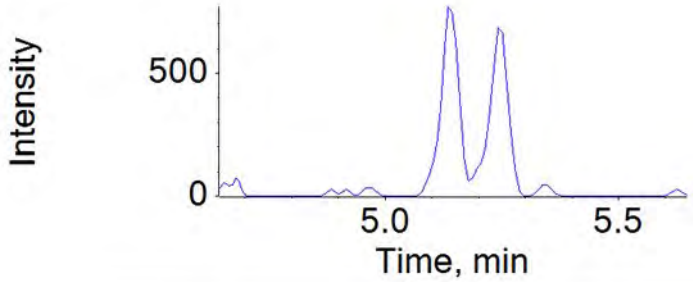
Component: PFOA
Primary Mass: 413.0 / 369.0



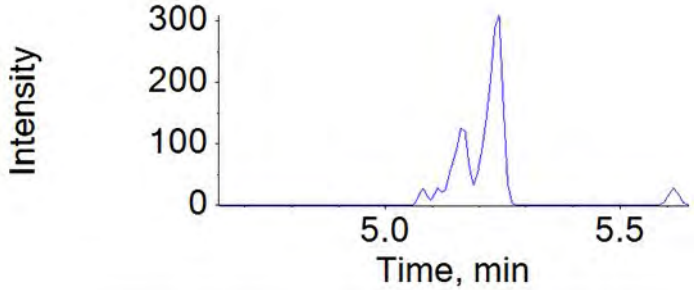
Component: PFOA_2
Secondary Mass: 413.0 / 169.0



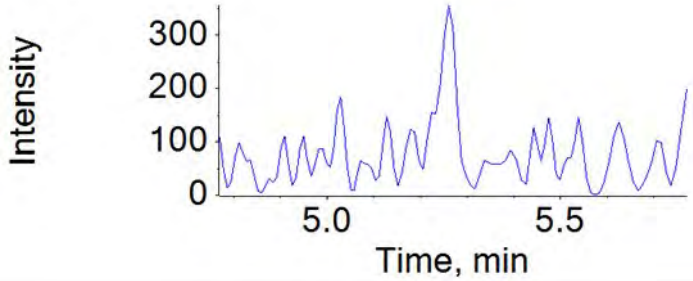
Component: PFOS
Primary Mass: 499.0 / 80.0



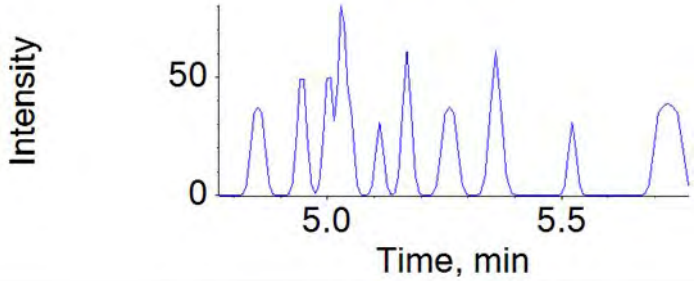
Component: PFOS_2
Secondary Mass: 499.0 / 99.0



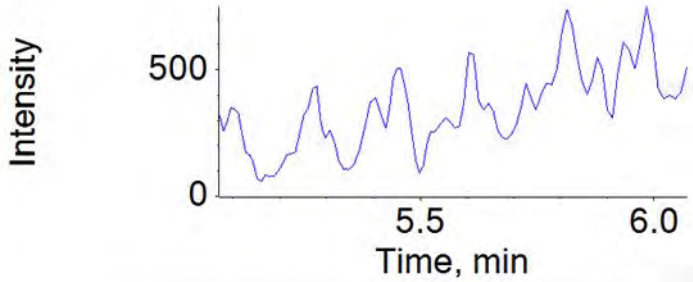
Component: PFNA
Primary Mass: 463.0 / 419.0



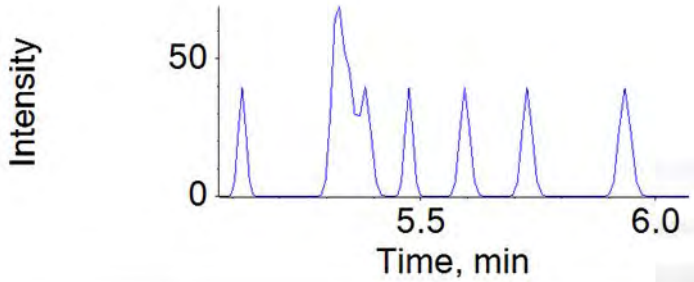
Component: PFNA_2
Secondary Mass: 463.0 / 169.0



Component: PFDA
Primary Mass: 513.0 / 469.0



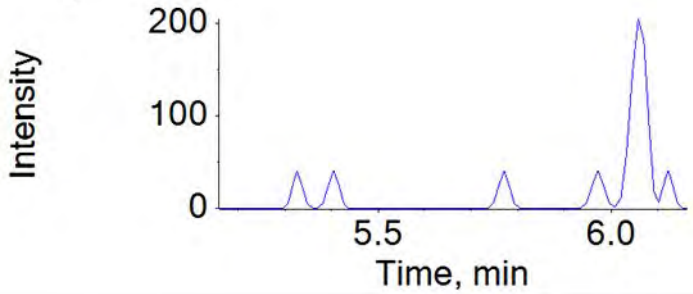
Component: PFDA_2
Secondary Mass: 513.0 / 169.0



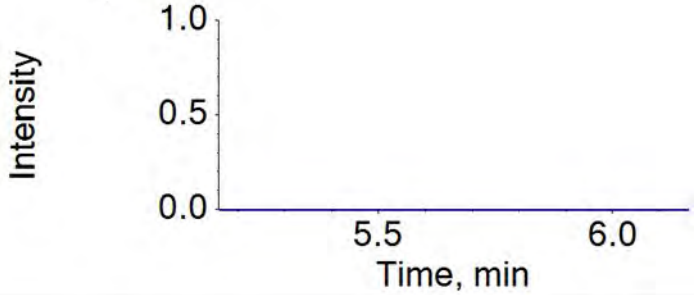
APPROVED
By MCD at 6:55 pm, 11/14/18

REVIEWED
By HMK at 11:03 am, 11/15/18

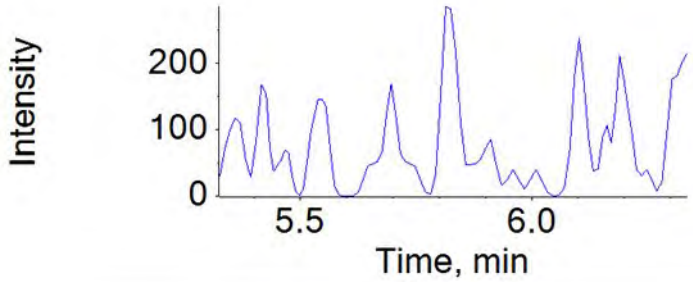
Component: NMeFOSAA
Primary Mass: 570.0 / 419.0



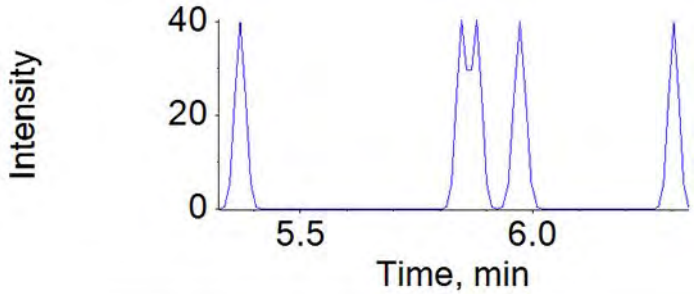
Component: NMeFOSAA_2
Secondary Mass: 570.0 / 483.0



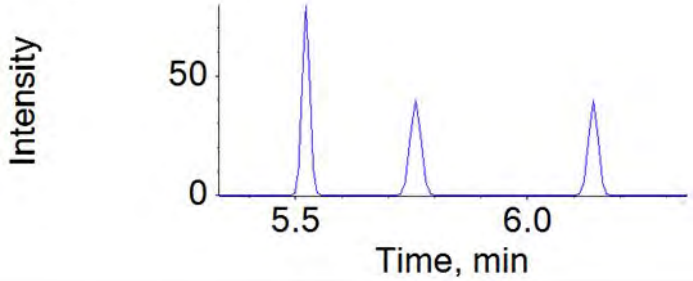
Component: PFUnDA
Primary Mass: 563.0 / 519.0



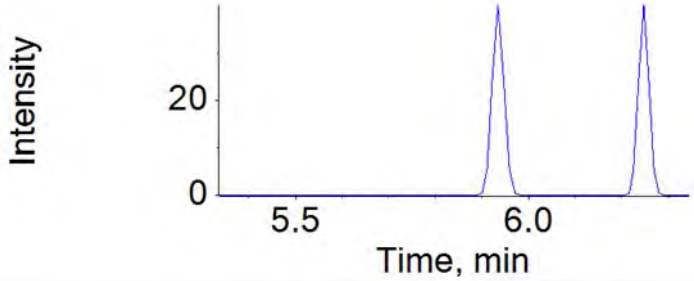
Component: PFUnDA_2
Secondary Mass: 563.0 / 169.0



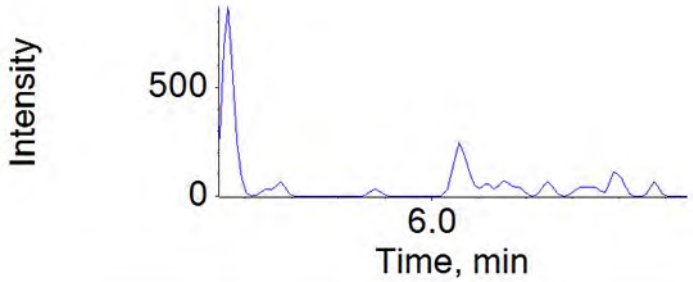
Component: NEtFOSAA
Primary Mass: 584.0 / 419.0



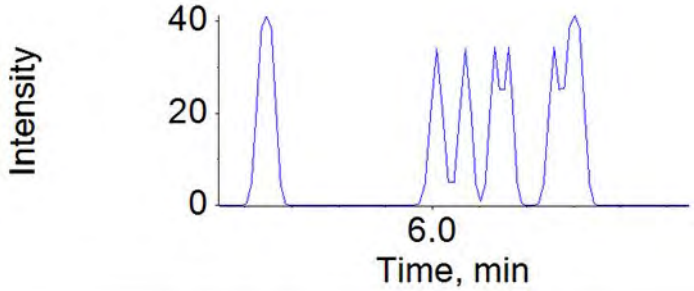
Component: NEtFOSAA_2
Secondary Mass: 584.0 / 526.0



Component: PFDoDA
Primary Mass: 613.0 / 569.0



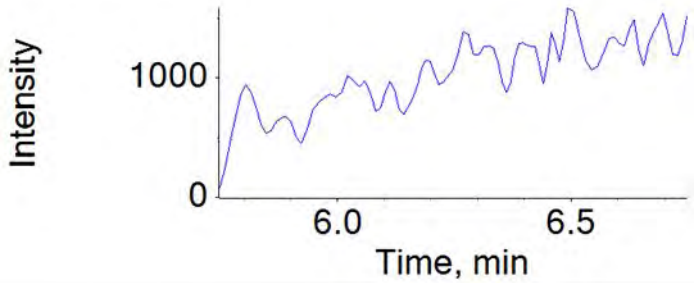
Component: PFDoDA_2
Secondary Mass: 613.0 / 169.0



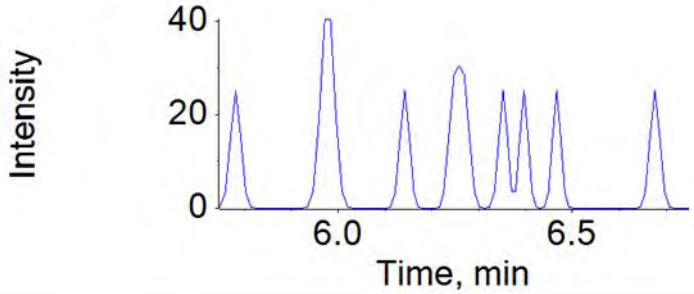
APPROVED
By MCD at 6:55 pm, 11/14/18

REVIEWED
By HMK at 11:03 am, 11/15/18

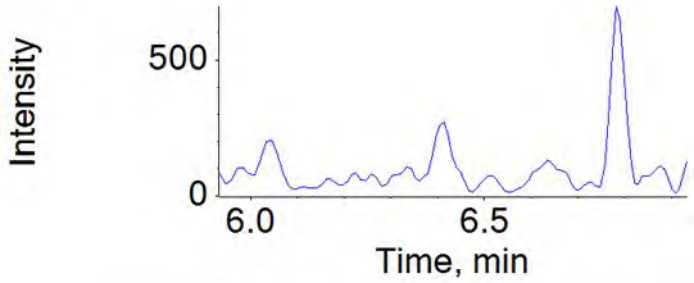
Component: PFTrDA
Primary Mass: 663.0 / 619.0



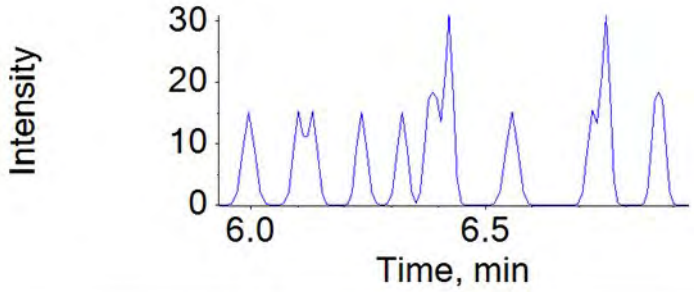
Component: PFTrDA_2
Secondary Mass: 663.0 / 169.0



Component: PFTeDA
Primary Mass: 713.0 / 669.0



Component: PFTeDA_2
Secondary Mass: 713.0 / 169.0



APPROVED
By MCD at 6:55 pm, 11/14/18

REVIEWED
By HMK at 11:03 am, 11/15/18

ICAL Name: 18NOV12DCAL **Result Table:** 18316011 11/14/2018 4:24:36 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Sample Name:	9885080			**Data File:**		18NOV13D-51.wiff
Sample ID:	EPA 537 mod QSM 5.1 table B-15 18316011 OU1-Bldg2-S-02-01 Grab Soil			**Acquis Date:**		2018-11-13T17:14:29
Sample Type:	Unknown			**Instrument:**		LM27631
Vial Position:	49			**Acquis Method:**		18AUG13_3uL.dam
Injection Vol:	3.00			**Result Table:**		18316011
QMethod File:	18AUG20QM			**ICAL Name:**		18NOV12DCAL
Batch Number:	18316011			**Operator:**		MCD7824
Sample Wt.:	1.05000			**Dilution Factor:**		1.00
Sample Vol.:	1.000			**Prep Factor:**		2.000

Injection Standard Peak Table

Injection Standard Area Reference File: 18NOV13D-05

Injection Standard Name	Inj Std Conc	Injection Std Peak Area	Rreference Injection Standard Area	Injection Std %Diff	Injection Std %Diff Limit	Injection Std %Diff OOS
13C3-PFBA	5.0	748317.2	661126.9	13	50	
13C2-PFOA	5.0	521744.4	466902.6	12	50	
13C4-PFOS	4.8	278626.4	247446.9	13	50	
13C2-PFDA	5.0	326733.0	295381.6	11	50	

Extraction Standard Peak Table

Extraction Standard Name	Ext Std Area	Inj Std Name	Inj Std Area	Area Ratio	Ext Std Conc	Ext Std Result	Ext Std %REC	Ext Std %REC Limit	Ext Std OOS
E13C3-PFBS	319665.0	13C3-PFBA	748317.2	0.427	8.857	5.744	65	50-150	
E13C5-PFHxA	501711.5	13C2-PFOA	521744.4	0.962	9.524	6.616	69	50-150	
E13C3-PFHxS	236519.5	13C2-PFOA	521744.4	0.453	9.010	5.925	66	50-150	
E13C4-PFHpA	394167.5	13C2-PFOA	521744.4	0.755	9.524	6.483	68	50-150	
E13C8-PFOA	715357.5	13C2-PFOA	521744.4	1.371	9.524	7.195	76	50-150	
E13C8-PFOS	216756.3	13C4-PFOS	278626.4	0.778	9.105	6.566	72	50-150	
E13C9-PFNA	356160.0	13C4-PFOS	278626.4	1.278	9.524	6.789	71	50-150	
E13C6-PFDA	473828.4	13C2-PFDA	326733.0	1.450	9.524	6.446	68	50-150	
Ed3-NMeFOSAA	67747.3	13C2-PFDA	326733.0	0.207	9.524	7.129	75	50-150	
E13C7-PFUnDA	201293.2	13C2-PFDA	326733.0	0.616	9.524	6.813	72	50-150	
Ed5-NEtFOSAA	50645.0	13C2-PFDA	326733.0	0.155	9.524	6.246	66	50-150	
E13C2-PFDoDA	426208.4	13C2-PFDA	326733.0	1.304	9.524	6.451	68	50-150	
E13C2-PFTeDA	302955.0	13C2-PFDA	326733.0	0.927	9.524	6.200	65	50-150	

APPROVED
By MCD at 4:50 pm, 11/14/18

REVIEWED
By HMK at 12:21 pm, 11/15/18

ICAL Name: 18NOV12DCAL **Result Table:** 18316011 11/14/2018 4:24:36 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

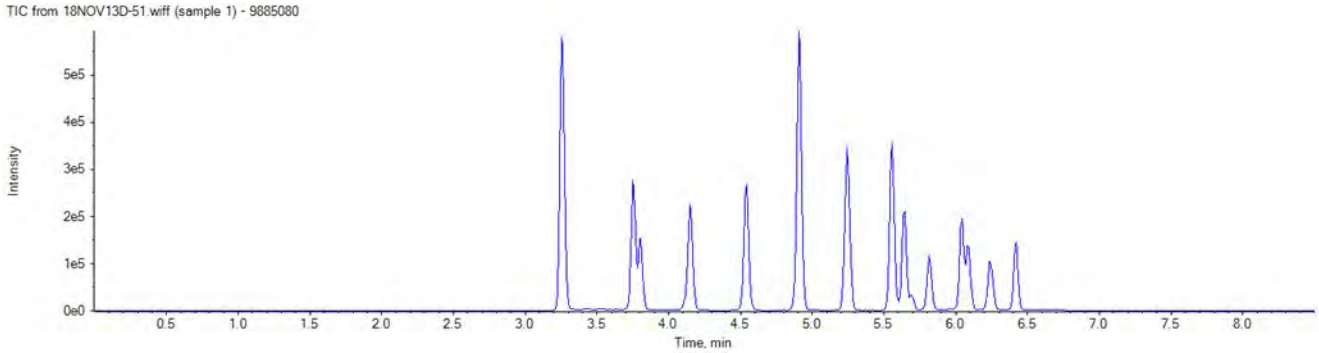
Analyte Quantitation Peak Table

Sample Name: 9885080 **Instrument Name:** LM27631 **File Name:** 18NOV13D-51.wiff

Sample Wt	Sample Vol	Dilution Factor	PrepFactor
1.05000	1.000	1.00	2.000

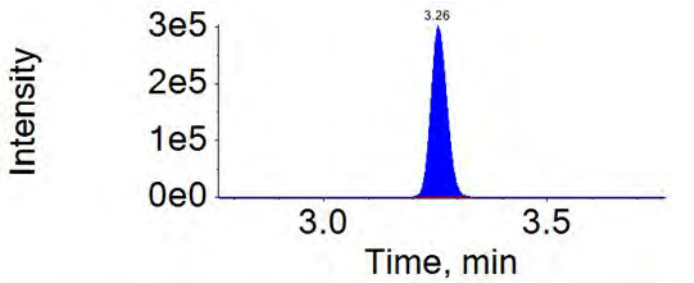
Analyte Name	RT	RRT	Analyte Area Response	E	Int Typ	ES Name	ES RT	ES Area Response	Area Ratio	Sample Result (ng/g)
PFBS	N/A	N/A	N/A		A	13C3-PFBS	3.80	319665.0	N/A	
PFHxA	N/A	N/A	N/A		A	13C5-PFHxA	4.15	501711.5	N/A	
PFHpA	N/A	N/A	N/A		A	13C4-PFHpA	4.54	394167.5	N/A	
PFHxS	N/A	N/A	N/A		A	13C3-PFHxS	4.54	236519.5	N/A	
PFOA	4.91	1.000	50973.9		A	13C8-PFOA	4.91	715357.5	0.071	0.725
PFOS	5.24	1.000	2730.0		M	13C8-PFOS	5.24	216756.3	0.013	0.105
PFNA	N/A	N/A	N/A		A	13C9-PFNA	5.25	356160.0	N/A	
PFDA	N/A	N/A	N/A		A	13C6-PFDA	5.55	473828.4	N/A	
NMeFOSAA	N/A	N/A	N/A		A	d3-NMeFOSAA	5.69	67747.3	N/A	
PFUnDA	N/A	N/A	N/A		A	13C7-PFUnDA	5.81	201293.2	N/A	
NEtFOSAA	N/A	N/A	N/A		A	d5-NEtFOSAA	5.82	50645.0	N/A	
PFDoDA	N/A	N/A	N/A		A	13C2-PFDoDA	6.04	426208.4	N/A	
PFTrDA	N/A	N/A	N/A		A	13C2-PFDoDA	6.04	426208.4	N/A	
PFTeDA	N/A	N/A	N/A		A	13C2-PFTeDA	6.42	302955.0	N/A	

Total Ion Chromatogram

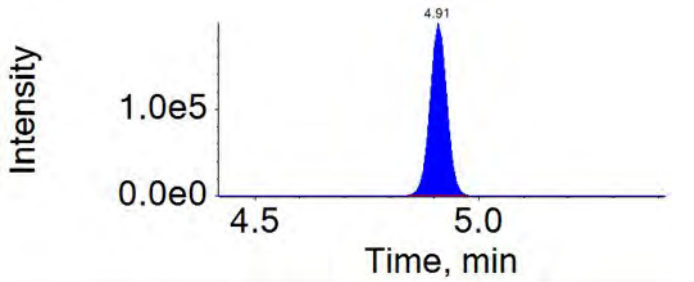


ICAL Name: 18NOV12DCAL **Result Table:** 18316011 11/14/2018 4:24:36 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

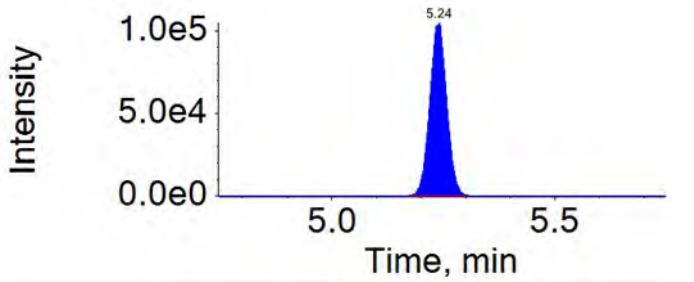
Injection Standard: 13C3-PFBA
216.0 / 172.0



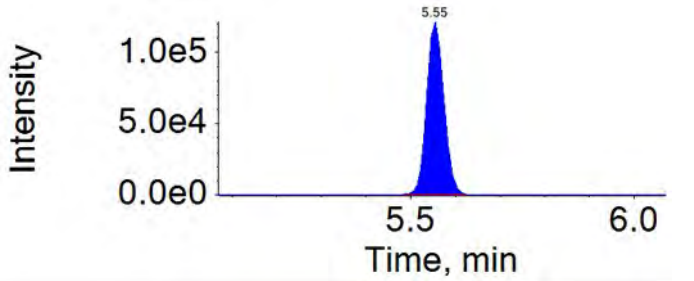
Injection Standard: 13C2-PFOA
415.0 / 370.0



Injection Standard: 13C4-PFOS
503.0 / 80.0

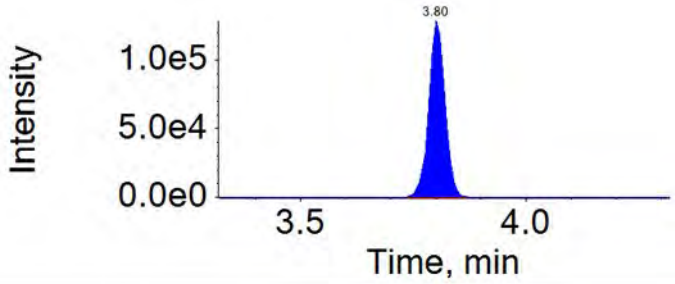


Injection Standard: 13C2-PFDA
515.0 / 470.0

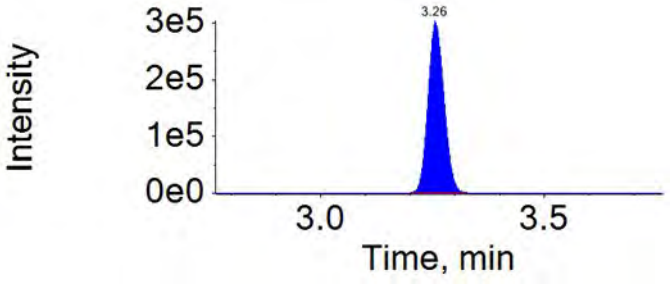


ICAL Name: 18NOV12DCAL **Result Table:** 18316011 11/14/2018 4:24:36 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

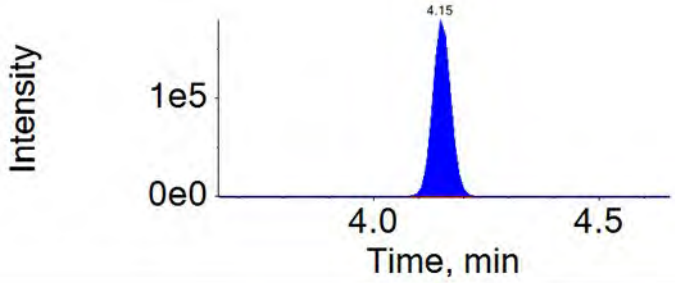
Extraction Standard: E13C3-PFBS
302.0 / 80.0



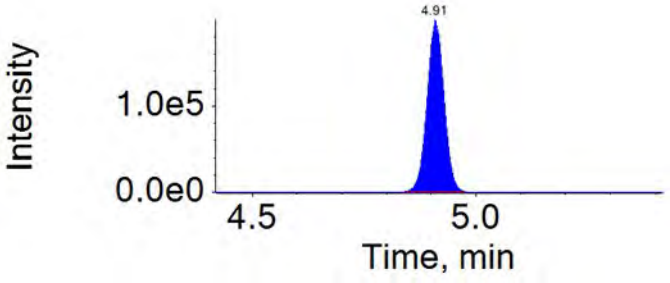
Injection Standard: 13C3-PFBA
216.0 / 172.0



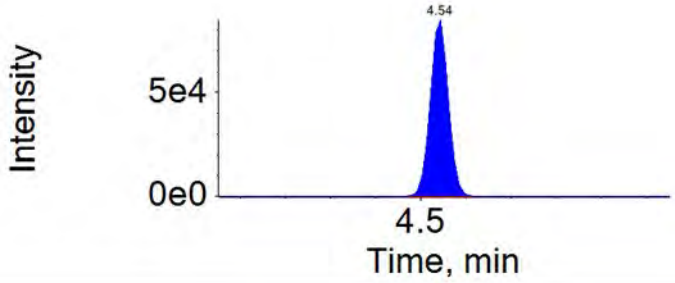
Extraction Standard: E13C5-PFHxA
318.0 / 273.0



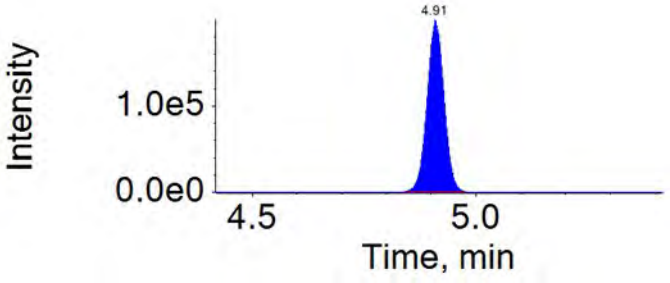
Injection Standard: 13C2-PFOA
415.0 / 370.0



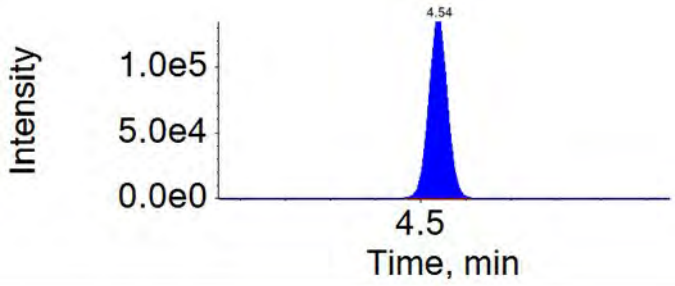
Extraction Standard: E13C3-PFHxS
402.0 / 80.0



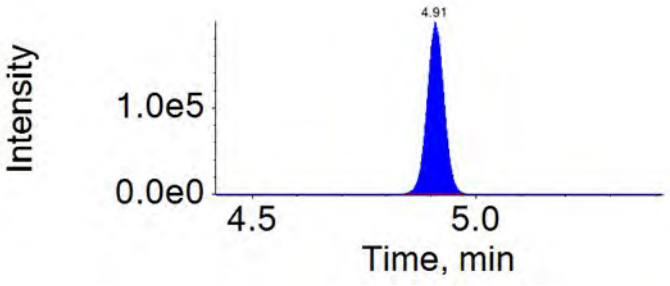
Injection Standard: 13C2-PFOA
415.0 / 370.0



Extraction Standard: E13C4-PFHpA
367.0 / 322.0



Injection Standard: 13C2-PFOA
415.0 / 370.0

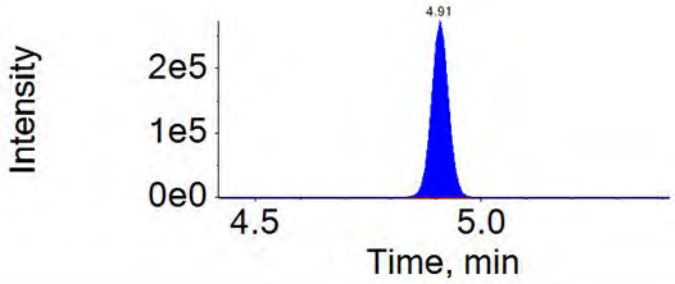


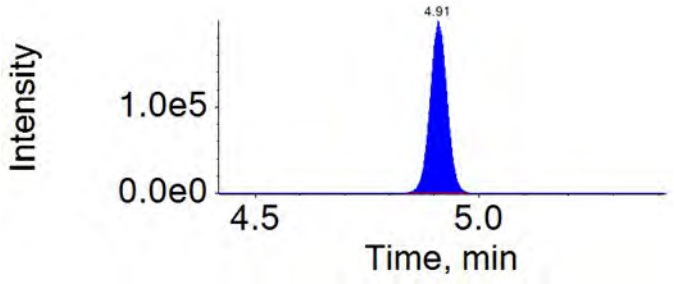
APPROVED
By MCD at 4:50 pm, 11/14/18

REVIEWED
By HMK at 12:21 pm, 11/15/18

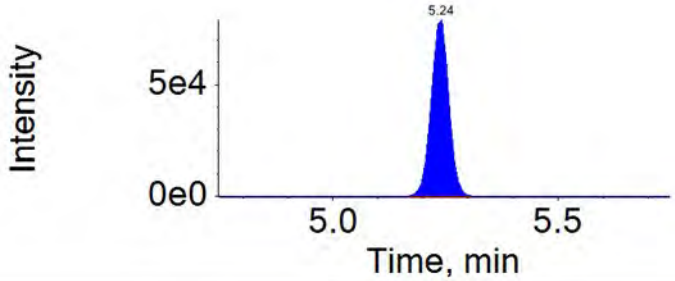
ICAL Name: 18NOV12DCAL **Result Table:** 18316011 11/14/2018 4:24:36 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

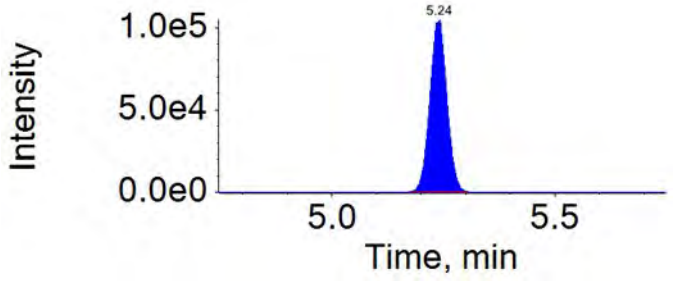
Extraction Standard: E13C8-PFOA	Injection Standard: 13C2-PFOA
421.0 / 376.0	415.0 / 370.0



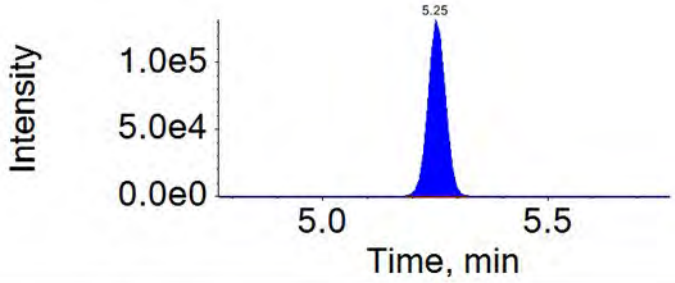


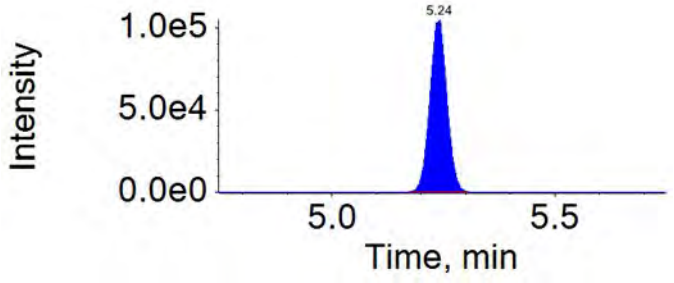
Extraction Standard: E13C8-PFOS	Injection Standard: 13C4-PFOS
507.0 / 80.0	503.0 / 80.0



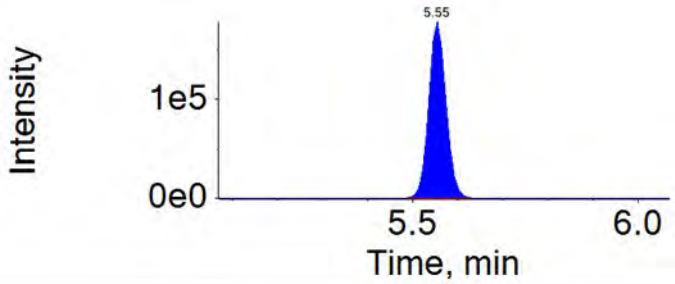


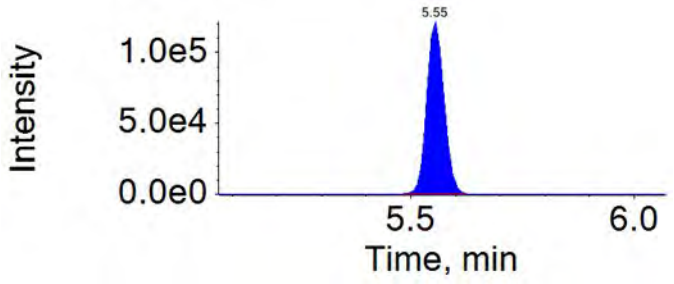
Extraction Standard: E13C9-PFNA	Injection Standard: 13C4-PFOS
472.0 / 427.0	503.0 / 80.0





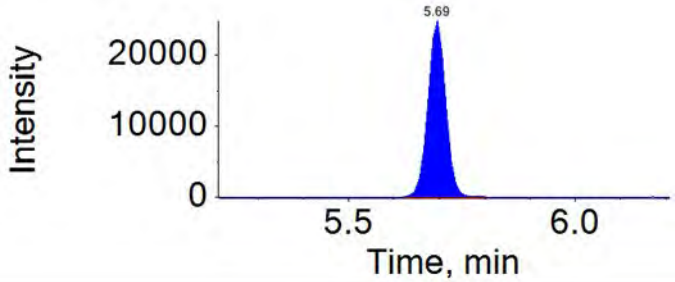
Extraction Standard: E13C6-PFDA	Injection Standard: 13C2-PFDA
519.0 / 474.0	515.0 / 470.0

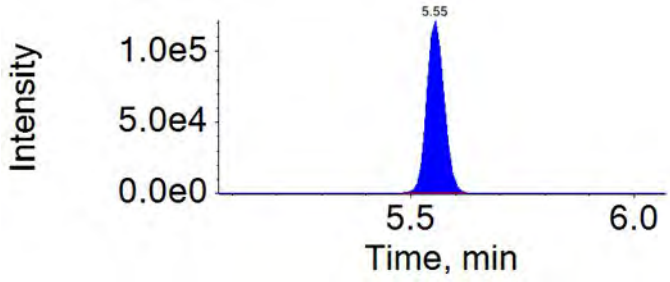




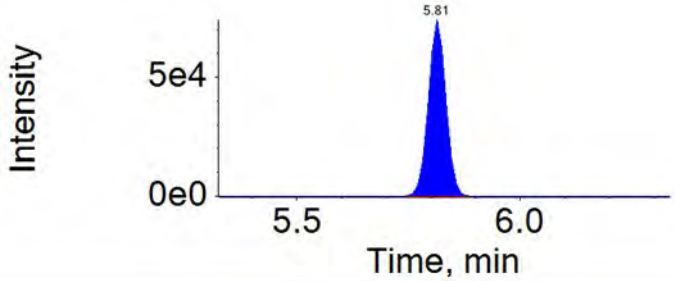
ICAL Name: 18NOV12DCAL **Result Table:** 18316011 11/14/2018 4:24:36 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

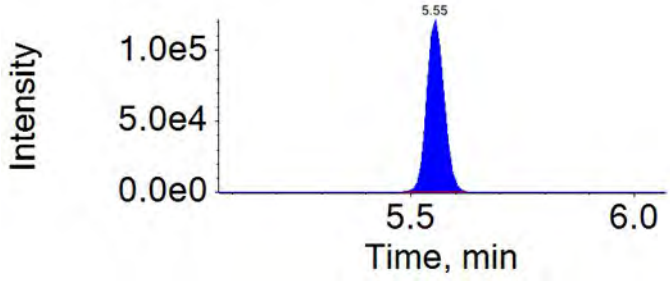
Extraction Standard: Ed3-NMeFOSAA	Injection Standard: 13C2-PFDA
573.0 / 419.0	515.0 / 470.0



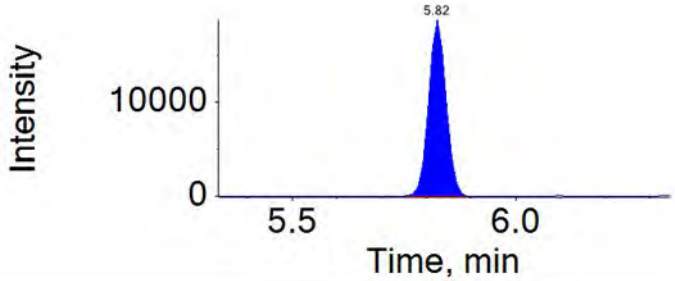


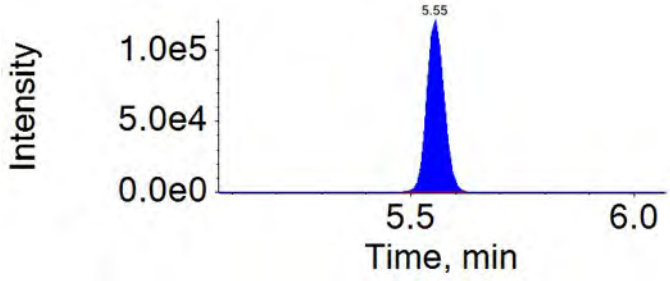
Extraction Standard: E13C7-PFUnDA	Injection Standard: 13C2-PFDA
570.0 / 525.0	515.0 / 470.0



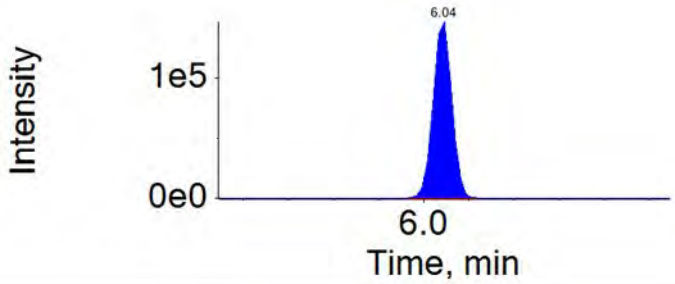


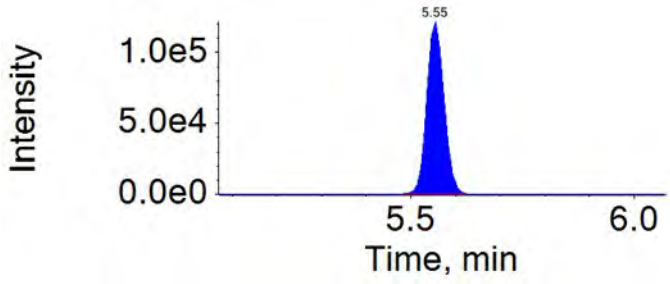
Extraction Standard: Ed5-NEtFOSAA	Injection Standard: 13C2-PFDA
589.0 / 419.0	515.0 / 470.0



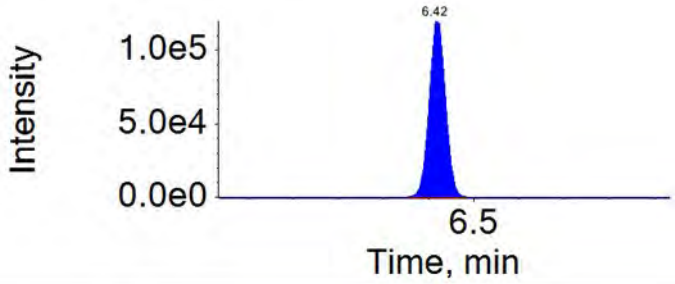
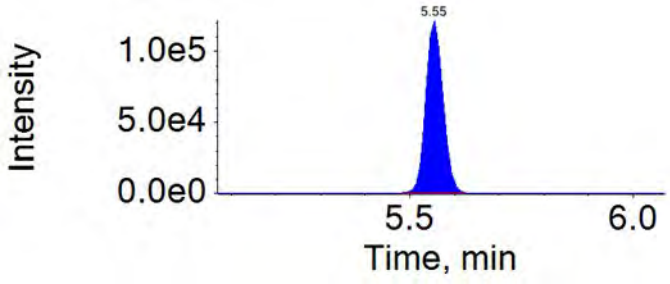


Extraction Standard: E13C2-PFDoDA	Injection Standard: 13C2-PFDA
615.0 / 570.0	515.0 / 470.0



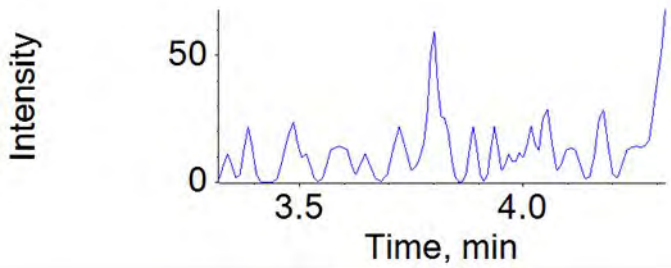


ICAL Name: 18NOV12DCAL **Result Table:** 18316011 11/14/2018 4:24:36 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

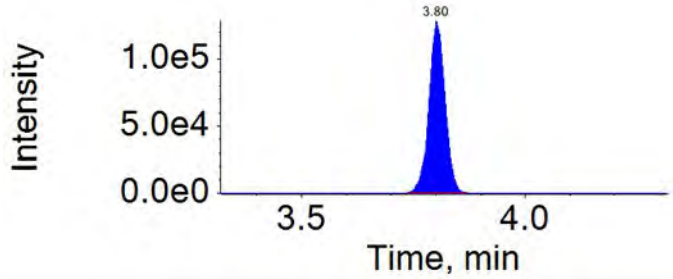
Extraction Standard: E13C2-PFTeDA	Injection Standard: 13C2-PFDA
715.0 / 670.0 	515.0 / 470.0 

ICAL Name: 18NOV12DCAL **Result Table:** 18316011 11/14/2018 4:24:36 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

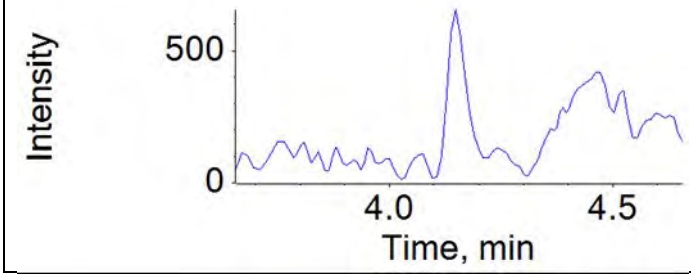
Analyte: PFBS
299.0 / 80.0



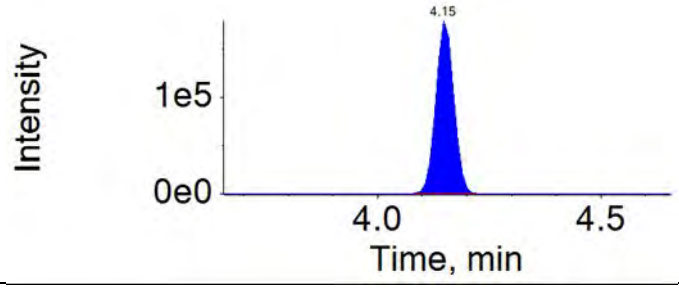
Extraction Standard: 13C3-PFBS
302.0 / 80.0



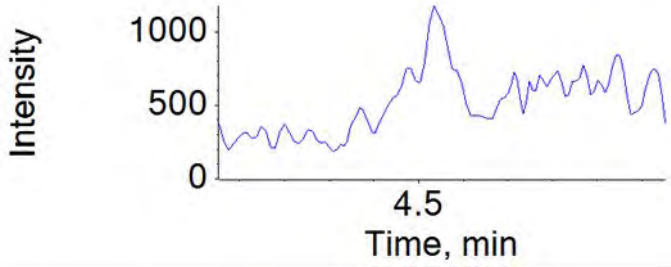
Analyte: PFHxA
313.0 / 269.0



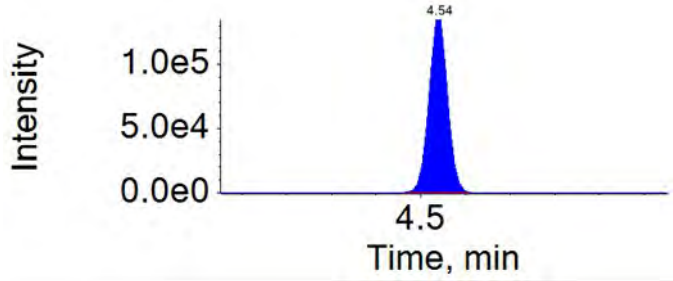
Extraction Standard: 13C5-PFHxA
318.0 / 273.0



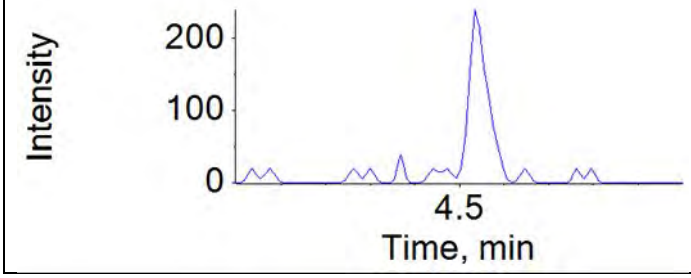
Analyte: PFHpA
363.0 / 319.0



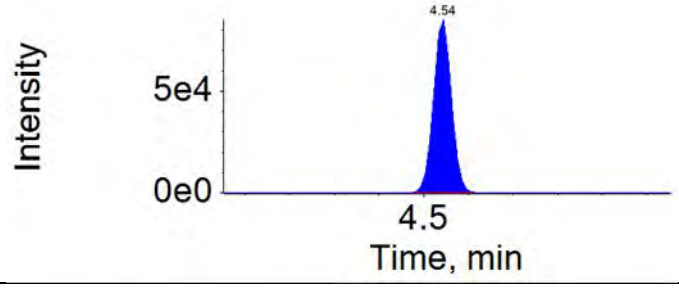
Extraction Standard: 13C4-PFHpA
367.0 / 322.0



Analyte: PFHxS
399.0 / 80.0



Extraction Standard: 13C3-PFHxS
402.0 / 80.0

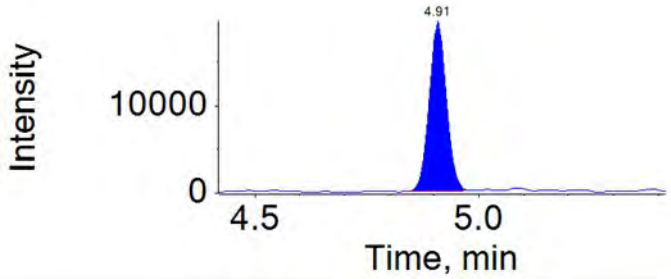


APPROVED
By MCD at 4:50 pm, 11/14/18

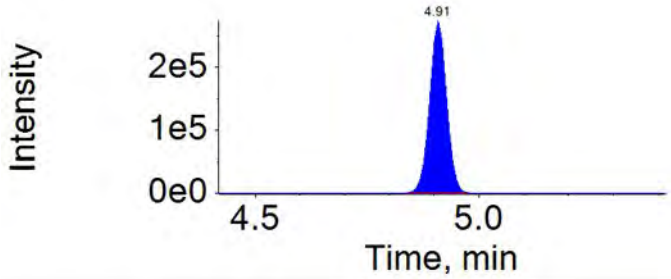
REVIEWED
By HMK at 12:21 pm, 11/15/18

ICAL Name: 18NOV12DCAL **Result Table:** 18316011 11/14/2018 4:24:36 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

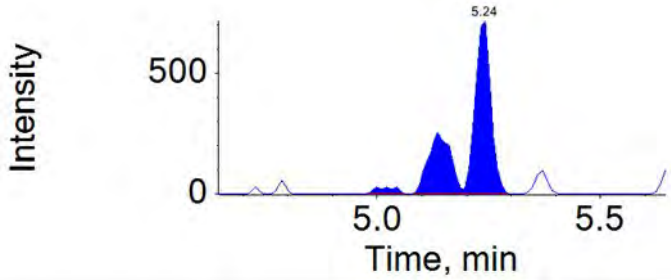
Analyte: PFOA
413.0 / 369.0



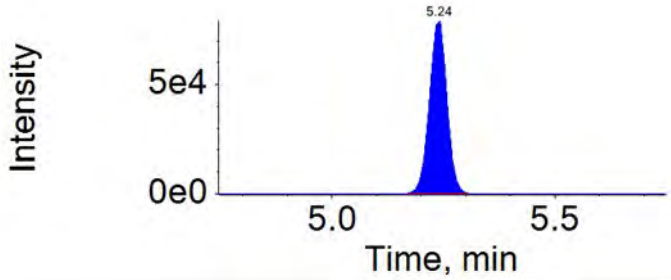
Extraction Standard: 13C8-PFOA
421.0 / 376.0



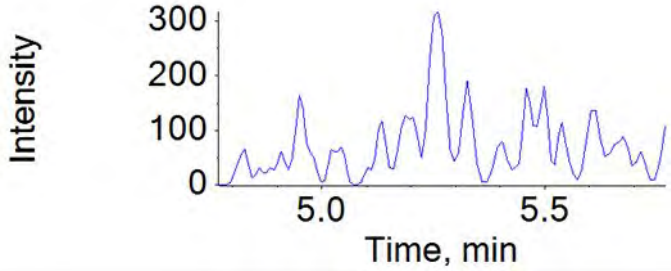
Analyte: PFOS
499.0 / 80.0



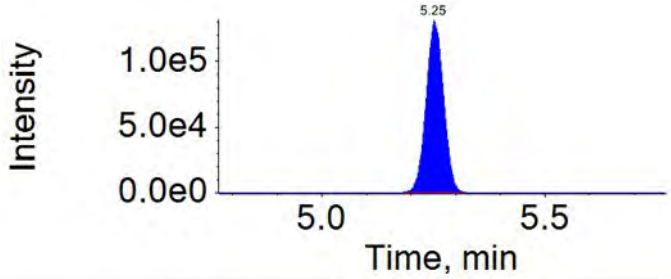
Extraction Standard: 13C8-PFOS
507.0 / 80.0



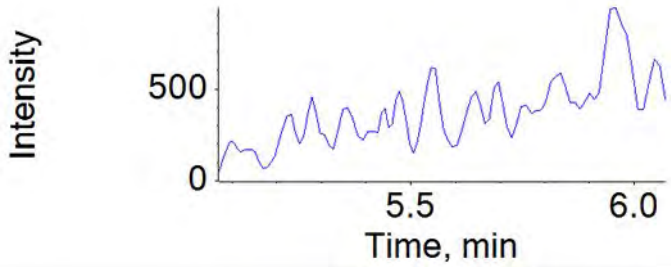
Analyte: PFNA
463.0 / 419.0



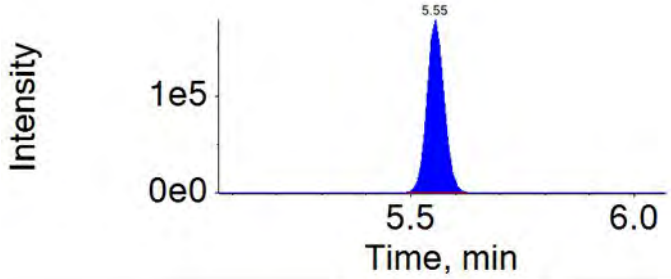
Extraction Standard: 13C9-PFNA
472.0 / 427.0



Analyte: PFDA
513.0 / 469.0



Extraction Standard: 13C6-PFDA
519.0 / 474.0

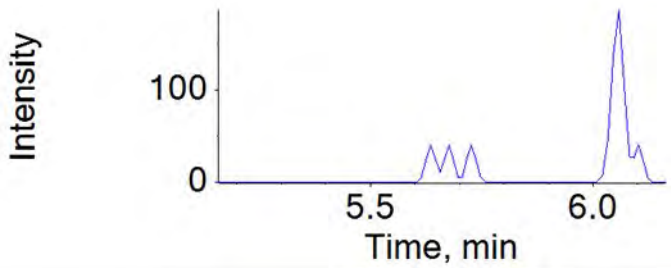


APPROVED
By MCD at 4:50 pm, 11/14/18

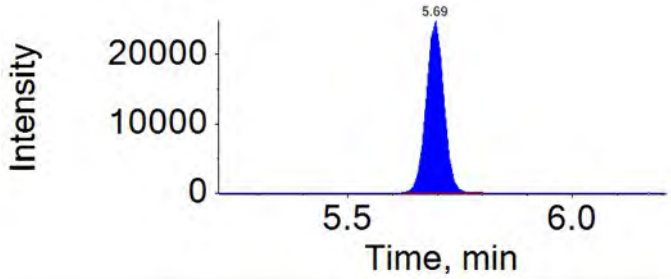
REVIEWED
By HMK at 12:21 pm, 11/15/18

ICAL Name: 18NOV12DCAL **Result Table:** 18316011 11/14/2018 4:24:36 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

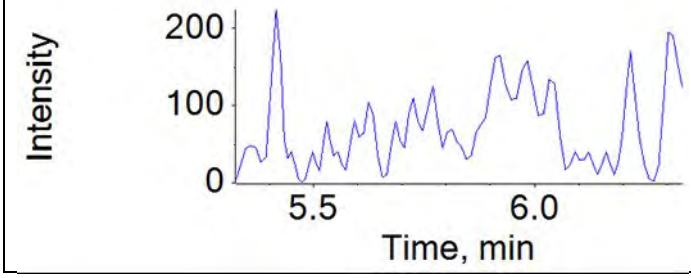
Analyte: NMeFOSAA
570.0 / 419.0



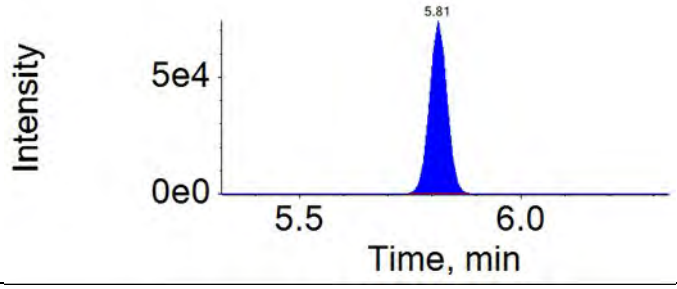
Extraction Standard: d3-NMeFOSAA
573.0 / 419.0



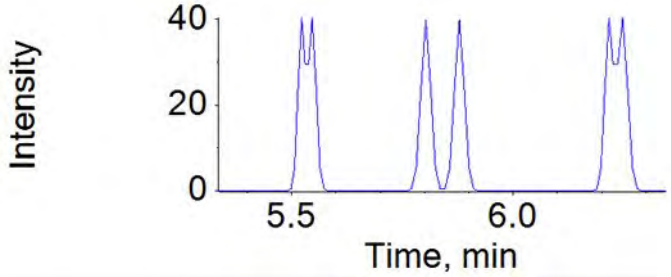
Analyte: PFUnDA
563.0 / 519.0



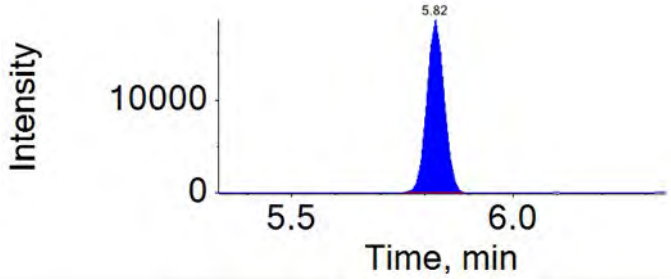
Extraction Standard: 13C7-PFUnDA
570.0 / 525.0



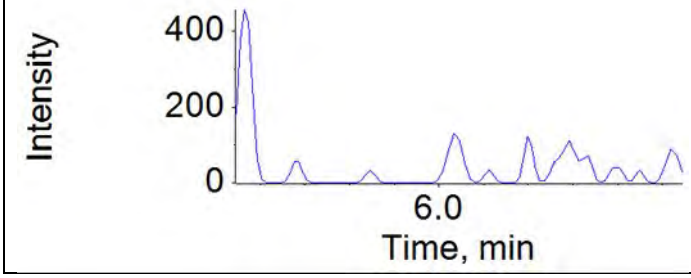
Analyte: NEtFOSAA
584.0 / 419.0



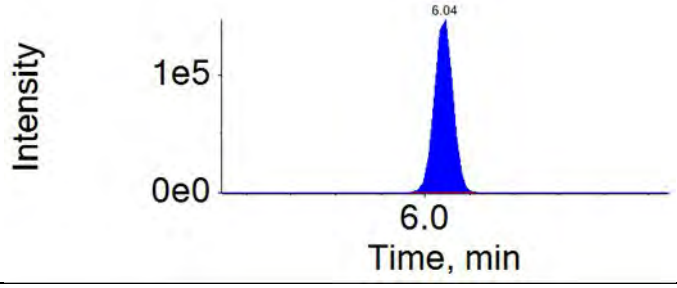
Extraction Standard: d5-NEtFOSAA
589.0 / 419.0



Analyte: PFDoDA
613.0 / 569.0



Extraction Standard: 13C2-PFDoDA
615.0 / 570.0

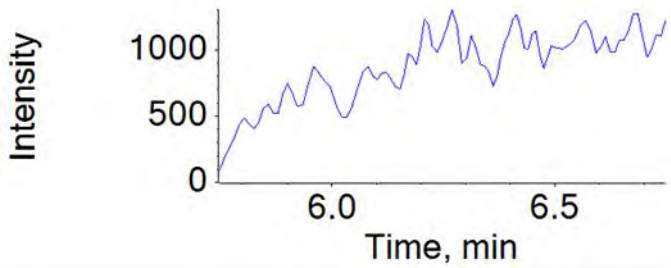


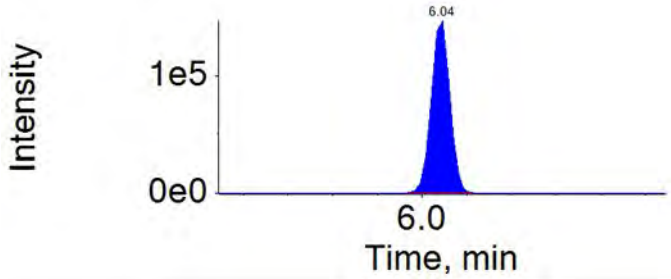
APPROVED
By MCD at 4:50 pm, 11/14/18

REVIEWED
By HMK at 12:21 pm, 11/15/18

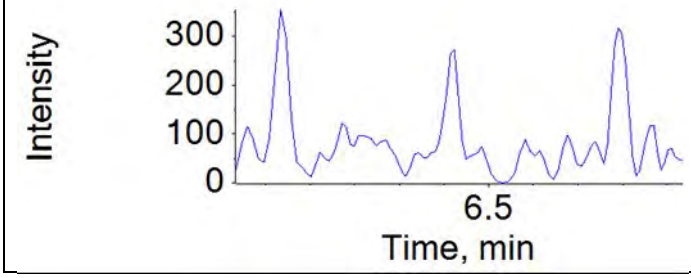
ICAL Name: 18NOV12DCAL **Result Table:** 18316011 11/14/2018 4:24:36 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

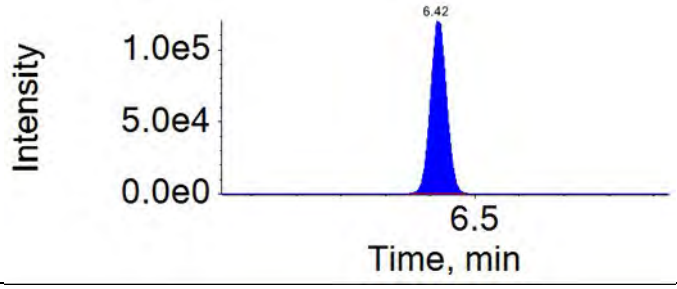
Analyte: PFTrDA	Extraction Standard: 13C2-PFDoDA
663.0 / 619.0	615.0 / 570.0





Analyte: PFTeDA	Extraction Standard: 13C2-PFTeDA
713.0 / 669.0	715.0 / 670.0





APPROVED
By MCD at 4:50 pm, 11/14/18

REVIEWED
By HMK at 12:21 pm, 11/15/18

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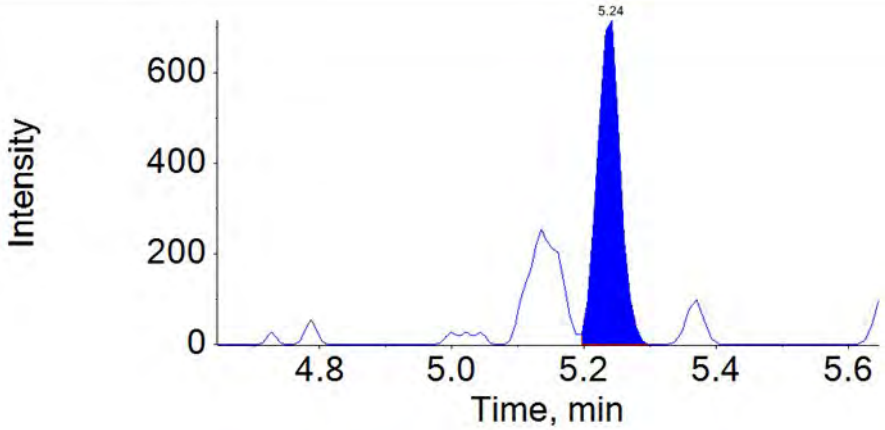
Auto Integrations prior to Manual Integration

Print Date: 11/14/2018 4:31 PM
Template: MQ-OrigInteg-16NOV21.docx

Results Table Name: 18316011
Results Table Date: 11/14/2018 4:24:36 PM

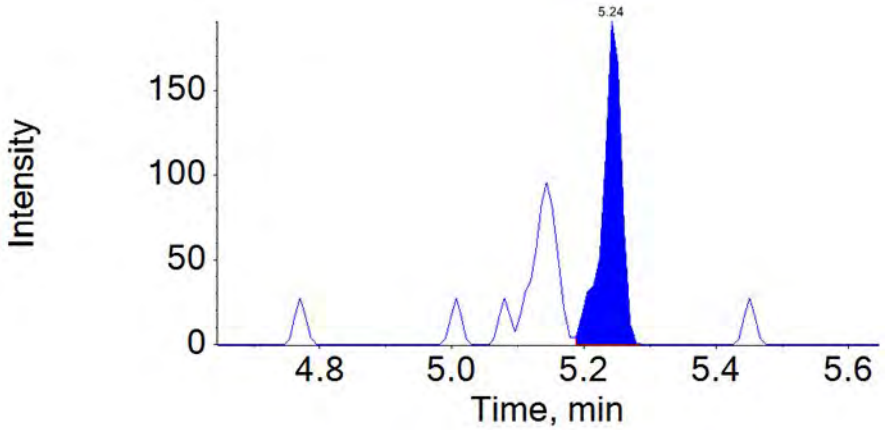
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

Component Name:
PFOS
RT (min.):
5.24
Peak Area:
1739.2
Mass Range:
499.0 / 80.0
File Name:
18NOV13D-51.wiff
Sample Name:
9885080



Integration Comment: incorrect integration

Component Name:
PFOS_2
RT (min.):
5.24
Peak Area:
377.8
Mass Range:
499.0 / 99.0
File Name:
18NOV13D-51.wiff
Sample Name:
9885080



Integration Comment: incorrect integration

APPROVED
By MCD at 4:50 pm, 11/14/18

REVIEWED
By HMK at 12:21 pm, 11/15/18

Results Table Name: 18316011
Results Table Date: 11/14/2018 4:24:36 PM

Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

APPROVED
By MCD at 4:50 pm, 11/14/18

REVIEWED
By HMK at 12:21 pm, 11/15/18

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LC-MS/MS Analysis Report

Printed: 11/14/2018 4:28:00 PM
Template: IonRatio18OCT10

Ion Ratio Report

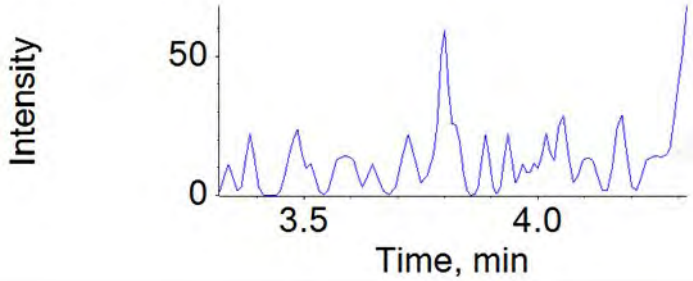
Sample Name: 9885080 **Instrument Name:** LM27631 **File Name:** 18NOV13D-51.wiff

Component Name	RT	RRT	Analyte Area Response	Int Typ	Expected Ion Ratio	Ion Ratio	Ion Ratio % Diff	Ion Ratio Limit	Ion Ratio OOS
PFBS	N/A	N/A	N/A	A	N/A	N/A			
PFBS_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFHxA	N/A	N/A	N/A	A	N/A	N/A			
PFHxA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFHpA	N/A	N/A	N/A	A	N/A	N/A			
PFHpA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFHxS	N/A	N/A	N/A	A	N/A	N/A			
PFHxS_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFOA	4.91	1.00	50973.9	A	N/A	0.0496			
PFOA_2	4.92	1.00	2528.9	A	N/A	0.0496	-12	50	
PFOS	5.24	1.00	2730.0	M	N/A	0.2505			
PFOS_2	5.24	1.00	683.9	M	N/A	0.2505	-16	50	
PFNA	N/A	N/A	N/A	A	N/A	N/A			
PFNA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFDA	N/A	N/A	N/A	A	N/A	N/A			
PFDA_2	N/A	N/A	N/A	A	N/A	N/A		50	
NMeFOSAA	N/A	N/A	N/A	A	N/A	N/A			
NMeFOSAA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFUnDA	N/A	N/A	N/A	A	N/A	N/A			
PFUnDA_2	N/A	N/A	N/A	A	N/A	N/A		50	
NEtFOSAA	N/A	N/A	N/A	A	N/A	N/A			
NEtFOSAA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFDoDA	N/A	N/A	N/A	A	N/A	N/A			
PFDoDA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFTrDA	N/A	N/A	N/A	A	N/A	N/A			
PFTrDA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFTeDA	N/A	N/A	N/A	A	N/A	N/A			
PFTeDA_2	N/A	N/A	N/A	A	N/A	N/A		50	

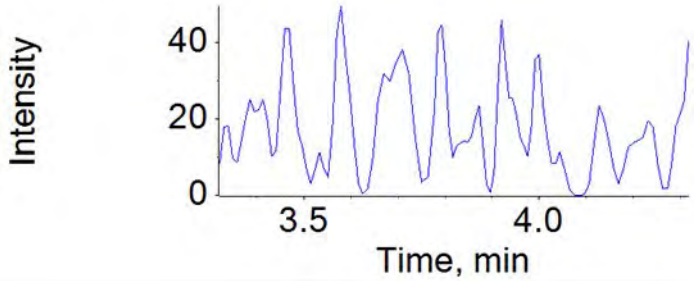
APPROVED
By MCD at 4:50 pm, 11/14/18

REVIEWED
By HMK at 12:21 pm, 11/15/18

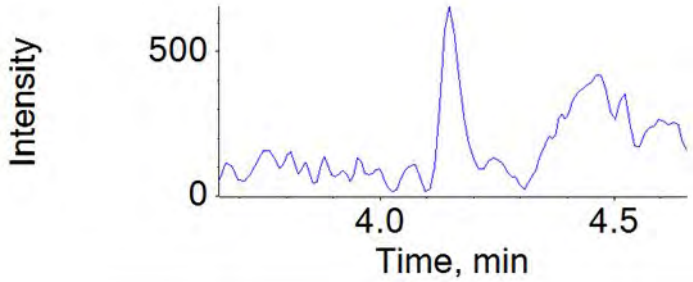
Component: PFBS
Primary Mass: 299.0 / 80.0



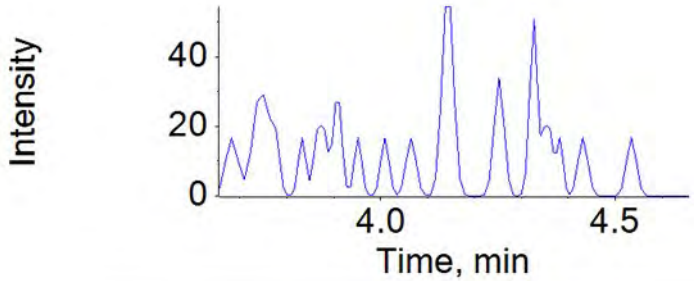
Component: PFBS_2
Secondary Mass: 299.0 / 99.0



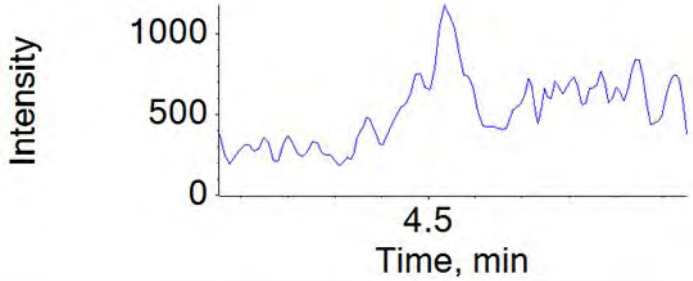
Component: PFHxA
Primary Mass: 313.0 / 269.0



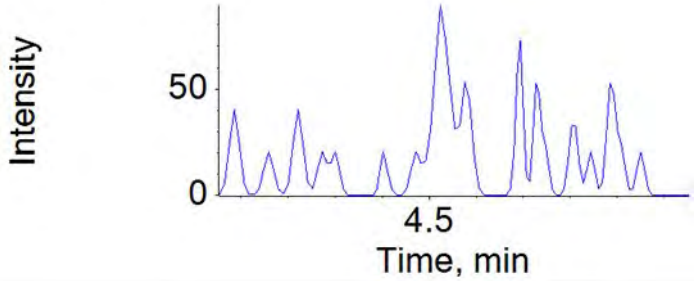
Component: PFHxA_2
Secondary Mass: 313.0 / 119.0



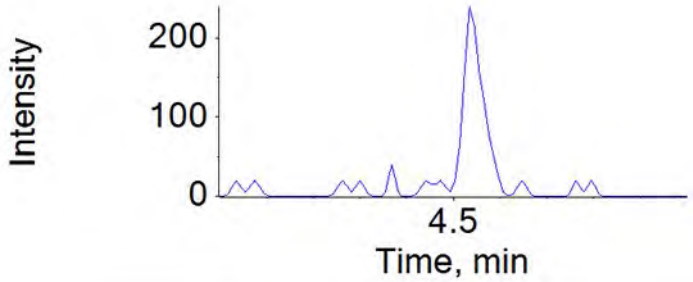
Component: PFHpA
Primary Mass: 363.0 / 319.0



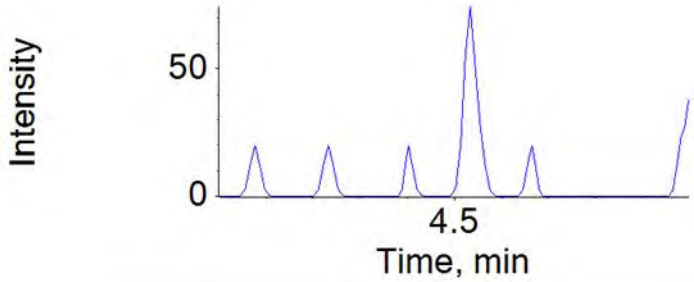
Component: PFHpA_2
Secondary Mass: 363.0 / 169.0



Component: PFHxS
Primary Mass: 399.0 / 80.0



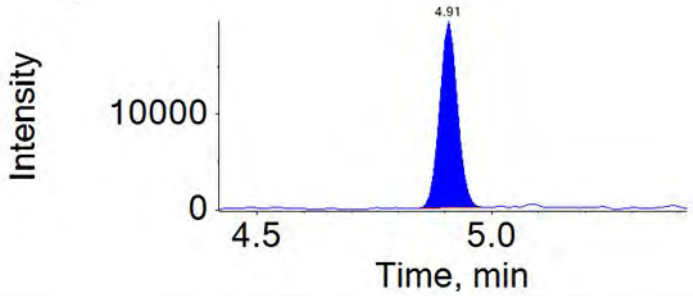
Component: PFHxS_2
Secondary Mass: 399.0 / 99.0



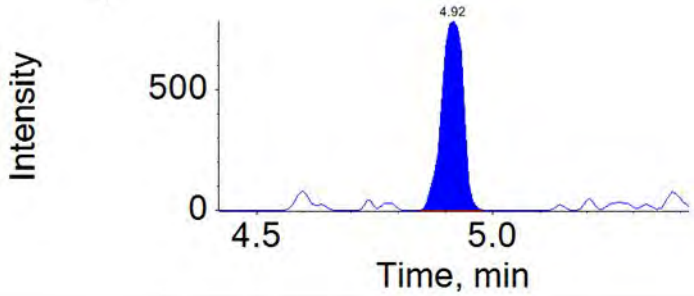
APPROVED
By MCD at 4:50 pm, 11/14/18

REVIEWED
By HMK at 12:21 pm, 11/15/18

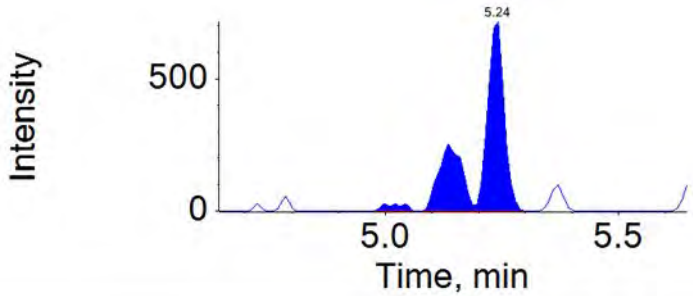
Component: PFOA
Primary Mass: 413.0 / 369.0



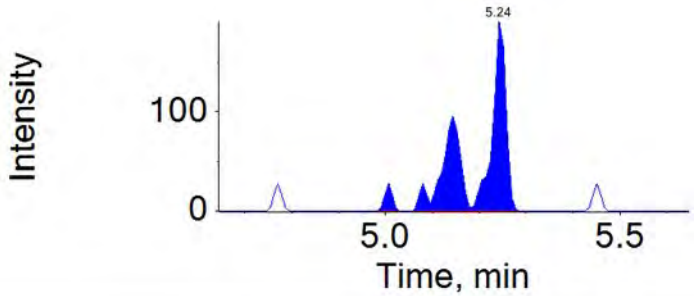
Component: PFOA_2
Secondary Mass: 413.0 / 169.0



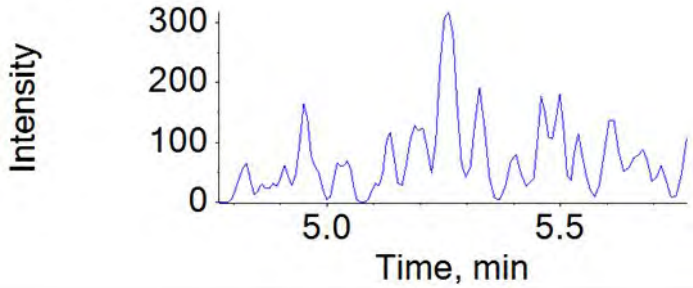
Component: PFOS
Primary Mass: 499.0 / 80.0



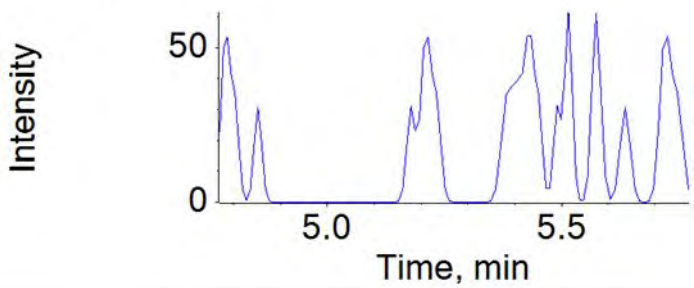
Component: PFOS_2
Secondary Mass: 499.0 / 99.0



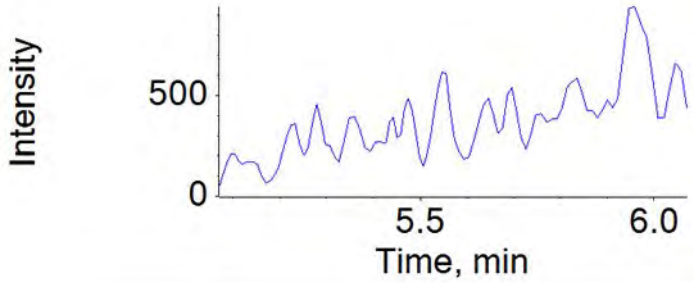
Component: PFNA
Primary Mass: 463.0 / 419.0



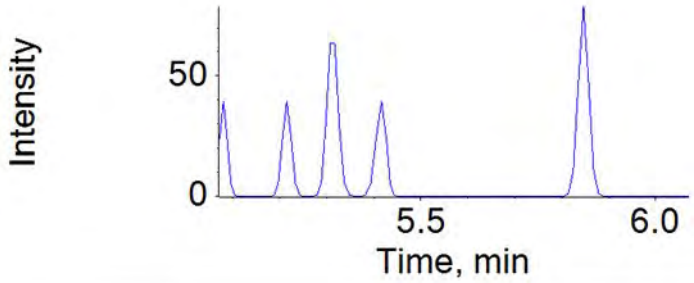
Component: PFNA_2
Secondary Mass: 463.0 / 169.0



Component: PFDA
Primary Mass: 513.0 / 469.0



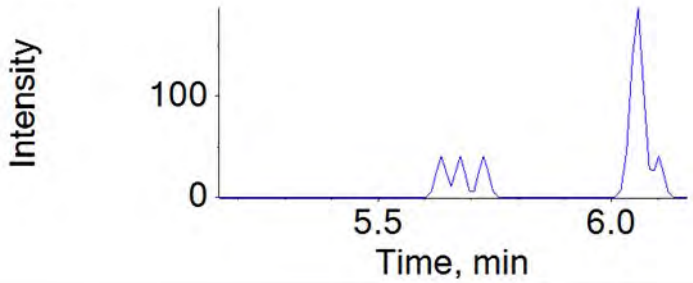
Component: PFDA_2
Secondary Mass: 513.0 / 169.0



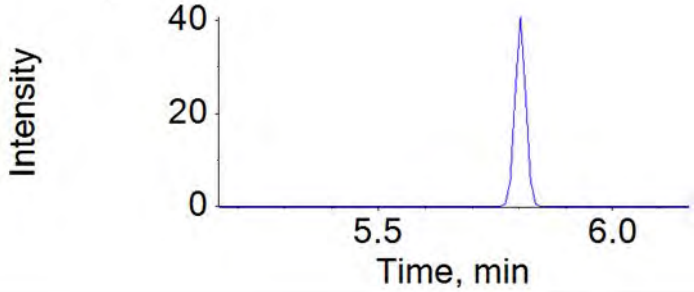
APPROVED
By MCD at 4:50 pm, 11/14/18

REVIEWED
By HMK at 12:21 pm, 11/15/18

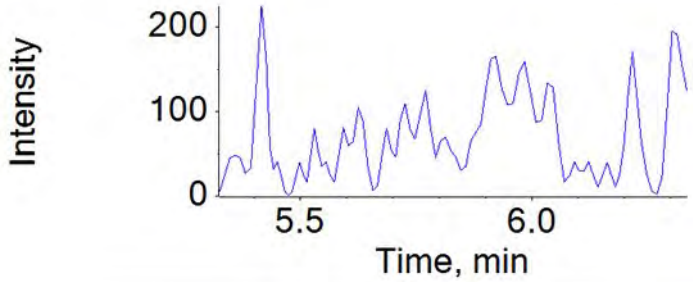
Component: NMeFOSAA
Primary Mass: 570.0 / 419.0



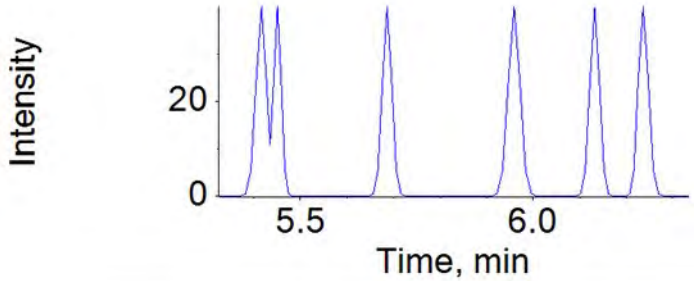
Component: NMeFOSAA_2
Secondary Mass: 570.0 / 483.0



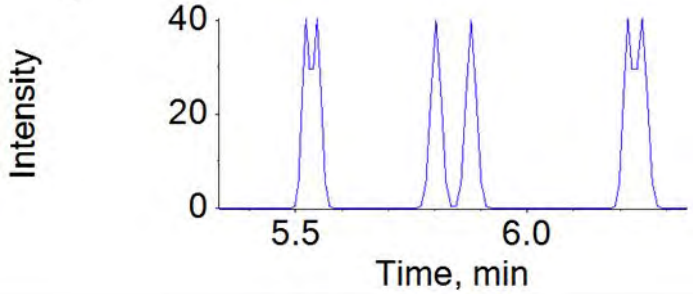
Component: PFUnDA
Primary Mass: 563.0 / 519.0



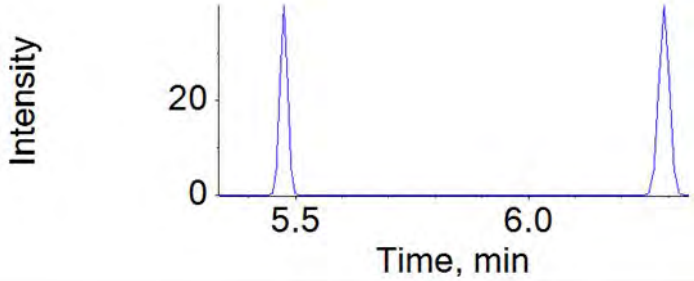
Component: PFUnDA_2
Secondary Mass: 563.0 / 169.0



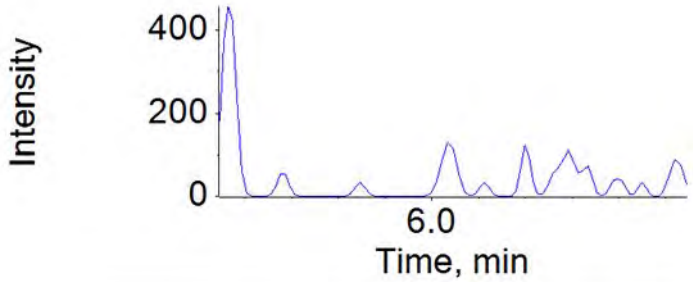
Component: NEtFOSAA
Primary Mass: 584.0 / 419.0



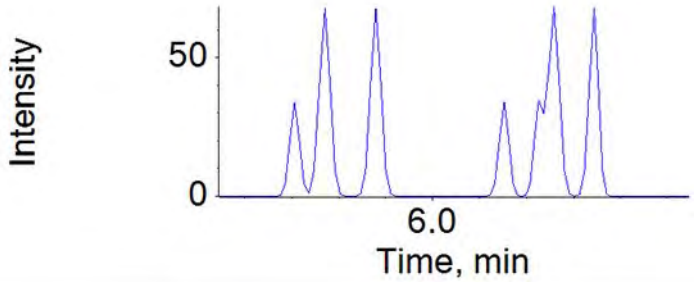
Component: NEtFOSAA_2
Secondary Mass: 584.0 / 526.0



Component: PFDoDA
Primary Mass: 613.0 / 569.0



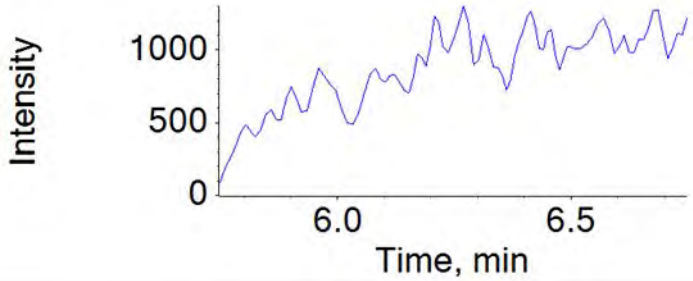
Component: PFDoDA_2
Secondary Mass: 613.0 / 169.0



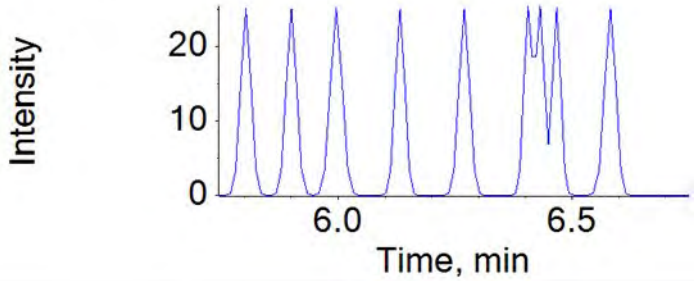
APPROVED
By MCD at 4:50 pm, 11/14/18

REVIEWED
By HMK at 12:21 pm, 11/15/18

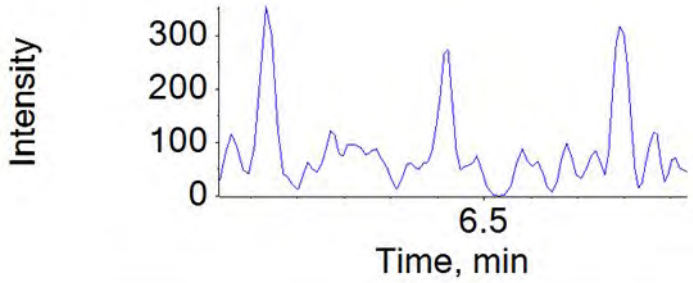
Component: PFTrDA
Primary Mass: 663.0 / 619.0



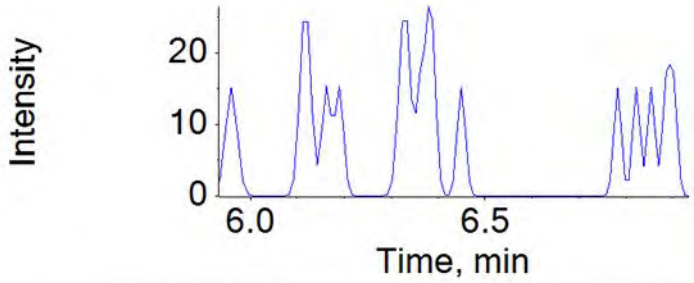
Component: PFTrDA_2
Secondary Mass: 663.0 / 169.0



Component: PFTeDA
Primary Mass: 713.0 / 669.0



Component: PFTeDA_2
Secondary Mass: 713.0 / 169.0



APPROVED
By MCD at 4:50 pm, 11/14/18

REVIEWED
By HMK at 12:21 pm, 11/15/18

ICAL Name: 18NOV12DCAL **Result Table:** 18316011 11/14/2018 4:24:36 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Sample Name:	9885081			**Data File:**		18NOV13D-52.wiff
Sample ID:	EPA 537 mod QSM 5.1 table B-15 18316011 OU1-Bldg2-S-02-03 Grab Soil			**Acquis Date:**		2018-11-13T17:23:29
Sample Type:	Unknown			**Instrument:**		LM27631
Vial Position:	50			**Acquis Method:**		18AUG13_3uL.dam
Injection Vol:	3.00			**Result Table:**		18316011
QMethod File:	18AUG20QM			**ICAL Name:**		18NOV12DCAL
Batch Number:	18316011			**Operator:**		MCD7824
Sample Wt.:	1.08000			**Dilution Factor:**		1.00
Sample Vol.:	1.000			**Prep Factor:**		2.000

Injection Standard Peak Table

Injection Standard Area Reference File: 18NOV13D-05

Injection Standard Name	Inj Std Conc	Injection Std Peak Area	Rreference Injection Standard Area	Injection Std %Diff	Injection Std %Diff Limit	Injection Std %Diff OOS
13C3-PFBA	5.0	737048.8	661126.9	11	50	
13C2-PFOA	5.0	501167.9	466902.6	7	50	
13C4-PFOS	4.8	269269.9	247446.9	9	50	
13C2-PFDA	5.0	311719.7	295381.6	6	50	

Extraction Standard Peak Table

Extraction Standard Name	Ext Std Area	Inj Std Name	Inj Std Area	Area Ratio	Ext Std Conc	Ext Std Result	Ext Std %REC	Ext Std %REC Limit	Ext Std OOS
E13C3-PFBS	351466.8	13C3-PFBA	737048.8	0.477	8.611	6.234	72	50-150	
E13C5-PFHxA	548028.1	13C2-PFOA	501167.9	1.094	9.259	7.315	79	50-150	
E13C3-PFHxS	259191.2	13C2-PFOA	501167.9	0.517	8.759	6.572	75	50-150	
E13C4-PFHpA	415476.5	13C2-PFOA	501167.9	0.829	9.259	6.916	75	50-150	
E13C8-PFOA	758531.6	13C2-PFOA	501167.9	1.514	9.259	7.722	83	50-150	
E13C8-PFOS	226520.8	13C4-PFOS	269269.9	0.841	8.852	6.903	78	50-150	
E13C9-PFNA	377871.8	13C4-PFOS	269269.9	1.403	9.259	7.246	78	50-150	
E13C6-PFDA	514630.3	13C2-PFDA	311719.8	1.651	9.259	7.134	77	50-150	
Ed3-NMeFOSAA	66241.4	13C2-PFDA	311719.8	0.213	9.259	7.103	77	50-150	
E13C7-PFUnDA	216369.6	13C2-PFDA	311719.8	0.694	9.259	7.463	81	50-150	
Ed5-NEtFOSAA	50278.4	13C2-PFDA	311719.8	0.161	9.259	6.319	68	50-150	
E13C2-PFDoDA	460827.8	13C2-PFDA	311719.8	1.478	9.259	7.108	77	50-150	
E13C2-PFTeDA	331781.1	13C2-PFDA	311719.8	1.064	9.259	6.920	75	50-150	

APPROVED
By MCD at 4:50 pm, 11/14/18

REVIEWED
By HMK at 12:21 pm, 11/15/18

ICAL Name: 18NOV12DCAL **Result Table:** 18316011 11/14/2018 4:24:36 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

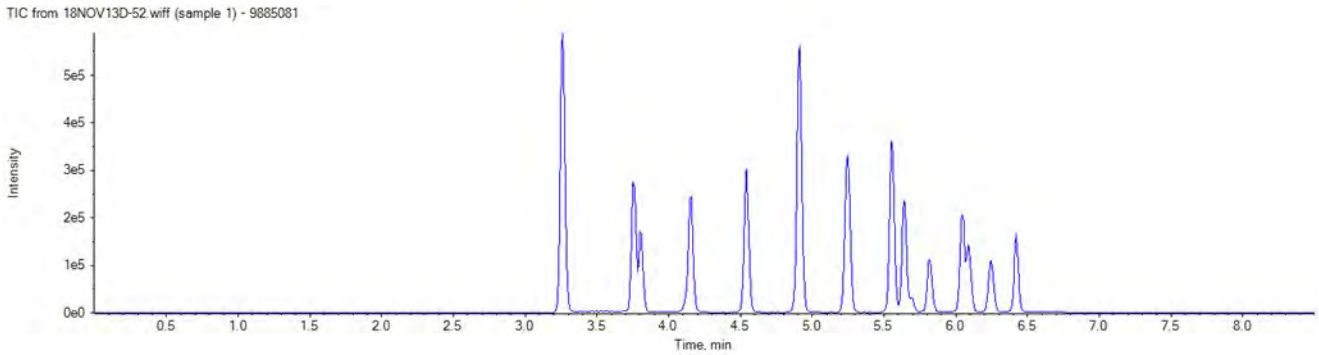
Analyte Quantitation Peak Table

Sample Name: 9885081 **Instrument Name:** LM27631 **File Name:** 18NOV13D-52.wiff

Sample Wt	Sample Vol	Dilution Factor	PrepFactor
1.08000	1.000	1.00	2.000

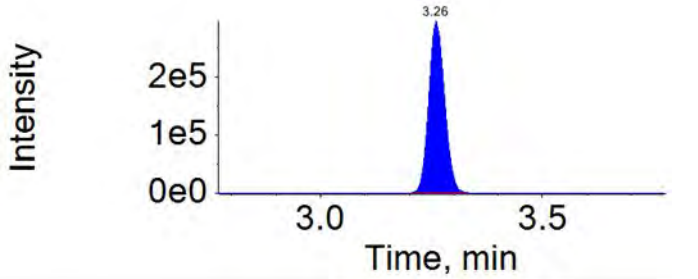
Analyte Name	RT	RRT	Analyte Area Response	E	Int Typ	ES Name	ES RT	ES Area Response	Area Ratio	Sample Result (ng/g)
PFBS	N/A	N/A	N/A		A	13C3-PFBS	3.81	351466.8	N/A	
PFHxA	N/A	N/A	N/A		A	13C5-PFHxA	4.15	548028.1	N/A	
PFHpA	N/A	N/A	N/A		A	13C4-PFHpA	4.54	415476.5	N/A	
PFHxS	N/A	N/A	N/A		A	13C3-PFHxS	4.54	259191.2	N/A	
PFOA	4.91	1.000	18127.0		A	13C8-PFOA	4.91	758531.6	0.024	0.236
PFOS	N/A	N/A	N/A		A	13C8-PFOS	5.24	226520.8	N/A	
PFNA	N/A	N/A	N/A		A	13C9-PFNA	5.25	377871.8	N/A	
PFDA	N/A	N/A	N/A		A	13C6-PFDA	5.56	514630.3	N/A	
NMeFOSAA	N/A	N/A	N/A		A	d3-NMeFOSAA	5.70	66241.4	N/A	
PFUnDA	N/A	N/A	N/A		A	13C7-PFUnDA	5.82	216369.6	N/A	
NEtFOSAA	N/A	N/A	N/A		A	d5-NEtFOSAA	5.83	50278.4	N/A	
PFDoDA	N/A	N/A	N/A		A	13C2-PFDoDA	6.05	460827.8	N/A	
PFTrDA	N/A	N/A	N/A		A	13C2-PFDoDA	6.05	460827.8	N/A	
PFTeDA	N/A	N/A	N/A		A	13C2-PFTeDA	6.42	331781.1	N/A	

Total Ion Chromatogram

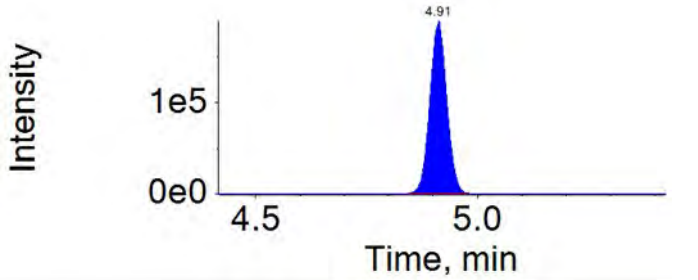


ICAL Name: 18NOV12DCAL **Result Table:** 18316011 11/14/2018 4:24:36 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

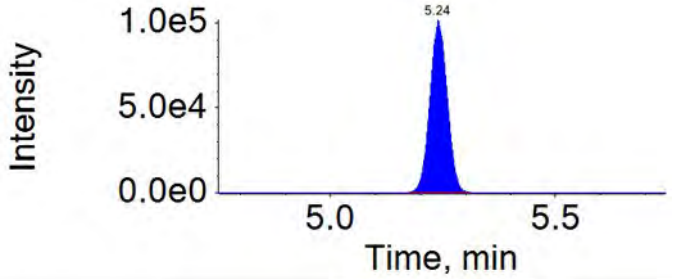
Injection Standard: 13C3-PFBA
216.0 / 172.0



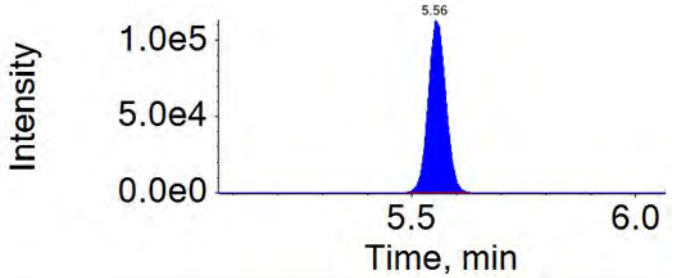
Injection Standard: 13C2-PFOA
415.0 / 370.0



Injection Standard: 13C4-PFOS
503.0 / 80.0



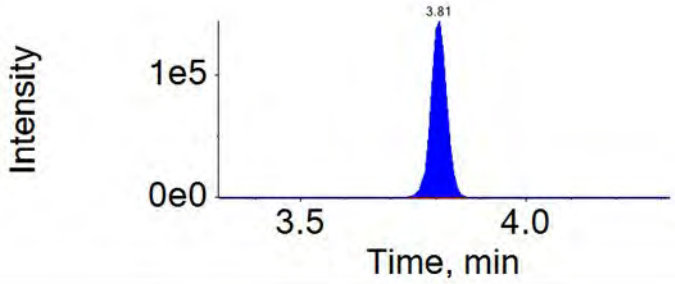
Injection Standard: 13C2-PFDA
515.0 / 470.0



ICAL Name: 18NOV12DCAL **Result Table:** 18316011 11/14/2018 4:24:36 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

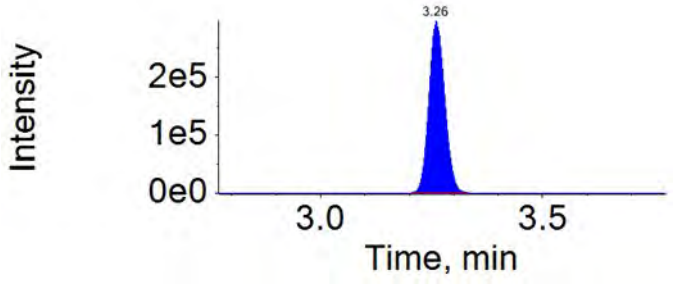
Extraction Standard: E13C3-PFBS

302.0 / 80.0



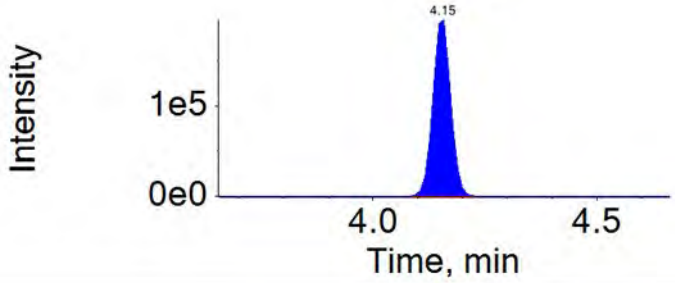
Injection Standard: 13C3-PFBA

216.0 / 172.0



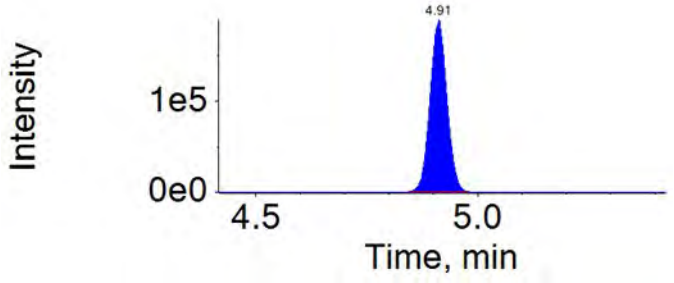
Extraction Standard: E13C5-PFHxA

318.0 / 273.0



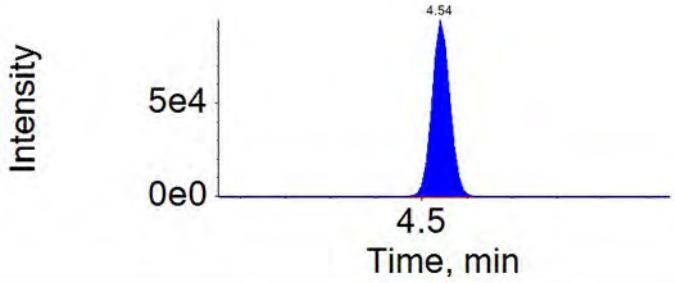
Injection Standard: 13C2-PFOA

415.0 / 370.0



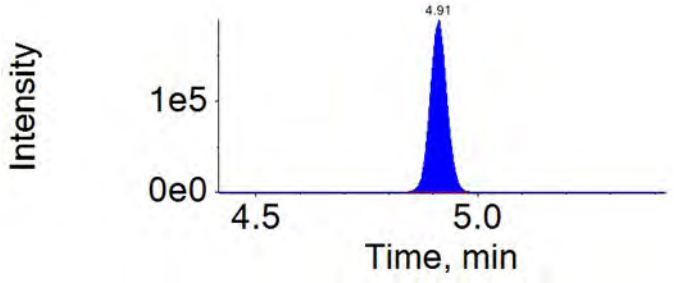
Extraction Standard: E13C3-PFHxS

402.0 / 80.0



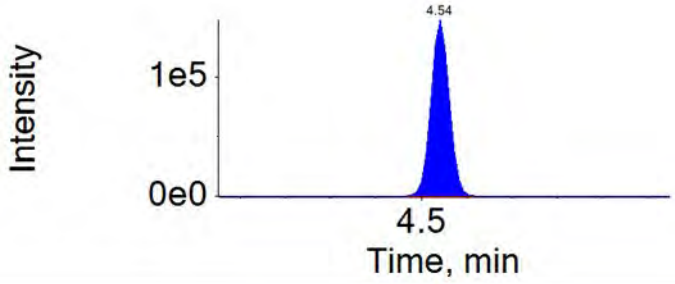
Injection Standard: 13C2-PFOA

415.0 / 370.0



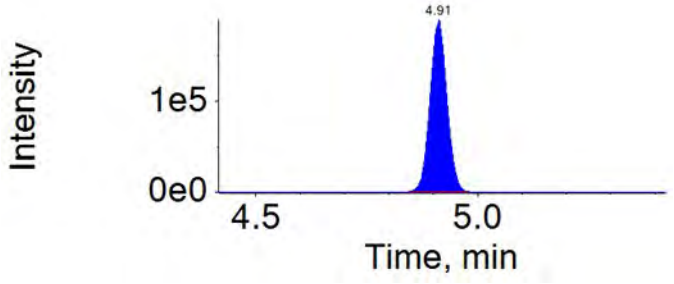
Extraction Standard: E13C4-PFHpA

367.0 / 322.0



Injection Standard: 13C2-PFOA

415.0 / 370.0

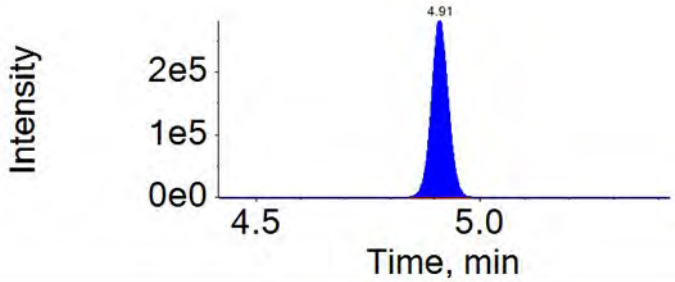


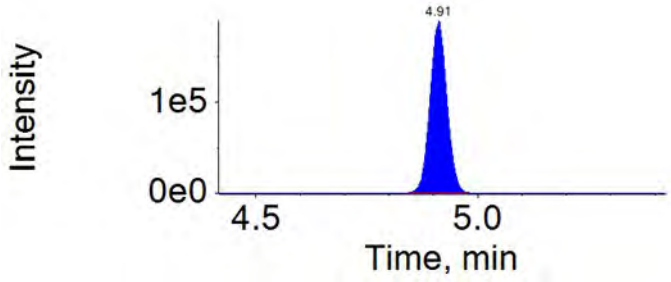
APPROVED
By MCD at 4:50 pm, 11/14/18

REVIEWED
By HMK at 12:21 pm, 11/15/18

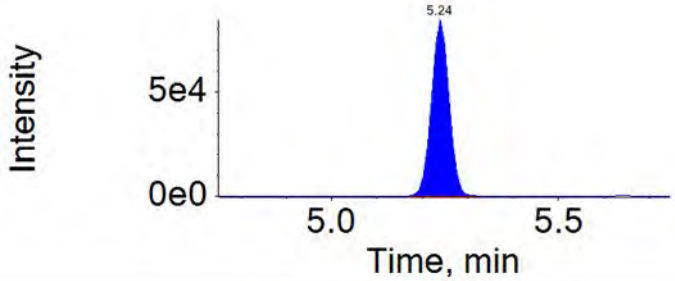
ICAL Name: 18NOV12DCAL **Result Table:** 18316011 11/14/2018 4:24:36 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

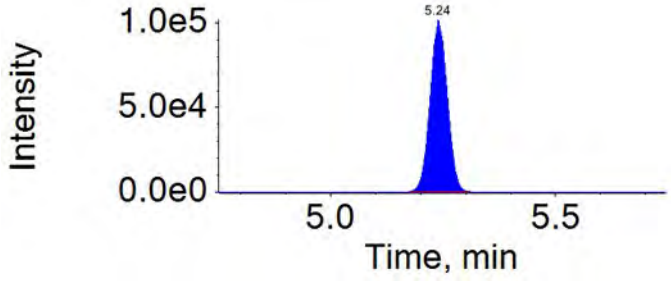
Extraction Standard: E13C8-PFOA	Injection Standard: 13C2-PFOA
421.0 / 376.0	415.0 / 370.0



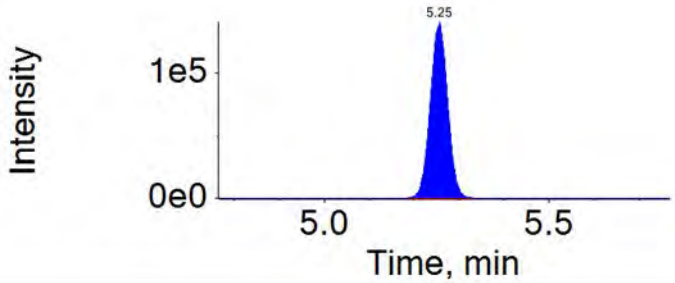


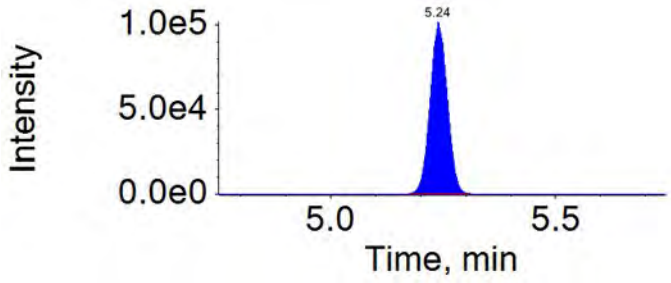
Extraction Standard: E13C8-PFOS	Injection Standard: 13C4-PFOS
507.0 / 80.0	503.0 / 80.0



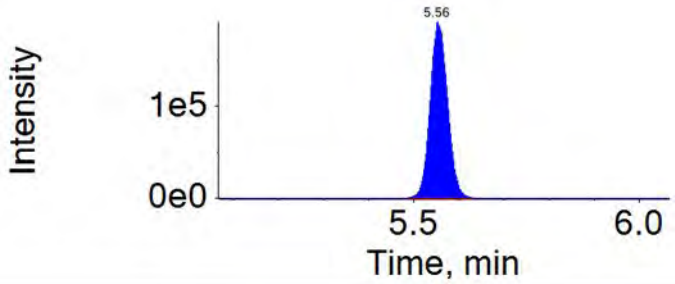


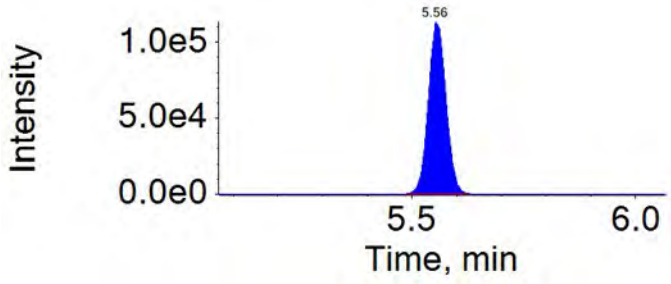
Extraction Standard: E13C9-PFNA	Injection Standard: 13C4-PFOS
472.0 / 427.0	503.0 / 80.0





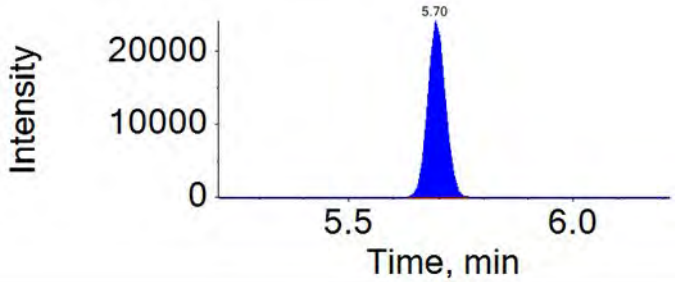
Extraction Standard: E13C6-PFDA	Injection Standard: 13C2-PFDA
519.0 / 474.0	515.0 / 470.0

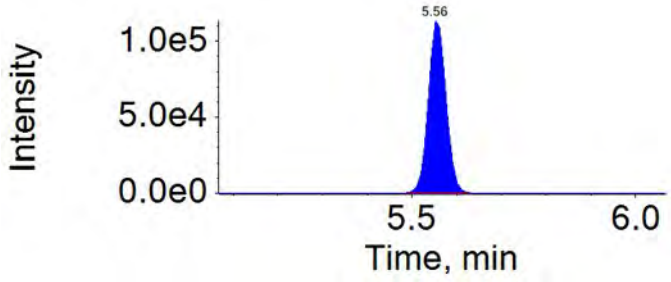




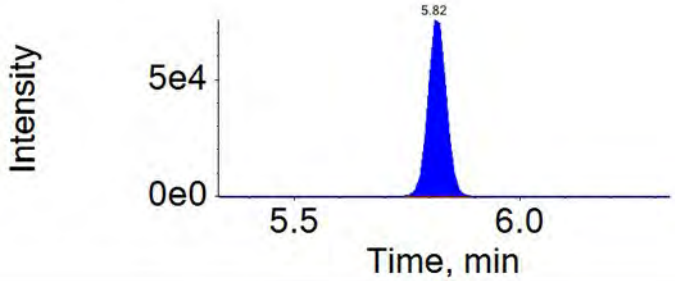
ICAL Name: 18NOV12DCAL **Result Table:** 18316011 11/14/2018 4:24:36 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

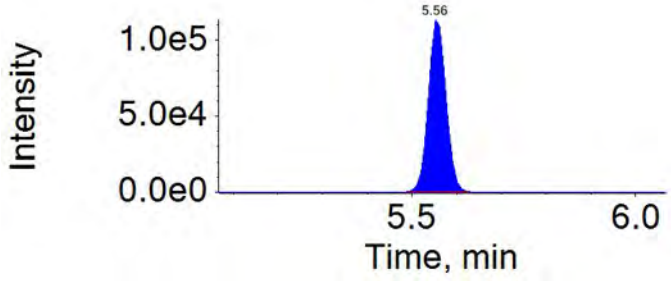
Extraction Standard: Ed3-NMeFOSAA	Injection Standard: 13C2-PFDA
573.0 / 419.0	515.0 / 470.0



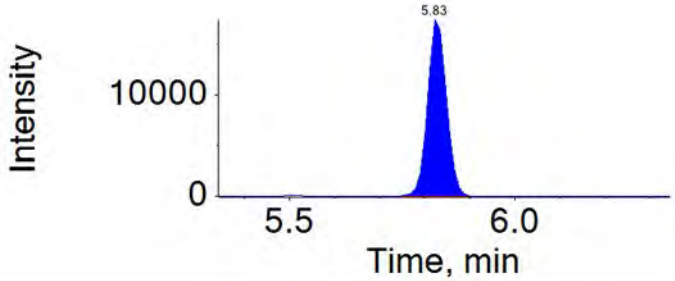


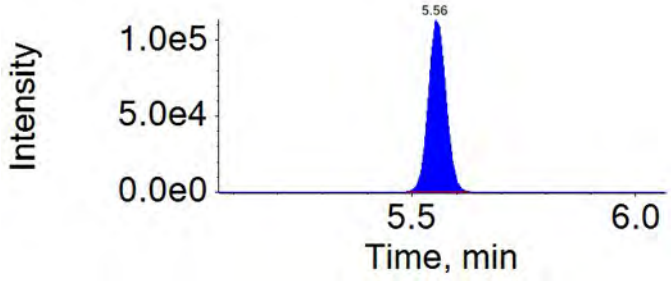
Extraction Standard: E13C7-PFUnDA	Injection Standard: 13C2-PFDA
570.0 / 525.0	515.0 / 470.0



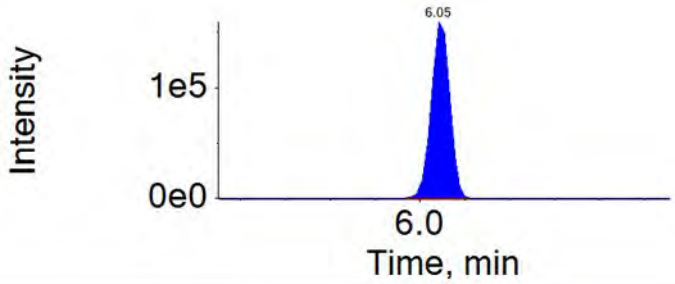


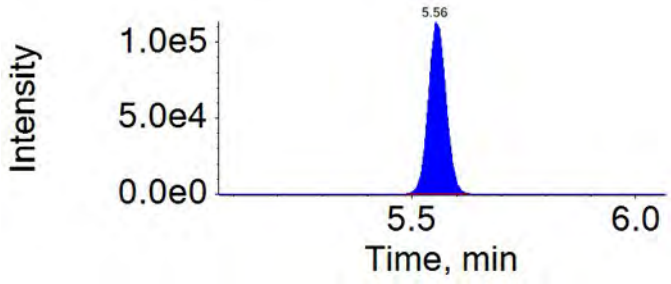
Extraction Standard: Ed5-NEtFOSAA	Injection Standard: 13C2-PFDA
589.0 / 419.0	515.0 / 470.0





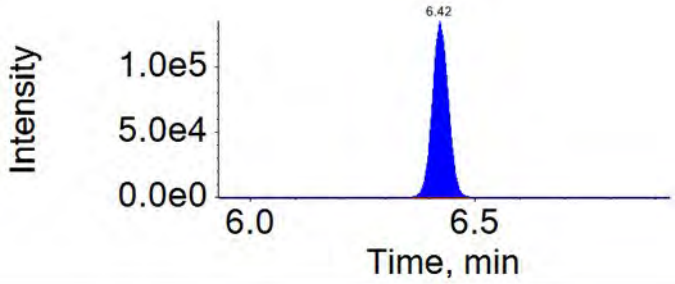
Extraction Standard: E13C2-PFDoDA	Injection Standard: 13C2-PFDA
615.0 / 570.0	515.0 / 470.0

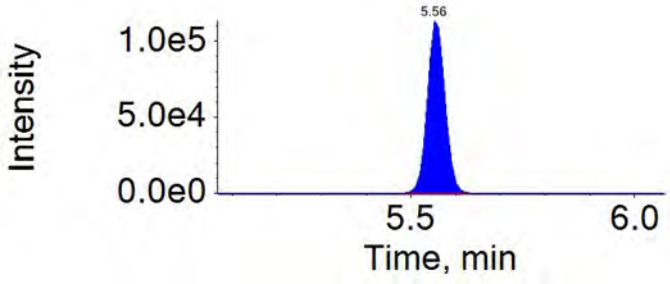




ICAL Name: 18NOV12DCAL **Result Table:** 18316011 11/14/2018 4:24:36 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

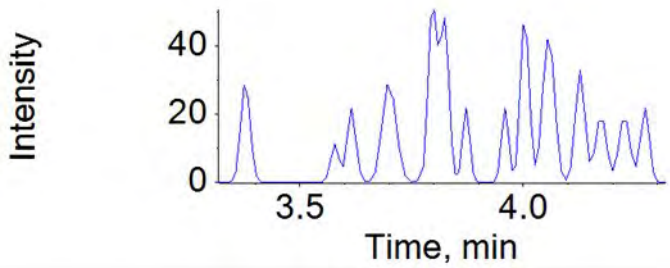
Extraction Standard: E13C2-PFTeDA	Injection Standard: 13C2-PFDA
715.0 / 670.0	515.0 / 470.0



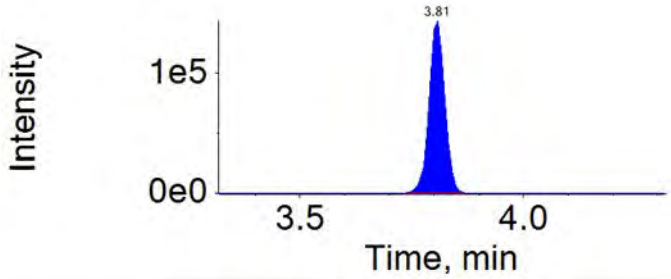


ICAL Name: 18NOV12DCAL **Result Table:** 18316011 11/14/2018 4:24:36 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

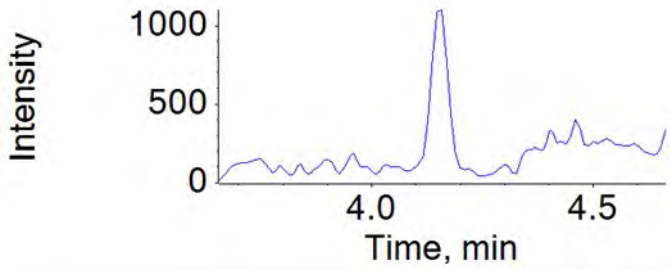
Analyte: PFBS
299.0 / 80.0



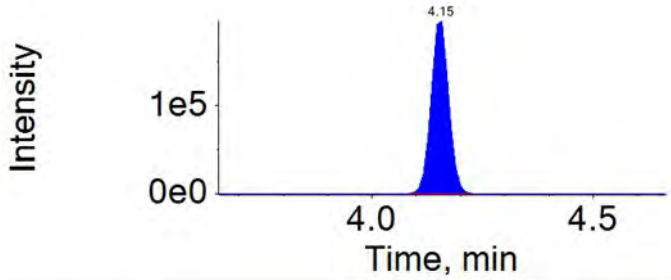
Extraction Standard: 13C3-PFBS
302.0 / 80.0



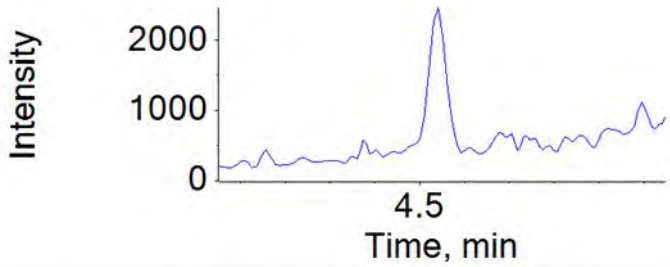
Analyte: PFHxA
313.0 / 269.0



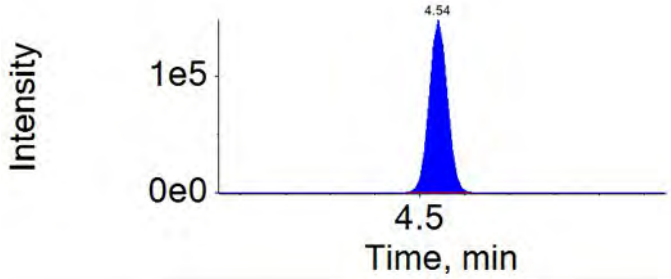
Extraction Standard: 13C5-PFHxA
318.0 / 273.0



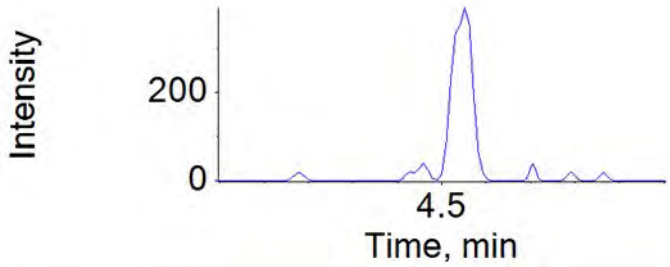
Analyte: PFHpA
363.0 / 319.0



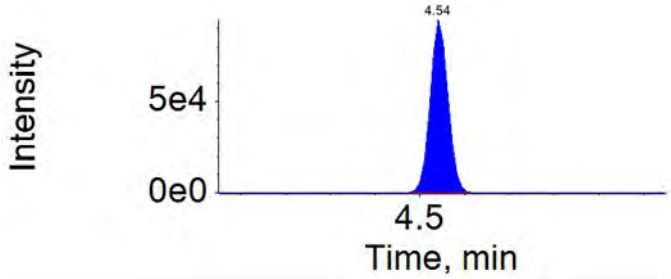
Extraction Standard: 13C4-PFHpA
367.0 / 322.0



Analyte: PFHxS
399.0 / 80.0



Extraction Standard: 13C3-PFHxS
402.0 / 80.0

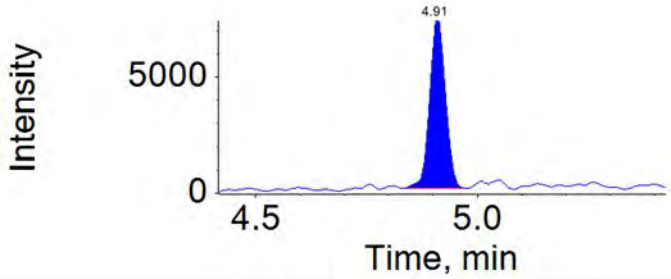


APPROVED
By MCD at 4:50 pm, 11/14/18

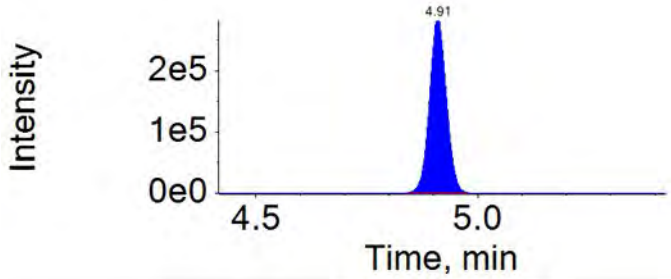
REVIEWED
By HMK at 12:21 pm, 11/15/18

ICAL Name: 18NOV12DCAL **Result Table:** 18316011 11/14/2018 4:24:36 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

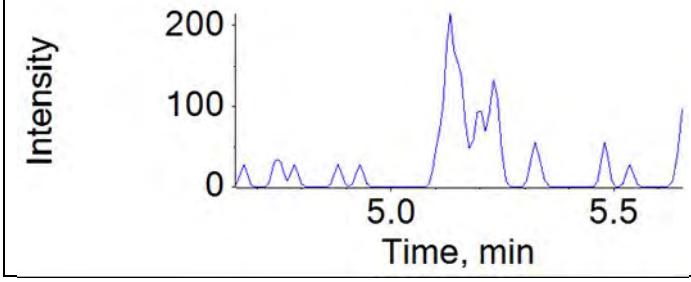
Analyte: PFOA
413.0 / 369.0



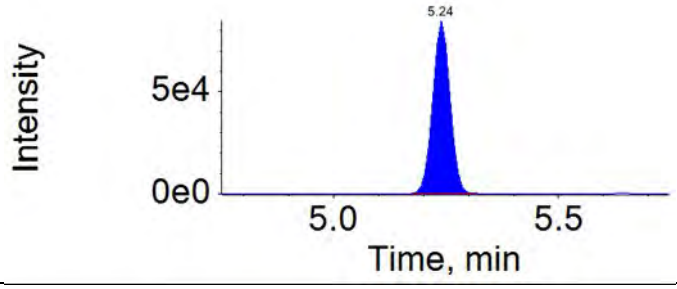
Extraction Standard: 13C8-PFOA
421.0 / 376.0



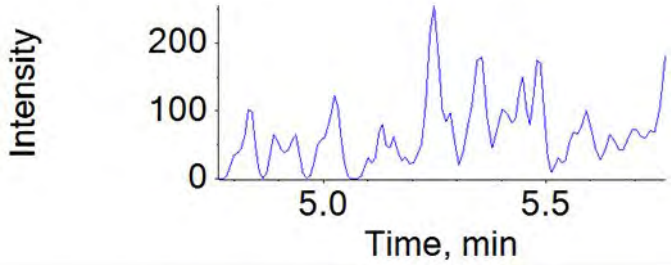
Analyte: PFOS
499.0 / 80.0



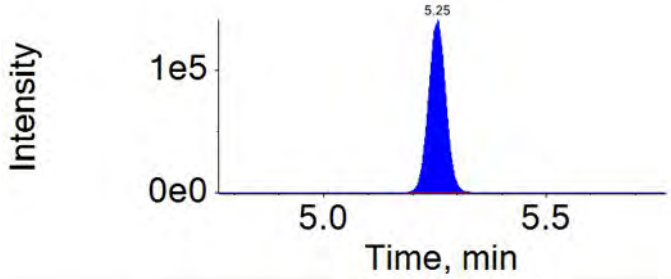
Extraction Standard: 13C8-PFOS
507.0 / 80.0



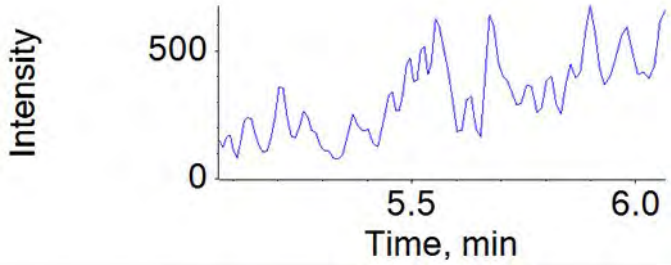
Analyte: PFNA
463.0 / 419.0



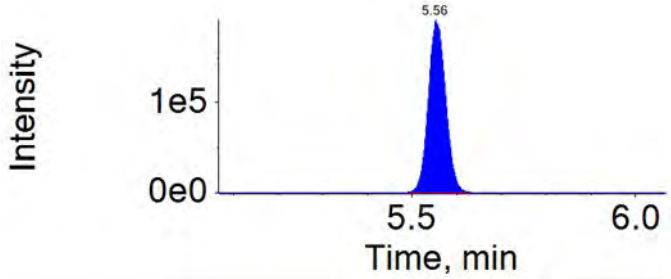
Extraction Standard: 13C9-PFNA
472.0 / 427.0



Analyte: PFDA
513.0 / 469.0



Extraction Standard: 13C6-PFDA
519.0 / 474.0

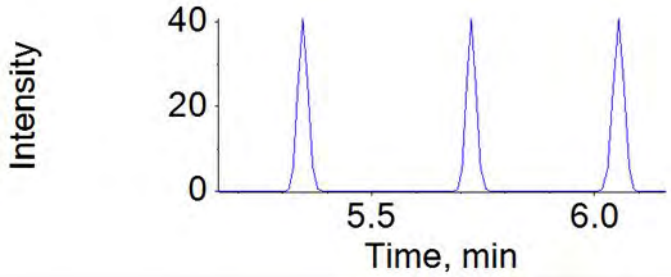


APPROVED
By MCD at 4:50 pm, 11/14/18

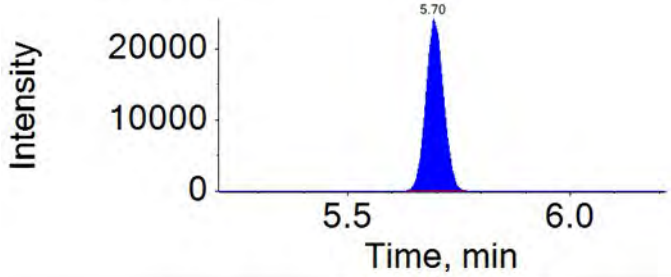
REVIEWED
By HMK at 12:21 pm, 11/15/18

ICAL Name: 18NOV12DCAL **Result Table:** 18316011 11/14/2018 4:24:36 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

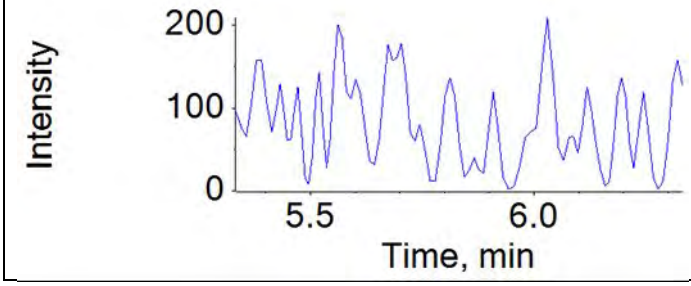
Analyte: NMeFOSAA
570.0 / 419.0



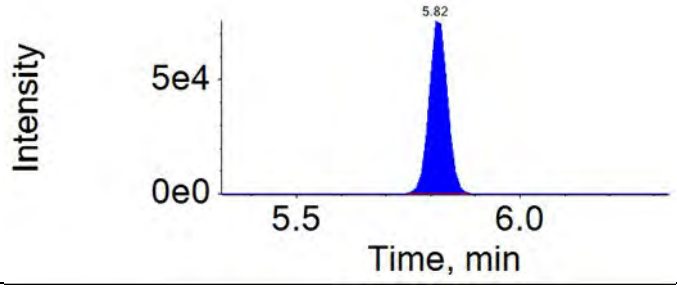
Extraction Standard: d3-NMeFOSAA
573.0 / 419.0



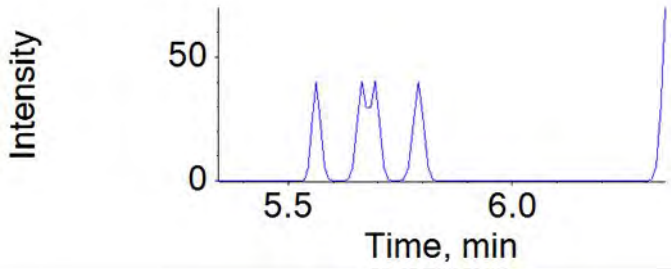
Analyte: PFUnDA
563.0 / 519.0



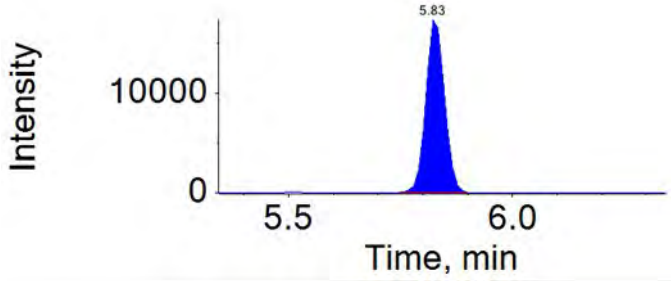
Extraction Standard: 13C7-PFUnDA
570.0 / 525.0



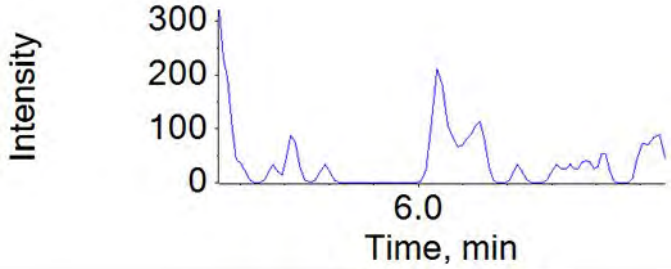
Analyte: NEtFOSAA
584.0 / 419.0



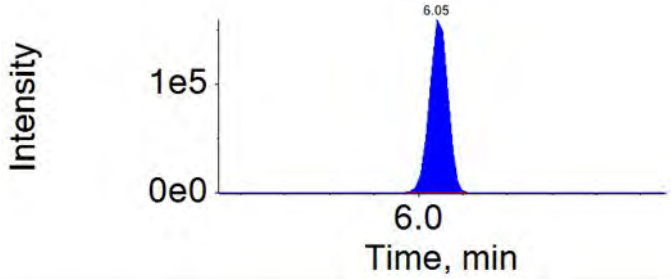
Extraction Standard: d5-NEtFOSAA
589.0 / 419.0



Analyte: PFDoDA
613.0 / 569.0



Extraction Standard: 13C2-PFDoDA
615.0 / 570.0

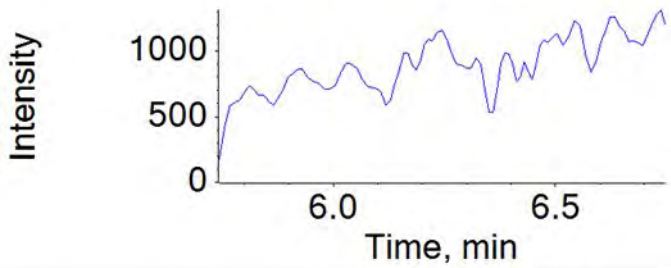


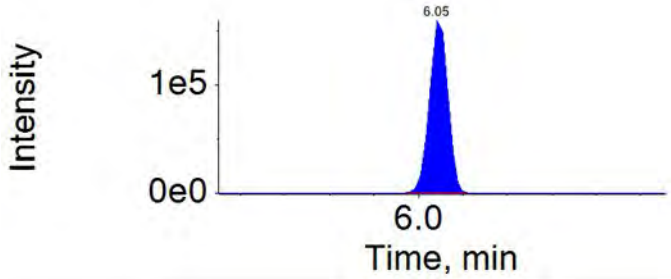
APPROVED
By MCD at 4:50 pm, 11/14/18

REVIEWED
By HMK at 12:21 pm, 11/15/18

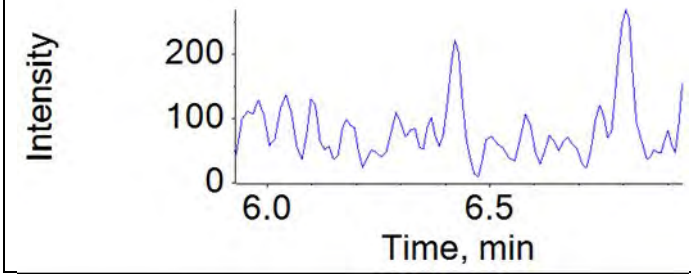
ICAL Name: 18NOV12DCAL **Result Table:** 18316011 11/14/2018 4:24:36 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

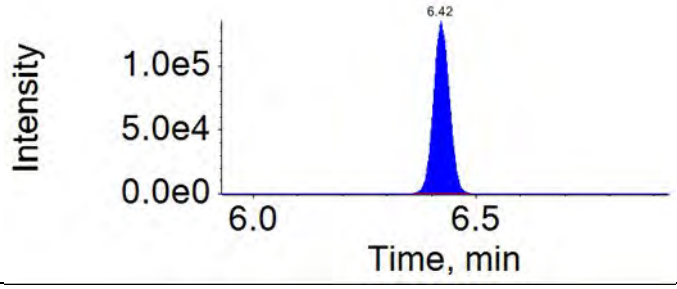
Analyte: PFTrDA	Extraction Standard: 13C2-PFDoDA
663.0 / 619.0	615.0 / 570.0





Analyte: PFTeDA	Extraction Standard: 13C2-PFTeDA
713.0 / 669.0	715.0 / 670.0





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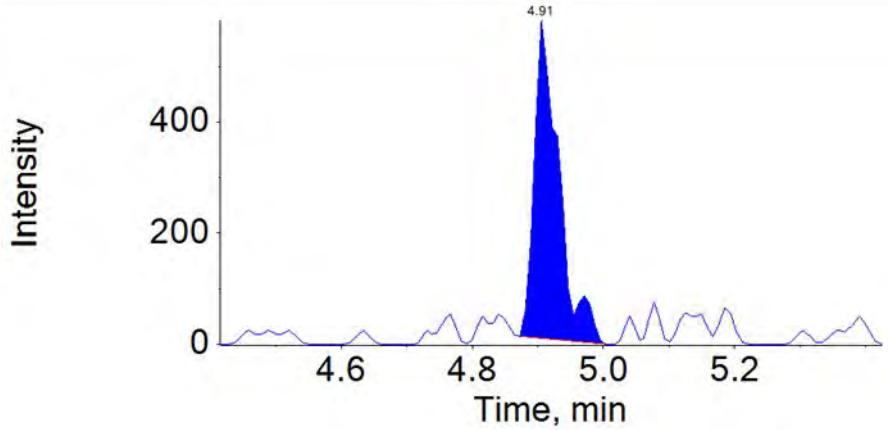
Auto Integrations prior to Manual Integration

Print Date: 11/14/2018 4:31 PM
Template: MQ-OrigInteg-16NOV21.docx

Results Table Name: 18316011
Results Table Date: 11/14/2018 4:24:36 PM

Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

Component Name:
PFOA_2
RT (min.):
4.91
Peak Area:
1498.6
Mass Range:
413.0 / 169.0
File Name:
18NOV13D-52.wiff
Sample Name:
9885081



Integration Comment: incorrect integration

APPROVED
By MCD at 4:50 pm, 11/14/18

REVIEWED
By HMK at 12:21 pm, 11/15/18

Results Table Name: 18316011
Results Table Date: 11/14/2018 4:24:36 PM

Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

APPROVED
By MCD at 4:50 pm, 11/14/18

REVIEWED
By HMK at 12:21 pm, 11/15/18

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LC-MS/MS Analysis Report

Printed: 11/14/2018 4:28:00 PM
Template: IonRatio18OCT10

Ion Ratio Report

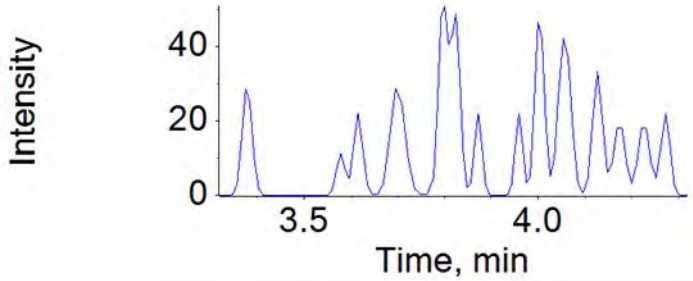
Sample Name: 9885081 **Instrument Name:** LM27631 **File Name:** 18NOV13D-52.wiff

Component Name	RT	RRT	Analyte Area Response	Int Typ	Expected Ion Ratio	Ion Ratio	Ion Ratio % Diff	Ion Ratio Limit	Ion Ratio OOS
PFBS	N/A	N/A	N/A	A	N/A	N/A			
PFBS_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFHxA	N/A	N/A	N/A	A	N/A	N/A			
PFHxA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFHpA	N/A	N/A	N/A	A	N/A	N/A			
PFHpA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFHxS	N/A	N/A	N/A	A	N/A	N/A			
PFHxS_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFOA	4.91	1.00	18127.0	A	N/A	0.0757			
PFOA_2	4.91	1.00	1371.5	M	N/A	0.0757	35	50	
PFOS	N/A	N/A	N/A	A	N/A	N/A			
PFOS_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFNA	N/A	N/A	N/A	A	N/A	N/A			
PFNA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFDA	N/A	N/A	N/A	A	N/A	N/A			
PFDA_2	N/A	N/A	N/A	A	N/A	N/A		50	
NMeFOSAA	N/A	N/A	N/A	A	N/A	N/A			
NMeFOSAA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFUnDA	N/A	N/A	N/A	A	N/A	N/A			
PFUnDA_2	N/A	N/A	N/A	A	N/A	N/A		50	
NEtFOSAA	N/A	N/A	N/A	A	N/A	N/A			
NEtFOSAA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFDoDA	N/A	N/A	N/A	A	N/A	N/A			
PFDoDA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFTrDA	N/A	N/A	N/A	A	N/A	N/A			
PFTrDA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFTeDA	N/A	N/A	N/A	A	N/A	N/A			
PFTeDA_2	N/A	N/A	N/A	A	N/A	N/A		50	

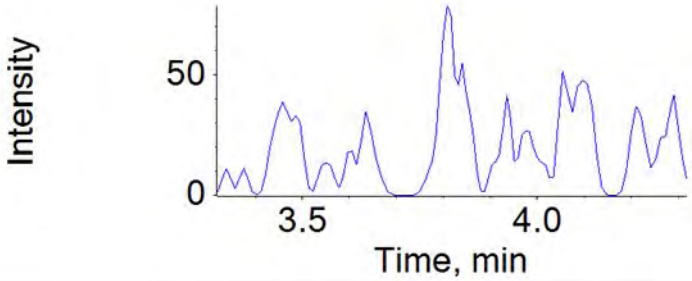
APPROVED
By MCD at 4:50 pm, 11/14/18

REVIEWED
By HMK at 12:21 pm, 11/15/18

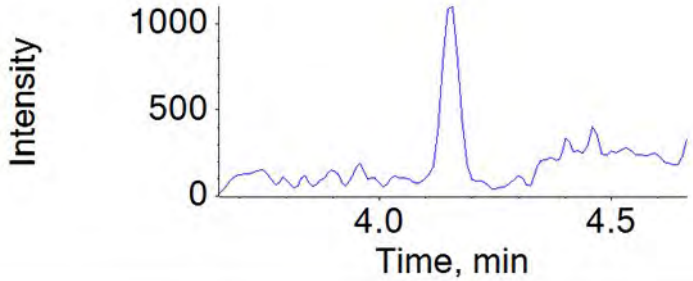
Component: PFBS
Primary Mass: 299.0 / 80.0



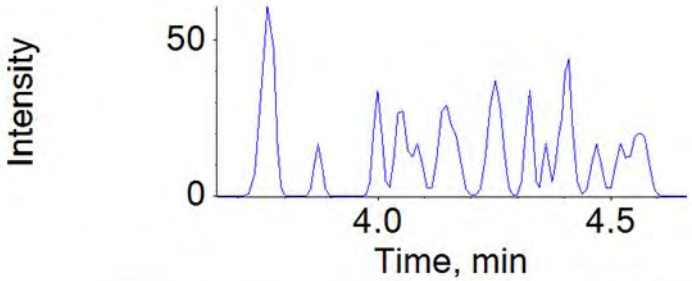
Component: PFBS_2
Secondary Mass: 299.0 / 99.0



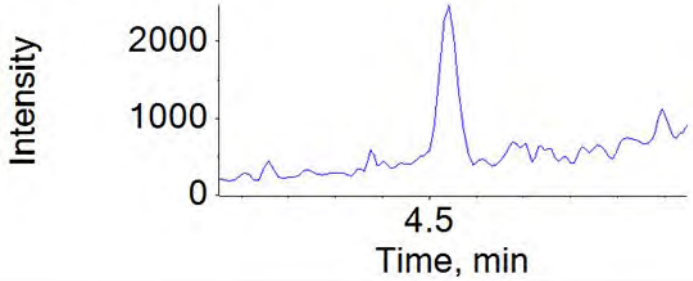
Component: PFHxA
Primary Mass: 313.0 / 269.0



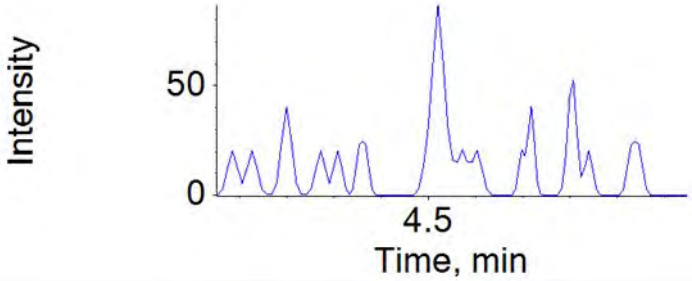
Component: PFHxA_2
Secondary Mass: 313.0 / 119.0



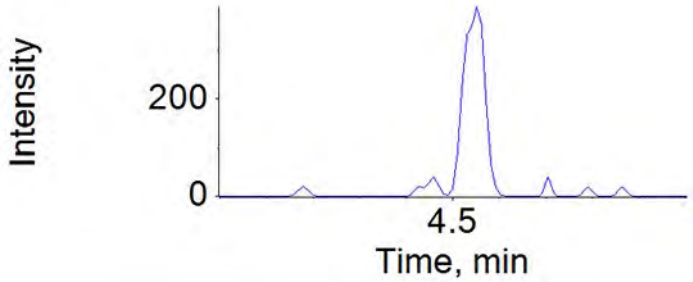
Component: PFHpA
Primary Mass: 363.0 / 319.0



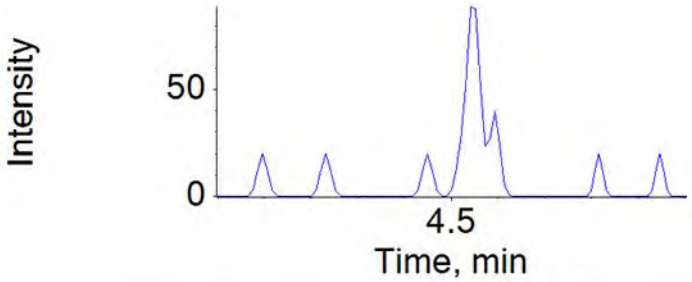
Component: PFHpA_2
Secondary Mass: 363.0 / 169.0



Component: PFHxS
Primary Mass: 399.0 / 80.0



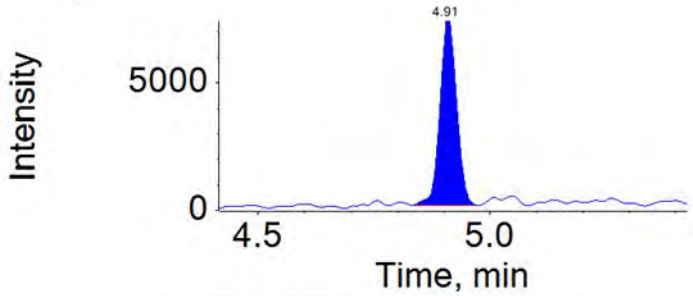
Component: PFHxS_2
Secondary Mass: 399.0 / 99.0



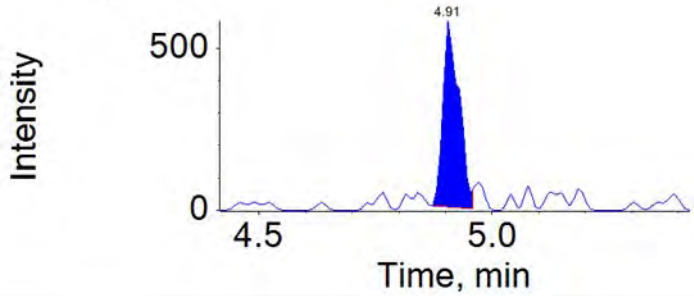
APPROVED
By MCD at 4:50 pm, 11/14/18

REVIEWED
By HMK at 12:21 pm, 11/15/18

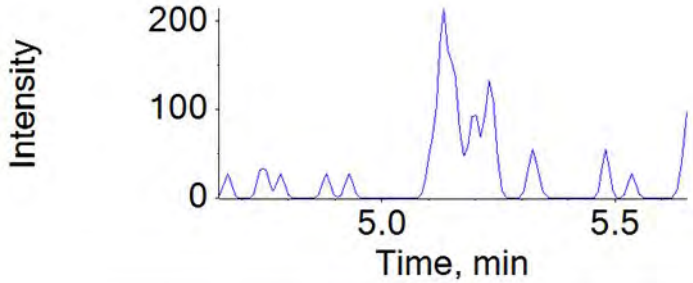
Component: PFOA
Primary Mass: 413.0 / 369.0



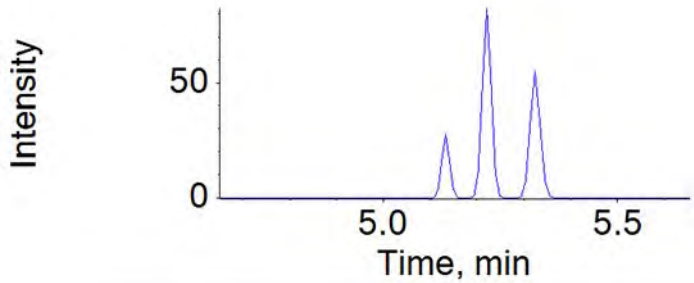
Component: PFOA_2
Secondary Mass: 413.0 / 169.0



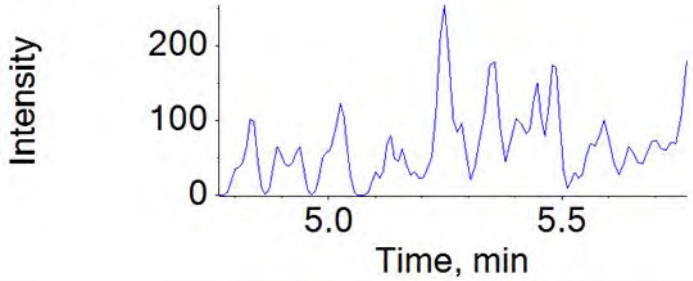
Component: PFOS
Primary Mass: 499.0 / 80.0



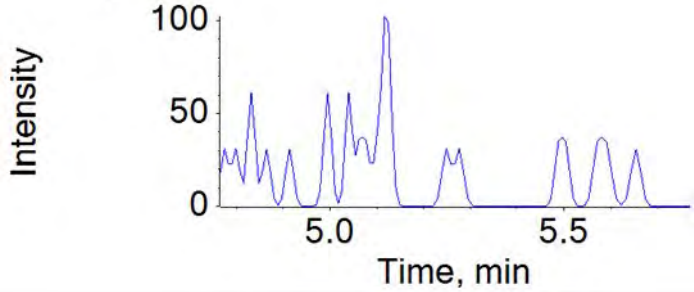
Component: PFOS_2
Secondary Mass: 499.0 / 99.0



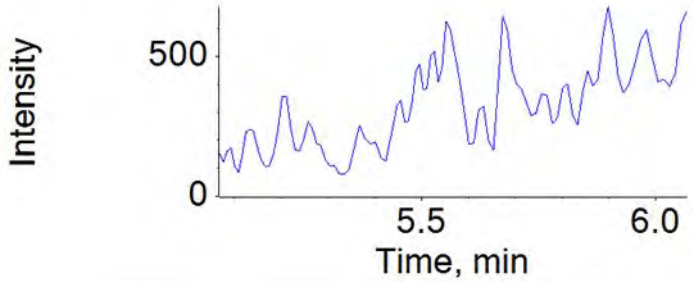
Component: PFNA
Primary Mass: 463.0 / 419.0



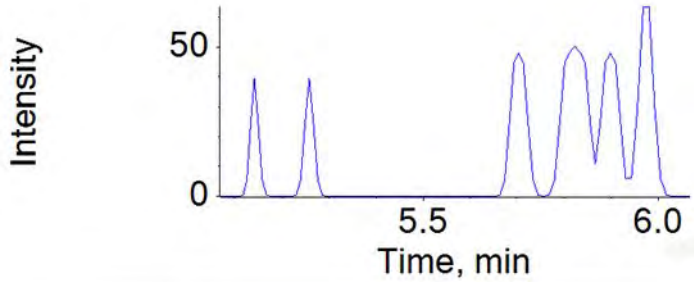
Component: PFNA_2
Secondary Mass: 463.0 / 169.0



Component: PFDA
Primary Mass: 513.0 / 469.0



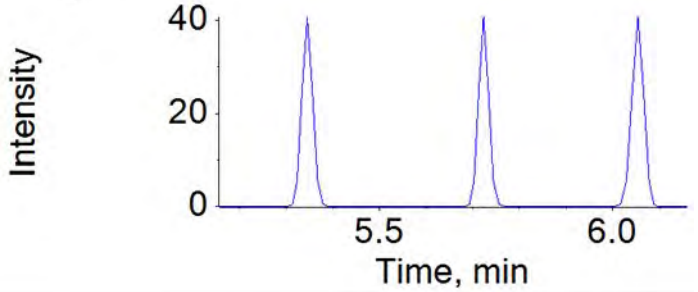
Component: PFDA_2
Secondary Mass: 513.0 / 169.0



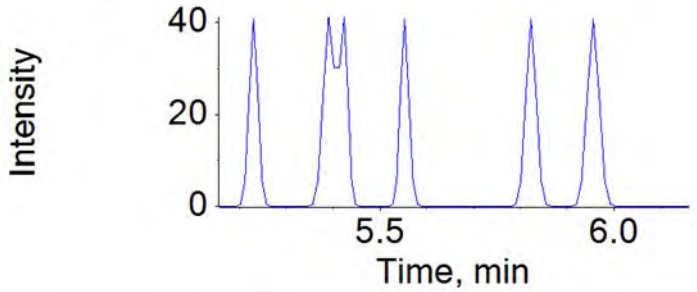
APPROVED
By MCD at 4:50 pm, 11/14/18

REVIEWED
By HMK at 12:21 pm, 11/15/18

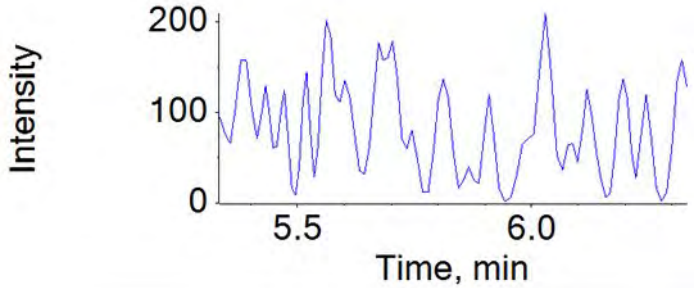
Component: NMeFOSAA
Primary Mass: 570.0 / 419.0



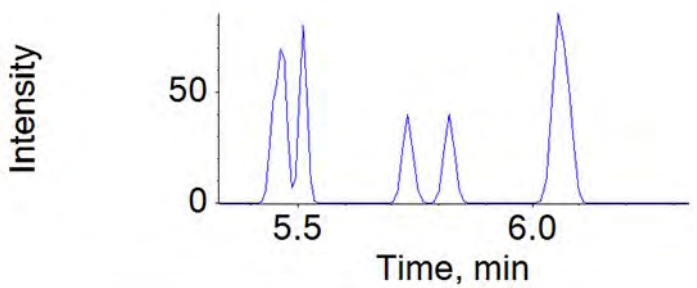
Component: NMeFOSAA_2
Secondary Mass: 570.0 / 483.0



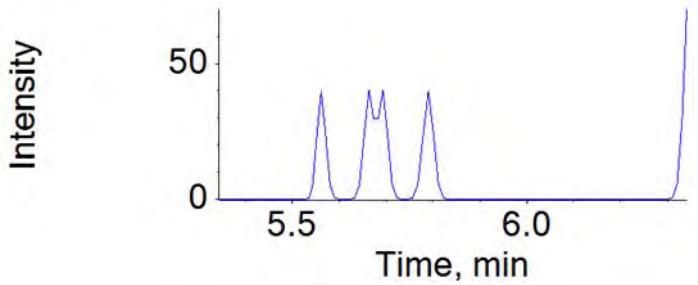
Component: PFUnDA
Primary Mass: 563.0 / 519.0



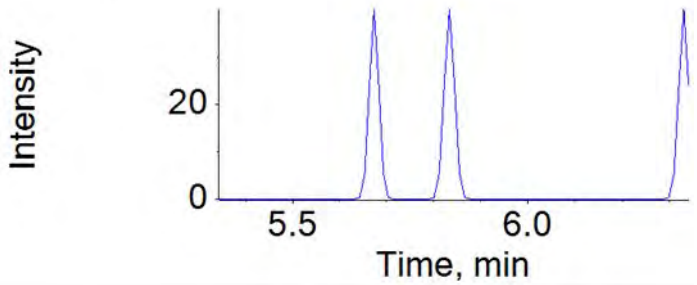
Component: PFUnDA_2
Secondary Mass: 563.0 / 169.0



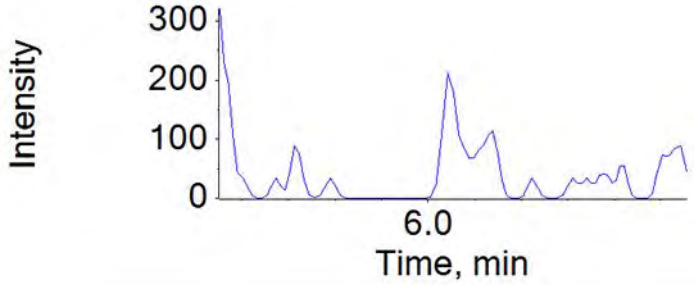
Component: NEtFOSAA
Primary Mass: 584.0 / 419.0



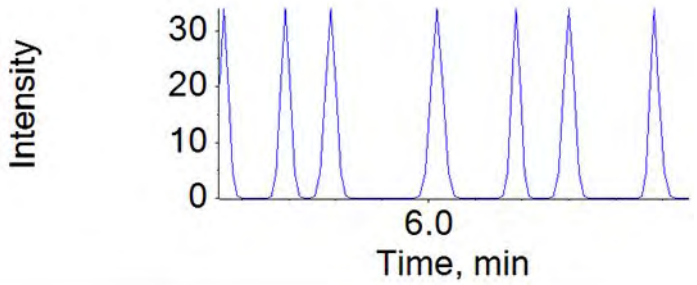
Component: NEtFOSAA_2
Secondary Mass: 584.0 / 526.0



Component: PFDoDA
Primary Mass: 613.0 / 569.0



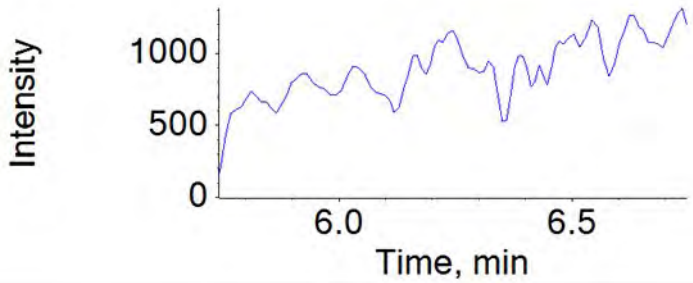
Component: PFDoDA_2
Secondary Mass: 613.0 / 169.0



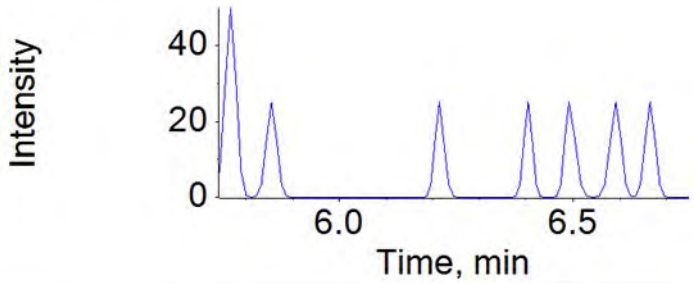
APPROVED
By MCD at 4:50 pm, 11/14/18

REVIEWED
By HMK at 12:21 pm, 11/15/18

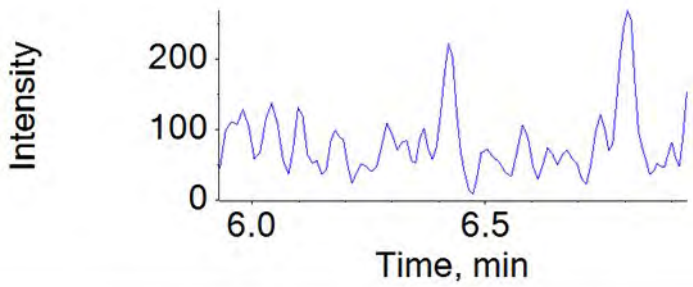
Component: PFTrDA
Primary Mass: 663.0 / 619.0



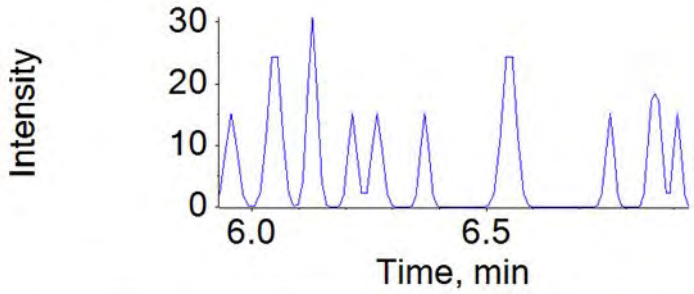
Component: PFTrDA_2
Secondary Mass: 663.0 / 169.0



Component: PFTeDA
Primary Mass: 713.0 / 669.0



Component: PFTeDA_2
Secondary Mass: 713.0 / 169.0



APPROVED
By MCD at 4:50 pm, 11/14/18

REVIEWED
By HMK at 12:21 pm, 11/15/18

ICAL Name: 18NOV12DCAL **Result Table:** 18316011 11/14/2018 4:24:36 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Sample Name:	9885082			**Data File:**		18NOV13D-53.wiff
Sample ID:	EPA 537 mod QSM 5.1 table B-15 18316011 OU1-Bldg2-S-02-08 Grab Soil			**Acquis Date:**		2018-11-13T17:32:29
Sample Type:	Unknown			**Instrument:**		LM27631
Vial Position:	51			**Acquis Method:**		18AUG13_3uL.dam
Injection Vol:	3.00			**Result Table:**		18316011
QMethod File:	18AUG20QM			**ICAL Name:**		18NOV12DCAL
Batch Number:	18316011			**Operator:**		MCD7824
Sample Wt.:	1.04000			**Dilution Factor:**		1.00
Sample Vol.:	1.000			**Prep Factor:**		2.000

Injection Standard Peak Table

Injection Standard Area Reference File: 18NOV13D-05

Injection Standard Name	Inj Std Conc	Injection Std Peak Area	Rreference Injection Standard Area	Injection Std %Diff	Injection Std %Diff Limit	Injection Std %Diff OOS
13C3-PFBA	5.0	739459.2	661126.9	12	50	
13C2-PFOA	5.0	517234.2	466902.6	11	50	
13C4-PFOS	4.8	274461.5	247446.9	11	50	
13C2-PFDA	5.0	317185.0	295381.6	7	50	

Extraction Standard Peak Table

Extraction Standard Name	Ext Std Area	Inj Std Name	Inj Std Area	Area Ratio	Ext Std Conc	Ext Std Result	Ext Std %REC	Ext Std %REC Limit	Ext Std OOS
E13C3-PFBS	362676.5	13C3-PFBA	739459.2	0.490	8.942	6.658	74	50-150	
E13C5-PFHxA	558690.6	13C2-PFOA	517234.2	1.080	9.615	7.504	78	50-150	
E13C3-PFHxS	274956.5	13C2-PFOA	517234.2	0.532	9.096	7.015	77	50-150	
E13C4-PFHpA	416110.9	13C2-PFOA	517234.2	0.804	9.615	6.970	72	50-150	
E13C8-PFOA	786871.9	13C2-PFOA	517234.2	1.521	9.615	8.060	84	50-150	
E13C8-PFOS	231669.5	13C4-PFOS	274461.5	0.844	9.192	7.192	78	50-150	
E13C9-PFNA	387728.6	13C4-PFOS	274461.5	1.413	9.615	7.575	79	50-150	
E13C6-PFDA	546009.5	13C2-PFDA	317185.0	1.721	9.615	7.725	80	50-150	
Ed3-NMeFOSAA	69298.1	13C2-PFDA	317185.0	0.218	9.615	7.584	79	50-150	
E13C7-PFUnDA	211371.9	13C2-PFDA	317185.0	0.666	9.615	7.441	77	50-150	
Ed5-NEtFOSAA	48523.9	13C2-PFDA	317185.0	0.153	9.615	6.224	65	50-150	
E13C2-PFDoDA	490479.4	13C2-PFDA	317185.0	1.546	9.615	7.721	80	50-150	
E13C2-PFTeDA	332891.7	13C2-PFDA	317185.0	1.050	9.615	7.086	74	50-150	

APPROVED
By MCD at 4:50 pm, 11/14/18

REVIEWED
By HMK at 12:21 pm, 11/15/18

ICAL Name: 18NOV12DCAL **Result Table:** 18316011 11/14/2018 4:24:36 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

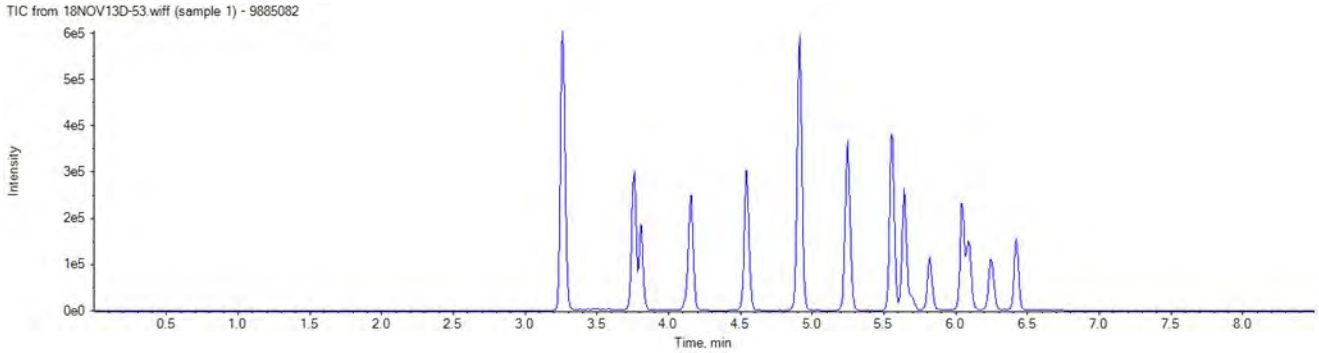
Analyte Quantitation Peak Table

Sample Name: 9885082 **Instrument Name:** LM27631 **File Name:** 18NOV13D-53.wiff

Sample Wt	Sample Vol	Dilution Factor	PrepFactor
1.04000	1.000	1.00	2.000

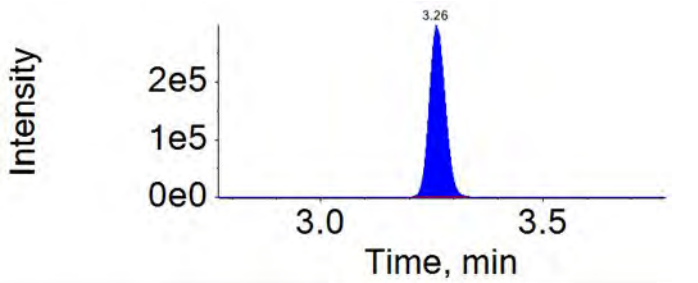
Analyte Name	RT	RRT	Analyte Area Response	E	Int Typ	ES Name	ES RT	ES Area Response	Area Ratio	Sample Result (ng/g)
PFBS	N/A	N/A	N/A		A	13C3-PFBS	3.81	362676.5	N/A	
PFHxA	N/A	N/A	N/A		A	13C5-PFHxA	4.15	558690.6	N/A	
PFHpA	N/A	N/A	N/A		A	13C4-PFHpA	4.54	416110.9	N/A	
PFHxS	N/A	N/A	N/A		A	13C3-PFHxS	4.54	274956.5	N/A	
PFOA	N/A	N/A	N/A		A	13C8-PFOA	4.91	786871.9	N/A	
PFOS	N/A	N/A	N/A		A	13C8-PFOS	5.24	231669.5	N/A	
PFNA	N/A	N/A	N/A		A	13C9-PFNA	5.26	387728.6	N/A	
PFDA	N/A	N/A	N/A		A	13C6-PFDA	5.56	546009.5	N/A	
NMeFOSAA	N/A	N/A	N/A		A	d3-NMeFOSAA	5.70	69298.1	N/A	
PFUnDA	N/A	N/A	N/A		A	13C7-PFUnDA	5.82	211371.9	N/A	
NEtFOSAA	N/A	N/A	N/A		A	d5-NEtFOSAA	5.83	48523.9	N/A	
PFDoDA	N/A	N/A	N/A		A	13C2-PFDoDA	6.05	490479.4	N/A	
PFTrDA	N/A	N/A	N/A		A	13C2-PFDoDA	6.05	490479.4	N/A	
PFTeDA	N/A	N/A	N/A		A	13C2-PFTeDA	6.42	332891.7	N/A	

Total Ion Chromatogram

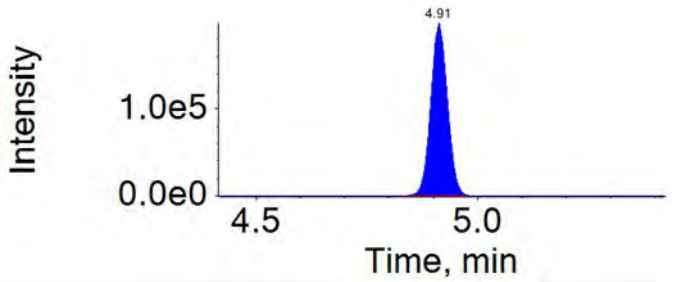


ICAL Name: 18NOV12DCAL **Result Table:** 18316011 11/14/2018 4:24:36 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

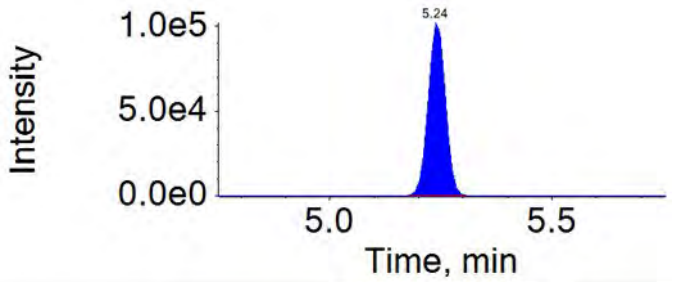
Injection Standard: 13C3-PFBA
216.0 / 172.0



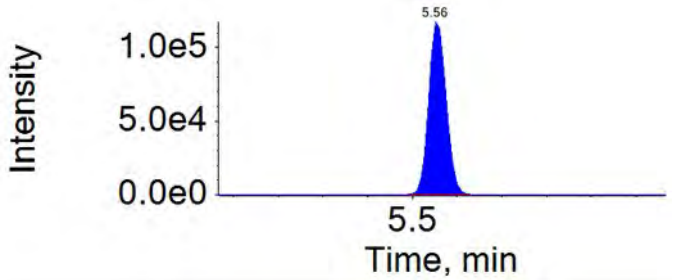
Injection Standard: 13C2-PFOA
415.0 / 370.0



Injection Standard: 13C4-PFOS
503.0 / 80.0

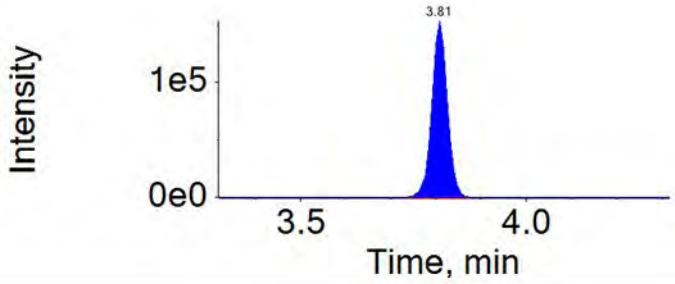


Injection Standard: 13C2-PFDA
515.0 / 470.0

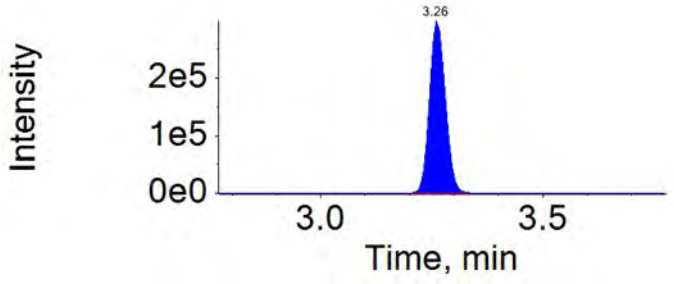


ICAL Name: 18NOV12DCAL **Result Table:** 18316011 11/14/2018 4:24:36 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

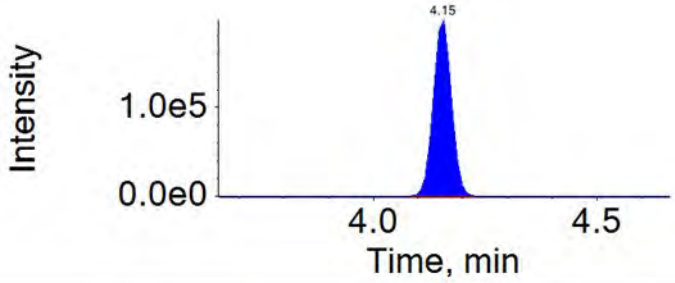
Extraction Standard: E13C3-PFBS
302.0 / 80.0



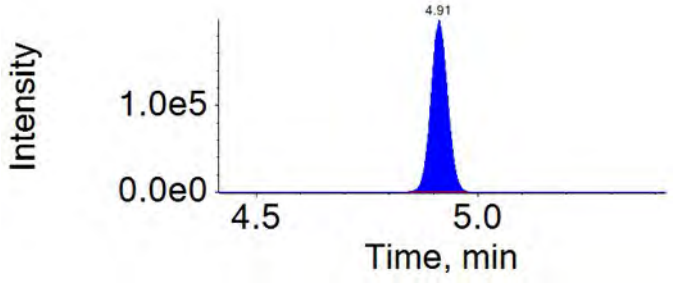
Injection Standard: 13C3-PFBA
216.0 / 172.0



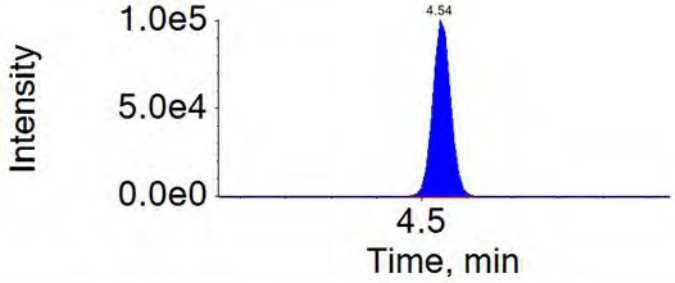
Extraction Standard: E13C5-PFHxA
318.0 / 273.0



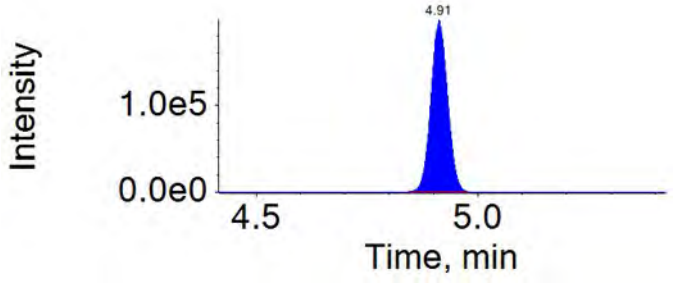
Injection Standard: 13C2-PFOA
415.0 / 370.0



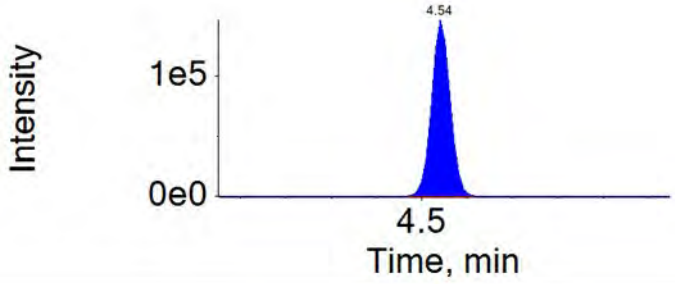
Extraction Standard: E13C3-PFHxS
402.0 / 80.0



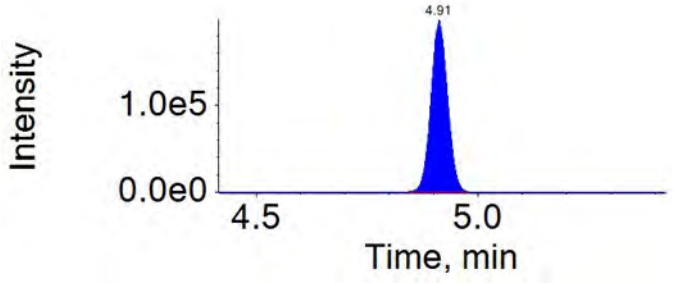
Injection Standard: 13C2-PFOA
415.0 / 370.0



Extraction Standard: E13C4-PFHpA
367.0 / 322.0



Injection Standard: 13C2-PFOA
415.0 / 370.0

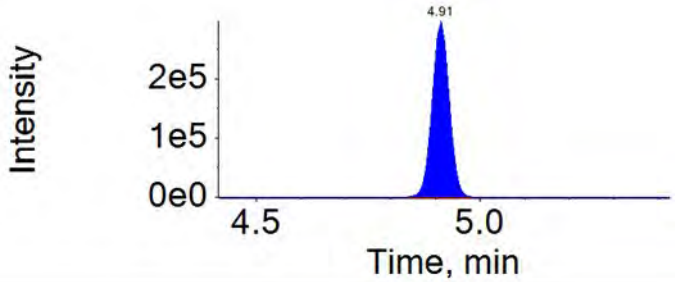


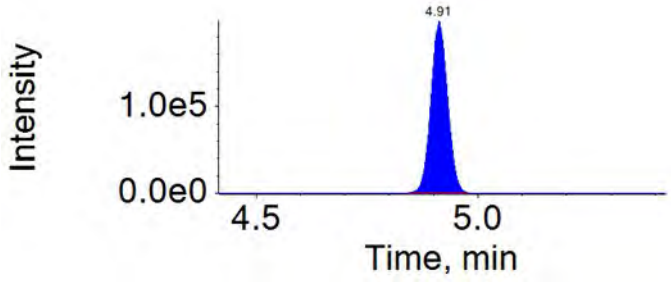
APPROVED
By MCD at 4:50 pm, 11/14/18

REVIEWED
By HMK at 12:21 pm, 11/15/18

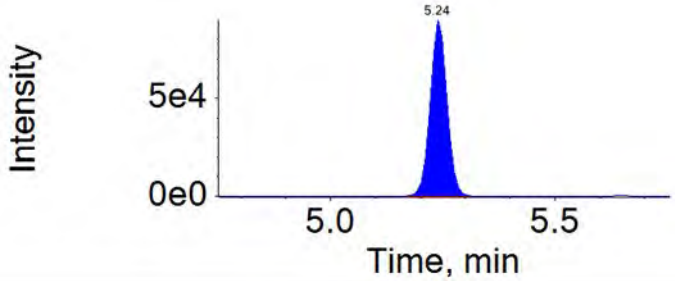
ICAL Name: 18NOV12DCAL **Result Table:** 18316011 11/14/2018 4:24:36 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

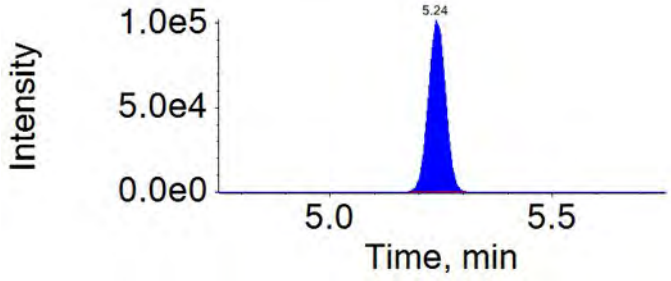
Extraction Standard: E13C8-PFOA	Injection Standard: 13C2-PFOA
421.0 / 376.0	415.0 / 370.0



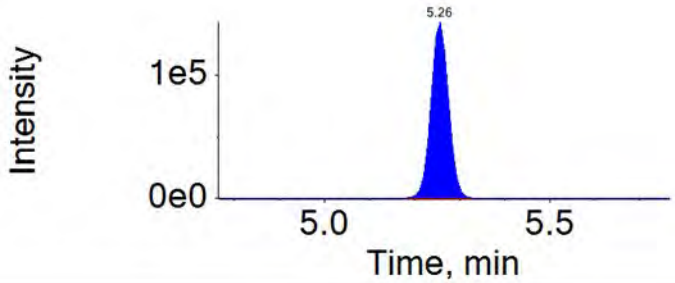


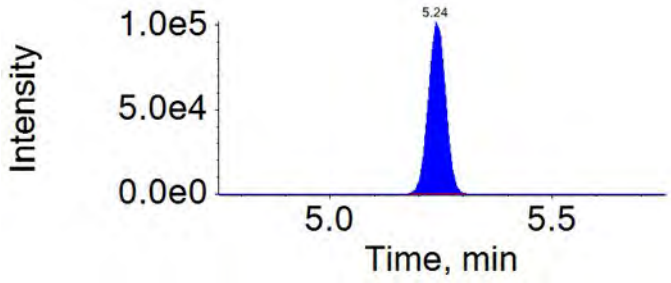
Extraction Standard: E13C8-PFOS	Injection Standard: 13C4-PFOS
507.0 / 80.0	503.0 / 80.0



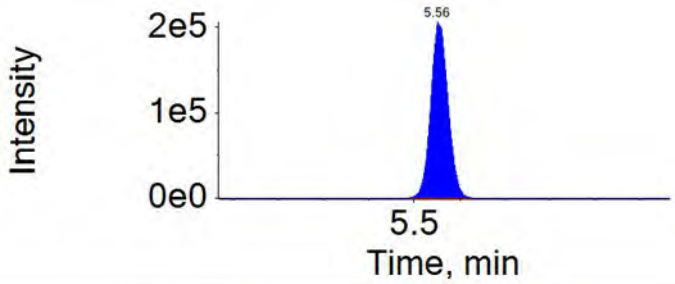


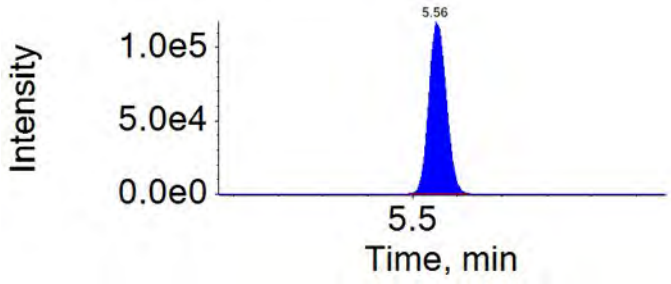
Extraction Standard: E13C9-PFNA	Injection Standard: 13C4-PFOS
472.0 / 427.0	503.0 / 80.0





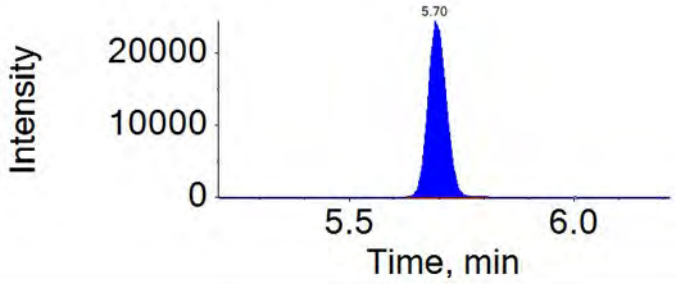
Extraction Standard: E13C6-PFDA	Injection Standard: 13C2-PFDA
519.0 / 474.0	515.0 / 470.0

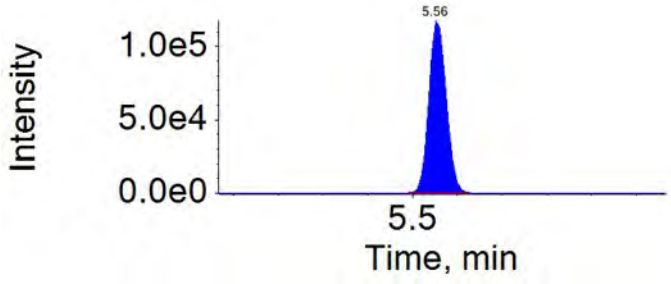




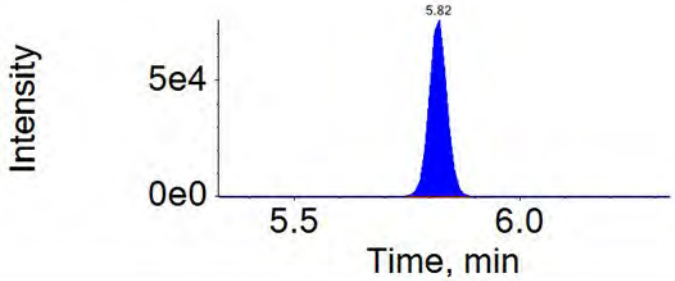
ICAL Name: 18NOV12DCAL **Result Table:** 18316011 11/14/2018 4:24:36 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

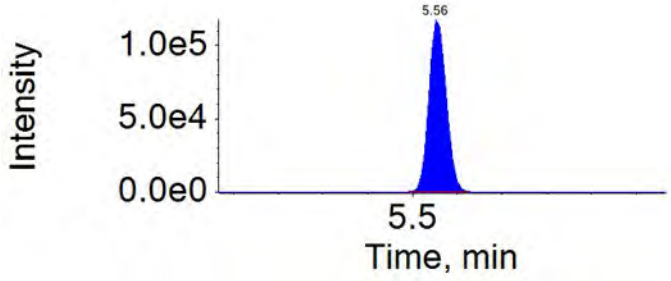
Extraction Standard: Ed3-NMeFOSAA	Injection Standard: 13C2-PFDA
573.0 / 419.0	515.0 / 470.0



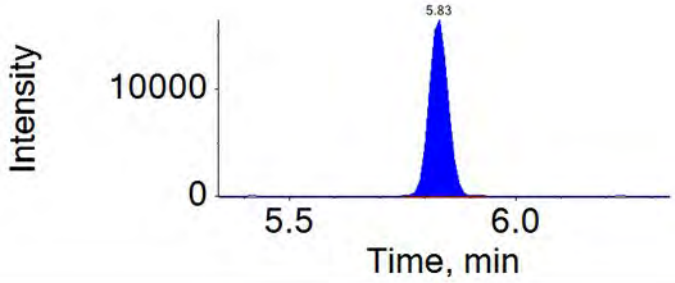


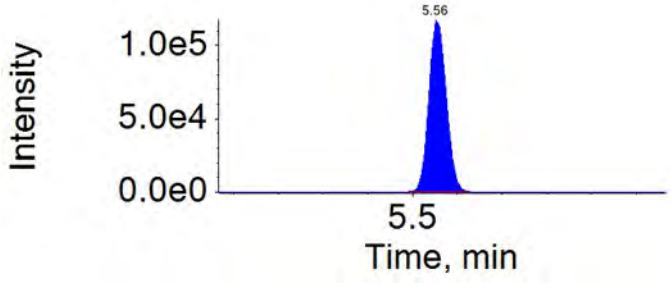
Extraction Standard: E13C7-PFUnDA	Injection Standard: 13C2-PFDA
570.0 / 525.0	515.0 / 470.0



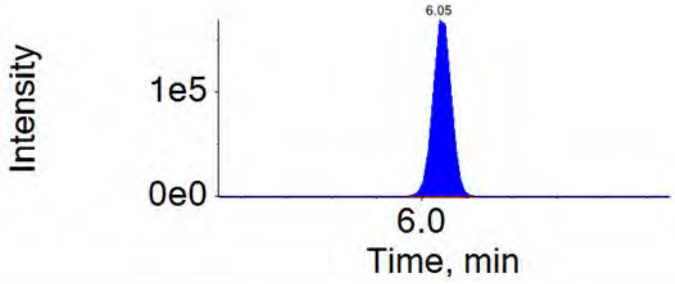


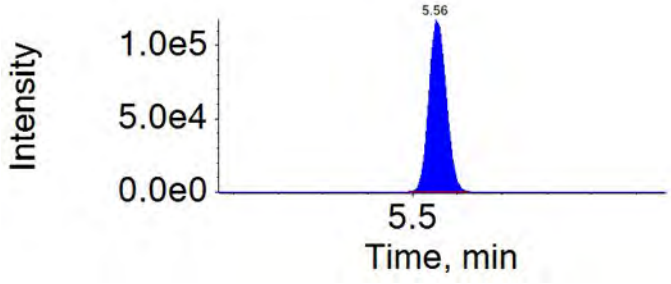
Extraction Standard: Ed5-NEtFOSAA	Injection Standard: 13C2-PFDA
589.0 / 419.0	515.0 / 470.0



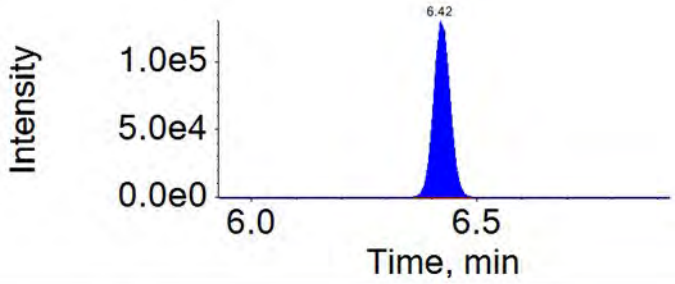
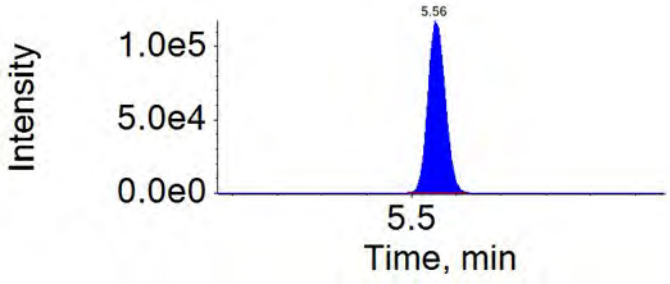


Extraction Standard: E13C2-PFDoDA	Injection Standard: 13C2-PFDA
615.0 / 570.0	515.0 / 470.0



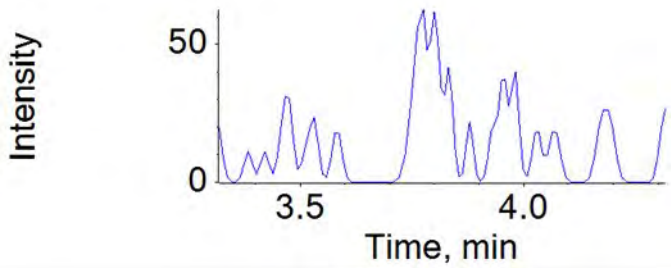


ICAL Name: 18NOV12DCAL **Result Table:** 18316011 11/14/2018 4:24:36 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

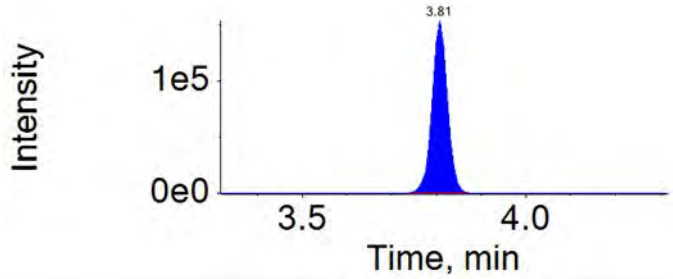
Extraction Standard: E13C2-PFTeDA	Injection Standard: 13C2-PFDA
715.0 / 670.0 	515.0 / 470.0 

ICAL Name: 18NOV12DCAL **Result Table:** 18316011 11/14/2018 4:24:36 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

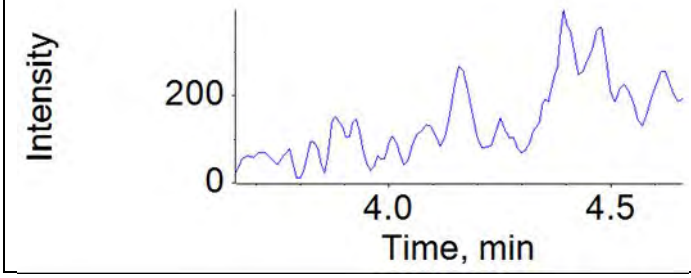
Analyte: PFBS
299.0 / 80.0



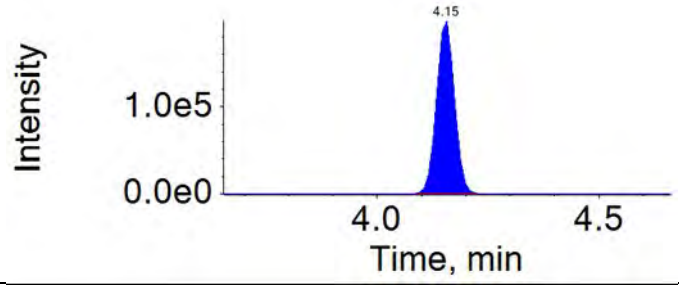
Extraction Standard: 13C3-PFBS
302.0 / 80.0



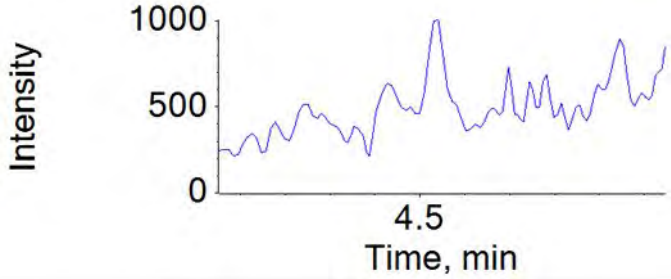
Analyte: PFHxA
313.0 / 269.0



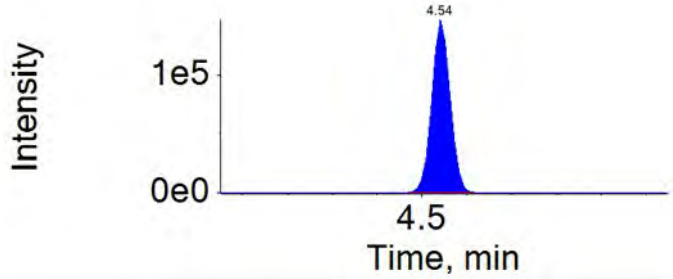
Extraction Standard: 13C5-PFHxA
318.0 / 273.0



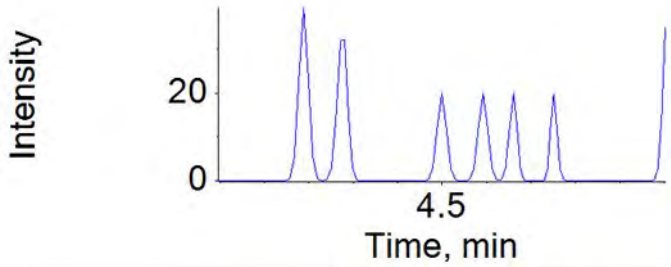
Analyte: PFHpA
363.0 / 319.0



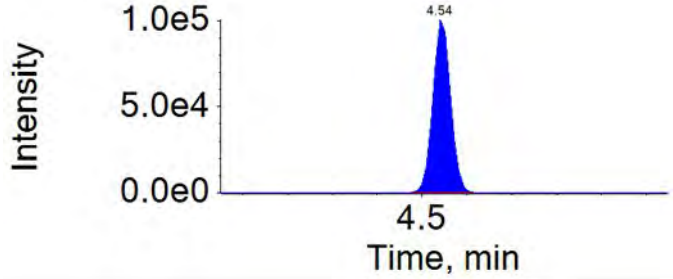
Extraction Standard: 13C4-PFHpA
367.0 / 322.0



Analyte: PFHxS
399.0 / 80.0

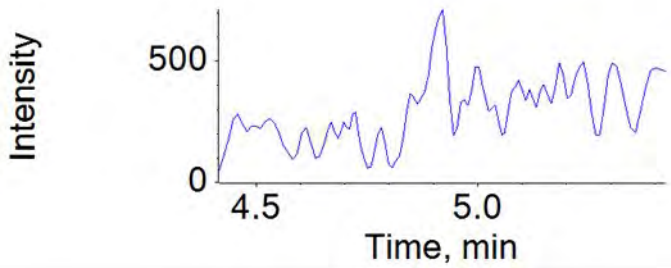


Extraction Standard: 13C3-PFHxS
402.0 / 80.0

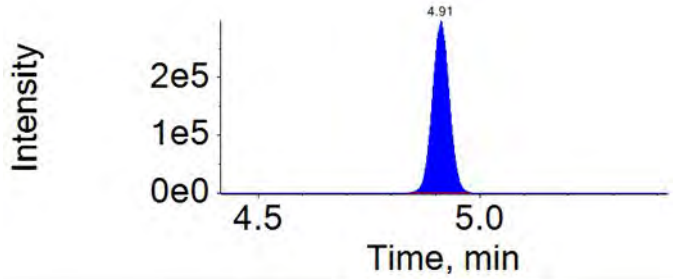


ICAL Name: 18NOV12DCAL **Result Table:** 18316011 11/14/2018 4:24:36 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

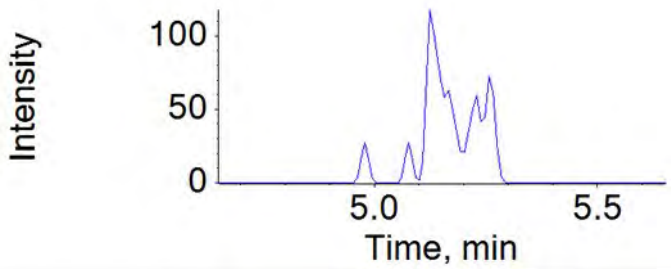
Analyte: PFOA
413.0 / 369.0



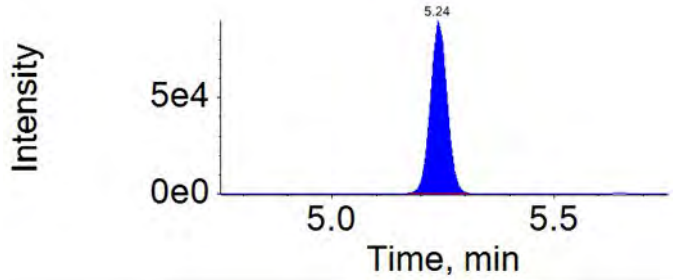
Extraction Standard: 13C8-PFOA
421.0 / 376.0



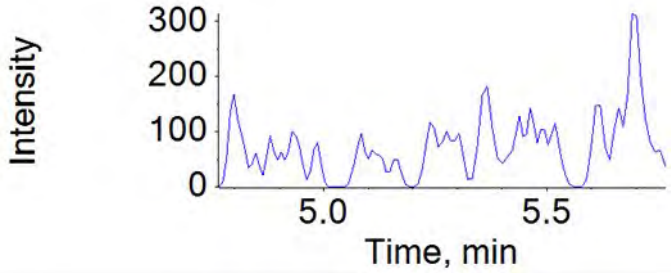
Analyte: PFOS
499.0 / 80.0



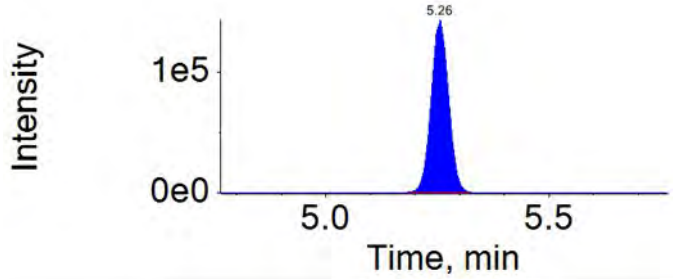
Extraction Standard: 13C8-PFOS
507.0 / 80.0



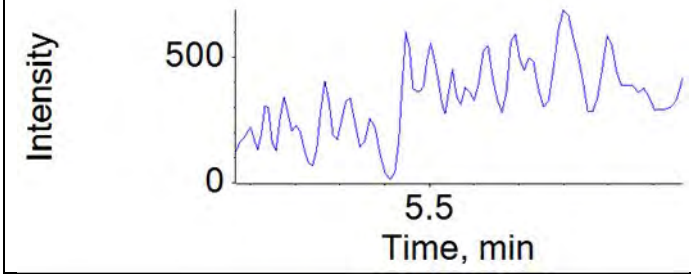
Analyte: PFNA
463.0 / 419.0



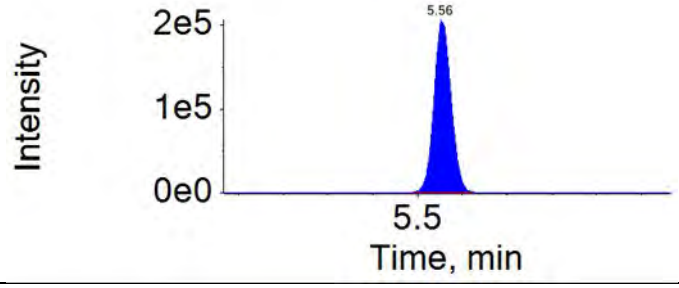
Extraction Standard: 13C9-PFNA
472.0 / 427.0



Analyte: PFDA
513.0 / 469.0



Extraction Standard: 13C6-PFDA
519.0 / 474.0

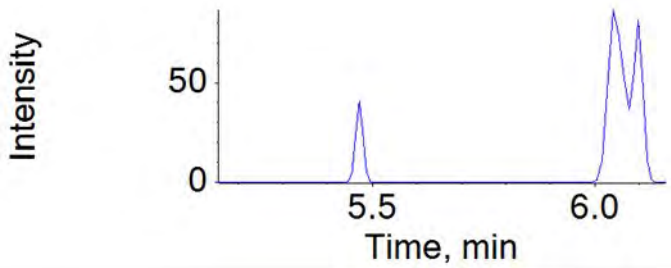


APPROVED
By MCD at 4:50 pm, 11/14/18

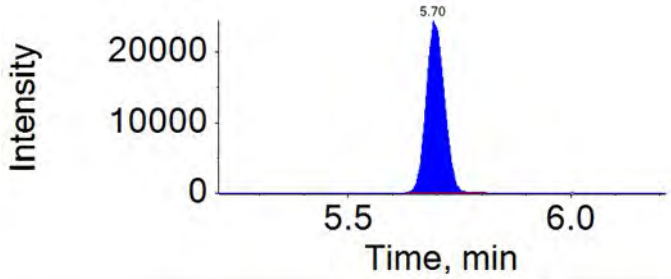
REVIEWED
By HMK at 12:21 pm, 11/15/18

ICAL Name: 18NOV12DCAL **Result Table:** 18316011 11/14/2018 4:24:36 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

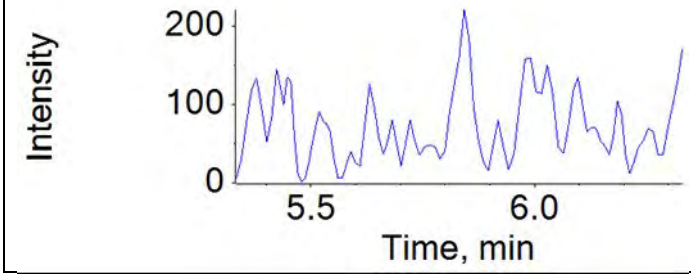
Analyte: NMeFOSAA
570.0 / 419.0



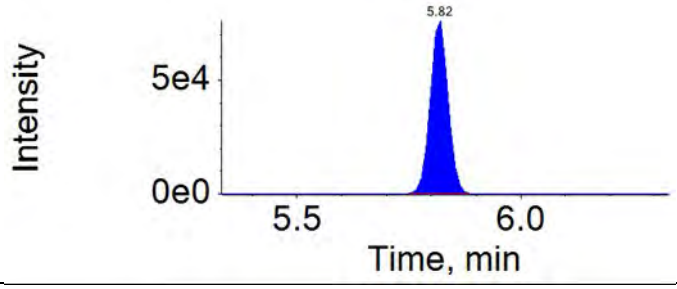
Extraction Standard: d3-NMeFOSAA
573.0 / 419.0



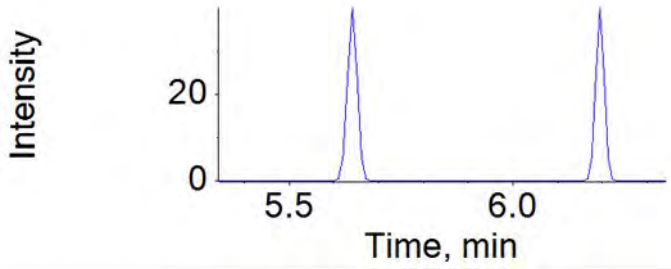
Analyte: PFUnDA
563.0 / 519.0



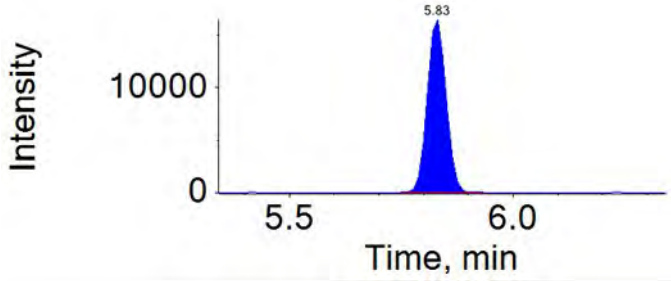
Extraction Standard: 13C7-PFUnDA
570.0 / 525.0



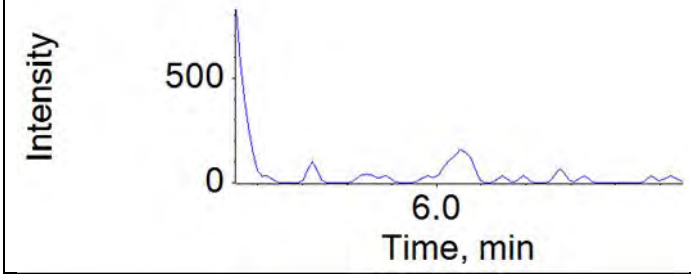
Analyte: NEtFOSAA
584.0 / 419.0



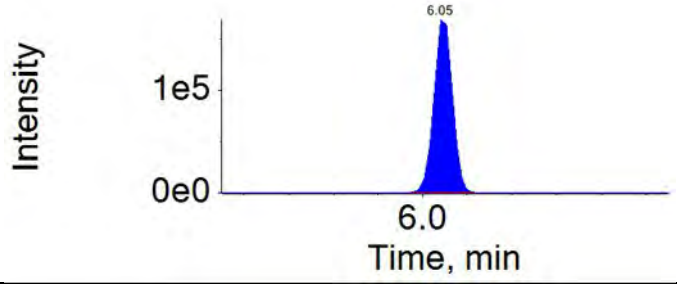
Extraction Standard: d5-NEtFOSAA
589.0 / 419.0



Analyte: PFDoDA
613.0 / 569.0



Extraction Standard: 13C2-PFDoDA
615.0 / 570.0

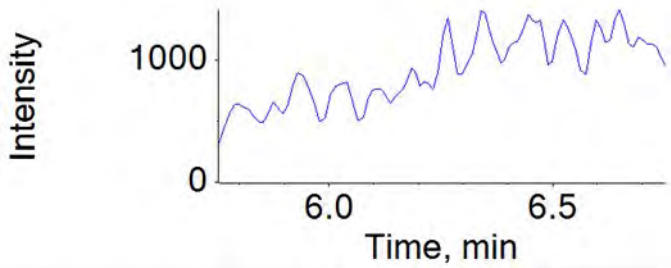


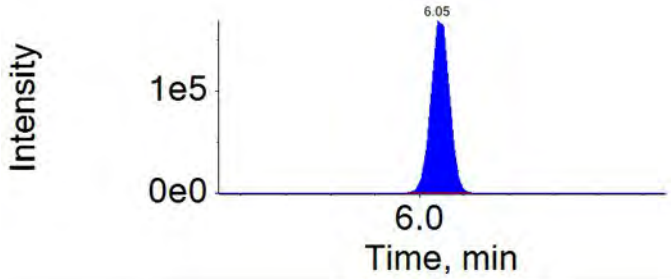
APPROVED
By MCD at 4:50 pm, 11/14/18

REVIEWED
By HMK at 12:21 pm, 11/15/18

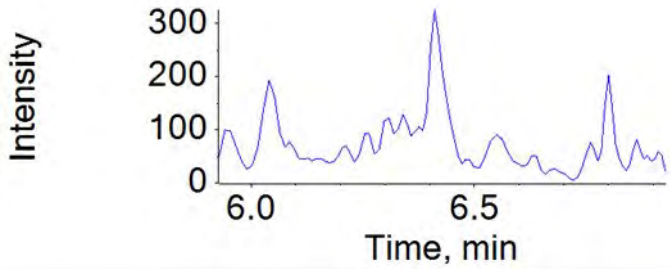
ICAL Name: 18NOV12DCAL **Result Table:** 18316011 11/14/2018 4:24:36 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

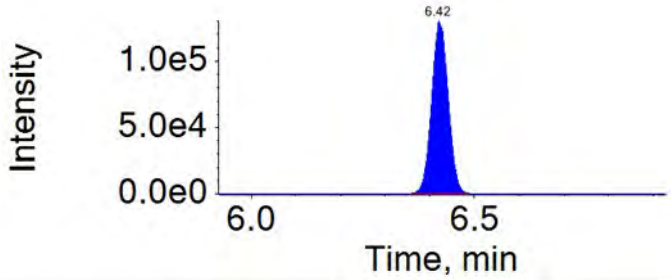
Analyte: PFTrDA	Extraction Standard: 13C2-PFDoDA
663.0 / 619.0	615.0 / 570.0





Analyte: PFTeDA	Extraction Standard: 13C2-PFTeDA
713.0 / 669.0	715.0 / 670.0





Ion Ratio Report

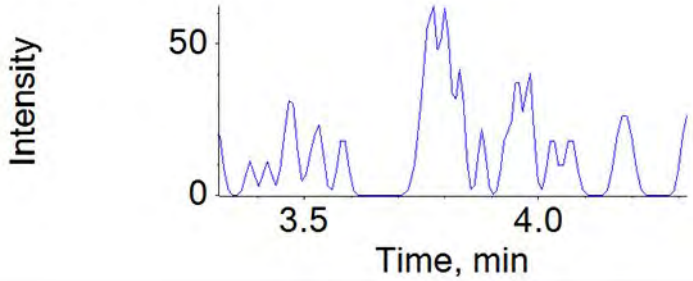
Sample Name: 9885082 **Instrument Name:** LM27631 **File Name:** 18NOV13D-53.wiff

Component Name	RT	RRT	Analyte Area Response	Int Typ	Expected Ion Ratio	Ion Ratio	Ion Ratio % Diff	Ion Ratio Limit	Ion Ratio OOS
PFBS	N/A	N/A	N/A	A	N/A	N/A			
PFBS_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFHxA	N/A	N/A	N/A	A	N/A	N/A			
PFHxA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFHpA	N/A	N/A	N/A	A	N/A	N/A			
PFHpA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFHxS	N/A	N/A	N/A	A	N/A	N/A			
PFHxS_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFOA	N/A	N/A	N/A	A	N/A	N/A			
PFOA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFOS	N/A	N/A	N/A	A	N/A	N/A			
PFOS_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFNA	N/A	N/A	N/A	A	N/A	N/A			
PFNA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFDA	N/A	N/A	N/A	A	N/A	N/A			
PFDA_2	N/A	N/A	N/A	A	N/A	N/A		50	
NMeFOSAA	N/A	N/A	N/A	A	N/A	N/A			
NMeFOSAA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFUnDA	N/A	N/A	N/A	A	N/A	N/A			
PFUnDA_2	N/A	N/A	N/A	A	N/A	N/A		50	
NEtFOSAA	N/A	N/A	N/A	A	N/A	N/A			
NEtFOSAA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFDoDA	N/A	N/A	N/A	A	N/A	N/A			
PFDoDA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFTrDA	N/A	N/A	N/A	A	N/A	N/A			
PFTrDA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFTeDA	N/A	N/A	N/A	A	N/A	N/A			
PFTeDA_2	N/A	N/A	N/A	A	N/A	N/A		50	

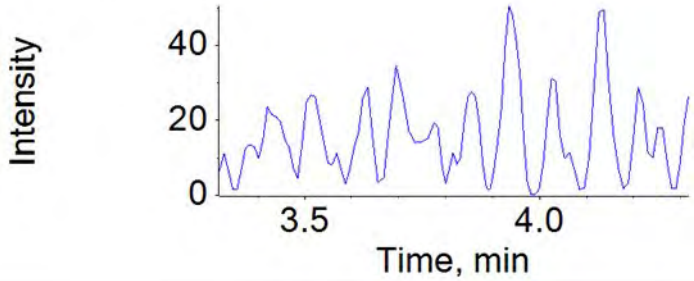
APPROVED
By MCD at 4:50 pm, 11/14/18

REVIEWED
By HMK at 12:21 pm, 11/15/18

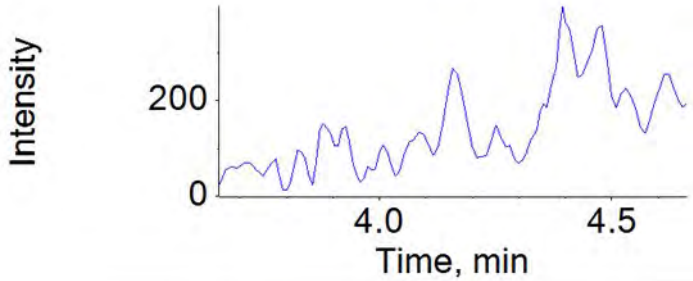
Component: PFBS
Primary Mass: 299.0 / 80.0



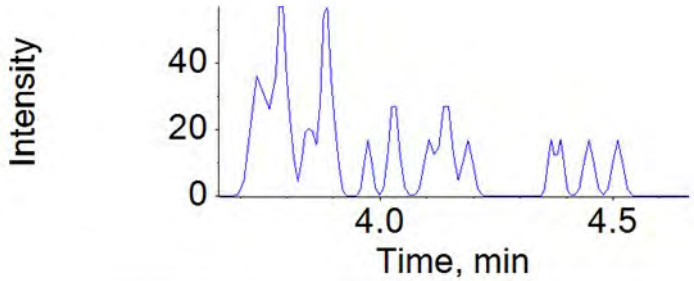
Component: PFBS_2
Secondary Mass: 299.0 / 99.0



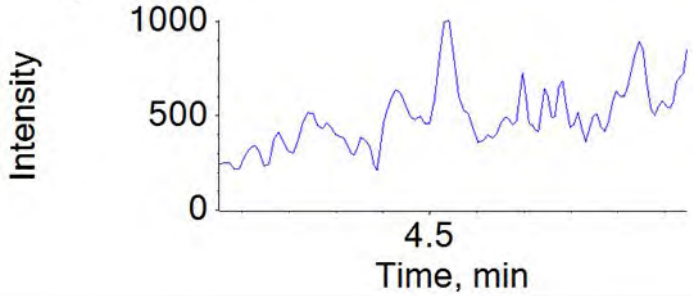
Component: PFHxA
Primary Mass: 313.0 / 269.0



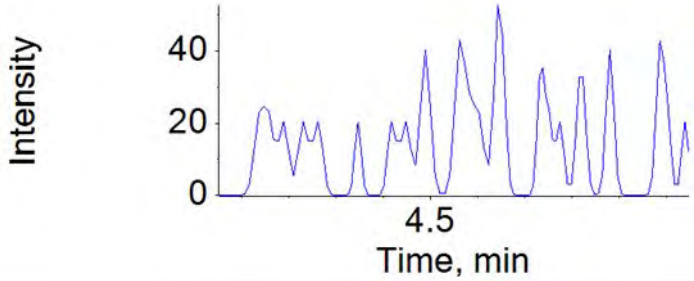
Component: PFHxA_2
Secondary Mass: 313.0 / 119.0



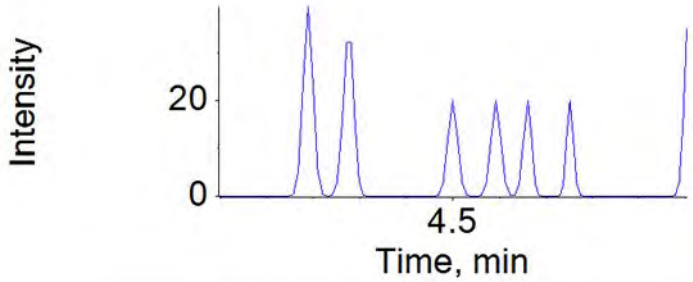
Component: PFHpA
Primary Mass: 363.0 / 319.0



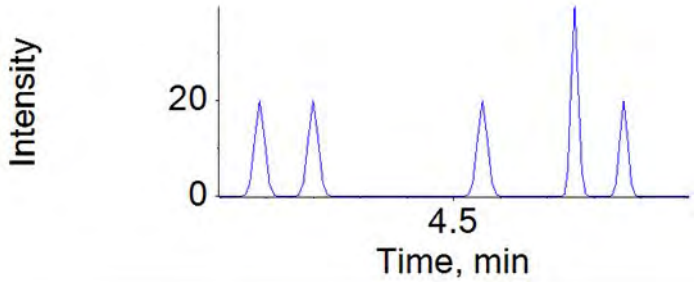
Component: PFHpA_2
Secondary Mass: 363.0 / 169.0



Component: PFHxS
Primary Mass: 399.0 / 80.0



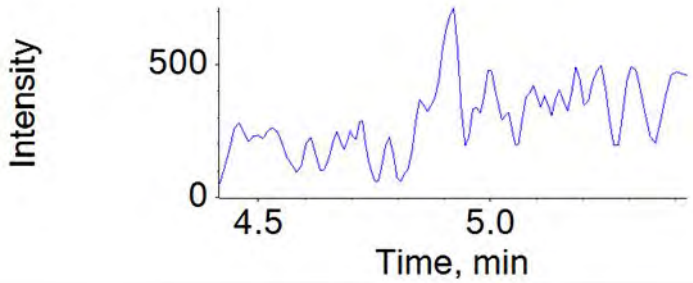
Component: PFHxS_2
Secondary Mass: 399.0 / 99.0



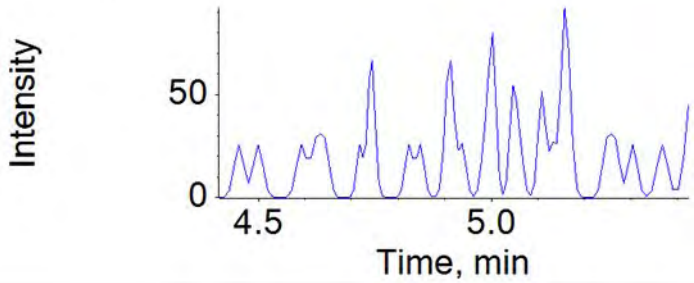
APPROVED
By MCD at 4:50 pm, 11/14/18

REVIEWED
By HMK at 12:21 pm, 11/15/18

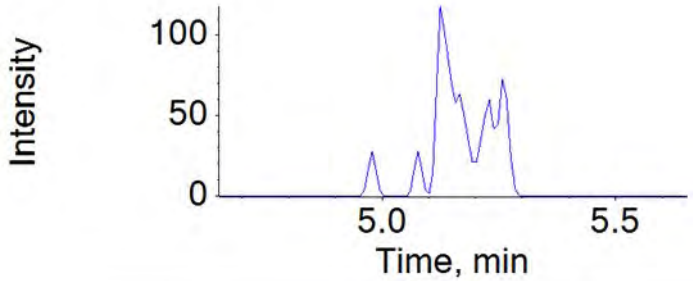
Component: PFOA
Primary Mass: 413.0 / 369.0



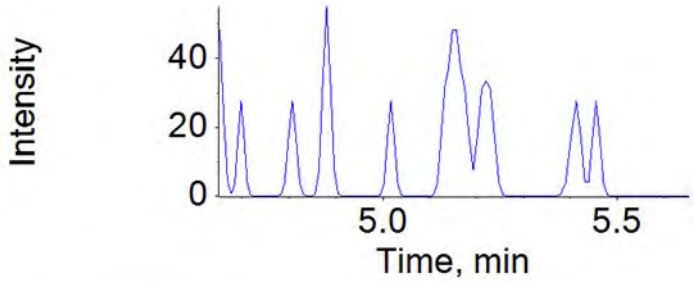
Component: PFOA_2
Secondary Mass: 413.0 / 169.0



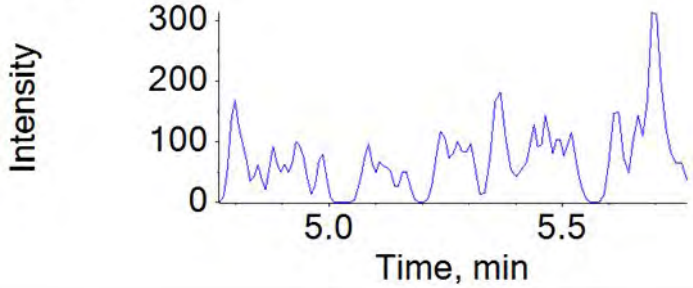
Component: PFOS
Primary Mass: 499.0 / 80.0



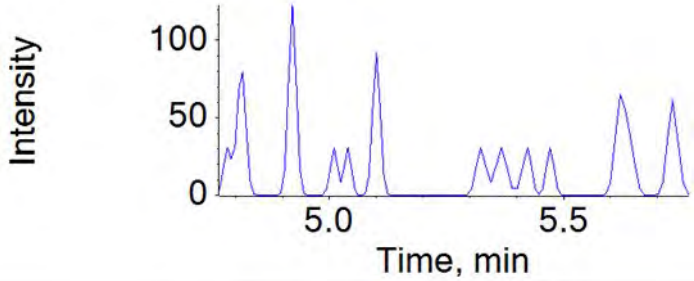
Component: PFOS_2
Secondary Mass: 499.0 / 99.0



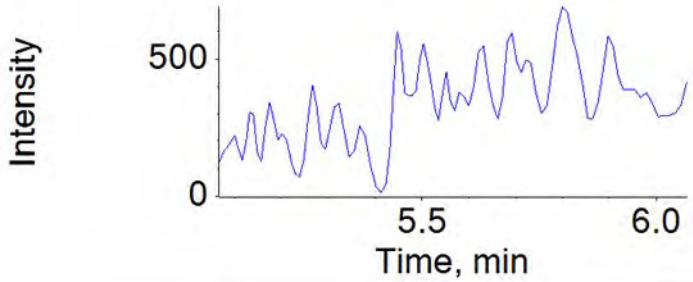
Component: PFNA
Primary Mass: 463.0 / 419.0



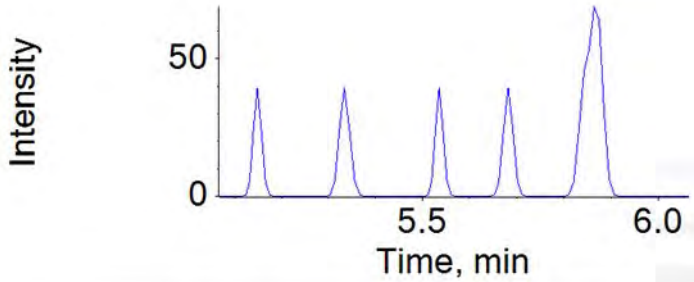
Component: PFNA_2
Secondary Mass: 463.0 / 169.0



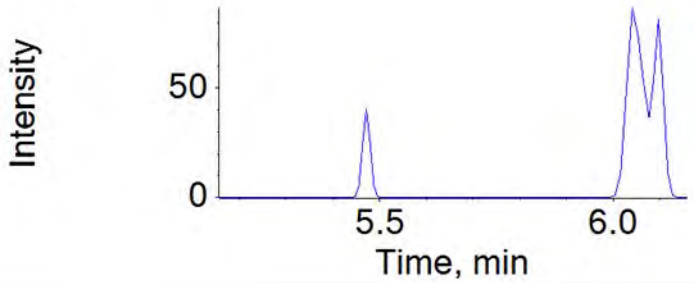
Component: PFDA
Primary Mass: 513.0 / 469.0



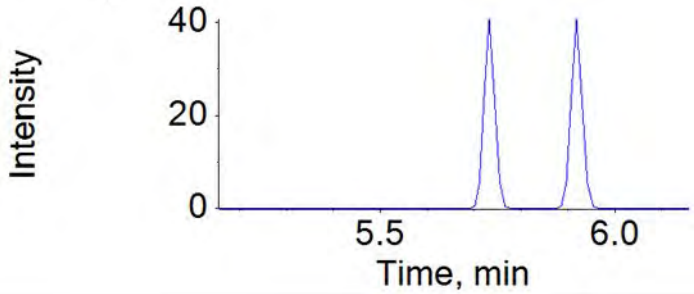
Component: PFDA_2
Secondary Mass: 513.0 / 169.0



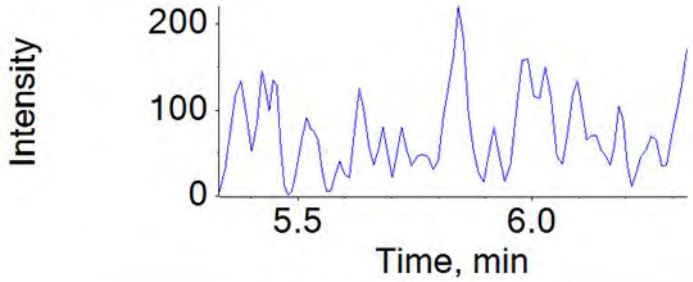
Component: NMeFOSAA
Primary Mass: 570.0 / 419.0



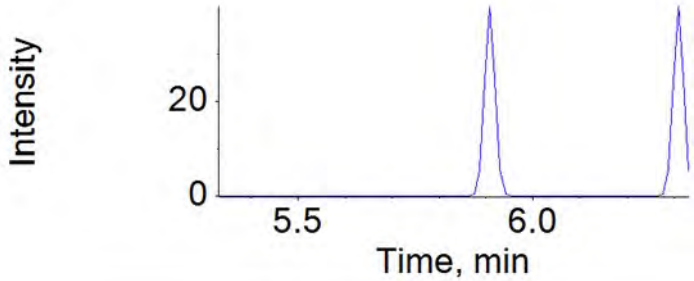
Component: NMeFOSAA_2
Secondary Mass: 570.0 / 483.0



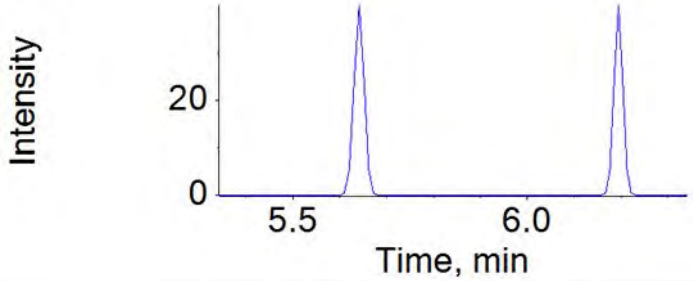
Component: PFUnDA
Primary Mass: 563.0 / 519.0



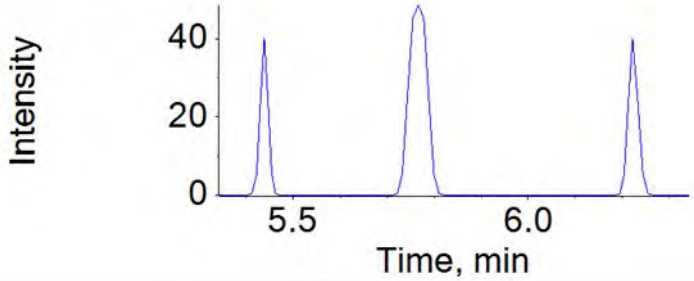
Component: PFUnDA_2
Secondary Mass: 563.0 / 169.0



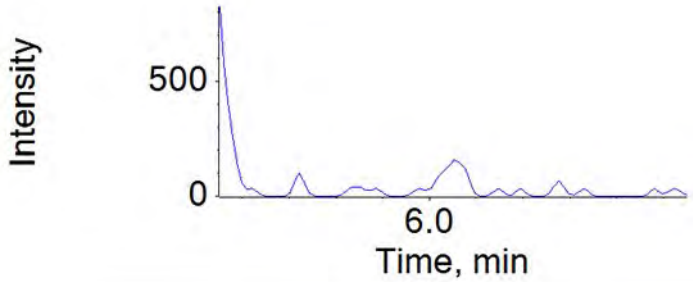
Component: NEtFOSAA
Primary Mass: 584.0 / 419.0



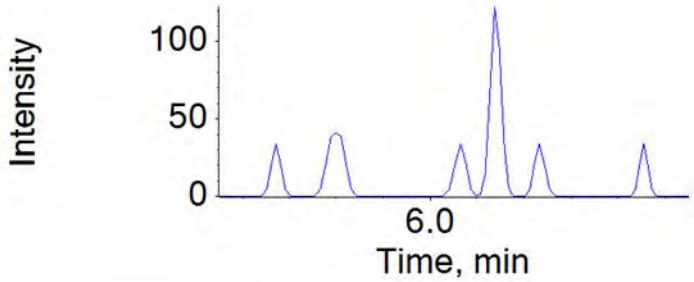
Component: NEtFOSAA_2
Secondary Mass: 584.0 / 526.0



Component: PFDoDA
Primary Mass: 613.0 / 569.0



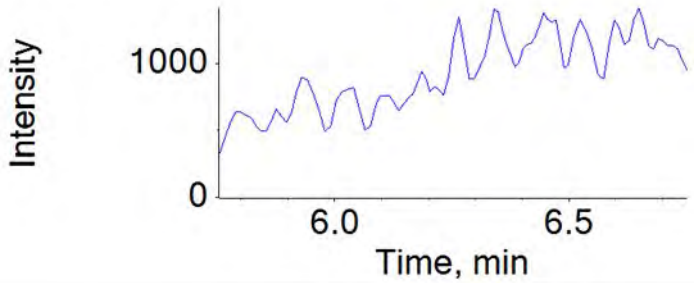
Component: PFDoDA_2
Secondary Mass: 613.0 / 169.0



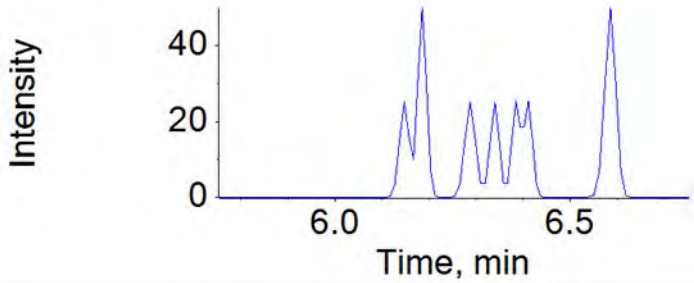
APPROVED
By MCD at 4:50 pm, 11/14/18

REVIEWED
By HMK at 12:21 pm, 11/15/18

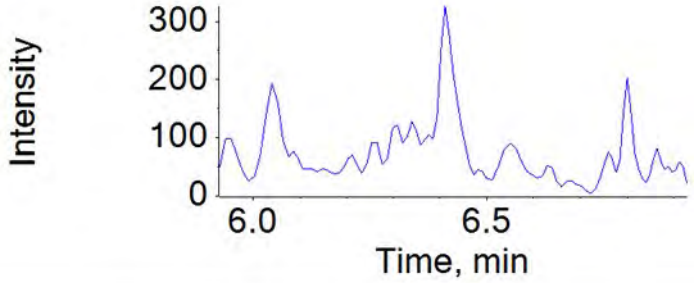
Component: PFTrDA
Primary Mass: 663.0 / 619.0



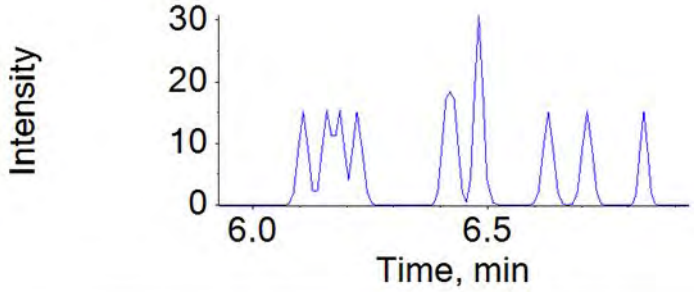
Component: PFTrDA_2
Secondary Mass: 663.0 / 169.0



Component: PFTeDA
Primary Mass: 713.0 / 669.0



Component: PFTeDA_2
Secondary Mass: 713.0 / 169.0



APPROVED
By MCD at 4:50 pm, 11/14/18

REVIEWED
By HMK at 12:21 pm, 11/15/18

ICAL Name: 18NOV12DCAL **Result Table:** 18316011 11/14/2018 4:24:36 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Sample Name:	9885085			**Data File:**		18NOV13D-54.wiff
Sample ID:	EPA 537 mod QSM 5.1 table B-15 18316011 OU1-Bldg27-S-01-01 Grab Soil			**Acquis Date:**		2018-11-13T17:41:29
Sample Type:	Unknown			**Instrument:**		LM27631
Vial Position:	52			**Acquis Method:**		18AUG13_3uL.dam
Injection Vol:	3.00			**Result Table:**		18316011
QMethod File:	18AUG20QM			**ICAL Name:**		18NOV12DCAL
Batch Number:	18316011			**Operator:**		MCD7824
Sample Wt.:	1.01000			**Dilution Factor:**		1.00
Sample Vol.:	1.000			**Prep Factor:**		2.000

Injection Standard Peak Table

Injection Standard Area Reference File: 18NOV13D-05

Injection Standard Name	Inj Std Conc	Injection Std Peak Area	Rreference Injection Standard Area	Injection Std %Diff	Injection Std %Diff Limit	Injection Std %Diff OOS
13C3-PFBA	5.0	702913.1	661126.9	6	50	
13C2-PFOA	5.0	502568.2	466902.6	8	50	
13C4-PFOS	4.8	258581.5	247446.9	5	50	
13C2-PFDA	5.0	315438.2	295381.6	7	50	

Extraction Standard Peak Table

Extraction Standard Name	Ext Std Area	Inj Std Name	Inj Std Area	Area Ratio	Ext Std Conc	Ext Std Result	Ext Std %REC	Ext Std %REC Limit	Ext Std OOS
E13C3-PFBS	336740.5	13C3-PFBA	702913.1	0.479	9.208	6.697	73	50-150	
E13C5-PFHxA	524484.0	13C2-PFOA	502568.2	1.044	9.901	7.465	75	50-150	
E13C3-PFHxS	249921.3	13C2-PFOA	502568.2	0.497	9.366	6.757	72	50-150	
E13C4-PFHpA	414410.3	13C2-PFOA	502568.2	0.825	9.901	7.356	74	50-150	
E13C8-PFOA	742866.0	13C2-PFOA	502568.2	1.478	9.901	8.064	81	50-150	
E13C8-PFOS	225321.1	13C4-PFOS	258581.5	0.871	9.465	7.645	81	50-150	
E13C9-PFNA	377477.5	13C4-PFOS	258581.5	1.460	9.901	8.060	81	50-150	
E13C6-PFDA	493290.2	13C2-PFDA	315438.2	1.564	9.901	7.226	73	50-150	
Ed3-NMeFOSAA	50737.6	13C2-PFDA	315438.2	0.161	9.901	5.749	58	50-150	
E13C7-PFUnDA	212766.2	13C2-PFDA	315438.2	0.675	9.901	7.755	78	50-150	
Ed5-NEtFOSAA	40511.4	13C2-PFDA	315438.2	0.128	9.901	5.380	54	50-150	
E13C2-PFDoDA	451325.6	13C2-PFDA	315438.2	1.431	9.901	7.356	74	50-150	
E13C2-PFTeDA	311604.1	13C2-PFDA	315438.2	0.988	9.901	6.867	69	50-150	

APPROVED
By MCD at 4:50 pm, 11/14/18

REVIEWED
By HMK at 12:21 pm, 11/15/18

ICAL Name: 18NOV12DCAL **Result Table:** 18316011 11/14/2018 4:24:36 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

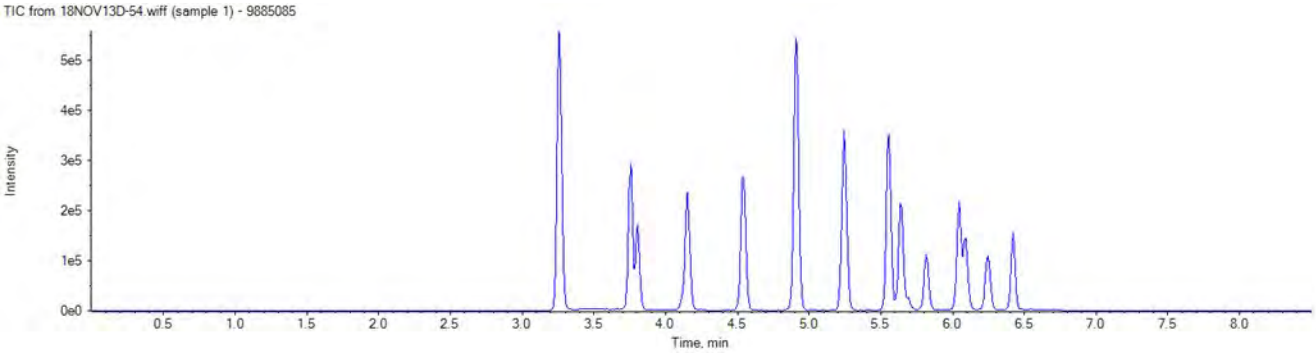
Analyte Quantitation Peak Table

Sample Name: 9885085 **Instrument Name:** LM27631 **File Name:** 18NOV13D-54.wiff

Sample Wt	Sample Vol	Dilution Factor	PrepFactor
1.01000	1.000	1.00	2.000

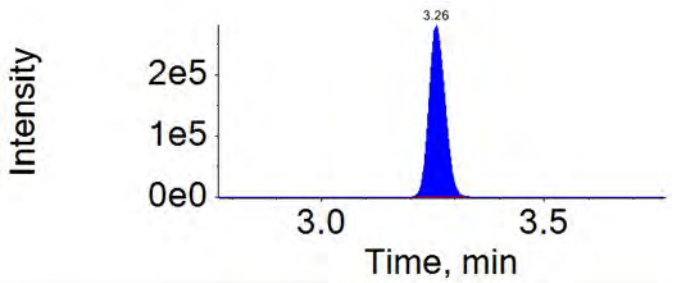
Analyte Name	RT	RRT	Analyte Area Response	E	Int Typ	ES Name	ES RT	ES Area Response	Area Ratio	Sample Result (ng/g)
PFBS	N/A	N/A	N/A		A	13C3-PFBS	3.80	336740.5	N/A	
PFHxA	N/A	N/A	N/A		A	13C5-PFHxA	4.15	524484.0	N/A	
PFHpA	N/A	N/A	N/A		A	13C4-PFHpA	4.54	414410.3	N/A	
PFHxS	N/A	N/A	N/A		A	13C3-PFHxS	4.54	249921.3	N/A	
PFOA	N/A	N/A	N/A		A	13C8-PFOA	4.91	742866.0	N/A	
PFOS	5.24	1.000	6021.4		M	13C8-PFOS	5.24	225321.1	0.027	0.231
PFNA	N/A	N/A	N/A		A	13C9-PFNA	5.25	377477.5	N/A	
PFDA	N/A	N/A	N/A		A	13C6-PFDA	5.55	493290.2	N/A	
NMeFOSAA	N/A	N/A	N/A		A	d3-NMeFOSAA	5.69	50737.6	N/A	
PFUnDA	N/A	N/A	N/A		A	13C7-PFUnDA	5.82	212766.2	N/A	
NEtFOSAA	N/A	N/A	N/A		A	d5-NEtFOSAA	5.83	40511.4	N/A	
PFDoDA	N/A	N/A	N/A		A	13C2-PFDoDA	6.05	451325.6	N/A	
PFTrDA	N/A	N/A	N/A		A	13C2-PFDoDA	6.05	451325.6	N/A	
PFTeDA	N/A	N/A	N/A		A	13C2-PFTeDA	6.42	311604.1	N/A	

Total Ion Chromatogram

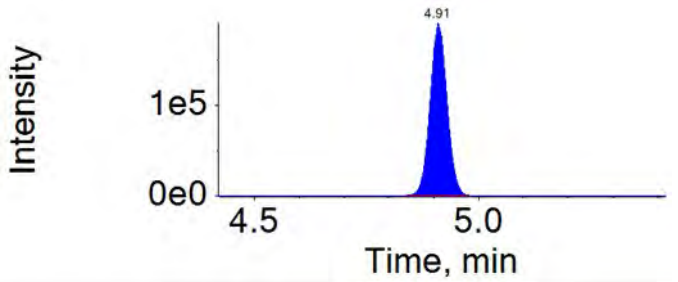


ICAL Name: 18NOV12DCAL **Result Table:** 18316011 11/14/2018 4:24:36 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

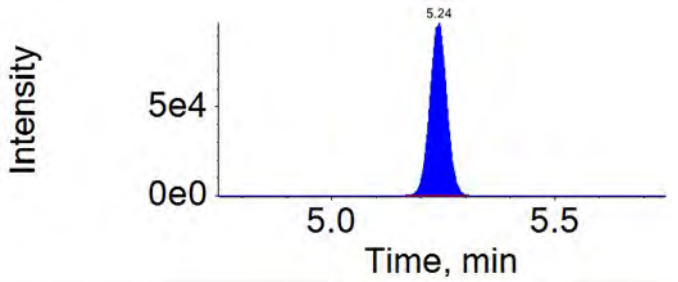
Injection Standard: 13C3-PFBA
216.0 / 172.0



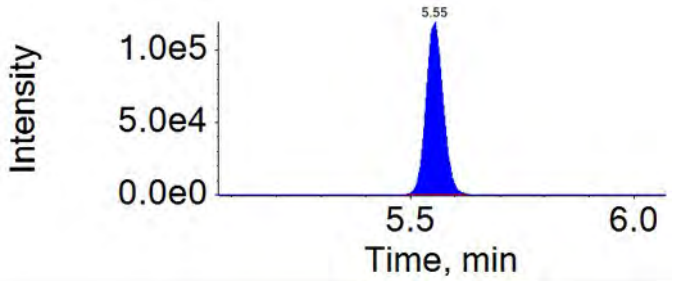
Injection Standard: 13C2-PFOA
415.0 / 370.0



Injection Standard: 13C4-PFOS
503.0 / 80.0

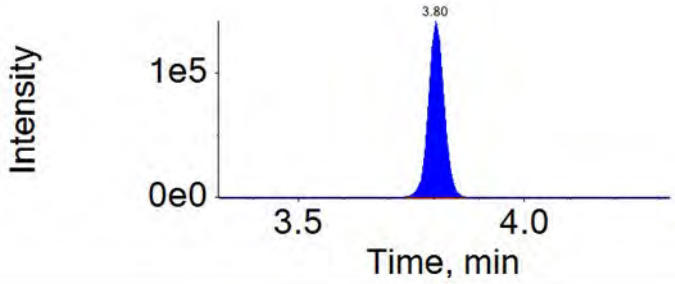


Injection Standard: 13C2-PFDA
515.0 / 470.0

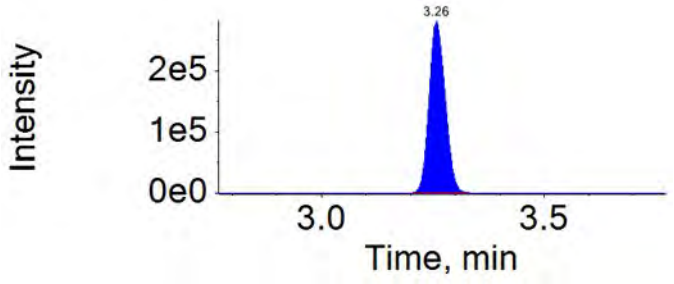


ICAL Name: 18NOV12DCAL **Result Table:** 18316011 11/14/2018 4:24:36 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

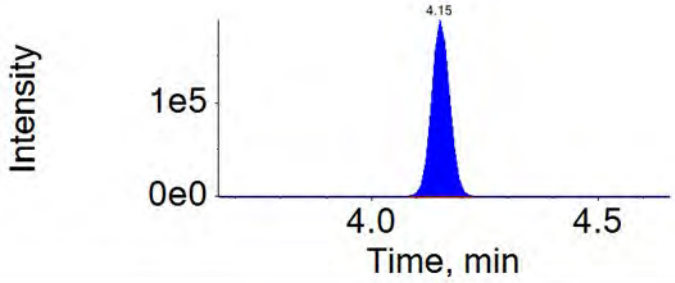
Extraction Standard: E13C3-PFBS
302.0 / 80.0



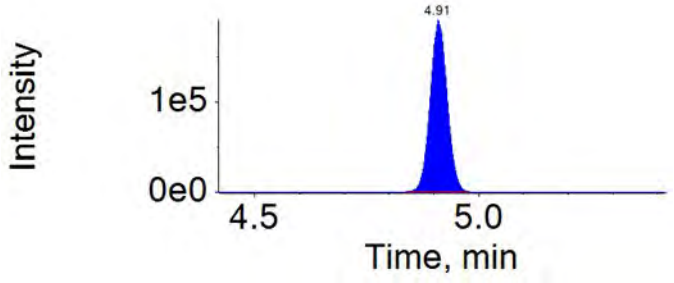
Injection Standard: 13C3-PFBA
216.0 / 172.0



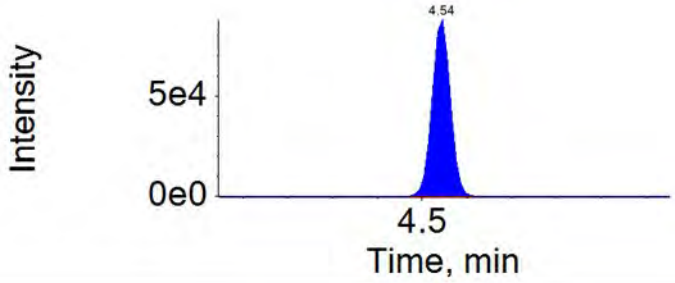
Extraction Standard: E13C5-PFHxA
318.0 / 273.0



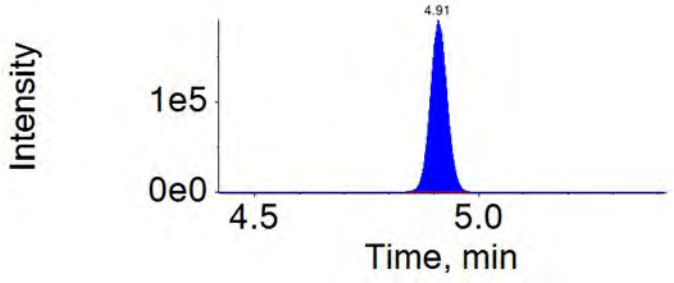
Injection Standard: 13C2-PFOA
415.0 / 370.0



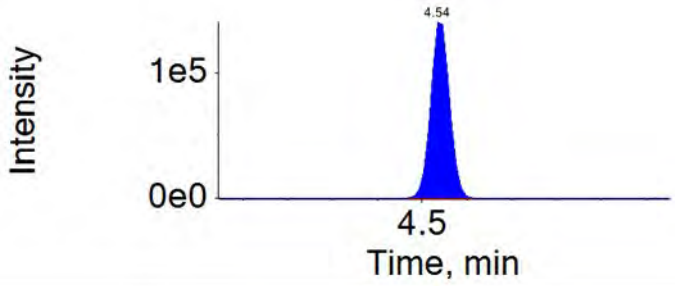
Extraction Standard: E13C3-PFHxS
402.0 / 80.0



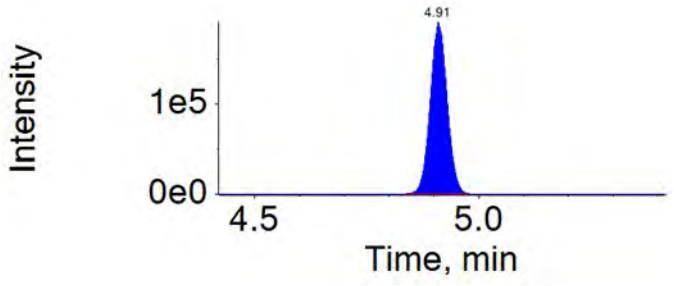
Injection Standard: 13C2-PFOA
415.0 / 370.0



Extraction Standard: E13C4-PFHpA
367.0 / 322.0



Injection Standard: 13C2-PFOA
415.0 / 370.0

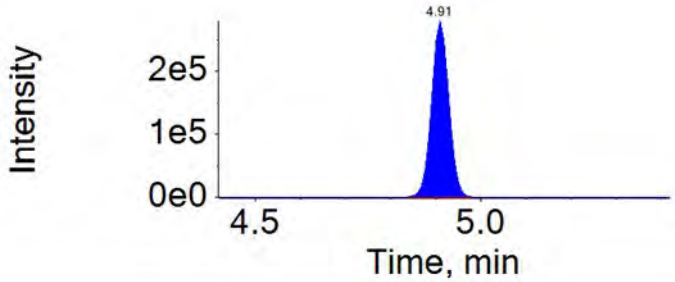


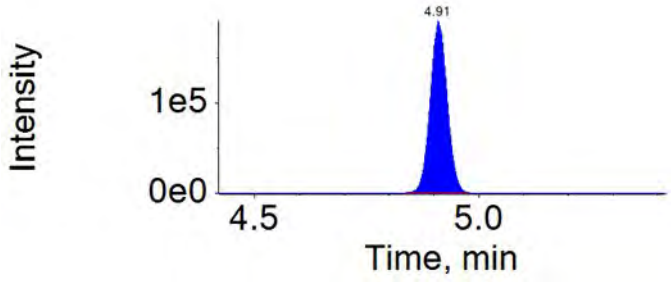
APPROVED
By MCD at 4:50 pm, 11/14/18

REVIEWED
By HMK at 12:21 pm, 11/15/18

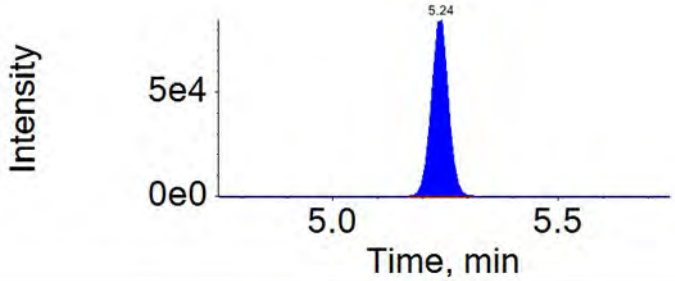
ICAL Name: 18NOV12DCAL **Result Table:** 18316011 11/14/2018 4:24:36 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

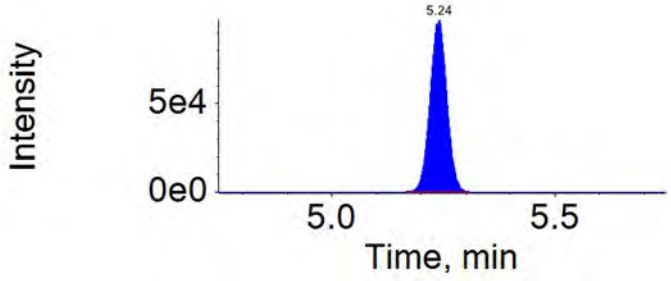
Extraction Standard: E13C8-PFOA	Injection Standard: 13C2-PFOA
421.0 / 376.0	415.0 / 370.0



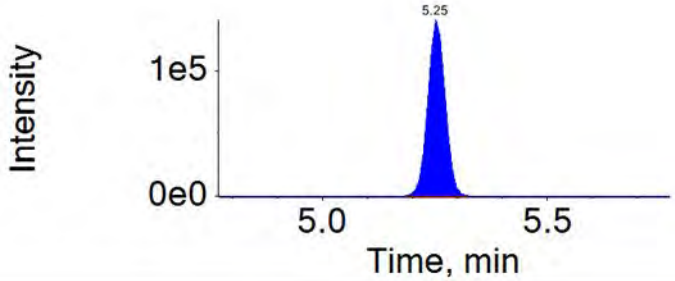


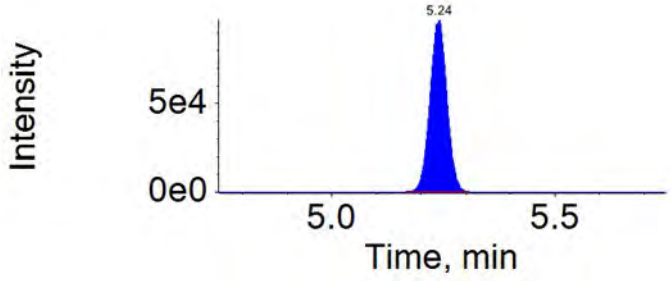
Extraction Standard: E13C8-PFOS	Injection Standard: 13C4-PFOS
507.0 / 80.0	503.0 / 80.0



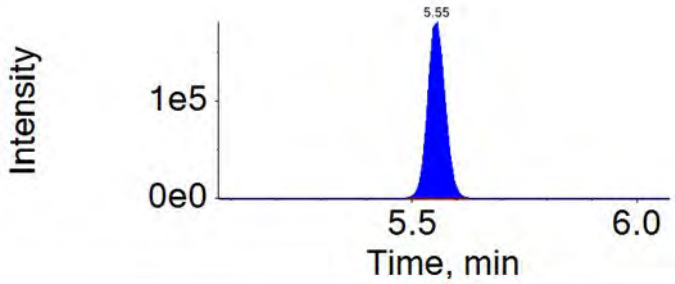


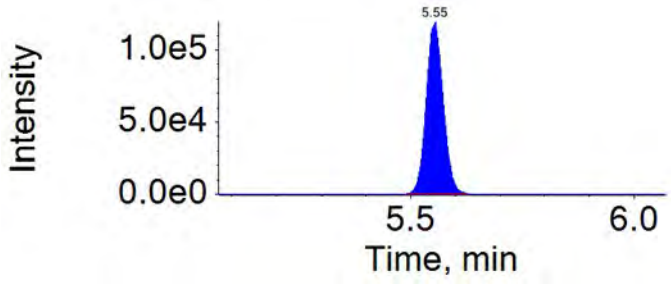
Extraction Standard: E13C9-PFNA	Injection Standard: 13C4-PFOS
472.0 / 427.0	503.0 / 80.0





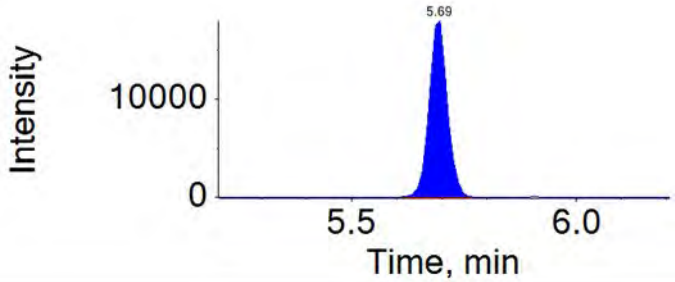
Extraction Standard: E13C6-PFDA	Injection Standard: 13C2-PFDA
519.0 / 474.0	515.0 / 470.0

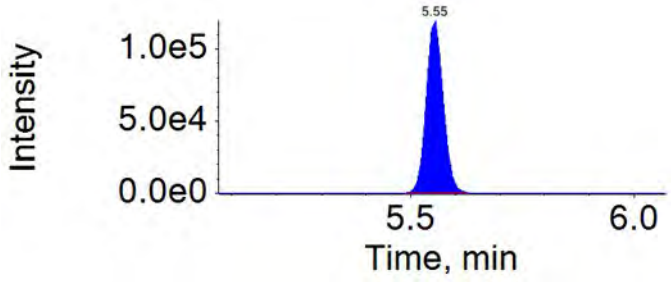




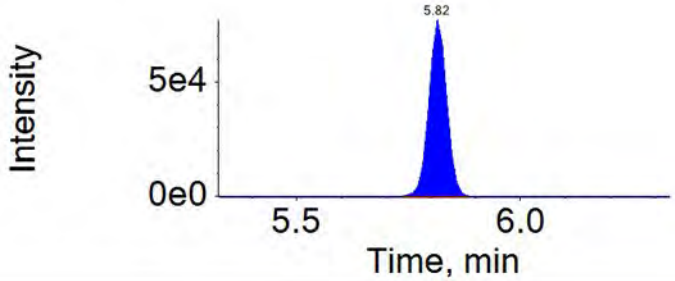
ICAL Name: 18NOV12DCAL **Result Table:** 18316011 11/14/2018 4:24:36 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

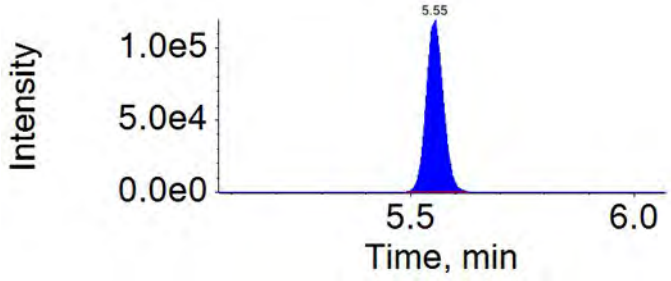
Extraction Standard: Ed3-NMeFOSAA	Injection Standard: 13C2-PFDA
573.0 / 419.0	515.0 / 470.0



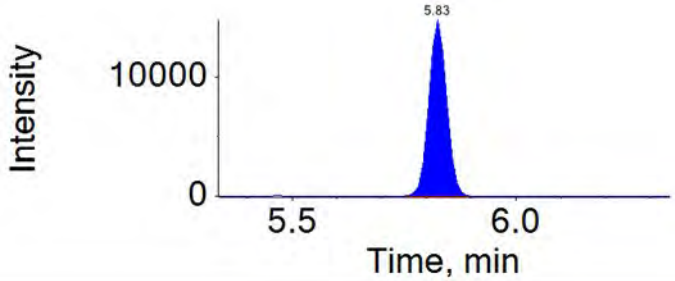


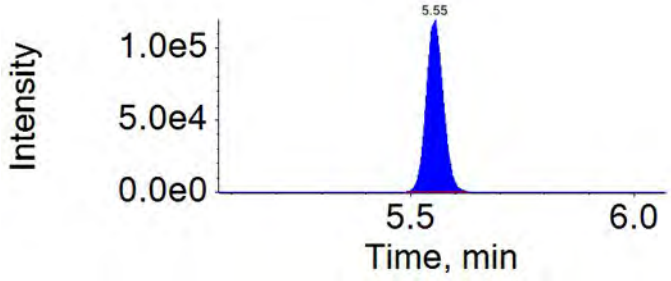
Extraction Standard: E13C7-PFUnDA	Injection Standard: 13C2-PFDA
570.0 / 525.0	515.0 / 470.0



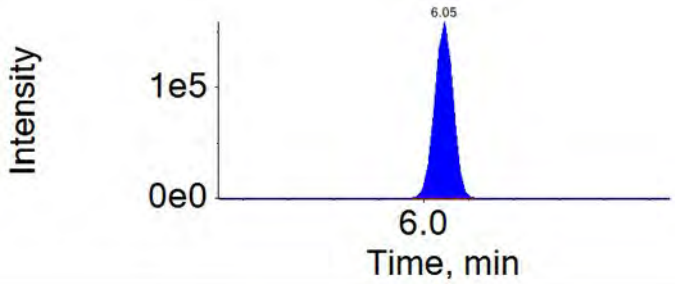


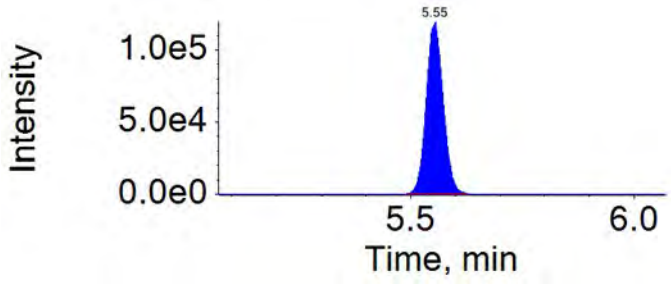
Extraction Standard: Ed5-NEtFOSAA	Injection Standard: 13C2-PFDA
589.0 / 419.0	515.0 / 470.0





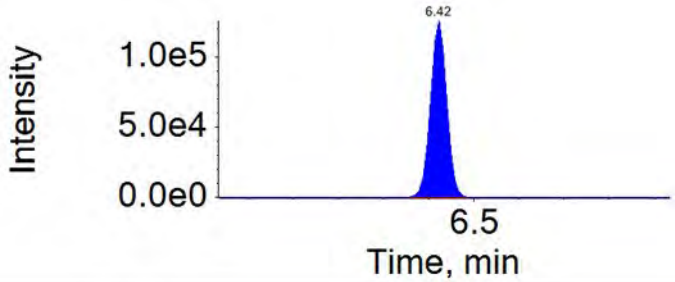
Extraction Standard: E13C2-PFDoDA	Injection Standard: 13C2-PFDA
615.0 / 570.0	515.0 / 470.0

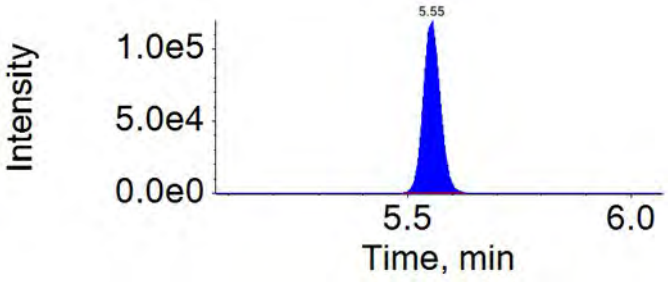




ICAL Name: 18NOV12DCAL **Result Table:** 18316011 11/14/2018 4:24:36 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

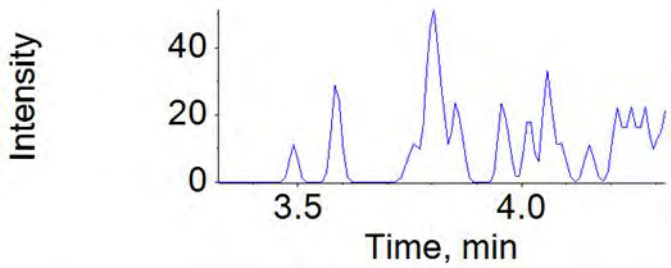
Extraction Standard: E13C2-PFTeDA	Injection Standard: 13C2-PFDA
715.0 / 670.0	515.0 / 470.0



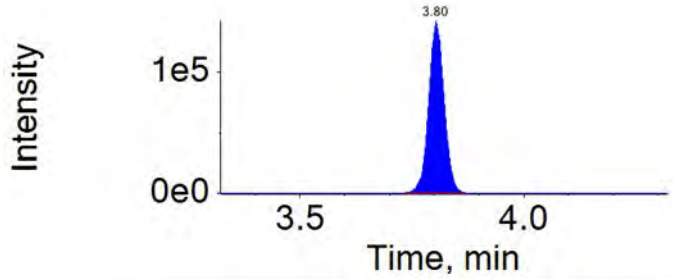


ICAL Name: 18NOV12DCAL **Result Table:** 18316011 11/14/2018 4:24:36 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

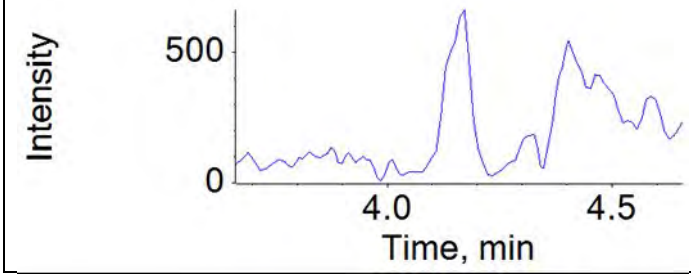
Analyte: PFBS
299.0 / 80.0



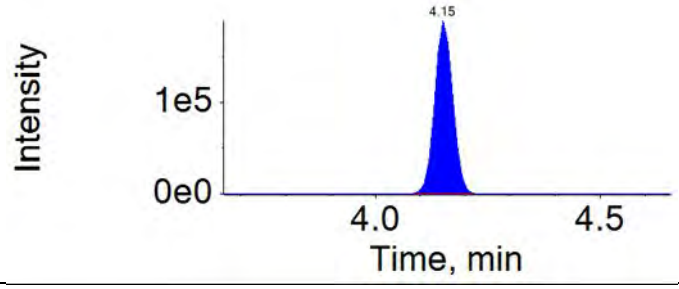
Extraction Standard: 13C3-PFBS
302.0 / 80.0



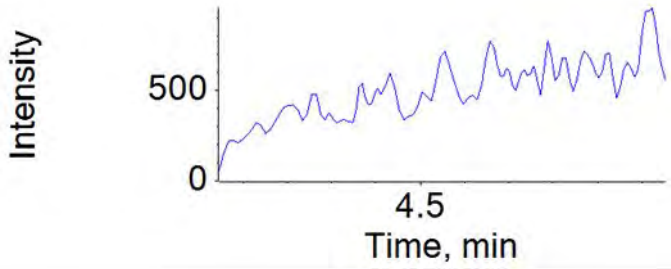
Analyte: PFHxA
313.0 / 269.0



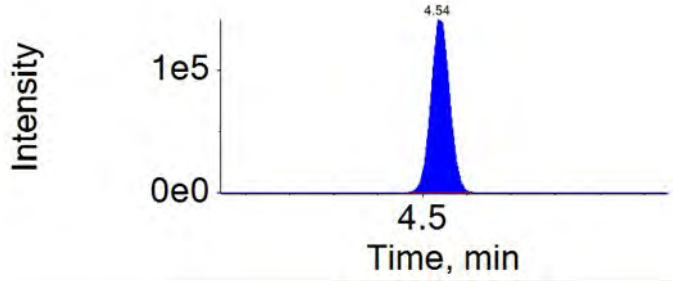
Extraction Standard: 13C5-PFHxA
318.0 / 273.0



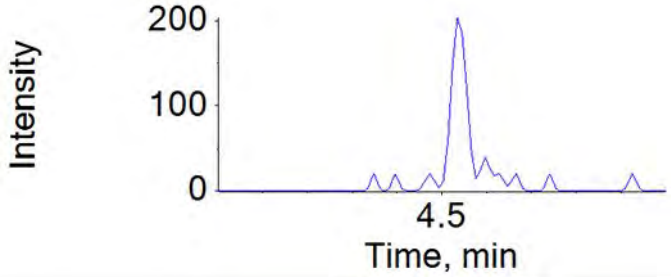
Analyte: PFHpA
363.0 / 319.0



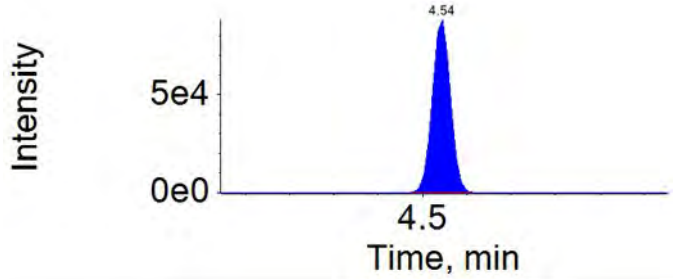
Extraction Standard: 13C4-PFHpA
367.0 / 322.0



Analyte: PFHxS
399.0 / 80.0

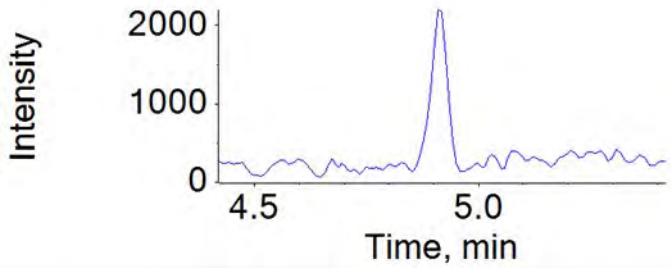


Extraction Standard: 13C3-PFHxS
402.0 / 80.0

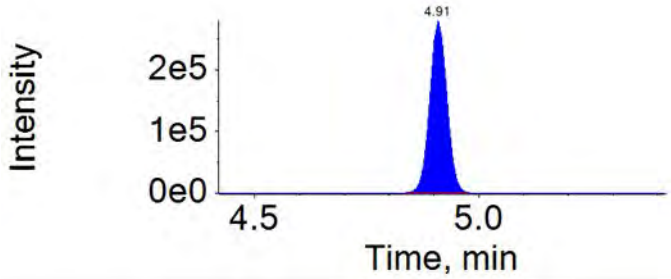


ICAL Name: 18NOV12DCAL **Result Table:** 18316011 11/14/2018 4:24:36 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

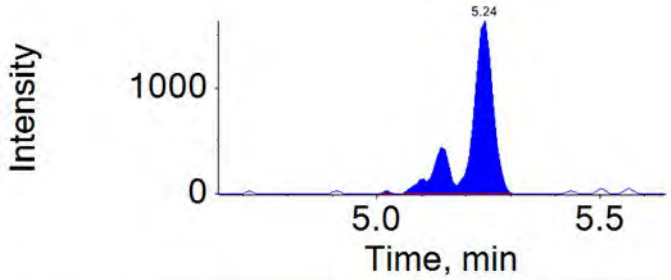
Analyte: PFOA
413.0 / 369.0



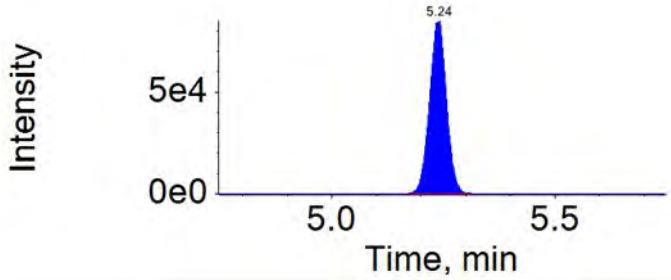
Extraction Standard: 13C8-PFOA
421.0 / 376.0



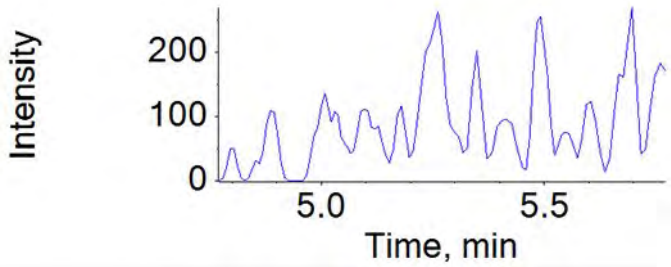
Analyte: PFOS
499.0 / 80.0



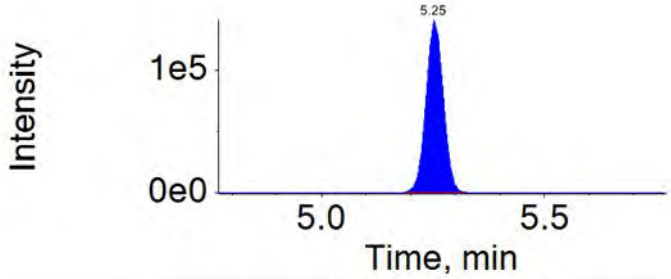
Extraction Standard: 13C8-PFOS
507.0 / 80.0



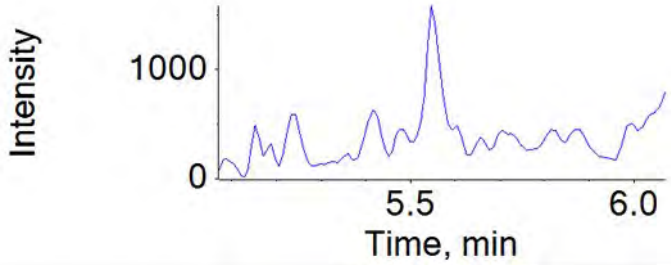
Analyte: PFNA
463.0 / 419.0



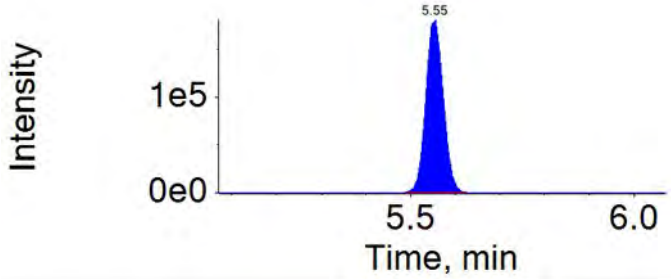
Extraction Standard: 13C9-PFNA
472.0 / 427.0



Analyte: PFDA
513.0 / 469.0



Extraction Standard: 13C6-PFDA
519.0 / 474.0

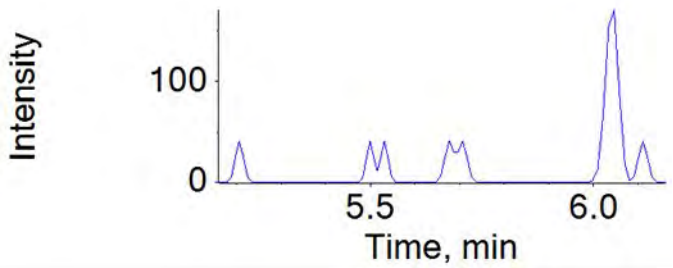


APPROVED
By MCD at 4:50 pm, 11/14/18

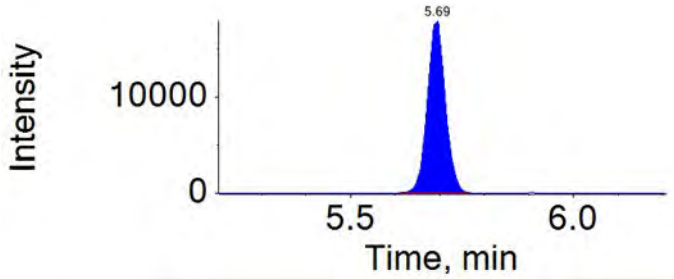
REVIEWED
By HMK at 12:21 pm, 11/15/18

ICAL Name: 18NOV12DCAL **Result Table:** 18316011 11/14/2018 4:24:36 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

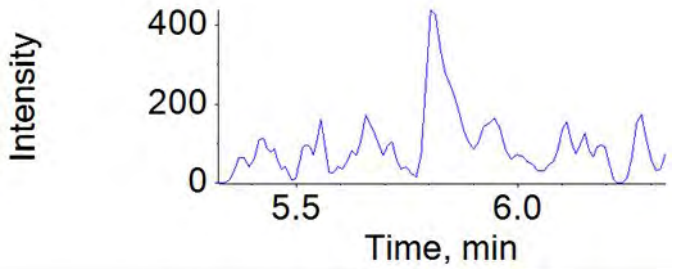
Analyte: NMeFOSAA
570.0 / 419.0



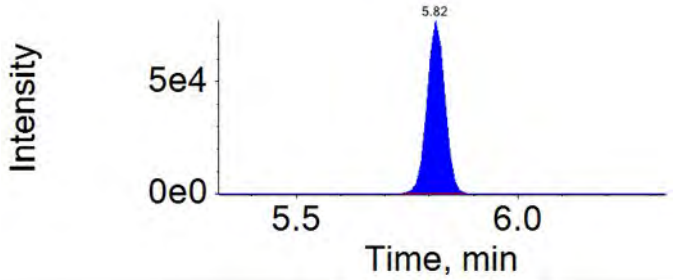
Extraction Standard: d3-NMeFOSAA
573.0 / 419.0



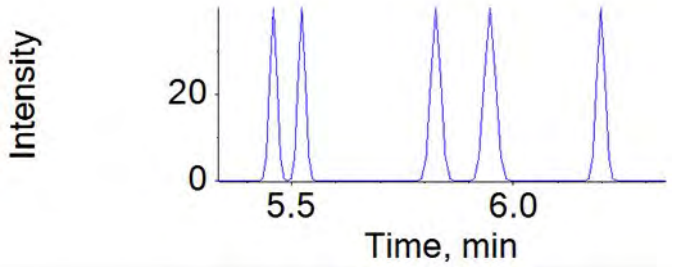
Analyte: PFUnDA
563.0 / 519.0



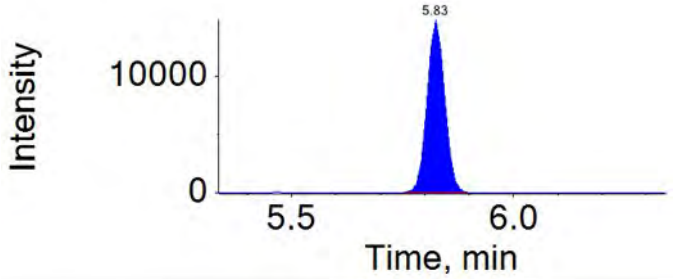
Extraction Standard: 13C7-PFUnDA
570.0 / 525.0



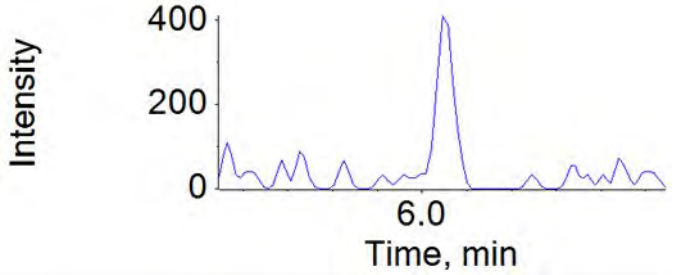
Analyte: NEtFOSAA
584.0 / 419.0



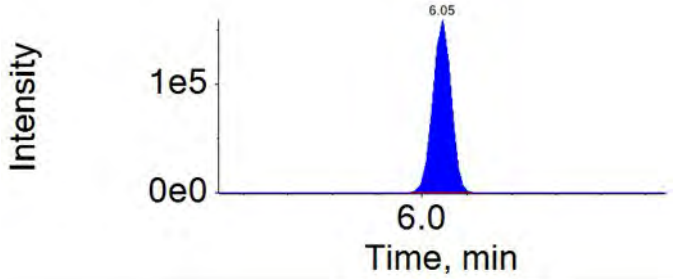
Extraction Standard: d5-NEtFOSAA
589.0 / 419.0



Analyte: PFDoDA
613.0 / 569.0



Extraction Standard: 13C2-PFDoDA
615.0 / 570.0

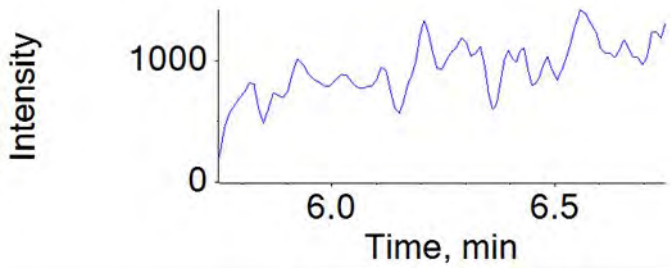


APPROVED
By MCD at 4:50 pm, 11/14/18

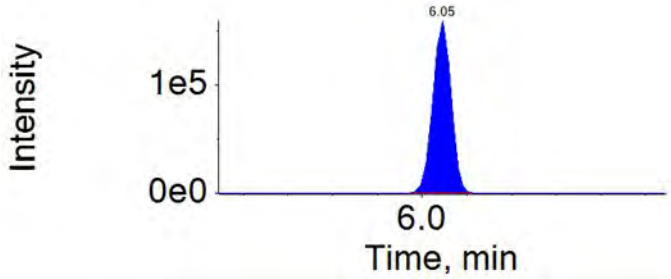
REVIEWED
By HMK at 12:21 pm, 11/15/18

ICAL Name: 18NOV12DCAL **Result Table:** 18316011 11/14/2018 4:24:36 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

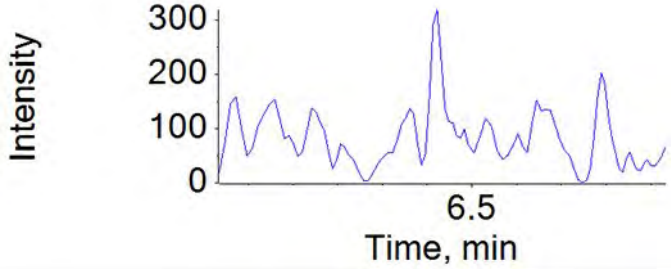
Analyte: PFTrDA
663.0 / 619.0



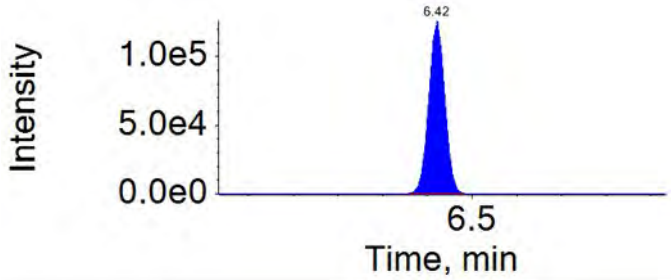
Extraction Standard: 13C2-PFDoDA
615.0 / 570.0



Analyte: PFTeDA
713.0 / 669.0



Extraction Standard: 13C2-PFTeDA
715.0 / 670.0



APPROVED
By MCD at 4:50 pm, 11/14/18

REVIEWED
By HMK at 12:21 pm, 11/15/18

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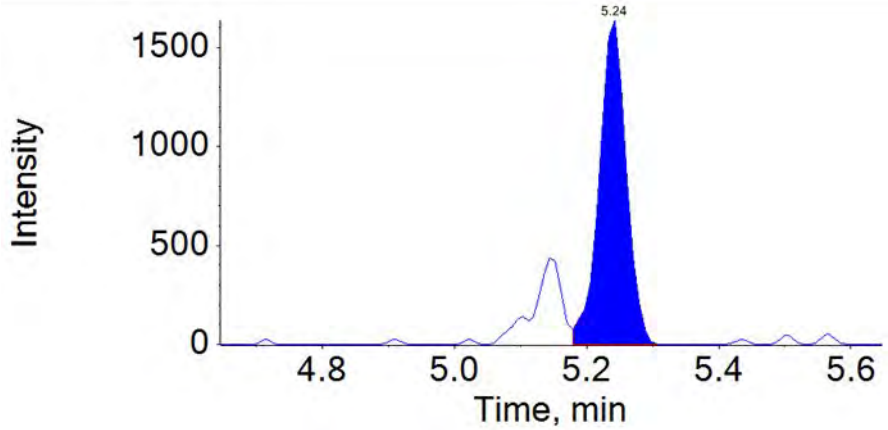
Auto Integrations prior to Manual Integration

Print Date: 11/14/2018 4:31 PM
Template: MQ-OrigInteg-16NOV21.docx

Results Table Name: 18316011
Results Table Date: 11/14/2018 4:24:36 PM

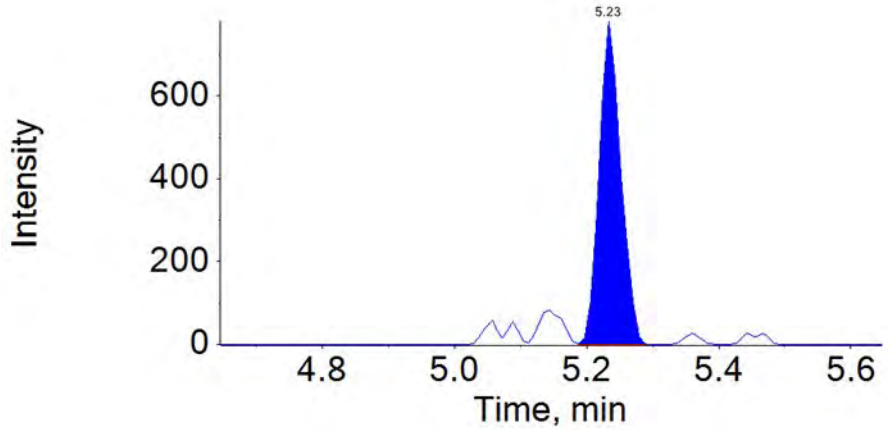
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

Component Name:
PFOS
RT (min.):
5.24
Peak Area:
4678.4
Mass Range:
499.0 / 80.0
File Name:
18NOV13D-54.wiff
Sample Name:
9885085



Integration Comment: incorrect integration

Component Name:
PFOS_2
RT (min.):
5.23
Peak Area:
1781.3
Mass Range:
499.0 / 99.0
File Name:
18NOV13D-54.wiff
Sample Name:
9885085



Integration Comment: incorrect integration

APPROVED
By MCD at 4:50 pm, 11/14/18

REVIEWED
By HMK at 12:21 pm, 11/15/18

Results Table Name: 18316011
Results Table Date: 11/14/2018 4:24:36 PM

Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

APPROVED
By MCD at 4:50 pm, 11/14/18

REVIEWED
By HMK at 12:21 pm, 11/15/18

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LC-MS/MS Analysis Report

Printed: 11/14/2018 4:28:00 PM
Template: IonRatio18OCT10

Ion Ratio Report

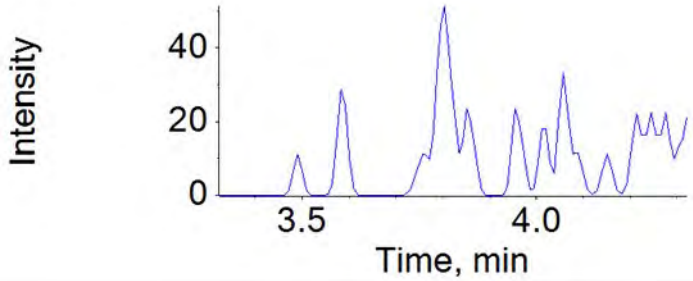
Sample Name: 9885085 **Instrument Name:** LM27631 **File Name:** 18NOV13D-54.wiff

Component Name	RT	RRT	Analyte Area Response	Int Typ	Expected Ion Ratio	Ion Ratio	Ion Ratio % Diff	Ion Ratio Limit	Ion Ratio OOS
PFBS	N/A	N/A	N/A	A	N/A	N/A			
PFBS_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFHxA	N/A	N/A	N/A	A	N/A	N/A			
PFHxA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFHpA	N/A	N/A	N/A	A	N/A	N/A			
PFHpA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFHxS	N/A	N/A	N/A	A	N/A	N/A			
PFHxS_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFOA	N/A	N/A	N/A	A	N/A	N/A			
PFOA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFOS	5.24	1.00	6021.4	M	N/A	0.3557			
PFOS_2	5.23	1.00	2142.0	M	N/A	0.3557	20	50	
PFNA	N/A	N/A	N/A	A	N/A	N/A			
PFNA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFDA	N/A	N/A	N/A	A	N/A	N/A			
PFDA_2	N/A	N/A	N/A	A	N/A	N/A		50	
NMeFOSAA	N/A	N/A	N/A	A	N/A	N/A			
NMeFOSAA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFUnDA	N/A	N/A	N/A	A	N/A	N/A			
PFUnDA_2	N/A	N/A	N/A	A	N/A	N/A		50	
NEtFOSAA	N/A	N/A	N/A	A	N/A	N/A			
NEtFOSAA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFDoDA	N/A	N/A	N/A	A	N/A	N/A			
PFDoDA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFTrDA	N/A	N/A	N/A	A	N/A	N/A			
PFTrDA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFTeDA	N/A	N/A	N/A	A	N/A	N/A			
PFTeDA_2	N/A	N/A	N/A	A	N/A	N/A		50	

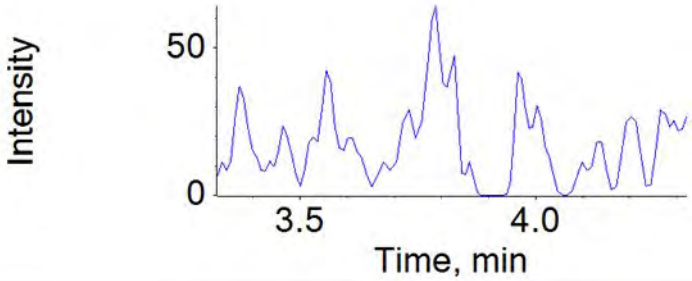
APPROVED
By MCD at 4:50 pm, 11/14/18

REVIEWED
By HMK at 12:21 pm, 11/15/18

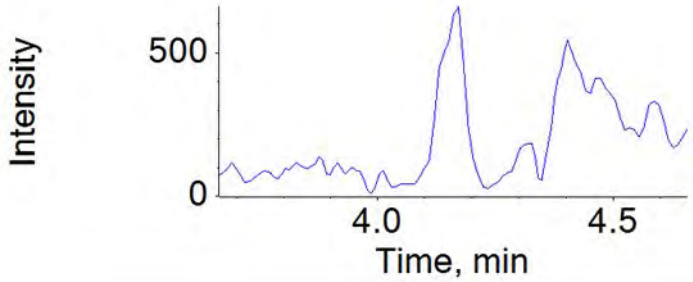
Component: PFBS
Primary Mass: 299.0 / 80.0



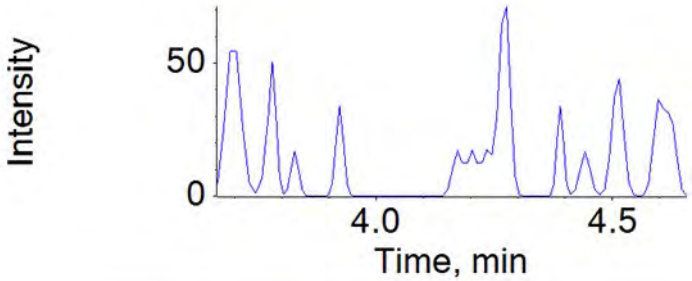
Component: PFBS_2
Secondary Mass: 299.0 / 99.0



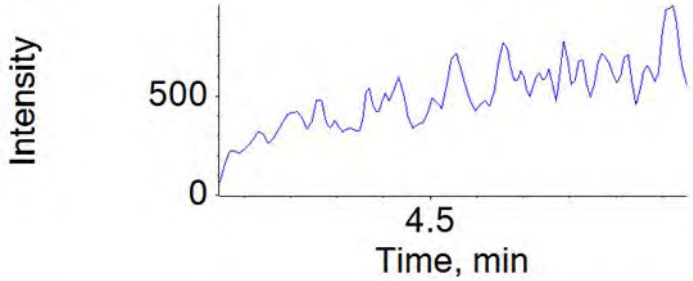
Component: PFHxA
Primary Mass: 313.0 / 269.0



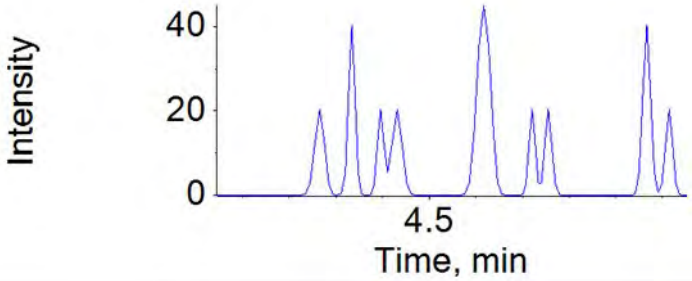
Component: PFHxA_2
Secondary Mass: 313.0 / 119.0



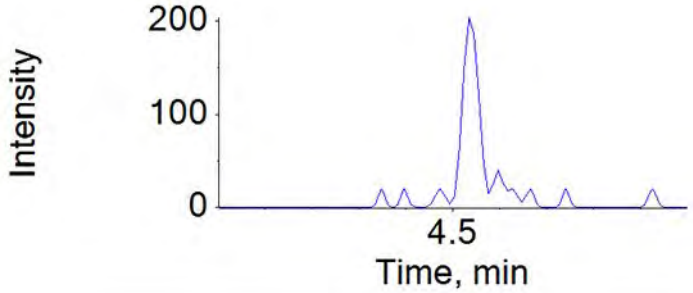
Component: PFHpA
Primary Mass: 363.0 / 319.0



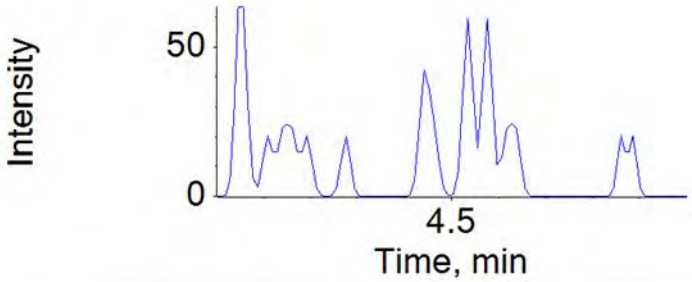
Component: PFHpA_2
Secondary Mass: 363.0 / 169.0



Component: PFHxS
Primary Mass: 399.0 / 80.0



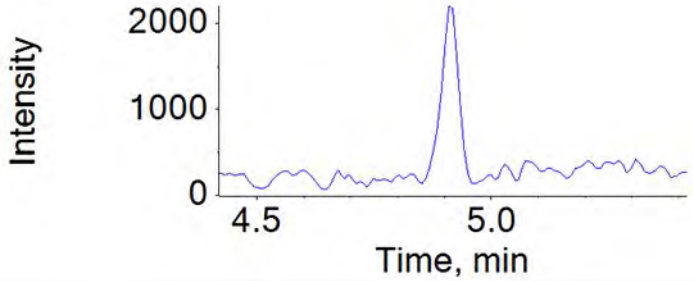
Component: PFHxS_2
Secondary Mass: 399.0 / 99.0



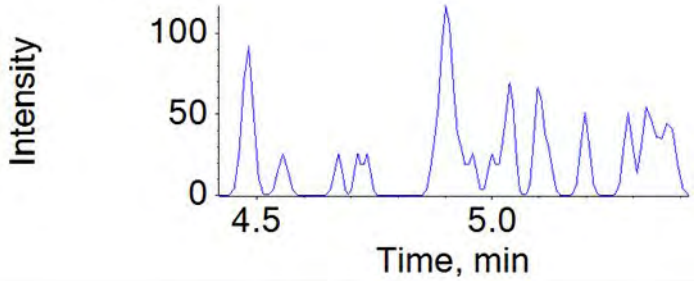
APPROVED
By MCD at 4:50 pm, 11/14/18

REVIEWED
By HMK at 12:21 pm, 11/15/18

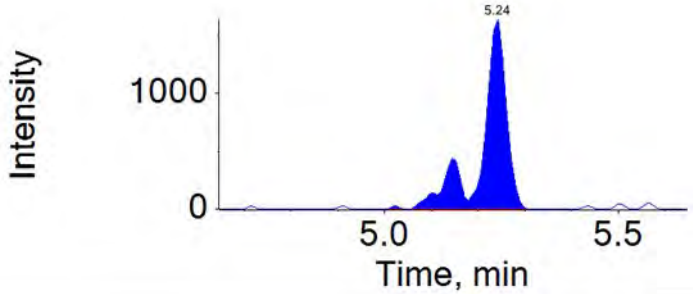
Component: PFOA
Primary Mass: 413.0 / 369.0



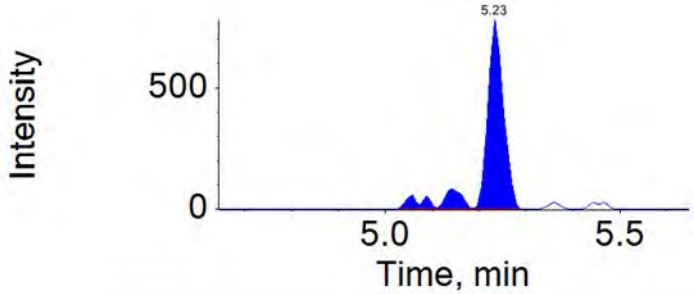
Component: PFOA_2
Secondary Mass: 413.0 / 169.0



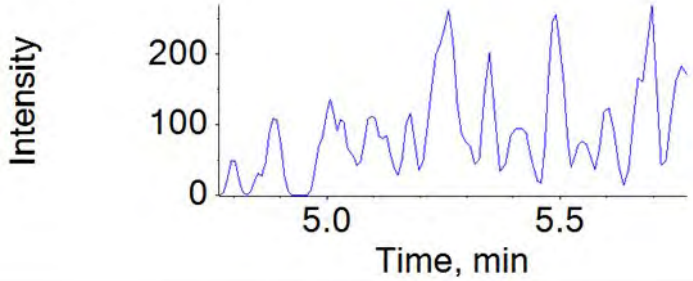
Component: PFOS
Primary Mass: 499.0 / 80.0



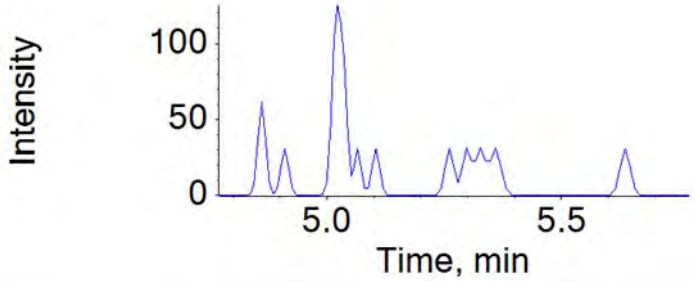
Component: PFOS_2
Secondary Mass: 499.0 / 99.0



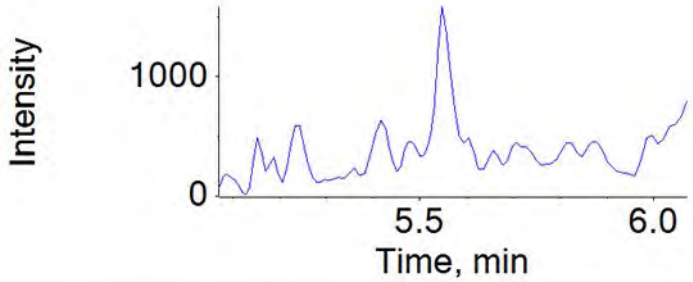
Component: PFNA
Primary Mass: 463.0 / 419.0



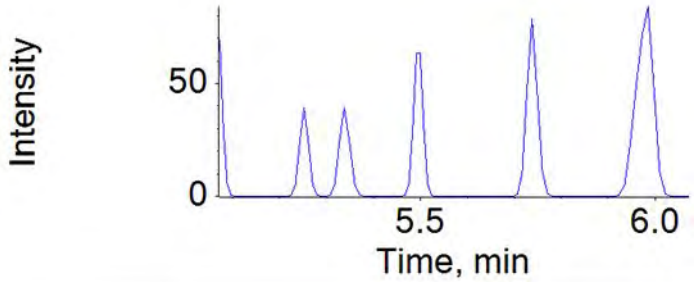
Component: PFNA_2
Secondary Mass: 463.0 / 169.0



Component: PFDA
Primary Mass: 513.0 / 469.0



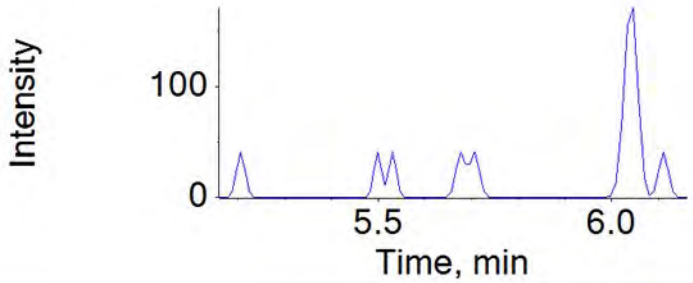
Component: PFDA_2
Secondary Mass: 513.0 / 169.0



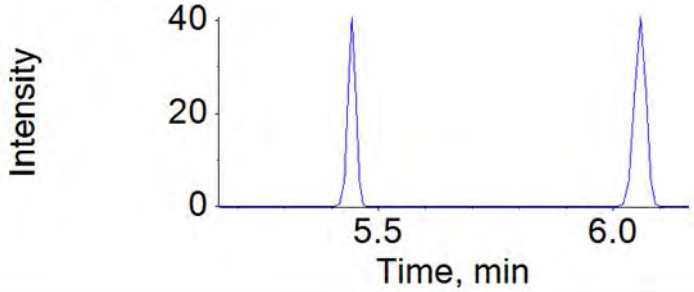
APPROVED
By MCD at 4:50 pm, 11/14/18

REVIEWED
By HMK at 12:21 pm, 11/15/18

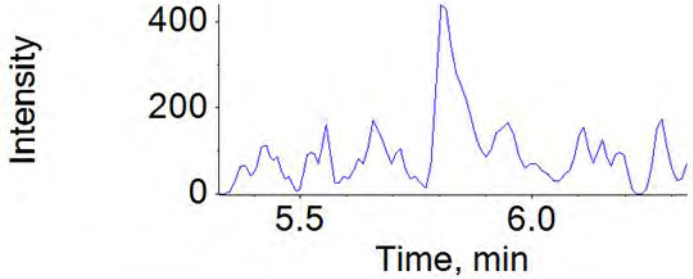
Component: NMeFOSAA
Primary Mass: 570.0 / 419.0



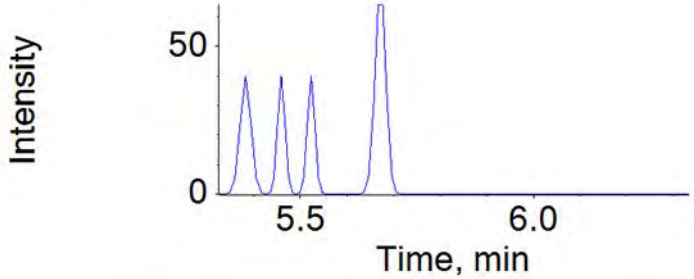
Component: NMeFOSAA_2
Secondary Mass: 570.0 / 483.0



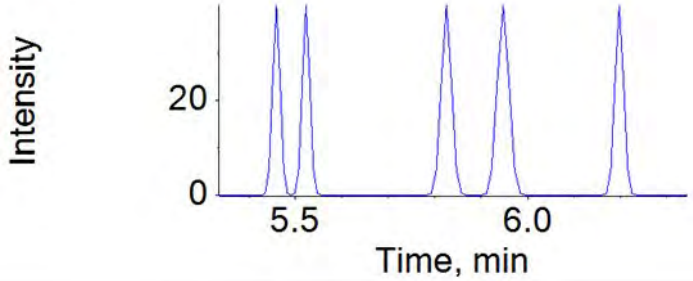
Component: PFUnDA
Primary Mass: 563.0 / 519.0



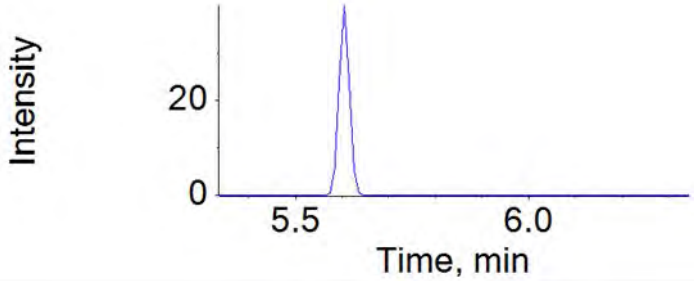
Component: PFUnDA_2
Secondary Mass: 563.0 / 169.0



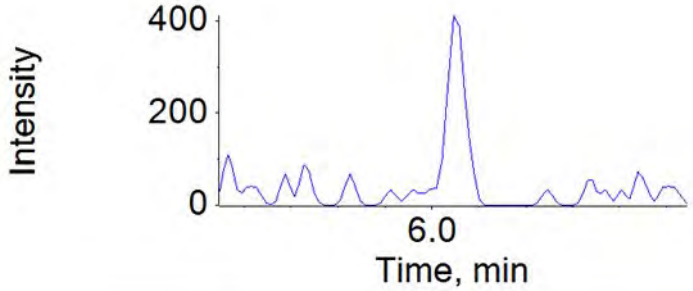
Component: NEtFOSAA
Primary Mass: 584.0 / 419.0



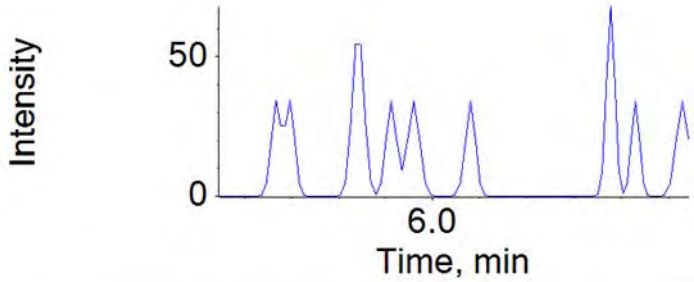
Component: NEtFOSAA_2
Secondary Mass: 584.0 / 526.0



Component: PFDoDA
Primary Mass: 613.0 / 569.0



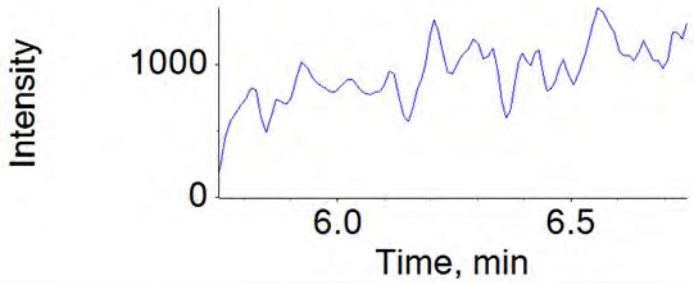
Component: PFDoDA_2
Secondary Mass: 613.0 / 169.0



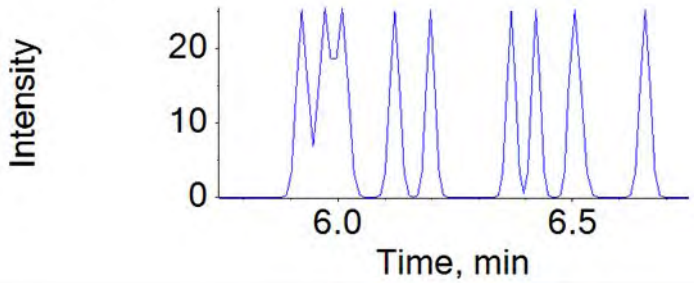
APPROVED
By MCD at 4:50 pm, 11/14/18

REVIEWED
By HMK at 12:21 pm, 11/15/18

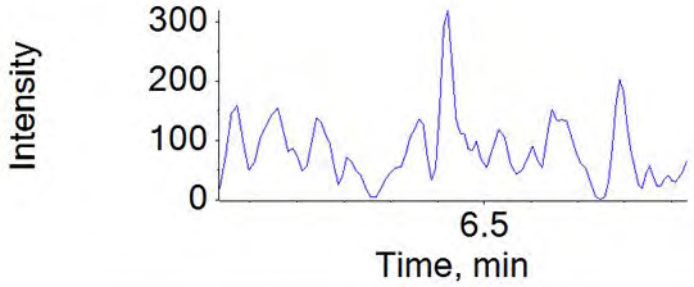
Component: PFTrDA
Primary Mass: 663.0 / 619.0



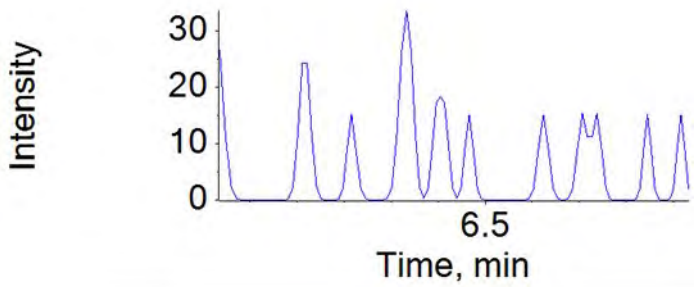
Component: PFTrDA_2
Secondary Mass: 663.0 / 169.0



Component: PFTeDA
Primary Mass: 713.0 / 669.0



Component: PFTeDA_2
Secondary Mass: 713.0 / 169.0



APPROVED
By MCD at 4:50 pm, 11/14/18

REVIEWED
By HMK at 12:21 pm, 11/15/18

ICAL Name: 18NOV12DCAL **Result Table:** 18316011 11/14/2018 4:24:36 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Sample Name:	9885086BKG			**Data File:**		18NOV13D-55.wiff
Sample ID:	EPA 537 mod QSM 5.1 table B-15 18316011 OU1-Bldg27-S-01-03 Grab Soil			**Acquis Date:**		2018-11-13T17:50:29
Sample Type:	Unknown			**Instrument:**		LM27631
Vial Position:	53			**Acquis Method:**		18AUG13_3uL.dam
Injection Vol:	3.00			**Result Table:**		18316011
QMethod File:	18AUG20QM			**ICAL Name:**		18NOV12DCAL
Batch Number:	18316011			**Operator:**		MCD7824
Sample Wt.:	1.06000			**Dilution Factor:**		1.00
Sample Vol.:	1.000			**Prep Factor:**		2.000

Injection Standard Peak Table

Injection Standard Area Reference File: 18NOV13D-05

Injection Standard Name	Inj Std Conc	Injection Std Peak Area	Rreference Injection Standard Area	Injection Std %Diff	Injection Std %Diff Limit	Injection Std %Diff OOS
13C3-PFBA	5.0	724651.9	661126.9	10	50	
13C2-PFOA	5.0	497531.3	466902.6	7	50	
13C4-PFOS	4.8	275243.5	247446.9	11	50	
13C2-PFDA	5.0	326420.8	295381.6	11	50	

Extraction Standard Peak Table

Extraction Standard Name	Ext Std Area	Inj Std Name	Inj Std Area	Area Ratio	Ext Std Conc	Ext Std Result	Ext Std %REC	Ext Std %REC Limit	Ext Std OOS
E13C3-PFBS	332509.2	13C3-PFBA	724651.9	0.459	8.774	6.112	70	50-150	
E13C5-PFHxA	510211.5	13C2-PFOA	497531.3	1.025	9.434	6.989	74	50-150	
E13C3-PFHxS	243409.0	13C2-PFOA	497531.3	0.489	8.925	6.334	71	50-150	
E13C4-PFHpA	409524.3	13C2-PFOA	497531.3	0.823	9.434	6.997	74	50-150	
E13C8-PFOA	707516.4	13C2-PFOA	497531.3	1.422	9.434	7.392	78	50-150	
E13C8-PFOS	209792.7	13C4-PFOS	275243.5	0.762	9.019	6.372	71	50-150	
E13C9-PFNA	360723.3	13C4-PFOS	275243.5	1.311	9.434	6.894	73	50-150	
E13C6-PFDA	507117.1	13C2-PFDA	326420.8	1.554	9.434	6.840	73	50-150	
Ed3-NMeFOSAA	38897.4	13C2-PFDA	326420.8	0.119	9.434	4.058	43	50-150	OOS
E13C7-PFUnDA	197197.6	13C2-PFDA	326420.8	0.604	9.434	6.618	70	50-150	
Ed5-NEtFOSAA	30600.9	13C2-PFDA	326420.8	0.094	9.434	3.742	40	50-150	OOS
E13C2-PFDoDA	427136.6	13C2-PFDA	326420.8	1.309	9.434	6.410	68	50-150	
E13C2-PFTeDA	292166.7	13C2-PFDA	326420.8	0.895	9.434	5.929	63	50-150	

APPROVED
By MCD at 4:50 pm, 11/14/18

REVIEWED
By HMK at 12:21 pm, 11/15/18

ICAL Name: 18NOV12DCAL **Result Table:** 18316011 11/14/2018 4:24:36 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

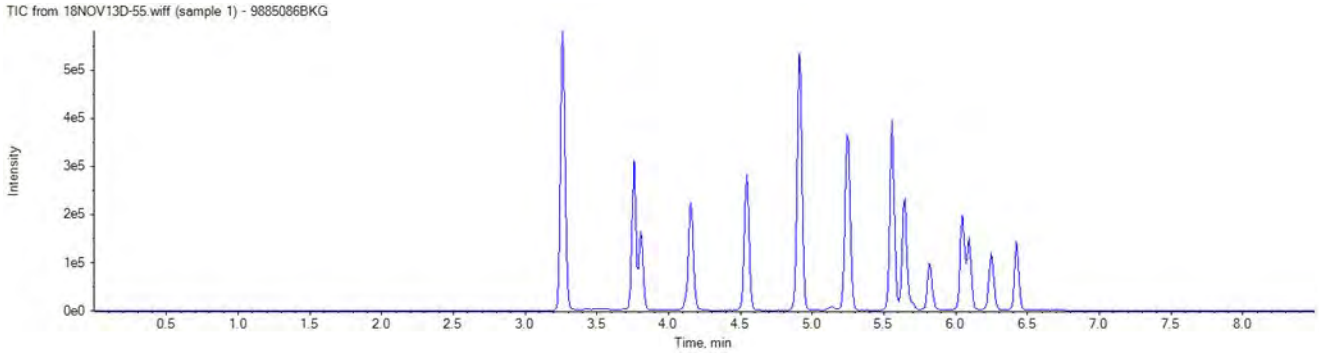
Analyte Quantitation Peak Table

Sample Name: 9885086BKG **Instrument Name:** LM27631 **File Name:** 18NOV13D-55.wiff

Sample Wt	Sample Vol	Dilution Factor	PrepFactor
1.06000	1.000	1.00	2.000

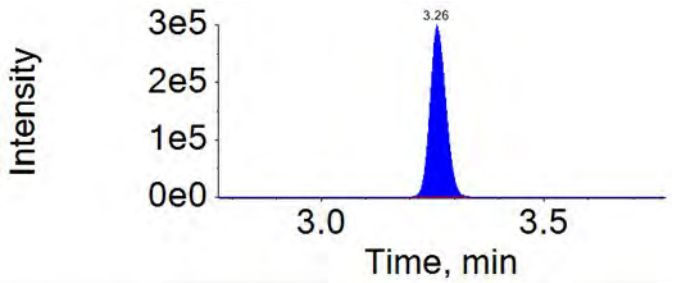
Analyte Name	RT	RRT	Analyte Area Response	E	Int Typ	ES Name	ES RT	ES Area Response	Area Ratio	Sample Result (ng/g)
PFBS	N/A	N/A	N/A		A	13C3-PFBS	3.81	332509.2	N/A	
PFHxA	N/A	N/A	N/A		A	13C5-PFHxA	4.16	510211.5	N/A	
PFHpA	N/A	N/A	N/A		A	13C4-PFHpA	4.54	409524.3	N/A	
PFHxS	N/A	N/A	N/A		A	13C3-PFHxS	4.54	243409.0	N/A	
PFOA	N/A	N/A	N/A		A	13C8-PFOA	4.91	707516.4	N/A	
PFOS	5.24	1.000	98339.2		M	13C8-PFOS	5.24	209792.7	0.469	3.868
PFNA	N/A	N/A	N/A		A	13C9-PFNA	5.26	360723.3	N/A	
PFDA	N/A	N/A	N/A		A	13C6-PFDA	5.55	507117.1	N/A	
NMeFOSAA	N/A	N/A	N/A		A	d3-NMeFOSAA	5.69	38897.4	N/A	
PFUnDA	N/A	N/A	N/A		A	13C7-PFUnDA	5.82	197197.6	N/A	
NEtFOSAA	N/A	N/A	N/A		A	d5-NEtFOSAA	5.83	30600.9	N/A	
PFDoDA	N/A	N/A	N/A		A	13C2-PFDoDA	6.05	427136.6	N/A	
PFTrDA	N/A	N/A	N/A		A	13C2-PFDoDA	6.05	427136.6	N/A	
PFTeDA	N/A	N/A	N/A		A	13C2-PFTeDA	6.42	292166.7	N/A	

Total Ion Chromatogram

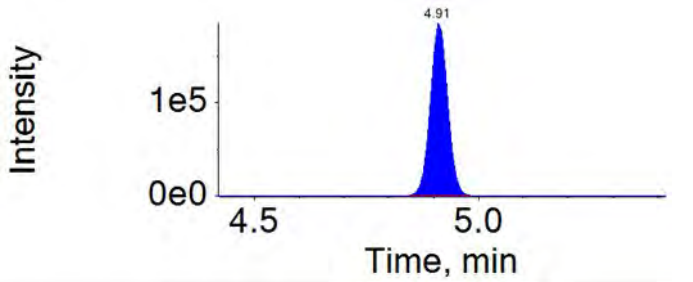


ICAL Name: 18NOV12DCAL **Result Table:** 18316011 11/14/2018 4:24:36 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

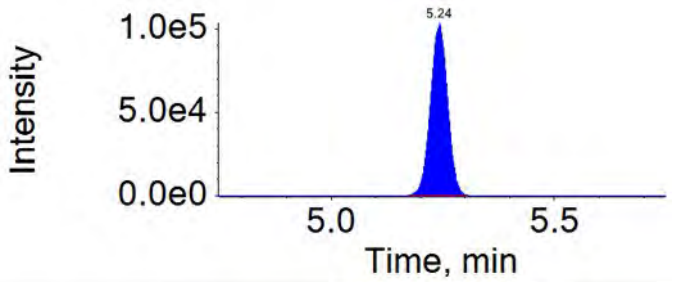
Injection Standard: 13C3-PFBA
216.0 / 172.0



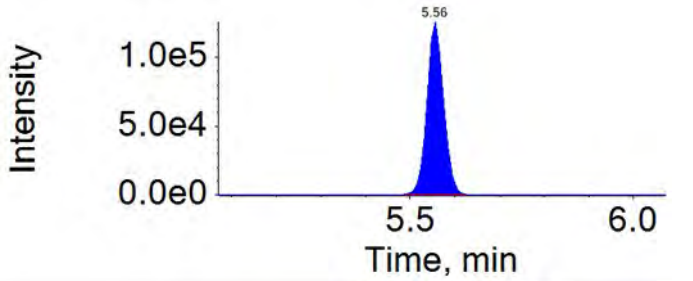
Injection Standard: 13C2-PFOA
415.0 / 370.0



Injection Standard: 13C4-PFOS
503.0 / 80.0

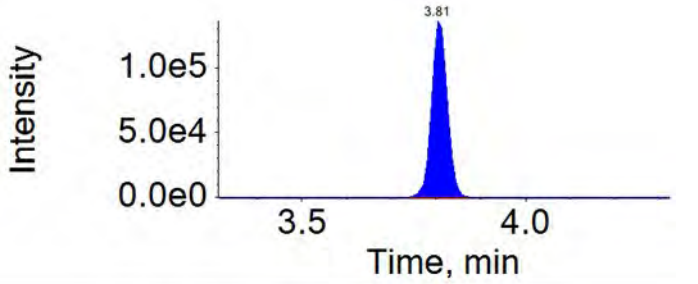


Injection Standard: 13C2-PFDA
515.0 / 470.0

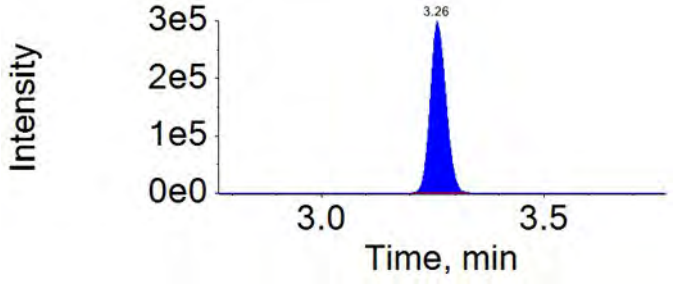


ICAL Name: 18NOV12DCAL **Result Table:** 18316011 11/14/2018 4:24:36 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

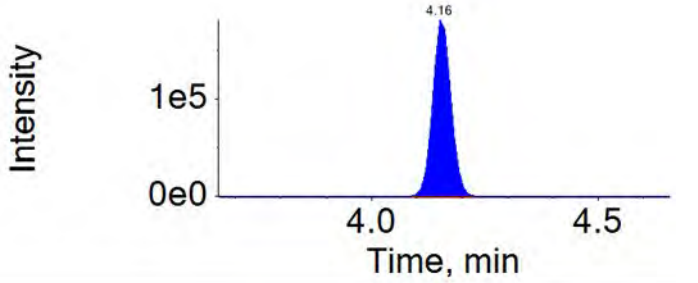
Extraction Standard: E13C3-PFBS
302.0 / 80.0



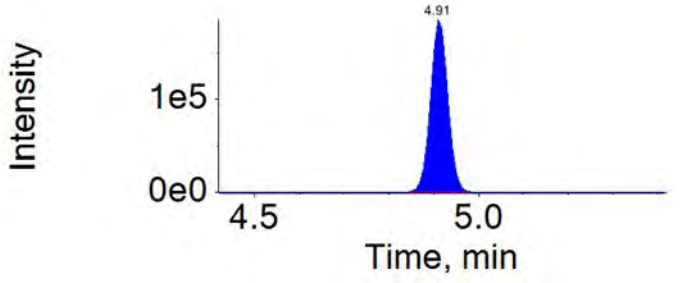
Injection Standard: 13C3-PFBA
216.0 / 172.0



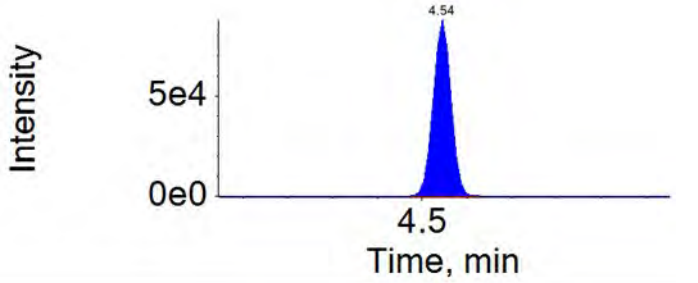
Extraction Standard: E13C5-PFHxA
318.0 / 273.0



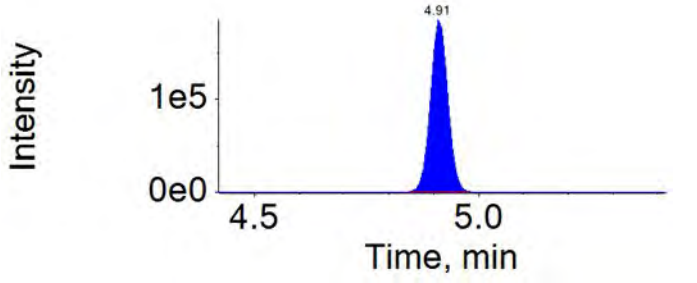
Injection Standard: 13C2-PFOA
415.0 / 370.0



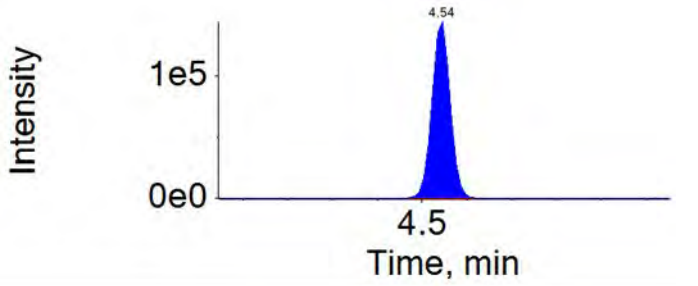
Extraction Standard: E13C3-PFHxS
402.0 / 80.0



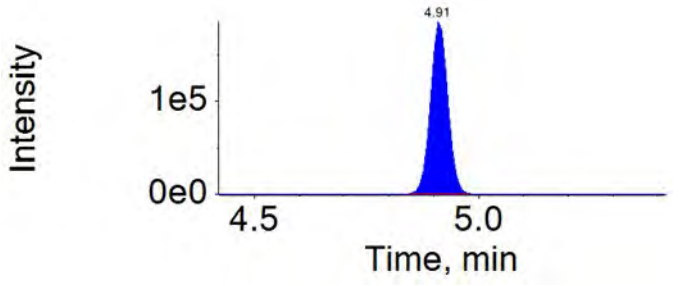
Injection Standard: 13C2-PFOA
415.0 / 370.0



Extraction Standard: E13C4-PFHpA
367.0 / 322.0



Injection Standard: 13C2-PFOA
415.0 / 370.0

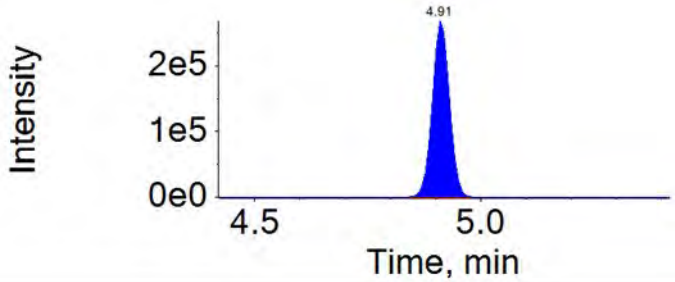


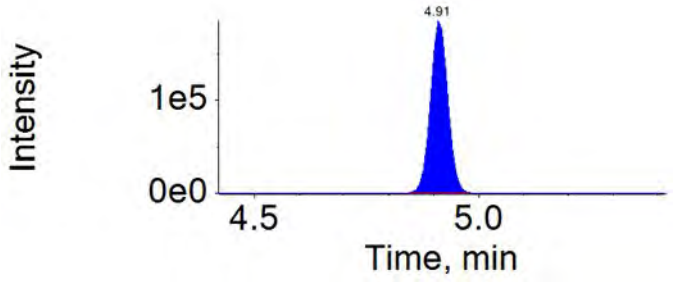
APPROVED
By MCD at 4:50 pm, 11/14/18

REVIEWED
By HMK at 12:21 pm, 11/15/18

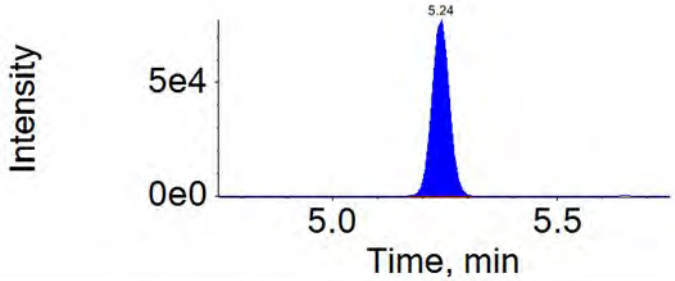
ICAL Name: 18NOV12DCAL **Result Table:** 18316011 11/14/2018 4:24:36 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

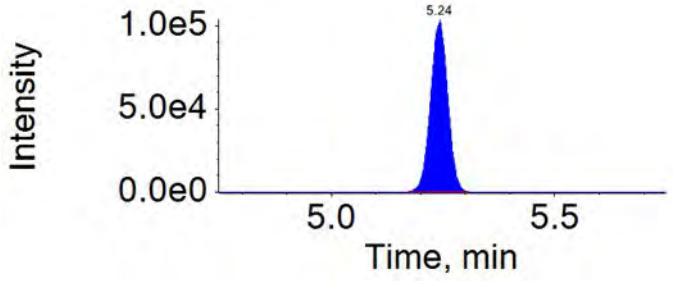
Extraction Standard: E13C8-PFOA	Injection Standard: 13C2-PFOA
421.0 / 376.0	415.0 / 370.0



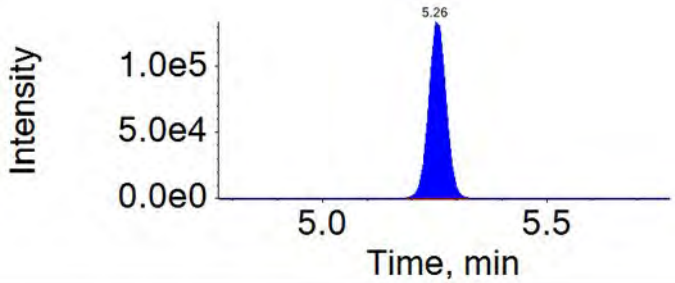


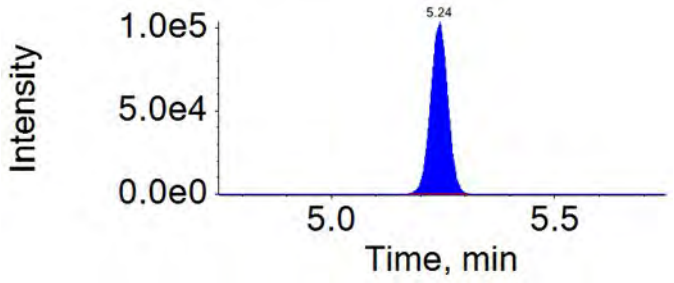
Extraction Standard: E13C8-PFOS	Injection Standard: 13C4-PFOS
507.0 / 80.0	503.0 / 80.0



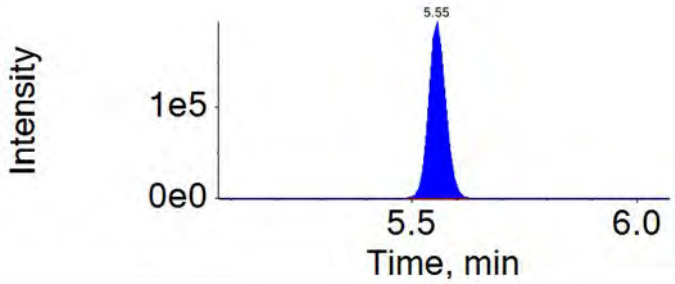


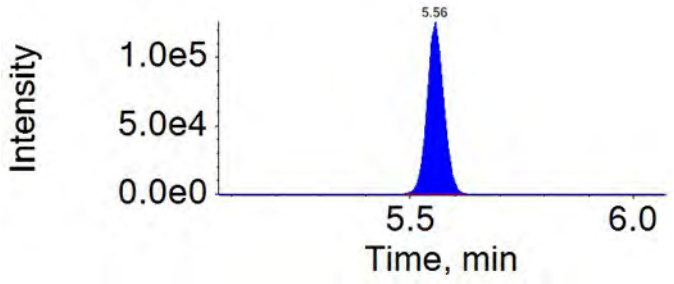
Extraction Standard: E13C9-PFNA	Injection Standard: 13C4-PFOS
472.0 / 427.0	503.0 / 80.0





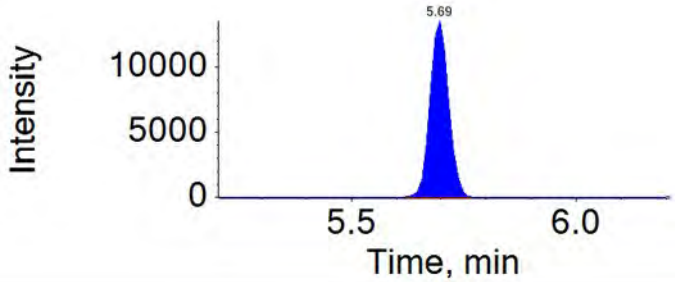
Extraction Standard: E13C6-PFDA	Injection Standard: 13C2-PFDA
519.0 / 474.0	515.0 / 470.0

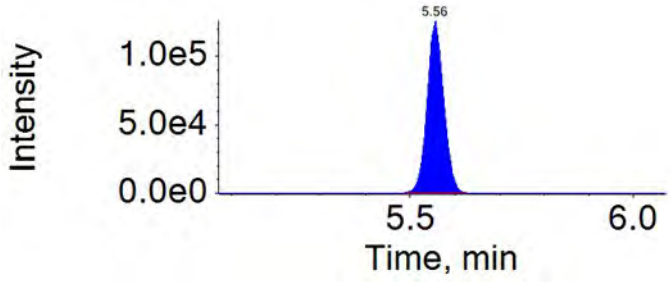




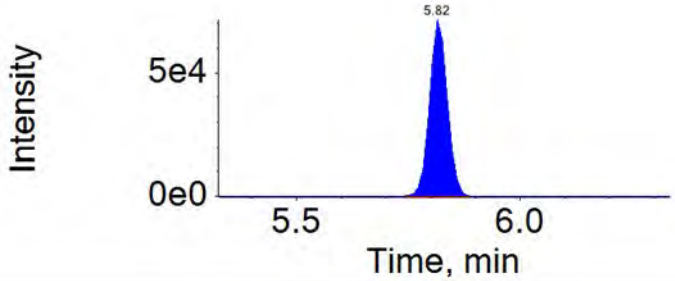
ICAL Name: 18NOV12DCAL **Result Table:** 18316011 11/14/2018 4:24:36 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

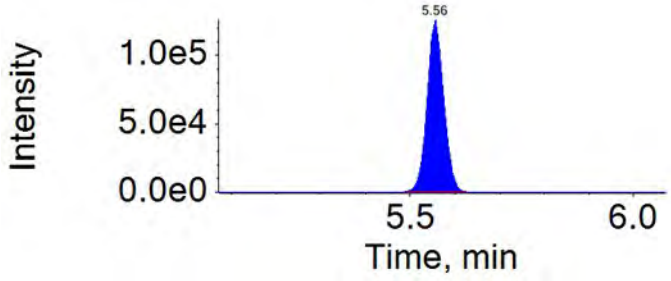
Extraction Standard: Ed3-NMeFOSAA	Injection Standard: 13C2-PFDA
573.0 / 419.0	515.0 / 470.0



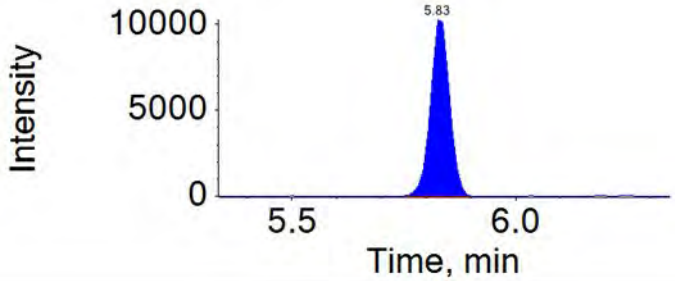


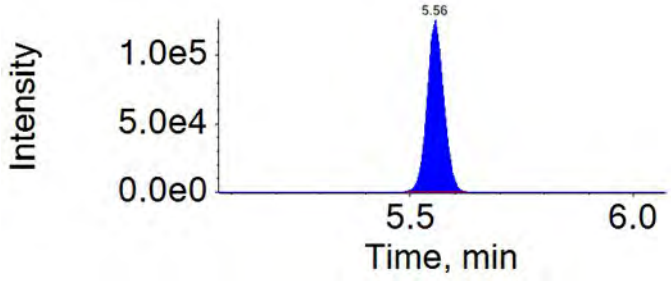
Extraction Standard: E13C7-PFUnDA	Injection Standard: 13C2-PFDA
570.0 / 525.0	515.0 / 470.0



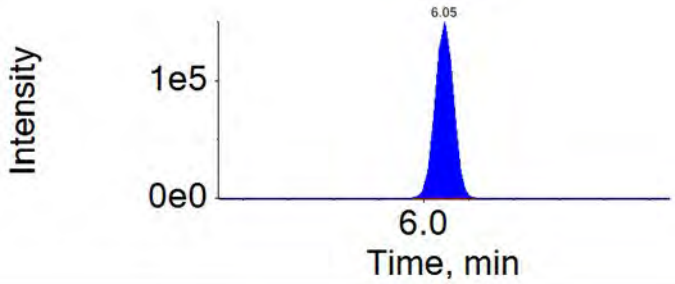


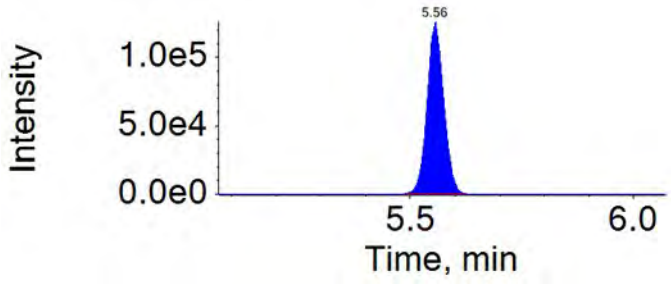
Extraction Standard: Ed5-NEtFOSAA	Injection Standard: 13C2-PFDA
589.0 / 419.0	515.0 / 470.0



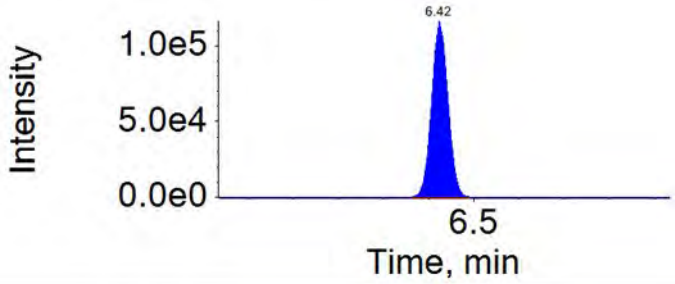
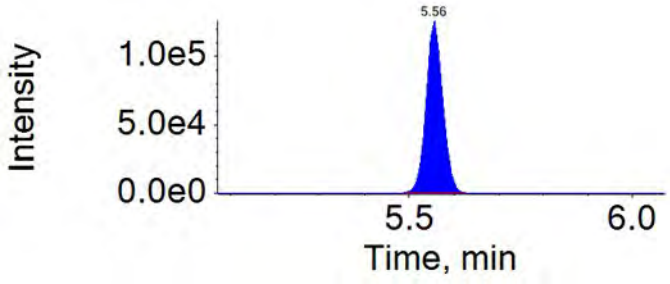


Extraction Standard: E13C2-PFDoDA	Injection Standard: 13C2-PFDA
615.0 / 570.0	515.0 / 470.0



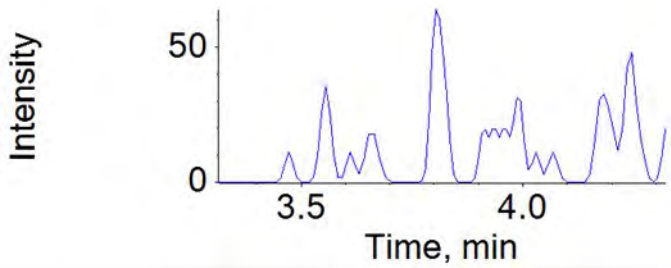


ICAL Name: 18NOV12DCAL **Result Table:** 18316011 11/14/2018 4:24:36 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

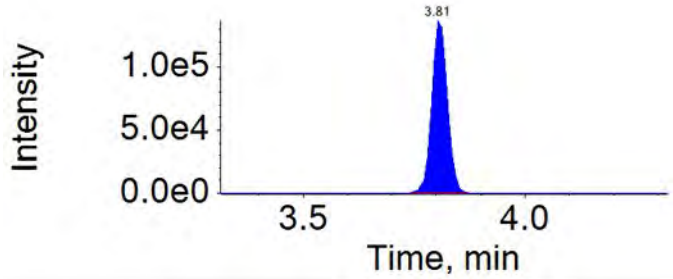
Extraction Standard: E13C2-PFTeDA	Injection Standard: 13C2-PFDA
715.0 / 670.0 	515.0 / 470.0 

ICAL Name: 18NOV12DCAL **Result Table:** 18316011 11/14/2018 4:24:36 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

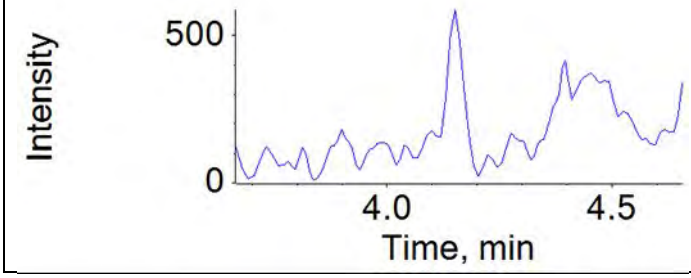
Analyte: PFBS
299.0 / 80.0



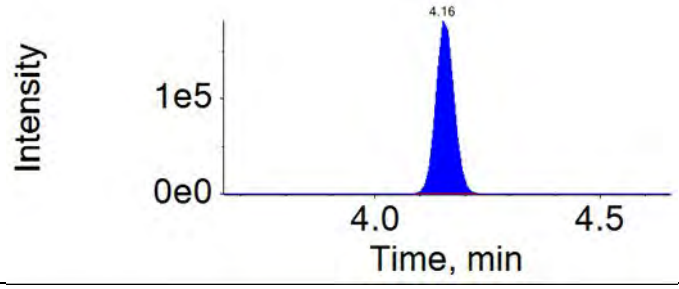
Extraction Standard: 13C3-PFBS
302.0 / 80.0



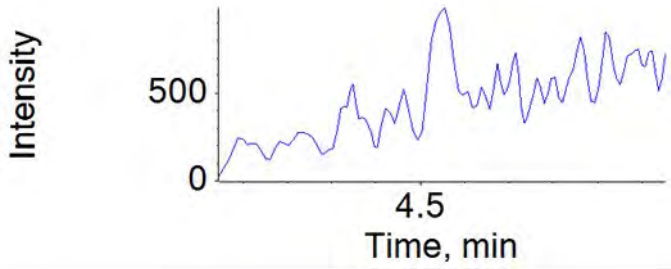
Analyte: PFHxA
313.0 / 269.0



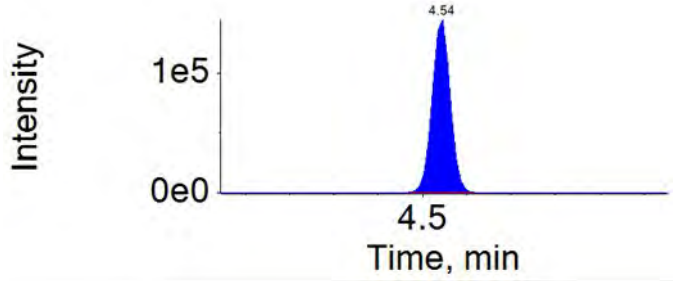
Extraction Standard: 13C5-PFHxA
318.0 / 273.0



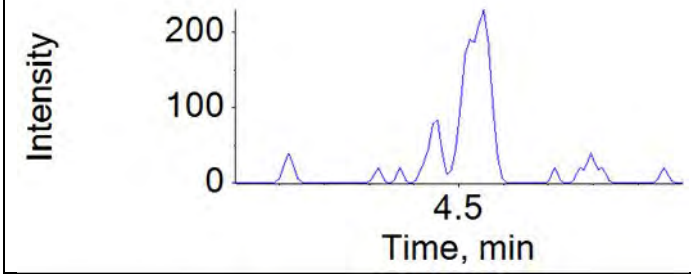
Analyte: PFHpA
363.0 / 319.0



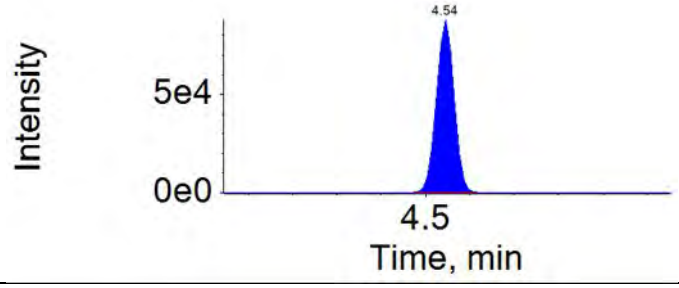
Extraction Standard: 13C4-PFHpA
367.0 / 322.0



Analyte: PFHxS
399.0 / 80.0

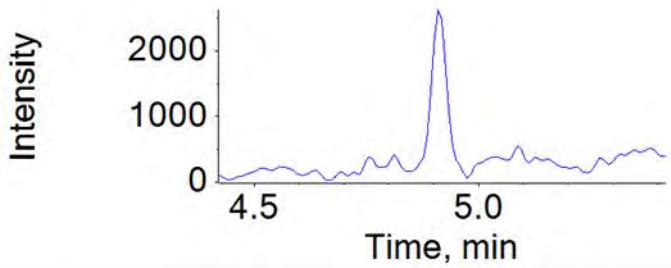


Extraction Standard: 13C3-PFHxS
402.0 / 80.0

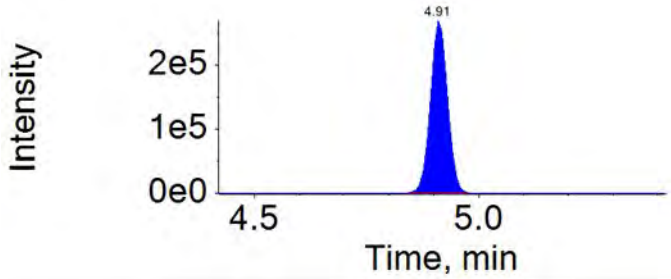


ICAL Name: 18NOV12DCAL **Result Table:** 18316011 11/14/2018 4:24:36 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

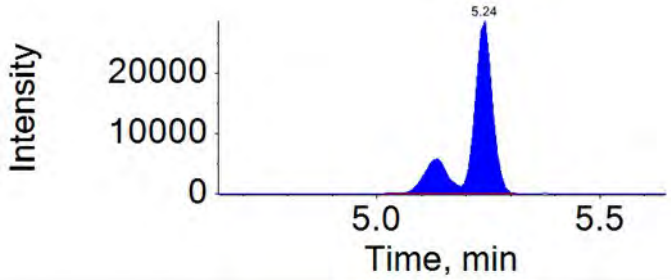
Analyte: PFOA
413.0 / 369.0



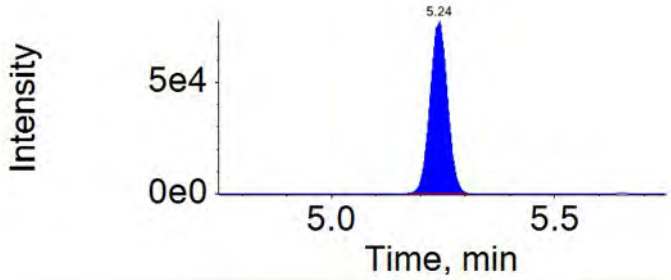
Extraction Standard: 13C8-PFOA
421.0 / 376.0



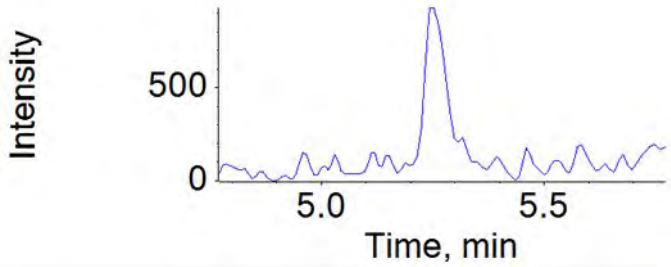
Analyte: PFOS
499.0 / 80.0



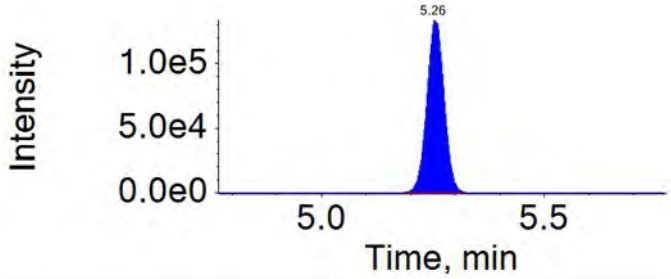
Extraction Standard: 13C8-PFOS
507.0 / 80.0



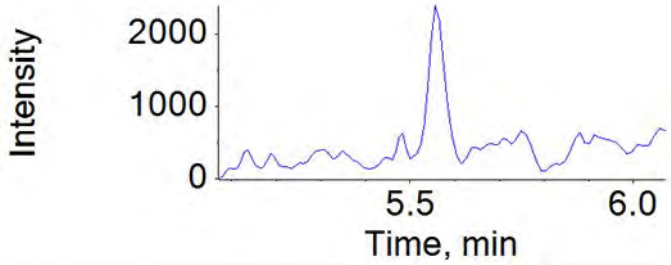
Analyte: PFNA
463.0 / 419.0



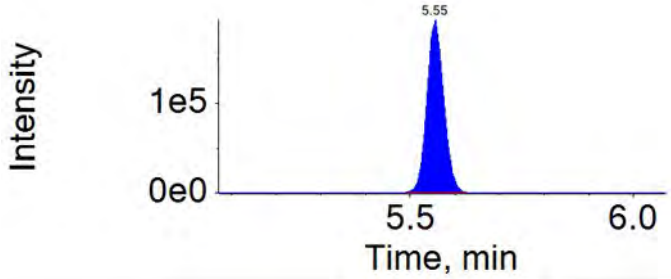
Extraction Standard: 13C9-PFNA
472.0 / 427.0



Analyte: PFDA
513.0 / 469.0



Extraction Standard: 13C6-PFDA
519.0 / 474.0

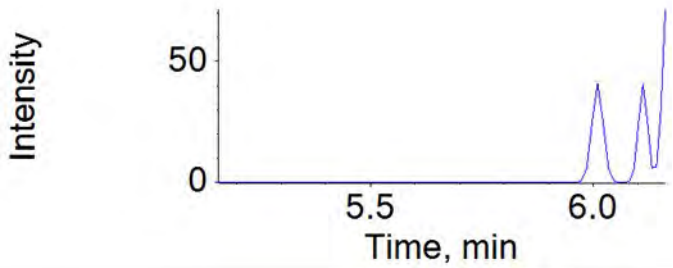


APPROVED
By MCD at 4:51 pm, 11/14/18

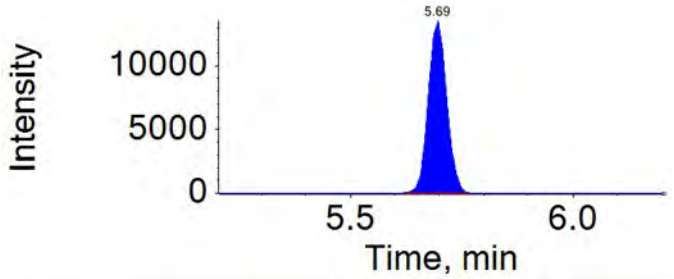
REVIEWED
By HMK at 12:21 pm, 11/15/18

ICAL Name: 18NOV12DCAL **Result Table:** 18316011 11/14/2018 4:24:36 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

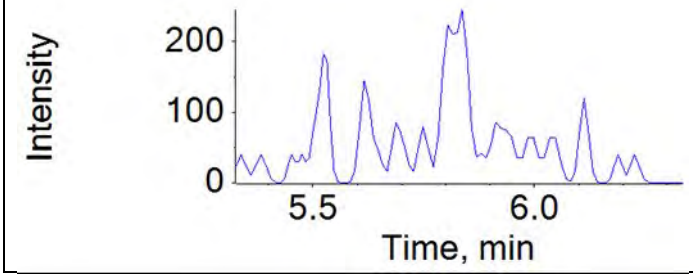
Analyte: NMeFOSAA
570.0 / 419.0



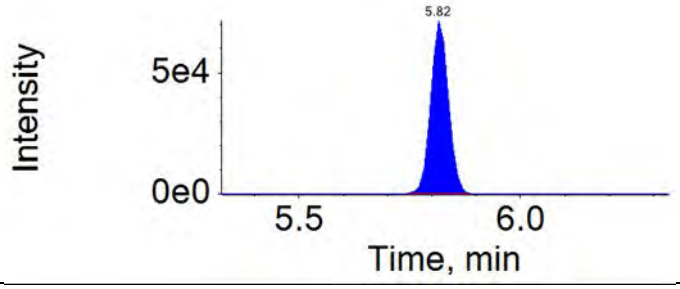
Extraction Standard: d3-NMeFOSAA
573.0 / 419.0



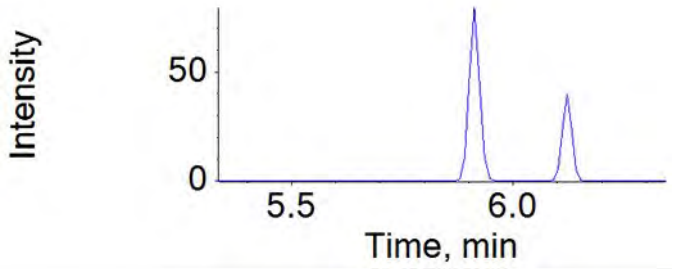
Analyte: PFUnDA
563.0 / 519.0



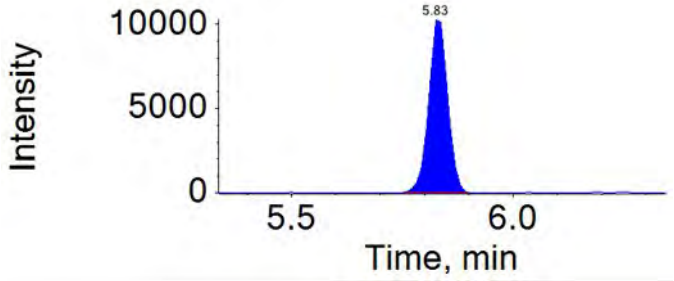
Extraction Standard: 13C7-PFUnDA
570.0 / 525.0



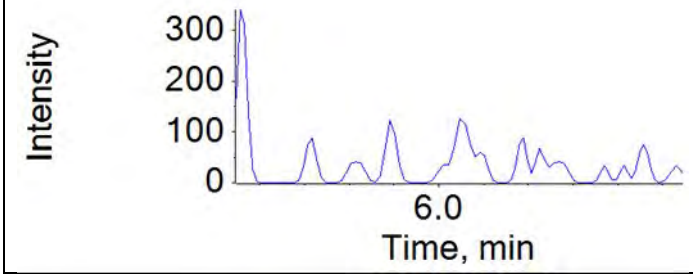
Analyte: NEtFOSAA
584.0 / 419.0



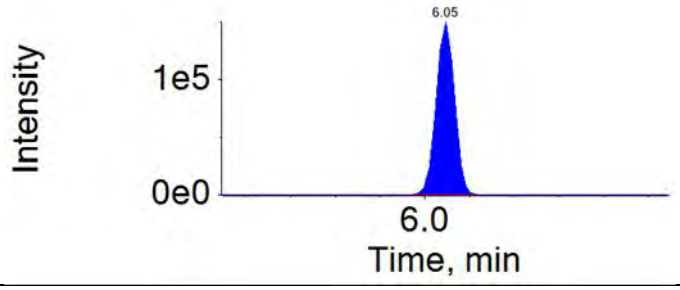
Extraction Standard: d5-NEtFOSAA
589.0 / 419.0



Analyte: PFDoDA
613.0 / 569.0



Extraction Standard: 13C2-PFDoDA
615.0 / 570.0

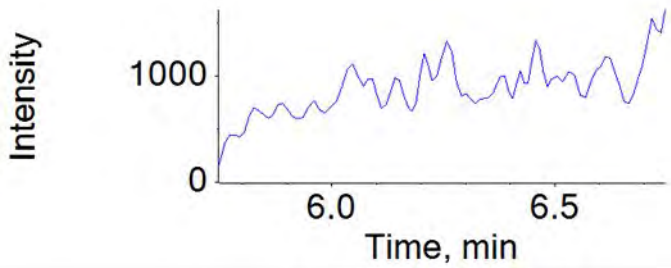


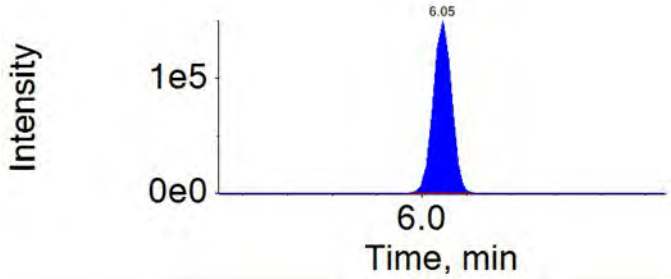
APPROVED
By MCD at 4:51 pm, 11/14/18

REVIEWED
By HMK at 12:21 pm, 11/15/18

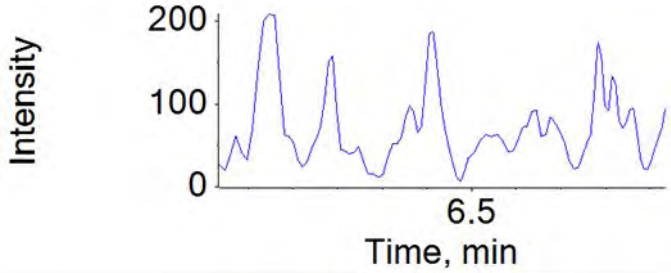
ICAL Name: 18NOV12DCAL **Result Table:** 18316011 11/14/2018 4:24:36 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

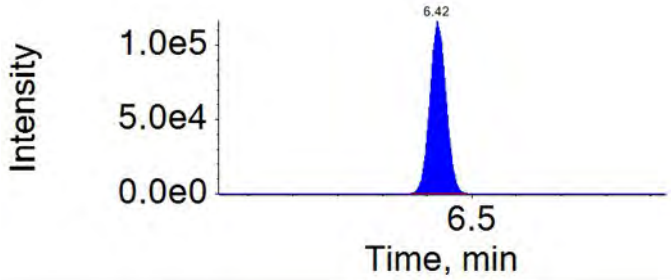
Analyte: PFTrDA	Extraction Standard: 13C2-PFDoDA
663.0 / 619.0	615.0 / 570.0





Analyte: PFTeDA	Extraction Standard: 13C2-PFTeDA
713.0 / 669.0	715.0 / 670.0





APPROVED
By MCD at 4:51 pm, 11/14/18

REVIEWED
By HMK at 12:21 pm, 11/15/18

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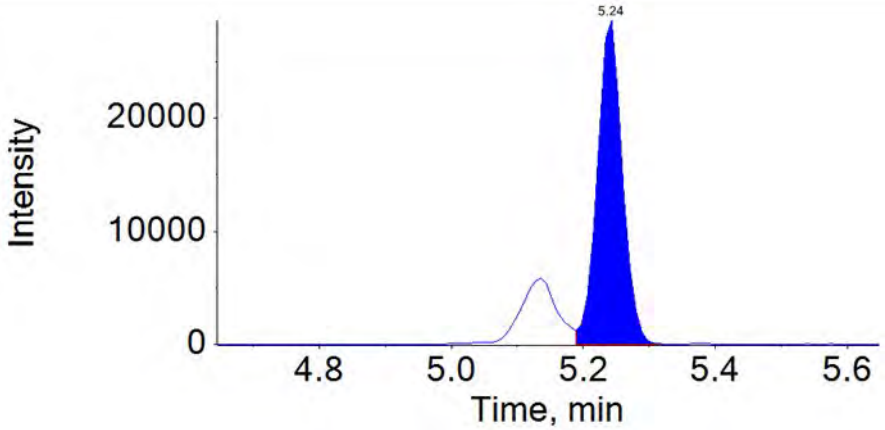
Auto Integrations prior to Manual Integration

Print Date: 11/14/2018 4:31 PM
Template: MQ-OrigInteg-16NOV21.docx

Results Table Name: 18316011
Results Table Date: 11/14/2018 4:24:36 PM

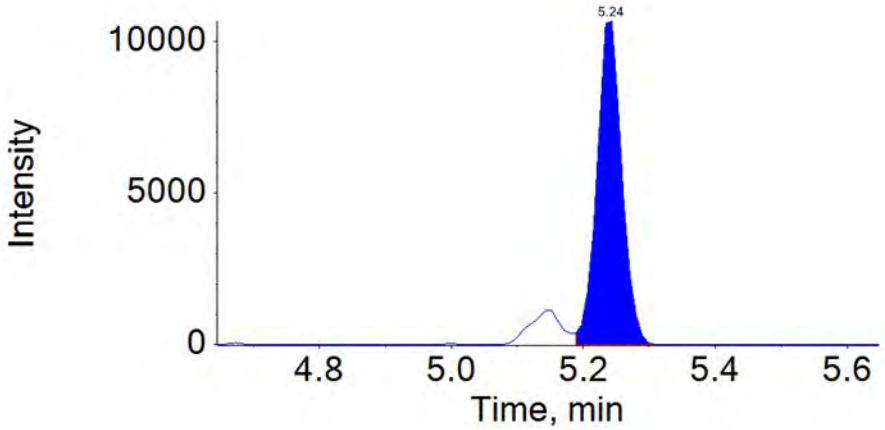
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

Component Name:
PFOS
RT (min.):
5.24
Peak Area:
75767.7
Mass Range:
499.0 / 80.0
File Name:
18NOV13D-55.wiff
Sample Name:
9885086BKG



Integration Comment: incorrect integration

Component Name:
PFOS_2
RT (min.):
5.24
Peak Area:
28119.2
Mass Range:
499.0 / 99.0
File Name:
18NOV13D-55.wiff
Sample Name:
9885086BKG



Integration Comment: incorrect integration

APPROVED
By MCD at 4:51 pm, 11/14/18

REVIEWED
By HMK at 12:21 pm, 11/15/18

Results Table Name: 18316011
Results Table Date: 11/14/2018 4:24:36 PM

Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

APPROVED
By MCD at 4:51 pm, 11/14/18

REVIEWED
By HMK at 12:21 pm, 11/15/18

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LC-MS/MS Analysis Report

Printed: 11/14/2018 4:28:00 PM
Template: IonRatio18OCT10

Ion Ratio Report

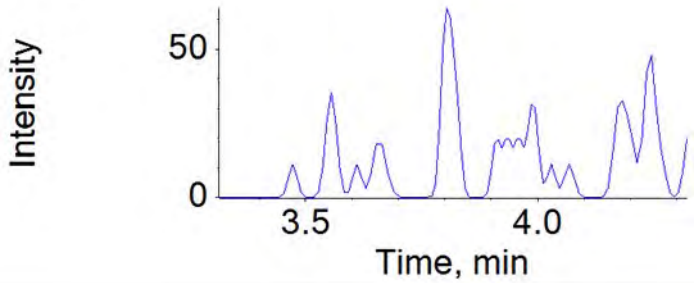
Sample Name: 9885086BKG **Instrument Name:** LM27631 **File Name:** 18NOV13D-55.wiff

Component Name	RT	RRT	Analyte Area Response	Int Typ	Expected Ion Ratio	Ion Ratio	Ion Ratio % Diff	Ion Ratio Limit	Ion Ratio OOS
PFBS	N/A	N/A	N/A	A	N/A	N/A			
PFBS_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFHxA	N/A	N/A	N/A	A	N/A	N/A			
PFHxA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFHpA	N/A	N/A	N/A	A	N/A	N/A			
PFHpA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFHxS	N/A	N/A	N/A	A	N/A	N/A			
PFHxS_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFOA	N/A	N/A	N/A	A	N/A	N/A			
PFOA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFOS	5.24	1.00	98339.2	M	N/A	0.3251			
PFOS_2	5.24	1.00	31967.1	M	N/A	0.3251	10	50	
PFNA	N/A	N/A	N/A	A	N/A	N/A			
PFNA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFDA	N/A	N/A	N/A	A	N/A	N/A			
PFDA_2	N/A	N/A	N/A	A	N/A	N/A		50	
NMeFOSAA	N/A	N/A	N/A	A	N/A	N/A			
NMeFOSAA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFUnDA	N/A	N/A	N/A	A	N/A	N/A			
PFUnDA_2	N/A	N/A	N/A	A	N/A	N/A		50	
NEtFOSAA	N/A	N/A	N/A	A	N/A	N/A			
NEtFOSAA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFDoDA	N/A	N/A	N/A	A	N/A	N/A			
PFDoDA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFTrDA	N/A	N/A	N/A	A	N/A	N/A			
PFTrDA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFTeDA	N/A	N/A	N/A	A	N/A	N/A			
PFTeDA_2	N/A	N/A	N/A	A	N/A	N/A		50	

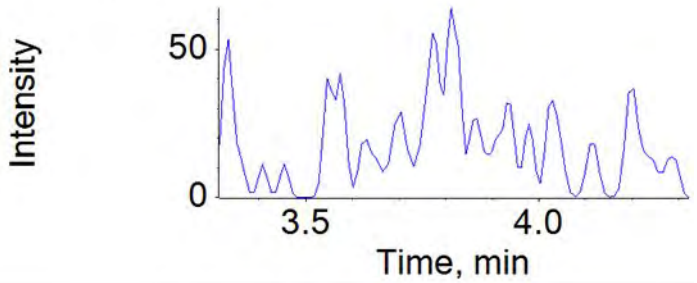
APPROVED
By MCD at 4:51 pm, 11/14/18

REVIEWED
By HMK at 12:21 pm, 11/15/18

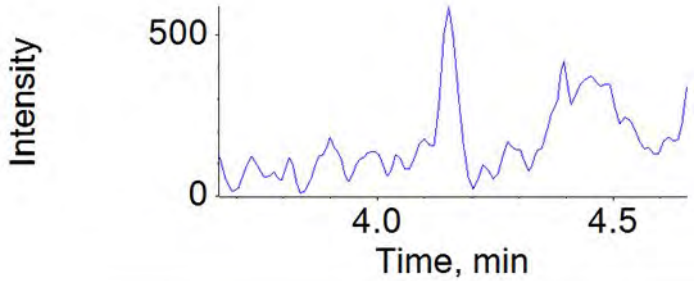
Component: PFBS
Primary Mass: 299.0 / 80.0



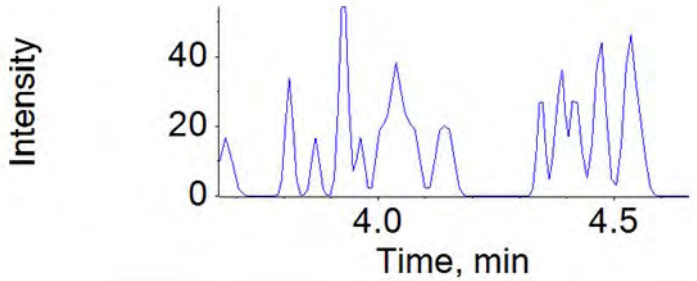
Component: PFBS_2
Secondary Mass: 299.0 / 99.0



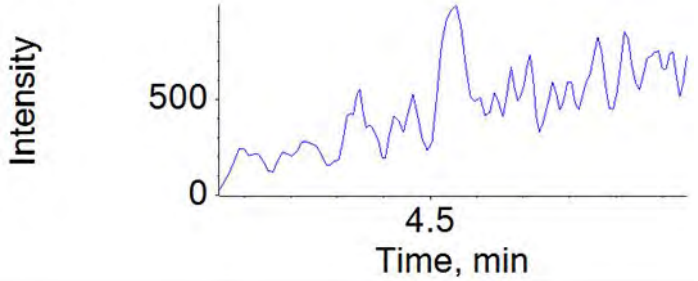
Component: PFHxA
Primary Mass: 313.0 / 269.0



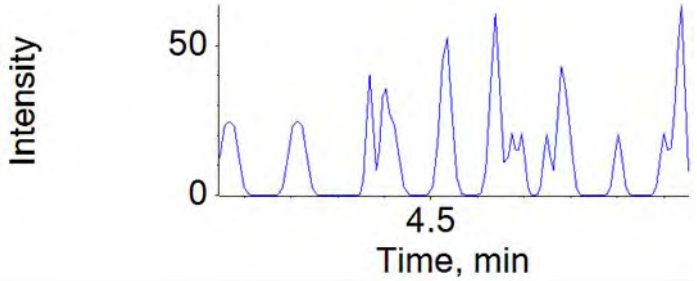
Component: PFHxA_2
Secondary Mass: 313.0 / 119.0



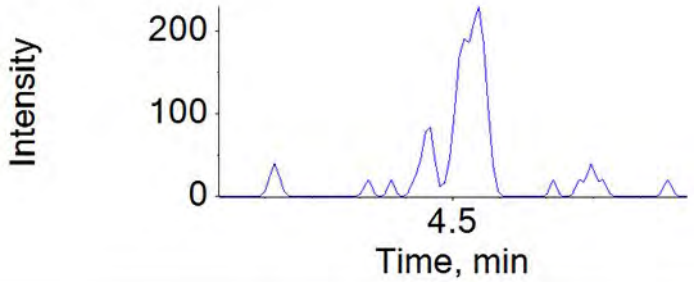
Component: PFHpA
Primary Mass: 363.0 / 319.0



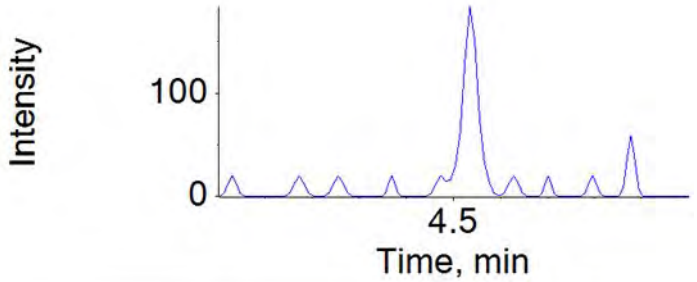
Component: PFHpA_2
Secondary Mass: 363.0 / 169.0



Component: PFHxS
Primary Mass: 399.0 / 80.0



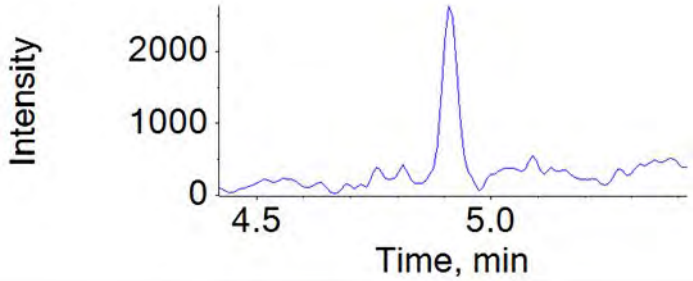
Component: PFHxS_2
Secondary Mass: 399.0 / 99.0



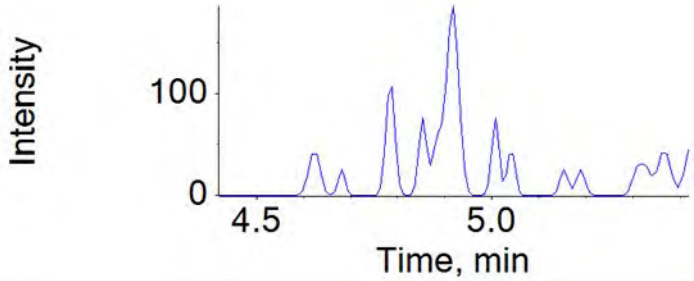
APPROVED
By MCD at 4:51 pm, 11/14/18

REVIEWED
By HMK at 12:21 pm, 11/15/18

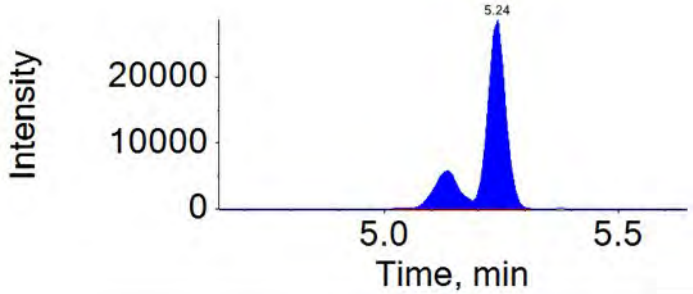
Component: PFOA
Primary Mass: 413.0 / 369.0



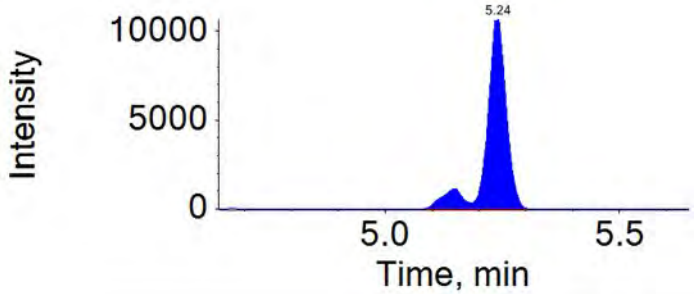
Component: PFOA_2
Secondary Mass: 413.0 / 169.0



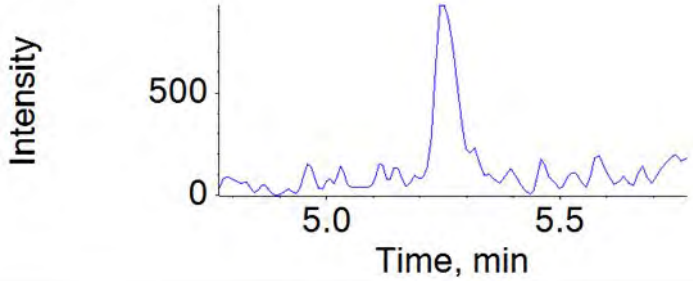
Component: PFOS
Primary Mass: 499.0 / 80.0



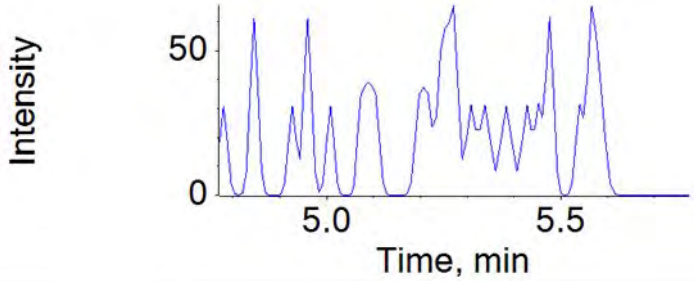
Component: PFOS_2
Secondary Mass: 499.0 / 99.0



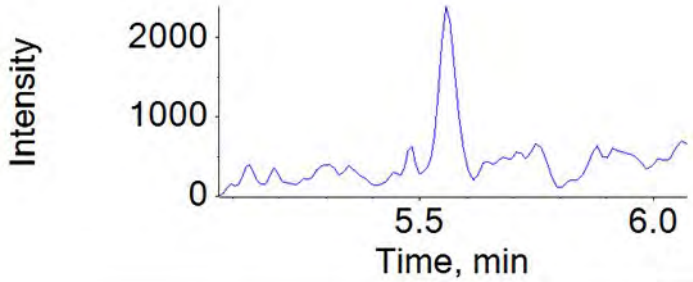
Component: PFNA
Primary Mass: 463.0 / 419.0



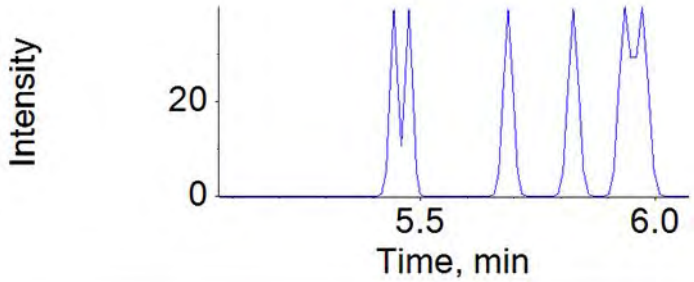
Component: PFNA_2
Secondary Mass: 463.0 / 169.0



Component: PFDA
Primary Mass: 513.0 / 469.0



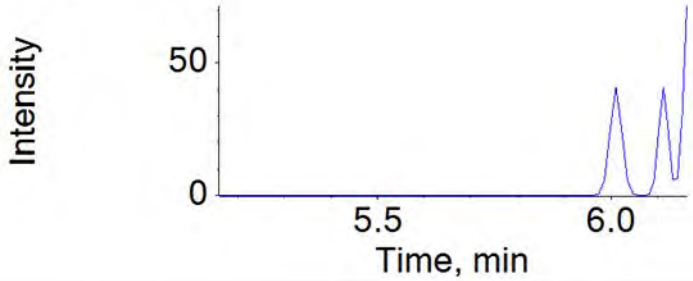
Component: PFDA_2
Secondary Mass: 513.0 / 169.0



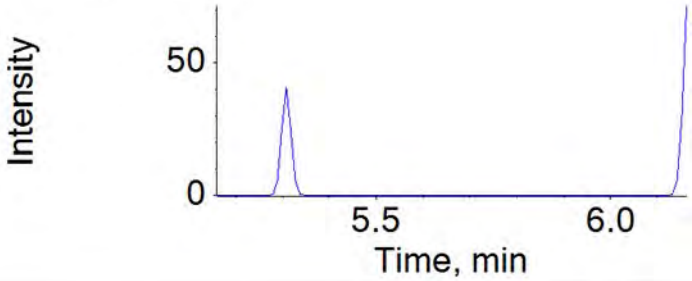
APPROVED
By MCD at 4:51 pm, 11/14/18

REVIEWED
By HMK at 12:21 pm, 11/15/18

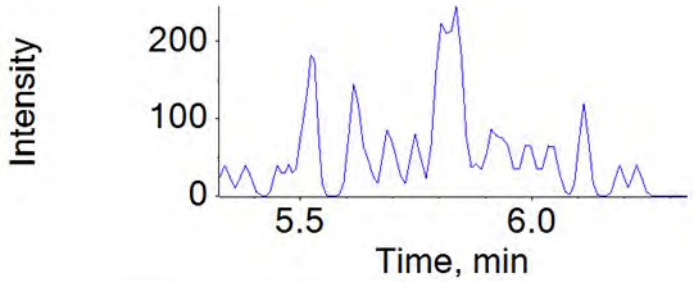
Component: NMeFOSAA
Primary Mass: 570.0 / 419.0



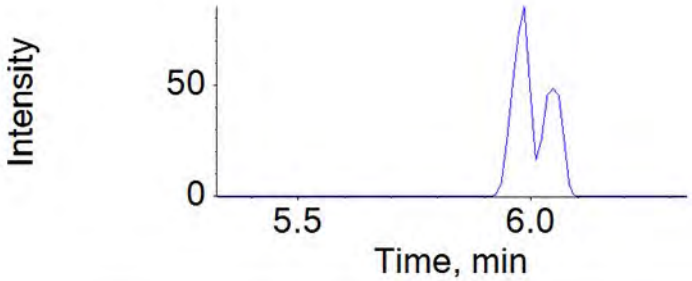
Component: NMeFOSAA_2
Secondary Mass: 570.0 / 483.0



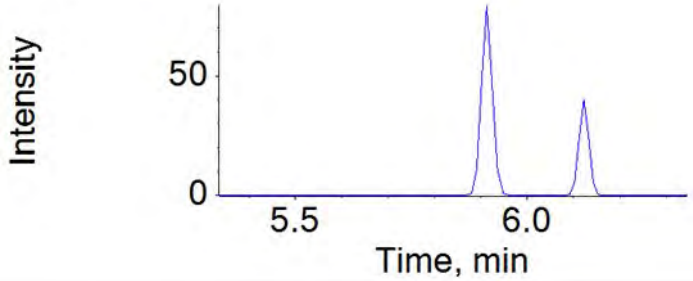
Component: PFUnDA
Primary Mass: 563.0 / 519.0



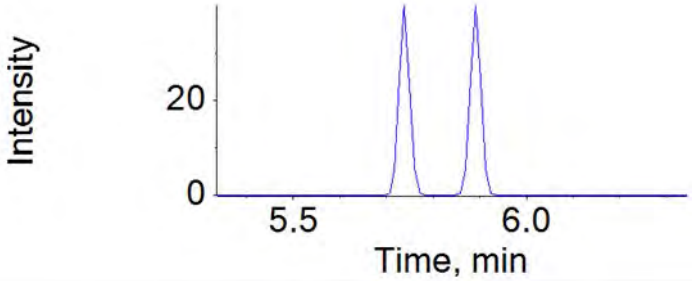
Component: PFUnDA_2
Secondary Mass: 563.0 / 169.0



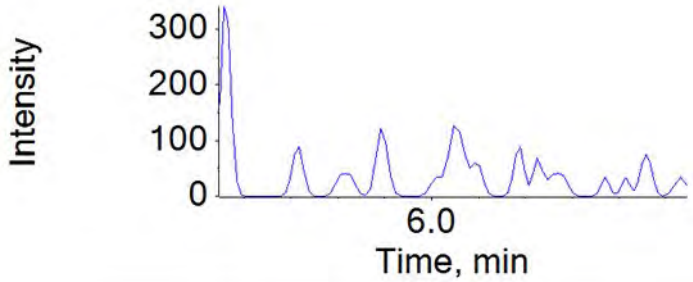
Component: NEtFOSAA
Primary Mass: 584.0 / 419.0



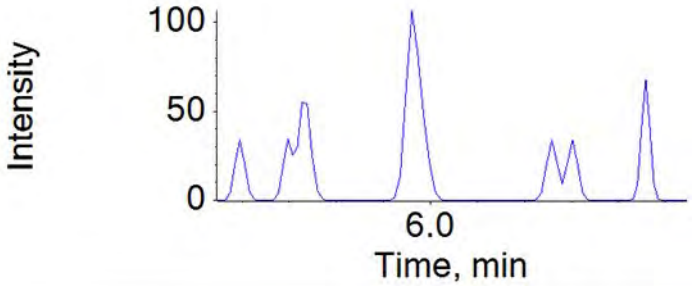
Component: NEtFOSAA_2
Secondary Mass: 584.0 / 526.0



Component: PFDoDA
Primary Mass: 613.0 / 569.0



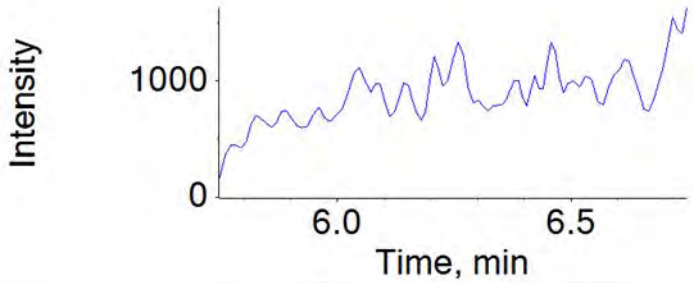
Component: PFDoDA_2
Secondary Mass: 613.0 / 169.0



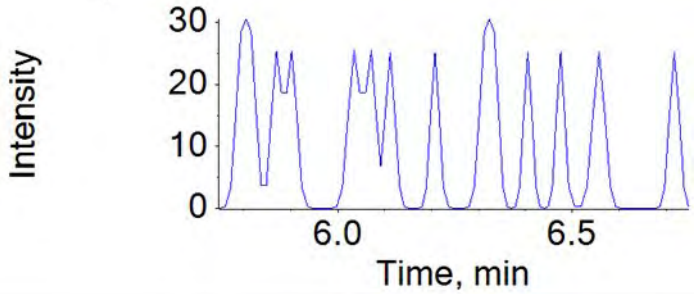
APPROVED
By MCD at 4:51 pm, 11/14/18

REVIEWED
By HMK at 12:21 pm, 11/15/18

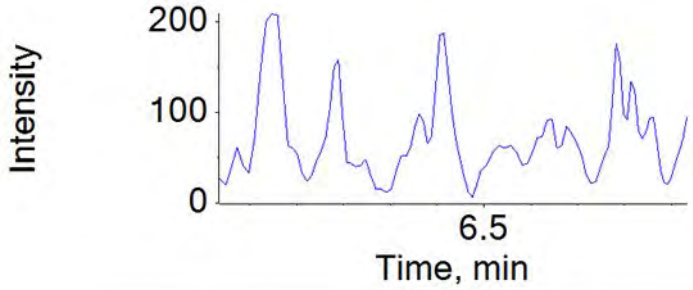
Component: PFTrDA
Primary Mass: 663.0 / 619.0



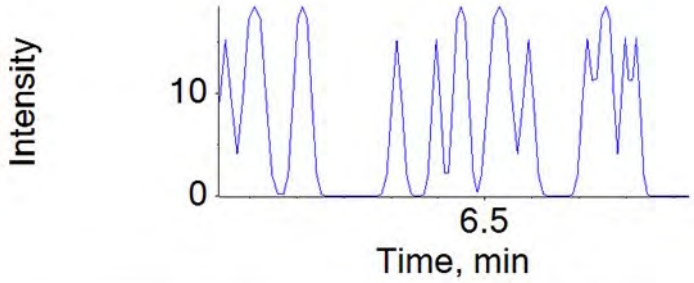
Component: PFTrDA_2
Secondary Mass: 663.0 / 169.0



Component: PFTeDA
Primary Mass: 713.0 / 669.0



Component: PFTeDA_2
Secondary Mass: 713.0 / 169.0



APPROVED
By MCD at 4:51 pm, 11/14/18

REVIEWED
By HMK at 12:21 pm, 11/15/18

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LC-MS/MS
DOD Analysis Report

Printed: 11/14/2018 4:26:00 PM
Template: DOD-Sample-18JUN22.docx

ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM
Result Table: 18316011 11/14/2018 4:24:36 PM
Acquisition Method: 18AUG13_3uL.dam

Sample Name:	9885089			**Data File:**		18NOV13D-58.wiff
Sample ID:	EPA 537 mod QSM 5.1 table B-15 18316011 OU1-Bldg27-S-01-07 Grab Soil			**Acquis Date:**		2018-11-13T18:17:35
Sample Type:	Unknown			**Instrument:**		LM27631
Vial Position:	56			**Acquis Method:**		18AUG13_3uL.dam
Injection Vol:	3.00			**Result Table:**		18316011
QMethod File:	18AUG20QM			**ICAL Name:**		18NOV12DCAL
Batch Number:	18316011			**Operator:**		MCD7824
Sample Wt.:	1.06000			**Dilution Factor:**		1.00
Sample Vol.:	1.000			**Prep Factor:**		2.000

Injection Standard Peak Table

Injection Standard Area Reference File: 18NOV13D-05

Injection Standard Name	Inj Std Conc	Injection Std Peak Area	Rreference Injection Standard Area	Injection Std %Diff	Injection Std %Diff Limit	Injection Std %Diff OOS
13C3-PFBA	5.0	736997.8	661126.9	11	50	
13C2-PFOA	5.0	517841.2	466902.6	11	50	
13C4-PFOS	4.8	275137.4	247446.9	11	50	
13C2-PFDA	5.0	327634.0	295381.6	11	50	

Extraction Standard Peak Table

Extraction Standard Name	Ext Std Area	Inj Std Name	Inj Std Area	Area Ratio	Ext Std Conc	Ext Std Result	Ext Std %REC	Ext Std %REC Limit	Ext Std OOS
E13C3-PFBS	327138.9	13C3-PFBA	736997.8	0.444	8.774	5.912	67	50-150	
E13C5-PFHxA	517495.9	13C2-PFOA	517841.2	0.999	9.434	6.811	72	50-150	
E13C3-PFHxS	247140.2	13C2-PFOA	517841.2	0.477	8.925	6.179	69	50-150	
E13C4-PFHpA	421352.7	13C2-PFOA	517841.2	0.814	9.434	6.916	73	50-150	
E13C8-PFOA	726473.1	13C2-PFOA	517841.2	1.403	9.434	7.293	77	50-150	
E13C8-PFOS	214522.8	13C4-PFOS	275137.4	0.780	9.019	6.518	72	50-150	
E13C9-PFNA	371218.9	13C4-PFOS	275137.4	1.349	9.434	7.098	75	50-150	
E13C6-PFDA	493604.0	13C2-PFDA	327634.0	1.507	9.434	6.633	70	50-150	
Ed3-NMeFOSAA	57586.0	13C2-PFDA	327634.0	0.176	9.434	5.986	63	50-150	
E13C7-PFUnDA	196031.1	13C2-PFDA	327634.0	0.598	9.434	6.554	69	50-150	
Ed5-NEtFOSAA	46375.3	13C2-PFDA	327634.0	0.142	9.434	5.650	60	50-150	
E13C2-PFDoDA	422468.3	13C2-PFDA	327634.0	1.289	9.434	6.317	67	50-150	
E13C2-PFTeDA	320749.5	13C2-PFDA	327634.0	0.979	9.434	6.485	69	50-150	

APPROVED
By MCD at 4:51 pm, 11/14/18

REVIEWED
By HMK at 12:21 pm, 11/15/18

ICAL Name: 18NOV12DCAL **Result Table:** 18316011 11/14/2018 4:24:36 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

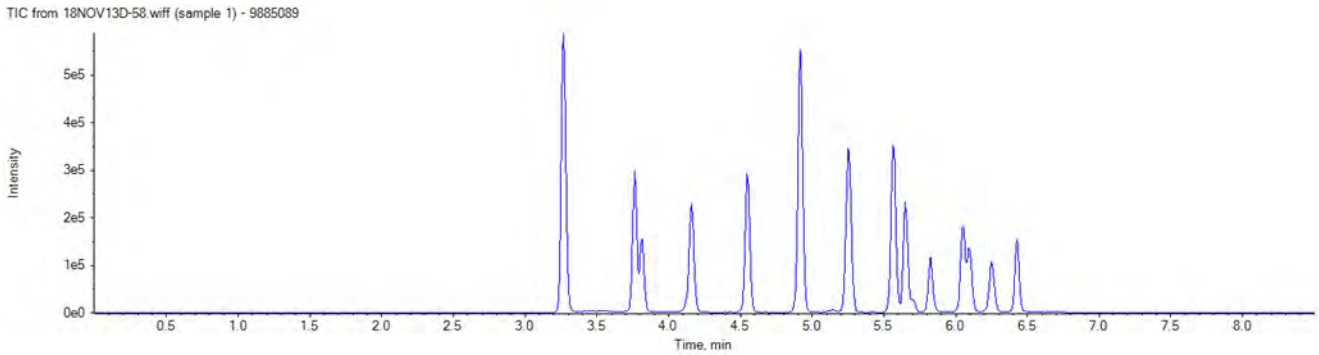
Analyte Quantitation Peak Table

Sample Name: 9885089 **Instrument Name:** LM27631 **File Name:** 18NOV13D-58.wiff

Sample Wt	Sample Vol	Dilution Factor	PrepFactor
1.06000	1.000	1.00	2.000

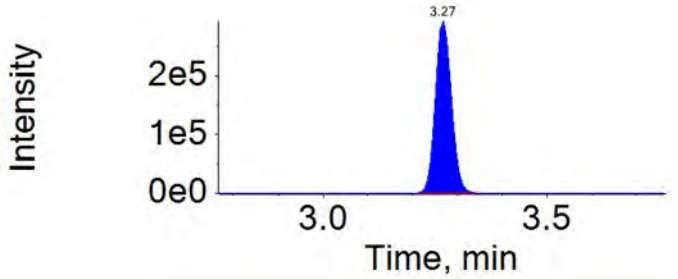
Analyte Name	RT	RRT	Analyte Area Response	E	Int Typ	ES Name	ES RT	ES Area Response	Area Ratio	Sample Result (ng/g)
PFBS	N/A	N/A	N/A		A	13C3-PFBS	3.81	327138.9	N/A	
PFHxA	N/A	N/A	N/A		A	13C5-PFHxA	4.16	517495.9	N/A	
PFHpA	N/A	N/A	N/A		A	13C4-PFHpA	4.55	421352.7	N/A	
PFHxS	N/A	N/A	N/A		A	13C3-PFHxS	4.55	247140.2	N/A	
PFOA	N/A	N/A	N/A		A	13C8-PFOA	4.92	726473.1	N/A	
PFOS	5.25	1.000	41748.7		M	13C8-PFOS	5.25	214522.8	0.195	1.606
PFNA	N/A	N/A	N/A		A	13C9-PFNA	5.26	371218.9	N/A	
PFDA	N/A	N/A	N/A		A	13C6-PFDA	5.57	493604.0	N/A	
NMeFOSAA	N/A	N/A	N/A		A	d3-NMeFOSAA	5.70	57586.0	N/A	
PFUnDA	N/A	N/A	N/A		A	13C7-PFUnDA	5.82	196031.1	N/A	
NEtFOSAA	N/A	N/A	N/A		A	d5-NEtFOSAA	5.83	46375.3	N/A	
PFDoDA	N/A	N/A	N/A		A	13C2-PFDoDA	6.05	422468.3	N/A	
PFTrDA	N/A	N/A	N/A		A	13C2-PFDoDA	6.05	422468.3	N/A	
PFTeDA	N/A	N/A	N/A		A	13C2-PFTeDA	6.43	320749.5	N/A	

Total Ion Chromatogram

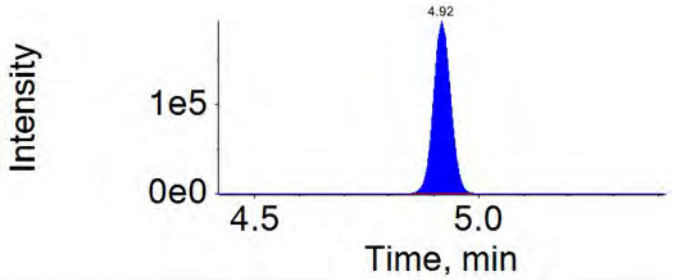


ICAL Name: 18NOV12DCAL **Result Table:** 18316011 11/14/2018 4:24:36 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

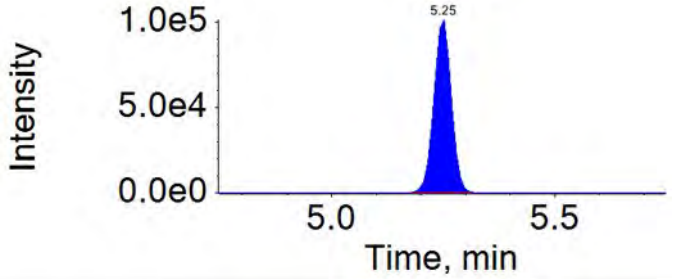
Injection Standard: 13C3-PFBA
216.0 / 172.0



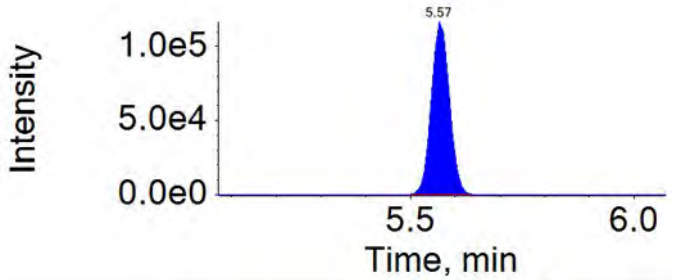
Injection Standard: 13C2-PFOA
415.0 / 370.0



Injection Standard: 13C4-PFOS
503.0 / 80.0



Injection Standard: 13C2-PFDA
515.0 / 470.0

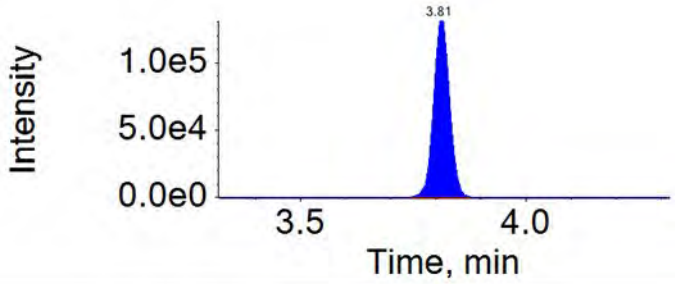


APPROVED
By MCD at 4:51 pm, 11/14/18

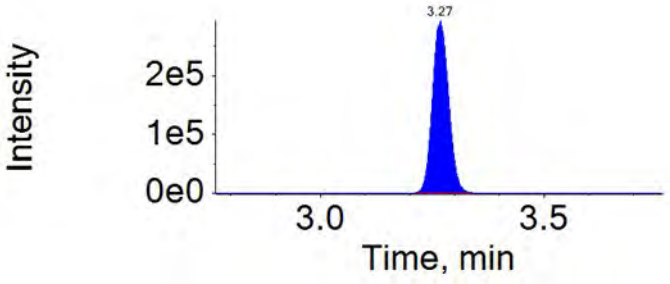
REVIEWED
By HMK at 12:21 pm, 11/15/18

ICAL Name: 18NOV12DCAL **Result Table:** 18316011 11/14/2018 4:24:36 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

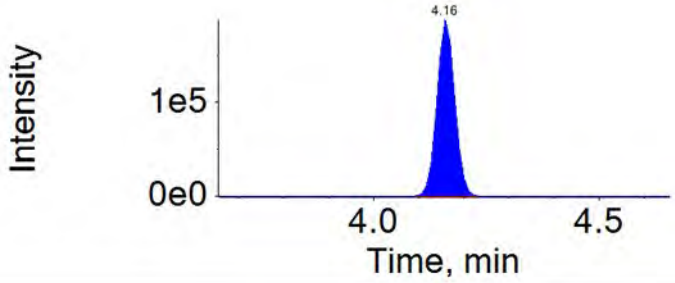
Extraction Standard: E13C3-PFBS
302.0 / 80.0



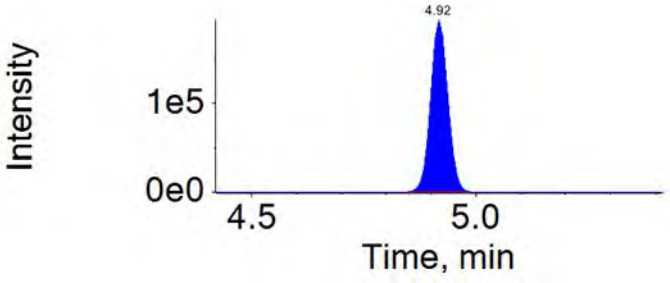
Injection Standard: 13C3-PFBA
216.0 / 172.0



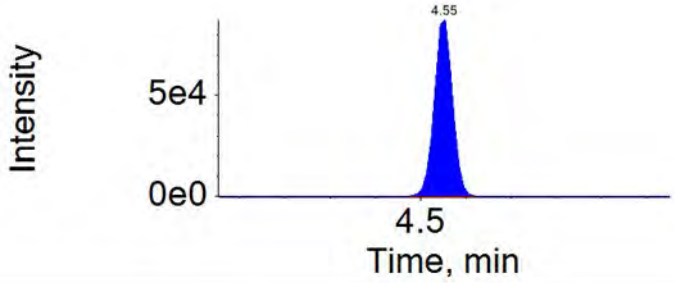
Extraction Standard: E13C5-PFHxA
318.0 / 273.0



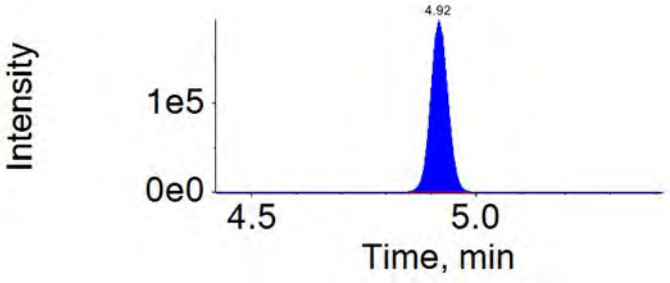
Injection Standard: 13C2-PFOA
415.0 / 370.0



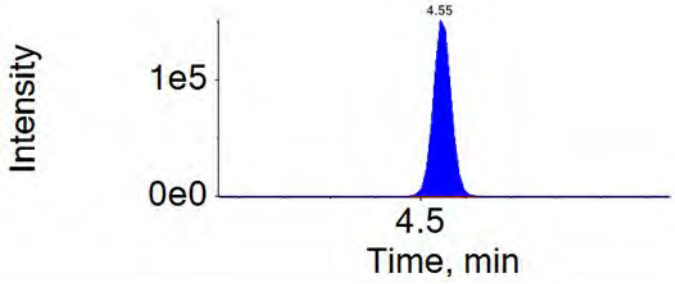
Extraction Standard: E13C3-PFHxS
402.0 / 80.0



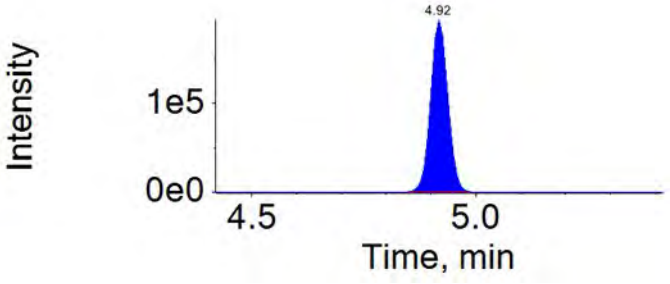
Injection Standard: 13C2-PFOA
415.0 / 370.0



Extraction Standard: E13C4-PFHpA
367.0 / 322.0



Injection Standard: 13C2-PFOA
415.0 / 370.0

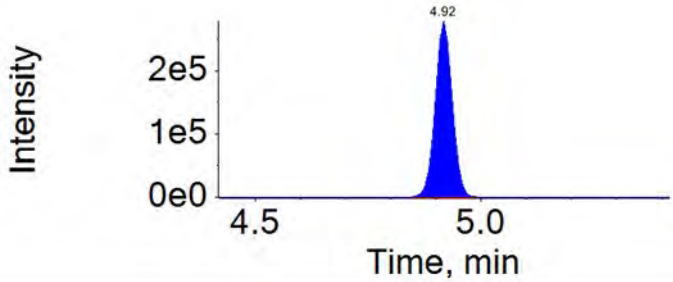


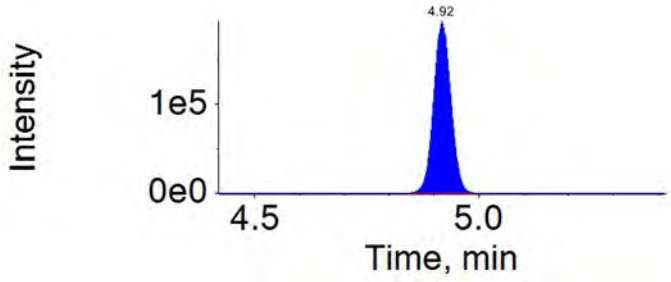
APPROVED
By MCD at 4:51 pm, 11/14/18

REVIEWED
By HMK at 12:21 pm, 11/15/18

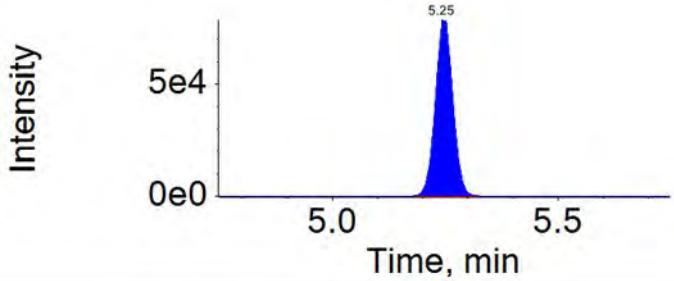
ICAL Name: 18NOV12DCAL **Result Table:** 18316011 11/14/2018 4:24:36 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

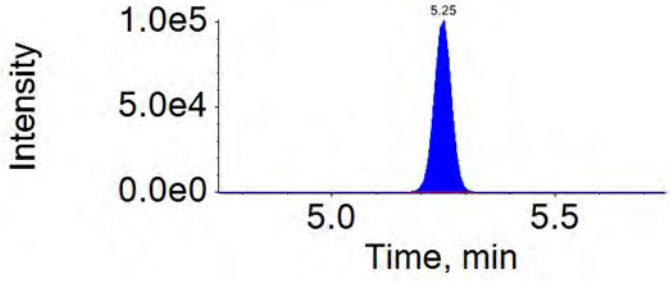
Extraction Standard: E13C8-PFOA	Injection Standard: 13C2-PFOA
421.0 / 376.0	415.0 / 370.0



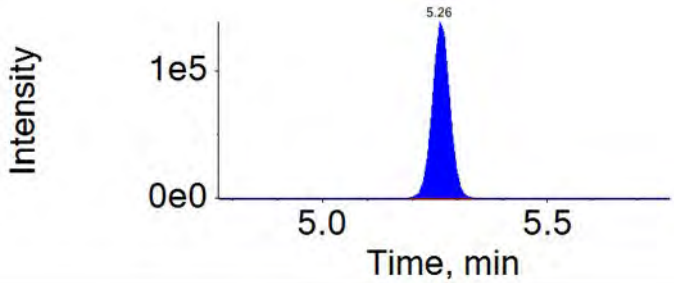


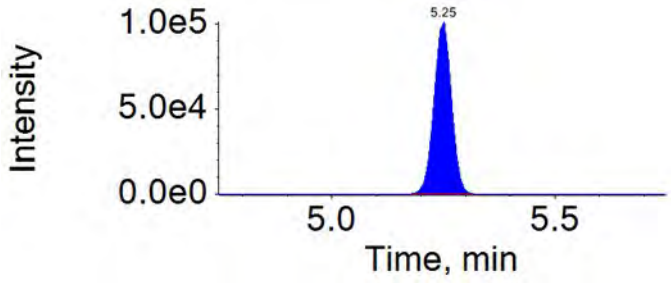
Extraction Standard: E13C8-PFOS	Injection Standard: 13C4-PFOS
507.0 / 80.0	503.0 / 80.0



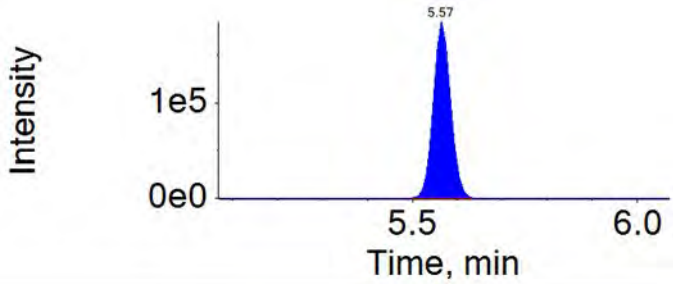


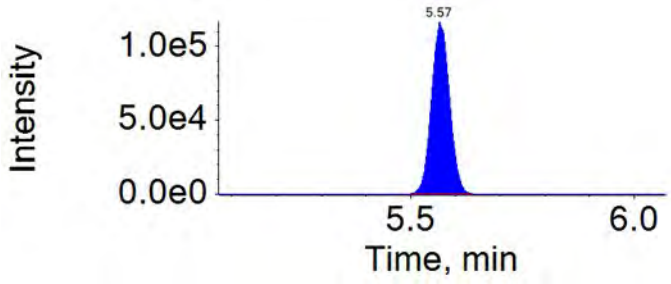
Extraction Standard: E13C9-PFNA	Injection Standard: 13C4-PFOS
472.0 / 427.0	503.0 / 80.0





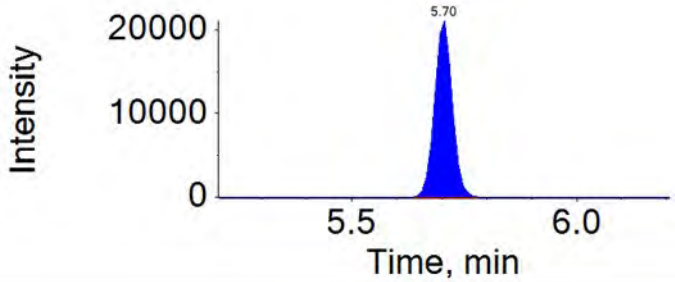
Extraction Standard: E13C6-PFDA	Injection Standard: 13C2-PFDA
519.0 / 474.0	515.0 / 470.0

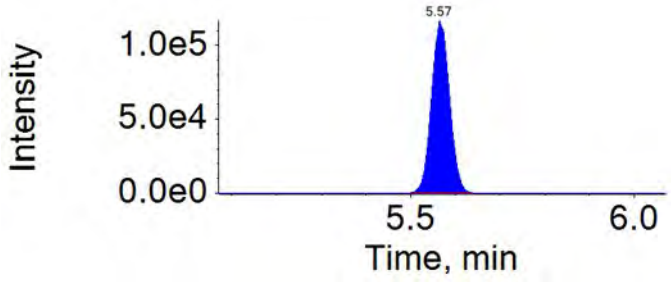




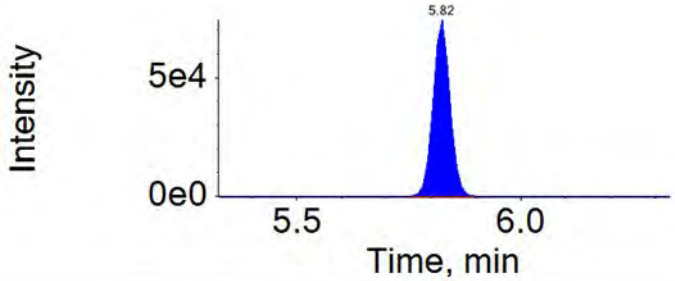
ICAL Name: 18NOV12DCAL **Result Table:** 18316011 11/14/2018 4:24:36 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

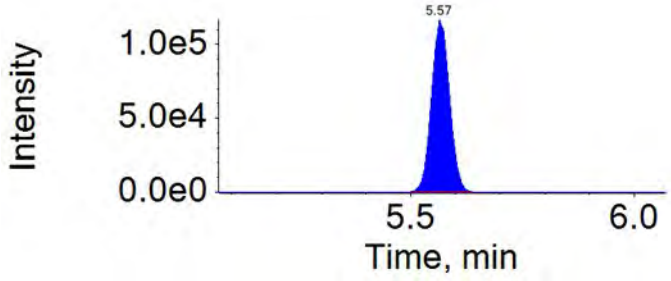
Extraction Standard: Ed3-NMeFOSAA	Injection Standard: 13C2-PFDA
573.0 / 419.0	515.0 / 470.0



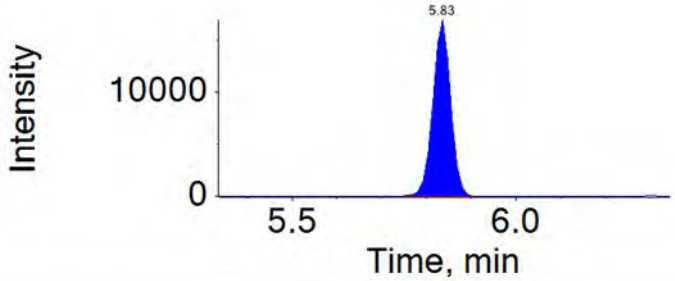


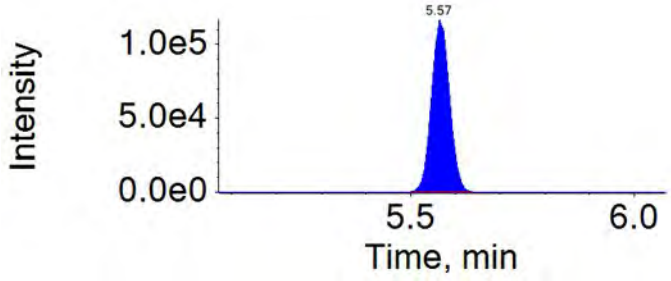
Extraction Standard: E13C7-PFUnDA	Injection Standard: 13C2-PFDA
570.0 / 525.0	515.0 / 470.0



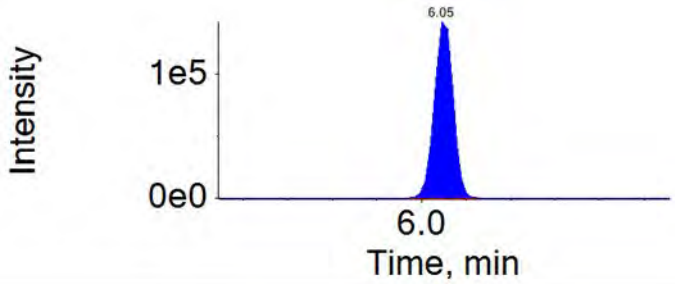


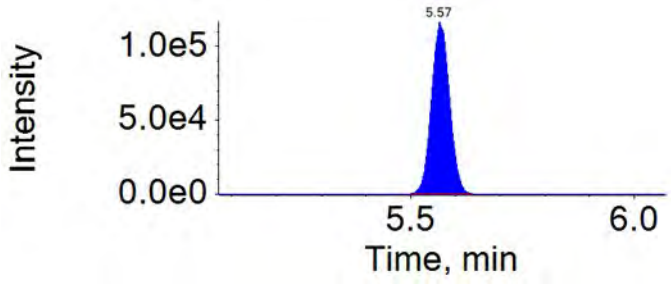
Extraction Standard: Ed5-NEtFOSAA	Injection Standard: 13C2-PFDA
589.0 / 419.0	515.0 / 470.0



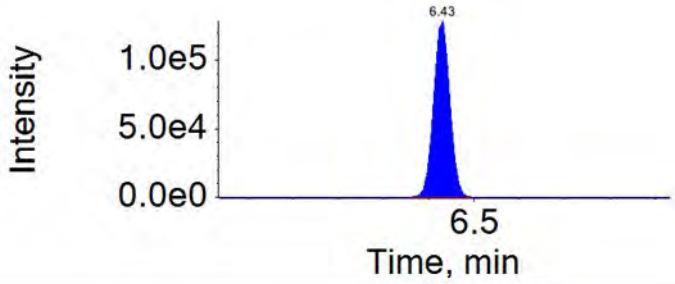
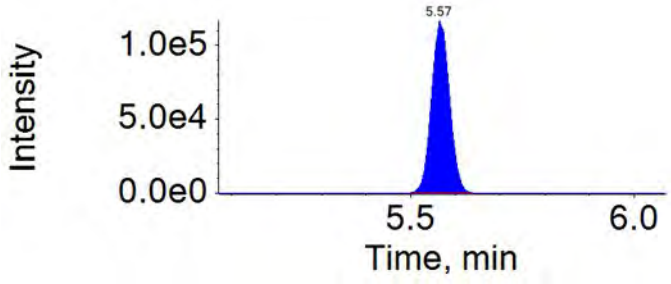


Extraction Standard: E13C2-PFDoDA	Injection Standard: 13C2-PFDA
615.0 / 570.0	515.0 / 470.0



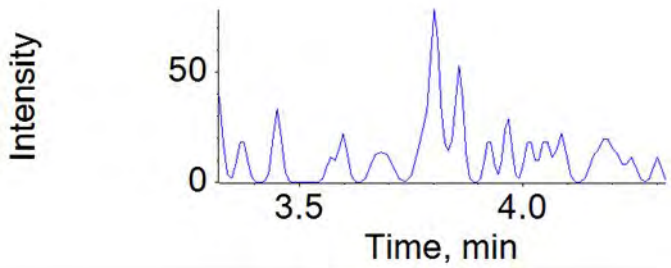


ICAL Name: 18NOV12DCAL **Result Table:** 18316011 11/14/2018 4:24:36 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

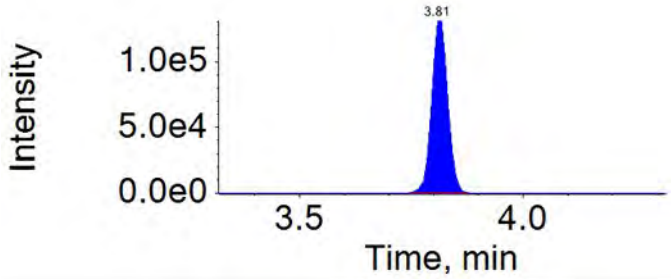
Extraction Standard: E13C2-PFTeDA	Injection Standard: 13C2-PFDA
715.0 / 670.0 	515.0 / 470.0 

ICAL Name: 18NOV12DCAL **Result Table:** 18316011 11/14/2018 4:24:36 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

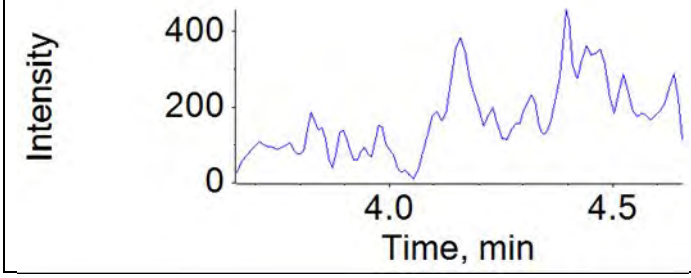
Analyte: PFBS
299.0 / 80.0



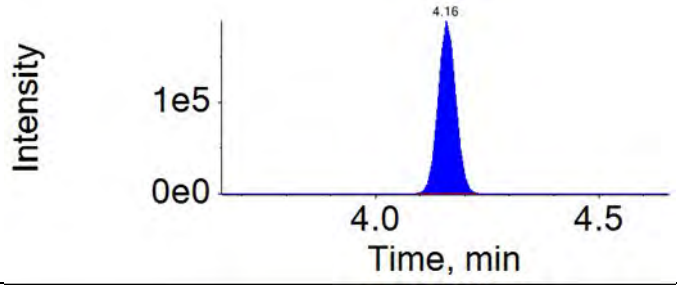
Extraction Standard: 13C3-PFBS
302.0 / 80.0



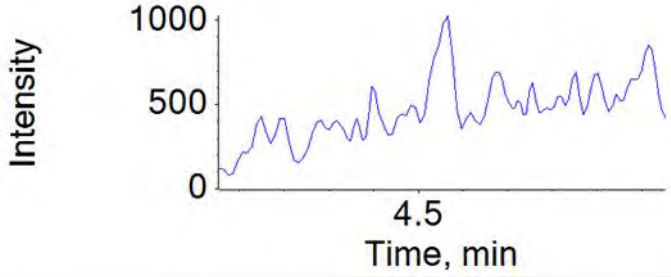
Analyte: PFHxA
313.0 / 269.0



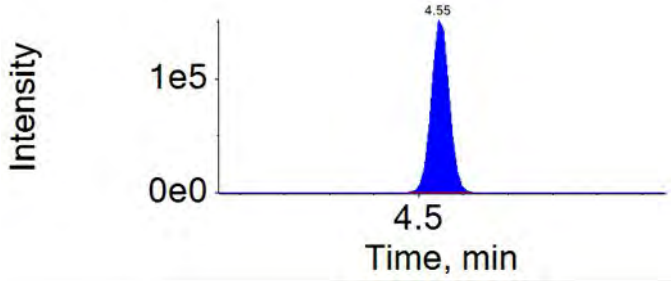
Extraction Standard: 13C5-PFHxA
318.0 / 273.0



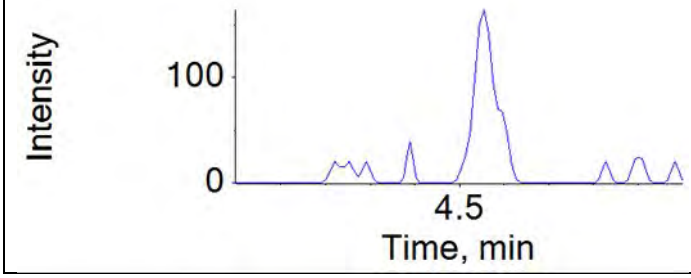
Analyte: PFHpA
363.0 / 319.0



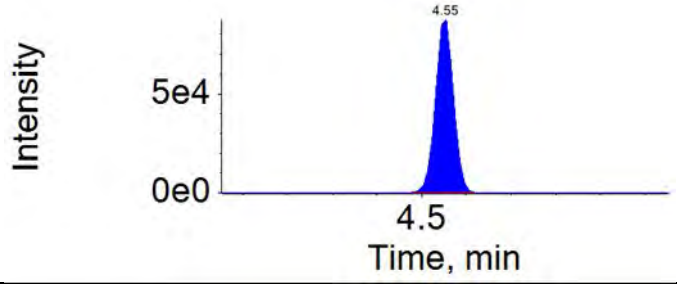
Extraction Standard: 13C4-PFHpA
367.0 / 322.0



Analyte: PFHxS
399.0 / 80.0

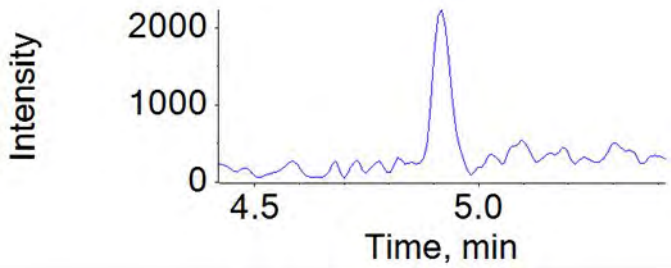


Extraction Standard: 13C3-PFHxS
402.0 / 80.0

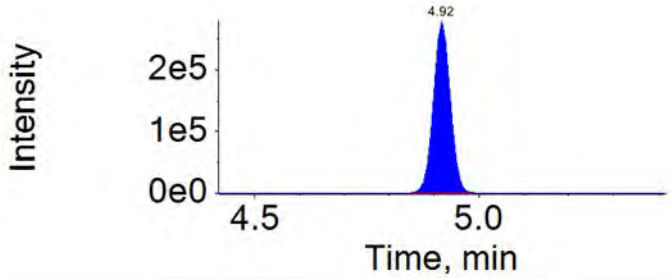


ICAL Name: 18NOV12DCAL **Result Table:** 18316011 11/14/2018 4:24:36 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

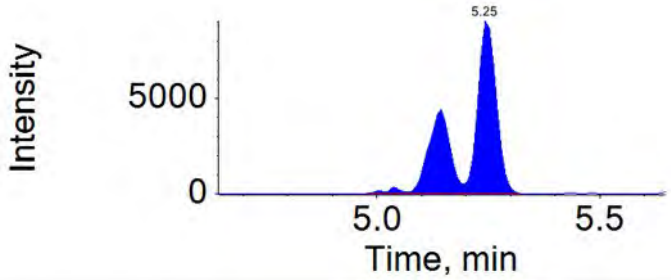
Analyte: PFOA
413.0 / 369.0



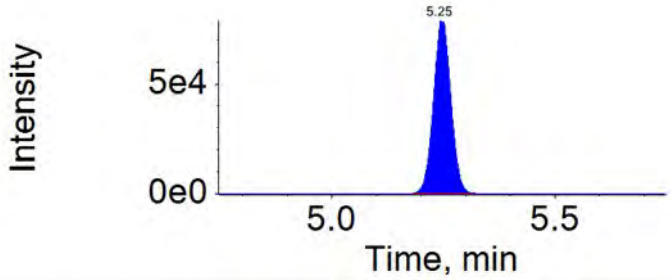
Extraction Standard: 13C8-PFOA
421.0 / 376.0



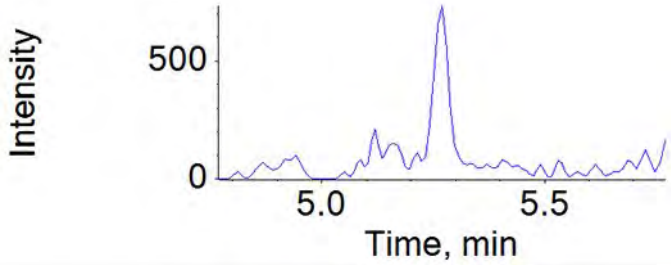
Analyte: PFOS
499.0 / 80.0



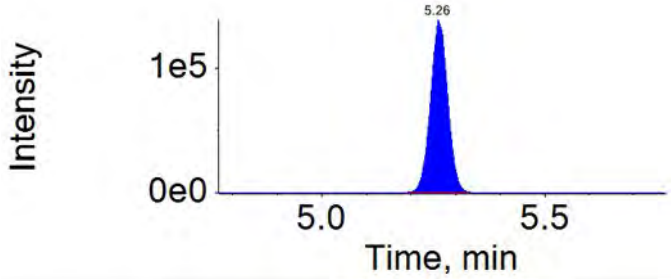
Extraction Standard: 13C8-PFOS
507.0 / 80.0



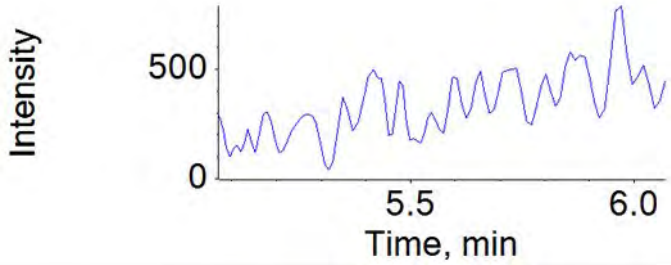
Analyte: PFNA
463.0 / 419.0



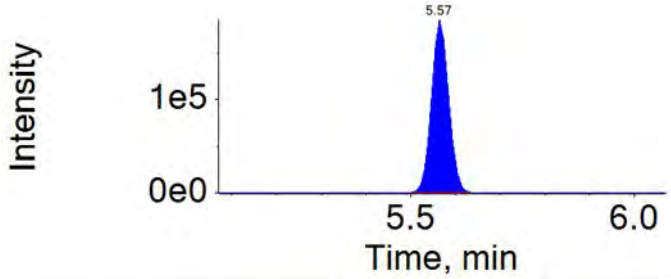
Extraction Standard: 13C9-PFNA
472.0 / 427.0



Analyte: PFDA
513.0 / 469.0

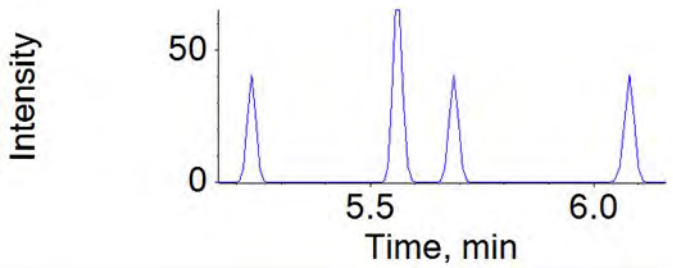


Extraction Standard: 13C6-PFDA
519.0 / 474.0

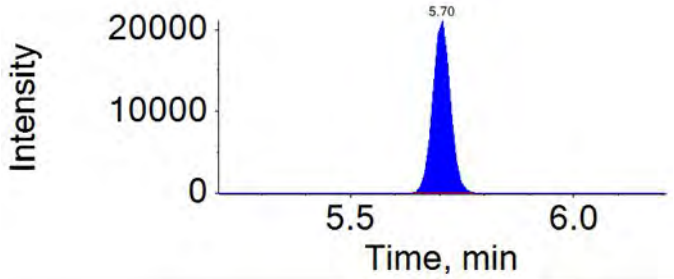


ICAL Name: 18NOV12DCAL **Result Table:** 18316011 11/14/2018 4:24:36 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

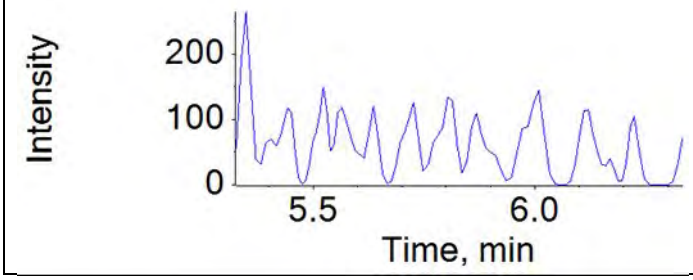
Analyte: NMeFOSAA
570.0 / 419.0



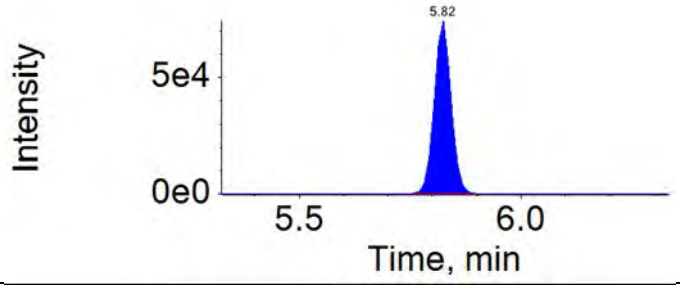
Extraction Standard: d3-NMeFOSAA
573.0 / 419.0



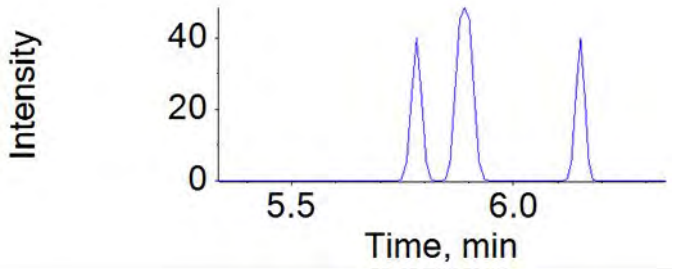
Analyte: PFUnDA
563.0 / 519.0



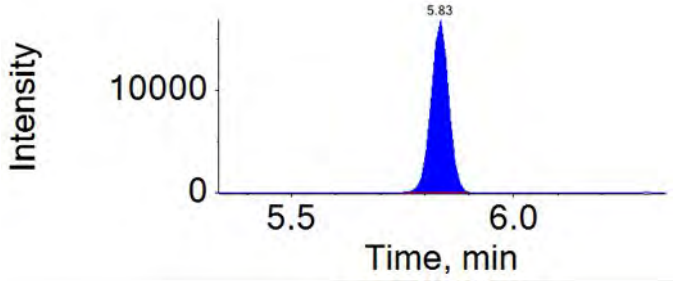
Extraction Standard: 13C7-PFUnDA
570.0 / 525.0



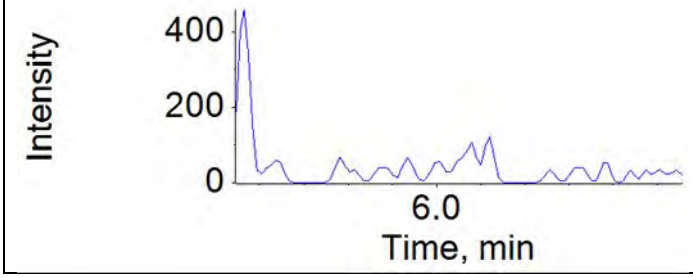
Analyte: NEtFOSAA
584.0 / 419.0



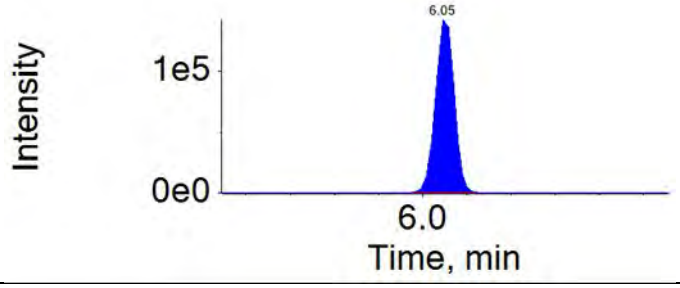
Extraction Standard: d5-NEtFOSAA
589.0 / 419.0



Analyte: PFDoDA
613.0 / 569.0



Extraction Standard: 13C2-PFDoDA
615.0 / 570.0

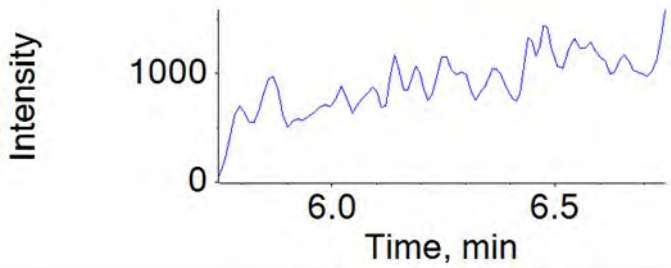


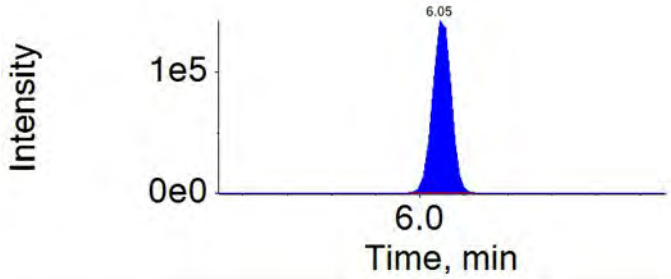
APPROVED
By MCD at 4:51 pm, 11/14/18

REVIEWED
By HMK at 12:21 pm, 11/15/18

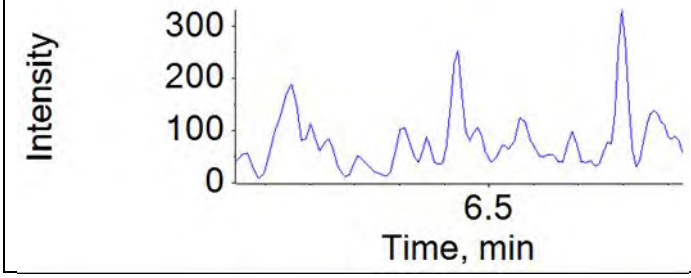
ICAL Name: 18NOV12DCAL **Result Table:** 18316011 11/14/2018 4:24:36 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

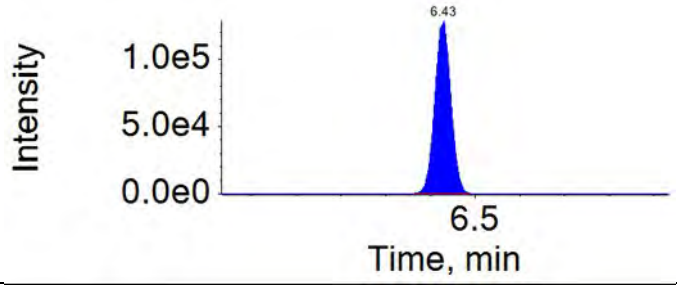
Analyte: PFTrDA	Extraction Standard: 13C2-PFDoDA
663.0 / 619.0	615.0 / 570.0





Analyte: PFTeDA	Extraction Standard: 13C2-PFTeDA
713.0 / 669.0	715.0 / 670.0





APPROVED
By MCD at 4:51 pm, 11/14/18

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By HMK at 12:21 pm, 11/15/18

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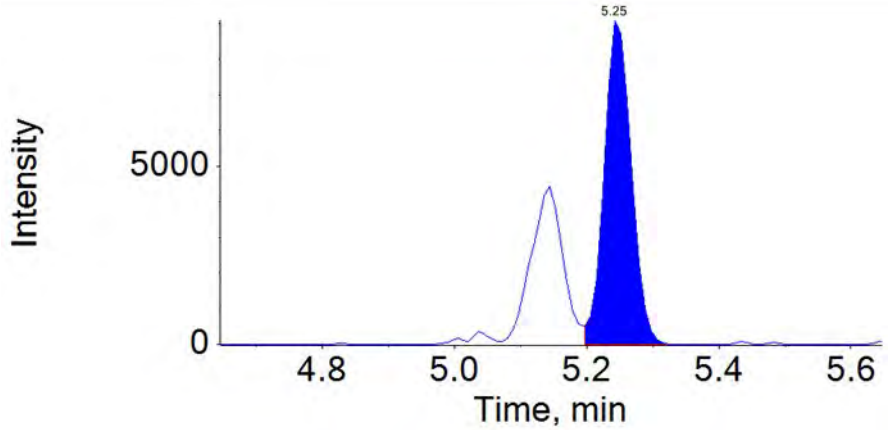
Auto Integrations prior to Manual Integration

Print Date: 11/14/2018 4:31 PM
Template: MQ-OrigInteg-16NOV21.docx

Results Table Name: 18316011
Results Table Date: 11/14/2018 4:24:36 PM

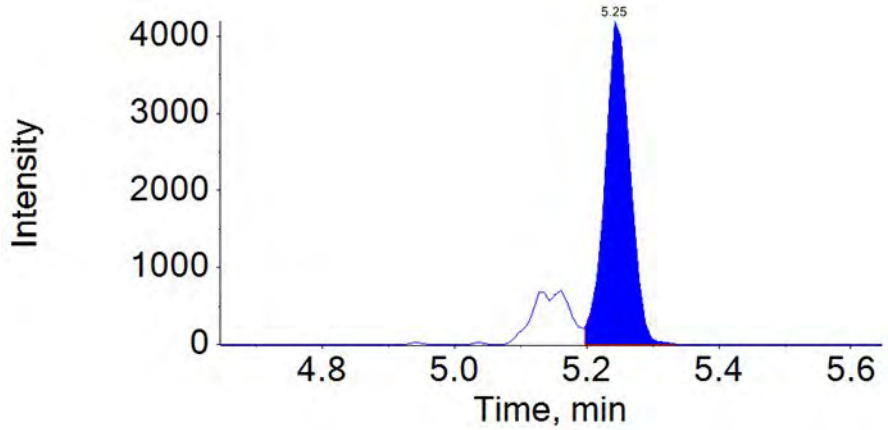
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

Component Name:
PFOS
RT (min.):
5.25
Peak Area:
25904.6
Mass Range:
499.0 / 80.0
File Name:
18NOV13D-58.wiff
Sample Name:
9885089



Integration Comment: incorrect integration

Component Name:
PFOS_2
RT (min.):
5.25
Peak Area:
11132.6
Mass Range:
499.0 / 99.0
File Name:
18NOV13D-58.wiff
Sample Name:
9885089



Integration Comment: incorrect integration

APPROVED
By MCD at 4:51 pm, 11/14/18

REVIEWED
By HMK at 12:21 pm, 11/15/18

Results Table Name: 18316011
Results Table Date: 11/14/2018 4:24:36 PM

Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

APPROVED
By MCD at 4:51 pm, 11/14/18

REVIEWED
By HMK at 12:21 pm, 11/15/18

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LC-MS/MS Analysis Report

Printed: 11/14/2018 4:28:00 PM
Template: IonRatio18OCT10

Ion Ratio Report

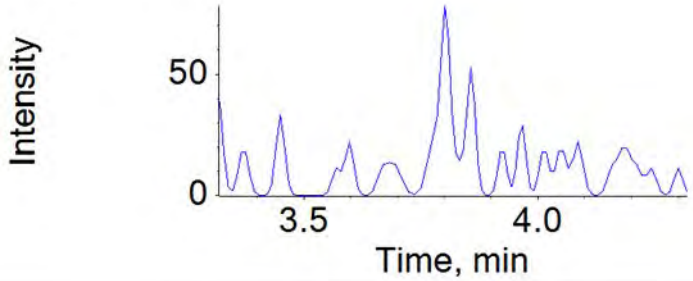
Sample Name: 9885089 **Instrument Name:** LM27631 **File Name:** 18NOV13D-58.wiff

Component Name	RT	RRT	Analyte Area Response	Int Typ	Expected Ion Ratio	Ion Ratio	Ion Ratio % Diff	Ion Ratio Limit	Ion Ratio OOS
PFBS	N/A	N/A	N/A	A	N/A	N/A			
PFBS_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFHxA	N/A	N/A	N/A	A	N/A	N/A			
PFHxA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFHpA	N/A	N/A	N/A	A	N/A	N/A			
PFHpA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFHxS	N/A	N/A	N/A	A	N/A	N/A			
PFHxS_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFOA	N/A	N/A	N/A	A	N/A	N/A			
PFOA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFOS	5.25	1.00	41748.7	M	N/A	0.3359			
PFOS_2	5.25	1.00	14022.6	M	N/A	0.3359	13	50	
PFNA	N/A	N/A	N/A	A	N/A	N/A			
PFNA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFDA	N/A	N/A	N/A	A	N/A	N/A			
PFDA_2	N/A	N/A	N/A	A	N/A	N/A		50	
NMeFOSAA	N/A	N/A	N/A	A	N/A	N/A			
NMeFOSAA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFUnDA	N/A	N/A	N/A	A	N/A	N/A			
PFUnDA_2	N/A	N/A	N/A	A	N/A	N/A		50	
NEtFOSAA	N/A	N/A	N/A	A	N/A	N/A			
NEtFOSAA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFDoDA	N/A	N/A	N/A	A	N/A	N/A			
PFDoDA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFTrDA	N/A	N/A	N/A	A	N/A	N/A			
PFTrDA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFTeDA	N/A	N/A	N/A	A	N/A	N/A			
PFTeDA_2	N/A	N/A	N/A	A	N/A	N/A		50	

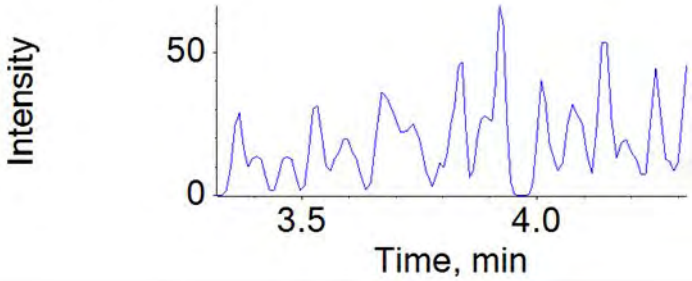
APPROVED
By MCD at 4:51 pm, 11/14/18

REVIEWED
By HMK at 12:21 pm, 11/15/18

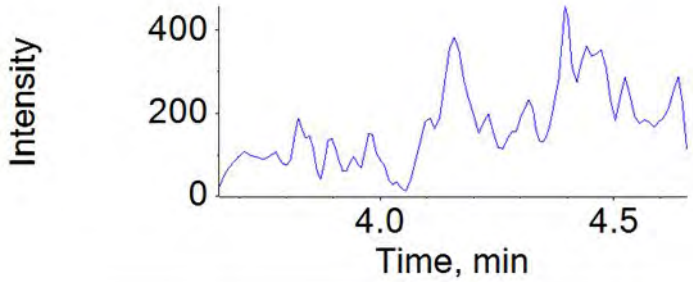
Component: PFBS
Primary Mass: 299.0 / 80.0



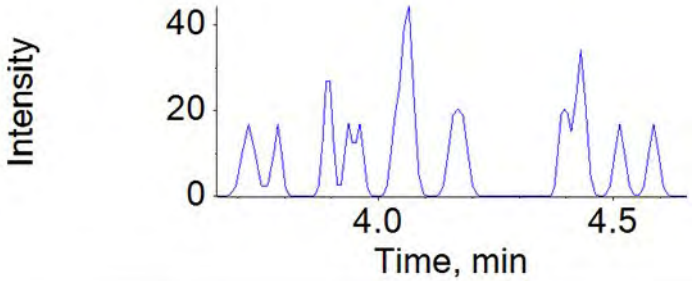
Component: PFBS_2
Secondary Mass: 299.0 / 99.0



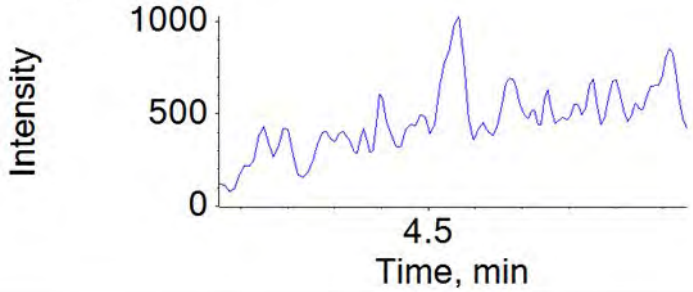
Component: PFHxA
Primary Mass: 313.0 / 269.0



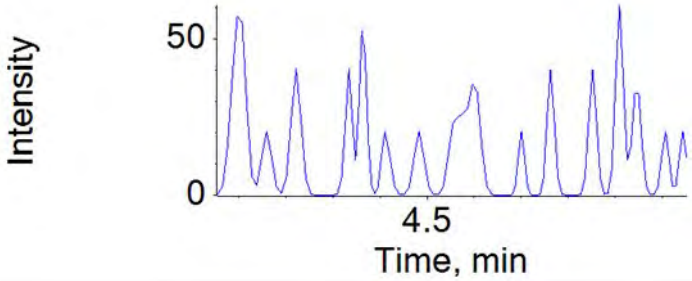
Component: PFHxA_2
Secondary Mass: 313.0 / 119.0



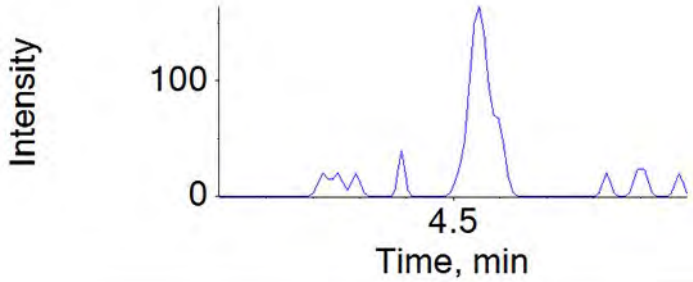
Component: PFHpA
Primary Mass: 363.0 / 319.0



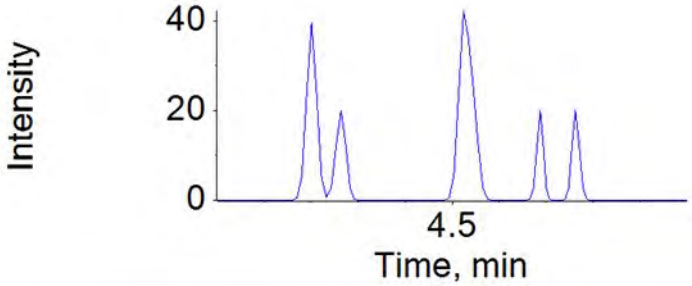
Component: PFHpA_2
Secondary Mass: 363.0 / 169.0



Component: PFHxS
Primary Mass: 399.0 / 80.0



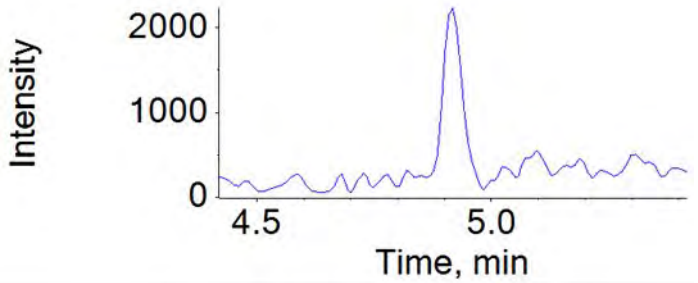
Component: PFHxS_2
Secondary Mass: 399.0 / 99.0



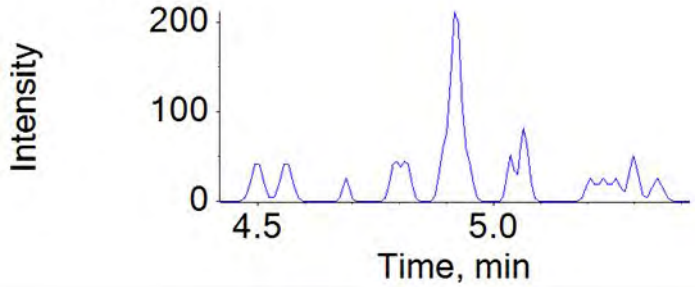
APPROVED
By MCD at 4:51 pm, 11/14/18

REVIEWED
By HMK at 12:21 pm, 11/15/18

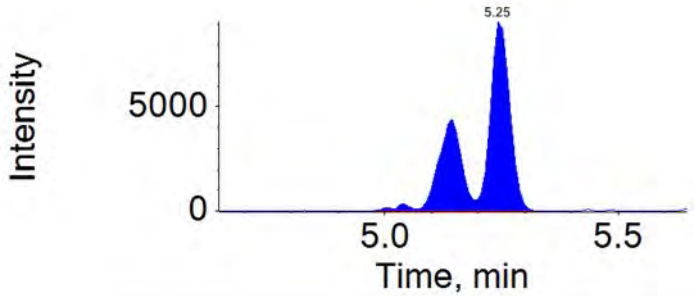
Component: PFOA
Primary Mass: 413.0 / 369.0



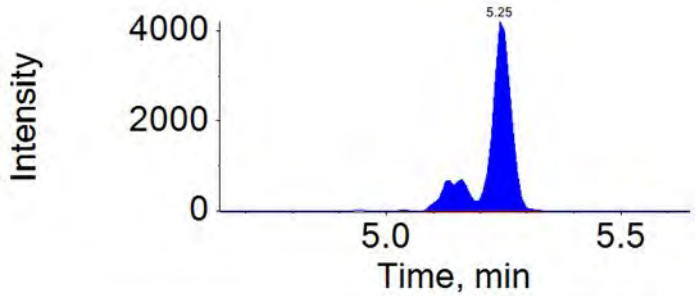
Component: PFOA_2
Secondary Mass: 413.0 / 169.0



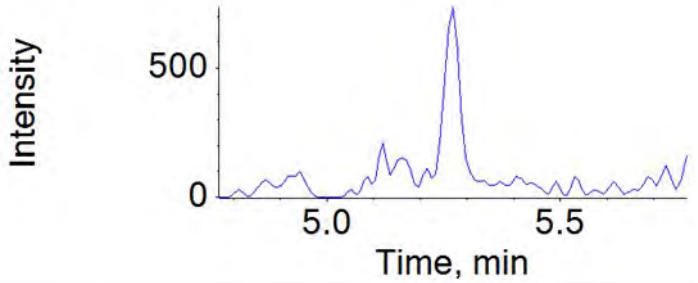
Component: PFOS
Primary Mass: 499.0 / 80.0



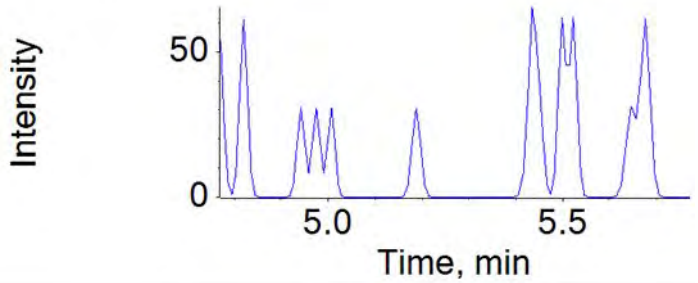
Component: PFOS_2
Secondary Mass: 499.0 / 99.0



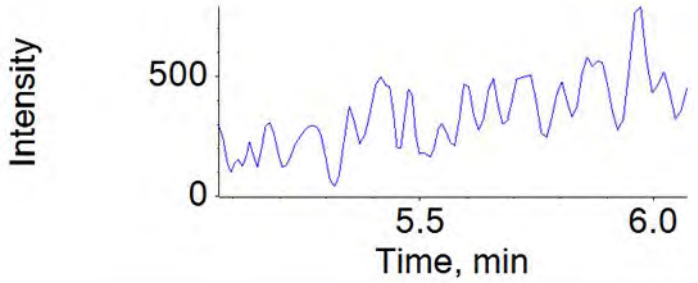
Component: PFNA
Primary Mass: 463.0 / 419.0



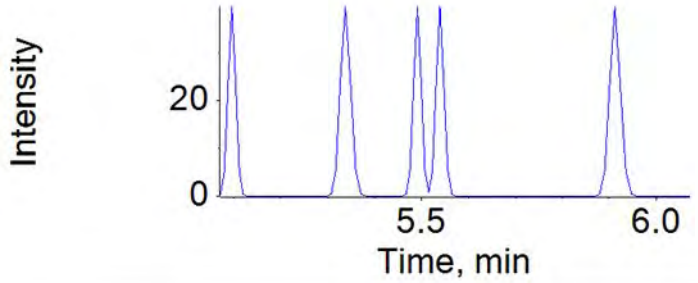
Component: PFNA_2
Secondary Mass: 463.0 / 169.0



Component: PFDA
Primary Mass: 513.0 / 469.0



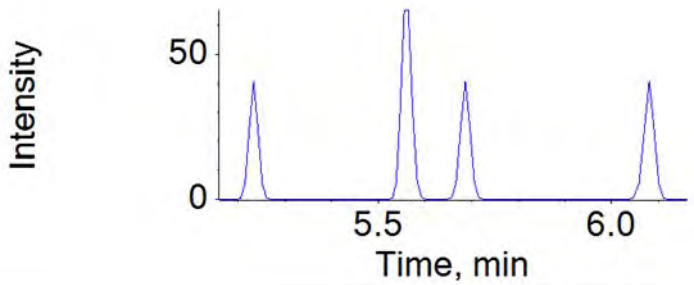
Component: PFDA_2
Secondary Mass: 513.0 / 169.0



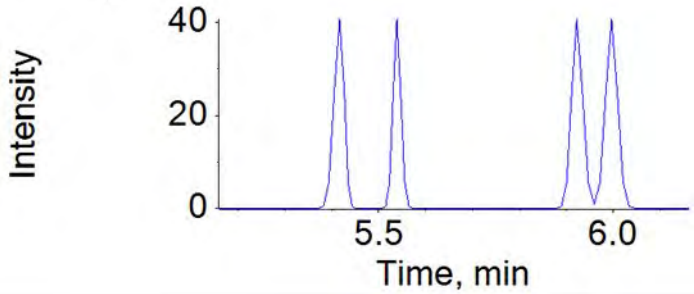
APPROVED
By MCD at 4:51 pm, 11/14/18

REVIEWED
By HMK at 12:21 pm, 11/15/18

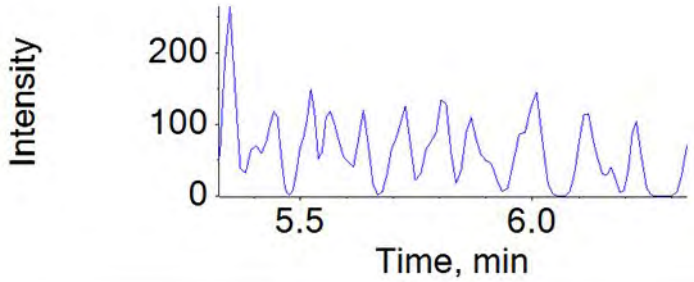
Component: NMeFOSAA
Primary Mass: 570.0 / 419.0



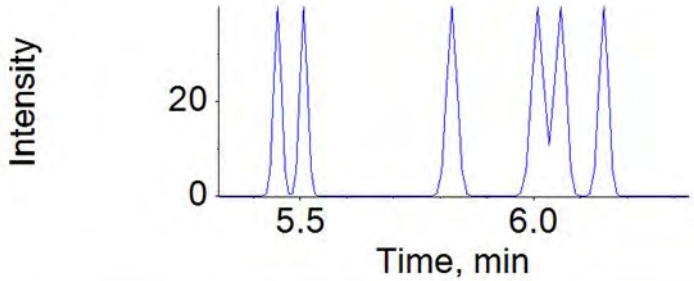
Component: NMeFOSAA_2
Secondary Mass: 570.0 / 483.0



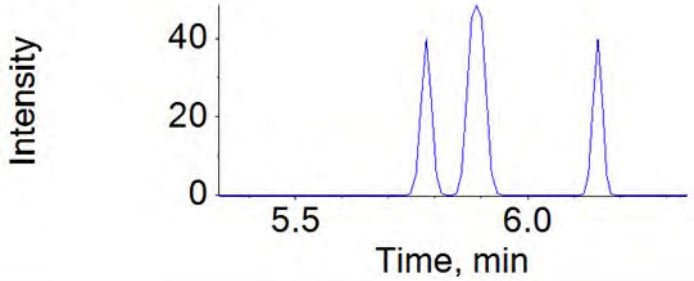
Component: PFUnDA
Primary Mass: 563.0 / 519.0



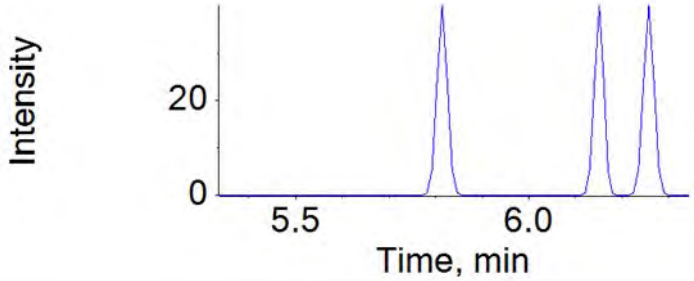
Component: PFUnDA_2
Secondary Mass: 563.0 / 169.0



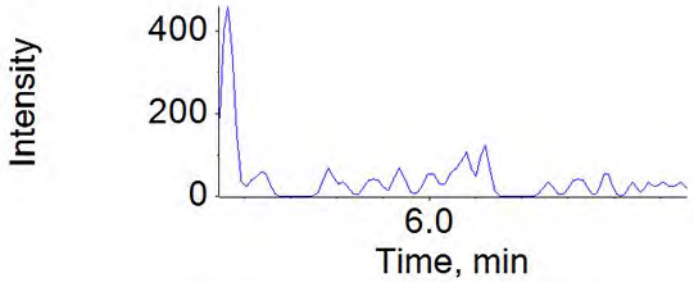
Component: NEtFOSAA
Primary Mass: 584.0 / 419.0



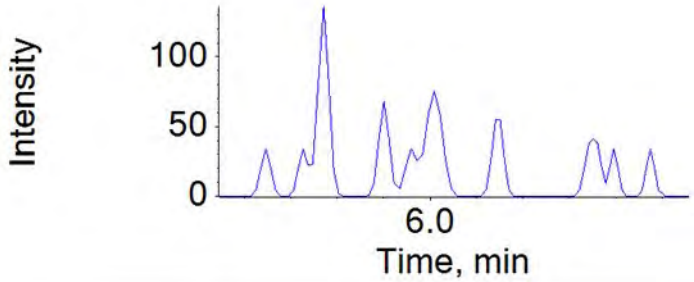
Component: NEtFOSAA_2
Secondary Mass: 584.0 / 526.0



Component: PFDoDA
Primary Mass: 613.0 / 569.0



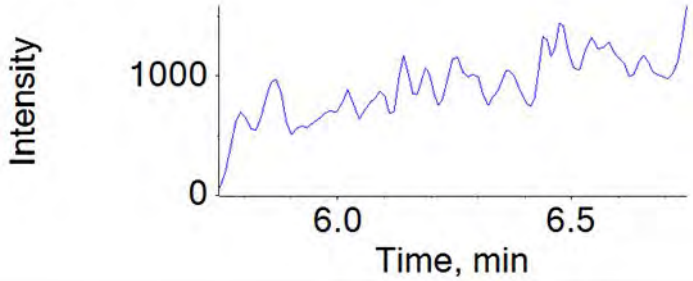
Component: PFDoDA_2
Secondary Mass: 613.0 / 169.0



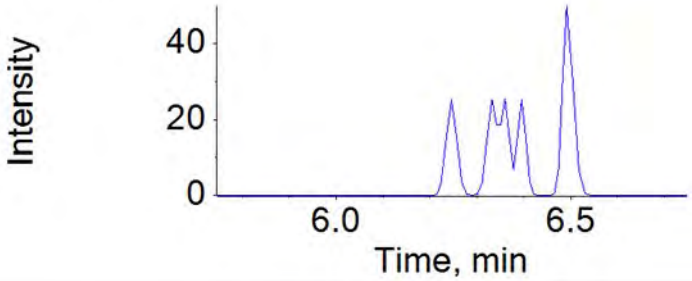
APPROVED
By MCD at 4:51 pm, 11/14/18

REVIEWED
By HMK at 12:21 pm, 11/15/18

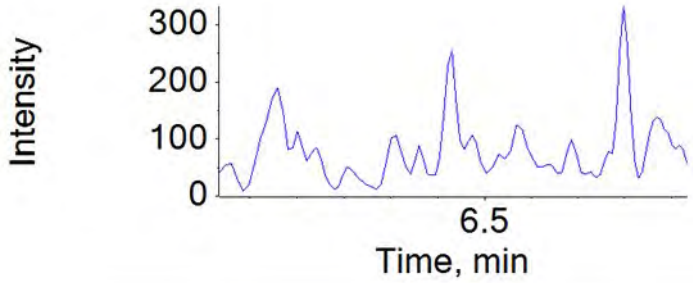
Component: PFTrDA
Primary Mass: 663.0 / 619.0



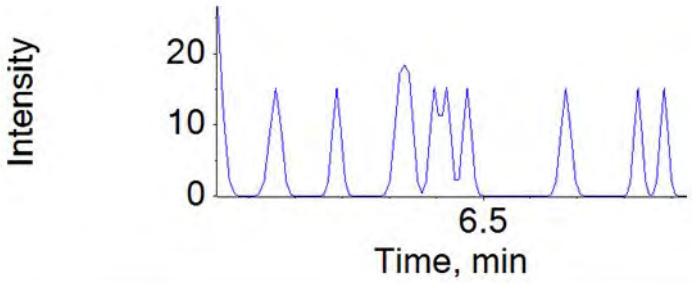
Component: PFTrDA_2
Secondary Mass: 663.0 / 169.0



Component: PFTeDA
Primary Mass: 713.0 / 669.0



Component: PFTeDA_2
Secondary Mass: 713.0 / 169.0



APPROVED
By MCD at 4:51 pm, 11/14/18

REVIEWED
By HMK at 12:21 pm, 11/15/18

ICAL Name: 18NOV12DCAL **Result Table:** 18316011 11/14/2018 4:24:36 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Sample Name:	9885090			**Data File:**		18NOV13D-60.wiff
Sample ID:	EPA 537 mod QSM 5.1 table B-15 18316011 OU1-Bldg27-S-01-11 Grab Soil			**Acquis Date:**		2018-11-13T18:35:38
Sample Type:	Unknown			**Instrument:**		LM27631
Vial Position:	57			**Acquis Method:**		18AUG13_3uL.dam
Injection Vol:	3.00			**Result Table:**		18316011
QMethod File:	18AUG20QM			**ICAL Name:**		18NOV12DCAL
Batch Number:	18316011			**Operator:**		MCD7824
Sample Wt.:	1.06000			**Dilution Factor:**		1.00
Sample Vol.:	1.000			**Prep Factor:**		2.000

Injection Standard Peak Table

Injection Standard Area Reference File: 18NOV13D-05

Injection Standard Name	Inj Std Conc	Injection Std Peak Area	Rreference Injection Standard Area	Injection Std %Diff	Injection Std %Diff Limit	Injection Std %Diff OOS
13C3-PFBA	5.0	720310.1	661126.9	9	50	
13C2-PFOA	5.0	504006.2	466902.6	8	50	
13C4-PFOS	4.8	280084.2	247446.9	13	50	
13C2-PFDA	5.0	334921.7	295381.6	13	50	

Extraction Standard Peak Table

Extraction Standard Name	Ext Std Area	Inj Std Name	Inj Std Area	Area Ratio	Ext Std Conc	Ext Std Result	Ext Std %REC	Ext Std %REC Limit	Ext Std OOS
E13C3-PFBS	366657.2	13C3-PFBA	720310.1	0.509	8.774	6.780	77	50-150	
E13C5-PFHxA	544263.8	13C2-PFOA	504006.2	1.080	9.434	7.360	78	50-150	
E13C3-PFHxS	264898.2	13C2-PFOA	504006.2	0.526	8.925	6.805	76	50-150	
E13C4-PFHpA	421022.5	13C2-PFOA	504006.2	0.835	9.434	7.101	75	50-150	
E13C8-PFOA	734965.5	13C2-PFOA	504006.2	1.458	9.434	7.581	80	50-150	
E13C8-PFOS	229051.4	13C4-PFOS	280084.2	0.818	9.019	6.837	76	50-150	
E13C9-PFNA	400411.2	13C4-PFOS	280084.2	1.430	9.434	7.521	80	50-150	
E13C6-PFDA	529377.4	13C2-PFDA	334921.7	1.581	9.434	6.959	74	50-150	
Ed3-NMeFOSAA	68409.8	13C2-PFDA	334921.7	0.204	9.434	6.956	74	50-150	
E13C7-PFUnDA	220154.1	13C2-PFDA	334921.7	0.657	9.434	7.201	76	50-150	
Ed5-NEtFOSAA	48667.2	13C2-PFDA	334921.7	0.145	9.434	5.800	61	50-150	
E13C2-PFDoDA	491025.3	13C2-PFDA	334921.7	1.466	9.434	7.182	76	50-150	
E13C2-PFTeDA	343934.6	13C2-PFDA	334921.7	1.027	9.434	6.802	72	50-150	

APPROVED
By MCD at 4:51 pm, 11/14/18

REVIEWED
By HMK at 12:21 pm, 11/15/18

ICAL Name: 18NOV12DCAL **Result Table:** 18316011 11/14/2018 4:24:36 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

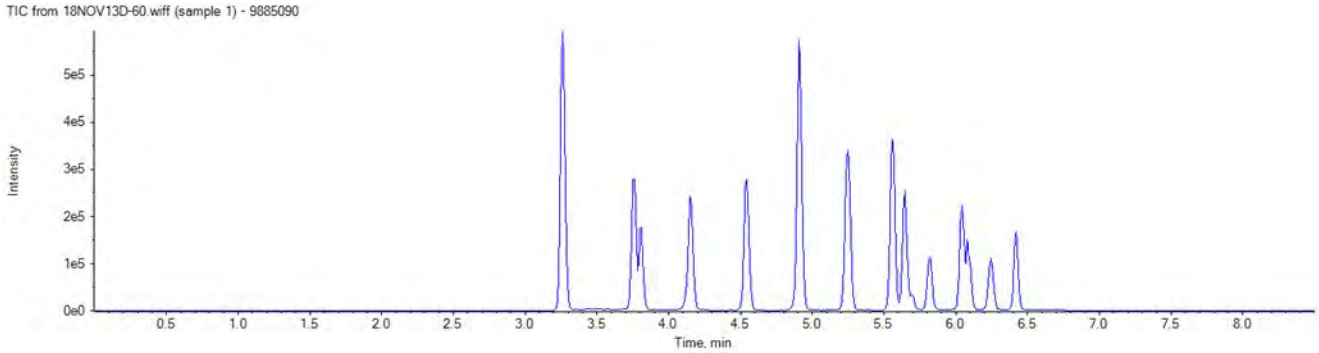
Analyte Quantitation Peak Table

Sample Name: 9885090 **Instrument Name:** LM27631 **File Name:** 18NOV13D-60.wiff

Sample Wt	Sample Vol	Dilution Factor	PrepFactor
1.06000	1.000	1.00	2.000

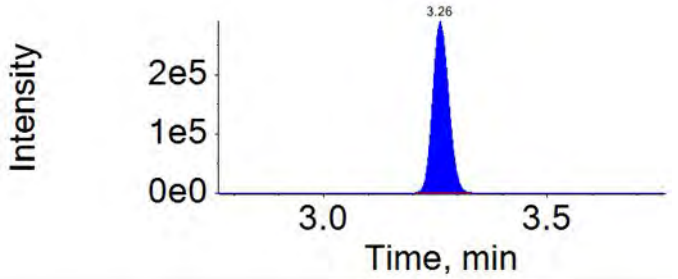
Analyte Name	RT	RRT	Analyte Area Response	E	Int Typ	ES Name	ES RT	ES Area Response	Area Ratio	Sample Result (ng/g)
PFBS	N/A	N/A	N/A		A	13C3-PFBS	3.81	366657.2	N/A	
PFHxA	N/A	N/A	N/A		A	13C5-PFHxA	4.15	544263.8	N/A	
PFHpA	N/A	N/A	N/A		A	13C4-PFHpA	4.54	421022.5	N/A	
PFHxS	N/A	N/A	N/A		A	13C3-PFHxS	4.54	264898.2	N/A	
PFOA	N/A	N/A	N/A		A	13C8-PFOA	4.91	734965.5	N/A	
PFOS	5.23	1.000	14451.9		M	13C8-PFOS	5.24	229051.4	0.063	0.521
PFNA	N/A	N/A	N/A		A	13C9-PFNA	5.26	400411.2	N/A	
PFDA	N/A	N/A	N/A		A	13C6-PFDA	5.56	529377.4	N/A	
NMeFOSAA	N/A	N/A	N/A		A	d3-NMeFOSAA	5.70	68409.8	N/A	
PFUnDA	N/A	N/A	N/A		A	13C7-PFUnDA	5.82	220154.1	N/A	
NEtFOSAA	N/A	N/A	N/A		A	d5-NEtFOSAA	5.83	48667.2	N/A	
PFDoDA	N/A	N/A	N/A		A	13C2-PFDoDA	6.04	491025.3	N/A	
PFTrDA	N/A	N/A	N/A		A	13C2-PFDoDA	6.04	491025.3	N/A	
PFTeDA	N/A	N/A	N/A		A	13C2-PFTeDA	6.42	343934.6	N/A	

Total Ion Chromatogram

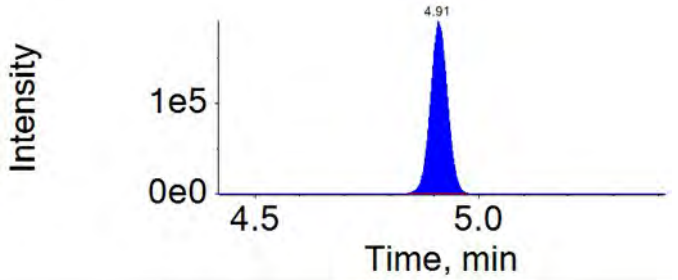


ICAL Name: 18NOV12DCAL **Result Table:** 18316011 11/14/2018 4:24:36 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

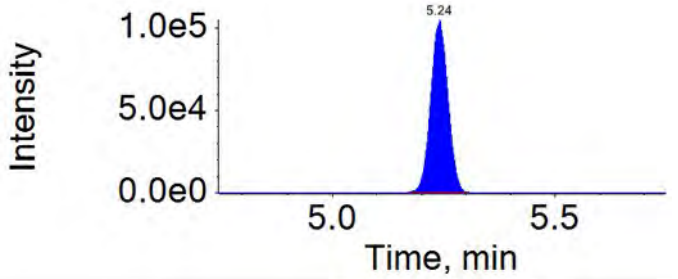
Injection Standard: 13C3-PFBA
216.0 / 172.0



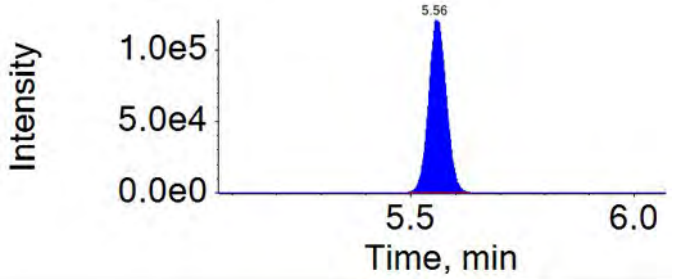
Injection Standard: 13C2-PFOA
415.0 / 370.0



Injection Standard: 13C4-PFOS
503.0 / 80.0

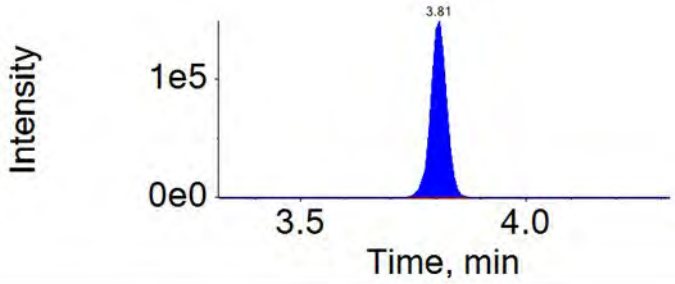


Injection Standard: 13C2-PFDA
515.0 / 470.0

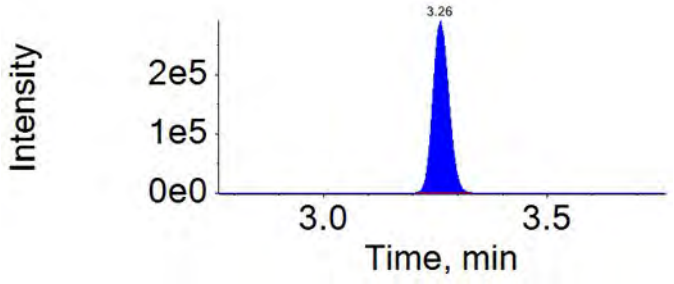


ICAL Name: 18NOV12DCAL **Result Table:** 18316011 11/14/2018 4:24:36 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

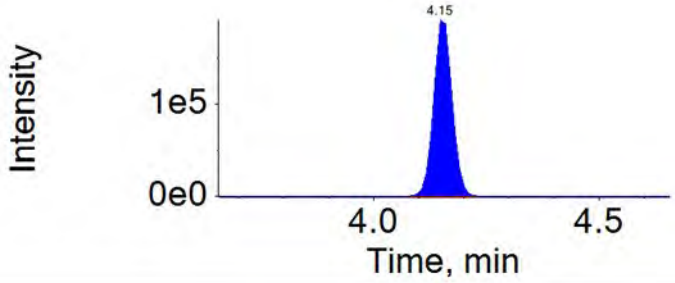
Extraction Standard: E13C3-PFBS
302.0 / 80.0



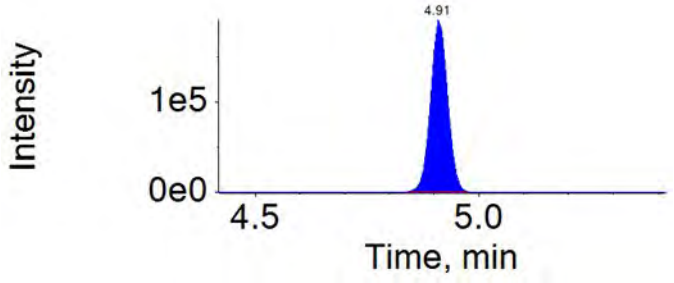
Injection Standard: 13C3-PFBA
216.0 / 172.0



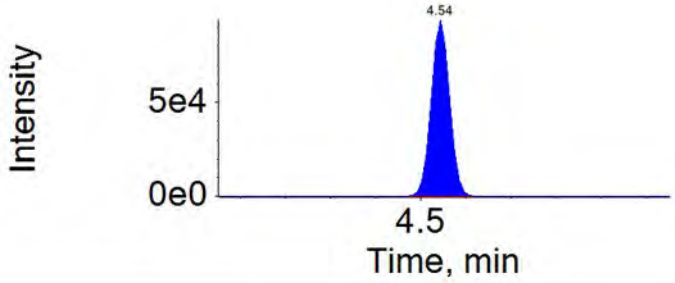
Extraction Standard: E13C5-PFHxA
318.0 / 273.0



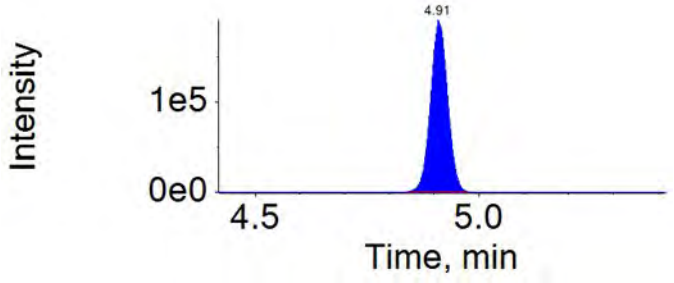
Injection Standard: 13C2-PFOA
415.0 / 370.0



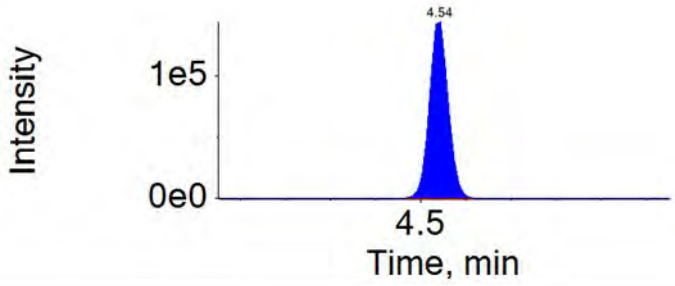
Extraction Standard: E13C3-PFHxS
402.0 / 80.0



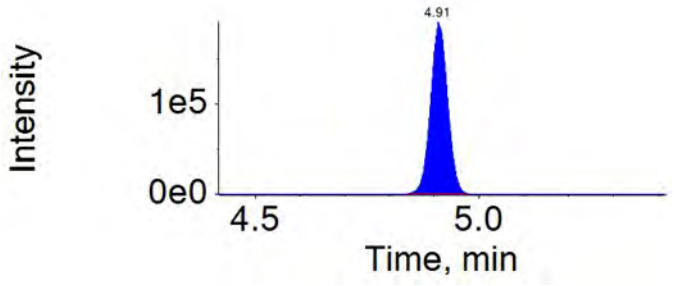
Injection Standard: 13C2-PFOA
415.0 / 370.0



Extraction Standard: E13C4-PFHpA
367.0 / 322.0



Injection Standard: 13C2-PFOA
415.0 / 370.0

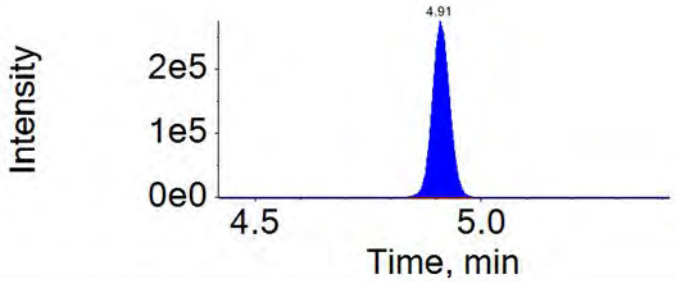


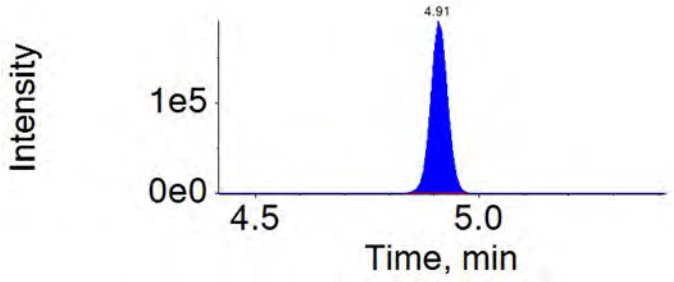
APPROVED
By MCD at 4:51 pm, 11/14/18

REVIEWED
By HMK at 12:22 pm, 11/15/18

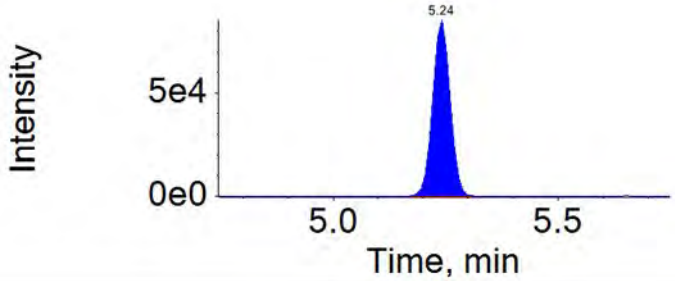
ICAL Name: 18NOV12DCAL **Result Table:** 18316011 11/14/2018 4:24:36 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

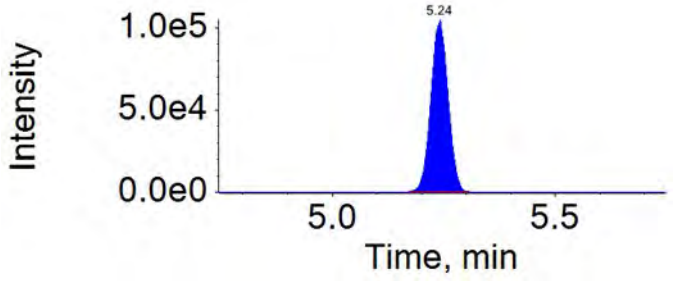
Extraction Standard: E13C8-PFOA	Injection Standard: 13C2-PFOA
421.0 / 376.0	415.0 / 370.0



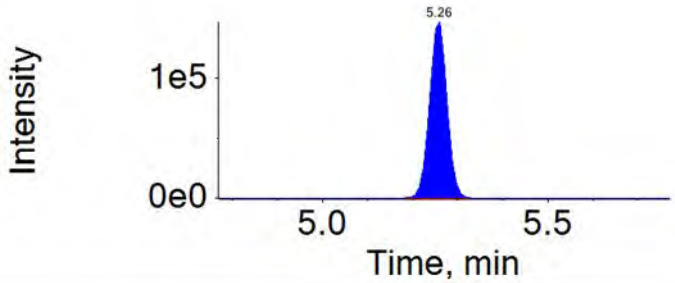


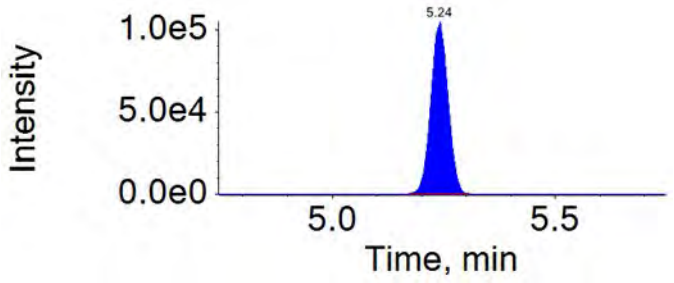
Extraction Standard: E13C8-PFOS	Injection Standard: 13C4-PFOS
507.0 / 80.0	503.0 / 80.0



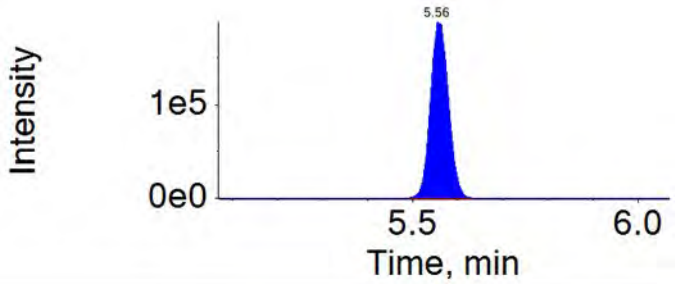


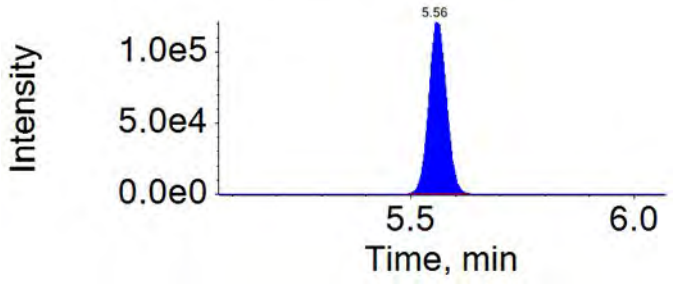
Extraction Standard: E13C9-PFNA	Injection Standard: 13C4-PFOS
472.0 / 427.0	503.0 / 80.0





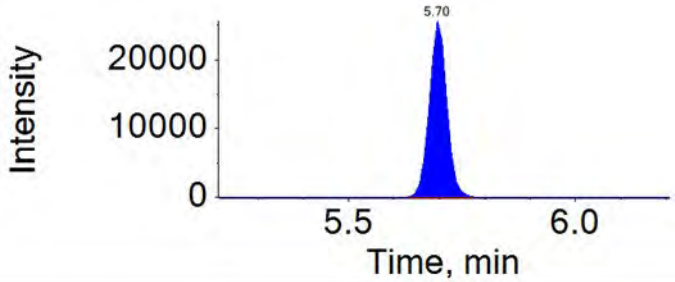
Extraction Standard: E13C6-PFDA	Injection Standard: 13C2-PFDA
519.0 / 474.0	515.0 / 470.0

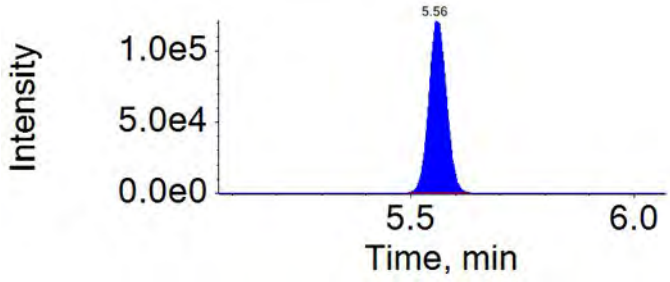




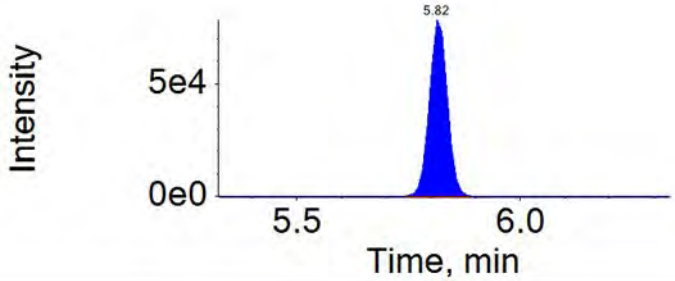
ICAL Name: 18NOV12DCAL **Result Table:** 18316011 11/14/2018 4:24:36 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

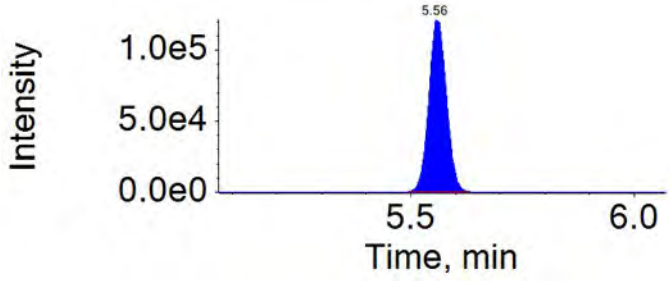
Extraction Standard: Ed3-NMeFOSAA	Injection Standard: 13C2-PFDA
573.0 / 419.0	515.0 / 470.0



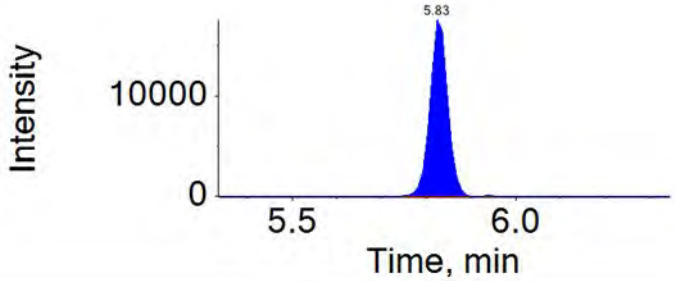


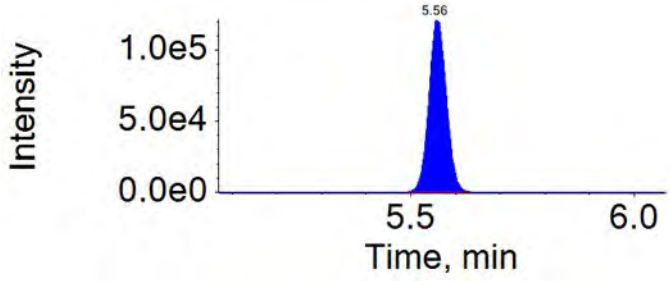
Extraction Standard: E13C7-PFUnDA	Injection Standard: 13C2-PFDA
570.0 / 525.0	515.0 / 470.0



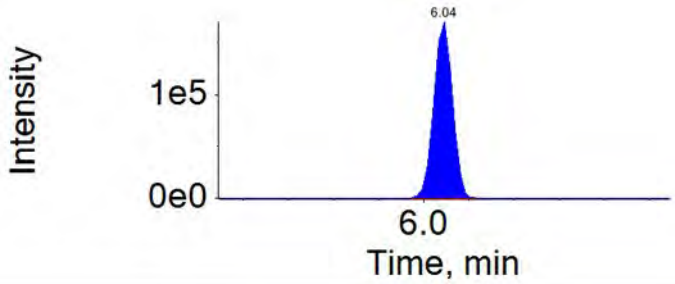


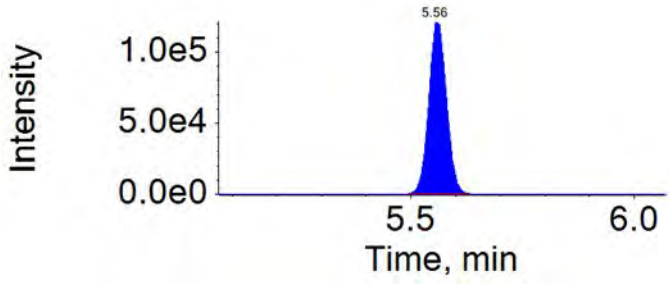
Extraction Standard: Ed5-NEtFOSAA	Injection Standard: 13C2-PFDA
589.0 / 419.0	515.0 / 470.0



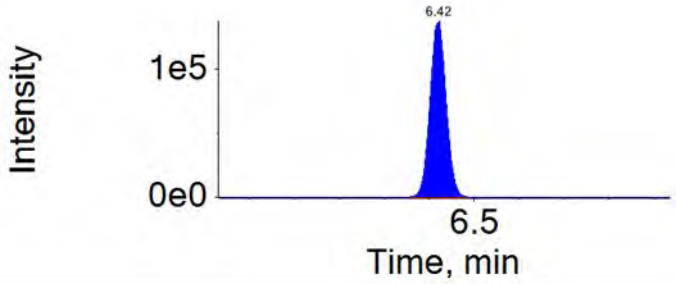
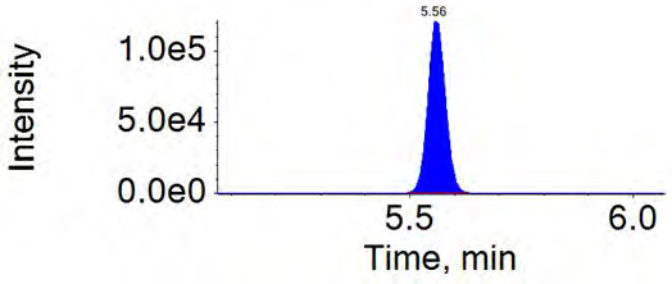


Extraction Standard: E13C2-PFDoDA	Injection Standard: 13C2-PFDA
615.0 / 570.0	515.0 / 470.0



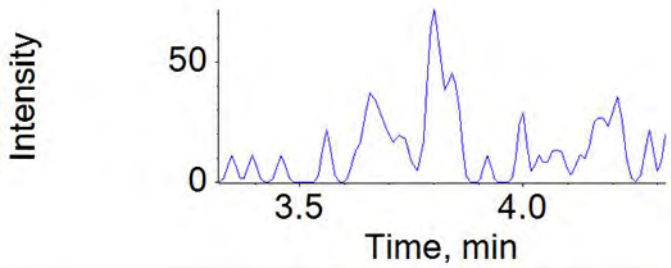


ICAL Name: 18NOV12DCAL **Result Table:** 18316011 11/14/2018 4:24:36 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

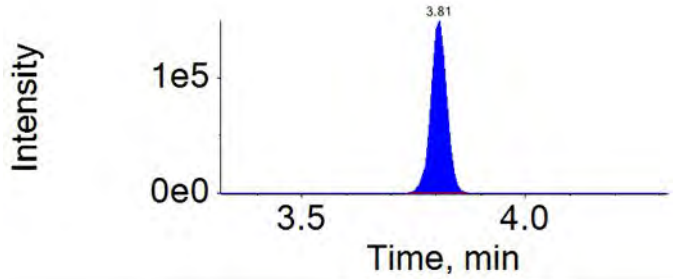
Extraction Standard: E13C2-PFTeDA	Injection Standard: 13C2-PFDA
715.0 / 670.0 	515.0 / 470.0 

ICAL Name: 18NOV12DCAL **Result Table:** 18316011 11/14/2018 4:24:36 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

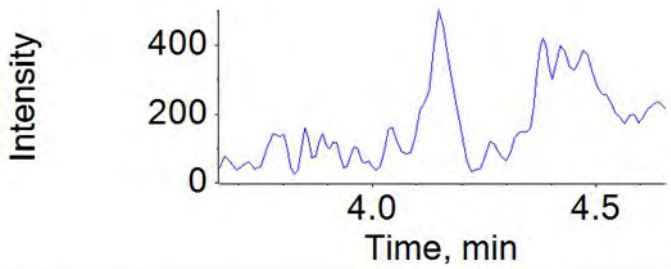
Analyte: PFBS
299.0 / 80.0



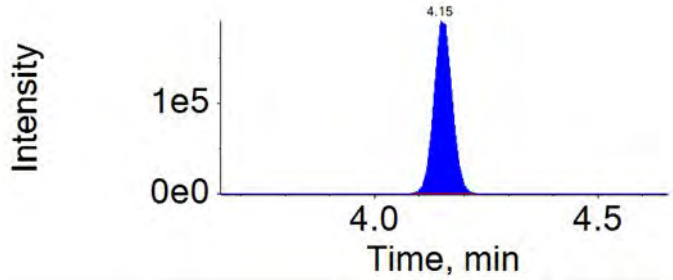
Extraction Standard: 13C3-PFBS
302.0 / 80.0



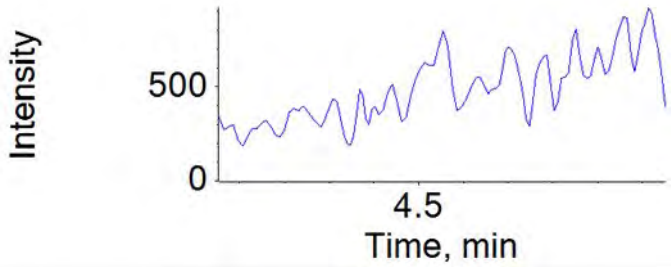
Analyte: PFHxA
313.0 / 269.0



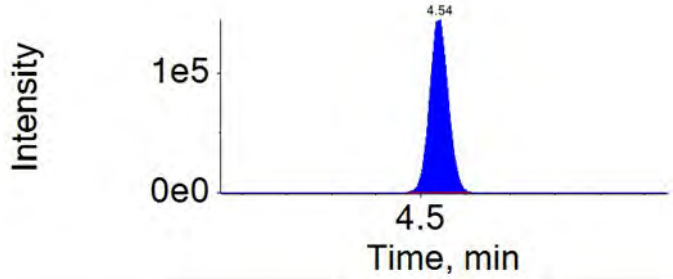
Extraction Standard: 13C5-PFHxA
318.0 / 273.0



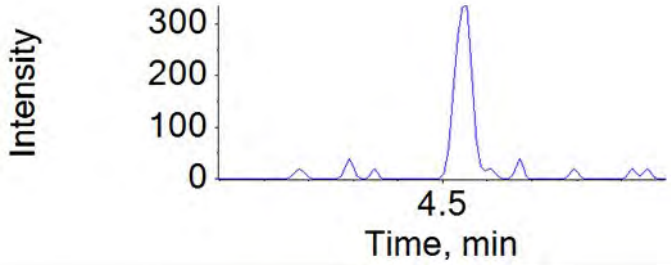
Analyte: PFHpA
363.0 / 319.0



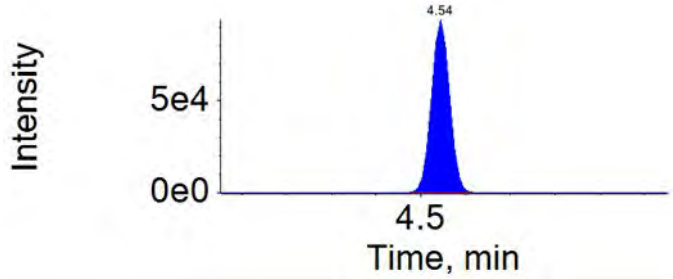
Extraction Standard: 13C4-PFHpA
367.0 / 322.0



Analyte: PFHxS
399.0 / 80.0



Extraction Standard: 13C3-PFHxS
402.0 / 80.0

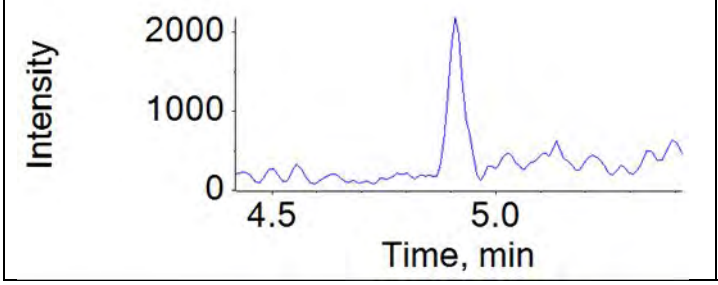


APPROVED
By MCD at 4:51 pm, 11/14/18

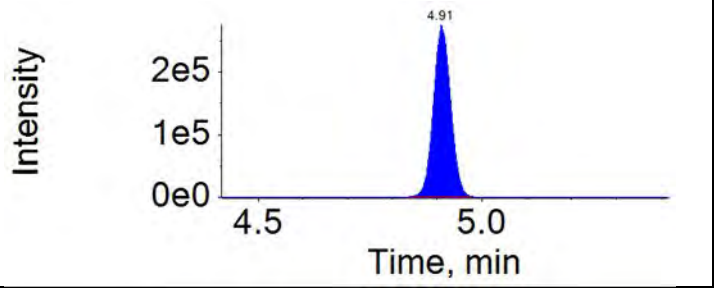
REVIEWED
By HMK at 12:22 pm, 11/15/18

ICAL Name: 18NOV12DCAL **Result Table:** 18316011 11/14/2018 4:24:36 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

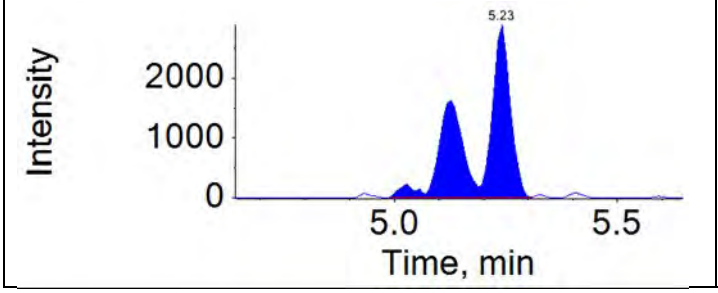
Analyte: PFOA
413.0 / 369.0



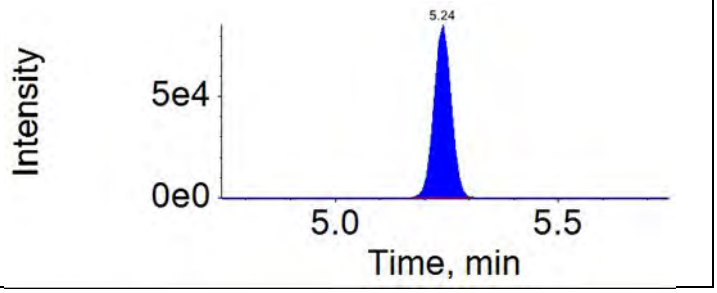
Extraction Standard: 13C8-PFOA
421.0 / 376.0



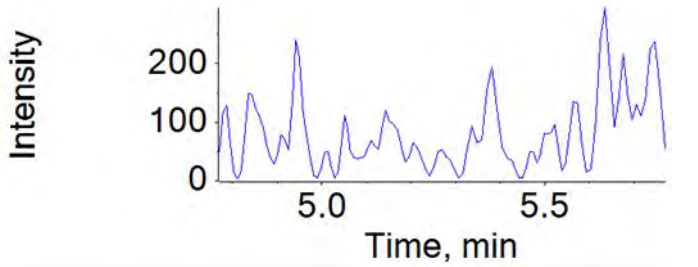
Analyte: PFOS
499.0 / 80.0



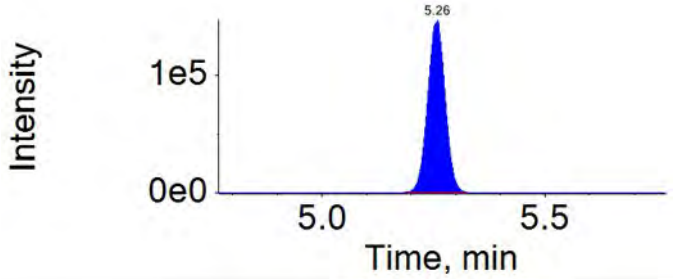
Extraction Standard: 13C8-PFOS
507.0 / 80.0



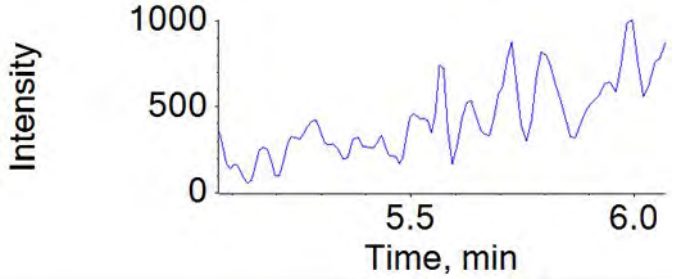
Analyte: PFNA
463.0 / 419.0



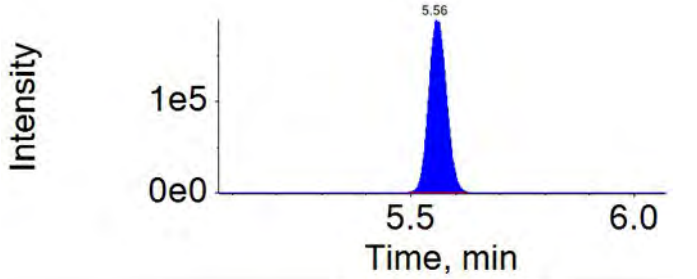
Extraction Standard: 13C9-PFNA
472.0 / 427.0



Analyte: PFDA
513.0 / 469.0



Extraction Standard: 13C6-PFDA
519.0 / 474.0

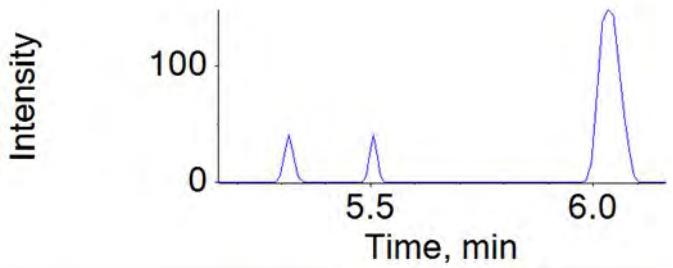


APPROVED
By MCD at 4:51 pm, 11/14/18

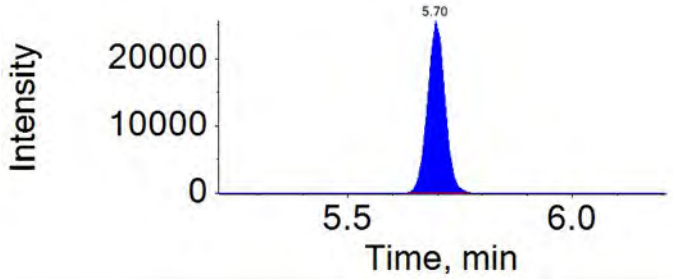
REVIEWED
By HMK at 12:22 pm, 11/15/18

ICAL Name: 18NOV12DCAL **Result Table:** 18316011 11/14/2018 4:24:36 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

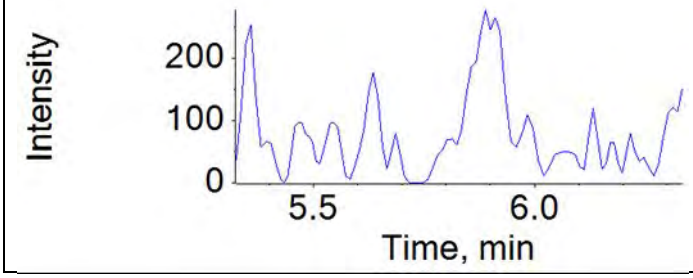
Analyte: NMeFOSAA
570.0 / 419.0



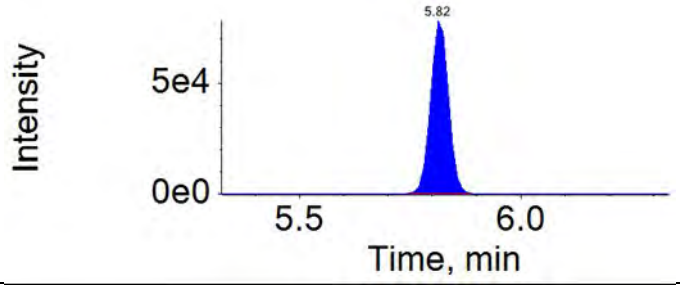
Extraction Standard: d3-NMeFOSAA
573.0 / 419.0



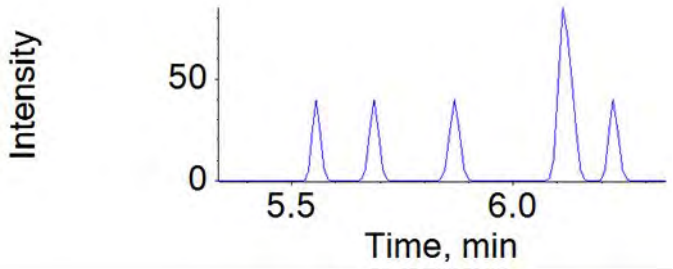
Analyte: PFUnDA
563.0 / 519.0



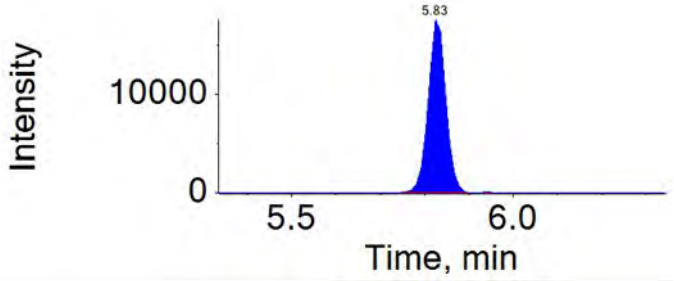
Extraction Standard: 13C7-PFUnDA
570.0 / 525.0



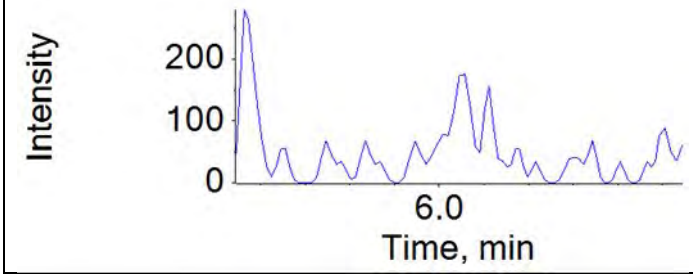
Analyte: NEtFOSAA
584.0 / 419.0



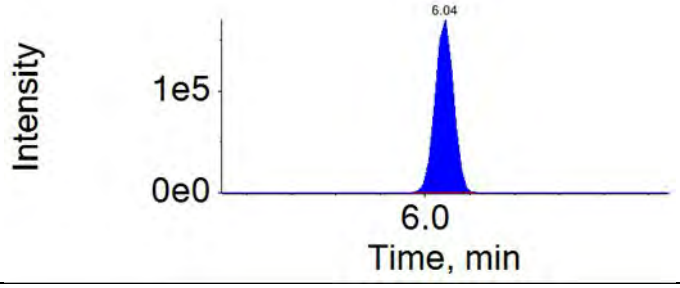
Extraction Standard: d5-NEtFOSAA
589.0 / 419.0



Analyte: PFDoDA
613.0 / 569.0



Extraction Standard: 13C2-PFDoDA
615.0 / 570.0

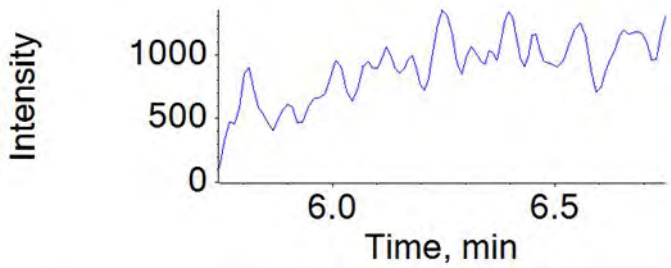


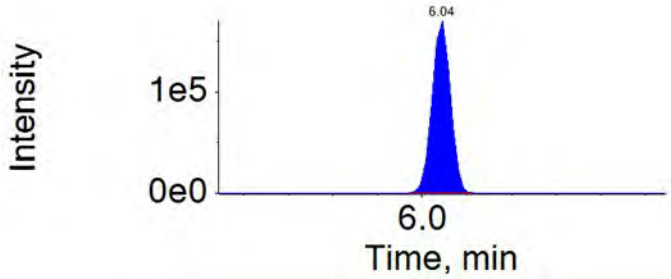
APPROVED
By MCD at 4:51 pm, 11/14/18

REVIEWED
By HMK at 12:22 pm, 11/15/18

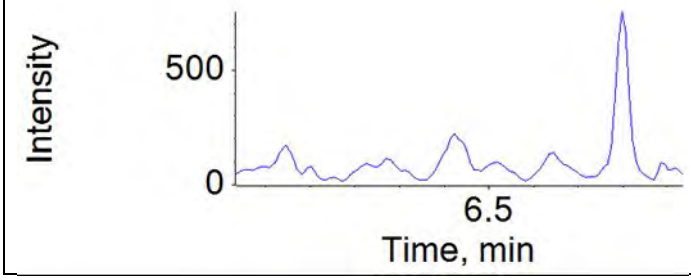
ICAL Name: 18NOV12DCAL **Result Table:** 18316011 11/14/2018 4:24:36 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

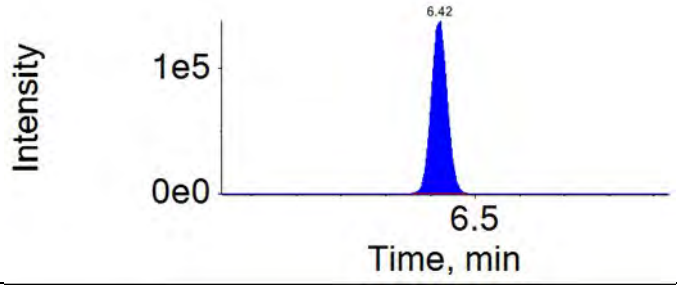
Analyte: PFTrDA	Extraction Standard: 13C2-PFDoDA
663.0 / 619.0	615.0 / 570.0





Analyte: PFTeDA	Extraction Standard: 13C2-PFTeDA
713.0 / 669.0	715.0 / 670.0





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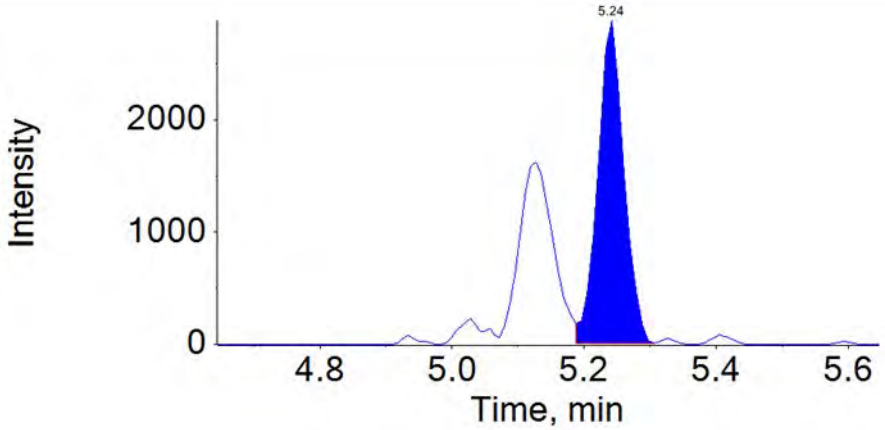
Auto Integrations prior to Manual Integration

Print Date: 11/14/2018 4:31 PM
Template: MQ-OrigInteg-16NOV21.docx

Results Table Name: 18316011
Results Table Date: 11/14/2018 4:24:36 PM

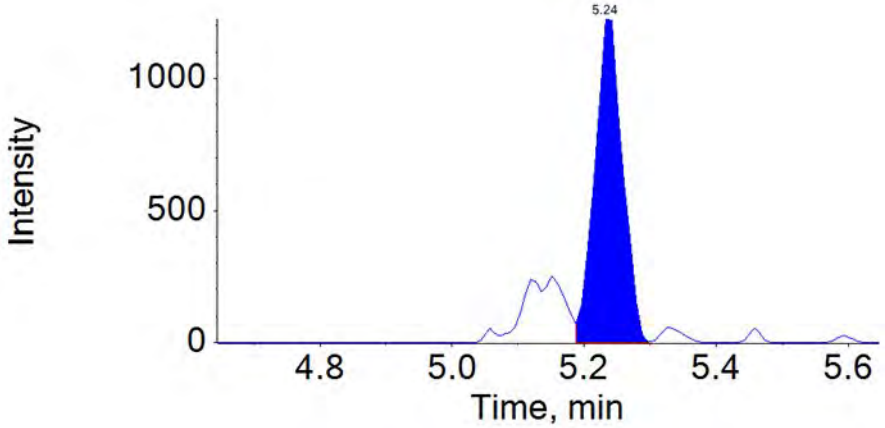
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

Component Name:
PFOS
RT (min.):
5.24
Peak Area:
7911.1
Mass Range:
499.0 / 80.0
File Name:
18NOV13D-60.wiff
Sample Name:
9885090



Integration Comment: incorrect integration

Component Name:
PFOS_2
RT (min.):
5.24
Peak Area:
3606.0
Mass Range:
499.0 / 99.0
File Name:
18NOV13D-60.wiff
Sample Name:
9885090



Integration Comment: incorrect integration

APPROVED
By MCD at 4:51 pm, 11/14/18

REVIEWED
By HMK at 12:22 pm, 11/15/18

Results Table Name: 18316011
Results Table Date: 11/14/2018 4:24:36 PM

Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

APPROVED
By MCD at 4:51 pm, 11/14/18

REVIEWED
By HMK at 12:22 pm, 11/15/18

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LC-MS/MS Analysis Report

Printed: 11/14/2018 4:28:00 PM
Template: IonRatio18OCT10

Ion Ratio Report

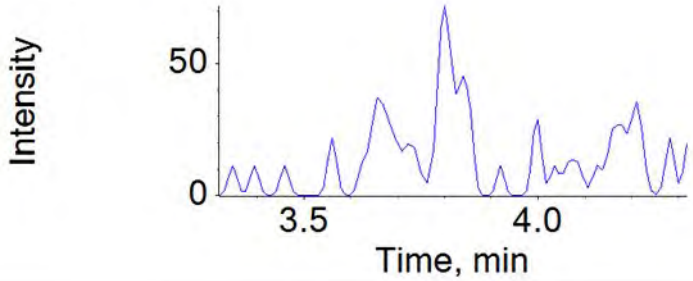
Sample Name: 9885090 **Instrument Name:** LM27631 **File Name:** 18NOV13D-60.wiff

Component Name	RT	RRT	Analyte Area Response	Int Typ	Expected Ion Ratio	Ion Ratio	Ion Ratio % Diff	Ion Ratio Limit	Ion Ratio OOS
PFBS	N/A	N/A	N/A	A	N/A	N/A			
PFBS_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFHxA	N/A	N/A	N/A	A	N/A	N/A			
PFHxA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFHpA	N/A	N/A	N/A	A	N/A	N/A			
PFHpA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFHxS	N/A	N/A	N/A	A	N/A	N/A			
PFHxS_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFOA	N/A	N/A	N/A	A	N/A	N/A			
PFOA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFOS	5.23	1.00	14451.9	M	N/A	0.3265			
PFOS_2	5.24	1.00	4719.3	M	N/A	0.3265	10	50	
PFNA	N/A	N/A	N/A	A	N/A	N/A			
PFNA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFDA	N/A	N/A	N/A	A	N/A	N/A			
PFDA_2	N/A	N/A	N/A	A	N/A	N/A		50	
NMeFOSAA	N/A	N/A	N/A	A	N/A	N/A			
NMeFOSAA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFUnDA	N/A	N/A	N/A	A	N/A	N/A			
PFUnDA_2	N/A	N/A	N/A	A	N/A	N/A		50	
NEtFOSAA	N/A	N/A	N/A	A	N/A	N/A			
NEtFOSAA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFDoDA	N/A	N/A	N/A	A	N/A	N/A			
PFDoDA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFTrDA	N/A	N/A	N/A	A	N/A	N/A			
PFTrDA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFTeDA	N/A	N/A	N/A	A	N/A	N/A			
PFTeDA_2	N/A	N/A	N/A	A	N/A	N/A		50	

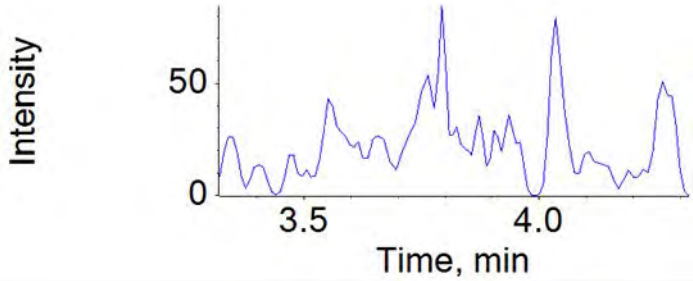
APPROVED
By MCD at 4:51 pm, 11/14/18

REVIEWED
By HMK at 12:22 pm, 11/15/18

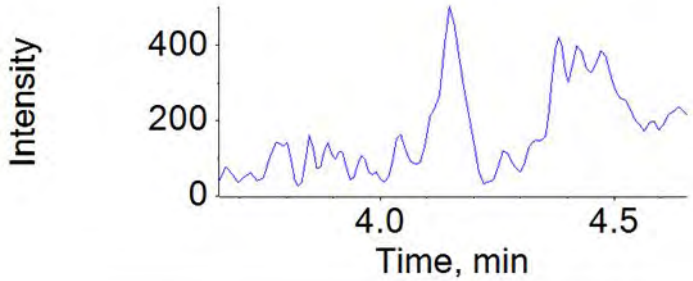
Component: PFBS
Primary Mass: 299.0 / 80.0



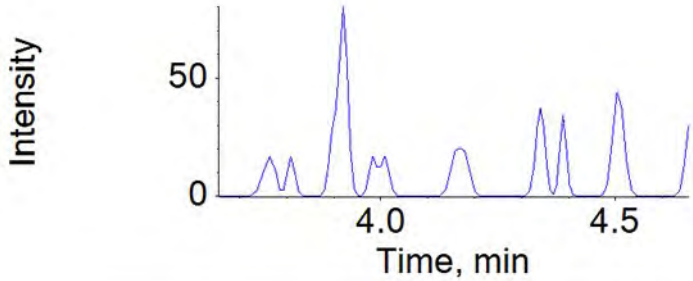
Component: PFBS_2
Secondary Mass: 299.0 / 99.0



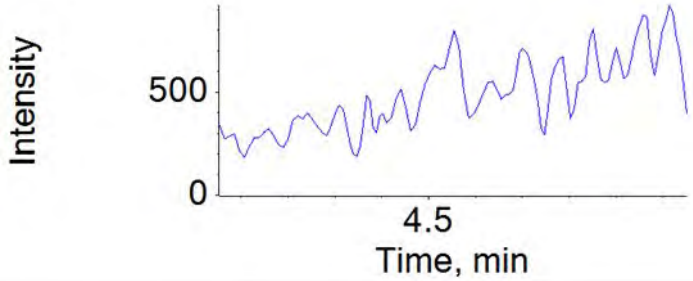
Component: PFHxA
Primary Mass: 313.0 / 269.0



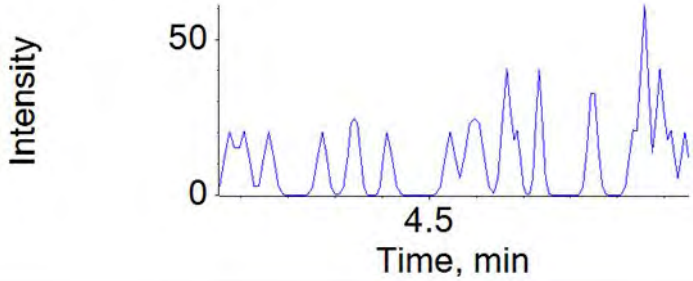
Component: PFHxA_2
Secondary Mass: 313.0 / 119.0



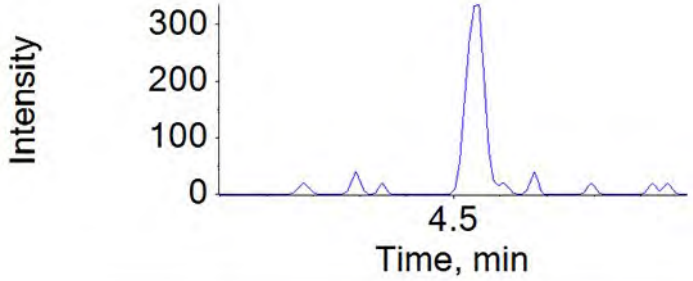
Component: PFHpA
Primary Mass: 363.0 / 319.0



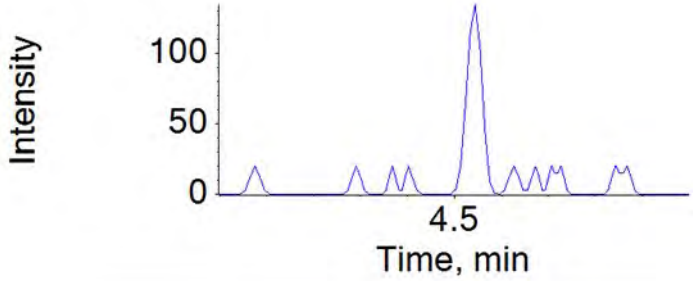
Component: PFHpA_2
Secondary Mass: 363.0 / 169.0



Component: PFHxS
Primary Mass: 399.0 / 80.0



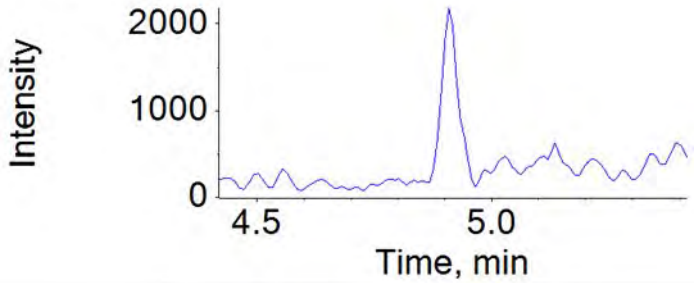
Component: PFHxS_2
Secondary Mass: 399.0 / 99.0



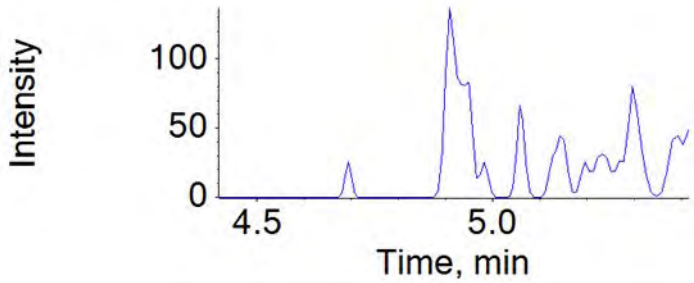
APPROVED
By MCD at 4:51 pm, 11/14/18

REVIEWED
By HMK at 12:22 pm, 11/15/18

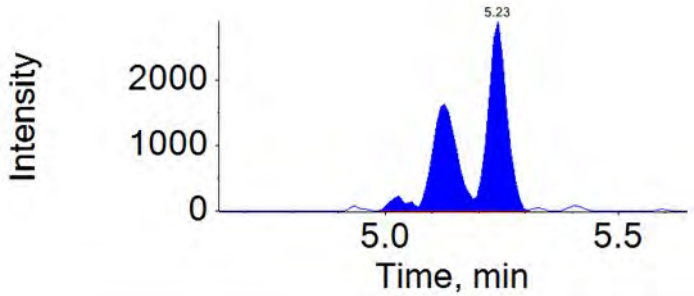
Component: PFOA
Primary Mass: 413.0 / 369.0



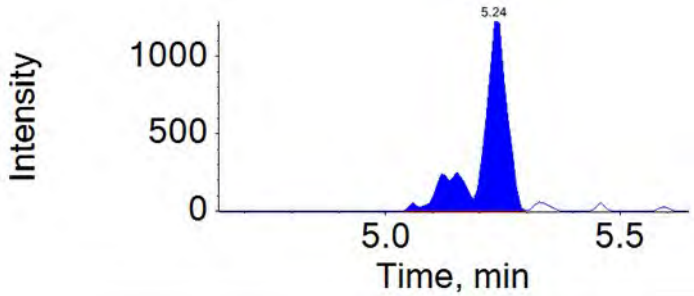
Component: PFOA_2
Secondary Mass: 413.0 / 169.0



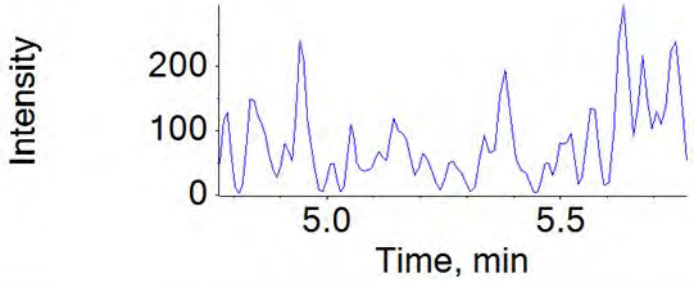
Component: PFOS
Primary Mass: 499.0 / 80.0



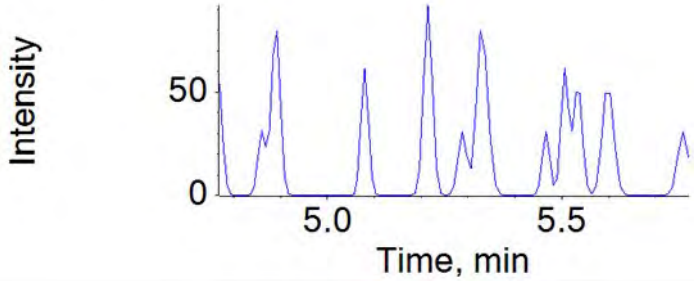
Component: PFOS_2
Secondary Mass: 499.0 / 99.0



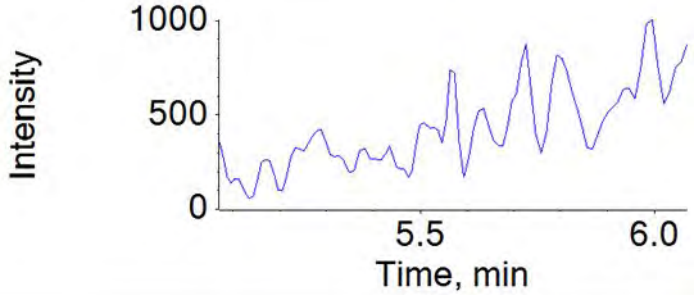
Component: PFNA
Primary Mass: 463.0 / 419.0



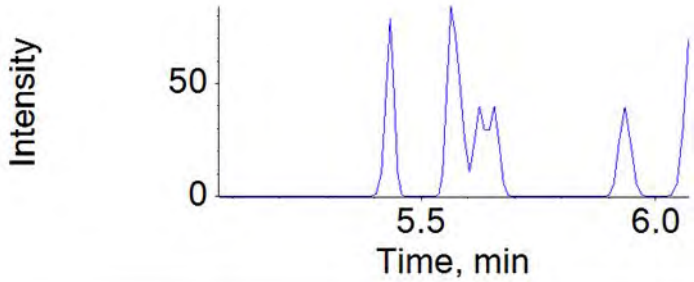
Component: PFNA_2
Secondary Mass: 463.0 / 169.0



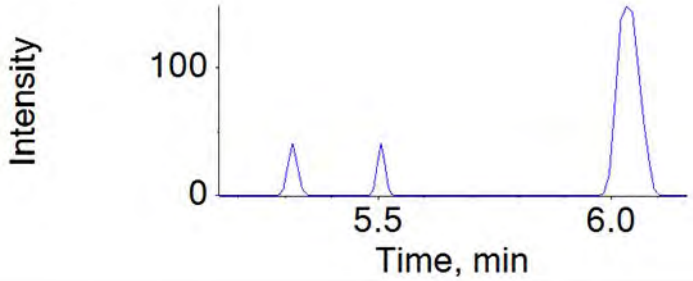
Component: PFDA
Primary Mass: 513.0 / 469.0



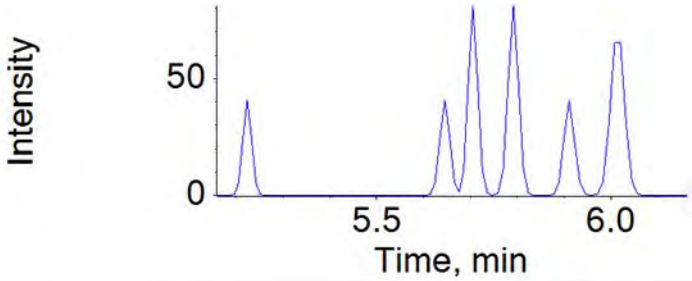
Component: PFDA_2
Secondary Mass: 513.0 / 169.0



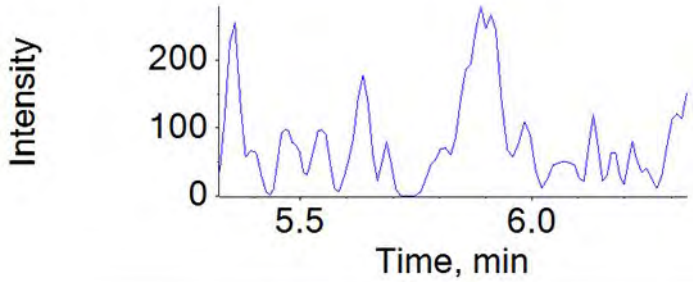
Component: NMeFOSAA
Primary Mass: 570.0 / 419.0



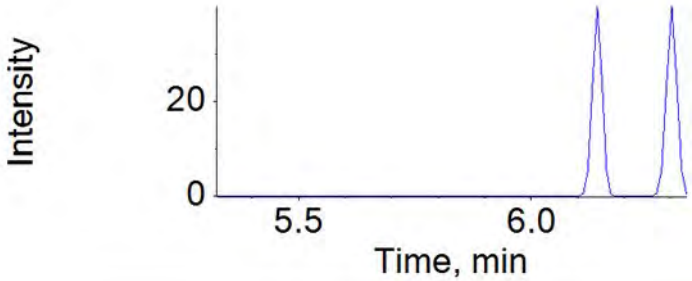
Component: NMeFOSAA_2
Secondary Mass: 570.0 / 483.0



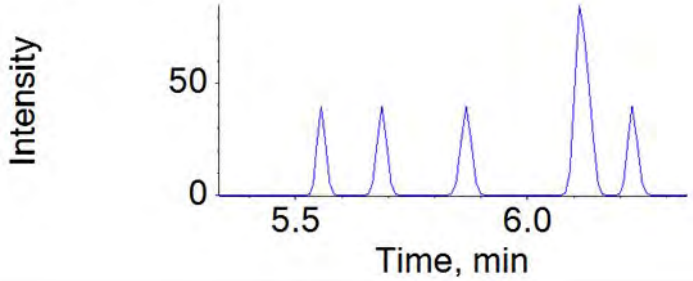
Component: PFUnDA
Primary Mass: 563.0 / 519.0



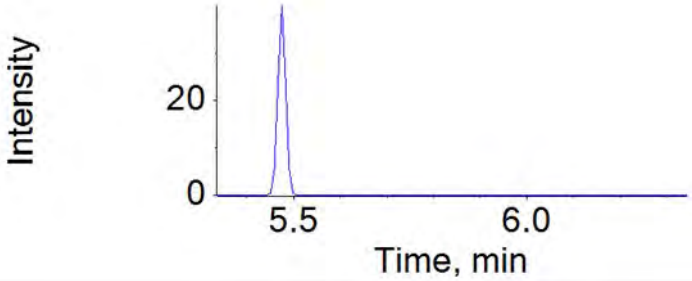
Component: PFUnDA_2
Secondary Mass: 563.0 / 169.0



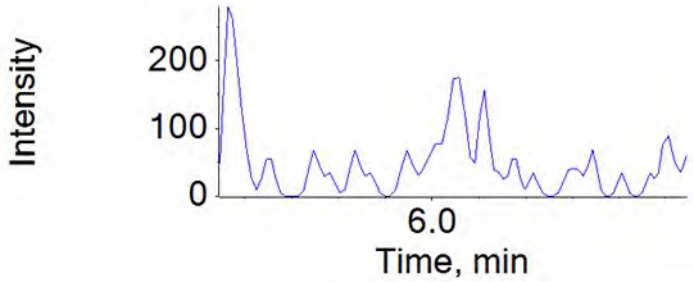
Component: NEtFOSAA
Primary Mass: 584.0 / 419.0



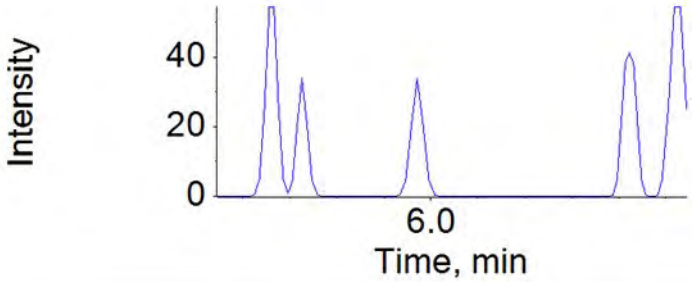
Component: NEtFOSAA_2
Secondary Mass: 584.0 / 526.0



Component: PFDoDA
Primary Mass: 613.0 / 569.0



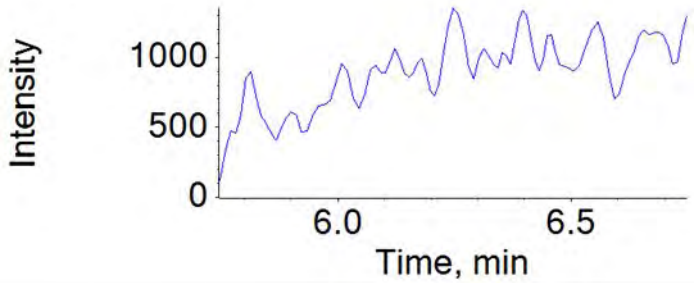
Component: PFDoDA_2
Secondary Mass: 613.0 / 169.0



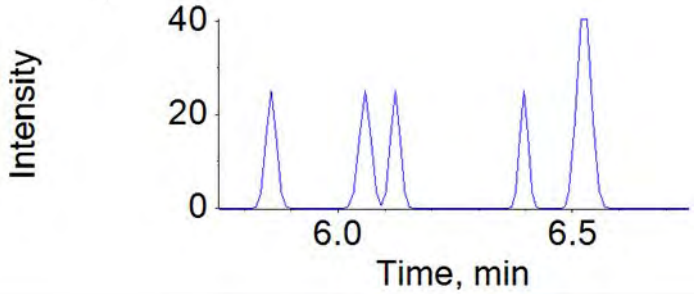
APPROVED
By MCD at 4:51 pm, 11/14/18

REVIEWED
By HMK at 12:22 pm, 11/15/18

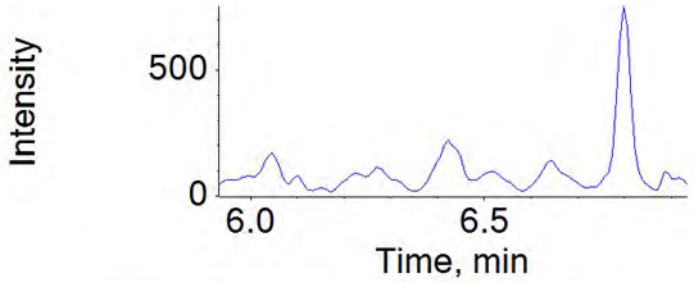
Component: PFTrDA
Primary Mass: 663.0 / 619.0



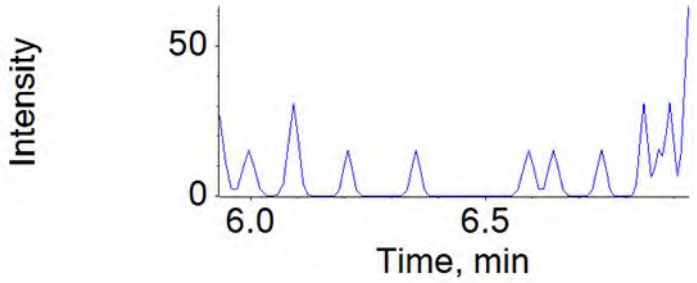
Component: PFTrDA_2
Secondary Mass: 663.0 / 169.0



Component: PFTeDA
Primary Mass: 713.0 / 669.0



Component: PFTeDA_2
Secondary Mass: 713.0 / 169.0



APPROVED
By MCD at 4:51 pm, 11/14/18

REVIEWED
By HMK at 12:22 pm, 11/15/18

ICAL Name: 18NOV28DCAL **Result Table:** 18332003 11/30/2018 9:58:40 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Sample Name:	9885091			**Data File:**		18NOV29D-66.wiff
Sample ID:	EPA 537 mod QSM 5.1 table B-15 18332003 OU1-Bldg27-S-01-12 Grab Soil			**Acquis Date:**		2018-11-29T19:43:54
Sample Type:	Unknown			**Instrument:**		LM27631
Vial Position:	45			**Acquis Method:**		18AUG13_3uL.dam
Injection Vol:	3.00			**Result Table:**		18332003
QMethod File:	18AUG20QM			**ICAL Name:**		18NOV28DCAL
Batch Number:	18332003			**Operator:**		MCD7824
Sample Wt.:	1.10000			**Dilution Factor:**		1.00
Sample Vol.:	1.000			**Prep Factor:**		2.000

Injection Standard Peak Table

Injection Standard Area Reference File: 18NOV29D-05

Injection Standard Name	Inj Std Conc	Injection Std Peak Area	Rreference Injection Standard Area	Injection Std %Diff	Injection Std %Diff Limit	Injection Std %Diff OOS
13C3-PFBA	5.0	1056847.5	906425.4	17	50	
13C2-PFOA	5.0	639341.2	495984.0	29	50	
13C4-PFOS	4.8	364462.9	296261.8	23	50	
13C2-PFDA	5.0	586772.2	451203.0	30	50	

Extraction Standard Peak Table

Extraction Standard Name	Ext Std Area	Inj Std Name	Inj Std Area	Area Ratio	Ext Std Conc	Ext Std Result	Ext Std %REC	Ext Std %REC Limit	Ext Std OOS
E13C3-PFBS	431143.2	13C3-PFBA	1056847.5	0.408	8.455	7.076	84	50-150	
E13C5-PFHxA	664917.5	13C2-PFOA	639341.2	1.040	9.091	6.945	76	50-150	
E13C3-PFHxS	338206.6	13C2-PFOA	639341.2	0.529	8.600	7.538	88	50-150	
E13C4-PFHpA	543278.1	13C2-PFOA	639341.2	0.850	9.091	7.099	78	50-150	
E13C8-PFOA	989419.3	13C2-PFOA	639341.2	1.548	9.091	7.745	85	50-150	
E13C8-PFOS	336564.1	13C4-PFOS	364462.9	0.923	8.691	7.579	87	50-150	
E13C9-PFNA	666154.9	13C4-PFOS	364462.9	1.828	9.091	7.299	80	50-150	
E13C6-PFDA	886287.1	13C2-PFDA	586772.2	1.510	9.091	7.743	85	50-150	
Ed3-NMeFOSAA	211997.5	13C2-PFDA	586772.2	0.361	9.091	8.340	92	50-150	
E13C7-PFUnDA	575507.9	13C2-PFDA	586772.2	0.981	9.091	7.537	83	50-150	
Ed5-NEtFOSAA	139042.3	13C2-PFDA	586772.2	0.237	9.091	7.676	84	50-150	
E13C2-PFDoDA	1119041.6	13C2-PFDA	586772.2	1.907	9.091	7.285	80	50-150	
E13C2-PFTeDA	790601.0	13C2-PFDA	586772.2	1.347	9.091	6.779	75	50-150	

APPROVED
By MCD at 10:13 pm, 11/30/18

REVIEWED
By HMK at 2:27 pm, 12/6/18

ICAL Name: 18NOV28DCAL **Result Table:** 18332003 11/30/2018 9:58:40 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

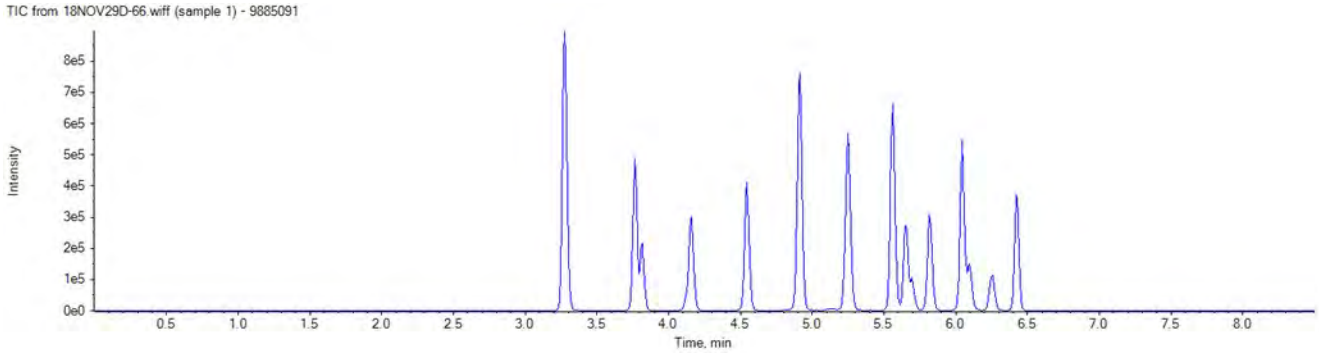
Analyte Quantitation Peak Table

Sample Name: 9885091 **Instrument Name:** LM27631 **File Name:** 18NOV29D-66.wiff

Sample Wt	Sample Vol	Dilution Factor	PrepFactor
1.10000	1.000	1.00	2.000

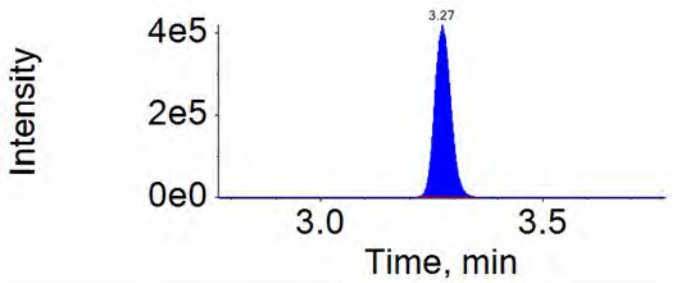
Analyte Name	RT	RRT	Analyte Area Response	E	Int Typ	ES Name	ES RT	ES Area Response	Area Ratio	Sample Result (ng/g)
PFBS	N/A	N/A	N/A		A	13C3-PFBS	3.81	431143.2	N/A	
PFHxA	N/A	N/A	N/A		A	13C5-PFHxA	4.16	664917.5	N/A	
PFHpA	N/A	N/A	N/A		A	13C4-PFHpA	4.54	543278.1	N/A	
PFHxS	4.55	1.000	23348.7		M	13C3-PFHxS	4.55	338206.6	0.069	0.588
PFOA	4.91	1.000	52892.7		A	13C8-PFOA	4.91	989419.3	0.053	0.502
PFOS	5.24	1.000	50467.2		M	13C8-PFOS	5.24	336564.1	0.150	1.144
PFNA	N/A	N/A	N/A		A	13C9-PFNA	5.26	666154.9	N/A	
PFDA	N/A	N/A	N/A		A	13C6-PFDA	5.56	886287.1	N/A	
NMeFOSAA	N/A	N/A	N/A		A	d3-NMeFOSAA	5.70	211997.5	N/A	
PFUnDA	N/A	N/A	N/A		A	13C7-PFUnDA	5.82	575507.9	N/A	
NEtFOSAA	N/A	N/A	N/A		A	d5-NEtFOSAA	5.83	139042.3	N/A	
PFDoDA	N/A	N/A	N/A		A	13C2-PFDoDA	6.04	1119041.6	N/A	
PFTrDA	N/A	N/A	N/A		A	13C2-PFDoDA	6.04	1119041.6	N/A	
PFTeDA	N/A	N/A	N/A		A	13C2-PFTeDA	6.43	790601.0	N/A	

Total Ion Chromatogram

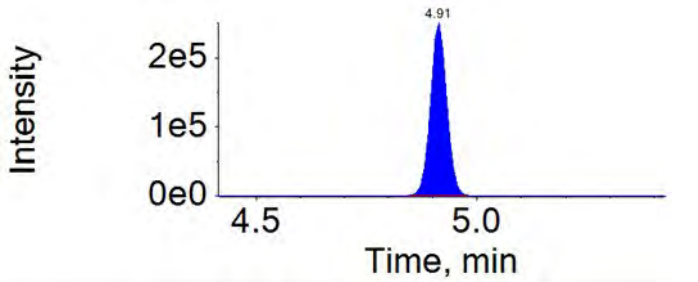


ICAL Name: 18NOV28DCAL **Result Table:** 18332003 11/30/2018 9:58:40 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

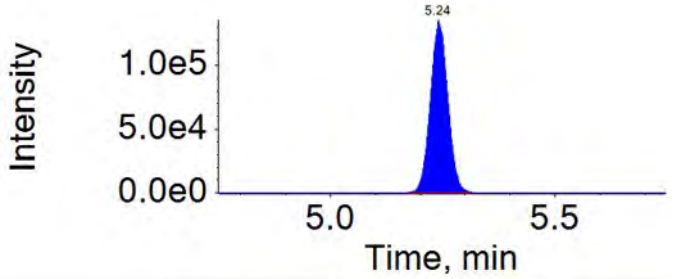
Injection Standard: 13C3-PFBA
216.0 / 172.0



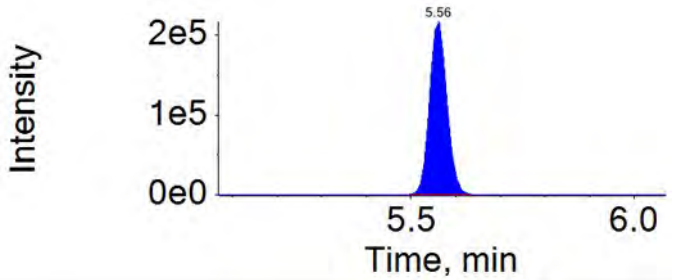
Injection Standard: 13C2-PFOA
415.0 / 370.0



Injection Standard: 13C4-PFOS
503.0 / 80.0



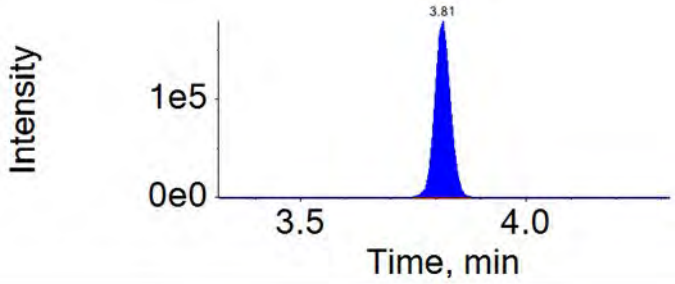
Injection Standard: 13C2-PFDA
515.0 / 470.0



ICAL Name: 18NOV28DCAL **Result Table:** 18332003 11/30/2018 9:58:40 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

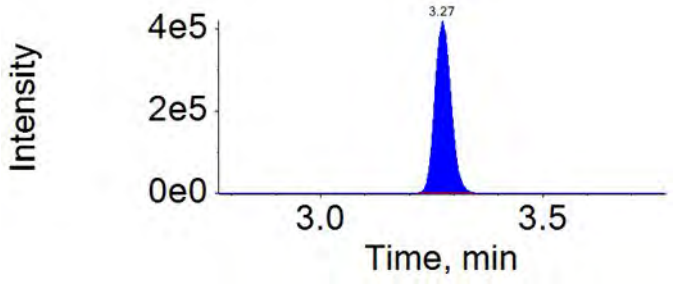
Extraction Standard: E13C3-PFBS

302.0 / 80.0



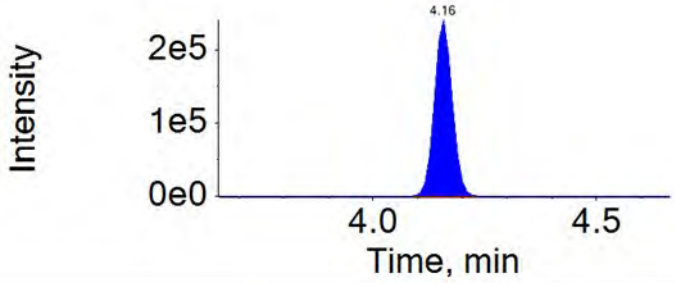
Injection Standard: 13C3-PFBA

216.0 / 172.0



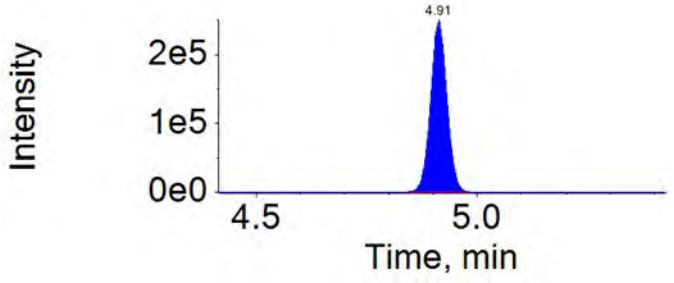
Extraction Standard: E13C5-PFHxA

318.0 / 273.0



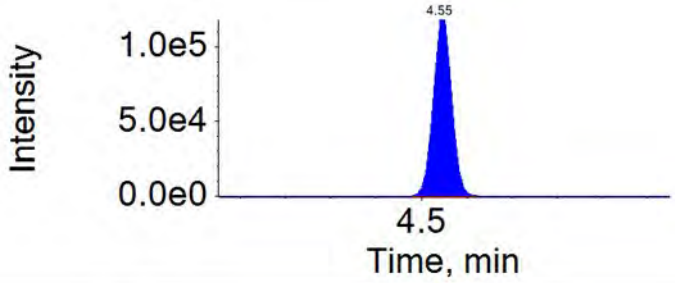
Injection Standard: 13C2-PFOA

415.0 / 370.0



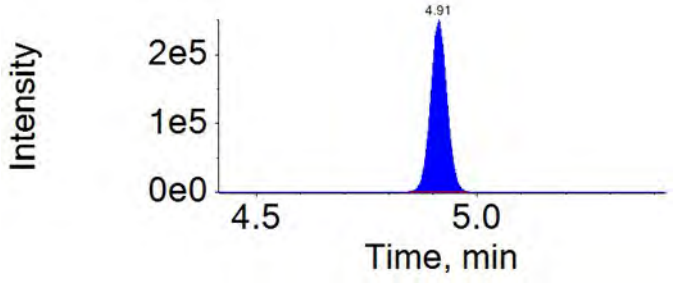
Extraction Standard: E13C3-PFHxS

402.0 / 80.0



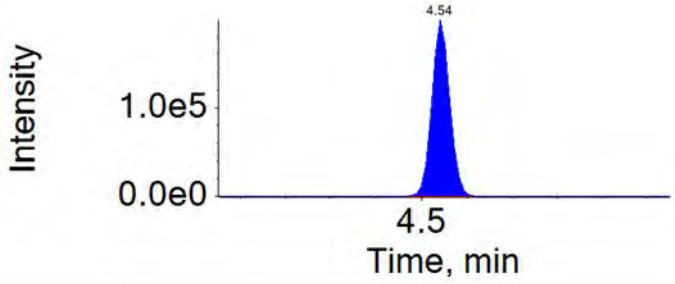
Injection Standard: 13C2-PFOA

415.0 / 370.0



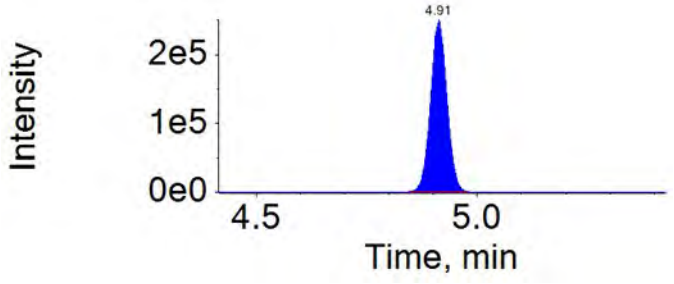
Extraction Standard: E13C4-PFHpA

367.0 / 322.0



Injection Standard: 13C2-PFOA

415.0 / 370.0

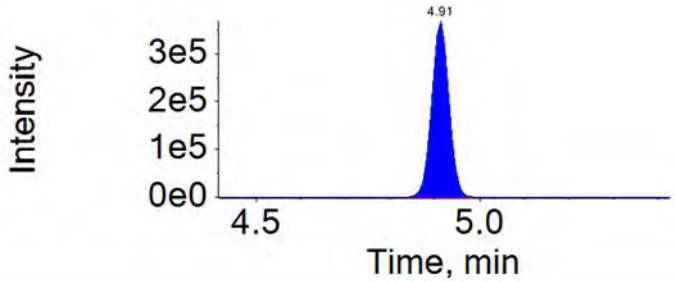


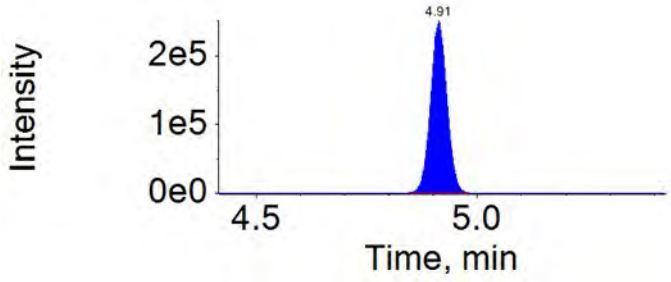
APPROVED
By MCD at 10:13 pm, 11/30/18

REVIEWED
By HMK at 2:27 pm, 12/6/18

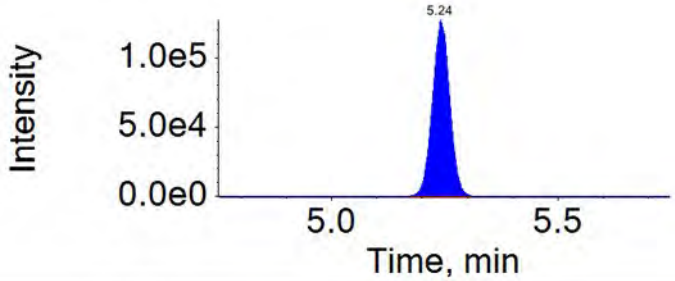
ICAL Name: 18NOV28DCAL **Result Table:** 18332003 11/30/2018 9:58:40 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

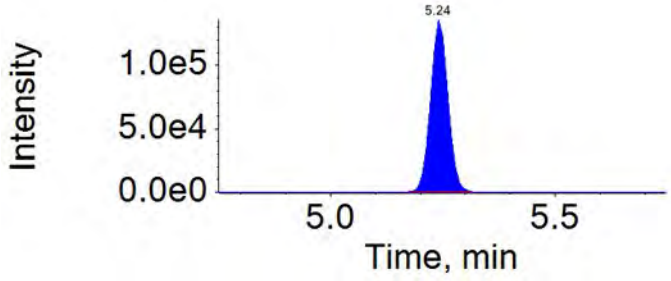
Extraction Standard: E13C8-PFOA	Injection Standard: 13C2-PFOA
421.0 / 376.0	415.0 / 370.0



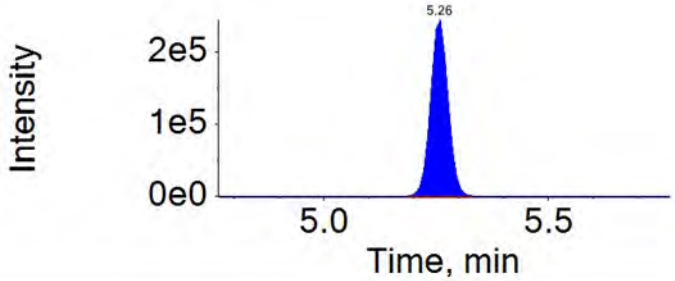


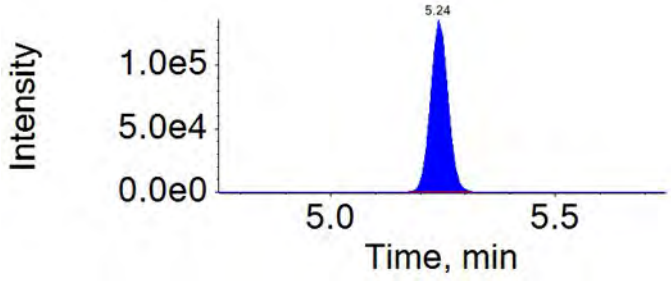
Extraction Standard: E13C8-PFOS	Injection Standard: 13C4-PFOS
507.0 / 80.0	503.0 / 80.0



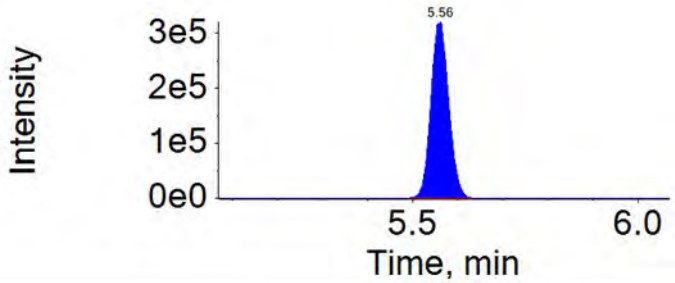


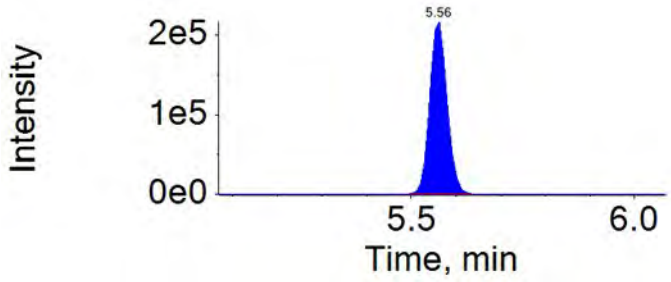
Extraction Standard: E13C9-PFNA	Injection Standard: 13C4-PFOS
472.0 / 427.0	503.0 / 80.0





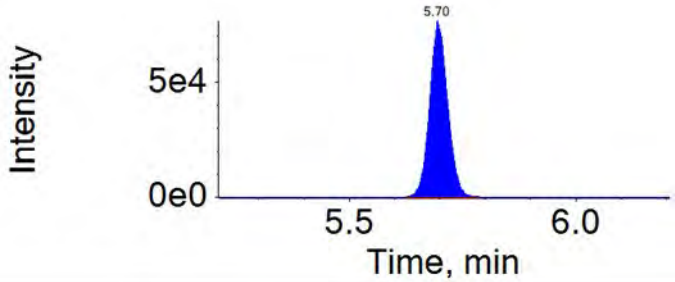
Extraction Standard: E13C6-PFDA	Injection Standard: 13C2-PFDA
519.0 / 474.0	515.0 / 470.0

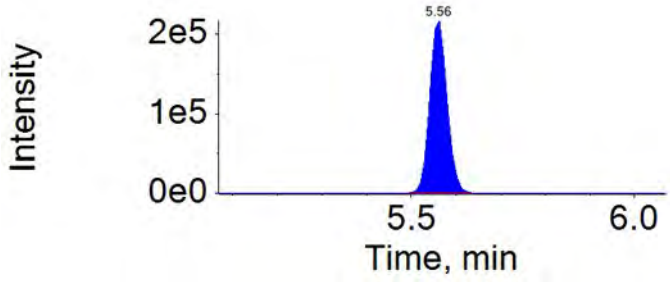




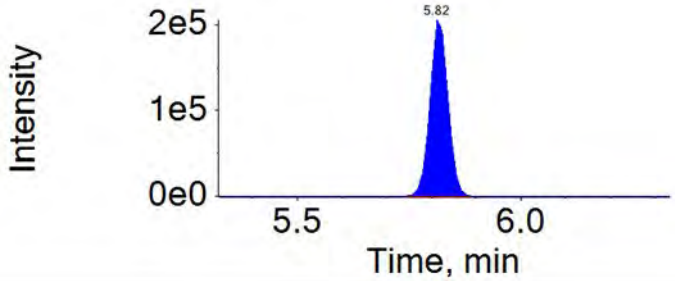
ICAL Name: 18NOV28DCAL **Result Table:** 18332003 11/30/2018 9:58:40 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

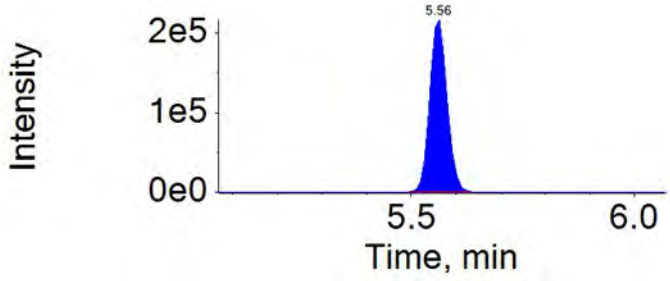
Extraction Standard: Ed3-NMeFOSAA	Injection Standard: 13C2-PFDA
573.0 / 419.0	515.0 / 470.0



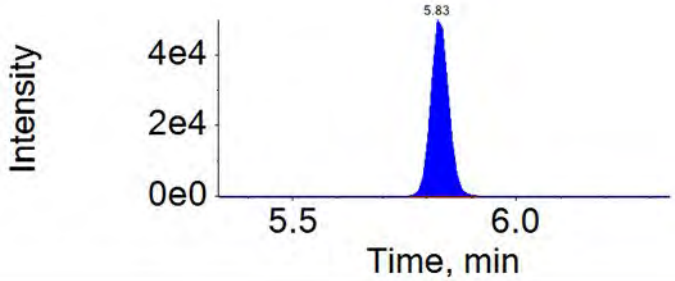


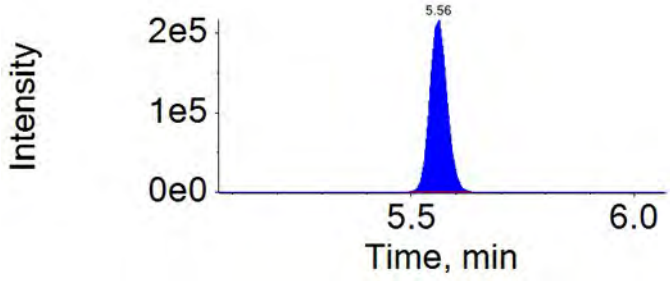
Extraction Standard: E13C7-PFUnDA	Injection Standard: 13C2-PFDA
570.0 / 525.0	515.0 / 470.0



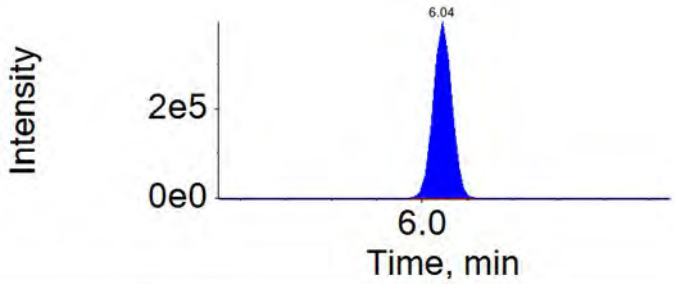


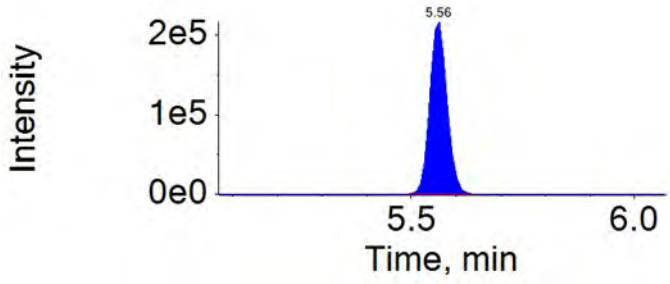
Extraction Standard: Ed5-NEtFOSAA	Injection Standard: 13C2-PFDA
589.0 / 419.0	515.0 / 470.0



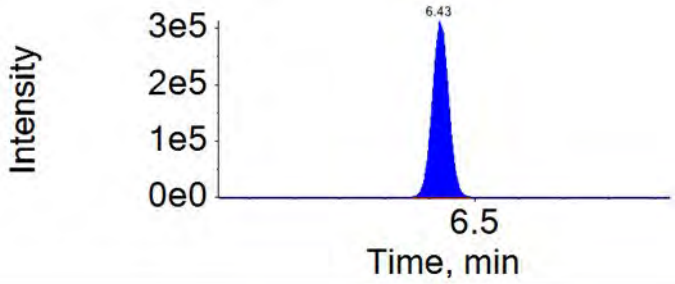
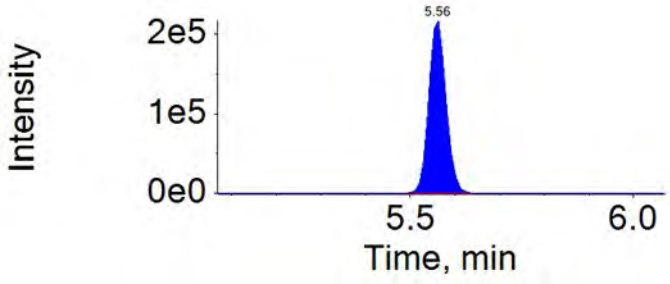


Extraction Standard: E13C2-PFDoDA	Injection Standard: 13C2-PFDA
615.0 / 570.0	515.0 / 470.0



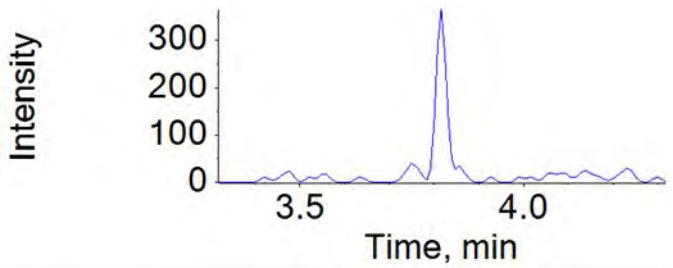


ICAL Name: 18NOV28DCAL **Result Table:** 18332003 11/30/2018 9:58:40 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

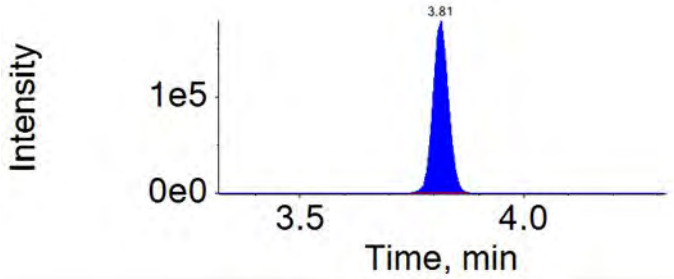
Extraction Standard: E13C2-PFTeDA	Injection Standard: 13C2-PFDA
715.0 / 670.0 	515.0 / 470.0 

ICAL Name: 18NOV28DCAL **Result Table:** 18332003 11/30/2018 9:58:40 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

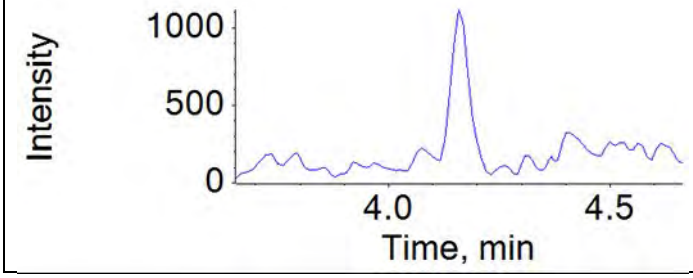
Analyte: PFBS
299.0 / 80.0



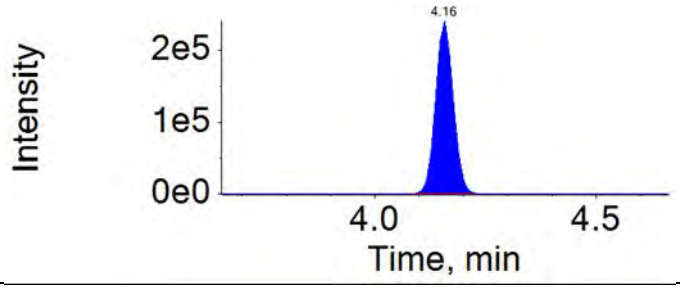
Extraction Standard: 13C3-PFBS
302.0 / 80.0



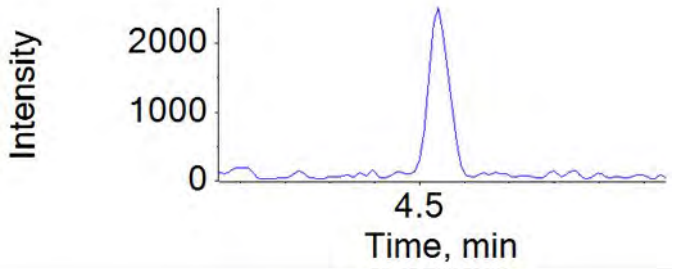
Analyte: PFHxA
313.0 / 269.0



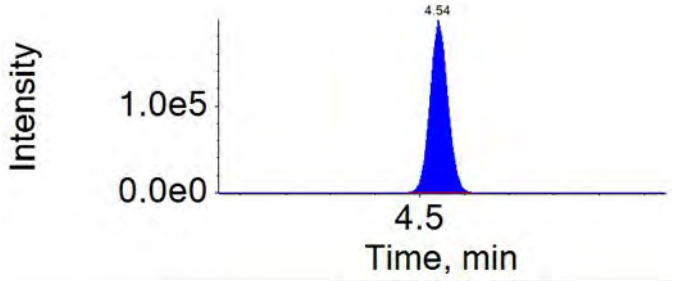
Extraction Standard: 13C5-PFHxA
318.0 / 273.0



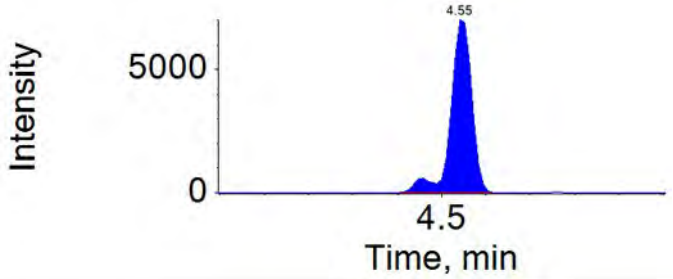
Analyte: PFHpA
363.0 / 319.0



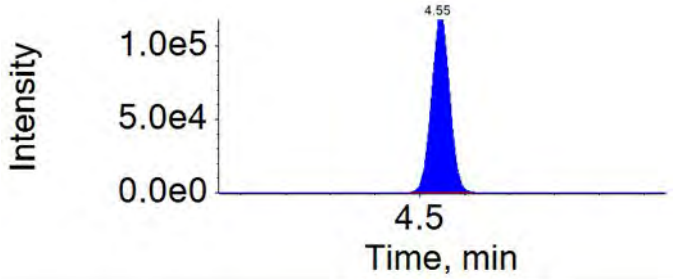
Extraction Standard: 13C4-PFHpA
367.0 / 322.0



Analyte: PFHxS
399.0 / 80.0



Extraction Standard: 13C3-PFHxS
402.0 / 80.0

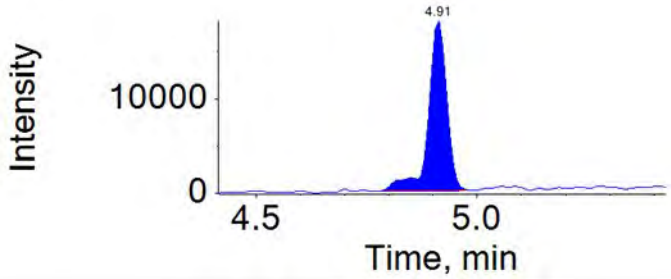


APPROVED
By MCD at 10:13 pm, 11/30/18

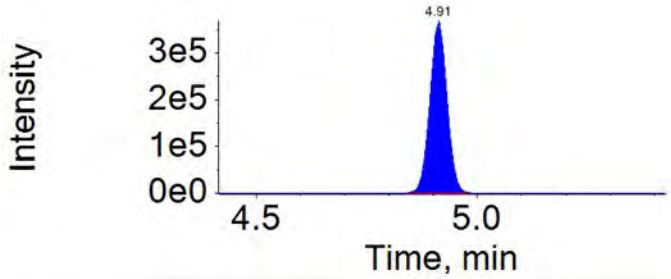
REVIEWED
By HMK at 2:27 pm, 12/6/18

ICAL Name: 18NOV28DCAL **Result Table:** 18332003 11/30/2018 9:58:40 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

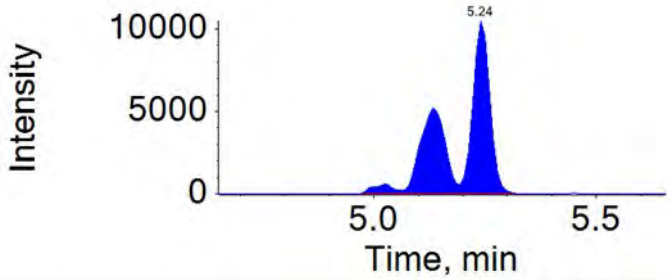
Analyte: PFOA
413.0 / 369.0



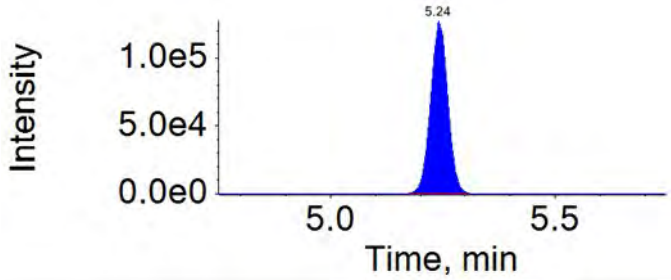
Extraction Standard: 13C8-PFOA
421.0 / 376.0



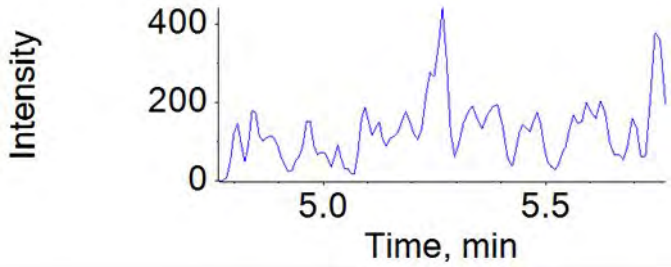
Analyte: PFOS
499.0 / 80.0



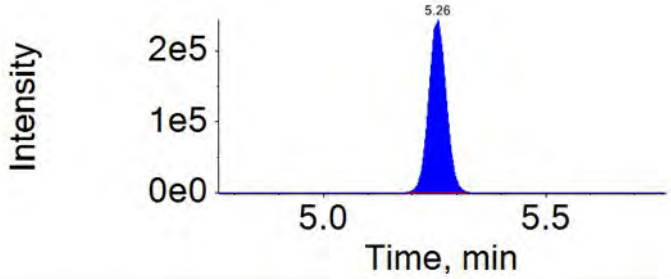
Extraction Standard: 13C8-PFOS
507.0 / 80.0



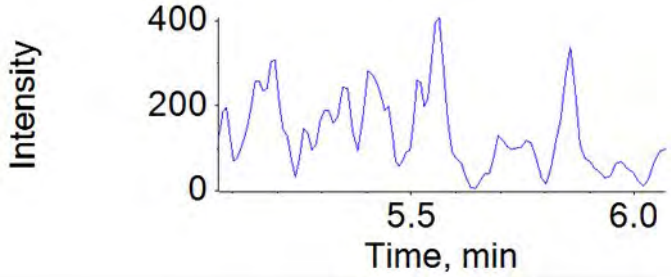
Analyte: PFNA
463.0 / 419.0



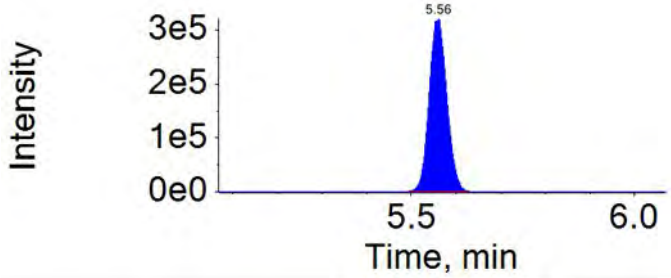
Extraction Standard: 13C9-PFNA
472.0 / 427.0



Analyte: PFDA
513.0 / 469.0



Extraction Standard: 13C6-PFDA
519.0 / 474.0

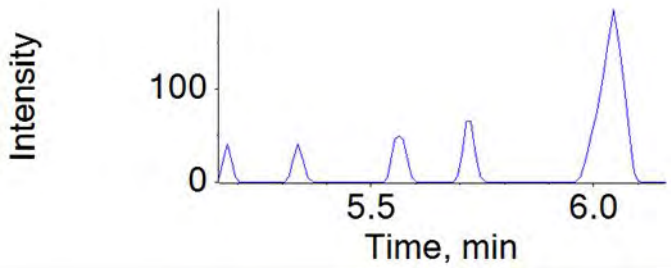


APPROVED
By MCD at 10:13 pm, 11/30/18

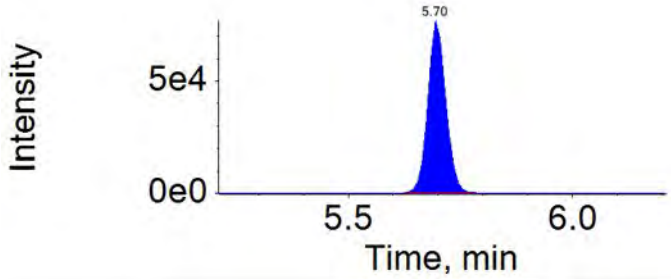
REVIEWED
By HMK at 2:27 pm, 12/6/18

ICAL Name: 18NOV28DCAL **Result Table:** 18332003 11/30/2018 9:58:40 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

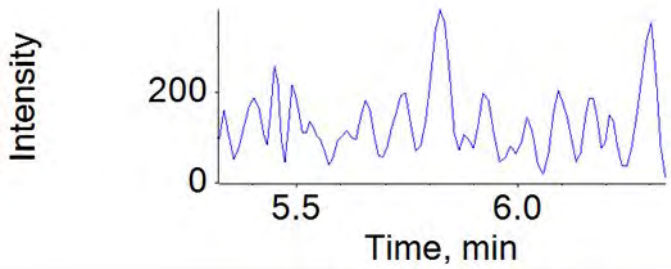
Analyte: NMeFOSAA
570.0 / 419.0



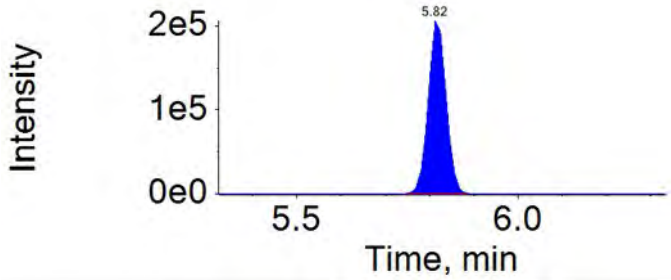
Extraction Standard: d3-NMeFOSAA
573.0 / 419.0



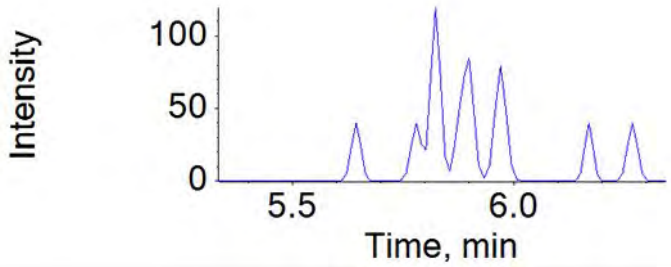
Analyte: PFUnDA
563.0 / 519.0



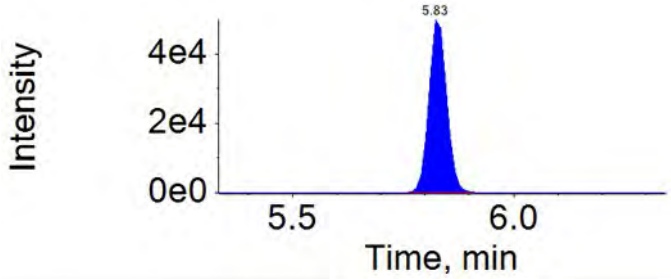
Extraction Standard: 13C7-PFUnDA
570.0 / 525.0



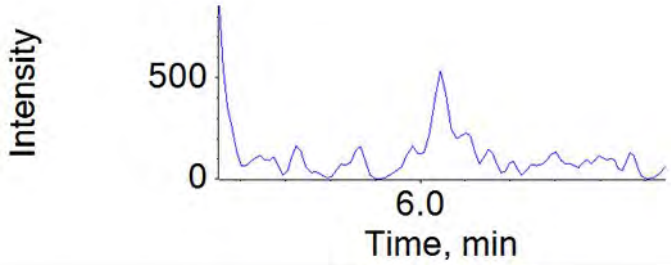
Analyte: NEtFOSAA
584.0 / 419.0



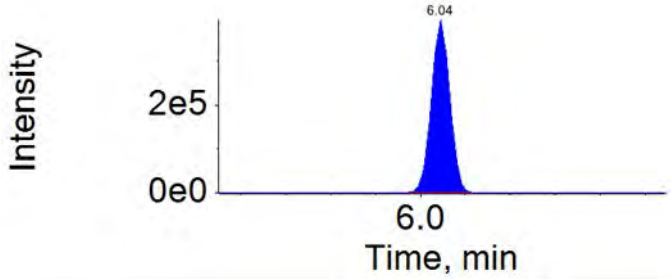
Extraction Standard: d5-NEtFOSAA
589.0 / 419.0



Analyte: PFDoDA
613.0 / 569.0



Extraction Standard: 13C2-PFDoDA
615.0 / 570.0

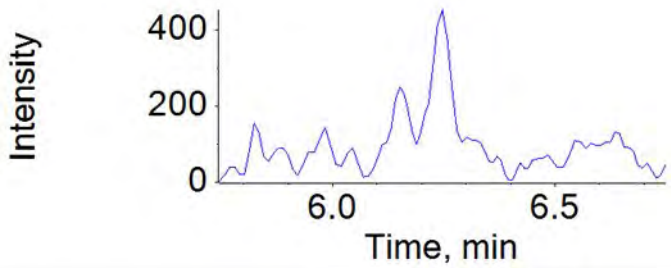


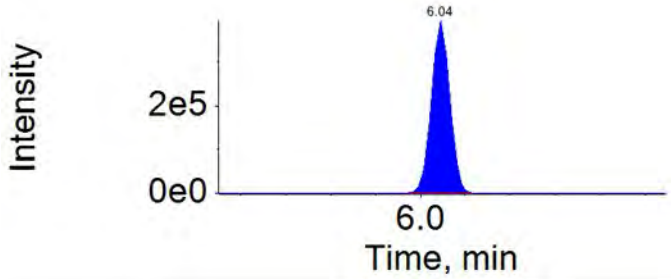
APPROVED
By MCD at 10:13 pm, 11/30/18

REVIEWED
By HMK at 2:27 pm, 12/6/18

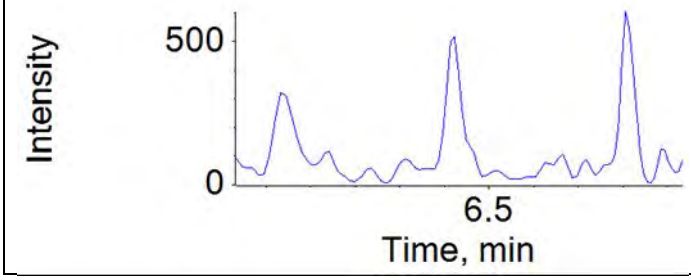
ICAL Name: 18NOV28DCAL **Result Table:** 18332003 11/30/2018 9:58:40 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

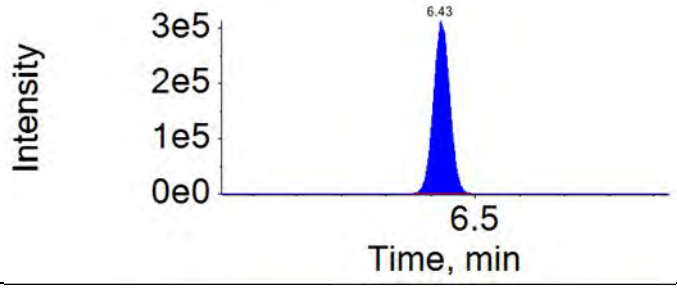
Analyte: PFTrDA	Extraction Standard: 13C2-PFDoDA
663.0 / 619.0	615.0 / 570.0





Analyte: PFTeDA	Extraction Standard: 13C2-PFTeDA
713.0 / 669.0	715.0 / 670.0





APPROVED
By MCD at 10:13 pm, 11/30/18

REVIEWED
By HMK at 2:27 pm, 12/6/18

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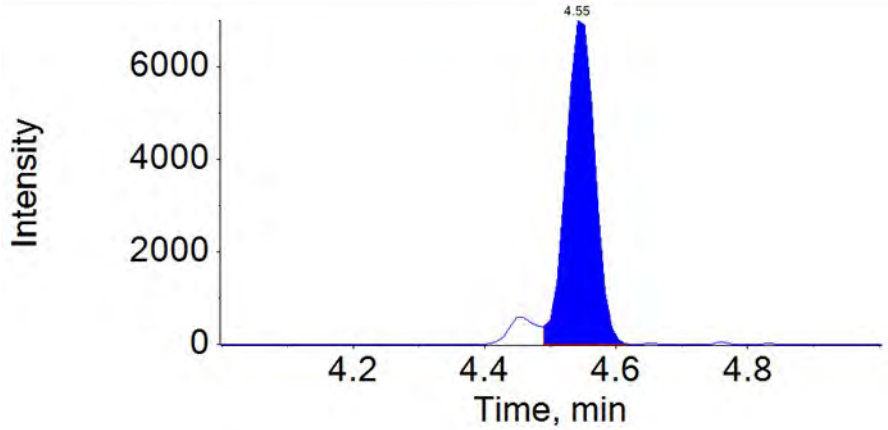
Auto Integrations prior to Manual Integration

Print Date: 11/30/2018 10:06 PM
Template: MQ-OrigInteg-16NOV21.docx

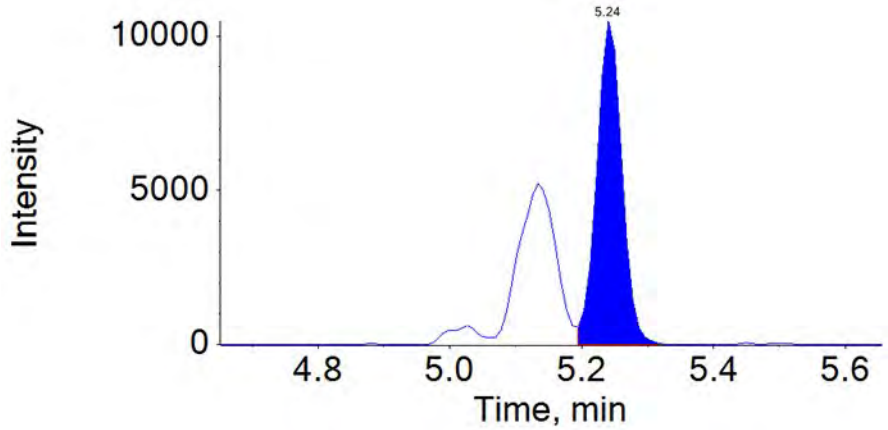
Results Table Name: 18332003
Results Table Date: 11/30/2018 9:58:40 PM
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

Component Name:
PFHxS
RT (min.):
4.55
Peak Area:
21586.0
Mass Range:
399.0 / 80.0
File Name:
18NOV29D-66.wiff
Sample Name:
9885091



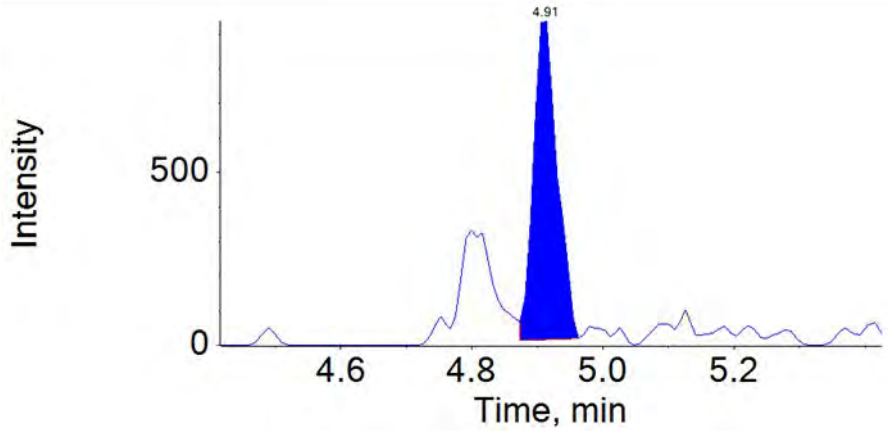
Integration Comment: incorrect integration

Component Name:
PFOS
RT (min.):
5.24
Peak Area:
27852.4
Mass Range:
499.0 / 80.0
File Name:
18NOV29D-66.wiff
Sample Name:
9885091



Integration Comment: incorrect integration

Component Name:
PFOA_2
RT (min.):
4.91
Peak Area:
2345.3
Mass Range:
413.0 / 169.0
File Name:
18NOV29D-66.wiff
Sample Name:
9885091



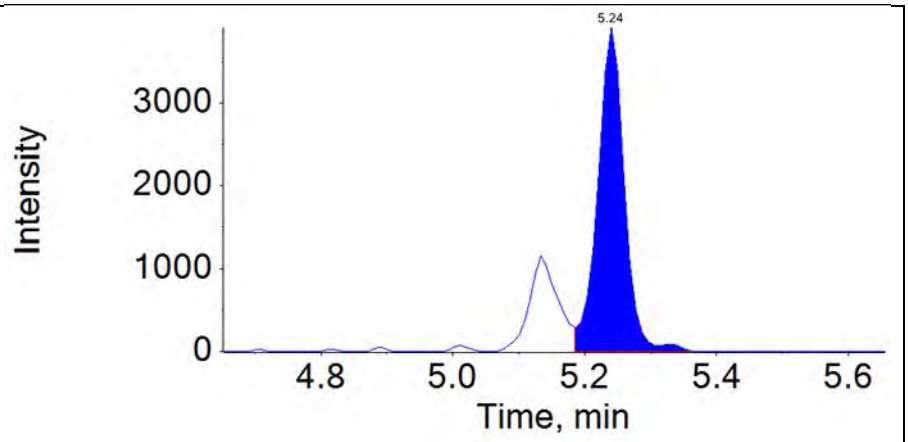
Integration Comment: incorrect integration

APPROVED
By MCD at 10:13 pm, 11/30/18

REVIEWED
By HMK at 2:27 pm, 12/6/18

Results Table Name: 18332003
Results Table Date: 11/30/2018 9:58:40 PM
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

Component Name:
PFOS_2
RT (min.):
5.24
Peak Area:
10955.0
Mass Range:
499.0 / 99.0
File Name:
18NOV29D-66.wiff
Sample Name:
9885091



Integration Comment: incorrect integration

APPROVED
By MCD at 10:13 pm, 11/30/18

REVIEWED
By HMK at 2:27 pm, 12/6/18

Results Table Name: 18332003
Results Table Date: 11/30/2018 9:58:40 PM

Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

APPROVED
By MCD at 10:13 pm, 11/30/18

REVIEWED
By HMK at 2:27 pm, 12/6/18

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LC-MS/MS Analysis Report

Printed: 11/30/2018 10:03:00 PM
Template: IonRatio18OCT10

Ion Ratio Report

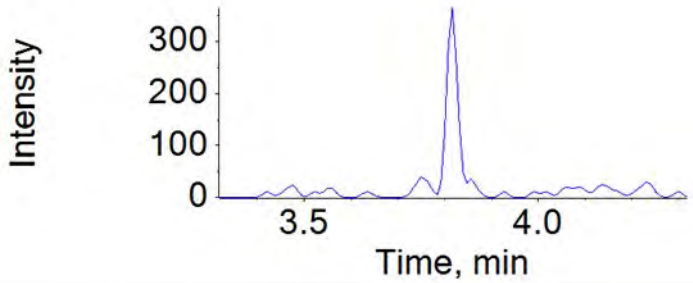
Sample Name: 9885091 **Instrument Name:** LM27631 **File Name:** 18NOV29D-66.wiff

Component Name	RT	RRT	Analyte Area Response	Int Typ	Expected Ion Ratio	Ion Ratio	Ion Ratio % Diff	Ion Ratio Limit	Ion Ratio OOS
PFBS	N/A	N/A	N/A	A	N/A	N/A			
PFBS_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFHxA	N/A	N/A	N/A	A	N/A	N/A			
PFHxA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFHpA	N/A	N/A	N/A	A	N/A	N/A			
PFHpA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFHxS	4.55	1.00	23348.7	M	N/A	0.3113			
PFHxS_2	4.55	1.00	7267.4	A	N/A	0.3113	-16	50	
PFOA	4.91	1.00	52892.7	A	N/A	0.0656			
PFOA_2	4.91	1.00	3472.1	M	N/A	0.0656	15	50	
PFOS	5.24	1.00	50467.2	M	N/A	0.2893			
PFOS_2	5.24	1.00	14601.8	M	N/A	0.2893	-2	50	
PFNA	N/A	N/A	N/A	A	N/A	N/A			
PFNA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFDA	N/A	N/A	N/A	A	N/A	N/A			
PFDA_2	N/A	N/A	N/A	A	N/A	N/A		50	
NMeFOSAA	N/A	N/A	N/A	A	N/A	N/A			
NMeFOSAA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFUnDA	N/A	N/A	N/A	A	N/A	N/A			
PFUnDA_2	N/A	N/A	N/A	A	N/A	N/A		50	
NEtFOSAA	N/A	N/A	N/A	A	N/A	N/A			
NEtFOSAA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFDoDA	N/A	N/A	N/A	A	N/A	N/A			
PFDoDA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFTrDA	N/A	N/A	N/A	A	N/A	N/A			
PFTrDA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFTeDA	N/A	N/A	N/A	A	N/A	N/A			
PFTeDA_2	N/A	N/A	N/A	A	N/A	N/A		50	

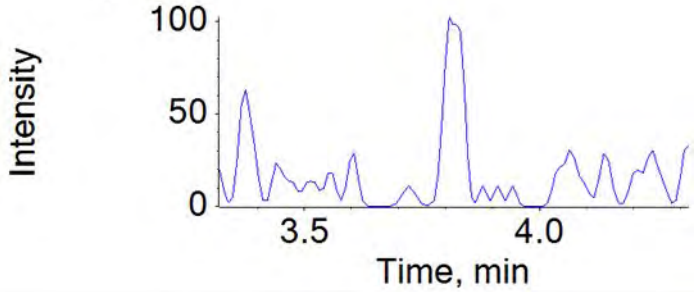
APPROVED
By MCD at 10:13 pm, 11/30/18

REVIEWED
By HMK at 2:27 pm, 12/6/18

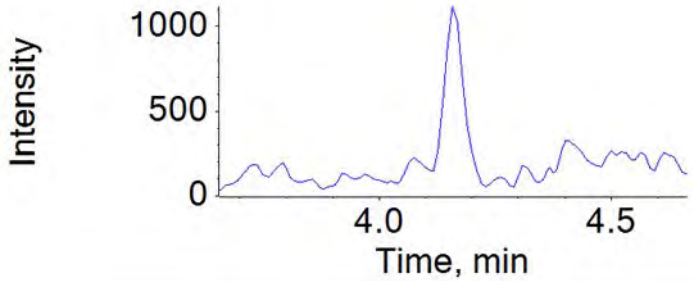
Component: PFBS
Primary Mass: 299.0 / 80.0



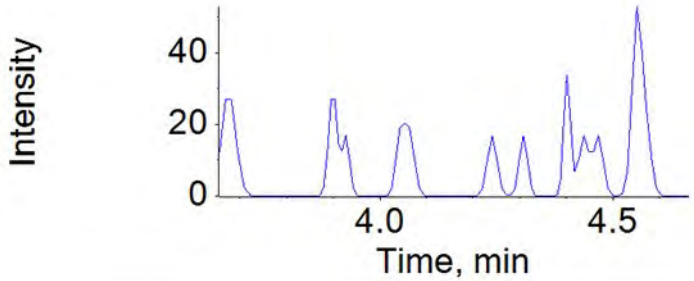
Component: PFBS_2
Secondary Mass: 299.0 / 99.0



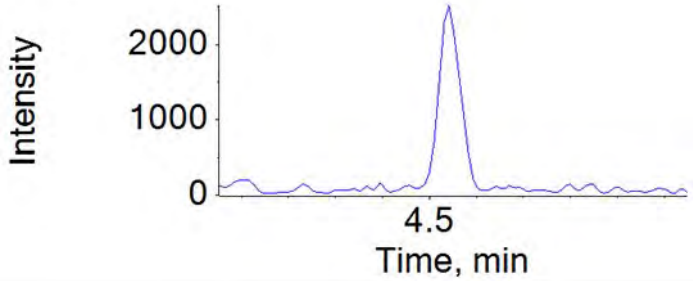
Component: PFHxA
Primary Mass: 313.0 / 269.0



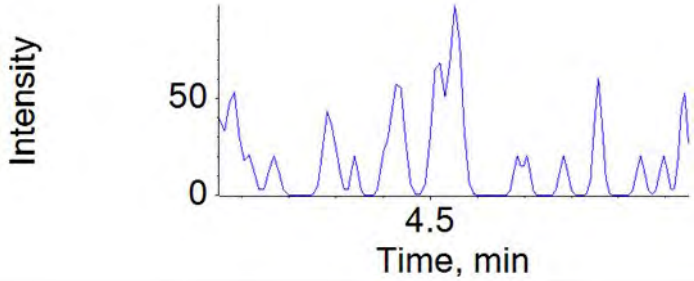
Component: PFHxA_2
Secondary Mass: 313.0 / 119.0



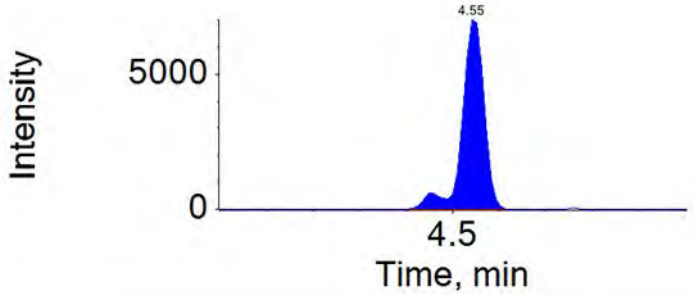
Component: PFHpA
Primary Mass: 363.0 / 319.0



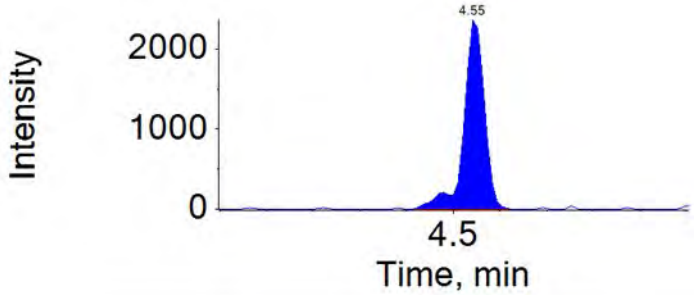
Component: PFHpA_2
Secondary Mass: 363.0 / 169.0



Component: PFHxS
Primary Mass: 399.0 / 80.0



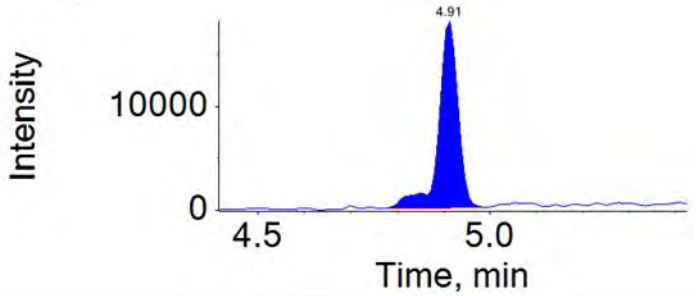
Component: PFHxS_2
Secondary Mass: 399.0 / 99.0



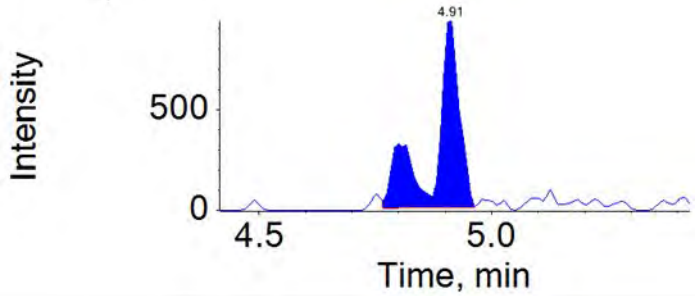
APPROVED
By MCD at 10:13 pm, 11/30/18

REVIEWED
By HMK at 2:27 pm, 12/6/18

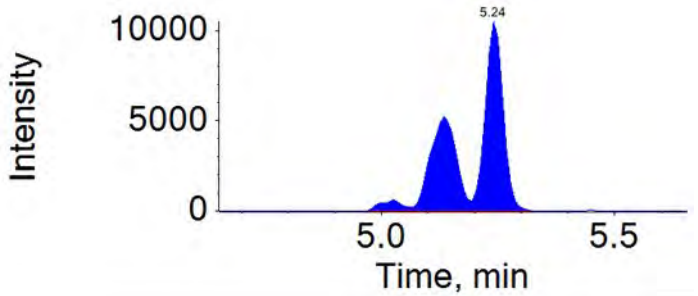
Component: PFOA
Primary Mass: 413.0 / 369.0



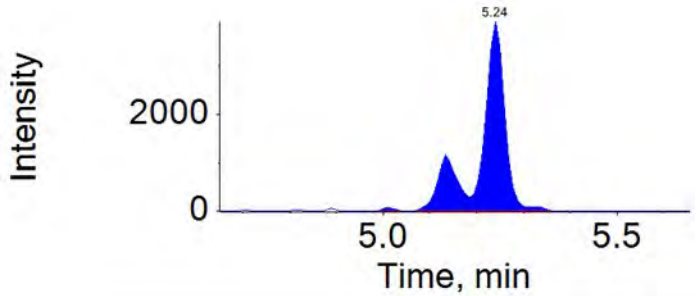
Component: PFOA_2
Secondary Mass: 413.0 / 169.0



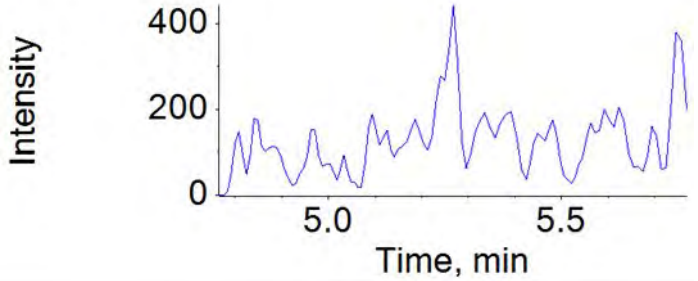
Component: PFOS
Primary Mass: 499.0 / 80.0



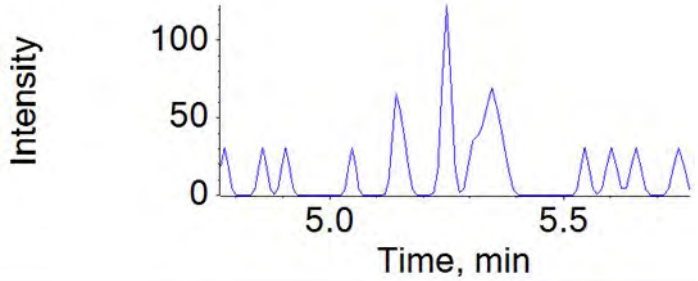
Component: PFOS_2
Secondary Mass: 499.0 / 99.0



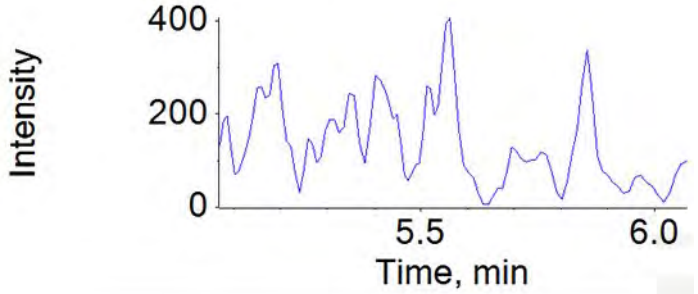
Component: PFNA
Primary Mass: 463.0 / 419.0



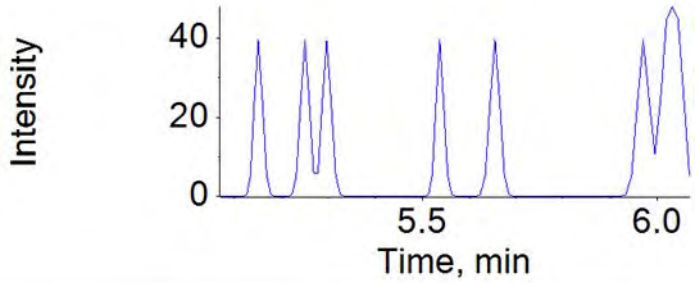
Component: PFNA_2
Secondary Mass: 463.0 / 169.0



Component: PFDA
Primary Mass: 513.0 / 469.0



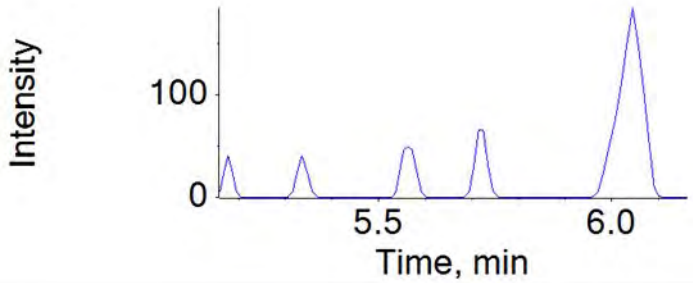
Component: PFDA_2
Secondary Mass: 513.0 / 169.0



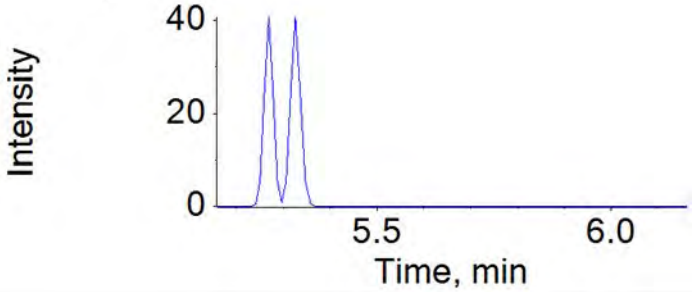
APPROVED
By MCD at 10:13 pm, 11/30/18

REVIEWED
By HMK at 2:27 pm, 12/6/18

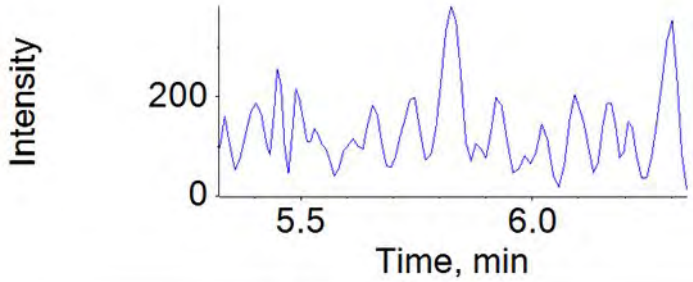
Component: NMeFOSAA
Primary Mass: 570.0 / 419.0



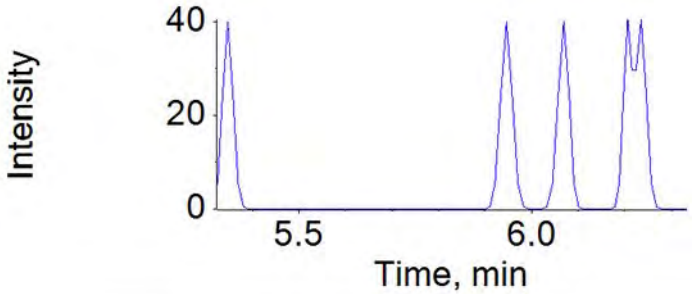
Component: NMeFOSAA_2
Secondary Mass: 570.0 / 483.0



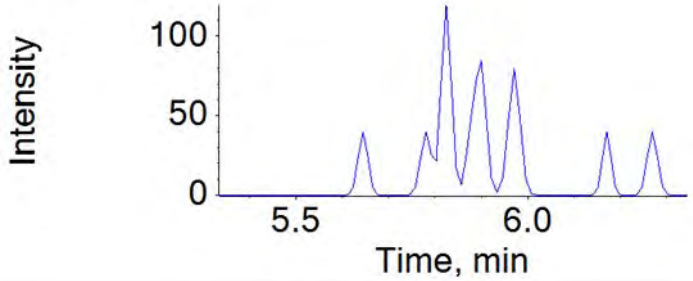
Component: PFUnDA
Primary Mass: 563.0 / 519.0



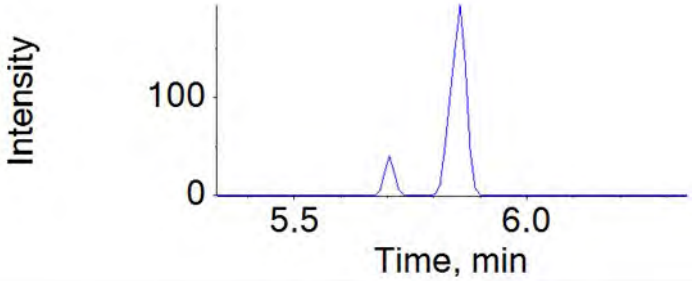
Component: PFUnDA_2
Secondary Mass: 563.0 / 169.0



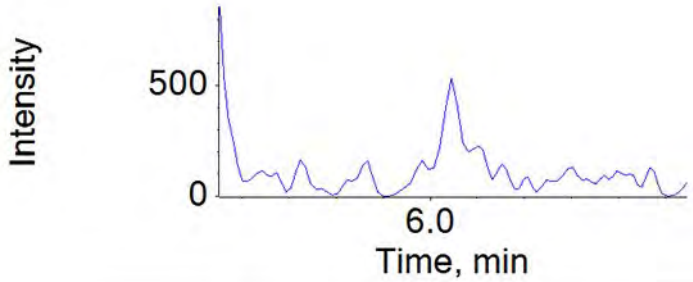
Component: NEtFOSAA
Primary Mass: 584.0 / 419.0



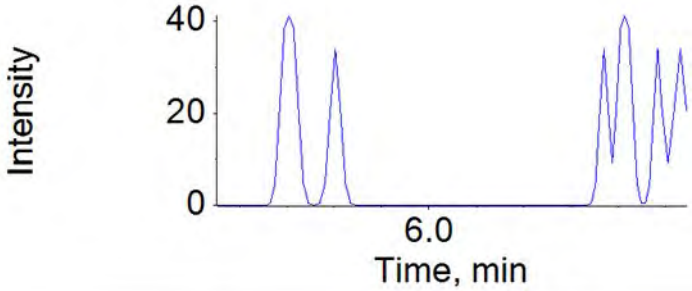
Component: NEtFOSAA_2
Secondary Mass: 584.0 / 526.0



Component: PFDoDA
Primary Mass: 613.0 / 569.0



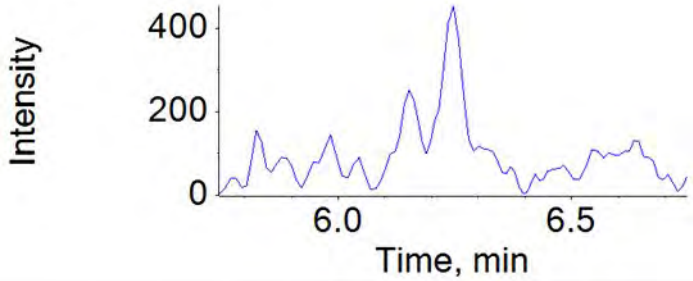
Component: PFDoDA_2
Secondary Mass: 613.0 / 169.0



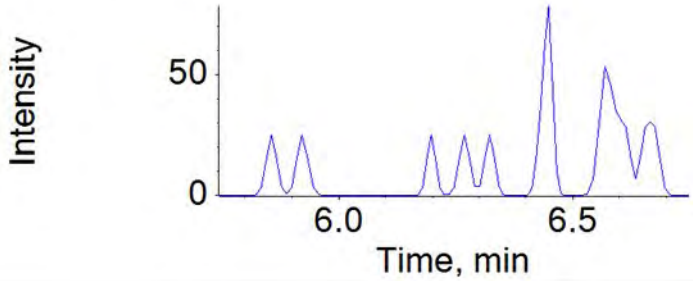
APPROVED
By MCD at 10:13 pm, 11/30/18

REVIEWED
By HMK at 2:27 pm, 12/6/18

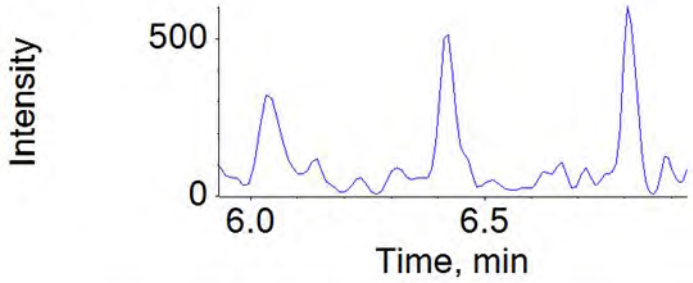
Component: PFTrDA
Primary Mass: 663.0 / 619.0



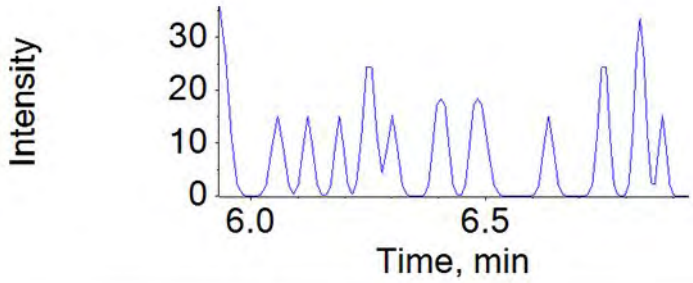
Component: PFTrDA_2
Secondary Mass: 663.0 / 169.0



Component: PFTeDA
Primary Mass: 713.0 / 669.0



Component: PFTeDA_2
Secondary Mass: 713.0 / 169.0



APPROVED
By MCD at 10:13 pm, 11/30/18

REVIEWED
By HMK at 2:27 pm, 12/6/18

ICAL Name: 18NOV12DCAL **Result Table:** 18316011 11/14/2018 4:24:36 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Sample Name:	9885092			**Data File:**		18NOV13D-61.wiff
Sample ID:	EPA 537 mod QSM 5.1 table B-15 18316011 OU1-Bldg27-S-02-01 Grab Soil			**Acquis Date:**		2018-11-13T18:44:38
Sample Type:	Unknown			**Instrument:**		LM27631
Vial Position:	58			**Acquis Method:**		18AUG13_3uL.dam
Injection Vol:	3.00			**Result Table:**		18316011
QMethod File:	18AUG20QM			**ICAL Name:**		18NOV12DCAL
Batch Number:	18316011			**Operator:**		MCD7824
Sample Wt.:	1.04000			**Dilution Factor:**		1.00
Sample Vol.:	1.000			**Prep Factor:**		2.000

Injection Standard Peak Table

Injection Standard Area Reference File: 18NOV13D-05

Injection Standard Name	Inj Std Conc	Injection Std Peak Area	Rreference Injection Standard Area	Injection Std %Diff	Injection Std %Diff Limit	Injection Std %Diff OOS
13C3-PFBA	5.0	723621.5	661126.9	9	50	
13C2-PFOA	5.0	522948.5	466902.6	12	50	
13C4-PFOS	4.8	279073.9	247446.9	13	50	
13C2-PFDA	5.0	323957.5	295381.6	10	50	

Extraction Standard Peak Table

Extraction Standard Name	Ext Std Area	Inj Std Name	Inj Std Area	Area Ratio	Ext Std Conc	Ext Std Result	Ext Std %REC	Ext Std %REC Limit	Ext Std OOS
E13C3-PFBS	346927.6	13C3-PFBA	723621.5	0.479	8.942	6.508	73	50-150	
E13C5-PFHxA	528785.1	13C2-PFOA	522948.5	1.011	9.615	7.024	73	50-150	
E13C3-PFHxS	262887.2	13C2-PFOA	522948.5	0.503	9.096	6.634	73	50-150	
E13C4-PFHpA	433931.7	13C2-PFOA	522948.5	0.830	9.615	7.189	75	50-150	
E13C8-PFOA	750438.6	13C2-PFOA	522948.5	1.435	9.615	7.603	79	50-150	
E13C8-PFOS	228469.3	13C4-PFOS	279073.9	0.819	9.192	6.976	76	50-150	
E13C9-PFNA	380202.8	13C4-PFOS	279073.9	1.362	9.615	7.305	76	50-150	
E13C6-PFDA	514275.6	13C2-PFDA	323957.5	1.587	9.615	7.124	74	50-150	
Ed3-NMeFOSAA	49647.5	13C2-PFDA	323957.5	0.153	9.615	5.320	55	50-150	
E13C7-PFUnDA	208243.5	13C2-PFDA	323957.5	0.643	9.615	7.177	75	50-150	
Ed5-NEtFOSAA	41788.3	13C2-PFDA	323957.5	0.129	9.615	5.248	55	50-150	
E13C2-PFDoDA	462525.8	13C2-PFDA	323957.5	1.428	9.615	7.129	74	50-150	
E13C2-PFTeDA	319904.0	13C2-PFDA	323957.5	0.987	9.615	6.667	69	50-150	

APPROVED
By MCD at 4:51 pm, 11/14/18

REVIEWED
By HMK at 12:22 pm, 11/15/18

ICAL Name: 18NOV12DCAL **Result Table:** 18316011 11/14/2018 4:24:36 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

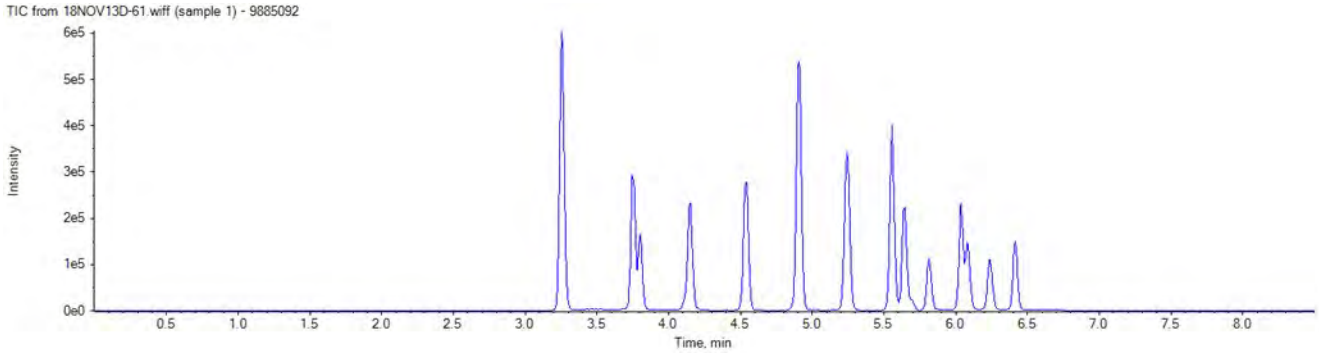
Analyte Quantitation Peak Table

Sample Name: 9885092 **Instrument Name:** LM27631 **File Name:** 18NOV13D-61.wiff

Sample Wt	Sample Vol	Dilution Factor	PrepFactor
1.04000	1.000	1.00	2.000

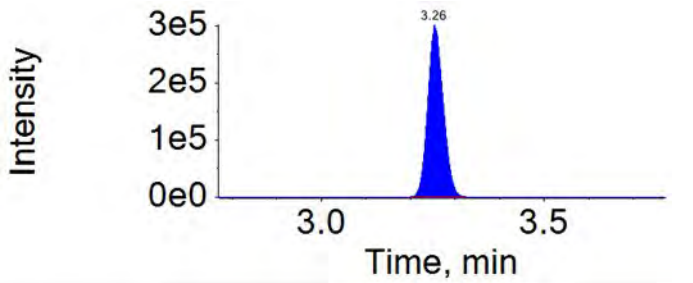
Analyte Name	RT	RRT	Analyte Area Response	E	Int Typ	ES Name	ES RT	ES Area Response	Area Ratio	Sample Result (ng/g)
PFBS	N/A	N/A	N/A		A	13C3-PFBS	3.80	346927.6	N/A	
PFHxA	N/A	N/A	N/A		A	13C5-PFHxA	4.15	528785.1	N/A	
PFHpA	N/A	N/A	N/A		A	13C4-PFHpA	4.54	433931.7	N/A	
PFHxS	N/A	N/A	N/A		A	13C3-PFHxS	4.54	262887.2	N/A	
PFOA	N/A	N/A	N/A		A	13C8-PFOA	4.91	750438.6	N/A	
PFOS	5.24	1.000	9194.0		M	13C8-PFOS	5.24	228469.3	0.040	0.338
PFNA	N/A	N/A	N/A		A	13C9-PFNA	5.25	380202.8	N/A	
PFDA	N/A	N/A	N/A		A	13C6-PFDA	5.55	514275.6	N/A	
NMeFOSAA	N/A	N/A	N/A		A	d3-NMeFOSAA	5.69	49647.5	N/A	
PFUnDA	N/A	N/A	N/A		A	13C7-PFUnDA	5.81	208243.5	N/A	
NEtFOSAA	N/A	N/A	N/A		A	d5-NEtFOSAA	5.82	41788.3	N/A	
PFDoDA	N/A	N/A	N/A		A	13C2-PFDoDA	6.04	462525.8	N/A	
PFTrDA	N/A	N/A	N/A		A	13C2-PFDoDA	6.04	462525.8	N/A	
PFTeDA	N/A	N/A	N/A		A	13C2-PFTeDA	6.41	319904.0	N/A	

Total Ion Chromatogram

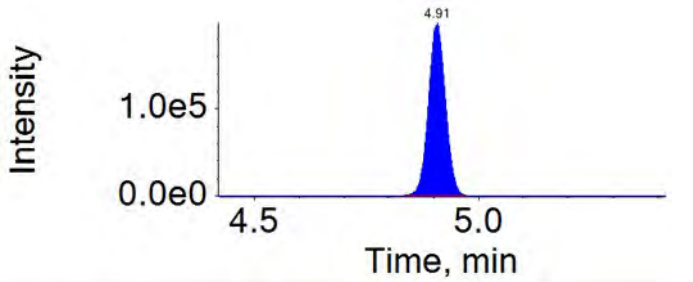


ICAL Name: 18NOV12DCAL **Result Table:** 18316011 11/14/2018 4:24:36 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

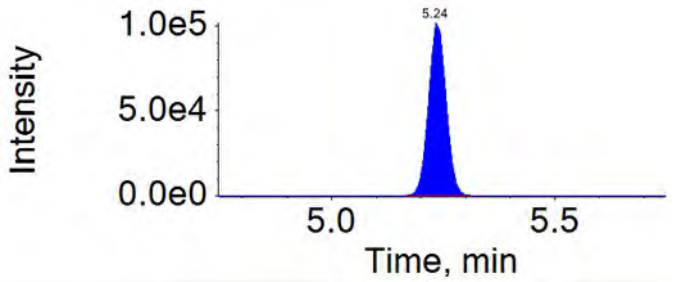
Injection Standard: 13C3-PFBA
216.0 / 172.0



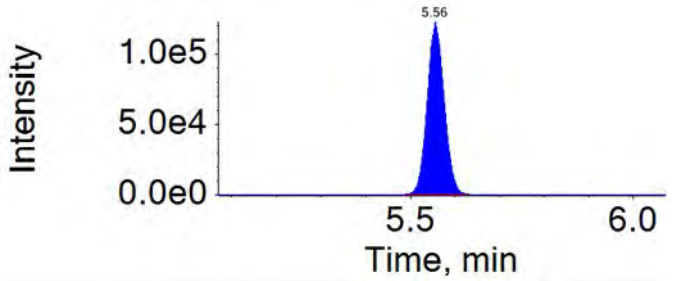
Injection Standard: 13C2-PFOA
415.0 / 370.0



Injection Standard: 13C4-PFOS
503.0 / 80.0



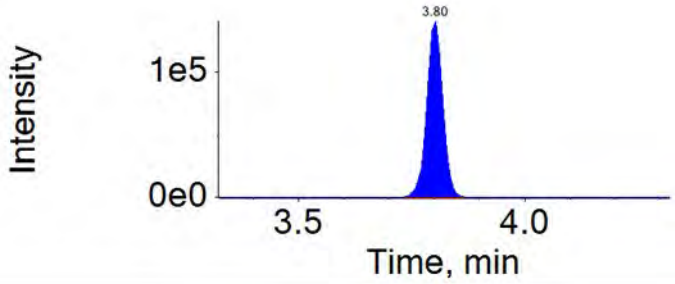
Injection Standard: 13C2-PFDA
515.0 / 470.0



ICAL Name: 18NOV12DCAL **Result Table:** 18316011 11/14/2018 4:24:36 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

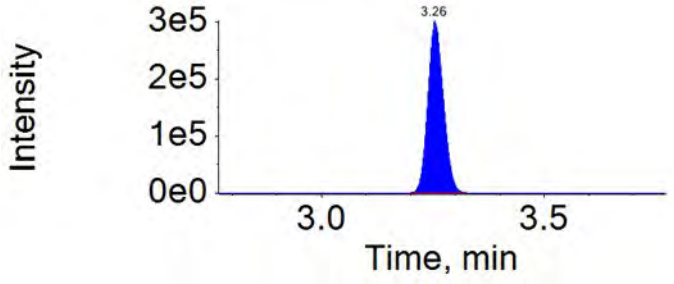
Extraction Standard: E13C3-PFBS

302.0 / 80.0



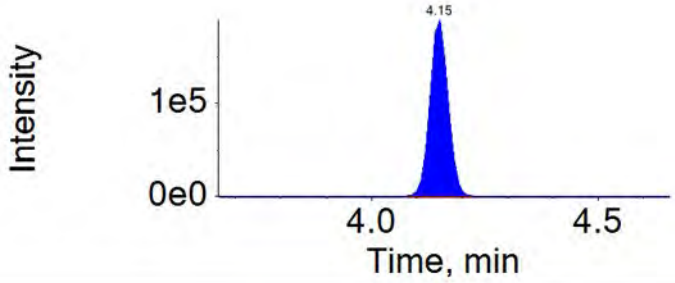
Injection Standard: 13C3-PFBA

216.0 / 172.0



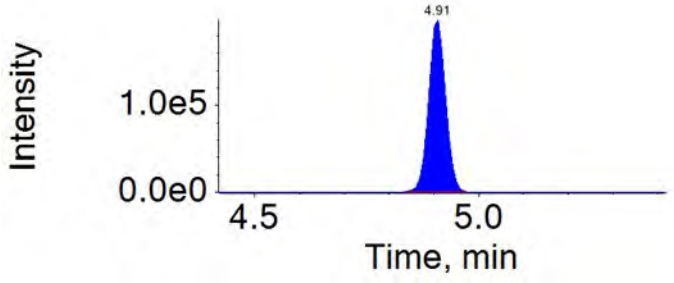
Extraction Standard: E13C5-PFHxA

318.0 / 273.0



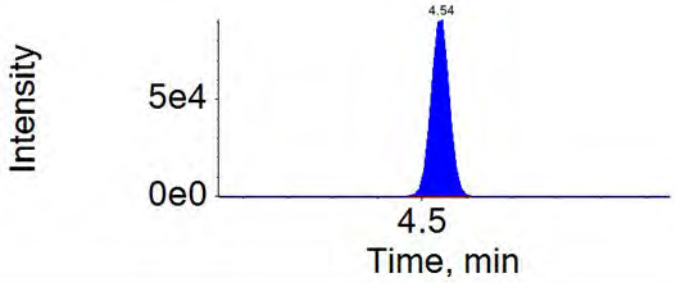
Injection Standard: 13C2-PFOA

415.0 / 370.0



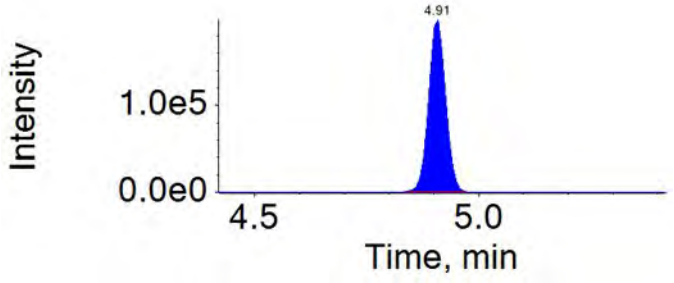
Extraction Standard: E13C3-PFHxS

402.0 / 80.0



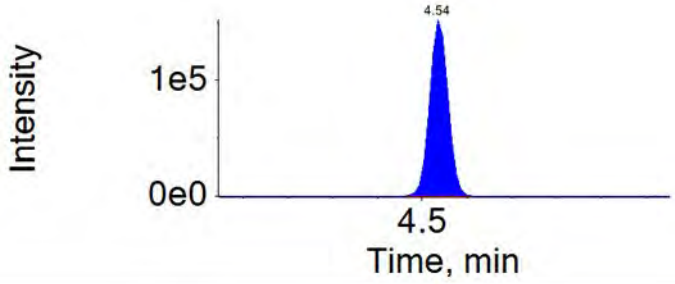
Injection Standard: 13C2-PFOA

415.0 / 370.0



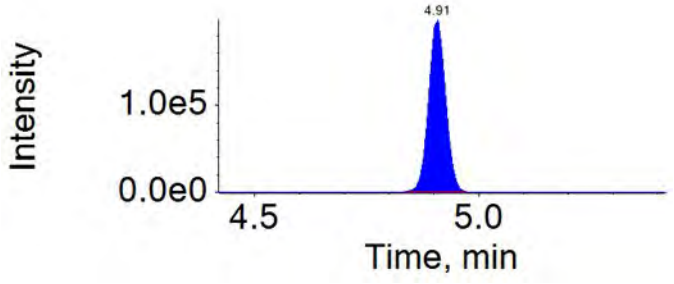
Extraction Standard: E13C4-PFHpA

367.0 / 322.0



Injection Standard: 13C2-PFOA

415.0 / 370.0

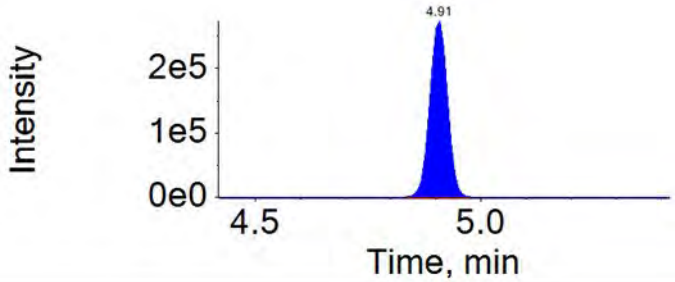


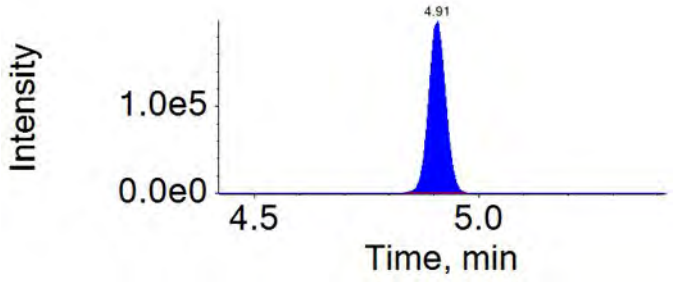
APPROVED
By MCD at 4:51 pm, 11/14/18

REVIEWED
By HMK at 12:22 pm, 11/15/18

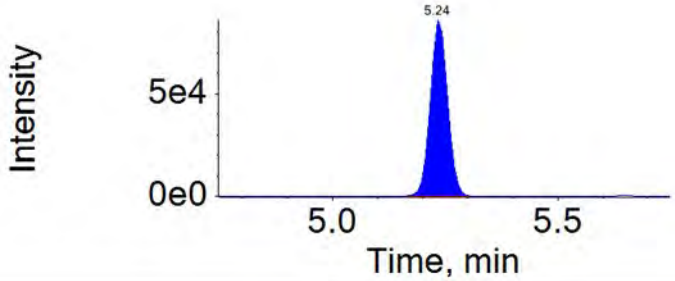
ICAL Name: 18NOV12DCAL **Result Table:** 18316011 11/14/2018 4:24:36 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

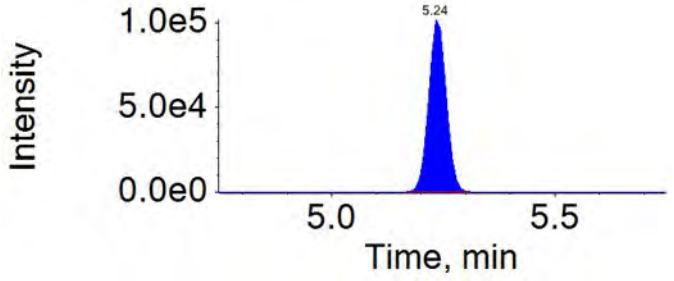
Extraction Standard: E13C8-PFOA	Injection Standard: 13C2-PFOA
421.0 / 376.0	415.0 / 370.0



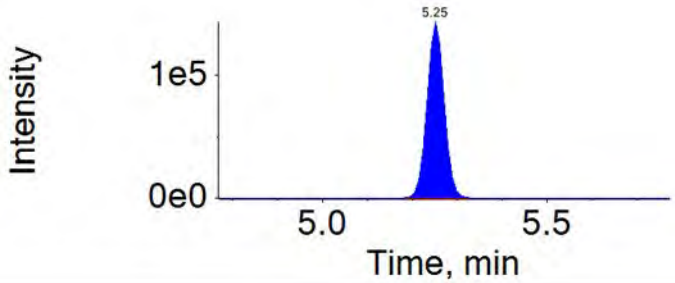


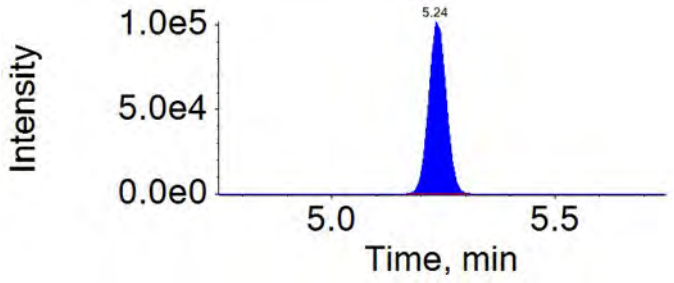
Extraction Standard: E13C8-PFOS	Injection Standard: 13C4-PFOS
507.0 / 80.0	503.0 / 80.0



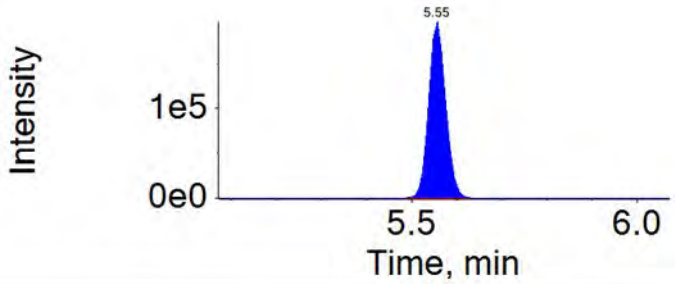


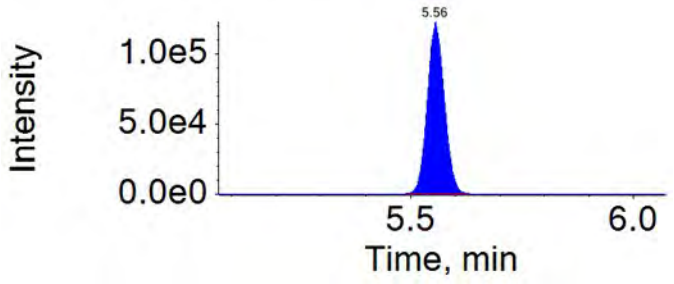
Extraction Standard: E13C9-PFNA	Injection Standard: 13C4-PFOS
472.0 / 427.0	503.0 / 80.0





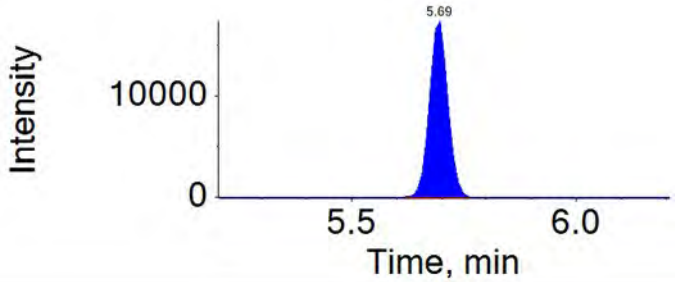
Extraction Standard: E13C6-PFDA	Injection Standard: 13C2-PFDA
519.0 / 474.0	515.0 / 470.0

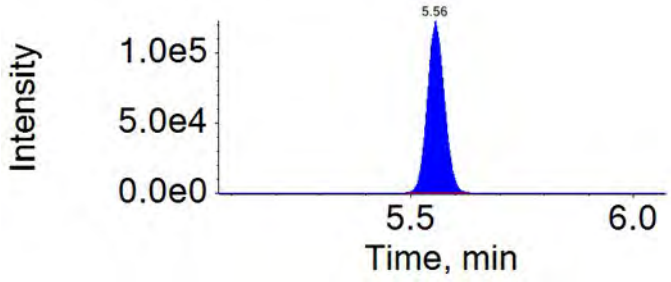




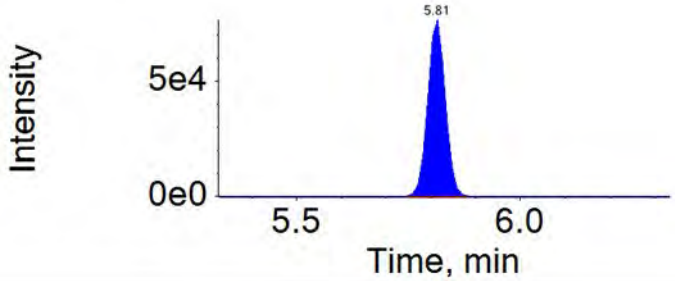
ICAL Name: 18NOV12DCAL **Result Table:** 18316011 11/14/2018 4:24:36 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

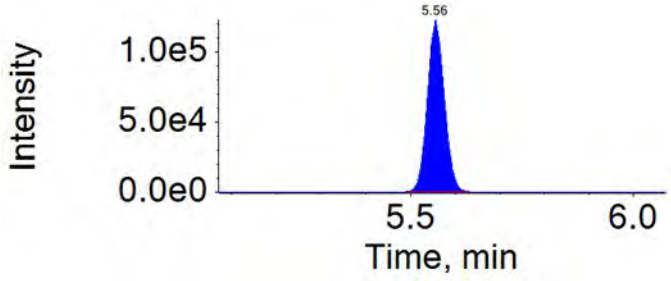
Extraction Standard: Ed3-NMeFOSAA	Injection Standard: 13C2-PFDA
573.0 / 419.0	515.0 / 470.0



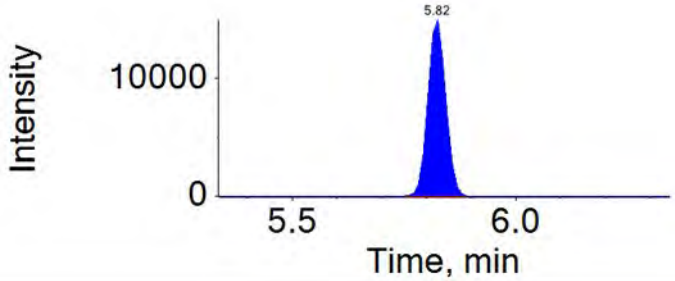


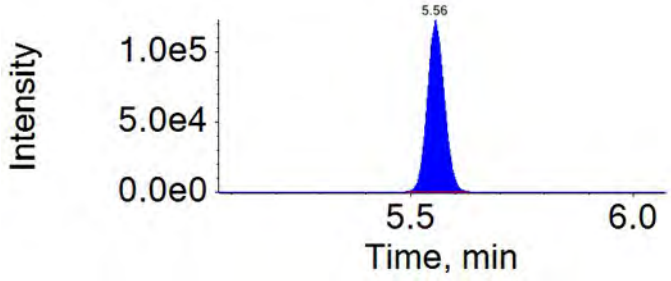
Extraction Standard: E13C7-PFUnDA	Injection Standard: 13C2-PFDA
570.0 / 525.0	515.0 / 470.0



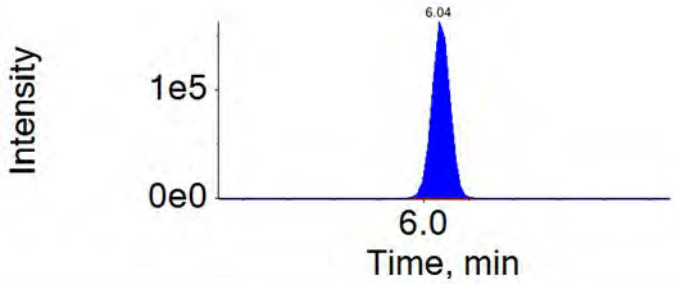


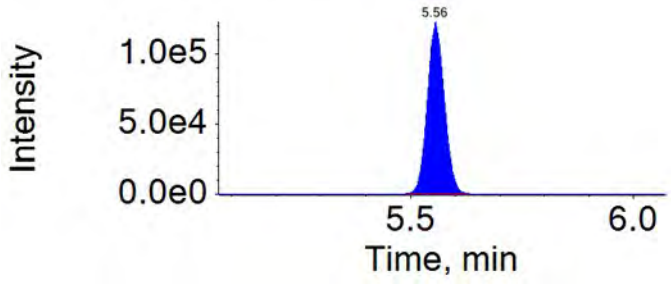
Extraction Standard: Ed5-NEtFOSAA	Injection Standard: 13C2-PFDA
589.0 / 419.0	515.0 / 470.0



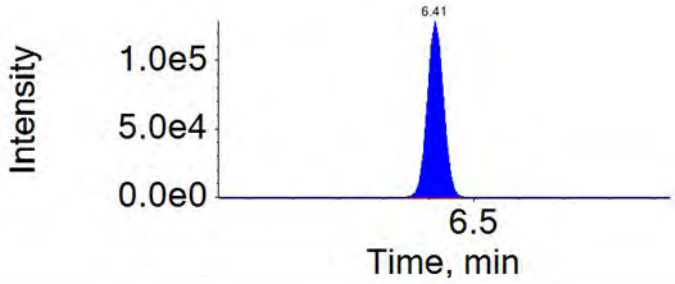
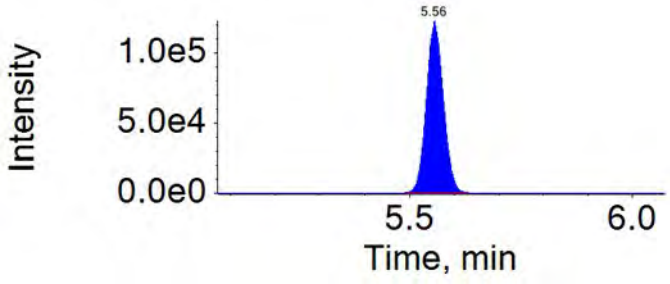


Extraction Standard: E13C2-PFDoDA	Injection Standard: 13C2-PFDA
615.0 / 570.0	515.0 / 470.0



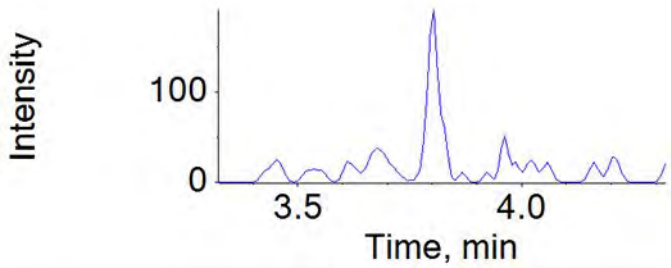


ICAL Name: 18NOV12DCAL **Result Table:** 18316011 11/14/2018 4:24:36 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

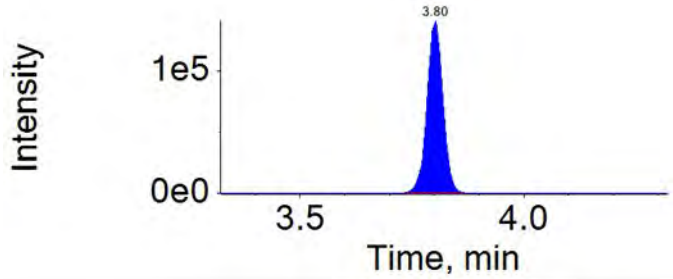
Extraction Standard: E13C2-PFTeDA	Injection Standard: 13C2-PFDA
715.0 / 670.0 	515.0 / 470.0 

ICAL Name: 18NOV12DCAL **Result Table:** 18316011 11/14/2018 4:24:36 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

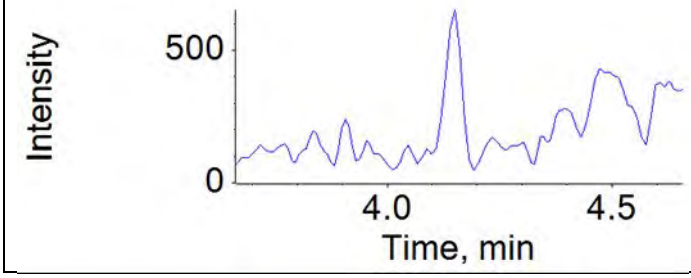
Analyte: PFBS
299.0 / 80.0



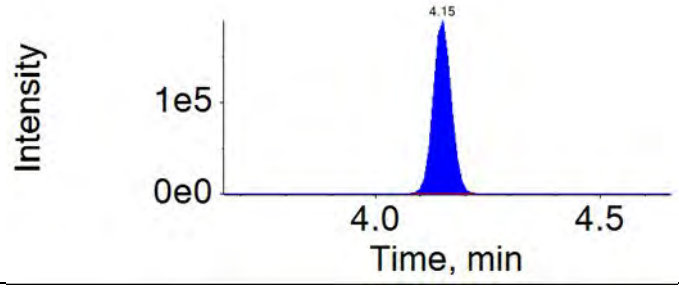
Extraction Standard: 13C3-PFBS
302.0 / 80.0



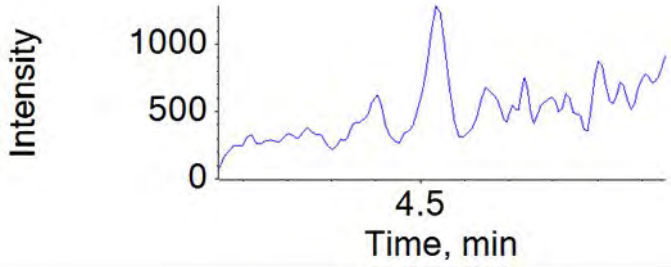
Analyte: PFHxA
313.0 / 269.0



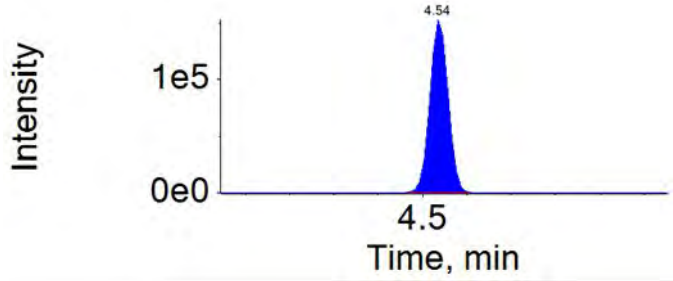
Extraction Standard: 13C5-PFHxA
318.0 / 273.0



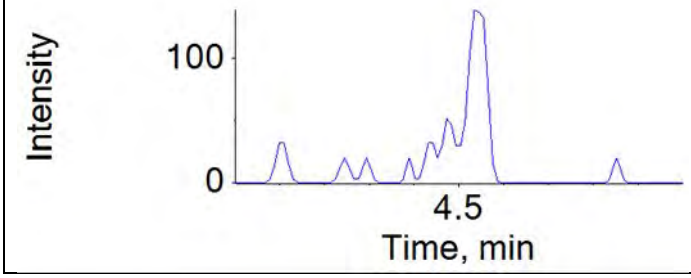
Analyte: PFHpA
363.0 / 319.0



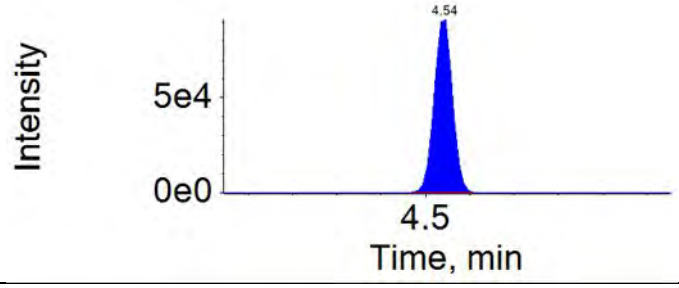
Extraction Standard: 13C4-PFHpA
367.0 / 322.0



Analyte: PFHxS
399.0 / 80.0



Extraction Standard: 13C3-PFHxS
402.0 / 80.0

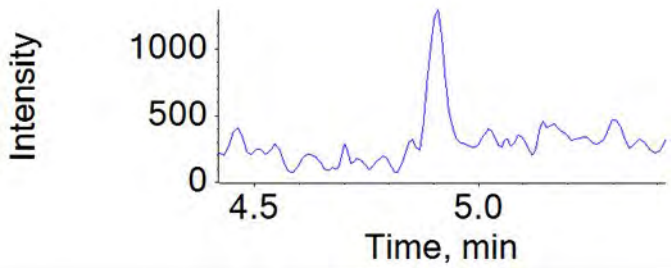


APPROVED
By MCD at 4:51 pm, 11/14/18

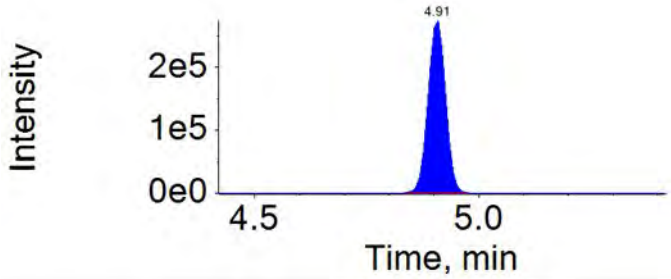
REVIEWED
By HMK at 12:22 pm, 11/15/18

ICAL Name: 18NOV12DCAL **Result Table:** 18316011 11/14/2018 4:24:36 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

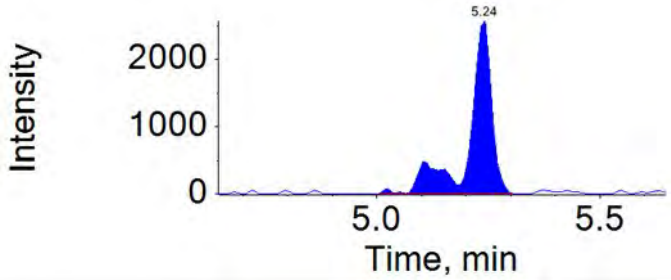
Analyte: PFOA
413.0 / 369.0



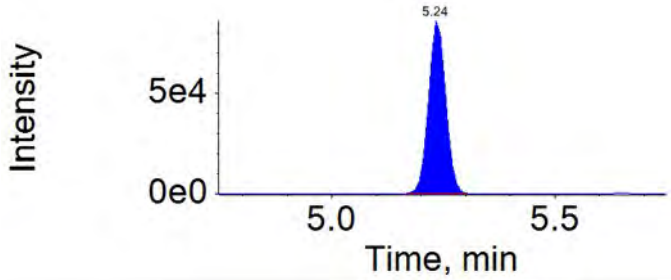
Extraction Standard: 13C8-PFOA
421.0 / 376.0



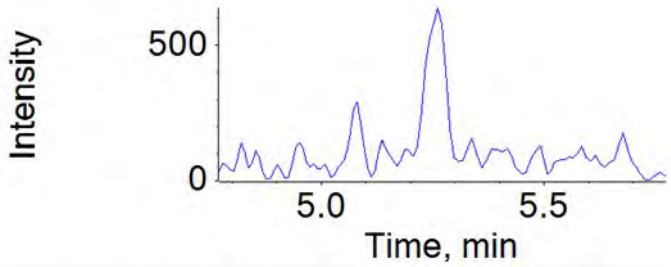
Analyte: PFOS
499.0 / 80.0



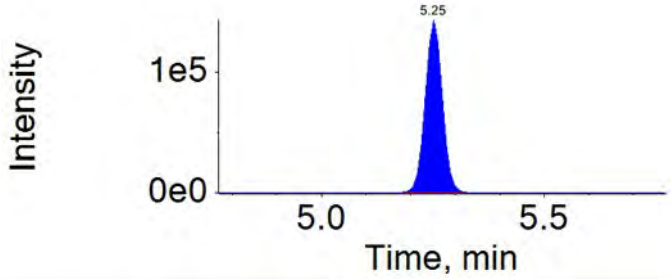
Extraction Standard: 13C8-PFOS
507.0 / 80.0



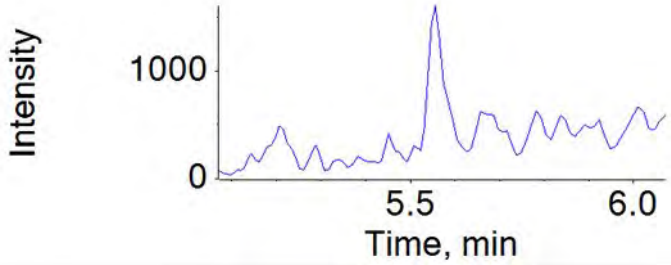
Analyte: PFNA
463.0 / 419.0



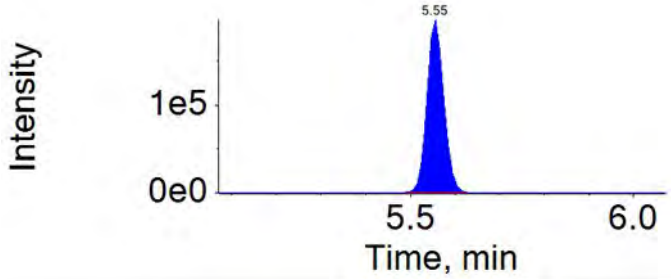
Extraction Standard: 13C9-PFNA
472.0 / 427.0



Analyte: PFDA
513.0 / 469.0



Extraction Standard: 13C6-PFDA
519.0 / 474.0

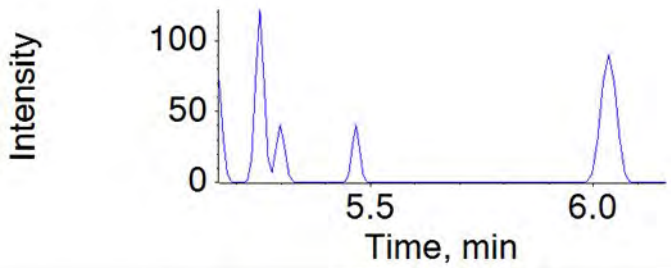


APPROVED
By MCD at 4:51 pm, 11/14/18

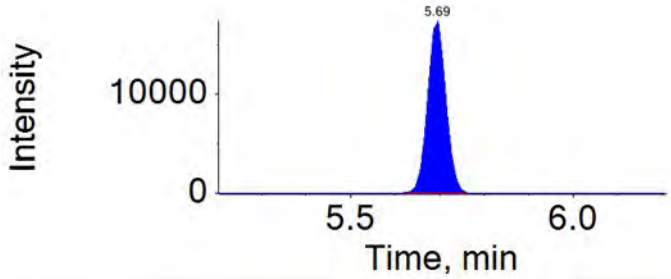
REVIEWED
By HMK at 12:22 pm, 11/15/18

ICAL Name: 18NOV12DCAL **Result Table:** 18316011 11/14/2018 4:24:36 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

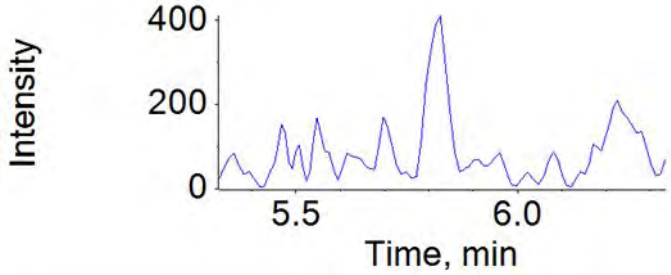
Analyte: NMeFOSAA
570.0 / 419.0



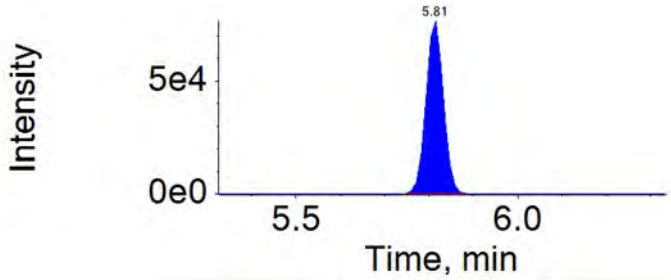
Extraction Standard: d3-NMeFOSAA
573.0 / 419.0



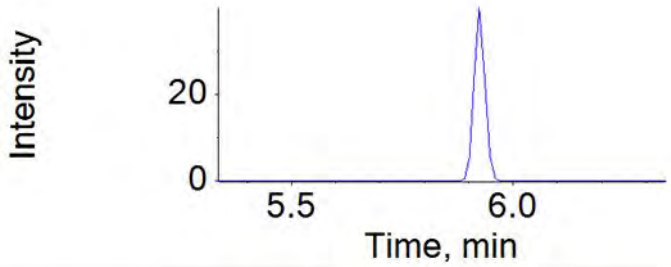
Analyte: PFUnDA
563.0 / 519.0



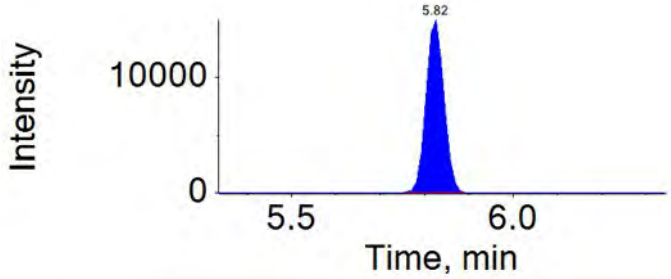
Extraction Standard: 13C7-PFUnDA
570.0 / 525.0



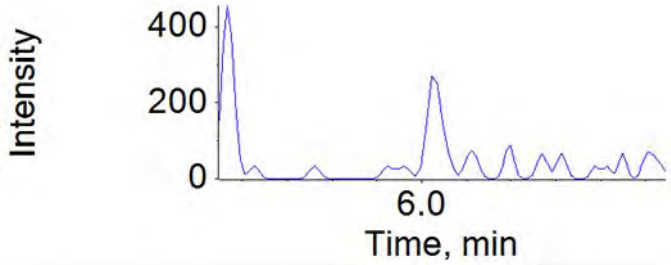
Analyte: NEtFOSAA
584.0 / 419.0



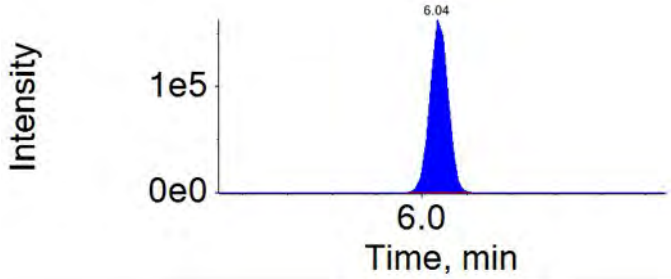
Extraction Standard: d5-NEtFOSAA
589.0 / 419.0



Analyte: PFDoDA
613.0 / 569.0



Extraction Standard: 13C2-PFDoDA
615.0 / 570.0

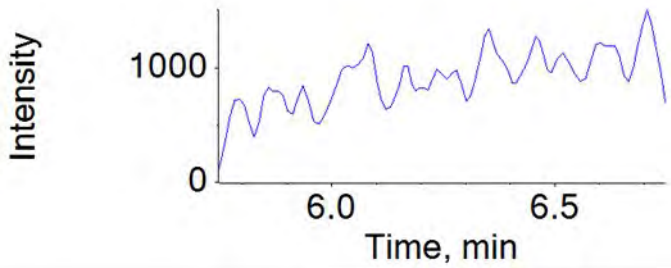


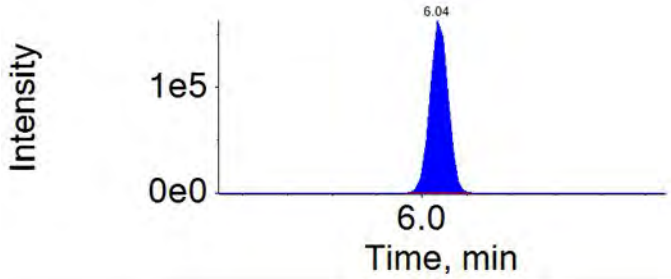
APPROVED
By MCD at 4:51 pm, 11/14/18

REVIEWED
By HMK at 12:22 pm, 11/15/18

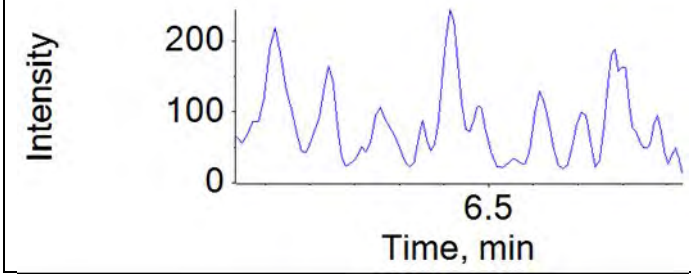
ICAL Name: 18NOV12DCAL **Result Table:** 18316011 11/14/2018 4:24:36 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

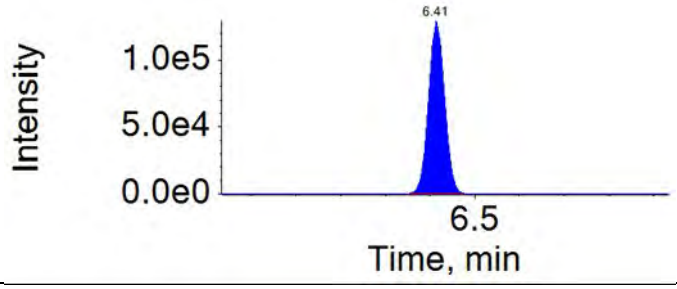
Analyte: PFTrDA	Extraction Standard: 13C2-PFDoDA
663.0 / 619.0	615.0 / 570.0





Analyte: PFTeDA	Extraction Standard: 13C2-PFTeDA
713.0 / 669.0	715.0 / 670.0





APPROVED
By MCD at 4:51 pm, 11/14/18

REVIEWED
By HMK at 12:22 pm, 11/15/18

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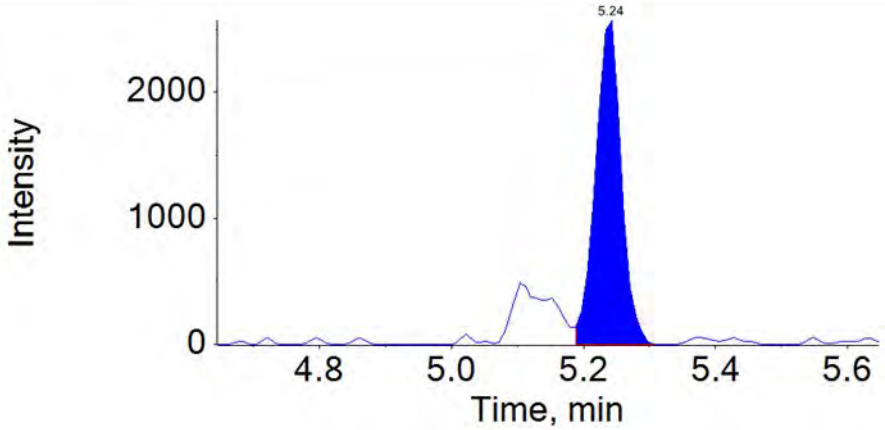
Auto Integrations prior to Manual Integration

Print Date: 11/14/2018 4:31 PM
Template: MQ-OrigInteg-16NOV21.docx

Results Table Name: 18316011
Results Table Date: 11/14/2018 4:24:36 PM

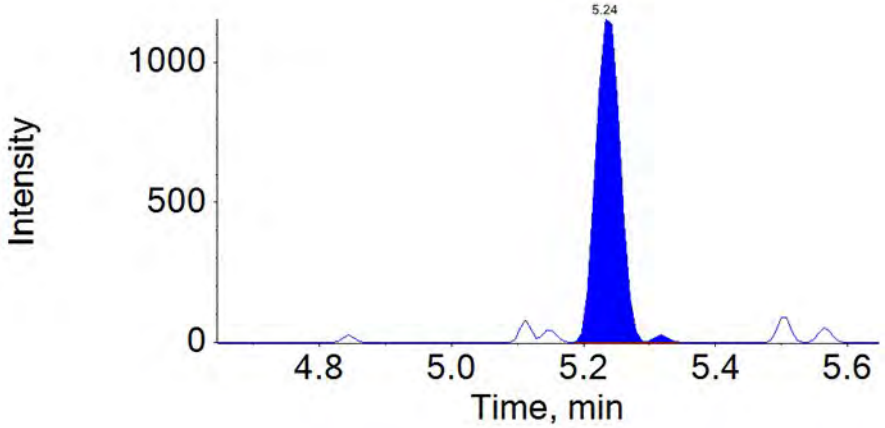
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

Component Name:
PFOS
RT (min.):
5.24
Peak Area:
6998.2
Mass Range:
499.0 / 80.0
File Name:
18NOV13D-61.wiff
Sample Name:
9885092



Integration Comment: incorrect integration

Component Name:
PFOS_2
RT (min.):
5.24
Peak Area:
3034.5
Mass Range:
499.0 / 99.0
File Name:
18NOV13D-61.wiff
Sample Name:
9885092



Integration Comment: incorrect integration

APPROVED
By MCD at 4:51 pm, 11/14/18

REVIEWED
By HMK at 12:22 pm, 11/15/18

Results Table Name: 18316011
Results Table Date: 11/14/2018 4:24:36 PM

Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

APPROVED
By MCD at 4:51 pm, 11/14/18

REVIEWED
By HMK at 12:22 pm, 11/15/18

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LC-MS/MS Analysis Report

Printed: 11/14/2018 4:28:00 PM
Template: IonRatio18OCT10

Ion Ratio Report

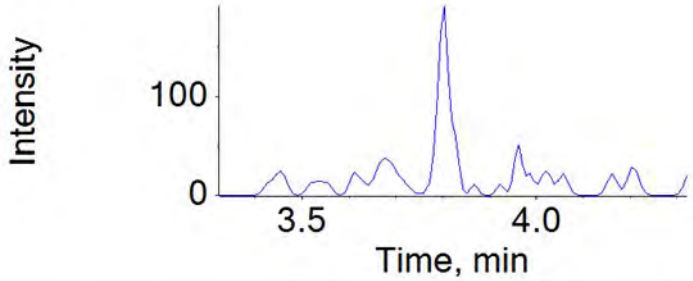
Sample Name: 9885092 **Instrument Name:** LM27631 **File Name:** 18NOV13D-61.wiff

Component Name	RT	RRT	Analyte Area Response	Int Typ	Expected Ion Ratio	Ion Ratio	Ion Ratio % Diff	Ion Ratio Limit	Ion Ratio OOS
PFBS	N/A	N/A	N/A	A	N/A	N/A			
PFBS_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFHxA	N/A	N/A	N/A	A	N/A	N/A			
PFHxA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFHpA	N/A	N/A	N/A	A	N/A	N/A			
PFHpA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFHxS	N/A	N/A	N/A	A	N/A	N/A			
PFHxS_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFOA	N/A	N/A	N/A	A	N/A	N/A			
PFOA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFOS	5.24	1.00	9194.0	M	N/A	0.3442			
PFOS_2	5.24	1.00	3165.0	M	N/A	0.3442	16	50	
PFNA	N/A	N/A	N/A	A	N/A	N/A			
PFNA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFDA	N/A	N/A	N/A	A	N/A	N/A			
PFDA_2	N/A	N/A	N/A	A	N/A	N/A		50	
NMeFOSAA	N/A	N/A	N/A	A	N/A	N/A			
NMeFOSAA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFUnDA	N/A	N/A	N/A	A	N/A	N/A			
PFUnDA_2	N/A	N/A	N/A	A	N/A	N/A		50	
NEtFOSAA	N/A	N/A	N/A	A	N/A	N/A			
NEtFOSAA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFDoDA	N/A	N/A	N/A	A	N/A	N/A			
PFDoDA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFTrDA	N/A	N/A	N/A	A	N/A	N/A			
PFTrDA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFTeDA	N/A	N/A	N/A	A	N/A	N/A			
PFTeDA_2	N/A	N/A	N/A	A	N/A	N/A		50	

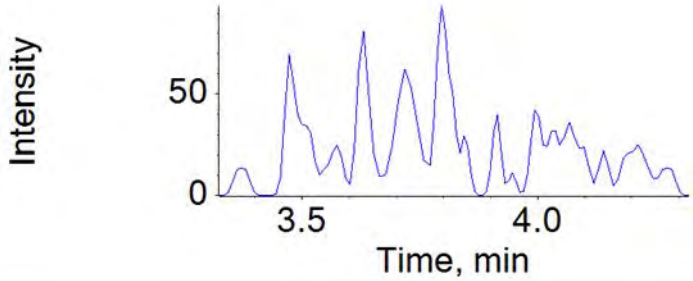
APPROVED
By MCD at 4:51 pm, 11/14/18

REVIEWED
By HMK at 12:22 pm, 11/15/18

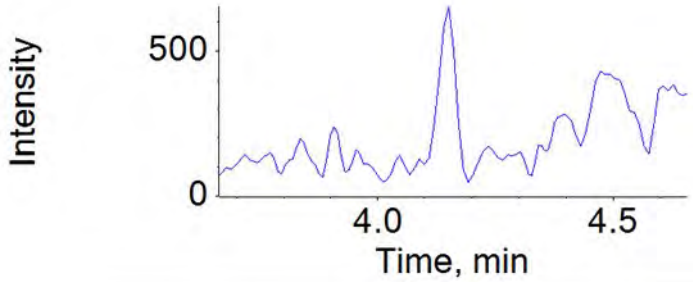
Component: PFBS
Primary Mass: 299.0 / 80.0



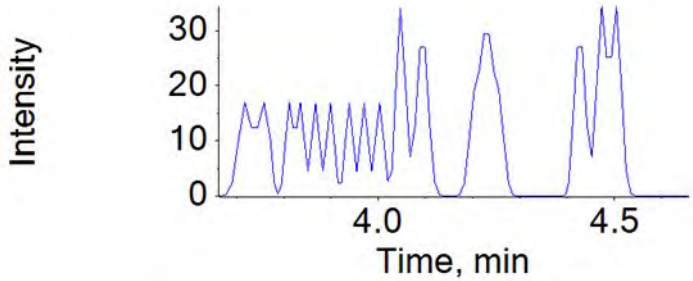
Component: PFBS_2
Secondary Mass: 299.0 / 99.0



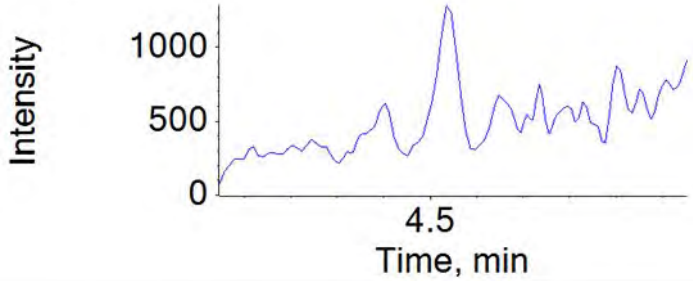
Component: PFHxA
Primary Mass: 313.0 / 269.0



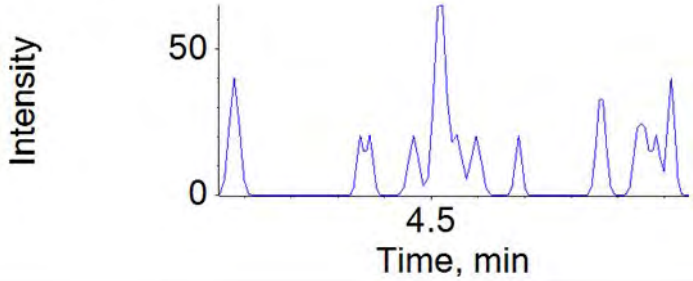
Component: PFHxA_2
Secondary Mass: 313.0 / 119.0



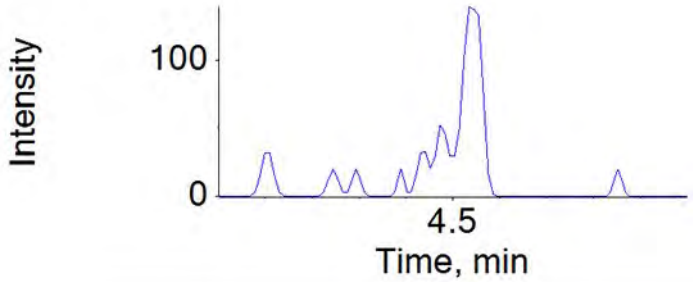
Component: PFHpA
Primary Mass: 363.0 / 319.0



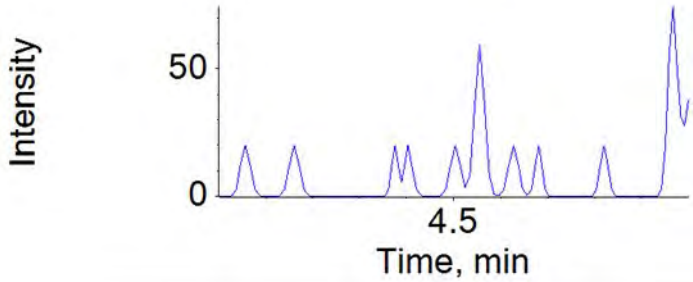
Component: PFHpA_2
Secondary Mass: 363.0 / 169.0



Component: PFHxS
Primary Mass: 399.0 / 80.0



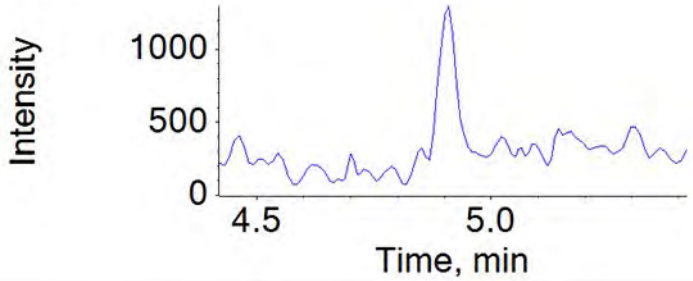
Component: PFHxS_2
Secondary Mass: 399.0 / 99.0



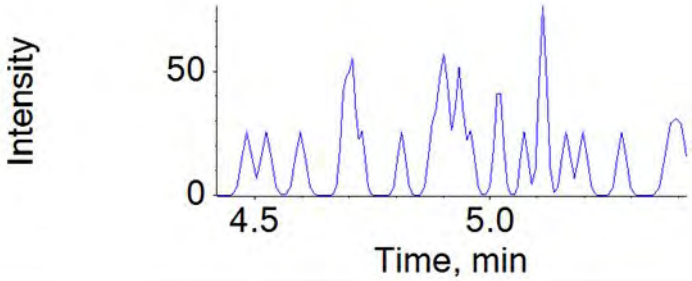
APPROVED
By MCD at 4:51 pm, 11/14/18

REVIEWED
By HMK at 12:22 pm, 11/15/18

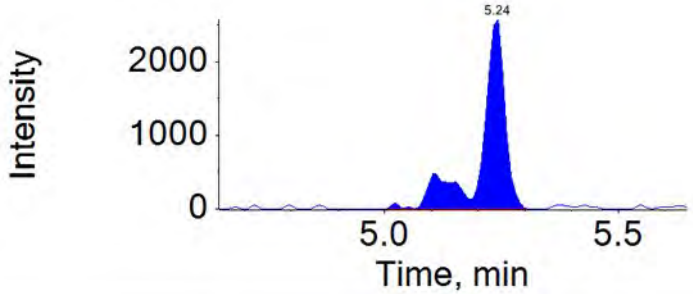
Component: PFOA
Primary Mass: 413.0 / 369.0



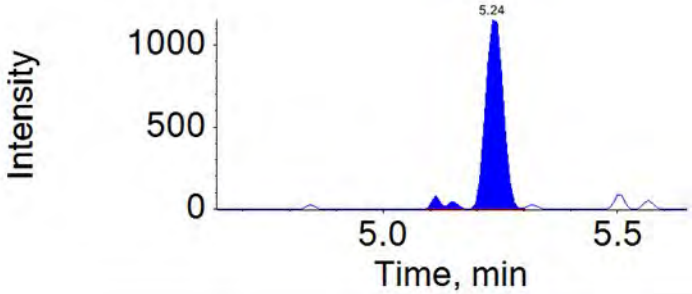
Component: PFOA_2
Secondary Mass: 413.0 / 169.0



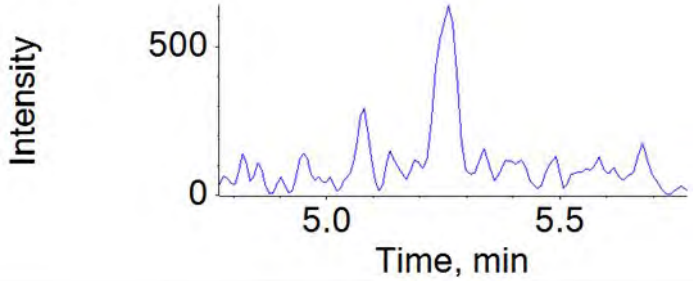
Component: PFOS
Primary Mass: 499.0 / 80.0



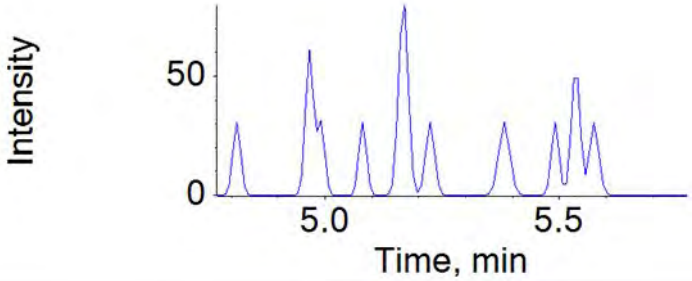
Component: PFOS_2
Secondary Mass: 499.0 / 99.0



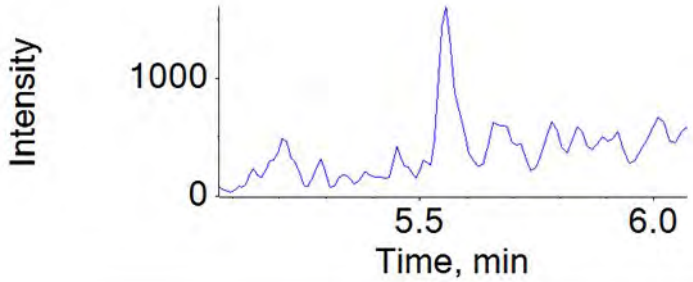
Component: PFNA
Primary Mass: 463.0 / 419.0



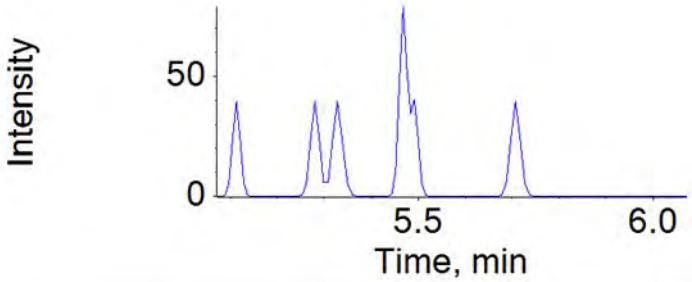
Component: PFNA_2
Secondary Mass: 463.0 / 169.0



Component: PFDA
Primary Mass: 513.0 / 469.0



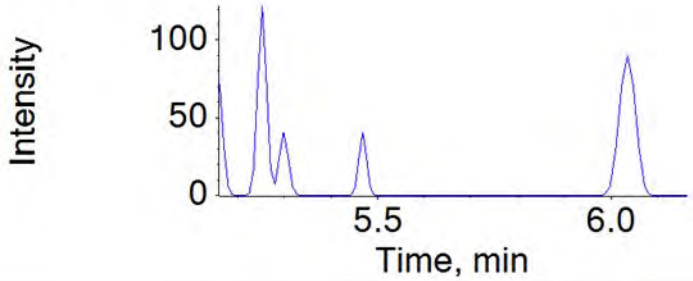
Component: PFDA_2
Secondary Mass: 513.0 / 169.0



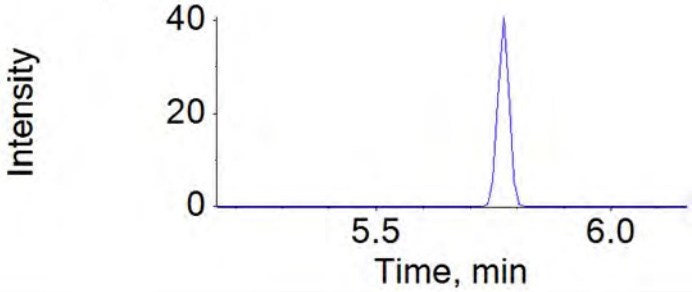
APPROVED
By MCD at 4:51 pm, 11/14/18

REVIEWED
By HMK at 12:22 pm, 11/15/18

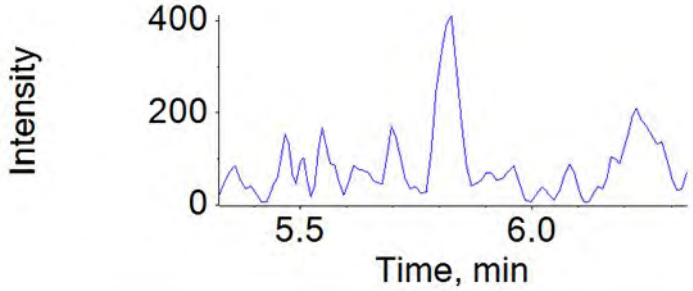
Component: NMeFOSAA
Primary Mass: 570.0 / 419.0



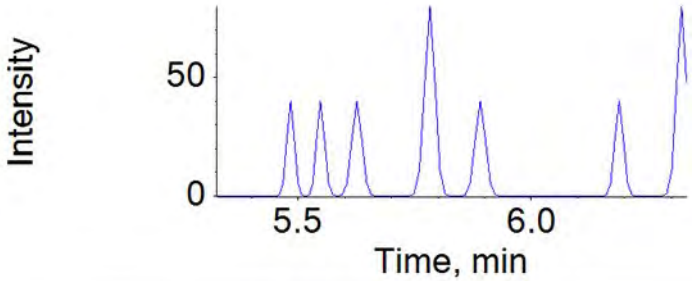
Component: NMeFOSAA_2
Secondary Mass: 570.0 / 483.0



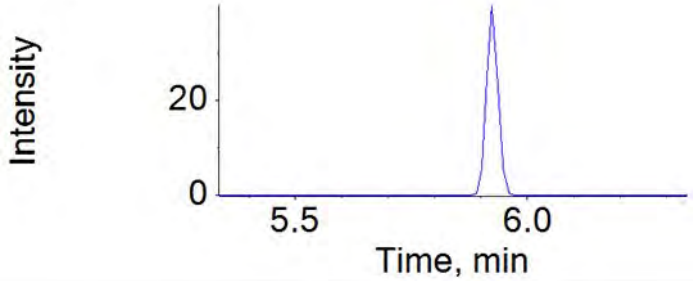
Component: PFUnDA
Primary Mass: 563.0 / 519.0



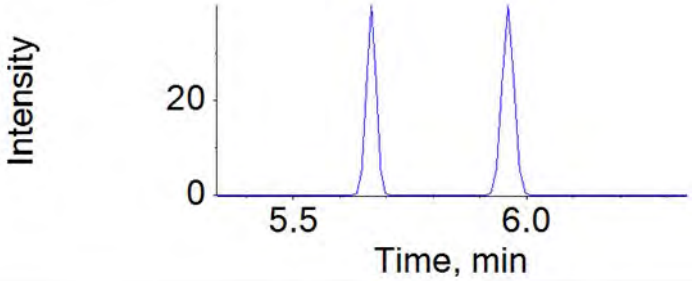
Component: PFUnDA_2
Secondary Mass: 563.0 / 169.0



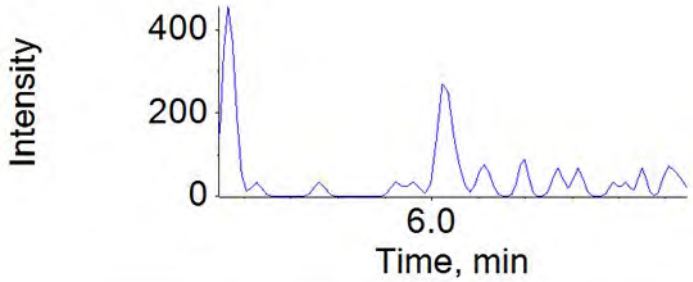
Component: NEtFOSAA
Primary Mass: 584.0 / 419.0



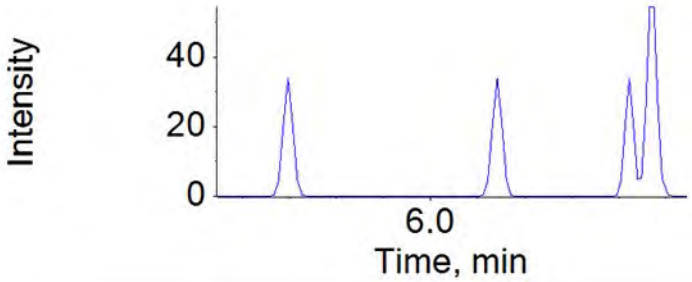
Component: NEtFOSAA_2
Secondary Mass: 584.0 / 526.0



Component: PFDoDA
Primary Mass: 613.0 / 569.0



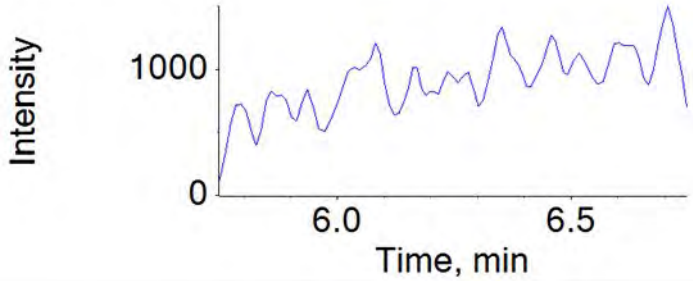
Component: PFDoDA_2
Secondary Mass: 613.0 / 169.0



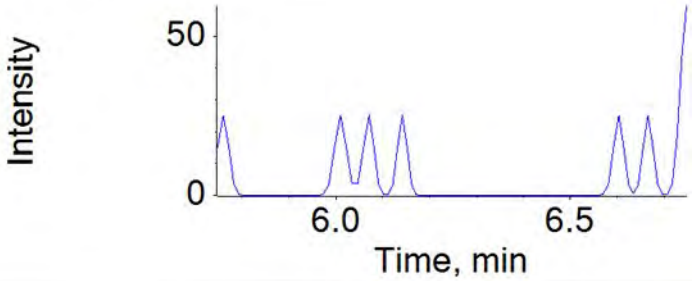
APPROVED
By MCD at 4:51 pm, 11/14/18

REVIEWED
By HMK at 12:22 pm, 11/15/18

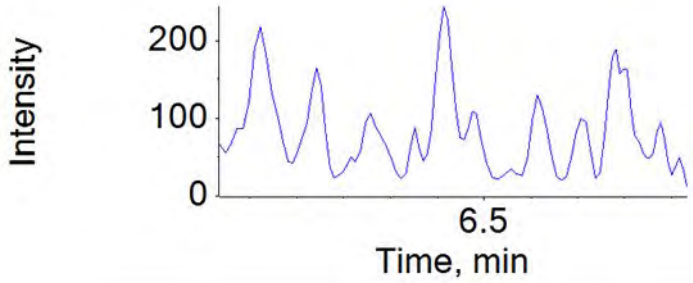
Component: PFTrDA
Primary Mass: 663.0 / 619.0



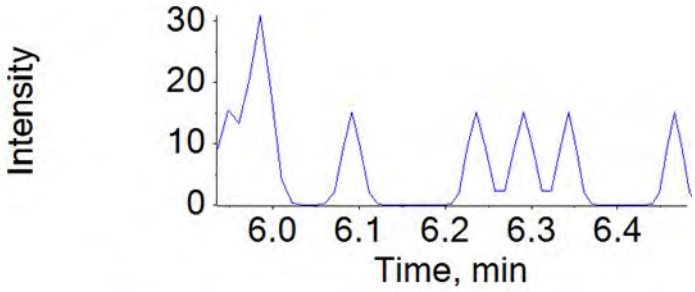
Component: PFTrDA_2
Secondary Mass: 663.0 / 169.0



Component: PFTeDA
Primary Mass: 713.0 / 669.0



Component: PFTeDA_2
Secondary Mass: 713.0 / 169.0



APPROVED
By MCD at 4:51 pm, 11/14/18

REVIEWED
By HMK at 12:22 pm, 11/15/18

ICAL Name: 18NOV12DCAL **Result Table:** 18316011 11/14/2018 4:24:36 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Sample Name:	9885093			**Data File:**		18NOV13D-62.wiff
Sample ID:	EPA 537 mod QSM 5.1 table B-15 18316011 OU1-Bldg27-S-02-03 Grab Soil			**Acquis Date:**		2018-11-13T18:53:41
Sample Type:	Unknown			**Instrument:**		LM27631
Vial Position:	59			**Acquis Method:**		18AUG13_3uL.dam
Injection Vol:	3.00			**Result Table:**		18316011
QMethod File:	18AUG20QM			**ICAL Name:**		18NOV12DCAL
Batch Number:	18316011			**Operator:**		MCD7824
Sample Wt.:	1.09000			**Dilution Factor:**		1.00
Sample Vol.:	1.000			**Prep Factor:**		2.000

Injection Standard Peak Table

Injection Standard Area Reference File: 18NOV13D-05

Injection Standard Name	Inj Std Conc	Injection Std Peak Area	Rreference Injection Standard Area	Injection Std %Diff	Injection Std %Diff Limit	Injection Std %Diff OOS
13C3-PFBA	5.0	745893.7	661126.9	13	50	
13C2-PFOA	5.0	535321.3	466902.6	15	50	
13C4-PFOS	4.8	281239.0	247446.9	14	50	
13C2-PFDA	5.0	320874.3	295381.6	9	50	

Extraction Standard Peak Table

Extraction Standard Name	Ext Std Area	Inj Std Name	Inj Std Area	Area Ratio	Ext Std Conc	Ext Std Result	Ext Std %REC	Ext Std %REC Limit	Ext Std OOS
E13C3-PFBS	312916.9	13C3-PFBA	745893.7	0.420	8.532	5.434	64	50-150	
E13C5-PFHxA	479550.1	13C2-PFOA	535321.3	0.896	9.174	5.938	65	50-150	
E13C3-PFHxS	227280.3	13C2-PFOA	535321.3	0.425	8.679	5.346	62	50-150	
E13C4-PFHpA	385836.9	13C2-PFOA	535321.3	0.721	9.174	5.958	65	50-150	
E13C8-PFOA	674487.0	13C2-PFOA	535321.3	1.260	9.174	6.370	69	50-150	
E13C8-PFOS	207933.0	13C4-PFOS	281239.0	0.739	8.771	6.011	69	50-150	
E13C9-PFNA	343728.2	13C4-PFOS	281239.0	1.222	9.174	6.253	68	50-150	
E13C6-PFDA	466661.8	13C2-PFDA	320874.3	1.454	9.174	6.227	68	50-150	
Ed3-NMeFOSAA	44383.0	13C2-PFDA	320874.3	0.138	9.174	4.581	50	50-150	
E13C7-PFUnDA	189490.9	13C2-PFDA	320874.3	0.591	9.174	6.291	69	50-150	
Ed5-NEtFOSAA	39949.5	13C2-PFDA	320874.3	0.125	9.174	4.833	53	50-150	
E13C2-PFDoDA	403562.1	13C2-PFDA	320874.3	1.258	9.174	5.992	65	50-150	
E13C2-PFTeDA	275235.2	13C2-PFDA	320874.3	0.858	9.174	5.525	60	50-150	

APPROVED
By MCD at 4:51 pm, 11/14/18

REVIEWED
By HMK at 12:22 pm, 11/15/18

ICAL Name: 18NOV12DCAL **Result Table:** 18316011 11/14/2018 4:24:36 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

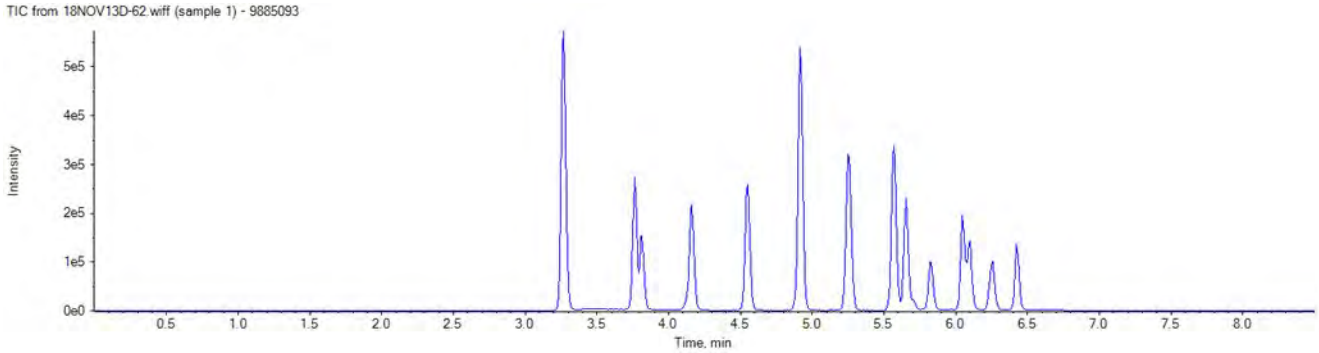
Analyte Quantitation Peak Table

Sample Name: 9885093 **Instrument Name:** LM27631 **File Name:** 18NOV13D-62.wiff

Sample Wt	Sample Vol	Dilution Factor	PrepFactor
1.09000	1.000	1.00	2.000

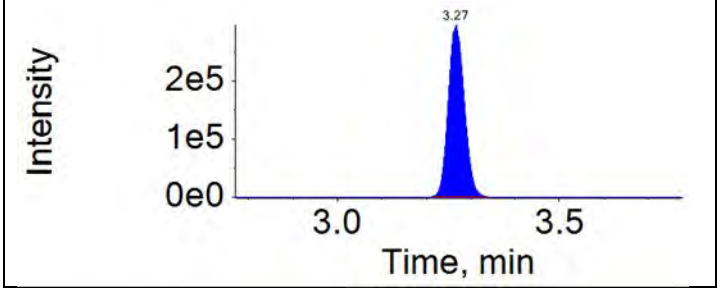
Analyte Name	RT	RRT	Analyte Area Response	E	Int Typ	ES Name	ES RT	ES Area Response	Area Ratio	Sample Result (ng/g)
PFBS	N/A	N/A	N/A		A	13C3-PFBS	3.81	312916.9	N/A	
PFHxA	N/A	N/A	N/A		A	13C5-PFHxA	4.16	479550.1	N/A	
PFHpA	N/A	N/A	N/A		A	13C4-PFHpA	4.55	385836.9	N/A	
PFHxS	N/A	N/A	N/A		A	13C3-PFHxS	4.55	227280.3	N/A	
PFOA	N/A	N/A	N/A		A	13C8-PFOA	4.92	674487.0	N/A	
PFOS	5.25	1.000	3383.2		M	13C8-PFOS	5.25	207933.0	0.016	0.131
PFNA	N/A	N/A	N/A		A	13C9-PFNA	5.26	343728.2	N/A	
PFDA	N/A	N/A	N/A		A	13C6-PFDA	5.57	466661.8	N/A	
NMeFOSAA	N/A	N/A	N/A		A	d3-NMeFOSAA	5.71	44383.0	N/A	
PFUnDA	N/A	N/A	N/A		A	13C7-PFUnDA	5.82	189490.9	N/A	
NEtFOSAA	N/A	N/A	N/A		A	d5-NEtFOSAA	5.83	39949.5	N/A	
PFDoDA	N/A	N/A	N/A		A	13C2-PFDoDA	6.05	403562.1	N/A	
PFTrDA	N/A	N/A	N/A		A	13C2-PFDoDA	6.05	403562.1	N/A	
PFTeDA	N/A	N/A	N/A		A	13C2-PFTeDA	6.43	275235.2	N/A	

Total Ion Chromatogram

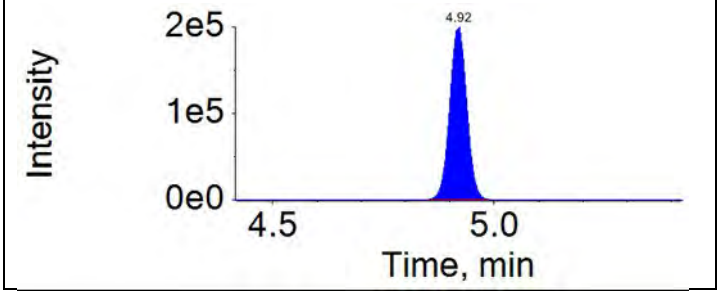


ICAL Name: 18NOV12DCAL **Result Table:** 18316011 11/14/2018 4:24:36 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

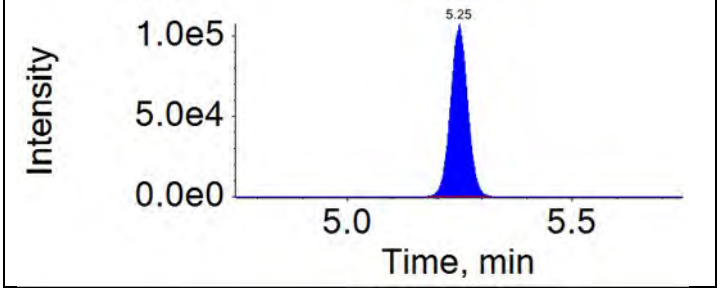
Injection Standard: 13C3-PFBA
216.0 / 172.0



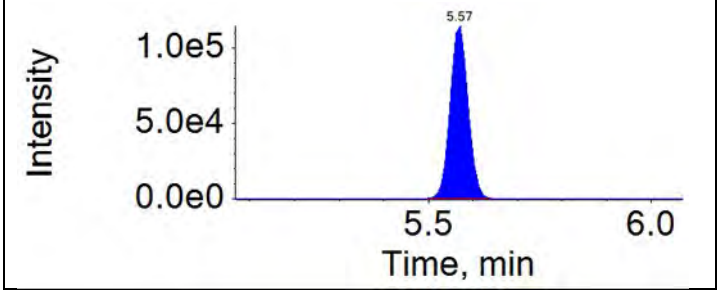
Injection Standard: 13C2-PFOA
415.0 / 370.0



Injection Standard: 13C4-PFOS
503.0 / 80.0

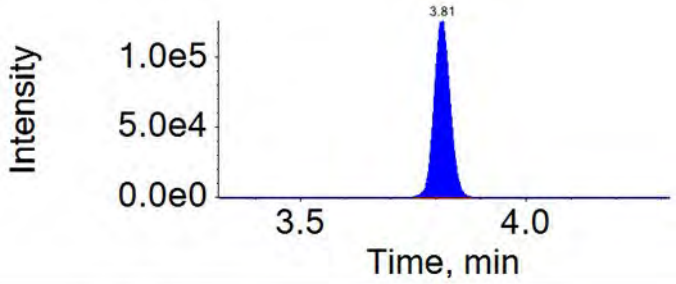


Injection Standard: 13C2-PFDA
515.0 / 470.0

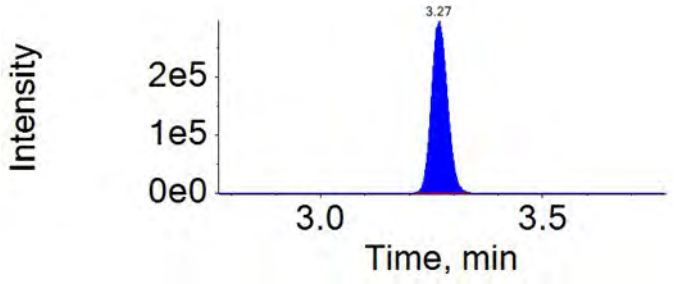


ICAL Name: 18NOV12DCAL **Result Table:** 18316011 11/14/2018 4:24:36 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

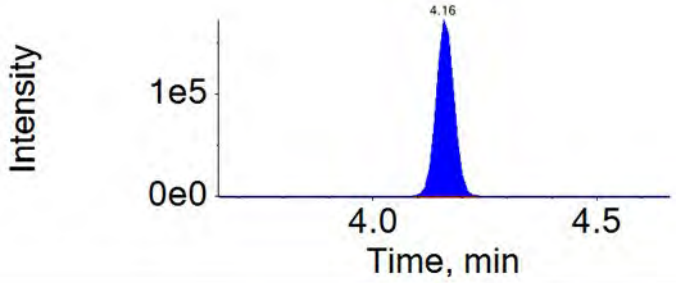
Extraction Standard: E13C3-PFBS
302.0 / 80.0



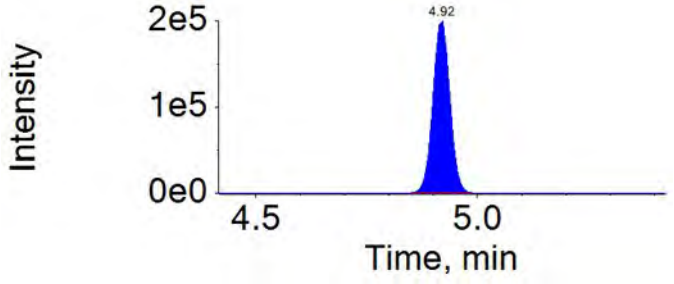
Injection Standard: 13C3-PFBA
216.0 / 172.0



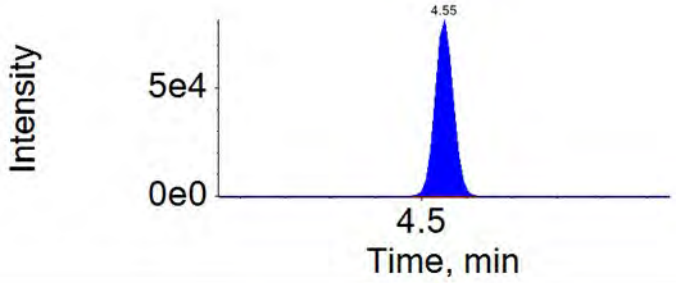
Extraction Standard: E13C5-PFHxA
318.0 / 273.0



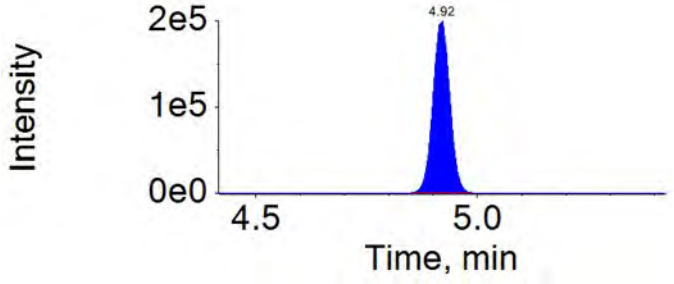
Injection Standard: 13C2-PFOA
415.0 / 370.0



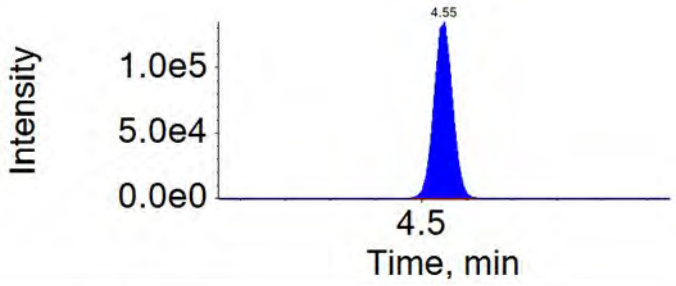
Extraction Standard: E13C3-PFHxS
402.0 / 80.0



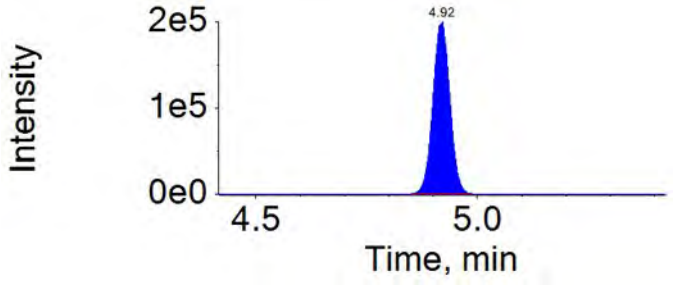
Injection Standard: 13C2-PFOA
415.0 / 370.0



Extraction Standard: E13C4-PFHpA
367.0 / 322.0



Injection Standard: 13C2-PFOA
415.0 / 370.0

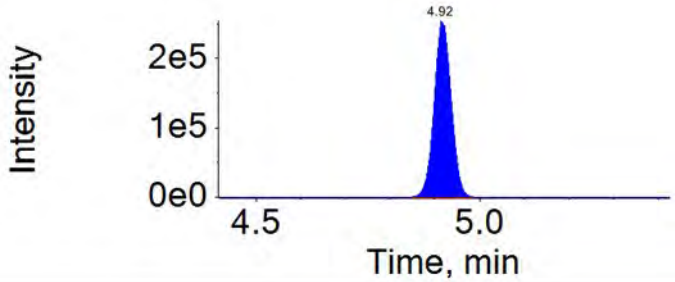


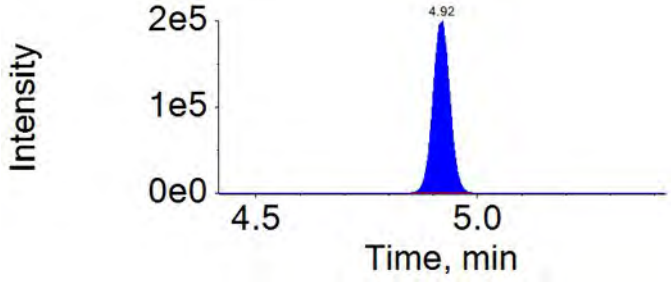
APPROVED
By MCD at 4:51 pm, 11/14/18

REVIEWED
By HMK at 12:22 pm, 11/15/18

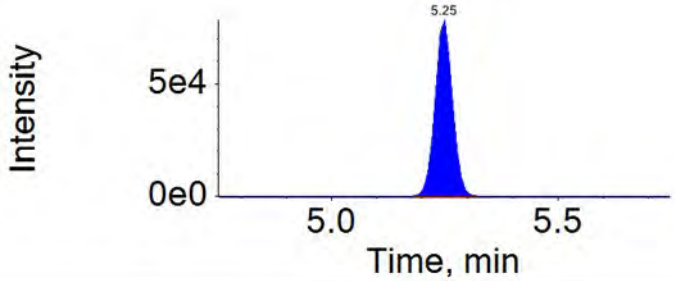
ICAL Name: 18NOV12DCAL **Result Table:** 18316011 11/14/2018 4:24:36 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

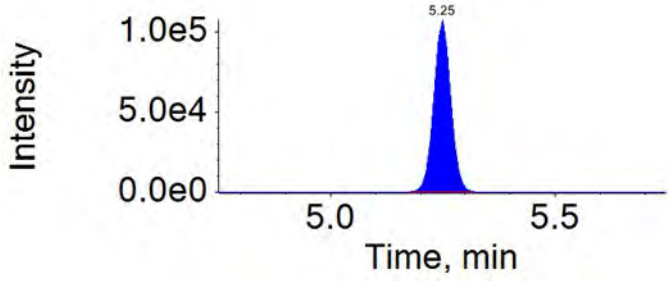
Extraction Standard: E13C8-PFOA	Injection Standard: 13C2-PFOA
421.0 / 376.0	415.0 / 370.0



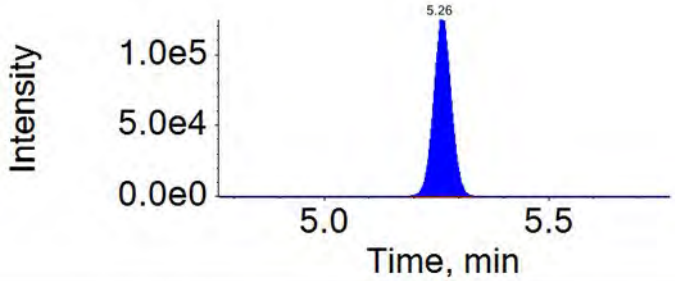


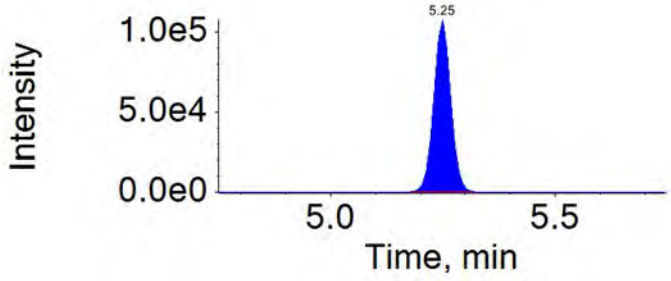
Extraction Standard: E13C8-PFOS	Injection Standard: 13C4-PFOS
507.0 / 80.0	503.0 / 80.0



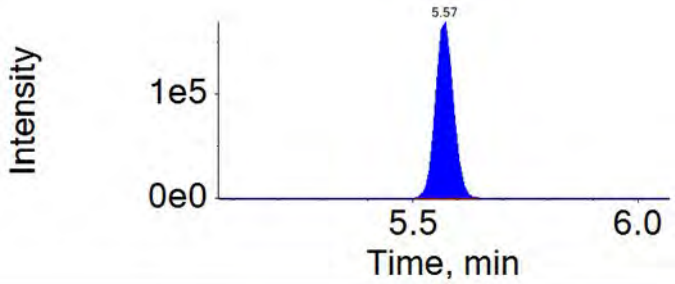


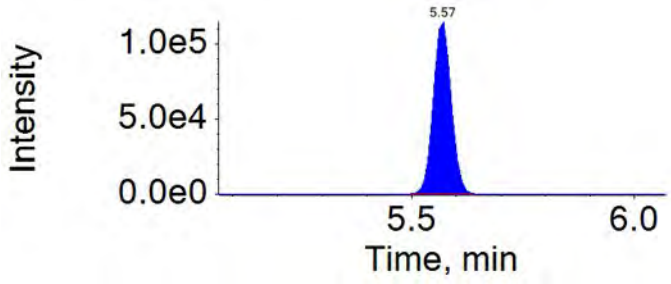
Extraction Standard: E13C9-PFNA	Injection Standard: 13C4-PFOS
472.0 / 427.0	503.0 / 80.0





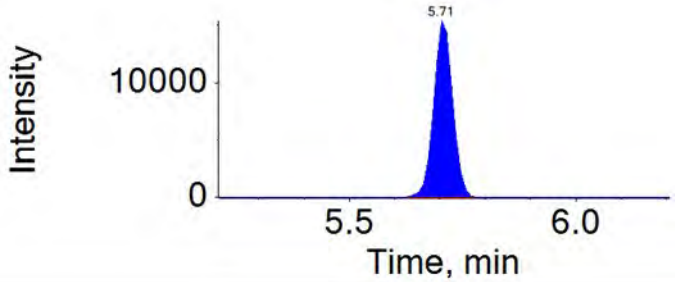
Extraction Standard: E13C6-PFDA	Injection Standard: 13C2-PFDA
519.0 / 474.0	515.0 / 470.0

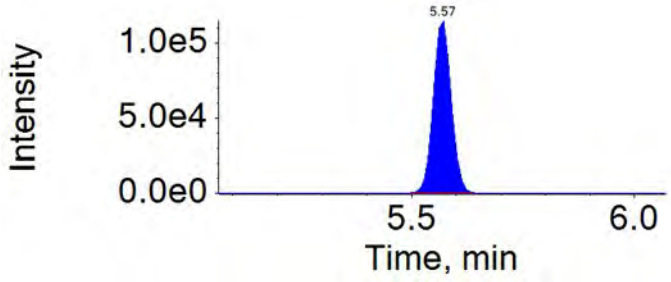




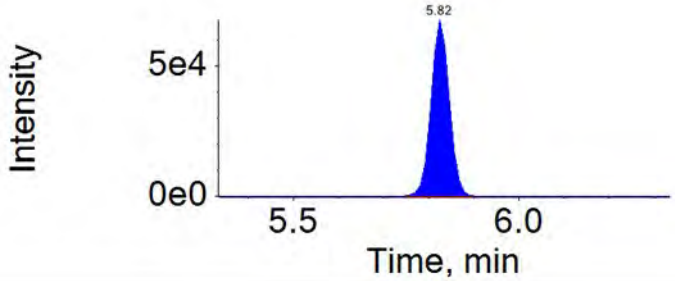
ICAL Name: 18NOV12DCAL **Result Table:** 18316011 11/14/2018 4:24:36 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

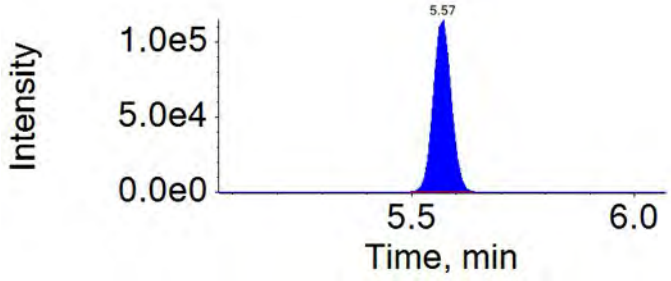
Extraction Standard: Ed3-NMeFOSAA	Injection Standard: 13C2-PFDA
573.0 / 419.0	515.0 / 470.0



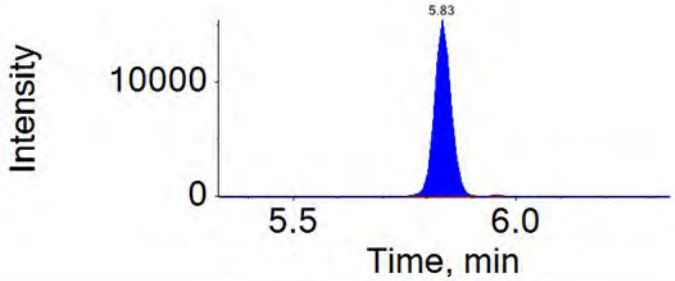


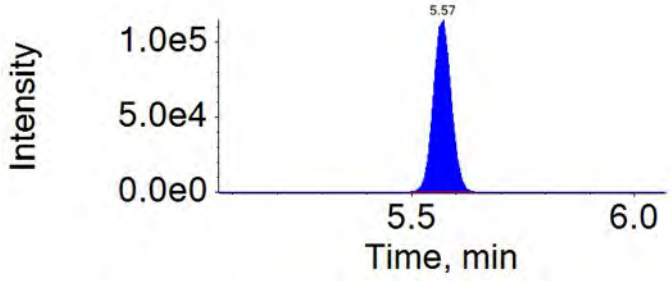
Extraction Standard: E13C7-PFUnDA	Injection Standard: 13C2-PFDA
570.0 / 525.0	515.0 / 470.0



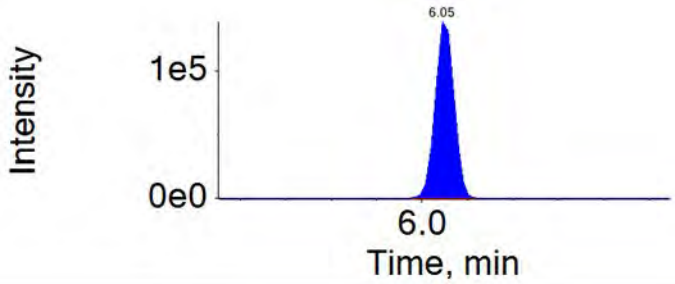


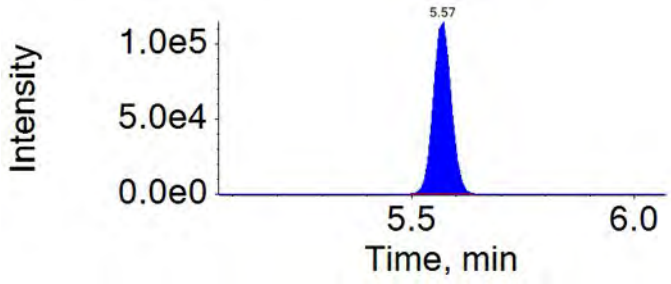
Extraction Standard: Ed5-NEtFOSAA	Injection Standard: 13C2-PFDA
589.0 / 419.0	515.0 / 470.0



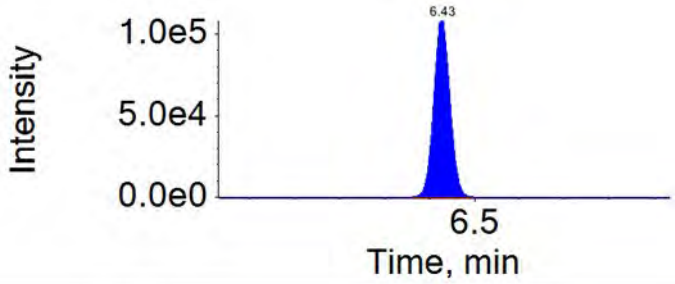
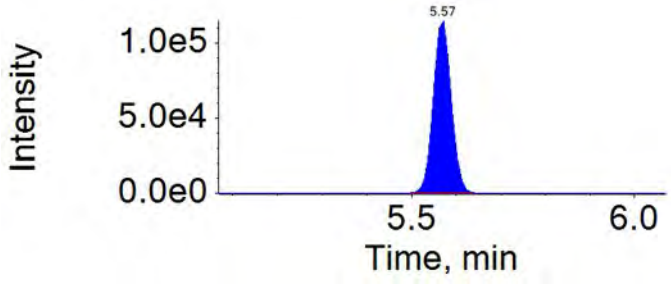


Extraction Standard: E13C2-PFDoDA	Injection Standard: 13C2-PFDA
615.0 / 570.0	515.0 / 470.0



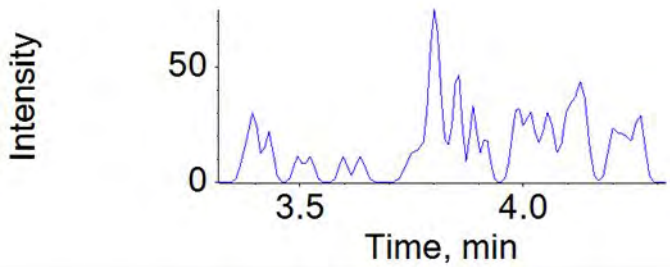


ICAL Name: 18NOV12DCAL **Result Table:** 18316011 11/14/2018 4:24:36 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

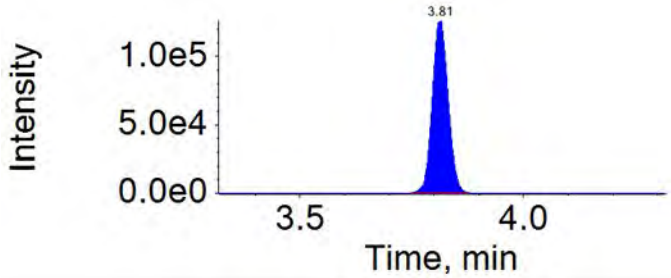
Extraction Standard: E13C2-PFTeDA	Injection Standard: 13C2-PFDA
715.0 / 670.0 	515.0 / 470.0 

ICAL Name: 18NOV12DCAL **Result Table:** 18316011 11/14/2018 4:24:36 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

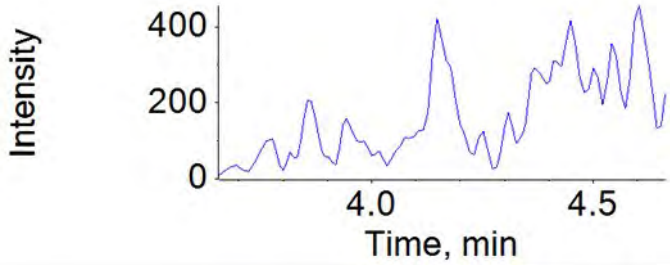
Analyte: PFBS
299.0 / 80.0



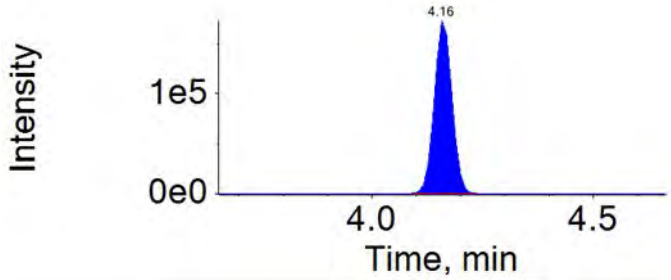
Extraction Standard: 13C3-PFBS
302.0 / 80.0



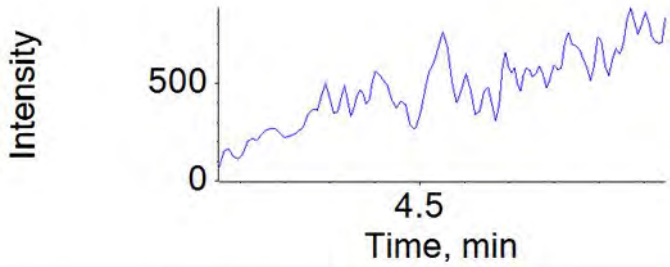
Analyte: PFHxA
313.0 / 269.0



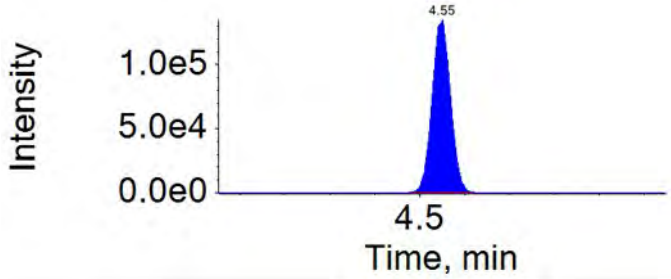
Extraction Standard: 13C5-PFHxA
318.0 / 273.0



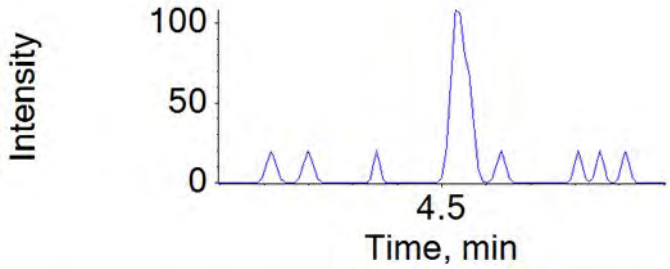
Analyte: PFHpA
363.0 / 319.0



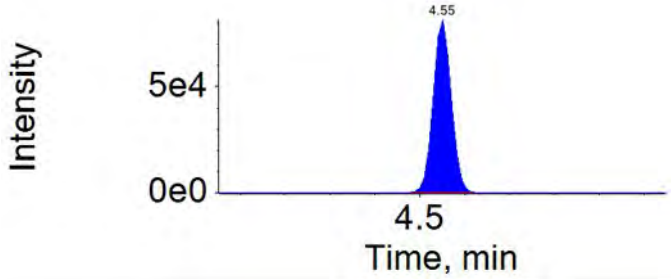
Extraction Standard: 13C4-PFHpA
367.0 / 322.0



Analyte: PFHxS
399.0 / 80.0

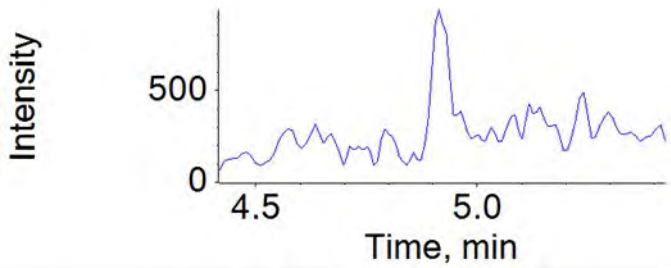


Extraction Standard: 13C3-PFHxS
402.0 / 80.0

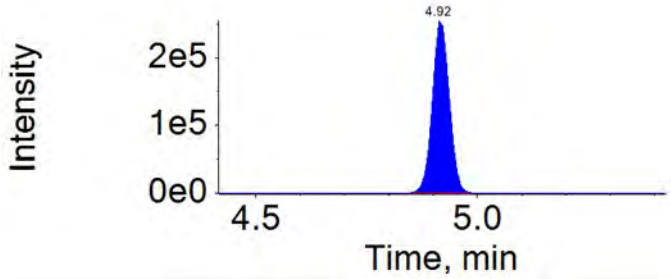


ICAL Name: 18NOV12DCAL **Result Table:** 18316011 11/14/2018 4:24:36 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

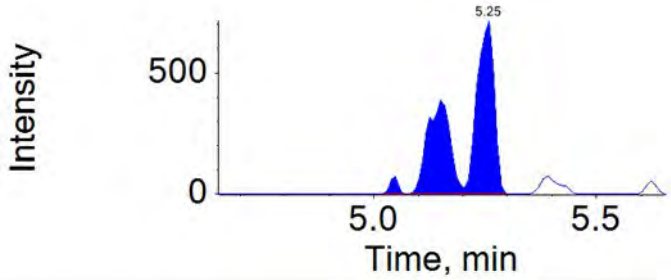
Analyte: PFOA
413.0 / 369.0



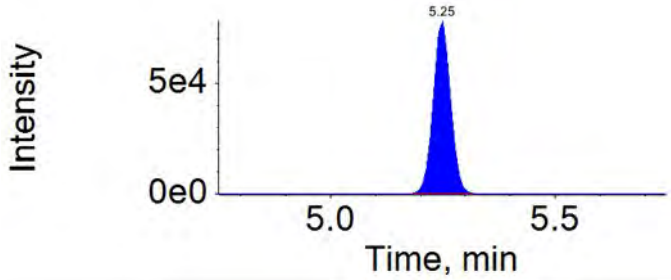
Extraction Standard: 13C8-PFOA
421.0 / 376.0



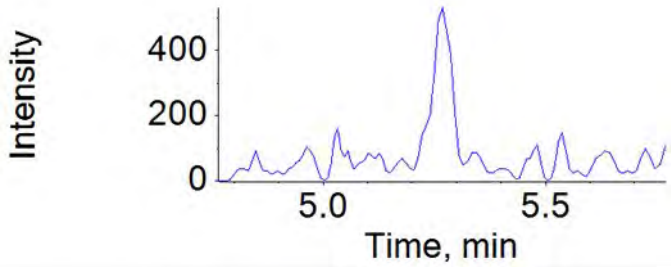
Analyte: PFOS
499.0 / 80.0



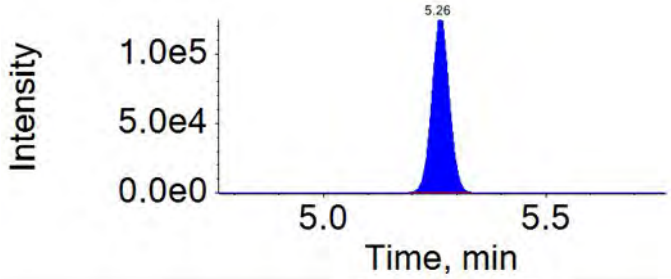
Extraction Standard: 13C8-PFOS
507.0 / 80.0



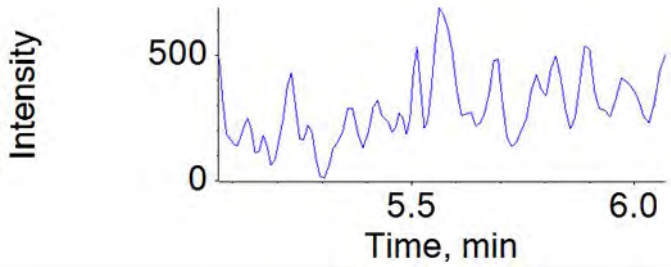
Analyte: PFNA
463.0 / 419.0



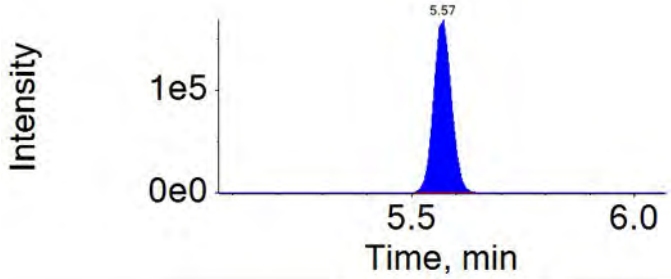
Extraction Standard: 13C9-PFNA
472.0 / 427.0



Analyte: PFDA
513.0 / 469.0

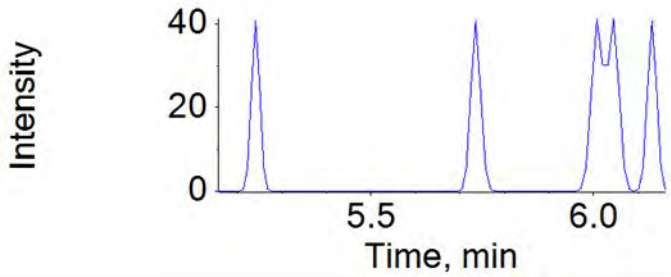


Extraction Standard: 13C6-PFDA
519.0 / 474.0

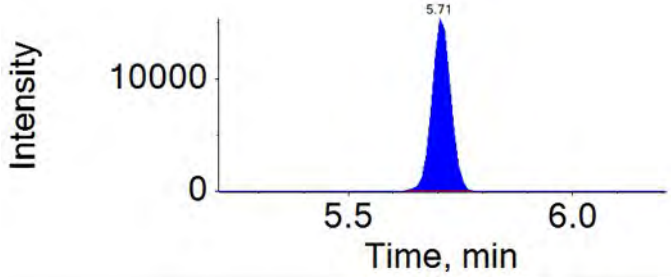


ICAL Name: 18NOV12DCAL **Result Table:** 18316011 11/14/2018 4:24:36 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

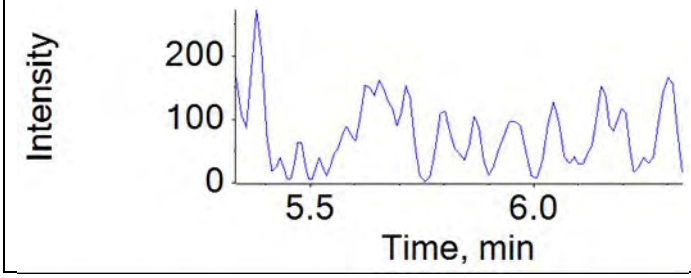
Analyte: NMeFOSAA
570.0 / 419.0



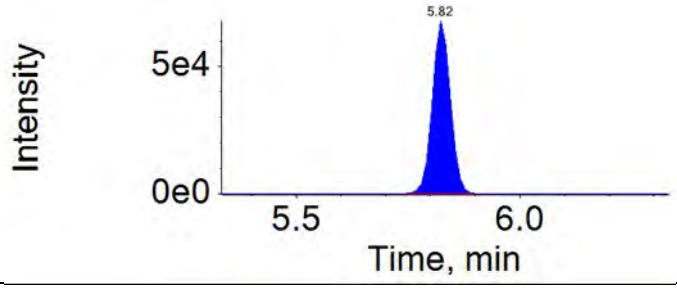
Extraction Standard: d3-NMeFOSAA
573.0 / 419.0



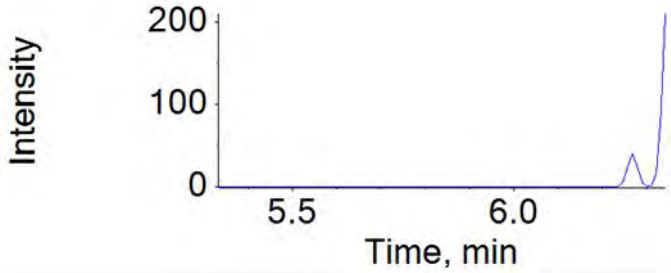
Analyte: PFUnDA
563.0 / 519.0



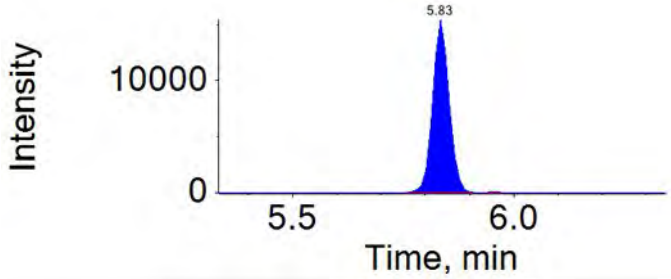
Extraction Standard: 13C7-PFUnDA
570.0 / 525.0



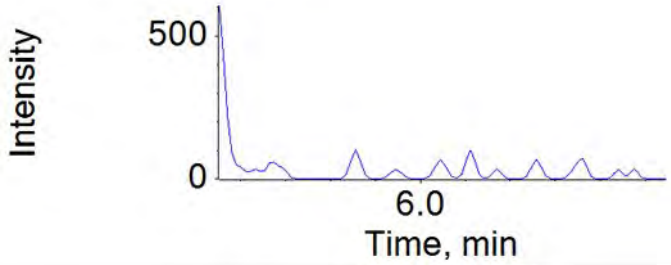
Analyte: NEtFOSAA
584.0 / 419.0



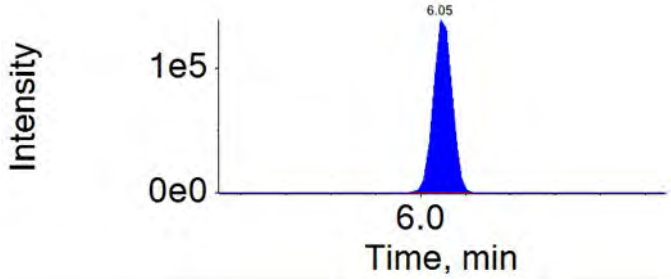
Extraction Standard: d5-NEtFOSAA
589.0 / 419.0



Analyte: PFDoDA
613.0 / 569.0



Extraction Standard: 13C2-PFDoDA
615.0 / 570.0

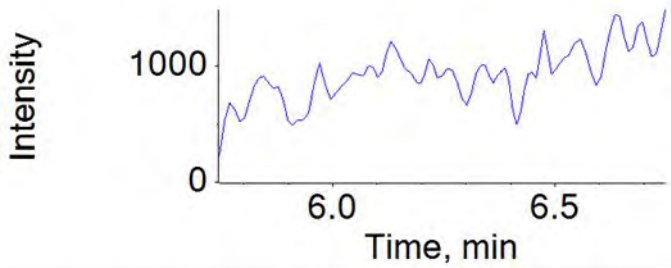


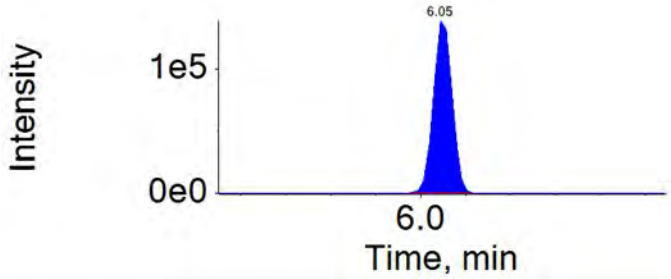
APPROVED
By MCD at 4:51 pm, 11/14/18

REVIEWED
By HMK at 12:22 pm, 11/15/18

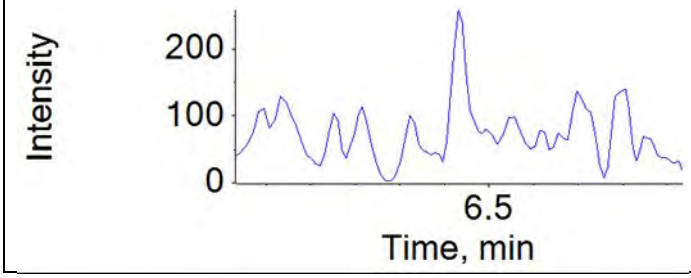
ICAL Name: 18NOV12DCAL **Result Table:** 18316011 11/14/2018 4:24:36 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

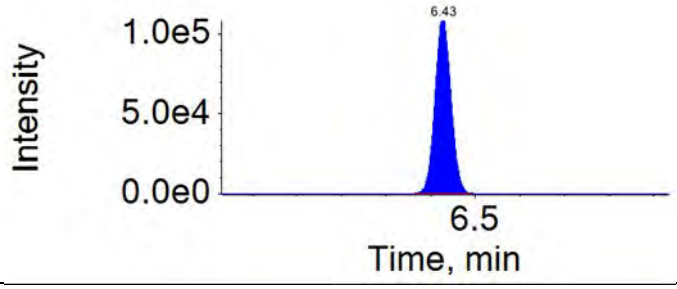
Analyte: PFTrDA	Extraction Standard: 13C2-PFDoDA
663.0 / 619.0	615.0 / 570.0





Analyte: PFTeDA	Extraction Standard: 13C2-PFTeDA
713.0 / 669.0	715.0 / 670.0





APPROVED
By MCD at 4:51 pm, 11/14/18

REVIEWED
By HMK at 12:22 pm, 11/15/18

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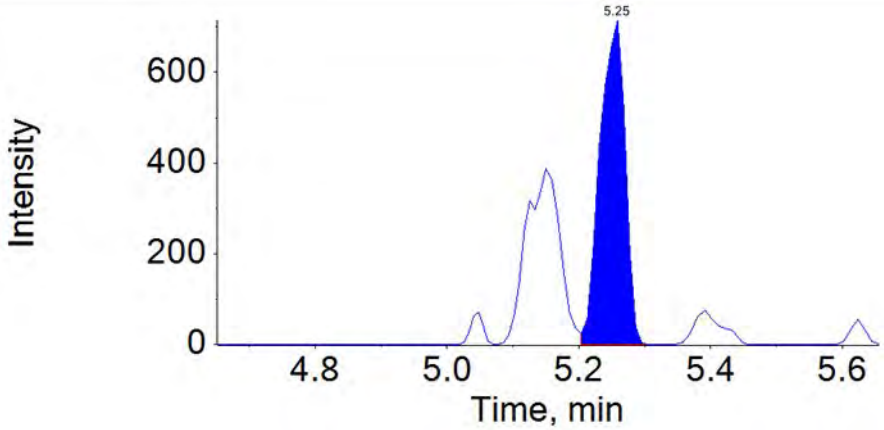
Auto Integrations prior to Manual Integration

Print Date: 11/14/2018 4:31 PM
Template: MQ-OrigInteg-16NOV21.docx

Results Table Name: 18316011
Results Table Date: 11/14/2018 4:24:36 PM

Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

Component Name:
PFOS
RT (min.):
5.25
Peak Area:
1901.7
Mass Range:
499.0 / 80.0
File Name:
18NOV13D-62.wiff
Sample Name:
9885093



Integration Comment: incorrect integration

APPROVED
By MCD at 4:51 pm, 11/14/18

REVIEWED
By HMK at 12:22 pm, 11/15/18

Results Table Name: 18316011
Results Table Date: 11/14/2018 4:24:36 PM

Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

APPROVED
By MCD at 4:51 pm, 11/14/18

REVIEWED
By HMK at 12:22 pm, 11/15/18

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LC-MS/MS Analysis Report

Printed: 11/14/2018 4:29:00 PM
Template: IonRatio18OCT10

Ion Ratio Report

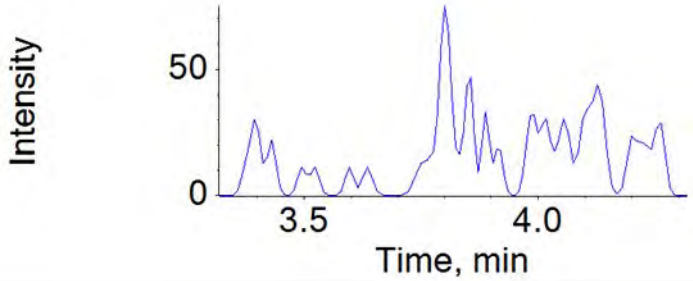
Sample Name: 9885093 **Instrument Name:** LM27631 **File Name:** 18NOV13D-62.wiff

Component Name	RT	RRT	Analyte Area Response	Int Typ	Expected Ion Ratio	Ion Ratio	Ion Ratio % Diff	Ion Ratio Limit	Ion Ratio OOS
PFBS	N/A	N/A	N/A	A	N/A	N/A			
PFBS_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFHxA	N/A	N/A	N/A	A	N/A	N/A			
PFHxA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFHpA	N/A	N/A	N/A	A	N/A	N/A			
PFHpA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFHxS	N/A	N/A	N/A	A	N/A	N/A			
PFHxS_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFOA	N/A	N/A	N/A	A	N/A	N/A			
PFOA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFOS	5.25	1.00	3383.2	M	N/A	0.3252			
PFOS_2	5.24	1.00	1100.3	A	N/A	0.3252	10	50	
PFNA	N/A	N/A	N/A	A	N/A	N/A			
PFNA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFDA	N/A	N/A	N/A	A	N/A	N/A			
PFDA_2	N/A	N/A	N/A	A	N/A	N/A		50	
NMeFOSAA	N/A	N/A	N/A	A	N/A	N/A			
NMeFOSAA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFUnDA	N/A	N/A	N/A	A	N/A	N/A			
PFUnDA_2	N/A	N/A	N/A	A	N/A	N/A		50	
NEtFOSAA	N/A	N/A	N/A	A	N/A	N/A			
NEtFOSAA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFDoDA	N/A	N/A	N/A	A	N/A	N/A			
PFDoDA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFTrDA	N/A	N/A	N/A	A	N/A	N/A			
PFTrDA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFTeDA	N/A	N/A	N/A	A	N/A	N/A			
PFTeDA_2	N/A	N/A	N/A	A	N/A	N/A		50	

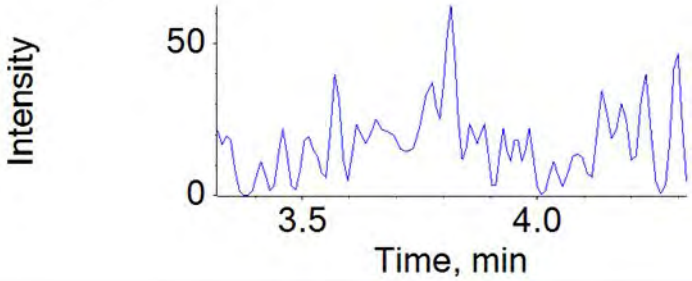
APPROVED
By MCD at 4:51 pm, 11/14/18

REVIEWED
By HMK at 12:22 pm, 11/15/18

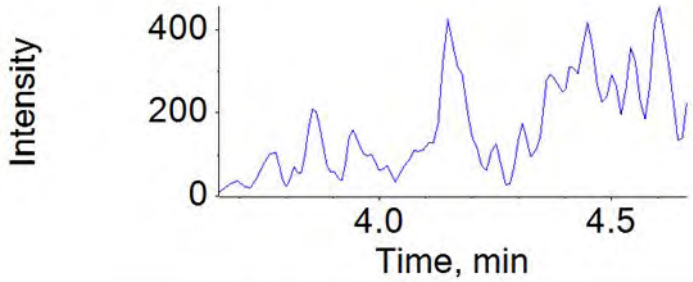
Component: PFBS
Primary Mass: 299.0 / 80.0



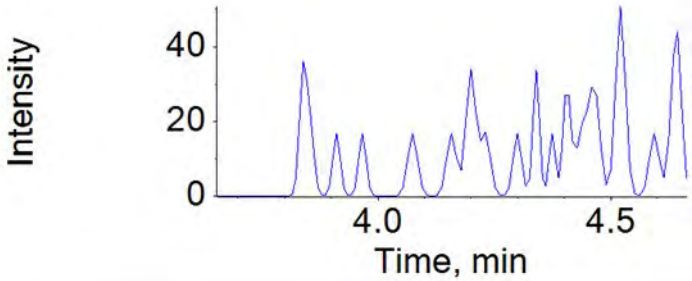
Component: PFBS_2
Secondary Mass: 299.0 / 99.0



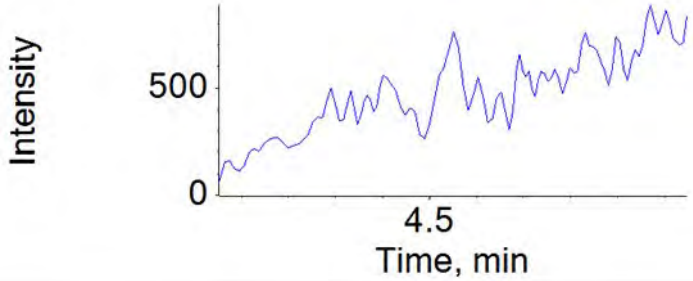
Component: PFHxA
Primary Mass: 313.0 / 269.0



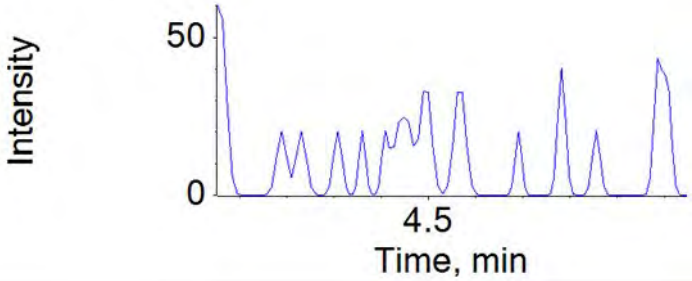
Component: PFHxA_2
Secondary Mass: 313.0 / 119.0



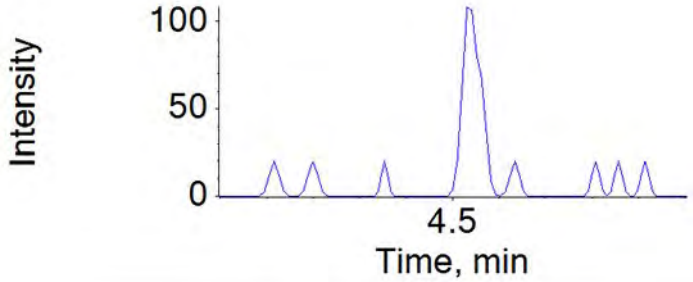
Component: PFHpA
Primary Mass: 363.0 / 319.0



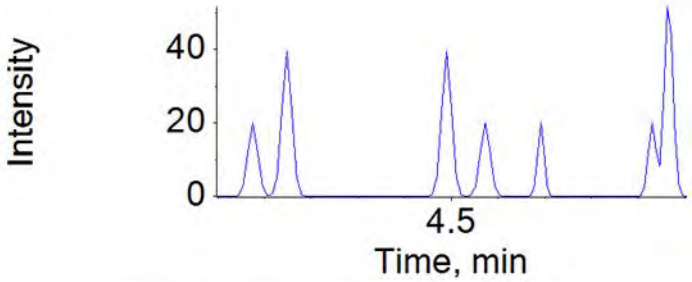
Component: PFHpA_2
Secondary Mass: 363.0 / 169.0



Component: PFHxS
Primary Mass: 399.0 / 80.0



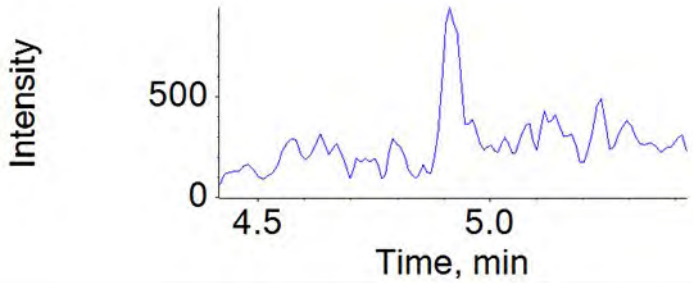
Component: PFHxS_2
Secondary Mass: 399.0 / 99.0



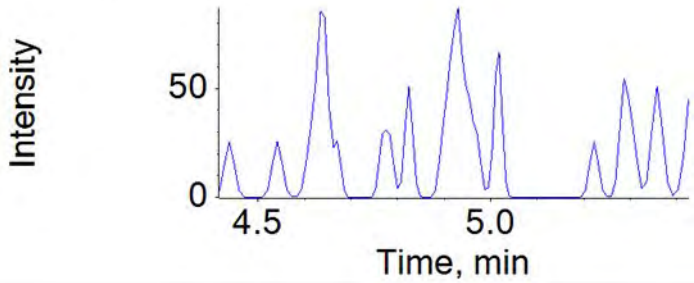
APPROVED
By MCD at 4:51 pm, 11/14/18

REVIEWED
By HMK at 12:22 pm, 11/15/18

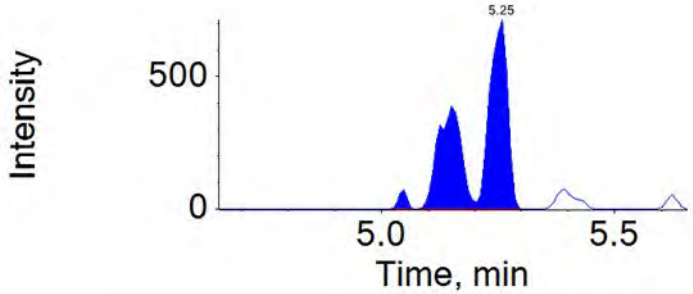
Component: PFOA
Primary Mass: 413.0 / 369.0



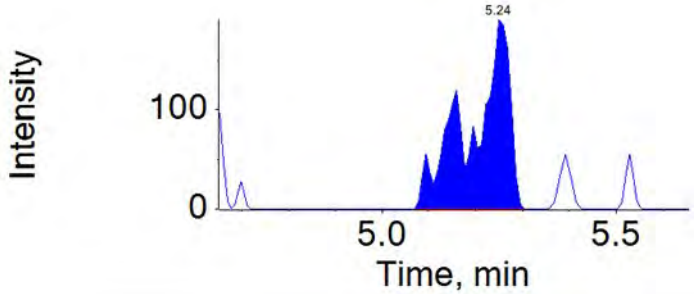
Component: PFOA_2
Secondary Mass: 413.0 / 169.0



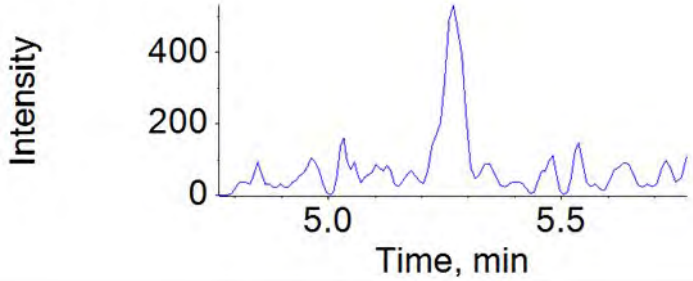
Component: PFOS
Primary Mass: 499.0 / 80.0



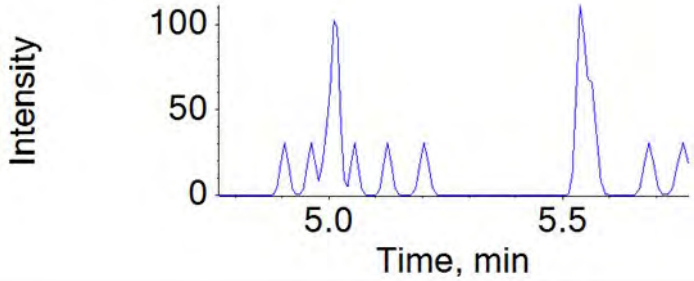
Component: PFOS_2
Secondary Mass: 499.0 / 99.0



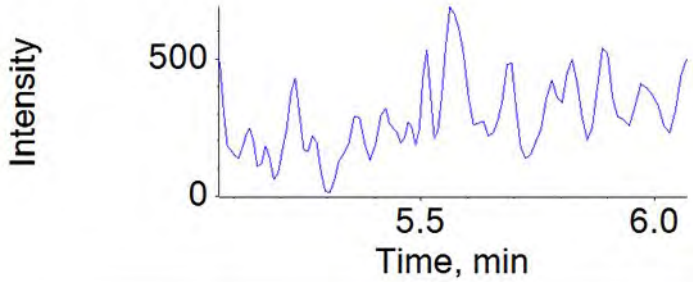
Component: PFNA
Primary Mass: 463.0 / 419.0



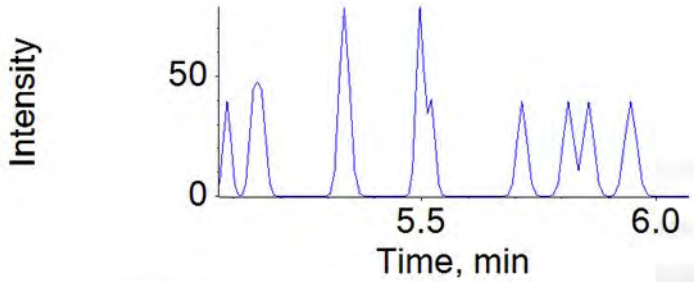
Component: PFNA_2
Secondary Mass: 463.0 / 169.0



Component: PFDA
Primary Mass: 513.0 / 469.0



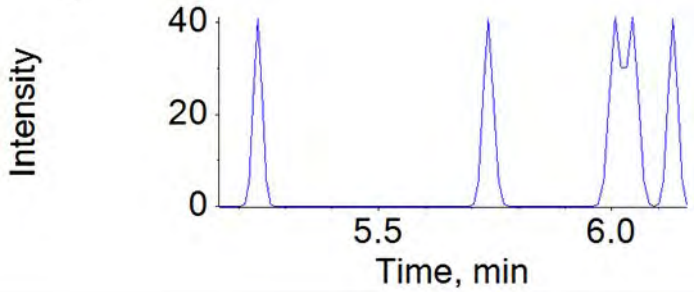
Component: PFDA_2
Secondary Mass: 513.0 / 169.0



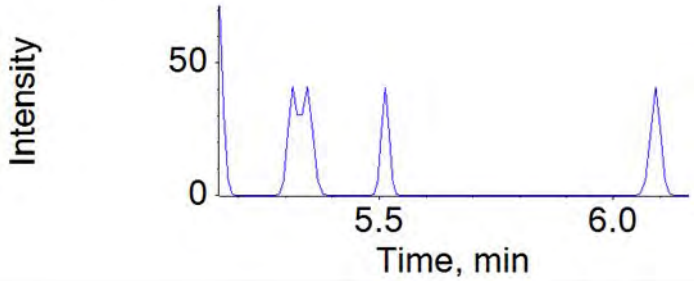
APPROVED
By MCD at 4:51 pm, 11/14/18

REVIEWED
By HMK at 12:22 pm, 11/15/18

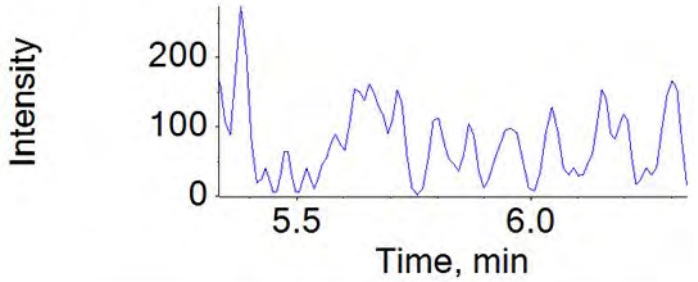
Component: NMeFOSAA
Primary Mass: 570.0 / 419.0



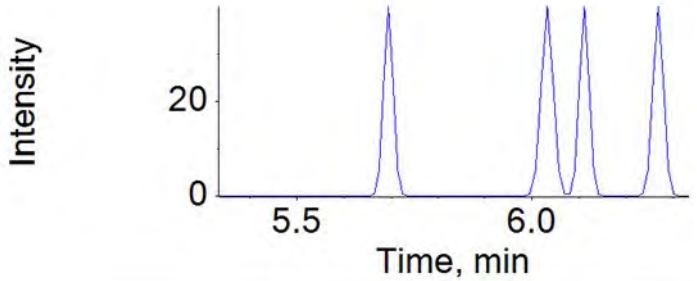
Component: NMeFOSAA_2
Secondary Mass: 570.0 / 483.0



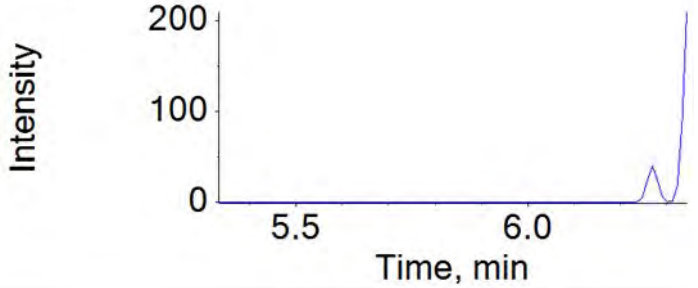
Component: PFUnDA
Primary Mass: 563.0 / 519.0



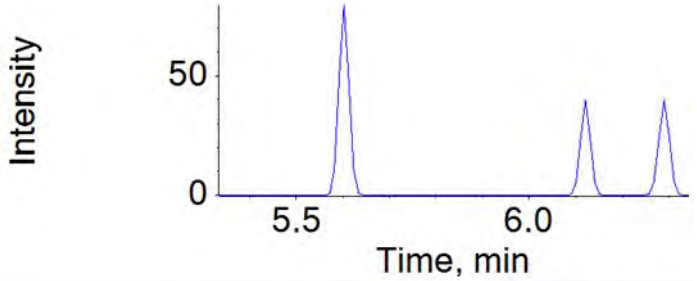
Component: PFUnDA_2
Secondary Mass: 563.0 / 169.0



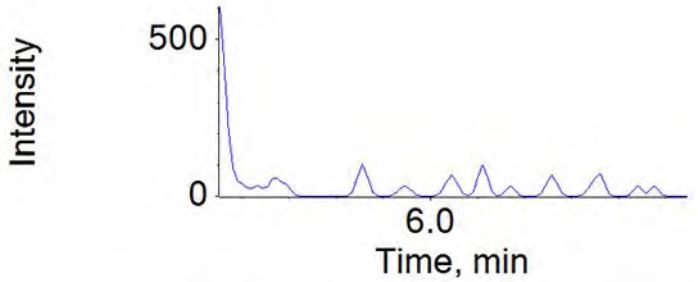
Component: NEtFOSAA
Primary Mass: 584.0 / 419.0



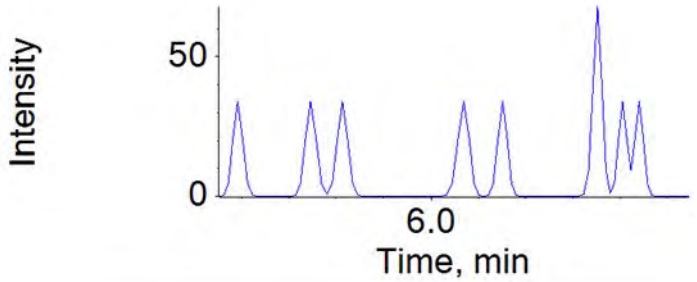
Component: NEtFOSAA_2
Secondary Mass: 584.0 / 526.0



Component: PFDoDA
Primary Mass: 613.0 / 569.0



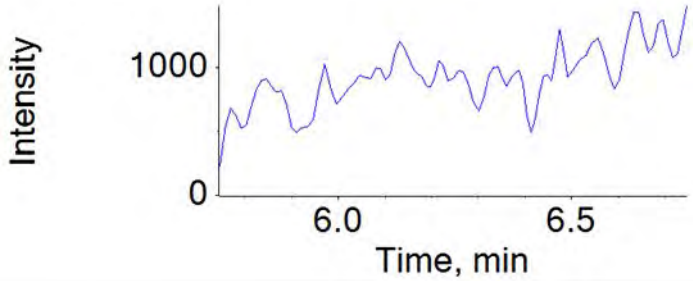
Component: PFDoDA_2
Secondary Mass: 613.0 / 169.0



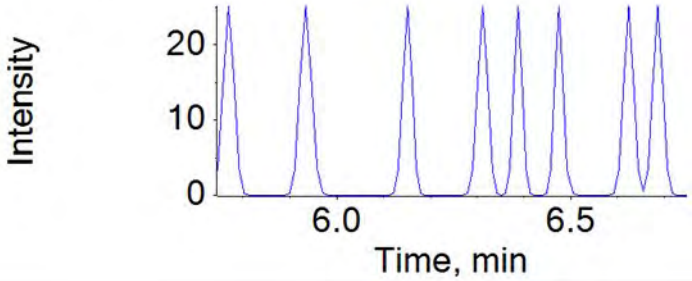
APPROVED
By MCD at 4:51 pm, 11/14/18

REVIEWED
By HMK at 12:22 pm, 11/15/18

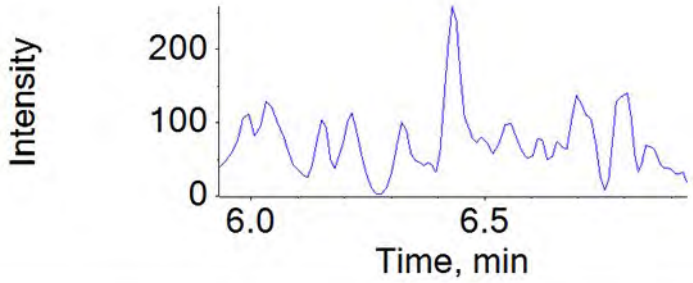
Component: PFTrDA
Primary Mass: 663.0 / 619.0



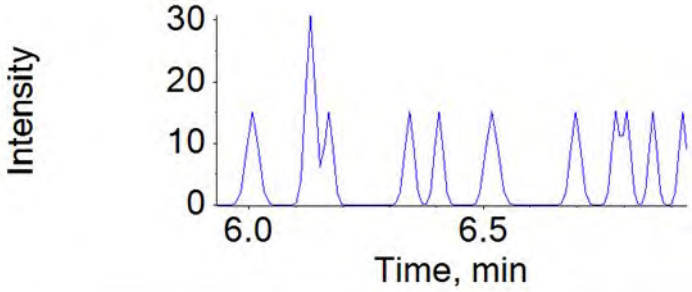
Component: PFTrDA_2
Secondary Mass: 663.0 / 169.0



Component: PFTeDA
Primary Mass: 713.0 / 669.0



Component: PFTeDA_2
Secondary Mass: 713.0 / 169.0



APPROVED
By MCD at 4:51 pm, 11/14/18

REVIEWED
By HMK at 12:22 pm, 11/15/18

ICAL Name: 18NOV12DCAL **Result Table:** 18316011 11/14/2018 4:24:36 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Sample Name:	9885094			**Data File:**		18NOV13D-63.wiff
Sample ID:	EPA 537 mod QSM 5.1 table B-15 18316011 OU1-Bldg27-S-02-06 Grab Soil			**Acquis Date:**		2018-11-13T19:02:41
Sample Type:	Unknown			**Instrument:**		LM27631
Vial Position:	60			**Acquis Method:**		18AUG13_3uL.dam
Injection Vol:	3.00			**Result Table:**		18316011
QMethod File:	18AUG20QM			**ICAL Name:**		18NOV12DCAL
Batch Number:	18316011			**Operator:**		MCD7824
Sample Wt.:	1.06000			**Dilution Factor:**		1.00
Sample Vol.:	1.000			**Prep Factor:**		2.000

Injection Standard Peak Table

Injection Standard Area Reference File: 18NOV13D-05

Injection Standard Name	Inj Std Conc	Injection Std Peak Area	Rreference Injection Standard Area	Injection Std %Diff	Injection Std %Diff Limit	Injection Std %Diff OOS
13C3-PFBA	5.0	742262.4	661126.9	12	50	
13C2-PFOA	5.0	519419.8	466902.6	11	50	
13C4-PFOS	4.8	279023.2	247446.9	13	50	
13C2-PFDA	5.0	318771.9	295381.6	8	50	

Extraction Standard Peak Table

Extraction Standard Name	Ext Std Area	Inj Std Name	Inj Std Area	Area Ratio	Ext Std Conc	Ext Std Result	Ext Std %REC	Ext Std %REC Limit	Ext Std OOS
E13C3-PFBS	361903.2	13C3-PFBA	742262.4	0.488	8.774	6.494	74	50-150	
E13C5-PFHxA	560610.1	13C2-PFOA	519419.8	1.079	9.434	7.356	78	50-150	
E13C3-PFHxS	267742.7	13C2-PFOA	519419.8	0.515	8.925	6.674	75	50-150	
E13C4-PFHpA	443119.4	13C2-PFOA	519419.8	0.853	9.434	7.252	77	50-150	
E13C8-PFOA	799713.3	13C2-PFOA	519419.8	1.540	9.434	8.004	85	50-150	
E13C8-PFOS	234434.4	13C4-PFOS	279023.2	0.840	9.019	7.024	78	50-150	
E13C9-PFNA	413898.3	13C4-PFOS	279023.2	1.483	9.434	7.804	83	50-150	
E13C6-PFDA	544619.0	13C2-PFDA	318771.9	1.708	9.434	7.522	80	50-150	
Ed3-NMeFOSAA	66127.6	13C2-PFDA	318771.9	0.207	9.434	7.065	75	50-150	
E13C7-PFUnDA	221152.3	13C2-PFDA	318771.9	0.694	9.434	7.600	81	50-150	
Ed5-NEtFOSAA	56823.0	13C2-PFDA	318771.9	0.178	9.434	7.116	75	50-150	
E13C2-PFDoDA	470747.2	13C2-PFDA	318771.9	1.477	9.434	7.234	77	50-150	
E13C2-PFTeDA	338521.2	13C2-PFDA	318771.9	1.062	9.434	7.034	75	50-150	

APPROVED
By MCD at 4:51 pm, 11/14/18

REVIEWED
By HMK at 12:22 pm, 11/15/18

ICAL Name: 18NOV12DCAL **Result Table:** 18316011 11/14/2018 4:24:36 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

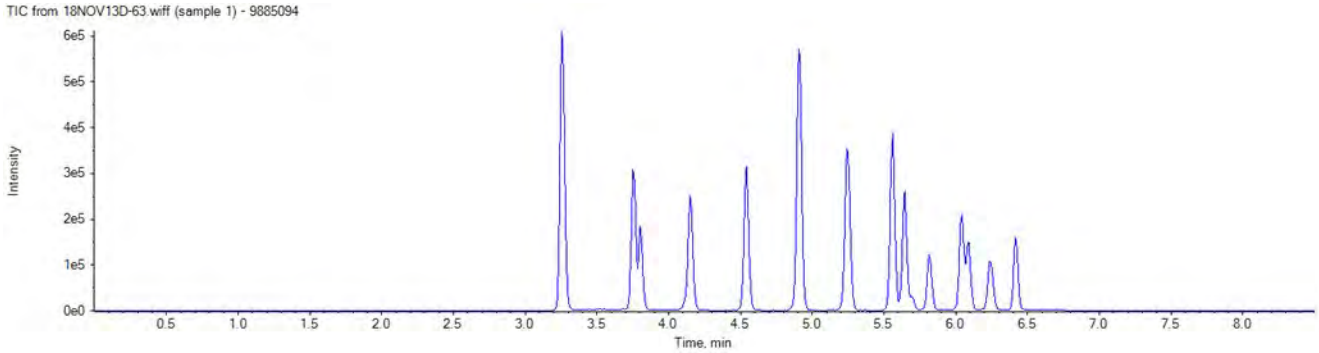
Analyte Quantitation Peak Table

Sample Name: 9885094 **Instrument Name:** LM27631 **File Name:** 18NOV13D-63.wiff

Sample Wt	Sample Vol	Dilution Factor	PrepFactor
1.06000	1.000	1.00	2.000

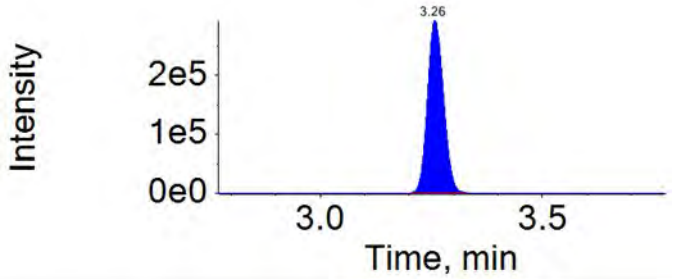
Analyte Name	RT	RRT	Analyte Area Response	E	Int Typ	ES Name	ES RT	ES Area Response	Area Ratio	Sample Result (ng/g)
PFBS	N/A	N/A	N/A		A	13C3-PFBS	3.80	361903.2	N/A	
PFHxA	N/A	N/A	N/A		A	13C5-PFHxA	4.15	560610.1	N/A	
PFHpA	N/A	N/A	N/A		A	13C4-PFHpA	4.54	443119.4	N/A	
PFHxS	N/A	N/A	N/A		A	13C3-PFHxS	4.54	267742.7	N/A	
PFOA	N/A	N/A	N/A		A	13C8-PFOA	4.91	799713.3	N/A	
PFOS	N/A	N/A	N/A		A	13C8-PFOS	5.24	234434.4	N/A	
PFNA	N/A	N/A	N/A		A	13C9-PFNA	5.25	413898.3	N/A	
PFDA	N/A	N/A	N/A		A	13C6-PFDA	5.56	544619.0	N/A	
NMeFOSAA	N/A	N/A	N/A		A	d3-NMeFOSAA	5.70	66127.6	N/A	
PFUnDA	N/A	N/A	N/A		A	13C7-PFUnDA	5.81	221152.3	N/A	
NEtFOSAA	N/A	N/A	N/A		A	d5-NEtFOSAA	5.83	56823.0	N/A	
PFDoDA	N/A	N/A	N/A		A	13C2-PFDoDA	6.04	470747.2	N/A	
PFTrDA	N/A	N/A	N/A		A	13C2-PFDoDA	6.04	470747.2	N/A	
PFTeDA	N/A	N/A	N/A		A	13C2-PFTeDA	6.42	338521.2	N/A	

Total Ion Chromatogram

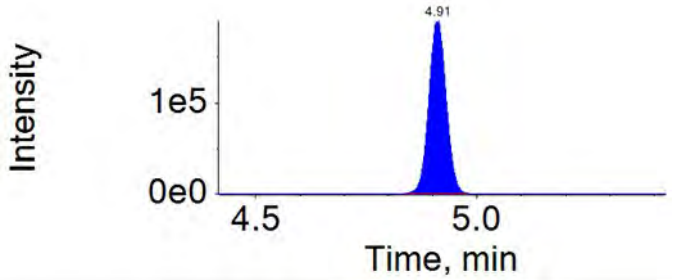


ICAL Name: 18NOV12DCAL **Result Table:** 18316011 11/14/2018 4:24:36 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

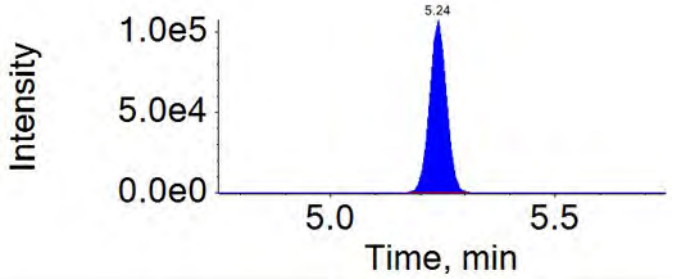
Injection Standard: 13C3-PFBA
216.0 / 172.0



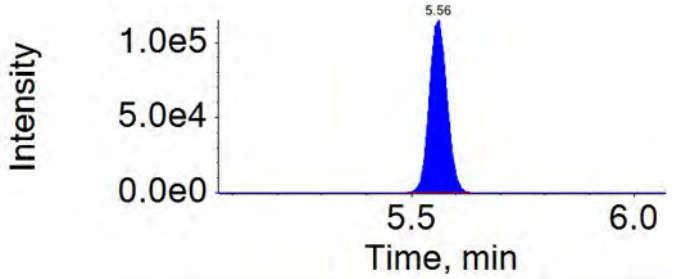
Injection Standard: 13C2-PFOA
415.0 / 370.0



Injection Standard: 13C4-PFOS
503.0 / 80.0

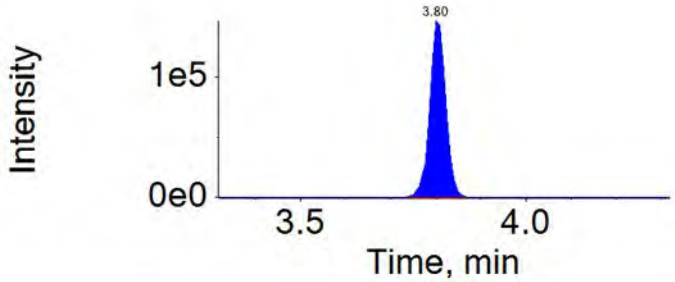


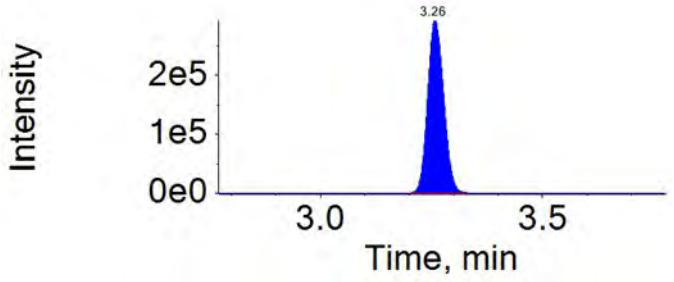
Injection Standard: 13C2-PFDA
515.0 / 470.0



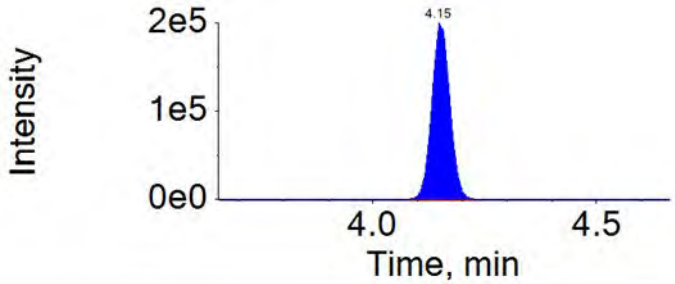
ICAL Name: 18NOV12DCAL **Result Table:** 18316011 11/14/2018 4:24:36 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

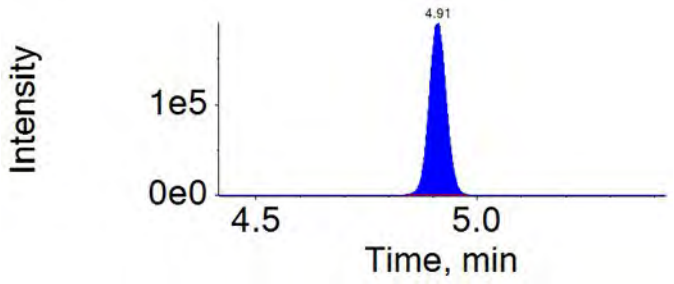
Extraction Standard: E13C3-PFBS	Injection Standard: 13C3-PFBA
302.0 / 80.0	216.0 / 172.0



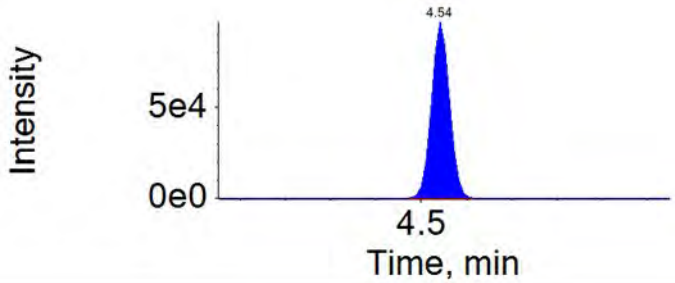


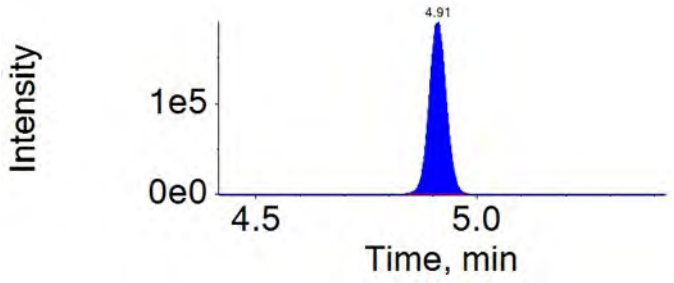
Extraction Standard: E13C5-PFHxA	Injection Standard: 13C2-PFOA
318.0 / 273.0	415.0 / 370.0



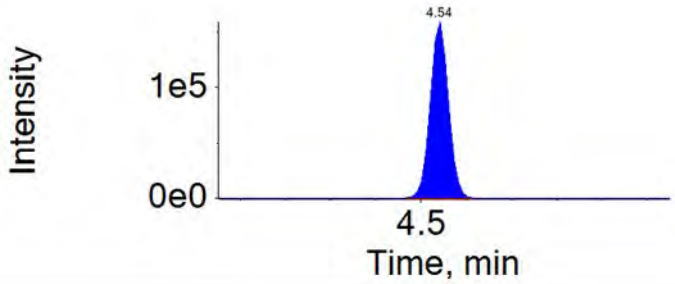


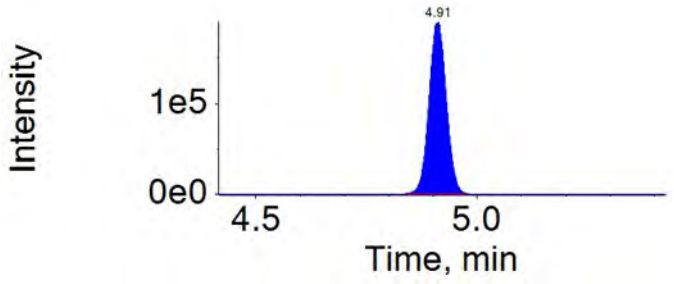
Extraction Standard: E13C3-PFHxS	Injection Standard: 13C2-PFOA
402.0 / 80.0	415.0 / 370.0





Extraction Standard: E13C4-PFHpA	Injection Standard: 13C2-PFOA
367.0 / 322.0	415.0 / 370.0



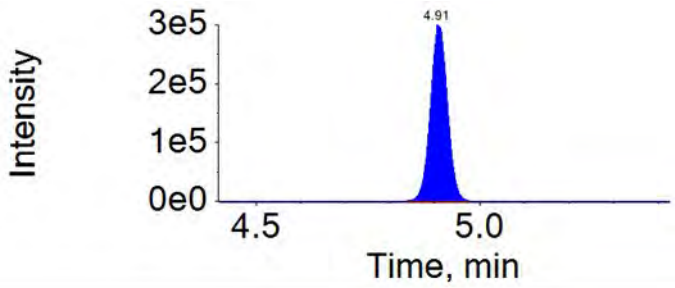


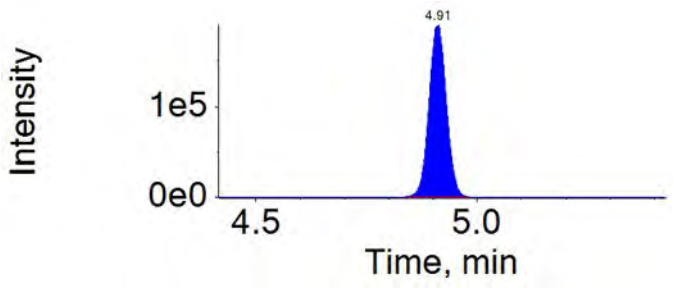
APPROVED
By MCD at 4:51 pm, 11/14/18

REVIEWED
By HMK at 12:22 pm, 11/15/18

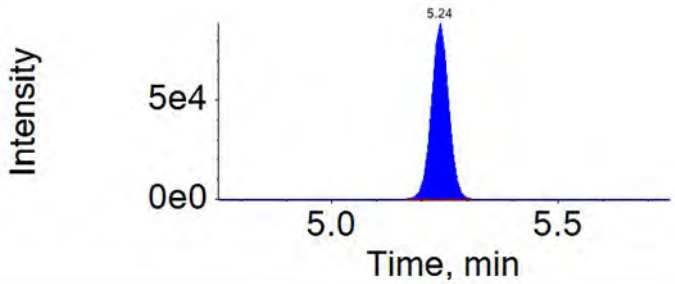
ICAL Name: 18NOV12DCAL **Result Table:** 18316011 11/14/2018 4:24:36 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

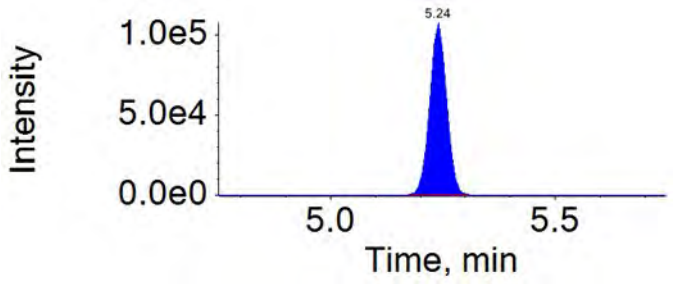
Extraction Standard: E13C8-PFOA	Injection Standard: 13C2-PFOA
421.0 / 376.0	415.0 / 370.0



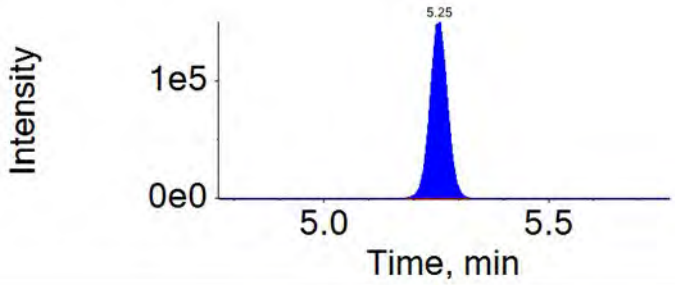


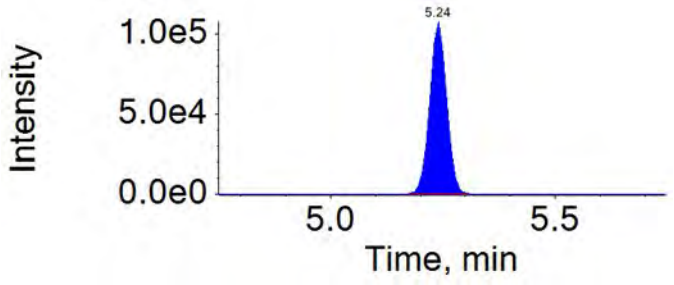
Extraction Standard: E13C8-PFOS	Injection Standard: 13C4-PFOS
507.0 / 80.0	503.0 / 80.0



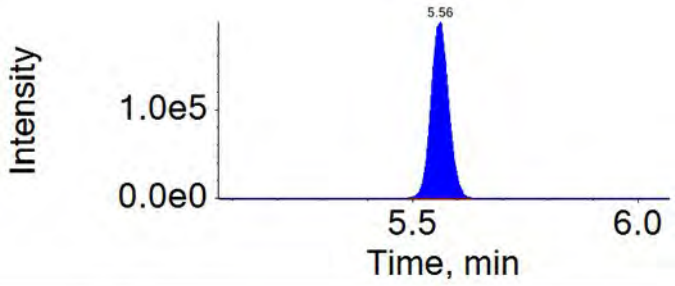


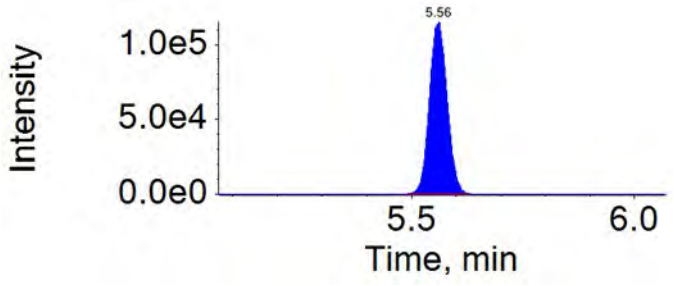
Extraction Standard: E13C9-PFNA	Injection Standard: 13C4-PFOS
472.0 / 427.0	503.0 / 80.0





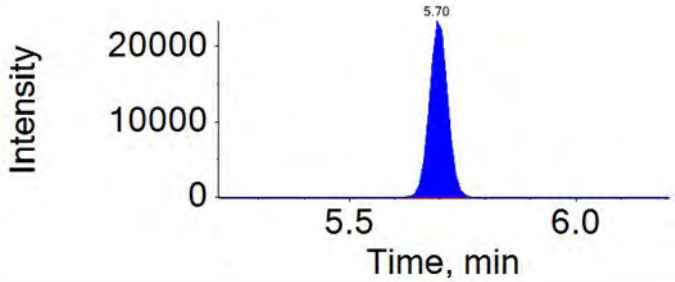
Extraction Standard: E13C6-PFDA	Injection Standard: 13C2-PFDA
519.0 / 474.0	515.0 / 470.0

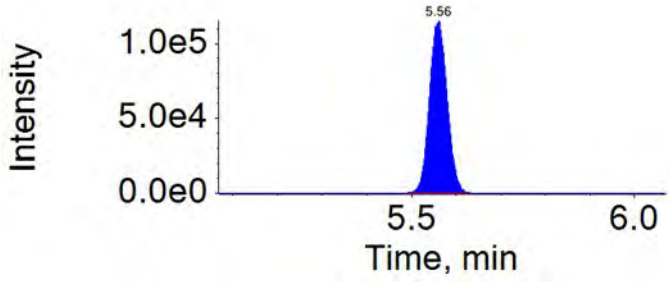




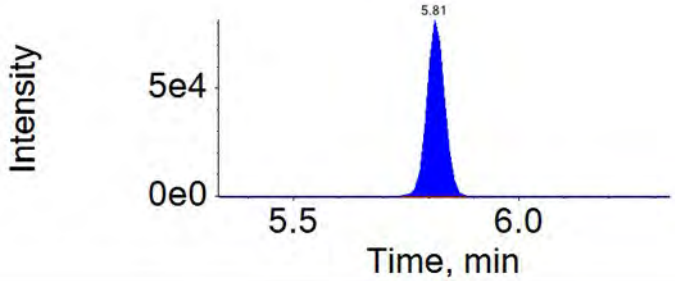
ICAL Name: 18NOV12DCAL **Result Table:** 18316011 11/14/2018 4:24:36 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

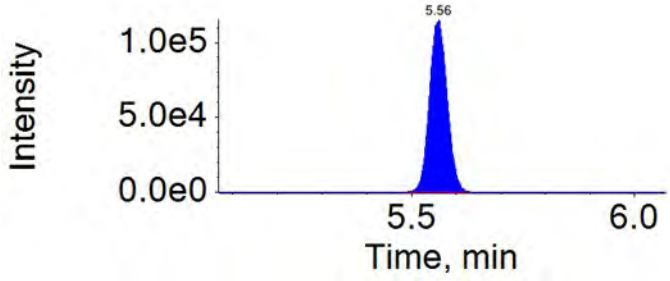
Extraction Standard: Ed3-NMeFOSAA	Injection Standard: 13C2-PFDA
573.0 / 419.0	515.0 / 470.0



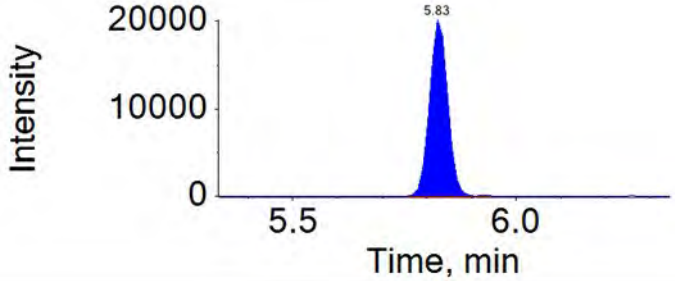


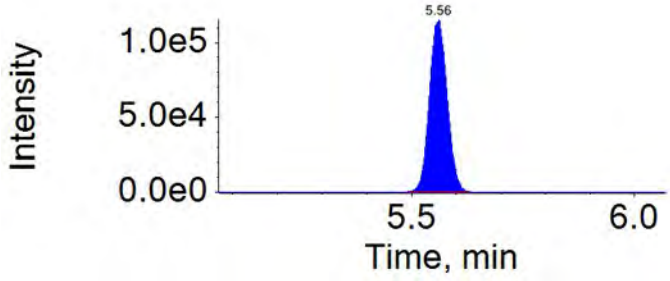
Extraction Standard: E13C7-PFUnDA	Injection Standard: 13C2-PFDA
570.0 / 525.0	515.0 / 470.0



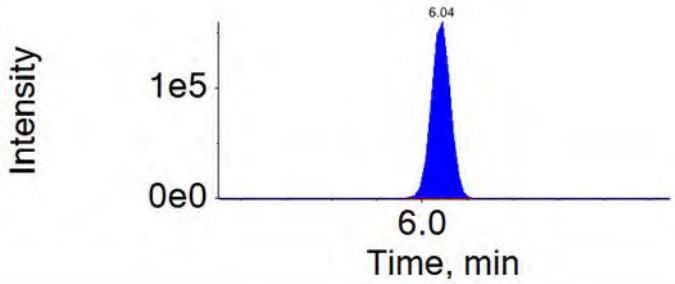


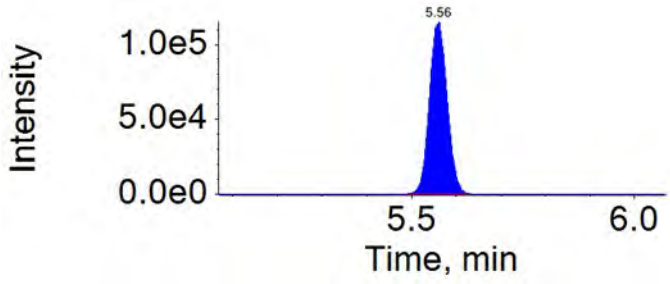
Extraction Standard: Ed5-NEtFOSAA	Injection Standard: 13C2-PFDA
589.0 / 419.0	515.0 / 470.0





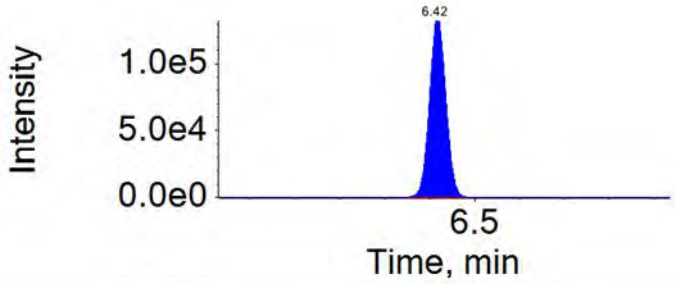
Extraction Standard: E13C2-PFDoDA	Injection Standard: 13C2-PFDA
615.0 / 570.0	515.0 / 470.0

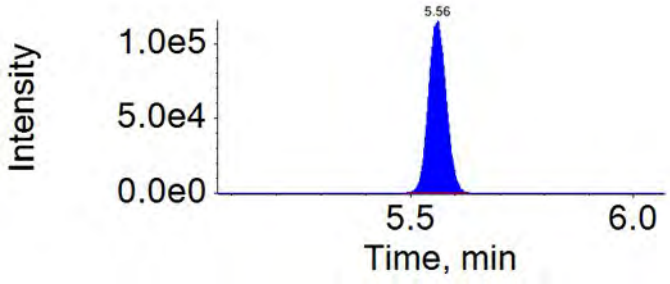




ICAL Name: 18NOV12DCAL **Result Table:** 18316011 11/14/2018 4:24:36 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

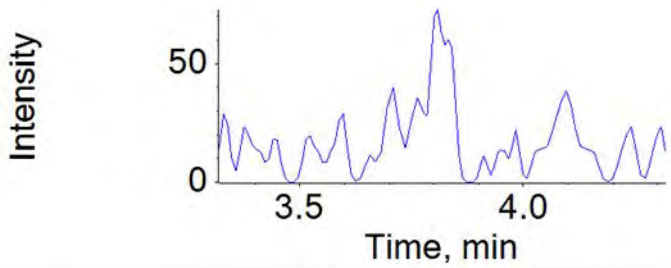
Extraction Standard: E13C2-PFTeDA	Injection Standard: 13C2-PFDA
715.0 / 670.0	515.0 / 470.0



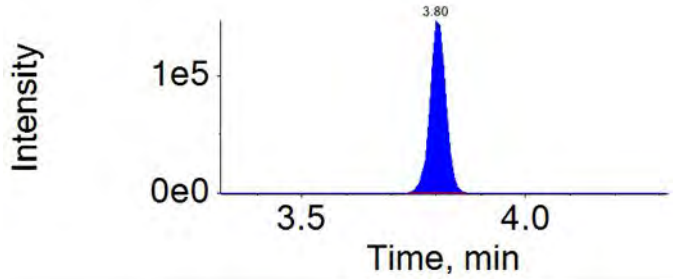


ICAL Name: 18NOV12DCAL **Result Table:** 18316011 11/14/2018 4:24:36 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

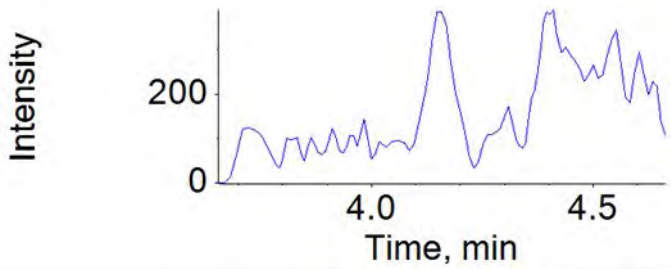
Analyte: PFBS
299.0 / 80.0



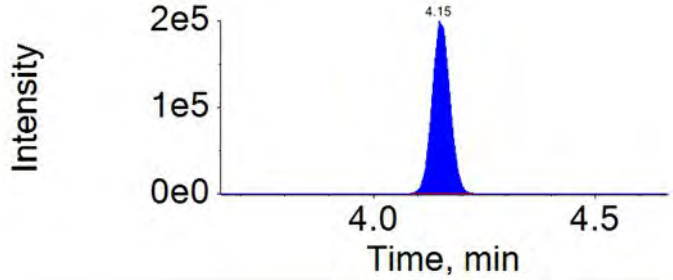
Extraction Standard: 13C3-PFBS
302.0 / 80.0



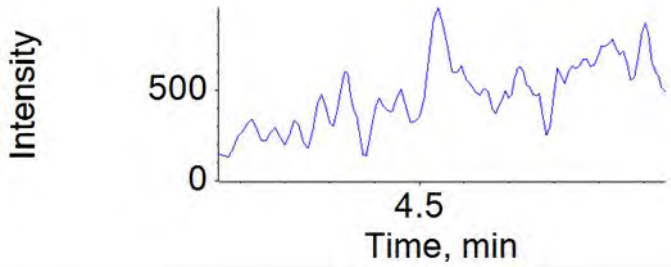
Analyte: PFHxA
313.0 / 269.0



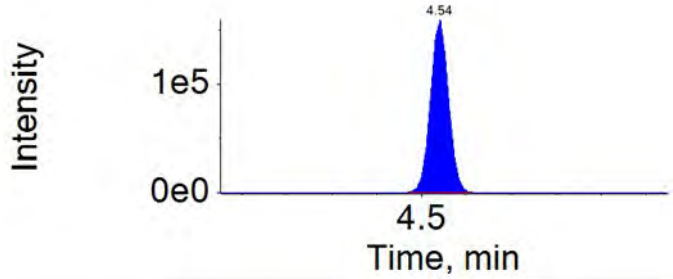
Extraction Standard: 13C5-PFHxA
318.0 / 273.0



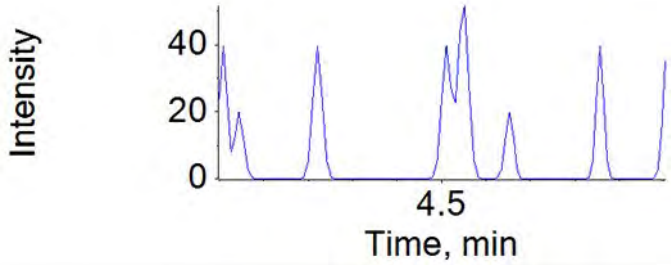
Analyte: PFHpA
363.0 / 319.0



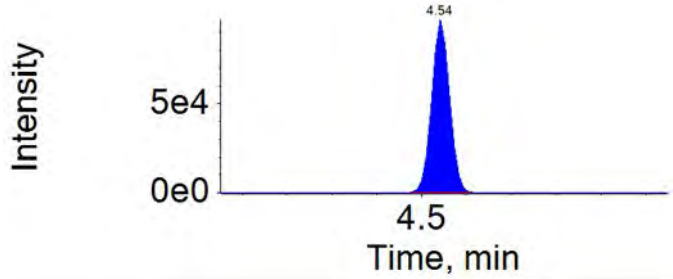
Extraction Standard: 13C4-PFHpA
367.0 / 322.0



Analyte: PFHxS
399.0 / 80.0



Extraction Standard: 13C3-PFHxS
402.0 / 80.0

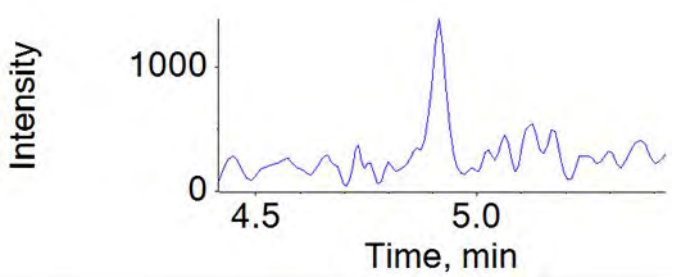


APPROVED
By MCD at 4:51 pm, 11/14/18

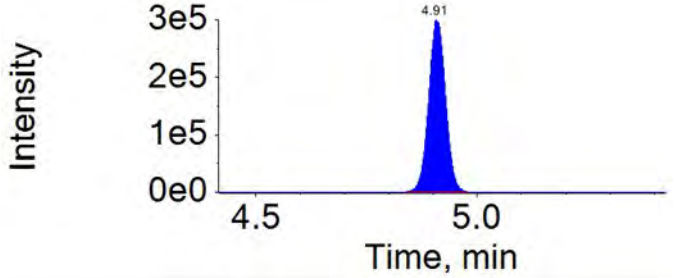
REVIEWED
By HMK at 12:22 pm, 11/15/18

ICAL Name: 18NOV12DCAL **Result Table:** 18316011 11/14/2018 4:24:36 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

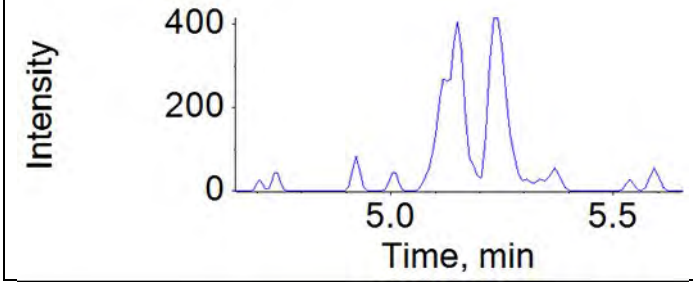
Analyte: PFOA
413.0 / 369.0



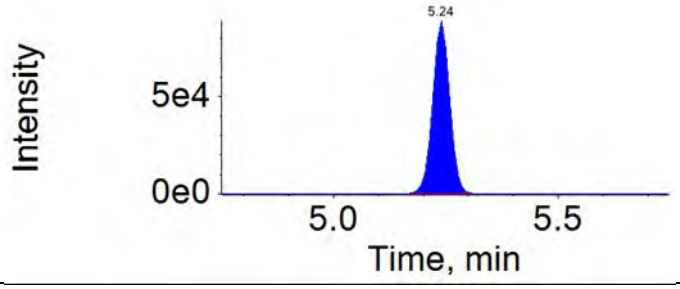
Extraction Standard: 13C8-PFOA
421.0 / 376.0



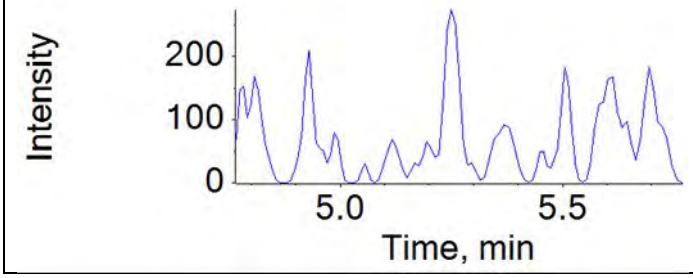
Analyte: PFOS
499.0 / 80.0



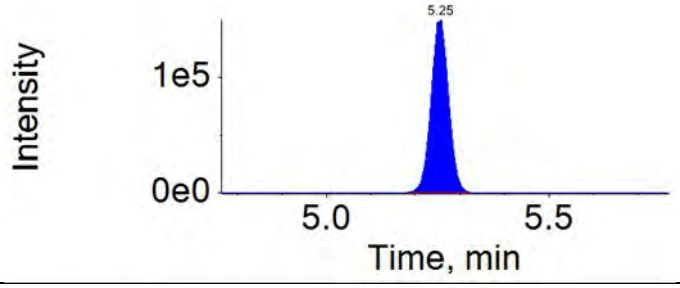
Extraction Standard: 13C8-PFOS
507.0 / 80.0



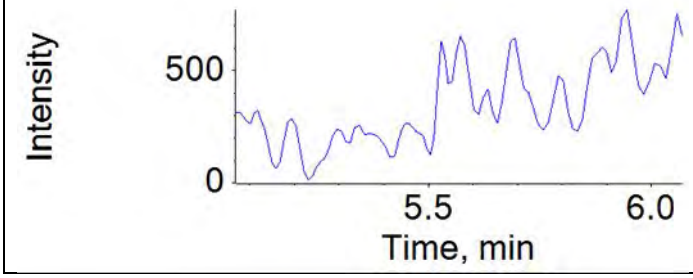
Analyte: PFNA
463.0 / 419.0



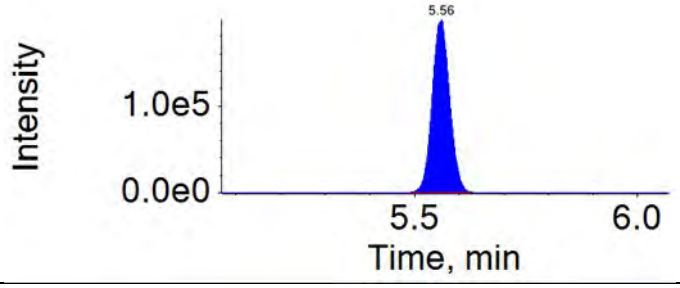
Extraction Standard: 13C9-PFNA
472.0 / 427.0



Analyte: PFDA
513.0 / 469.0



Extraction Standard: 13C6-PFDA
519.0 / 474.0

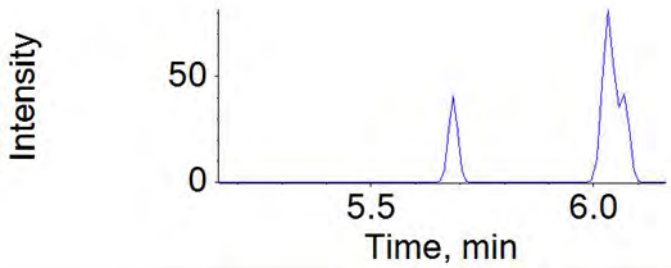


APPROVED
By MCD at 4:51 pm, 11/14/18

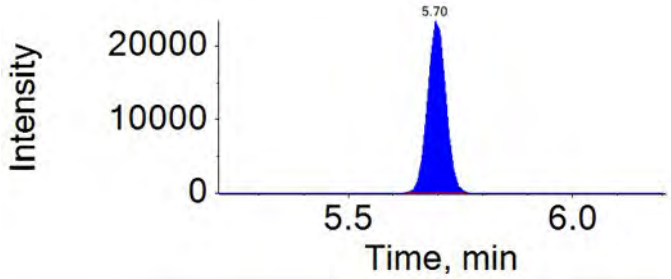
REVIEWED
By HMK at 12:22 pm, 11/15/18

ICAL Name: 18NOV12DCAL **Result Table:** 18316011 11/14/2018 4:24:36 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

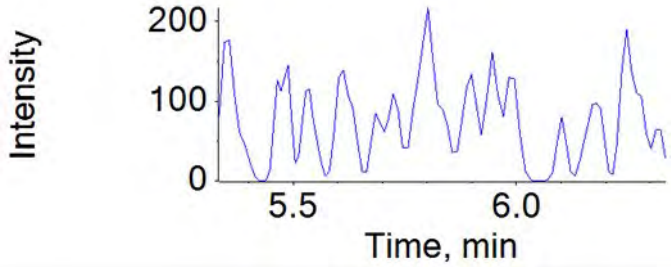
Analyte: NMeFOSAA
570.0 / 419.0



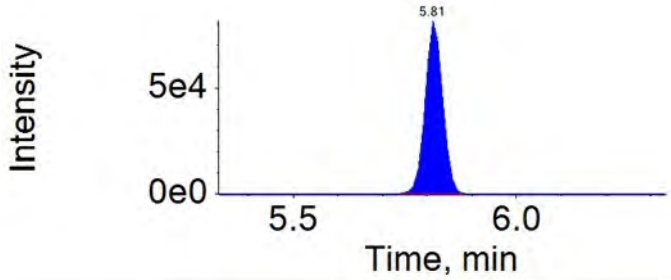
Extraction Standard: d3-NMeFOSAA
573.0 / 419.0



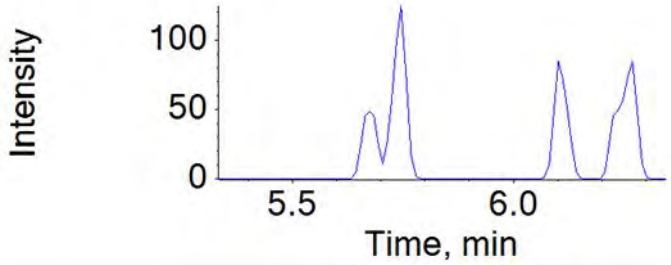
Analyte: PFUnDA
563.0 / 519.0



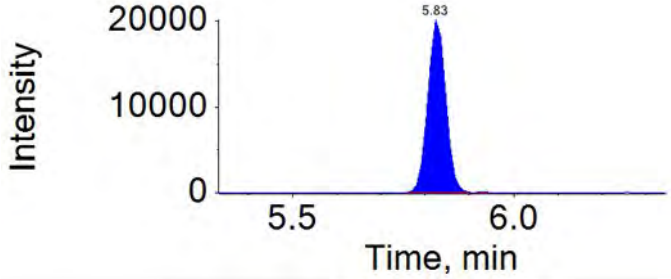
Extraction Standard: 13C7-PFUnDA
570.0 / 525.0



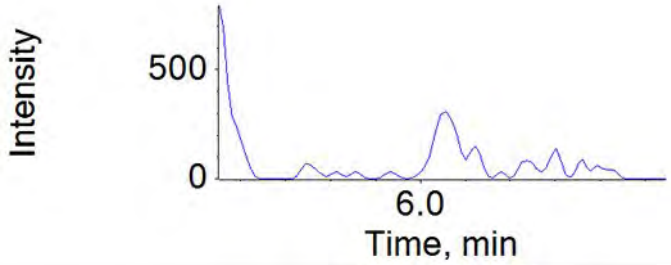
Analyte: NEtFOSAA
584.0 / 419.0



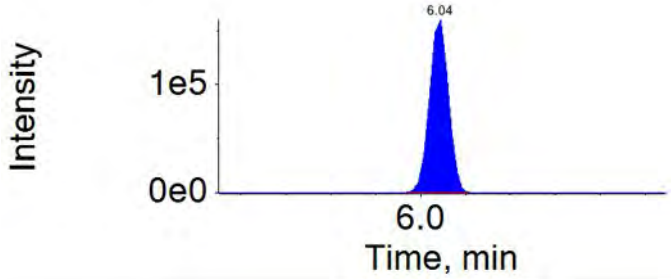
Extraction Standard: d5-NEtFOSAA
589.0 / 419.0



Analyte: PFDoDA
613.0 / 569.0

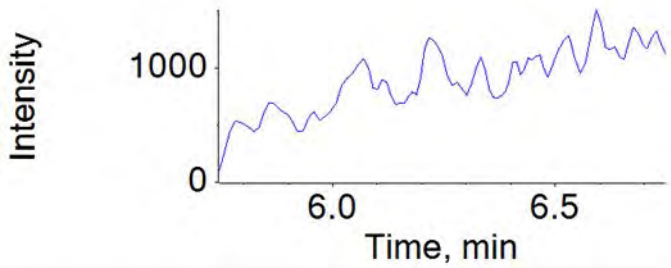


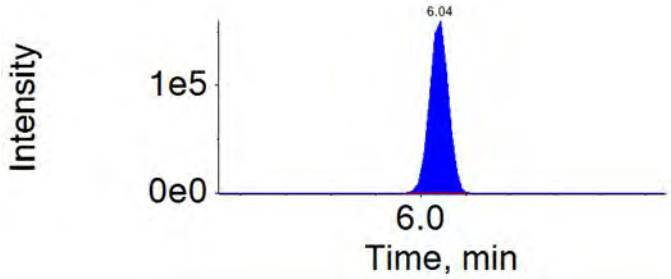
Extraction Standard: 13C2-PFDoDA
615.0 / 570.0



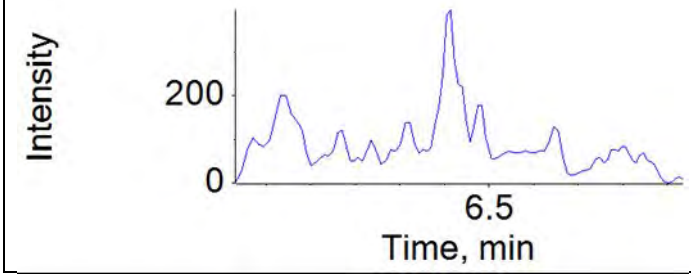
ICAL Name: 18NOV12DCAL **Result Table:** 18316011 11/14/2018 4:24:36 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

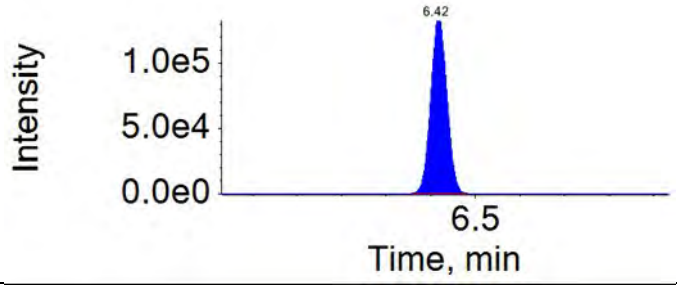
Analyte: PFTrDA	Extraction Standard: 13C2-PFDoDA
663.0 / 619.0	615.0 / 570.0





Analyte: PFTeDA	Extraction Standard: 13C2-PFTeDA
713.0 / 669.0	715.0 / 670.0





APPROVED
By MCD at 4:51 pm, 11/14/18

REVIEWED
By HMK at 12:22 pm, 11/15/18

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LC-MS/MS Analysis Report

Printed: 11/14/2018 4:29:00 PM
Template: IonRatio18OCT10

Ion Ratio Report

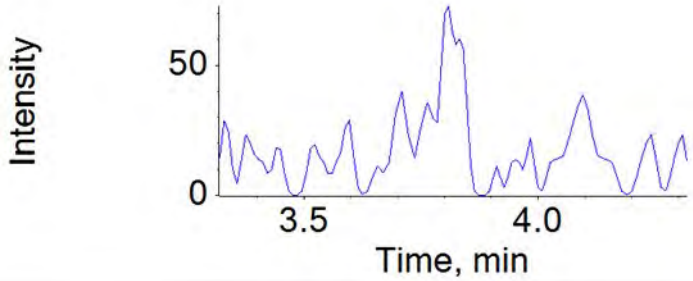
Sample Name: 9885094 **Instrument Name:** LM27631 **File Name:** 18NOV13D-63.wiff

Component Name	RT	RRT	Analyte Area Response	Int Typ	Expected Ion Ratio	Ion Ratio	Ion Ratio % Diff	Ion Ratio Limit	Ion Ratio OOS
PFBS	N/A	N/A	N/A	A	N/A	N/A			
PFBS_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFHxA	N/A	N/A	N/A	A	N/A	N/A			
PFHxA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFHpA	N/A	N/A	N/A	A	N/A	N/A			
PFHpA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFHxS	N/A	N/A	N/A	A	N/A	N/A			
PFHxS_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFOA	N/A	N/A	N/A	A	N/A	N/A			
PFOA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFOS	N/A	N/A	N/A	A	N/A	N/A			
PFOS_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFNA	N/A	N/A	N/A	A	N/A	N/A			
PFNA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFDA	N/A	N/A	N/A	A	N/A	N/A			
PFDA_2	N/A	N/A	N/A	A	N/A	N/A		50	
NMeFOSAA	N/A	N/A	N/A	A	N/A	N/A			
NMeFOSAA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFUnDA	N/A	N/A	N/A	A	N/A	N/A			
PFUnDA_2	N/A	N/A	N/A	A	N/A	N/A		50	
NEtFOSAA	N/A	N/A	N/A	A	N/A	N/A			
NEtFOSAA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFDoDA	N/A	N/A	N/A	A	N/A	N/A			
PFDoDA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFTrDA	N/A	N/A	N/A	A	N/A	N/A			
PFTrDA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFTeDA	N/A	N/A	N/A	A	N/A	N/A			
PFTeDA_2	N/A	N/A	N/A	A	N/A	N/A		50	

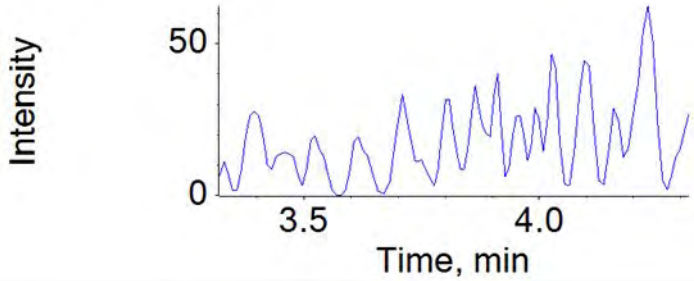
APPROVED
By MCD at 4:51 pm, 11/14/18

REVIEWED
By HMK at 12:22 pm, 11/15/18

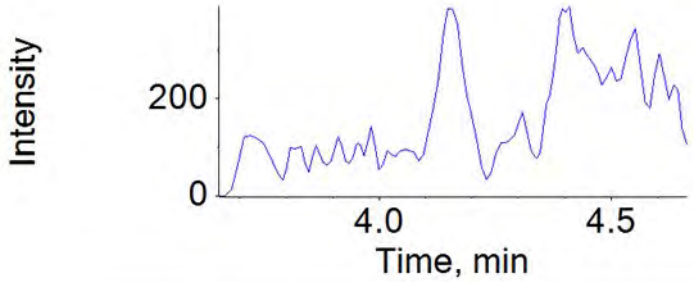
Component: PFBS
Primary Mass: 299.0 / 80.0



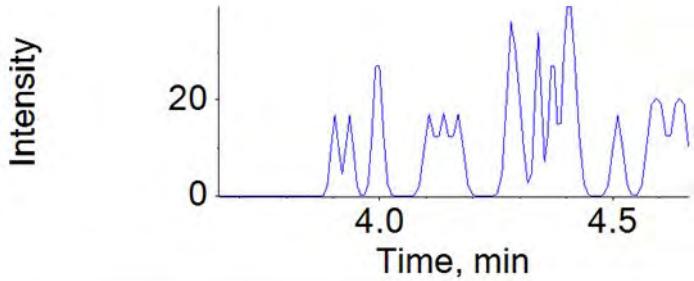
Component: PFBS_2
Secondary Mass: 299.0 / 99.0



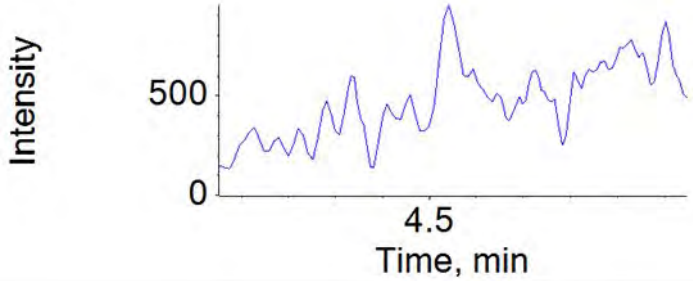
Component: PFHxA
Primary Mass: 313.0 / 269.0



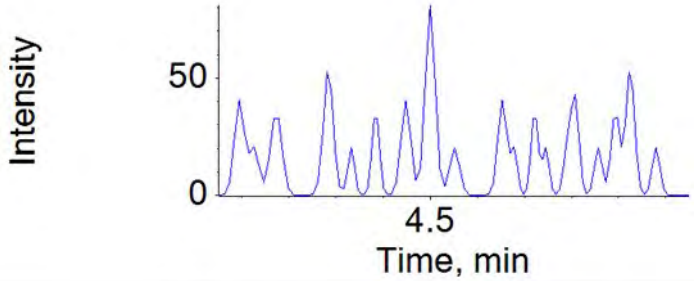
Component: PFHxA_2
Secondary Mass: 313.0 / 119.0



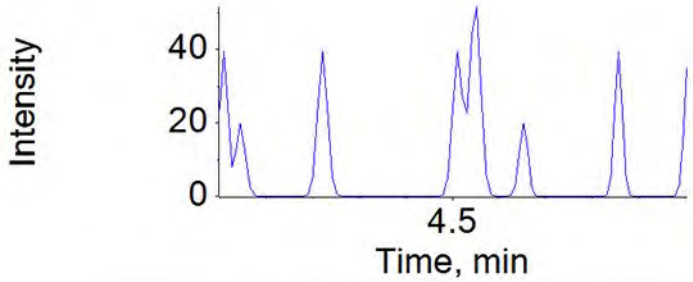
Component: PFHpA
Primary Mass: 363.0 / 319.0



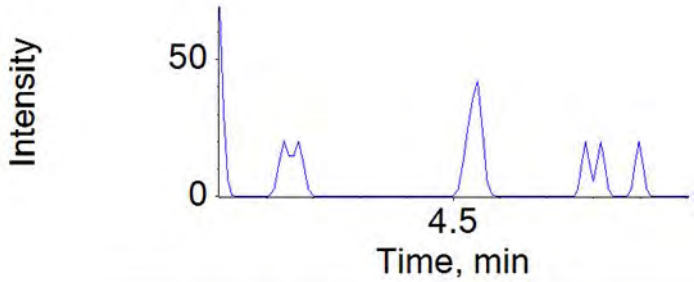
Component: PFHpA_2
Secondary Mass: 363.0 / 169.0



Component: PFHxS
Primary Mass: 399.0 / 80.0



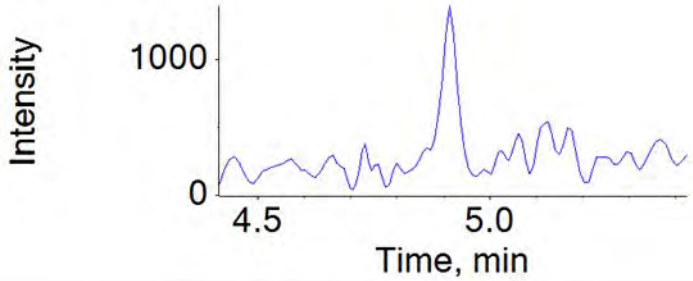
Component: PFHxS_2
Secondary Mass: 399.0 / 99.0



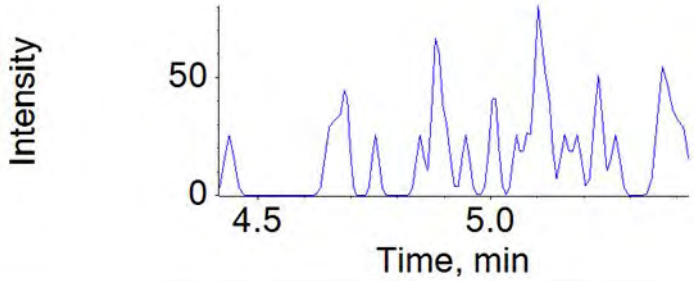
APPROVED
By MCD at 4:51 pm, 11/14/18

REVIEWED
By HMK at 12:22 pm, 11/15/18

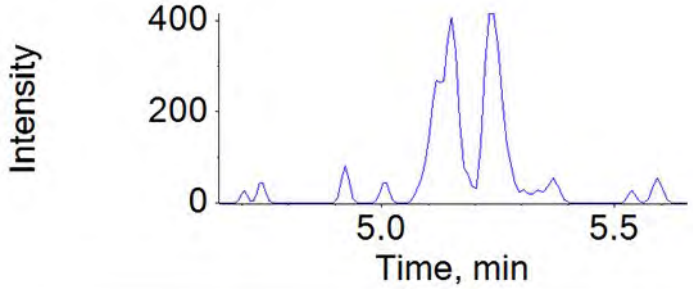
Component: PFOA
Primary Mass: 413.0 / 369.0



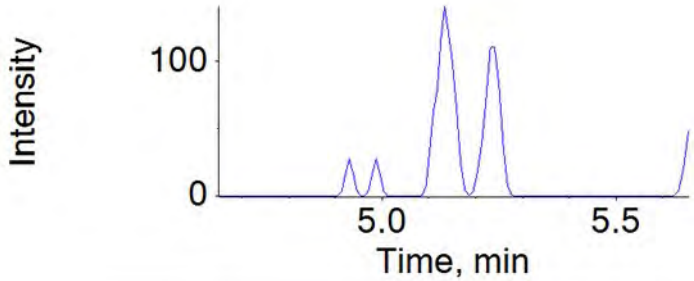
Component: PFOA_2
Secondary Mass: 413.0 / 169.0



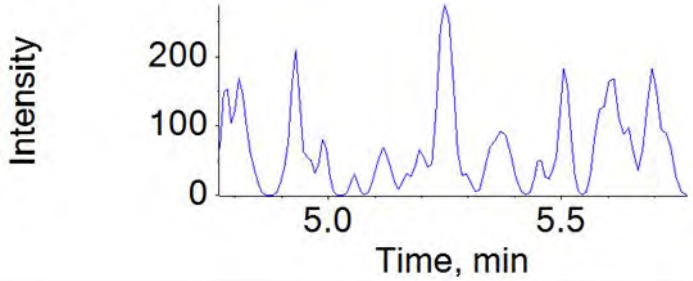
Component: PFOS
Primary Mass: 499.0 / 80.0



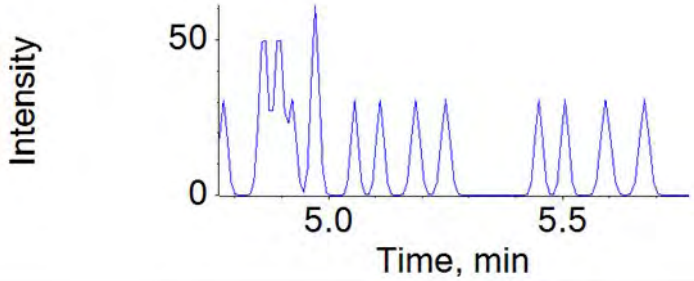
Component: PFOS_2
Secondary Mass: 499.0 / 99.0



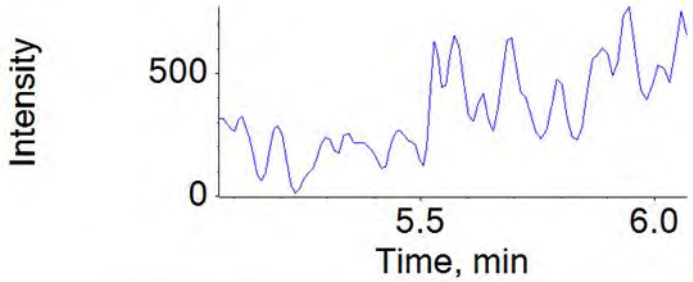
Component: PFNA
Primary Mass: 463.0 / 419.0



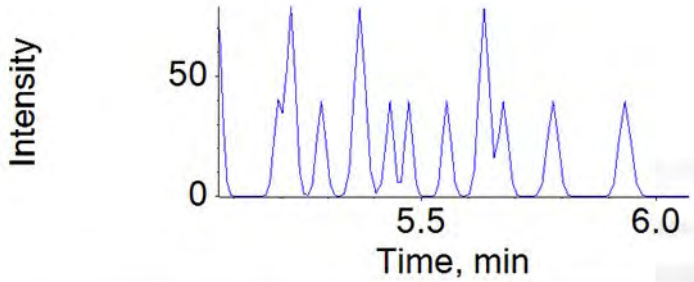
Component: PFNA_2
Secondary Mass: 463.0 / 169.0



Component: PFDA
Primary Mass: 513.0 / 469.0



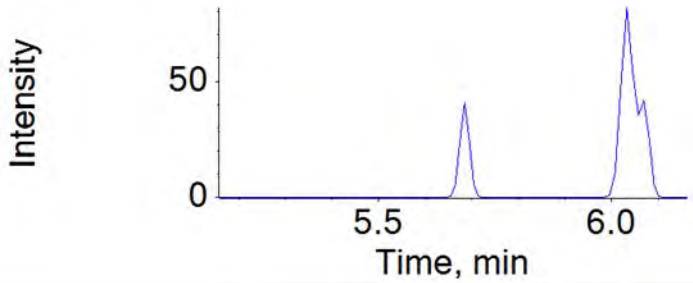
Component: PFDA_2
Secondary Mass: 513.0 / 169.0



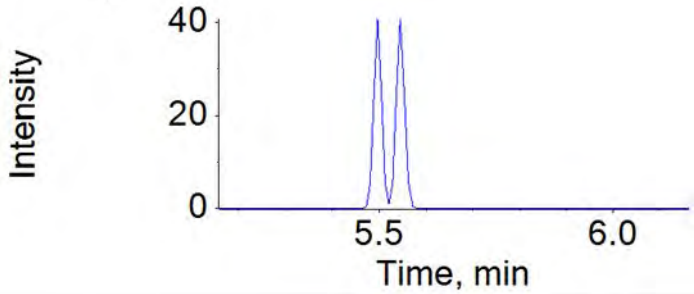
APPROVED
By MCD at 4:51 pm, 11/14/18

REVIEWED
By HMK at 12:22 pm, 11/15/18

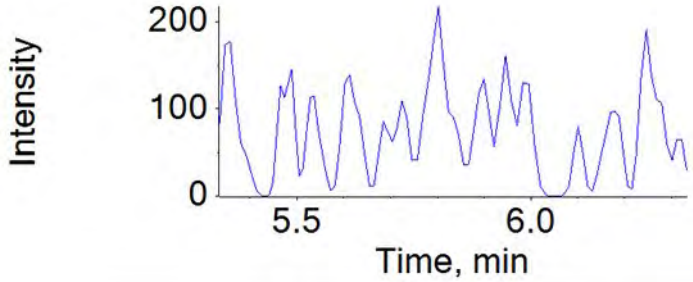
Component: NMeFOSAA
Primary Mass: 570.0 / 419.0



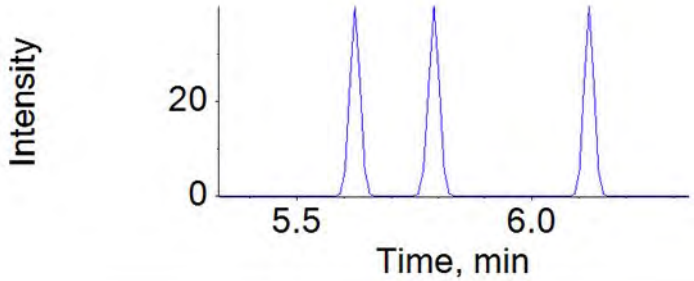
Component: NMeFOSAA_2
Secondary Mass: 570.0 / 483.0



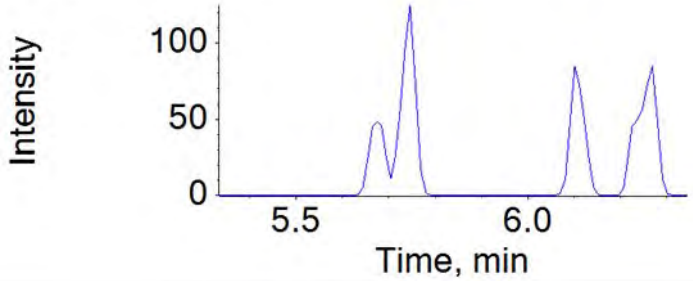
Component: PFUnDA
Primary Mass: 563.0 / 519.0



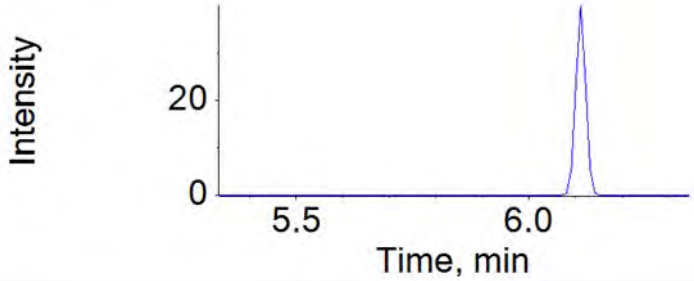
Component: PFUnDA_2
Secondary Mass: 563.0 / 169.0



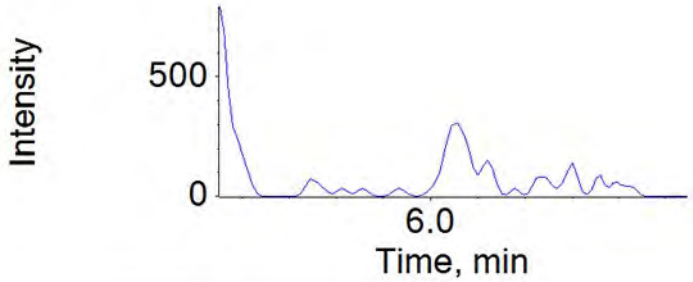
Component: NEtFOSAA
Primary Mass: 584.0 / 419.0



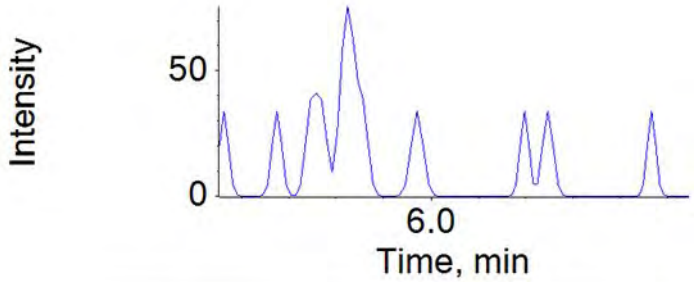
Component: NEtFOSAA_2
Secondary Mass: 584.0 / 526.0



Component: PFDoDA
Primary Mass: 613.0 / 569.0



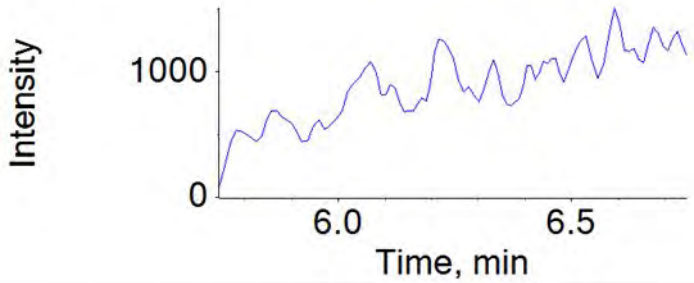
Component: PFDoDA_2
Secondary Mass: 613.0 / 169.0



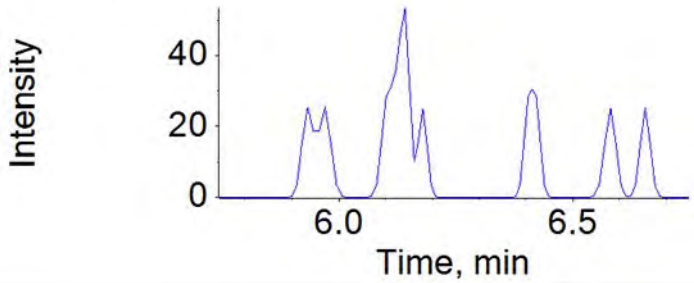
APPROVED
By MCD at 4:51 pm, 11/14/18

REVIEWED
By HMK at 12:22 pm, 11/15/18

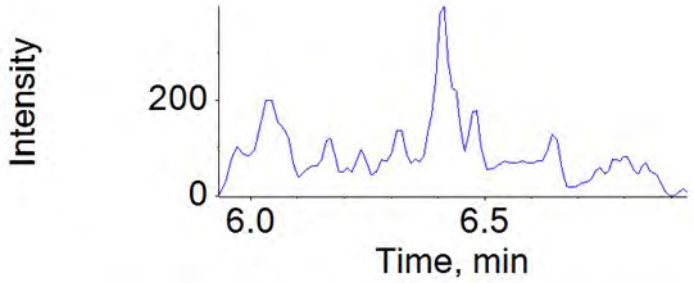
Component: PFTrDA
Primary Mass: 663.0 / 619.0



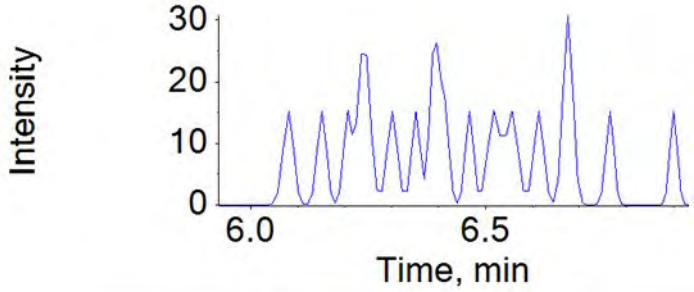
Component: PFTrDA_2
Secondary Mass: 663.0 / 169.0



Component: PFTeDA
Primary Mass: 713.0 / 669.0



Component: PFTeDA_2
Secondary Mass: 713.0 / 169.0



APPROVED
By MCD at 4:51 pm, 11/14/18

REVIEWED
By HMK at 12:22 pm, 11/15/18

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LC-MS/MS
DOD Analysis Report

Printed: 11/14/2018 4:26:00 PM
Template: DOD-Sample-18JUN22.docx

ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM
Result Table: 18316011 11/14/2018 4:24:36 PM
Acquisition Method: 18AUG13_3uL.dam

Sample Name:	9885095			**Data File:**		18NOV13D-64.wiff
Sample ID:	EPA 537 mod QSM 5.1 table B-15 18316011 OU1-Bldg27-S-02-08 Grab Soil			**Acquis Date:**		2018-11-13T19:11:44
Sample Type:	Unknown			**Instrument:**		LM27631
Vial Position:	61			**Acquis Method:**		18AUG13_3uL.dam
Injection Vol:	3.00			**Result Table:**		18316011
QMethod File:	18AUG20QM			**ICAL Name:**		18NOV12DCAL
Batch Number:	18316011			**Operator:**		MCD7824
Sample Wt.:	1.08000			**Dilution Factor:**		1.00
Sample Vol.:	1.000			**Prep Factor:**		2.000

Injection Standard Peak Table

Injection Standard Area Reference File: 18NOV13D-05

Injection Standard Name	Inj Std Conc	Injection Std Peak Area	Rreference Injection Standard Area	Injection Std %Diff	Injection Std %Diff Limit	Injection Std %Diff OOS
13C3-PFBA	5.0	744487.9	661126.9	13	50	
13C2-PFOA	5.0	529910.9	466902.6	13	50	
13C4-PFOS	4.8	287049.4	247446.9	16	50	
13C2-PFDA	5.0	325556.6	295381.6	10	50	

Extraction Standard Peak Table

Extraction Standard Name	Ext Std Area	Inj Std Name	Inj Std Area	Area Ratio	Ext Std Conc	Ext Std Result	Ext Std %REC	Ext Std %REC Limit	Ext Std OOS
E13C3-PFBS	354137.9	13C3-PFBA	744487.9	0.476	8.611	6.218	72	50-150	
E13C5-PFHxA	555146.2	13C2-PFOA	529910.9	1.048	9.259	7.008	76	50-150	
E13C3-PFHxS	262911.6	13C2-PFOA	529910.9	0.496	8.759	6.305	72	50-150	
E13C4-PFHpA	421091.8	13C2-PFOA	529910.9	0.795	9.259	6.630	72	50-150	
E13C8-PFOA	738956.9	13C2-PFOA	529910.9	1.394	9.259	7.115	77	50-150	
E13C8-PFOS	224667.2	13C4-PFOS	287049.4	0.783	8.852	6.422	73	50-150	
E13C9-PFNA	377451.7	13C4-PFOS	287049.4	1.315	9.259	6.789	73	50-150	
E13C6-PFDA	501880.0	13C2-PFDA	325556.6	1.542	9.259	6.662	72	50-150	
Ed3-NMeFOSAA	68025.7	13C2-PFDA	325556.6	0.209	9.259	6.985	75	50-150	
E13C7-PFUnDA	212490.5	13C2-PFDA	325556.6	0.653	9.259	7.018	76	50-150	
Ed5-NEtFOSAA	52888.4	13C2-PFDA	325556.6	0.162	9.259	6.365	69	50-150	
E13C2-PFDoDA	474214.1	13C2-PFDA	325556.6	1.457	9.259	7.004	76	50-150	
E13C2-PFTeDA	331626.7	13C2-PFDA	325556.6	1.019	9.259	6.622	72	50-150	

APPROVED
By MCD at 4:51 pm, 11/14/18

REVIEWED
By HMK at 12:22 pm, 11/15/18

ICAL Name: 18NOV12DCAL **Result Table:** 18316011 11/14/2018 4:24:36 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

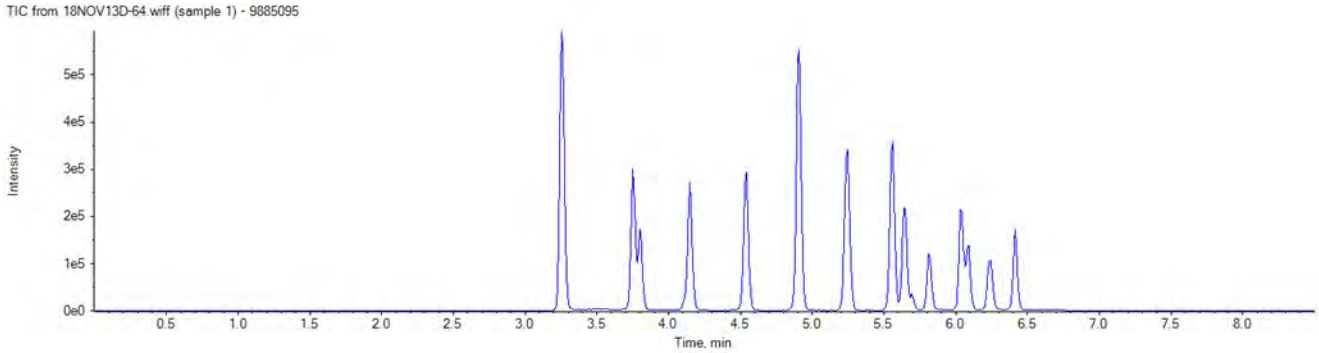
Analyte Quantitation Peak Table

Sample Name: 9885095 **Instrument Name:** LM27631 **File Name:** 18NOV13D-64.wiff

Sample Wt	Sample Vol	Dilution Factor	PrepFactor
1.08000	1.000	1.00	2.000

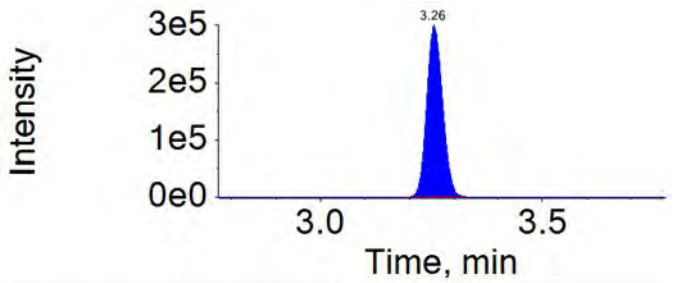
Analyte Name	RT	RRT	Analyte Area Response	E	Int Typ	ES Name	ES RT	ES Area Response	Area Ratio	Sample Result (ng/g)
PFBS	N/A	N/A	N/A		A	13C3-PFBS	3.80	354137.9	N/A	
PFHxA	N/A	N/A	N/A		A	13C5-PFHxA	4.15	555146.2	N/A	
PFHpA	N/A	N/A	N/A		A	13C4-PFHpA	4.54	421091.8	N/A	
PFHxS	N/A	N/A	N/A		A	13C3-PFHxS	4.54	262911.6	N/A	
PFOA	N/A	N/A	N/A		A	13C8-PFOA	4.91	738956.9	N/A	
PFOS	N/A	N/A	N/A		A	13C8-PFOS	5.24	224667.2	N/A	
PFNA	N/A	N/A	N/A		A	13C9-PFNA	5.25	377451.7	N/A	
PFDA	N/A	N/A	N/A		A	13C6-PFDA	5.56	501880.0	N/A	
NMeFOSAA	N/A	N/A	N/A		A	d3-NMeFOSAA	5.70	68025.7	N/A	
PFUnDA	N/A	N/A	N/A		A	13C7-PFUnDA	5.81	212490.5	N/A	
NEtFOSAA	N/A	N/A	N/A		A	d5-NEtFOSAA	5.83	52888.4	N/A	
PFDoDA	N/A	N/A	N/A		A	13C2-PFDoDA	6.04	474214.1	N/A	
PFTrDA	N/A	N/A	N/A		A	13C2-PFDoDA	6.04	474214.1	N/A	
PFTeDA	N/A	N/A	N/A		A	13C2-PFTeDA	6.41	331626.7	N/A	

Total Ion Chromatogram

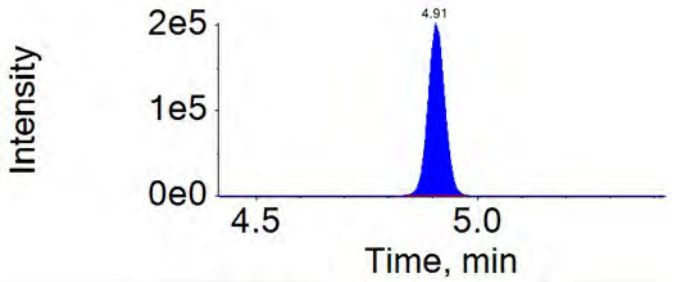


ICAL Name: 18NOV12DCAL **Result Table:** 18316011 11/14/2018 4:24:36 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

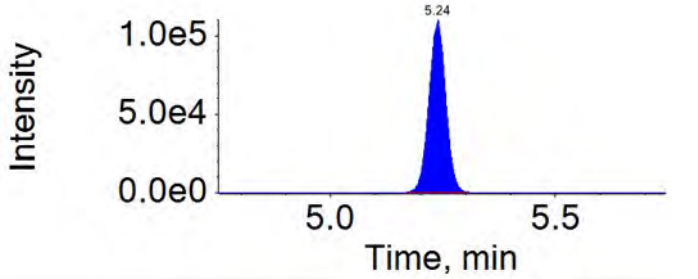
Injection Standard: 13C3-PFBA
216.0 / 172.0



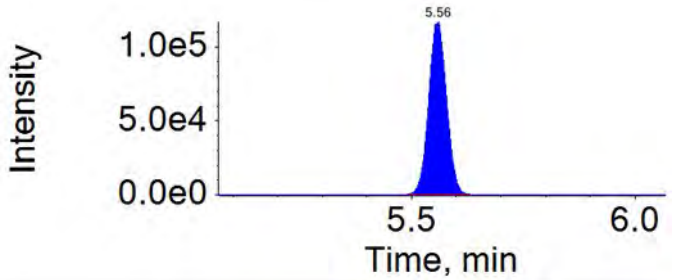
Injection Standard: 13C2-PFOA
415.0 / 370.0



Injection Standard: 13C4-PFOS
503.0 / 80.0



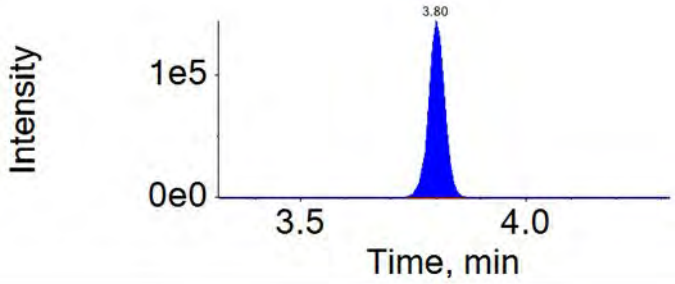
Injection Standard: 13C2-PFDA
515.0 / 470.0



ICAL Name: 18NOV12DCAL **Result Table:** 18316011 11/14/2018 4:24:36 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

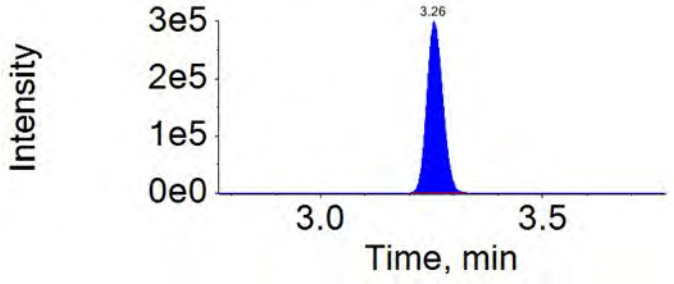
Extraction Standard: E13C3-PFBS

302.0 / 80.0



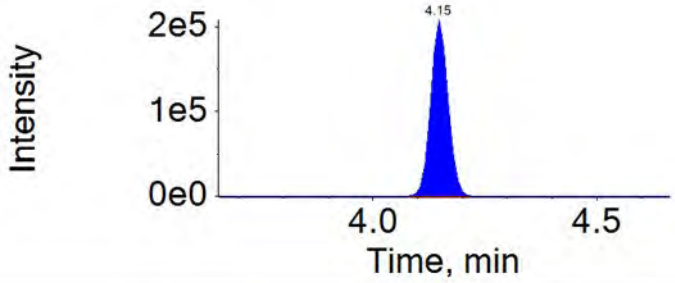
Injection Standard: 13C3-PFBA

216.0 / 172.0



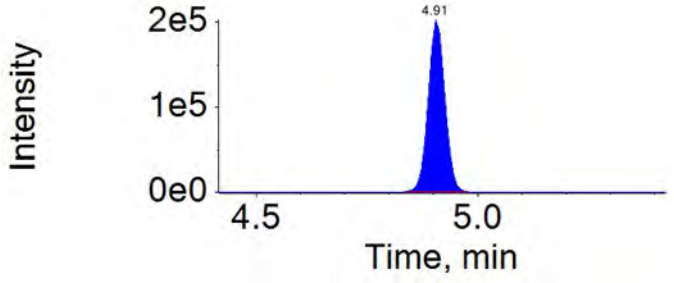
Extraction Standard: E13C5-PFHxA

318.0 / 273.0



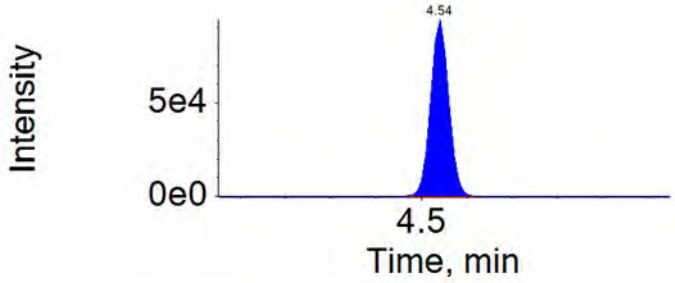
Injection Standard: 13C2-PFOA

415.0 / 370.0



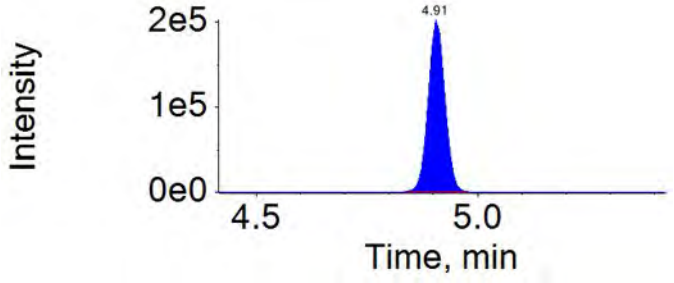
Extraction Standard: E13C3-PFHxS

402.0 / 80.0



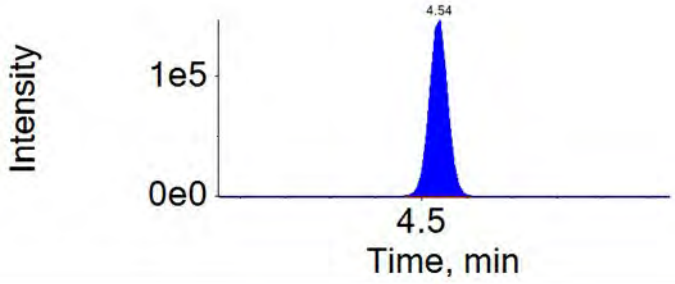
Injection Standard: 13C2-PFOA

415.0 / 370.0



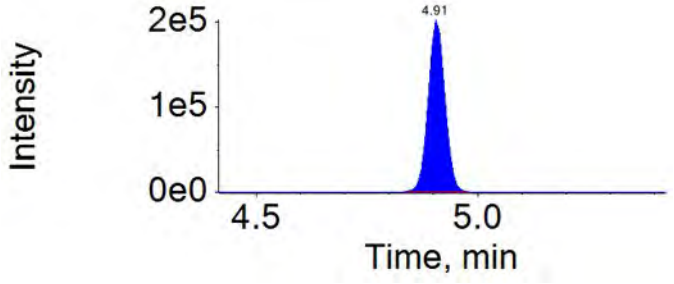
Extraction Standard: E13C4-PFHpA

367.0 / 322.0



Injection Standard: 13C2-PFOA

415.0 / 370.0

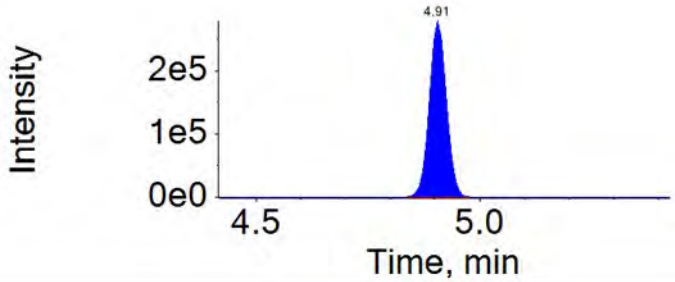


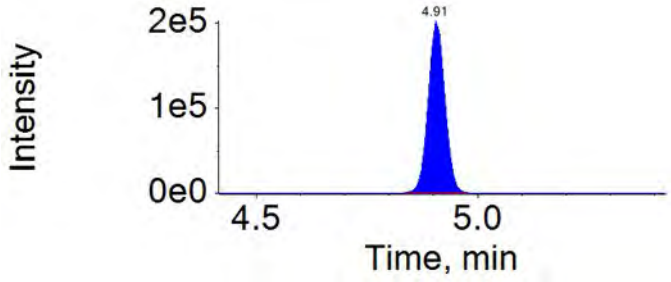
APPROVED
By MCD at 4:51 pm, 11/14/18

REVIEWED
By HMK at 12:22 pm, 11/15/18

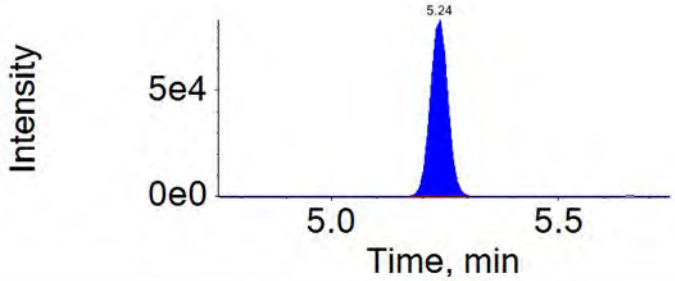
ICAL Name: 18NOV12DCAL **Result Table:** 18316011 11/14/2018 4:24:36 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

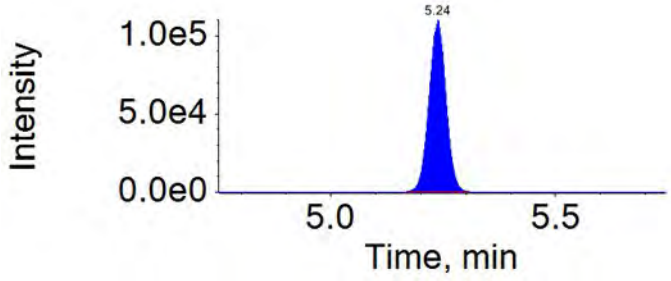
Extraction Standard: E13C8-PFOA	Injection Standard: 13C2-PFOA
421.0 / 376.0	415.0 / 370.0



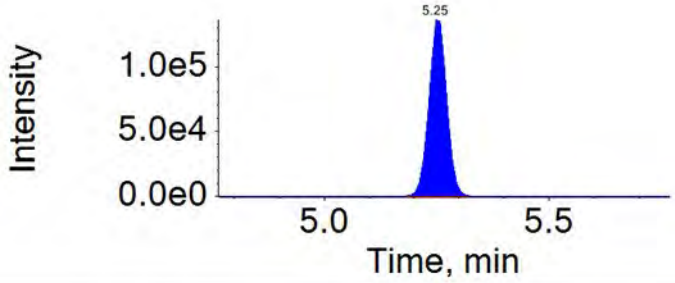


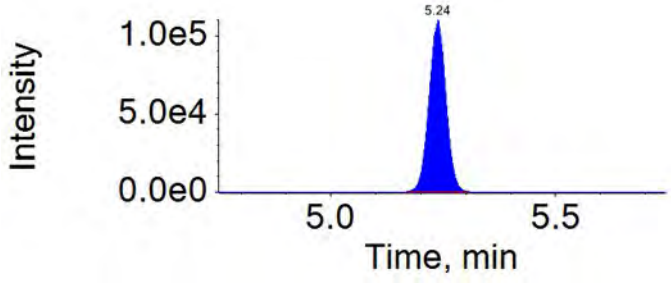
Extraction Standard: E13C8-PFOS	Injection Standard: 13C4-PFOS
507.0 / 80.0	503.0 / 80.0



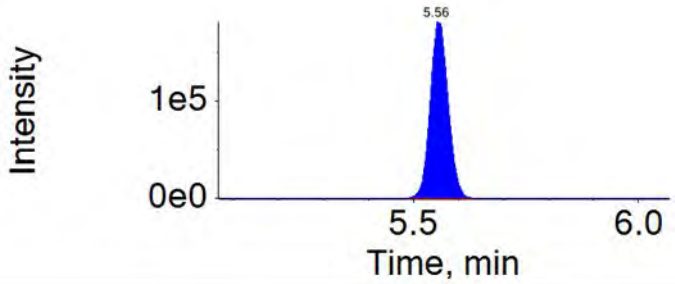


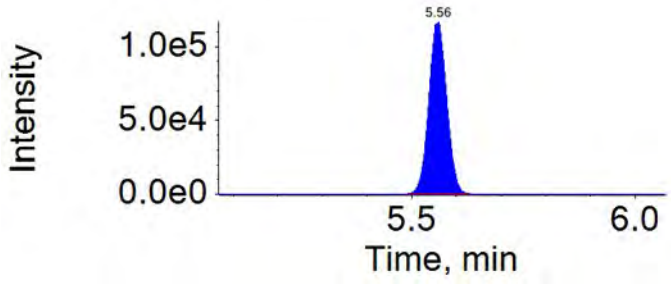
Extraction Standard: E13C9-PFNA	Injection Standard: 13C4-PFOS
472.0 / 427.0	503.0 / 80.0





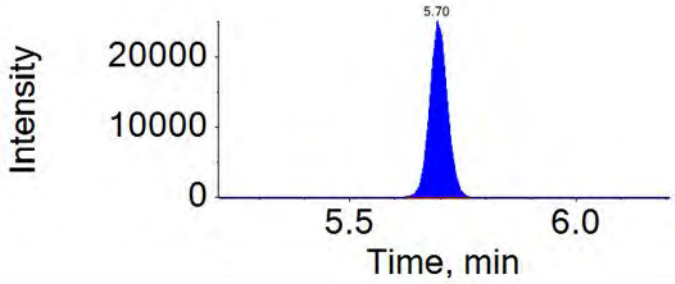
Extraction Standard: E13C6-PFDA	Injection Standard: 13C2-PFDA
519.0 / 474.0	515.0 / 470.0

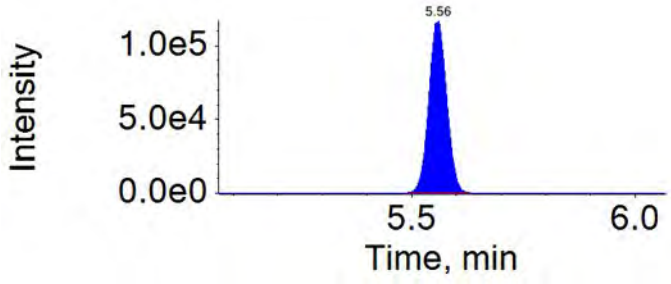




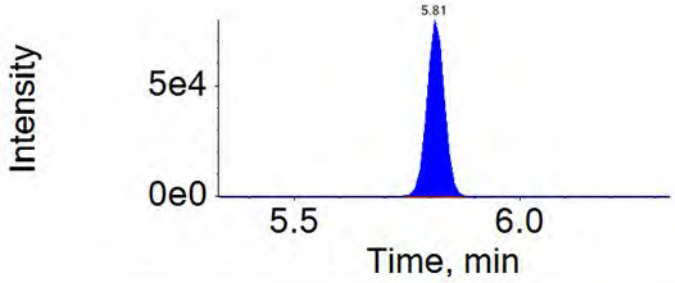
ICAL Name: 18NOV12DCAL **Result Table:** 18316011 11/14/2018 4:24:36 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

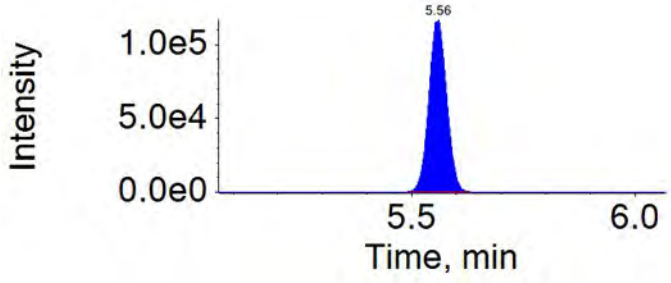
Extraction Standard: Ed3-NMeFOSAA	Injection Standard: 13C2-PFDA
573.0 / 419.0	515.0 / 470.0



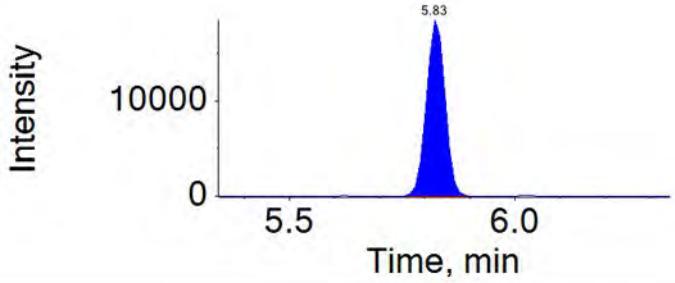


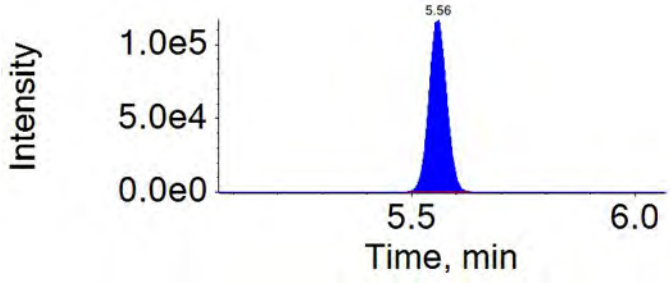
Extraction Standard: E13C7-PFUnDA	Injection Standard: 13C2-PFDA
570.0 / 525.0	515.0 / 470.0



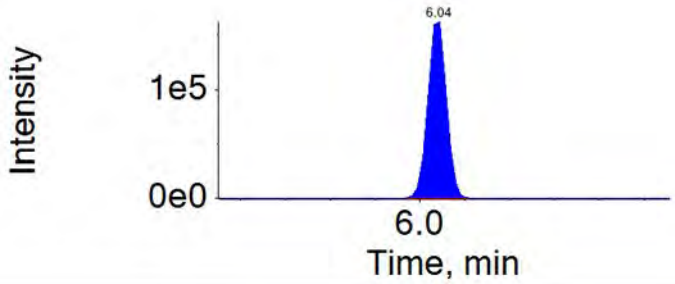


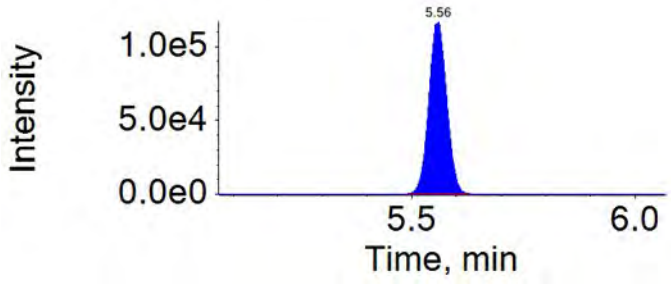
Extraction Standard: Ed5-NEtFOSAA	Injection Standard: 13C2-PFDA
589.0 / 419.0	515.0 / 470.0



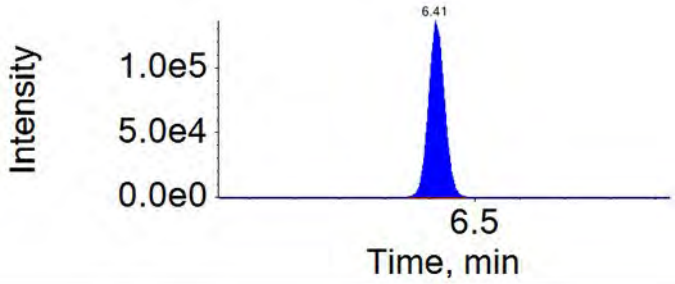
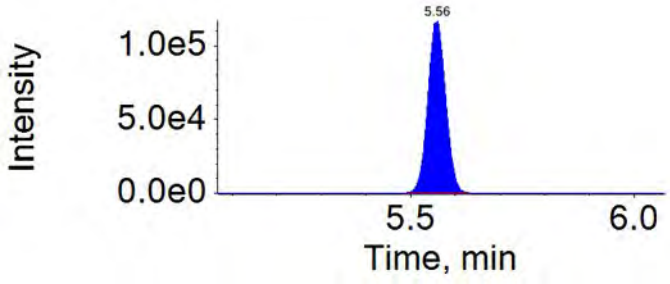


Extraction Standard: E13C2-PFDoDA	Injection Standard: 13C2-PFDA
615.0 / 570.0	515.0 / 470.0



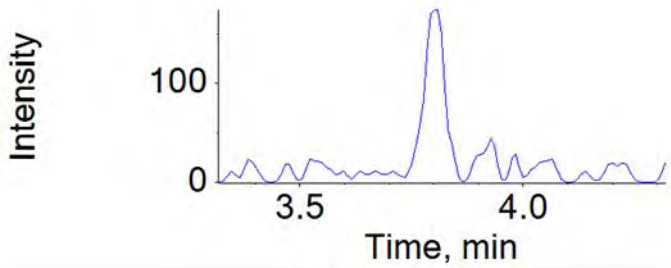


ICAL Name: 18NOV12DCAL **Result Table:** 18316011 11/14/2018 4:24:36 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

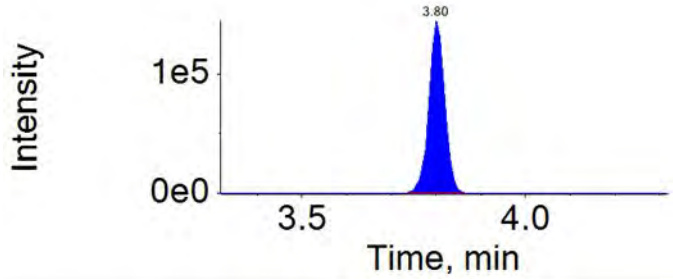
Extraction Standard: E13C2-PFTeDA	Injection Standard: 13C2-PFDA
715.0 / 670.0 	515.0 / 470.0 

ICAL Name: 18NOV12DCAL **Result Table:** 18316011 11/14/2018 4:24:36 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

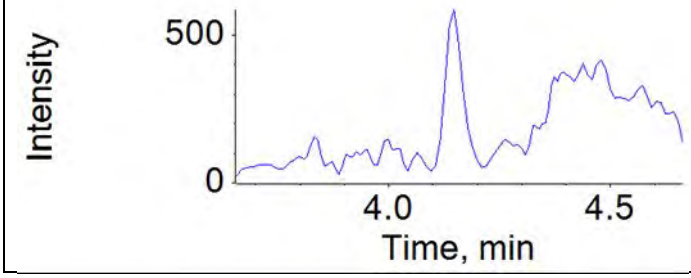
Analyte: PFBS
299.0 / 80.0



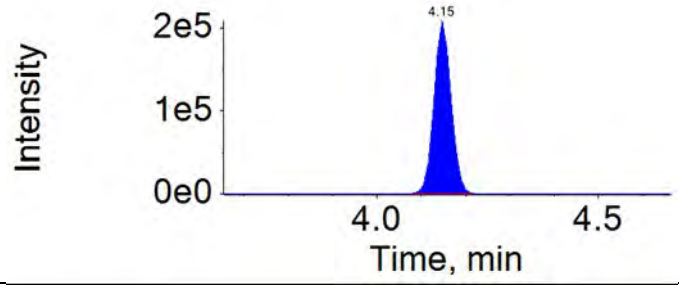
Extraction Standard: 13C3-PFBS
302.0 / 80.0



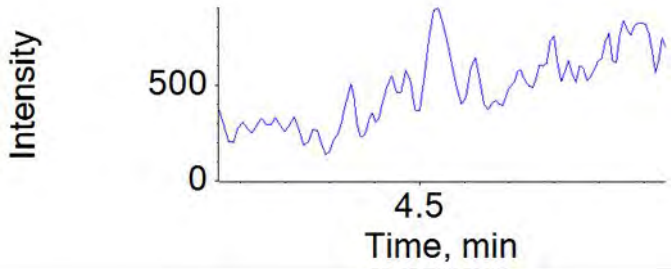
Analyte: PFHxA
313.0 / 269.0



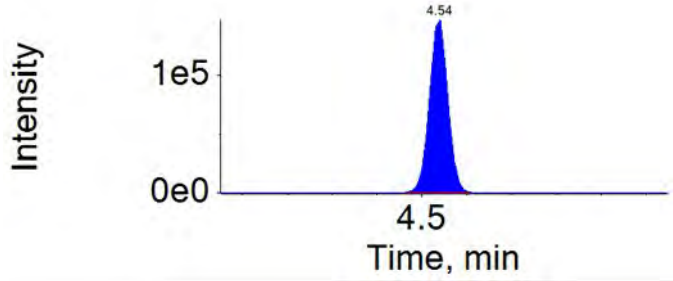
Extraction Standard: 13C5-PFHxA
318.0 / 273.0



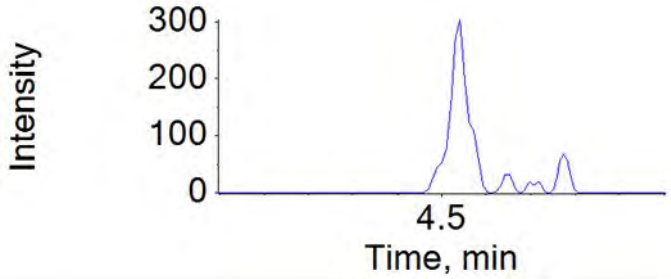
Analyte: PFHpA
363.0 / 319.0



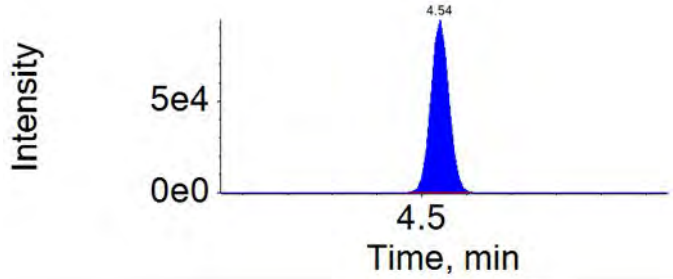
Extraction Standard: 13C4-PFHpA
367.0 / 322.0



Analyte: PFHxS
399.0 / 80.0



Extraction Standard: 13C3-PFHxS
402.0 / 80.0

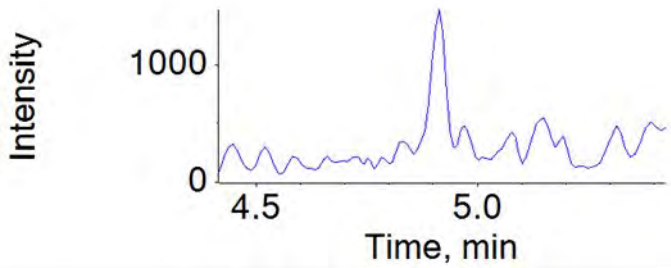


APPROVED
By MCD at 4:51 pm, 11/14/18

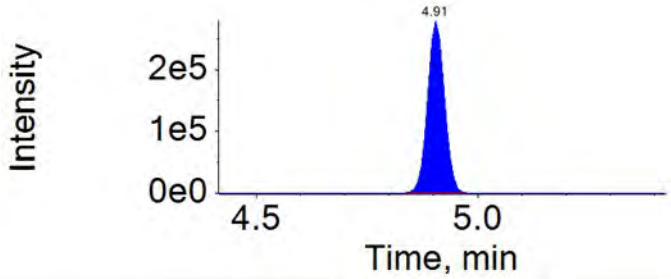
REVIEWED
By HMK at 12:22 pm, 11/15/18

ICAL Name: 18NOV12DCAL **Result Table:** 18316011 11/14/2018 4:24:36 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

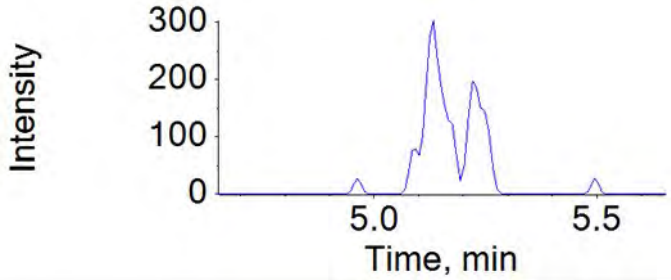
Analyte: PFOA
413.0 / 369.0



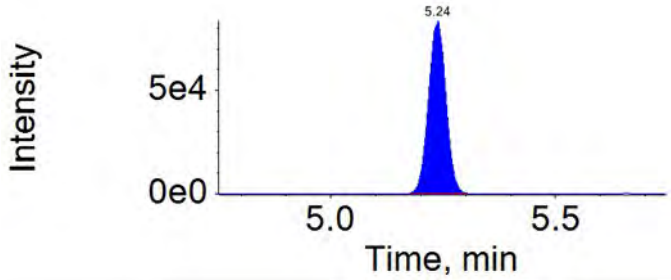
Extraction Standard: 13C8-PFOA
421.0 / 376.0



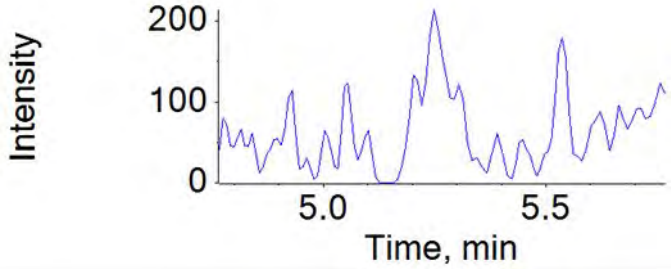
Analyte: PFOS
499.0 / 80.0



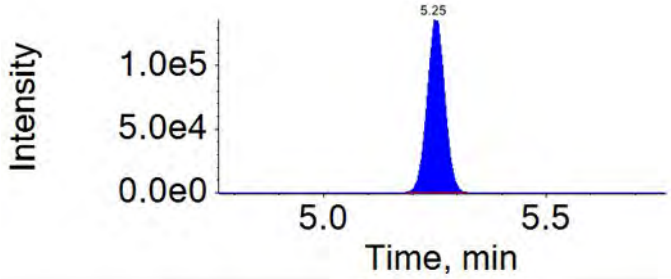
Extraction Standard: 13C8-PFOS
507.0 / 80.0



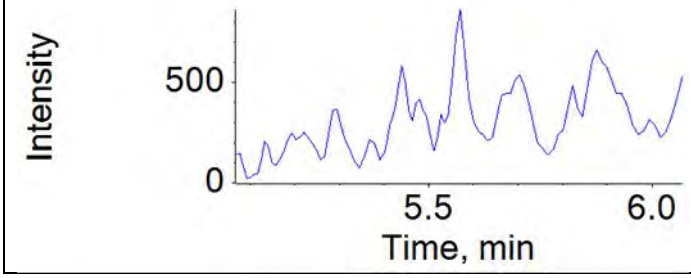
Analyte: PFNA
463.0 / 419.0



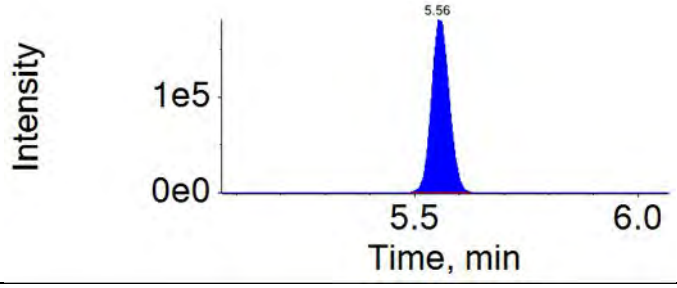
Extraction Standard: 13C9-PFNA
472.0 / 427.0



Analyte: PFDA
513.0 / 469.0



Extraction Standard: 13C6-PFDA
519.0 / 474.0

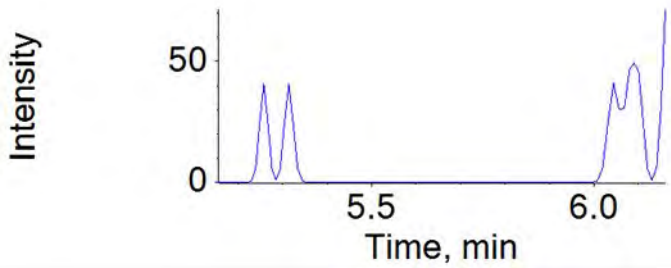


APPROVED
By MCD at 4:51 pm, 11/14/18

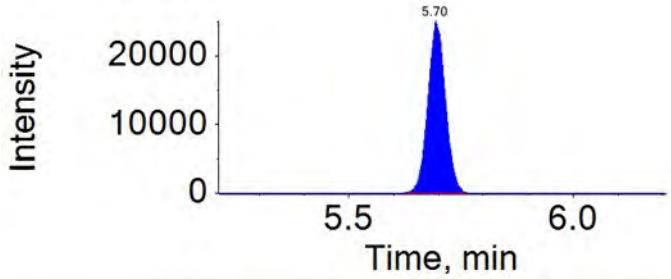
REVIEWED
By HMK at 12:22 pm, 11/15/18

ICAL Name: 18NOV12DCAL **Result Table:** 18316011 11/14/2018 4:24:36 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

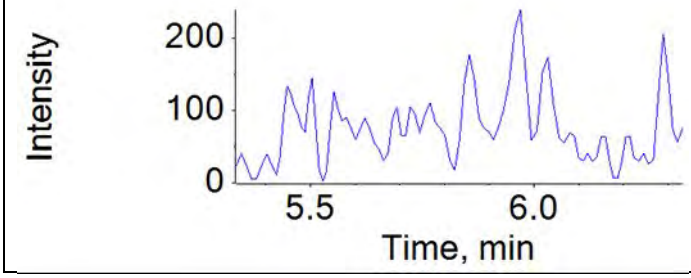
Analyte: NMeFOSAA
570.0 / 419.0



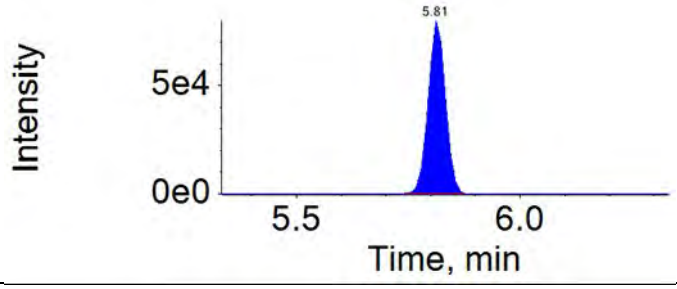
Extraction Standard: d3-NMeFOSAA
573.0 / 419.0



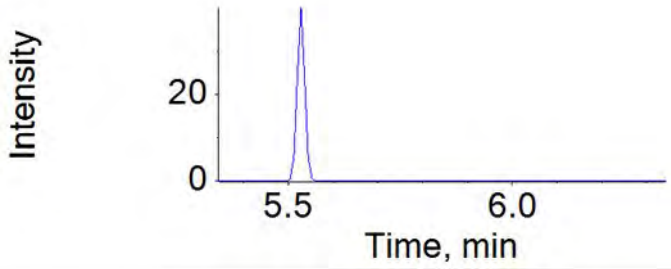
Analyte: PFUnDA
563.0 / 519.0



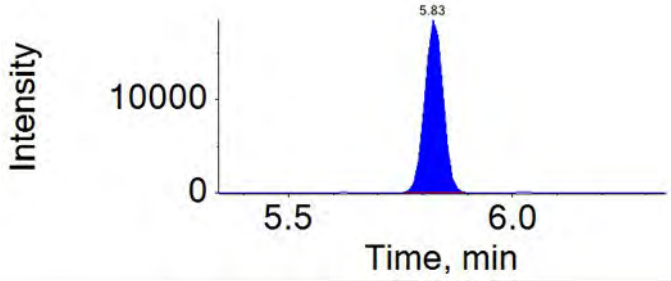
Extraction Standard: 13C7-PFUnDA
570.0 / 525.0



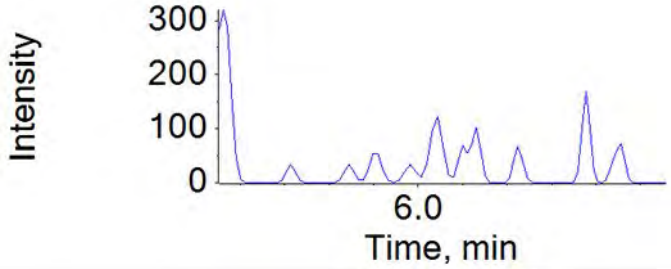
Analyte: NEtFOSAA
584.0 / 419.0



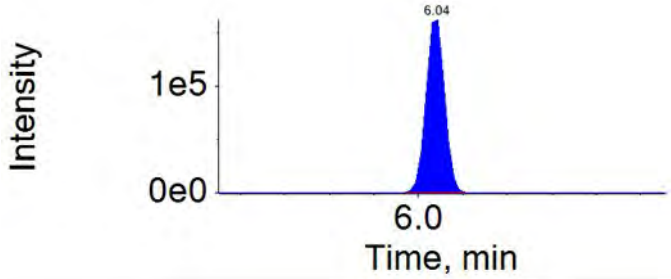
Extraction Standard: d5-NEtFOSAA
589.0 / 419.0



Analyte: PFDoDA
613.0 / 569.0



Extraction Standard: 13C2-PFDoDA
615.0 / 570.0

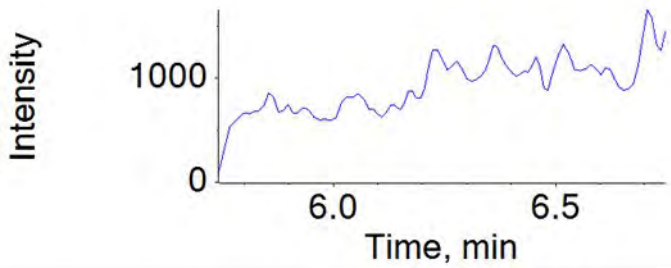


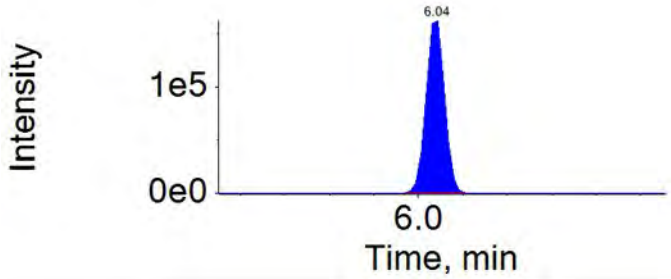
APPROVED
By MCD at 4:51 pm, 11/14/18

REVIEWED
By HMK at 12:22 pm, 11/15/18

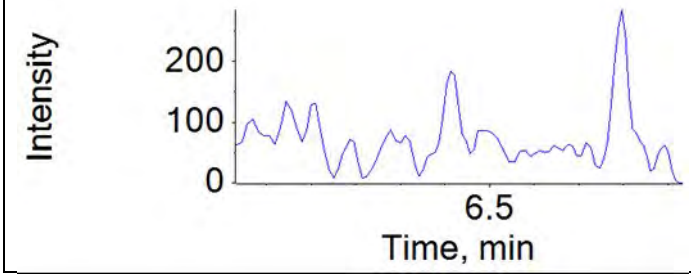
ICAL Name: 18NOV12DCAL **Result Table:** 18316011 11/14/2018 4:24:36 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

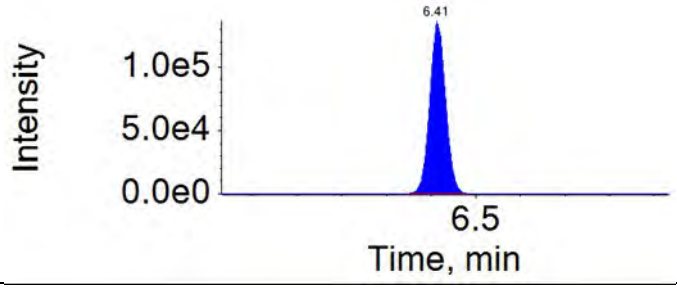
Analyte: PFTrDA	Extraction Standard: 13C2-PFDoDA
663.0 / 619.0	615.0 / 570.0





Analyte: PFTeDA	Extraction Standard: 13C2-PFTeDA
713.0 / 669.0	715.0 / 670.0





APPROVED
By MCD at 4:51 pm, 11/14/18

REVIEWED
By HMK at 12:22 pm, 11/15/18

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LC-MS/MS Analysis Report

Printed: 11/14/2018 4:29:00 PM
Template: IonRatio18OCT10

Ion Ratio Report

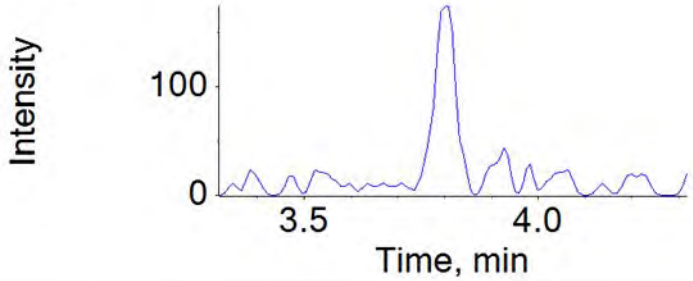
Sample Name: 9885095 **Instrument Name:** LM27631 **File Name:** 18NOV13D-64.wiff

Component Name	RT	RRT	Analyte Area Response	Int Typ	Expected Ion Ratio	Ion Ratio	Ion Ratio % Diff	Ion Ratio Limit	Ion Ratio OOS
PFBS	N/A	N/A	N/A	A	N/A	N/A			
PFBS_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFHxA	N/A	N/A	N/A	A	N/A	N/A			
PFHxA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFHpA	N/A	N/A	N/A	A	N/A	N/A			
PFHpA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFHxS	N/A	N/A	N/A	A	N/A	N/A			
PFHxS_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFOA	N/A	N/A	N/A	A	N/A	N/A			
PFOA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFOS	N/A	N/A	N/A	A	N/A	N/A			
PFOS_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFNA	N/A	N/A	N/A	A	N/A	N/A			
PFNA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFDA	N/A	N/A	N/A	A	N/A	N/A			
PFDA_2	N/A	N/A	N/A	A	N/A	N/A		50	
NMeFOSAA	N/A	N/A	N/A	A	N/A	N/A			
NMeFOSAA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFUnDA	N/A	N/A	N/A	A	N/A	N/A			
PFUnDA_2	N/A	N/A	N/A	A	N/A	N/A		50	
NEtFOSAA	N/A	N/A	N/A	A	N/A	N/A			
NEtFOSAA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFDoDA	N/A	N/A	N/A	A	N/A	N/A			
PFDoDA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFTrDA	N/A	N/A	N/A	A	N/A	N/A			
PFTrDA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFTeDA	N/A	N/A	N/A	A	N/A	N/A			
PFTeDA_2	N/A	N/A	N/A	A	N/A	N/A		50	

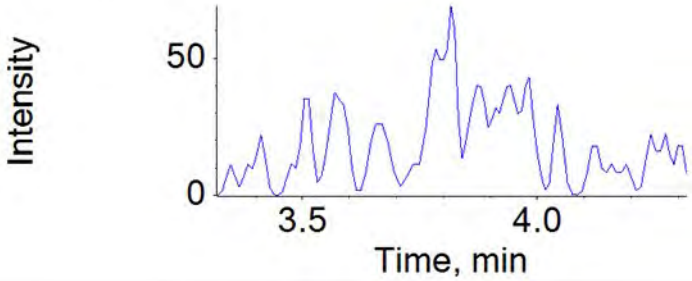
APPROVED
By MCD at 4:51 pm, 11/14/18

REVIEWED
By HMK at 12:22 pm, 11/15/18

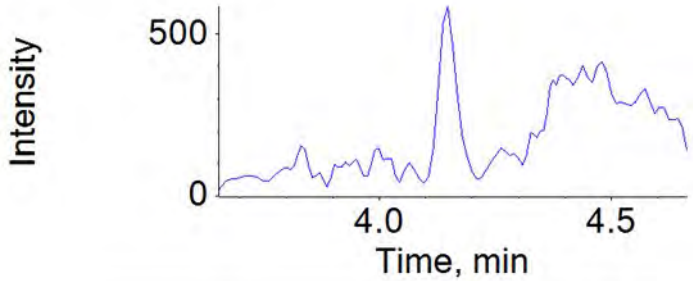
Component: PFBS
Primary Mass: 299.0 / 80.0



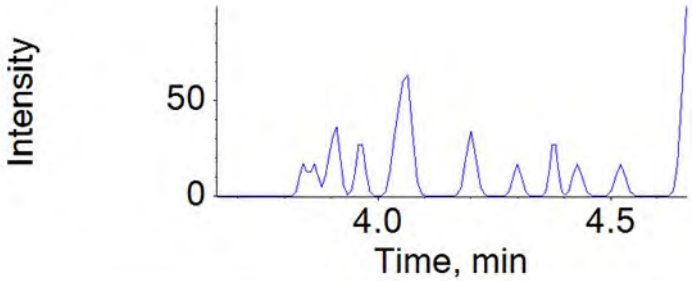
Component: PFBS_2
Secondary Mass: 299.0 / 99.0



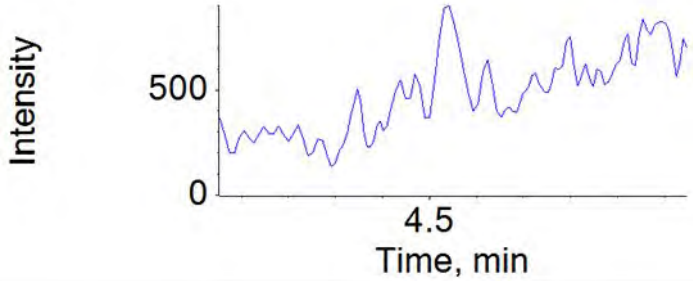
Component: PFHxA
Primary Mass: 313.0 / 269.0



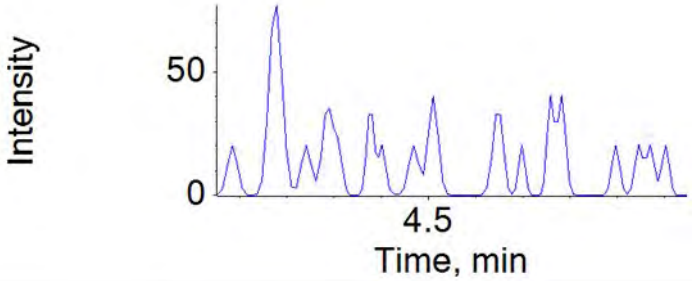
Component: PFHxA_2
Secondary Mass: 313.0 / 119.0



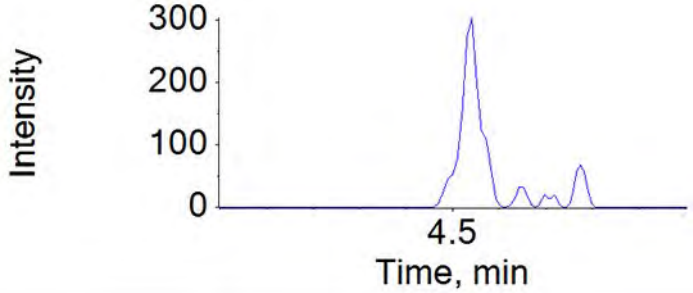
Component: PFHpA
Primary Mass: 363.0 / 319.0



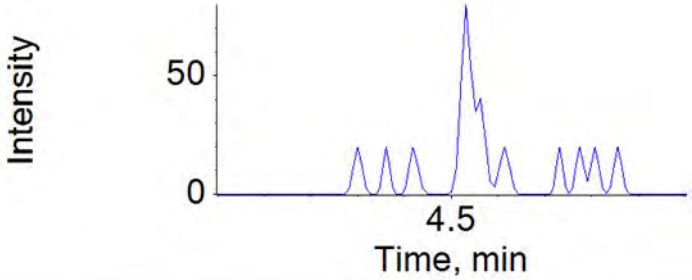
Component: PFHpA_2
Secondary Mass: 363.0 / 169.0



Component: PFHxS
Primary Mass: 399.0 / 80.0



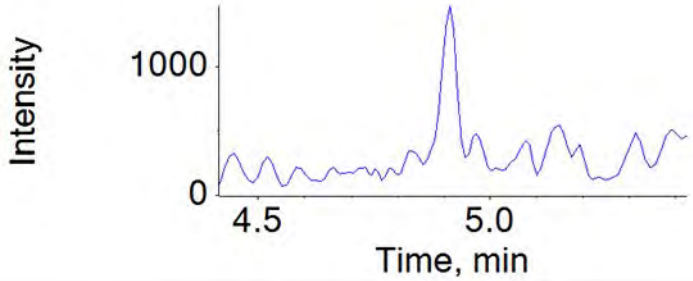
Component: PFHxS_2
Secondary Mass: 399.0 / 99.0



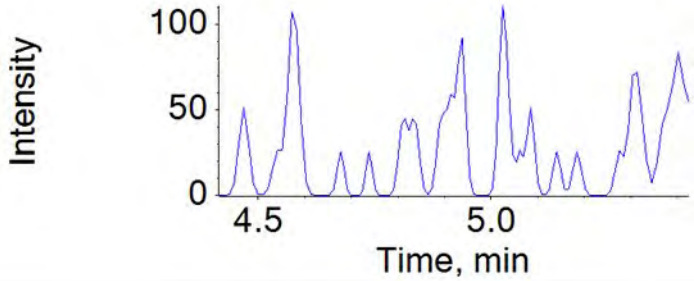
APPROVED
By MCD at 4:51 pm, 11/14/18

REVIEWED
By HMK at 12:22 pm, 11/15/18

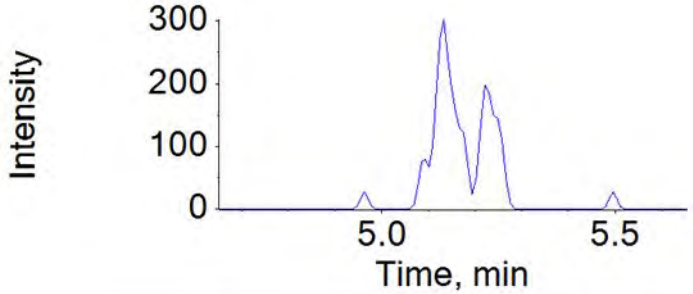
Component: PFOA
Primary Mass: 413.0 / 369.0



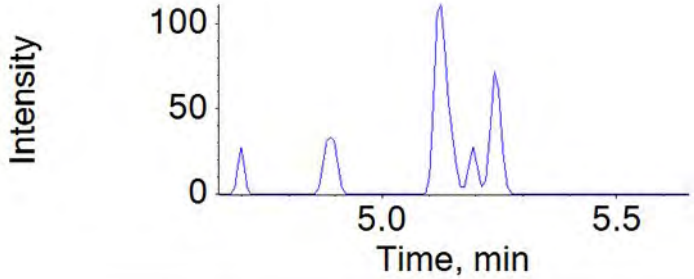
Component: PFOA_2
Secondary Mass: 413.0 / 169.0



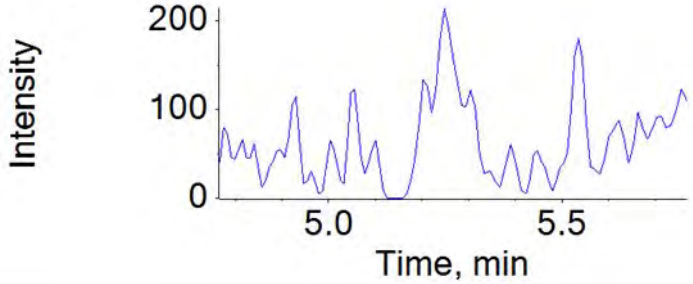
Component: PFOS
Primary Mass: 499.0 / 80.0



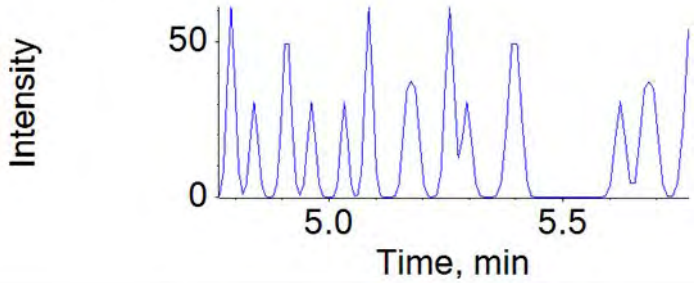
Component: PFOS_2
Secondary Mass: 499.0 / 99.0



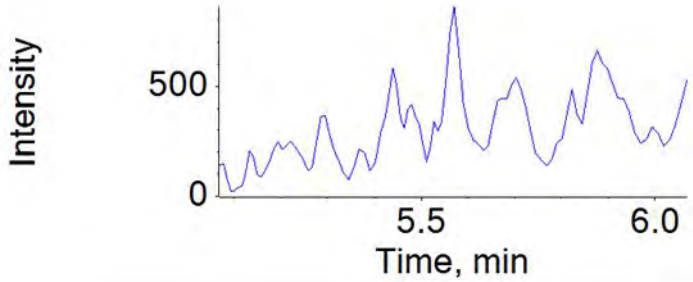
Component: PFNA
Primary Mass: 463.0 / 419.0



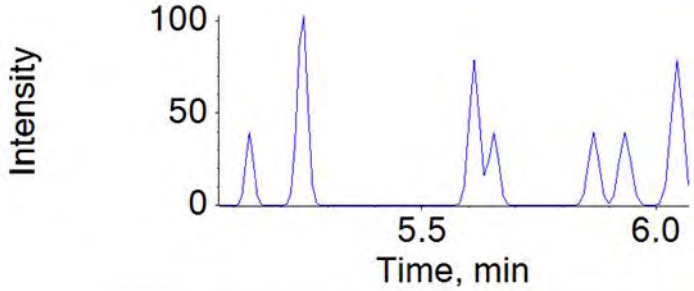
Component: PFNA_2
Secondary Mass: 463.0 / 169.0



Component: PFDA
Primary Mass: 513.0 / 469.0



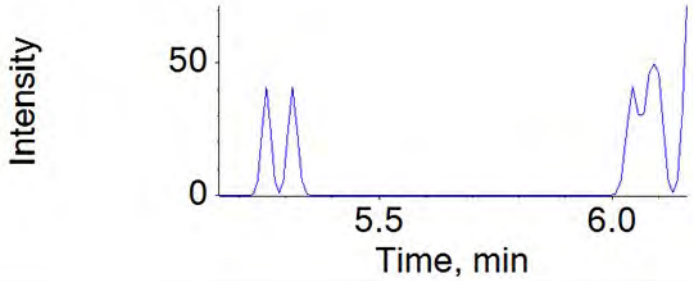
Component: PFDA_2
Secondary Mass: 513.0 / 169.0



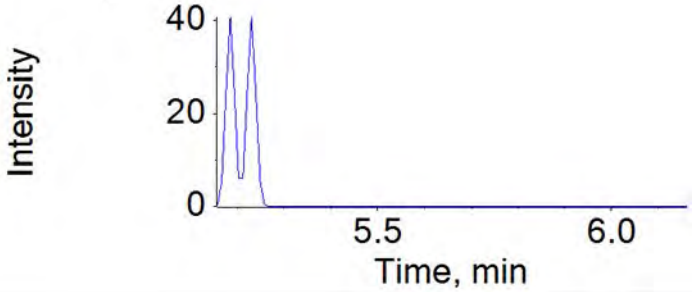
APPROVED
By MCD at 4:51 pm, 11/14/18

REVIEWED
By HMK at 12:22 pm, 11/15/18

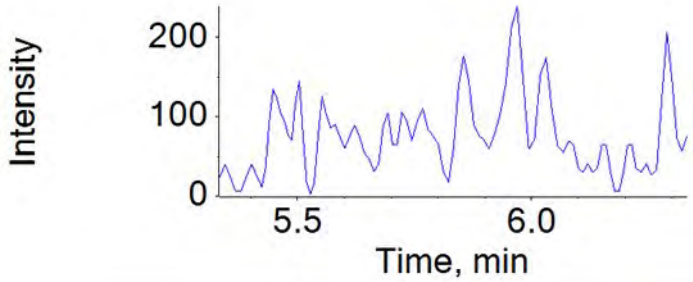
Component: NMeFOSAA
Primary Mass: 570.0 / 419.0



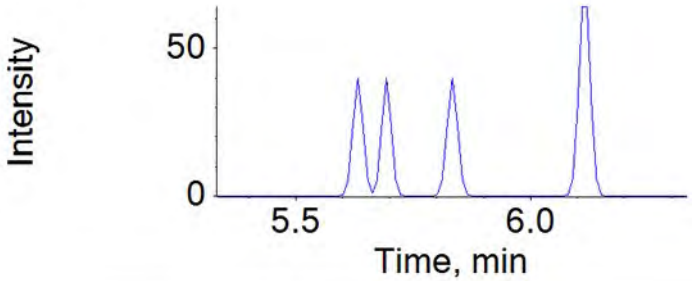
Component: NMeFOSAA_2
Secondary Mass: 570.0 / 483.0



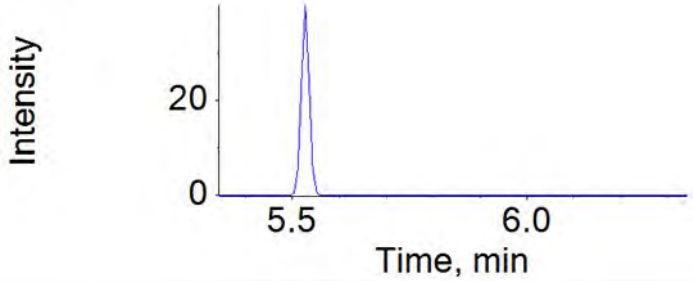
Component: PFUnDA
Primary Mass: 563.0 / 519.0



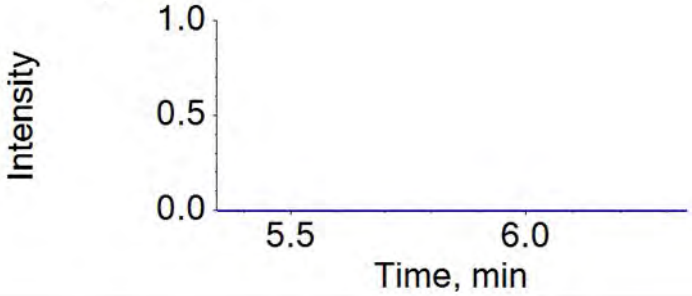
Component: PFUnDA_2
Secondary Mass: 563.0 / 169.0



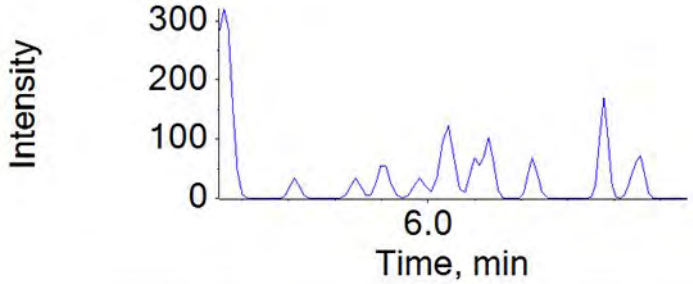
Component: NEtFOSAA
Primary Mass: 584.0 / 419.0



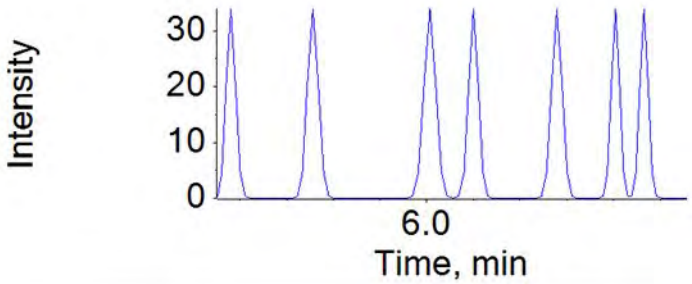
Component: NEtFOSAA_2
Secondary Mass: 584.0 / 526.0



Component: PFDoDA
Primary Mass: 613.0 / 569.0



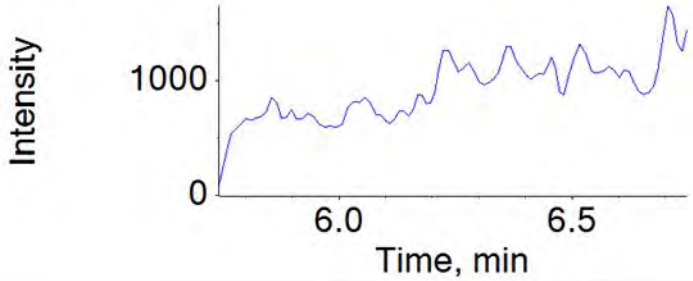
Component: PFDoDA_2
Secondary Mass: 613.0 / 169.0



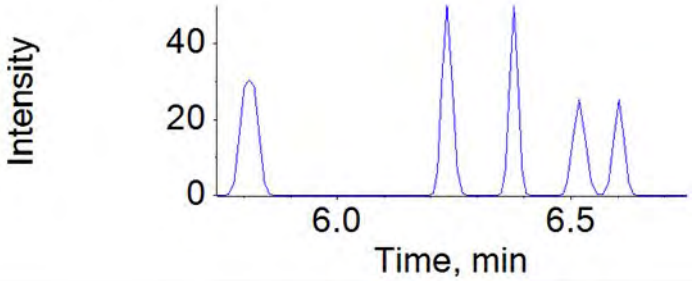
APPROVED
By MCD at 4:51 pm, 11/14/18

REVIEWED
By HMK at 12:22 pm, 11/15/18

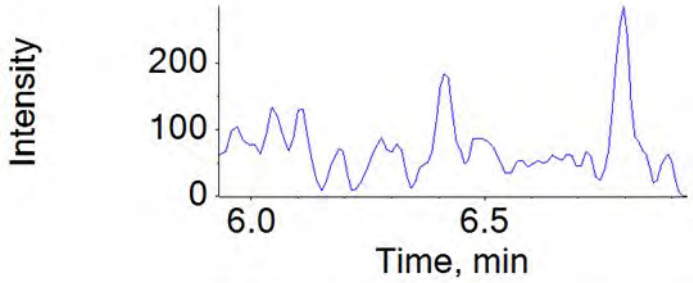
Component: PFTrDA
Primary Mass: 663.0 / 619.0



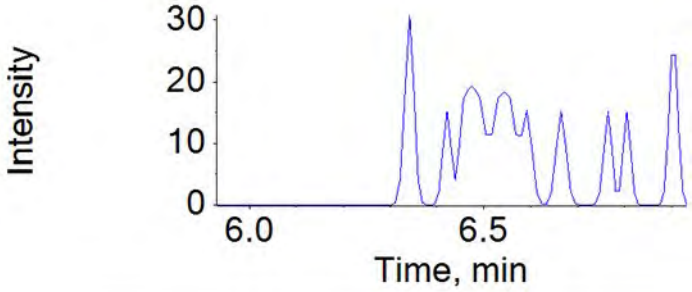
Component: PFTrDA_2
Secondary Mass: 663.0 / 169.0



Component: PFTeDA
Primary Mass: 713.0 / 669.0



Component: PFTeDA_2
Secondary Mass: 713.0 / 169.0



APPROVED
By MCD at 4:51 pm, 11/14/18

REVIEWED
By HMK at 12:22 pm, 11/15/18

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LC-MS/MS
DOD Analysis Report

Printed: 11/14/2018 4:26:00 PM
Template: DOD-Sample-18JUN22.docx

ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM
Result Table: 18316011 11/14/2018 4:24:36 PM
Acquisition Method: 18AUG13_3uL.dam

Sample Name:	9885098			**Data File:**		18NOV13D-65.wiff
Sample ID:	EPA 537 mod QSM 5.1 table B-15 18316011 OU1-Bldg50-S-01-01 Grab Soil			**Acquis Date:**		2018-11-13T19:20:47
Sample Type:	Unknown			**Instrument:**		LM27631
Vial Position:	62			**Acquis Method:**		18AUG13_3uL.dam
Injection Vol:	3.00			**Result Table:**		18316011
QMethod File:	18AUG20QM			**ICAL Name:**		18NOV12DCAL
Batch Number:	18316011			**Operator:**		MCD7824
Sample Wt.:	1.06000			**Dilution Factor:**		1.00
Sample Vol.:	1.000			**Prep Factor:**		2.000

Injection Standard Peak Table

Injection Standard Area Reference File: 18NOV13D-05

Injection Standard Name	Inj Std Conc	Injection Std Peak Area	Rreference Injection Standard Area	Injection Std %Diff	Injection Std %Diff Limit	Injection Std %Diff OOS
13C3-PFBA	5.0	715056.5	661126.9	8	50	
13C2-PFOA	5.0	553900.0	466902.6	19	50	
13C4-PFOS	4.8	266826.1	247446.9	8	50	
13C2-PFDA	5.0	315057.1	295381.6	7	50	

Extraction Standard Peak Table

Extraction Standard Name	Ext Std Area	Inj Std Name	Inj Std Area	Area Ratio	Ext Std Conc	Ext Std Result	Ext Std %REC	Ext Std %REC Limit	Ext Std OOS
E13C3-PFBS	355698.0	13C3-PFBA	715056.5	0.497	8.774	6.626	76	50-150	
E13C5-PFHxA	572983.3	13C2-PFOA	553900.0	1.034	9.434	7.051	75	50-150	
E13C3-PFHxS	255055.3	13C2-PFOA	553900.0	0.460	8.925	5.962	67	50-150	
E13C4-PFHpA	441837.4	13C2-PFOA	553900.0	0.798	9.434	6.781	72	50-150	
E13C8-PFOA	771481.5	13C2-PFOA	553900.0	1.393	9.434	7.240	77	50-150	
E13C8-PFOS	228635.3	13C4-PFOS	266826.1	0.857	9.019	7.163	79	50-150	
E13C9-PFNA	405677.8	13C4-PFOS	266826.1	1.520	9.434	7.998	85	50-150	
E13C6-PFDA	541584.6	13C2-PFDA	315057.1	1.719	9.434	7.569	80	50-150	
Ed3-NMeFOSAA	70845.7	13C2-PFDA	315057.1	0.225	9.434	7.658	81	50-150	
E13C7-PFUnDA	225938.6	13C2-PFDA	315057.1	0.717	9.434	7.856	83	50-150	
Ed5-NEtFOSAA	54054.2	13C2-PFDA	315057.1	0.172	9.434	6.849	73	50-150	
E13C2-PFDoDA	483721.7	13C2-PFDA	315057.1	1.535	9.434	7.521	80	50-150	
E13C2-PFTeDA	343558.3	13C2-PFDA	315057.1	1.090	9.434	7.223	77	50-150	

APPROVED
By MCD at 4:51 pm, 11/14/18

REVIEWED
By HMK at 12:22 pm, 11/15/18

ICAL Name: 18NOV12DCAL **Result Table:** 18316011 11/14/2018 4:24:36 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

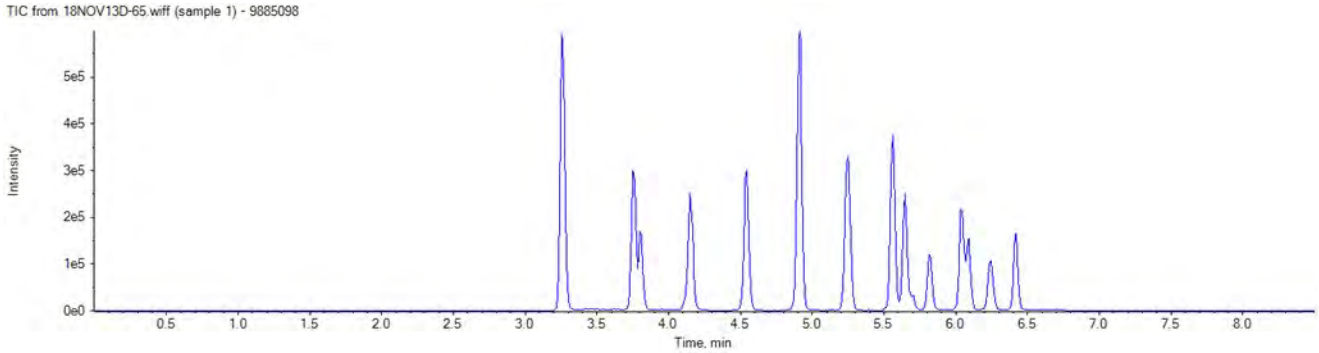
Analyte Quantitation Peak Table

Sample Name: 9885098 **Instrument Name:** LM27631 **File Name:** 18NOV13D-65.wiff

Sample Wt	Sample Vol	Dilution Factor	PrepFactor
1.06000	1.000	1.00	2.000

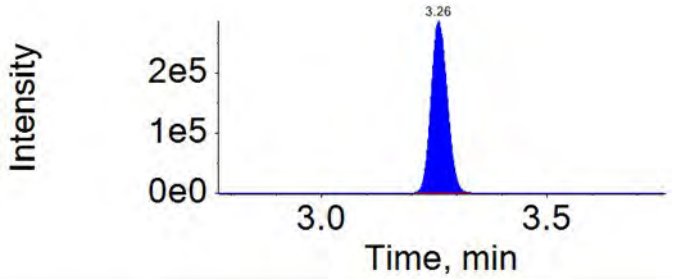
Analyte Name	RT	RRT	Analyte Area Response	E	Int Typ	ES Name	ES RT	ES Area Response	Area Ratio	Sample Result (ng/g)
PFBS	N/A	N/A	N/A		A	13C3-PFBS	3.80	355698.0	N/A	
PFHxA	N/A	N/A	N/A		A	13C5-PFHxA	4.15	572983.3	N/A	
PFHpA	N/A	N/A	N/A		A	13C4-PFHpA	4.54	441837.4	N/A	
PFHxS	N/A	N/A	N/A		A	13C3-PFHxS	4.54	255055.3	N/A	
PFOA	N/A	N/A	N/A		A	13C8-PFOA	4.91	771481.5	N/A	
PFOS	N/A	N/A	N/A		A	13C8-PFOS	5.24	228635.3	N/A	
PFNA	N/A	N/A	N/A		A	13C9-PFNA	5.26	405677.8	N/A	
PFDA	N/A	N/A	N/A		A	13C6-PFDA	5.56	541584.6	N/A	
NMeFOSAA	N/A	N/A	N/A		A	d3-NMeFOSAA	5.70	70845.7	N/A	
PFUnDA	N/A	N/A	N/A		A	13C7-PFUnDA	5.82	225938.6	N/A	
NEtFOSAA	N/A	N/A	N/A		A	d5-NEtFOSAA	5.83	54054.2	N/A	
PFDoDA	N/A	N/A	N/A		A	13C2-PFDoDA	6.04	483721.7	N/A	
PFTrDA	N/A	N/A	N/A		A	13C2-PFDoDA	6.04	483721.7	N/A	
PFTeDA	N/A	N/A	N/A		A	13C2-PFTeDA	6.42	343558.3	N/A	

Total Ion Chromatogram

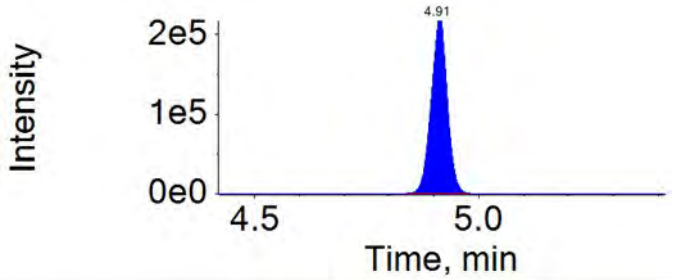


ICAL Name: 18NOV12DCAL **Result Table:** 18316011 11/14/2018 4:24:36 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

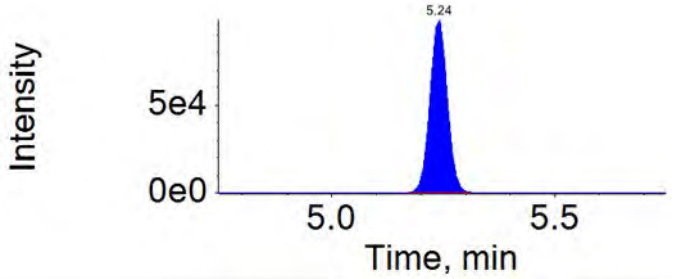
Injection Standard: 13C3-PFBA
216.0 / 172.0



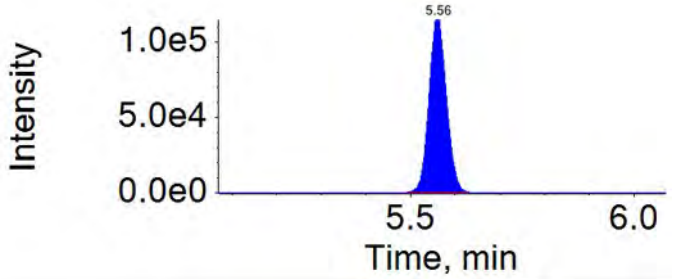
Injection Standard: 13C2-PFOA
415.0 / 370.0



Injection Standard: 13C4-PFOS
503.0 / 80.0

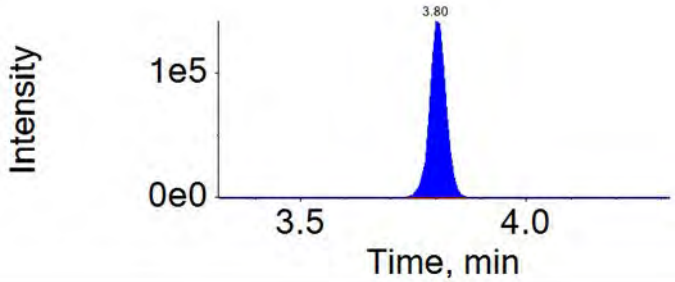


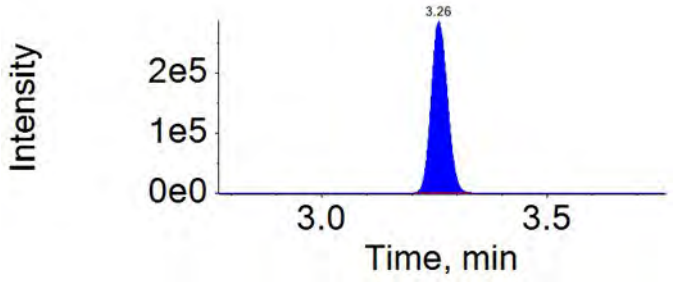
Injection Standard: 13C2-PFDA
515.0 / 470.0



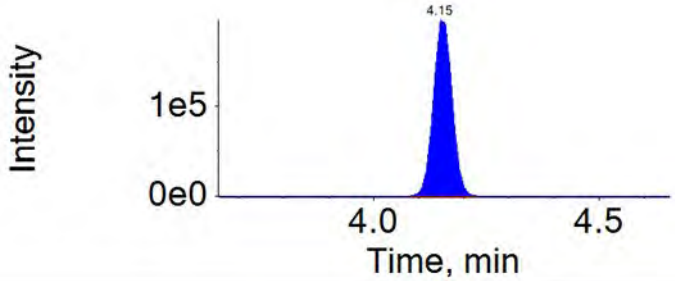
ICAL Name: 18NOV12DCAL **Result Table:** 18316011 11/14/2018 4:24:36 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

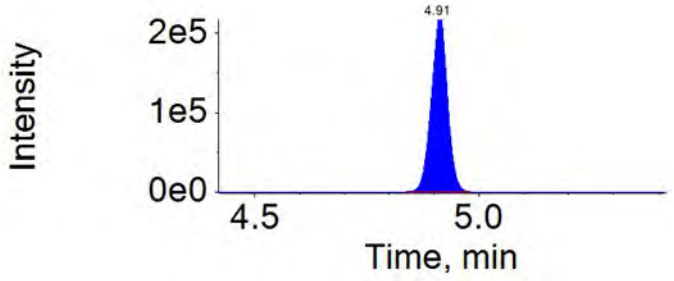
Extraction Standard: E13C3-PFBS	Injection Standard: 13C3-PFBA
302.0 / 80.0	216.0 / 172.0



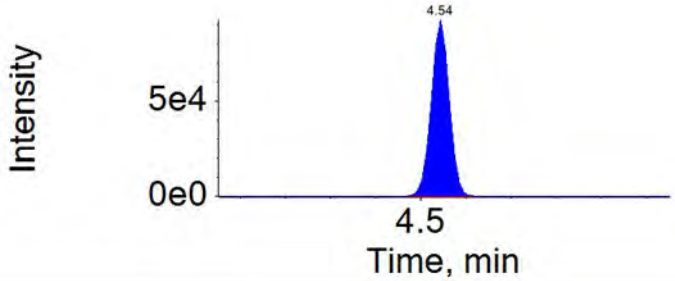


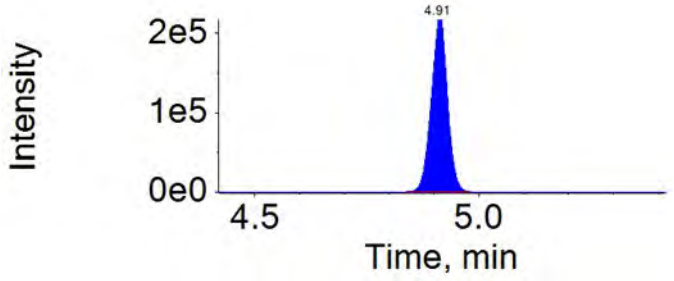
Extraction Standard: E13C5-PFHxA	Injection Standard: 13C2-PFOA
318.0 / 273.0	415.0 / 370.0



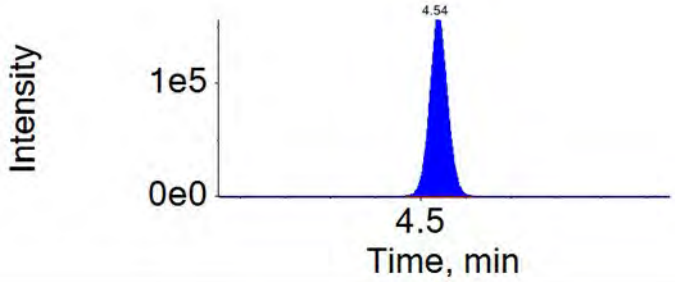


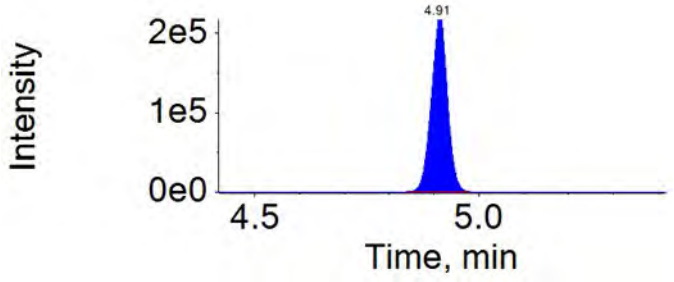
Extraction Standard: E13C3-PFHxS	Injection Standard: 13C2-PFOA
402.0 / 80.0	415.0 / 370.0





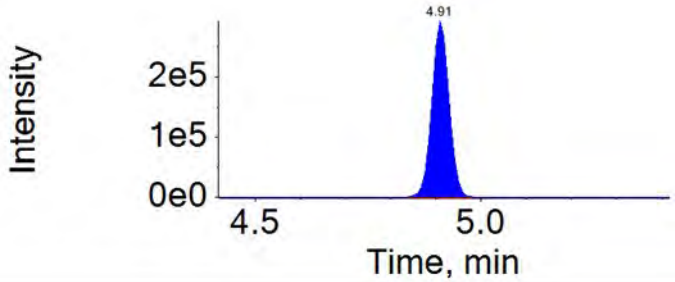
Extraction Standard: E13C4-PFHpA	Injection Standard: 13C2-PFOA
367.0 / 322.0	415.0 / 370.0

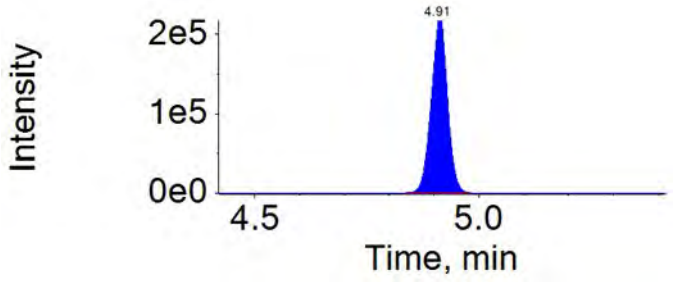




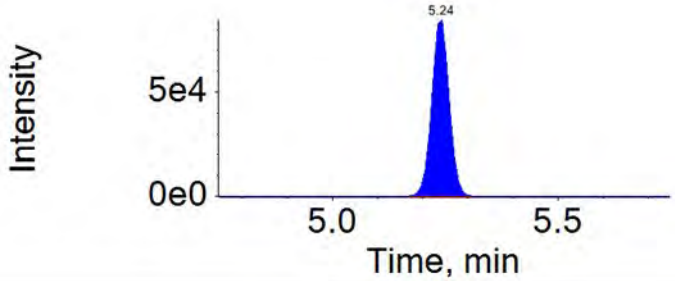
ICAL Name: 18NOV12DCAL **Result Table:** 18316011 11/14/2018 4:24:36 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

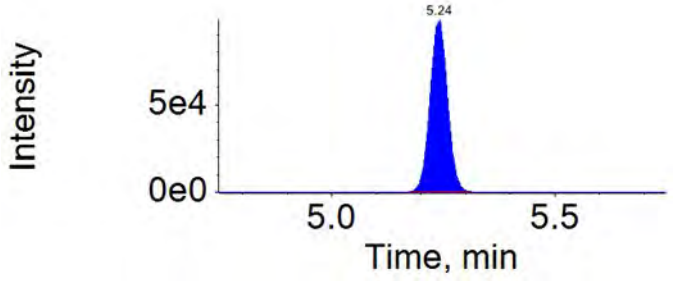
Extraction Standard: E13C8-PFOA	Injection Standard: 13C2-PFOA
421.0 / 376.0	415.0 / 370.0



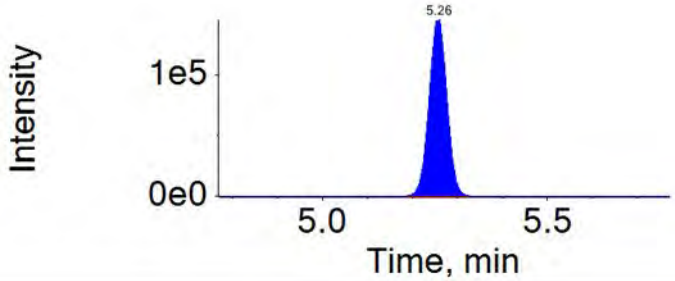


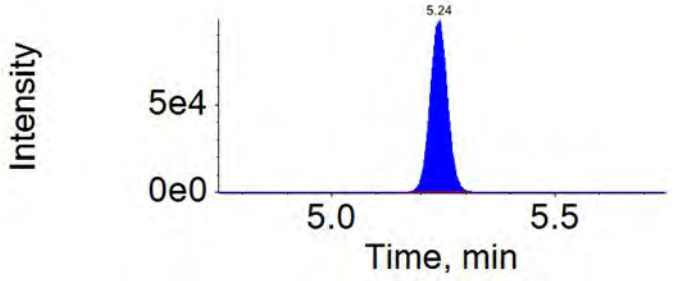
Extraction Standard: E13C8-PFOS	Injection Standard: 13C4-PFOS
507.0 / 80.0	503.0 / 80.0



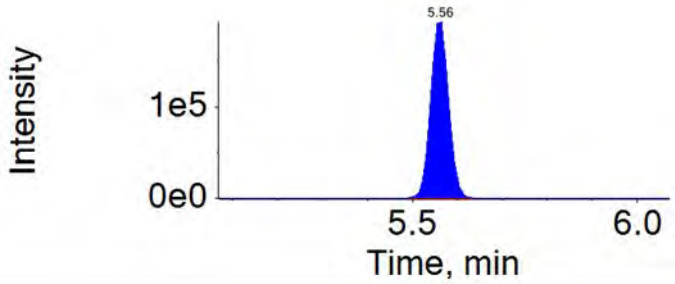


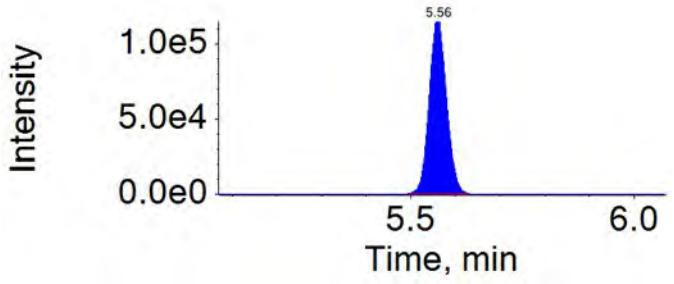
Extraction Standard: E13C9-PFNA	Injection Standard: 13C4-PFOS
472.0 / 427.0	503.0 / 80.0





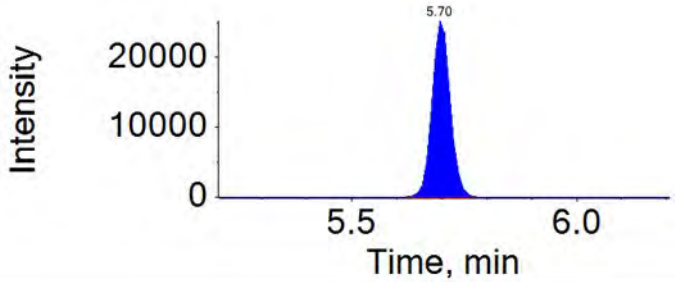
Extraction Standard: E13C6-PFDA	Injection Standard: 13C2-PFDA
519.0 / 474.0	515.0 / 470.0

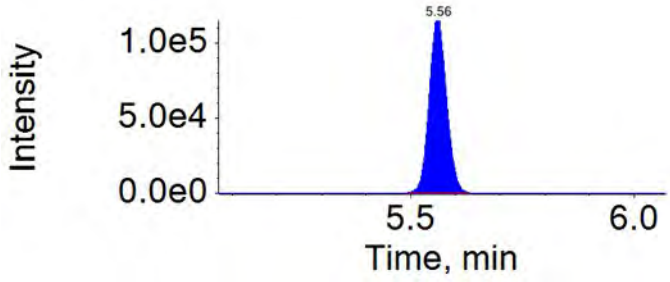




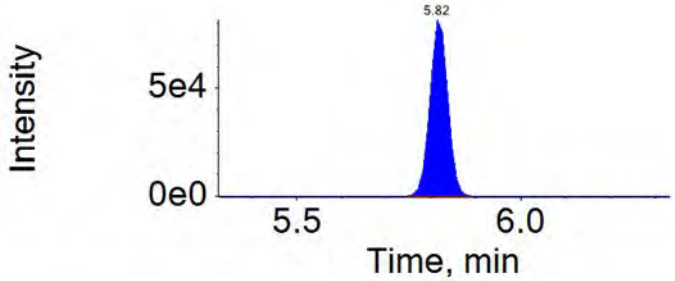
ICAL Name: 18NOV12DCAL **Result Table:** 18316011 11/14/2018 4:24:36 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

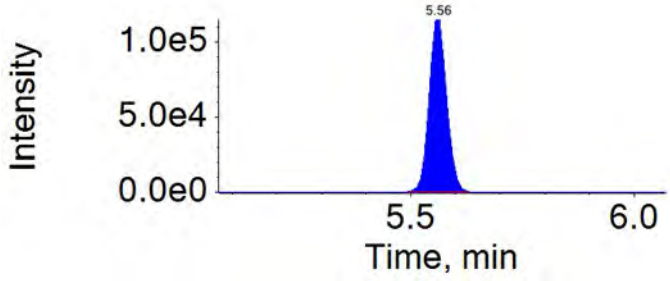
Extraction Standard: Ed3-NMeFOSAA	Injection Standard: 13C2-PFDA
573.0 / 419.0	515.0 / 470.0



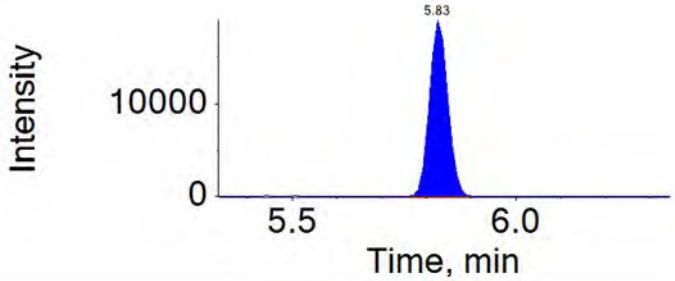


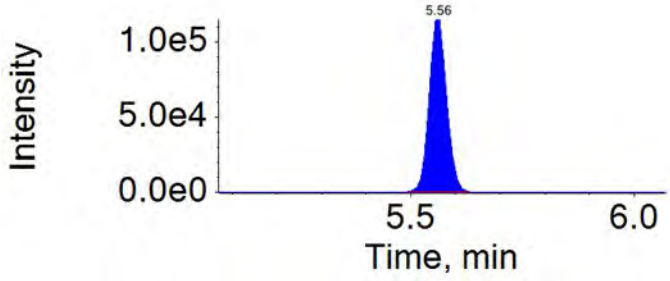
Extraction Standard: E13C7-PFUnDA	Injection Standard: 13C2-PFDA
570.0 / 525.0	515.0 / 470.0



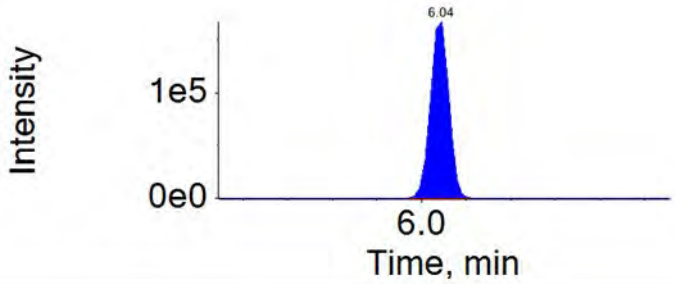


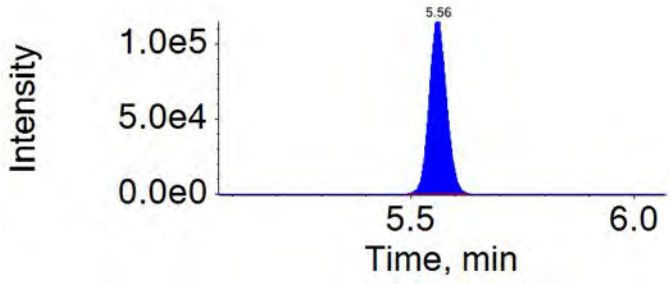
Extraction Standard: Ed5-NEtFOSAA	Injection Standard: 13C2-PFDA
589.0 / 419.0	515.0 / 470.0



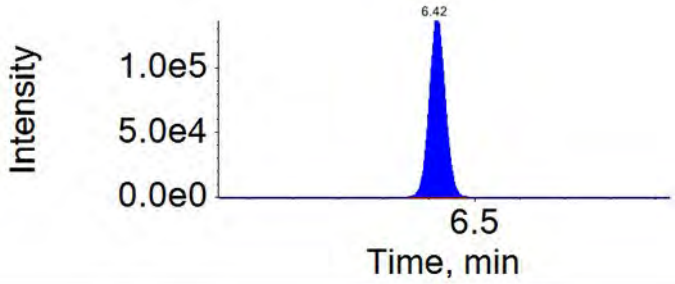
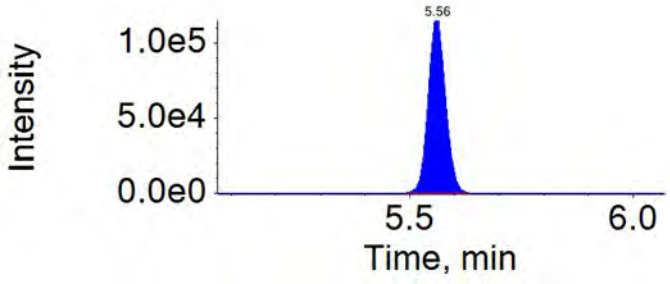


Extraction Standard: E13C2-PFDoDA	Injection Standard: 13C2-PFDA
615.0 / 570.0	515.0 / 470.0



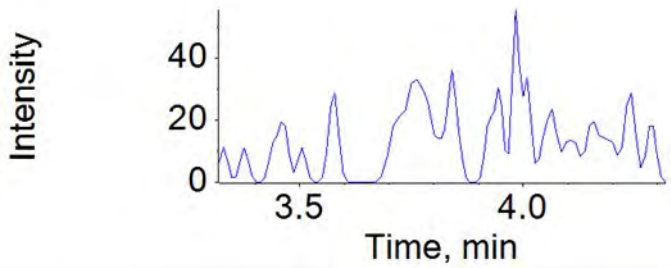


ICAL Name: 18NOV12DCAL **Result Table:** 18316011 11/14/2018 4:24:36 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

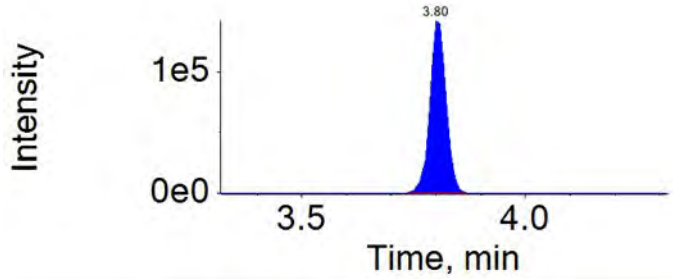
Extraction Standard: E13C2-PFTeDA	Injection Standard: 13C2-PFDA
715.0 / 670.0 	515.0 / 470.0 

ICAL Name: 18NOV12DCAL **Result Table:** 18316011 11/14/2018 4:24:36 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

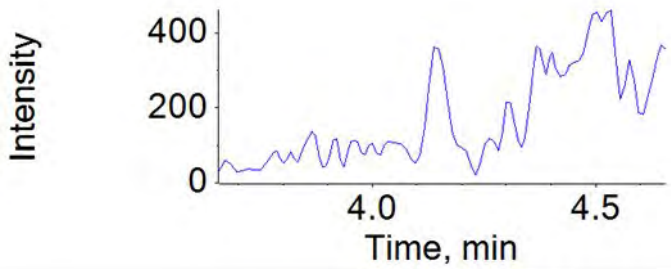
Analyte: PFBS
299.0 / 80.0



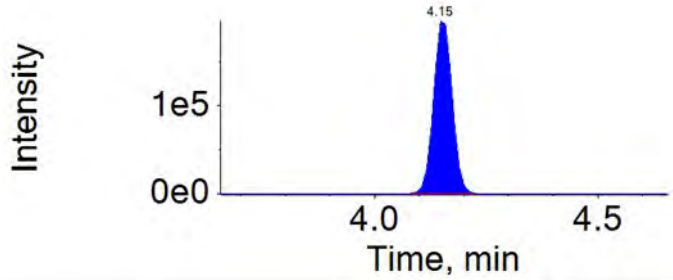
Extraction Standard: 13C3-PFBS
302.0 / 80.0



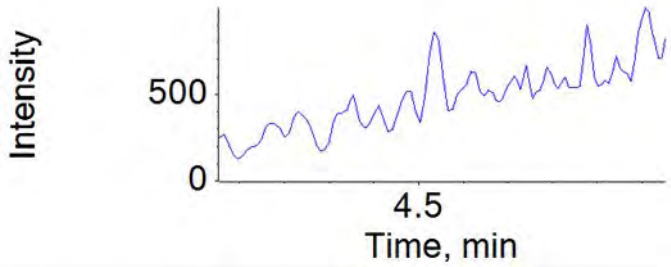
Analyte: PFHxA
313.0 / 269.0



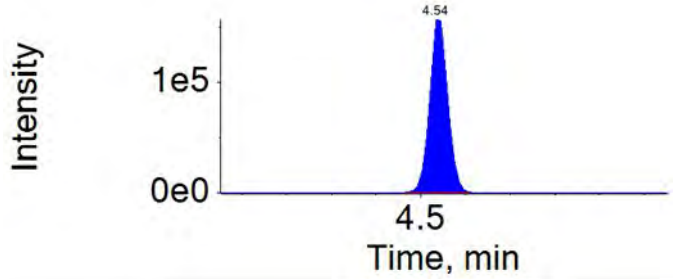
Extraction Standard: 13C5-PFHxA
318.0 / 273.0



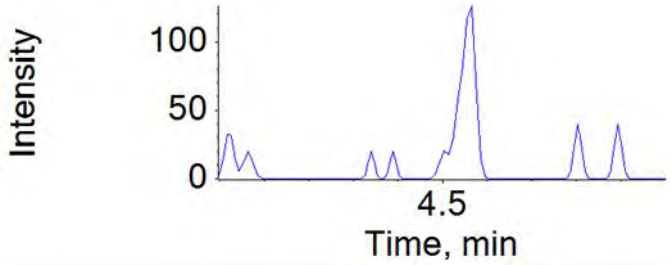
Analyte: PFHpA
363.0 / 319.0



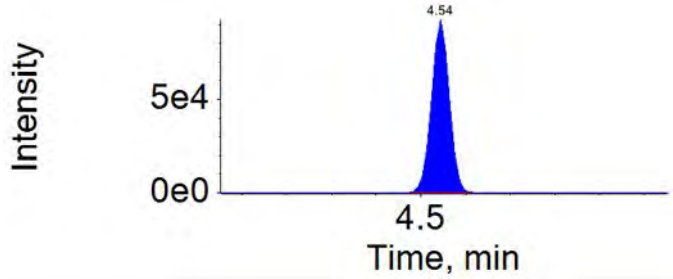
Extraction Standard: 13C4-PFHpA
367.0 / 322.0



Analyte: PFHxS
399.0 / 80.0

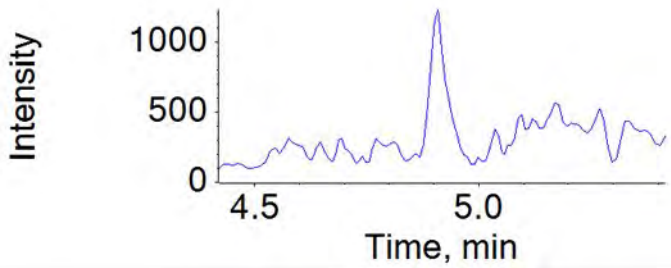


Extraction Standard: 13C3-PFHxS
402.0 / 80.0

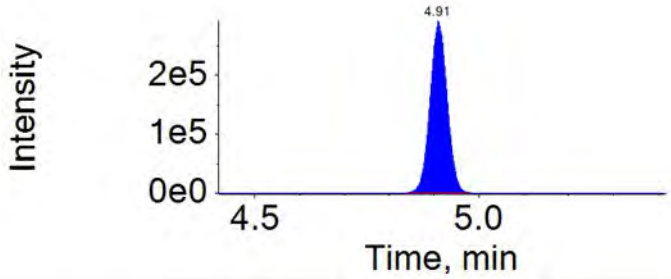


ICAL Name: 18NOV12DCAL **Result Table:** 18316011 11/14/2018 4:24:36 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

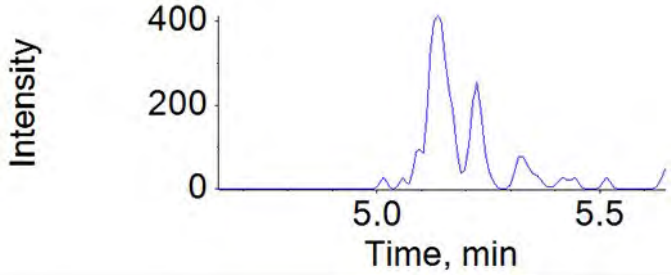
Analyte: PFOA
413.0 / 369.0



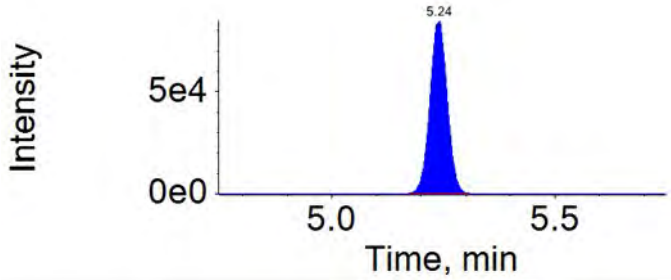
Extraction Standard: 13C8-PFOA
421.0 / 376.0



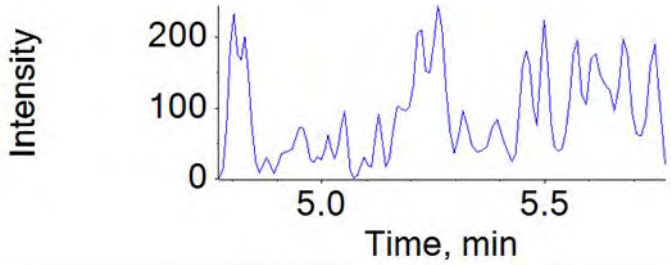
Analyte: PFOS
499.0 / 80.0



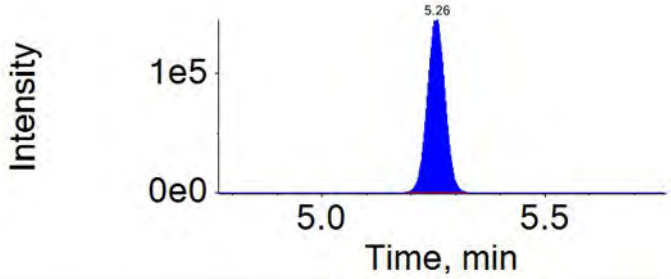
Extraction Standard: 13C8-PFOS
507.0 / 80.0



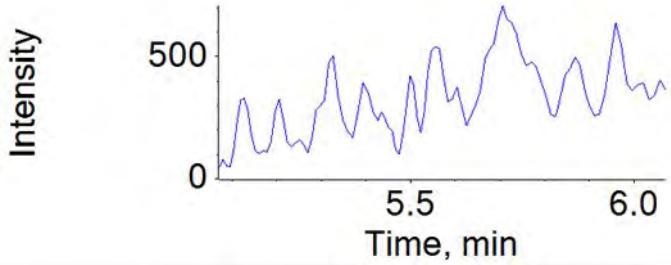
Analyte: PFNA
463.0 / 419.0



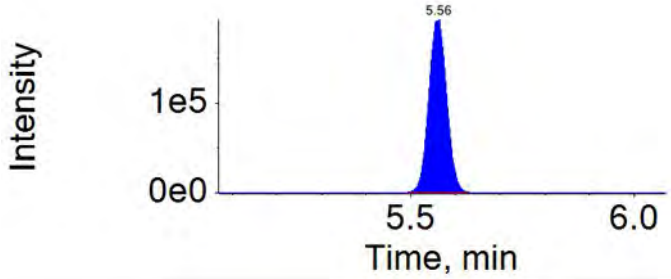
Extraction Standard: 13C9-PFNA
472.0 / 427.0



Analyte: PFDA
513.0 / 469.0

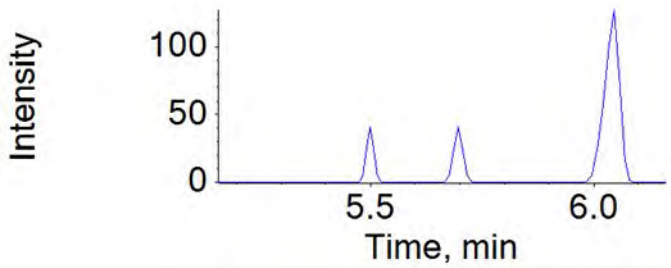


Extraction Standard: 13C6-PFDA
519.0 / 474.0

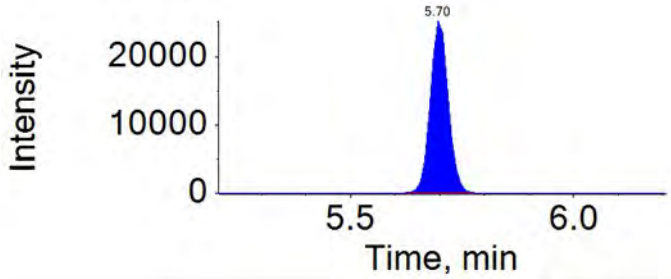


ICAL Name: 18NOV12DCAL **Result Table:** 18316011 11/14/2018 4:24:36 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

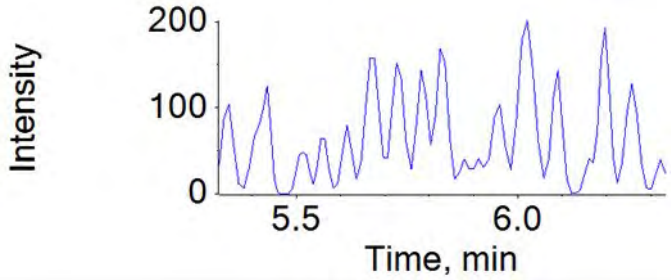
Analyte: NMeFOSAA
570.0 / 419.0



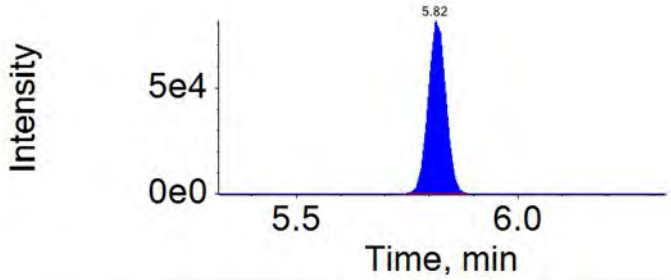
Extraction Standard: d3-NMeFOSAA
573.0 / 419.0



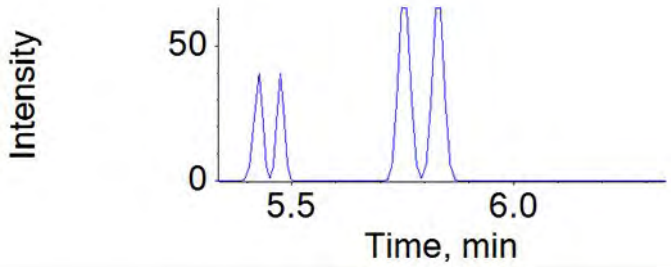
Analyte: PFUnDA
563.0 / 519.0



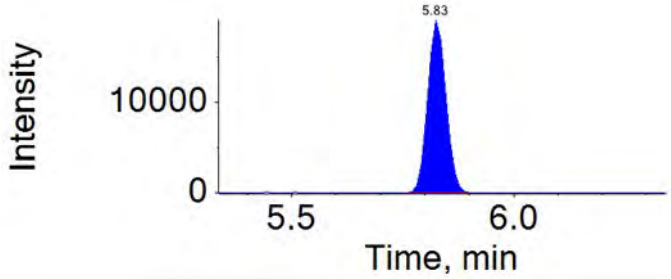
Extraction Standard: 13C7-PFUnDA
570.0 / 525.0



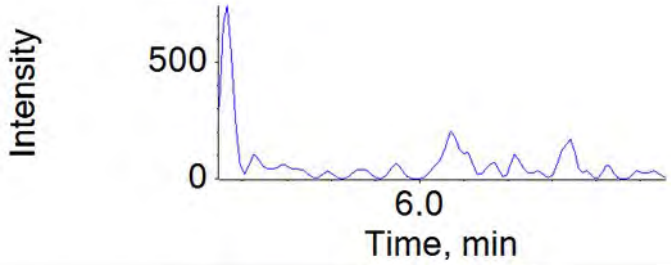
Analyte: NEtFOSAA
584.0 / 419.0



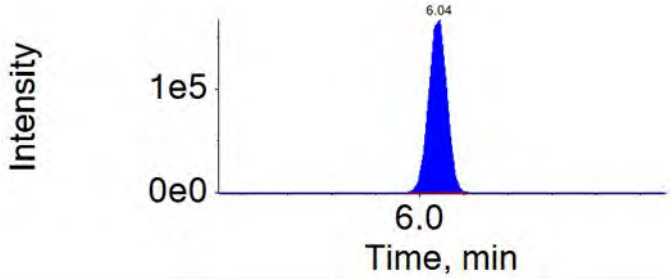
Extraction Standard: d5-NEtFOSAA
589.0 / 419.0



Analyte: PFDoDA
613.0 / 569.0



Extraction Standard: 13C2-PFDoDA
615.0 / 570.0

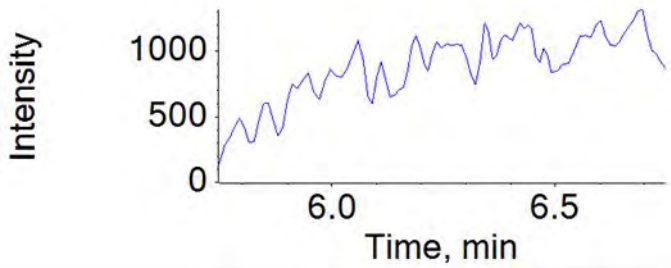


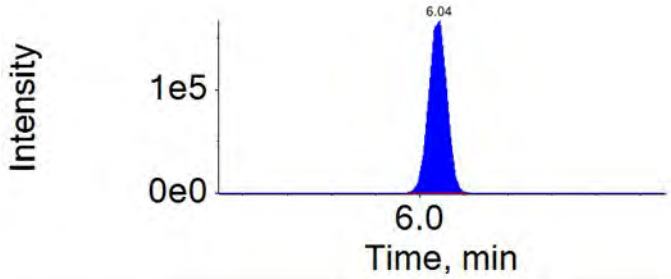
APPROVED
By MCD at 4:51 pm, 11/14/18

REVIEWED
By HMK at 12:22 pm, 11/15/18

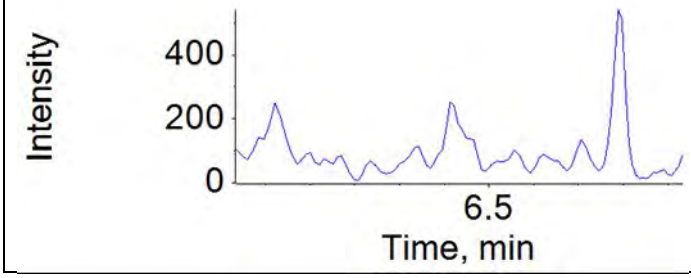
ICAL Name: 18NOV12DCAL **Result Table:** 18316011 11/14/2018 4:24:36 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

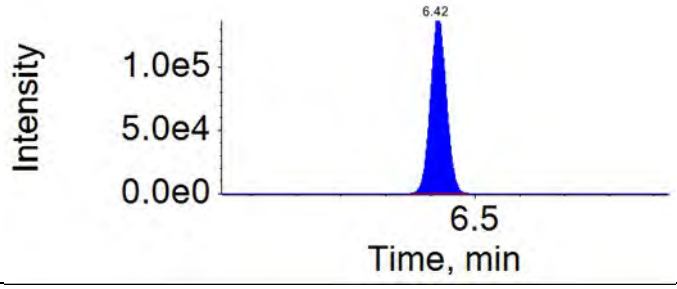
Analyte: PFTrDA	Extraction Standard: 13C2-PFDoDA
663.0 / 619.0	615.0 / 570.0





Analyte: PFTeDA	Extraction Standard: 13C2-PFTeDA
713.0 / 669.0	715.0 / 670.0





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LC-MS/MS Analysis Report

Printed: 11/14/2018 4:29:00 PM
Template: IonRatio18OCT10

Ion Ratio Report

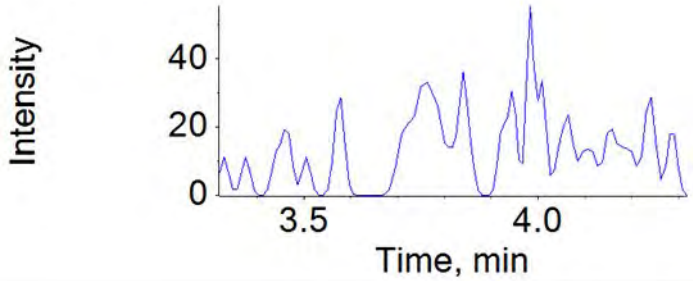
Sample Name: 9885098 **Instrument Name:** LM27631 **File Name:** 18NOV13D-65.wiff

Component Name	RT	RRT	Analyte Area Response	Int Typ	Expected Ion Ratio	Ion Ratio	Ion Ratio % Diff	Ion Ratio Limit	Ion Ratio OOS
PFBS	N/A	N/A	N/A	A	N/A	N/A			
PFBS_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFHxA	N/A	N/A	N/A	A	N/A	N/A			
PFHxA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFHpA	N/A	N/A	N/A	A	N/A	N/A			
PFHpA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFHxS	N/A	N/A	N/A	A	N/A	N/A			
PFHxS_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFOA	N/A	N/A	N/A	A	N/A	N/A			
PFOA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFOS	N/A	N/A	N/A	A	N/A	N/A			
PFOS_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFNA	N/A	N/A	N/A	A	N/A	N/A			
PFNA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFDA	N/A	N/A	N/A	A	N/A	N/A			
PFDA_2	N/A	N/A	N/A	A	N/A	N/A		50	
NMeFOSAA	N/A	N/A	N/A	A	N/A	N/A			
NMeFOSAA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFUnDA	N/A	N/A	N/A	A	N/A	N/A			
PFUnDA_2	N/A	N/A	N/A	A	N/A	N/A		50	
NEtFOSAA	N/A	N/A	N/A	A	N/A	N/A			
NEtFOSAA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFDoDA	N/A	N/A	N/A	A	N/A	N/A			
PFDoDA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFTrDA	N/A	N/A	N/A	A	N/A	N/A			
PFTrDA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFTeDA	N/A	N/A	N/A	A	N/A	N/A			
PFTeDA_2	N/A	N/A	N/A	A	N/A	N/A		50	

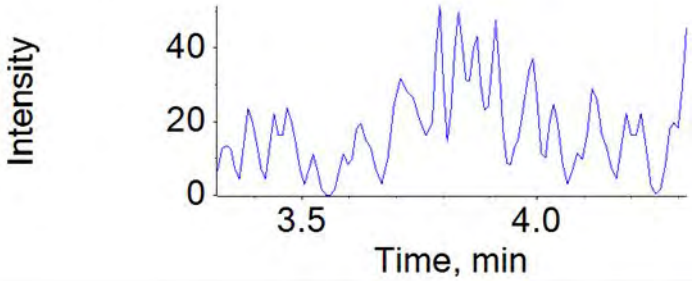
APPROVED
By MCD at 4:51 pm, 11/14/18

REVIEWED
By HMK at 12:22 pm, 11/15/18

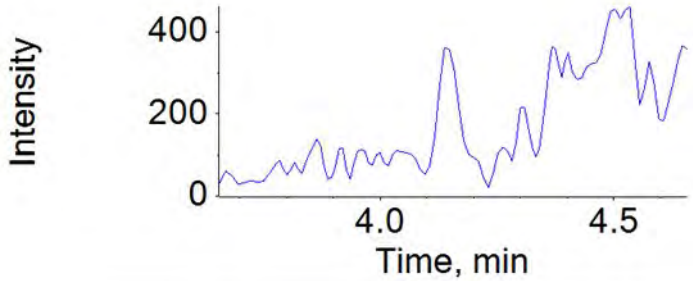
Component: PFBS
Primary Mass: 299.0 / 80.0



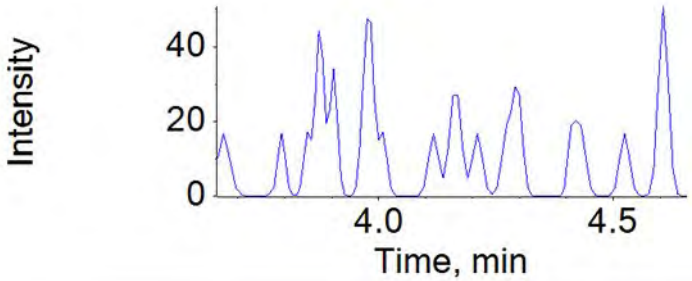
Component: PFBS_2
Secondary Mass: 299.0 / 99.0



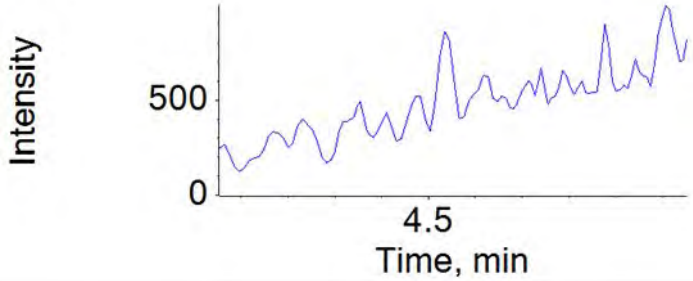
Component: PFHxA
Primary Mass: 313.0 / 269.0



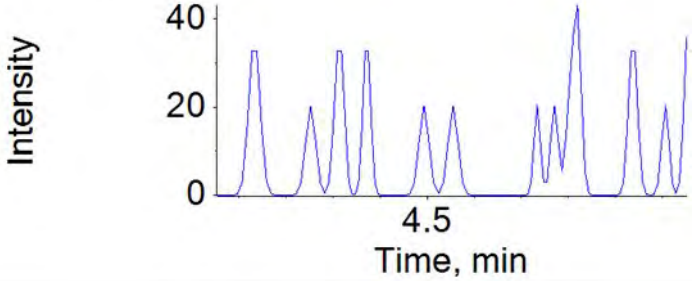
Component: PFHxA_2
Secondary Mass: 313.0 / 119.0



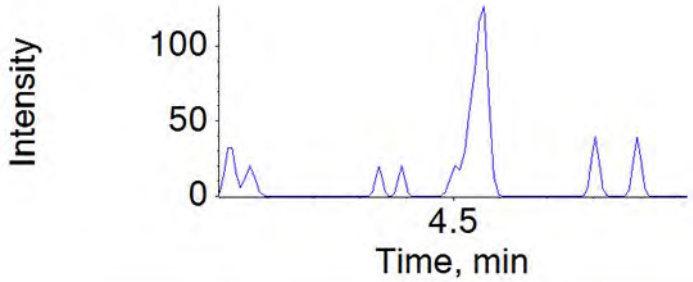
Component: PFHpA
Primary Mass: 363.0 / 319.0



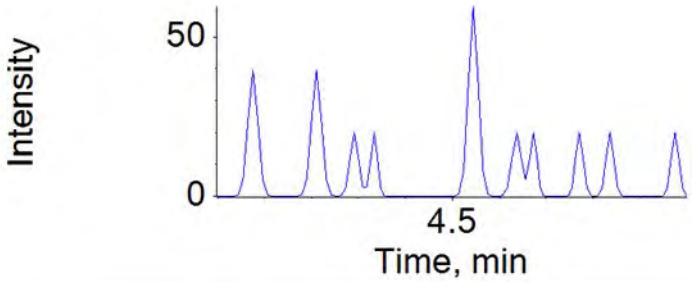
Component: PFHpA_2
Secondary Mass: 363.0 / 169.0



Component: PFHxS
Primary Mass: 399.0 / 80.0



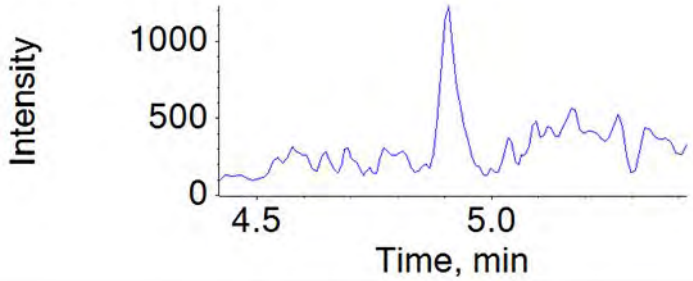
Component: PFHxS_2
Secondary Mass: 399.0 / 99.0



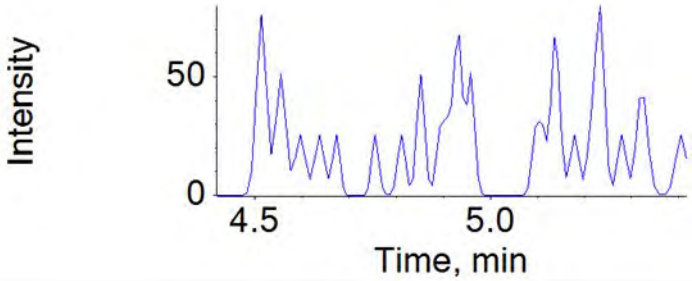
APPROVED
By MCD at 4:51 pm, 11/14/18

REVIEWED
By HMK at 12:22 pm, 11/15/18

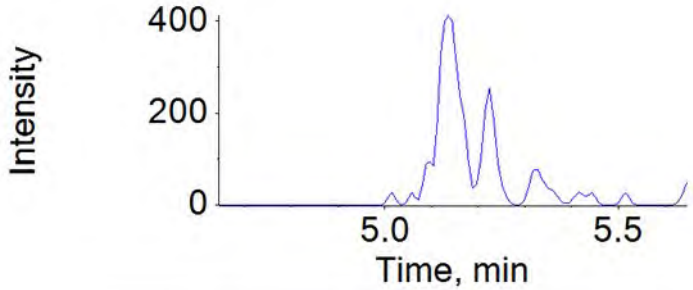
Component: PFOA
Primary Mass: 413.0 / 369.0



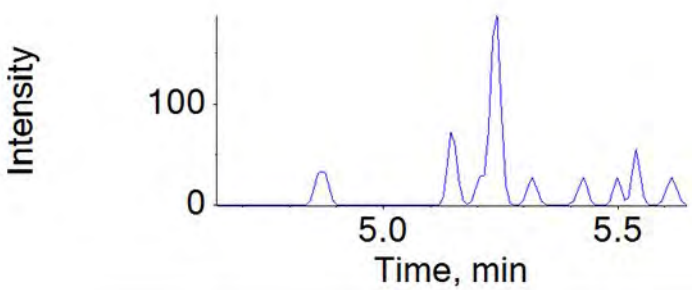
Component: PFOA_2
Secondary Mass: 413.0 / 169.0



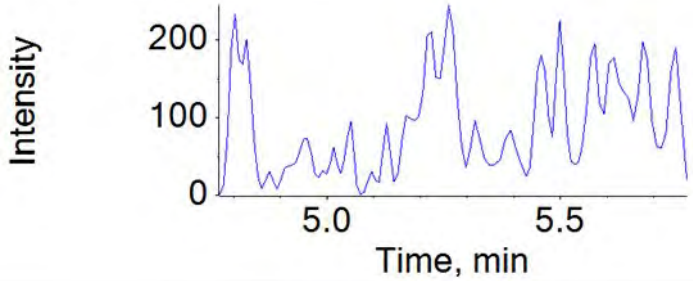
Component: PFOS
Primary Mass: 499.0 / 80.0



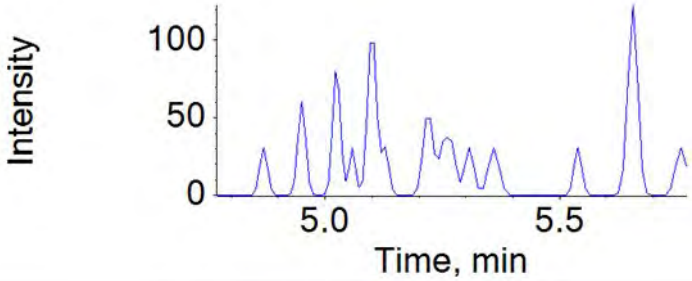
Component: PFOS_2
Secondary Mass: 499.0 / 99.0



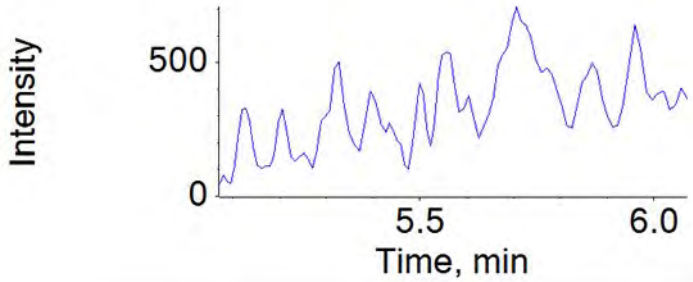
Component: PFNA
Primary Mass: 463.0 / 419.0



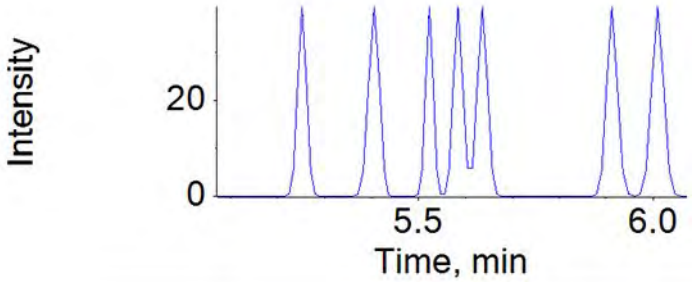
Component: PFNA_2
Secondary Mass: 463.0 / 169.0



Component: PFDA
Primary Mass: 513.0 / 469.0



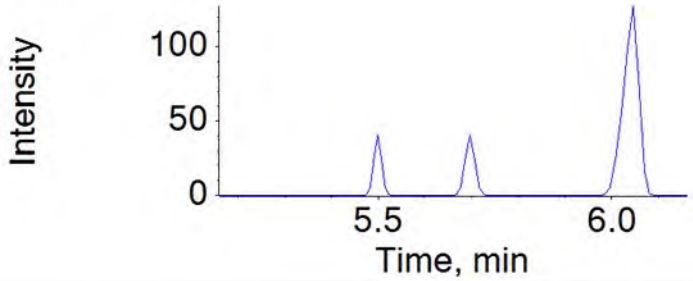
Component: PFDA_2
Secondary Mass: 513.0 / 169.0



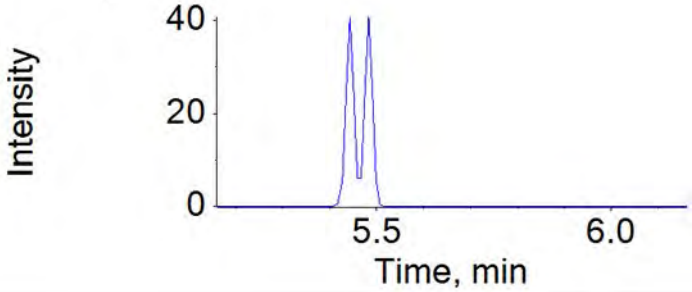
APPROVED
By MCD at 4:51 pm, 11/14/18

REVIEWED
By HMK at 12:22 pm, 11/15/18

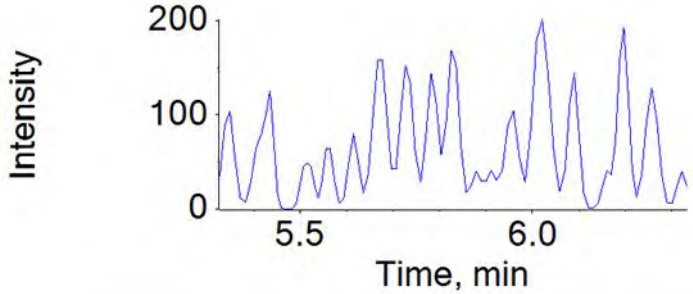
Component: NMeFOSAA
Primary Mass: 570.0 / 419.0



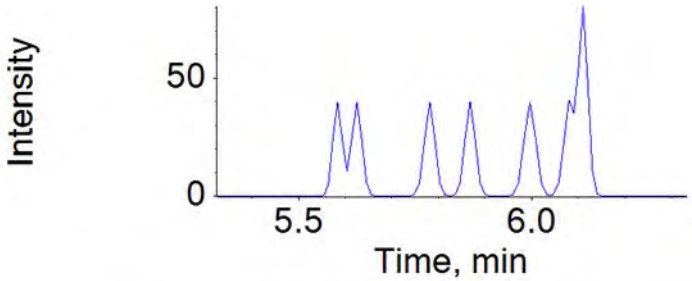
Component: NMeFOSAA_2
Secondary Mass: 570.0 / 483.0



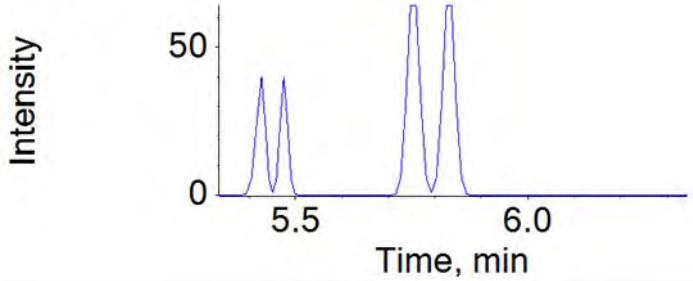
Component: PFUnDA
Primary Mass: 563.0 / 519.0



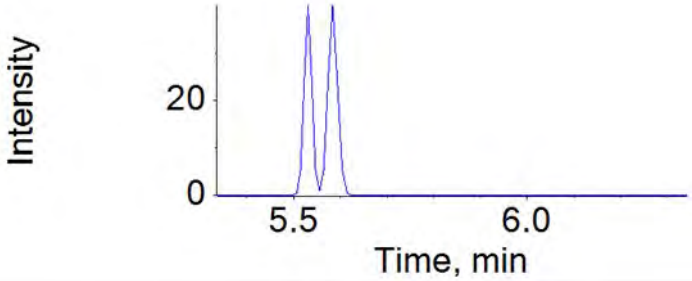
Component: PFUnDA_2
Secondary Mass: 563.0 / 169.0



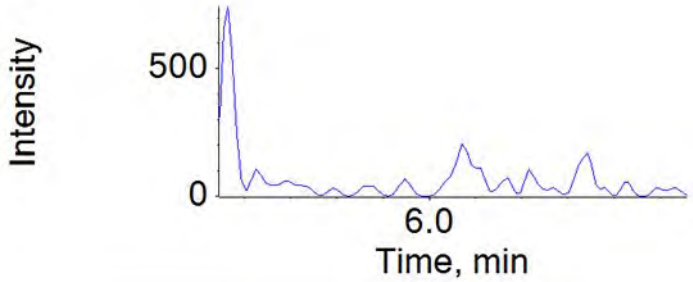
Component: NEtFOSAA
Primary Mass: 584.0 / 419.0



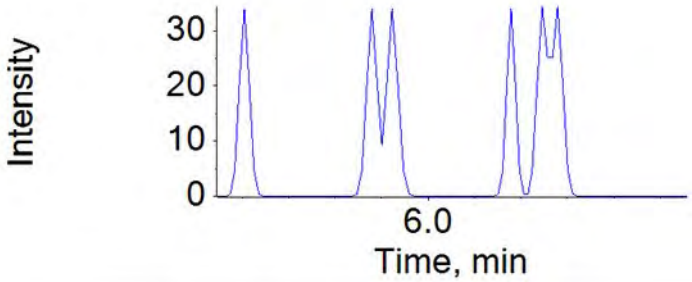
Component: NEtFOSAA_2
Secondary Mass: 584.0 / 526.0



Component: PFDoDA
Primary Mass: 613.0 / 569.0



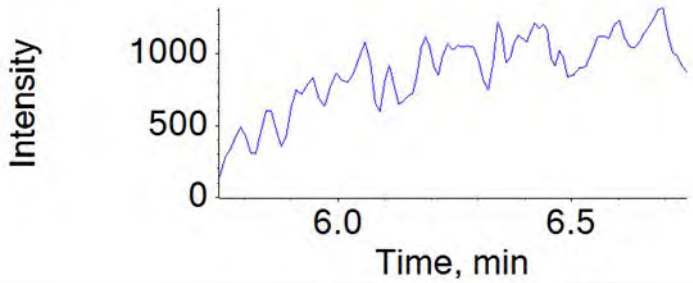
Component: PFDoDA_2
Secondary Mass: 613.0 / 169.0



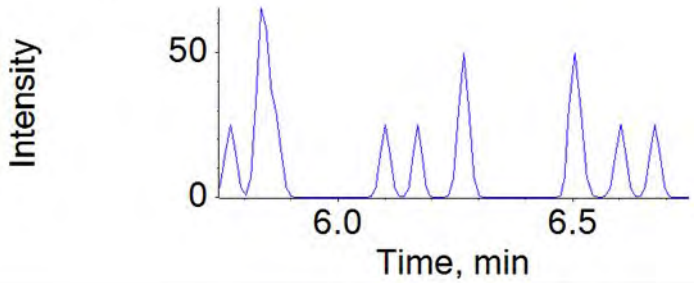
APPROVED
By MCD at 4:51 pm, 11/14/18

REVIEWED
By HMK at 12:22 pm, 11/15/18

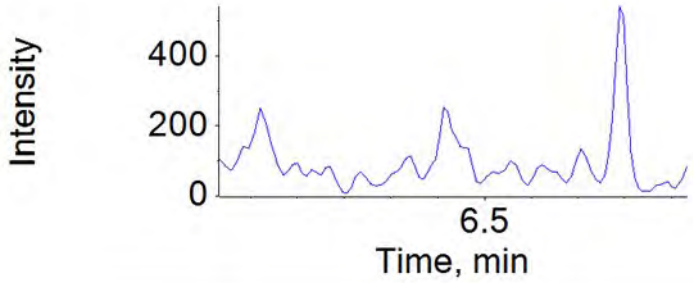
Component: PFTrDA
Primary Mass: 663.0 / 619.0



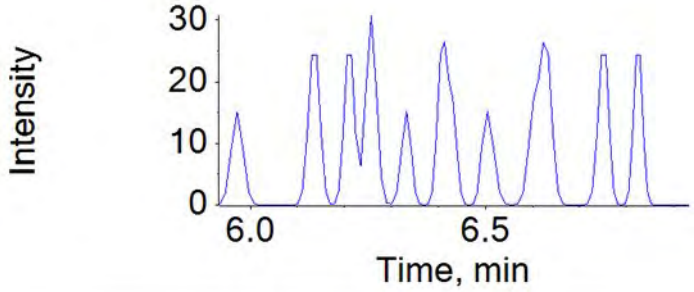
Component: PFTrDA_2
Secondary Mass: 663.0 / 169.0



Component: PFTeDA
Primary Mass: 713.0 / 669.0



Component: PFTeDA_2
Secondary Mass: 713.0 / 169.0



APPROVED
By MCD at 4:51 pm, 11/14/18

REVIEWED
By HMK at 12:22 pm, 11/15/18

ICAL Name: 18NOV12DCAL **Result Table:** 18316011 11/14/2018 4:24:36 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Sample Name:	9885099			**Data File:**		18NOV13D-66.wiff
Sample ID:	EPA 537 mod QSM 5.1 table B-15 18316011 OU1-Bldg50-S-01-03 Grab Soil			**Acquis Date:**		2018-11-13T19:29:50
Sample Type:	Unknown			**Instrument:**		LM27631
Vial Position:	63			**Acquis Method:**		18AUG13_3uL.dam
Injection Vol:	3.00			**Result Table:**		18316011
QMethod File:	18AUG20QM			**ICAL Name:**		18NOV12DCAL
Batch Number:	18316011			**Operator:**		MCD7824
Sample Wt.:	1.07000			**Dilution Factor:**		1.00
Sample Vol.:	1.000			**Prep Factor:**		2.000

Injection Standard Peak Table

Injection Standard Area Reference File: 18NOV13D-05

Injection Standard Name	Inj Std Conc	Injection Std Peak Area	Rreference Injection Standard Area	Injection Std %Diff	Injection Std %Diff Limit	Injection Std %Diff OOS
13C3-PFBA	5.0	758028.0	661126.9	15	50	
13C2-PFOA	5.0	501847.1	466902.6	7	50	
13C4-PFOS	4.8	285955.9	247446.9	16	50	
13C2-PFDA	5.0	362053.6	295381.6	23	50	

Extraction Standard Peak Table

Extraction Standard Name	Ext Std Area	Inj Std Name	Inj Std Area	Area Ratio	Ext Std Conc	Ext Std Result	Ext Std %REC	Ext Std %REC Limit	Ext Std OOS
E13C3-PFBS	307602.6	13C3-PFBA	758028.0	0.406	8.692	5.354	62	50-150	
E13C5-PFHxA	495201.9	13C2-PFOA	501847.1	0.987	9.346	6.663	71	50-150	
E13C3-PFHxS	236338.5	13C2-PFOA	501847.1	0.471	8.841	6.040	68	50-150	
E13C4-PFHpA	395413.8	13C2-PFOA	501847.1	0.788	9.346	6.635	71	50-150	
E13C8-PFOA	683136.5	13C2-PFOA	501847.1	1.361	9.346	7.010	75	50-150	
E13C8-PFOS	200116.3	13C4-PFOS	285955.9	0.700	8.935	5.796	65	50-150	
E13C9-PFNA	344649.5	13C4-PFOS	285955.9	1.205	9.346	6.281	67	50-150	
E13C6-PFDA	455770.9	13C2-PFDA	362053.6	1.259	9.346	5.491	59	50-150	
Ed3-NMeFOSAA	63512.6	13C2-PFDA	362053.6	0.175	9.346	5.919	63	50-150	
E13C7-PFUnDA	191241.6	13C2-PFDA	362053.6	0.528	9.346	5.732	61	50-150	
Ed5-NEtFOSAA	43363.7	13C2-PFDA	362053.6	0.120	9.346	4.736	51	50-150	
E13C2-PFDoDA	396309.1	13C2-PFDA	362053.6	1.095	9.346	5.312	57	50-150	
E13C2-PFTeDA	294677.7	13C2-PFDA	362053.6	0.814	9.346	5.341	57	50-150	

APPROVED
By MCD at 4:51 pm, 11/14/18

REVIEWED
By HMK at 12:22 pm, 11/15/18

ICAL Name: 18NOV12DCAL **Result Table:** 18316011 11/14/2018 4:24:36 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

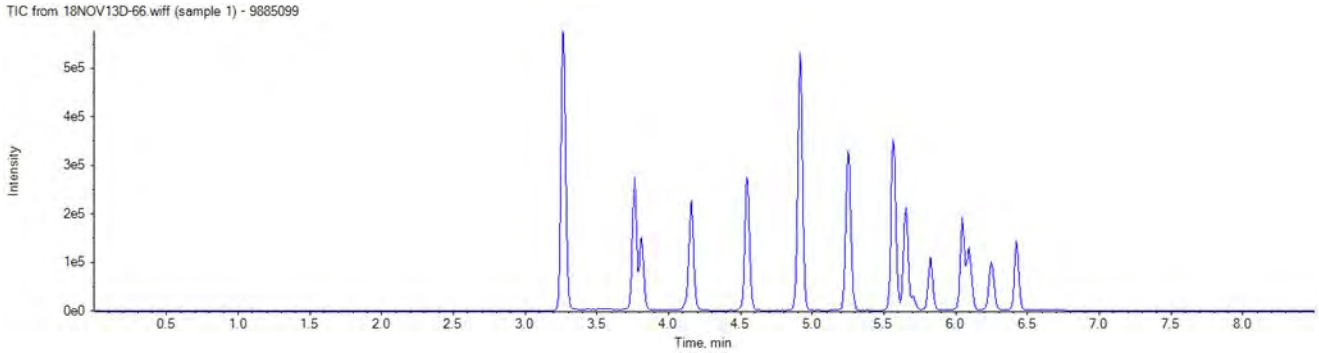
Analyte Quantitation Peak Table

Sample Name: 9885099 **Instrument Name:** LM27631 **File Name:** 18NOV13D-66.wiff

Sample Wt	Sample Vol	Dilution Factor	PrepFactor
1.07000	1.000	1.00	2.000

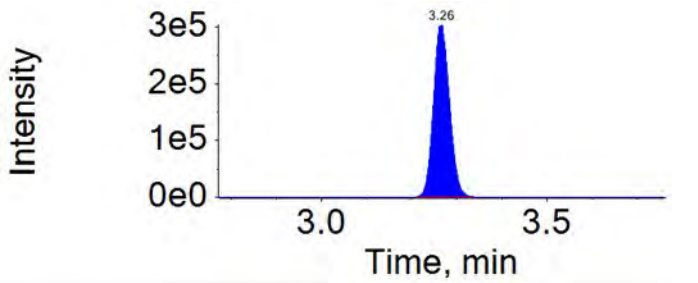
Analyte Name	RT	RRT	Analyte Area Response	E	Int Typ	ES Name	ES RT	ES Area Response	Area Ratio	Sample Result (ng/g)
PFBS	N/A	N/A	N/A		A	13C3-PFBS	3.81	307602.6	N/A	
PFHxA	N/A	N/A	N/A		A	13C5-PFHxA	4.16	495201.9	N/A	
PFHpA	N/A	N/A	N/A		A	13C4-PFHpA	4.55	395413.8	N/A	
PFHxS	N/A	N/A	N/A		A	13C3-PFHxS	4.55	236338.5	N/A	
PFOA	N/A	N/A	N/A		A	13C8-PFOA	4.92	683136.5	N/A	
PFOS	N/A	N/A	N/A		A	13C8-PFOS	5.24	200116.3	N/A	
PFNA	N/A	N/A	N/A		A	13C9-PFNA	5.26	344649.5	N/A	
PFDA	N/A	N/A	N/A		A	13C6-PFDA	5.56	455770.9	N/A	
NMeFOSAA	N/A	N/A	N/A		A	d3-NMeFOSAA	5.70	63512.6	N/A	
PFUnDA	N/A	N/A	N/A		A	13C7-PFUnDA	5.82	191241.6	N/A	
NEtFOSAA	N/A	N/A	N/A		A	d5-NEtFOSAA	5.83	43363.7	N/A	
PFDoDA	N/A	N/A	N/A		A	13C2-PFDoDA	6.05	396309.1	N/A	
PFTrDA	N/A	N/A	N/A		A	13C2-PFDoDA	6.05	396309.1	N/A	
PFTeDA	N/A	N/A	N/A		A	13C2-PFTeDA	6.42	294677.7	N/A	

Total Ion Chromatogram

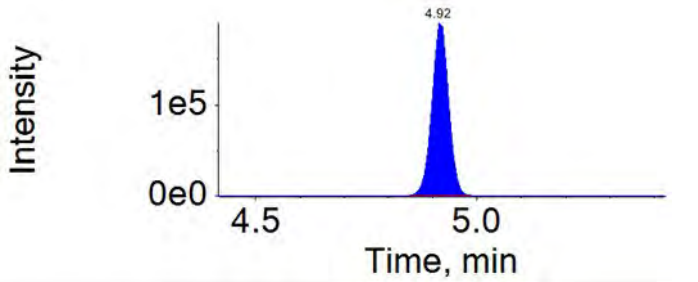


ICAL Name: 18NOV12DCAL **Result Table:** 18316011 11/14/2018 4:24:36 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

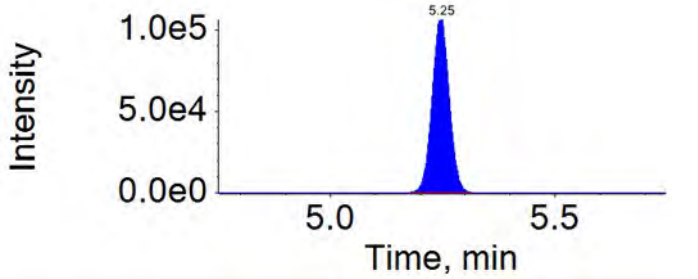
Injection Standard: 13C3-PFBA
216.0 / 172.0



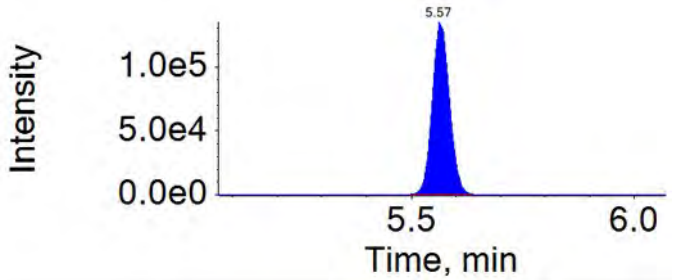
Injection Standard: 13C2-PFOA
415.0 / 370.0



Injection Standard: 13C4-PFOS
503.0 / 80.0

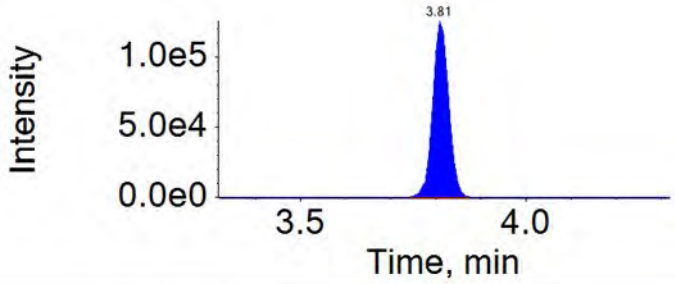


Injection Standard: 13C2-PFDA
515.0 / 470.0

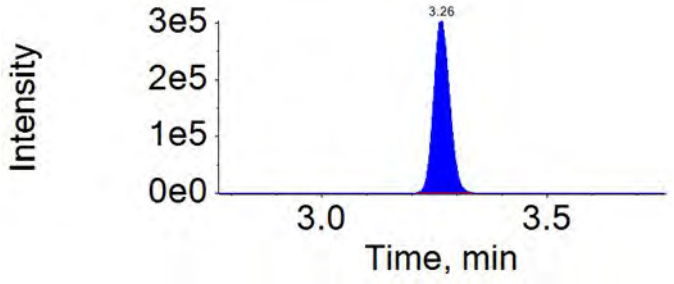


ICAL Name: 18NOV12DCAL **Result Table:** 18316011 11/14/2018 4:24:36 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

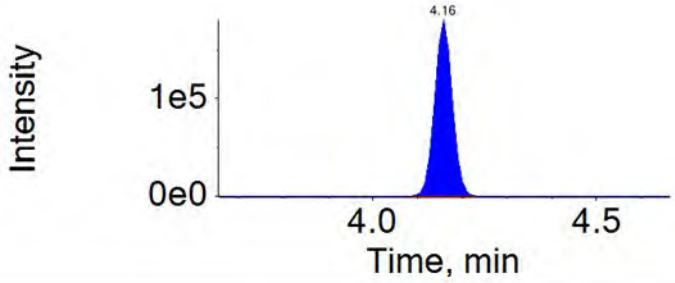
Extraction Standard: E13C3-PFBS
302.0 / 80.0



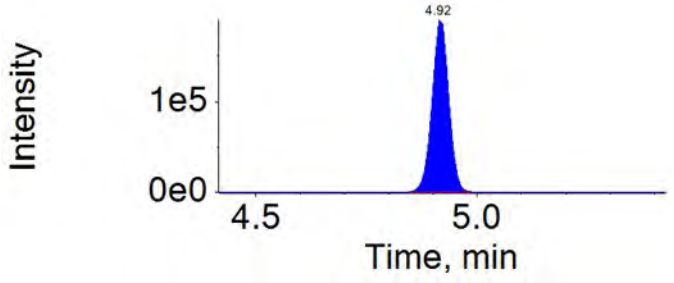
Injection Standard: 13C3-PFBA
216.0 / 172.0



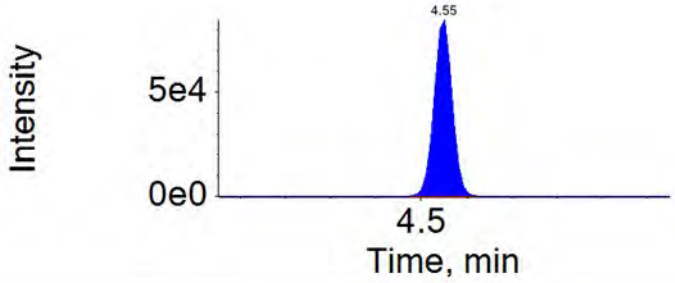
Extraction Standard: E13C5-PFHxA
318.0 / 273.0



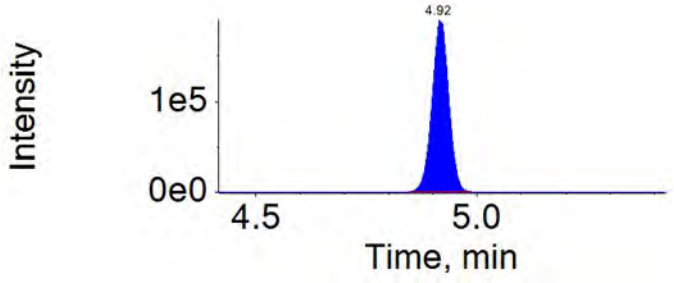
Injection Standard: 13C2-PFOA
415.0 / 370.0



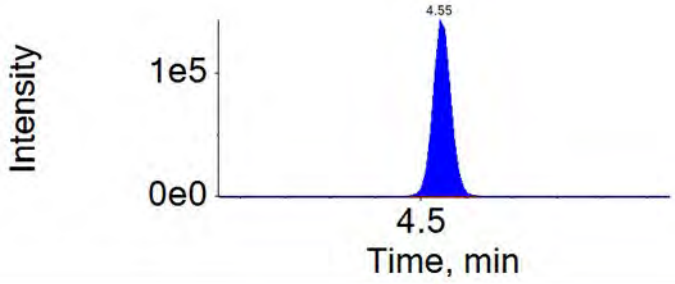
Extraction Standard: E13C3-PFHxS
402.0 / 80.0



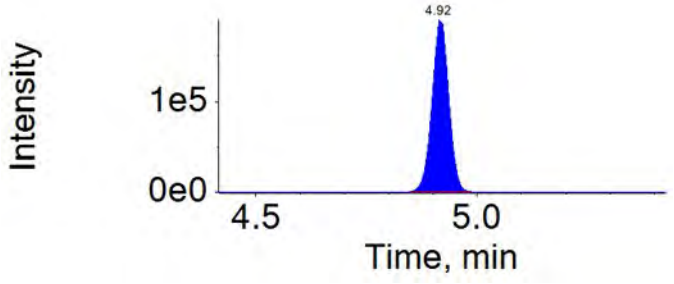
Injection Standard: 13C2-PFOA
415.0 / 370.0



Extraction Standard: E13C4-PFHpA
367.0 / 322.0



Injection Standard: 13C2-PFOA
415.0 / 370.0

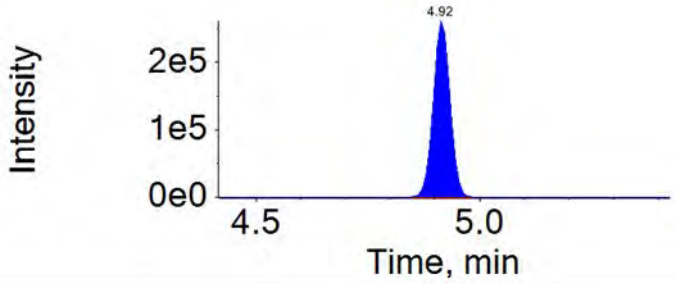


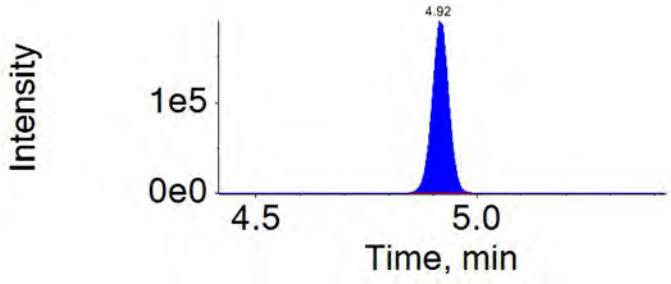
APPROVED
By MCD at 4:51 pm, 11/14/18

REVIEWED
By HMK at 12:22 pm, 11/15/18

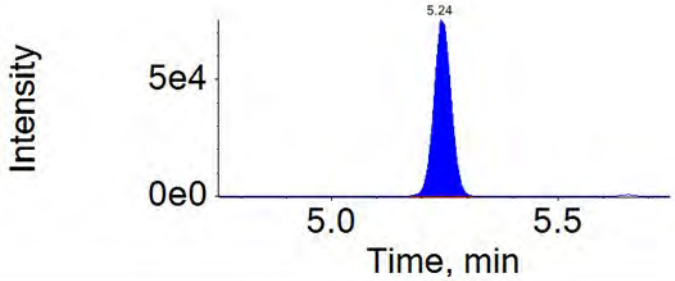
ICAL Name: 18NOV12DCAL **Result Table:** 18316011 11/14/2018 4:24:36 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

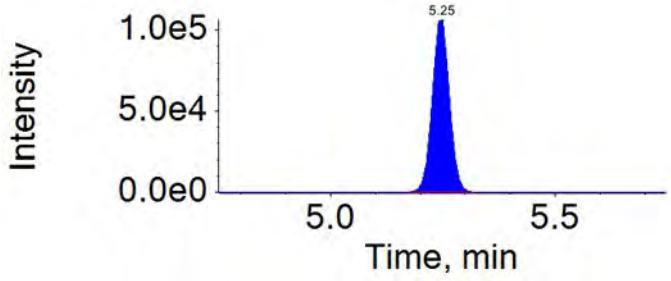
Extraction Standard: E13C8-PFOA	Injection Standard: 13C2-PFOA
421.0 / 376.0	415.0 / 370.0



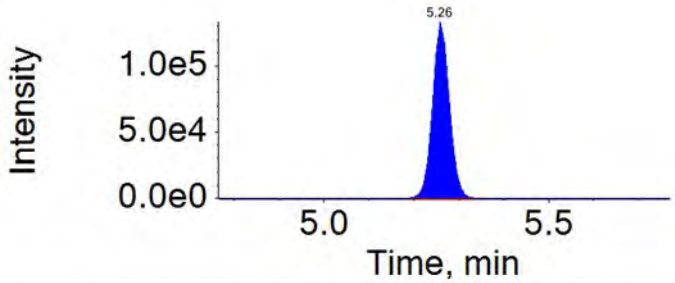


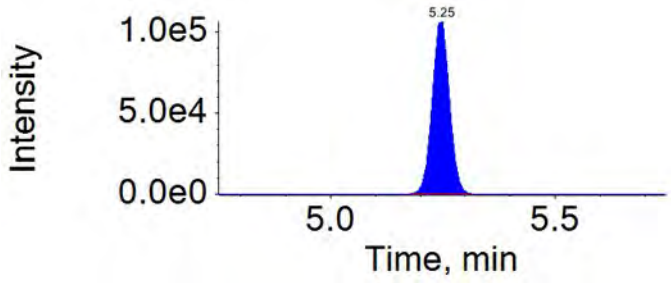
Extraction Standard: E13C8-PFOS	Injection Standard: 13C4-PFOS
507.0 / 80.0	503.0 / 80.0



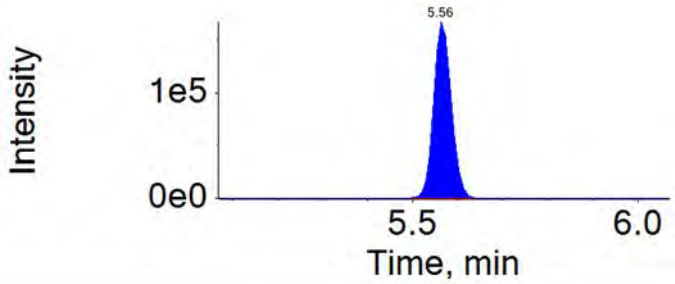


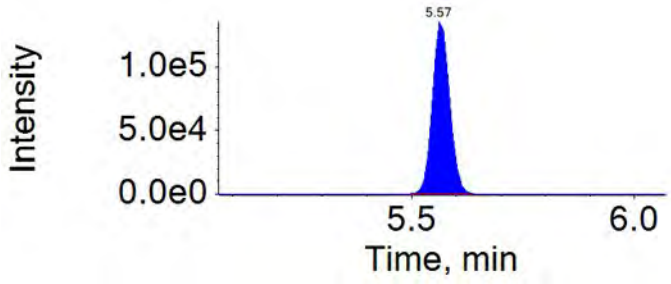
Extraction Standard: E13C9-PFNA	Injection Standard: 13C4-PFOS
472.0 / 427.0	503.0 / 80.0





Extraction Standard: E13C6-PFDA	Injection Standard: 13C2-PFDA
519.0 / 474.0	515.0 / 470.0



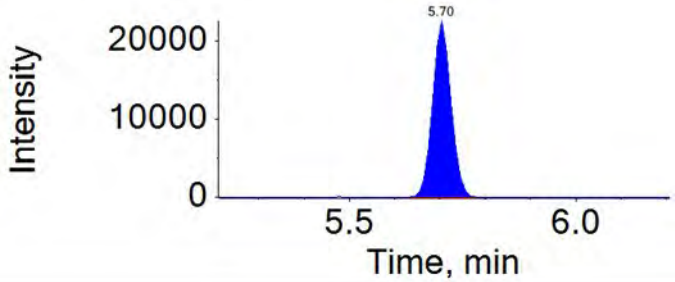


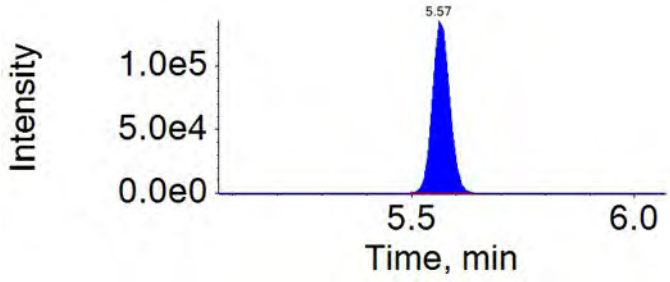
APPROVED
By MCD at 4:51 pm, 11/14/18

REVIEWED
By HMK at 12:22 pm, 11/15/18

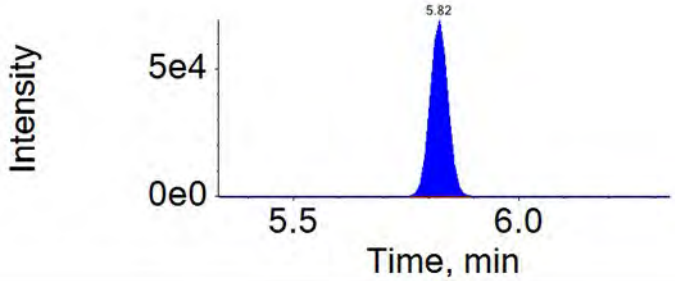
ICAL Name: 18NOV12DCAL **Result Table:** 18316011 11/14/2018 4:24:36 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

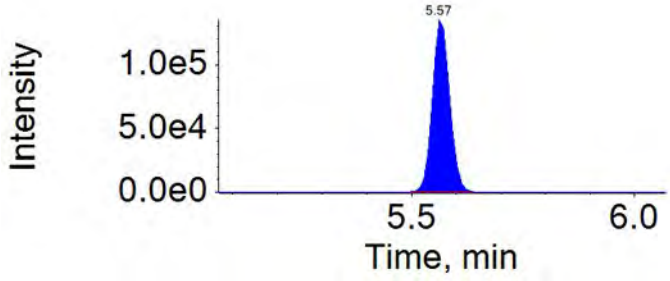
Extraction Standard: Ed3-NMeFOSAA	Injection Standard: 13C2-PFDA
573.0 / 419.0	515.0 / 470.0



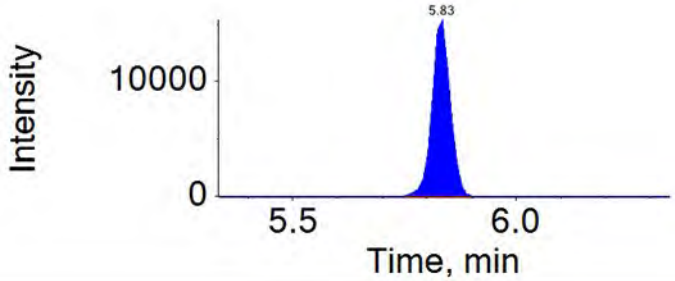


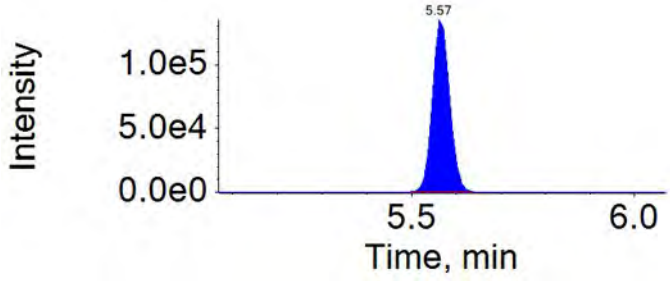
Extraction Standard: E13C7-PFUnDA	Injection Standard: 13C2-PFDA
570.0 / 525.0	515.0 / 470.0



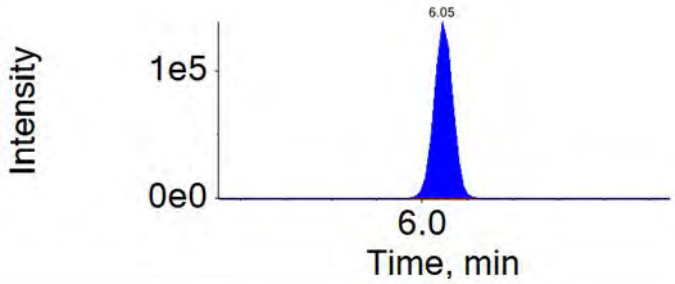


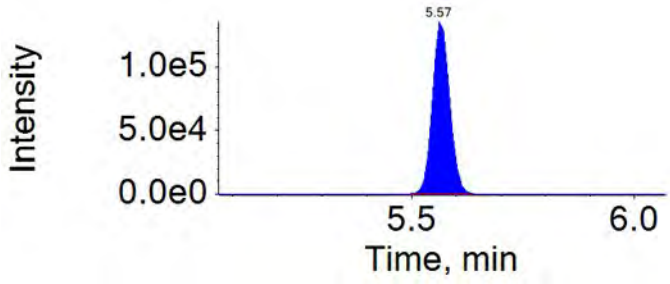
Extraction Standard: Ed5-NEtFOSAA	Injection Standard: 13C2-PFDA
589.0 / 419.0	515.0 / 470.0



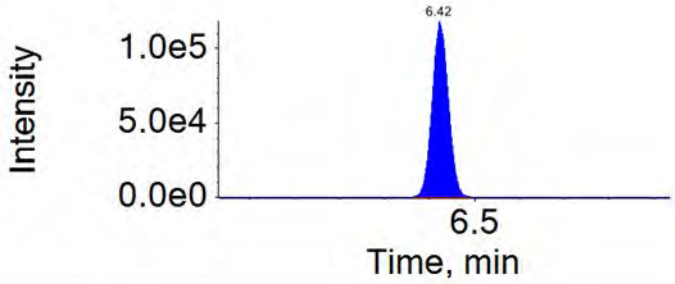
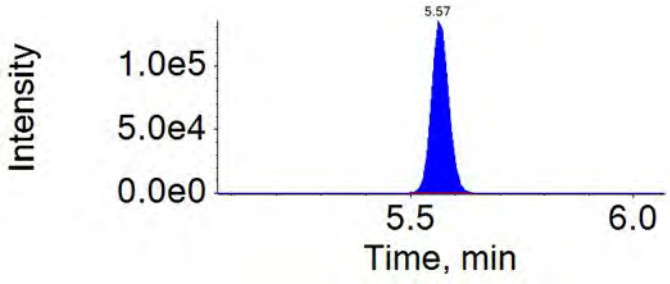


Extraction Standard: E13C2-PFDoDA	Injection Standard: 13C2-PFDA
615.0 / 570.0	515.0 / 470.0



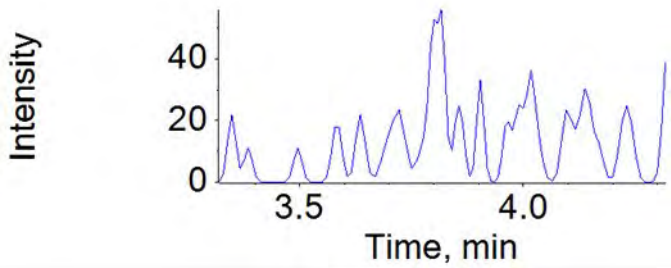


ICAL Name: 18NOV12DCAL **Result Table:** 18316011 11/14/2018 4:24:36 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

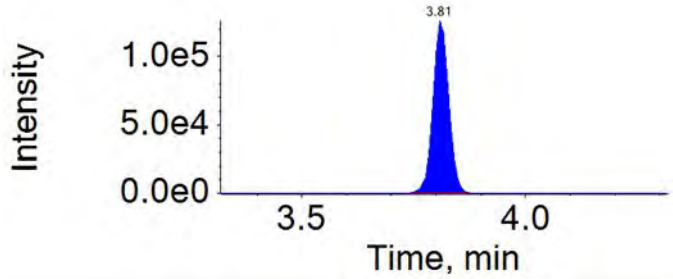
Extraction Standard: E13C2-PFTeDA	Injection Standard: 13C2-PFDA
715.0 / 670.0 	515.0 / 470.0 

ICAL Name: 18NOV12DCAL **Result Table:** 18316011 11/14/2018 4:24:36 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

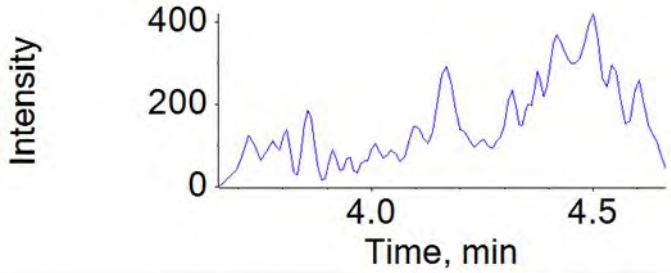
Analyte: PFBS
299.0 / 80.0



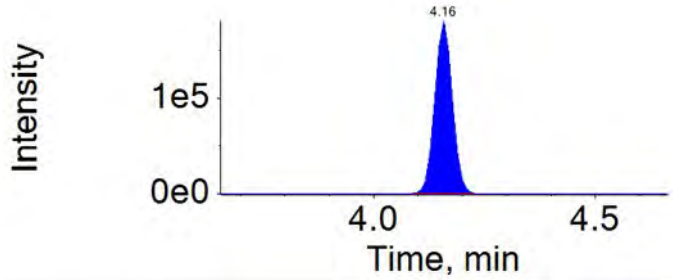
Extraction Standard: 13C3-PFBS
302.0 / 80.0



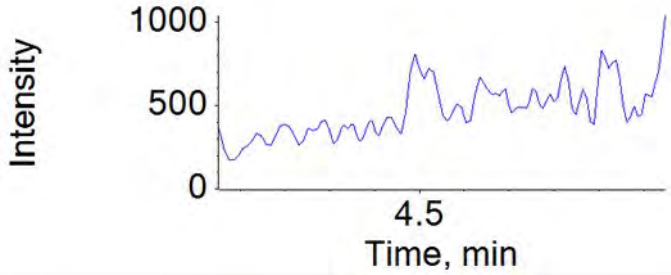
Analyte: PFHxA
313.0 / 269.0



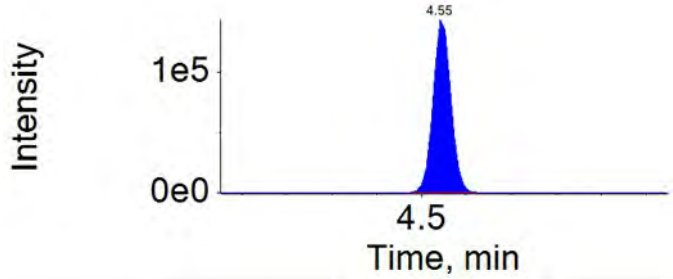
Extraction Standard: 13C5-PFHxA
318.0 / 273.0



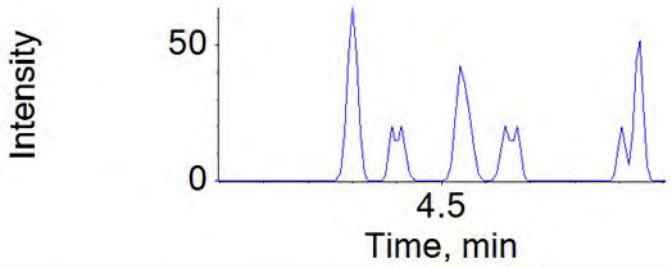
Analyte: PFHpA
363.0 / 319.0



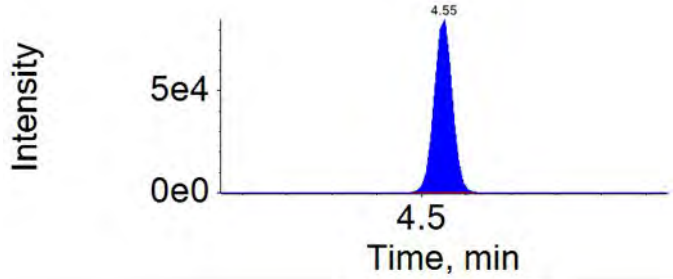
Extraction Standard: 13C4-PFHpA
367.0 / 322.0



Analyte: PFHxS
399.0 / 80.0



Extraction Standard: 13C3-PFHxS
402.0 / 80.0

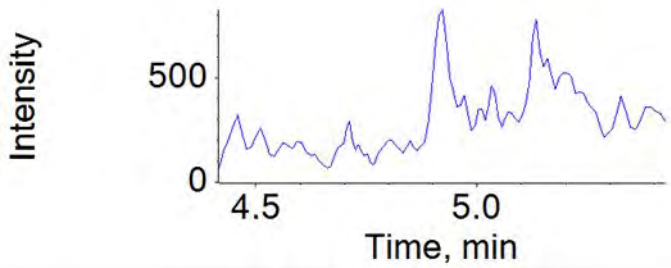


APPROVED
By MCD at 4:51 pm, 11/14/18

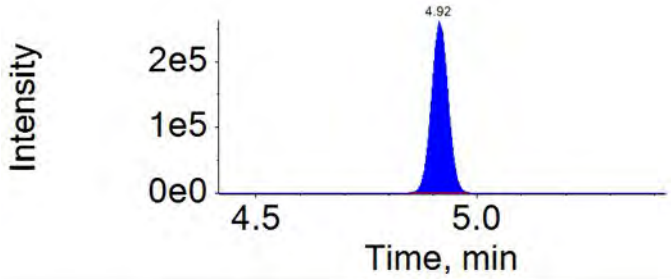
REVIEWED
By HMK at 12:22 pm, 11/15/18

ICAL Name: 18NOV12DCAL **Result Table:** 18316011 11/14/2018 4:24:36 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

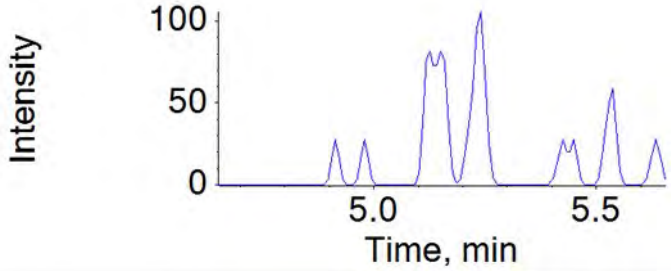
Analyte: PFOA
413.0 / 369.0



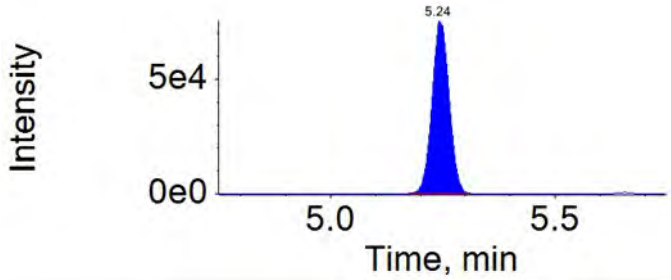
Extraction Standard: 13C8-PFOA
421.0 / 376.0



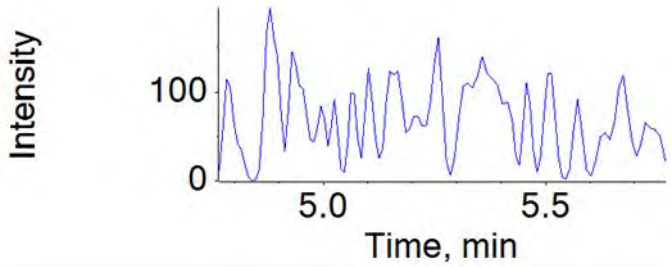
Analyte: PFOS
499.0 / 80.0



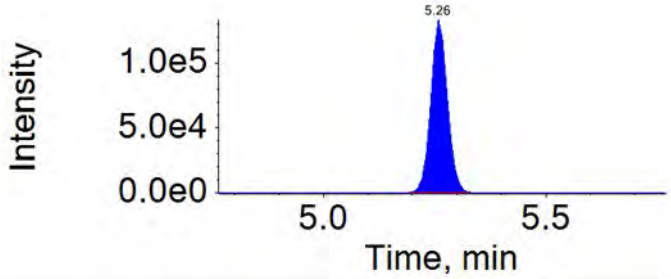
Extraction Standard: 13C8-PFOS
507.0 / 80.0



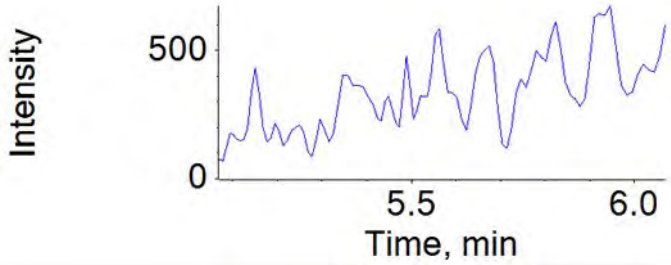
Analyte: PFNA
463.0 / 419.0



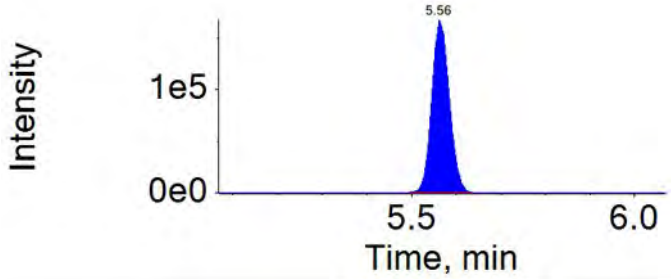
Extraction Standard: 13C9-PFNA
472.0 / 427.0



Analyte: PFDA
513.0 / 469.0

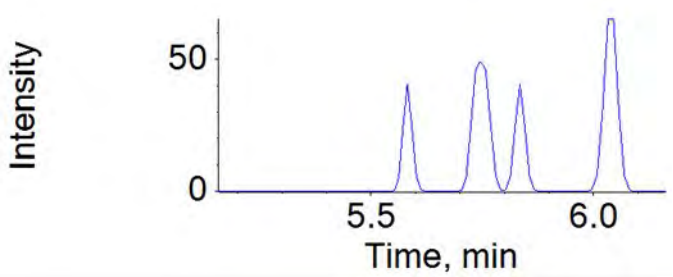


Extraction Standard: 13C6-PFDA
519.0 / 474.0

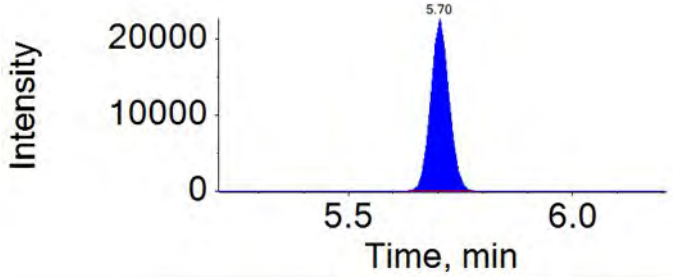


ICAL Name: 18NOV12DCAL **Result Table:** 18316011 11/14/2018 4:24:36 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

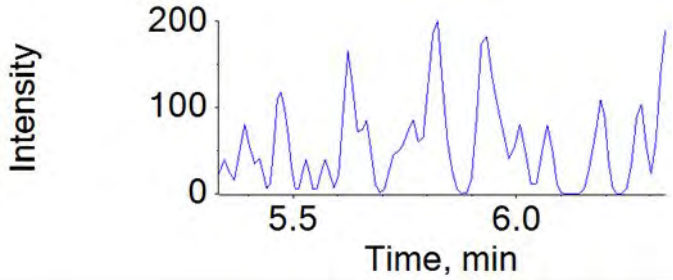
Analyte: NMeFOSAA
570.0 / 419.0



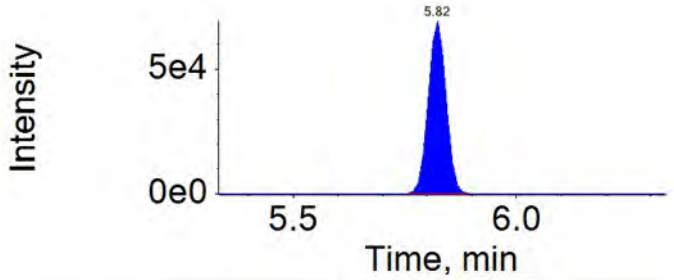
Extraction Standard: d3-NMeFOSAA
573.0 / 419.0



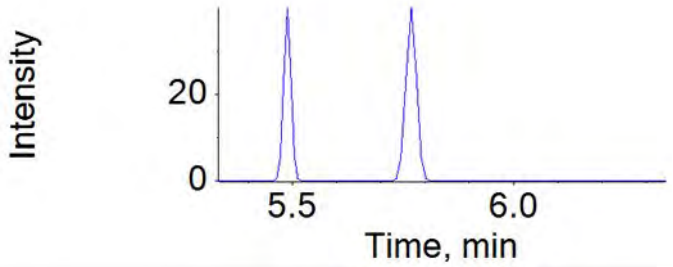
Analyte: PFUnDA
563.0 / 519.0



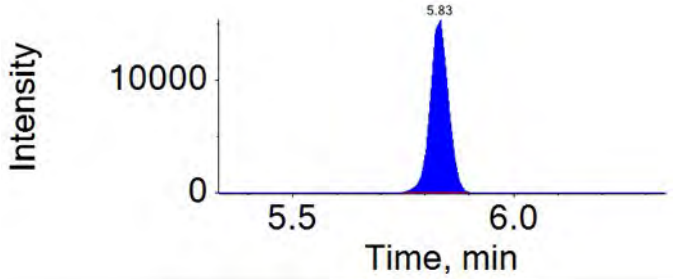
Extraction Standard: 13C7-PFUnDA
570.0 / 525.0



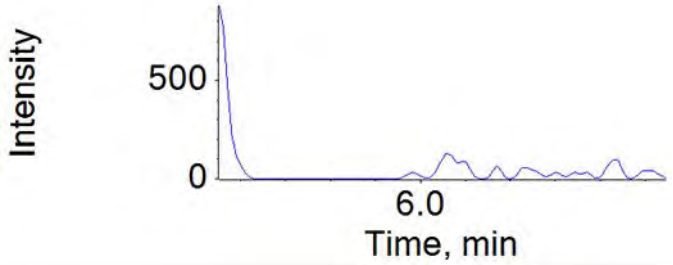
Analyte: NEtFOSAA
584.0 / 419.0



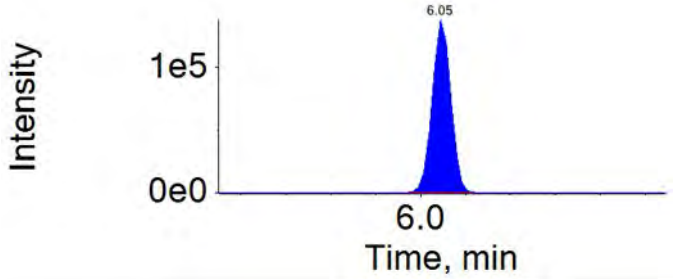
Extraction Standard: d5-NEtFOSAA
589.0 / 419.0



Analyte: PFDoDA
613.0 / 569.0



Extraction Standard: 13C2-PFDoDA
615.0 / 570.0

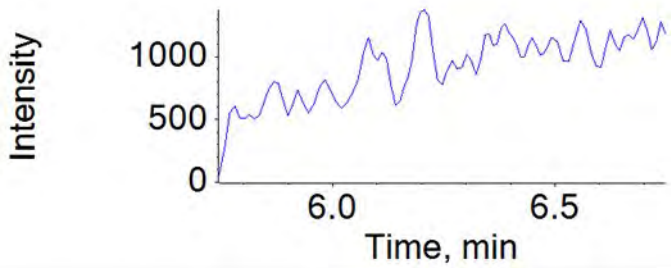


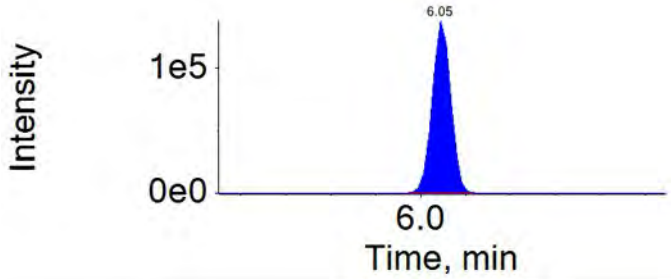
APPROVED
By MCD at 4:51 pm, 11/14/18

REVIEWED
By HMK at 12:22 pm, 11/15/18

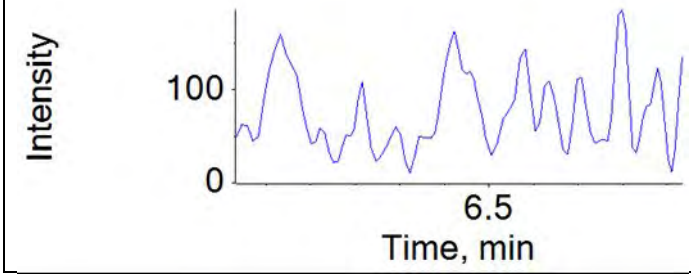
ICAL Name: 18NOV12DCAL **Result Table:** 18316011 11/14/2018 4:24:36 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

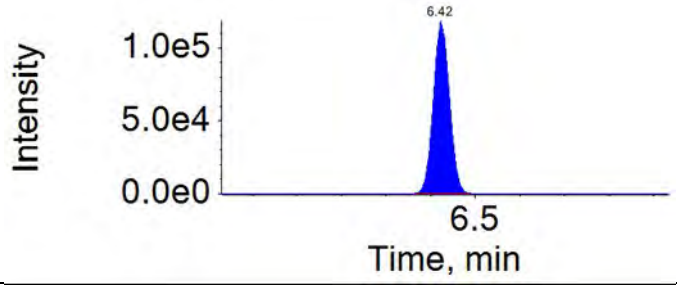
Analyte: PFTrDA	Extraction Standard: 13C2-PFDoDA
663.0 / 619.0	615.0 / 570.0





Analyte: PFTeDA	Extraction Standard: 13C2-PFTeDA
713.0 / 669.0	715.0 / 670.0





APPROVED
By MCD at 4:51 pm, 11/14/18

REVIEWED
By HMK at 12:22 pm, 11/15/18

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LC-MS/MS Analysis Report

Printed: 11/14/2018 4:29:00 PM
Template: IonRatio18OCT10

Ion Ratio Report

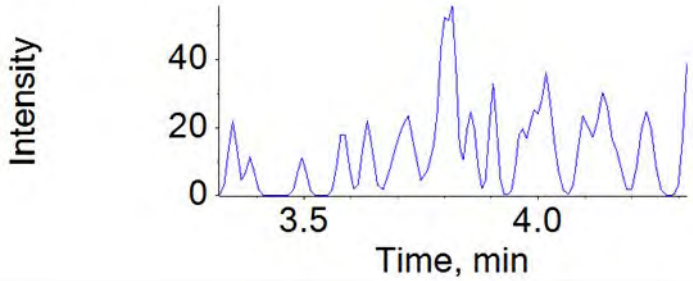
Sample Name: 9885099 **Instrument Name:** LM27631 **File Name:** 18NOV13D-66.wiff

Component Name	RT	RRT	Analyte Area Response	Int Typ	Expected Ion Ratio	Ion Ratio	Ion Ratio % Diff	Ion Ratio Limit	Ion Ratio OOS
PFBS	N/A	N/A	N/A	A	N/A	N/A			
PFBS_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFHxA	N/A	N/A	N/A	A	N/A	N/A			
PFHxA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFHpA	N/A	N/A	N/A	A	N/A	N/A			
PFHpA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFHxS	N/A	N/A	N/A	A	N/A	N/A			
PFHxS_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFOA	N/A	N/A	N/A	A	N/A	N/A			
PFOA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFOS	N/A	N/A	N/A	A	N/A	N/A			
PFOS_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFNA	N/A	N/A	N/A	A	N/A	N/A			
PFNA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFDA	N/A	N/A	N/A	A	N/A	N/A			
PFDA_2	N/A	N/A	N/A	A	N/A	N/A		50	
NMeFOSAA	N/A	N/A	N/A	A	N/A	N/A			
NMeFOSAA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFUnDA	N/A	N/A	N/A	A	N/A	N/A			
PFUnDA_2	N/A	N/A	N/A	A	N/A	N/A		50	
NEtFOSAA	N/A	N/A	N/A	A	N/A	N/A			
NEtFOSAA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFDoDA	N/A	N/A	N/A	A	N/A	N/A			
PFDoDA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFTrDA	N/A	N/A	N/A	A	N/A	N/A			
PFTrDA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFTeDA	N/A	N/A	N/A	A	N/A	N/A			
PFTeDA_2	N/A	N/A	N/A	A	N/A	N/A		50	

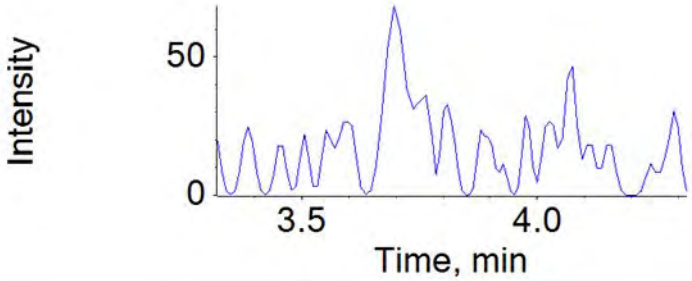
APPROVED
By MCD at 4:51 pm, 11/14/18

REVIEWED
By HMK at 12:22 pm, 11/15/18

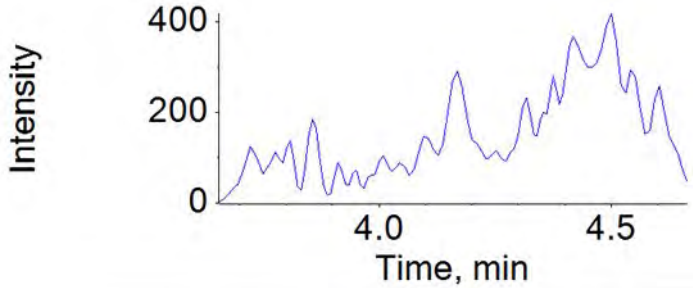
Component: PFBS
Primary Mass: 299.0 / 80.0



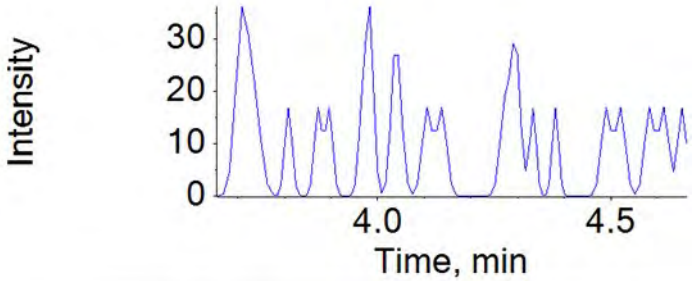
Component: PFBS_2
Secondary Mass: 299.0 / 99.0



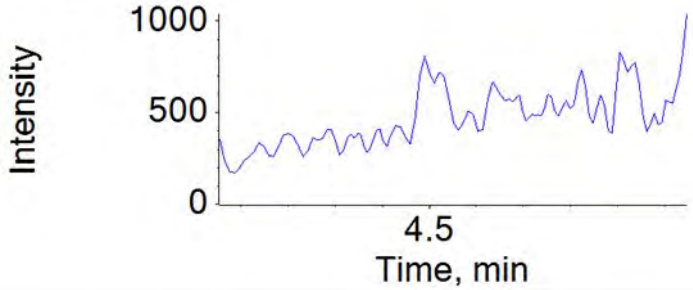
Component: PFHxA
Primary Mass: 313.0 / 269.0



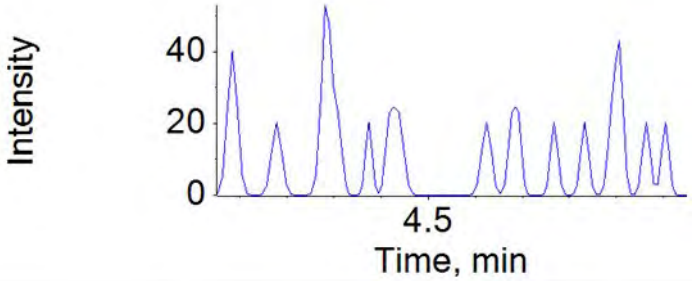
Component: PFHxA_2
Secondary Mass: 313.0 / 119.0



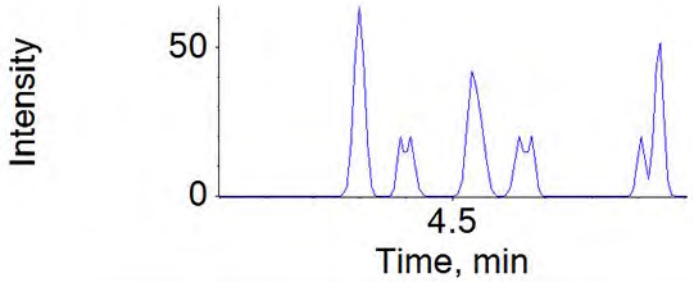
Component: PFHpA
Primary Mass: 363.0 / 319.0



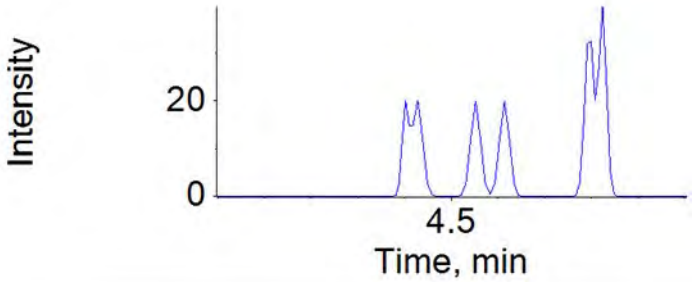
Component: PFHpA_2
Secondary Mass: 363.0 / 169.0



Component: PFHxS
Primary Mass: 399.0 / 80.0



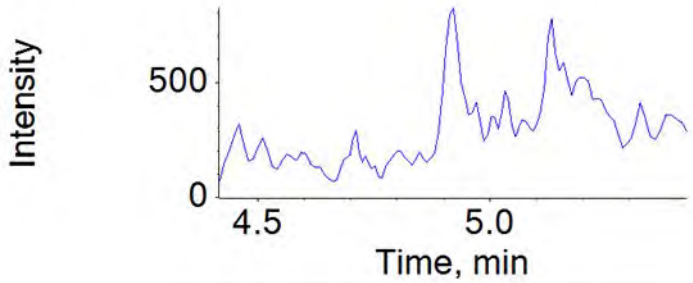
Component: PFHxS_2
Secondary Mass: 399.0 / 99.0



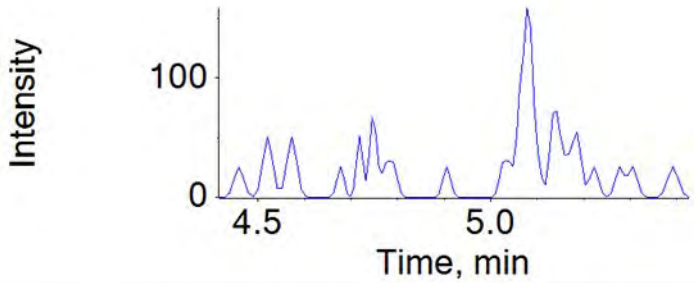
APPROVED
By MCD at 4:51 pm, 11/14/18

REVIEWED
By HMK at 12:22 pm, 11/15/18

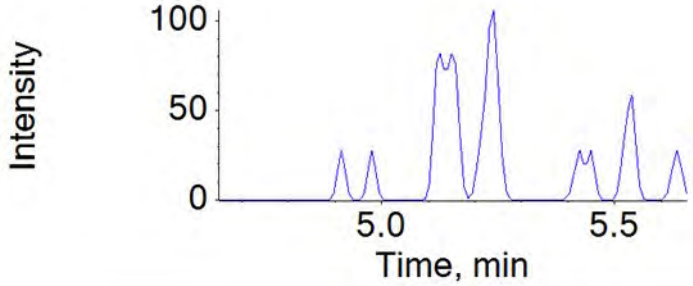
Component: PFOA
Primary Mass: 413.0 / 369.0



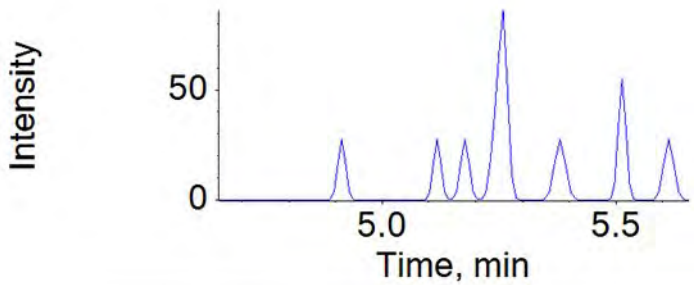
Component: PFOA_2
Secondary Mass: 413.0 / 169.0



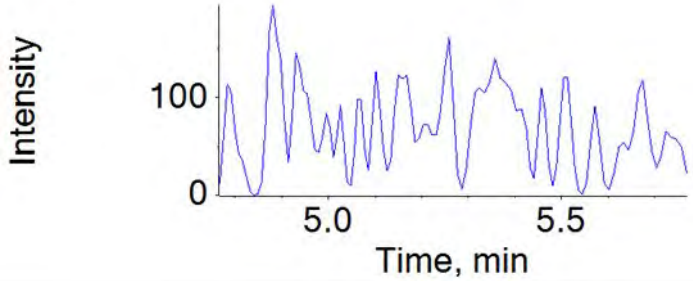
Component: PFOS
Primary Mass: 499.0 / 80.0



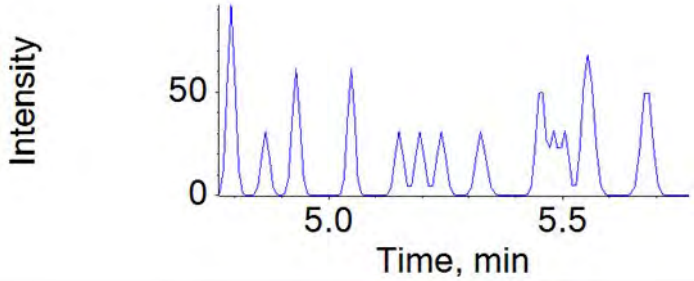
Component: PFOS_2
Secondary Mass: 499.0 / 99.0



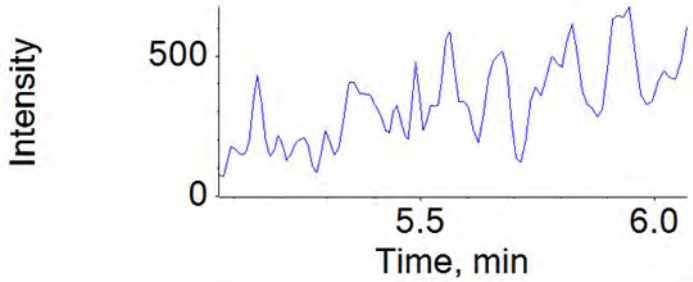
Component: PFNA
Primary Mass: 463.0 / 419.0



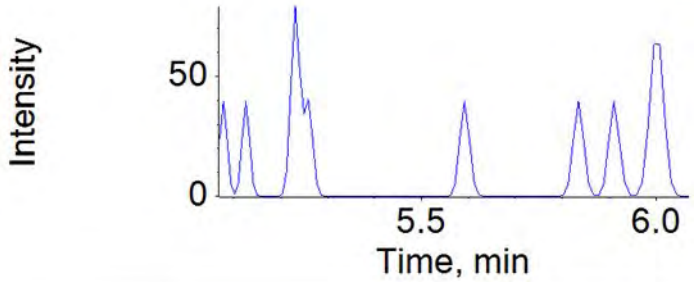
Component: PFNA_2
Secondary Mass: 463.0 / 169.0



Component: PFDA
Primary Mass: 513.0 / 469.0



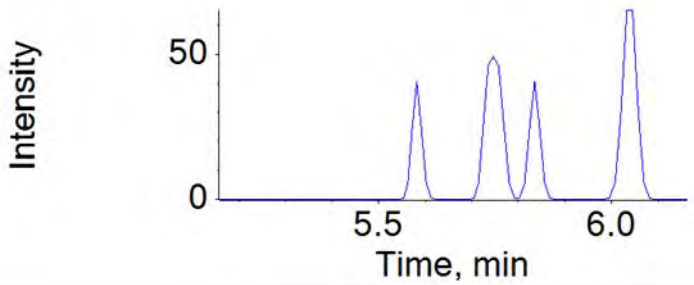
Component: PFDA_2
Secondary Mass: 513.0 / 169.0



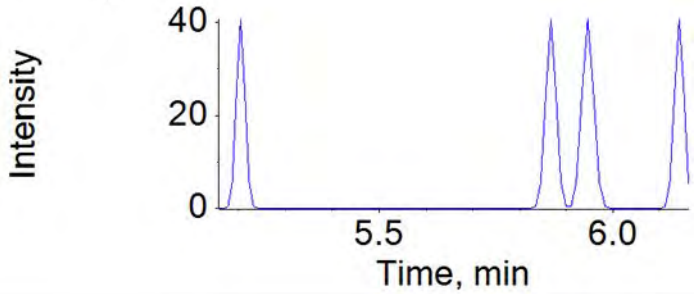
APPROVED
By MCD at 4:51 pm, 11/14/18

REVIEWED
By HMK at 12:22 pm, 11/15/18

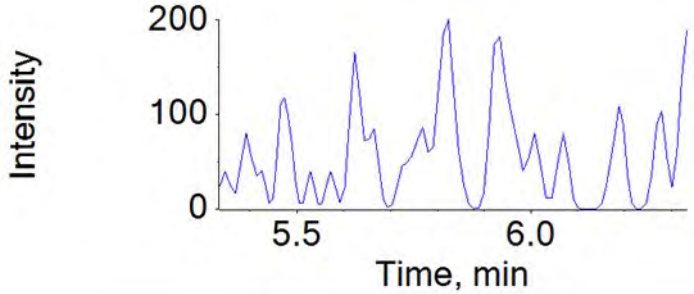
Component: NMeFOSAA
Primary Mass: 570.0 / 419.0



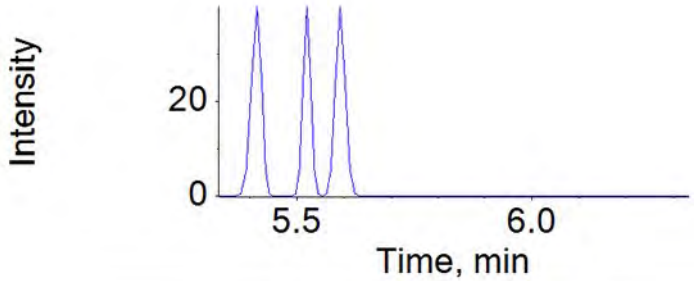
Component: NMeFOSAA_2
Secondary Mass: 570.0 / 483.0



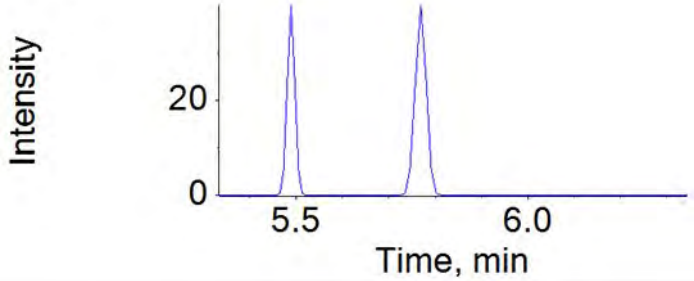
Component: PFUnDA
Primary Mass: 563.0 / 519.0



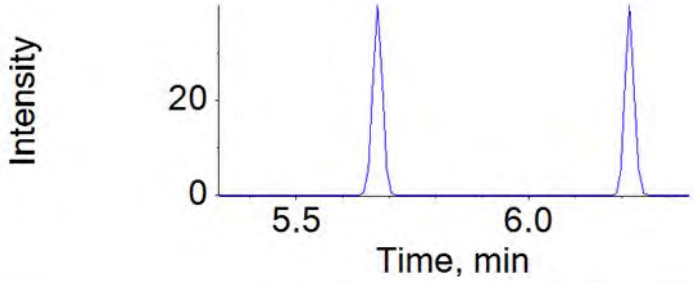
Component: PFUnDA_2
Secondary Mass: 563.0 / 169.0



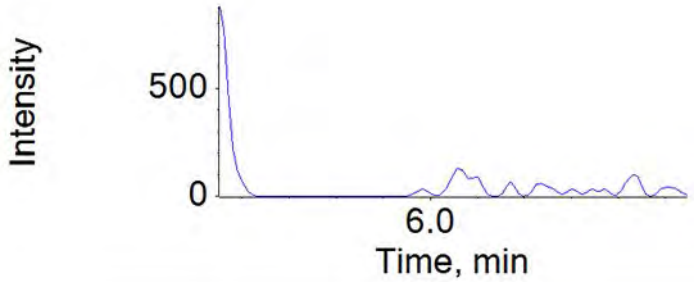
Component: NEtFOSAA
Primary Mass: 584.0 / 419.0



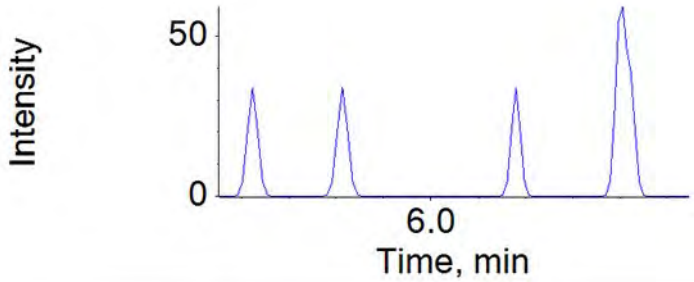
Component: NEtFOSAA_2
Secondary Mass: 584.0 / 526.0



Component: PFDoDA
Primary Mass: 613.0 / 569.0



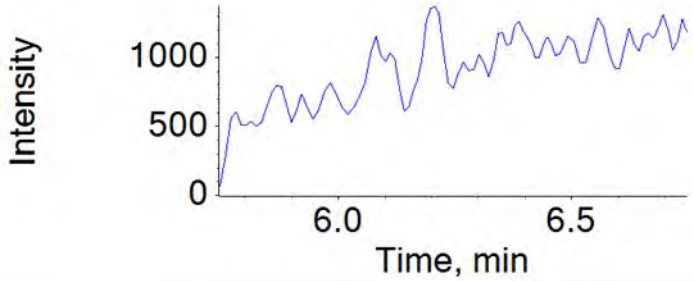
Component: PFDoDA_2
Secondary Mass: 613.0 / 169.0



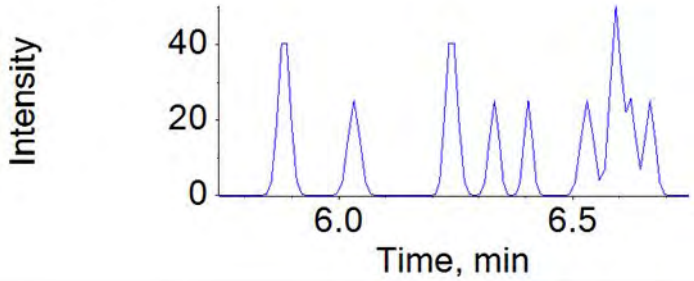
APPROVED
By MCD at 4:51 pm, 11/14/18

REVIEWED
By HMK at 12:22 pm, 11/15/18

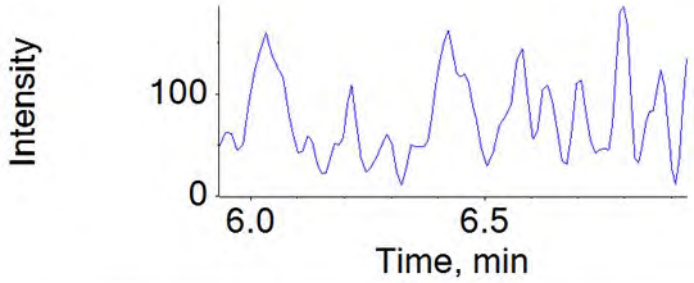
Component: PFTrDA
Primary Mass: 663.0 / 619.0



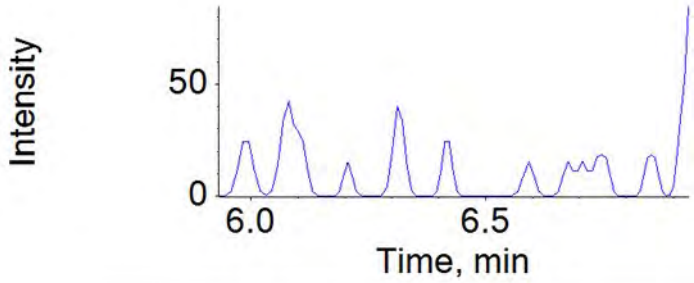
Component: PFTrDA_2
Secondary Mass: 663.0 / 169.0



Component: PFTeDA
Primary Mass: 713.0 / 669.0



Component: PFTeDA_2
Secondary Mass: 713.0 / 169.0



APPROVED
By MCD at 4:51 pm, 11/14/18

REVIEWED
By HMK at 12:22 pm, 11/15/18

ICAL Name: 18NOV12DCAL **Result Table:** 18316011 11/14/2018 4:24:36 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Sample Name:	9885100			**Data File:**		18NOV13D-67.wiff
Sample ID:	EPA 537 mod QSM 5.1 table B-15 18316011 OU1-Bldg50-S-01-05 Grab Soil			**Acquis Date:**		2018-11-13T19:38:50
Sample Type:	Unknown			**Instrument:**		LM27631
Vial Position:	64			**Acquis Method:**		18AUG13_3uL.dam
Injection Vol:	3.00			**Result Table:**		18316011
QMethod File:	18AUG20QM			**ICAL Name:**		18NOV12DCAL
Batch Number:	18316011			**Operator:**		MCD7824
Sample Wt.:	1.10000			**Dilution Factor:**		1.00
Sample Vol.:	1.000			**Prep Factor:**		2.000

Injection Standard Peak Table

Injection Standard Area Reference File: 18NOV13D-05

Injection Standard Name	Inj Std Conc	Injection Std Peak Area	Rreference Injection Standard Area	Injection Std %Diff	Injection Std %Diff Limit	Injection Std %Diff OOS
13C3-PFBA	5.0	735207.9	661126.9	11	50	
13C2-PFOA	5.0	540581.5	466902.6	16	50	
13C4-PFOS	4.8	272969.5	247446.9	10	50	
13C2-PFDA	5.0	321410.9	295381.6	9	50	

Extraction Standard Peak Table

Extraction Standard Name	Ext Std Area	Inj Std Name	Inj Std Area	Area Ratio	Ext Std Conc	Ext Std Result	Ext Std %REC	Ext Std %REC Limit	Ext Std OOS
E13C3-PFBS	352343.4	13C3-PFBA	735207.9	0.479	8.455	6.151	73	50-150	
E13C5-PFHxA	543439.3	13C2-PFOA	540581.5	1.005	9.091	6.603	73	50-150	
E13C3-PFHxS	262210.8	13C2-PFOA	540581.5	0.485	8.600	6.052	70	50-150	
E13C4-PFHpA	429532.9	13C2-PFOA	540581.5	0.795	9.091	6.509	72	50-150	
E13C8-PFOA	744293.7	13C2-PFOA	540581.5	1.377	9.091	6.897	76	50-150	
E13C8-PFOS	233304.4	13C4-PFOS	272969.5	0.855	8.691	6.885	79	50-150	
E13C9-PFNA	390816.6	13C4-PFOS	272969.5	1.432	9.091	7.258	80	50-150	
E13C6-PFDA	518256.1	13C2-PFDA	321410.9	1.612	9.091	6.841	75	50-150	
Ed3-NMeFOSAA	67022.2	13C2-PFDA	321410.9	0.209	9.091	6.844	75	50-150	
E13C7-PFUnDA	226506.4	13C2-PFDA	321410.9	0.705	9.091	7.439	82	50-150	
Ed5-NEtFOSAA	52664.1	13C2-PFDA	321410.9	0.164	9.091	6.303	69	50-150	
E13C2-PFDoDA	470031.9	13C2-PFDA	321410.9	1.462	9.091	6.903	76	50-150	
E13C2-PFTeDA	340080.7	13C2-PFDA	321410.9	1.058	9.091	6.754	74	50-150	

APPROVED
By MCD at 4:51 pm, 11/14/18

REVIEWED
By HMK at 12:22 pm, 11/15/18

ICAL Name: 18NOV12DCAL **Result Table:** 18316011 11/14/2018 4:24:36 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

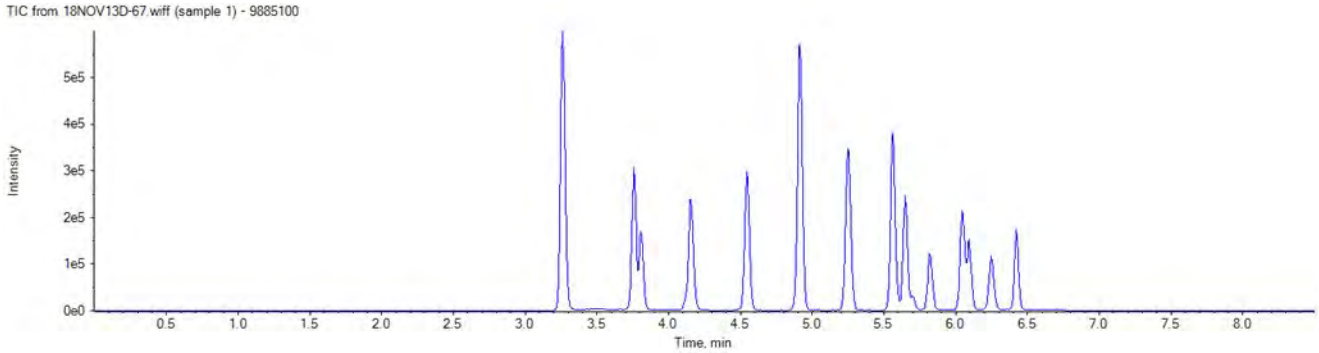
Analyte Quantitation Peak Table

Sample Name: 9885100 **Instrument Name:** LM27631 **File Name:** 18NOV13D-67.wiff

Sample Wt	Sample Vol	Dilution Factor	PrepFactor
1.10000	1.000	1.00	2.000

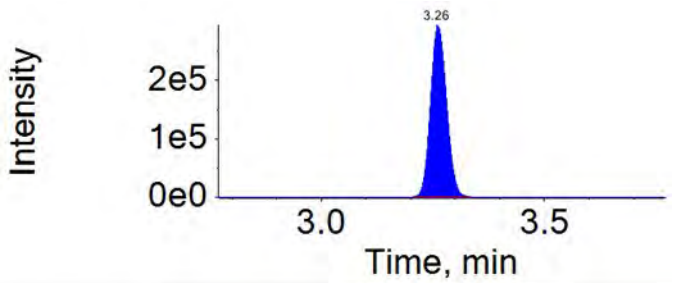
Analyte Name	RT	RRT	Analyte Area Response	E	Int Typ	ES Name	ES RT	ES Area Response	Area Ratio	Sample Result (ng/g)
PFBS	N/A	N/A	N/A		A	13C3-PFBS	3.81	352343.4	N/A	
PFHxA	N/A	N/A	N/A		A	13C5-PFHxA	4.16	543439.3	N/A	
PFHpA	N/A	N/A	N/A		A	13C4-PFHpA	4.54	429532.9	N/A	
PFHxS	N/A	N/A	N/A		A	13C3-PFHxS	4.55	262210.8	N/A	
PFOA	N/A	N/A	N/A		A	13C8-PFOA	4.91	744293.7	N/A	
PFOS	N/A	N/A	N/A		A	13C8-PFOS	5.24	233304.4	N/A	
PFNA	N/A	N/A	N/A		A	13C9-PFNA	5.26	390816.6	N/A	
PFDA	N/A	N/A	N/A		A	13C6-PFDA	5.56	518256.1	N/A	
NMeFOSAA	N/A	N/A	N/A		A	d3-NMeFOSAA	5.70	67022.2	N/A	
PFUnDA	N/A	N/A	N/A		A	13C7-PFUnDA	5.82	226506.4	N/A	
NEtFOSAA	N/A	N/A	N/A		A	d5-NEtFOSAA	5.83	52664.1	N/A	
PFDoDA	N/A	N/A	N/A		A	13C2-PFDoDA	6.05	470031.9	N/A	
PFTrDA	N/A	N/A	N/A		A	13C2-PFDoDA	6.05	470031.9	N/A	
PFTeDA	N/A	N/A	N/A		A	13C2-PFTeDA	6.42	340080.7	N/A	

Total Ion Chromatogram

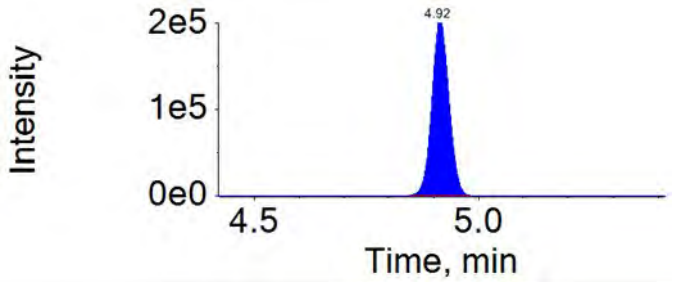


ICAL Name: 18NOV12DCAL **Result Table:** 18316011 11/14/2018 4:24:36 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

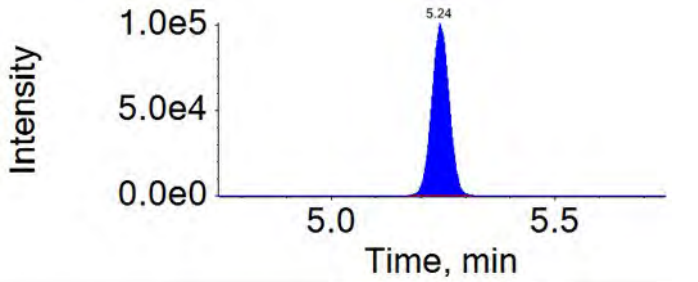
Injection Standard: 13C3-PFBA
216.0 / 172.0



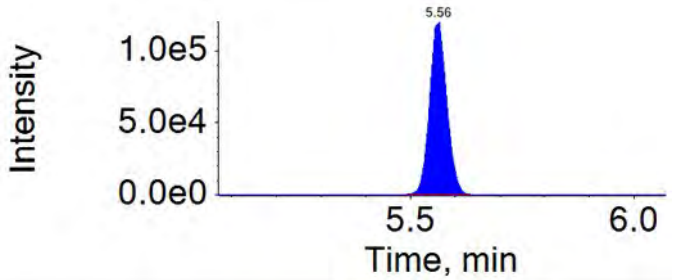
Injection Standard: 13C2-PFOA
415.0 / 370.0



Injection Standard: 13C4-PFOS
503.0 / 80.0

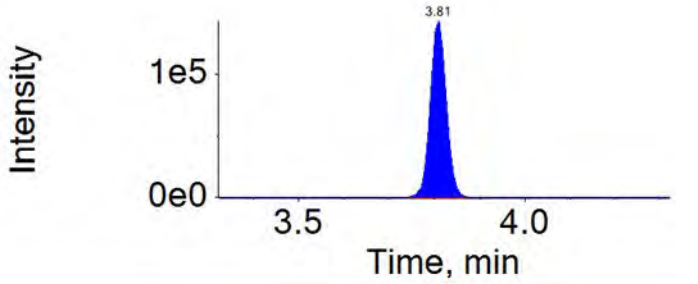


Injection Standard: 13C2-PFDA
515.0 / 470.0

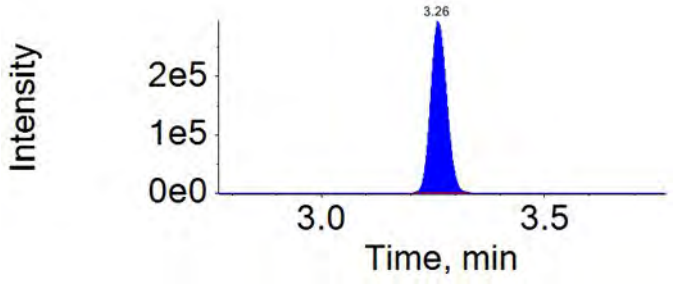


ICAL Name: 18NOV12DCAL **Result Table:** 18316011 11/14/2018 4:24:36 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

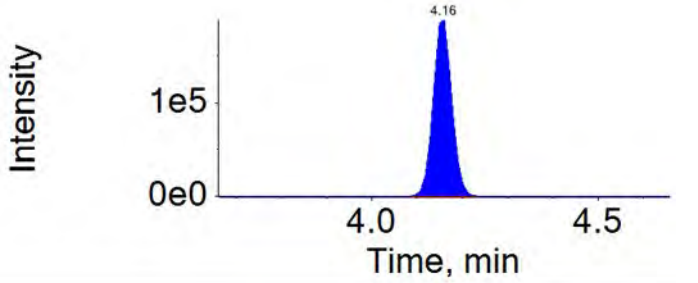
Extraction Standard: E13C3-PFBS
302.0 / 80.0



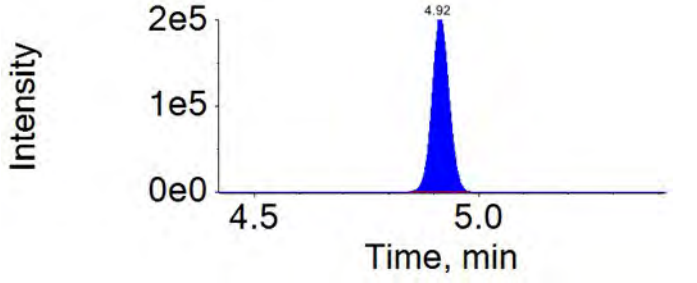
Injection Standard: 13C3-PFBA
216.0 / 172.0



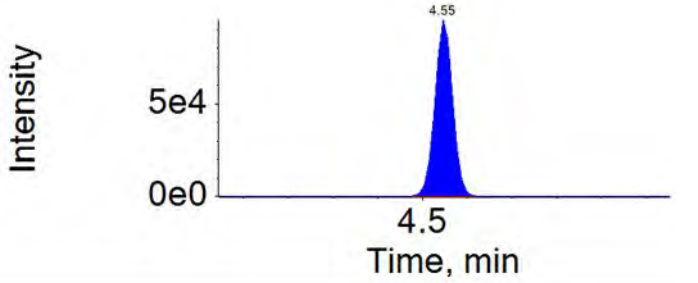
Extraction Standard: E13C5-PFHxA
318.0 / 273.0



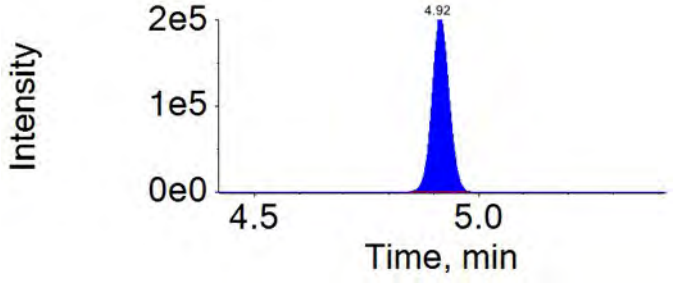
Injection Standard: 13C2-PFOA
415.0 / 370.0



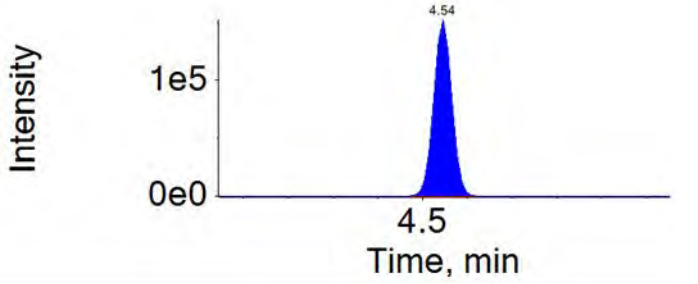
Extraction Standard: E13C3-PFHxS
402.0 / 80.0



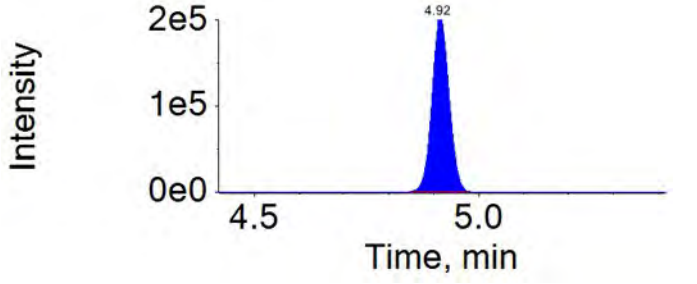
Injection Standard: 13C2-PFOA
415.0 / 370.0



Extraction Standard: E13C4-PFHpA
367.0 / 322.0



Injection Standard: 13C2-PFOA
415.0 / 370.0

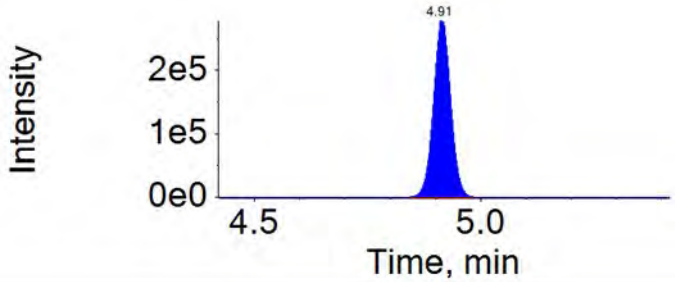


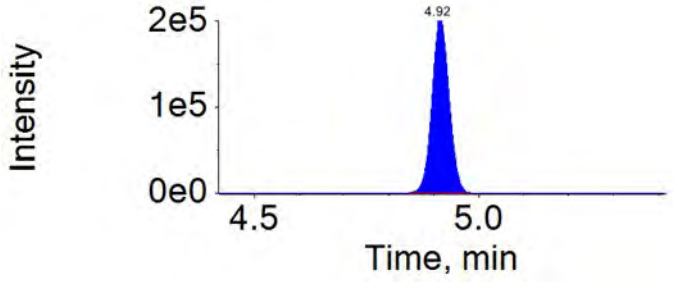
APPROVED
By MCD at 4:51 pm, 11/14/18

REVIEWED
By HMK at 12:22 pm, 11/15/18

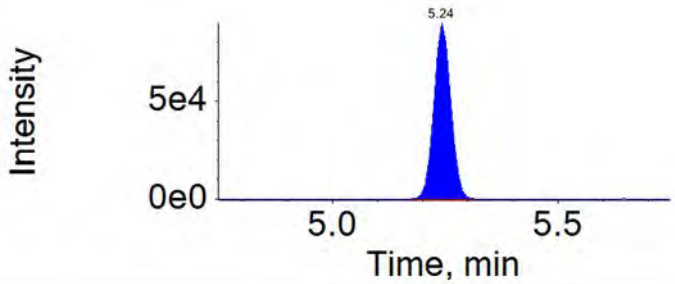
ICAL Name: 18NOV12DCAL **Result Table:** 18316011 11/14/2018 4:24:36 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

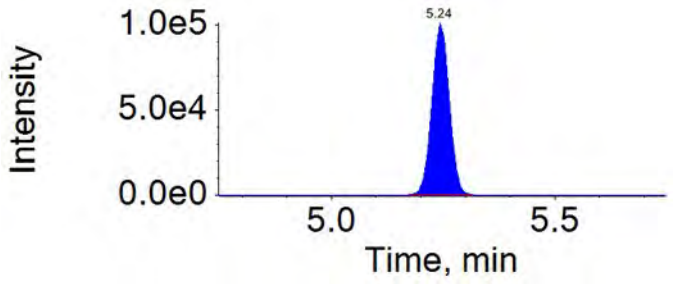
Extraction Standard: E13C8-PFOA	Injection Standard: 13C2-PFOA
421.0 / 376.0	415.0 / 370.0



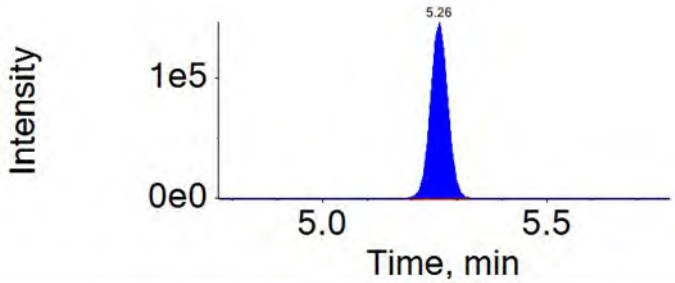


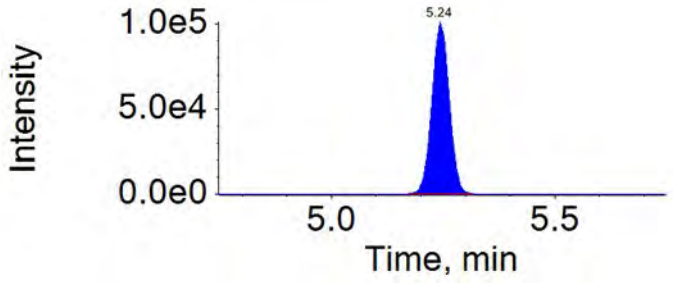
Extraction Standard: E13C8-PFOS	Injection Standard: 13C4-PFOS
507.0 / 80.0	503.0 / 80.0



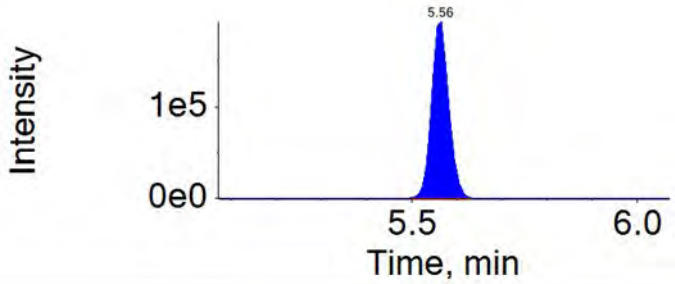


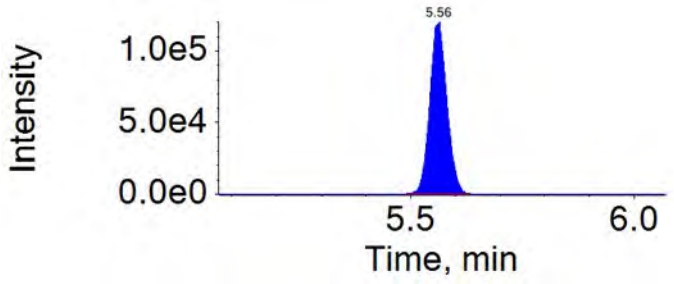
Extraction Standard: E13C9-PFNA	Injection Standard: 13C4-PFOS
472.0 / 427.0	503.0 / 80.0





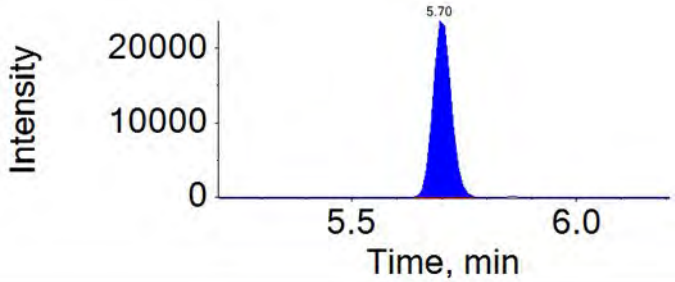
Extraction Standard: E13C6-PFDA	Injection Standard: 13C2-PFDA
519.0 / 474.0	515.0 / 470.0

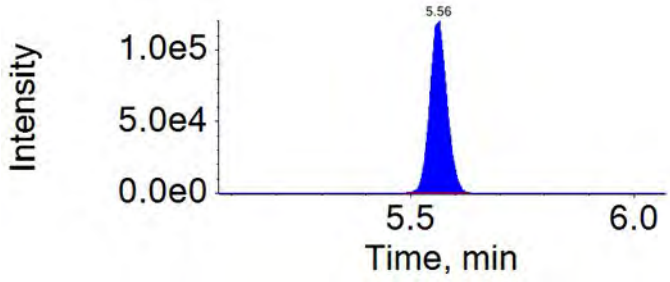




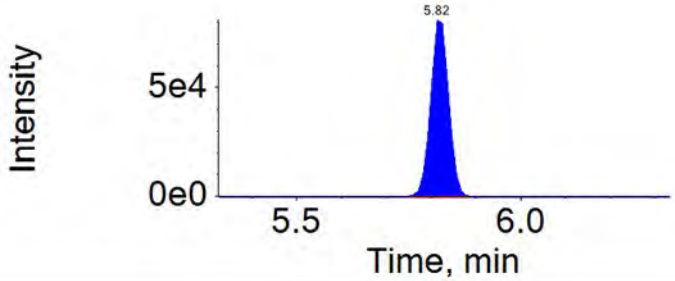
ICAL Name: 18NOV12DCAL **Result Table:** 18316011 11/14/2018 4:24:36 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

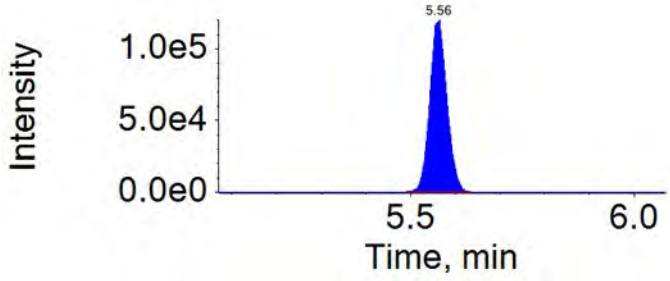
Extraction Standard: Ed3-NMeFOSAA	Injection Standard: 13C2-PFDA
573.0 / 419.0	515.0 / 470.0



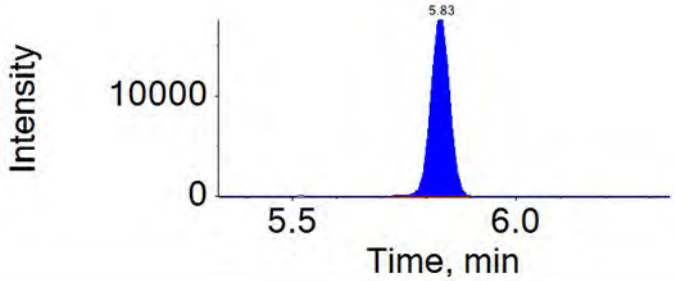


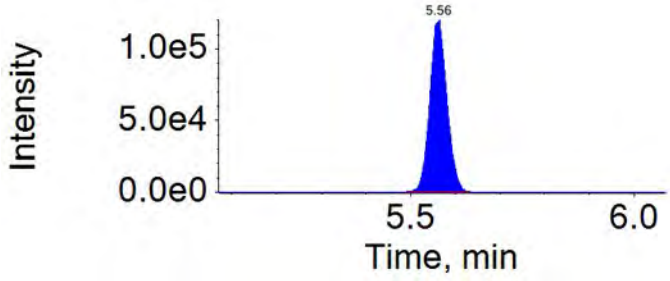
Extraction Standard: E13C7-PFUnDA	Injection Standard: 13C2-PFDA
570.0 / 525.0	515.0 / 470.0



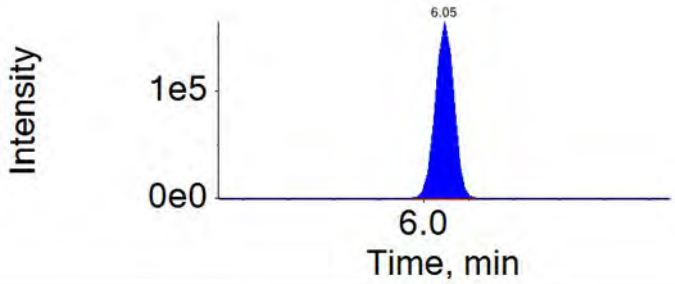


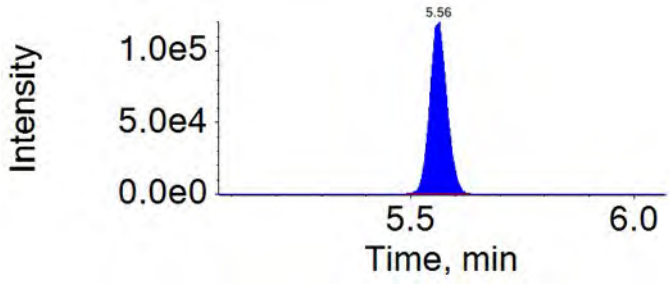
Extraction Standard: Ed5-NEtFOSAA	Injection Standard: 13C2-PFDA
589.0 / 419.0	515.0 / 470.0



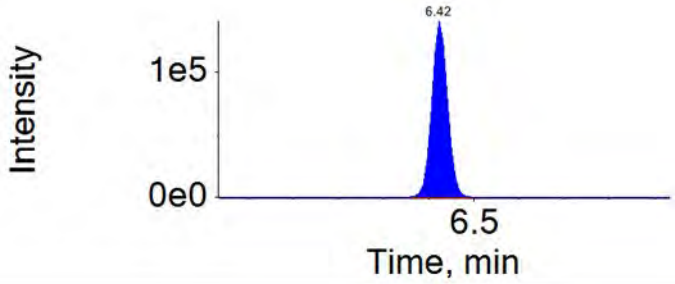
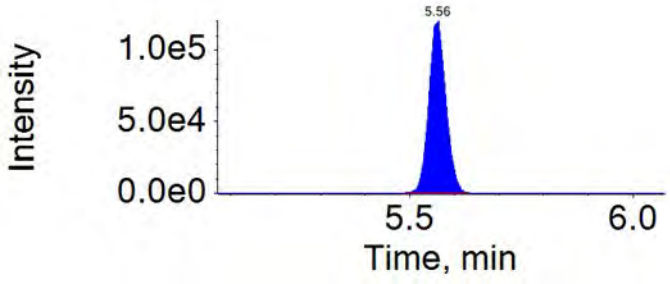


Extraction Standard: E13C2-PFDoDA	Injection Standard: 13C2-PFDA
615.0 / 570.0	515.0 / 470.0



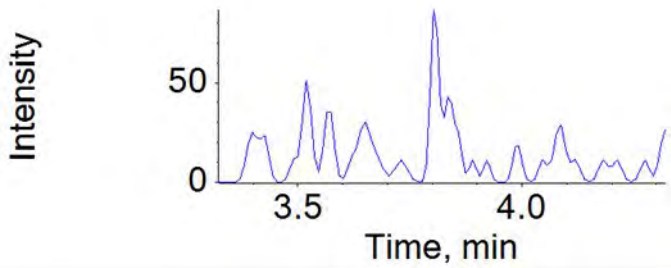


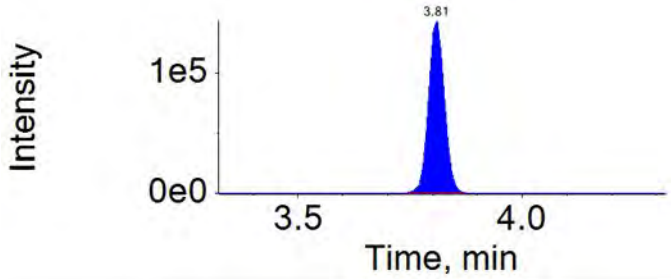
ICAL Name: 18NOV12DCAL **Result Table:** 18316011 11/14/2018 4:24:36 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Extraction Standard: E13C2-PFTeDA	Injection Standard: 13C2-PFDA
715.0 / 670.0 	515.0 / 470.0 

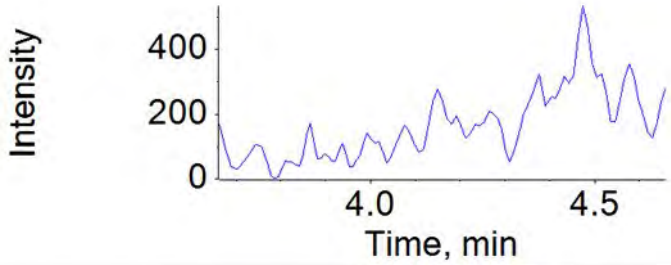
ICAL Name: 18NOV12DCAL **Result Table:** 18316011 11/14/2018 4:24:36 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

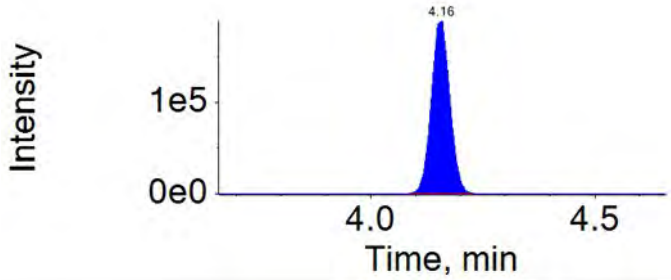
Analyte: PFBS	Extraction Standard: 13C3-PFBS
299.0 / 80.0	302.0 / 80.0



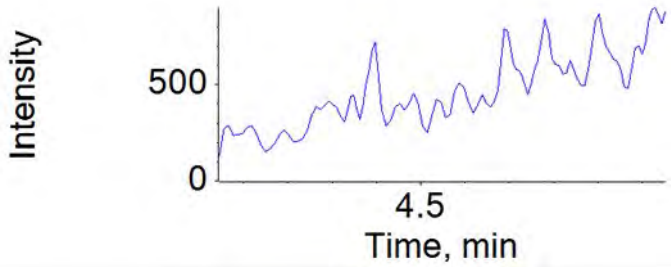


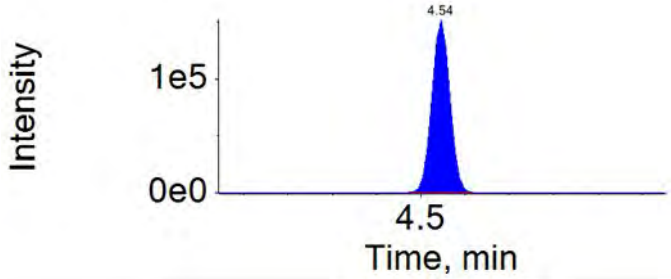
Analyte: PFHxA	Extraction Standard: 13C5-PFHxA
313.0 / 269.0	318.0 / 273.0



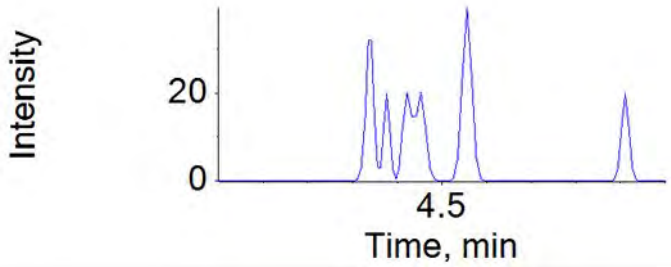


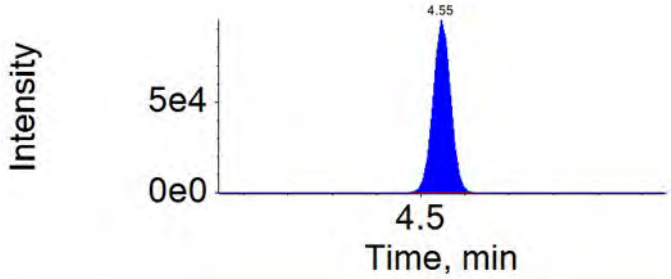
Analyte: PFHpA	Extraction Standard: 13C4-PFHpA
363.0 / 319.0	367.0 / 322.0





Analyte: PFHxS	Extraction Standard: 13C3-PFHxS
399.0 / 80.0	402.0 / 80.0



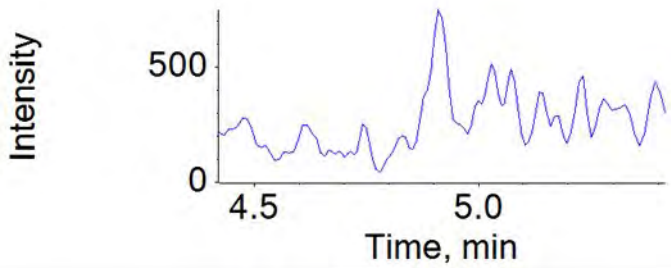


APPROVED
By MCD at 4:51 pm, 11/14/18

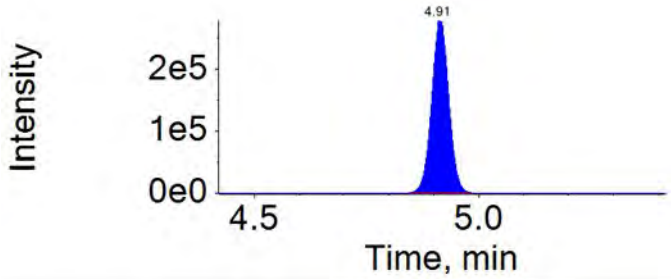
REVIEWED
By HMK at 12:22 pm, 11/15/18

ICAL Name: 18NOV12DCAL **Result Table:** 18316011 11/14/2018 4:24:36 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

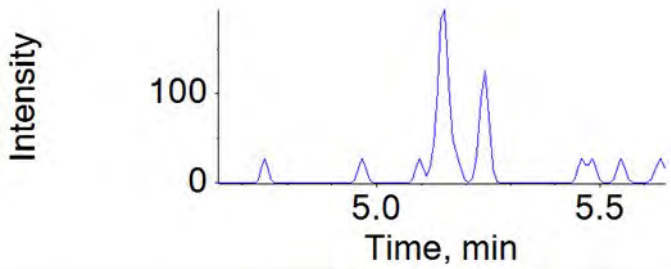
Analyte: PFOA
413.0 / 369.0



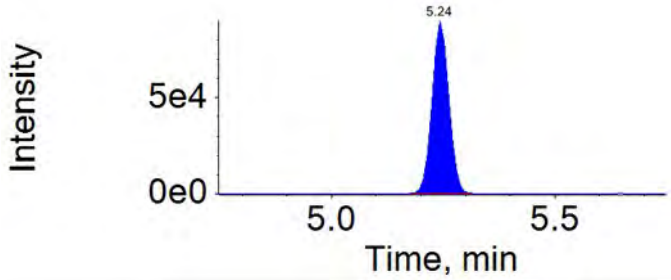
Extraction Standard: 13C8-PFOA
421.0 / 376.0



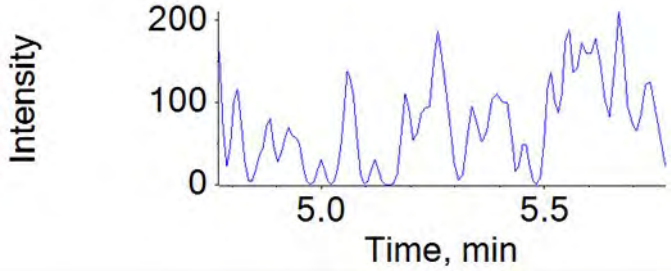
Analyte: PFOS
499.0 / 80.0



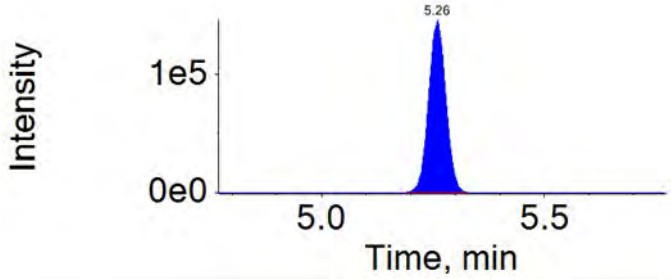
Extraction Standard: 13C8-PFOS
507.0 / 80.0



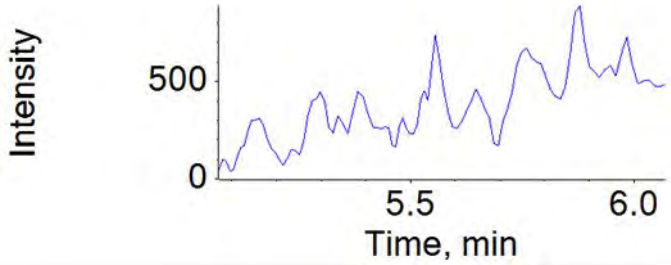
Analyte: PFNA
463.0 / 419.0



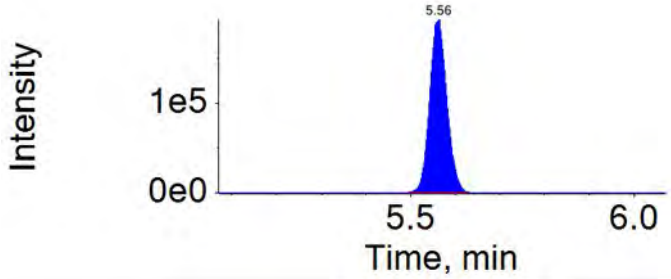
Extraction Standard: 13C9-PFNA
472.0 / 427.0



Analyte: PFDA
513.0 / 469.0

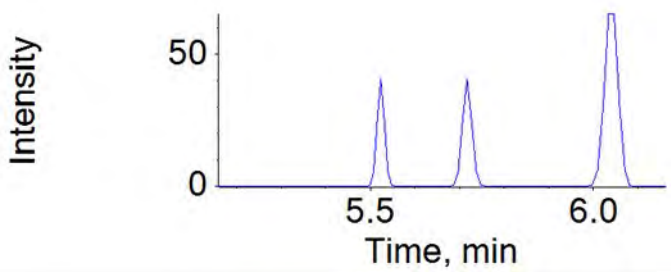


Extraction Standard: 13C6-PFDA
519.0 / 474.0

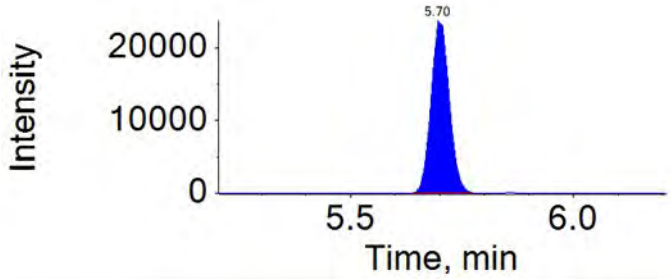


ICAL Name: 18NOV12DCAL **Result Table:** 18316011 11/14/2018 4:24:36 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

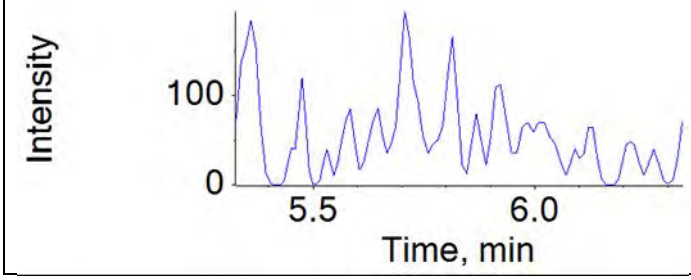
Analyte: NMeFOSAA
570.0 / 419.0



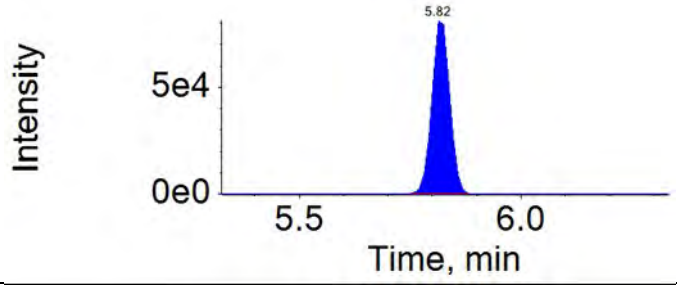
Extraction Standard: d3-NMeFOSAA
573.0 / 419.0



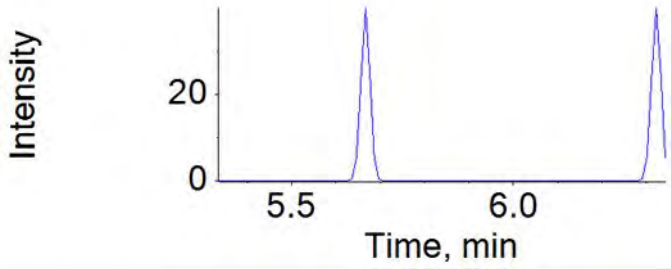
Analyte: PFUnDA
563.0 / 519.0



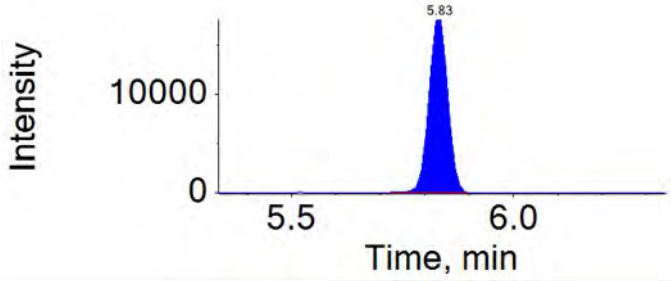
Extraction Standard: 13C7-PFUnDA
570.0 / 525.0



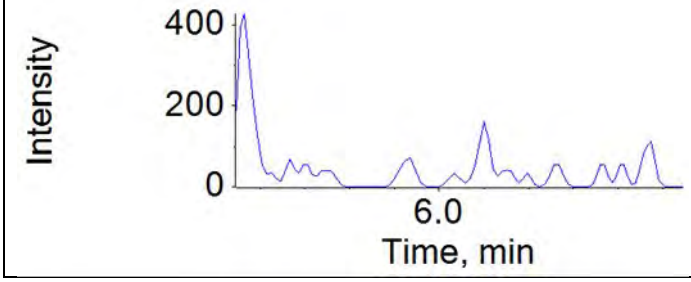
Analyte: NEtFOSAA
584.0 / 419.0



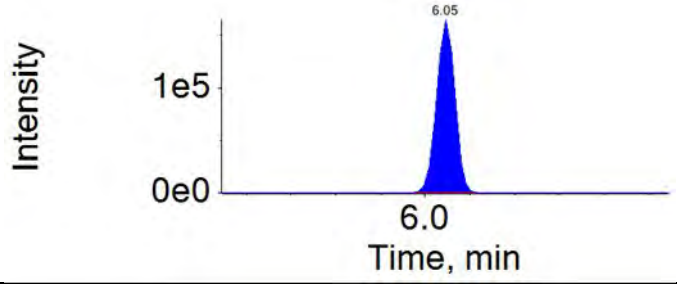
Extraction Standard: d5-NEtFOSAA
589.0 / 419.0



Analyte: PFDoDA
613.0 / 569.0



Extraction Standard: 13C2-PFDoDA
615.0 / 570.0

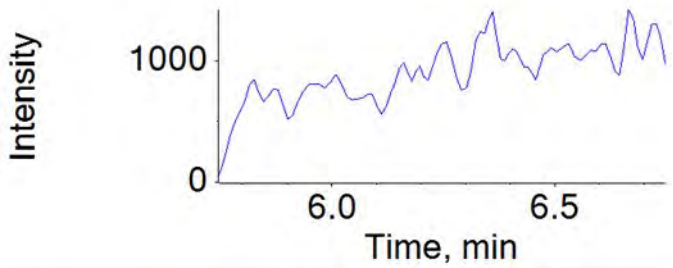


APPROVED
By MCD at 4:51 pm, 11/14/18

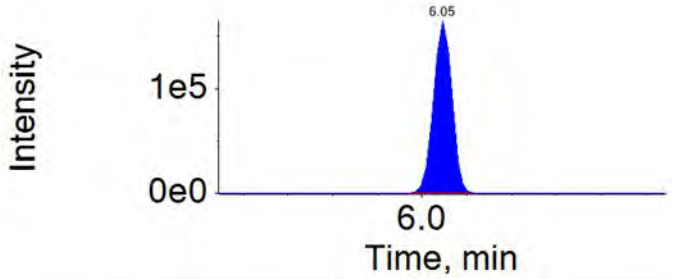
REVIEWED
By HMK at 12:22 pm, 11/15/18

ICAL Name: 18NOV12DCAL **Result Table:** 18316011 11/14/2018 4:24:36 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

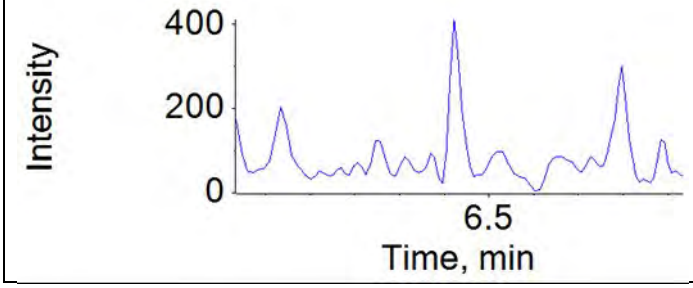
Analyte: PFTrDA
663.0 / 619.0



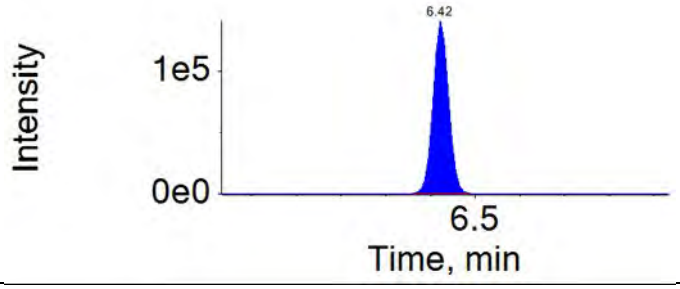
Extraction Standard: 13C2-PFDoDA
615.0 / 570.0



Analyte: PFTeDA
713.0 / 669.0



Extraction Standard: 13C2-PFTeDA
715.0 / 670.0



APPROVED
By MCD at 4:51 pm, 11/14/18

REVIEWED
By HMK at 12:22 pm, 11/15/18

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LC-MS/MS Analysis Report

Printed: 11/14/2018 4:29:00 PM
Template: IonRatio18OCT10

Ion Ratio Report

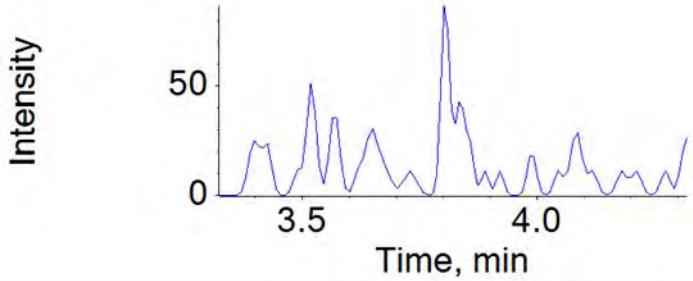
Sample Name: 9885100 **Instrument Name:** LM27631 **File Name:** 18NOV13D-67.wiff

Component Name	RT	RRT	Analyte Area Response	Int Typ	Expected Ion Ratio	Ion Ratio	Ion Ratio % Diff	Ion Ratio Limit	Ion Ratio OOS
PFBS	N/A	N/A	N/A	A	N/A	N/A			
PFBS_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFHxA	N/A	N/A	N/A	A	N/A	N/A			
PFHxA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFHpA	N/A	N/A	N/A	A	N/A	N/A			
PFHpA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFHxS	N/A	N/A	N/A	A	N/A	N/A			
PFHxS_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFOA	N/A	N/A	N/A	A	N/A	N/A			
PFOA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFOS	N/A	N/A	N/A	A	N/A	N/A			
PFOS_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFNA	N/A	N/A	N/A	A	N/A	N/A			
PFNA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFDA	N/A	N/A	N/A	A	N/A	N/A			
PFDA_2	N/A	N/A	N/A	A	N/A	N/A		50	
NMeFOSAA	N/A	N/A	N/A	A	N/A	N/A			
NMeFOSAA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFUnDA	N/A	N/A	N/A	A	N/A	N/A			
PFUnDA_2	N/A	N/A	N/A	A	N/A	N/A		50	
NEtFOSAA	N/A	N/A	N/A	A	N/A	N/A			
NEtFOSAA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFDoDA	N/A	N/A	N/A	A	N/A	N/A			
PFDoDA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFTrDA	N/A	N/A	N/A	A	N/A	N/A			
PFTrDA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFTeDA	N/A	N/A	N/A	A	N/A	N/A			
PFTeDA_2	N/A	N/A	N/A	A	N/A	N/A		50	

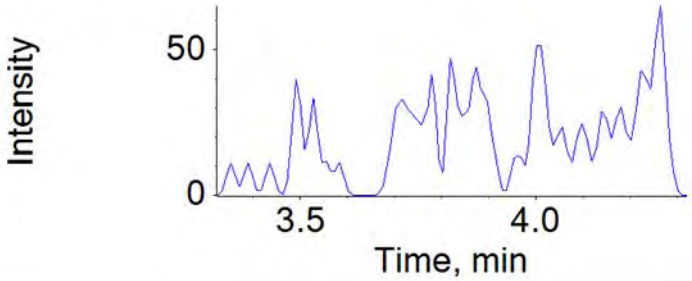
APPROVED
By MCD at 4:51 pm, 11/14/18

REVIEWED
By HMK at 12:22 pm, 11/15/18

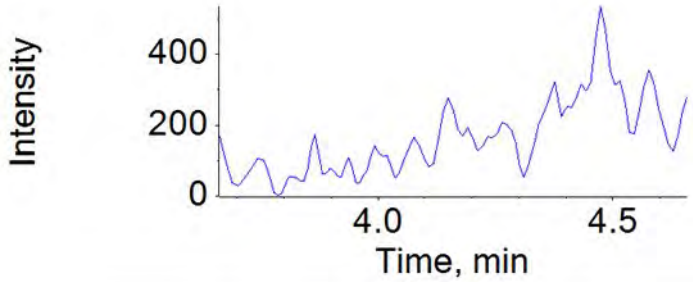
Component: PFBS
Primary Mass: 299.0 / 80.0



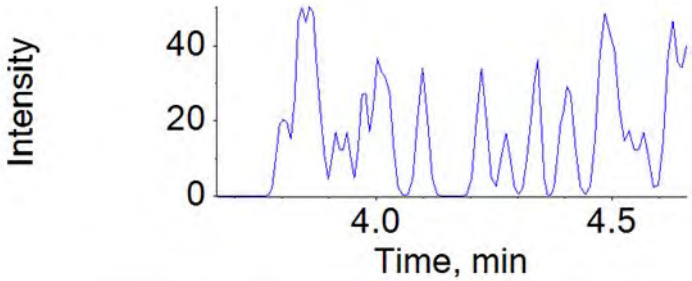
Component: PFBS_2
Secondary Mass: 299.0 / 99.0



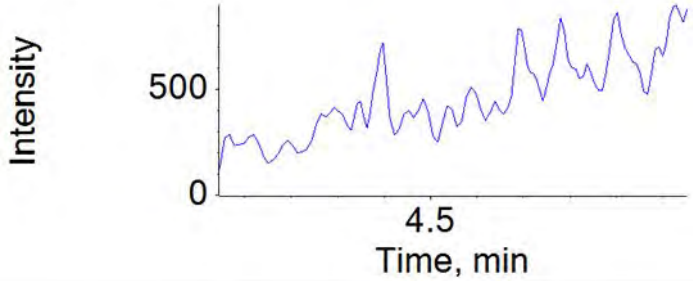
Component: PFHxA
Primary Mass: 313.0 / 269.0



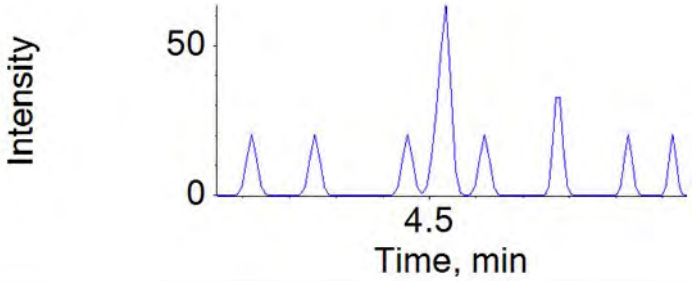
Component: PFHxA_2
Secondary Mass: 313.0 / 119.0



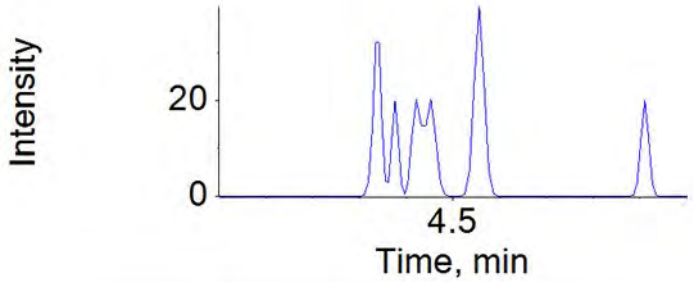
Component: PFHpA
Primary Mass: 363.0 / 319.0



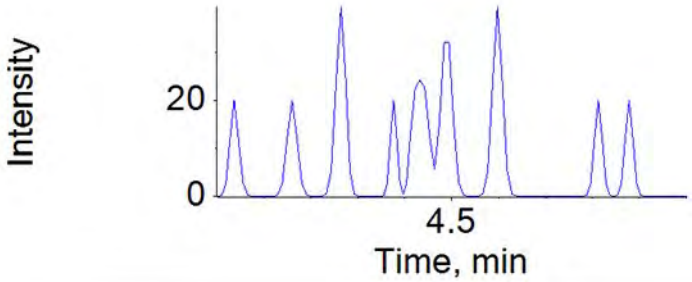
Component: PFHpA_2
Secondary Mass: 363.0 / 169.0



Component: PFHxS
Primary Mass: 399.0 / 80.0



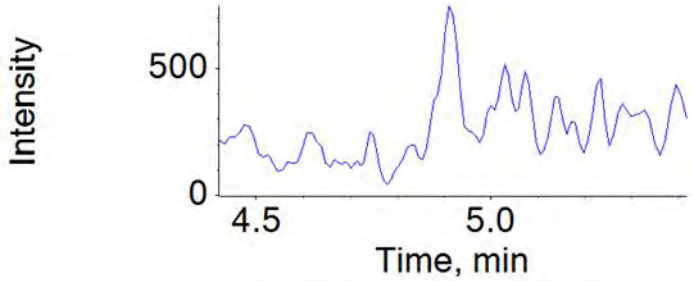
Component: PFHxS_2
Secondary Mass: 399.0 / 99.0



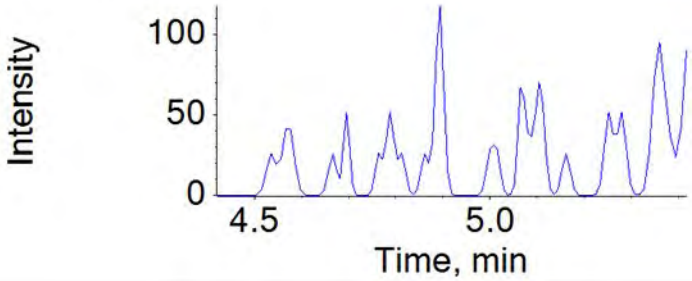
APPROVED
By MCD at 4:51 pm, 11/14/18

REVIEWED
By HMK at 12:22 pm, 11/15/18

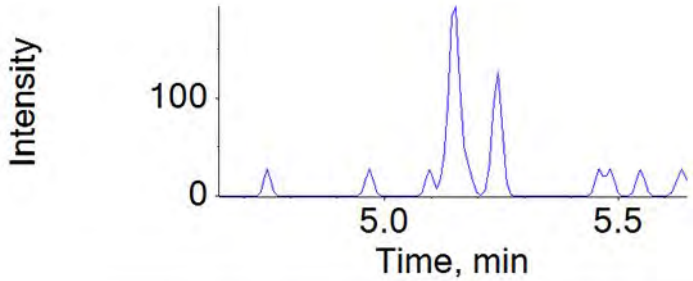
Component: PFOA
Primary Mass: 413.0 / 369.0



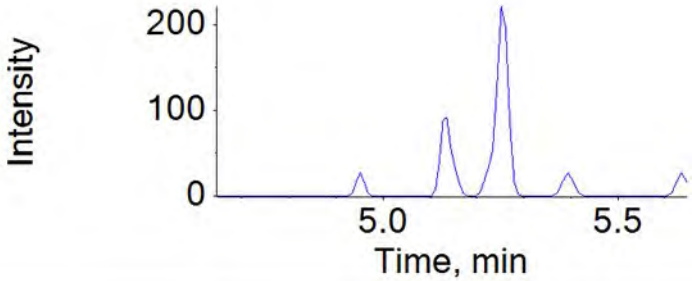
Component: PFOA_2
Secondary Mass: 413.0 / 169.0



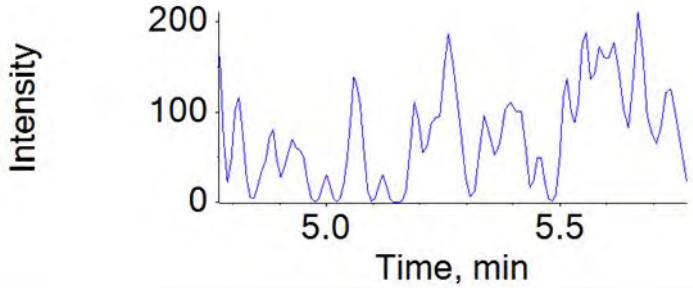
Component: PFOS
Primary Mass: 499.0 / 80.0



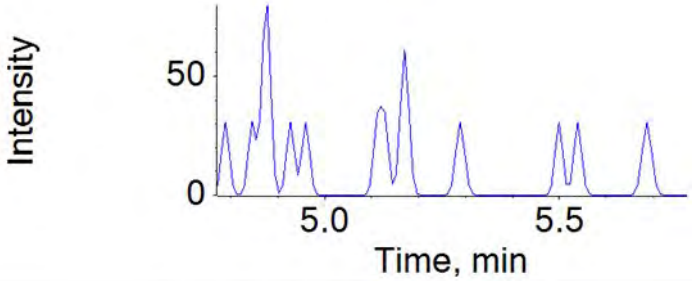
Component: PFOS_2
Secondary Mass: 499.0 / 99.0



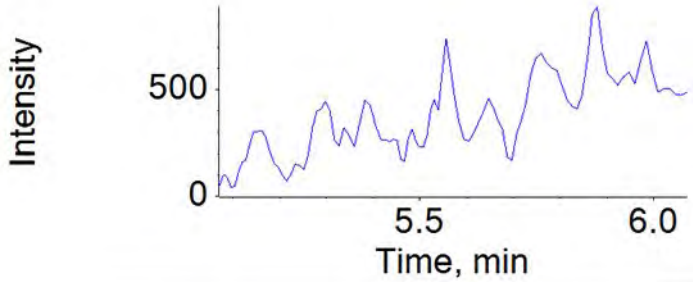
Component: PFNA
Primary Mass: 463.0 / 419.0



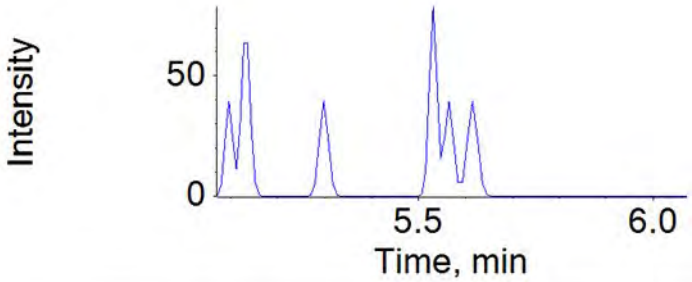
Component: PFNA_2
Secondary Mass: 463.0 / 169.0



Component: PFDA
Primary Mass: 513.0 / 469.0



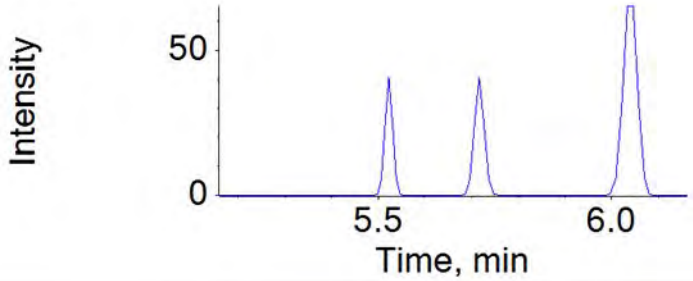
Component: PFDA_2
Secondary Mass: 513.0 / 169.0



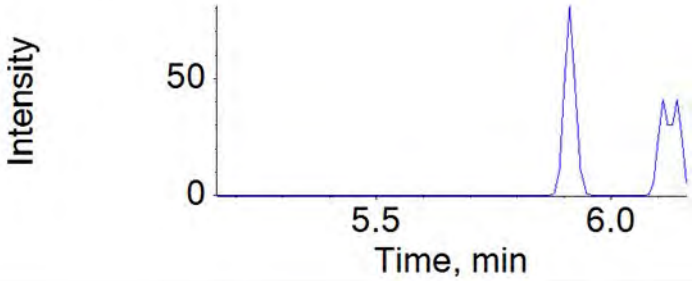
APPROVED
By MCD at 4:51 pm, 11/14/18

REVIEWED
By HMK at 12:22 pm, 11/15/18

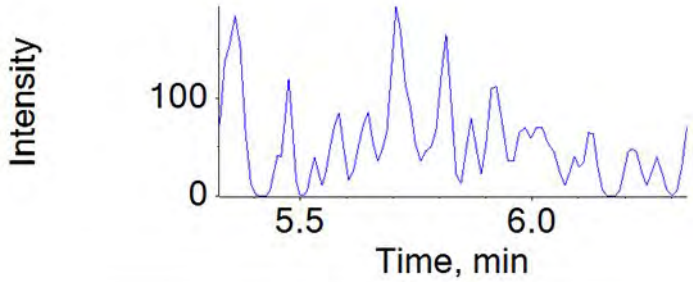
Component: NMeFOSAA
Primary Mass: 570.0 / 419.0



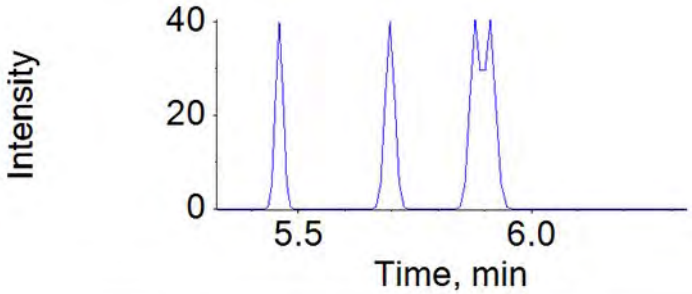
Component: NMeFOSAA_2
Secondary Mass: 570.0 / 483.0



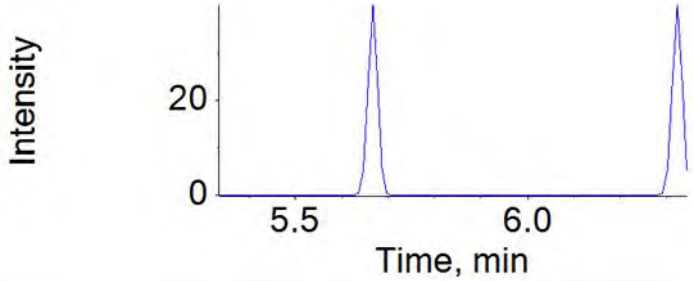
Component: PFUnDA
Primary Mass: 563.0 / 519.0



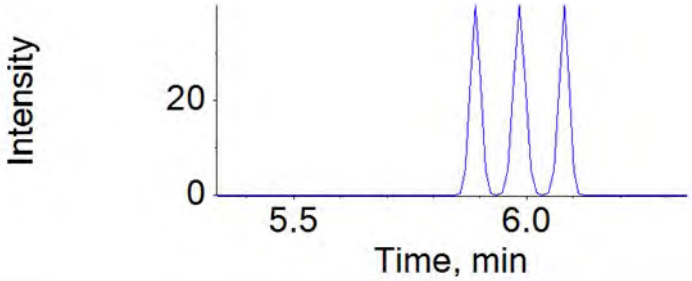
Component: PFUnDA_2
Secondary Mass: 563.0 / 169.0



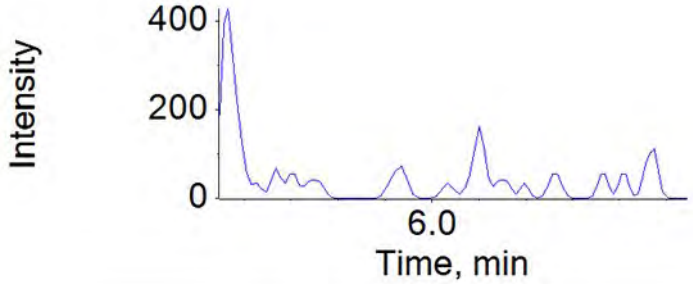
Component: NEtFOSAA
Primary Mass: 584.0 / 419.0



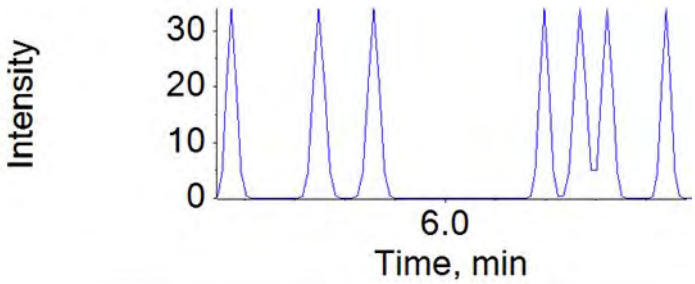
Component: NEtFOSAA_2
Secondary Mass: 584.0 / 526.0



Component: PFDoDA
Primary Mass: 613.0 / 569.0



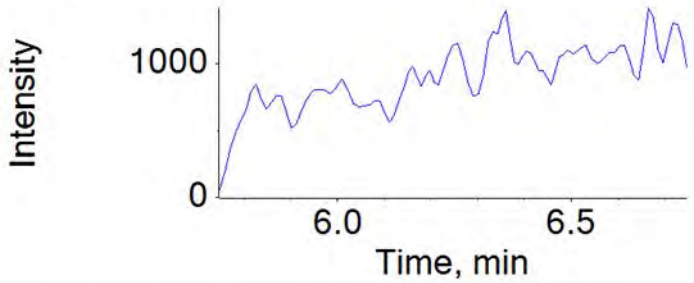
Component: PFDoDA_2
Secondary Mass: 613.0 / 169.0



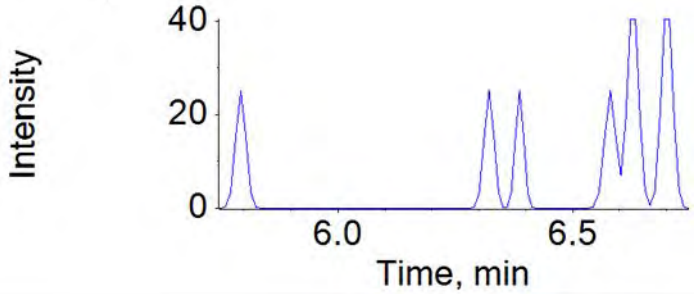
APPROVED
By MCD at 4:51 pm, 11/14/18

REVIEWED
By HMK at 12:22 pm, 11/15/18

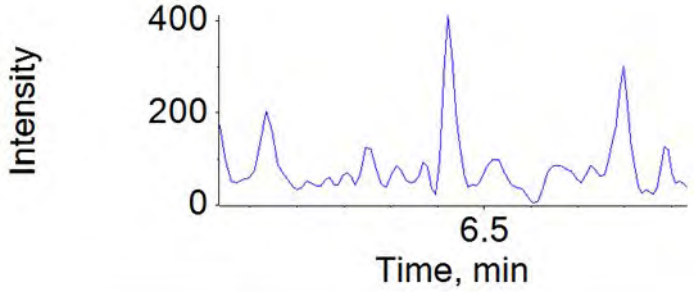
Component: PFTrDA
Primary Mass: 663.0 / 619.0



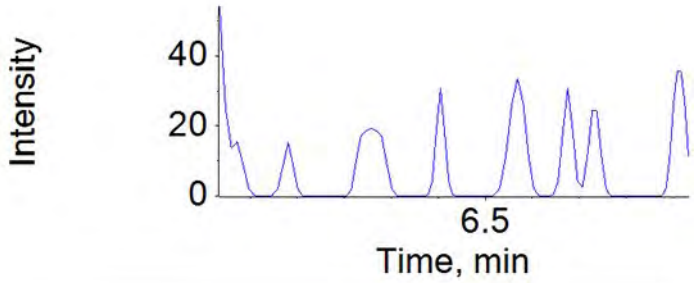
Component: PFTrDA_2
Secondary Mass: 663.0 / 169.0



Component: PFTeDA
Primary Mass: 713.0 / 669.0



Component: PFTeDA_2
Secondary Mass: 713.0 / 169.0



APPROVED
By MCD at 4:51 pm, 11/14/18

REVIEWED
By HMK at 12:22 pm, 11/15/18

ICAL Name: 18NOV12DCAL **Result Table:** 18316011 11/14/2018 4:24:36 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Sample Name:	9885101			**Data File:**		18NOV13D-68.wiff
Sample ID:	EPA 537 mod QSM 5.1 table B-15 18316011 OU1-Bldg50-S-01-08 Grab Soil			**Acquis Date:**		2018-11-13T19:47:50
Sample Type:	Unknown			**Instrument:**		LM27631
Vial Position:	65			**Acquis Method:**		18AUG13_3uL.dam
Injection Vol:	3.00			**Result Table:**		18316011
QMethod File:	18AUG20QM			**ICAL Name:**		18NOV12DCAL
Batch Number:	18316011			**Operator:**		MCD7824
Sample Wt.:	1.07000			**Dilution Factor:**		1.00
Sample Vol.:	1.000			**Prep Factor:**		2.000

Injection Standard Peak Table

Injection Standard Area Reference File: 18NOV13D-05

Injection Standard Name	Inj Std Conc	Injection Std Peak Area	Rreference Injection Standard Area	Injection Std %Diff	Injection Std %Diff Limit	Injection Std %Diff OOS
13C3-PFBA	5.0	746585.4	661126.9	13	50	
13C2-PFOA	5.0	494489.8	466902.6	6	50	
13C4-PFOS	4.8	278347.0	247446.9	12	50	
13C2-PFDA	5.0	321992.6	295381.6	9	50	

Extraction Standard Peak Table

Extraction Standard Name	Ext Std Area	Inj Std Name	Inj Std Area	Area Ratio	Ext Std Conc	Ext Std Result	Ext Std %REC	Ext Std %REC Limit	Ext Std OOS
E13C3-PFBS	321585.2	13C3-PFBA	746585.4	0.431	8.692	5.684	65	50-150	
E13C5-PFHxA	513872.6	13C2-PFOA	494489.8	1.039	9.346	7.017	75	50-150	
E13C3-PFHxS	261614.3	13C2-PFOA	494489.8	0.529	8.841	6.786	77	50-150	
E13C4-PFHpA	390087.0	13C2-PFOA	494489.8	0.789	9.346	6.643	71	50-150	
E13C8-PFOA	689716.1	13C2-PFOA	494489.8	1.395	9.346	7.183	77	50-150	
E13C8-PFOS	210271.5	13C4-PFOS	278347.0	0.755	8.935	6.256	70	50-150	
E13C9-PFNA	372306.6	13C4-PFOS	278347.0	1.338	9.346	6.971	75	50-150	
E13C6-PFDA	500454.3	13C2-PFDA	321992.6	1.554	9.346	6.779	73	50-150	
Ed3-NMeFOSAA	61370.7	13C2-PFDA	321992.6	0.191	9.346	6.431	69	50-150	
E13C7-PFUnDA	207254.9	13C2-PFDA	321992.6	0.644	9.346	6.985	75	50-150	
Ed5-NEtFOSAA	47014.6	13C2-PFDA	321992.6	0.146	9.346	5.774	62	50-150	
E13C2-PFDoDA	412984.1	13C2-PFDA	321992.6	1.283	9.346	6.224	67	50-150	
E13C2-PFTeDA	298749.2	13C2-PFDA	321992.6	0.928	9.346	6.088	65	50-150	

APPROVED
By MCD at 4:51 pm, 11/14/18

REVIEWED
By HMK at 12:22 pm, 11/15/18

ICAL Name: 18NOV12DCAL **Result Table:** 18316011 11/14/2018 4:24:36 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

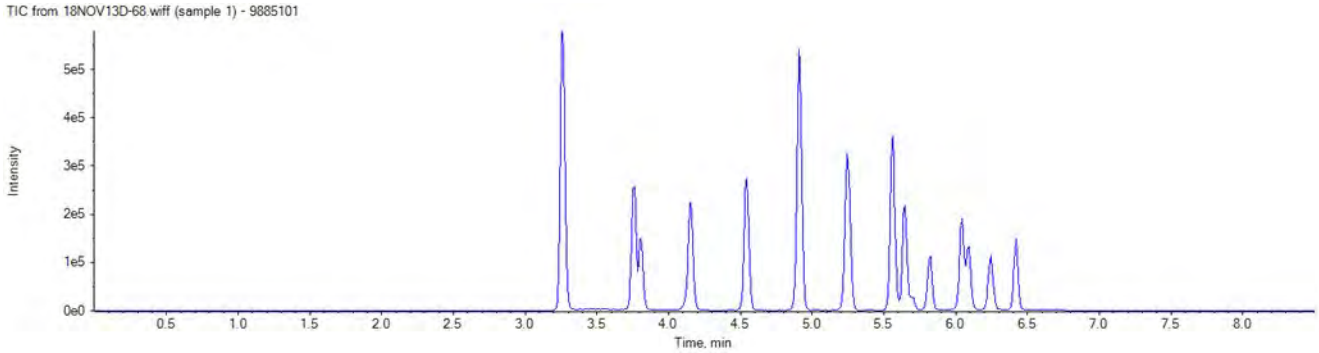
Analyte Quantitation Peak Table

Sample Name: 9885101 **Instrument Name:** LM27631 **File Name:** 18NOV13D-68.wiff

Sample Wt	Sample Vol	Dilution Factor	PrepFactor
1.07000	1.000	1.00	2.000

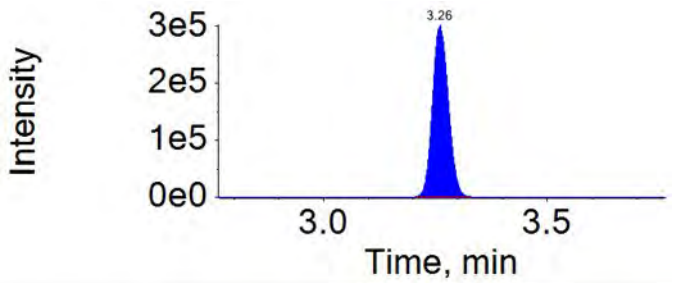
Analyte Name	RT	RRT	Analyte Area Response	E	Int Typ	ES Name	ES RT	ES Area Response	Area Ratio	Sample Result (ng/g)
PFBS	N/A	N/A	N/A		A	13C3-PFBS	3.81	321585.2	N/A	
PFHxA	N/A	N/A	N/A		A	13C5-PFHxA	4.15	513872.6	N/A	
PFHpA	N/A	N/A	N/A		A	13C4-PFHpA	4.54	390087.0	N/A	
PFHxS	N/A	N/A	N/A		A	13C3-PFHxS	4.54	261614.3	N/A	
PFOA	N/A	N/A	N/A		A	13C8-PFOA	4.91	689716.1	N/A	
PFOS	N/A	N/A	N/A		A	13C8-PFOS	5.24	210271.5	N/A	
PFNA	N/A	N/A	N/A		A	13C9-PFNA	5.26	372306.6	N/A	
PFDA	N/A	N/A	N/A		A	13C6-PFDA	5.56	500454.3	N/A	
NMeFOSAA	N/A	N/A	N/A		A	d3-NMeFOSAA	5.70	61370.7	N/A	
PFUnDA	N/A	N/A	N/A		A	13C7-PFUnDA	5.82	207254.9	N/A	
NEtFOSAA	N/A	N/A	N/A		A	d5-NEtFOSAA	5.83	47014.6	N/A	
PFDoDA	N/A	N/A	N/A		A	13C2-PFDoDA	6.04	412984.1	N/A	
PFTrDA	N/A	N/A	N/A		A	13C2-PFDoDA	6.04	412984.1	N/A	
PFTeDA	N/A	N/A	N/A		A	13C2-PFTeDA	6.42	298749.2	N/A	

Total Ion Chromatogram

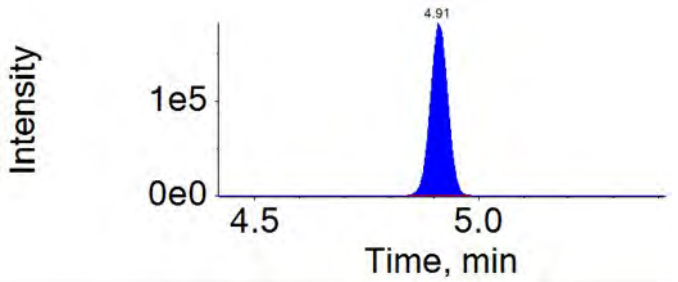


ICAL Name: 18NOV12DCAL **Result Table:** 18316011 11/14/2018 4:24:36 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

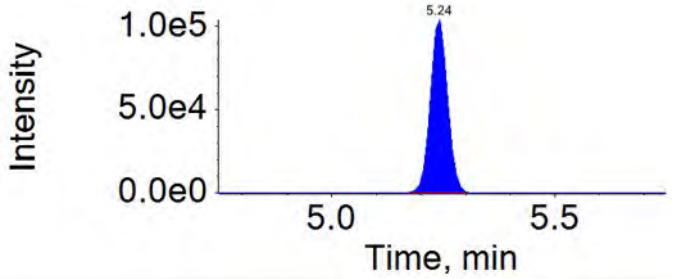
Injection Standard: 13C3-PFBA
216.0 / 172.0



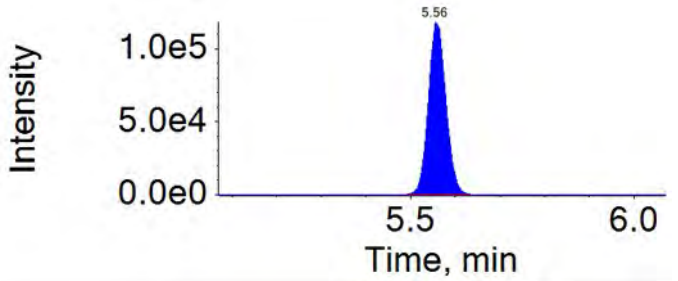
Injection Standard: 13C2-PFOA
415.0 / 370.0



Injection Standard: 13C4-PFOS
503.0 / 80.0

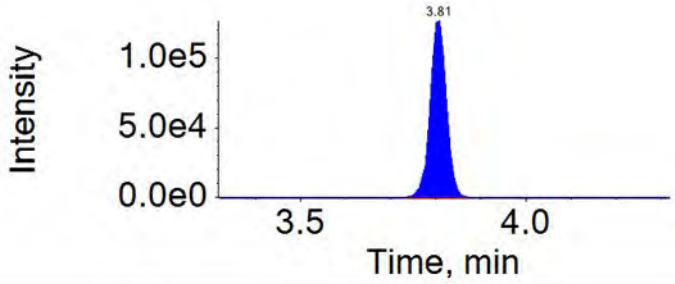


Injection Standard: 13C2-PFDA
515.0 / 470.0

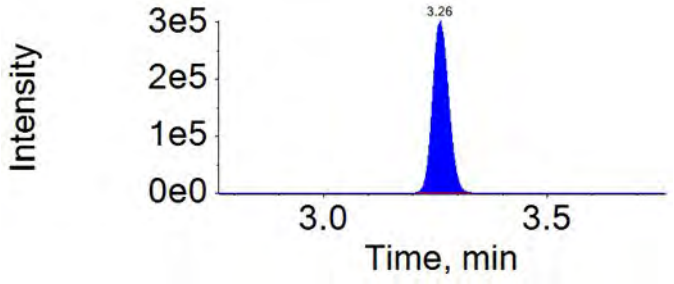


ICAL Name: 18NOV12DCAL **Result Table:** 18316011 11/14/2018 4:24:36 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

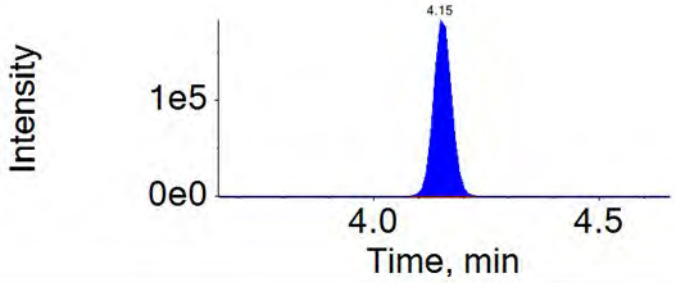
Extraction Standard: E13C3-PFBS
302.0 / 80.0



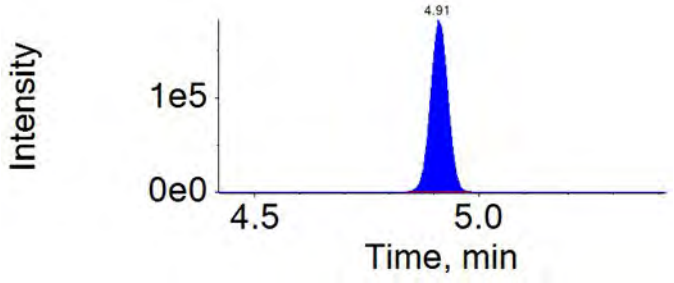
Injection Standard: 13C3-PFBA
216.0 / 172.0



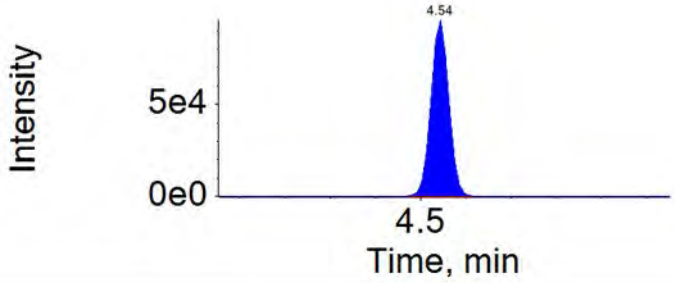
Extraction Standard: E13C5-PFHxA
318.0 / 273.0



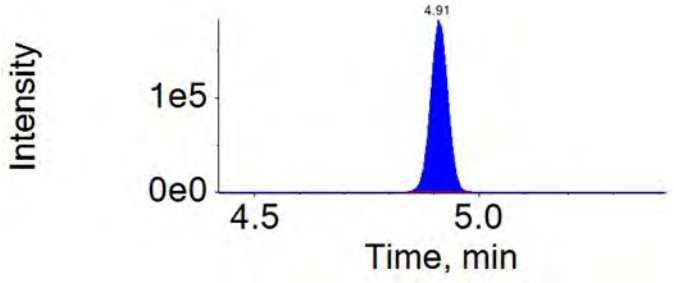
Injection Standard: 13C2-PFOA
415.0 / 370.0



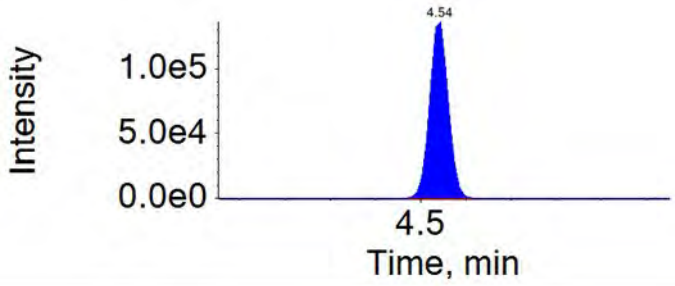
Extraction Standard: E13C3-PFHxS
402.0 / 80.0



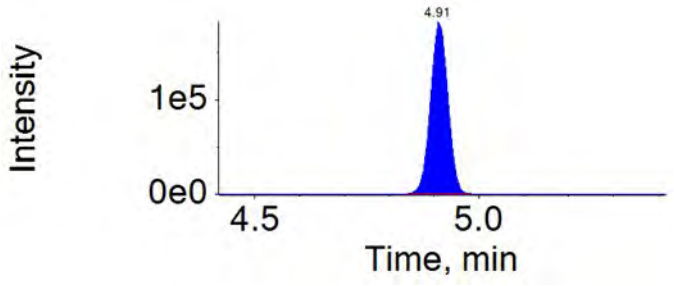
Injection Standard: 13C2-PFOA
415.0 / 370.0



Extraction Standard: E13C4-PFHpA
367.0 / 322.0



Injection Standard: 13C2-PFOA
415.0 / 370.0

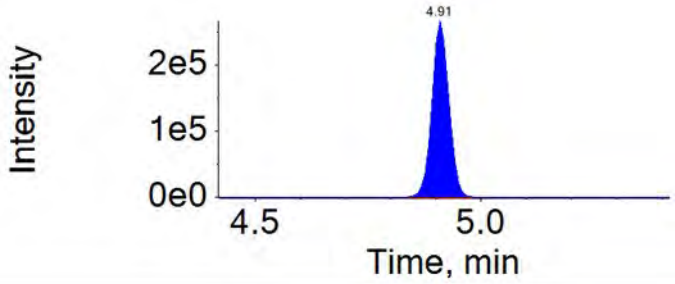


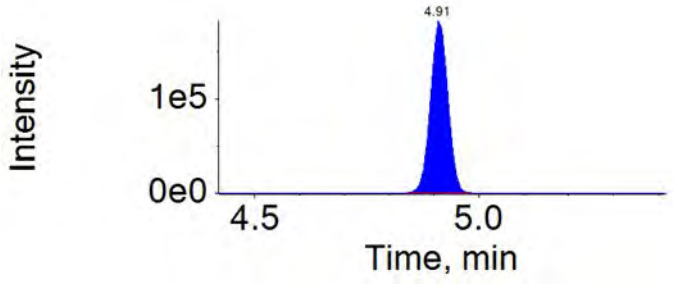
APPROVED
By MCD at 4:51 pm, 11/14/18

REVIEWED
By HMK at 12:22 pm, 11/15/18

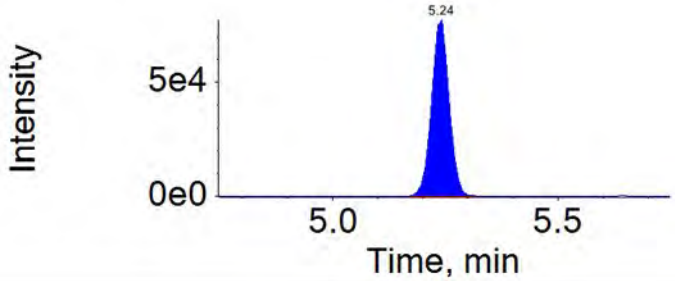
ICAL Name: 18NOV12DCAL **Result Table:** 18316011 11/14/2018 4:24:36 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

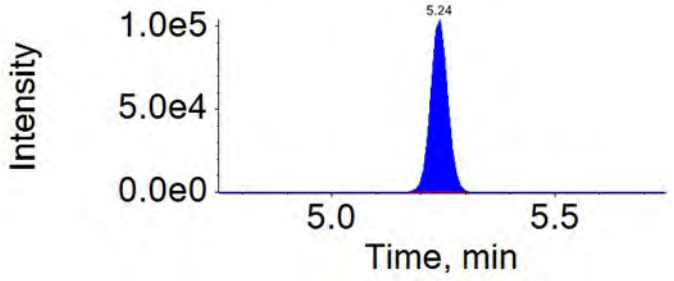
Extraction Standard: E13C8-PFOA	Injection Standard: 13C2-PFOA
421.0 / 376.0	415.0 / 370.0



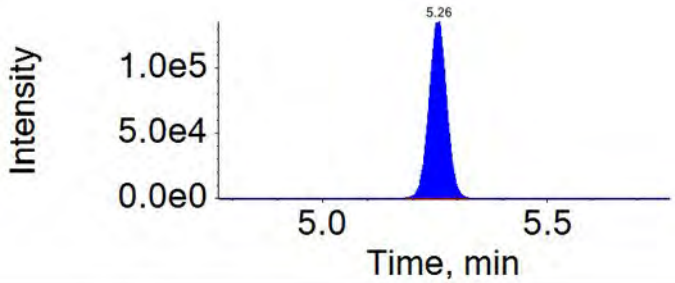


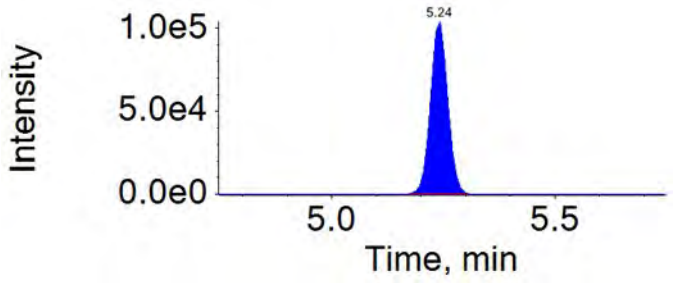
Extraction Standard: E13C8-PFOS	Injection Standard: 13C4-PFOS
507.0 / 80.0	503.0 / 80.0



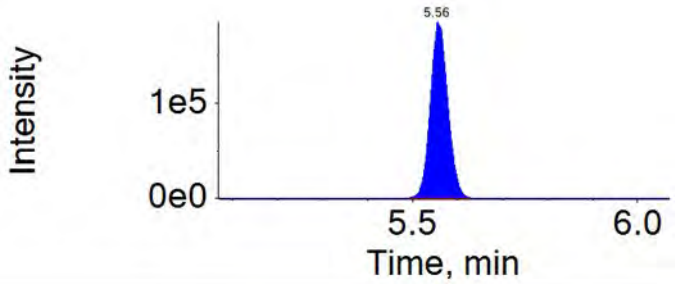


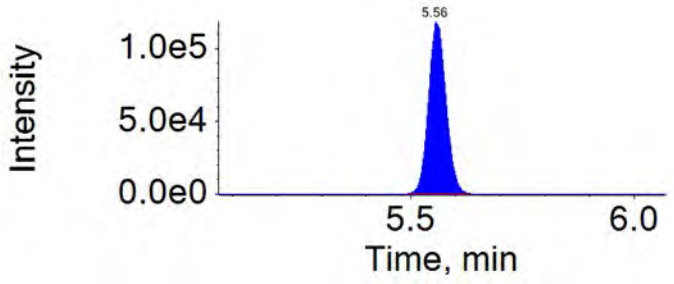
Extraction Standard: E13C9-PFNA	Injection Standard: 13C4-PFOS
472.0 / 427.0	503.0 / 80.0





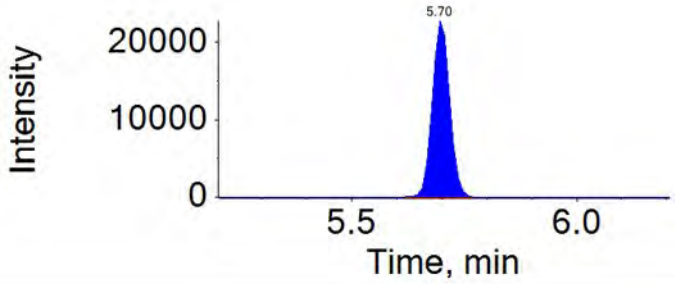
Extraction Standard: E13C6-PFDA	Injection Standard: 13C2-PFDA
519.0 / 474.0	515.0 / 470.0

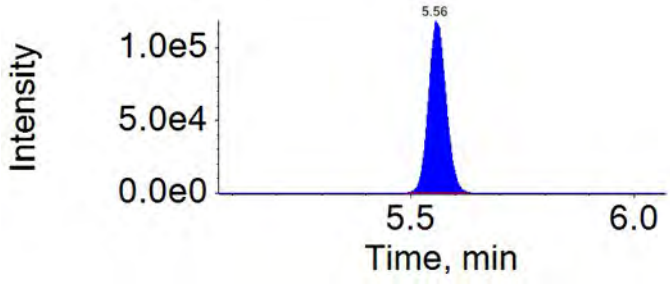




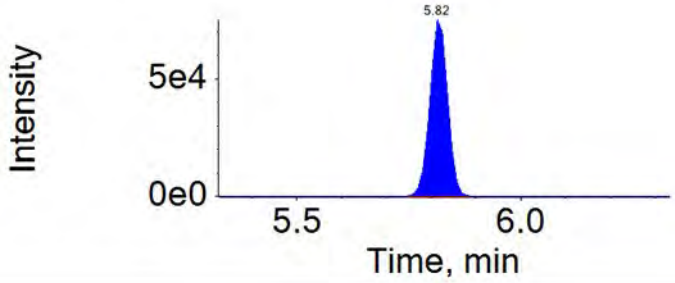
ICAL Name: 18NOV12DCAL **Result Table:** 18316011 11/14/2018 4:24:36 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

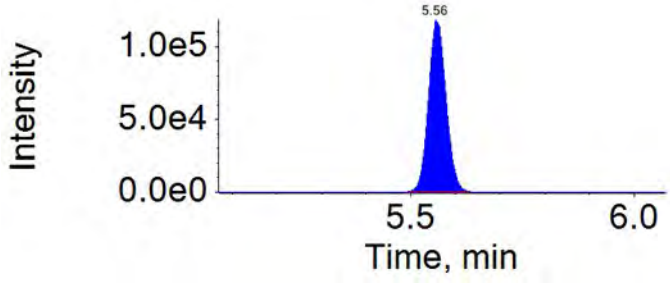
Extraction Standard: Ed3-NMeFOSAA	Injection Standard: 13C2-PFDA
573.0 / 419.0	515.0 / 470.0



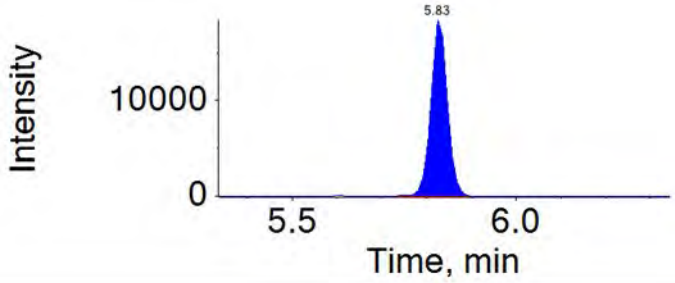


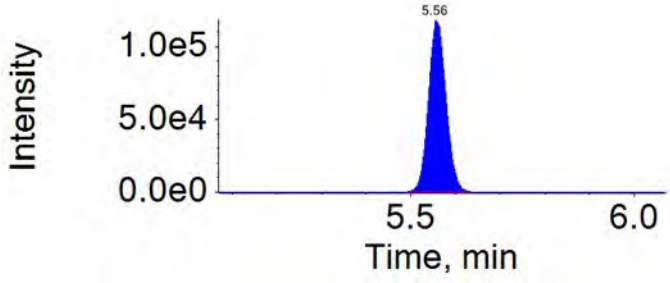
Extraction Standard: E13C7-PFUnDA	Injection Standard: 13C2-PFDA
570.0 / 525.0	515.0 / 470.0



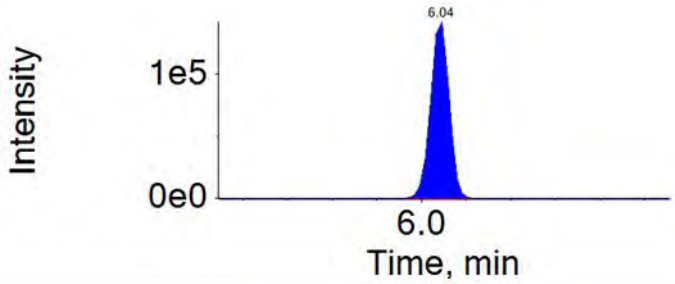


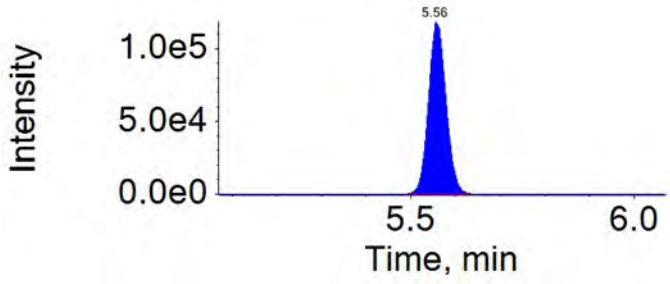
Extraction Standard: Ed5-NEtFOSAA	Injection Standard: 13C2-PFDA
589.0 / 419.0	515.0 / 470.0



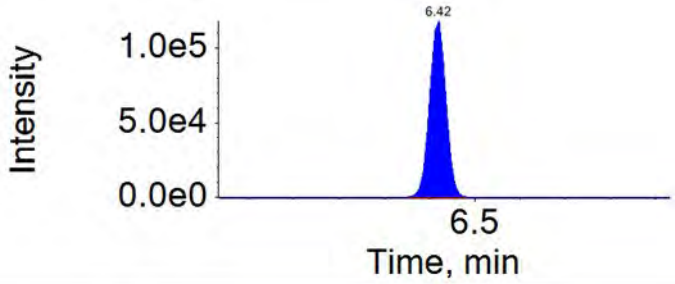
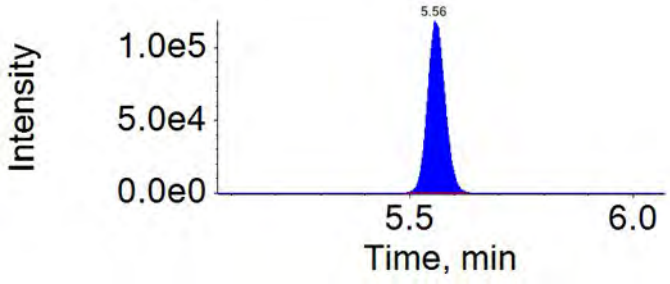


Extraction Standard: E13C2-PFDoDA	Injection Standard: 13C2-PFDA
615.0 / 570.0	515.0 / 470.0



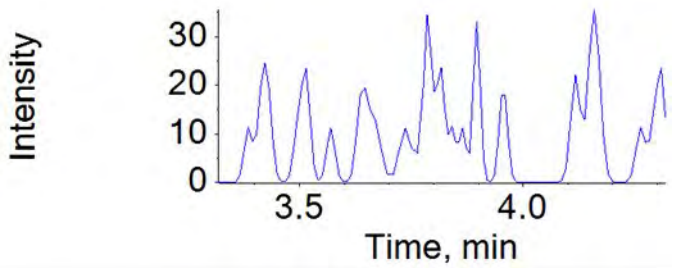


ICAL Name: 18NOV12DCAL **Result Table:** 18316011 11/14/2018 4:24:36 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

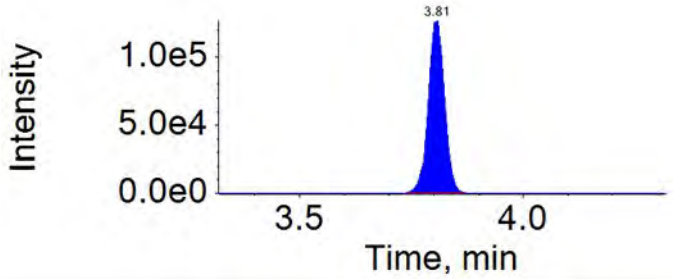
Extraction Standard: E13C2-PFTeDA	Injection Standard: 13C2-PFDA
715.0 / 670.0 	515.0 / 470.0 

ICAL Name: 18NOV12DCAL **Result Table:** 18316011 11/14/2018 4:24:36 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

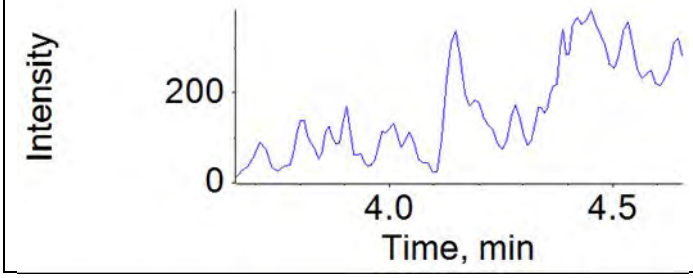
Analyte: PFBS
299.0 / 80.0



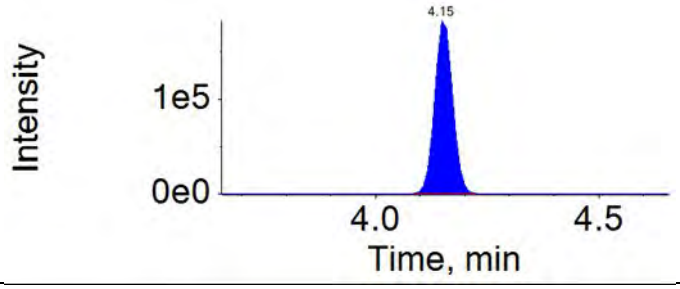
Extraction Standard: 13C3-PFBS
302.0 / 80.0



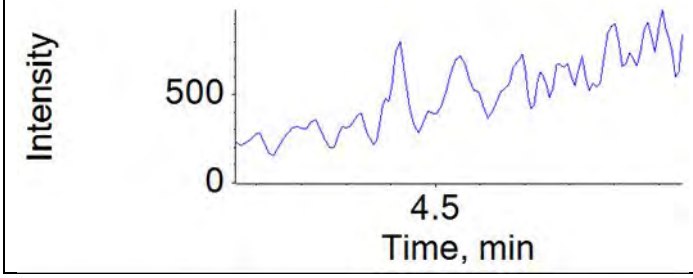
Analyte: PFHxA
313.0 / 269.0



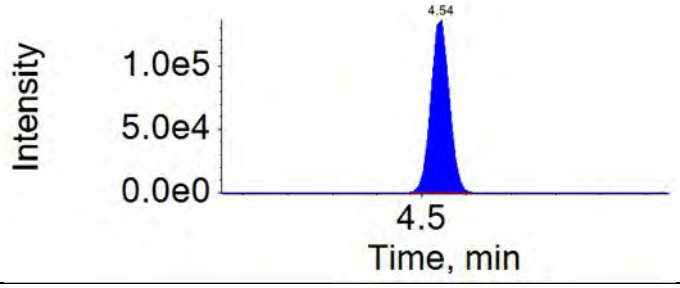
Extraction Standard: 13C5-PFHxA
318.0 / 273.0



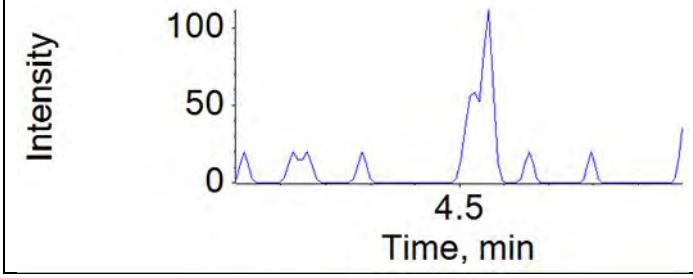
Analyte: PFHpA
363.0 / 319.0



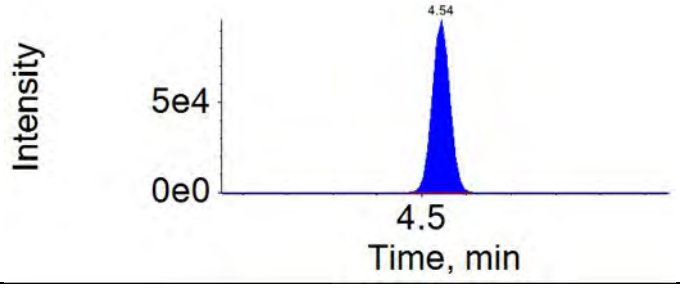
Extraction Standard: 13C4-PFHpA
367.0 / 322.0



Analyte: PFHxS
399.0 / 80.0

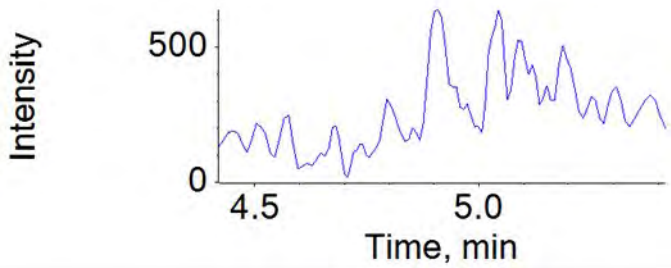


Extraction Standard: 13C3-PFHxS
402.0 / 80.0

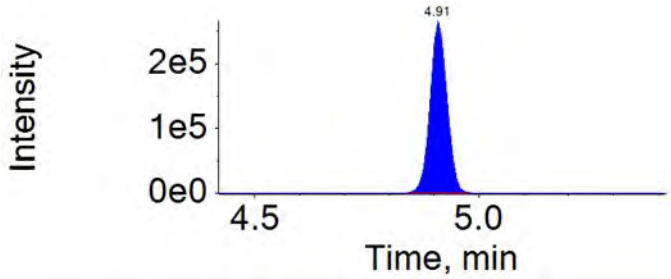


ICAL Name: 18NOV12DCAL **Result Table:** 18316011 11/14/2018 4:24:36 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

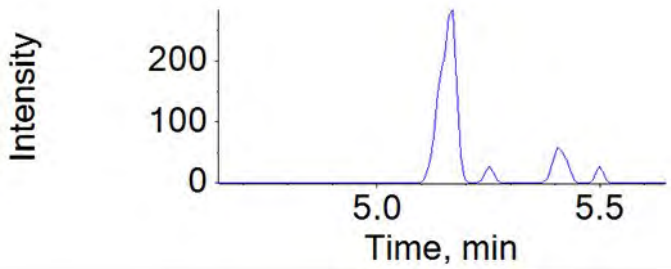
Analyte: PFOA
413.0 / 369.0



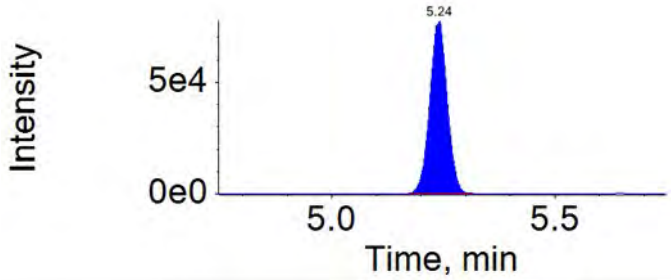
Extraction Standard: 13C8-PFOA
421.0 / 376.0



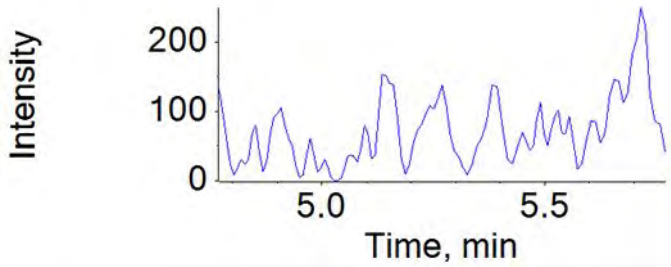
Analyte: PFOS
499.0 / 80.0



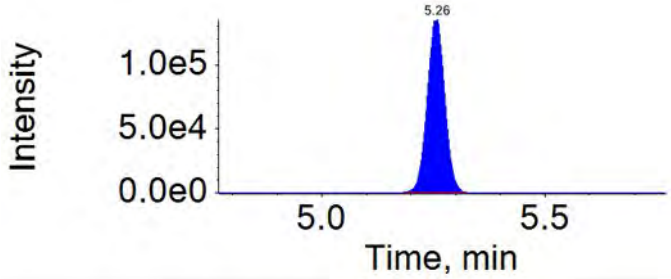
Extraction Standard: 13C8-PFOS
507.0 / 80.0



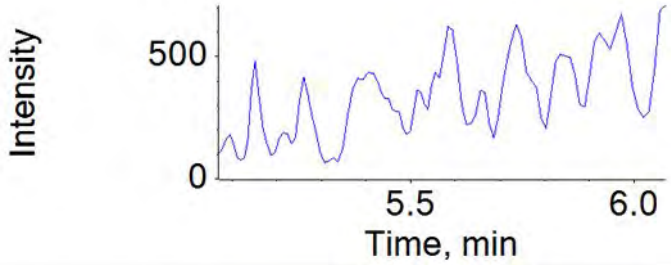
Analyte: PFNA
463.0 / 419.0



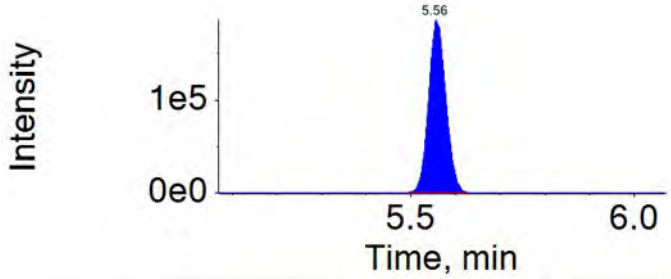
Extraction Standard: 13C9-PFNA
472.0 / 427.0



Analyte: PFDA
513.0 / 469.0



Extraction Standard: 13C6-PFDA
519.0 / 474.0

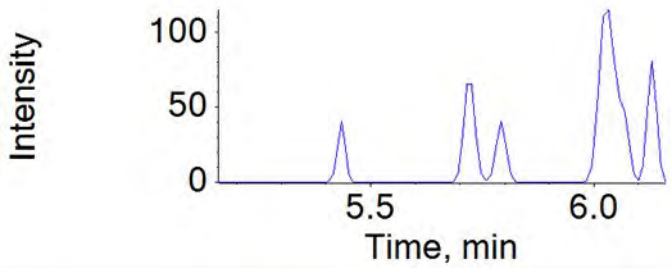


APPROVED
By MCD at 4:51 pm, 11/14/18

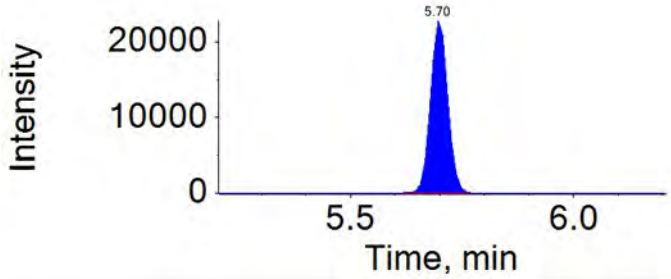
REVIEWED
By HMK at 12:22 pm, 11/15/18

ICAL Name: 18NOV12DCAL **Result Table:** 18316011 11/14/2018 4:24:36 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

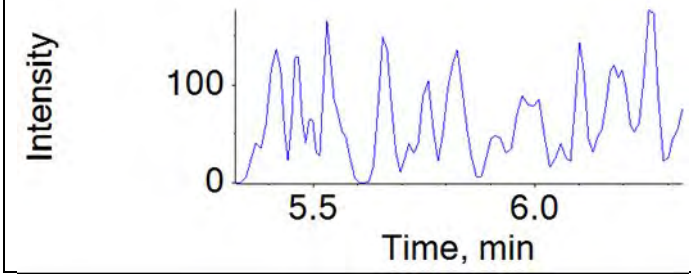
Analyte: NMeFOSAA
570.0 / 419.0



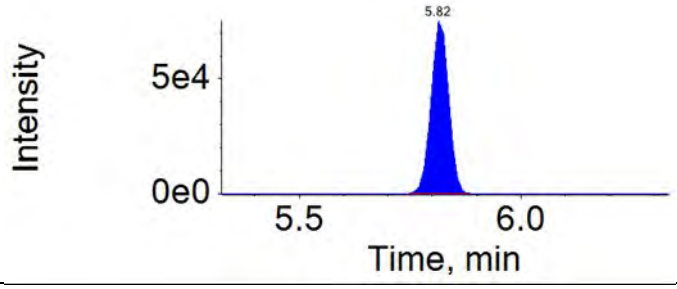
Extraction Standard: d3-NMeFOSAA
573.0 / 419.0



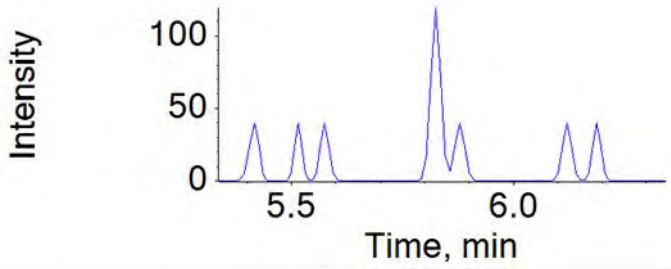
Analyte: PFUnDA
563.0 / 519.0



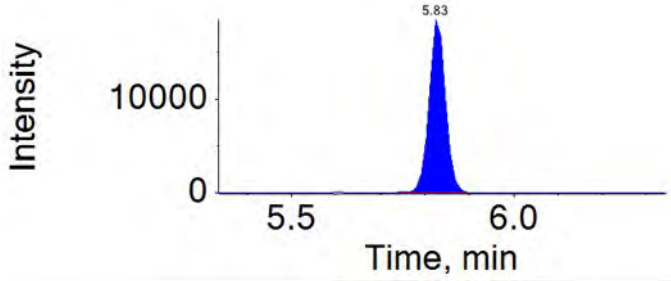
Extraction Standard: 13C7-PFUnDA
570.0 / 525.0



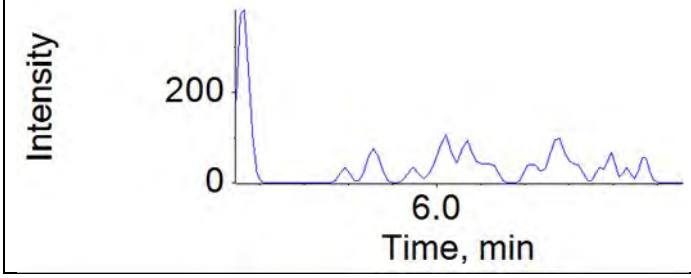
Analyte: NEtFOSAA
584.0 / 419.0



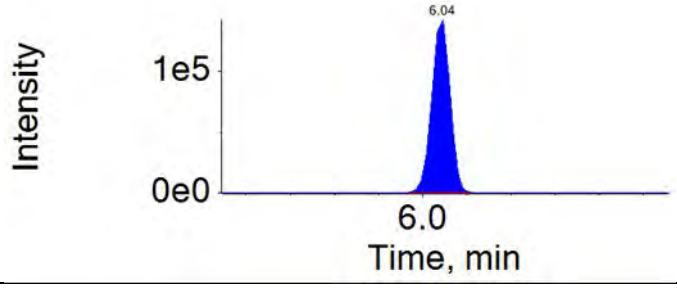
Extraction Standard: d5-NEtFOSAA
589.0 / 419.0



Analyte: PFDoDA
613.0 / 569.0



Extraction Standard: 13C2-PFDoDA
615.0 / 570.0

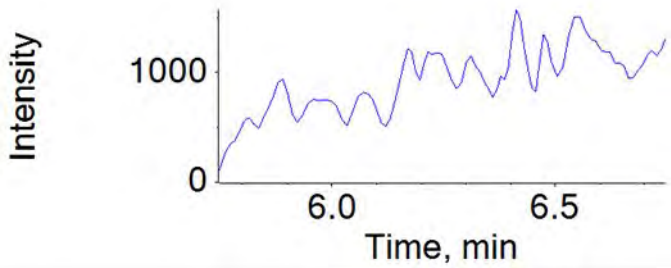


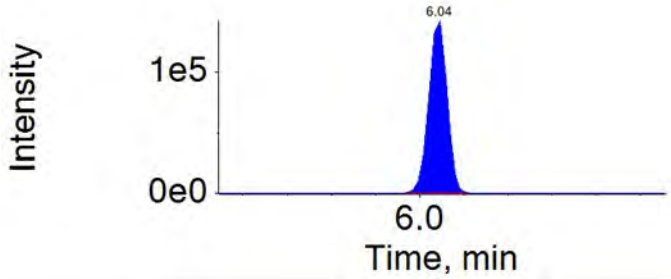
APPROVED
By MCD at 4:51 pm, 11/14/18

REVIEWED
By HMK at 12:22 pm, 11/15/18

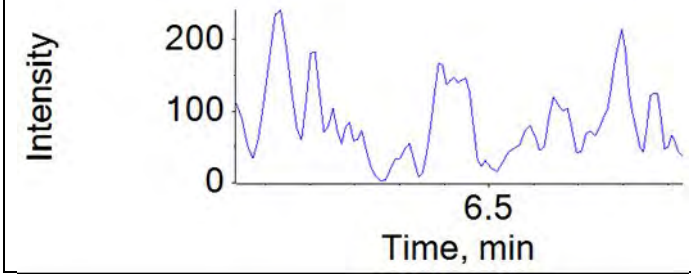
ICAL Name: 18NOV12DCAL **Result Table:** 18316011 11/14/2018 4:24:36 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

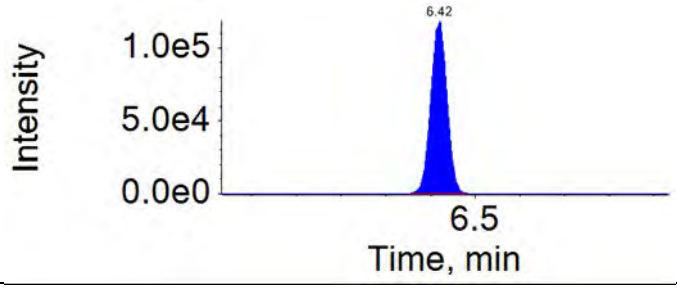
Analyte: PFTrDA	Extraction Standard: 13C2-PFDoDA
663.0 / 619.0	615.0 / 570.0





Analyte: PFTeDA	Extraction Standard: 13C2-PFTeDA
713.0 / 669.0	715.0 / 670.0





APPROVED
By MCD at 4:51 pm, 11/14/18

REVIEWED
By HMK at 12:22 pm, 11/15/18

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LC-MS/MS Analysis Report

Printed: 11/14/2018 4:29:00 PM
Template: IonRatio18OCT10

Ion Ratio Report

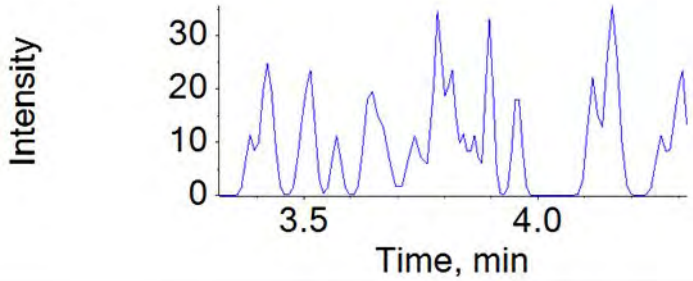
Sample Name: 9885101 **Instrument Name:** LM27631 **File Name:** 18NOV13D-68.wiff

Component Name	RT	RRT	Analyte Area Response	Int Typ	Expected Ion Ratio	Ion Ratio	Ion Ratio % Diff	Ion Ratio Limit	Ion Ratio OOS
PFBS	N/A	N/A	N/A	A	N/A	N/A			
PFBS_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFHxA	N/A	N/A	N/A	A	N/A	N/A			
PFHxA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFHpA	N/A	N/A	N/A	A	N/A	N/A			
PFHpA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFHxS	N/A	N/A	N/A	A	N/A	N/A			
PFHxS_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFOA	N/A	N/A	N/A	A	N/A	N/A			
PFOA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFOS	N/A	N/A	N/A	A	N/A	N/A			
PFOS_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFNA	N/A	N/A	N/A	A	N/A	N/A			
PFNA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFDA	N/A	N/A	N/A	A	N/A	N/A			
PFDA_2	N/A	N/A	N/A	A	N/A	N/A		50	
NMeFOSAA	N/A	N/A	N/A	A	N/A	N/A			
NMeFOSAA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFUnDA	N/A	N/A	N/A	A	N/A	N/A			
PFUnDA_2	N/A	N/A	N/A	A	N/A	N/A		50	
NEtFOSAA	N/A	N/A	N/A	A	N/A	N/A			
NEtFOSAA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFDoDA	N/A	N/A	N/A	A	N/A	N/A			
PFDoDA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFTrDA	N/A	N/A	N/A	A	N/A	N/A			
PFTrDA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFTeDA	N/A	N/A	N/A	A	N/A	N/A			
PFTeDA_2	N/A	N/A	N/A	A	N/A	N/A		50	

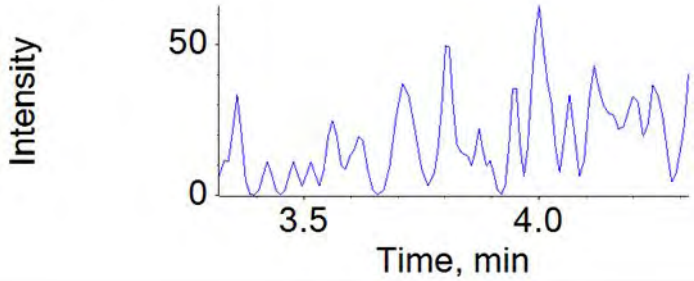
APPROVED
By MCD at 4:51 pm, 11/14/18

REVIEWED
By HMK at 12:22 pm, 11/15/18

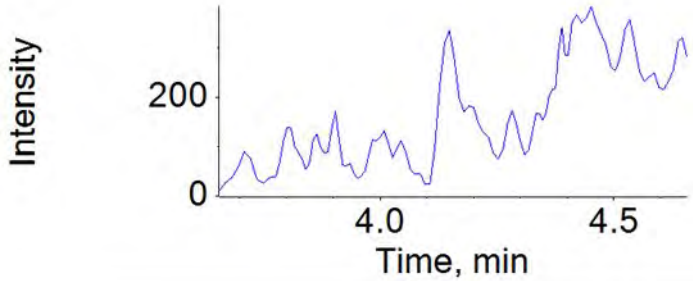
Component: PFBS
Primary Mass: 299.0 / 80.0



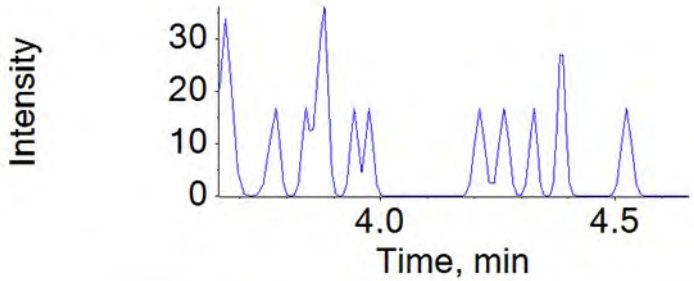
Component: PFBS_2
Secondary Mass: 299.0 / 99.0



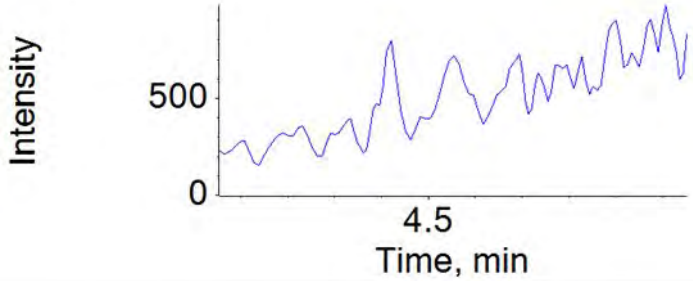
Component: PFHxA
Primary Mass: 313.0 / 269.0



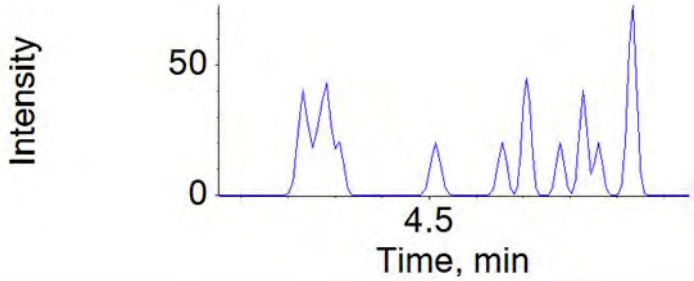
Component: PFHxA_2
Secondary Mass: 313.0 / 119.0



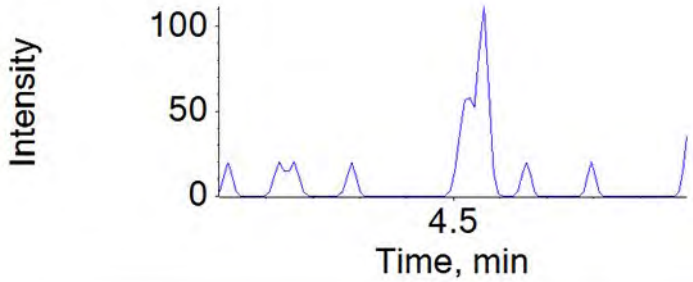
Component: PFHpA
Primary Mass: 363.0 / 319.0



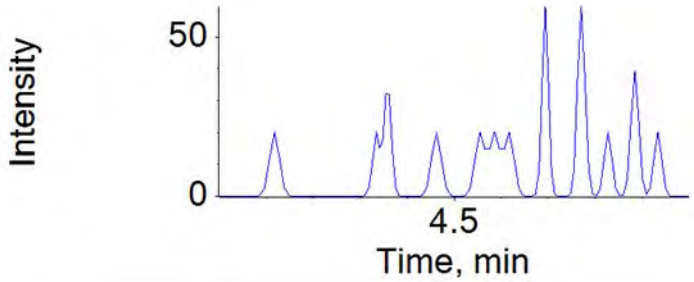
Component: PFHpA_2
Secondary Mass: 363.0 / 169.0



Component: PFHxS
Primary Mass: 399.0 / 80.0



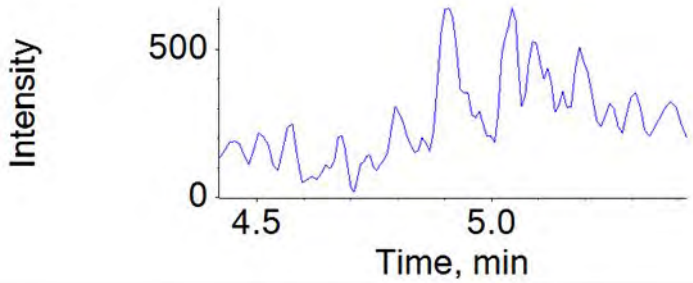
Component: PFHxS_2
Secondary Mass: 399.0 / 99.0



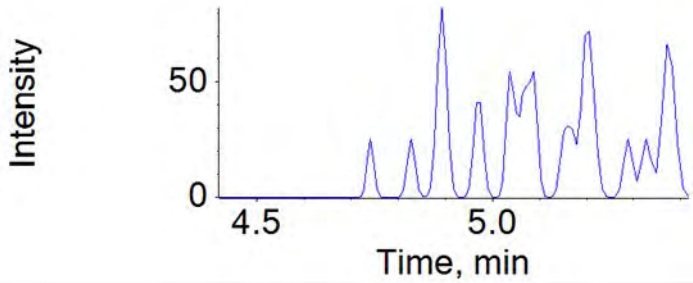
APPROVED
By MCD at 4:51 pm, 11/14/18

REVIEWED
By HMK at 12:22 pm, 11/15/18

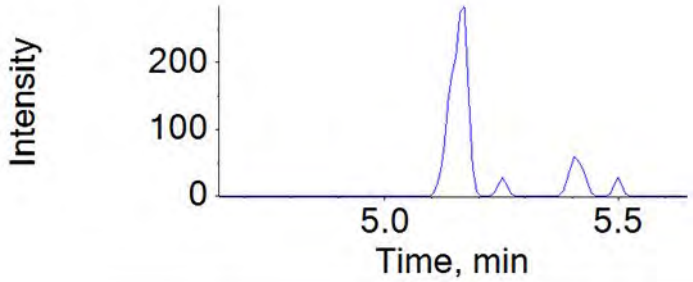
Component: PFOA
Primary Mass: 413.0 / 369.0



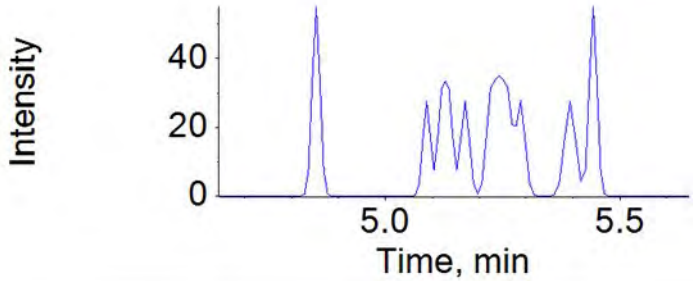
Component: PFOA_2
Secondary Mass: 413.0 / 169.0



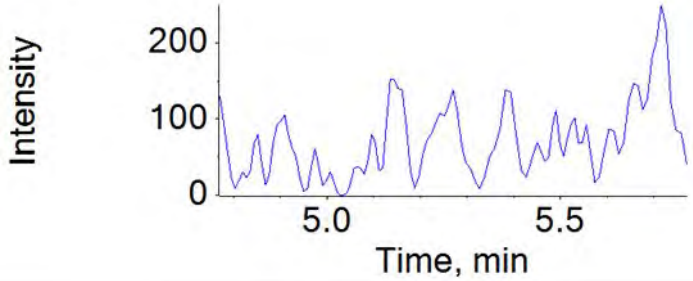
Component: PFOS
Primary Mass: 499.0 / 80.0



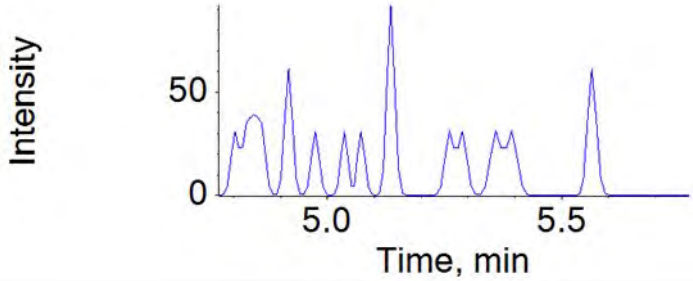
Component: PFOS_2
Secondary Mass: 499.0 / 99.0



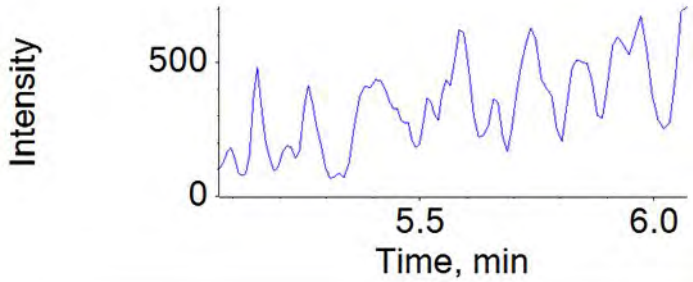
Component: PFNA
Primary Mass: 463.0 / 419.0



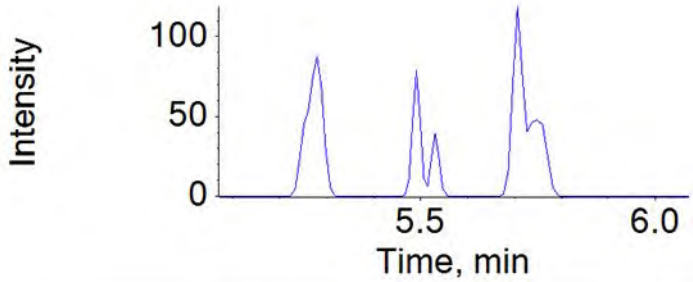
Component: PFNA_2
Secondary Mass: 463.0 / 169.0



Component: PFDA
Primary Mass: 513.0 / 469.0



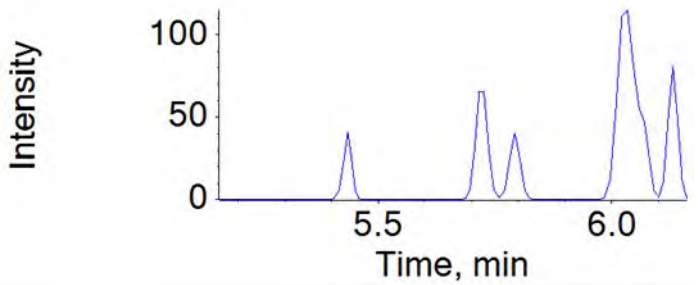
Component: PFDA_2
Secondary Mass: 513.0 / 169.0



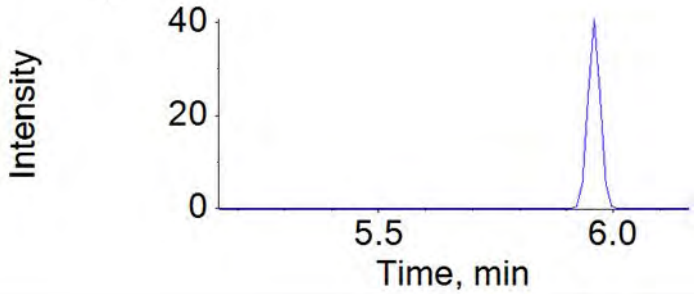
APPROVED
By MCD at 4:51 pm, 11/14/18

REVIEWED
By HMK at 12:22 pm, 11/15/18

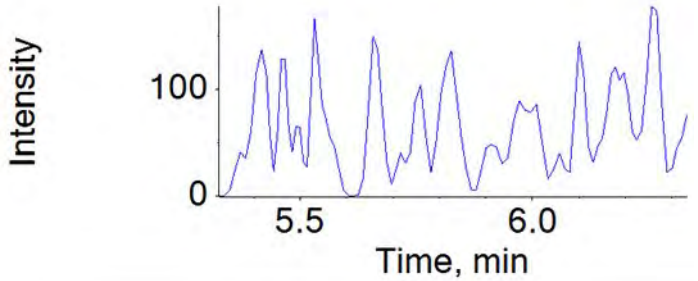
Component: NMeFOSAA
Primary Mass: 570.0 / 419.0



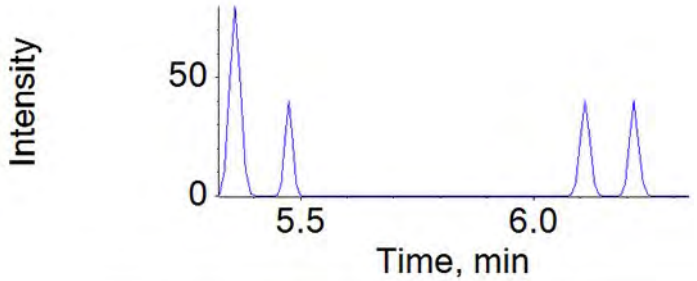
Component: NMeFOSAA_2
Secondary Mass: 570.0 / 483.0



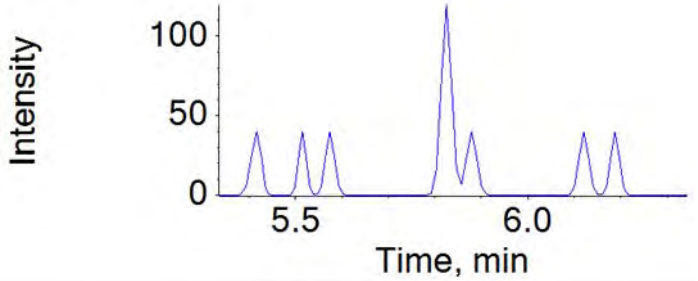
Component: PFUnDA
Primary Mass: 563.0 / 519.0



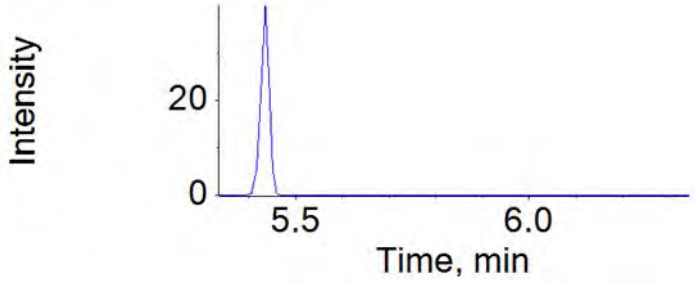
Component: PFUnDA_2
Secondary Mass: 563.0 / 169.0



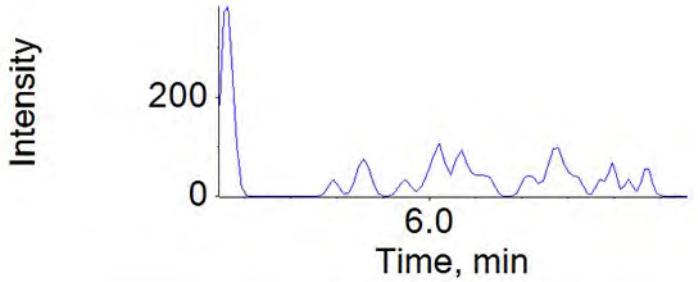
Component: NEtFOSAA
Primary Mass: 584.0 / 419.0



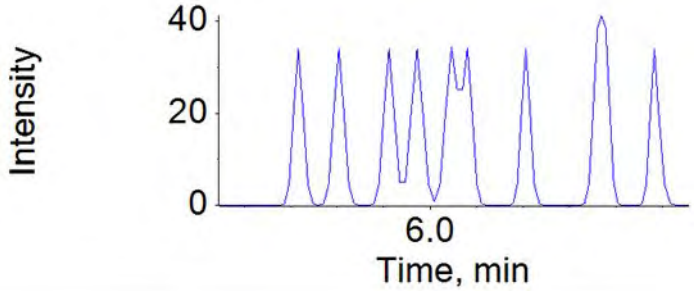
Component: NEtFOSAA_2
Secondary Mass: 584.0 / 526.0



Component: PFDoDA
Primary Mass: 613.0 / 569.0



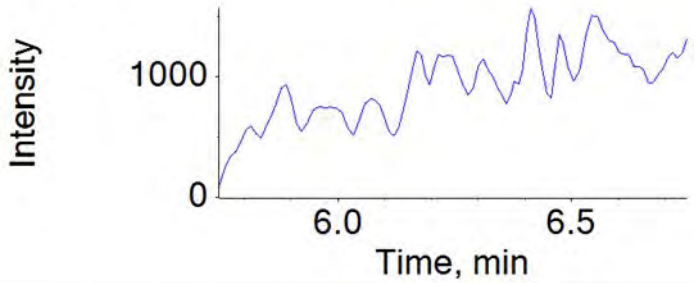
Component: PFDoDA_2
Secondary Mass: 613.0 / 169.0



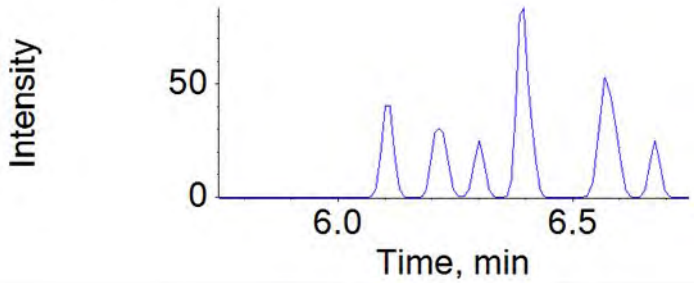
APPROVED
By MCD at 4:51 pm, 11/14/18

REVIEWED
By HMK at 12:22 pm, 11/15/18

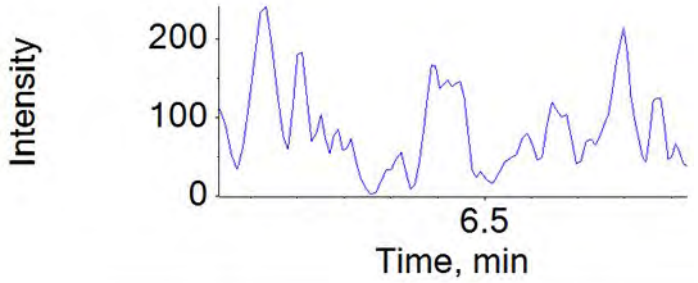
Component: PFTrDA
Primary Mass: 663.0 / 619.0



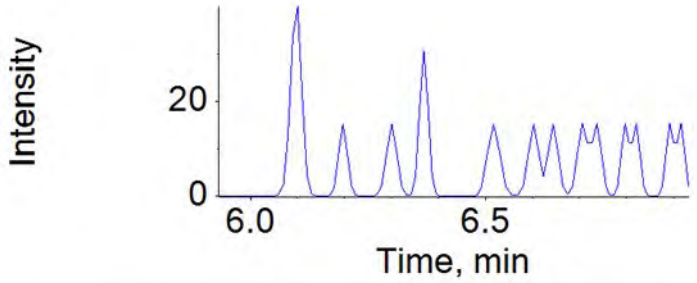
Component: PFTrDA_2
Secondary Mass: 663.0 / 169.0



Component: PFTeDA
Primary Mass: 713.0 / 669.0



Component: PFTeDA_2
Secondary Mass: 713.0 / 169.0



APPROVED
By MCD at 4:51 pm, 11/14/18

REVIEWED
By HMK at 12:22 pm, 11/15/18

ICAL Name: 18NOV12DCAL **Result Table:** 18316011 11/14/2018 4:24:36 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Sample Name:	9885104			**Data File:**		18NOV13D-69.wiff
Sample ID:	EPA 537 mod QSM 5.1 table B-15 18316011 OU1-Bldg50-S-02-01 Grab Soil			**Acquis Date:**		2018-11-13T19:56:50
Sample Type:	Unknown			**Instrument:**		LM27631
Vial Position:	66			**Acquis Method:**		18AUG13_3uL.dam
Injection Vol:	3.00			**Result Table:**		18316011
QMethod File:	18AUG20QM			**ICAL Name:**		18NOV12DCAL
Batch Number:	18316011			**Operator:**		MCD7824
Sample Wt.:	1.05000			**Dilution Factor:**		1.00
Sample Vol.:	1.000			**Prep Factor:**		2.000

Injection Standard Peak Table

Injection Standard Area Reference File: 18NOV13D-05

Injection Standard Name	Inj Std Conc	Injection Std Peak Area	Rreference Injection Standard Area	Injection Std %Diff	Injection Std %Diff Limit	Injection Std %Diff OOS
13C3-PFBA	5.0	728141.3	661126.9	10	50	
13C2-PFOA	5.0	496816.0	466902.6	6	50	
13C4-PFOS	4.8	279627.6	247446.9	13	50	
13C2-PFDA	5.0	327163.5	295381.6	11	50	

Extraction Standard Peak Table

Extraction Standard Name	Ext Std Area	Inj Std Name	Inj Std Area	Area Ratio	Ext Std Conc	Ext Std Result	Ext Std %REC	Ext Std %REC Limit	Ext Std OOS
E13C3-PFBS	336920.3	13C3-PFBA	728141.3	0.463	8.857	6.222	70	50-150	
E13C5-PFHxA	528866.3	13C2-PFOA	496816.0	1.065	9.524	7.325	77	50-150	
E13C3-PFHxS	250115.6	13C2-PFOA	496816.0	0.503	9.010	6.580	73	50-150	
E13C4-PFHpA	397999.2	13C2-PFOA	496816.0	0.801	9.524	6.874	72	50-150	
E13C8-PFOA	710207.6	13C2-PFOA	496816.0	1.430	9.524	7.502	79	50-150	
E13C8-PFOS	214220.2	13C4-PFOS	279627.6	0.766	9.105	6.466	71	50-150	
E13C9-PFNA	365335.1	13C4-PFOS	279627.6	1.307	9.524	6.939	73	50-150	
E13C6-PFDA	517111.1	13C2-PFDA	327163.5	1.581	9.524	7.026	74	50-150	
Ed3-NMeFOSAA	66083.5	13C2-PFDA	327163.5	0.202	9.524	6.945	73	50-150	
E13C7-PFUnDA	205440.2	13C2-PFDA	327163.5	0.628	9.524	6.944	73	50-150	
Ed5-NEtFOSAA	48759.5	13C2-PFDA	327163.5	0.149	9.524	6.006	63	50-150	
E13C2-PFDoDA	453723.5	13C2-PFDA	327163.5	1.387	9.524	6.859	72	50-150	
E13C2-PFTeDA	331104.5	13C2-PFDA	327163.5	1.012	9.524	6.768	71	50-150	

APPROVED
By MCD at 4:51 pm, 11/14/18

REVIEWED
By HMK at 12:22 pm, 11/15/18

ICAL Name: 18NOV12DCAL **Result Table:** 18316011 11/14/2018 4:24:36 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

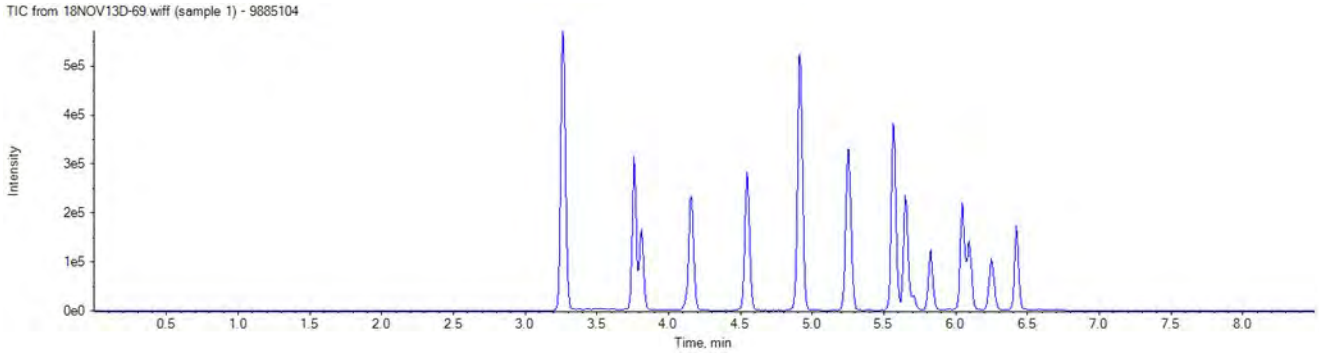
Analyte Quantitation Peak Table

Sample Name: 9885104 **Instrument Name:** LM27631 **File Name:** 18NOV13D-69.wiff

Sample Wt	Sample Vol	Dilution Factor	PrepFactor
1.05000	1.000	1.00	2.000

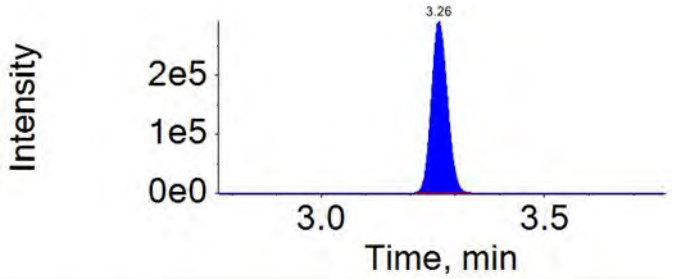
Analyte Name	RT	RRT	Analyte Area Response	E	Int Typ	ES Name	ES RT	ES Area Response	Area Ratio	Sample Result (ng/g)
PFBS	N/A	N/A	N/A		A	13C3-PFBS	3.81	336920.3	N/A	
PFHxA	N/A	N/A	N/A		A	13C5-PFHxA	4.16	528866.3	N/A	
PFHpA	N/A	N/A	N/A		A	13C4-PFHpA	4.55	397999.2	N/A	
PFHxS	N/A	N/A	N/A		A	13C3-PFHxS	4.55	250115.6	N/A	
PFOA	N/A	N/A	N/A		A	13C8-PFOA	4.91	710207.6	N/A	
PFOS	N/A	N/A	N/A		A	13C8-PFOS	5.24	214220.2	N/A	
PFNA	N/A	N/A	N/A		A	13C9-PFNA	5.26	365335.1	N/A	
PFDA	N/A	N/A	N/A		A	13C6-PFDA	5.57	517111.1	N/A	
NMeFOSAA	N/A	N/A	N/A		A	d3-NMeFOSAA	5.71	66083.5	N/A	
PFUnDA	N/A	N/A	N/A		A	13C7-PFUnDA	5.82	205440.2	N/A	
NEtFOSAA	N/A	N/A	N/A		A	d5-NEtFOSAA	5.83	48759.5	N/A	
PFDoDA	N/A	N/A	N/A		A	13C2-PFDoDA	6.05	453723.5	N/A	
PFTrDA	N/A	N/A	N/A		A	13C2-PFDoDA	6.05	453723.5	N/A	
PFTeDA	N/A	N/A	N/A		A	13C2-PFTeDA	6.42	331104.5	N/A	

Total Ion Chromatogram

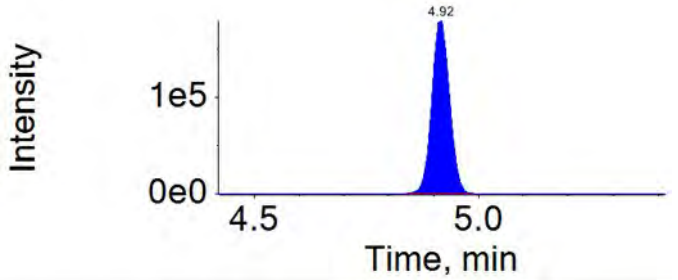


ICAL Name: 18NOV12DCAL **Result Table:** 18316011 11/14/2018 4:24:36 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

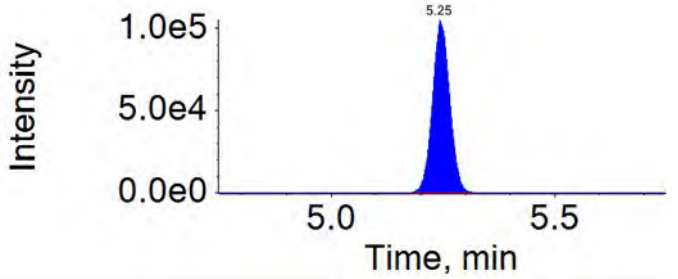
Injection Standard: 13C3-PFBA
216.0 / 172.0



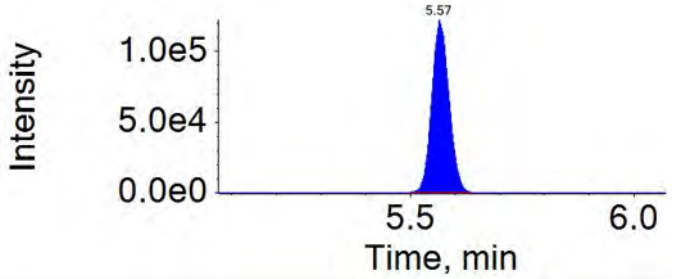
Injection Standard: 13C2-PFOA
415.0 / 370.0



Injection Standard: 13C4-PFOS
503.0 / 80.0

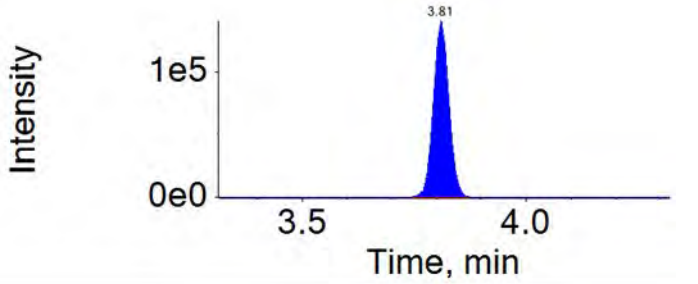


Injection Standard: 13C2-PFDA
515.0 / 470.0

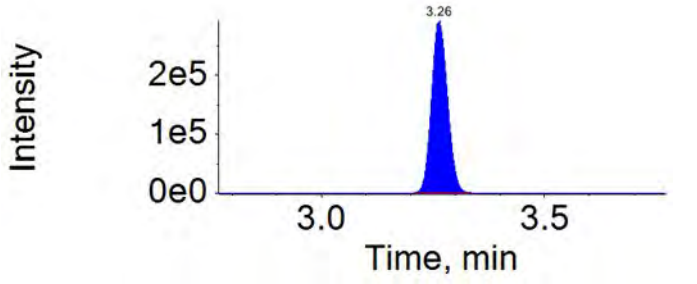


ICAL Name: 18NOV12DCAL **Result Table:** 18316011 11/14/2018 4:24:36 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

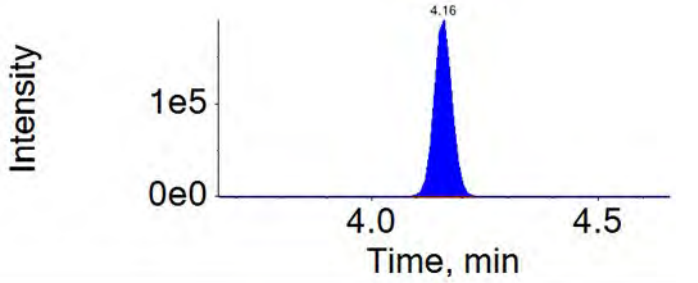
Extraction Standard: E13C3-PFBS
302.0 / 80.0



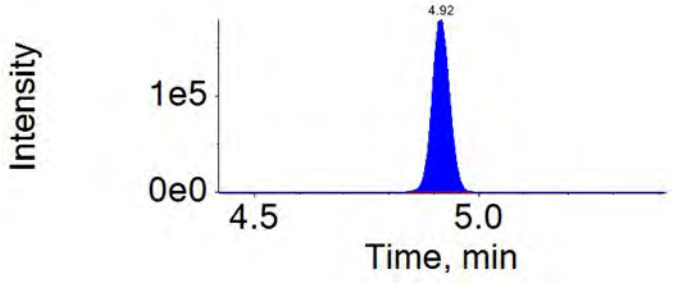
Injection Standard: 13C3-PFBA
216.0 / 172.0



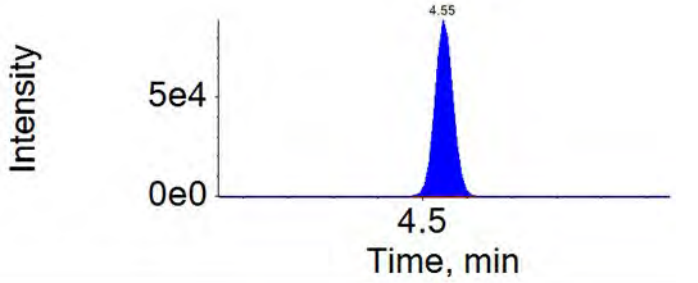
Extraction Standard: E13C5-PFHxA
318.0 / 273.0



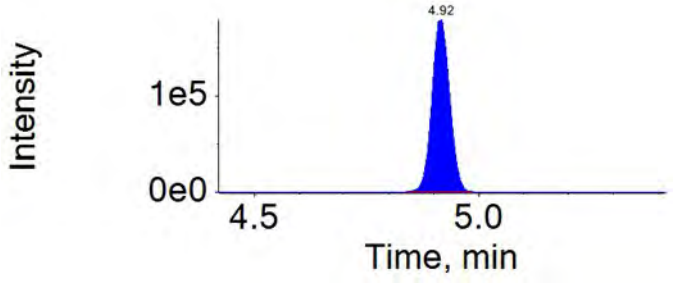
Injection Standard: 13C2-PFOA
415.0 / 370.0



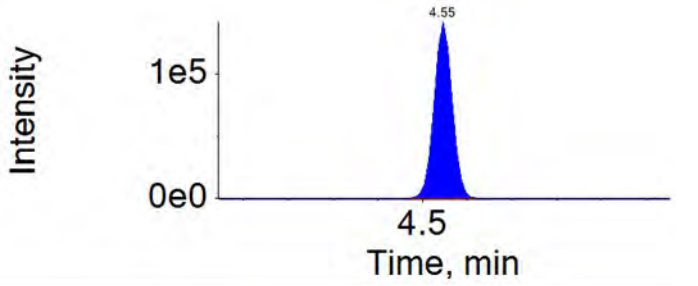
Extraction Standard: E13C3-PFHxS
402.0 / 80.0



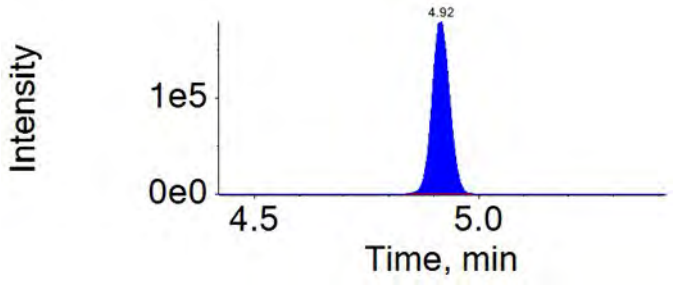
Injection Standard: 13C2-PFOA
415.0 / 370.0



Extraction Standard: E13C4-PFHpA
367.0 / 322.0



Injection Standard: 13C2-PFOA
415.0 / 370.0

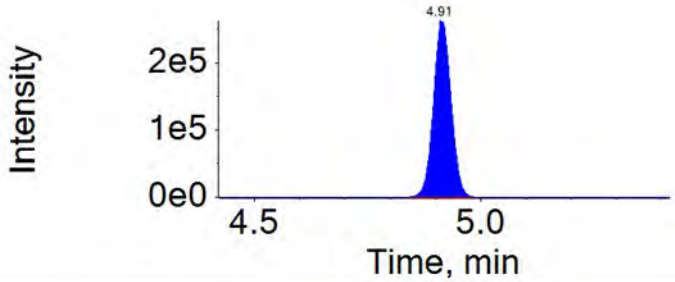


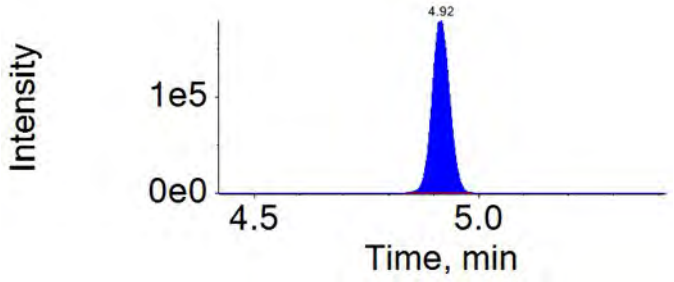
APPROVED
By MCD at 4:51 pm, 11/14/18

REVIEWED
By HMK at 12:22 pm, 11/15/18

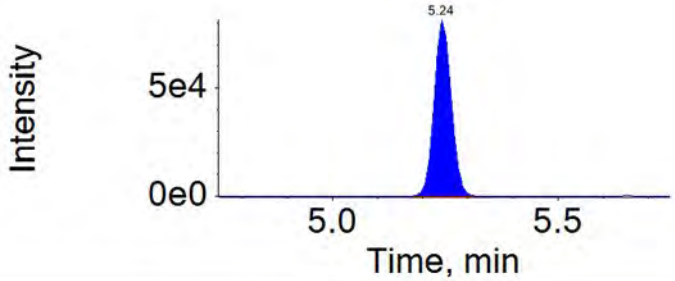
ICAL Name: 18NOV12DCAL **Result Table:** 18316011 11/14/2018 4:24:36 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

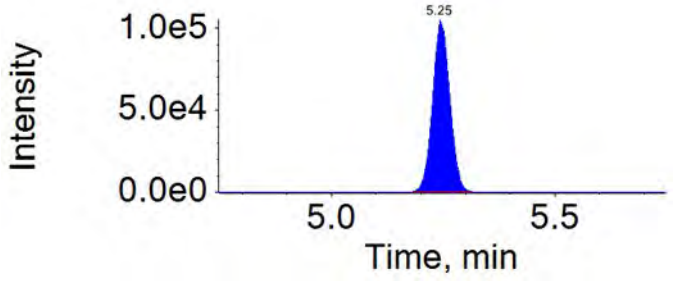
Extraction Standard: E13C8-PFOA	Injection Standard: 13C2-PFOA
421.0 / 376.0	415.0 / 370.0



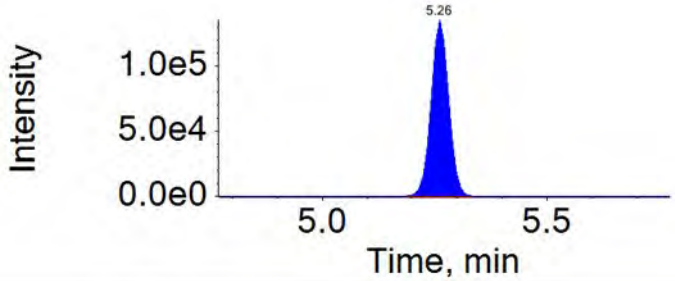


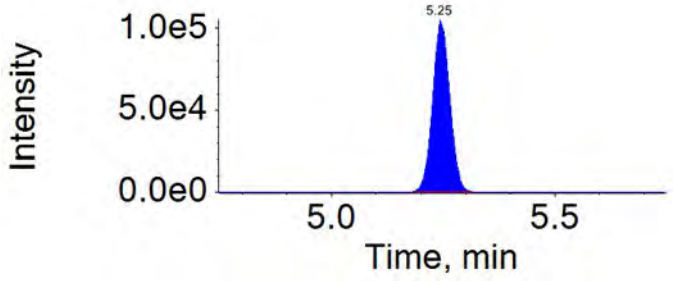
Extraction Standard: E13C8-PFOS	Injection Standard: 13C4-PFOS
507.0 / 80.0	503.0 / 80.0



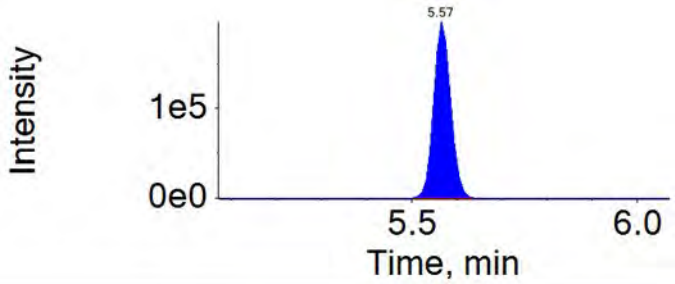


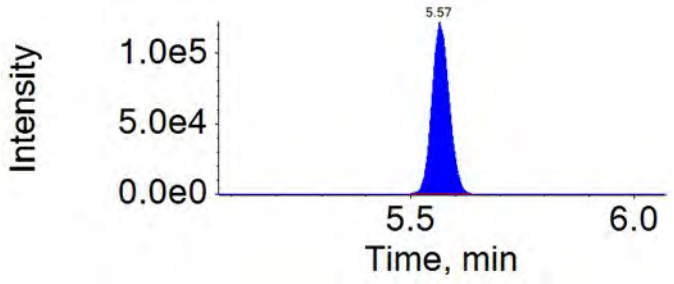
Extraction Standard: E13C9-PFNA	Injection Standard: 13C4-PFOS
472.0 / 427.0	503.0 / 80.0





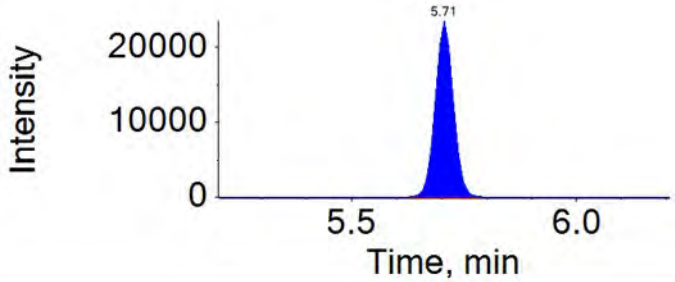
Extraction Standard: E13C6-PFDA	Injection Standard: 13C2-PFDA
519.0 / 474.0	515.0 / 470.0

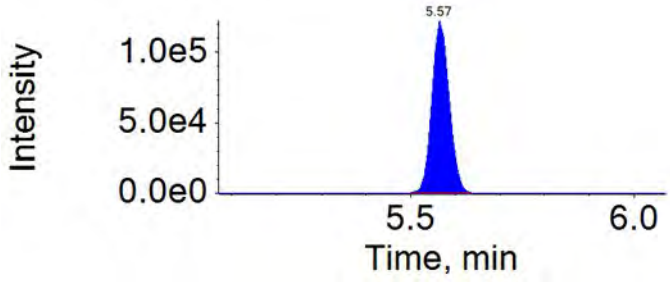




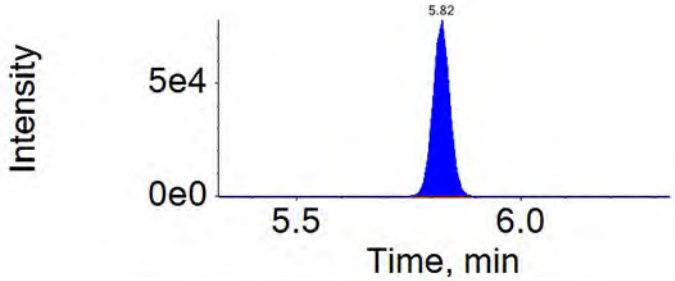
ICAL Name: 18NOV12DCAL **Result Table:** 18316011 11/14/2018 4:24:36 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

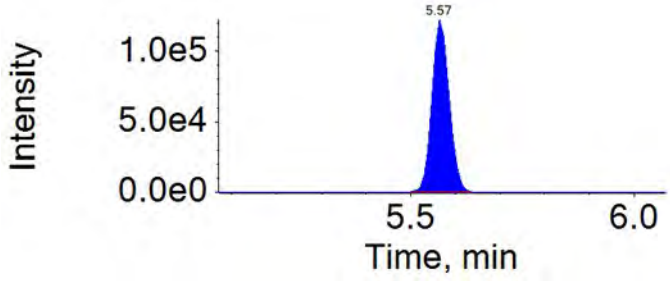
Extraction Standard: Ed3-NMeFOSAA	Injection Standard: 13C2-PFDA
573.0 / 419.0	515.0 / 470.0



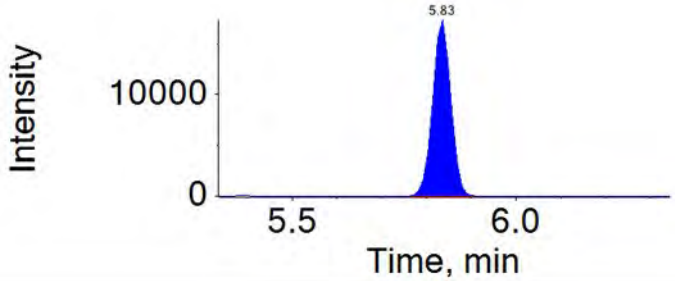


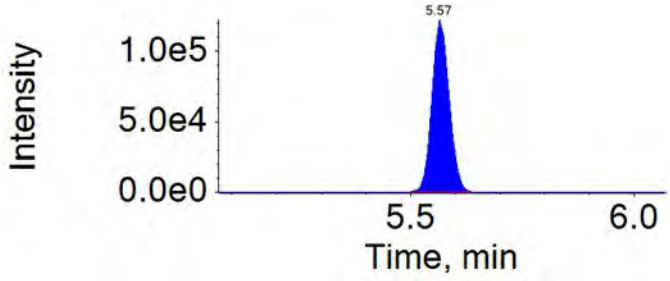
Extraction Standard: E13C7-PFUnDA	Injection Standard: 13C2-PFDA
570.0 / 525.0	515.0 / 470.0



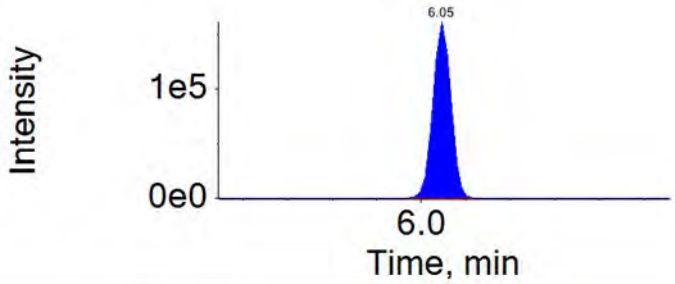


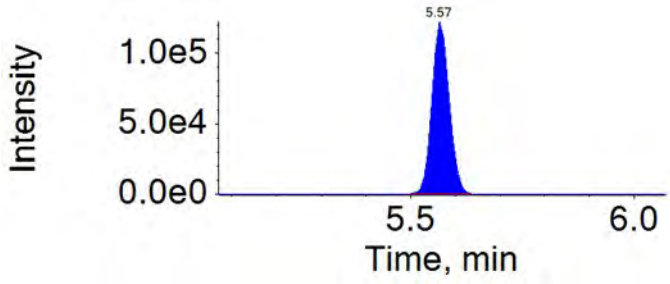
Extraction Standard: Ed5-NEtFOSAA	Injection Standard: 13C2-PFDA
589.0 / 419.0	515.0 / 470.0



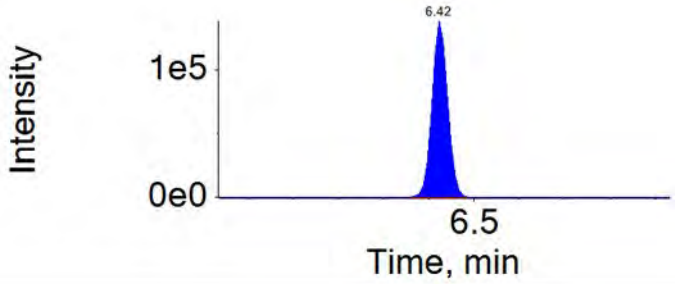
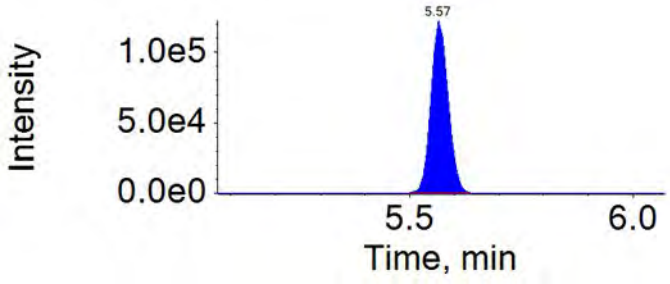


Extraction Standard: E13C2-PFDoDA	Injection Standard: 13C2-PFDA
615.0 / 570.0	515.0 / 470.0



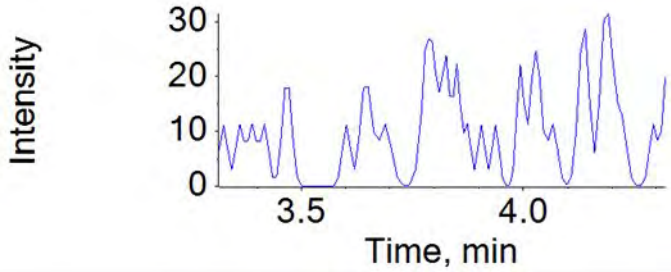


ICAL Name: 18NOV12DCAL **Result Table:** 18316011 11/14/2018 4:24:36 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

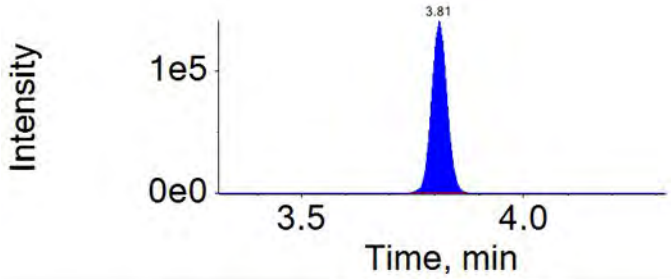
Extraction Standard: E13C2-PFTeDA	Injection Standard: 13C2-PFDA
715.0 / 670.0 	515.0 / 470.0 

ICAL Name: 18NOV12DCAL **Result Table:** 18316011 11/14/2018 4:24:36 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

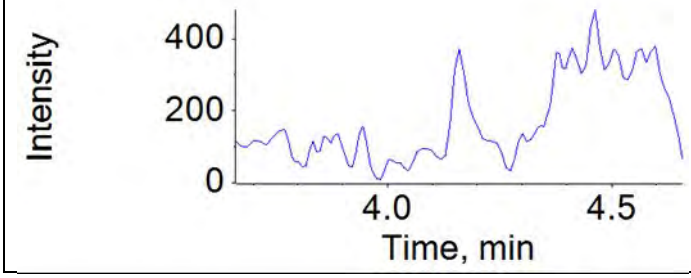
Analyte: PFBS
299.0 / 80.0



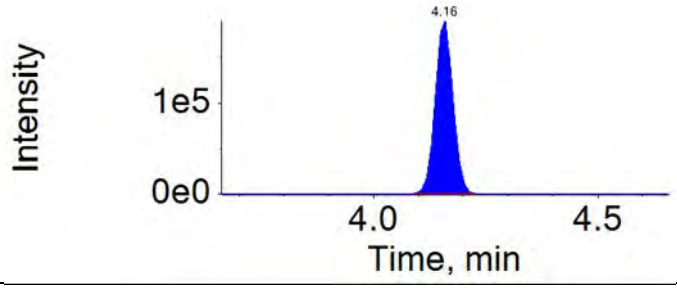
Extraction Standard: 13C3-PFBS
302.0 / 80.0



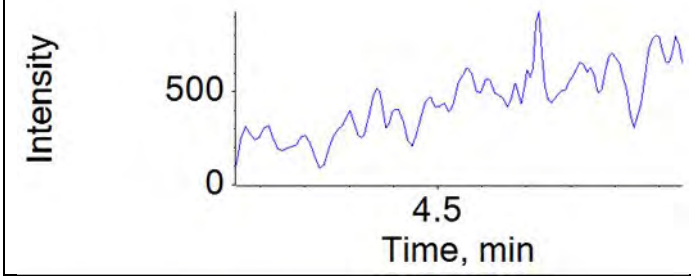
Analyte: PFHxA
313.0 / 269.0



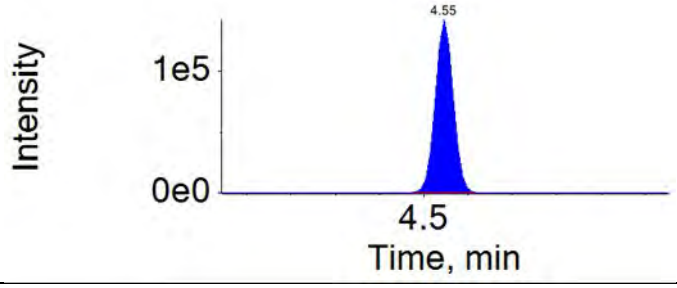
Extraction Standard: 13C5-PFHxA
318.0 / 273.0



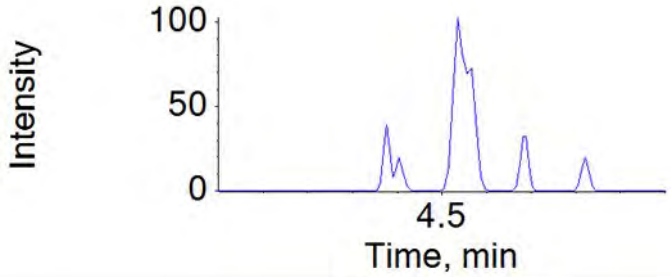
Analyte: PFHpA
363.0 / 319.0



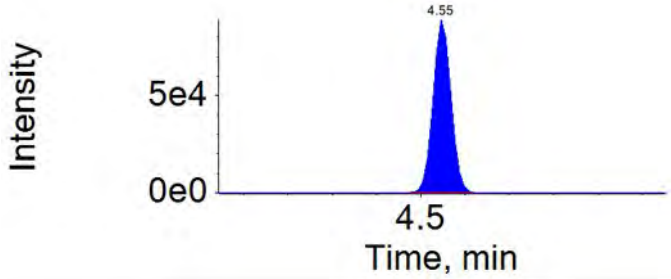
Extraction Standard: 13C4-PFHpA
367.0 / 322.0



Analyte: PFHxS
399.0 / 80.0

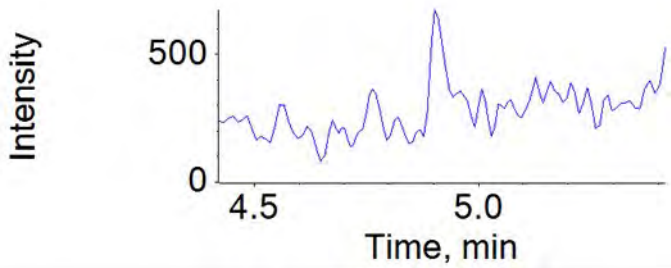


Extraction Standard: 13C3-PFHxS
402.0 / 80.0

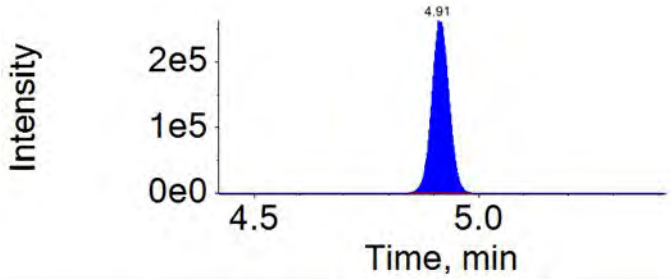


ICAL Name: 18NOV12DCAL **Result Table:** 18316011 11/14/2018 4:24:36 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

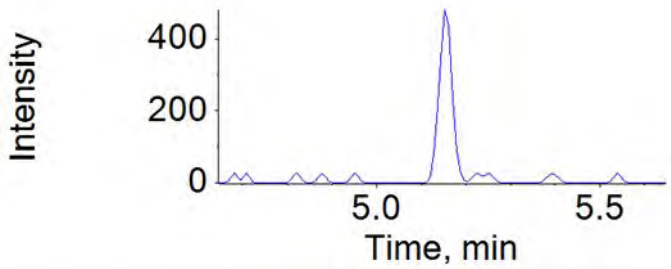
Analyte: PFOA
413.0 / 369.0



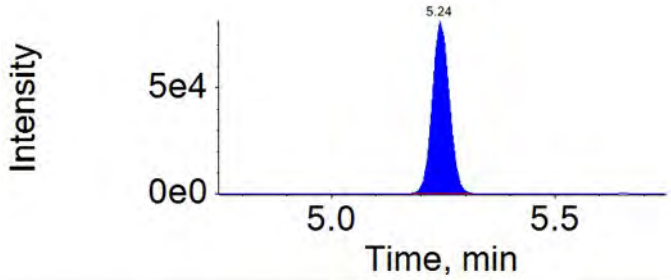
Extraction Standard: 13C8-PFOA
421.0 / 376.0



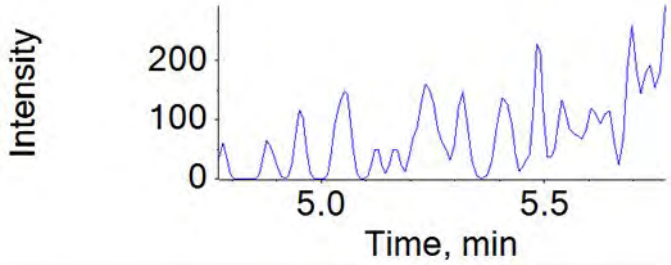
Analyte: PFOS
499.0 / 80.0



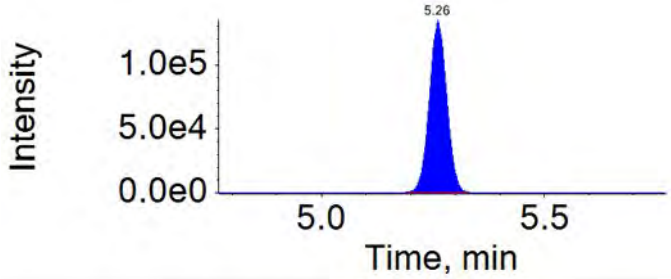
Extraction Standard: 13C8-PFOS
507.0 / 80.0



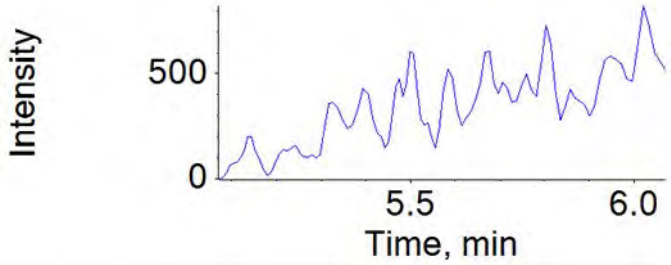
Analyte: PFNA
463.0 / 419.0



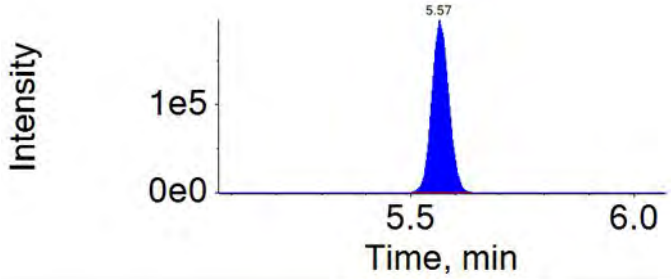
Extraction Standard: 13C9-PFNA
472.0 / 427.0



Analyte: PFDA
513.0 / 469.0

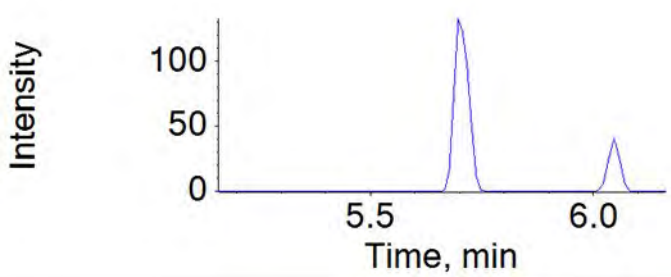


Extraction Standard: 13C6-PFDA
519.0 / 474.0

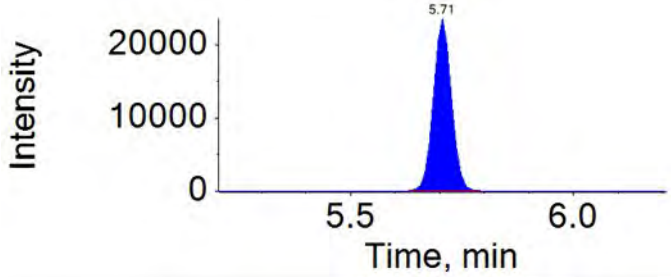


ICAL Name: 18NOV12DCAL **Result Table:** 18316011 11/14/2018 4:24:36 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

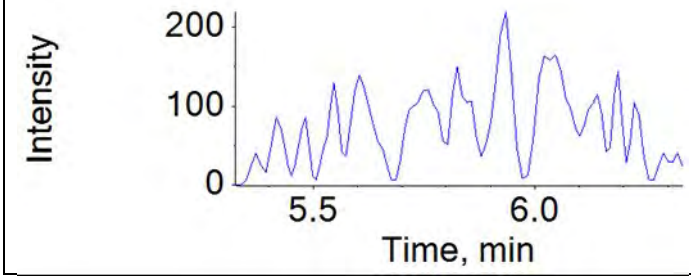
Analyte: NMeFOSAA
570.0 / 419.0



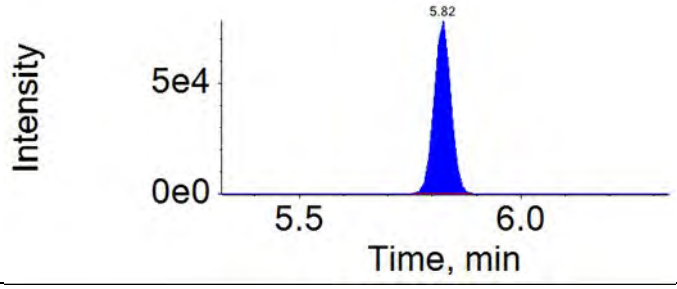
Extraction Standard: d3-NMeFOSAA
573.0 / 419.0



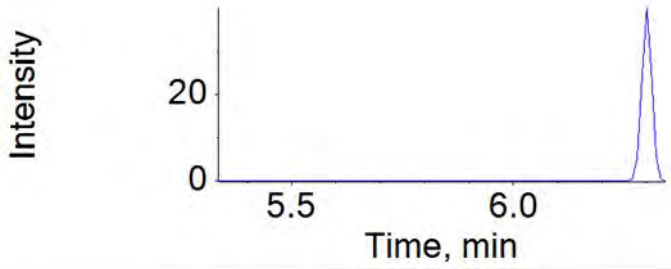
Analyte: PFUnDA
563.0 / 519.0



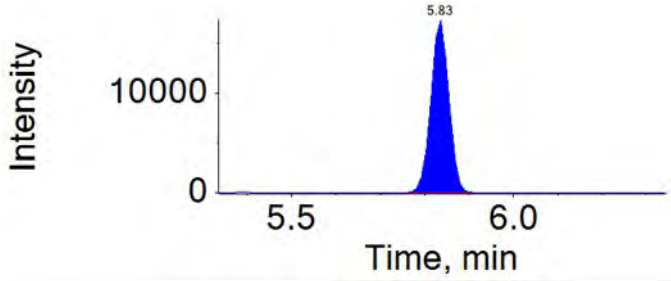
Extraction Standard: 13C7-PFUnDA
570.0 / 525.0



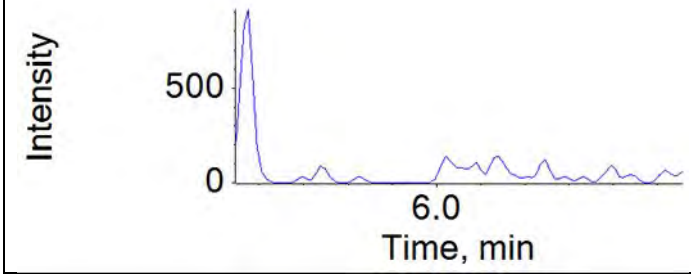
Analyte: NEtFOSAA
584.0 / 419.0



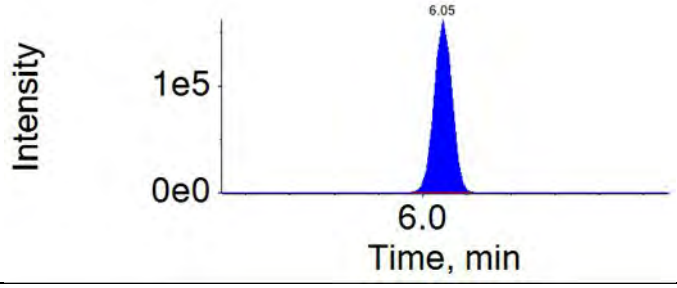
Extraction Standard: d5-NEtFOSAA
589.0 / 419.0



Analyte: PFDoDA
613.0 / 569.0



Extraction Standard: 13C2-PFDoDA
615.0 / 570.0

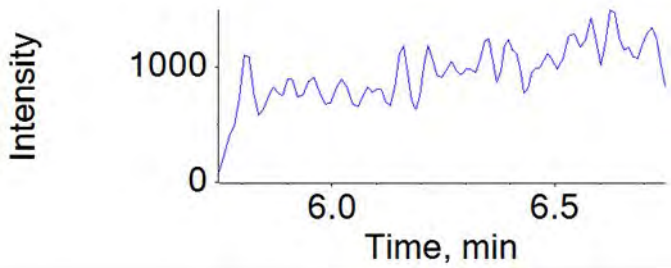


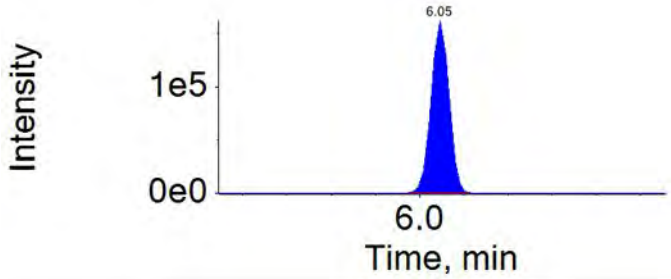
APPROVED
By MCD at 4:51 pm, 11/14/18

REVIEWED
By HMK at 12:22 pm, 11/15/18

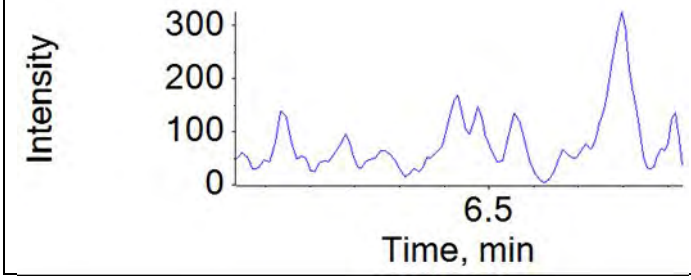
ICAL Name: 18NOV12DCAL **Result Table:** 18316011 11/14/2018 4:24:36 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

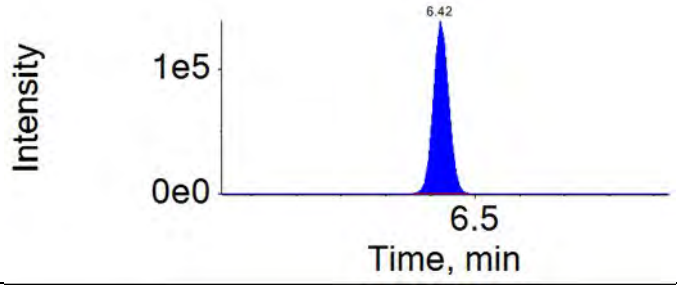
Analyte: PFTrDA	Extraction Standard: 13C2-PFDoDA
663.0 / 619.0	615.0 / 570.0





Analyte: PFTeDA	Extraction Standard: 13C2-PFTeDA
713.0 / 669.0	715.0 / 670.0





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LC-MS/MS Analysis Report

Printed: 11/14/2018 4:29:00 PM
Template: IonRatio18OCT10

Ion Ratio Report

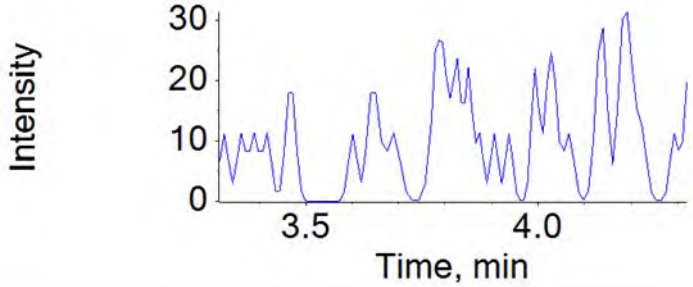
Sample Name: 9885104 **Instrument Name:** LM27631 **File Name:** 18NOV13D-69.wiff

Component Name	RT	RRT	Analyte Area Response	Int Typ	Expected Ion Ratio	Ion Ratio	Ion Ratio % Diff	Ion Ratio Limit	Ion Ratio OOS
PFBS	N/A	N/A	N/A	A	N/A	N/A			
PFBS_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFHxA	N/A	N/A	N/A	A	N/A	N/A			
PFHxA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFHpA	N/A	N/A	N/A	A	N/A	N/A			
PFHpA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFHxS	N/A	N/A	N/A	A	N/A	N/A			
PFHxS_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFOA	N/A	N/A	N/A	A	N/A	N/A			
PFOA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFOS	N/A	N/A	N/A	A	N/A	N/A			
PFOS_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFNA	N/A	N/A	N/A	A	N/A	N/A			
PFNA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFDA	N/A	N/A	N/A	A	N/A	N/A			
PFDA_2	N/A	N/A	N/A	A	N/A	N/A		50	
NMeFOSAA	N/A	N/A	N/A	A	N/A	N/A			
NMeFOSAA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFUnDA	N/A	N/A	N/A	A	N/A	N/A			
PFUnDA_2	N/A	N/A	N/A	A	N/A	N/A		50	
NEtFOSAA	N/A	N/A	N/A	A	N/A	N/A			
NEtFOSAA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFDoDA	N/A	N/A	N/A	A	N/A	N/A			
PFDoDA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFTrDA	N/A	N/A	N/A	A	N/A	N/A			
PFTrDA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFTeDA	N/A	N/A	N/A	A	N/A	N/A			
PFTeDA_2	N/A	N/A	N/A	A	N/A	N/A		50	

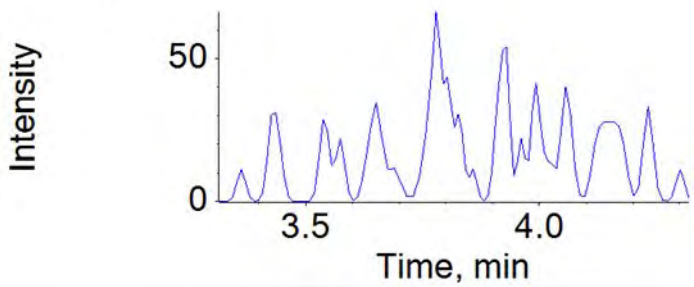
APPROVED
By MCD at 4:51 pm, 11/14/18

REVIEWED
By HMK at 12:22 pm, 11/15/18

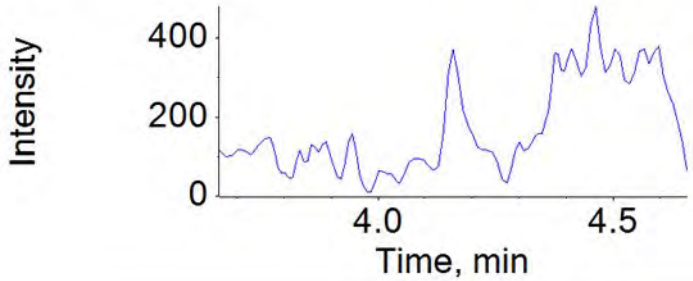
Component: PFBS
Primary Mass: 299.0 / 80.0



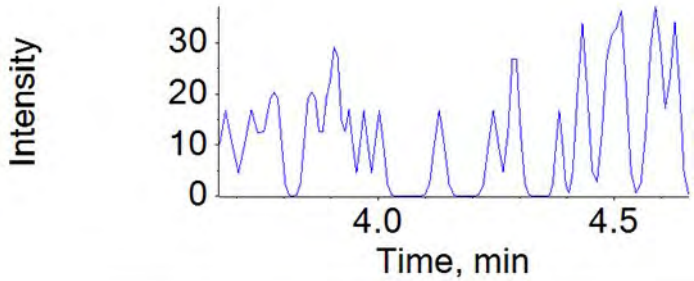
Component: PFBS_2
Secondary Mass: 299.0 / 99.0



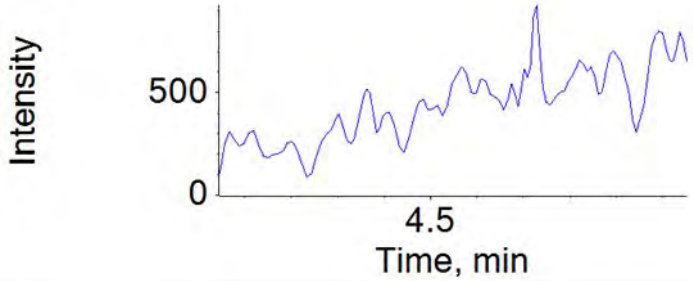
Component: PFHxA
Primary Mass: 313.0 / 269.0



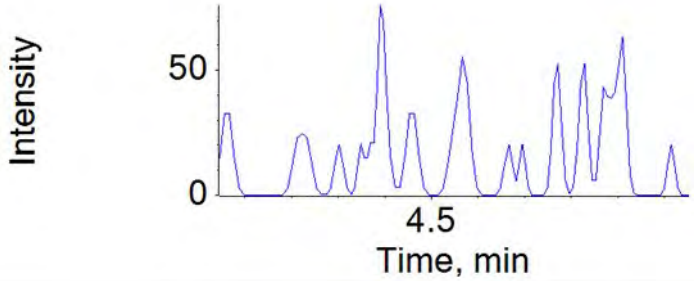
Component: PFHxA_2
Secondary Mass: 313.0 / 119.0



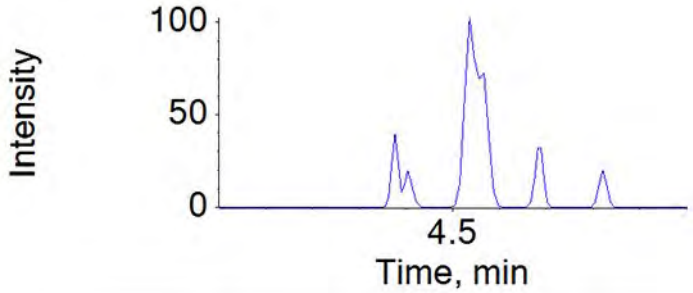
Component: PFHpA
Primary Mass: 363.0 / 319.0



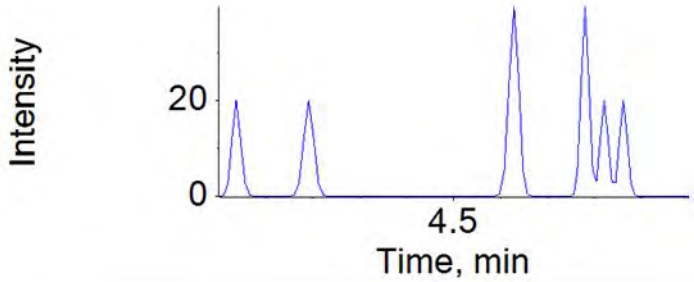
Component: PFHpA_2
Secondary Mass: 363.0 / 169.0



Component: PFHxS
Primary Mass: 399.0 / 80.0



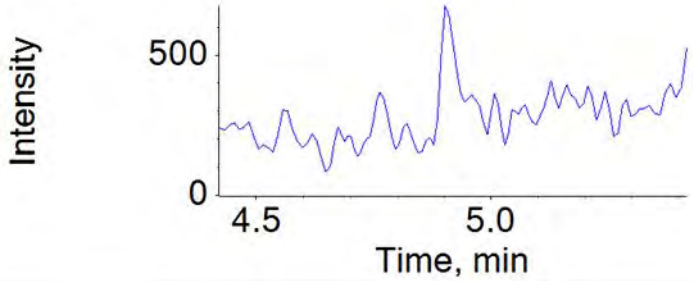
Component: PFHxS_2
Secondary Mass: 399.0 / 99.0



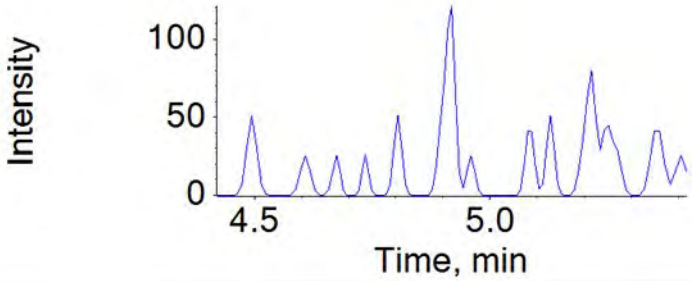
APPROVED
By MCD at 4:51 pm, 11/14/18

REVIEWED
By HMK at 12:22 pm, 11/15/18

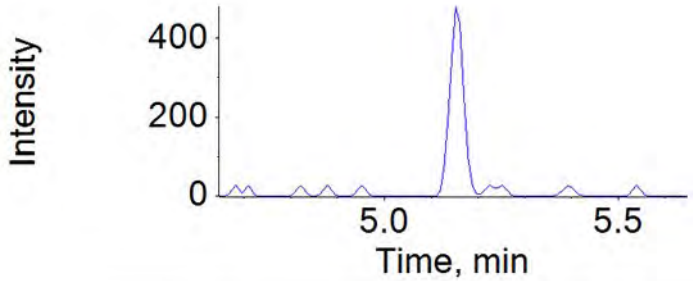
Component: PFOA
Primary Mass: 413.0 / 369.0



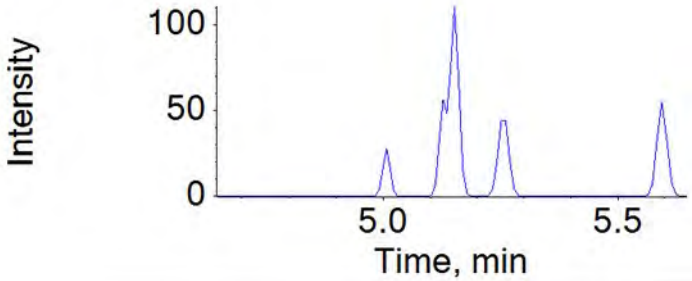
Component: PFOA_2
Secondary Mass: 413.0 / 169.0



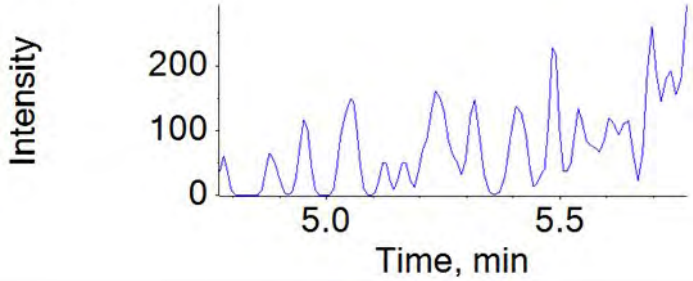
Component: PFOS
Primary Mass: 499.0 / 80.0



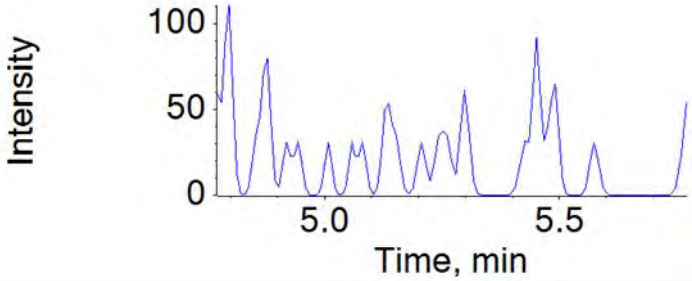
Component: PFOS_2
Secondary Mass: 499.0 / 99.0



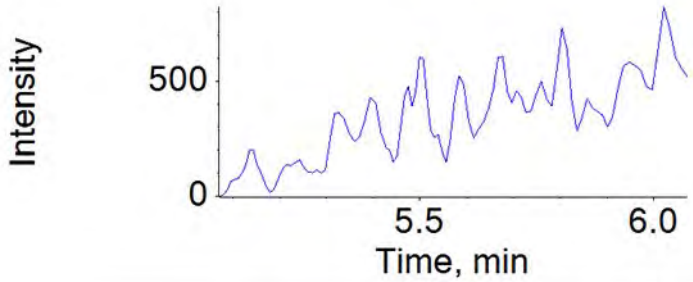
Component: PFNA
Primary Mass: 463.0 / 419.0



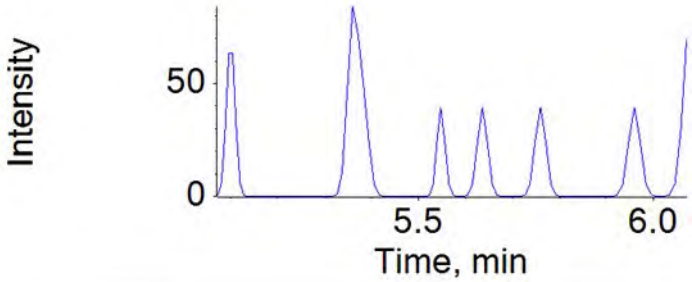
Component: PFNA_2
Secondary Mass: 463.0 / 169.0



Component: PFDA
Primary Mass: 513.0 / 469.0



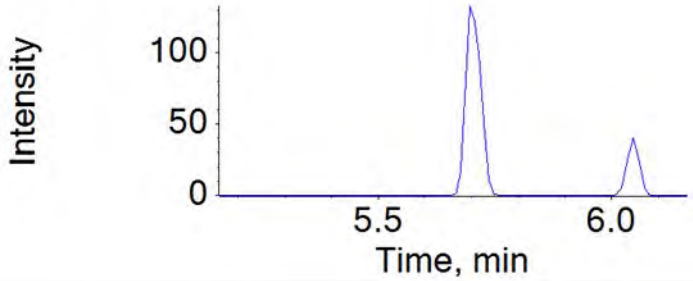
Component: PFDA_2
Secondary Mass: 513.0 / 169.0



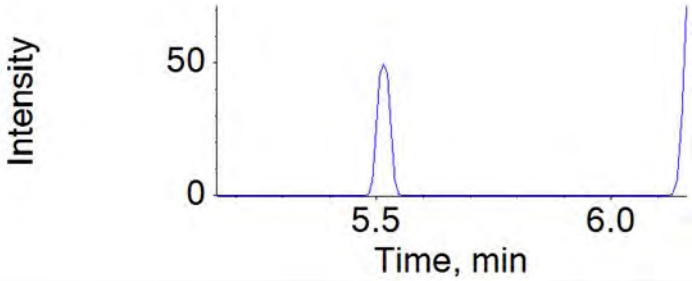
APPROVED
By MCD at 4:51 pm, 11/14/18

REVIEWED
By HMK at 12:22 pm, 11/15/18

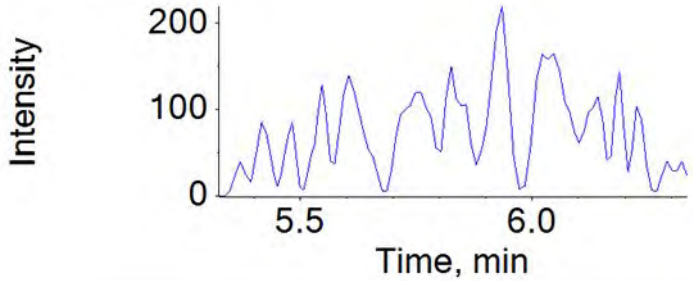
Component: NMeFOSAA
Primary Mass: 570.0 / 419.0



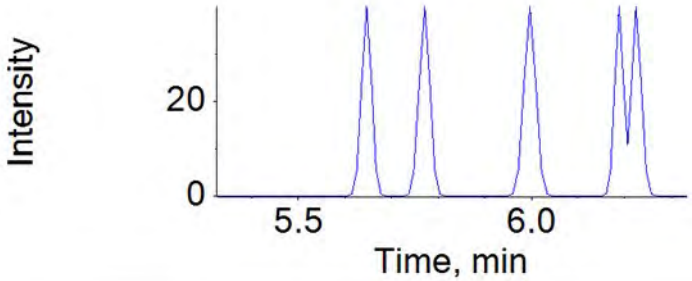
Component: NMeFOSAA_2
Secondary Mass: 570.0 / 483.0



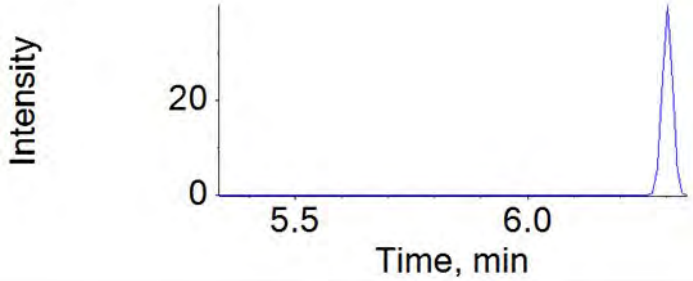
Component: PFUnDA
Primary Mass: 563.0 / 519.0



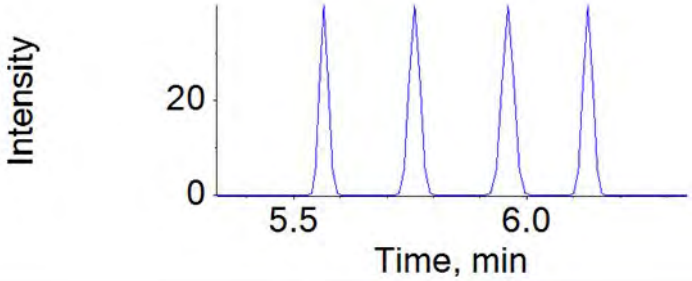
Component: PFUnDA_2
Secondary Mass: 563.0 / 169.0



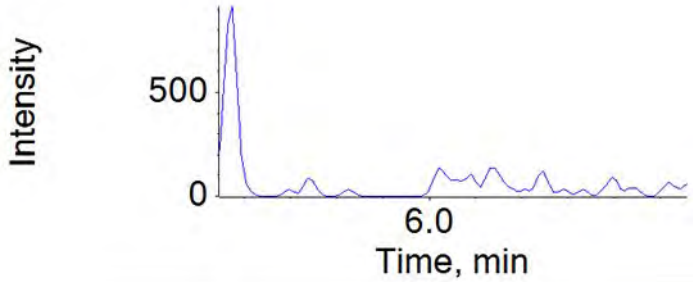
Component: NEtFOSAA
Primary Mass: 584.0 / 419.0



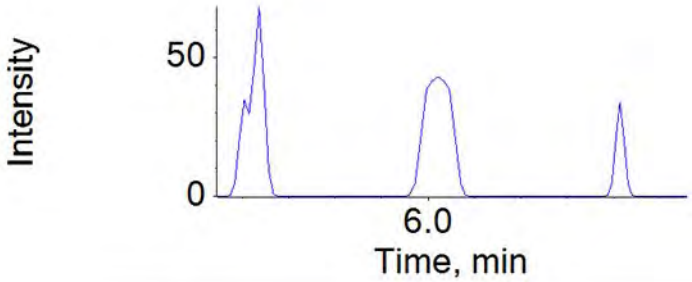
Component: NEtFOSAA_2
Secondary Mass: 584.0 / 526.0



Component: PFDoDA
Primary Mass: 613.0 / 569.0



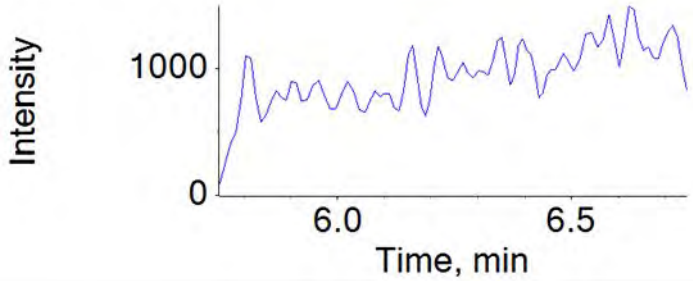
Component: PFDoDA_2
Secondary Mass: 613.0 / 169.0



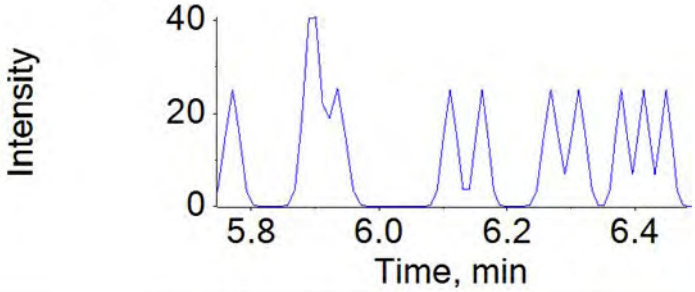
APPROVED
By MCD at 4:51 pm, 11/14/18

REVIEWED
By HMK at 12:22 pm, 11/15/18

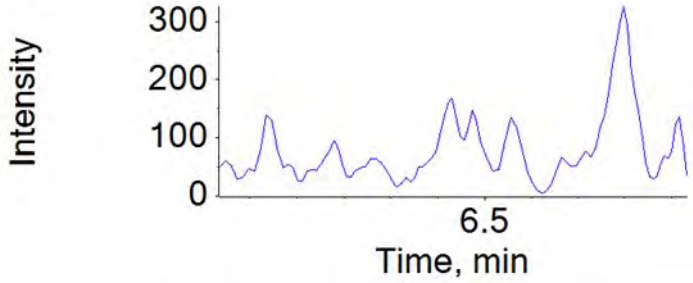
Component: PFTrDA
Primary Mass: 663.0 / 619.0



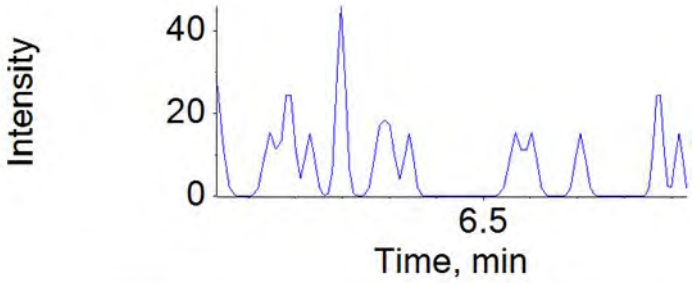
Component: PFTrDA_2
Secondary Mass: 663.0 / 169.0



Component: PFTeDA
Primary Mass: 713.0 / 669.0



Component: PFTeDA_2
Secondary Mass: 713.0 / 169.0



APPROVED
By MCD at 4:51 pm, 11/14/18

REVIEWED
By HMK at 12:22 pm, 11/15/18

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LC-MS/MS
DOD Analysis Report

Printed: 11/14/2018 4:27:00 PM
Template: DOD-Sample-18JUN22.docx

ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM
Result Table: 18316011 11/14/2018 4:24:36 PM
Acquisition Method: 18AUG13_3uL.dam

Sample Name:	9885105			**Data File:**		18NOV13D-71.wiff
Sample ID:	EPA 537 mod QSM 5.1 table B-15 18316011 OU1-Bldg50-S-02-03 Grab Soil			**Acquis Date:**		2018-11-13T20:14:50
Sample Type:	Unknown			**Instrument:**		LM27631
Vial Position:	67			**Acquis Method:**		18AUG13_3uL.dam
Injection Vol:	3.00			**Result Table:**		18316011
QMethod File:	18AUG20QM			**ICAL Name:**		18NOV12DCAL
Batch Number:	18316011			**Operator:**		MCD7824
Sample Wt.:	1.03000			**Dilution Factor:**		1.00
Sample Vol.:	1.000			**Prep Factor:**		2.000

Injection Standard Peak Table

Injection Standard Area Reference File: 18NOV13D-05

Injection Standard Name	Inj Std Conc	Injection Std Peak Area	Rreference Injection Standard Area	Injection Std %Diff	Injection Std %Diff Limit	Injection Std %Diff OOS
13C3-PFBA	5.0	737669.0	661126.9	12	50	
13C2-PFOA	5.0	531123.7	466902.6	14	50	
13C4-PFOS	4.8	287083.0	247446.9	16	50	
13C2-PFDA	5.0	324956.4	295381.6	10	50	

Extraction Standard Peak Table

Extraction Standard Name	Ext Std Area	Inj Std Name	Inj Std Area	Area Ratio	Ext Std Conc	Ext Std Result	Ext Std %REC	Ext Std %REC Limit	Ext Std OOS
E13C3-PFBS	381397.9	13C3-PFBA	737669.0	0.517	9.029	7.087	78	50-150	
E13C5-PFHxA	597677.3	13C2-PFOA	531123.7	1.125	9.709	7.893	81	50-150	
E13C3-PFHxS	293210.3	13C2-PFOA	531123.7	0.552	9.184	7.356	80	50-150	
E13C4-PFHpA	440476.9	13C2-PFOA	531123.7	0.829	9.709	7.255	75	50-150	
E13C8-PFOA	790636.7	13C2-PFOA	531123.7	1.489	9.709	7.964	82	50-150	
E13C8-PFOS	251200.8	13C4-PFOS	287083.0	0.875	9.282	7.528	81	50-150	
E13C9-PFNA	420759.5	13C4-PFOS	287083.0	1.466	9.709	7.935	82	50-150	
E13C6-PFDA	581981.4	13C2-PFDA	324956.4	1.791	9.709	8.115	84	50-150	
Ed3-NMeFOSAA	81236.6	13C2-PFDA	324956.4	0.250	9.709	8.762	90	50-150	
E13C7-PFUnDA	237694.4	13C2-PFDA	324956.4	0.731	9.709	8.246	85	50-150	
Ed5-NEtFOSAA	55760.3	13C2-PFDA	324956.4	0.172	9.709	7.049	73	50-150	
E13C2-PFDoDA	495314.3	13C2-PFDA	324956.4	1.524	9.709	7.684	79	50-150	
E13C2-PFTeDA	347009.0	13C2-PFDA	324956.4	1.068	9.709	7.279	75	50-150	

APPROVED
By MCD at 4:51 pm, 11/14/18

REVIEWED
By HMK at 12:22 pm, 11/15/18

ICAL Name: 18NOV12DCAL **Result Table:** 18316011 11/14/2018 4:24:36 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

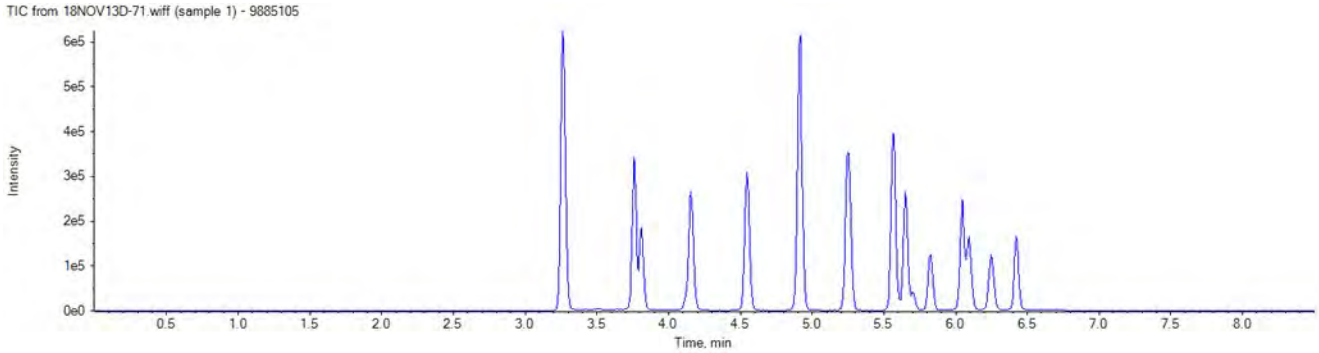
Analyte Quantitation Peak Table

Sample Name: 9885105 **Instrument Name:** LM27631 **File Name:** 18NOV13D-71.wiff

Sample Wt	Sample Vol	Dilution Factor	PrepFactor
1.03000	1.000	1.00	2.000

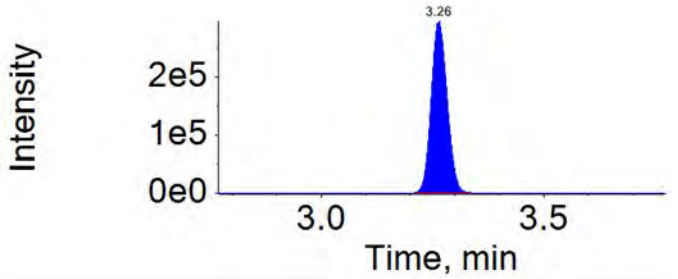
Analyte Name	RT	RRT	Analyte Area Response	E	Int Typ	ES Name	ES RT	ES Area Response	Area Ratio	Sample Result (ng/g)
PFBS	N/A	N/A	N/A		A	13C3-PFBS	3.81	381397.9	N/A	
PFHxA	N/A	N/A	N/A		A	13C5-PFHxA	4.16	597677.3	N/A	
PFHpA	N/A	N/A	N/A		A	13C4-PFHpA	4.55	440476.9	N/A	
PFHxS	N/A	N/A	N/A		A	13C3-PFHxS	4.55	293210.3	N/A	
PFOA	N/A	N/A	N/A		A	13C8-PFOA	4.91	790636.7	N/A	
PFOS	N/A	N/A	N/A		A	13C8-PFOS	5.24	251200.8	N/A	
PFNA	N/A	N/A	N/A		A	13C9-PFNA	5.26	420759.5	N/A	
PFDA	N/A	N/A	N/A		A	13C6-PFDA	5.57	581981.4	N/A	
NMeFOSAA	N/A	N/A	N/A		A	d3-NMeFOSAA	5.70	81236.6	N/A	
PFUnDA	N/A	N/A	N/A		A	13C7-PFUnDA	5.82	237694.4	N/A	
NEtFOSAA	N/A	N/A	N/A		A	d5-NEtFOSAA	5.83	55760.3	N/A	
PFDoDA	N/A	N/A	N/A		A	13C2-PFDoDA	6.05	495314.3	N/A	
PFTrDA	N/A	N/A	N/A		A	13C2-PFDoDA	6.05	495314.3	N/A	
PFTeDA	N/A	N/A	N/A		A	13C2-PFTeDA	6.42	347009.0	N/A	

Total Ion Chromatogram

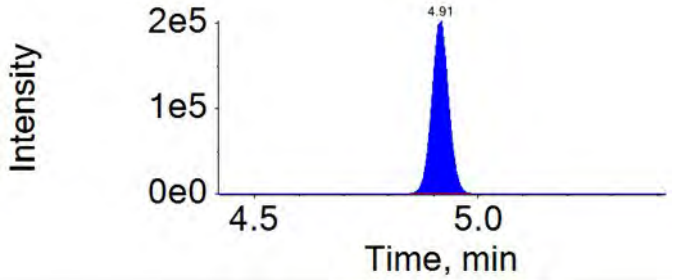


ICAL Name: 18NOV12DCAL **Result Table:** 18316011 11/14/2018 4:24:36 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

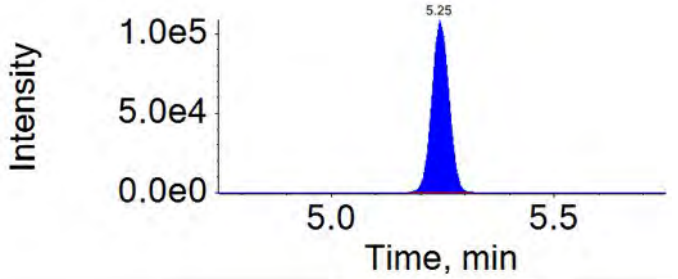
Injection Standard: 13C3-PFBA
216.0 / 172.0



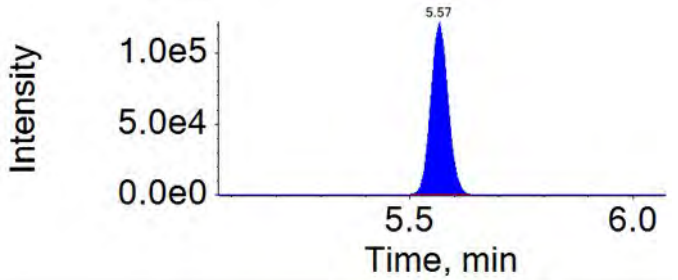
Injection Standard: 13C2-PFOA
415.0 / 370.0



Injection Standard: 13C4-PFOS
503.0 / 80.0



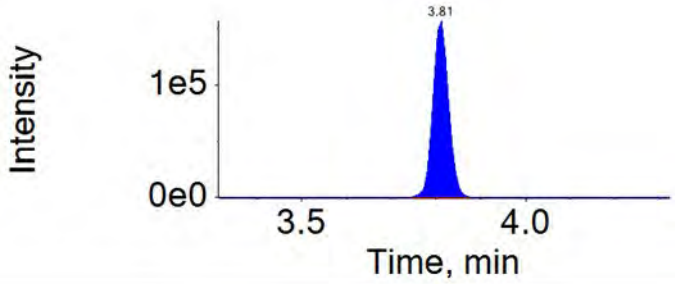
Injection Standard: 13C2-PFDA
515.0 / 470.0



ICAL Name: 18NOV12DCAL **Result Table:** 18316011 11/14/2018 4:24:36 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

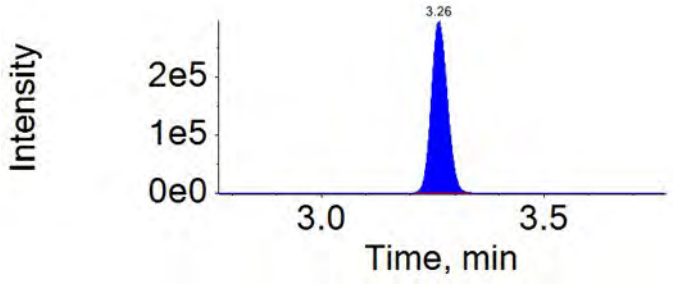
Extraction Standard: E13C3-PFBS

302.0 / 80.0



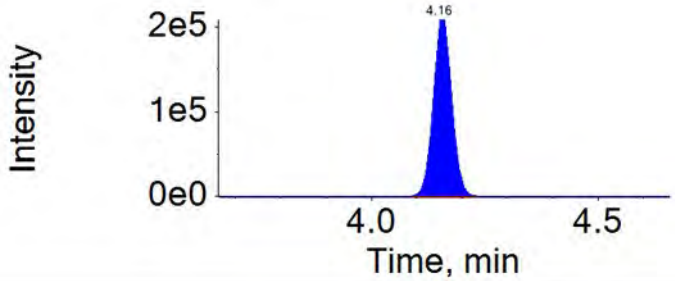
Injection Standard: 13C3-PFBA

216.0 / 172.0



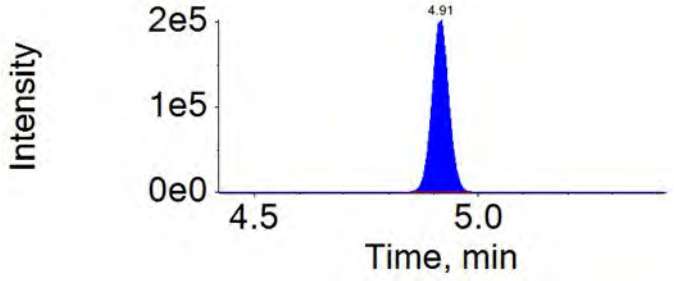
Extraction Standard: E13C5-PFHxA

318.0 / 273.0



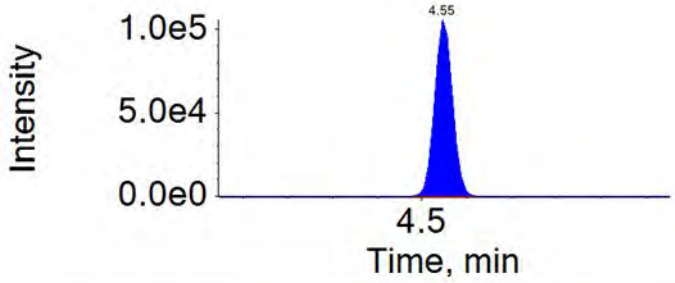
Injection Standard: 13C2-PFOA

415.0 / 370.0



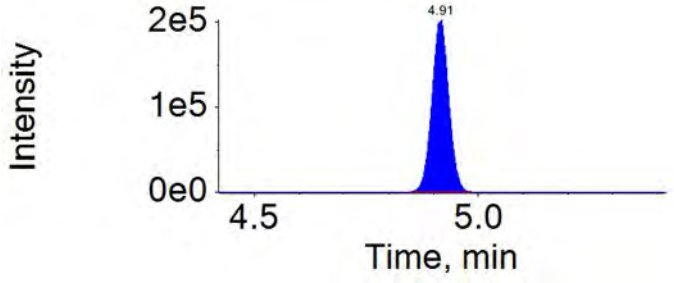
Extraction Standard: E13C3-PFHxS

402.0 / 80.0



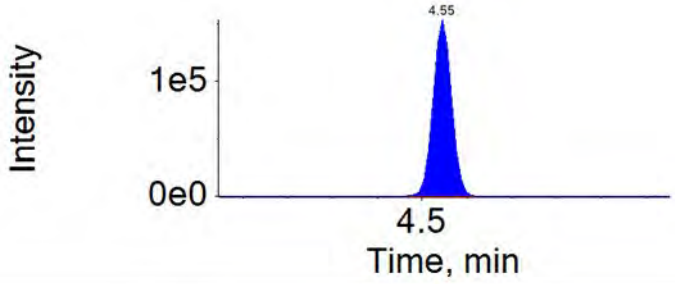
Injection Standard: 13C2-PFOA

415.0 / 370.0



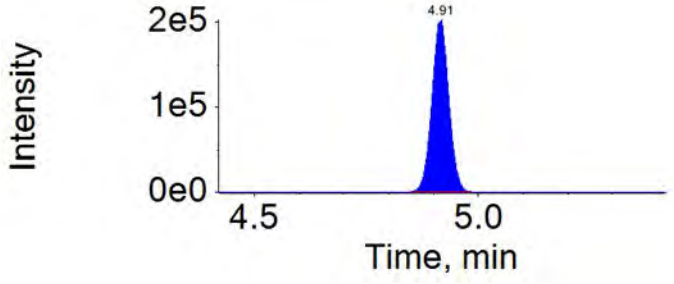
Extraction Standard: E13C4-PFHpA

367.0 / 322.0



Injection Standard: 13C2-PFOA

415.0 / 370.0

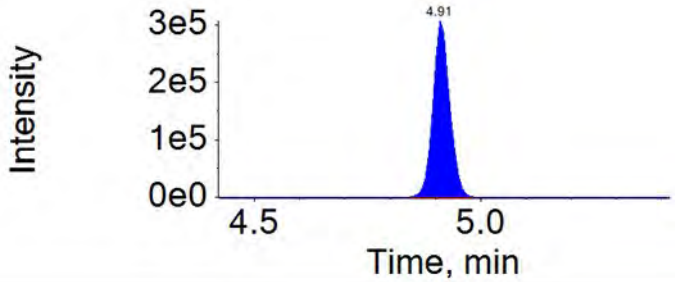


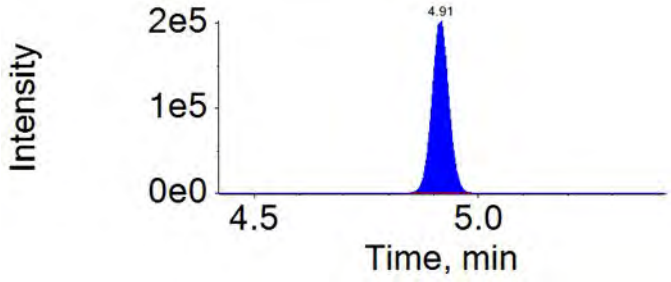
APPROVED
By MCD at 4:51 pm, 11/14/18

REVIEWED
By HMK at 12:22 pm, 11/15/18

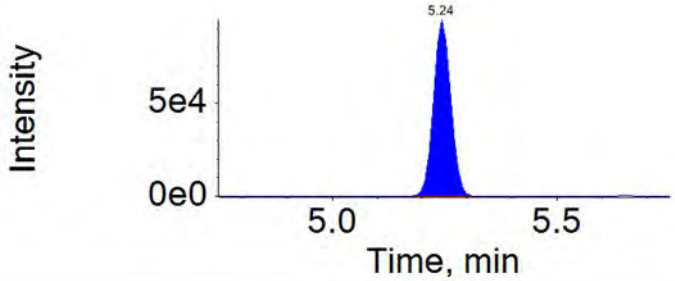
ICAL Name: 18NOV12DCAL **Result Table:** 18316011 11/14/2018 4:24:36 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

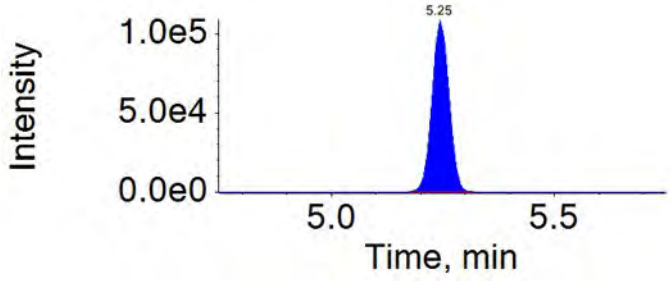
Extraction Standard: E13C8-PFOA	Injection Standard: 13C2-PFOA
421.0 / 376.0	415.0 / 370.0



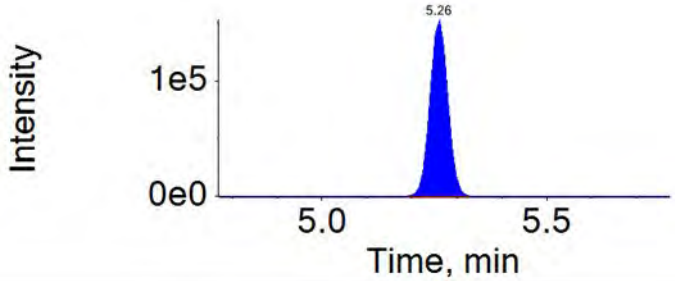


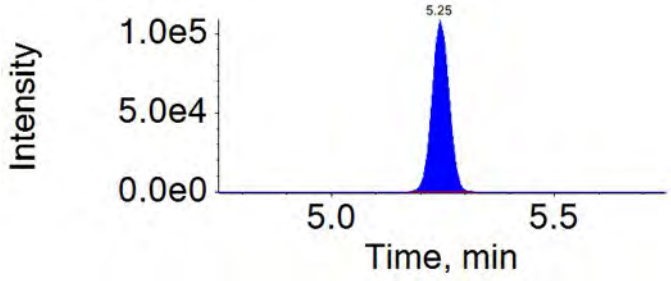
Extraction Standard: E13C8-PFOS	Injection Standard: 13C4-PFOS
507.0 / 80.0	503.0 / 80.0



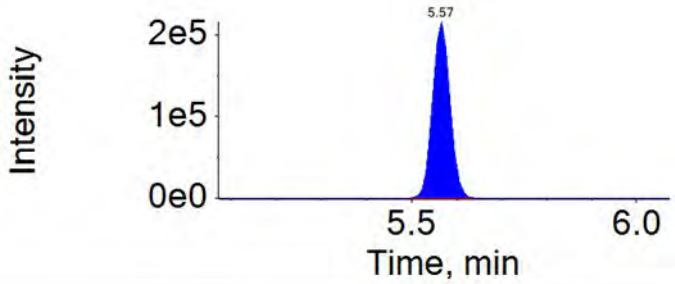


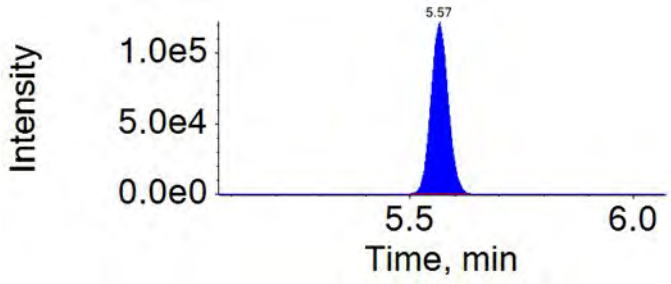
Extraction Standard: E13C9-PFNA	Injection Standard: 13C4-PFOS
472.0 / 427.0	503.0 / 80.0





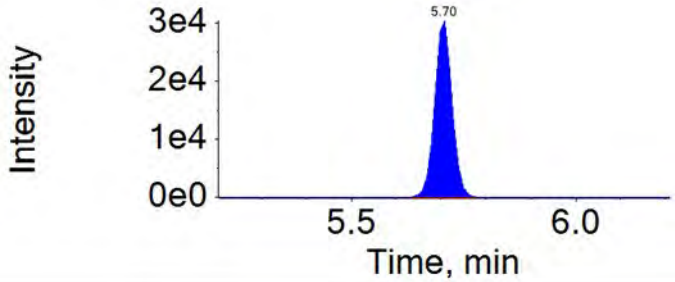
Extraction Standard: E13C6-PFDA	Injection Standard: 13C2-PFDA
519.0 / 474.0	515.0 / 470.0

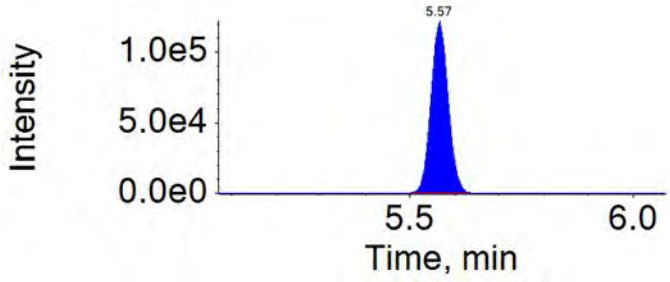




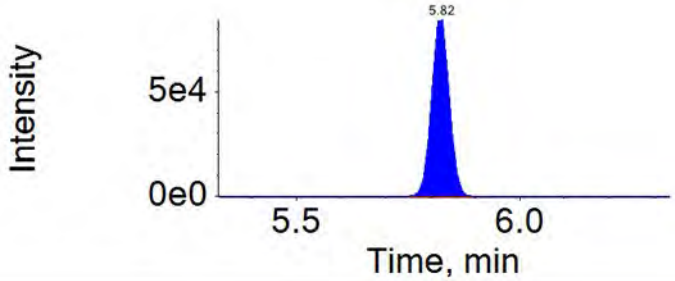
ICAL Name: 18NOV12DCAL **Result Table:** 18316011 11/14/2018 4:24:36 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

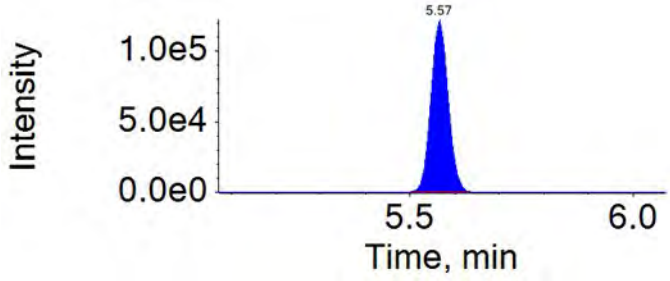
Extraction Standard: Ed3-NMeFOSAA	Injection Standard: 13C2-PFDA
573.0 / 419.0	515.0 / 470.0



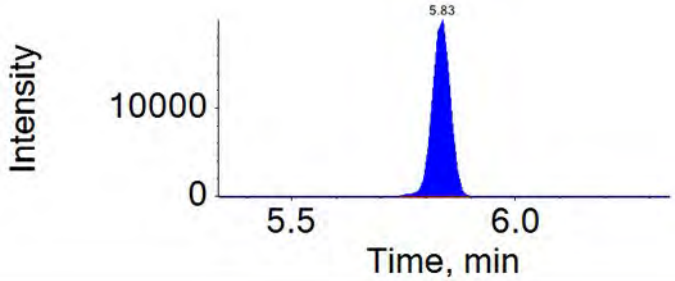


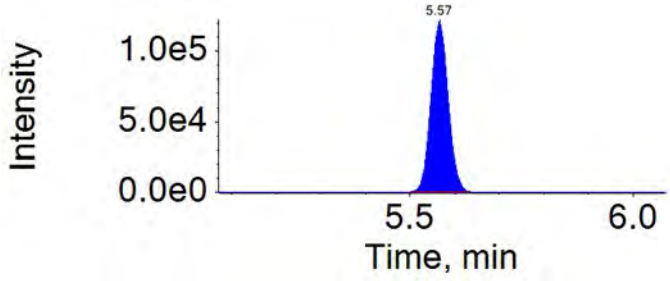
Extraction Standard: E13C7-PFUnDA	Injection Standard: 13C2-PFDA
570.0 / 525.0	515.0 / 470.0



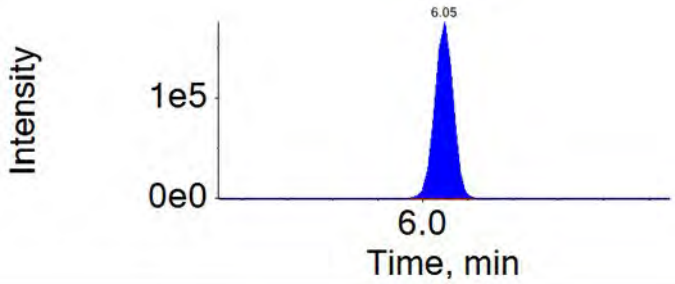


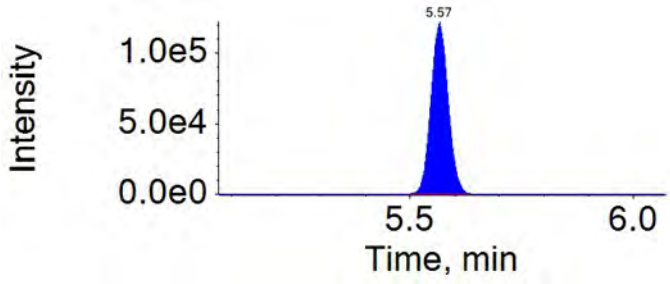
Extraction Standard: Ed5-NEtFOSAA	Injection Standard: 13C2-PFDA
589.0 / 419.0	515.0 / 470.0



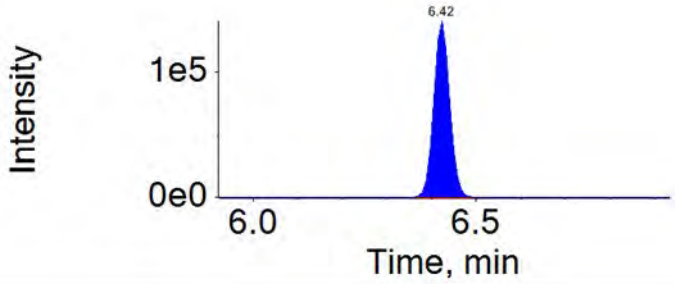
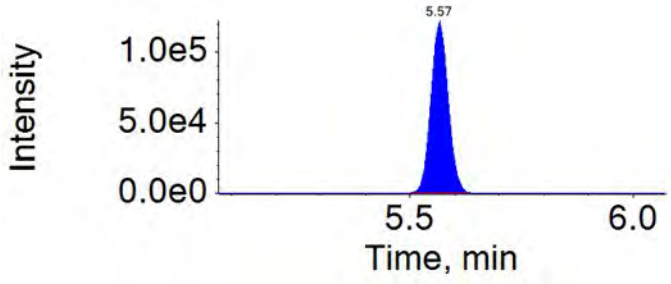


Extraction Standard: E13C2-PFDoDA	Injection Standard: 13C2-PFDA
615.0 / 570.0	515.0 / 470.0



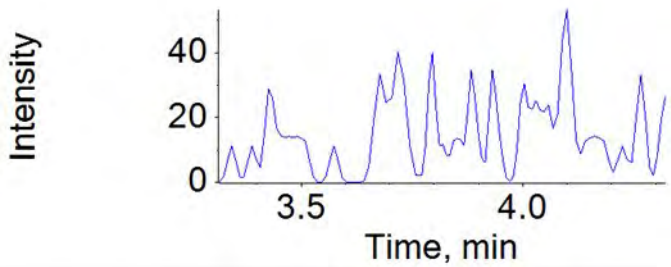


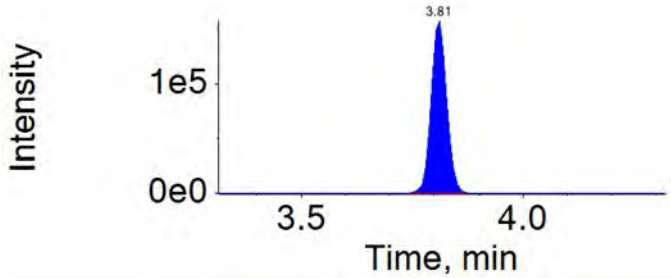
ICAL Name: 18NOV12DCAL **Result Table:** 18316011 11/14/2018 4:24:36 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Extraction Standard: E13C2-PFTeDA	Injection Standard: 13C2-PFDA
715.0 / 670.0 	515.0 / 470.0 

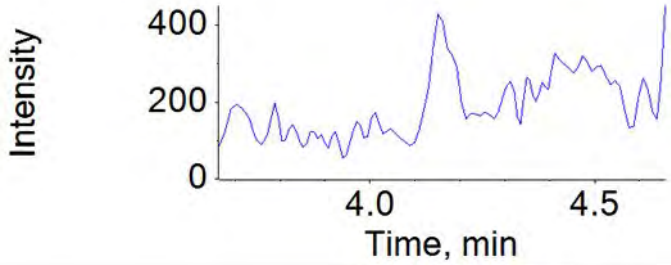
ICAL Name: 18NOV12DCAL **Result Table:** 18316011 11/14/2018 4:24:36 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

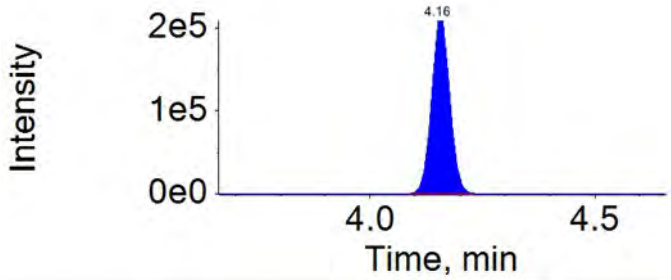
Analyte: PFBS	Extraction Standard: 13C3-PFBS
299.0 / 80.0	302.0 / 80.0



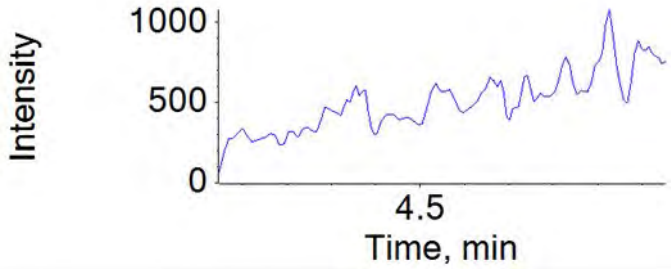


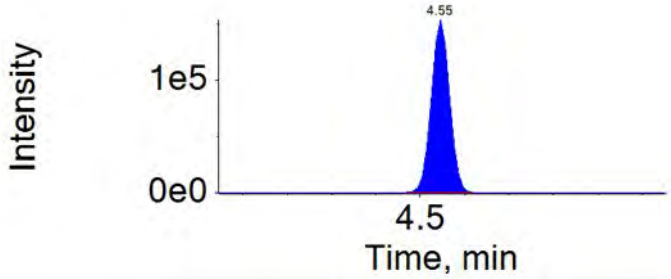
Analyte: PFHxA	Extraction Standard: 13C5-PFHxA
313.0 / 269.0	318.0 / 273.0



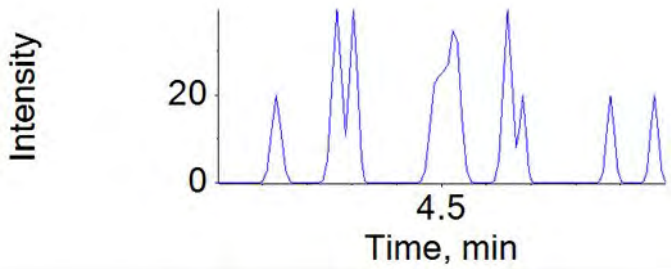


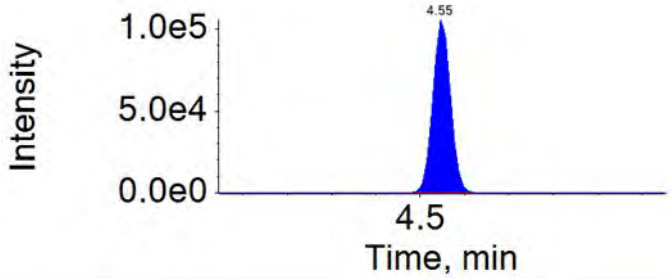
Analyte: PFHpA	Extraction Standard: 13C4-PFHpA
363.0 / 319.0	367.0 / 322.0





Analyte: PFHxS	Extraction Standard: 13C3-PFHxS
399.0 / 80.0	402.0 / 80.0



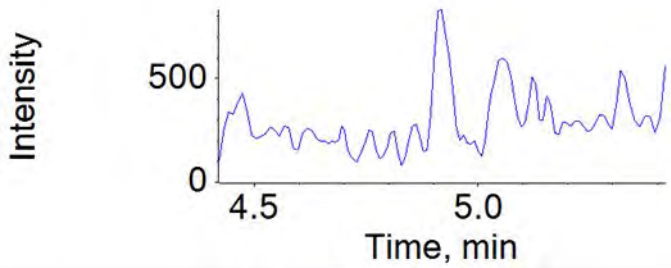


APPROVED
By MCD at 4:51 pm, 11/14/18

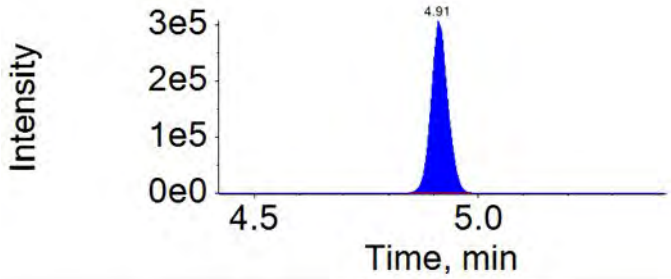
REVIEWED
By HMK at 12:22 pm, 11/15/18

ICAL Name: 18NOV12DCAL **Result Table:** 18316011 11/14/2018 4:24:36 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

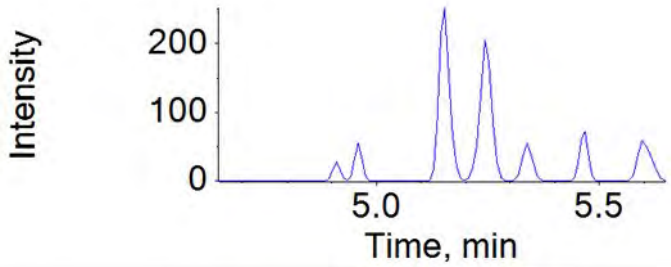
Analyte: PFOA
413.0 / 369.0



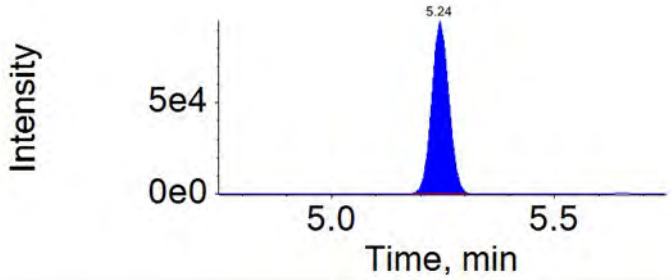
Extraction Standard: 13C8-PFOA
421.0 / 376.0



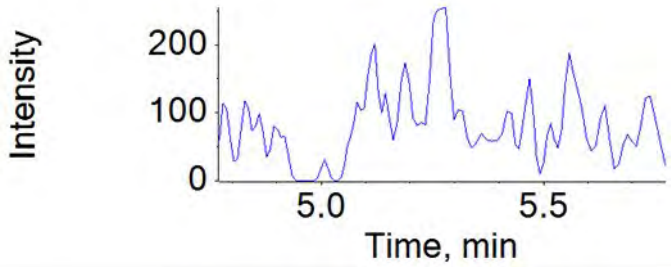
Analyte: PFOS
499.0 / 80.0



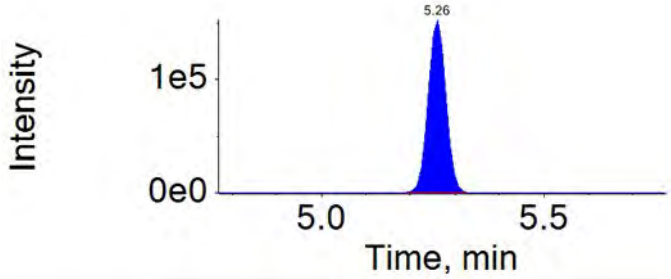
Extraction Standard: 13C8-PFOS
507.0 / 80.0



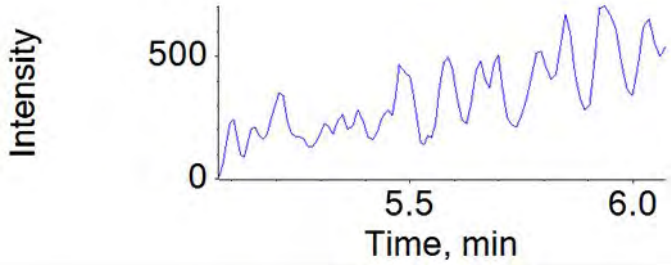
Analyte: PFNA
463.0 / 419.0



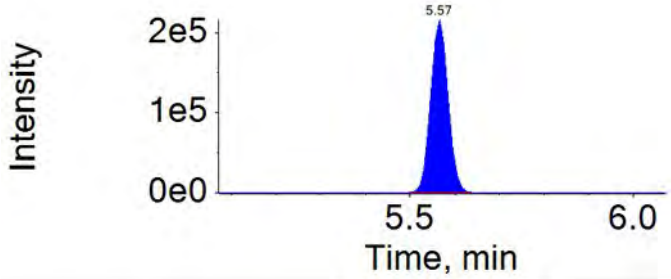
Extraction Standard: 13C9-PFNA
472.0 / 427.0



Analyte: PFDA
513.0 / 469.0

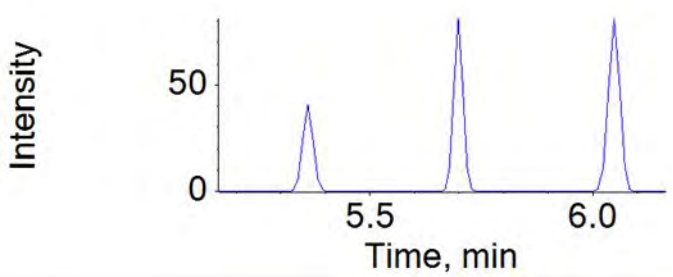


Extraction Standard: 13C6-PFDA
519.0 / 474.0

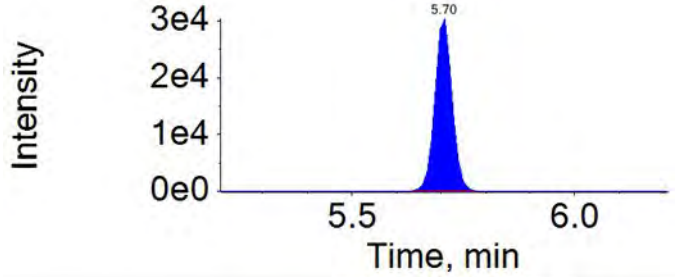


ICAL Name: 18NOV12DCAL **Result Table:** 18316011 11/14/2018 4:24:36 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

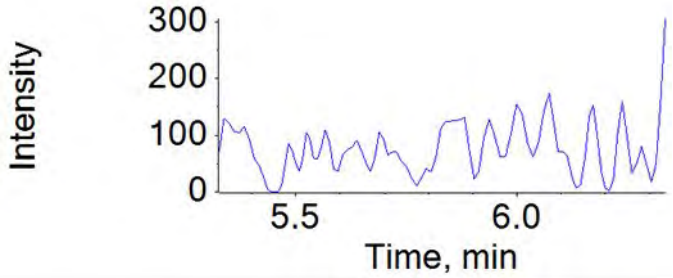
Analyte: NMeFOSAA
570.0 / 419.0



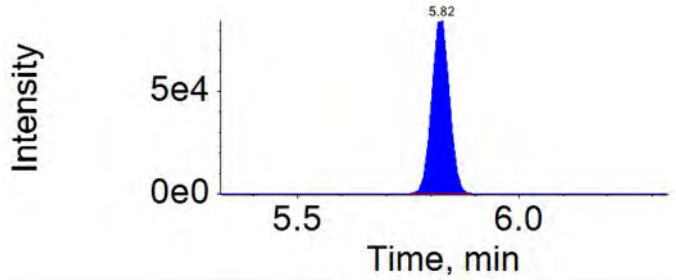
Extraction Standard: d3-NMeFOSAA
573.0 / 419.0



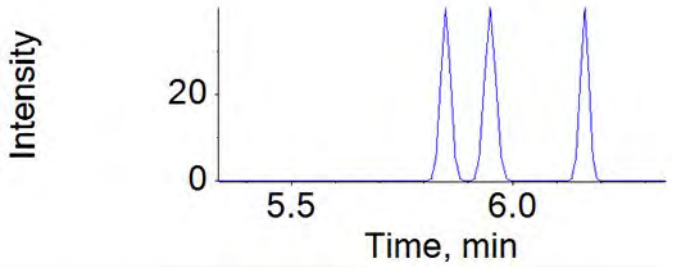
Analyte: PFUnDA
563.0 / 519.0



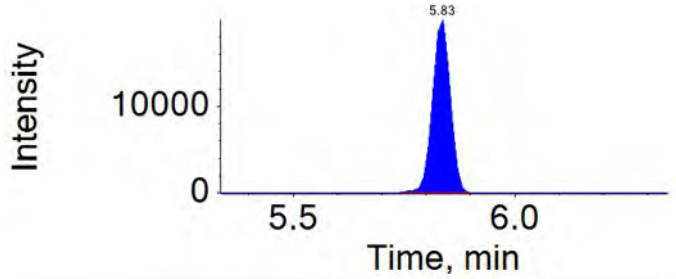
Extraction Standard: 13C7-PFUnDA
570.0 / 525.0



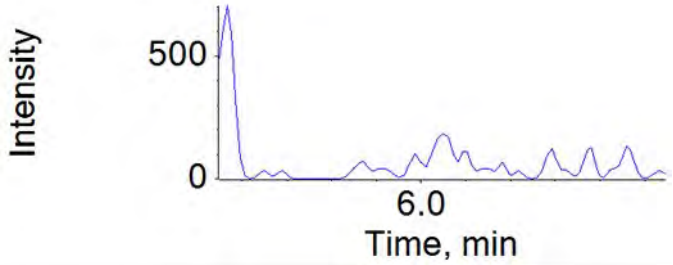
Analyte: NEtFOSAA
584.0 / 419.0



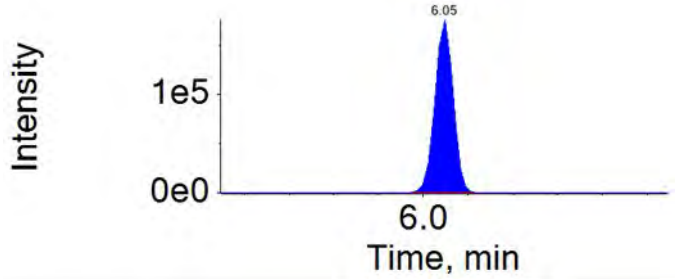
Extraction Standard: d5-NEtFOSAA
589.0 / 419.0



Analyte: PFDoDA
613.0 / 569.0



Extraction Standard: 13C2-PFDoDA
615.0 / 570.0

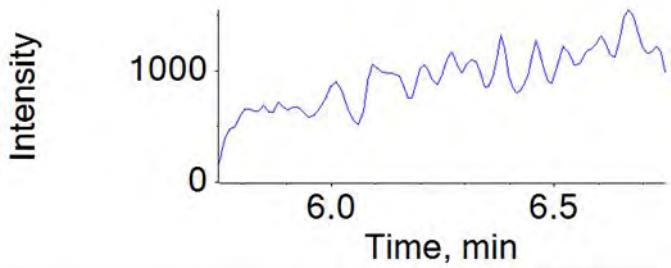


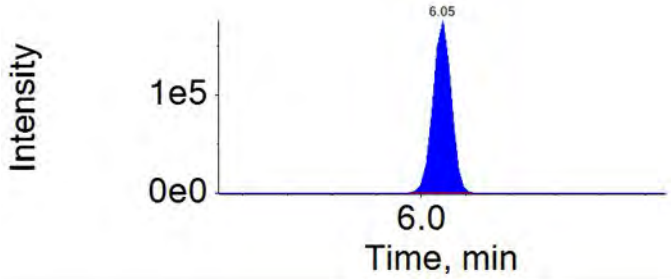
APPROVED
By MCD at 4:51 pm, 11/14/18

REVIEWED
By HMK at 12:22 pm, 11/15/18

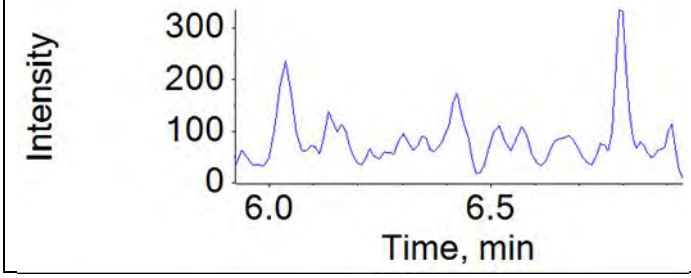
ICAL Name: 18NOV12DCAL **Result Table:** 18316011 11/14/2018 4:24:36 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

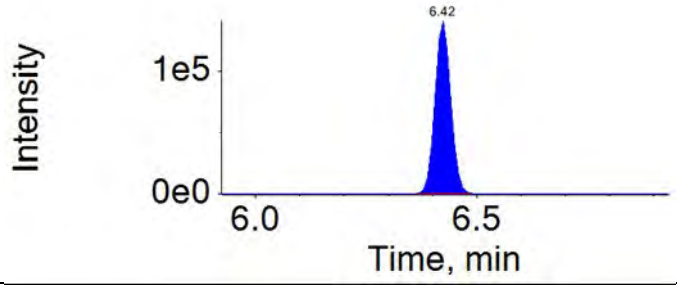
Analyte: PFTrDA	Extraction Standard: 13C2-PFDoDA
663.0 / 619.0	615.0 / 570.0





Analyte: PFTeDA	Extraction Standard: 13C2-PFTeDA
713.0 / 669.0	715.0 / 670.0





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LC-MS/MS Analysis Report

Printed: 11/14/2018 4:29:00 PM
Template: IonRatio18OCT10

Ion Ratio Report

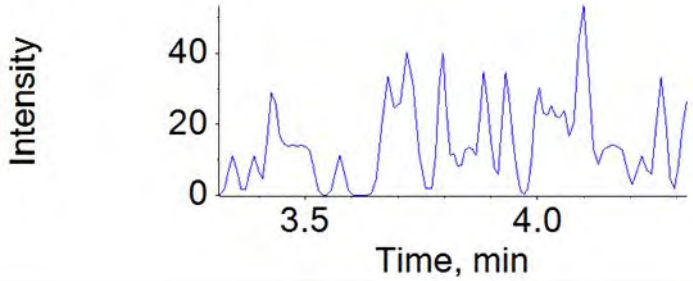
Sample Name: 9885105 **Instrument Name:** LM27631 **File Name:** 18NOV13D-71.wiff

Component Name	RT	RRT	Analyte Area Response	Int Typ	Expected Ion Ratio	Ion Ratio	Ion Ratio % Diff	Ion Ratio Limit	Ion Ratio OOS
PFBS	N/A	N/A	N/A	A	N/A	N/A			
PFBS_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFHxA	N/A	N/A	N/A	A	N/A	N/A			
PFHxA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFHpA	N/A	N/A	N/A	A	N/A	N/A			
PFHpA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFHxS	N/A	N/A	N/A	A	N/A	N/A			
PFHxS_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFOA	N/A	N/A	N/A	A	N/A	N/A			
PFOA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFOS	N/A	N/A	N/A	A	N/A	N/A			
PFOS_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFNA	N/A	N/A	N/A	A	N/A	N/A			
PFNA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFDA	N/A	N/A	N/A	A	N/A	N/A			
PFDA_2	N/A	N/A	N/A	A	N/A	N/A		50	
NMeFOSAA	N/A	N/A	N/A	A	N/A	N/A			
NMeFOSAA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFUnDA	N/A	N/A	N/A	A	N/A	N/A			
PFUnDA_2	N/A	N/A	N/A	A	N/A	N/A		50	
NEtFOSAA	N/A	N/A	N/A	A	N/A	N/A			
NEtFOSAA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFDoDA	N/A	N/A	N/A	A	N/A	N/A			
PFDoDA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFTrDA	N/A	N/A	N/A	A	N/A	N/A			
PFTrDA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFTeDA	N/A	N/A	N/A	A	N/A	N/A			
PFTeDA_2	N/A	N/A	N/A	A	N/A	N/A		50	

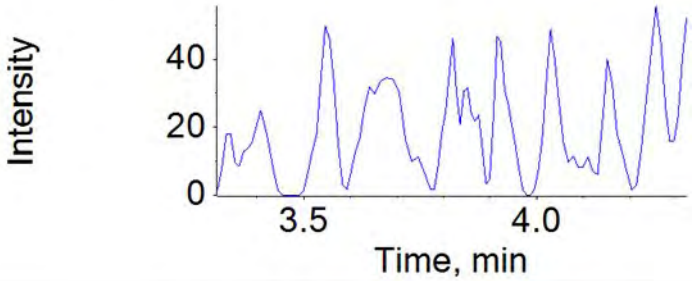
APPROVED
By MCD at 4:51 pm, 11/14/18

REVIEWED
By HMK at 12:22 pm, 11/15/18

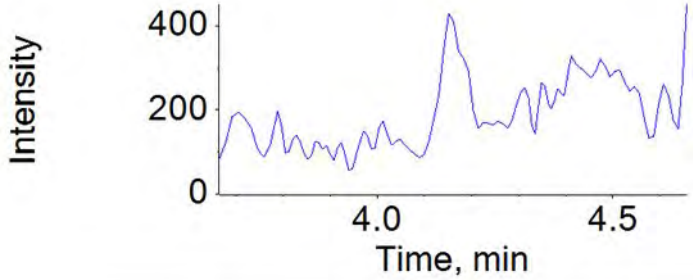
Component: PFBS
Primary Mass: 299.0 / 80.0



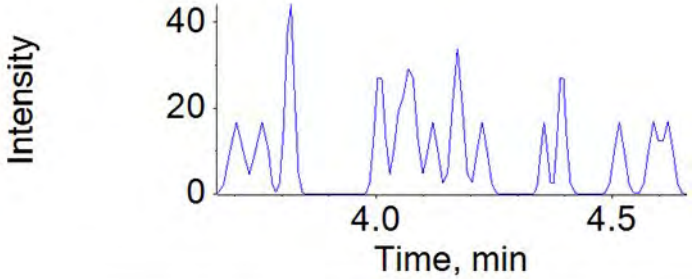
Component: PFBS_2
Secondary Mass: 299.0 / 99.0



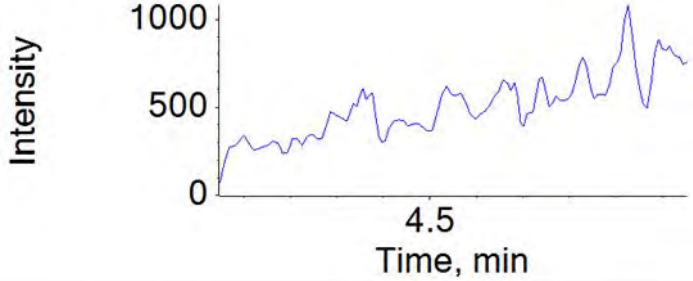
Component: PFHxA
Primary Mass: 313.0 / 269.0



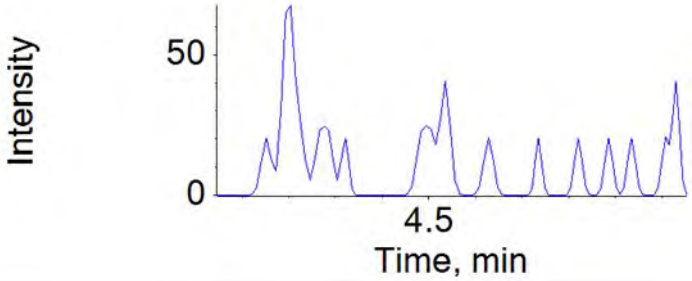
Component: PFHxA_2
Secondary Mass: 313.0 / 119.0



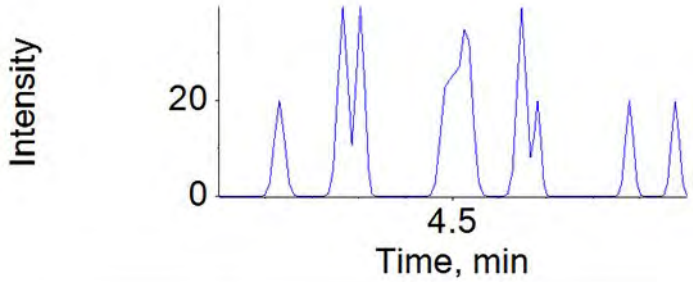
Component: PFHpA
Primary Mass: 363.0 / 319.0



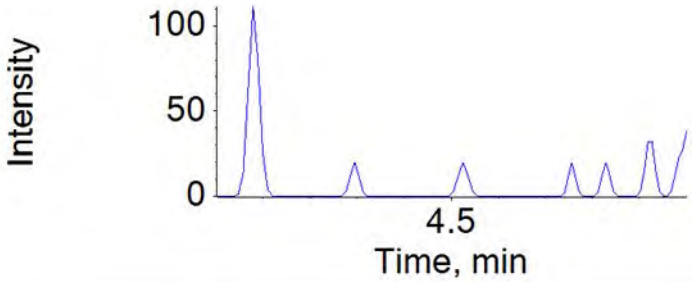
Component: PFHpA_2
Secondary Mass: 363.0 / 169.0



Component: PFHxS
Primary Mass: 399.0 / 80.0



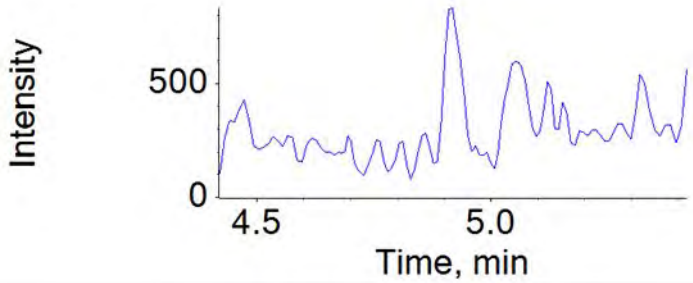
Component: PFHxS_2
Secondary Mass: 399.0 / 99.0



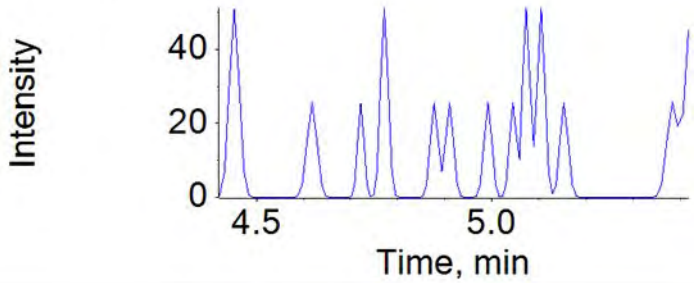
APPROVED
By MCD at 4:51 pm, 11/14/18

REVIEWED
By HMK at 12:22 pm, 11/15/18

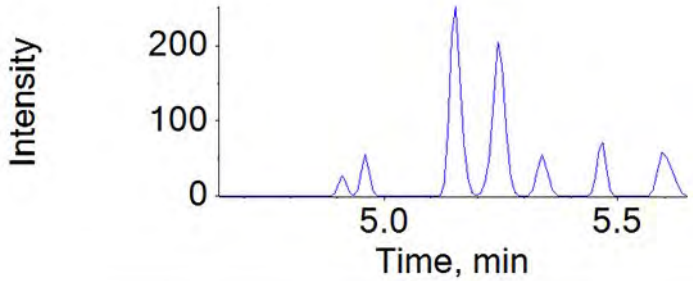
Component: PFOA
Primary Mass: 413.0 / 369.0



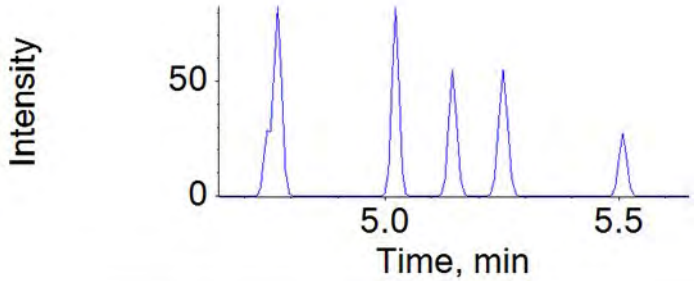
Component: PFOA_2
Secondary Mass: 413.0 / 169.0



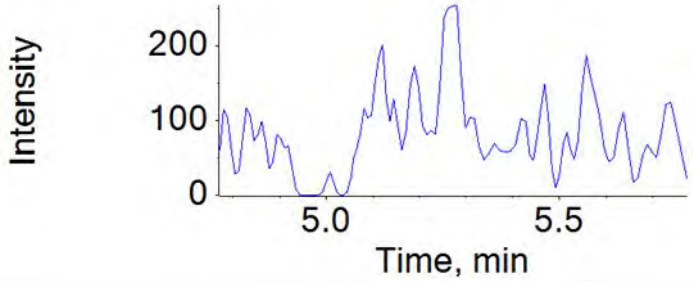
Component: PFOS
Primary Mass: 499.0 / 80.0



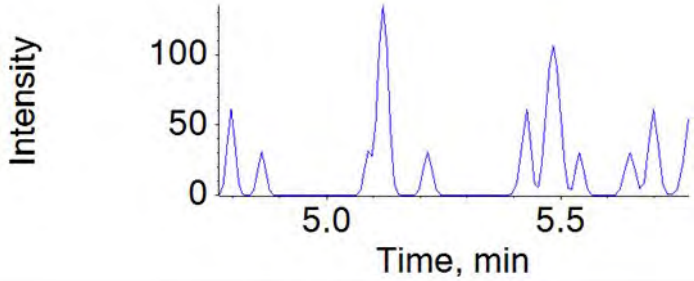
Component: PFOS_2
Secondary Mass: 499.0 / 99.0



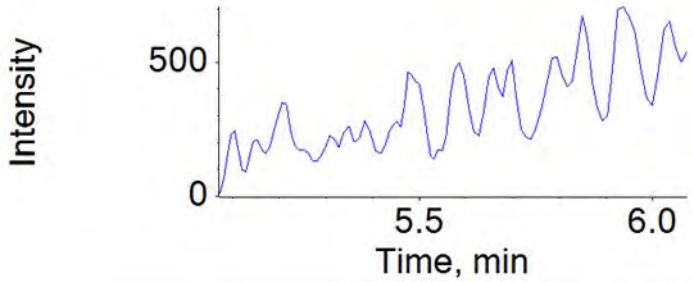
Component: PFNA
Primary Mass: 463.0 / 419.0



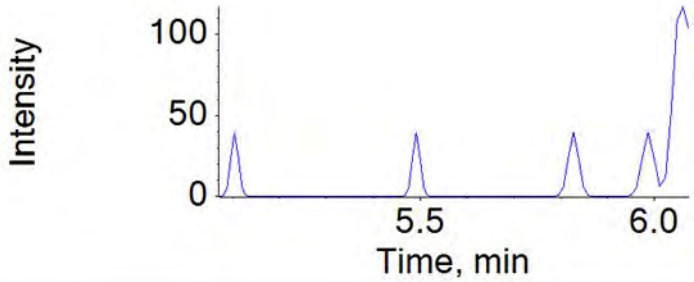
Component: PFNA_2
Secondary Mass: 463.0 / 169.0



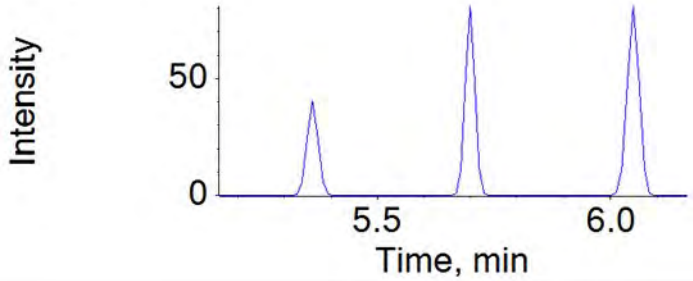
Component: PFDA
Primary Mass: 513.0 / 469.0



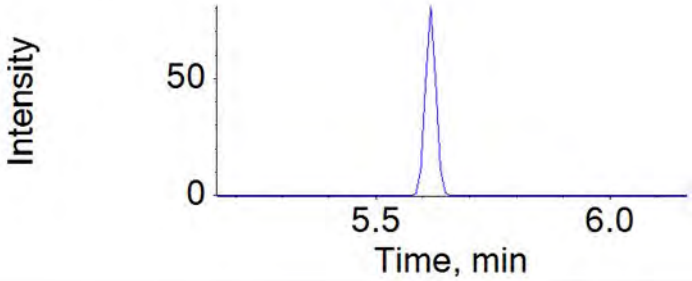
Component: PFDA_2
Secondary Mass: 513.0 / 169.0



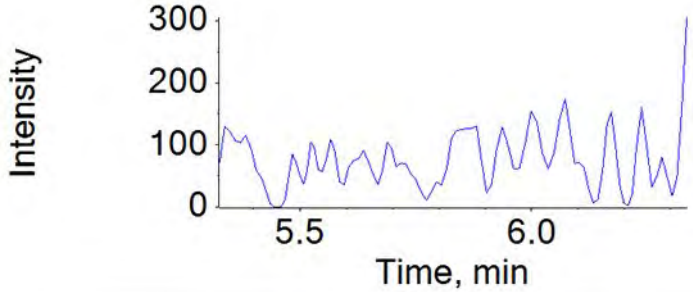
Component: NMeFOSAA
Primary Mass: 570.0 / 419.0



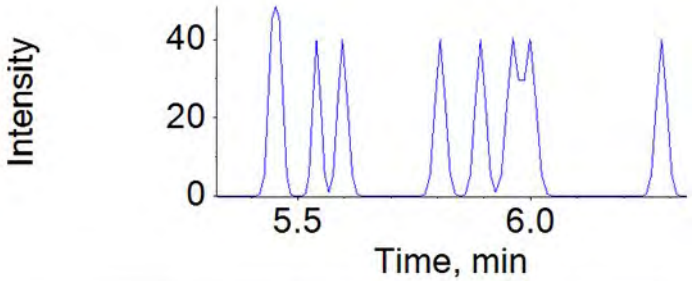
Component: NMeFOSAA_2
Secondary Mass: 570.0 / 483.0



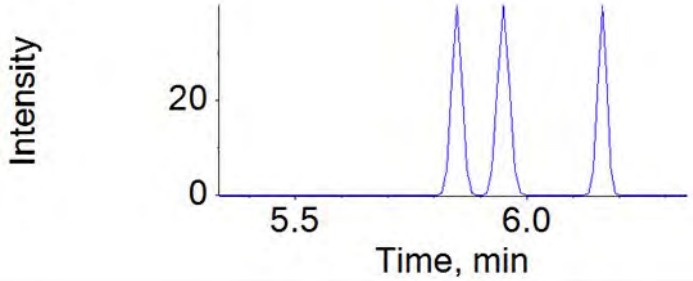
Component: PFUnDA
Primary Mass: 563.0 / 519.0



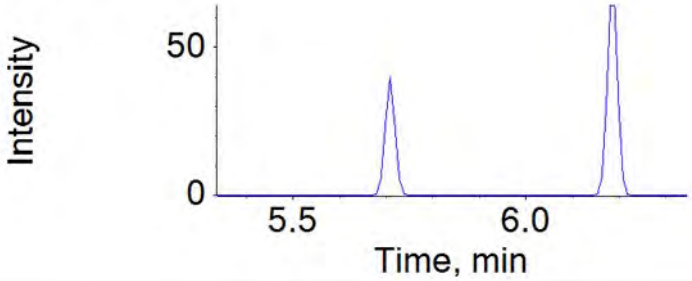
Component: PFUnDA_2
Secondary Mass: 563.0 / 169.0



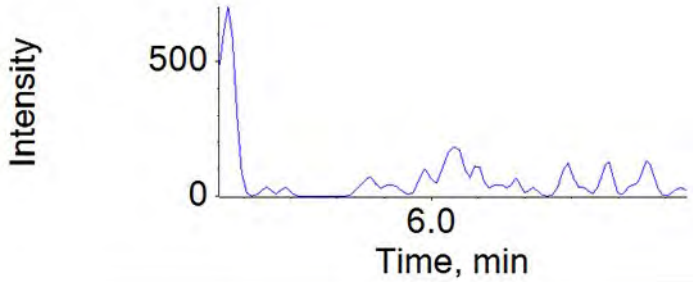
Component: NEtFOSAA
Primary Mass: 584.0 / 419.0



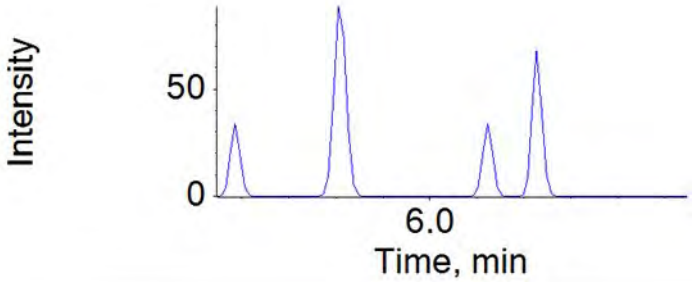
Component: NEtFOSAA_2
Secondary Mass: 584.0 / 526.0



Component: PFDoDA
Primary Mass: 613.0 / 569.0



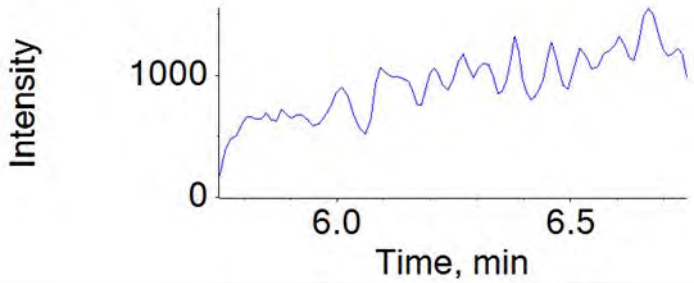
Component: PFDoDA_2
Secondary Mass: 613.0 / 169.0



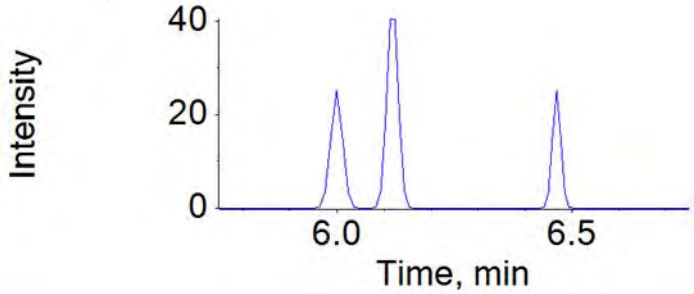
APPROVED
By MCD at 4:51 pm, 11/14/18

REVIEWED
By HMK at 12:22 pm, 11/15/18

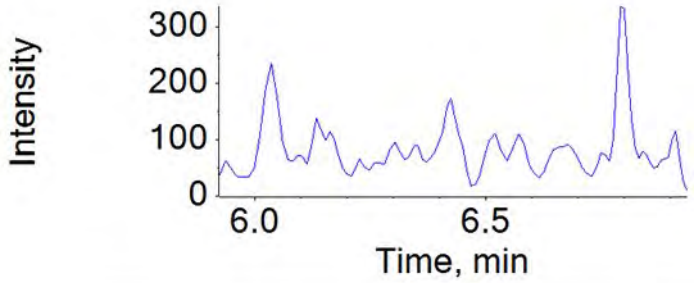
Component: PFTrDA
Primary Mass: 663.0 / 619.0



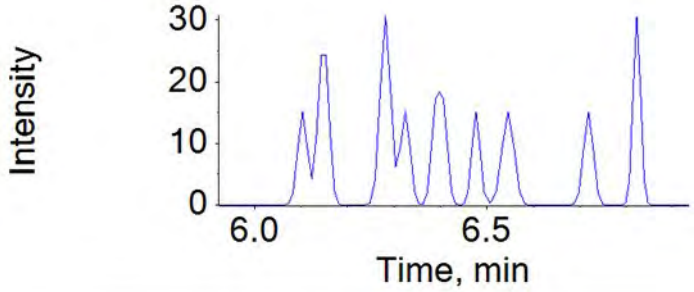
Component: PFTrDA_2
Secondary Mass: 663.0 / 169.0



Component: PFTeDA
Primary Mass: 713.0 / 669.0



Component: PFTeDA_2
Secondary Mass: 713.0 / 169.0



APPROVED
By MCD at 4:51 pm, 11/14/18

REVIEWED
By HMK at 12:22 pm, 11/15/18

ICAL Name: 18NOV12DCAL **Result Table:** 18316011 11/14/2018 4:24:36 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Sample Name:	9885106			**Data File:**		18NOV13D-72.wiff
Sample ID:	EPA 537 mod QSM 5.1 table B-15 18316011 OU1-Bldg50-S-02-08 Grab Soil			**Acquis Date:**		2018-11-13T20:23:50
Sample Type:	Unknown			**Instrument:**		LM27631
Vial Position:	68			**Acquis Method:**		18AUG13_3uL.dam
Injection Vol:	3.00			**Result Table:**		18316011
QMethod File:	18AUG20QM			**ICAL Name:**		18NOV12DCAL
Batch Number:	18316011			**Operator:**		MCD7824
Sample Wt.:	1.03000			**Dilution Factor:**		1.00
Sample Vol.:	1.000			**Prep Factor:**		2.000

Injection Standard Peak Table

Injection Standard Area Reference File: 18NOV13D-05

Injection Standard Name	Inj Std Conc	Injection Std Peak Area	Rreference Injection Standard Area	Injection Std %Diff	Injection Std %Diff Limit	Injection Std %Diff OOS
13C3-PFBA	5.0	756298.6	661126.9	14	50	
13C2-PFOA	5.0	518555.6	466902.6	11	50	
13C4-PFOS	4.8	279121.3	247446.9	13	50	
13C2-PFDA	5.0	325542.2	295381.6	10	50	

Extraction Standard Peak Table

Extraction Standard Name	Ext Std Area	Inj Std Name	Inj Std Area	Area Ratio	Ext Std Conc	Ext Std Result	Ext Std %REC	Ext Std %REC Limit	Ext Std OOS
E13C3-PFBS	367985.8	13C3-PFBA	756298.6	0.487	9.029	6.669	74	50-150	
E13C5-PFHxA	573328.2	13C2-PFOA	518555.6	1.106	9.709	7.755	80	50-150	
E13C3-PFHxS	280574.5	13C2-PFOA	518555.6	0.541	9.184	7.209	78	50-150	
E13C4-PFHpA	464898.7	13C2-PFOA	518555.6	0.897	9.709	7.843	81	50-150	
E13C8-PFOA	793330.5	13C2-PFOA	518555.6	1.530	9.709	8.185	84	50-150	
E13C8-PFOS	241461.3	13C4-PFOS	279121.3	0.865	9.282	7.443	80	50-150	
E13C9-PFNA	408185.8	13C4-PFOS	279121.3	1.462	9.709	7.917	82	50-150	
E13C6-PFDA	536699.0	13C2-PFDA	325542.2	1.649	9.709	7.470	77	50-150	
Ed3-NMeFOSAA	77893.3	13C2-PFDA	325542.2	0.239	9.709	8.386	86	50-150	
E13C7-PFUnDA	221791.1	13C2-PFDA	325542.2	0.681	9.709	7.681	79	50-150	
Ed5-NEtFOSAA	55222.5	13C2-PFDA	325542.2	0.170	9.709	6.969	72	50-150	
E13C2-PFDoDA	489754.4	13C2-PFDA	325542.2	1.504	9.709	7.585	78	50-150	
E13C2-PFTeDA	341574.3	13C2-PFDA	325542.2	1.049	9.709	7.153	74	50-150	

APPROVED
By MCD at 4:51 pm, 11/14/18

REVIEWED
By HMK at 12:22 pm, 11/15/18

ICAL Name: 18NOV12DCAL **Result Table:** 18316011 11/14/2018 4:24:36 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

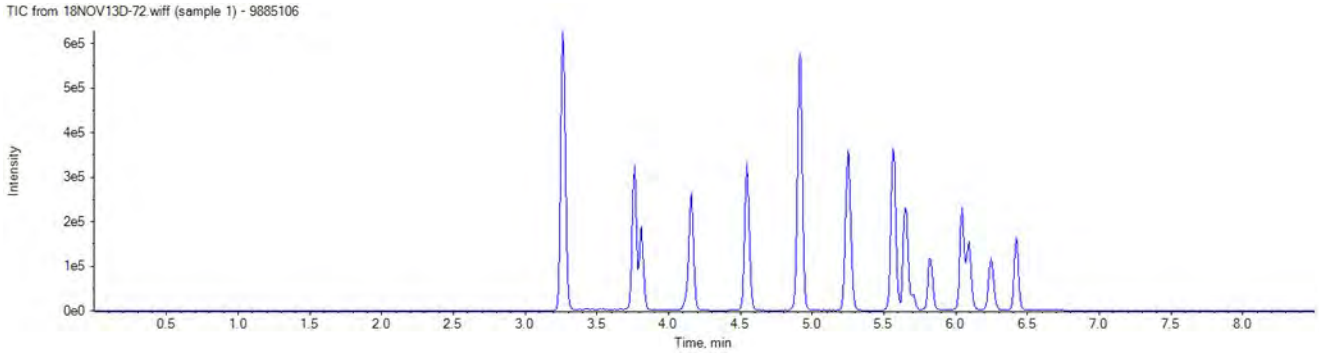
Analyte Quantitation Peak Table

Sample Name: 9885106 **Instrument Name:** LM27631 **File Name:** 18NOV13D-72.wiff

Sample Wt	Sample Vol	Dilution Factor	PrepFactor
1.03000	1.000	1.00	2.000

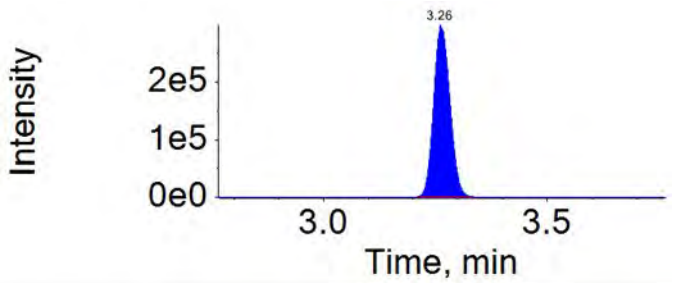
Analyte Name	RT	RRT	Analyte Area Response	E	Int Typ	ES Name	ES RT	ES Area Response	Area Ratio	Sample Result (ng/g)
PFBS	N/A	N/A	N/A		A	13C3-PFBS	3.81	367985.8	N/A	
PFHxA	N/A	N/A	N/A		A	13C5-PFHxA	4.16	573328.2	N/A	
PFHpA	N/A	N/A	N/A		A	13C4-PFHpA	4.54	464898.7	N/A	
PFHxS	N/A	N/A	N/A		A	13C3-PFHxS	4.55	280574.5	N/A	
PFOA	N/A	N/A	N/A		A	13C8-PFOA	4.91	793330.5	N/A	
PFOS	N/A	N/A	N/A		A	13C8-PFOS	5.24	241461.3	N/A	
PFNA	N/A	N/A	N/A		A	13C9-PFNA	5.26	408185.8	N/A	
PFDA	N/A	N/A	N/A		A	13C6-PFDA	5.56	536699.0	N/A	
NMeFOSAA	N/A	N/A	N/A		A	d3-NMeFOSAA	5.70	77893.3	N/A	
PFUnDA	N/A	N/A	N/A		A	13C7-PFUnDA	5.82	221791.1	N/A	
NEtFOSAA	N/A	N/A	N/A		A	d5-NEtFOSAA	5.83	55222.5	N/A	
PFDoDA	N/A	N/A	N/A		A	13C2-PFDoDA	6.04	489754.4	N/A	
PFTrDA	N/A	N/A	N/A		A	13C2-PFDoDA	6.04	489754.4	N/A	
PFTeDA	N/A	N/A	N/A		A	13C2-PFTeDA	6.42	341574.3	N/A	

Total Ion Chromatogram

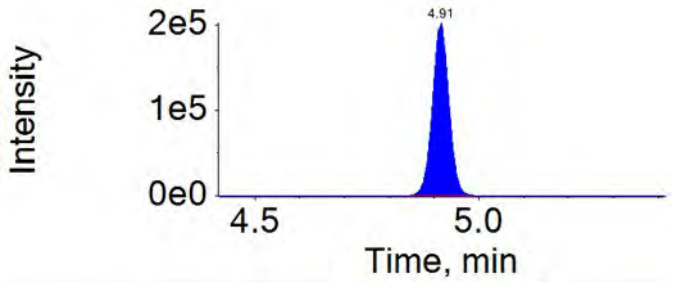


ICAL Name: 18NOV12DCAL **Result Table:** 18316011 11/14/2018 4:24:36 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

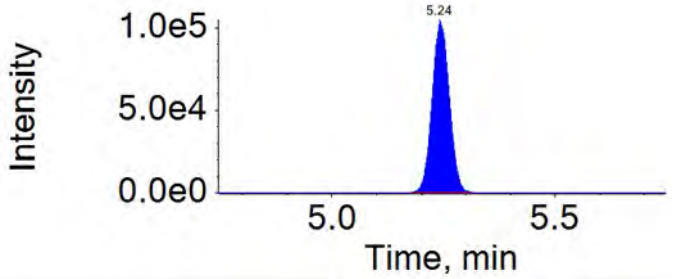
Injection Standard: 13C3-PFBA
216.0 / 172.0



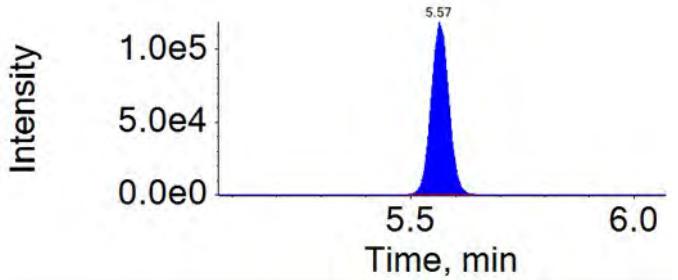
Injection Standard: 13C2-PFOA
415.0 / 370.0



Injection Standard: 13C4-PFOS
503.0 / 80.0



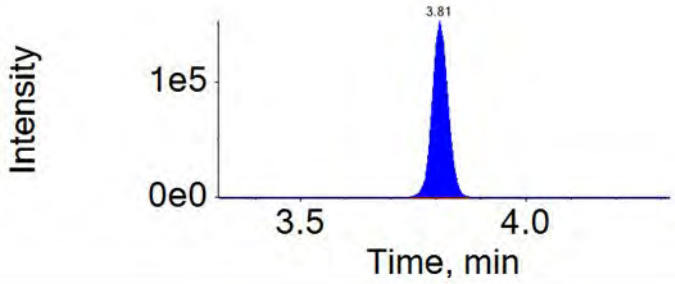
Injection Standard: 13C2-PFDA
515.0 / 470.0



ICAL Name: 18NOV12DCAL **Result Table:** 18316011 11/14/2018 4:24:36 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

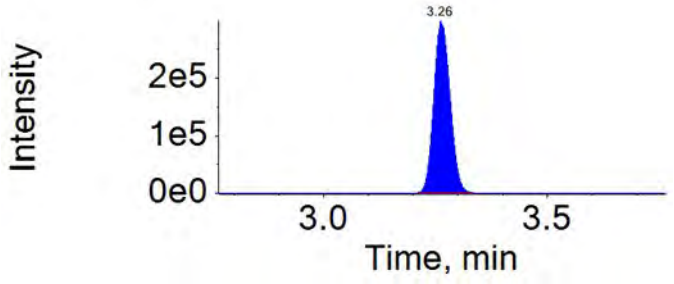
Extraction Standard: E13C3-PFBS

302.0 / 80.0



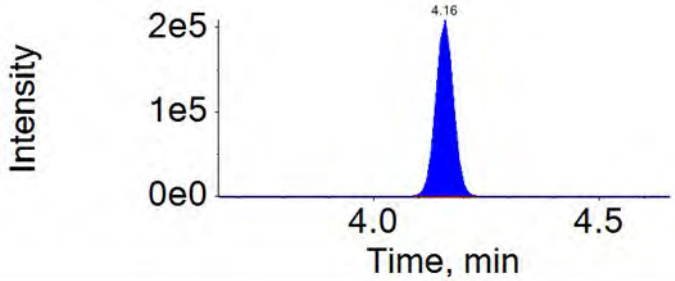
Injection Standard: 13C3-PFBA

216.0 / 172.0



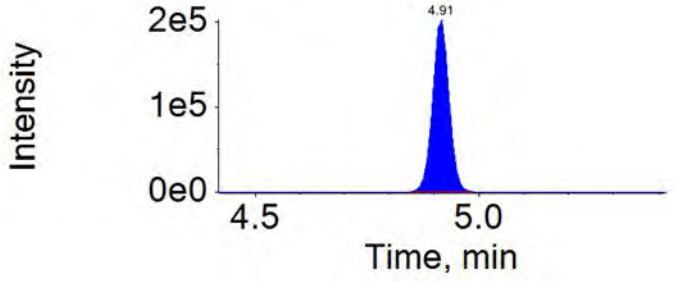
Extraction Standard: E13C5-PFHxA

318.0 / 273.0



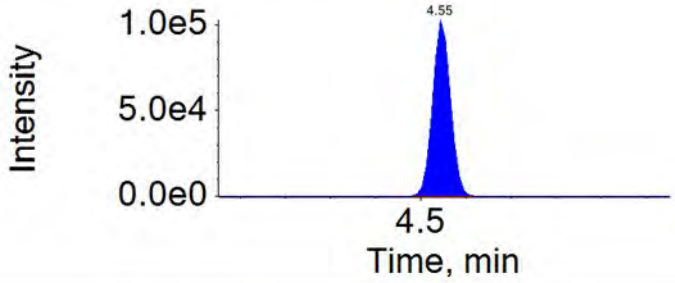
Injection Standard: 13C2-PFOA

415.0 / 370.0



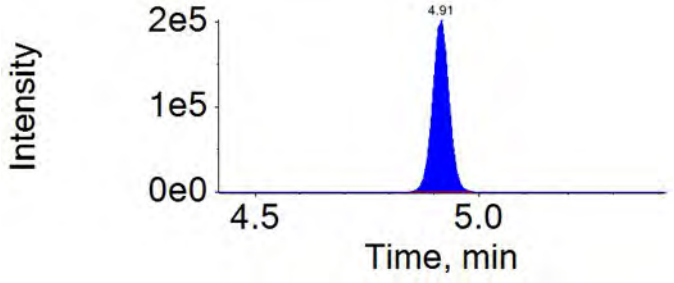
Extraction Standard: E13C3-PFHxS

402.0 / 80.0



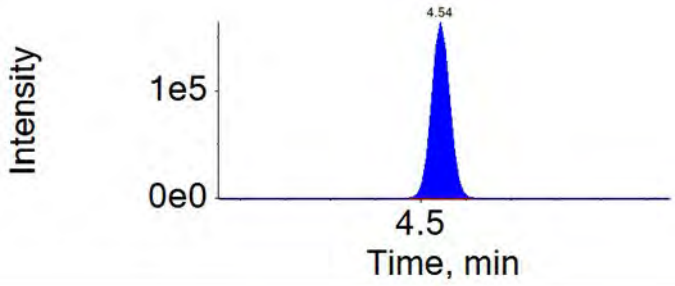
Injection Standard: 13C2-PFOA

415.0 / 370.0



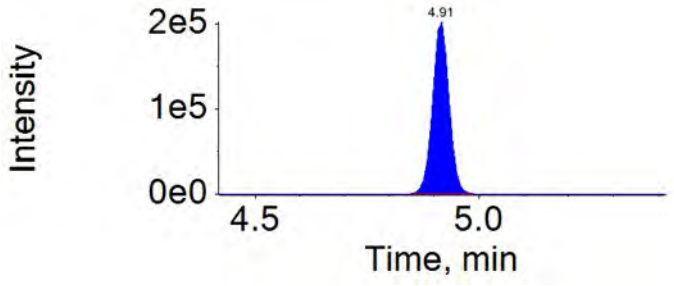
Extraction Standard: E13C4-PFHpA

367.0 / 322.0



Injection Standard: 13C2-PFOA

415.0 / 370.0

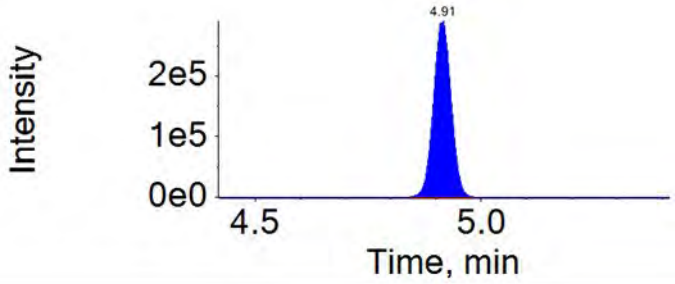


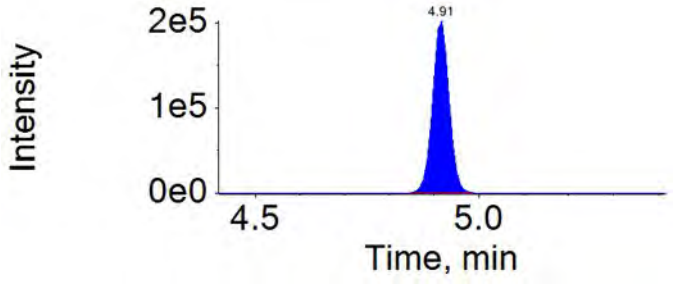
APPROVED
By MCD at 4:51 pm, 11/14/18

REVIEWED
By HMK at 12:22 pm, 11/15/18

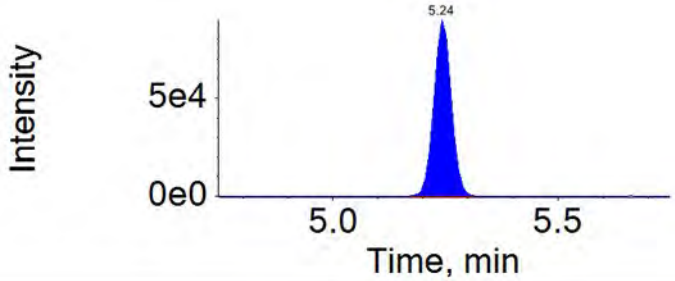
ICAL Name: 18NOV12DCAL **Result Table:** 18316011 11/14/2018 4:24:36 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

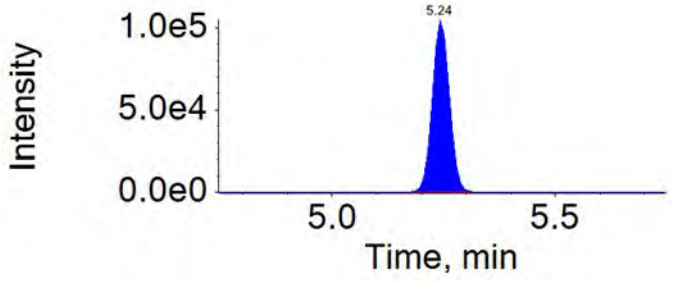
Extraction Standard: E13C8-PFOA	Injection Standard: 13C2-PFOA
421.0 / 376.0	415.0 / 370.0



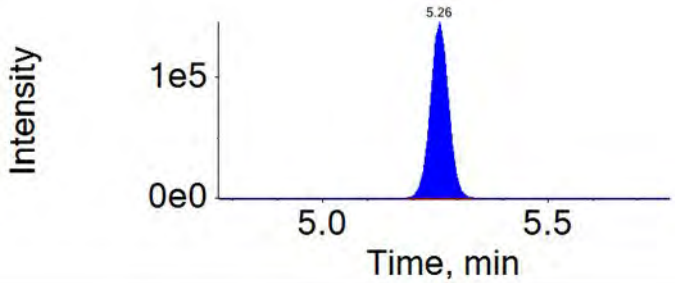


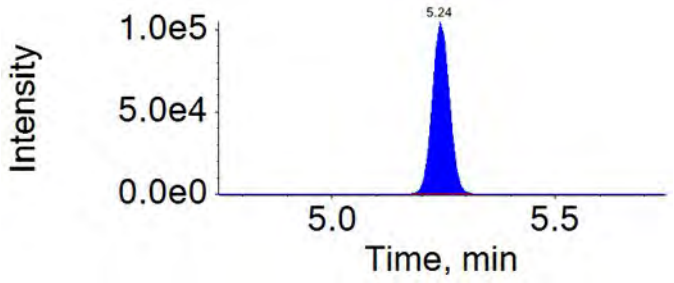
Extraction Standard: E13C8-PFOS	Injection Standard: 13C4-PFOS
507.0 / 80.0	503.0 / 80.0



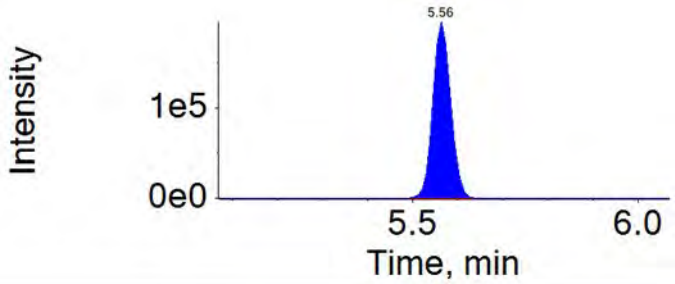


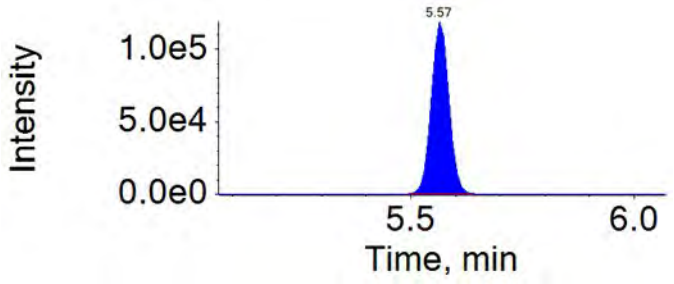
Extraction Standard: E13C9-PFNA	Injection Standard: 13C4-PFOS
472.0 / 427.0	503.0 / 80.0





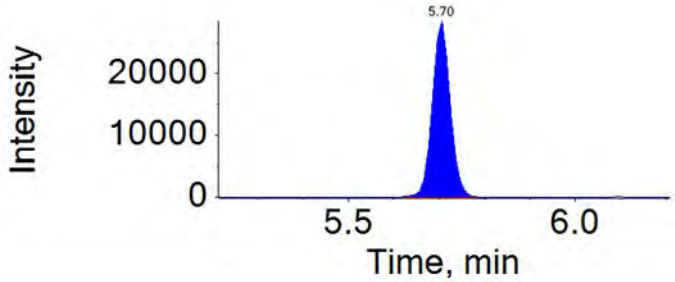
Extraction Standard: E13C6-PFDA	Injection Standard: 13C2-PFDA
519.0 / 474.0	515.0 / 470.0

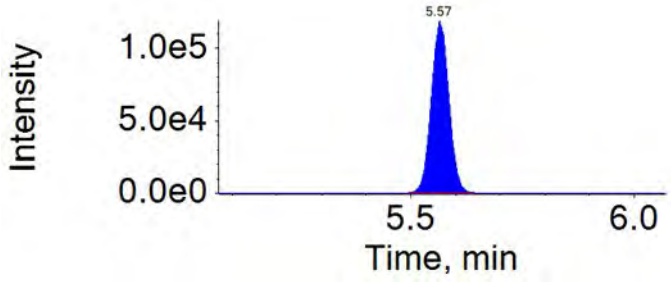




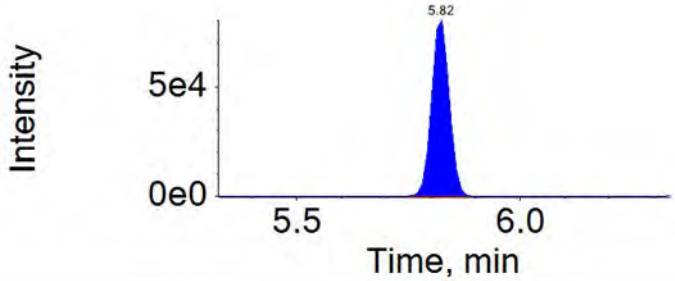
ICAL Name: 18NOV12DCAL **Result Table:** 18316011 11/14/2018 4:24:36 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

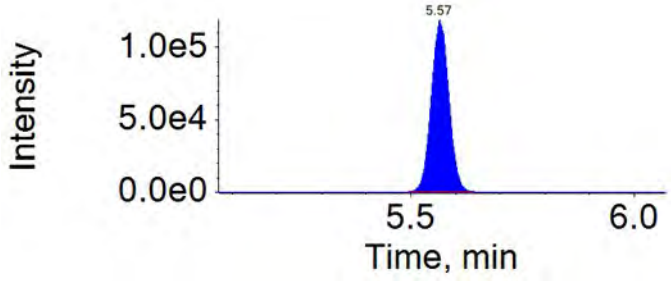
Extraction Standard: Ed3-NMeFOSAA	Injection Standard: 13C2-PFDA
573.0 / 419.0	515.0 / 470.0



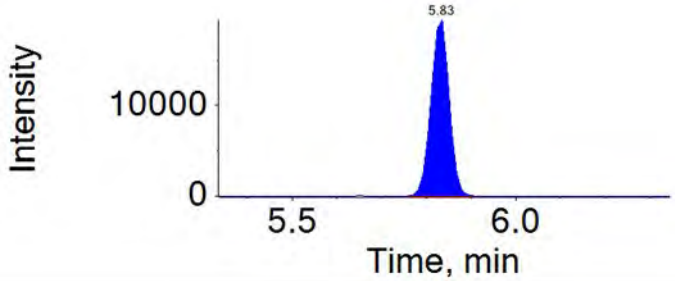


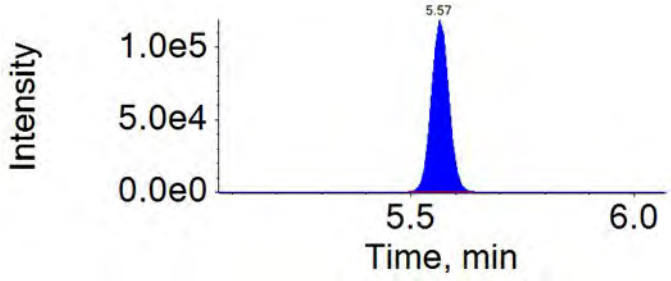
Extraction Standard: E13C7-PFUnDA	Injection Standard: 13C2-PFDA
570.0 / 525.0	515.0 / 470.0



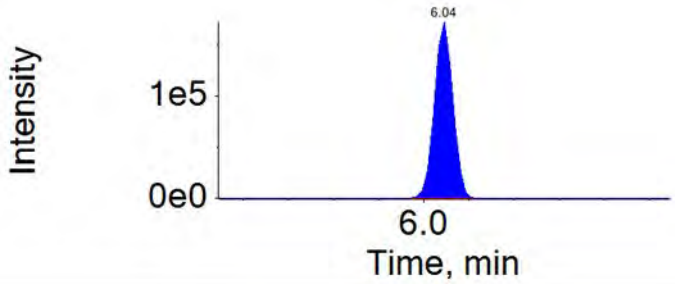


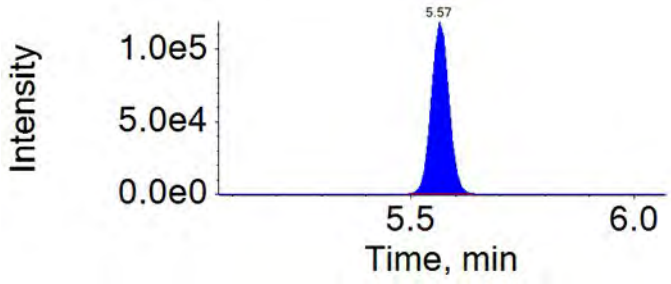
Extraction Standard: Ed5-NEtFOSAA	Injection Standard: 13C2-PFDA
589.0 / 419.0	515.0 / 470.0



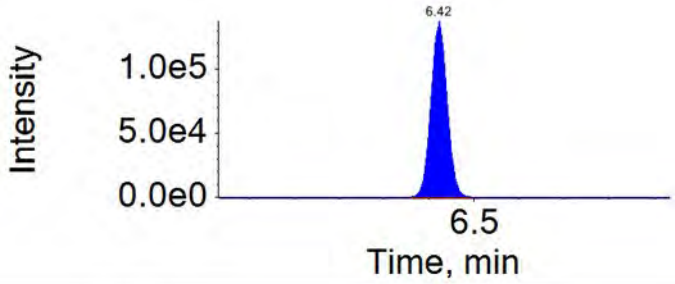
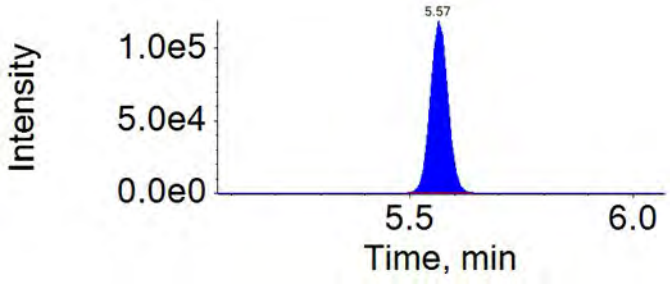


Extraction Standard: E13C2-PFDoDA	Injection Standard: 13C2-PFDA
615.0 / 570.0	515.0 / 470.0



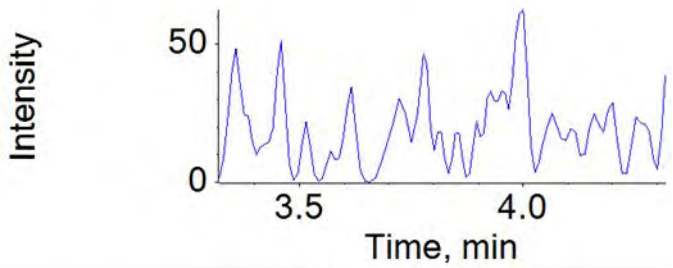


ICAL Name: 18NOV12DCAL **Result Table:** 18316011 11/14/2018 4:24:36 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

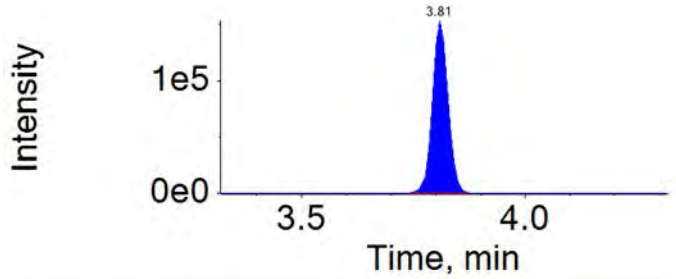
Extraction Standard: E13C2-PFTeDA	Injection Standard: 13C2-PFDA
715.0 / 670.0 	515.0 / 470.0 

ICAL Name: 18NOV12DCAL **Result Table:** 18316011 11/14/2018 4:24:36 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

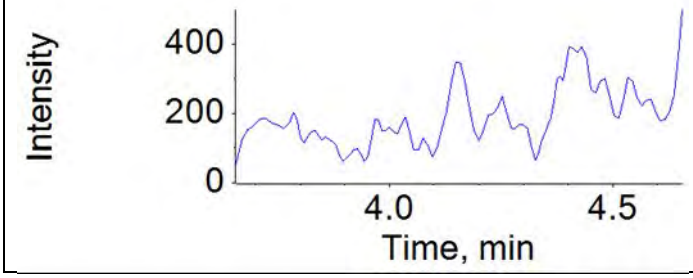
Analyte: PFBS
299.0 / 80.0



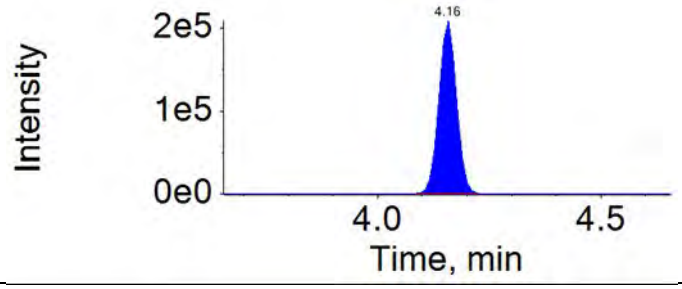
Extraction Standard: 13C3-PFBS
302.0 / 80.0



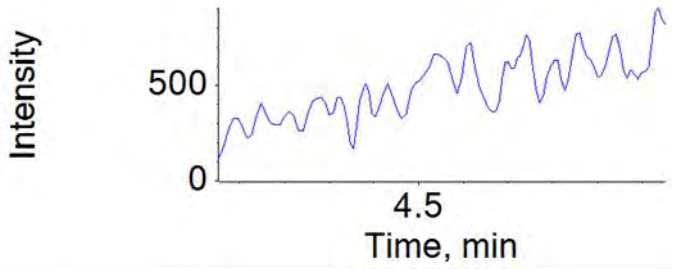
Analyte: PFHxA
313.0 / 269.0



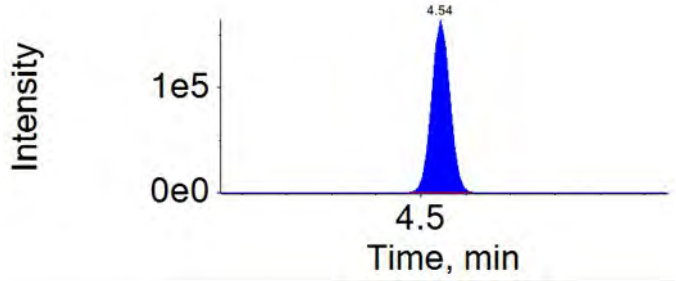
Extraction Standard: 13C5-PFHxA
318.0 / 273.0



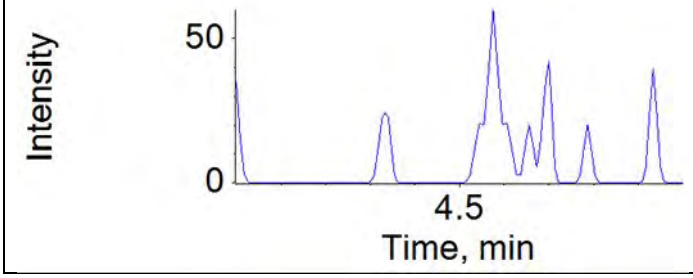
Analyte: PFHpA
363.0 / 319.0



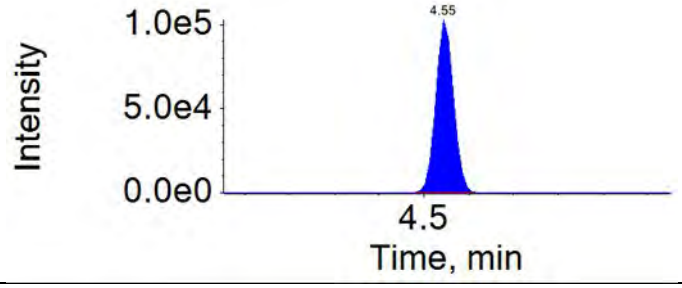
Extraction Standard: 13C4-PFHpA
367.0 / 322.0



Analyte: PFHxS
399.0 / 80.0



Extraction Standard: 13C3-PFHxS
402.0 / 80.0

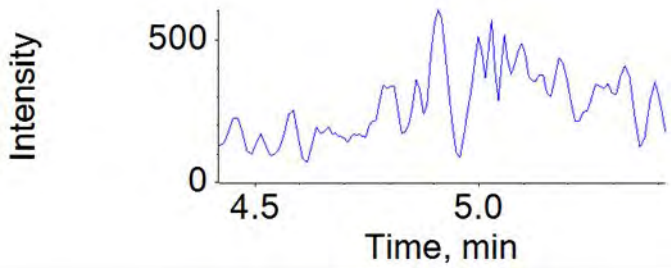


APPROVED
By MCD at 4:51 pm, 11/14/18

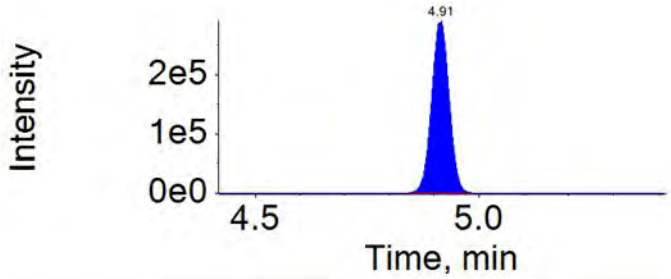
REVIEWED
By HMK at 12:22 pm, 11/15/18

ICAL Name: 18NOV12DCAL **Result Table:** 18316011 11/14/2018 4:24:36 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

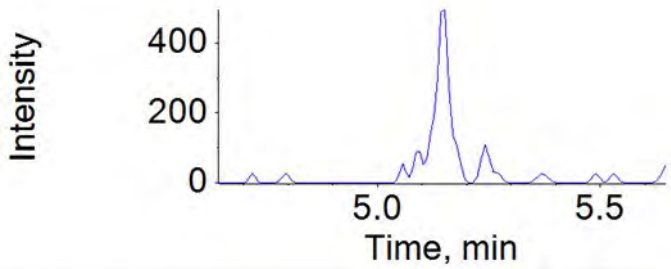
Analyte: PFOA
413.0 / 369.0



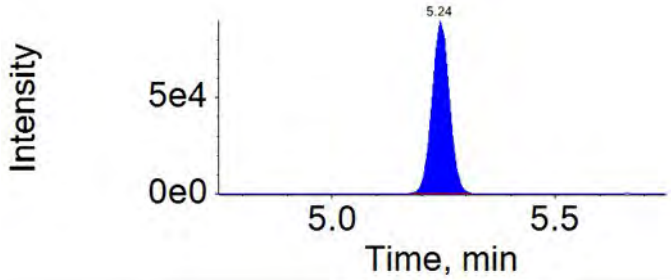
Extraction Standard: 13C8-PFOA
421.0 / 376.0



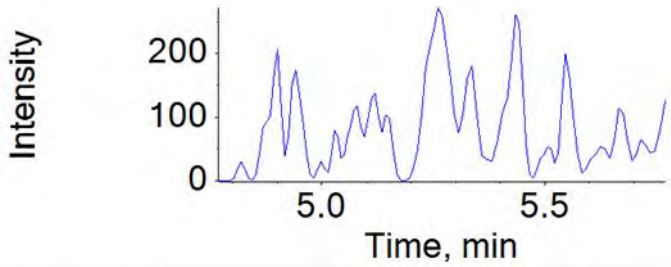
Analyte: PFOS
499.0 / 80.0



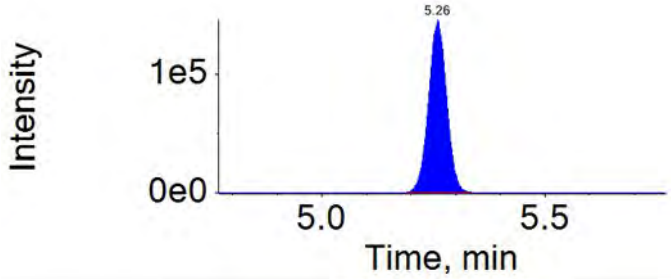
Extraction Standard: 13C8-PFOS
507.0 / 80.0



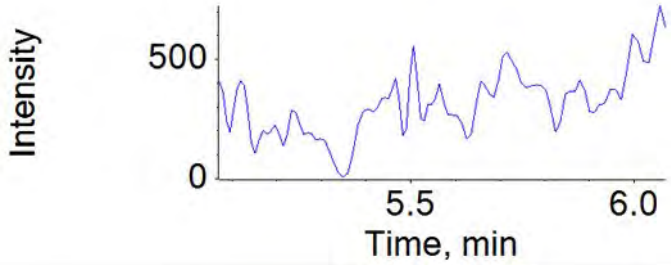
Analyte: PFNA
463.0 / 419.0



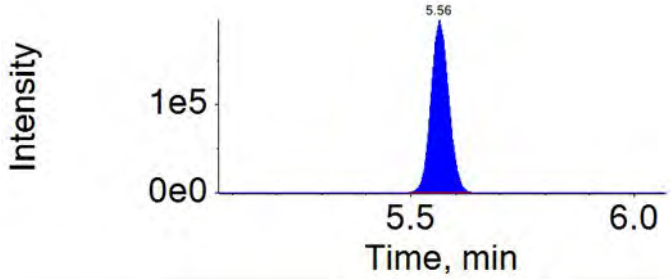
Extraction Standard: 13C9-PFNA
472.0 / 427.0



Analyte: PFDA
513.0 / 469.0

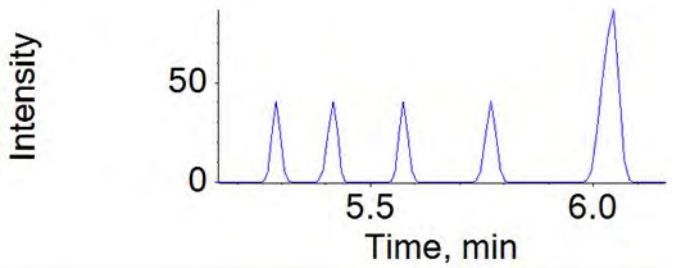


Extraction Standard: 13C6-PFDA
519.0 / 474.0

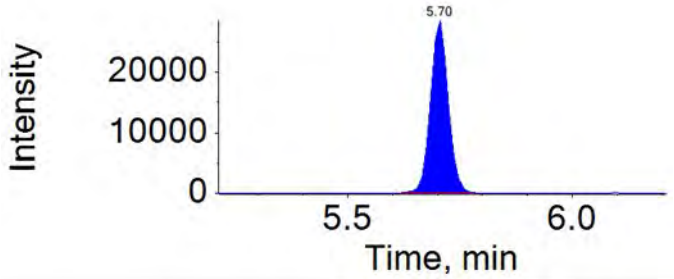


ICAL Name: 18NOV12DCAL **Result Table:** 18316011 11/14/2018 4:24:36 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

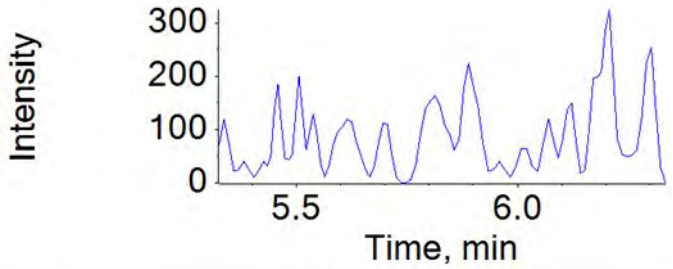
Analyte: NMeFOSAA
570.0 / 419.0



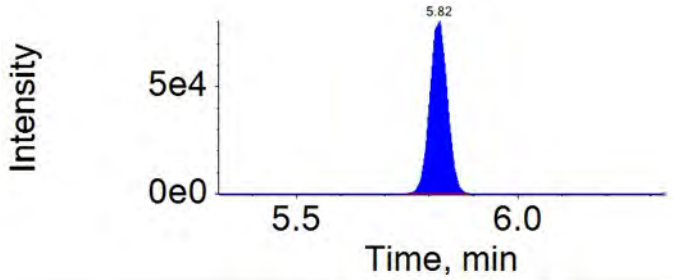
Extraction Standard: d3-NMeFOSAA
573.0 / 419.0



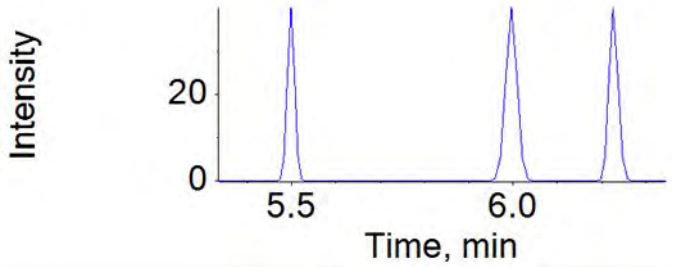
Analyte: PFUnDA
563.0 / 519.0



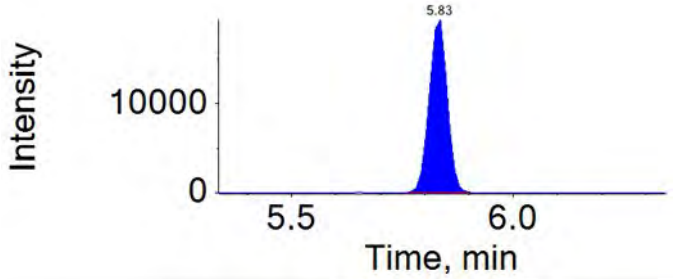
Extraction Standard: 13C7-PFUnDA
570.0 / 525.0



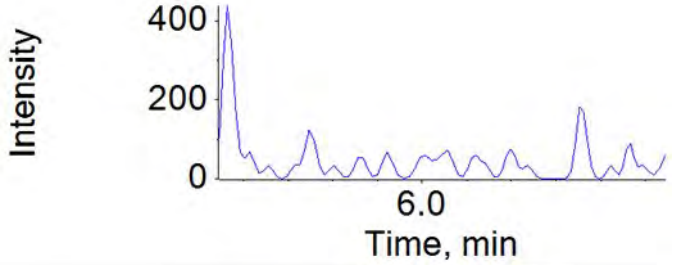
Analyte: NEtFOSAA
584.0 / 419.0



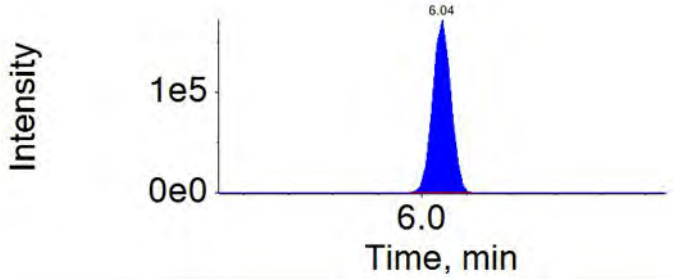
Extraction Standard: d5-NEtFOSAA
589.0 / 419.0



Analyte: PFDoDA
613.0 / 569.0



Extraction Standard: 13C2-PFDoDA
615.0 / 570.0

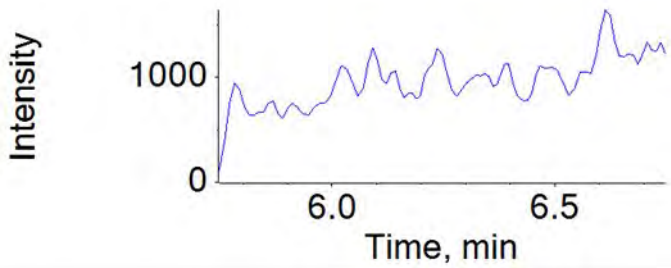


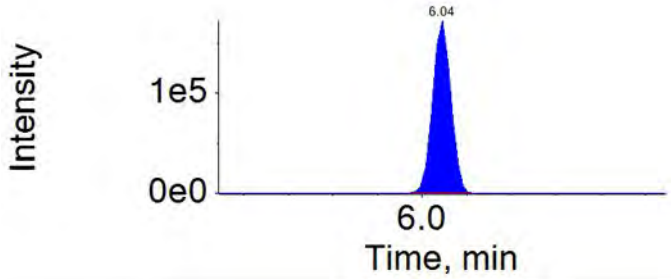
APPROVED
By MCD at 4:51 pm, 11/14/18

REVIEWED
By HMK at 12:22 pm, 11/15/18

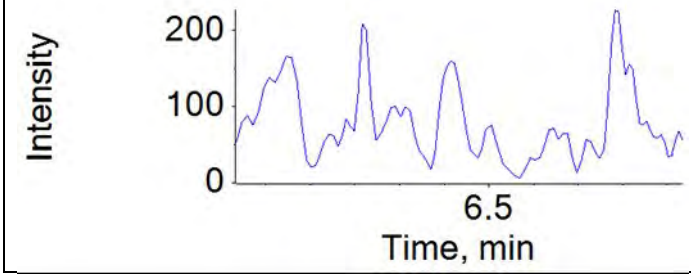
ICAL Name: 18NOV12DCAL **Result Table:** 18316011 11/14/2018 4:24:36 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

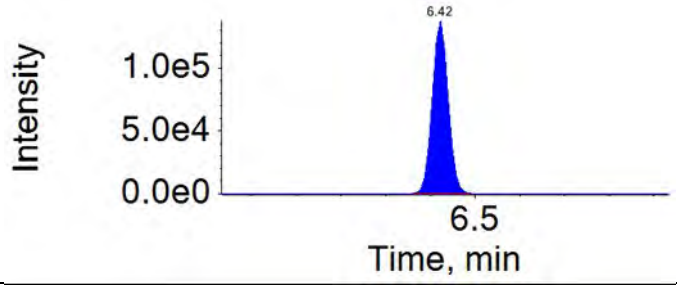
Analyte: PFTrDA	Extraction Standard: 13C2-PFDoDA
663.0 / 619.0	615.0 / 570.0





Analyte: PFTeDA	Extraction Standard: 13C2-PFTeDA
713.0 / 669.0	715.0 / 670.0





APPROVED
By MCD at 4:51 pm, 11/14/18

REVIEWED
By HMK at 12:22 pm, 11/15/18

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LC-MS/MS Analysis Report

Printed: 11/14/2018 4:29:00 PM
Template: IonRatio18OCT10

Ion Ratio Report

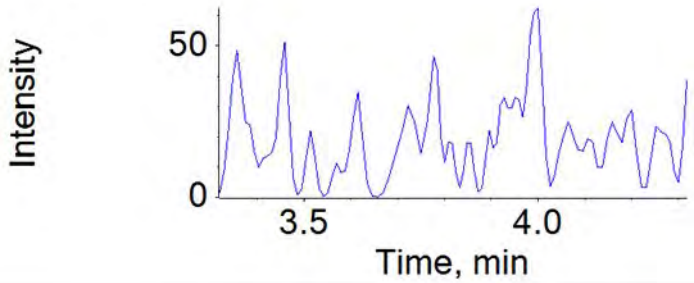
Sample Name: 9885106 **Instrument Name:** LM27631 **File Name:** 18NOV13D-72.wiff

Component Name	RT	RRT	Analyte Area Response	Int Typ	Expected Ion Ratio	Ion Ratio	Ion Ratio % Diff	Ion Ratio Limit	Ion Ratio OOS
PFBS	N/A	N/A	N/A	A	N/A	N/A			
PFBS_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFHxA	N/A	N/A	N/A	A	N/A	N/A			
PFHxA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFHpA	N/A	N/A	N/A	A	N/A	N/A			
PFHpA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFHxS	N/A	N/A	N/A	A	N/A	N/A			
PFHxS_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFOA	N/A	N/A	N/A	A	N/A	N/A			
PFOA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFOS	N/A	N/A	N/A	A	N/A	N/A			
PFOS_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFNA	N/A	N/A	N/A	A	N/A	N/A			
PFNA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFDA	N/A	N/A	N/A	A	N/A	N/A			
PFDA_2	N/A	N/A	N/A	A	N/A	N/A		50	
NMeFOSAA	N/A	N/A	N/A	A	N/A	N/A			
NMeFOSAA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFUnDA	N/A	N/A	N/A	A	N/A	N/A			
PFUnDA_2	N/A	N/A	N/A	A	N/A	N/A		50	
NEtFOSAA	N/A	N/A	N/A	A	N/A	N/A			
NEtFOSAA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFDoDA	N/A	N/A	N/A	A	N/A	N/A			
PFDoDA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFTrDA	N/A	N/A	N/A	A	N/A	N/A			
PFTrDA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFTeDA	N/A	N/A	N/A	A	N/A	N/A			
PFTeDA_2	N/A	N/A	N/A	A	N/A	N/A		50	

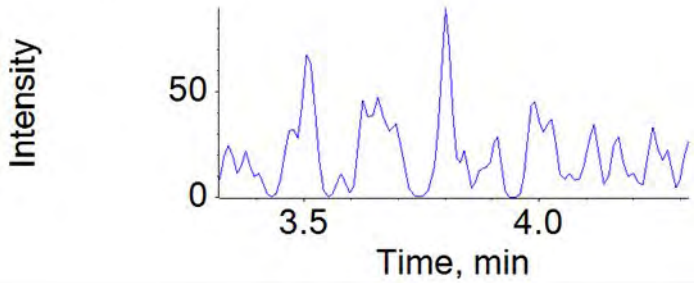
APPROVED
By MCD at 4:51 pm, 11/14/18

REVIEWED
By HMK at 12:22 pm, 11/15/18

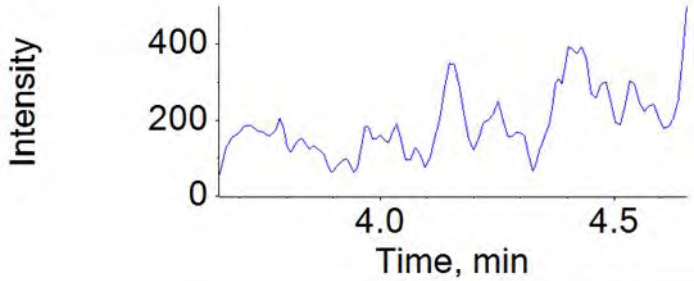
Component: PFBS
Primary Mass: 299.0 / 80.0



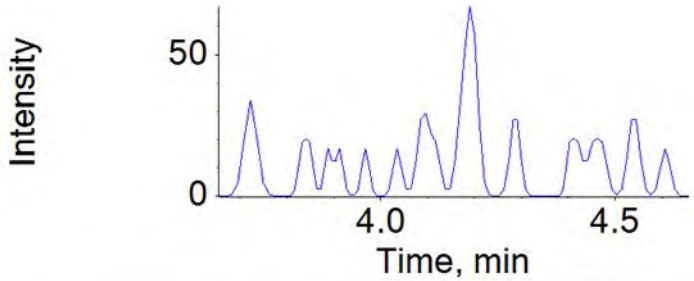
Component: PFBS_2
Secondary Mass: 299.0 / 99.0



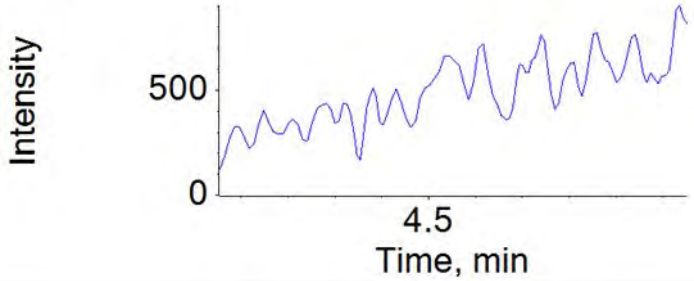
Component: PFHxA
Primary Mass: 313.0 / 269.0



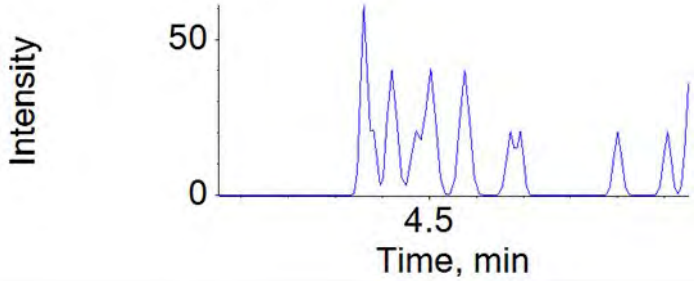
Component: PFHxA_2
Secondary Mass: 313.0 / 119.0



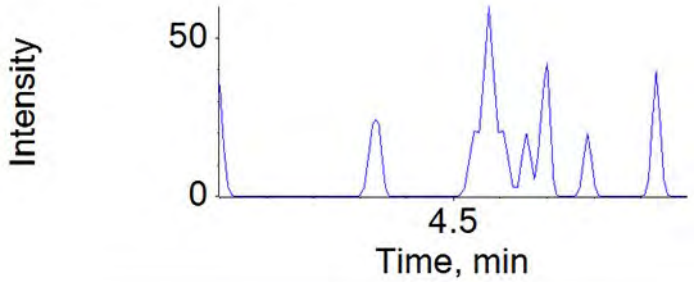
Component: PFHpA
Primary Mass: 363.0 / 319.0



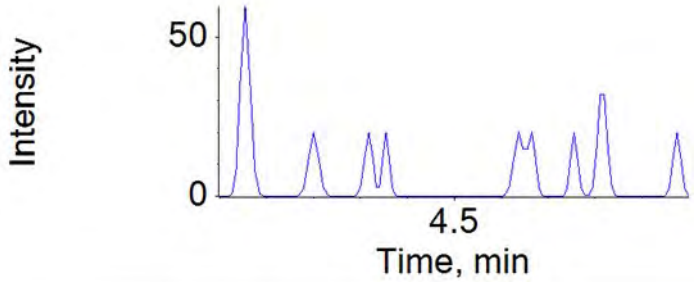
Component: PFHpA_2
Secondary Mass: 363.0 / 169.0



Component: PFHxS
Primary Mass: 399.0 / 80.0



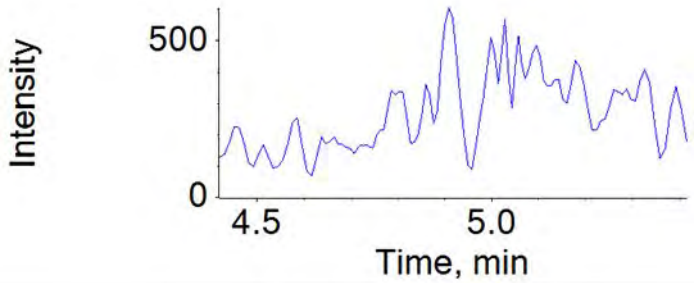
Component: PFHxS_2
Secondary Mass: 399.0 / 99.0



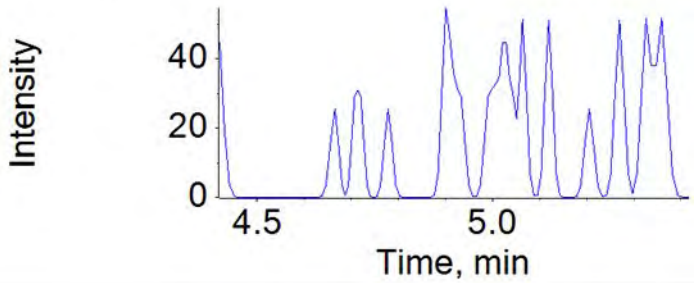
APPROVED
By MCD at 4:51 pm, 11/14/18

REVIEWED
By HMK at 12:22 pm, 11/15/18

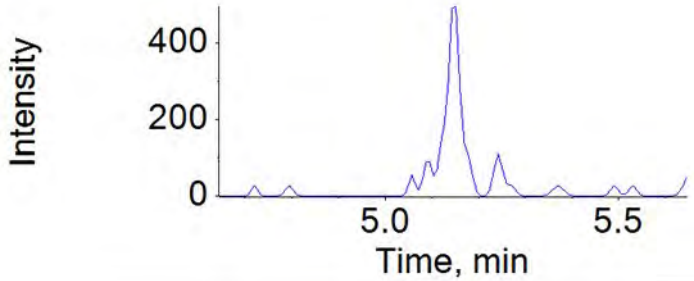
Component: PFOA
Primary Mass: 413.0 / 369.0



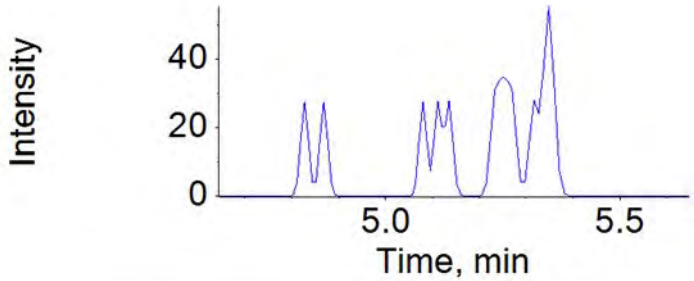
Component: PFOA_2
Secondary Mass: 413.0 / 169.0



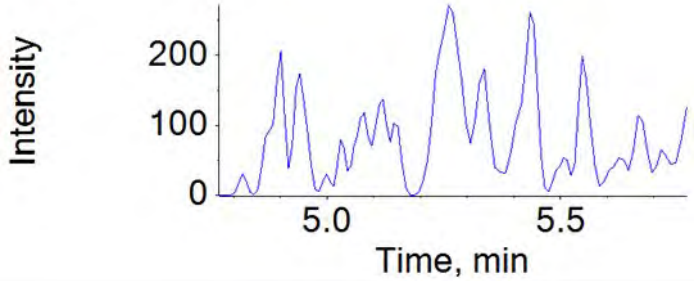
Component: PFOS
Primary Mass: 499.0 / 80.0



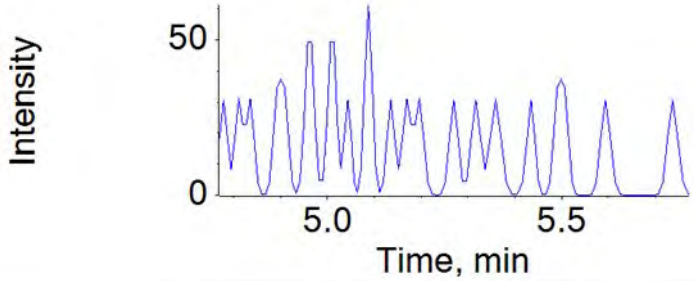
Component: PFOS_2
Secondary Mass: 499.0 / 99.0



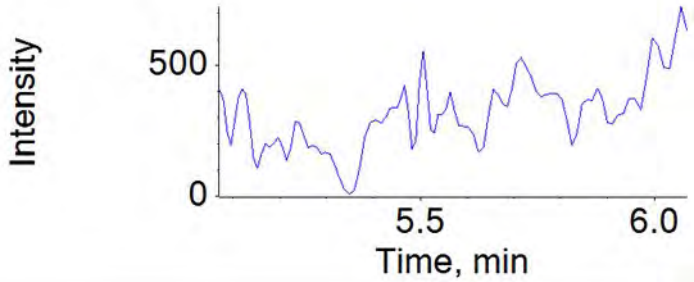
Component: PFNA
Primary Mass: 463.0 / 419.0



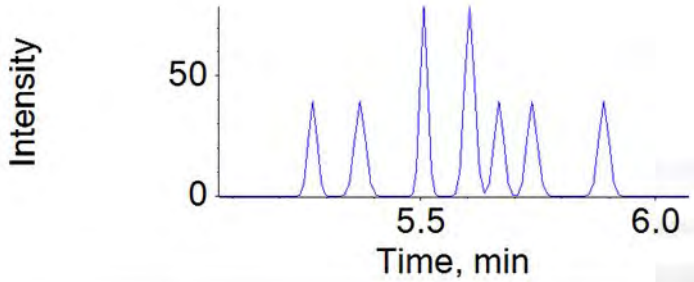
Component: PFNA_2
Secondary Mass: 463.0 / 169.0



Component: PFDA
Primary Mass: 513.0 / 469.0



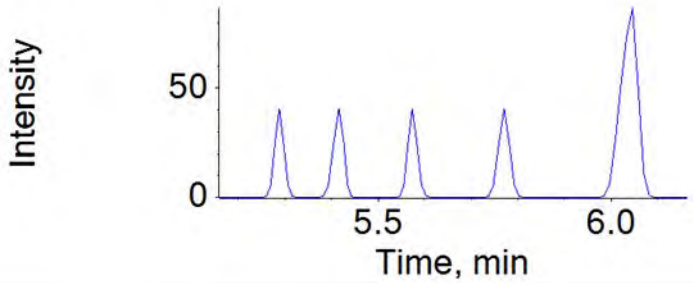
Component: PFDA_2
Secondary Mass: 513.0 / 169.0



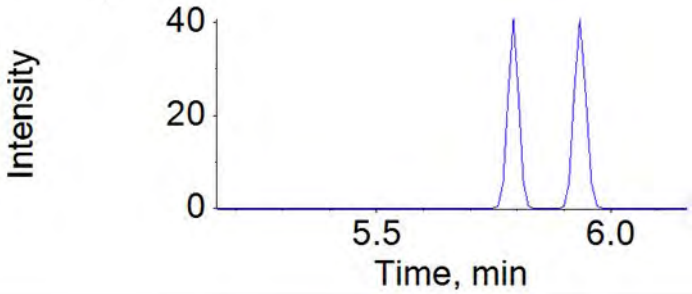
APPROVED
By MCD at 4:51 pm, 11/14/18

REVIEWED
By HMK at 12:22 pm, 11/15/18

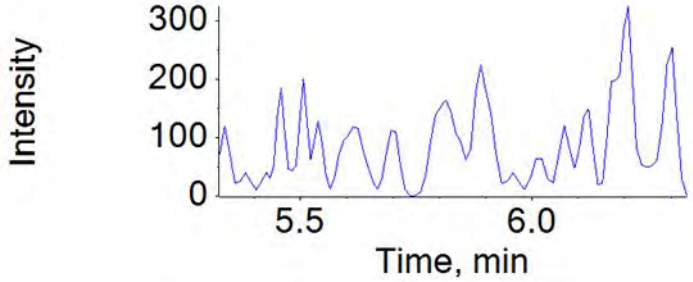
Component: NMeFOSAA
Primary Mass: 570.0 / 419.0



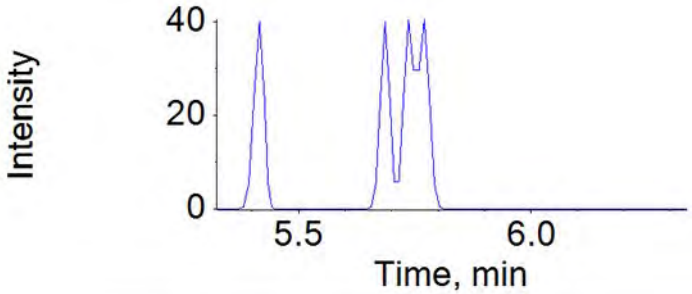
Component: NMeFOSAA_2
Secondary Mass: 570.0 / 483.0



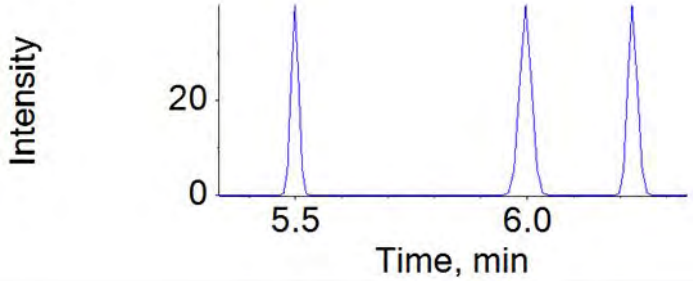
Component: PFUnDA
Primary Mass: 563.0 / 519.0



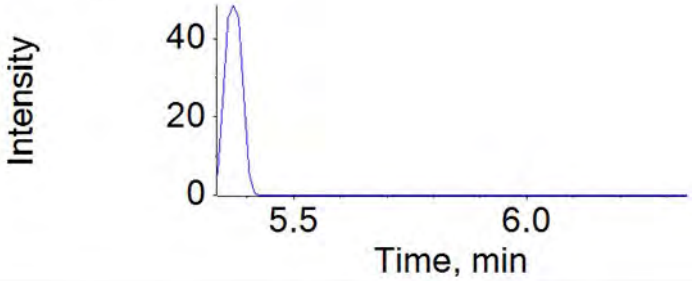
Component: PFUnDA_2
Secondary Mass: 563.0 / 169.0



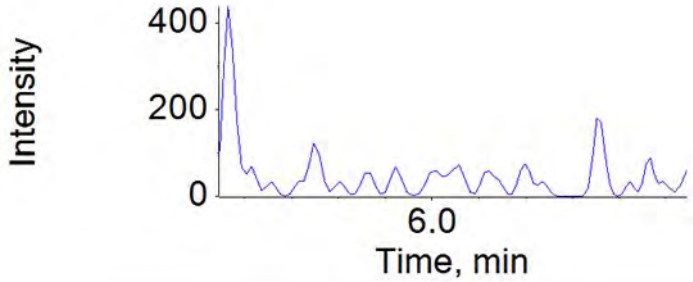
Component: NEtFOSAA
Primary Mass: 584.0 / 419.0



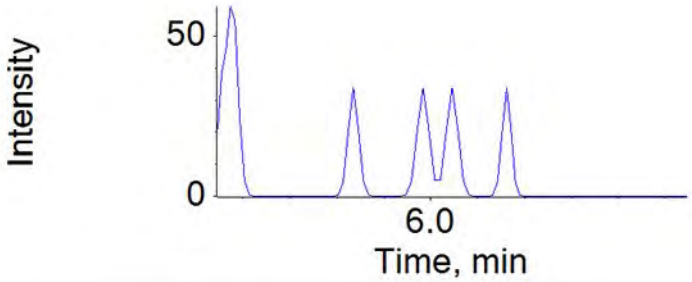
Component: NEtFOSAA_2
Secondary Mass: 584.0 / 526.0



Component: PFDoDA
Primary Mass: 613.0 / 569.0



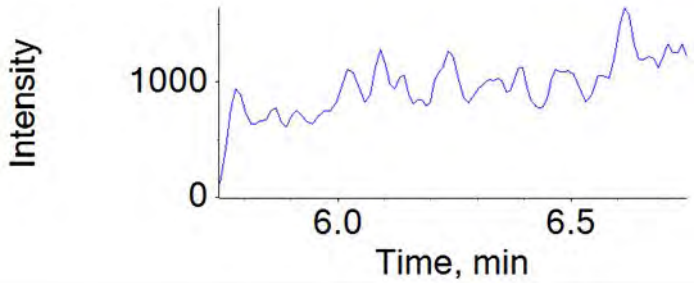
Component: PFDoDA_2
Secondary Mass: 613.0 / 169.0



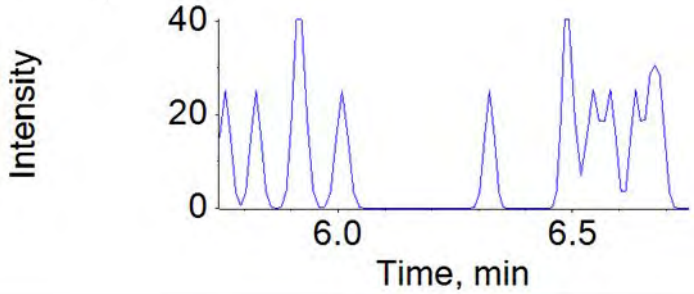
APPROVED
By MCD at 4:51 pm, 11/14/18

REVIEWED
By HMK at 12:22 pm, 11/15/18

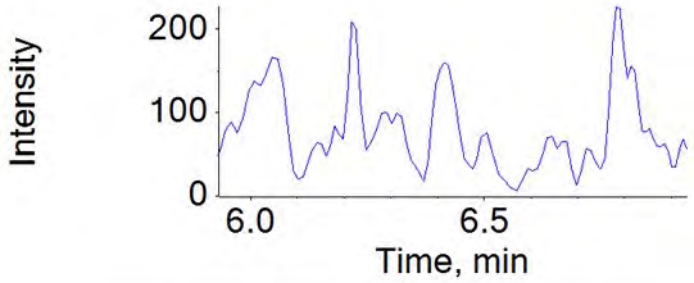
Component: PFTrDA
Primary Mass: 663.0 / 619.0



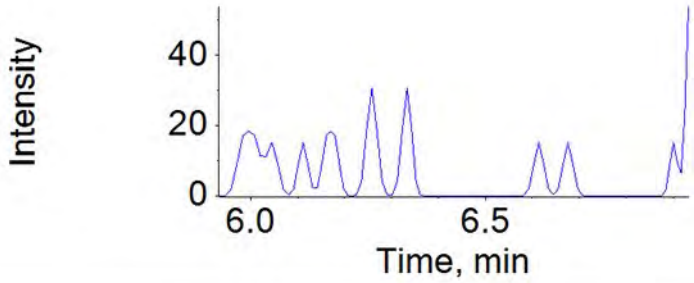
Component: PFTrDA_2
Secondary Mass: 663.0 / 169.0



Component: PFTeDA
Primary Mass: 713.0 / 669.0



Component: PFTeDA_2
Secondary Mass: 713.0 / 169.0



APPROVED
By MCD at 4:51 pm, 11/14/18

REVIEWED
By HMK at 12:22 pm, 11/15/18

Standards Data

PFAS by LC/MS/MS

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LC-MS/MS Sample Run Log

Printed: 11/14/2018 7:04:00 PM
Template: Sample Run Log-17JUL05.docx

Instrument Name: LM27631

Data File Name	Sample ID	Batch No	Analysis Date/Time
18NOV12DCAL-41.wiff	MDL	N\A	11/12/2018 2:56:51 PM
18NOV12DCAL-42.wiff	CAL1	N\A	11/12/2018 3:05:54 PM
18NOV12DCAL-43.wiff	CAL2	N\A	11/12/2018 3:15:03 PM
18NOV12DCAL-44.wiff	CAL3	N\A	11/12/2018 3:24:03 PM
18NOV12DCAL-45.wiff	CAL4	N\A	11/12/2018 3:33:03 PM
18NOV12DCAL-46.wiff	CAL5	N\A	11/12/2018 3:42:06 PM
18NOV12DCAL-47.wiff	CAL6	N\A	11/12/2018 3:51:06 PM
18NOV12DCAL-48.wiff	CAL7	N\A	11/12/2018 4:00:06 PM
18NOV12DCAL-49.wiff	solvent	N\A	11/12/2018 4:09:09 PM
18NOV12DCAL-50.wiff	ICV	N\A	11/12/2018 4:18:11 PM
18NOV12DCAL-51.wiff	L+B CAL3	N\A	11/12/2018 4:27:15 PM
18NOV12DCAL-52.wiff	CCV1_CAL3	N\A	11/12/2018 4:36:17 PM
18NOV13D-01.wiff	solvent	N/A	11/13/2018 9:07:50 AM
18NOV13D-02.wiff	solvent	N/A	11/13/2018 9:16:53 AM
18NOV13D-03.wiff	solvent	N/A	11/13/2018 9:25:56 AM
18NOV13D-04.wiff	solvent	N/A	11/13/2018 9:34:59 AM
18NOV13D-05.wiff	CCV1_ISC_CAL2	N/A	11/13/2018 9:44:02 AM
18NOV13D-06.wiff	INBLK	N/A	11/13/2018 9:53:05 AM
18NOV13D-07.wiff	BLK316012	18316012	11/13/2018 10:02:05 AM
18NOV13D-08.wiff	LCS316012	18316012	11/13/2018 10:11:09 AM
18NOV13D-09.wiff	9881902	18316012	11/13/2018 10:20:11 AM
18NOV13D-10.wiff	9881903	18316012	11/13/2018 10:29:14 AM
18NOV13D-11.wiff	9881904	18316012	11/13/2018 10:38:14 AM
18NOV13D-12.wiff	9881907BKG	18316012	11/13/2018 10:47:14 AM
18NOV13D-13.wiff	9881908MS	18316012	11/13/2018 10:56:14 AM
18NOV13D-14.wiff	9881909MSD	18316012	11/13/2018 11:05:17 AM
18NOV13D-15.wiff	9881910	18316012	11/13/2018 11:14:20 AM
18NOV13D-16.wiff	9881911	18316012	11/13/2018 11:23:20 AM
18NOV13D-17.wiff	CCV2_CAL3	N/A	11/13/2018 11:32:20 AM
18NOV13D-18.wiff	9881912	18316012	11/13/2018 11:41:23 AM
18NOV13D-19.wiff	9881915	18316012	11/13/2018 11:50:23 AM
18NOV13D-20.wiff	9881916	18316012	11/13/2018 11:59:26 AM
18NOV13D-21.wiff	9881917	18316012	11/13/2018 12:08:26 PM
18NOV13D-22.wiff	9881918	18316012	11/13/2018 12:17:29 PM
18NOV13D-23.wiff	CCV3_CAL4	N/A	11/13/2018 12:26:35 PM
18NOV13D-24.wiff	solvent	N/A	11/13/2018 1:10:48 PM
18NOV13D-25.wiff	BLK316028	18316028	11/13/2018 1:19:50 PM
18NOV13D-26.wiff	LCS316028	18316028	11/13/2018 1:28:53 PM
18NOV13D-27.wiff	9885141	18316028	11/13/2018 1:37:56 PM
18NOV13D-28.wiff	9885142BKG	18316028	11/13/2018 1:46:59 PM
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18NOV13D-30.wiff	9885144MSD	18316028	11/13/2018 2:05:02 PM
18NOV13D-31.wiff	9885145	18316028	11/13/2018 2:14:02 PM
18NOV13D-32.wiff	9885147	18316028	11/13/2018 2:23:02 PM
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18NOV13D-36.wiff	9885150	18316028	11/13/2018 2:59:05 PM
18NOV13D-37.wiff	9885152	18316028	11/13/2018 3:08:08 PM
18NOV13D-38.wiff	9885153	18316028	11/13/2018 3:17:11 PM
18NOV13D-39.wiff	9885154	18316028	11/13/2018 3:26:14 PM
18NOV13D-40.wiff	9885155	18316028	11/13/2018 3:35:17 PM
18NOV13D-41.wiff	9885156	18316028	11/13/2018 3:44:17 PM
18NOV13D-42.wiff	9885157	18316028	11/13/2018 3:53:20 PM
18NOV13D-43.wiff	solvent	N/A	11/13/2018 4:02:23 PM
18NOV13D-44.wiff	9881576	18314009	11/13/2018 4:11:23 PM
18NOV13D-45.wiff	9881589	18314009	11/13/2018 4:20:26 PM

APPROVED
By MCD at 7:04 pm, 11/14/18

Instrument Name: LM27631

18NOV13D-46.wiff	9881595	18314009	11/13/2018 4:29:26 PM
18NOV13D-47.wiff	CCV5_CAL3	N/A	11/13/2018 4:38:29 PM
18NOV13D-48.wiff	solvent	N/A	11/13/2018 4:47:29 PM
18NOV13D-49.wiff	BLK316011	18316011	11/13/2018 4:56:29 PM
18NOV13D-50.wiff	LCS316011	18316011	11/13/2018 5:05:29 PM
18NOV13D-51.wiff	9885080	18316011	11/13/2018 5:14:29 PM
18NOV13D-52.wiff	9885081	18316011	11/13/2018 5:23:29 PM
18NOV13D-53.wiff	9885082	18316011	11/13/2018 5:32:29 PM
18NOV13D-54.wiff	9885085	18316011	11/13/2018 5:41:29 PM
18NOV13D-55.wiff	9885086BKG	18316011	11/13/2018 5:50:29 PM
18NOV13D-56.wiff	9885087MS	18316011	11/13/2018 5:59:32 PM
18NOV13D-57.wiff	9885088MSD	18316011	11/13/2018 6:08:35 PM
18NOV13D-58.wiff	9885089	18316011	11/13/2018 6:17:35 PM
18NOV13D-59.wiff	CCV6_CAL4	N/A	11/13/2018 6:26:35 PM
18NOV13D-60.wiff	9885090	18316011	11/13/2018 6:35:38 PM
18NOV13D-61.wiff	9885092	18316011	11/13/2018 6:44:38 PM
18NOV13D-62.wiff	9885093	18316011	11/13/2018 6:53:41 PM
18NOV13D-63.wiff	9885094	18316011	11/13/2018 7:02:41 PM
18NOV13D-64.wiff	9885095	18316011	11/13/2018 7:11:44 PM
18NOV13D-65.wiff	9885098	18316011	11/13/2018 7:20:47 PM
18NOV13D-66.wiff	9885099	18316011	11/13/2018 7:29:50 PM
18NOV13D-67.wiff	9885100	18316011	11/13/2018 7:38:50 PM
18NOV13D-68.wiff	9885101	18316011	11/13/2018 7:47:50 PM
18NOV13D-69.wiff	9885104	18316011	11/13/2018 7:56:50 PM
18NOV13D-70.wiff	CCV7_ISC_CAL2	N/A	11/13/2018 8:05:50 PM
18NOV13D-71.wiff	9885105	18316011	11/13/2018 8:14:50 PM
18NOV13D-72.wiff	9885106	18316011	11/13/2018 8:23:50 PM
18NOV13D-73.wiff	9885118	18316011	11/13/2018 8:32:50 PM
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18NOV13D-77.wiff	BLK316024	18316024	11/13/2018 9:08:52 PM
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18NOV13D-80.wiff	9885057	18316024	11/13/2018 9:35:55 PM
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18NOV13D-82.wiff	9885059	18316024	11/13/2018 9:53:58 PM
18NOV13D-83.wiff	9885062BKG	18316024	11/13/2018 10:02:58 PM
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18NOV13D-87.wiff	CCV9_CAL4	N/A	11/13/2018 10:38:59 PM
18NOV13D-88.wiff	9885075	18316024	11/13/2018 10:47:59 PM
18NOV13D-89.wiff	solvent	N/A	11/13/2018 10:56:58 PM
18NOV13D-90.wiff	BLK316029	18316029	11/13/2018 11:06:02 PM
18NOV13D-91.wiff	LCS316029	18316029	11/13/2018 11:15:01 PM
18NOV13D-92.wiff	9885078	18316029	11/13/2018 11:24:02 PM
18NOV13D-93.wiff	9885160	18316029	11/13/2018 11:33:01 PM
18NOV13D-94.wiff	9885161BKG	18316029	11/13/2018 11:42:03 PM
18NOV13D-95.wiff	9885162MS	18316029	11/13/2018 11:51:04 PM
18NOV13D-96.wiff	9885163MSD	18316029	11/14/2018 12:00:09 AM
18NOV13D-97.wiff	9885164	18316029	11/14/2018 12:09:10 AM
18NOV13D-98.wiff	9885165	18316029	11/14/2018 12:18:11 AM
18NOV13D-99.wiff	CCV10_ISC_CAL2	N/A	11/14/2018 12:27:10 AM
18NOV13D-100.wiff	INBLK	N/A	11/14/2018 12:36:10 AM

20 mM Ammonium Acetate in H2O: 782411091833A
20 mM Ammonium Acetate in 0.5% H2O|Methanol: 782411091833B

APPROVED
By MCD at 7:04 pm, 11/14/18

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LC-MS/MS Sample Run Log

Printed: 11/30/2018 11:04:00 PM
Template: Sample Run Log-17JUL05.docx

Instrument Name: LM27631

Data File Name	Sample ID	Batch No	Analysis Date/Time
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18NOV28DCAL-06.wiff	CAL1	N/A	11/28/2018 1:42:10 PM
18NOV28DCAL-07.wiff	CAL2	N/A	11/28/2018 1:51:13 PM
18NOV28DCAL-08.wiff	CAL3	N/A	11/28/2018 2:00:13 PM
18NOV28DCAL-09.wiff	CAL4	N/A	11/28/2018 2:09:13 PM
18NOV28DCAL-10.wiff	CAL5	N/A	11/28/2018 2:18:16 PM
18NOV28DCAL-11.wiff	CAL6	N/A	11/28/2018 2:27:16 PM
18NOV28DCAL-12.wiff	CAL7	N/A	11/28/2018 2:36:16 PM
18NOV28DCAL-13.wiff	Instrument Blank	N/A	11/28/2018 2:45:19 PM
18NOV28DCAL-14.wiff	ICV	N/A	11/28/2018 2:54:22 PM
18NOV28DCAL-15.wiff	L+B CAL3	N/A	11/28/2018 3:03:22 PM
18NOV28DCAL-16.wiff	CCV1_CAL3	N/A	11/28/2018 3:12:25 PM
18NOV29D-01.wiff	solvent	N/A	11/29/2018 9:57:32 AM
18NOV29D-02.wiff	solvent	N/A	11/29/2018 10:06:32 AM
18NOV29D-03.wiff	solvent	N/A	11/29/2018 10:15:35 AM
18NOV29D-04.wiff	solvent	N/A	11/29/2018 10:24:35 AM
18NOV29D-05.wiff	CCV1_ISC_CAL2	N/A	11/29/2018 10:33:38 AM
18NOV29D-06.wiff	Instrument Blank	N/A	11/29/2018 10:42:38 AM
18NOV29D-07.wiff	BLK331005	18331005	11/29/2018 10:51:41 AM
18NOV29D-08.wiff	LCS331005	18331005	11/29/2018 11:00:41 AM
18NOV29D-09.wiff	9911369	18331005	11/29/2018 11:09:41 AM
18NOV29D-10.wiff	9911370	18331005	11/29/2018 11:18:41 AM
18NOV29D-11.wiff	9911371	18331005	11/29/2018 11:27:41 AM
18NOV29D-12.wiff	9911372	18331005	11/29/2018 11:36:41 AM
18NOV29D-13.wiff	9911373BKG	18331005	11/29/2018 11:45:44 AM
18NOV29D-14.wiff	9911376	18331005	11/29/2018 11:54:47 AM
18NOV29D-15.wiff	9911377	18331005	11/29/2018 12:03:47 PM
18NOV29D-16.wiff	9911378	18331005	11/29/2018 12:12:50 PM
18NOV29D-17.wiff	CCV2_CAL3	N/A	11/29/2018 12:21:50 PM
18NOV29D-18.wiff	solvent	N/A	11/29/2018 12:30:50 PM
18NOV29D-19.wiff	BLK331006	18331006	11/29/2018 12:39:54 PM
18NOV29D-20.wiff	LCS331006	18331006	11/29/2018 12:48:53 PM
18NOV29D-21.wiff	9911416	18331006	11/29/2018 12:57:56 PM
18NOV29D-22.wiff	9911417	18331006	11/29/2018 1:06:56 PM
18NOV29D-23.wiff	9911418	18331006	11/29/2018 1:15:56 PM
18NOV29D-24.wiff	9911419	18331006	11/29/2018 1:24:56 PM
18NOV29D-25.wiff	9911420BKG	18331006	11/29/2018 1:33:59 PM
18NOV29D-26.wiff	9911423	18331006	11/29/2018 1:42:59 PM
18NOV29D-27.wiff	9911424	18331006	11/29/2018 1:51:59 PM
18NOV29D-28.wiff	9911425	18331006	11/29/2018 2:01:02 PM
18NOV29D-29.wiff	CCV3_CAL4	N/A	11/29/2018 2:10:02 PM
18NOV29D-30.wiff	9911426	18331006	11/29/2018 2:19:02 PM
18NOV29D-31.wiff	9911427	18331006	11/29/2018 2:28:02 PM
18NOV29D-32.wiff	9911428	18331006	11/29/2018 2:37:02 PM
18NOV29D-33.wiff	9911429	18331006	11/29/2018 2:46:03 PM
18NOV29D-34.wiff	9911430	18331006	11/29/2018 2:55:03 PM
18NOV29D-35.wiff	9911431	18331006	11/29/2018 3:04:03 PM
18NOV29D-36.wiff	9911432	18331006	11/29/2018 3:13:03 PM
18NOV29D-37.wiff	9911433	18331006	11/29/2018 3:22:03 PM
18NOV29D-38.wiff	9911434	18331006	11/29/2018 3:31:06 PM
18NOV29D-39.wiff	9911421MS	18331006	11/29/2018 3:40:06 PM
18NOV29D-40.wiff	CCV4_ISC_CAL2	N/A	11/29/2018 3:49:06 PM
18NOV29D-41.wiff	9911422MSD	18331006	11/29/2018 3:58:06 PM
18NOV29D-42.wiff	solvent	N/A	11/29/2018 4:07:08 PM
18NOV29D-43.wiff	BLK331014	18331014	11/29/2018 4:16:09 PM
18NOV29D-44.wiff	LCS331014	18331014	11/29/2018 4:25:12 PM
18NOV29D-45.wiff	LCSDA	18331014	11/29/2018 4:34:15 PM

APPROVED
By MCD at 11:04 pm, 11/30/18

Instrument Name: LM27631

18NOV29D-46.wiff	9881899	18331014	11/29/2018 4:43:18 PM
18NOV29D-47.wiff	9881900	18331014	11/29/2018 4:52:21 PM
18NOV29D-48.wiff	9881932	18331014	11/29/2018 5:01:24 PM
18NOV29D-49.wiff	9881933BKG	18331014	11/29/2018 5:10:27 PM
18NOV29D-50.wiff	9881947	18331014	11/29/2018 5:19:30 PM
18NOV29D-51.wiff	9881948	18331014	11/29/2018 5:28:33 PM
18NOV29D-52.wiff	CCV5_CAL3	N/A	11/29/2018 5:37:36 PM
18NOV29D-53.wiff	9881899MS	18331014	11/29/2018 5:46:36 PM
18NOV29D-54.wiff	solvent	N/A	11/29/2018 5:55:39 PM
18NOV29D-55.wiff	BLK332003	18332003	11/29/2018 6:04:39 PM
18NOV29D-56.wiff	LCS332003	18332003	11/29/2018 6:13:39 PM
18NOV29D-57.wiff	9881542	18332003	11/29/2018 6:22:39 PM
18NOV29D-58.wiff	9881543	18332003	11/29/2018 6:31:39 PM
18NOV29D-59.wiff	9883382BKG	18332003	11/29/2018 6:40:42 PM
18NOV29D-60.wiff	9883385	18332003	11/29/2018 6:49:45 PM
18NOV29D-61.wiff	9883396	18332003	11/29/2018 6:58:45 PM
18NOV29D-62.wiff	9883397	18332003	11/29/2018 7:07:45 PM
18NOV29D-63.wiff	9885076	18332003	11/29/2018 7:16:48 PM
18NOV29D-64.wiff	CCV6_CAL4	N/A	11/29/2018 7:25:48 PM
18NOV29D-65.wiff	9885077	18332003	11/29/2018 7:34:51 PM
18NOV29D-66.wiff	9885091	18332003	11/29/2018 7:43:54 PM
18NOV29D-67.wiff	9885133	18332003	11/29/2018 7:52:57 PM
18NOV29D-68.wiff	9885134	18332003	11/29/2018 8:02:00 PM
18NOV29D-69.wiff	9885151	18332003	11/29/2018 8:11:03 PM
18NOV29D-70.wiff	9883383MS	18332003	11/29/2018 8:20:03 PM
18NOV29D-71.wiff	9883384MSD	18332003	11/29/2018 8:29:03 PM
18NOV29D-72.wiff	CCV7_ISC_CAL2	N/A	11/29/2018 8:38:03 PM
18NOV29D-73.wiff	Instrument Blank	N/A	11/29/2018 8:47:06 PM
18NOV29D-74.wiff	9911358	18330003	11/29/2018 8:56:09 PM
18NOV29D-75.wiff	9911366	18330003	11/29/2018 9:05:09 PM
18NOV29D-76.wiff	9911367	18330003	11/29/2018 9:14:09 PM
18NOV29D-77.wiff	9909757	18330013	11/29/2018 9:23:09 PM
18NOV29D-78.wiff	9909762	18330013	11/29/2018 9:32:09 PM
18NOV29D-79.wiff	CCV8_CAL3	N/A	11/29/2018 9:41:09 PM
18NOV29D-80.wiff	BLK332013	18332013	11/29/2018 9:50:12 PM
18NOV29D-81.wiff	LCS332013	18332013	11/29/2018 9:59:15 PM
18NOV29D-82.wiff	9909732	18332013	11/29/2018 10:08:18 PM
18NOV29D-83.wiff	9909733	18332013	11/29/2018 10:17:21 PM
18NOV29D-84.wiff	9909734BKG	18332013	11/29/2018 10:26:24 PM
18NOV29D-85.wiff	9909735	18332013	11/29/2018 10:35:27 PM
18NOV29D-86.wiff	9909736	18332013	11/29/2018 10:44:30 PM
18NOV29D-87.wiff	9909737	18332013	11/29/2018 10:53:33 PM
18NOV29D-88.wiff	9909738	18332013	11/29/2018 11:02:33 PM
18NOV29D-89.wiff	9909739	18332013	11/29/2018 11:11:36 PM
18NOV29D-90.wiff	CCV9_CAL4	N/A	11/29/2018 11:20:36 PM
18NOV29D-91.wiff	9909740	18332013	11/29/2018 11:29:36 PM
18NOV29D-92.wiff	9909741	18332013	11/29/2018 11:38:36 PM
18NOV29D-93.wiff	9909742	18332013	11/29/2018 11:47:36 PM
18NOV29D-94.wiff	9909743MS	18332013	11/29/2018 11:56:36 PM
18NOV29D-95.wiff	9909744MSD	18332013	11/30/2018 12:05:36 AM

20 mM Ammonium Acetate in H2O: 2615711261833A
20 mM Ammonium Acetate in 0.5% H2O\Methanol: 2615711261833B

APPROVED
By MCD at 11:04 pm, 11/30/18

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV12DCAL **QMethod Name:** 18AUG20QM
Result Table: 18NOV12DCAL_Updated1/10/2019 3:19:00 PM **Acquisition Method:** 18AUG13_3uL.dam

Sample File Name	Acquisition Date	Sample ID	Sample Name
18NOV12DCAL-42.wiff	11/12/2018 3:05:54 PM	CALBRN11833C	CAL1
18NOV12DCAL-43.wiff	11/12/2018 3:15:03 PM	CALBRN21833C	CAL2
18NOV12DCAL-44.wiff	11/12/2018 3:24:03 PM	CALBRN31833B	CAL3
18NOV12DCAL-45.wiff	11/12/2018 3:33:03 PM	CALBRN41833B	CAL4
18NOV12DCAL-46.wiff	11/12/2018 3:42:06 PM	CALBRN51833B	CAL5
18NOV12DCAL-47.wiff	11/12/2018 3:51:06 PM	CALBRN61833B	CAL6
18NOV12DCAL-48.wiff	11/12/2018 4:00:06 PM	CALBRN71833B	CAL7

CAL3 Injection Standard Areas

Sample Name	Injection Std Name	Injection Std Area
CAL3	13C3-PFBA	659926.2
CAL3	13C2-PFOA	450219.7
CAL3	13C4-PFOS	249205.8
CAL3	13C2-PFDA	278743.9

APPROVED
By MCD at 3:22 pm, 1/10/19

REVIEWED
By ucmr at 3:21 pm, 1/25/19

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV12DCAL **QMethod Name:** 18AUG20QM
Result Table: 18NOV12DCAL_Updated1/10/2019 3:19:00 PM **Acquisition Method:** 18AUG13_3uL.dam

Response Factor Table

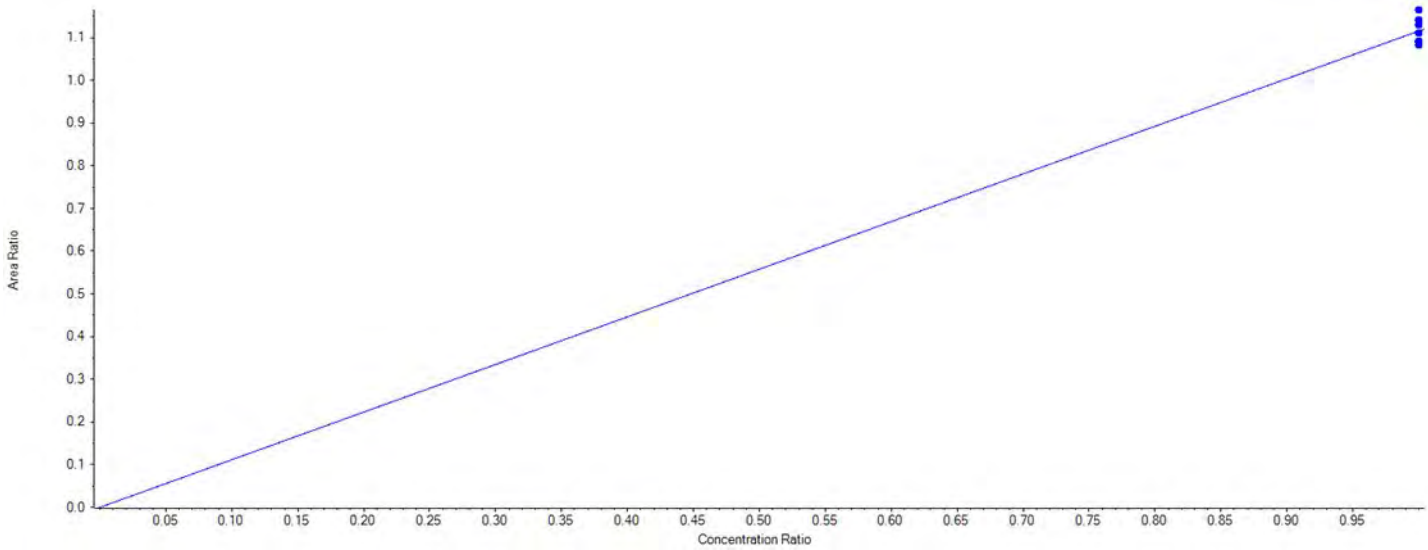
Analyte Name	CAL 1	CAL 2	CAL 3	CAL 4	CAL 5	CAL 6	CAL 7	%RSD	Limit	OOS	r^2	OOS
PFBA	1.059	0.868	1.034	0.919	0.966	0.910	0.882	7	20		0.999	
PFPeA	1.058	0.952	1.052	0.939	0.906	0.876	0.839	8	20		0.999	
PFBS	1.061	0.938	1.061	0.954	1.001	0.997	0.964	5	20		1.000	
4:2-FTS	1.764	1.591	1.797	1.672	1.662	1.782	1.703	4	20		0.999	
PFHxA	1.470	1.241	1.361	1.233	1.255	1.160	N/A	8	20		0.998	
PFPeS	0.534	0.400	0.499	0.479	0.471	0.484	0.478	8	20		1.000	
PFHpA	1.776	1.486	1.766	1.619	1.555	1.461	N/A	8	20		0.998	
PFHxS	1.019	0.838	1.029	0.984	0.957	0.972	0.980	6	20		1.000	
6:2-FTS	1.892	1.888	2.214	2.112	2.098	1.876	N/A	7	20		0.996	
PFHpS	1.007	0.773	0.988	0.856	0.922	0.911	0.890	8	20		1.000	
PFOA	1.136	0.940	1.059	0.960	1.022	0.956	0.904	7	20		0.998	
PFOS	1.194	1.024	1.112	1.084	1.110	1.087	1.093	4	20		1.000	
PFNA	1.545	1.489	1.658	1.424	1.542	1.407	1.336	7	20		0.997	
PFNS	0.602	0.621	0.674	0.628	0.676	0.673	0.695	5	20		0.999	
PFDA	1.122	0.883	1.037	0.962	0.987	0.919	N/A	8	20		0.999	
8:2-FTS	2.201	1.873	2.243	1.857	2.127	2.051	N/A	7	20		0.998	
PFOSA	1.113	0.931	1.074	0.954	1.047	1.024	N/A	6	20		0.999	
NMeFOSAA	0.663	0.620	0.877	0.890	0.865	0.893	0.886	13	20		1.000	
PFDS	0.521	0.496	0.511	0.520	0.537	0.515	0.533	2	20		1.000	
PFUnDA	2.280	1.757	2.026	2.069	1.918	1.881	N/A	8	20		0.999	
NEtFOSAA	0.709	1.011	1.153	0.906	0.931	0.963	N/A	14	20		0.998	
PFDoDA	1.015	0.935	1.079	0.963	1.034	0.961	N/A	5	20		0.999	
10:2-FTS	1.703	1.561	1.573	1.278	1.573	1.511	1.383	9	20		0.997	
NMePFOSAE	1.287	1.110	1.331	1.179	1.255	1.278	1.152	6	20		0.997	
NMePFOSA	0.758	0.950	0.975	1.020	1.096	0.983	N/A	11	20		0.998	
PFDoS	0.306	0.272	0.264	0.272	0.266	0.278	0.272	5	20		1.000	
NEtPFOSAE	1.873	1.487	1.717	1.622	1.623	1.516	N/A	8	20		0.999	
NEtPFOSA	1.129	1.156	1.156	1.125	1.166	1.070	1.078	3	20		0.999	
PFTrDA	0.925	0.751	0.839	0.808	0.827	0.774	N/A	7	20		0.999	
PFTeDA	0.996	0.851	0.994	0.911	0.934	0.892	0.880	6	20		0.999	
PFHxDA	0.486	0.402	0.442	0.409	0.413	0.435	0.414	6	20		0.999	
PFODA	0.367	0.316	0.367	0.349	0.358	0.360	0.359	5	20		1.000	

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV12DCAL **QMethod Name:** 18AUG20QM
Result Table: 18NOV12DCAL_Updated1/10/2019 3:19:00 PM **Acquisition Method:** 18AUG13_3uL.dam

E13C4-PFBA

y = 1.11523 x (std. dev. = 0.03058) (weighting: None)



Extraction Standard Calibration Verification

Sample Name	E13C4-PFBA Area	13C3-PFBA Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	763334.3	676527.501	True	5.00	1.128	3.27	1.000	5.000	5.059	1	30	
CAL2	771445.8	662396.701	True	5.00	1.165	3.27	1.000	5.000	5.221	4	30	
CAL3	733360.2	659926.183	True	5.00	1.111	3.27	1.000	5.000	4.982	0	30	
CAL4	726396.0	671568.052	True	5.00	1.082	3.26	1.000	5.000	4.849	-3	30	
CAL5	698871.9	641789.507	True	5.00	1.089	3.26	1.000	5.000	4.882	-2	30	
CAL6	633648.4	555817.856	True	5.00	1.140	3.27	1.000	5.000	5.111	2	30	
CAL7	557392.8	510525.814	True	5.00	1.092	3.25	1.000	5.000	4.895	-2	30	

APPROVED
By MCD at 3:22 pm, 1/10/19

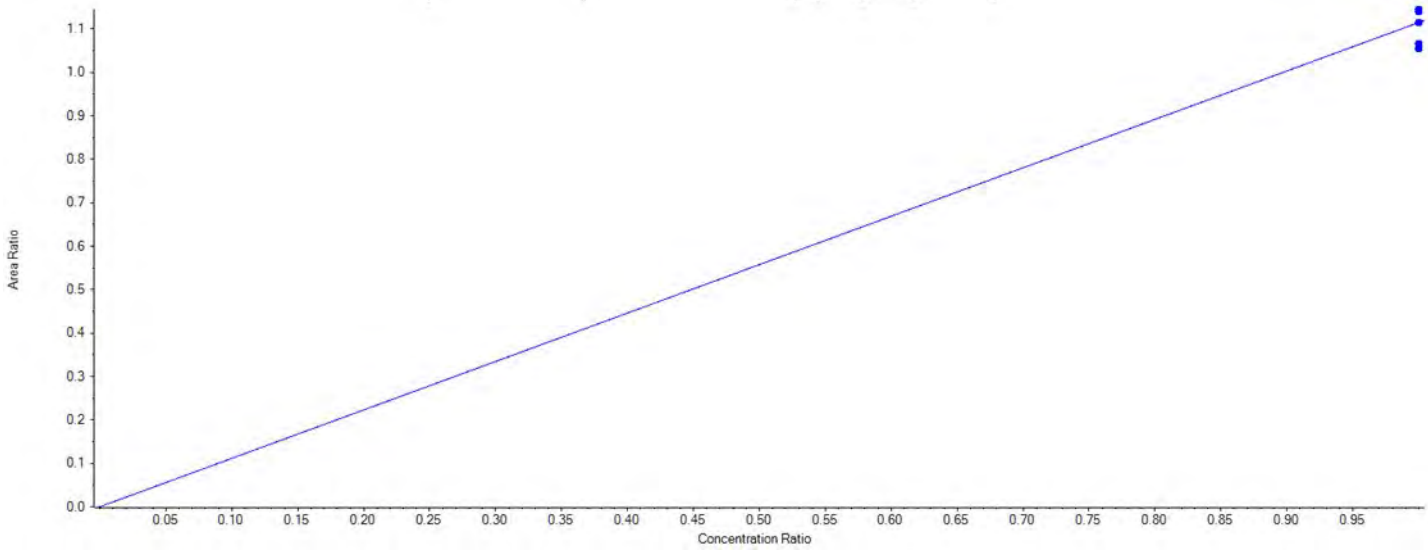
REVIEWED
By ucmr at 3:21 pm, 1/25/19

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV12DCAL **QMethod Name:** 18AUG20QM
Result Table: 18NOV12DCAL_Updated1/10/2019 3:19:00 PM **Acquisition Method:** 18AUG13_3uL.dam

E13C5-PFPeA

y = 1.11477 x (std. dev. = 0.03868) (weighting: None)



Extraction Standard Calibration Verification

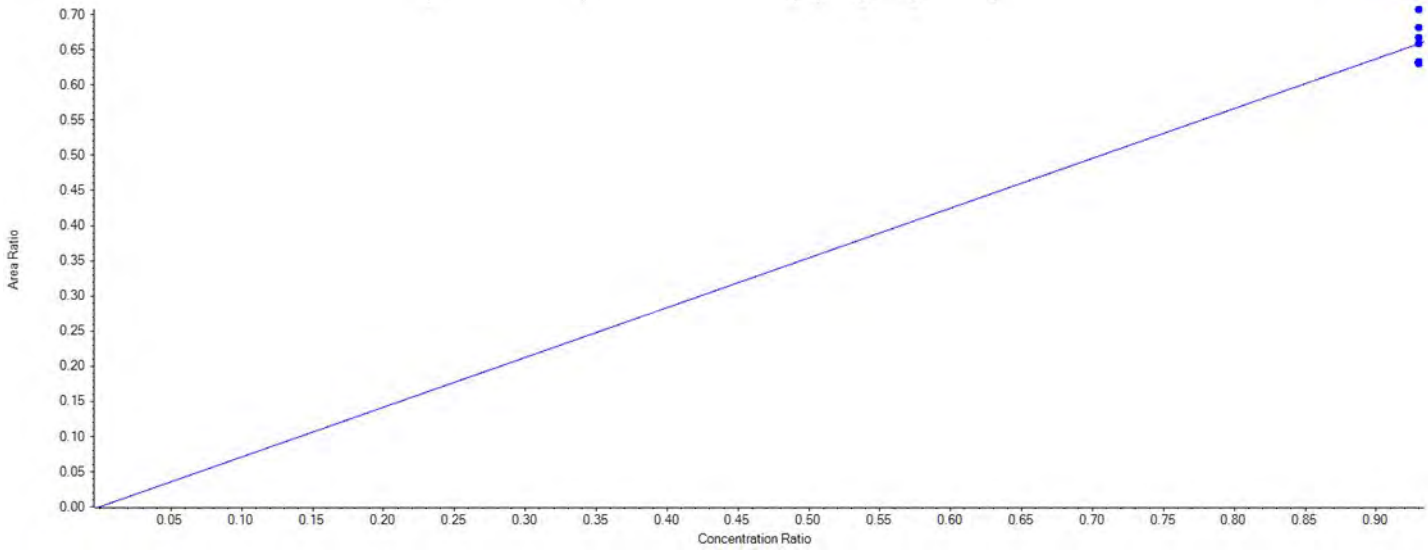
Sample Name	E13C5-PFPeA Area	13C3-PFBA Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	771179.4	676527.501	True	5.00	1.140	3.76	1.150	5.000	5.113	2	30	
CAL2	738194.7	662396.701	True	5.00	1.114	3.77	1.150	5.000	4.998	0	30	
CAL3	695805.7	659926.183	True	5.00	1.054	3.77	1.150	5.000	4.729	-5	30	
CAL4	716206.9	671568.052	True	5.00	1.066	3.76	1.150	5.000	4.783	-4	30	
CAL5	734598.3	641789.507	True	5.00	1.145	3.76	1.150	5.000	5.134	3	30	
CAL6	635977.8	555817.856	True	5.00	1.144	3.76	1.150	5.000	5.132	3	30	
CAL7	581688.7	510525.814	True	5.00	1.139	3.75	1.150	5.000	5.110	2	30	

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV12DCAL **QMethod Name:** 18AUG20QM
Result Table: 18NOV12DCAL_Updated1/10/2019 3:19:00 PM **Acquisition Method:** 18AUG13_3uL.dam

E13C3-PFBS

y = 0.70830 x (std. dev. = 0.03132) (weighting: None)



Extraction Standard Calibration Verification

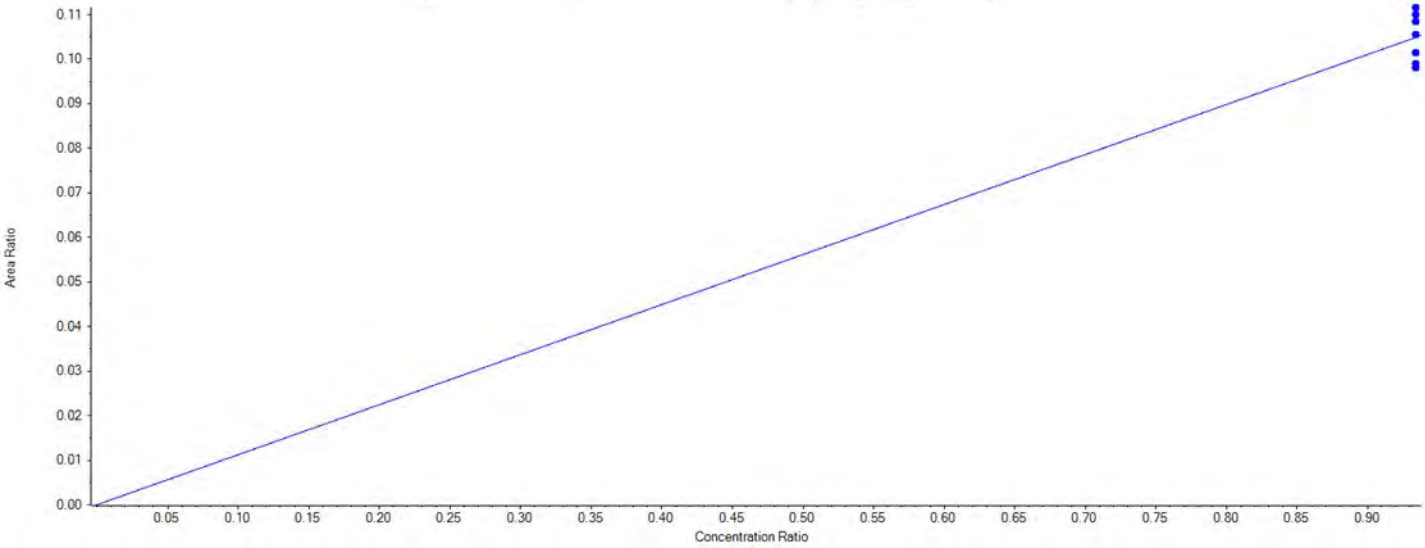
Sample Name	E13C3-PFBS Area	13C3-PFBA Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	445963.4	676527.501	True	5.00	0.659	3.81	1.170	4.650	4.653	0	30	
CAL2	418860.7	662396.701	True	5.00	0.632	3.82	1.170	4.650	4.464	-4	30	
CAL3	416352.7	659926.183	True	5.00	0.631	3.82	1.170	4.650	4.454	-4	30	
CAL4	425015.7	671568.052	True	5.00	0.633	3.81	1.170	4.650	4.468	-4	30	
CAL5	428050.6	641789.507	True	5.00	0.667	3.81	1.170	4.650	4.708	1	30	
CAL6	378676.8	555817.856	True	5.00	0.681	3.81	1.170	4.650	4.809	3	30	
CAL7	361166.0	510525.814	True	5.00	0.707	3.80	1.170	4.650	4.994	7	30	

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV12DCAL **QMethod Name:** 18AUG20QM
Result Table: 18NOV12DCAL_Updated1/10/2019 3:19:00 PM **Acquisition Method:** 18AUG13_3uL.dam

E13C2-4:2-FTS

y = 0.11226 x (std. dev. = 0.00584) (weighting: None)



Extraction Standard Calibration Verification

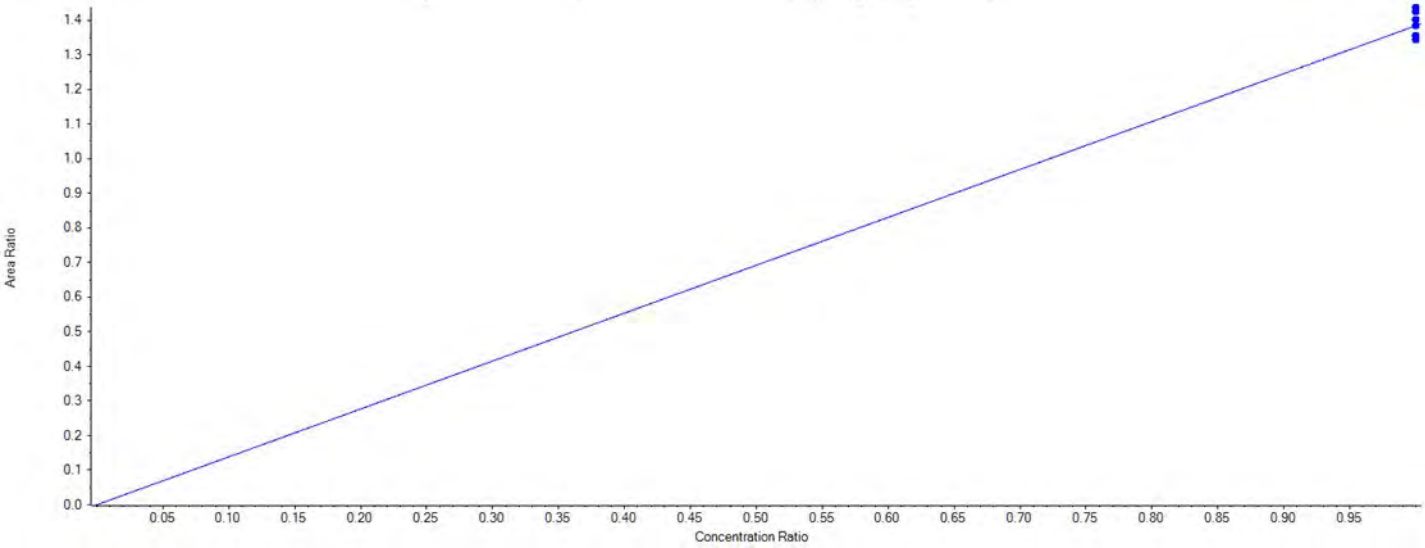
Sample Name	E13C2-4:2-FTS Area	13C2-PFOA Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	51494.6	474834.926	True	5.00	0.108	4.13	0.840	4.670	4.830	3	30	
CAL2	46141.8	454466.719	True	5.00	0.102	4.13	0.840	4.670	4.522	-3	30	
CAL3	47514.8	450219.683	True	5.00	0.106	4.13	0.840	4.670	4.700	1	30	
CAL4	47246.4	477519.675	True	5.00	0.099	4.13	0.840	4.670	4.407	-6	30	
CAL5	51791.9	464284.617	True	5.00	0.112	4.12	0.840	4.670	4.968	6	30	
CAL6	41422.2	422900.470	True	5.00	0.098	4.13	0.840	4.670	4.362	-7	30	
CAL7	40505.1	368158.252	True	5.00	0.110	4.11	0.840	4.670	4.900	5	30	

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV12DCAL **QMethod Name:** 18AUG20QM
Result Table: 18NOV12DCAL_Updated1/10/2019 3:19:00 PM **Acquisition Method:** 18AUG13_3uL.dam

E13C5-PFHxA

y = 1.38415 x (std. dev. = 0.03876) (weighting: None)



Extraction Standard Calibration Verification

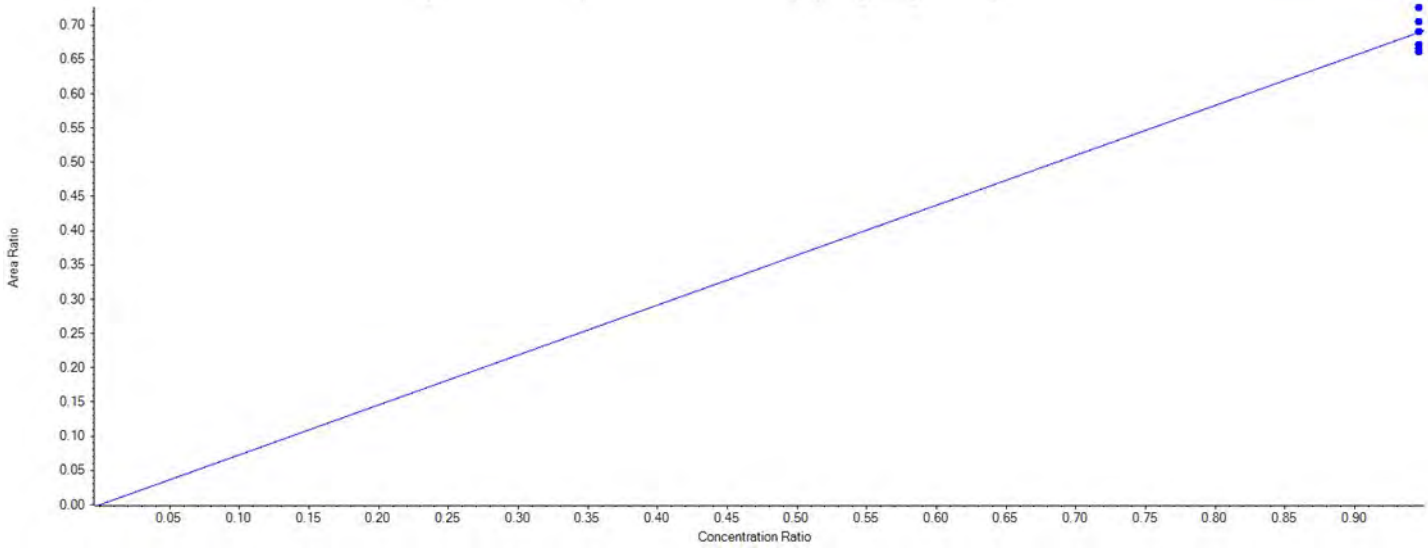
Sample Name	E13C5-PFHxA Area	13C2-PFOA Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	664975.9	474834.926	True	5.00	1.400	4.16	0.850	5.000	5.059	1	30	
CAL2	648170.1	454466.719	True	5.00	1.426	4.17	0.850	5.000	5.152	3	30	
CAL3	646783.5	450219.683	True	5.00	1.437	4.17	0.850	5.000	5.189	4	30	
CAL4	641195.8	477519.675	True	5.00	1.343	4.16	0.850	5.000	4.851	-3	30	
CAL5	628952.8	464284.617	True	5.00	1.355	4.15	0.850	5.000	4.894	-2	30	
CAL6	568205.8	422900.470	True	5.00	1.344	4.16	0.850	5.000	4.854	-3	30	
CAL7	509807.9	368158.252	True	5.00	1.385	4.15	0.840	5.000	5.002	0	30	

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV12DCAL **QMethod Name:** 18AUG20QM
Result Table: 18NOV12DCAL_Updated1/10/2019 3:19:00 PM **Acquisition Method:** 18AUG13_3uL.dam

E13C3-PFHxS

y = 0.72866 x (std. dev. = 0.02531) (weighting: None)



Extraction Standard Calibration Verification

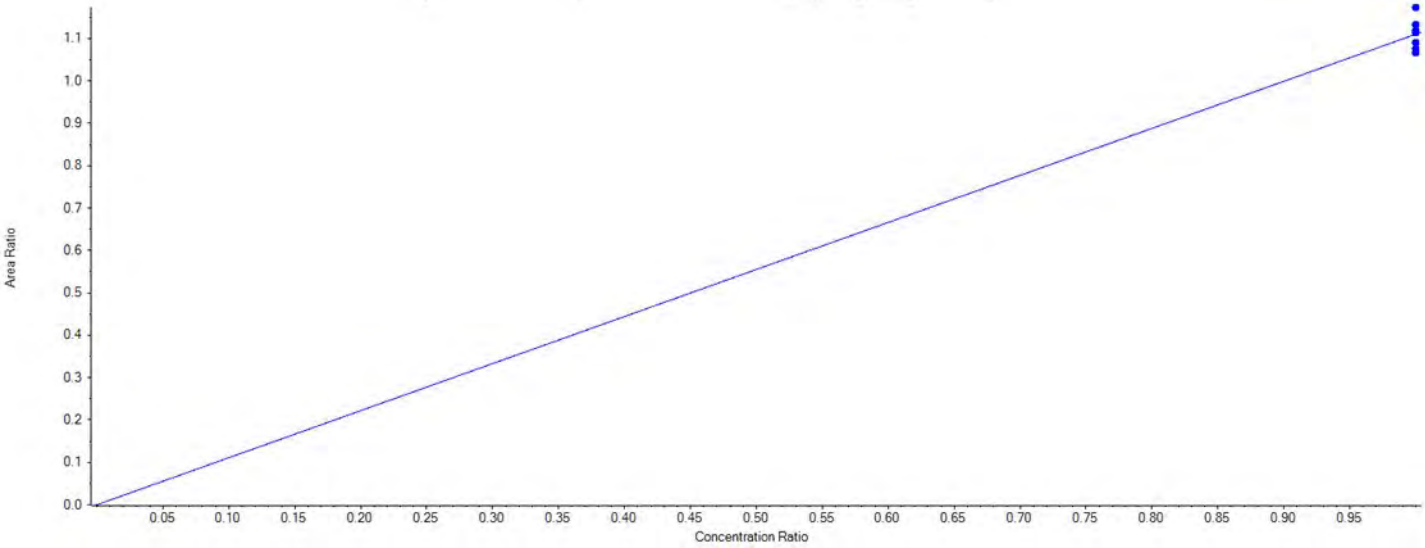
Sample Name	E13C3-PFHxS Area	13C2-PFOA Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	327944.5	474834.926	True	5.00	0.691	4.55	0.930	4.730	4.739	0	30	
CAL2	320400.4	454466.719	True	5.00	0.705	4.56	0.930	4.730	4.838	2	30	
CAL3	317243.2	450219.683	True	5.00	0.705	4.56	0.930	4.730	4.835	2	30	
CAL4	315722.6	477519.675	True	5.00	0.661	4.55	0.930	4.730	4.537	-4	30	
CAL5	309304.5	464284.617	True	5.00	0.666	4.54	0.920	4.730	4.571	-3	30	
CAL6	284116.5	422900.470	True	5.00	0.672	4.55	0.920	4.730	4.610	-3	30	
CAL7	267182.8	368158.252	True	5.00	0.726	4.54	0.920	4.730	4.980	5	30	

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV12DCAL **QMethod Name:** 18AUG20QM
Result Table: 18NOV12DCAL_Updated1/10/2019 3:19:00 PM **Acquisition Method:** 18AUG13_3uL.dam

E13C4-PFHpA

y = 1.10984 x (std. dev. = 0.03656) (weighting: None)



Extraction Standard Calibration Verification

Sample Name	E13C4-PFHpA Area	13C2-PFOA Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	528473.5	474834.926	True	5.00	1.113	4.55	0.920	5.000	5.014	0	30	
CAL2	532987.5	454466.719	True	5.00	1.173	4.55	0.920	5.000	5.284	6	30	
CAL3	503681.0	450219.683	True	5.00	1.119	4.55	0.920	5.000	5.040	1	30	
CAL4	509151.8	477519.675	True	5.00	1.066	4.55	0.920	5.000	4.804	-4	30	
CAL5	525802.0	464284.617	True	5.00	1.132	4.54	0.920	5.000	5.102	2	30	
CAL6	455005.8	422900.470	True	5.00	1.076	4.55	0.920	5.000	4.847	-3	30	
CAL7	401203.9	368158.252	True	5.00	1.090	4.54	0.920	5.000	4.910	-2	30	

APPROVED
By MCD at 3:23 pm, 1/10/19

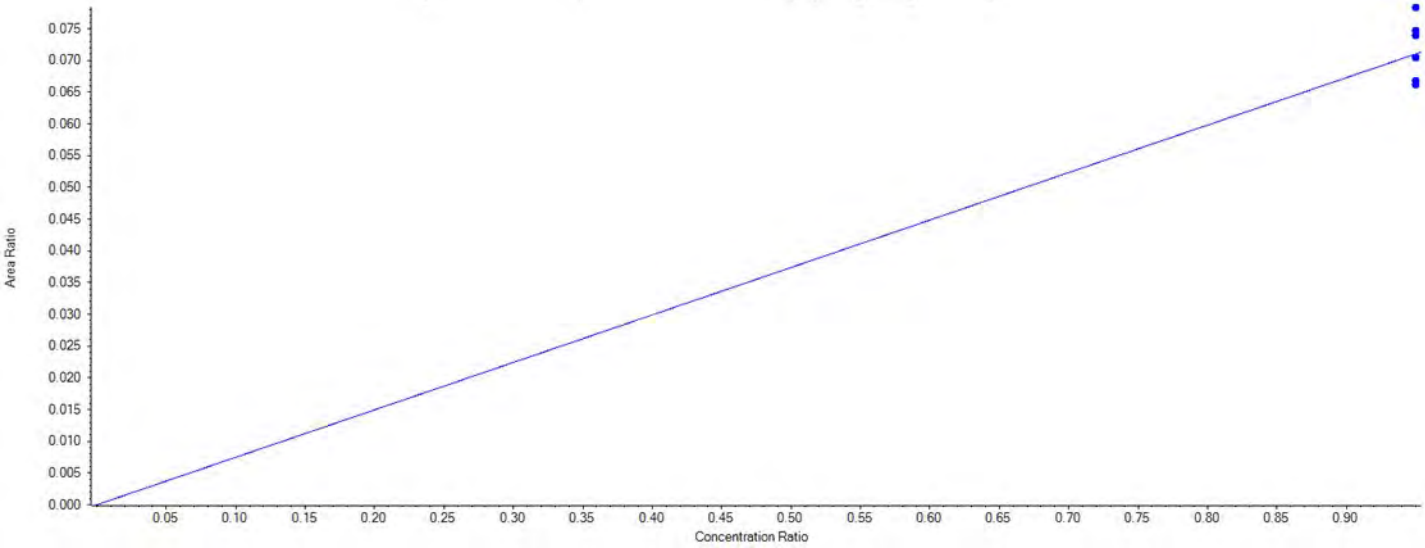
REVIEWED
By ucmr at 3:21 pm, 1/25/19

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV12DCAL **QMethod Name:** 18AUG20QM
Result Table: 18NOV12DCAL_Updated1/10/2019 3:19:00 PM **Acquisition Method:** 18AUG13_3uL.dam

E13C2-6:2-FTS

y = 0.07473 x (std. dev. = 0.00497) (weighting: None)



Extraction Standard Calibration Verification

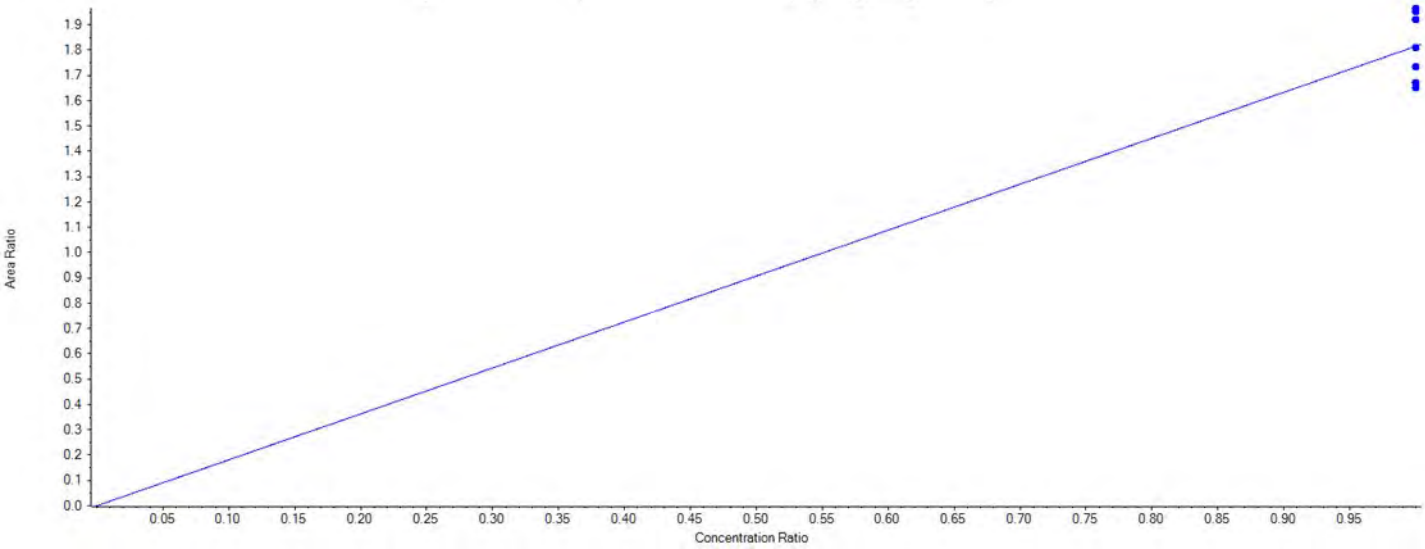
Sample Name	E13C2-6:2-FTS Area	13C2-PFOA Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	35455.2	474834.926	True	5.00	0.075	4.91	1.000	4.750	4.996	5	30	
CAL2	35585.7	454466.719	True	5.00	0.078	4.91	1.000	4.750	5.239	10	30	
CAL3	31706.4	450219.683	True	5.00	0.070	4.91	1.000	4.750	4.712	-1	30	
CAL4	31883.3	477519.675	True	5.00	0.067	4.91	1.000	4.750	4.467	-6	30	
CAL5	31012.0	464284.617	True	5.00	0.067	4.90	1.000	4.750	4.469	-6	30	
CAL6	27988.5	422900.470	True	5.00	0.066	4.91	1.000	4.750	4.428	-7	30	
CAL7	27180.2	368158.252	True	5.00	0.074	4.89	1.000	4.750	4.939	4	30	

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV12DCAL **QMethod Name:** 18AUG20QM
Result Table: 18NOV12DCAL_Updated1/10/2019 3:19:00 PM **Acquisition Method:** 18AUG13_3uL.dam

E13C8-PFOA

y = 1.81479 x (std. dev. = 0.13316) (weighting: None)



Extraction Standard Calibration Verification

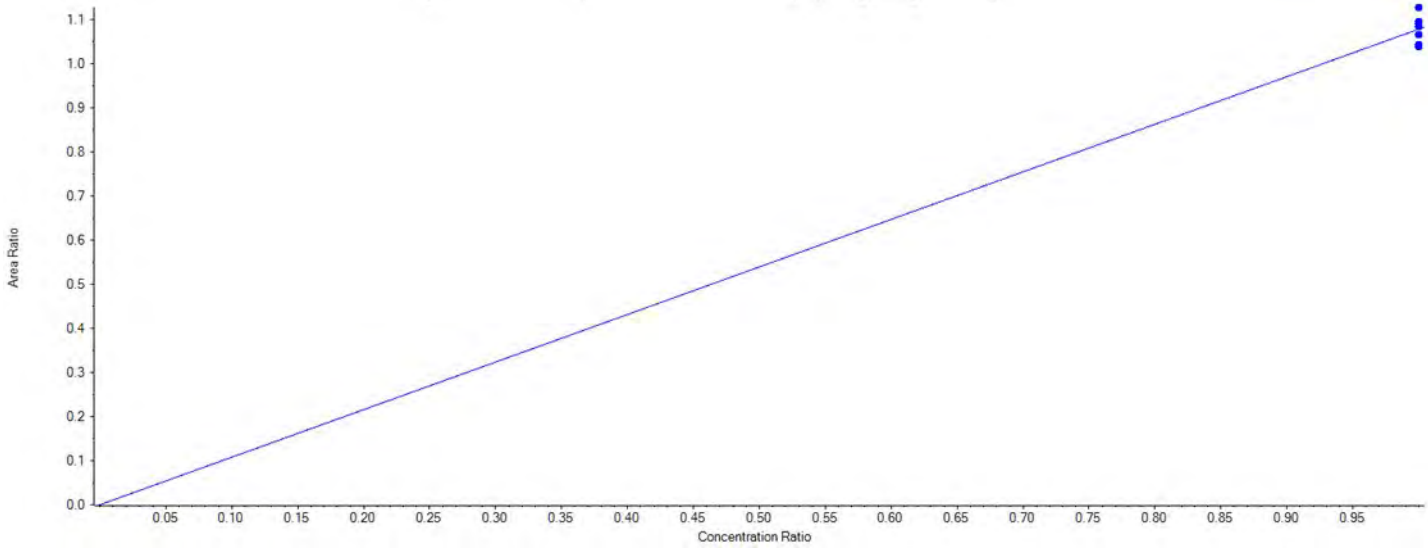
Sample Name	E13C8-PFOA Area	13C2-PFOA Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	912537.7	474834.926	True	5.00	1.922	4.92	1.000	5.000	5.295	6	30	
CAL2	892584.2	454466.719	True	5.00	1.964	4.92	1.000	5.000	5.411	8	30	
CAL3	878868.5	450219.683	True	5.00	1.952	4.93	1.000	5.000	5.378	8	30	
CAL4	863597.3	477519.675	True	5.00	1.809	4.92	1.000	5.000	4.983	0	30	
CAL5	805288.7	464284.617	True	5.00	1.734	4.91	1.000	5.000	4.779	-4	30	
CAL6	707130.3	422900.470	True	5.00	1.672	4.92	1.000	5.000	4.607	-8	30	
CAL7	607669.5	368158.252	True	5.00	1.651	4.91	1.000	5.000	4.548	-9	30	

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV12DCAL **QMethod Name:** 18AUG20QM
Result Table: 18NOV12DCAL_Updated1/10/2019 3:19:00 PM **Acquisition Method:** 18AUG13_3uL.dam

E13C8-PFOS

y = 1.07880 x (std. dev. = 0.03134) (weighting: None)



Extraction Standard Calibration Verification

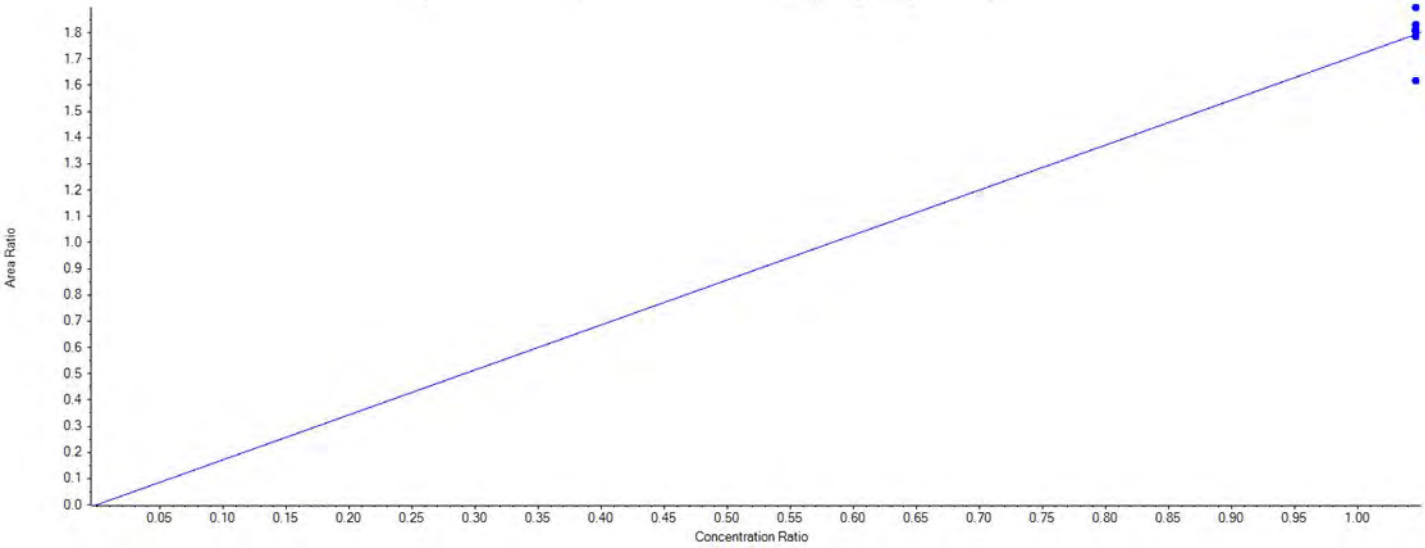
Sample Name	E13C8-PFOS Area	13C4-PFOS Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	283127.4	265368.985	True	4.78	1.067	5.25	1.000	4.780	4.727	-1	30	
CAL2	271778.8	250483.817	True	4.78	1.085	5.25	1.000	4.780	4.808	1	30	
CAL3	281035.5	249205.780	True	4.78	1.128	5.25	1.000	4.780	4.997	5	30	
CAL4	267380.8	256143.287	True	4.78	1.044	5.25	1.000	4.780	4.625	-3	30	
CAL5	267157.6	243589.874	True	4.78	1.097	5.24	1.000	4.780	4.860	2	30	
CAL6	253129.2	231712.116	True	4.78	1.092	5.25	1.000	4.780	4.840	1	30	
CAL7	242617.5	233532.695	True	4.78	1.039	5.24	1.000	4.780	4.603	-4	30	

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV12DCAL **QMethod Name:** 18AUG20QM
Result Table: 18NOV12DCAL_Updated1/10/2019 3:19:00 PM **Acquisition Method:** 18AUG13_3uL.dam

E13C9-PFNA

y = 1.71440 x (std. dev. = 0.08194) (weighting: None)



Extraction Standard Calibration Verification

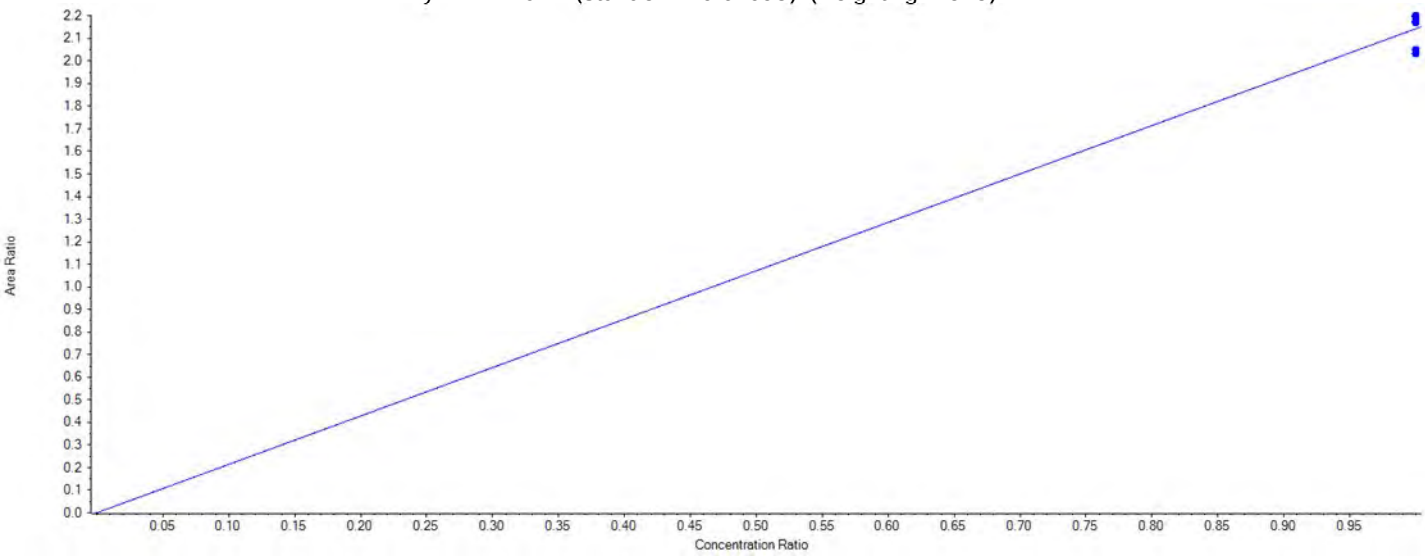
Sample Name	E13C9-PFNA Area	13C4-PFOS Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	479931.4	265368.985	True	4.78	1.809	5.26	1.000	5.000	5.042	1	30	
CAL2	451850.1	250483.817	True	4.78	1.804	5.27	1.000	5.000	5.030	1	30	
CAL3	455948.9	249205.780	True	4.78	1.830	5.27	1.000	5.000	5.101	2	30	
CAL4	485570.4	256143.287	True	4.78	1.896	5.26	1.000	5.000	5.285	6	30	
CAL5	441776.8	243589.874	True	4.78	1.814	5.26	1.000	5.000	5.057	1	30	
CAL6	413811.3	231712.116	True	4.78	1.786	5.27	1.000	5.000	4.979	0	30	
CAL7	377369.8	233532.695	True	4.78	1.616	5.25	1.000	5.000	4.505	-10	30	

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV12DCAL **QMethod Name:** 18AUG20QM
Result Table: 18NOV12DCAL_Updated1/10/2019 3:19:00 PM **Acquisition Method:** 18AUG13_3uL.dam

E13C6-PFDA

y = 2.14262 x (std. dev. = 0.07095) (weighting: None)



Extraction Standard Calibration Verification

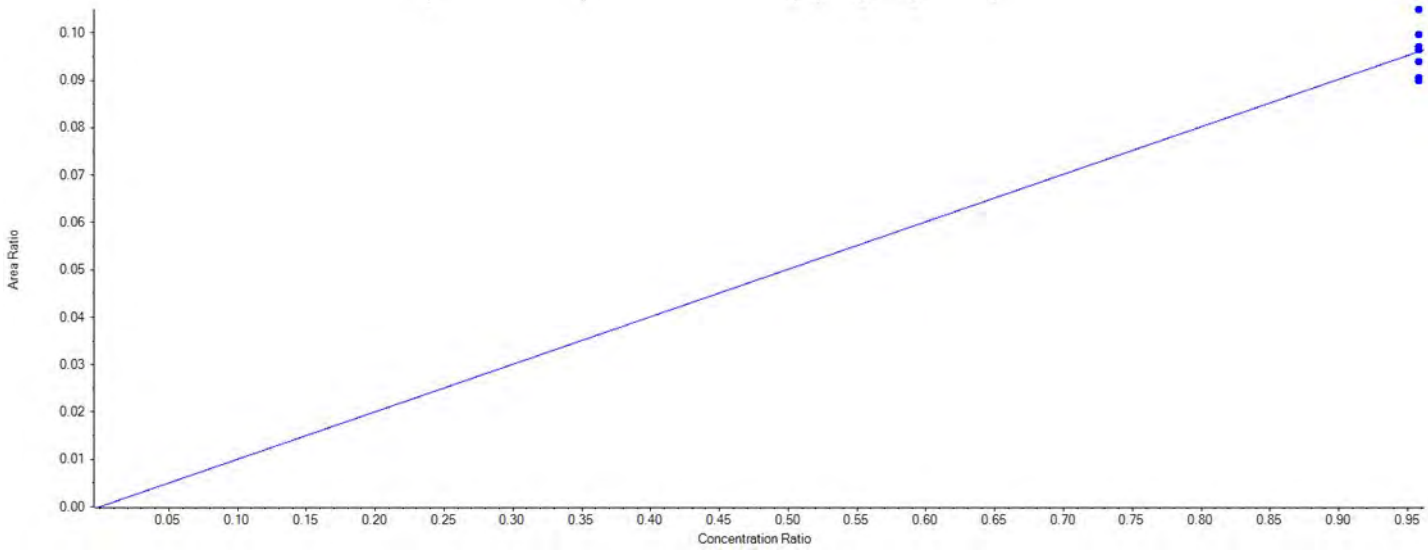
Sample Name	E13C6-PFDA Area	13C2-PFDA Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	612577.4	281654.747	True	5.00	2.175	5.57	1.000	5.000	5.075	2	30	
CAL2	601859.8	277324.192	True	5.00	2.170	5.57	1.000	5.000	5.064	1	30	
CAL3	612680.8	278743.894	True	5.00	2.198	5.57	1.000	5.000	5.129	3	30	
CAL4	612056.5	301327.179	True	5.00	2.031	5.56	1.000	5.000	4.740	-5	30	
CAL5	585231.2	269315.722	True	5.00	2.173	5.56	1.000	5.000	5.071	1	30	
CAL6	522613.8	237446.928	True	5.00	2.201	5.57	1.000	5.000	5.136	3	30	
CAL7	479333.1	233825.066	True	5.00	2.050	5.55	1.000	5.000	4.784	-4	30	

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV12DCAL **QMethod Name:** 18AUG20QM
Result Table: 18NOV12DCAL_Updated1/10/2019 3:19:00 PM **Acquisition Method:** 18AUG13_3uL.dam

E13C2-8:2-FTS

y = 0.10026 x (std. dev. = 0.00552) (weighting: None)



Extraction Standard Calibration Verification

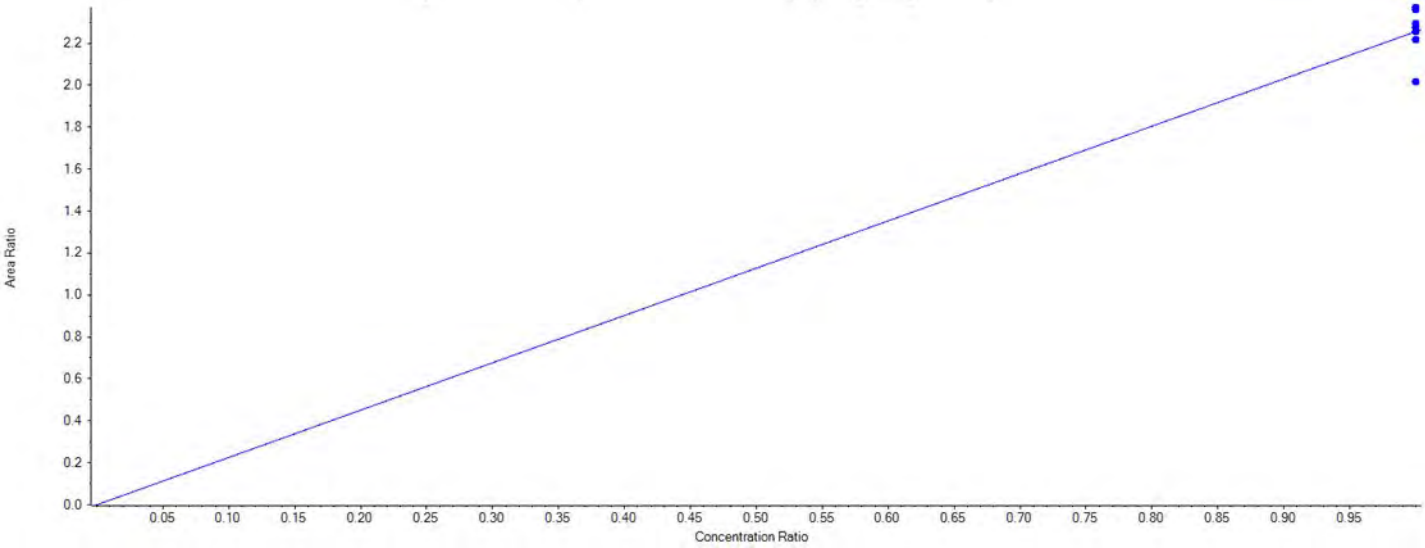
Sample Name	E13C2-8:2-FTS Area	13C2-PFDA Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	26445.5	281654.747	True	5.00	0.094	5.57	1.000	4.790	4.683	-2	30	
CAL2	27639.2	277324.192	True	5.00	0.100	5.57	1.000	4.790	4.970	4	30	
CAL3	29249.8	278743.894	True	5.00	0.105	5.57	1.000	4.790	5.233	9	30	
CAL4	27253.5	301327.179	True	5.00	0.090	5.57	1.000	4.790	4.511	-6	30	
CAL5	24192.1	269315.722	True	5.00	0.090	5.56	1.000	4.790	4.480	-6	30	
CAL6	22899.0	237446.928	True	5.00	0.096	5.57	1.000	4.790	4.810	0	30	
CAL7	22711.0	233825.066	True	5.00	0.097	5.56	1.000	4.790	4.844	1	30	

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV12DCAL **QMethod Name:** 18AUG20QM
Result Table: 18NOV12DCAL_Updated1/10/2019 3:19:00 PM **Acquisition Method:** 18AUG13_3uL.dam

E13C8-PFOSA

y = 2.25533 x (std. dev. = 0.11852) (weighting: None)



Extraction Standard Calibration Verification

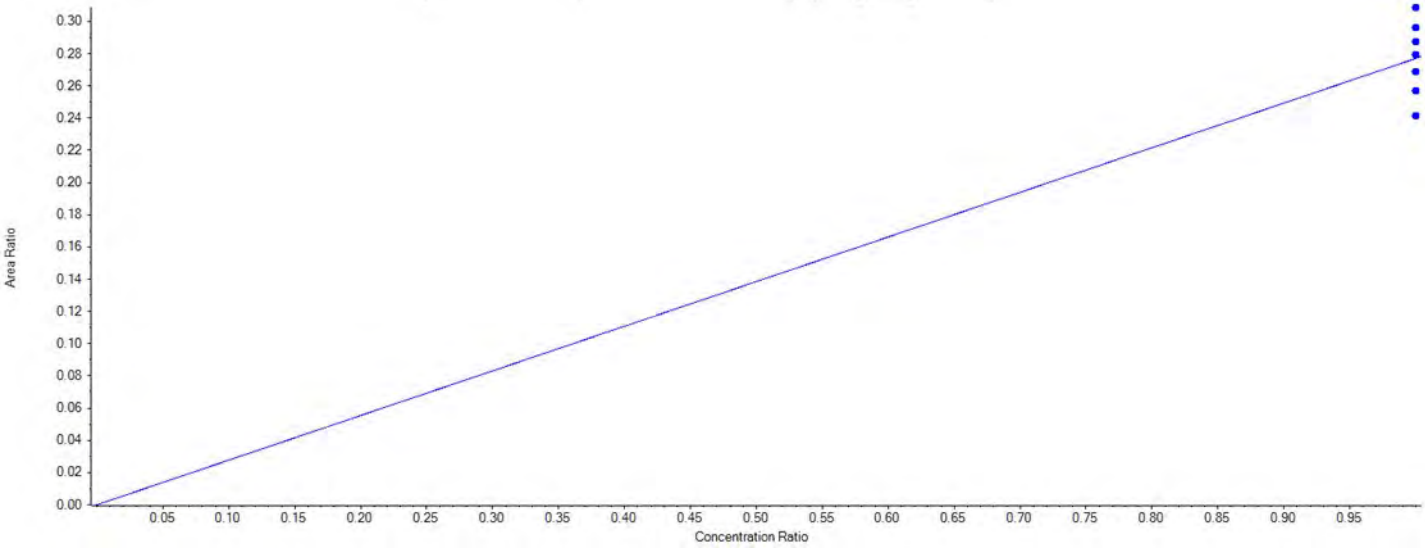
Sample Name	E13C8-PFOSA Area	13C2-PFDA Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	664489.9	281654.747	True	5.00	2.359	5.65	1.010	5.000	5.230	5	30	
CAL2	636543.1	277324.192	True	5.00	2.295	5.65	1.010	5.000	5.089	2	30	
CAL3	629109.9	278743.894	True	5.00	2.257	5.65	1.010	5.000	5.004	0	30	
CAL4	607762.0	301327.179	True	5.00	2.017	5.64	1.010	5.000	4.472	-11	30	
CAL5	596544.1	269315.722	True	5.00	2.215	5.64	1.010	5.000	4.911	-2	30	
CAL6	539992.5	237446.928	True	5.00	2.274	5.65	1.010	5.000	5.042	1	30	
CAL7	554092.6	233825.066	True	5.00	2.370	5.63	1.010	5.000	5.254	5	30	

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV12DCAL **QMethod Name:** 18AUG20QM
Result Table: 18NOV12DCAL_Updated1/10/2019 3:19:00 PM **Acquisition Method:** 18AUG13_3uL.dam

Ed3-NMeFOSAA

y = 0.27700 x (std. dev. = 0.02309) (weighting: None)



Extraction Standard Calibration Verification

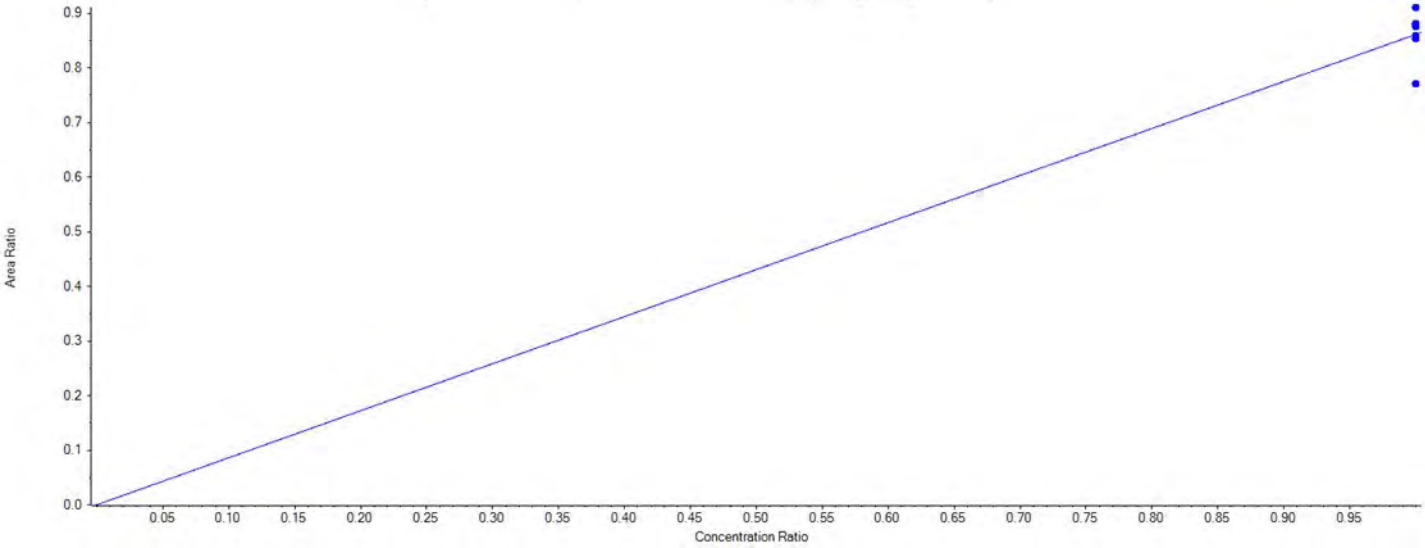
Sample Name	Ed3-NMeFOSAA Area	13C2-PFDA Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	86914.5	281654.747	True	5.00	0.309	5.70	1.020	5.000	5.570	11	30	
CAL2	77388.6	277324.192	True	5.00	0.279	5.71	1.020	5.000	5.037	1	30	
CAL3	71670.3	278743.894	True	5.00	0.257	5.71	1.030	5.000	4.641	-7	30	
CAL4	72788.0	301327.179	True	5.00	0.242	5.70	1.020	5.000	4.360	-13	30	
CAL5	72424.5	269315.722	True	5.00	0.269	5.70	1.020	5.000	4.854	-3	30	
CAL6	70320.3	237446.928	True	5.00	0.296	5.71	1.020	5.000	5.346	7	30	
CAL7	67250.5	233825.066	True	5.00	0.288	5.69	1.020	5.000	5.192	4	30	

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV12DCAL **QMethod Name:** 18AUG20QM
Result Table: 18NOV12DCAL_Updated1/10/2019 3:19:00 PM **Acquisition Method:** 18AUG13_3uL.dam

E13C7-PFUnDA

y = 0.86119 x (std. dev. = 0.04416) (weighting: None)



Extraction Standard Calibration Verification

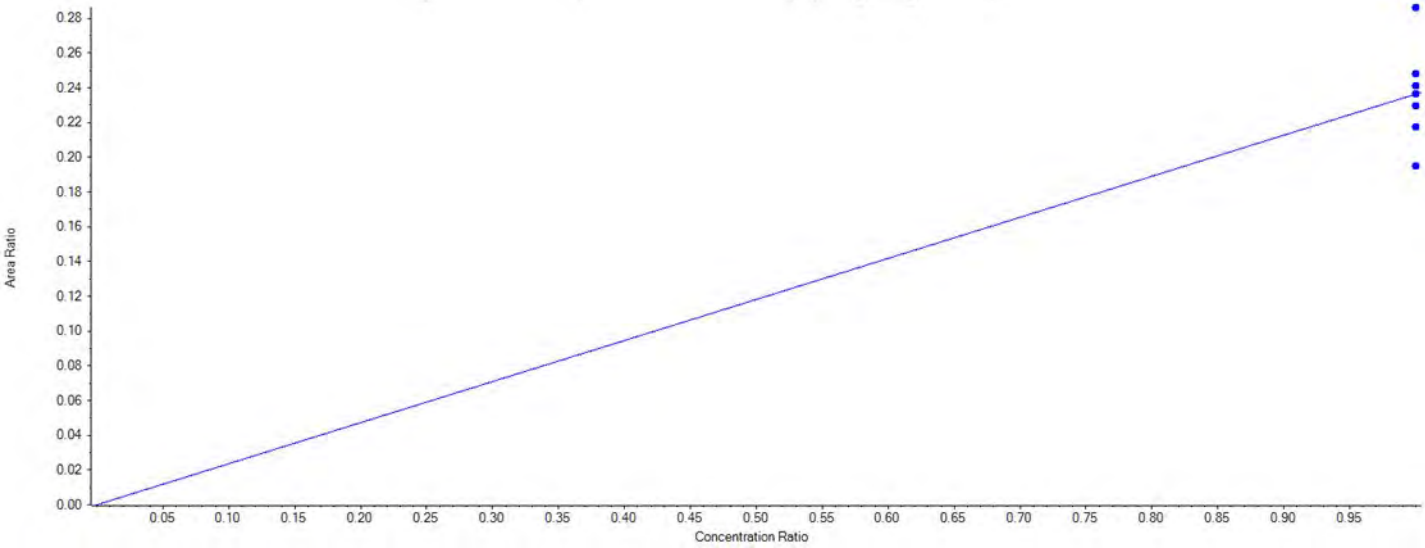
Sample Name	E13C7-PFUnDA Area	13C2-PFDA Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	256402.0	281654.747	True	5.00	0.910	5.83	1.050	5.000	5.285	6	30	
CAL2	242881.7	277324.192	True	5.00	0.876	5.83	1.050	5.000	5.085	2	30	
CAL3	245605.3	278743.894	True	5.00	0.881	5.83	1.050	5.000	5.116	2	30	
CAL4	232014.1	301327.179	True	5.00	0.770	5.82	1.050	5.000	4.470	-11	30	
CAL5	231187.9	269315.722	True	5.00	0.858	5.82	1.050	5.000	4.984	0	30	
CAL6	208574.1	237446.928	True	5.00	0.878	5.83	1.050	5.000	5.100	2	30	
CAL7	199746.8	233825.066	True	5.00	0.854	5.81	1.050	5.000	4.960	-1	30	

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV12DCAL **QMethod Name:** 18AUG20QM
Result Table: 18NOV12DCAL_Updated1/10/2019 3:19:00 PM **Acquisition Method:** 18AUG13_3uL.dam

Ed5-NEtFOSAA

y = 0.23634 x (std. dev. = 0.02816) (weighting: None)



Extraction Standard Calibration Verification

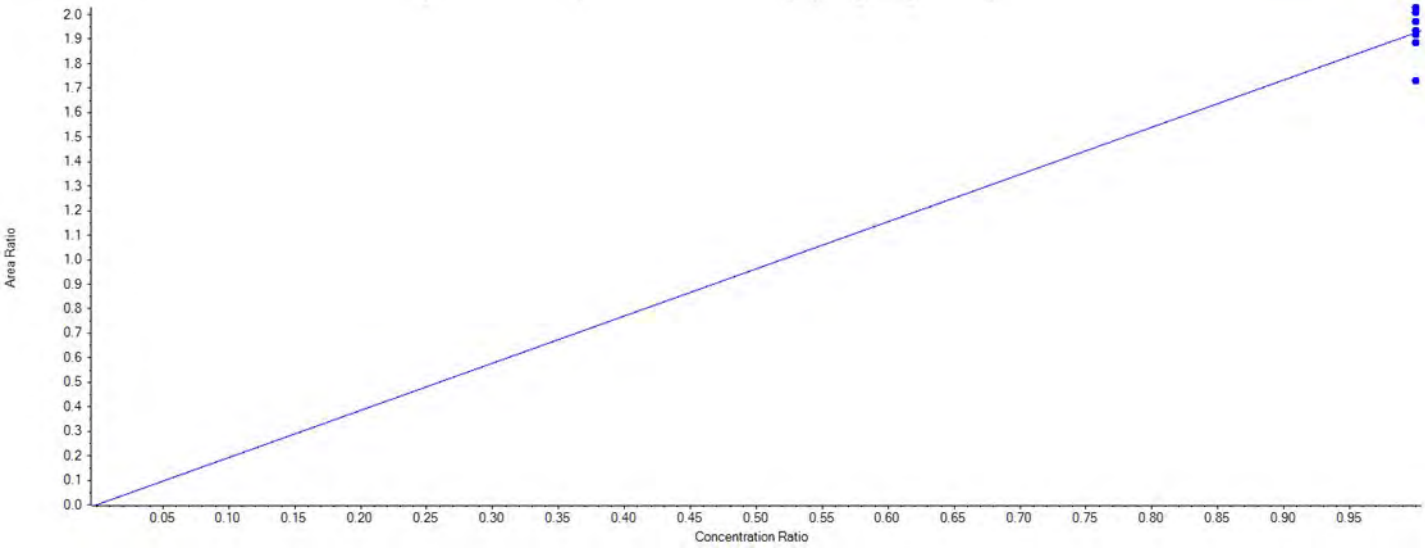
Sample Name	Ed5-NEtFOSAA Area	13C2-PFDA Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	80597.2	281654.747	True	5.00	0.286	5.84	1.050	5.000	6.054	21	30	
CAL2	63686.9	277324.192	True	5.00	0.230	5.84	1.050	5.000	4.859	-3	30	
CAL3	54383.9	278743.894	True	5.00	0.195	5.84	1.050	5.000	4.128	-17	30	
CAL4	65478.0	301327.179	True	5.00	0.217	5.83	1.050	5.000	4.597	-8	30	
CAL5	63701.7	269315.722	True	5.00	0.237	5.83	1.050	5.000	5.004	0	30	
CAL6	57308.1	237446.928	True	5.00	0.241	5.84	1.050	5.000	5.106	2	30	
CAL7	58049.5	233825.066	True	5.00	0.248	5.82	1.050	5.000	5.252	5	30	

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV12DCAL **QMethod Name:** 18AUG20QM
Result Table: 18NOV12DCAL_Updated1/10/2019 3:19:00 PM **Acquisition Method:** 18AUG13_3uL.dam

E13C2-PFDoDA

y = 1.92577 x (std. dev. = 0.09966) (weighting: None)



Extraction Standard Calibration Verification

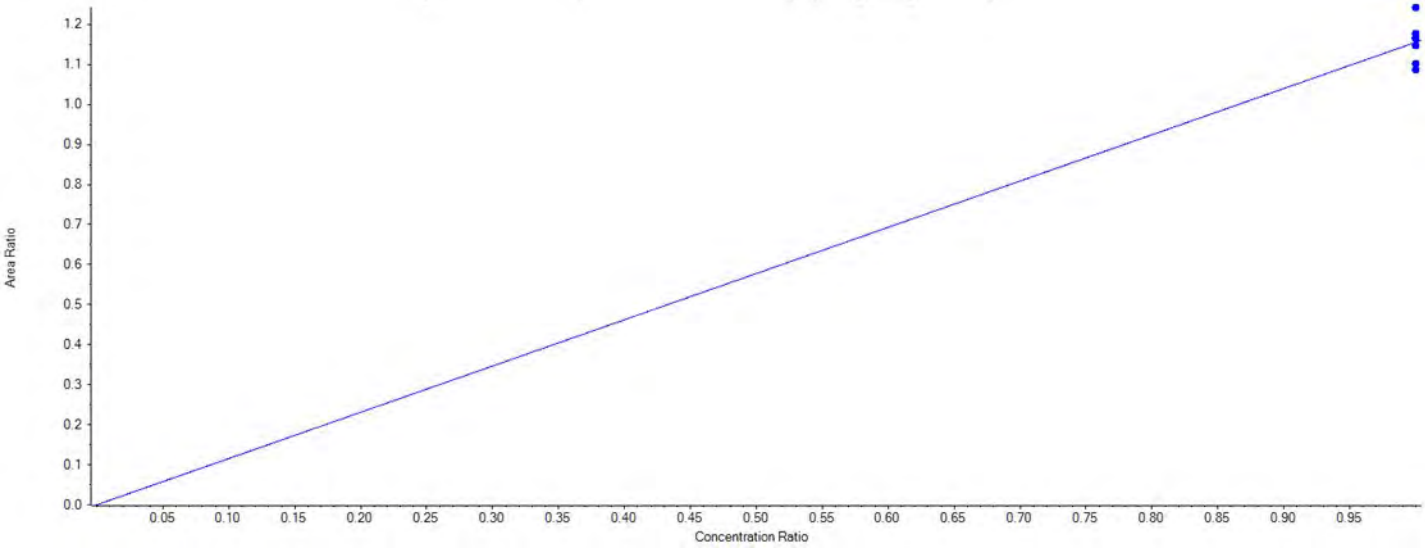
Sample Name	E13C2-PFDoDA Area	13C2-PFDA Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	545413.2	281654.747	True	5.00	1.936	6.05	1.090	5.000	5.028	1	30	
CAL2	532175.3	277324.192	True	5.00	1.919	6.06	1.090	5.000	4.982	0	30	
CAL3	549542.3	278743.894	True	5.00	1.971	6.06	1.090	5.000	5.119	2	30	
CAL4	521514.1	301327.179	True	5.00	1.731	6.05	1.090	5.000	4.494	-10	30	
CAL5	507556.8	269315.722	True	5.00	1.885	6.04	1.090	5.000	4.893	-2	30	
CAL6	477105.5	237446.928	True	5.00	2.009	6.06	1.090	5.000	5.217	4	30	
CAL7	474393.8	233825.066	True	5.00	2.029	6.04	1.090	5.000	5.268	5	30	

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV12DCAL **QMethod Name:** 18AUG20QM
Result Table: 18NOV12DCAL_Updated1/10/2019 3:19:00 PM **Acquisition Method:** 18AUG13_3uL.dam

Ed7-NMePFOSAE

y = 1.15541 x (std. dev. = 0.05092) (weighting: None)



Extraction Standard Calibration Verification

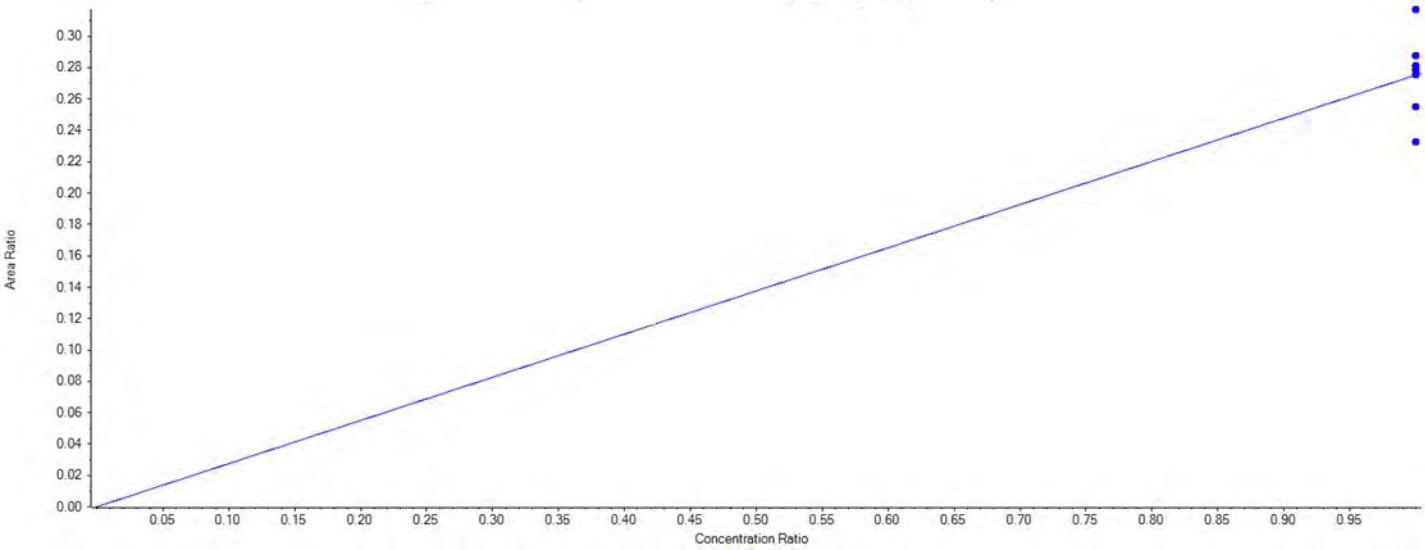
Sample Name	Ed7-NMePFOSAE Area	13C2-PFDA Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	349854.5	281654.747	True	5.00	1.242	6.09	1.090	5.000	5.375	8	30	
CAL2	323456.5	277324.192	True	5.00	1.166	6.09	1.090	5.000	5.047	1	30	
CAL3	307355.4	278743.894	True	5.00	1.103	6.09	1.090	5.000	4.772	-5	30	
CAL4	327796.4	301327.179	True	5.00	1.088	6.09	1.090	5.000	4.708	-6	30	
CAL5	316777.8	269315.722	True	5.00	1.176	6.08	1.090	5.000	5.090	2	30	
CAL6	272639.0	237446.928	True	5.00	1.148	6.09	1.090	5.000	4.969	-1	30	
CAL7	272283.1	233825.066	True	5.00	1.164	6.08	1.090	5.000	5.039	1	30	

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV12DCAL **QMethod Name:** 18AUG20QM
Result Table: 18NOV12DCAL_Updated1/10/2019 3:19:00 PM **Acquisition Method:** 18AUG13_3uL.dam

Ed3-NMePFOSA

y = 0.27520 x (std. dev. = 0.02631) (weighting: None)



Extraction Standard Calibration Verification

Sample Name	Ed3-NMePFOSA Area	13C2-PFDA Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	78396.5	281654.747	True	5.00	0.278	6.10	1.100	5.000	5.057	1	30	
CAL2	77893.2	277324.192	True	5.00	0.281	6.11	1.100	5.000	5.103	2	30	
CAL3	76782.9	278743.894	True	5.00	0.275	6.11	1.100	5.000	5.005	0	30	
CAL4	70122.5	301327.179	True	5.00	0.233	6.10	1.100	5.000	4.228	-15	30	
CAL5	68615.7	269315.722	True	5.00	0.255	6.09	1.100	5.000	4.629	-7	30	
CAL6	68215.9	237446.928	True	5.00	0.287	6.11	1.100	5.000	5.220	4	30	
CAL7	74110.3	233825.066	True	5.00	0.317	6.09	1.100	5.000	5.758	15	30	

APPROVED
By MCD at 3:23 pm, 1/10/19

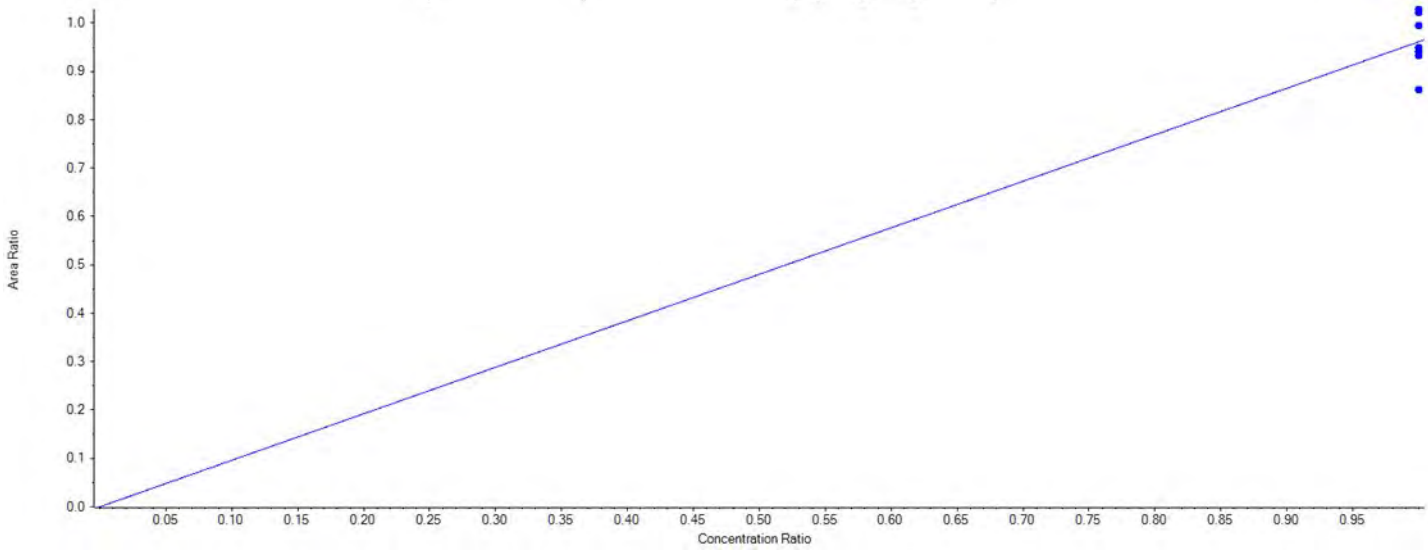
REVIEWED
By ucmr at 3:21 pm, 1/25/19

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV12DCAL **QMethod Name:** 18AUG20QM
Result Table: 18NOV12DCAL_Updated1/10/2019 3:19:00 PM **Acquisition Method:** 18AUG13_3uL.dam

Ed9-NEtPFOSAE

y = 0.96134 x (std. dev. = 0.05866) (weighting: None)



Extraction Standard Calibration Verification

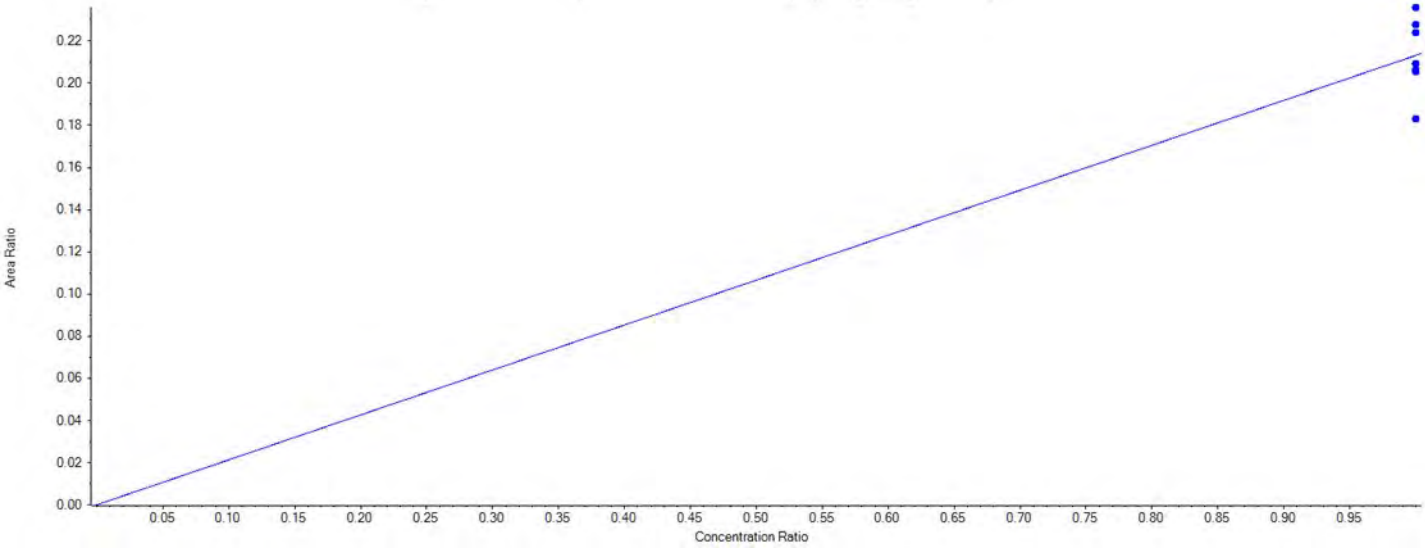
Sample Name	Ed9-NEtPFOSAE Area	13C2-PFDA Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	280311.6	281654.747	True	5.00	0.995	6.24	1.120	5.000	5.176	4	30	
CAL2	261195.6	277324.192	True	5.00	0.942	6.25	1.120	5.000	4.899	-2	30	
CAL3	259792.3	278743.894	True	5.00	0.932	6.25	1.120	5.000	4.847	-3	30	
CAL4	259467.4	301327.179	True	5.00	0.861	6.24	1.120	5.000	4.479	-10	30	
CAL5	255767.7	269315.722	True	5.00	0.950	6.23	1.120	5.000	4.939	-1	30	
CAL6	242587.5	237446.928	True	5.00	1.022	6.25	1.120	5.000	5.314	6	30	
CAL7	240346.5	233825.066	True	5.00	1.028	6.23	1.120	5.000	5.346	7	30	

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV12DCAL **QMethod Name:** 18AUG20QM
Result Table: 18NOV12DCAL_Updated1/10/2019 3:19:00 PM **Acquisition Method:** 18AUG13_3uL.dam

Ed5-NEtPFOSA

y = 0.21315 x (std. dev. = 0.01765) (weighting: None)



Extraction Standard Calibration Verification

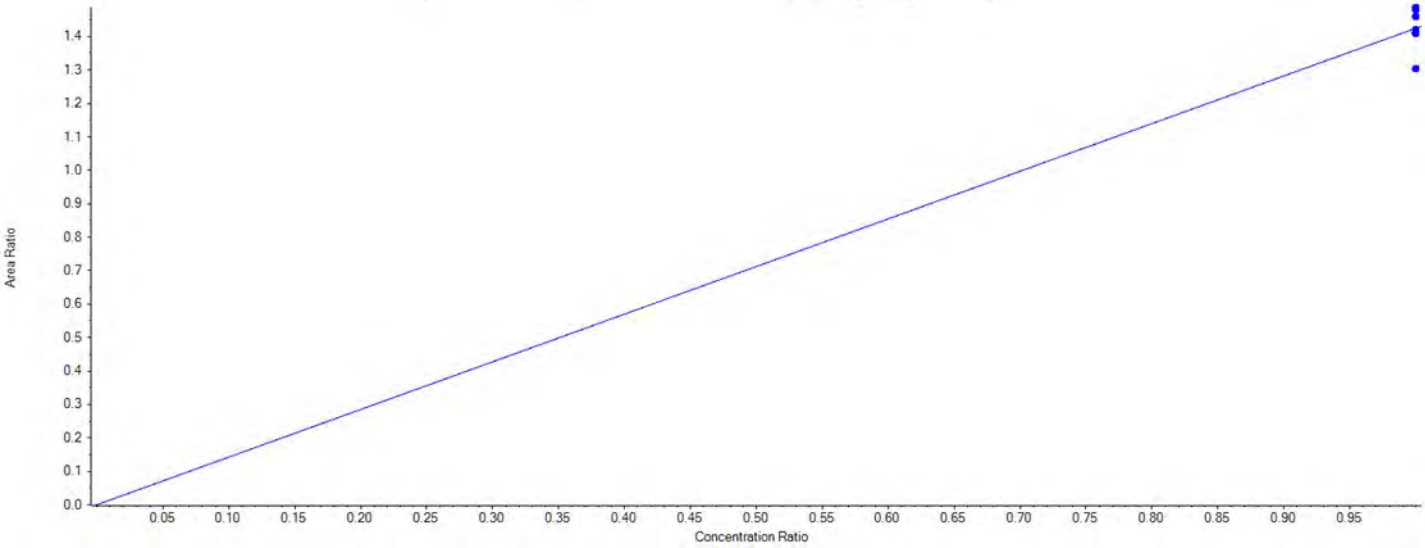
Sample Name	Ed5-NEtPFOSA Area	13C2-PFDA Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	63047.1	281654.747	True	5.00	0.224	6.26	1.130	5.000	5.251	5	30	
CAL2	58073.5	277324.192	True	5.00	0.209	6.27	1.130	5.000	4.912	-2	30	
CAL3	57485.9	278743.894	True	5.00	0.206	6.27	1.130	5.000	4.838	-3	30	
CAL4	55177.3	301327.179	True	5.00	0.183	6.26	1.130	5.000	4.296	-14	30	
CAL5	55378.4	269315.722	True	5.00	0.206	6.25	1.130	5.000	4.824	-4	30	
CAL6	56004.0	237446.928	True	5.00	0.236	6.27	1.130	5.000	5.533	11	30	
CAL7	53297.8	233825.066	True	5.00	0.228	6.25	1.130	5.000	5.347	7	30	

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV12DCAL **QMethod Name:** 18AUG20QM
Result Table: 18NOV12DCAL_Updated1/10/2019 3:19:00 PM **Acquisition Method:** 18AUG13_3uL.dam

E13C2-PFTeDA

y = 1.42422 x (std. dev. = 0.06255) (weighting: None)



Extraction Standard Calibration Verification

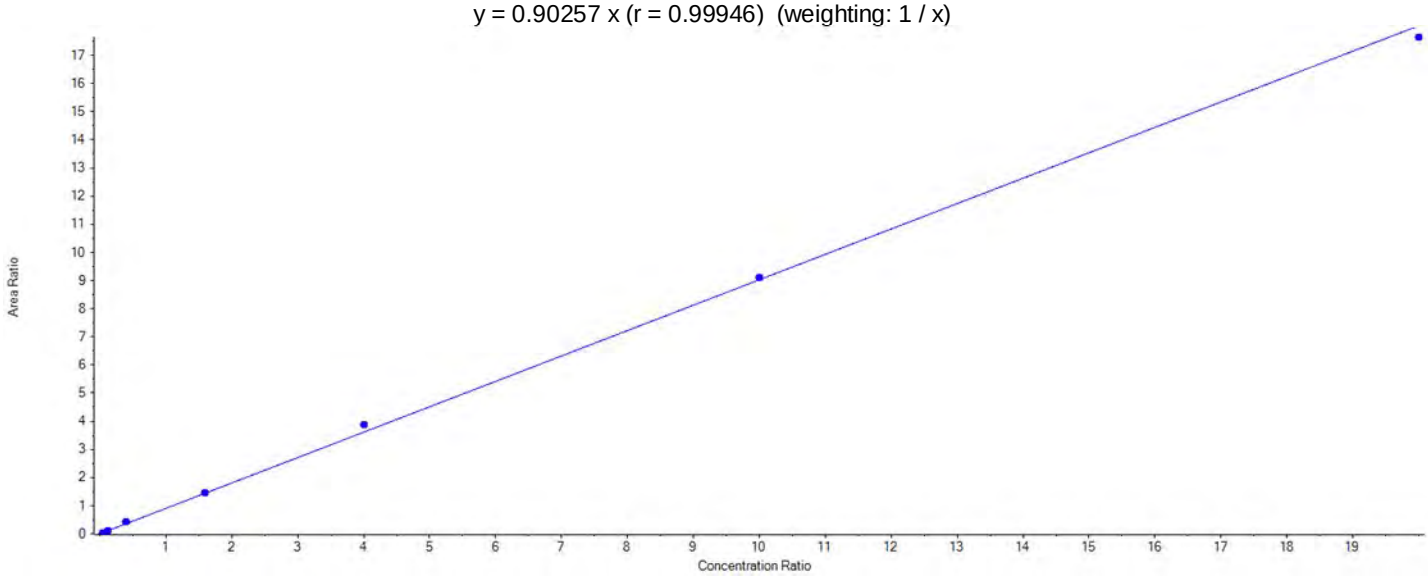
Sample Name	E13C2-PFTeDA Area	13C2-PFDA Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	410633.0	281654.747	True	5.00	1.458	6.43	1.160	5.000	5.118	2	30	
CAL2	394146.2	277324.192	True	5.00	1.421	6.43	1.160	5.000	4.990	0	30	
CAL3	393544.9	278743.894	True	5.00	1.412	6.43	1.160	5.000	4.957	-1	30	
CAL4	392356.6	301327.179	True	5.00	1.302	6.43	1.160	5.000	4.571	-9	30	
CAL5	379571.6	269315.722	True	5.00	1.409	6.42	1.160	5.000	4.948	-1	30	
CAL6	352892.2	237446.928	True	5.00	1.486	6.43	1.160	5.000	5.218	4	30	
CAL7	346256.6	233825.066	True	5.00	1.481	6.42	1.160	5.000	5.199	4	30	

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV12DCAL **QMethod Name:** 18AUG20QM
Result Table: 18NOV12DCAL_Updated1/10/2019 3:19:00 PM **Acquisition Method:** 18AUG13_3uL.dam

PFBA

y = 0.90257 x (r = 0.99946) (weighting: 1 / x)



Component Calibration Verification

Sample Name	PFBA Area	S/N	13C4-PFBA Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	32322.9	189.9	763334.268	True	5.00	0.042	3.27	1.000	0.200	0.235	17	30	
CAL2	80396.2	328.7	771445.801	True	5.00	0.104	3.27	1.000	0.600	0.577	-4	30	
CAL3	303228.7	603.0	733360.151	True	5.00	0.413	3.27	1.000	2.000	2.291	15	30	
CAL4	1068414.9	996.7	726395.964	True	5.00	1.471	3.26	1.000	8.000	8.148	2	30	
CAL5	2700090.8	1579.9	698871.915	True	5.00	3.863	3.26	1.000	20.000	21.403	7	30	
CAL6	5765353.4	2132.7	633648.378	True	5.00	9.099	3.26	1.000	50.000	50.404	1	30	
CAL7	9834601.7	2326.7	557392.782	True	5.00	17.644	3.25	1.000	100.000	97.743	-2	30	

APPROVED
By MCD at 3:23 pm, 1/10/19

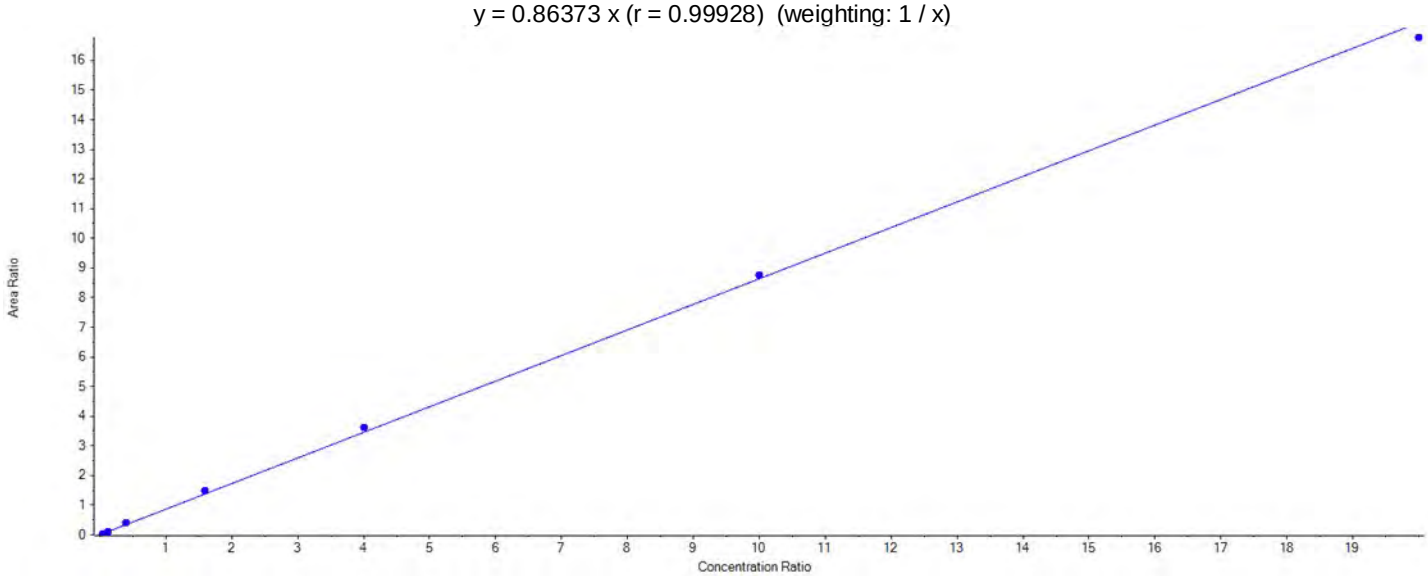
REVIEWED
By ucmr at 3:21 pm, 1/25/19

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV12DCAL **QMethod Name:** 18AUG20QM
Result Table: 18NOV12DCAL_Updated1/10/2019 3:19:00 PM **Acquisition Method:** 18AUG13_3uL.dam

PFPeA

y = 0.86373 x (r = 0.99928) (weighting: 1 / x)



Component Calibration Verification

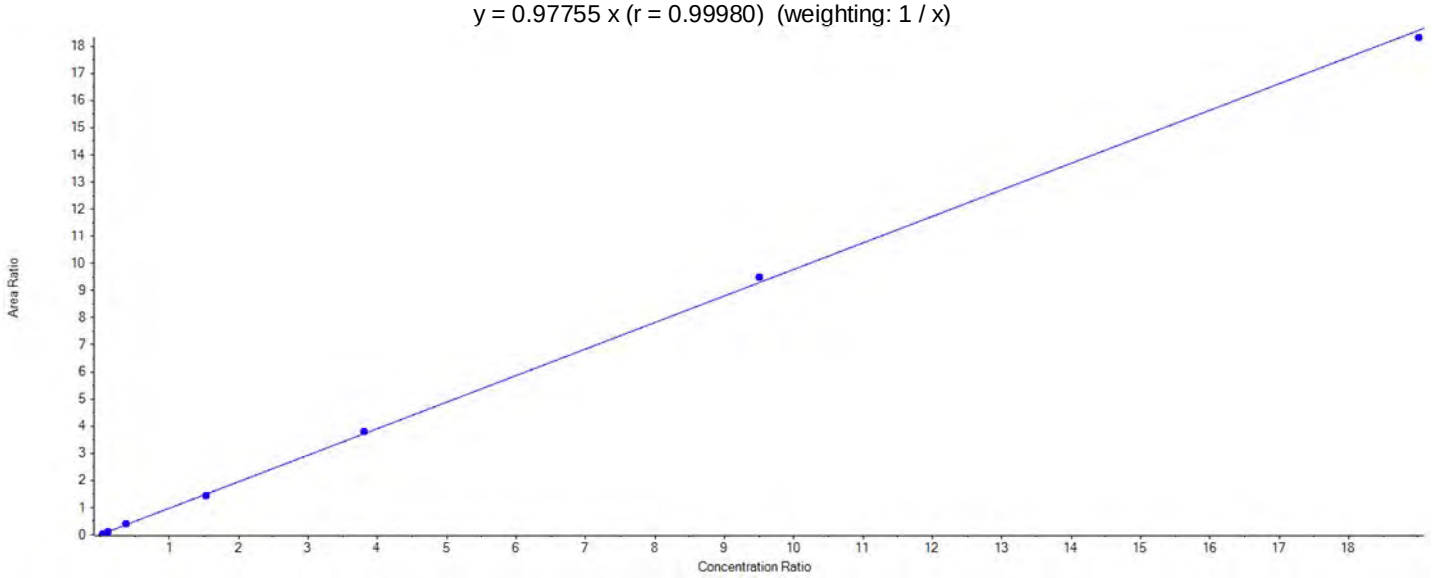
Sample Name	PFPeA Area	S/N	13C5-PFPeA Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	32633.1	78.7	771179.392	True	5.00	0.042	3.77	1.000	0.200	0.245	22	30	
CAL2	84319.4	153.0	738194.743	True	5.00	0.114	3.77	1.000	0.600	0.661	10	30	
CAL3	292715.8	240.6	695805.672	True	5.00	0.421	3.77	1.000	2.000	2.435	22	30	
CAL4	1075643.5	403.4	716206.931	True	5.00	1.502	3.76	1.000	8.000	8.694	9	30	
CAL5	2660895.4	642.6	734598.250	True	5.00	3.622	3.76	1.000	20.000	20.969	5	30	
CAL6	5570221.7	1016.0	635977.788	True	5.00	8.759	3.77	1.000	50.000	50.702	1	30	
CAL7	9756431.5	1095.7	581688.659	True	5.00	16.773	3.75	1.000	100.000	97.094	-3	30	

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV12DCAL **QMethod Name:** 18AUG20QM
Result Table: 18NOV12DCAL_Updated1/10/2019 3:19:00 PM **Acquisition Method:** 18AUG13_3uL.dam

PFBS

y = 0.97755 x (r = 0.99980) (weighting: 1 / x)



Component Calibration Verification

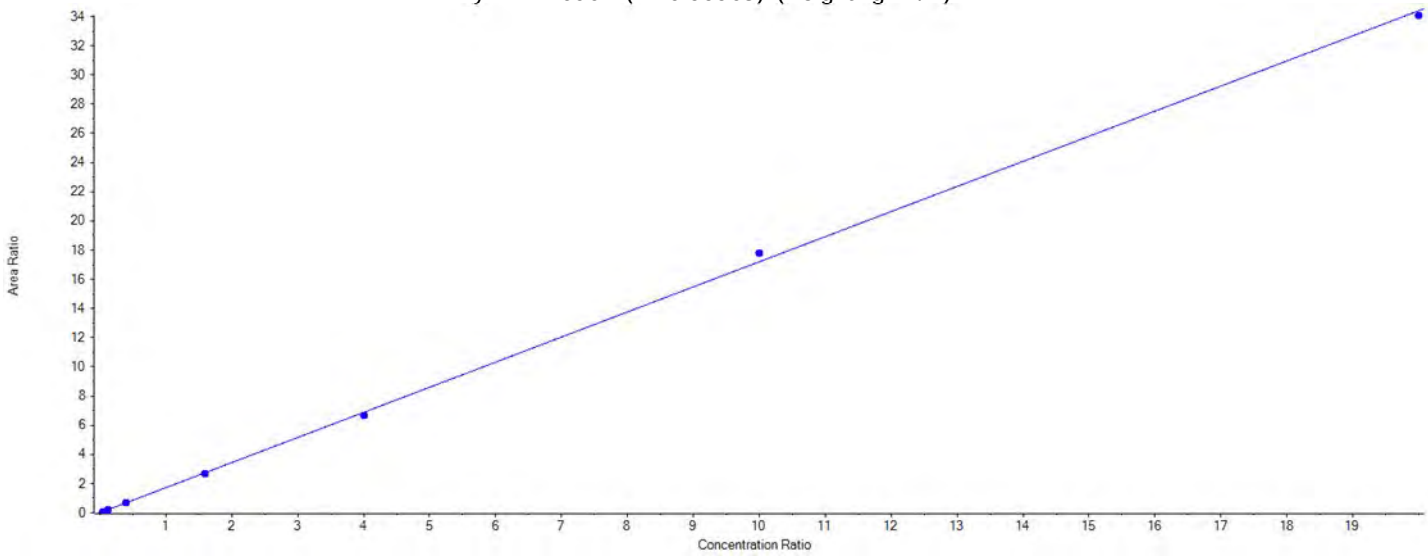
Sample Name	PFBS Area	S/N	13C3-PFBS Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	18010.0	456.9	445963.431	True	4.65	0.040	3.81	1.000	0.177	0.192	9	30	
CAL2	44885.2	959.4	418860.683	True	4.65	0.107	3.82	1.000	0.531	0.510	-4	30	
CAL3	168144.6	1287.7	416352.746	True	4.65	0.404	3.82	1.000	1.770	1.921	9	30	
CAL4	617045.6	2604.2	425015.723	True	4.65	1.452	3.81	1.000	7.080	6.906	-2	30	
CAL5	1630613.5	4013.6	428050.642	True	4.65	3.809	3.80	1.000	17.700	18.121	2	30	
CAL6	3588084.1	4714.2	378676.812	True	4.65	9.475	3.81	1.000	44.200	45.072	2	30	
CAL7	6615935.3	4086.7	361166.004	True	4.65	18.318	3.80	1.000	88.400	87.136	-1	30	

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV12DCAL **QMethod Name:** 18AUG20QM
Result Table: 18NOV12DCAL_Updated1/10/2019 3:19:00 PM **Acquisition Method:** 18AUG13_3uL.dam

4:2-FTS

y = 1.72006 x (r = 0.99968) (weighting: 1 / x)



Component Calibration Verification

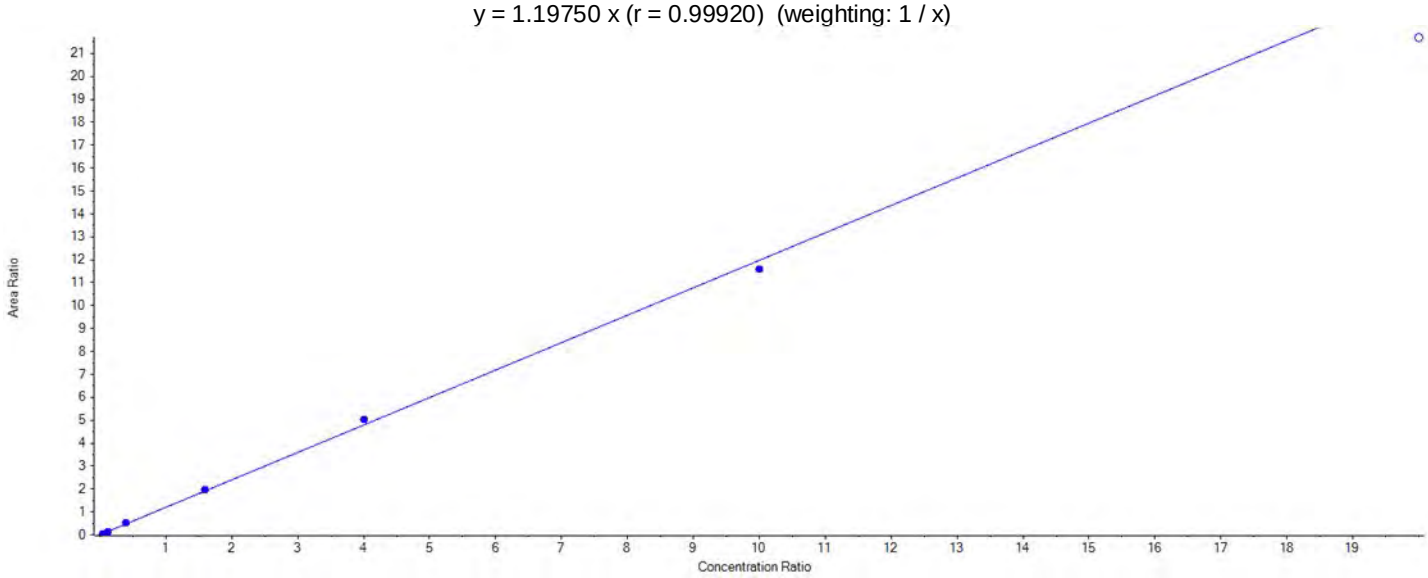
Sample Name	4:2-FTS Area	S/N	13C2-4:2-FTS Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	3636.4	188.8	51494.566	True	4.67	0.071	4.13	1.000	0.187	0.192	3	30	
CAL2	8804.0	391.1	46141.763	True	4.67	0.191	4.13	1.000	0.560	0.518	-7	30	
CAL3	34188.5	932.2	47514.792	True	4.67	0.720	4.13	1.000	1.870	1.954	4	30	
CAL4	126396.5	2063.7	47246.369	True	4.67	2.675	4.13	1.000	7.470	7.263	-3	30	
CAL5	344695.9	2546.9	51791.866	True	4.67	6.655	4.12	1.000	18.700	18.070	-3	30	
CAL6	738293.9	3115.2	41422.166	True	4.67	17.824	4.13	1.000	46.700	48.392	4	30	
CAL7	1379983.9	3342.5	40505.086	True	4.67	34.069	4.11	1.000	93.400	92.499	-1	30	

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV12DCAL **QMethod Name:** 18AUG20QM
Result Table: 18NOV12DCAL_Updated1/10/2019 3:19:00 PM **Acquisition Method:** 18AUG13_3uL.dam

PFHxA

y = 1.19750 x (r = 0.99920) (weighting: 1 / x)



Component Calibration Verification

Sample Name	PFHxA Area	S/N	13C5-PFHxA Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	39108.2	254.9	664975.876	True	5.00	0.059	4.16	1.000	0.200	0.246	23	30	
CAL2	96559.3	367.8	648170.061	True	5.00	0.149	4.16	1.000	0.600	0.622	4	30	
CAL3	352013.5	713.4	646783.501	True	5.00	0.544	4.17	1.000	2.000	2.272	14	30	
CAL4	1265231.1	1181.4	641195.847	True	5.00	1.973	4.16	1.000	8.000	8.239	3	30	
CAL5	3158486.4	1640.8	628952.790	True	5.00	5.022	4.15	1.000	20.000	20.968	5	30	
CAL6	6593779.0	2095.1	568205.817	True	5.00	11.605	4.16	1.000	50.000	48.453	-3	30	
CAL7	11059420.3	2611.8	509807.950	False	5.00	21.693	4.15	1.000	100.000	90.577	-9	30	

APPROVED
By MCD at 3:23 pm, 1/10/19

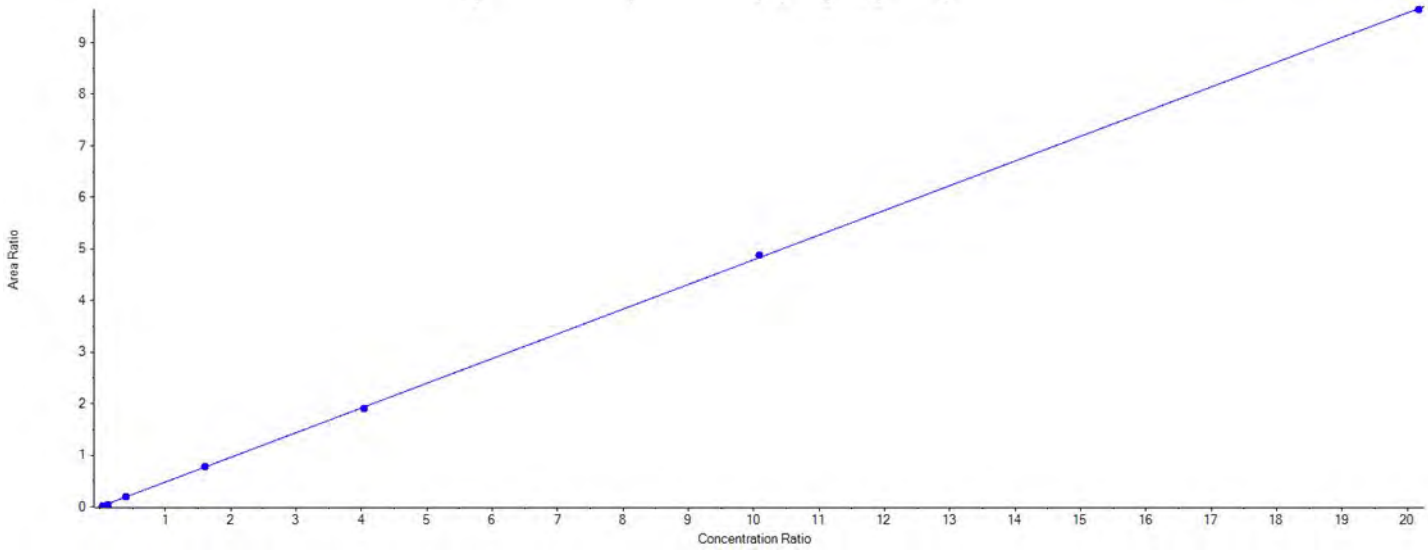
REVIEWED
By ucmr at 3:21 pm, 1/25/19

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV12DCAL **QMethod Name:** 18AUG20QM
Result Table: 18NOV12DCAL_Updated1/10/2019 3:19:00 PM **Acquisition Method:** 18AUG13_3uL.dam

PFPeS

y = 0.47896 x (r = 0.99991) (weighting: 1 / x)



Component Calibration Verification

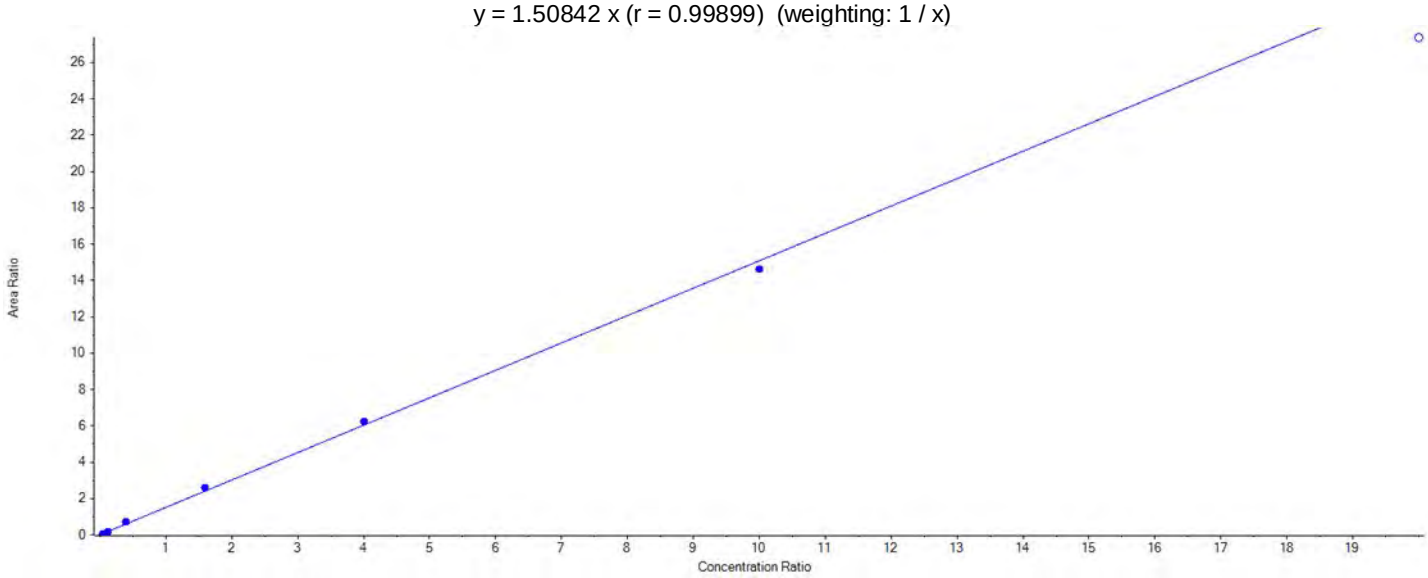
Sample Name	PFPeS Area	S/N	13C3-PFBS Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	9620.1	321.5	445963.431	True	4.65	0.022	4.18	1.100	0.188	0.209	11	30	
CAL2	20295.0	611.8	418860.683	True	4.65	0.048	4.19	1.100	0.563	0.470	-16	30	
CAL3	84071.2	1175.2	416352.746	True	4.65	0.202	4.19	1.100	1.880	1.960	4	30	
CAL4	328681.7	3455.2	425015.723	True	4.65	0.773	4.18	1.100	7.500	7.508	0	30	
CAL5	815928.2	2443.7	428050.642	True	4.65	1.906	4.17	1.100	18.800	18.506	-2	30	
CAL6	1847826.8	3263.9	378676.812	True	4.65	4.880	4.18	1.100	46.900	47.375	1	30	
CAL7	3482095.9	4201.9	361166.004	True	4.65	9.641	4.17	1.100	93.800	93.602	0	30	

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV12DCAL **QMethod Name:** 18AUG20QM
Result Table: 18NOV12DCAL_Updated1/10/2019 3:19:00 PM **Acquisition Method:** 18AUG13_3uL.dam

PFHpA

y = 1.50842 x (r = 0.99899) (weighting: 1 / x)



Component Calibration Verification

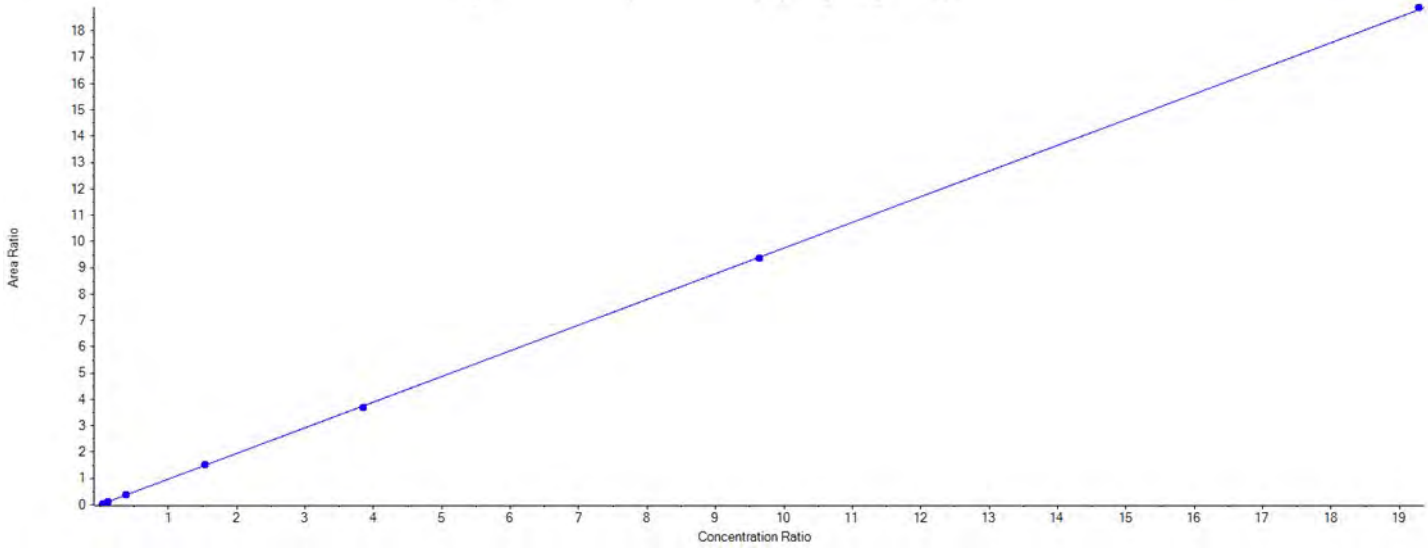
Sample Name	PFHpA Area	S/N	13C4-PFHpA Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	37545.4	111.6	528473.493	True	5.00	0.071	4.55	1.000	0.200	0.235	18	30	
CAL2	95048.3	255.2	532987.486	True	5.00	0.178	4.55	1.000	0.600	0.591	-1	30	
CAL3	355834.2	621.3	503681.029	True	5.00	0.706	4.56	1.000	2.000	2.342	17	30	
CAL4	1318774.5	846.6	509151.776	True	5.00	2.590	4.55	1.000	8.000	8.586	7	30	
CAL5	3269561.0	1266.8	525802.046	True	5.00	6.218	4.54	1.000	20.000	20.612	3	30	
CAL6	6648455.3	1607.4	455005.812	True	5.00	14.612	4.55	1.000	50.000	48.434	-3	30	
CAL7	10981922.8	1824.2	401203.881	False	5.00	27.372	4.54	1.000	100.000	90.732	-9	30	

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV12DCAL **QMethod Name:** 18AUG20QM
Result Table: 18NOV12DCAL_Updated1/10/2019 3:19:00 PM **Acquisition Method:** 18AUG13_3uL.dam

PFHxS

y = 0.97552 x (r = 0.99992) (weighting: 1 / x)



Component Calibration Verification

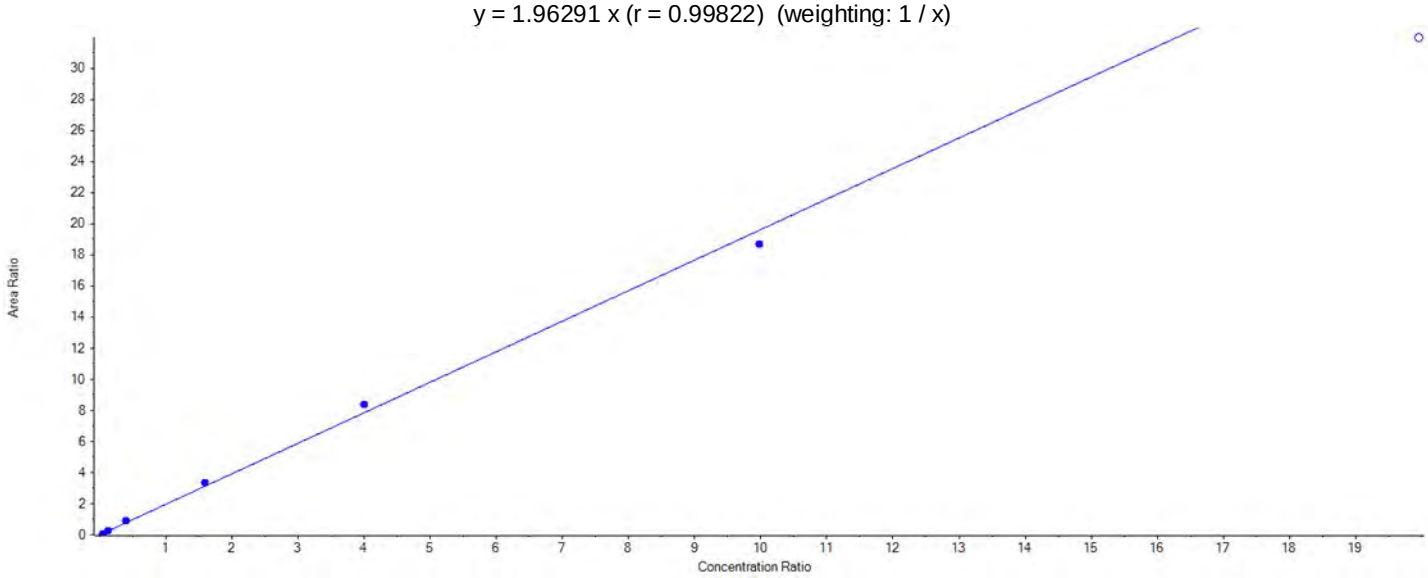
Sample Name	PFHxS Area	S/N	13C3-PFHxS Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	12858.1	420.7	327944.533	True	4.73	0.039	4.55	1.000	0.182	0.190	4	30	
CAL2	31064.7	21916.1	320400.366	True	4.73	0.097	4.56	1.000	0.547	0.470	-14	30	
CAL3	125622.0	1397.4	317243.200	True	4.73	0.396	4.56	1.000	1.820	1.920	5	30	
CAL4	479291.0	1690.0	315722.635	True	4.73	1.518	4.55	1.000	7.300	7.361	1	30	
CAL5	1138604.3	1511.8	309304.485	True	4.73	3.681	4.54	1.000	18.200	17.849	-2	30	
CAL6	2662852.0	1747.2	284116.506	True	4.73	9.372	4.55	1.000	45.600	45.444	0	30	
CAL7	5048349.8	1449.1	267182.785	True	4.73	18.895	4.54	1.000	91.200	91.615	0	30	

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV12DCAL **QMethod Name:** 18AUG20QM
Result Table: 18NOV12DCAL_Updated1/10/2019 3:19:00 PM **Acquisition Method:** 18AUG13_3uL.dam

6:2-FTS

y = 1.96291 x (r = 0.99822) (weighting: 1 / x)



Component Calibration Verification

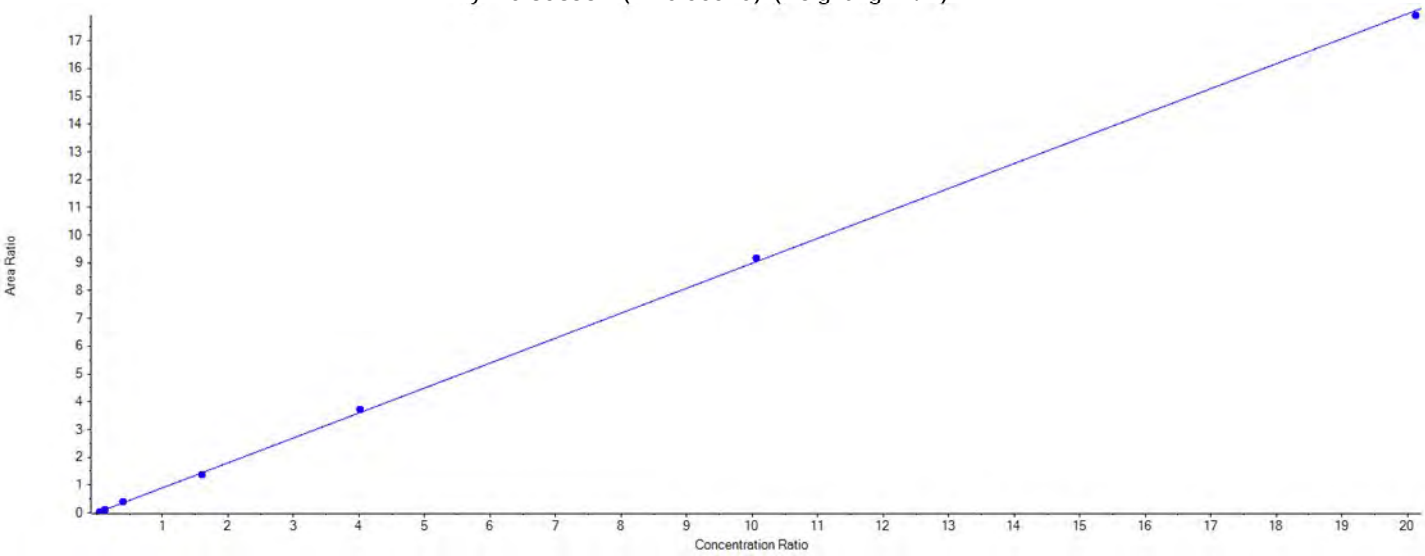
Sample Name	6:2-FTS Area	S/N	13C2-6:2-FTS Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	2683.1	289.4	35455.215	True	4.75	0.076	4.90	1.000	0.190	0.183	-4	30	
CAL2	8048.4	680.8	35585.691	True	4.75	0.226	4.91	1.000	0.569	0.547	-4	30	
CAL3	28084.9	4492.0	31706.424	True	4.75	0.886	4.91	1.000	1.900	2.143	13	30	
CAL4	107470.6	1876.3	31883.281	True	4.75	3.371	4.91	1.000	7.580	8.157	8	30	
CAL5	260254.3	2335.4	31012.005	True	4.75	8.392	4.90	1.000	19.000	20.308	7	30	
CAL6	523949.5	2243.2	27988.493	True	4.75	18.720	4.91	1.000	47.400	45.301	-4	30	
CAL7	869227.2	3021.8	27180.238	False	4.75	31.980	4.89	1.000	94.800	77.388	-18	30	

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV12DCAL **QMethod Name:** 18AUG20QM
Result Table: 18NOV12DCAL_Updated1/10/2019 3:19:00 PM **Acquisition Method:** 18AUG13_3uL.dam

PFHpS

y = 0.89855 x (r = 0.99976) (weighting: 1 / x)



Component Calibration Verification

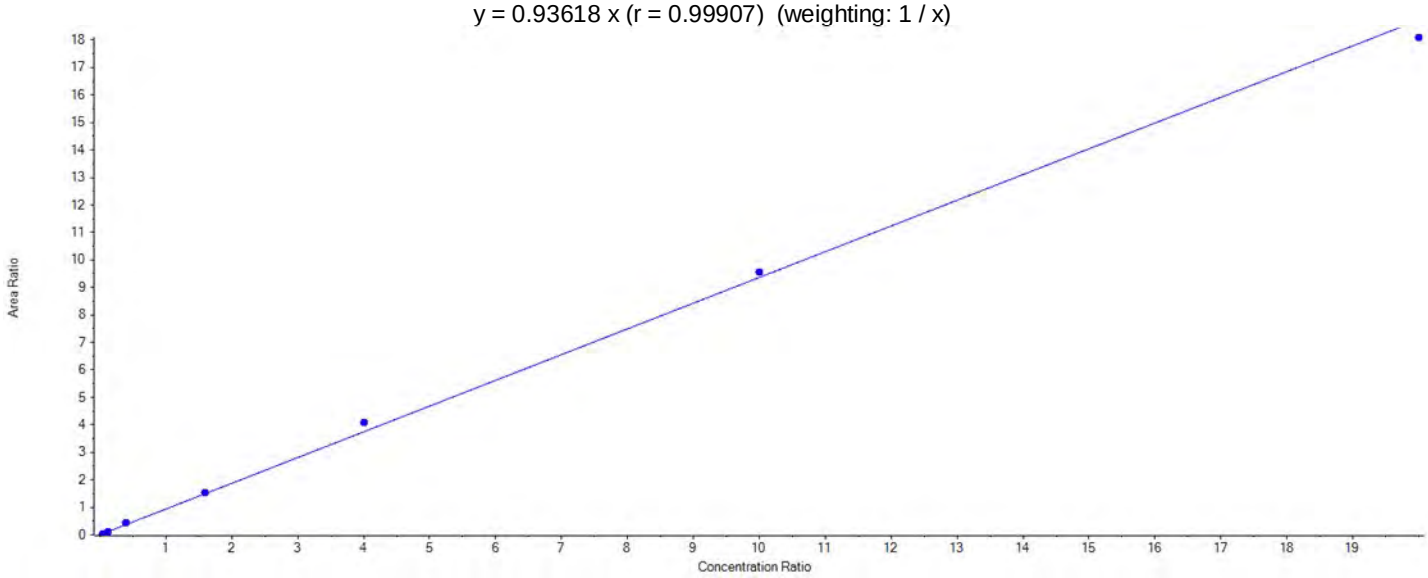
Sample Name	PFHpS Area	S/N	13C3-PFHxS Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	13262.8	924.7	327944.533	True	4.73	0.040	4.91	1.080	0.190	0.213	12	30	
CAL2	29902.3	1651.5	320400.366	True	4.73	0.093	4.92	1.080	0.571	0.491	-14	30	
CAL3	125907.9	2910.0	317243.200	True	4.73	0.397	4.92	1.080	1.900	2.089	10	30	
CAL4	434949.2	2606.3	315722.635	True	4.73	1.378	4.91	1.080	7.610	7.252	-5	30	
CAL5	1145559.8	3668.3	309304.485	True	4.73	3.704	4.90	1.080	19.000	19.496	3	30	
CAL6	2604868.6	3378.5	284116.506	True	4.73	9.168	4.91	1.080	47.600	48.262	1	30	
CAL7	4784682.8	2777.4	267182.785	True	4.73	17.908	4.90	1.080	95.200	94.267	-1	30	

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV12DCAL **QMethod Name:** 18AUG20QM
Result Table: 18NOV12DCAL_Updated1/10/2019 3:19:00 PM **Acquisition Method:** 18AUG13_3uL.dam

PFOA

y = 0.93618 x (r = 0.99907) (weighting: 1 / x)



Component Calibration Verification

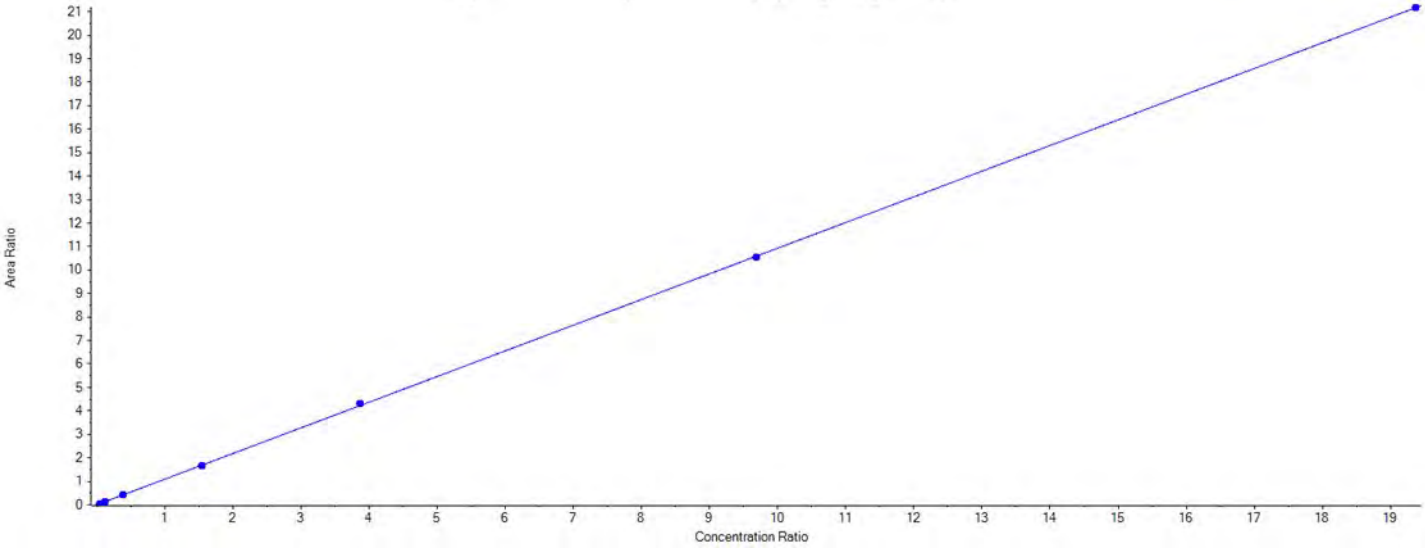
Sample Name	PFOA Area	S/N	13C8-PFOA Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	41468.0	187.1	912537.715	True	5.00	0.045	4.92	1.000	0.200	0.243	21	30	
CAL2	100710.5	331.7	892584.211	True	5.00	0.113	4.93	1.000	0.600	0.603	0	30	
CAL3	372258.9	744.4	878868.476	True	5.00	0.424	4.93	1.000	2.000	2.262	13	30	
CAL4	1327086.1	1187.5	863597.255	True	5.00	1.537	4.92	1.000	8.000	8.207	3	30	
CAL5	3291549.4	1816.2	805288.723	True	5.00	4.087	4.91	1.000	20.000	21.830	9	30	
CAL6	6758642.8	2708.4	707130.314	True	5.00	9.558	4.92	1.000	50.000	51.047	2	30	
CAL7	10991740.1	2902.7	607669.526	True	5.00	18.088	4.91	1.000	100.000	96.608	-3	30	

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV12DCAL **QMethod Name:** 18AUG20QM
Result Table: 18NOV12DCAL_Updated1/10/2019 3:19:00 PM **Acquisition Method:** 18AUG13_3uL.dam

PFOS

y = 1.09305 x (r = 0.99997) (weighting: 1 / x)



Component Calibration Verification

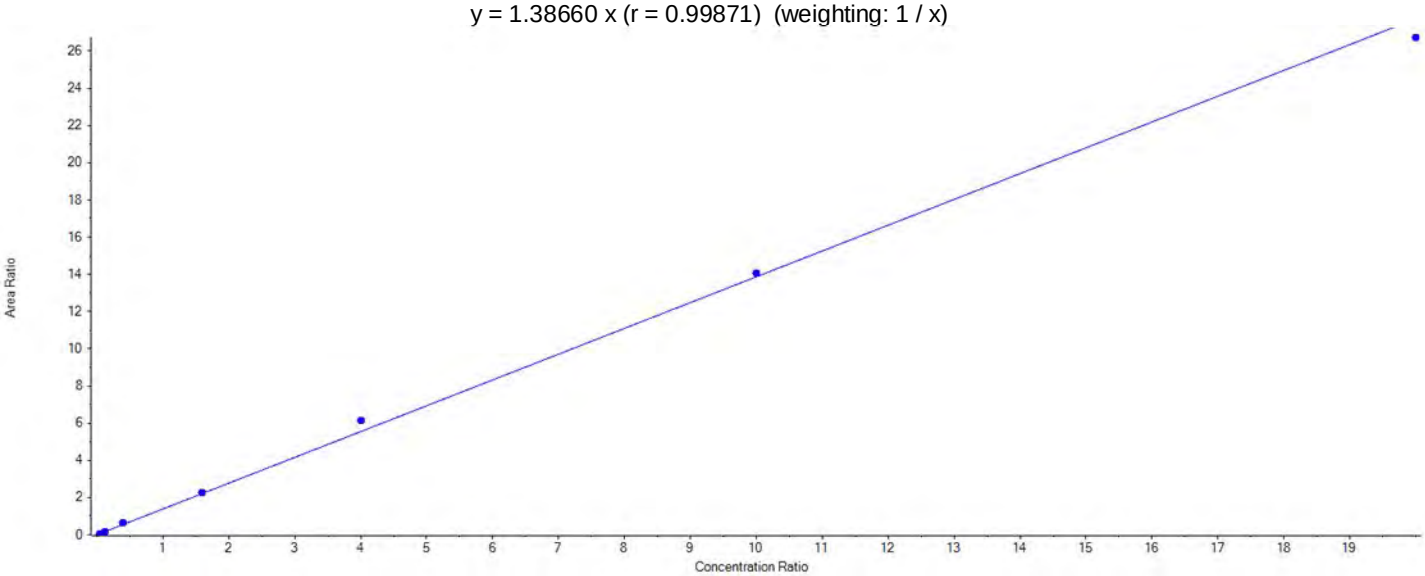
Sample Name	PFOS Area	S/N	13C8-PFOS Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	13088.5	581.9	283127.433	True	4.78	0.046	5.25	1.000	0.185	0.202	9	30	
CAL2	32301.0	342.7	271778.843	True	4.78	0.119	5.25	1.000	0.555	0.520	-6	30	
CAL3	120897.4	739.8	281035.504	True	4.78	0.430	5.25	1.000	1.850	1.881	2	30	
CAL4	448833.8	1353.6	267380.807	True	4.78	1.679	5.25	1.000	7.400	7.341	-1	30	
CAL5	1147826.8	1190.7	267157.611	True	4.78	4.296	5.24	1.000	18.500	18.789	2	30	
CAL6	2664957.2	1191.1	253129.162	True	4.78	10.528	5.25	1.000	46.300	46.040	-1	30	
CAL7	5138367.0	1123.0	242617.529	True	4.78	21.179	5.24	1.000	92.600	92.617	0	30	

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV12DCAL **QMethod Name:** 18AUG20QM
Result Table: 18NOV12DCAL_Updated1/10/2019 3:19:00 PM **Acquisition Method:** 18AUG13_3uL.dam

PFNA

y = 1.38660 x (r = 0.99871) (weighting: 1 / x)



Component Calibration Verification

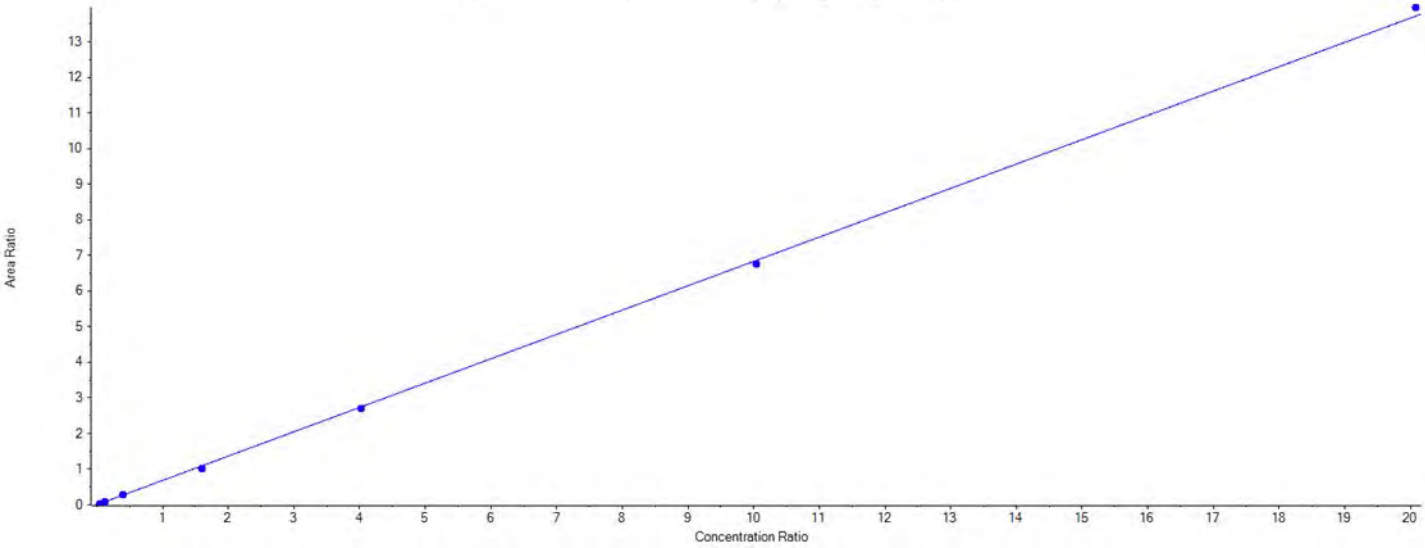
Sample Name	PFNA Area	S/N	13C9-PFNA Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	29660.1	270.7	479931.430	True	5.00	0.062	5.26	1.000	0.200	0.223	11	30	
CAL2	80724.2	537.0	451850.144	True	5.00	0.179	5.27	1.000	0.600	0.644	7	30	
CAL3	302323.8	1252.4	455948.853	True	5.00	0.663	5.27	1.000	2.000	2.391	20	30	
CAL4	1106664.2	1697.5	485570.409	True	5.00	2.279	5.26	1.000	8.000	8.218	3	30	
CAL5	2725089.7	2530.1	441776.750	True	5.00	6.168	5.26	1.000	20.000	22.243	11	30	
CAL6	5820576.6	3024.4	413811.345	True	5.00	14.066	5.27	1.000	50.000	50.720	1	30	
CAL7	10084288.3	3917.9	377369.763	True	5.00	26.723	5.25	1.000	100.000	96.360	-4	30	

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV12DCAL **QMethod Name:** 18AUG20QM
Result Table: 18NOV12DCAL_Updated1/10/2019 3:19:00 PM **Acquisition Method:** 18AUG13_3uL.dam

PFNS

y = 0.68322 x (r = 0.99974) (weighting: 1 / x)



Component Calibration Verification

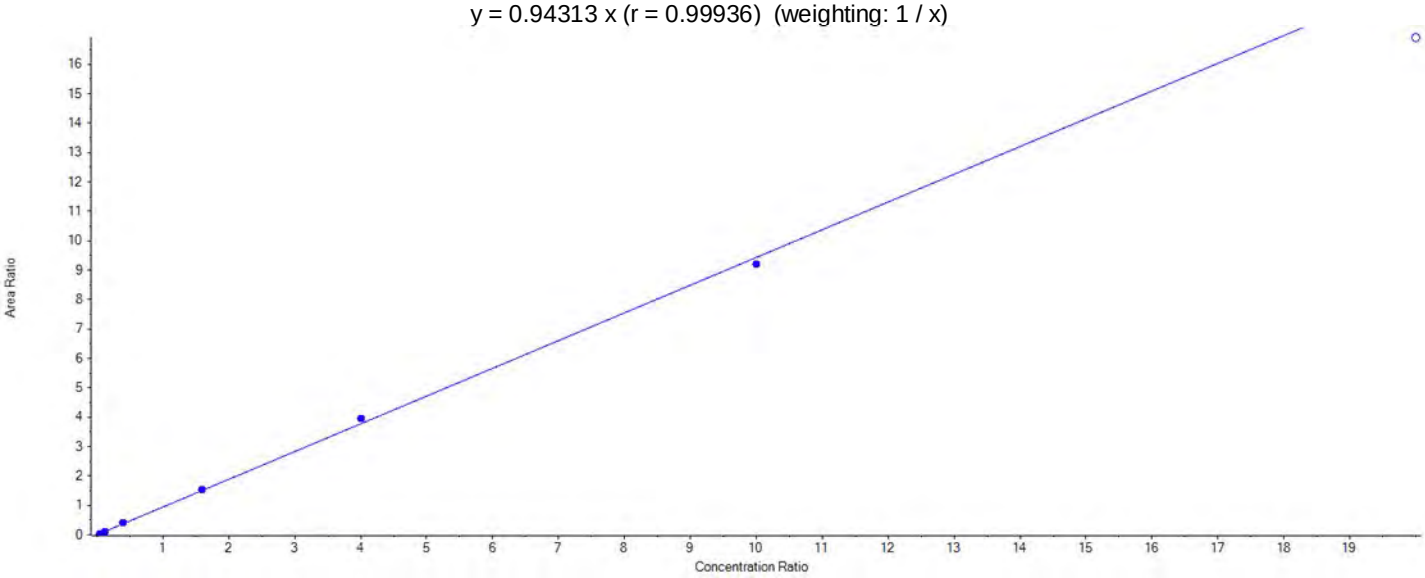
Sample Name	PFNS Area	S/N	13C8-PFOS Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	6846.6	64175.9	283127.433	True	4.78	0.024	5.54	1.060	0.192	0.169	-12	30	
CAL2	20326.1	1643.1	271778.843	True	4.78	0.075	5.55	1.060	0.576	0.523	-9	30	
CAL3	76049.0	306613.9	281035.504	True	4.78	0.271	5.55	1.060	1.920	1.893	-1	30	
CAL4	269712.3	3708.3	267380.807	True	4.78	1.009	5.54	1.060	7.680	7.057	-8	30	
CAL5	725402.0	3853.5	267157.611	True	4.78	2.715	5.53	1.060	19.200	18.997	-1	30	
CAL6	1709959.4	3115.5	253129.162	True	4.78	6.755	5.55	1.060	48.000	47.262	-2	30	
CAL7	3386860.5	3789.1	242617.529	True	4.78	13.960	5.53	1.060	96.000	97.666	2	30	

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV12DCAL **QMethod Name:** 18AUG20QM
Result Table: 18NOV12DCAL_Updated1/10/2019 3:19:00 PM **Acquisition Method:** 18AUG13_3uL.dam

PFDA

y = 0.94313 x (r = 0.99936) (weighting: 1 / x)



Component Calibration Verification

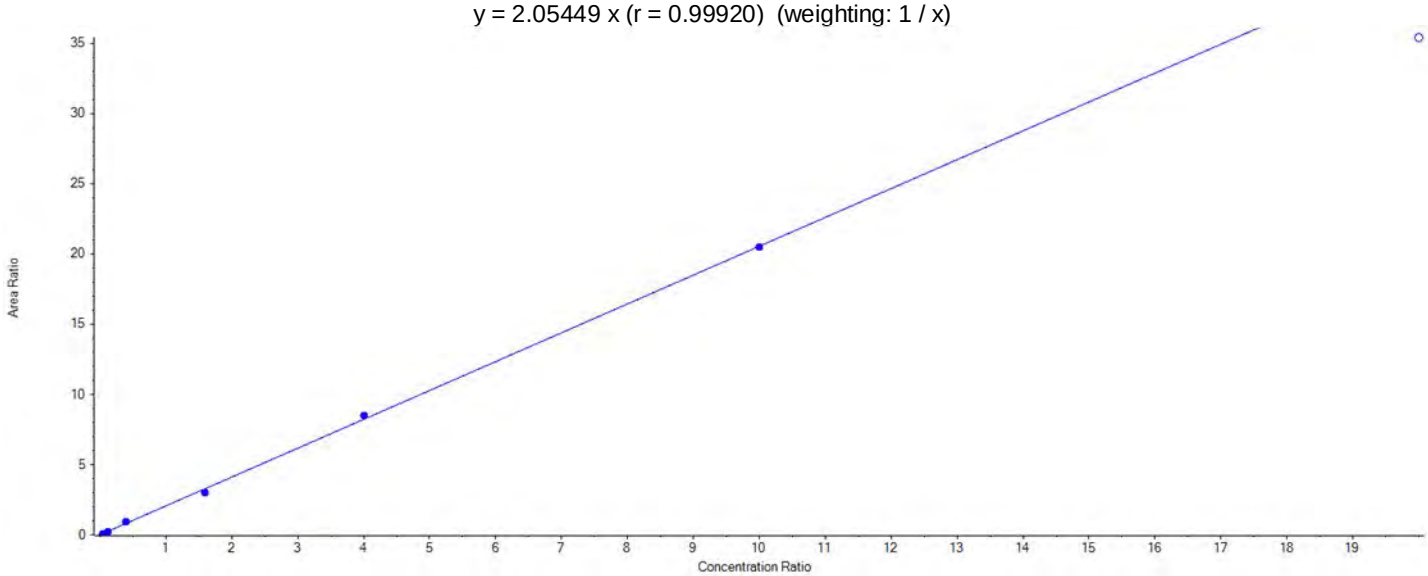
Sample Name	PFDA Area	S/N	13C6-PFDA Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	27488.5	91.3	612577.429	True	5.00	0.045	5.56	1.000	0.200	0.238	19	30	
CAL2	63802.1	156.0	601859.800	True	5.00	0.106	5.57	1.000	0.600	0.562	-6	30	
CAL3	254047.8	380.5	612680.786	True	5.00	0.415	5.57	1.000	2.000	2.198	10	30	
CAL4	941985.3	720.2	612056.466	True	5.00	1.539	5.56	1.000	8.000	8.159	2	30	
CAL5	2309359.5	1113.9	585231.231	True	5.00	3.946	5.56	1.000	20.000	20.920	5	30	
CAL6	4802967.8	1415.3	522613.810	True	5.00	9.190	5.57	1.000	50.000	48.722	-3	30	
CAL7	8104726.6	2024.7	479333.064	False	5.00	16.908	5.55	1.000	100.000	89.640	-10	30	

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV12DCAL **QMethod Name:** 18AUG20QM
Result Table: 18NOV12DCAL_Updated1/10/2019 3:19:00 PM **Acquisition Method:** 18AUG13_3uL.dam

8:2-FTS

y = 2.05449 x (r = 0.99920) (weighting: 1 / x)



Component Calibration Verification

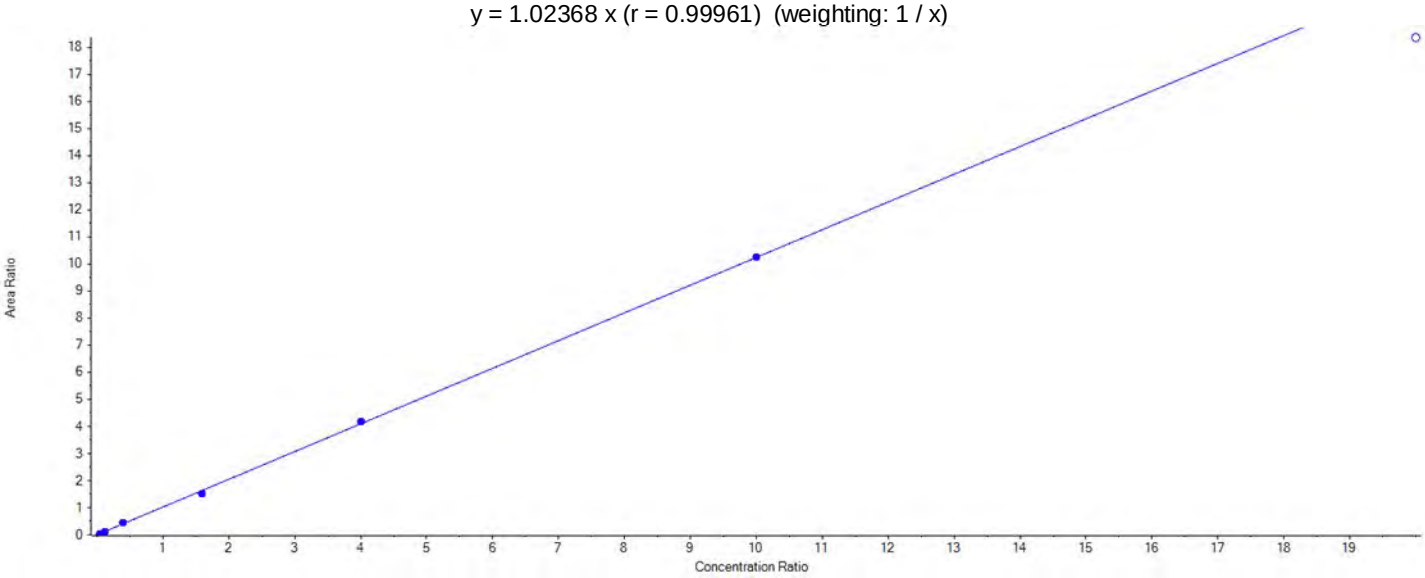
Sample Name	8:2-FTS Area	S/N	13C2-8:2-FTS Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	2333.1	294799.1	26445.481	True	4.79	0.088	5.57	1.000	0.192	0.206	7	30	
CAL2	6214.2	6270.0	27639.188	True	4.79	0.225	5.57	1.000	0.575	0.524	-9	30	
CAL3	26295.1	17693.1	29249.839	True	4.79	0.899	5.57	1.000	1.920	2.096	9	30	
CAL4	80922.6	6228.9	27253.461	True	4.79	2.969	5.57	1.000	7.660	6.923	-10	30	
CAL5	206213.1	2630.2	24192.138	True	4.79	8.524	5.56	1.000	19.200	19.873	4	30	
CAL6	469719.6	3836.0	22899.000	True	4.79	20.513	5.57	1.000	47.900	47.825	0	30	
CAL7	804019.5	2307.7	22710.952	False	4.79	35.402	5.56	1.000	95.800	82.540	-14	30	

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV12DCAL **QMethod Name:** 18AUG20QM
Result Table: 18NOV12DCAL_Updated1/10/2019 3:19:00 PM **Acquisition Method:** 18AUG13_3uL.dam

PFOSA

y = 1.02368 x (r = 0.99961) (weighting: 1 / x)



Component Calibration Verification

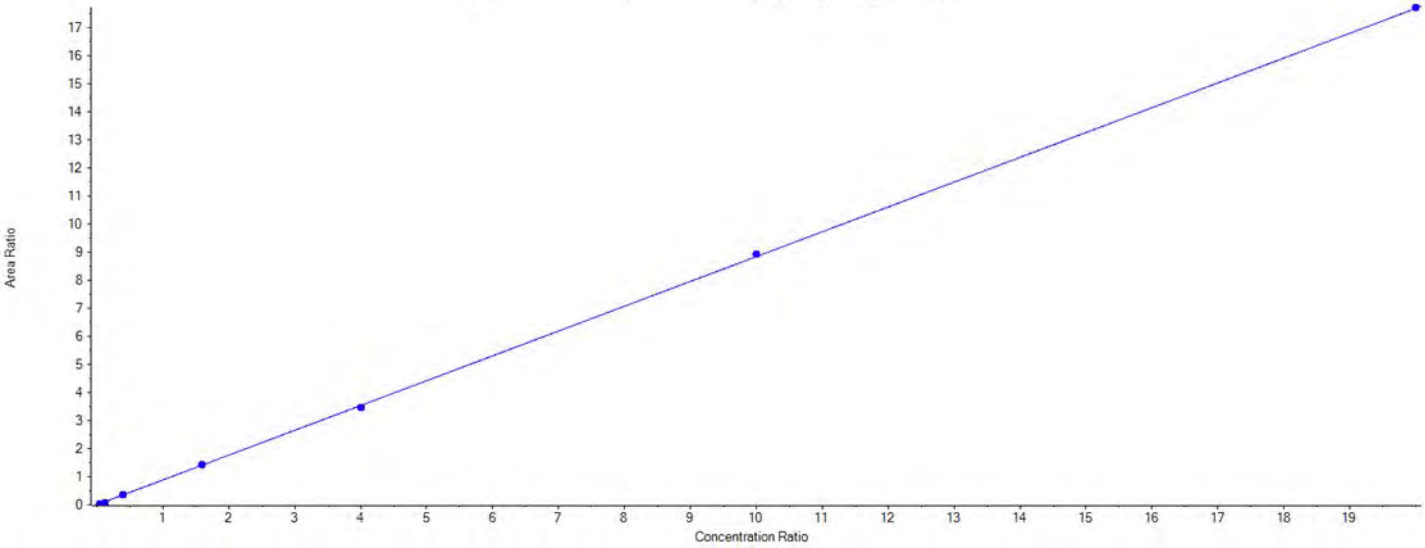
Sample Name	PFOSA Area	S/N	13C8-PFOSA Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	29582.8	441.0	664489.930	True	5.00	0.045	5.64	1.000	0.200	0.217	9	30	
CAL2	71087.0	726.6	636543.149	True	5.00	0.112	5.65	1.000	0.600	0.545	-9	30	
CAL3	270175.4	1379.9	629109.871	True	5.00	0.429	5.65	1.000	2.000	2.098	5	30	
CAL4	927660.4	2034.5	607762.027	True	5.00	1.526	5.64	1.000	8.000	7.455	-7	30	
CAL5	2498877.9	2082.0	596544.134	True	5.00	4.189	5.64	1.000	20.000	20.460	2	30	
CAL6	5530440.6	2331.7	539992.495	True	5.00	10.242	5.65	1.000	50.000	50.024	0	30	
CAL7	10169176.9	2455.7	554092.642	False	5.00	18.353	5.63	1.000	100.000	89.642	-10	30	

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV12DCAL **QMethod Name:** 18AUG20QM
Result Table: 18NOV12DCAL_Updated1/10/2019 3:19:00 PM **Acquisition Method:** 18AUG13_3uL.dam

NMeFOSAA

y = 0.88469 x (r = 0.99990) (weighting: 1 / x)



Component Calibration Verification

Sample Name	NMeFOSAA Area	S/N	d3-NMeFOSAA Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	2306.4	597.4	86914.510	True	5.00	0.027	5.71	1.000	0.200	0.150	-25	30	
CAL2	5759.6	226.1	77388.613	True	5.00	0.074	5.71	1.000	0.600	0.421	-30	30	
CAL3	25147.6	632.7	71670.262	True	5.00	0.351	5.71	1.000	2.000	1.983	-1	30	
CAL4	103649.1	37382.5	72788.025	True	5.00	1.424	5.70	1.000	8.000	8.048	1	30	
CAL5	250711.5	2299.0	72424.490	True	5.00	3.462	5.70	1.000	20.000	19.564	-2	30	
CAL6	627854.4	1632.7	70320.259	True	5.00	8.928	5.71	1.000	50.000	50.461	1	30	
CAL7	1191981.7	2314.0	67250.454	True	5.00	17.725	5.69	1.000	100.000	100.173	0	30	

APPROVED
By MCD at 3:23 pm, 1/10/19

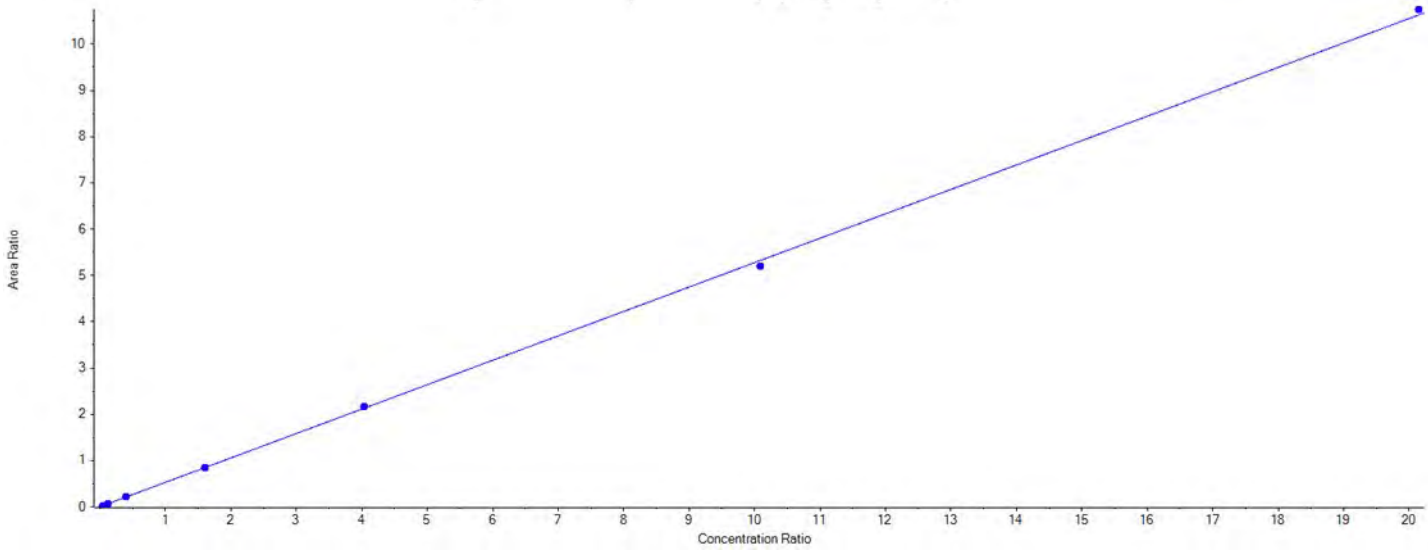
REVIEWED
By ucmr at 3:21 pm, 1/25/19

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV12DCAL **QMethod Name:** 18AUG20QM
Result Table: 18NOV12DCAL_Updated1/10/2019 3:19:00 PM **Acquisition Method:** 18AUG13_3uL.dam

PFDS

y = 0.52754 x (r = 0.99985) (weighting: 1 / x)



Component Calibration Verification

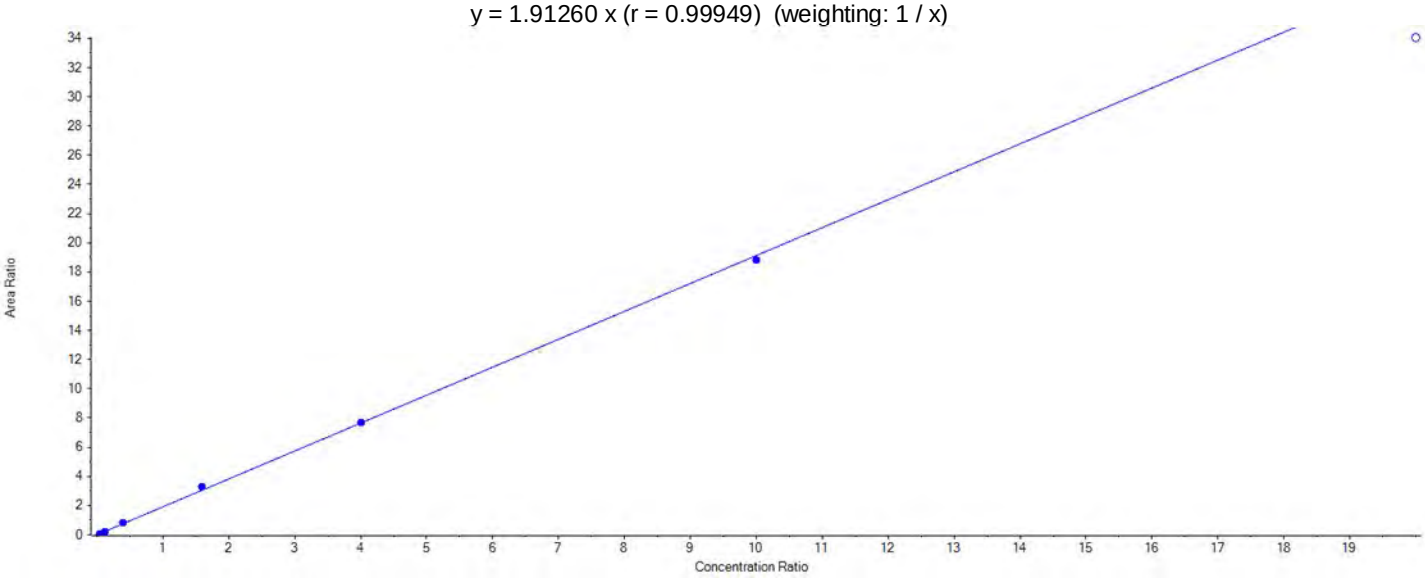
Sample Name	PFDS Area	S/N	13C8-PFOS Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	5952.2	1142.3	283127.433	True	4.78	0.021	5.80	1.100	0.193	0.190	-1	30	
CAL2	16291.9	12424.6	271778.843	True	4.78	0.060	5.80	1.100	0.578	0.543	-6	30	
CAL3	57966.9	3930335.8	281035.504	True	4.78	0.206	5.80	1.110	1.930	1.869	-3	30	
CAL4	224031.2	2859776.1	267380.807	True	4.78	0.838	5.80	1.110	7.700	7.592	-1	30	
CAL5	578877.5	2392.5	267157.611	True	4.78	2.167	5.79	1.100	19.300	19.633	2	30	
CAL6	1313570.3	3303.1	253129.162	True	4.78	5.189	5.80	1.100	48.200	47.020	-2	30	
CAL7	2606720.7	3557.3	242617.529	True	4.78	10.744	5.79	1.110	96.300	97.353	1	30	

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV12DCAL **QMethod Name:** 18AUG20QM
Result Table: 18NOV12DCAL_Updated1/10/2019 3:19:00 PM **Acquisition Method:** 18AUG13_3uL.dam

PFUnDA

y = 1.91260 x (r = 0.99949) (weighting: 1 / x)



Component Calibration Verification

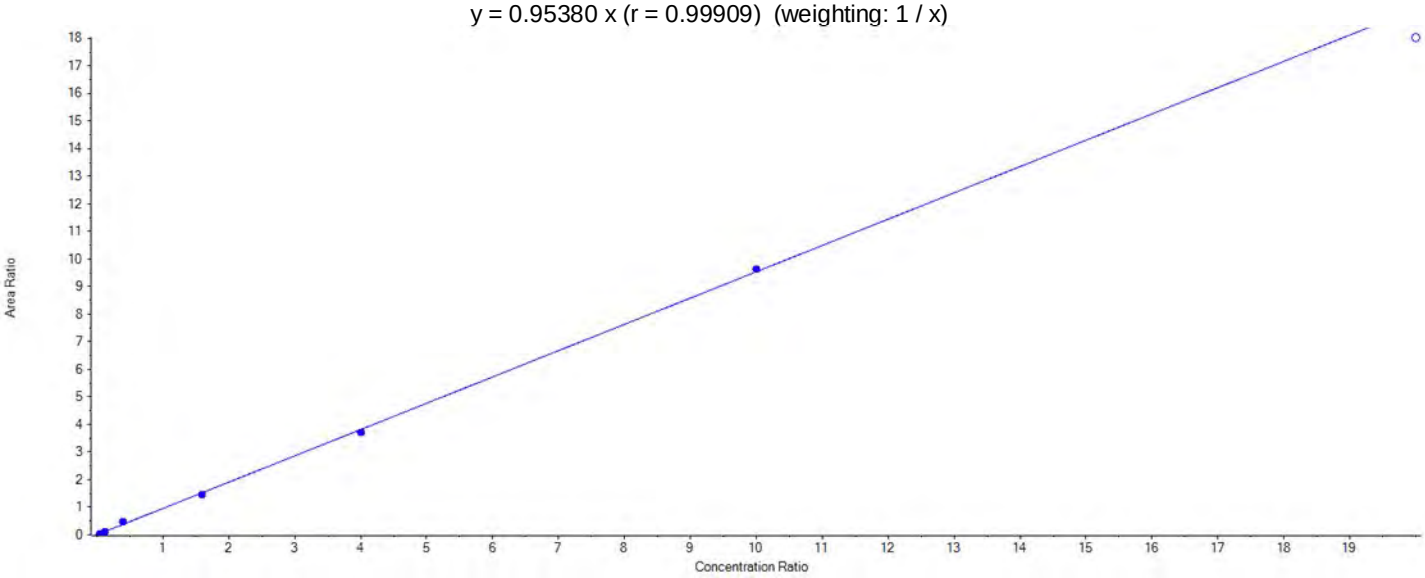
Sample Name	PFUnDA Area	S/N	13C7-PFUnDA Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	23379.5	206.2	256401.964	True	5.00	0.091	5.82	1.000	0.200	0.238	19	30	
CAL2	51206.8	285.0	242881.749	True	5.00	0.211	5.83	1.000	0.600	0.551	-8	30	
CAL3	199061.8	846.0	245605.298	True	5.00	0.810	5.83	1.000	2.000	2.119	6	30	
CAL4	768010.8	1510.9	232014.103	True	5.00	3.310	5.82	1.000	8.000	8.654	8	30	
CAL5	1773582.6	2061.6	231187.889	True	5.00	7.672	5.82	1.000	20.000	20.055	0	30	
CAL6	3923979.2	2695.3	208574.106	True	5.00	18.813	5.83	1.000	50.000	49.183	-2	30	
CAL7	6802701.2	3209.1	199746.834	False	5.00	34.057	5.81	1.000	100.000	89.032	-11	30	

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV12DCAL **QMethod Name:** 18AUG20QM
Result Table: 18NOV12DCAL_Updated1/10/2019 3:19:00 PM **Acquisition Method:** 18AUG13_3uL.dam

NEtFOSAA

y = 0.95380 x (r = 0.99909) (weighting: 1 / x)



Component Calibration Verification

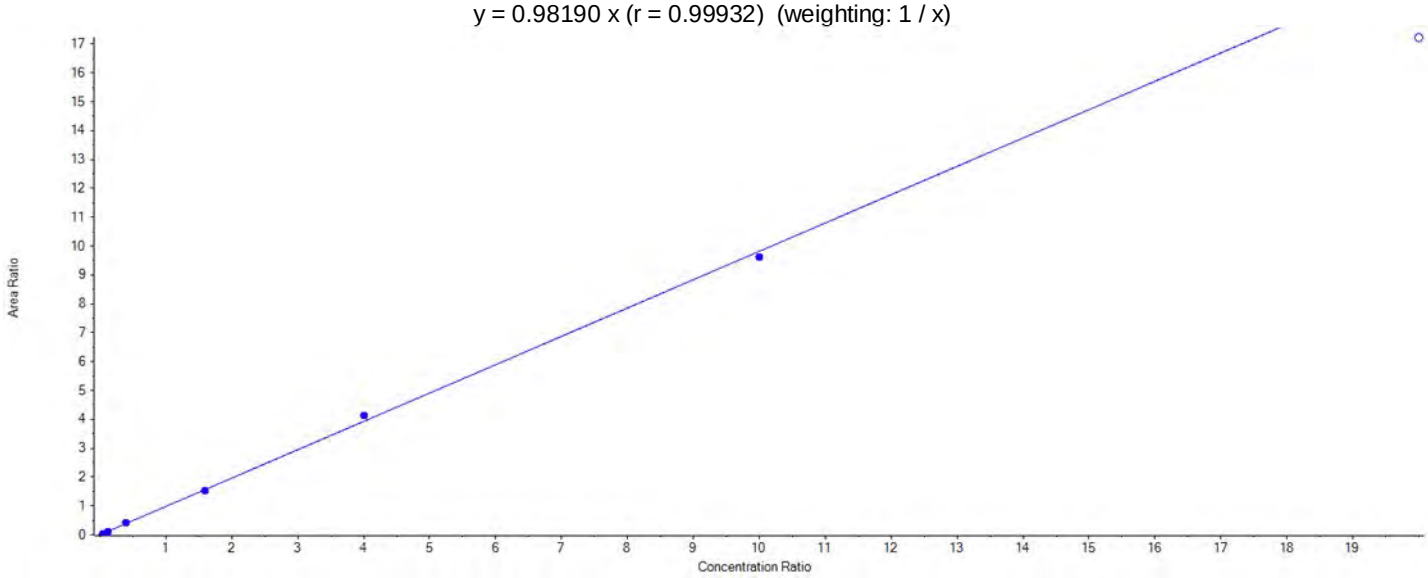
Sample Name	NEtFOSAA Area	S/N	d5-NEtFOSAA Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	2284.9	20256.7	80597.244	True	5.00	0.028	5.85	1.000	0.200	0.149	-26	30	
CAL2	7727.1	209.6	63686.933	True	5.00	0.121	5.85	1.000	0.600	0.636	6	30	
CAL3	25089.0	97.0	54383.911	True	5.00	0.461	5.84	1.000	2.000	2.418	21	30	
CAL4	94877.8	20462.7	65477.959	True	5.00	1.449	5.84	1.000	8.000	7.596	-5	30	
CAL5	237197.2	1311.0	63701.688	True	5.00	3.724	5.83	1.000	20.000	19.520	-2	30	
CAL6	551865.7	1762.3	57308.081	True	5.00	9.630	5.84	1.000	50.000	50.481	1	30	
CAL7	1046636.1	1311.5	58049.489	False	5.00	18.030	5.83	1.000	100.000	94.517	-5	30	

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV12DCAL **QMethod Name:** 18AUG20QM
Result Table: 18NOV12DCAL_Updated1/10/2019 3:19:00 PM **Acquisition Method:** 18AUG13_3uL.dam

PFDoDA

y = 0.98190 x (r = 0.99932) (weighting: 1 / x)



Component Calibration Verification

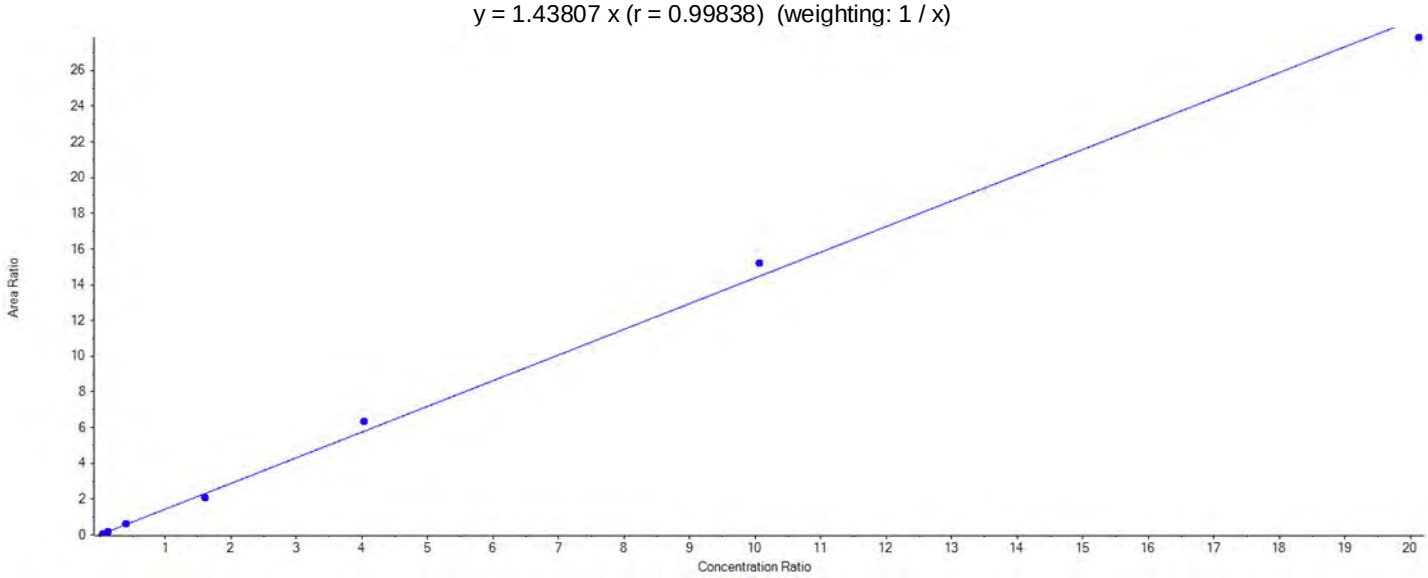
Sample Name	PFDoDA Area	S/N	13C2-PFDoDA Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	22143.6	430.3	545413.193	True	5.00	0.041	6.05	1.000	0.200	0.207	3	30	
CAL2	59695.2	467.4	532175.345	True	5.00	0.112	6.06	1.000	0.600	0.571	-5	30	
CAL3	237252.6	1192.0	549542.276	True	5.00	0.432	6.06	1.000	2.000	2.198	10	30	
CAL4	803646.8	1372.0	521514.091	True	5.00	1.541	6.05	1.000	8.000	7.847	-2	30	
CAL5	2099385.0	2645.1	507556.819	True	5.00	4.136	6.04	1.000	20.000	21.062	5	30	
CAL6	4582985.5	2623.0	477105.492	True	5.00	9.606	6.06	1.000	50.000	48.914	-2	30	
CAL7	8171355.3	3494.7	474393.787	False	5.00	17.225	6.04	1.000	100.000	87.711	-12	30	

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV12DCAL **QMethod Name:** 18AUG20QM
Result Table: 18NOV12DCAL_Updated1/10/2019 3:19:00 PM **Acquisition Method:** 18AUG13_3uL.dam

10:2-FTS

y = 1.43807 x (r = 0.99838) (weighting: 1 / x)



Component Calibration Verification

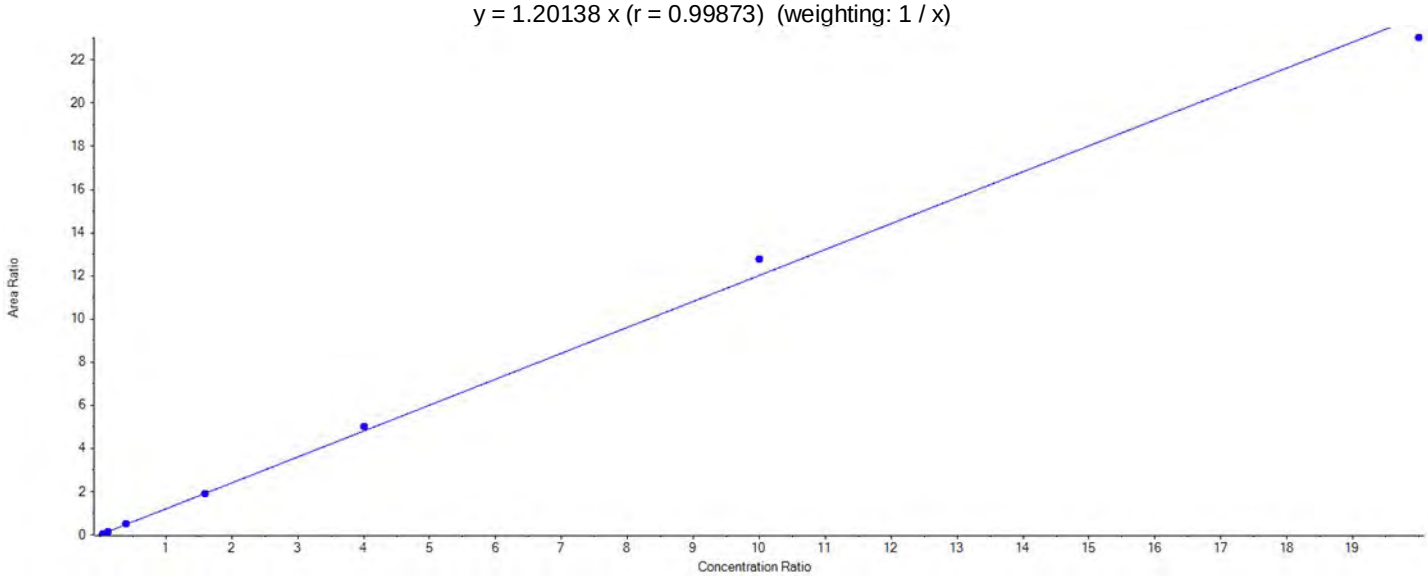
Sample Name	10:2-FTS Area	S/N	13C2-8:2-FTS Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	1814.2	3265.8	26445.481	True	4.79	0.069	6.07	1.090	0.193	0.229	18	30	
CAL2	5206.5	6837.3	27639.188	True	4.79	0.188	6.08	1.090	0.578	0.627	9	30	
CAL3	18541.7	12580.7	29249.839	True	4.79	0.634	6.07	1.090	1.930	2.111	9	30	
CAL4	56040.8	5520.1	27253.461	True	4.79	2.056	6.07	1.090	7.710	6.849	-11	30	
CAL5	153343.6	2460.5	24192.138	True	4.79	6.339	6.06	1.090	19.300	21.113	9	30	
CAL6	348263.2	3159.4	22899.000	True	4.79	15.209	6.07	1.090	48.200	50.658	5	30	
CAL7	632223.7	3215.8	22710.952	True	4.79	27.838	6.06	1.090	96.400	92.724	-4	30	

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV12DCAL **QMethod Name:** 18AUG20QM
Result Table: 18NOV12DCAL_Updated1/10/2019 3:19:00 PM **Acquisition Method:** 18AUG13_3uL.dam

NMePFOSAE

y = 1.20138 x (r = 0.99873) (weighting: 1 / x)



Component Calibration Verification

Sample Name	NMePFOSAE Area	S/N	d7-NMePFOSAE Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	18013.9	109.4	349854.469	True	5.00	0.051	6.10	1.000	0.200	0.214	7	30	
CAL2	43085.1	193.1	323456.508	True	5.00	0.133	6.10	1.000	0.600	0.554	-8	30	
CAL3	163668.7	409.2	307355.434	True	5.00	0.533	6.10	1.000	2.000	2.216	11	30	
CAL4	618314.4	740.2	327796.394	True	5.00	1.886	6.10	1.000	8.000	7.850	-2	30	
CAL5	1590507.1	975.1	316777.819	True	5.00	5.021	6.09	1.000	20.000	20.896	4	30	
CAL6	3484588.8	1388.9	272638.968	True	5.00	12.781	6.10	1.000	50.000	53.193	6	30	
CAL7	6272486.3	1388.0	272283.142	True	5.00	23.037	6.09	1.000	100.000	95.876	-4	30	

APPROVED
By MCD at 3:23 pm, 1/10/19

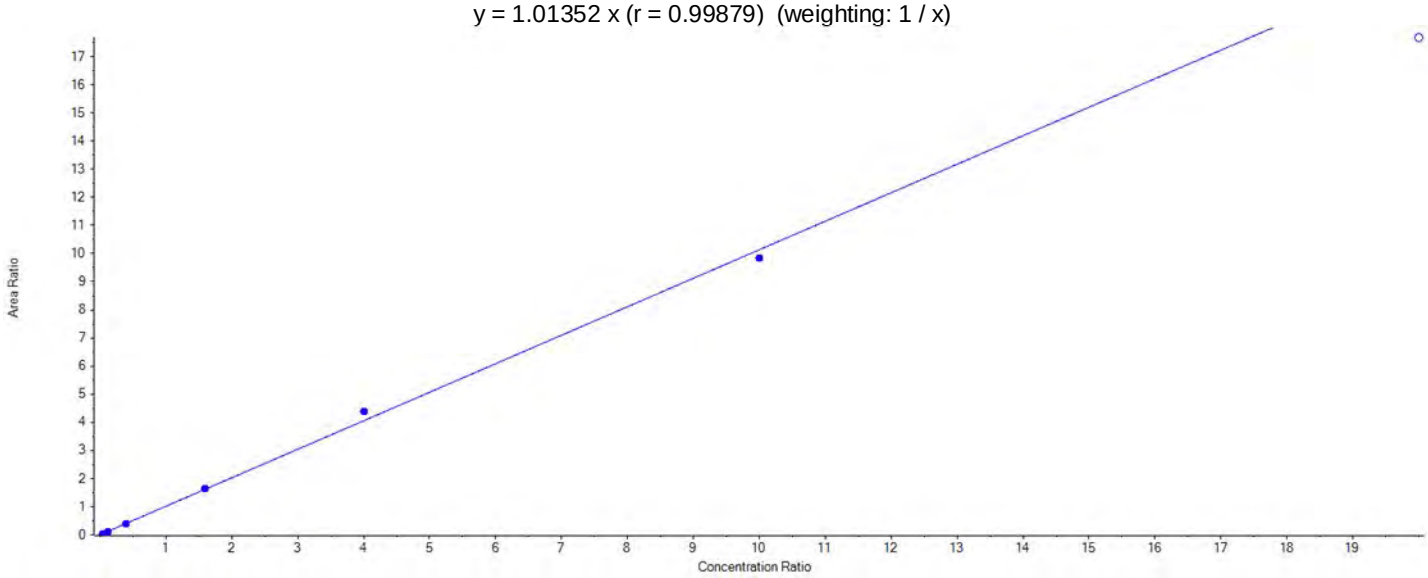
REVIEWED
By ucmr at 3:21 pm, 1/25/19

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV12DCAL **QMethod Name:** 18AUG20QM
Result Table: 18NOV12DCAL_Updated1/10/2019 3:19:00 PM **Acquisition Method:** 18AUG13_3uL.dam

NMePFOSA

y = 1.01352 x (r = 0.99879) (weighting: 1 / x)



Component Calibration Verification

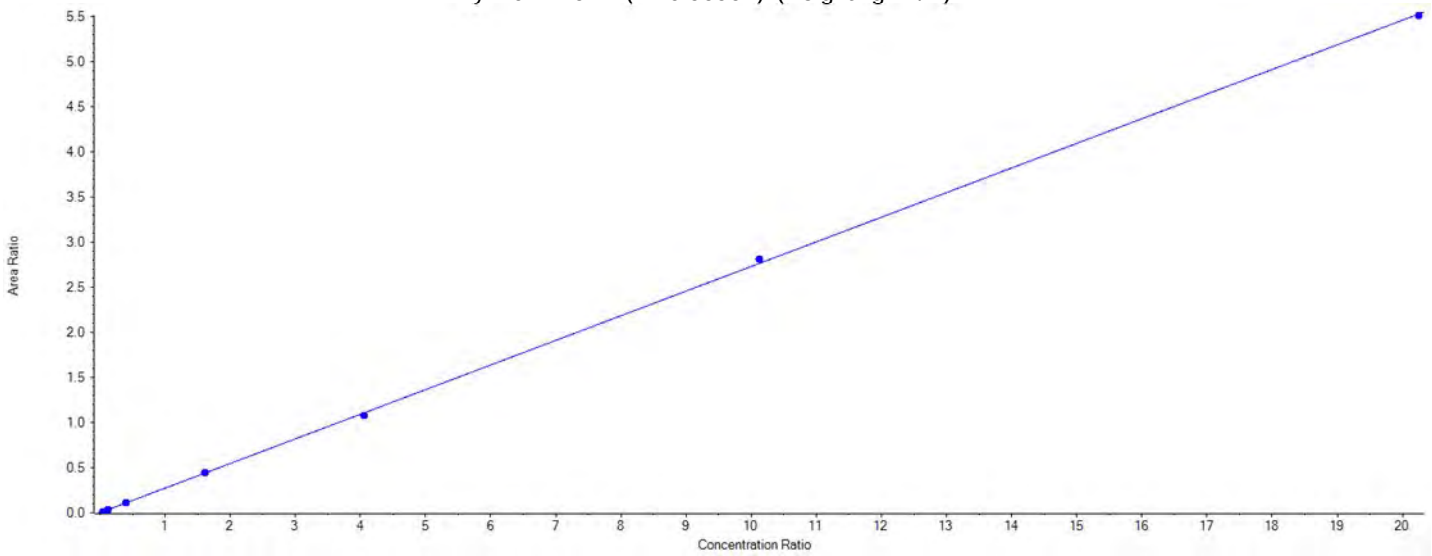
Sample Name	NMePFOSA Area	S/N	d3-NMePFOSA Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	2376.3	153.9	78396.495	True	5.00	0.030	6.11	1.000	0.200	0.150	-25	30	
CAL2	8877.7	472.1	77893.238	True	5.00	0.114	6.11	1.000	0.600	0.562	-6	30	
CAL3	29934.3	447.4	76782.886	True	5.00	0.390	6.11	1.000	2.000	1.923	-4	30	
CAL4	114415.9	890.1	70122.473	True	5.00	1.632	6.10	1.000	8.000	8.049	1	30	
CAL5	300855.7	937.9	68615.664	True	5.00	4.385	6.10	1.000	20.000	21.631	8	30	
CAL6	670429.6	1054.0	68215.937	True	5.00	9.828	6.11	1.000	50.000	48.485	-3	30	
CAL7	1310162.9	1043.5	74110.295	False	5.00	17.679	6.09	1.000	100.000	87.214	-13	30	

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV12DCAL **QMethod Name:** 18AUG20QM
Result Table: 18NOV12DCAL_Updated1/10/2019 3:19:00 PM **Acquisition Method:** 18AUG13_3uL.dam

PFDoS

y = 0.27292 x (r = 0.99991) (weighting: 1 / x)



Component Calibration Verification

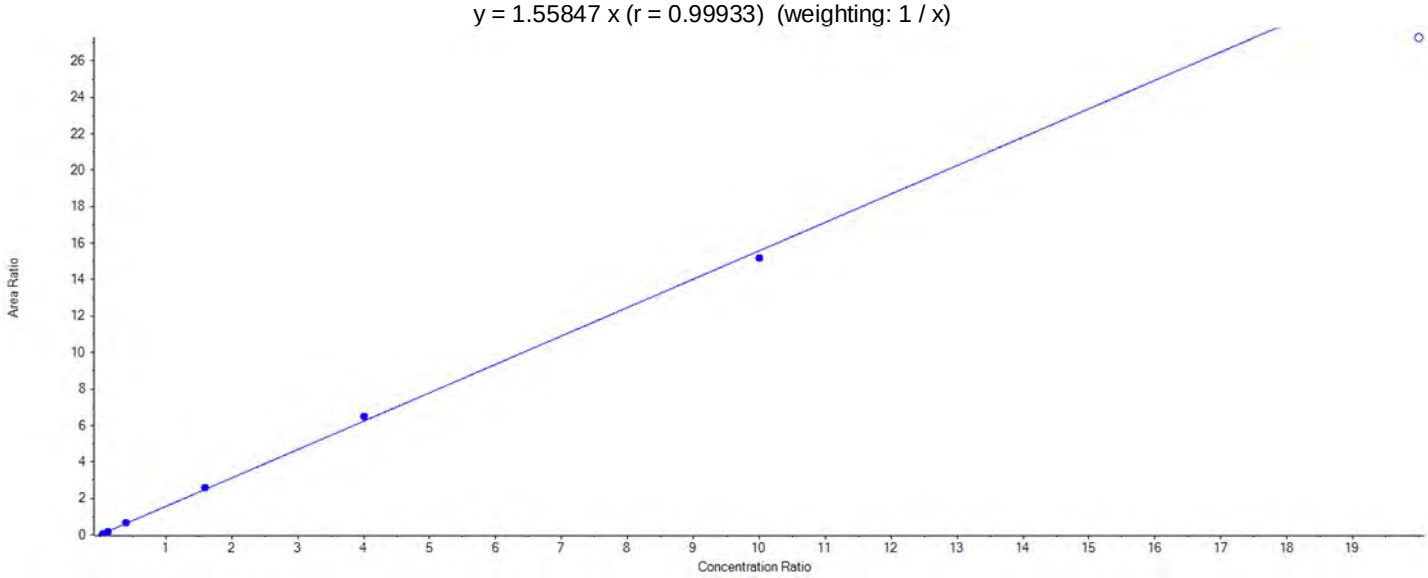
Sample Name	PFDoS Area	S/N	13C8-PFOS Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	3520.9	58335.2	283127.433	True	4.78	0.012	6.22	1.190	0.194	0.218	12	30	
CAL2	8992.5	12149.3	271778.843	True	4.78	0.033	6.22	1.190	0.581	0.580	0	30	
CAL3	30098.3	137145.7	281035.504	True	4.78	0.107	6.23	1.190	1.940	1.876	-3	30	
CAL4	117663.3	1376.2	267380.807	True	4.78	0.440	6.22	1.190	7.740	7.707	0	30	
CAL5	288905.1	1660.8	267157.611	True	4.78	1.081	6.21	1.190	19.400	18.940	-2	30	
CAL6	711567.5	2275.7	253129.162	True	4.78	2.811	6.23	1.190	48.400	49.234	2	30	
CAL7	1336765.3	3028.7	242617.529	True	4.78	5.510	6.21	1.190	96.800	96.500	0	30	

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV12DCAL **QMethod Name:** 18AUG20QM
Result Table: 18NOV12DCAL_Updated1/10/2019 3:19:00 PM **Acquisition Method:** 18AUG13_3uL.dam

NEtPFOSAE

y = 1.55847 x (r = 0.99933) (weighting: 1 / x)



Component Calibration Verification

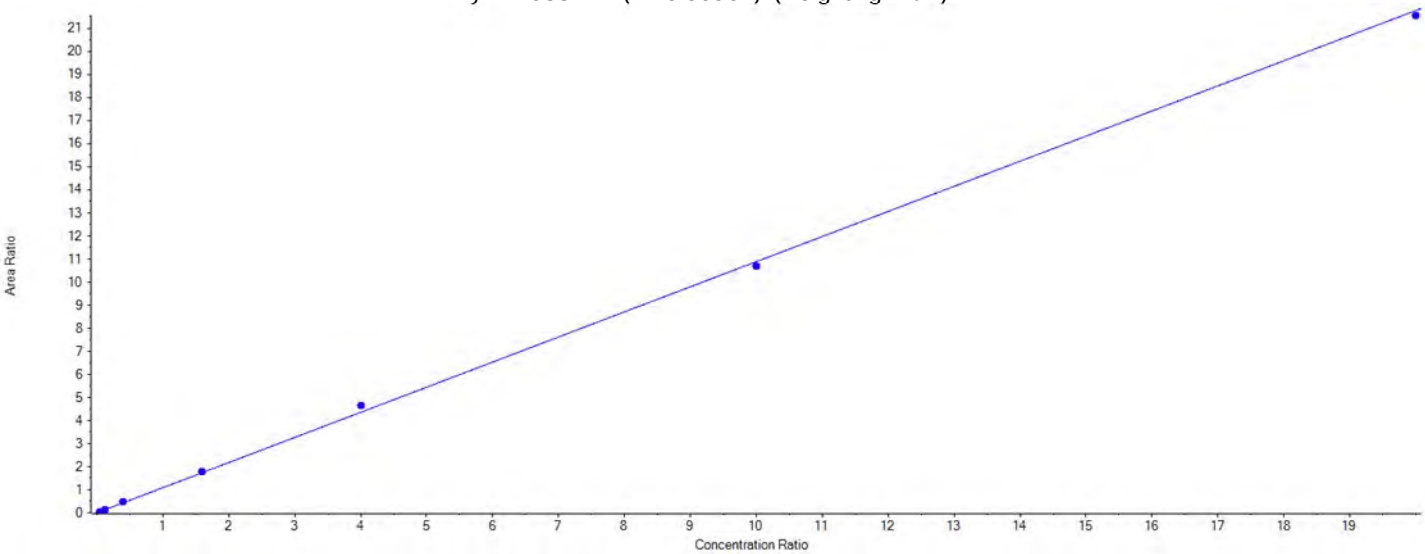
Sample Name	NEtPFOSAE Area	S/N	d9-NEtPFOSAE Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	21005.9	119.5	280311.617	True	5.00	0.075	6.26	1.000	0.200	0.240	20	30	
CAL2	46623.3	205.6	261195.607	True	5.00	0.178	6.26	1.000	0.600	0.573	-5	30	
CAL3	178457.8	320.7	259792.277	True	5.00	0.687	6.26	1.000	2.000	2.204	10	30	
CAL4	673196.1	592.1	259467.367	True	5.00	2.595	6.25	1.000	8.000	8.324	4	30	
CAL5	1660562.6	810.5	255767.749	True	5.00	6.492	6.25	1.000	20.000	20.830	4	30	
CAL6	3677006.6	1204.8	242587.535	True	5.00	15.157	6.26	1.000	50.000	48.629	-3	30	
CAL7	6557402.5	1093.9	240346.474	False	5.00	27.283	6.25	1.000	100.000	87.532	-12	30	

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV12DCAL **QMethod Name:** 18AUG20QM
Result Table: 18NOV12DCAL_Updated1/10/2019 3:19:00 PM **Acquisition Method:** 18AUG13_3uL.dam

NEtPFOSA

y = 1.08874 x (r = 0.99961) (weighting: 1 / x)



Component Calibration Verification

Sample Name	NEtPFOSA Area	S/N	d5-NEtPFOSA Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	2846.2	154.5	63047.063	True	5.00	0.045	6.27	1.000	0.200	0.207	4	30	
CAL2	8053.7	439.3	58073.450	True	5.00	0.139	6.27	1.000	0.600	0.637	6	30	
CAL3	26590.2	407.4	57485.886	True	5.00	0.463	6.27	1.000	2.000	2.124	6	30	
CAL4	99354.1	862.8	55177.273	True	5.00	1.801	6.27	1.000	8.000	8.269	3	30	
CAL5	258300.3	1044.0	55378.447	True	5.00	4.664	6.26	1.000	20.000	21.421	7	30	
CAL6	599280.4	865.2	56004.042	True	5.00	10.701	6.27	1.000	50.000	49.142	-2	30	
CAL7	1148933.0	1266.7	53297.846	True	5.00	21.557	6.26	1.000	100.000	98.999	-1	30	

APPROVED
By MCD at 3:23 pm, 1/10/19

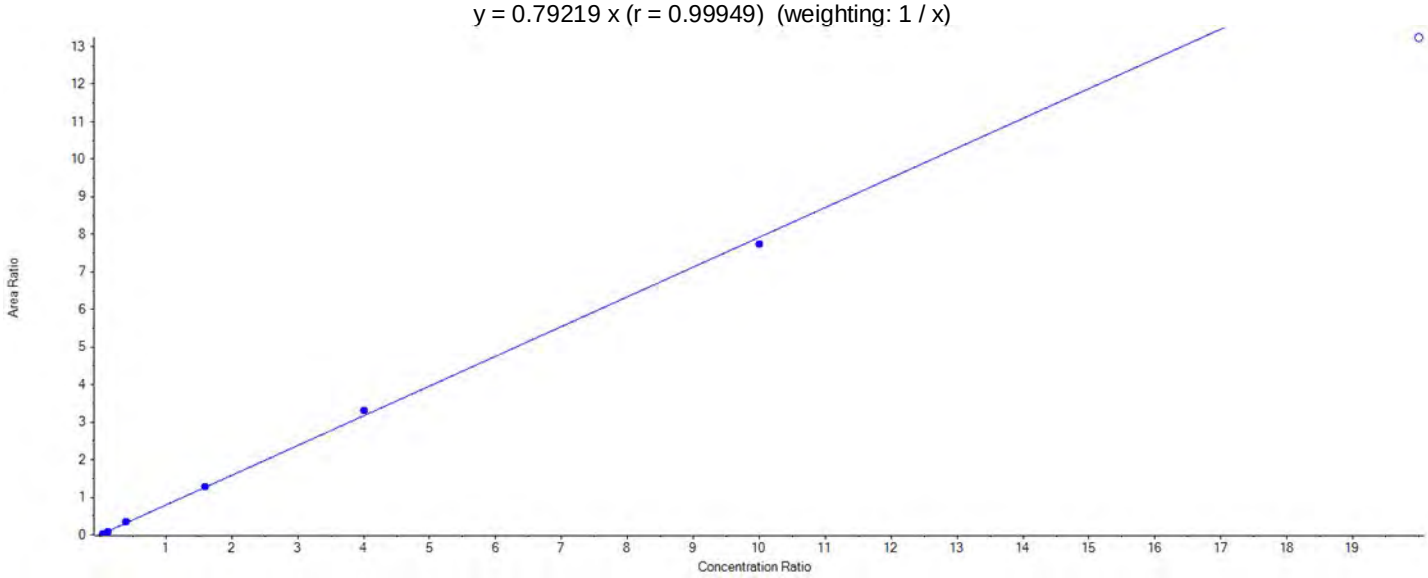
REVIEWED
By ucmr at 3:21 pm, 1/25/19

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV12DCAL **QMethod Name:** 18AUG20QM
Result Table: 18NOV12DCAL_Updated1/10/2019 3:19:00 PM **Acquisition Method:** 18AUG13_3uL.dam

PFTrDA

y = 0.79219 x (r = 0.99949) (weighting: 1 / x)



Component Calibration Verification

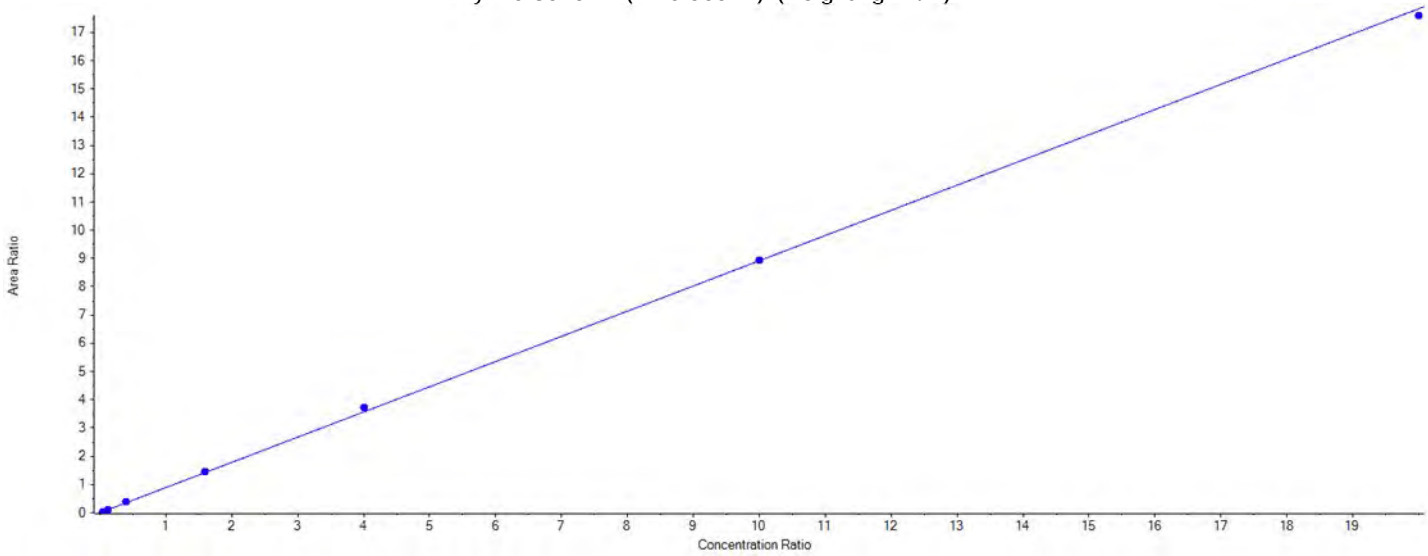
Sample Name	PFTrDA Area	S/N	13C2-PFDoDA Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	20185.1	68.6	545413.193	True	5.00	0.037	6.25	1.030	0.200	0.234	17	30	
CAL2	47991.3	109.2	532175.345	True	5.00	0.090	6.26	1.030	0.600	0.569	-5	30	
CAL3	184322.9	257.3	549542.276	True	5.00	0.335	6.26	1.030	2.000	2.117	6	30	
CAL4	674140.3	350.0	521514.091	True	5.00	1.293	6.25	1.030	8.000	8.159	2	30	
CAL5	1679407.2	589.3	507556.819	True	5.00	3.309	6.24	1.030	20.000	20.884	4	30	
CAL6	3691733.8	935.9	477105.492	True	5.00	7.738	6.26	1.030	50.000	48.838	-2	30	
CAL7	6281239.0	1061.9	474393.787	False	5.00	13.241	6.24	1.030	100.000	83.569	-16	30	

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV12DCAL **QMethod Name:** 18AUG20QM
Result Table: 18NOV12DCAL_Updated1/10/2019 3:19:00 PM **Acquisition Method:** 18AUG13_3uL.dam

PFTeDA

y = 0.89197 x (r = 0.99974) (weighting: 1 / x)



Component Calibration Verification

Sample Name	PFTeDA Area	S/N	13C2-PFTeDA Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	16357.5	210.0	410633.036	True	5.00	0.040	6.43	1.000	0.200	0.223	12	30	
CAL2	40236.5	281.3	394146.239	True	5.00	0.102	6.43	1.000	0.600	0.572	-5	30	
CAL3	156439.9	700.6	393544.938	True	5.00	0.398	6.43	1.000	2.000	2.228	11	30	
CAL4	571926.7	1105.3	392356.634	True	5.00	1.458	6.43	1.000	8.000	8.171	2	30	
CAL5	1418276.7	1705.5	379571.560	True	5.00	3.737	6.42	1.000	20.000	20.945	5	30	
CAL6	3149020.2	2109.2	352892.214	True	5.00	8.923	6.43	1.000	50.000	50.021	0	30	
CAL7	6092875.7	2023.1	346256.589	True	5.00	17.596	6.42	1.000	100.000	98.638	-1	30	

APPROVED
By MCD at 3:23 pm, 1/10/19

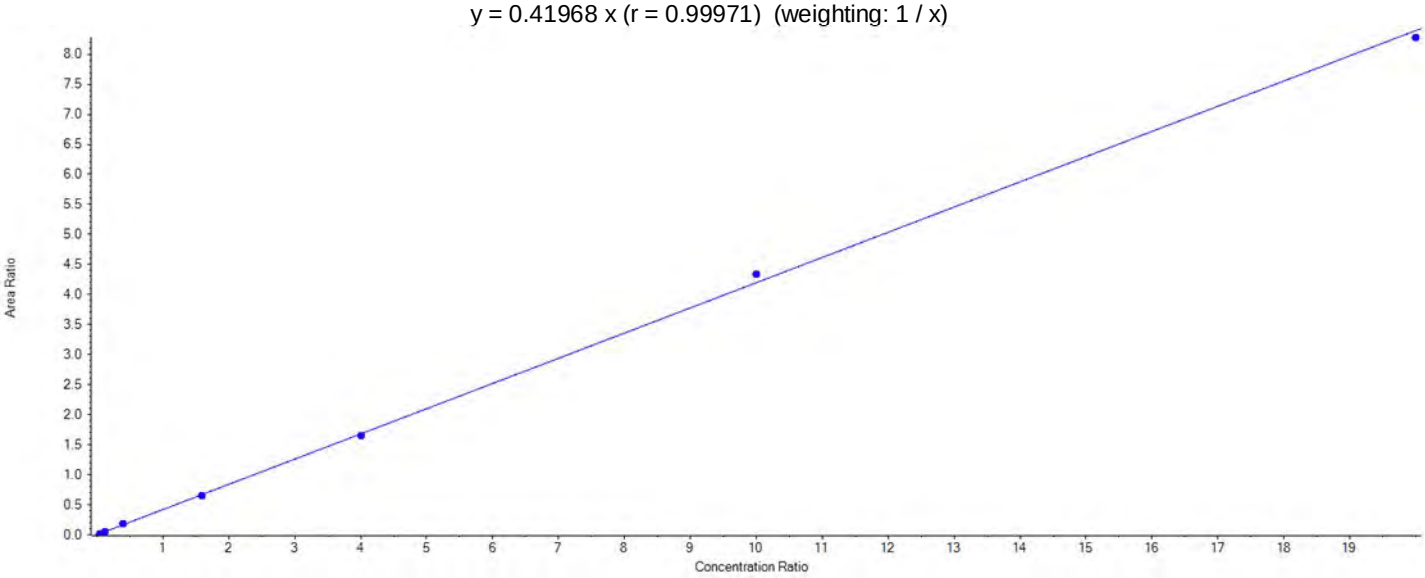
REVIEWED
By ucmr at 3:21 pm, 1/25/19

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV12DCAL **QMethod Name:** 18AUG20QM
Result Table: 18NOV12DCAL_Updated1/10/2019 3:19:00 PM **Acquisition Method:** 18AUG13_3uL.dam

PFHxDA

y = 0.41968 x (r = 0.99971) (weighting: 1 / x)



Component Calibration Verification

Sample Name	PFHxDA Area	S/N	13C2-PFTeDA Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	7976.0	221.5	410633.036	True	5.00	0.019	6.73	1.050	0.200	0.231	16	30	
CAL2	19006.4	621.9	394146.239	True	5.00	0.048	6.74	1.050	0.600	0.575	-4	30	
CAL3	69655.1	986.8	393544.938	True	5.00	0.177	6.74	1.050	2.000	2.109	5	30	
CAL4	256654.3	1362.8	392356.634	True	5.00	0.654	6.73	1.050	8.000	7.793	-3	30	
CAL5	627350.7	1919.3	379571.560	True	5.00	1.653	6.72	1.050	20.000	19.691	-2	30	
CAL6	1533920.2	4020.8	352892.214	True	5.00	4.347	6.74	1.050	50.000	51.786	4	30	
CAL7	2866097.3	3342.9	346256.589	True	5.00	8.277	6.72	1.050	100.000	98.615	-1	30	

APPROVED
By MCD at 3:23 pm, 1/10/19

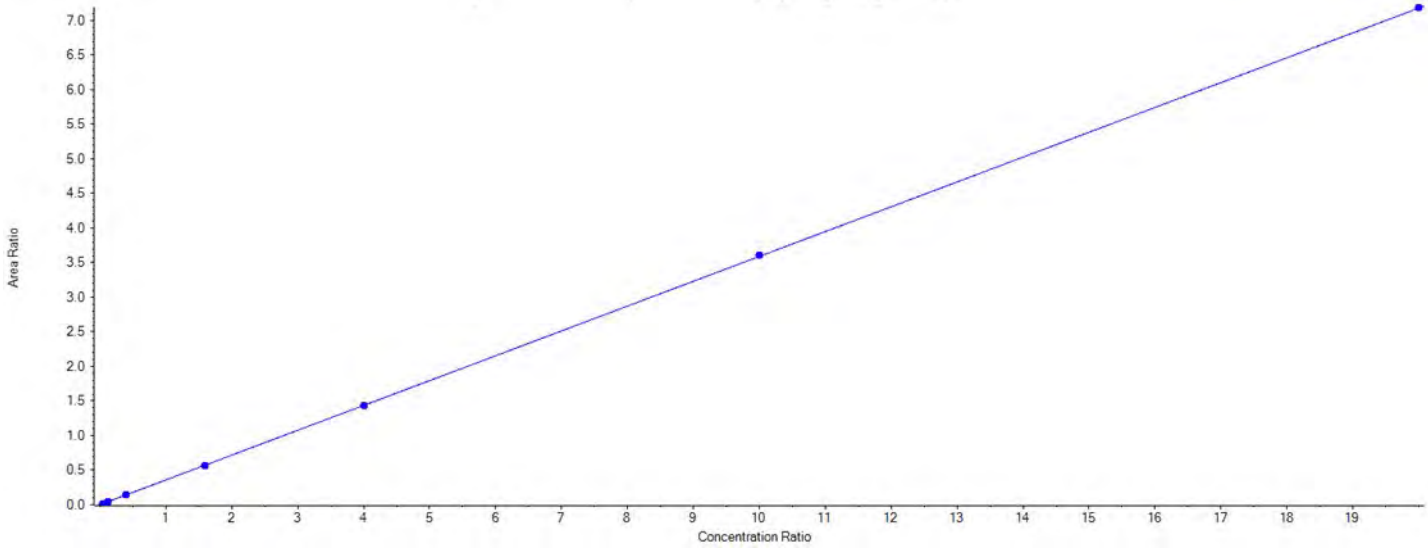
REVIEWED
By ucmr at 3:21 pm, 1/25/19

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV12DCAL **QMethod Name:** 18AUG20QM
Result Table: 18NOV12DCAL_Updated1/10/2019 3:19:00 PM **Acquisition Method:** 18AUG13_3uL.dam

PFODA

y = 0.35901 x (r = 0.99996) (weighting: 1 / x)



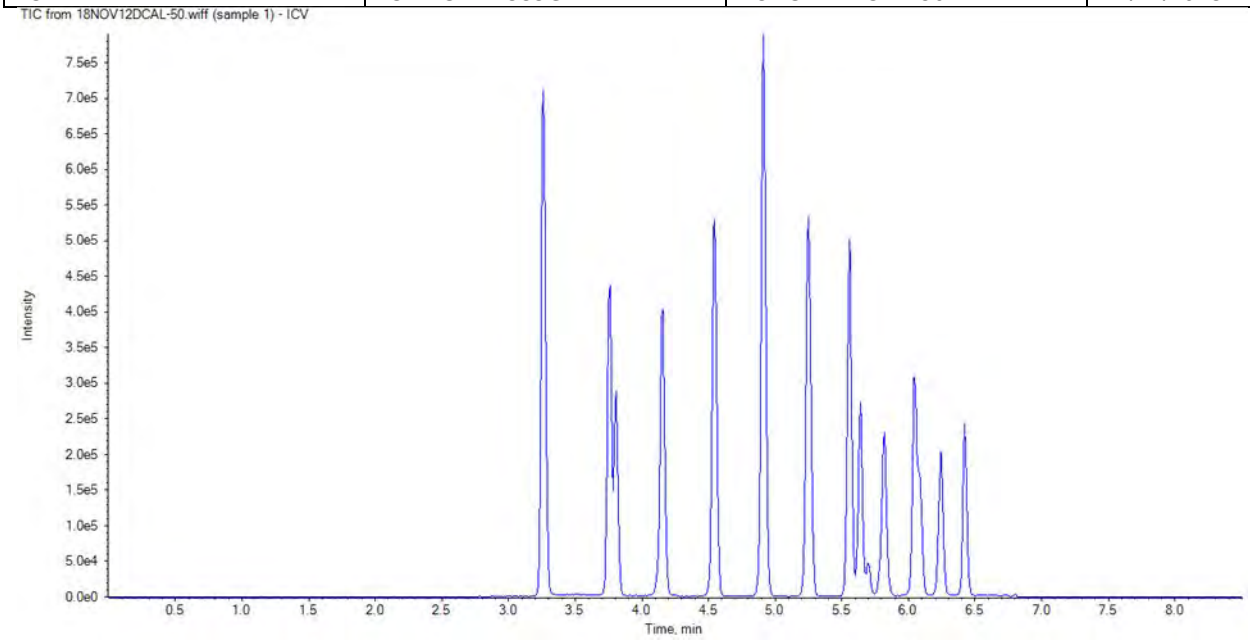
Component Calibration Verification

Sample Name	PFODA Area	S/N	13C2-PFTeDA Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	6020.3	470.6	410633.036	True	5.00	0.015	7.00	1.090	0.200	0.204	2	30	
CAL2	14955.6	635.0	394146.239	True	5.00	0.038	7.00	1.090	0.600	0.528	-12	30	
CAL3	57796.0	1304.8	393544.938	True	5.00	0.147	7.00	1.090	2.000	2.045	2	30	
CAL4	219359.6	2291.9	392356.634	True	5.00	0.559	6.99	1.090	8.000	7.786	-3	30	
CAL5	544296.5	2946.8	379571.560	True	5.00	1.434	6.98	1.090	20.000	19.971	0	30	
CAL6	1270897.6	3196.4	352892.214	True	5.00	3.601	7.00	1.090	50.000	50.157	0	30	
CAL7	2488863.6	3668.3	346256.589	True	5.00	7.188	6.98	1.090	100.000	100.107	0	30	

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV12DCAL **QMethod Name:** 18AUG20QM
Result Table: 18NOV12DCAL_Updated1/10/2019 3:19:00 PM **Acquisition Method:** 18AUG13_3uL.dam

Sample Name	Sample ID:	Sample File:	Acquisition Date:
ICV	ICVMODX1833G	18NOV12DCAL-50.wiff	11/12/2018 4:18:11 PM



Injection Standard Name	Inj Std Conc	Injection Std Peak Area	CAL3 Injection Standard Area	Injection Std %Diff	Injection Std %Diff Limit	Injection Std %Diff OOS
13C3-PFBA	5.000	655209.3	659926.2	-0.7	50	
13C2-PFOA	5.000	452726.2	450219.7	0.6	50	
13C4-PFOS	4.780	253010.3	249205.8	1.5	50	
13C2-PFDA	5.000	277002.7	278743.9	-0.6	50	

APPROVED
By MCD at 3:23 pm, 1/10/19

REVIEWED
By ucmr at 3:21 pm, 1/25/19

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV12DCAL **QMethod Name:** 18AUG20QM
Result Table: 18NOV12DCAL_Updated1/10/2019 3:19:00 PM **Acquisition Method:** 18AUG13_3uL.dam

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV12DCAL **QMethod Name:** 18AUG20QM
Result Table: 18NOV12DCAL_Updated1/10/2019 3:19:00 PM **Acquisition Method:** 18AUG13_3uL.dam

Sample Name	Sample ID:	Sample File:	Acquisition Date:
ICV	ICVMODX1833G	18NOV12DCAL-50.wiff	11/12/2018 4:18:11 PM

Analyte Name	Analyte Area	Ext Std Name	Ext Std Area	Ext Std Con	Area Ratio	RT (min)	RRT	Spec Amt	Calc Amt	% Diff	% Diff Lim	% Diff OOS
PFBA	270820.6	13C4-PFBA	715834.413	5.00	0.378	3.26	1.00	2.000	2.096	5	30	
PFPeA	265646.8	13C5-PFPeA	699482.188	5.00	0.380	3.76	1.00	2.000	2.198	10	30	
PFBS	150059.6	13C3-PFBS	394903.376	4.65	0.380	3.80	1.00	1.769	1.808	2	30	
4:2-FTS	N/A	13C2-4:2-FTS	47297.290	4.67	N/A	N/A	N/A	0.000	N/A		30	
PFHxA	328694.3	13C5-PFHxA	613579.433	5.00	0.536	4.15	1.00	2.000	2.237	12	30	
PFPeS	N/A	13C3-PFBS	394903.376	4.65	N/A	N/A	N/A	0.000	N/A		30	
PFHpA	316975.3	13C4-PFHpA	485394.910	5.00	0.653	4.54	1.00	2.000	2.165	8	30	
PFHxS	115564.2	13C3-PFHxS	304897.777	4.73	0.379	4.55	1.00	1.890	1.838	-3	30	
6:2-FTS	N/A	13C2-6:2-FTS	31532.780	4.75	N/A	N/A	N/A	0.000	N/A		30	
PFHpS	118318.7	13C3-PFHxS	304897.777	4.73	0.388	4.91	1.08	1.900	2.043	8	30	
PFOA	332094.4	13C8-PFOA	843573.278	5.00	0.394	4.91	1.00	2.000	2.103	5	30	
PFOS	100952.5	13C8-PFOS	266211.354	4.78	0.379	5.24	1.00	1.910	1.658	-13	30	
PFNA	271240.4	13C9-PFNA	458821.538	5.00	0.591	5.26	1.00	2.000	2.132	7	30	
PFNS	N/A	13C8-PFOS	266211.354	4.78	N/A	N/A	N/A	0.000	N/A		30	
PFDA	224279.7	13C6-PFDA	590290.290	5.00	0.380	5.56	1.00	2.000	2.014	1	30	
8:2-FTS	N/A	13C2-8:2-FTS	22188.868	4.79	N/A	N/A	N/A	0.000	N/A		30	
PFOSA	N/A	13C8-PFOSA	587080.139	5.00	N/A	N/A	N/A	0.000	N/A		30	
NMeFOSAA	30591.9	d3-NMeFOSAA	70133.206	5.00	0.436	5.70	1.00	2.000	2.465	23	30	
PFDS	52860.9	13C8-PFOS	266211.354	4.78	0.199	5.79	1.11	1.930	1.799	-7	30	
PFUnDA	183511.3	13C7-PFUnDA	228363.909	5.00	0.804	5.82	1.00	2.000	2.101	5	30	
NEtFOSAA	26149.3	d5-NEtFOSAA	59551.262	5.00	0.439	5.83	1.00	2.000	2.302	15	30	
PFDoDA	185295.0	13C2-PFDoDA	495858.058	5.00	0.374	6.05	1.00	2.000	1.903	-5	30	
10:2-FTS	N/A	13C2-8:2-FTS	22188.868	4.79	N/A	N/A	N/A	0.000	N/A		30	
NMePFOSAE	N/A	d7-NMePFOSAE	299185.381	5.00	N/A	N/A	N/A	0.000	N/A		30	
NMePFOSA	N/A	d3-NMePFOSA	75186.885	5.00	N/A	N/A	N/A	0.000	N/A		30	
PFDoS	N/A	13C8-PFOS	266211.354	4.78	N/A	N/A	N/A	0.000	N/A		30	
NEtPFOSAE	N/A	d9-NEtPFOSAE	255149.770	5.00	N/A	N/A	N/A	0.000	N/A		30	
NEtPFOSA	N/A	d5-NEtPFOSA	53596.168	5.00	N/A	N/A	N/A	0.000	N/A		30	
PFTrDA	165153.1	13C2-PFDoDA	495858.058	5.00	0.333	6.25	1.03	2.000	2.102	5	30	

APPROVED
By MCD at 3:23 pm, 1/10/19

REVIEWED
By ucmr at 3:21 pm, 1/25/19

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV12DCAL **QMethod Name:** 18AUG20QM
Result Table: 18NOV12DCAL_Updated1/10/2019 3:19:00 PM **Acquisition Method:** 18AUG13_3uL.dam

PFTeDA	135651.0	13C2-PFTeDA	365300.216	5.00	0.371	6.42	1.00	2.000	2.082	4	30	
PFHxDA	N/A	13C2-PFTeDA	365300.216	5.00	N/A	N/A	N/A	0.000	N/A		30	
PFODA	N/A	13C2-PFTeDA	365300.216	5.00	N/A	N/A	N/A	0.000	N/A		30	

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Sample Name:	CAL1			**Data File:**		18NOV12DCAL-42.wiff
Sample ID:	CALBRN11833C			**Acquis Date:**		2018-11-12T15:05:54
Sample Type:	Standard			**Instrument:**		LM27631
Vial Position:	3			**Acquis Method:**		18AUG13_3uL.dam
Injection Vol:	3.00			**Result Table:**		18NOV12DCAL
QMethod File:	18AUG20QM			**ICAL Name:**		18NOV12DCAL
Batch Number:	N\A			**Operator:**		MCD7824
Sample Wt.:	1.00000			**Dilution Factor:**		1.00
Sample Vol.:	1.000			**Prep Factor:**		1.000

Injection Standard Peak Table

Injection Standard Area Reference File: 18NOV12DCAL-44

Injection Standard Name	Inj Std Conc	Injection Std Peak Area	Rreference Injection Standard Area	Injection Std %Diff	Injection Std %Diff Limit	Injection Std %Diff OOS
13C3-PFBA	5.0	676527.5	659926.2	3	50	
13C2-PFOA	5.0	474834.9	450219.7	5	50	
13C4-PFOS	4.8	265369.0	249205.8	6	50	
13C2-PFDA	5.0	281654.8	278743.9	1	50	

Extraction Standard Peak Table

Extraction Standard Name	Ext Std Area	Inj Std Name	Inj Std Area	Area Ratio	Ext Std Conc	Ext Std Result	Ext Std %REC	Ext Std %REC Limit	Ext Std OOS
E13C4-PFBA	763334.3	13C3-PFBA	676527.5	1.128	5.000	5.059	101	70-130	
E13C5-PFPeA	771179.4	13C3-PFBA	676527.5	1.140	5.000	5.113	102	70-130	
E13C3-PFBS	445963.4	13C3-PFBA	676527.5	0.659	4.650	4.653	100	70-130	
E13C2-4:2-FTS	51494.6	13C2-PFOA	474834.9	0.108	4.670	4.830	103	70-130	
E13C5-PFHxA	664975.9	13C2-PFOA	474834.9	1.400	5.000	5.059	101	70-130	
E13C3-PFHxS	327944.5	13C2-PFOA	474834.9	0.691	4.730	4.739	100	70-130	
E13C4-PFHpA	528473.5	13C2-PFOA	474834.9	1.113	5.000	5.014	100	70-130	
E13C2-6:2-FTS	35455.2	13C2-PFOA	474834.9	0.075	4.750	4.996	105	70-130	
E13C8-PFOA	912537.7	13C2-PFOA	474834.9	1.922	5.000	5.295	106	70-130	
E13C8-PFOS	283127.4	13C4-PFOS	265369.0	1.067	4.780	4.727	99	70-130	
E13C9-PFNA	479931.4	13C4-PFOS	265369.0	1.809	5.000	5.042	101	70-130	
E13C6-PFDA	612577.4	13C2-PFDA	281654.8	2.175	5.000	5.075	102	70-130	
E13C2-8:2-FTS	26445.5	13C2-PFDA	281654.8	0.094	4.790	4.683	98	70-130	
E13C8-PFOSA	664489.9	13C2-PFDA	281654.8	2.359	5.000	5.230	105	70-130	
Ed3-NMeFOSAA	86914.5	13C2-PFDA	281654.8	0.309	5.000	5.570	111	70-130	
E13C7-PFUnDA	256402.0	13C2-PFDA	281654.8	0.910	5.000	5.285	106	70-130	
Ed5-NEtFOSAA	80597.2	13C2-PFDA	281654.8	0.286	5.000	6.054	121	70-130	
E13C2-PFDoDA	545413.2	13C2-PFDA	281654.8	1.936	5.000	5.028	101	70-130	
Ed7-NMePFOSAE	349854.5	13C2-PFDA	281654.8	1.242	5.000	5.375	108	70-130	
Ed3-NMePFOSA	78396.5	13C2-PFDA	281654.8	0.278	5.000	5.057	101	70-130	
Ed9-NEtPFOSAE	280311.6	13C2-PFDA	281654.8	0.995	5.000	5.176	104	70-130	
Ed5-NEtPFOSA	63047.1	13C2-PFDA	281654.8	0.224	5.000	5.251	105	70-130	
E13C2-PFTeDA	410633.0	13C2-PFDA	281654.8	1.458	5.000	5.118	102	70-130	

APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

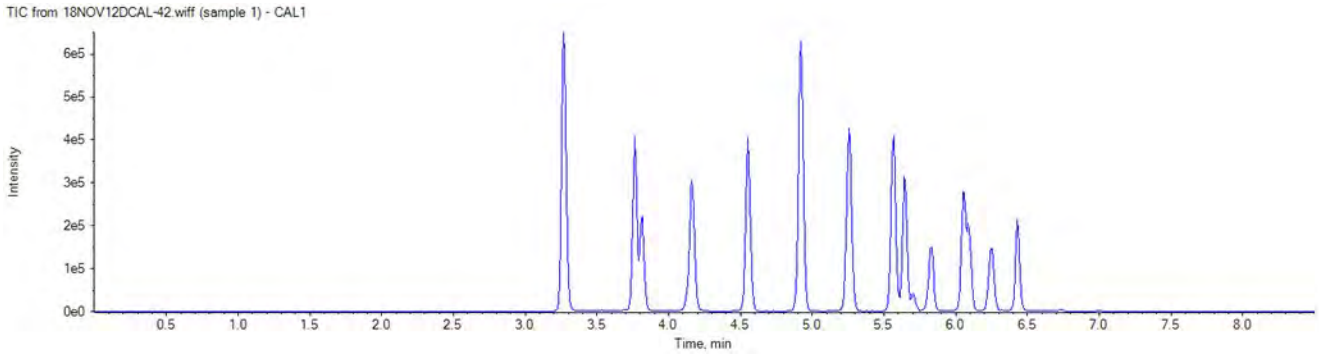
Analyte Quantitation Peak Table

Sample Name: CAL1 **Instrument Name:** LM27631 **File Name:** 18NOV12DCAL-42.wiff

Sample Wt	Sample Vol	Dilution Factor	PrepFactor
1.00000	1.000	1.00	1.000

Analyte Name	RT	RRT	Analyte Area Response	E	Int Typ	ES Name	ES RT	ES Area Response	Area Ratio	Sample Result (ng/g)
PFBA	3.27	1.000	32322.9		A	13C4-PFBA	3.27	763334.3	0.042	0.235
PFPeA	3.77	1.000	32633.1		M	13C5-PFPeA	3.76	771179.4	0.042	0.245
PFBS	3.81	1.000	18010.0		A	13C3-PFBS	3.81	445963.4	0.040	0.192
4:2-FTS	4.13	1.000	3636.4		A	13C2-4:2-FTS	4.13	51494.6	0.071	0.192
PFHxA	4.16	1.000	39108.2		A	13C5-PFHxA	4.16	664975.9	0.059	0.246
PFPeS	4.18	1.100	9620.1		A	13C3-PFBS	3.81	445963.4	0.022	0.209
PFHpA	4.55	1.000	37545.4		A	13C4-PFHpA	4.55	528473.5	0.071	0.235
PFHxS	4.55	1.000	12858.1		M	13C3-PFHxS	4.55	327944.5	0.039	0.190
6:2-FTS	4.90	1.000	2683.1		M	13C2-6:2-FTS	4.91	35455.2	0.076	0.183
PFHpS	4.91	1.080	13262.8		A	13C3-PFHxS	4.55	327944.5	0.040	0.213
PFOA	4.92	1.000	41468.0		A	13C8-PFOA	4.92	912537.7	0.045	0.243
PFOS	5.25	1.000	13088.5		M	13C8-PFOS	5.25	283127.4	0.046	0.202
PFNA	5.26	1.000	29660.1		A	13C9-PFNA	5.26	479931.4	0.062	0.223
PFNS	5.54	1.060	6846.6		A	13C8-PFOS	5.25	283127.4	0.024	0.169
PFDA	5.56	1.000	27488.6		A	13C6-PFDA	5.57	612577.4	0.045	0.238
8:2-FTS	5.57	1.000	2333.1		A	13C2-8:2-FTS	5.57	26445.5	0.088	0.206
PFOSA	5.64	1.000	29582.8		A	13C8-PFOSA	5.65	664489.9	0.045	0.217
NMeFOSAA	5.71	1.000	2306.4		A	d3-NMeFOSAA	5.70	86914.5	0.027	0.150
PFDS	5.80	1.100	5952.2		A	13C8-PFOS	5.25	283127.4	0.021	0.190
PFUnDA	5.82	1.000	23379.5		A	13C7-PFUnDA	5.83	256402.0	0.091	0.238
NEtFOSAA	5.85	1.000	2284.9		A	d5-NEtFOSAA	5.84	80597.2	0.028	0.149
PFDoDA	6.05	1.000	22143.6		A	13C2-PFDoDA	6.05	545413.2	0.041	0.207
10:2-FTS	6.07	1.090	1814.2		A	13C2-8:2-FTS	5.57	26445.5	0.069	0.229
NMePFOSAE	6.10	1.000	18013.9		A	d7-NMePFOSAE	6.09	349854.5	0.051	0.214
NMePFOSA	6.11	1.000	2376.3		A	d3-NMePFOSA	6.10	78396.5	0.030	0.150
PFDoS	6.22	1.190	3520.9		A	13C8-PFOS	5.25	283127.4	0.012	0.218
NEtPFOSAE	6.26	1.000	21005.9		A	d9-NEtPFOSAE	6.24	280311.6	0.075	0.240
NEtPFOSA	6.27	1.000	2846.2		M	d5-NEtPFOSA	6.26	63047.1	0.045	0.207
PFTrDA	6.25	1.030	20185.1		M	13C2-PFDoDA	6.05	545413.2	0.037	0.234
PFTeDA	6.43	1.000	16357.5		A	13C2-PFTeDA	6.43	410633.0	0.040	0.223
PFHxDA	6.73	1.050	7976.0		M	13C2-PFTeDA	6.43	410633.0	0.019	0.231
PFODA	7.00	1.090	6020.3		A	13C2-PFTeDA	6.43	410633.0	0.015	0.204

Total Ion Chromatogram

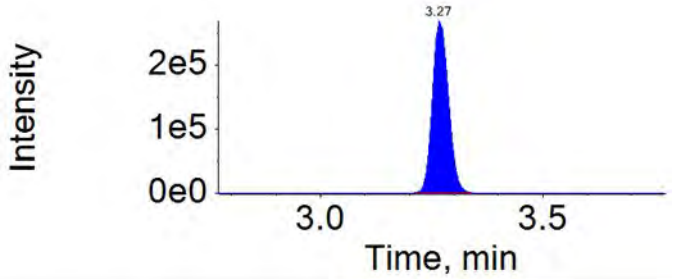


APPROVED
By MCD at 6:33 pm, 11/12/18

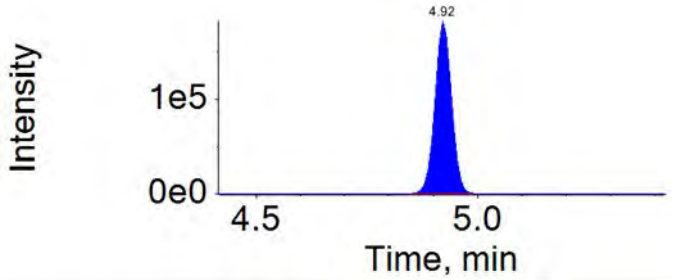
REVIEWED
By HMK at 10:53 am, 11/13/18

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

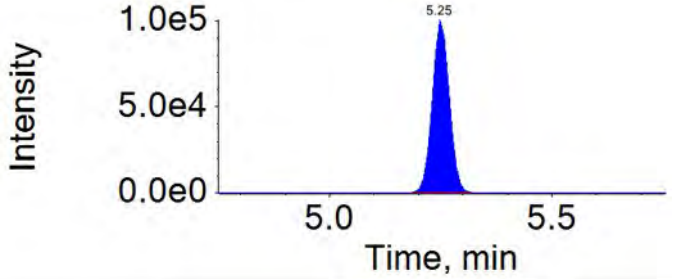
Injection Standard: 13C3-PFBA
216.0 / 172.0



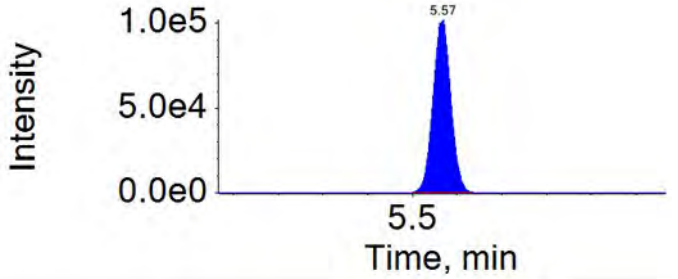
Injection Standard: 13C2-PFOA
415.0 / 370.0



Injection Standard: 13C4-PFOS
503.0 / 80.0

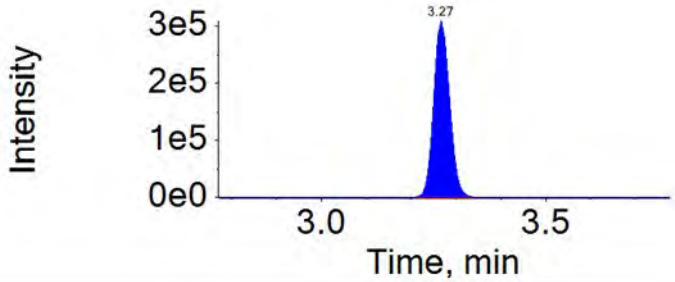


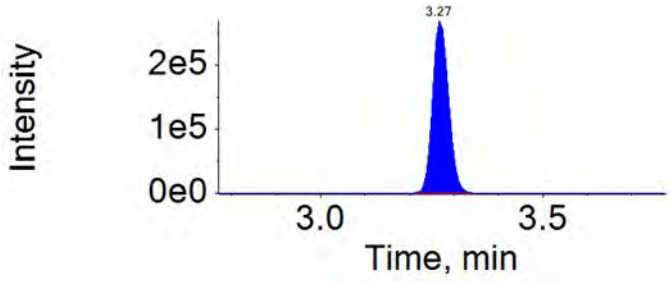
Injection Standard: 13C2-PFDA
515.0 / 470.0



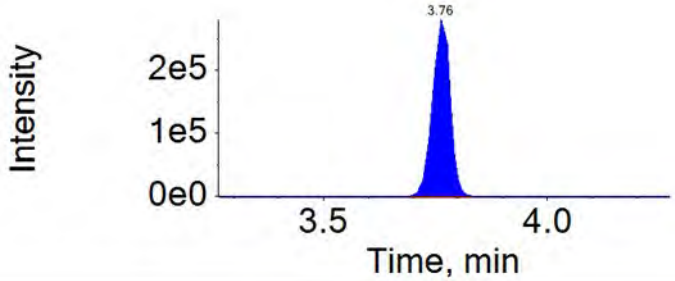
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

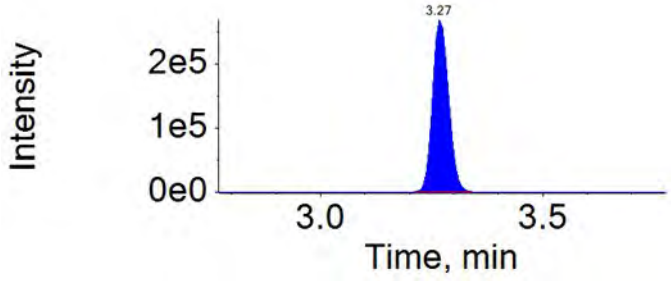
Extraction Standard: E13C4-PFBA	Injection Standard: 13C3-PFBA
217.0 / 172.0	216.0 / 172.0



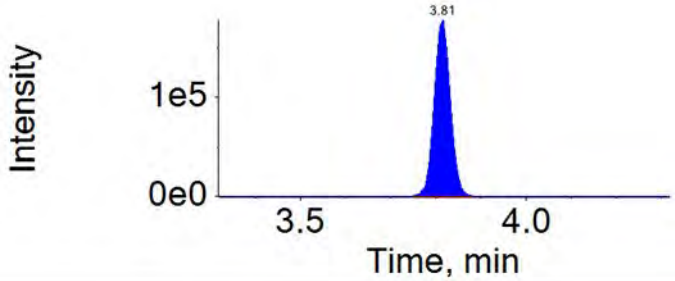


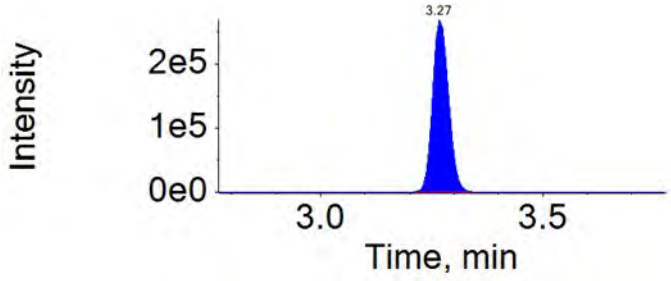
Extraction Standard: E13C5-PFPeA	Injection Standard: 13C3-PFBA
268.0 / 223.0	216.0 / 172.0



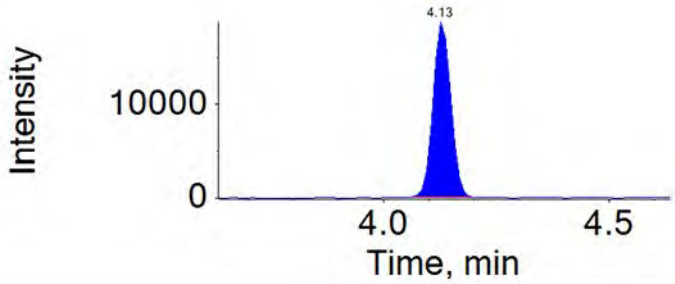


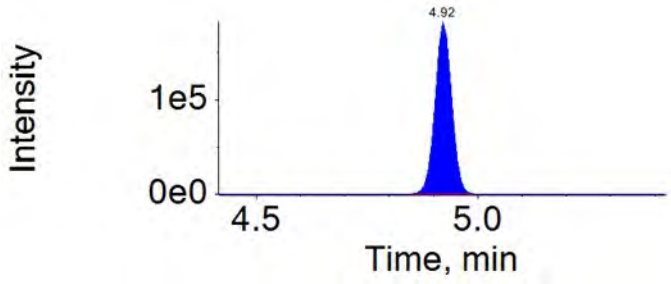
Extraction Standard: E13C3-PFBS	Injection Standard: 13C3-PFBA
302.0 / 80.0	216.0 / 172.0





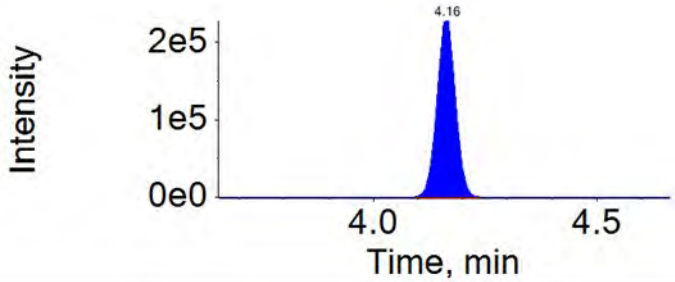
Extraction Standard: E13C2-4:2-FTS	Injection Standard: 13C2-PFOA
329.0 / 81.0	415.0 / 370.0

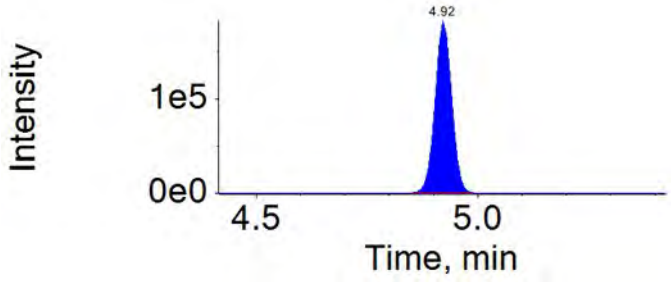




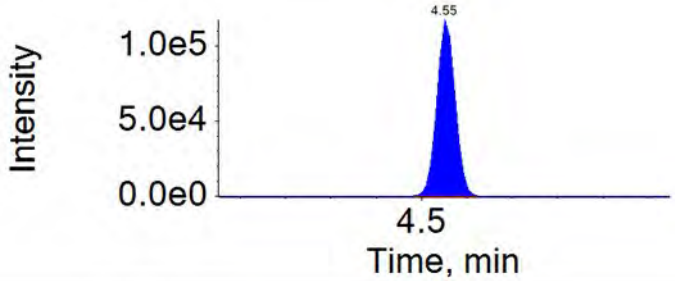
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

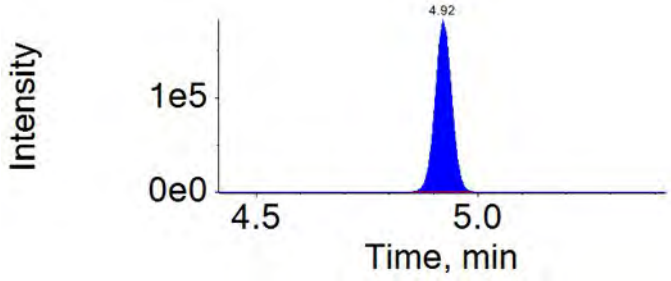
Extraction Standard: E13C5-PFHxA	Injection Standard: 13C2-PFOA
318.0 / 273.0	415.0 / 370.0



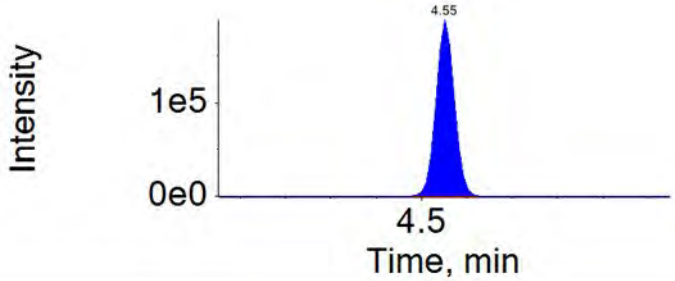


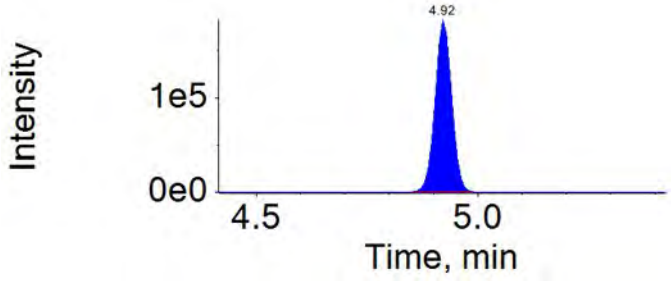
Extraction Standard: E13C3-PFHxS	Injection Standard: 13C2-PFOA
402.0 / 80.0	415.0 / 370.0



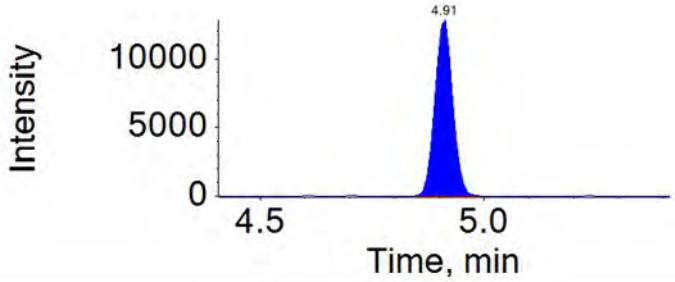


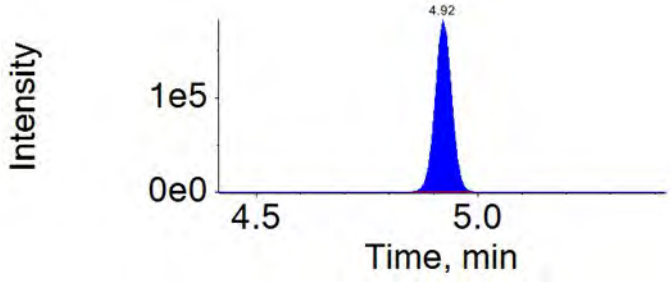
Extraction Standard: E13C4-PFHpA	Injection Standard: 13C2-PFOA
367.0 / 322.0	415.0 / 370.0





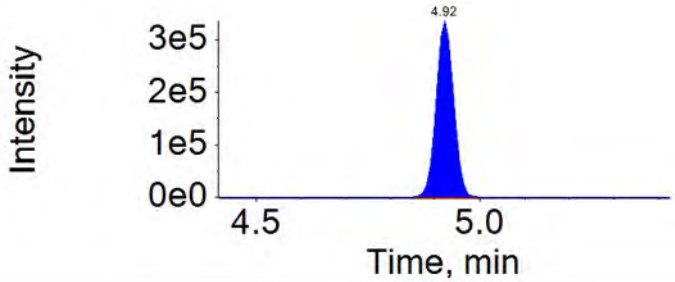
Extraction Standard: E13C2-6:2-FTS	Injection Standard: 13C2-PFOA
429.0 / 81.0	415.0 / 370.0

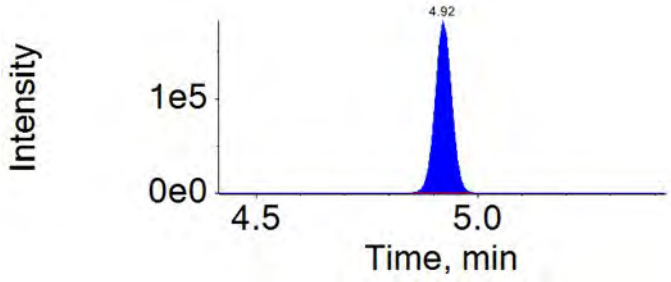




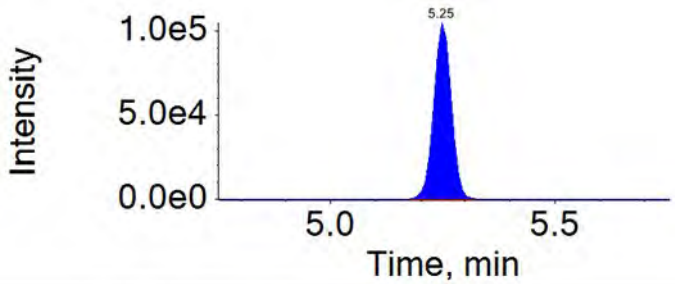
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

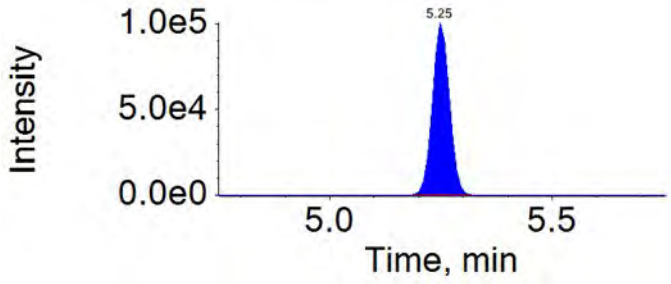
Extraction Standard: E13C8-PFOA	Injection Standard: 13C2-PFOA
421.0 / 376.0	415.0 / 370.0



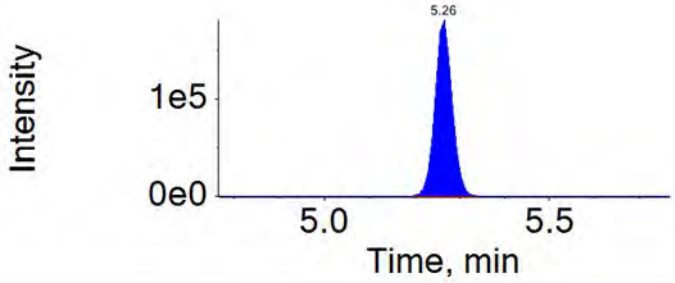


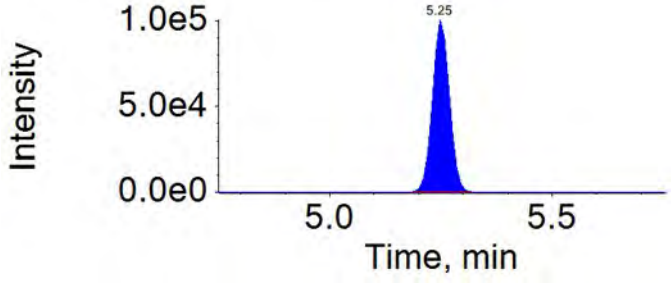
Extraction Standard: E13C8-PFOS	Injection Standard: 13C4-PFOS
507.0 / 80.0	503.0 / 80.0



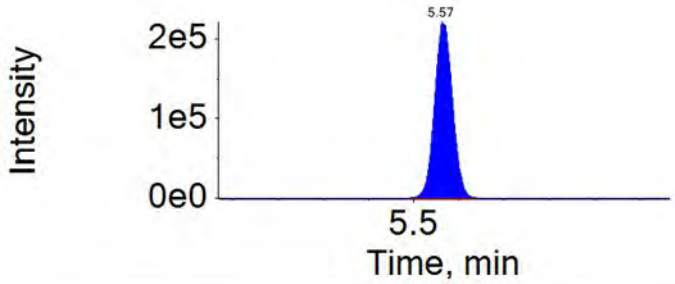


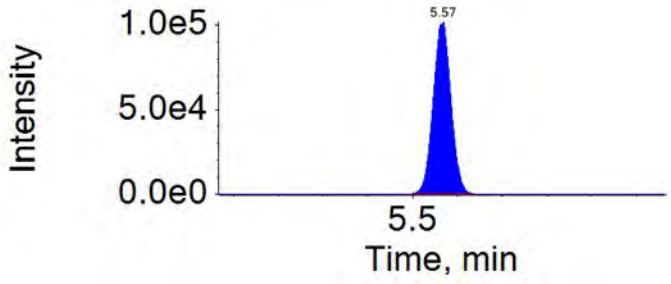
Extraction Standard: E13C9-PFNA	Injection Standard: 13C4-PFOS
472.0 / 427.0	503.0 / 80.0





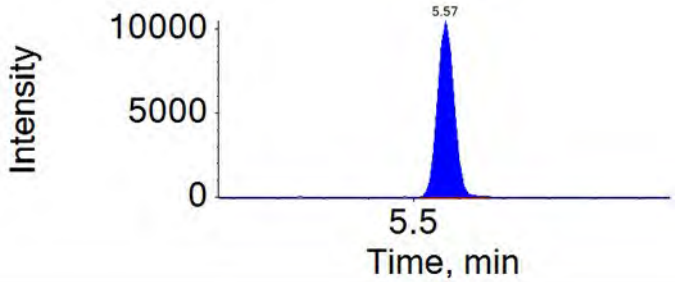
Extraction Standard: E13C6-PFDA	Injection Standard: 13C2-PFDA
519.0 / 474.0	515.0 / 470.0

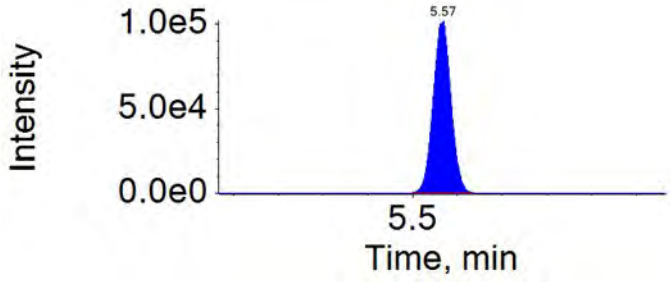




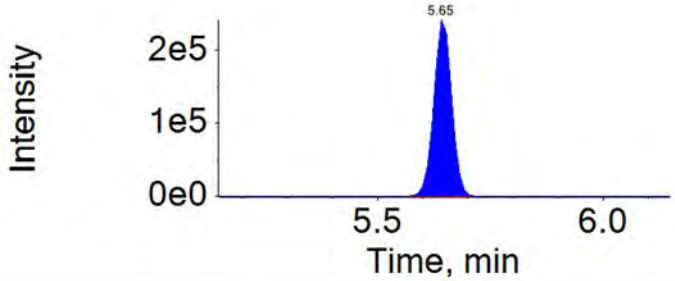
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

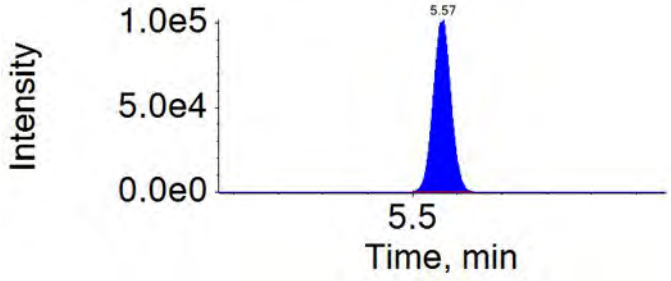
Extraction Standard: E13C2-8:2-FTS	Injection Standard: 13C2-PFDA
529.0 / 81.0	515.0 / 470.0



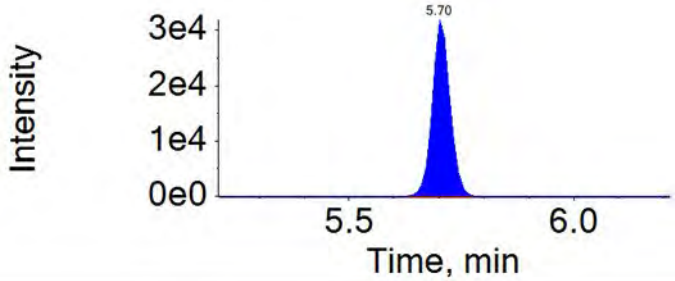


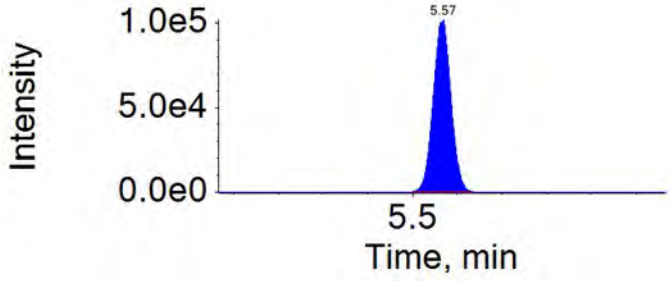
Extraction Standard: E13C8-PFOSA	Injection Standard: 13C2-PFDA
506.0 / 78.0	515.0 / 470.0



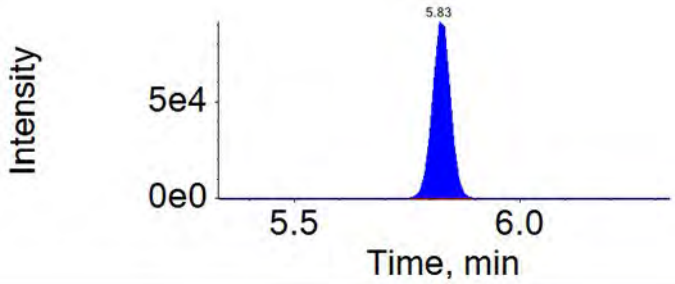


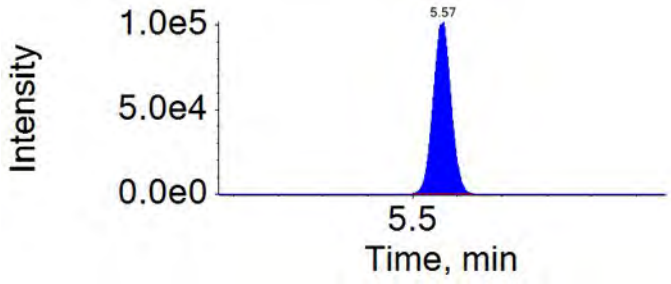
Extraction Standard: Ed3-NMeFOSAA	Injection Standard: 13C2-PFDA
573.0 / 419.0	515.0 / 470.0





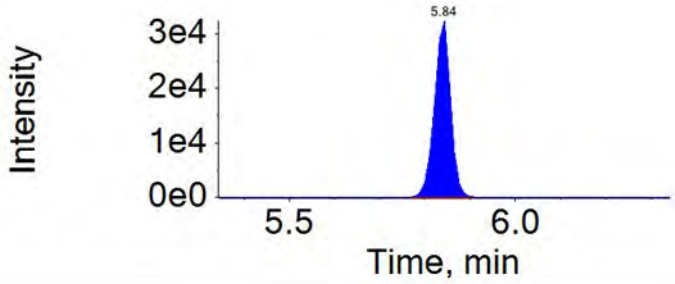
Extraction Standard: E13C7-PFUnDA	Injection Standard: 13C2-PFDA
570.0 / 525.0	515.0 / 470.0

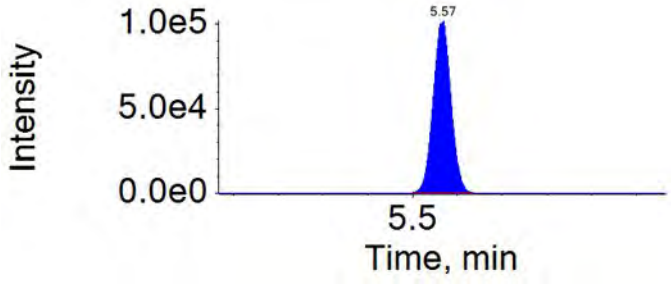




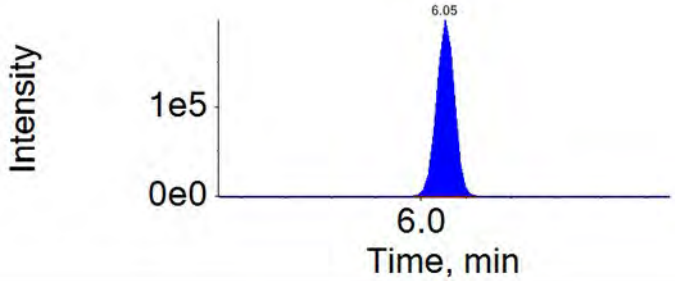
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

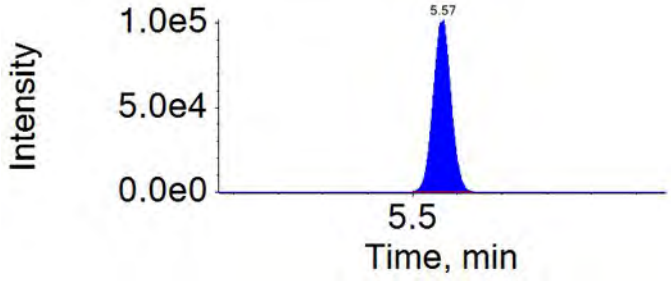
Extraction Standard: Ed5-NEtFOSAA	Injection Standard: 13C2-PFDA
589.0 / 419.0	515.0 / 470.0



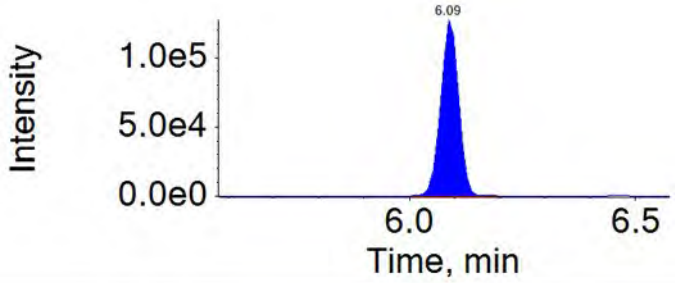


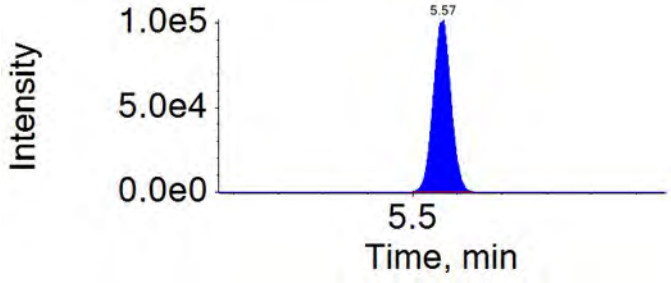
Extraction Standard: E13C2-PFDoDA	Injection Standard: 13C2-PFDA
615.0 / 570.0	515.0 / 470.0



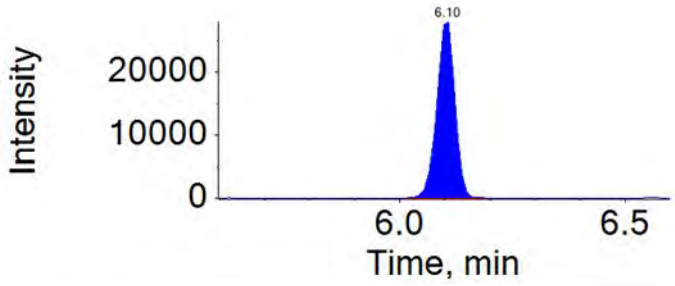


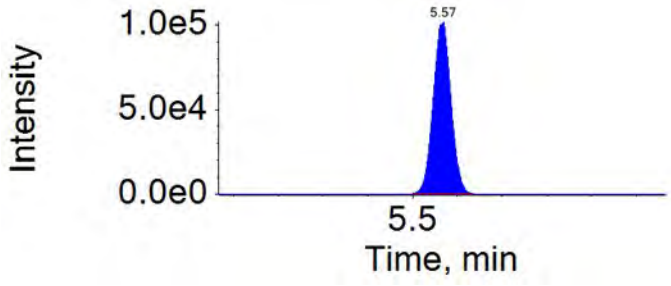
Extraction Standard: Ed7-NMePFOSAE	Injection Standard: 13C2-PFDA
623.0 / 59.0	515.0 / 470.0





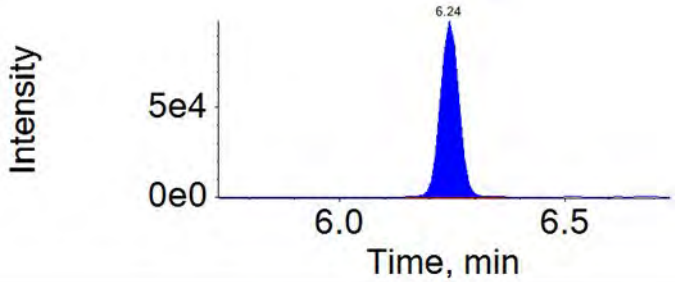
Extraction Standard: Ed3-NMePFOSA	Injection Standard: 13C2-PFDA
515.0 / 169.0	515.0 / 470.0

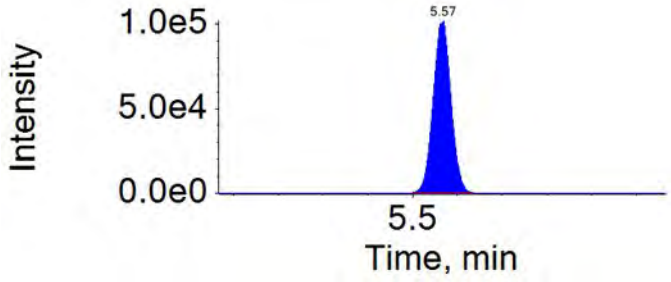




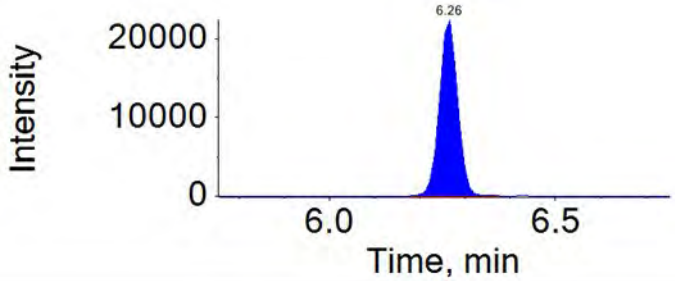
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

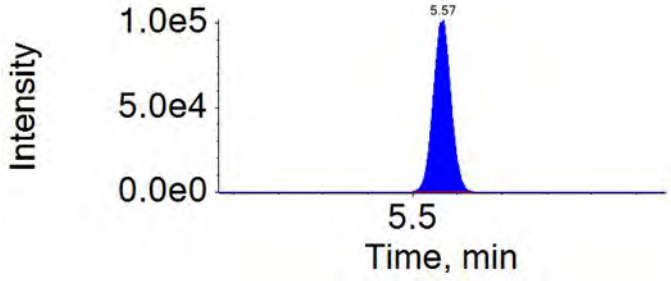
Extraction Standard: Ed9-NEtPFOSAE	Injection Standard: 13C2-PFDA
639.0 / 59.0	515.0 / 470.0



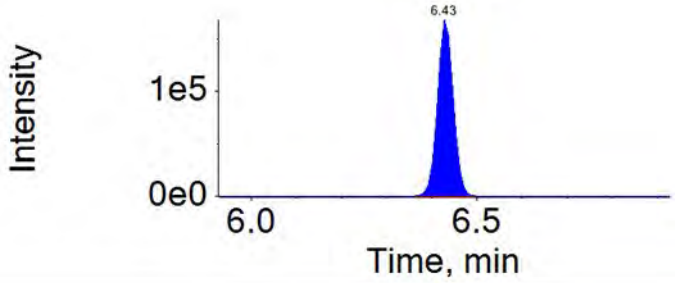


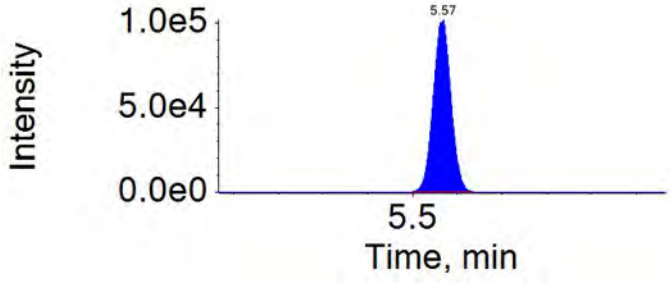
Extraction Standard: Ed5-NEtPFOSA	Injection Standard: 13C2-PFDA
531.0 / 169.0	515.0 / 470.0





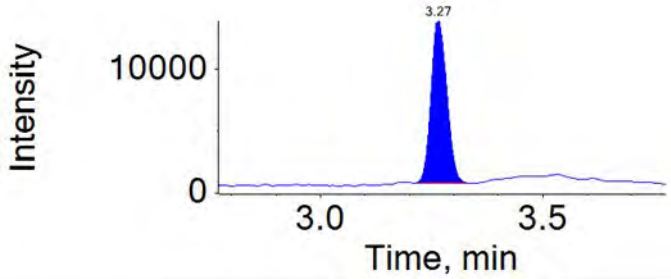
Extraction Standard: E13C2-PFTeDA	Injection Standard: 13C2-PFDA
715.0 / 670.0	515.0 / 470.0



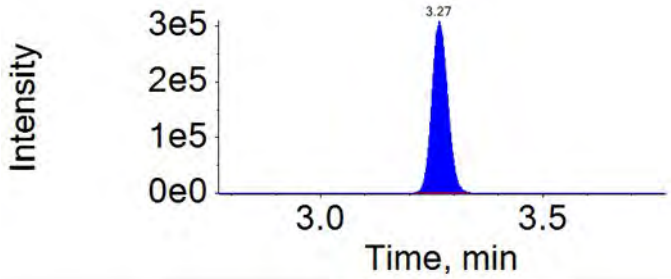


ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

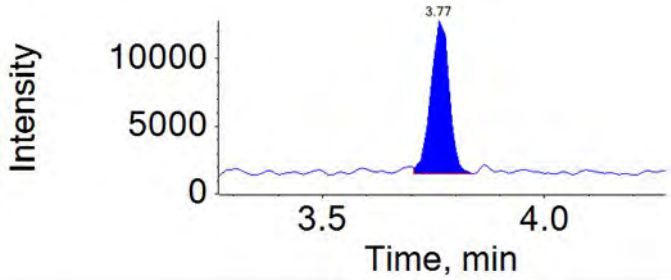
Analyte: PFBA
213.0 / 169.0



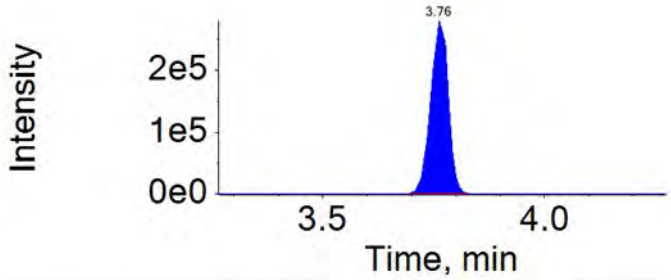
Extraction Standard: 13C4-PFBA
217.0 / 172.0



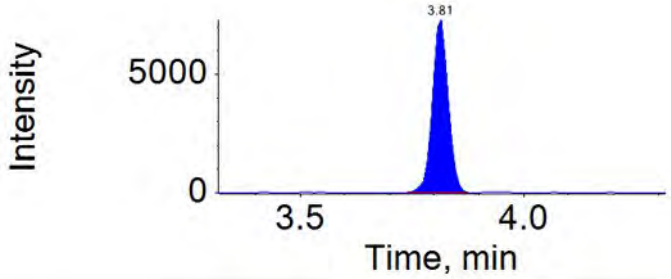
Analyte: PFPeA
263.0 / 219.0



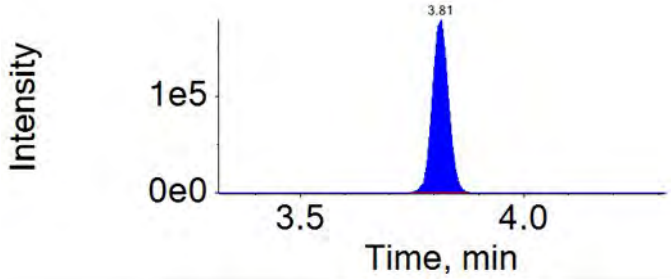
Extraction Standard: 13C5-PFPeA
268.0 / 223.0



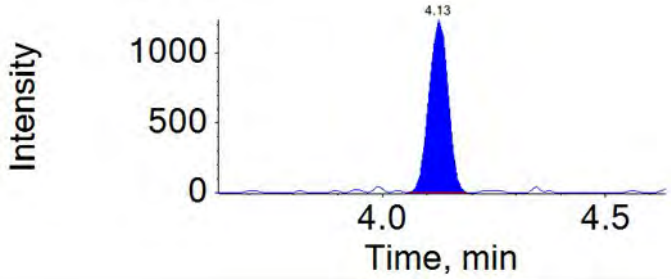
Analyte: PFBS
299.0 / 80.0



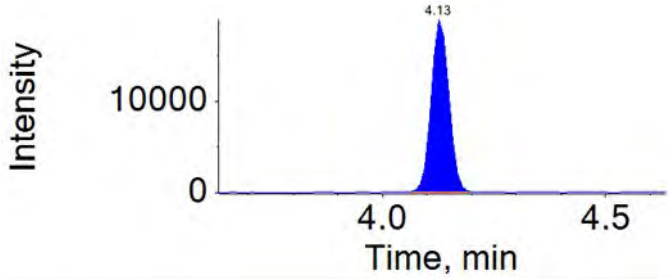
Extraction Standard: 13C3-PFBS
302.0 / 80.0



Analyte: 4:2-FTS
327.0 / 307.0



Extraction Standard: 13C2-4:2-FTS
329.0 / 81.0

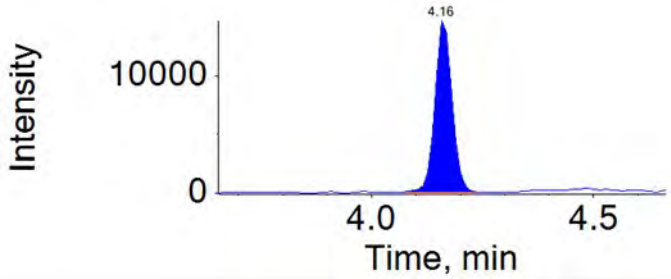


APPROVED
By MCD at 6:33 pm, 11/12/18

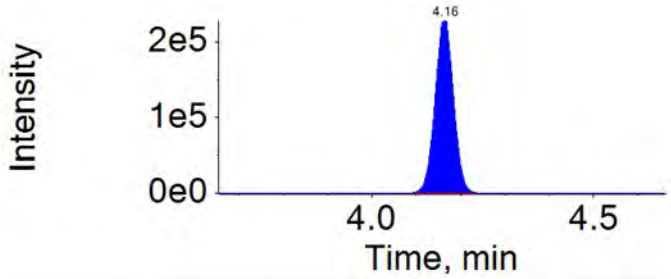
REVIEWED
By HMK at 10:53 am, 11/13/18

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

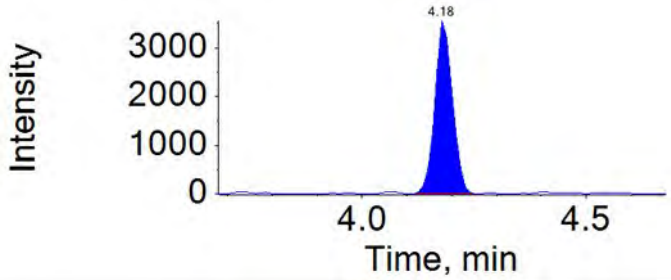
Analyte: PFHxA
313.0 / 269.0



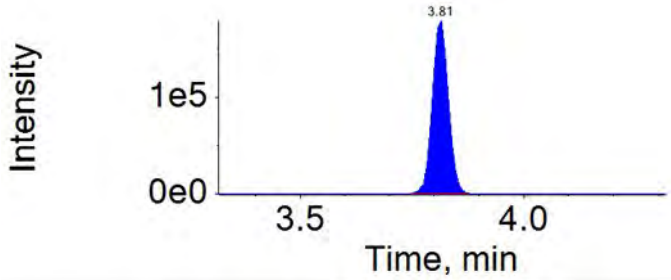
Extraction Standard: 13C5-PFHxA
318.0 / 273.0



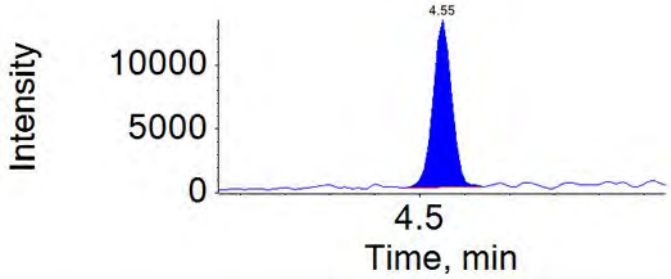
Analyte: PFPeS
349.0 / 80.0



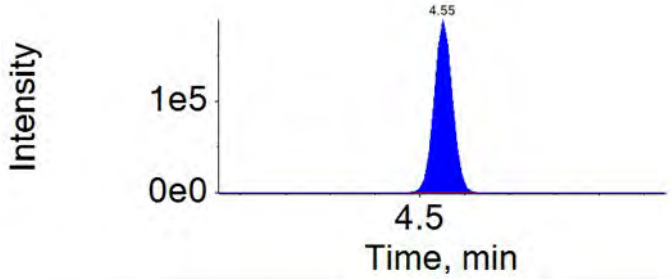
Extraction Standard: 13C3-PFBS
302.0 / 80.0



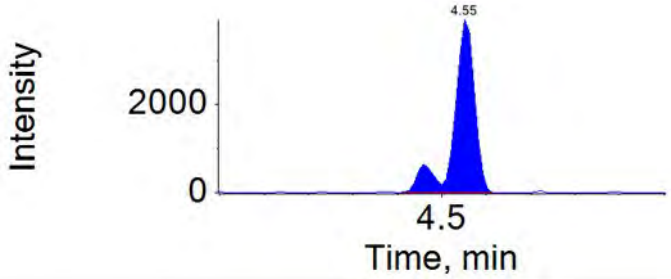
Analyte: PFHpA
363.0 / 319.0



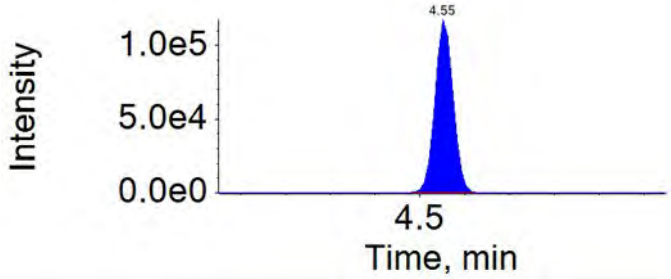
Extraction Standard: 13C4-PFHpA
367.0 / 322.0



Analyte: PFHxS
399.0 / 80.0



Extraction Standard: 13C3-PFHxS
402.0 / 80.0

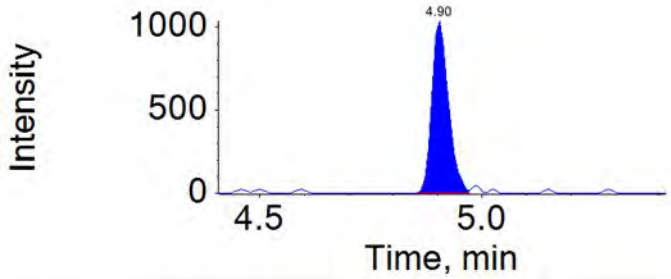


APPROVED
By MCD at 6:33 pm, 11/12/18

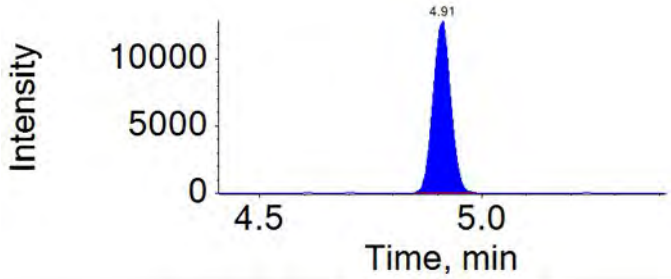
REVIEWED
By HMK at 10:53 am, 11/13/18

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

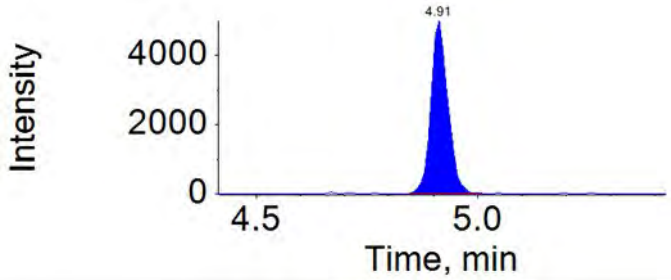
Analyte: 6:2-FTS
427.0 / 407.0



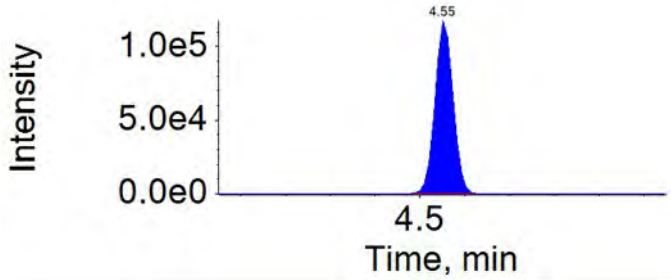
Extraction Standard: 13C2-6:2-FTS
429.0 / 81.0



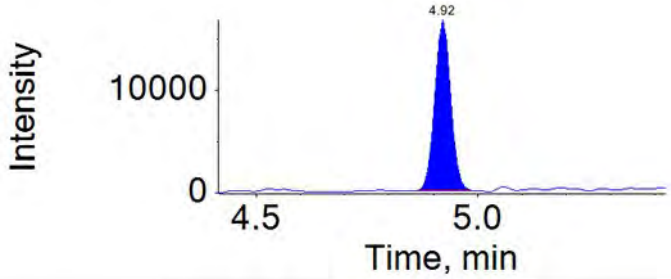
Analyte: PFHpS
449.0 / 80.0



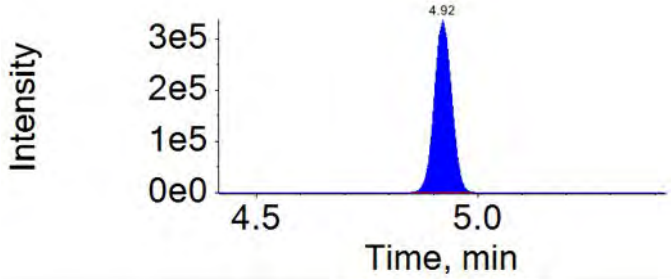
Extraction Standard: 13C3-PFHxS
402.0 / 80.0



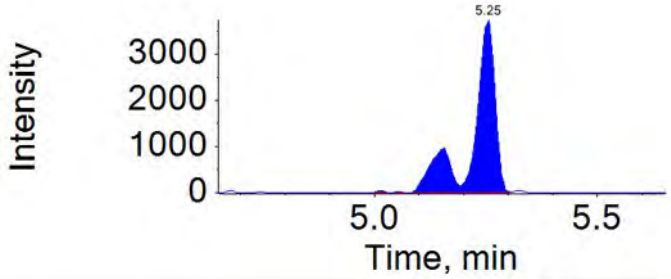
Analyte: PFOA
413.0 / 369.0



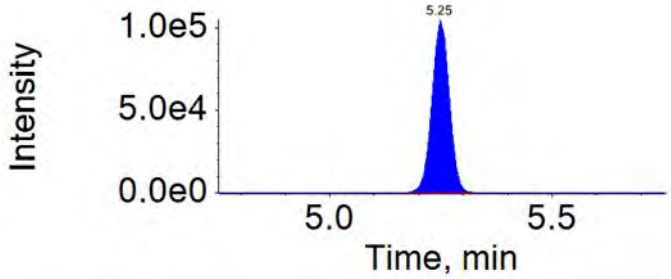
Extraction Standard: 13C8-PFOA
421.0 / 376.0



Analyte: PFOS
499.0 / 80.0



Extraction Standard: 13C8-PFOS
507.0 / 80.0

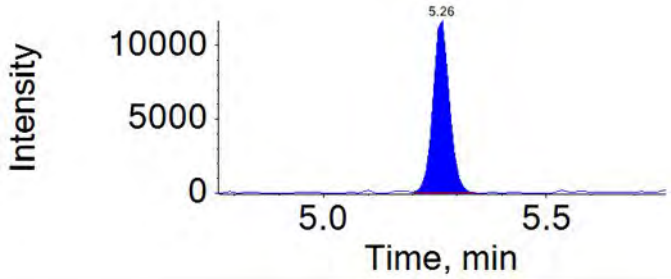


APPROVED
By MCD at 6:33 pm, 11/12/18

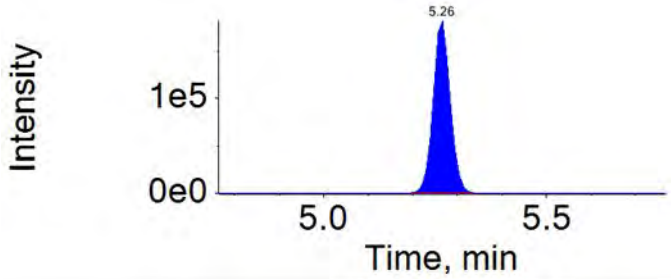
REVIEWED
By HMK at 10:53 am, 11/13/18

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

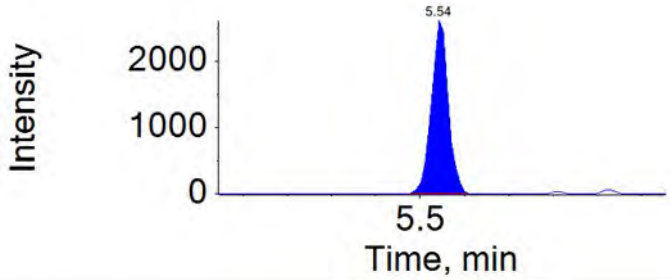
Analyte: PFNA
463.0 / 419.0



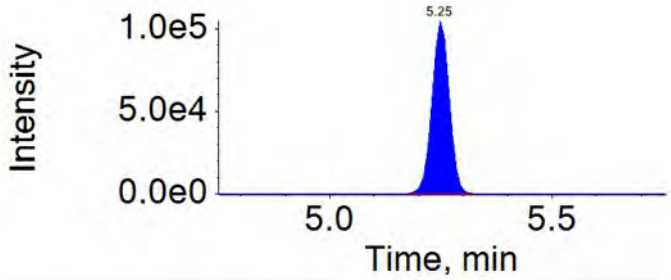
Extraction Standard: 13C9-PFNA
472.0 / 427.0



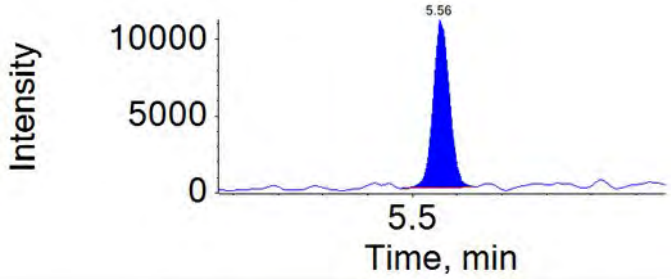
Analyte: PFNS
549.0 / 80.0



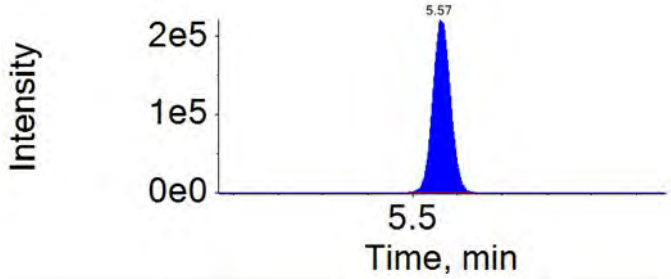
Extraction Standard: 13C8-PFOS
507.0 / 80.0



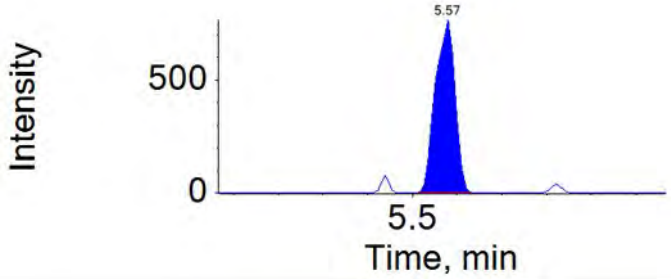
Analyte: PFDA
513.0 / 469.0



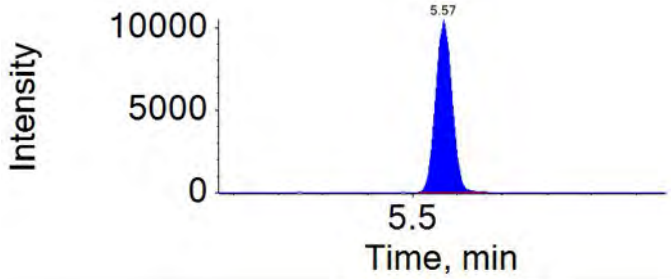
Extraction Standard: 13C6-PFDA
519.0 / 474.0



Analyte: 8:2-FTS
527.0 / 507.0



Extraction Standard: 13C2-8:2-FTS
529.0 / 81.0

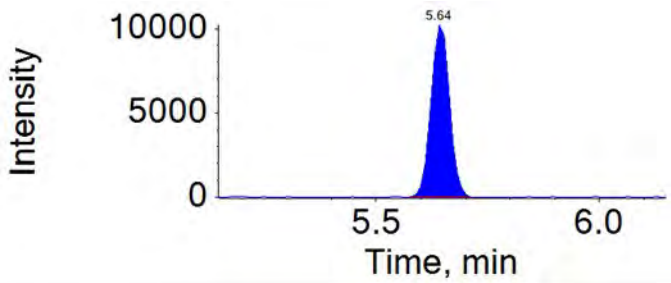


APPROVED
By MCD at 6:33 pm, 11/12/18

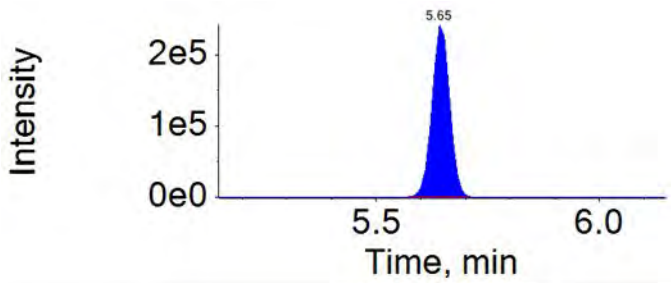
REVIEWED
By HMK at 10:53 am, 11/13/18

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

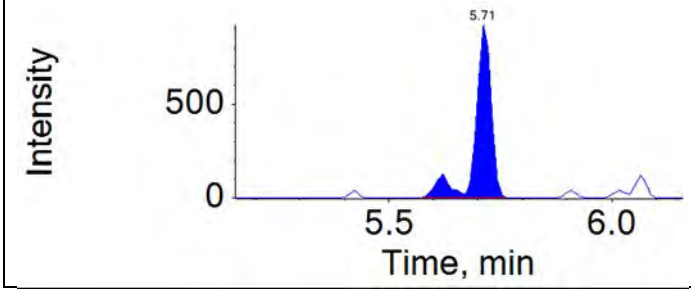
Analyte: PFOSA
498.0 / 78.0



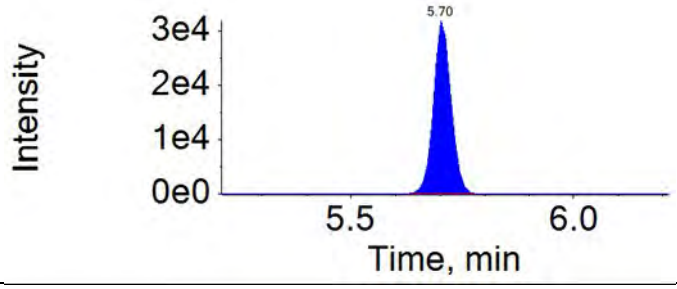
Extraction Standard: 13C8-PFOSA
506.0 / 78.0



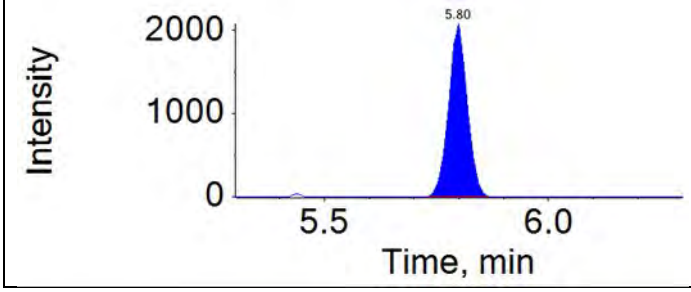
Analyte: NMeFOSAA
570.0 / 419.0



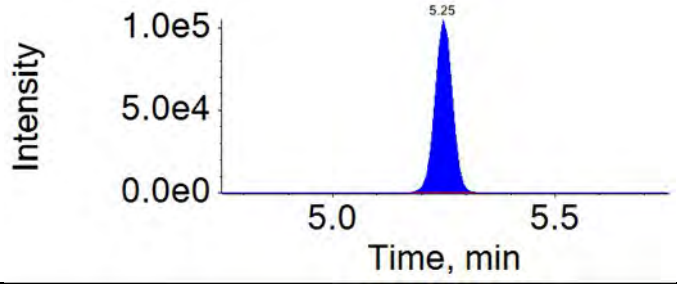
Extraction Standard: d3-NMeFOSAA
573.0 / 419.0



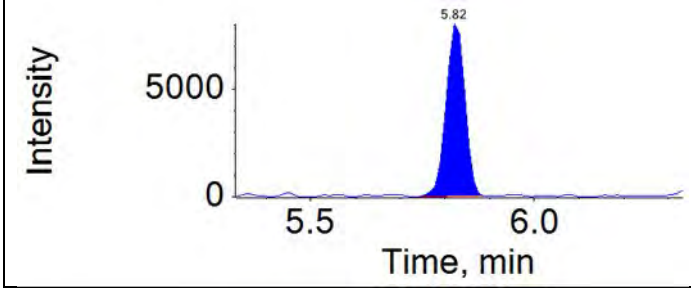
Analyte: PFDS
599.0 / 80.0



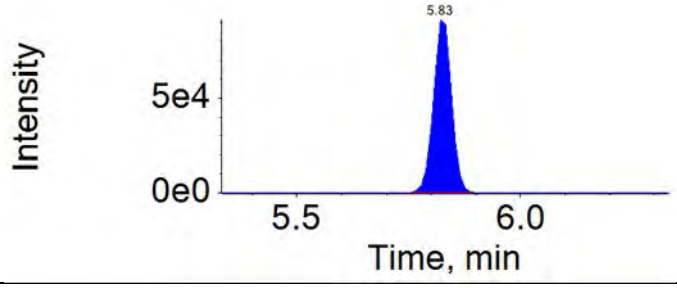
Extraction Standard: 13C8-PFOS
507.0 / 80.0



Analyte: PFUnDA
563.0 / 519.0



Extraction Standard: 13C7-PFUnDA
570.0 / 525.0

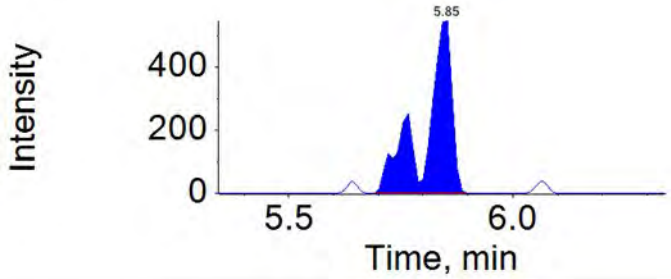


APPROVED
By MCD at 6:33 pm, 11/12/18

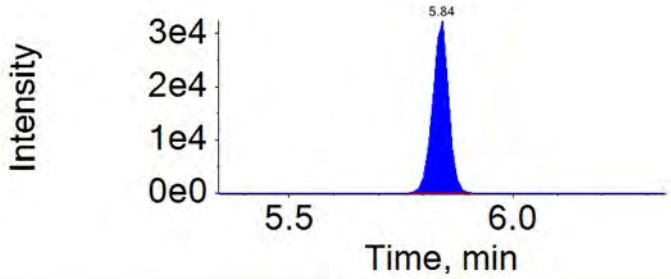
REVIEWED
By HMK at 10:53 am, 11/13/18

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

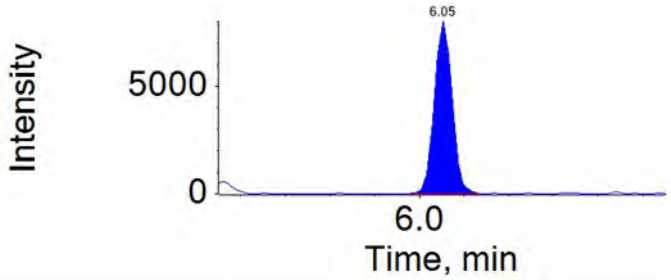
Analyte: NEtFOSAA
584.0 / 419.0



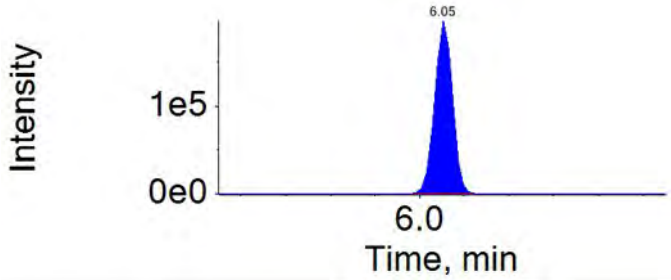
Extraction Standard: d5-NEtFOSAA
589.0 / 419.0



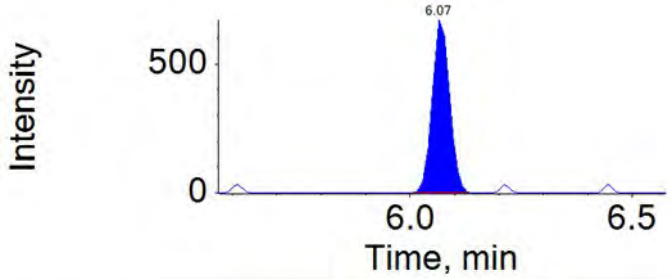
Analyte: PFDoDA
613.0 / 569.0



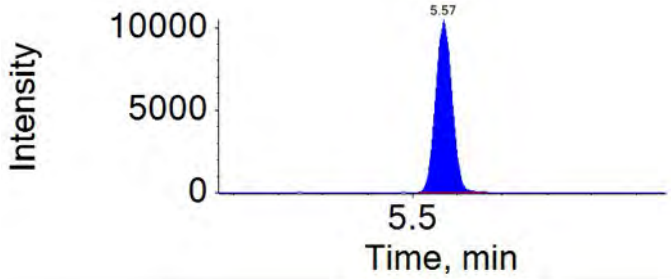
Extraction Standard: 13C2-PFDoDA
615.0 / 570.0



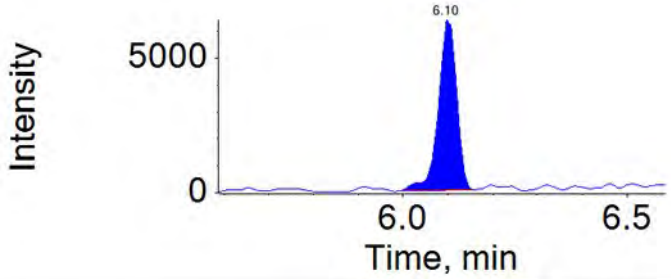
Analyte: 10:2-FTS
627.0 / 607.0



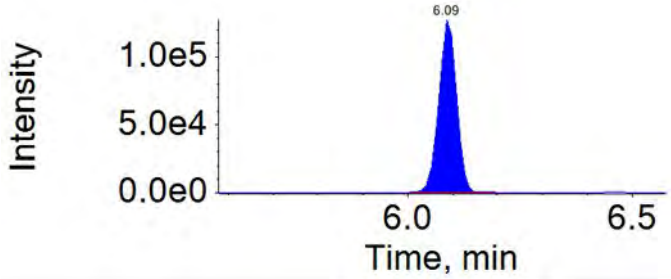
Extraction Standard: 13C2-8:2-FTS
529.0 / 81.0



Analyte: NMePFOSAE
616.0 / 59.0



Extraction Standard: d7-NMePFOSAE
623.0 / 59.0

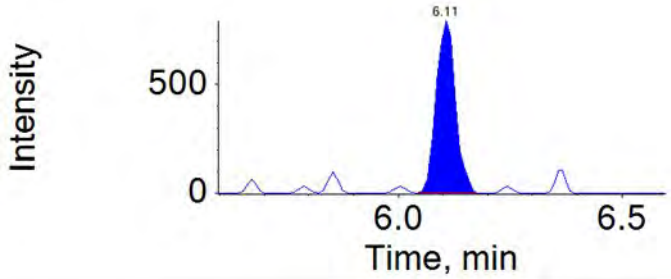


APPROVED
By MCD at 6:33 pm, 11/12/18

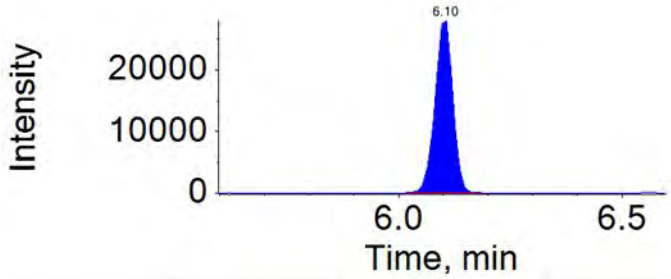
REVIEWED
By HMK at 10:53 am, 11/13/18

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

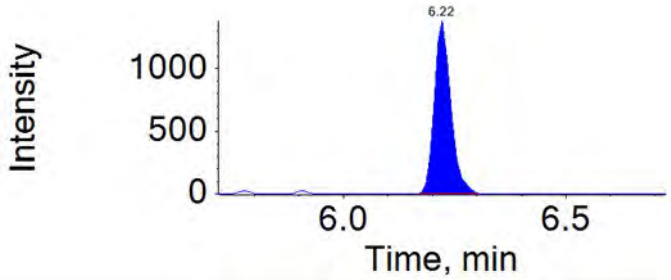
Analyte: NMePFOSA
512.0 / 169.0



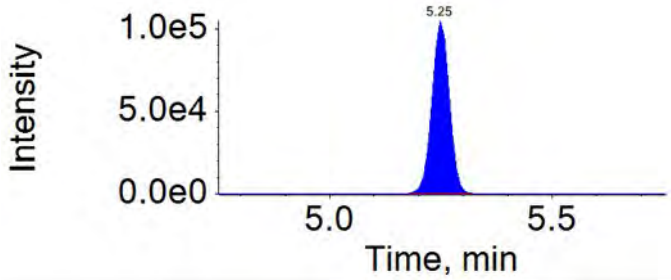
Extraction Standard: d3-NMePFOSA
515.0 / 169.0



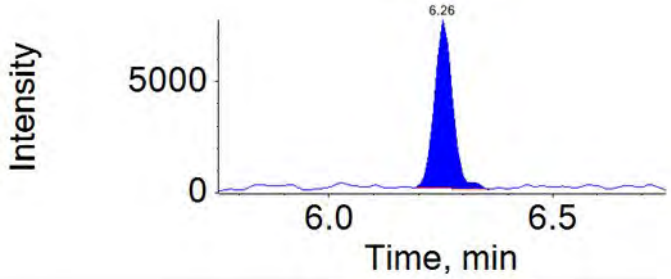
Analyte: PFDoS
699.0 / 80.0



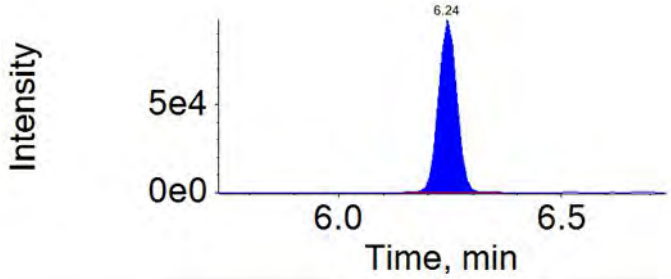
Extraction Standard: 13C8-PFOS
507.0 / 80.0



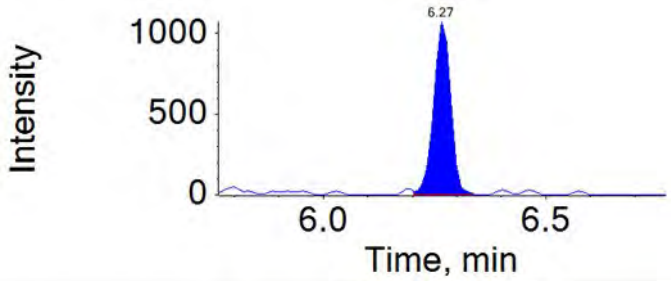
Analyte: NEtPFOSAE
630.0 / 59.0



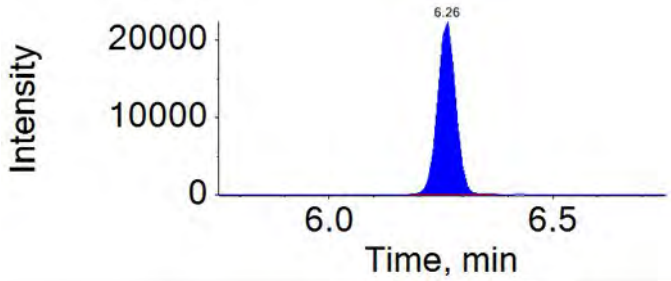
Extraction Standard: d9-NEtPFOSAE
639.0 / 59.0



Analyte: NEtPFOSA
526.0 / 169.0



Extraction Standard: d5-NEtPFOSA
531.0 / 169.0

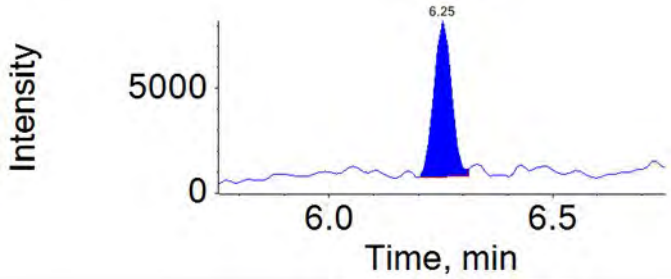


APPROVED
By MCD at 6:33 pm, 11/12/18

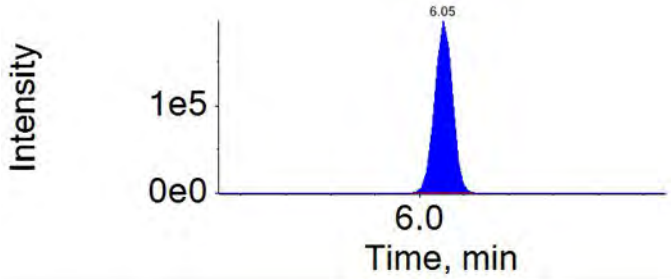
REVIEWED
By HMK at 10:53 am, 11/13/18

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

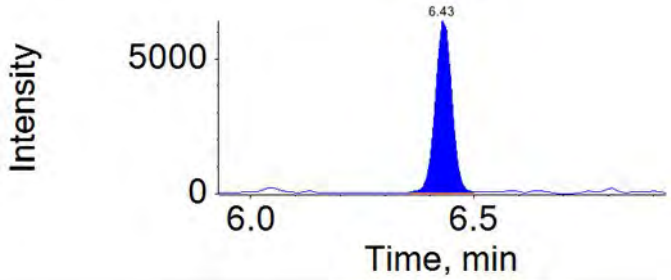
Analyte: PFTrDA
663.0 / 619.0



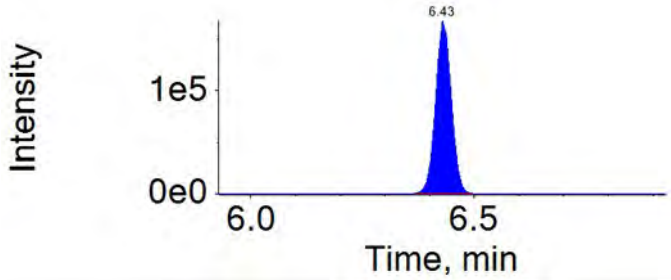
Extraction Standard: 13C2-PFDoDA
615.0 / 570.0



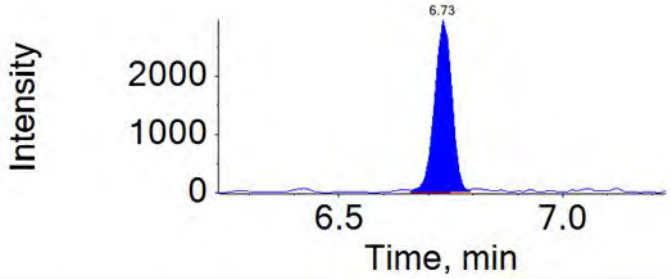
Analyte: PFTeDA
713.0 / 669.0



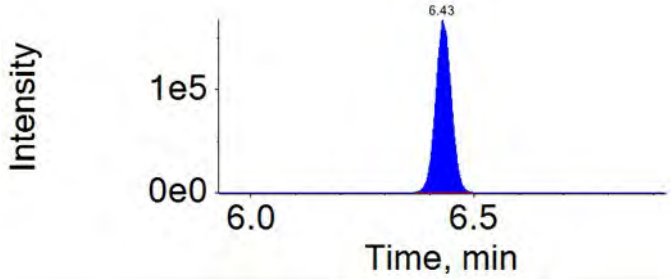
Extraction Standard: 13C2-PFTeDA
715.0 / 670.0



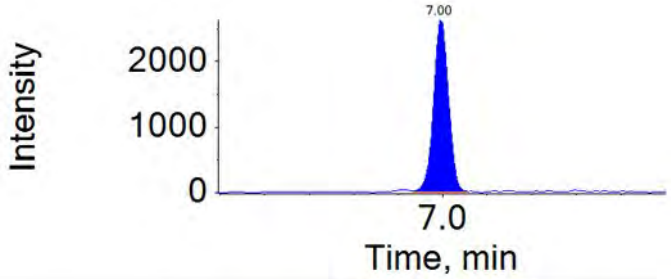
Analyte: PFHxDA
813.0 / 769.0



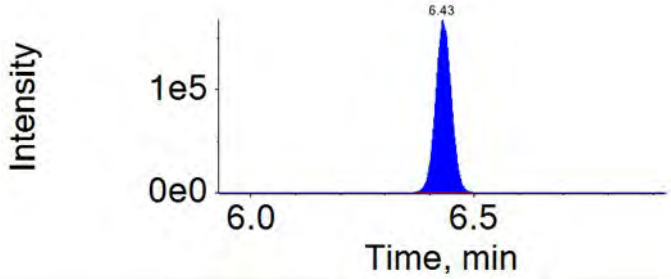
Extraction Standard: 13C2-PFTeDA
715.0 / 670.0



Analyte: PFODA
913.0 / 869.0



Extraction Standard: 13C2-PFTeDA
715.0 / 670.0



APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

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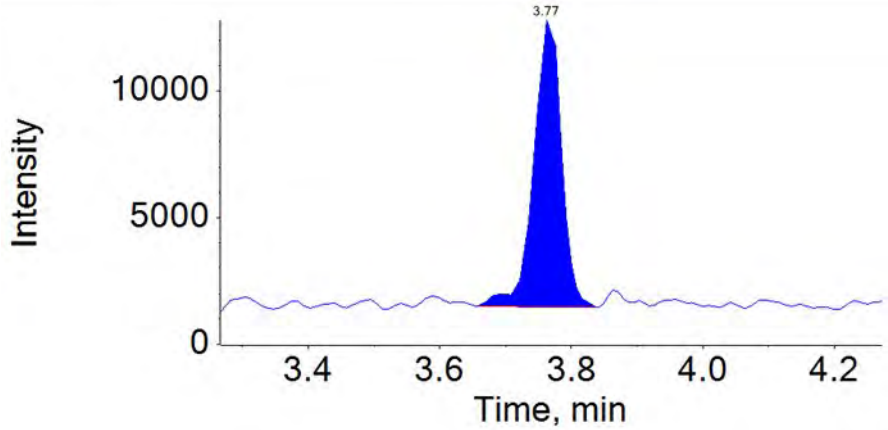
Auto Integrations prior to Manual Integration

Print Date: 11/12/2018 6:26 PM
Template: MQ-OrigInteg-16NOV21.docx

Results Table Name: 18NOV12DCAL
Results Table Date: 11/12/2018 6:23:42 PM

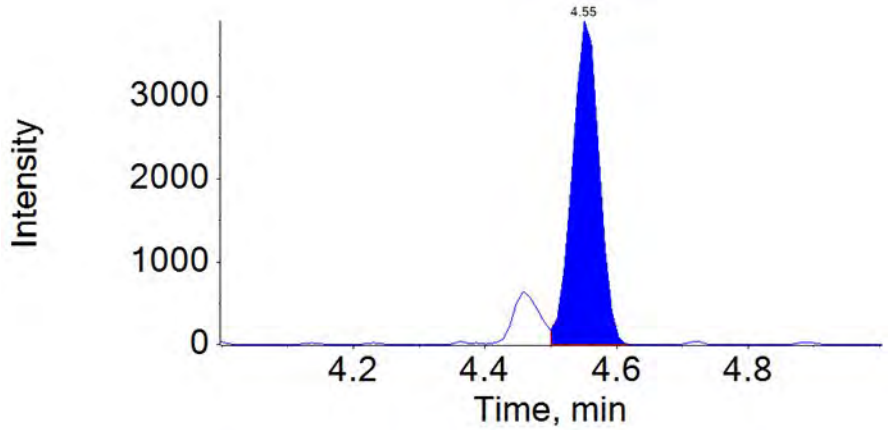
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

Component Name:
PFPeA
RT (min.):
3.77
Peak Area:
33474.86
Mass Range:
263.0 / 219.0
File Name:
18NOV12DCAL-42.wiff
Sample Name:
CAL1



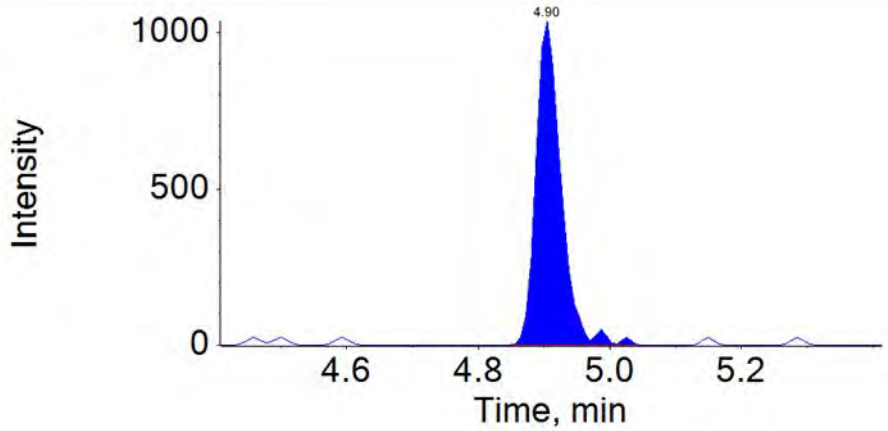
Integration Comment: incorrect integration

Component Name:
PFHxS
RT (min.):
4.55
Peak Area:
11101.81
Mass Range:
399.0 / 80.0
File Name:
18NOV12DCAL-42.wiff
Sample Name:
CAL1



Integration Comment: incorrect integration

Component Name:
6:2-FTS
RT (min.):
4.90
Peak Area:
2772.78
Mass Range:
427.0 / 407.0
File Name:
18NOV12DCAL-42.wiff
Sample Name:
CAL1



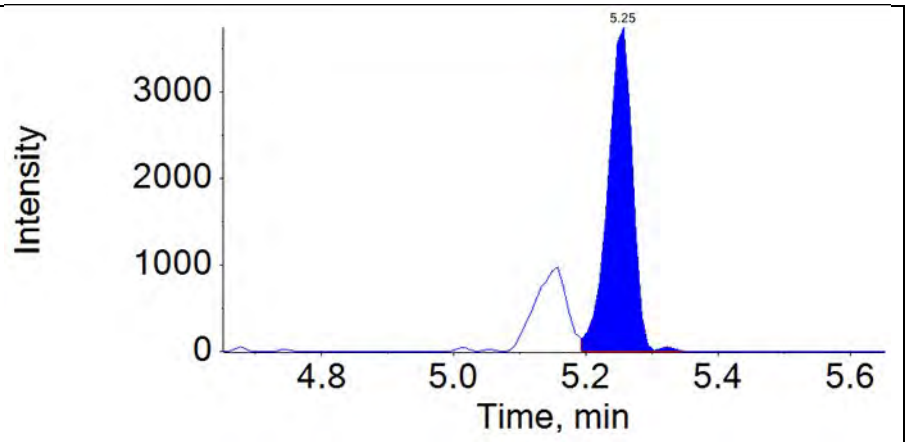
Integration Comment: incorrect integration

APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

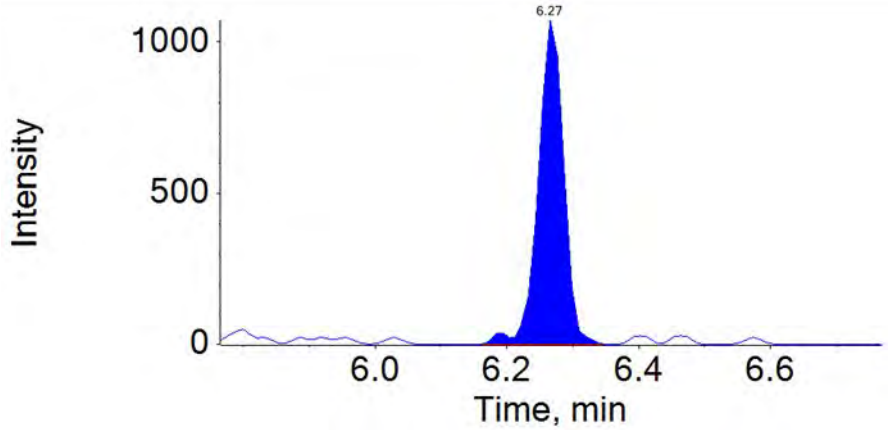
Results Table Name: 18NOV12DCAL
Results Table Date: 11/12/2018 6:23:42 PM
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

Component Name:
PFOS
RT (min.):
5.25
Peak Area:
9779.70
Mass Range:
499.0 / 80.0
File Name:
18NOV12DCAL-42.wiff
Sample Name:
CAL1



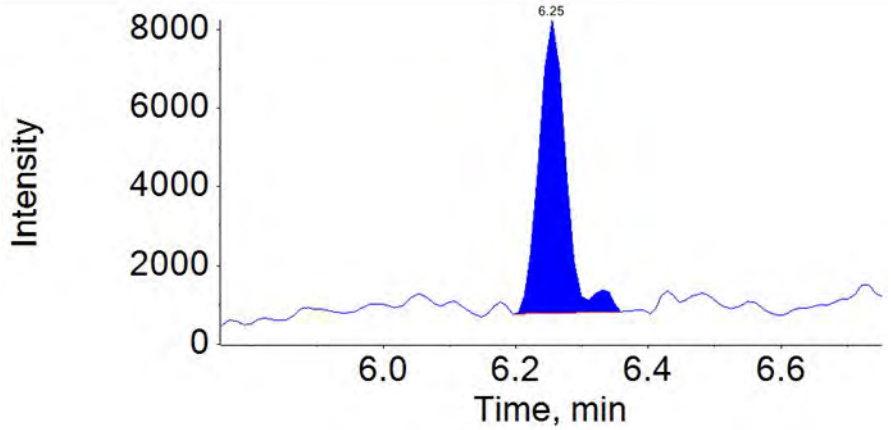
Integration Comment: incorrict integration

Component Name:
NEtPFOSA
RT (min.):
6.27
Peak Area:
2904.33
Mass Range:
526.0 / 169.0
File Name:
18NOV12DCAL-42.wiff
Sample Name:
CAL1



Integration Comment: incorrict integration

Component Name:
PFTrDA
RT (min.):
6.25
Peak Area:
21221.75
Mass Range:
663.0 / 619.0
File Name:
18NOV12DCAL-42.wiff
Sample Name:
CAL1



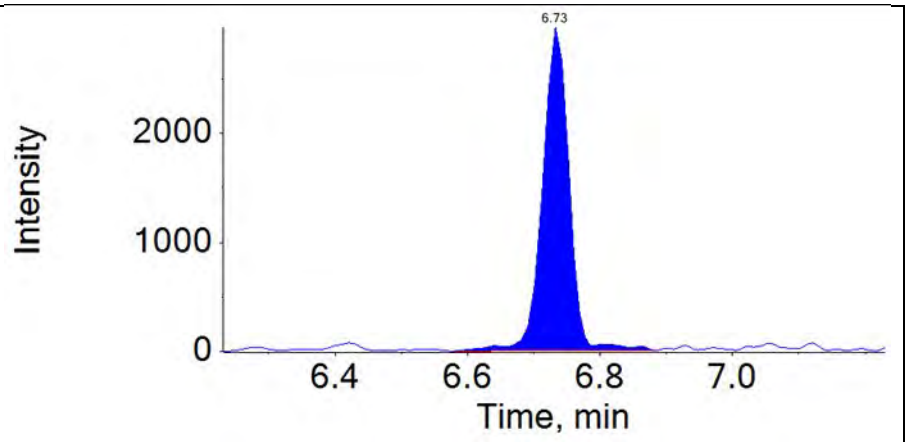
Integration Comment: incorrict integration

APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

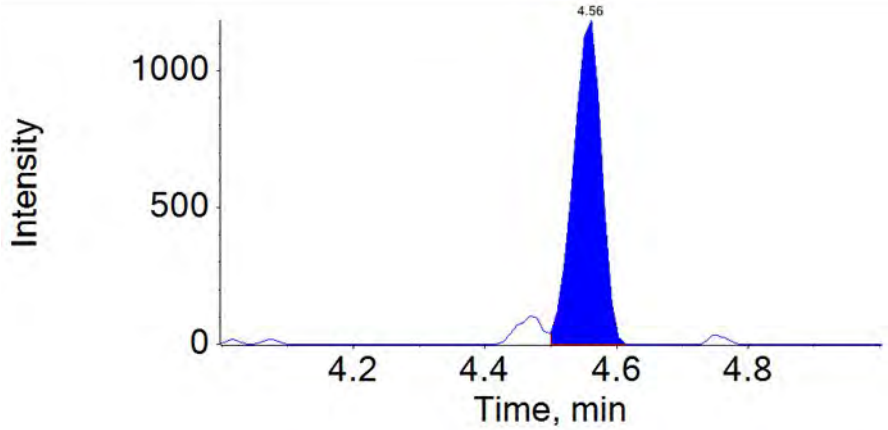
Results Table Name: 18NOV12DCAL
Results Table Date: 11/12/2018 6:23:42 PM
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

Component Name:
PFHxDA
RT (min.):
6.73
Peak Area:
8304.86
Mass Range:
813.0 / 769.0
File Name:
18NOV12DCAL-42.wiff
Sample Name:
CAL1



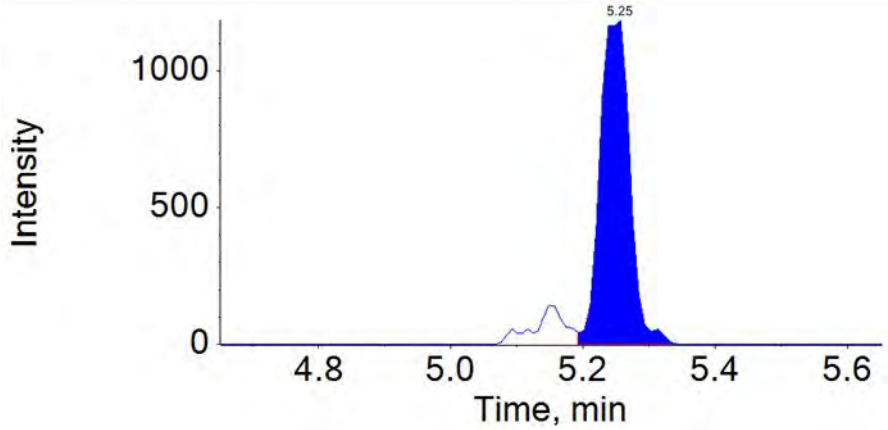
Integration Comment: incorrect integration

Component Name:
PFHxS_2
RT (min.):
4.56
Peak Area:
3529.38
Mass Range:
399.0 / 99.0
File Name:
18NOV12DCAL-42.wiff
Sample Name:
CAL1



Integration Comment: incorrect integration

Component Name:
PFOS_2
RT (min.):
5.25
Peak Area:
3773.94
Mass Range:
499.0 / 99.0
File Name:
18NOV12DCAL-42.wiff
Sample Name:
CAL1



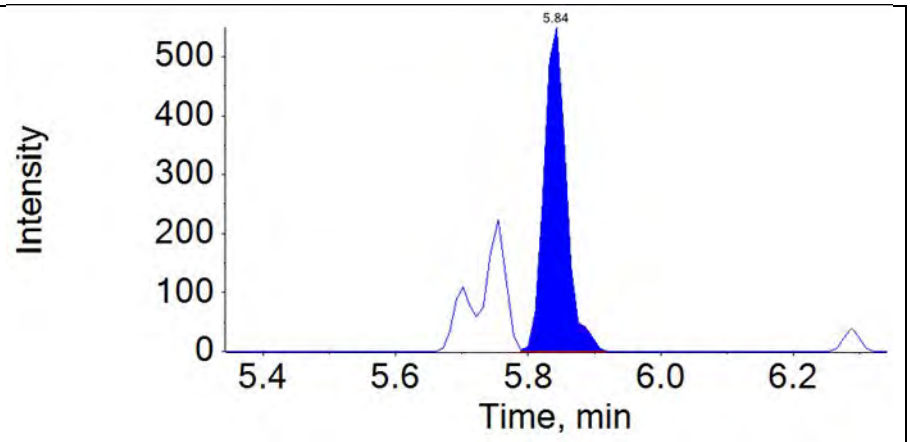
Integration Comment: incorrect integration

APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

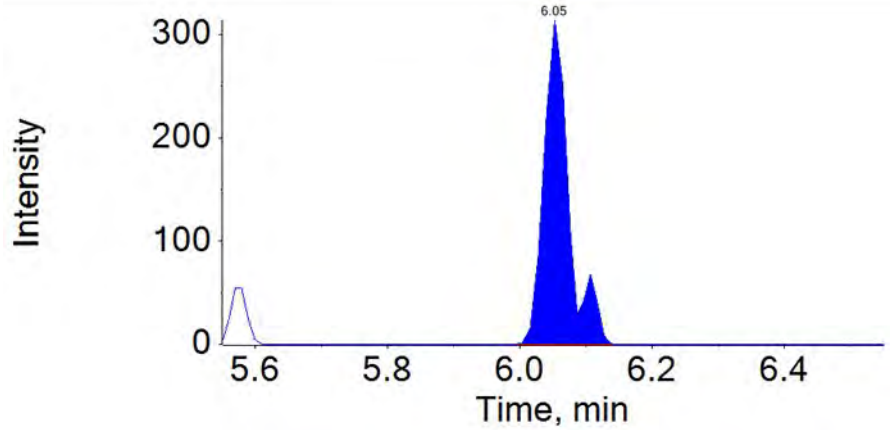
Results Table Name: 18NOV12DCAL
Results Table Date: 11/12/2018 6:23:42 PM
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

Component Name:
NEtFOSAA_2
RT (min.):
5.84
Peak Area:
1295.22
Mass Range:
584.0 / 526.0
File Name:
18NOV12DCAL-42.wiff
Sample Name:
CAL1



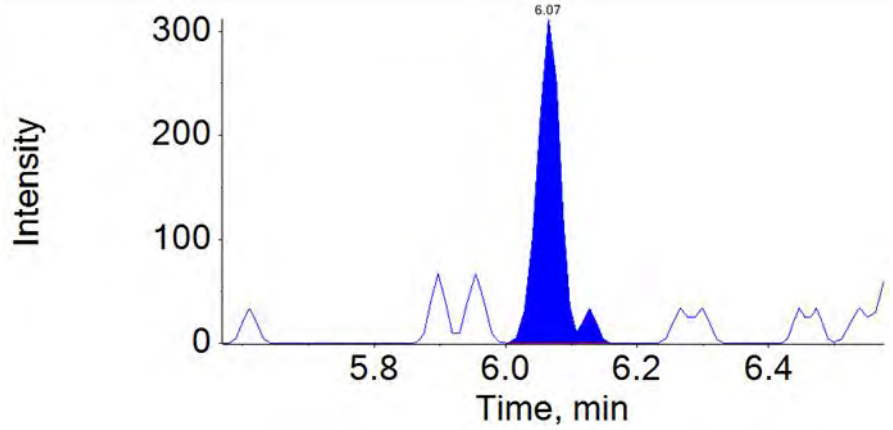
Integration Comment: incorrect integration

Component Name:
PFDoDA_2
RT (min.):
6.05
Peak Area:
835.89
Mass Range:
613.0 / 169.0
File Name:
18NOV12DCAL-42.wiff
Sample Name:
CAL1



Integration Comment: incorrect integration

Component Name:
10:2 FTS_2
RT (min.):
6.07
Peak Area:
801.59
Mass Range:
627.0 / 81.0
File Name:
18NOV12DCAL-42.wiff
Sample Name:
CAL1



Integration Comment: incorrect integration

APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

Results Table Name: 18NOV12DCAL
Results Table Date: 11/12/2018 6:23:42 PM

Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

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LC-MS/MS Analysis Report

Printed: 11/12/2018 6:22:00 PM
Template: IonRatio18OCT10

Ion Ratio Report

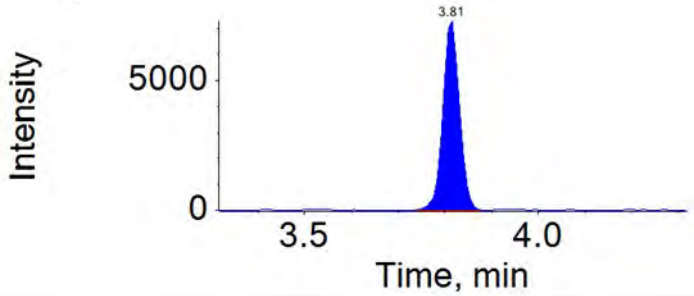
Sample Name: CAL1 **Instrument Name:** LM27631 **File Name:** 18NOV12DCAL-42.wiff

Component Name	RT	RRT	Analyte Area Response	Int Typ	Expected Ion Ratio	Ion Ratio	Ion Ratio % Diff	Ion Ratio Limit	Ion Ratio OOS
PFBS	3.81	1.00	18010.03	A	0.3619	0.3587			
PFBS_2	3.81	1.00	6459.67	A	0.3619	0.3587	-1	50	
4:2-FTS	4.13	1.00	3636.36	A	0.6730	0.7769			
4:2 FTS_2	4.13	1.00	2825.20	A	0.6730	0.7769		#NA!	
PFHxA	4.16	1.00	39108.19	A	0.0117	0.0110			
PFHxA_2	4.16	1.00	431.19	A	0.0117	0.0110	-5	50	
PFPeS	4.18	1.10	9620.09	A	0.5191	0.4377			
PFPeS_2	4.18	1.10	4210.95	A	0.5191	0.4377	-16	50	
PFHpA	4.55	1.00	37545.37	A	0.0563	0.0594			
PFHpA_2	4.55	1.00	2229.00	A	0.0563	0.0594	5	50	
PFHxS	4.55	1.00	12858.11	M	0.3428	0.2967			
PFHxS_2	4.56	1.00	3815.05	M	0.3428	0.2967	-13	50	
6:2-FTS	4.90	1.00	2683.12	M	0.6604	0.6208			
6:2 FTS_2	4.91	1.00	1665.70	A	0.6604	0.6208		#NA!	
PFHpS	4.91	1.08	13262.78	A	0.4066	0.3857			
PFHpS_2	4.91	1.08	5115.91	A	0.4066	0.3857	-5	50	
PFOA	4.92	1.00	41467.99	A	0.0562	0.0587			
PFOA_2	4.92	1.00	2433.19	A	0.0562	0.0587	4	50	
PFOS	5.25	1.00	13088.49	M	0.2968	0.3248			
PFOS_2	5.25	1.00	4250.80	M	0.2968	0.3248	9	50	
PFNA	5.26	1.00	29660.05	A	0.0229	0.0300			
PFNA_2	5.26	1.00	890.58	A	0.0229	0.0300	31	50	
PFNS	5.54	1.06	6846.55	A	0.4828	0.5747			
PFNS_2	5.55	1.06	3934.96	A	0.4828	0.5747	19	50	
PFDA	5.56	1.00	27488.55	A	0.0081	0.0185			
PFDA_2	5.57	1.00	509.91	A	0.0081	0.0185	130	50	OOS
8:2-FTS	5.57	1.00	2333.06	A	0.6814	0.8052			
8:2 FTS_2	5.57	1.00	1878.62	A	0.6814	0.8052		#NA!	
NMeFOSAA	5.71	1.00	2306.38	A	0.2569	0.2416			
NMeFOSAA_2	5.69	1.00	557.21	A	0.2569	0.2416	-6	50	
PFDS	5.80	1.10	5952.23	A	0.5144	0.5857			
PFDS_2	5.80	1.11	3486.36	A	0.5144	0.5857	14	50	
PFUnDA	5.82	1.00	23379.53	A	0.0058	0.0168			
PFUnDA_2	5.83	1.00	393.36	A	0.0058	0.0168	189	50	OOS
NEtFOSAA	5.85	1.00	2284.89	A	0.7253	0.8510			
NEtFOSAA_2	5.84	1.00	1944.53	M	0.7253	0.8510	17	50	
PFDoDA	6.05	1.00	22143.56	A	0.0157	0.0329			
PFDoDA_2	6.05	1.00	728.93	M	0.0157	0.0329	110	50	OOS
10:2-FTS	6.07	1.09	1814.19	A	0.6356	0.4140			
10:2 FTS_2	6.07	1.09	751.03	M	0.6356	0.4140		#NA!	
PFTrDA	6.25	1.03	20185.08	M	0.0086	0.0098			
PFTrDA_2	6.24	1.03	198.77	A	0.0086	0.0098	15	50	
PFTeDA	6.43	1.00	16357.53	A	0.0062	0.0036			
PFTeDA_2	6.46	1.01	58.89	A	0.0062	0.0036	-42	50	
PFHxDA	6.73	1.05	7976.02	M	0.0683	0.0708			
PFHxDA_2	6.73	1.05	564.53	A	0.0683	0.0708	4	50	
PFODA	7.00	1.09	6020.31	A	0.0277	0.0307			
PFODA_2	6.99	1.09	185.07	A	0.0277	0.0307	11	50	

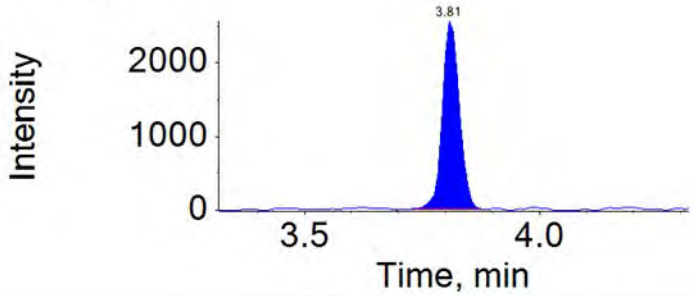
APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

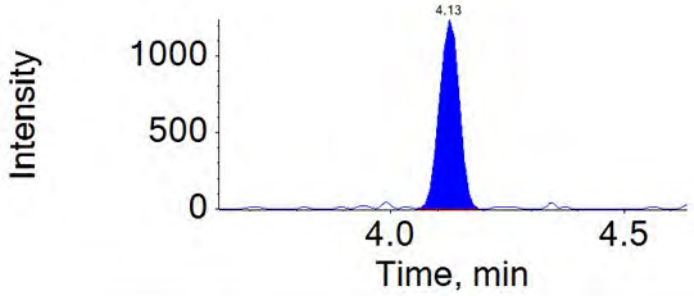
Component: PFBS
Primary Mass: 299.0 / 80.0



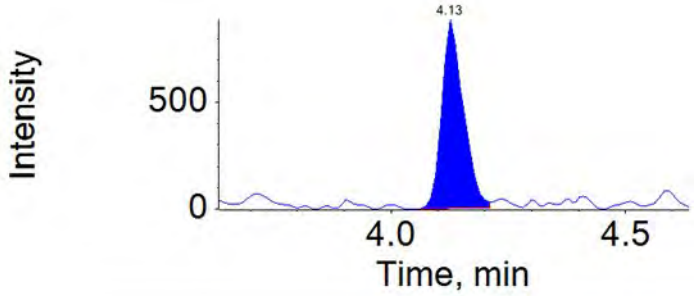
Component: PFBS_2
Secondary Mass: 299.0 / 99.0



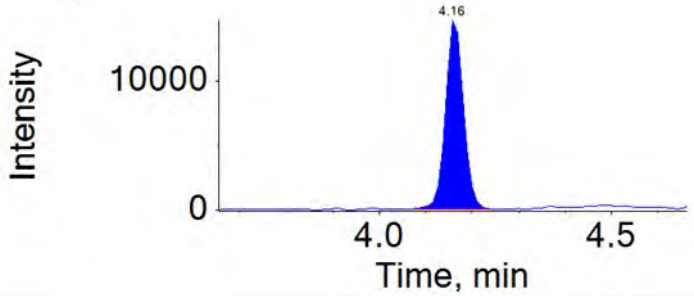
Component: 4:2-FTS
Primary Mass: 327.0 / 307.0



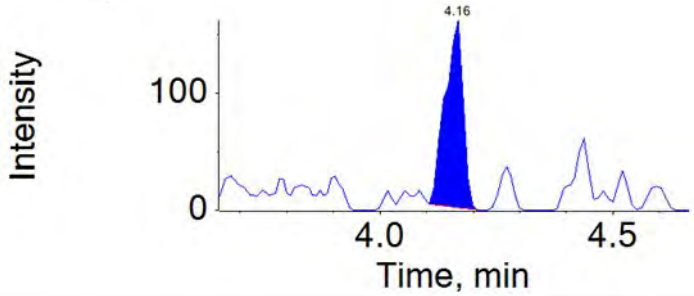
Component: 4:2 FTS_2
Secondary Mass: 327.0 / 81.0



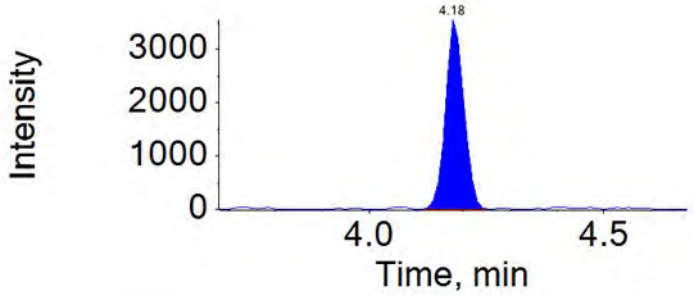
Component: PFHxA
Primary Mass: 313.0 / 269.0



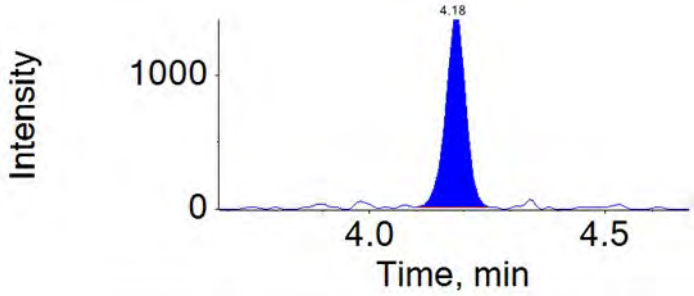
Component: PFHxA_2
Secondary Mass: 313.0 / 119.0



Component: PFPeS
Primary Mass: 349.0 / 80.0



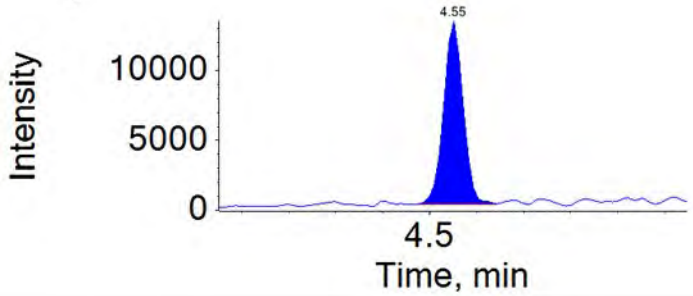
Component: PFPeS_2
Secondary Mass: 349.0 / 99.0



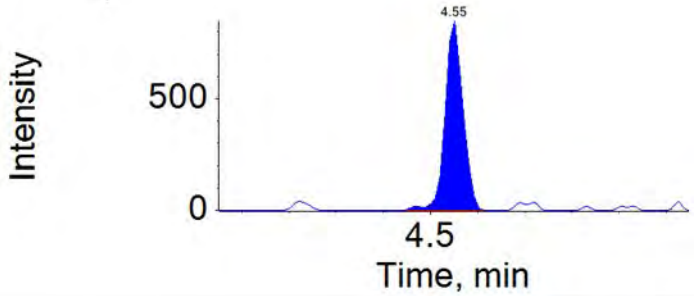
APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

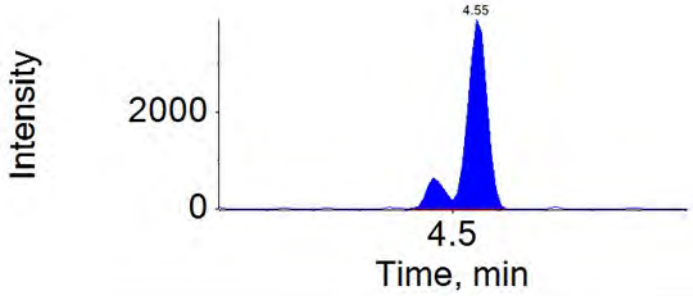
Component: PFHpA
Primary Mass: 363.0 / 319.0



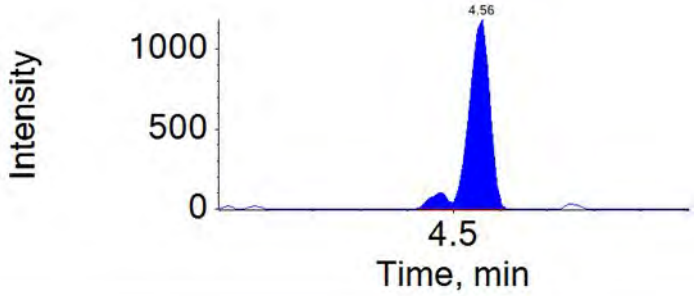
Component: PFHpA_2
Secondary Mass: 363.0 / 169.0



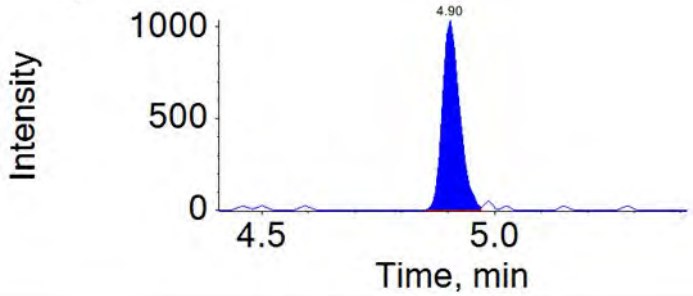
Component: PFHxS
Primary Mass: 399.0 / 80.0



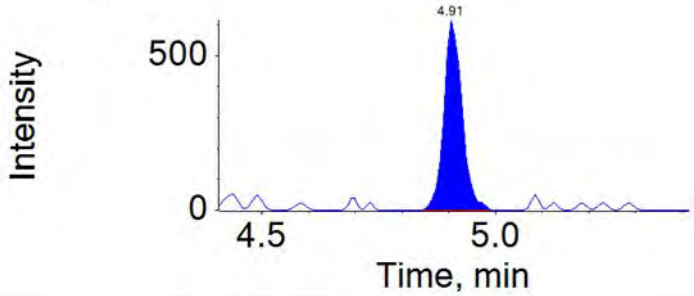
Component: PFHxS_2
Secondary Mass: 399.0 / 99.0



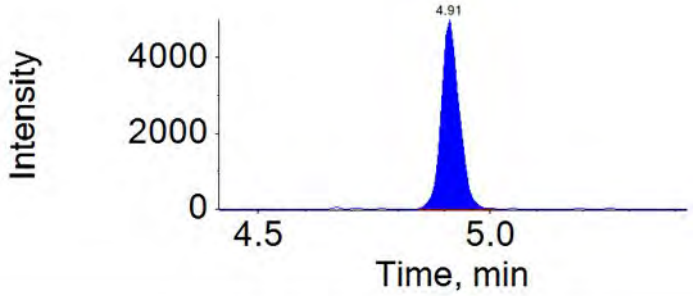
Component: 6:2-FTS
Primary Mass: 427.0 / 407.0



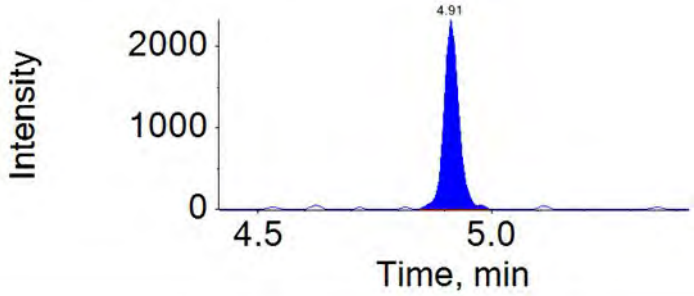
Component: 6:2 FTS_2
Secondary Mass: 427.0 / 81.0



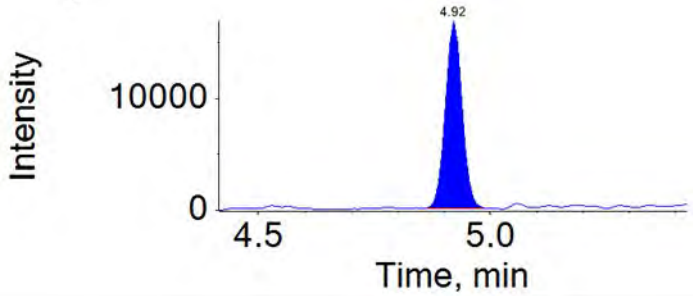
Component: PFHpS
Primary Mass: 449.0 / 80.0



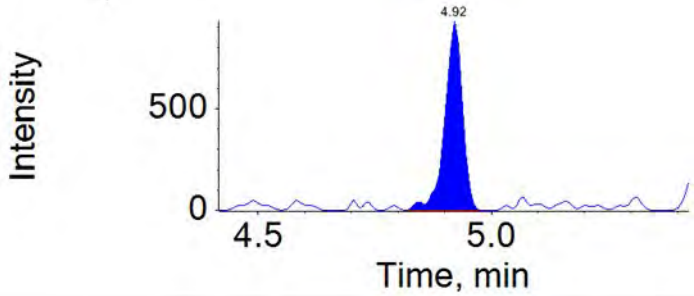
Component: PFHpS_2
Secondary Mass: 449.0 / 99.0



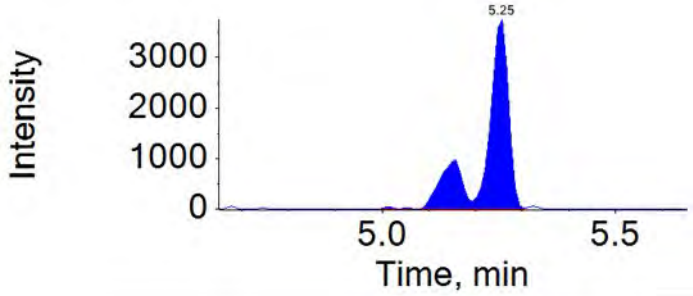
Component: PFOA
Primary Mass: 413.0 / 369.0



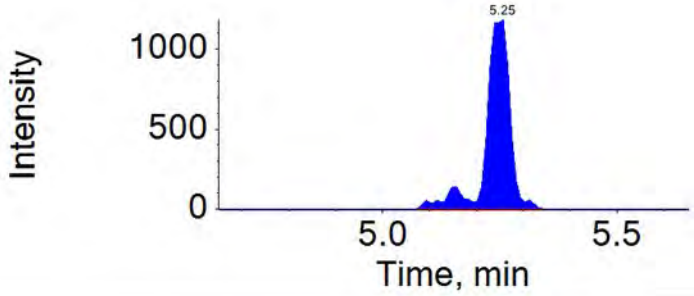
Component: PFOA_2
Secondary Mass: 413.0 / 169.0



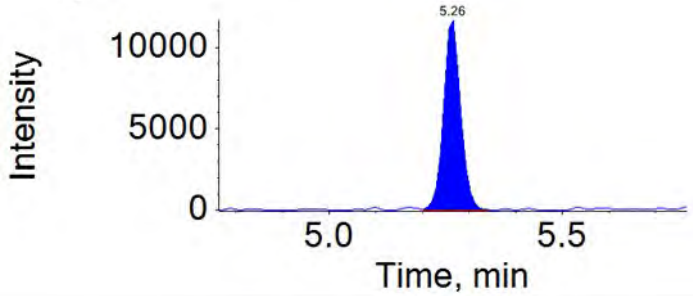
Component: PFOS
Primary Mass: 499.0 / 80.0



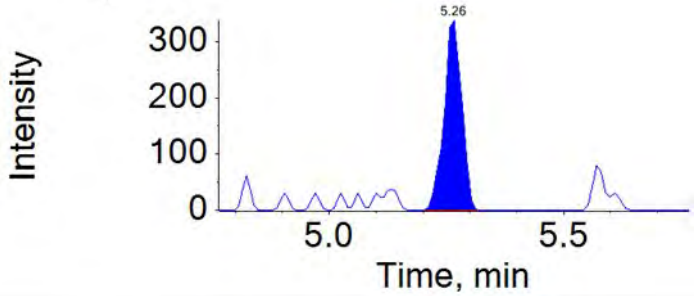
Component: PFOS_2
Secondary Mass: 499.0 / 99.0



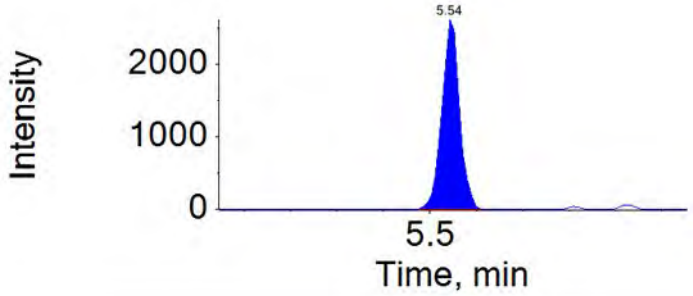
Component: PFNA
Primary Mass: 463.0 / 419.0



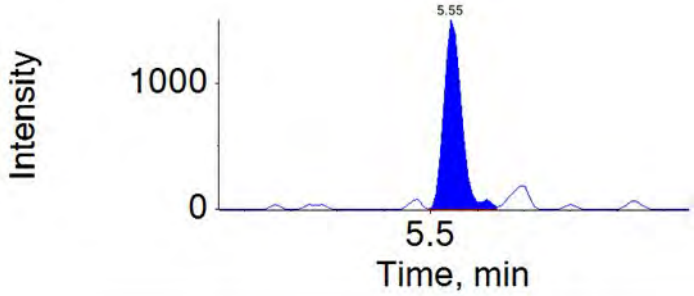
Component: PFNA_2
Secondary Mass: 463.0 / 169.0



Component: PFNS
Primary Mass: 549.0 / 80.0



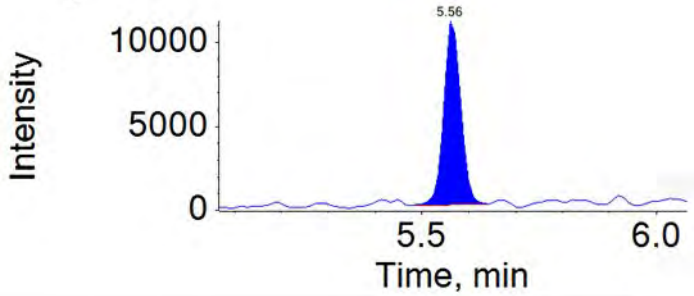
Component: PFNS_2
Secondary Mass: 549.0 / 99.0



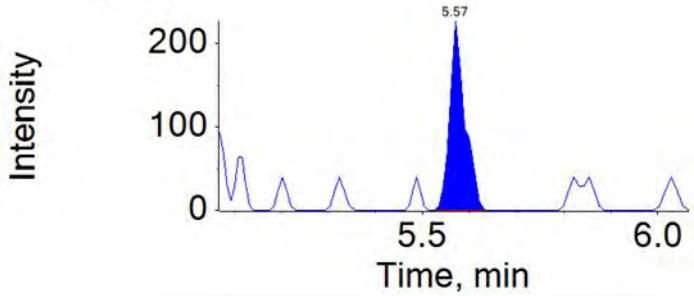
APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

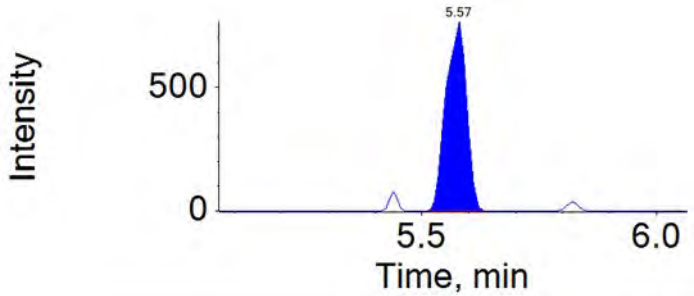
Component: PFDA
Primary Mass: 513.0 / 469.0



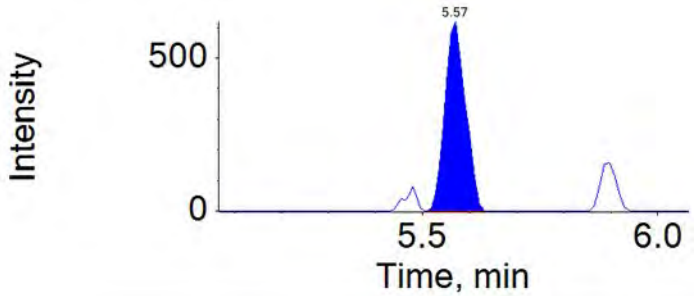
Component: PFDA_2
Secondary Mass: 513.0 / 169.0



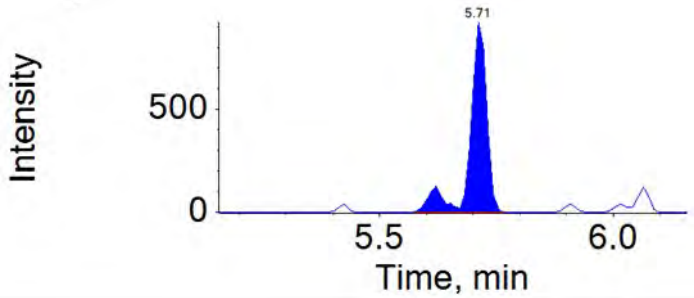
Component: 8:2-FTS
Primary Mass: 527.0 / 507.0



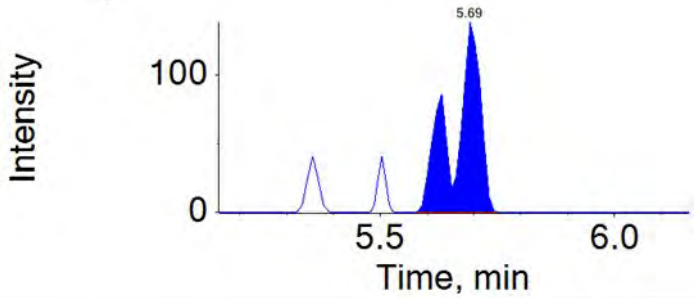
Component: 8:2 FTS_2
Secondary Mass: 527.0 / 81.0



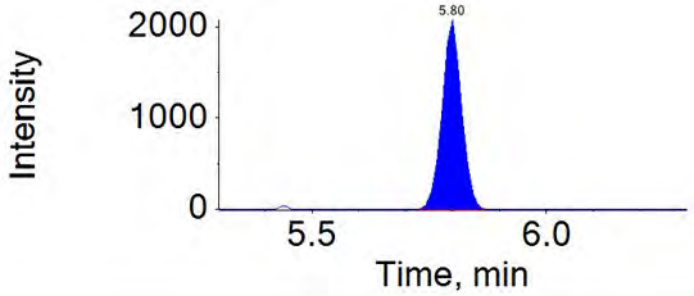
Component: NMeFOSAA
Primary Mass: 570.0 / 419.0



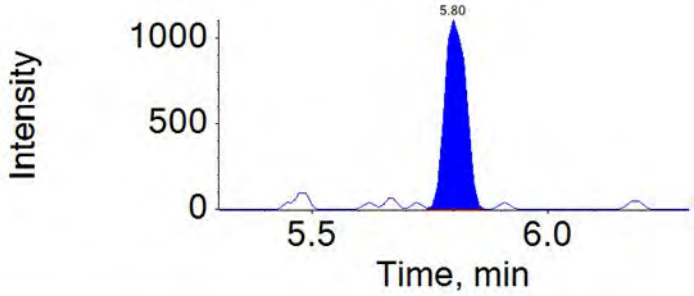
Component: NMeFOSAA_2
Secondary Mass: 570.0 / 483.0



Component: PFDS
Primary Mass: 599.0 / 80.0



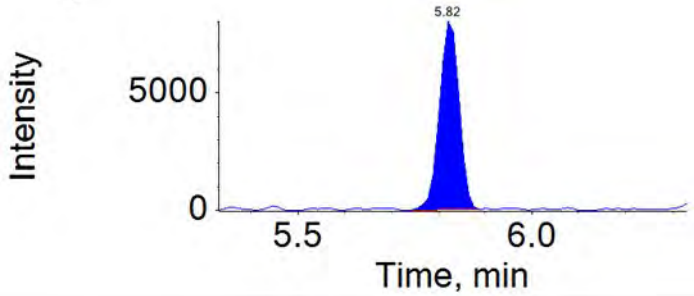
Component: PFDS_2
Secondary Mass: 599.0 / 99.0



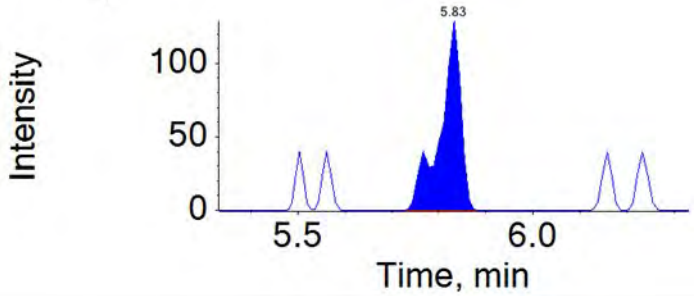
APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

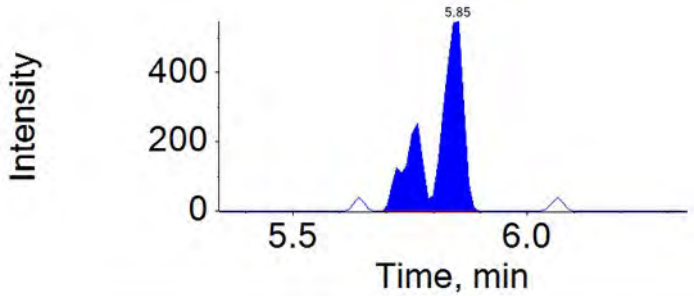
Component: PFUnDA
Primary Mass: 563.0 / 519.0



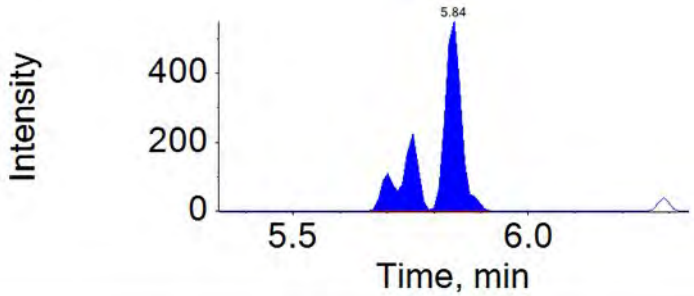
Component: PFUnDA_2
Secondary Mass: 563.0 / 169.0



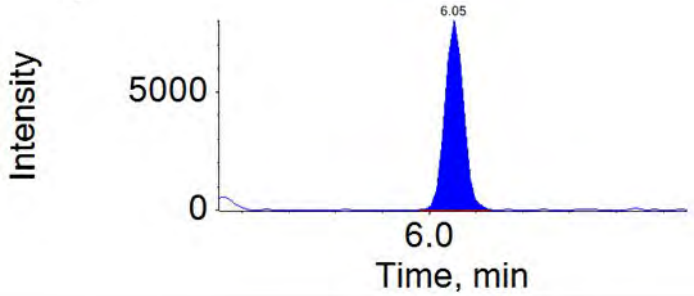
Component: NEtFOSAA
Primary Mass: 584.0 / 419.0



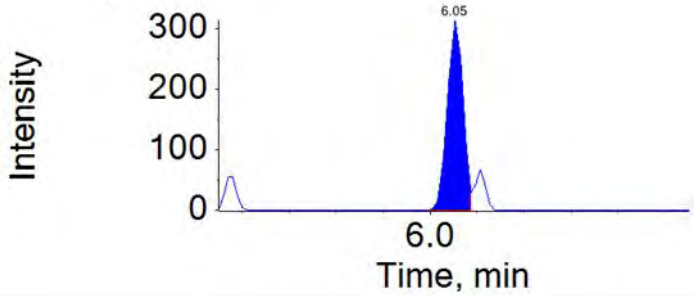
Component: NEtFOSAA_2
Secondary Mass: 584.0 / 526.0



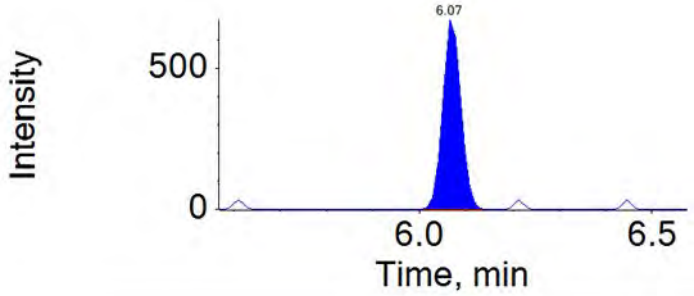
Component: PFDoDA
Primary Mass: 613.0 / 569.0



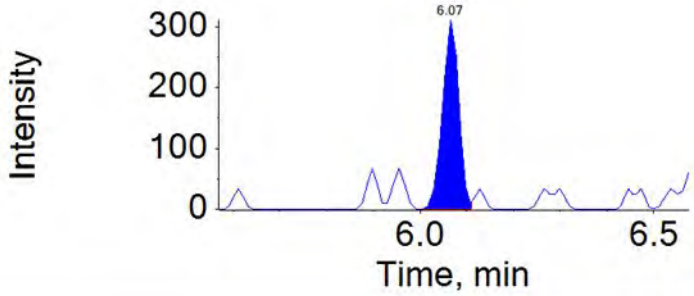
Component: PFDoDA_2
Secondary Mass: 613.0 / 169.0



Component: 10:2-FTS
Primary Mass: 627.0 / 607.0



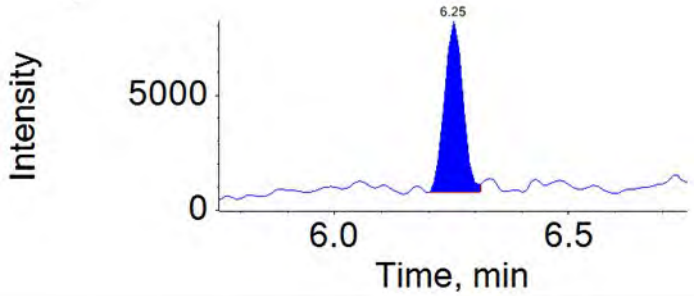
Component: 10:2 FTS_2
Secondary Mass: 627.0 / 81.0



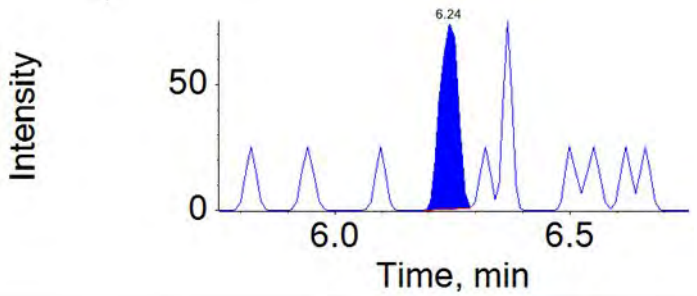
APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

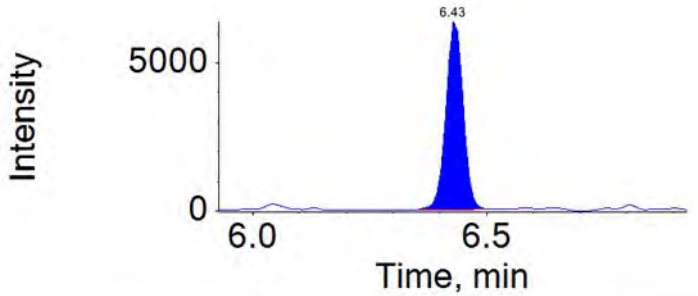
Component: PFTrDA
Primary Mass: 663.0 / 619.0



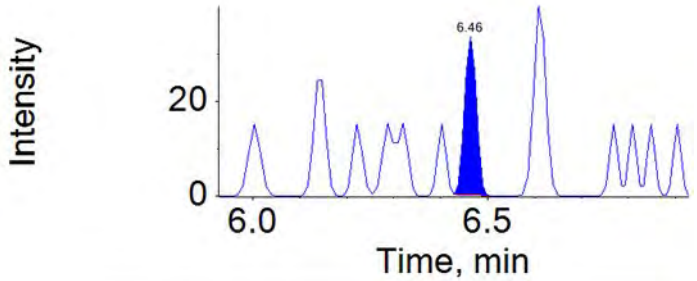
Component: PFTrDA_2
Secondary Mass: 663.0 / 169.0



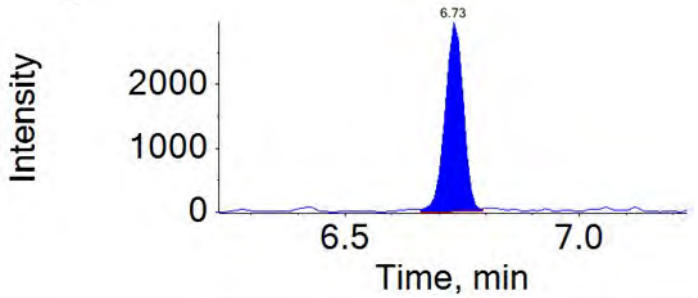
Component: PFTeDA
Primary Mass: 713.0 / 669.0



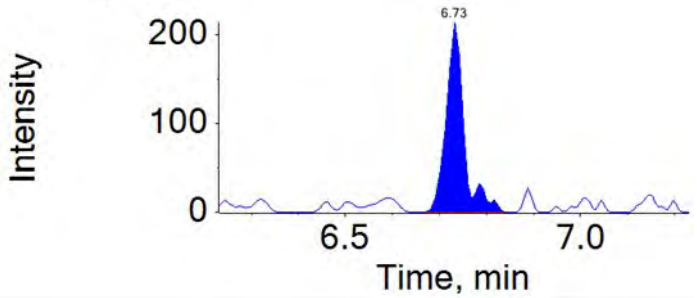
Component: PFTeDA_2
Secondary Mass: 713.0 / 169.0



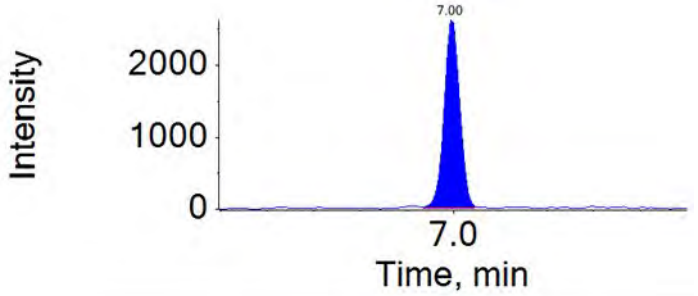
Component: PFHxDA
Primary Mass: 813.0 / 769.0



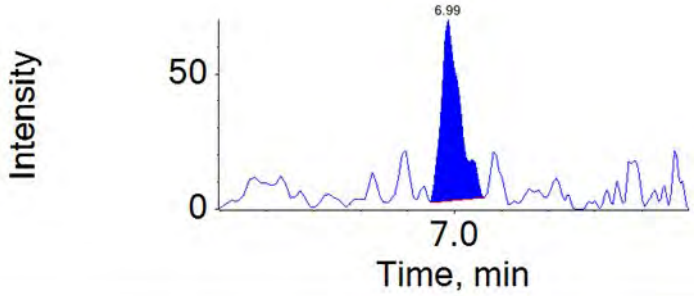
Component: PFHxDA_2
Secondary Mass: 813.0 / 169.0



Component: PFODA
Primary Mass: 913.0 / 869.0



Component: PFODA_2
Secondary Mass: 913.0 / 169.0



APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

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LC-MS/MS
DOD Analysis Report

Printed: 11/12/2018 6:20:00 PM
Template: DOD-Sample-18JUN22.docx

ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM
Result Table: 18NOV12DCAL 11/12/2018 6:14:07 PM
Acquisition Method: 18AUG13_3uL.dam

Sample Name:	CAL2			**Data File:**		18NOV12DCAL-43.wiff
Sample ID:	CALBRN21833C			**Acquis Date:**		2018-11-12T15:15:03
Sample Type:	Standard			**Instrument:**		LM27631
Vial Position:	4			**Acquis Method:**		18AUG13_3uL.dam
Injection Vol:	3.00			**Result Table:**		18NOV12DCAL
QMethod File:	18AUG20QM			**ICAL Name:**		18NOV12DCAL
Batch Number:	N\A			**Operator:**		MCD7824
Sample Wt.:	1.00000			**Dilution Factor:**		1.00
Sample Vol.:	1.000			**Prep Factor:**		1.000

Injection Standard Peak Table

Injection Standard Area Reference File: 18NOV12DCAL-44

Injection Standard Name	Inj Std Conc	Injection Std Peak Area	Rreference Injection Standard Area	Injection Std %Diff	Injection Std %Diff Limit	Injection Std %Diff OOS
13C3-PFBA	5.0	662396.7	659926.2	0	50	
13C2-PFOA	5.0	454466.7	450219.7	1	50	
13C4-PFOS	4.8	250483.8	249205.8	1	50	
13C2-PFDA	5.0	277324.2	278743.9	-1	50	

Extraction Standard Peak Table

Extraction Standard Name	Ext Std Area	Inj Std Name	Inj Std Area	Area Ratio	Ext Std Conc	Ext Std Result	Ext Std %REC	Ext Std %REC Limit	Ext Std OOS
E13C4-PFBA	771445.8	13C3-PFBA	662396.7	1.165	5.000	5.221	104	70-130	
E13C5-PFPeA	738194.7	13C3-PFBA	662396.7	1.114	5.000	4.998	100	70-130	
E13C3-PFBS	418860.7	13C3-PFBA	662396.7	0.632	4.650	4.464	96	70-130	
E13C2-4:2-FTS	46141.8	13C2-PFOA	454466.7	0.102	4.670	4.522	97	70-130	
E13C5-PFHxA	648170.1	13C2-PFOA	454466.7	1.426	5.000	5.152	103	70-130	
E13C3-PFHxS	320400.4	13C2-PFOA	454466.7	0.705	4.730	4.838	102	70-130	
E13C4-PFHpA	532987.5	13C2-PFOA	454466.7	1.173	5.000	5.284	106	70-130	
E13C2-6:2-FTS	35585.7	13C2-PFOA	454466.7	0.078	4.750	5.239	110	70-130	
E13C8-PFOA	892584.2	13C2-PFOA	454466.7	1.964	5.000	5.411	108	70-130	
E13C8-PFOS	271778.8	13C4-PFOS	250483.8	1.085	4.780	4.808	101	70-130	
E13C9-PFNA	451850.1	13C4-PFOS	250483.8	1.804	5.000	5.030	101	70-130	
E13C6-PFDA	601859.8	13C2-PFDA	277324.2	2.170	5.000	5.064	101	70-130	
E13C2-8:2-FTS	27639.2	13C2-PFDA	277324.2	0.100	4.790	4.970	104	70-130	
E13C8-PFOSA	636543.2	13C2-PFDA	277324.2	2.295	5.000	5.089	102	70-130	
Ed3-NMeFOSAA	77388.6	13C2-PFDA	277324.2	0.279	5.000	5.037	101	70-130	
E13C7-PFUnDA	242881.8	13C2-PFDA	277324.2	0.876	5.000	5.085	102	70-130	
Ed5-NEtFOSAA	63686.9	13C2-PFDA	277324.2	0.230	5.000	4.859	97	70-130	
E13C2-PFDoDA	532175.4	13C2-PFDA	277324.2	1.919	5.000	4.982	100	70-130	
Ed7-NMePFOSAE	323456.5	13C2-PFDA	277324.2	1.166	5.000	5.047	101	70-130	
Ed3-NMePFOSA	77893.2	13C2-PFDA	277324.2	0.281	5.000	5.103	102	70-130	
Ed9-NEtPFOSAE	261195.6	13C2-PFDA	277324.2	0.942	5.000	4.899	98	70-130	
Ed5-NEtPFOSA	58073.5	13C2-PFDA	277324.2	0.209	5.000	4.912	98	70-130	
E13C2-PFTeDA	394146.2	13C2-PFDA	277324.2	1.421	5.000	4.990	100	70-130	

APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

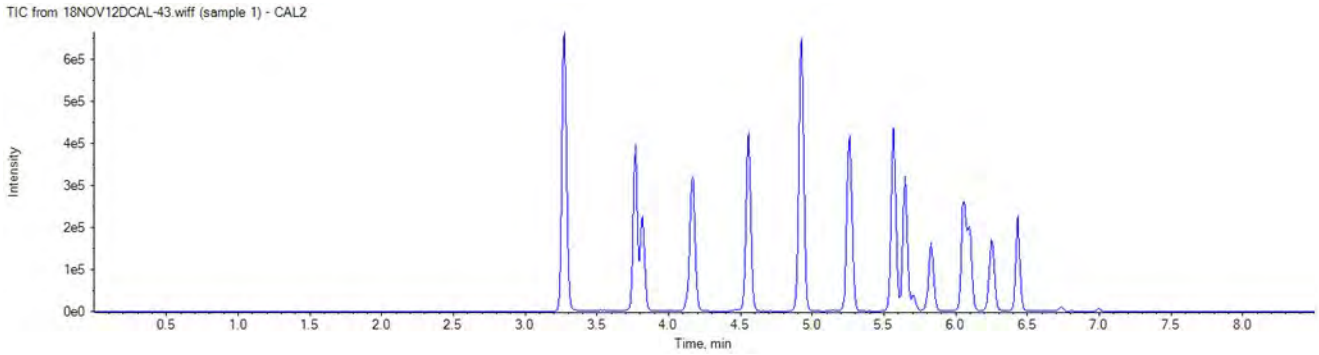
Analyte Quantitation Peak Table

Sample Name: CAL2 **Instrument Name:** LM27631 **File Name:** 18NOV12DCAL-43.wiff

Sample Wt	Sample Vol	Dilution Factor	PrepFactor
1.00000	1.000	1.00	1.000

Analyte Name	RT	RRT	Analyte Area Response	E	Int Typ	ES Name	ES RT	ES Area Response	Area Ratio	Sample Result (ng/g)
PFBA	3.27	1.000	80396.2		A	13C4-PFBA	3.27	771445.8	0.104	0.577
PFPeA	3.77	1.000	84319.4		A	13C5-PFPeA	3.77	738194.7	0.114	0.661
PFBS	3.82	1.000	44885.2		A	13C3-PFBS	3.82	418860.7	0.107	0.510
4:2-FTS	4.13	1.000	8804.0		A	13C2-4:2-FTS	4.13	46141.8	0.191	0.518
PFHxA	4.16	1.000	96559.3		A	13C5-PFHxA	4.17	648170.1	0.149	0.622
PFPeS	4.19	1.100	20295.0		A	13C3-PFBS	3.82	418860.7	0.048	0.470
PFHpA	4.55	1.000	95048.3		M	13C4-PFHpA	4.55	532987.5	0.178	0.591
PFHxS	4.56	1.000	31064.7		M	13C3-PFHxS	4.56	320400.4	0.097	0.470
6:2-FTS	4.91	1.000	8048.4		A	13C2-6:2-FTS	4.91	35585.7	0.226	0.547
PFHpS	4.92	1.080	29902.3		A	13C3-PFHxS	4.56	320400.4	0.093	0.491
PFOA	4.93	1.000	100710.5		A	13C8-PFOA	4.92	892584.2	0.113	0.603
PFOS	5.25	1.000	32301.0		M	13C8-PFOS	5.25	271778.8	0.119	0.520
PFNA	5.27	1.000	80724.2		A	13C9-PFNA	5.27	451850.1	0.179	0.644
PFNS	5.55	1.060	20326.1		A	13C8-PFOS	5.25	271778.8	0.075	0.523
PFDA	5.57	1.000	63802.1		M	13C6-PFDA	5.57	601859.8	0.106	0.562
8:2-FTS	5.57	1.000	6214.2		A	13C2-8:2-FTS	5.57	27639.2	0.225	0.524
PFOSA	5.65	1.000	71087.0		A	13C8-PFOSA	5.65	636543.2	0.112	0.545
NMeFOSAA	5.71	1.000	5759.6		A	d3-NMeFOSAA	5.71	77388.6	0.074	0.421
PFDS	5.80	1.100	16291.9		A	13C8-PFOS	5.25	271778.8	0.060	0.543
PFUnDA	5.83	1.000	51206.8		A	13C7-PFUnDA	5.83	242881.8	0.211	0.551
NEtFOSAA	5.85	1.000	7727.1		M	d5-NEtFOSAA	5.84	63686.9	0.121	0.636
PFDoDA	6.06	1.000	59695.3		A	13C2-PFDoDA	6.06	532175.4	0.112	0.571
10:2-FTS	6.08	1.090	5206.5		A	13C2-8:2-FTS	5.57	27639.2	0.188	0.627
NMePFOSAE	6.10	1.000	43085.1		A	d7-NMePFOSAE	6.09	323456.5	0.133	0.554
NMePFOSA	6.11	1.000	8877.7		A	d3-NMePFOSA	6.11	77893.2	0.114	0.562
PFDoS	6.22	1.190	8992.5		M	13C8-PFOS	5.25	271778.8	0.033	0.580
NEtPFOSAE	6.26	1.000	46623.3		M	d9-NEtPFOSAE	6.25	261195.6	0.178	0.573
NEtPFOSA	6.27	1.000	8053.7		M	d5-NEtPFOSA	6.27	58073.5	0.139	0.637
PFTrDA	6.26	1.030	47991.3		A	13C2-PFDoDA	6.06	532175.4	0.090	0.569
PFTeDA	6.43	1.000	40236.5		A	13C2-PFTeDA	6.43	394146.2	0.102	0.572
PFHxDA	6.74	1.050	19006.4		A	13C2-PFTeDA	6.43	394146.2	0.048	0.575
PFODA	7.00	1.090	14955.6		A	13C2-PFTeDA	6.43	394146.2	0.038	0.528

Total Ion Chromatogram

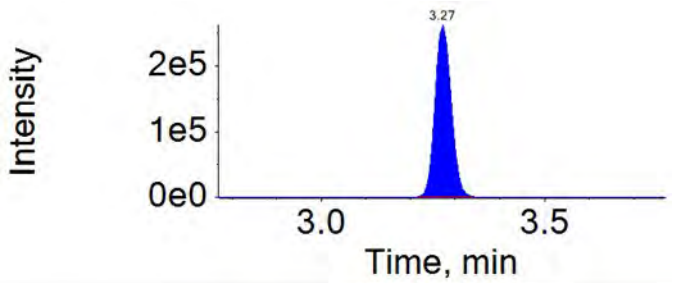


APPROVED
By MCD at 6:33 pm, 11/12/18

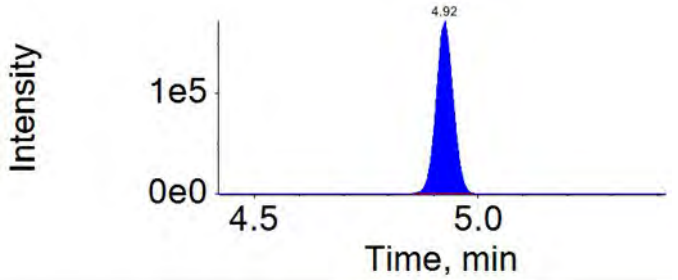
REVIEWED
By HMK at 10:53 am, 11/13/18

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

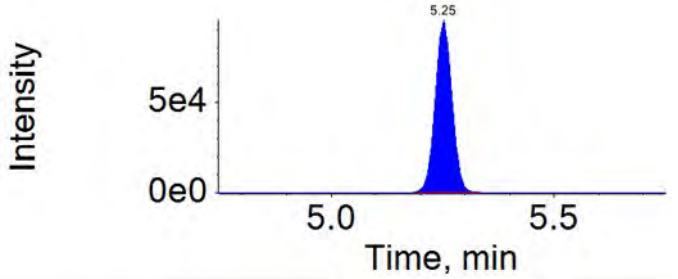
Injection Standard: 13C3-PFBA
216.0 / 172.0



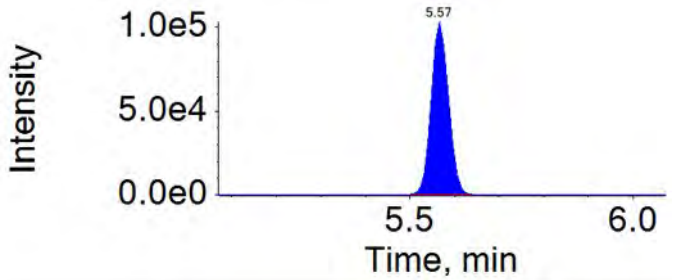
Injection Standard: 13C2-PFOA
415.0 / 370.0



Injection Standard: 13C4-PFOS
503.0 / 80.0

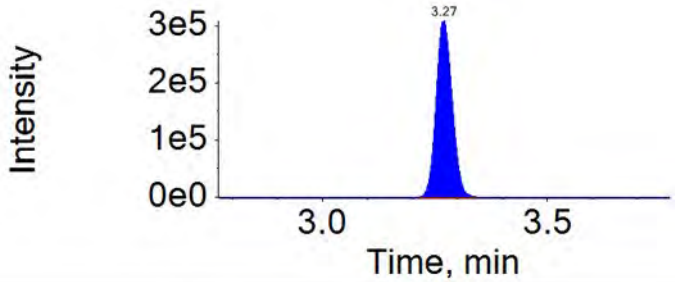


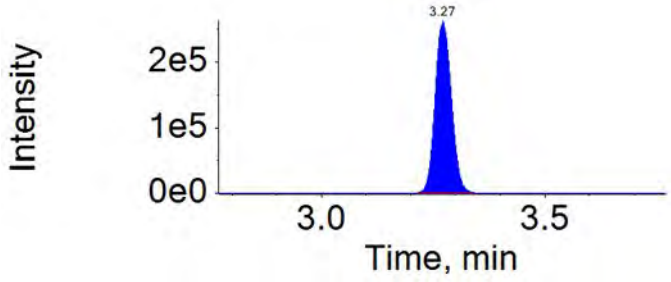
Injection Standard: 13C2-PFDA
515.0 / 470.0



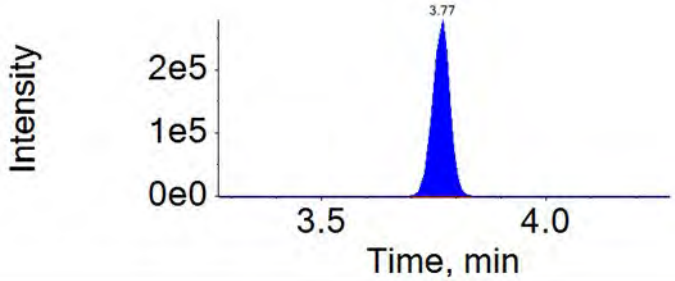
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

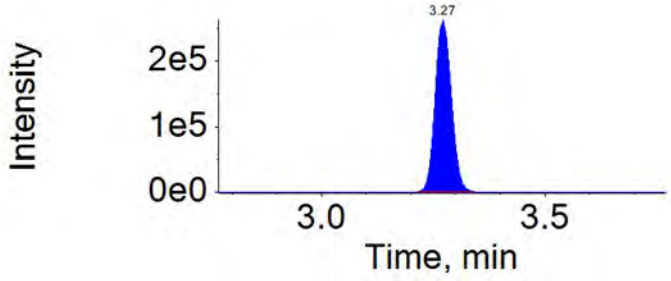
Extraction Standard: E13C4-PFBA	Injection Standard: 13C3-PFBA
217.0 / 172.0	216.0 / 172.0



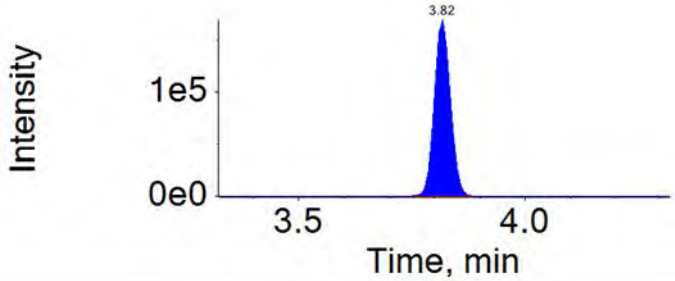


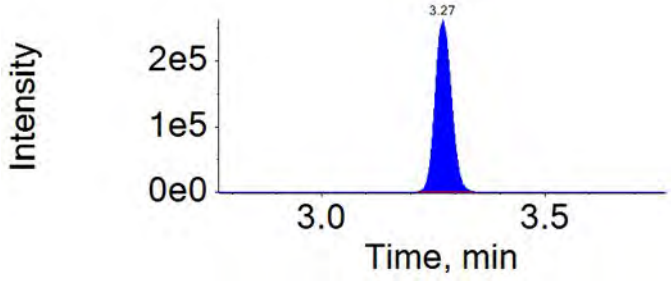
Extraction Standard: E13C5-PFPeA	Injection Standard: 13C3-PFBA
268.0 / 223.0	216.0 / 172.0



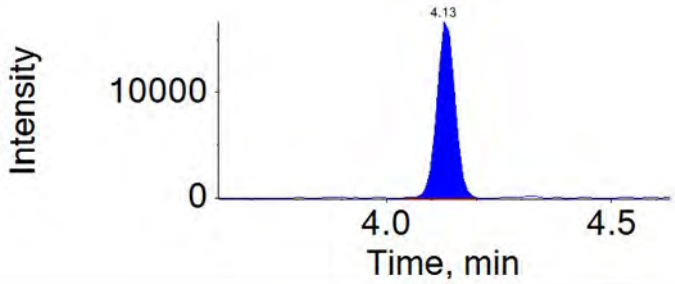


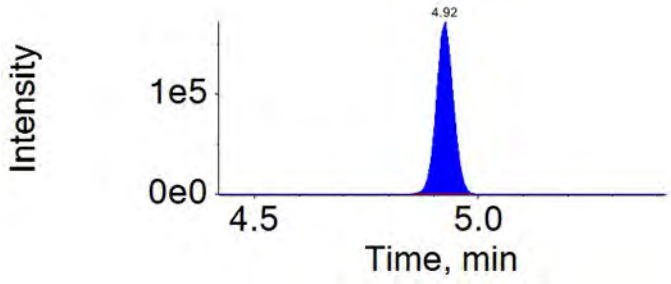
Extraction Standard: E13C3-PFBS	Injection Standard: 13C3-PFBA
302.0 / 80.0	216.0 / 172.0





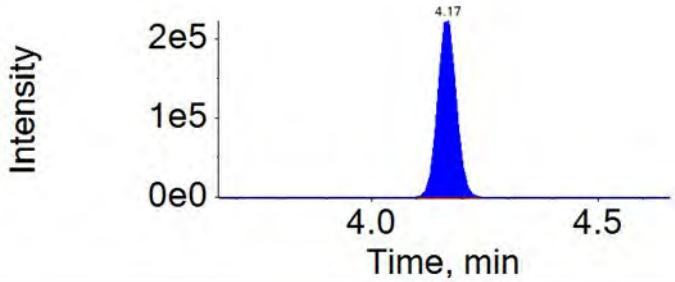
Extraction Standard: E13C2-4:2-FTS	Injection Standard: 13C2-PFOA
329.0 / 81.0	415.0 / 370.0

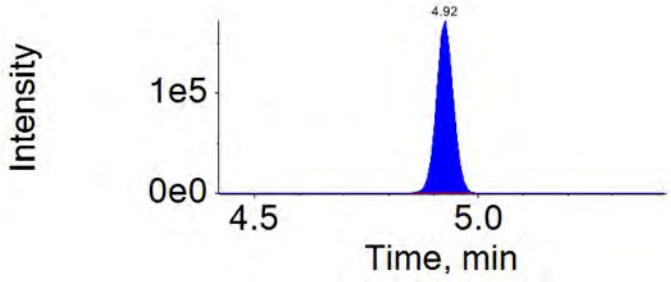




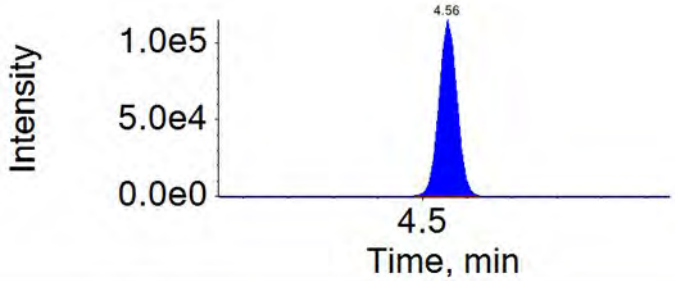
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

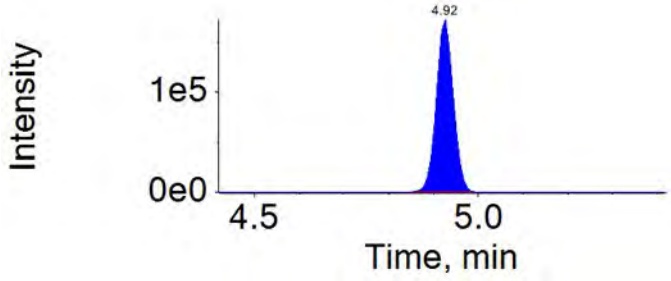
Extraction Standard: E13C5-PFHxA	Injection Standard: 13C2-PFOA
318.0 / 273.0	415.0 / 370.0



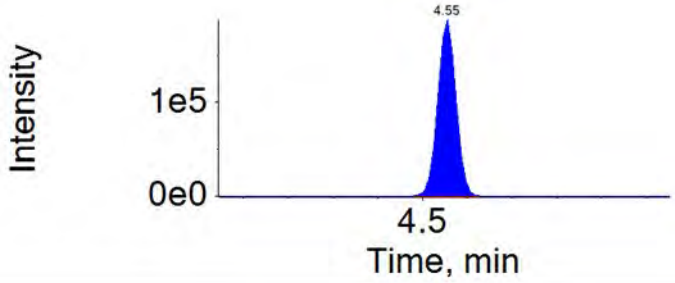


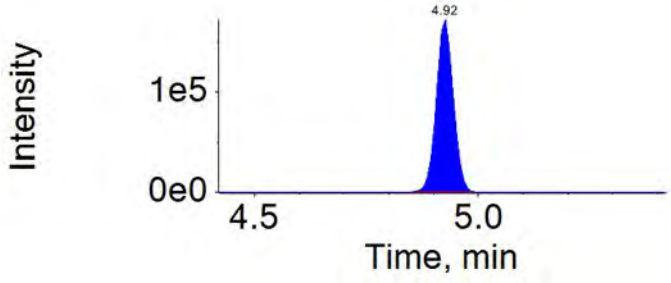
Extraction Standard: E13C3-PFHxS	Injection Standard: 13C2-PFOA
402.0 / 80.0	415.0 / 370.0



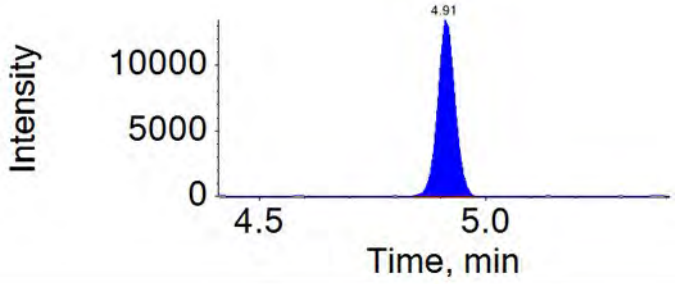


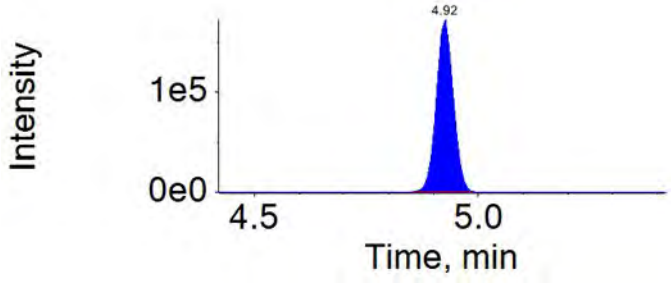
Extraction Standard: E13C4-PFHpA	Injection Standard: 13C2-PFOA
367.0 / 322.0	415.0 / 370.0





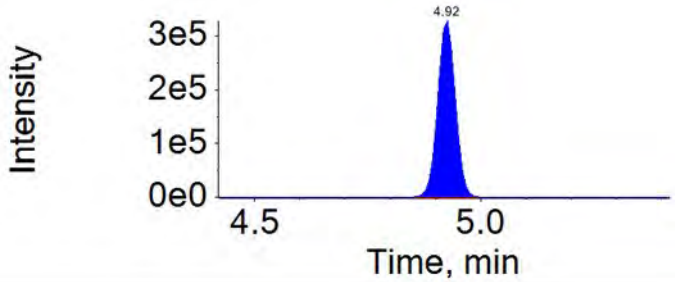
Extraction Standard: E13C2-6:2-FTS	Injection Standard: 13C2-PFOA
429.0 / 81.0	415.0 / 370.0

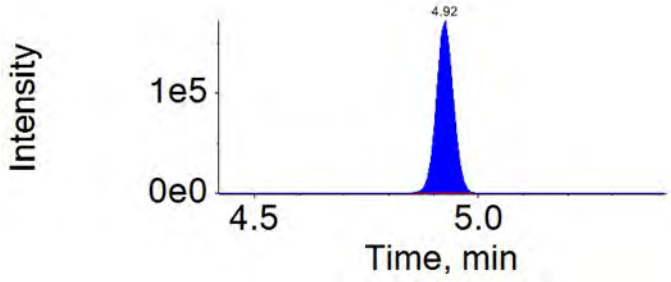




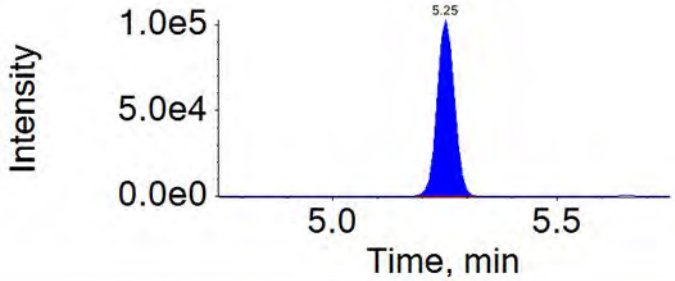
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

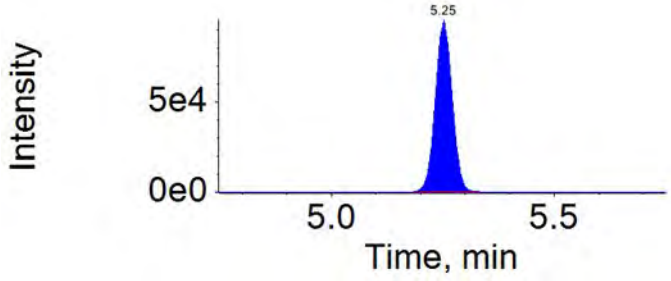
Extraction Standard: E13C8-PFOA	Injection Standard: 13C2-PFOA
421.0 / 376.0	415.0 / 370.0



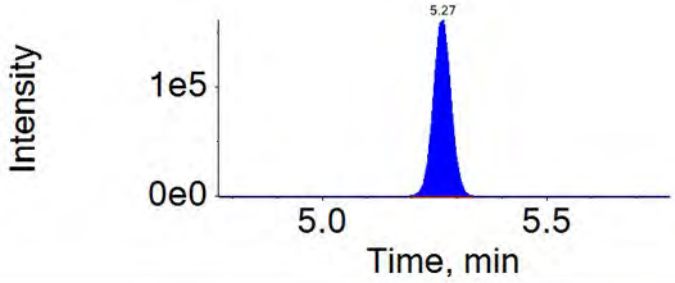


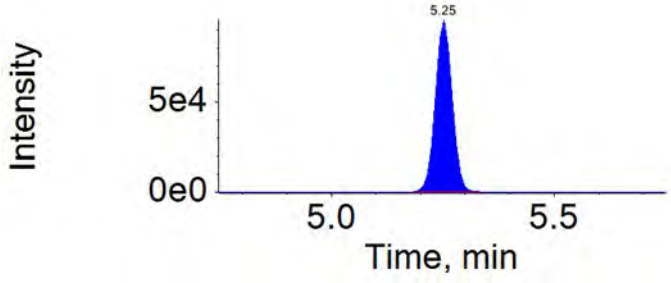
Extraction Standard: E13C8-PFOS	Injection Standard: 13C4-PFOS
507.0 / 80.0	503.0 / 80.0



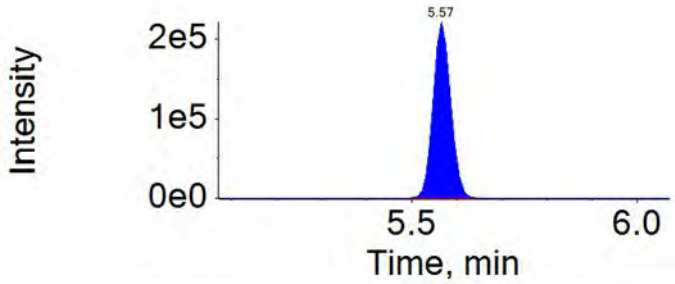


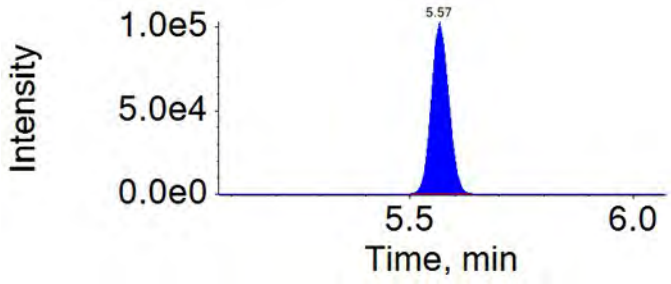
Extraction Standard: E13C9-PFNA	Injection Standard: 13C4-PFOS
472.0 / 427.0	503.0 / 80.0





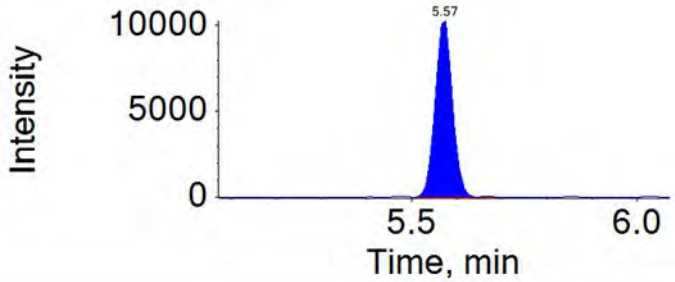
Extraction Standard: E13C6-PFDA	Injection Standard: 13C2-PFDA
519.0 / 474.0	515.0 / 470.0

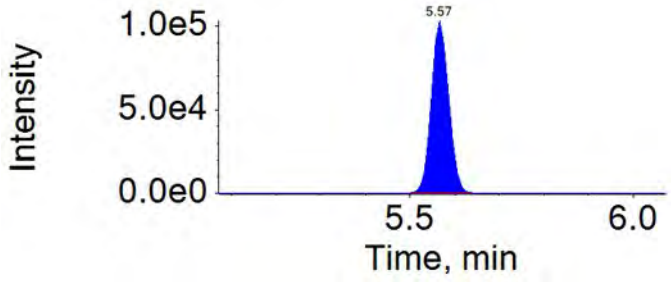




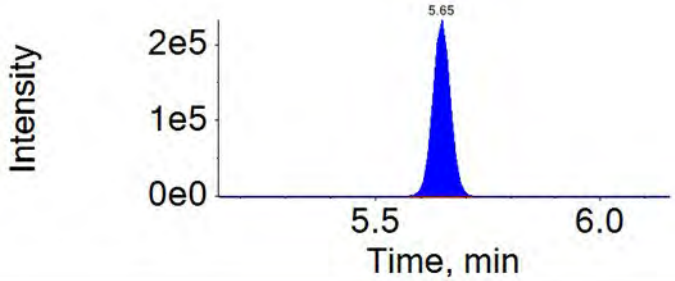
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

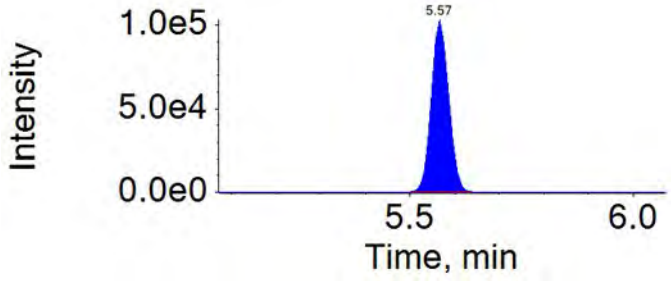
Extraction Standard: E13C2-8:2-FTS	Injection Standard: 13C2-PFDA
529.0 / 81.0	515.0 / 470.0



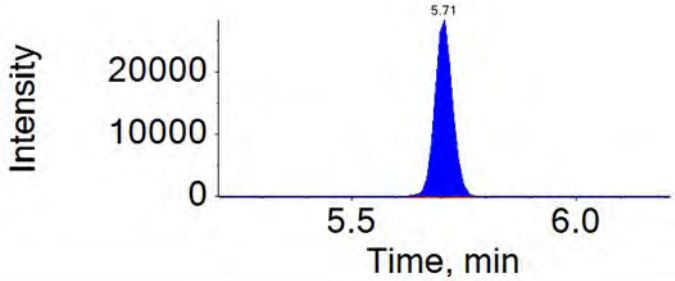


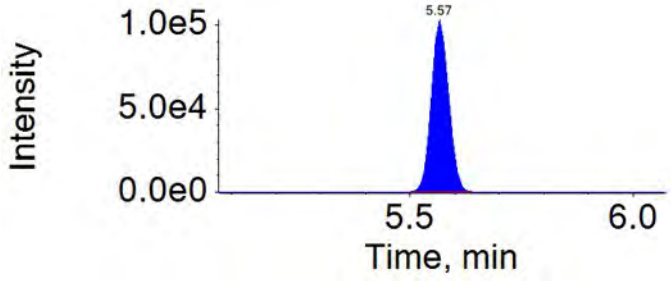
Extraction Standard: E13C8-PFOSA	Injection Standard: 13C2-PFDA
506.0 / 78.0	515.0 / 470.0



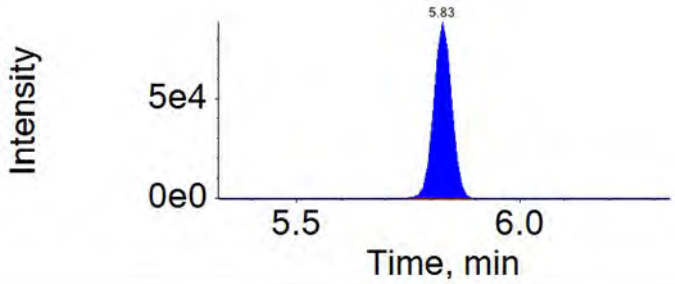


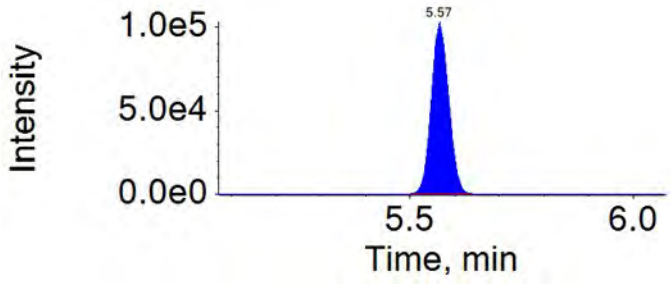
Extraction Standard: Ed3-NMeFOSAA	Injection Standard: 13C2-PFDA
573.0 / 419.0	515.0 / 470.0





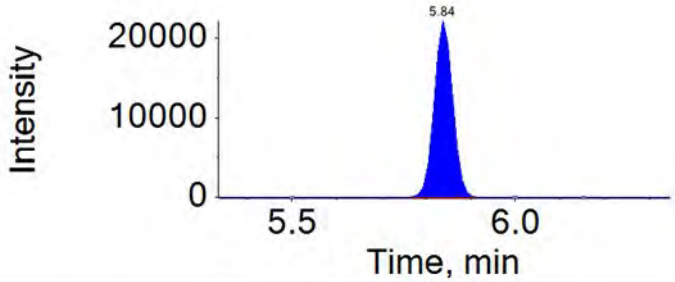
Extraction Standard: E13C7-PFUnDA	Injection Standard: 13C2-PFDA
570.0 / 525.0	515.0 / 470.0

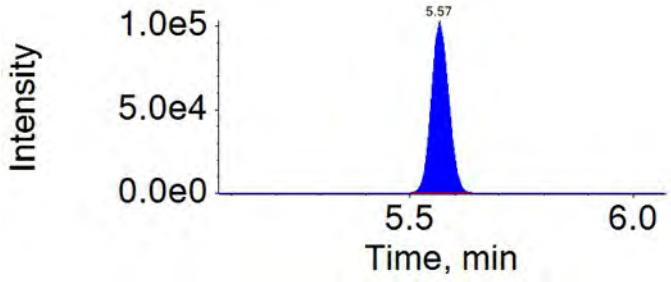




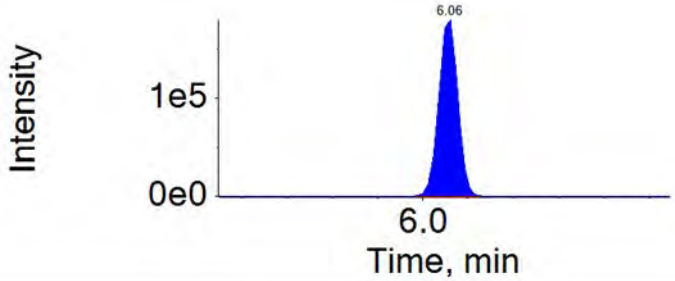
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

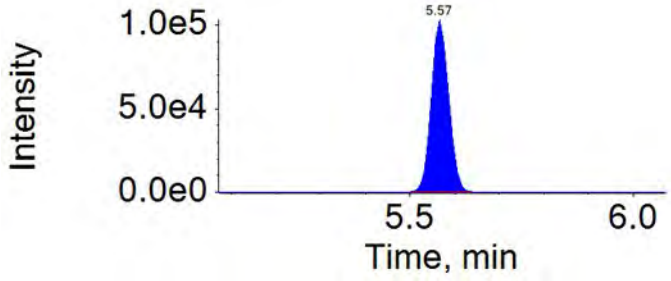
Extraction Standard: Ed5-NEtFOSAA	Injection Standard: 13C2-PFDA
589.0 / 419.0	515.0 / 470.0



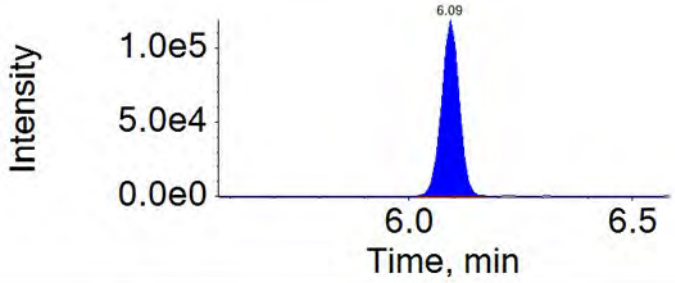


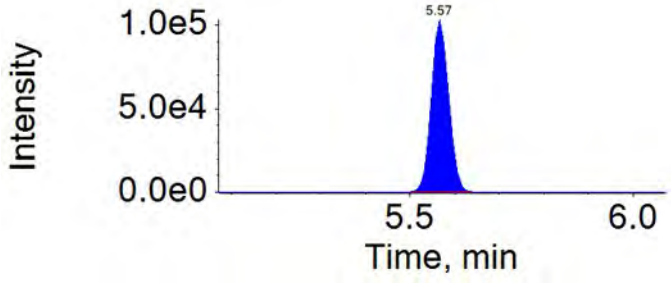
Extraction Standard: E13C2-PFDoDA	Injection Standard: 13C2-PFDA
615.0 / 570.0	515.0 / 470.0



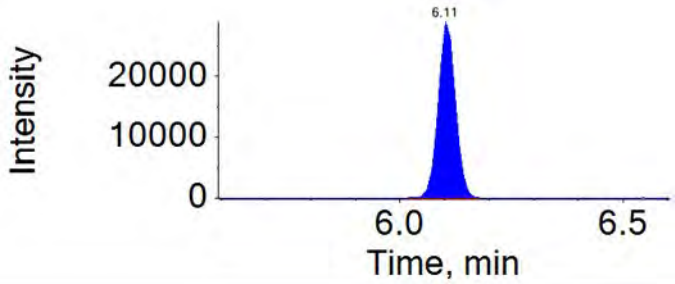


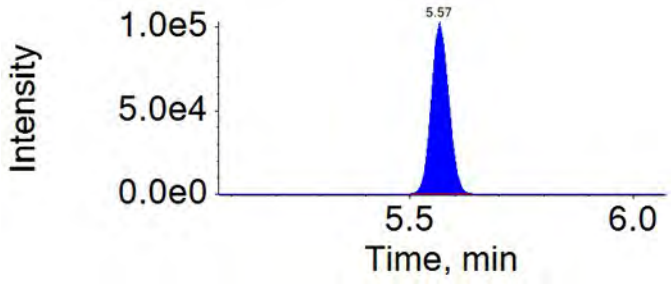
Extraction Standard: Ed7-NMePFOSAE	Injection Standard: 13C2-PFDA
623.0 / 59.0	515.0 / 470.0





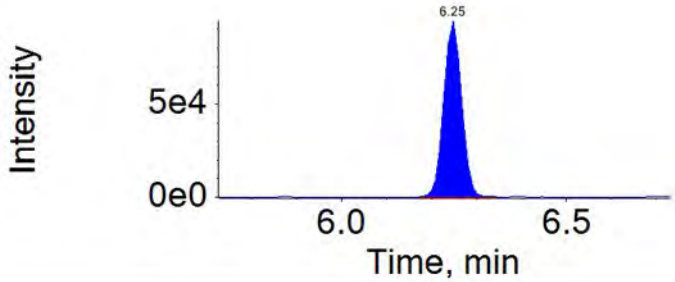
Extraction Standard: Ed3-NMePFOSA	Injection Standard: 13C2-PFDA
515.0 / 169.0	515.0 / 470.0

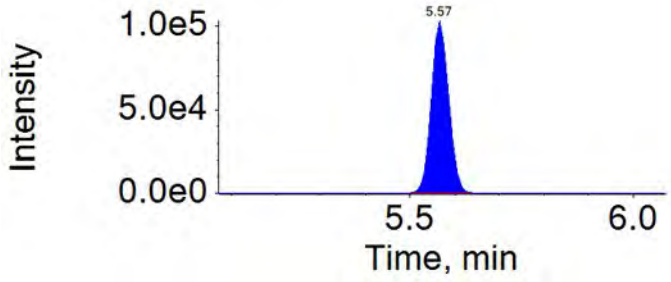




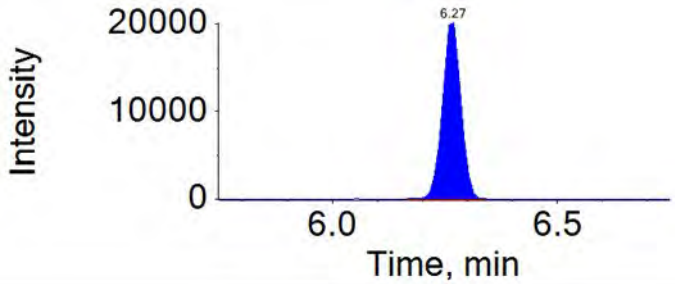
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

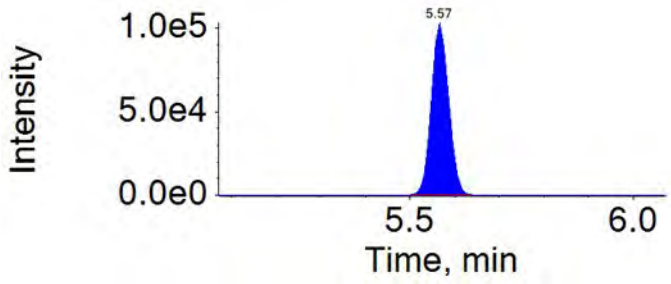
Extraction Standard: Ed9-NEtPFOSAE	Injection Standard: 13C2-PFDA
639.0 / 59.0	515.0 / 470.0



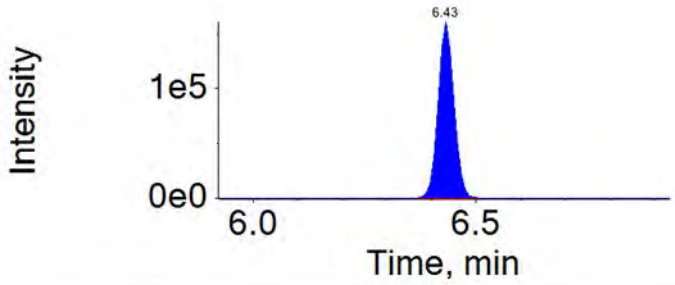


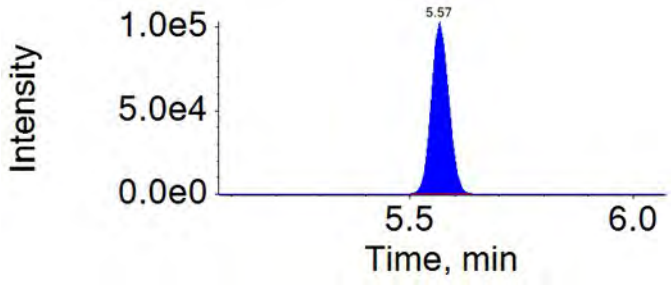
Extraction Standard: Ed5-NEtPFOSA	Injection Standard: 13C2-PFDA
531.0 / 169.0	515.0 / 470.0





Extraction Standard: E13C2-PFTeDA	Injection Standard: 13C2-PFDA
715.0 / 670.0	515.0 / 470.0



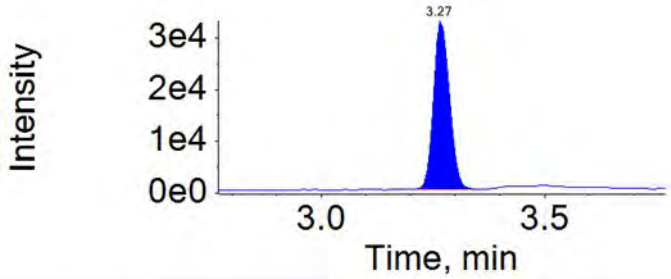


APPROVED
By MCD at 6:33 pm, 11/12/18

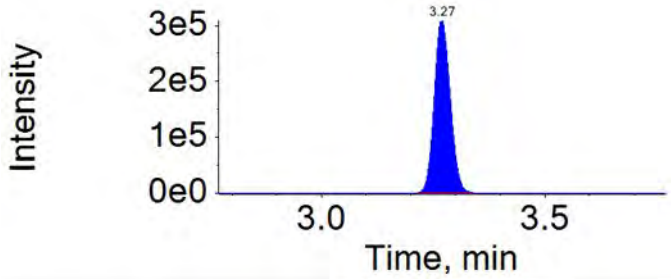
REVIEWED
By HMK at 10:53 am, 11/13/18

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

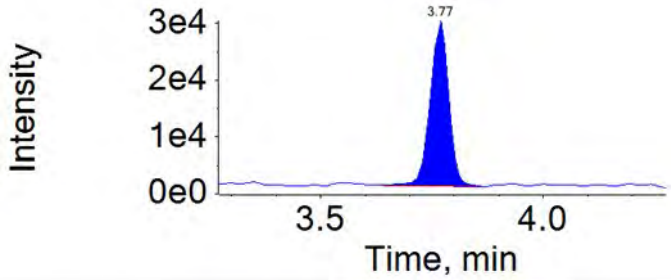
Analyte: PFBA
213.0 / 169.0



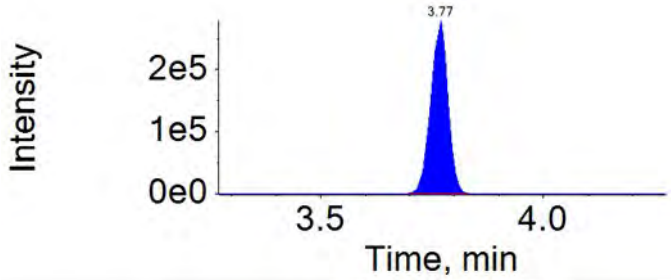
Extraction Standard: 13C4-PFBA
217.0 / 172.0



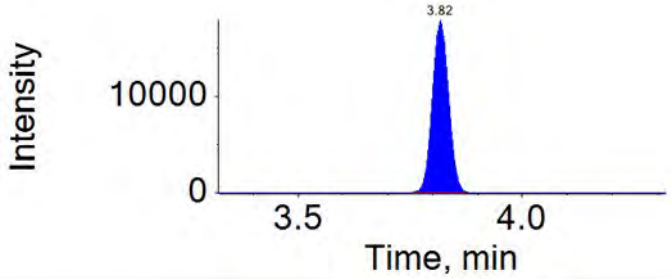
Analyte: PFPeA
263.0 / 219.0



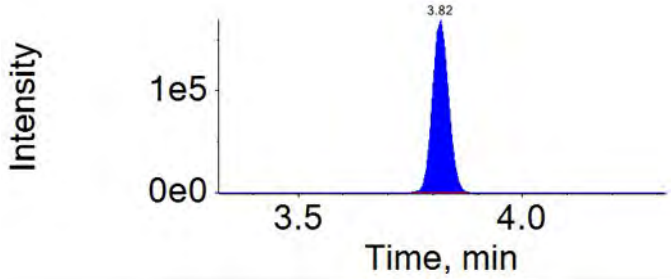
Extraction Standard: 13C5-PFPeA
268.0 / 223.0



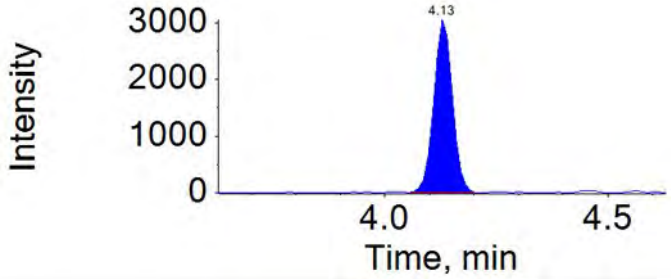
Analyte: PFBS
299.0 / 80.0



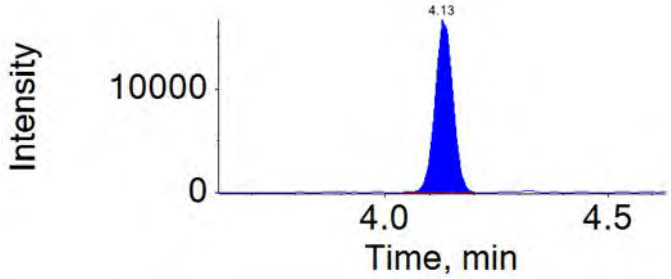
Extraction Standard: 13C3-PFBS
302.0 / 80.0



Analyte: 4:2-FTS
327.0 / 307.0



Extraction Standard: 13C2-4:2-FTS
329.0 / 81.0

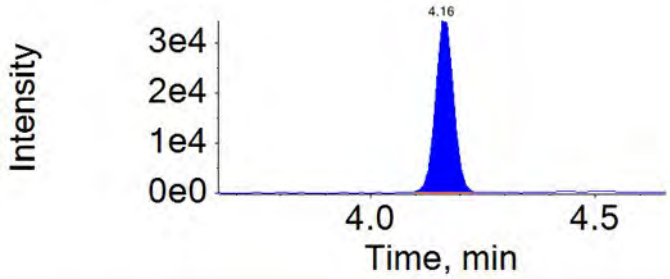


APPROVED
By MCD at 6:33 pm, 11/12/18

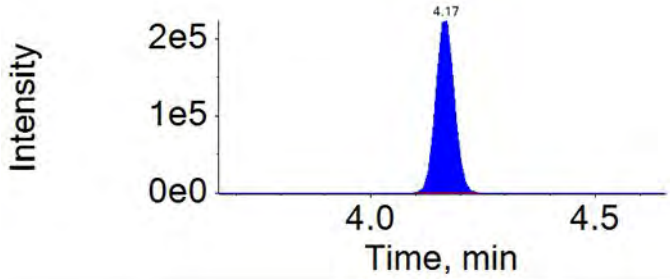
REVIEWED
By HMK at 10:53 am, 11/13/18

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

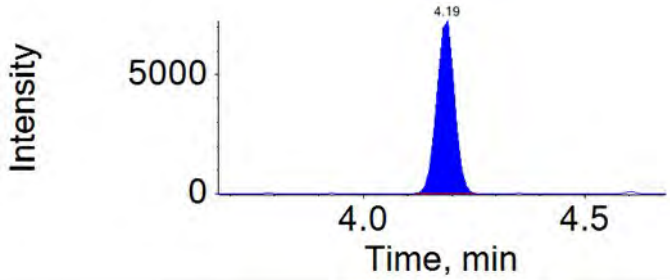
Analyte: PFHxA
313.0 / 269.0



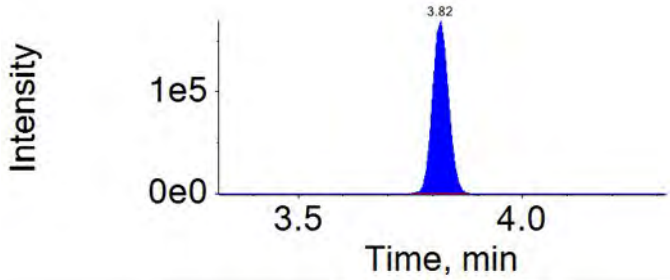
Extraction Standard: 13C5-PFHxA
318.0 / 273.0



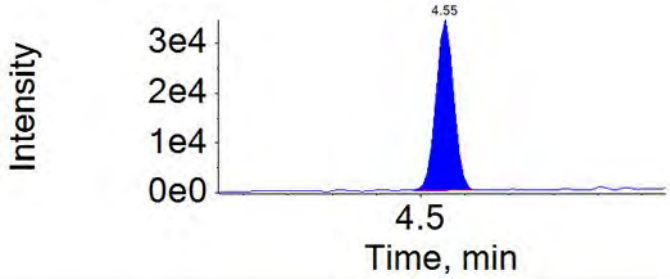
Analyte: PFPeS
349.0 / 80.0



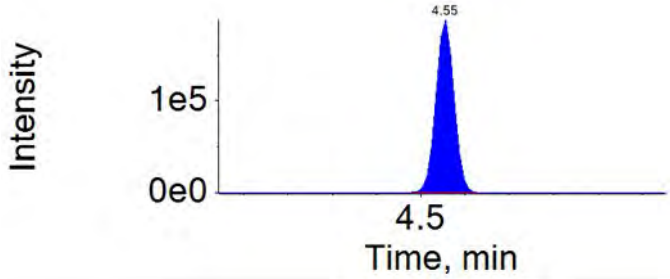
Extraction Standard: 13C3-PFBS
302.0 / 80.0



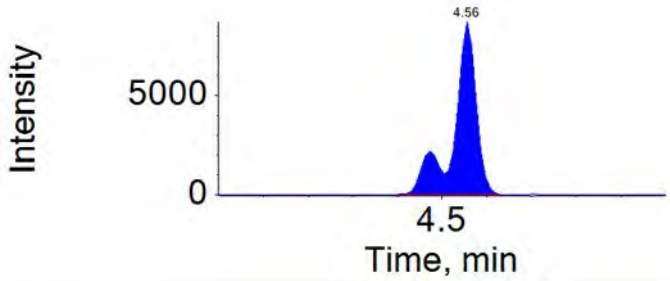
Analyte: PFHpA
363.0 / 319.0



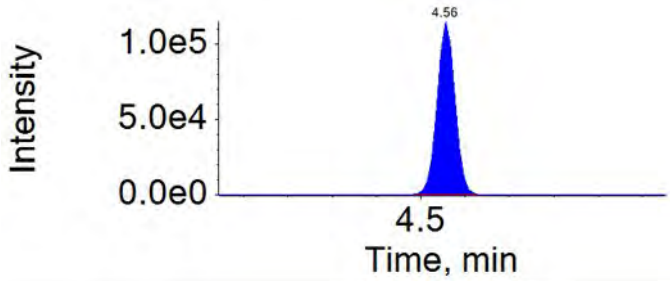
Extraction Standard: 13C4-PFHpA
367.0 / 322.0



Analyte: PFHxS
399.0 / 80.0

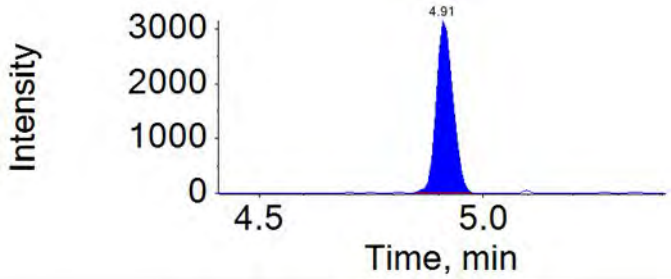


Extraction Standard: 13C3-PFHxS
402.0 / 80.0

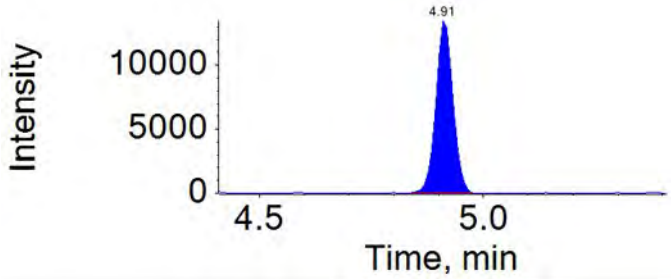


ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

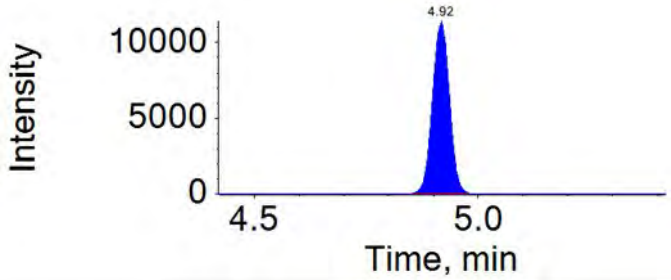
Analyte: 6:2-FTS
427.0 / 407.0



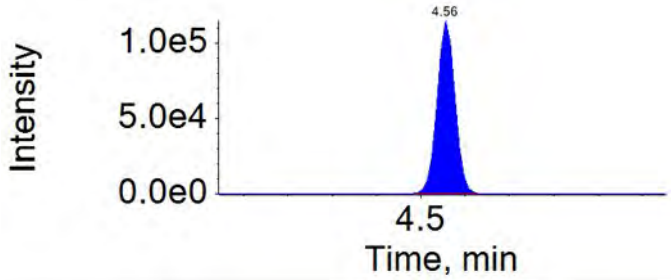
Extraction Standard: 13C2-6:2-FTS
429.0 / 81.0



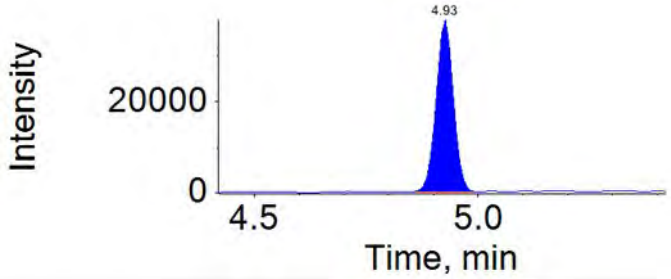
Analyte: PFHpS
449.0 / 80.0



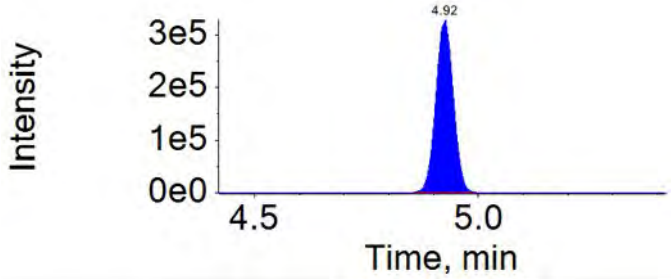
Extraction Standard: 13C3-PFHxS
402.0 / 80.0



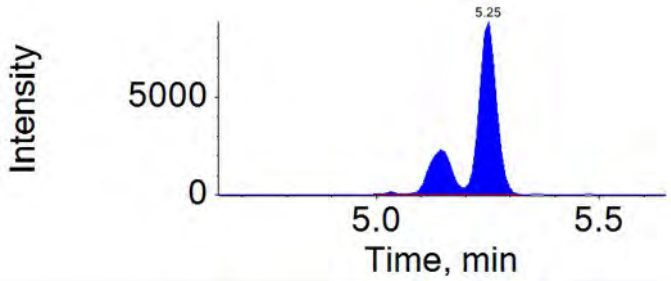
Analyte: PFOA
413.0 / 369.0



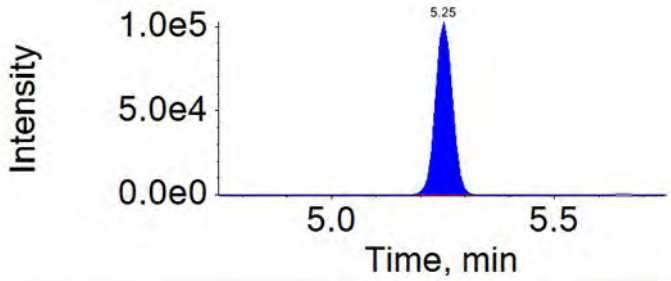
Extraction Standard: 13C8-PFOA
421.0 / 376.0



Analyte: PFOS
499.0 / 80.0



Extraction Standard: 13C8-PFOS
507.0 / 80.0

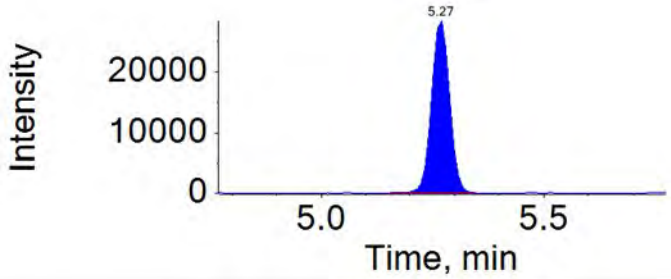


APPROVED
By MCD at 6:33 pm, 11/12/18

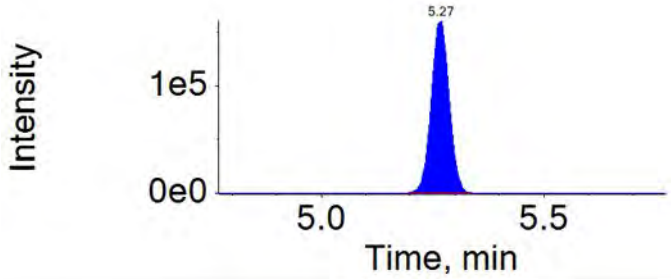
REVIEWED
By HMK at 10:53 am, 11/13/18

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

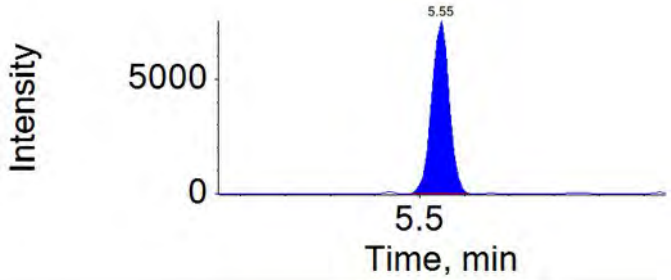
Analyte: PFNA
463.0 / 419.0



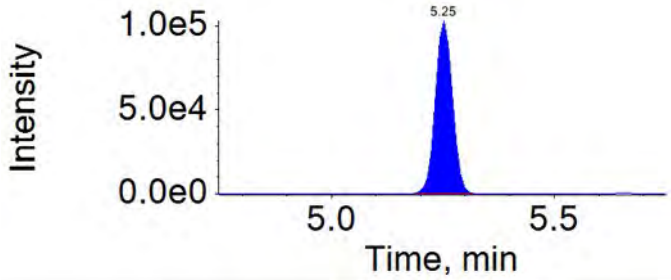
Extraction Standard: 13C9-PFNA
472.0 / 427.0



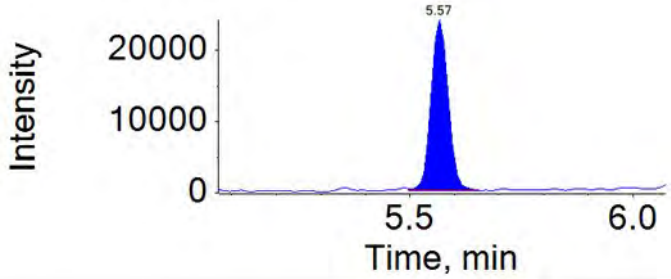
Analyte: PFNS
549.0 / 80.0



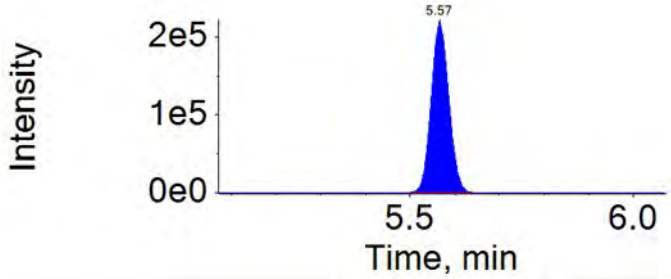
Extraction Standard: 13C8-PFOS
507.0 / 80.0



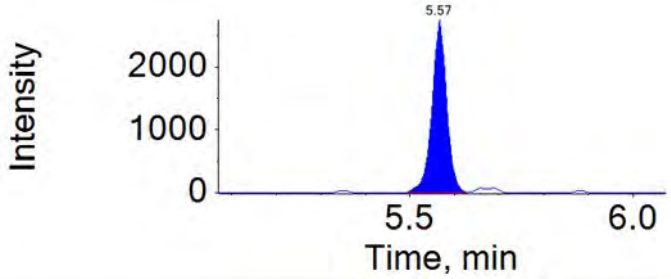
Analyte: PFDA
513.0 / 469.0



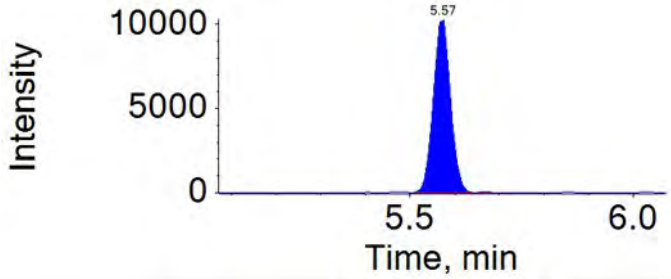
Extraction Standard: 13C6-PFDA
519.0 / 474.0



Analyte: 8:2-FTS
527.0 / 507.0



Extraction Standard: 13C2-8:2-FTS
529.0 / 81.0

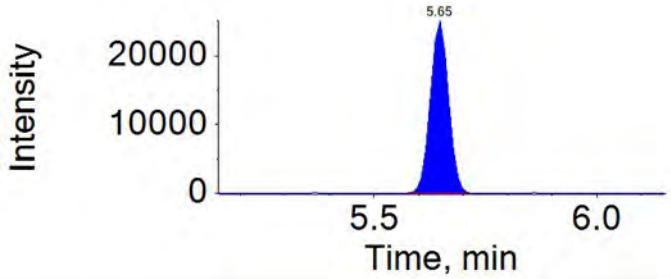


APPROVED
By MCD at 6:33 pm, 11/12/18

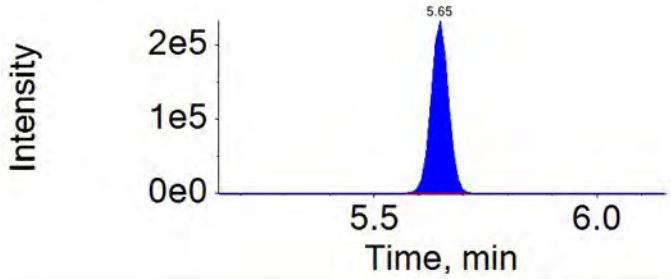
REVIEWED
By HMK at 10:53 am, 11/13/18

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

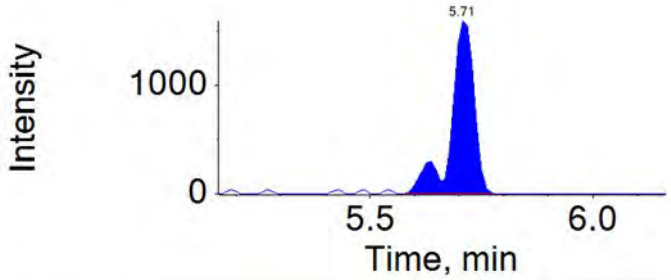
Analyte: PFOSA
498.0 / 78.0



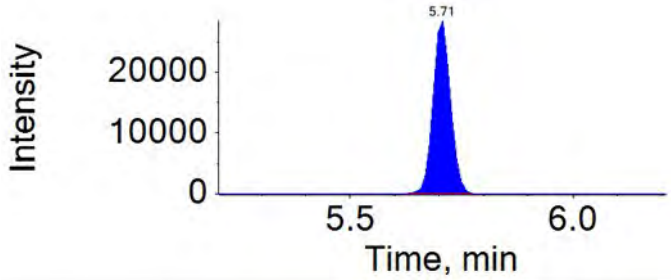
Extraction Standard: 13C8-PFOSA
506.0 / 78.0



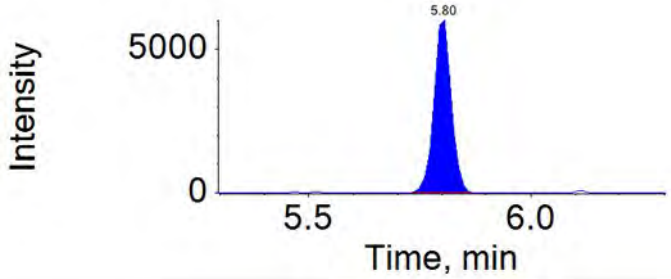
Analyte: NMeFOSAA
570.0 / 419.0



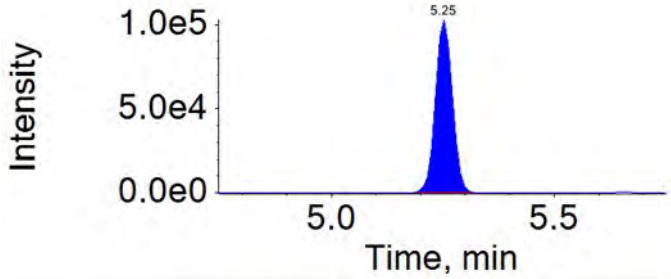
Extraction Standard: d3-NMeFOSAA
573.0 / 419.0



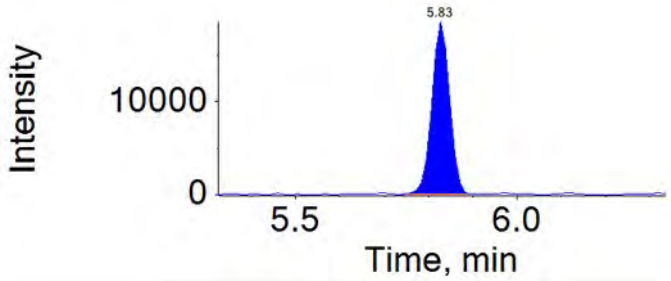
Analyte: PFDS
599.0 / 80.0



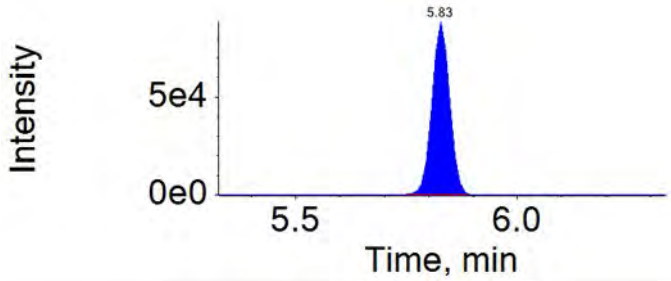
Extraction Standard: 13C8-PFOS
507.0 / 80.0



Analyte: PFUnDA
563.0 / 519.0



Extraction Standard: 13C7-PFUnDA
570.0 / 525.0

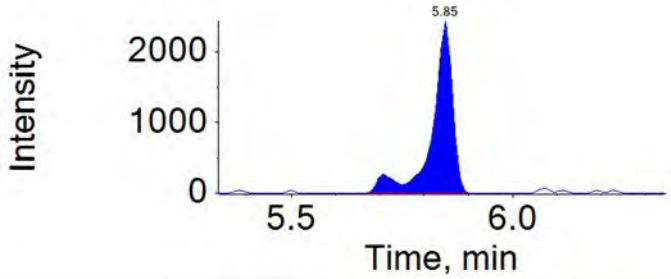


APPROVED
By MCD at 6:33 pm, 11/12/18

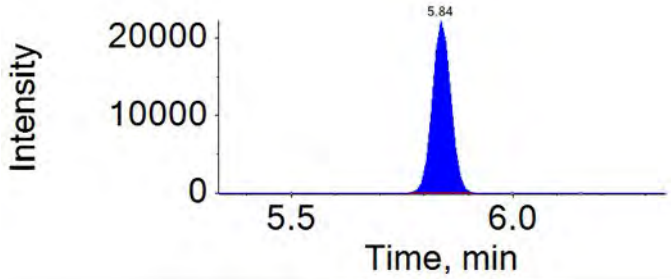
REVIEWED
By HMK at 10:53 am, 11/13/18

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

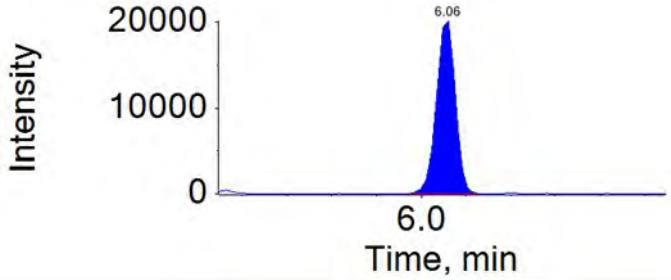
Analyte: NEtFOSAA
584.0 / 419.0



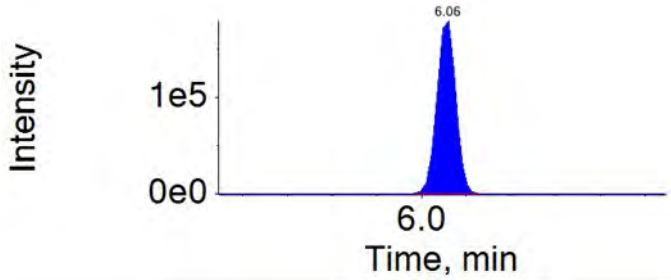
Extraction Standard: d5-NEtFOSAA
589.0 / 419.0



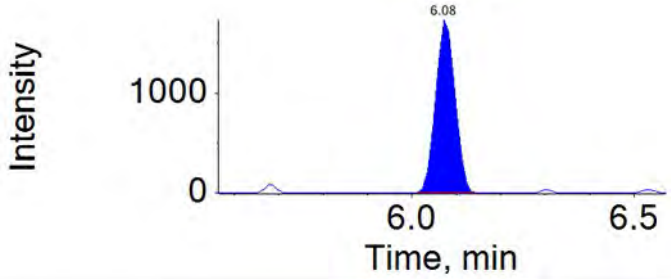
Analyte: PFDoDA
613.0 / 569.0



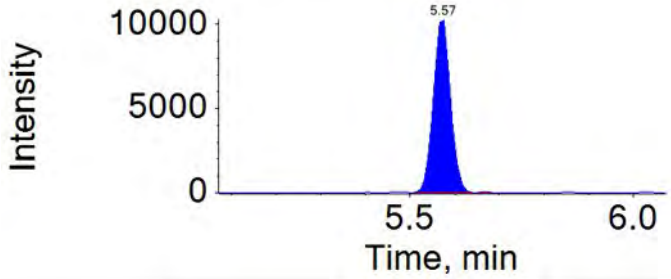
Extraction Standard: 13C2-PFDoDA
615.0 / 570.0



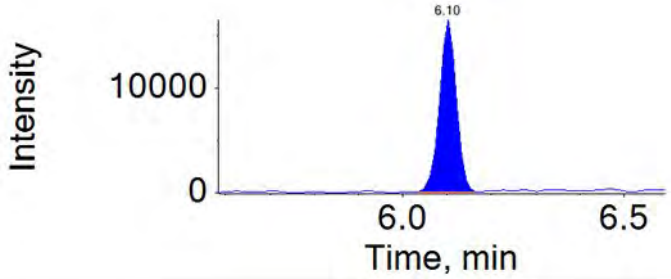
Analyte: 10:2-FTS
627.0 / 607.0



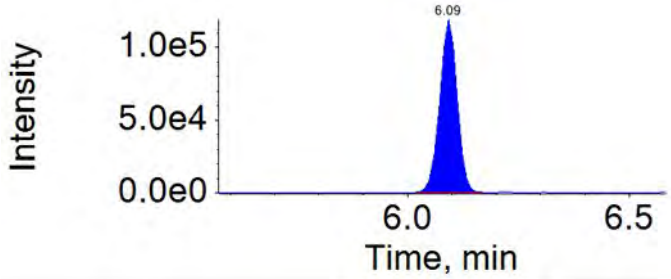
Extraction Standard: 13C2-8:2-FTS
529.0 / 81.0



Analyte: NMePFOSAE
616.0 / 59.0



Extraction Standard: d7-NMePFOSAE
623.0 / 59.0

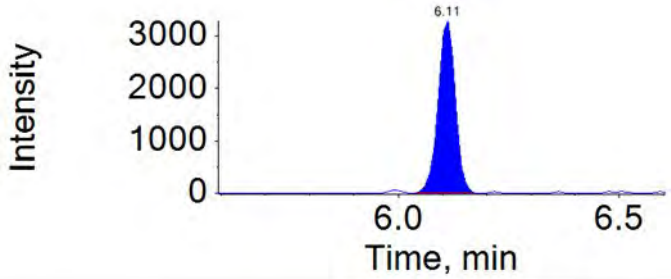


APPROVED
By MCD at 6:33 pm, 11/12/18

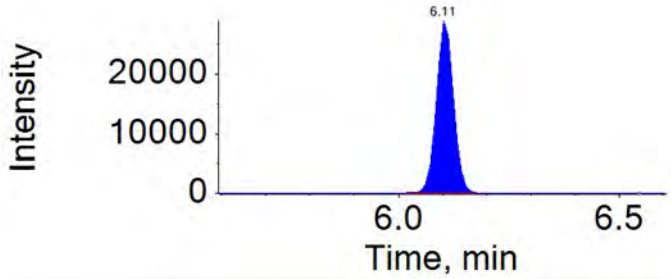
REVIEWED
By HMK at 10:53 am, 11/13/18

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

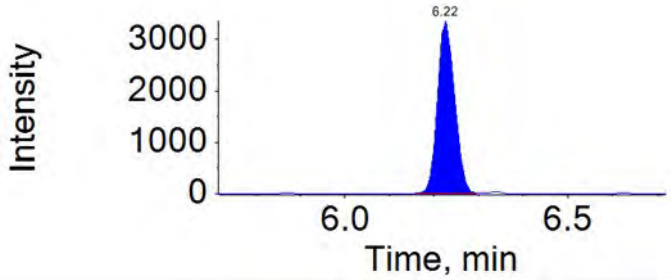
Analyte: NMePFOSA
512.0 / 169.0



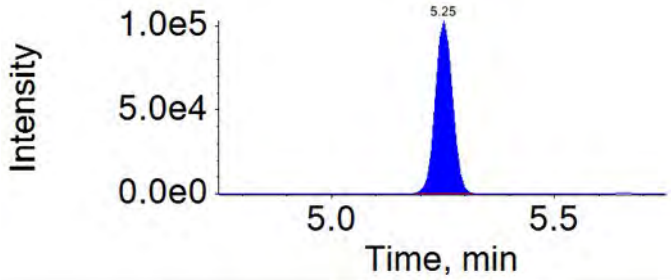
Extraction Standard: d3-NMePFOSA
515.0 / 169.0



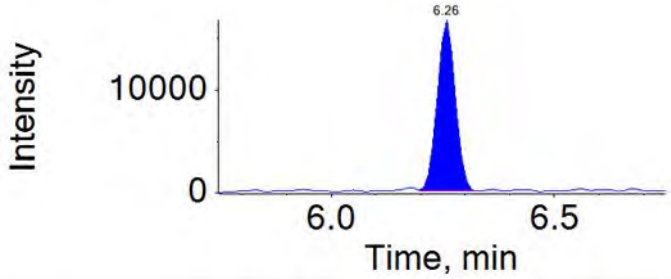
Analyte: PFDoS
699.0 / 80.0



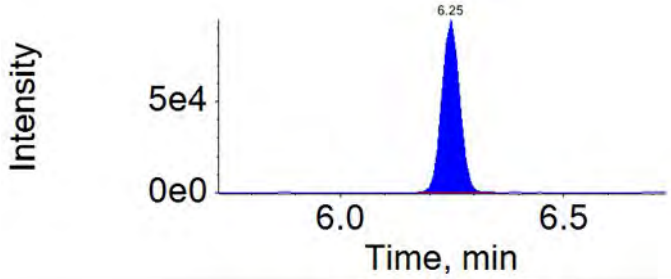
Extraction Standard: 13C8-PFOS
507.0 / 80.0



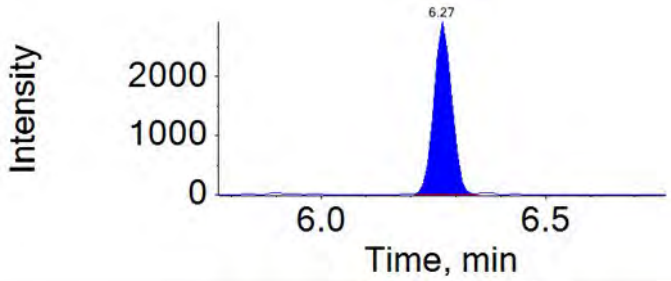
Analyte: NEtPFOSAE
630.0 / 59.0



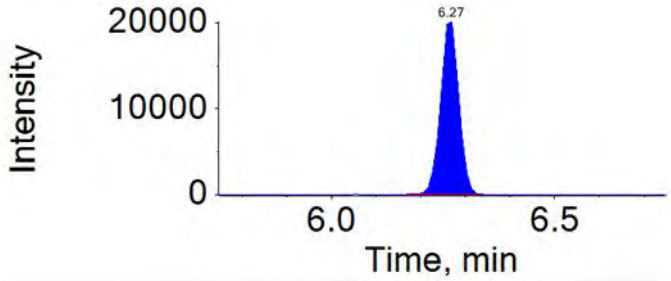
Extraction Standard: d9-NEtPFOSAE
639.0 / 59.0



Analyte: NEtPFOSA
526.0 / 169.0



Extraction Standard: d5-NEtPFOSA
531.0 / 169.0

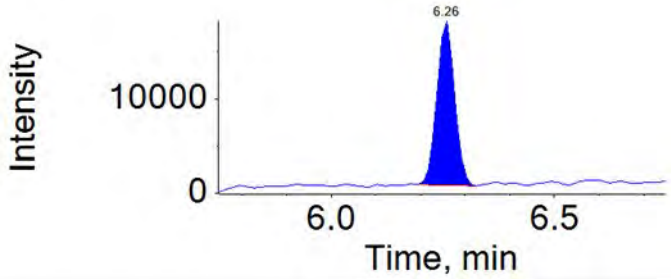


APPROVED
By MCD at 6:33 pm, 11/12/18

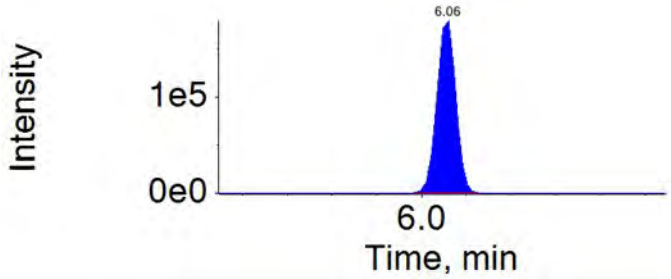
REVIEWED
By HMK at 10:53 am, 11/13/18

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

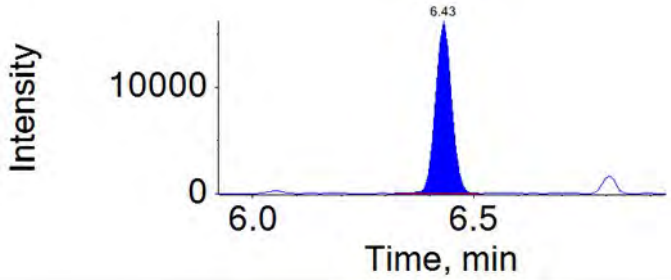
Analyte: PFTrDA
663.0 / 619.0



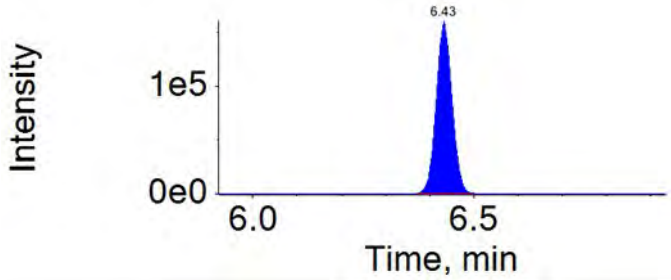
Extraction Standard: 13C2-PFDoDA
615.0 / 570.0



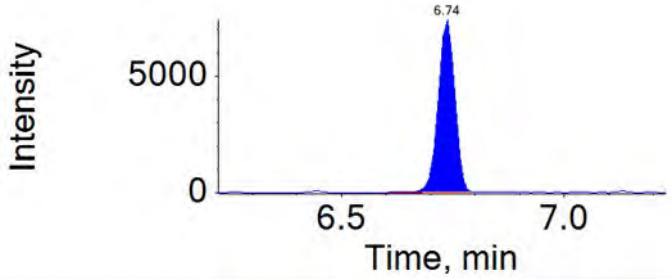
Analyte: PFTeDA
713.0 / 669.0



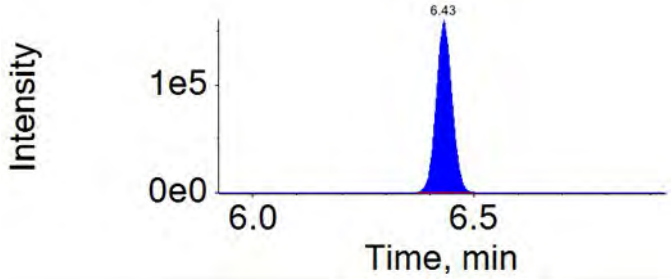
Extraction Standard: 13C2-PFTeDA
715.0 / 670.0



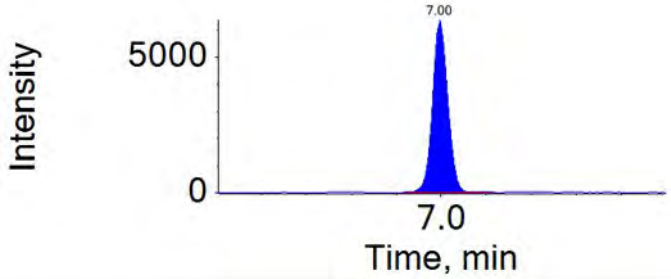
Analyte: PFHxDA
813.0 / 769.0



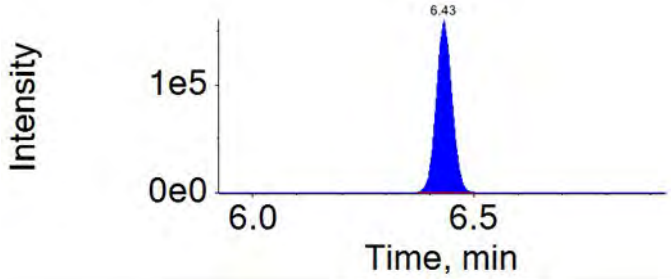
Extraction Standard: 13C2-PFTeDA
715.0 / 670.0



Analyte: PFODA
913.0 / 869.0



Extraction Standard: 13C2-PFTeDA
715.0 / 670.0



APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

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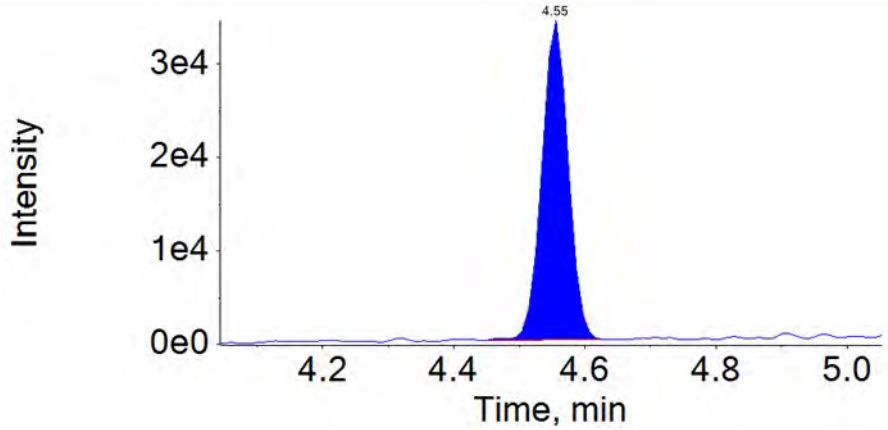
Auto Integrations prior to Manual Integration

Print Date: 11/12/2018 6:26 PM
Template: MQ-OrigInteg-16NOV21.docx

Results Table Name: 18NOV12DCAL
Results Table Date: 11/12/2018 6:23:42 PM

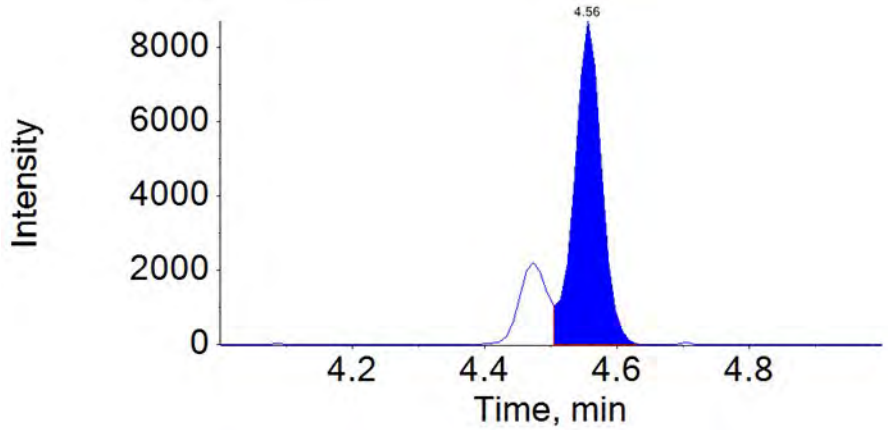
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

Component Name:
PFHpA
RT (min.):
4.55
Peak Area:
95434.80
Mass Range:
363.0 / 319.0
File Name:
18NOV12DCAL-43.wiff
Sample Name:
CAL2



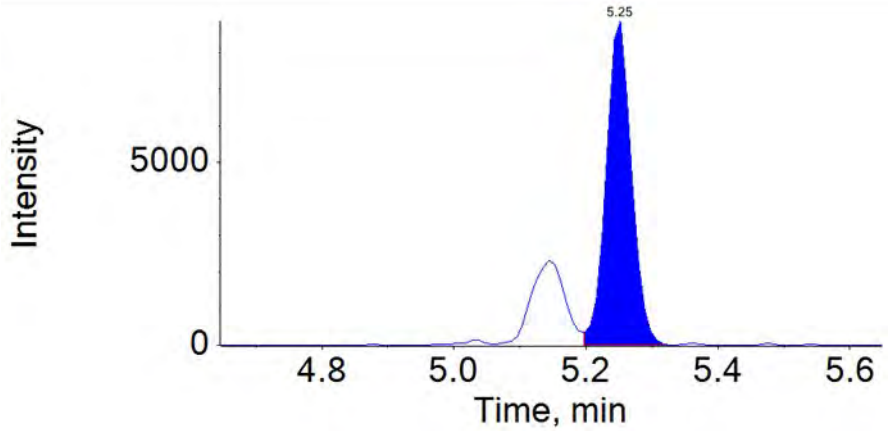
Integration Comment: incorrect integration

Component Name:
PFHxS
RT (min.):
4.56
Peak Area:
24710.47
Mass Range:
399.0 / 80.0
File Name:
18NOV12DCAL-43.wiff
Sample Name:
CAL2



Integration Comment: incorrect integration

Component Name:
PFOS
RT (min.):
5.25
Peak Area:
23625.90
Mass Range:
499.0 / 80.0
File Name:
18NOV12DCAL-43.wiff
Sample Name:
CAL2



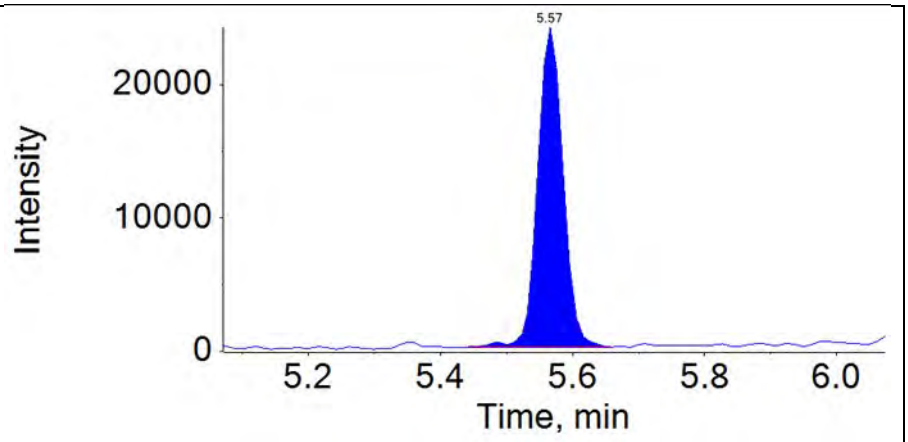
Integration Comment: incorrect integration

APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

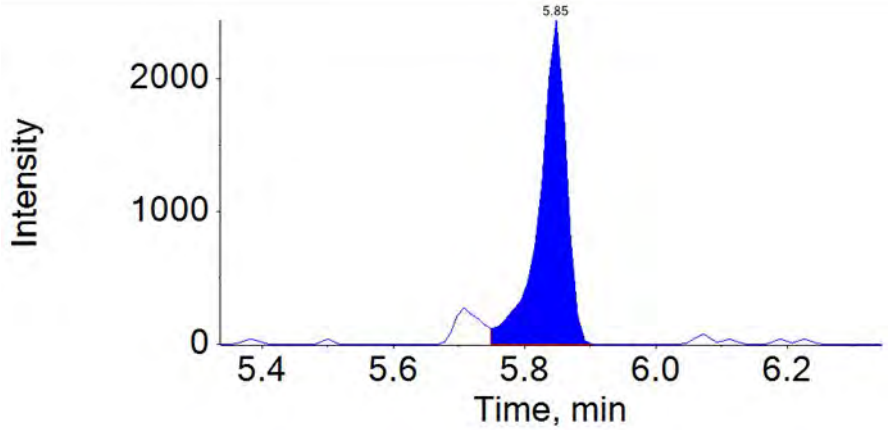
Results Table Name: 18NOV12DCAL
Results Table Date: 11/12/2018 6:23:42 PM
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

Component Name:
PFDA
RT (min.):
5.57
Peak Area:
64555.75
Mass Range:
513.0 / 469.0
File Name:
18NOV12DCAL-43.wiff
Sample Name:
CAL2



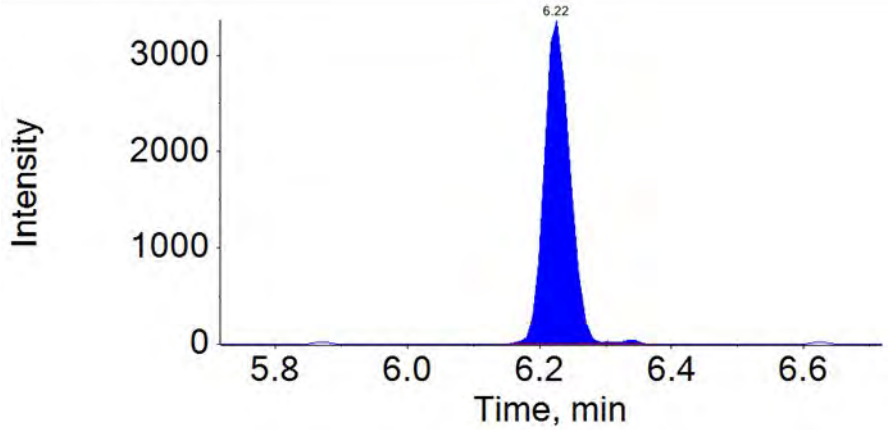
Integration Comment: incorrect integration

Component Name:
NEtFOSAA
RT (min.):
5.85
Peak Area:
6972.11
Mass Range:
584.0 / 419.0
File Name:
18NOV12DCAL-43.wiff
Sample Name:
CAL2



Integration Comment: incorrect integration

Component Name:
PFDoS
RT (min.):
6.22
Peak Area:
9104.97
Mass Range:
699.0 / 80.0
File Name:
18NOV12DCAL-43.wiff
Sample Name:
CAL2



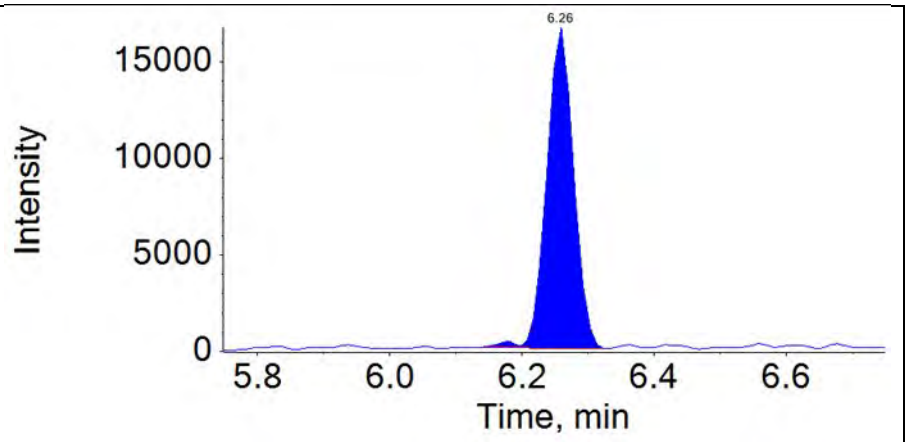
Integration Comment: incorrect integration

APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

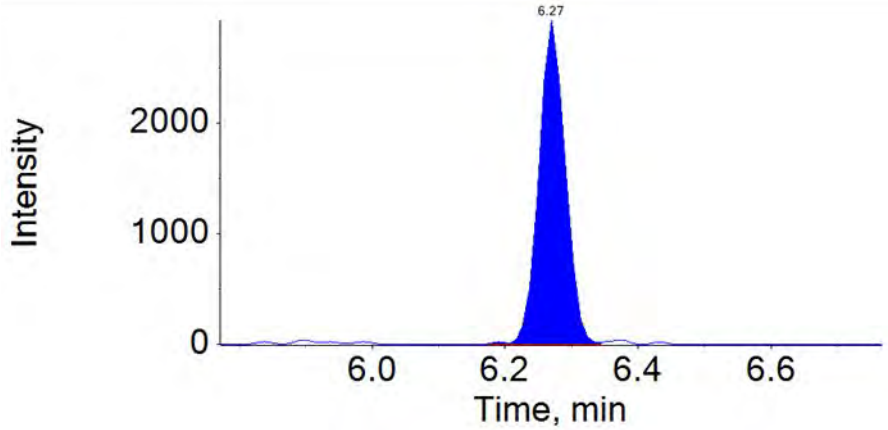
Results Table Name: 18NOV12DCAL
Results Table Date: 11/12/2018 6:23:42 PM
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

Component Name:
NEtPFOSAE
RT (min.):
6.26
Peak Area:
47267.14
Mass Range:
630.0 / 59.0
File Name:
18NOV12DCAL-43.wiff
Sample Name:
CAL2



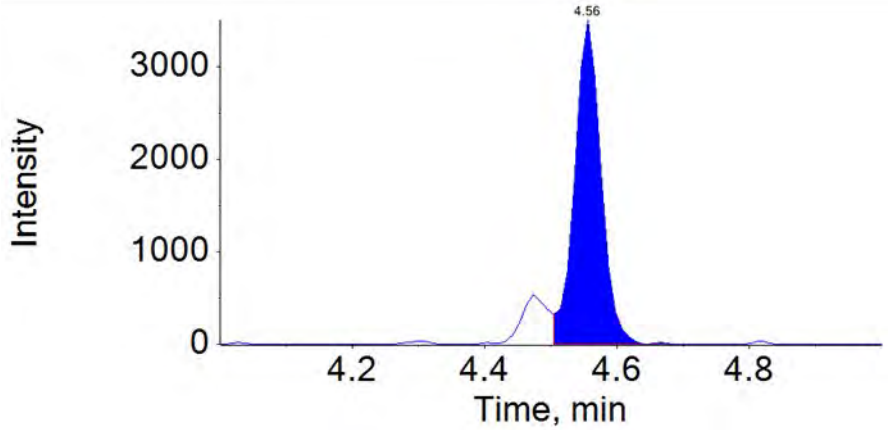
Integration Comment: incorrect integration

Component Name:
NEtPFOSA
RT (min.):
6.27
Peak Area:
8081.41
Mass Range:
526.0 / 169.0
File Name:
18NOV12DCAL-43.wiff
Sample Name:
CAL2



Integration Comment: incorrect integration

Component Name:
PFHxS_2
RT (min.):
4.56
Peak Area:
9734.65
Mass Range:
399.0 / 99.0
File Name:
18NOV12DCAL-43.wiff
Sample Name:
CAL2



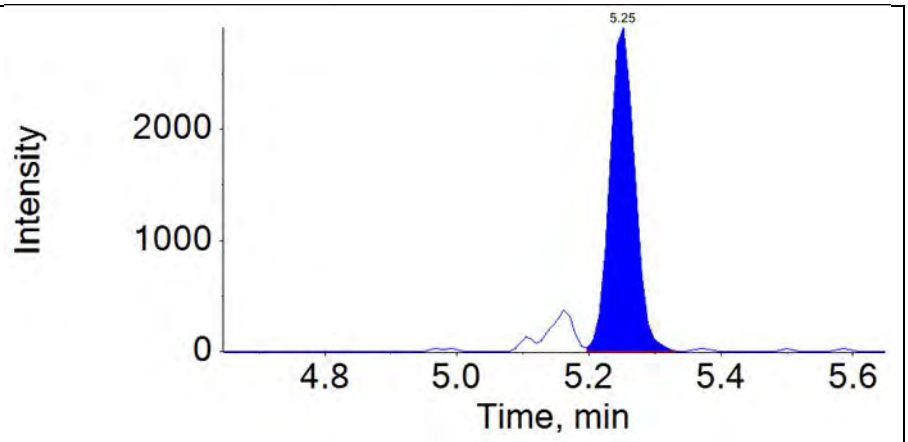
Integration Comment: incorrect integration

APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

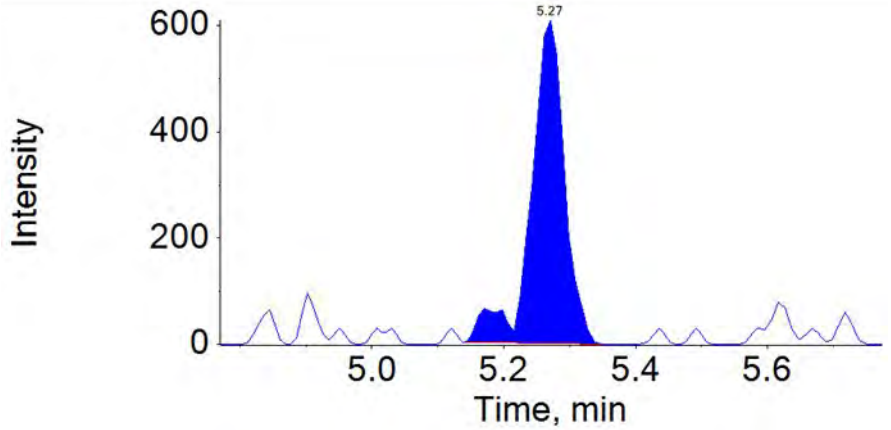
Results Table Name: 18NOV12DCAL
Results Table Date: 11/12/2018 6:23:42 PM
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

Component Name:
PFOS_2
RT (min.):
5.25
Peak Area:
7692.11
Mass Range:
499.0 / 99.0
File Name:
18NOV12DCAL-43.wiff
Sample Name:
CAL2



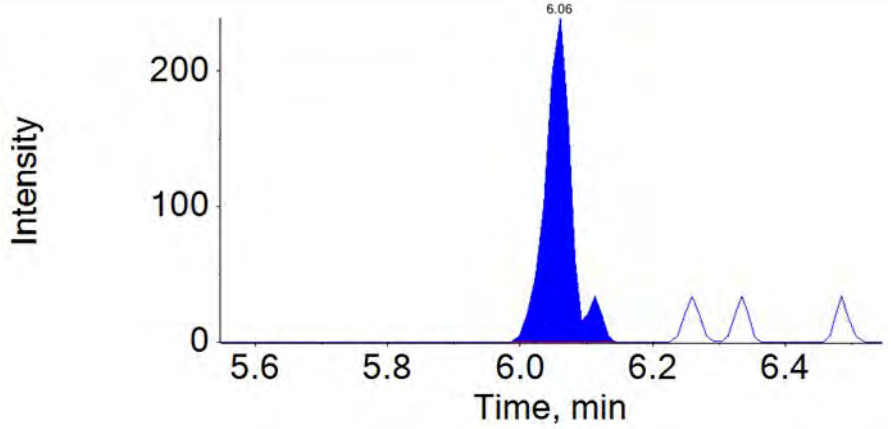
Integration Comment: incorrect integration

Component Name:
PFNA_2
RT (min.):
5.27
Peak Area:
2176.77
Mass Range:
463.0 / 169.0
File Name:
18NOV12DCAL-43.wiff
Sample Name:
CAL2



Integration Comment: incorrect integration

Component Name:
PFDoDA_2
RT (min.):
6.06
Peak Area:
655.49
Mass Range:
613.0 / 169.0
File Name:
18NOV12DCAL-43.wiff
Sample Name:
CAL2



Integration Comment: incorrect integration

APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

Results Table Name: 18NOV12DCAL
Results Table Date: 11/12/2018 6:23:42 PM

Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

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By HMK at 10:53 am, 11/13/18

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LC-MS/MS Analysis Report

Printed: 11/12/2018 6:22:00 PM
Template: IonRatio18OCT10

Ion Ratio Report

Sample Name: CAL2 **Instrument Name:** LM27631 **File Name:** 18NOV12DCAL-43.wiff

Component Name	RT	RRT	Analyte Area Response	Int Typ	Expected Ion Ratio	Ion Ratio	Ion Ratio % Diff	Ion Ratio Limit	Ion Ratio OOS
PFBS	3.82	1.00	44885.16	A	0.3619	0.3622			
PFBS_2	3.82	1.00	16259.22	A	0.3619	0.3622	0	50	
4:2-FTS	4.13	1.00	8803.96	A	0.6730	0.7006			
4:2 FTS_2	4.13	1.00	6168.18	A	0.6730	0.7006		#NA!	
PFHxA	4.16	1.00	96559.34	A	0.0117	0.0147			
PFHxA_2	4.16	1.00	1416.25	A	0.0117	0.0147	26	50	
PFPeS	4.19	1.10	20295.04	A	0.5191	0.5794			
PFPeS_2	4.18	1.10	11758.90	A	0.5191	0.5794	12	50	
PFHpA	4.55	1.00	95048.34	M	0.0563	0.0529			
PFHpA_2	4.55	1.00	5032.31	A	0.0563	0.0529	-6	50	
PFHxS	4.56	1.00	31064.73	M	0.3428	0.3595			
PFHxS_2	4.56	1.00	11169.02	M	0.3428	0.3595	5	50	
6:2-FTS	4.91	1.00	8048.37	A	0.6604	0.6742			
6:2 FTS_2	4.91	1.00	5425.84	A	0.6604	0.6742		#NA!	
PFHpS	4.92	1.08	29902.32	A	0.4066	0.4437			
PFHpS_2	4.92	1.08	13266.19	A	0.4066	0.4437	9	50	
PFOA	4.93	1.00	100710.53	A	0.0562	0.0523			
PFOA_2	4.92	1.00	5264.55	A	0.0562	0.0523	-7	50	
PFOS	5.25	1.00	32300.98	M	0.2968	0.2722			
PFOS_2	5.25	1.00	8793.88	M	0.2968	0.2722	-8	50	
PFNA	5.27	1.00	80724.19	A	0.0229	0.0248			
PFNA_2	5.27	1.00	1999.67	M	0.0229	0.0248	8	50	
PFNS	5.55	1.06	20326.14	A	0.4828	0.4548			
PFNS_2	5.54	1.06	9243.39	A	0.4828	0.4548	-6	50	
PFDA	5.57	1.00	63802.06	M	0.0081	0.0067			
PFDA_2	5.56	1.00	427.00	A	0.0081	0.0067	-17	50	
8:2-FTS	5.57	1.00	6214.24	A	0.6814	0.7964			
8:2 FTS_2	5.57	1.00	4949.26	A	0.6814	0.7964		#NA!	
NMeFOSAA	5.71	1.00	5759.59	A	0.2569	0.2344			
NMeFOSAA_2	5.70	1.00	1350.22	A	0.2569	0.2344	-9	50	
PFDS	5.80	1.10	16291.91	A	0.5144	0.5360			
PFDS_2	5.80	1.11	8732.52	A	0.5144	0.5360	4	50	
PFUnDA	5.83	1.00	51206.76	A	0.0058	0.0013			
PFUnDA_2	5.87	1.01	64.88	A	0.0058	0.0013	-78	50	OOS
NEtFOSAA	5.85	1.00	7727.12	M	0.7253	0.7329			
NEtFOSAA_2	5.84	1.00	5663.34	A	0.7253	0.7329	1	50	
PFDoDA	6.06	1.00	59695.25	A	0.0157	0.0101			
PFDoDA_2	6.06	1.00	604.13	M	0.0157	0.0101	-35	50	
10:2-FTS	6.08	1.09	5206.47	A	0.6356	0.6377			
10:2 FTS_2	6.07	1.09	3320.12	A	0.6356	0.6377		#NA!	
PFTrDA	6.26	1.03	47991.31	A	0.0086	0.0047			
PFTrDA_2	6.26	1.03	226.86	A	0.0086	0.0047	-45	50	
PFTeDA	6.43	1.00	40236.53	A	0.0062	0.0078			
PFTeDA_2	6.43	1.00	314.50	A	0.0062	0.0078	25	50	
PFHxDA	6.74	1.05	19006.44	A	0.0683	0.0747			
PFHxDA_2	6.73	1.05	1419.64	A	0.0683	0.0747	9	50	
PFODA	7.00	1.09	14955.56	A	0.0277	0.0314			
PFODA_2	7.00	1.09	469.81	A	0.0277	0.0314	13	50	

APPROVED
By MCD at 6:33 pm, 11/12/18

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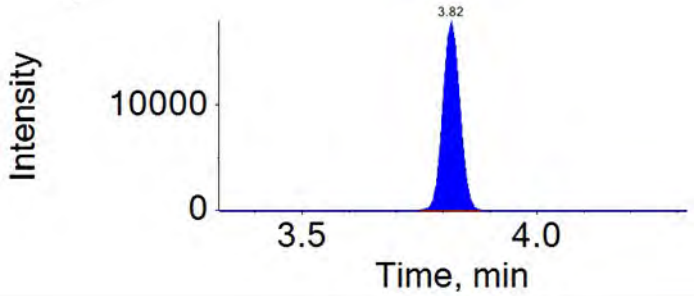
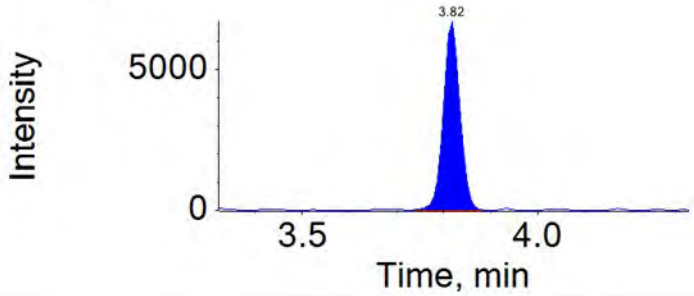
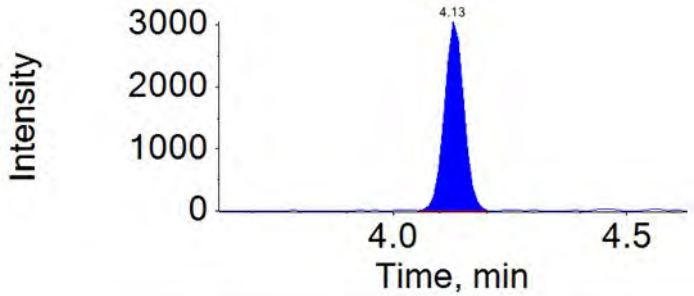
Component: PFBS
Primary Mass: 299.0 / 80.0



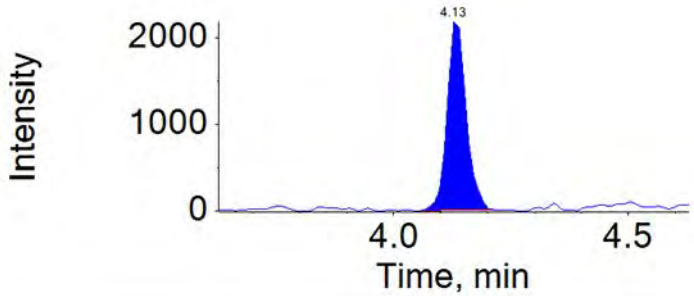
Component: PFBS_2
Secondary Mass: 299.0 / 99.0



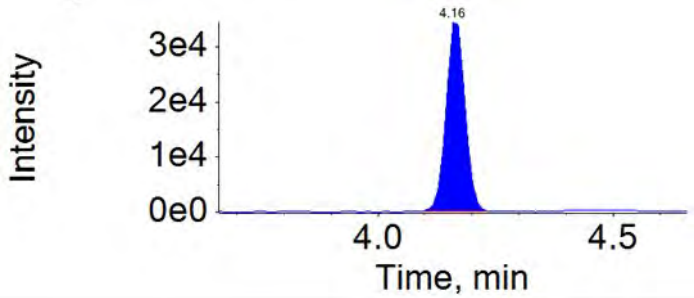
Component: 4:2-FTS
Primary Mass: 327.0 / 307.0



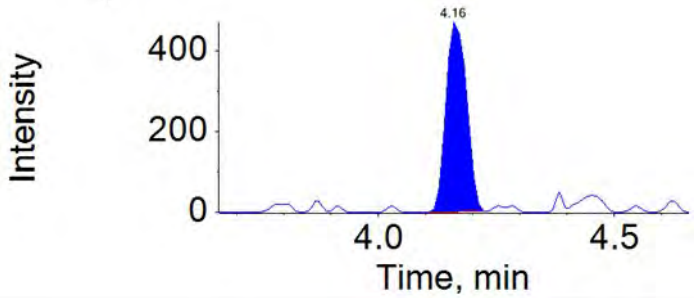
Component: 4:2 FTS_2
Secondary Mass: 327.0 / 81.0



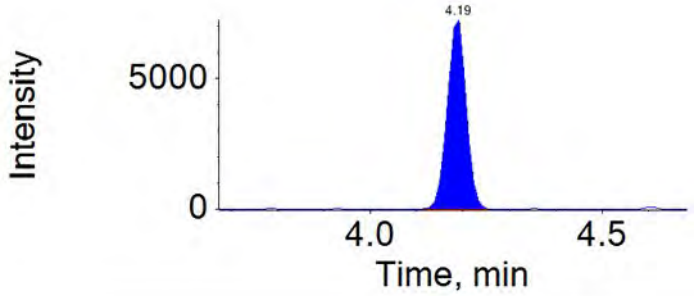
Component: PFHxA
Primary Mass: 313.0 / 269.0



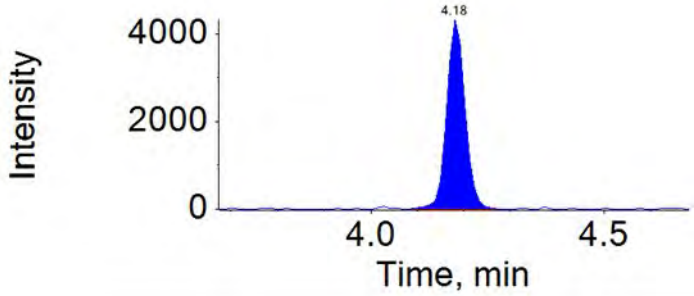
Component: PFHxA_2
Secondary Mass: 313.0 / 119.0



Component: PFPeS
Primary Mass: 349.0 / 80.0



Component: PFPeS_2
Secondary Mass: 349.0 / 99.0



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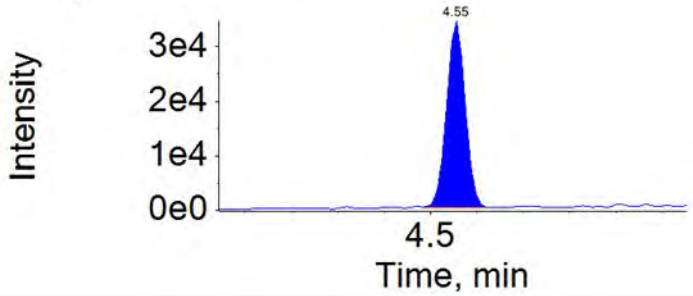
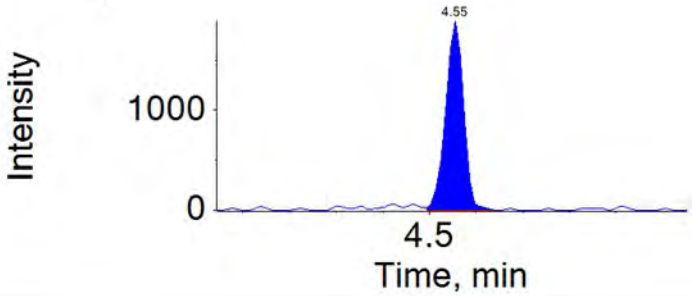
REVIEWED
By HMK at 10:53 am, 11/13/18

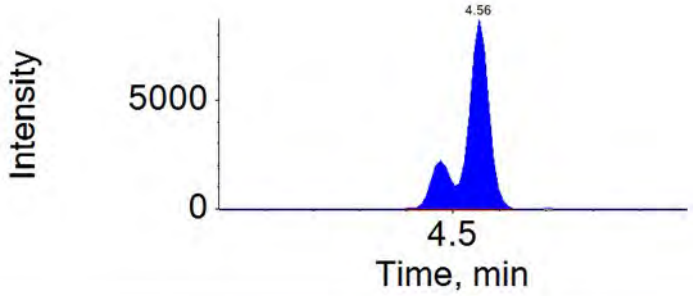
Component: PFHpA
Primary Mass: 363.0 / 319.0



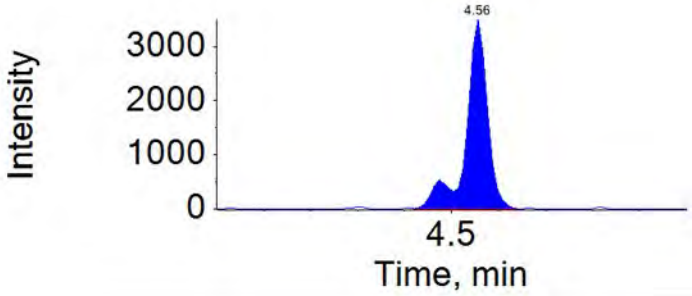
Component: PFHpA_2
Secondary Mass: 363.0 / 169.0



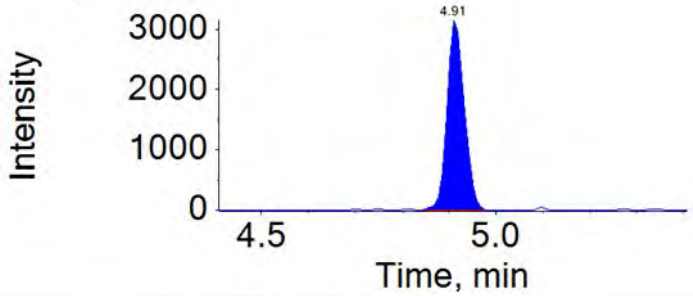
Component: PFHxS
Primary Mass: 399.0 / 80.0



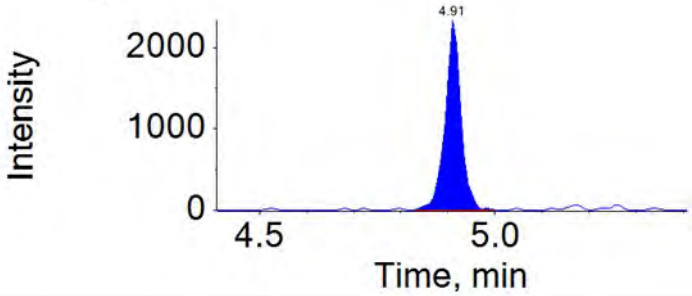
Component: PFHxS_2
Secondary Mass: 399.0 / 99.0



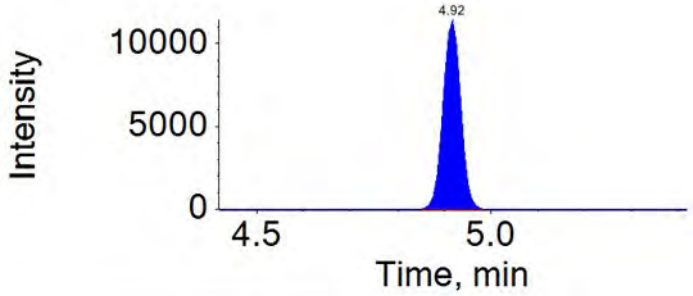
Component: 6:2-FTS
Primary Mass: 427.0 / 407.0



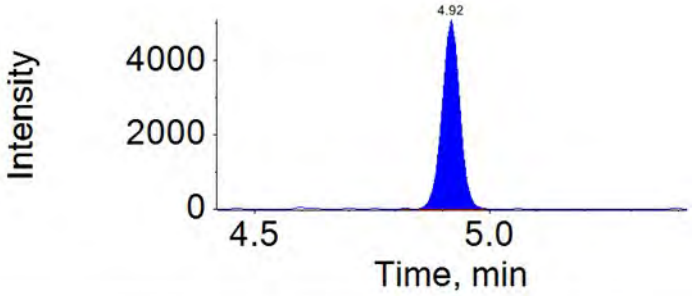
Component: 6:2 FTS_2
Secondary Mass: 427.0 / 81.0



Component: PFHpS
Primary Mass: 449.0 / 80.0



Component: PFHpS_2
Secondary Mass: 449.0 / 99.0



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By MCD at 6:33 pm, 11/12/18

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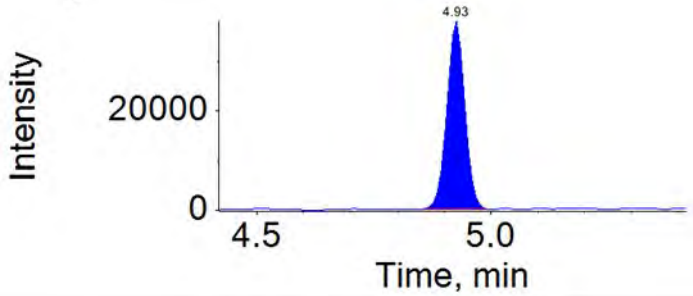
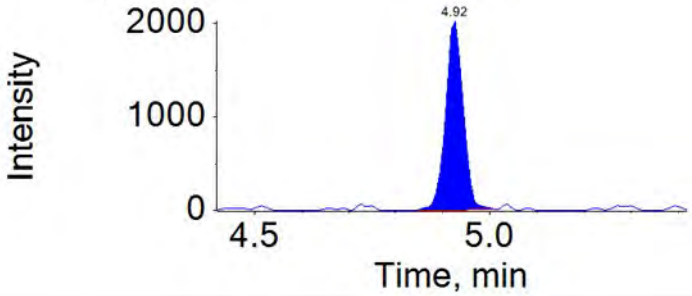
By HMK at 10:53 am, 11/13/18

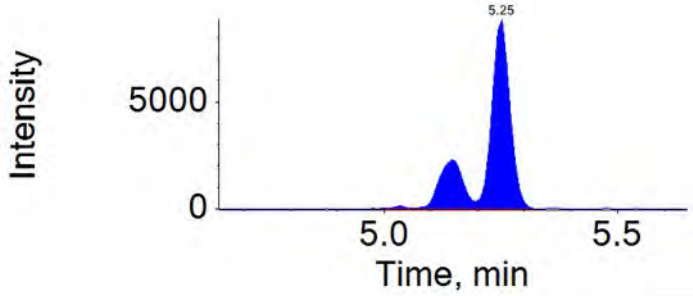
Component: PFOA
Primary Mass: 413.0 / 369.0



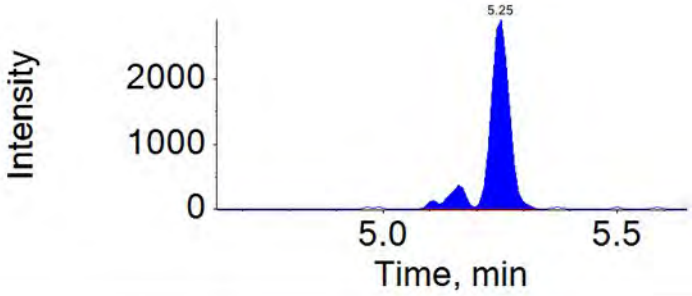
Component: PFOA_2
Secondary Mass: 413.0 / 169.0



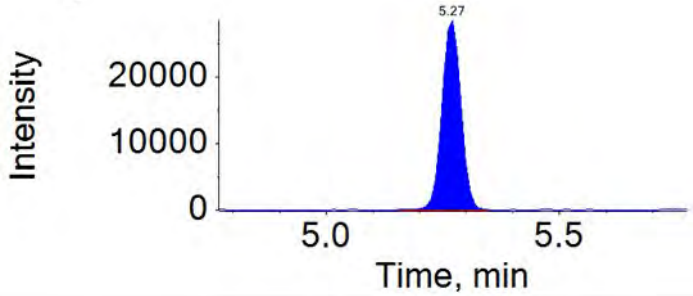
Component: PFOS
Primary Mass: 499.0 / 80.0



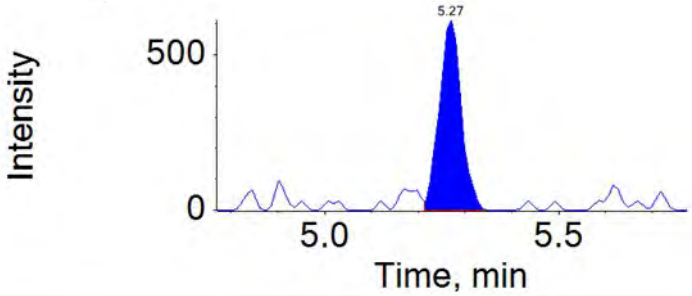
Component: PFOS_2
Secondary Mass: 499.0 / 99.0



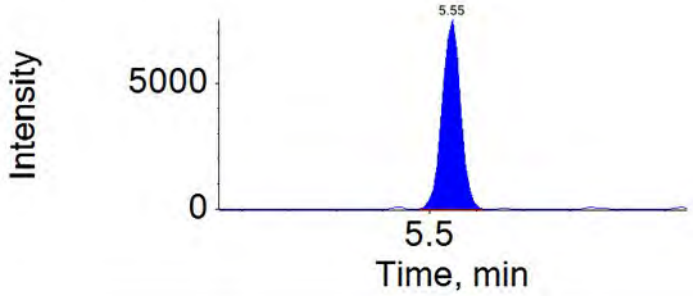
Component: PFNA
Primary Mass: 463.0 / 419.0



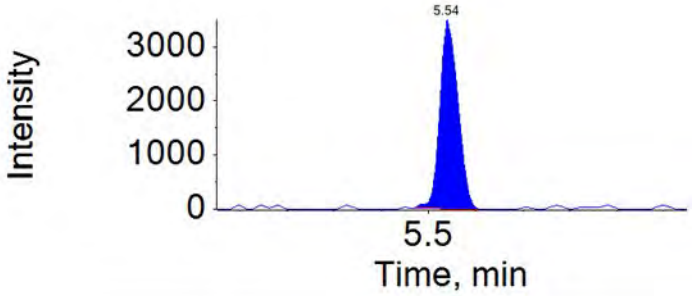
Component: PFNA_2
Secondary Mass: 463.0 / 169.0



Component: PFNS
Primary Mass: 549.0 / 80.0



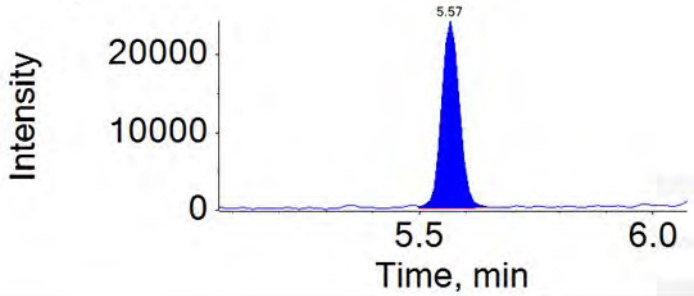
Component: PFNS_2
Secondary Mass: 549.0 / 99.0



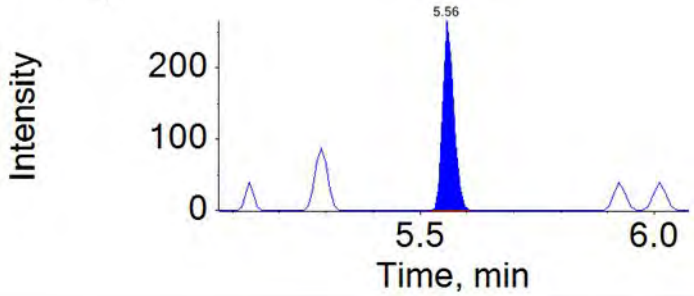
APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

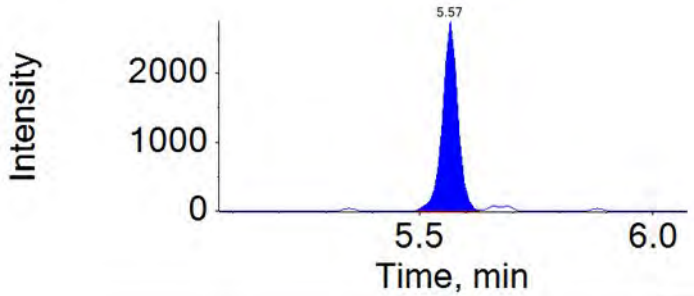
Component: PFDA
Primary Mass: 513.0 / 469.0



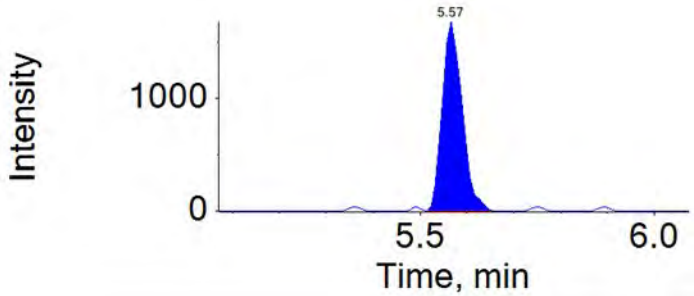
Component: PFDA_2
Secondary Mass: 513.0 / 169.0



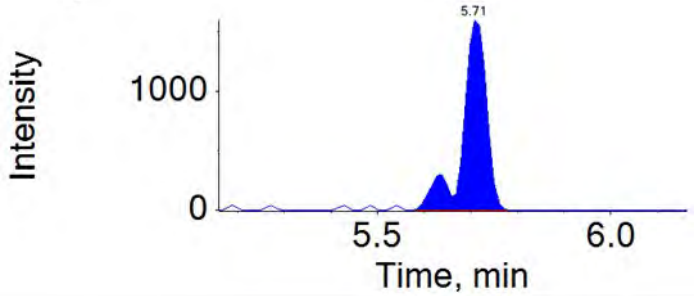
Component: 8:2-FTS
Primary Mass: 527.0 / 507.0



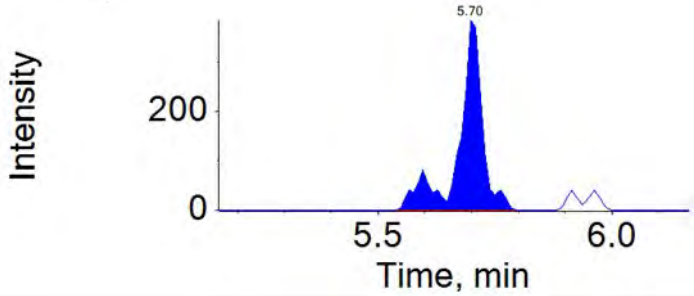
Component: 8:2 FTS_2
Secondary Mass: 527.0 / 81.0



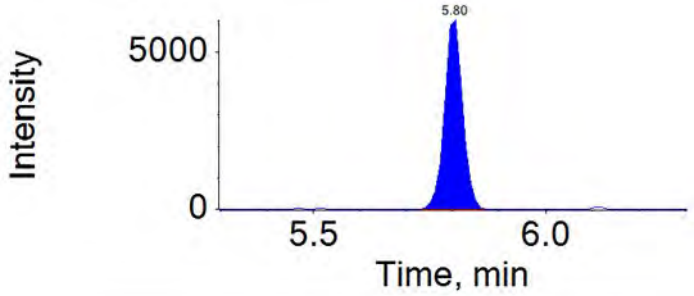
Component: NMeFOSAA
Primary Mass: 570.0 / 419.0



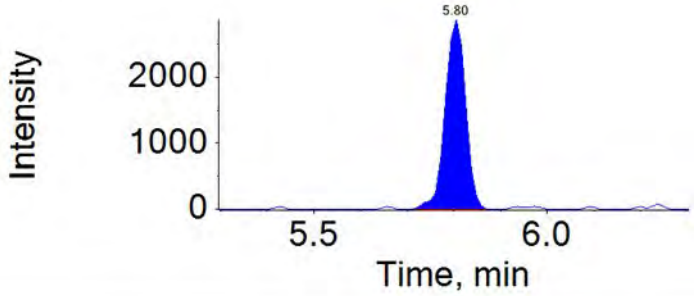
Component: NMeFOSAA_2
Secondary Mass: 570.0 / 483.0



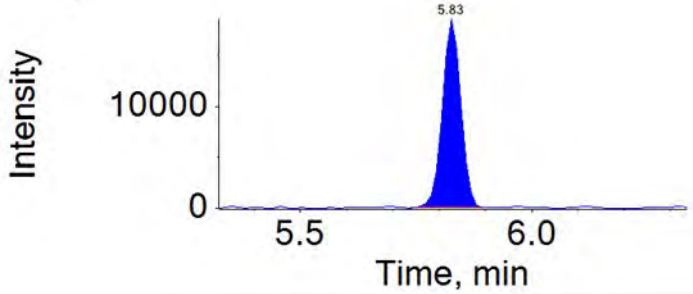
Component: PFDS
Primary Mass: 599.0 / 80.0



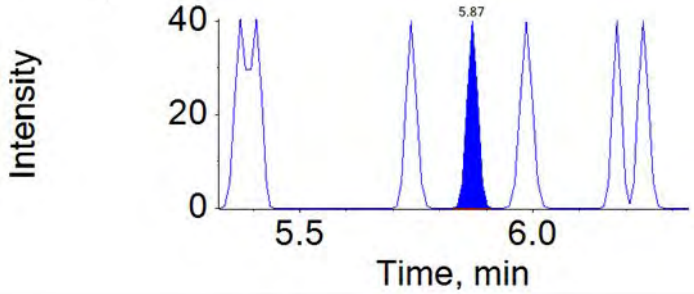
Component: PFDS_2
Secondary Mass: 599.0 / 99.0



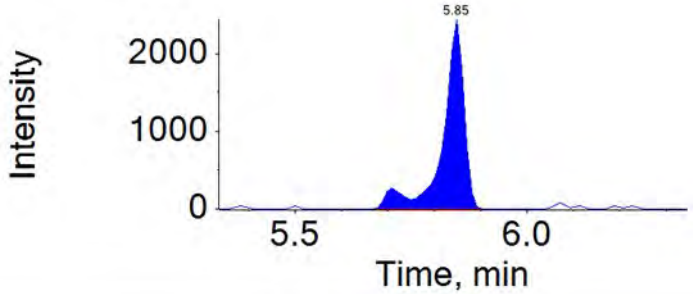
Component: PFUnDA
Primary Mass: 563.0 / 519.0



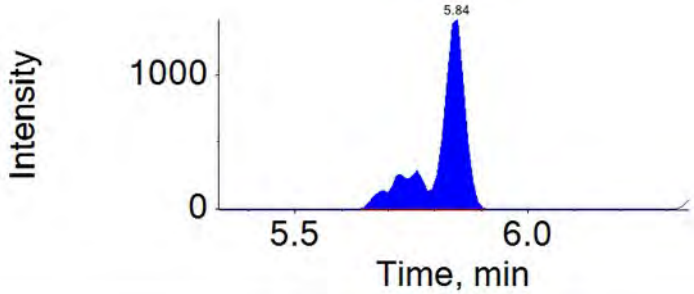
Component: PFUnDA_2
Secondary Mass: 563.0 / 169.0



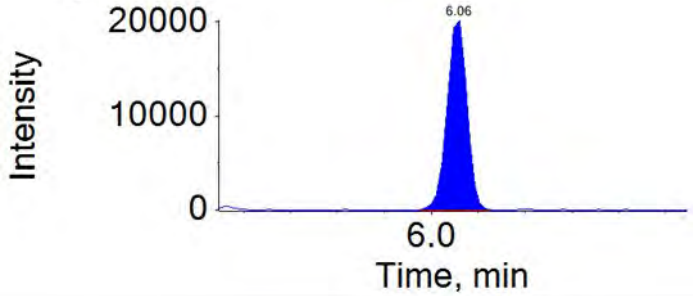
Component: NEtFOSAA
Primary Mass: 584.0 / 419.0



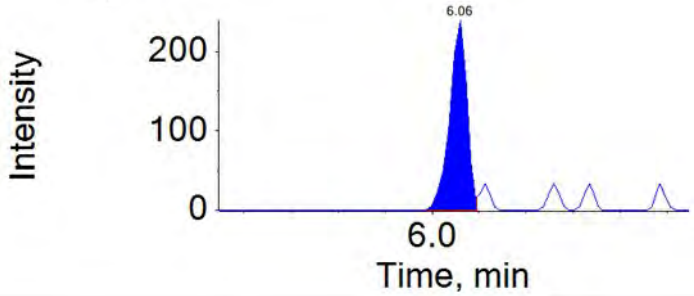
Component: NEtFOSAA_2
Secondary Mass: 584.0 / 526.0



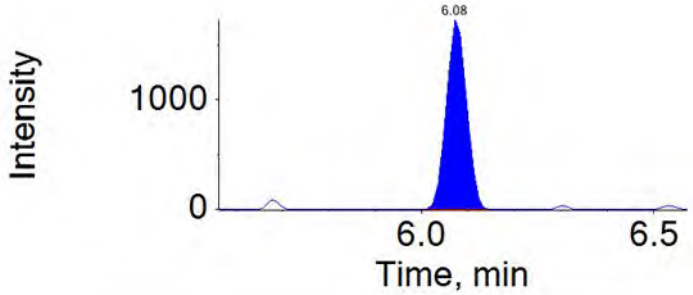
Component: PFDoDA
Primary Mass: 613.0 / 569.0



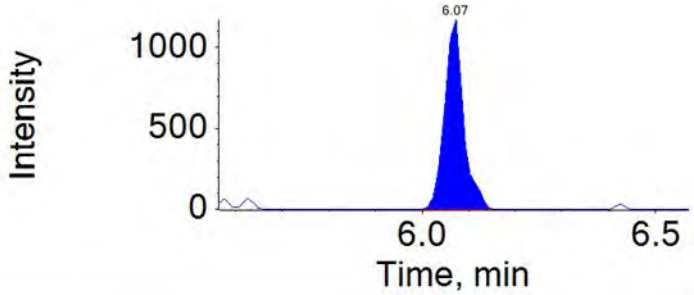
Component: PFDoDA_2
Secondary Mass: 613.0 / 169.0



Component: 10:2-FTS
Primary Mass: 627.0 / 607.0



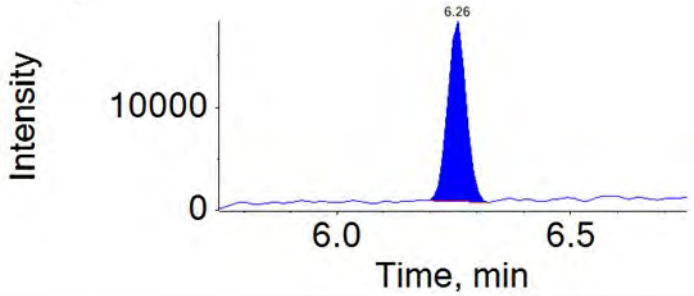
Component: 10:2 FTS_2
Secondary Mass: 627.0 / 81.0



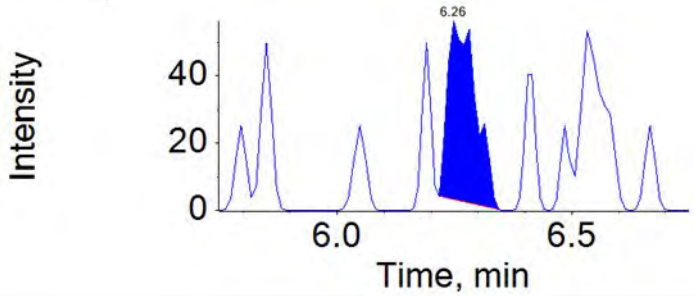
APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

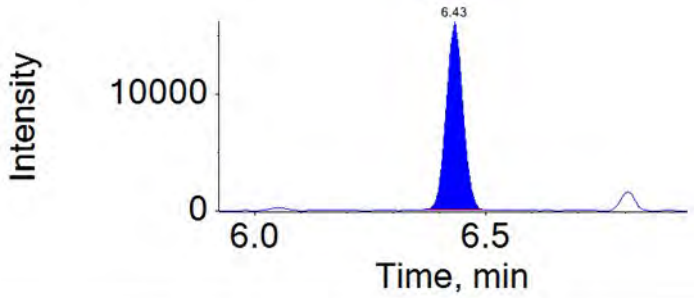
Component: PFTrDA
Primary Mass: 663.0 / 619.0



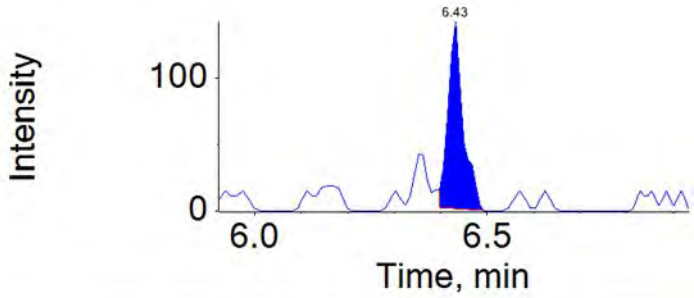
Component: PFTrDA_2
Secondary Mass: 663.0 / 169.0



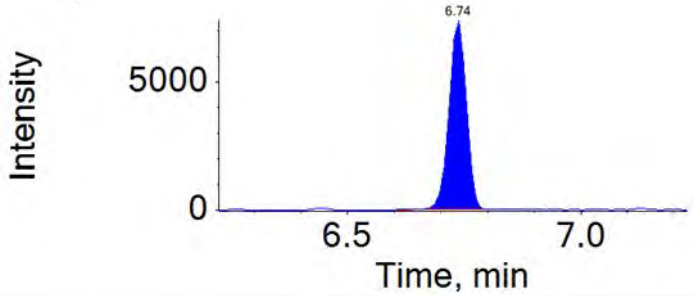
Component: PFTeDA
Primary Mass: 713.0 / 669.0



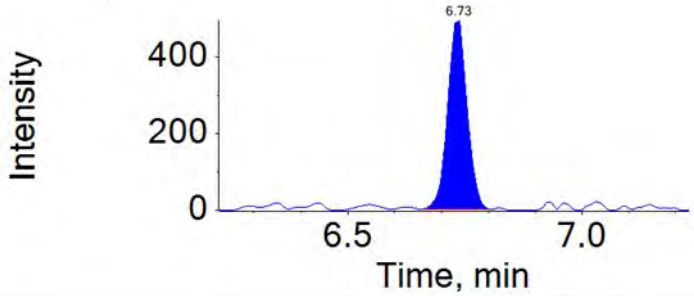
Component: PFTeDA_2
Secondary Mass: 713.0 / 169.0



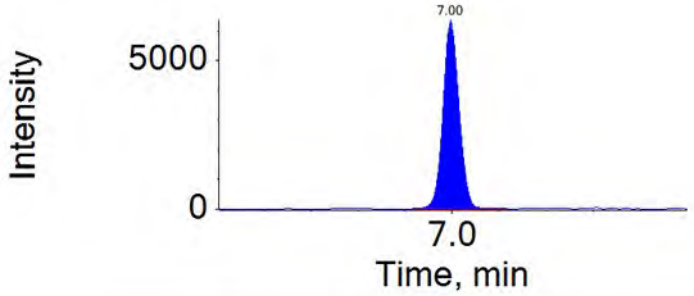
Component: PFHxDA
Primary Mass: 813.0 / 769.0



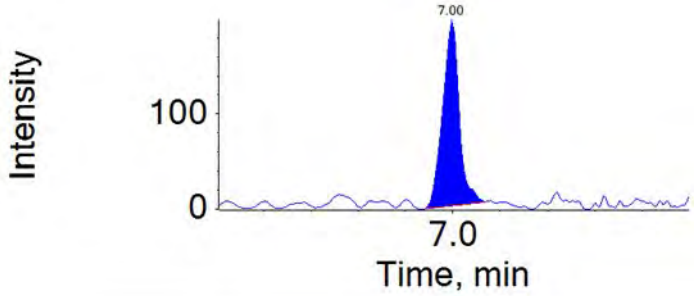
Component: PFHxDA_2
Secondary Mass: 813.0 / 169.0



Component: PFODA
Primary Mass: 913.0 / 869.0



Component: PFODA_2
Secondary Mass: 913.0 / 169.0



APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Sample Name:	CAL3			**Data File:**		18NOV12DCAL-44.wiff
Sample ID:	CALBRN31833B			**Acquis Date:**		2018-11-12T15:24:03
Sample Type:	Standard			**Instrument:**		LM27631
Vial Position:	5			**Acquis Method:**		18AUG13_3uL.dam
Injection Vol:	3.00			**Result Table:**		18NOV12DCAL
QMethod File:	18AUG20QM			**ICAL Name:**		18NOV12DCAL
Batch Number:	N\A			**Operator:**		MCD7824
Sample Wt.:	1.00000			**Dilution Factor:**		1.00
Sample Vol.:	1.000			**Prep Factor:**		1.000

Injection Standard Peak Table

Injection Standard Area Reference File: 18NOV12DCAL-44

Injection Standard Name	Inj Std Conc	Injection Std Peak Area	Rreference Injection Standard Area	Injection Std %Diff	Injection Std %Diff Limit	Injection Std %Diff OOS
13C3-PFBA	5.0	659926.2	659926.2	0	50	
13C2-PFOA	5.0	450219.7	450219.7	0	50	
13C4-PFOS	4.8	249205.8	249205.8	0	50	
13C2-PFDA	5.0	278743.9	278743.9	0	50	

Extraction Standard Peak Table

Extraction Standard Name	Ext Std Area	Inj Std Name	Inj Std Area	Area Ratio	Ext Std Conc	Ext Std Result	Ext Std %REC	Ext Std %REC Limit	Ext Std OOS
E13C4-PFBA	733360.2	13C3-PFBA	659926.2	1.111	5.000	4.982	100	70-130	
E13C5-PFPeA	695805.7	13C3-PFBA	659926.2	1.054	5.000	4.729	95	70-130	
E13C3-PFBS	416352.8	13C3-PFBA	659926.2	0.631	4.650	4.454	96	70-130	
E13C2-4:2-FTS	47514.8	13C2-PFOA	450219.7	0.106	4.670	4.700	101	70-130	
E13C5-PFHxA	646783.5	13C2-PFOA	450219.7	1.437	5.000	5.189	104	70-130	
E13C3-PFHxS	317243.2	13C2-PFOA	450219.7	0.705	4.730	4.835	102	70-130	
E13C4-PFHpA	503681.0	13C2-PFOA	450219.7	1.119	5.000	5.040	101	70-130	
E13C2-6:2-FTS	31706.4	13C2-PFOA	450219.7	0.070	4.750	4.712	99	70-130	
E13C8-PFOA	878868.5	13C2-PFOA	450219.7	1.952	5.000	5.378	108	70-130	
E13C8-PFOS	281035.5	13C4-PFOS	249205.8	1.128	4.780	4.997	105	70-130	
E13C9-PFNA	455948.9	13C4-PFOS	249205.8	1.830	5.000	5.101	102	70-130	
E13C6-PFDA	612680.8	13C2-PFDA	278743.9	2.198	5.000	5.129	103	70-130	
E13C2-8:2-FTS	29249.8	13C2-PFDA	278743.9	0.105	4.790	5.233	109	70-130	
E13C8-PFOSA	629109.9	13C2-PFDA	278743.9	2.257	5.000	5.004	100	70-130	
Ed3-NMeFOSAA	71670.3	13C2-PFDA	278743.9	0.257	5.000	4.641	93	70-130	
E13C7-PFUnDA	245605.3	13C2-PFDA	278743.9	0.881	5.000	5.116	102	70-130	
Ed5-NEtFOSAA	54383.9	13C2-PFDA	278743.9	0.195	5.000	4.128	83	70-130	
E13C2-PFDoDA	549542.3	13C2-PFDA	278743.9	1.971	5.000	5.119	102	70-130	
Ed7-NMePFOSAE	307355.4	13C2-PFDA	278743.9	1.103	5.000	4.772	95	70-130	
Ed3-NMePFOSA	76782.9	13C2-PFDA	278743.9	0.275	5.000	5.005	100	70-130	
Ed9-NEtPFOSAE	259792.3	13C2-PFDA	278743.9	0.932	5.000	4.847	97	70-130	
Ed5-NEtPFOSA	57485.9	13C2-PFDA	278743.9	0.206	5.000	4.838	97	70-130	
E13C2-PFTeDA	393544.9	13C2-PFDA	278743.9	1.412	5.000	4.957	99	70-130	

APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

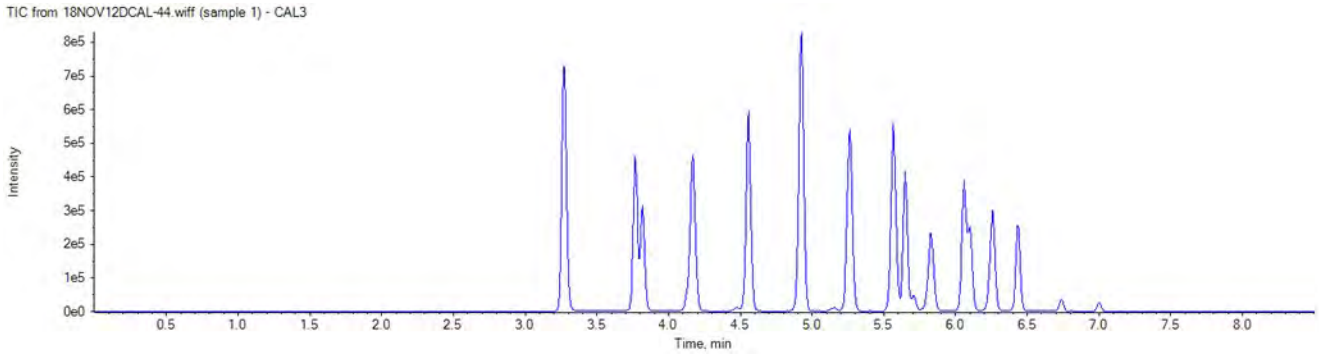
Analyte Quantitation Peak Table

Sample Name: CAL3 **Instrument Name:** LM27631 **File Name:** 18NOV12DCAL-44.wiff

Sample Wt	Sample Vol	Dilution Factor	PrepFactor
1.00000	1.000	1.00	1.000

Analyte Name	RT	RRT	Analyte Area Response	E	Int Typ	ES Name	ES RT	ES Area Response	Area Ratio	Sample Result (ng/g)
PFBA	3.27	1.000	303228.7		A	13C4-PFBA	3.27	733360.2	0.413	2.291
PFPeA	3.77	1.000	292715.8		A	13C5-PFPeA	3.77	695805.7	0.421	2.435
PFBS	3.82	1.000	168144.6		A	13C3-PFBS	3.82	416352.8	0.404	1.921
4:2-FTS	4.13	1.000	34188.5		A	13C2-4:2-FTS	4.13	47514.8	0.720	1.954
PFHxA	4.17	1.000	352013.5		A	13C5-PFHxA	4.17	646783.5	0.544	2.272
PFPeS	4.19	1.100	84071.2		A	13C3-PFBS	3.82	416352.8	0.202	1.960
PFHpA	4.56	1.000	355834.2		A	13C4-PFHpA	4.55	503681.0	0.706	2.342
PFHxS	4.56	1.000	125622.0		M	13C3-PFHxS	4.56	317243.2	0.396	1.920
6:2-FTS	4.91	1.000	28084.9		A	13C2-6:2-FTS	4.91	31706.4	0.886	2.143
PFHpS	4.92	1.080	125907.9		A	13C3-PFHxS	4.56	317243.2	0.397	2.089
PFOA	4.93	1.000	372258.9		A	13C8-PFOA	4.93	878868.5	0.424	2.262
PFOS	5.25	1.000	120897.5		M	13C8-PFOS	5.25	281035.5	0.430	1.881
PFNA	5.27	1.000	302323.8		A	13C9-PFNA	5.27	455948.9	0.663	2.391
PFNS	5.55	1.060	76049.0		A	13C8-PFOS	5.25	281035.5	0.271	1.893
PFDA	5.57	1.000	254047.8		M	13C6-PFDA	5.57	612680.8	0.415	2.198
8:2-FTS	5.57	1.000	26295.1		A	13C2-8:2-FTS	5.57	29249.8	0.899	2.096
PFOSA	5.65	1.000	270175.5		A	13C8-PFOSA	5.65	629109.9	0.429	2.098
NMeFOSAA	5.71	1.000	25147.7		A	d3-NMeFOSAA	5.71	71670.3	0.351	1.983
PFDS	5.80	1.110	57966.9		A	13C8-PFOS	5.25	281035.5	0.206	1.869
PFUnDA	5.83	1.000	199061.8		A	13C7-PFUnDA	5.83	245605.3	0.810	2.119
NEtFOSAA	5.84	1.000	25089.0		A	d5-NEtFOSAA	5.84	54383.9	0.461	2.418
PFDoDA	6.06	1.000	237252.6		A	13C2-PFDoDA	6.06	549542.3	0.432	2.198
10:2-FTS	6.07	1.090	18541.7		A	13C2-8:2-FTS	5.57	29249.8	0.634	2.111
NMePFOSAE	6.10	1.000	163668.7		A	d7-NMePFOSAE	6.09	307355.4	0.533	2.216
NMePFOSA	6.11	1.000	29934.3		A	d3-NMePFOSA	6.11	76782.9	0.390	1.923
PFDoS	6.23	1.190	30098.3		A	13C8-PFOS	5.25	281035.5	0.107	1.876
NEtPFOSAE	6.26	1.000	178457.9		A	d9-NEtPFOSAE	6.25	259792.3	0.687	2.204
NEtPFOSA	6.27	1.000	26590.2		M	d5-NEtPFOSA	6.27	57485.9	0.463	2.124
PFTrDA	6.26	1.030	184322.9		A	13C2-PFDoDA	6.06	549542.3	0.335	2.117
PFTeDA	6.43	1.000	156439.9		A	13C2-PFTeDA	6.43	393544.9	0.398	2.228
PFHxDA	6.74	1.050	69655.1		A	13C2-PFTeDA	6.43	393544.9	0.177	2.109
PFODA	7.00	1.090	57796.0		A	13C2-PFTeDA	6.43	393544.9	0.147	2.045

Total Ion Chromatogram

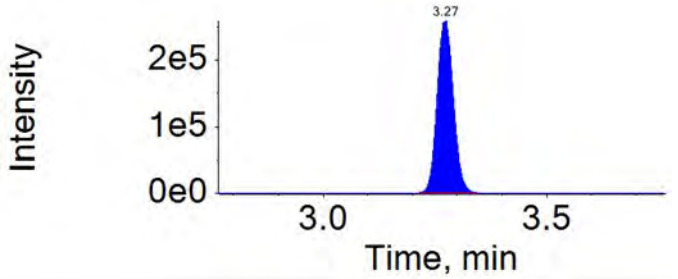


APPROVED
By MCD at 6:33 pm, 11/12/18

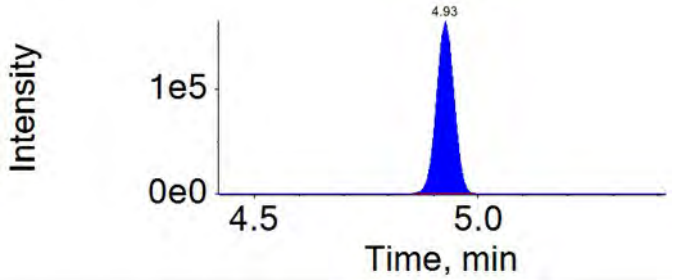
REVIEWED
By HMK at 10:53 am, 11/13/18

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

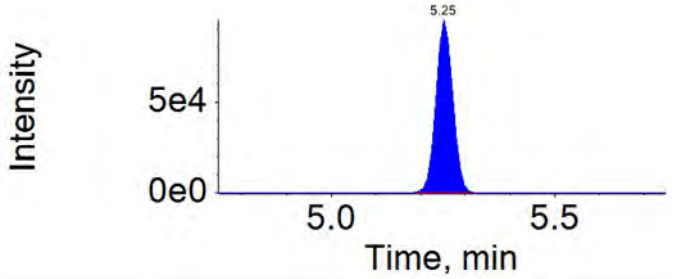
Injection Standard: 13C3-PFBA
216.0 / 172.0



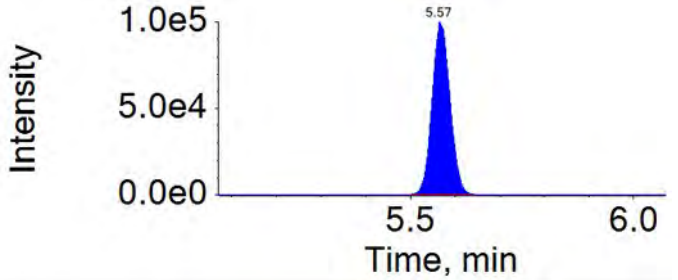
Injection Standard: 13C2-PFOA
415.0 / 370.0



Injection Standard: 13C4-PFOS
503.0 / 80.0



Injection Standard: 13C2-PFDA
515.0 / 470.0

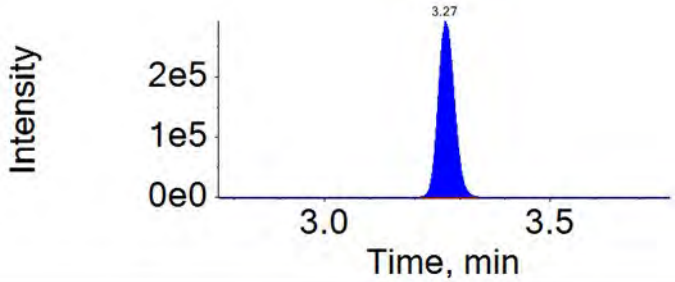


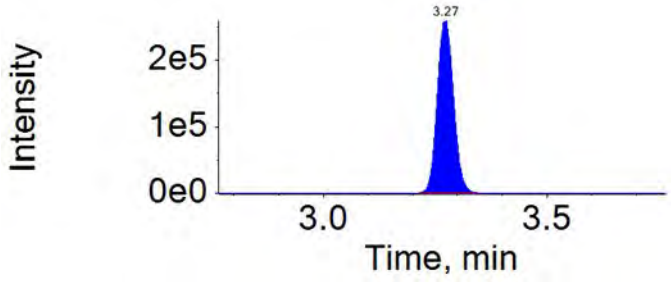
APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

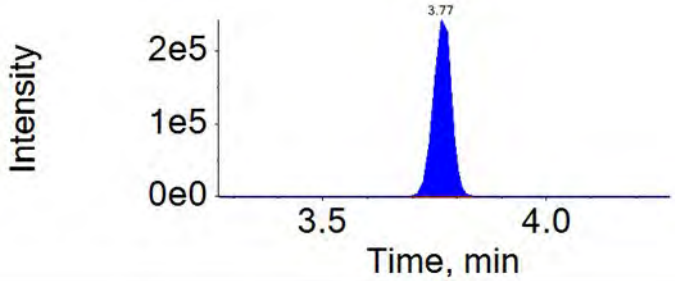
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

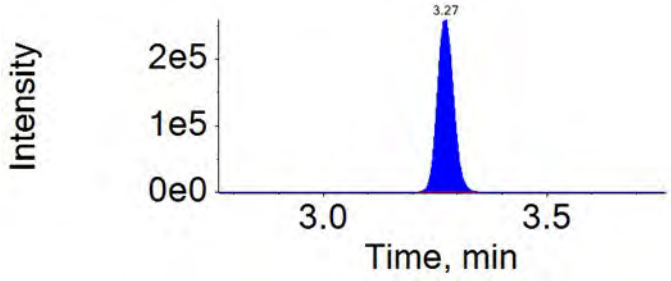
Extraction Standard: E13C4-PFBA	Injection Standard: 13C3-PFBA
217.0 / 172.0	216.0 / 172.0



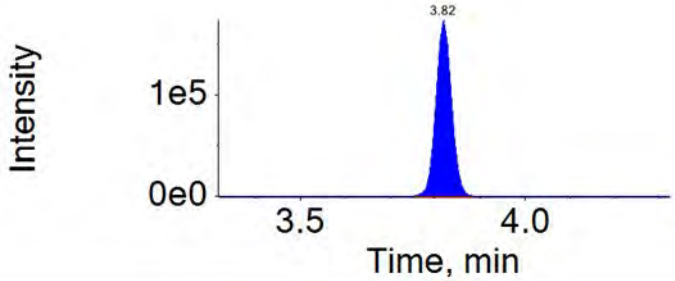


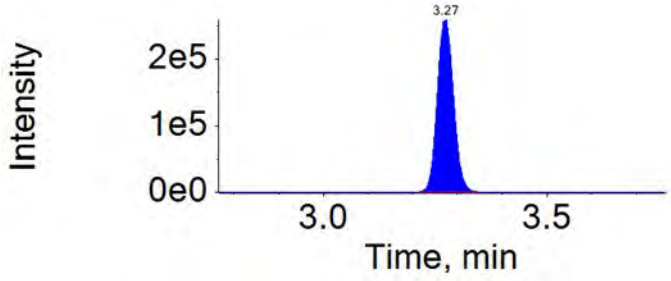
Extraction Standard: E13C5-PFPeA	Injection Standard: 13C3-PFBA
268.0 / 223.0	216.0 / 172.0



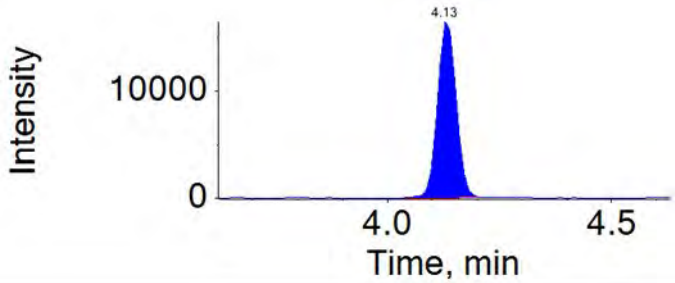


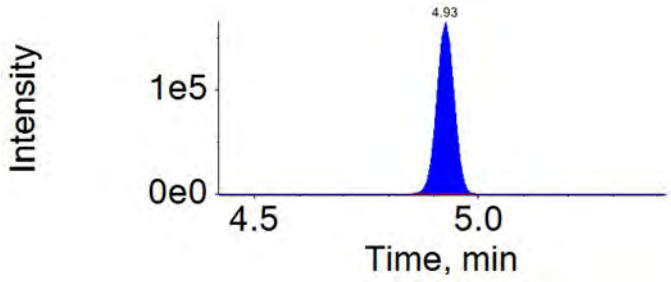
Extraction Standard: E13C3-PFBS	Injection Standard: 13C3-PFBA
302.0 / 80.0	216.0 / 172.0





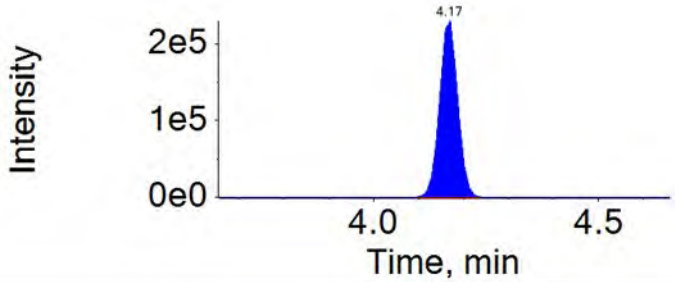
Extraction Standard: E13C2-4:2-FTS	Injection Standard: 13C2-PFOA
329.0 / 81.0	415.0 / 370.0

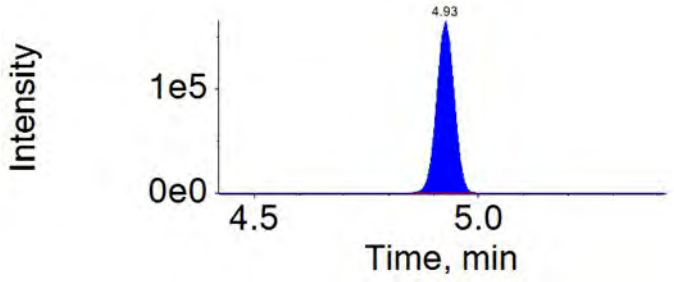




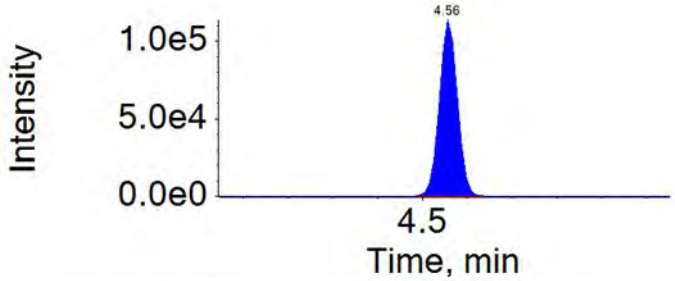
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

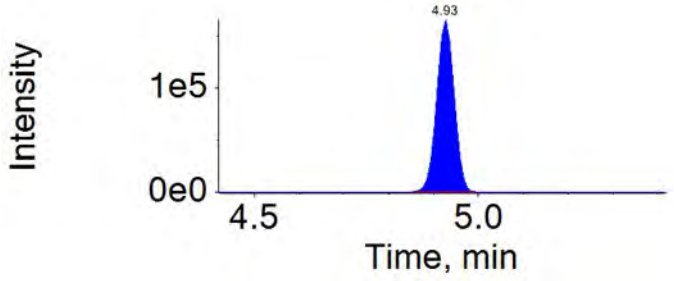
Extraction Standard: E13C5-PFHxA	Injection Standard: 13C2-PFOA
318.0 / 273.0	415.0 / 370.0



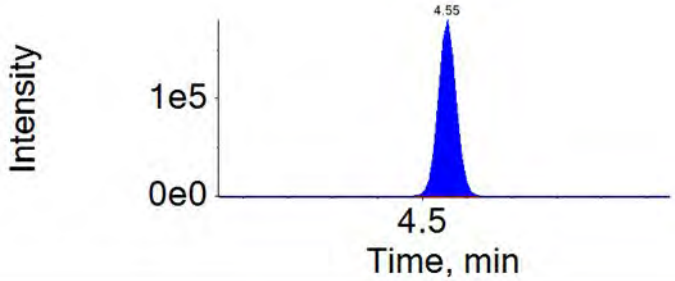


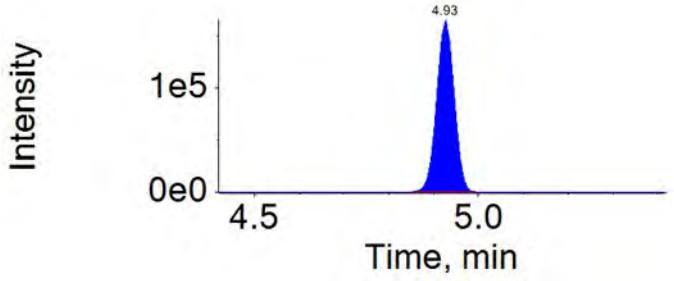
Extraction Standard: E13C3-PFHxS	Injection Standard: 13C2-PFOA
402.0 / 80.0	415.0 / 370.0



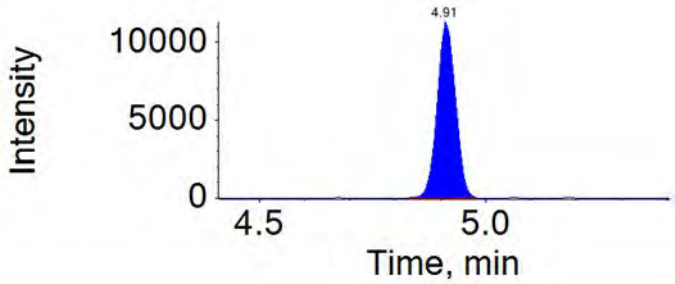


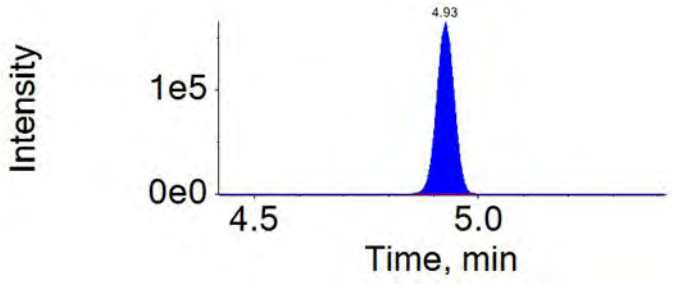
Extraction Standard: E13C4-PFHpA	Injection Standard: 13C2-PFOA
367.0 / 322.0	415.0 / 370.0





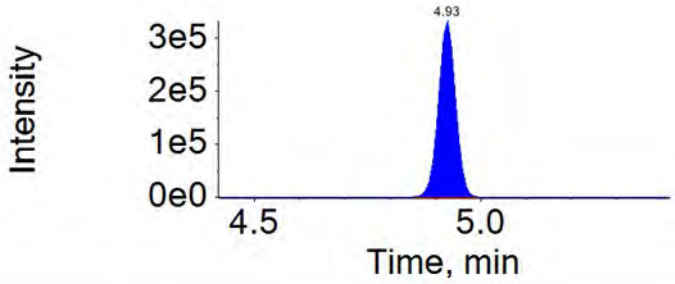
Extraction Standard: E13C2-6:2-FTS	Injection Standard: 13C2-PFOA
429.0 / 81.0	415.0 / 370.0



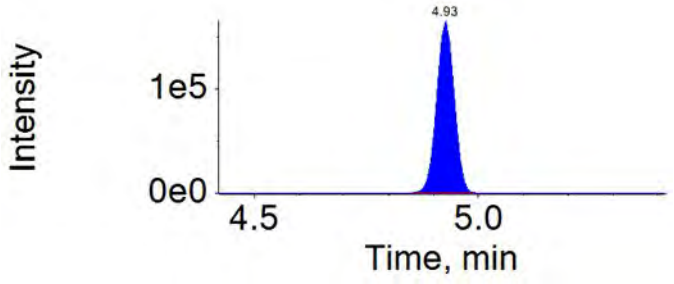


ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

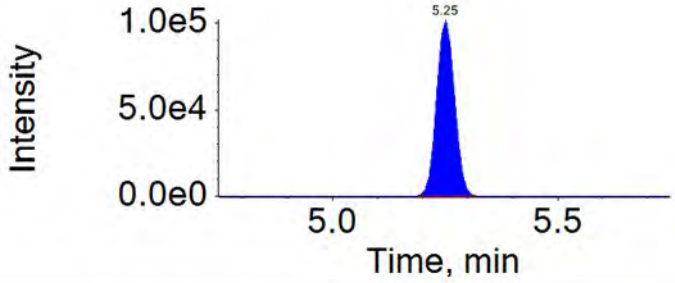
Extraction Standard: E13C8-PFOA
421.0 / 376.0



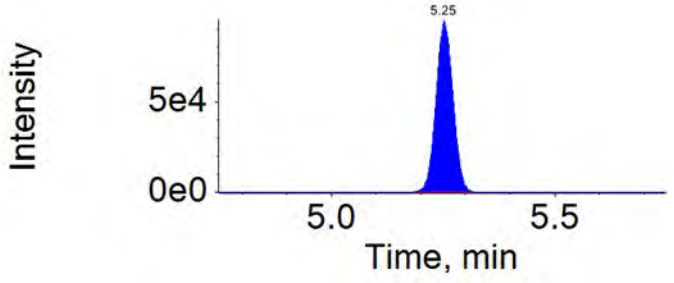
Injection Standard: 13C2-PFOA
415.0 / 370.0



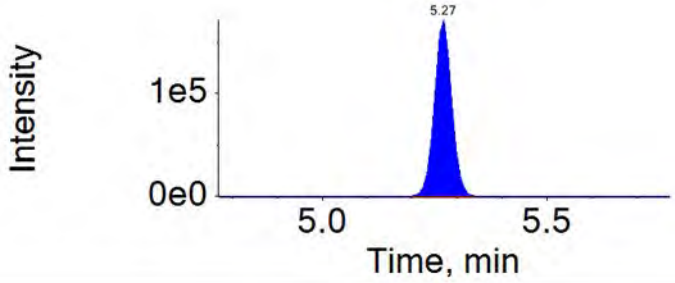
Extraction Standard: E13C8-PFOS
507.0 / 80.0



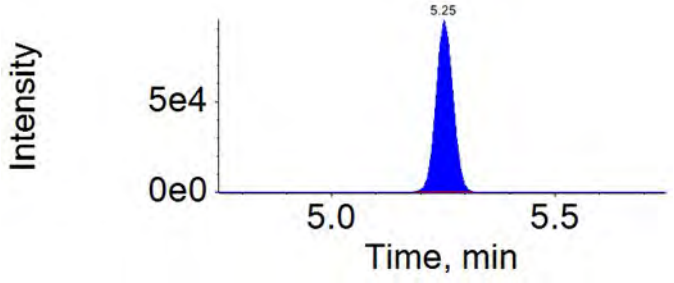
Injection Standard: 13C4-PFOS
503.0 / 80.0



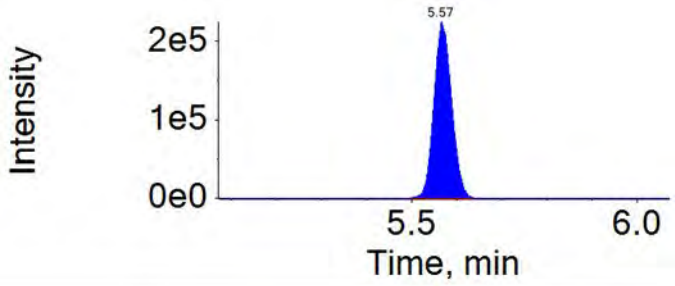
Extraction Standard: E13C9-PFNA
472.0 / 427.0



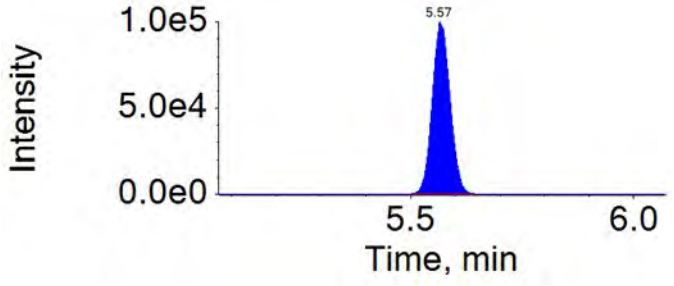
Injection Standard: 13C4-PFOS
503.0 / 80.0



Extraction Standard: E13C6-PFDA
519.0 / 474.0

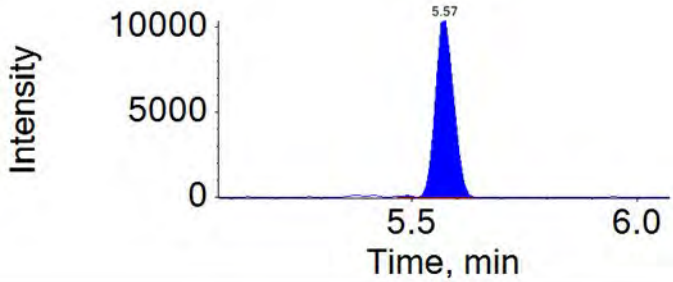


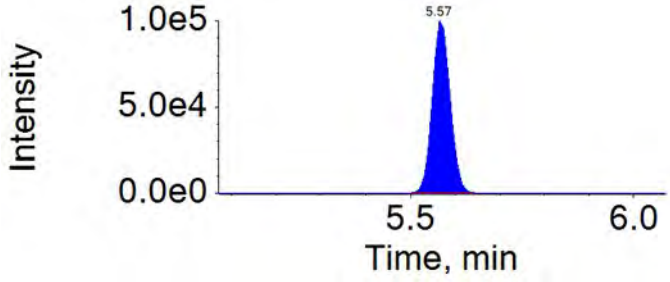
Injection Standard: 13C2-PFDA
515.0 / 470.0



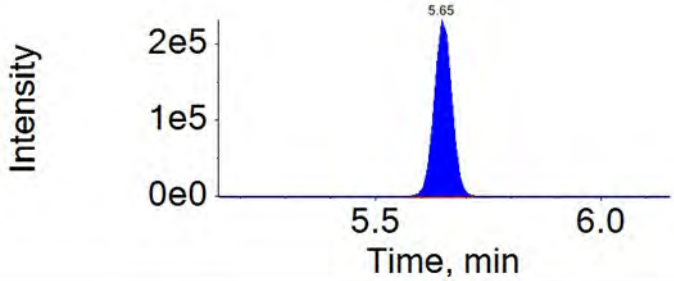
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

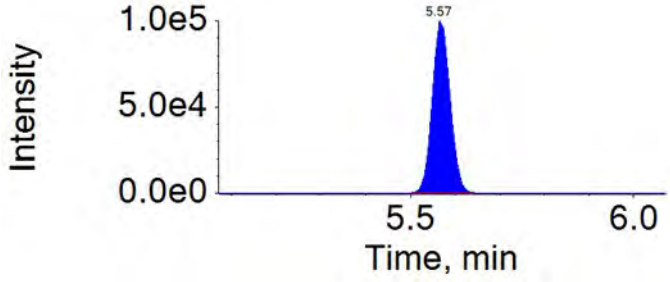
Extraction Standard: E13C2-8:2-FTS	Injection Standard: 13C2-PFDA
529.0 / 81.0	515.0 / 470.0



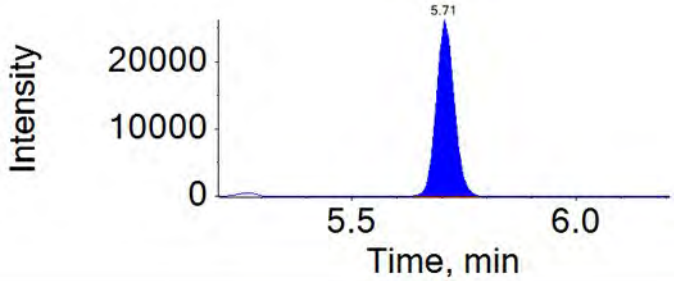


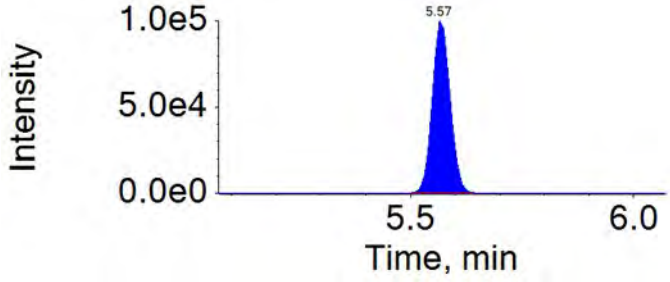
Extraction Standard: E13C8-PFOSA	Injection Standard: 13C2-PFDA
506.0 / 78.0	515.0 / 470.0



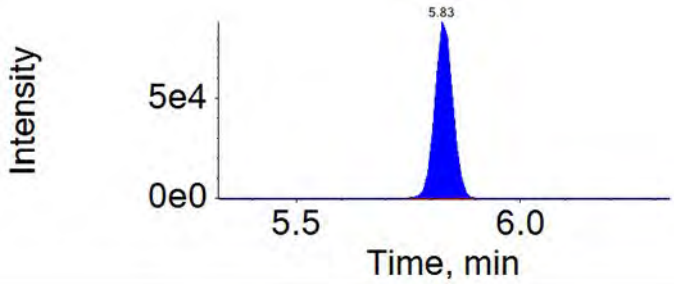


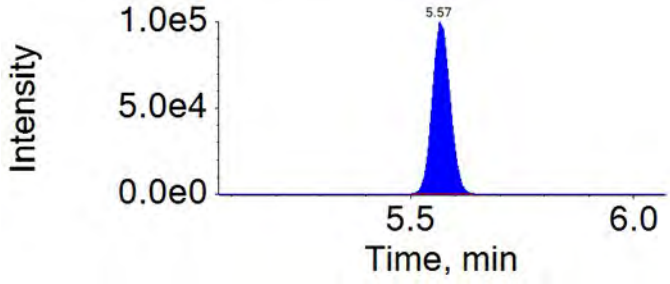
Extraction Standard: Ed3-NMeFOSAA	Injection Standard: 13C2-PFDA
573.0 / 419.0	515.0 / 470.0





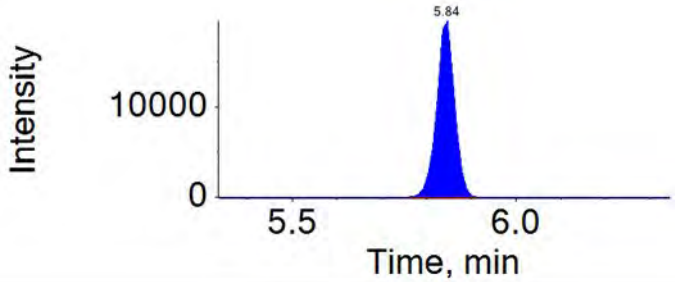
Extraction Standard: E13C7-PFUnDA	Injection Standard: 13C2-PFDA
570.0 / 525.0	515.0 / 470.0

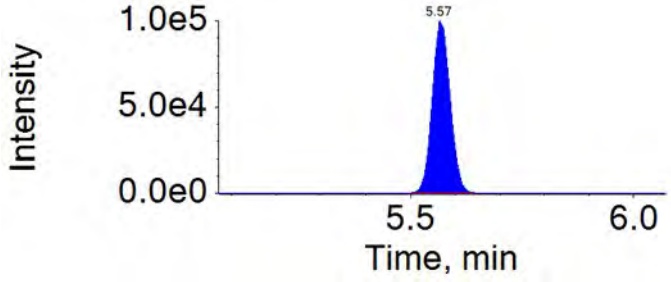




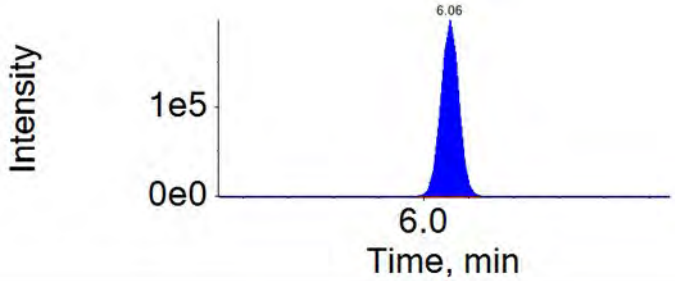
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

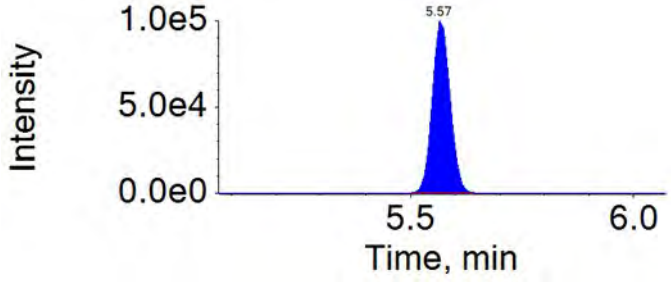
Extraction Standard: Ed5-NEtFOSAA	Injection Standard: 13C2-PFDA
589.0 / 419.0	515.0 / 470.0



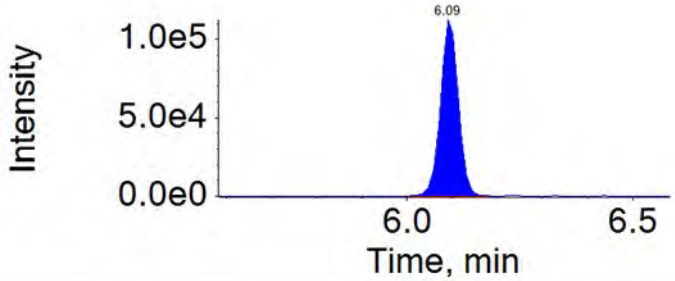


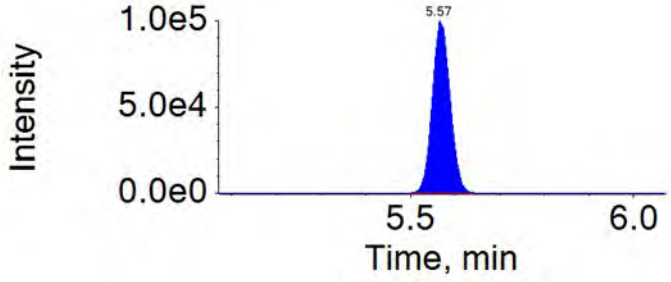
Extraction Standard: E13C2-PFDoDA	Injection Standard: 13C2-PFDA
615.0 / 570.0	515.0 / 470.0



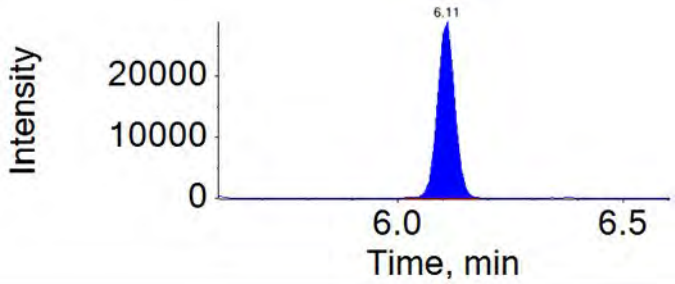


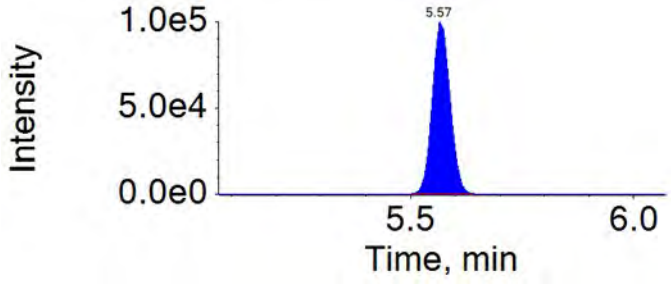
Extraction Standard: Ed7-NMePFOSAE	Injection Standard: 13C2-PFDA
623.0 / 59.0	515.0 / 470.0





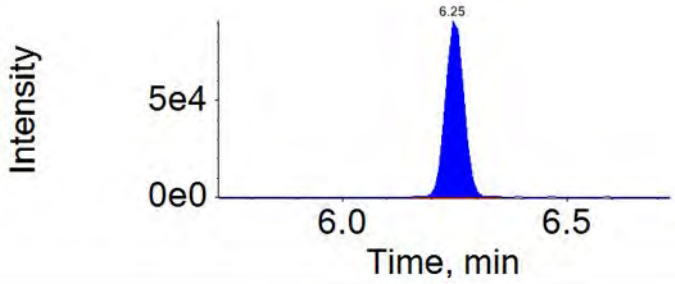
Extraction Standard: Ed3-NMePFOSA	Injection Standard: 13C2-PFDA
515.0 / 169.0	515.0 / 470.0

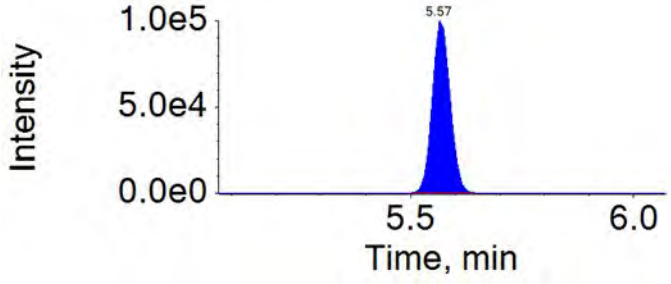




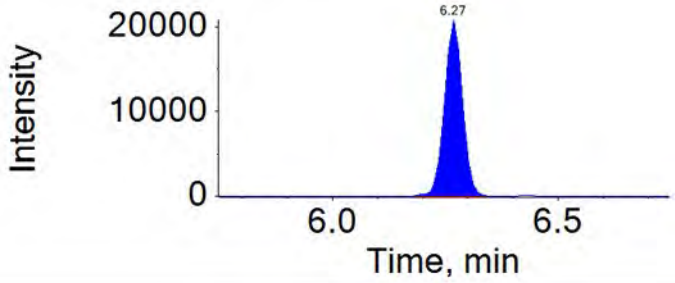
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

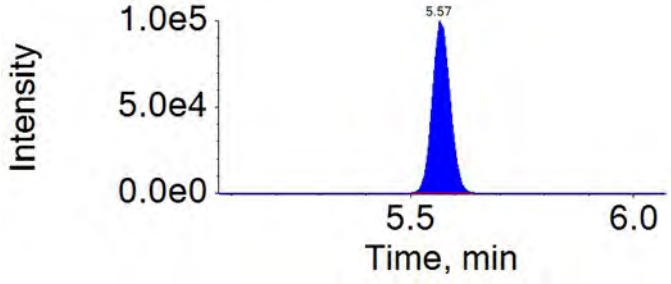
Extraction Standard: Ed9-NEtPFOSAE	Injection Standard: 13C2-PFDA
639.0 / 59.0	515.0 / 470.0



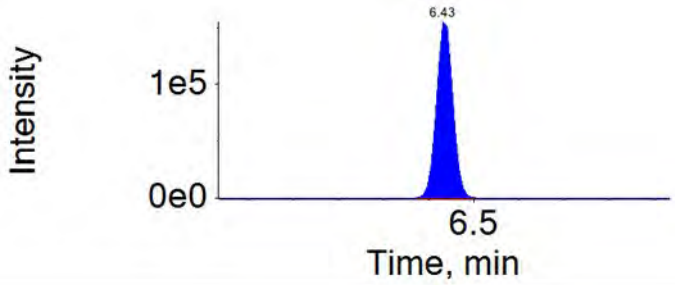


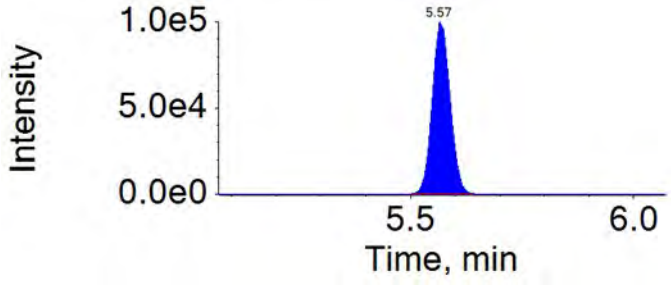
Extraction Standard: Ed5-NEtPFOSA	Injection Standard: 13C2-PFDA
531.0 / 169.0	515.0 / 470.0





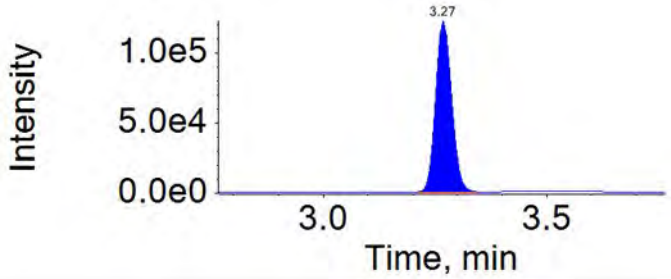
Extraction Standard: E13C2-PFTeDA	Injection Standard: 13C2-PFDA
715.0 / 670.0	515.0 / 470.0



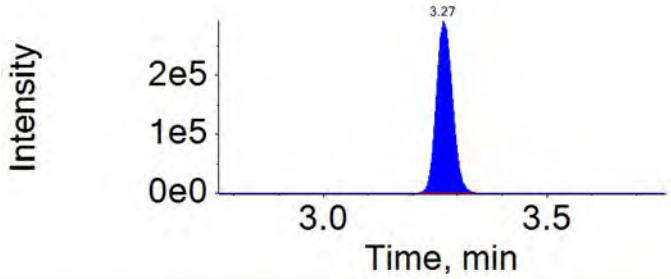


ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

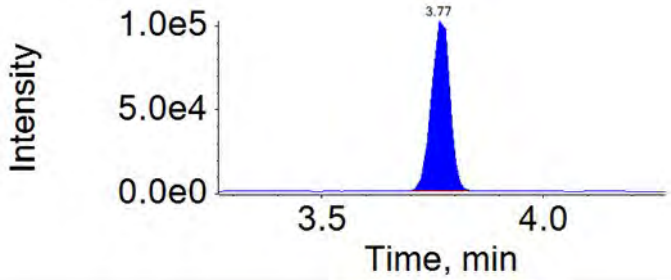
Analyte: PFBA
213.0 / 169.0



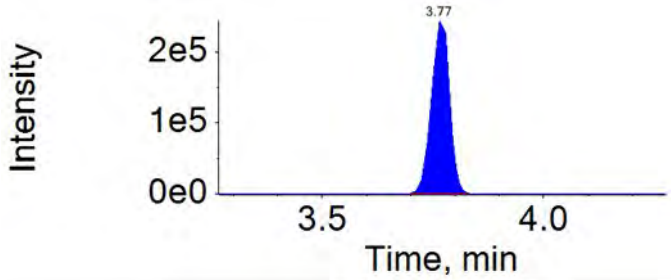
Extraction Standard: 13C4-PFBA
217.0 / 172.0



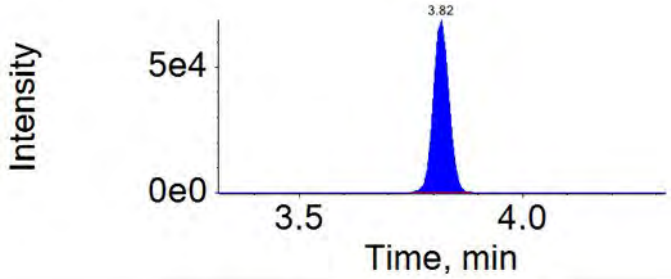
Analyte: PFPeA
263.0 / 219.0



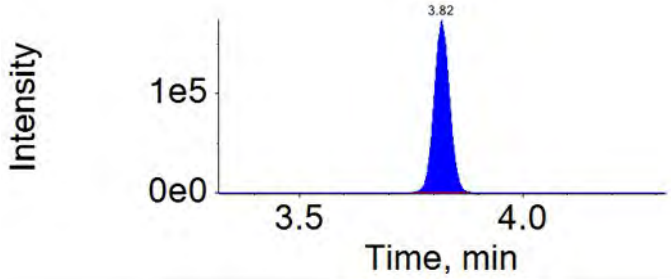
Extraction Standard: 13C5-PFPeA
268.0 / 223.0



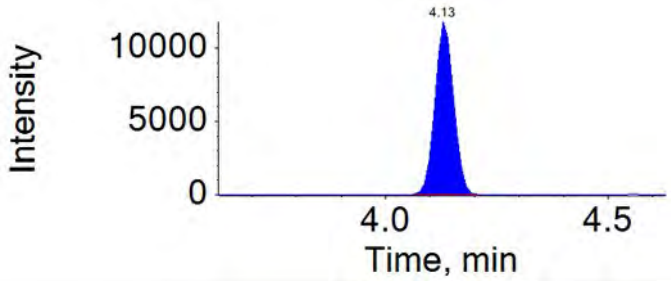
Analyte: PFBS
299.0 / 80.0



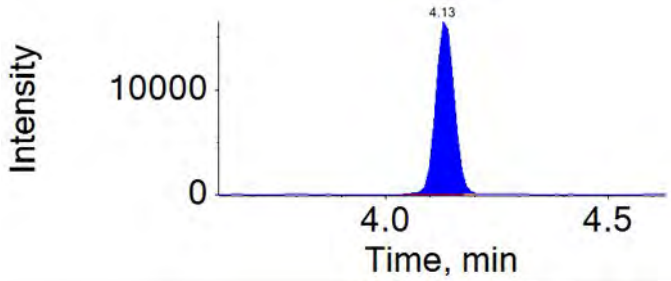
Extraction Standard: 13C3-PFBS
302.0 / 80.0



Analyte: 4:2-FTS
327.0 / 307.0



Extraction Standard: 13C2-4:2-FTS
329.0 / 81.0

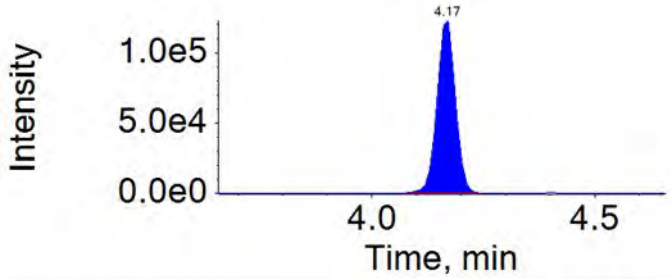


APPROVED
By MCD at 6:33 pm, 11/12/18

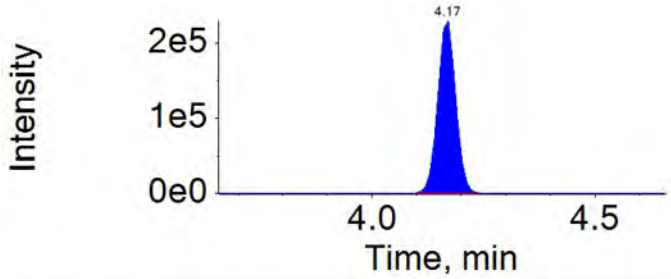
REVIEWED
By HMK at 10:53 am, 11/13/18

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

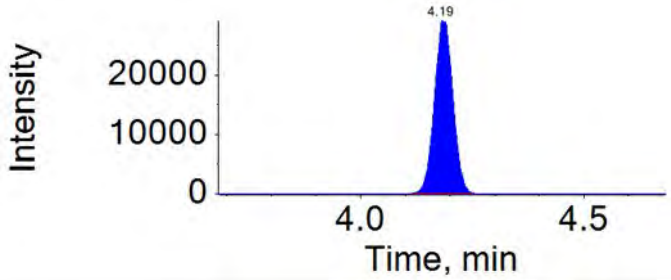
Analyte: PFHxA
313.0 / 269.0



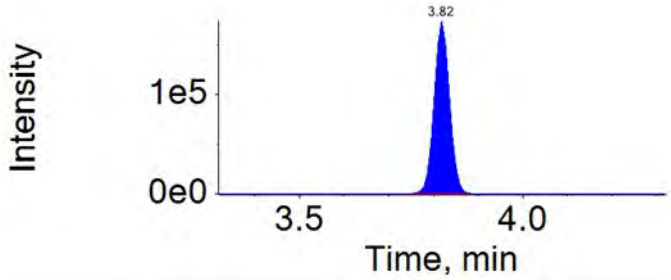
Extraction Standard: 13C5-PFHxA
318.0 / 273.0



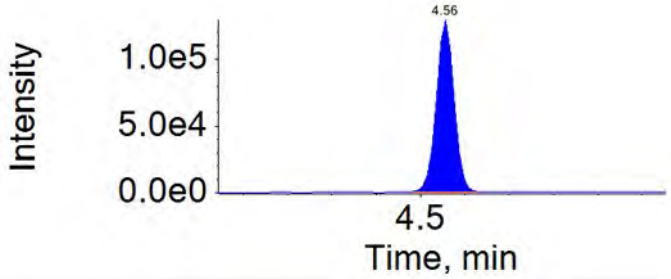
Analyte: PFPeS
349.0 / 80.0



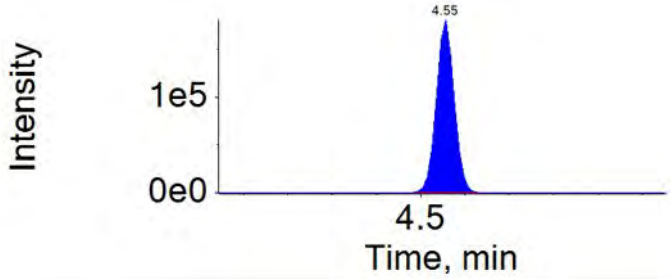
Extraction Standard: 13C3-PFBS
302.0 / 80.0



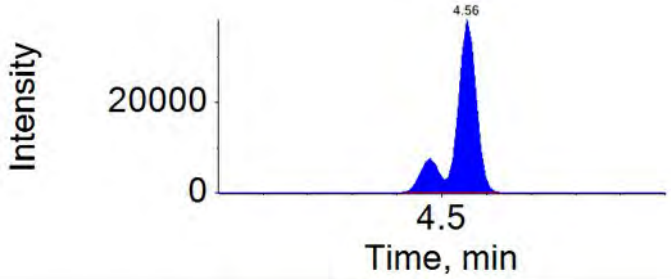
Analyte: PFHpA
363.0 / 319.0



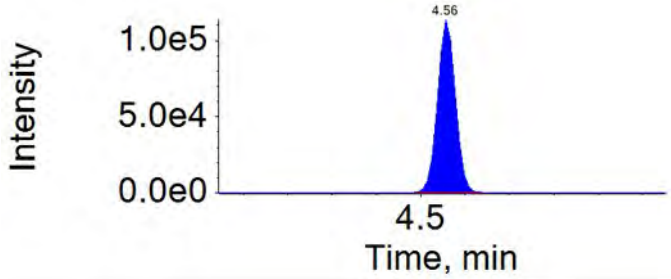
Extraction Standard: 13C4-PFHpA
367.0 / 322.0



Analyte: PFHxS
399.0 / 80.0

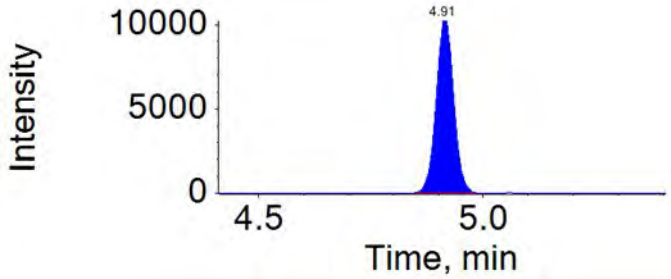


Extraction Standard: 13C3-PFHxS
402.0 / 80.0

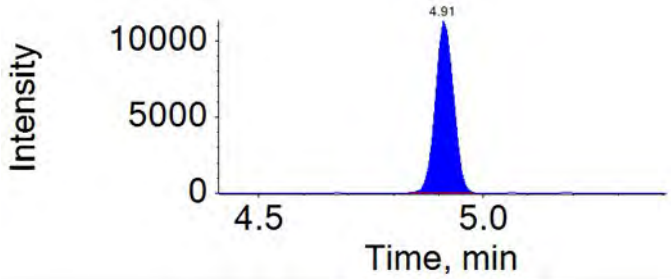


ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

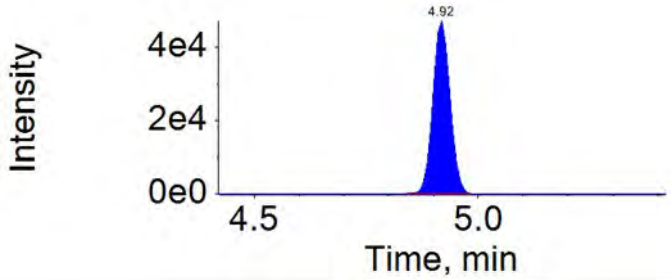
Analyte: 6:2-FTS
427.0 / 407.0



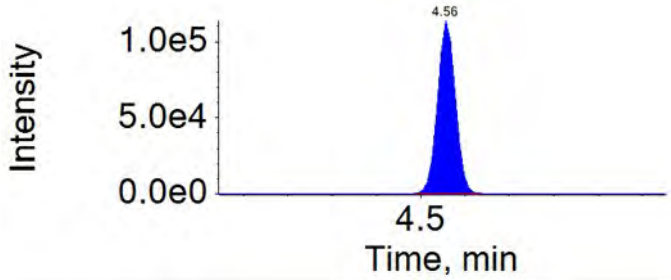
Extraction Standard: 13C2-6:2-FTS
429.0 / 81.0



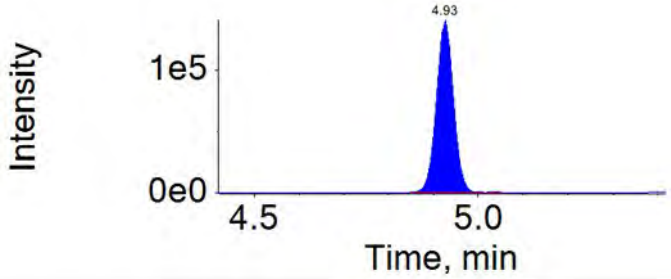
Analyte: PFHpS
449.0 / 80.0



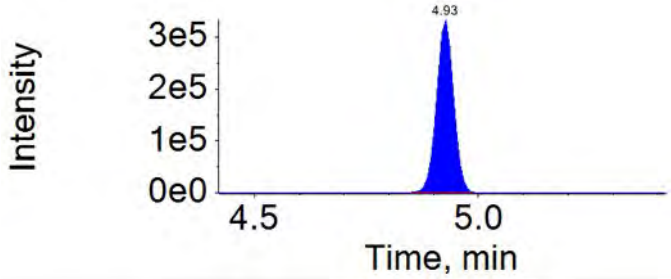
Extraction Standard: 13C3-PFHxS
402.0 / 80.0



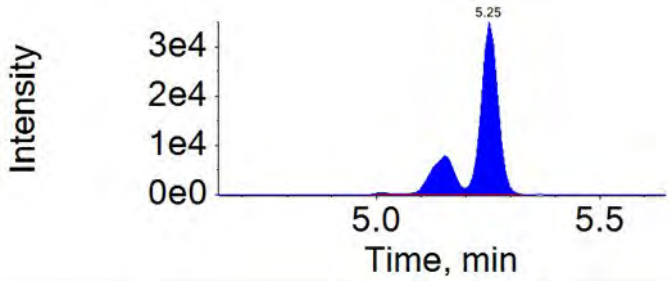
Analyte: PFOA
413.0 / 369.0



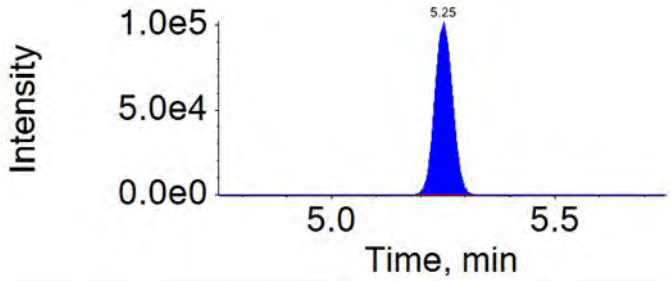
Extraction Standard: 13C8-PFOA
421.0 / 376.0



Analyte: PFOS
499.0 / 80.0



Extraction Standard: 13C8-PFOS
507.0 / 80.0

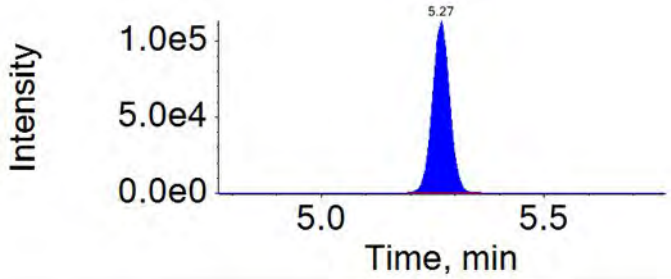


APPROVED
By MCD at 6:33 pm, 11/12/18

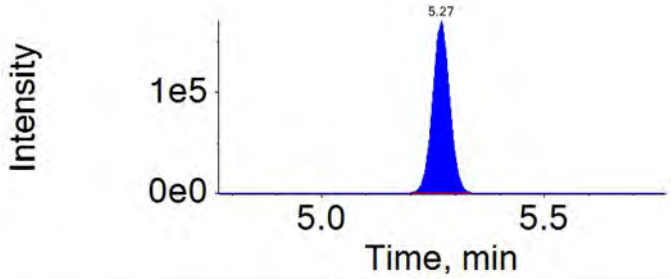
REVIEWED
By HMK at 10:53 am, 11/13/18

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

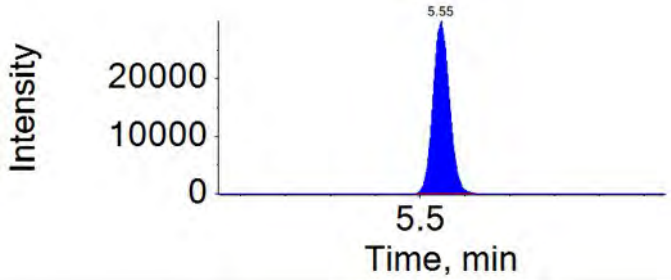
Analyte: PFNA
463.0 / 419.0



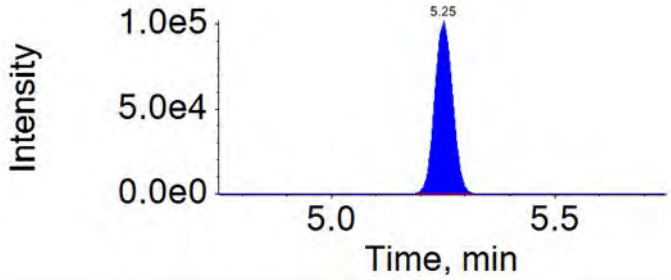
Extraction Standard: 13C9-PFNA
472.0 / 427.0



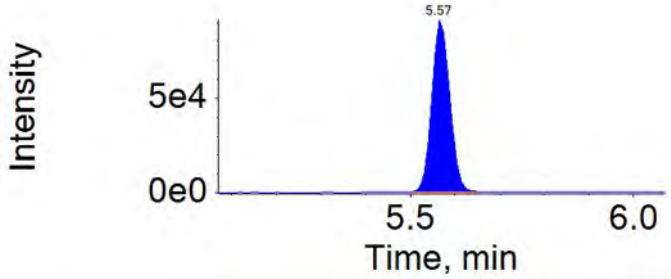
Analyte: PFNS
549.0 / 80.0



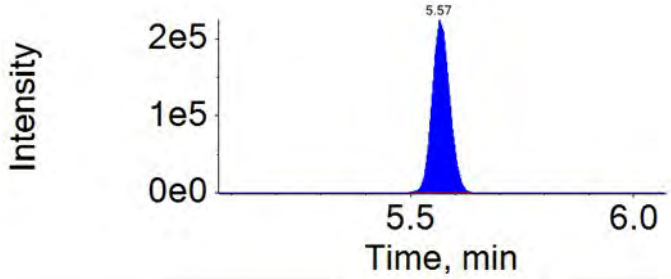
Extraction Standard: 13C8-PFOS
507.0 / 80.0



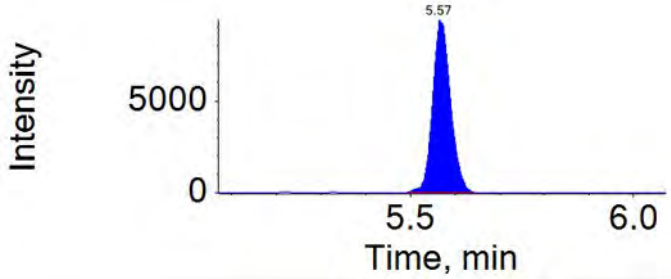
Analyte: PFDA
513.0 / 469.0



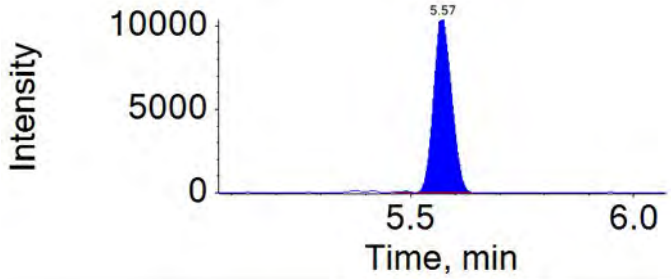
Extraction Standard: 13C6-PFDA
519.0 / 474.0



Analyte: 8:2-FTS
527.0 / 507.0



Extraction Standard: 13C2-8:2-FTS
529.0 / 81.0

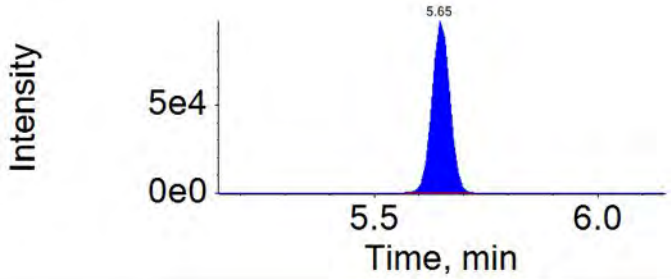


APPROVED
By MCD at 6:33 pm, 11/12/18

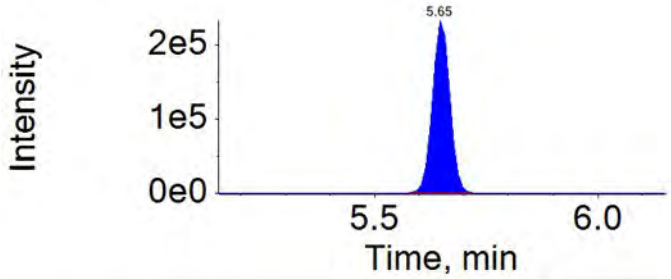
REVIEWED
By HMK at 10:53 am, 11/13/18

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

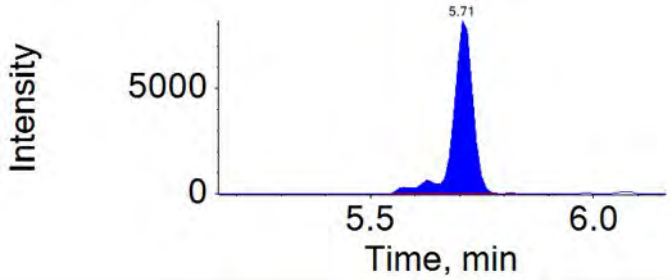
Analyte: PFOSA
498.0 / 78.0



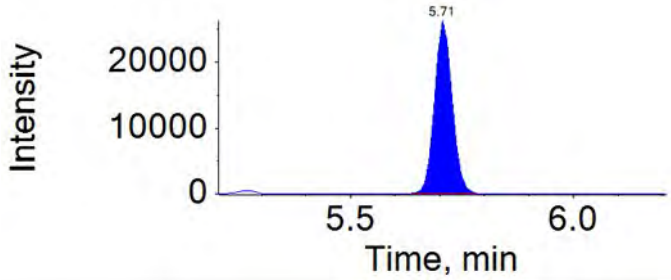
Extraction Standard: 13C8-PFOSA
506.0 / 78.0



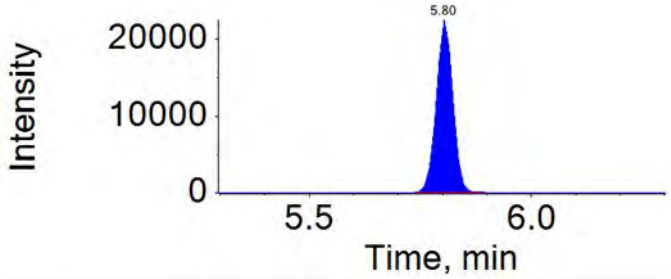
Analyte: NMeFOSAA
570.0 / 419.0



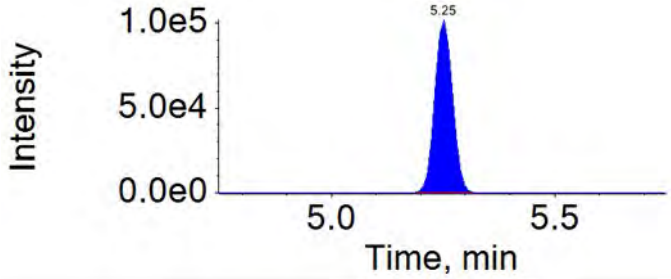
Extraction Standard: d3-NMeFOSAA
573.0 / 419.0



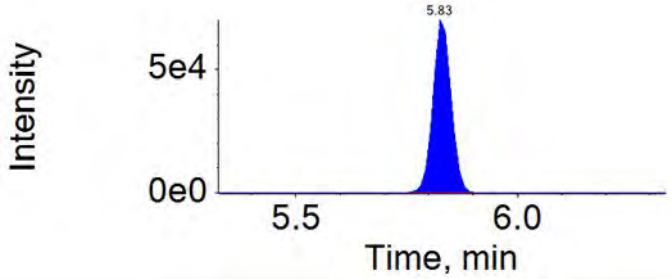
Analyte: PFDS
599.0 / 80.0



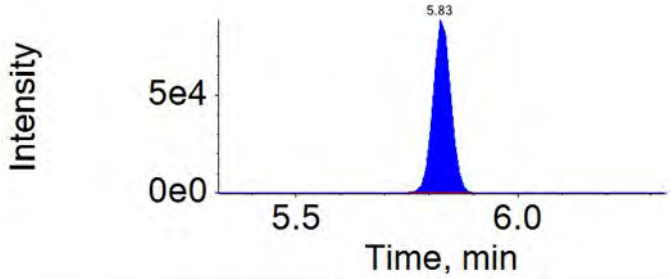
Extraction Standard: 13C8-PFOS
507.0 / 80.0



Analyte: PFUnDA
563.0 / 519.0



Extraction Standard: 13C7-PFUnDA
570.0 / 525.0

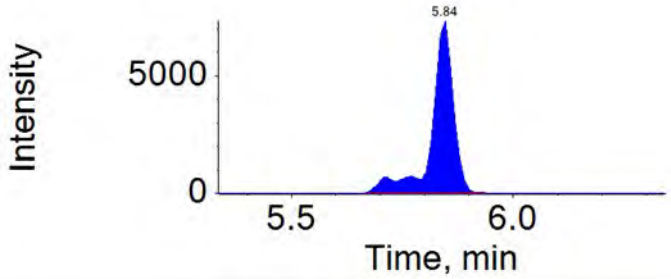


APPROVED
By MCD at 6:33 pm, 11/12/18

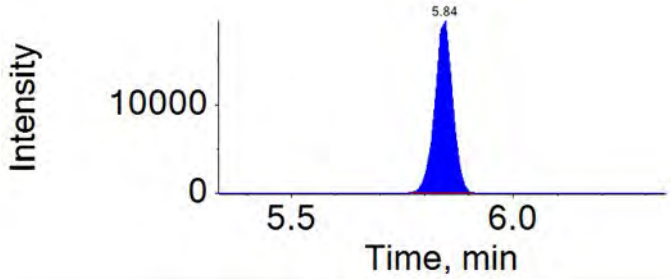
REVIEWED
By HMK at 10:53 am, 11/13/18

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

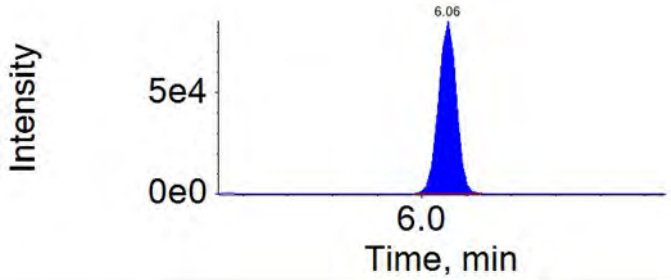
Analyte: NEtFOSAA
584.0 / 419.0



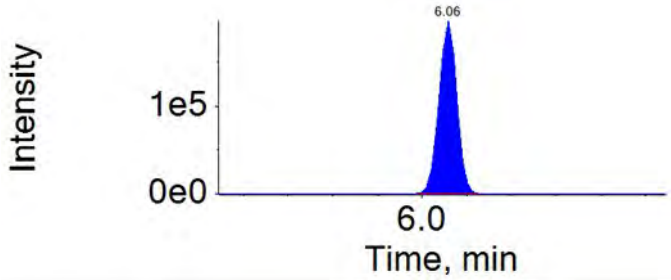
Extraction Standard: d5-NEtFOSAA
589.0 / 419.0



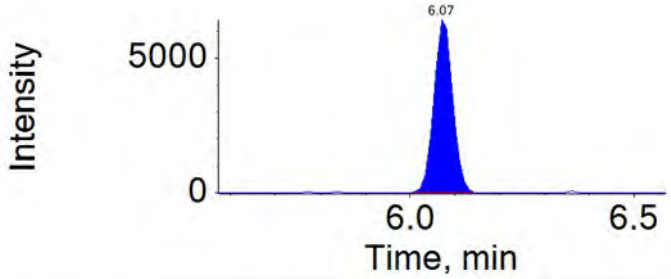
Analyte: PFDoDA
613.0 / 569.0



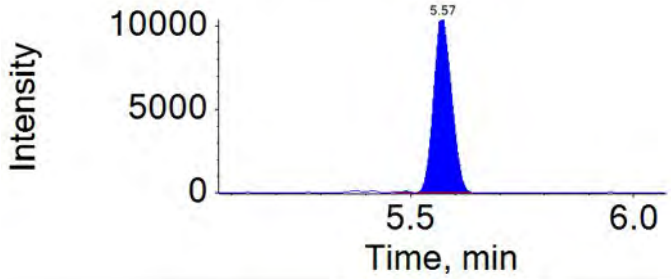
Extraction Standard: 13C2-PFDoDA
615.0 / 570.0



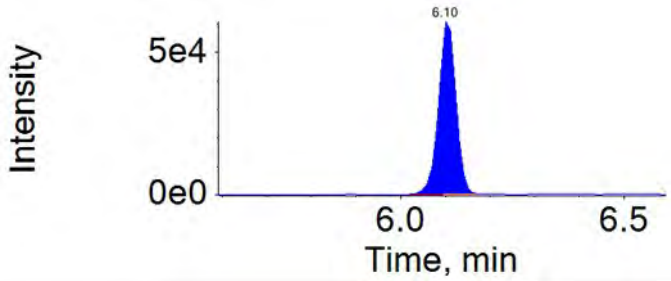
Analyte: 10:2-FTS
627.0 / 607.0



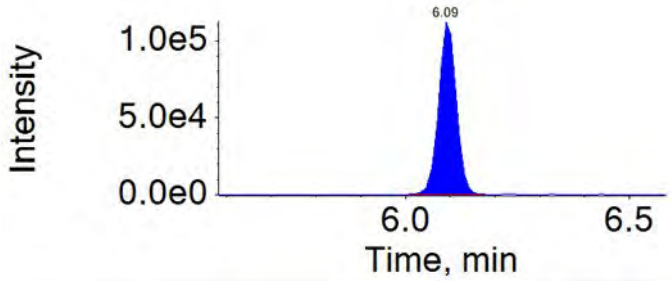
Extraction Standard: 13C2-8:2-FTS
529.0 / 81.0



Analyte: NMePFOSAE
616.0 / 59.0



Extraction Standard: d7-NMePFOSAE
623.0 / 59.0

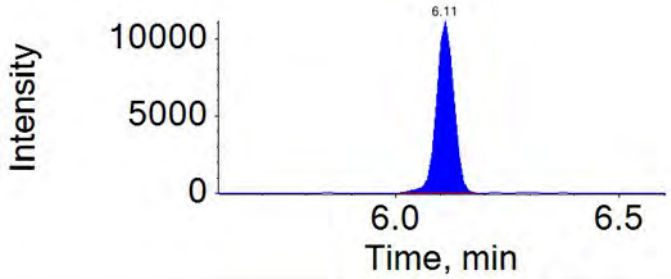


APPROVED
By MCD at 6:33 pm, 11/12/18

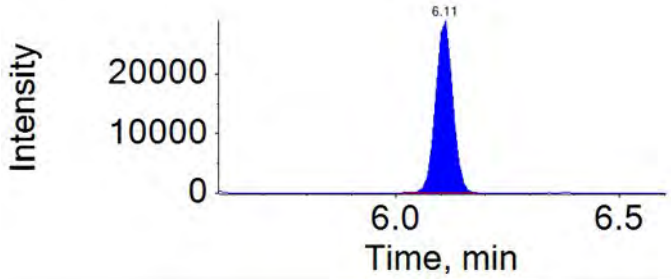
REVIEWED
By HMK at 10:53 am, 11/13/18

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

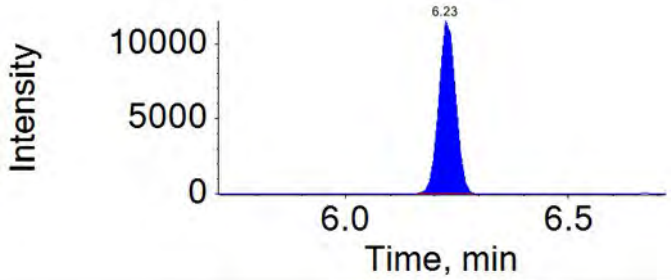
Analyte: NMePFOSA
512.0 / 169.0



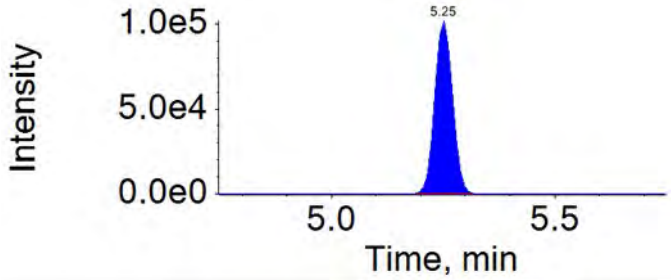
Extraction Standard: d3-NMePFOSA
515.0 / 169.0



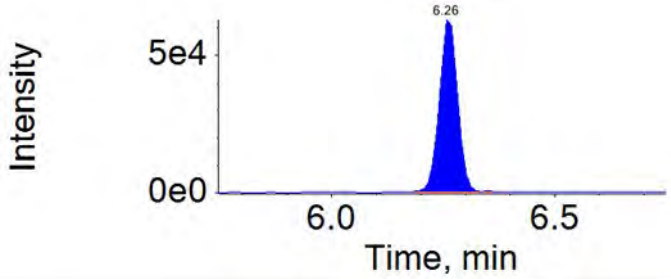
Analyte: PFDoS
699.0 / 80.0



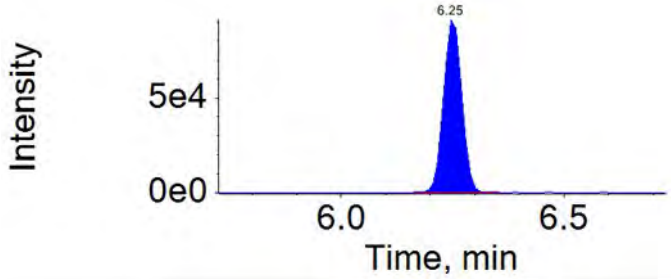
Extraction Standard: 13C8-PFOS
507.0 / 80.0



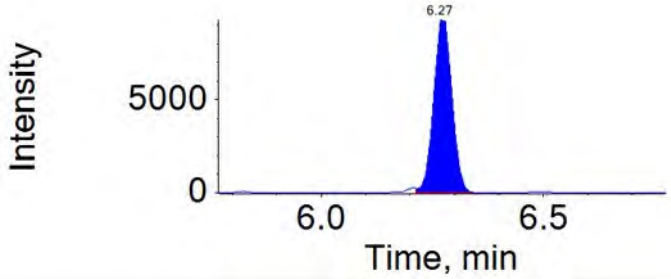
Analyte: NEtPFOSAE
630.0 / 59.0



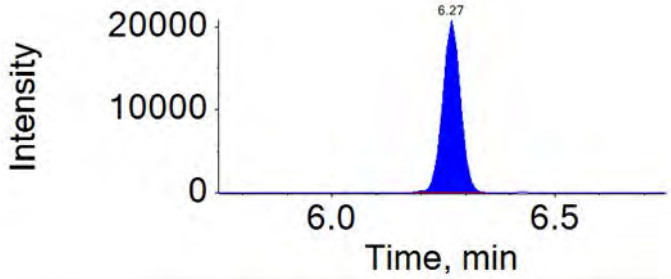
Extraction Standard: d9-NEtPFOSAE
639.0 / 59.0



Analyte: NEtPFOSA
526.0 / 169.0



Extraction Standard: d5-NEtPFOSA
531.0 / 169.0

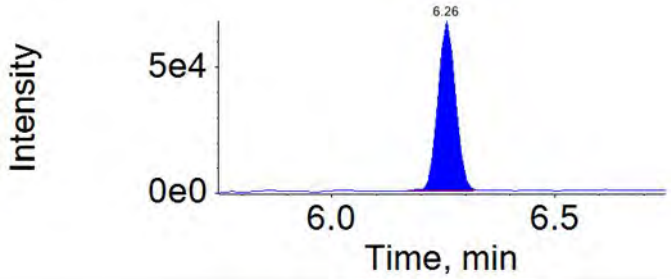


APPROVED
By MCD at 6:33 pm, 11/12/18

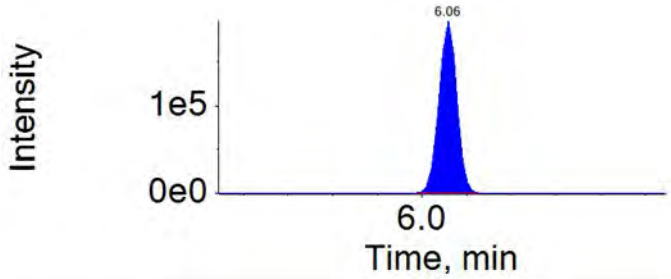
REVIEWED
By HMK at 10:53 am, 11/13/18

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

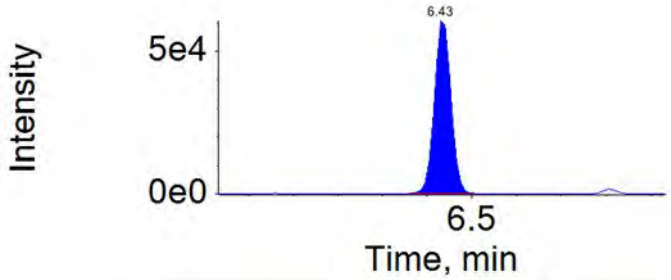
Analyte: PFTrDA
663.0 / 619.0



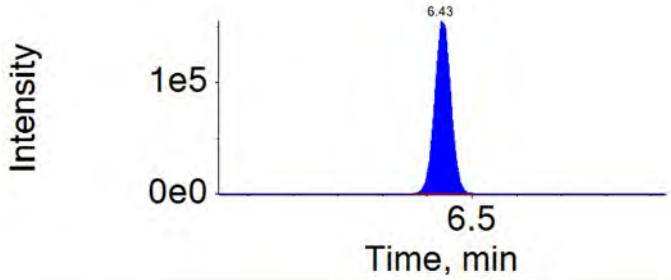
Extraction Standard: 13C2-PFDoDA
615.0 / 570.0



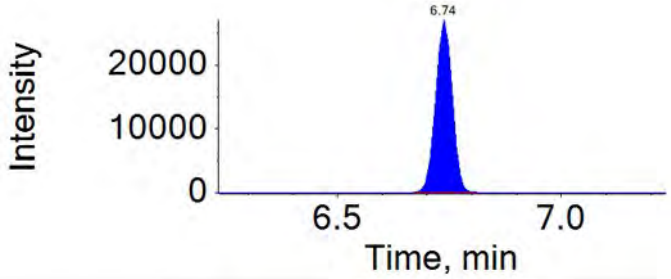
Analyte: PFTeDA
713.0 / 669.0



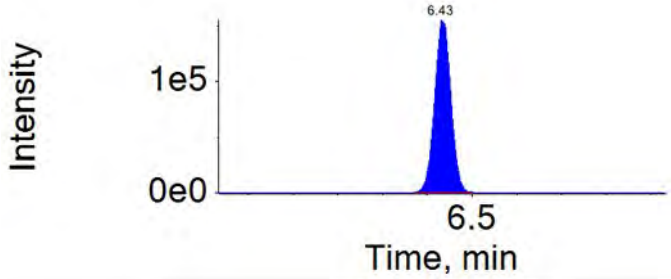
Extraction Standard: 13C2-PFTeDA
715.0 / 670.0



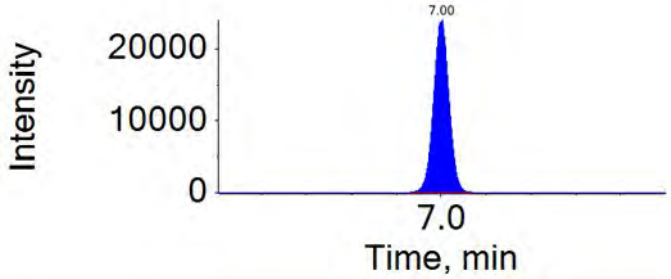
Analyte: PFHxDA
813.0 / 769.0



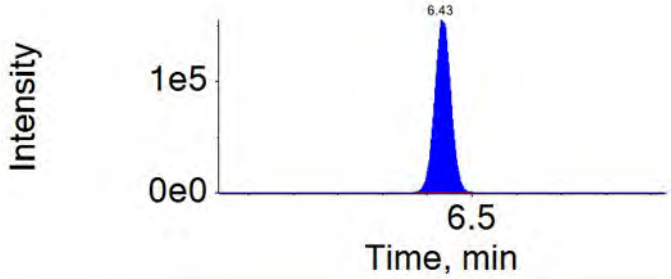
Extraction Standard: 13C2-PFTeDA
715.0 / 670.0



Analyte: PFODA
913.0 / 869.0



Extraction Standard: 13C2-PFTeDA
715.0 / 670.0



APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

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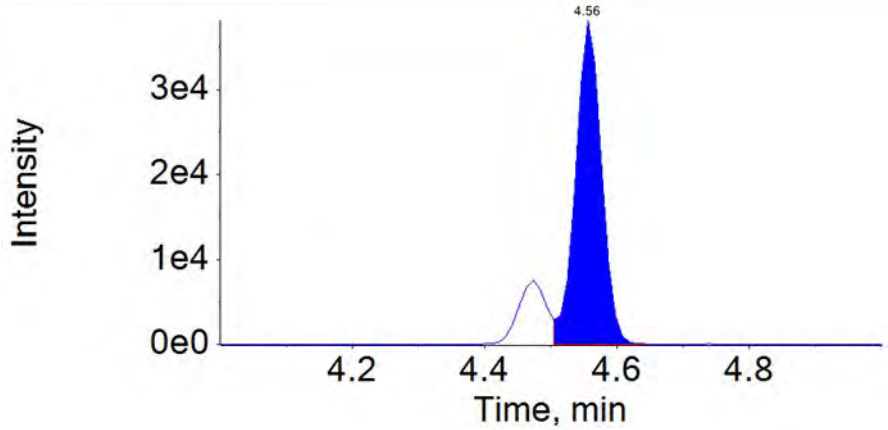
Auto Integrations prior to Manual Integration

Print Date: 11/12/2018 6:26 PM
Template: MQ-OrigInteg-16NOV21.docx

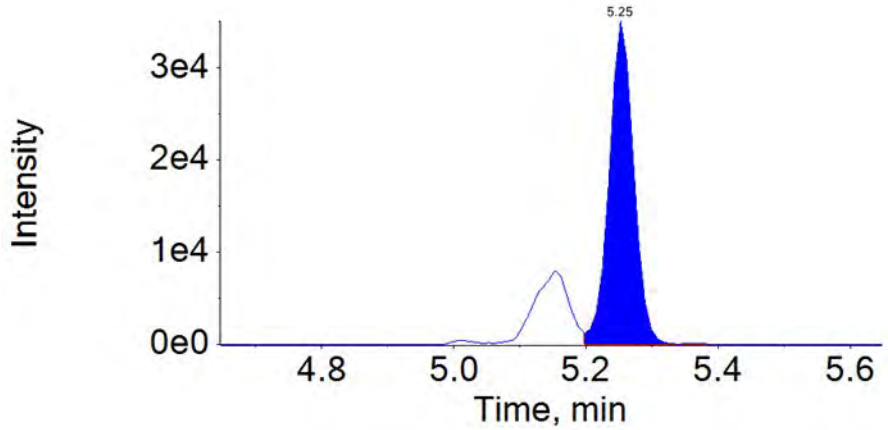
Results Table Name: 18NOV12DCAL
Results Table Date: 11/12/2018 6:23:42 PM
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

Component Name:
PFHxS
RT (min.):
4.56
Peak Area:
103825.76
Mass Range:
399.0 / 80.0
File Name:
18NOV12DCAL-44.wiff
Sample Name:
CAL3



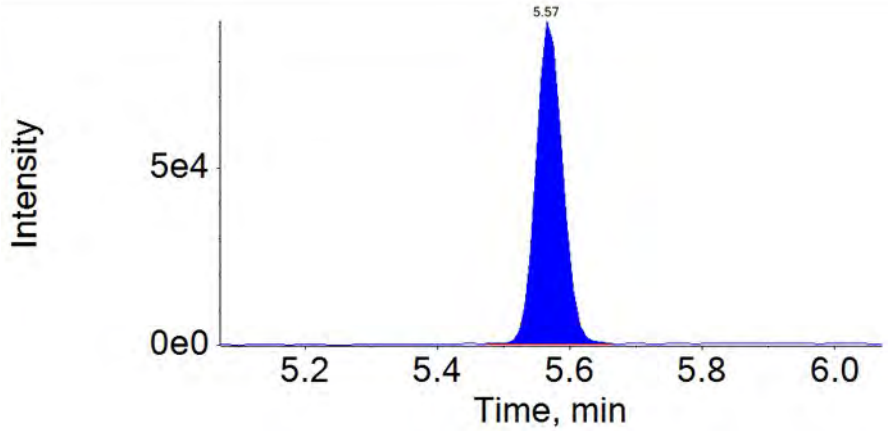
Integration Comment: incorrect integration

Component Name:
PFOS
RT (min.):
5.25
Peak Area:
90727.07
Mass Range:
499.0 / 80.0
File Name:
18NOV12DCAL-44.wiff
Sample Name:
CAL3



Integration Comment: incorrect integration

Component Name:
PFDA
RT (min.):
5.57
Peak Area:
254529.84
Mass Range:
513.0 / 469.0
File Name:
18NOV12DCAL-44.wiff
Sample Name:
CAL3



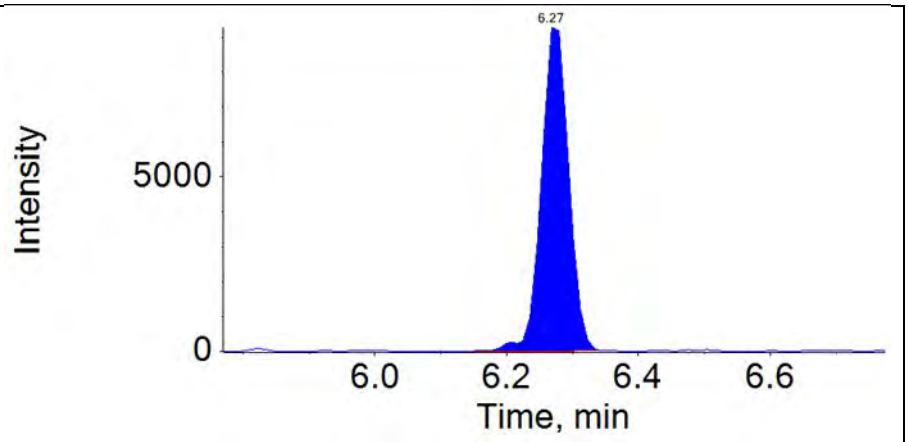
Integration Comment: incorrect integration

APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

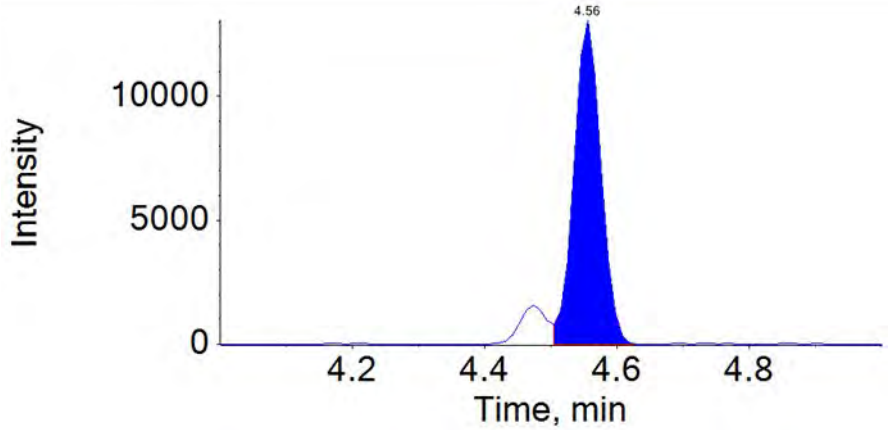
Results Table Name: 18NOV12DCAL
Results Table Date: 11/12/2018 6:23:42 PM
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

Component Name:
NEtPFOSA
RT (min.):
6.27
Peak Area:
26985.34
Mass Range:
526.0 / 169.0
File Name:
18NOV12DCAL-44.wiff
Sample Name:
CAL3



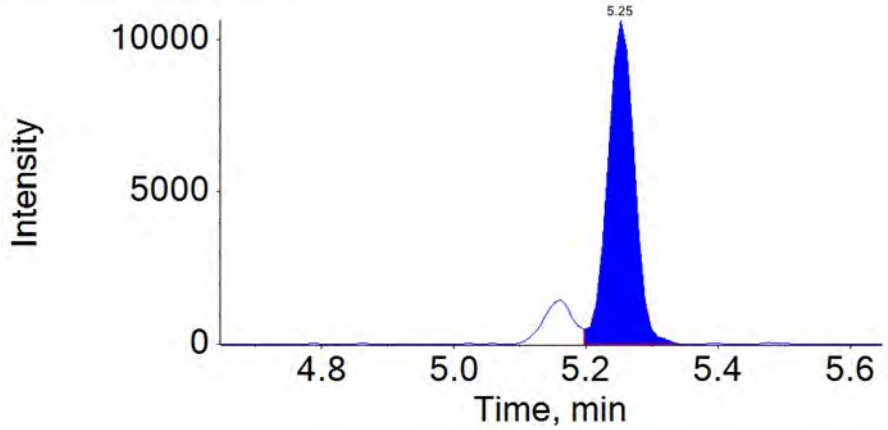
Integration Comment: incorrect integration

Component Name:
PFHxS_2
RT (min.):
4.56
Peak Area:
37027.02
Mass Range:
399.0 / 99.0
File Name:
18NOV12DCAL-44.wiff
Sample Name:
CAL3



Integration Comment: incorrect integration

Component Name:
PFOS_2
RT (min.):
5.25
Peak Area:
29768.90
Mass Range:
499.0 / 99.0
File Name:
18NOV12DCAL-44.wiff
Sample Name:
CAL3



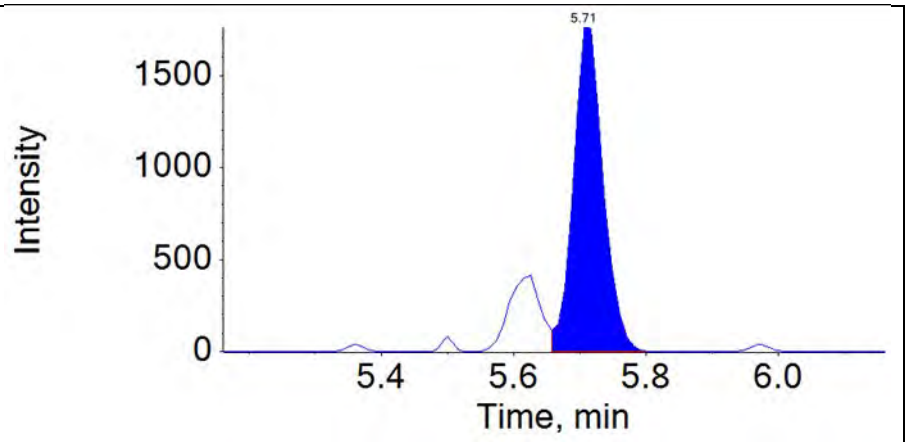
Integration Comment: incorrect integration

APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

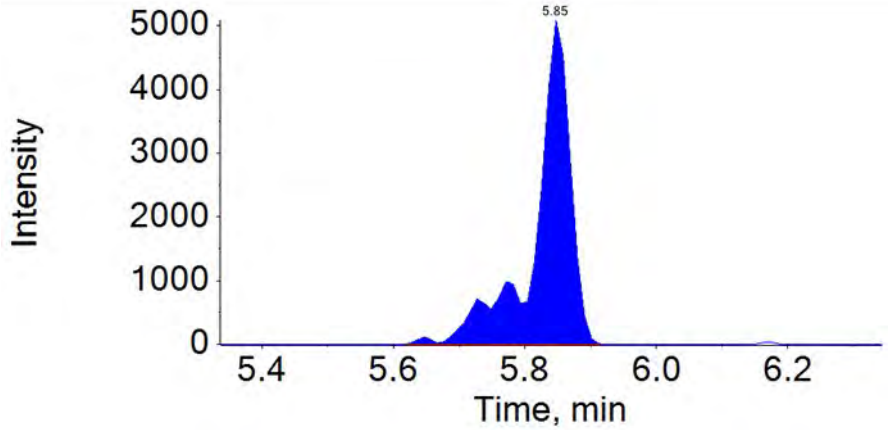
Results Table Name: 18NOV12DCAL
Results Table Date: 11/12/2018 6:23:42 PM
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

Component Name:
NMeFOSAA_2
RT (min.):
5.71
Peak Area:
5548.71
Mass Range:
570.0 / 483.0
File Name:
18NOV12DCAL-44.wiff
Sample Name:
CAL3



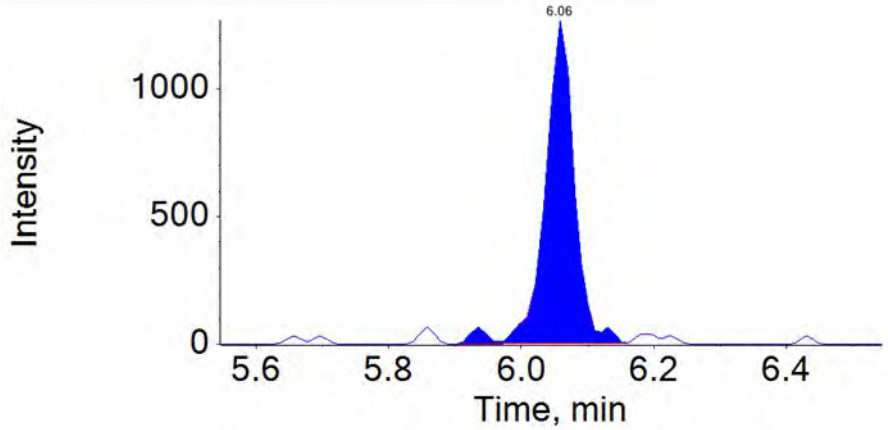
Integration Comment: incorrect integration

Component Name:
NEtFOSAA_2
RT (min.):
5.85
Peak Area:
19243.29
Mass Range:
584.0 / 526.0
File Name:
18NOV12DCAL-44.wiff
Sample Name:
CAL3



Integration Comment: incorrect integration

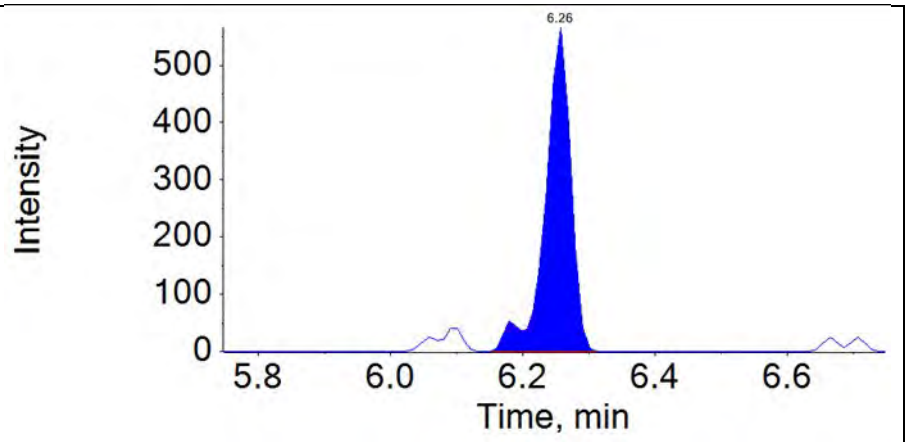
Component Name:
PFDoDA_2
RT (min.):
6.06
Peak Area:
3956.45
Mass Range:
613.0 / 169.0
File Name:
18NOV12DCAL-44.wiff
Sample Name:
CAL3



Integration Comment: incorrect integration

Results Table Name: 18NOV12DCAL
Results Table Date: 11/12/2018 6:23:42 PM
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

Component Name:
PFTrDA_2
RT (min.):
6.26
Peak Area:
1527.41
Mass Range:
663.0 / 169.0
File Name:
18NOV12DCAL-44.wiff
Sample Name:
CAL3



Integration Comment: incorrect integration

APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

Results Table Name: 18NOV12DCAL
Results Table Date: 11/12/2018 6:23:42 PM

Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

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LC-MS/MS Analysis Report

Printed: 11/12/2018 6:22:00 PM
Template: IonRatio18OCT10

Ion Ratio Report

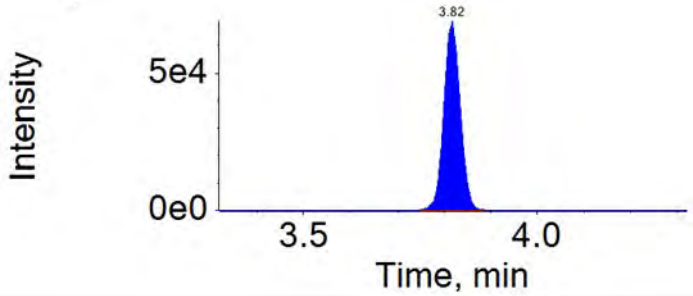
Sample Name: CAL3 **Instrument Name:** LM27631 **File Name:** 18NOV12DCAL-44.wiff

Component Name	RT	RRT	Analyte Area Response	Int Typ	Expected Ion Ratio	Ion Ratio	Ion Ratio % Diff	Ion Ratio Limit	Ion Ratio OOS
PFBS	3.82	1.00	168144.64	A	0.3619	0.3569			
PFBS_2	3.82	1.00	60008.36	A	0.3619	0.3569	-1	50	
4:2-FTS	4.13	1.00	34188.48	A	0.6730	0.6730			
4:2 FTS_2	4.13	1.00	23007.23	A	0.6730	0.6730		#NA!	
PFHxA	4.17	1.00	352013.45	A	0.0117	0.0120			
PFHxA_2	4.17	1.00	4207.12	A	0.0117	0.0120	3	50	
PFPeS	4.19	1.10	84071.24	A	0.5191	0.5304			
PFPeS_2	4.19	1.10	44592.70	A	0.5191	0.5304	2	50	
PFHpA	4.56	1.00	355834.18	A	0.0563	0.0619			
PFHpA_2	4.55	1.00	22030.36	A	0.0563	0.0619	10	50	
PFHxS	4.56	1.00	125622.02	M	0.3428	0.3304			
PFHxS_2	4.56	1.00	41506.57	M	0.3428	0.3304	-4	50	
6:2-FTS	4.91	1.00	28084.91	A	0.6604	0.7337			
6:2 FTS_2	4.91	1.00	20606.67	A	0.6604	0.7337		#NA!	
PFHpS	4.92	1.08	125907.86	A	0.4066	0.3838			
PFHpS_2	4.92	1.08	48327.03	A	0.4066	0.3838	-6	50	
PFOA	4.93	1.00	372258.90	A	0.0562	0.0567			
PFOA_2	4.92	1.00	21118.14	A	0.0562	0.0567	1	50	
PFOS	5.25	1.00	120897.45	M	0.2968	0.2842			
PFOS_2	5.25	1.00	34361.90	M	0.2968	0.2842	-4	50	
PFNA	5.27	1.00	302323.82	A	0.0229	0.0192			
PFNA_2	5.28	1.00	5790.58	A	0.0229	0.0192	-16	50	
PFNS	5.55	1.06	76049.00	A	0.4828	0.4502			
PFNS_2	5.54	1.06	34233.54	A	0.4828	0.4502	-7	50	
PFDA	5.57	1.00	254047.79	M	0.0081	0.0044			
PFDA_2	5.56	1.00	1125.96	A	0.0081	0.0044	-45	50	
8:2-FTS	5.57	1.00	26295.08	A	0.6814	0.5850			
8:2 FTS_2	5.57	1.00	15383.41	A	0.6814	0.5850		#NA!	
NMeFOSAA	5.71	1.00	25147.65	A	0.2569	0.2754			
NMeFOSAA_2	5.71	1.00	6926.51	M	0.2569	0.2754	7	50	
PFDS	5.80	1.11	57966.88	A	0.5144	0.5358			
PFDS_2	5.80	1.11	31061.10	A	0.5144	0.5358	4	50	
PFUnDA	5.83	1.00	199061.83	A	0.0058	0.0049			
PFUnDA_2	5.83	1.00	975.19	A	0.0058	0.0049	-16	50	
NEtFOSAA	5.84	1.00	25089.02	A	0.7253	0.7602			
NEtFOSAA_2	5.85	1.00	19071.96	M	0.7253	0.7602	5	50	
PFDoDA	6.06	1.00	237252.63	A	0.0157	0.0159			
PFDoDA_2	6.06	1.00	3761.16	M	0.0157	0.0159	1	50	
10:2-FTS	6.07	1.09	18541.69	A	0.6356	0.6613			
10:2 FTS_2	6.08	1.09	12260.75	A	0.6356	0.6613		#NA!	
PFTrDA	6.26	1.03	184322.87	A	0.0086	0.0079			
PFTrDA_2	6.26	1.03	1447.70	M	0.0086	0.0079	-8	50	
PFTeDA	6.43	1.00	156439.94	A	0.0062	0.0065			
PFTeDA_2	6.44	1.00	1023.07	A	0.0062	0.0065	5	50	
PFHxDA	6.74	1.05	69655.07	A	0.0683	0.0690			
PFHxDA_2	6.74	1.05	4808.92	A	0.0683	0.0690	1	50	
PFODA	7.00	1.09	57795.96	A	0.0277	0.0253			
PFODA_2	7.00	1.09	1464.82	A	0.0277	0.0253	-9	50	

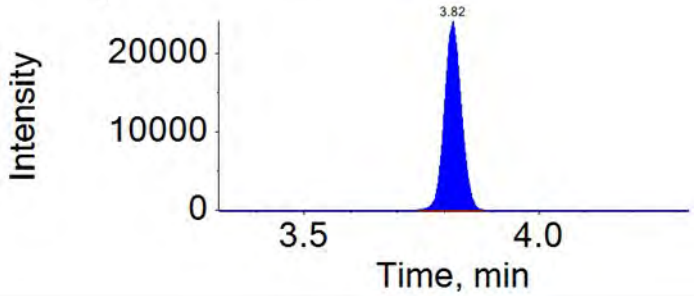
APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

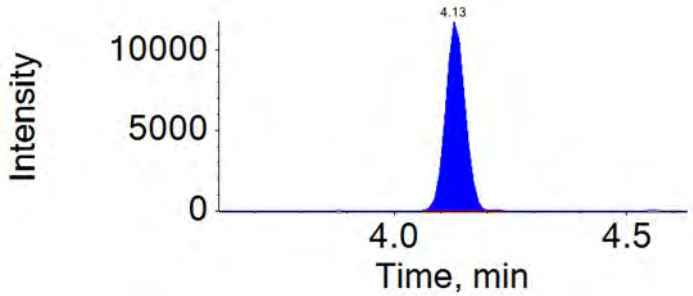
Component: PFBS
Primary Mass: 299.0 / 80.0



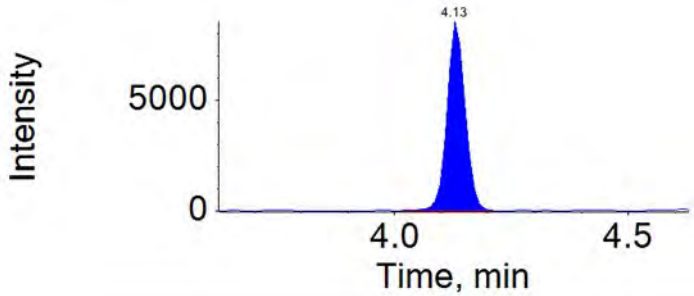
Component: PFBS_2
Secondary Mass: 299.0 / 99.0



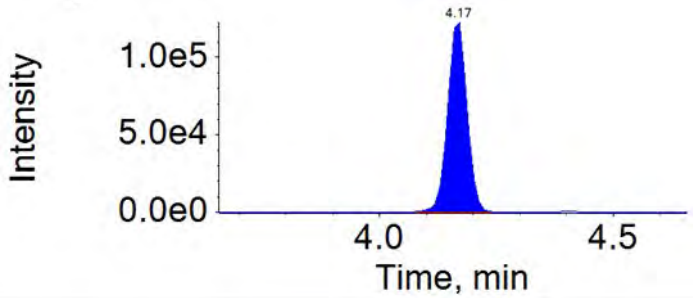
Component: 4:2-FTS
Primary Mass: 327.0 / 307.0



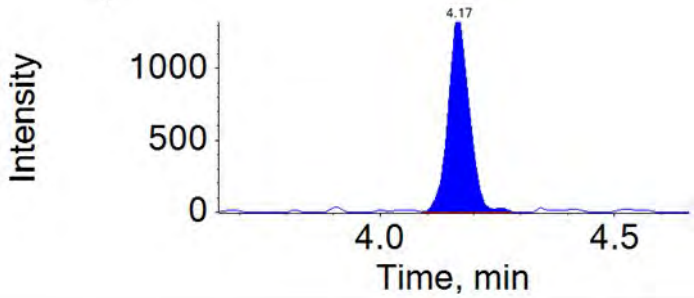
Component: 4:2 FTS_2
Secondary Mass: 327.0 / 81.0



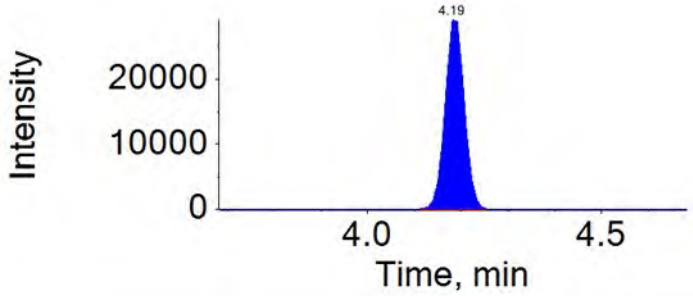
Component: PFHxA
Primary Mass: 313.0 / 269.0



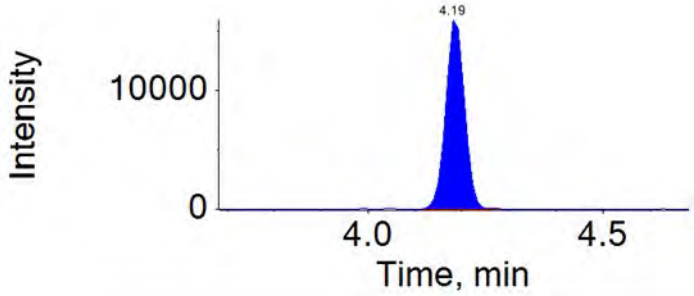
Component: PFHxA_2
Secondary Mass: 313.0 / 119.0



Component: PFPeS
Primary Mass: 349.0 / 80.0



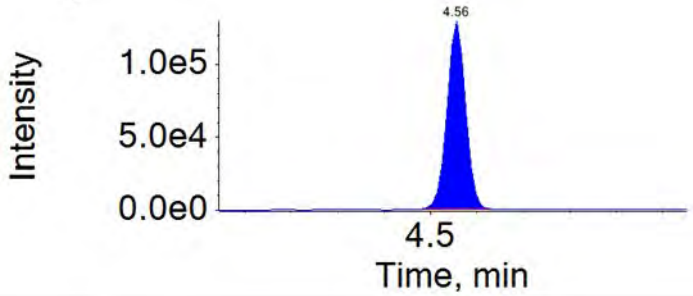
Component: PFPeS_2
Secondary Mass: 349.0 / 99.0



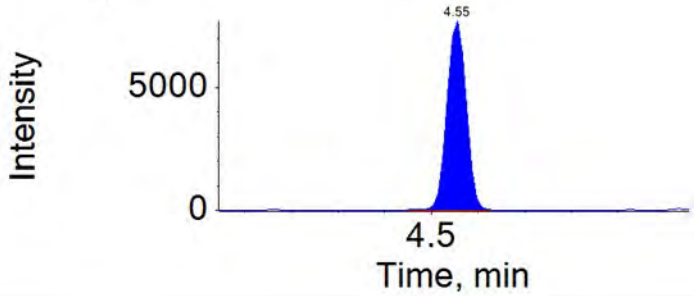
APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

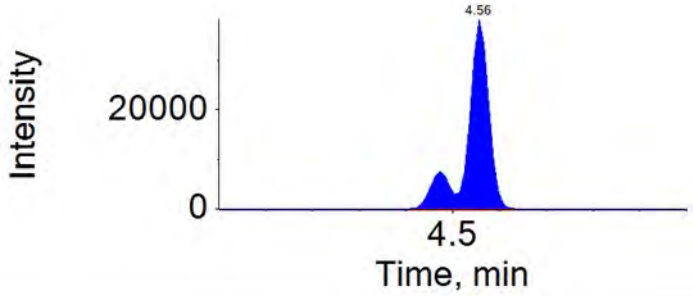
Component: PFHpA
Primary Mass: 363.0 / 319.0



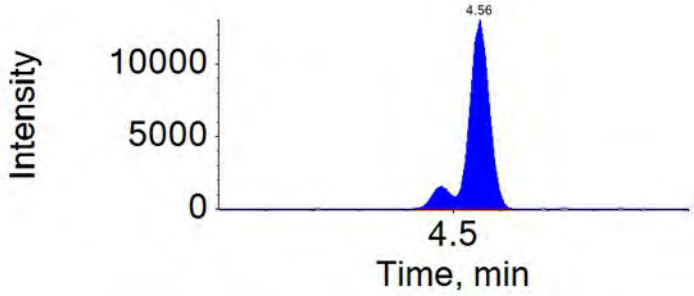
Component: PFHpA_2
Secondary Mass: 363.0 / 169.0



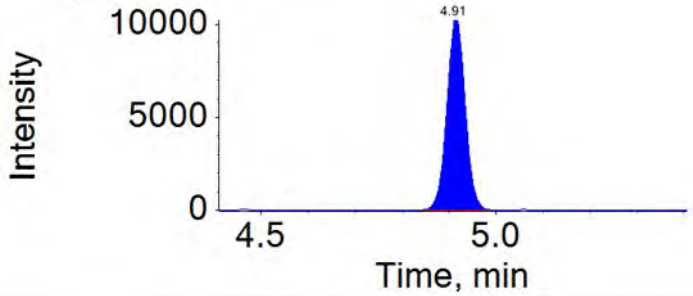
Component: PFHxS
Primary Mass: 399.0 / 80.0



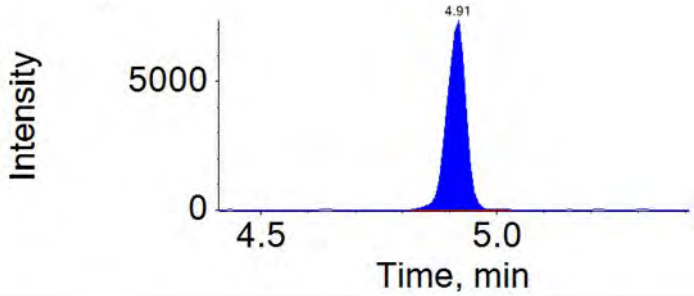
Component: PFHxS_2
Secondary Mass: 399.0 / 99.0



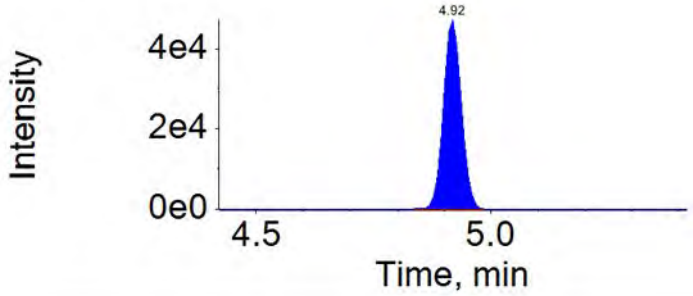
Component: 6:2-FTS
Primary Mass: 427.0 / 407.0



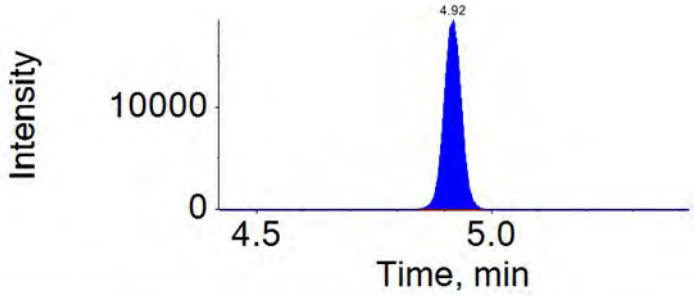
Component: 6:2 FTS_2
Secondary Mass: 427.0 / 81.0



Component: PFHpS
Primary Mass: 449.0 / 80.0



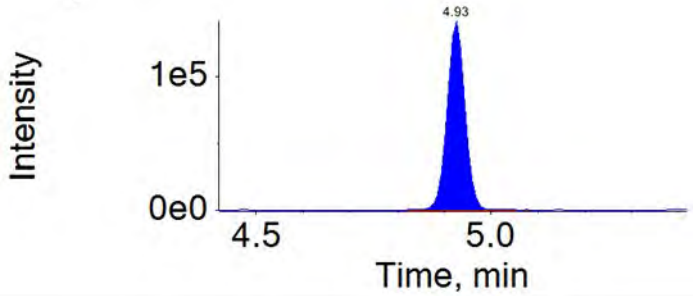
Component: PFHpS_2
Secondary Mass: 449.0 / 99.0



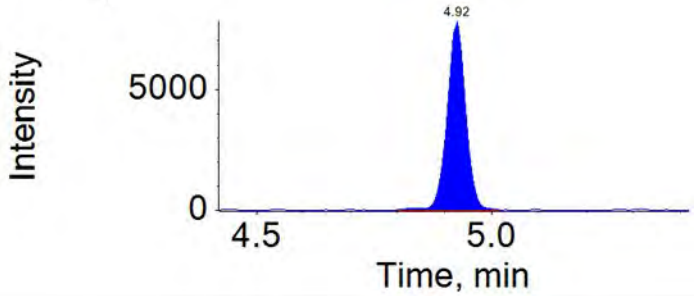
APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

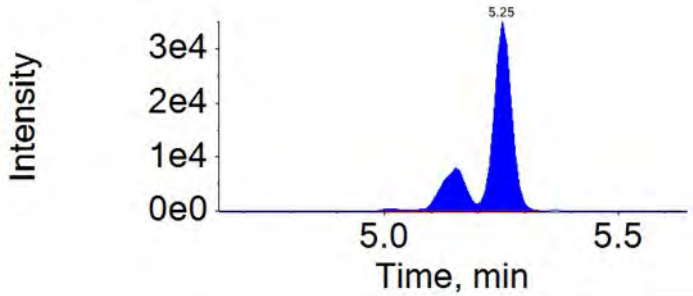
Component: PFOA
Primary Mass: 413.0 / 369.0



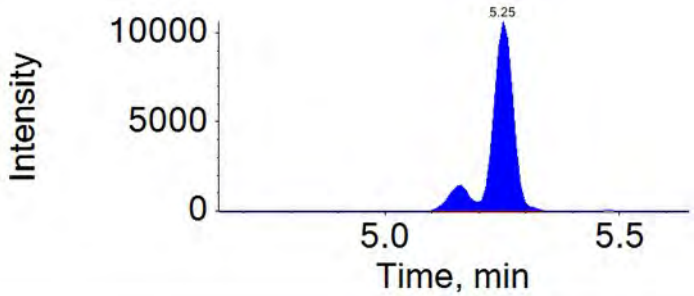
Component: PFOA_2
Secondary Mass: 413.0 / 169.0



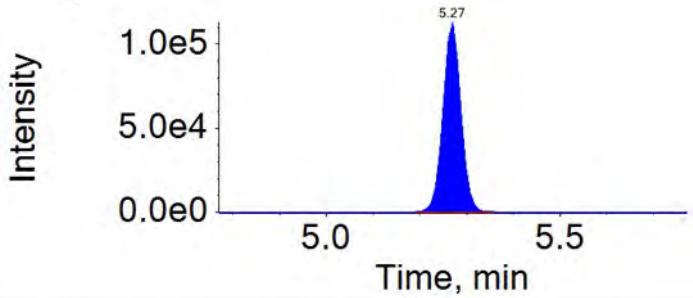
Component: PFOS
Primary Mass: 499.0 / 80.0



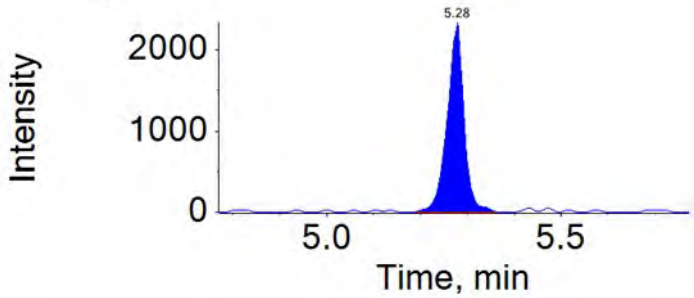
Component: PFOS_2
Secondary Mass: 499.0 / 99.0



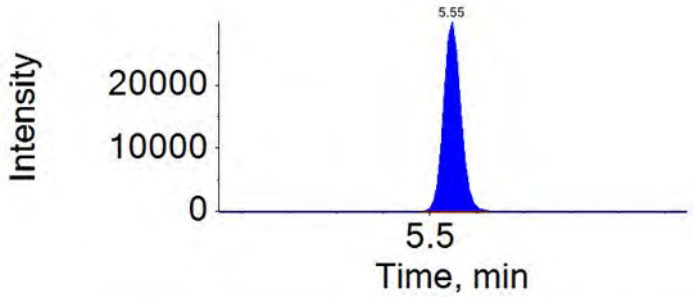
Component: PFNA
Primary Mass: 463.0 / 419.0



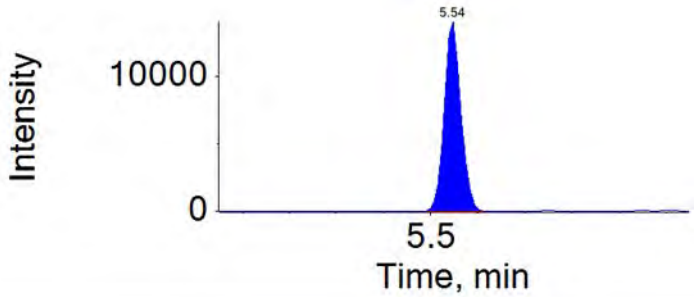
Component: PFNA_2
Secondary Mass: 463.0 / 169.0



Component: PFNS
Primary Mass: 549.0 / 80.0



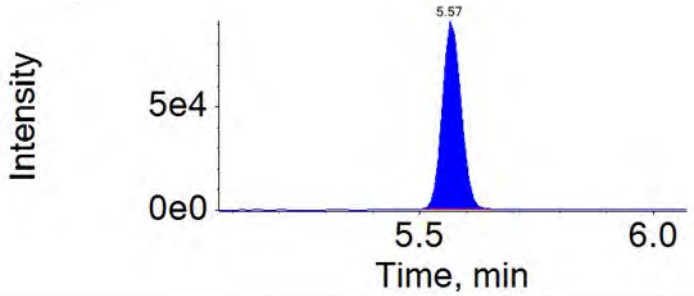
Component: PFNS_2
Secondary Mass: 549.0 / 99.0



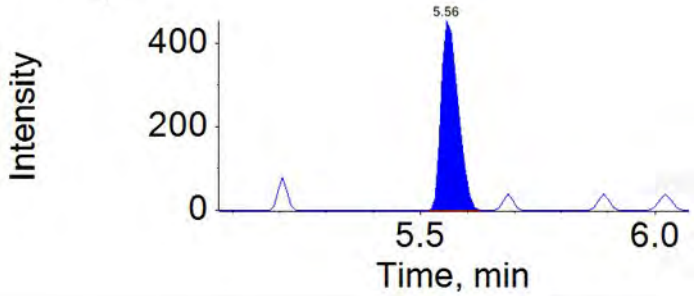
APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

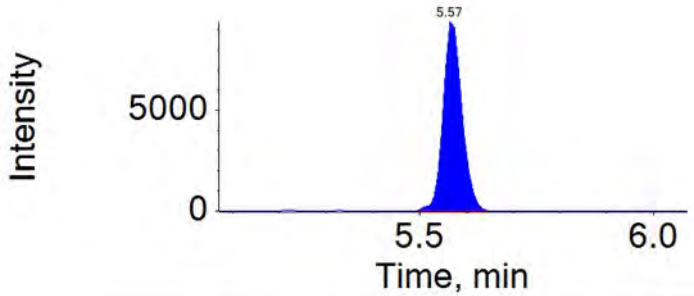
Component: PFDA
Primary Mass: 513.0 / 469.0



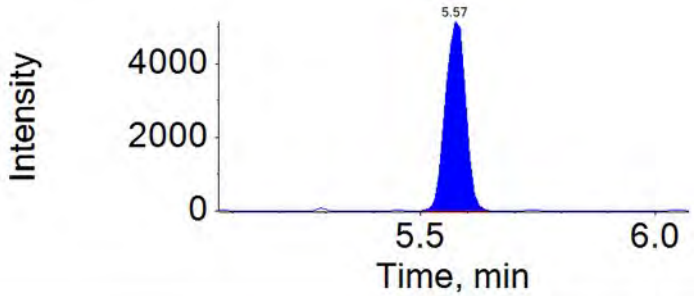
Component: PFDA_2
Secondary Mass: 513.0 / 169.0



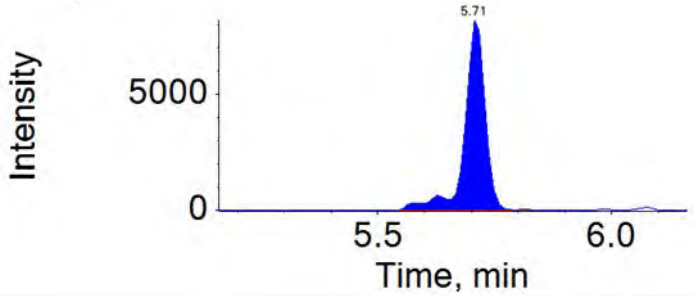
Component: 8:2-FTS
Primary Mass: 527.0 / 507.0



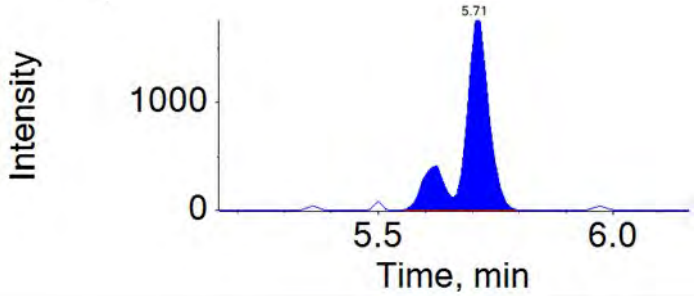
Component: 8:2 FTS_2
Secondary Mass: 527.0 / 81.0



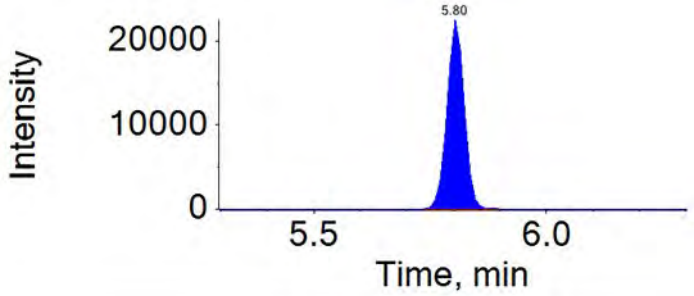
Component: NMeFOSAA
Primary Mass: 570.0 / 419.0



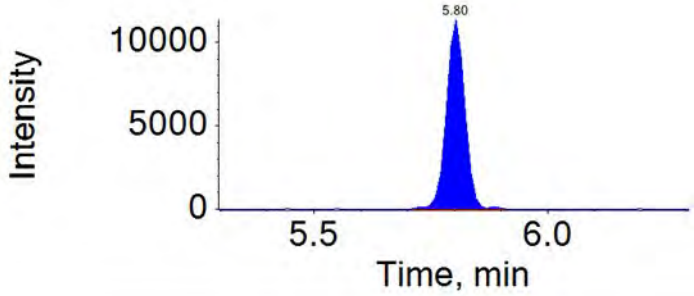
Component: NMeFOSAA_2
Secondary Mass: 570.0 / 483.0



Component: PFDS
Primary Mass: 599.0 / 80.0



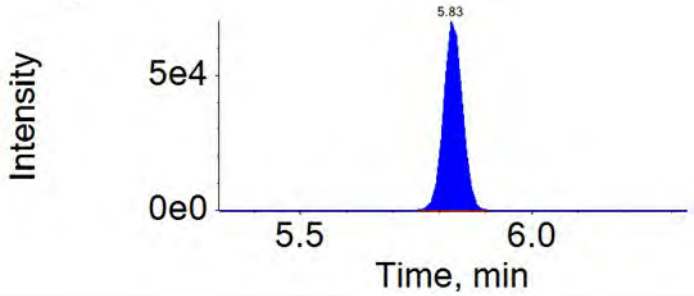
Component: PFDS_2
Secondary Mass: 599.0 / 99.0



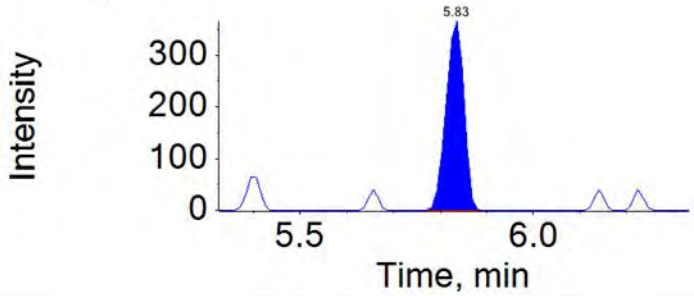
APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

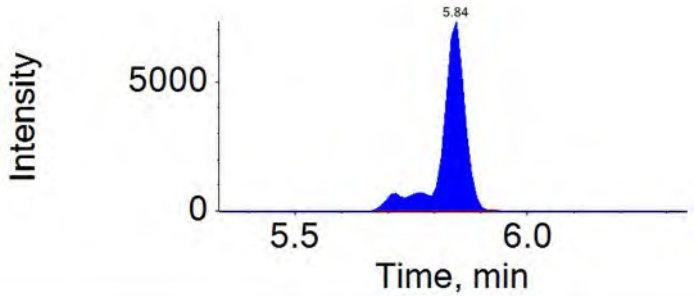
Component: PFUnDA
Primary Mass: 563.0 / 519.0



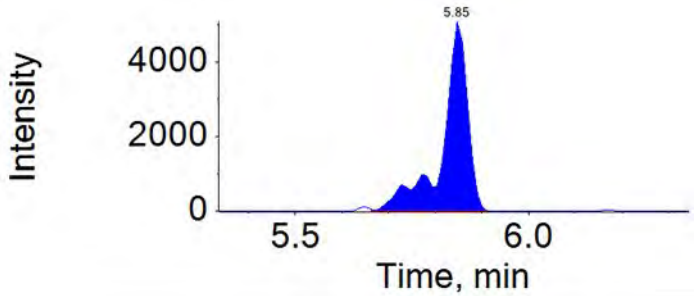
Component: PFUnDA_2
Secondary Mass: 563.0 / 169.0



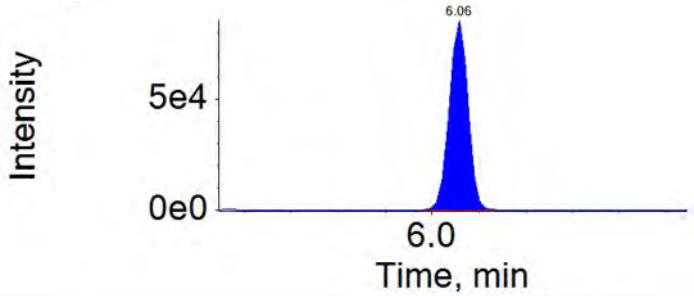
Component: NEtFOSAA
Primary Mass: 584.0 / 419.0



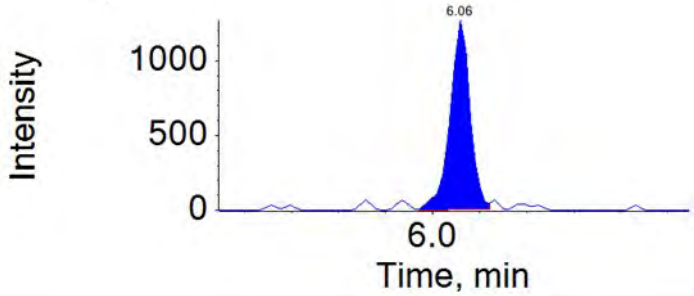
Component: NEtFOSAA_2
Secondary Mass: 584.0 / 526.0



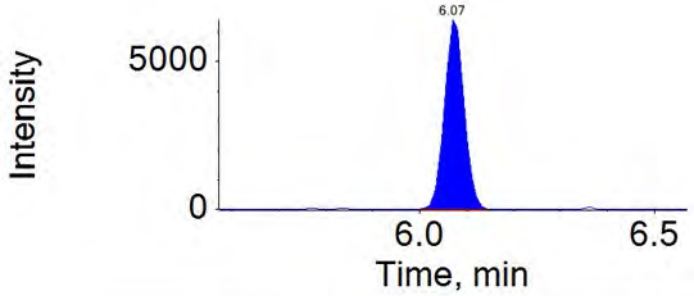
Component: PFDoDA
Primary Mass: 613.0 / 569.0



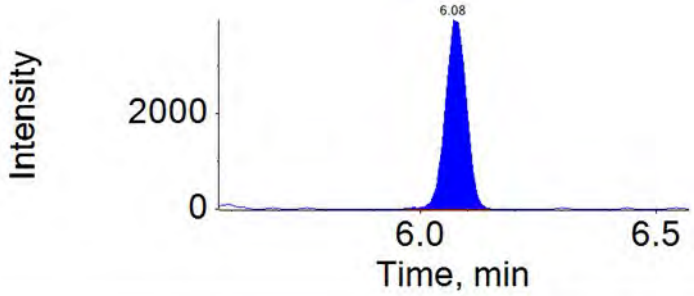
Component: PFDoDA_2
Secondary Mass: 613.0 / 169.0



Component: 10:2-FTS
Primary Mass: 627.0 / 607.0



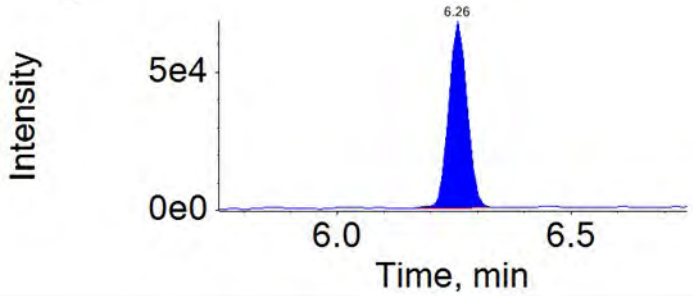
Component: 10:2 FTS_2
Secondary Mass: 627.0 / 81.0



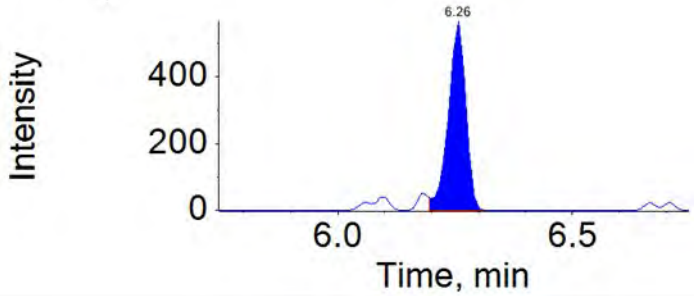
APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

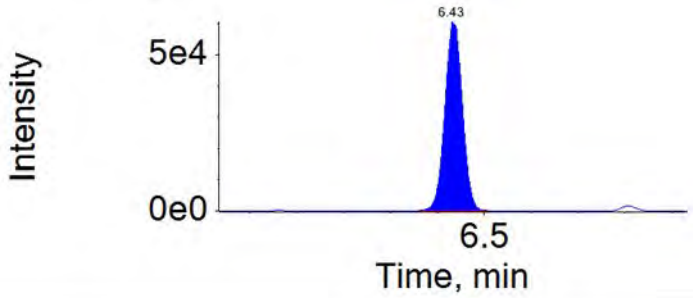
Component: PFTrDA
Primary Mass: 663.0 / 619.0



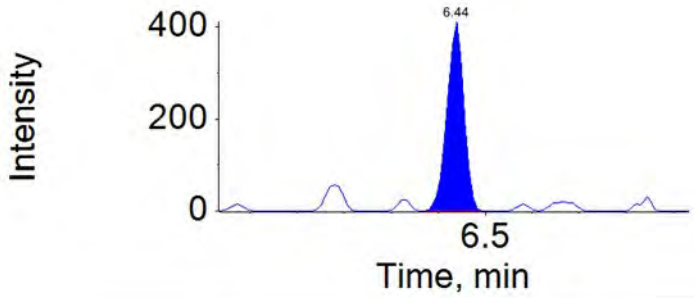
Component: PFTrDA_2
Secondary Mass: 663.0 / 169.0



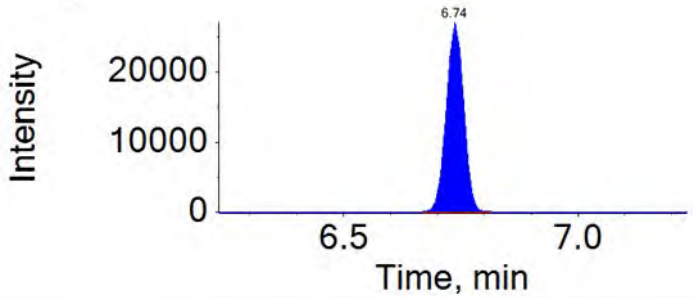
Component: PFTeDA
Primary Mass: 713.0 / 669.0



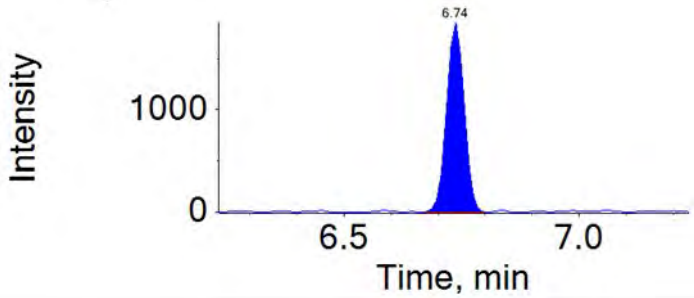
Component: PFTeDA_2
Secondary Mass: 713.0 / 169.0



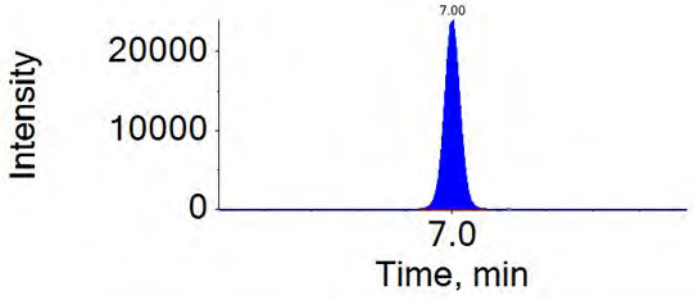
Component: PFHxDA
Primary Mass: 813.0 / 769.0



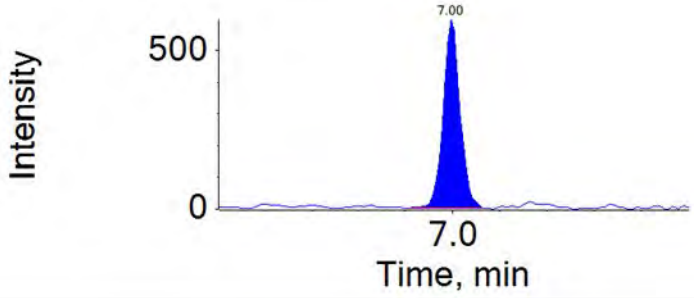
Component: PFHxDA_2
Secondary Mass: 813.0 / 169.0



Component: PFODA
Primary Mass: 913.0 / 869.0



Component: PFODA_2
Secondary Mass: 913.0 / 169.0



APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

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LC-MS/MS
DOD Analysis Report

Printed: 11/12/2018 6:20:00 PM
Template: DOD-Sample-18JUN22.docx

ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM
Result Table: 18NOV12DCAL 11/12/2018 6:14:07 PM
Acquisition Method: 18AUG13_3uL.dam

Sample Name:	CAL4			**Data File:**		18NOV12DCAL-45.wiff
Sample ID:	CALBRN41833B			**Acquis Date:**		2018-11-12T15:33:03
Sample Type:	Standard			**Instrument:**		LM27631
Vial Position:	6			**Acquis Method:**		18AUG13_3uL.dam
Injection Vol:	3.00			**Result Table:**		18NOV12DCAL
QMethod File:	18AUG20QM			**ICAL Name:**		18NOV12DCAL
Batch Number:	N\A			**Operator:**		MCD7824
Sample Wt.:	1.00000			**Dilution Factor:**		1.00
Sample Vol.:	1.000			**Prep Factor:**		1.000

Injection Standard Peak Table

Injection Standard Area Reference File: 18NOV12DCAL-44

Injection Standard Name	Inj Std Conc	Injection Std Peak Area	Rreference Injection Standard Area	Injection Std %Diff	Injection Std %Diff Limit	Injection Std %Diff OOS
13C3-PFBA	5.0	671568.1	659926.2	2	50	
13C2-PFOA	5.0	477519.7	450219.7	6	50	
13C4-PFOS	4.8	256143.3	249205.8	3	50	
13C2-PFDA	5.0	301327.2	278743.9	8	50	

Extraction Standard Peak Table

Extraction Standard Name	Ext Std Area	Inj Std Name	Inj Std Area	Area Ratio	Ext Std Conc	Ext Std Result	Ext Std %REC	Ext Std %REC Limit	Ext Std OOS
E13C4-PFBA	726396.0	13C3-PFBA	671568.1	1.082	5.000	4.849	97	70-130	
E13C5-PFPeA	716206.9	13C3-PFBA	671568.1	1.066	5.000	4.783	96	70-130	
E13C3-PFBS	425015.7	13C3-PFBA	671568.1	0.633	4.650	4.468	96	70-130	
E13C2-4:2-FTS	47246.4	13C2-PFOA	477519.7	0.099	4.670	4.407	94	70-130	
E13C5-PFHxA	641195.9	13C2-PFOA	477519.7	1.343	5.000	4.851	97	70-130	
E13C3-PFHxS	315722.6	13C2-PFOA	477519.7	0.661	4.730	4.537	96	70-130	
E13C4-PFHpA	509151.8	13C2-PFOA	477519.7	1.066	5.000	4.804	96	70-130	
E13C2-6:2-FTS	31883.3	13C2-PFOA	477519.7	0.067	4.750	4.467	94	70-130	
E13C8-PFOA	863597.3	13C2-PFOA	477519.7	1.809	5.000	4.983	100	70-130	
E13C8-PFOS	267380.8	13C4-PFOS	256143.3	1.044	4.780	4.625	97	70-130	
E13C9-PFNA	485570.4	13C4-PFOS	256143.3	1.896	5.000	5.285	106	70-130	
E13C6-PFDA	612056.5	13C2-PFDA	301327.2	2.031	5.000	4.740	95	70-130	
E13C2-8:2-FTS	27253.5	13C2-PFDA	301327.2	0.090	4.790	4.511	94	70-130	
E13C8-PFOSA	607762.0	13C2-PFDA	301327.2	2.017	5.000	4.472	89	70-130	
Ed3-NMeFOSAA	72788.0	13C2-PFDA	301327.2	0.242	5.000	4.360	87	70-130	
E13C7-PFUnDA	232014.1	13C2-PFDA	301327.2	0.770	5.000	4.470	89	70-130	
Ed5-NEtFOSAA	65478.0	13C2-PFDA	301327.2	0.217	5.000	4.597	92	70-130	
E13C2-PFDoDA	521514.1	13C2-PFDA	301327.2	1.731	5.000	4.494	90	70-130	
Ed7-NMePFOSAE	327796.4	13C2-PFDA	301327.2	1.088	5.000	4.708	94	70-130	
Ed3-NMePFOSA	70122.5	13C2-PFDA	301327.2	0.233	5.000	4.228	85	70-130	
Ed9-NEtPFOSAE	259467.4	13C2-PFDA	301327.2	0.861	5.000	4.479	90	70-130	
Ed5-NEtPFOSA	55177.3	13C2-PFDA	301327.2	0.183	5.000	4.296	86	70-130	
E13C2-PFTeDA	392356.6	13C2-PFDA	301327.2	1.302	5.000	4.571	91	70-130	

APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

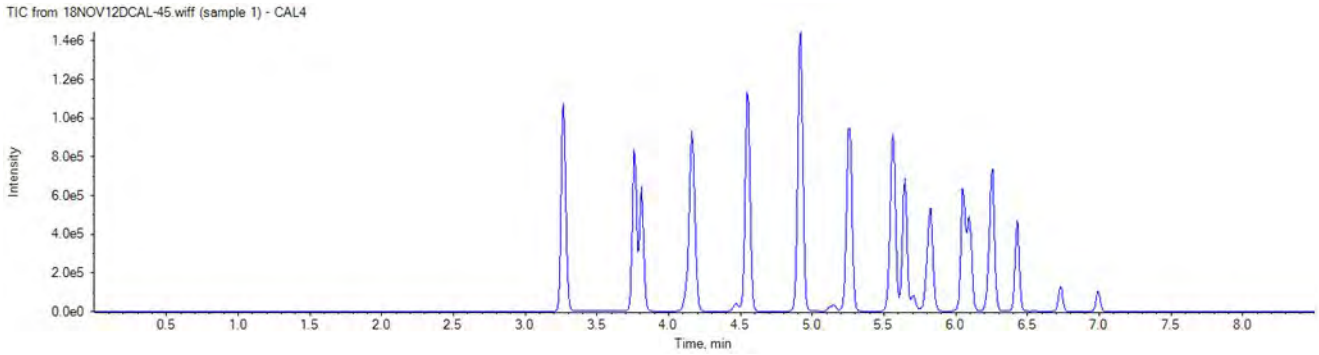
Analyte Quantitation Peak Table

Sample Name: CAL4 **Instrument Name:** LM27631 **File Name:** 18NOV12DCAL-45.wiff

Sample Wt	Sample Vol	Dilution Factor	PrepFactor
1.00000	1.000	1.00	1.000

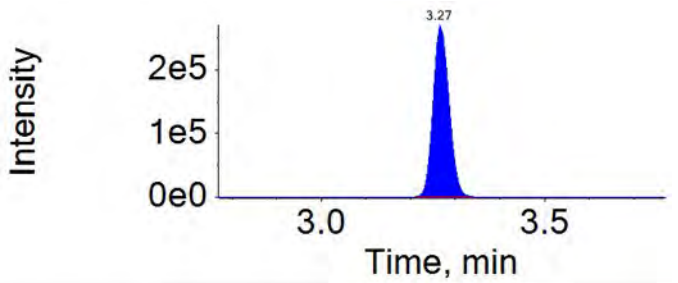
Analyte Name	RT	RRT	Analyte Area Response	E	Int Typ	ES Name	ES RT	ES Area Response	Area Ratio	Sample Result (ng/g)
PFBA	3.26	1.000	1068414.9		A	13C4-PFBA	3.26	726396.0	1.471	8.148
PFPeA	3.76	1.000	1075643.5		A	13C5-PFPeA	3.76	716206.9	1.502	8.694
PFBS	3.81	1.000	617045.6		A	13C3-PFBS	3.81	425015.7	1.452	6.906
4:2-FTS	4.13	1.000	126396.5		A	13C2-4:2-FTS	4.13	47246.4	2.675	7.263
PFHxA	4.16	1.000	1265231.1		A	13C5-PFHxA	4.16	641195.9	1.973	8.239
PFPeS	4.18	1.100	328681.7		A	13C3-PFBS	3.81	425015.7	0.773	7.508
PFHpA	4.55	1.000	1318774.5		A	13C4-PFHpA	4.55	509151.8	2.590	8.586
PFHxS	4.55	1.000	479291.0		M	13C3-PFHxS	4.55	315722.6	1.518	7.361
6:2-FTS	4.91	1.000	107470.6		A	13C2-6:2-FTS	4.91	31883.3	3.371	8.157
PFHpS	4.91	1.080	434949.2		A	13C3-PFHxS	4.55	315722.6	1.378	7.252
PFOA	4.92	1.000	1327086.1		A	13C8-PFOA	4.92	863597.3	1.537	8.207
PFOS	5.25	1.000	448833.8		M	13C8-PFOS	5.25	267380.8	1.679	7.341
PFNA	5.26	1.000	1106664.2		A	13C9-PFNA	5.26	485570.4	2.279	8.218
PFNS	5.54	1.060	269712.3		A	13C8-PFOS	5.25	267380.8	1.009	7.057
PFDA	5.56	1.000	941985.3		M	13C6-PFDA	5.56	612056.5	1.539	8.159
8:2-FTS	5.57	1.000	80922.6		A	13C2-8:2-FTS	5.57	27253.5	2.969	6.923
PFOSA	5.64	1.000	927660.5		A	13C8-PFOSA	5.64	607762.0	1.526	7.455
NMeFOSAA	5.70	1.000	103649.1		A	d3-NMeFOSAA	5.70	72788.0	1.424	8.048
PFDS	5.80	1.110	224031.2		A	13C8-PFOS	5.25	267380.8	0.838	7.592
PFUnDA	5.82	1.000	768010.8		A	13C7-PFUnDA	5.82	232014.1	3.310	8.654
NEtFOSAA	5.84	1.000	94877.8		A	d5-NEtFOSAA	5.83	65478.0	1.449	7.596
PFDoDA	6.05	1.000	803646.8		A	13C2-PFDoDA	6.05	521514.1	1.541	7.847
10:2-FTS	6.07	1.090	56040.8		A	13C2-8:2-FTS	5.57	27253.5	2.056	6.849
NMePFOSAE	6.10	1.000	618314.4		M	d7-NMePFOSAE	6.09	327796.4	1.886	7.850
NMePFOSA	6.10	1.000	114415.9		M	d3-NMePFOSA	6.10	70122.5	1.632	8.049
PFDoS	6.22	1.190	117663.3		A	13C8-PFOS	5.25	267380.8	0.440	7.707
NEtPFOSAE	6.25	1.000	673196.1		A	d9-NEtPFOSAE	6.24	259467.4	2.595	8.324
NEtPFOSA	6.27	1.000	99354.1		M	d5-NEtPFOSA	6.26	55177.3	1.801	8.269
PFTrDA	6.25	1.030	674140.3		A	13C2-PFDoDA	6.05	521514.1	1.293	8.159
PFTeDA	6.43	1.000	571926.7		A	13C2-PFTeDA	6.43	392356.6	1.458	8.171
PFHxDA	6.73	1.050	256654.3		A	13C2-PFTeDA	6.43	392356.6	0.654	7.793
PFODA	6.99	1.090	219359.6		A	13C2-PFTeDA	6.43	392356.6	0.559	7.786

Total Ion Chromatogram

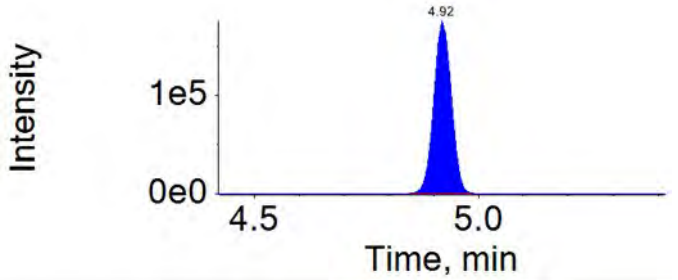


ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

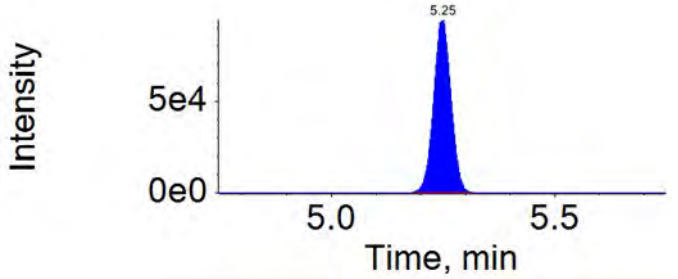
Injection Standard: 13C3-PFBA
216.0 / 172.0



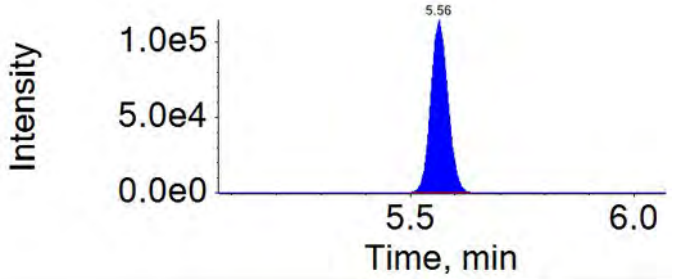
Injection Standard: 13C2-PFOA
415.0 / 370.0



Injection Standard: 13C4-PFOS
503.0 / 80.0



Injection Standard: 13C2-PFDA
515.0 / 470.0

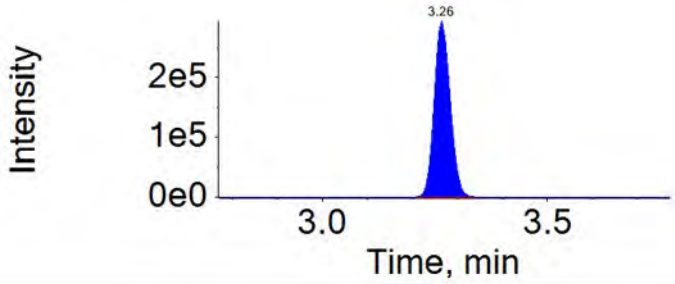


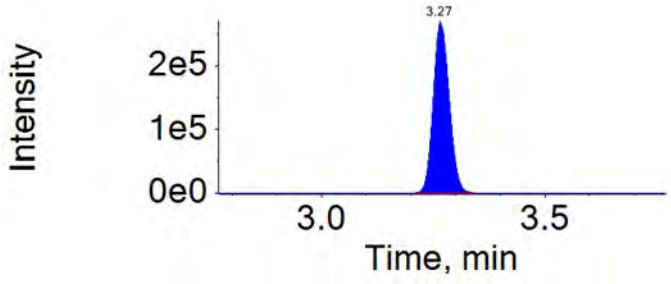
APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

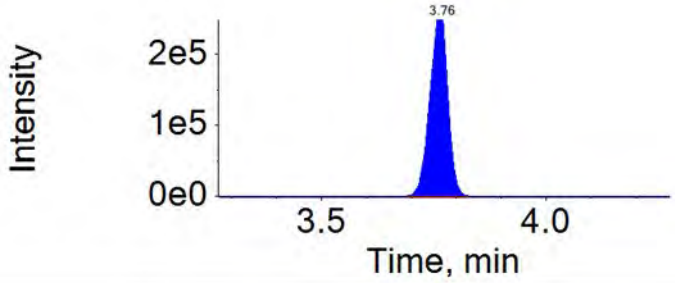
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

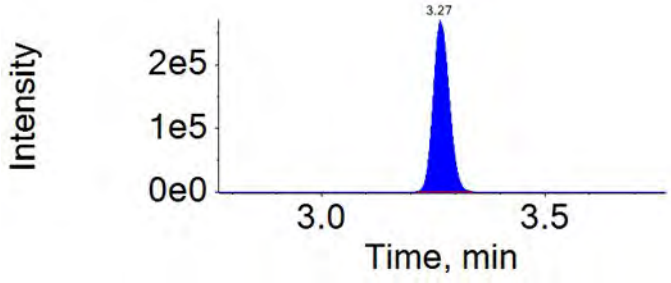
Extraction Standard: E13C4-PFBA	Injection Standard: 13C3-PFBA
217.0 / 172.0	216.0 / 172.0



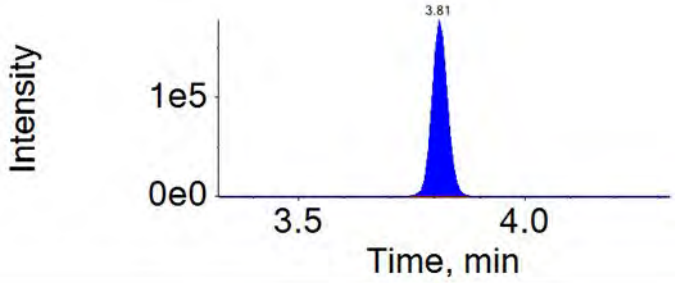


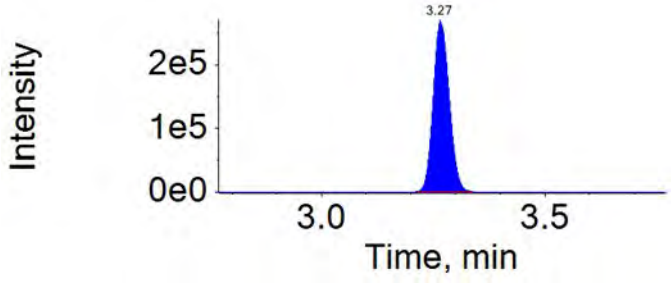
Extraction Standard: E13C5-PFPeA	Injection Standard: 13C3-PFBA
268.0 / 223.0	216.0 / 172.0



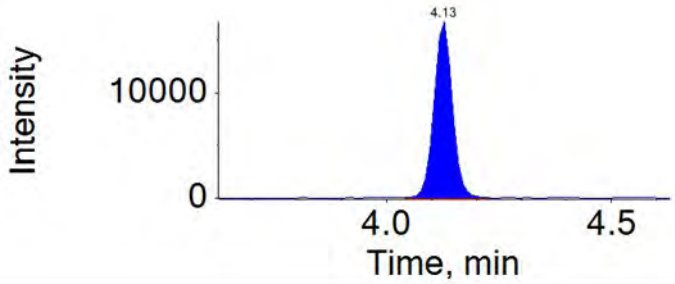


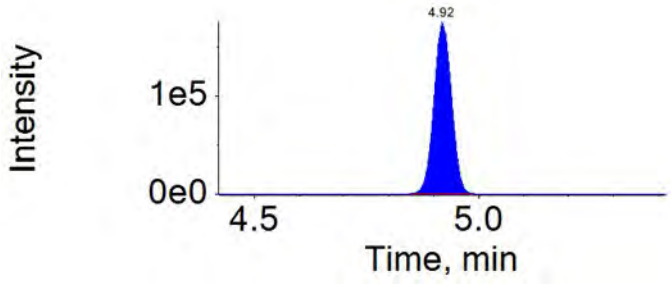
Extraction Standard: E13C3-PFBS	Injection Standard: 13C3-PFBA
302.0 / 80.0	216.0 / 172.0





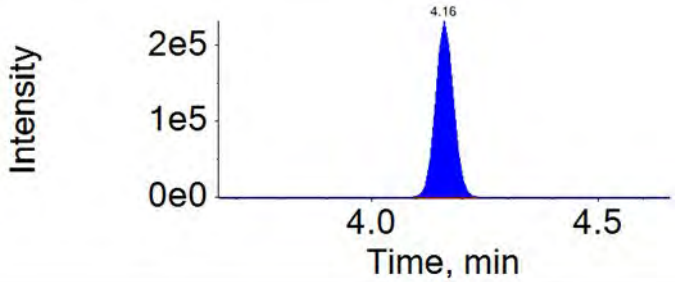
Extraction Standard: E13C2-4:2-FTS	Injection Standard: 13C2-PFOA
329.0 / 81.0	415.0 / 370.0

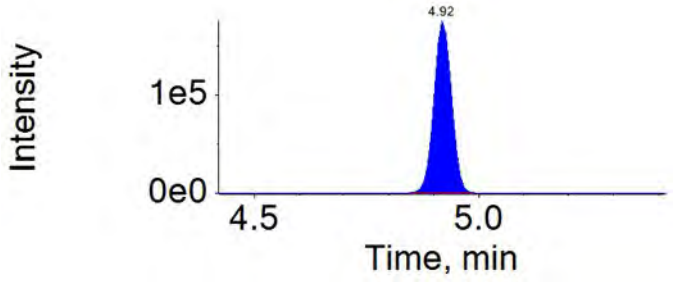




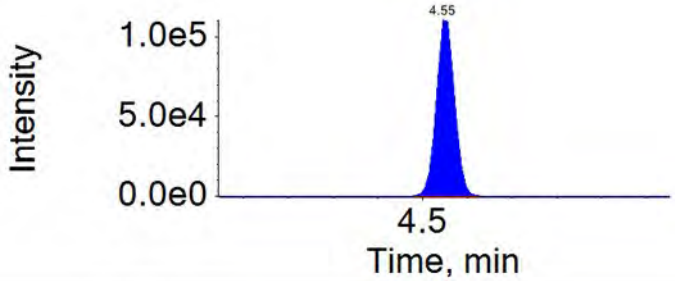
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

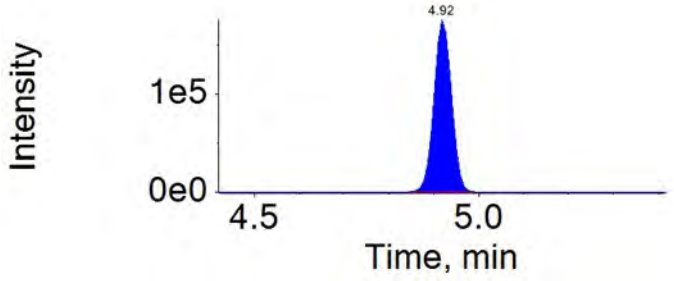
Extraction Standard: E13C5-PFHxA	Injection Standard: 13C2-PFOA
318.0 / 273.0	415.0 / 370.0



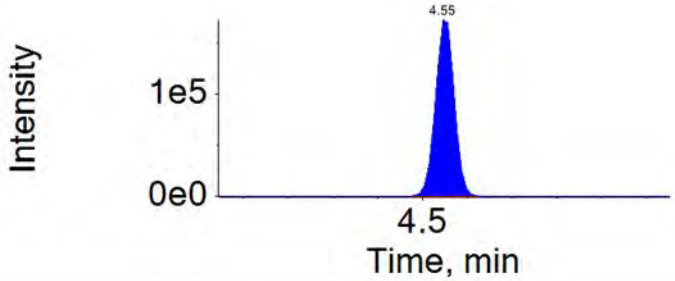


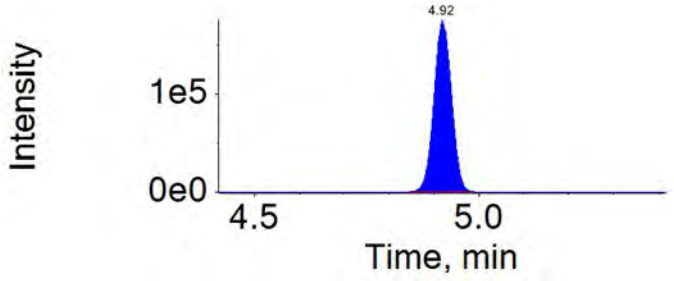
Extraction Standard: E13C3-PFHxS	Injection Standard: 13C2-PFOA
402.0 / 80.0	415.0 / 370.0



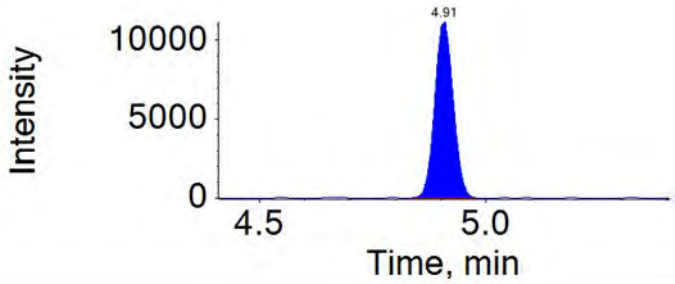


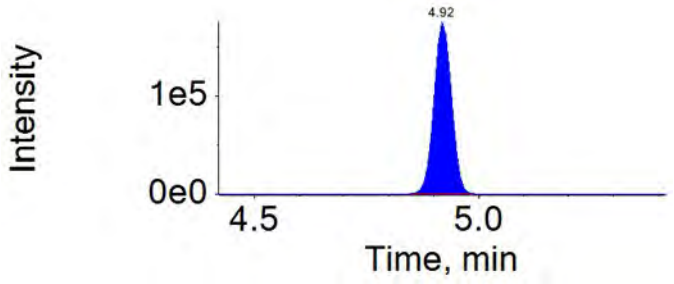
Extraction Standard: E13C4-PFHpA	Injection Standard: 13C2-PFOA
367.0 / 322.0	415.0 / 370.0





Extraction Standard: E13C2-6:2-FTS	Injection Standard: 13C2-PFOA
429.0 / 81.0	415.0 / 370.0

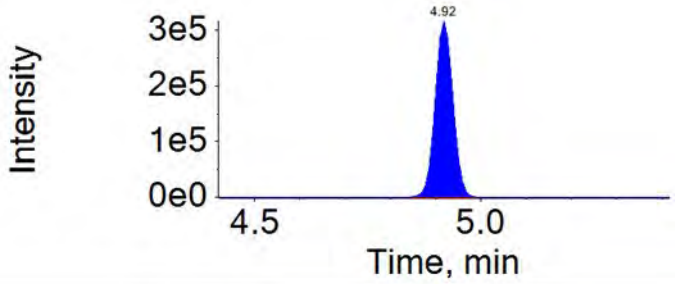




ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

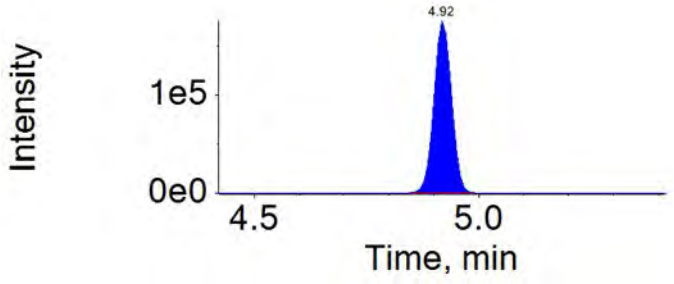
Extraction Standard: E13C8-PFOA

421.0 / 376.0



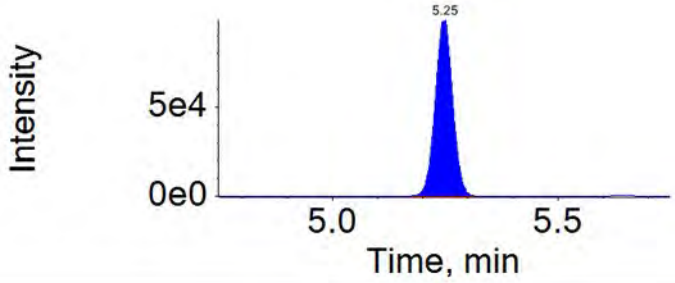
Injection Standard: 13C2-PFOA

415.0 / 370.0



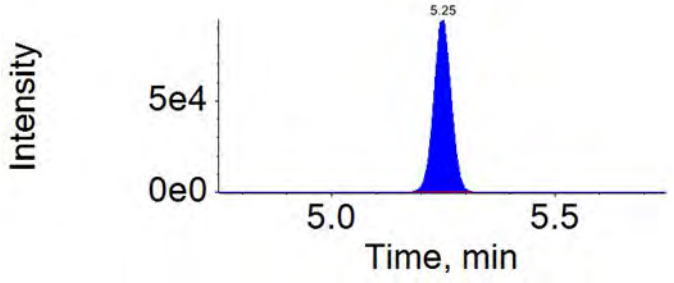
Extraction Standard: E13C8-PFOS

507.0 / 80.0



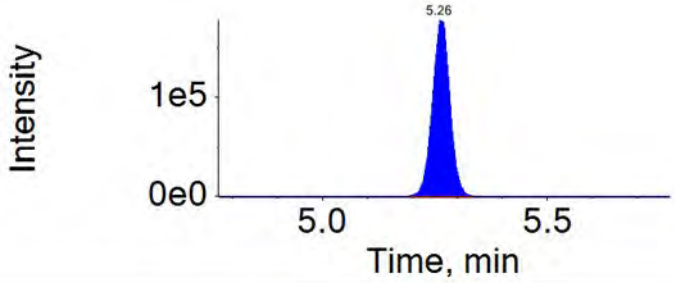
Injection Standard: 13C4-PFOS

503.0 / 80.0



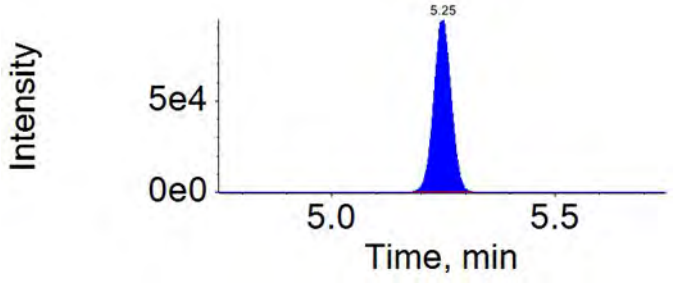
Extraction Standard: E13C9-PFNA

472.0 / 427.0



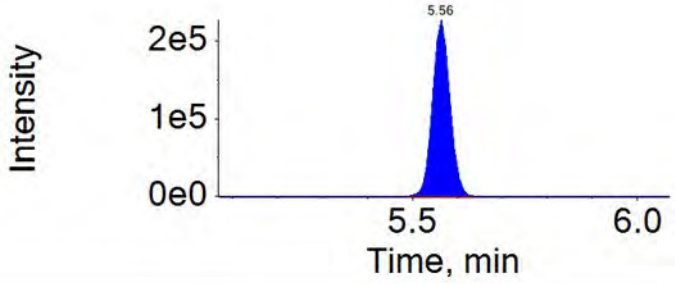
Injection Standard: 13C4-PFOS

503.0 / 80.0



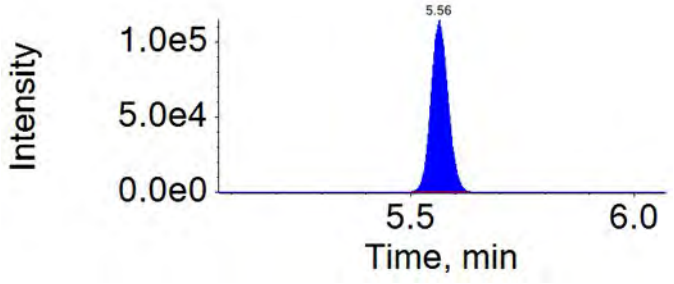
Extraction Standard: E13C6-PFDA

519.0 / 474.0



Injection Standard: 13C2-PFDA

515.0 / 470.0

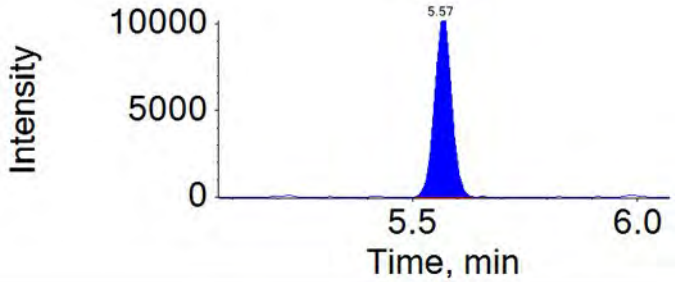


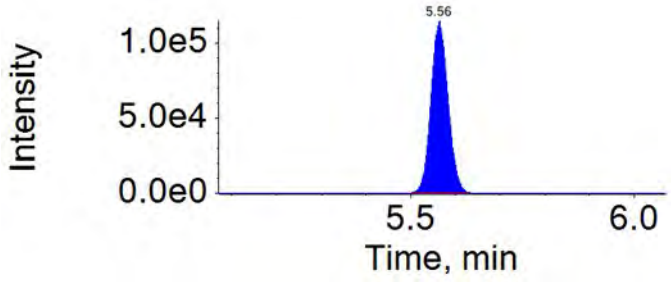
APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

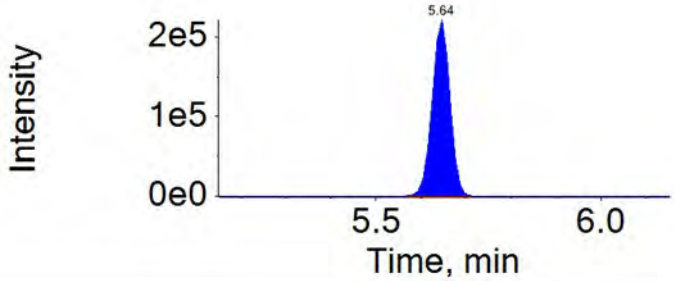
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

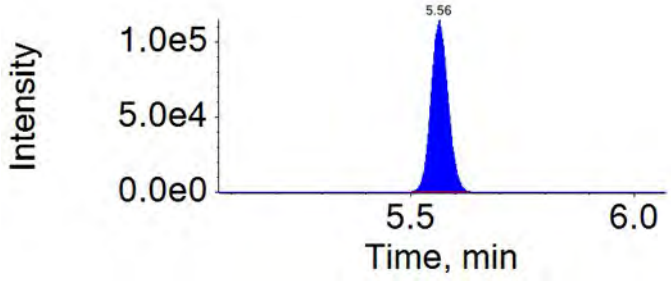
Extraction Standard: E13C2-8:2-FTS	Injection Standard: 13C2-PFDA
529.0 / 81.0	515.0 / 470.0



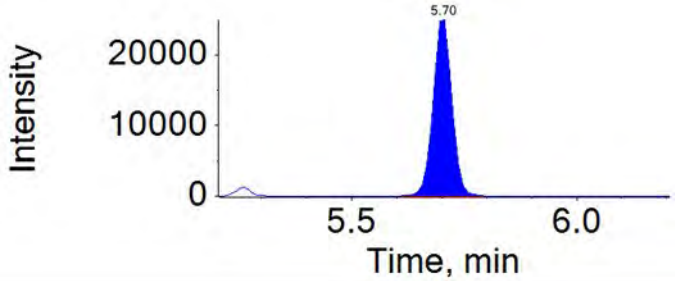


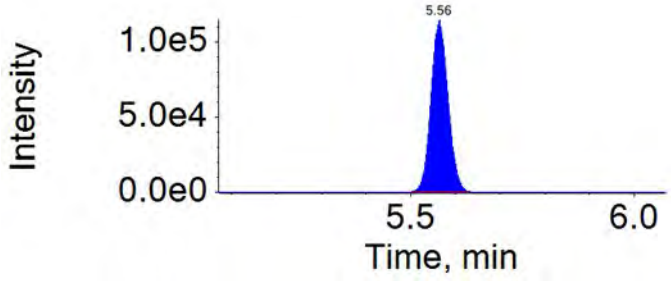
Extraction Standard: E13C8-PFOSA	Injection Standard: 13C2-PFDA
506.0 / 78.0	515.0 / 470.0



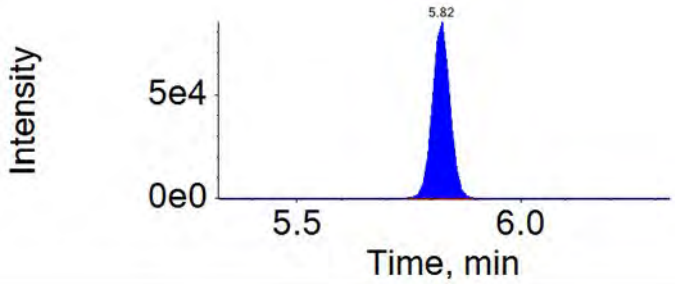


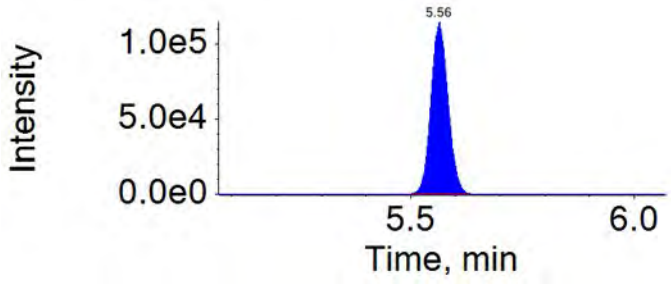
Extraction Standard: Ed3-NMeFOSAA	Injection Standard: 13C2-PFDA
573.0 / 419.0	515.0 / 470.0





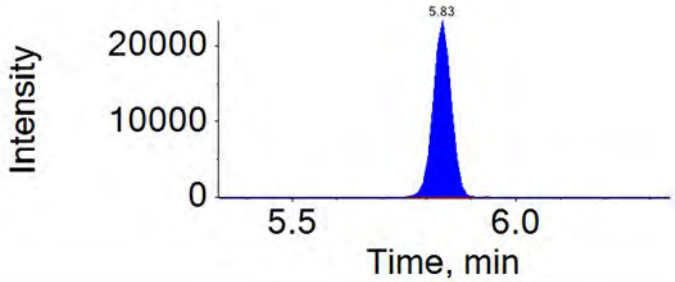
Extraction Standard: E13C7-PFUnDA	Injection Standard: 13C2-PFDA
570.0 / 525.0	515.0 / 470.0

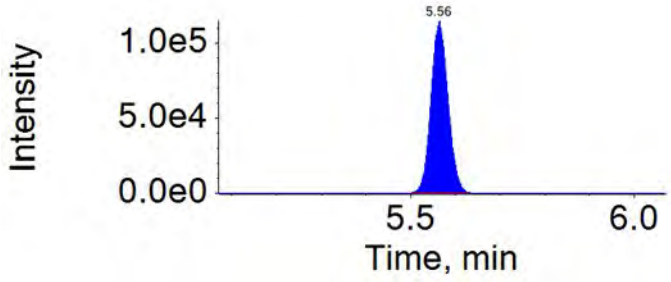




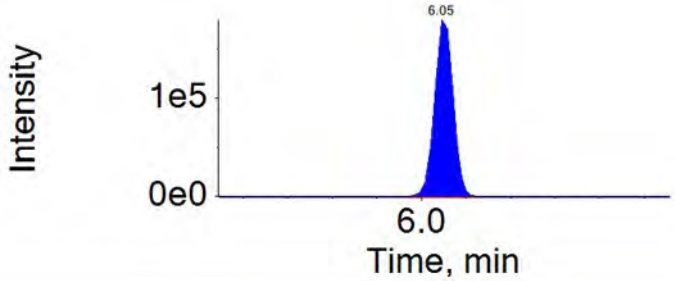
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

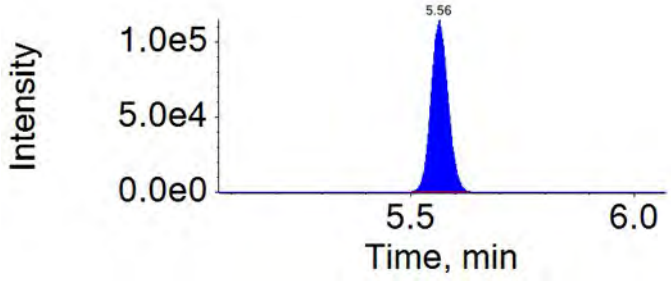
Extraction Standard: Ed5-NEtFOSAA	Injection Standard: 13C2-PFDA
589.0 / 419.0	515.0 / 470.0



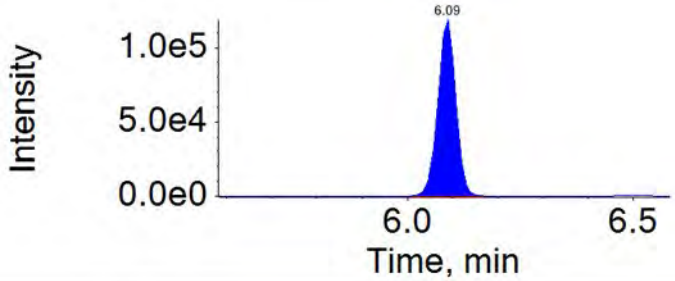


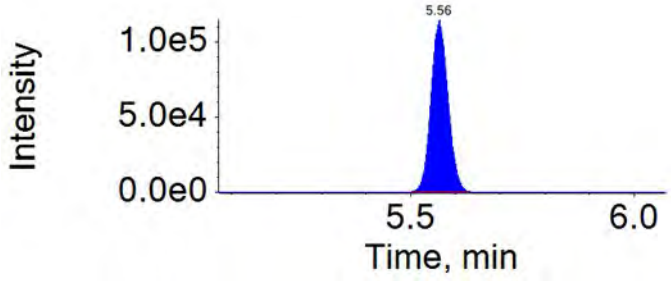
Extraction Standard: E13C2-PFDoDA	Injection Standard: 13C2-PFDA
615.0 / 570.0	515.0 / 470.0



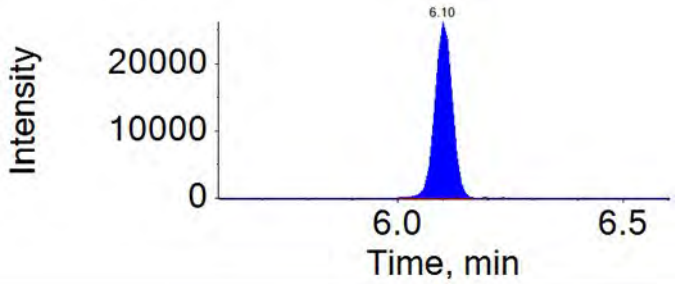


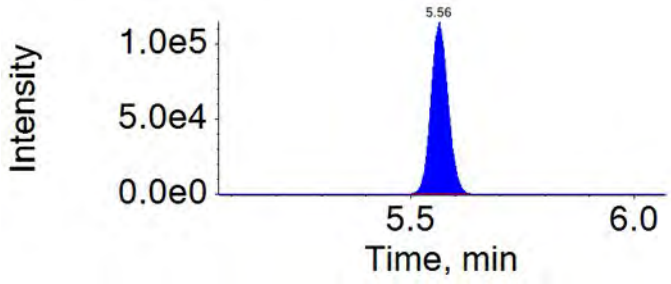
Extraction Standard: Ed7-NMePFOSAE	Injection Standard: 13C2-PFDA
623.0 / 59.0	515.0 / 470.0





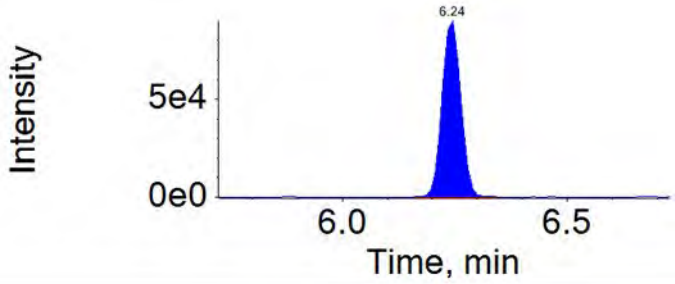
Extraction Standard: Ed3-NMePFOSA	Injection Standard: 13C2-PFDA
515.0 / 169.0	515.0 / 470.0

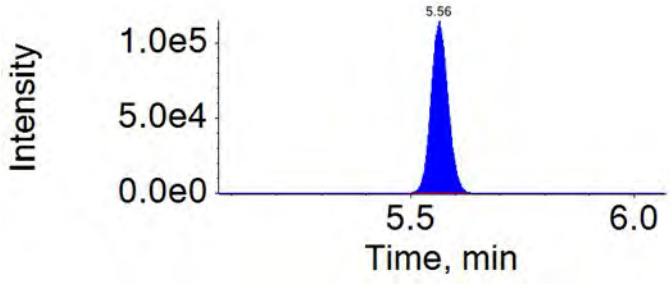




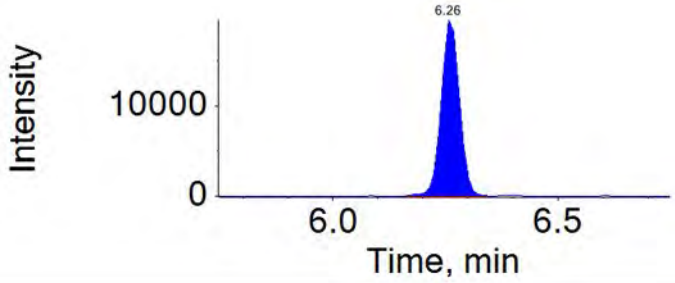
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

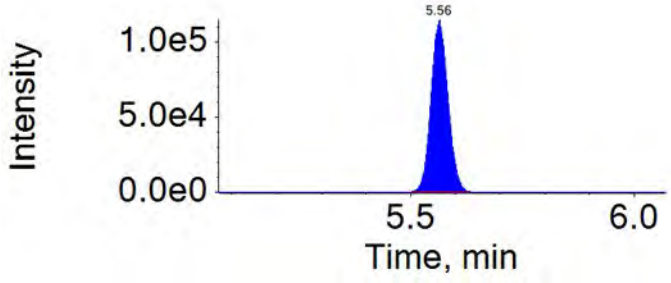
Extraction Standard: Ed9-NEtPFOSAE	Injection Standard: 13C2-PFDA
639.0 / 59.0	515.0 / 470.0



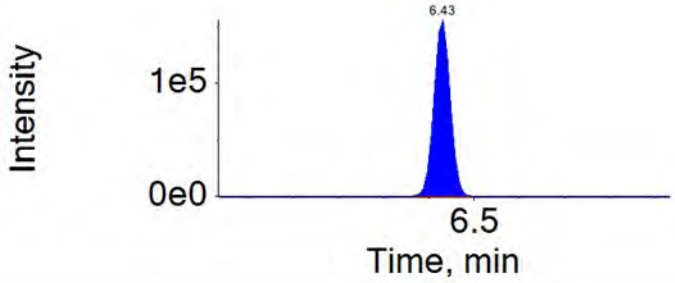


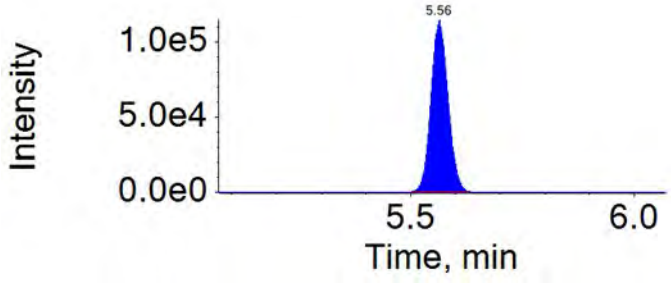
Extraction Standard: Ed5-NEtPFOSA	Injection Standard: 13C2-PFDA
531.0 / 169.0	515.0 / 470.0





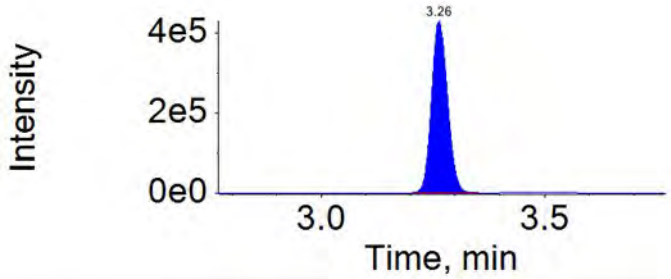
Extraction Standard: E13C2-PFTeDA	Injection Standard: 13C2-PFDA
715.0 / 670.0	515.0 / 470.0



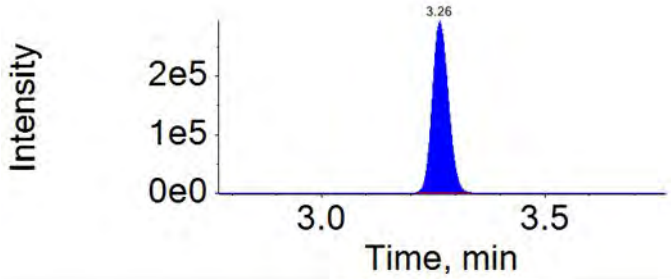


ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

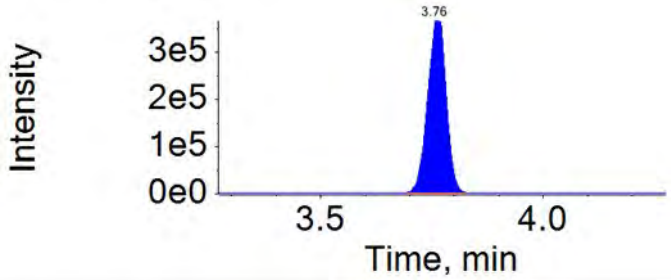
Analyte: PFBA
213.0 / 169.0



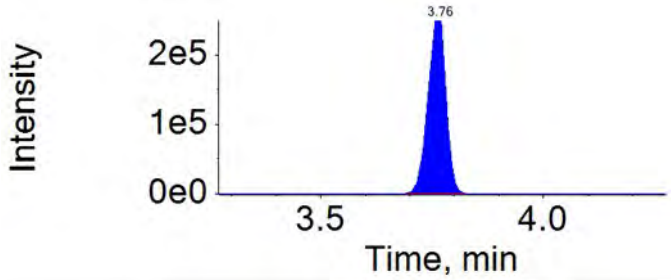
Extraction Standard: 13C4-PFBA
217.0 / 172.0



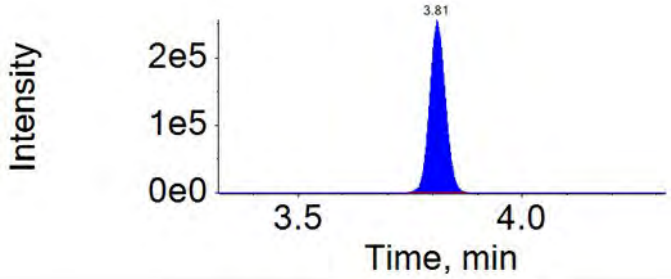
Analyte: PFPeA
263.0 / 219.0



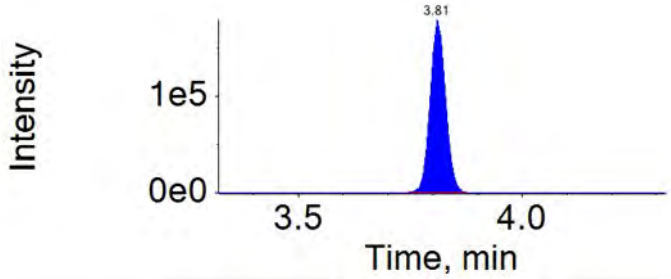
Extraction Standard: 13C5-PFPeA
268.0 / 223.0



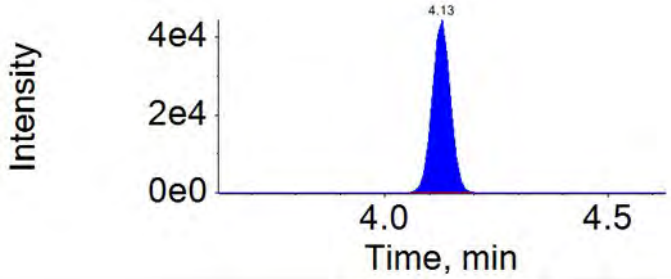
Analyte: PFBS
299.0 / 80.0



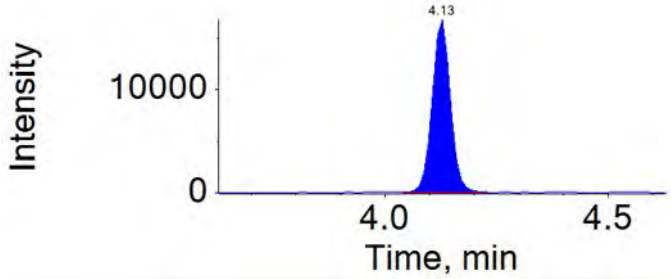
Extraction Standard: 13C3-PFBS
302.0 / 80.0



Analyte: 4:2-FTS
327.0 / 307.0



Extraction Standard: 13C2-4:2-FTS
329.0 / 81.0

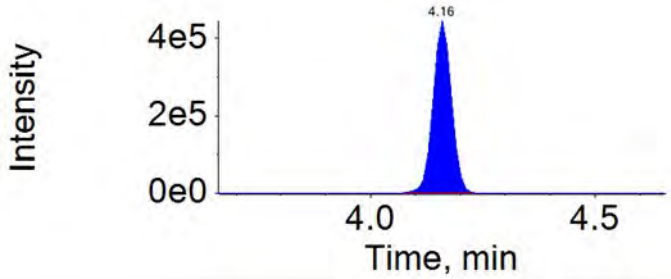


APPROVED
By MCD at 6:33 pm, 11/12/18

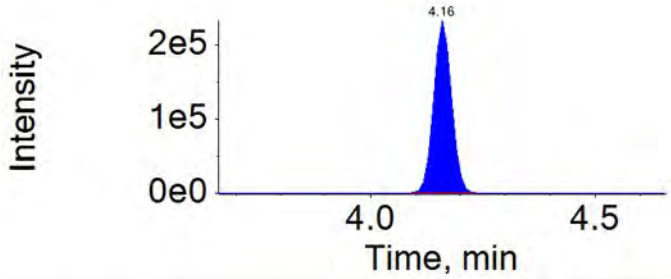
REVIEWED
By HMK at 10:53 am, 11/13/18

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

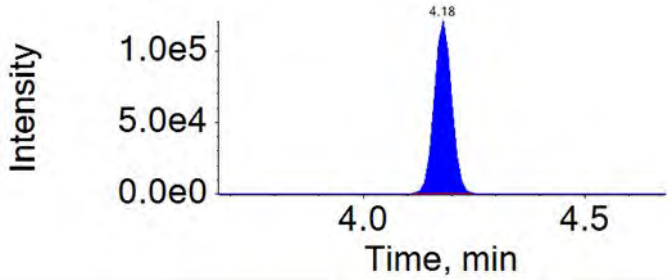
Analyte: PFHxA
313.0 / 269.0



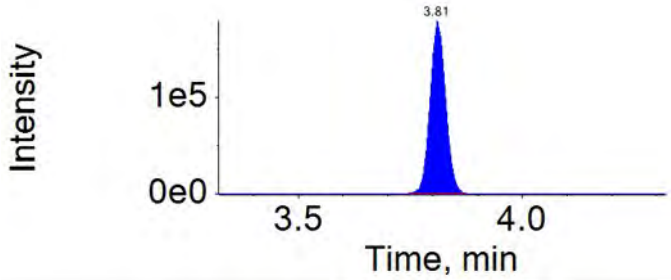
Extraction Standard: 13C5-PFHxA
318.0 / 273.0



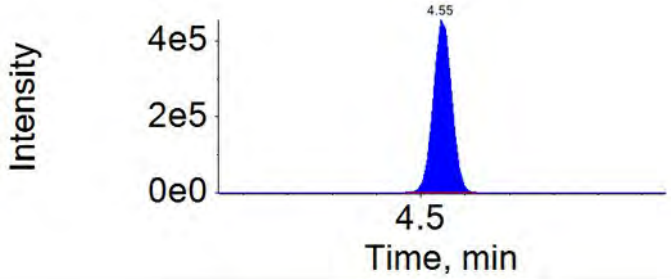
Analyte: PFPeS
349.0 / 80.0



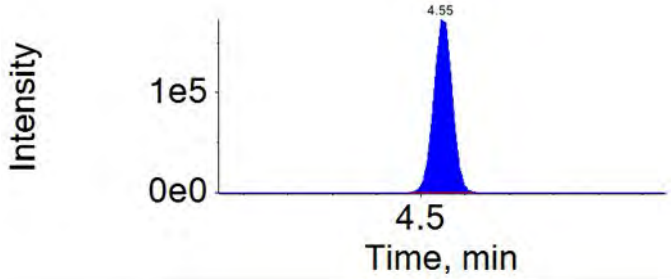
Extraction Standard: 13C3-PFBS
302.0 / 80.0



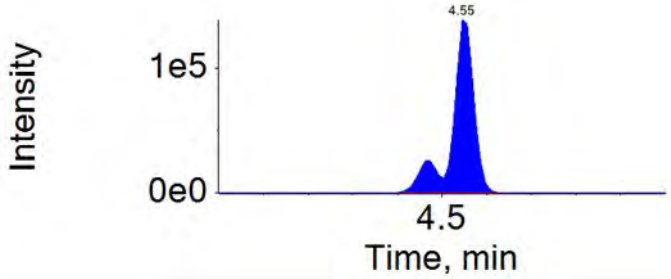
Analyte: PFHpA
363.0 / 319.0



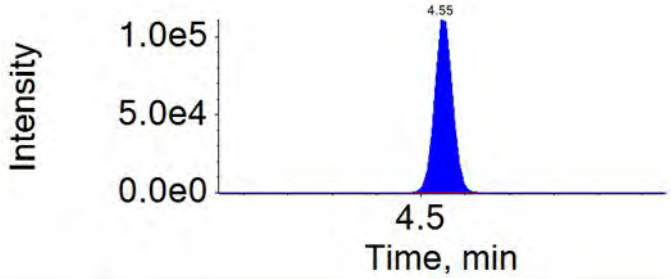
Extraction Standard: 13C4-PFHpA
367.0 / 322.0



Analyte: PFHxS
399.0 / 80.0

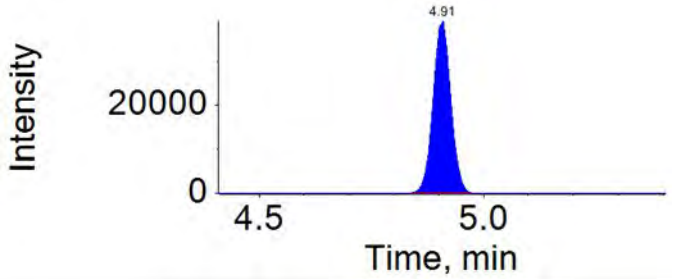


Extraction Standard: 13C3-PFHxS
402.0 / 80.0

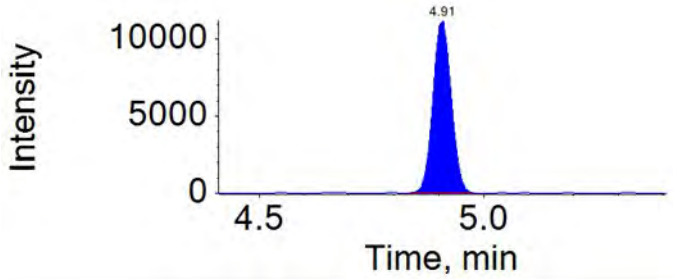


ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

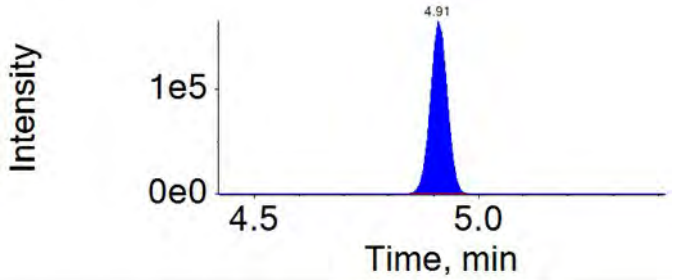
Analyte: 6:2-FTS
427.0 / 407.0



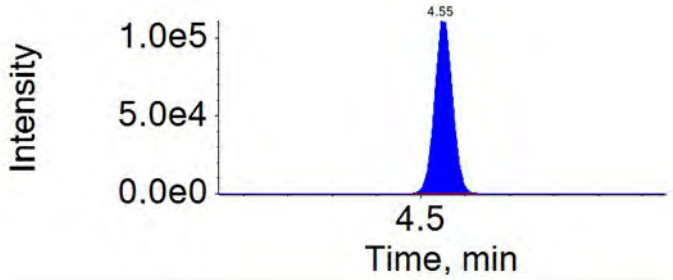
Extraction Standard: 13C2-6:2-FTS
429.0 / 81.0



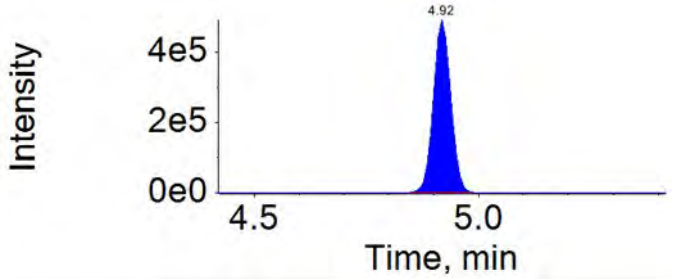
Analyte: PFHpS
449.0 / 80.0



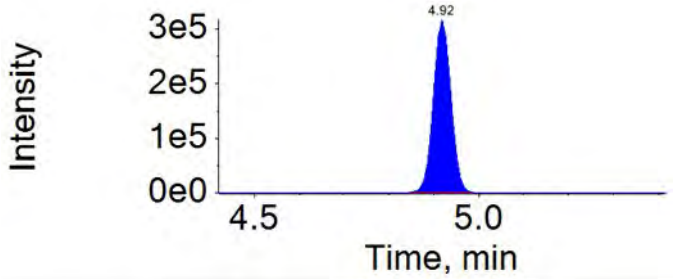
Extraction Standard: 13C3-PFHxS
402.0 / 80.0



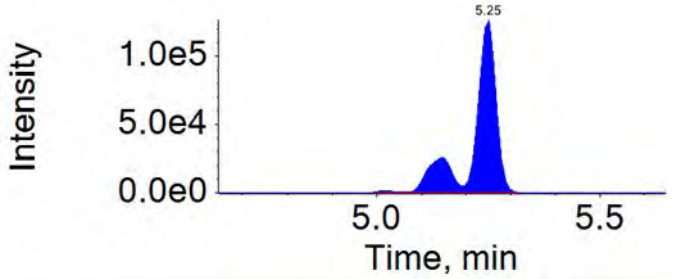
Analyte: PFOA
413.0 / 369.0



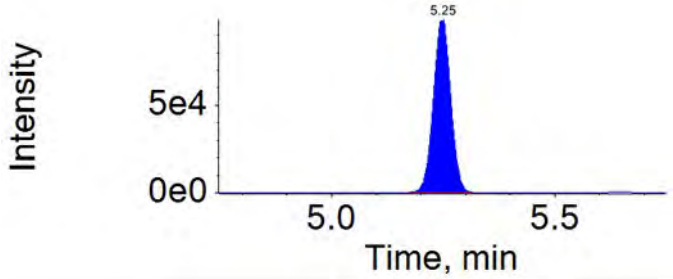
Extraction Standard: 13C8-PFOA
421.0 / 376.0



Analyte: PFOS
499.0 / 80.0



Extraction Standard: 13C8-PFOS
507.0 / 80.0

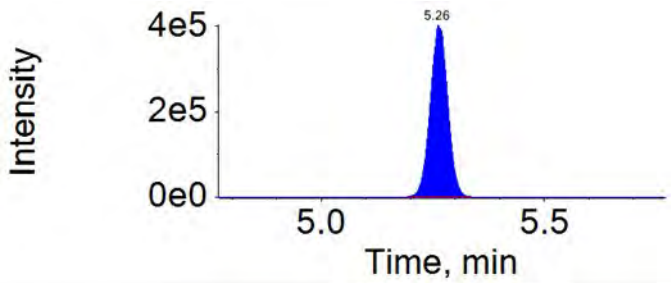


APPROVED
By MCD at 6:33 pm, 11/12/18

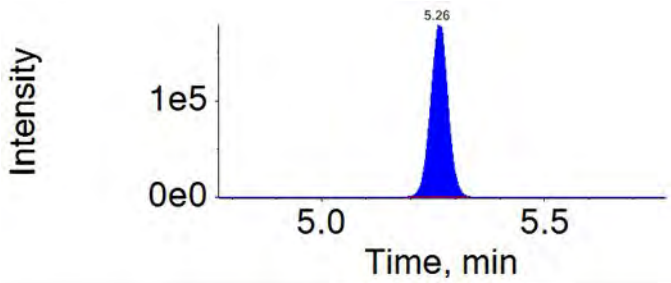
REVIEWED
By HMK at 10:53 am, 11/13/18

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

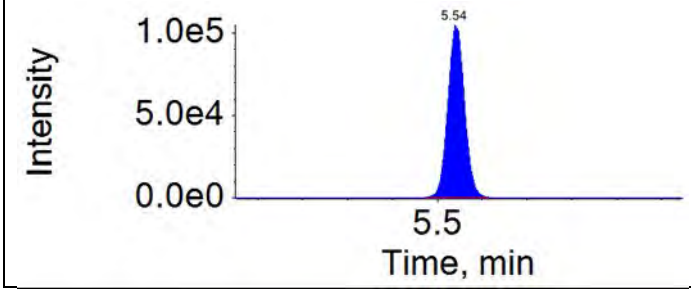
Analyte: PFNA
463.0 / 419.0



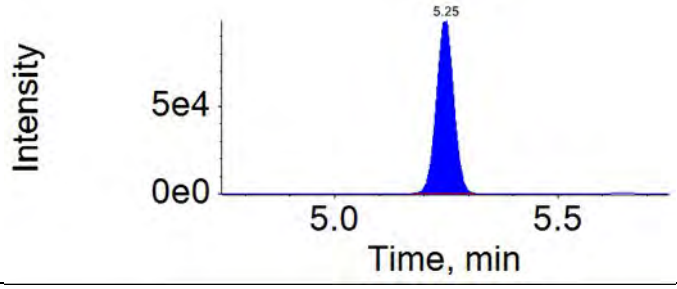
Extraction Standard: 13C9-PFNA
472.0 / 427.0



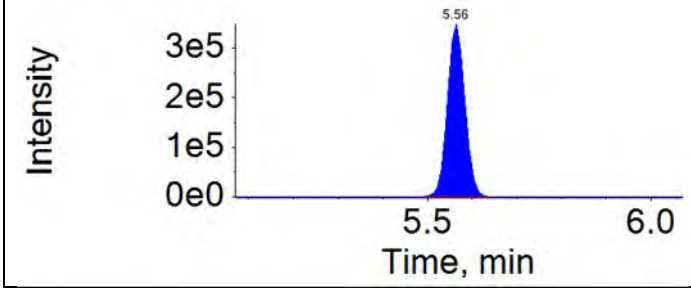
Analyte: PFNS
549.0 / 80.0



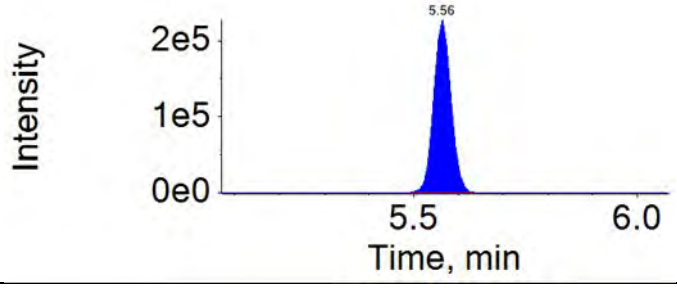
Extraction Standard: 13C8-PFOS
507.0 / 80.0



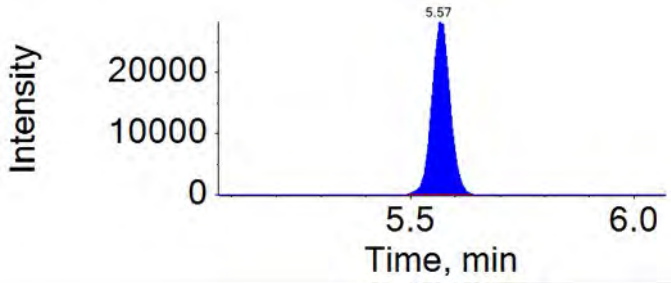
Analyte: PFDA
513.0 / 469.0



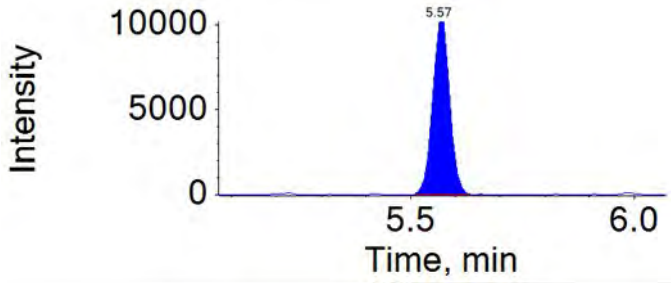
Extraction Standard: 13C6-PFDA
519.0 / 474.0



Analyte: 8:2-FTS
527.0 / 507.0



Extraction Standard: 13C2-8:2-FTS
529.0 / 81.0

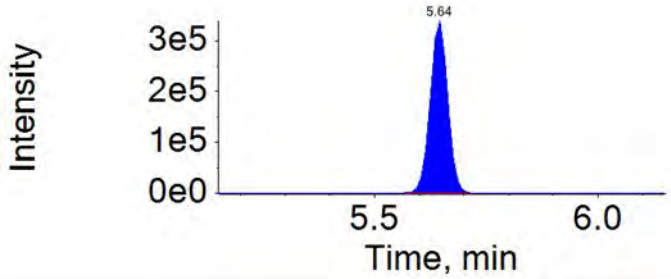


APPROVED
By MCD at 6:33 pm, 11/12/18

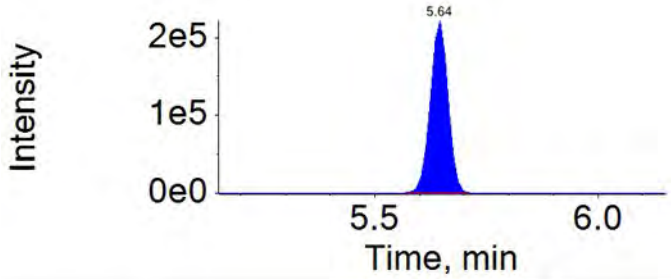
REVIEWED
By HMK at 10:53 am, 11/13/18

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

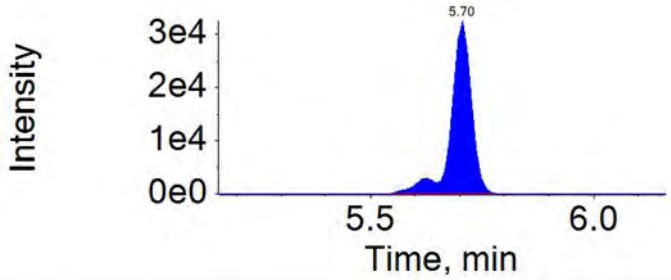
Analyte: PFOSA
498.0 / 78.0



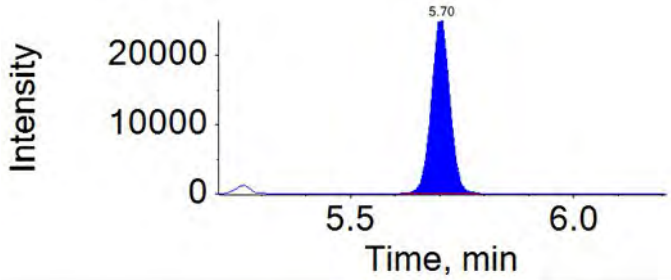
Extraction Standard: 13C8-PFOSA
506.0 / 78.0



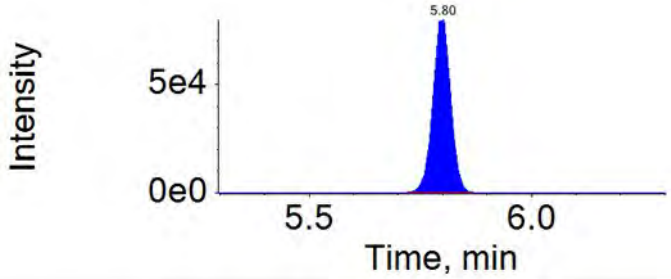
Analyte: NMeFOSAA
570.0 / 419.0



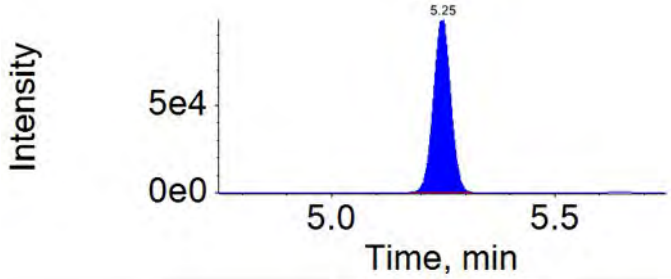
Extraction Standard: d3-NMeFOSAA
573.0 / 419.0



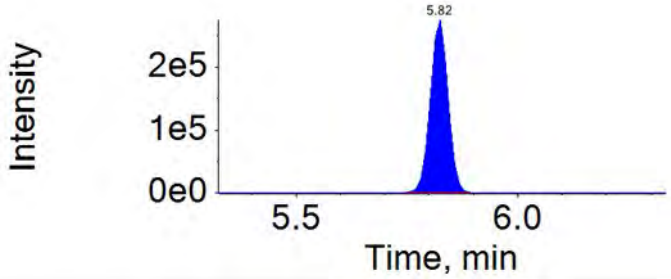
Analyte: PFDS
599.0 / 80.0



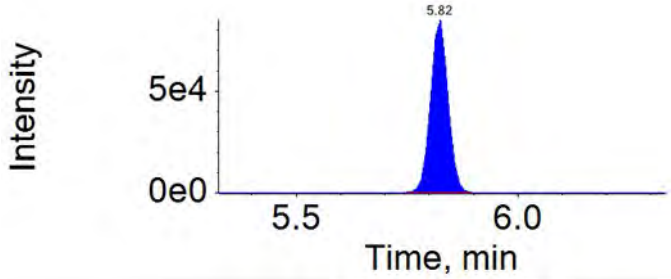
Extraction Standard: 13C8-PFOS
507.0 / 80.0



Analyte: PFUnDA
563.0 / 519.0



Extraction Standard: 13C7-PFUnDA
570.0 / 525.0

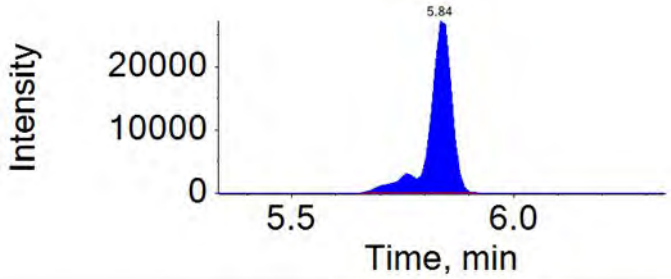


APPROVED
By MCD at 6:33 pm, 11/12/18

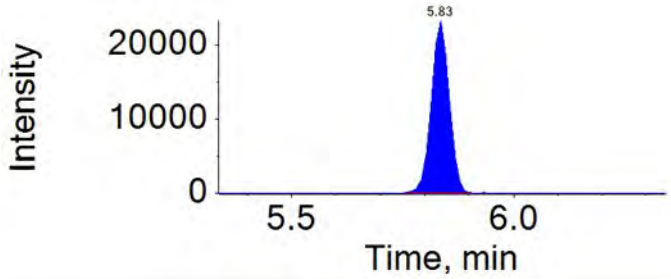
REVIEWED
By HMK at 10:53 am, 11/13/18

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

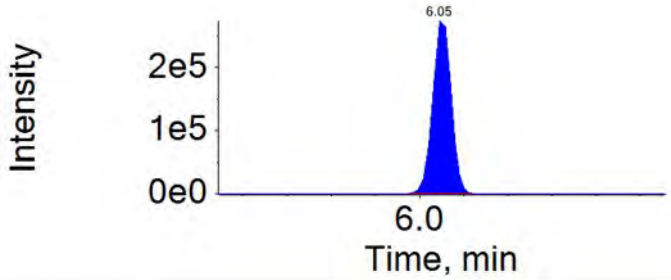
Analyte: NEtFOSAA
584.0 / 419.0



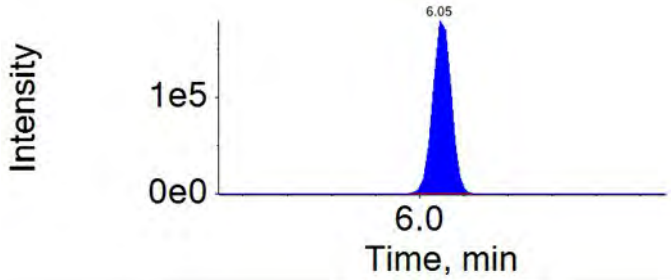
Extraction Standard: d5-NEtFOSAA
589.0 / 419.0



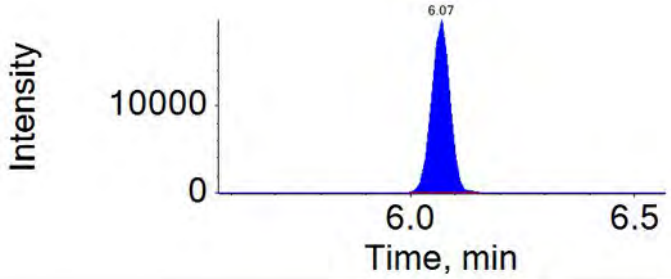
Analyte: PFDoDA
613.0 / 569.0



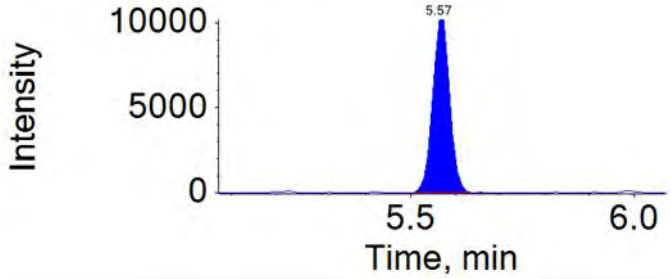
Extraction Standard: 13C2-PFDoDA
615.0 / 570.0



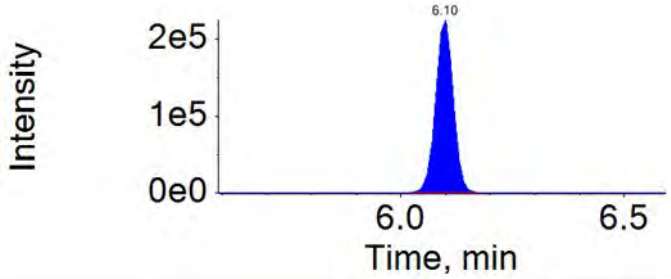
Analyte: 10:2-FTS
627.0 / 607.0



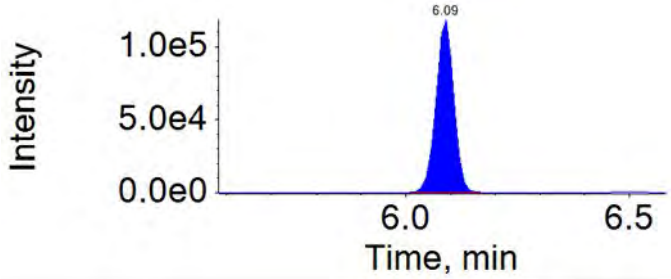
Extraction Standard: 13C2-8:2-FTS
529.0 / 81.0



Analyte: NMePFOSAE
616.0 / 59.0



Extraction Standard: d7-NMePFOSAE
623.0 / 59.0

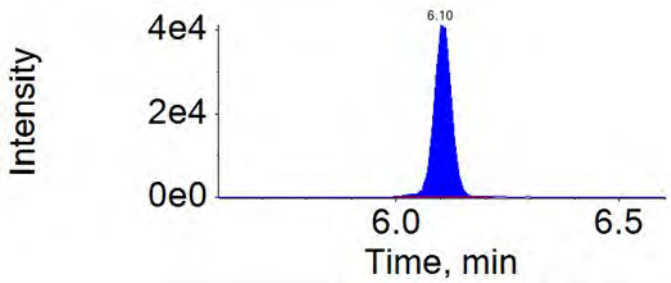


APPROVED
By MCD at 6:33 pm, 11/12/18

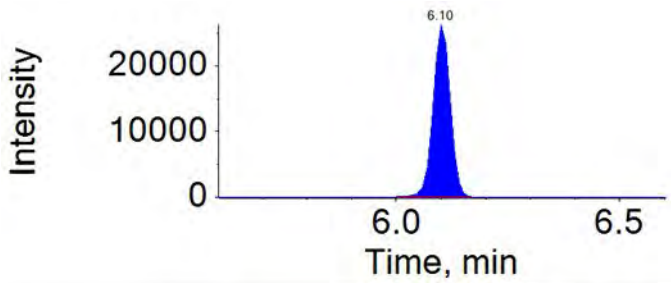
REVIEWED
By HMK at 10:53 am, 11/13/18

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

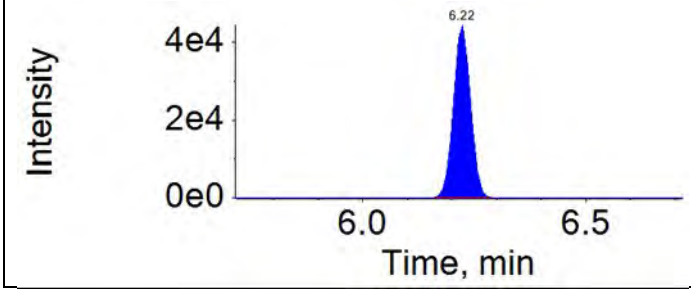
Analyte: NMePFOSA
512.0 / 169.0



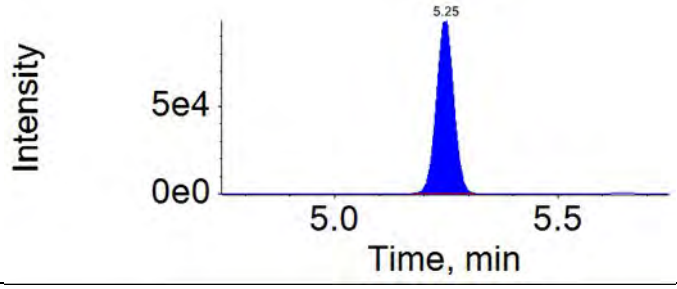
Extraction Standard: d3-NMePFOSA
515.0 / 169.0



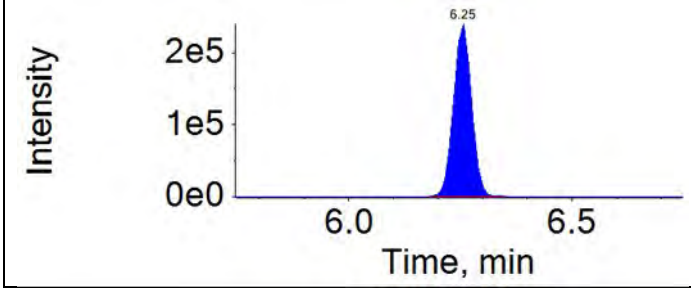
Analyte: PFDoS
699.0 / 80.0



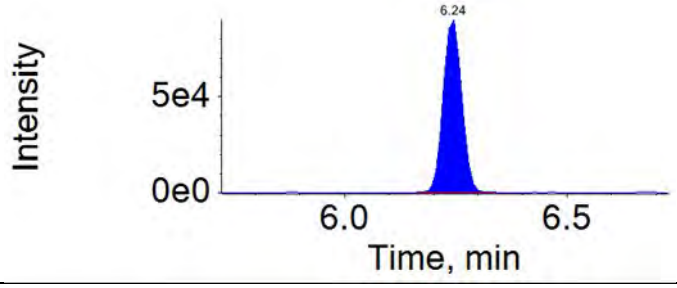
Extraction Standard: 13C8-PFOS
507.0 / 80.0



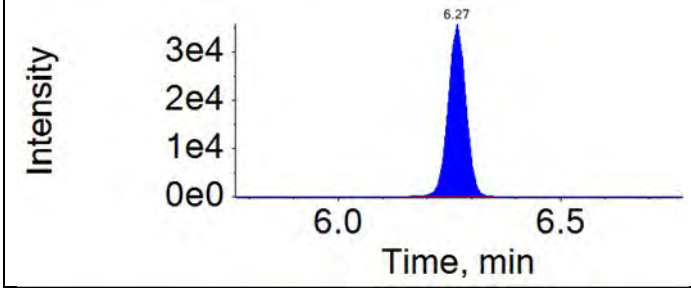
Analyte: NEtPFOSAE
630.0 / 59.0



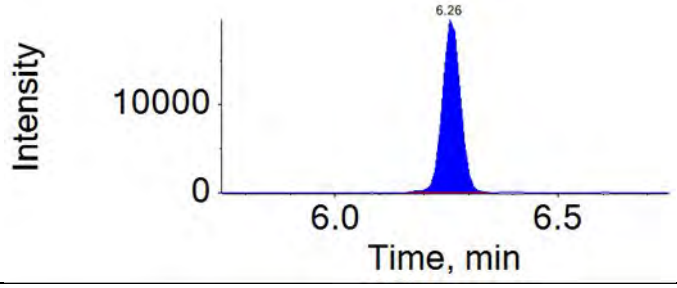
Extraction Standard: d9-NEtPFOSAE
639.0 / 59.0



Analyte: NEtPFOSA
526.0 / 169.0



Extraction Standard: d5-NEtPFOSA
531.0 / 169.0

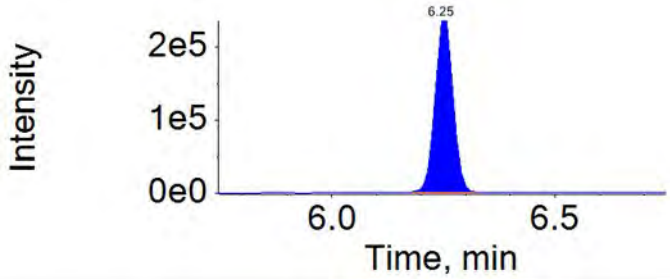


APPROVED
By MCD at 6:33 pm, 11/12/18

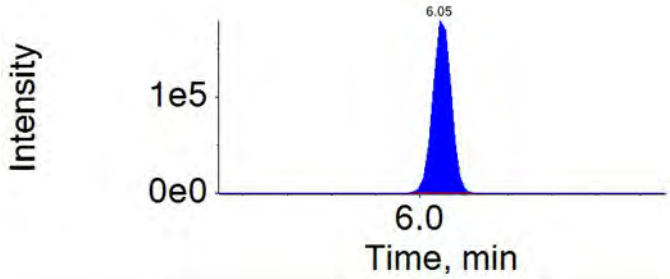
REVIEWED
By HMK at 10:53 am, 11/13/18

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

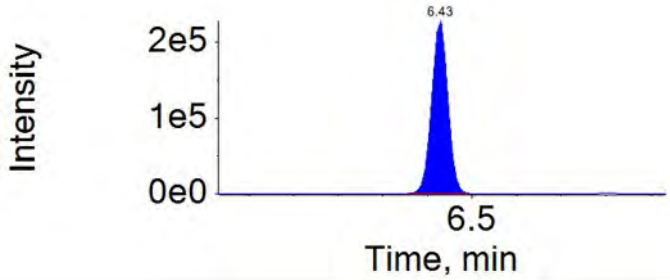
Analyte: PFTrDA
663.0 / 619.0



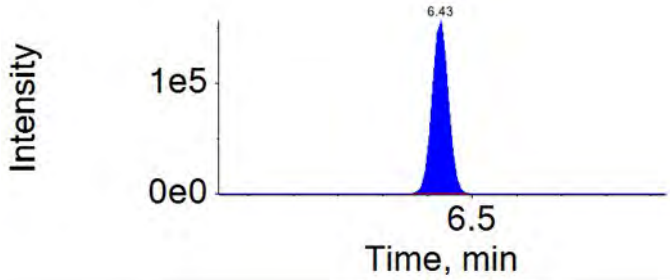
Extraction Standard: 13C2-PFDoDA
615.0 / 570.0



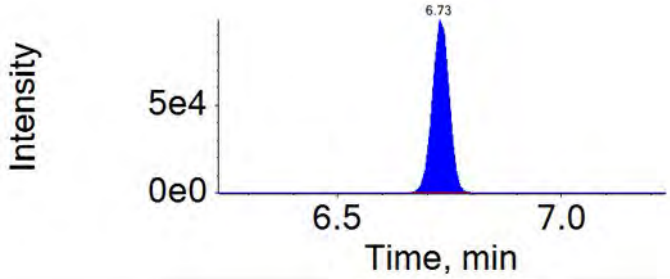
Analyte: PFTeDA
713.0 / 669.0



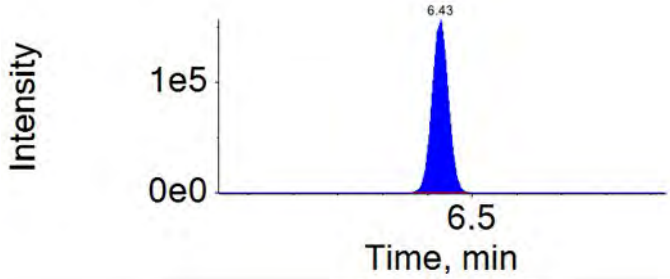
Extraction Standard: 13C2-PFTeDA
715.0 / 670.0



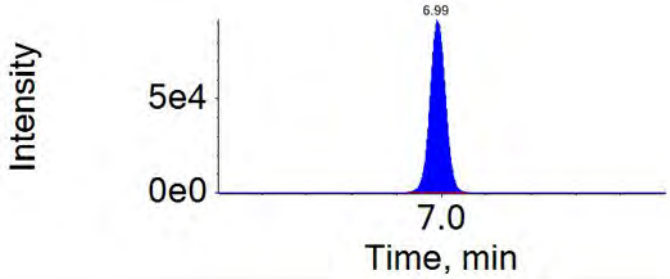
Analyte: PFHxDA
813.0 / 769.0



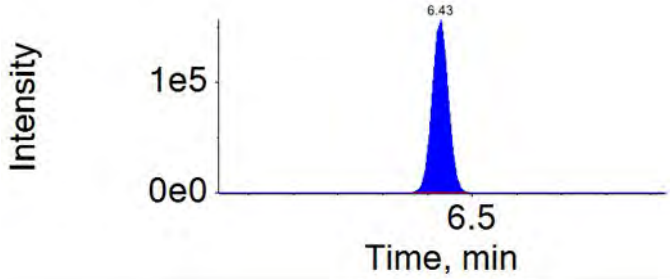
Extraction Standard: 13C2-PFTeDA
715.0 / 670.0



Analyte: PFODA
913.0 / 869.0



Extraction Standard: 13C2-PFTeDA
715.0 / 670.0



APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

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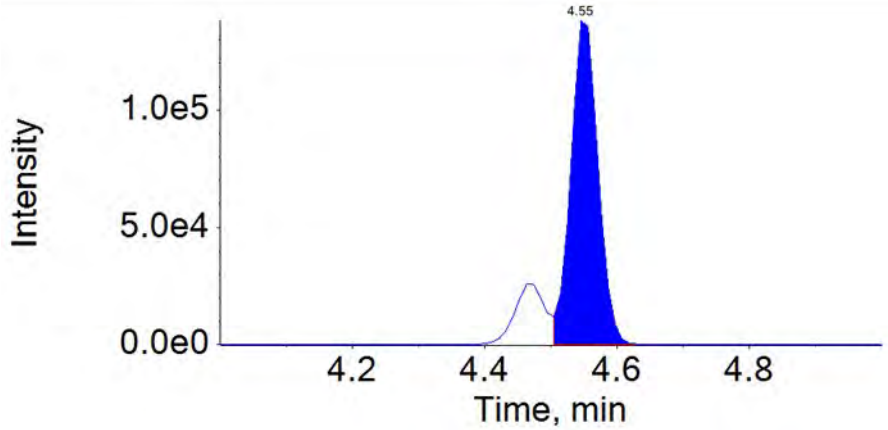
Auto Integrations prior to Manual Integration

Print Date: 11/12/2018 6:26 PM
Template: MQ-OrigInteg-16NOV21.docx

Results Table Name: 18NOV12DCAL
Results Table Date: 11/12/2018 6:23:42 PM

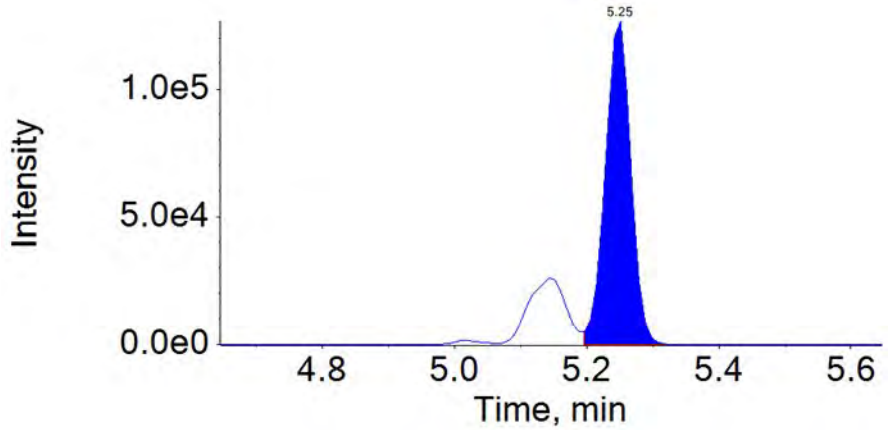
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

Component Name:
PFHxS
RT (min.):
4.55
Peak Area:
397028.39
Mass Range:
399.0 / 80.0
File Name:
18NOV12DCAL-45.wiff
Sample Name:
CAL4



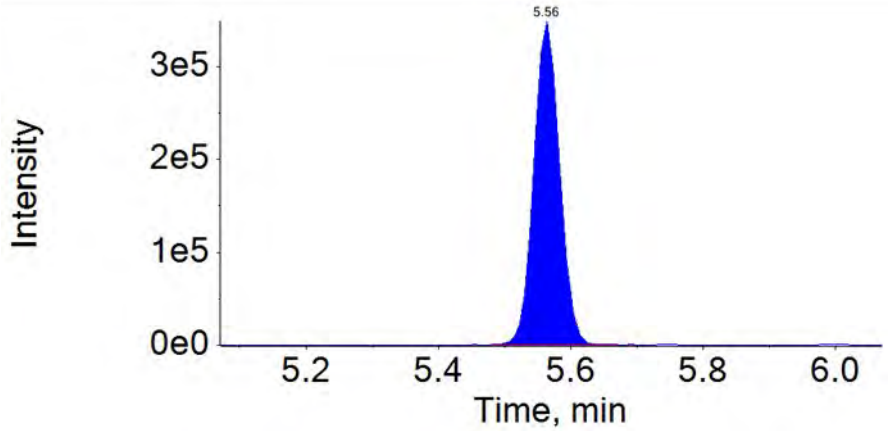
Integration Comment: incorrect integration

Component Name:
PFOS
RT (min.):
5.25
Peak Area:
340529.09
Mass Range:
499.0 / 80.0
File Name:
18NOV12DCAL-45.wiff
Sample Name:
CAL4



Integration Comment: incorrect integration

Component Name:
PFDA
RT (min.):
5.56
Peak Area:
942897.11
Mass Range:
513.0 / 469.0
File Name:
18NOV12DCAL-45.wiff
Sample Name:
CAL4



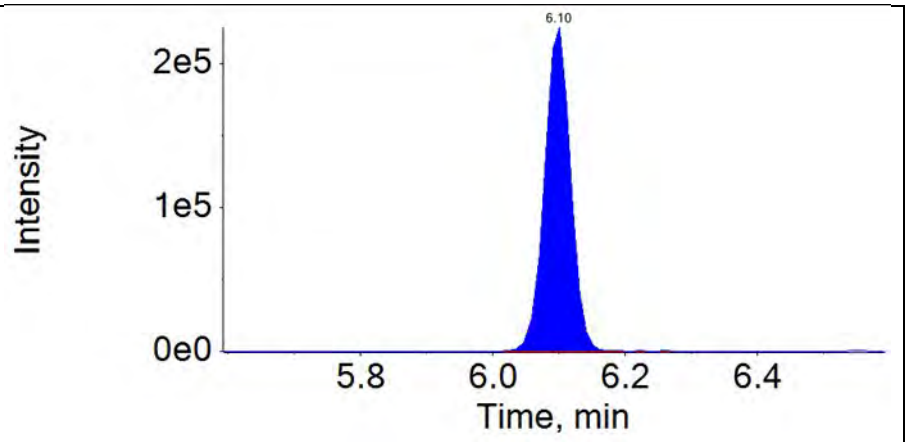
Integration Comment: incorrect integration

APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

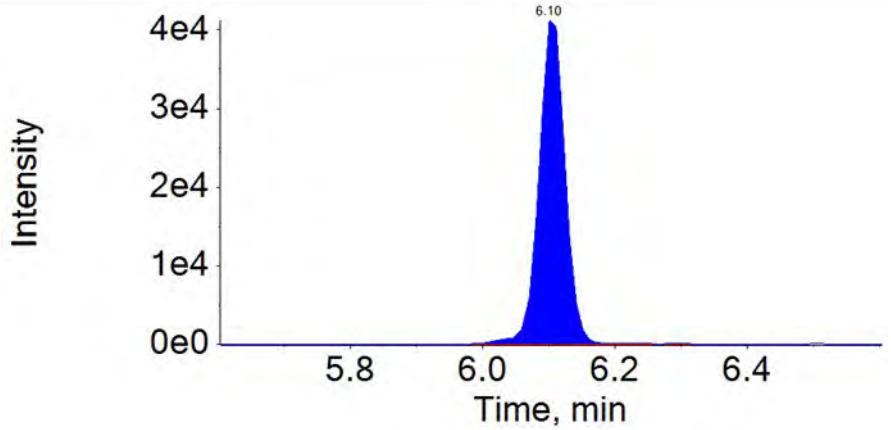
Results Table Name: 18NOV12DCAL
Results Table Date: 11/12/2018 6:23:42 PM
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

Component Name:
NMePFOSAE
RT (min.):
6.10
Peak Area:
620009.05
Mass Range:
616.0 / 59.0
File Name:
18NOV12DCAL-45.wiff
Sample Name:
CAL4



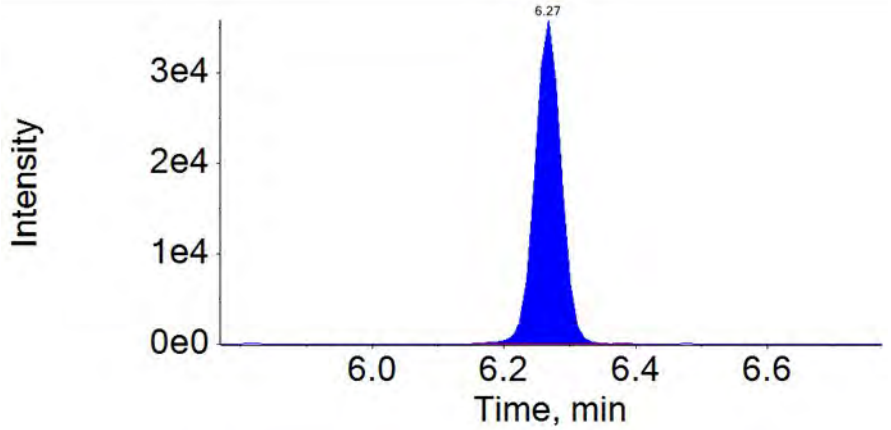
Integration Comment: incorrect integration

Component Name:
NMePFOSA
RT (min.):
6.10
Peak Area:
115018.95
Mass Range:
512.0 / 169.0
File Name:
18NOV12DCAL-45.wiff
Sample Name:
CAL4



Integration Comment: incorrect integration

Component Name:
NEtPFOSA
RT (min.):
6.27
Peak Area:
99550.21
Mass Range:
526.0 / 169.0
File Name:
18NOV12DCAL-45.wiff
Sample Name:
CAL4



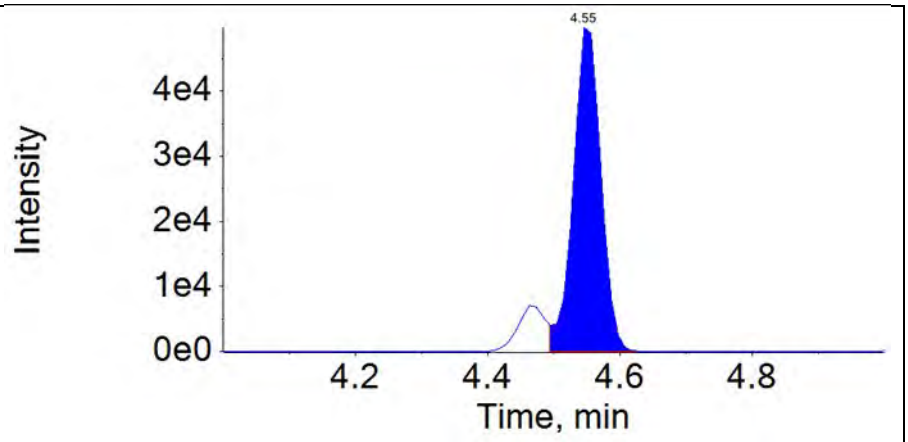
Integration Comment: incorrect integration

APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

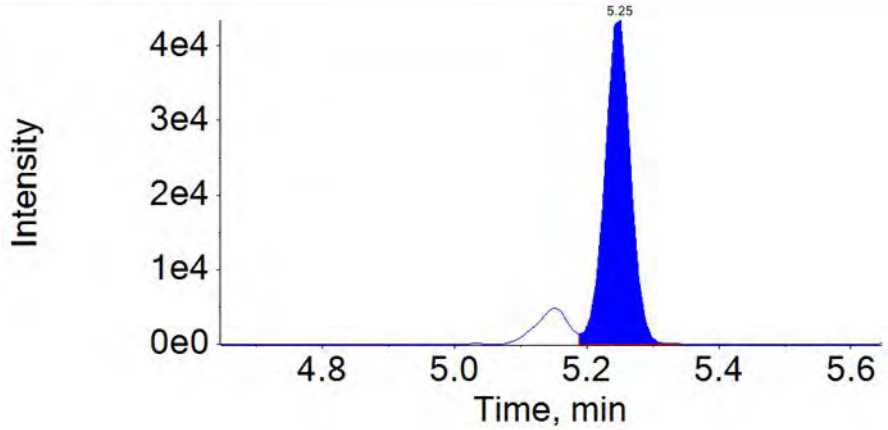
Results Table Name: 18NOV12DCAL
Results Table Date: 11/12/2018 6:23:42 PM
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

Component Name:
PFHxS_2
RT (min.):
4.55
Peak Area:
144906.99
Mass Range:
399.0 / 99.0
File Name:
18NOV12DCAL-45.wiff
Sample Name:
CAL4



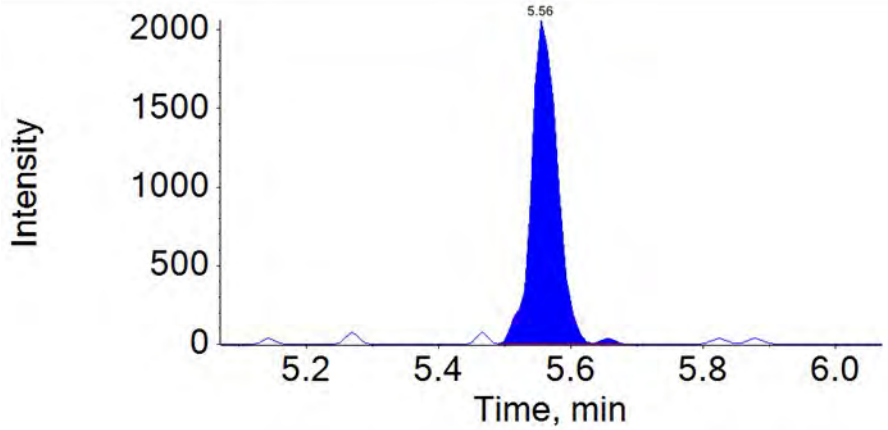
Integration Comment: incorrect integration

Component Name:
PFOS_2
RT (min.):
5.25
Peak Area:
119086.74
Mass Range:
499.0 / 99.0
File Name:
18NOV12DCAL-45.wiff
Sample Name:
CAL4



Integration Comment: incorrect integration

Component Name:
PFDA_2
RT (min.):
5.56
Peak Area:
5673.40
Mass Range:
513.0 / 169.0
File Name:
18NOV12DCAL-45.wiff
Sample Name:
CAL4



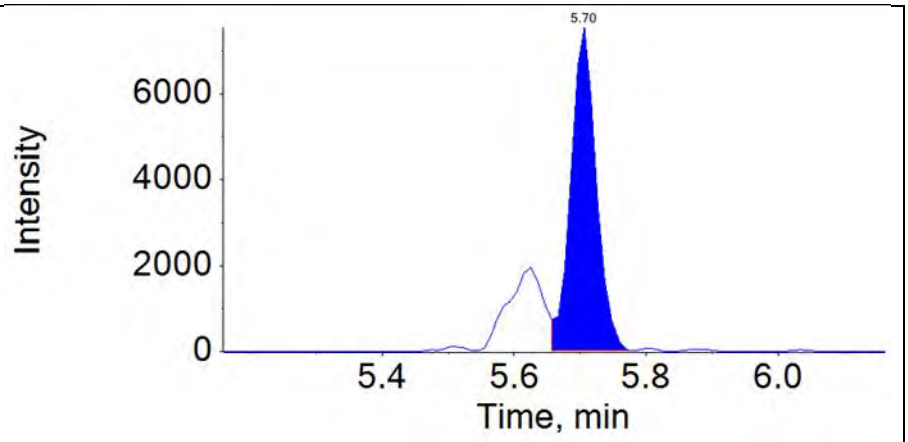
Integration Comment: incorrect integration

APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

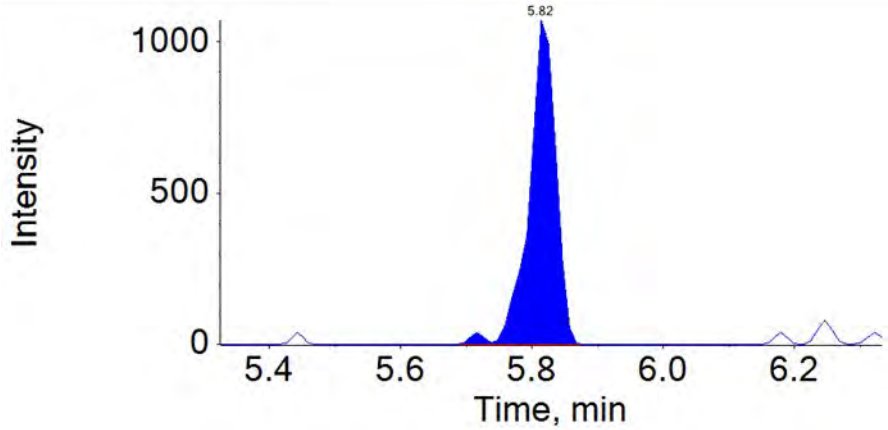
Results Table Name: 18NOV12DCAL
Results Table Date: 11/12/2018 6:23:42 PM
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

Component Name:
NMeFOSAA_2
RT (min.):
5.70
Peak Area:
20115.54
Mass Range:
570.0 / 483.0
File Name:
18NOV12DCAL-45.wiff
Sample Name:
CAL4



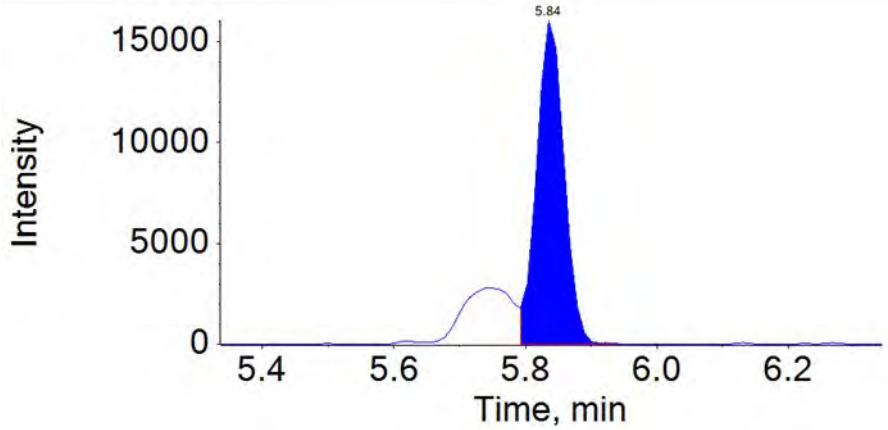
Integration Comment: incorrect integration

Component Name:
PFUnDA_2
RT (min.):
5.82
Peak Area:
3055.95
Mass Range:
563.0 / 169.0
File Name:
18NOV12DCAL-45.wiff
Sample Name:
CAL4



Integration Comment: incorrect integration

Component Name:
NEtFOSAA_2
RT (min.):
5.84
Peak Area:
46742.13
Mass Range:
584.0 / 526.0
File Name:
18NOV12DCAL-45.wiff
Sample Name:
CAL4



Integration Comment: incorrect integration

APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

Results Table Name: 18NOV12DCAL
Results Table Date: 11/12/2018 6:23:42 PM

Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

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By HMK at 10:53 am, 11/13/18

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LC-MS/MS Analysis Report

Printed: 11/12/2018 6:22:00 PM
Template: IonRatio18OCT10

Ion Ratio Report

Sample Name: CAL4 **Instrument Name:** LM27631 **File Name:** 18NOV12DCAL-45.wiff

Component Name	RT	RRT	Analyte Area Response	Int Typ	Expected Ion Ratio	Ion Ratio	Ion Ratio % Diff	Ion Ratio Limit	Ion Ratio OOS
PFBS	3.81	1.00	617045.58	A	0.3619	0.3710			
PFBS_2	3.81	1.00	228894.51	A	0.3619	0.3710	3	50	
4:2-FTS	4.13	1.00	126396.51	A	0.6730	0.6813			
4:2 FTS_2	4.12	1.00	86110.06	A	0.6730	0.6813		#NA!	
PFHxA	4.16	1.00	1265231.12	A	0.0117	0.0101			
PFHxA_2	4.16	1.00	12793.78	A	0.0117	0.0101	-13	50	
PFPeS	4.18	1.10	328681.66	A	0.5191	0.5078			
PFPeS_2	4.18	1.10	166890.99	A	0.5191	0.5078	-2	50	
PFHpA	4.55	1.00	1318774.50	A	0.0563	0.0555			
PFHpA_2	4.55	1.00	73135.24	A	0.0563	0.0555	-2	50	
PFHxS	4.55	1.00	479290.97	M	0.3428	0.3441			
PFHxS_2	4.55	1.00	164902.13	M	0.3428	0.3441	0	50	
6:2-FTS	4.91	1.00	107470.62	A	0.6604	0.6264			
6:2 FTS_2	4.91	1.00	67319.96	A	0.6604	0.6264		#NA!	
PFHpS	4.91	1.08	434949.18	A	0.4066	0.4089			
PFHpS_2	4.91	1.08	177851.23	A	0.4066	0.4089	1	50	
PFOA	4.92	1.00	1327086.09	A	0.0562	0.0557			
PFOA_2	4.92	1.00	73867.47	A	0.0562	0.0557	-1	50	
PFOS	5.25	1.00	448833.83	M	0.2968	0.3022			
PFOS_2	5.25	1.00	135652.81	M	0.2968	0.3022	2	50	
PFNA	5.26	1.00	1106664.23	A	0.0229	0.0210			
PFNA_2	5.26	1.00	23205.90	A	0.0229	0.0210	-8	50	
PFNS	5.54	1.06	269712.27	A	0.4828	0.4818			
PFNS_2	5.54	1.06	129941.05	A	0.4828	0.4818	0	50	
PFDA	5.56	1.00	941985.31	M	0.0081	0.0060			
PFDA_2	5.56	1.00	5626.45	M	0.0081	0.0060	-26	50	
8:2-FTS	5.57	1.00	80922.57	A	0.6814	0.6947			
8:2 FTS_2	5.57	1.00	56219.65	A	0.6814	0.6947		#NA!	
NMeFOSAA	5.70	1.00	103649.07	A	0.2569	0.2651			
NMeFOSAA_2	5.70	1.00	27472.86	M	0.2569	0.2651	3	50	
PFDS	5.80	1.11	224031.22	A	0.5144	0.4482			
PFDS_2	5.80	1.10	100404.30	A	0.5144	0.4482	-13	50	
PFUnDA	5.82	1.00	768010.80	A	0.0058	0.0039			
PFUnDA_2	5.82	1.00	2997.45	M	0.0058	0.0039	-33	50	
NEtFOSAA	5.84	1.00	94877.84	A	0.7253	0.6488			
NEtFOSAA_2	5.84	1.00	61554.78	M	0.7253	0.6488	-11	50	
PFDoDA	6.05	1.00	803646.84	A	0.0157	0.0099			
PFDoDA_2	6.05	1.00	7981.38	A	0.0157	0.0099	-37	50	
10:2-FTS	6.07	1.09	56040.80	A	0.6356	0.7371			
10:2 FTS_2	6.07	1.09	41308.18	A	0.6356	0.7371		#NA!	
PFTrDA	6.25	1.03	674140.32	A	0.0086	0.0101			
PFTrDA_2	6.25	1.03	6830.51	A	0.0086	0.0101	18	50	
PFTeDA	6.43	1.00	571926.74	A	0.0062	0.0068			
PFTeDA_2	6.43	1.00	3881.08	A	0.0062	0.0068	9	50	
PFHxDA	6.73	1.05	256654.28	A	0.0683	0.0616			
PFHxDA_2	6.73	1.05	15804.20	A	0.0683	0.0616	-10	50	
PFODA	6.99	1.09	219359.64	A	0.0277	0.0258			
PFODA_2	6.99	1.09	5669.48	A	0.0277	0.0258	-7	50	

APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
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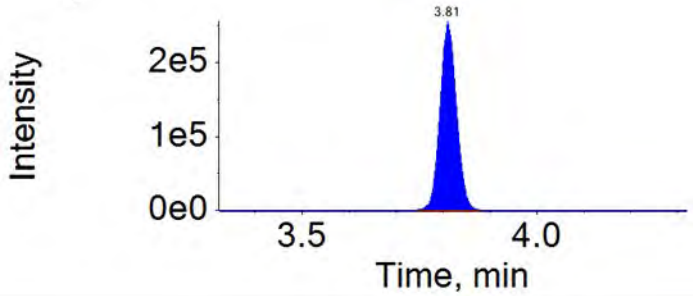
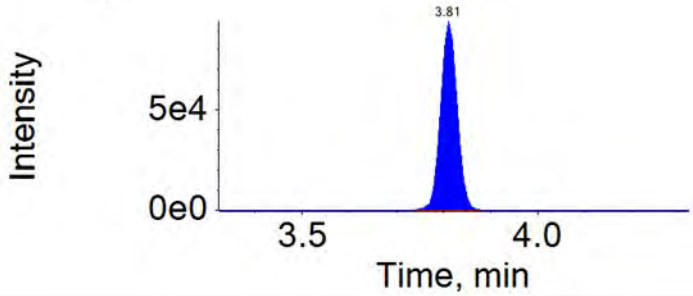
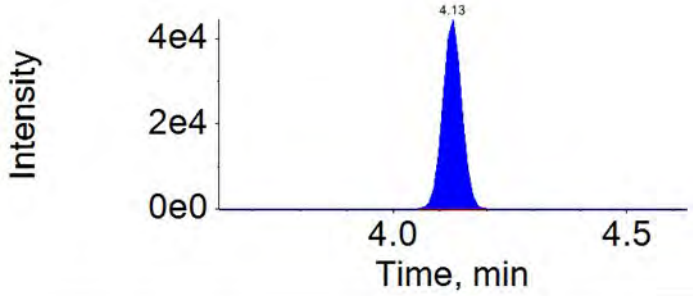
Component: PFBS
Primary Mass: 299.0 / 80.0



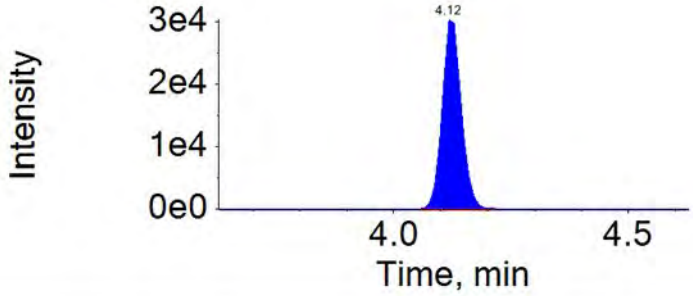
Component: PFBS_2
Secondary Mass: 299.0 / 99.0



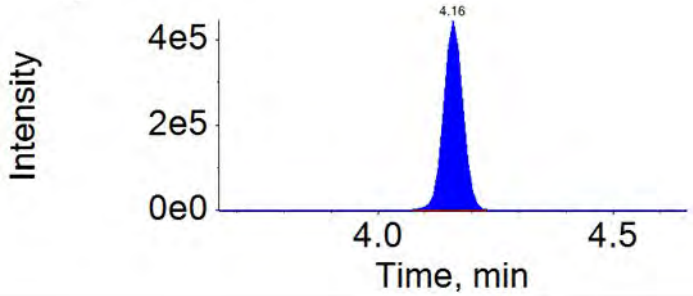
Component: 4:2-FTS
Primary Mass: 327.0 / 307.0



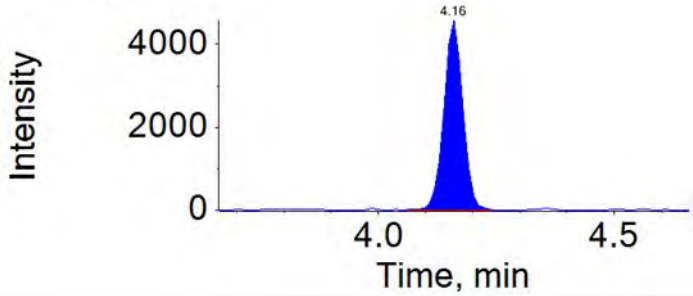
Component: 4:2 FTS_2
Secondary Mass: 327.0 / 81.0



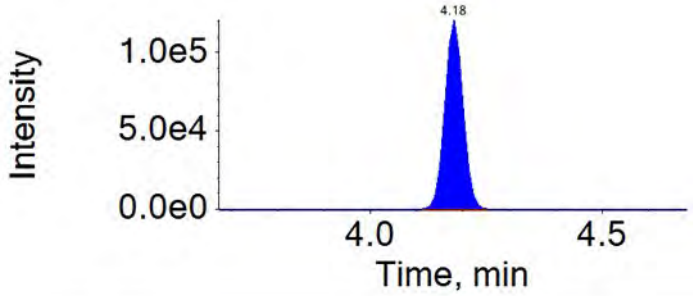
Component: PFHxA
Primary Mass: 313.0 / 269.0



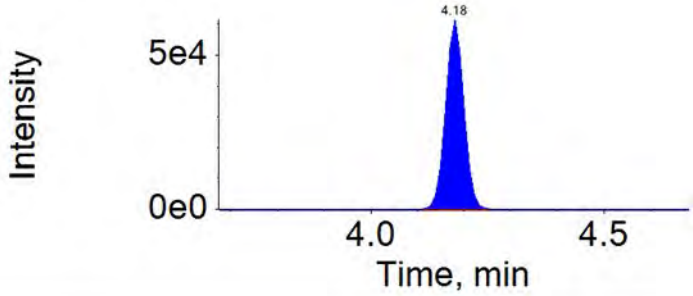
Component: PFHxA_2
Secondary Mass: 313.0 / 119.0



Component: PFPeS
Primary Mass: 349.0 / 80.0



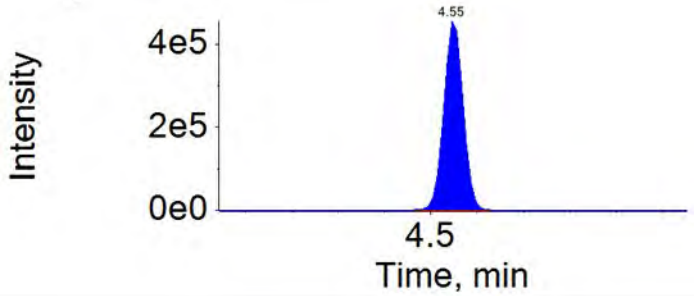
Component: PFPeS_2
Secondary Mass: 349.0 / 99.0



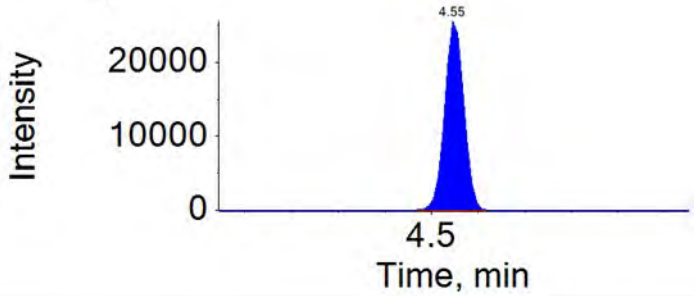
APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

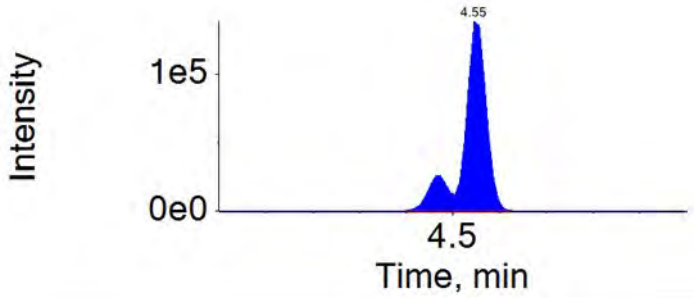
Component: PFHpA
Primary Mass: 363.0 / 319.0



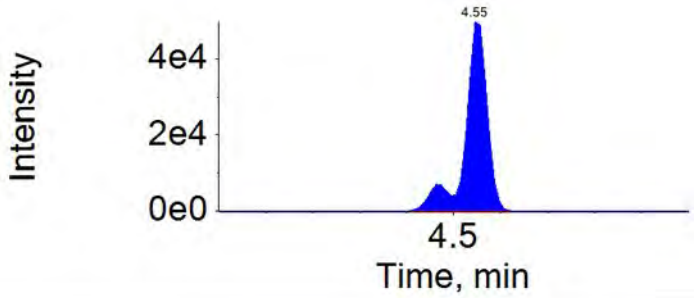
Component: PFHpA_2
Secondary Mass: 363.0 / 169.0



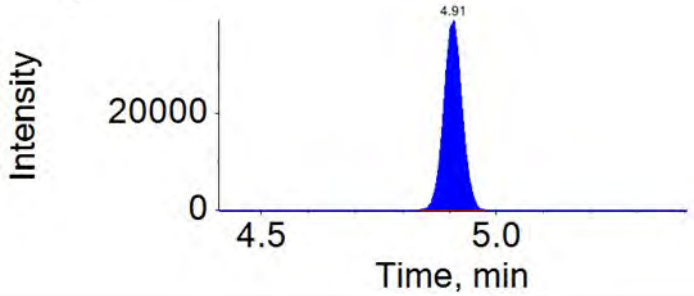
Component: PFHxS
Primary Mass: 399.0 / 80.0



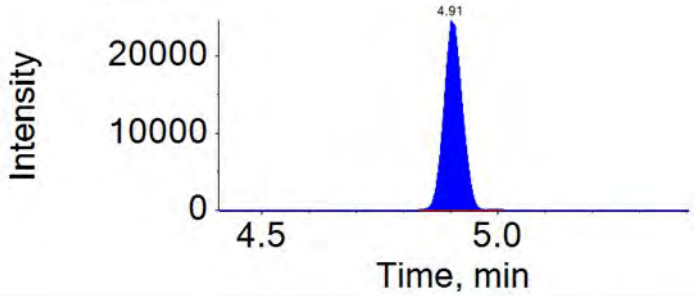
Component: PFHxS_2
Secondary Mass: 399.0 / 99.0



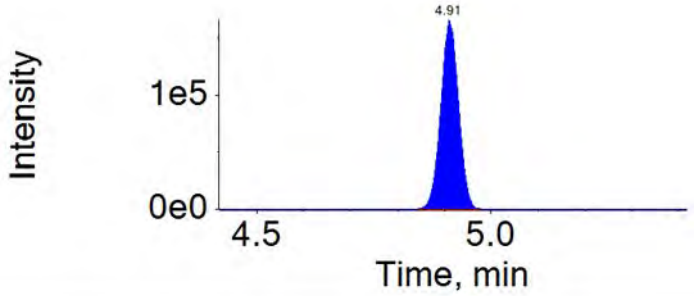
Component: 6:2-FTS
Primary Mass: 427.0 / 407.0



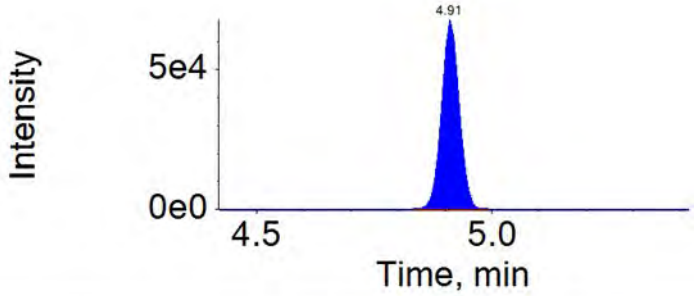
Component: 6:2 FTS_2
Secondary Mass: 427.0 / 81.0



Component: PFHpS
Primary Mass: 449.0 / 80.0



Component: PFHpS_2
Secondary Mass: 449.0 / 99.0



APPROVED
By MCD at 6:33 pm, 11/12/18

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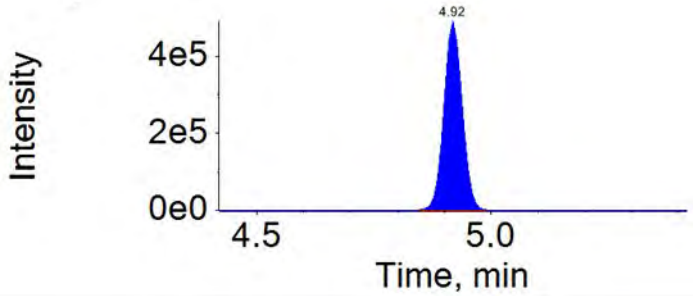
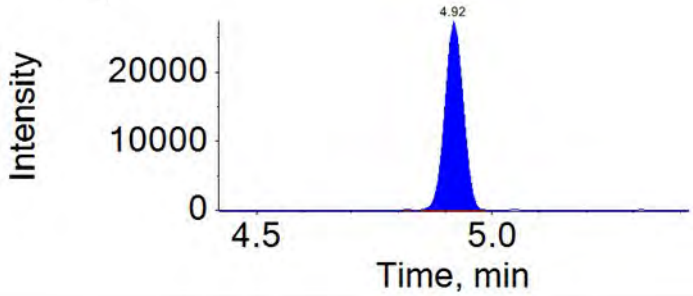
By HMK at 10:53 am, 11/13/18

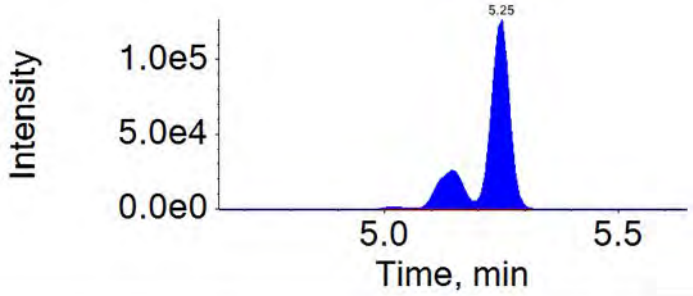
Component: PFOA
Primary Mass: 413.0 / 369.0



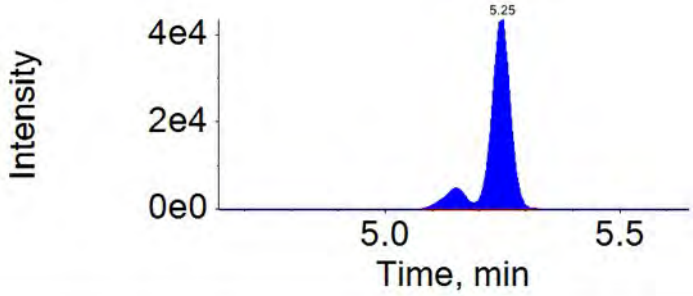
Component: PFOA_2
Secondary Mass: 413.0 / 169.0



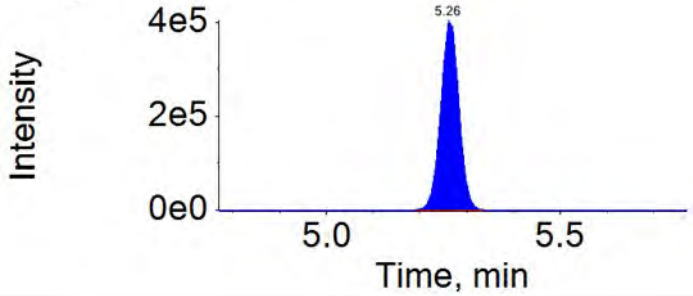
Component: PFOS
Primary Mass: 499.0 / 80.0



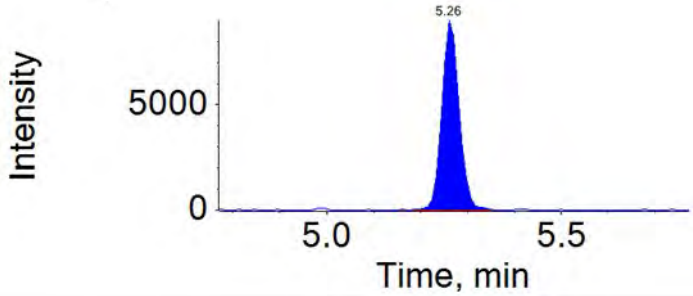
Component: PFOS_2
Secondary Mass: 499.0 / 99.0



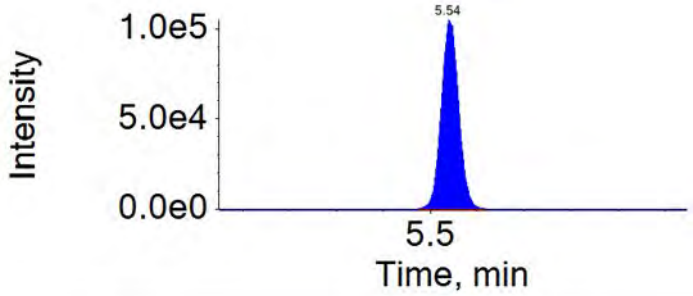
Component: PFNA
Primary Mass: 463.0 / 419.0



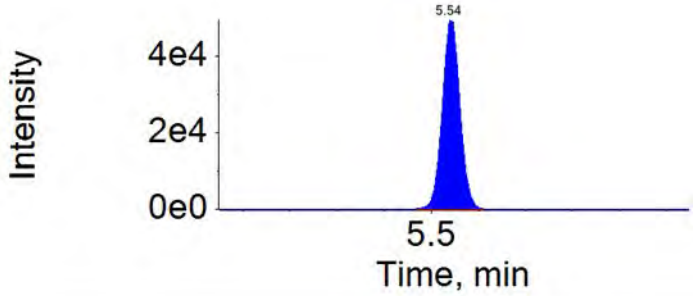
Component: PFNA_2
Secondary Mass: 463.0 / 169.0



Component: PFNS
Primary Mass: 549.0 / 80.0



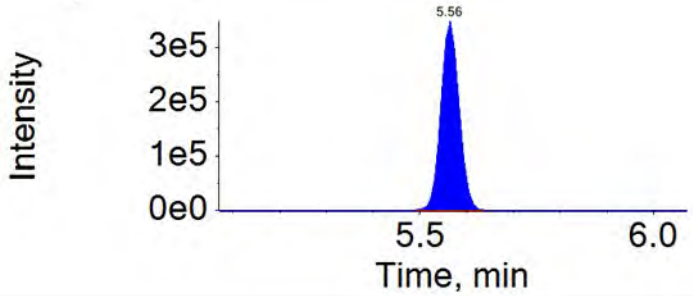
Component: PFNS_2
Secondary Mass: 549.0 / 99.0



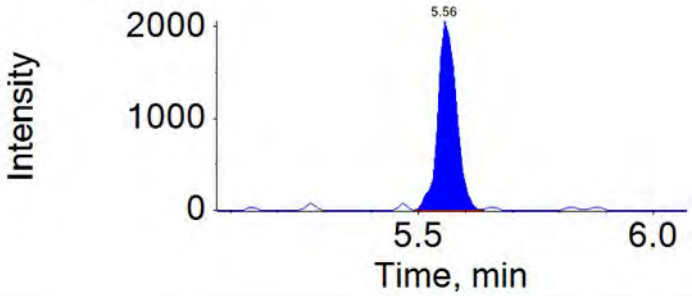
APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

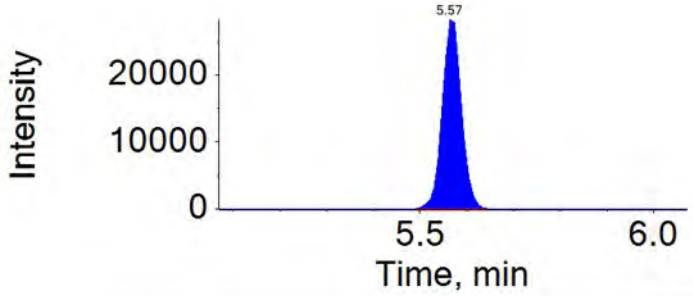
Component: PFDA
Primary Mass: 513.0 / 469.0



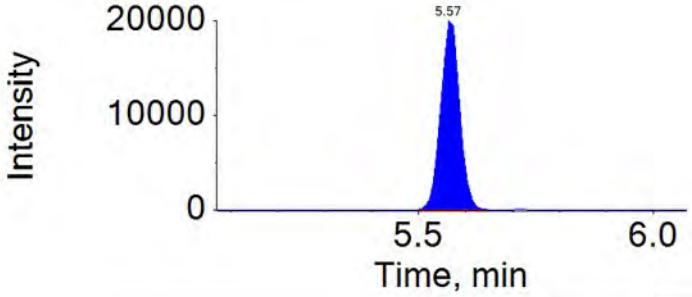
Component: PFDA_2
Secondary Mass: 513.0 / 169.0



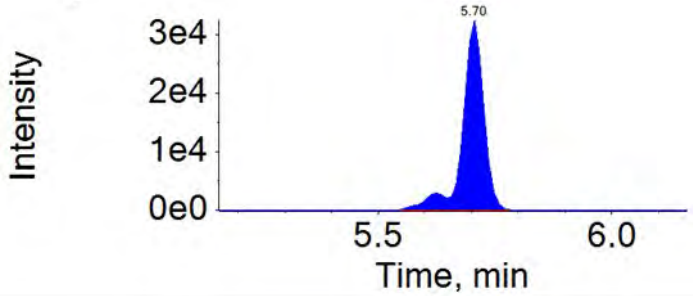
Component: 8:2-FTS
Primary Mass: 527.0 / 507.0



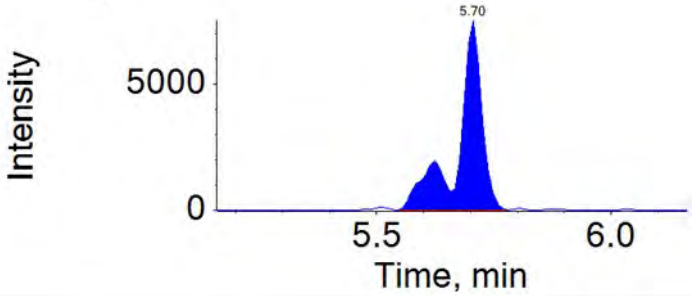
Component: 8:2 FTS_2
Secondary Mass: 527.0 / 81.0



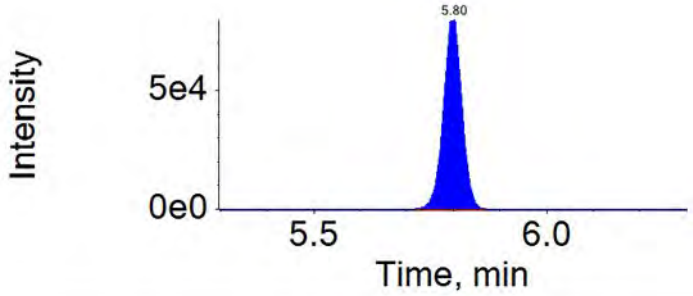
Component: NMeFOSAA
Primary Mass: 570.0 / 419.0



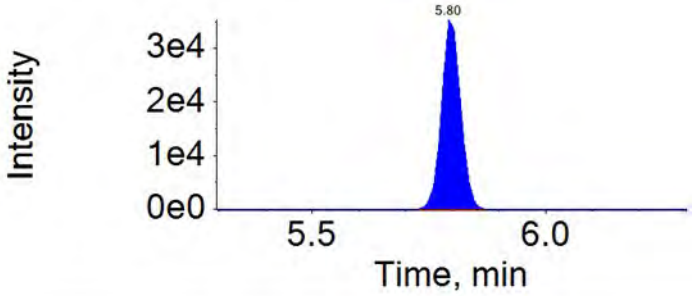
Component: NMeFOSAA_2
Secondary Mass: 570.0 / 483.0



Component: PFDS
Primary Mass: 599.0 / 80.0



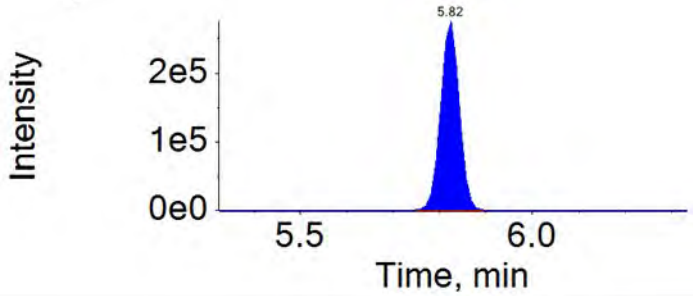
Component: PFDS_2
Secondary Mass: 599.0 / 99.0



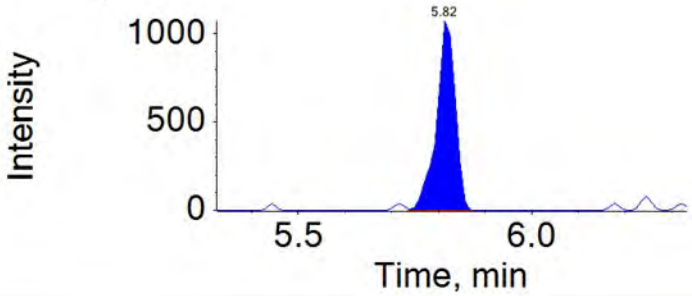
APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

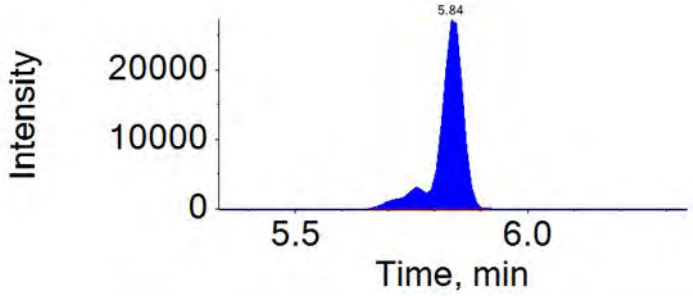
Component: PFUnDA
Primary Mass: 563.0 / 519.0



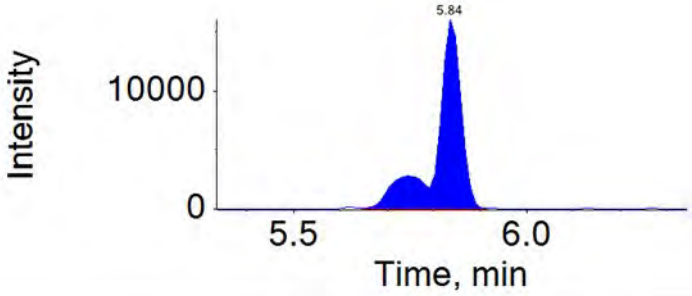
Component: PFUnDA_2
Secondary Mass: 563.0 / 169.0



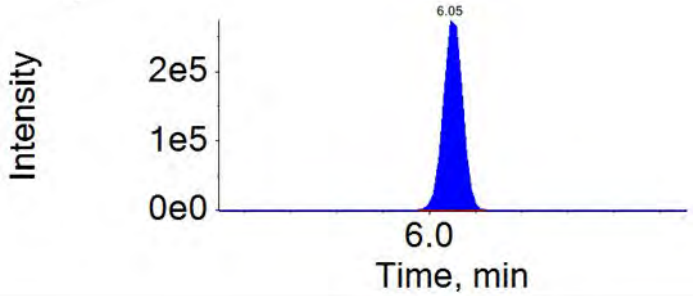
Component: NEtFOSAA
Primary Mass: 584.0 / 419.0



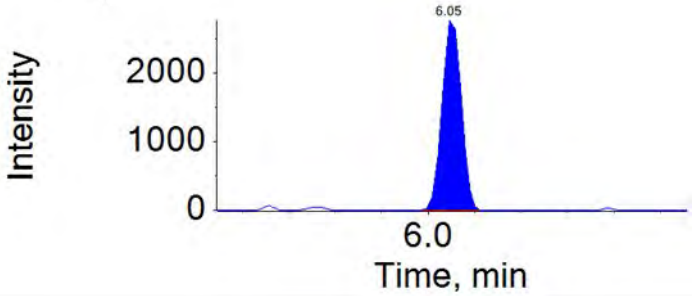
Component: NEtFOSAA_2
Secondary Mass: 584.0 / 526.0



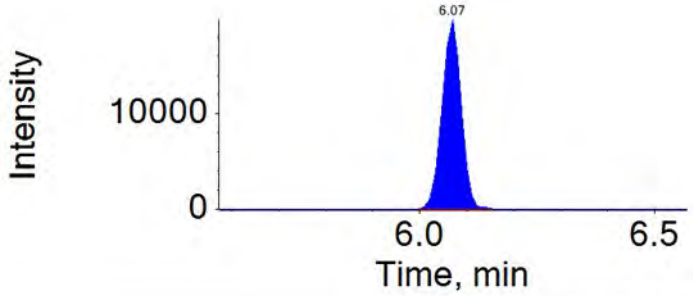
Component: PFDoDA
Primary Mass: 613.0 / 569.0



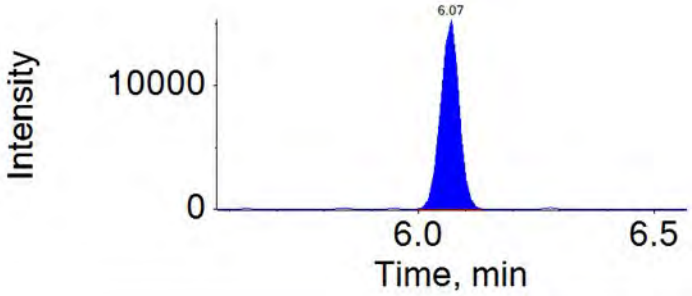
Component: PFDoDA_2
Secondary Mass: 613.0 / 169.0



Component: 10:2-FTS
Primary Mass: 627.0 / 607.0



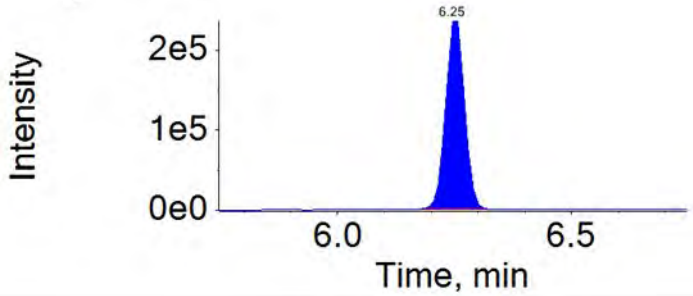
Component: 10:2 FTS_2
Secondary Mass: 627.0 / 81.0



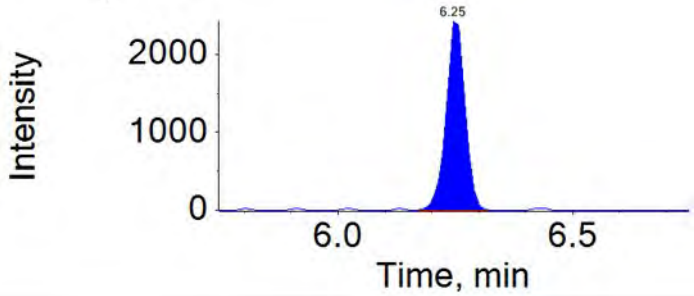
APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

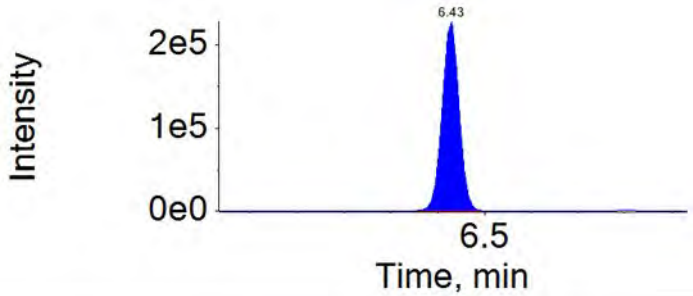
Component: PFTrDA
Primary Mass: 663.0 / 619.0



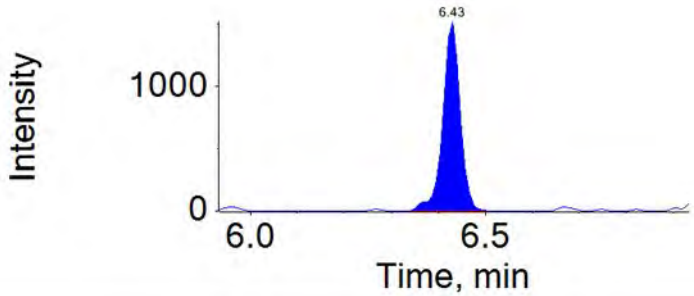
Component: PFTrDA_2
Secondary Mass: 663.0 / 169.0



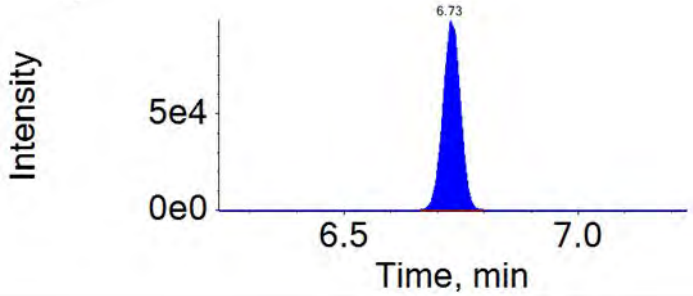
Component: PFTeDA
Primary Mass: 713.0 / 669.0



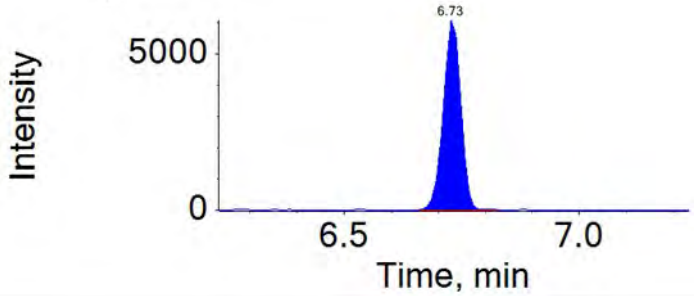
Component: PFTeDA_2
Secondary Mass: 713.0 / 169.0



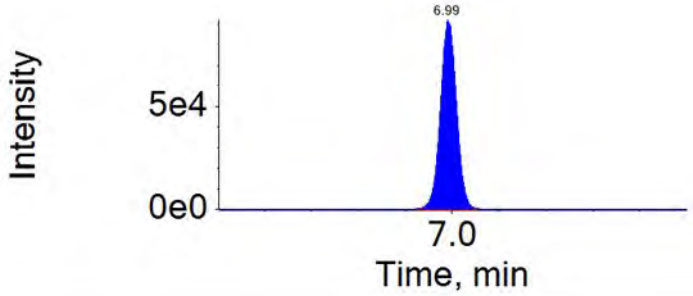
Component: PFHxDA
Primary Mass: 813.0 / 769.0



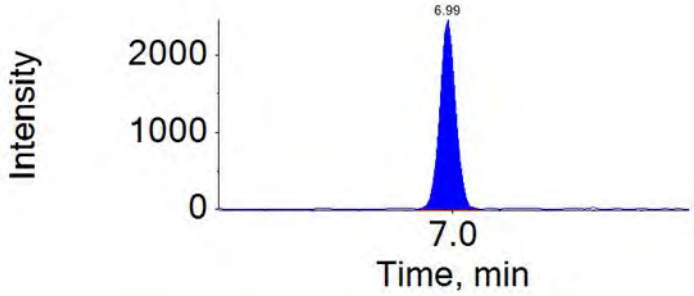
Component: PFHxDA_2
Secondary Mass: 813.0 / 169.0



Component: PFODA
Primary Mass: 913.0 / 869.0



Component: PFODA_2
Secondary Mass: 913.0 / 169.0



APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM
Result Table: 18NOV12DCAL 11/12/2018 6:14:07 PM
Acquisition Method: 18AUG13_3uL.dam

Sample Name:	CAL5			**Data File:**		18NOV12DCAL-46.wiff
Sample ID:	CALBRN51833B			**Acquis Date:**		2018-11-12T15:42:06
Sample Type:	Standard			**Instrument:**		LM27631
Vial Position:	7			**Acquis Method:**		18AUG13_3uL.dam
Injection Vol:	3.00			**Result Table:**		18NOV12DCAL
QMethod File:	18AUG20QM			**ICAL Name:**		18NOV12DCAL
Batch Number:	N\A			**Operator:**		MCD7824
Sample Wt.:	1.00000			**Dilution Factor:**		1.00
Sample Vol.:	1.000			**Prep Factor:**		1.000

Injection Standard Peak Table

Injection Standard Area Reference File: 18NOV12DCAL-44

Injection Standard Name	Inj Std Conc	Injection Std Peak Area	Rreference Injection Standard Area	Injection Std %Diff	Injection Std %Diff Limit	Injection Std %Diff OOS
13C3-PFBA	5.0	641789.5	659926.2	-3	50	
13C2-PFOA	5.0	464284.6	450219.7	3	50	
13C4-PFOS	4.8	243589.9	249205.8	-2	50	
13C2-PFDA	5.0	269315.7	278743.9	-3	50	

Extraction Standard Peak Table

Extraction Standard Name	Ext Std Area	Inj Std Name	Inj Std Area	Area Ratio	Ext Std Conc	Ext Std Result	Ext Std %REC	Ext Std %REC Limit	Ext Std OOS
E13C4-PFBA	698871.9	13C3-PFBA	641789.5	1.089	5.000	4.882	98	70-130	
E13C5-PFPeA	734598.3	13C3-PFBA	641789.5	1.145	5.000	5.134	103	70-130	
E13C3-PFBS	428050.6	13C3-PFBA	641789.5	0.667	4.650	4.708	101	70-130	
E13C2-4:2-FTS	51791.9	13C2-PFOA	464284.6	0.112	4.670	4.968	106	70-130	
E13C5-PFHxA	628952.8	13C2-PFOA	464284.6	1.355	5.000	4.894	98	70-130	
E13C3-PFHxS	309304.5	13C2-PFOA	464284.6	0.666	4.730	4.571	97	70-130	
E13C4-PFHpA	525802.1	13C2-PFOA	464284.6	1.132	5.000	5.102	102	70-130	
E13C2-6:2-FTS	31012.0	13C2-PFOA	464284.6	0.067	4.750	4.469	94	70-130	
E13C8-PFOA	805288.7	13C2-PFOA	464284.6	1.734	5.000	4.779	96	70-130	
E13C8-PFOS	267157.6	13C4-PFOS	243589.9	1.097	4.780	4.860	102	70-130	
E13C9-PFNA	441776.8	13C4-PFOS	243589.9	1.814	5.000	5.057	101	70-130	
E13C6-PFDA	585231.2	13C2-PFDA	269315.7	2.173	5.000	5.071	101	70-130	
E13C2-8:2-FTS	24192.1	13C2-PFDA	269315.7	0.090	4.790	4.480	94	70-130	
E13C8-PFOSA	596544.1	13C2-PFDA	269315.7	2.215	5.000	4.911	98	70-130	
Ed3-NMeFOSAA	72424.5	13C2-PFDA	269315.7	0.269	5.000	4.854	97	70-130	
E13C7-PFUnDA	231187.9	13C2-PFDA	269315.7	0.858	5.000	4.984	100	70-130	
Ed5-NEtFOSAA	63701.7	13C2-PFDA	269315.7	0.237	5.000	5.004	100	70-130	
E13C2-PFDoDA	507556.8	13C2-PFDA	269315.7	1.885	5.000	4.893	98	70-130	
Ed7-NMePFOSAE	316777.8	13C2-PFDA	269315.7	1.176	5.000	5.090	102	70-130	
Ed3-NMePFOSA	68615.7	13C2-PFDA	269315.7	0.255	5.000	4.629	93	70-130	
Ed9-NEtPFOSAE	255767.8	13C2-PFDA	269315.7	0.950	5.000	4.939	99	70-130	
Ed5-NEtPFOSA	55378.5	13C2-PFDA	269315.7	0.206	5.000	4.824	96	70-130	
E13C2-PFTeDA	379571.6	13C2-PFDA	269315.7	1.409	5.000	4.948	99	70-130	

APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

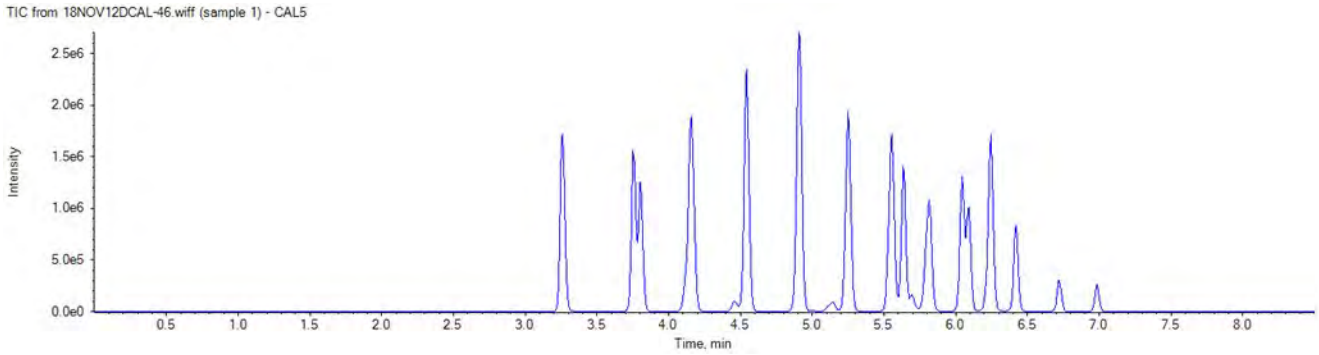
Analyte Quantitation Peak Table

Sample Name: CAL5 **Instrument Name:** LM27631 **File Name:** 18NOV12DCAL-46.wiff

Sample Wt	Sample Vol	Dilution Factor	PrepFactor
1.00000	1.000	1.00	1.000

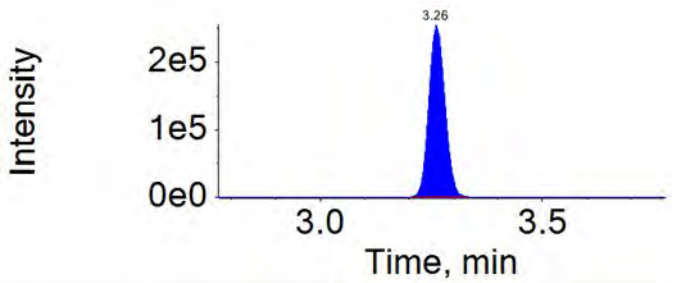
Analyte Name	RT	RRT	Analyte Area Response	E	Int Typ	ES Name	ES RT	ES Area Response	Area Ratio	Sample Result (ng/g)
PFBA	3.26	1.000	2700090.8		A	13C4-PFBA	3.26	698871.9	3.863	21.403
PFPeA	3.76	1.000	2660895.4		A	13C5-PFPeA	3.76	734598.3	3.622	20.969
PFBS	3.80	1.000	1630613.5		A	13C3-PFBS	3.81	428050.6	3.809	18.121
4:2-FTS	4.12	1.000	344695.9		A	13C2-4:2-FTS	4.12	51791.9	6.655	18.070
PFHxA	4.15	1.000	3158486.4		A	13C5-PFHxA	4.15	628952.8	5.022	20.968
PFPeS	4.17	1.100	815928.2		A	13C3-PFBS	3.81	428050.6	1.906	18.506
PFHpA	4.54	1.000	3269561.0		A	13C4-PFHpA	4.54	525802.1	6.218	20.612
PFHxS	4.54	1.000	1138604.3		M	13C3-PFHxS	4.54	309304.5	3.681	17.849
6:2-FTS	4.90	1.000	260254.3		A	13C2-6:2-FTS	4.90	31012.0	8.392	20.308
PFHpS	4.90	1.080	1145559.8		A	13C3-PFHxS	4.54	309304.5	3.704	19.496
PFOA	4.91	1.000	3291549.4		A	13C8-PFOA	4.91	805288.7	4.087	21.830
PFOS	5.24	1.000	1147826.8		M	13C8-PFOS	5.24	267157.6	4.296	18.789
PFNA	5.26	1.000	2725089.7		A	13C9-PFNA	5.26	441776.8	6.168	22.243
PFNS	5.53	1.060	725402.0		A	13C8-PFOS	5.24	267157.6	2.715	18.997
PFDA	5.56	1.000	2309359.5		A	13C6-PFDA	5.56	585231.2	3.946	20.920
8:2-FTS	5.56	1.000	206213.1		A	13C2-8:2-FTS	5.56	24192.1	8.524	19.873
PFOSA	5.64	1.000	2498877.9		A	13C8-PFOSA	5.64	596544.1	4.189	20.460
NMeFOSAA	5.70	1.000	250711.5		A	d3-NMeFOSAA	5.70	72424.5	3.462	19.564
PFDS	5.79	1.100	578877.5		A	13C8-PFOS	5.24	267157.6	2.167	19.633
PFUnDA	5.82	1.000	1773582.6		A	13C7-PFUnDA	5.82	231187.9	7.672	20.055
NEtFOSAA	5.83	1.000	237197.2		A	d5-NEtFOSAA	5.83	63701.7	3.724	19.520
PFDoDA	6.04	1.000	2099385.0		A	13C2-PFDoDA	6.04	507556.8	4.136	21.062
10:2-FTS	6.06	1.090	153343.6		A	13C2-8:2-FTS	5.56	24192.1	6.339	21.113
NMePFOSAE	6.09	1.000	1590507.1		M	d7-NMePFOSAE	6.08	316777.8	5.021	20.896
NMePFOSA	6.10	1.000	300855.7		A	d3-NMePFOSA	6.09	68615.7	4.385	21.631
PFDoS	6.21	1.190	288905.1		A	13C8-PFOS	5.24	267157.6	1.081	18.940
NEtPFOSAE	6.25	1.000	1660562.6		M	d9-NEtPFOSAE	6.23	255767.8	6.492	20.830
NEtPFOSA	6.26	1.000	258300.3		A	d5-NEtPFOSA	6.25	55378.5	4.664	21.421
PFTrDA	6.24	1.030	1679407.2		A	13C2-PFDoDA	6.04	507556.8	3.309	20.884
PFTeDA	6.42	1.000	1418276.7		A	13C2-PFTeDA	6.42	379571.6	3.737	20.945
PFHxDA	6.72	1.050	627350.7		A	13C2-PFTeDA	6.42	379571.6	1.653	19.691
PFODA	6.98	1.090	544296.5		A	13C2-PFTeDA	6.42	379571.6	1.434	19.971

Total Ion Chromatogram

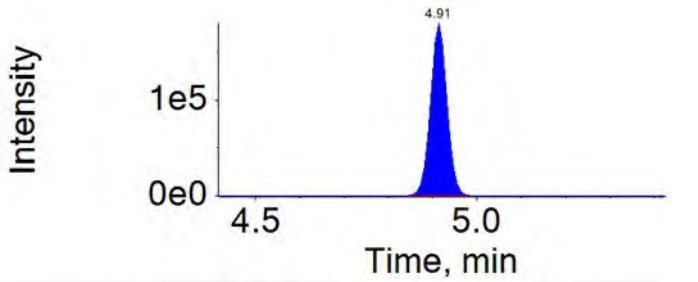


ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

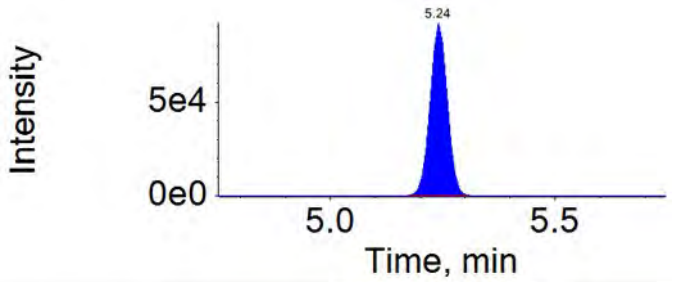
Injection Standard: 13C3-PFBA
216.0 / 172.0



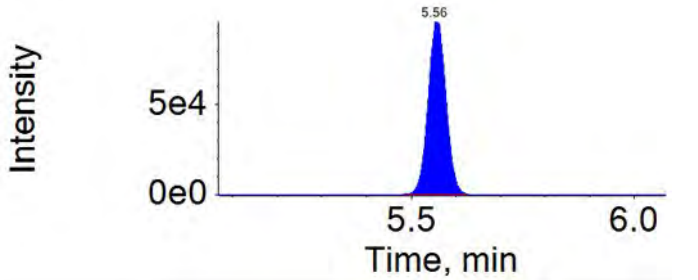
Injection Standard: 13C2-PFOA
415.0 / 370.0



Injection Standard: 13C4-PFOS
503.0 / 80.0



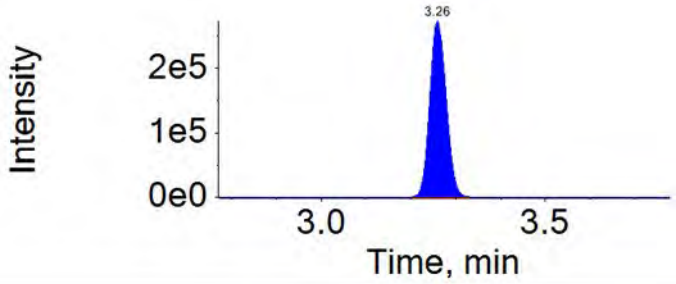
Injection Standard: 13C2-PFDA
515.0 / 470.0



ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

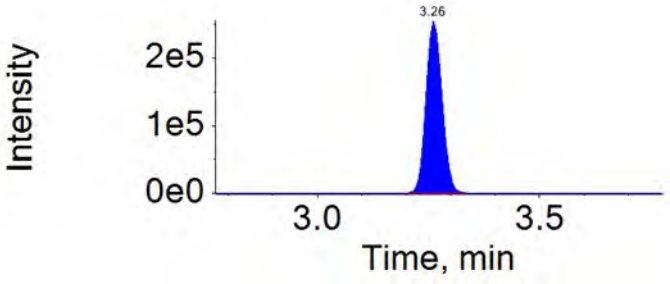
Extraction Standard: E13C4-PFBA

217.0 / 172.0



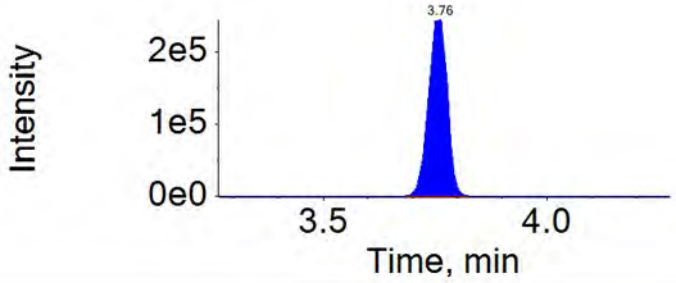
Injection Standard: 13C3-PFBA

216.0 / 172.0



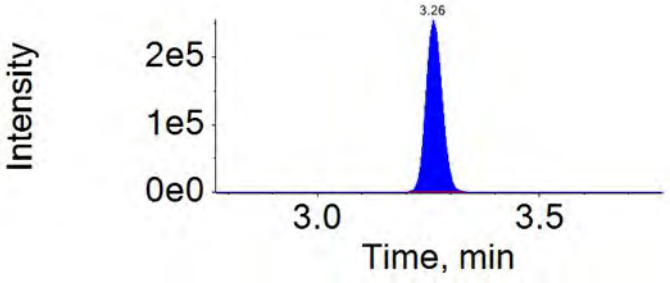
Extraction Standard: E13C5-PFPeA

268.0 / 223.0



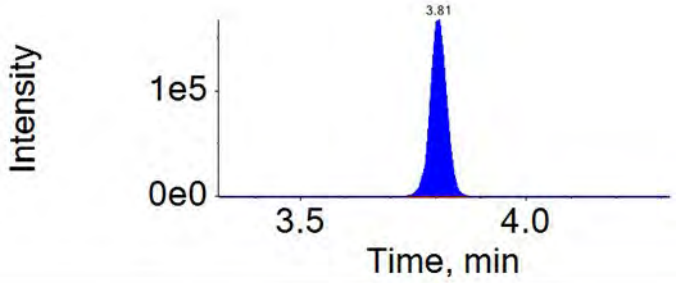
Injection Standard: 13C3-PFBA

216.0 / 172.0



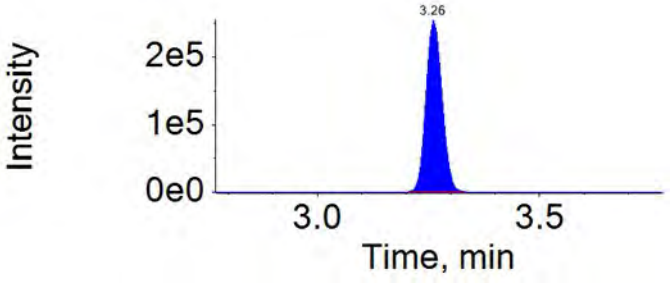
Extraction Standard: E13C3-PFBS

302.0 / 80.0



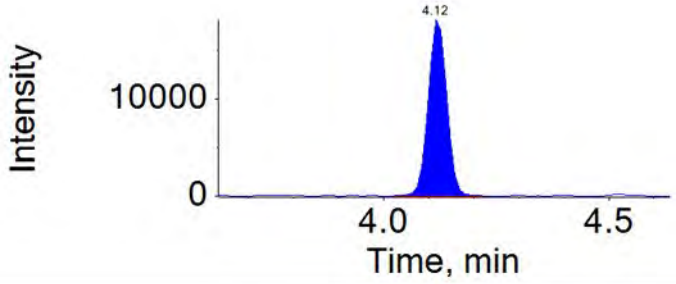
Injection Standard: 13C3-PFBA

216.0 / 172.0



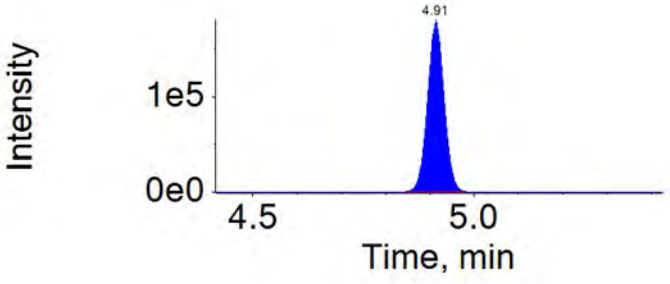
Extraction Standard: E13C2-4:2-FTS

329.0 / 81.0



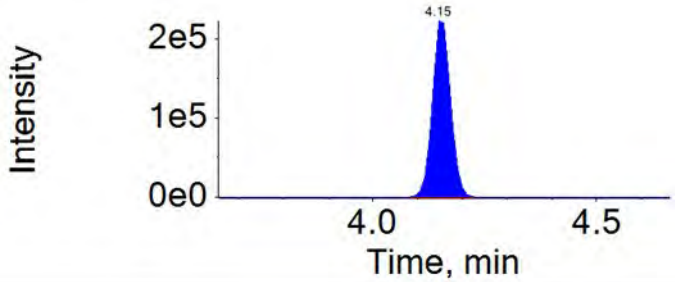
Injection Standard: 13C2-PFOA

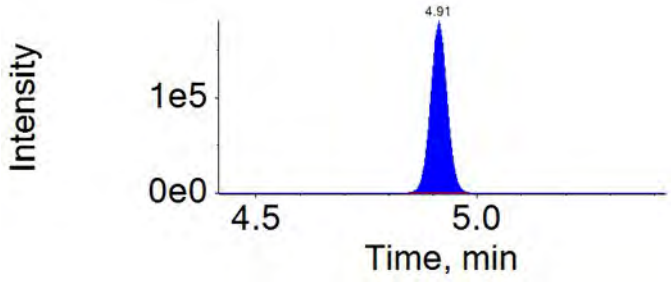
415.0 / 370.0



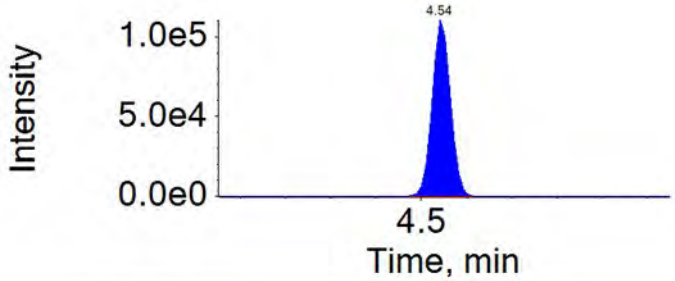
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

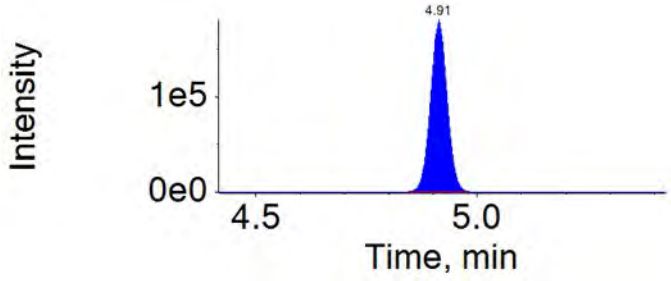
Extraction Standard: E13C5-PFHxA	Injection Standard: 13C2-PFOA
318.0 / 273.0	415.0 / 370.0



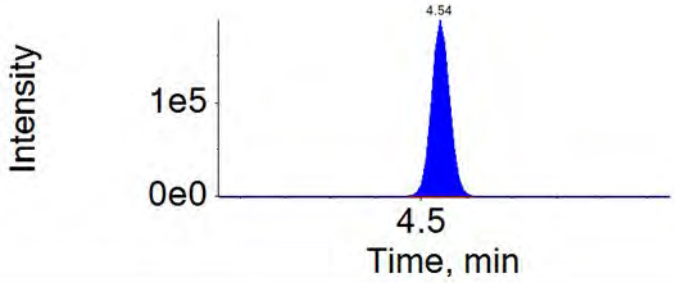


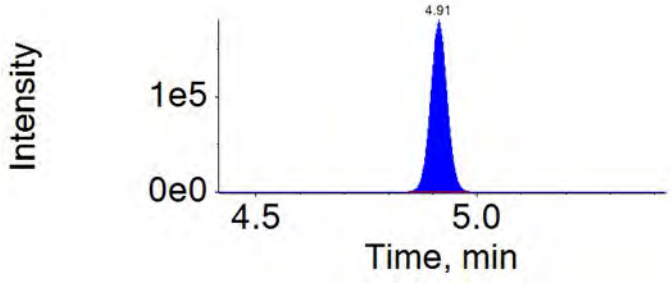
Extraction Standard: E13C3-PFHxS	Injection Standard: 13C2-PFOA
402.0 / 80.0	415.0 / 370.0



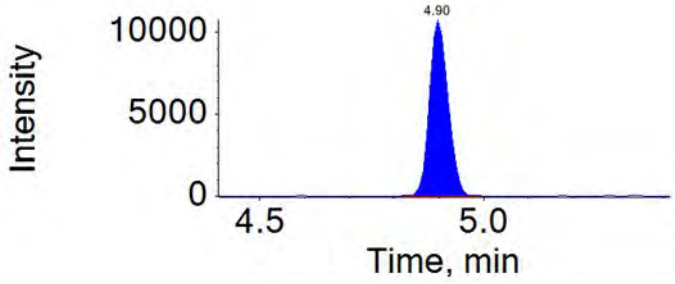


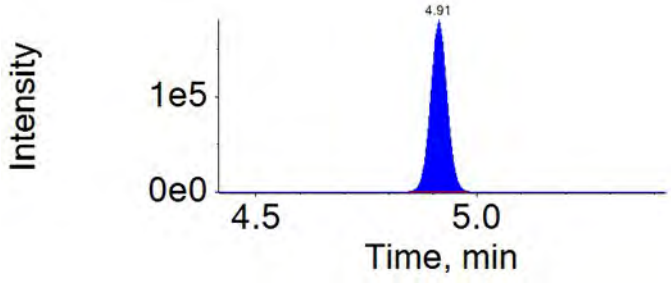
Extraction Standard: E13C4-PFHpA	Injection Standard: 13C2-PFOA
367.0 / 322.0	415.0 / 370.0





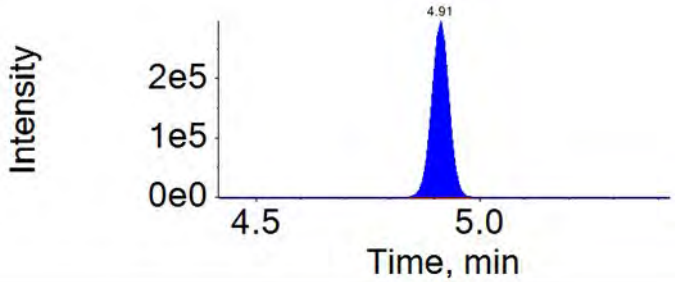
Extraction Standard: E13C2-6:2-FTS	Injection Standard: 13C2-PFOA
429.0 / 81.0	415.0 / 370.0

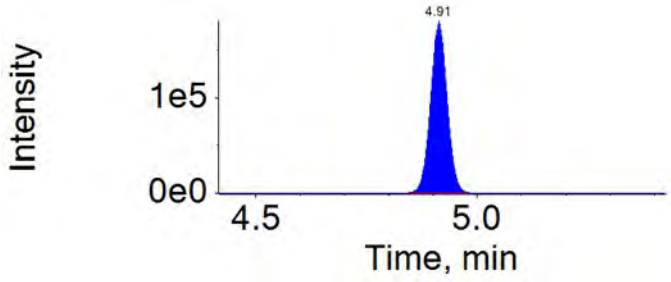




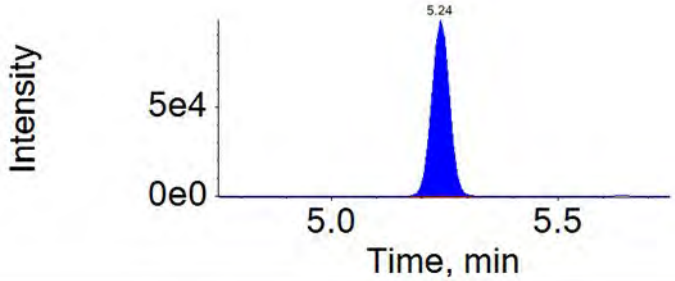
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

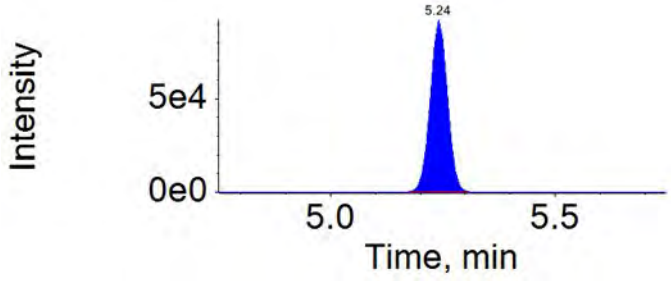
Extraction Standard: E13C8-PFOA	Injection Standard: 13C2-PFOA
421.0 / 376.0	415.0 / 370.0



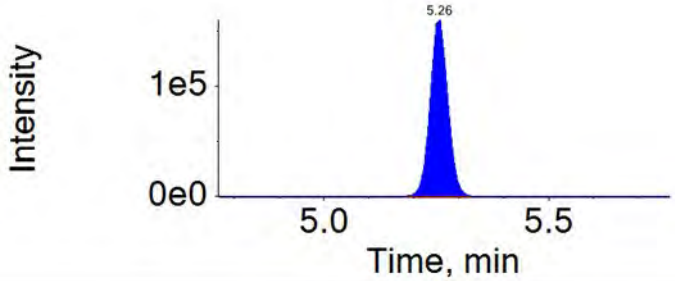


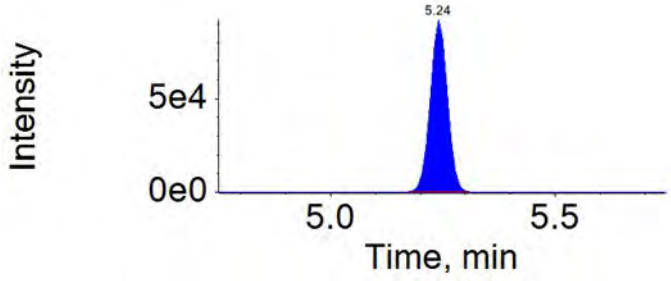
Extraction Standard: E13C8-PFOS	Injection Standard: 13C4-PFOS
507.0 / 80.0	503.0 / 80.0



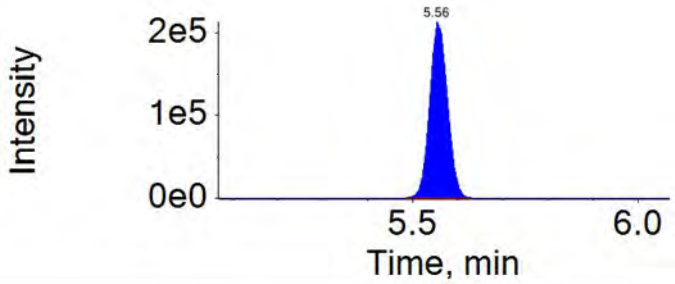


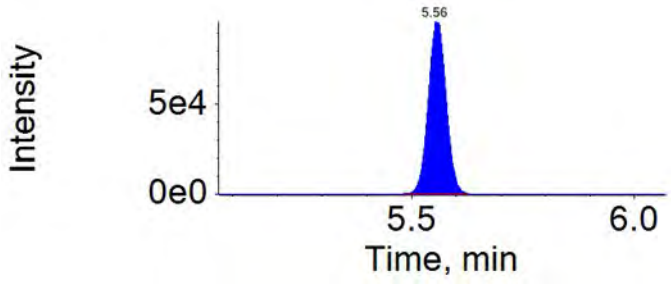
Extraction Standard: E13C9-PFNA	Injection Standard: 13C4-PFOS
472.0 / 427.0	503.0 / 80.0





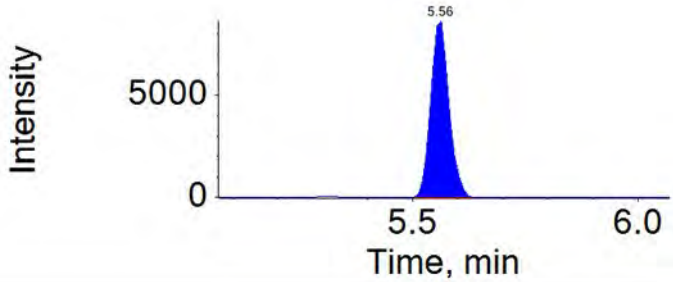
Extraction Standard: E13C6-PFDA	Injection Standard: 13C2-PFDA
519.0 / 474.0	515.0 / 470.0

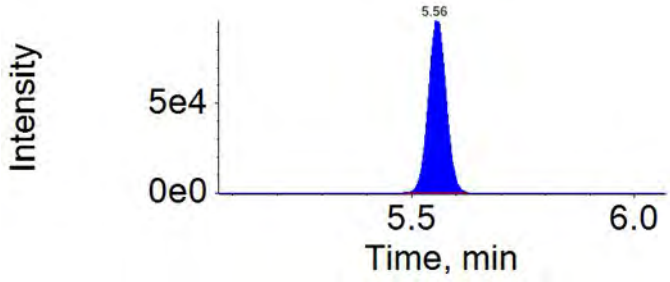




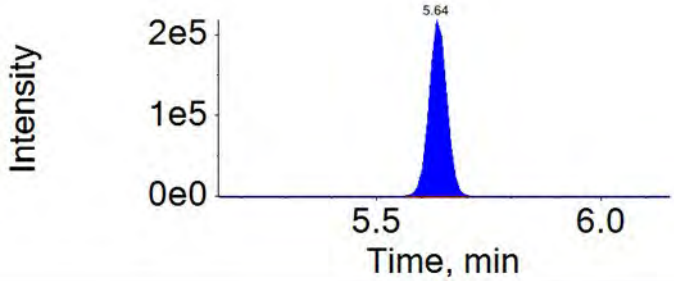
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

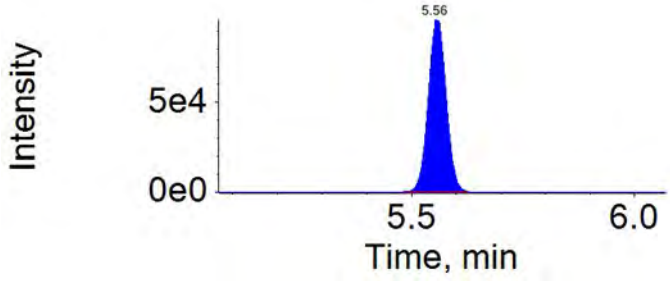
Extraction Standard: E13C2-8:2-FTS	Injection Standard: 13C2-PFDA
529.0 / 81.0	515.0 / 470.0



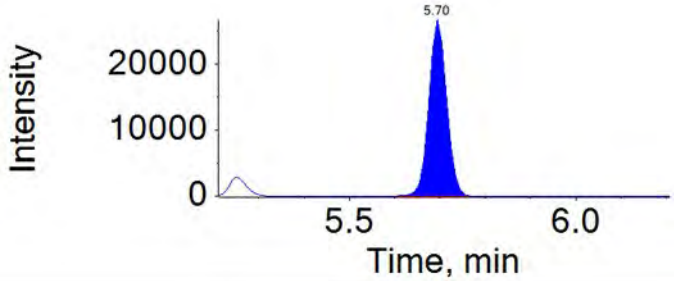


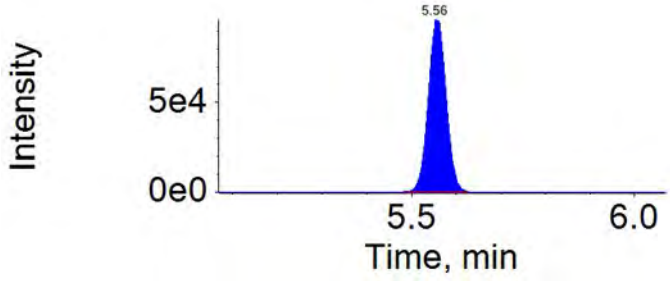
Extraction Standard: E13C8-PFOSA	Injection Standard: 13C2-PFDA
506.0 / 78.0	515.0 / 470.0



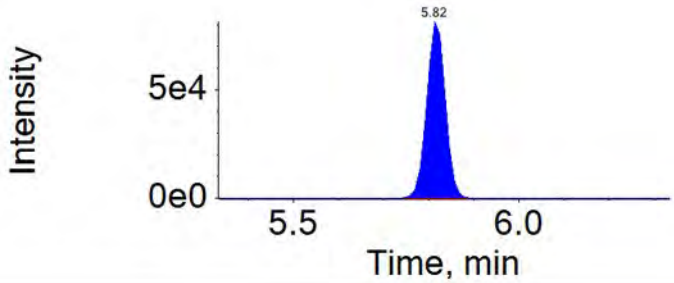


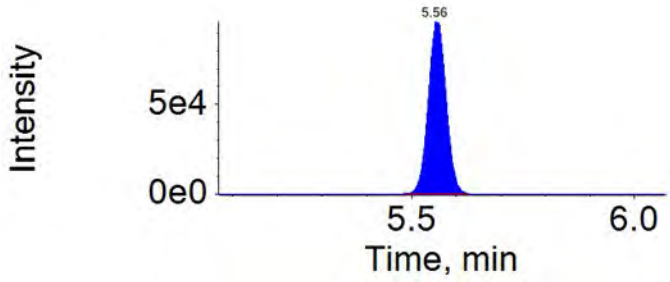
Extraction Standard: Ed3-NMeFOSAA	Injection Standard: 13C2-PFDA
573.0 / 419.0	515.0 / 470.0





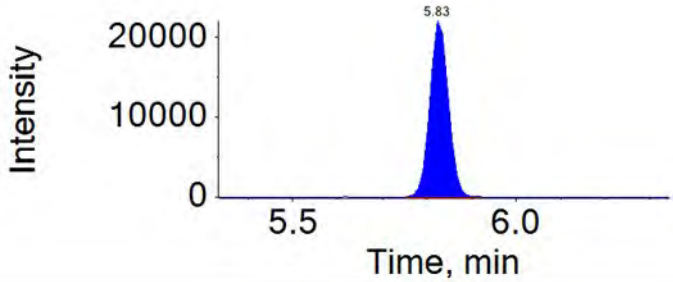
Extraction Standard: E13C7-PFUnDA	Injection Standard: 13C2-PFDA
570.0 / 525.0	515.0 / 470.0

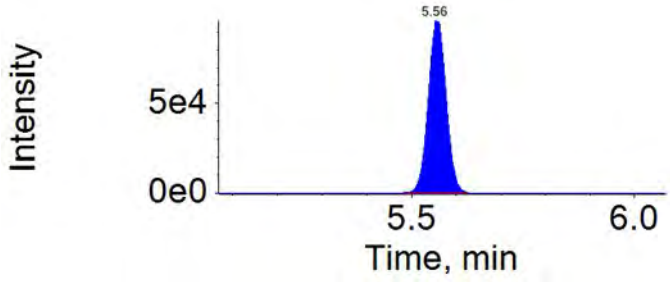




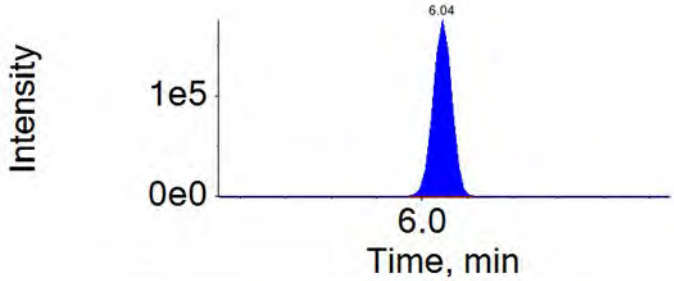
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

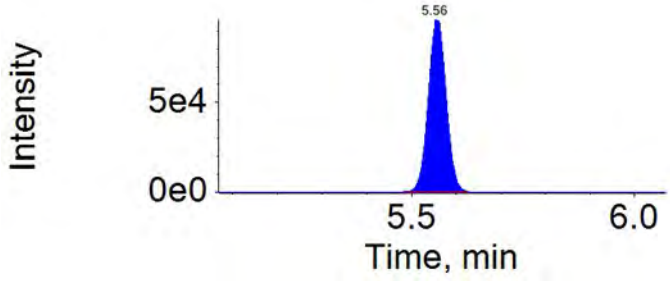
Extraction Standard: Ed5-NEtFOSAA	Injection Standard: 13C2-PFDA
589.0 / 419.0	515.0 / 470.0



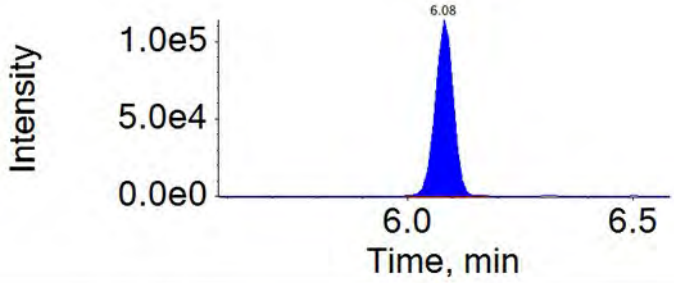


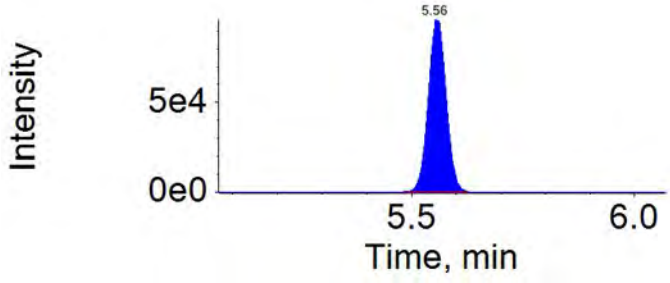
Extraction Standard: E13C2-PFDoDA	Injection Standard: 13C2-PFDA
615.0 / 570.0	515.0 / 470.0



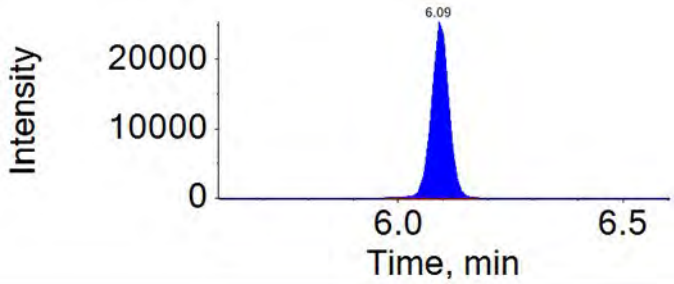


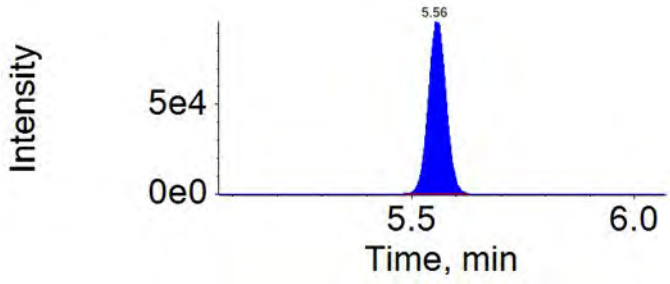
Extraction Standard: Ed7-NMePFOSAE	Injection Standard: 13C2-PFDA
623.0 / 59.0	515.0 / 470.0





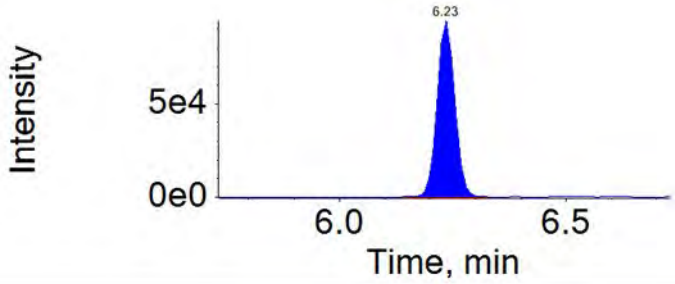
Extraction Standard: Ed3-NMePFOSA	Injection Standard: 13C2-PFDA
515.0 / 169.0	515.0 / 470.0

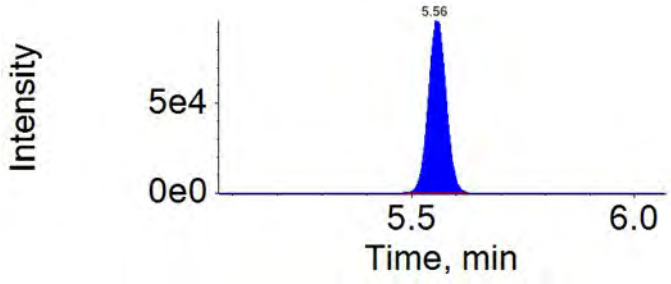




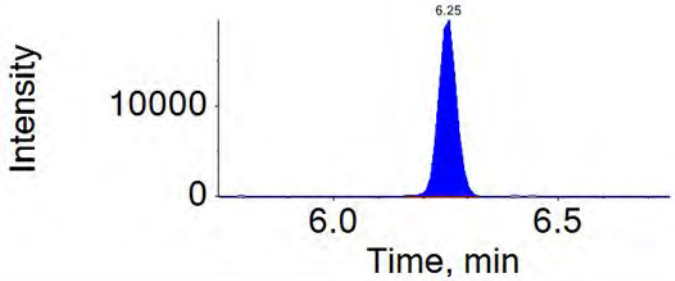
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

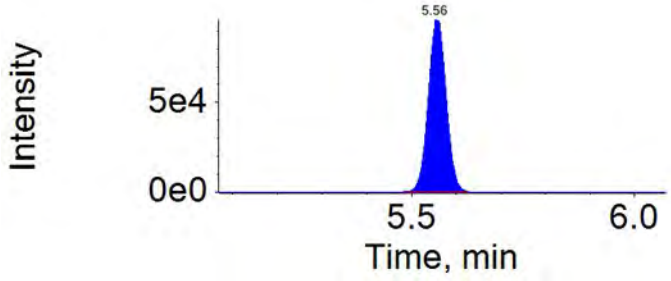
Extraction Standard: Ed9-NEtPFOSAE	Injection Standard: 13C2-PFDA
639.0 / 59.0	515.0 / 470.0



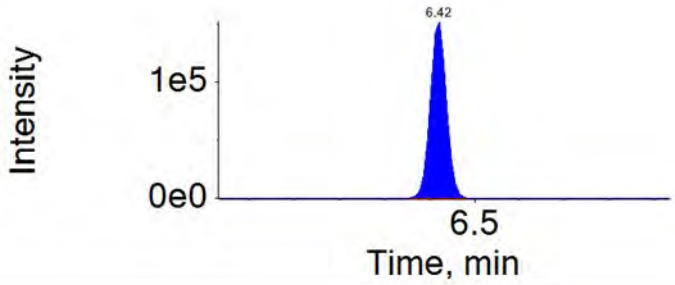


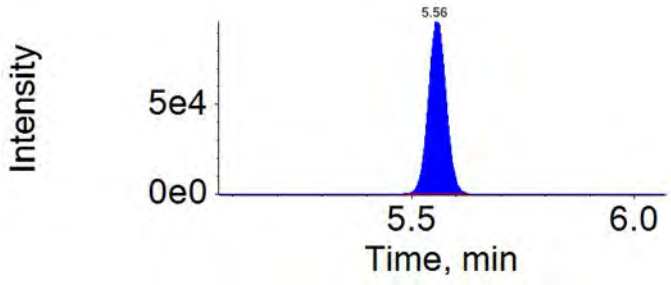
Extraction Standard: Ed5-NEtPFOSA	Injection Standard: 13C2-PFDA
531.0 / 169.0	515.0 / 470.0





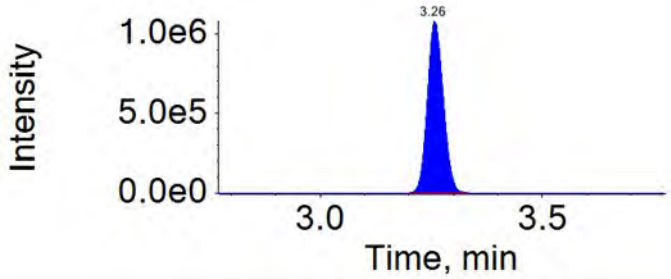
Extraction Standard: E13C2-PFTeDA	Injection Standard: 13C2-PFDA
715.0 / 670.0	515.0 / 470.0



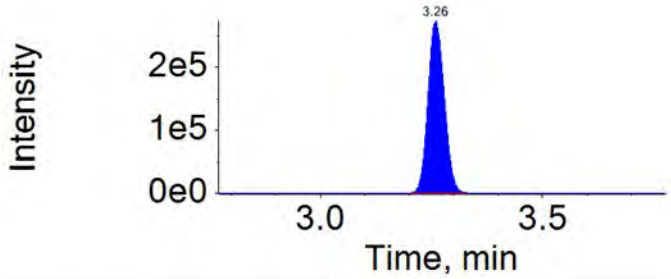


ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

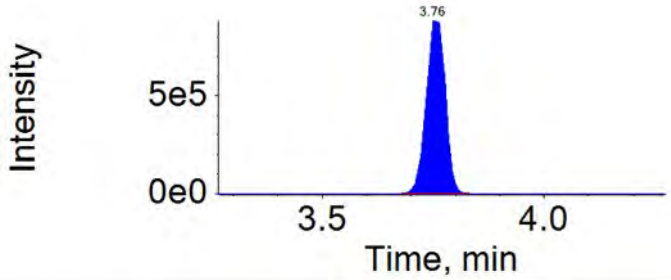
Analyte: PFBA
213.0 / 169.0



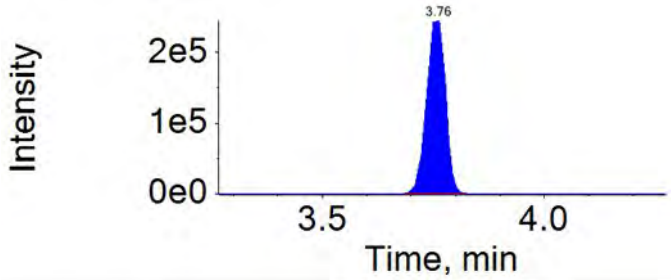
Extraction Standard: 13C4-PFBA
217.0 / 172.0



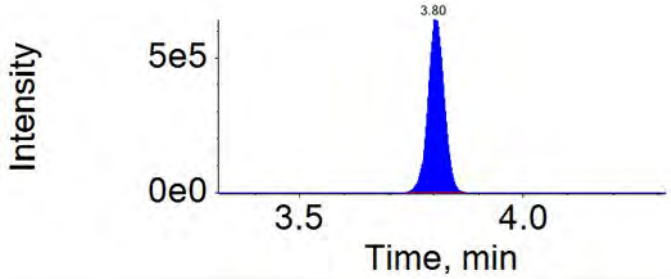
Analyte: PFPeA
263.0 / 219.0



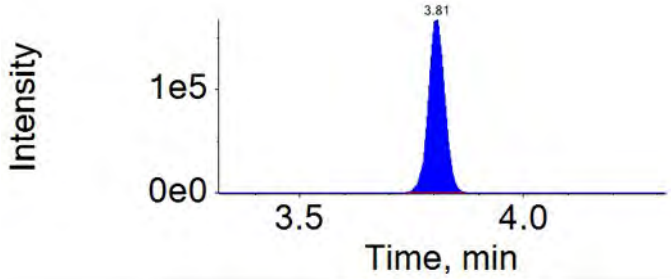
Extraction Standard: 13C5-PFPeA
268.0 / 223.0



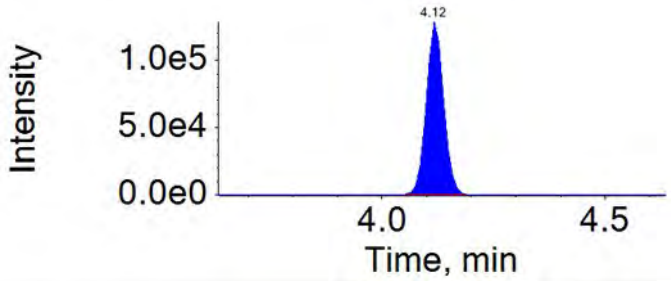
Analyte: PFBS
299.0 / 80.0



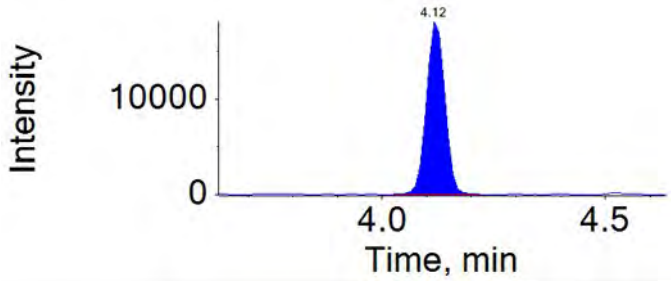
Extraction Standard: 13C3-PFBS
302.0 / 80.0



Analyte: 4:2-FTS
327.0 / 307.0



Extraction Standard: 13C2-4:2-FTS
329.0 / 81.0

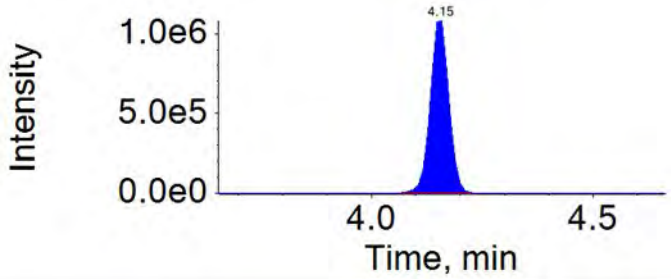


APPROVED
By MCD at 6:33 pm, 11/12/18

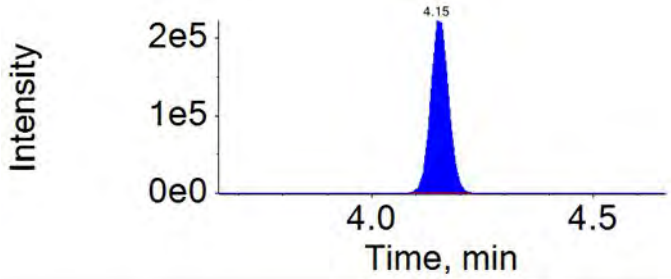
REVIEWED
By HMK at 10:53 am, 11/13/18

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

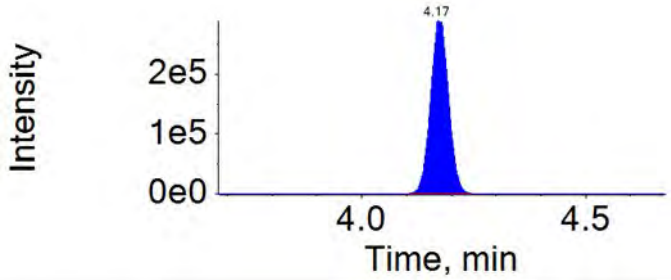
Analyte: PFHxA
313.0 / 269.0



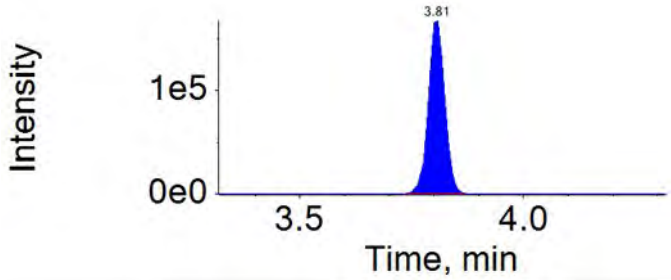
Extraction Standard: 13C5-PFHxA
318.0 / 273.0



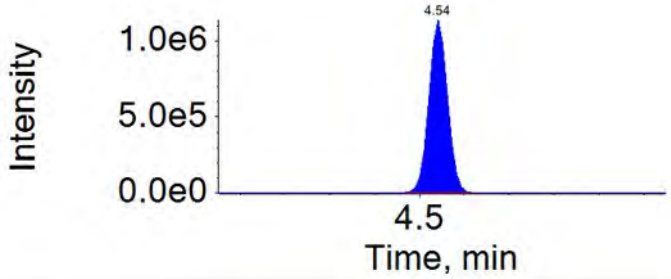
Analyte: PFPeS
349.0 / 80.0



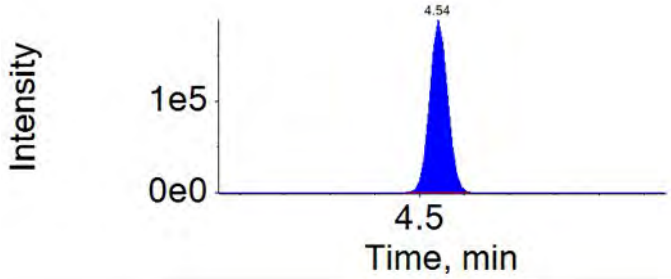
Extraction Standard: 13C3-PFBS
302.0 / 80.0



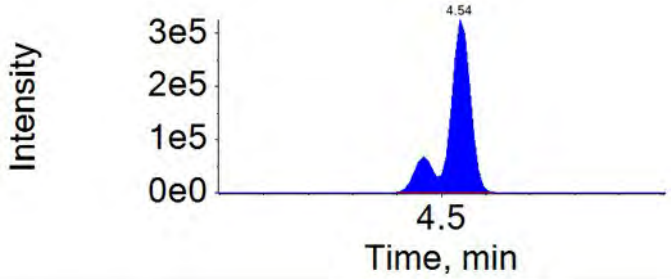
Analyte: PFHpA
363.0 / 319.0



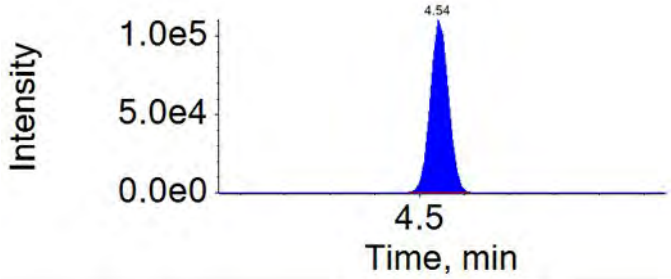
Extraction Standard: 13C4-PFHpA
367.0 / 322.0



Analyte: PFHxS
399.0 / 80.0



Extraction Standard: 13C3-PFHxS
402.0 / 80.0

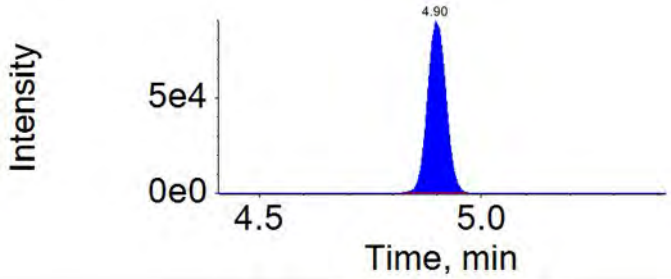


APPROVED
By MCD at 6:33 pm, 11/12/18

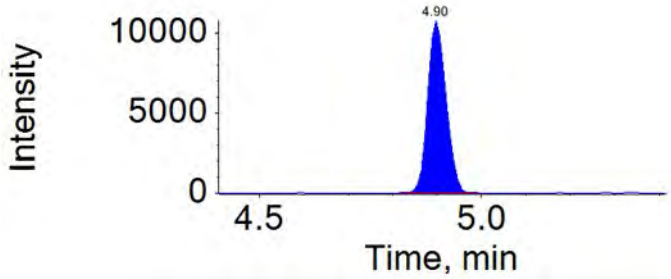
REVIEWED
By HMK at 10:53 am, 11/13/18

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

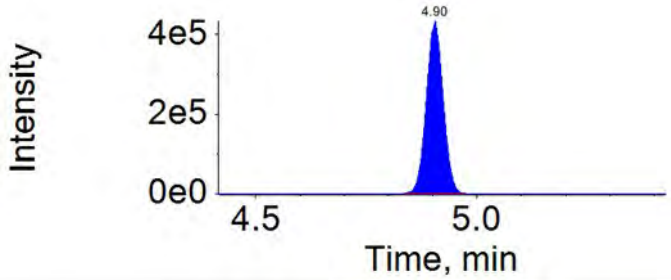
Analyte: 6:2-FTS
427.0 / 407.0



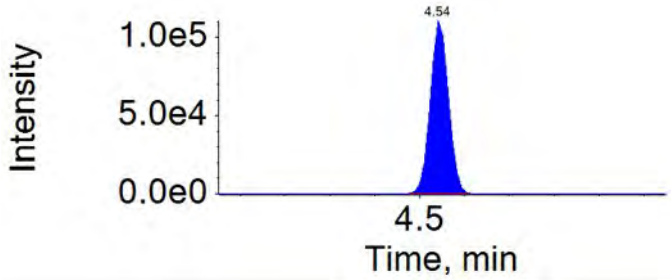
Extraction Standard: 13C2-6:2-FTS
429.0 / 81.0



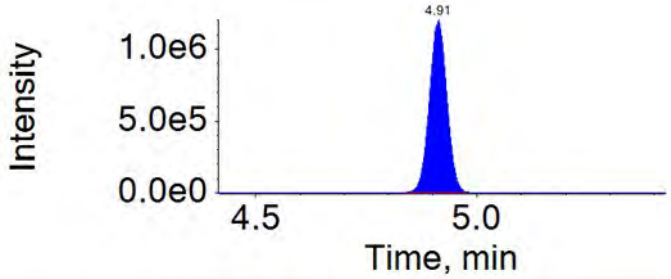
Analyte: PFHpS
449.0 / 80.0



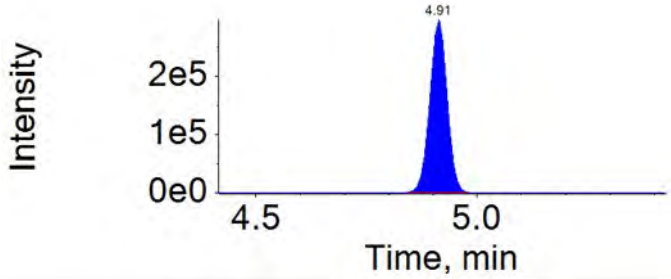
Extraction Standard: 13C3-PFHxS
402.0 / 80.0



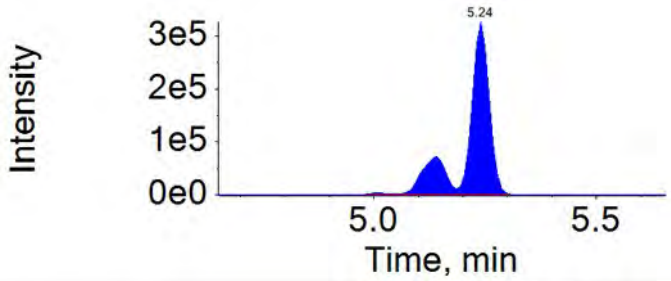
Analyte: PFOA
413.0 / 369.0



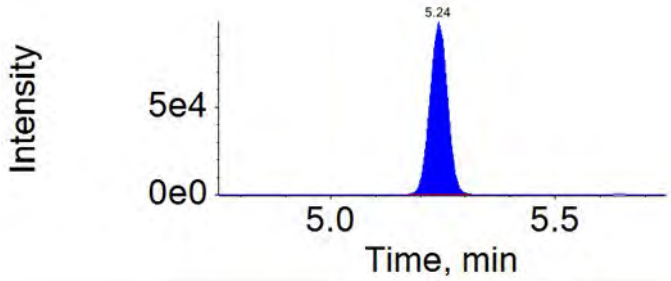
Extraction Standard: 13C8-PFOA
421.0 / 376.0



Analyte: PFOS
499.0 / 80.0



Extraction Standard: 13C8-PFOS
507.0 / 80.0

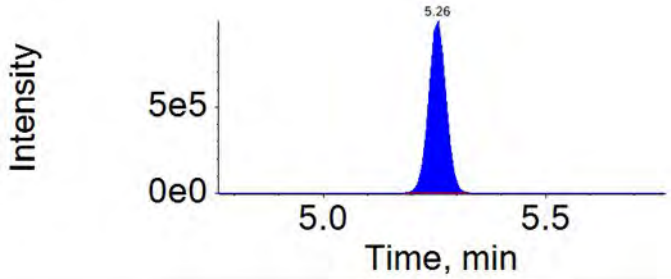


APPROVED
By MCD at 6:33 pm, 11/12/18

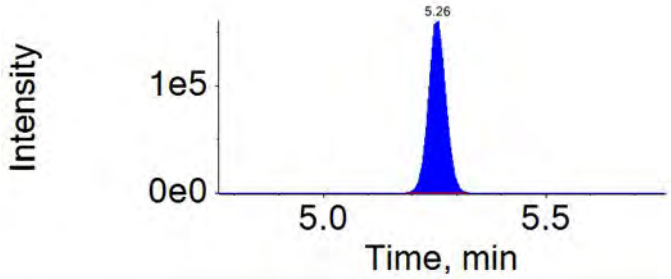
REVIEWED
By HMK at 10:53 am, 11/13/18

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

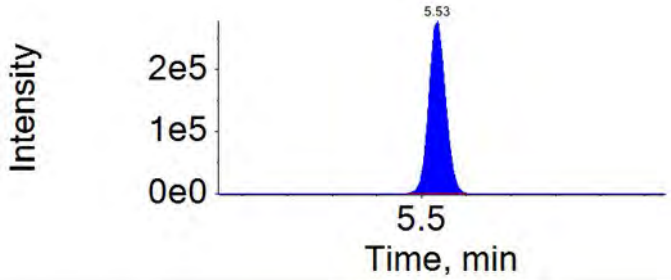
Analyte: PFNA
463.0 / 419.0



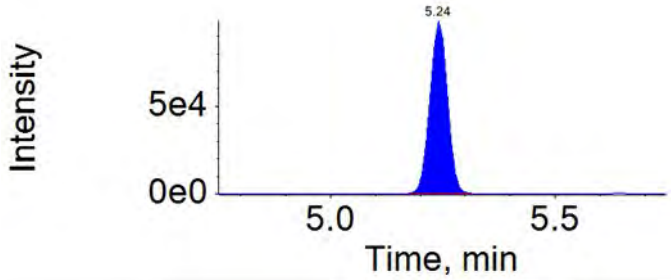
Extraction Standard: 13C9-PFNA
472.0 / 427.0



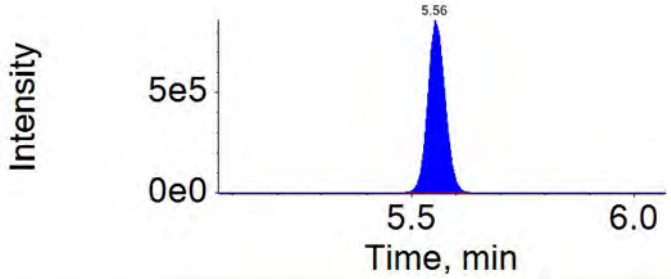
Analyte: PFNS
549.0 / 80.0



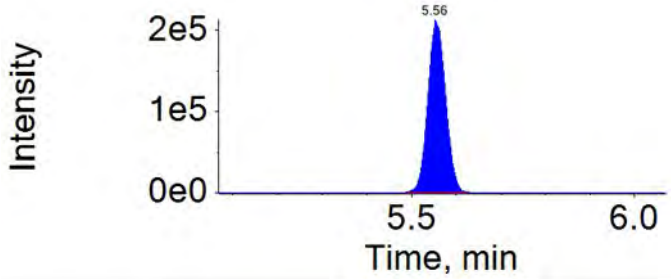
Extraction Standard: 13C8-PFOS
507.0 / 80.0



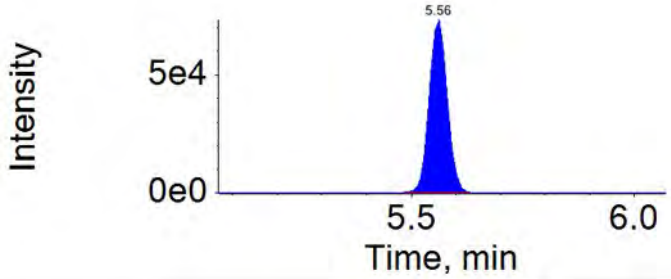
Analyte: PFDA
513.0 / 469.0



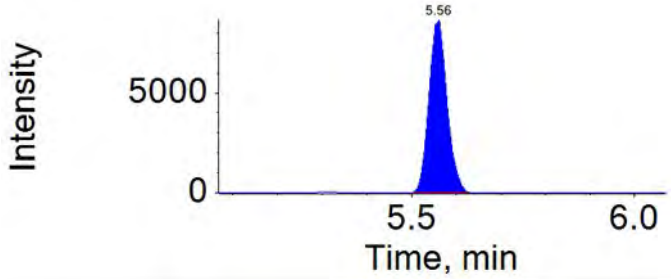
Extraction Standard: 13C6-PFDA
519.0 / 474.0



Analyte: 8:2-FTS
527.0 / 507.0



Extraction Standard: 13C2-8:2-FTS
529.0 / 81.0

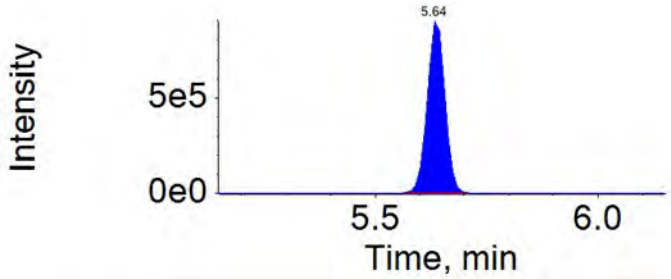


APPROVED
By MCD at 6:33 pm, 11/12/18

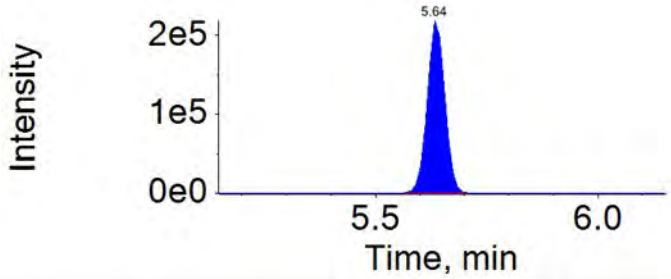
REVIEWED
By HMK at 10:53 am, 11/13/18

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

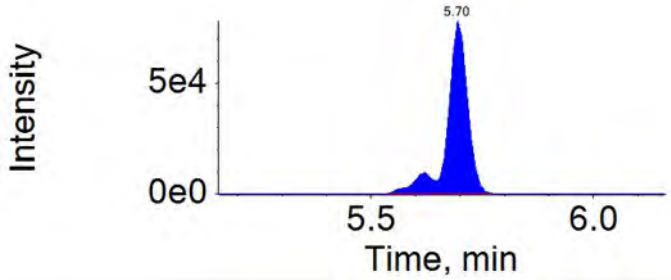
Analyte: PFOSA
498.0 / 78.0



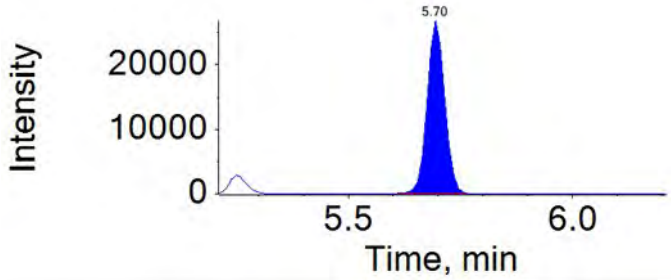
Extraction Standard: 13C8-PFOSA
506.0 / 78.0



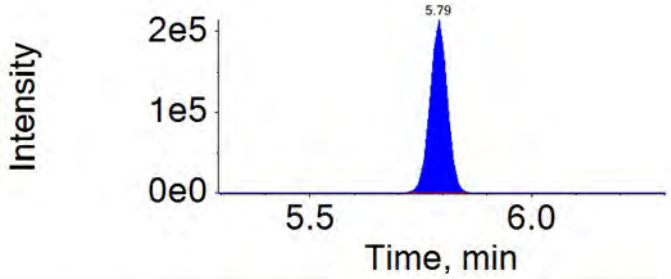
Analyte: NMeFOSAA
570.0 / 419.0



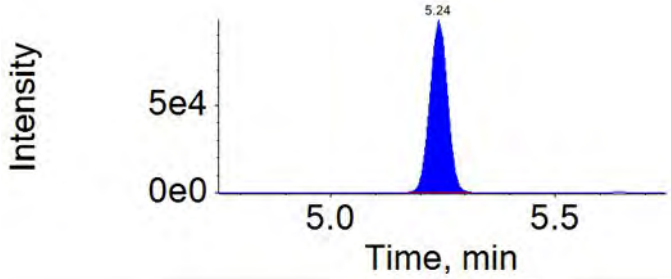
Extraction Standard: d3-NMeFOSAA
573.0 / 419.0



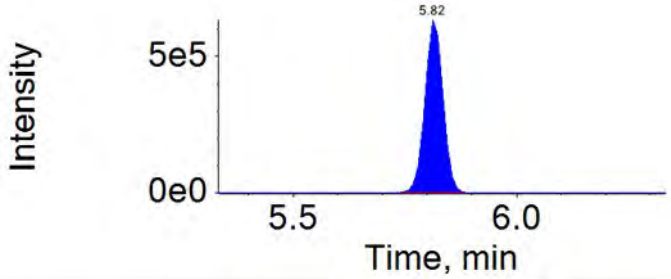
Analyte: PFDS
599.0 / 80.0



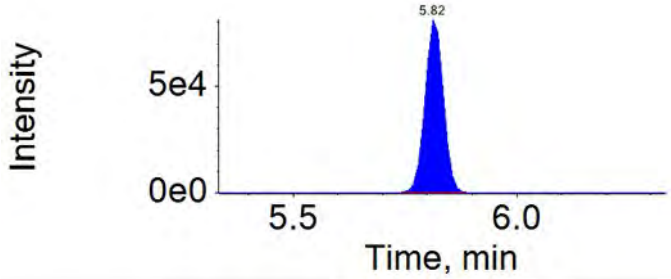
Extraction Standard: 13C8-PFOS
507.0 / 80.0



Analyte: PFUnDA
563.0 / 519.0



Extraction Standard: 13C7-PFUnDA
570.0 / 525.0

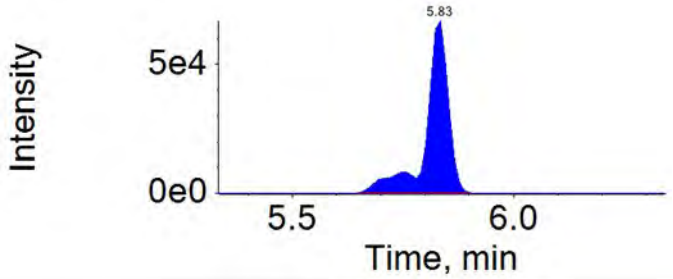


APPROVED
By MCD at 6:33 pm, 11/12/18

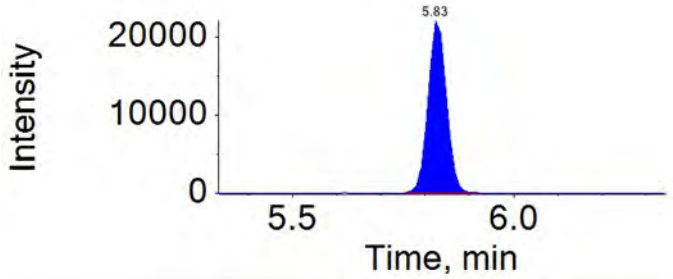
REVIEWED
By HMK at 10:53 am, 11/13/18

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

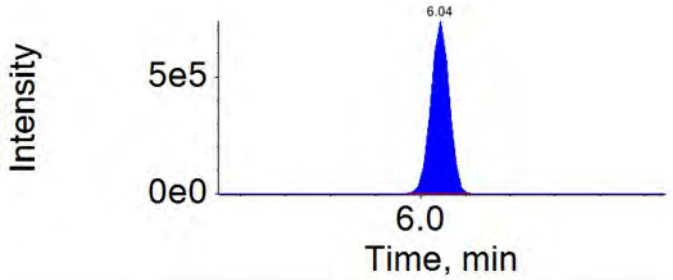
Analyte: NEtFOSAA
584.0 / 419.0



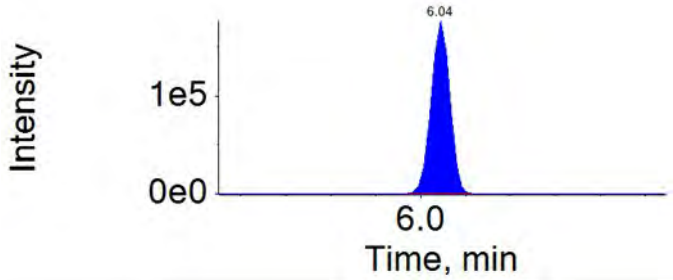
Extraction Standard: d5-NEtFOSAA
589.0 / 419.0



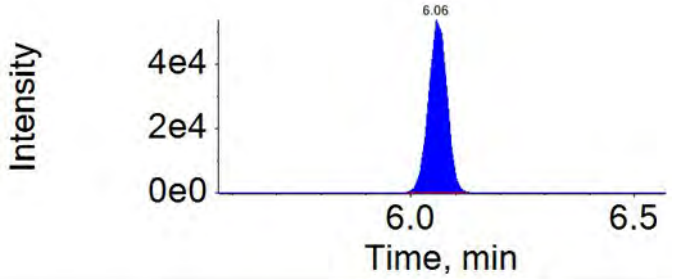
Analyte: PFDoDA
613.0 / 569.0



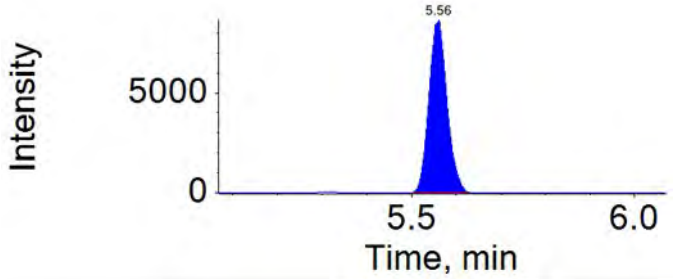
Extraction Standard: 13C2-PFDoDA
615.0 / 570.0



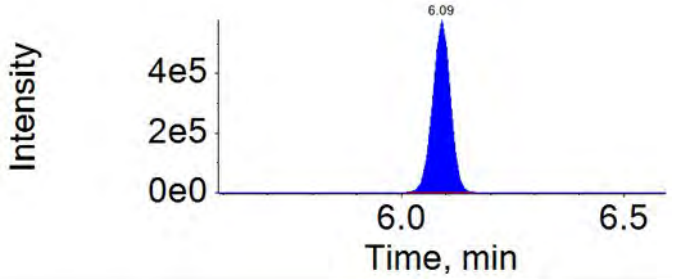
Analyte: 10:2-FTS
627.0 / 607.0



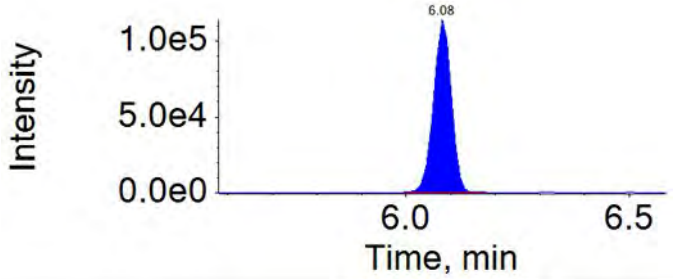
Extraction Standard: 13C2-8:2-FTS
529.0 / 81.0



Analyte: NMePFOSAE
616.0 / 59.0



Extraction Standard: d7-NMePFOSAE
623.0 / 59.0

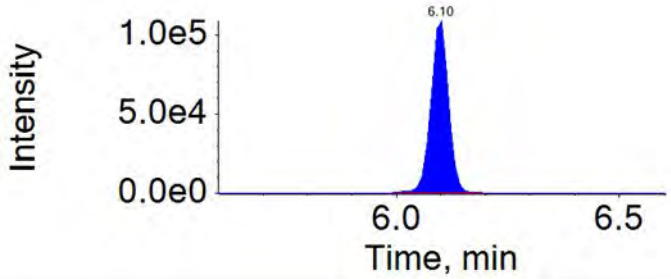


APPROVED
By MCD at 6:33 pm, 11/12/18

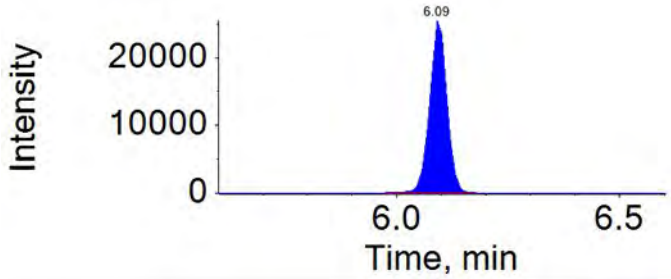
REVIEWED
By HMK at 10:53 am, 11/13/18

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

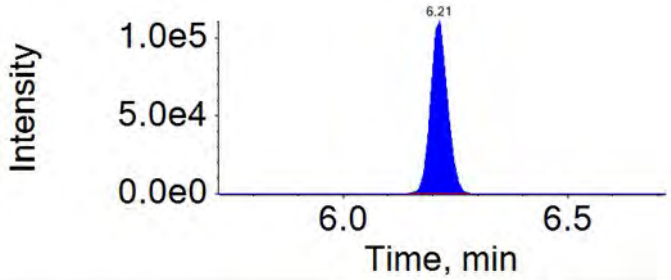
Analyte: NMePFOSA
512.0 / 169.0



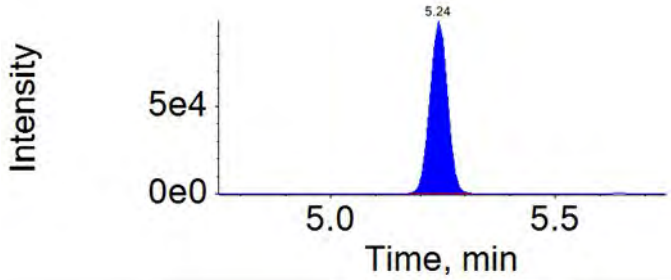
Extraction Standard: d3-NMePFOSA
515.0 / 169.0



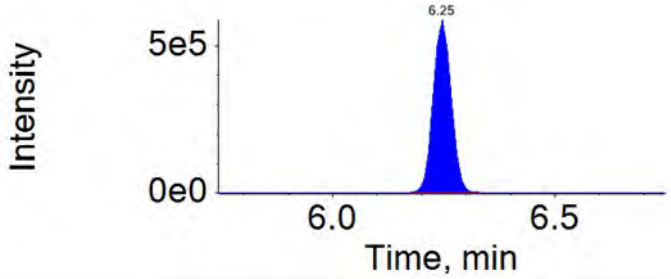
Analyte: PFDoS
699.0 / 80.0



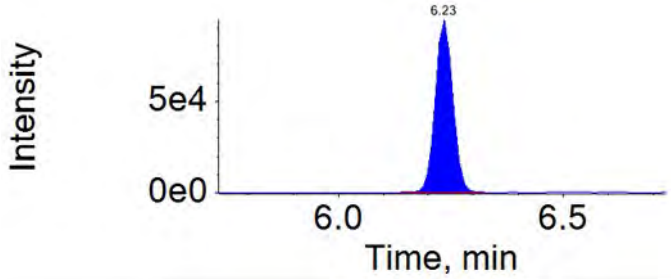
Extraction Standard: 13C8-PFOS
507.0 / 80.0



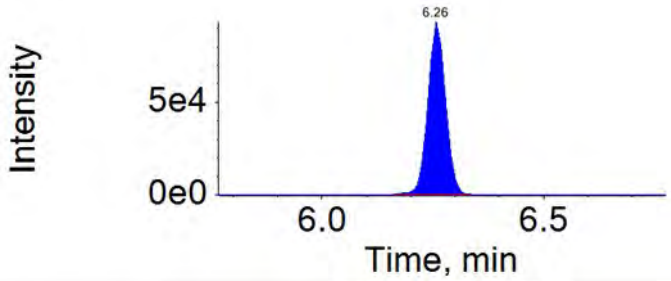
Analyte: NEtPFOSAE
630.0 / 59.0



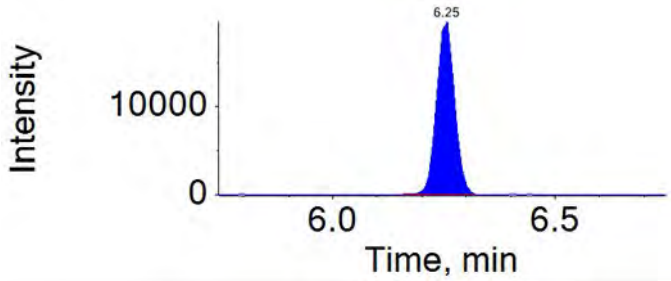
Extraction Standard: d9-NEtPFOSAE
639.0 / 59.0



Analyte: NEtPFOSA
526.0 / 169.0



Extraction Standard: d5-NEtPFOSA
531.0 / 169.0

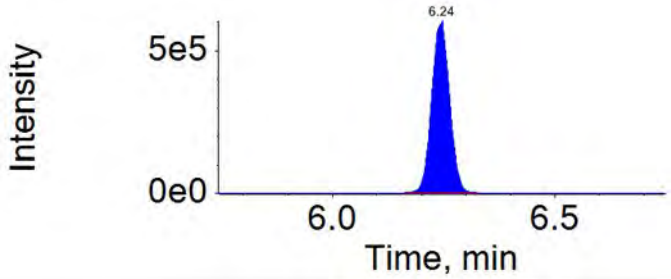


APPROVED
By MCD at 6:33 pm, 11/12/18

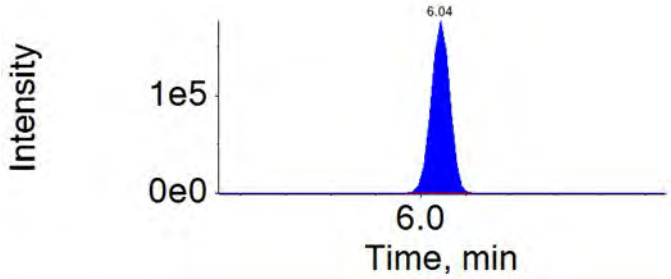
REVIEWED
By HMK at 10:53 am, 11/13/18

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

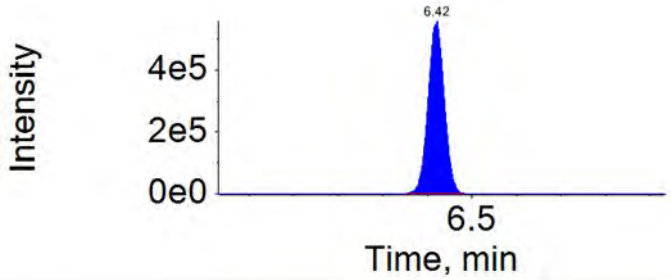
Analyte: PFTrDA
663.0 / 619.0



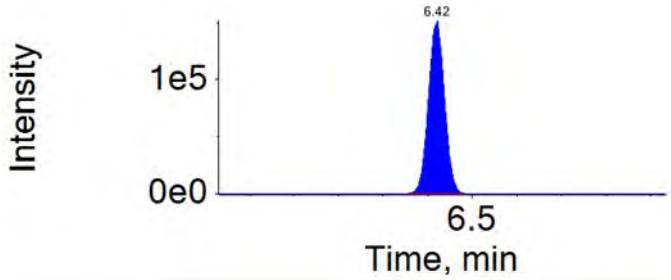
Extraction Standard: 13C2-PFDoDA
615.0 / 570.0



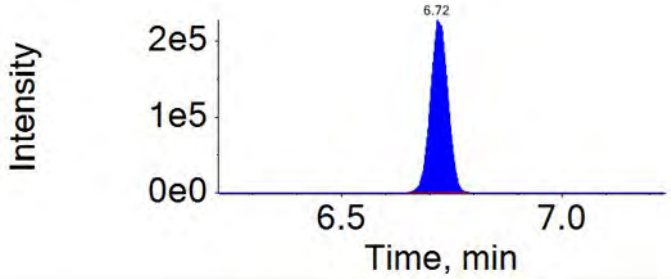
Analyte: PFTeDA
713.0 / 669.0



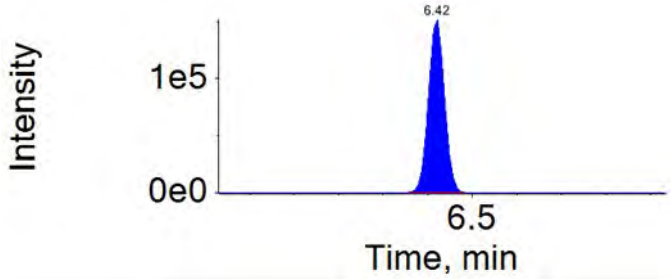
Extraction Standard: 13C2-PFTeDA
715.0 / 670.0



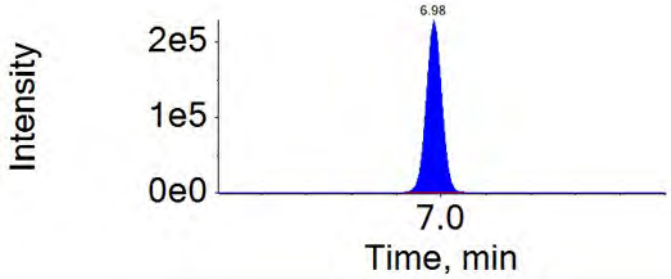
Analyte: PFHxDA
813.0 / 769.0



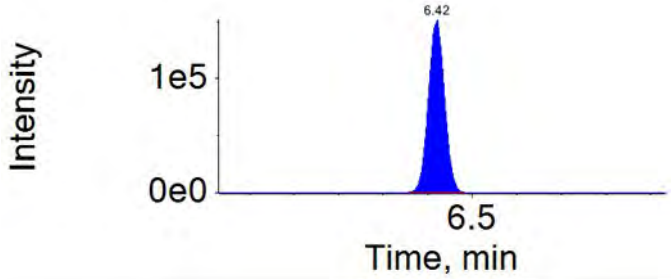
Extraction Standard: 13C2-PFTeDA
715.0 / 670.0



Analyte: PFODA
913.0 / 869.0



Extraction Standard: 13C2-PFTeDA
715.0 / 670.0



APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

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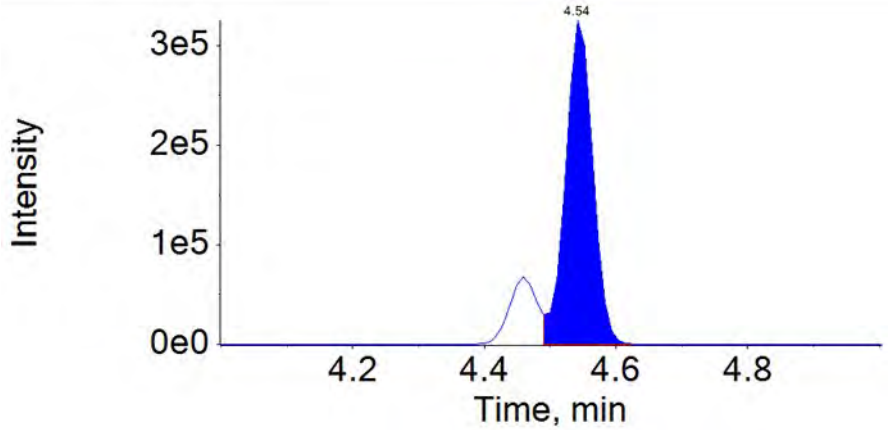
Auto Integrations prior to Manual Integration

Print Date: 11/12/2018 6:26 PM
Template: MQ-OrigInteg-16NOV21.docx

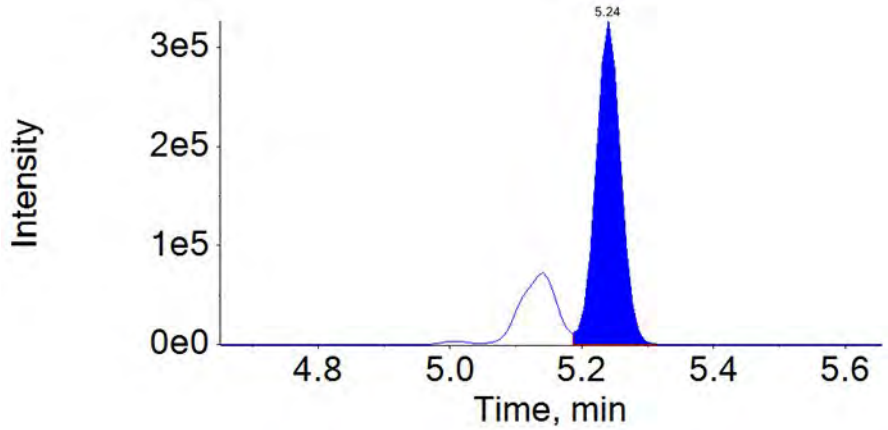
Results Table Name: 18NOV12DCAL
Results Table Date: 11/12/2018 6:23:42 PM
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

Component Name:
PFHxS
RT (min.):
4.54
Peak Area:
943687.14
Mass Range:
399.0 / 80.0
File Name:
18NOV12DCAL-46.wiff
Sample Name:
CAL5



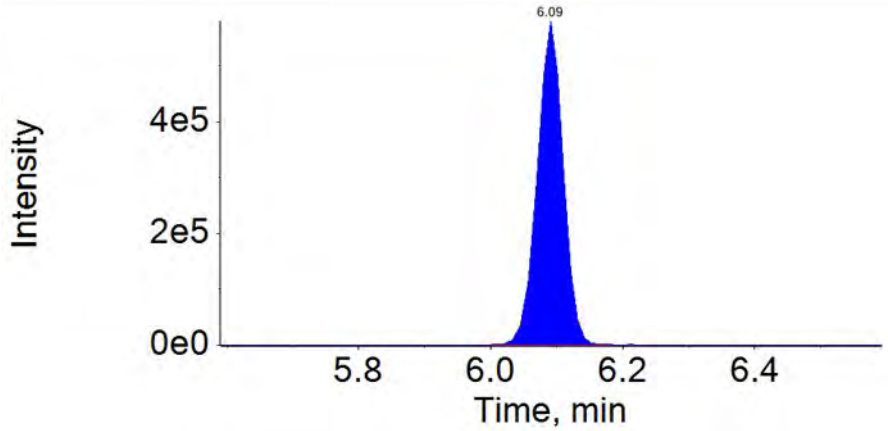
Integration Comment: incorrect integration

Component Name:
PFOS
RT (min.):
5.24
Peak Area:
860586.56
Mass Range:
499.0 / 80.0
File Name:
18NOV12DCAL-46.wiff
Sample Name:
CAL5



Integration Comment: incorrect integration

Component Name:
NMePFOSAE
RT (min.):
6.09
Peak Area:
1591493.63
Mass Range:
616.0 / 59.0
File Name:
18NOV12DCAL-46.wiff
Sample Name:
CAL5



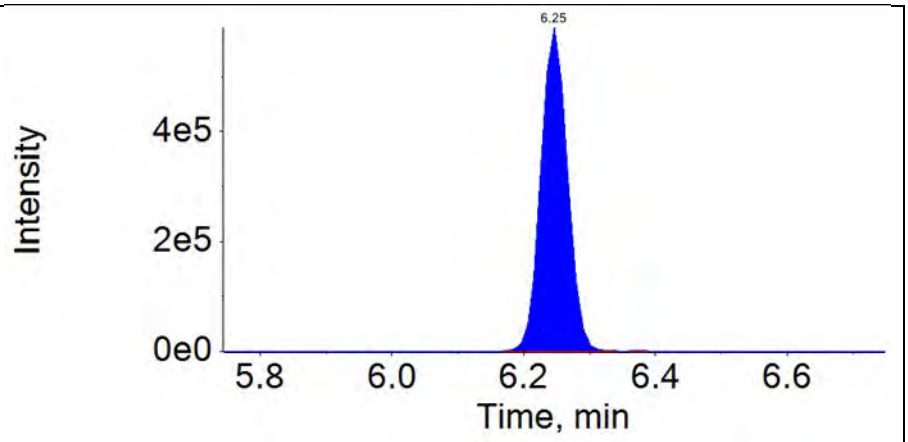
Integration Comment: incorrect integration

APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

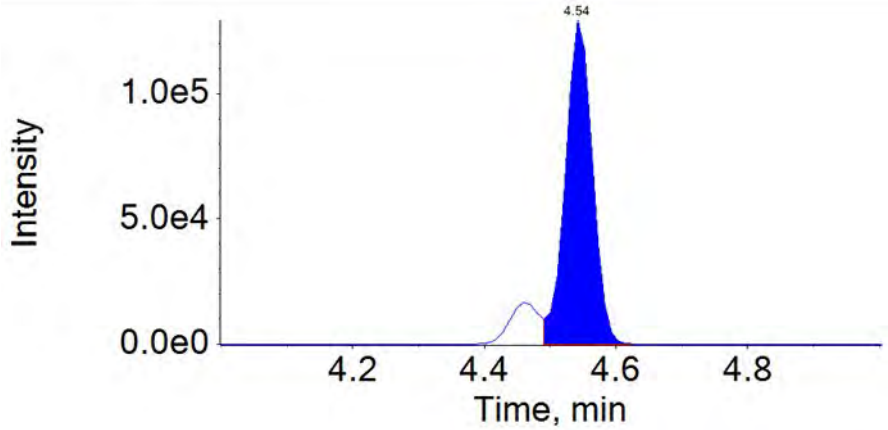
Results Table Name: 18NOV12DCAL
Results Table Date: 11/12/2018 6:23:42 PM
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

Component Name:
NEtPFOSAE
RT (min.):
6.25
Peak Area:
1662069.44
Mass Range:
630.0 / 59.0
File Name:
18NOV12DCAL-46.wiff
Sample Name:
CAL5



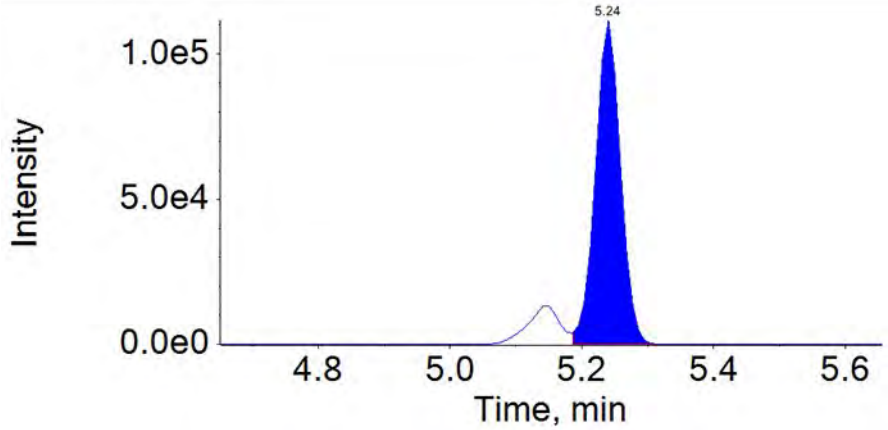
Integration Comment: incorrect integration

Component Name:
PFHxS_2
RT (min.):
4.54
Peak Area:
369522.57
Mass Range:
399.0 / 99.0
File Name:
18NOV12DCAL-46.wiff
Sample Name:
CAL5



Integration Comment: incorrect integration

Component Name:
PFOS_2
RT (min.):
5.24
Peak Area:
295251.82
Mass Range:
499.0 / 99.0
File Name:
18NOV12DCAL-46.wiff
Sample Name:
CAL5



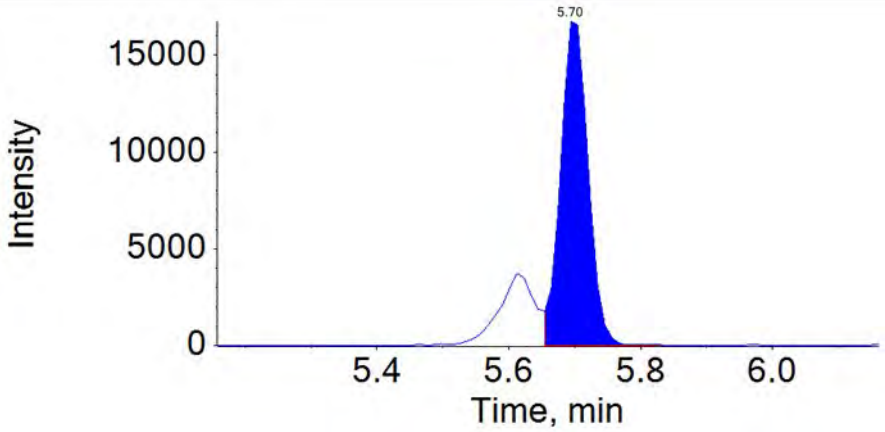
Integration Comment: incorrect integration

APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

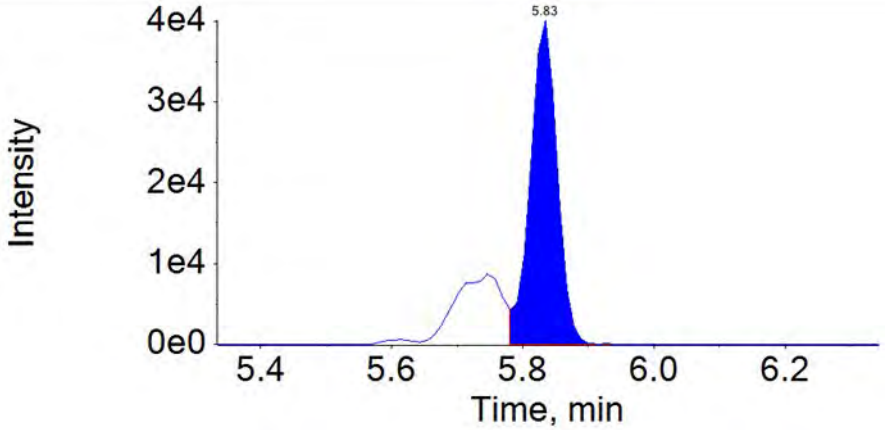
Results Table Name: 18NOV12DCAL
Results Table Date: 11/12/2018 6:23:42 PM
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

Component Name:
NMeFOSAA_2
RT (min.):
5.70
Peak Area:
48911.60
Mass Range:
570.0 / 483.0
File Name:
18NOV12DCAL-46.wiff
Sample Name:
CAL5



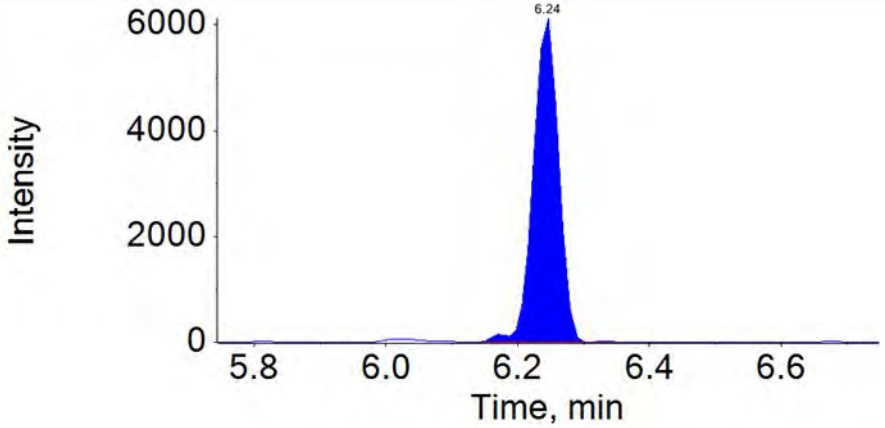
Integration Comment: incorrect integration

Component Name:
NEtFOSAA_2
RT (min.):
5.83
Peak Area:
114677.93
Mass Range:
584.0 / 526.0
File Name:
18NOV12DCAL-46.wiff
Sample Name:
CAL5



Integration Comment: incorrect integration

Component Name:
PFTrDA_2
RT (min.):
6.24
Peak Area:
16434.79
Mass Range:
663.0 / 169.0
File Name:
18NOV12DCAL-46.wiff
Sample Name:
CAL5



Integration Comment: incorrect integration

APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

Results Table Name: 18NOV12DCAL
Results Table Date: 11/12/2018 6:23:42 PM

Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

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LC-MS/MS Analysis Report

Printed: 11/12/2018 6:22:00 PM
Template: IonRatio18OCT10

Ion Ratio Report

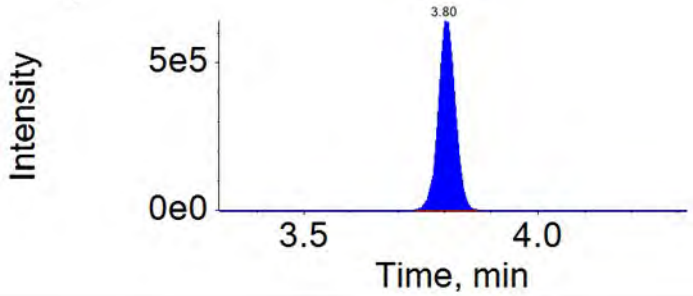
Sample Name: CAL5 **Instrument Name:** LM27631 **File Name:** 18NOV12DCAL-46.wiff

Component Name	RT	RRT	Analyte Area Response	Int Typ	Expected Ion Ratio	Ion Ratio	Ion Ratio % Diff	Ion Ratio Limit	Ion Ratio OOS
PFBS	3.80	1.00	1630613.49	A	0.3619	0.3539			
PFBS_2	3.80	1.00	577021.23	A	0.3619	0.3539	-2	50	
4:2-FTS	4.12	1.00	344695.89	A	0.6730	0.5792			
4:2 FTS_2	4.12	1.00	199643.08	A	0.6730	0.5792		#NA!	
PFHxA	4.15	1.00	3158486.41	A	0.0117	0.0109			
PFHxA_2	4.15	1.00	34335.08	A	0.0117	0.0109	-7	50	
PFPeS	4.17	1.10	815928.18	A	0.5191	0.5405			
PFPeS_2	4.17	1.10	440987.79	A	0.5191	0.5405	4	50	
PFHpA	4.54	1.00	3269561.01	A	0.0563	0.0518			
PFHpA_2	4.54	1.00	169510.99	A	0.0563	0.0518	-8	50	
PFHxS	4.54	1.00	1138604.25	M	0.3428	0.3697			
PFHxS_2	4.54	1.00	420898.36	M	0.3428	0.3697	8	50	
6:2-FTS	4.90	1.00	260254.34	A	0.6604	0.6706			
6:2 FTS_2	4.90	1.00	174514.29	A	0.6604	0.6706		#NA!	
PFHpS	4.90	1.08	1145559.80	A	0.4066	0.4043			
PFHpS_2	4.90	1.08	463097.70	A	0.4066	0.4043	-1	50	
PFOA	4.91	1.00	3291549.40	A	0.0562	0.0563			
PFOA_2	4.91	1.00	185238.19	A	0.0562	0.0563	0	50	
PFOS	5.24	1.00	1147826.77	M	0.2968	0.2969			
PFOS_2	5.24	1.00	340771.88	M	0.2968	0.2969	0	50	
PFNA	5.26	1.00	2725089.71	A	0.0229	0.0218			
PFNA_2	5.26	1.00	59324.51	A	0.0229	0.0218	-5	50	
PFNS	5.53	1.06	725402.00	A	0.4828	0.4661			
PFNS_2	5.53	1.06	338109.67	A	0.4828	0.4661	-3	50	
PFDA	5.56	1.00	2309359.54	A	0.0081	0.0056			
PFDA_2	5.56	1.00	12923.91	A	0.0081	0.0056	-31	50	
8:2-FTS	5.56	1.00	206213.12	A	0.6814	0.6384			
8:2 FTS_2	5.56	1.00	131655.86	A	0.6814	0.6384		#NA!	
NMeFOSAA	5.70	1.00	250711.49	A	0.2569	0.2507			
NMeFOSAA_2	5.70	1.00	62849.33	M	0.2569	0.2507	-2	50	
PFDS	5.79	1.10	578877.50	A	0.5144	0.4977			
PFDS_2	5.79	1.10	288112.49	A	0.5144	0.4977	-3	50	
PFUnDA	5.82	1.00	1773582.60	A	0.0058	0.0044			
PFUnDA_2	5.82	1.00	7755.59	A	0.0058	0.0044	-25	50	
NEtFOSAA	5.83	1.00	237197.18	A	0.7253	0.6651			
NEtFOSAA_2	5.83	1.00	157758.05	M	0.7253	0.6651	-8	50	
PFDoDA	6.04	1.00	2099385.04	A	0.0157	0.0116			
PFDoDA_2	6.04	1.00	24326.91	A	0.0157	0.0116	-26	50	
10:2-FTS	6.06	1.09	153343.55	A	0.6356	0.6979			
10:2 FTS_2	6.06	1.09	107018.53	A	0.6356	0.6979		#NA!	
PFTrDA	6.24	1.03	1679407.24	A	0.0086	0.0096			
PFTrDA_2	6.24	1.03	16152.60	M	0.0086	0.0096	12	50	
PFTeDA	6.42	1.00	1418276.72	A	0.0062	0.0062			
PFTeDA_2	6.42	1.00	8850.65	A	0.0062	0.0062	0	50	
PFHxDA	6.72	1.05	627350.68	A	0.0683	0.0680			
PFHxDA_2	6.72	1.05	42651.35	A	0.0683	0.0680	0	50	
PFODA	6.98	1.09	544296.46	A	0.0277	0.0265			
PFODA_2	6.98	1.09	14445.27	A	0.0277	0.0265	-4	50	

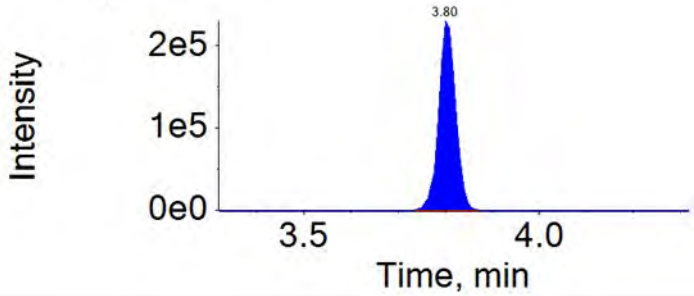
APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

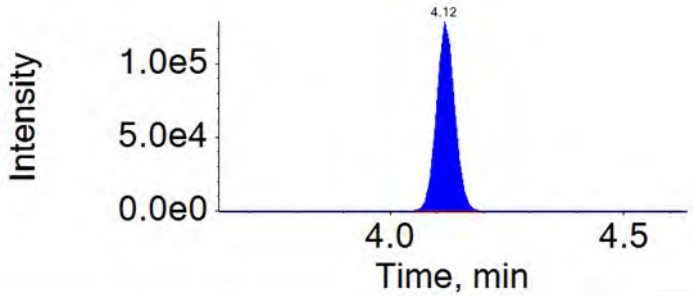
Component: PFBS
Primary Mass: 299.0 / 80.0



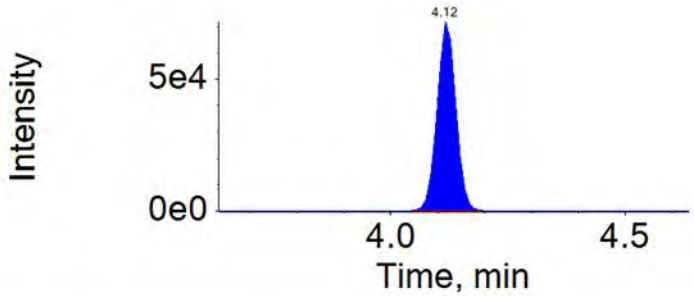
Component: PFBS_2
Secondary Mass: 299.0 / 99.0



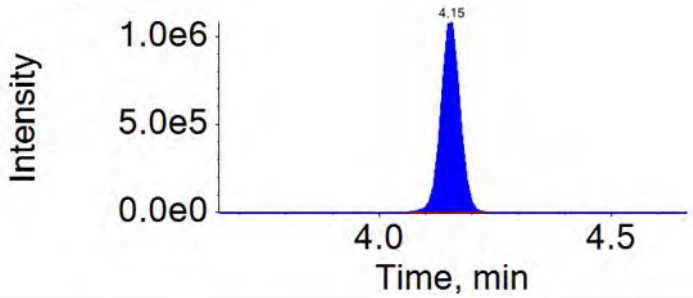
Component: 4:2-FTS
Primary Mass: 327.0 / 307.0



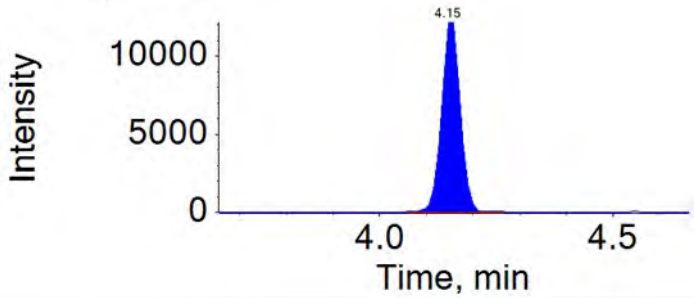
Component: 4:2 FTS_2
Secondary Mass: 327.0 / 81.0



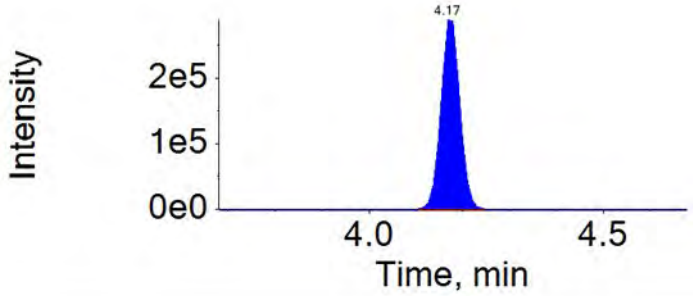
Component: PFHxA
Primary Mass: 313.0 / 269.0



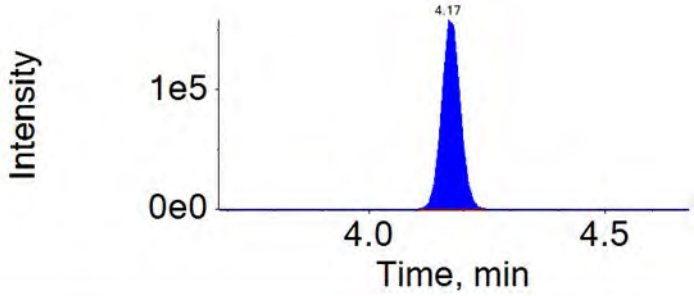
Component: PFHxA_2
Secondary Mass: 313.0 / 119.0



Component: PFPeS
Primary Mass: 349.0 / 80.0



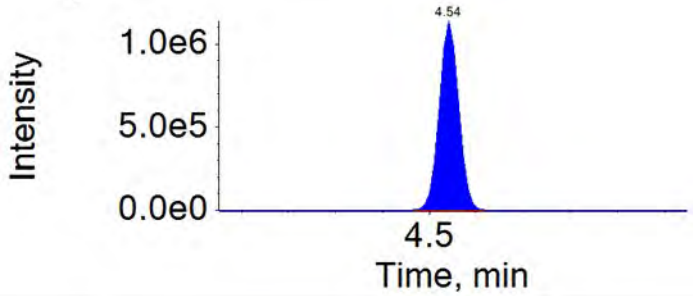
Component: PFPeS_2
Secondary Mass: 349.0 / 99.0



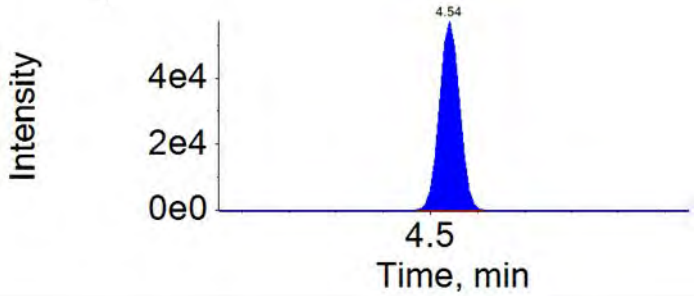
APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

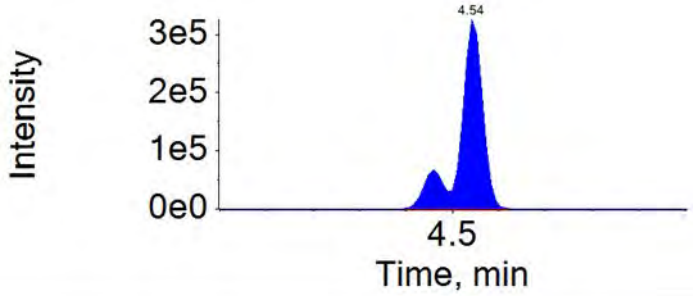
Component: PFHpA
Primary Mass: 363.0 / 319.0



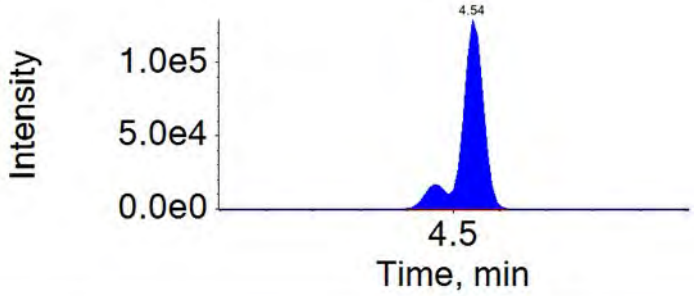
Component: PFHpA_2
Secondary Mass: 363.0 / 169.0



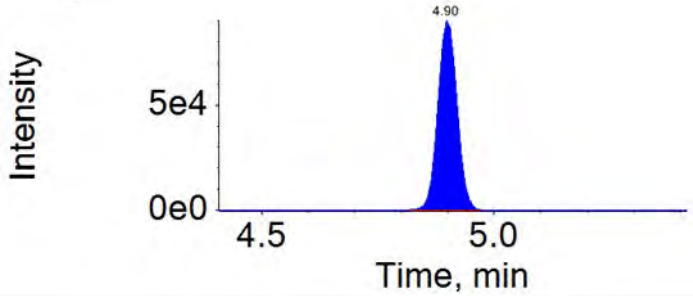
Component: PFHxS
Primary Mass: 399.0 / 80.0



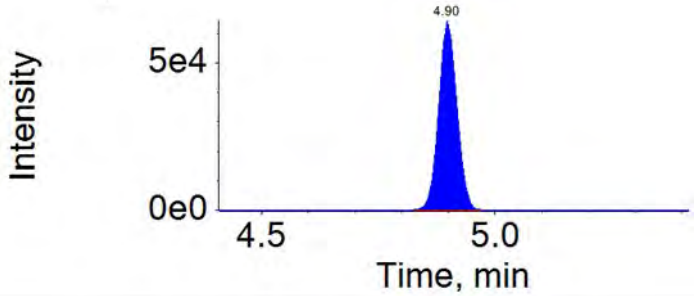
Component: PFHxS_2
Secondary Mass: 399.0 / 99.0



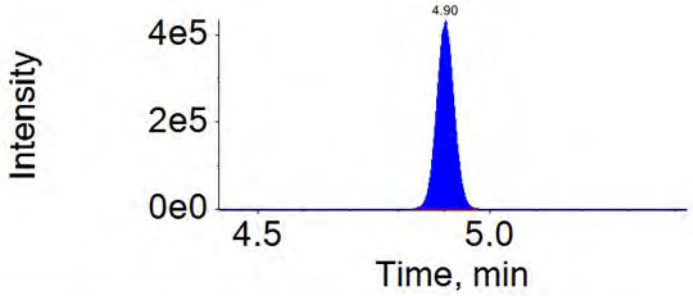
Component: 6:2-FTS
Primary Mass: 427.0 / 407.0



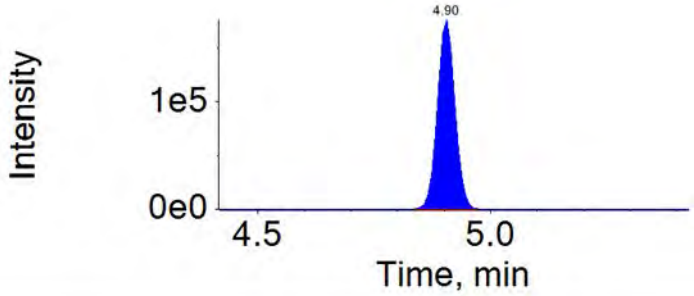
Component: 6:2 FTS_2
Secondary Mass: 427.0 / 81.0



Component: PFHpS
Primary Mass: 449.0 / 80.0



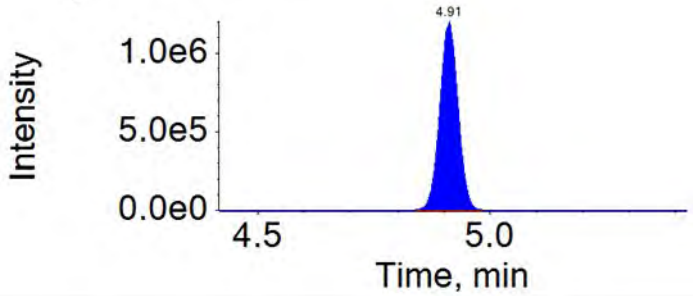
Component: PFHpS_2
Secondary Mass: 449.0 / 99.0



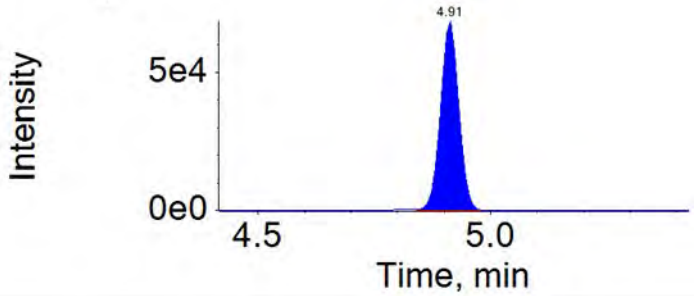
APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

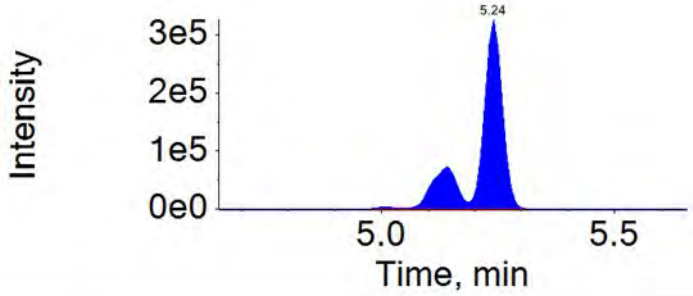
Component: PFOA
Primary Mass: 413.0 / 369.0



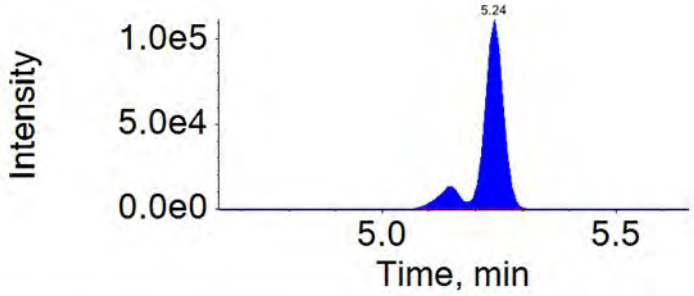
Component: PFOA_2
Secondary Mass: 413.0 / 169.0



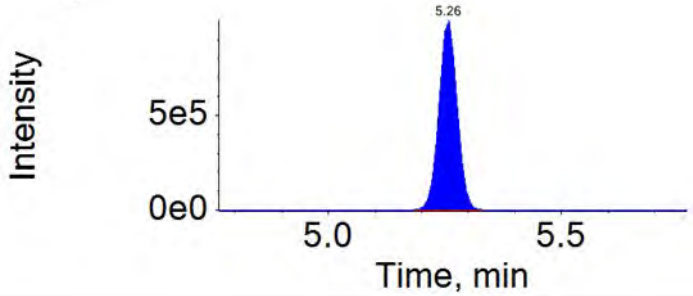
Component: PFOS
Primary Mass: 499.0 / 80.0



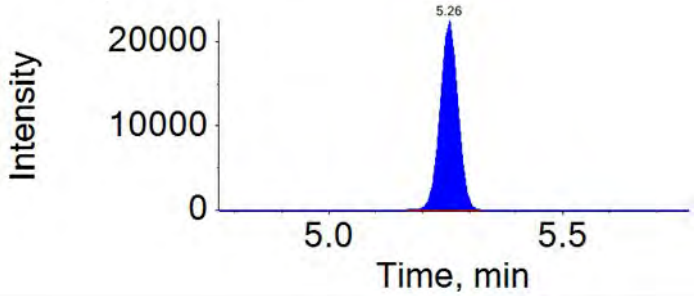
Component: PFOS_2
Secondary Mass: 499.0 / 99.0



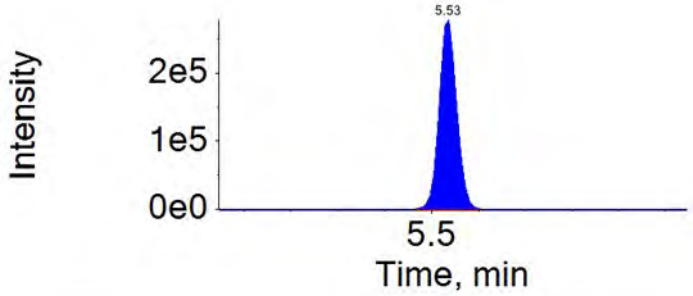
Component: PFNA
Primary Mass: 463.0 / 419.0



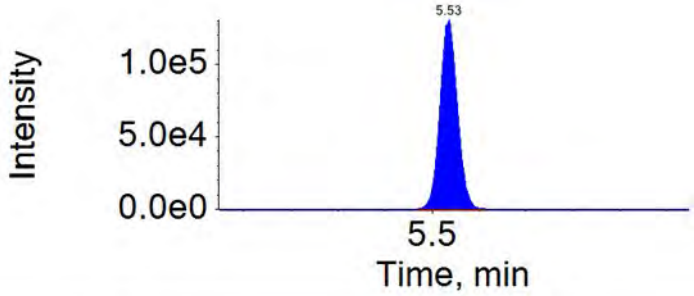
Component: PFNA_2
Secondary Mass: 463.0 / 169.0



Component: PFNS
Primary Mass: 549.0 / 80.0



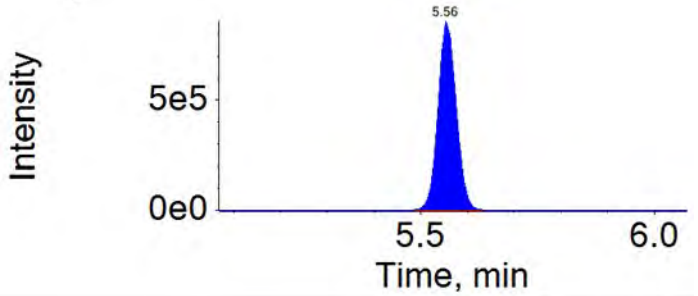
Component: PFNS_2
Secondary Mass: 549.0 / 99.0



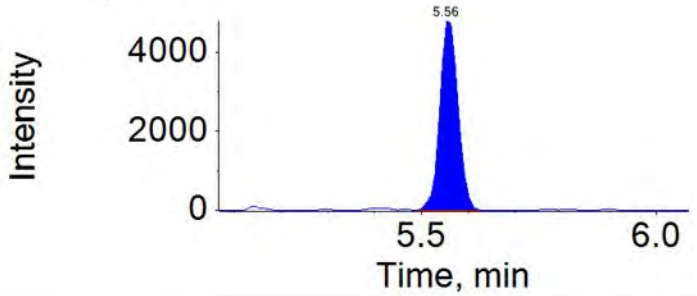
APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

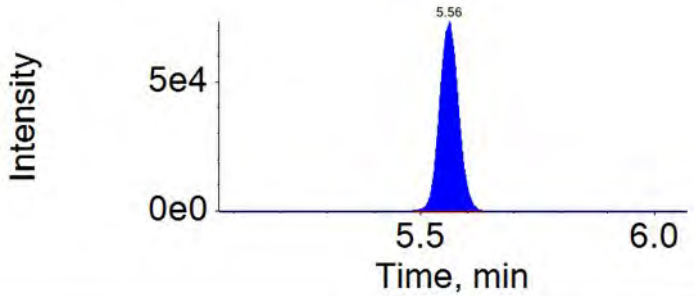
Component: PFDA
Primary Mass: 513.0 / 469.0



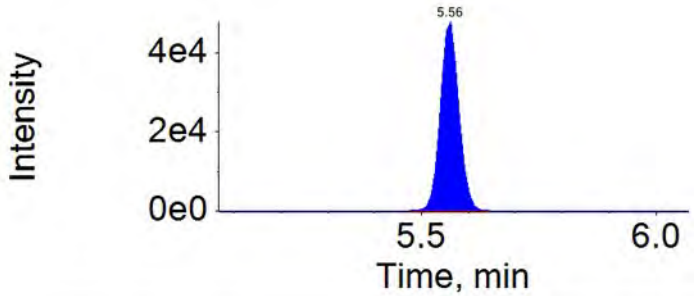
Component: PFDA_2
Secondary Mass: 513.0 / 169.0



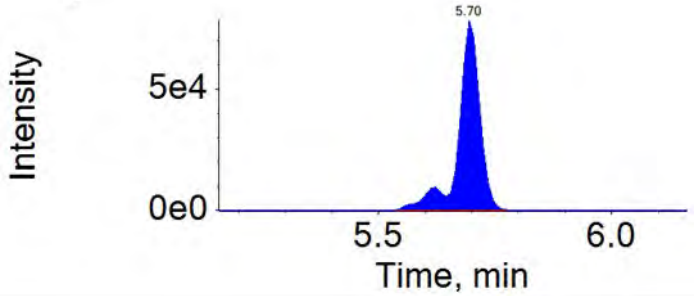
Component: 8:2-FTS
Primary Mass: 527.0 / 507.0



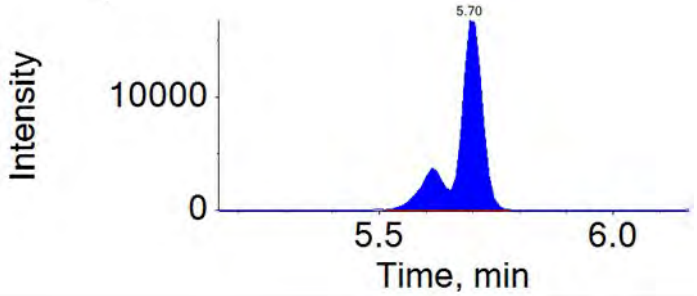
Component: 8:2 FTS_2
Secondary Mass: 527.0 / 81.0



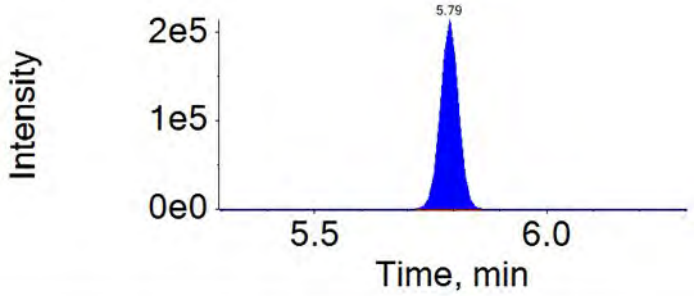
Component: NMeFOSAA
Primary Mass: 570.0 / 419.0



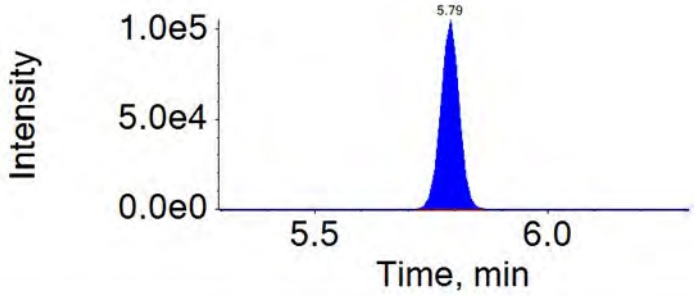
Component: NMeFOSAA_2
Secondary Mass: 570.0 / 483.0



Component: PFDS
Primary Mass: 599.0 / 80.0



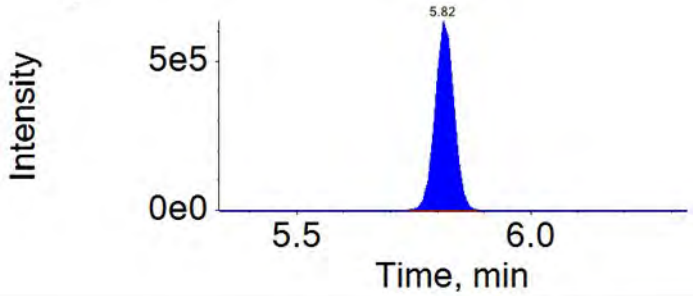
Component: PFDS_2
Secondary Mass: 599.0 / 99.0



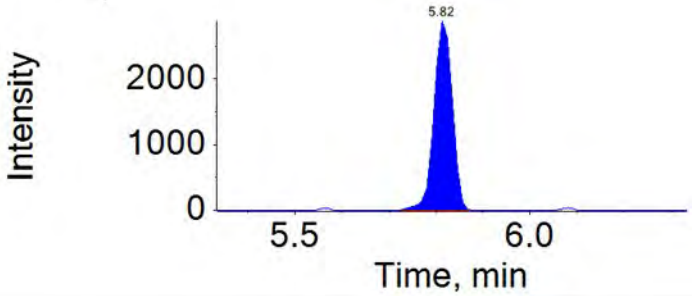
APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

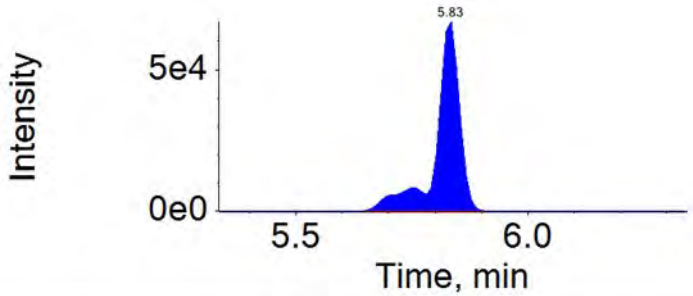
Component: PFUnDA
Primary Mass: 563.0 / 519.0



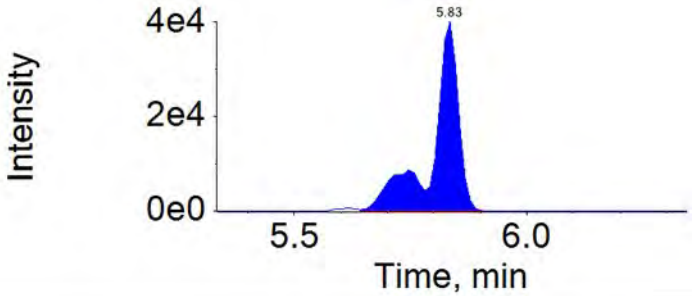
Component: PFUnDA_2
Secondary Mass: 563.0 / 169.0



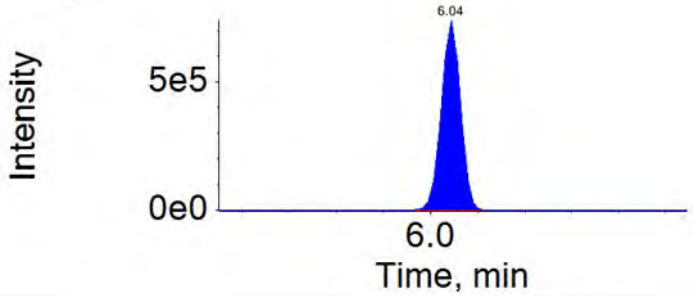
Component: NEtFOSAA
Primary Mass: 584.0 / 419.0



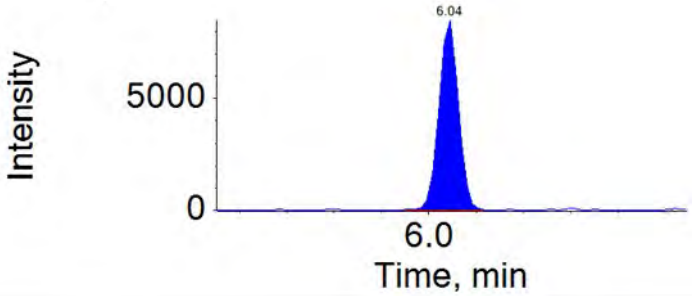
Component: NEtFOSAA_2
Secondary Mass: 584.0 / 526.0



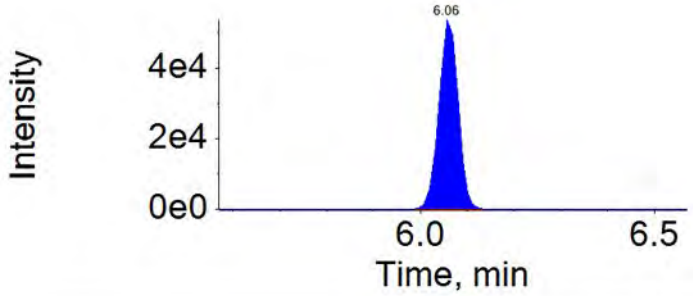
Component: PFDoDA
Primary Mass: 613.0 / 569.0



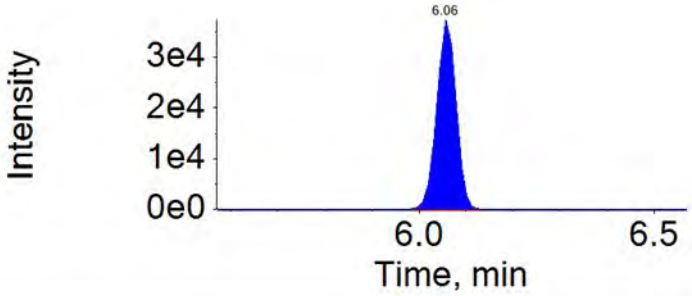
Component: PFDoDA_2
Secondary Mass: 613.0 / 169.0



Component: 10:2-FTS
Primary Mass: 627.0 / 607.0



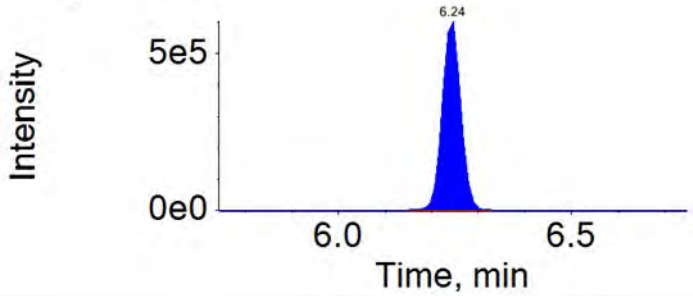
Component: 10:2 FTS_2
Secondary Mass: 627.0 / 81.0



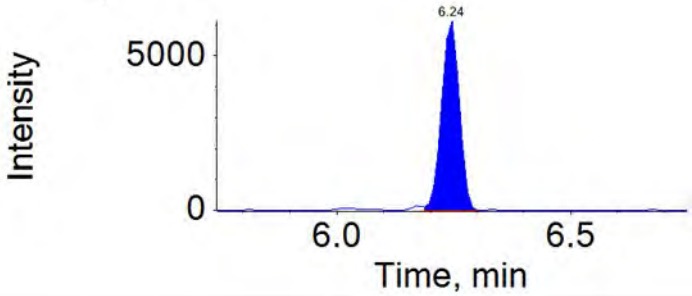
APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

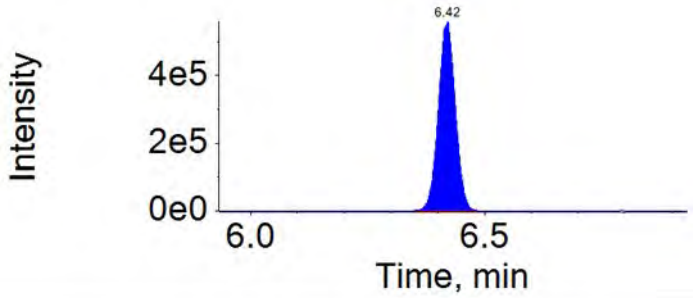
Component: PFTrDA
Primary Mass: 663.0 / 619.0



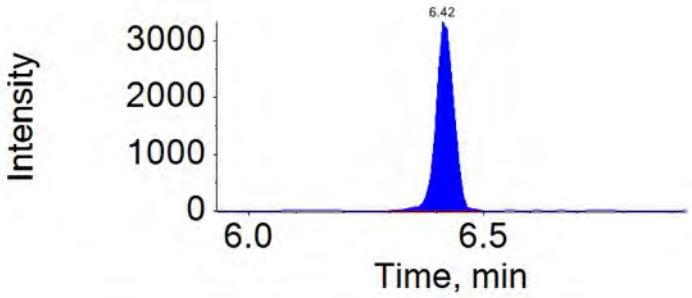
Component: PFTrDA_2
Secondary Mass: 663.0 / 169.0



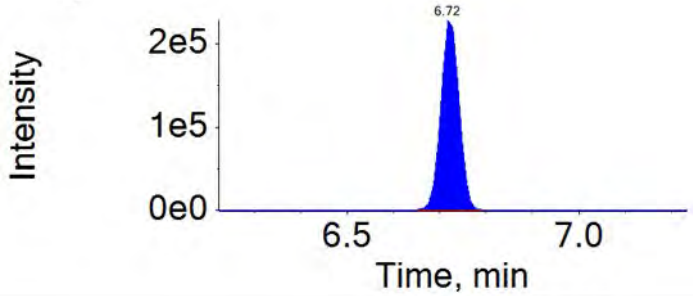
Component: PFTeDA
Primary Mass: 713.0 / 669.0



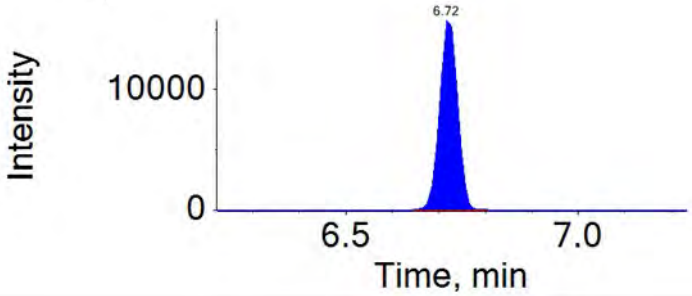
Component: PFTeDA_2
Secondary Mass: 713.0 / 169.0



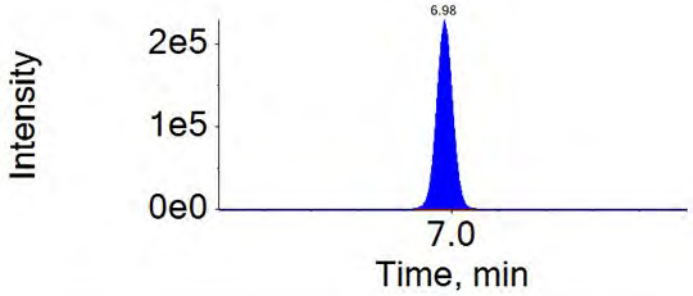
Component: PFHxDA
Primary Mass: 813.0 / 769.0



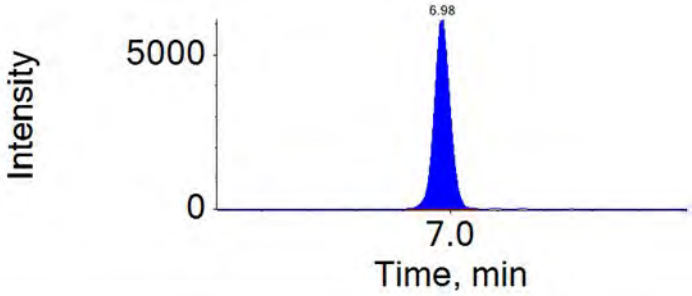
Component: PFHxDA_2
Secondary Mass: 813.0 / 169.0



Component: PFODA
Primary Mass: 913.0 / 869.0



Component: PFODA_2
Secondary Mass: 913.0 / 169.0



APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Sample Name:	CAL6			**Data File:**		18NOV12DCAL-47.wiff
Sample ID:	CALBRN61833B			**Acquis Date:**		2018-11-12T15:51:06
Sample Type:	Standard			**Instrument:**		LM27631
Vial Position:	8			**Acquis Method:**		18AUG13_3uL.dam
Injection Vol:	3.00			**Result Table:**		18NOV12DCAL
QMethod File:	18AUG20QM			**ICAL Name:**		18NOV12DCAL
Batch Number:	N\A			**Operator:**		MCD7824
Sample Wt.:	1.00000			**Dilution Factor:**		1.00
Sample Vol.:	1.000			**Prep Factor:**		1.000

Injection Standard Peak Table

Injection Standard Area Reference File: 18NOV12DCAL-44

Injection Standard Name	Inj Std Conc	Injection Std Peak Area	Rreference Injection Standard Area	Injection Std %Diff	Injection Std %Diff Limit	Injection Std %Diff OOS
13C3-PFBA	5.0	555817.9	659926.2	-16	50	
13C2-PFOA	5.0	422900.5	450219.7	-6	50	
13C4-PFOS	4.8	231712.1	249205.8	-7	50	
13C2-PFDA	5.0	237446.9	278743.9	-15	50	

Extraction Standard Peak Table

Extraction Standard Name	Ext Std Area	Inj Std Name	Inj Std Area	Area Ratio	Ext Std Conc	Ext Std Result	Ext Std %REC	Ext Std %REC Limit	Ext Std OOS
E13C4-PFBA	633648.4	13C3-PFBA	555817.9	1.140	5.000	5.111	102	70-130	
E13C5-PFPeA	635977.8	13C3-PFBA	555817.9	1.144	5.000	5.132	103	70-130	
E13C3-PFBS	378676.8	13C3-PFBA	555817.9	0.681	4.650	4.809	103	70-130	
E13C2-4:2-FTS	41422.2	13C2-PFOA	422900.5	0.098	4.670	4.362	93	70-130	
E13C5-PFHxA	568205.8	13C2-PFOA	422900.5	1.344	5.000	4.854	97	70-130	
E13C3-PFHxS	284116.5	13C2-PFOA	422900.5	0.672	4.730	4.610	97	70-130	
E13C4-PFHpA	455005.8	13C2-PFOA	422900.5	1.076	5.000	4.847	97	70-130	
E13C2-6:2-FTS	27988.5	13C2-PFOA	422900.5	0.066	4.750	4.428	93	70-130	
E13C8-PFOA	707130.3	13C2-PFOA	422900.5	1.672	5.000	4.607	92	70-130	
E13C8-PFOS	253129.2	13C4-PFOS	231712.1	1.092	4.780	4.840	101	70-130	
E13C9-PFNA	413811.4	13C4-PFOS	231712.1	1.786	5.000	4.979	100	70-130	
E13C6-PFDA	522613.8	13C2-PFDA	237446.9	2.201	5.000	5.136	103	70-130	
E13C2-8:2-FTS	22899.0	13C2-PFDA	237446.9	0.096	4.790	4.810	100	70-130	
E13C8-PFOSA	539992.5	13C2-PFDA	237446.9	2.274	5.000	5.042	101	70-130	
Ed3-NMeFOSAA	70320.3	13C2-PFDA	237446.9	0.296	5.000	5.346	107	70-130	
E13C7-PFUnDA	208574.1	13C2-PFDA	237446.9	0.878	5.000	5.100	102	70-130	
Ed5-NEtFOSAA	57308.1	13C2-PFDA	237446.9	0.241	5.000	5.106	102	70-130	
E13C2-PFDoDA	477105.5	13C2-PFDA	237446.9	2.009	5.000	5.217	104	70-130	
Ed7-NMePFOSAE	272639.0	13C2-PFDA	237446.9	1.148	5.000	4.969	99	70-130	
Ed3-NMePFOSA	68215.9	13C2-PFDA	237446.9	0.287	5.000	5.220	104	70-130	
Ed9-NEtPFOSAE	242587.5	13C2-PFDA	237446.9	1.022	5.000	5.314	106	70-130	
Ed5-NEtPFOSA	56004.0	13C2-PFDA	237446.9	0.236	5.000	5.533	111	70-130	
E13C2-PFTeDA	352892.2	13C2-PFDA	237446.9	1.486	5.000	5.218	104	70-130	

APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

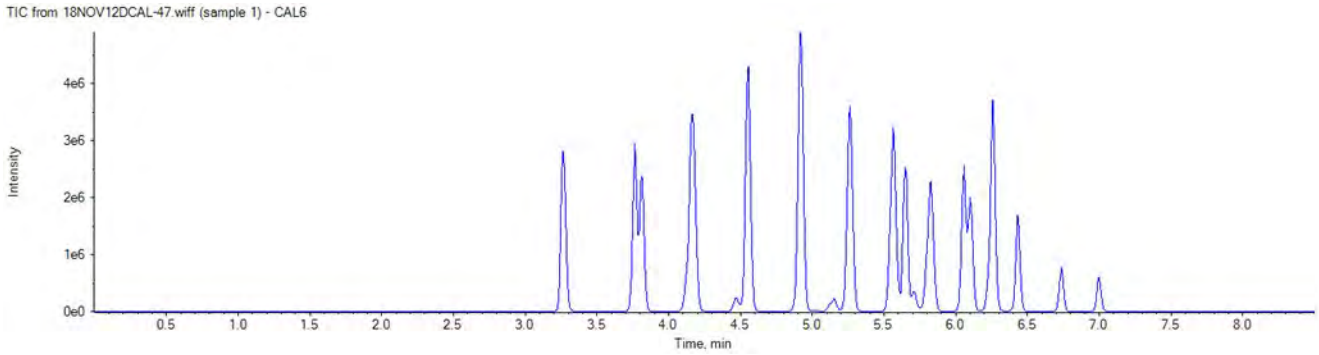
Analyte Quantitation Peak Table

Sample Name: CAL6 **Instrument Name:** LM27631 **File Name:** 18NOV12DCAL-47.wiff

Sample Wt	Sample Vol	Dilution Factor	PrepFactor
1.00000	1.000	1.00	1.000

Analyte Name	RT	RRT	Analyte Area Response	E	Int Typ	ES Name	ES RT	ES Area Response	Area Ratio	Sample Result (ng/g)
PFBA	3.26	1.000	5765353.4		A	13C4-PFBA	3.27	633648.4	9.099	50.404
PFPeA	3.77	1.000	5570221.7		A	13C5-PFPeA	3.76	635977.8	8.759	50.702
PFBS	3.81	1.000	3588084.2		A	13C3-PFBS	3.81	378676.8	9.475	45.072
4:2-FTS	4.13	1.000	738294.0		A	13C2-4:2-FTS	4.13	41422.2	17.824	48.392
PFHxA	4.16	1.000	6593779.0		A	13C5-PFHxA	4.16	568205.8	11.605	48.453
PFPeS	4.18	1.100	1847826.8		A	13C3-PFBS	3.81	378676.8	4.880	47.375
PFHpA	4.55	1.000	6648455.3		A	13C4-PFHpA	4.55	455005.8	14.612	48.434
PFHxS	4.55	1.000	2662852.0		M	13C3-PFHxS	4.55	284116.5	9.372	45.444
6:2-FTS	4.91	1.000	523949.5		A	13C2-6:2-FTS	4.91	27988.5	18.720	45.301
PFHpS	4.91	1.080	2604868.6		A	13C3-PFHxS	4.55	284116.5	9.168	48.262
PFOA	4.92	1.000	6758642.8		A	13C8-PFOA	4.92	707130.3	9.558	51.047
PFOS	5.25	1.000	2664957.2		M	13C8-PFOS	5.25	253129.2	10.528	46.040
PFNA	5.27	1.000	5820576.6		A	13C9-PFNA	5.27	413811.4	14.066	50.720
PFNS	5.55	1.060	1709959.5		A	13C8-PFOS	5.25	253129.2	6.755	47.262
PFDA	5.57	1.000	4802967.8		A	13C6-PFDA	5.57	522613.8	9.190	48.722
8:2-FTS	5.57	1.000	469719.6		A	13C2-8:2-FTS	5.57	22899.0	20.513	47.825
PFOSA	5.65	1.000	5530440.6		A	13C8-PFOSA	5.65	539992.5	10.242	50.024
NMeFOSAA	5.71	1.000	627854.4		M	d3-NMeFOSAA	5.71	70320.3	8.928	50.461
PFDS	5.80	1.100	1313570.3		A	13C8-PFOS	5.25	253129.2	5.189	47.020
PFUnDA	5.83	1.000	3923979.2		A	13C7-PFUnDA	5.83	208574.1	18.813	49.183
NEtFOSAA	5.84	1.000	551865.7		A	d5-NEtFOSAA	5.84	57308.1	9.630	50.481
PFDoDA	6.06	1.000	4582985.5		A	13C2-PFDoDA	6.06	477105.5	9.606	48.914
10:2-FTS	6.07	1.090	348263.2		A	13C2-8:2-FTS	5.57	22899.0	15.209	50.658
NMePFOSAE	6.10	1.000	3484588.8		A	d7-NMePFOSAE	6.09	272639.0	12.781	53.193
NMePFOSA	6.11	1.000	670429.6		A	d3-NMePFOSA	6.11	68215.9	9.828	48.485
PFDoS	6.23	1.190	711567.5		A	13C8-PFOS	5.25	253129.2	2.811	49.234
NEtPFOSAE	6.26	1.000	3677006.6		A	d9-NEtPFOSAE	6.25	242587.5	15.157	48.629
NEtPFOSA	6.27	1.000	599280.4		A	d5-NEtPFOSA	6.27	56004.0	10.701	49.142
PFTrDA	6.26	1.030	3691733.8		A	13C2-PFDoDA	6.06	477105.5	7.738	48.838
PFTeDA	6.43	1.000	3149020.2		A	13C2-PFTeDA	6.43	352892.2	8.923	50.021
PFHxDA	6.74	1.050	1533920.2		A	13C2-PFTeDA	6.43	352892.2	4.347	51.786
PFODA	7.00	1.090	1270897.6		A	13C2-PFTeDA	6.43	352892.2	3.601	50.157

Total Ion Chromatogram

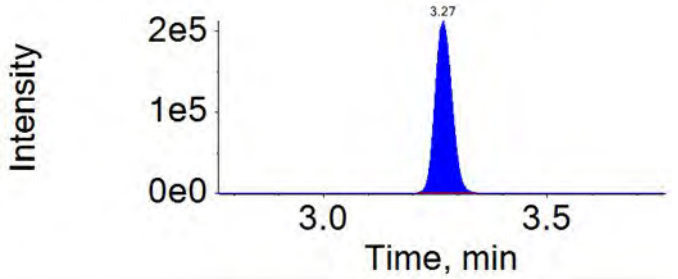


APPROVED
By MCD at 6:33 pm, 11/12/18

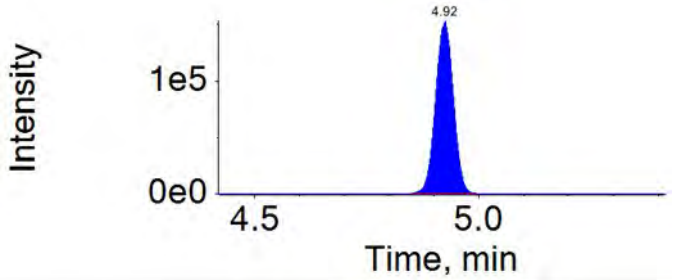
REVIEWED
By HMK at 10:53 am, 11/13/18

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

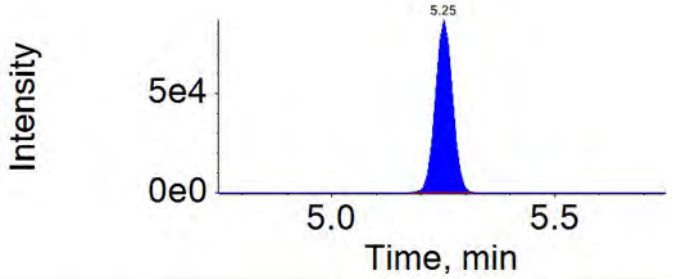
Injection Standard: 13C3-PFBA
216.0 / 172.0



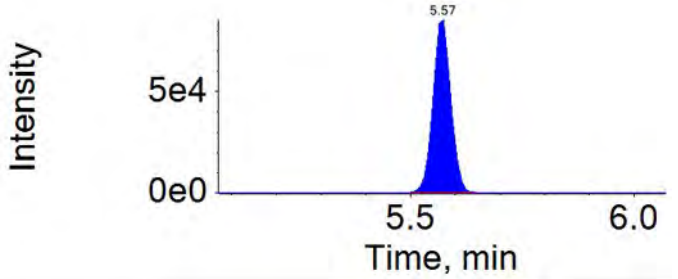
Injection Standard: 13C2-PFOA
415.0 / 370.0



Injection Standard: 13C4-PFOS
503.0 / 80.0

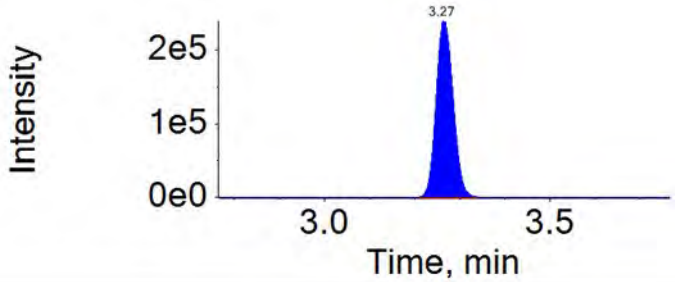


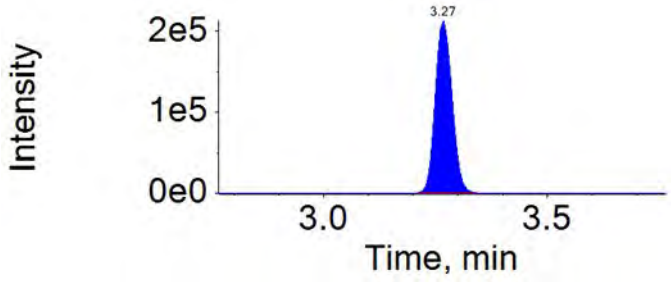
Injection Standard: 13C2-PFDA
515.0 / 470.0



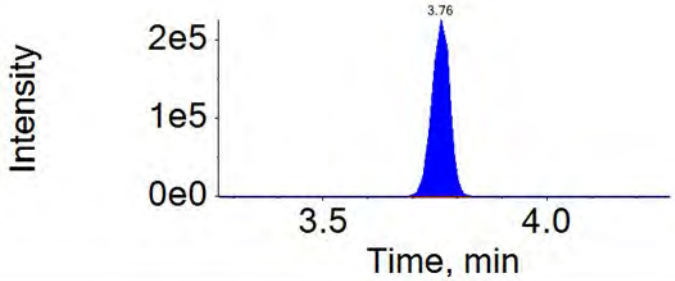
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

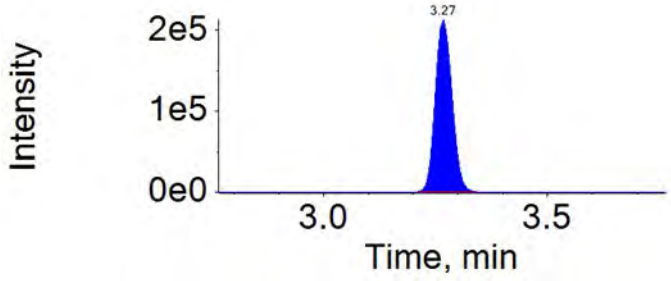
Extraction Standard: E13C4-PFBA	Injection Standard: 13C3-PFBA
217.0 / 172.0	216.0 / 172.0



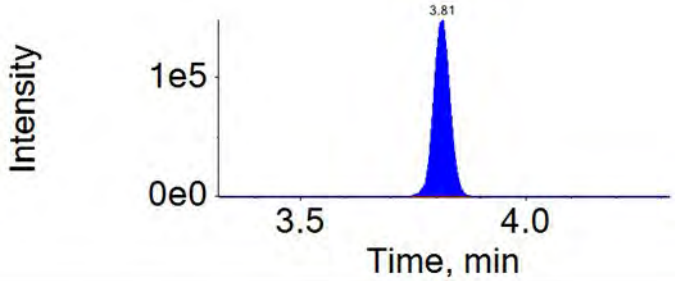


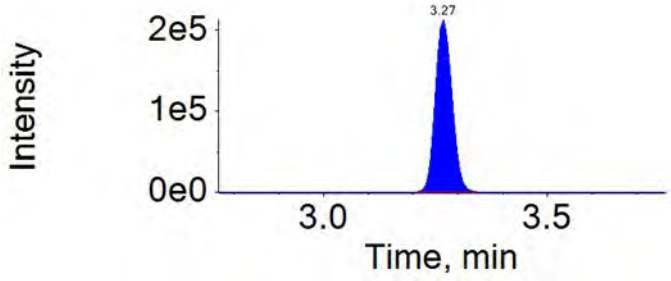
Extraction Standard: E13C5-PFPeA	Injection Standard: 13C3-PFBA
268.0 / 223.0	216.0 / 172.0



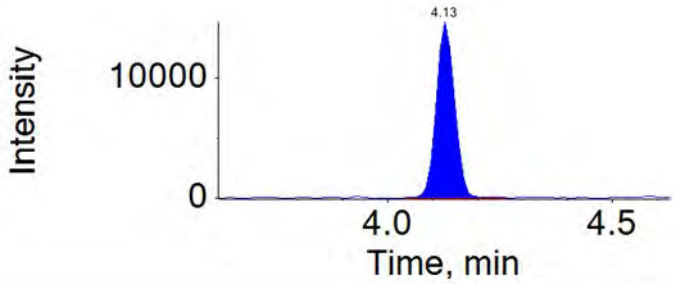


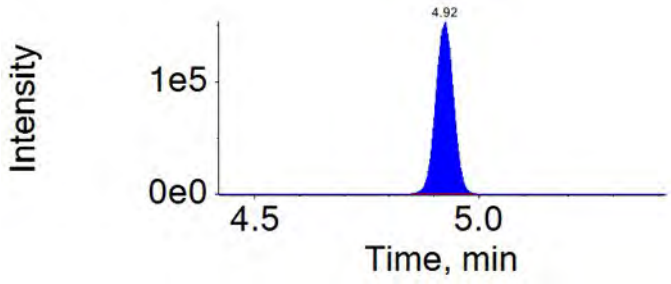
Extraction Standard: E13C3-PFBS	Injection Standard: 13C3-PFBA
302.0 / 80.0	216.0 / 172.0





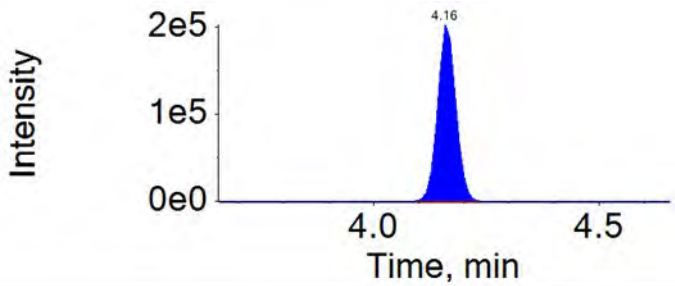
Extraction Standard: E13C2-4:2-FTS	Injection Standard: 13C2-PFOA
329.0 / 81.0	415.0 / 370.0

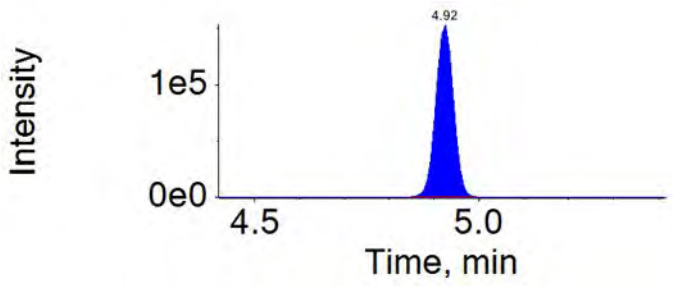




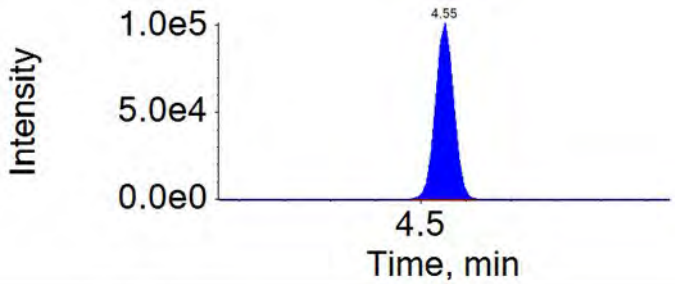
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

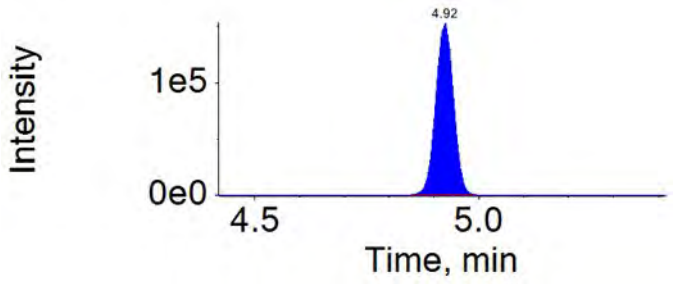
Extraction Standard: E13C5-PFHxA	Injection Standard: 13C2-PFOA
318.0 / 273.0	415.0 / 370.0



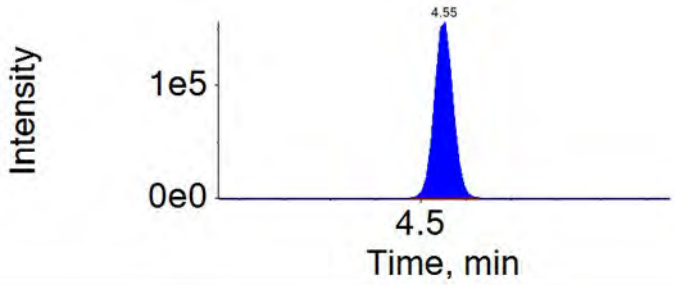


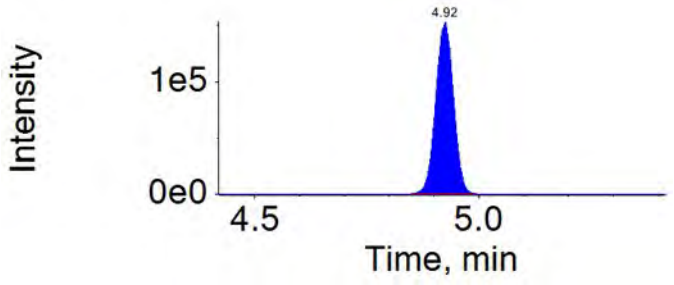
Extraction Standard: E13C3-PFHxS	Injection Standard: 13C2-PFOA
402.0 / 80.0	415.0 / 370.0



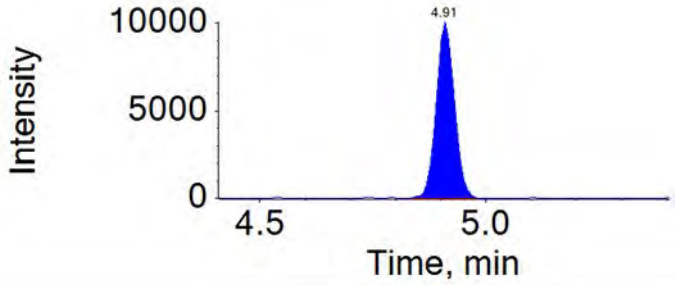


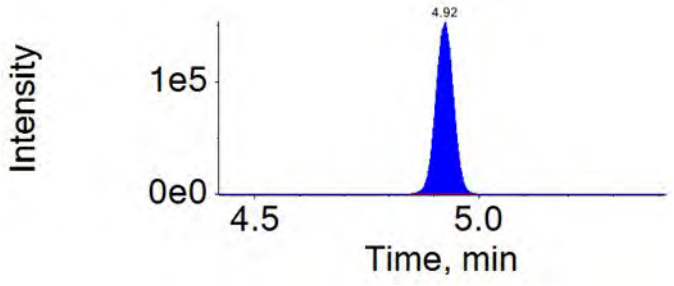
Extraction Standard: E13C4-PFHpA	Injection Standard: 13C2-PFOA
367.0 / 322.0	415.0 / 370.0





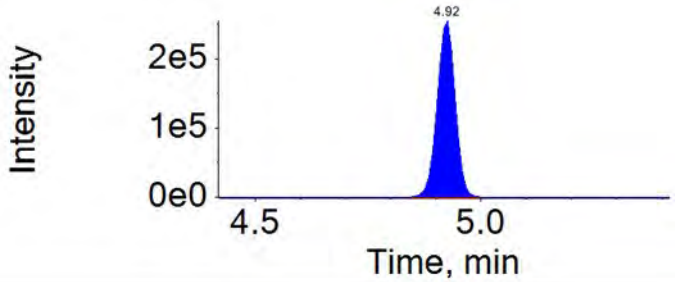
Extraction Standard: E13C2-6:2-FTS	Injection Standard: 13C2-PFOA
429.0 / 81.0	415.0 / 370.0

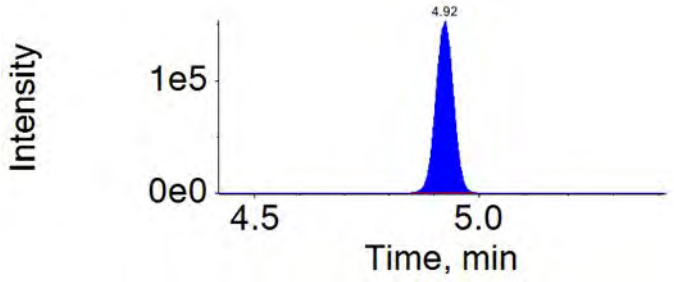




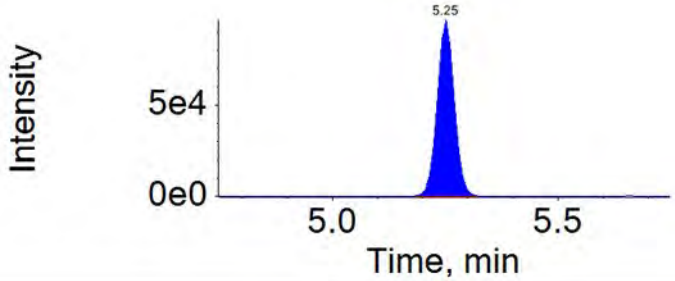
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

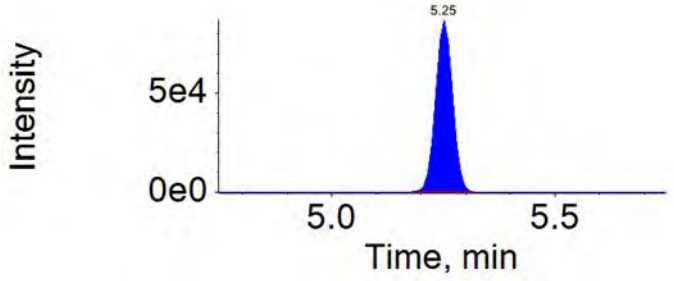
Extraction Standard: E13C8-PFOA	Injection Standard: 13C2-PFOA
421.0 / 376.0	415.0 / 370.0



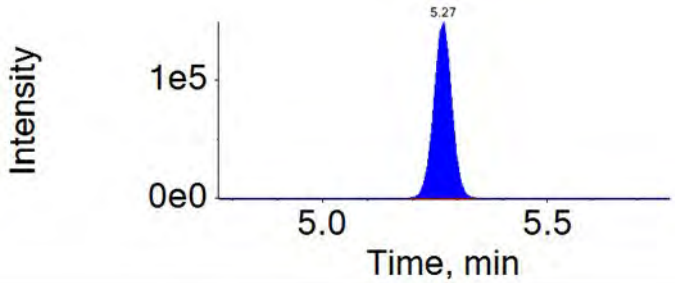


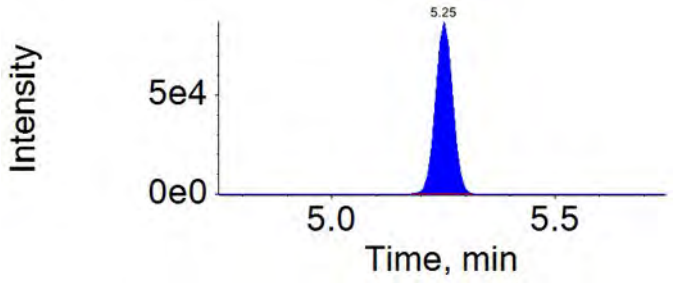
Extraction Standard: E13C8-PFOS	Injection Standard: 13C4-PFOS
507.0 / 80.0	503.0 / 80.0



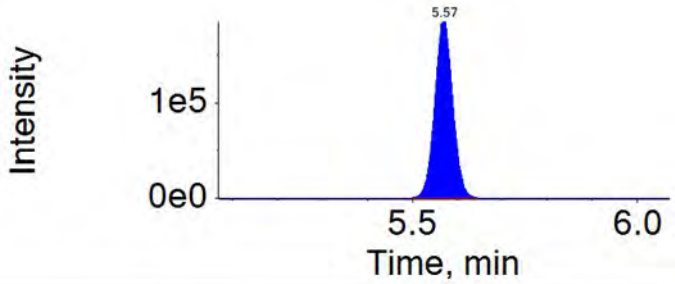


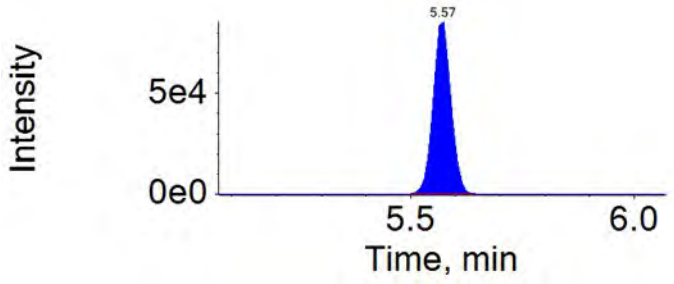
Extraction Standard: E13C9-PFNA	Injection Standard: 13C4-PFOS
472.0 / 427.0	503.0 / 80.0





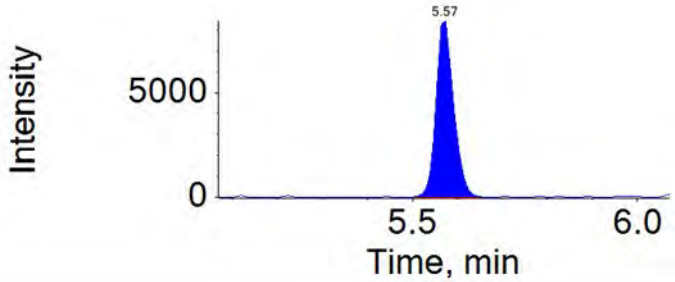
Extraction Standard: E13C6-PFDA	Injection Standard: 13C2-PFDA
519.0 / 474.0	515.0 / 470.0

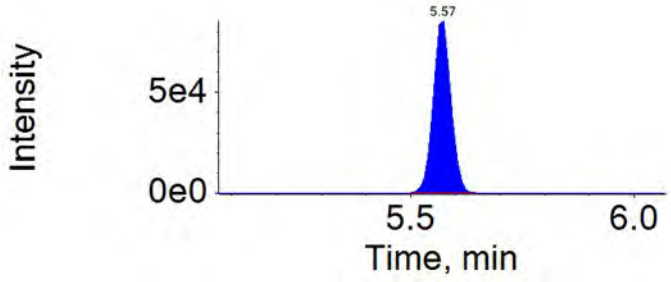




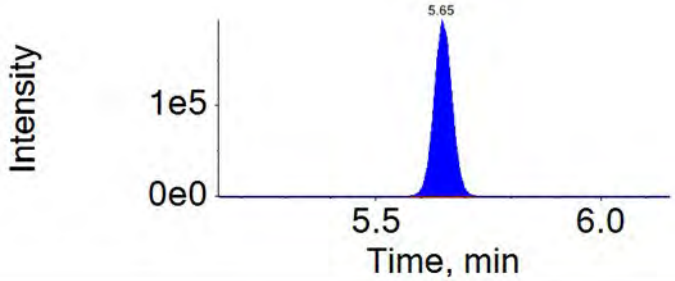
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

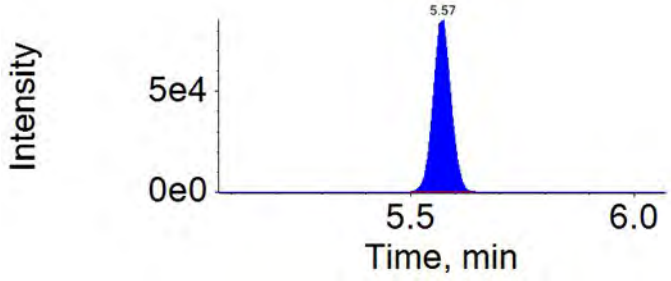
Extraction Standard: E13C2-8:2-FTS	Injection Standard: 13C2-PFDA
529.0 / 81.0	515.0 / 470.0



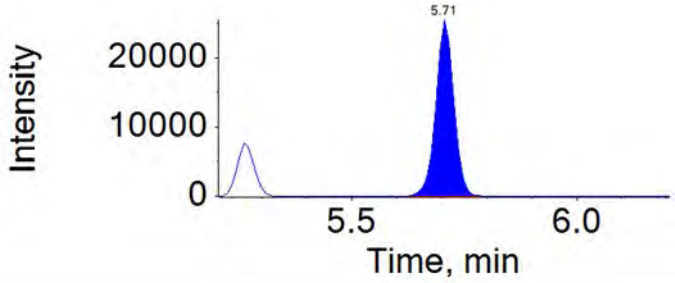


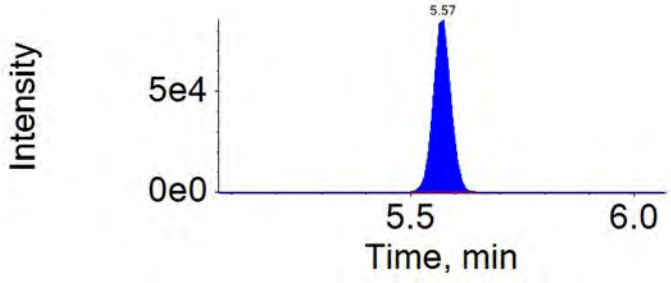
Extraction Standard: E13C8-PFOSA	Injection Standard: 13C2-PFDA
506.0 / 78.0	515.0 / 470.0



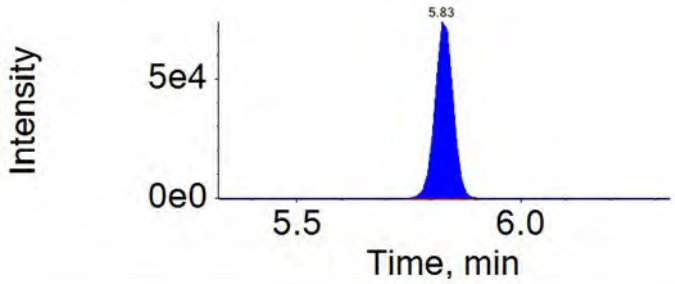


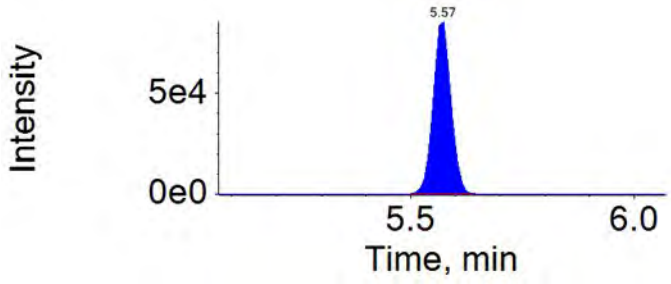
Extraction Standard: Ed3-NMeFOSAA	Injection Standard: 13C2-PFDA
573.0 / 419.0	515.0 / 470.0





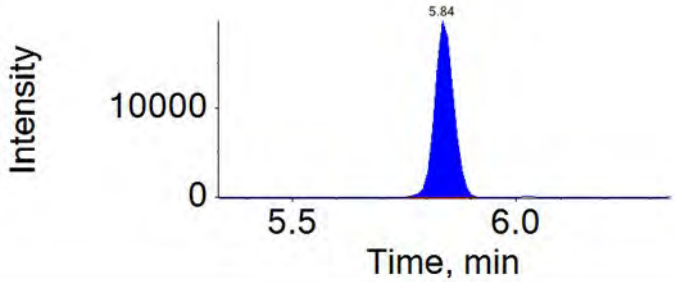
Extraction Standard: E13C7-PFUnDA	Injection Standard: 13C2-PFDA
570.0 / 525.0	515.0 / 470.0

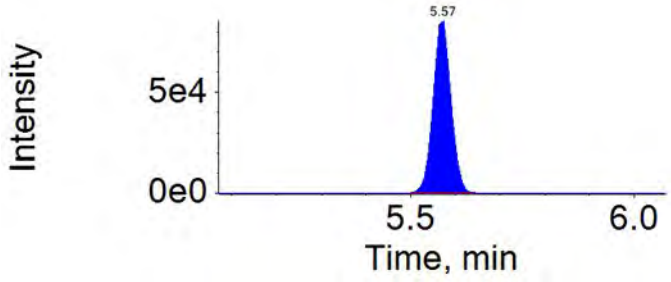




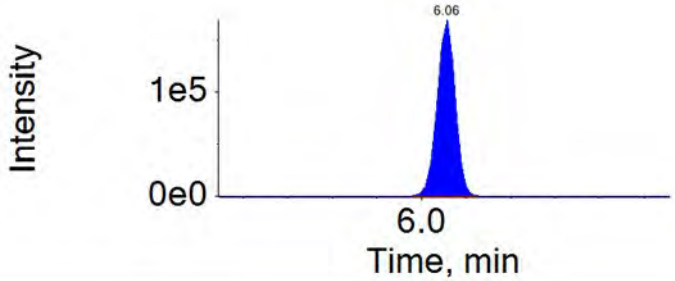
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

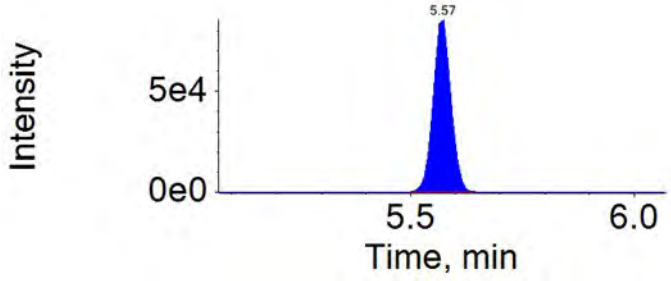
Extraction Standard: Ed5-NEtFOSAA	Injection Standard: 13C2-PFDA
589.0 / 419.0	515.0 / 470.0



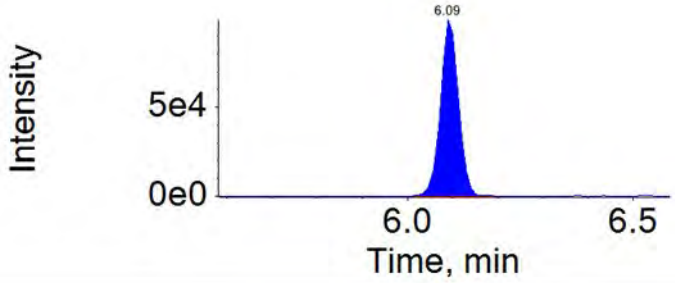


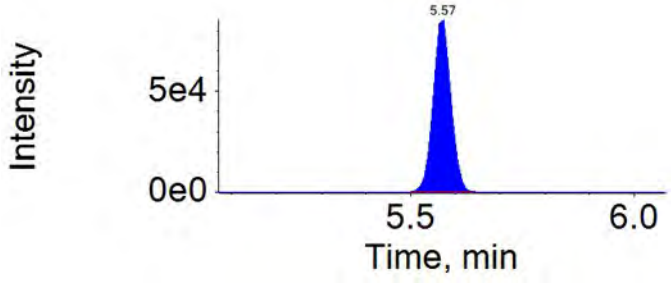
Extraction Standard: E13C2-PFDoDA	Injection Standard: 13C2-PFDA
615.0 / 570.0	515.0 / 470.0



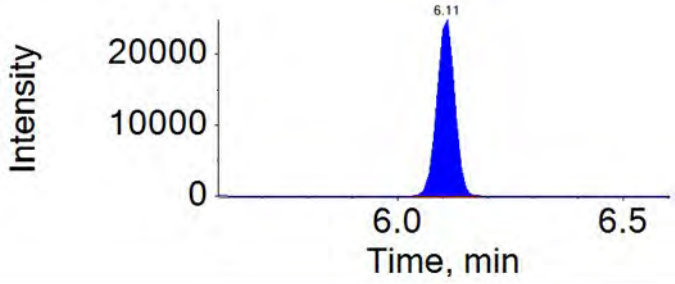


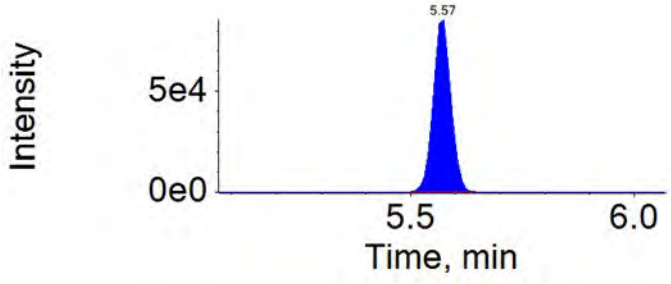
Extraction Standard: Ed7-NMePFOSAE	Injection Standard: 13C2-PFDA
623.0 / 59.0	515.0 / 470.0





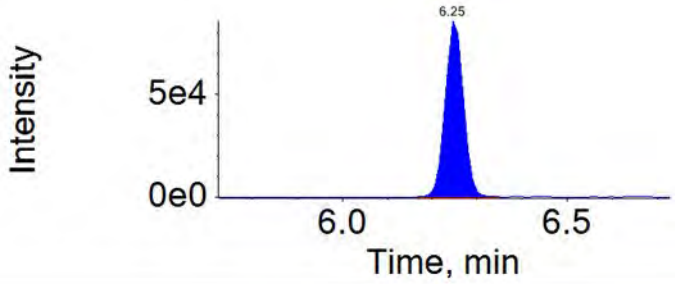
Extraction Standard: Ed3-NMePFOSA	Injection Standard: 13C2-PFDA
515.0 / 169.0	515.0 / 470.0

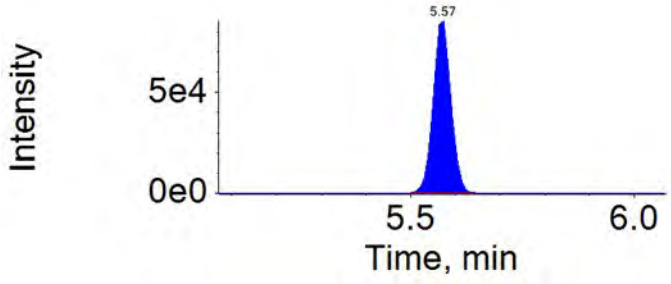




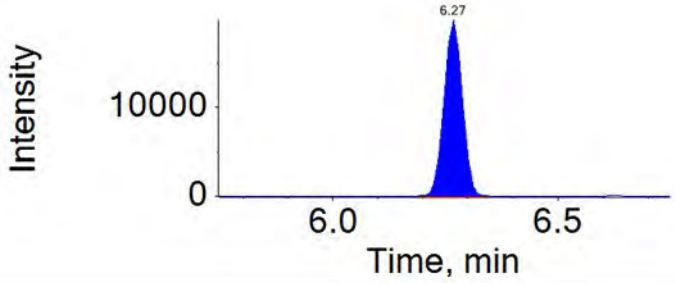
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

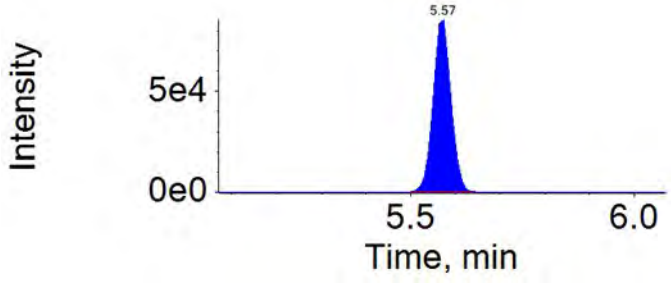
Extraction Standard: Ed9-NEtPFOSAE	Injection Standard: 13C2-PFDA
639.0 / 59.0	515.0 / 470.0



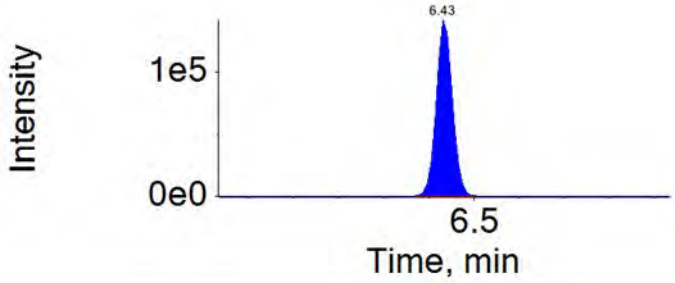


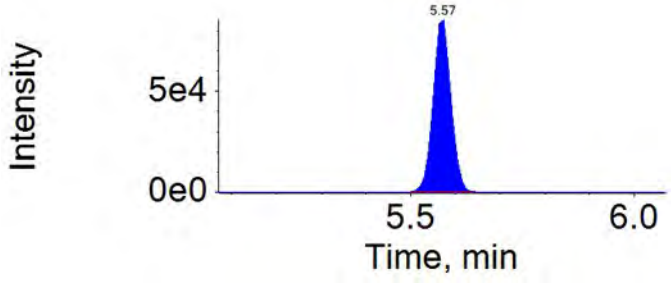
Extraction Standard: Ed5-NEtPFOSA	Injection Standard: 13C2-PFDA
531.0 / 169.0	515.0 / 470.0





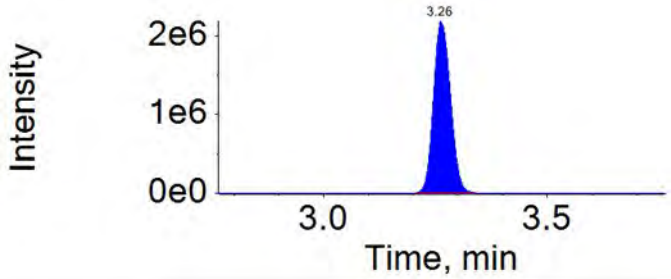
Extraction Standard: E13C2-PFTeDA	Injection Standard: 13C2-PFDA
715.0 / 670.0	515.0 / 470.0



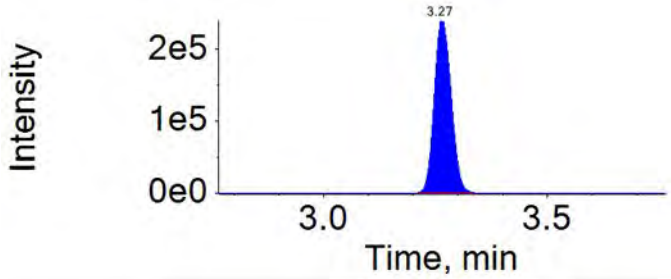


ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

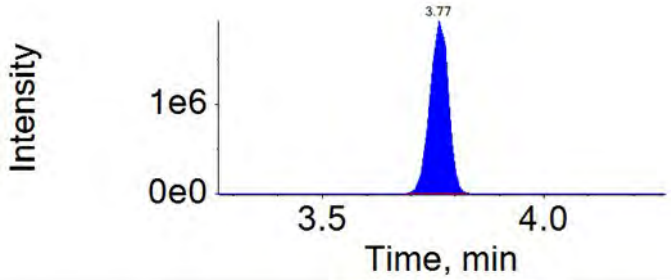
Analyte: PFBA
213.0 / 169.0



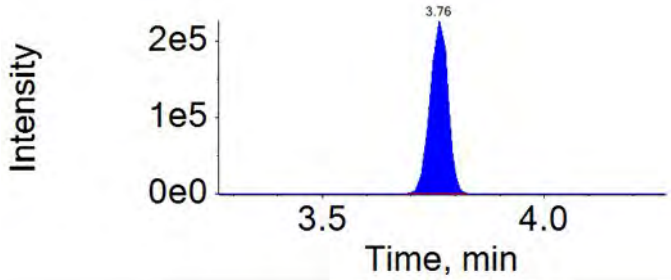
Extraction Standard: 13C4-PFBA
217.0 / 172.0



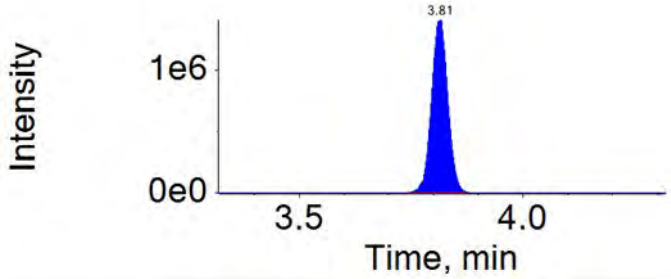
Analyte: PFPeA
263.0 / 219.0



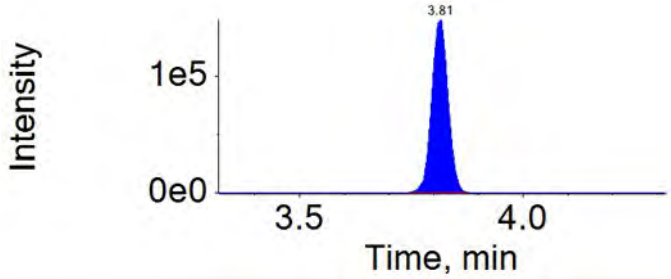
Extraction Standard: 13C5-PFPeA
268.0 / 223.0



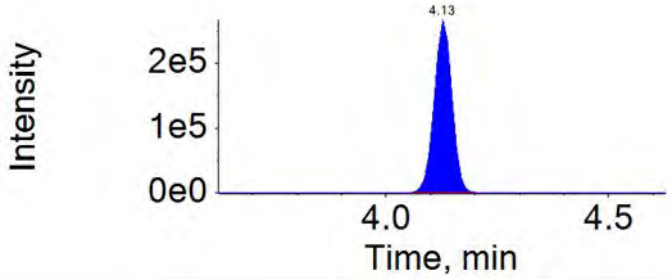
Analyte: PFBS
299.0 / 80.0



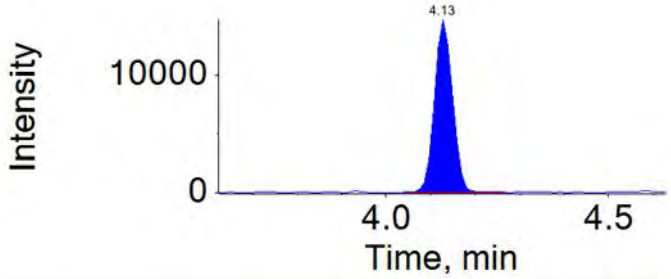
Extraction Standard: 13C3-PFBS
302.0 / 80.0



Analyte: 4:2-FTS
327.0 / 307.0



Extraction Standard: 13C2-4:2-FTS
329.0 / 81.0

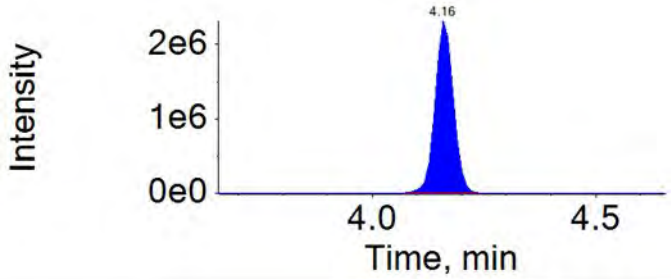


APPROVED
By MCD at 6:33 pm, 11/12/18

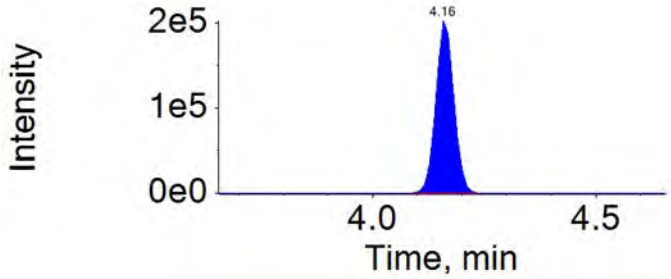
REVIEWED
By HMK at 10:53 am, 11/13/18

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

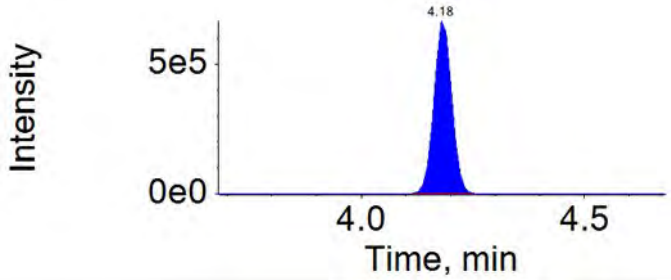
Analyte: PFHxA
313.0 / 269.0



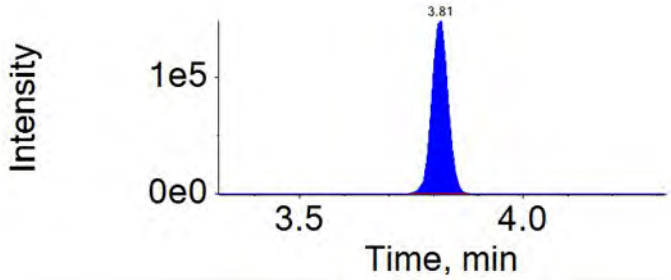
Extraction Standard: 13C5-PFHxA
318.0 / 273.0



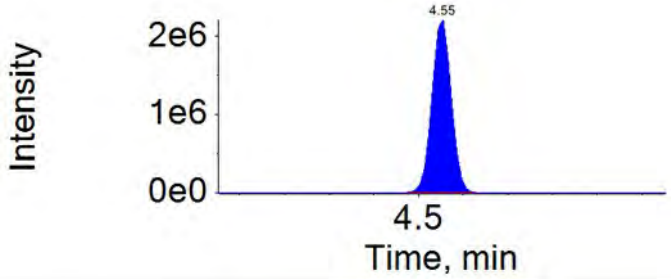
Analyte: PFPeS
349.0 / 80.0



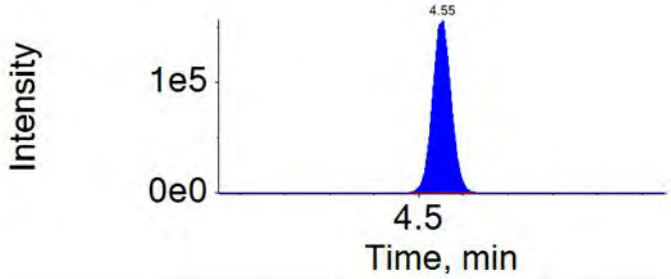
Extraction Standard: 13C3-PFBS
302.0 / 80.0



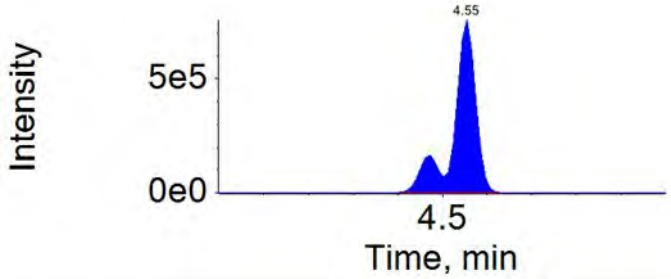
Analyte: PFHpA
363.0 / 319.0



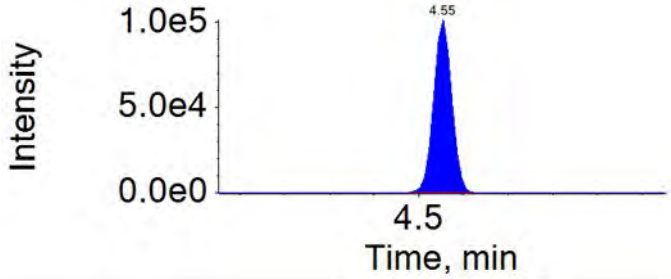
Extraction Standard: 13C4-PFHpA
367.0 / 322.0



Analyte: PFHxS
399.0 / 80.0



Extraction Standard: 13C3-PFHxS
402.0 / 80.0

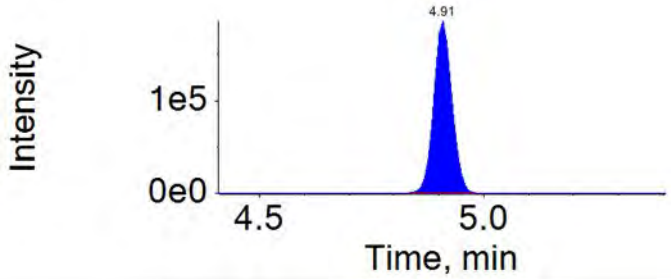


APPROVED
By MCD at 6:33 pm, 11/12/18

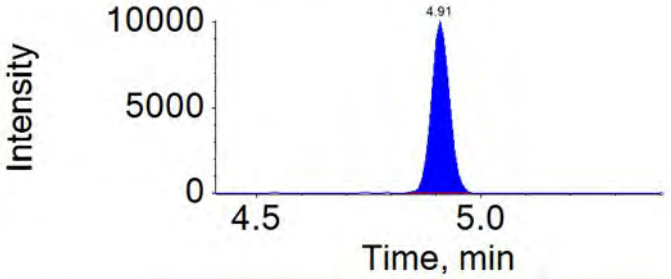
REVIEWED
By HMK at 10:53 am, 11/13/18

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

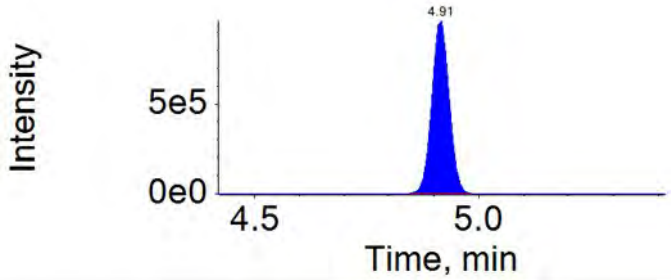
Analyte: 6:2-FTS
427.0 / 407.0



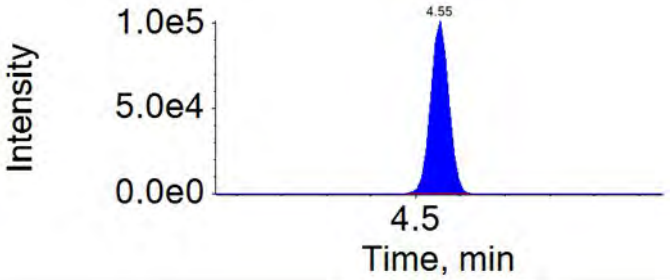
Extraction Standard: 13C2-6:2-FTS
429.0 / 81.0



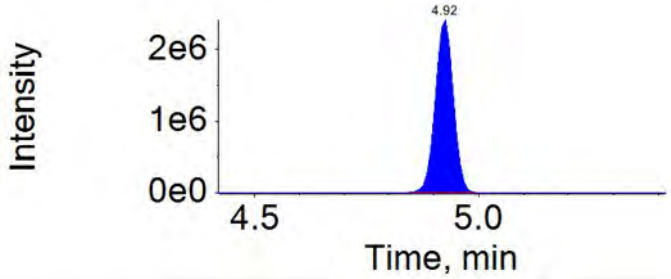
Analyte: PFHpS
449.0 / 80.0



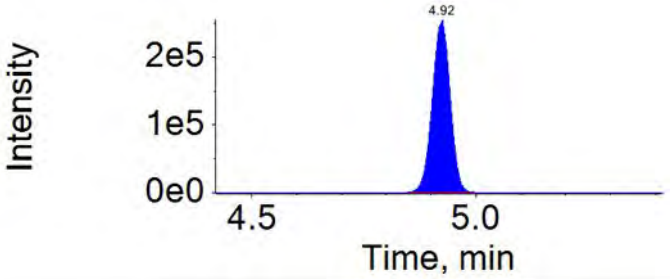
Extraction Standard: 13C3-PFHxS
402.0 / 80.0



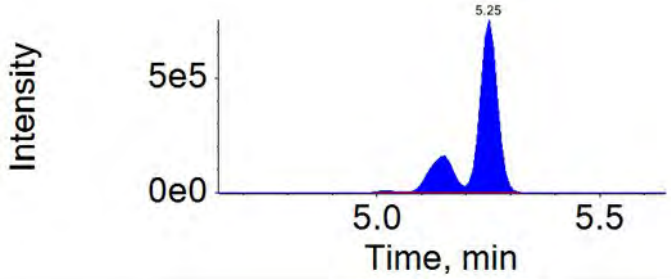
Analyte: PFOA
413.0 / 369.0



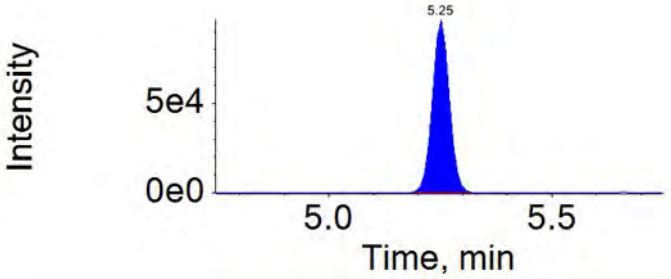
Extraction Standard: 13C8-PFOA
421.0 / 376.0



Analyte: PFOS
499.0 / 80.0



Extraction Standard: 13C8-PFOS
507.0 / 80.0

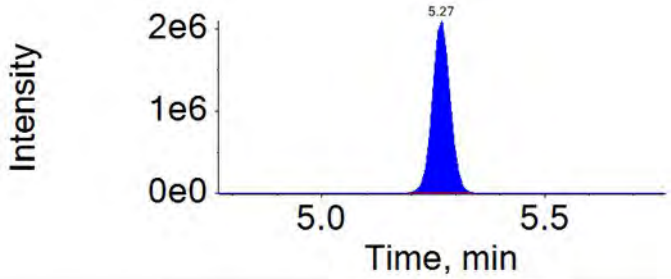


APPROVED
By MCD at 6:33 pm, 11/12/18

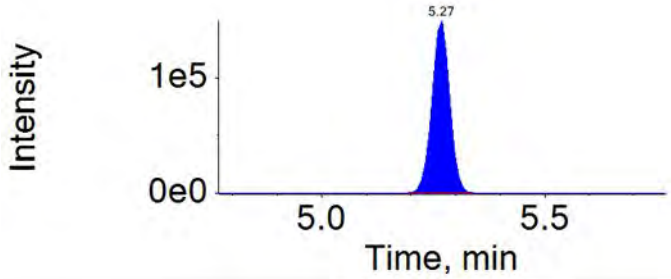
REVIEWED
By HMK at 10:53 am, 11/13/18

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

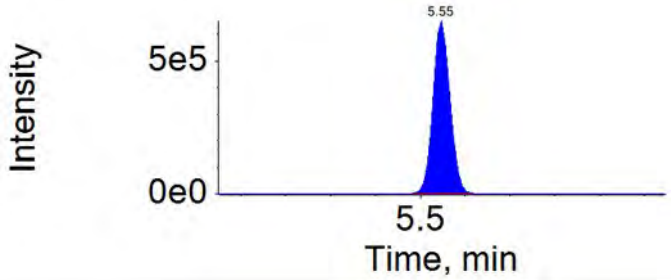
Analyte: PFNA
463.0 / 419.0



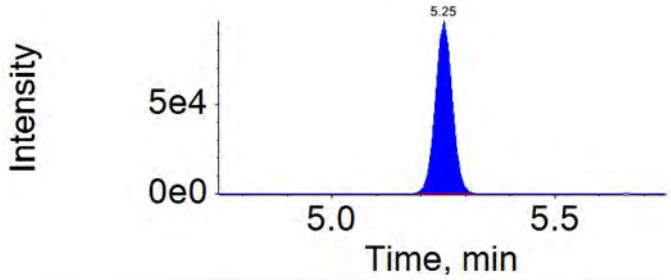
Extraction Standard: 13C9-PFNA
472.0 / 427.0



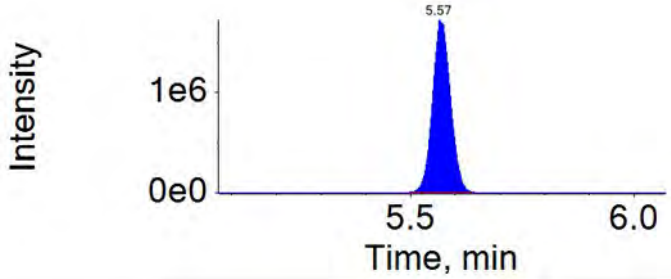
Analyte: PFNS
549.0 / 80.0



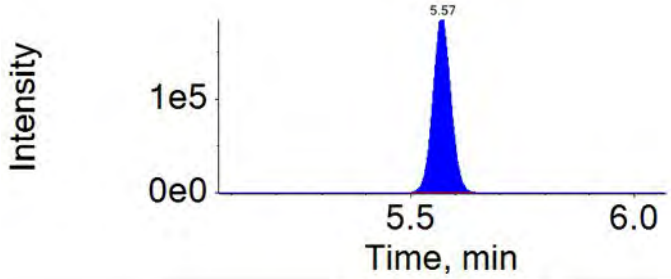
Extraction Standard: 13C8-PFOS
507.0 / 80.0



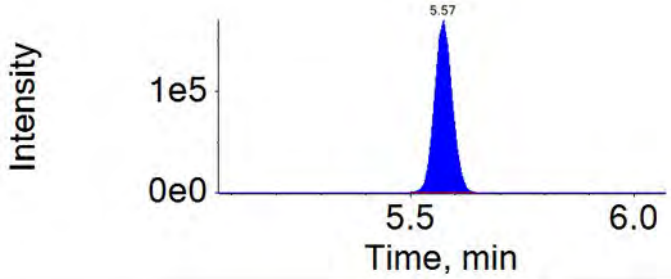
Analyte: PFDA
513.0 / 469.0



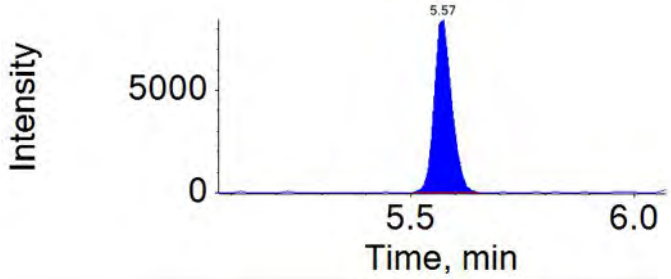
Extraction Standard: 13C6-PFDA
519.0 / 474.0



Analyte: 8:2-FTS
527.0 / 507.0



Extraction Standard: 13C2-8:2-FTS
529.0 / 81.0

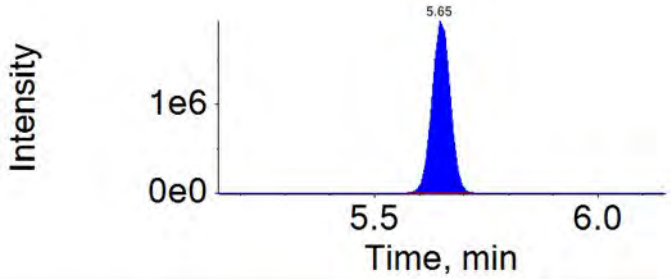


APPROVED
By MCD at 6:33 pm, 11/12/18

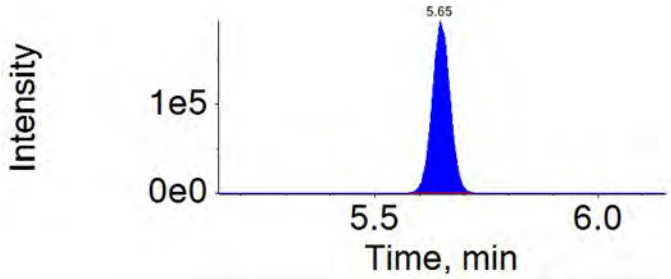
REVIEWED
By HMK at 10:53 am, 11/13/18

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

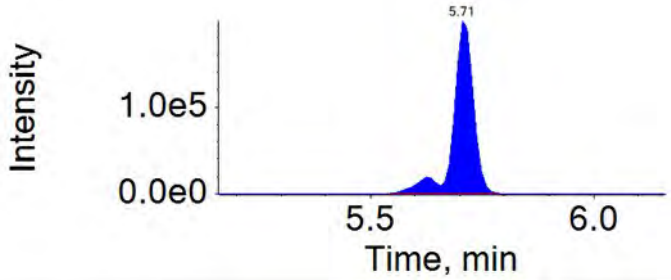
Analyte: PFOSA
498.0 / 78.0



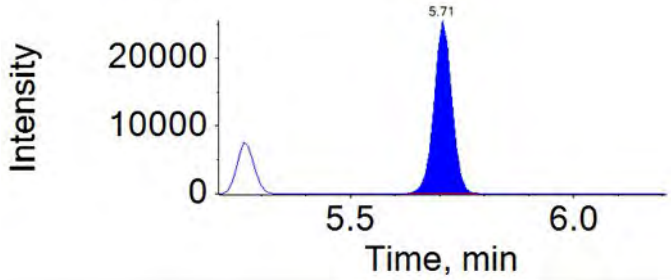
Extraction Standard: 13C8-PFOSA
506.0 / 78.0



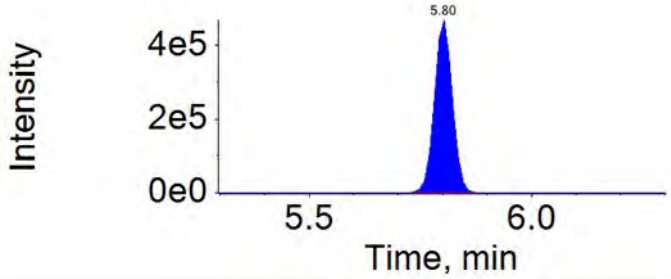
Analyte: NMeFOSAA
570.0 / 419.0



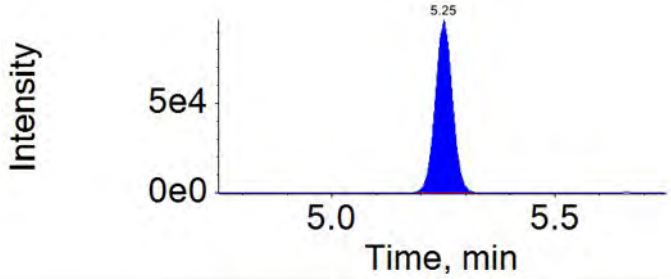
Extraction Standard: d3-NMeFOSAA
573.0 / 419.0



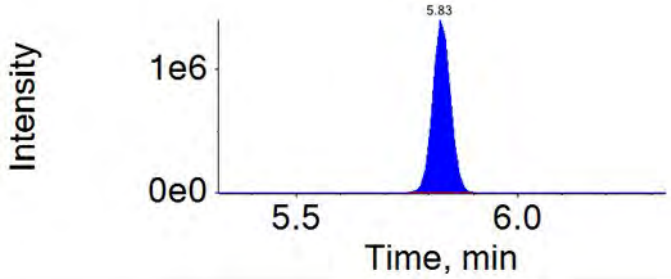
Analyte: PFDS
599.0 / 80.0



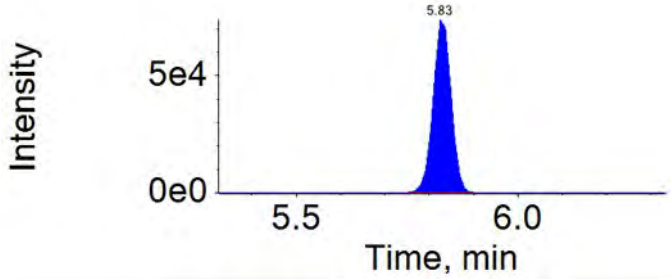
Extraction Standard: 13C8-PFOS
507.0 / 80.0



Analyte: PFUnDA
563.0 / 519.0



Extraction Standard: 13C7-PFUnDA
570.0 / 525.0

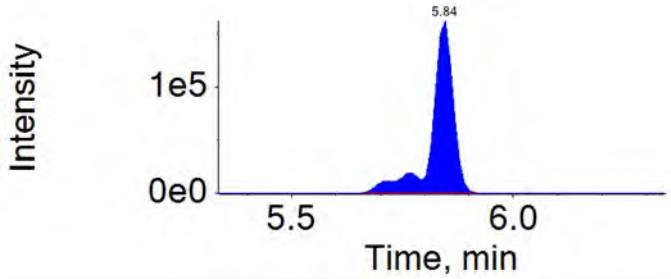


APPROVED
By MCD at 6:33 pm, 11/12/18

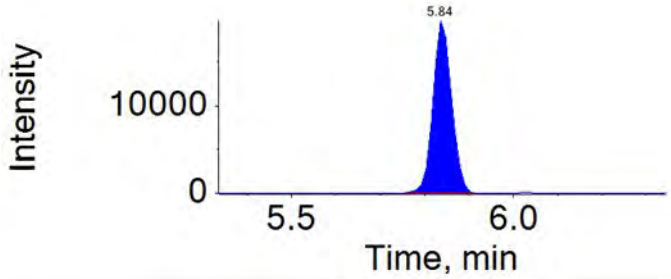
REVIEWED
By HMK at 10:53 am, 11/13/18

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

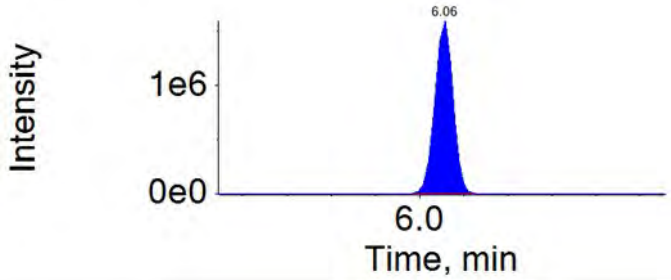
Analyte: NEtFOSAA
584.0 / 419.0



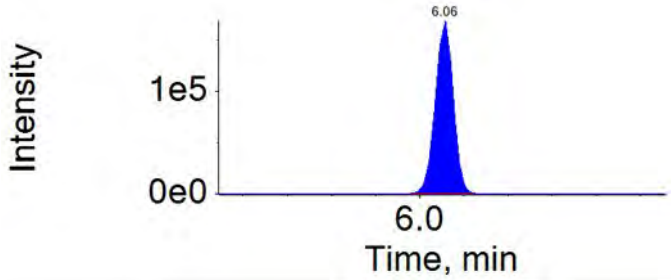
Extraction Standard: d5-NEtFOSAA
589.0 / 419.0



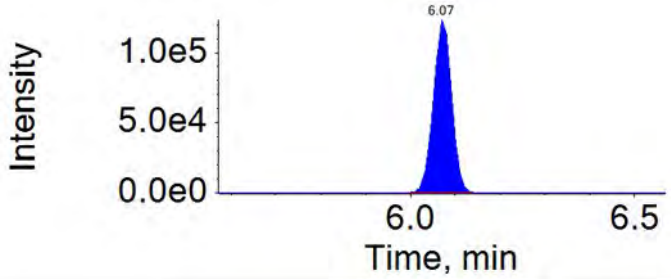
Analyte: PFDoDA
613.0 / 569.0



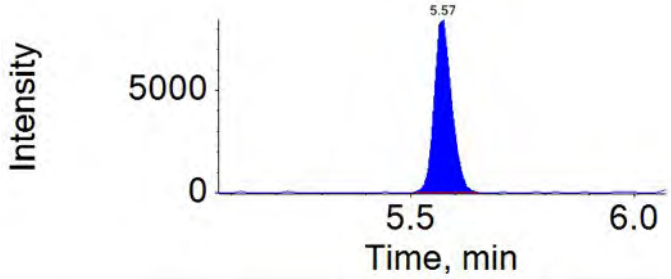
Extraction Standard: 13C2-PFDoDA
615.0 / 570.0



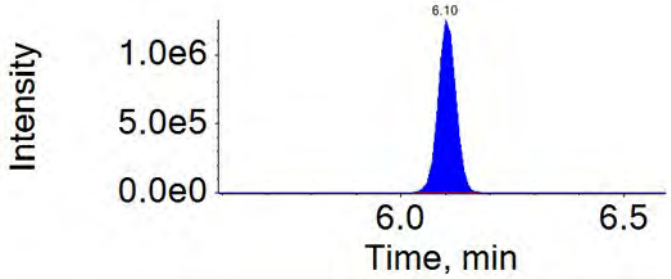
Analyte: 10:2-FTS
627.0 / 607.0



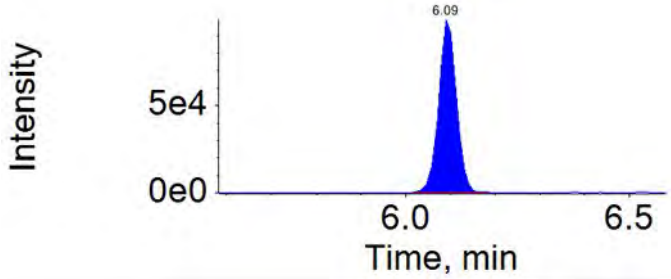
Extraction Standard: 13C2-8:2-FTS
529.0 / 81.0



Analyte: NMePFOSAE
616.0 / 59.0



Extraction Standard: d7-NMePFOSAE
623.0 / 59.0

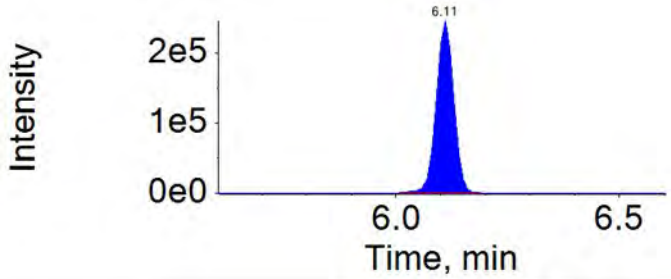


APPROVED
By MCD at 6:33 pm, 11/12/18

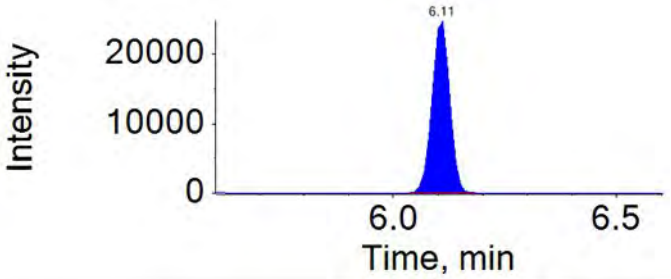
REVIEWED
By HMK at 10:53 am, 11/13/18

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

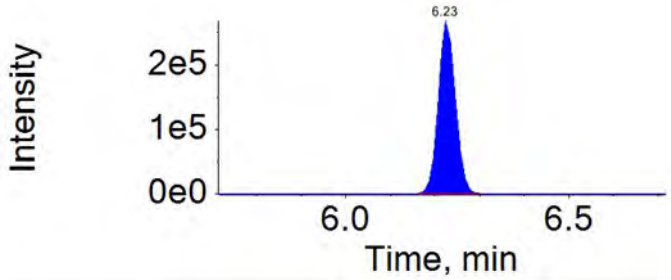
Analyte: NMePFOSA
512.0 / 169.0



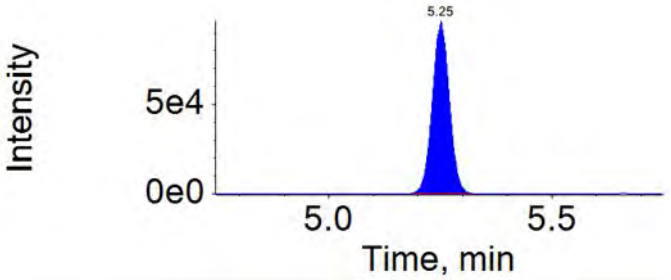
Extraction Standard: d3-NMePFOSA
515.0 / 169.0



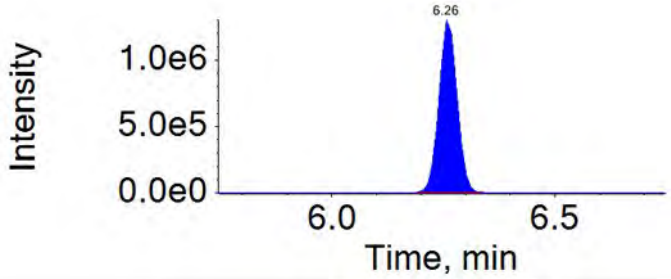
Analyte: PFDoS
699.0 / 80.0



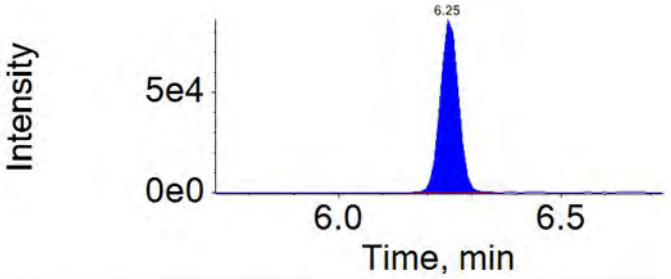
Extraction Standard: 13C8-PFOS
507.0 / 80.0



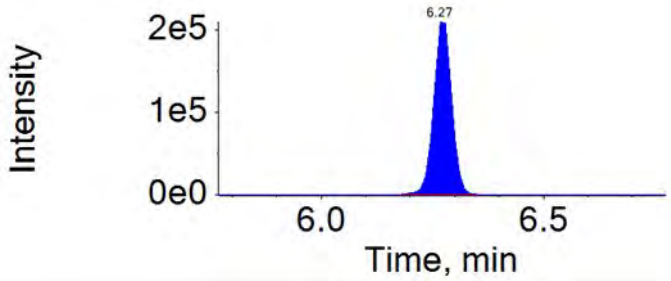
Analyte: NEtPFOSAE
630.0 / 59.0



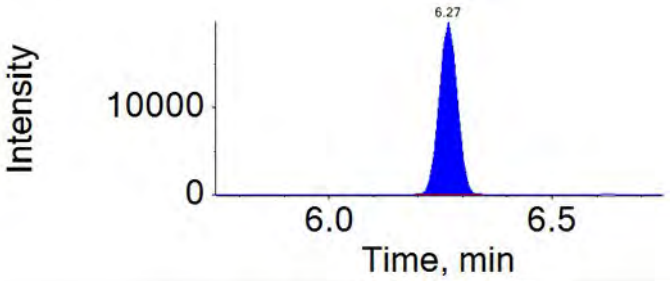
Extraction Standard: d9-NEtPFOSAE
639.0 / 59.0



Analyte: NEtPFOSA
526.0 / 169.0



Extraction Standard: d5-NEtPFOSA
531.0 / 169.0

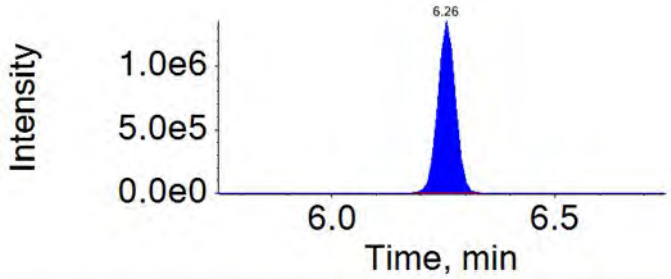


APPROVED
By MCD at 6:33 pm, 11/12/18

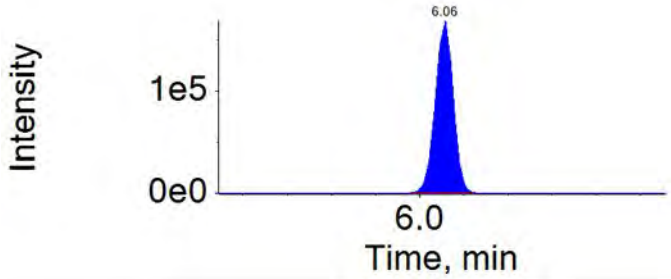
REVIEWED
By HMK at 10:53 am, 11/13/18

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

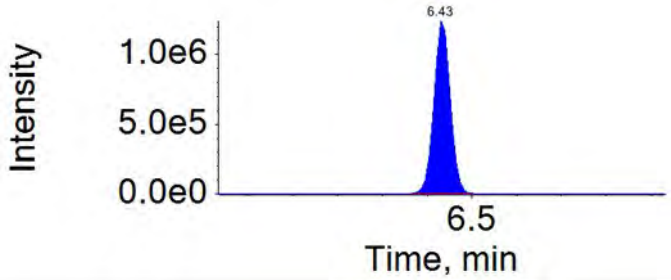
Analyte: PFTrDA
663.0 / 619.0



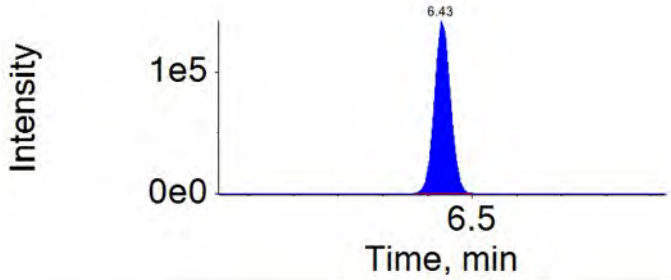
Extraction Standard: 13C2-PFDoDA
615.0 / 570.0



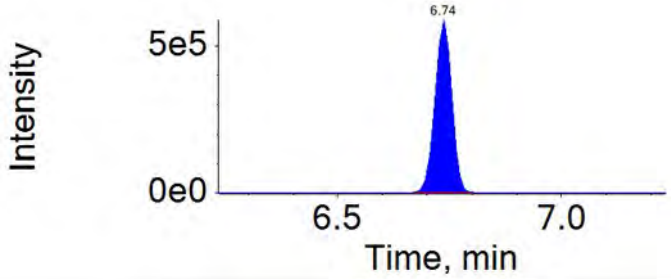
Analyte: PFTeDA
713.0 / 669.0



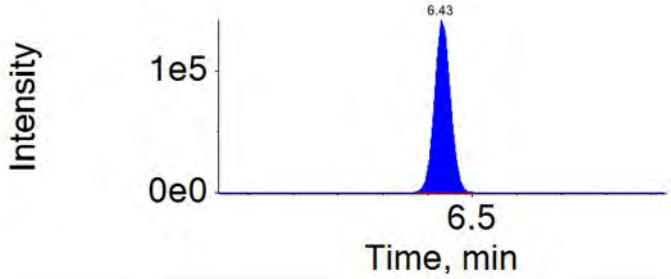
Extraction Standard: 13C2-PFTeDA
715.0 / 670.0



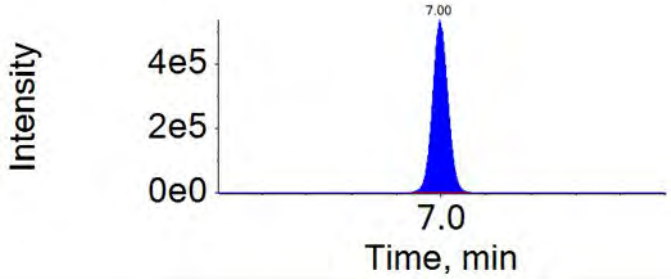
Analyte: PFHxDA
813.0 / 769.0



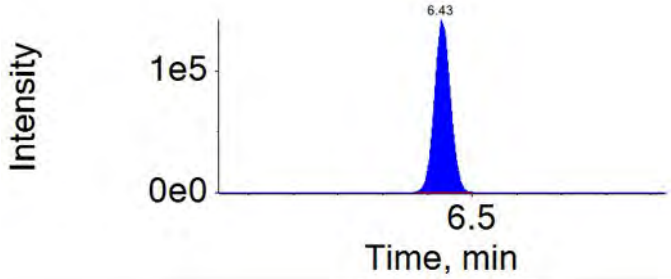
Extraction Standard: 13C2-PFTeDA
715.0 / 670.0



Analyte: PFODA
913.0 / 869.0



Extraction Standard: 13C2-PFTeDA
715.0 / 670.0



APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

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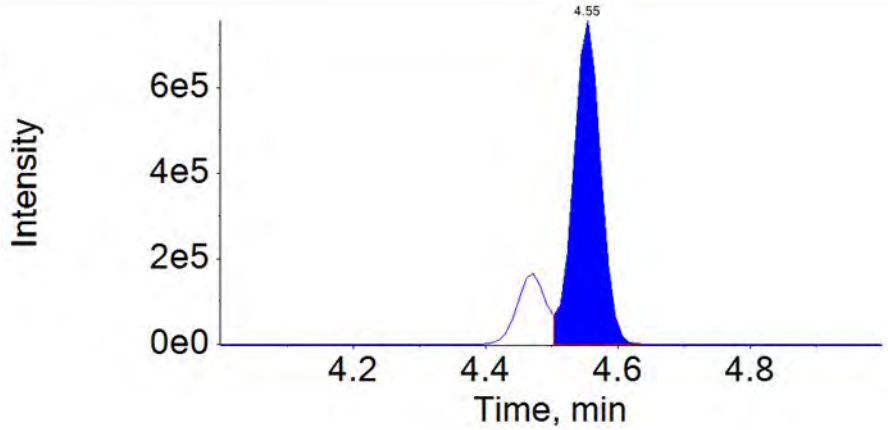
Auto Integrations prior to Manual Integration

Print Date: 11/12/2018 6:26 PM
Template: MQ-OrigInteg-16NOV21.docx

Results Table Name: 18NOV12DCAL
Results Table Date: 11/12/2018 6:23:42 PM

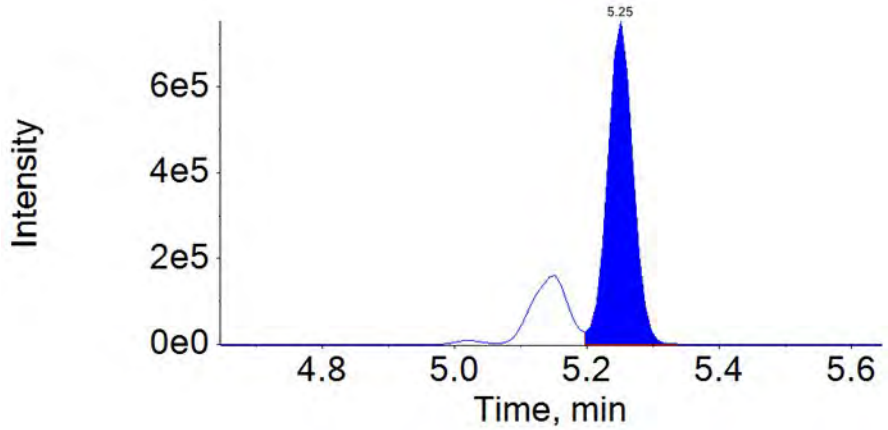
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

Component Name:
PFHxS
RT (min.):
4.55
Peak Area:
2168276.79
Mass Range:
399.0 / 80.0
File Name:
18NOV12DCAL-47.wiff
Sample Name:
CAL6



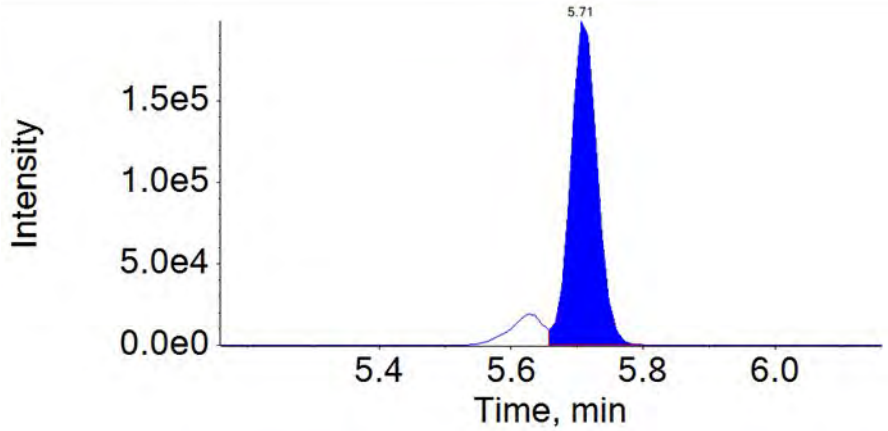
Integration Comment: incorrect integration

Component Name:
PFOS
RT (min.):
5.25
Peak Area:
2015391.27
Mass Range:
499.0 / 80.0
File Name:
18NOV12DCAL-47.wiff
Sample Name:
CAL6



Integration Comment: incorrect integration

Component Name:
NMeFOSAA
RT (min.):
5.71
Peak Area:
561930.92
Mass Range:
570.0 / 419.0
File Name:
18NOV12DCAL-47.wiff
Sample Name:
CAL6



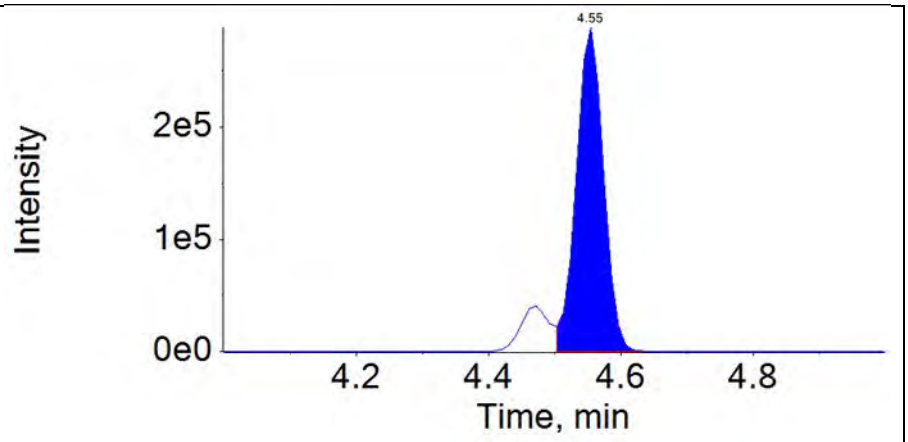
Integration Comment: incorrect integration

APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

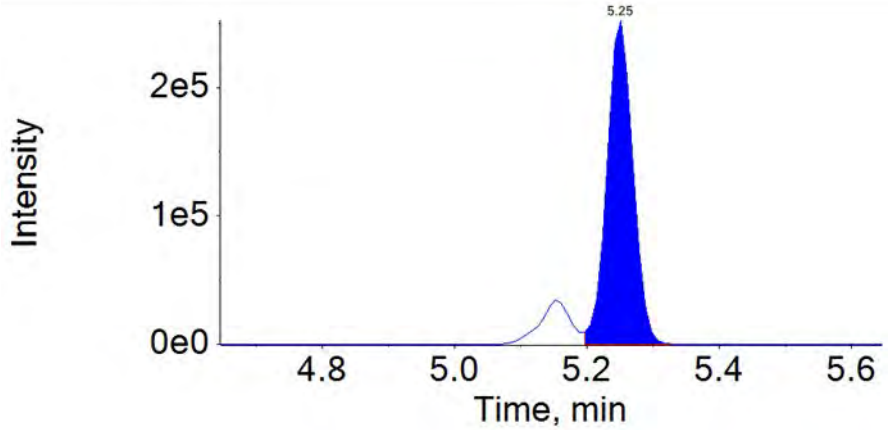
Results Table Name: 18NOV12DCAL
Results Table Date: 11/12/2018 6:23:42 PM
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

Component Name:
PFHxS_2
RT (min.):
4.55
Peak Area:
827831.34
Mass Range:
399.0 / 99.0
File Name:
18NOV12DCAL-47.wiff
Sample Name:
CAL6



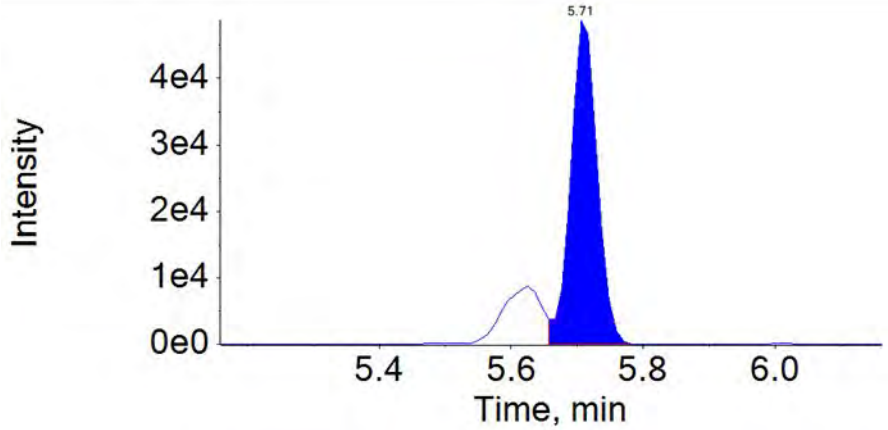
Integration Comment: incorrect integration

Component Name:
PFOS_2
RT (min.):
5.25
Peak Area:
689553.42
Mass Range:
499.0 / 99.0
File Name:
18NOV12DCAL-47.wiff
Sample Name:
CAL6



Integration Comment: incorrect integration

Component Name:
NMeFOSAA_2
RT (min.):
5.71
Peak Area:
136171.13
Mass Range:
570.0 / 483.0
File Name:
18NOV12DCAL-47.wiff
Sample Name:
CAL6



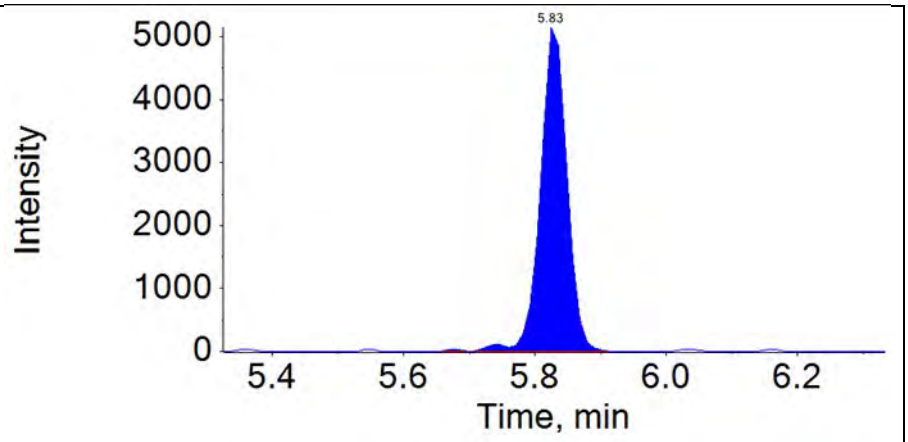
Integration Comment: incorrect integration

APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

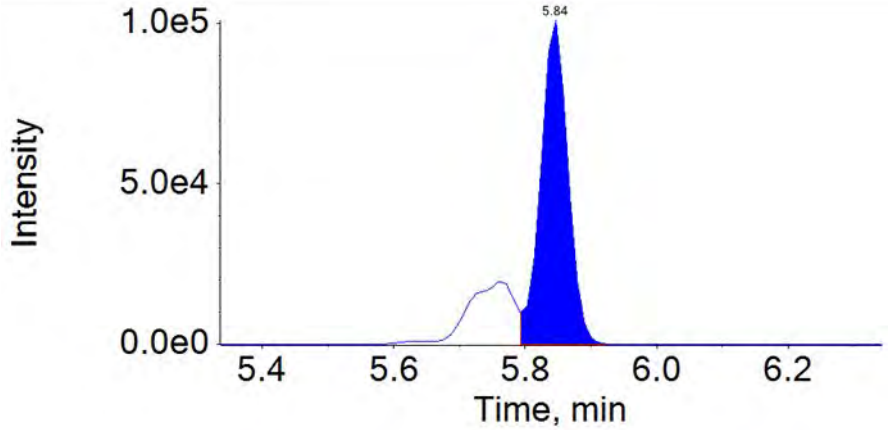
Results Table Name: 18NOV12DCAL
Results Table Date: 11/12/2018 6:23:42 PM
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

Component Name:
PFUnDA_2
RT (min.):
5.83
Peak Area:
14552.55
Mass Range:
563.0 / 169.0
File Name:
18NOV12DCAL-47.wiff
Sample Name:
CAL6



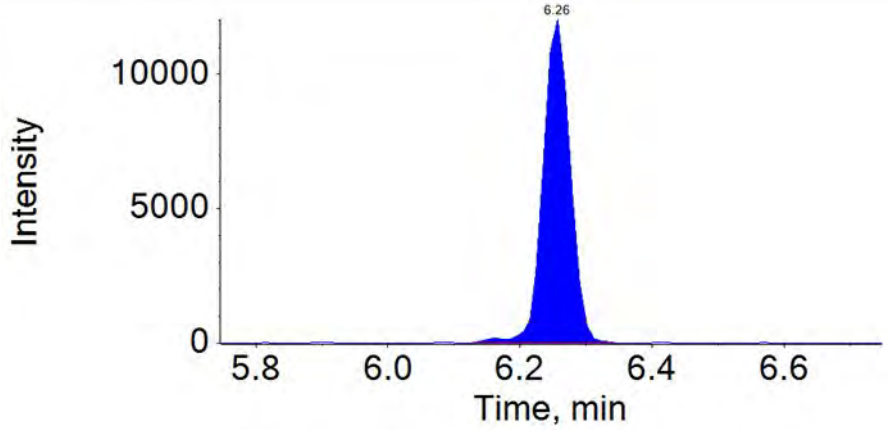
Integration Comment: incorrict integration

Component Name:
NEtFOSAA_2
RT (min.):
5.84
Peak Area:
290918.50
Mass Range:
584.0 / 526.0
File Name:
18NOV12DCAL-47.wiff
Sample Name:
CAL6



Integration Comment: incorrict integration

Component Name:
PFTrDA_2
RT (min.):
6.26
Peak Area:
34575.92
Mass Range:
663.0 / 169.0
File Name:
18NOV12DCAL-47.wiff
Sample Name:
CAL6



Integration Comment: incorrict integration

Results Table Name: 18NOV12DCAL
Results Table Date: 11/12/2018 6:23:42 PM

Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

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LC-MS/MS Analysis Report

Printed: 11/12/2018 6:22:00 PM
Template: IonRatio18OCT10

Ion Ratio Report

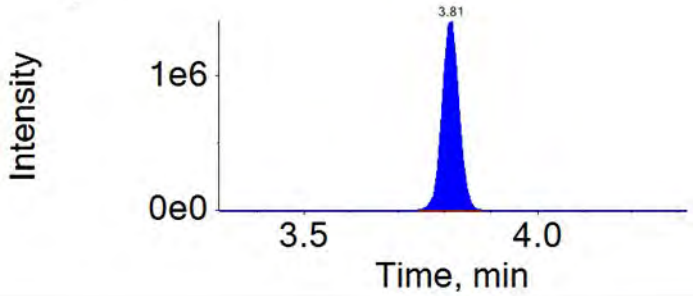
Sample Name: CAL6 **Instrument Name:** LM27631 **File Name:** 18NOV12DCAL-47.wiff

Component Name	RT	RRT	Analyte Area Response	Int Typ	Expected Ion Ratio	Ion Ratio	Ion Ratio % Diff	Ion Ratio Limit	Ion Ratio OOS
PFBS	3.81	1.00	3588084.15	A	0.3619	0.3688			
PFBS_2	3.81	1.00	1323155.38	A	0.3619	0.3688	2	50	
4:2-FTS	4.13	1.00	738293.95	A	0.6730	0.6272			
4:2 FTS_2	4.13	1.00	463074.71	A	0.6730	0.6272		#NA!	
PFHxA	4.16	1.00	6593778.96	A	0.0117	0.0113			
PFHxA_2	4.16	1.00	74578.79	A	0.0117	0.0113	-3	50	
PFPeS	4.18	1.10	1847826.78	A	0.5191	0.5187			
PFPeS_2	4.18	1.10	958558.40	A	0.5191	0.5187	0	50	
PFHpA	4.55	1.00	6648455.32	A	0.0563	0.0564			
PFHpA_2	4.55	1.00	375071.53	A	0.0563	0.0564	0	50	
PFHxS	4.55	1.00	2662852.00	M	0.3428	0.3565			
PFHxS_2	4.55	1.00	949378.20	M	0.3428	0.3565	4	50	
6:2-FTS	4.91	1.00	523949.46	A	0.6604	0.6368			
6:2 FTS_2	4.91	1.00	333633.12	A	0.6604	0.6368		#NA!	
PFHpS	4.91	1.08	2604868.63	A	0.4066	0.4130			
PFHpS_2	4.91	1.08	1075742.12	A	0.4066	0.4130	2	50	
PFOA	4.92	1.00	6758642.79	A	0.0562	0.0574			
PFOA_2	4.92	1.00	387863.69	A	0.0562	0.0574	2	50	
PFOS	5.25	1.00	2664957.22	M	0.2968	0.3006			
PFOS_2	5.25	1.00	801195.47	M	0.2968	0.3006	1	50	
PFNA	5.27	1.00	5820576.59	A	0.0229	0.0205			
PFNA_2	5.27	1.00	119436.95	A	0.0229	0.0205	-10	50	
PFNS	5.55	1.06	1709959.45	A	0.4828	0.4693			
PFNS_2	5.55	1.06	802535.42	A	0.4828	0.4693	-3	50	
PFDA	5.57	1.00	4802967.81	A	0.0081	0.0072			
PFDA_2	5.57	1.00	34768.56	A	0.0081	0.0072	-10	50	
8:2-FTS	5.57	1.00	469719.63	A	0.6814	0.5683			
8:2 FTS_2	5.57	1.00	266934.57	A	0.6814	0.5683		#NA!	
NMeFOSAA	5.71	1.00	627854.43	M	0.2569	0.2739			
NMeFOSAA_2	5.71	1.00	171981.91	M	0.2569	0.2739	7	50	
PFDS	5.80	1.10	1313570.32	A	0.5144	0.4832			
PFDS_2	5.80	1.11	634717.73	A	0.5144	0.4832	-6	50	
PFUnDA	5.83	1.00	3923979.21	A	0.0058	0.0036			
PFUnDA_2	5.83	1.00	14257.68	M	0.0058	0.0036	-38	50	
NEtFOSAA	5.84	1.00	551865.73	A	0.7253	0.6936			
NEtFOSAA_2	5.84	1.00	382778.11	M	0.7253	0.6936	-4	50	
PFDoDA	6.06	1.00	4582985.49	A	0.0157	0.0136			
PFDoDA_2	6.06	1.00	62235.50	A	0.0157	0.0136	-13	50	
10:2-FTS	6.07	1.09	348263.21	A	0.6356	0.6654			
10:2 FTS_2	6.07	1.09	231731.38	A	0.6356	0.6654		#NA!	
PFTrDA	6.26	1.03	3691733.76	A	0.0086	0.0093			
PFTrDA_2	6.26	1.03	34255.33	M	0.0086	0.0093	8	50	
PFTeDA	6.43	1.00	3149020.22	A	0.0062	0.0065			
PFTeDA_2	6.43	1.00	20486.74	A	0.0062	0.0065	4	50	
PFHxDA	6.74	1.05	1533920.21	A	0.0683	0.0655			
PFHxDA_2	6.73	1.05	100532.17	A	0.0683	0.0655	-4	50	
PFODA	7.00	1.09	1270897.62	A	0.0277	0.0264			
PFODA_2	7.00	1.09	33518.79	A	0.0277	0.0264	-5	50	

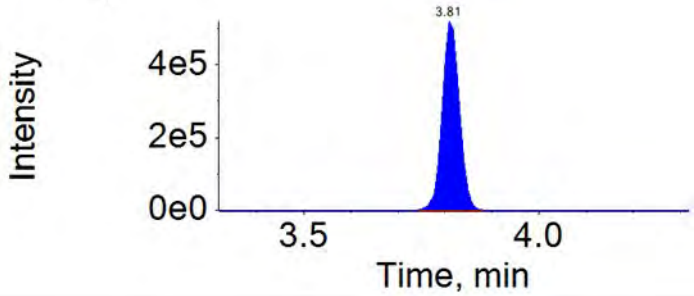
APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

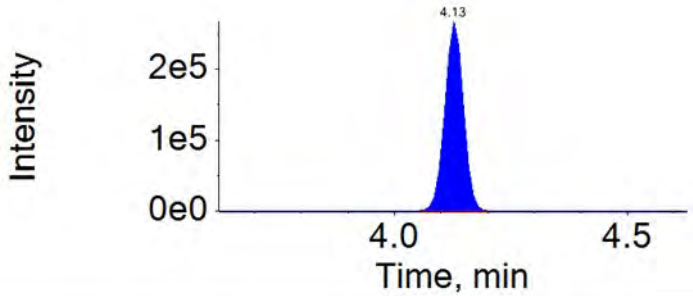
Component: PFBS
Primary Mass: 299.0 / 80.0



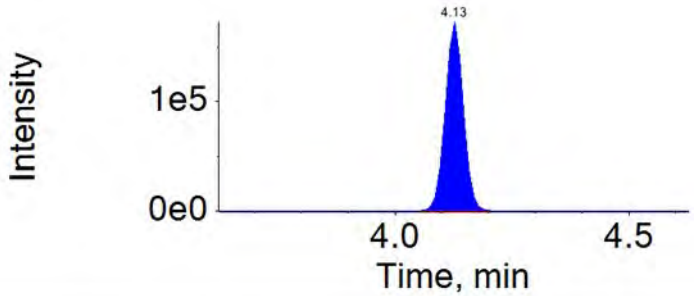
Component: PFBS_2
Secondary Mass: 299.0 / 99.0



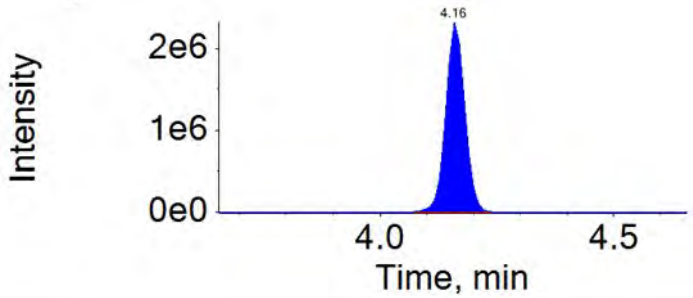
Component: 4:2-FTS
Primary Mass: 327.0 / 307.0



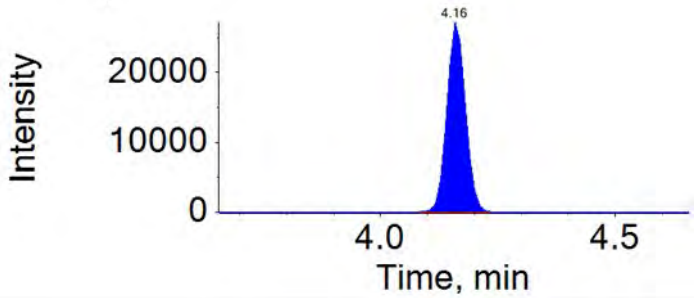
Component: 4:2 FTS_2
Secondary Mass: 327.0 / 81.0



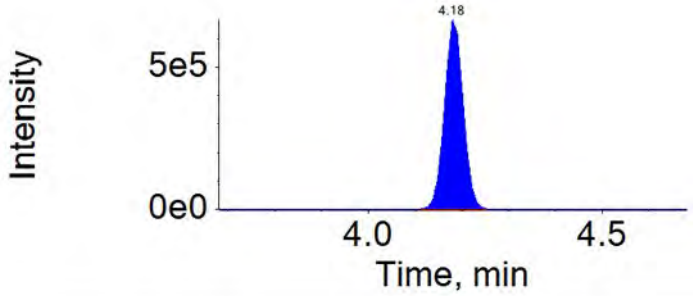
Component: PFHxA
Primary Mass: 313.0 / 269.0



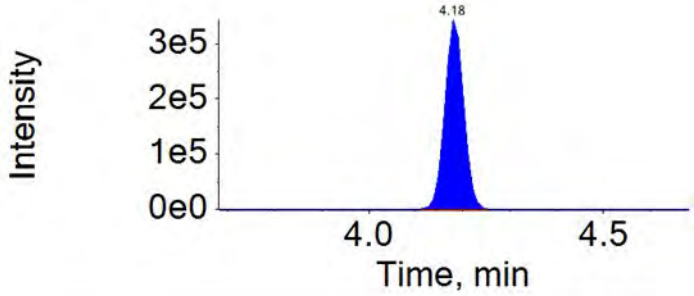
Component: PFHxA_2
Secondary Mass: 313.0 / 119.0



Component: PFPeS
Primary Mass: 349.0 / 80.0



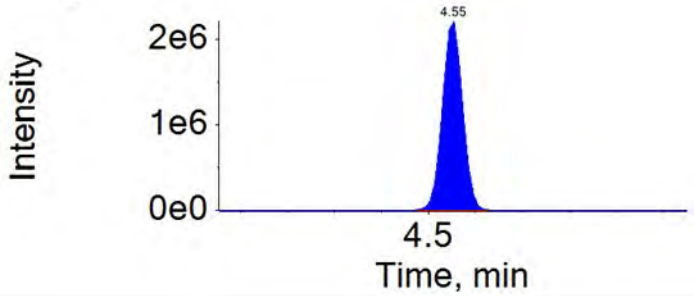
Component: PFPeS_2
Secondary Mass: 349.0 / 99.0



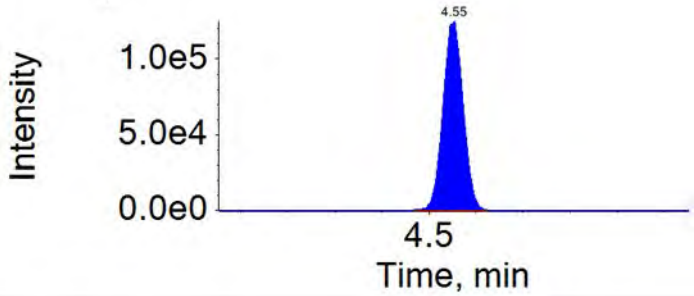
APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

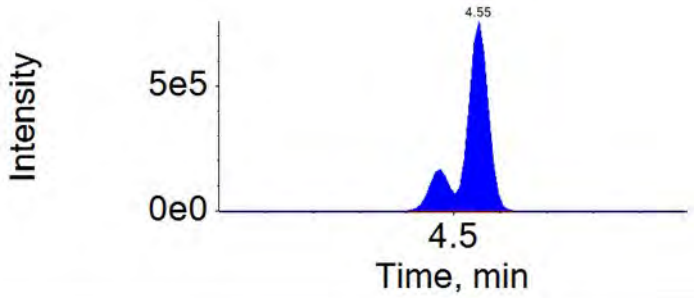
Component: PFHpA
Primary Mass: 363.0 / 319.0



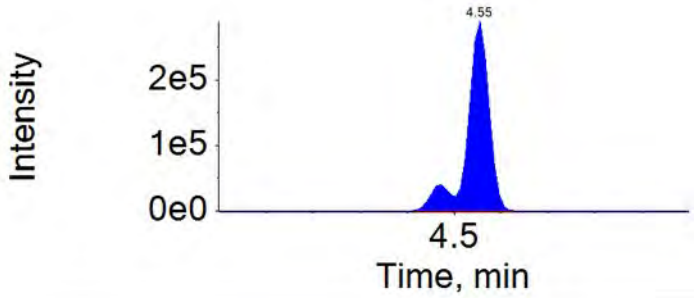
Component: PFHpA_2
Secondary Mass: 363.0 / 169.0



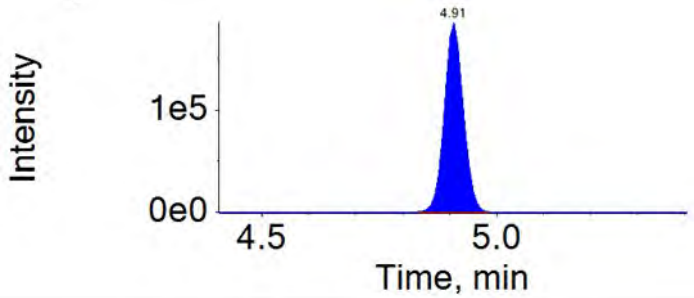
Component: PFHxS
Primary Mass: 399.0 / 80.0



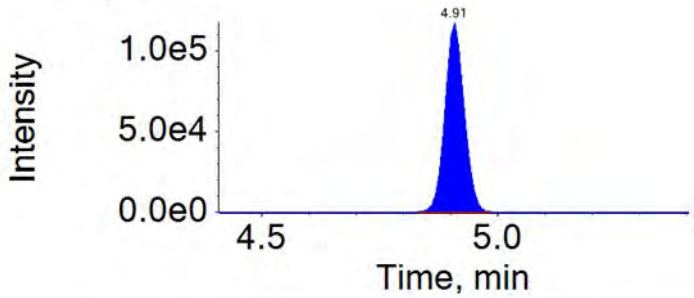
Component: PFHxS_2
Secondary Mass: 399.0 / 99.0



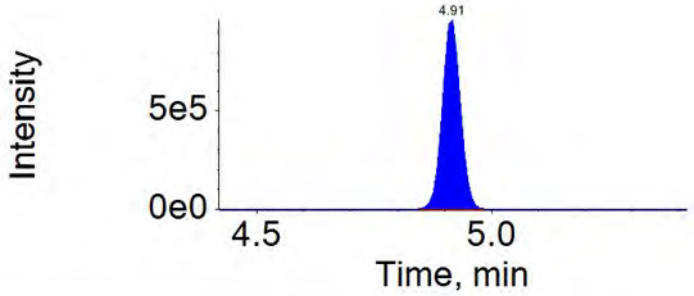
Component: 6:2-FTS
Primary Mass: 427.0 / 407.0



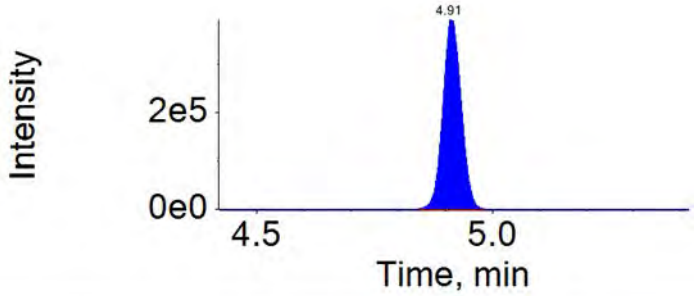
Component: 6:2 FTS_2
Secondary Mass: 427.0 / 81.0



Component: PFHpS
Primary Mass: 449.0 / 80.0



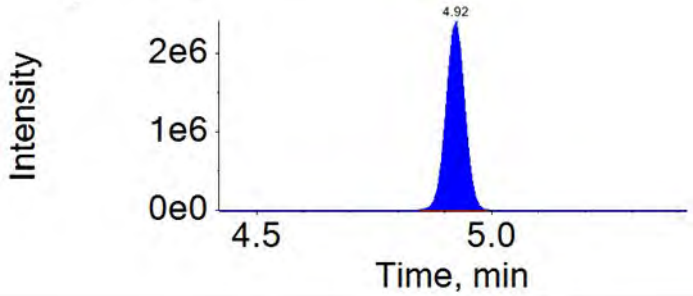
Component: PFHpS_2
Secondary Mass: 449.0 / 99.0



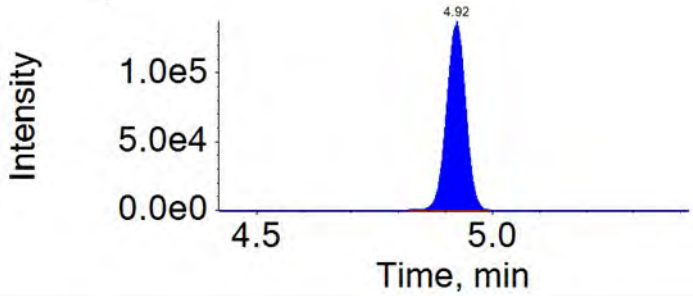
APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

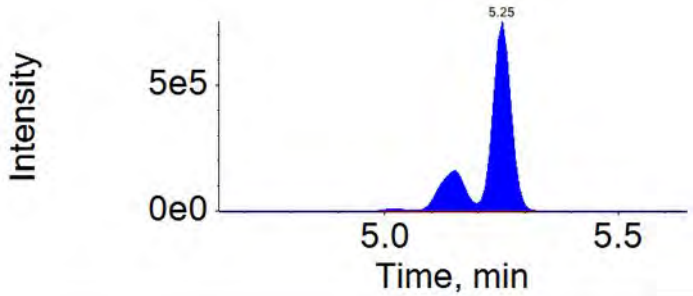
Component: PFOA
Primary Mass: 413.0 / 369.0



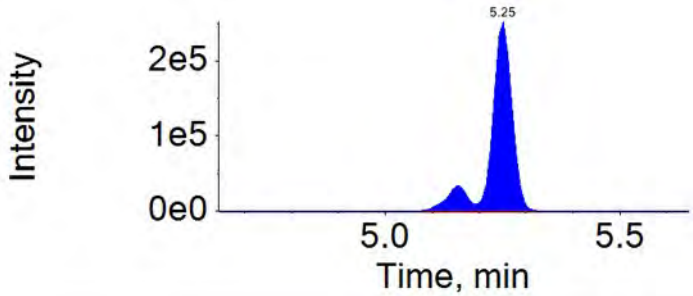
Component: PFOA_2
Secondary Mass: 413.0 / 169.0



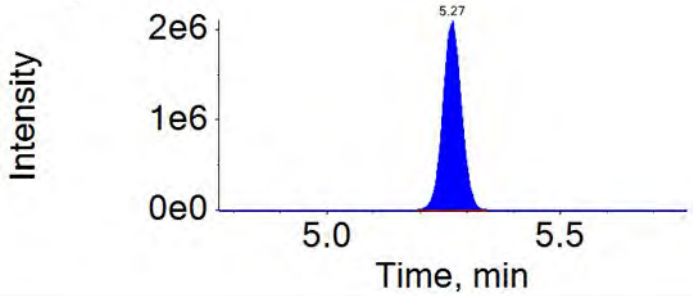
Component: PFOS
Primary Mass: 499.0 / 80.0



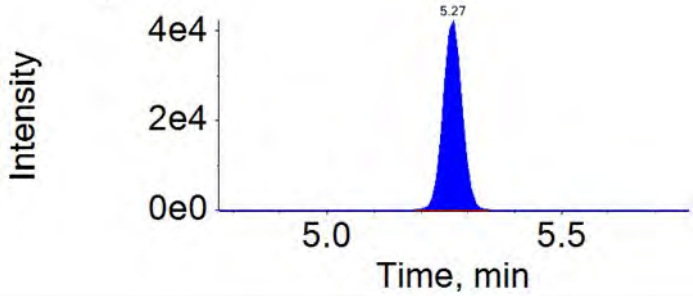
Component: PFOS_2
Secondary Mass: 499.0 / 99.0



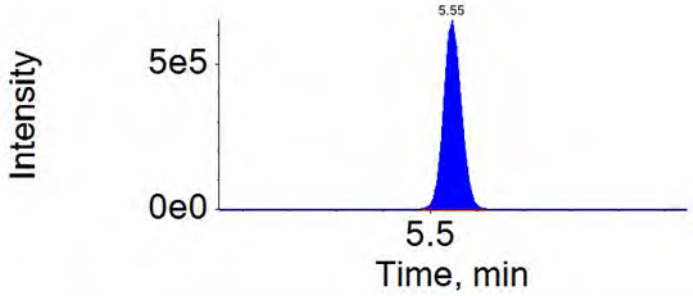
Component: PFNA
Primary Mass: 463.0 / 419.0



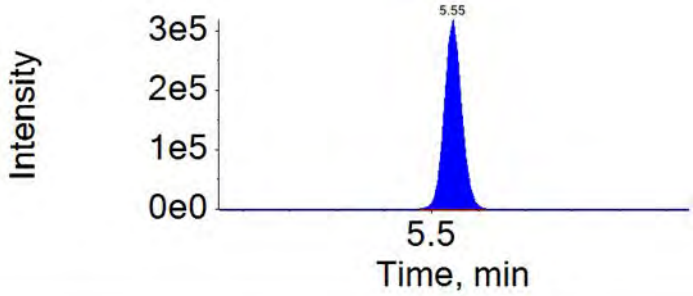
Component: PFNA_2
Secondary Mass: 463.0 / 169.0



Component: PFNS
Primary Mass: 549.0 / 80.0



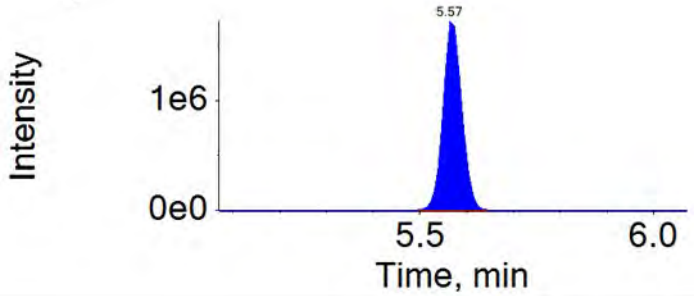
Component: PFNS_2
Secondary Mass: 549.0 / 99.0



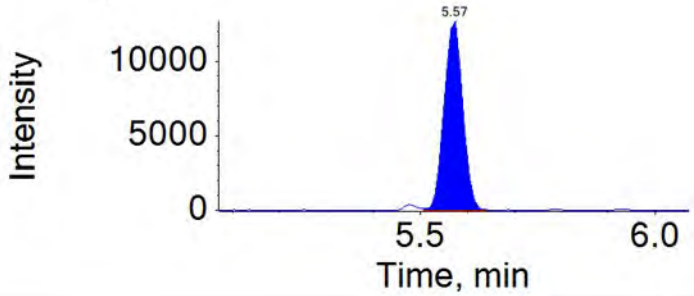
APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

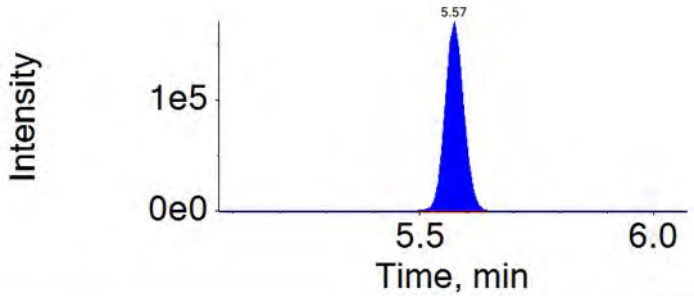
Component: PFDA
Primary Mass: 513.0 / 469.0



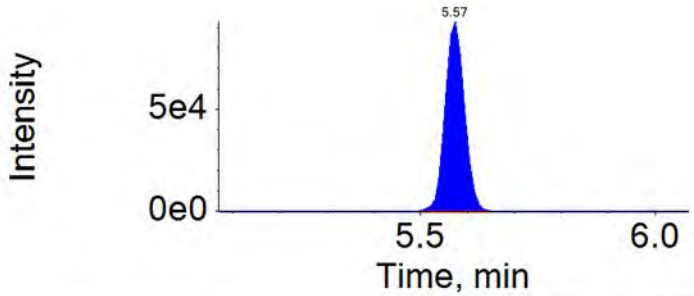
Component: PFDA_2
Secondary Mass: 513.0 / 169.0



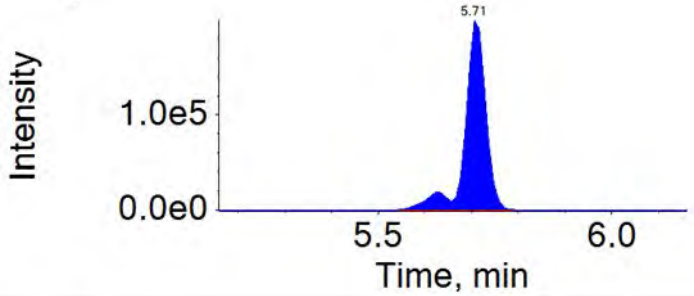
Component: 8:2-FTS
Primary Mass: 527.0 / 507.0



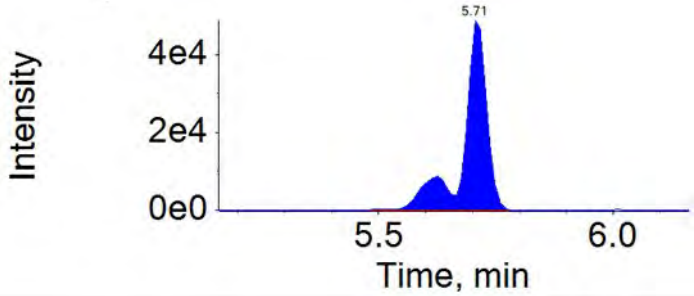
Component: 8:2 FTS_2
Secondary Mass: 527.0 / 81.0



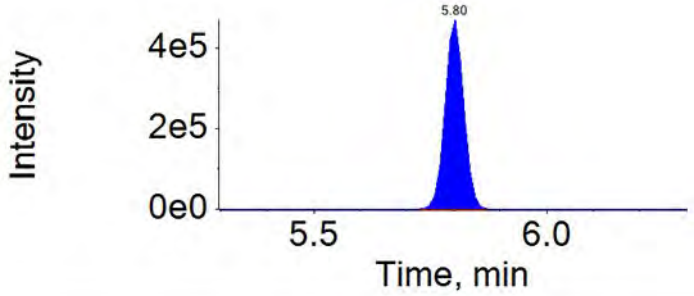
Component: NMeFOSAA
Primary Mass: 570.0 / 419.0



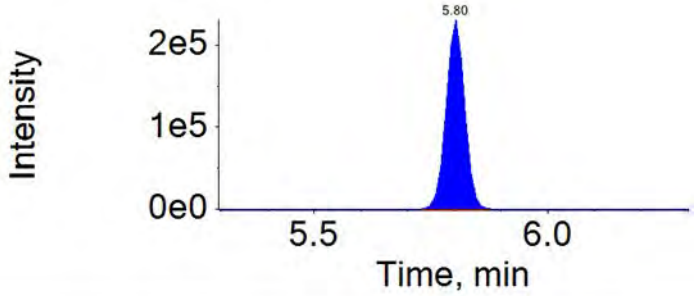
Component: NMeFOSAA_2
Secondary Mass: 570.0 / 483.0



Component: PFDS
Primary Mass: 599.0 / 80.0



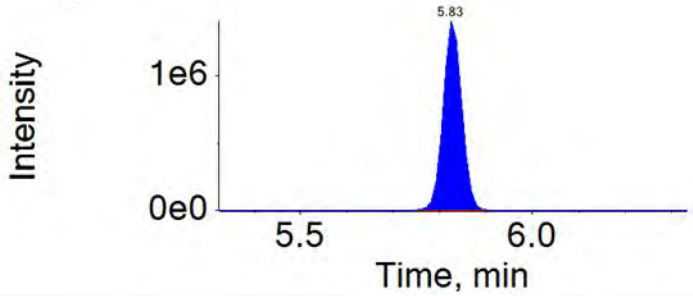
Component: PFDS_2
Secondary Mass: 599.0 / 99.0



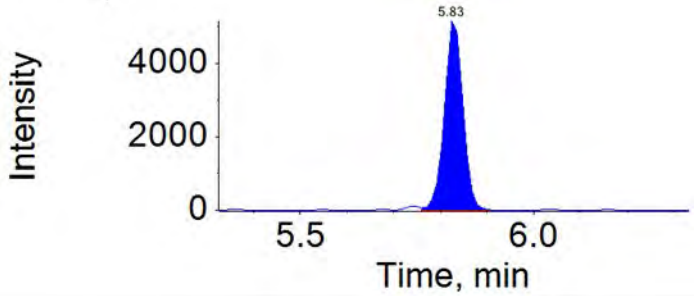
APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

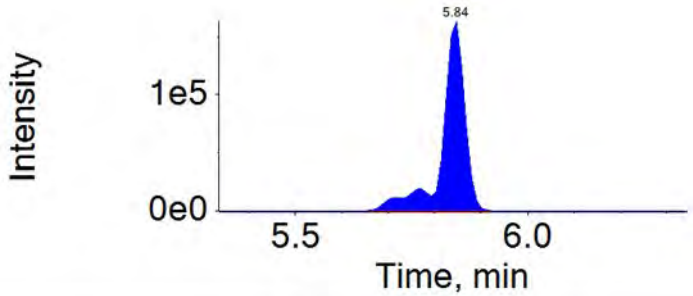
Component: PFUnDA
Primary Mass: 563.0 / 519.0



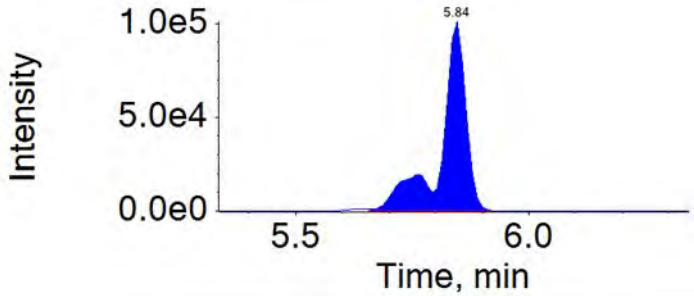
Component: PFUnDA_2
Secondary Mass: 563.0 / 169.0



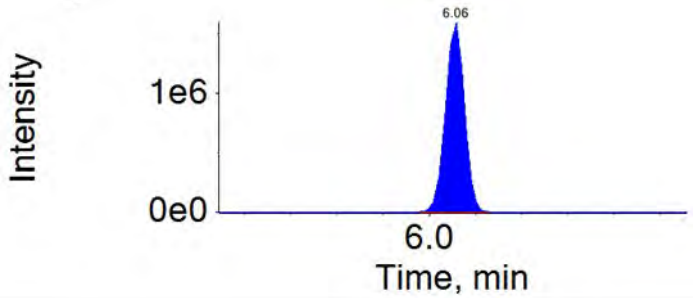
Component: NEtFOSAA
Primary Mass: 584.0 / 419.0



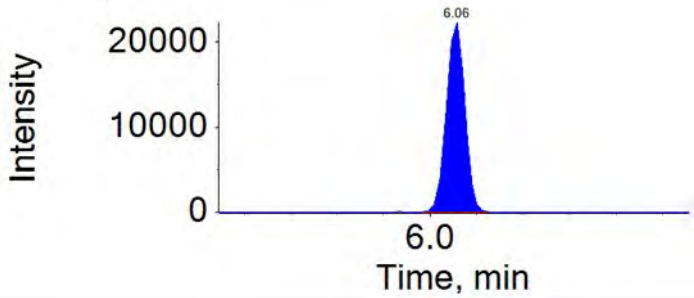
Component: NEtFOSAA_2
Secondary Mass: 584.0 / 526.0



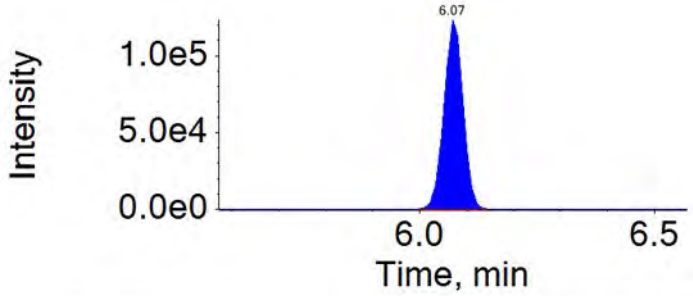
Component: PFDoDA
Primary Mass: 613.0 / 569.0



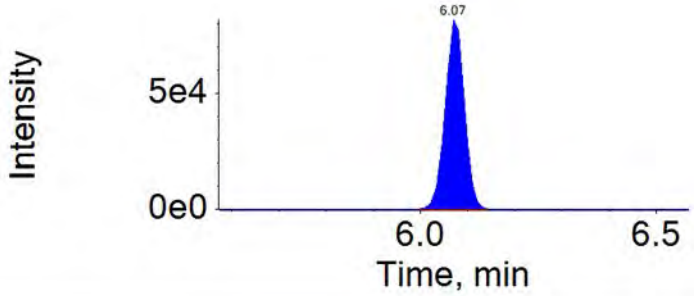
Component: PFDoDA_2
Secondary Mass: 613.0 / 169.0



Component: 10:2-FTS
Primary Mass: 627.0 / 607.0



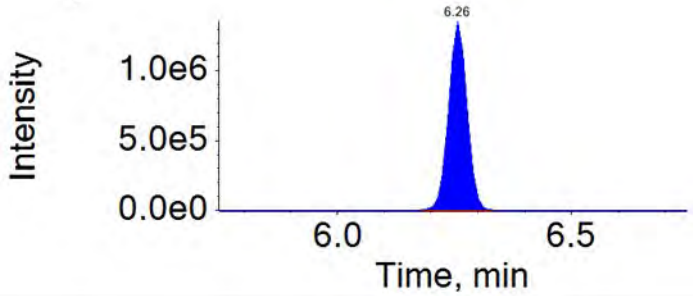
Component: 10:2 FTS_2
Secondary Mass: 627.0 / 81.0



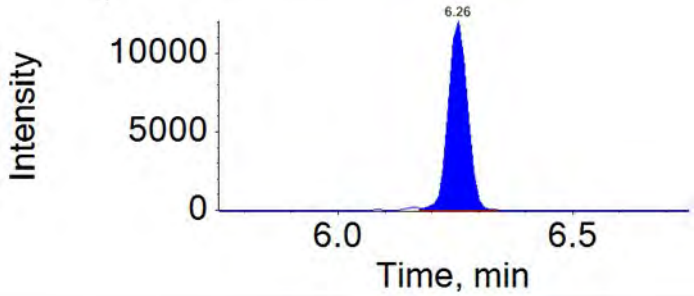
APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

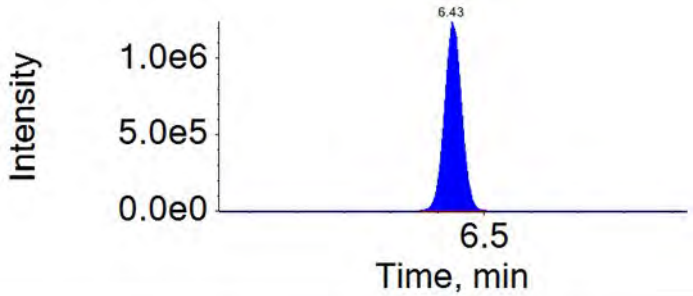
Component: PFTrDA
Primary Mass: 663.0 / 619.0



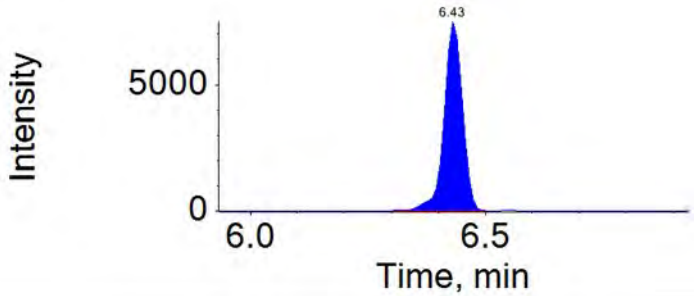
Component: PFTrDA_2
Secondary Mass: 663.0 / 169.0



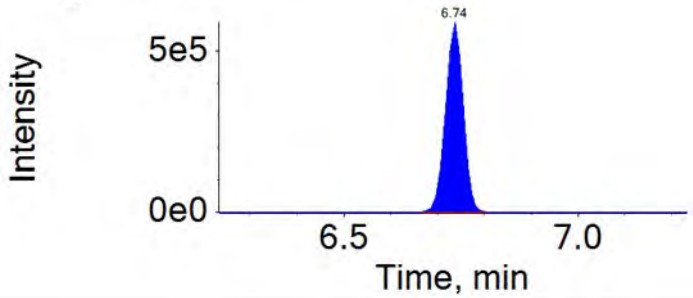
Component: PFTeDA
Primary Mass: 713.0 / 669.0



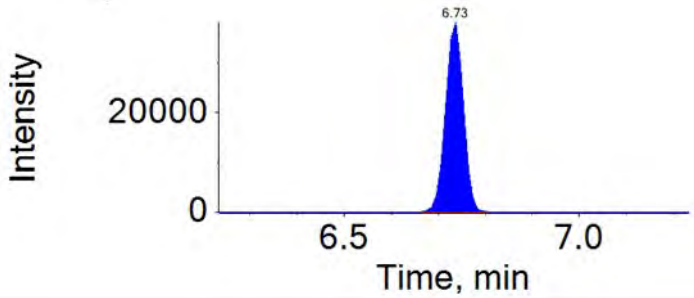
Component: PFTeDA_2
Secondary Mass: 713.0 / 169.0



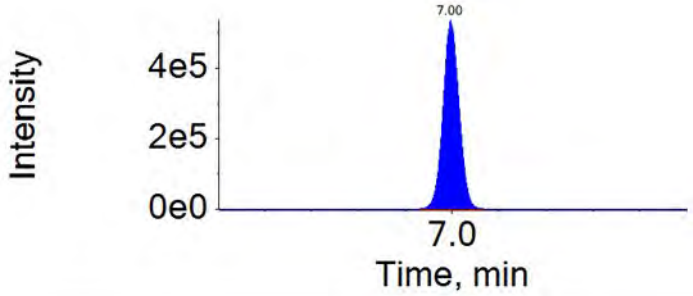
Component: PFHxDA
Primary Mass: 813.0 / 769.0



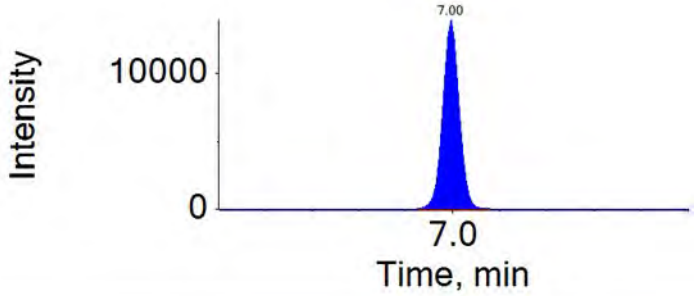
Component: PFHxDA_2
Secondary Mass: 813.0 / 169.0



Component: PFODA
Primary Mass: 913.0 / 869.0



Component: PFODA_2
Secondary Mass: 913.0 / 169.0



APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Sample Name:	CAL7			**Data File:**		18NOV12DCAL-48.wiff
Sample ID:	CALBRN71833B			**Acquis Date:**		2018-11-12T16:00:06
Sample Type:	Standard			**Instrument:**		LM27631
Vial Position:	9			**Acquis Method:**		18AUG13_3uL.dam
Injection Vol:	3.00			**Result Table:**		18NOV12DCAL
QMethod File:	18AUG20QM			**ICAL Name:**		18NOV12DCAL
Batch Number:	N\A			**Operator:**		MCD7824
Sample Wt.:	1.00000			**Dilution Factor:**		1.00
Sample Vol.:	1.000			**Prep Factor:**		1.000

Injection Standard Peak Table

Injection Standard Area Reference File: 18NOV12DCAL-44

Injection Standard Name	Inj Std Conc	Injection Std Peak Area	Rreference Injection Standard Area	Injection Std %Diff	Injection Std %Diff Limit	Injection Std %Diff OOS
13C3-PFBA	5.0	510525.8	659926.2	-23	50	
13C2-PFOA	5.0	368158.3	450219.7	-18	50	
13C4-PFOS	4.8	233532.7	249205.8	-6	50	
13C2-PFDA	5.0	233825.1	278743.9	-16	50	

Extraction Standard Peak Table

Extraction Standard Name	Ext Std Area	Inj Std Name	Inj Std Area	Area Ratio	Ext Std Conc	Ext Std Result	Ext Std %REC	Ext Std %REC Limit	Ext Std OOS
E13C4-PFBA	557392.8	13C3-PFBA	510525.8	1.092	5.000	4.895	98	70-130	
E13C5-PFPeA	581688.7	13C3-PFBA	510525.8	1.139	5.000	5.110	102	70-130	
E13C3-PFBS	361166.0	13C3-PFBA	510525.8	0.707	4.650	4.994	107	70-130	
E13C2-4:2-FTS	40505.1	13C2-PFOA	368158.3	0.110	4.670	4.900	105	70-130	
E13C5-PFHxA	509808.0	13C2-PFOA	368158.3	1.385	5.000	5.002	100	70-130	
E13C3-PFHxS	267182.8	13C2-PFOA	368158.3	0.726	4.730	4.980	105	70-130	
E13C4-PFHpA	401203.9	13C2-PFOA	368158.3	1.090	5.000	4.910	98	70-130	
E13C2-6:2-FTS	27180.2	13C2-PFOA	368158.3	0.074	4.750	4.939	104	70-130	
E13C8-PFOA	607669.5	13C2-PFOA	368158.3	1.651	5.000	4.548	91	70-130	
E13C8-PFOS	242617.5	13C4-PFOS	233532.7	1.039	4.780	4.603	96	70-130	
E13C9-PFNA	377369.8	13C4-PFOS	233532.7	1.616	5.000	4.505	90	70-130	
E13C6-PFDA	479333.1	13C2-PFDA	233825.1	2.050	5.000	4.784	96	70-130	
E13C2-8:2-FTS	22711.0	13C2-PFDA	233825.1	0.097	4.790	4.844	101	70-130	
E13C8-PFOSA	554092.6	13C2-PFDA	233825.1	2.370	5.000	5.254	105	70-130	
Ed3-NMeFOSAA	67250.5	13C2-PFDA	233825.1	0.288	5.000	5.192	104	70-130	
E13C7-PFUnDA	199746.8	13C2-PFDA	233825.1	0.854	5.000	4.960	99	70-130	
Ed5-NEtFOSAA	58049.5	13C2-PFDA	233825.1	0.248	5.000	5.252	105	70-130	
E13C2-PFDoDA	474393.8	13C2-PFDA	233825.1	2.029	5.000	5.268	105	70-130	
Ed7-NMePFOSAE	272283.1	13C2-PFDA	233825.1	1.164	5.000	5.039	101	70-130	
Ed3-NMePFOSA	74110.3	13C2-PFDA	233825.1	0.317	5.000	5.758	115	70-130	
Ed9-NEtPFOSAE	240346.5	13C2-PFDA	233825.1	1.028	5.000	5.346	107	70-130	
Ed5-NEtPFOSA	53297.9	13C2-PFDA	233825.1	0.228	5.000	5.347	107	70-130	
E13C2-PFTeDA	346256.6	13C2-PFDA	233825.1	1.481	5.000	5.199	104	70-130	

APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

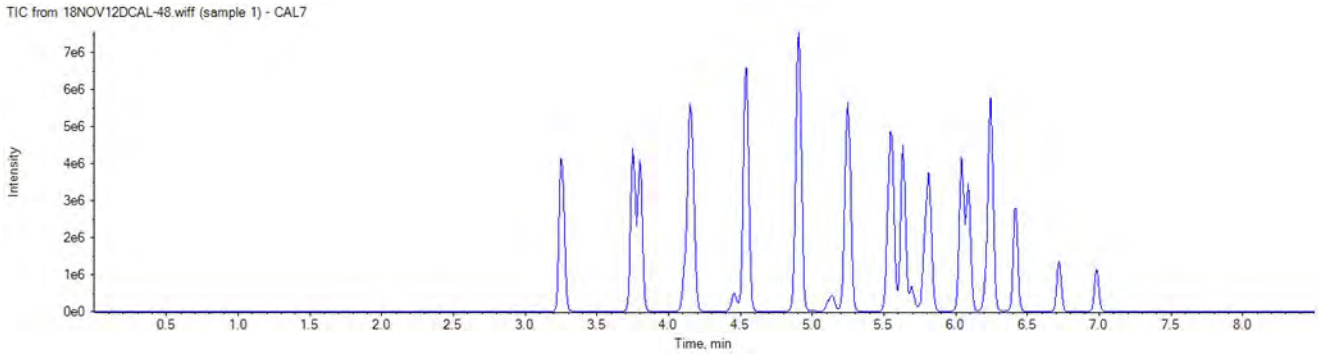
Analyte Quantitation Peak Table

Sample Name: CAL7 **Instrument Name:** LM27631 **File Name:** 18NOV12DCAL-48.wiff

Sample Wt	Sample Vol	Dilution Factor	PrepFactor
1.00000	1.000	1.00	1.000

Analyte Name	RT	RRT	Analyte Area Response	E	Int Typ	ES Name	ES RT	ES Area Response	Area Ratio	Sample Result (ng/g)
PFBA	3.25	1.000	9834601.7		A	13C4-PFBA	3.25	557392.8	17.644	97.743
PFPeA	3.75	1.000	9756431.5		A	13C5-PFPeA	3.75	581688.7	16.773	97.094
PFBS	3.80	1.000	6615935.3		A	13C3-PFBS	3.80	361166.0	18.318	87.136
4:2-FTS	4.11	1.000	1379983.9		A	13C2-4:2-FTS	4.11	40505.1	34.069	92.499
PFHxA	4.15	1.000	11059420.3		A	13C5-PFHxA	4.15	509808.0	21.693	90.577
PFPeS	4.17	1.100	3482095.9		A	13C3-PFBS	3.80	361166.0	9.641	93.602
PFHpA	4.54	1.000	10981922.8		A	13C4-PFHpA	4.54	401203.9	27.372	90.732
PFHxS	4.54	1.000	5048349.8		M	13C3-PFHxS	4.54	267182.8	18.895	91.615
6:2-FTS	4.89	1.000	869227.2		A	13C2-6:2-FTS	4.89	27180.2	31.980	77.388
PFHpS	4.90	1.080	4784682.8		A	13C3-PFHxS	4.54	267182.8	17.908	94.267
PFOA	4.91	1.000	10991740.1		A	13C8-PFOA	4.91	607669.5	18.088	96.608
PFOS	5.24	1.000	5138367.0		M	13C8-PFOS	5.24	242617.5	21.179	92.617
PFNA	5.25	1.000	10084288.3		A	13C9-PFNA	5.25	377369.8	26.723	96.360
PFNS	5.53	1.060	3386860.5		A	13C8-PFOS	5.24	242617.5	13.960	97.666
PFDA	5.55	1.000	8104726.6		A	13C6-PFDA	5.55	479333.1	16.908	89.640
8:2-FTS	5.56	1.000	804019.5		A	13C2-8:2-FTS	5.56	22711.0	35.402	82.540
PFOSA	5.63	1.000	10169176.9		A	13C8-PFOSA	5.63	554092.6	18.353	89.642
NMeFOSAA	5.69	1.000	1191981.7		M	d3-NMeFOSAA	5.69	67250.5	17.725	100.173
PFDS	5.79	1.110	2606720.7		A	13C8-PFOS	5.24	242617.5	10.744	97.353
PFUnDA	5.81	1.000	6802701.2		A	13C7-PFUnDA	5.81	199746.8	34.057	89.032
NEtFOSAA	5.83	1.000	1046636.1		M	d5-NEtFOSAA	5.82	58049.5	18.030	94.517
PFDoDA	6.04	1.000	8171355.4		A	13C2-PFDoDA	6.04	474393.8	17.225	87.711
10:2-FTS	6.06	1.090	632223.7		A	13C2-8:2-FTS	5.56	22711.0	27.838	92.724
NMePFOSAE	6.09	1.000	6272486.3		A	d7-NMePFOSAE	6.08	272283.1	23.037	95.876
NMePFOSA	6.09	1.000	1310162.9		A	d3-NMePFOSA	6.09	74110.3	17.679	87.214
PFDoS	6.21	1.190	1336765.3		A	13C8-PFOS	5.24	242617.5	5.510	96.500
NEtPFOSAE	6.25	1.000	6557402.5		A	d9-NEtPFOSAE	6.23	240346.5	27.283	87.532
NEtPFOSA	6.26	1.000	1148933.0		A	d5-NEtPFOSA	6.25	53297.9	21.557	98.999
PFTrDA	6.24	1.030	6281239.0		A	13C2-PFDoDA	6.04	474393.8	13.241	83.569
PFTeDA	6.42	1.000	6092875.7		A	13C2-PFTeDA	6.42	346256.6	17.596	98.638
PFHxDA	6.72	1.050	2866097.3		A	13C2-PFTeDA	6.42	346256.6	8.277	98.615
PFODA	6.98	1.090	2488863.6		A	13C2-PFTeDA	6.42	346256.6	7.188	100.107

Total Ion Chromatogram

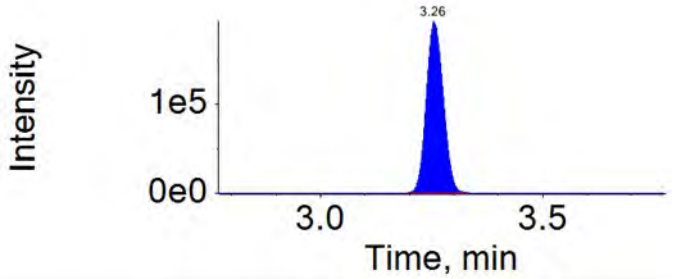


APPROVED
By MCD at 6:33 pm, 11/12/18

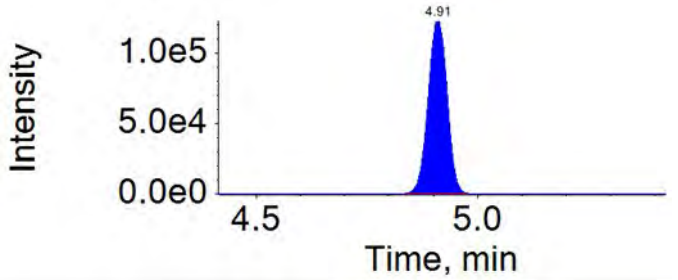
REVIEWED
By HMK at 10:53 am, 11/13/18

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

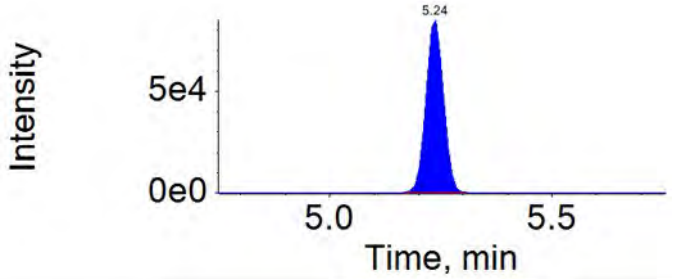
Injection Standard: 13C3-PFBA
216.0 / 172.0



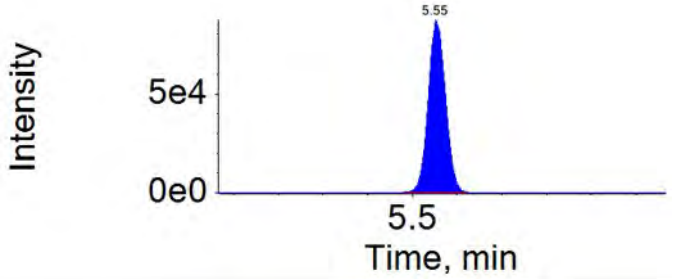
Injection Standard: 13C2-PFOA
415.0 / 370.0



Injection Standard: 13C4-PFOS
503.0 / 80.0

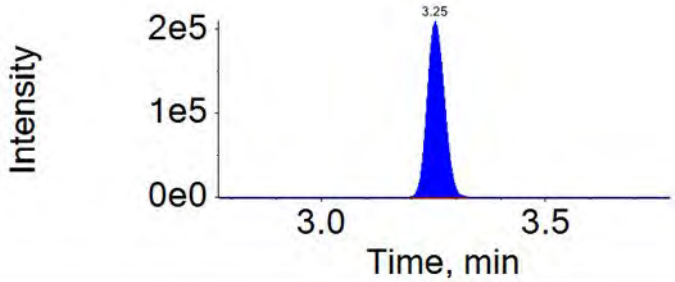


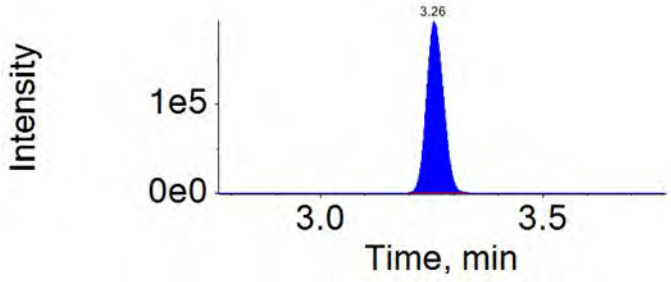
Injection Standard: 13C2-PFDA
515.0 / 470.0



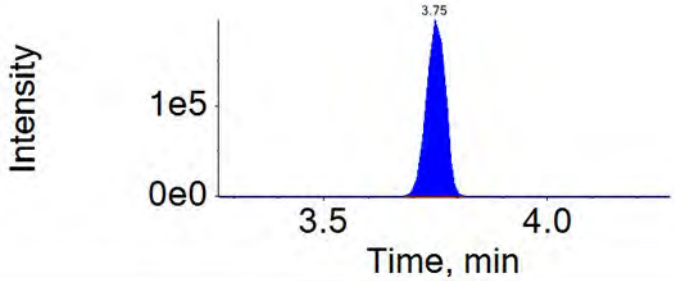
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

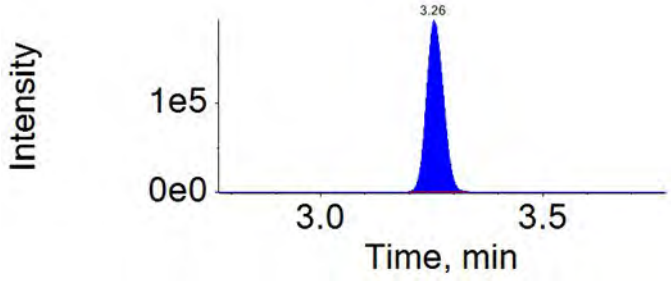
Extraction Standard: E13C4-PFBA	Injection Standard: 13C3-PFBA
217.0 / 172.0	216.0 / 172.0



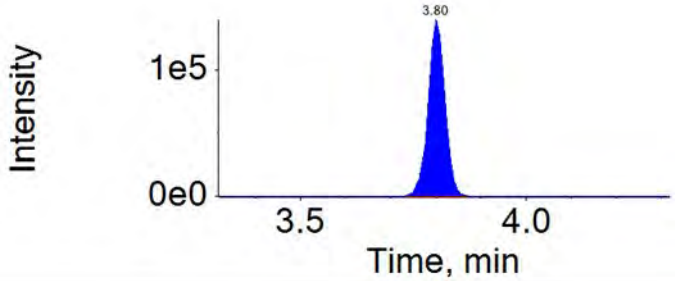


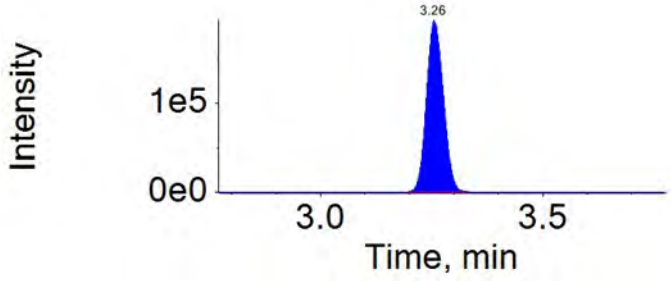
Extraction Standard: E13C5-PFPeA	Injection Standard: 13C3-PFBA
268.0 / 223.0	216.0 / 172.0



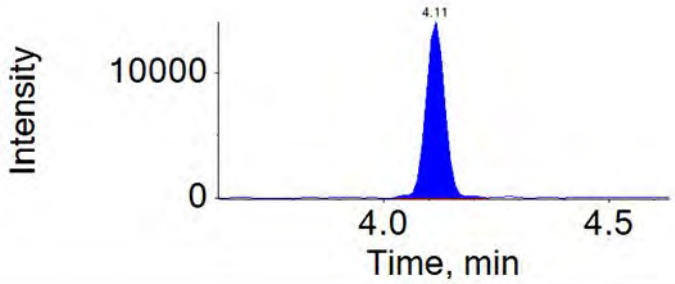


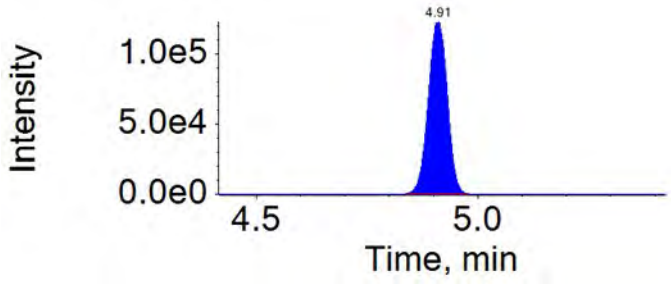
Extraction Standard: E13C3-PFBS	Injection Standard: 13C3-PFBA
302.0 / 80.0	216.0 / 172.0





Extraction Standard: E13C2-4:2-FTS	Injection Standard: 13C2-PFOA
329.0 / 81.0	415.0 / 370.0



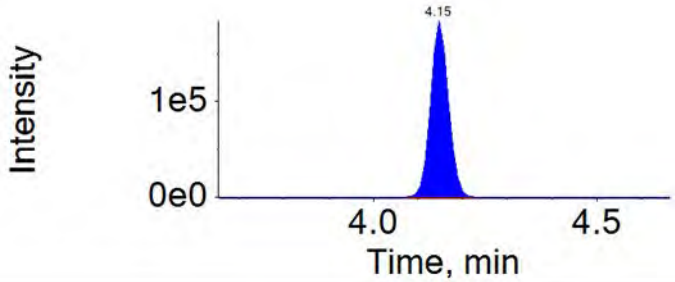


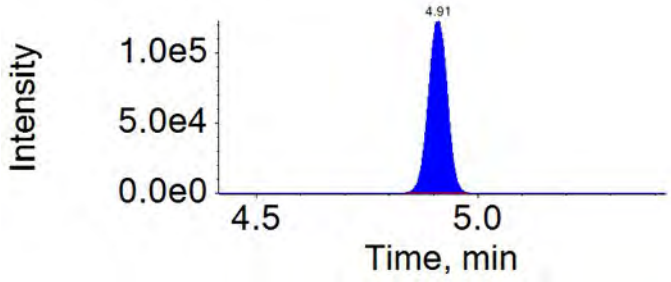
APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

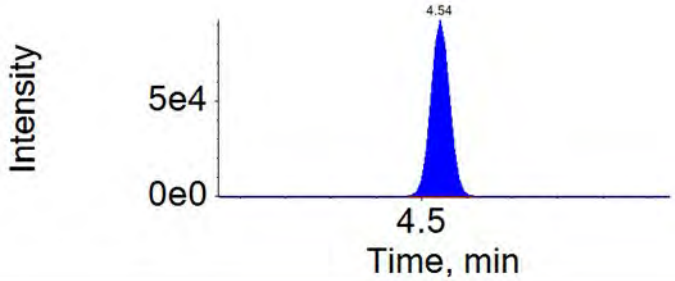
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

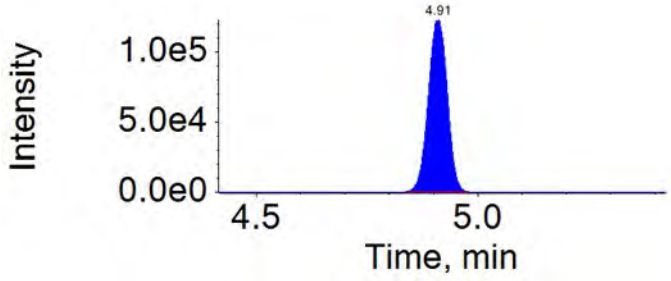
Extraction Standard: E13C5-PFHxA	Injection Standard: 13C2-PFOA
318.0 / 273.0	415.0 / 370.0



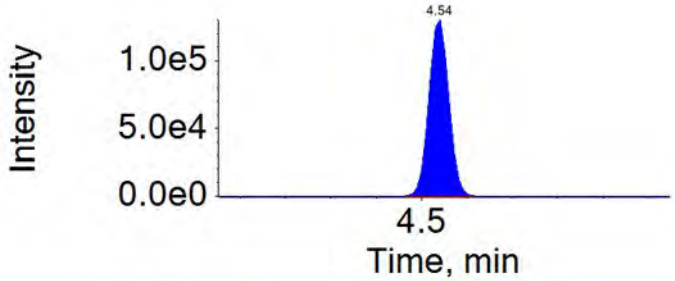


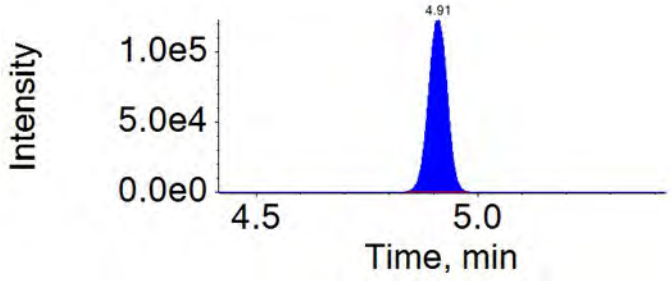
Extraction Standard: E13C3-PFHxS	Injection Standard: 13C2-PFOA
402.0 / 80.0	415.0 / 370.0



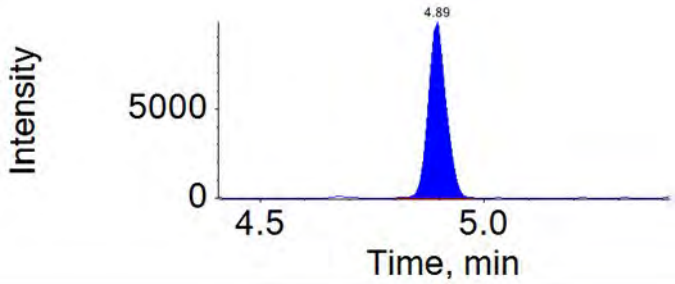


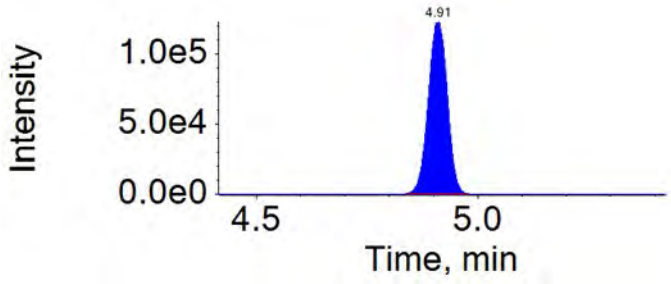
Extraction Standard: E13C4-PFHpA	Injection Standard: 13C2-PFOA
367.0 / 322.0	415.0 / 370.0





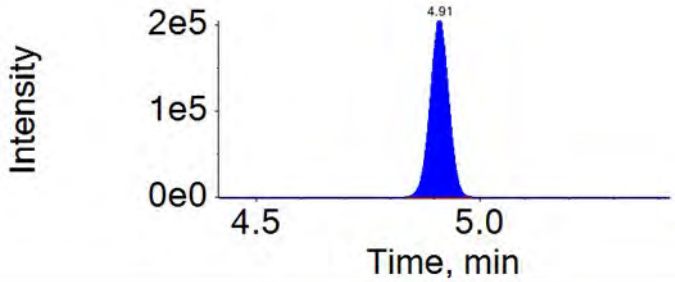
Extraction Standard: E13C2-6:2-FTS	Injection Standard: 13C2-PFOA
429.0 / 81.0	415.0 / 370.0

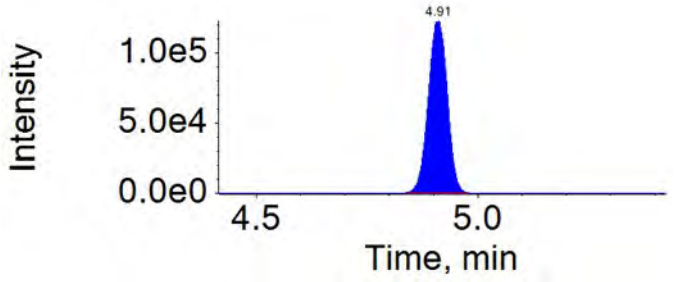




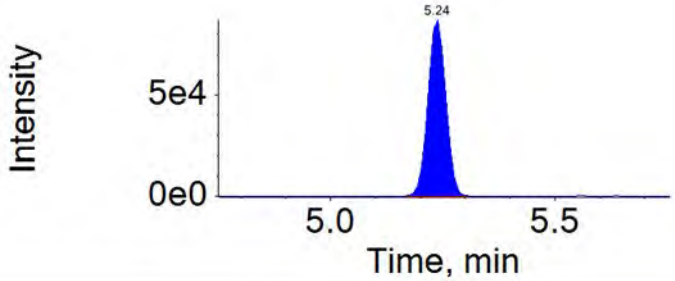
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

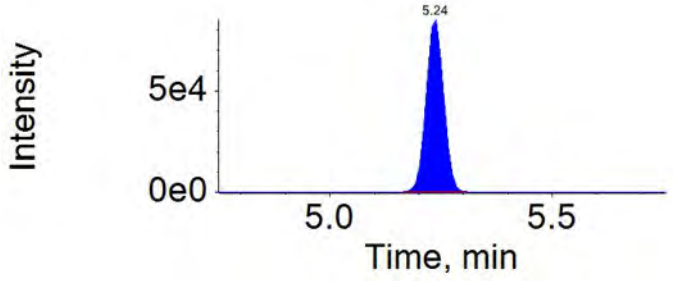
Extraction Standard: E13C8-PFOA	Injection Standard: 13C2-PFOA
421.0 / 376.0	415.0 / 370.0



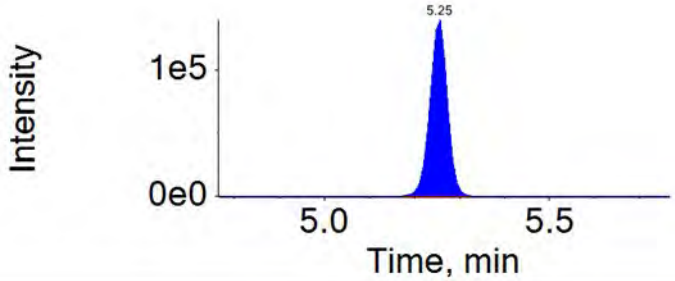


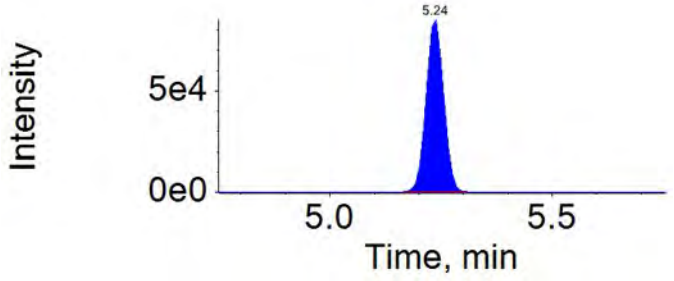
Extraction Standard: E13C8-PFOS	Injection Standard: 13C4-PFOS
507.0 / 80.0	503.0 / 80.0



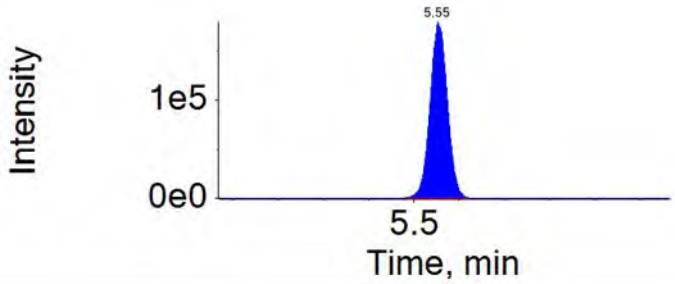


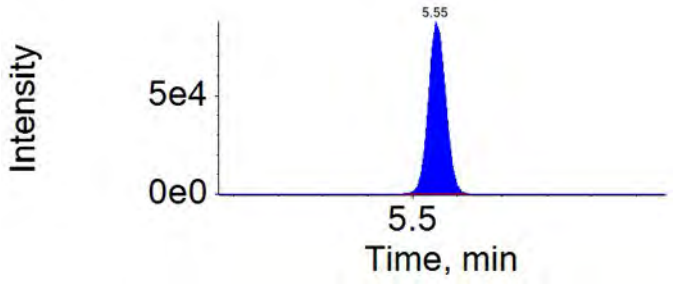
Extraction Standard: E13C9-PFNA	Injection Standard: 13C4-PFOS
472.0 / 427.0	503.0 / 80.0





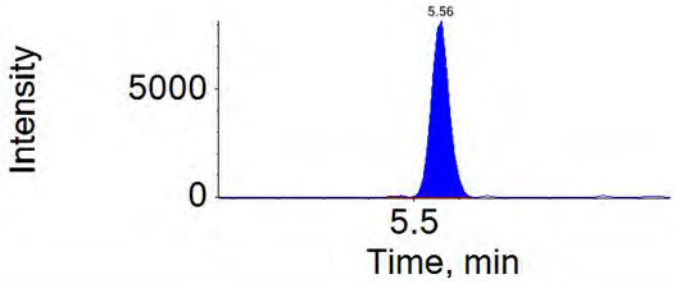
Extraction Standard: E13C6-PFDA	Injection Standard: 13C2-PFDA
519.0 / 474.0	515.0 / 470.0

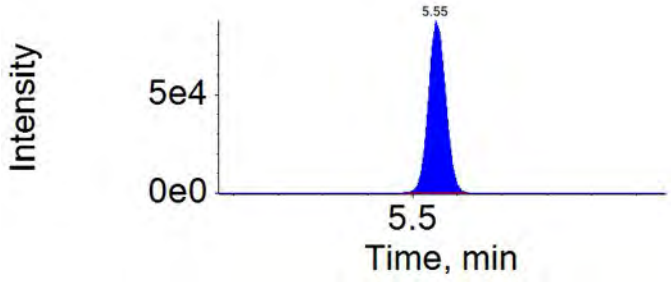




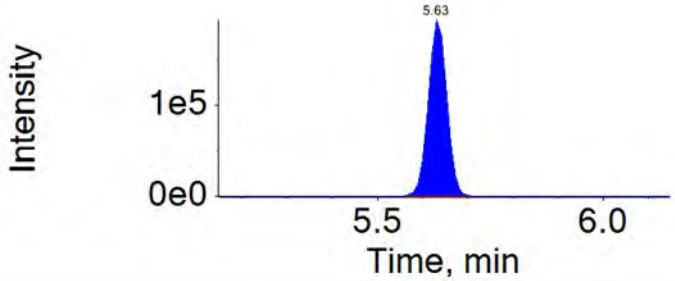
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

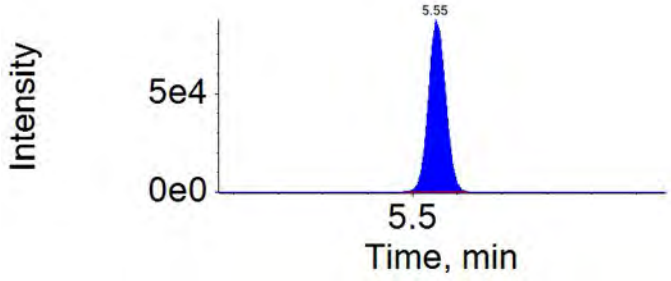
Extraction Standard: E13C2-8:2-FTS	Injection Standard: 13C2-PFDA
529.0 / 81.0	515.0 / 470.0



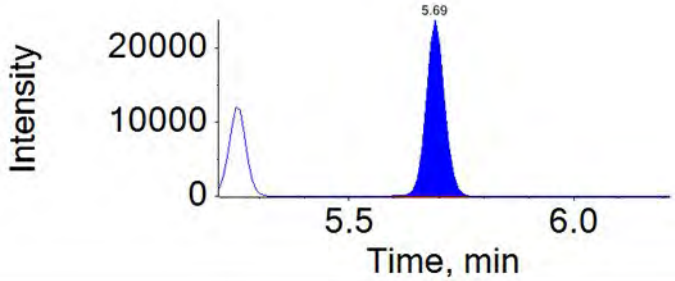


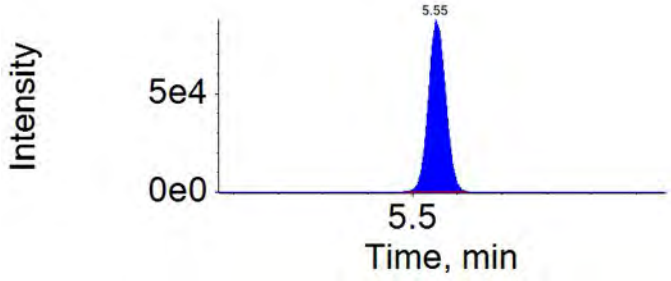
Extraction Standard: E13C8-PFOSA	Injection Standard: 13C2-PFDA
506.0 / 78.0	515.0 / 470.0



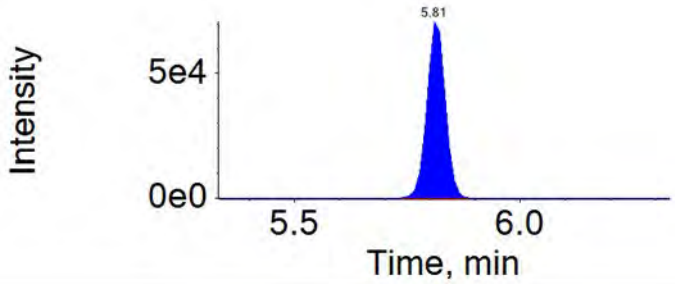


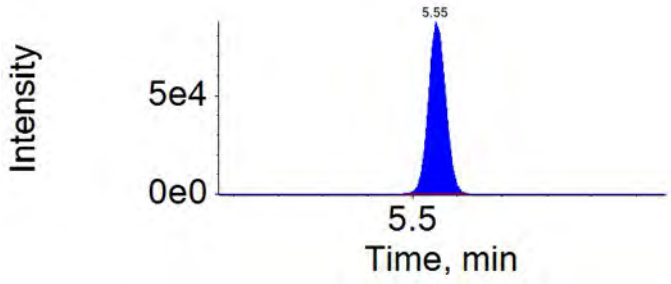
Extraction Standard: Ed3-NMeFOSAA	Injection Standard: 13C2-PFDA
573.0 / 419.0	515.0 / 470.0





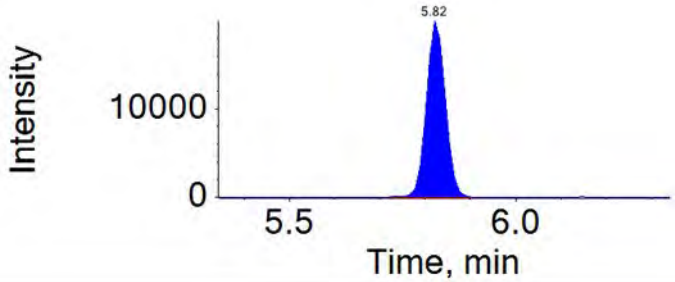
Extraction Standard: E13C7-PFUnDA	Injection Standard: 13C2-PFDA
570.0 / 525.0	515.0 / 470.0

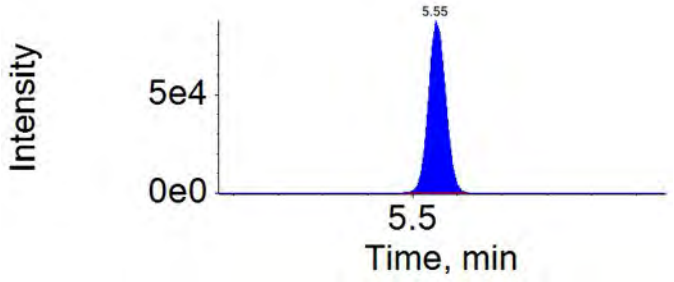




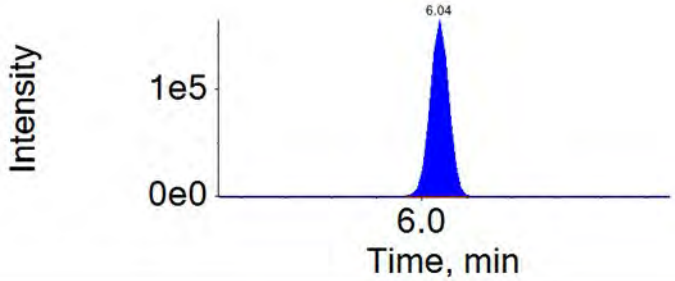
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

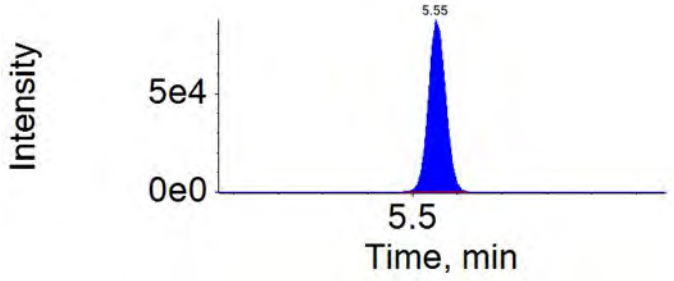
Extraction Standard: Ed5-NEtFOSAA	Injection Standard: 13C2-PFDA
589.0 / 419.0	515.0 / 470.0



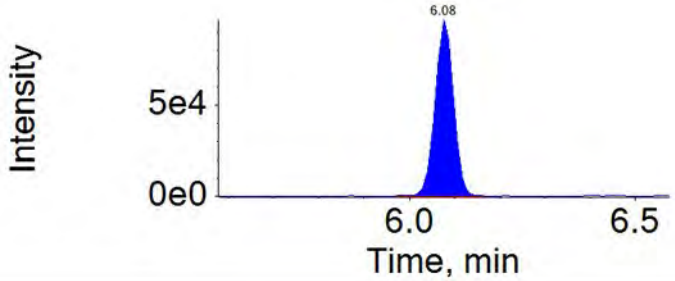


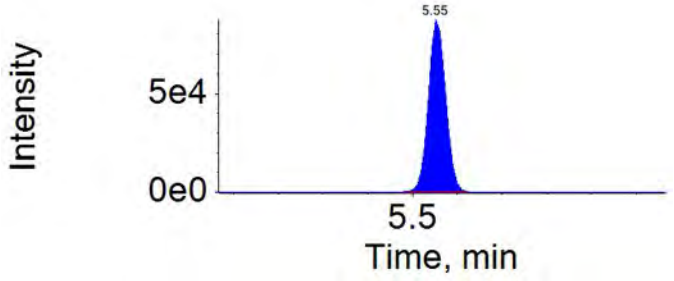
Extraction Standard: E13C2-PFDoDA	Injection Standard: 13C2-PFDA
615.0 / 570.0	515.0 / 470.0



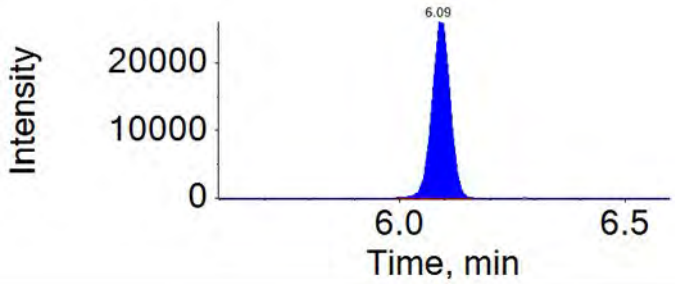


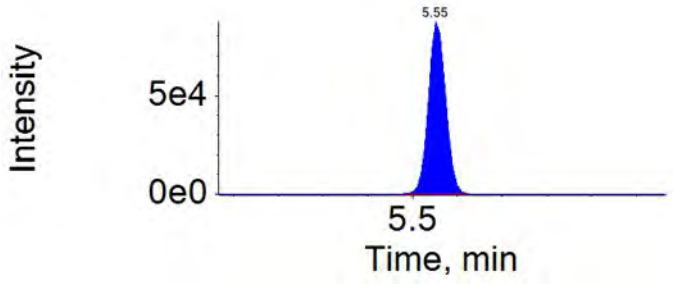
Extraction Standard: Ed7-NMePFOSAE	Injection Standard: 13C2-PFDA
623.0 / 59.0	515.0 / 470.0





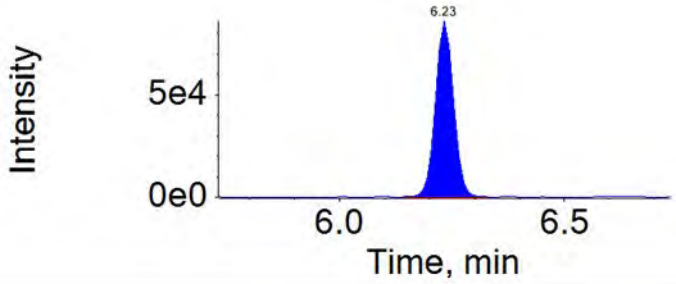
Extraction Standard: Ed3-NMePFOSA	Injection Standard: 13C2-PFDA
515.0 / 169.0	515.0 / 470.0

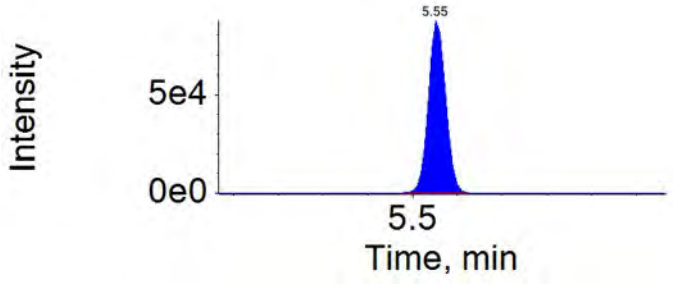




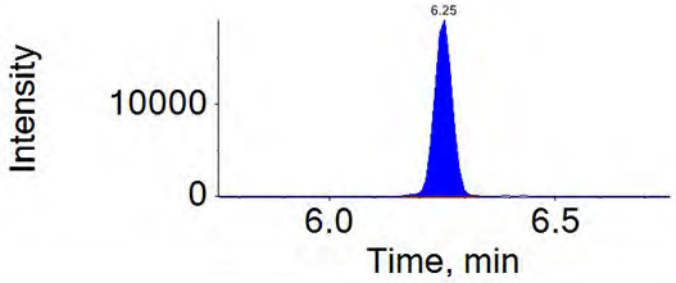
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

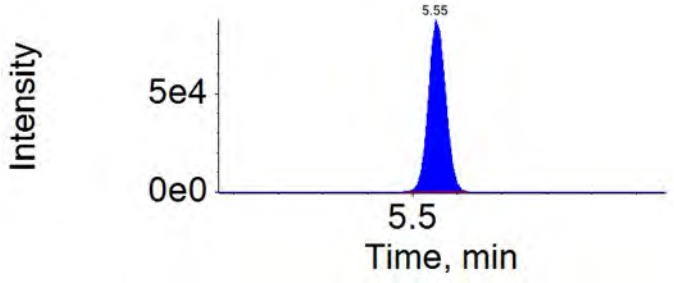
Extraction Standard: Ed9-NEtPFOSAE	Injection Standard: 13C2-PFDA
639.0 / 59.0	515.0 / 470.0



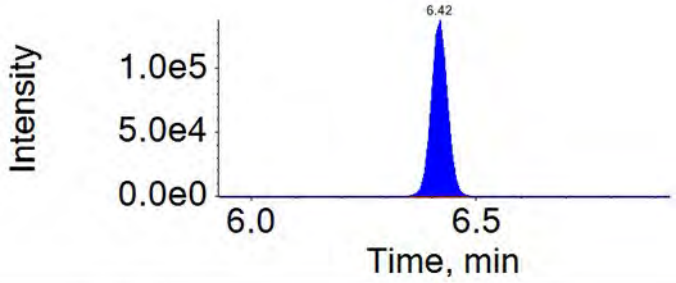


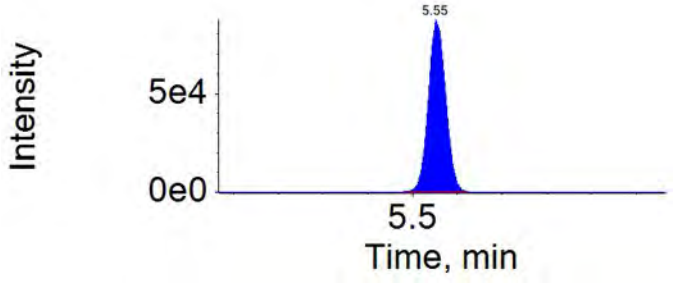
Extraction Standard: Ed5-NEtPFOSA	Injection Standard: 13C2-PFDA
531.0 / 169.0	515.0 / 470.0





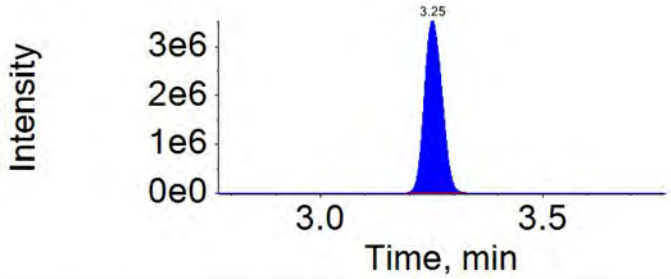
Extraction Standard: E13C2-PFTeDA	Injection Standard: 13C2-PFDA
715.0 / 670.0	515.0 / 470.0



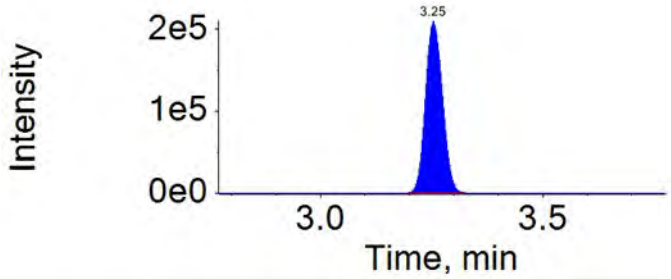


ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

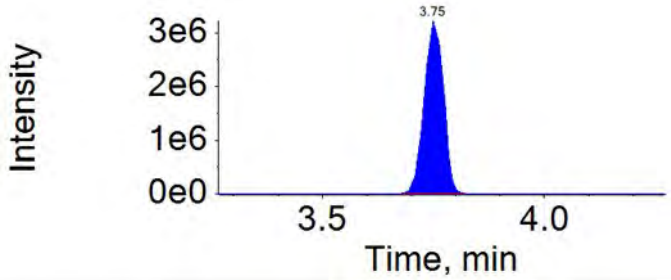
Analyte: PFBA
213.0 / 169.0



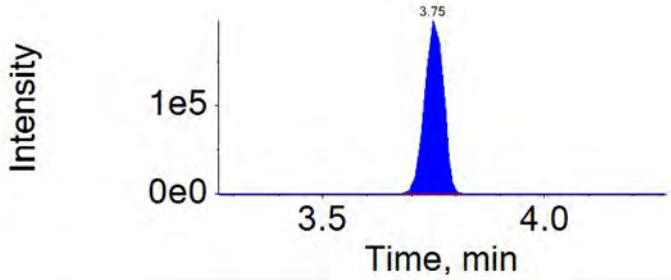
Extraction Standard: 13C4-PFBA
217.0 / 172.0



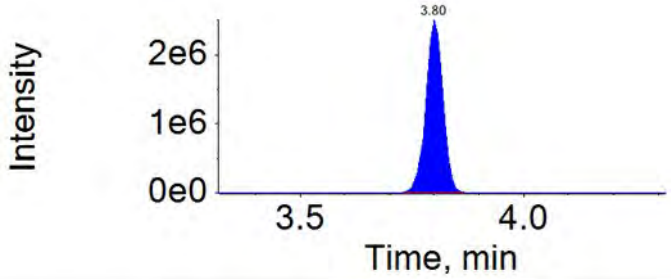
Analyte: PFPeA
263.0 / 219.0



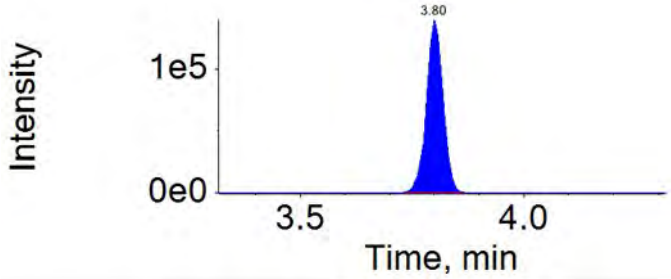
Extraction Standard: 13C5-PFPeA
268.0 / 223.0



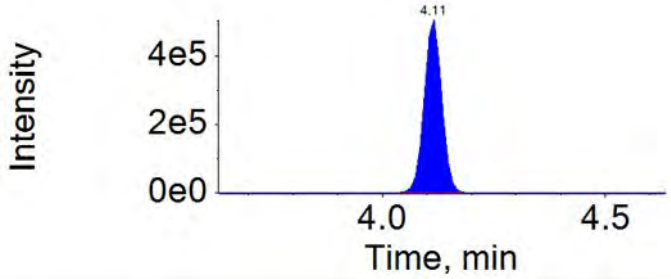
Analyte: PFBS
299.0 / 80.0



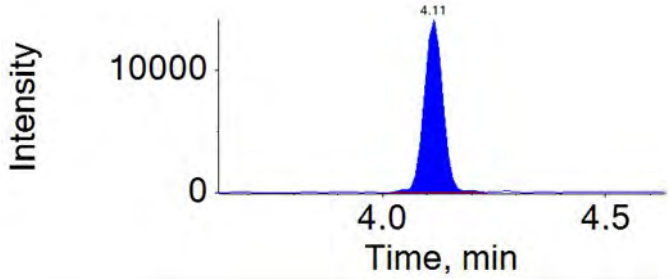
Extraction Standard: 13C3-PFBS
302.0 / 80.0



Analyte: 4:2-FTS
327.0 / 307.0



Extraction Standard: 13C2-4:2-FTS
329.0 / 81.0

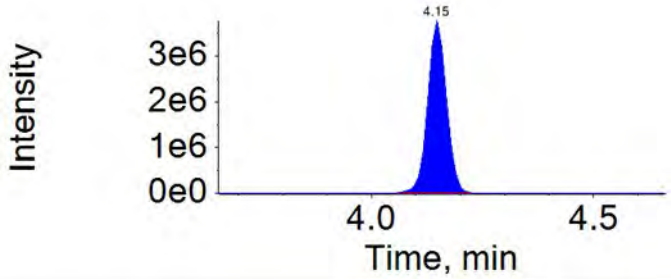


APPROVED
By MCD at 6:33 pm, 11/12/18

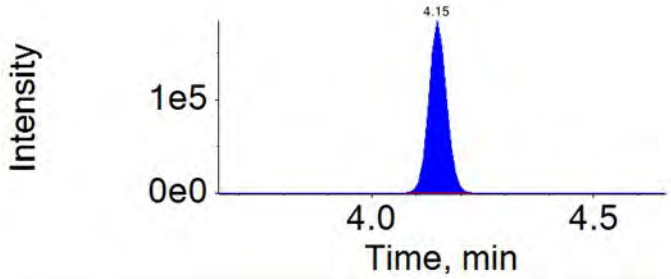
REVIEWED
By HMK at 10:53 am, 11/13/18

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

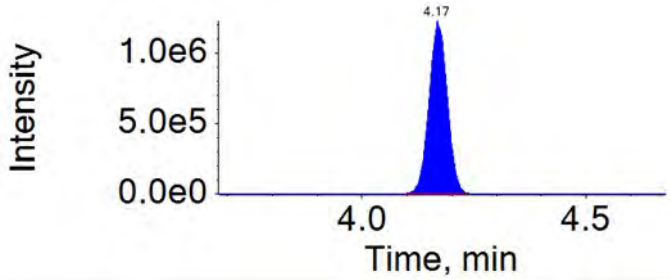
Analyte: PFHxA
313.0 / 269.0



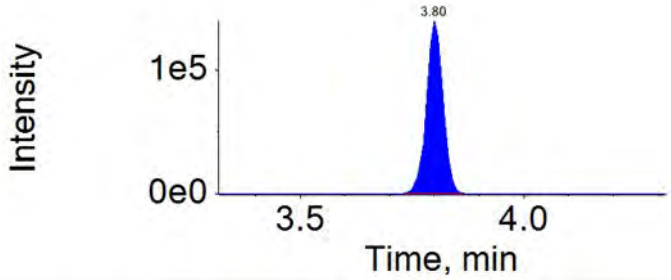
Extraction Standard: 13C5-PFHxA
318.0 / 273.0



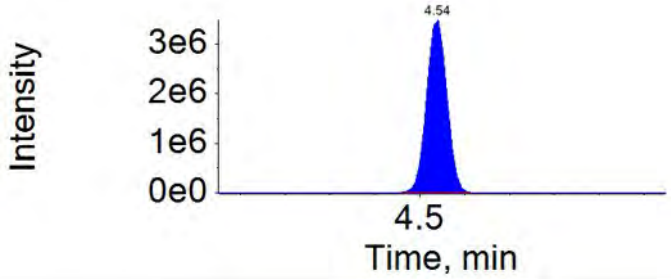
Analyte: PFPeS
349.0 / 80.0



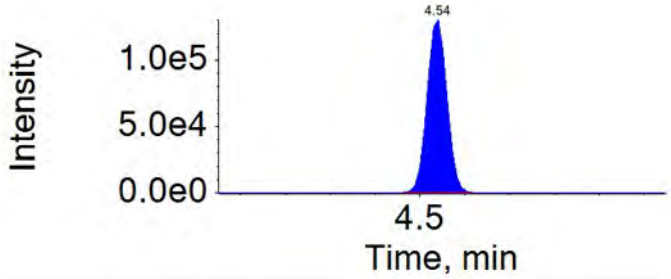
Extraction Standard: 13C3-PFBS
302.0 / 80.0



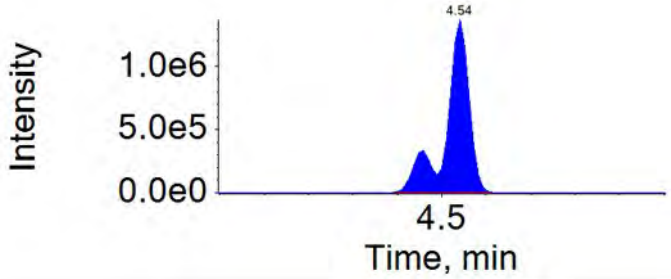
Analyte: PFHpA
363.0 / 319.0



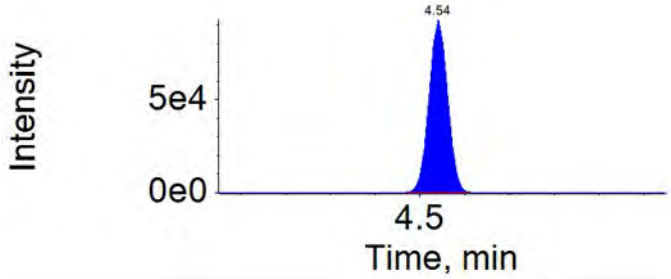
Extraction Standard: 13C4-PFHpA
367.0 / 322.0



Analyte: PFHxS
399.0 / 80.0



Extraction Standard: 13C3-PFHxS
402.0 / 80.0

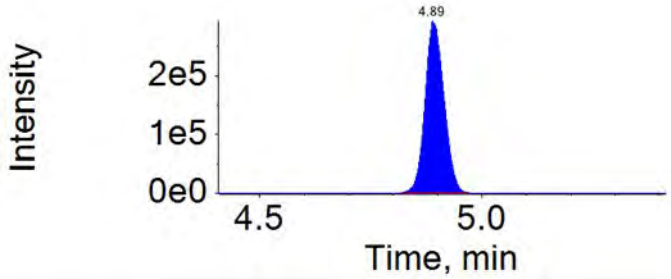


APPROVED
By MCD at 6:33 pm, 11/12/18

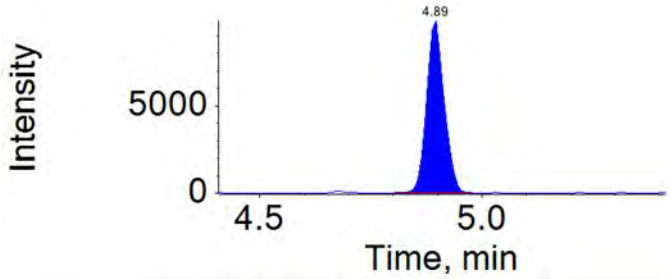
REVIEWED
By HMK at 10:53 am, 11/13/18

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

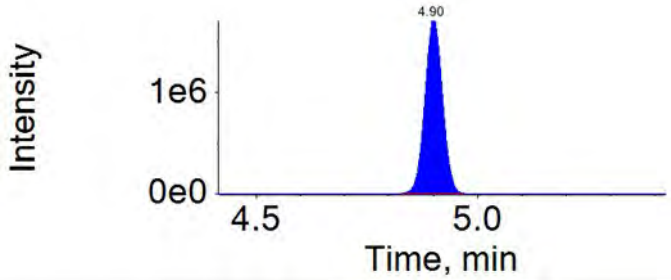
Analyte: 6:2-FTS
427.0 / 407.0



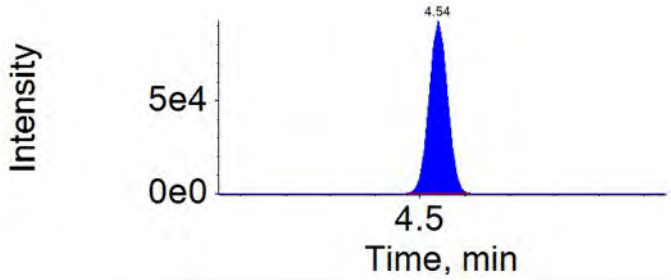
Extraction Standard: 13C2-6:2-FTS
429.0 / 81.0



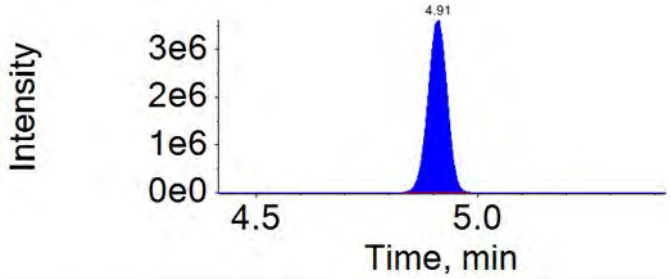
Analyte: PFHpS
449.0 / 80.0



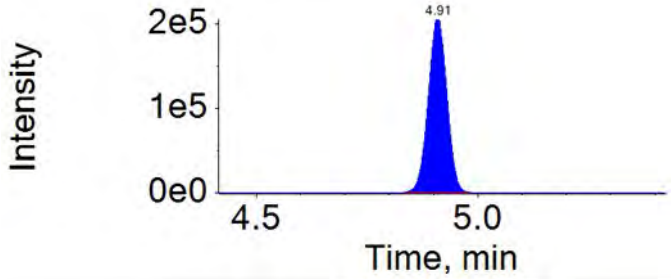
Extraction Standard: 13C3-PFHxS
402.0 / 80.0



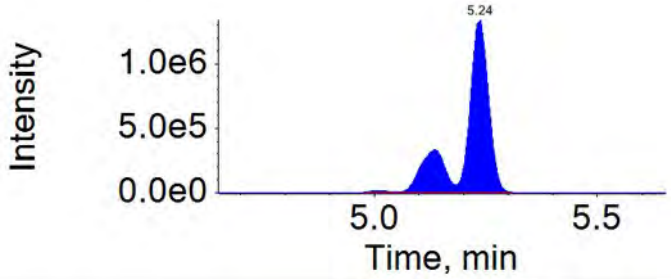
Analyte: PFOA
413.0 / 369.0



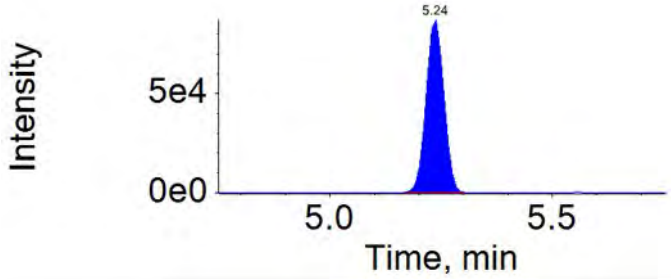
Extraction Standard: 13C8-PFOA
421.0 / 376.0



Analyte: PFOS
499.0 / 80.0



Extraction Standard: 13C8-PFOS
507.0 / 80.0

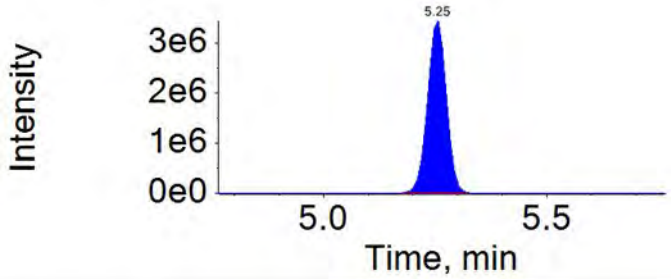


APPROVED
By MCD at 6:33 pm, 11/12/18

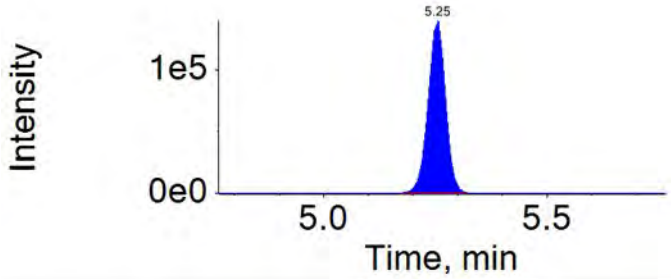
REVIEWED
By HMK at 10:53 am, 11/13/18

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

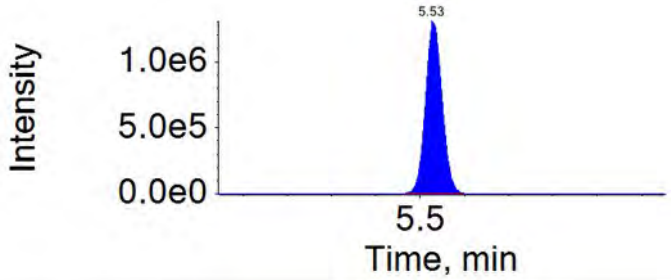
Analyte: PFNA
463.0 / 419.0



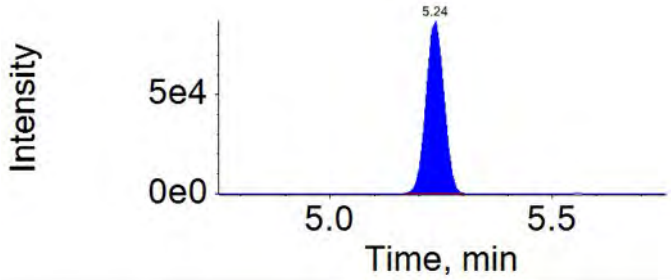
Extraction Standard: 13C9-PFNA
472.0 / 427.0



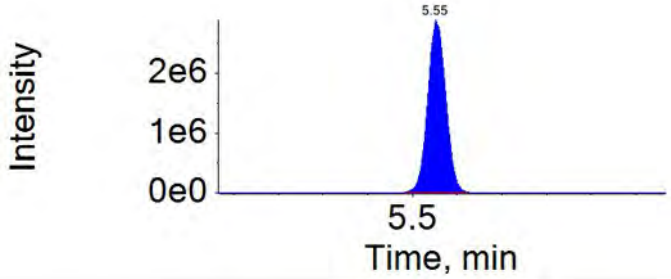
Analyte: PFNS
549.0 / 80.0



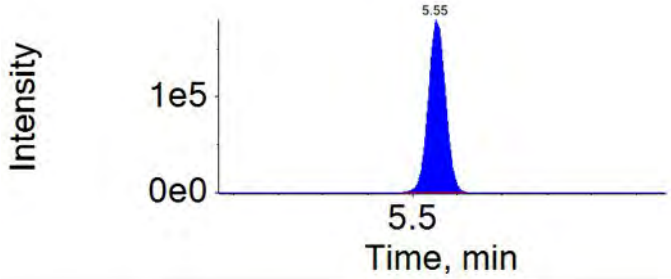
Extraction Standard: 13C8-PFOS
507.0 / 80.0



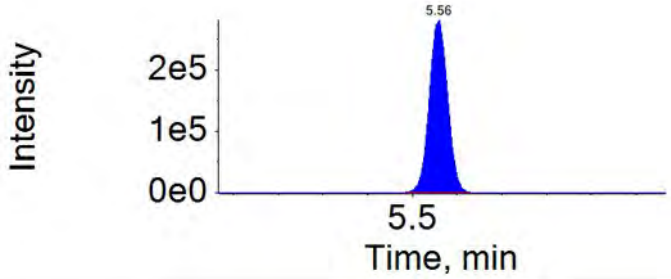
Analyte: PFDA
513.0 / 469.0



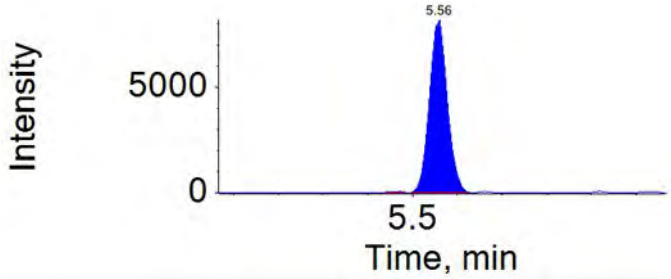
Extraction Standard: 13C6-PFDA
519.0 / 474.0



Analyte: 8:2-FTS
527.0 / 507.0



Extraction Standard: 13C2-8:2-FTS
529.0 / 81.0

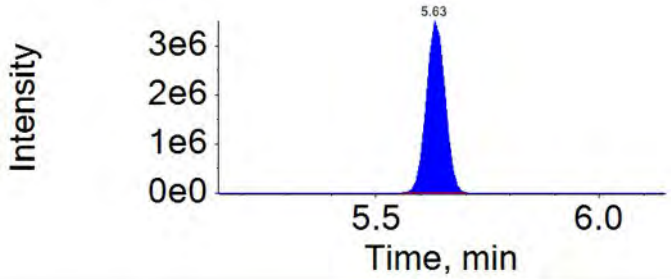


APPROVED
By MCD at 6:33 pm, 11/12/18

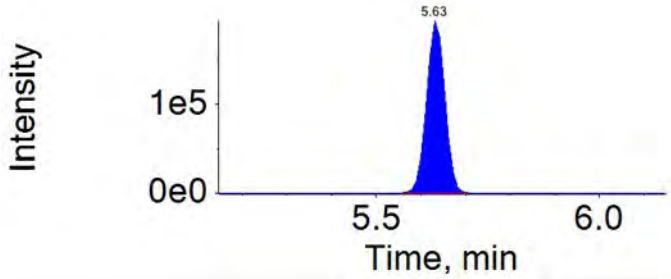
REVIEWED
By HMK at 10:53 am, 11/13/18

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

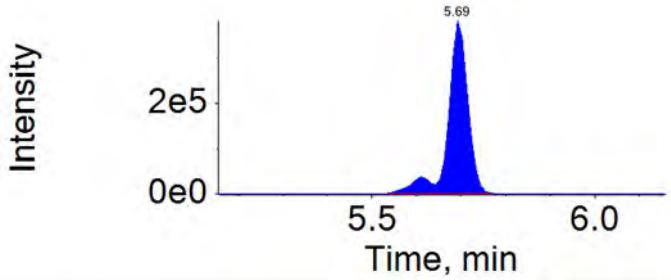
Analyte: PFOSA
498.0 / 78.0



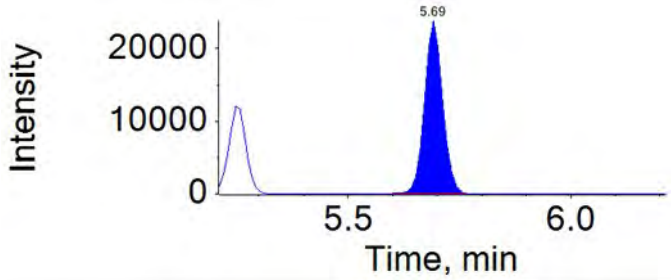
Extraction Standard: 13C8-PFOSA
506.0 / 78.0



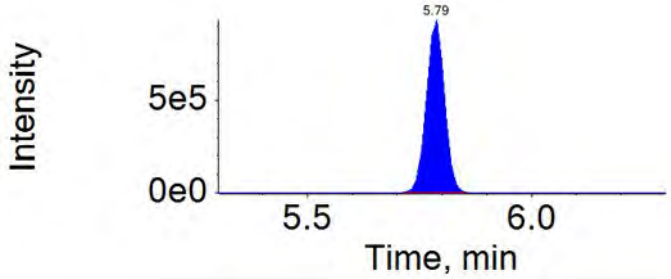
Analyte: NMeFOSAA
570.0 / 419.0



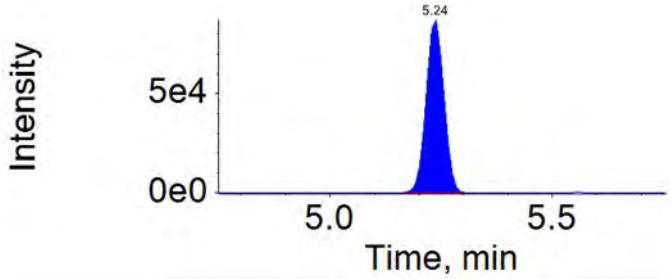
Extraction Standard: d3-NMeFOSAA
573.0 / 419.0



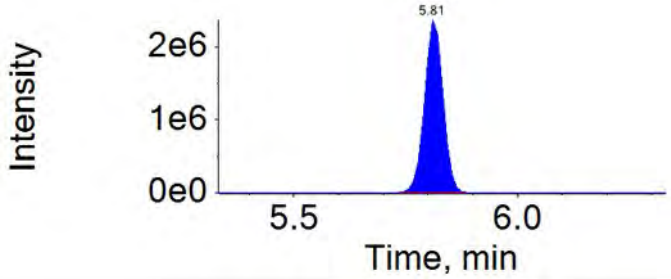
Analyte: PFDS
599.0 / 80.0



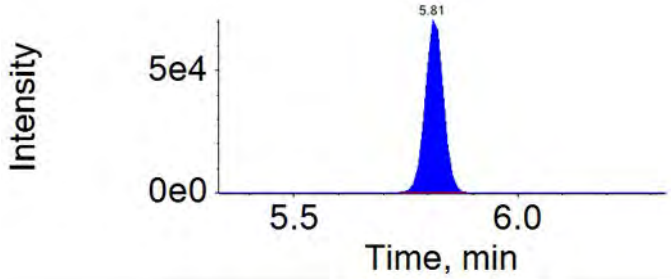
Extraction Standard: 13C8-PFOS
507.0 / 80.0



Analyte: PFUnDA
563.0 / 519.0



Extraction Standard: 13C7-PFUnDA
570.0 / 525.0

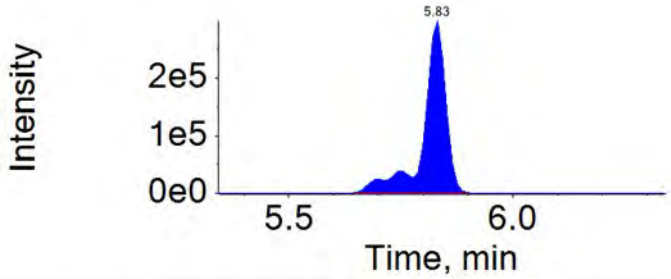


APPROVED
By MCD at 6:33 pm, 11/12/18

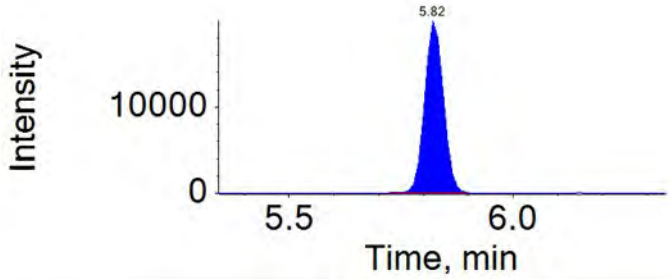
REVIEWED
By HMK at 10:53 am, 11/13/18

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

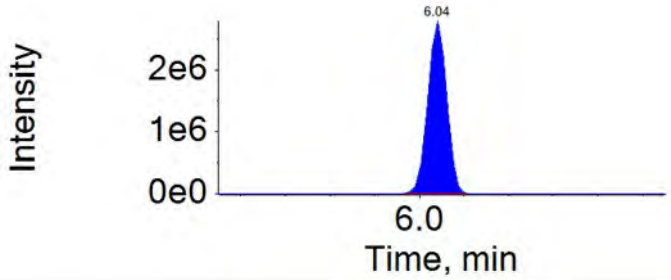
Analyte: NEtFOSAA
584.0 / 419.0



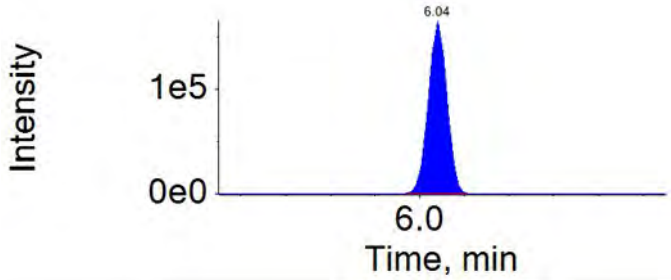
Extraction Standard: d5-NEtFOSAA
589.0 / 419.0



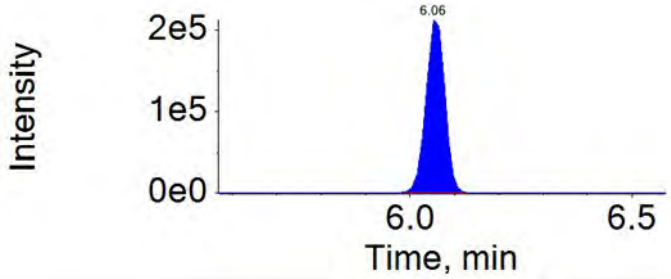
Analyte: PFDoDA
613.0 / 569.0



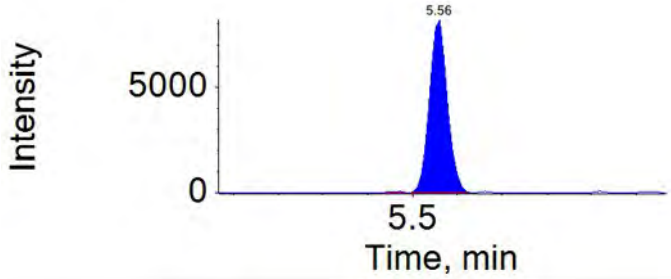
Extraction Standard: 13C2-PFDoDA
615.0 / 570.0



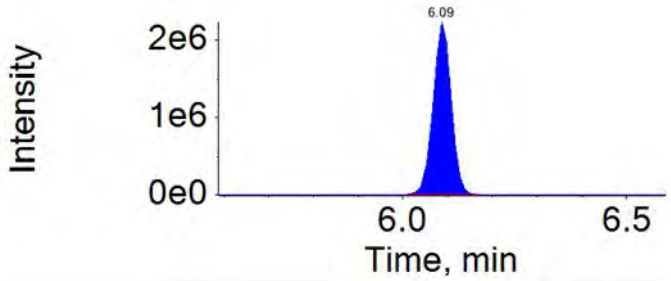
Analyte: 10:2-FTS
627.0 / 607.0



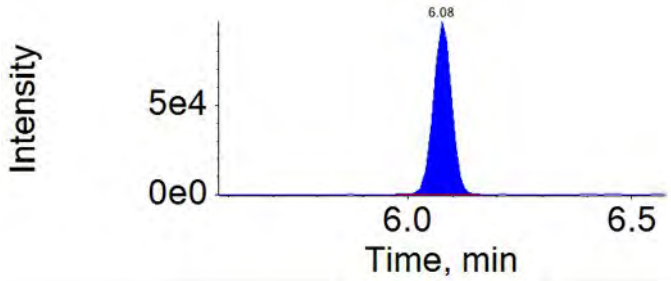
Extraction Standard: 13C2-8:2-FTS
529.0 / 81.0



Analyte: NMePFOSAE
616.0 / 59.0

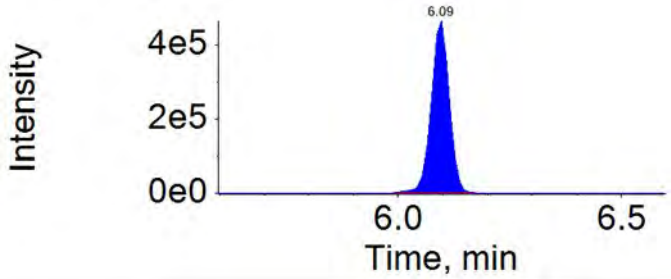


Extraction Standard: d7-NMePFOSAE
623.0 / 59.0

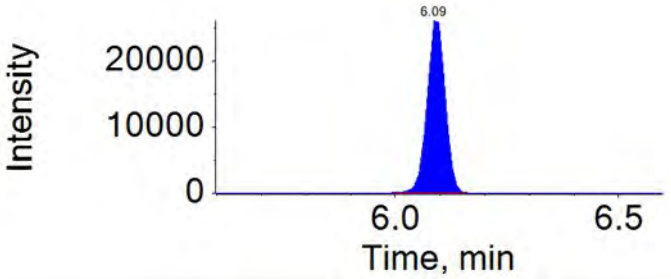


ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

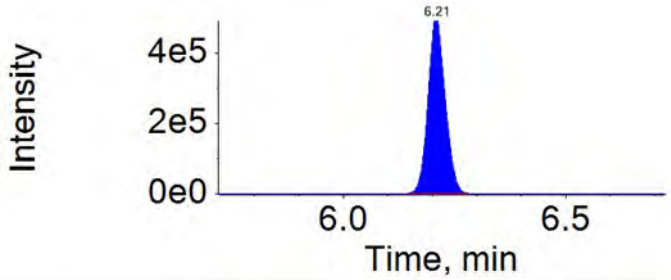
Analyte: NMePFOSA
512.0 / 169.0



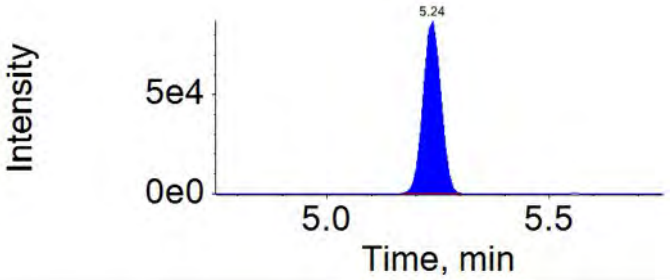
Extraction Standard: d3-NMePFOSA
515.0 / 169.0



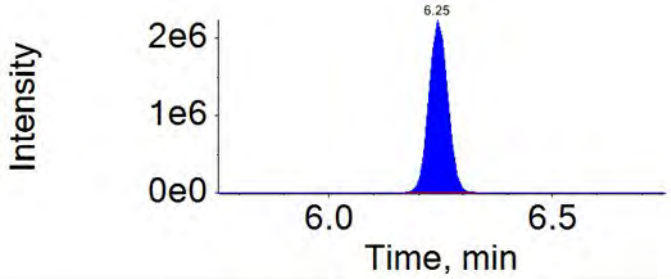
Analyte: PFDoS
699.0 / 80.0



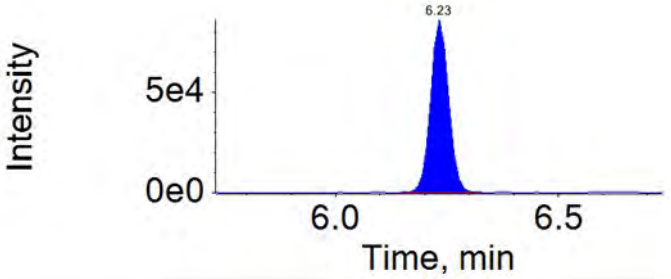
Extraction Standard: 13C8-PFOS
507.0 / 80.0



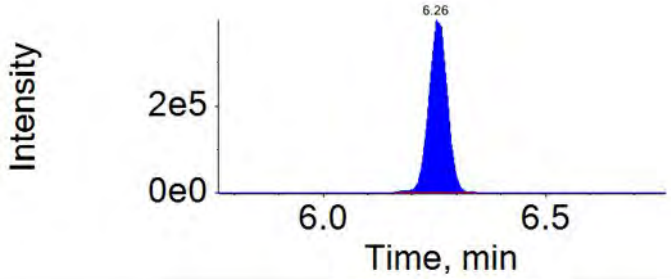
Analyte: NEtPFOSAE
630.0 / 59.0



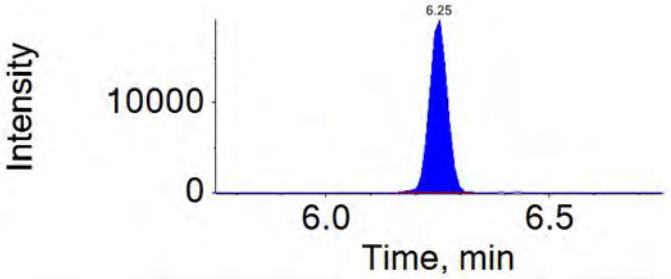
Extraction Standard: d9-NEtPFOSAE
639.0 / 59.0



Analyte: NEtPFOSA
526.0 / 169.0



Extraction Standard: d5-NEtPFOSA
531.0 / 169.0

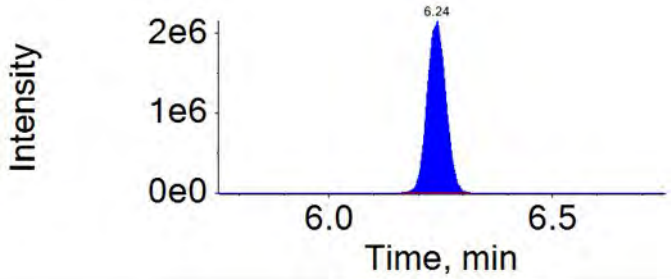


APPROVED
By MCD at 6:33 pm, 11/12/18

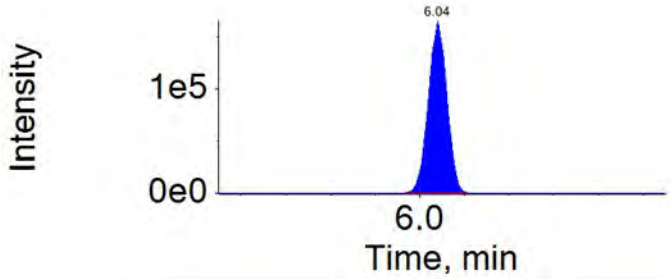
REVIEWED
By HMK at 10:53 am, 11/13/18

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

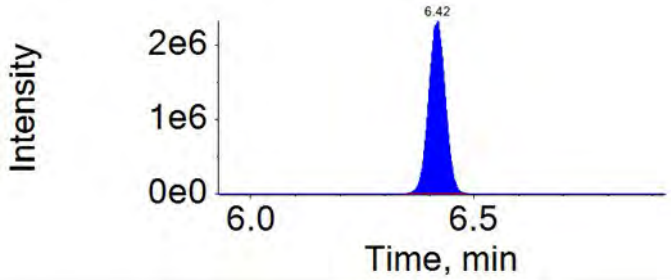
Analyte: PFTrDA
663.0 / 619.0



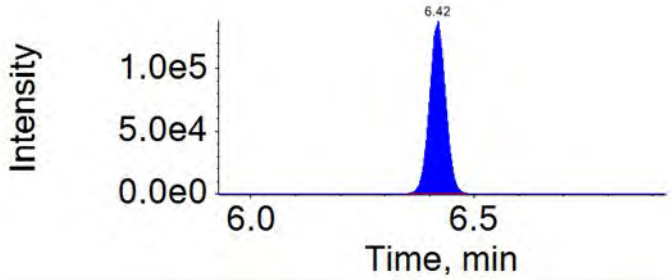
Extraction Standard: 13C2-PFDoDA
615.0 / 570.0



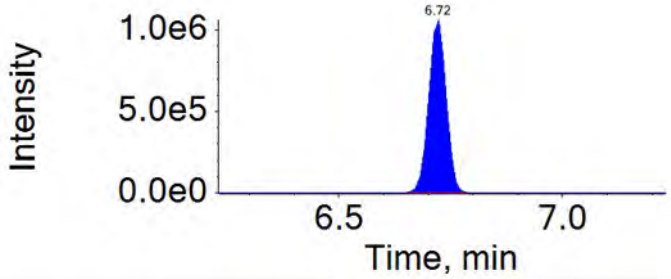
Analyte: PFTeDA
713.0 / 669.0



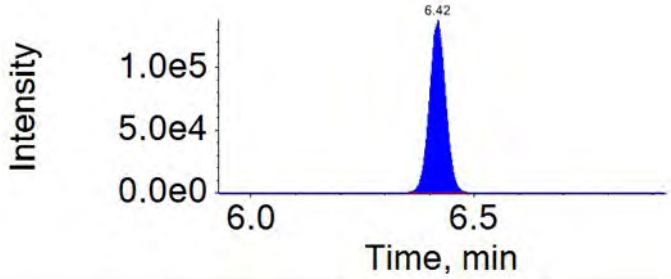
Extraction Standard: 13C2-PFTeDA
715.0 / 670.0



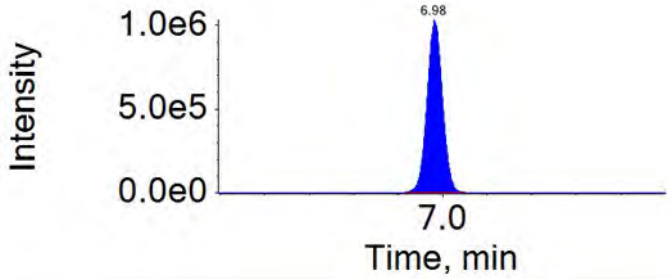
Analyte: PFHxDA
813.0 / 769.0



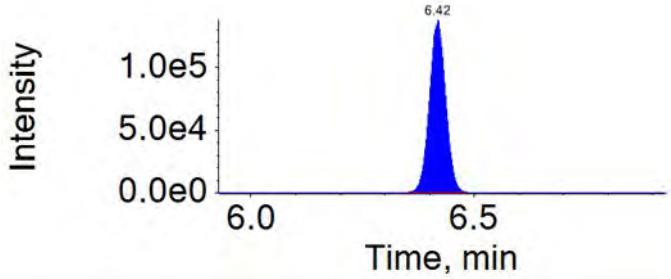
Extraction Standard: 13C2-PFTeDA
715.0 / 670.0



Analyte: PFODA
913.0 / 869.0



Extraction Standard: 13C2-PFTeDA
715.0 / 670.0



APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

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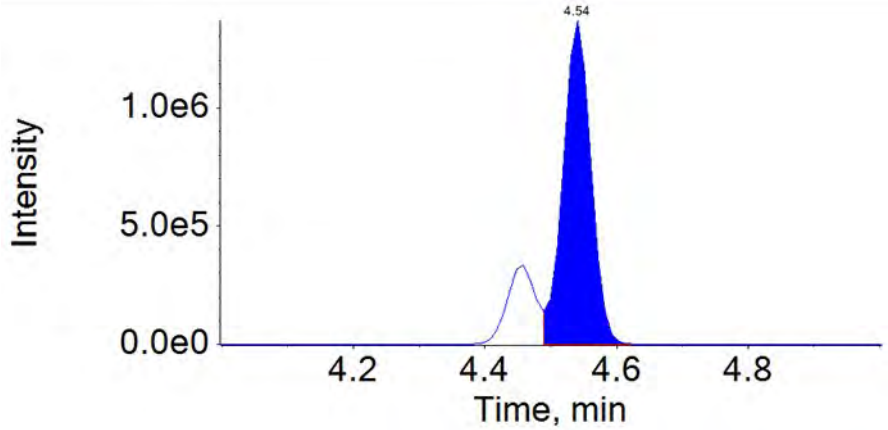
Auto Integrations prior to Manual Integration

Print Date: 11/12/2018 6:26 PM
Template: MQ-OrigInteg-16NOV21.docx

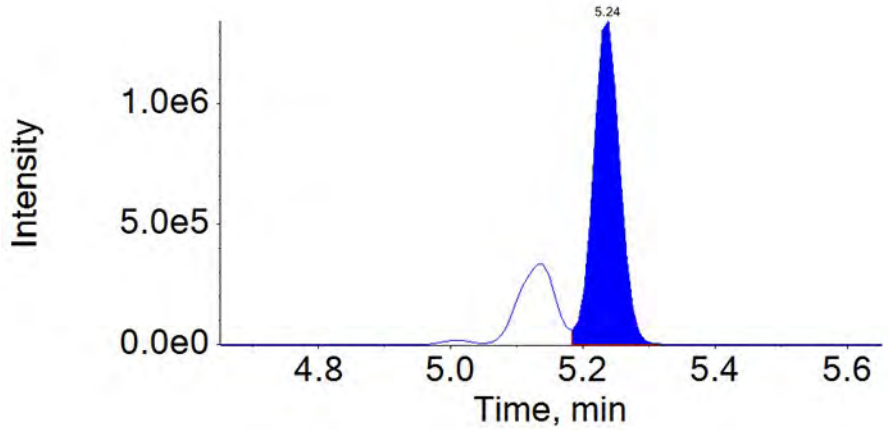
Results Table Name: 18NOV12DCAL
Results Table Date: 11/12/2018 6:23:42 PM
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

Component Name:
PFHxS
RT (min.):
4.54
Peak Area:
4044983.17
Mass Range:
399.0 / 80.0
File Name:
18NOV12DCAL-48.wiff
Sample Name:
CAL7



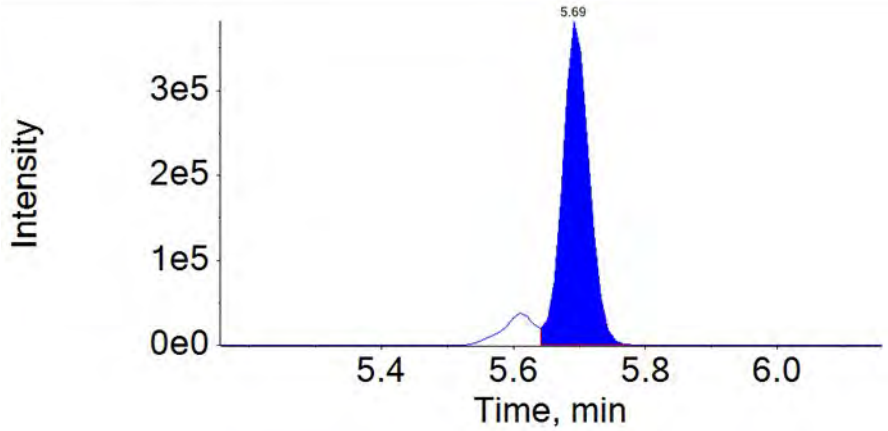
Integration Comment: incorrect integration

Component Name:
PFOS
RT (min.):
5.24
Peak Area:
3770924.60
Mass Range:
499.0 / 80.0
File Name:
18NOV12DCAL-48.wiff
Sample Name:
CAL7



Integration Comment: incorrect integration

Component Name:
NMeFOSAA
RT (min.):
5.69
Peak Area:
1065914.33
Mass Range:
570.0 / 419.0
File Name:
18NOV12DCAL-48.wiff
Sample Name:
CAL7



Integration Comment: incorrect integration

APPROVED
By MCD at 6:33 pm, 11/12/18

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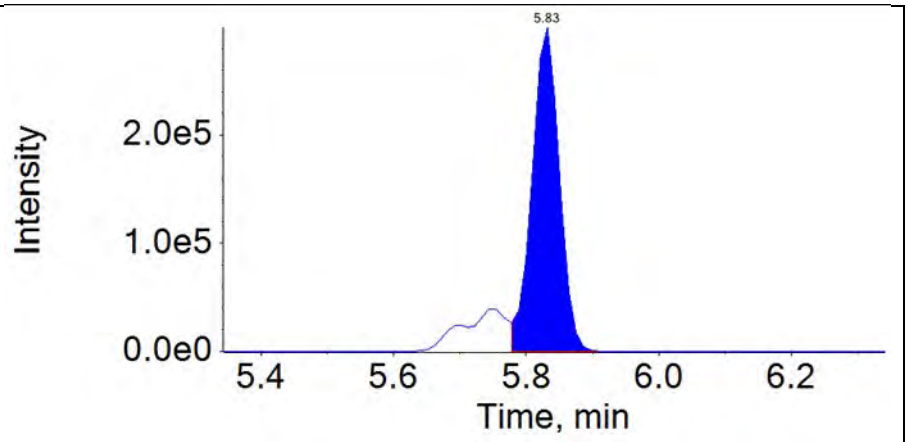
By HMK at 10:53 am, 11/13/18

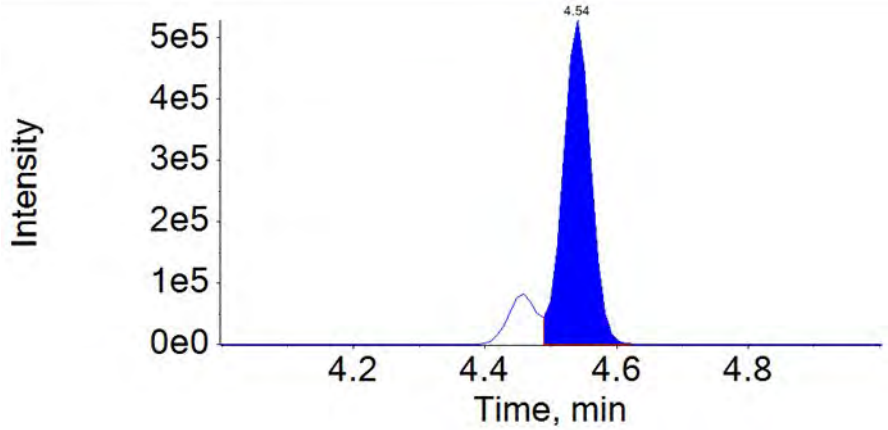
Results Table Name: 18NOV12DCAL
Results Table Date: 11/12/2018 6:23:42 PM
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

Component Name:
NEtFOSAA
RT (min.):
5.83
Peak Area:
862135.47
Mass Range:
584.0 / 419.0
File Name:
18NOV12DCAL-48.wiff
Sample Name:
CAL7



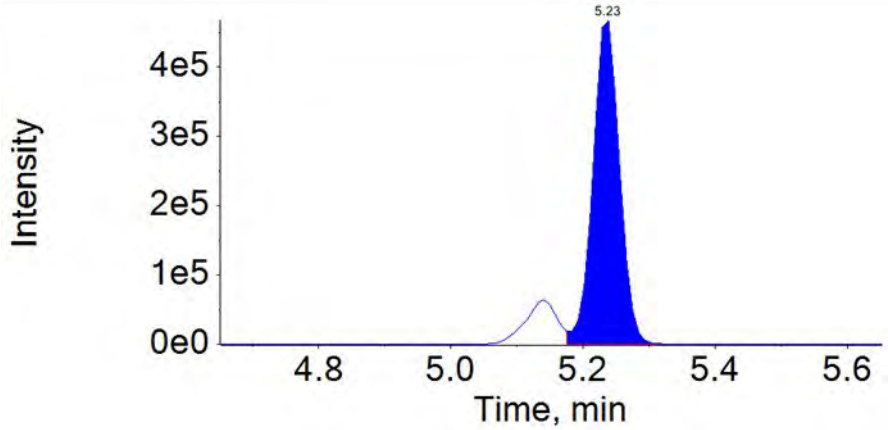
Integration Comment: incorrect integration

Component Name:
PFHxS_2
RT (min.):
4.54
Peak Area:
1552233.65
Mass Range:
399.0 / 99.0
File Name:
18NOV12DCAL-48.wiff
Sample Name:
CAL7



Integration Comment: incorrect integration

Component Name:
PFOS_2
RT (min.):
5.23
Peak Area:
1316284.93
Mass Range:
499.0 / 99.0
File Name:
18NOV12DCAL-48.wiff
Sample Name:
CAL7



Integration Comment: incorrect integration

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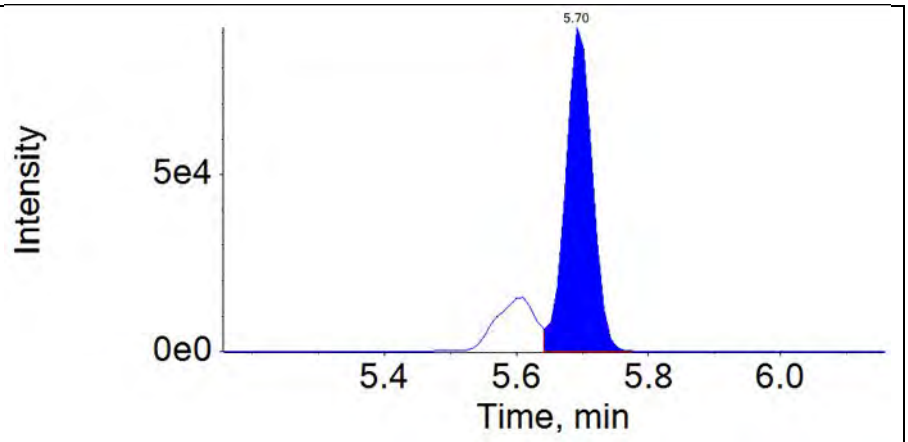
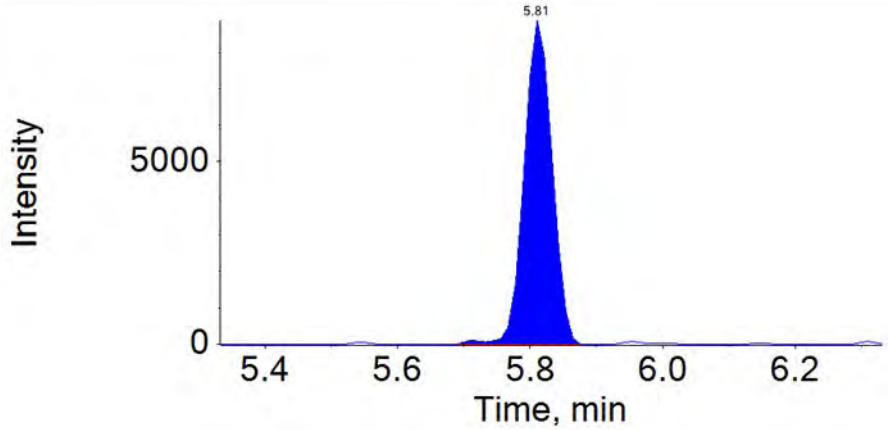
Results Table Name: 18NOV12DCAL
Results Table Date: 11/12/2018 6:23:42 PM
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

Component Name:
NMeFOSAA_2
RT (min.):
5.70
Peak Area:
256419.22
Mass Range:
570.0 / 483.0
File Name:
18NOV12DCAL-48.wiff
Sample Name:
CAL7



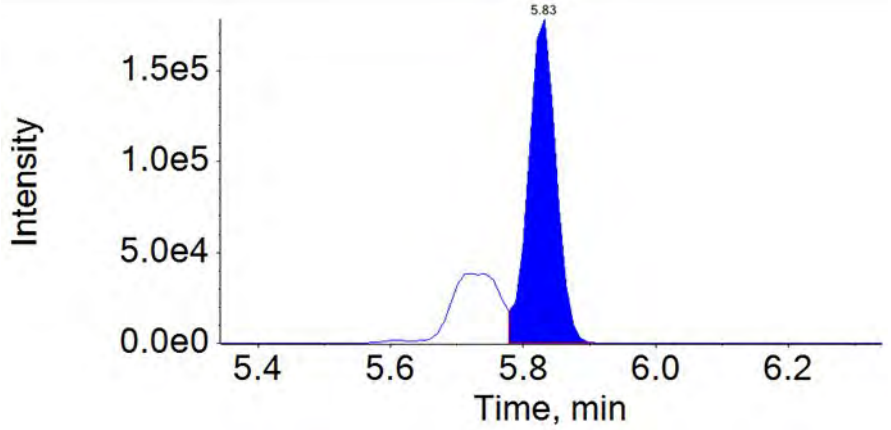
Integration Comment: incorrect integration

Component Name:
PFUnDA_2
RT (min.):
5.81
Peak Area:
26121.92
Mass Range:
563.0 / 169.0
File Name:
18NOV12DCAL-48.wiff
Sample Name:
CAL7



Integration Comment: incorrect integration

Component Name:
NEtFOSAA_2
RT (min.):
5.83
Peak Area:
517079.85
Mass Range:
584.0 / 526.0
File Name:
18NOV12DCAL-48.wiff
Sample Name:
CAL7



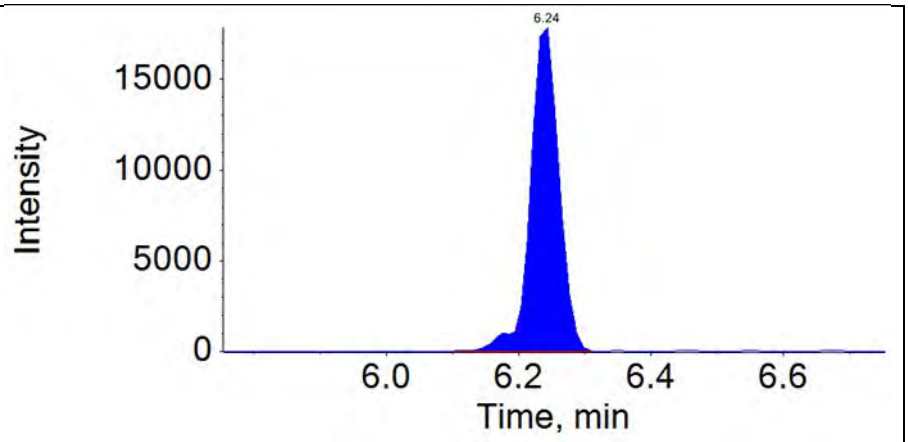
Integration Comment: incorrect integration

APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

Results Table Name: 18NOV12DCAL
Results Table Date: 11/12/2018 6:23:42 PM
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

Component Name:
PFTrDA_2
RT (min.):
6.24
Peak Area:
53950.01
Mass Range:
663.0 / 169.0
File Name:
18NOV12DCAL-48.wiff
Sample Name:
CAL7



Integration Comment: incorrect integration

APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

Results Table Name: 18NOV12DCAL
Results Table Date: 11/12/2018 6:23:42 PM

Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

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By MCD at 6:33 pm, 11/12/18

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By HMK at 10:53 am, 11/13/18

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LC-MS/MS Analysis Report

Printed: 11/12/2018 6:22:00 PM
Template: IonRatio18OCT10

Ion Ratio Report

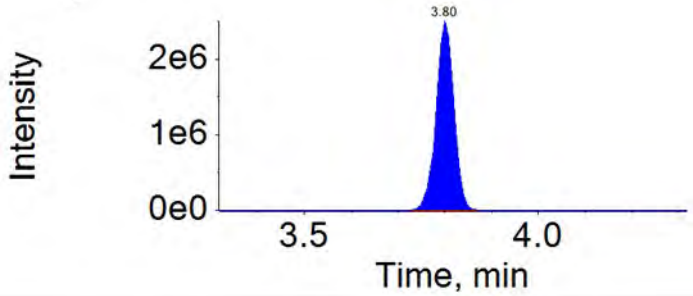
Sample Name: CAL7 **Instrument Name:** LM27631 **File Name:** 18NOV12DCAL-48.wiff

Component Name	RT	RRT	Analyte Area Response	Int Typ	Expected Ion Ratio	Ion Ratio	Ion Ratio % Diff	Ion Ratio Limit	Ion Ratio OOS
PFBS	3.80	1.00	6615935.34	A	0.3619	0.3803			
PFBS_2	3.80	1.00	2515947.77	A	0.3619	0.3803	5	50	
4:2-FTS	4.11	1.00	1379983.90	A	0.6730	0.6491			
4:2 FTS_2	4.11	1.00	895801.93	A	0.6730	0.6491		#NA!	
PFHxA	4.15	1.00	11059420.28	A	0.0117	0.0124			
PFHxA_2	4.15	1.00	136818.87	A	0.0117	0.0124	6	50	
PFPeS	4.17	1.10	3482095.87	A	0.5191	0.5217			
PFPeS_2	4.17	1.10	1816709.54	A	0.5191	0.5217	1	50	
PFHpA	4.54	1.00	10981922.82	A	0.0563	0.0563			
PFHpA_2	4.54	1.00	618128.71	A	0.0563	0.0563	0	50	
PFHxS	4.54	1.00	5048349.82	M	0.3428	0.3562			
PFHxS_2	4.54	1.00	1798400.55	M	0.3428	0.3562	4	50	
6:2-FTS	4.89	1.00	869227.19	A	0.6604	0.6365			
6:2 FTS_2	4.89	1.00	553300.52	A	0.6604	0.6365		#NA!	
PFHpS	4.90	1.08	4784682.82	A	0.4066	0.4068			
PFHpS_2	4.90	1.08	1946425.33	A	0.4066	0.4068	0	50	
PFOA	4.91	1.00	10991740.12	A	0.0562	0.0611			
PFOA_2	4.91	1.00	671295.39	A	0.0562	0.0611	9	50	
PFOS	5.24	1.00	5138366.95	M	0.2968	0.2975			
PFOS_2	5.23	1.00	1528751.71	M	0.2968	0.2975	0	50	
PFNA	5.25	1.00	10084288.28	A	0.0229	0.0213			
PFNA_2	5.25	1.00	214560.66	A	0.0229	0.0213	-7	50	
PFNS	5.53	1.06	3386860.46	A	0.4828	0.4408			
PFNS_2	5.53	1.06	1492987.09	A	0.4828	0.4408	-9	50	
PFDA	5.55	1.00	8104726.61	A	0.0081	0.0071			
PFDA_2	5.55	1.00	57305.88	A	0.0081	0.0071	-12	50	
8:2-FTS	5.56	1.00	804019.53	A	0.6814	0.5854			
8:2 FTS_2	5.56	1.00	470706.51	A	0.6814	0.5854		#NA!	
NMeFOSAA	5.69	1.00	1191981.70	M	0.2569	0.2688			
NMeFOSAA_2	5.70	1.00	320371.24	M	0.2569	0.2688	5	50	
PFDS	5.79	1.11	2606720.69	A	0.5144	0.4749			
PFDS_2	5.79	1.10	1238034.03	A	0.5144	0.4749	-8	50	
PFUnDA	5.81	1.00	6802701.21	A	0.0058	0.0038			
PFUnDA_2	5.81	1.00	25933.20	M	0.0058	0.0038	-34	50	
NEtFOSAA	5.83	1.00	1046636.11	M	0.7253	0.6803			
NEtFOSAA_2	5.83	1.00	711980.18	M	0.7253	0.6803	-6	50	
PFDoDA	6.04	1.00	8171355.35	A	0.0157	0.0138			
PFDoDA_2	6.04	1.00	113144.85	A	0.0157	0.0138	-12	50	
10:2-FTS	6.06	1.09	632223.71	A	0.6356	0.6817			
10:2 FTS_2	6.06	1.09	431003.27	A	0.6356	0.6817		#NA!	
PFTrDA	6.24	1.03	6281239.03	A	0.0086	0.0083			
PFTrDA_2	6.24	1.03	52325.72	M	0.0086	0.0083	-3	50	
PFTeDA	6.42	1.00	6092875.66	A	0.0062	0.0060			
PFTeDA_2	6.42	1.00	36395.60	A	0.0062	0.0060	-4	50	
PFHxDA	6.72	1.05	2866097.32	A	0.0683	0.0642			
PFHxDA_2	6.72	1.05	183981.95	A	0.0683	0.0642	-6	50	
PFODA	6.98	1.09	2488863.64	A	0.0277	0.0267			
PFODA_2	6.98	1.09	66332.27	A	0.0277	0.0267	-4	50	

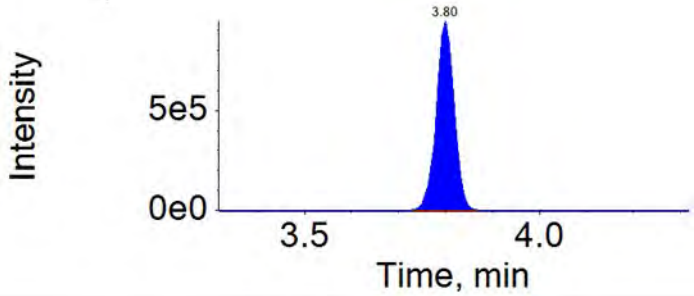
APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

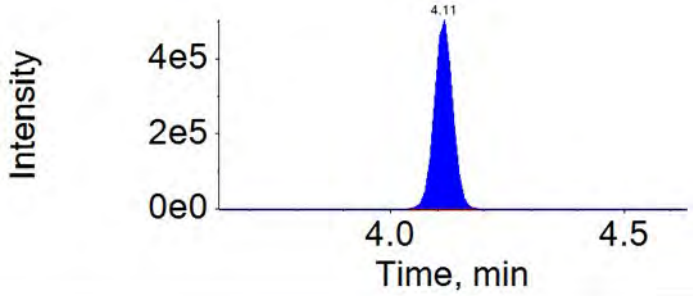
Component: PFBS
Primary Mass: 299.0 / 80.0



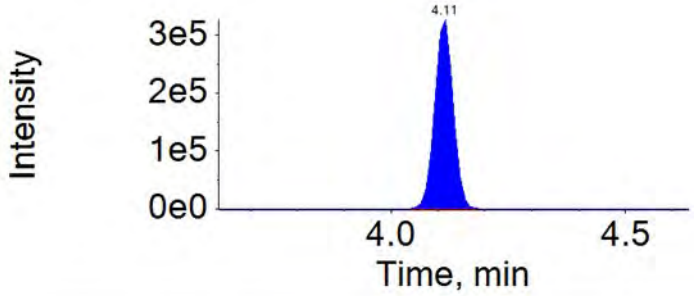
Component: PFBS_2
Secondary Mass: 299.0 / 99.0



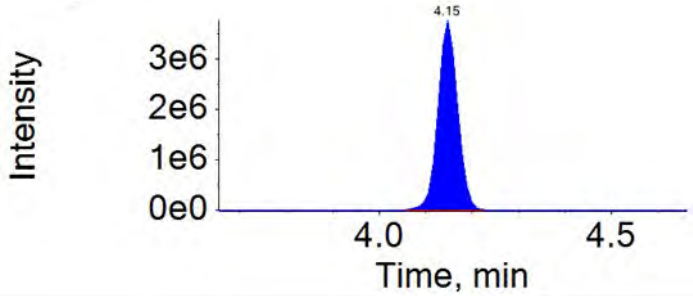
Component: 4:2-FTS
Primary Mass: 327.0 / 307.0



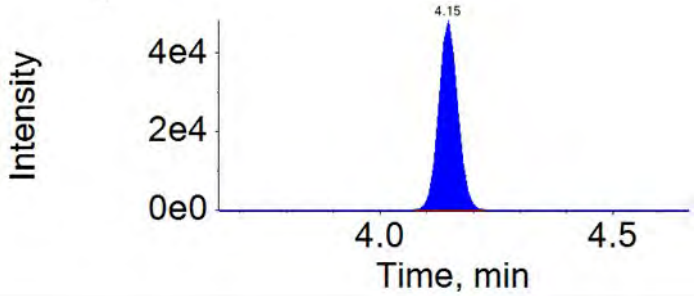
Component: 4:2 FTS_2
Secondary Mass: 327.0 / 81.0



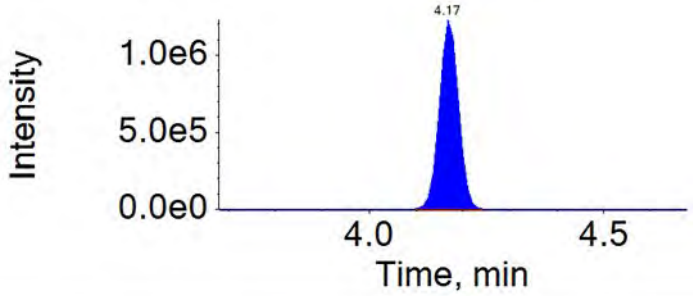
Component: PFHxA
Primary Mass: 313.0 / 269.0



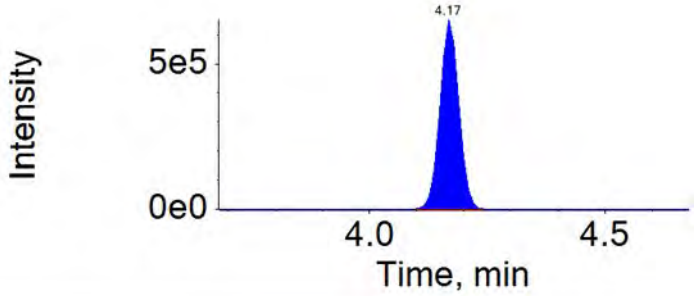
Component: PFHxA_2
Secondary Mass: 313.0 / 119.0



Component: PFPeS
Primary Mass: 349.0 / 80.0



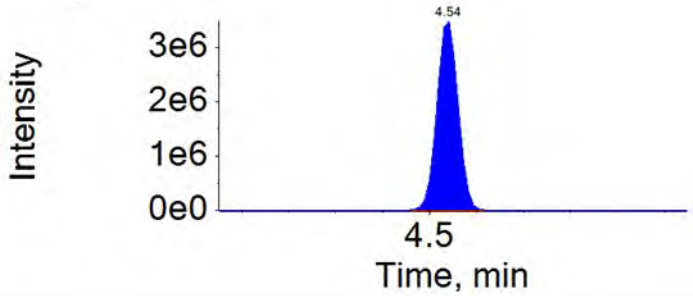
Component: PFPeS_2
Secondary Mass: 349.0 / 99.0



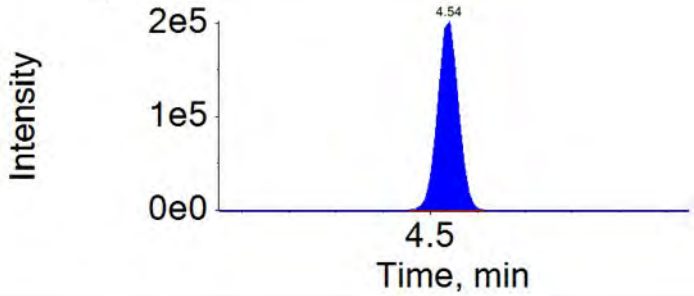
APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

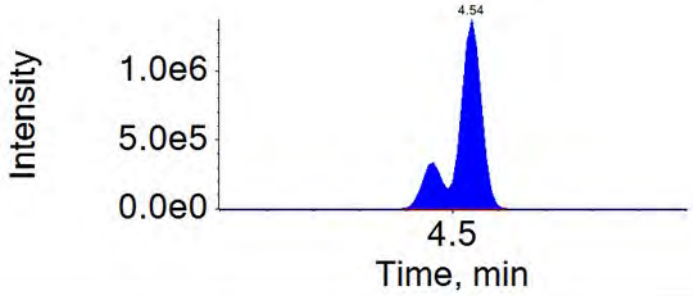
Component: PFHpA
Primary Mass: 363.0 / 319.0



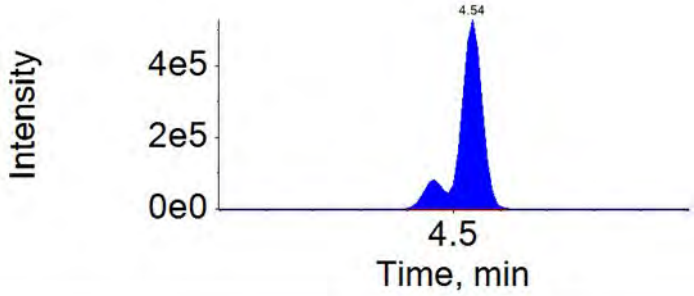
Component: PFHpA_2
Secondary Mass: 363.0 / 169.0



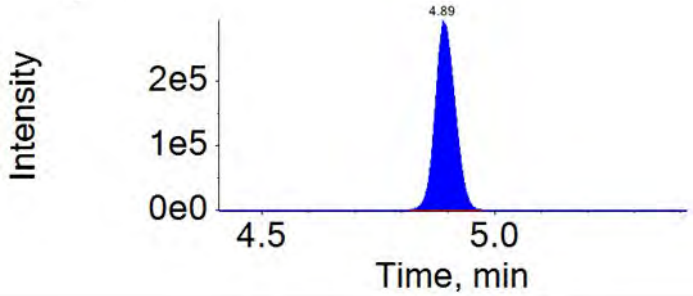
Component: PFHxS
Primary Mass: 399.0 / 80.0



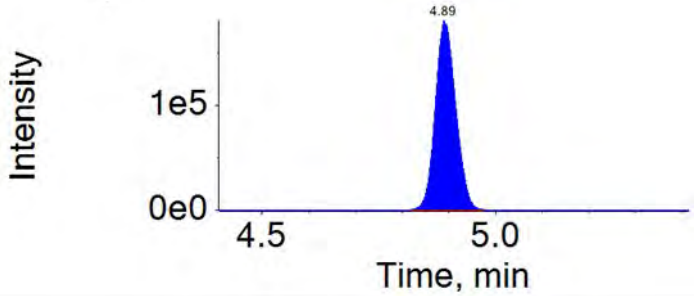
Component: PFHxS_2
Secondary Mass: 399.0 / 99.0



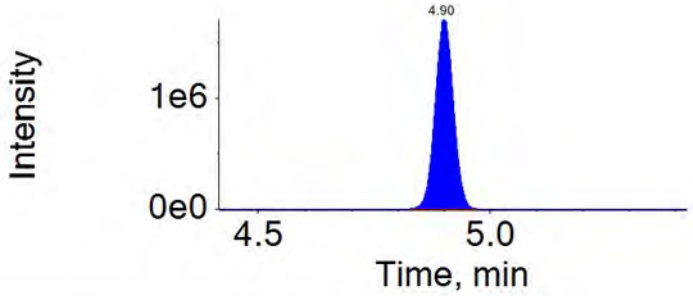
Component: 6:2-FTS
Primary Mass: 427.0 / 407.0



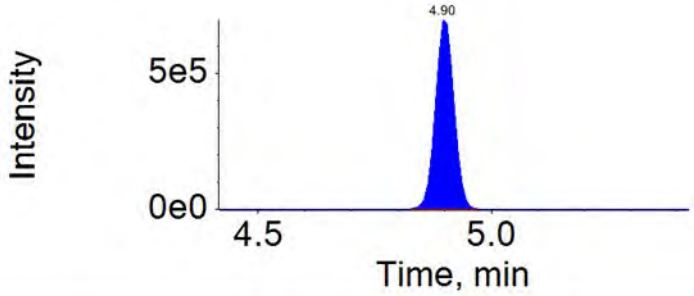
Component: 6:2 FTS_2
Secondary Mass: 427.0 / 81.0



Component: PFHpS
Primary Mass: 449.0 / 80.0



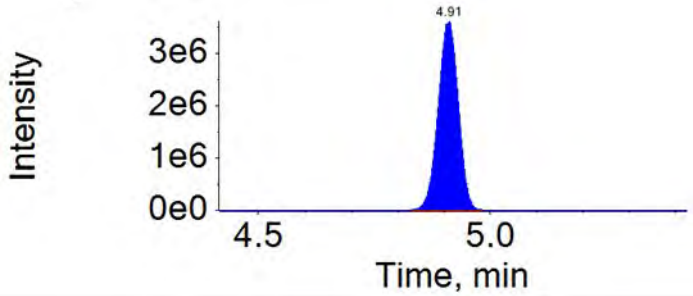
Component: PFHpS_2
Secondary Mass: 449.0 / 99.0



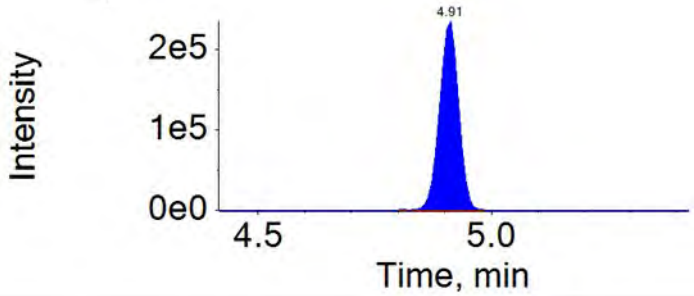
APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

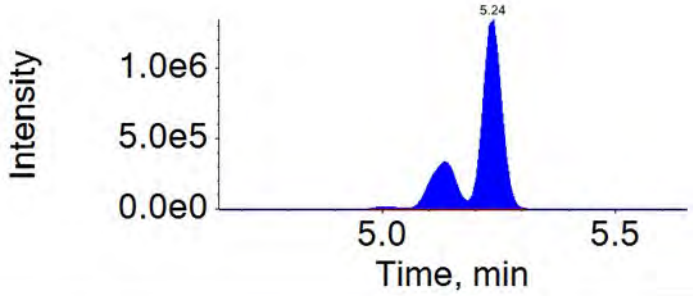
Component: PFOA
Primary Mass: 413.0 / 369.0



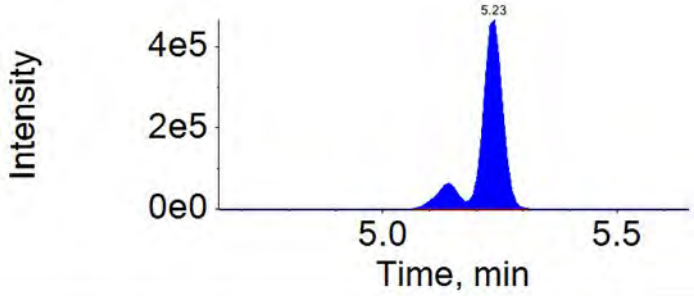
Component: PFOA_2
Secondary Mass: 413.0 / 169.0



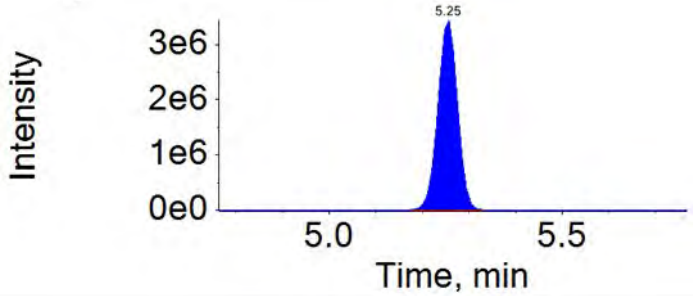
Component: PFOS
Primary Mass: 499.0 / 80.0



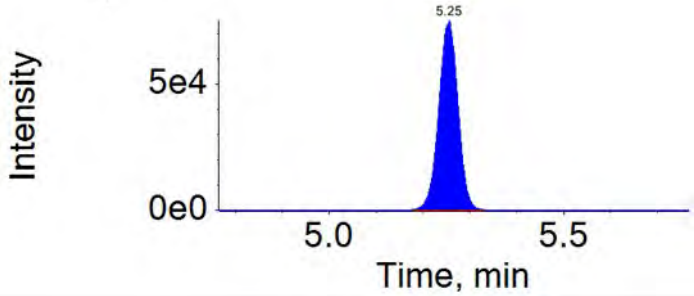
Component: PFOS_2
Secondary Mass: 499.0 / 99.0



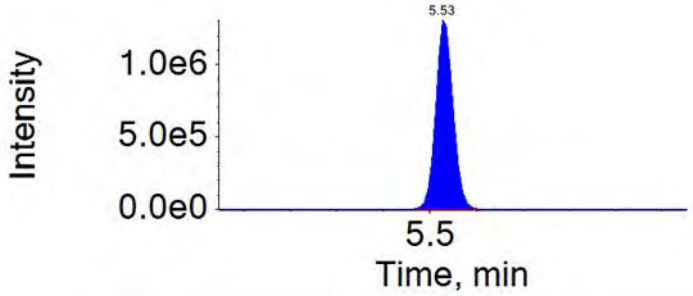
Component: PFNA
Primary Mass: 463.0 / 419.0



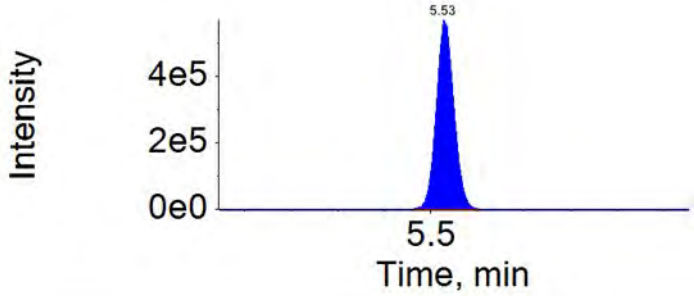
Component: PFNA_2
Secondary Mass: 463.0 / 169.0



Component: PFNS
Primary Mass: 549.0 / 80.0



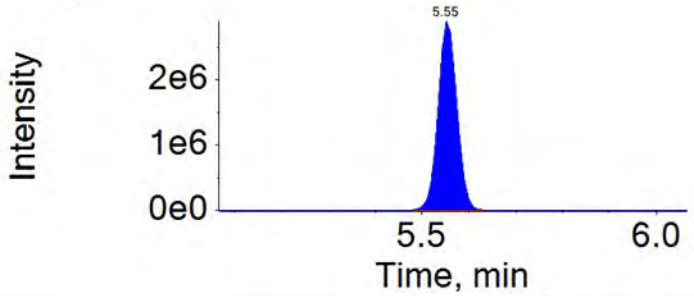
Component: PFNS_2
Secondary Mass: 549.0 / 99.0



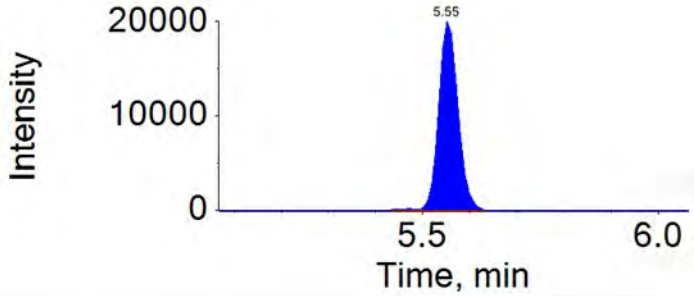
APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

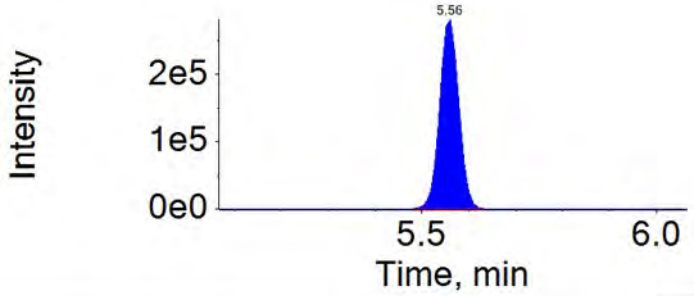
Component: PFDA
Primary Mass: 513.0 / 469.0



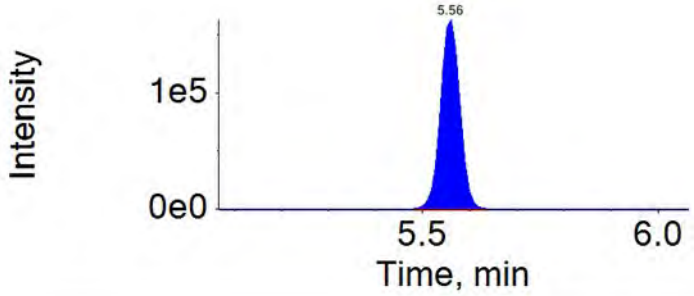
Component: PFDA_2
Secondary Mass: 513.0 / 169.0



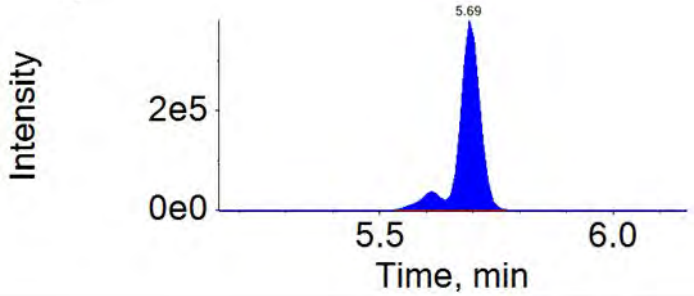
Component: 8:2-FTS
Primary Mass: 527.0 / 507.0



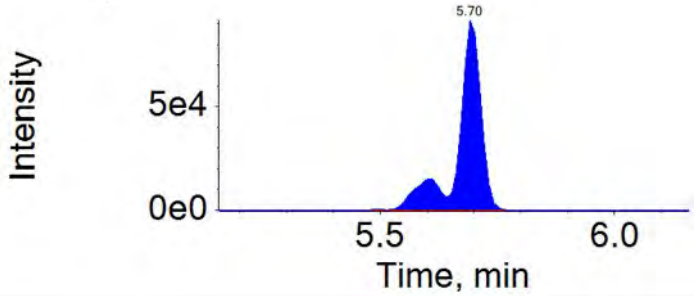
Component: 8:2 FTS_2
Secondary Mass: 527.0 / 81.0



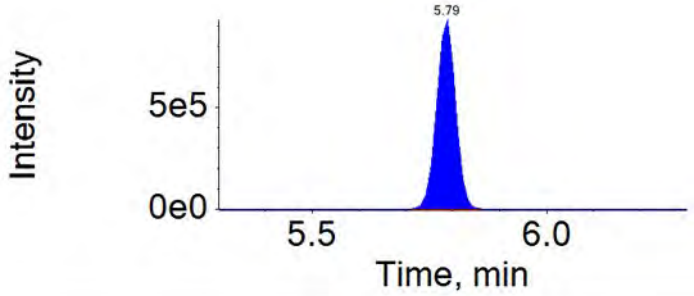
Component: NMeFOSAA
Primary Mass: 570.0 / 419.0



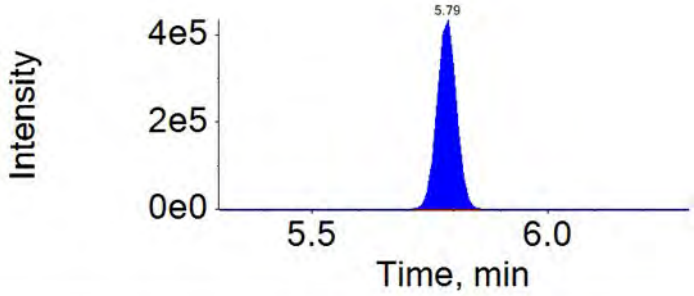
Component: NMeFOSAA_2
Secondary Mass: 570.0 / 483.0



Component: PFDS
Primary Mass: 599.0 / 80.0



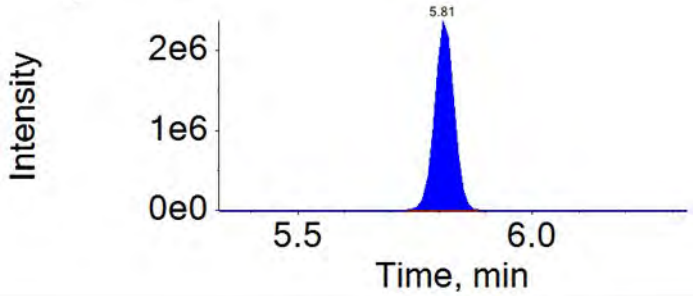
Component: PFDS_2
Secondary Mass: 599.0 / 99.0



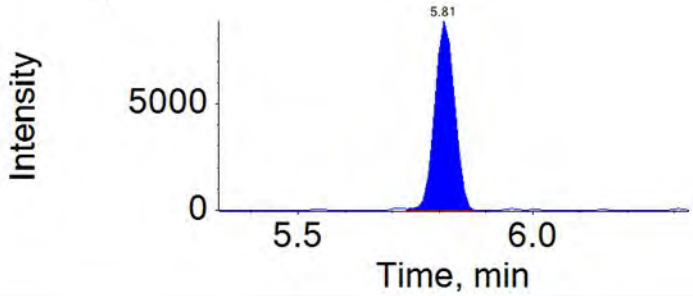
APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

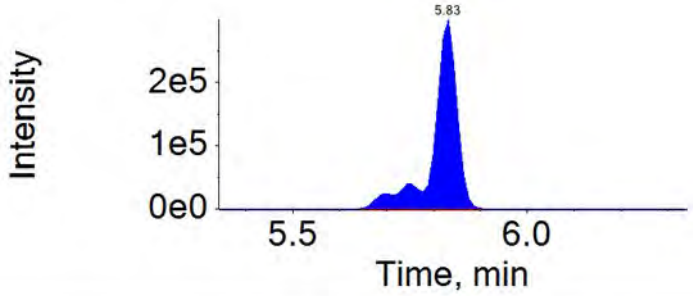
Component: PFUnDA
Primary Mass: 563.0 / 519.0



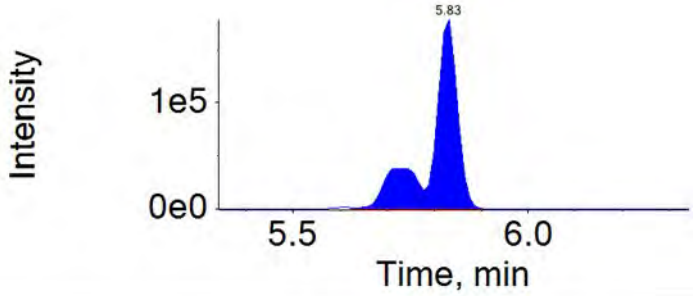
Component: PFUnDA_2
Secondary Mass: 563.0 / 169.0



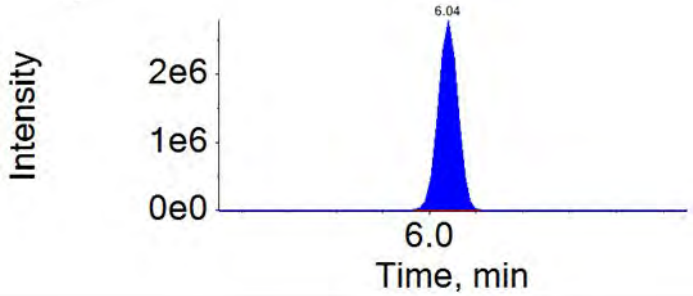
Component: NEtFOSAA
Primary Mass: 584.0 / 419.0



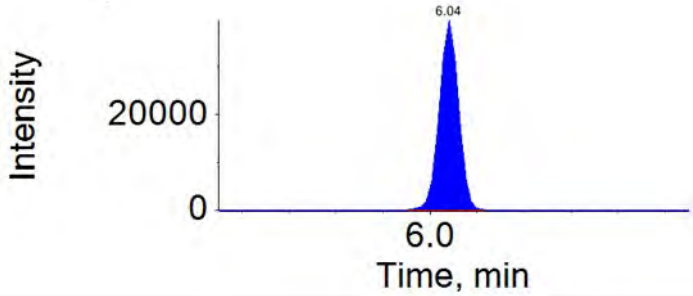
Component: NEtFOSAA_2
Secondary Mass: 584.0 / 526.0



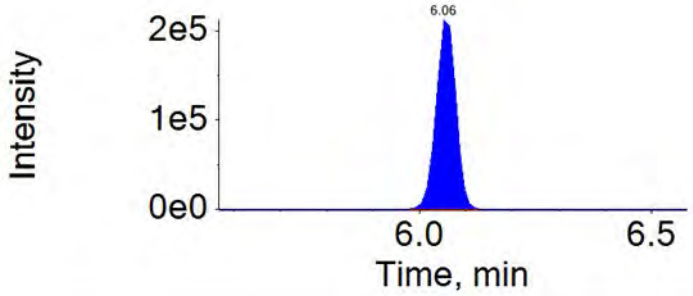
Component: PFDoDA
Primary Mass: 613.0 / 569.0



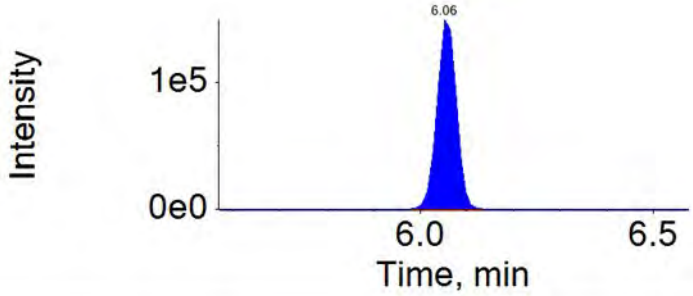
Component: PFDoDA_2
Secondary Mass: 613.0 / 169.0



Component: 10:2-FTS
Primary Mass: 627.0 / 607.0



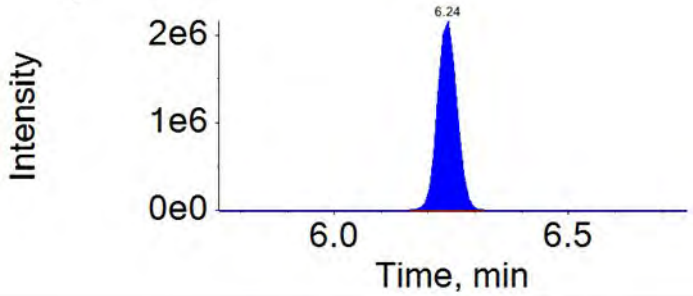
Component: 10:2 FTS_2
Secondary Mass: 627.0 / 81.0



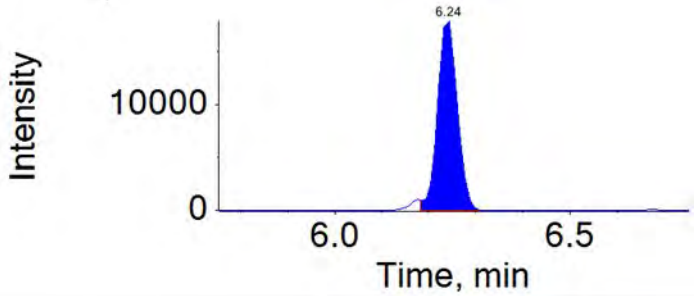
APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

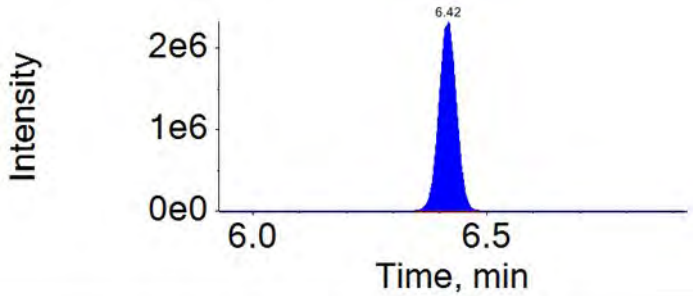
Component: PFTrDA
Primary Mass: 663.0 / 619.0



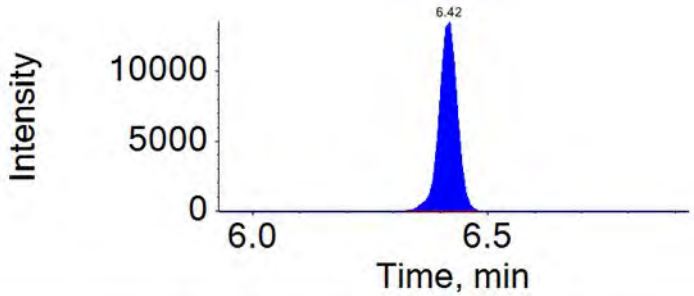
Component: PFTrDA_2
Secondary Mass: 663.0 / 169.0



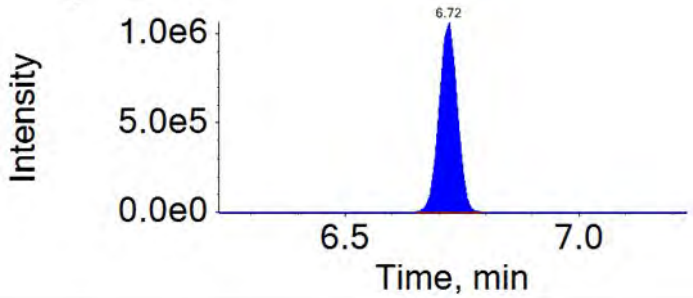
Component: PFTeDA
Primary Mass: 713.0 / 669.0



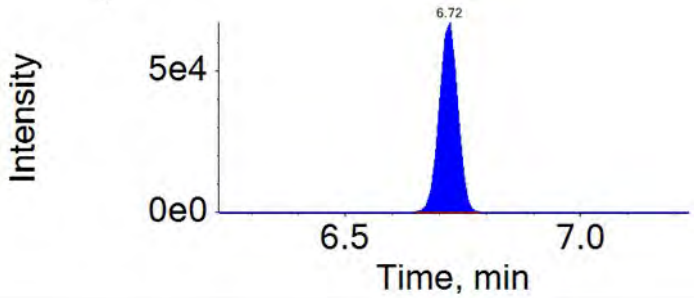
Component: PFTeDA_2
Secondary Mass: 713.0 / 169.0



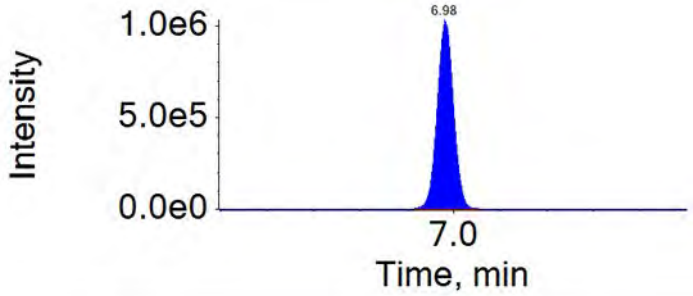
Component: PFHxDA
Primary Mass: 813.0 / 769.0



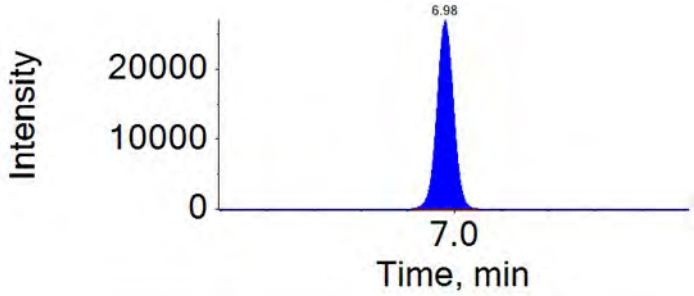
Component: PFHxDA_2
Secondary Mass: 813.0 / 169.0



Component: PFODA
Primary Mass: 913.0 / 869.0



Component: PFODA_2
Secondary Mass: 913.0 / 169.0



APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

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LC-MS/MS
DOD Analysis Report

Printed: 11/12/2018 6:20:00 PM
Template: DOD-Sample-18JUN22.docx

ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM
Result Table: 18NOV12DCAL 11/12/2018 6:14:07 PM
Acquisition Method: 18AUG13_3uL.dam

Sample Name:	MDL			**Data File:**		18NOV12DCAL-41.wiff
Sample ID:	MDLMODX1833F			**Acquis Date:**		2018-11-12T14:56:51
Sample Type:	Unknown			**Instrument:**		LM27631
Vial Position:	2			**Acquis Method:**		18AUG13_3uL.dam
Injection Vol:	3.00			**Result Table:**		18NOV12DCAL
QMethod File:	18AUG20QM			**ICAL Name:**		18NOV12DCAL
Batch Number:	N\A			**Operator:**		MCD7824
Sample Wt.:	1.00000			**Dilution Factor:**		1.00
Sample Vol.:	1.000			**Prep Factor:**		1.000

Injection Standard Peak Table

Injection Standard Area Reference File: 18NOV12DCAL-44

Injection Standard Name	Inj Std Conc	Injection Std Peak Area	Rreference Injection Standard Area	Injection Std %Diff	Injection Std %Diff Limit	Injection Std %Diff OOS
13C3-PFBA	5.0	633265.0	659926.2	-4	50	
13C2-PFOA	5.0	422926.0	450219.7	-6	50	
13C4-PFOS	4.8	238608.2	249205.8	-4	50	
13C2-PFDA	5.0	268362.6	278743.9	-4	50	

Extraction Standard Peak Table

Extraction Standard Name	Ext Std Area	Inj Std Name	Inj Std Area	Area Ratio	Ext Std Conc	Ext Std Result	Ext Std %REC	Ext Std %REC Limit	Ext Std OOS
E13C4-PFBA	710466.9	13C3-PFBA	633265.0	1.122	5.000	5.030	101	70-130	
E13C5-PFPeA	681259.0	13C3-PFBA	633265.0	1.076	5.000	4.825	97	70-130	
E13C3-PFBS	393264.2	13C3-PFBA	633265.0	0.621	4.650	4.384	94	70-130	
E13C2-4:2-FTS	44526.6	13C2-PFOA	422926.0	0.105	4.670	4.689	100	70-130	
E13C5-PFHxA	637812.0	13C2-PFOA	422926.0	1.508	5.000	5.448	109	70-130	
E13C3-PFHxS	301527.6	13C2-PFOA	422926.0	0.713	4.730	4.892	103	70-130	
E13C4-PFHpA	476944.8	13C2-PFOA	422926.0	1.128	5.000	5.081	102	70-130	
E13C2-6:2-FTS	30514.4	13C2-PFOA	422926.0	0.072	4.750	4.827	102	70-130	
E13C8-PFOA	779343.3	13C2-PFOA	422926.0	1.843	5.000	5.077	102	70-130	
E13C8-PFOS	248479.3	13C4-PFOS	238608.2	1.041	4.780	4.614	97	70-130	
E13C9-PFNA	435787.7	13C4-PFOS	238608.2	1.826	5.000	5.092	102	70-130	
E13C6-PFDA	583105.1	13C2-PFDA	268362.6	2.173	5.000	5.070	101	70-130	
E13C2-8:2-FTS	24193.5	13C2-PFDA	268362.6	0.090	4.790	4.496	94	70-130	
E13C8-PFOSA	559143.9	13C2-PFDA	268362.6	2.084	5.000	4.619	92	70-130	
Ed3-NMeFOSAA	63421.6	13C2-PFDA	268362.6	0.236	5.000	4.266	85	70-130	
E13C7-PFUnDA	227858.5	13C2-PFDA	268362.6	0.849	5.000	4.930	99	70-130	
Ed5-NEtFOSAA	57840.8	13C2-PFDA	268362.6	0.216	5.000	4.560	91	70-130	
E13C2-PFDoDA	487146.2	13C2-PFDA	268362.6	1.815	5.000	4.713	94	70-130	
Ed7-NMePFOSAE	286690.6	13C2-PFDA	268362.6	1.068	5.000	4.623	92	70-130	
Ed3-NMePFOSA	71517.2	13C2-PFDA	268362.6	0.266	5.000	4.842	97	70-130	
Ed9-NEtPFOSAE	252037.2	13C2-PFDA	268362.6	0.939	5.000	4.885	98	70-130	
Ed5-NEtPFOSA	54637.9	13C2-PFDA	268362.6	0.204	5.000	4.776	96	70-130	
E13C2-PFTeDA	362820.8	13C2-PFDA	268362.6	1.352	5.000	4.746	95	70-130	

APPROVED
By MCD at 6:34 pm, 11/12/18

REVIEWED
By HMK at 10:54 am, 11/13/18

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

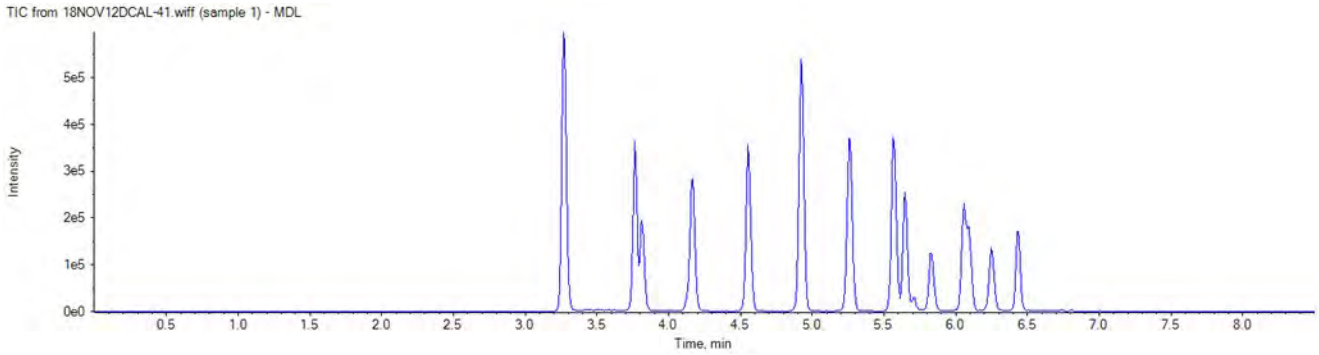
Analyte Quantitation Peak Table

Sample Name: MDL **Instrument Name:** LM27631 **File Name:** 18NOV12DCAL-41.wiff

Sample Wt	Sample Vol	Dilution Factor	PrepFactor
1.00000	1.000	1.00	1.000

Analyte Name	RT	RRT	Analyte Area Response	E	Int Typ	ES Name	ES RT	ES Area Response	Area Ratio	Sample Result (ng/g)
PFBA	3.27	1.000	22532.9		A	13C4-PFBA	3.27	710466.9	0.032	0.176
PFPeA	3.77	1.000	20193.5		M	13C5-PFPeA	3.77	681259.0	0.030	0.172
PFBS	3.81	1.000	9248.3		A	13C3-PFBS	3.81	393264.2	0.024	0.112
4:2-FTS	4.13	1.000	1329.9		A	13C2-4:2-FTS	4.13	44526.6	0.030	0.081
PFHxA	4.17	1.000	21601.6		A	13C5-PFHxA	4.17	637812.0	0.034	0.141
PFPeS	4.19	1.100	4484.8		A	13C3-PFBS	3.81	393264.2	0.011	0.111
PFHpA	4.56	1.000	22043.5		A	13C4-PFHpA	4.55	476944.8	0.046	0.153
PFHxS	4.56	1.000	8143.5		M	13C3-PFHxS	4.56	301527.6	0.027	0.131
6:2-FTS	4.91	1.000	1176.2		M	13C2-6:2-FTS	4.91	30514.4	0.039	0.093
PFHpS	4.92	1.080	7117.5		A	13C3-PFHxS	4.56	301527.6	0.024	0.124
PFOA	4.93	1.000	18045.0		A	13C8-PFOA	4.93	779343.3	0.023	0.124
PFOS	5.25	1.000	6416.9		A	13C8-PFOS	5.25	248479.3	0.026	0.113
PFNA	5.27	1.000	18065.1		M	13C9-PFNA	5.27	435787.7	0.041	0.149
PFNS	5.54	1.060	3661.2		A	13C8-PFOS	5.25	248479.3	0.015	0.103
PFDA	5.57	1.000	17350.5		A	13C6-PFDA	5.57	583105.1	0.030	0.158
8:2-FTS	5.57	1.000	1475.2		A	13C2-8:2-FTS	5.57	24193.5	0.061	0.142
PFOSA	5.64	1.000	10288.3		A	13C8-PFOSA	5.65	559143.9	0.018	0.090
NMeFOSAA	5.72	1.000	1372.4		A	d3-NMeFOSAA	5.71	63421.6	0.022	0.122
PFDS	5.80	1.100	2648.8		A	13C8-PFOS	5.25	248479.3	0.011	0.097
PFUnDA	5.83	1.000	12215.3		M	13C7-PFUnDA	5.83	227858.5	0.054	0.140
NEtFOSAA	5.84	1.000	1937.8		A	d5-NEtFOSAA	5.84	57840.8	0.034	0.176
PFDoDA	6.06	1.000	14033.1		A	13C2-PFDoDA	6.06	487146.2	0.029	0.147
10:2-FTS	6.06	1.090	352.6		M	13C2-8:2-FTS	5.57	24193.5	0.015	0.049
NMePFOSAE	6.10	1.000	9218.1		A	d7-NMePFOSAE	6.09	286690.6	0.032	0.134
NMePFOSA	6.11	1.000	1339.8		A	d3-NMePFOSA	6.11	71517.2	0.019	0.092
PFDoS	6.22	1.180	1425.7		A	13C8-PFOS	5.25	248479.3	0.006	0.100
NEtPFOSAE	6.26	1.000	10510.3		A	d9-NEtPFOSAE	6.25	252037.2	0.042	0.134
NEtPFOSA	6.28	1.000	1191.3		M	d5-NEtPFOSA	6.27	54637.9	0.022	0.100
PFTrDA	6.26	1.030	7825.5		M	13C2-PFDoDA	6.06	487146.2	0.016	0.101
PFTeDA	6.43	1.000	8938.5		A	13C2-PFTeDA	6.43	362820.8	0.025	0.138
PFHxDA	6.74	1.050	3934.2		A	13C2-PFTeDA	6.43	362820.8	0.011	0.129
PFODA	7.00	1.090	2726.4		A	13C2-PFTeDA	6.43	362820.8	0.008	0.105

Total Ion Chromatogram

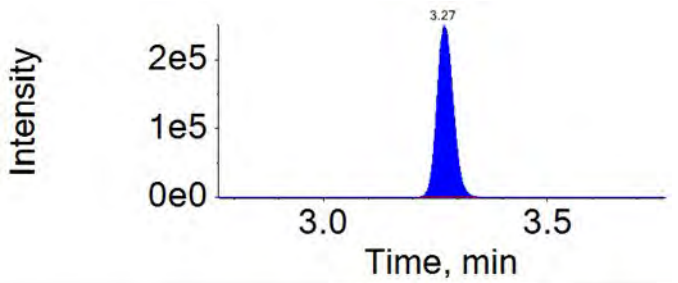


APPROVED
By MCD at 6:34 pm, 11/12/18

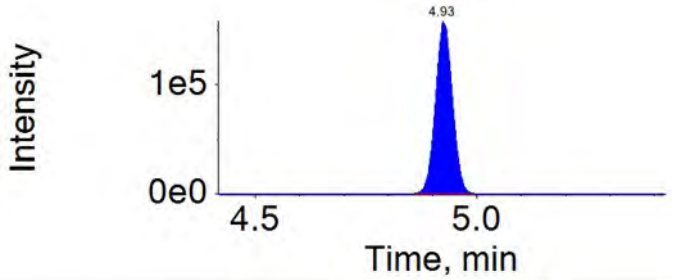
REVIEWED
By HMK at 10:54 am, 11/13/18

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

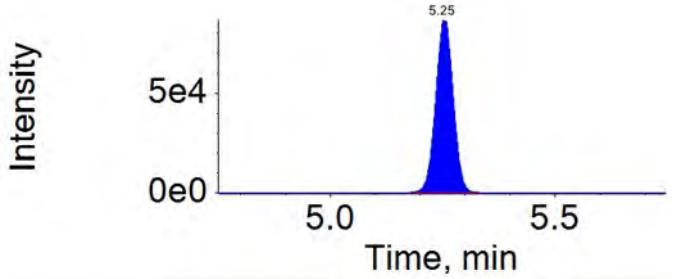
Injection Standard: 13C3-PFBA
216.0 / 172.0



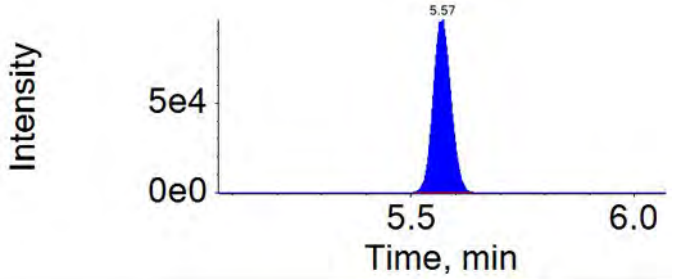
Injection Standard: 13C2-PFOA
415.0 / 370.0



Injection Standard: 13C4-PFOS
503.0 / 80.0

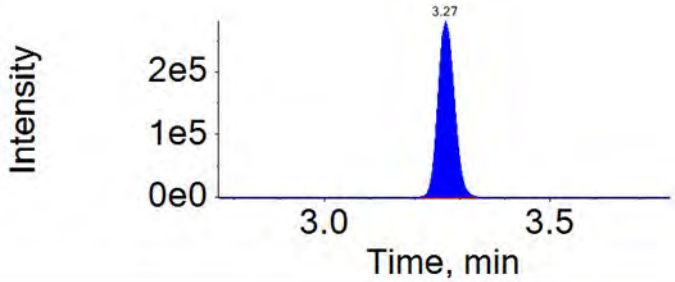


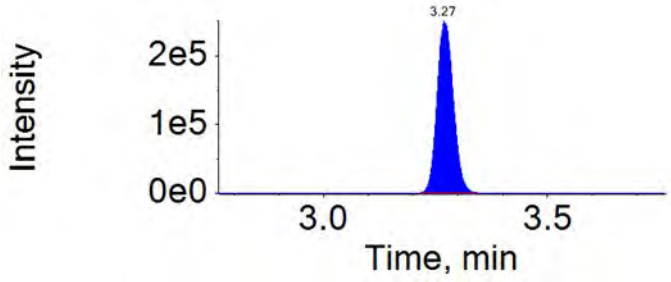
Injection Standard: 13C2-PFDA
515.0 / 470.0



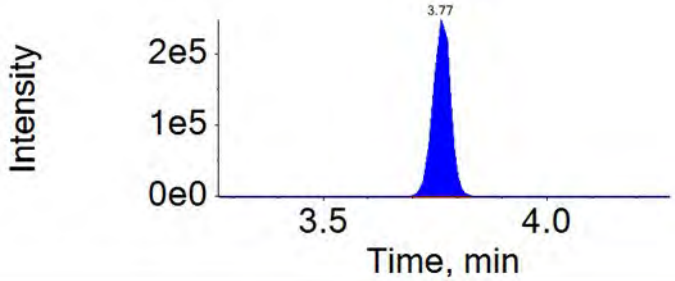
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

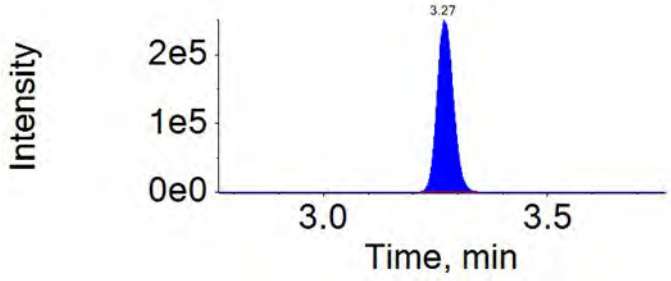
Extraction Standard: E13C4-PFBA	Injection Standard: 13C3-PFBA
217.0 / 172.0	216.0 / 172.0



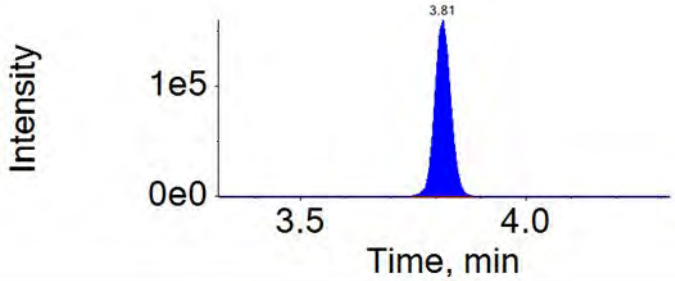


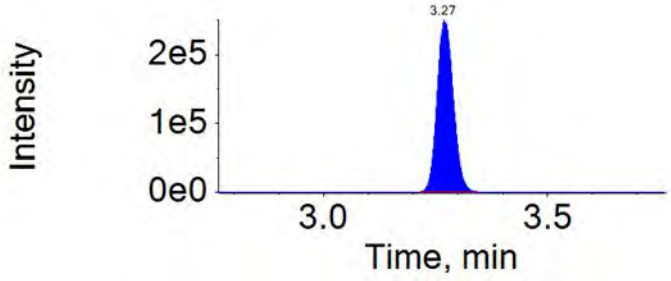
Extraction Standard: E13C5-PFPeA	Injection Standard: 13C3-PFBA
268.0 / 223.0	216.0 / 172.0



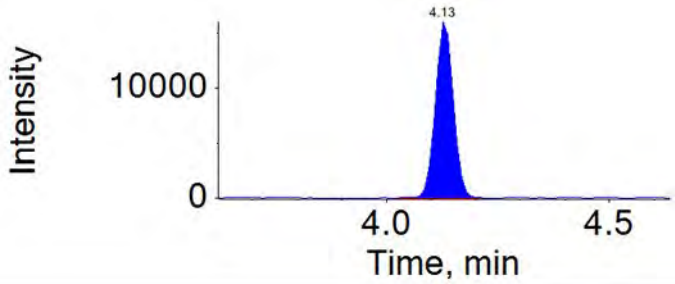


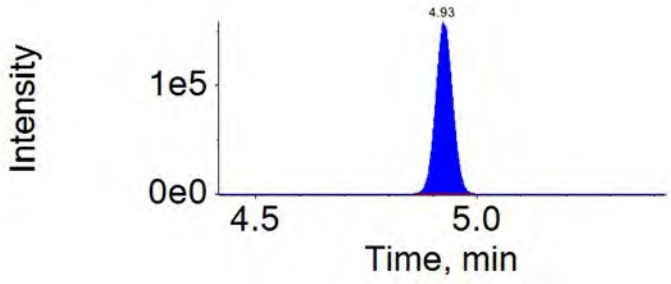
Extraction Standard: E13C3-PFBS	Injection Standard: 13C3-PFBA
302.0 / 80.0	216.0 / 172.0





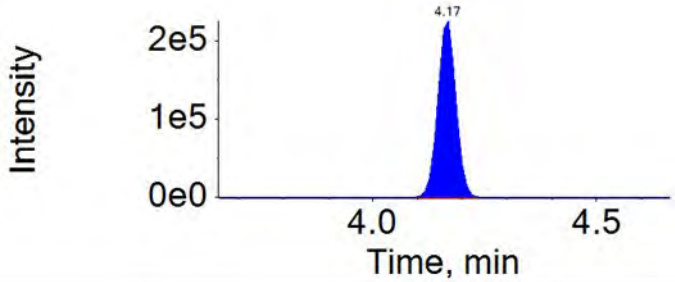
Extraction Standard: E13C2-4:2-FTS	Injection Standard: 13C2-PFOA
329.0 / 81.0	415.0 / 370.0

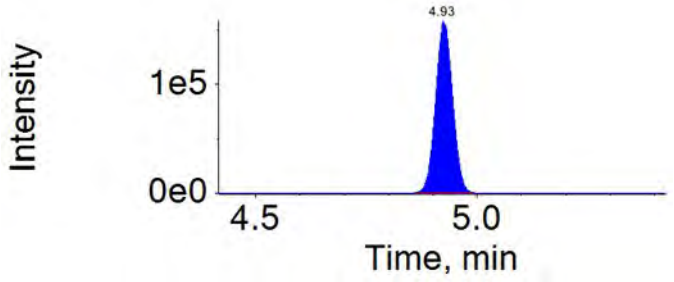




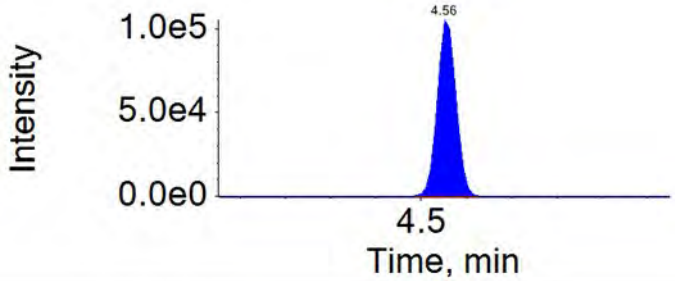
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

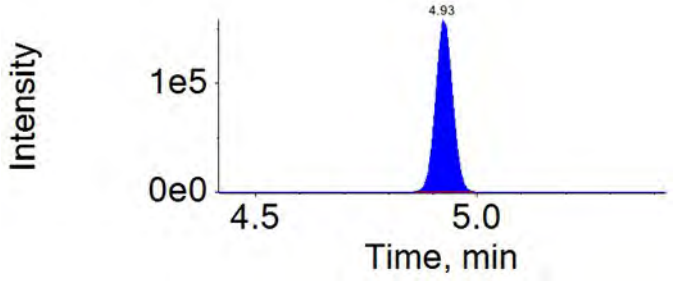
Extraction Standard: E13C5-PFHxA	Injection Standard: 13C2-PFOA
318.0 / 273.0	415.0 / 370.0



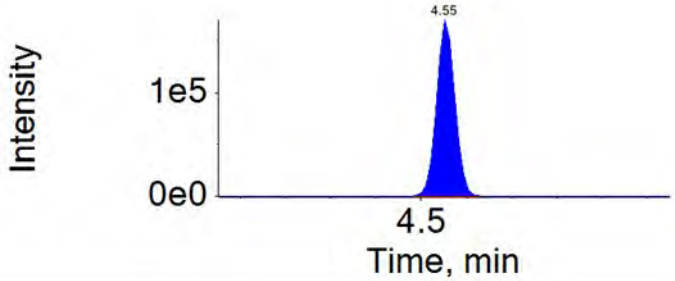


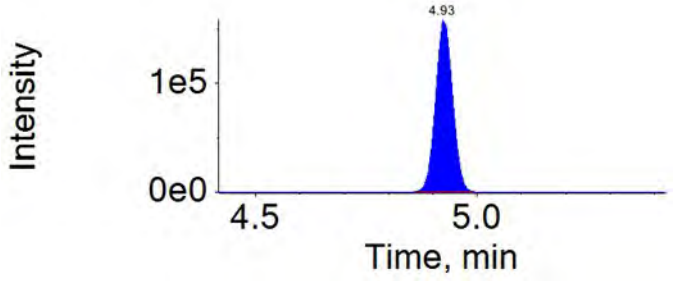
Extraction Standard: E13C3-PFHxS	Injection Standard: 13C2-PFOA
402.0 / 80.0	415.0 / 370.0



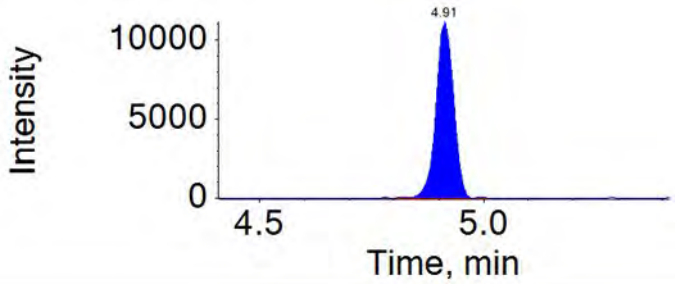


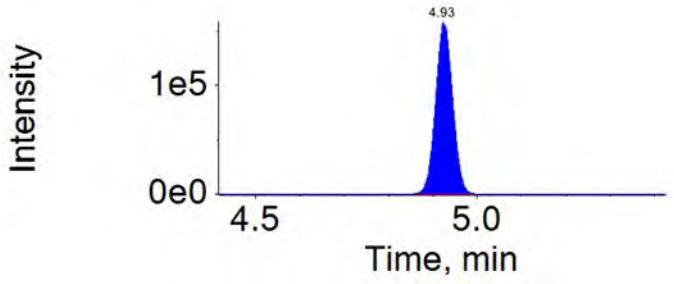
Extraction Standard: E13C4-PFHpA	Injection Standard: 13C2-PFOA
367.0 / 322.0	415.0 / 370.0





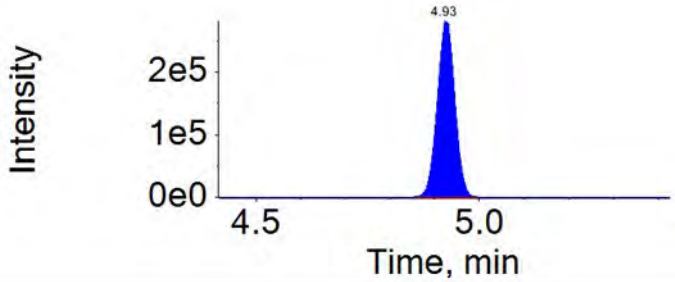
Extraction Standard: E13C2-6:2-FTS	Injection Standard: 13C2-PFOA
429.0 / 81.0	415.0 / 370.0

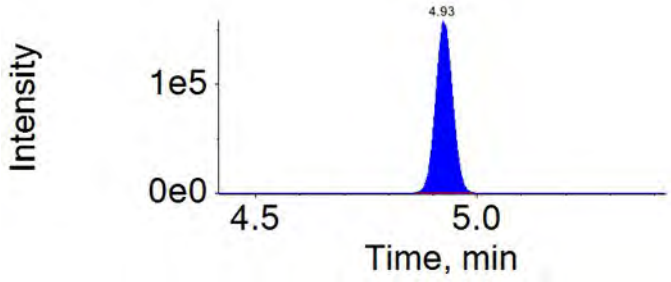




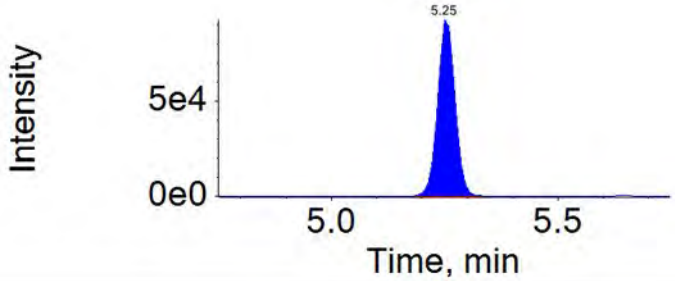
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

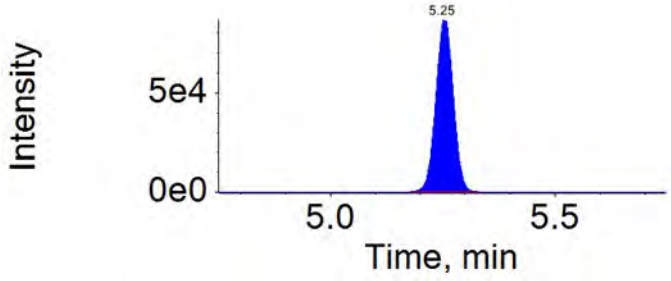
Extraction Standard: E13C8-PFOA	Injection Standard: 13C2-PFOA
421.0 / 376.0	415.0 / 370.0



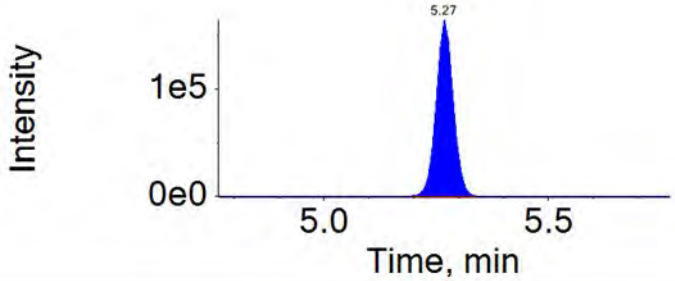


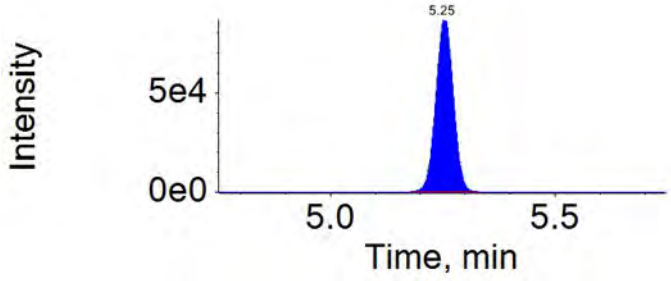
Extraction Standard: E13C8-PFOS	Injection Standard: 13C4-PFOS
507.0 / 80.0	503.0 / 80.0



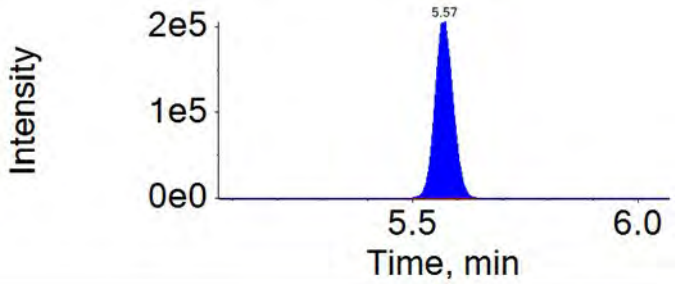


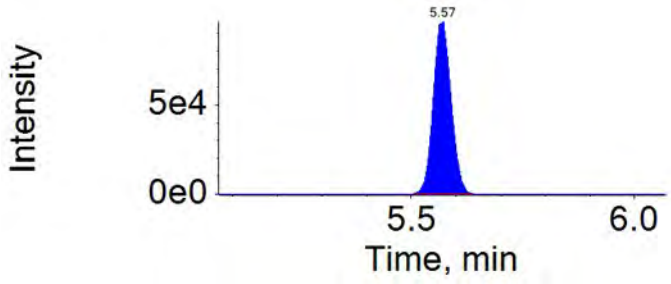
Extraction Standard: E13C9-PFNA	Injection Standard: 13C4-PFOS
472.0 / 427.0	503.0 / 80.0





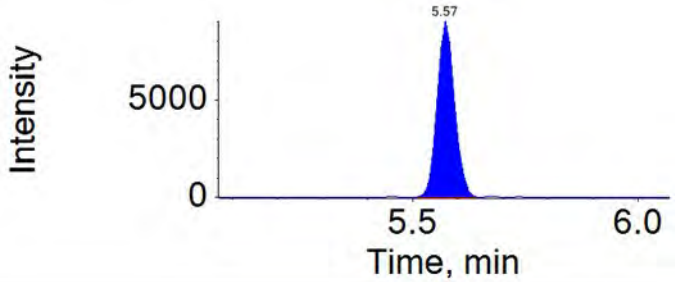
Extraction Standard: E13C6-PFDA	Injection Standard: 13C2-PFDA
519.0 / 474.0	515.0 / 470.0

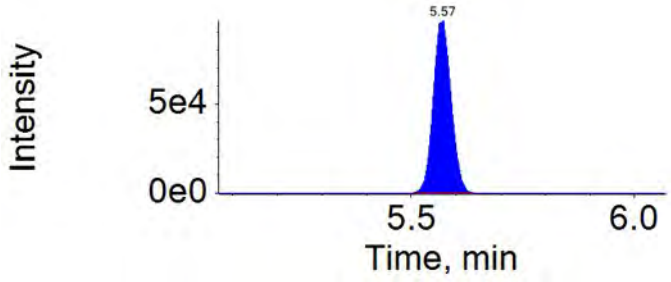




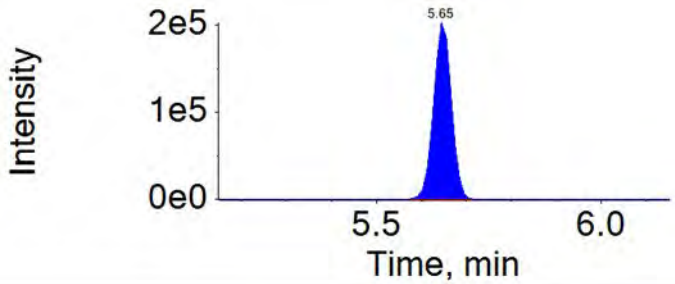
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

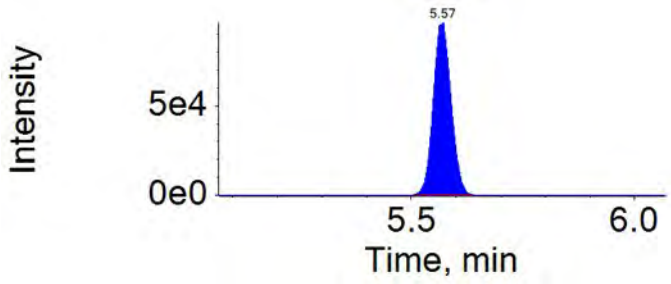
Extraction Standard: E13C2-8:2-FTS	Injection Standard: 13C2-PFDA
529.0 / 81.0	515.0 / 470.0



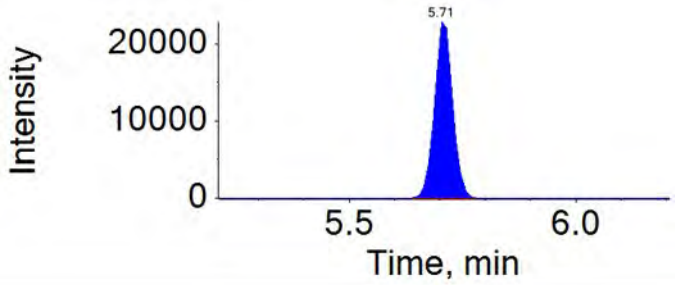


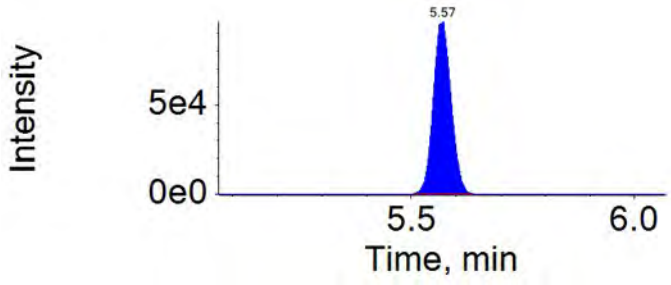
Extraction Standard: E13C8-PFOSA	Injection Standard: 13C2-PFDA
506.0 / 78.0	515.0 / 470.0



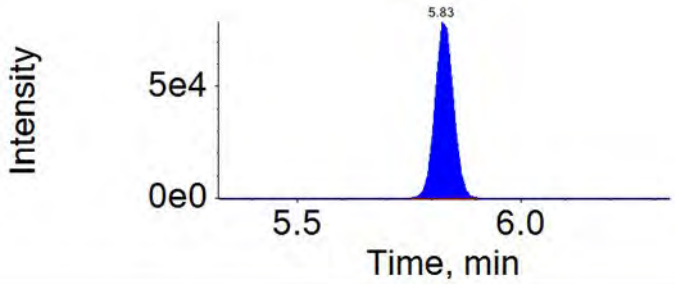


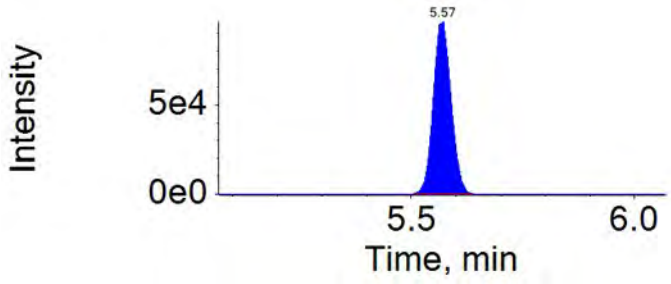
Extraction Standard: Ed3-NMeFOSAA	Injection Standard: 13C2-PFDA
573.0 / 419.0	515.0 / 470.0





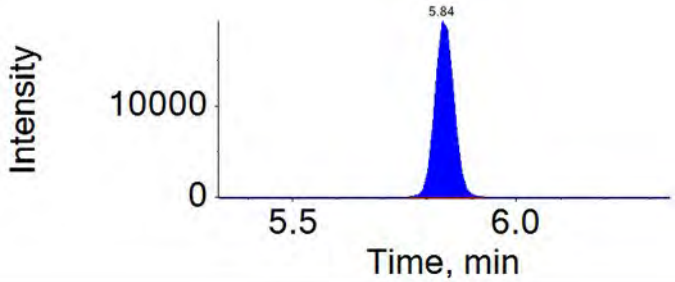
Extraction Standard: E13C7-PFUnDA	Injection Standard: 13C2-PFDA
570.0 / 525.0	515.0 / 470.0

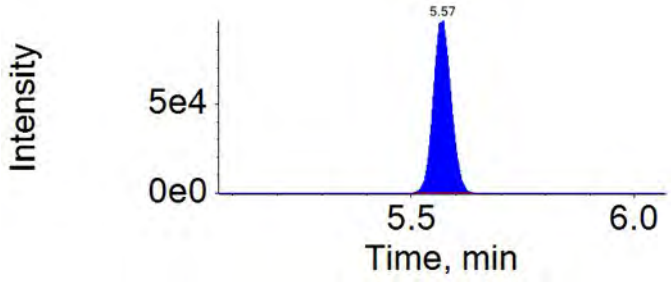




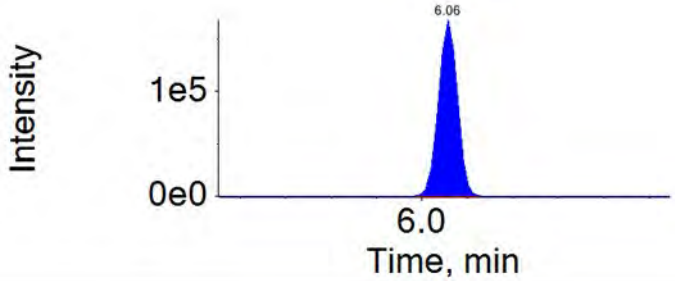
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

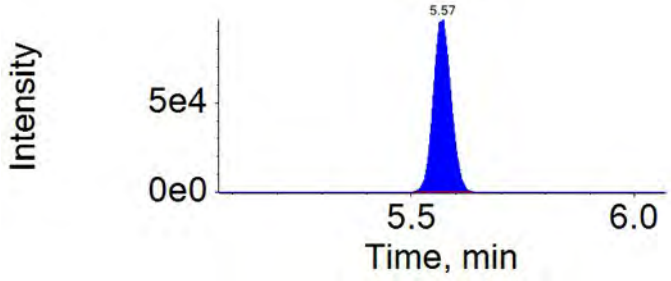
Extraction Standard: Ed5-NEtFOSAA	Injection Standard: 13C2-PFDA
589.0 / 419.0	515.0 / 470.0



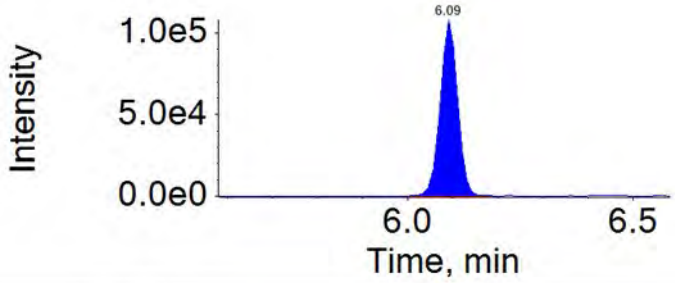


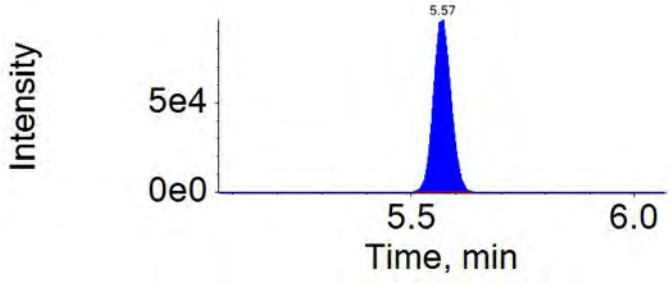
Extraction Standard: E13C2-PFDoDA	Injection Standard: 13C2-PFDA
615.0 / 570.0	515.0 / 470.0



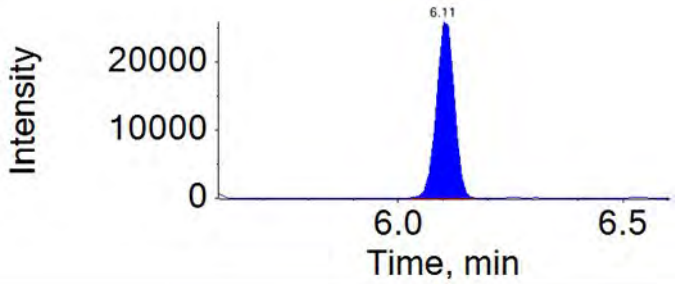


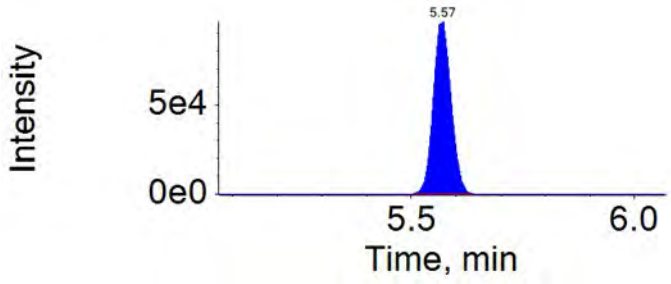
Extraction Standard: Ed7-NMePFOSAE	Injection Standard: 13C2-PFDA
623.0 / 59.0	515.0 / 470.0





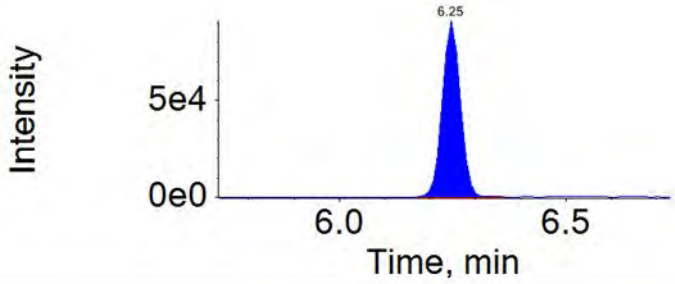
Extraction Standard: Ed3-NMePFOSA	Injection Standard: 13C2-PFDA
515.0 / 169.0	515.0 / 470.0

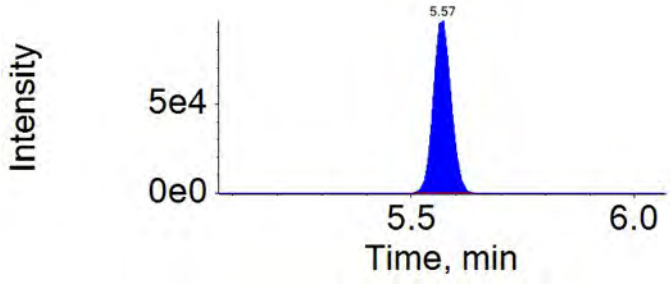




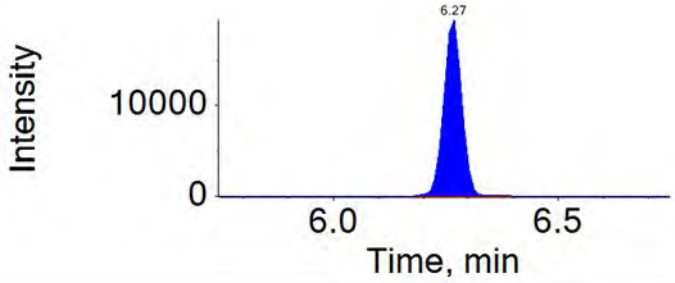
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

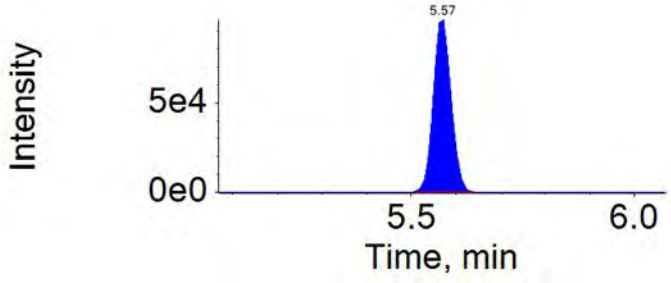
Extraction Standard: Ed9-NEtPFOSAE	Injection Standard: 13C2-PFDA
639.0 / 59.0	515.0 / 470.0



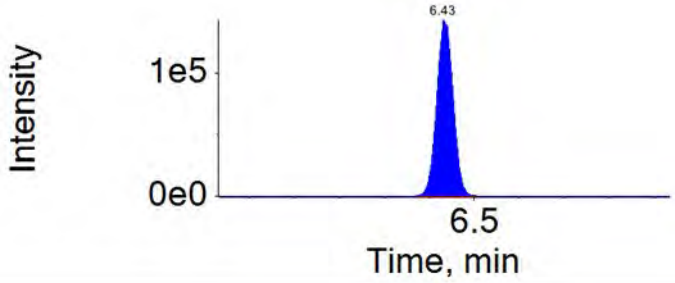


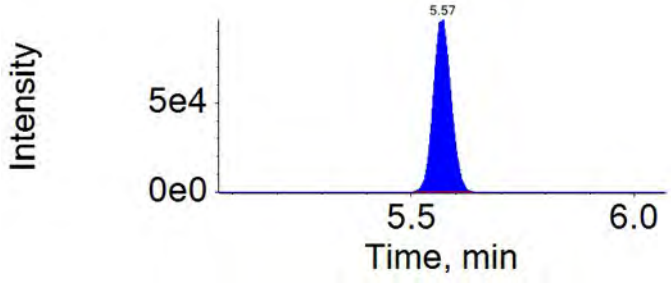
Extraction Standard: Ed5-NEtPFOSA	Injection Standard: 13C2-PFDA
531.0 / 169.0	515.0 / 470.0





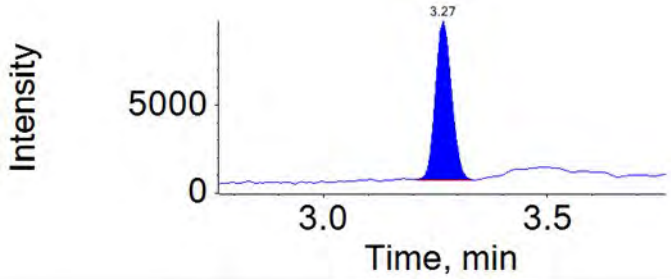
Extraction Standard: E13C2-PFTeDA	Injection Standard: 13C2-PFDA
715.0 / 670.0	515.0 / 470.0



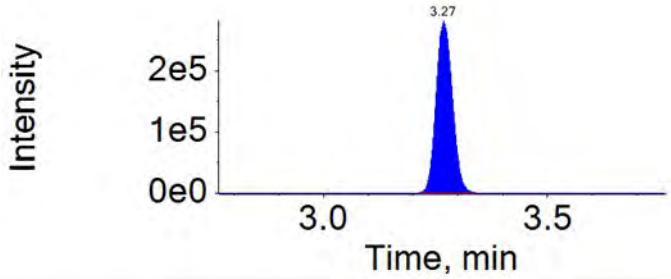


ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

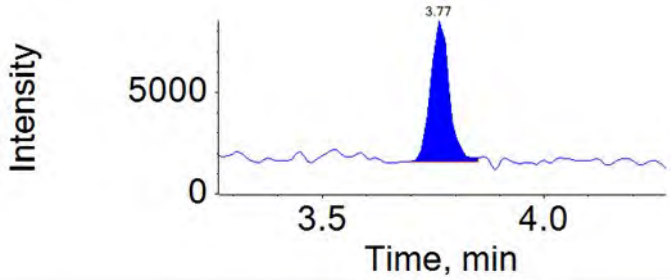
Analyte: PFBA
213.0 / 169.0



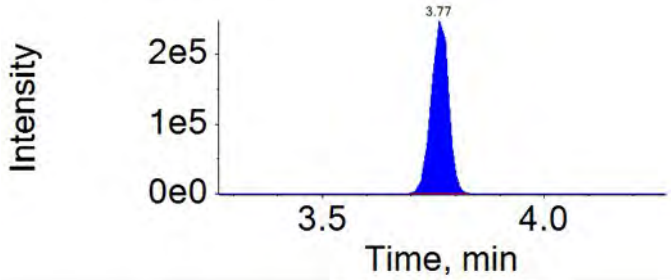
Extraction Standard: 13C4-PFBA
217.0 / 172.0



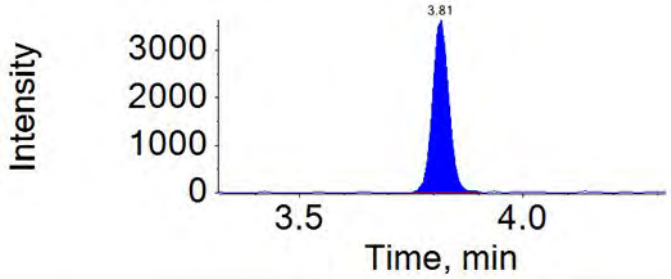
Analyte: PFPeA
263.0 / 219.0



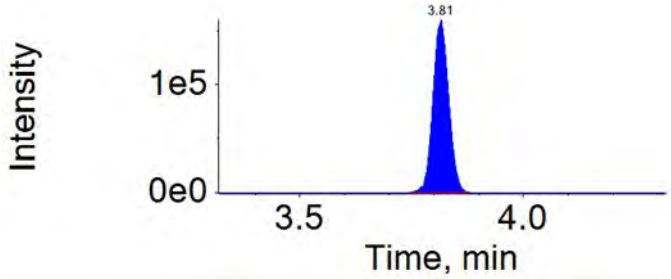
Extraction Standard: 13C5-PFPeA
268.0 / 223.0



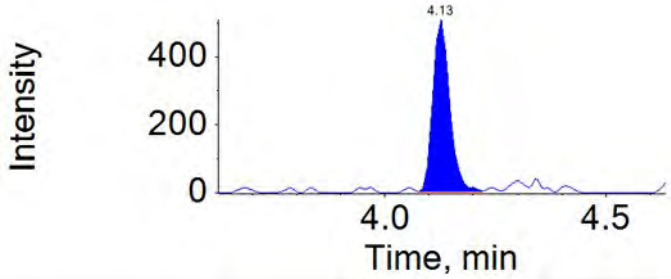
Analyte: PFBS
299.0 / 80.0



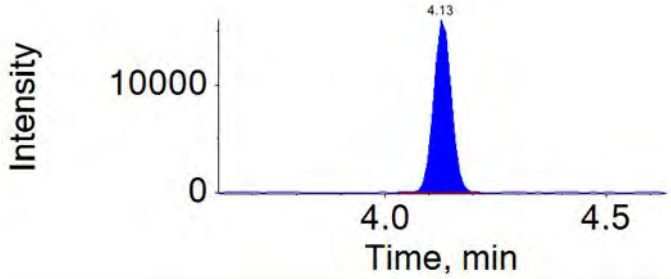
Extraction Standard: 13C3-PFBS
302.0 / 80.0



Analyte: 4:2-FTS
327.0 / 307.0



Extraction Standard: 13C2-4:2-FTS
329.0 / 81.0

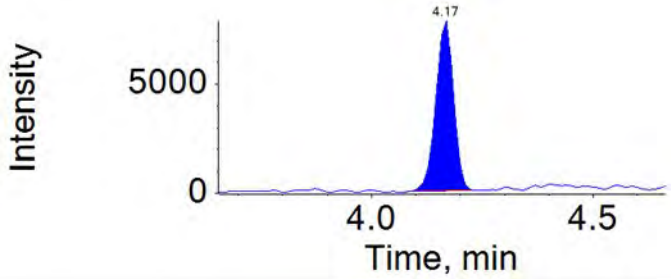


APPROVED
By MCD at 6:34 pm, 11/12/18

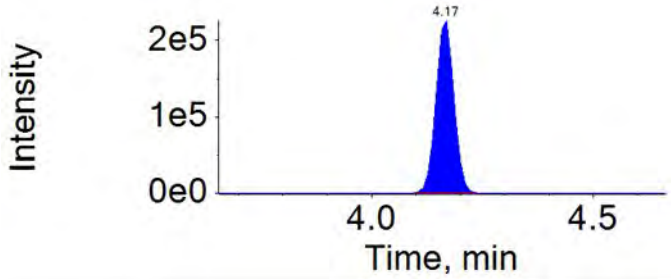
REVIEWED
By HMK at 10:54 am, 11/13/18

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

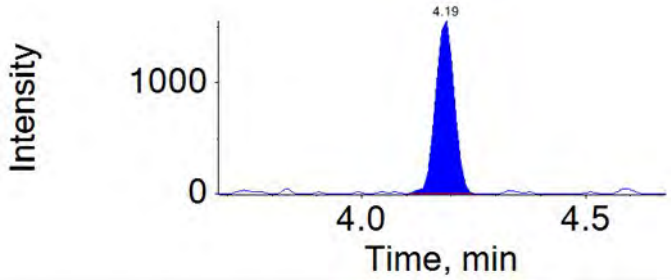
Analyte: PFHxA
313.0 / 269.0



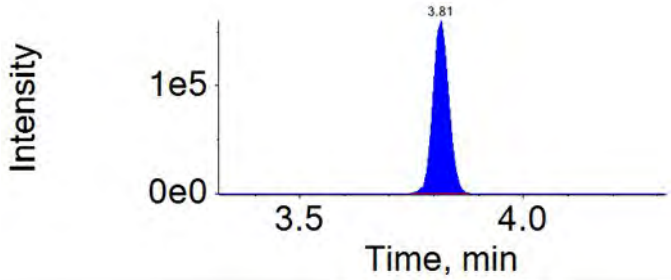
Extraction Standard: 13C5-PFHxA
318.0 / 273.0



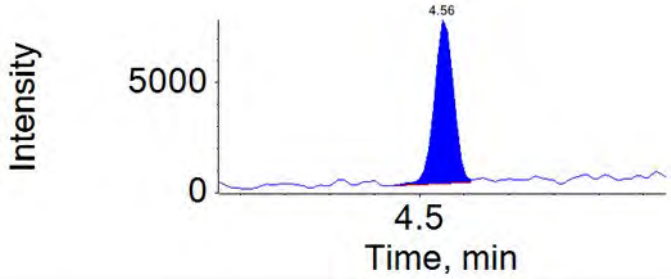
Analyte: PFPeS
349.0 / 80.0



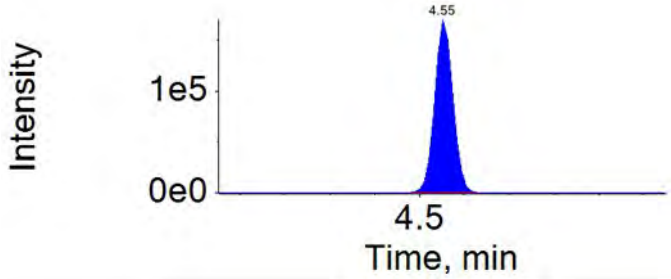
Extraction Standard: 13C3-PFBS
302.0 / 80.0



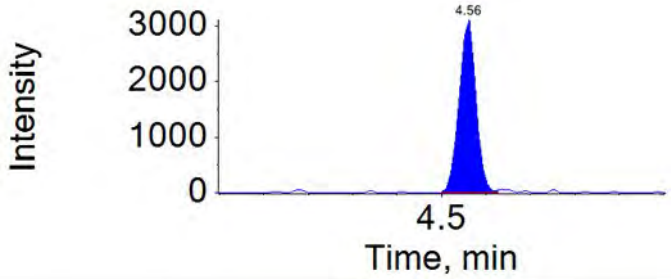
Analyte: PFHpA
363.0 / 319.0



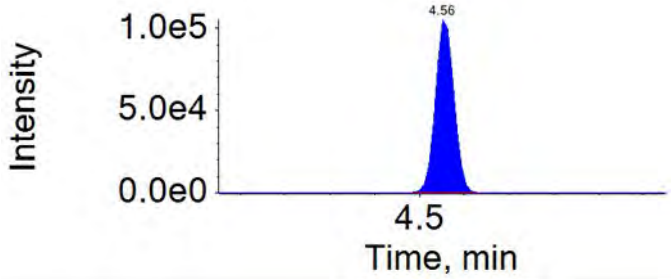
Extraction Standard: 13C4-PFHpA
367.0 / 322.0



Analyte: PFHxS
399.0 / 80.0



Extraction Standard: 13C3-PFHxS
402.0 / 80.0

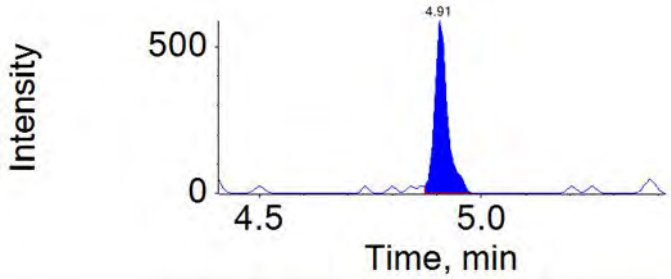


APPROVED
By MCD at 6:34 pm, 11/12/18

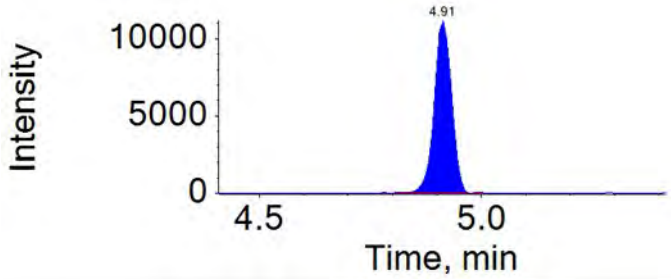
REVIEWED
By HMK at 10:54 am, 11/13/18

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

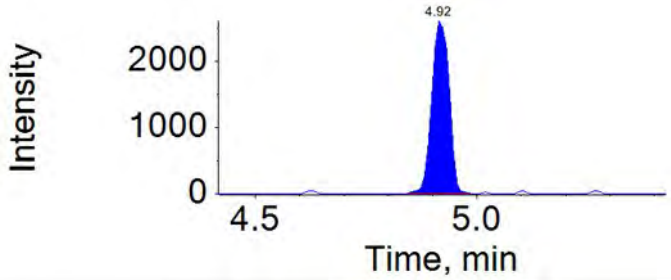
Analyte: 6:2-FTS
427.0 / 407.0



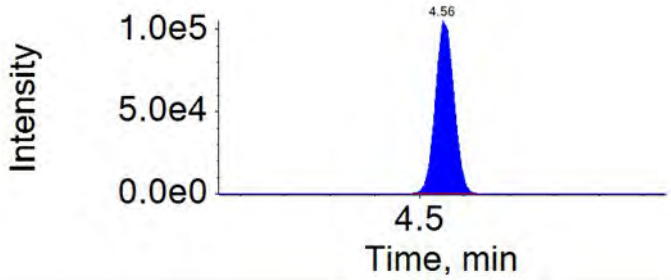
Extraction Standard: 13C2-6:2-FTS
429.0 / 81.0



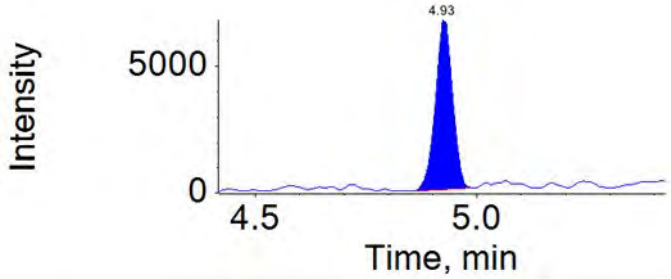
Analyte: PFHpS
449.0 / 80.0



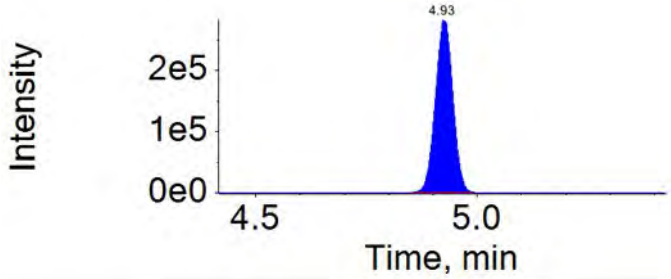
Extraction Standard: 13C3-PFHxS
402.0 / 80.0



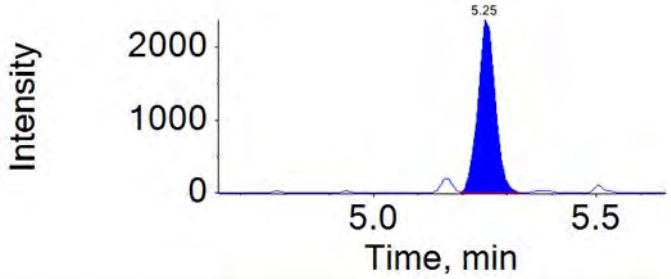
Analyte: PFOA
413.0 / 369.0



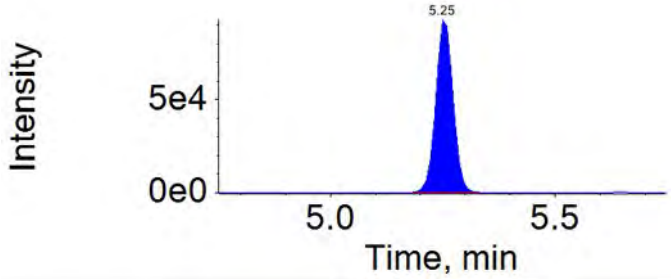
Extraction Standard: 13C8-PFOA
421.0 / 376.0



Analyte: PFOS
499.0 / 80.0

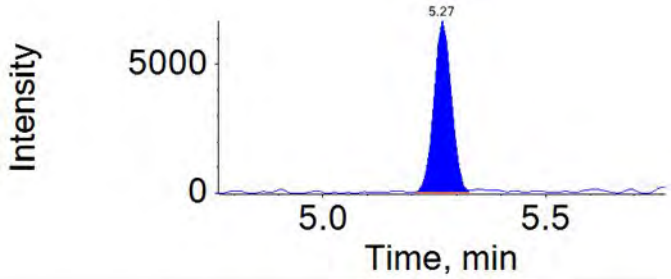


Extraction Standard: 13C8-PFOS
507.0 / 80.0

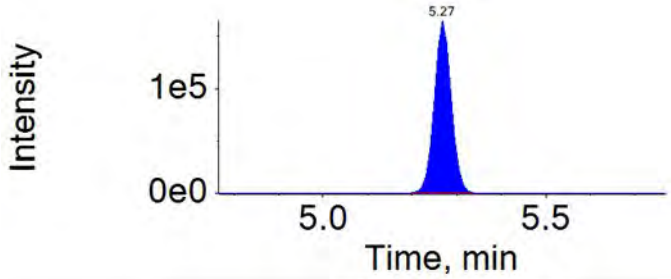


ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

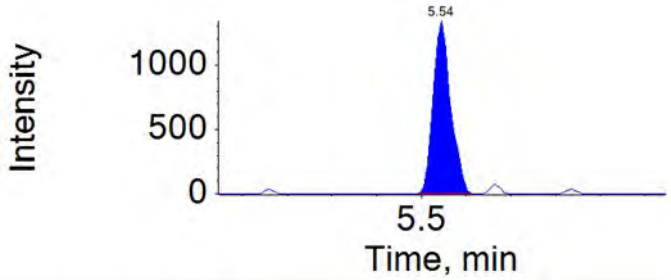
Analyte: PFNA
463.0 / 419.0



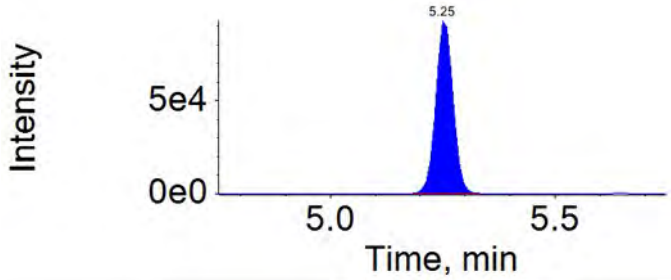
Extraction Standard: 13C9-PFNA
472.0 / 427.0



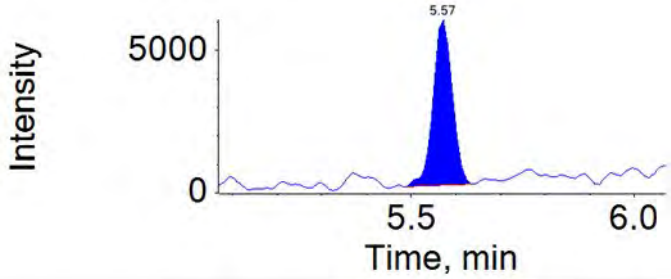
Analyte: PFNS
549.0 / 80.0



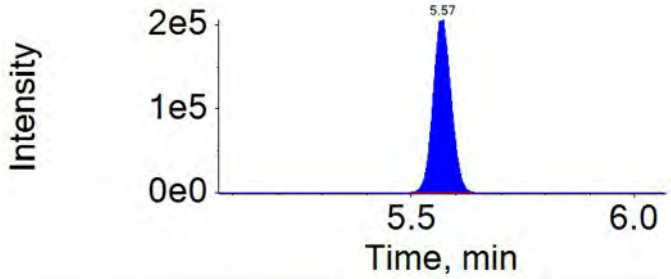
Extraction Standard: 13C8-PFOS
507.0 / 80.0



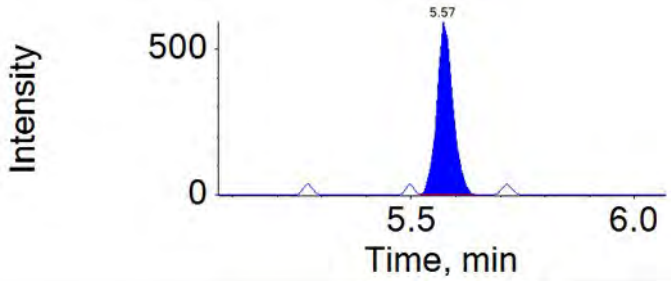
Analyte: PFDA
513.0 / 469.0



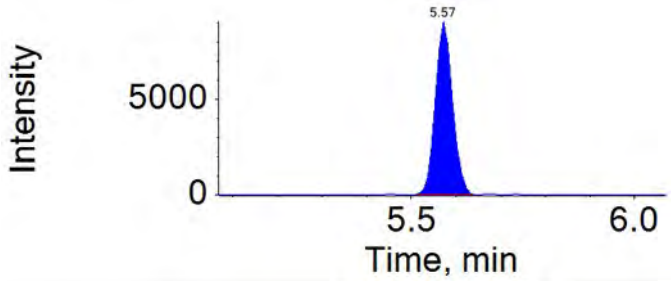
Extraction Standard: 13C6-PFDA
519.0 / 474.0



Analyte: 8:2-FTS
527.0 / 507.0



Extraction Standard: 13C2-8:2-FTS
529.0 / 81.0

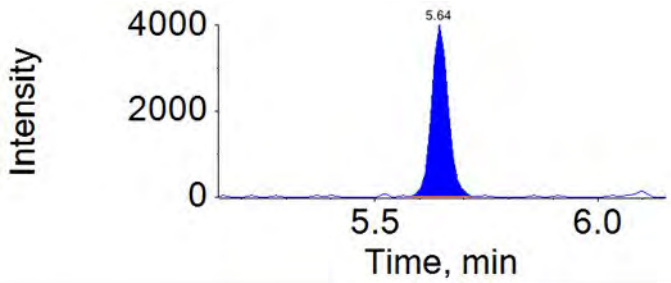


APPROVED
By MCD at 6:34 pm, 11/12/18

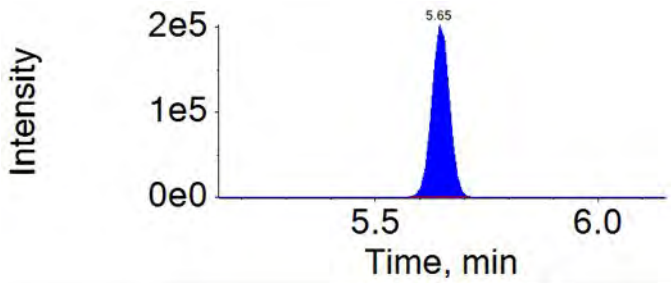
REVIEWED
By HMK at 10:54 am, 11/13/18

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

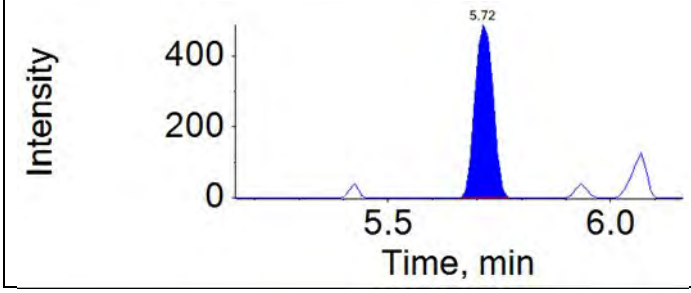
Analyte: PFOSA
498.0 / 78.0



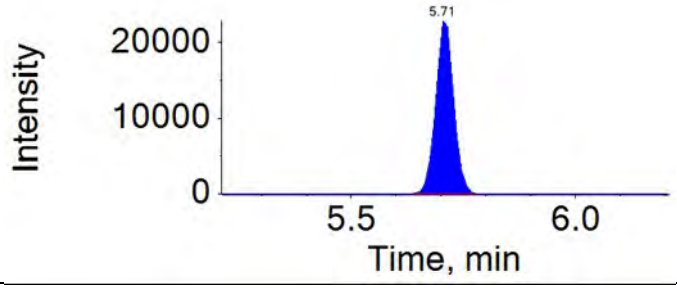
Extraction Standard: 13C8-PFOSA
506.0 / 78.0



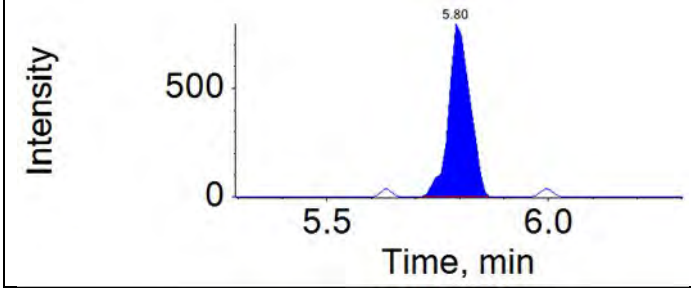
Analyte: NMeFOSAA
570.0 / 419.0



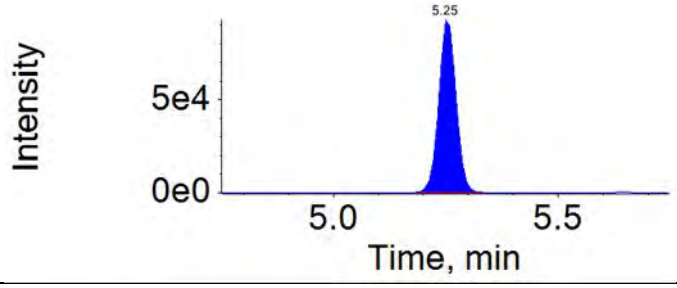
Extraction Standard: d3-NMeFOSAA
573.0 / 419.0



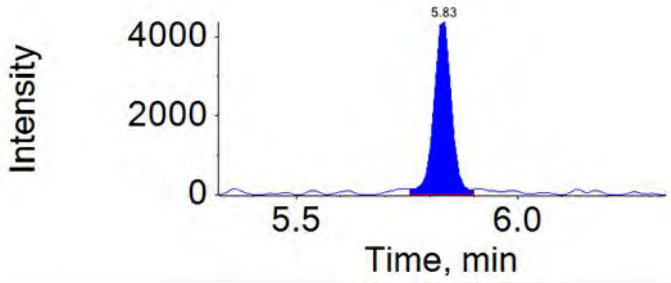
Analyte: PFDS
599.0 / 80.0



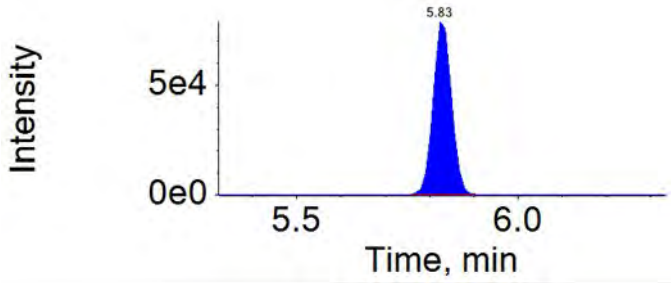
Extraction Standard: 13C8-PFOS
507.0 / 80.0



Analyte: PFUnDA
563.0 / 519.0



Extraction Standard: 13C7-PFUnDA
570.0 / 525.0

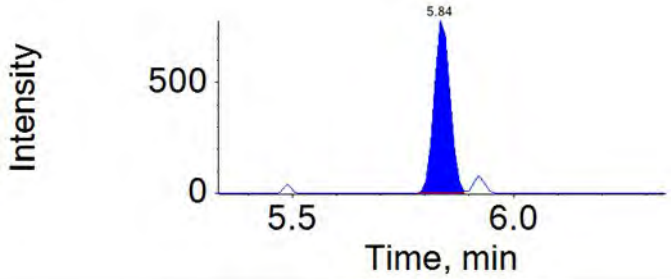


APPROVED
By MCD at 6:34 pm, 11/12/18

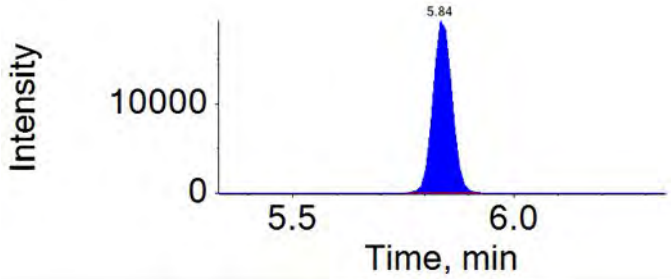
REVIEWED
By HMK at 10:54 am, 11/13/18

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

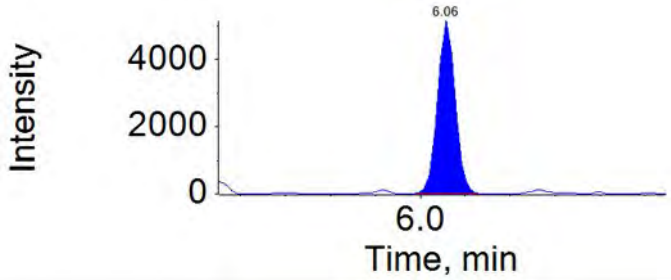
Analyte: NEtFOSAA
584.0 / 419.0



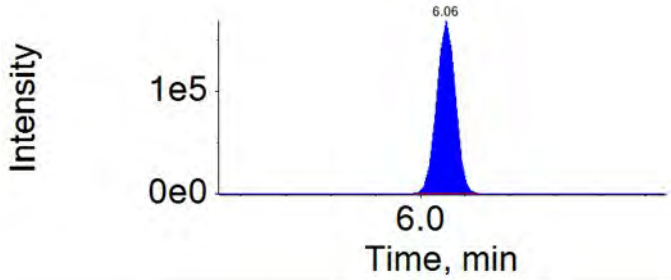
Extraction Standard: d5-NEtFOSAA
589.0 / 419.0



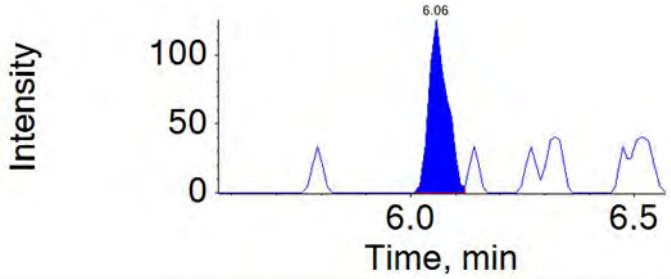
Analyte: PFDoDA
613.0 / 569.0



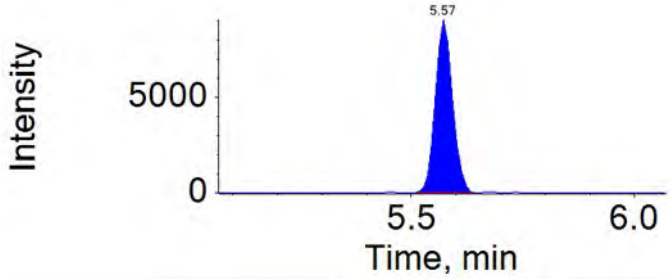
Extraction Standard: 13C2-PFDoDA
615.0 / 570.0



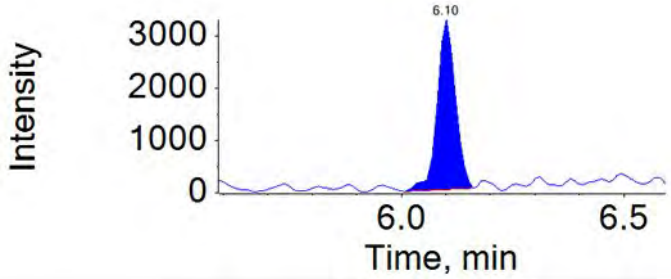
Analyte: 10:2-FTS
627.0 / 607.0



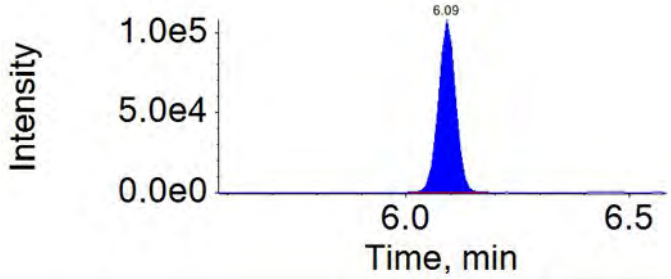
Extraction Standard: 13C2-8:2-FTS
529.0 / 81.0



Analyte: NMePFOSAE
616.0 / 59.0



Extraction Standard: d7-NMePFOSAE
623.0 / 59.0

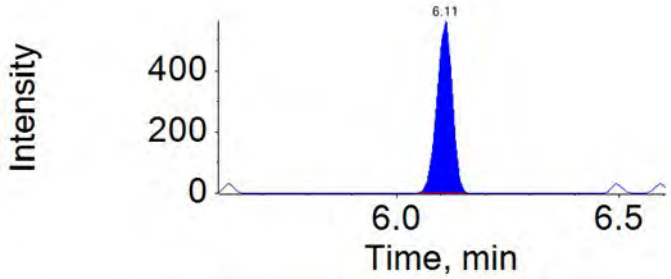


APPROVED
By MCD at 6:34 pm, 11/12/18

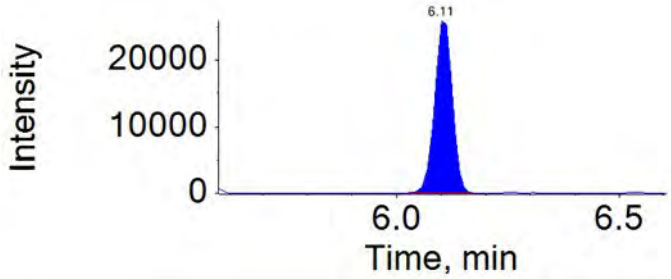
REVIEWED
By HMK at 10:54 am, 11/13/18

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

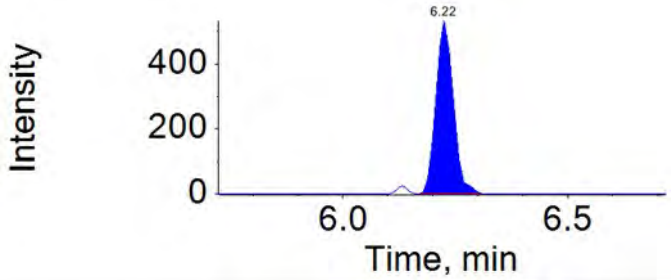
Analyte: NMePFOSA
512.0 / 169.0



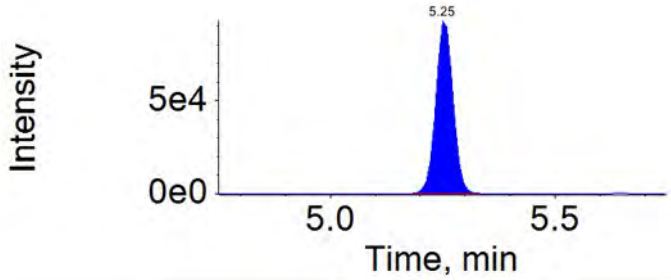
Extraction Standard: d3-NMePFOSA
515.0 / 169.0



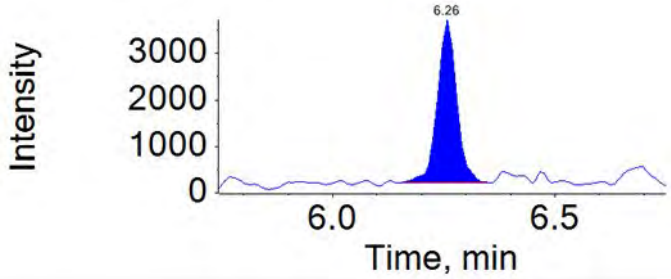
Analyte: PFDoS
699.0 / 80.0



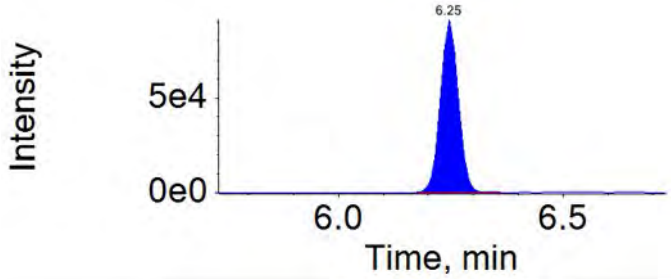
Extraction Standard: 13C8-PFOS
507.0 / 80.0



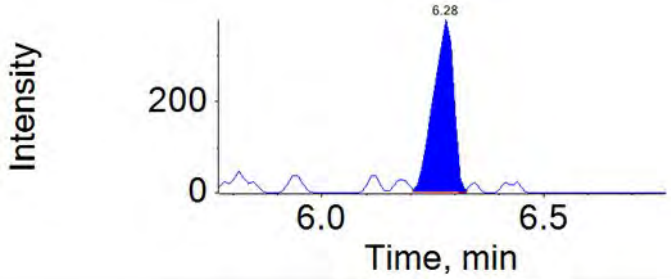
Analyte: NEtPFOSAE
630.0 / 59.0



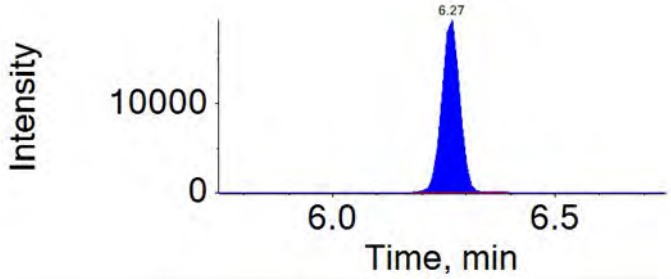
Extraction Standard: d9-NEtPFOSAE
639.0 / 59.0



Analyte: NEtPFOSA
526.0 / 169.0



Extraction Standard: d5-NEtPFOSA
531.0 / 169.0

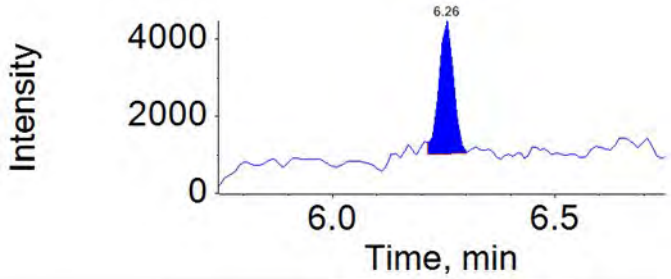


APPROVED
By MCD at 6:34 pm, 11/12/18

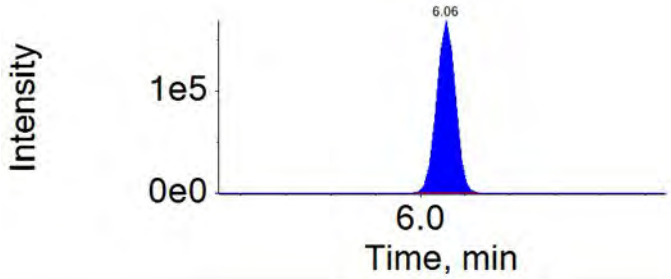
REVIEWED
By HMK at 10:54 am, 11/13/18

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

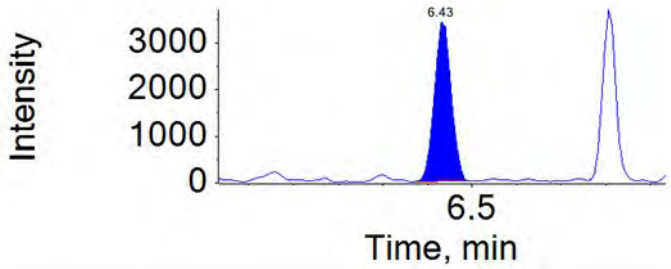
Analyte: PFTrDA
663.0 / 619.0



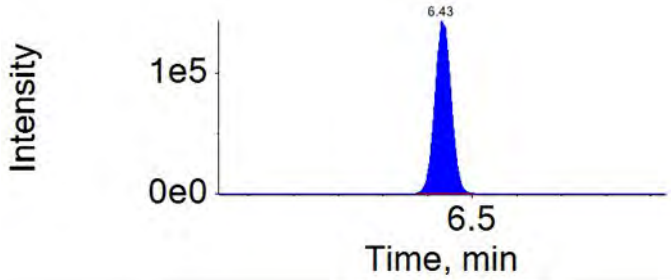
Extraction Standard: 13C2-PFDoDA
615.0 / 570.0



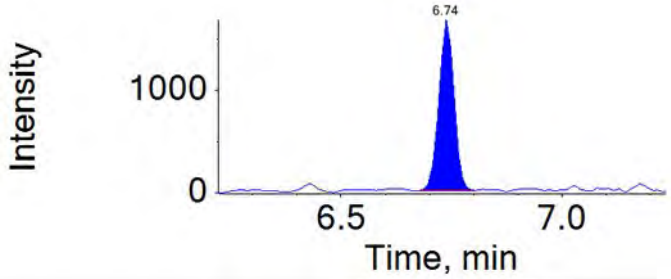
Analyte: PFTeDA
713.0 / 669.0



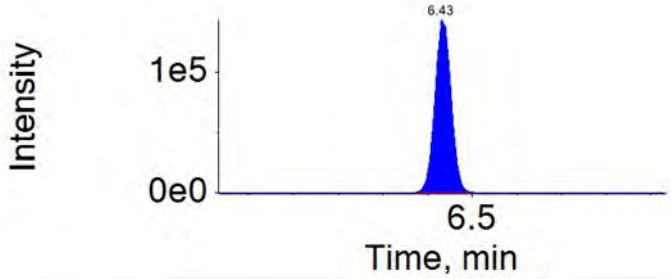
Extraction Standard: 13C2-PFTeDA
715.0 / 670.0



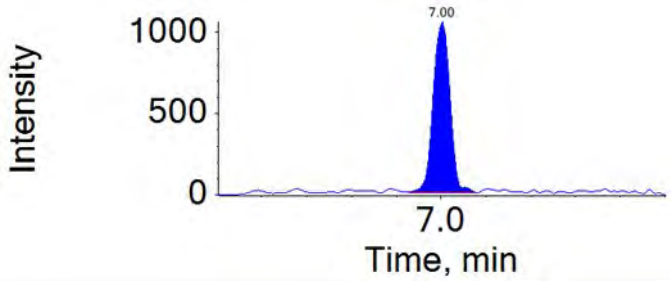
Analyte: PFHxDA
813.0 / 769.0



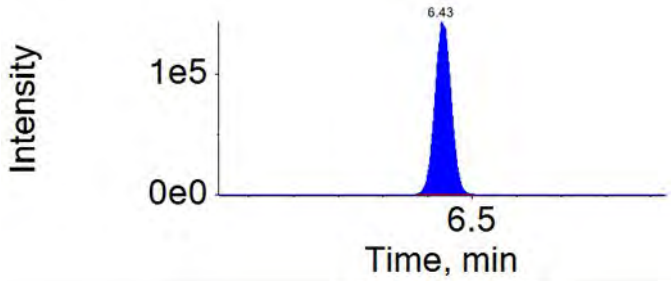
Extraction Standard: 13C2-PFTeDA
715.0 / 670.0



Analyte: PFODA
913.0 / 869.0



Extraction Standard: 13C2-PFTeDA
715.0 / 670.0

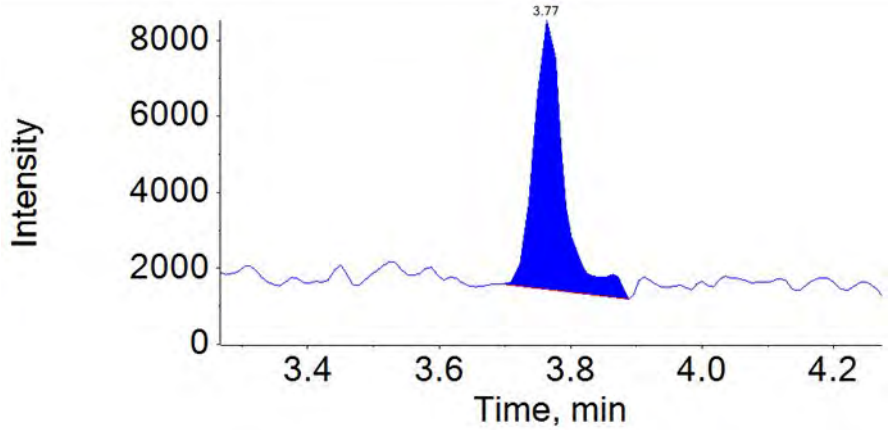


APPROVED
By MCD at 6:34 pm, 11/12/18

REVIEWED
By HMK at 10:54 am, 11/13/18

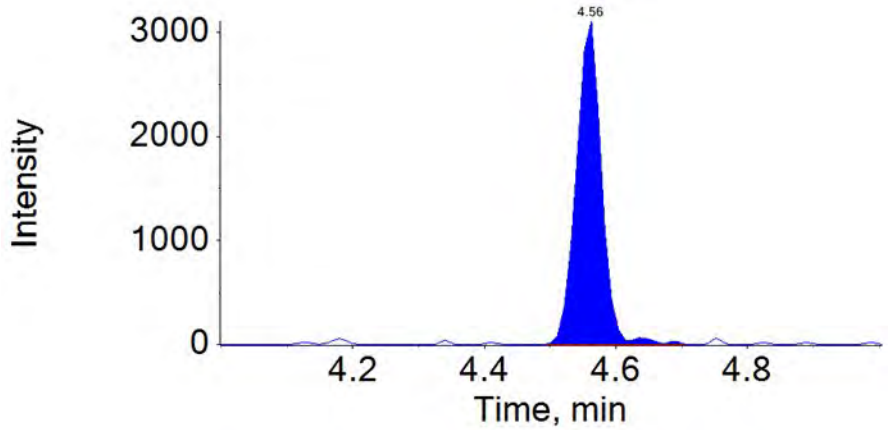
Results Table Name: 18NOV12DCAL
Results Table Date: 11/12/2018 6:23:42 PM
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

Component Name:
PFPeA
RT (min.):
3.77
Peak Area:
22570.74
Mass Range:
263.0 / 219.0
File Name:
18NOV12DCAL-41.wiff
Sample Name:
MDL



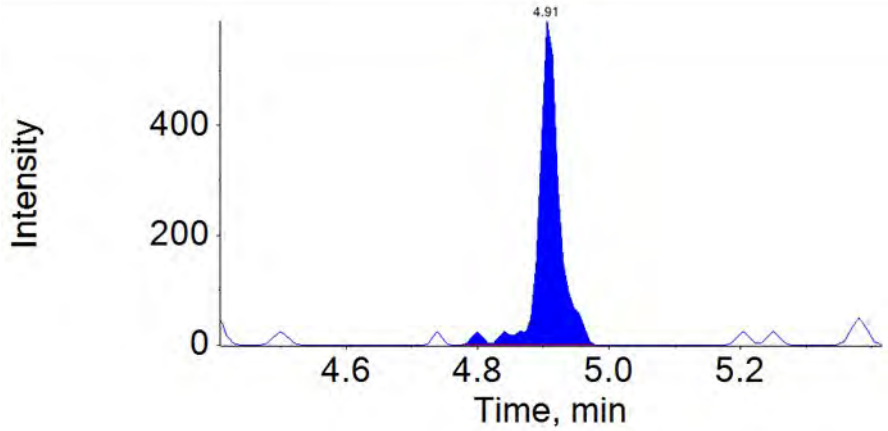
Integration Comment: incorrect integration

Component Name:
PFHxS
RT (min.):
4.56
Peak Area:
8305.21
Mass Range:
399.0 / 80.0
File Name:
18NOV12DCAL-41.wiff
Sample Name:
MDL



Integration Comment: incorrect integration

Component Name:
6:2-FTS
RT (min.):
4.91
Peak Area:
1264.35
Mass Range:
427.0 / 407.0
File Name:
18NOV12DCAL-41.wiff
Sample Name:
MDL



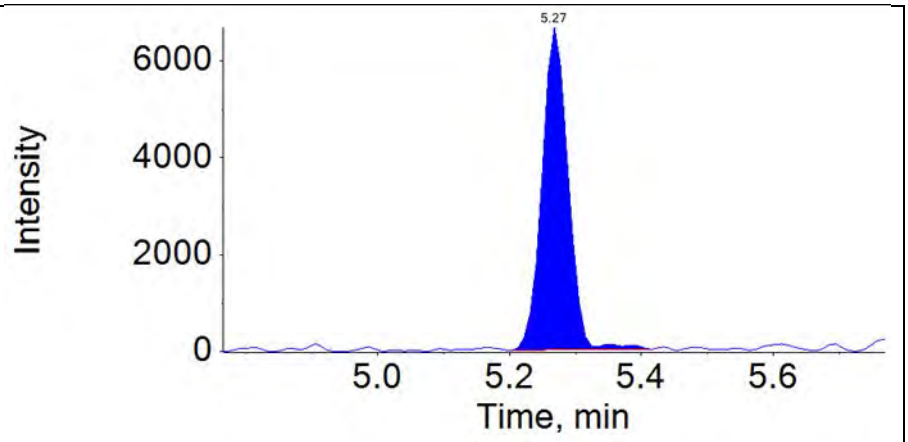
Integration Comment: incorrect integration

APPROVED
By MCD at 6:34 pm, 11/12/18

REVIEWED
By HMK at 10:54 am, 11/13/18

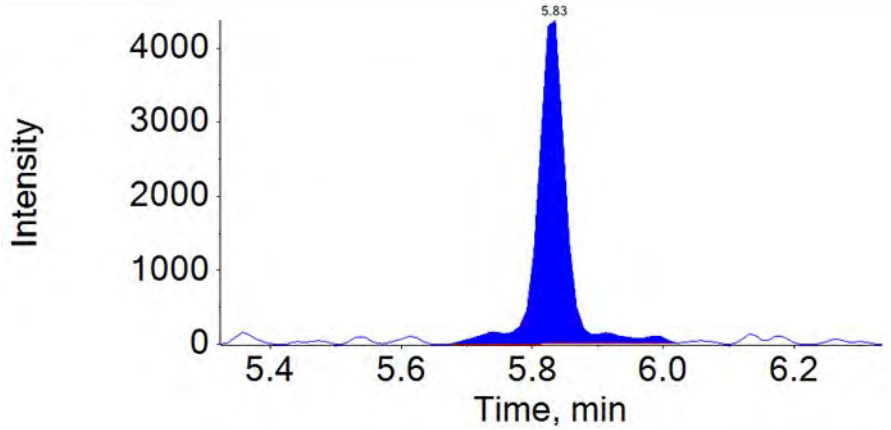
Results Table Name: 18NOV12DCAL
Results Table Date: 11/12/2018 6:23:42 PM
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

Component Name:
PFNA
RT (min.):
5.27
Peak Area:
18397.36
Mass Range:
463.0 / 419.0
File Name:
18NOV12DCAL-41.wiff
Sample Name:
MDL



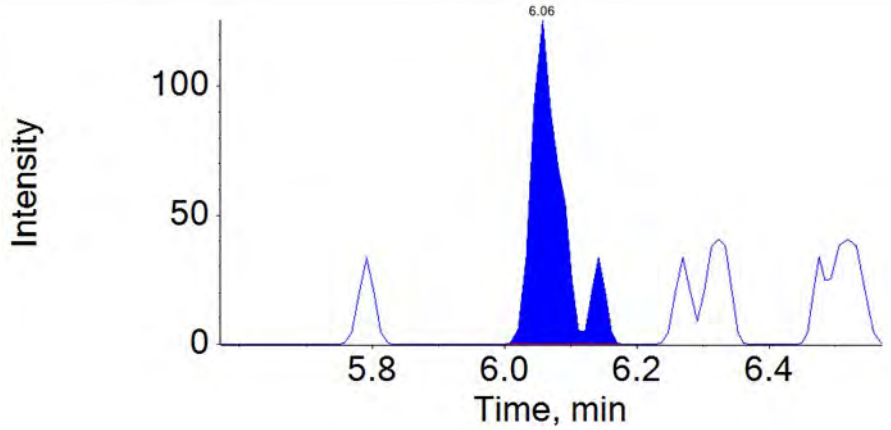
Integration Comment: incorrect integration

Component Name:
PFUnDA
RT (min.):
5.83
Peak Area:
13277.76
Mass Range:
563.0 / 519.0
File Name:
18NOV12DCAL-41.wiff
Sample Name:
MDL



Integration Comment: incorrect integration

Component Name:
10:2-FTS
RT (min.):
6.06
Peak Area:
401.71
Mass Range:
627.0 / 607.0
File Name:
18NOV12DCAL-41.wiff
Sample Name:
MDL



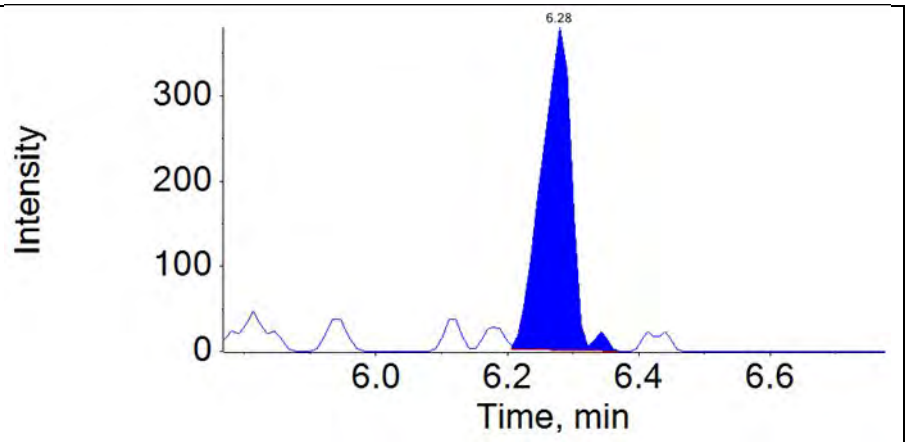
Integration Comment: incorrect integration

APPROVED
By MCD at 6:34 pm, 11/12/18

REVIEWED
By HMK at 10:54 am, 11/13/18

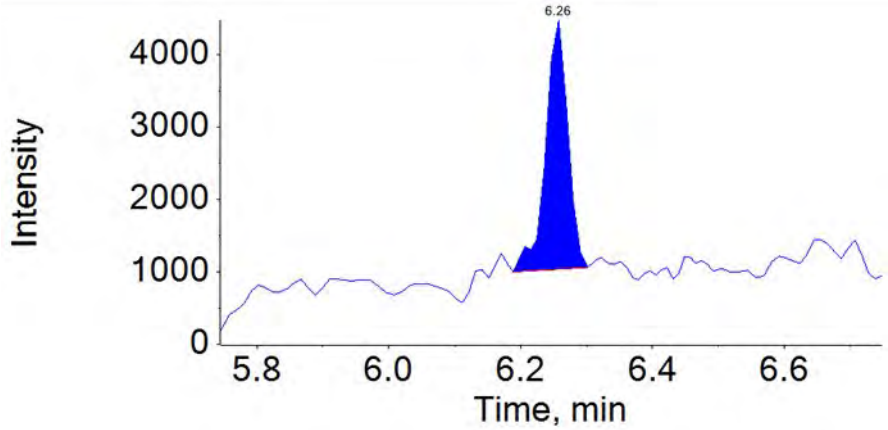
Results Table Name: 18NOV12DCAL
Results Table Date: 11/12/2018 6:23:42 PM
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

Component Name:
NEtPFOSA
RT (min.):
6.28
Peak Area:
1221.08
Mass Range:
526.0 / 169.0
File Name:
18NOV12DCAL-41.wiff
Sample Name:
MDL



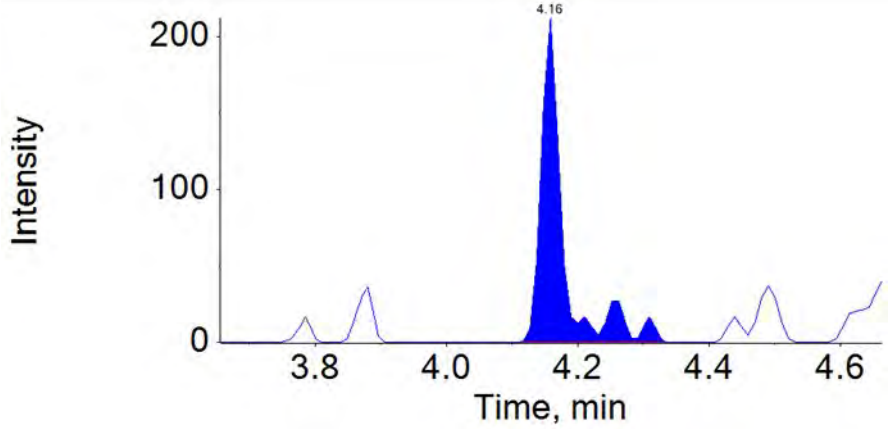
Integration Comment: incorrect integration

Component Name:
PFTrDA
RT (min.):
6.26
Peak Area:
8070.84
Mass Range:
663.0 / 619.0
File Name:
18NOV12DCAL-41.wiff
Sample Name:
MDL



Integration Comment: incorrect integration

Component Name:
PFHxA_2
RT (min.):
4.16
Peak Area:
496.72
Mass Range:
313.0 / 119.0
File Name:
18NOV12DCAL-41.wiff
Sample Name:
MDL



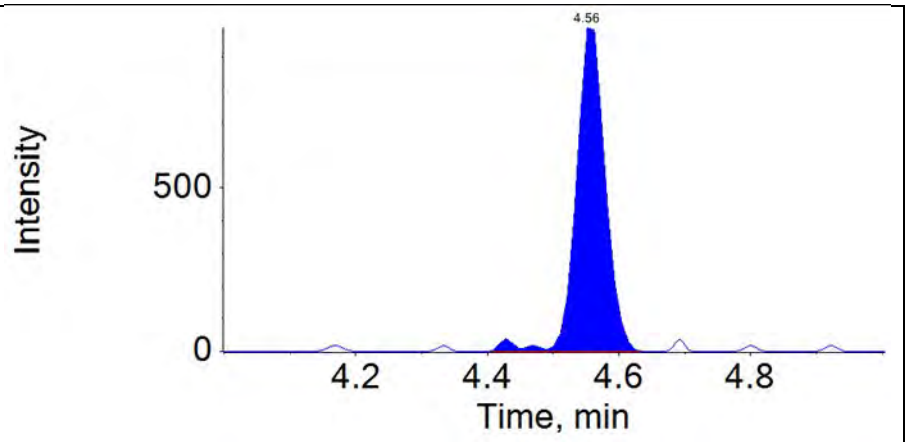
Integration Comment: incorrect integration

APPROVED
By MCD at 6:34 pm, 11/12/18

REVIEWED
By HMK at 10:54 am, 11/13/18

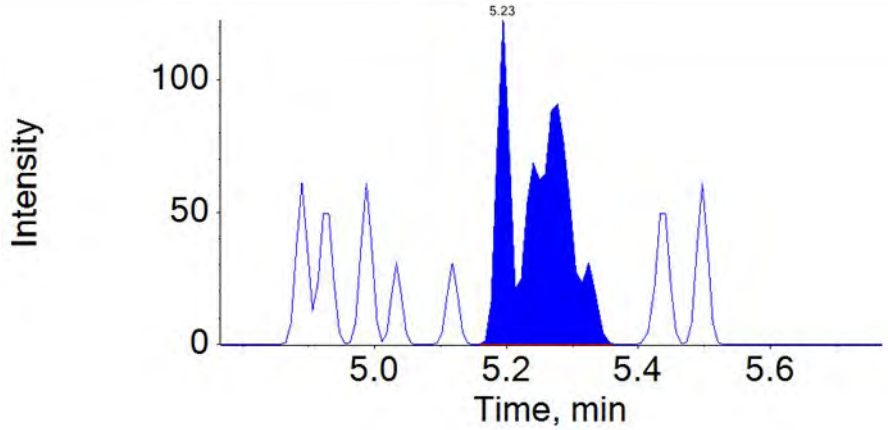
Results Table Name: 18NOV12DCAL
Results Table Date: 11/12/2018 6:23:42 PM
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

Component Name:
PFHxS_2
RT (min.):
4.56
Peak Area:
3074.31
Mass Range:
399.0 / 99.0
File Name:
18NOV12DCAL-41.wiff
Sample Name:
MDL



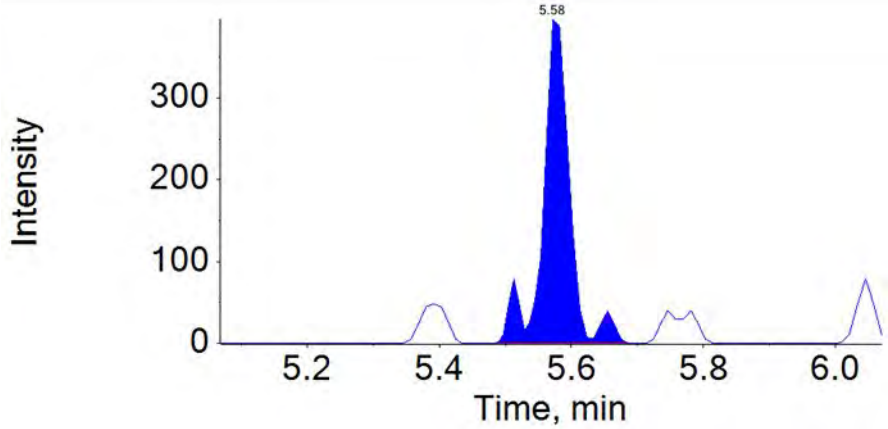
Integration Comment: incorrect integration

Component Name:
PFNA_2
RT (min.):
5.23
Peak Area:
553.54
Mass Range:
463.0 / 169.0
File Name:
18NOV12DCAL-41.wiff
Sample Name:
MDL



Integration Comment: incorrect integration

Component Name:
8:2 FTS_2
RT (min.):
5.58
Peak Area:
1126.66
Mass Range:
527.0 / 81.0
File Name:
18NOV12DCAL-41.wiff
Sample Name:
MDL



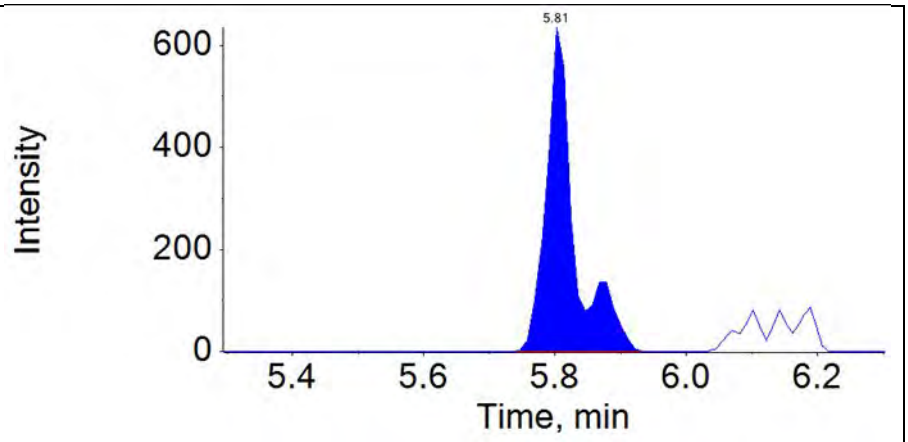
Integration Comment: incorrect integration

APPROVED
By MCD at 6:34 pm, 11/12/18

REVIEWED
By HMK at 10:54 am, 11/13/18

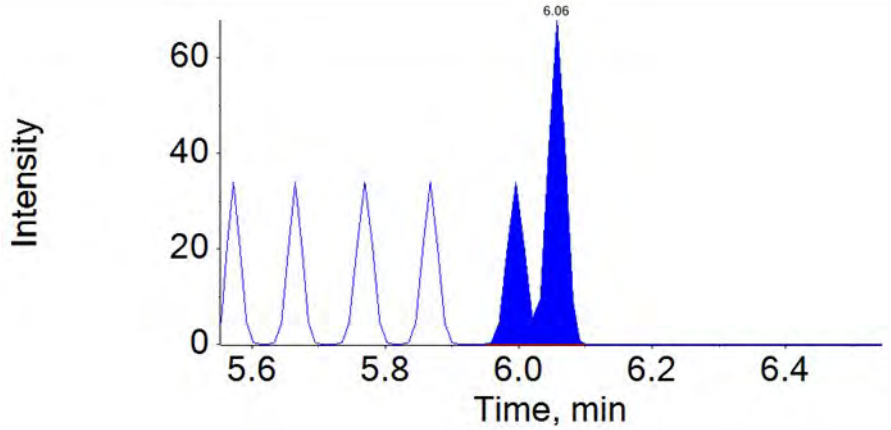
Results Table Name: 18NOV12DCAL
Results Table Date: 11/12/2018 6:23:42 PM
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

Component Name:
PFDS_2
RT (min.):
5.81
Peak Area:
1909.26
Mass Range:
599.0 / 99.0
File Name:
18NOV12DCAL-41.wiff
Sample Name:
MDL



Integration Comment: incorrect integration

Component Name:
PFDoDA_2
RT (min.):
6.06
Peak Area:
186.10
Mass Range:
613.0 / 169.0
File Name:
18NOV12DCAL-41.wiff
Sample Name:
MDL



Integration Comment: incorrect integration

APPROVED
By MCD at 6:34 pm, 11/12/18

REVIEWED
By HMK at 10:54 am, 11/13/18

Results Table Name: 18NOV12DCAL
Results Table Date: 11/12/2018 6:23:42 PM

Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

APPROVED
By MCD at 6:34 pm, 11/12/18

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By HMK at 10:54 am, 11/13/18

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LC-MS/MS Analysis Report

Printed: 11/12/2018 6:22:00 PM
Template: IonRatio18OCT10

Ion Ratio Report

Sample Name: MDL **Instrument Name:** LM27631 **File Name:** 18NOV12DCAL-41.wiff

Component Name	RT	RRT	Analyte Area Response	Int Typ	Expected Ion Ratio	Ion Ratio	Ion Ratio % Diff	Ion Ratio Limit	Ion Ratio OOS
PFBS	3.81	1.00	9248.27	A	0.3619	0.4009			
PFBS_2	3.81	1.00	3707.95	A	0.3619	0.4009	11	50	
4:2-FTS	4.13	1.00	1329.90	A	0.6730	1.1531			
4:2 FTS_2	4.14	1.00	1533.53	A	0.6730	1.1531		#NA!	
PFHxA	4.17	1.00	21601.58	A	0.0117	0.0185			
PFHxA_2	4.16	1.00	400.56	M	0.0117	0.0185	59	50	OOS
PFPeS	4.19	1.10	4484.75	A	0.5191	0.5939			
PFPeS_2	4.18	1.10	2663.62	A	0.5191	0.5939	14	50	
PFHpA	4.56	1.00	22043.51	A	0.0563	0.0598			
PFHpA_2	4.54	1.00	1317.81	A	0.0563	0.0598	6	50	
PFHxS	4.56	1.00	8143.51	M	0.3428	0.3665			
PFHxS_2	4.56	1.00	2984.60	M	0.3428	0.3665	7	50	
6:2-FTS	4.91	1.00	1176.17	M	0.6604	0.6555			
6:2 FTS_2	4.91	1.00	771.04	A	0.6604	0.6555		#NA!	
PFHpS	4.92	1.08	7117.47	A	0.4066	0.3729			
PFHpS_2	4.92	1.08	2653.97	A	0.4066	0.3729	-8	50	
PFOA	4.93	1.00	18045.03	A	0.0562	0.0847			
PFOA_2	4.92	1.00	1528.65	A	0.0562	0.0847	51	50	OOS
PFOS	5.25	1.00	6416.89	A	0.2968	0.3439			
PFOS_2	5.25	1.00	2206.80	A	0.2968	0.3439	16	50	
PFNA	5.27	1.00	18065.11	M	0.0229	0.0217			
PFNA_2	5.27	1.00	391.14	M	0.0229	0.0217	-5	50	
PFNS	5.54	1.06	3661.22	A	0.4828	0.5154			
PFNS_2	5.55	1.06	1886.87	A	0.4828	0.5154	7	50	
PFDA	5.57	1.00	17350.54	A	0.0081	0.0034			
PFDA_2	5.58	1.00	58.57	A	0.0081	0.0034	-58	50	OOS
8:2-FTS	5.57	1.00	1475.16	A	0.6814	0.6626			
8:2 FTS_2	5.58	1.00	977.44	M	0.6814	0.6626		#NA!	
NMeFOSAA	5.72	1.00	1372.38	A	0.2569	0.3580			
NMeFOSAA_2	5.70	1.00	491.32	A	0.2569	0.3580	39	50	
PFDS	5.80	1.10	2648.79	A	0.5144	0.5845			
PFDS_2	5.81	1.10	1548.24	M	0.5144	0.5845	14	50	
PFUnDA	5.83	1.00	12215.29	M	0.0058	0.0269			
PFUnDA_2	5.82	1.00	328.37	A	0.0058	0.0269	362	50	OOS
NEtFOSAA	5.84	1.00	1937.77	A	0.7253	0.5676			
NEtFOSAA_2	5.85	1.00	1099.93	A	0.7253	0.5676	-22	50	
PFDoDA	6.06	1.00	14033.14	A	0.0157	0.0089			
PFDoDA_2	6.06	1.00	124.75	M	0.0157	0.0089	-43	50	
10:2-FTS	6.06	1.09	352.60	M	0.6356	0.9381			
10:2 FTS_2	6.08	1.09	330.78	A	0.6356	0.9381		#NA!	
PFTrDA	6.26	1.03	7825.51	M	0.0086	0.0105			
PFTrDA_2	6.26	1.03	82.38	A	0.0086	0.0105	23	50	
PFTeDA	6.43	1.00	8938.53	A	0.0062	0.0089			
PFTeDA_2	6.43	1.00	79.25	A	0.0062	0.0089	42	50	
PFHxDA	6.74	1.05	3934.22	A	0.0683	0.0745			
PFHxDA_2	6.74	1.05	292.96	A	0.0683	0.0745	9	50	
PFODA	7.00	1.09	2726.36	A	0.0277	0.0224			
PFODA_2	6.99	1.09	61.09	A	0.0277	0.0224	-19	50	

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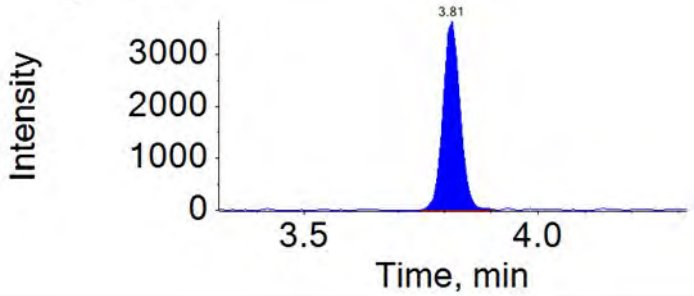
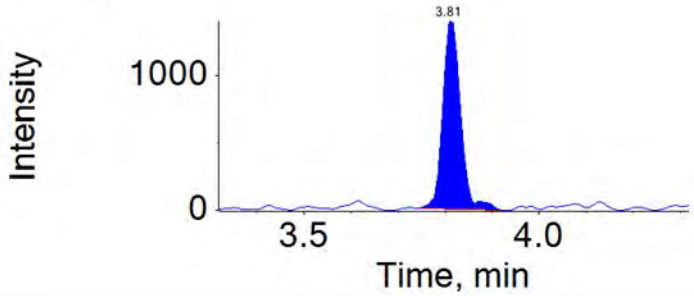
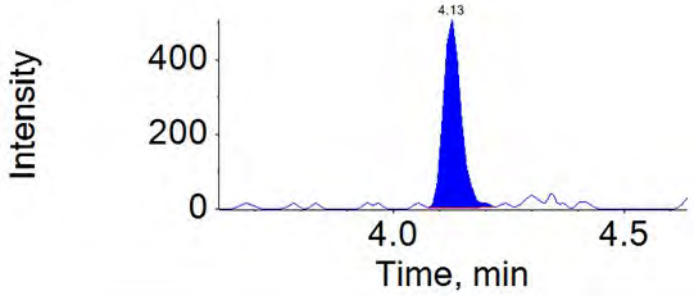
Component: PFBS
Primary Mass: 299.0 / 80.0



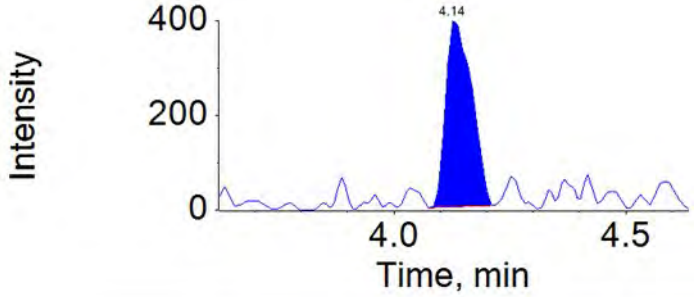
Component: PFBS_2
Secondary Mass: 299.0 / 99.0



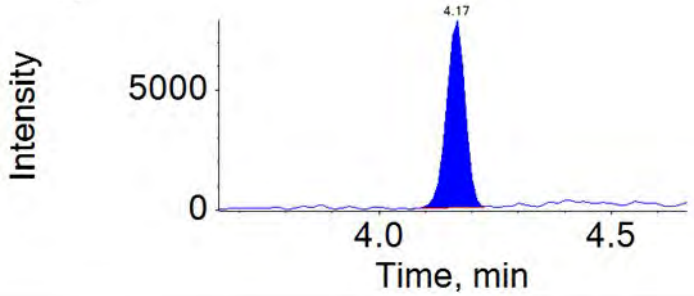
Component: 4:2-FTS
Primary Mass: 327.0 / 307.0



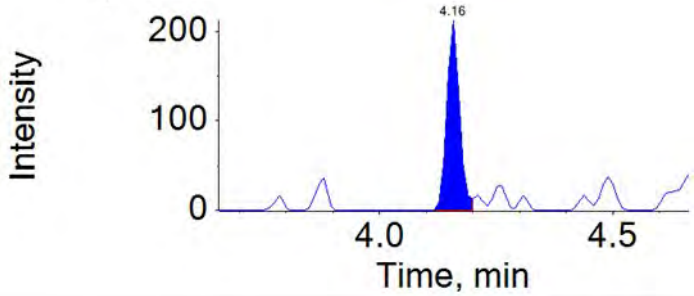
Component: 4:2 FTS_2
Secondary Mass: 327.0 / 81.0



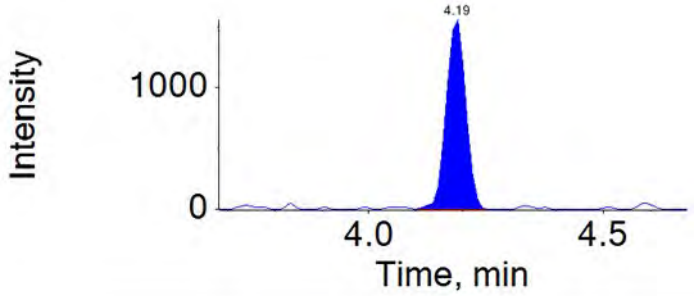
Component: PFHxA
Primary Mass: 313.0 / 269.0



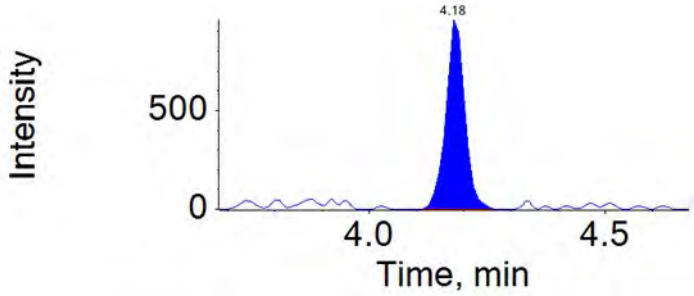
Component: PFHxA_2
Secondary Mass: 313.0 / 119.0



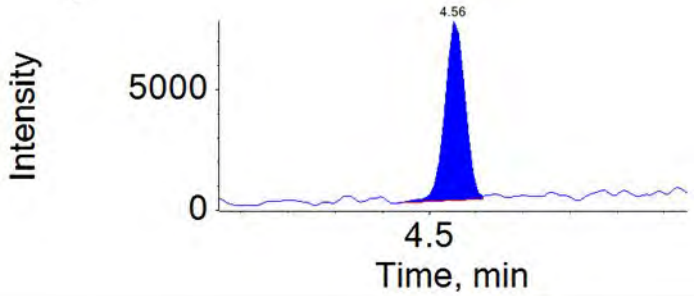
Component: PFPeS
Primary Mass: 349.0 / 80.0



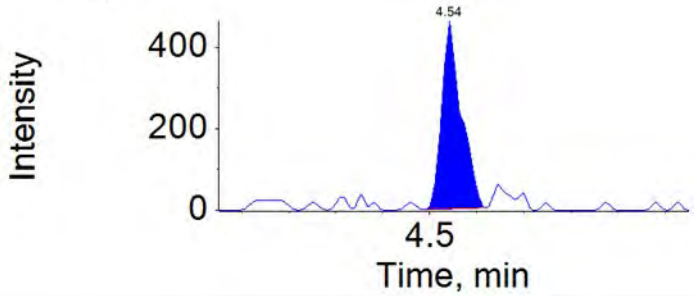
Component: PFPeS_2
Secondary Mass: 349.0 / 99.0



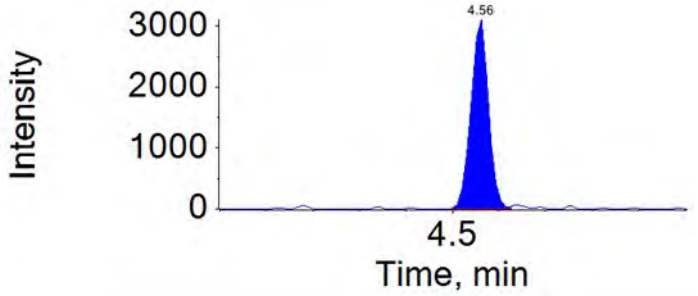
Component: PFHpA
Primary Mass: 363.0 / 319.0



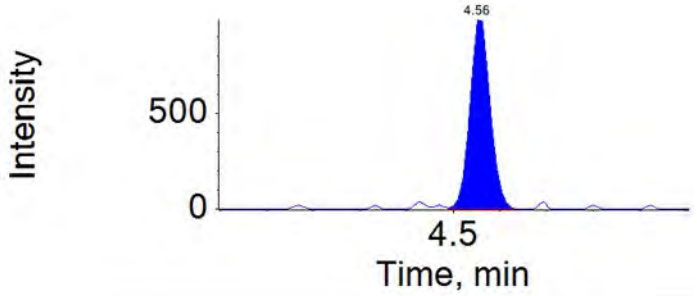
Component: PFHpA_2
Secondary Mass: 363.0 / 169.0



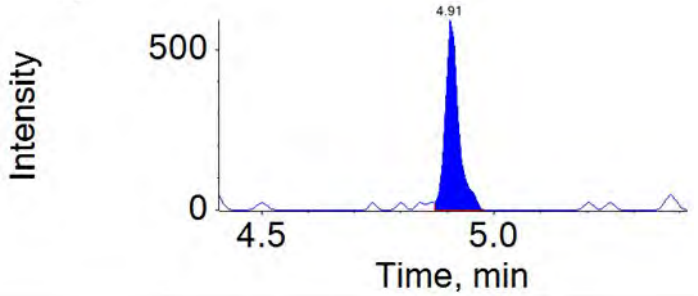
Component: PFHxS
Primary Mass: 399.0 / 80.0



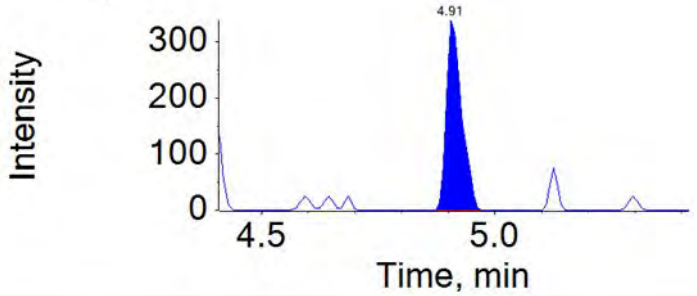
Component: PFHxS_2
Secondary Mass: 399.0 / 99.0



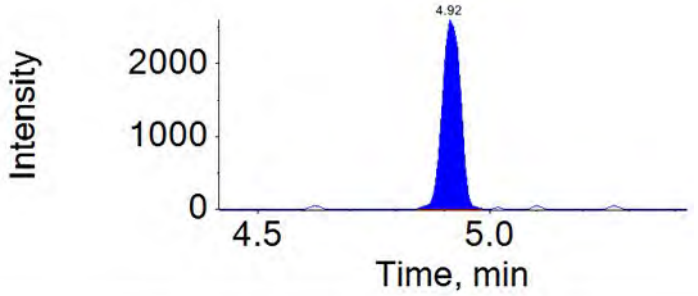
Component: 6:2-FTS
Primary Mass: 427.0 / 407.0



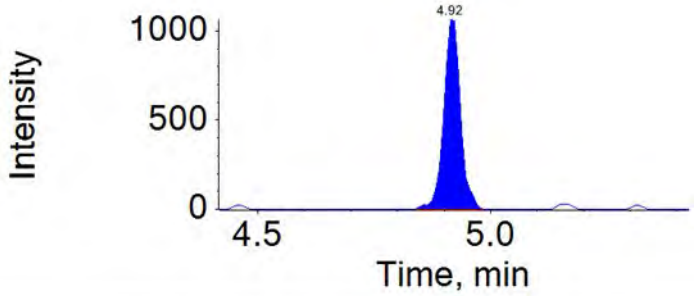
Component: 6:2 FTS_2
Secondary Mass: 427.0 / 81.0



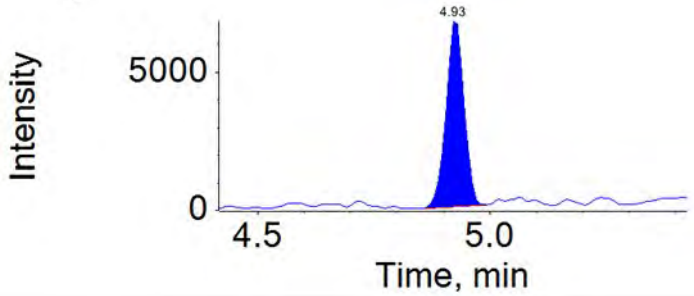
Component: PFHpS
Primary Mass: 449.0 / 80.0



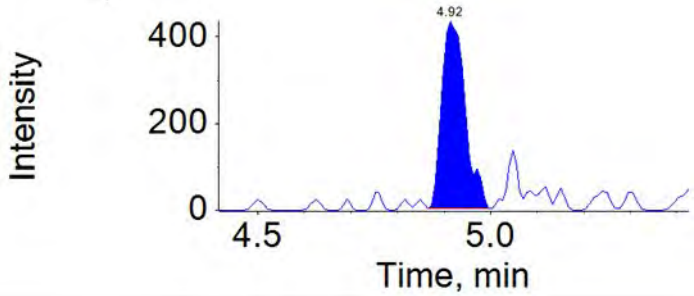
Component: PFHpS_2
Secondary Mass: 449.0 / 99.0



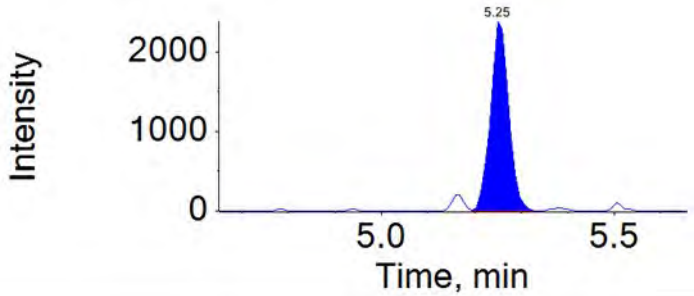
Component: PFOA
Primary Mass: 413.0 / 369.0



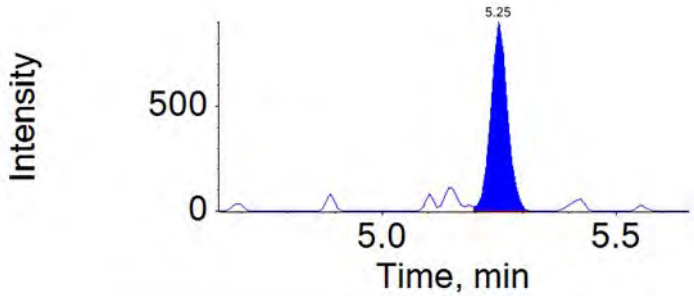
Component: PFOA_2
Secondary Mass: 413.0 / 169.0



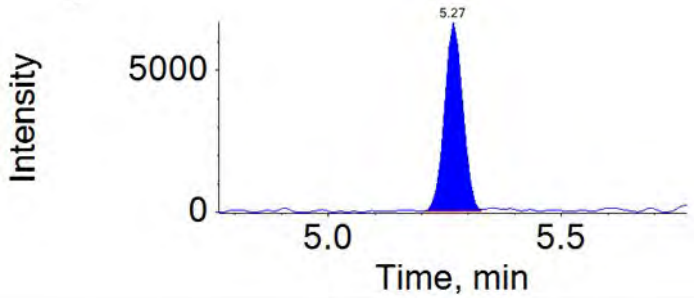
Component: PFOS
Primary Mass: 499.0 / 80.0



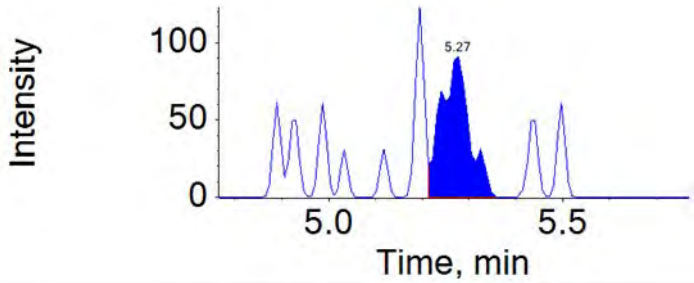
Component: PFOS_2
Secondary Mass: 499.0 / 99.0



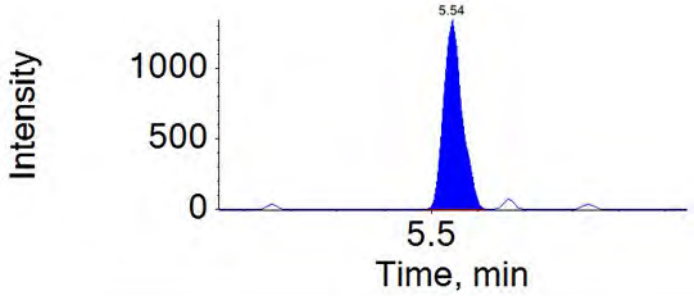
Component: PFNA
Primary Mass: 463.0 / 419.0



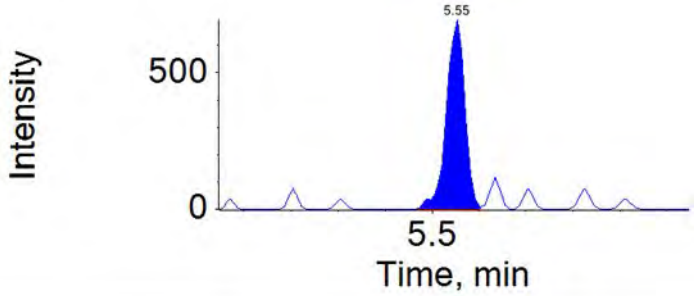
Component: PFNA_2
Secondary Mass: 463.0 / 169.0



Component: PFNS
Primary Mass: 549.0 / 80.0



Component: PFNS_2
Secondary Mass: 549.0 / 99.0



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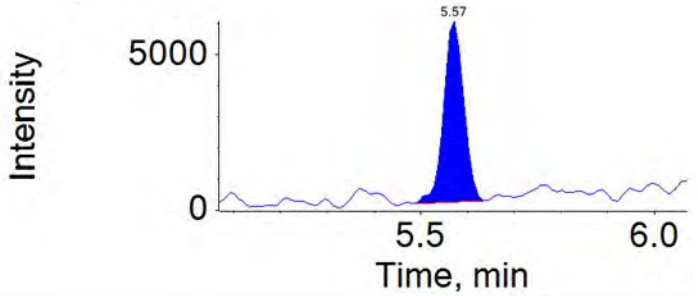
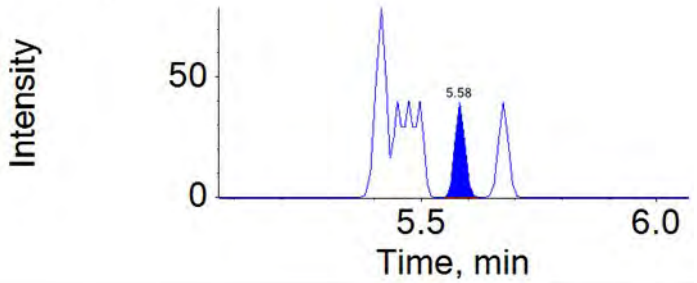
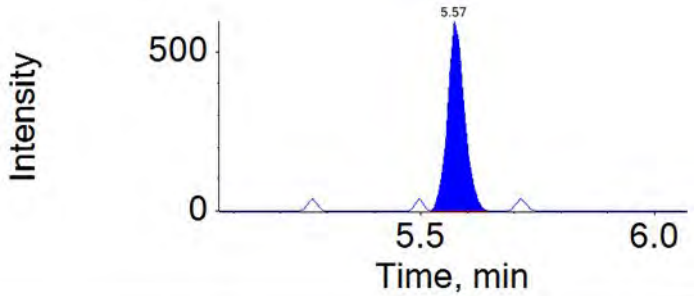
Component: PFDA
Primary Mass: 513.0 / 469.0



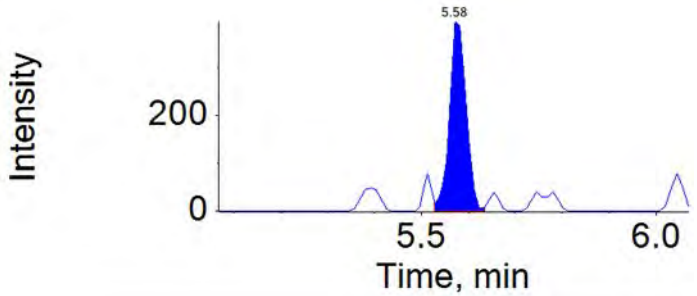
Component: PFDA_2
Secondary Mass: 513.0 / 169.0



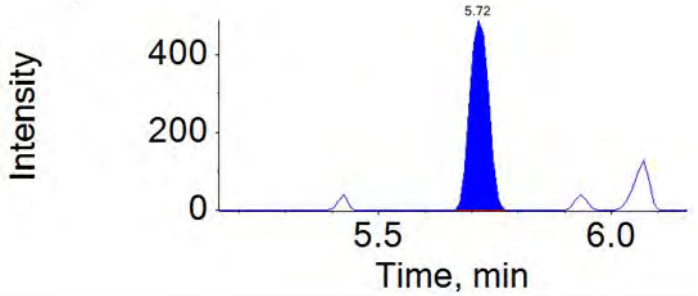
Component: 8:2-FTS
Primary Mass: 527.0 / 507.0



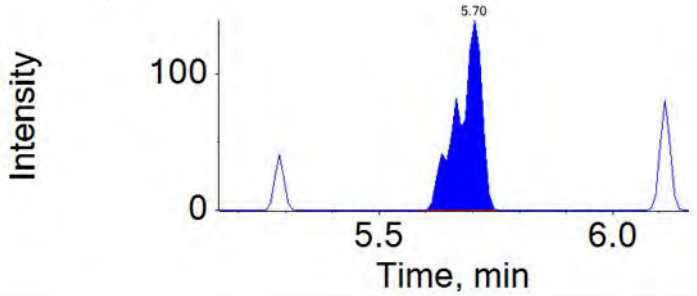
Component: 8:2 FTS_2
Secondary Mass: 527.0 / 81.0



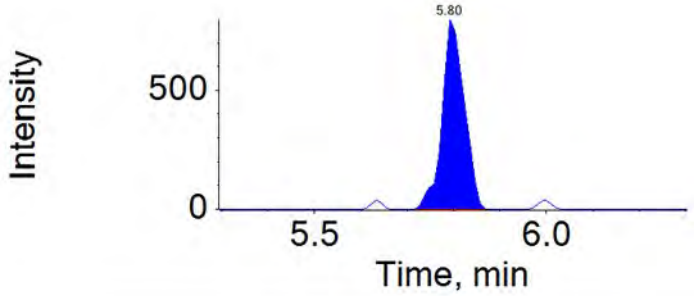
Component: NMeFOSAA
Primary Mass: 570.0 / 419.0



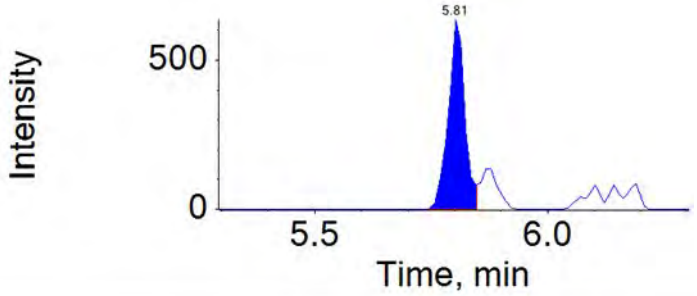
Component: NMeFOSAA_2
Secondary Mass: 570.0 / 483.0



Component: PFDS
Primary Mass: 599.0 / 80.0



Component: PFDS_2
Secondary Mass: 599.0 / 99.0



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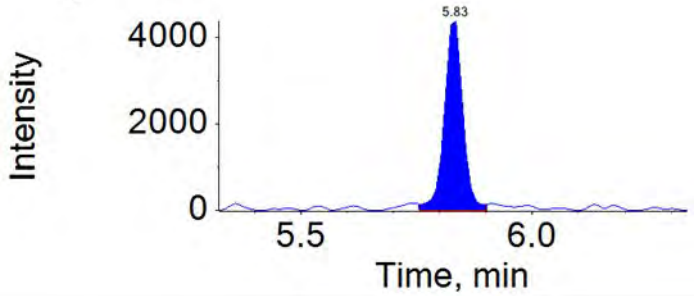
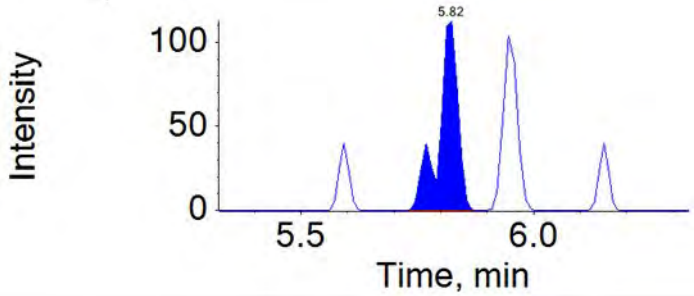
By MCD at 6:34 pm, 11/12/18

REVIEWED
By HMK at 10:54 am, 11/13/18

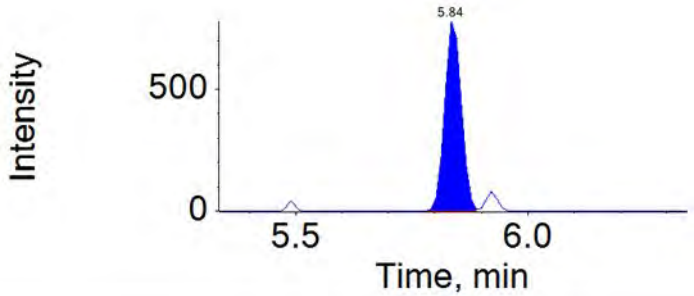
Component: PFUnDA
Primary Mass: 563.0 / 519.0



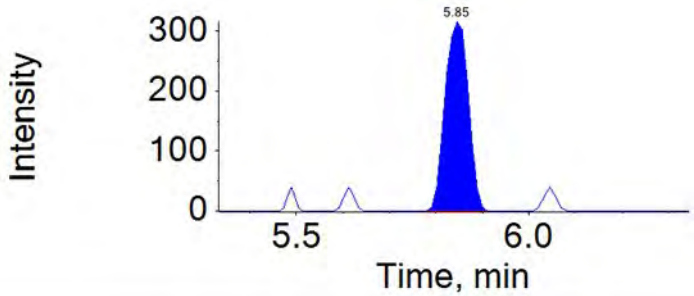
Component: PFUnDA_2
Secondary Mass: 563.0 / 169.0



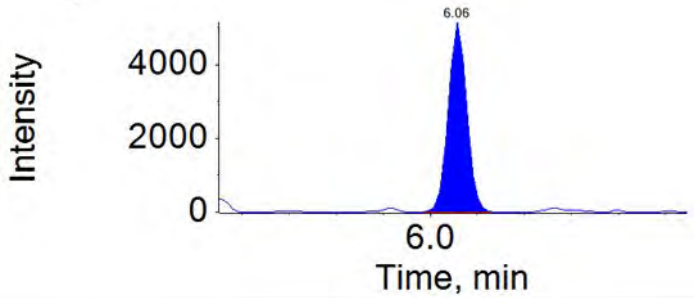
Component: NEtFOSAA
Primary Mass: 584.0 / 419.0



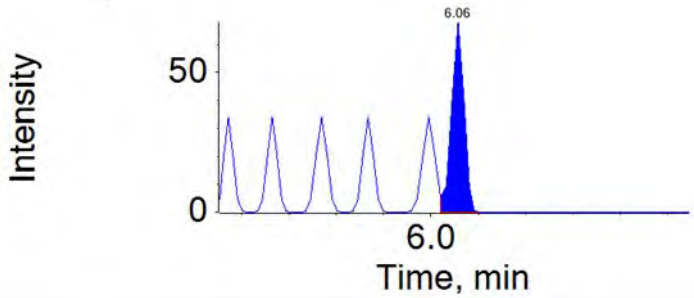
Component: NEtFOSAA_2
Secondary Mass: 584.0 / 526.0



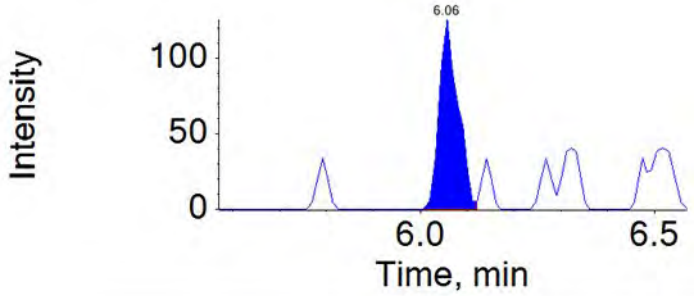
Component: PFDoDA
Primary Mass: 613.0 / 569.0



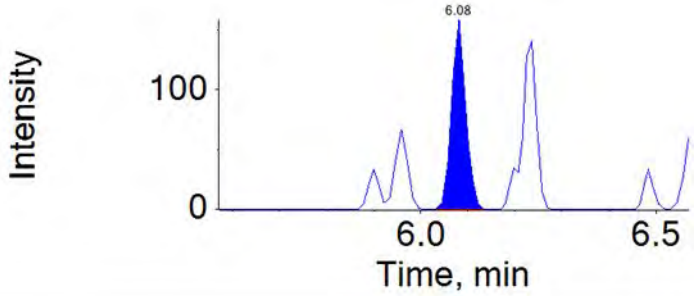
Component: PFDoDA_2
Secondary Mass: 613.0 / 169.0



Component: 10:2-FTS
Primary Mass: 627.0 / 607.0



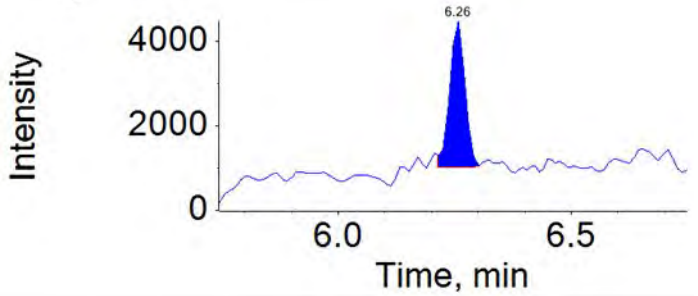
Component: 10:2 FTS_2
Secondary Mass: 627.0 / 81.0



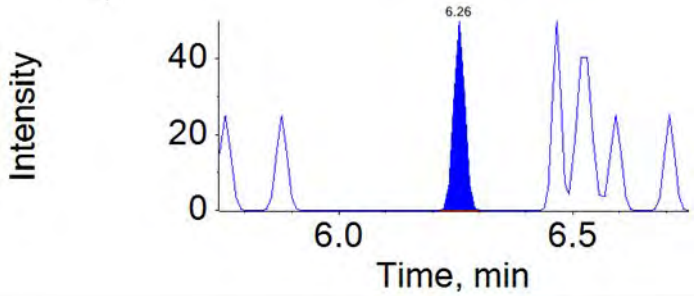
APPROVED
By MCD at 6:34 pm, 11/12/18

REVIEWED
By HMK at 10:54 am, 11/13/18

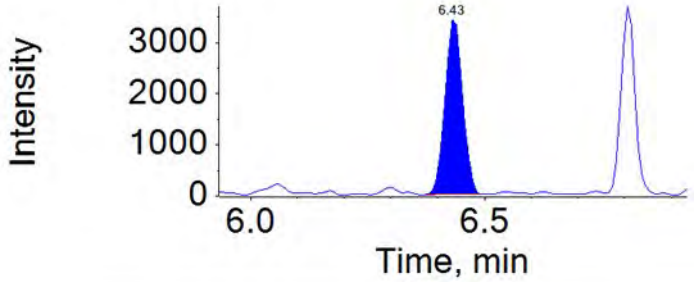
Component: PFTrDA
Primary Mass: 663.0 / 619.0



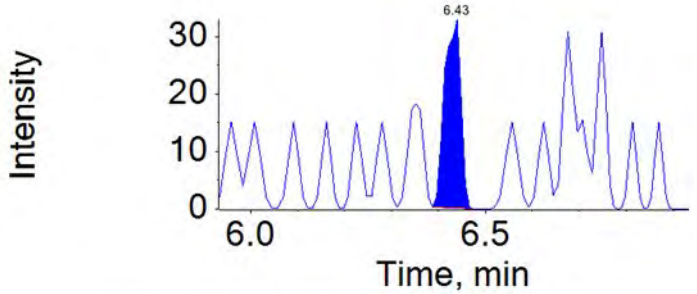
Component: PFTrDA_2
Secondary Mass: 663.0 / 169.0



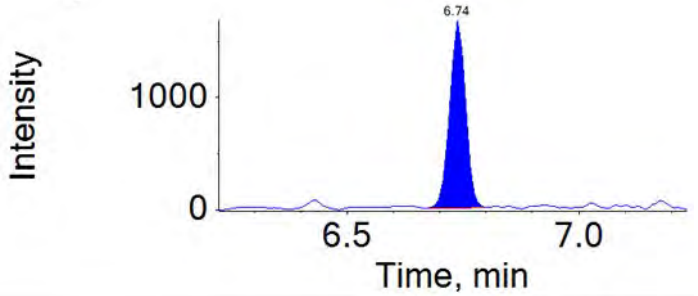
Component: PFTeDA
Primary Mass: 713.0 / 669.0



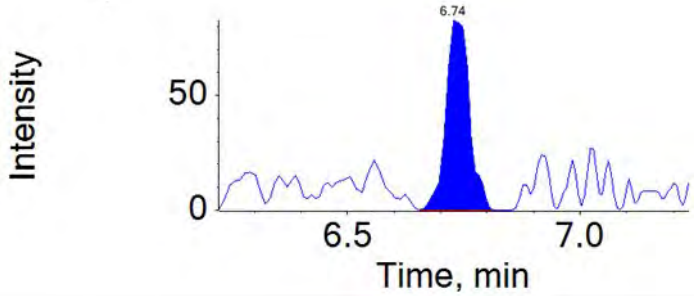
Component: PFTeDA_2
Secondary Mass: 713.0 / 169.0



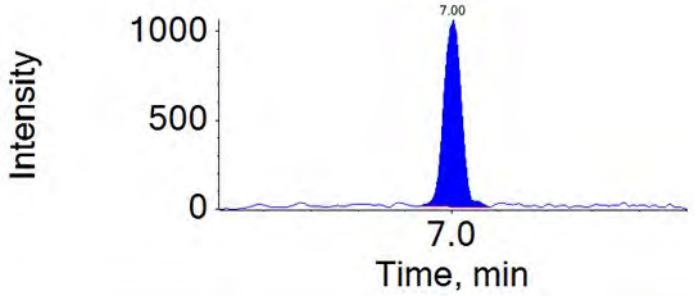
Component: PFHxDA
Primary Mass: 813.0 / 769.0



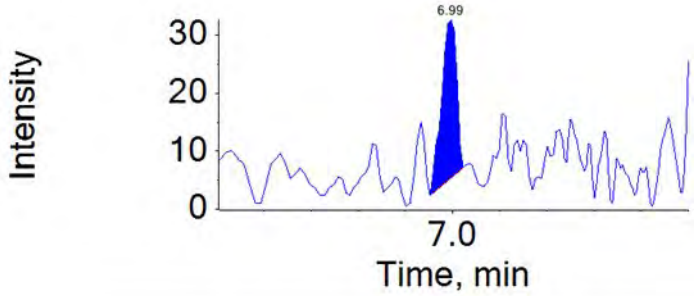
Component: PFHxDA_2
Secondary Mass: 813.0 / 169.0



Component: PFODA
Primary Mass: 913.0 / 869.0



Component: PFODA_2
Secondary Mass: 913.0 / 169.0



APPROVED
By MCD at 6:34 pm, 11/12/18

REVIEWED
By HMK at 10:54 am, 11/13/18

eurofins | Lancaster Laboratories

LC-MS/MS
DOD Analysis Report

Printed: 11/20/2018 8:38:00 AM
Template: DOD-Sample-18JUN22.docx

ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM
Result Table: 18NOV12DCAL 11/20/2018 8:36:28 AM
Acquisition Method: 18AUG13_3uL.dam

Sample Name:	INBLK			**Data File:**		18NOV12DCAL-49.wiff
Sample ID:	methanol			**Acquis Date:**		11/12/2018 4:09:09 PM
Sample Type:	Unknown			**Instrument:**		LM27631
Vial Position:	1			**Acquis Method:**		18AUG13_3uL.dam
Injection Vol:	3.00			**Result Table:**		18NOV12DCAL
QMethod File:	18AUG20QM			**ICAL Name:**		18NOV12DCAL
Batch Number:	N\A			**Operator:**		JPT12262
Sample Wt.:	1.00000			**Dilution Factor:**		1.00
Sample Vol.:	1.000			**Prep Factor:**		1.000

Injection Standard Peak Table

Injection Standard Area Reference File: 18NOV12DCAL-44

Injection Standard Name	Inj Std Conc	Injection Std Peak Area	Rreference Injection Standard Area	Injection Std %Diff	Injection Std %Diff Limit	Injection Std %Diff OOS
13C3-PFBA	5.0	705408.6	659926.2	7	50	
13C2-PFOA	5.0	484266.1	450219.7	8	50	
13C4-PFOS	4.8	261290.0	249205.8	5	50	
13C2-PFDA	5.0	303665.7	278743.9	9	50	

Extraction Standard Peak Table

Extraction Standard Name	Ext Std Area	Inj Std Name	Inj Std Area	Area Ratio	Ext Std Conc	Ext Std Result	Ext Std %REC	Ext Std %REC Limit	Ext Std OOS
E13C4-PFBA	778730.1	13C3-PFBA	705408.6	1.104	5.000	4.949	99	70-130	
E13C5-PFPeA	758823.9	13C3-PFBA	705408.6	1.076	5.000	4.825	96	70-130	
E13C3-PFBS	456635.4	13C3-PFBA	705408.6	0.647	4.650	4.570	98	70-130	
E13C2-4:2-FTS	57620.0	13C2-PFOA	484266.1	0.119	4.670	5.299	113	70-130	
E13C5-PFHxA	665797.6	13C2-PFOA	484266.1	1.375	5.000	4.966	99	70-130	
E13C3-PFHxS	372925.2	13C2-PFOA	484266.1	0.770	4.730	5.284	112	70-130	
E13C4-PFHpA	547261.8	13C2-PFOA	484266.1	1.130	5.000	5.091	102	70-130	
E13C2-6:2-FTS	39087.0	13C2-PFOA	484266.1	0.081	4.750	5.400	114	70-130	
E13C8-PFOA	901909.5	13C2-PFOA	484266.1	1.862	5.000	5.131	103	70-130	
E13C8-PFOS	289703.0	13C4-PFOS	261290.0	1.109	4.780	4.913	103	70-130	
E13C9-PFNA	509013.2	13C4-PFOS	261290.0	1.948	5.000	5.432	109	70-130	
E13C6-PFDA	643925.8	13C2-PFDA	303665.7	2.121	5.000	4.948	99	70-130	
E13C2-8:2-FTS	27339.0	13C2-PFDA	303665.7	0.090	4.790	4.490	94	70-130	
E13C8-PFOSA	681332.9	13C2-PFDA	303665.7	2.244	5.000	4.974	99	70-130	
Ed3-NMeFOSAA	73694.3	13C2-PFDA	303665.7	0.243	5.000	4.381	88	70-130	
E13C7-PFUnDA	265353.1	13C2-PFDA	303665.7	0.874	5.000	5.073	101	70-130	
Ed5-NEtFOSAA	59646.1	13C2-PFDA	303665.7	0.196	5.000	4.156	83	70-130	
E13C2-PFDoDA	576780.7	13C2-PFDA	303665.7	1.899	5.000	4.932	99	70-130	
Ed7-NMePFOSAE	354624.2	13C2-PFDA	303665.7	1.168	5.000	5.054	101	70-130	
Ed3-NMePFOSA	79601.3	13C2-PFDA	303665.7	0.262	5.000	4.763	95	70-130	
Ed9-NEtPFOSAE	287722.3	13C2-PFDA	303665.7	0.947	5.000	4.928	99	70-130	
Ed5-NEtPFOSA	59772.3	13C2-PFDA	303665.7	0.197	5.000	4.617	92	70-130	
E13C2-PFTeDA	418729.7	13C2-PFDA	303665.7	1.379	5.000	4.841	97	70-130	

APPROVED
By JPT at 8:42 am, 11/20/18

REVIEWED
By HMK at 8:47 am, 11/20/18

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/20/2018 8:36:28 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

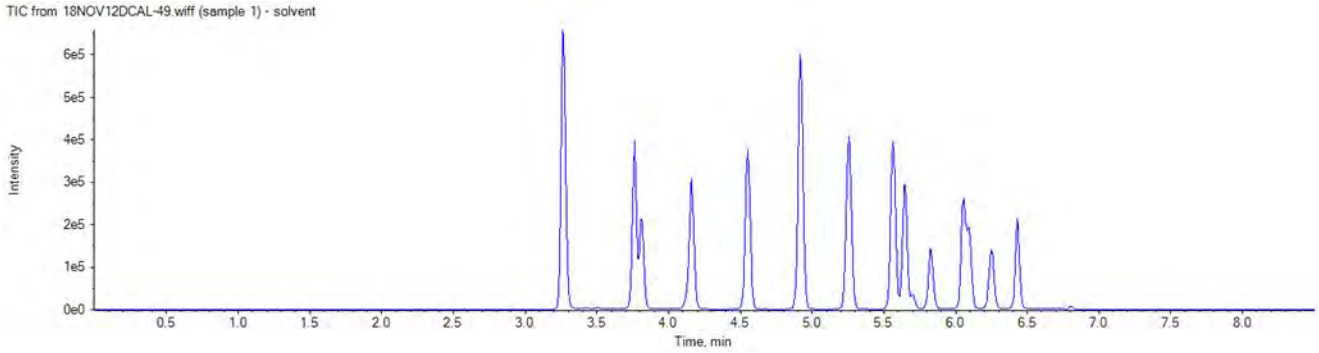
Analyte Quantitation Peak Table

Sample Name: INBLK **Instrument Name:** LM27631 **File Name:** 18NOV12DCAL-49.wiff

Sample Wt	Sample Vol	Dilution Factor	PrepFactor
1.00000	1.000	1.00	1.000

Analyte Name	RT	RRT	Analyte Area Response	E	Int Typ	ES Name	ES RT	ES Area Response	Area Ratio	Sample Result (ng/g)
PFBA	N/A	N/A	N/A		A	13C4-PFBA	3.26	778730.1	N/A	
PFPeA	N/A	N/A	N/A		A	13C5-PFPeA	3.76	758823.9	N/A	
PFBS	N/A	N/A	N/A		A	13C3-PFBS	3.81	456635.4	N/A	
4:2-FTS	N/A	N/A	N/A		A	13C2-4:2-FTS	4.13	57620.0	N/A	
PFHxA	N/A	N/A	N/A		A	13C5-PFHxA	4.16	665797.6	N/A	
PFPeS	N/A	N/A	N/A		A	13C3-PFBS	3.81	456635.4	N/A	
PFHpA	N/A	N/A	N/A		A	13C4-PFHpA	4.55	547261.8	N/A	
PFHxS	N/A	N/A	N/A		A	13C3-PFHxS	4.55	372925.2	N/A	
6:2-FTS	N/A	N/A	N/A		A	13C2-6:2-FTS	4.91	39087.0	N/A	
PFHpS	N/A	N/A	N/A		A	13C3-PFHxS	4.55	372925.2	N/A	
PFOA	N/A	N/A	N/A		A	13C8-PFOA	4.92	901909.5	N/A	
PFOS	N/A	N/A	N/A		A	13C8-PFOS	5.25	289703.0	N/A	
PFNA	N/A	N/A	N/A		A	13C9-PFNA	5.26	509013.2	N/A	
PFNS	N/A	N/A	N/A		A	13C8-PFOS	5.25	289703.0	N/A	
PFDA	N/A	N/A	N/A		A	13C6-PFDA	5.56	643925.8	N/A	
8:2-FTS	N/A	N/A	N/A		A	13C2-8:2-FTS	5.57	27339.0	N/A	
PFOSA	N/A	N/A	N/A		A	13C8-PFOSA	5.65	681332.9	N/A	
NMeFOSAA	N/A	N/A	N/A		A	d3-NMeFOSAA	5.70	73694.3	N/A	
PFDS	N/A	N/A	N/A		A	13C8-PFOS	5.25	289703.0	N/A	
PFUnDA	N/A	N/A	N/A		A	13C7-PFUnDA	5.83	265353.1	N/A	
NEtFOSAA	N/A	N/A	N/A		A	d5-NEtFOSAA	5.84	59646.1	N/A	
PFDoDA	N/A	N/A	N/A		A	13C2-PFDoDA	6.05	576780.7	N/A	
10:2-FTS	N/A	N/A	N/A		A	13C2-8:2-FTS	5.57	27339.0	N/A	
NMePFOSAE	N/A	N/A	N/A		A	d7-NMePFOSAE	6.09	354624.2	N/A	
NMePFOSA	N/A	N/A	N/A		A	d3-NMePFOSA	6.10	79601.3	N/A	
PFDoS	N/A	N/A	N/A		A	13C8-PFOS	5.25	289703.0	N/A	
NEtPFOSAE	N/A	N/A	N/A		A	d9-NEtPFOSAE	6.25	287722.3	N/A	
NEtPFOSA	N/A	N/A	N/A		A	d5-NEtPFOSA	6.26	59772.3	N/A	
PFTrDA	N/A	N/A	N/A		A	13C2-PFDoDA	6.05	576780.7	N/A	
PFTeDA	N/A	N/A	N/A		A	13C2-PFTeDA	6.43	418729.7	N/A	
PFHxDA	6.73	1.050	2221.7		A	13C2-PFTeDA	6.43	418729.7	0.005	0.063
PFODA	N/A	N/A	N/A		A	13C2-PFTeDA	6.43	418729.7	N/A	

Total Ion Chromatogram

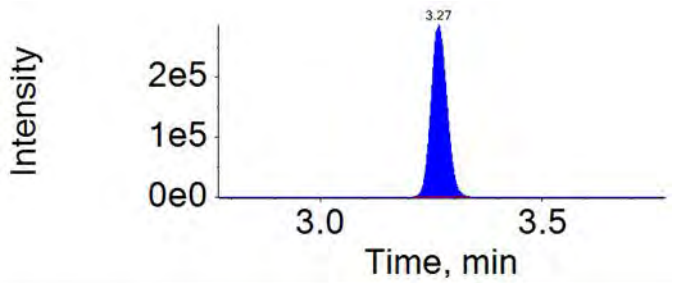


APPROVED
By JPT at 8:42 am, 11/20/18

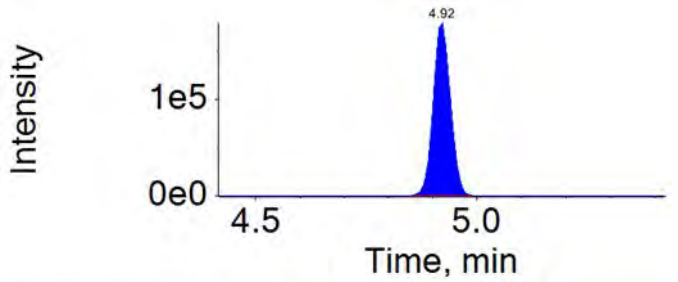
REVIEWED
By HMK at 8:47 am, 11/20/18

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/20/2018 8:36:28 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

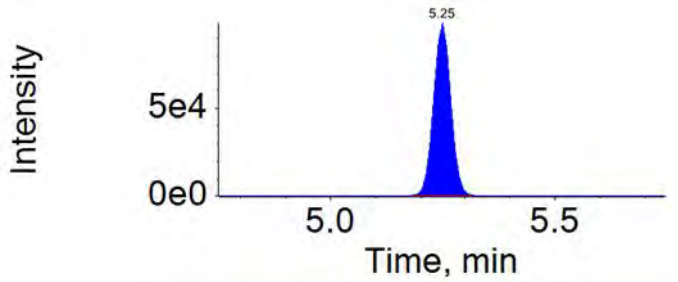
Injection Standard: 13C3-PFBA
216.0 / 172.0



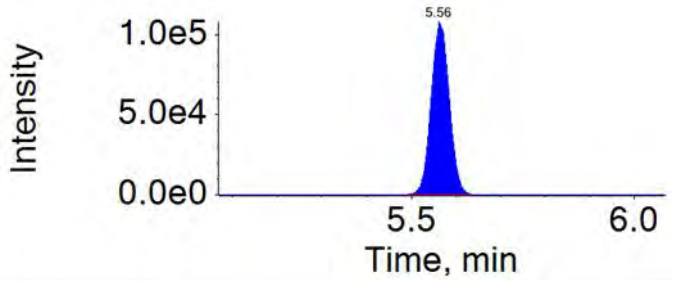
Injection Standard: 13C2-PFOA
415.0 / 370.0



Injection Standard: 13C4-PFOS
503.0 / 80.0

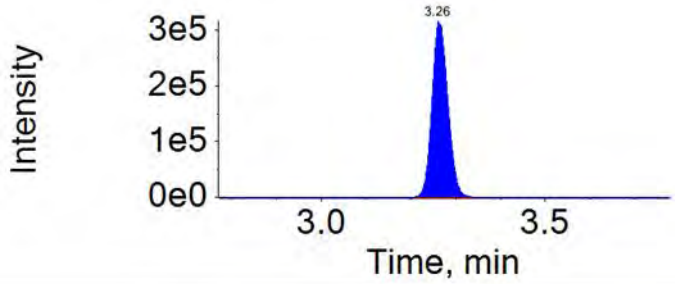


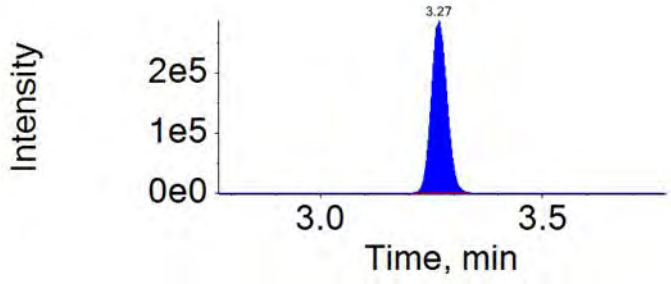
Injection Standard: 13C2-PFDA
515.0 / 470.0



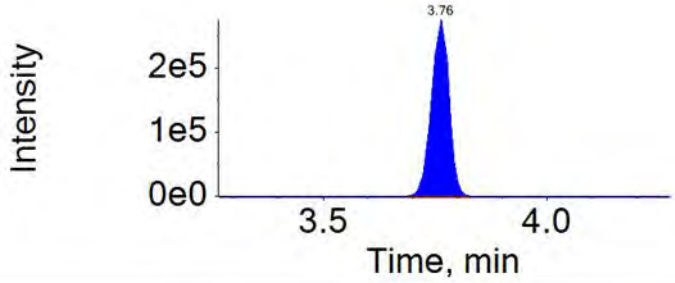
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/20/2018 8:36:28 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

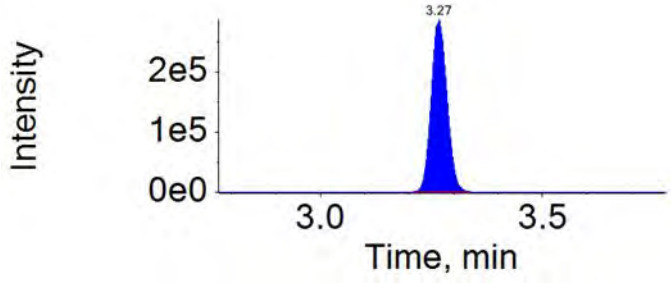
Extraction Standard: E13C4-PFBA	Injection Standard: 13C3-PFBA
217.0 / 172.0	216.0 / 172.0



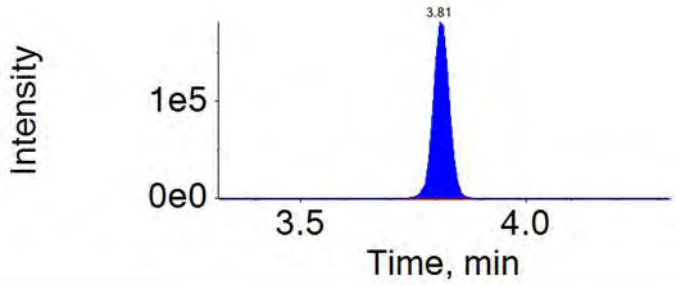


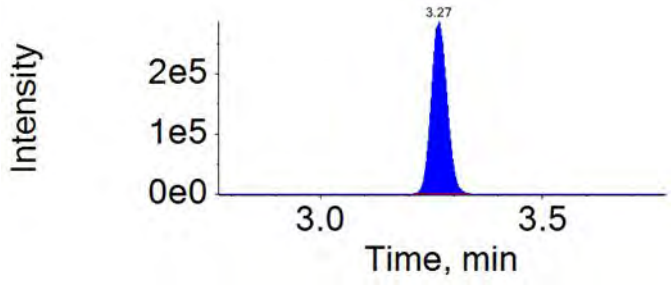
Extraction Standard: E13C5-PFPeA	Injection Standard: 13C3-PFBA
268.0 / 223.0	216.0 / 172.0



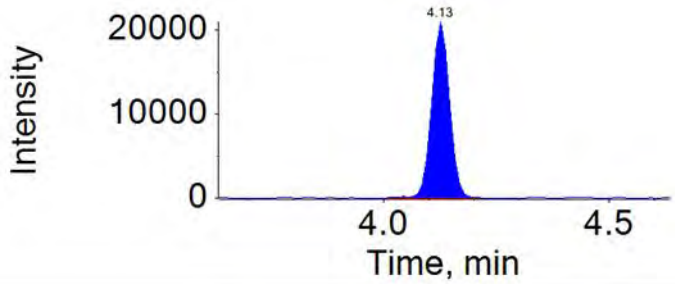


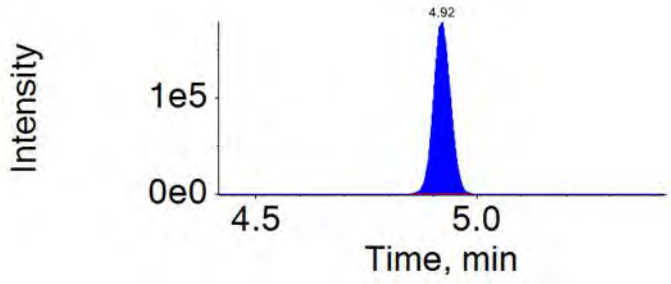
Extraction Standard: E13C3-PFBS	Injection Standard: 13C3-PFBA
302.0 / 80.0	216.0 / 172.0





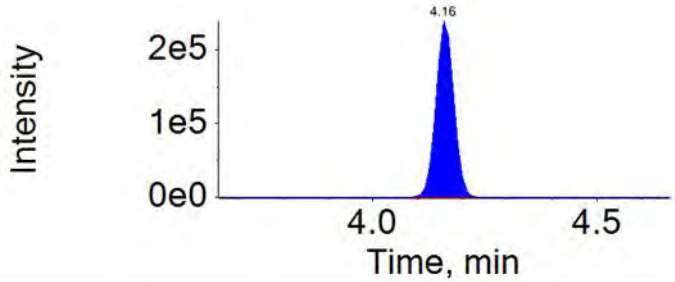
Extraction Standard: E13C2-4:2-FTS	Injection Standard: 13C2-PFOA
329.0 / 81.0	415.0 / 370.0

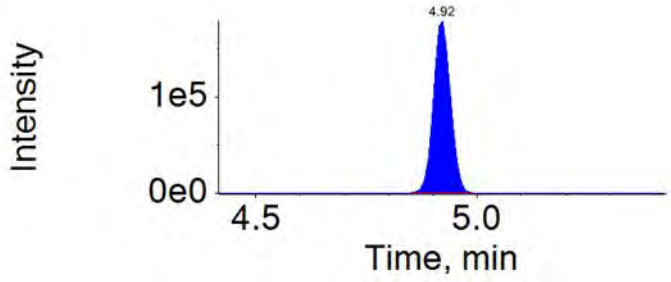




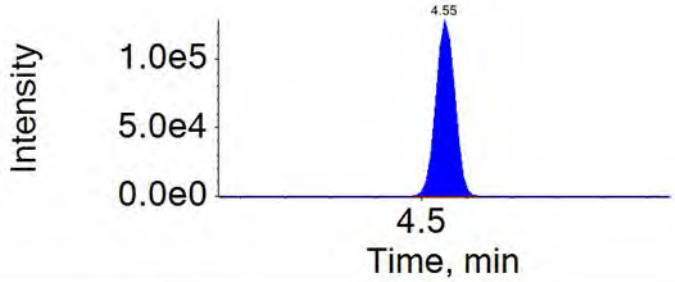
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/20/2018 8:36:28 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

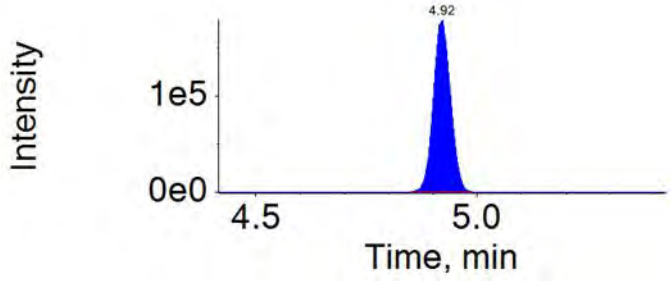
Extraction Standard: E13C5-PFHxA	Injection Standard: 13C2-PFOA
318.0 / 273.0	415.0 / 370.0



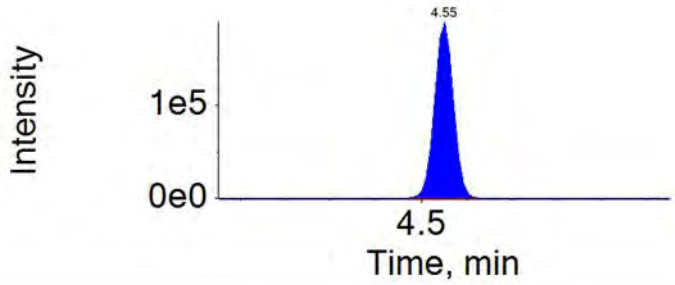


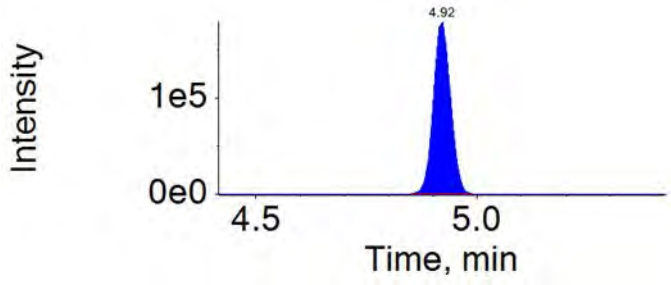
Extraction Standard: E13C3-PFHxS	Injection Standard: 13C2-PFOA
402.0 / 80.0	415.0 / 370.0



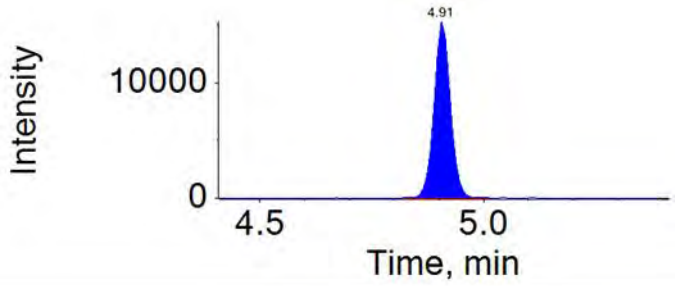


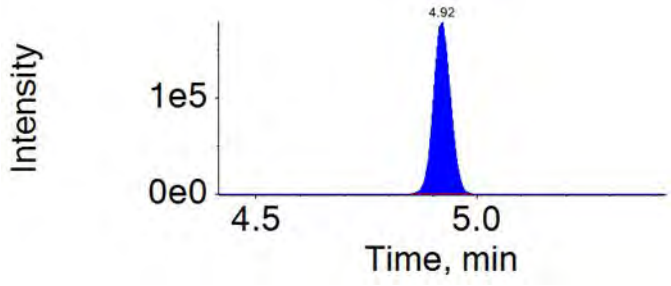
Extraction Standard: E13C4-PFHpA	Injection Standard: 13C2-PFOA
367.0 / 322.0	415.0 / 370.0





Extraction Standard: E13C2-6:2-FTS	Injection Standard: 13C2-PFOA
429.0 / 81.0	415.0 / 370.0





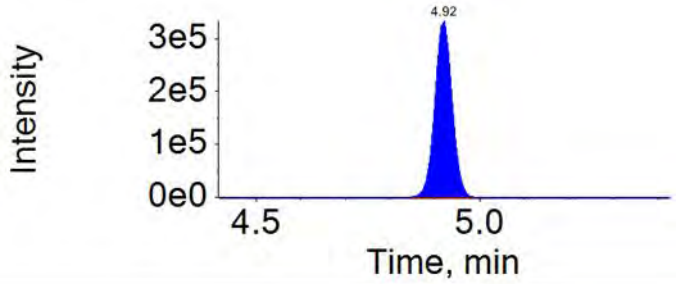
APPROVED
By JPT at 8:42 am, 11/20/18

REVIEWED
By HMK at 8:47 am, 11/20/18

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/20/2018 8:36:28 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

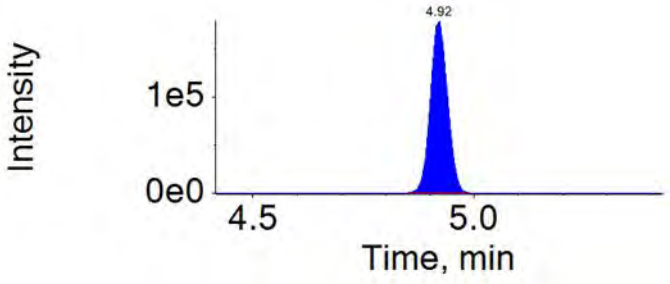
Extraction Standard: E13C8-PFOA

421.0 / 376.0



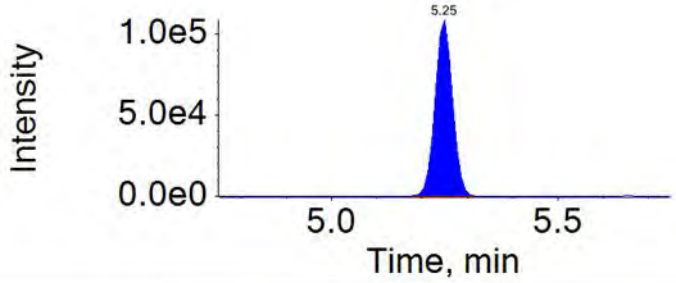
Injection Standard: 13C2-PFOA

415.0 / 370.0



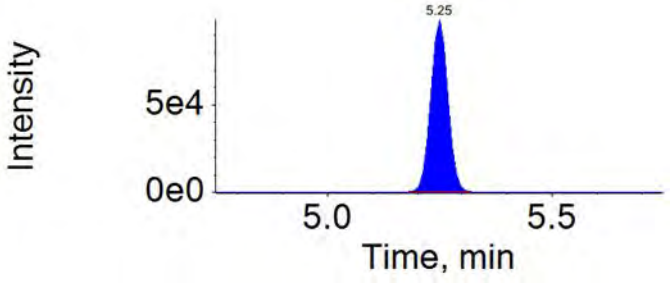
Extraction Standard: E13C8-PFOS

507.0 / 80.0



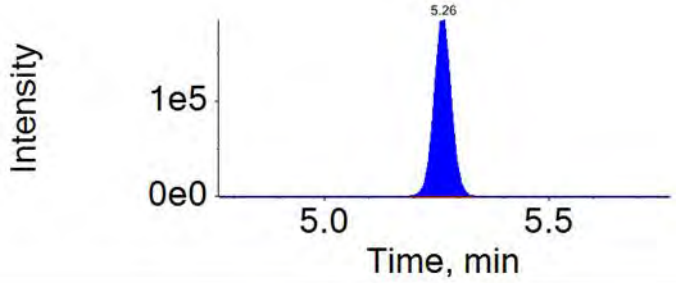
Injection Standard: 13C4-PFOS

503.0 / 80.0



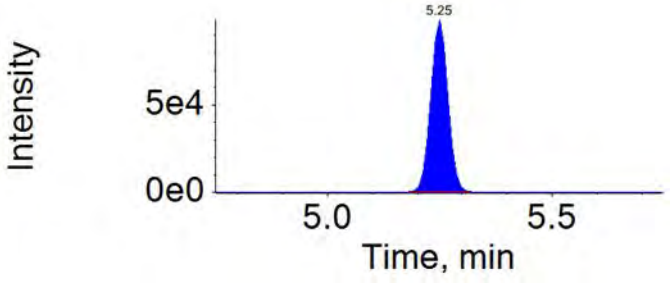
Extraction Standard: E13C9-PFNA

472.0 / 427.0



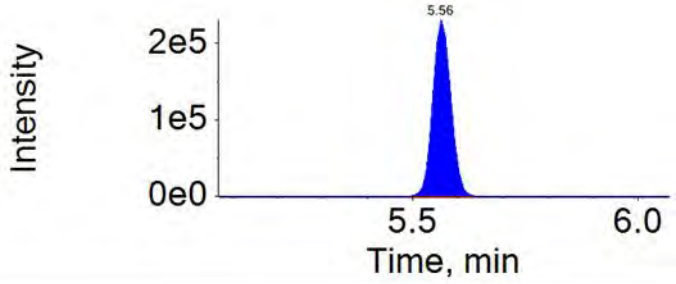
Injection Standard: 13C4-PFOS

503.0 / 80.0



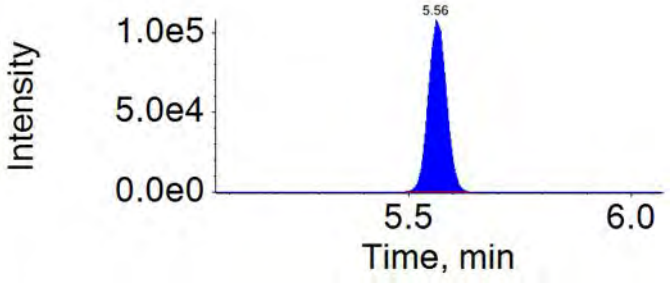
Extraction Standard: E13C6-PFDA

519.0 / 474.0



Injection Standard: 13C2-PFDA

515.0 / 470.0

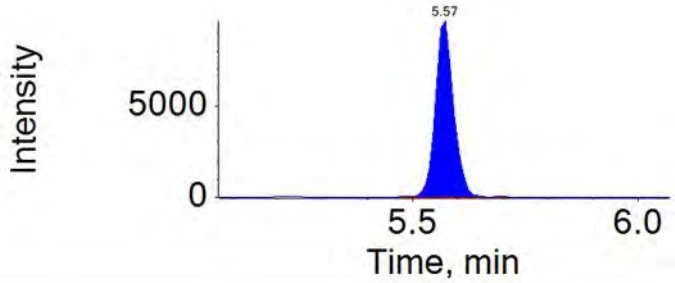


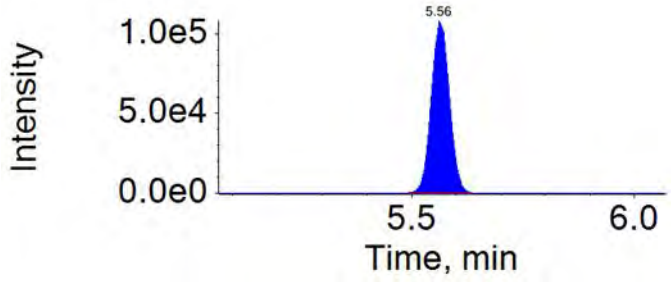
APPROVED
By JPT at 8:42 am, 11/20/18

REVIEWED
By HMK at 8:47 am, 11/20/18

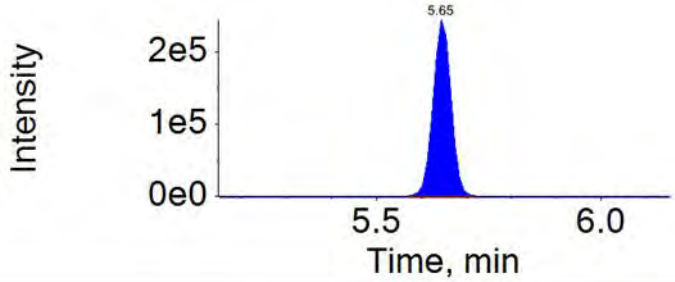
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/20/2018 8:36:28 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

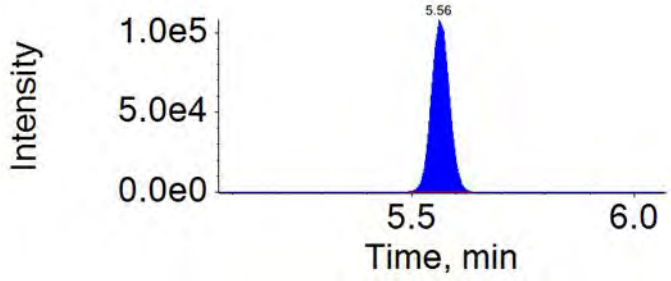
Extraction Standard: E13C2-8:2-FTS	Injection Standard: 13C2-PFDA
529.0 / 81.0	515.0 / 470.0



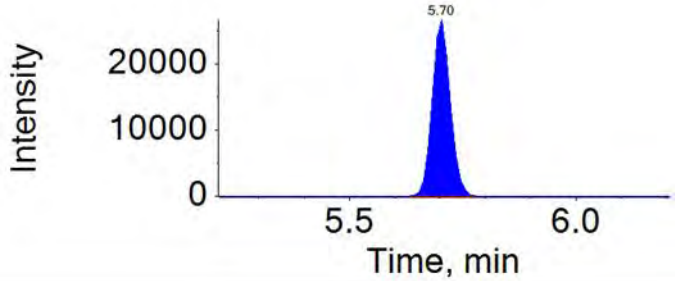


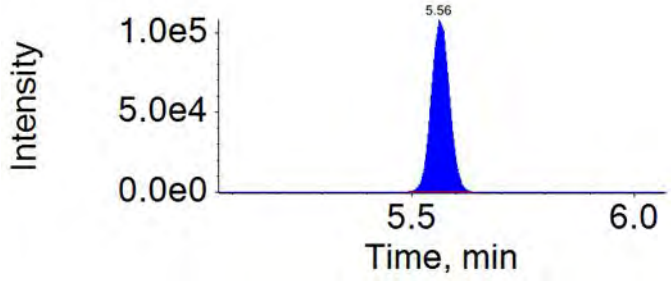
Extraction Standard: E13C8-PFOSA	Injection Standard: 13C2-PFDA
506.0 / 78.0	515.0 / 470.0



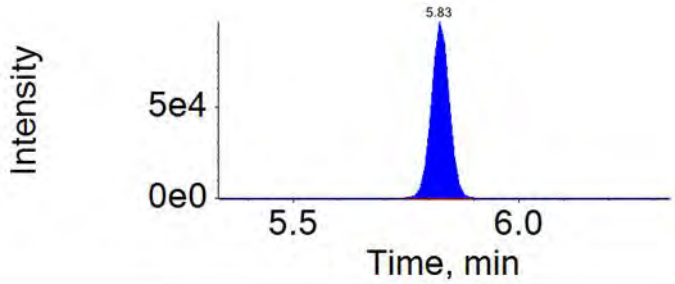


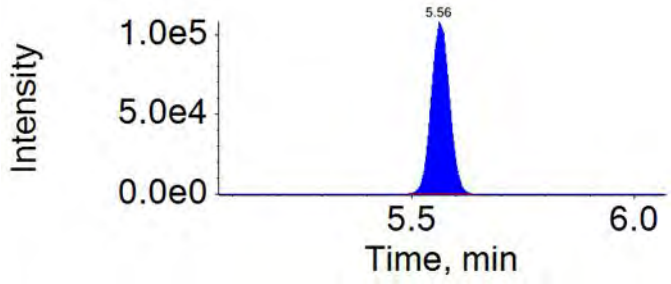
Extraction Standard: Ed3-NMeFOSAA	Injection Standard: 13C2-PFDA
573.0 / 419.0	515.0 / 470.0





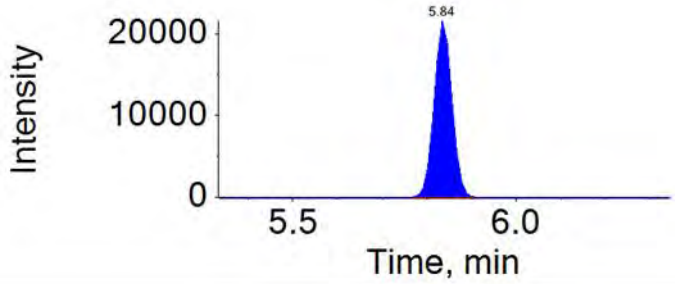
Extraction Standard: E13C7-PFUnDA	Injection Standard: 13C2-PFDA
570.0 / 525.0	515.0 / 470.0

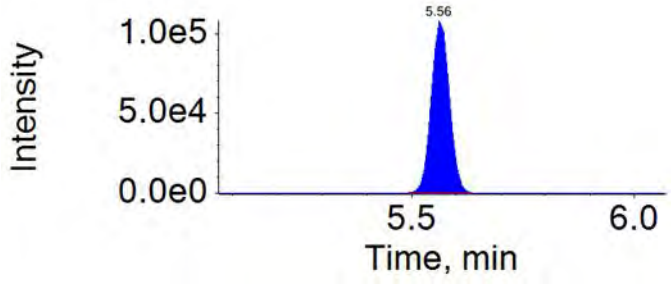




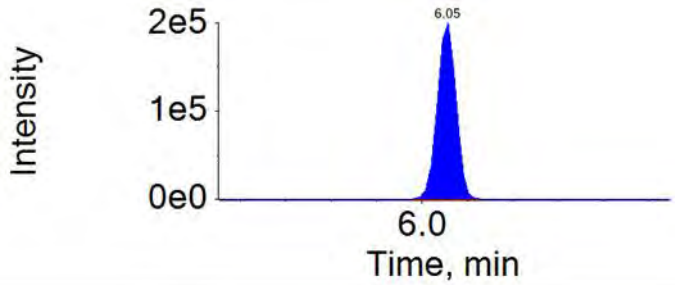
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/20/2018 8:36:28 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

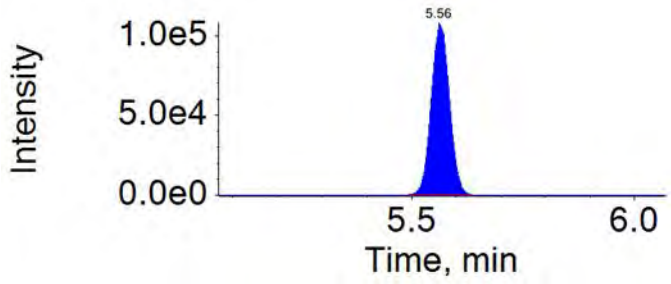
Extraction Standard: Ed5-NEtFOSAA	Injection Standard: 13C2-PFDA
589.0 / 419.0	515.0 / 470.0



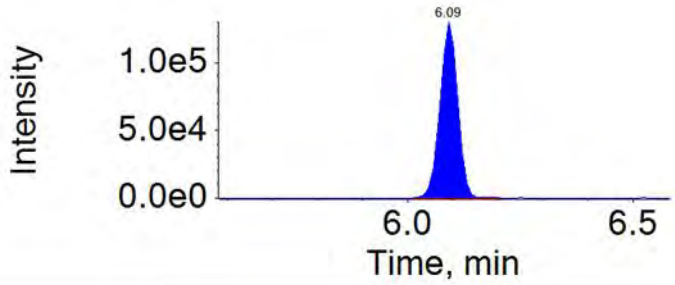


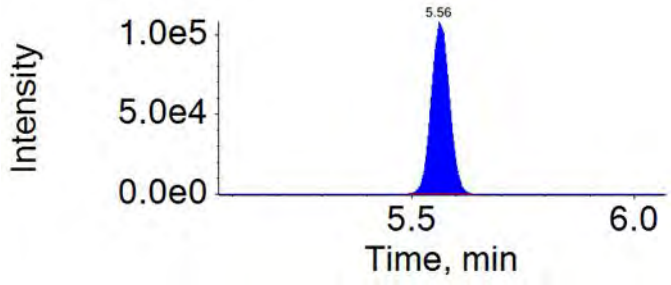
Extraction Standard: E13C2-PFDoDA	Injection Standard: 13C2-PFDA
615.0 / 570.0	515.0 / 470.0



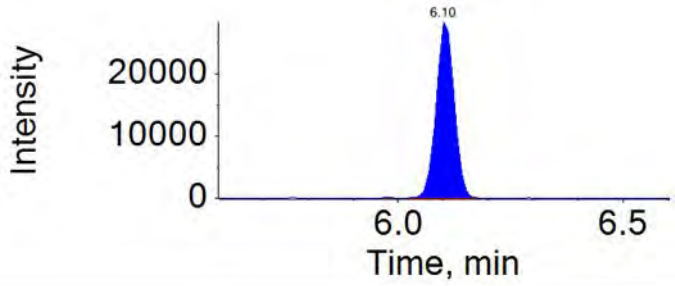


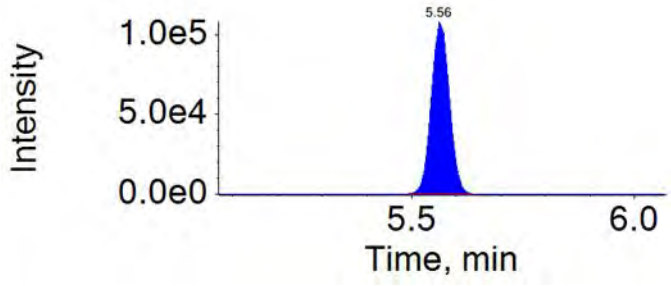
Extraction Standard: Ed7-NMePFOSAE	Injection Standard: 13C2-PFDA
623.0 / 59.0	515.0 / 470.0





Extraction Standard: Ed3-NMePFOSA	Injection Standard: 13C2-PFDA
515.0 / 169.0	515.0 / 470.0



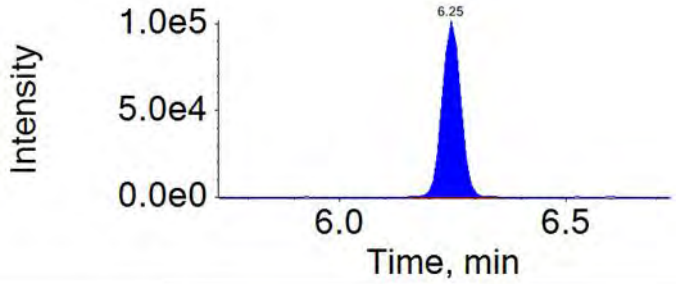


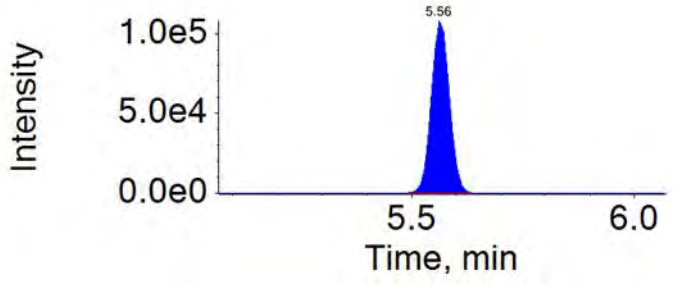
APPROVED
By JPT at 8:42 am, 11/20/18

REVIEWED
By HMK at 8:47 am, 11/20/18

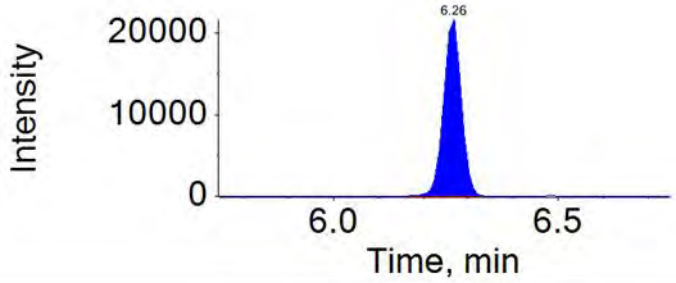
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/20/2018 8:36:28 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

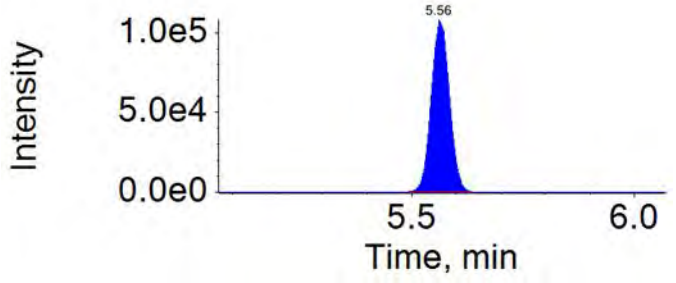
Extraction Standard: Ed9-NEtPFOSAE	Injection Standard: 13C2-PFDA
639.0 / 59.0	515.0 / 470.0



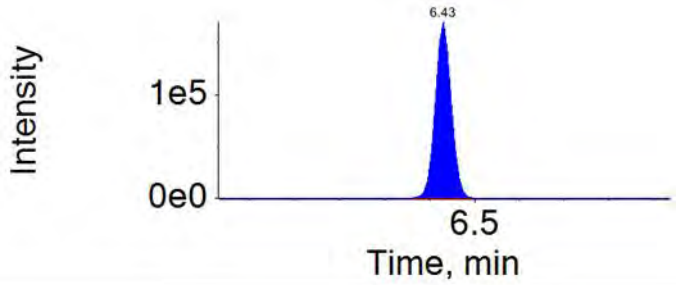


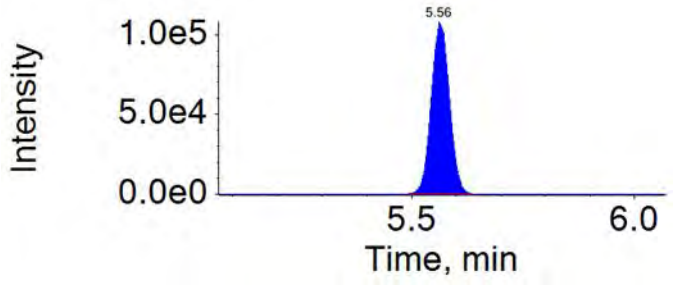
Extraction Standard: Ed5-NEtPFOSA	Injection Standard: 13C2-PFDA
531.0 / 169.0	515.0 / 470.0





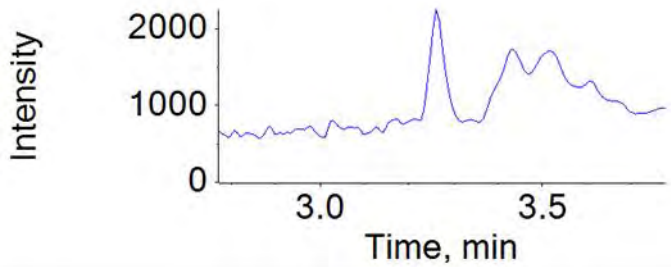
Extraction Standard: E13C2-PFTeDA	Injection Standard: 13C2-PFDA
715.0 / 670.0	515.0 / 470.0



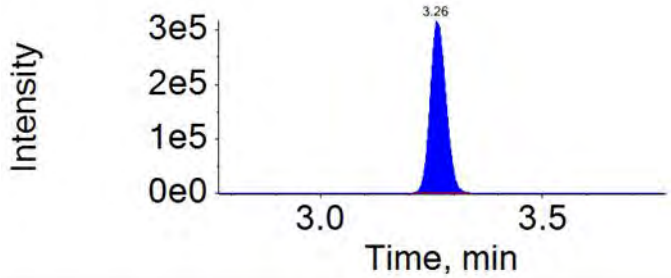


ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/20/2018 8:36:28 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

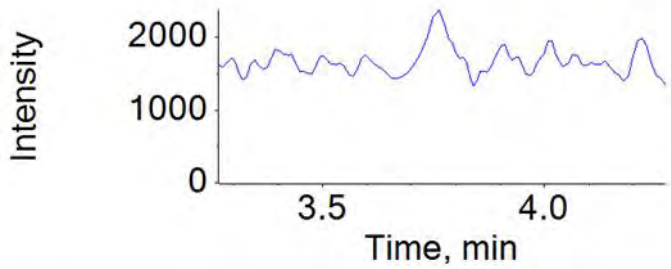
Analyte: PFBA
213.0 / 169.0



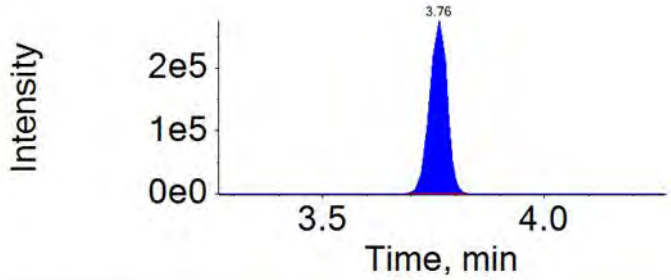
Extraction Standard: 13C4-PFBA
217.0 / 172.0



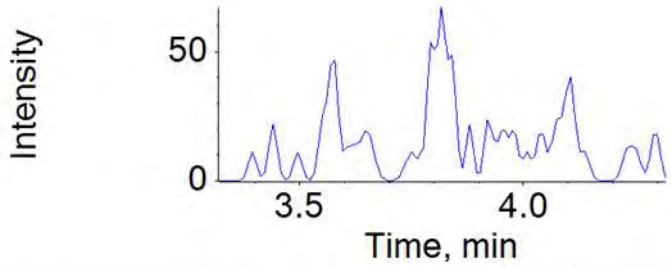
Analyte: PFPeA
263.0 / 219.0



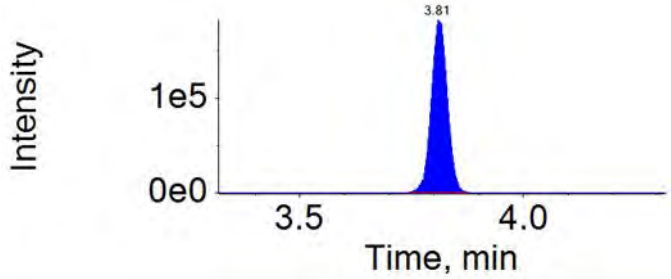
Extraction Standard: 13C5-PFPeA
268.0 / 223.0



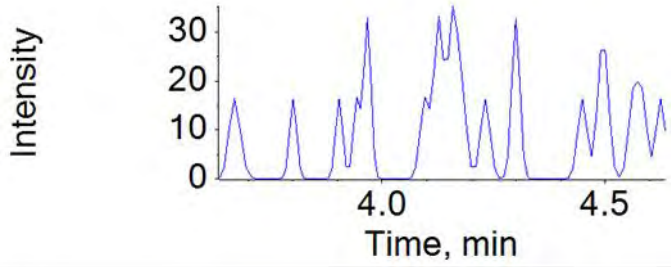
Analyte: PFBS
299.0 / 80.0



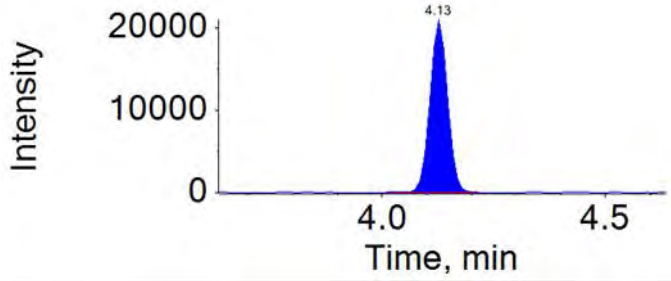
Extraction Standard: 13C3-PFBS
302.0 / 80.0



Analyte: 4:2-FTS
327.0 / 307.0



Extraction Standard: 13C2-4:2-FTS
329.0 / 81.0

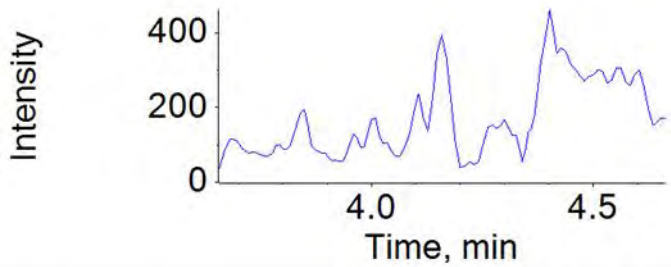


APPROVED
By JPT at 8:42 am, 11/20/18

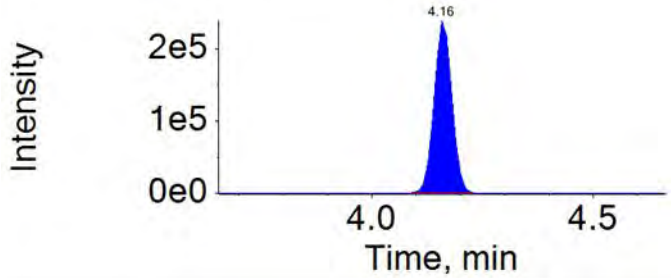
REVIEWED
By HMK at 8:47 am, 11/20/18

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/20/2018 8:36:28 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

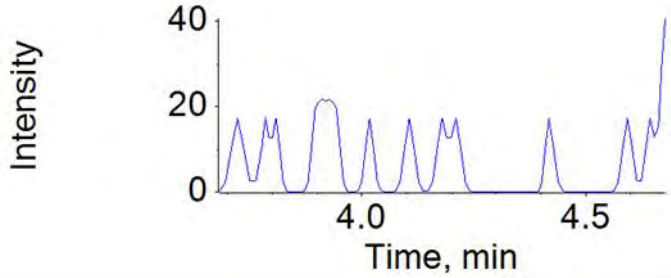
Analyte: PFHxA
313.0 / 269.0



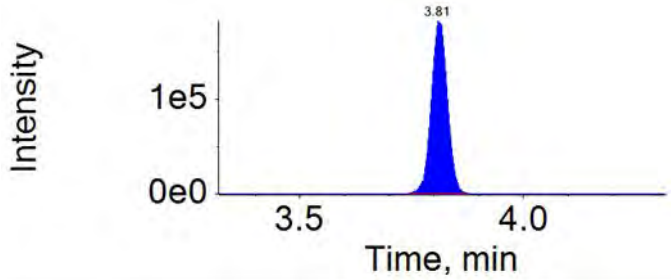
Extraction Standard: 13C5-PFHxA
318.0 / 273.0



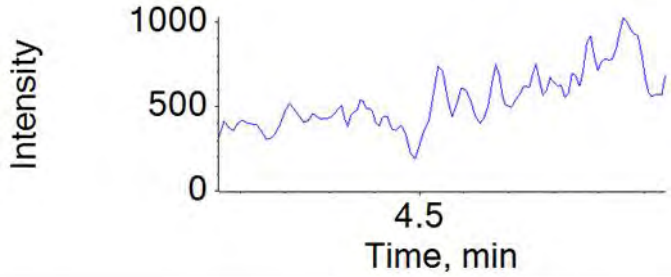
Analyte: PFPeS
349.0 / 80.0



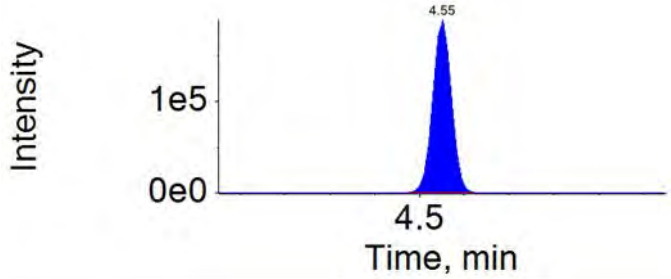
Extraction Standard: 13C3-PFBS
302.0 / 80.0



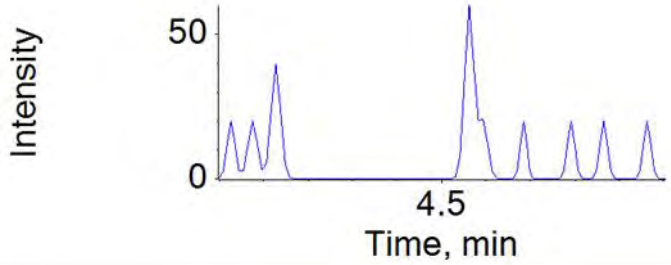
Analyte: PFHpA
363.0 / 319.0



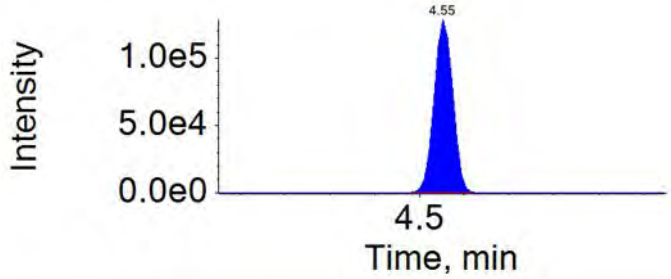
Extraction Standard: 13C4-PFHpA
367.0 / 322.0



Analyte: PFHxS
399.0 / 80.0

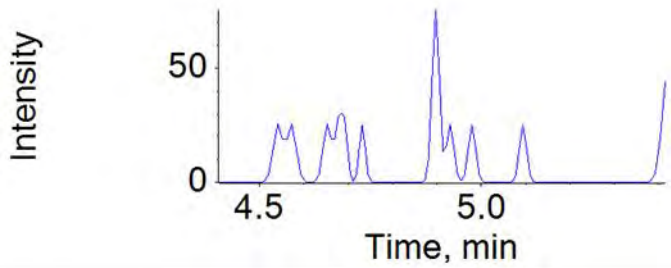


Extraction Standard: 13C3-PFHxS
402.0 / 80.0

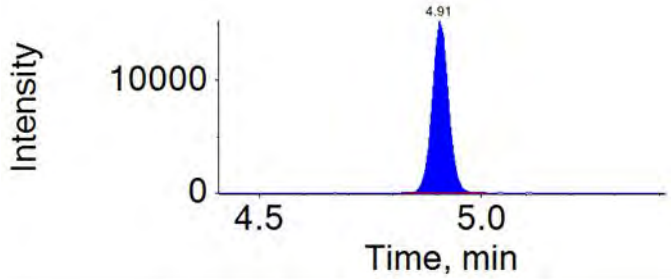


ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/20/2018 8:36:28 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

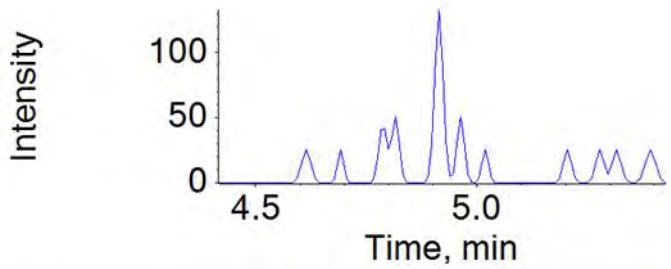
Analyte: 6:2-FTS
427.0 / 407.0



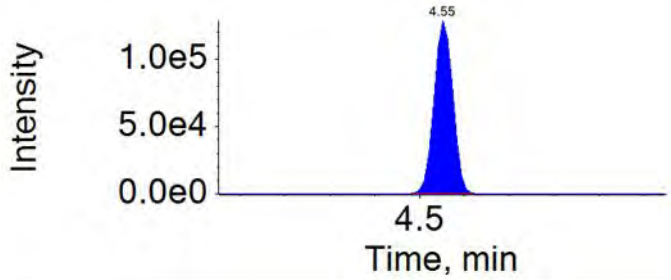
Extraction Standard: 13C2-6:2-FTS
429.0 / 81.0



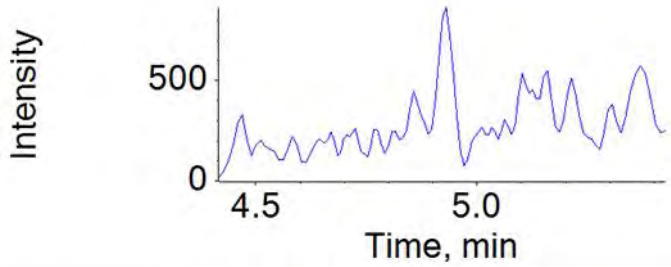
Analyte: PFHpS
449.0 / 80.0



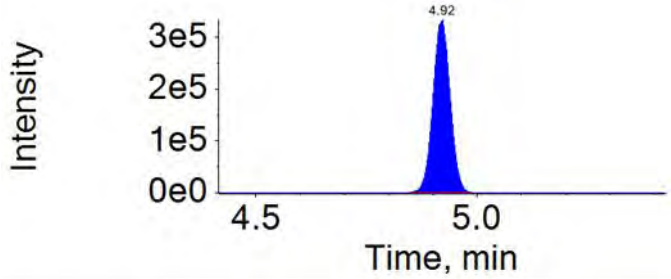
Extraction Standard: 13C3-PFHxS
402.0 / 80.0



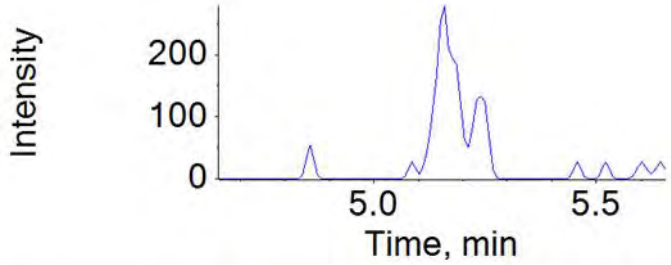
Analyte: PFOA
413.0 / 369.0



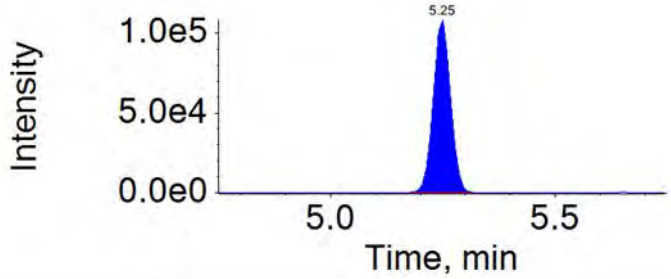
Extraction Standard: 13C8-PFOA
421.0 / 376.0



Analyte: PFOS
499.0 / 80.0



Extraction Standard: 13C8-PFOS
507.0 / 80.0

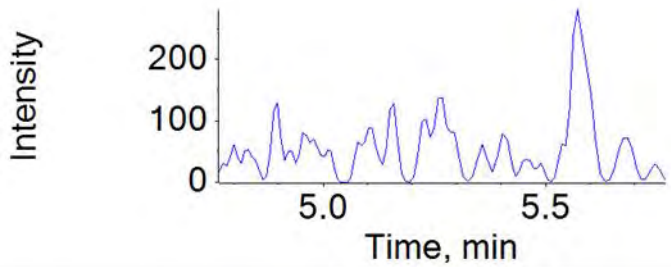


APPROVED
By JPT at 8:42 am, 11/20/18

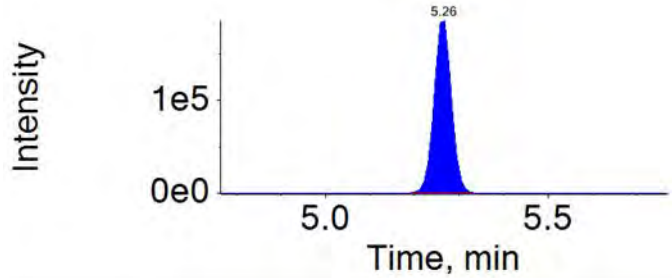
REVIEWED
By HMK at 8:47 am, 11/20/18

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/20/2018 8:36:28 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

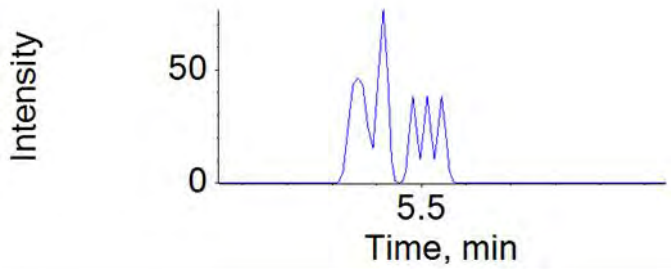
Analyte: PFNA
463.0 / 419.0



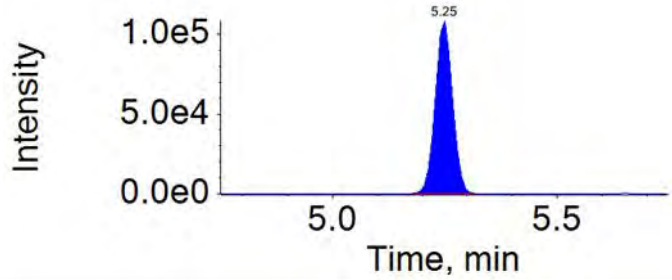
Extraction Standard: 13C9-PFNA
472.0 / 427.0



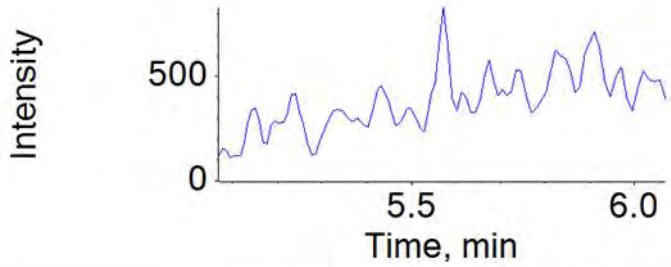
Analyte: PFNS
549.0 / 80.0



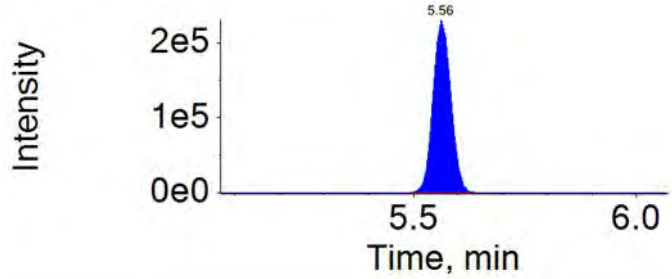
Extraction Standard: 13C8-PFOS
507.0 / 80.0



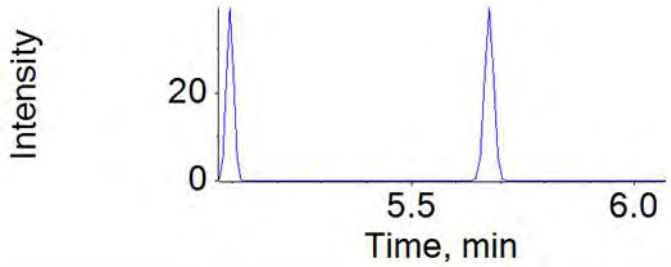
Analyte: PFDA
513.0 / 469.0



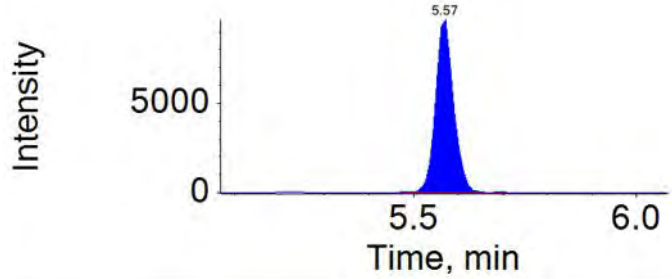
Extraction Standard: 13C6-PFDA
519.0 / 474.0



Analyte: 8:2-FTS
527.0 / 507.0



Extraction Standard: 13C2-8:2-FTS
529.0 / 81.0

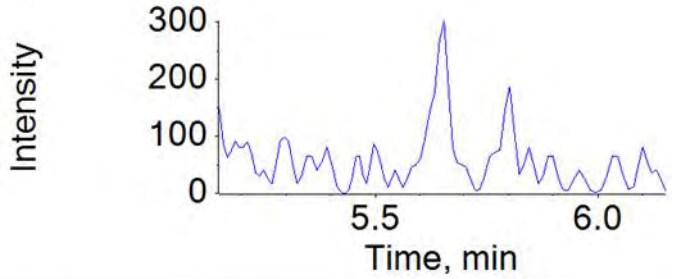


APPROVED
By JPT at 8:42 am, 11/20/18

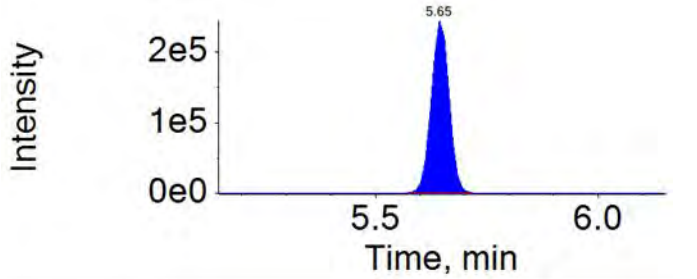
REVIEWED
By HMK at 8:47 am, 11/20/18

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/20/2018 8:36:28 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

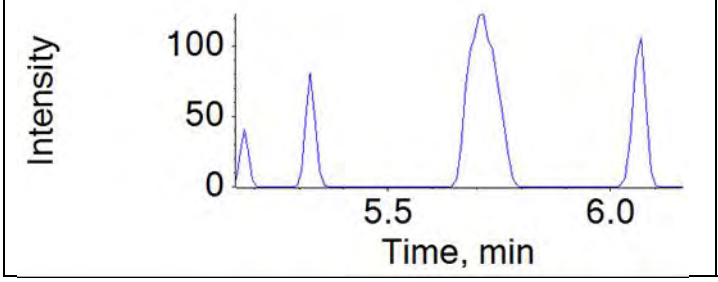
Analyte: PFOSA
498.0 / 78.0



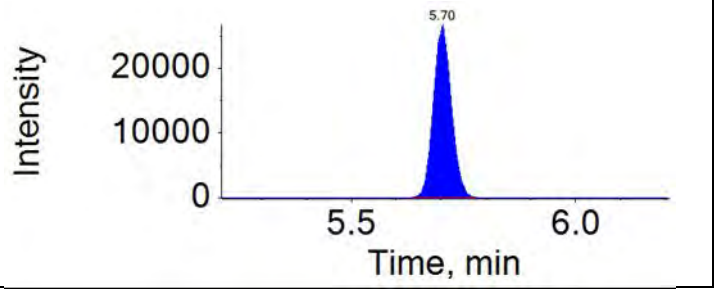
Extraction Standard: 13C8-PFOSA
506.0 / 78.0



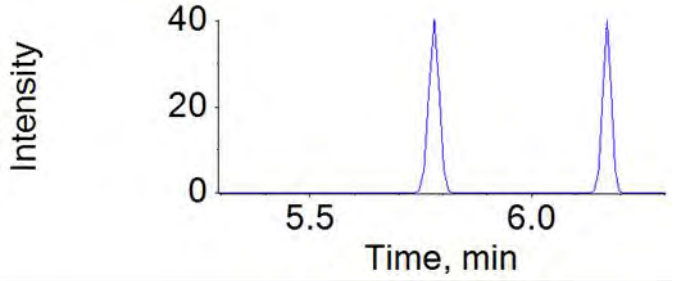
Analyte: NMeFOSAA
570.0 / 419.0



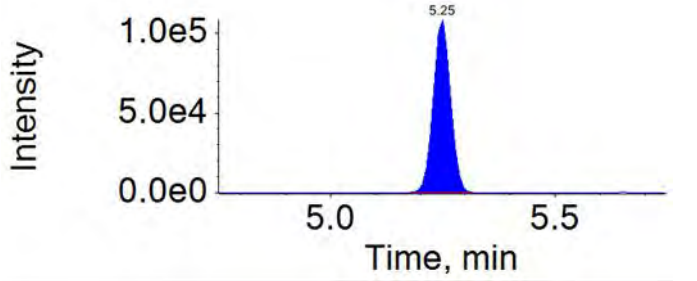
Extraction Standard: d3-NMeFOSAA
573.0 / 419.0



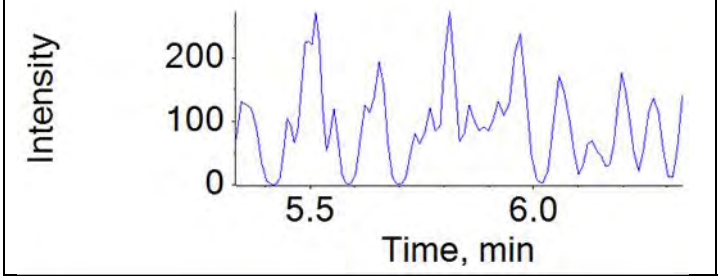
Analyte: PFDS
599.0 / 80.0



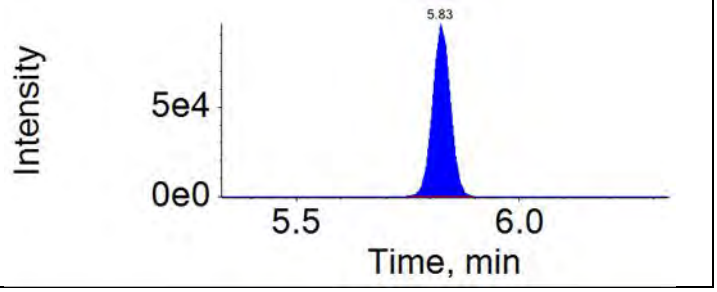
Extraction Standard: 13C8-PFOS
507.0 / 80.0



Analyte: PFUnDA
563.0 / 519.0



Extraction Standard: 13C7-PFUnDA
570.0 / 525.0

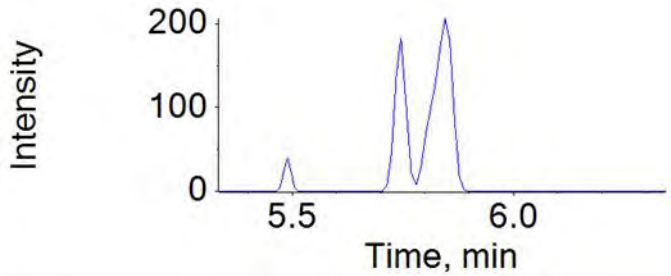


APPROVED
By JPT at 8:42 am, 11/20/18

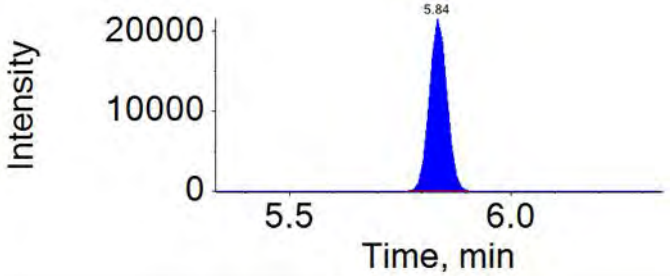
REVIEWED
By HMK at 8:47 am, 11/20/18

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/20/2018 8:36:28 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

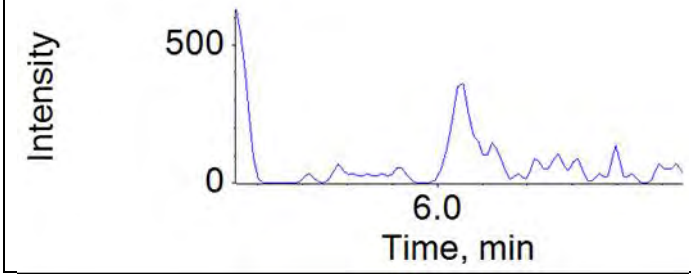
Analyte: NEtFOSAA
584.0 / 419.0



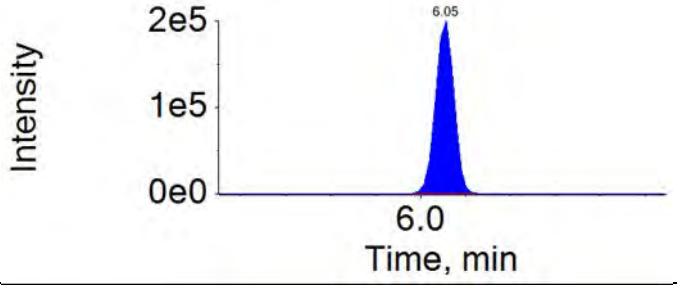
Extraction Standard: d5-NEtFOSAA
589.0 / 419.0



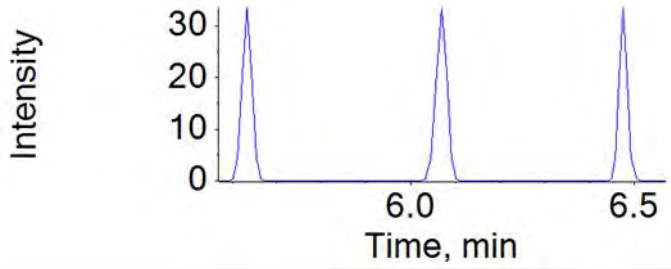
Analyte: PFDoDA
613.0 / 569.0



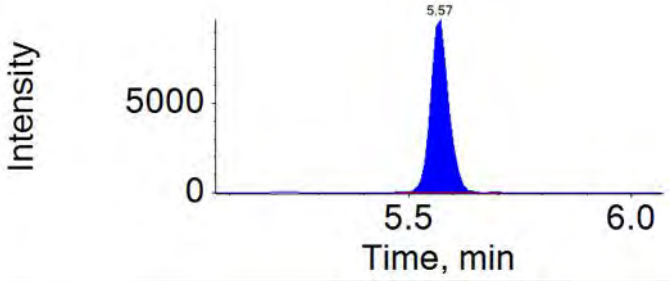
Extraction Standard: 13C2-PFDoDA
615.0 / 570.0



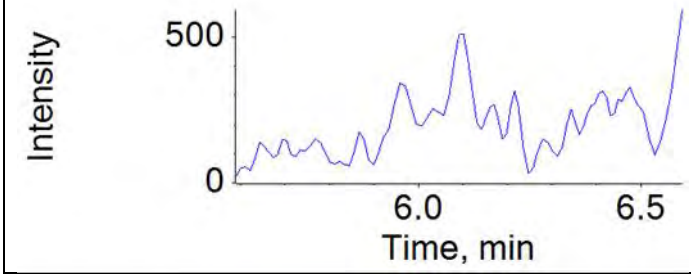
Analyte: 10:2-FTS
627.0 / 607.0



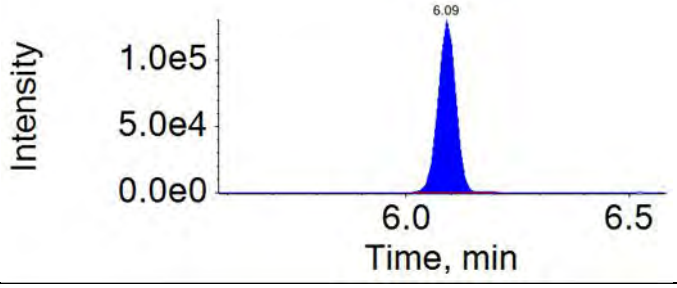
Extraction Standard: 13C2-8:2-FTS
529.0 / 81.0



Analyte: NMePFOSAE
616.0 / 59.0



Extraction Standard: d7-NMePFOSAE
623.0 / 59.0

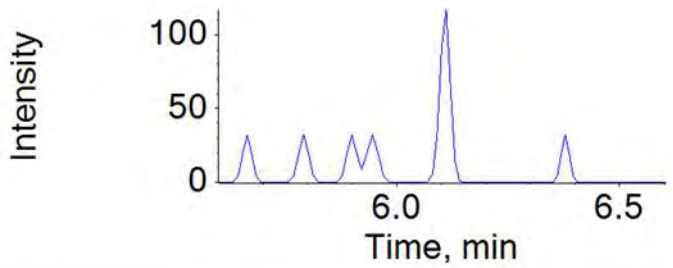


APPROVED
By JPT at 8:42 am, 11/20/18

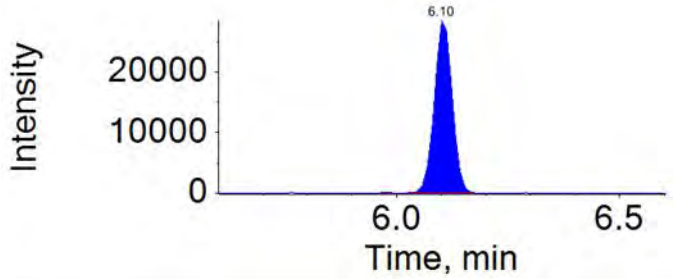
REVIEWED
By HMK at 8:47 am, 11/20/18

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/20/2018 8:36:28 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

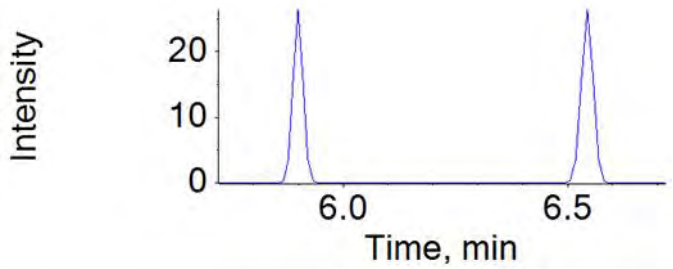
Analyte: NMePFOSA
512.0 / 169.0



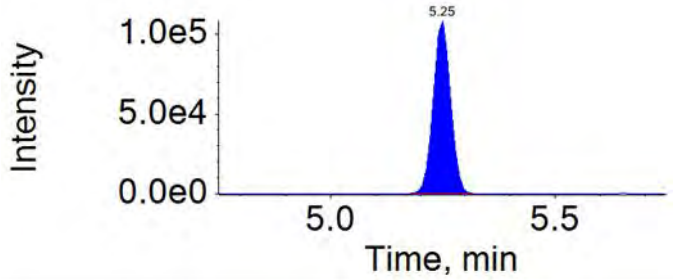
Extraction Standard: d3-NMePFOSA
515.0 / 169.0



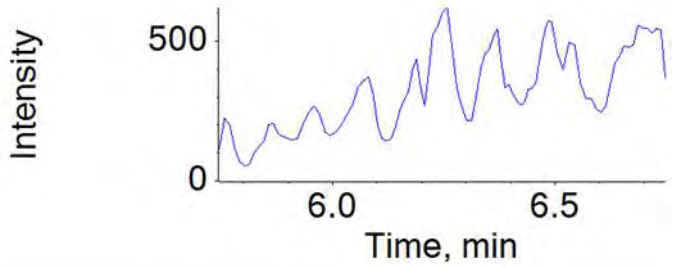
Analyte: PFDoS
699.0 / 80.0



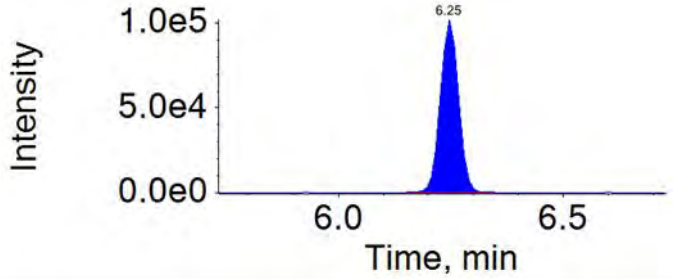
Extraction Standard: 13C8-PFOS
507.0 / 80.0



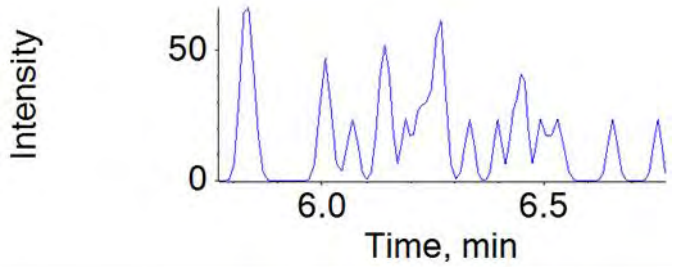
Analyte: NEtPFOSAE
630.0 / 59.0



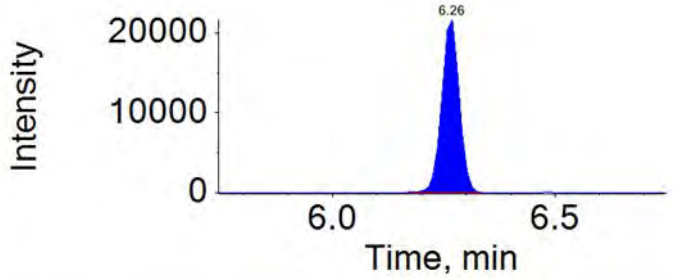
Extraction Standard: d9-NEtPFOSAE
639.0 / 59.0



Analyte: NEtPFOSA
526.0 / 169.0



Extraction Standard: d5-NEtPFOSA
531.0 / 169.0

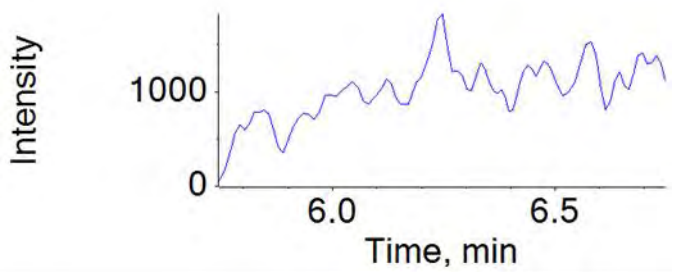


APPROVED
By JPT at 8:42 am, 11/20/18

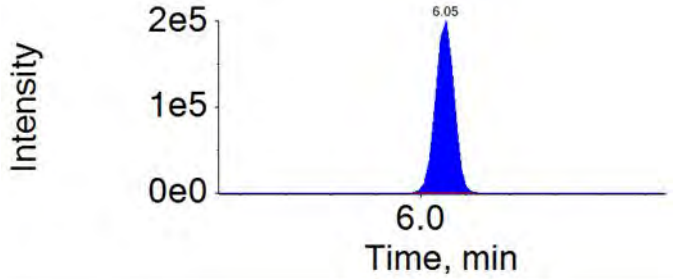
REVIEWED
By HMK at 8:47 am, 11/20/18

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/20/2018 8:36:28 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

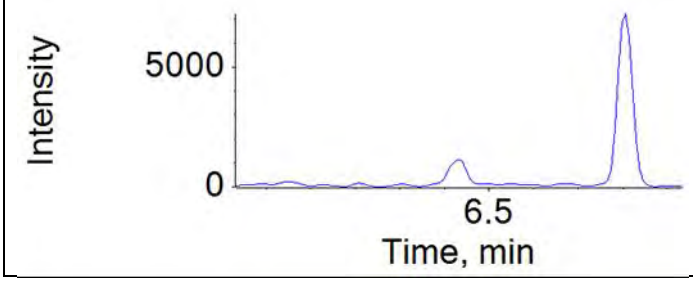
Analyte: PFTrDA
663.0 / 619.0



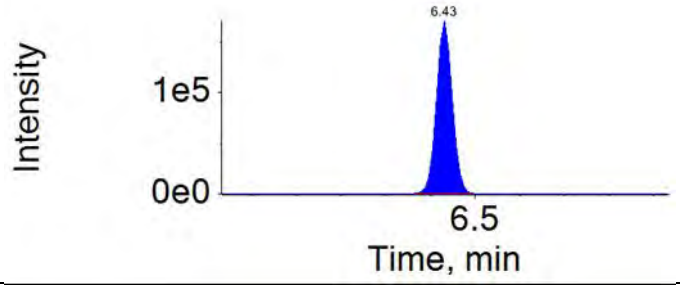
Extraction Standard: 13C2-PFDoDA
615.0 / 570.0



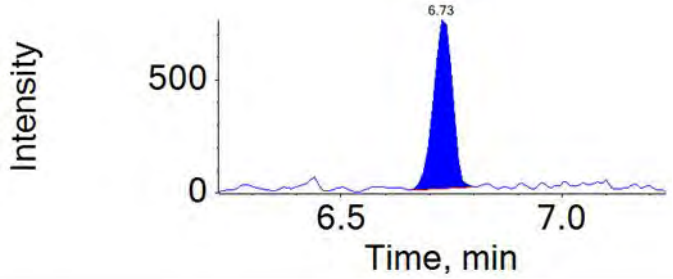
Analyte: PFTeDA
713.0 / 669.0



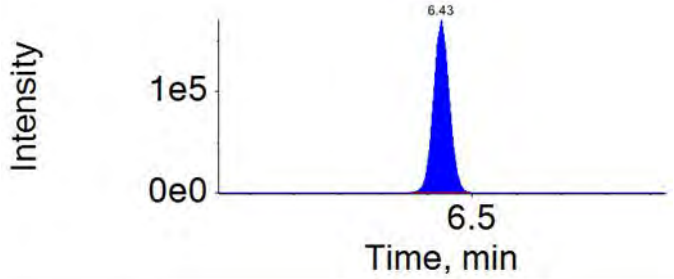
Extraction Standard: 13C2-PFTeDA
715.0 / 670.0



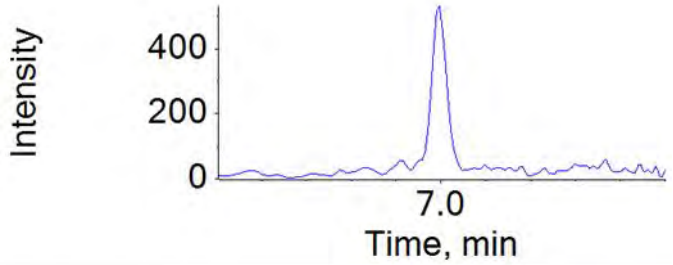
Analyte: PFHxDA
813.0 / 769.0



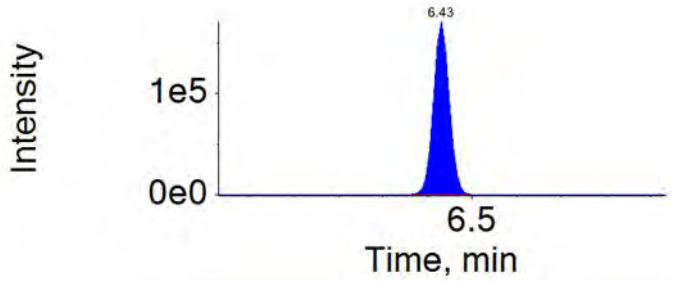
Extraction Standard: 13C2-PFTeDA
715.0 / 670.0



Analyte: PFODA
913.0 / 869.0



Extraction Standard: 13C2-PFTeDA
715.0 / 670.0



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LC-MS/MS Analysis Report

Printed: 11/20/2018 8:38:00 AM
Template: IonRatio18OCT10

Ion Ratio Report

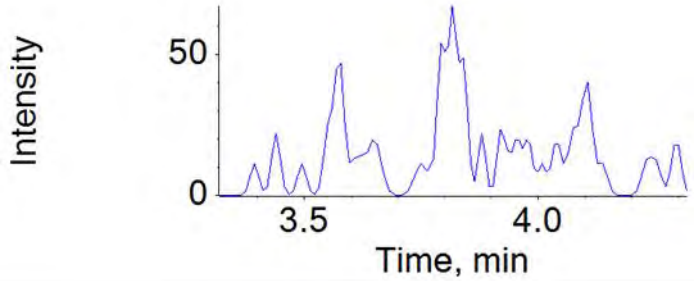
Sample Name: INBLK **Instrument Name:** LM27631 **File Name:** 18NOV12DCAL-49.wiff

Component Name	RT	RRT	Analyte Area Response	Int Typ	Expected Ion Ratio	Ion Ratio	Ion Ratio % Diff	Ion Ratio Limit	Ion Ratio OOS
PFBS	N/A	N/A	N/A	A	N/A	N/A			
PFBS_2	N/A	N/A	N/A	A	N/A	N/A		50	
4:2-FTS	N/A	N/A	N/A	A	N/A	N/A			
4:2 FTS_2	N/A	N/A	N/A	A	N/A	N/A		#NA!	
PFHxA	N/A	N/A	N/A	A	N/A	N/A			
PFHxA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFPeS	N/A	N/A	N/A	A	N/A	N/A			
PFPeS_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFHpA	N/A	N/A	N/A	A	N/A	N/A			
PFHpA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFHxS	N/A	N/A	N/A	A	N/A	N/A			
PFHxS_2	N/A	N/A	N/A	A	N/A	N/A		50	
6:2-FTS	N/A	N/A	N/A	A	N/A	N/A			
6:2 FTS_2	N/A	N/A	N/A	A	N/A	N/A		#NA!	
PFHpS	N/A	N/A	N/A	A	N/A	N/A			
PFHpS_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFOA	N/A	N/A	N/A	A	N/A	N/A			
PFOA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFOS	N/A	N/A	N/A	A	N/A	N/A			
PFOS_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFNA	N/A	N/A	N/A	A	N/A	N/A			
PFNA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFNS	N/A	N/A	N/A	A	N/A	N/A			
PFNS_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFDA	N/A	N/A	N/A	A	N/A	N/A			
PFDA_2	N/A	N/A	N/A	A	N/A	N/A		50	
8:2-FTS	N/A	N/A	N/A	A	N/A	N/A			
8:2 FTS_2	N/A	N/A	N/A	A	N/A	N/A		#NA!	
NMeFOSAA	N/A	N/A	N/A	A	N/A	N/A			
NMeFOSAA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFDS	N/A	N/A	N/A	A	N/A	N/A			
PFDS_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFUnDA	N/A	N/A	N/A	A	N/A	N/A			
PFUnDA_2	5.81	1.00	64.89	A	N/A	N/A		50	
NEtFOSAA	N/A	N/A	N/A	A	N/A	N/A			
NEtFOSAA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFDoDA	N/A	N/A	N/A	A	N/A	N/A			
PFDoDA_2	N/A	N/A	N/A	A	N/A	N/A		50	
10:2-FTS	N/A	N/A	N/A	A	N/A	N/A			
10:2 FTS_2	N/A	N/A	N/A	A	N/A	N/A		#NA!	
PFTrDA	N/A	N/A	N/A	A	N/A	N/A			
PFTrDA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFTeDA	N/A	N/A	N/A	A	N/A	N/A			
PFTeDA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFHxDA	6.73	1.05	2221.67	A	N/A	1.0000			
PFHxDA_2	6.74	1.05	133.29	A	N/A	0.0600	-11	50	
PFODA	N/A	N/A	N/A	A	N/A	N/A			
PFODA_2	N/A	N/A	N/A	A	N/A	N/A		50	

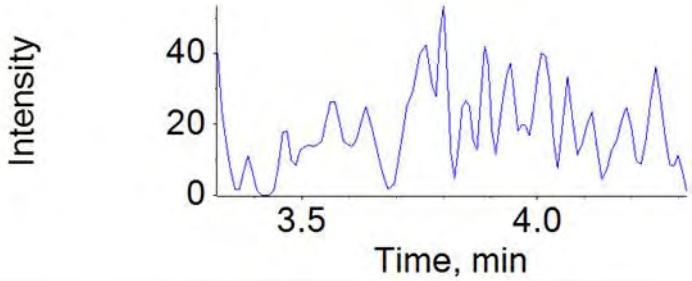
APPROVED
By JPT at 8:42 am, 11/20/18

REVIEWED
By HMK at 8:47 am, 11/20/18

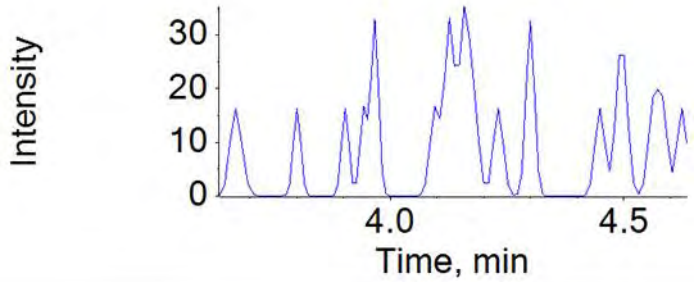
Component: PFBS
Primary Mass: 299.0 / 80.0



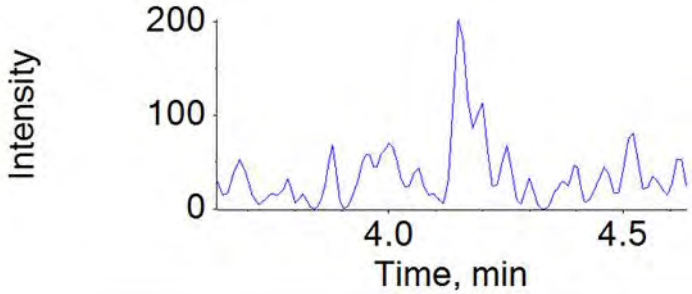
Component: PFBS_2
Secondary Mass: 299.0 / 99.0



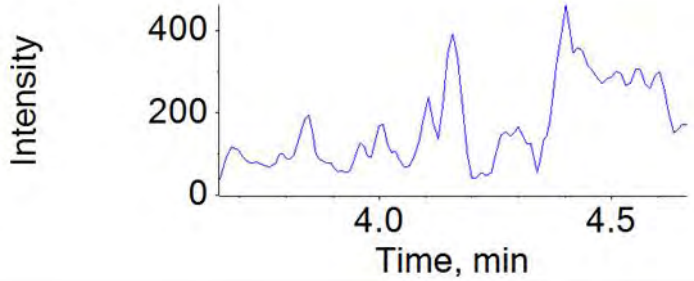
Component: 4:2-FTS
Primary Mass: 327.0 / 307.0



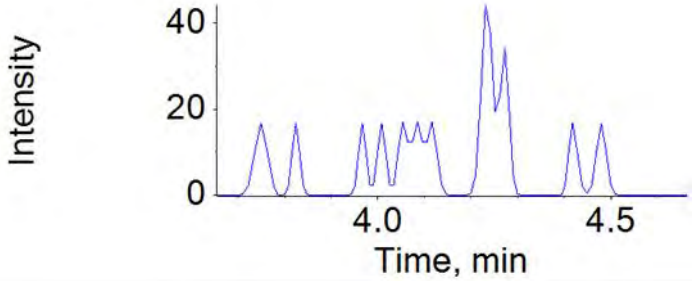
Component: 4:2 FTS_2
Secondary Mass: 327.0 / 81.0



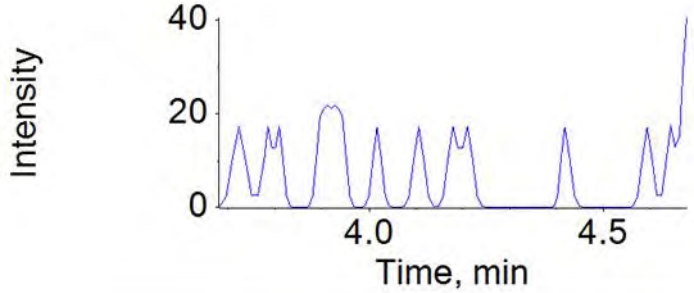
Component: PFHxA
Primary Mass: 313.0 / 269.0



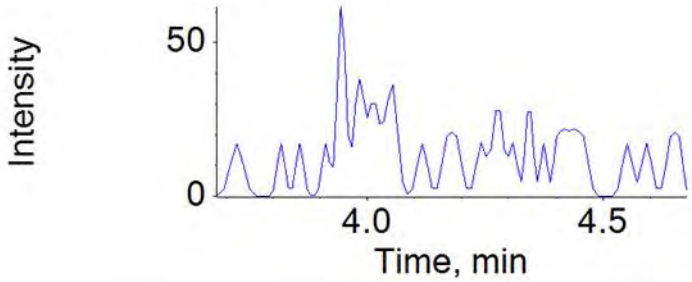
Component: PFHxA_2
Secondary Mass: 313.0 / 119.0



Component: PFPeS
Primary Mass: 349.0 / 80.0



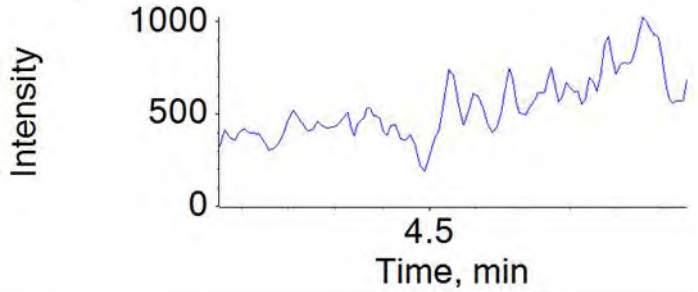
Component: PFPeS_2
Secondary Mass: 349.0 / 99.0



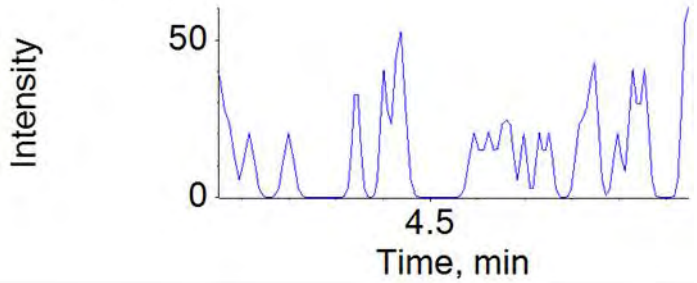
APPROVED
By JPT at 8:42 am, 11/20/18

REVIEWED
By HMK at 8:47 am, 11/20/18

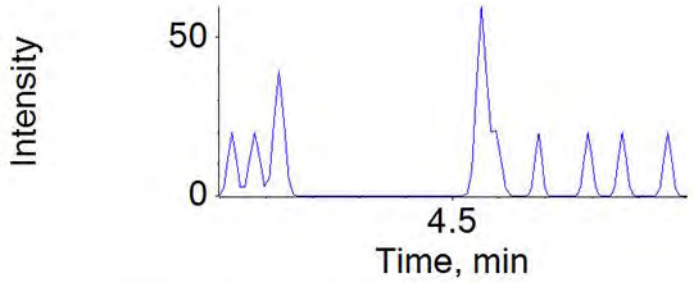
Component: PFHpA
Primary Mass: 363.0 / 319.0



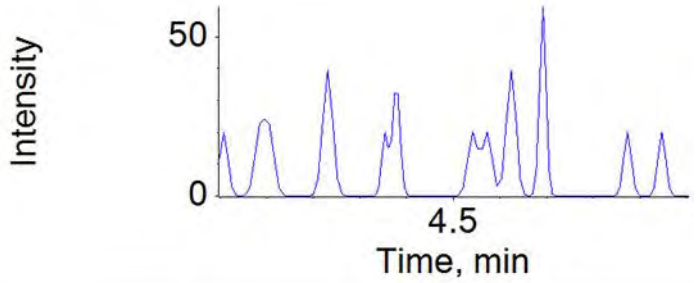
Component: PFHpA_2
Secondary Mass: 363.0 / 169.0



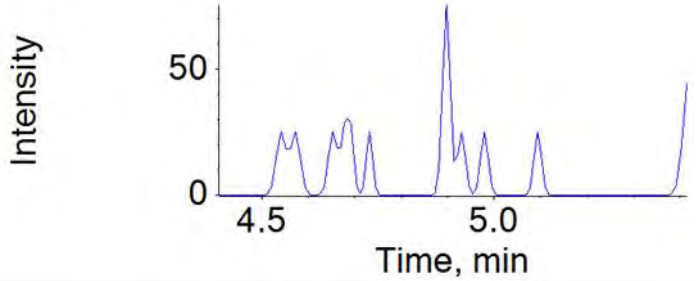
Component: PFHxS
Primary Mass: 399.0 / 80.0



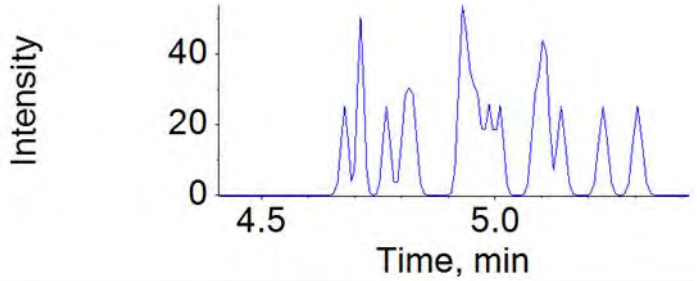
Component: PFHxS_2
Secondary Mass: 399.0 / 99.0



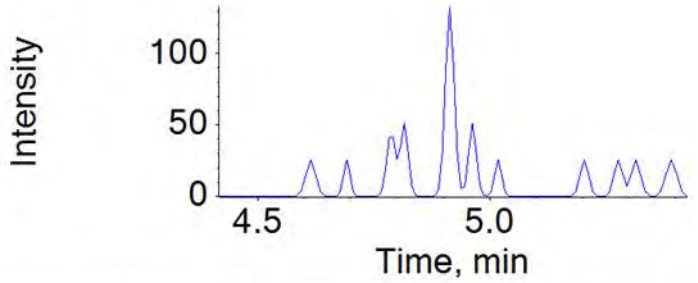
Component: 6:2-FTS
Primary Mass: 427.0 / 407.0



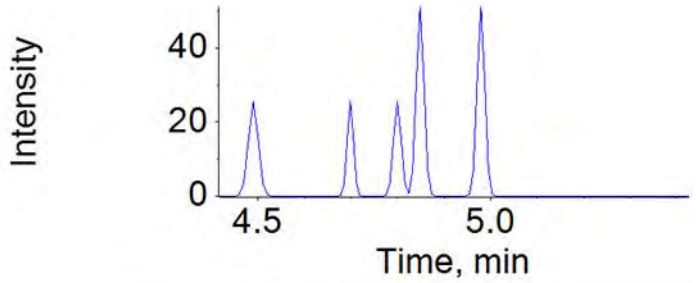
Component: 6:2 FTS_2
Secondary Mass: 427.0 / 81.0



Component: PFHpS
Primary Mass: 449.0 / 80.0



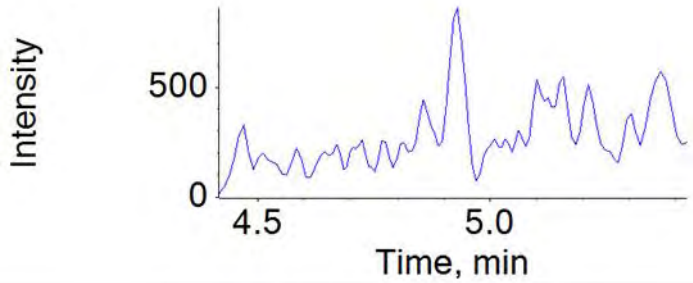
Component: PFHpS_2
Secondary Mass: 449.0 / 99.0



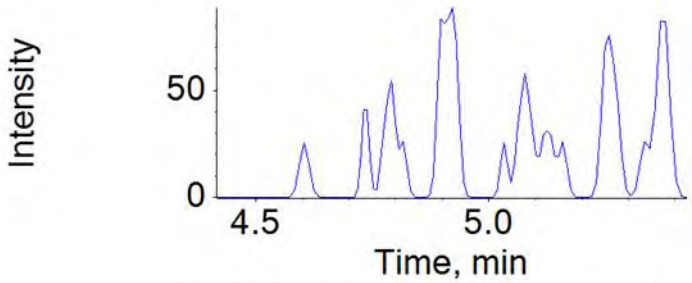
APPROVED
By JPT at 8:42 am, 11/20/18

REVIEWED
By HMK at 8:47 am, 11/20/18

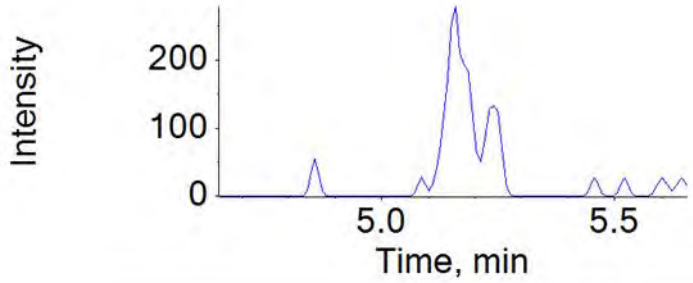
Component: PFOA
Primary Mass: 413.0 / 369.0



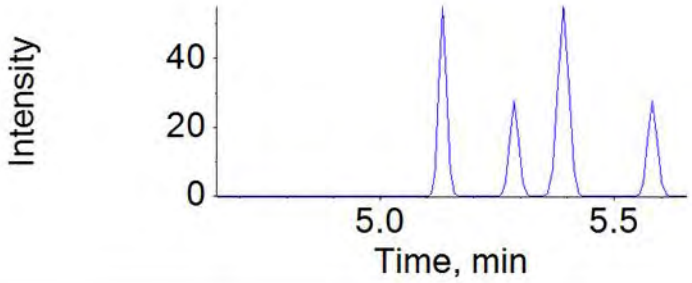
Component: PFOA_2
Secondary Mass: 413.0 / 169.0



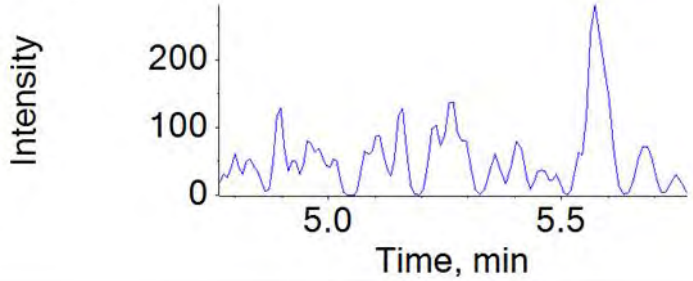
Component: PFOS
Primary Mass: 499.0 / 80.0



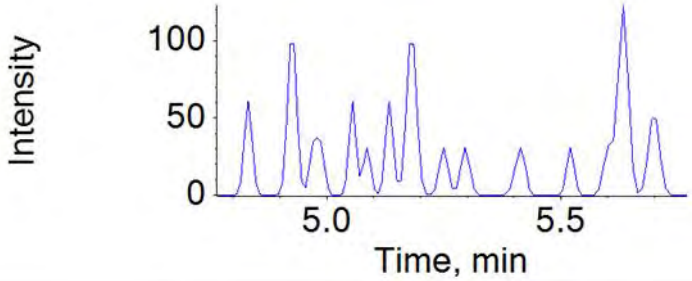
Component: PFOS_2
Secondary Mass: 499.0 / 99.0



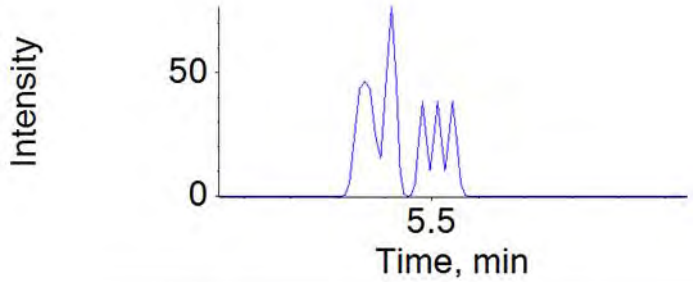
Component: PFNA
Primary Mass: 463.0 / 419.0



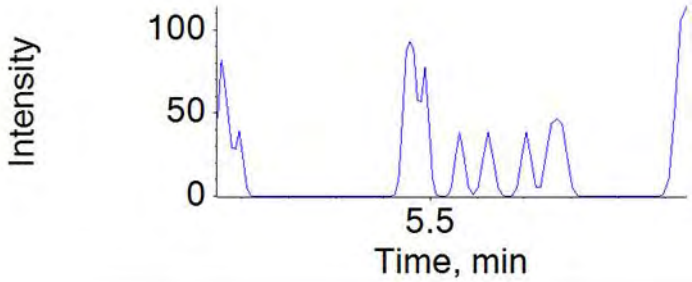
Component: PFNA_2
Secondary Mass: 463.0 / 169.0



Component: PFNS
Primary Mass: 549.0 / 80.0



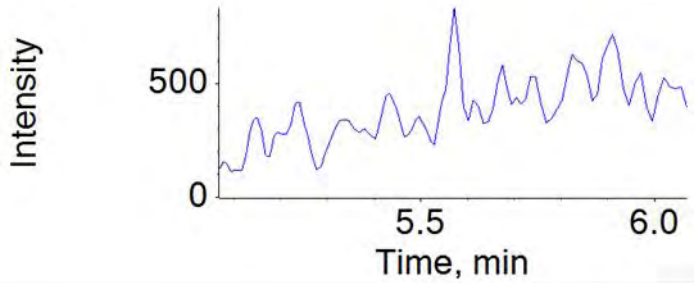
Component: PFNS_2
Secondary Mass: 549.0 / 99.0



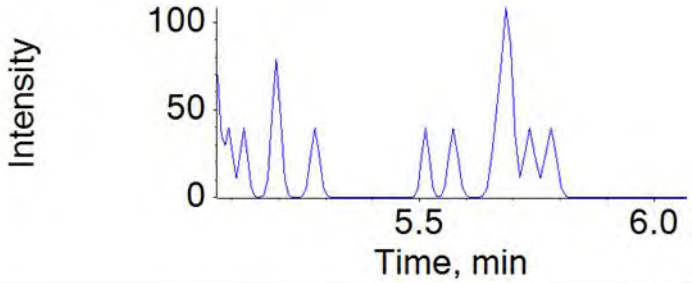
APPROVED
By JPT at 8:42 am, 11/20/18

REVIEWED
By HMK at 8:47 am, 11/20/18

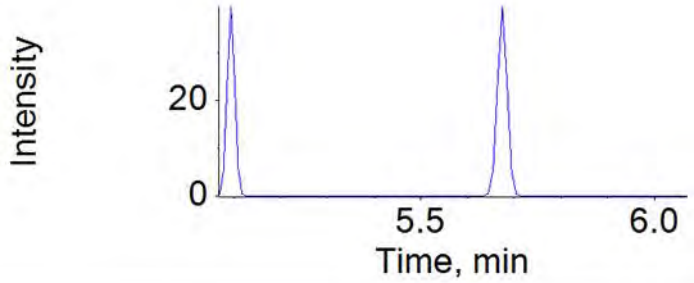
Component: PFDA
Primary Mass: 513.0 / 469.0



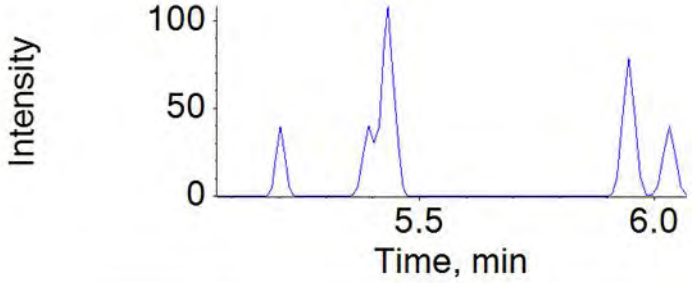
Component: PFDA_2
Secondary Mass: 513.0 / 169.0



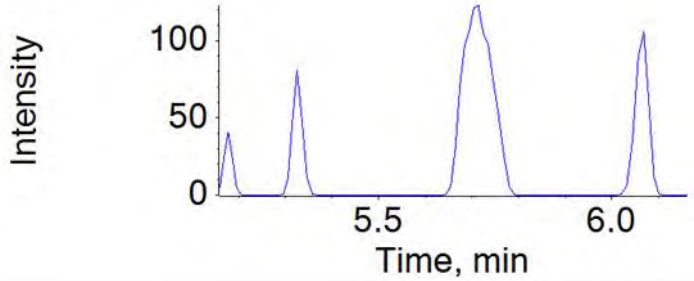
Component: 8:2-FTS
Primary Mass: 527.0 / 507.0



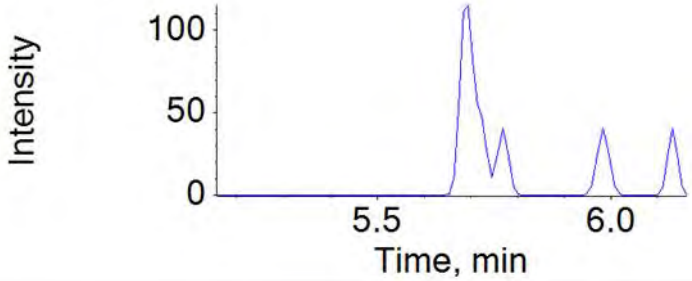
Component: 8:2 FTS_2
Secondary Mass: 527.0 / 81.0



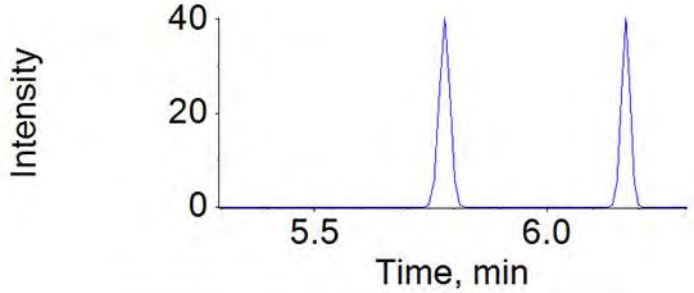
Component: NMeFOSAA
Primary Mass: 570.0 / 419.0



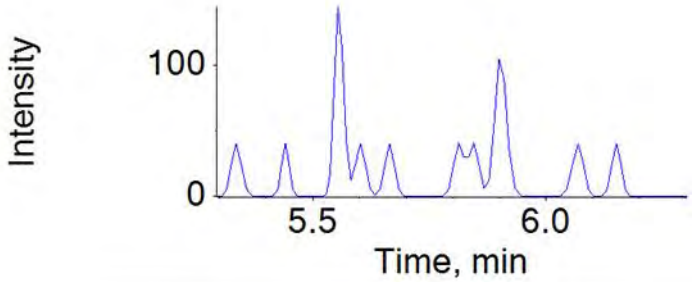
Component: NMeFOSAA_2
Secondary Mass: 570.0 / 483.0



Component: PFDS
Primary Mass: 599.0 / 80.0



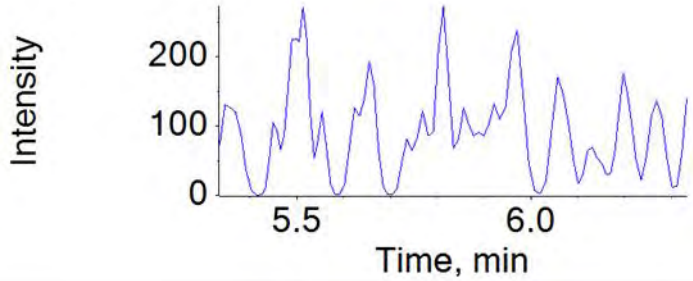
Component: PFDS_2
Secondary Mass: 599.0 / 99.0



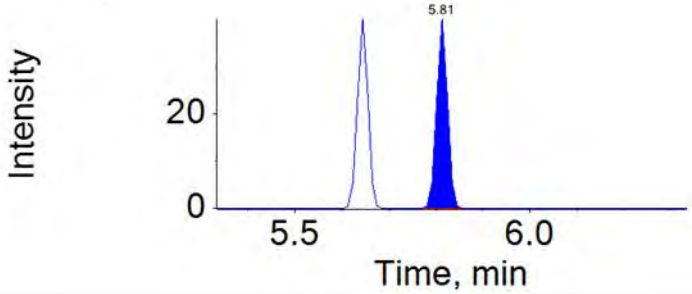
APPROVED
By JPT at 8:42 am, 11/20/18

REVIEWED
By HMK at 8:47 am, 11/20/18

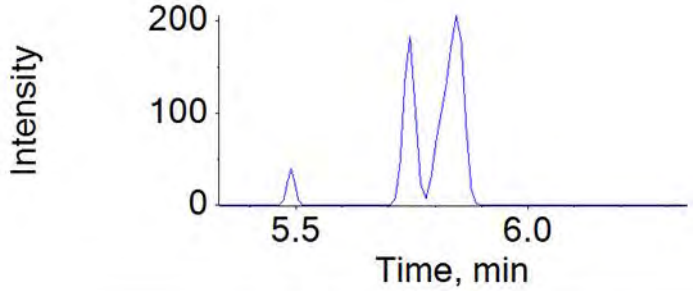
Component: PFUnDA
Primary Mass: 563.0 / 519.0



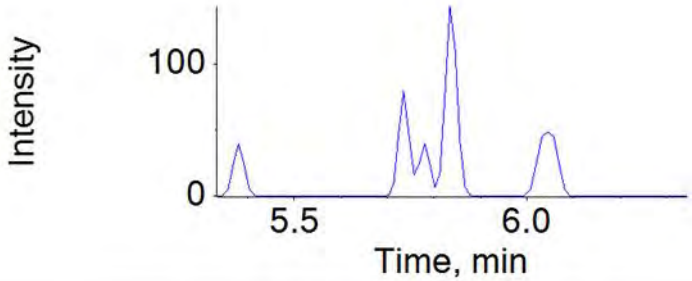
Component: PFUnDA_2
Secondary Mass: 563.0 / 169.0



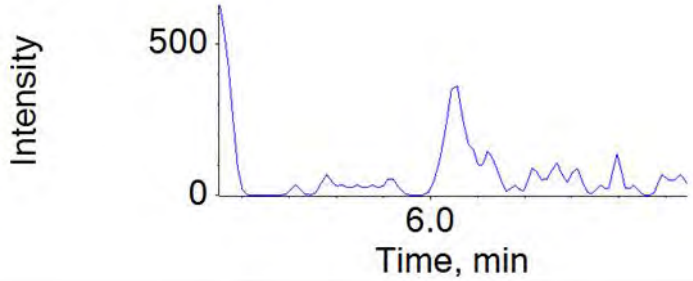
Component: NEtFOSAA
Primary Mass: 584.0 / 419.0



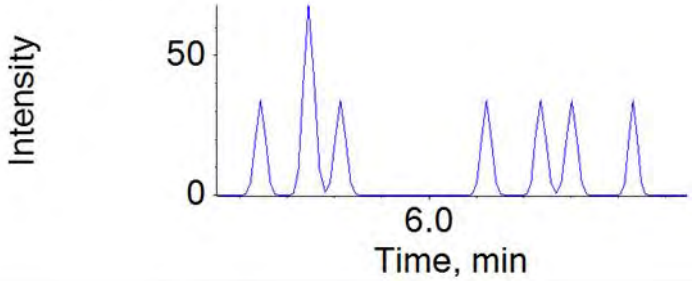
Component: NEtFOSAA_2
Secondary Mass: 584.0 / 526.0



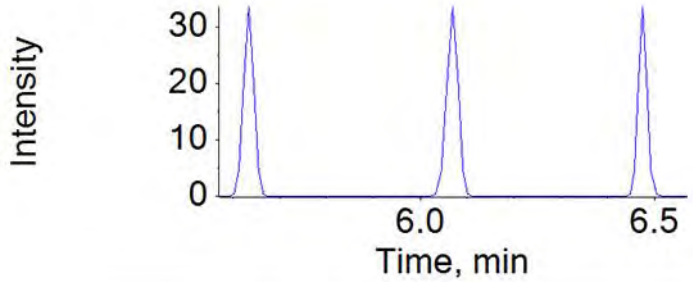
Component: PFDoDA
Primary Mass: 613.0 / 569.0



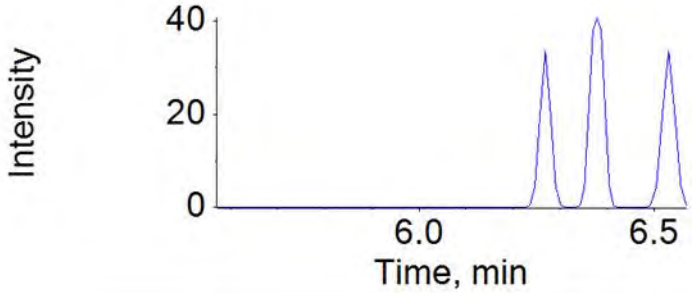
Component: PFDoDA_2
Secondary Mass: 613.0 / 169.0



Component: 10:2-FTS
Primary Mass: 627.0 / 607.0



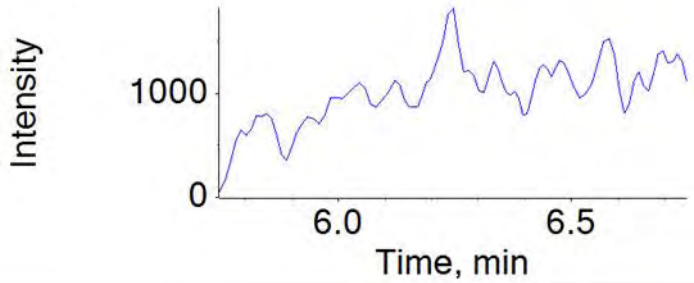
Component: 10:2 FTS_2
Secondary Mass: 627.0 / 81.0



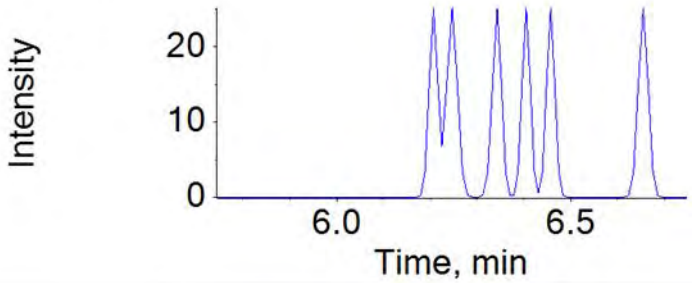
APPROVED
By JPT at 8:42 am, 11/20/18

REVIEWED
By HMK at 8:47 am, 11/20/18

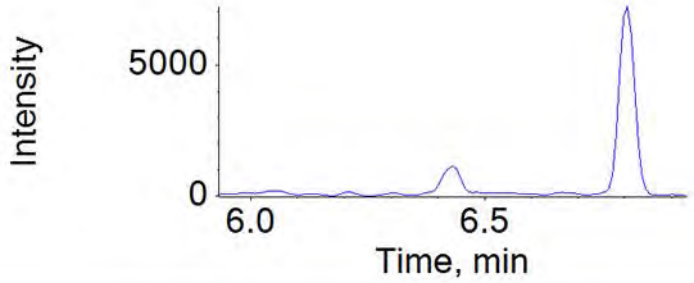
Component: PFTrDA
Primary Mass: 663.0 / 619.0



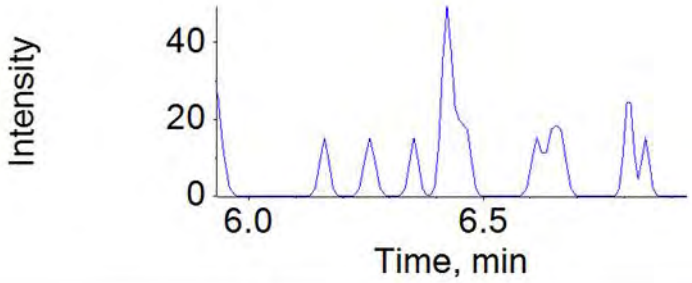
Component: PFTrDA_2
Secondary Mass: 663.0 / 169.0



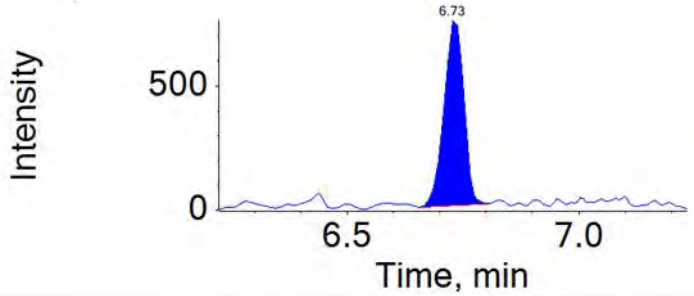
Component: PFTeDA
Primary Mass: 713.0 / 669.0



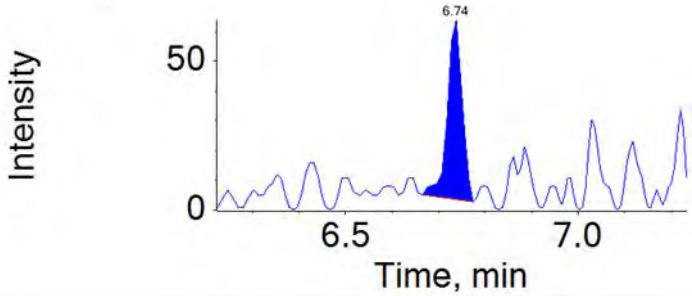
Component: PFTeDA_2
Secondary Mass: 713.0 / 169.0



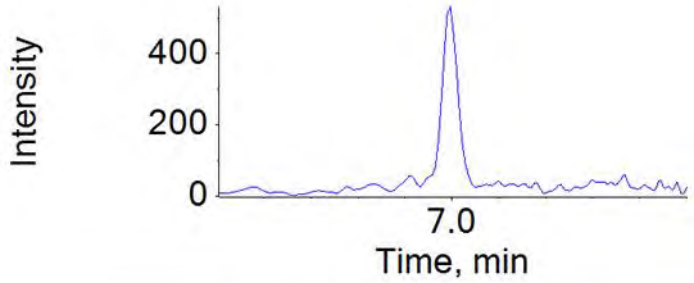
Component: PFHxDA
Primary Mass: 813.0 / 769.0



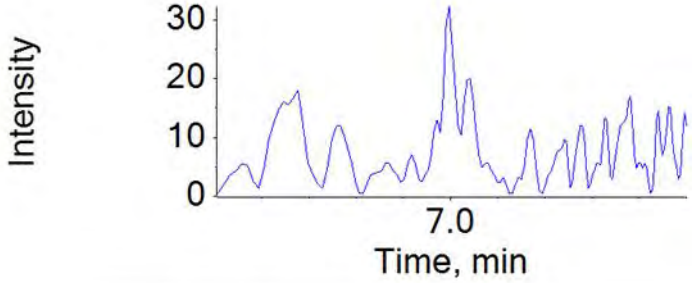
Component: PFHxDA_2
Secondary Mass: 813.0 / 169.0



Component: PFODA
Primary Mass: 913.0 / 869.0



Component: PFODA_2
Secondary Mass: 913.0 / 169.0



APPROVED
By JPT at 8:42 am, 11/20/18

REVIEWED
By HMK at 8:47 am, 11/20/18

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LC-MS/MS
DOD Analysis Report

Printed: 1/10/2019 3:20:00 PM
Template: DOD-Sample-18JUN22.docx

ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM
Result Table: 18NOV12DCAL_Updated 1/10/2019 3:19:00 PM
Acquisition Method: 18AUG13_3uL.dam

Sample Name:	ICV			**Data File:**		18NOV12DCAL-50.wiff
Sample ID:	ICVMODX1833G			**Acquis Date:**		2018-11-12T16:18:11
Sample Type:	Quality Control			**Instrument:**		LM27631
Vial Position:	10			**Acquis Method:**		18AUG13_3uL.dam
Injection Vol:	3.00			**Result Table:**		18NOV12DCAL_Updated
QMethod File:	18AUG20QM			**ICAL Name:**		18NOV12DCAL
Batch Number:	N\A			**Operator:**		MCD7824
Sample Wt.:	1.00000			**Dilution Factor:**		1.00
Sample Vol.:	1.000			**Prep Factor:**		1.000

Injection Standard Peak Table

Injection Standard Area Reference File: 18NOV12DCAL-44

Injection Standard Name	Inj Std Conc	Injection Std Peak Area	Rreference Injection Standard Area	Injection Std %Diff	Injection Std %Diff Limit	Injection Std %Diff OOS
13C3-PFBA	5.0	655209.3	659926.2	-1	50	
13C2-PFOA	5.0	452726.2	450219.7	1	50	
13C4-PFOS	4.8	253010.3	249205.8	2	50	
13C2-PFDA	5.0	277002.7	278743.9	-1	50	

Extraction Standard Peak Table

Extraction Standard Name	Ext Std Area	Inj Std Name	Inj Std Area	Area Ratio	Ext Std Conc	Ext Std Result	Ext Std %REC	Ext Std %REC Limit	Ext Std OOS
E13C4-PFBA	715834.4	13C3-PFBA	655209.3	1.093	5.000	4.898	98	70-130	
E13C5-PFPeA	699482.2	13C3-PFBA	655209.3	1.068	5.000	4.788	96	70-130	
E13C3-PFBS	394903.4	13C3-PFBA	655209.3	0.603	4.650	4.255	91	70-130	
E13C2-4:2-FTS	47297.3	13C2-PFOA	452726.2	0.104	4.670	4.653	100	70-130	
E13C5-PFHxA	613579.4	13C2-PFOA	452726.2	1.355	5.000	4.896	98	70-130	
E13C3-PFHxS	304897.8	13C2-PFOA	452726.2	0.673	4.730	4.621	98	70-130	
E13C4-PFHpA	485394.9	13C2-PFOA	452726.2	1.072	5.000	4.830	97	70-130	
E13C2-6:2-FTS	31532.8	13C2-PFOA	452726.2	0.070	4.750	4.660	98	70-130	
E13C8-PFOA	843573.3	13C2-PFOA	452726.2	1.863	5.000	5.134	103	70-130	
E13C8-PFOS	266211.4	13C4-PFOS	253010.3	1.052	4.780	4.662	98	70-130	
E13C9-PFNA	458821.5	13C4-PFOS	253010.3	1.813	5.000	5.056	101	70-130	
E13C6-PFDA	590290.3	13C2-PFDA	277002.7	2.131	5.000	4.973	99	70-130	
E13C2-8:2-FTS	22188.9	13C2-PFDA	277002.7	0.080	4.790	3.995	83	70-130	
E13C8-PFOSA	587080.1	13C2-PFDA	277002.7	2.119	5.000	4.699	94	70-130	
Ed3-NMeFOSAA	70133.2	13C2-PFDA	277002.7	0.253	5.000	4.570	91	70-130	
E13C7-PFUnDA	228363.9	13C2-PFDA	277002.7	0.824	5.000	4.786	96	70-130	
Ed5-NEtFOSAA	59551.3	13C2-PFDA	277002.7	0.215	5.000	4.548	91	70-130	
E13C2-PFDoDA	495858.1	13C2-PFDA	277002.7	1.790	5.000	4.648	93	70-130	
Ed7-NMePFOSAE	299185.4	13C2-PFDA	277002.7	1.080	5.000	4.674	93	70-130	
Ed3-NMePFOSA	75186.9	13C2-PFDA	277002.7	0.271	5.000	4.931	99	70-130	
Ed9-NEtPFOSAE	255149.8	13C2-PFDA	277002.7	0.921	5.000	4.791	96	70-130	
Ed5-NEtPFOSA	53596.2	13C2-PFDA	277002.7	0.193	5.000	4.539	91	70-130	
E13C2-PFTeDA	365300.2	13C2-PFDA	277002.7	1.319	5.000	4.630	93	70-130	

APPROVED
By MCD at 3:23 pm, 1/10/19

REVIEWED
By ucmr at 3:21 pm, 1/25/19

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL_Updated 1/10/2019 3:19:00 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

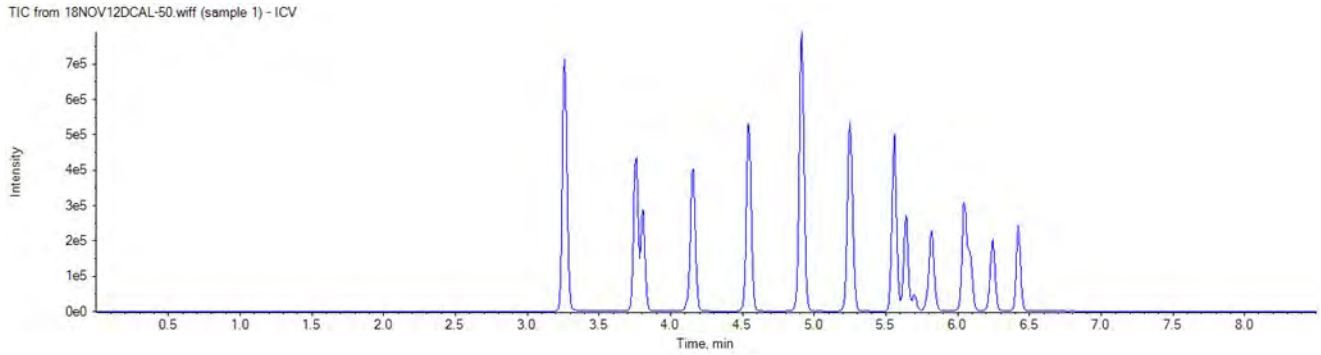
Analyte Quantitation Peak Table

Sample Name: ICV **Instrument Name:** LM27631 **File Name:** 18NOV12DCAL-50.wiff

Sample Wt	Sample Vol	Dilution Factor	PrepFactor
1.00000	1.000	1.00	1.000

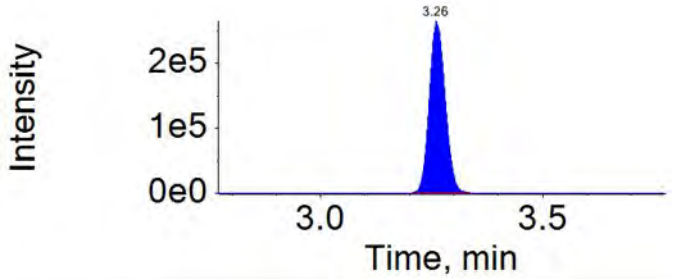
Analyte Name	RT	RRT	Analyte Area Response	E	Int Typ	ES Name	ES RT	ES Area Response	Area Ratio	Sample Result (ng/g)
PFBA	3.26	1.000	270820.6		A	13C4-PFBA	3.26	715834.4	0.378	2.096
PFPeA	3.76	1.000	265646.8		A	13C5-PFPeA	3.76	699482.2	0.380	2.198
PFBS	3.80	1.000	150059.6		A	13C3-PFBS	3.81	394903.4	0.380	1.808
4:2-FTS	N/A	N/A	N/A		A	13C2-4:2-FTS	4.12	47297.3	N/A	
PFHxA	4.15	1.000	328694.3		A	13C5-PFHxA	4.15	613579.4	0.536	2.237
PFPeS	N/A	N/A	N/A		A	13C3-PFBS	3.81	394903.4	N/A	
PFHpA	4.54	1.000	316975.3		A	13C4-PFHpA	4.54	485394.9	0.653	2.165
PFHxS	4.55	1.000	115564.2		A	13C3-PFHxS	4.55	304897.8	0.379	1.838
6:2-FTS	N/A	N/A	N/A		A	13C2-6:2-FTS	4.90	31532.8	N/A	
PFHpS	4.91	1.080	118318.7		A	13C3-PFHxS	4.55	304897.8	0.388	2.043
PFOA	4.91	1.000	332094.4		A	13C8-PFOA	4.91	843573.3	0.394	2.103
PFOS	5.24	1.000	100952.5		M	13C8-PFOS	5.24	266211.4	0.379	1.658
PFNA	5.26	1.000	271240.4		A	13C9-PFNA	5.26	458821.5	0.591	2.132
PFNS	N/A	N/A	N/A		A	13C8-PFOS	5.24	266211.4	N/A	
PFDA	5.56	1.000	224279.7		A	13C6-PFDA	5.56	590290.3	0.380	2.014
8:2-FTS	N/A	N/A	N/A		A	13C2-8:2-FTS	5.56	22188.9	N/A	
PFOSA	N/A	N/A	N/A		A	13C8-PFOSA	5.64	587080.1	N/A	
NMeFOSAA	5.70	1.000	30591.9		A	d3-NMeFOSAA	5.70	70133.2	0.436	2.465
PFDS	5.79	1.110	52860.9		M	13C8-PFOS	5.24	266211.4	0.199	1.799
PFUnDA	5.82	1.000	183511.3		A	13C7-PFUnDA	5.82	228363.9	0.804	2.101
NEtFOSAA	5.83	1.000	26149.3		A	d5-NEtFOSAA	5.83	59551.3	0.439	2.302
PFDoDA	6.05	1.000	185295.0		A	13C2-PFDoDA	6.05	495858.1	0.374	1.903
10:2-FTS	N/A	N/A	N/A		A	13C2-8:2-FTS	5.56	22188.9	N/A	
NMePFOSAE	N/A	N/A	N/A		A	d7-NMePFOSAE	6.08	299185.4	N/A	
NMePFOSA	N/A	N/A	N/A		A	d3-NMePFOSA	6.10	75186.9	N/A	
PFDoS	N/A	N/A	N/A		A	13C8-PFOS	5.24	266211.4	N/A	
NEtPFOSAE	N/A	N/A	N/A		A	d9-NEtPFOSAE	6.24	255149.8	N/A	
NEtPFOSA	N/A	N/A	N/A		A	d5-NEtPFOSA	6.26	53596.2	N/A	
PFTrDA	6.25	1.030	165153.1		A	13C2-PFDoDA	6.05	495858.1	0.333	2.102
PFTeDA	6.42	1.000	135651.0		A	13C2-PFTeDA	6.42	365300.2	0.371	2.082
PFHxDA	N/A	N/A	N/A		A	13C2-PFTeDA	6.42	365300.2	N/A	
PFODA	N/A	N/A	N/A		A	13C2-PFTeDA	6.42	365300.2	N/A	

Total Ion Chromatogram

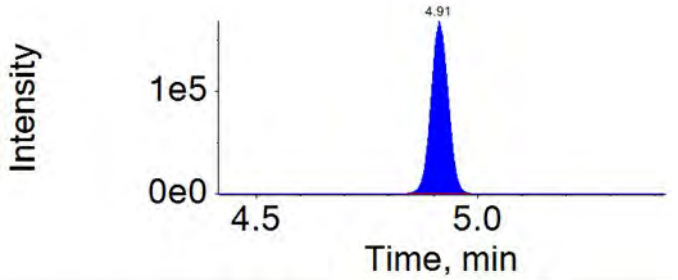


ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL_Updated 1/10/2019 3:19:00 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

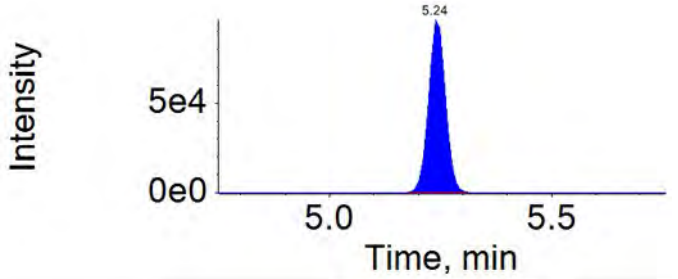
Injection Standard: 13C3-PFBA
216.0 / 172.0



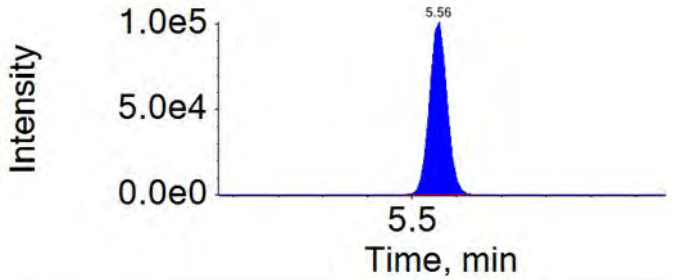
Injection Standard: 13C2-PFOA
415.0 / 370.0



Injection Standard: 13C4-PFOS
503.0 / 80.0

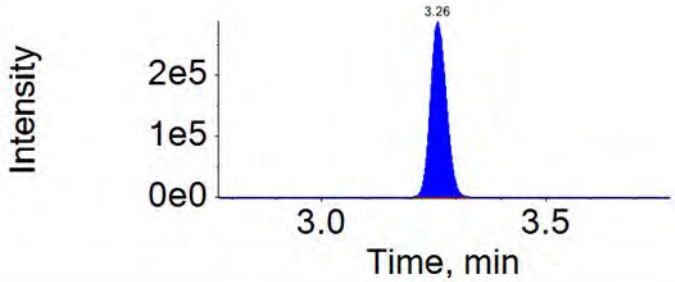


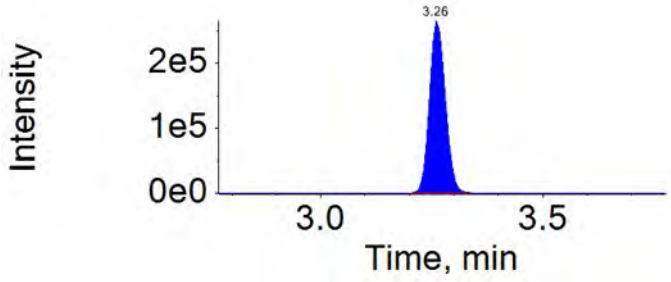
Injection Standard: 13C2-PFDA
515.0 / 470.0



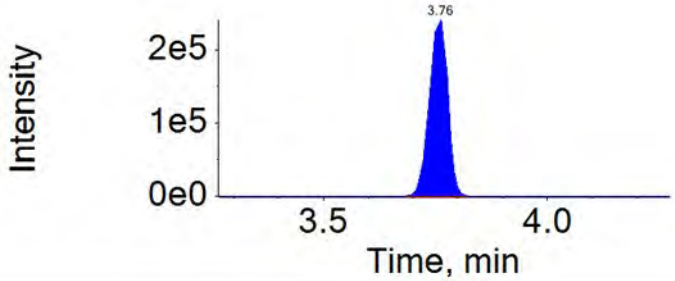
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL_Updated 1/10/2019 3:19:00 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

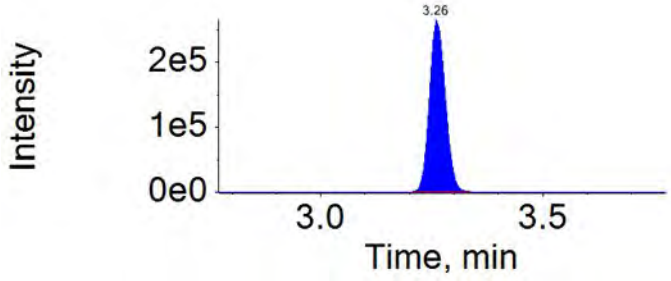
Extraction Standard: E13C4-PFBA	Injection Standard: 13C3-PFBA
217.0 / 172.0	216.0 / 172.0



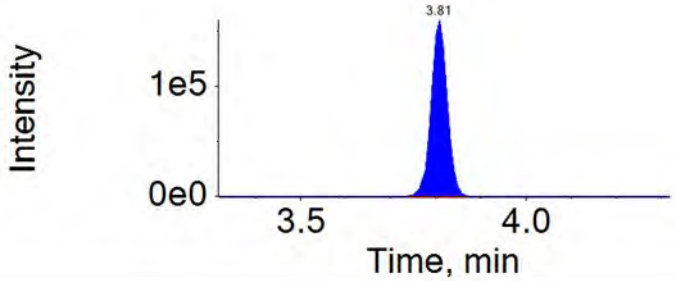


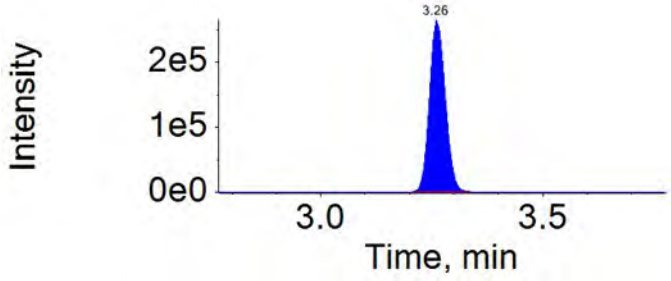
Extraction Standard: E13C5-PFPeA	Injection Standard: 13C3-PFBA
268.0 / 223.0	216.0 / 172.0



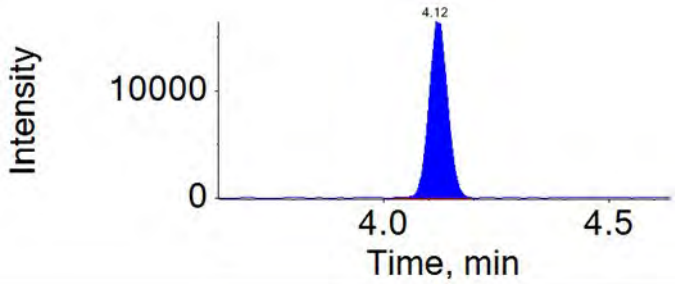


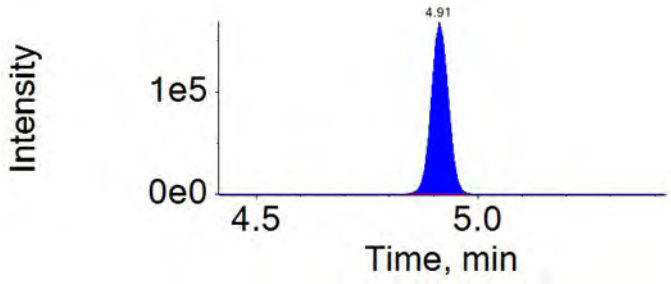
Extraction Standard: E13C3-PFBS	Injection Standard: 13C3-PFBA
302.0 / 80.0	216.0 / 172.0





Extraction Standard: E13C2-4:2-FTS	Injection Standard: 13C2-PFOA
329.0 / 81.0	415.0 / 370.0



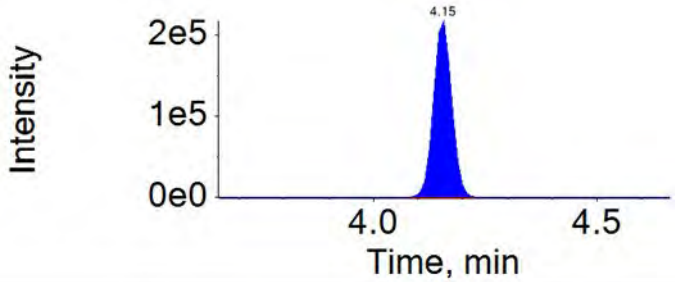


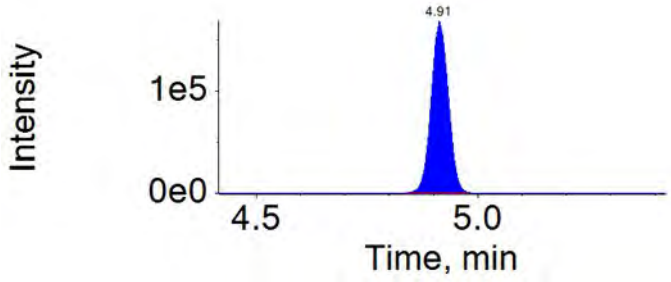
APPROVED
By MCD at 3:23 pm, 1/10/19

REVIEWED
By ucmr at 3:21 pm, 1/25/19

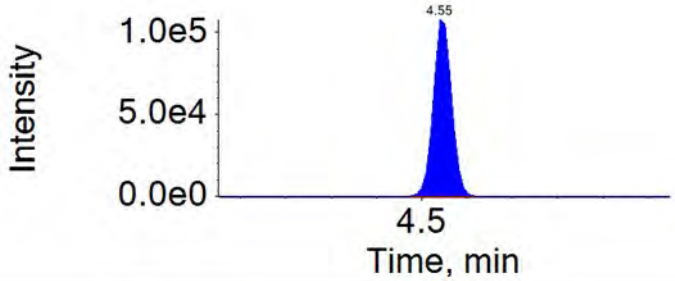
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL_Updated 1/10/2019 3:19:00 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

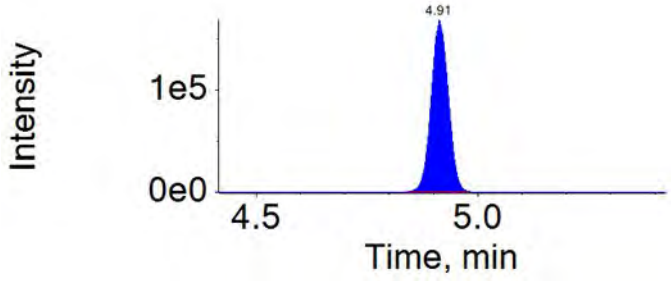
Extraction Standard: E13C5-PFHxA	Injection Standard: 13C2-PFOA
318.0 / 273.0	415.0 / 370.0



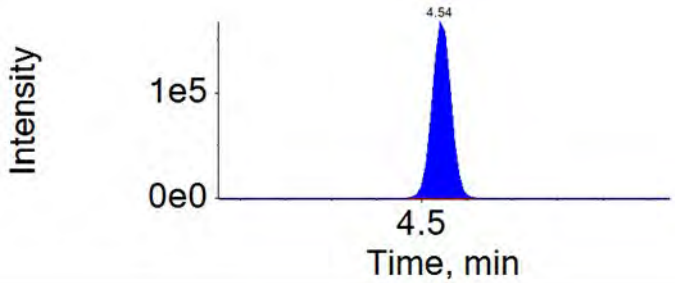


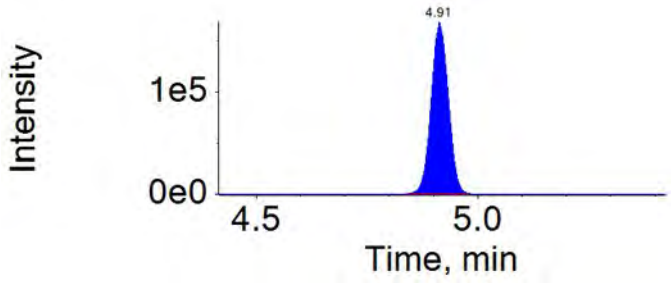
Extraction Standard: E13C3-PFHxS	Injection Standard: 13C2-PFOA
402.0 / 80.0	415.0 / 370.0



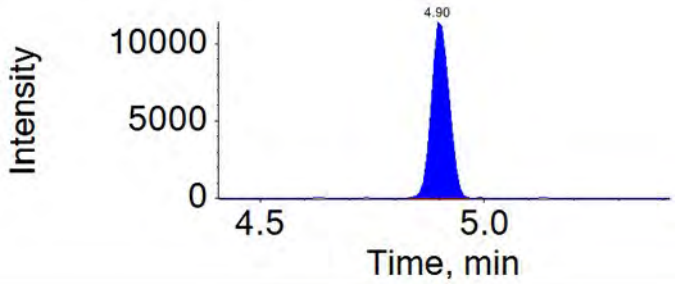


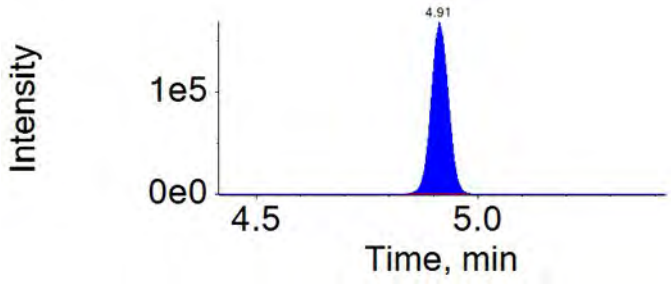
Extraction Standard: E13C4-PFHpA	Injection Standard: 13C2-PFOA
367.0 / 322.0	415.0 / 370.0





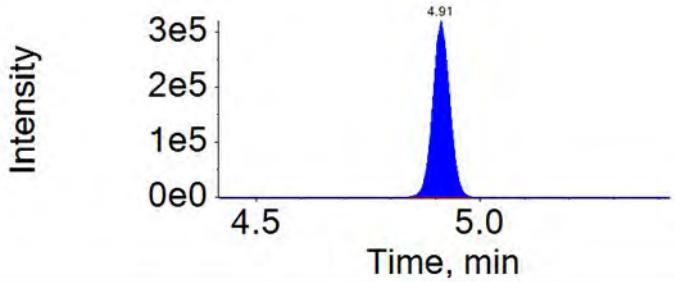
Extraction Standard: E13C2-6:2-FTS	Injection Standard: 13C2-PFOA
429.0 / 81.0	415.0 / 370.0

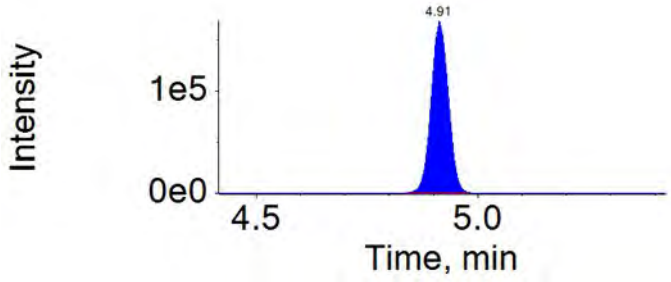




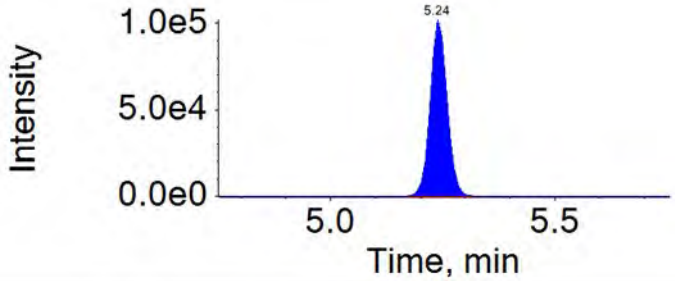
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL_Updated 1/10/2019 3:19:00 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

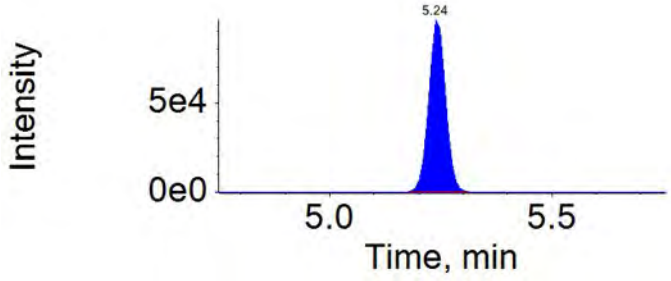
Extraction Standard: E13C8-PFOA	Injection Standard: 13C2-PFOA
421.0 / 376.0	415.0 / 370.0



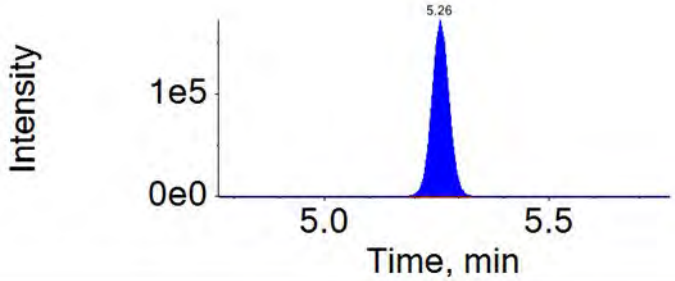


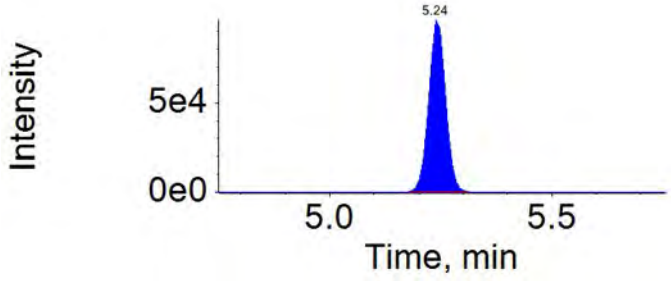
Extraction Standard: E13C8-PFOS	Injection Standard: 13C4-PFOS
507.0 / 80.0	503.0 / 80.0



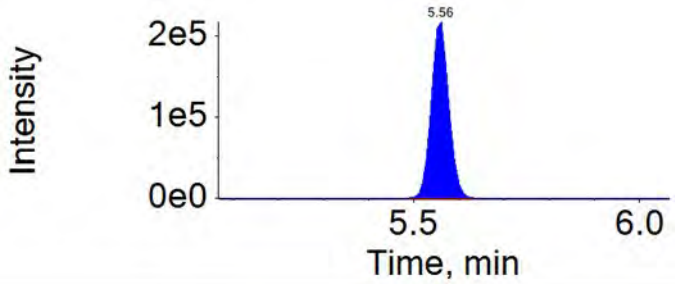


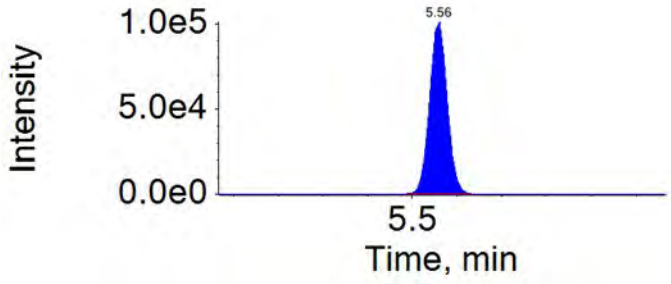
Extraction Standard: E13C9-PFNA	Injection Standard: 13C4-PFOS
472.0 / 427.0	503.0 / 80.0





Extraction Standard: E13C6-PFDA	Injection Standard: 13C2-PFDA
519.0 / 474.0	515.0 / 470.0





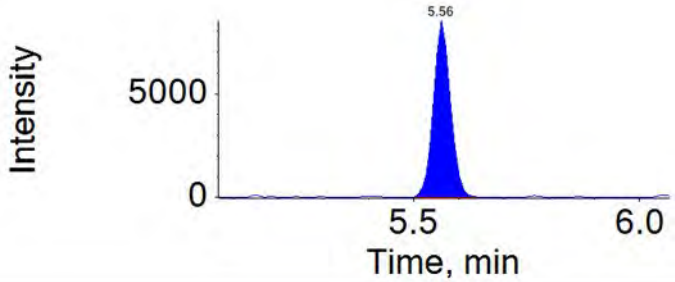
APPROVED
By MCD at 3:23 pm, 1/10/19

REVIEWED
By ucmr at 3:21 pm, 1/25/19

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL_Updated 1/10/2019 3:19:00 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

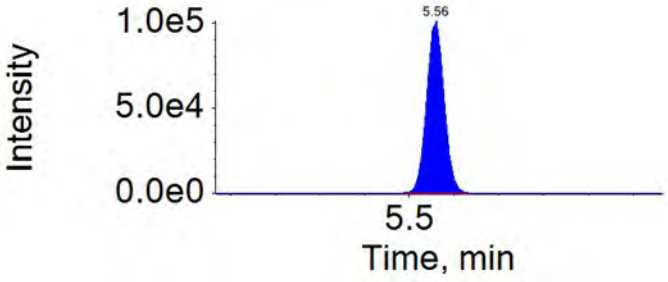
Extraction Standard: E13C2-8:2-FTS

529.0 / 81.0



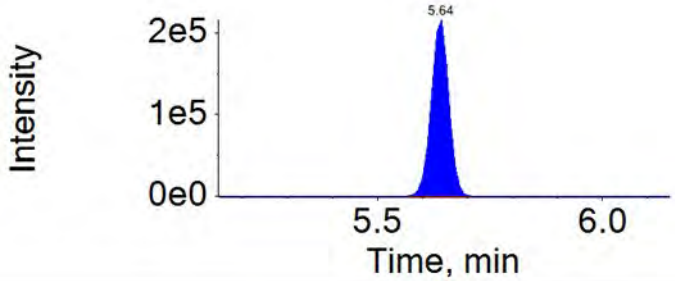
Injection Standard: 13C2-PFDA

515.0 / 470.0



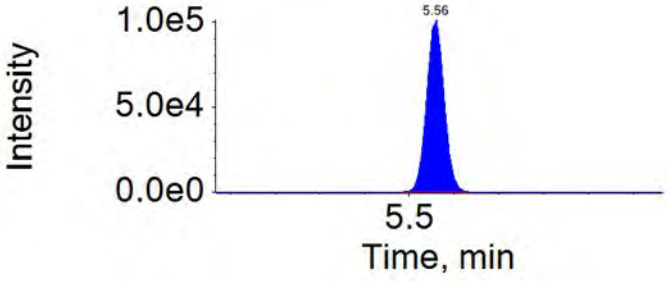
Extraction Standard: E13C8-PFOSA

506.0 / 78.0



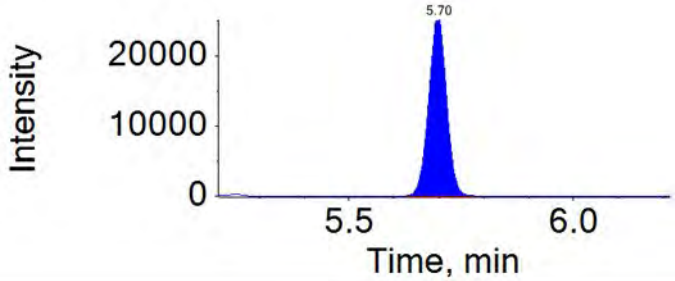
Injection Standard: 13C2-PFDA

515.0 / 470.0



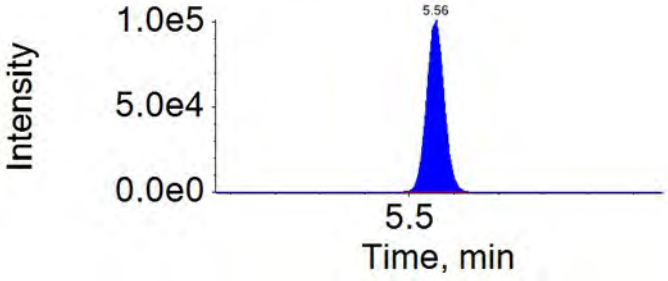
Extraction Standard: Ed3-NMeFOSAA

573.0 / 419.0



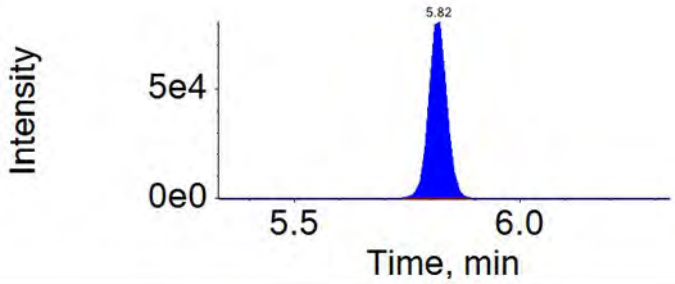
Injection Standard: 13C2-PFDA

515.0 / 470.0



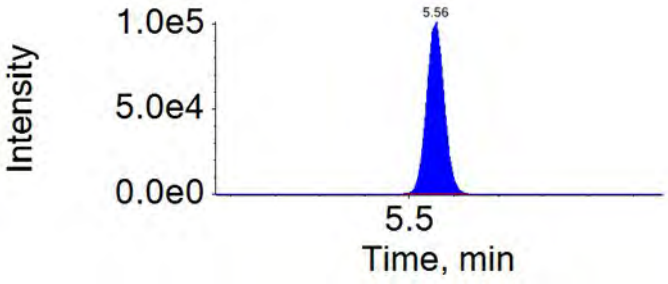
Extraction Standard: E13C7-PFUnDA

570.0 / 525.0



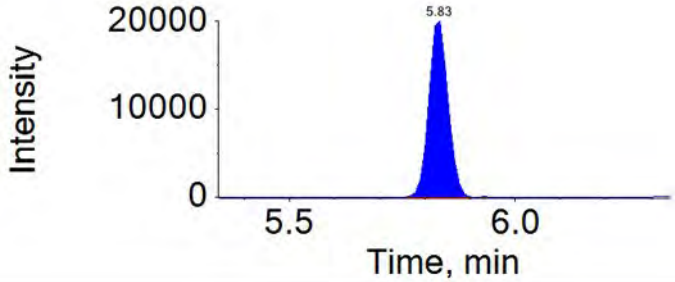
Injection Standard: 13C2-PFDA

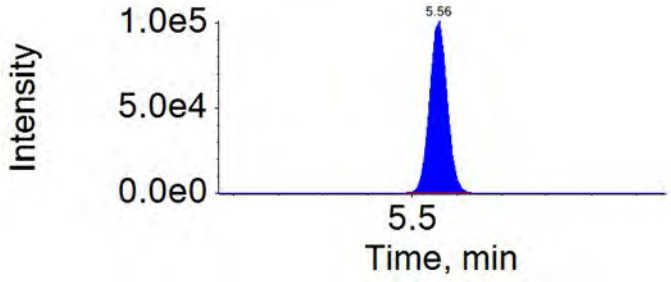
515.0 / 470.0



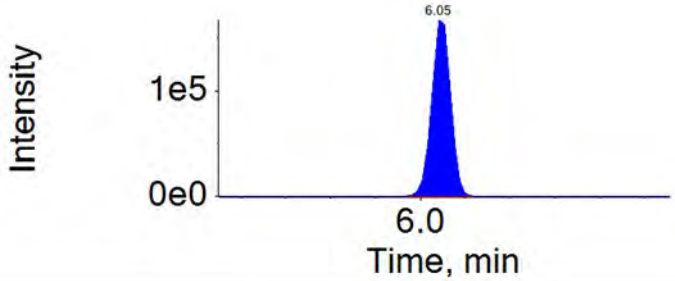
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL_Updated 1/10/2019 3:19:00 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

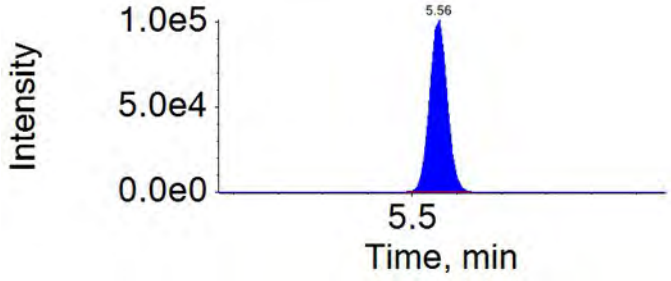
Extraction Standard: Ed5-NEtFOSAA	Injection Standard: 13C2-PFDA
589.0 / 419.0	515.0 / 470.0



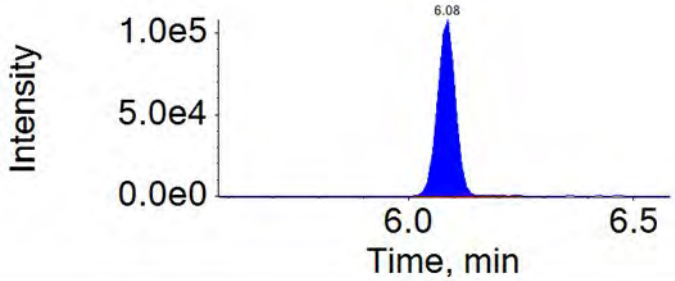


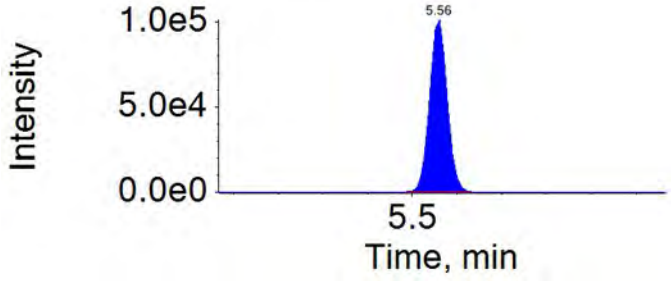
Extraction Standard: E13C2-PFDoDA	Injection Standard: 13C2-PFDA
615.0 / 570.0	515.0 / 470.0



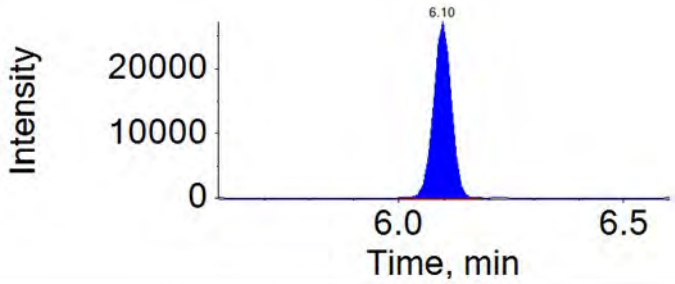


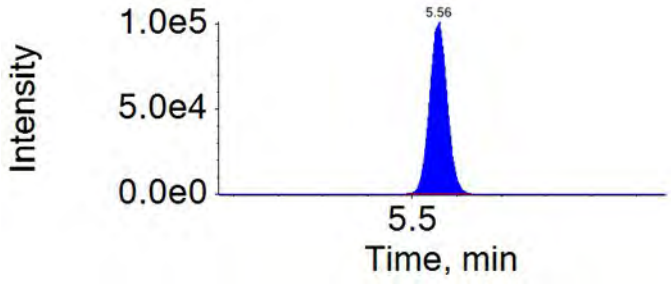
Extraction Standard: Ed7-NMePFOSAE	Injection Standard: 13C2-PFDA
623.0 / 59.0	515.0 / 470.0





Extraction Standard: Ed3-NMePFOSA	Injection Standard: 13C2-PFDA
515.0 / 169.0	515.0 / 470.0



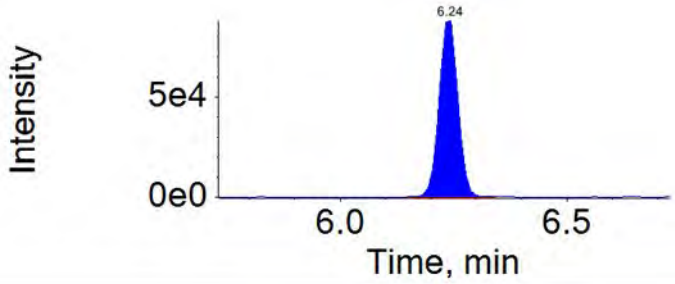


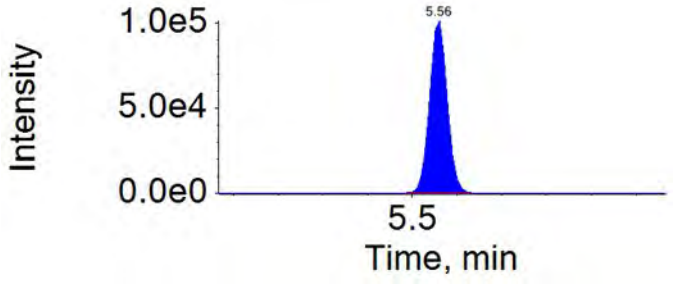
APPROVED
By MCD at 3:23 pm, 1/10/19

REVIEWED
By ucmr at 3:21 pm, 1/25/19

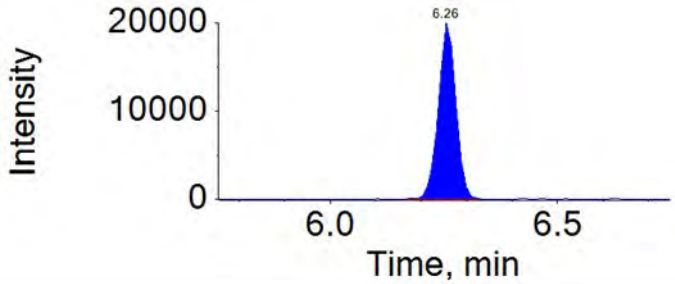
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL_Updated 1/10/2019 3:19:00 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

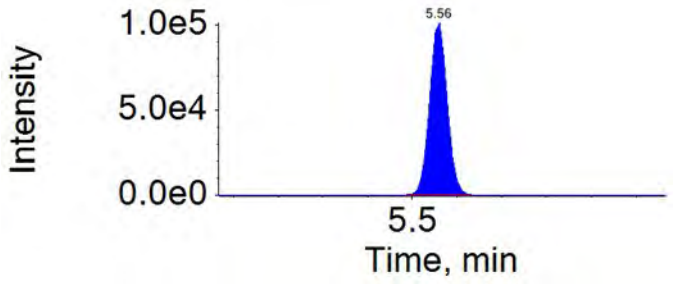
Extraction Standard: Ed9-NEtPFOSAE	Injection Standard: 13C2-PFDA
639.0 / 59.0	515.0 / 470.0



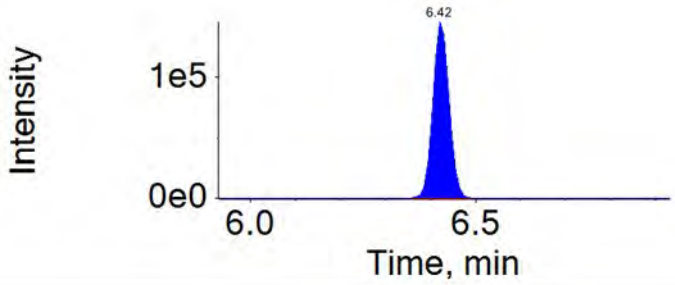


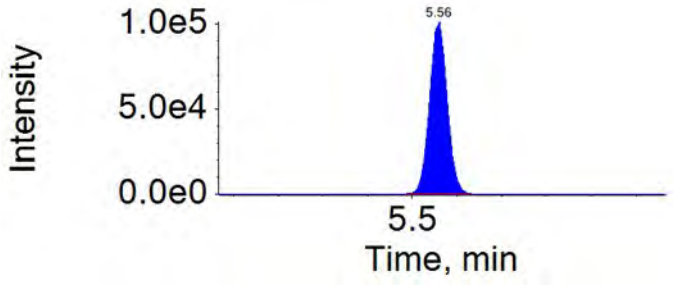
Extraction Standard: Ed5-NEtPFOSA	Injection Standard: 13C2-PFDA
531.0 / 169.0	515.0 / 470.0





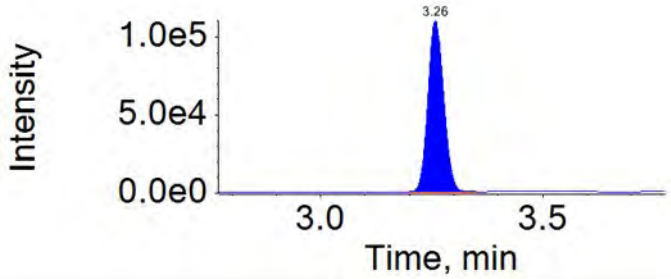
Extraction Standard: E13C2-PFTeDA	Injection Standard: 13C2-PFDA
715.0 / 670.0	515.0 / 470.0



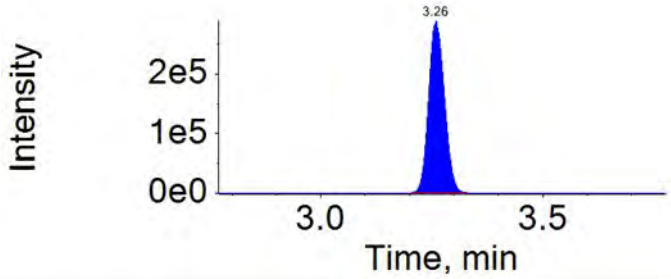


ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL_Updated 1/10/2019 3:19:00 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

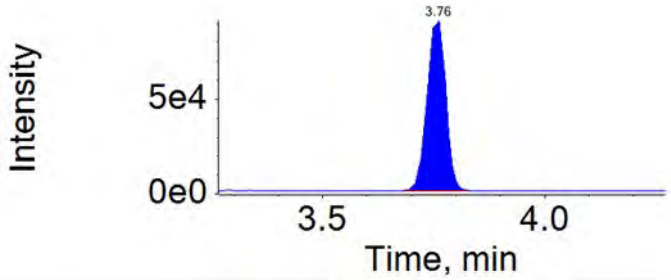
Analyte: PFBA
213.0 / 169.0



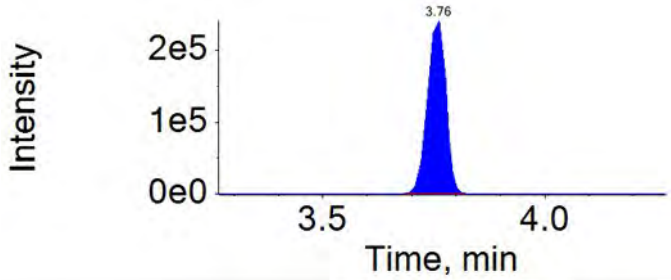
Extraction Standard: 13C4-PFBA
217.0 / 172.0



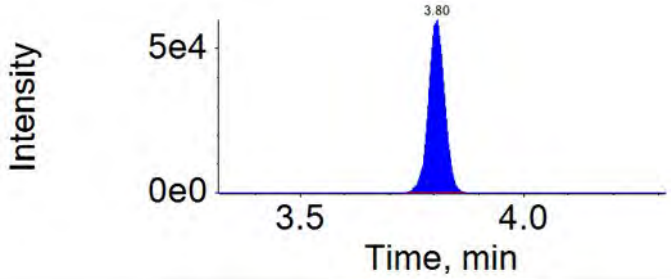
Analyte: PFPeA
263.0 / 219.0



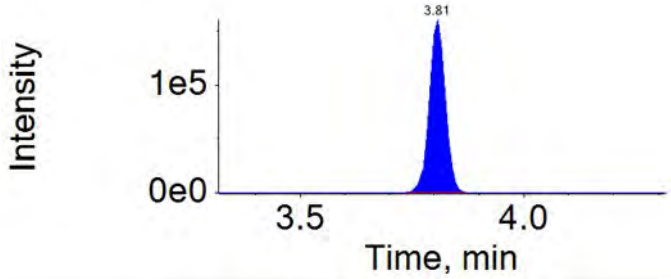
Extraction Standard: 13C5-PFPeA
268.0 / 223.0



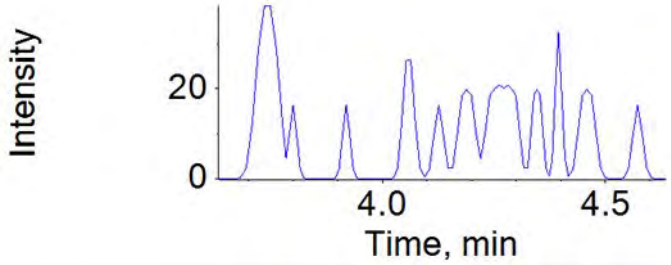
Analyte: PFBS
299.0 / 80.0



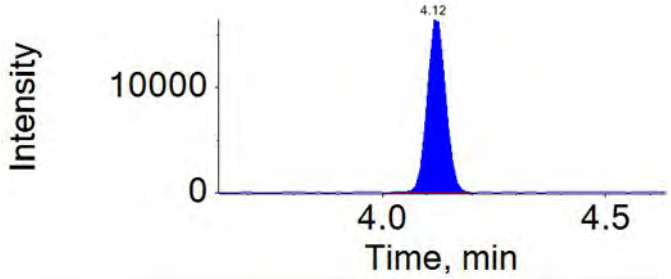
Extraction Standard: 13C3-PFBS
302.0 / 80.0



Analyte: 4:2-FTS
327.0 / 307.0

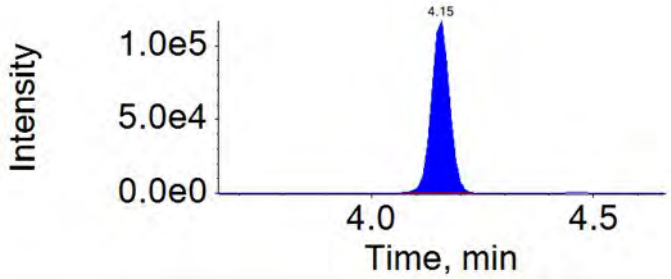


Extraction Standard: 13C2-4:2-FTS
329.0 / 81.0

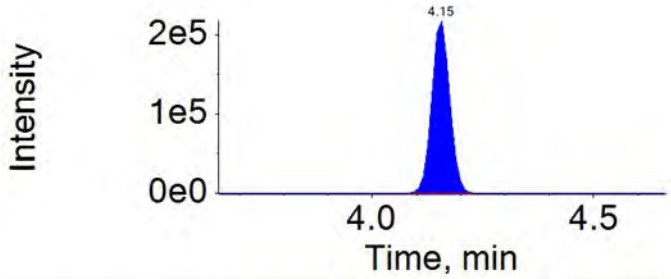


ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL_Updated 1/10/2019 3:19:00 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

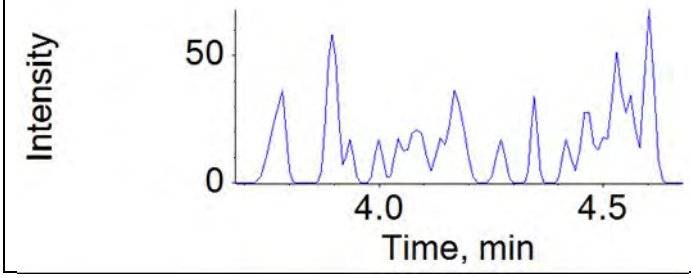
Analyte: PFHxA
313.0 / 269.0



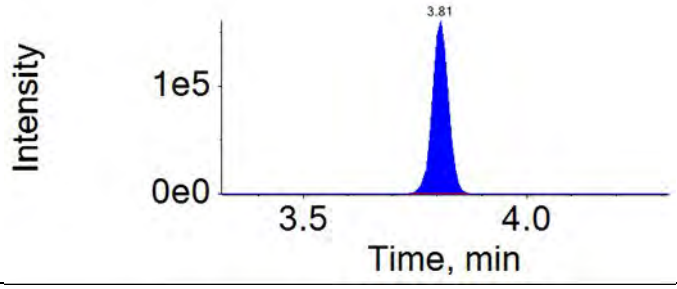
Extraction Standard: 13C5-PFHxA
318.0 / 273.0



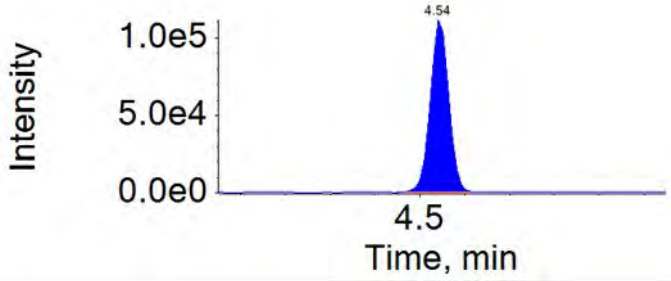
Analyte: PFPeS
349.0 / 80.0



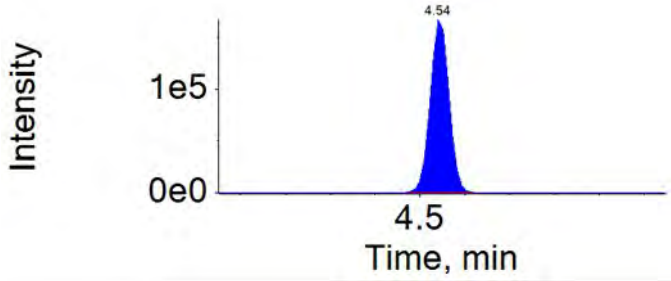
Extraction Standard: 13C3-PFBS
302.0 / 80.0



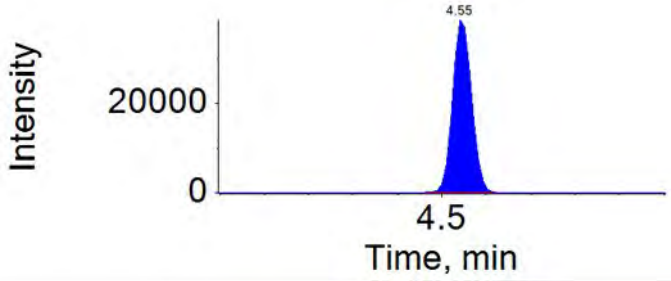
Analyte: PFHpA
363.0 / 319.0



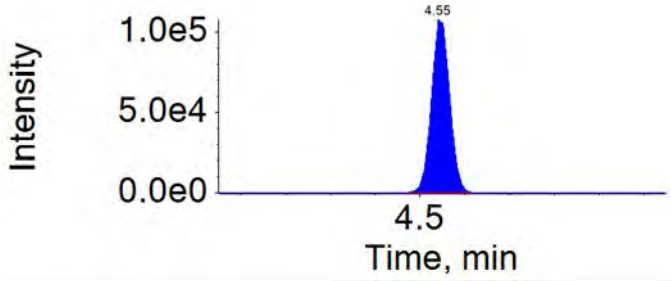
Extraction Standard: 13C4-PFHpA
367.0 / 322.0



Analyte: PFHxS
399.0 / 80.0

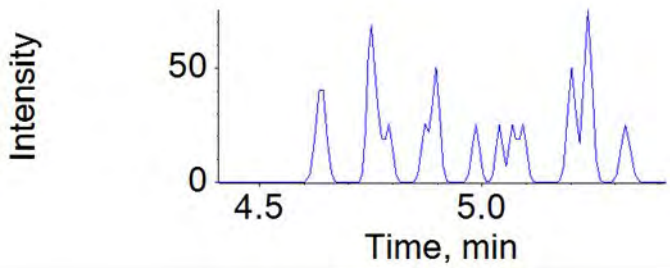


Extraction Standard: 13C3-PFHxS
402.0 / 80.0

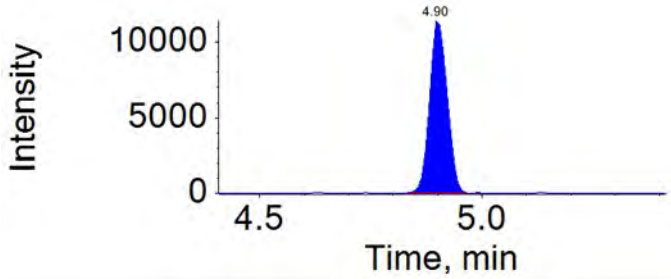


ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL_Updated 1/10/2019 3:19:00 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

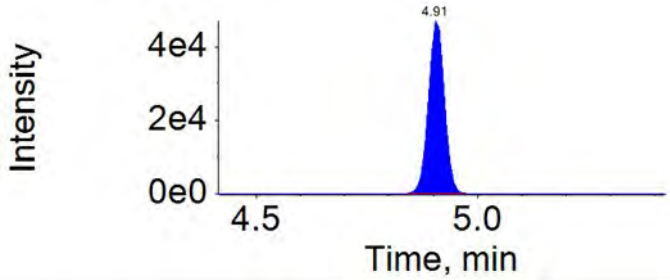
Analyte: 6:2-FTS
427.0 / 407.0



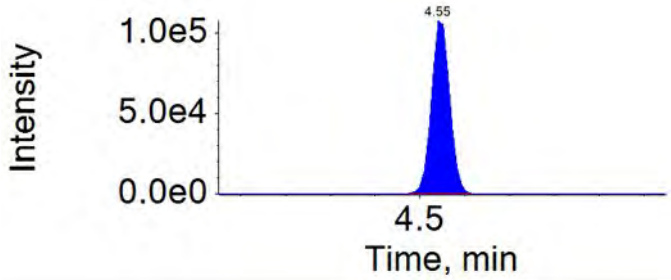
Extraction Standard: 13C2-6:2-FTS
429.0 / 81.0



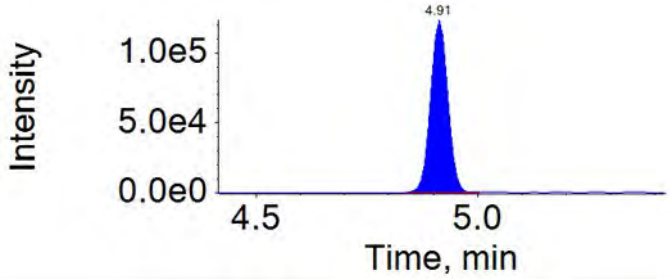
Analyte: PFHpS
449.0 / 80.0



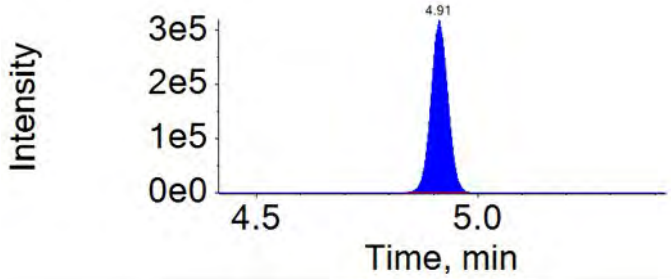
Extraction Standard: 13C3-PFHxS
402.0 / 80.0



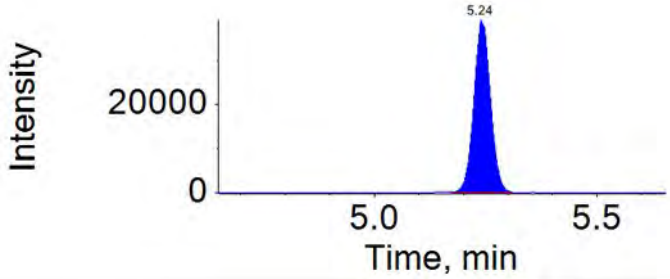
Analyte: PFOA
413.0 / 369.0



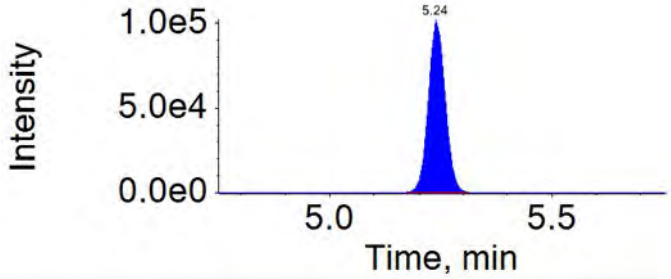
Extraction Standard: 13C8-PFOA
421.0 / 376.0



Analyte: PFOS
499.0 / 80.0

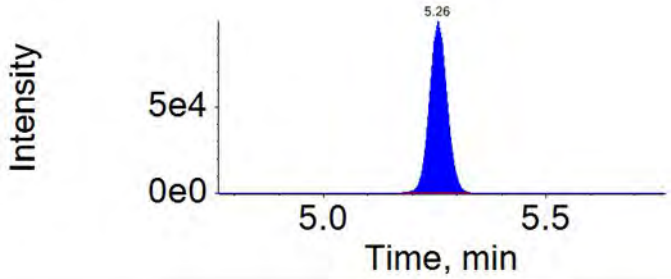


Extraction Standard: 13C8-PFOS
507.0 / 80.0

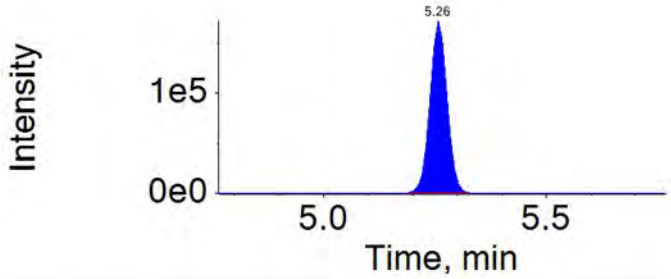


ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL_Updated 1/10/2019 3:19:00 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

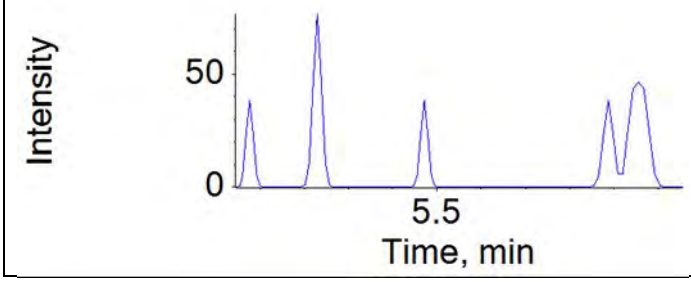
Analyte: PFNA
463.0 / 419.0



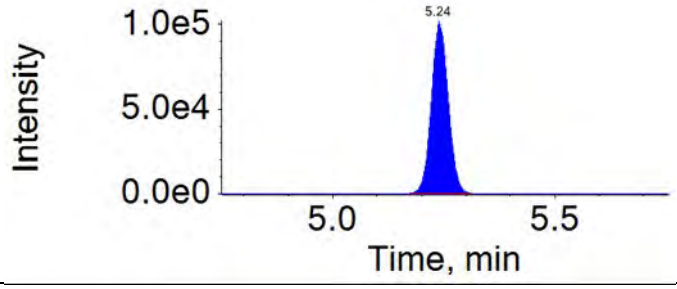
Extraction Standard: 13C9-PFNA
472.0 / 427.0



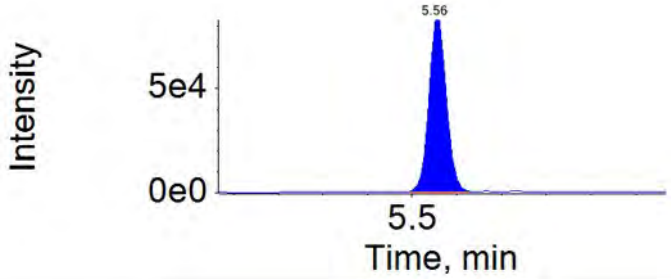
Analyte: PFNS
549.0 / 80.0



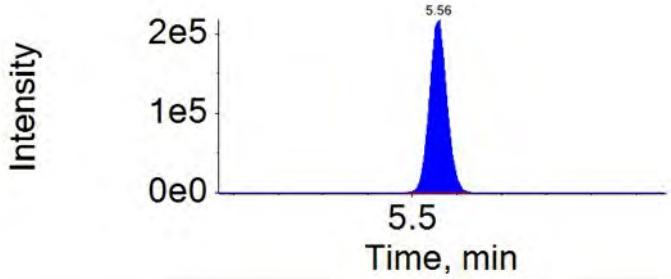
Extraction Standard: 13C8-PFOS
507.0 / 80.0



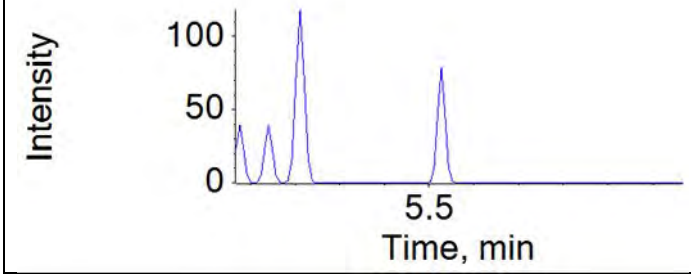
Analyte: PFDA
513.0 / 469.0



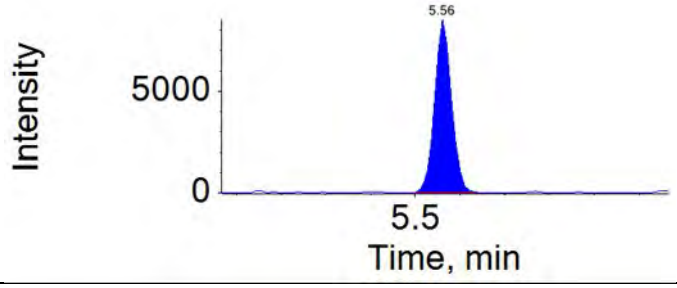
Extraction Standard: 13C6-PFDA
519.0 / 474.0



Analyte: 8:2-FTS
527.0 / 507.0

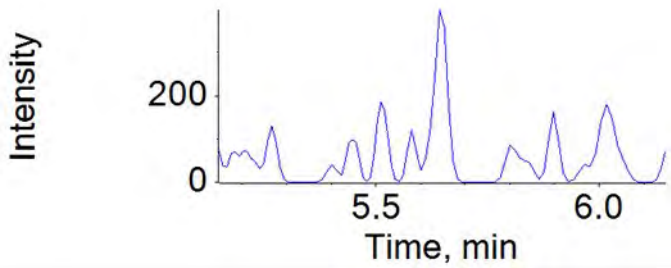


Extraction Standard: 13C2-8:2-FTS
529.0 / 81.0

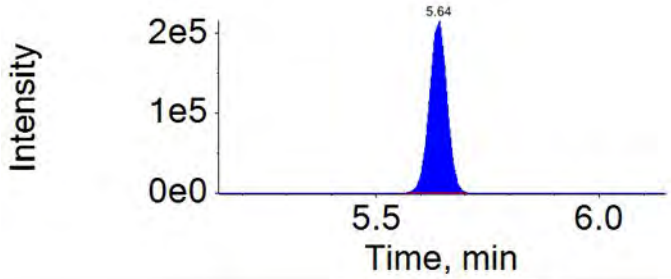


ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL_Updated 1/10/2019 3:19:00 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

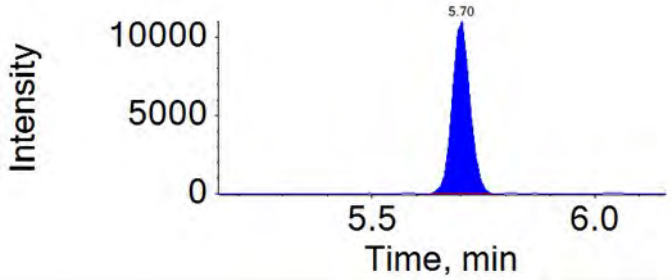
Analyte: PFOSA
498.0 / 78.0



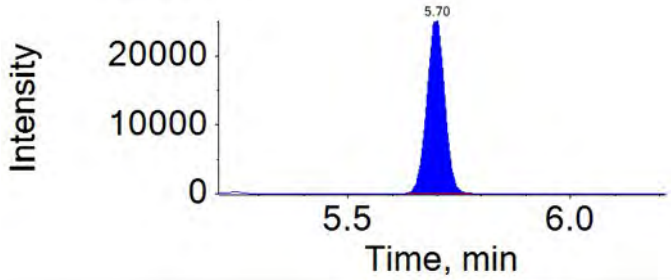
Extraction Standard: 13C8-PFOSA
506.0 / 78.0



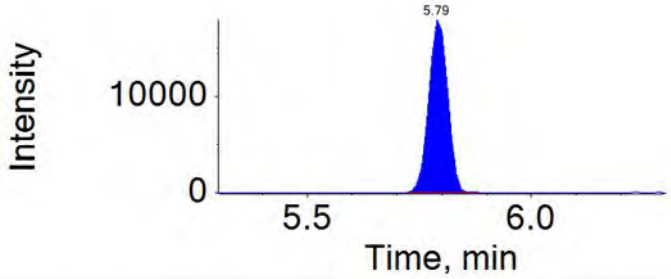
Analyte: NMeFOSAA
570.0 / 419.0



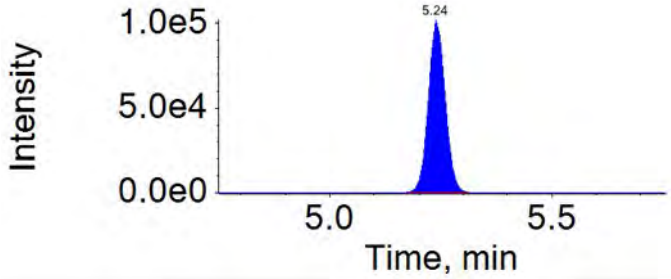
Extraction Standard: d3-NMeFOSAA
573.0 / 419.0



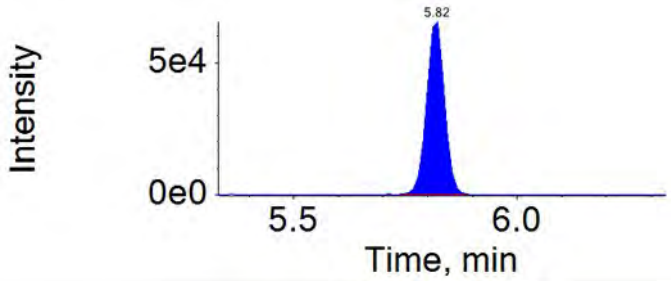
Analyte: PFDS
599.0 / 80.0



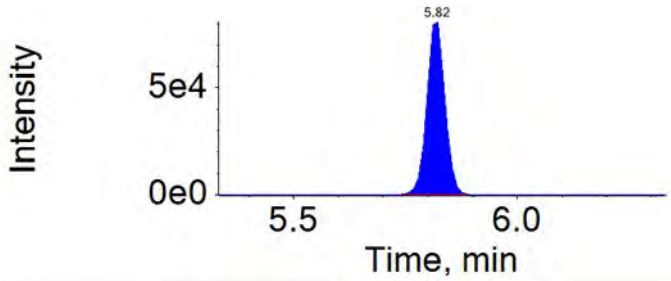
Extraction Standard: 13C8-PFOS
507.0 / 80.0



Analyte: PFUnDA
563.0 / 519.0

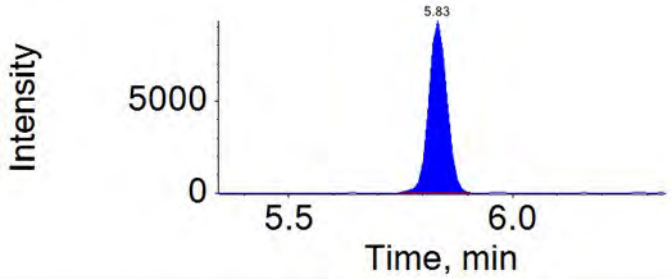


Extraction Standard: 13C7-PFUnDA
570.0 / 525.0

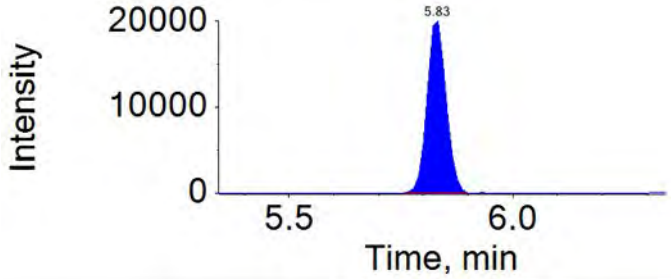


ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL_Updated 1/10/2019 3:19:00 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

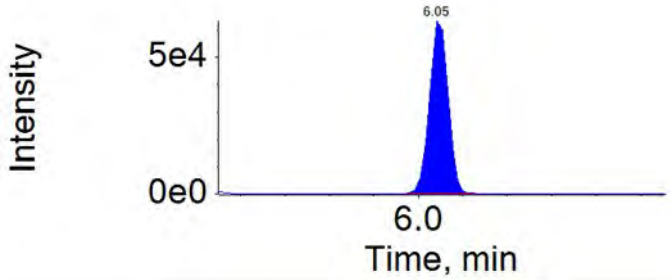
Analyte: NEtFOSAA
584.0 / 419.0



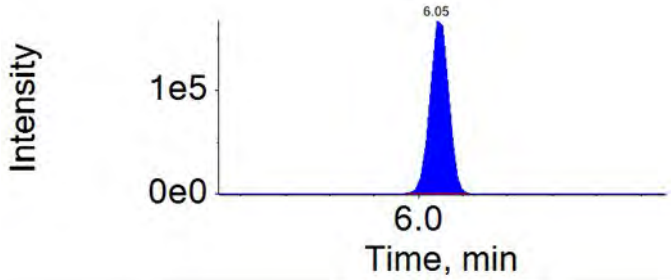
Extraction Standard: d5-NEtFOSAA
589.0 / 419.0



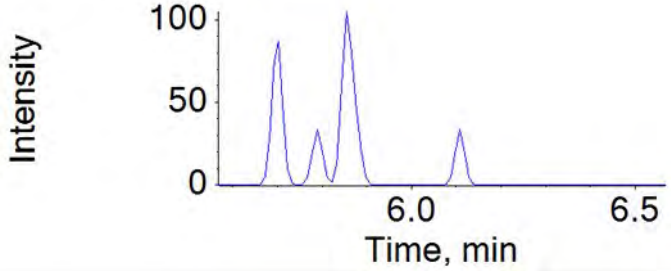
Analyte: PFDoDA
613.0 / 569.0



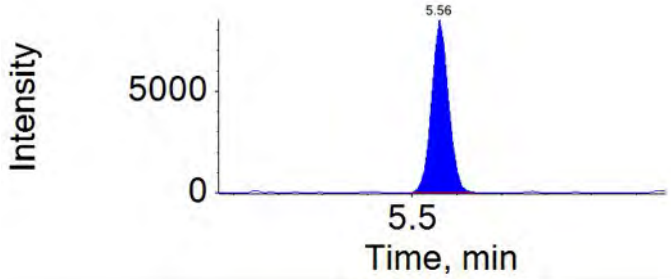
Extraction Standard: 13C2-PFDoDA
615.0 / 570.0



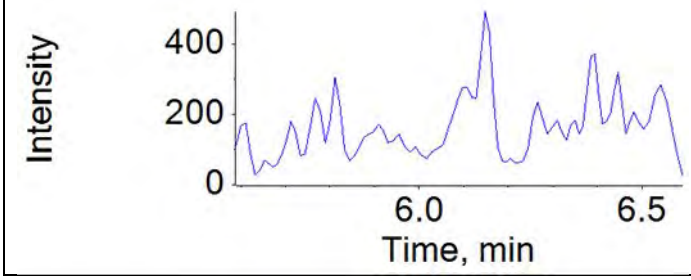
Analyte: 10:2-FTS
627.0 / 607.0



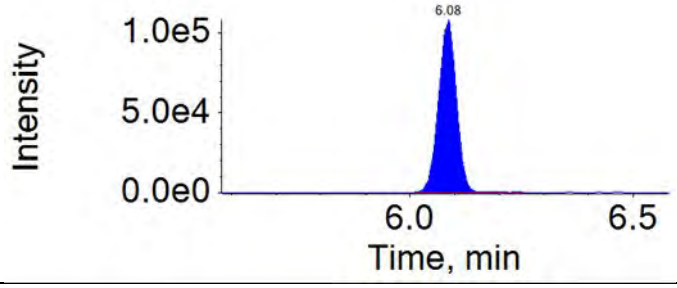
Extraction Standard: 13C2-8:2-FTS
529.0 / 81.0



Analyte: NMePFOSAE
616.0 / 59.0

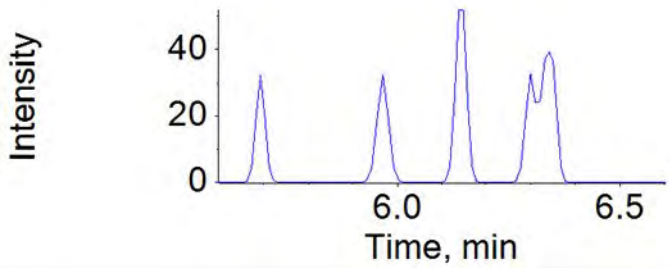


Extraction Standard: d7-NMePFOSAE
623.0 / 59.0

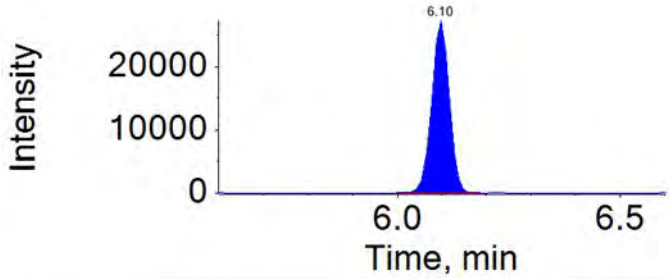


ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL_Updated 1/10/2019 3:19:00 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

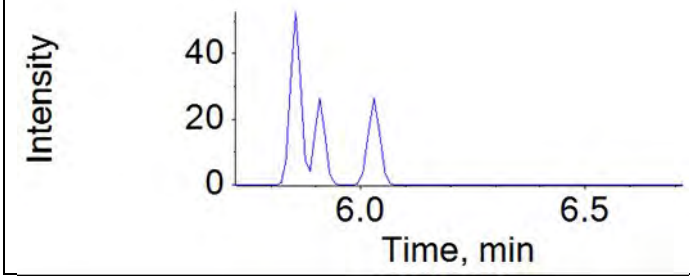
Analyte: NMePFOSA
512.0 / 169.0



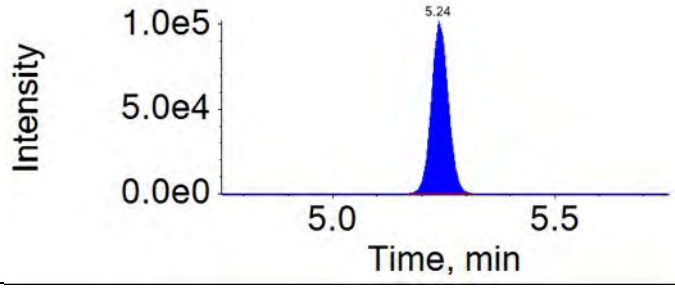
Extraction Standard: d3-NMePFOSA
515.0 / 169.0



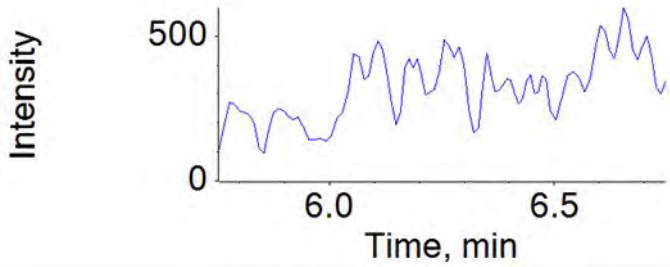
Analyte: PFDoS
699.0 / 80.0



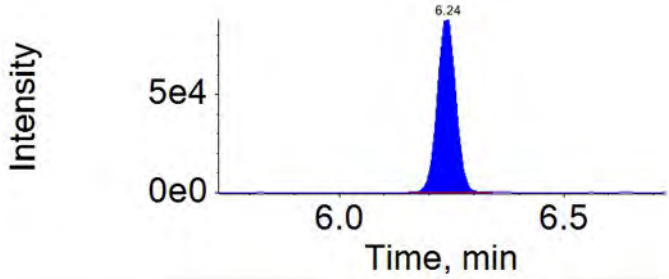
Extraction Standard: 13C8-PFOS
507.0 / 80.0



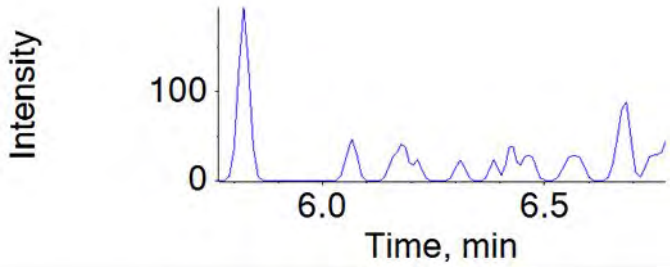
Analyte: NEtPFOSAE
630.0 / 59.0



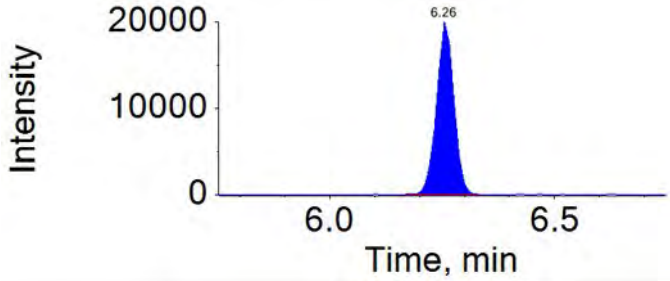
Extraction Standard: d9-NEtPFOSAE
639.0 / 59.0



Analyte: NEtPFOSA
526.0 / 169.0

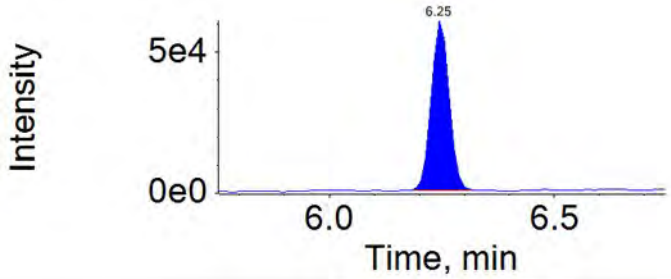


Extraction Standard: d5-NEtPFOSA
531.0 / 169.0

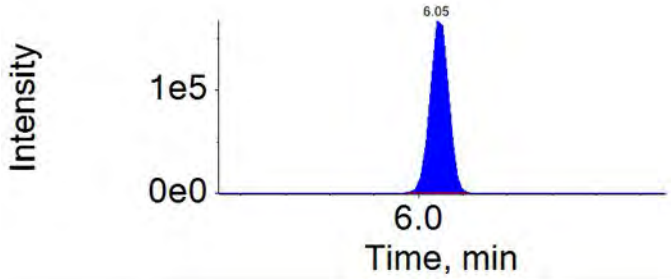


ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL_Updated 1/10/2019 3:19:00 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

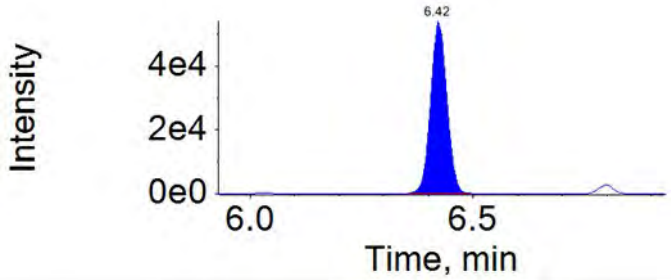
Analyte: PFTrDA
663.0 / 619.0



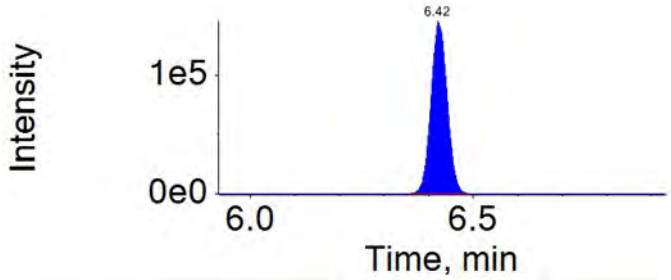
Extraction Standard: 13C2-PFDoDA
615.0 / 570.0



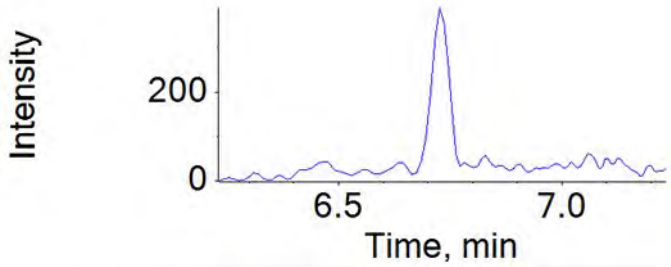
Analyte: PFTeDA
713.0 / 669.0



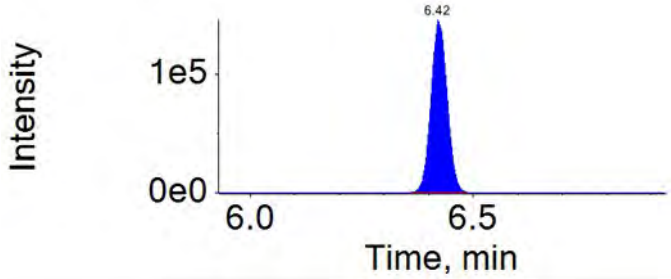
Extraction Standard: 13C2-PFTeDA
715.0 / 670.0



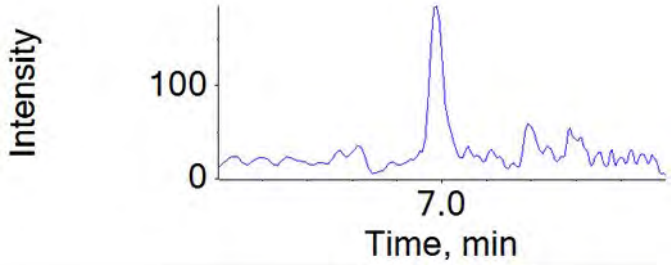
Analyte: PFHxDA
813.0 / 769.0



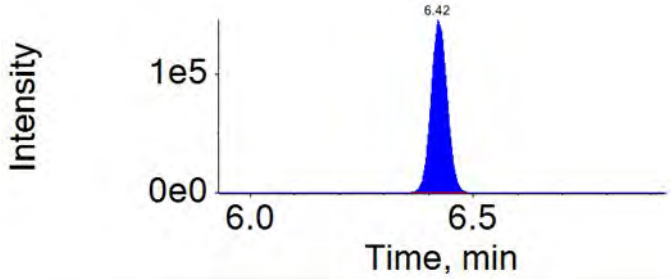
Extraction Standard: 13C2-PFTeDA
715.0 / 670.0



Analyte: PFODA
913.0 / 869.0

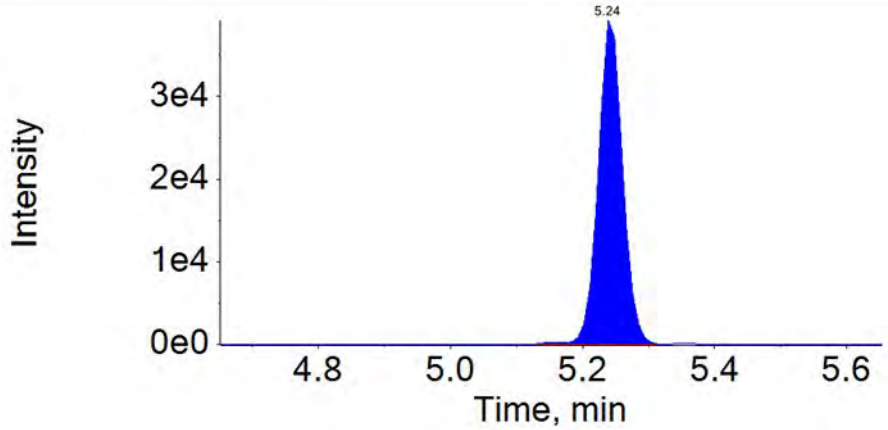


Extraction Standard: 13C2-PFTeDA
715.0 / 670.0



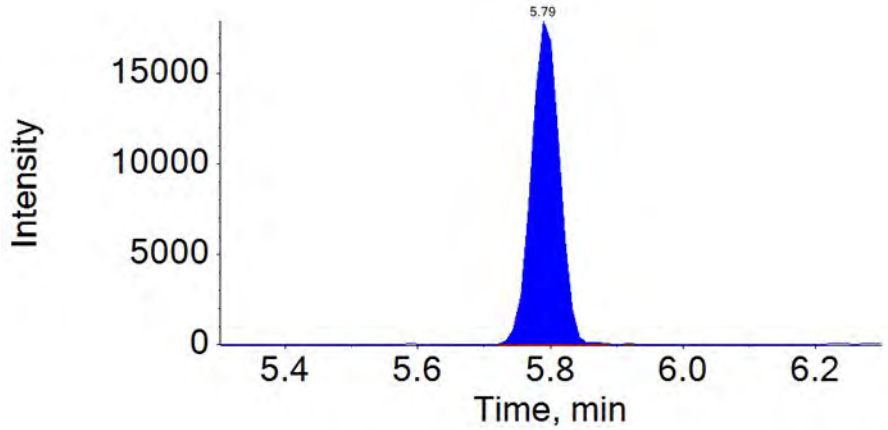
Results Table Name: 18NOV12DCAL_Updated
Results Table Date: 1/10/2019 3:19:00 PM
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

Component Name:
PFOS
RT (min.):
5.24
Peak Area:
101508.8
Mass Range:
499.0 / 80.0
File Name:
18NOV12DCAL-50.wiff
Sample Name:
ICV



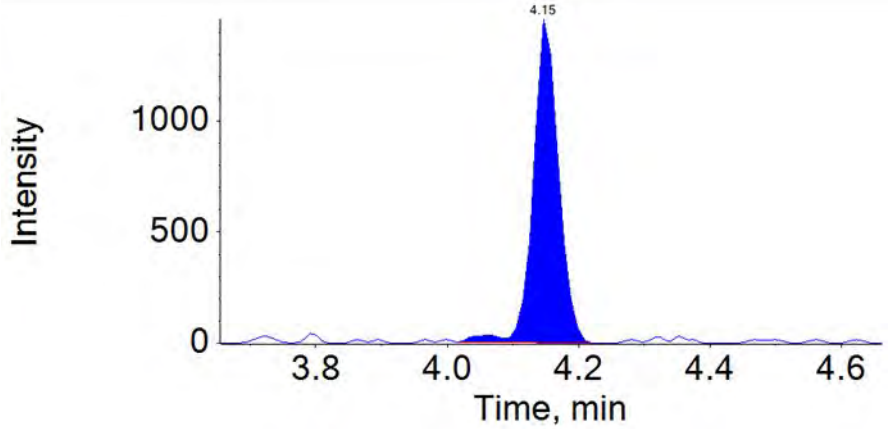
Integration Comment: incorrect integration

Component Name:
PFDS
RT (min.):
5.79
Peak Area:
52928.5
Mass Range:
599.0 / 80.0
File Name:
18NOV12DCAL-50.wiff
Sample Name:
ICV



Integration Comment: incorrect integration

Component Name:
PFHxA_2
RT (min.):
4.15
Peak Area:
3909.7
Mass Range:
313.0 / 119.0
File Name:
18NOV12DCAL-50.wiff
Sample Name:
ICV



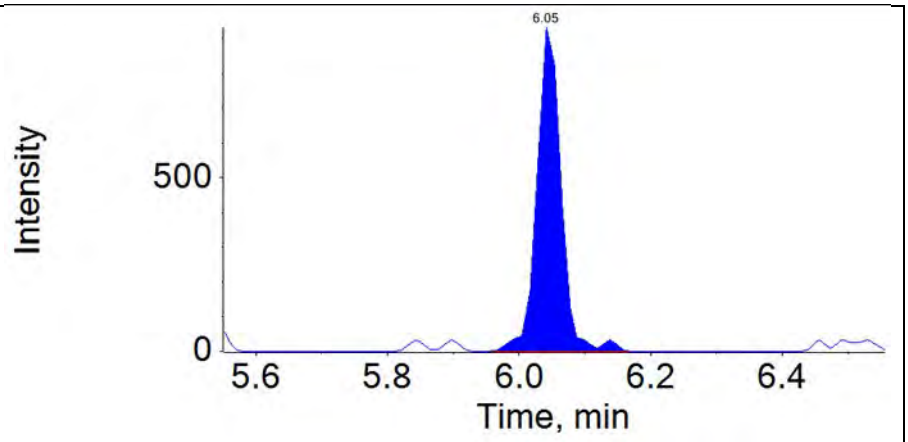
Integration Comment: incorrect integration

APPROVED
By MCD at 3:23 pm, 1/10/19

REVIEWED
By ucmr at 3:21 pm, 1/25/19

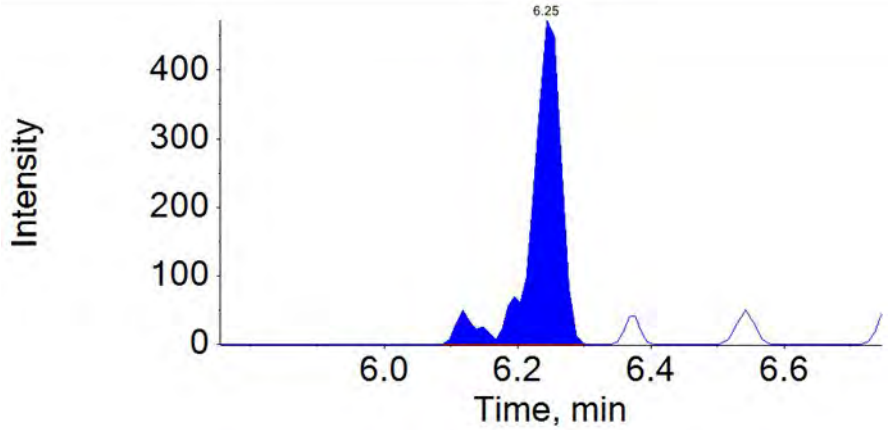
Results Table Name: 18NOV12DCAL_Updated
Results Table Date: 1/10/2019 3:19:00 PM
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

Component Name:
PFDoDA_2
RT (min.):
6.05
Peak Area:
2399.9
Mass Range:
613.0 / 169.0
File Name:
18NOV12DCAL-50.wiff
Sample Name:
ICV



Integration Comment: incorrect integration

Component Name:
PFTrDA_2
RT (min.):
6.25
Peak Area:
1468.6
Mass Range:
663.0 / 169.0
File Name:
18NOV12DCAL-50.wiff
Sample Name:
ICV



Integration Comment: incorrect integration

Results Table Name: 18NOV12DCAL_Updated
Results Table Date: 1/10/2019 3:19:00 PM
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

APPROVED
By MCD at 3:23 pm, 1/10/19

REVIEWED
By ucmr at 3:21 pm, 1/25/19

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LC-MS/MS Analysis Report

Printed: 1/10/2019 3:21:00 PM
Template: IonRatio18OCT10

Ion Ratio Report

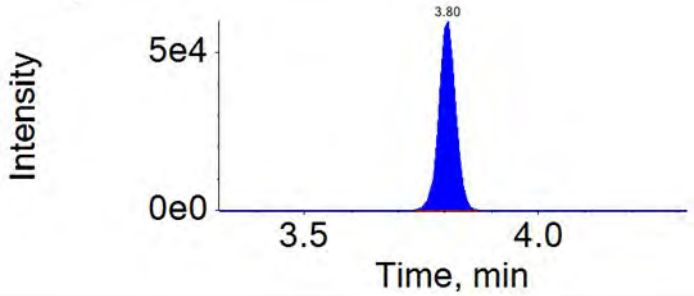
Sample Name: ICV **Instrument Name:** LM27631 **File Name:** 18NOV12DCAL-50.wiff

Component Name	RT	RRT	Analyte Area Response	Int Typ	Expected Ion Ratio	Ion Ratio	Ion Ratio % Diff	Ion Ratio Limit	Ion Ratio OOS
PFBS	3.80	1.00	150059.6	A	N/A	0.3773			
PFBS_2	3.81	1.00	56617.7	A	N/A	0.3773	4	50	
4:2-FTS	N/A	N/A	N/A	A	N/A	N/A			
4:2 FTS_2	N/A	N/A	N/A	A	N/A	N/A		#NA!	
PFHxA	4.15	1.00	328694.3	A	N/A	0.0117			
PFHxA_2	4.15	1.00	3829.7	M	N/A	0.0117	0	50	
PFPeS	N/A	N/A	N/A	A	N/A	N/A			
PFPeS_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFHpA	4.54	1.00	316975.3	A	N/A	0.0530			
PFHpA_2	4.54	1.00	16790.6	A	N/A	0.0530	-6	50	
PFHxS	4.55	1.00	115564.2	A	N/A	0.3340			
PFHxS_2	4.55	1.00	38596.8	A	N/A	0.3340	-3	50	
6:2-FTS	N/A	N/A	N/A	A	N/A	N/A			
6:2 FTS_2	N/A	N/A	N/A	A	N/A	N/A		#NA!	
PFHpS	4.91	1.08	118318.7	A	N/A	0.3735			
PFHpS_2	4.91	1.08	44193.2	A	N/A	0.3735	-8	50	
PFOA	4.91	1.00	332094.4	A	N/A	0.0559			
PFOA_2	4.91	1.00	18574.5	A	N/A	0.0559	0	50	
PFOS	5.24	1.00	100952.5	M	N/A	0.3741			
PFOS_2	5.24	1.00	37762.8	A	N/A	0.3741	26	50	
PFNA	5.26	1.00	271240.4	A	N/A	0.0190			
PFNA_2	5.26	1.00	5150.4	A	N/A	0.0190	-17	50	
PFNS	N/A	N/A	N/A	A	N/A	N/A			
PFNS_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFDA	5.56	1.00	224279.7	A	N/A	0.0061			
PFDA_2	5.56	1.00	1372.7	A	N/A	0.0061	-24	50	
8:2-FTS	N/A	N/A	N/A	A	N/A	N/A			
8:2 FTS_2	N/A	N/A	N/A	A	N/A	N/A		#NA!	
NMeFOSAA	5.70	1.00	30591.9	A	N/A	0.2719			
NMeFOSAA_2	5.70	1.00	8316.9	A	N/A	0.2719	6	50	
PFDS	5.79	1.11	52860.9	M	N/A	0.5291			
PFDS_2	5.79	1.11	27969.6	A	N/A	0.5291	3	50	
PFUnDA	5.82	1.00	183511.3	A	N/A	0.0078			
PFUnDA_2	5.82	1.00	1432.4	A	N/A	0.0078	34	50	
NEtFOSAA	5.83	1.00	26149.3	A	N/A	0.6365			
NEtFOSAA_2	5.83	1.00	16644.9	A	N/A	0.6365	-12	50	
PFDoDA	6.05	1.00	185295.0	A	N/A	0.0127			
PFDoDA_2	6.05	1.00	2349.0	M	N/A	0.0127	-19	50	
10:2-FTS	N/A	N/A	N/A	A	N/A	N/A			
10:2 FTS_2	N/A	N/A	N/A	A	N/A	N/A		#NA!	
PFTrDA	6.25	1.03	165153.1	A	N/A	0.0082			
PFTrDA_2	6.25	1.03	1357.0	M	N/A	0.0082	-4	50	
PFTeDA	6.42	1.00	135651.0	A	N/A	0.0054			
PFTeDA_2	6.42	1.00	727.0	A	N/A	0.0054	-14	50	
PFHxDA	N/A	N/A	N/A	A	N/A	N/A			
PFHxDA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFODA	N/A	N/A	N/A	A	N/A	N/A			
PFODA_2	N/A	N/A	N/A	A	N/A	N/A		50	

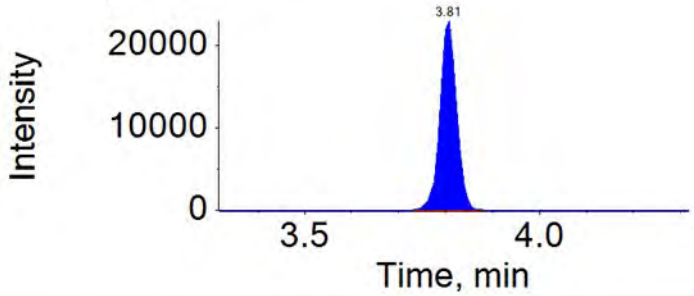
APPROVED
By MCD at 3:23 pm, 1/10/19

REVIEWED
By ucmr at 3:21 pm, 1/25/19

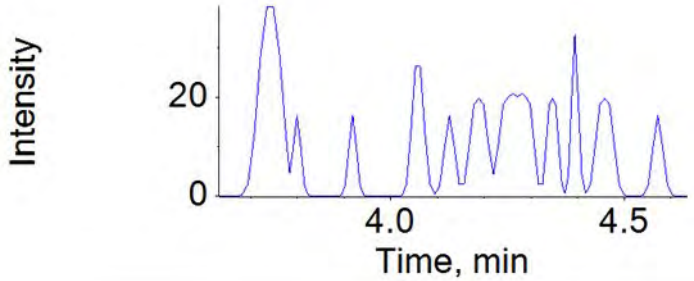
Component: PFBS
Primary Mass: 299.0 / 80.0



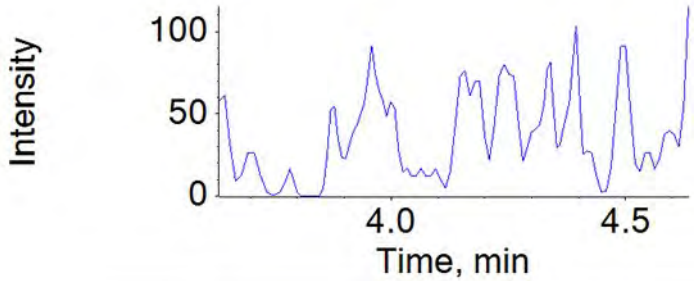
Component: PFBS_2
Secondary Mass: 299.0 / 99.0



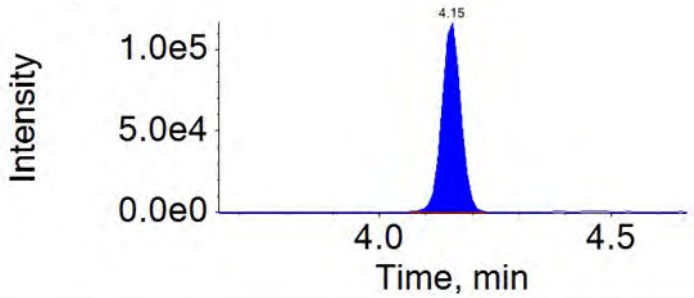
Component: 4:2-FTS
Primary Mass: 327.0 / 307.0



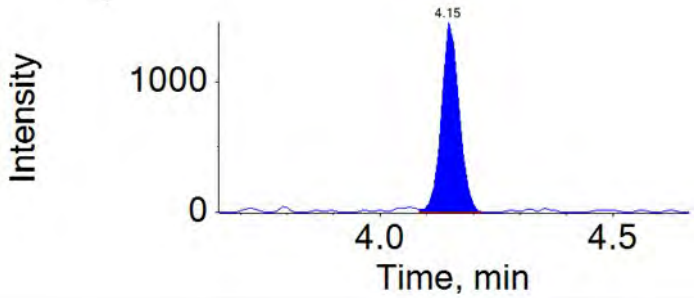
Component: 4:2 FTS_2
Secondary Mass: 327.0 / 81.0



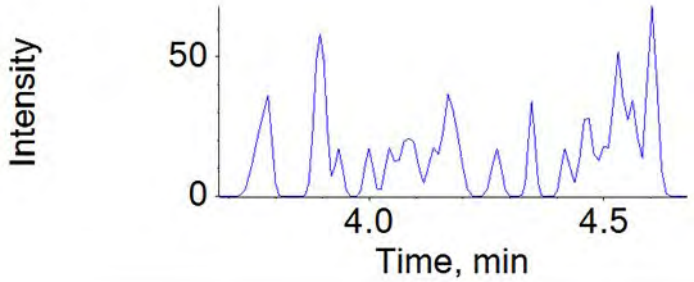
Component: PFHxA
Primary Mass: 313.0 / 269.0



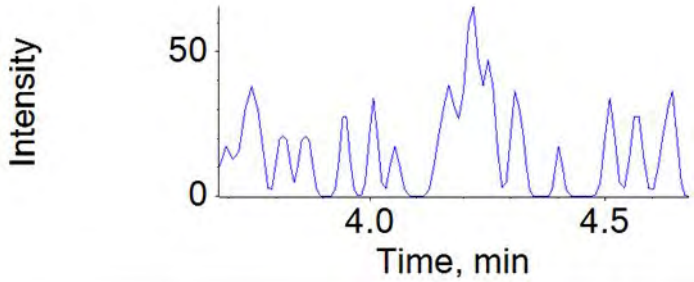
Component: PFHxA_2
Secondary Mass: 313.0 / 119.0



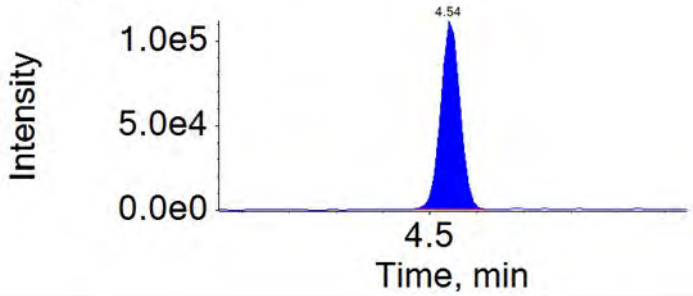
Component: PFPeS
Primary Mass: 349.0 / 80.0



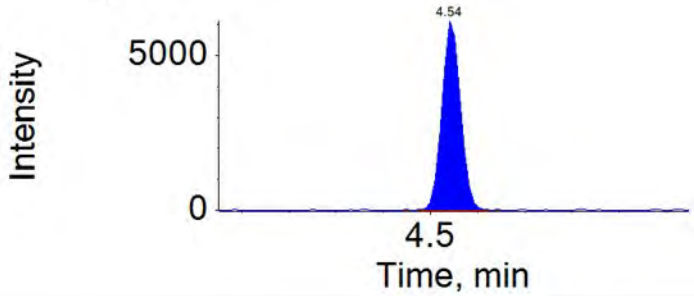
Component: PFPeS_2
Secondary Mass: 349.0 / 99.0



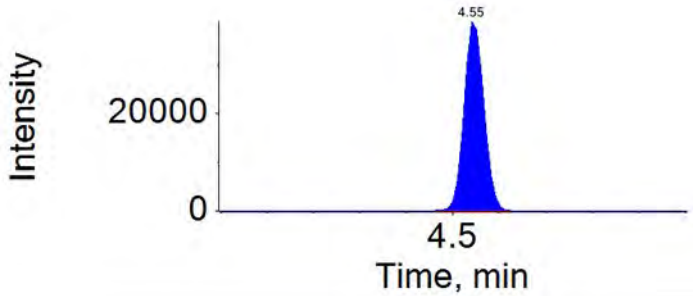
Component: PFHpA
Primary Mass: 363.0 / 319.0



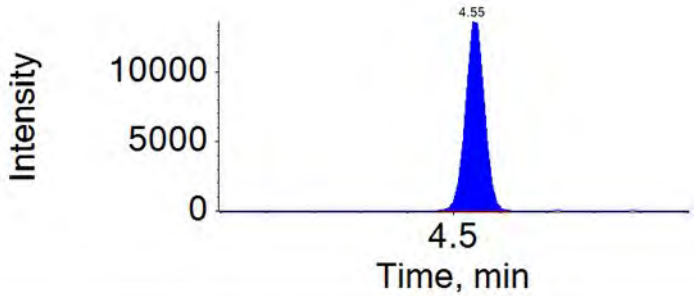
Component: PFHpA_2
Secondary Mass: 363.0 / 169.0



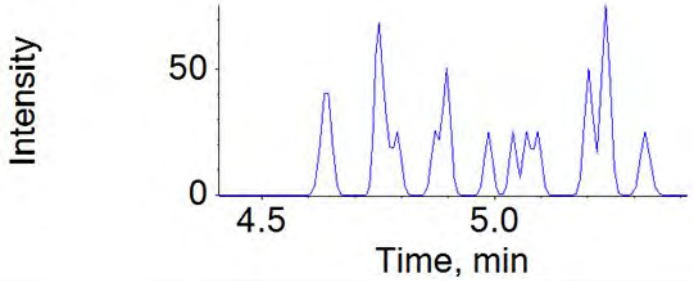
Component: PFHxS
Primary Mass: 399.0 / 80.0



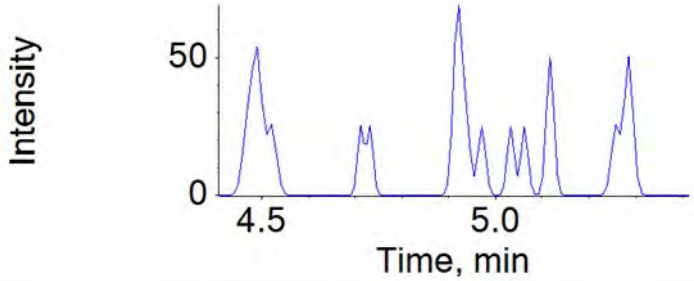
Component: PFHxS_2
Secondary Mass: 399.0 / 99.0



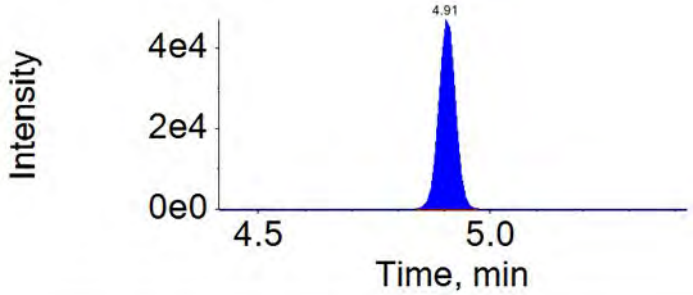
Component: 6:2-FTS
Primary Mass: 427.0 / 407.0



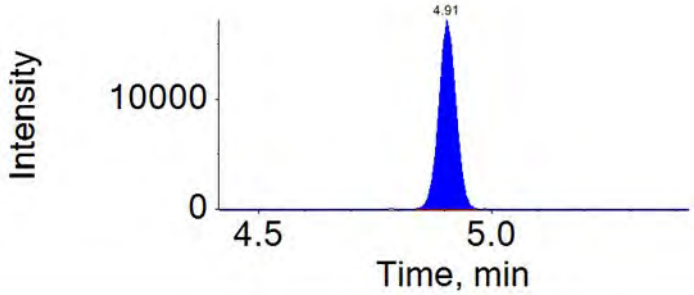
Component: 6:2 FTS_2
Secondary Mass: 427.0 / 81.0



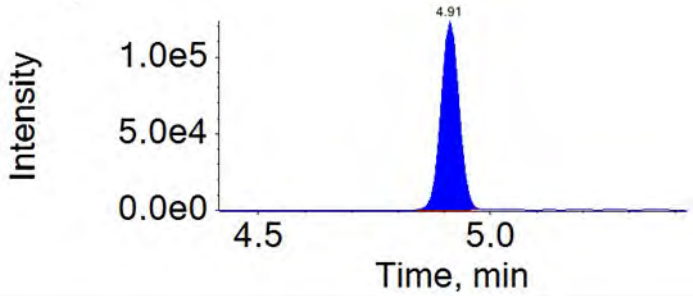
Component: PFHpS
Primary Mass: 449.0 / 80.0



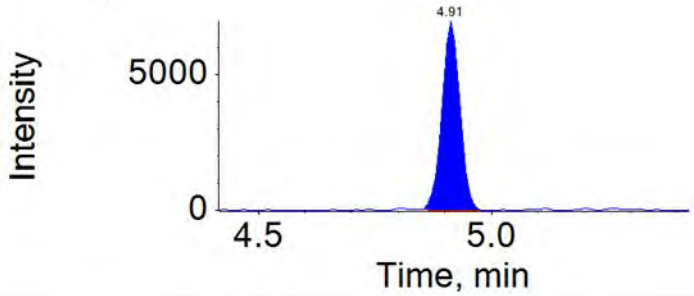
Component: PFHpS_2
Secondary Mass: 449.0 / 99.0



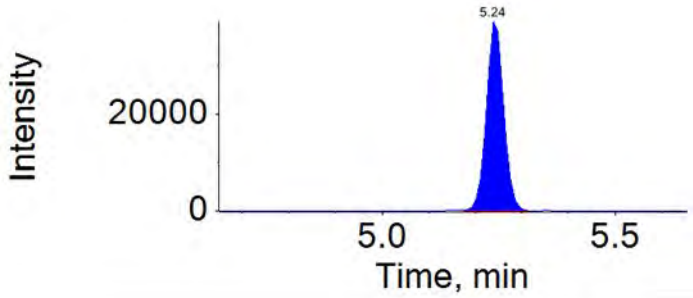
Component: PFOA
Primary Mass: 413.0 / 369.0



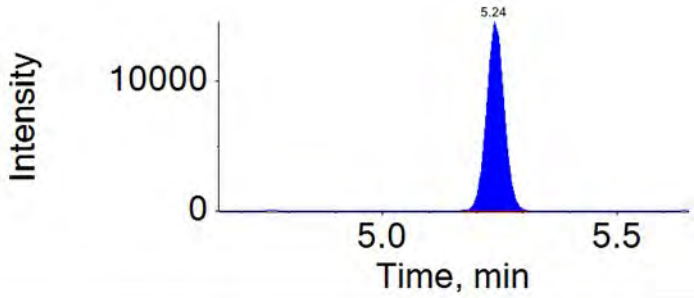
Component: PFOA_2
Secondary Mass: 413.0 / 169.0



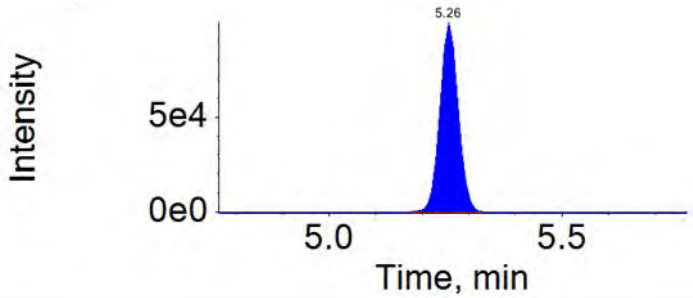
Component: PFOS
Primary Mass: 499.0 / 80.0



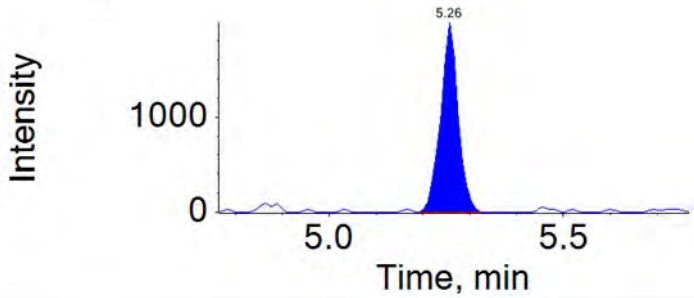
Component: PFOS_2
Secondary Mass: 499.0 / 99.0



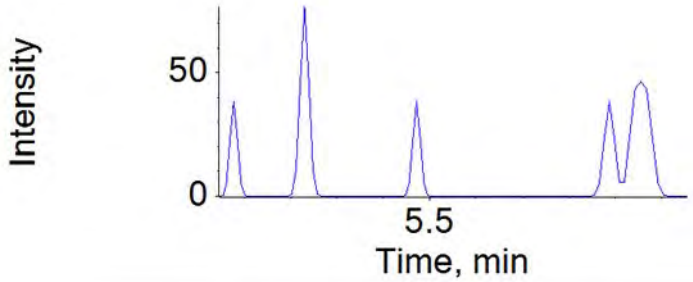
Component: PFNA
Primary Mass: 463.0 / 419.0



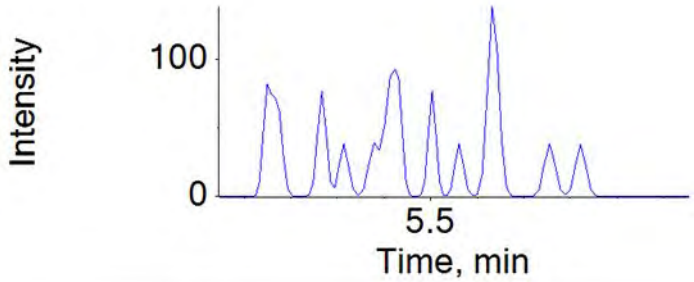
Component: PFNA_2
Secondary Mass: 463.0 / 169.0



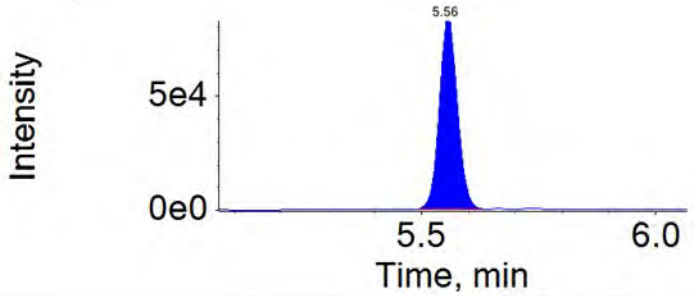
Component: PFNS
Primary Mass: 549.0 / 80.0



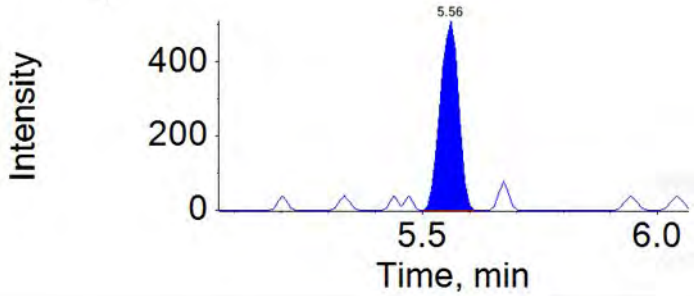
Component: PFNS_2
Secondary Mass: 549.0 / 99.0



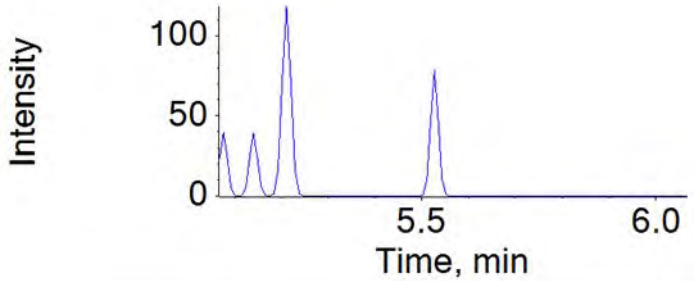
Component: PFDA
Primary Mass: 513.0 / 469.0



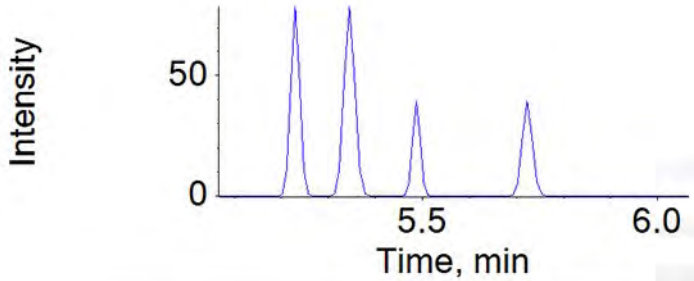
Component: PFDA_2
Secondary Mass: 513.0 / 169.0



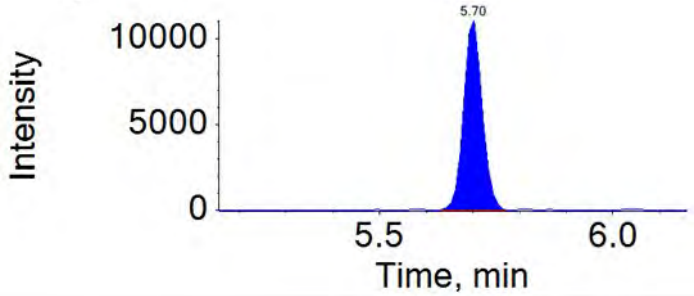
Component: 8:2-FTS
Primary Mass: 527.0 / 507.0



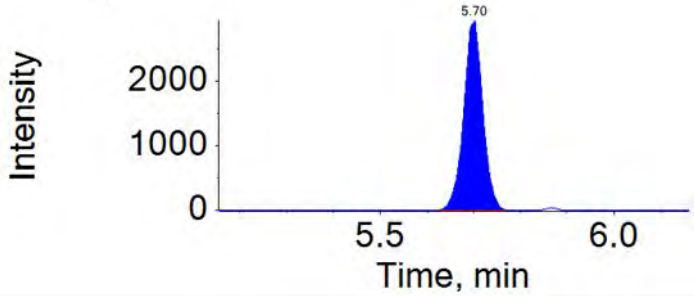
Component: 8:2 FTS_2
Secondary Mass: 527.0 / 81.0



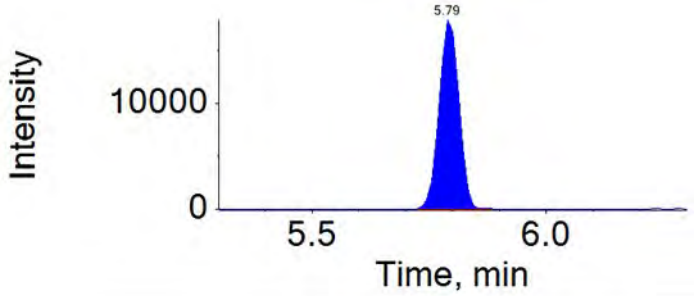
Component: NMeFOSAA
Primary Mass: 570.0 / 419.0



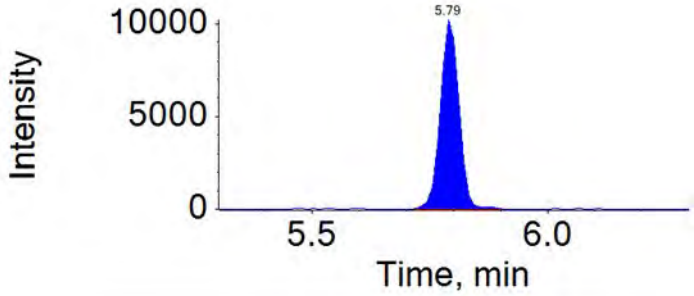
Component: NMeFOSAA_2
Secondary Mass: 570.0 / 483.0



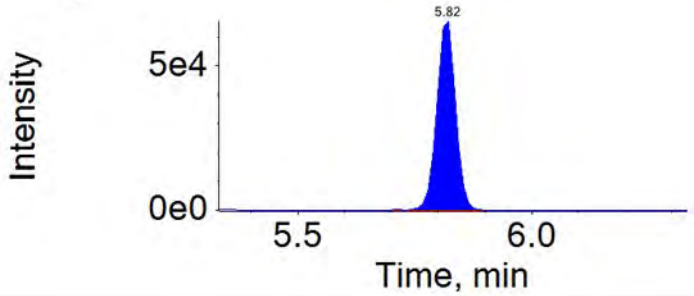
Component: PFDS
Primary Mass: 599.0 / 80.0



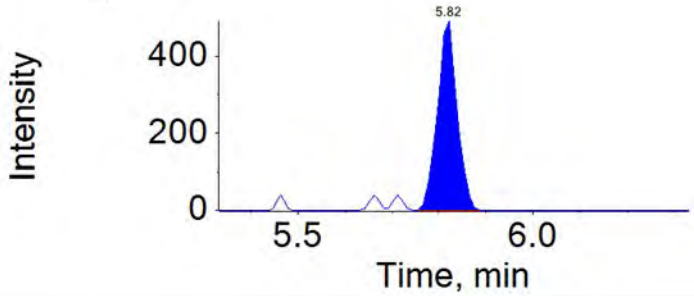
Component: PFDS_2
Secondary Mass: 599.0 / 99.0



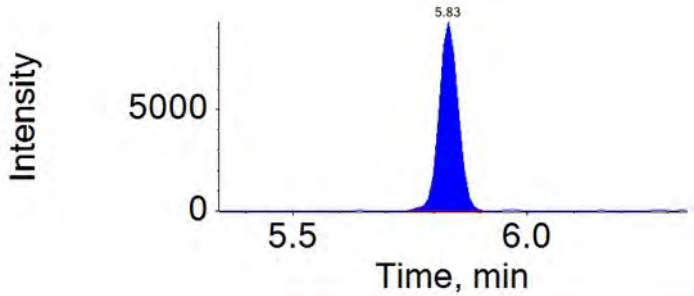
Component: PFUnDA
Primary Mass: 563.0 / 519.0



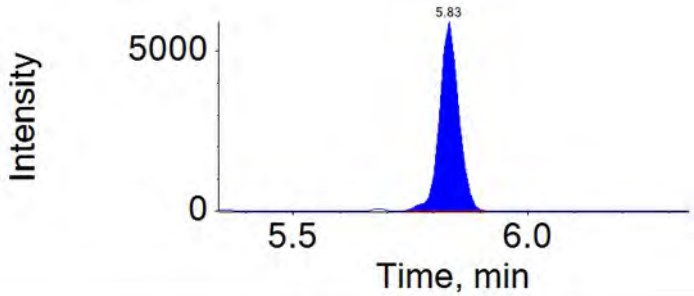
Component: PFUnDA_2
Secondary Mass: 563.0 / 169.0



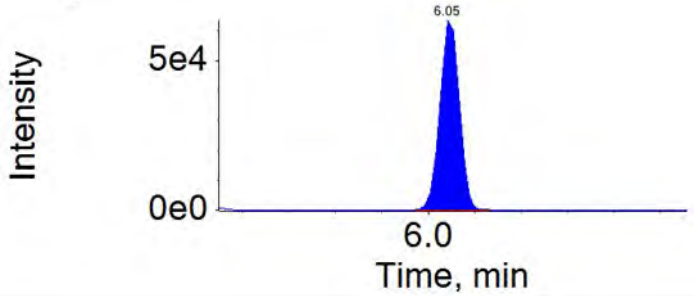
Component: NEtFOSAA
Primary Mass: 584.0 / 419.0



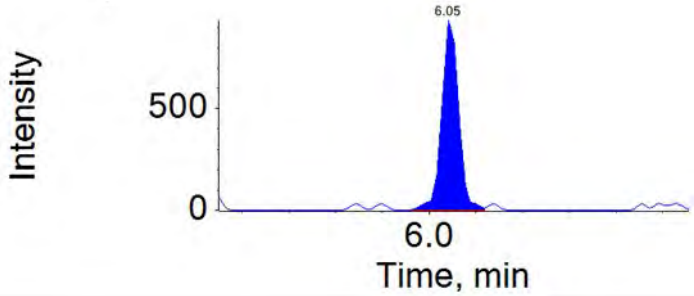
Component: NEtFOSAA_2
Secondary Mass: 584.0 / 526.0



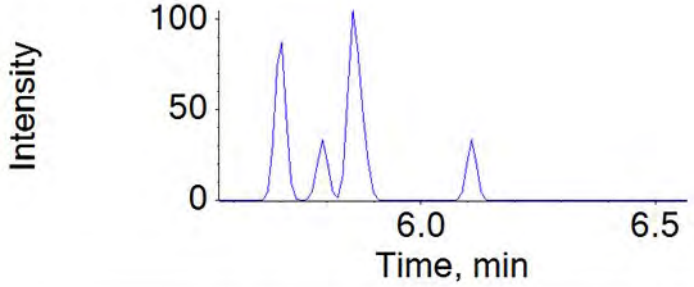
Component: PFDoDA
Primary Mass: 613.0 / 569.0



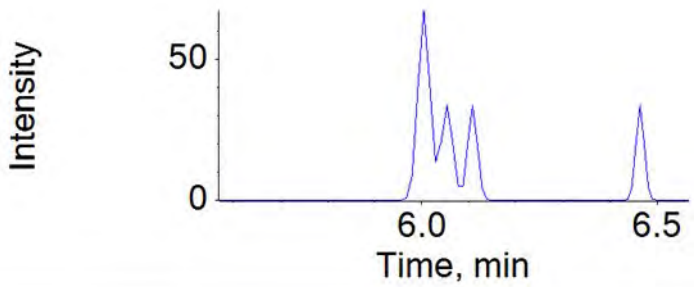
Component: PFDoDA_2
Secondary Mass: 613.0 / 169.0



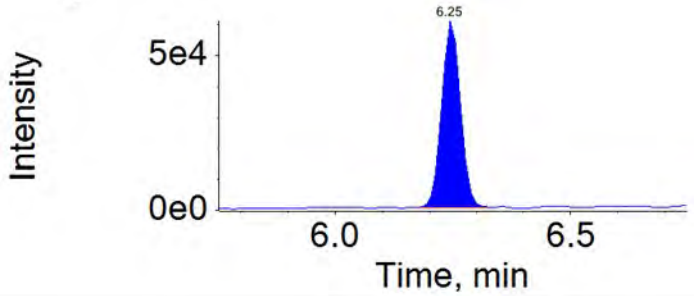
Component: 10:2-FTS
Primary Mass: 627.0 / 607.0



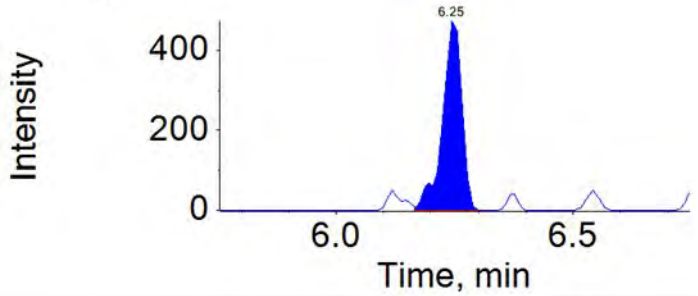
Component: 10:2 FTS_2
Secondary Mass: 627.0 / 81.0



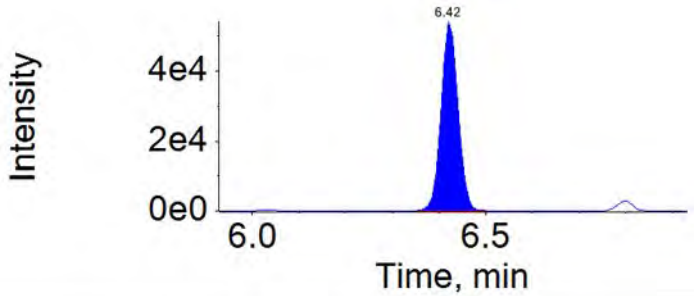
Component: PFTrDA
Primary Mass: 663.0 / 619.0



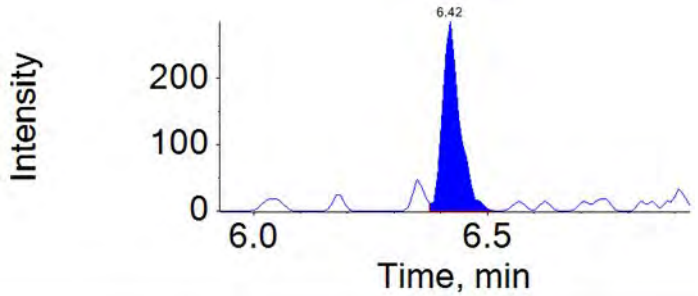
Component: PFTrDA_2
Secondary Mass: 663.0 / 169.0



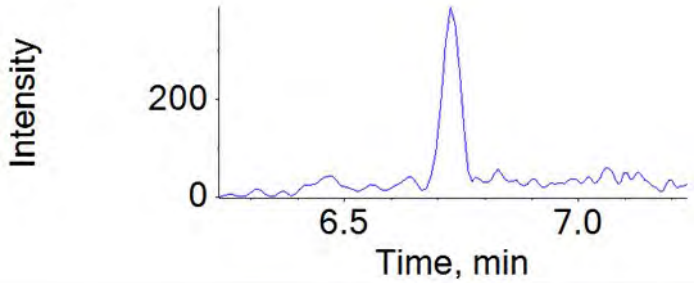
Component: PFTeDA
Primary Mass: 713.0 / 669.0



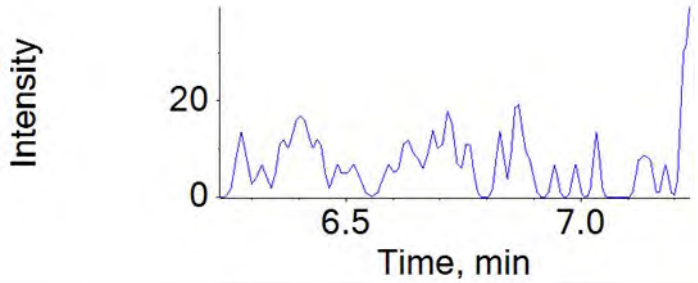
Component: PFTeDA_2
Secondary Mass: 713.0 / 169.0



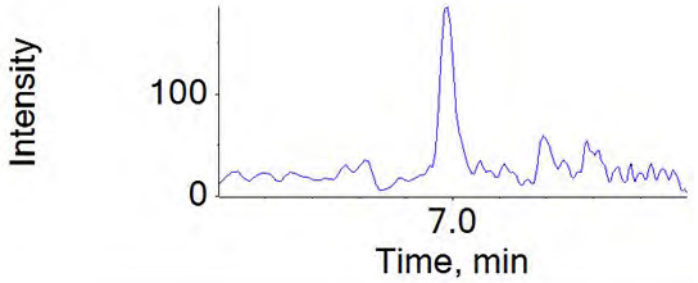
Component: PFHxDA
Primary Mass: 813.0 / 769.0



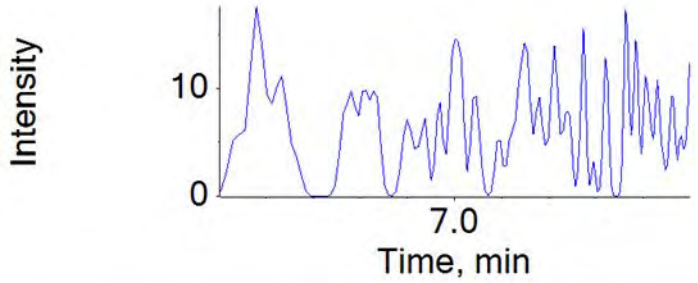
Component: PFHxDA_2
Secondary Mass: 813.0 / 169.0



Component: PFODA
Primary Mass: 913.0 / 869.0



Component: PFODA_2
Secondary Mass: 913.0 / 169.0



ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM
Result Table: 18NOV12DCAL 11/12/2018 6:14:07 PM
Acquisition Method: 18AUG13_3uL.dam

Sample Name:	L+B CAL3			**Data File:**		18NOV12DCAL-51.wiff
Sample ID:	LBMODX1833D			**Acquis Date:**		2018-11-12T16:27:15
Sample Type:	Unknown			**Instrument:**		LM27631
Vial Position:	11			**Acquis Method:**		18AUG13_3uL.dam
Injection Vol:	3.00			**Result Table:**		18NOV12DCAL
QMethod File:	18AUG20QM			**ICAL Name:**		18NOV12DCAL
Batch Number:	N\A			**Operator:**		MCD7824
Sample Wt.:	1.00000			**Dilution Factor:**		1.00
Sample Vol.:	1.000			**Prep Factor:**		1.000

Injection Standard Peak Table

Injection Standard Area Reference File: 18NOV12DCAL-44

Injection Standard Name	Inj Std Conc	Injection Std Peak Area	Rreference Injection Standard Area	Injection Std %Diff	Injection Std %Diff Limit	Injection Std %Diff OOS
13C3-PFBA	5.0	682528.6	659926.2	3	50	
13C2-PFOA	5.0	446810.2	450219.7	-1	50	
13C4-PFOS	4.8	256014.8	249205.8	3	50	
13C2-PFDA	5.0	295115.2	278743.9	6	50	

Extraction Standard Peak Table

Extraction Standard Name	Ext Std Area	Inj Std Name	Inj Std Area	Area Ratio	Ext Std Conc	Ext Std Result	Ext Std %REC	Ext Std %REC Limit	Ext Std OOS
E13C4-PFBA	735331.8	13C3-PFBA	682528.6	1.077	5.000	4.830	97	70-130	
E13C5-PFPeA	714738.5	13C3-PFBA	682528.6	1.047	5.000	4.697	94	70-130	
E13C3-PFBS	418749.4	13C3-PFBA	682528.6	0.614	4.650	4.331	93	70-130	
E13C2-4:2-FTS	45470.2	13C2-PFOA	446810.2	0.102	4.670	4.532	97	70-130	
E13C5-PFHxA	624943.7	13C2-PFOA	446810.2	1.399	5.000	5.052	101	70-130	
E13C3-PFHxS	318599.1	13C2-PFOA	446810.2	0.713	4.730	4.893	103	70-130	
E13C4-PFHpA	492218.6	13C2-PFOA	446810.2	1.102	5.000	4.963	99	70-130	
E13C2-6:2-FTS	35757.3	13C2-PFOA	446810.2	0.080	4.750	5.354	113	70-130	
E13C8-PFOA	860795.2	13C2-PFOA	446810.2	1.927	5.000	5.308	106	70-130	
E13C8-PFOS	257626.7	13C4-PFOS	256014.8	1.006	4.780	4.459	93	70-130	
E13C9-PFNA	443649.2	13C4-PFOS	256014.8	1.733	5.000	4.832	97	70-130	
E13C6-PFDA	588492.8	13C2-PFDA	295115.2	1.994	5.000	4.653	93	70-130	
E13C2-8:2-FTS	26035.6	13C2-PFDA	295115.2	0.088	4.790	4.400	92	70-130	
E13C8-PFOSA	615348.9	13C2-PFDA	295115.2	2.085	5.000	4.623	92	70-130	
Ed3-NMeFOSAA	69196.9	13C2-PFDA	295115.2	0.234	5.000	4.232	85	70-130	
E13C7-PFUnDA	249433.8	13C2-PFDA	295115.2	0.845	5.000	4.907	98	70-130	
Ed5-NEtFOSAA	70399.3	13C2-PFDA	295115.2	0.239	5.000	5.047	101	70-130	
E13C2-PFDoDA	502206.8	13C2-PFDA	295115.2	1.702	5.000	4.418	88	70-130	
Ed7-NMePFOSAE	314874.3	13C2-PFDA	295115.2	1.067	5.000	4.617	92	70-130	
Ed3-NMePFOSA	80287.6	13C2-PFDA	295115.2	0.272	5.000	4.943	99	70-130	
Ed9-NEtPFOSAE	265747.6	13C2-PFDA	295115.2	0.900	5.000	4.683	94	70-130	
Ed5-NEtPFOSA	56128.1	13C2-PFDA	295115.2	0.190	5.000	4.462	89	70-130	
E13C2-PFTeDA	379002.1	13C2-PFDA	295115.2	1.284	5.000	4.509	90	70-130	

APPROVED
By MCD at 6:34 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

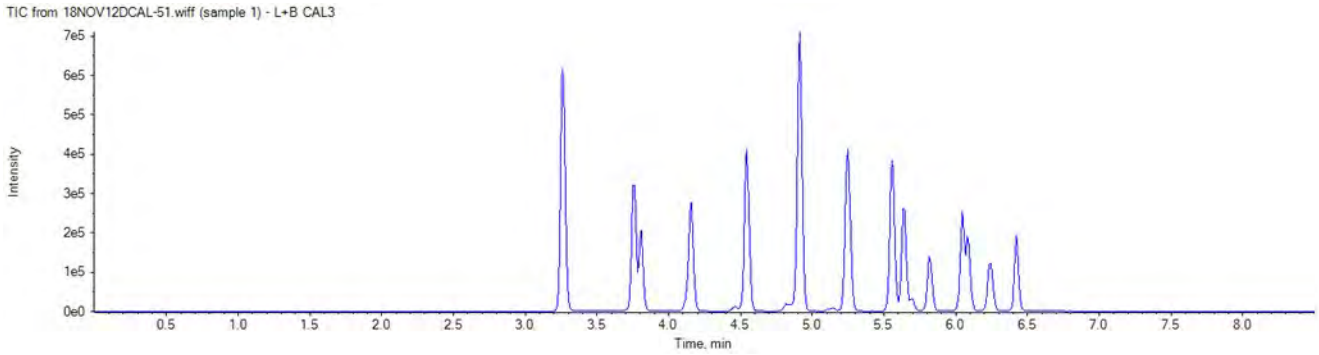
Analyte Quantitation Peak Table

Sample Name: L+B CAL3 **Instrument Name:** LM27631 **File Name:** 18NOV12DCAL-51.wiff

Sample Wt	Sample Vol	Dilution Factor	PrepFactor
1.00000	1.000	1.00	1.000

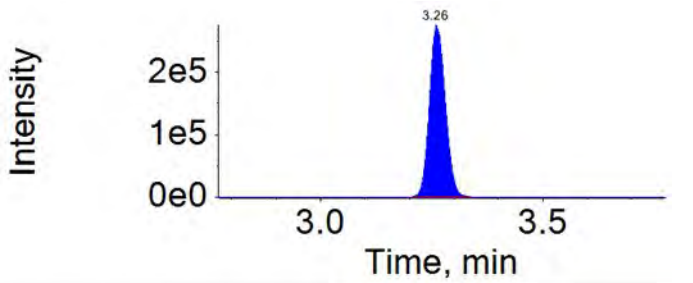
Analyte Name	RT	RRT	Analyte Area Response	E	Int Typ	ES Name	ES RT	ES Area Response	Area Ratio	Sample Result (ng/g)
PFBA	N/A	N/A	N/A		A	13C4-PFBA	3.26	735331.8	N/A	
PFPeA	N/A	N/A	N/A		A	13C5-PFPeA	3.76	714738.5	N/A	
PFBS	N/A	N/A	N/A		A	13C3-PFBS	3.81	418749.4	N/A	
4:2-FTS	N/A	N/A	N/A		A	13C2-4:2-FTS	4.12	45470.2	N/A	
PFHxA	N/A	N/A	N/A		A	13C5-PFHxA	4.15	624943.7	N/A	
PFPeS	N/A	N/A	N/A		A	13C3-PFBS	3.81	418749.4	N/A	
PFHpA	N/A	N/A	N/A		A	13C4-PFHpA	4.54	492218.6	N/A	
PFHxS	4.55	1.000	122359.8		M	13C3-PFHxS	4.55	318599.1	0.384	1.862
6:2-FTS	N/A	N/A	N/A		A	13C2-6:2-FTS	4.90	35757.3	N/A	
PFHpS	N/A	N/A	N/A		A	13C3-PFHxS	4.55	318599.1	N/A	
PFOA	4.91	1.000	312625.4		M	13C8-PFOA	4.91	860795.2	0.363	1.940
PFOS	5.24	1.000	105809.8		M	13C8-PFOS	5.24	257626.7	0.411	1.796
PFNA	N/A	N/A	N/A		A	13C9-PFNA	5.26	443649.2	N/A	
PFNS	N/A	N/A	N/A		A	13C8-PFOS	5.24	257626.7	N/A	
PFDA	N/A	N/A	N/A		A	13C6-PFDA	5.56	588492.8	N/A	
8:2-FTS	N/A	N/A	N/A		A	13C2-8:2-FTS	5.56	26035.6	N/A	
PFOSA	N/A	N/A	N/A		A	13C8-PFOSA	5.64	615348.9	N/A	
NMeFOSAA	N/A	N/A	N/A		A	d3-NMeFOSAA	5.70	69196.9	N/A	
PFDS	N/A	N/A	N/A		A	13C8-PFOS	5.24	257626.7	N/A	
PFUnDA	N/A	N/A	N/A		A	13C7-PFUnDA	5.82	249433.8	N/A	
NEtFOSAA	N/A	N/A	N/A		A	d5-NEtFOSAA	5.83	70399.3	N/A	
PFDoDA	N/A	N/A	N/A		A	13C2-PFDoDA	6.05	502206.8	N/A	
10:2-FTS	N/A	N/A	N/A		A	13C2-8:2-FTS	5.56	26035.6	N/A	
NMePFOSAE	N/A	N/A	N/A		A	d7-NMePFOSAE	6.08	314874.3	N/A	
NMePFOSA	N/A	N/A	N/A		A	d3-NMePFOSA	6.10	80287.6	N/A	
PFDoS	N/A	N/A	N/A		A	13C8-PFOS	5.24	257626.7	N/A	
NEtPFOSAE	N/A	N/A	N/A		A	d9-NEtPFOSAE	6.24	265747.6	N/A	
NEtPFOSA	N/A	N/A	N/A		A	d5-NEtPFOSA	6.26	56128.1	N/A	
PFTrDA	N/A	N/A	N/A		A	13C2-PFDoDA	6.05	502206.8	N/A	
PFTeDA	N/A	N/A	N/A		A	13C2-PFTeDA	6.42	379002.1	N/A	
PFHxDA	N/A	N/A	N/A		A	13C2-PFTeDA	6.42	379002.1	N/A	
PFODA	N/A	N/A	N/A		A	13C2-PFTeDA	6.42	379002.1	N/A	

Total Ion Chromatogram

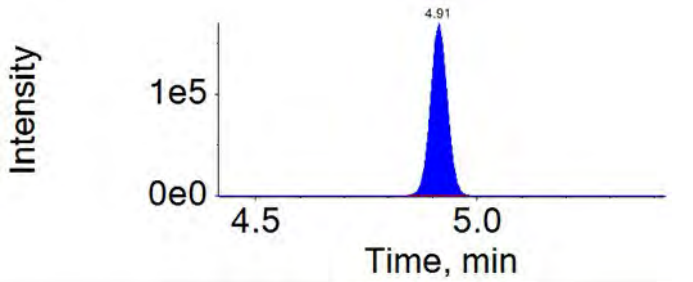


ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

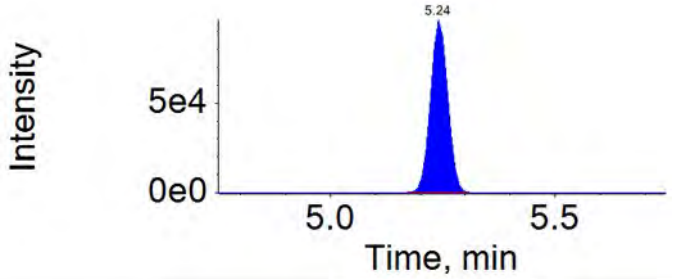
Injection Standard: 13C3-PFBA
216.0 / 172.0



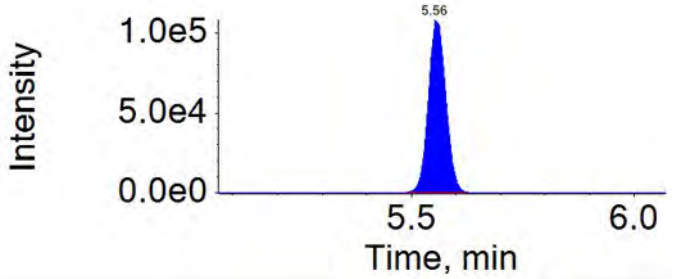
Injection Standard: 13C2-PFOA
415.0 / 370.0



Injection Standard: 13C4-PFOS
503.0 / 80.0

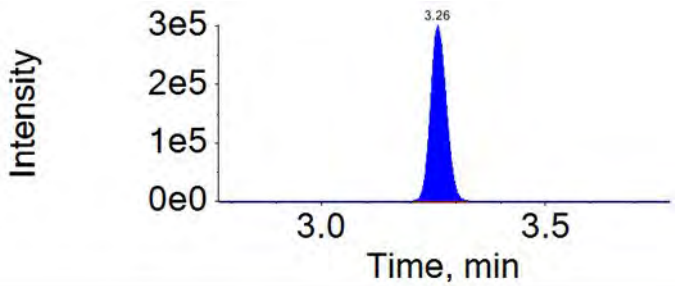


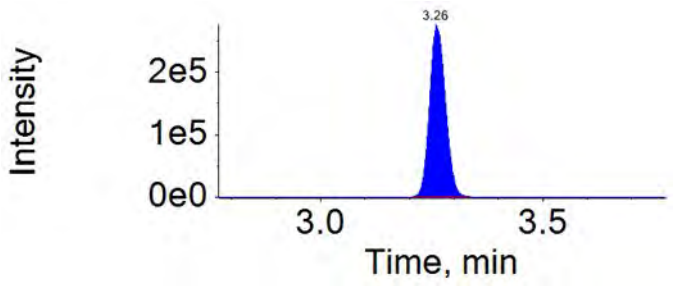
Injection Standard: 13C2-PFDA
515.0 / 470.0



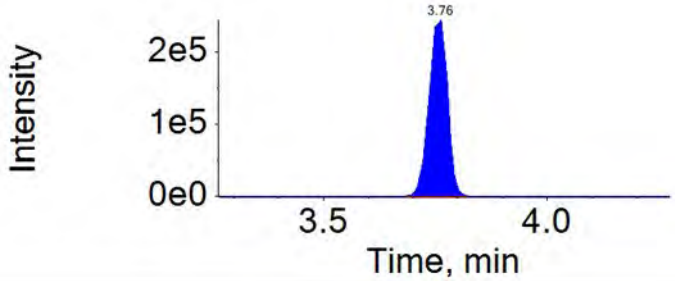
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

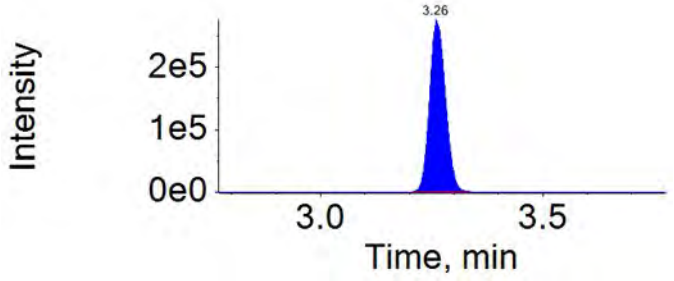
Extraction Standard: E13C4-PFBA	Injection Standard: 13C3-PFBA
217.0 / 172.0	216.0 / 172.0



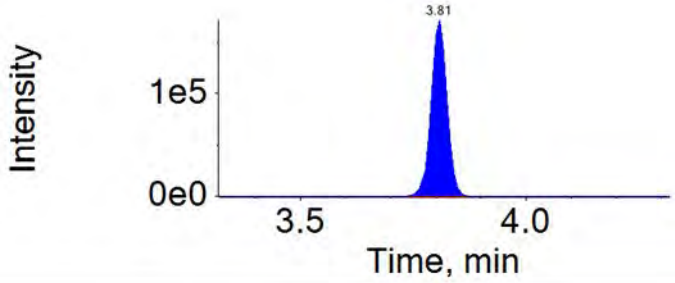


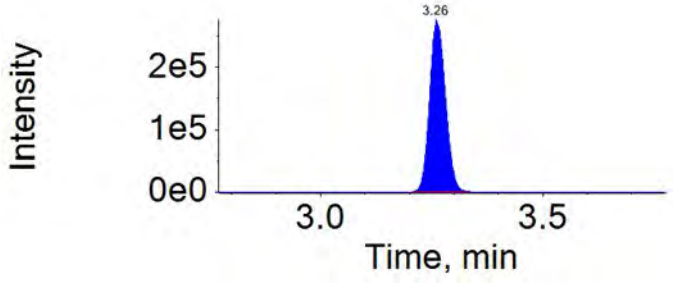
Extraction Standard: E13C5-PFPeA	Injection Standard: 13C3-PFBA
268.0 / 223.0	216.0 / 172.0



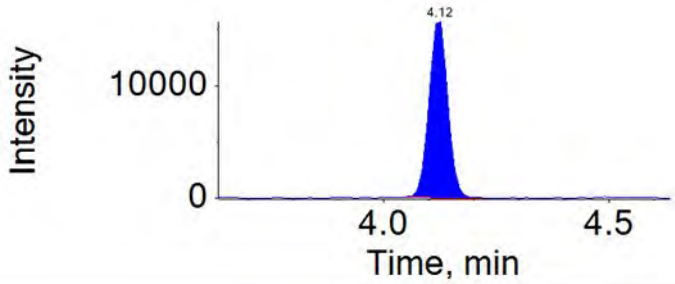


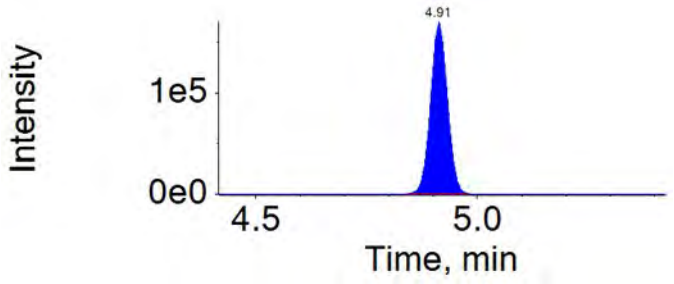
Extraction Standard: E13C3-PFBS	Injection Standard: 13C3-PFBA
302.0 / 80.0	216.0 / 172.0





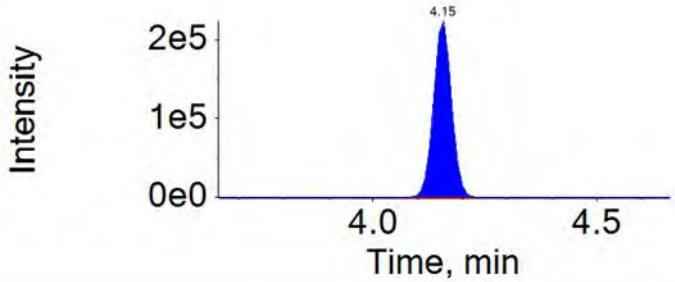
Extraction Standard: E13C2-4:2-FTS	Injection Standard: 13C2-PFOA
329.0 / 81.0	415.0 / 370.0

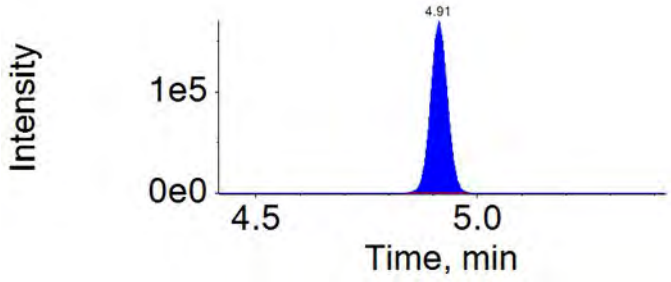




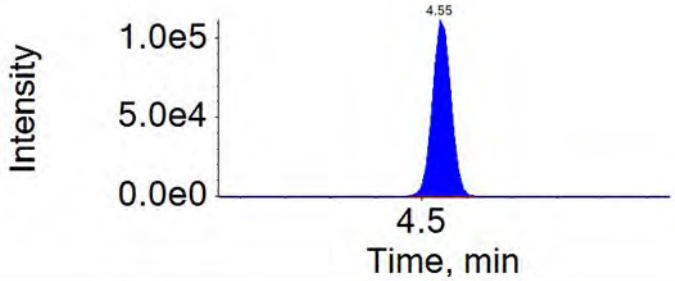
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

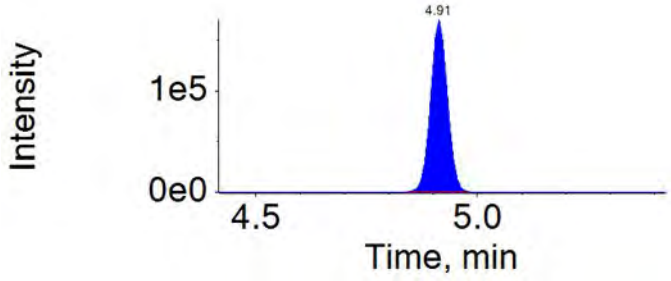
Extraction Standard: E13C5-PFHxA	Injection Standard: 13C2-PFOA
318.0 / 273.0	415.0 / 370.0



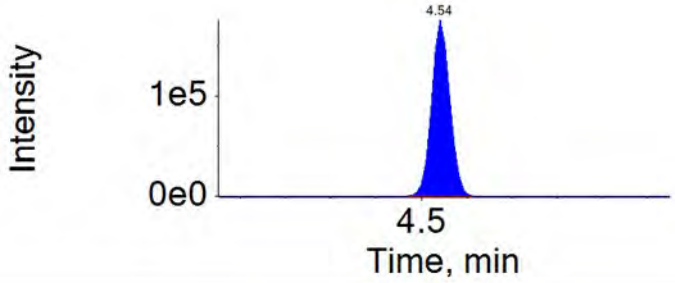


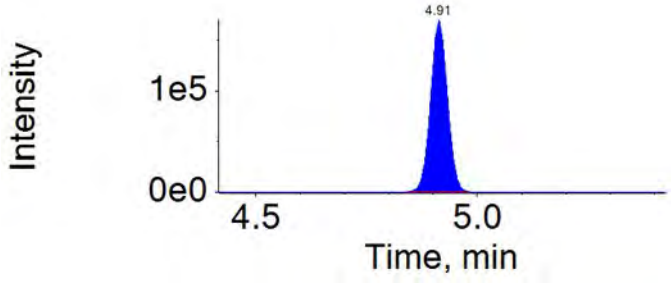
Extraction Standard: E13C3-PFHxS	Injection Standard: 13C2-PFOA
402.0 / 80.0	415.0 / 370.0



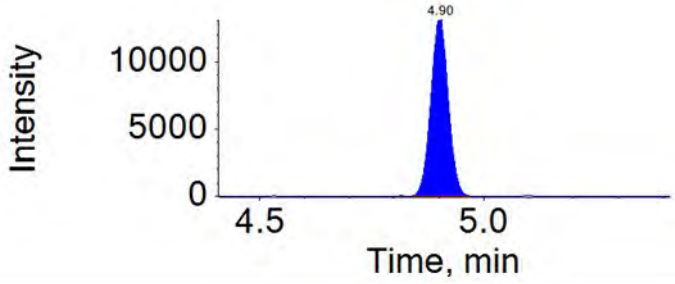


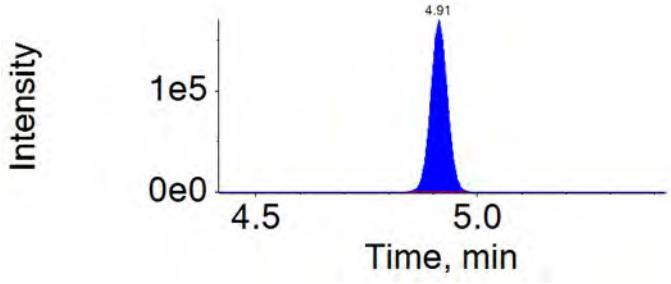
Extraction Standard: E13C4-PFHpA	Injection Standard: 13C2-PFOA
367.0 / 322.0	415.0 / 370.0





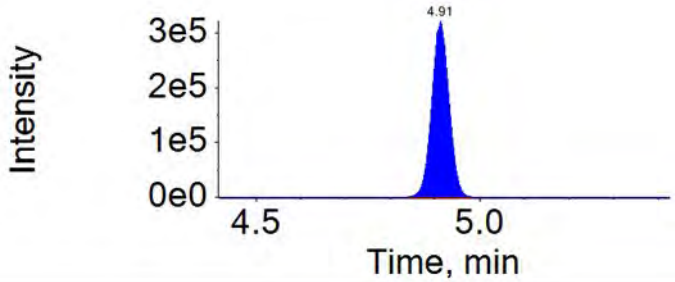
Extraction Standard: E13C2-6:2-FTS	Injection Standard: 13C2-PFOA
429.0 / 81.0	415.0 / 370.0

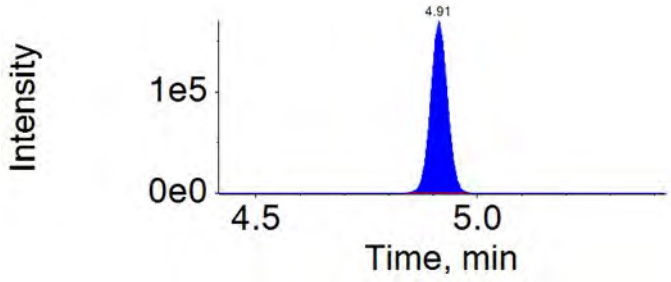




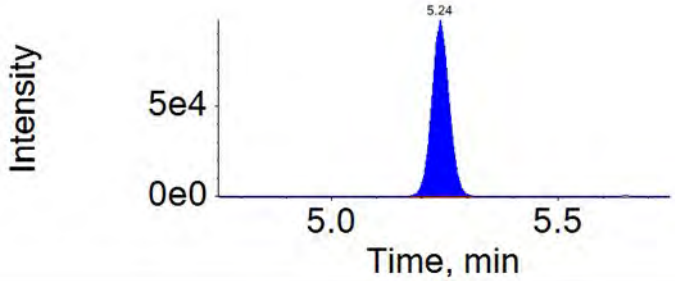
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

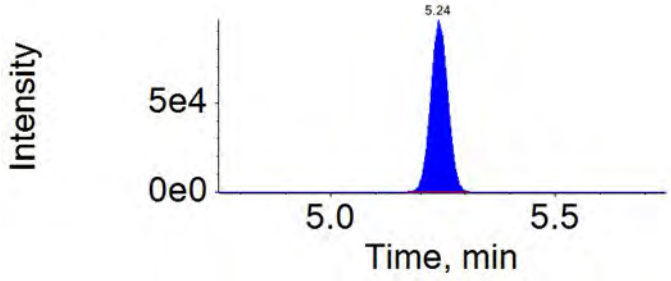
Extraction Standard: E13C8-PFOA	Injection Standard: 13C2-PFOA
421.0 / 376.0	415.0 / 370.0



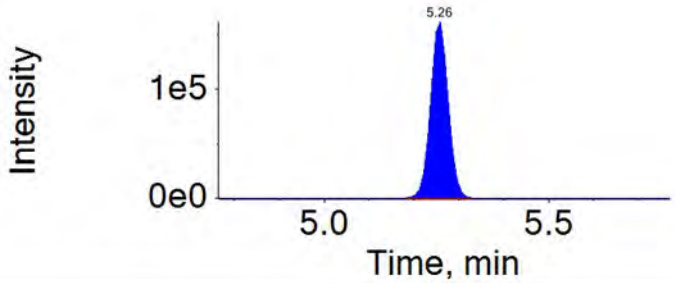


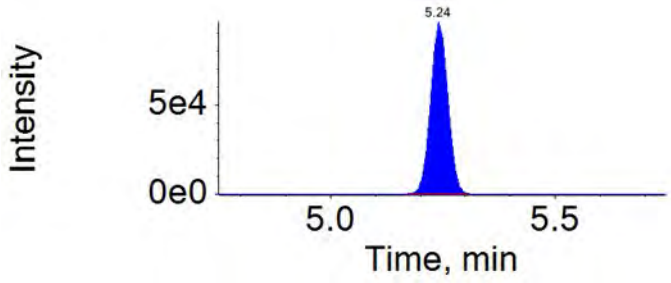
Extraction Standard: E13C8-PFOS	Injection Standard: 13C4-PFOS
507.0 / 80.0	503.0 / 80.0



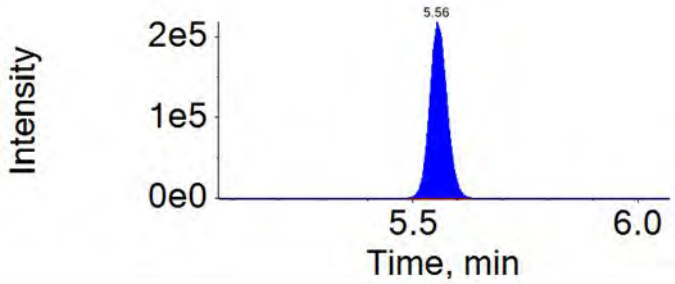


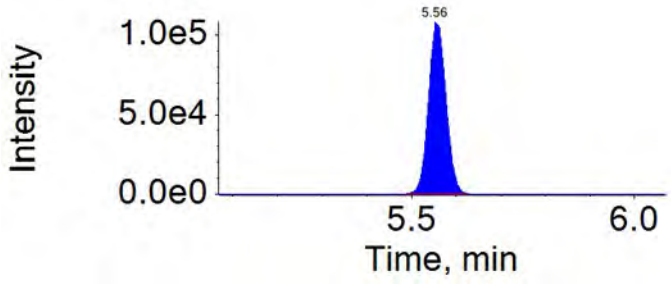
Extraction Standard: E13C9-PFNA	Injection Standard: 13C4-PFOS
472.0 / 427.0	503.0 / 80.0





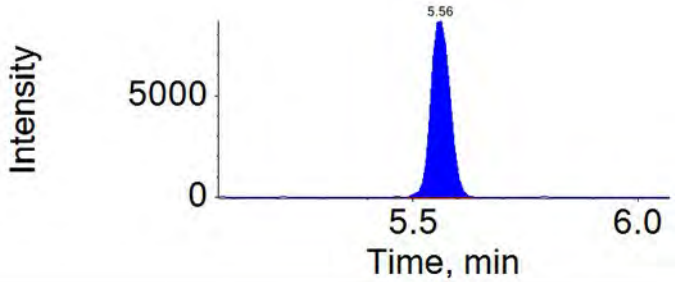
Extraction Standard: E13C6-PFDA	Injection Standard: 13C2-PFDA
519.0 / 474.0	515.0 / 470.0

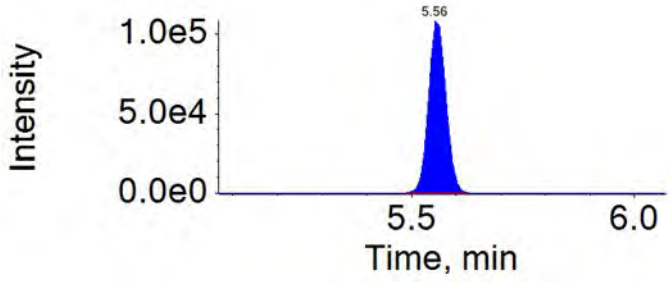




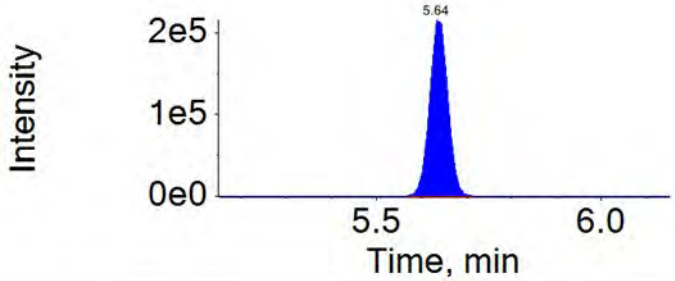
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

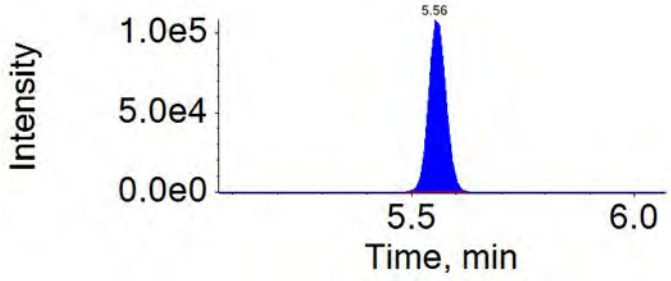
Extraction Standard: E13C2-8:2-FTS	Injection Standard: 13C2-PFDA
529.0 / 81.0	515.0 / 470.0



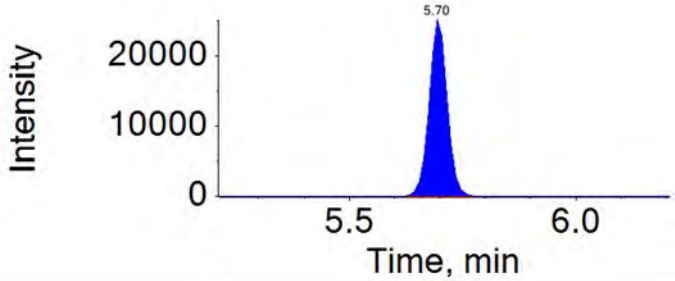


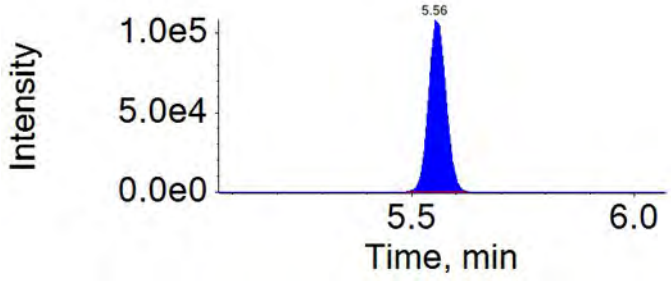
Extraction Standard: E13C8-PFOSA	Injection Standard: 13C2-PFDA
506.0 / 78.0	515.0 / 470.0



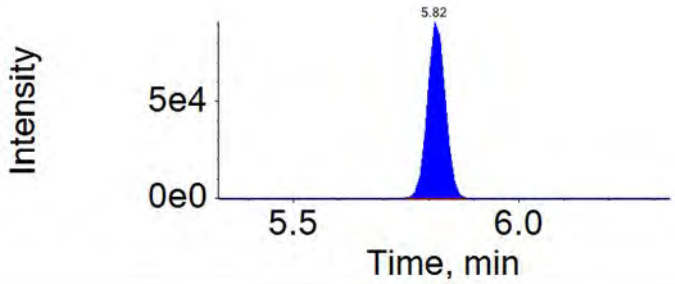


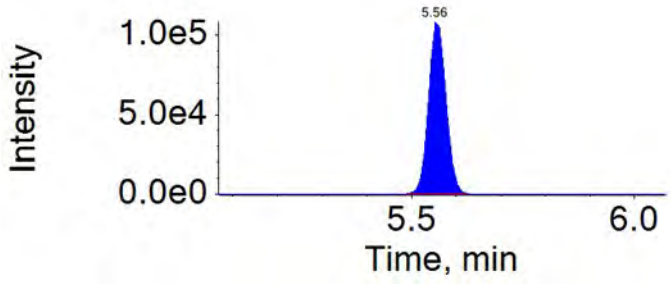
Extraction Standard: Ed3-NMeFOSAA	Injection Standard: 13C2-PFDA
573.0 / 419.0	515.0 / 470.0





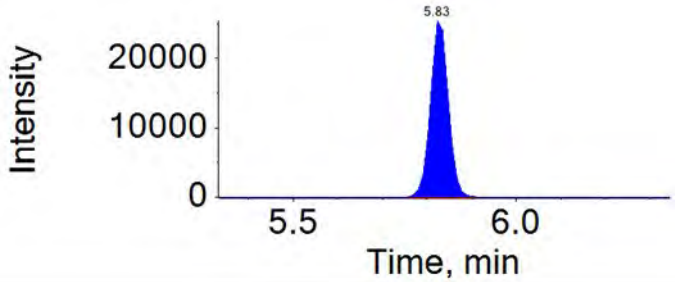
Extraction Standard: E13C7-PFUnDA	Injection Standard: 13C2-PFDA
570.0 / 525.0	515.0 / 470.0

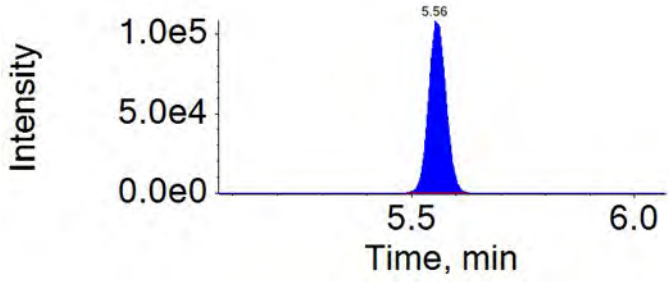




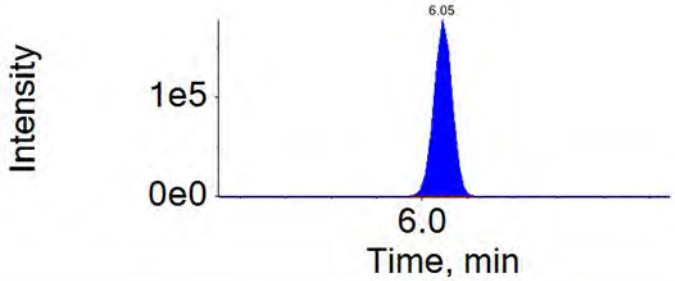
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

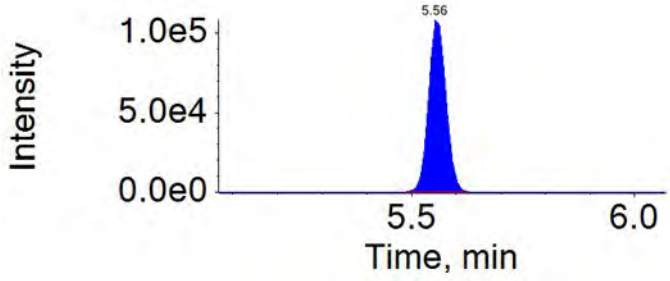
Extraction Standard: Ed5-NEtFOSAA	Injection Standard: 13C2-PFDA
589.0 / 419.0	515.0 / 470.0



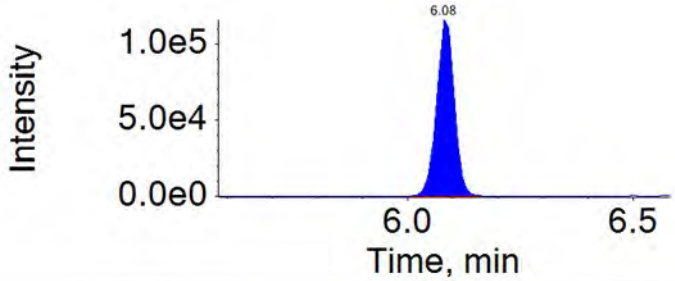


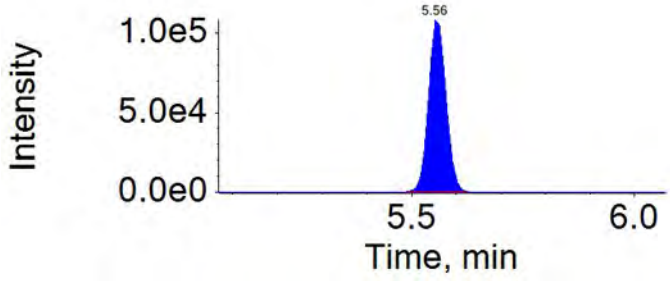
Extraction Standard: E13C2-PFDoDA	Injection Standard: 13C2-PFDA
615.0 / 570.0	515.0 / 470.0



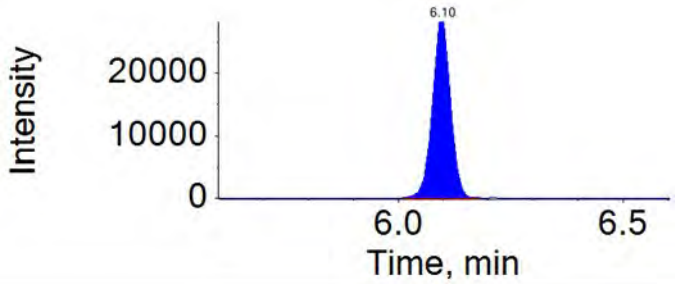


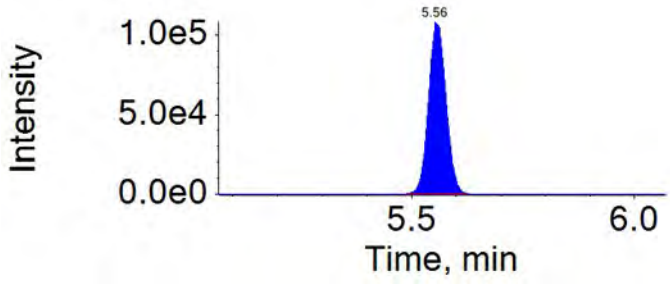
Extraction Standard: Ed7-NMePFOSAE	Injection Standard: 13C2-PFDA
623.0 / 59.0	515.0 / 470.0





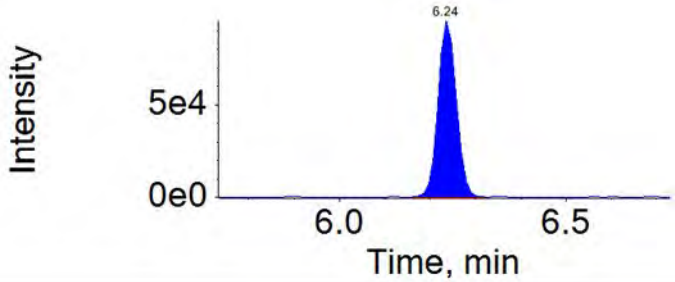
Extraction Standard: Ed3-NMePFOSA	Injection Standard: 13C2-PFDA
515.0 / 169.0	515.0 / 470.0

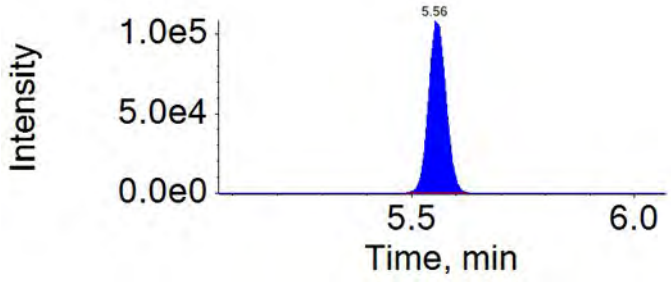




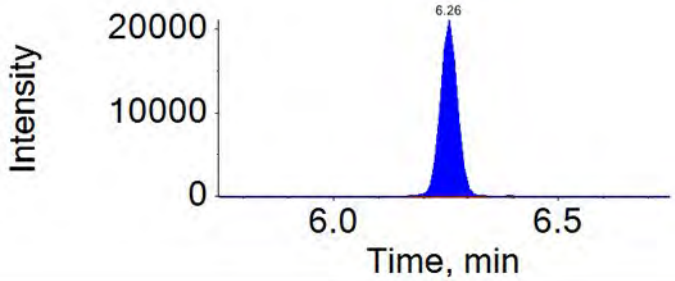
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

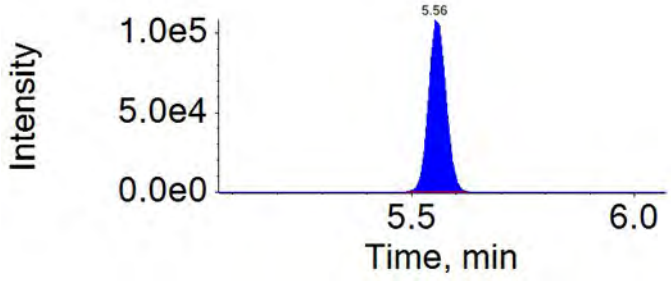
Extraction Standard: Ed9-NEtPFOSAE	Injection Standard: 13C2-PFDA
639.0 / 59.0	515.0 / 470.0



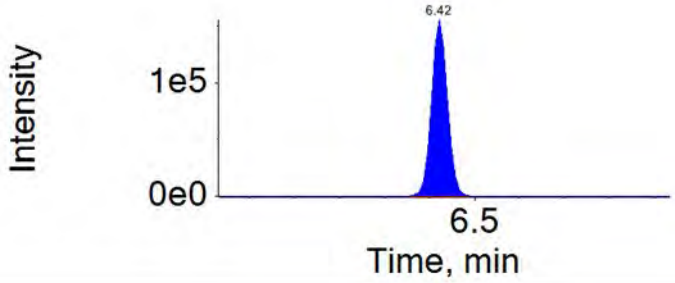


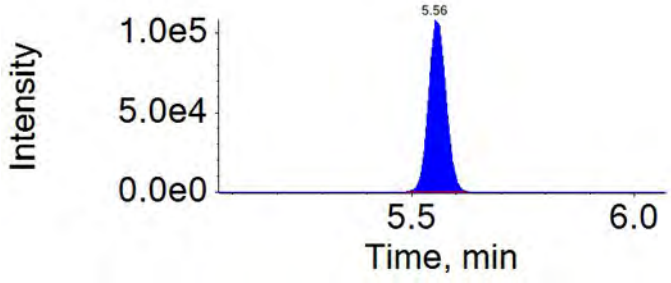
Extraction Standard: Ed5-NEtPFOSA	Injection Standard: 13C2-PFDA
531.0 / 169.0	515.0 / 470.0





Extraction Standard: E13C2-PFTeDA	Injection Standard: 13C2-PFDA
715.0 / 670.0	515.0 / 470.0



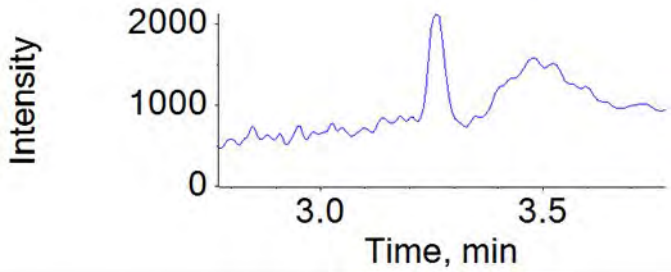


APPROVED
By MCD at 6:34 pm, 11/12/18

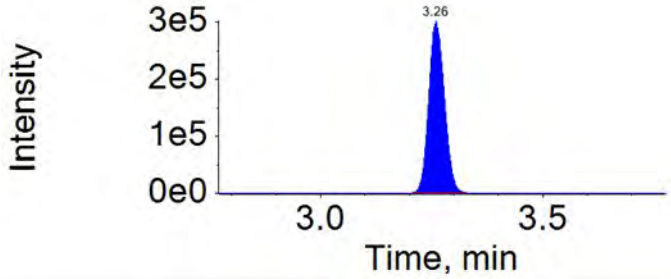
REVIEWED
By HMK at 10:53 am, 11/13/18

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

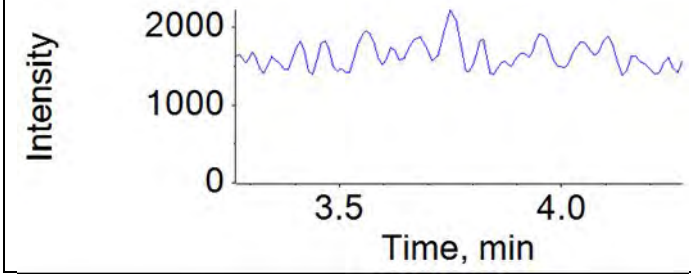
Analyte: PFBA
213.0 / 169.0



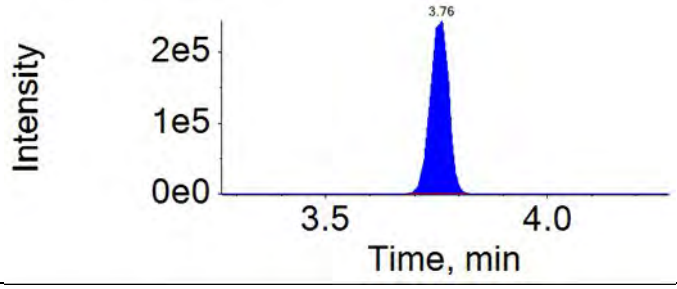
Extraction Standard: 13C4-PFBA
217.0 / 172.0



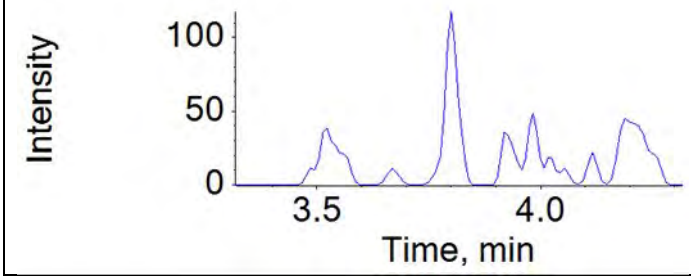
Analyte: PFPeA
263.0 / 219.0



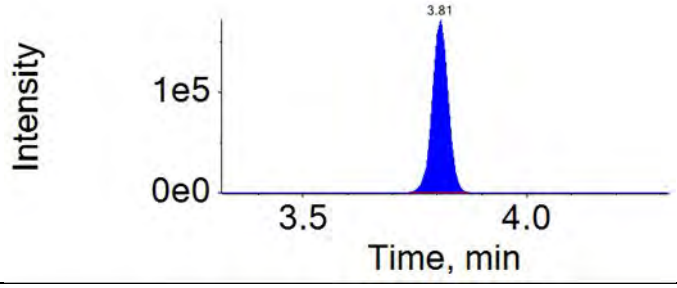
Extraction Standard: 13C5-PFPeA
268.0 / 223.0



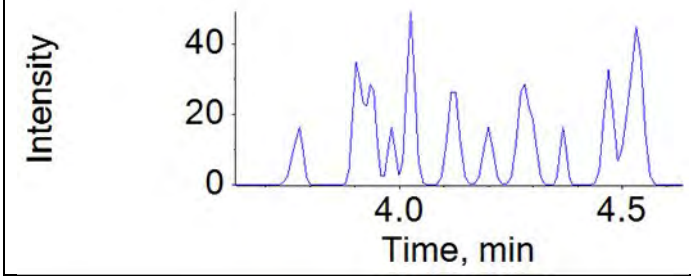
Analyte: PFBS
299.0 / 80.0



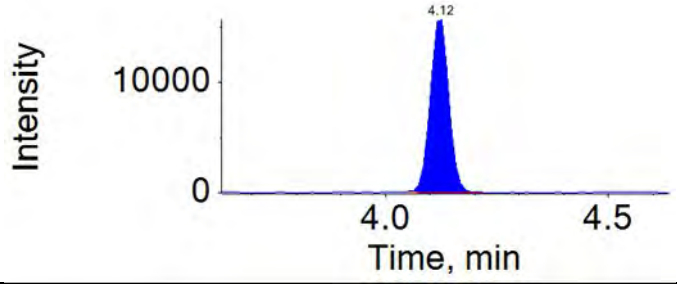
Extraction Standard: 13C3-PFBS
302.0 / 80.0



Analyte: 4:2-FTS
327.0 / 307.0



Extraction Standard: 13C2-4:2-FTS
329.0 / 81.0

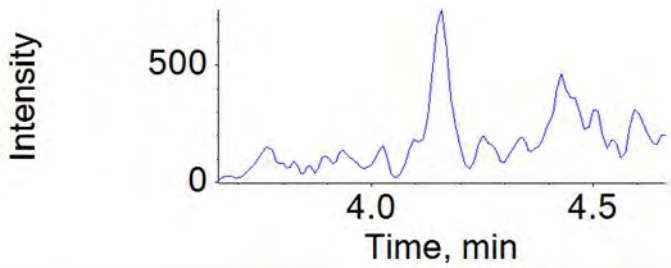


APPROVED
By MCD at 6:34 pm, 11/12/18

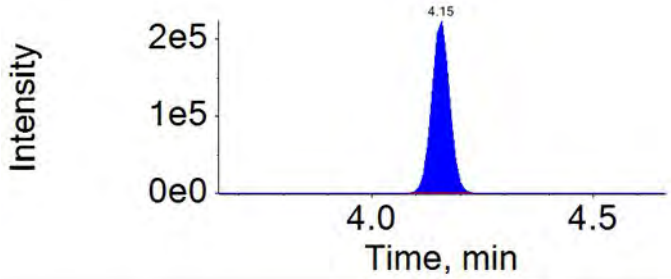
REVIEWED
By HMK at 10:53 am, 11/13/18

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

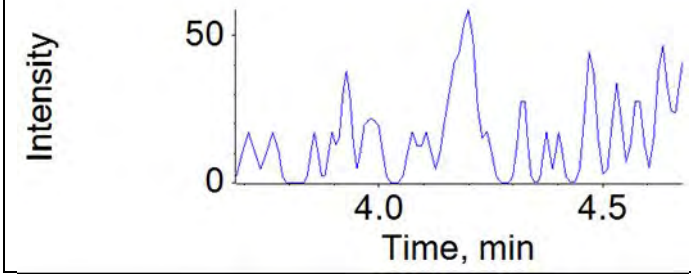
Analyte: PFHxA
313.0 / 269.0



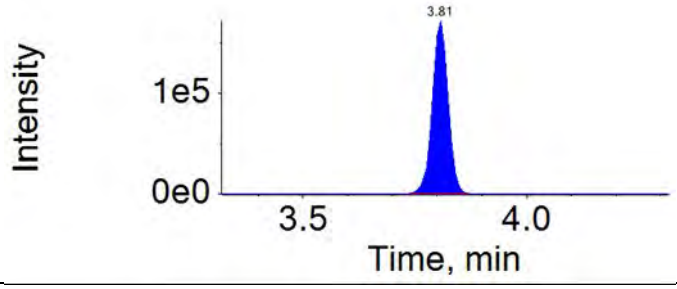
Extraction Standard: 13C5-PFHxA
318.0 / 273.0



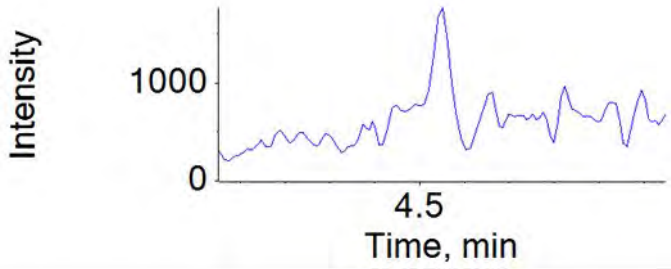
Analyte: PFPeS
349.0 / 80.0



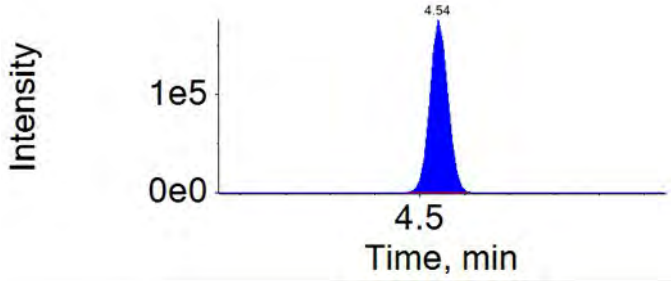
Extraction Standard: 13C3-PFBS
302.0 / 80.0



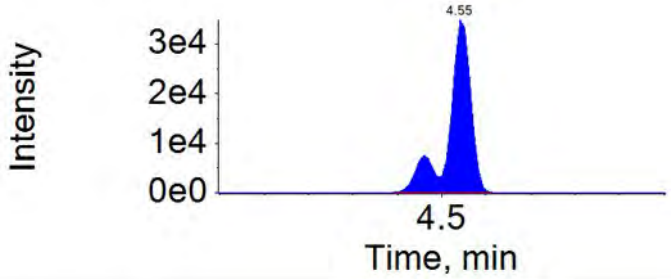
Analyte: PFHpA
363.0 / 319.0



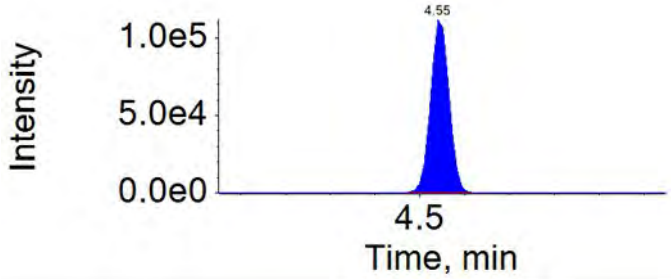
Extraction Standard: 13C4-PFHpA
367.0 / 322.0



Analyte: PFHxS
399.0 / 80.0



Extraction Standard: 13C3-PFHxS
402.0 / 80.0

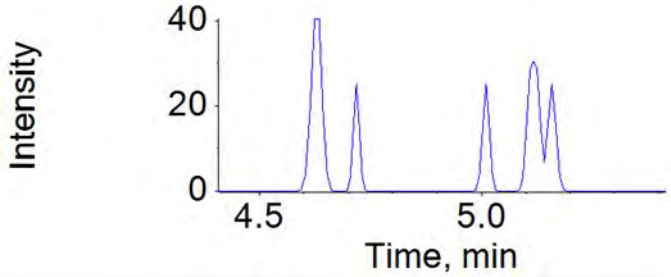


APPROVED
By MCD at 6:34 pm, 11/12/18

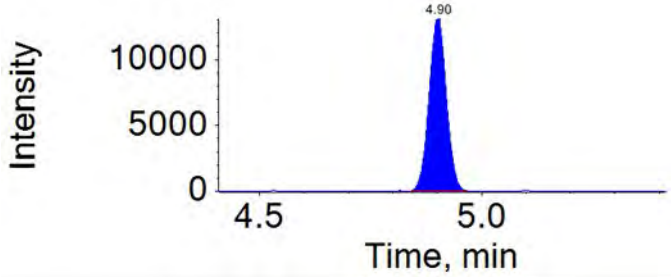
REVIEWED
By HMK at 10:53 am, 11/13/18

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

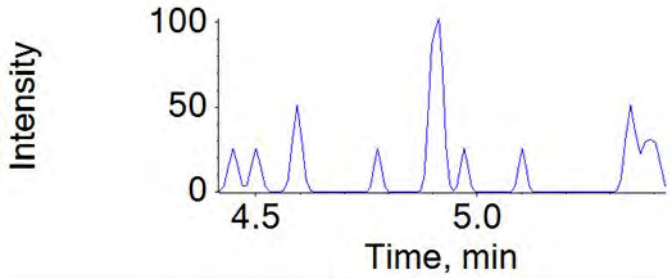
Analyte: 6:2-FTS
427.0 / 407.0



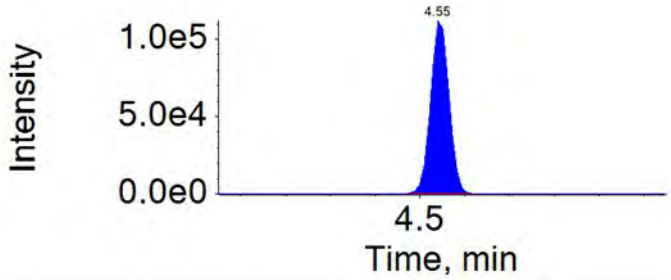
Extraction Standard: 13C2-6:2-FTS
429.0 / 81.0



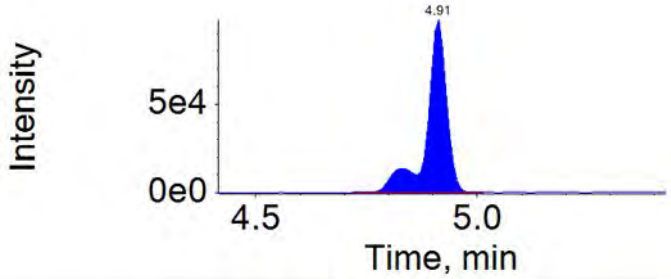
Analyte: PFHpS
449.0 / 80.0



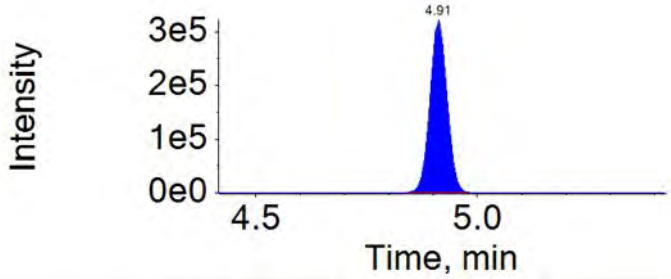
Extraction Standard: 13C3-PFHxS
402.0 / 80.0



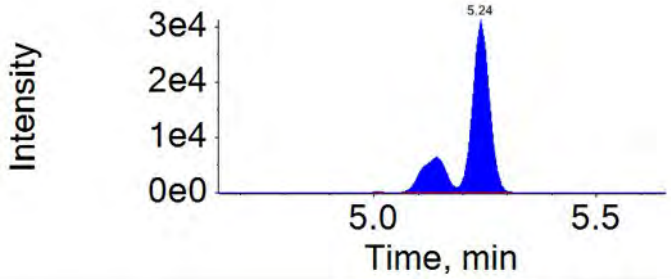
Analyte: PFOA
413.0 / 369.0



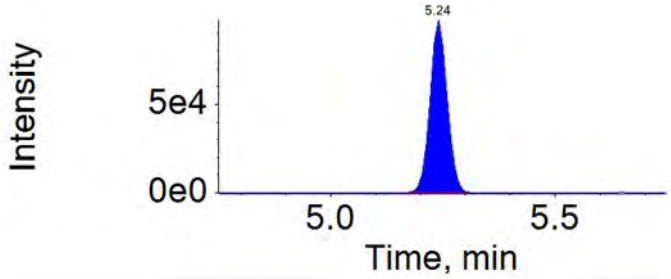
Extraction Standard: 13C8-PFOA
421.0 / 376.0



Analyte: PFOS
499.0 / 80.0



Extraction Standard: 13C8-PFOS
507.0 / 80.0

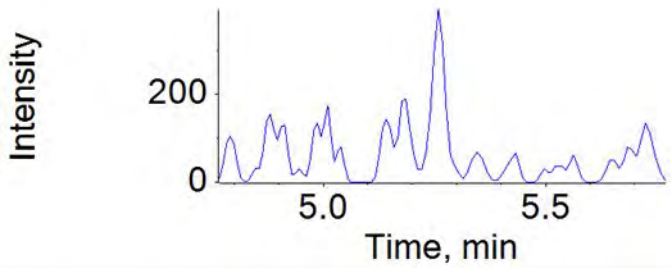


APPROVED
By MCD at 6:34 pm, 11/12/18

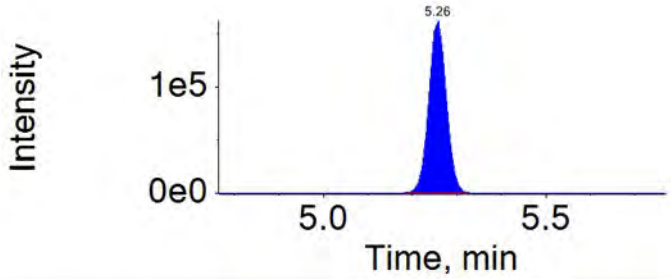
REVIEWED
By HMK at 10:53 am, 11/13/18

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

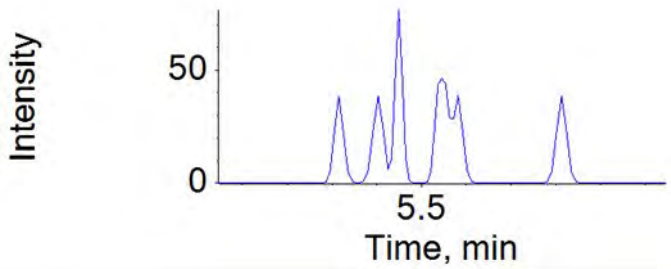
Analyte: PFNA
463.0 / 419.0



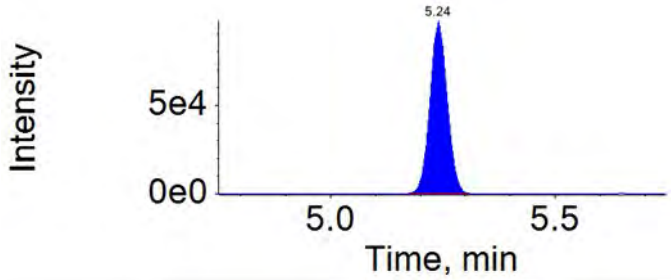
Extraction Standard: 13C9-PFNA
472.0 / 427.0



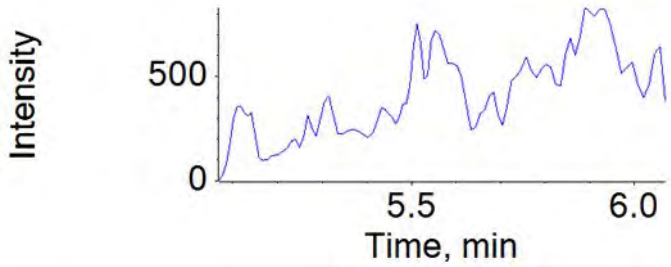
Analyte: PFNS
549.0 / 80.0



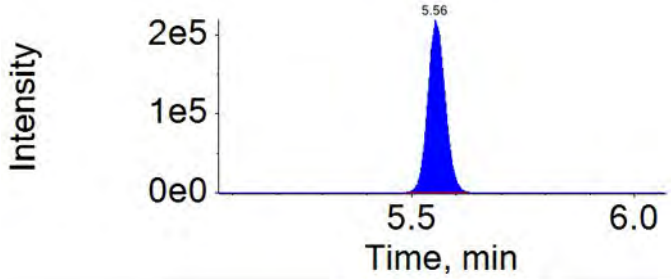
Extraction Standard: 13C8-PFOS
507.0 / 80.0



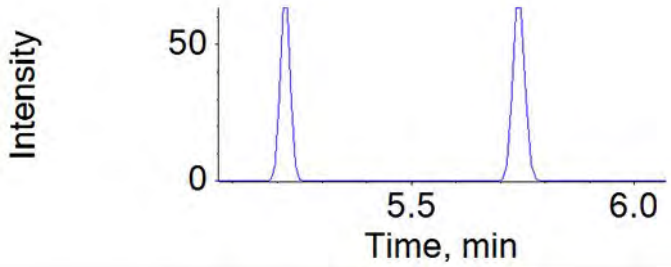
Analyte: PFDA
513.0 / 469.0



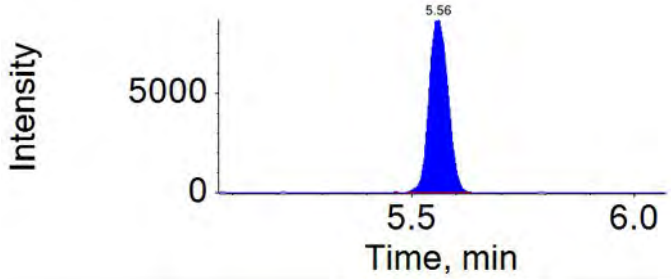
Extraction Standard: 13C6-PFDA
519.0 / 474.0



Analyte: 8:2-FTS
527.0 / 507.0



Extraction Standard: 13C2-8:2-FTS
529.0 / 81.0

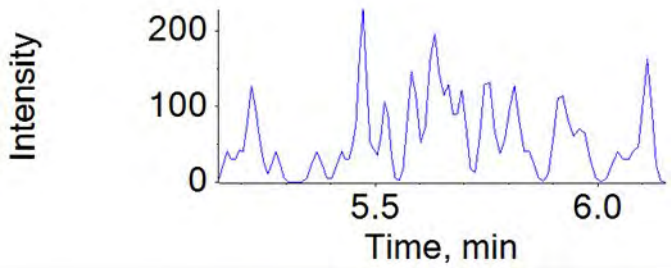


APPROVED
By MCD at 6:34 pm, 11/12/18

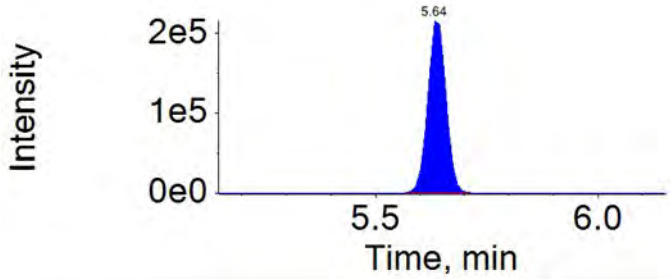
REVIEWED
By HMK at 10:53 am, 11/13/18

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

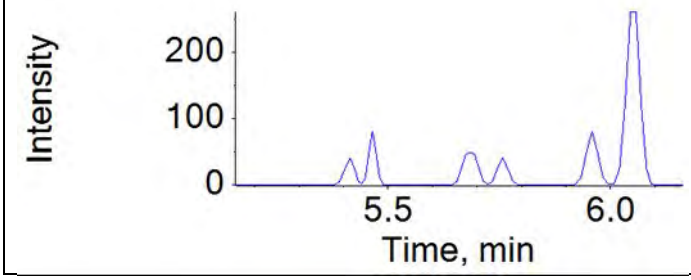
Analyte: PFOSA
498.0 / 78.0



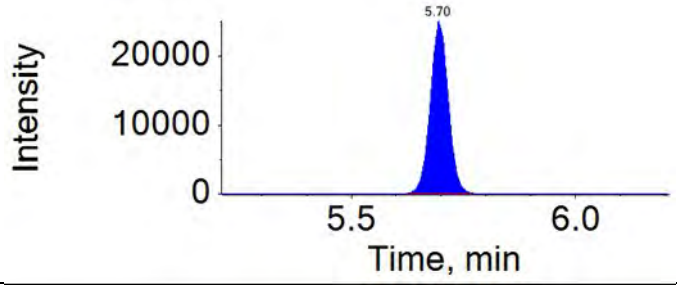
Extraction Standard: 13C8-PFOSA
506.0 / 78.0



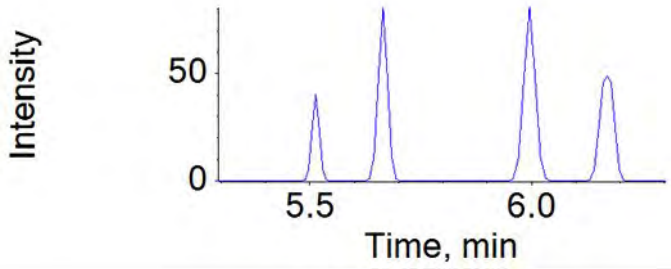
Analyte: NMeFOSAA
570.0 / 419.0



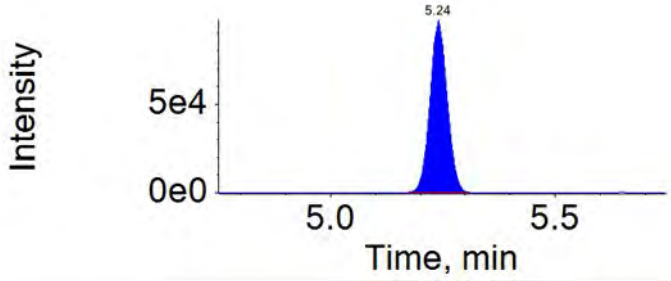
Extraction Standard: d3-NMeFOSAA
573.0 / 419.0



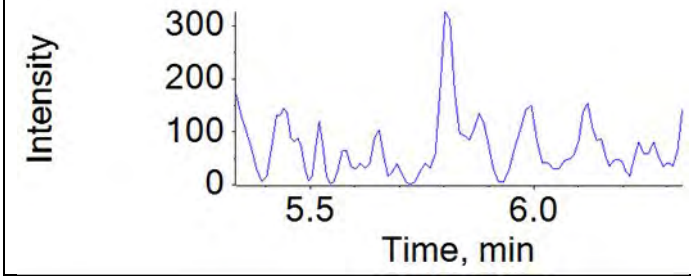
Analyte: PFDS
599.0 / 80.0



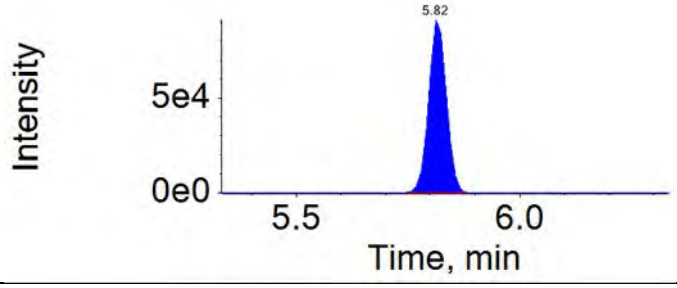
Extraction Standard: 13C8-PFOS
507.0 / 80.0



Analyte: PFUnDA
563.0 / 519.0



Extraction Standard: 13C7-PFUnDA
570.0 / 525.0

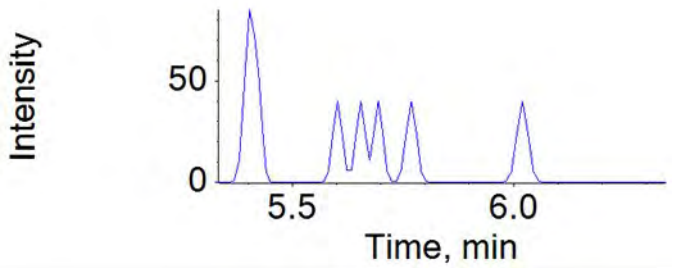


APPROVED
By MCD at 6:34 pm, 11/12/18

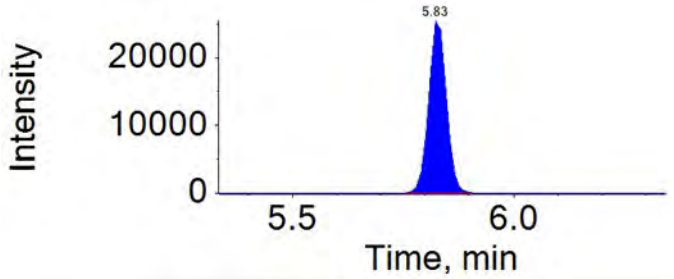
REVIEWED
By HMK at 10:53 am, 11/13/18

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

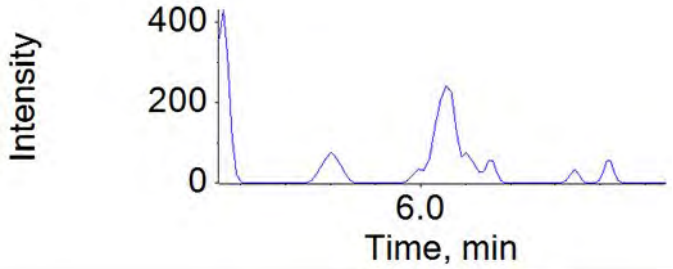
Analyte: NEtFOSAA
584.0 / 419.0



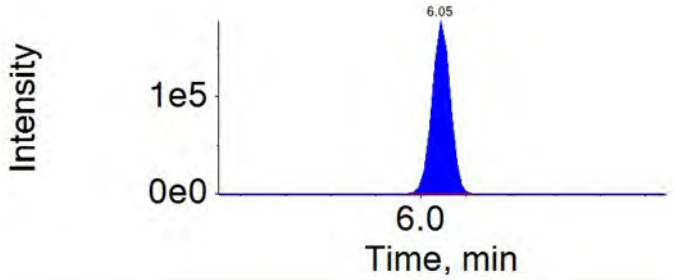
Extraction Standard: d5-NEtFOSAA
589.0 / 419.0



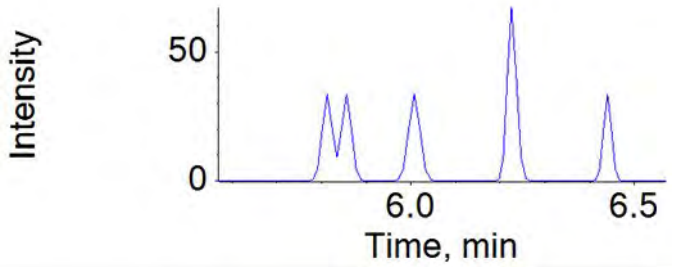
Analyte: PFDoDA
613.0 / 569.0



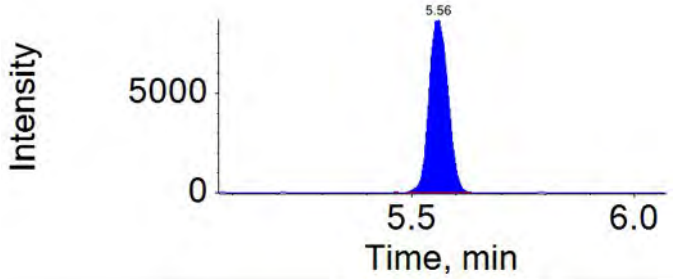
Extraction Standard: 13C2-PFDoDA
615.0 / 570.0



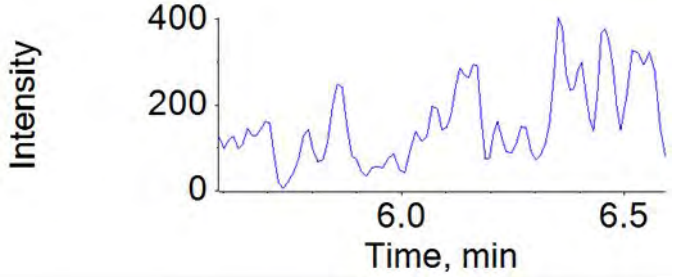
Analyte: 10:2-FTS
627.0 / 607.0



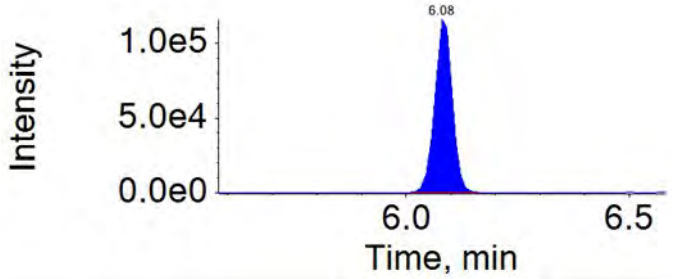
Extraction Standard: 13C2-8:2-FTS
529.0 / 81.0



Analyte: NMePFOSAE
616.0 / 59.0



Extraction Standard: d7-NMePFOSAE
623.0 / 59.0

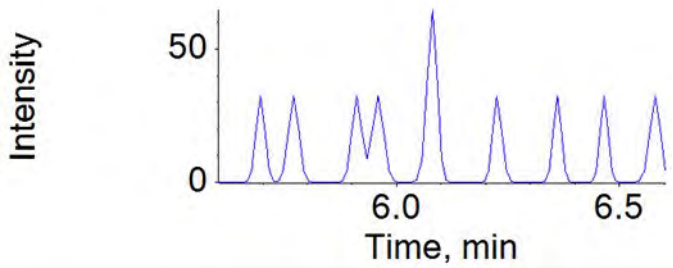


APPROVED
By MCD at 6:34 pm, 11/12/18

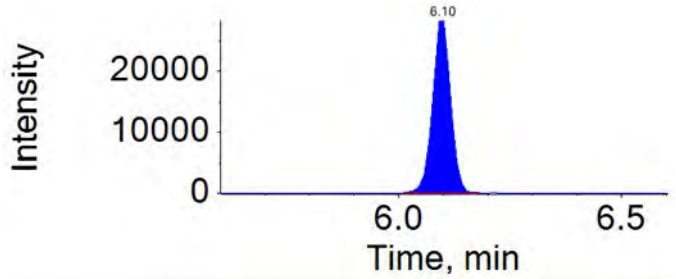
REVIEWED
By HMK at 10:53 am, 11/13/18

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

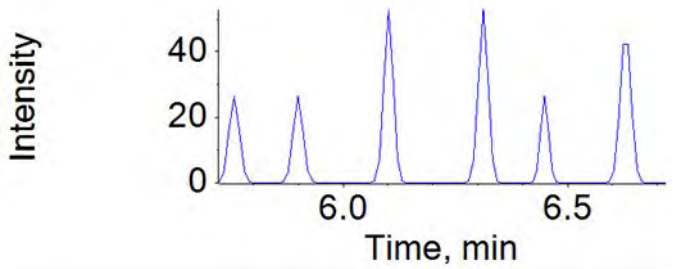
Analyte: NMePFOSA
512.0 / 169.0



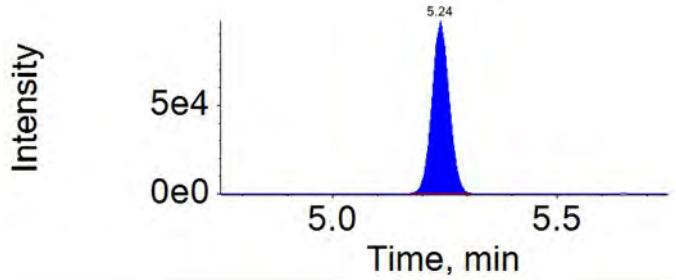
Extraction Standard: d3-NMePFOSA
515.0 / 169.0



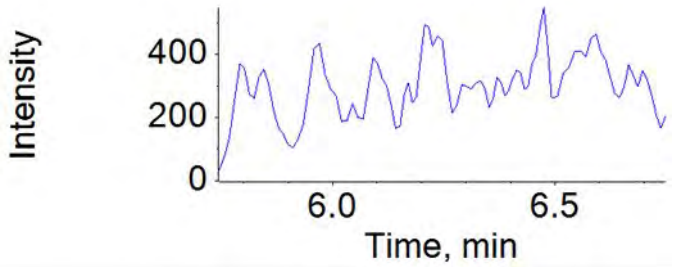
Analyte: PFDoS
699.0 / 80.0



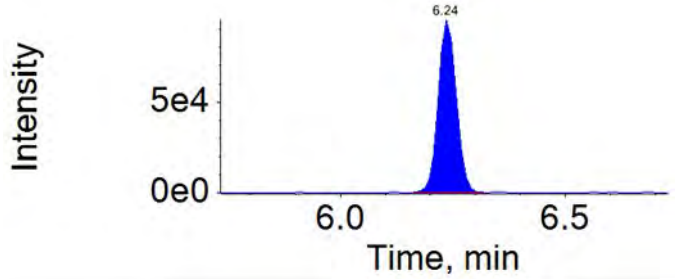
Extraction Standard: 13C8-PFOS
507.0 / 80.0



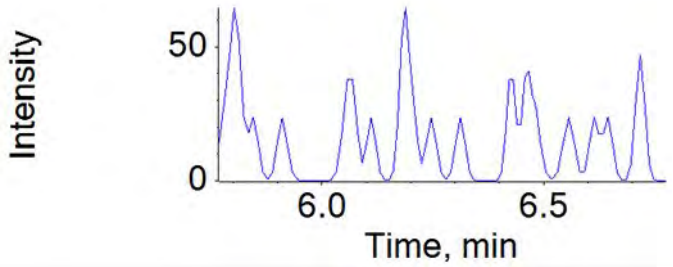
Analyte: NEtPFOSAE
630.0 / 59.0



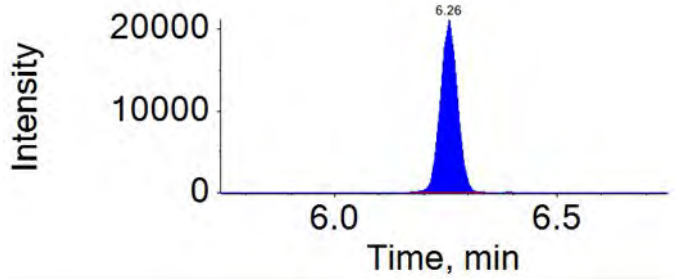
Extraction Standard: d9-NEtPFOSAE
639.0 / 59.0



Analyte: NEtPFOSA
526.0 / 169.0



Extraction Standard: d5-NEtPFOSA
531.0 / 169.0

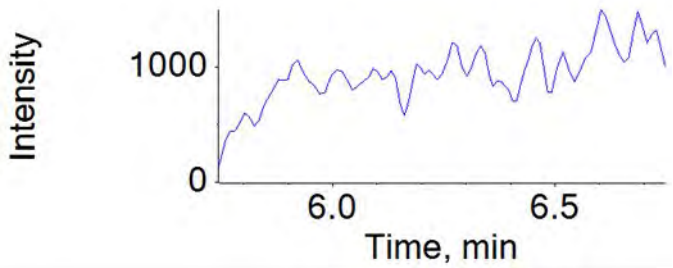


APPROVED
By MCD at 6:34 pm, 11/12/18

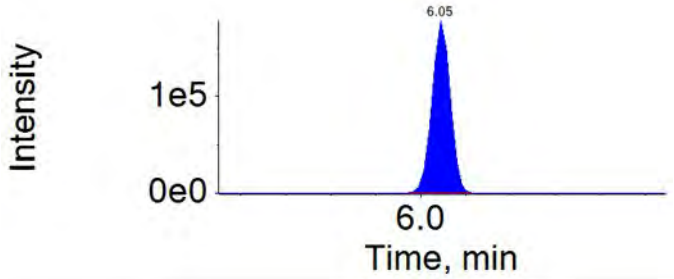
REVIEWED
By HMK at 10:53 am, 11/13/18

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

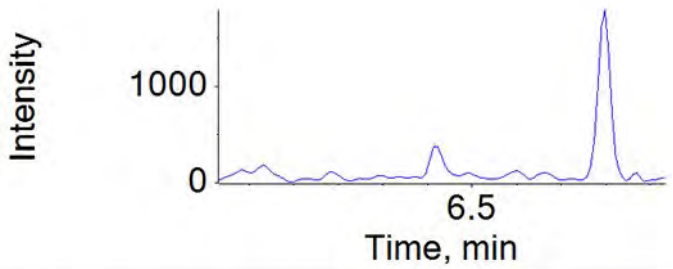
Analyte: PFTrDA
663.0 / 619.0



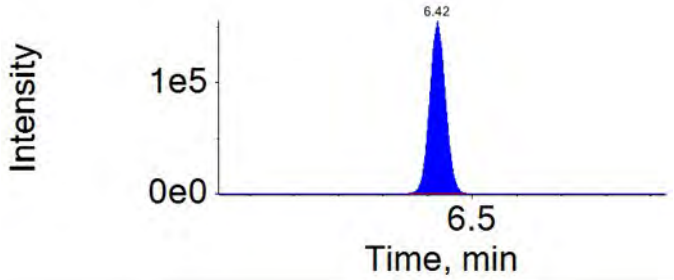
Extraction Standard: 13C2-PFDoDA
615.0 / 570.0



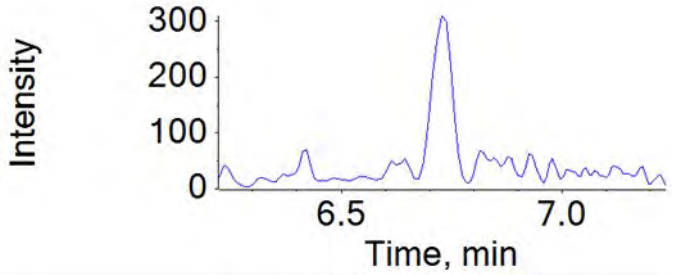
Analyte: PFTeDA
713.0 / 669.0



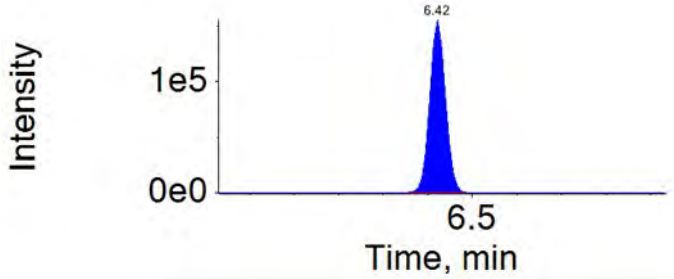
Extraction Standard: 13C2-PFTeDA
715.0 / 670.0



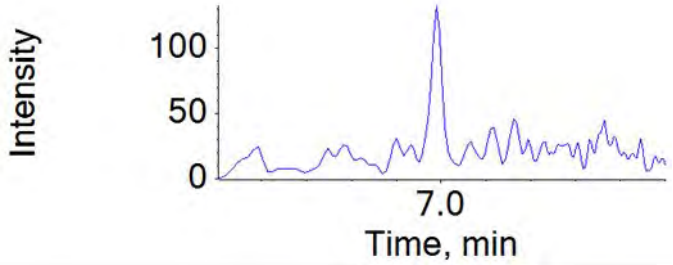
Analyte: PFHxDA
813.0 / 769.0



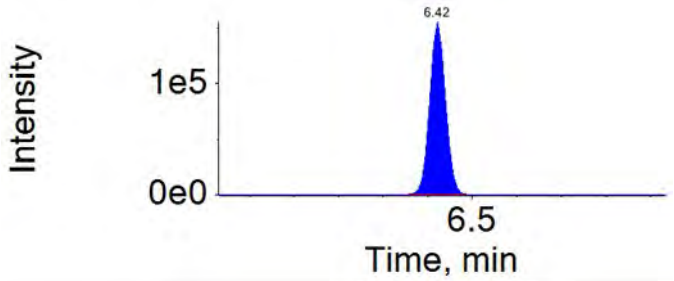
Extraction Standard: 13C2-PFTeDA
715.0 / 670.0



Analyte: PFODA
913.0 / 869.0



Extraction Standard: 13C2-PFTeDA
715.0 / 670.0



APPROVED
By MCD at 6:34 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

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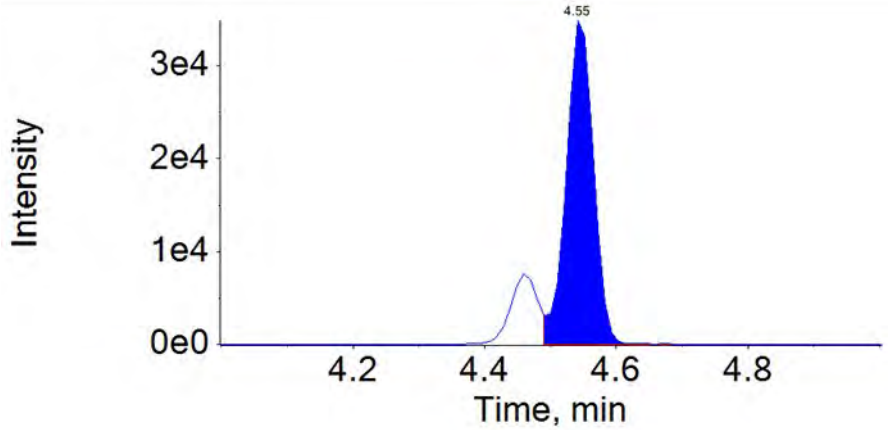
Auto Integrations prior to Manual Integration

Print Date: 11/12/2018 6:26 PM
Template: MQ-OrigInteg-16NOV21.docx

Results Table Name: 18NOV12DCAL
Results Table Date: 11/12/2018 6:23:42 PM

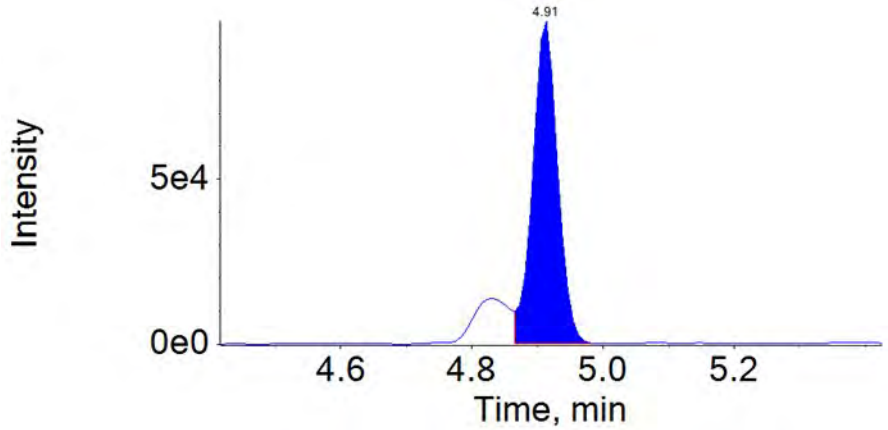
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

Component Name:
PFHxS
RT (min.):
4.55
Peak Area:
101341.11
Mass Range:
399.0 / 80.0
File Name:
18NOV12DCAL-51.wiff
Sample Name:
L+B CAL3



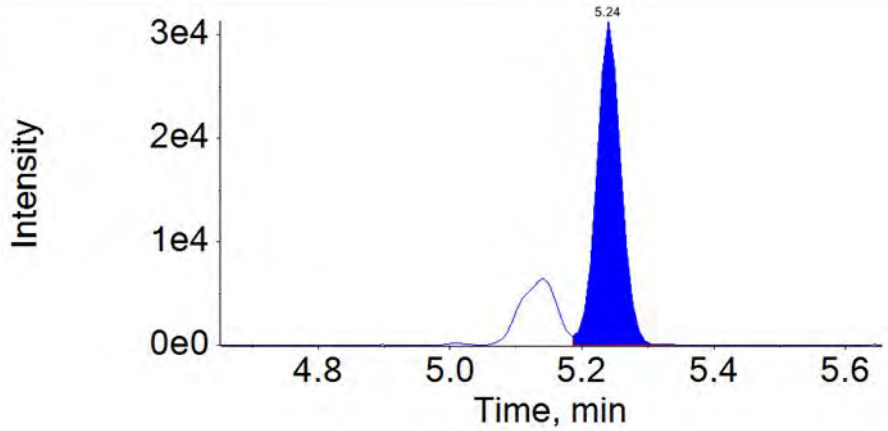
Integration Comment: incorrect integration

Component Name:
PFOA
RT (min.):
4.91
Peak Area:
258567.11
Mass Range:
413.0 / 369.0
File Name:
18NOV12DCAL-51.wiff
Sample Name:
L+B CAL3



Integration Comment: incorrect integration

Component Name:
PFOS
RT (min.):
5.24
Peak Area:
80546.10
Mass Range:
499.0 / 80.0
File Name:
18NOV12DCAL-51.wiff
Sample Name:
L+B CAL3



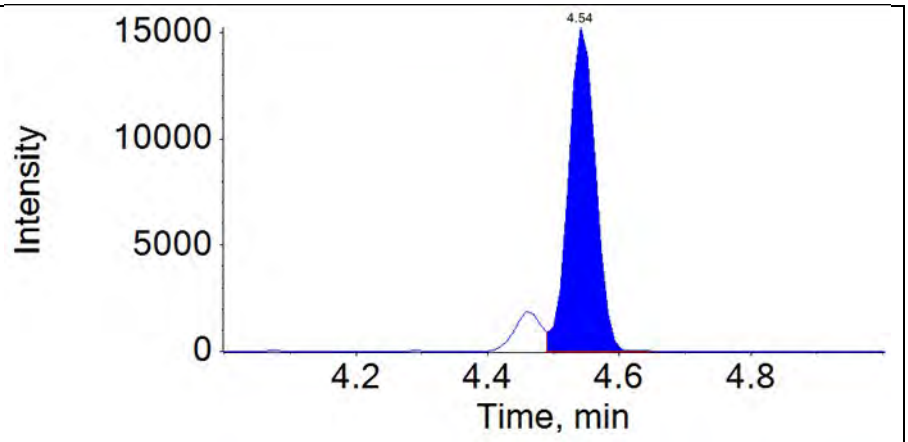
Integration Comment: incorrect integration

APPROVED
By MCD at 6:34 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

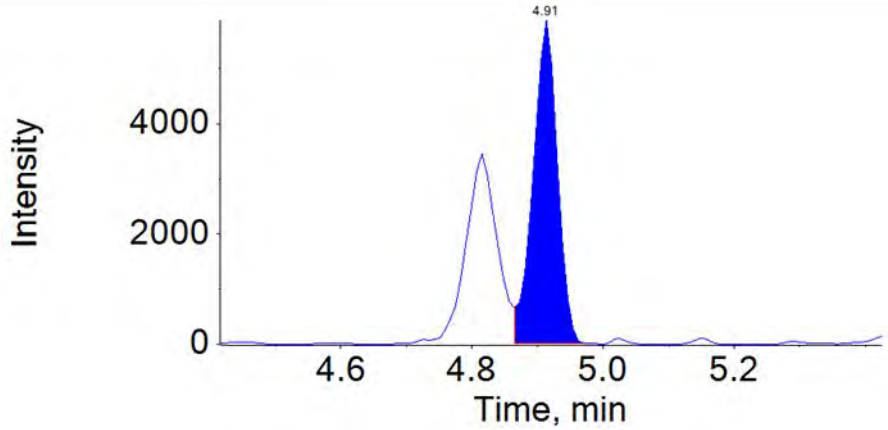
Results Table Name: 18NOV12DCAL
Results Table Date: 11/12/2018 6:23:42 PM
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

Component Name:
PFHxS_2
RT (min.):
4.54
Peak Area:
43554.75
Mass Range:
399.0 / 99.0
File Name:
18NOV12DCAL-51.wiff
Sample Name:
L+B CAL3



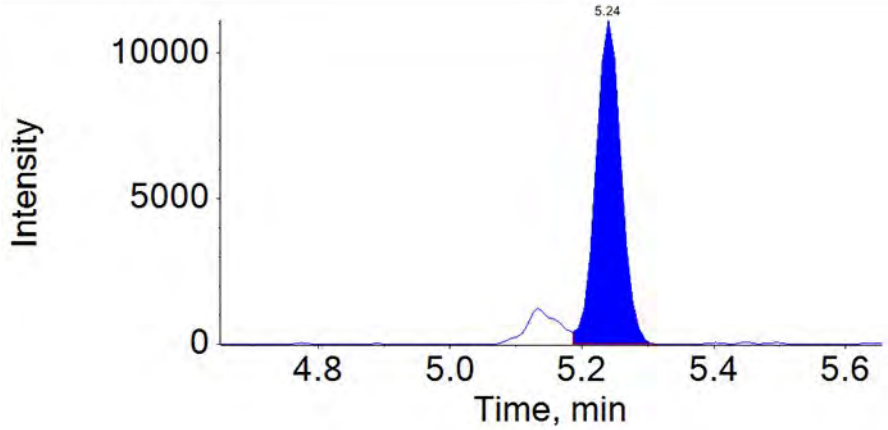
Integration Comment: incorrect integration

Component Name:
PFOA_2
RT (min.):
4.91
Peak Area:
15059.21
Mass Range:
413.0 / 169.0
File Name:
18NOV12DCAL-51.wiff
Sample Name:
L+B CAL3



Integration Comment: incorrect integration

Component Name:
PFOS_2
RT (min.):
5.24
Peak Area:
29829.42
Mass Range:
499.0 / 99.0
File Name:
18NOV12DCAL-51.wiff
Sample Name:
L+B CAL3



Integration Comment: incorrect integration

APPROVED
By MCD at 6:34 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

Results Table Name: 18NOV12DCAL
Results Table Date: 11/12/2018 6:23:42 PM

Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

APPROVED
By MCD at 6:34 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

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LC-MS/MS Analysis Report

Printed: 11/12/2018 6:23:00 PM
Template: IonRatio18OCT10

Ion Ratio Report

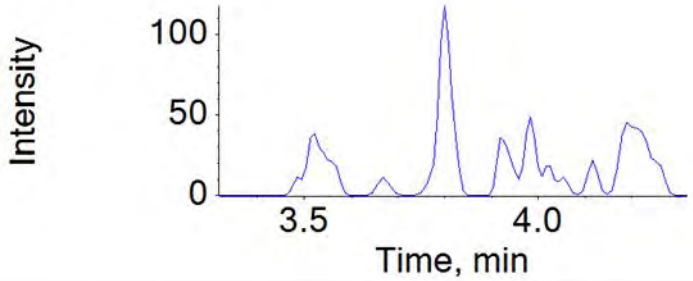
Sample Name: L+B CAL3 **Instrument Name:** LM27631 **File Name:** 18NOV12DCAL-51.wiff

Component Name	RT	RRT	Analyte Area Response	Int Typ	Expected Ion Ratio	Ion Ratio	Ion Ratio % Diff	Ion Ratio Limit	Ion Ratio OOS
PFBS	N/A	N/A	N/A	A	0.3619	N/A			
PFBS_2	N/A	N/A	N/A	A	0.3619	N/A		50	
4:2-FTS	N/A	N/A	N/A	A	0.6730	N/A			
4:2 FTS_2	N/A	N/A	N/A	A	0.6730	N/A		#NA!	
PFHxA	N/A	N/A	N/A	A	0.0117	N/A			
PFHxA_2	N/A	N/A	N/A	A	0.0117	N/A		50	
PFPeS	N/A	N/A	N/A	A	0.5191	N/A			
PFPeS_2	N/A	N/A	N/A	A	0.5191	N/A		50	
PFHpA	N/A	N/A	N/A	A	0.0563	N/A			
PFHpA_2	N/A	N/A	N/A	A	0.0563	N/A		50	
PFHxS	4.55	1.00	122359.84	M	0.3428	0.3979			
PFHxS_2	4.54	1.00	48686.07	M	0.3428	0.3979	16	50	
6:2-FTS	N/A	N/A	N/A	A	0.6604	N/A			
6:2 FTS_2	N/A	N/A	N/A	A	0.6604	N/A		#NA!	
PFHpS	N/A	N/A	N/A	A	0.4066	N/A			
PFHpS_2	N/A	N/A	N/A	A	0.4066	N/A		50	
PFOA	4.91	1.00	312625.40	M	0.0562	0.0855			
PFOA_2	4.90	1.00	26736.79	M	0.0562	0.0855	52	50	OOS
PFOS	5.24	1.00	105809.81	M	0.2968	0.3212			
PFOS_2	5.24	1.00	33989.74	M	0.2968	0.3212	8	50	
PFNA	N/A	N/A	N/A	A	0.0229	N/A			
PFNA_2	N/A	N/A	N/A	A	0.0229	N/A		50	
PFNS	N/A	N/A	N/A	A	0.4828	N/A			
PFNS_2	N/A	N/A	N/A	A	0.4828	N/A		50	
PFDA	N/A	N/A	N/A	A	0.0081	N/A			
PFDA_2	N/A	N/A	N/A	A	0.0081	N/A		50	
8:2-FTS	N/A	N/A	N/A	A	0.6814	N/A			
8:2 FTS_2	N/A	N/A	N/A	A	0.6814	N/A		#NA!	
NMeFOSAA	N/A	N/A	N/A	A	0.2569	N/A			
NMeFOSAA_2	N/A	N/A	N/A	A	0.2569	N/A		50	
PFDS	N/A	N/A	N/A	A	0.5144	N/A			
PFDS_2	N/A	N/A	N/A	A	0.5144	N/A		50	
PFUnDA	N/A	N/A	N/A	A	0.0058	N/A			
PFUnDA_2	N/A	N/A	N/A	A	0.0058	N/A		50	
NEtFOSAA	N/A	N/A	N/A	A	0.7253	N/A			
NEtFOSAA_2	N/A	N/A	N/A	A	0.7253	N/A		50	
PFDoDA	N/A	N/A	N/A	A	0.0157	N/A			
PFDoDA_2	N/A	N/A	N/A	A	0.0157	N/A		50	
10:2-FTS	N/A	N/A	N/A	A	0.6356	N/A			
10:2 FTS_2	N/A	N/A	N/A	A	0.6356	N/A		#NA!	
PFTrDA	N/A	N/A	N/A	A	0.0086	N/A			
PFTrDA_2	N/A	N/A	N/A	A	0.0086	N/A		50	
PFTeDA	N/A	N/A	N/A	A	0.0062	N/A			
PFTeDA_2	N/A	N/A	N/A	A	0.0062	N/A		50	
PFHxDA	N/A	N/A	N/A	A	0.0683	N/A			
PFHxDA_2	N/A	N/A	N/A	A	0.0683	N/A		50	
PFODA	N/A	N/A	N/A	A	0.0277	N/A			
PFODA_2	N/A	N/A	N/A	A	0.0277	N/A		50	

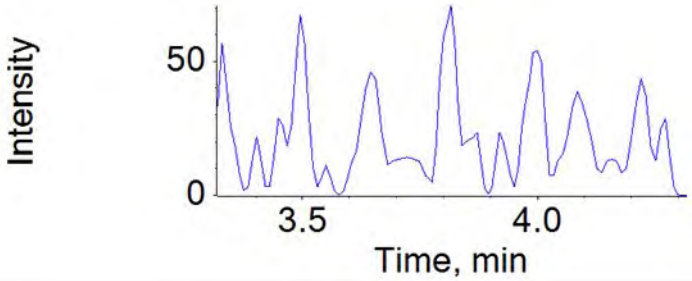
APPROVED
By MCD at 6:34 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

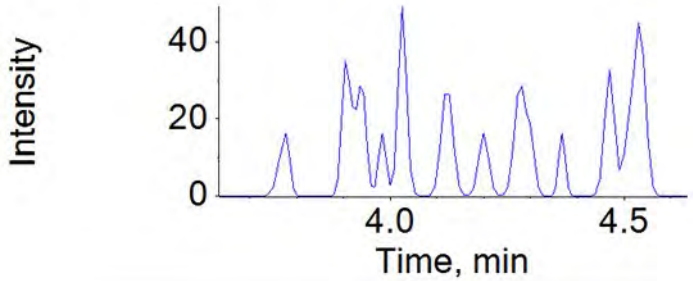
Component: PFBS
Primary Mass: 299.0 / 80.0



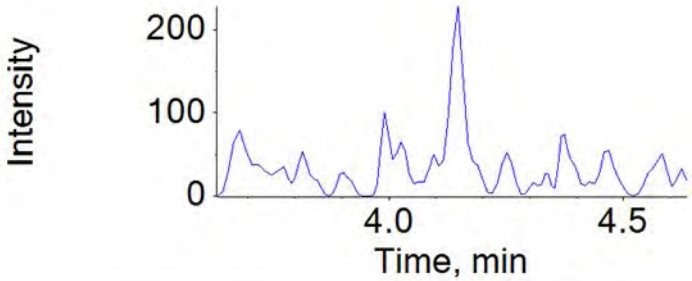
Component: PFBS_2
Secondary Mass: 299.0 / 99.0



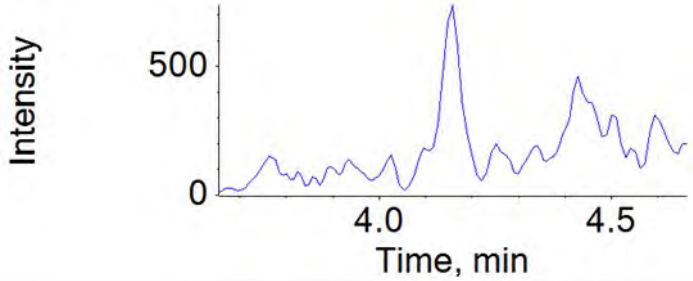
Component: 4:2-FTS
Primary Mass: 327.0 / 307.0



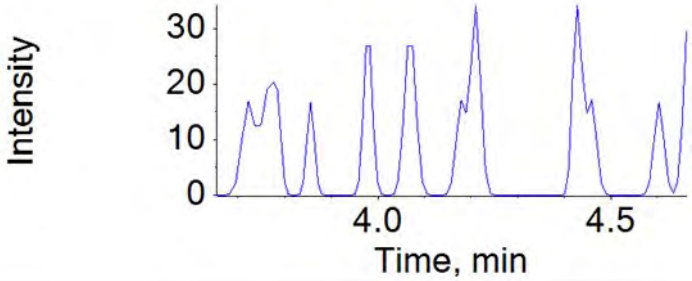
Component: 4:2 FTS_2
Secondary Mass: 327.0 / 81.0



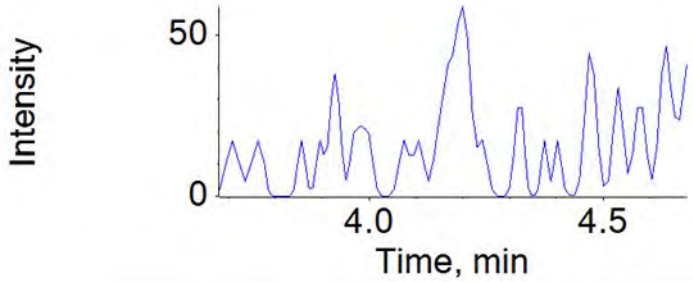
Component: PFHxA
Primary Mass: 313.0 / 269.0



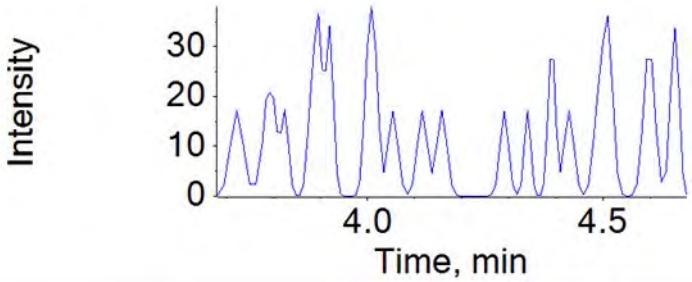
Component: PFHxA_2
Secondary Mass: 313.0 / 119.0



Component: PFPeS
Primary Mass: 349.0 / 80.0



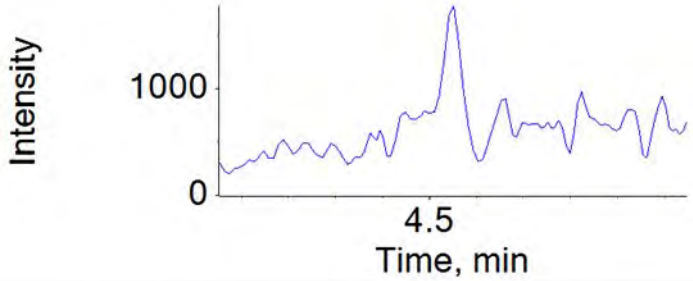
Component: PFPeS_2
Secondary Mass: 349.0 / 99.0



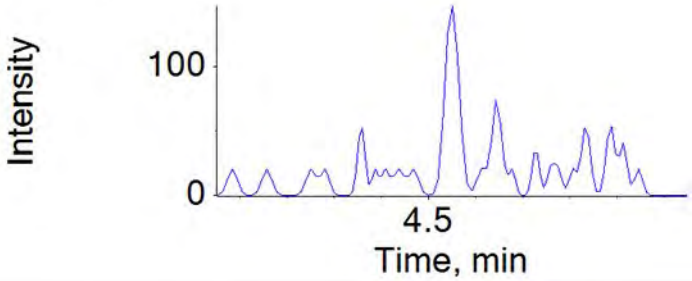
APPROVED
By MCD at 6:34 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

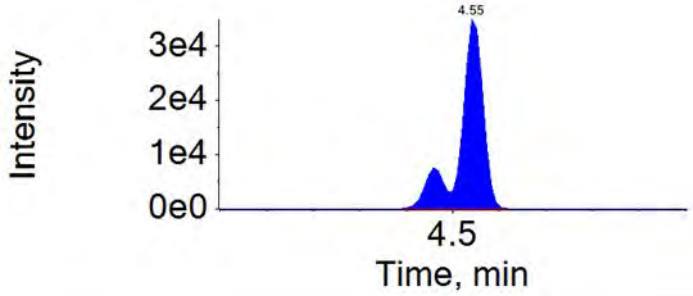
Component: PFHpA
Primary Mass: 363.0 / 319.0



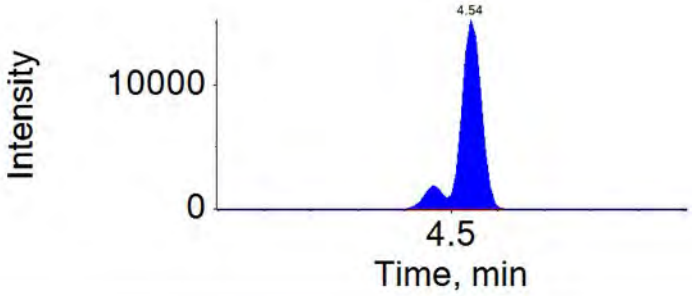
Component: PFHpA_2
Secondary Mass: 363.0 / 169.0



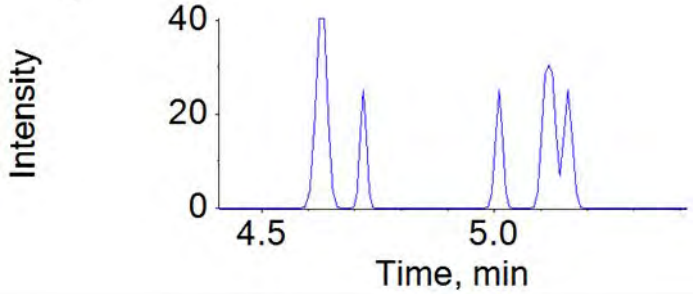
Component: PFHxS
Primary Mass: 399.0 / 80.0



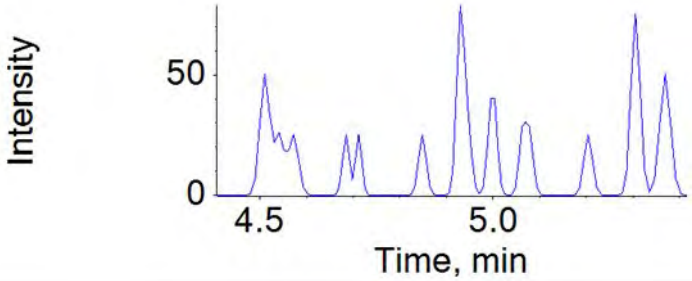
Component: PFHxS_2
Secondary Mass: 399.0 / 99.0



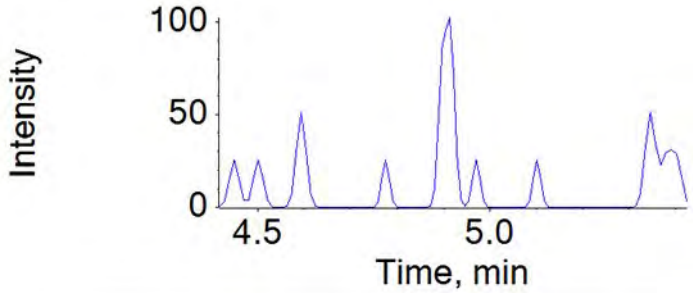
Component: 6:2-FTS
Primary Mass: 427.0 / 407.0



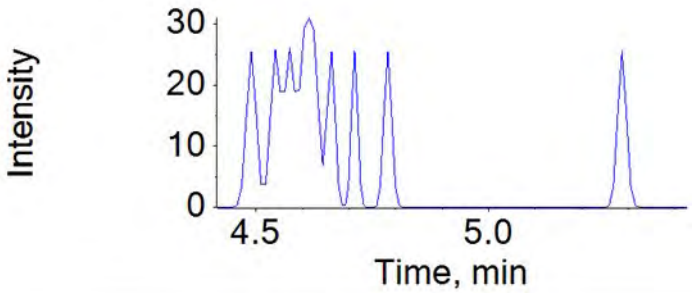
Component: 6:2 FTS_2
Secondary Mass: 427.0 / 81.0



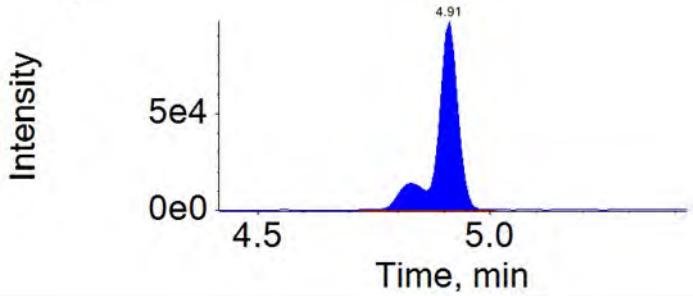
Component: PFHpS
Primary Mass: 449.0 / 80.0



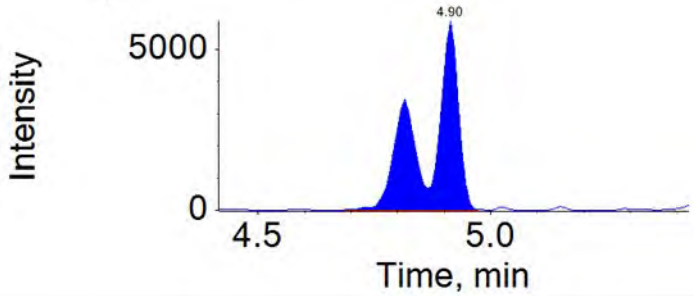
Component: PFHpS_2
Secondary Mass: 449.0 / 99.0



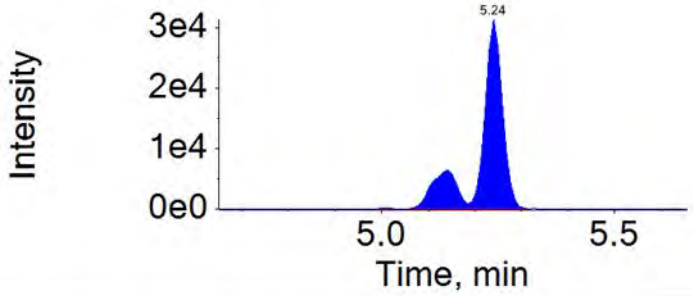
Component: PFOA
Primary Mass: 413.0 / 369.0



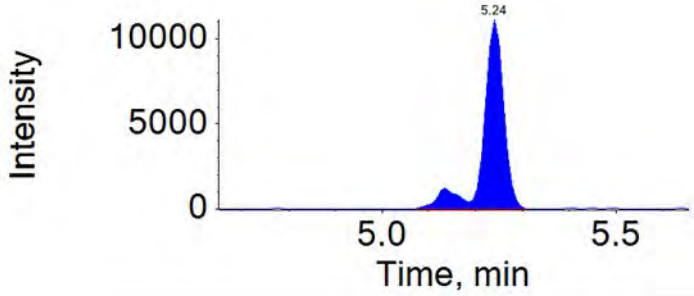
Component: PFOA_2
Secondary Mass: 413.0 / 169.0



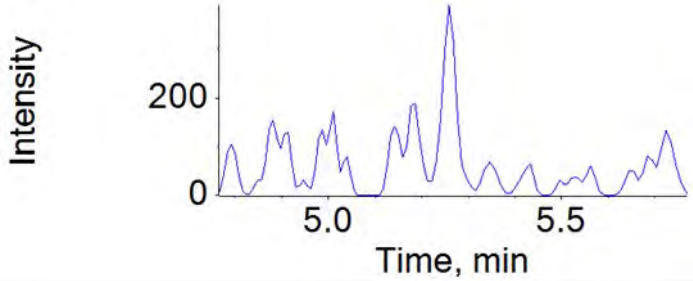
Component: PFOS
Primary Mass: 499.0 / 80.0



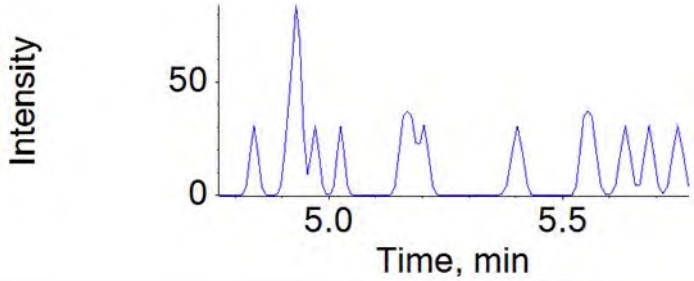
Component: PFOS_2
Secondary Mass: 499.0 / 99.0



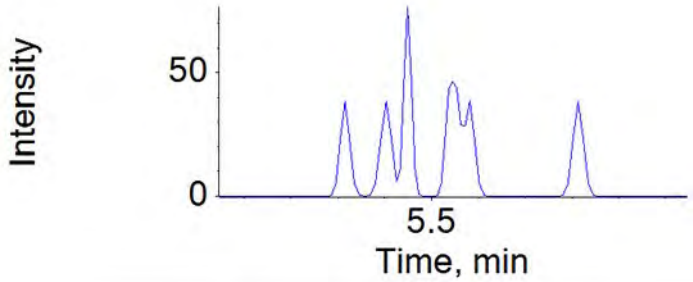
Component: PFNA
Primary Mass: 463.0 / 419.0



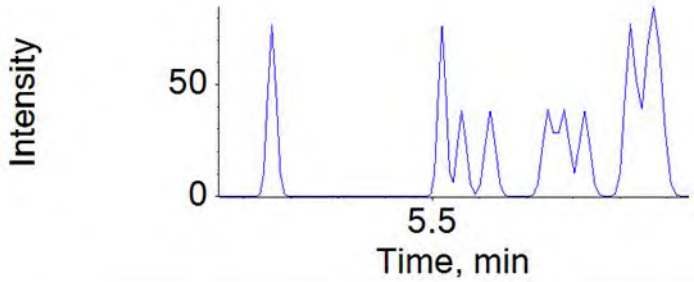
Component: PFNA_2
Secondary Mass: 463.0 / 169.0



Component: PFNS
Primary Mass: 549.0 / 80.0



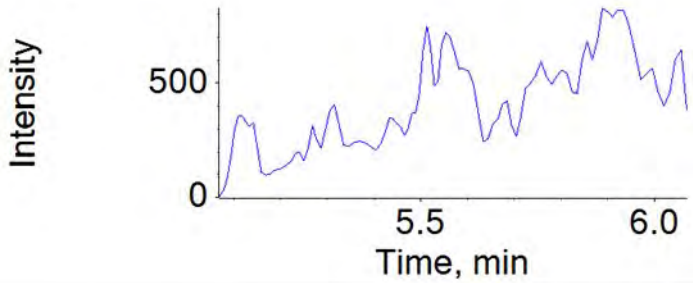
Component: PFNS_2
Secondary Mass: 549.0 / 99.0



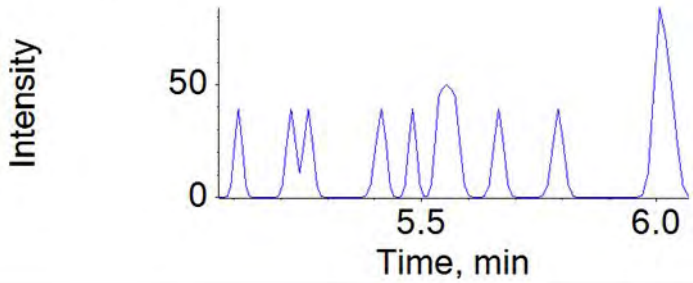
APPROVED
By MCD at 6:34 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

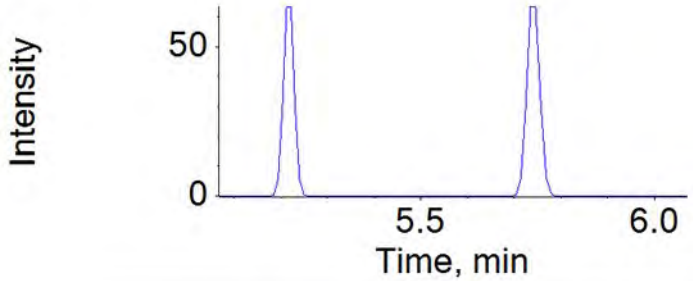
Component: PFDA
Primary Mass: 513.0 / 469.0



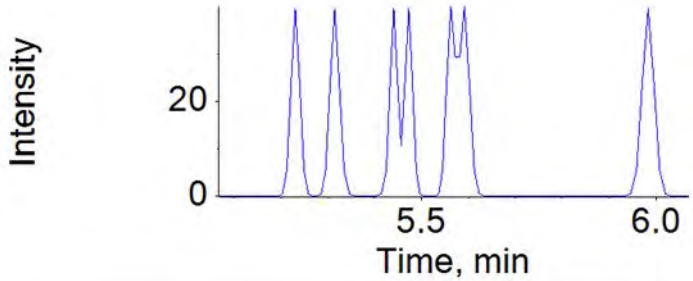
Component: PFDA_2
Secondary Mass: 513.0 / 169.0



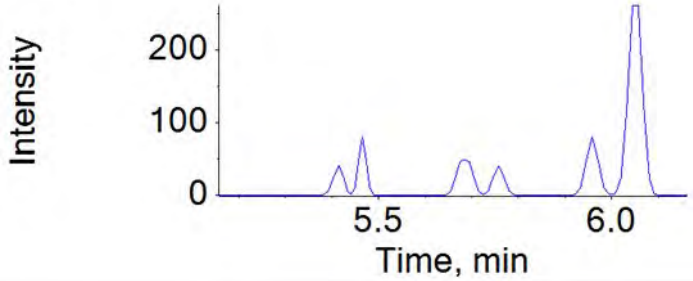
Component: 8:2-FTS
Primary Mass: 527.0 / 507.0



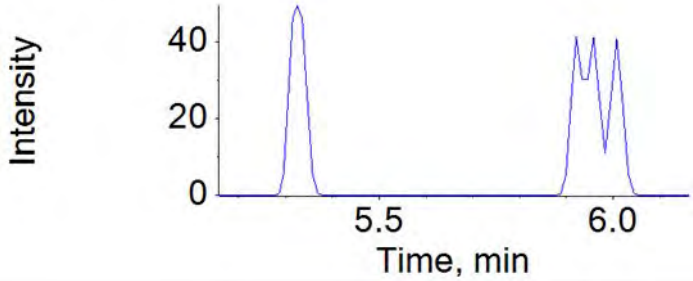
Component: 8:2 FTS_2
Secondary Mass: 527.0 / 81.0



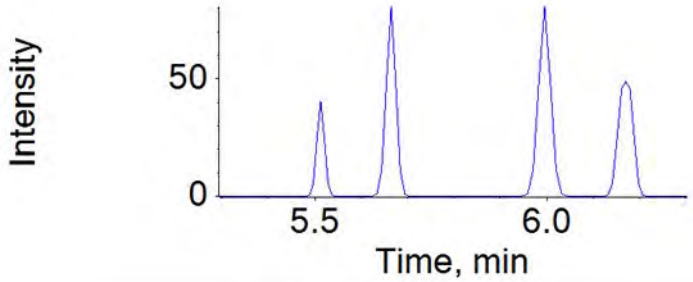
Component: NMeFOSAA
Primary Mass: 570.0 / 419.0



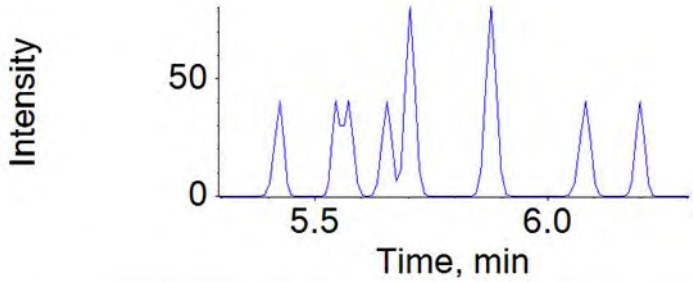
Component: NMeFOSAA_2
Secondary Mass: 570.0 / 483.0



Component: PFDS
Primary Mass: 599.0 / 80.0



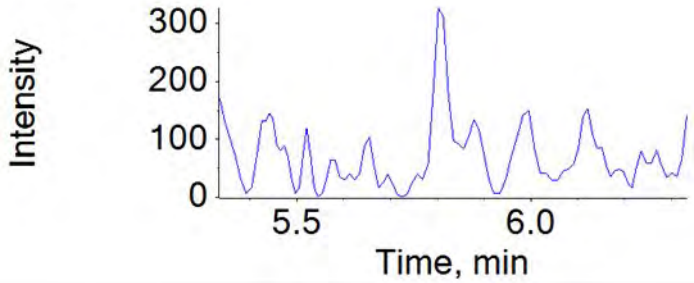
Component: PFDS_2
Secondary Mass: 599.0 / 99.0



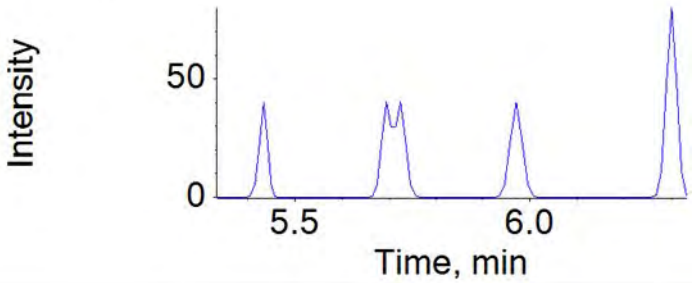
APPROVED
By MCD at 6:34 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

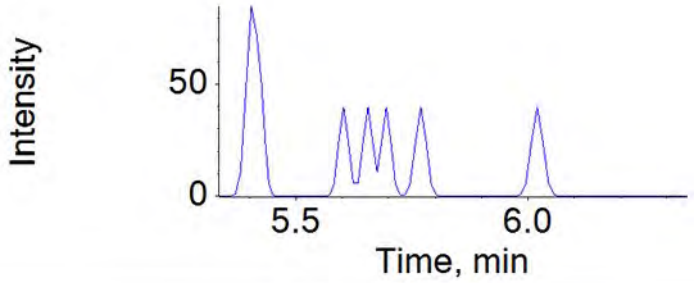
Component: PFUnDA
Primary Mass: 563.0 / 519.0



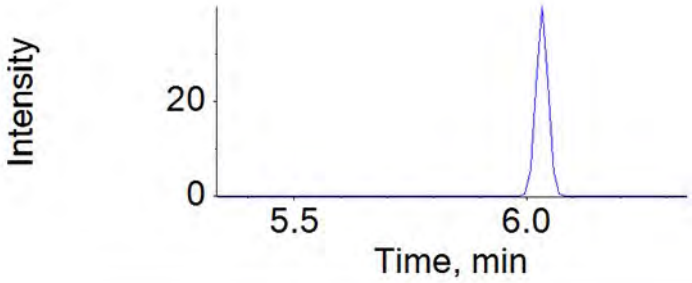
Component: PFUnDA_2
Secondary Mass: 563.0 / 169.0



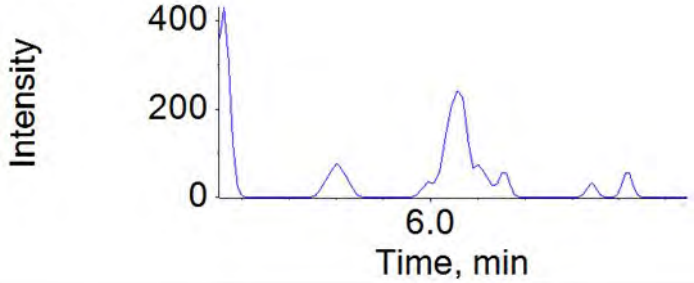
Component: NEtFOSAA
Primary Mass: 584.0 / 419.0



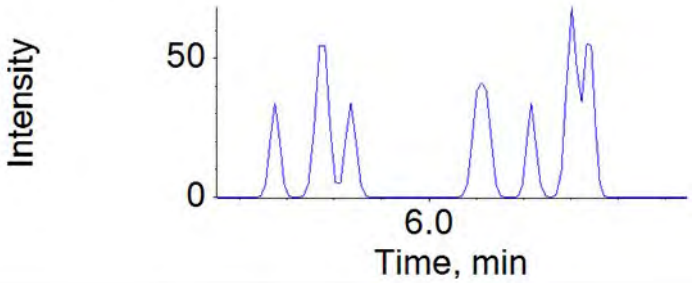
Component: NEtFOSAA_2
Secondary Mass: 584.0 / 526.0



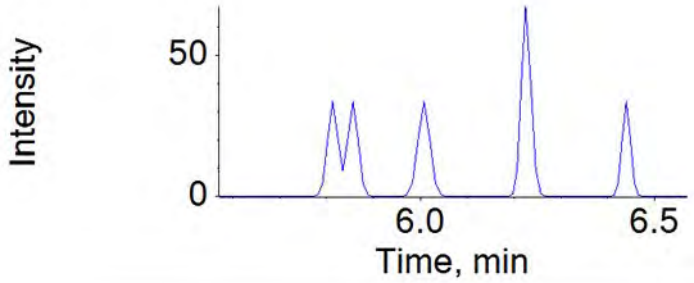
Component: PFDoDA
Primary Mass: 613.0 / 569.0



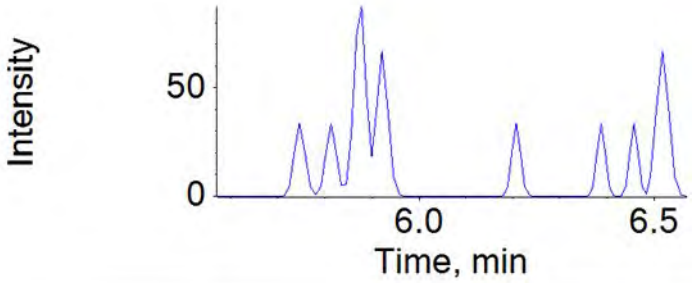
Component: PFDoDA_2
Secondary Mass: 613.0 / 169.0



Component: 10:2-FTS
Primary Mass: 627.0 / 607.0



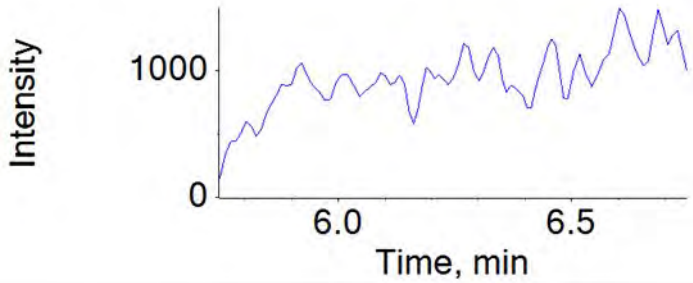
Component: 10:2 FTS_2
Secondary Mass: 627.0 / 81.0



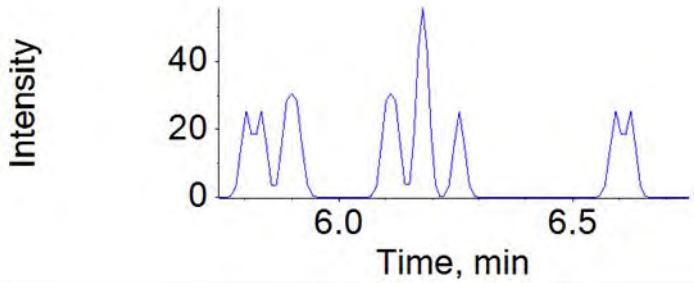
APPROVED
By MCD at 6:34 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

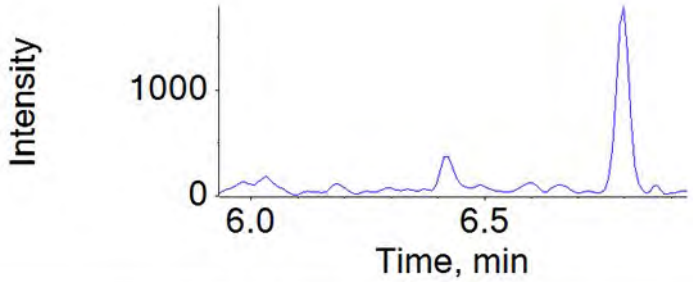
Component: PFTrDA
Primary Mass: 663.0 / 619.0



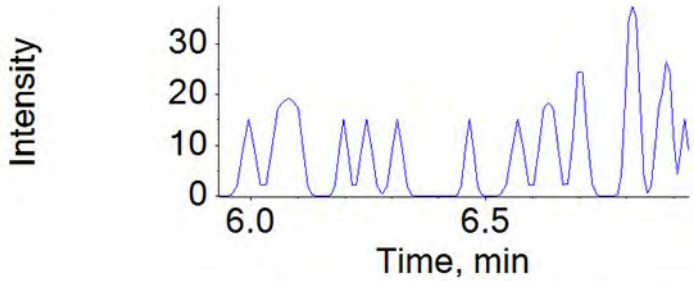
Component: PFTrDA_2
Secondary Mass: 663.0 / 169.0



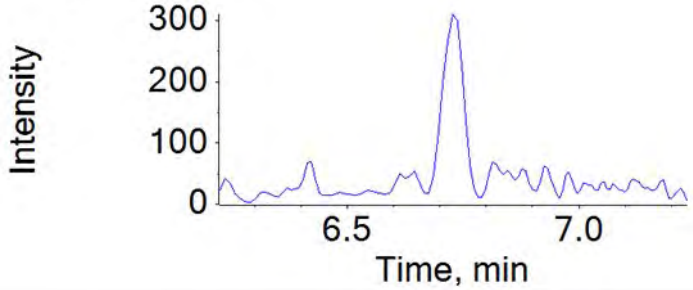
Component: PFTeDA
Primary Mass: 713.0 / 669.0



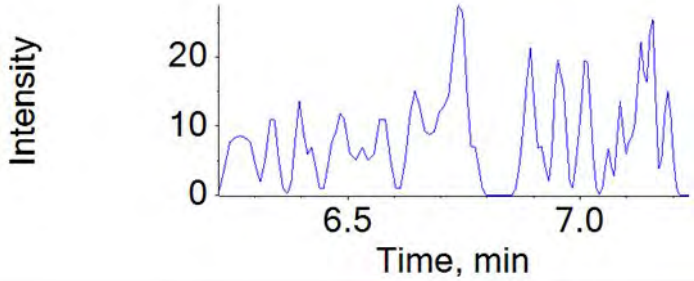
Component: PFTeDA_2
Secondary Mass: 713.0 / 169.0



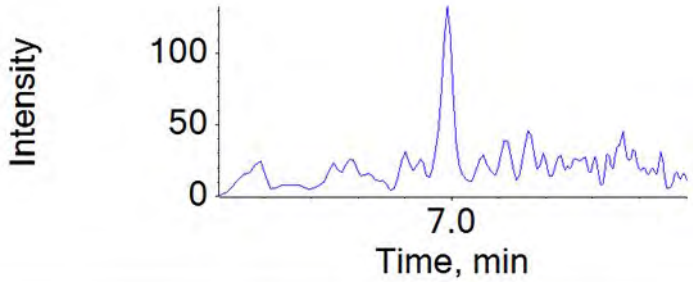
Component: PFHxDA
Primary Mass: 813.0 / 769.0



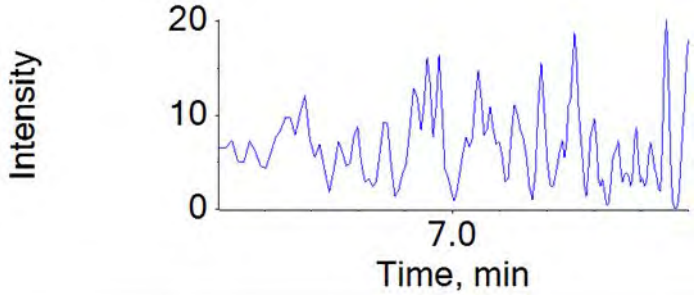
Component: PFHxDA_2
Secondary Mass: 813.0 / 169.0



Component: PFODA
Primary Mass: 913.0 / 869.0



Component: PFODA_2
Secondary Mass: 913.0 / 169.0



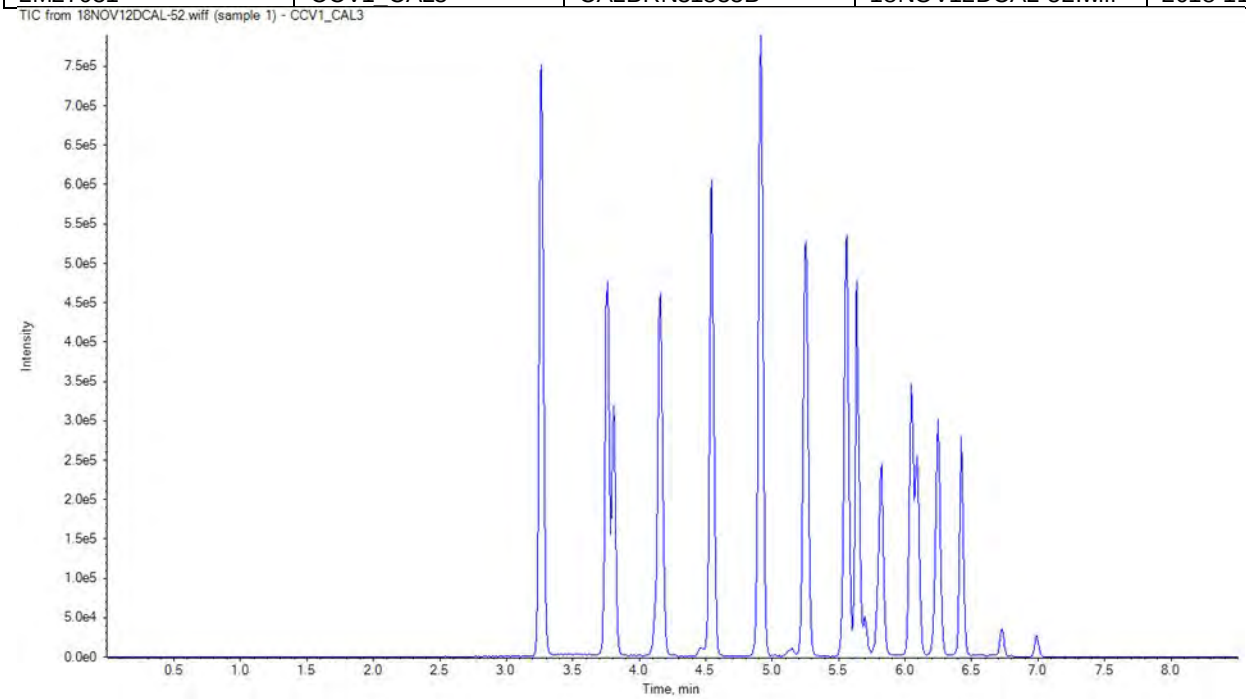
APPROVED
By MCD at 6:34 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

Continuing Calibration Verfication

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Instrument Name:	Sample Name:	Sample ID:	Sample File:	Acquisition Date:
LM27631	CCV1_CAL3	CALBRN31833B	18NOV12DCAL-52.wiff	2018-11-12T16:36:17



Injection Standard Area Reference File: 18NOV12DCAL-44

Injection Standard Name	Inj Std Conc	Injection Std Peak Area	Reference Injection Standard Area	Injection Std %Diff	Injection Std %Diff Limit	Injection Std %Diff OOS
13C3-PFBA	5.0	664284.7	659926.2	1	50	
13C2-PFOA	5.0	438739.4	450219.7	-3	50	
13C4-PFOS	4.8	248122.9	249205.8	0	50	
13C2-PFDA	5.0	280671.6	278743.9	1	50	

APPROVED
By MCD at 6:34 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

Continuing Calibration Verfication

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Instrument Name:	Sample Name:	Sample ID:	Sample File:	Acquisition Date:
LM27631	CCV1_CAL3	CALBRN31833B	18NOV12DCAL-52.wiff	2018-11-12T16:36:17

Analyte Name	Analyte Area	Sc /pk	Ext Std Name	Ext Std Area	Ext Std con	Area Ratio	RT (min)	RRT	Spec Amt	Calc Amt	% Diff	% Diff Lim	% Diff OOS
PFBA	303662.2	10	13C4-PFBA	735275.5	5.0	0.413	3.26	1.000	2.000	2.288	14	30	
PFPeA	301109.0	11	13C5-PFPeA	741612.6	5.0	0.406	3.76	1.000	2.000	2.350	18	30	
PFBS	166889.6	10	13C3-PFBS	428368.4	4.7	0.390	3.81	1.000	1.770	1.853	5	30	
4:2-FTS	33008.9	12	13C2-4:2-FTS	45542.8	4.7	0.725	4.12	1.000	1.870	1.968	5	30	
PFHxA	362326.0	12	13C5-PFHxA	638944.4	5.0	0.567	4.16	1.000	2.000	2.368	18	30	
PFPeS	87834.9	11	13C3-PFBS	428368.4	4.7	0.205	4.18	1.100	1.880	1.991	6	30	
PFHpA	361271.6	11	13C4-PFHpA	513535.0	5.0	0.703	4.54	1.000	2.000	2.332	17	30	
PFHxS	128396.1	18	13C3-PFHxS	315408.2	4.7	0.407	4.55	1.000	1.820	1.974	8	30	
6:2-FTS	30500.7	11	13C2-6:2-FTS	31026.1	4.8	0.983	4.90	1.000	1.900	2.379	25	30	
PFHpS	122801.7	11	13C3-PFHxS	315408.2	4.7	0.389	4.91	1.080	1.900	2.050	8	30	
PFOA	370358.7	11	13C8-PFOA	845332.9	5.0	0.438	4.91	1.000	2.000	2.340	17	30	
PFOS	122332.0	21	13C8-PFOS	260810.5	4.8	0.469	5.24	1.000	1.850	2.051	11	30	
PFNA	292557.2	11	13C9-PFNA	468762.7	5.0	0.624	5.26	1.000	2.000	2.250	13	30	
PFNS	76021.2	11	13C8-PFOS	260810.5	4.8	0.291	5.54	1.060	1.920	2.039	6	30	
PFDA	253956.7	11	13C6-PFDA	610394.1	5.0	0.416	5.56	1.000	2.000	2.206	10	30	
8:2-FTS	22335.5	11	13C2-8:2-FTS	28002.9	4.8	0.798	5.56	1.000	1.920	1.860	-3	30	
PFOSA	236734.8	12	13C8-PFOSA	697263.3	5.0	0.340	5.64	1.000	2.000	1.658	-17	30	
NMeFOSAA	28733.4	18	d3-NMeFOSAA	73784.5	5.0	0.389	5.70	1.000	2.000	2.201	10	30	
PFDS	62507.8	11	13C8-PFOS	260810.5	4.8	0.240	5.79	1.110	1.930	2.172	13	30	
PFUnDA	199322.4	12	13C7-PFUnDA	244775.8	5.0	0.814	5.82	1.000	2.000	2.129	6	30	
NEtFOSAA	24531.9	20	d5-NEtFOSAA	70158.9	5.0	0.350	5.83	1.000	2.000	1.833	-8	30	
PFDoDA	228792.9	12	13C2-PFDoDA	497113.0	5.0	0.460	6.05	1.000	2.000	2.344	17	30	
10:2-FTS	14411.1	11	13C2-8:2-FTS	28002.9	4.8	0.515	6.06	1.090	1.930	1.714	-11	30	
NMePFOSAE	172466.5	11	d7-NMePFOSAE	300873.2	5.0	0.573	6.09	1.000	2.000	2.386	19	30	
NMePFOSA	31464.1	12	d3-NMePFOSA	75068.4	5.0	0.419	6.10	1.000	2.000	2.068	3	30	
PFDoS	33762.2	11	13C8-PFOS	260810.5	4.8	0.129	6.22	1.190	1.940	2.267	17	30	
NEtPFOSAE	180928.5	11	d9-NEtPFOSAE	250299.2	5.0	0.723	6.25	1.000	2.000	2.319	16	30	
NEtPFOSA	26529.3	11	d5-NEtPFOSA	59631.6	5.0	0.445	6.26	1.000	2.000	2.043	2	30	
PFTrDA	185154.6	11	13C2-PFDoDA	497113.0	5.0	0.372	6.25	1.030	2.000	2.351	18	30	
PFTeDA	159904.6	10	13C2-PFTeDA	379642.6	5.0	0.421	6.42	1.000	2.000	2.361	18	30	
PFHxDA	68393.8	11	13C2-PFTeDA	379642.6	5.0	0.180	6.73	1.050	2.000	2.146	7	30	
PFODA	58092.4	10	13C2-PFTeDA	379642.6	5.0	0.153	6.99	1.090	2.000	2.131	7	30	

APPROVED
By MCD at 6:34 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

Continuing Calibration Verfication

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

APPROVED
By MCD at 6:34 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM
Result Table: 18NOV12DCAL 11/12/2018 6:14:07 PM
Acquisition Method: 18AUG13_3uL.dam

Sample Name:	CCV1_CAL3			**Data File:**		18NOV12DCAL-52.wiff
Sample ID:	CALBRN31833B			**Acquis Date:**		2018-11-12T16:36:17
Sample Type:	Quality Control			**Instrument:**		LM27631
Vial Position:	5			**Acquis Method:**		18AUG13_3uL.dam
Injection Vol:	3.00			**Result Table:**		18NOV12DCAL
QMethod File:	18AUG20QM			**ICAL Name:**		18NOV12DCAL
Batch Number:	N\A			**Operator:**		MCD7824
Sample Wt.:	1.00000			**Dilution Factor:**		1.00
Sample Vol.:	1.000			**Prep Factor:**		1.000

Injection Standard Peak Table

Injection Standard Area Reference File: 18NOV12DCAL-44

Injection Standard Name	Inj Std Conc	Injection Std Peak Area	Rreference Injection Standard Area	Injection Std %Diff	Injection Std %Diff Limit	Injection Std %Diff OOS
13C3-PFBA	5.0	664284.7	659926.2	1	50	
13C2-PFOA	5.0	438739.4	450219.7	-3	50	
13C4-PFOS	4.8	248122.9	249205.8	0	50	
13C2-PFDA	5.0	280671.6	278743.9	1	50	

Extraction Standard Peak Table

Extraction Standard Name	Ext Std Area	Inj Std Name	Inj Std Area	Area Ratio	Ext Std Conc	Ext Std Result	Ext Std %REC	Ext Std %REC Limit	Ext Std OOS
E13C4-PFBA	735275.5	13C3-PFBA	664284.7	1.107	5.000	4.962	99	70-130	
E13C5-PFPeA	741612.6	13C3-PFBA	664284.7	1.116	5.000	5.007	100	70-130	
E13C3-PFBS	428368.4	13C3-PFBA	664284.7	0.645	4.650	4.552	98	70-130	
E13C2-4:2-FTS	45542.8	13C2-PFOA	438739.4	0.104	4.670	4.623	99	70-130	
E13C5-PFHxA	638944.4	13C2-PFOA	438739.4	1.456	5.000	5.261	105	70-130	
E13C3-PFHxS	315408.2	13C2-PFOA	438739.4	0.719	4.730	4.933	104	70-130	
E13C4-PFHpA	513535.0	13C2-PFOA	438739.4	1.170	5.000	5.273	105	70-130	
E13C2-6:2-FTS	31026.1	13C2-PFOA	438739.4	0.071	4.750	4.731	100	70-130	
E13C8-PFOA	845332.9	13C2-PFOA	438739.4	1.927	5.000	5.308	106	70-130	
E13C8-PFOS	260810.5	13C4-PFOS	248122.9	1.051	4.780	4.657	97	70-130	
E13C9-PFNA	468762.7	13C4-PFOS	248122.9	1.889	5.000	5.267	105	70-130	
E13C6-PFDA	610394.1	13C2-PFDA	280671.6	2.175	5.000	5.075	102	70-130	
E13C2-8:2-FTS	28002.9	13C2-PFDA	280671.6	0.100	4.790	4.976	104	70-130	
E13C8-PFOSA	697263.3	13C2-PFDA	280671.6	2.484	5.000	5.508	110	70-130	
Ed3-NMeFOSAA	73784.5	13C2-PFDA	280671.6	0.263	5.000	4.745	95	70-130	
E13C7-PFUnDA	244775.8	13C2-PFDA	280671.6	0.872	5.000	5.063	101	70-130	
Ed5-NEtFOSAA	70158.9	13C2-PFDA	280671.6	0.250	5.000	5.288	106	70-130	
E13C2-PFDoDA	497113.0	13C2-PFDA	280671.6	1.771	5.000	4.599	92	70-130	
Ed7-NMePFOSAE	300873.2	13C2-PFDA	280671.6	1.072	5.000	4.639	93	70-130	
Ed3-NMePFOSA	75068.4	13C2-PFDA	280671.6	0.267	5.000	4.859	97	70-130	
Ed9-NEtPFOSAE	250299.2	13C2-PFDA	280671.6	0.892	5.000	4.638	93	70-130	
Ed5-NEtPFOSA	59631.6	13C2-PFDA	280671.6	0.212	5.000	4.984	100	70-130	
E13C2-PFTeDA	379642.6	13C2-PFDA	280671.6	1.353	5.000	4.749	95	70-130	

APPROVED
By MCD at 6:34 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

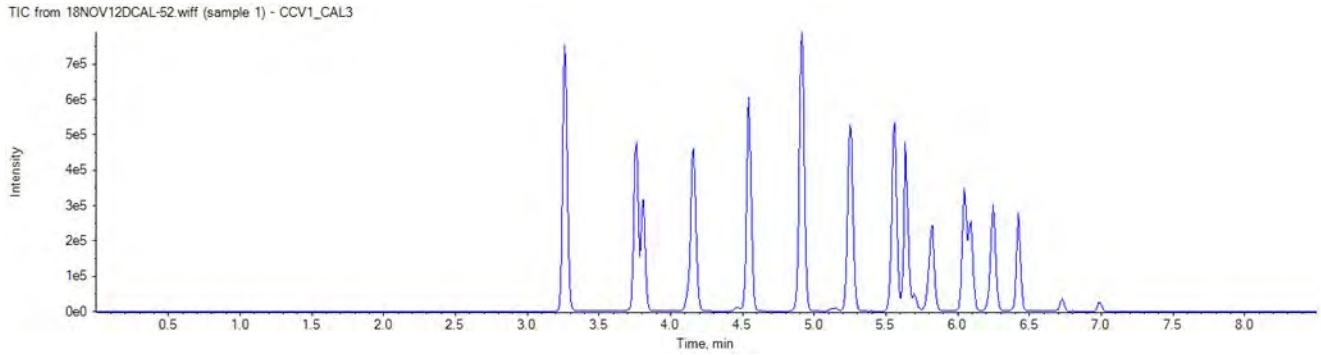
Analyte Quantitation Peak Table

Sample Name: CCV1_CAL3 **Instrument Name:** LM27631 **File Name:** 18NOV12DCAL-52.wiff

Sample Wt	Sample Vol	Dilution Factor	PrepFactor
1.00000	1.000	1.00	1.000

Analyte Name	RT	RRT	Analyte Area Response	E	Int Typ	ES Name	ES RT	ES Area Response	Area Ratio	Sample Result (ng/g)
PFBA	3.26	1.000	303662.2		A	13C4-PFBA	3.26	735275.5	0.413	2.288
PFPeA	3.76	1.000	301109.0		A	13C5-PFPeA	3.76	741612.6	0.406	2.350
PFBS	3.81	1.000	166889.6		A	13C3-PFBS	3.81	428368.4	0.390	1.853
4:2-FTS	4.12	1.000	33008.9		A	13C2-4:2-FTS	4.12	45542.8	0.725	1.968
PFHxA	4.16	1.000	362326.0		A	13C5-PFHxA	4.16	638944.4	0.567	2.368
PFPeS	4.18	1.100	87834.9		A	13C3-PFBS	3.81	428368.4	0.205	1.991
PFHpA	4.54	1.000	361271.6		A	13C4-PFHpA	4.54	513535.0	0.703	2.332
PFHxS	4.55	1.000	128396.1		M	13C3-PFHxS	4.55	315408.2	0.407	1.974
6:2-FTS	4.90	1.000	30500.7		A	13C2-6:2-FTS	4.90	31026.1	0.983	2.379
PFHpS	4.91	1.080	122801.7		A	13C3-PFHxS	4.55	315408.2	0.389	2.050
PFOA	4.91	1.000	370358.7		A	13C8-PFOA	4.91	845332.9	0.438	2.340
PFOS	5.24	1.000	122332.0		M	13C8-PFOS	5.24	260810.5	0.469	2.051
PFNA	5.26	1.000	292557.2		A	13C9-PFNA	5.26	468762.7	0.624	2.250
PFNS	5.54	1.060	76021.2		A	13C8-PFOS	5.24	260810.5	0.291	2.039
PFDA	5.56	1.000	253956.7		A	13C6-PFDA	5.56	610394.1	0.416	2.206
8:2-FTS	5.56	1.000	22335.5		A	13C2-8:2-FTS	5.56	28002.9	0.798	1.860
PFOSA	5.64	1.000	236734.8		A	13C8-PFOSA	5.64	697263.3	0.340	1.658
NMeFOSAA	5.70	1.000	28733.4		A	d3-NMeFOSAA	5.70	73784.5	0.389	2.201
PFDS	5.79	1.110	62507.8		A	13C8-PFOS	5.24	260810.5	0.240	2.172
PFUnDA	5.82	1.000	199322.4		A	13C7-PFUnDA	5.82	244775.8	0.814	2.129
NEtFOSAA	5.83	1.000	24531.9		A	d5-NEtFOSAA	5.83	70158.9	0.350	1.833
PFDoDA	6.05	1.000	228792.9		A	13C2-PFDoDA	6.05	497113.0	0.460	2.344
10:2-FTS	6.06	1.090	14411.1		A	13C2-8:2-FTS	5.56	28002.9	0.515	1.714
NMePFOSAE	6.09	1.000	172466.5		A	d7-NMePFOSAE	6.09	300873.2	0.573	2.386
NMePFOSA	6.10	1.000	31464.1		A	d3-NMePFOSA	6.10	75068.4	0.419	2.068
PFDoS	6.22	1.190	33762.2		A	13C8-PFOS	5.24	260810.5	0.129	2.267
NEtPFOSAE	6.25	1.000	180928.5		A	d9-NEtPFOSAE	6.24	250299.2	0.723	2.319
NEtPFOSA	6.26	1.000	26529.3		A	d5-NEtPFOSA	6.26	59631.6	0.445	2.043
PFTrDA	6.25	1.030	185154.6		A	13C2-PFDoDA	6.05	497113.0	0.372	2.351
PFTeDA	6.42	1.000	159904.6		A	13C2-PFTeDA	6.42	379642.6	0.421	2.361
PFHxDA	6.73	1.050	68393.8		A	13C2-PFTeDA	6.42	379642.6	0.180	2.146
PFODA	6.99	1.090	58092.4		A	13C2-PFTeDA	6.42	379642.6	0.153	2.131

Total Ion Chromatogram

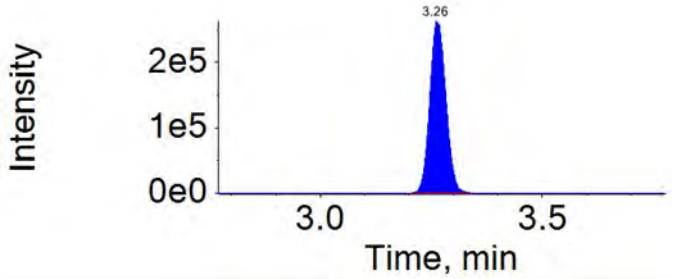


APPROVED
By MCD at 6:34 pm, 11/12/18

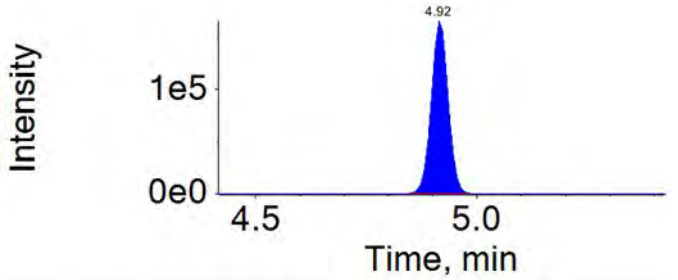
REVIEWED
By HMK at 10:53 am, 11/13/18

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

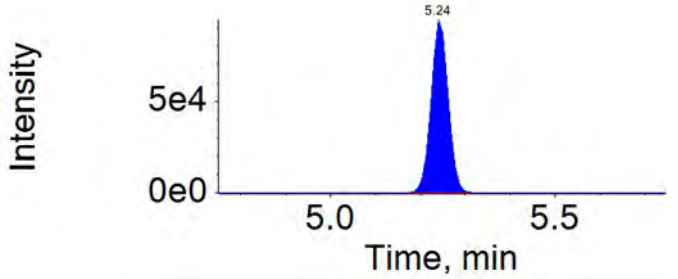
Injection Standard: 13C3-PFBA
216.0 / 172.0



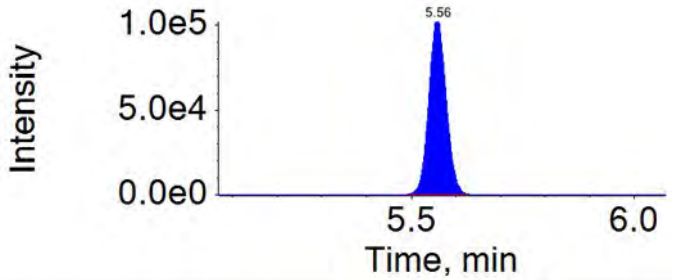
Injection Standard: 13C2-PFOA
415.0 / 370.0



Injection Standard: 13C4-PFOS
503.0 / 80.0

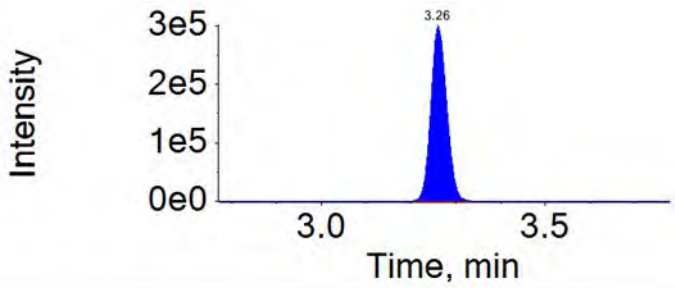


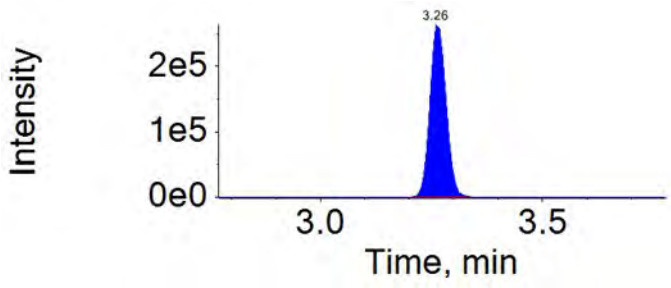
Injection Standard: 13C2-PFDA
515.0 / 470.0



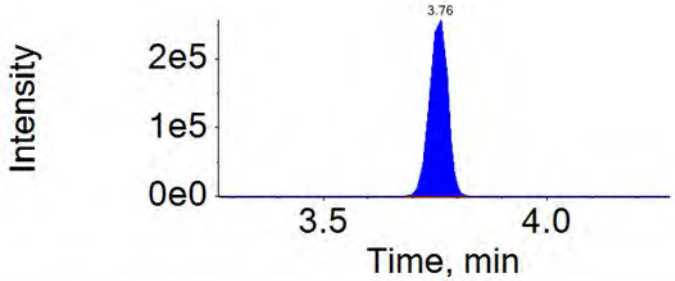
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

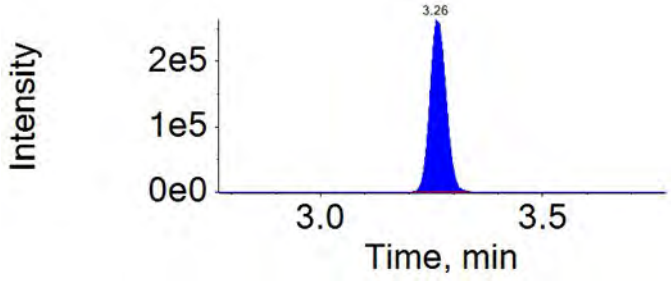
Extraction Standard: E13C4-PFBA	Injection Standard: 13C3-PFBA
217.0 / 172.0	216.0 / 172.0



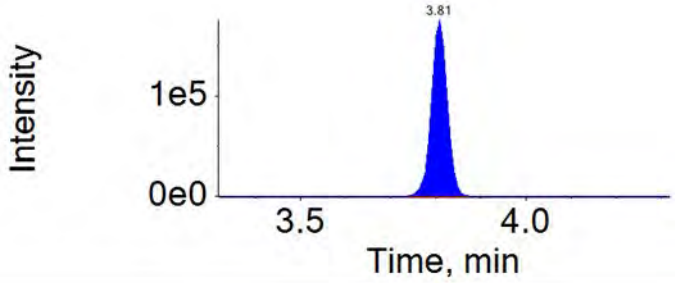


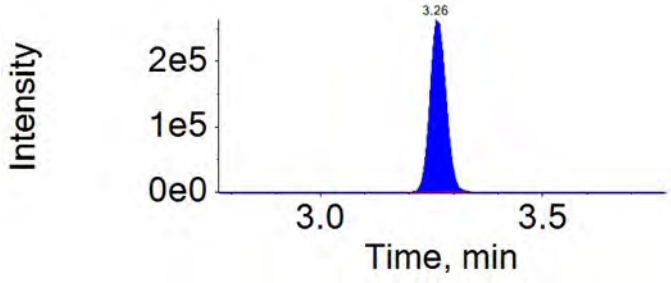
Extraction Standard: E13C5-PFPeA	Injection Standard: 13C3-PFBA
268.0 / 223.0	216.0 / 172.0



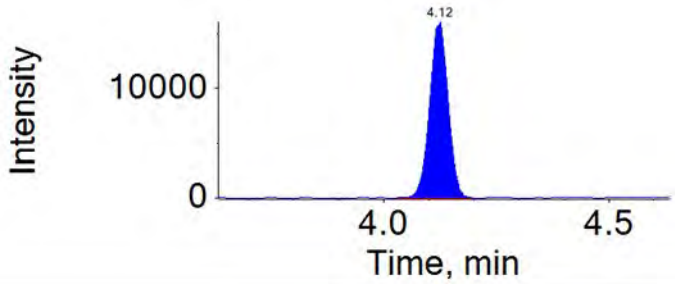


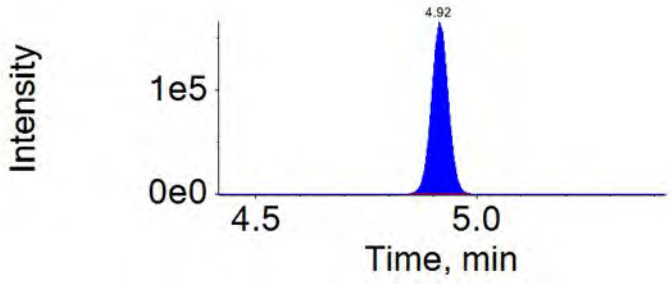
Extraction Standard: E13C3-PFBS	Injection Standard: 13C3-PFBA
302.0 / 80.0	216.0 / 172.0





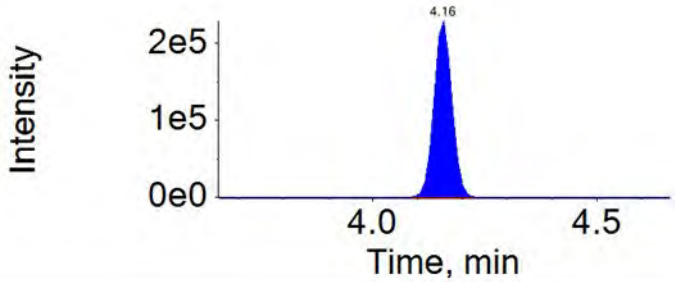
Extraction Standard: E13C2-4:2-FTS	Injection Standard: 13C2-PFOA
329.0 / 81.0	415.0 / 370.0

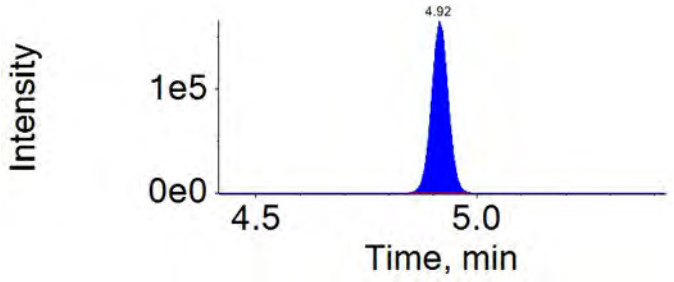




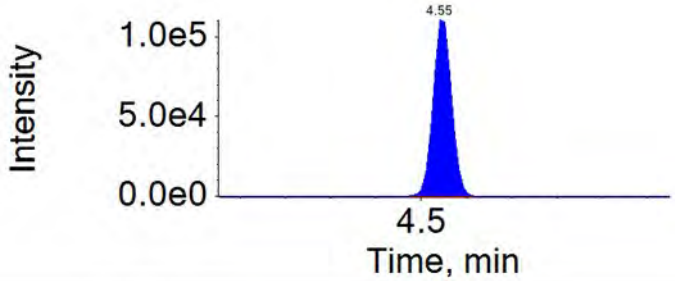
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

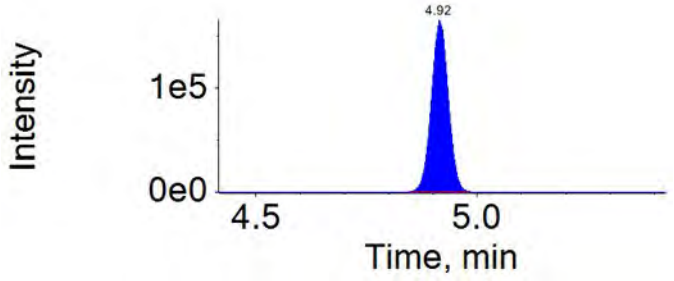
Extraction Standard: E13C5-PFHxA	Injection Standard: 13C2-PFOA
318.0 / 273.0	415.0 / 370.0



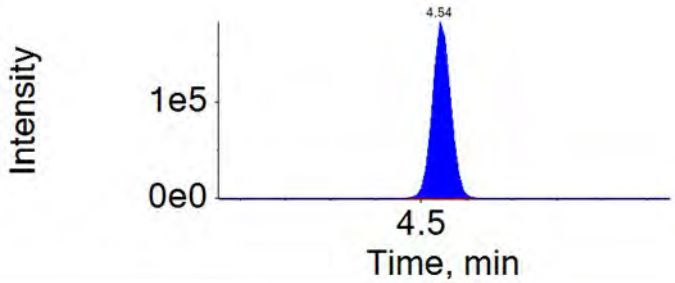


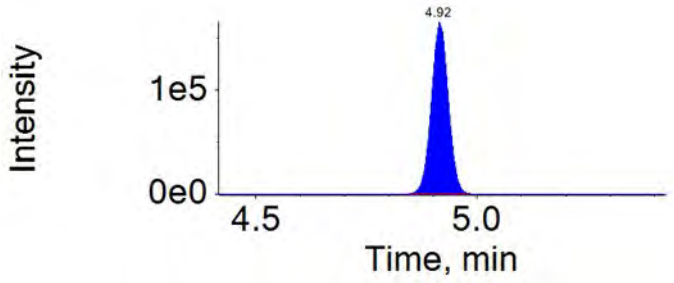
Extraction Standard: E13C3-PFHxS	Injection Standard: 13C2-PFOA
402.0 / 80.0	415.0 / 370.0



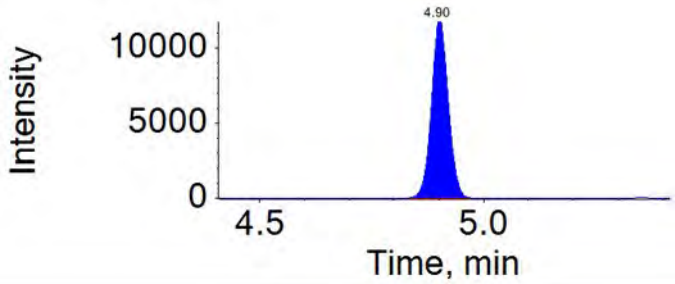


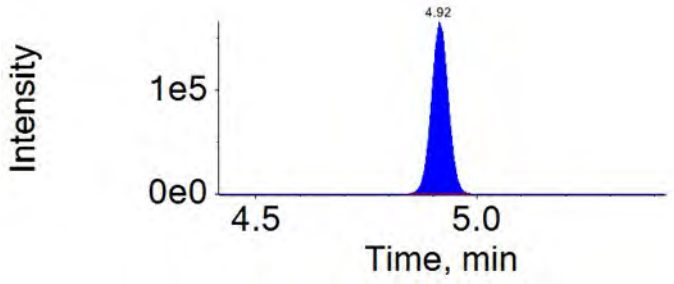
Extraction Standard: E13C4-PFHpA	Injection Standard: 13C2-PFOA
367.0 / 322.0	415.0 / 370.0





Extraction Standard: E13C2-6:2-FTS	Injection Standard: 13C2-PFOA
429.0 / 81.0	415.0 / 370.0

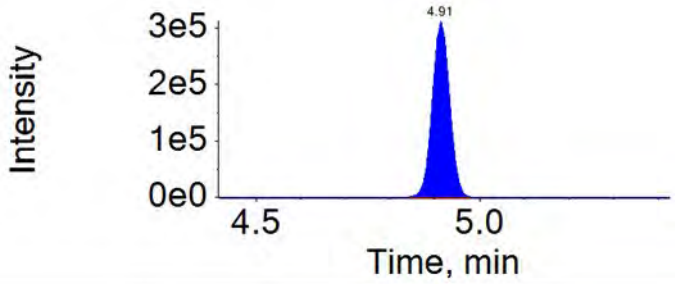




ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

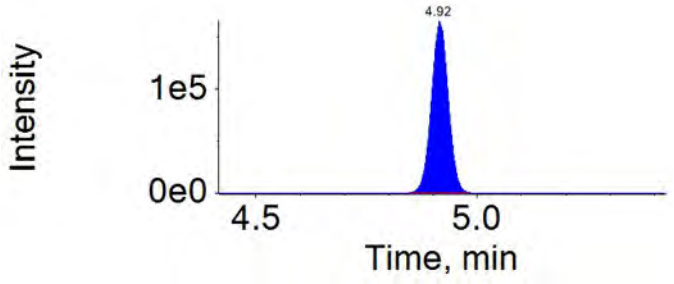
Extraction Standard: E13C8-PFOA

421.0 / 376.0



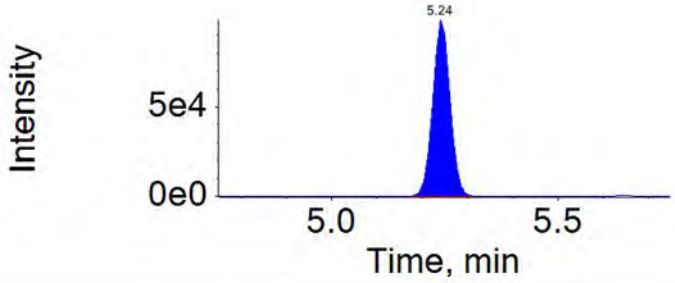
Injection Standard: 13C2-PFOA

415.0 / 370.0



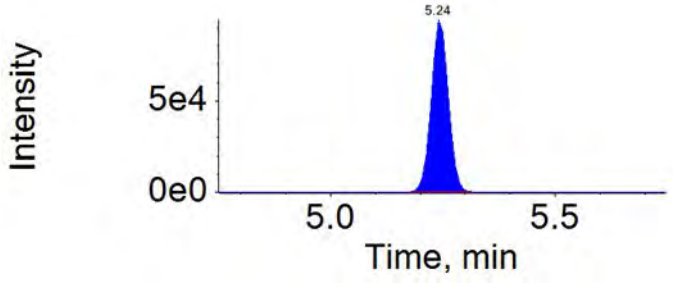
Extraction Standard: E13C8-PFOS

507.0 / 80.0



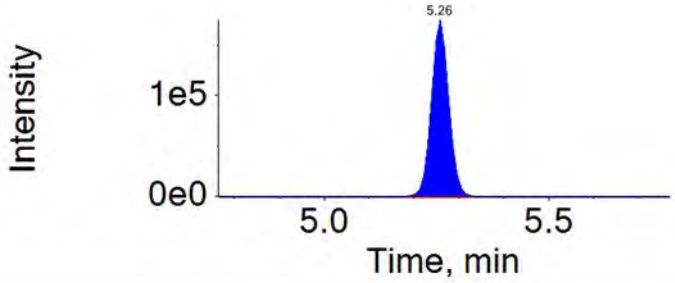
Injection Standard: 13C4-PFOS

503.0 / 80.0



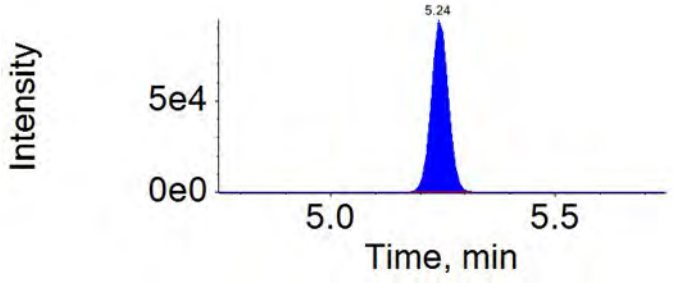
Extraction Standard: E13C9-PFNA

472.0 / 427.0



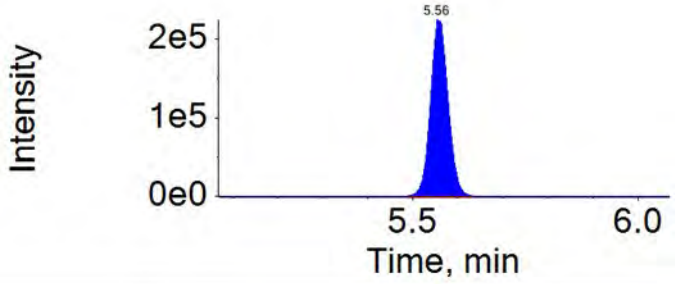
Injection Standard: 13C4-PFOS

503.0 / 80.0



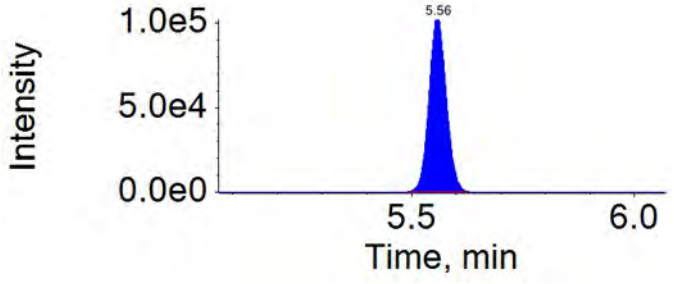
Extraction Standard: E13C6-PFDA

519.0 / 474.0



Injection Standard: 13C2-PFDA

515.0 / 470.0

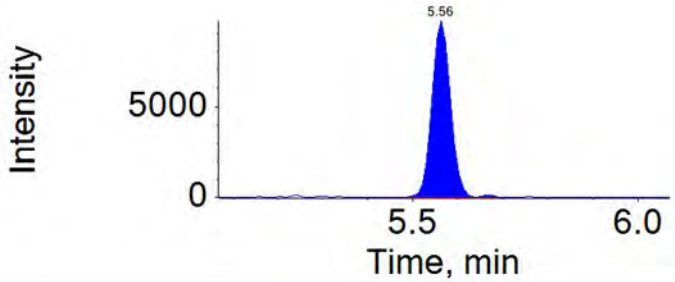


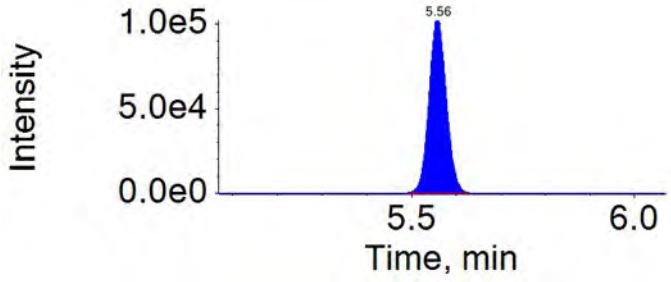
APPROVED
By MCD at 6:34 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

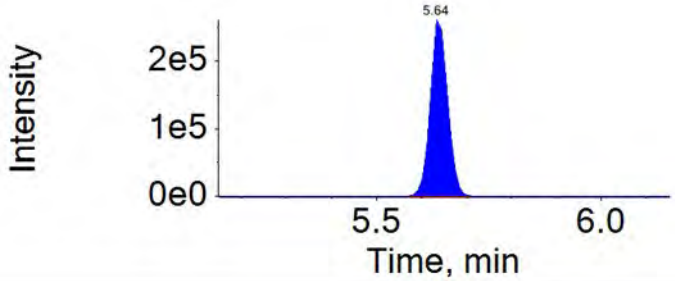
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

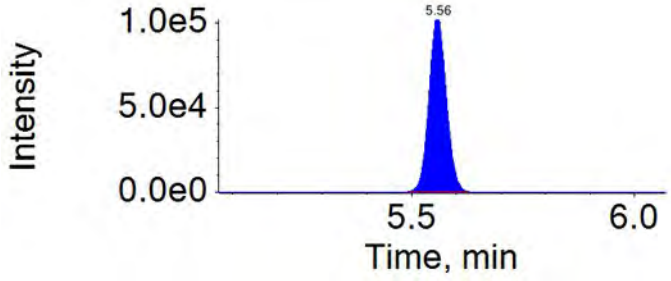
Extraction Standard: E13C2-8:2-FTS	Injection Standard: 13C2-PFDA
529.0 / 81.0	515.0 / 470.0



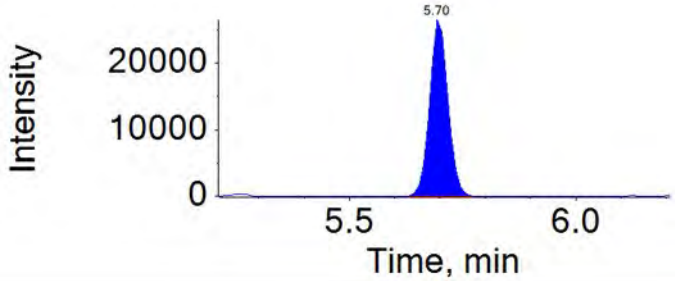


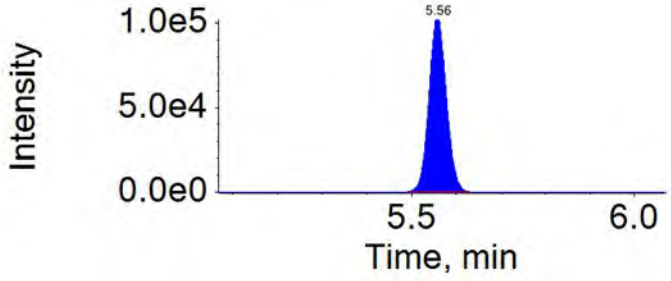
Extraction Standard: E13C8-PFOSA	Injection Standard: 13C2-PFDA
506.0 / 78.0	515.0 / 470.0



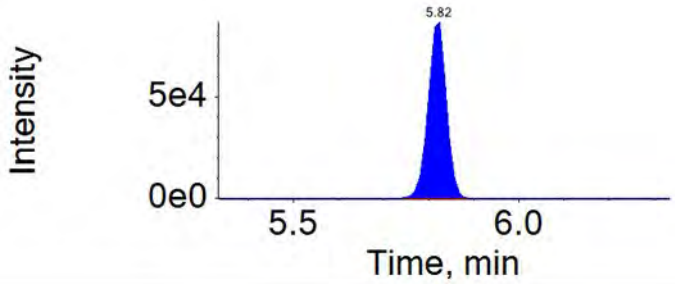


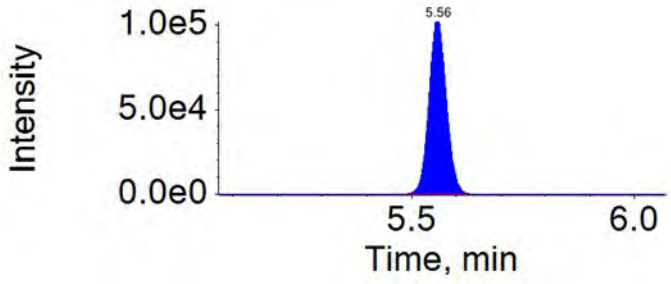
Extraction Standard: Ed3-NMeFOSAA	Injection Standard: 13C2-PFDA
573.0 / 419.0	515.0 / 470.0





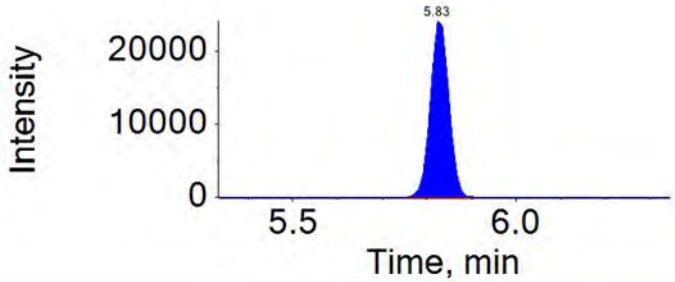
Extraction Standard: E13C7-PFUnDA	Injection Standard: 13C2-PFDA
570.0 / 525.0	515.0 / 470.0

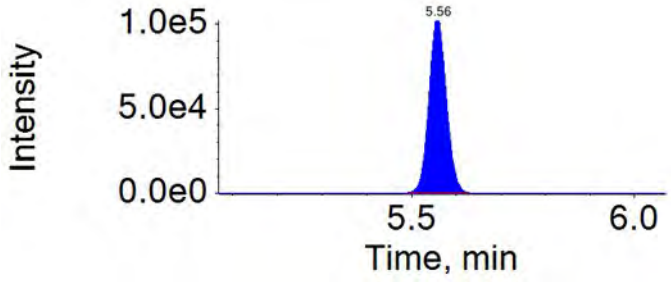




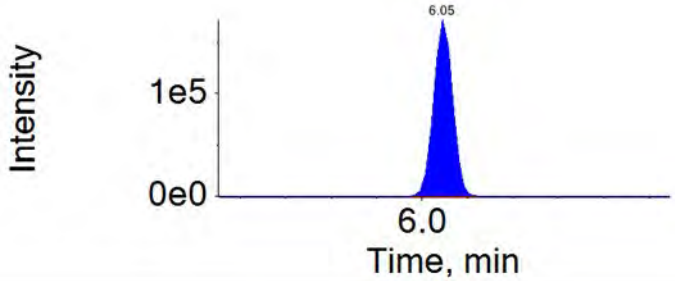
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

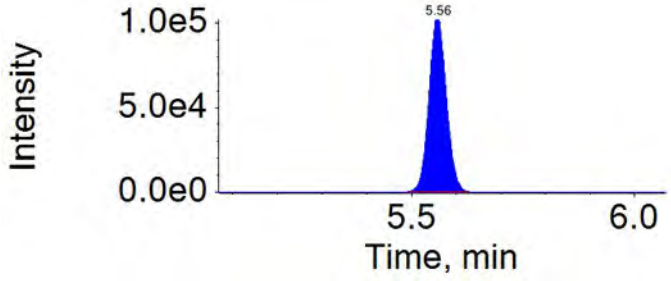
Extraction Standard: Ed5-NEtFOSAA	Injection Standard: 13C2-PFDA
589.0 / 419.0	515.0 / 470.0



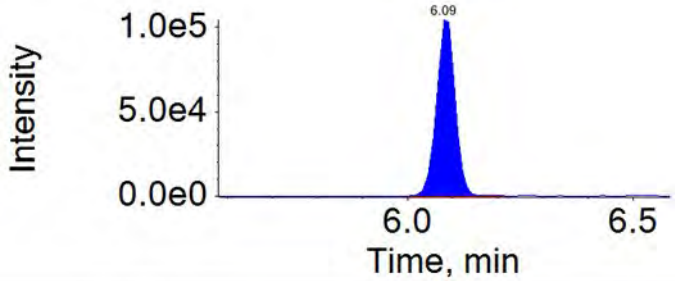


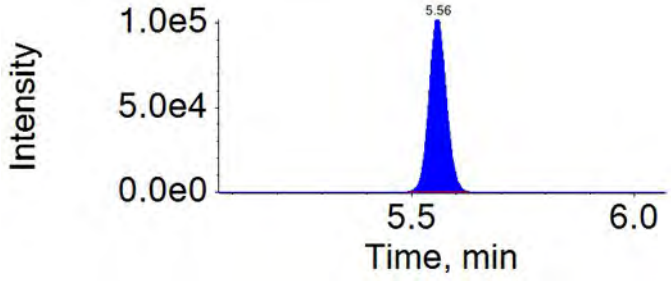
Extraction Standard: E13C2-PFDoDA	Injection Standard: 13C2-PFDA
615.0 / 570.0	515.0 / 470.0



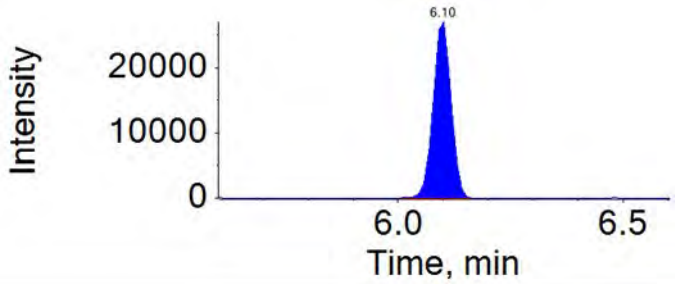


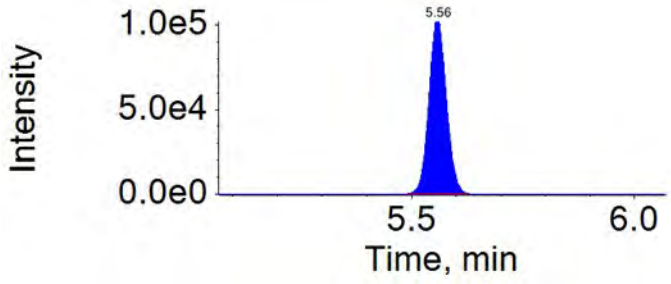
Extraction Standard: Ed7-NMePFOSAE	Injection Standard: 13C2-PFDA
623.0 / 59.0	515.0 / 470.0





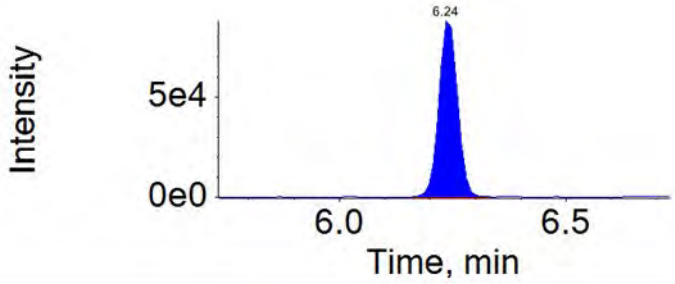
Extraction Standard: Ed3-NMePFOSA	Injection Standard: 13C2-PFDA
515.0 / 169.0	515.0 / 470.0

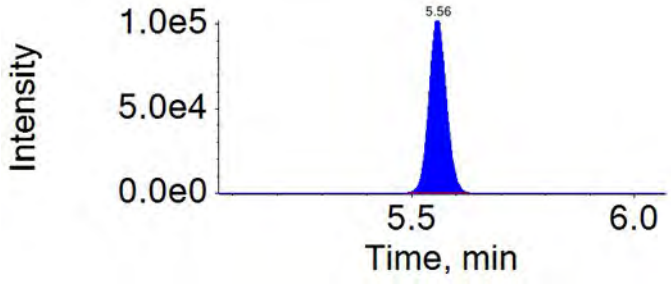




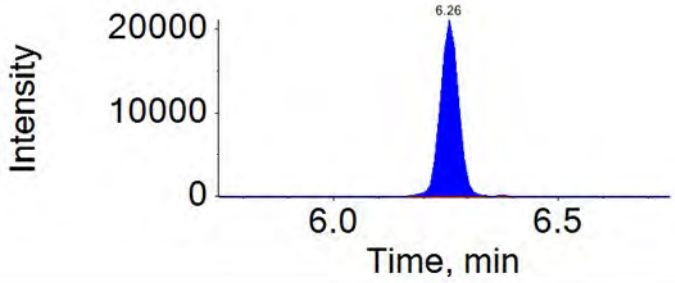
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

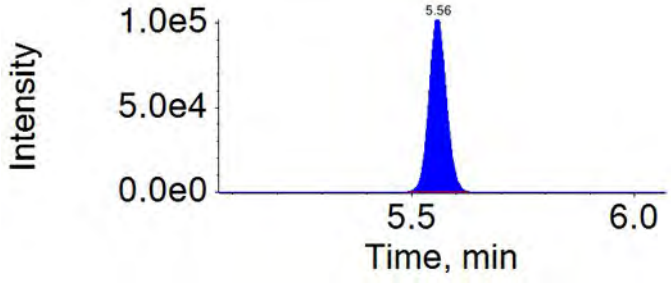
Extraction Standard: Ed9-NEtPFOSAE	Injection Standard: 13C2-PFDA
639.0 / 59.0	515.0 / 470.0



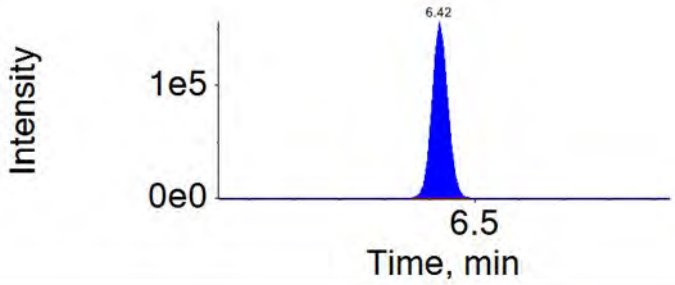


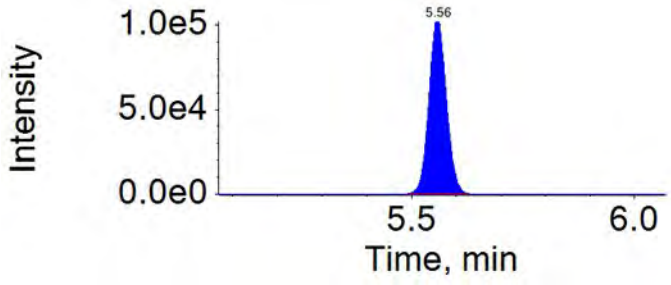
Extraction Standard: Ed5-NEtPFOSA	Injection Standard: 13C2-PFDA
531.0 / 169.0	515.0 / 470.0





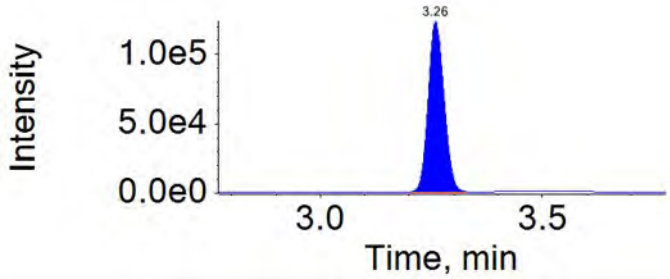
Extraction Standard: E13C2-PFTeDA	Injection Standard: 13C2-PFDA
715.0 / 670.0	515.0 / 470.0



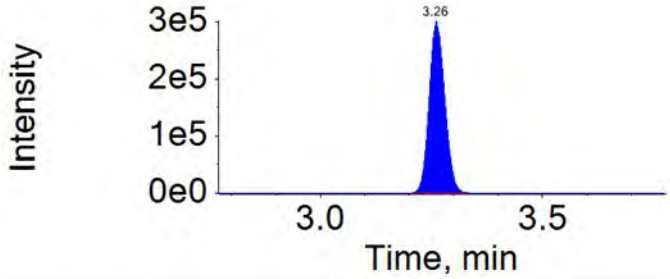


ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

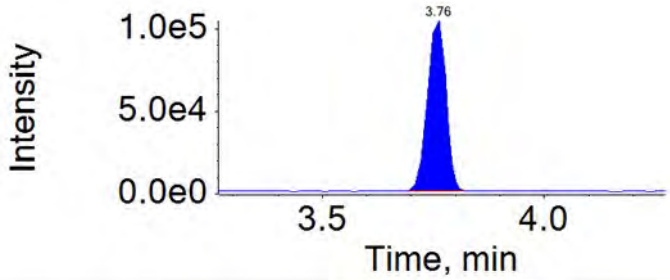
Analyte: PFBA
213.0 / 169.0



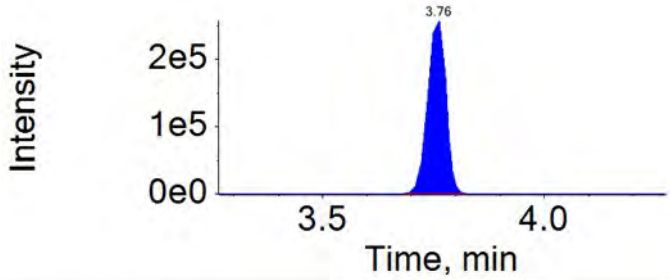
Extraction Standard: 13C4-PFBA
217.0 / 172.0



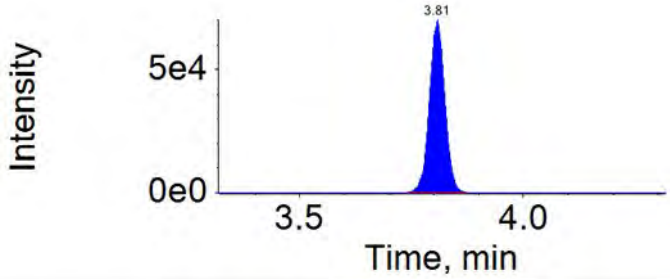
Analyte: PFPeA
263.0 / 219.0



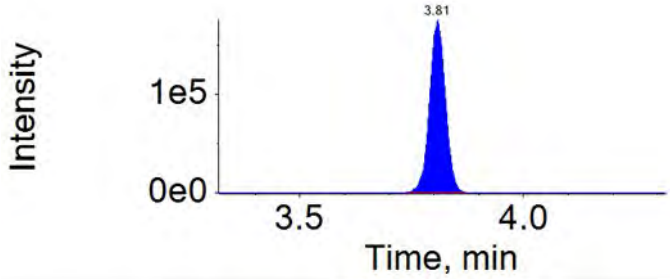
Extraction Standard: 13C5-PFPeA
268.0 / 223.0



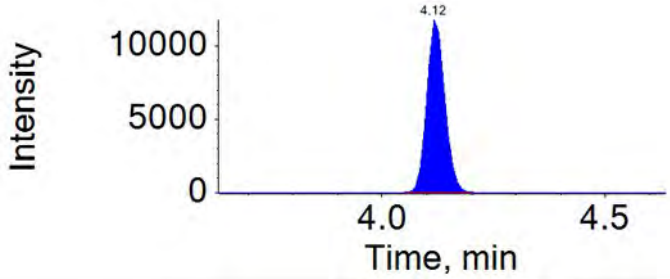
Analyte: PFBS
299.0 / 80.0



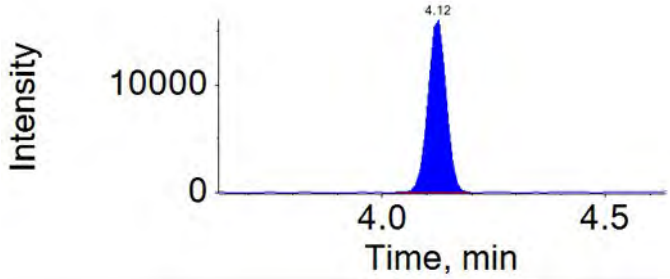
Extraction Standard: 13C3-PFBS
302.0 / 80.0



Analyte: 4:2-FTS
327.0 / 307.0



Extraction Standard: 13C2-4:2-FTS
329.0 / 81.0

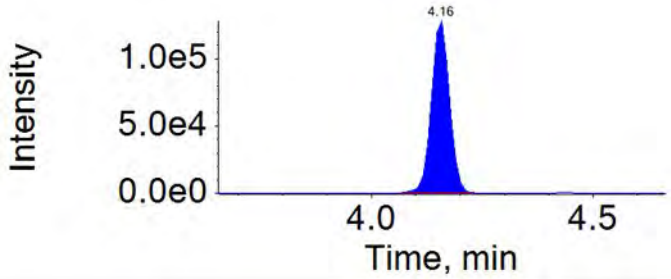


APPROVED
By MCD at 6:34 pm, 11/12/18

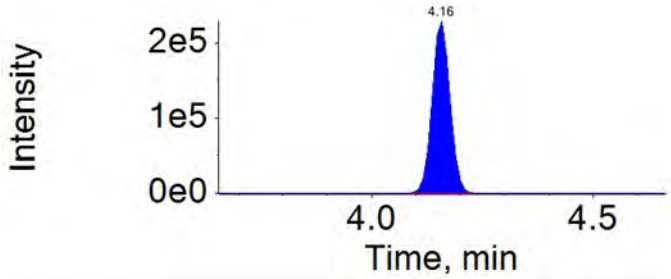
REVIEWED
By HMK at 10:53 am, 11/13/18

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

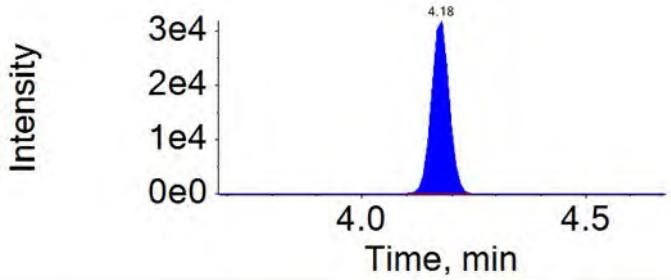
Analyte: PFHxA
313.0 / 269.0



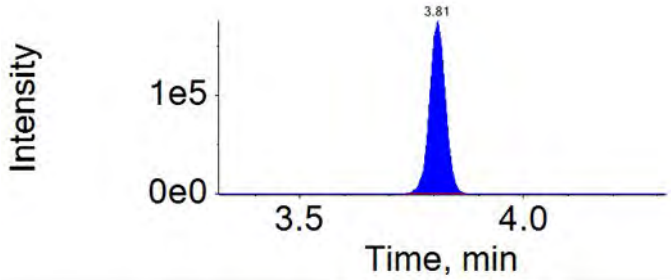
Extraction Standard: 13C5-PFHxA
318.0 / 273.0



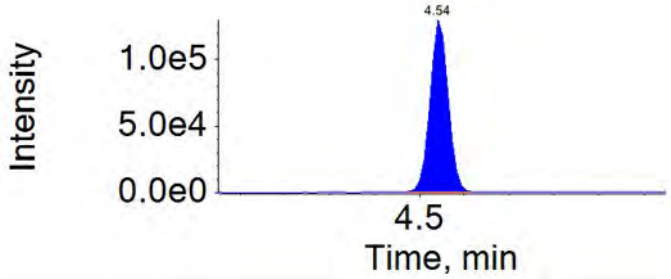
Analyte: PFPeS
349.0 / 80.0



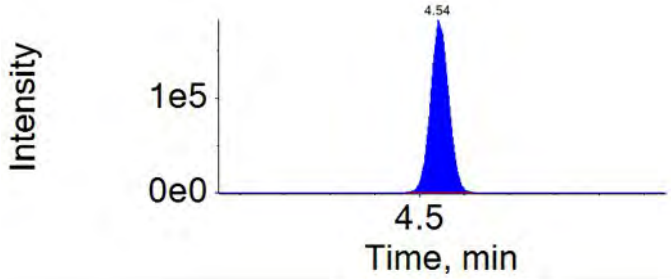
Extraction Standard: 13C3-PFBS
302.0 / 80.0



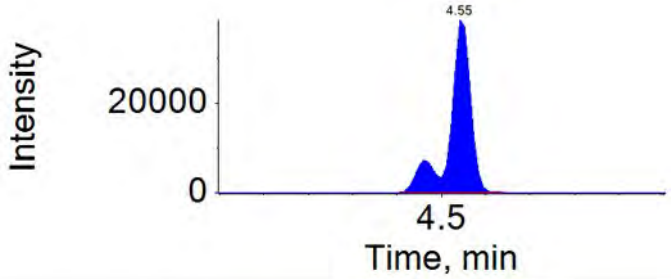
Analyte: PFHpA
363.0 / 319.0



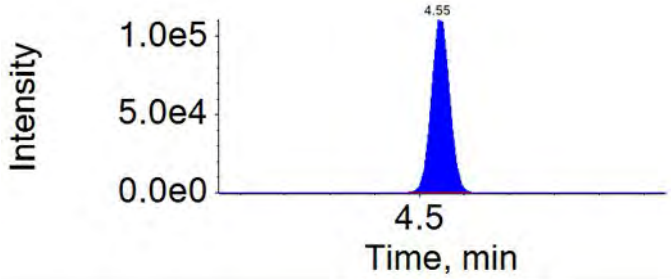
Extraction Standard: 13C4-PFHpA
367.0 / 322.0



Analyte: PFHxS
399.0 / 80.0

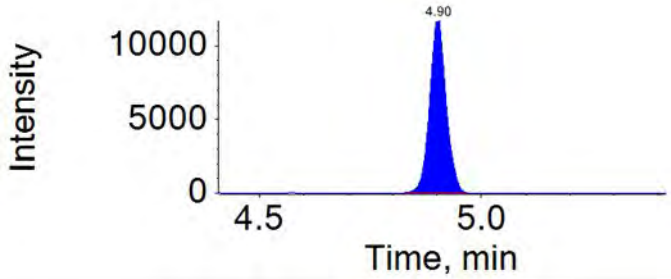


Extraction Standard: 13C3-PFHxS
402.0 / 80.0

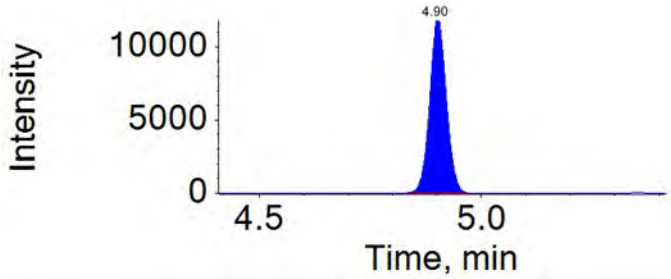


ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

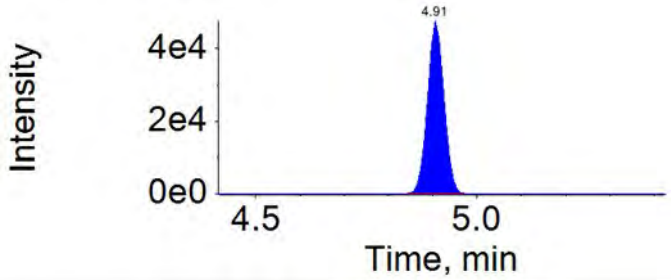
Analyte: 6:2-FTS
427.0 / 407.0



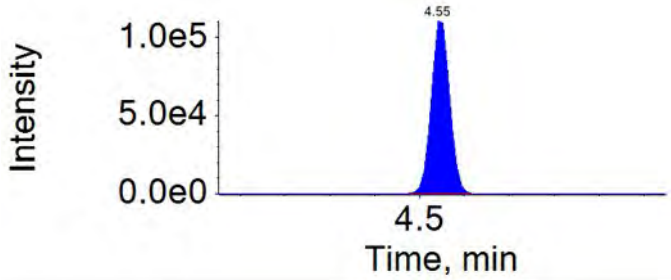
Extraction Standard: 13C2-6:2-FTS
429.0 / 81.0



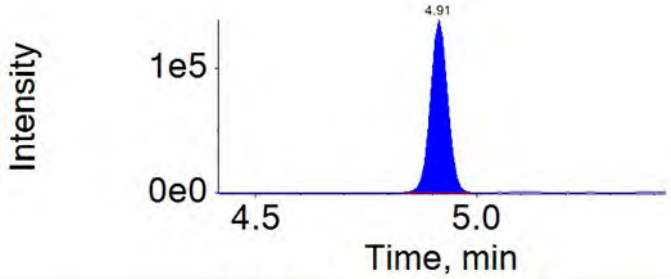
Analyte: PFHpS
449.0 / 80.0



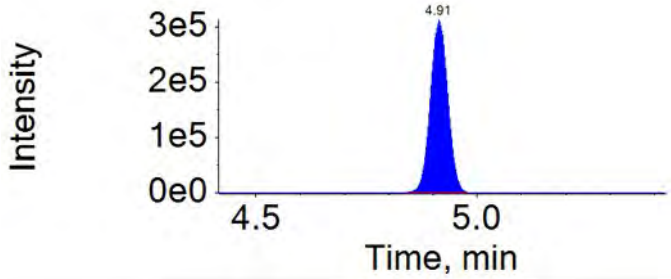
Extraction Standard: 13C3-PFHxS
402.0 / 80.0



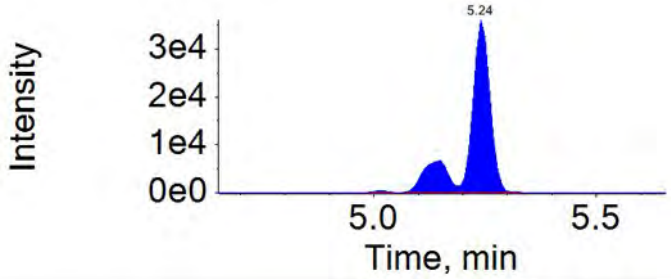
Analyte: PFOA
413.0 / 369.0



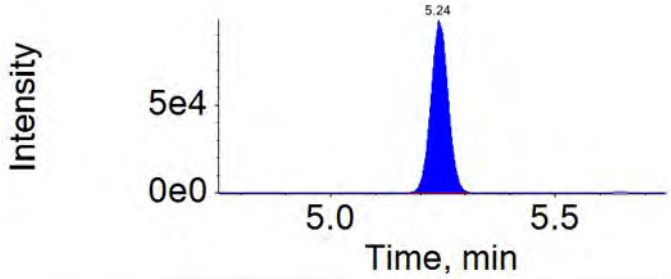
Extraction Standard: 13C8-PFOA
421.0 / 376.0



Analyte: PFOS
499.0 / 80.0



Extraction Standard: 13C8-PFOS
507.0 / 80.0

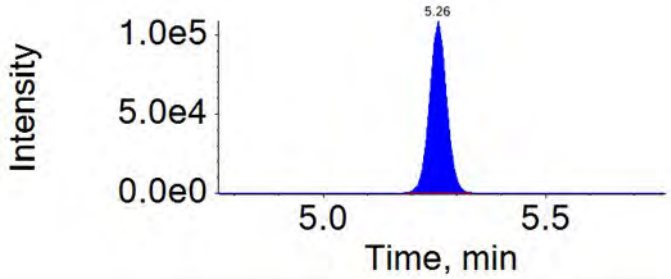


APPROVED
By MCD at 6:34 pm, 11/12/18

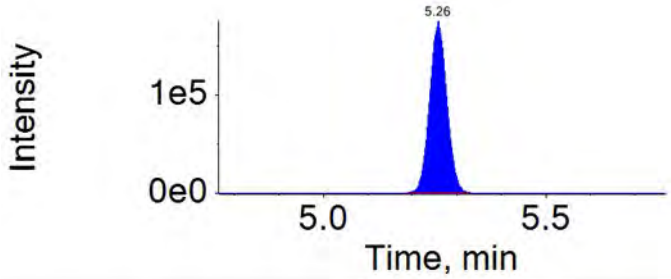
REVIEWED
By HMK at 10:53 am, 11/13/18

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

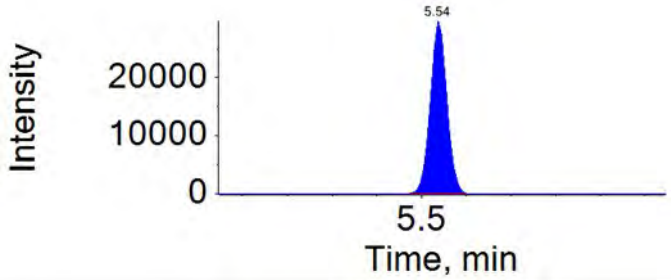
Analyte: PFNA
463.0 / 419.0



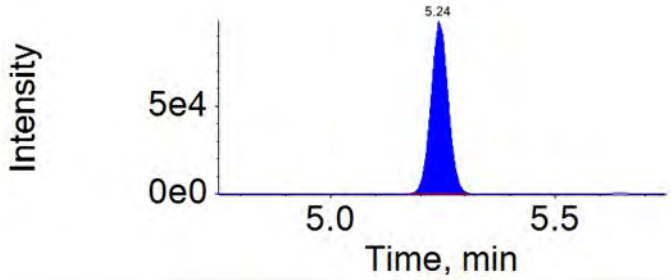
Extraction Standard: 13C9-PFNA
472.0 / 427.0



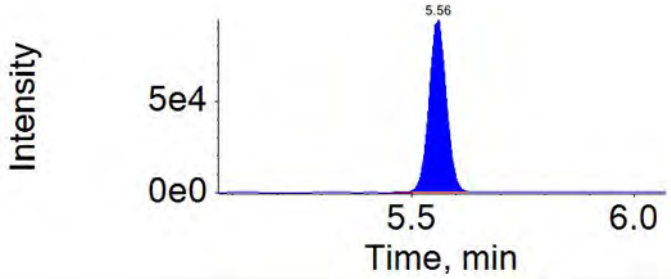
Analyte: PFNS
549.0 / 80.0



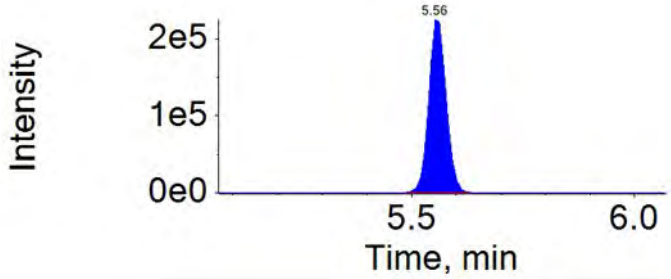
Extraction Standard: 13C8-PFOS
507.0 / 80.0



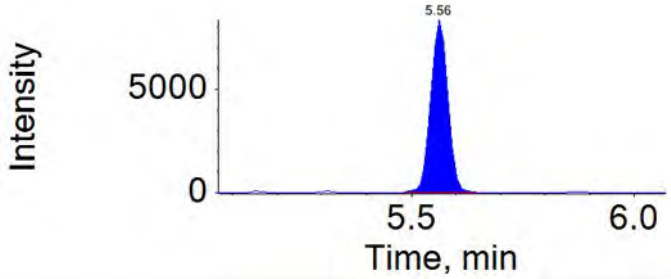
Analyte: PFDA
513.0 / 469.0



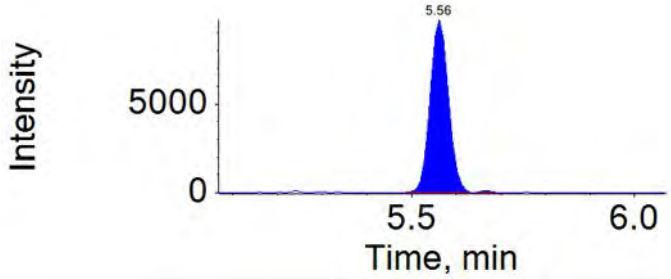
Extraction Standard: 13C6-PFDA
519.0 / 474.0



Analyte: 8:2-FTS
527.0 / 507.0



Extraction Standard: 13C2-8:2-FTS
529.0 / 81.0

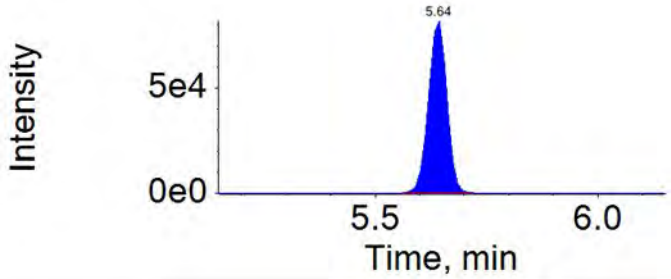


APPROVED
By MCD at 6:34 pm, 11/12/18

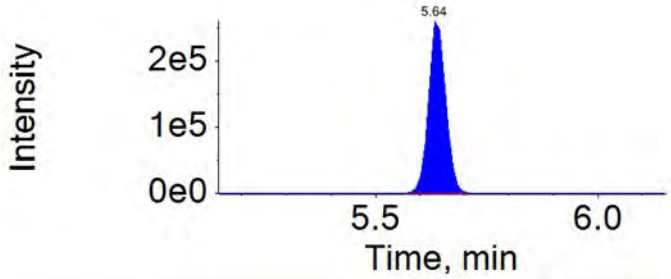
REVIEWED
By HMK at 10:53 am, 11/13/18

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

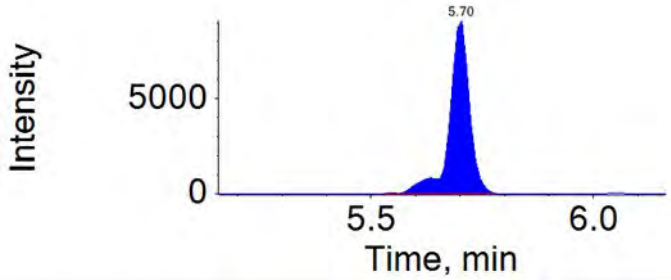
Analyte: PFOSA
498.0 / 78.0



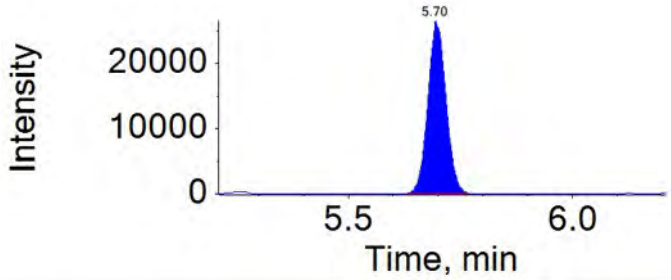
Extraction Standard: 13C8-PFOSA
506.0 / 78.0



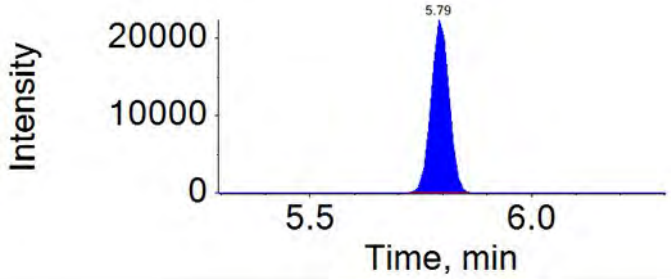
Analyte: NMeFOSAA
570.0 / 419.0



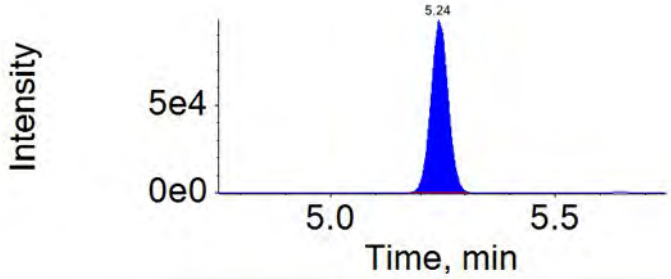
Extraction Standard: d3-NMeFOSAA
573.0 / 419.0



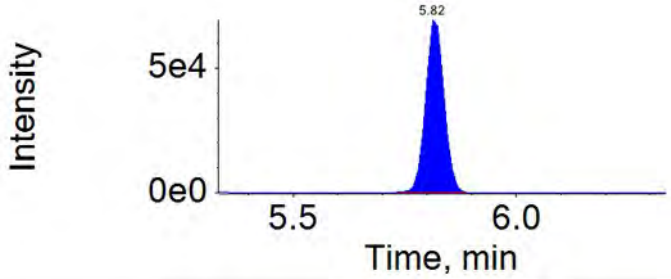
Analyte: PFDS
599.0 / 80.0



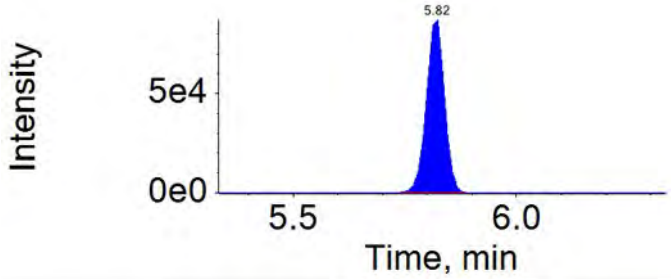
Extraction Standard: 13C8-PFOS
507.0 / 80.0



Analyte: PFUnDA
563.0 / 519.0



Extraction Standard: 13C7-PFUnDA
570.0 / 525.0

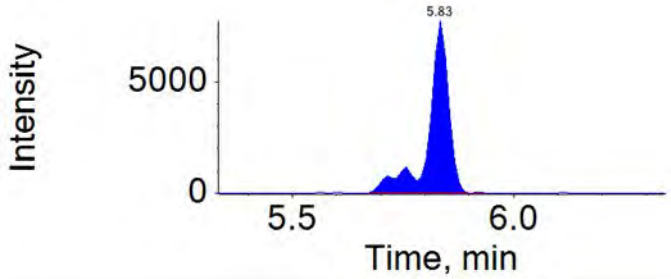


APPROVED
By MCD at 6:34 pm, 11/12/18

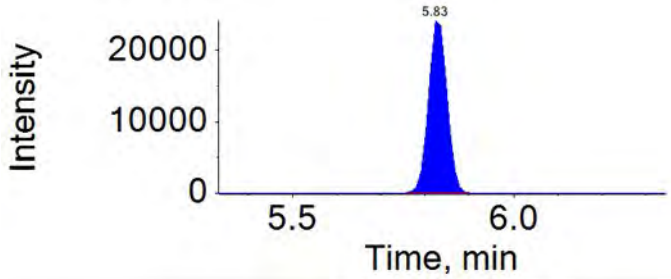
REVIEWED
By HMK at 10:53 am, 11/13/18

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

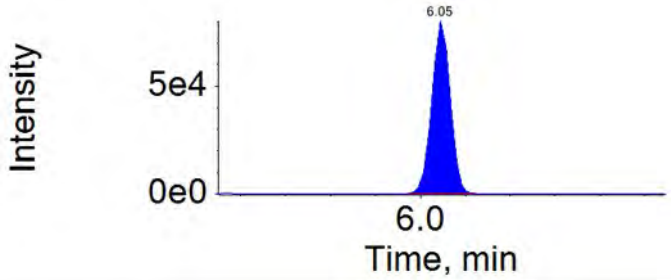
Analyte: NEtFOSAA
584.0 / 419.0



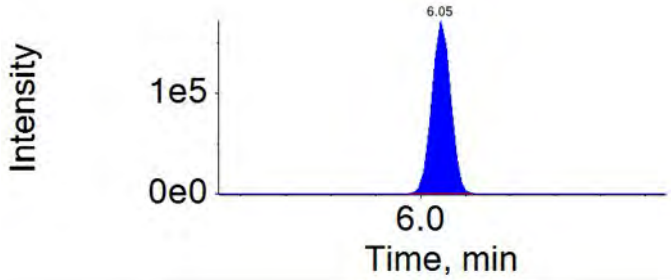
Extraction Standard: d5-NEtFOSAA
589.0 / 419.0



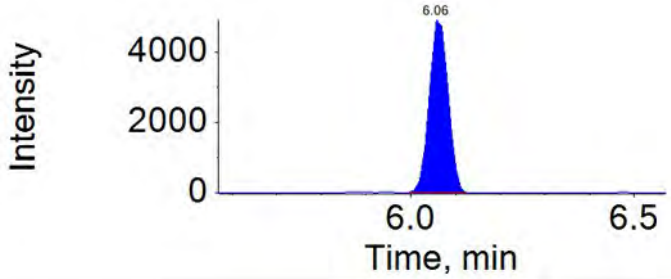
Analyte: PFDoDA
613.0 / 569.0



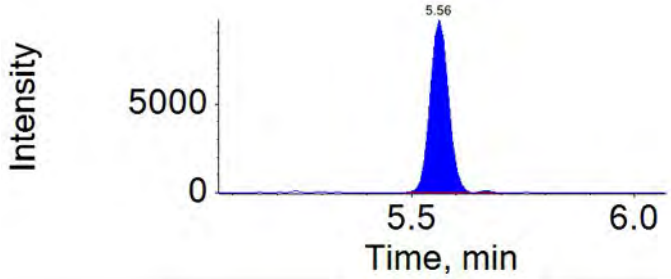
Extraction Standard: 13C2-PFDoDA
615.0 / 570.0



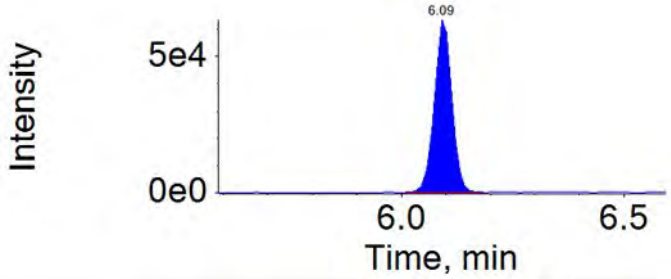
Analyte: 10:2-FTS
627.0 / 607.0



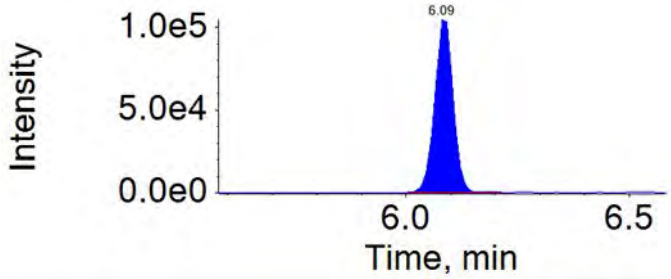
Extraction Standard: 13C2-8:2-FTS
529.0 / 81.0



Analyte: NMePFOSAE
616.0 / 59.0



Extraction Standard: d7-NMePFOSAE
623.0 / 59.0

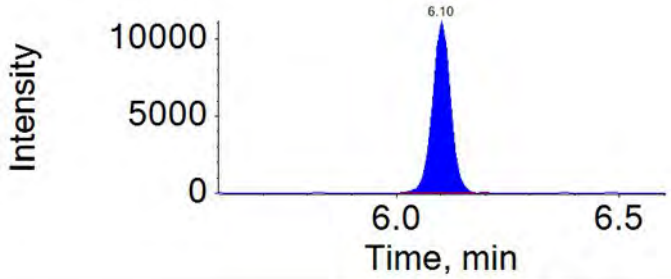


APPROVED
By MCD at 6:34 pm, 11/12/18

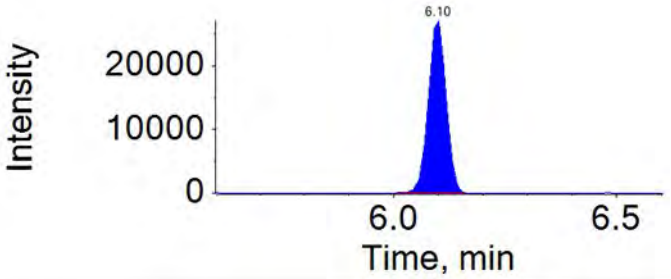
REVIEWED
By HMK at 10:53 am, 11/13/18

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

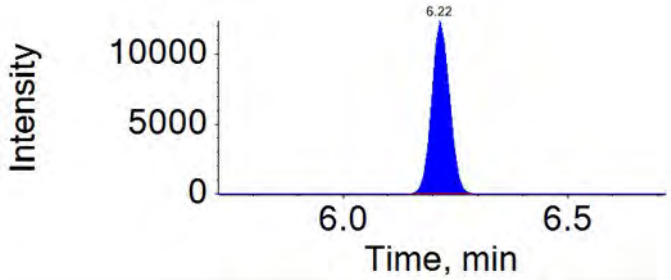
Analyte: NMePFOSA
512.0 / 169.0



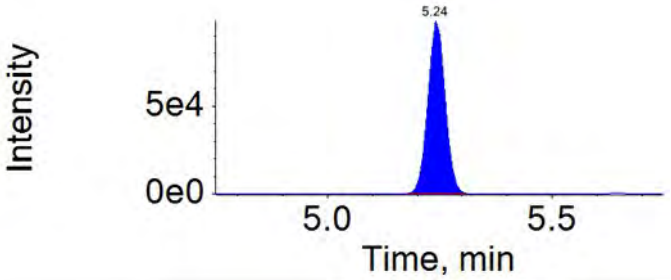
Extraction Standard: d3-NMePFOSA
515.0 / 169.0



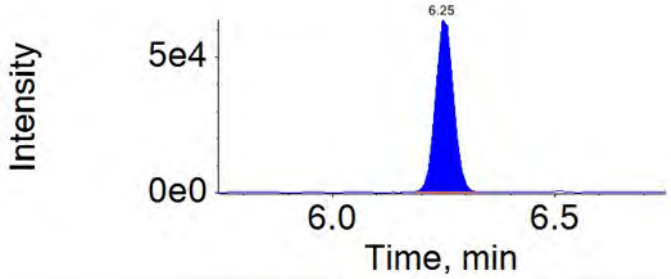
Analyte: PFDoS
699.0 / 80.0



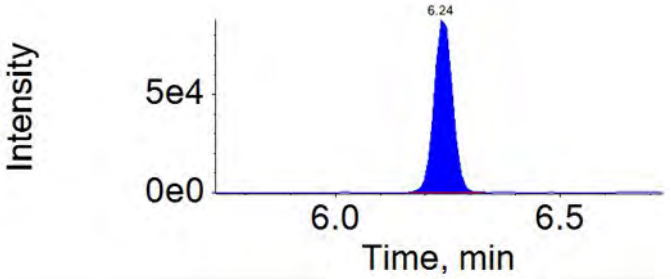
Extraction Standard: 13C8-PFOS
507.0 / 80.0



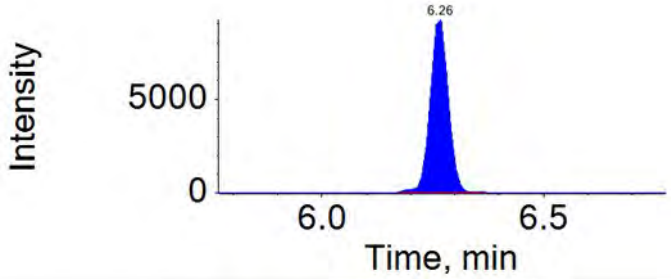
Analyte: NEtPFOSAE
630.0 / 59.0



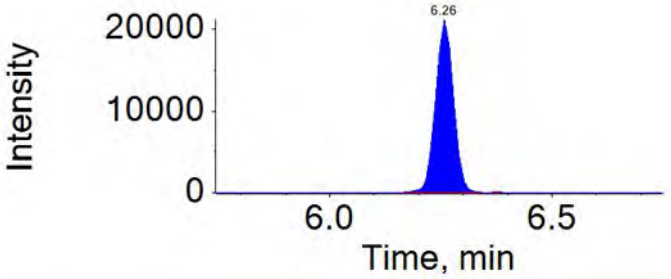
Extraction Standard: d9-NEtPFOSAE
639.0 / 59.0



Analyte: NEtPFOSA
526.0 / 169.0



Extraction Standard: d5-NEtPFOSA
531.0 / 169.0

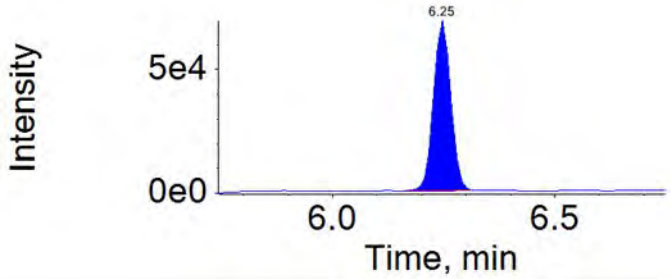


APPROVED
By MCD at 6:34 pm, 11/12/18

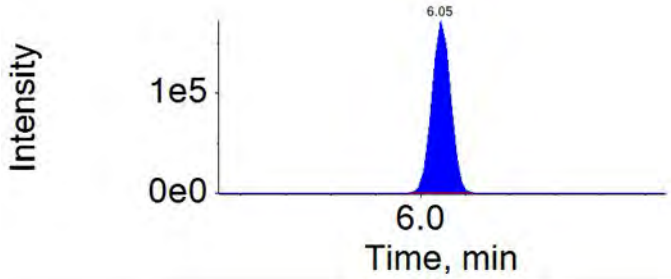
REVIEWED
By HMK at 10:53 am, 11/13/18

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

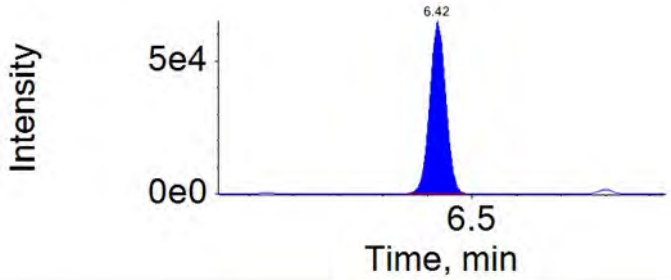
Analyte: PFTrDA
663.0 / 619.0



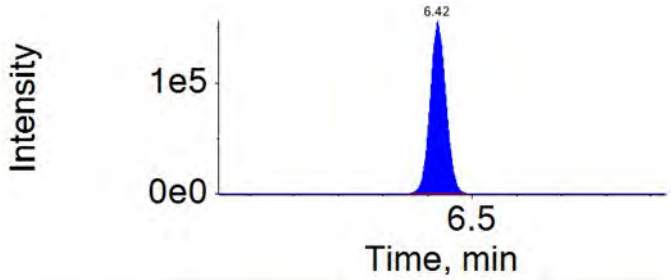
Extraction Standard: 13C2-PFDoDA
615.0 / 570.0



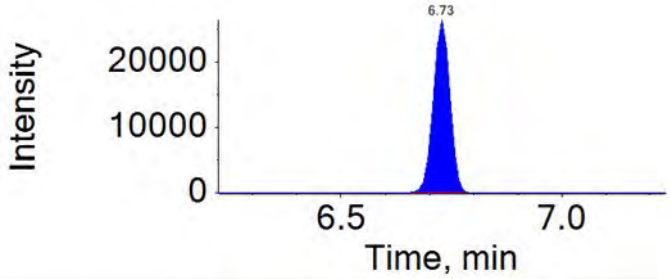
Analyte: PFTeDA
713.0 / 669.0



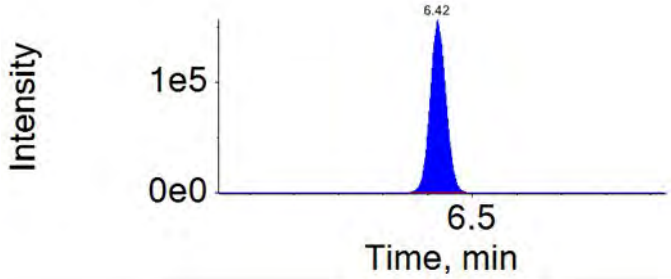
Extraction Standard: 13C2-PFTeDA
715.0 / 670.0



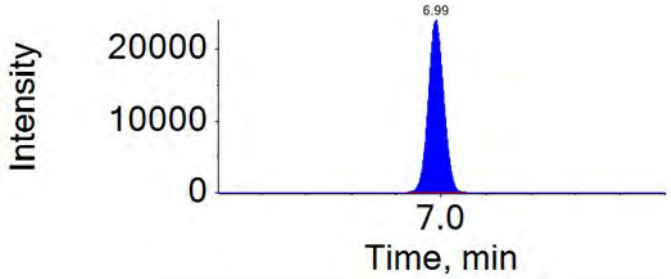
Analyte: PFHxDA
813.0 / 769.0



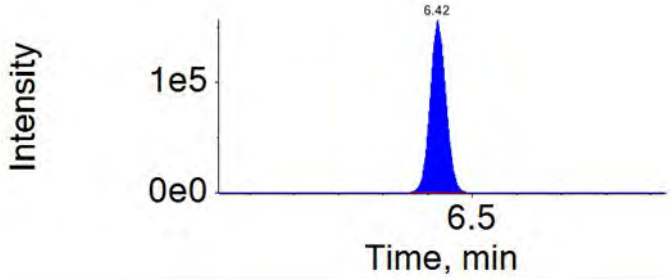
Extraction Standard: 13C2-PFTeDA
715.0 / 670.0



Analyte: PFODA
913.0 / 869.0



Extraction Standard: 13C2-PFTeDA
715.0 / 670.0



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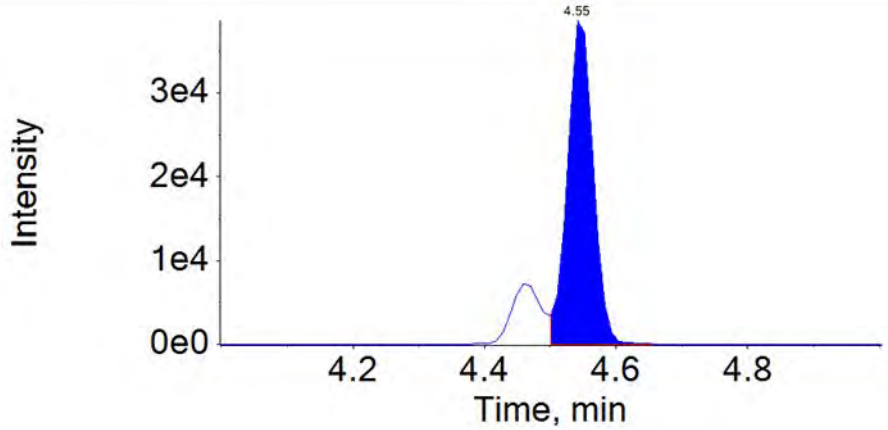
Auto Integrations prior to Manual Integration

Print Date: 11/12/2018 6:26 PM
Template: MQ-OrigInteg-16NOV21.docx

Results Table Name: 18NOV12DCAL
Results Table Date: 11/12/2018 6:23:42 PM

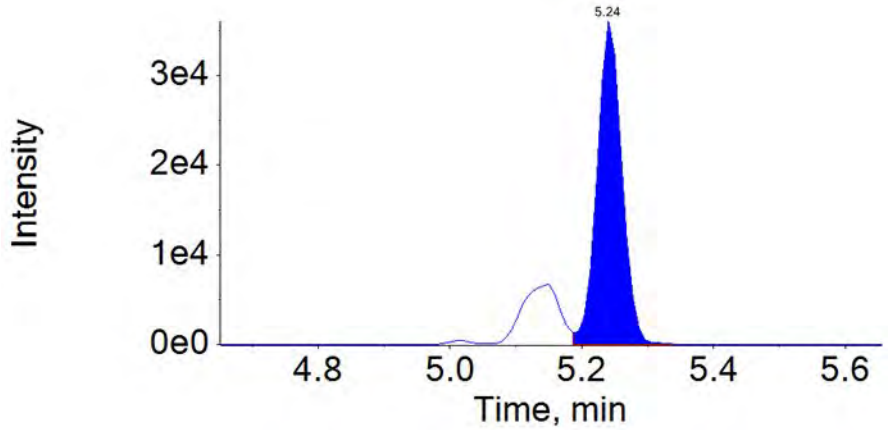
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

Component Name:
PFHxS
RT (min.):
4.55
Peak Area:
105576.75
Mass Range:
399.0 / 80.0
File Name:
18NOV12DCAL-52.wiff
Sample Name:
CCV1_CAL3



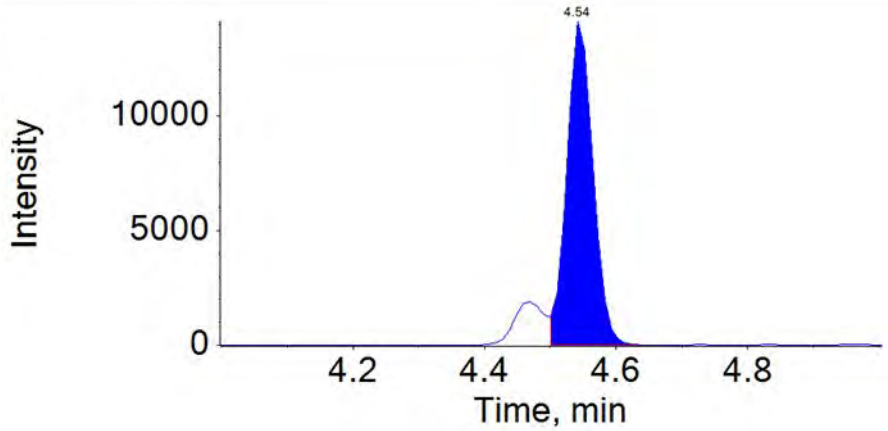
Integration Comment: incorrect integration

Component Name:
PFOS
RT (min.):
5.24
Peak Area:
94723.88
Mass Range:
499.0 / 80.0
File Name:
18NOV12DCAL-52.wiff
Sample Name:
CCV1_CAL3



Integration Comment: incorrect integration

Component Name:
PFHxS_2
RT (min.):
4.54
Peak Area:
39165.47
Mass Range:
399.0 / 99.0
File Name:
18NOV12DCAL-52.wiff
Sample Name:
CCV1_CAL3



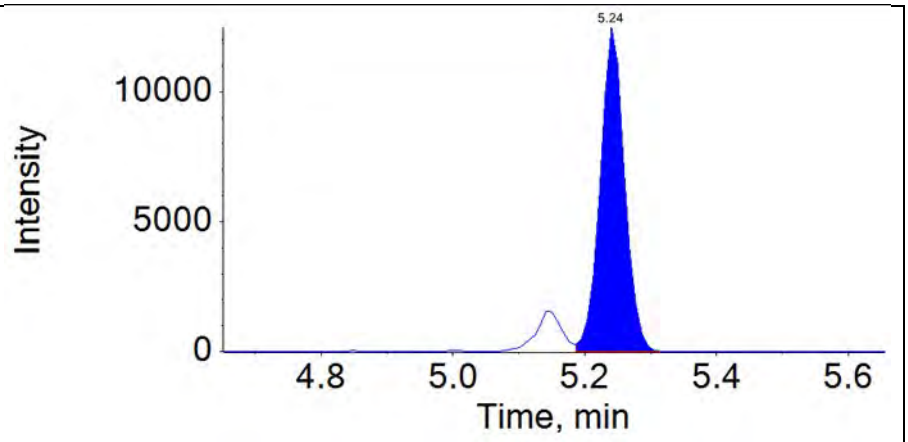
Integration Comment: incorrect integration

APPROVED
By MCD at 6:34 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

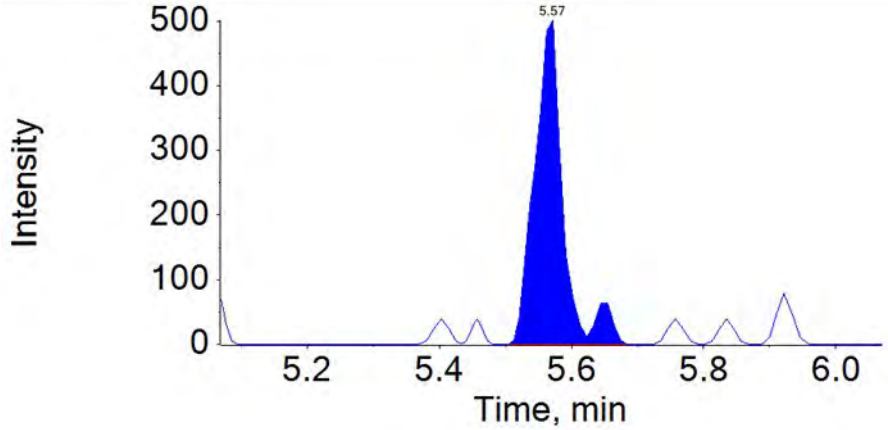
Results Table Name: 18NOV12DCAL
Results Table Date: 11/12/2018 6:23:42 PM
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

Component Name:
PFOS_2
RT (min.):
5.24
Peak Area:
32024.51
Mass Range:
499.0 / 99.0
File Name:
18NOV12DCAL-52.wiff
Sample Name:
CCV1_CAL3



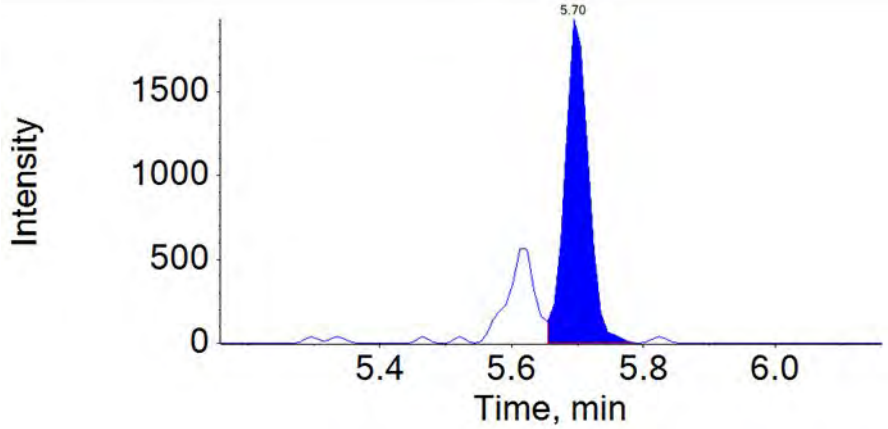
Integration Comment: incorrect integration

Component Name:
PFDA_2
RT (min.):
5.57
Peak Area:
1525.22
Mass Range:
513.0 / 169.0
File Name:
18NOV12DCAL-52.wiff
Sample Name:
CCV1_CAL3



Integration Comment: incorrect integration

Component Name:
NMeFOSAA_2
RT (min.):
5.70
Peak Area:
4786.64
Mass Range:
570.0 / 483.0
File Name:
18NOV12DCAL-52.wiff
Sample Name:
CCV1_CAL3



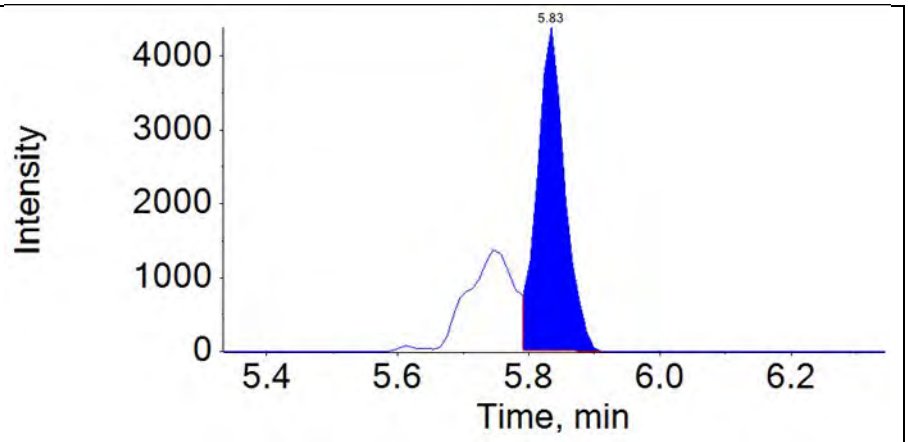
Integration Comment: incorrect integration

APPROVED
By MCD at 6:34 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

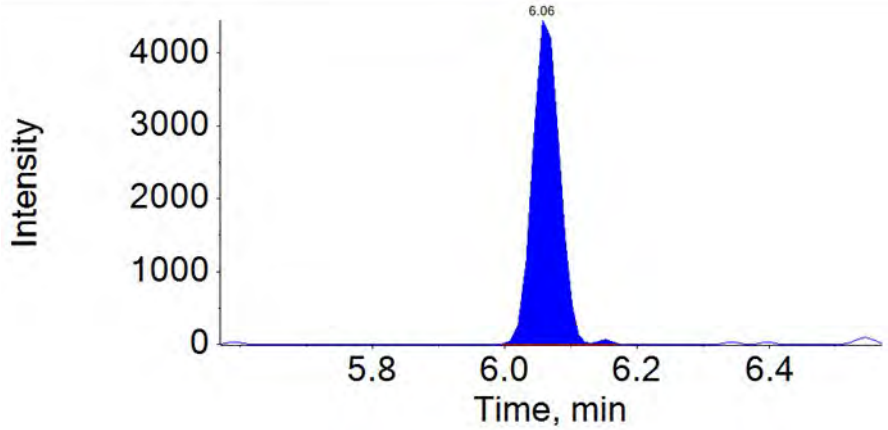
Results Table Name: 18NOV12DCAL
Results Table Date: 11/12/2018 6:23:42 PM
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

Component Name:
NEtFOSAA_2
RT (min.):
5.83
Peak Area:
12735.31
Mass Range:
584.0 / 526.0
File Name:
18NOV12DCAL-52.wiff
Sample Name:
CCV1_CAL3



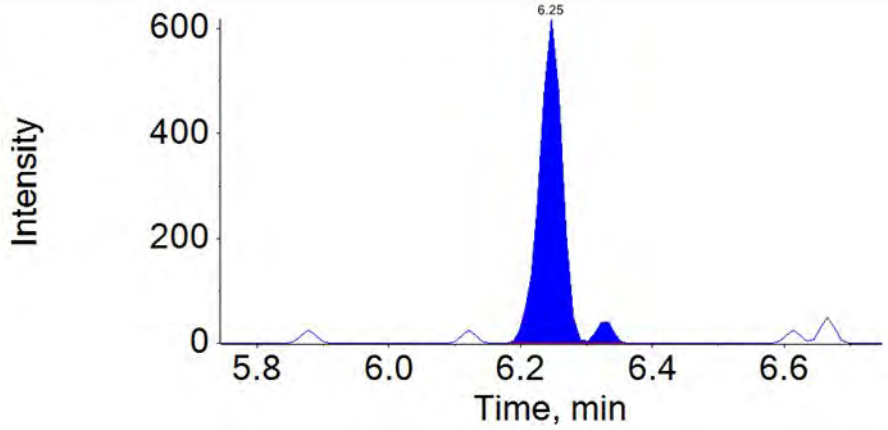
Integration Comment: incorrect integration

Component Name:
10:2 FTS_2
RT (min.):
6.06
Peak Area:
12750.49
Mass Range:
627.0 / 81.0
File Name:
18NOV12DCAL-52.wiff
Sample Name:
CCV1_CAL3



Integration Comment: incorrect integration

Component Name:
PFTrDA_2
RT (min.):
6.25
Peak Area:
1561.97
Mass Range:
663.0 / 169.0
File Name:
18NOV12DCAL-52.wiff
Sample Name:
CCV1_CAL3



Integration Comment: incorrect integration

Results Table Name: 18NOV12DCAL
Results Table Date: 11/12/2018 6:23:42 PM

Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

APPROVED
By MCD at 6:34 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

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LC-MS/MS Analysis Report

Printed: 11/12/2018 6:23:00 PM
Template: IonRatio18OCT10

Ion Ratio Report

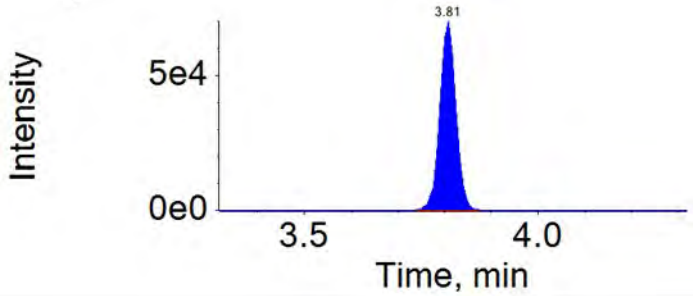
Sample Name: CCV1_CAL3 **Instrument Name:** LM27631 **File Name:** 18NOV12DCAL-52.wiff

Component Name	RT	RRT	Analyte Area Response	Int Typ	Expected Ion Ratio	Ion Ratio	Ion Ratio % Diff	Ion Ratio Limit	Ion Ratio OOS
PFBS	3.81	1.00	166889.60	A	0.3619	0.3759			
PFBS_2	3.81	1.00	62739.70	A	0.3619	0.3759	4	50	
4:2-FTS	4.12	1.00	33008.94	A	0.6730	0.6769			
4:2 FTS_2	4.12	1.00	22342.63	A	0.6730	0.6769		#NA!	
PFHxA	4.16	1.00	362325.97	A	0.0117	0.0114			
PFHxA_2	4.16	1.00	4119.87	A	0.0117	0.0114	-2	50	
PFPeS	4.18	1.10	87834.91	A	0.5191	0.5380			
PFPeS_2	4.17	1.10	47259.43	A	0.5191	0.5380	4	50	
PFHpA	4.54	1.00	361271.55	A	0.0563	0.0528			
PFHpA_2	4.54	1.00	19075.67	A	0.0563	0.0528	-6	50	
PFHxS	4.55	1.00	128396.13	M	0.3428	0.3526			
PFHxS_2	4.54	1.00	45266.10	M	0.3428	0.3526	3	50	
6:2-FTS	4.90	1.00	30500.72	A	0.6604	0.6139			
6:2 FTS_2	4.90	1.00	18723.69	A	0.6604	0.6139		#NA!	
PFHpS	4.91	1.08	122801.74	A	0.4066	0.3898			
PFHpS_2	4.91	1.08	47867.04	A	0.4066	0.3898	-4	50	
PFOA	4.91	1.00	370358.65	A	0.0562	0.0572			
PFOA_2	4.91	1.00	21182.05	A	0.0562	0.0572	2	50	
PFOS	5.24	1.00	122332.00	M	0.2968	0.2965			
PFOS_2	5.24	1.00	36275.78	M	0.2968	0.2965	0	50	
PFNA	5.26	1.00	292557.20	A	0.0229	0.0191			
PFNA_2	5.26	1.00	5601.50	A	0.0229	0.0191	-16	50	
PFNS	5.54	1.06	76021.24	A	0.4828	0.4752			
PFNS_2	5.54	1.06	36125.34	A	0.4828	0.4752	-2	50	
PFDA	5.56	1.00	253956.70	A	0.0081	0.0055			
PFDA_2	5.57	1.00	1404.60	M	0.0081	0.0055	-32	50	
8:2-FTS	5.56	1.00	22335.45	A	0.6814	0.6085			
8:2 FTS_2	5.56	1.00	13590.39	A	0.6814	0.6085		#NA!	
NMeFOSAA	5.70	1.00	28733.42	A	0.2569	0.2248			
NMeFOSAA_2	5.70	1.00	6459.32	M	0.2569	0.2248	-12	50	
PFDS	5.79	1.11	62507.84	A	0.5144	0.4958			
PFDS_2	5.79	1.10	30989.83	A	0.5144	0.4958	-4	50	
PFUnDA	5.82	1.00	199322.38	A	0.0058	0.0036			
PFUnDA_2	5.82	1.00	716.12	A	0.0058	0.0036	-38	50	
NEtFOSAA	5.83	1.00	24531.93	A	0.7253	0.7928			
NEtFOSAA_2	5.83	1.00	19448.32	M	0.7253	0.7928	9	50	
PFDoDA	6.05	1.00	228792.93	A	0.0157	0.0084			
PFDoDA_2	6.05	1.00	1930.67	A	0.0157	0.0084	-46	50	
10:2-FTS	6.06	1.09	14411.12	A	0.6356	0.8781			
10:2 FTS_2	6.06	1.09	12654.02	M	0.6356	0.8781		#NA!	
PFTrDA	6.25	1.03	185154.57	A	0.0086	0.0080			
PFTrDA_2	6.25	1.03	1486.41	M	0.0086	0.0080	-6	50	
PFTeDA	6.42	1.00	159904.63	A	0.0062	0.0061			
PFTeDA_2	6.42	1.00	982.46	A	0.0062	0.0061	-2	50	
PFHxDA	6.73	1.05	68393.80	A	0.0683	0.0584			
PFHxDA_2	6.73	1.05	3992.51	A	0.0683	0.0584	-14	50	
PFODA	6.99	1.09	58092.41	A	0.0277	0.0262			
PFODA_2	6.99	1.09	1524.27	A	0.0277	0.0262	-5	50	

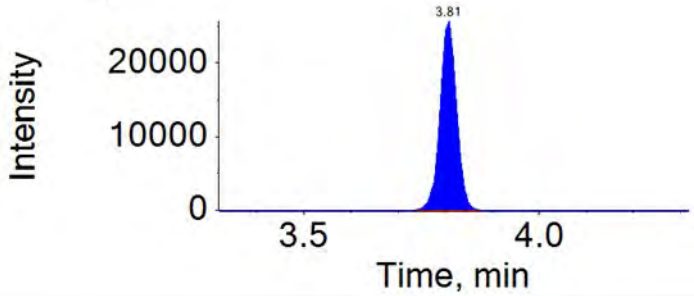
APPROVED
By MCD at 6:34 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

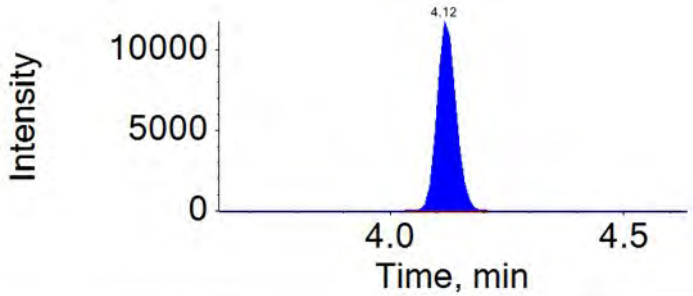
Component: PFBS
Primary Mass: 299.0 / 80.0



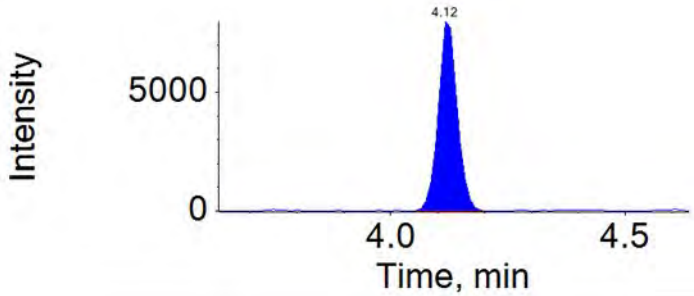
Component: PFBS_2
Secondary Mass: 299.0 / 99.0



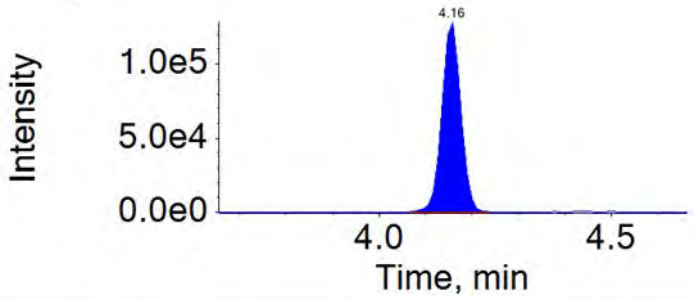
Component: 4:2-FTS
Primary Mass: 327.0 / 307.0



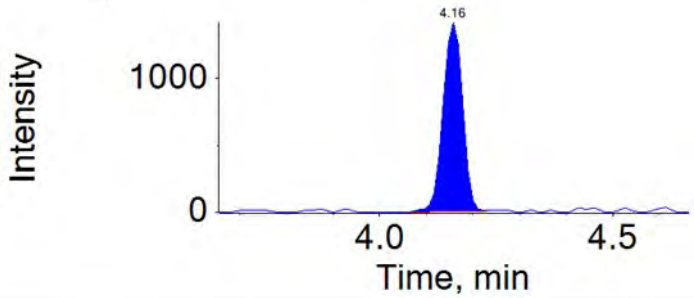
Component: 4:2 FTS_2
Secondary Mass: 327.0 / 81.0



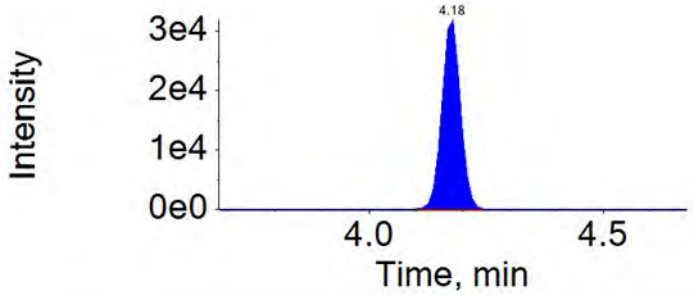
Component: PFHxA
Primary Mass: 313.0 / 269.0



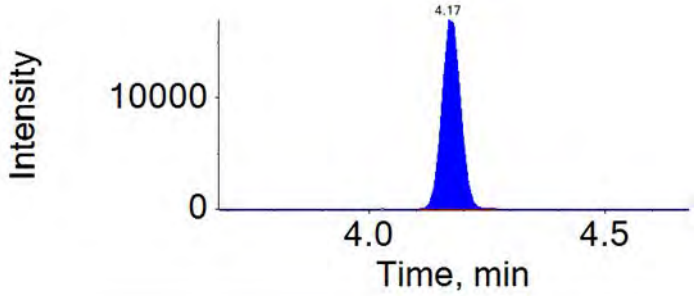
Component: PFHxA_2
Secondary Mass: 313.0 / 119.0



Component: PFPeS
Primary Mass: 349.0 / 80.0



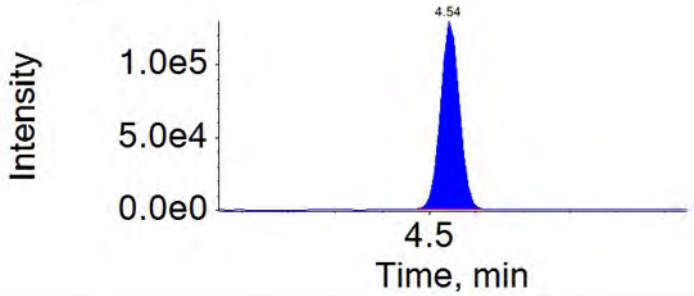
Component: PFPeS_2
Secondary Mass: 349.0 / 99.0



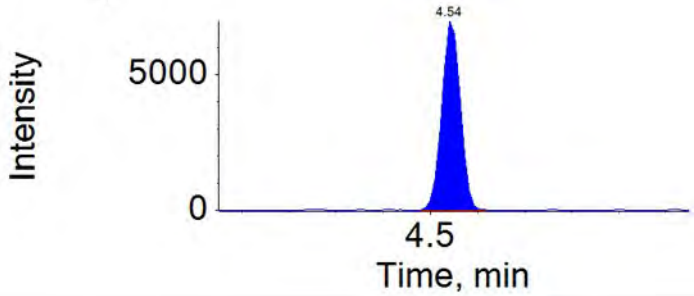
APPROVED
By MCD at 6:34 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

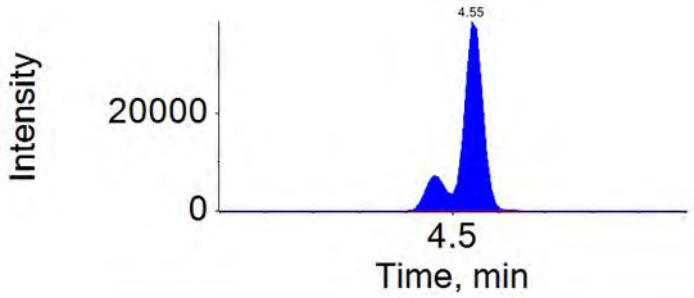
Component: PFHpA
Primary Mass: 363.0 / 319.0



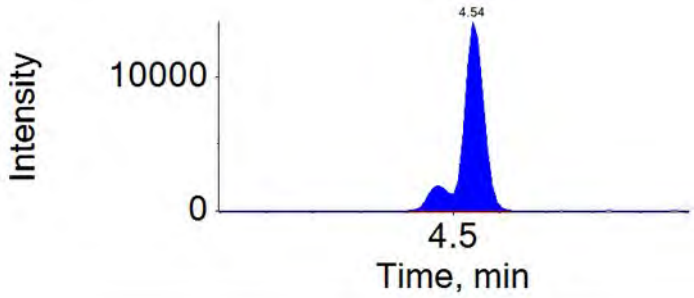
Component: PFHpA_2
Secondary Mass: 363.0 / 169.0



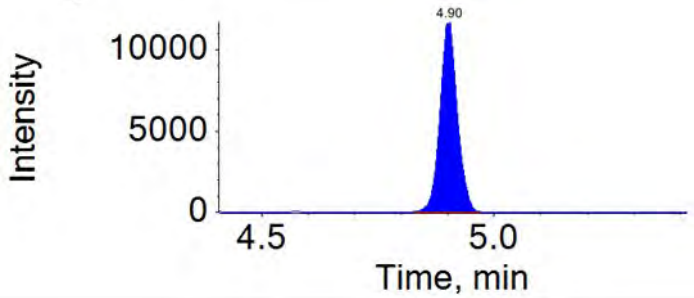
Component: PFHxS
Primary Mass: 399.0 / 80.0



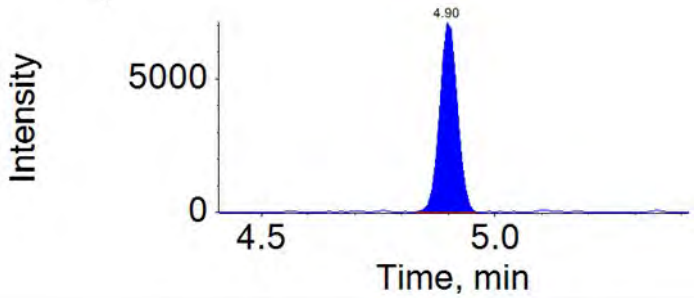
Component: PFHxS_2
Secondary Mass: 399.0 / 99.0



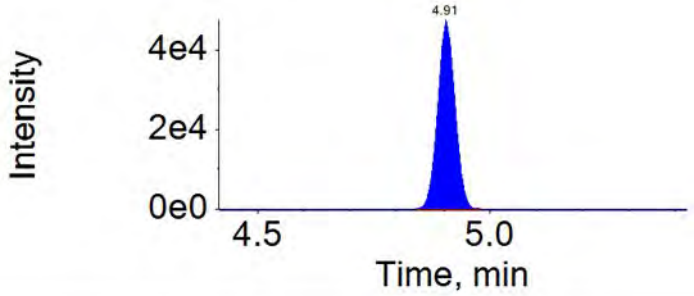
Component: 6:2-FTS
Primary Mass: 427.0 / 407.0



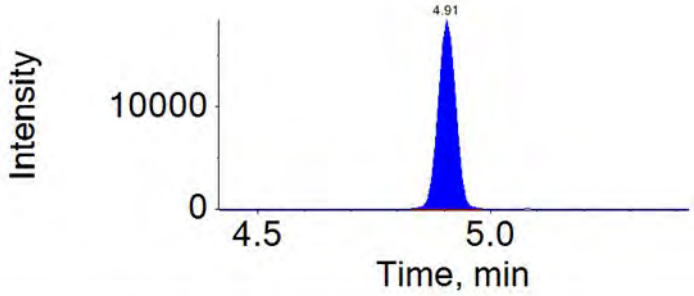
Component: 6:2 FTS_2
Secondary Mass: 427.0 / 81.0



Component: PFHpS
Primary Mass: 449.0 / 80.0



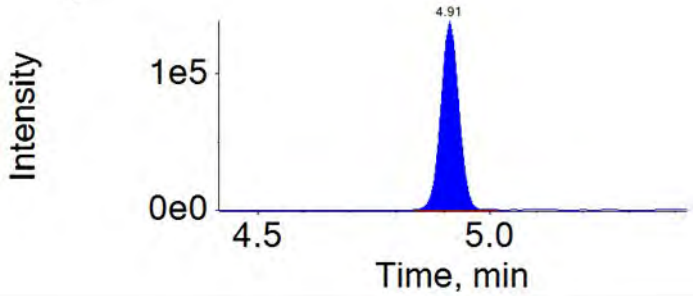
Component: PFHpS_2
Secondary Mass: 449.0 / 99.0



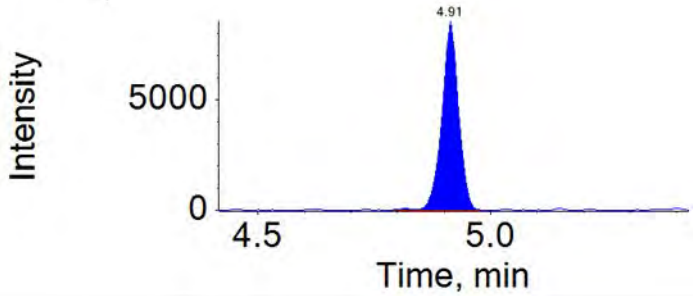
APPROVED
By MCD at 6:34 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

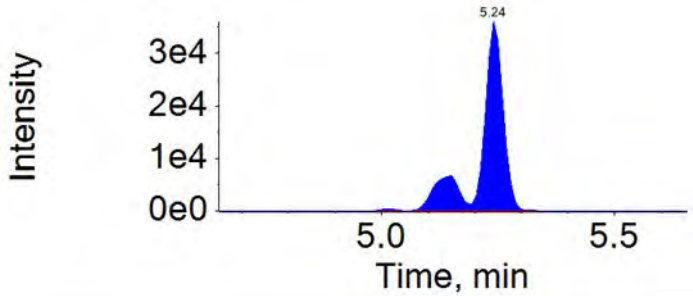
Component: PFOA
Primary Mass: 413.0 / 369.0



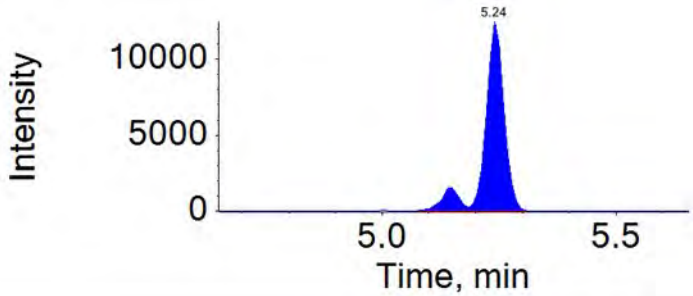
Component: PFOA_2
Secondary Mass: 413.0 / 169.0



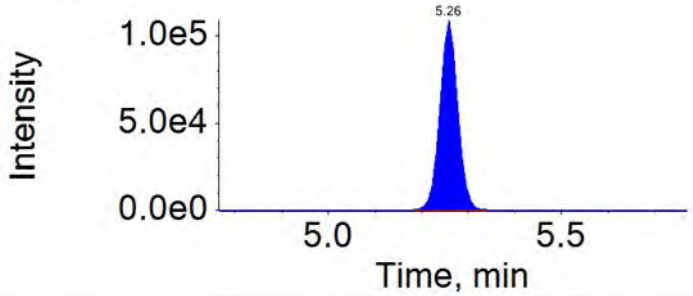
Component: PFOS
Primary Mass: 499.0 / 80.0



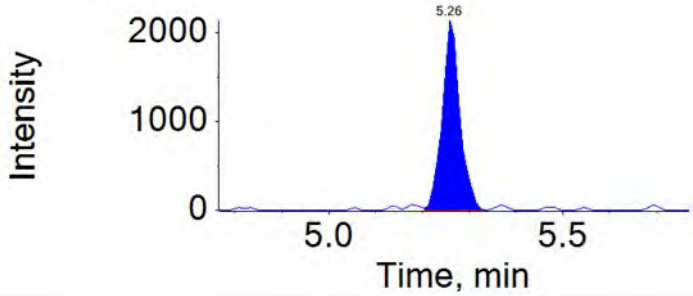
Component: PFOS_2
Secondary Mass: 499.0 / 99.0



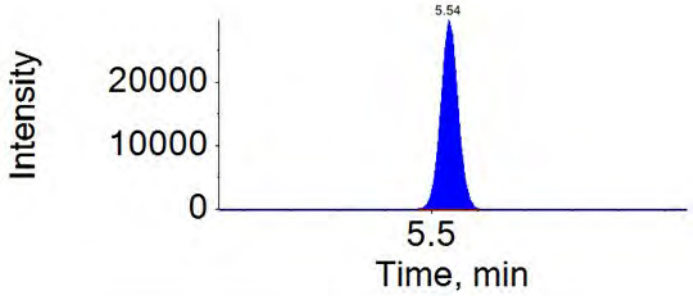
Component: PFNA
Primary Mass: 463.0 / 419.0



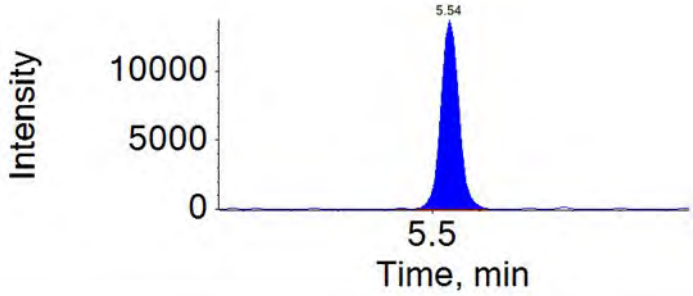
Component: PFNA_2
Secondary Mass: 463.0 / 169.0



Component: PFNS
Primary Mass: 549.0 / 80.0



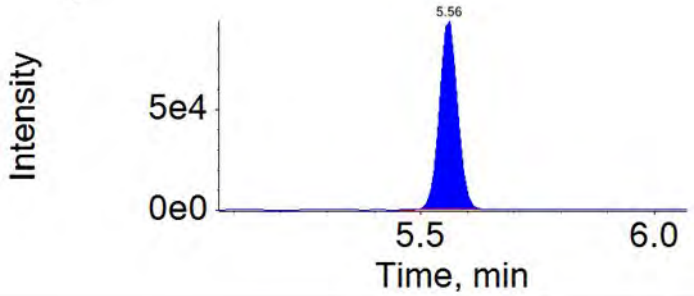
Component: PFNS_2
Secondary Mass: 549.0 / 99.0



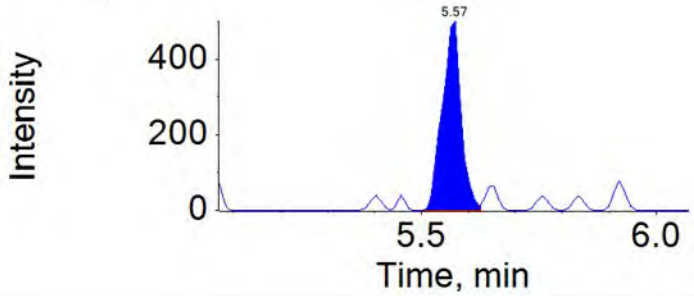
APPROVED
By MCD at 6:34 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

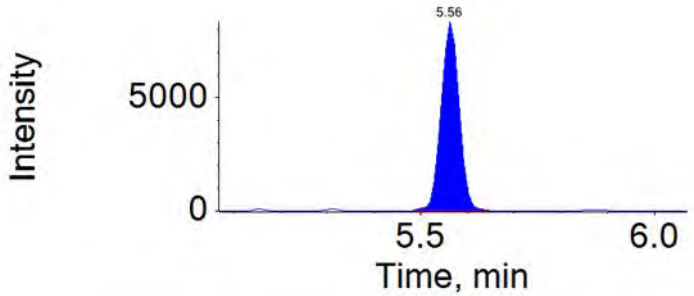
Component: PFDA
Primary Mass: 513.0 / 469.0



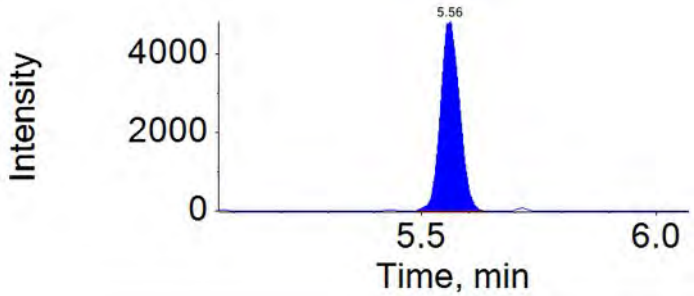
Component: PFDA_2
Secondary Mass: 513.0 / 169.0



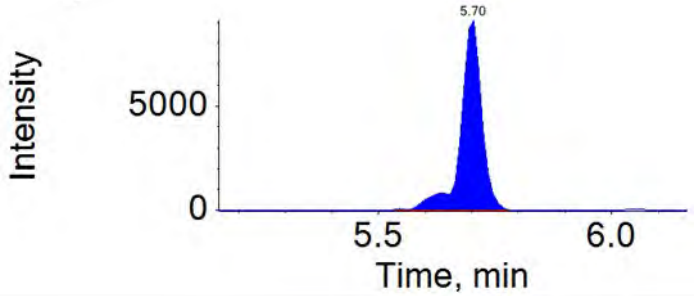
Component: 8:2-FTS
Primary Mass: 527.0 / 507.0



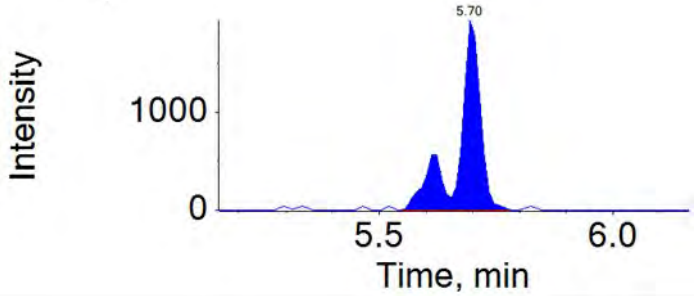
Component: 8:2 FTS_2
Secondary Mass: 527.0 / 81.0



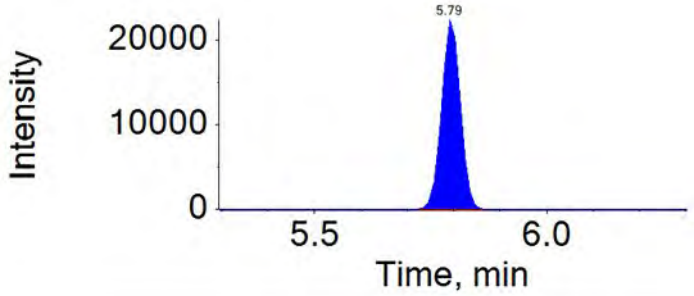
Component: NMeFOSAA
Primary Mass: 570.0 / 419.0



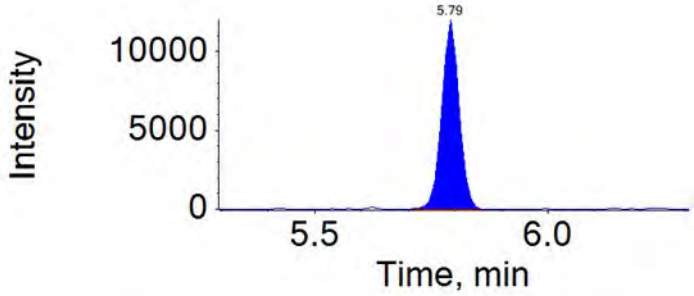
Component: NMeFOSAA_2
Secondary Mass: 570.0 / 483.0



Component: PFDS
Primary Mass: 599.0 / 80.0



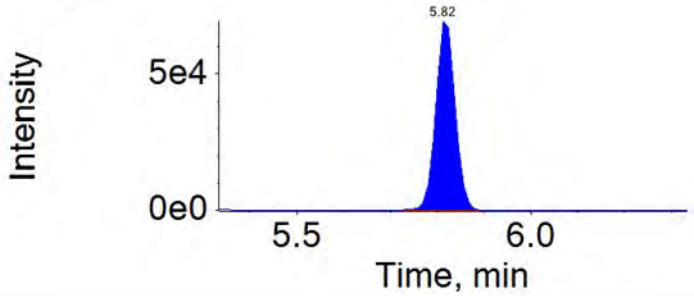
Component: PFDS_2
Secondary Mass: 599.0 / 99.0



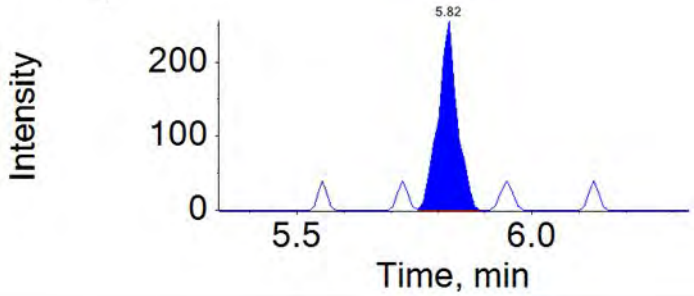
APPROVED
By MCD at 6:34 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

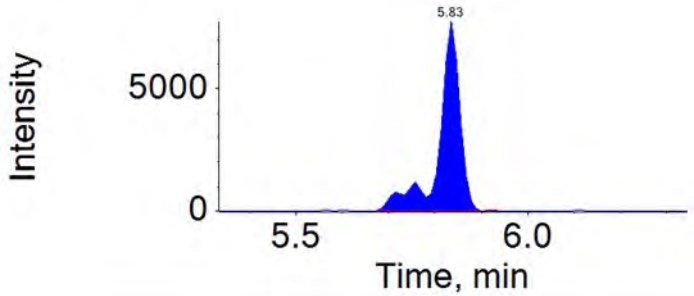
Component: PFUnDA
Primary Mass: 563.0 / 519.0



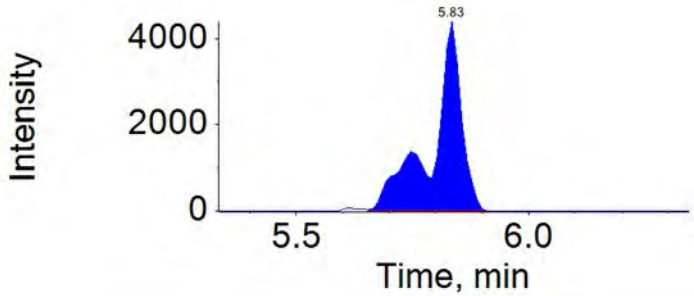
Component: PFUnDA_2
Secondary Mass: 563.0 / 169.0



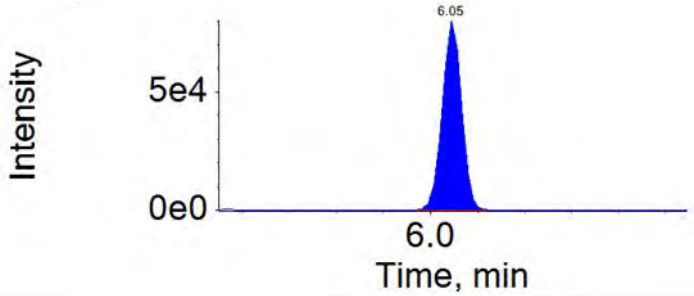
Component: NEtFOSAA
Primary Mass: 584.0 / 419.0



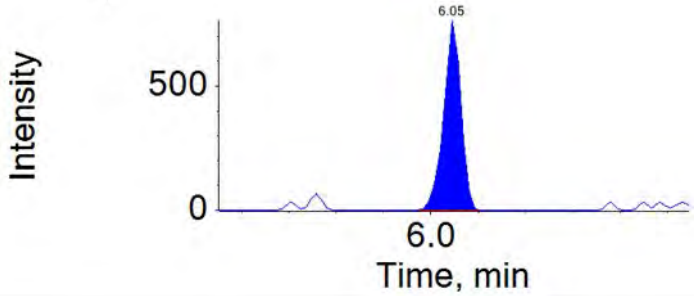
Component: NEtFOSAA_2
Secondary Mass: 584.0 / 526.0



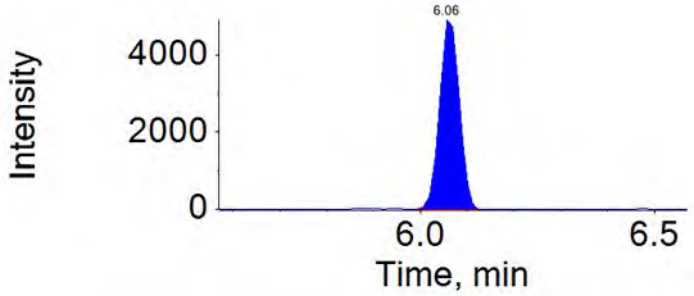
Component: PFDoDA
Primary Mass: 613.0 / 569.0



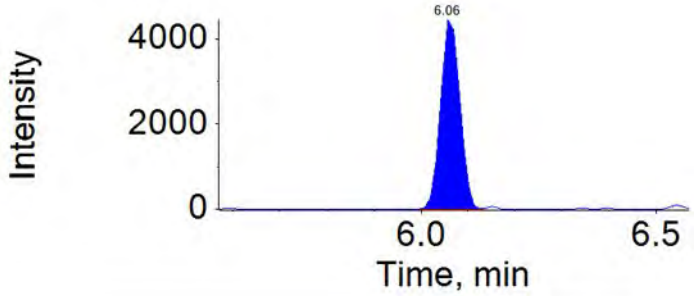
Component: PFDoDA_2
Secondary Mass: 613.0 / 169.0



Component: 10:2-FTS
Primary Mass: 627.0 / 607.0



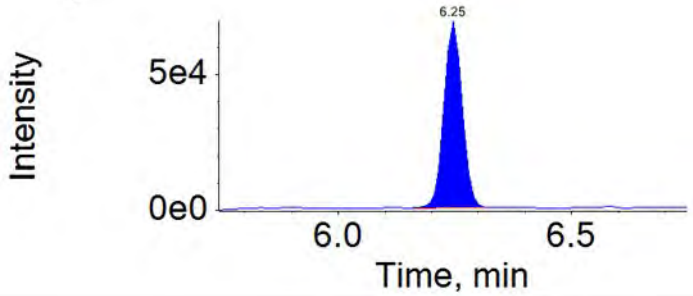
Component: 10:2 FTS_2
Secondary Mass: 627.0 / 81.0



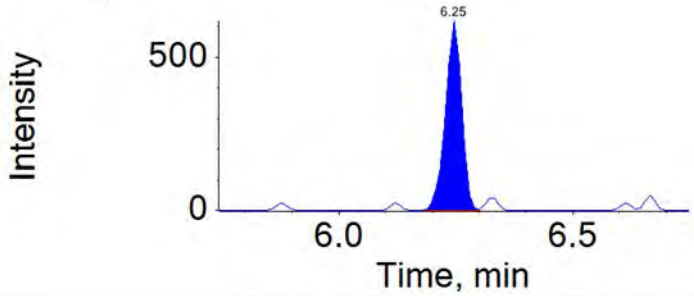
APPROVED
By MCD at 6:34 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

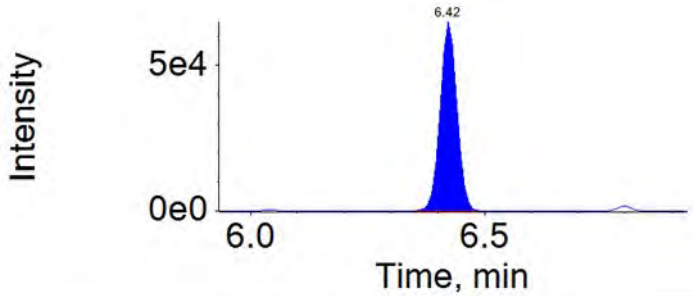
Component: PFTrDA
Primary Mass: 663.0 / 619.0



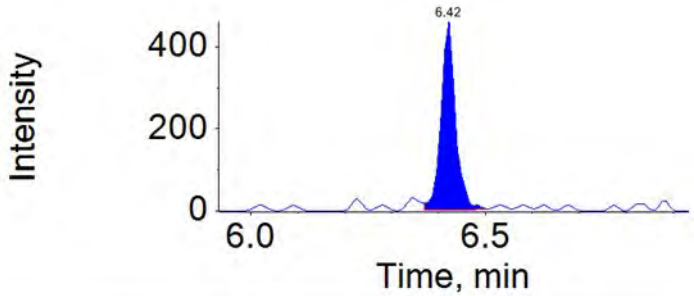
Component: PFTrDA_2
Secondary Mass: 663.0 / 169.0



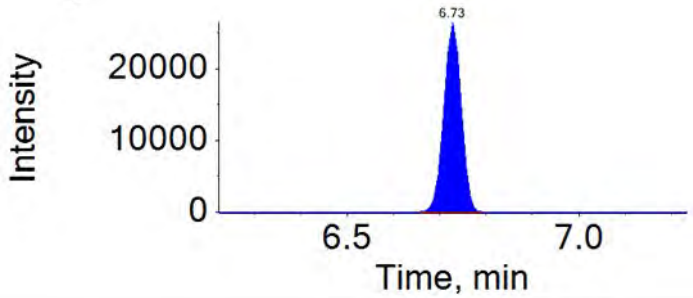
Component: PFTeDA
Primary Mass: 713.0 / 669.0



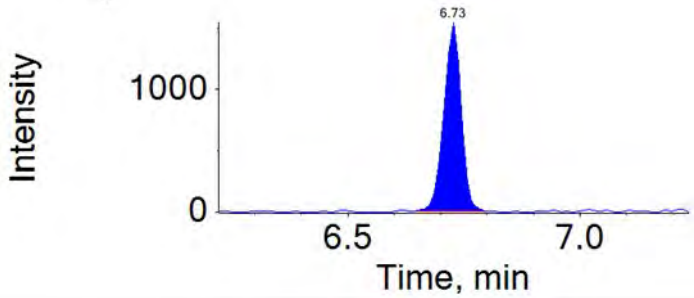
Component: PFTeDA_2
Secondary Mass: 713.0 / 169.0



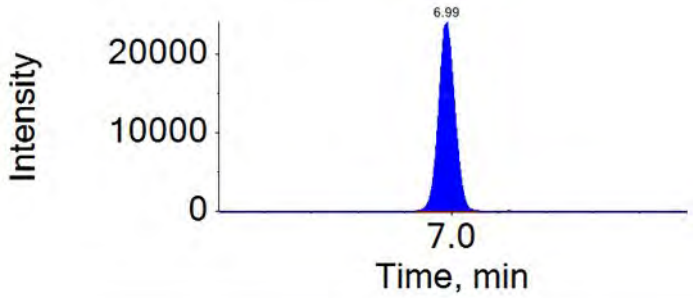
Component: PFHxDA
Primary Mass: 813.0 / 769.0



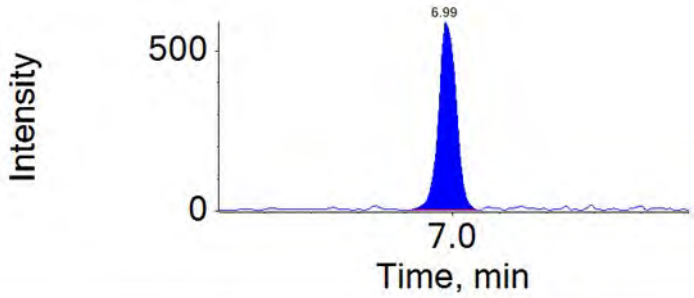
Component: PFHxDA_2
Secondary Mass: 813.0 / 169.0



Component: PFODA
Primary Mass: 913.0 / 869.0



Component: PFODA_2
Secondary Mass: 913.0 / 169.0



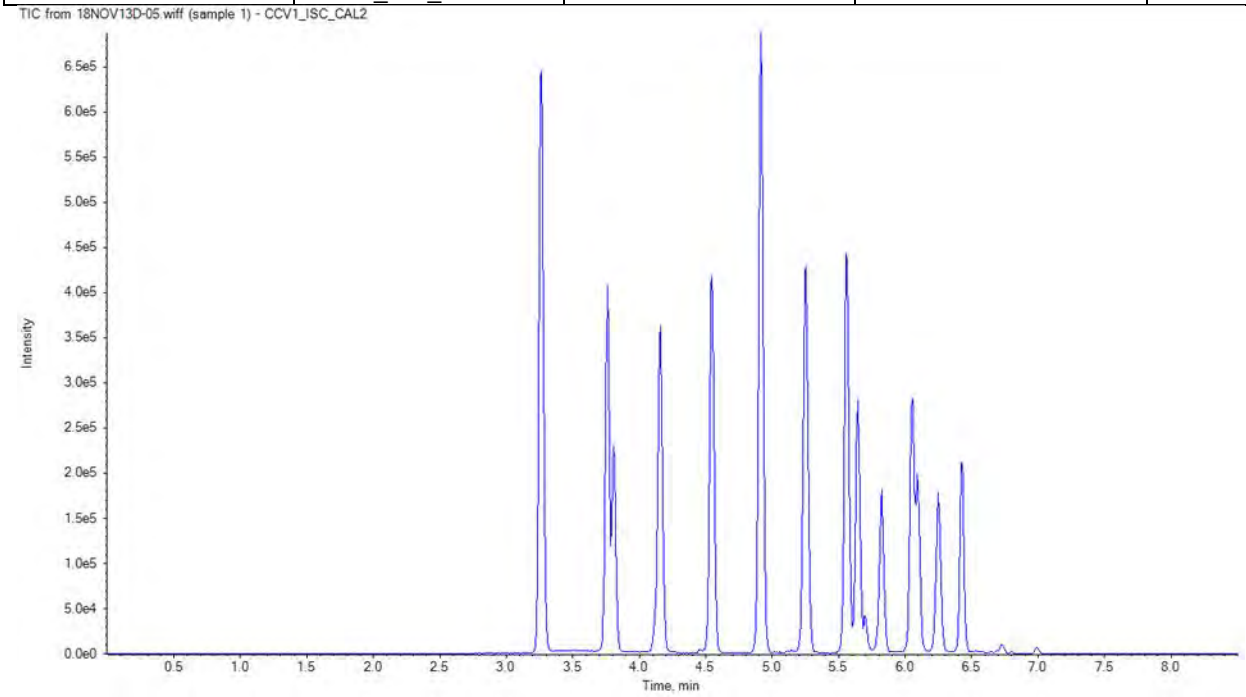
APPROVED
By MCD at 6:34 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

Instrument Sensitivity Check/ Continuing Calibration Verfication

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV13DCCV1-4 11/13/2018 4:25:30 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Instrument Name:	Sample Name:	Sample ID:	Sample File:	Acquisition Date:
LM27631	CCV1_ISC_CAL2	CALBRN21833C	18NOV13D-05.wiff	2018-11-13T09:44:02



Injection Standard Area Reference File: 18NOV12DCAL-44

Injection Standard Name	Inj Std Conc	Injection Std Peak Area	Reference Injection Standard Area	Injection Std %Diff	Injection Std %Diff Limit	Injection Std %Diff OOS
13C3-PFBA	5.0	661126.9	659926.2	0	50	
13C2-PFOA	5.0	466902.6	450219.7	4	50	
13C4-PFOS	4.8	247446.9	249205.8	-1	50	
13C2-PFDA	5.0	295381.6	278743.9	6	50	

APPROVED
By JPT at 4:33 pm, 11/13/18

REVIEWED
By HMK at 1:48 pm, 11/14/18

Instrument Sensitivity Check/ Continuing Calibration Verfication

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV13DCCV1-4 11/13/2018 4:25:30 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Instrument Name:	Sample Name:	Sample ID:	Sample File:	Acquisition Date:
LM27631	CCV1_ISC_CAL2	CALBRN21833C	18NOV13D-05.wiff	2018-11-13T09:44:02

Analyte Name	Analyte Area	Sc /pk	Ext Std Name	Ext Std Area	Ext Std con	Area Ratio	RT (min)	RRT	Spec Amt	Calc Amt	% Diff	% Diff Lim	% Diff OOS
PFBA	80023.3	10	13C4-PFBA	766812.0	5.0	0.104	3.26	1.000	0.600	0.578	-4	30	
PFPeA	76472.6	11	13C5-PFPeA	751025.9	5.0	0.102	3.76	1.000	0.600	0.589	-2	30	
PFBS	41984.3	11	13C3-PFBS	427122.1	4.7	0.098	3.81	1.000	0.531	0.468	-12	30	
4:2-FTS	9629.9	12	13C2-4:2-FTS	54897.9	4.7	0.175	4.12	1.000	0.560	0.476	-15	30	
PFHxA	96444.0	12	13C5-PFHxA	705940.0	5.0	0.137	4.16	1.000	0.600	0.570	-5	30	
PFPeS	22297.9	11	13C3-PFBS	427122.1	4.7	0.052	4.18	1.100	0.563	0.507	-10	30	
PFHpA	93659.5	12	13C4-PFHpA	545224.8	5.0	0.172	4.55	1.000	0.600	0.569	-5	30	
PFHxS	34111.0	18	13C3-PFHxS	315188.2	4.7	0.108	4.55	1.000	0.547	0.525	-4	30	
6:2-FTS	9221.0	11	13C2-6:2-FTS	36348.0	4.8	0.254	4.90	1.000	0.569	0.614	8	30	
PFHpS	30798.1	11	13C3-PFHxS	315188.2	4.7	0.098	4.91	1.080	0.571	0.514	-10	30	
PFOA	100905.0	11	13C8-PFOA	916289.6	5.0	0.110	4.92	1.000	0.600	0.588	-2	30	
PFOS	34555.4	22	13C8-PFOS	283234.2	4.8	0.122	5.24	1.000	0.555	0.534	-4	30	
PFNA	70400.6	11	13C9-PFNA	459889.6	5.0	0.153	5.26	1.000	0.600	0.552	-8	30	
PFNS	17583.2	10	13C8-PFOS	283234.2	4.8	0.062	5.54	1.060	0.576	0.434	-25	30	
PFDA	68441.3	11	13C6-PFDA	633571.3	5.0	0.108	5.56	1.000	0.600	0.573	-5	30	
8:2-FTS	5551.6	11	13C2-8:2-FTS	28239.6	4.8	0.197	5.56	1.000	0.575	0.458	-20	30	
PFOSA	70097.0	12	13C8-PFOSA	581964.0	5.0	0.120	5.64	1.000	0.600	0.588	-2	30	
NMeFOSAA	7238.6	17	d3-NMeFOSAA	75677.4	5.0	0.096	5.71	1.000	0.600	0.541	-10	30	
PFDS	14746.9	12	13C8-PFOS	283234.2	4.8	0.052	5.80	1.110	0.578	0.472	-18	30	
PFUnDA	55065.8	12	13C7-PFUnDA	262614.2	5.0	0.210	5.82	1.000	0.600	0.548	-9	30	
NEtFOSAA	8391.3	19	d5-NEtFOSAA	67382.4	5.0	0.125	5.84	1.000	0.600	0.653	9	30	
PFDoDA	63306.6	12	13C2-PFDoDA	563416.3	5.0	0.112	6.05	1.000	0.600	0.572	-5	30	
10:2-FTS	4315.1	11	13C2-8:2-FTS	28239.6	4.8	0.153	6.07	1.090	0.578	0.509	-12	30	
NMePFOSAE	46107.4	12	d7-NMePFOSAE	315627.9	5.0	0.146	6.10	1.000	0.600	0.608	1	30	
NMePFOSA	7580.7	13	d3-NMePFOSA	81274.6	5.0	0.093	6.11	1.000	0.600	0.460	-23	30	
PFDoS	7907.3	11	13C8-PFOS	283234.2	4.8	0.028	6.22	1.190	0.581	0.489	-16	30	
NEtPFOSAE	46594.2	12	d9-NEtPFOSAE	264447.2	5.0	0.176	6.26	1.000	0.600	0.565	-6	30	
NEtPFOSA	7426.1	11	d5-NEtPFOSA	57059.6	5.0	0.130	6.27	1.000	0.600	0.598	0	30	
PFTrDA	52911.8	12	13C2-PFDoDA	563416.3	5.0	0.094	6.25	1.030	0.600	0.593	-1	30	
PFTeDA	38686.6	11	13C2-PFTeDA	412151.2	5.0	0.094	6.43	1.000	0.600	0.526	-12	30	
PFHxDA	18605.8	11	13C2-PFTeDA	412151.2	5.0	0.045	6.73	1.050	0.600	0.538	-10	30	
PFODA	15935.1	10	13C2-PFTeDA	412151.2	5.0	0.039	6.99	1.090	0.600	0.538	-10	30	

APPROVED
By JPT at 4:33 pm, 11/13/18

REVIEWED
By HMK at 1:48 pm, 11/14/18

Instrument Sensitivity Check/ Continuing Calibration Verfication

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV13DCCV1-4 11/13/2018 4:25:30 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

APPROVED
By JPT at 4:33 pm, 11/13/18

REVIEWED
By HMK at 1:48 pm, 11/14/18

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LC-MS/MS
DOD Analysis Report

Printed: 11/13/2018 4:28:00 PM
Template: DOD-Sample-18JUN22.docx

ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM
Result Table: 18NOV13DCCV1-4 11/13/2018 4:25:30 PM
Acquisition Method: 18AUG13_3uL.dam

Sample Name:	CCV1_ISC_CAL2			**Data File:**		18NOV13D-05.wiff
Sample ID:	CALBRN21833C			**Acquis Date:**		2018-11-13T09:44:02
Sample Type:	Quality Control			**Instrument:**		LM27631
Vial Position:	4			**Acquis Method:**		18AUG13_3uL.dam
Injection Vol:	3.00			**Result Table:**		18NOV13DCCV1-4
QMethod File:	18AUG20QM			**ICAL Name:**		18NOV12DCAL
Batch Number:	N/A			**Operator:**		JPT12262
Sample Wt.:	1.00000			**Dilution Factor:**		1.00
Sample Vol.:	1.000			**Prep Factor:**		1.000

Injection Standard Peak Table

Injection Standard Area Reference File: 18NOV12DCAL-44

Injection Standard Name	Inj Std Conc	Injection Std Peak Area	Rreference Injection Standard Area	Injection Std %Diff	Injection Std %Diff Limit	Injection Std %Diff OOS
13C3-PFBA	5.0	661126.9	659926.2	0	50	
13C2-PFOA	5.0	466902.6	450219.7	4	50	
13C4-PFOS	4.8	247446.9	249205.8	-1	50	
13C2-PFDA	5.0	295381.6	278743.9	6	50	

Extraction Standard Peak Table

Extraction Standard Name	Ext Std Area	Inj Std Name	Inj Std Area	Area Ratio	Ext Std Conc	Ext Std Result	Ext Std %REC	Ext Std %REC Limit	Ext Std OOS
E13C4-PFBA	766812.0	13C3-PFBA	661126.9	1.160	5.000	5.200	104	70-130	
E13C5-PFPeA	751025.9	13C3-PFBA	661126.9	1.136	5.000	5.095	102	70-130	
E13C3-PFBS	427122.1	13C3-PFBA	661126.9	0.646	4.650	4.561	98	70-130	
E13C2-4:2-FTS	54897.9	13C2-PFOA	466902.6	0.118	4.670	5.237	112	70-130	
E13C5-PFHxA	705940.0	13C2-PFOA	466902.6	1.512	5.000	5.462	109	70-130	
E13C3-PFHxS	315188.2	13C2-PFOA	466902.6	0.675	4.730	4.632	98	70-130	
E13C4-PFHpA	545224.8	13C2-PFOA	466902.6	1.168	5.000	5.261	105	70-130	
E13C2-6:2-FTS	36348.0	13C2-PFOA	466902.6	0.078	4.750	5.209	110	70-130	
E13C8-PFOA	916289.6	13C2-PFOA	466902.6	1.962	5.000	5.407	108	70-130	
E13C8-PFOS	283234.2	13C4-PFOS	247446.9	1.145	4.780	5.072	106	70-130	
E13C9-PFNA	459889.6	13C4-PFOS	247446.9	1.859	5.000	5.182	104	70-130	
E13C6-PFDA	633571.3	13C2-PFDA	295381.6	2.145	5.000	5.005	100	70-130	
E13C2-8:2-FTS	28239.6	13C2-PFDA	295381.6	0.096	4.790	4.768	100	70-130	
E13C8-PFOSA	581964.0	13C2-PFDA	295381.6	1.970	5.000	4.368	87	70-130	
Ed3-NMeFOSAA	75677.4	13C2-PFDA	295381.6	0.256	5.000	4.625	92	70-130	
E13C7-PFUnDA	262614.2	13C2-PFDA	295381.6	0.889	5.000	5.162	103	70-130	
Ed5-NEtFOSAA	67382.4	13C2-PFDA	295381.6	0.228	5.000	4.826	97	70-130	
E13C2-PFDoDA	563416.3	13C2-PFDA	295381.6	1.907	5.000	4.952	99	70-130	
Ed7-NMePFOSAE	315627.9	13C2-PFDA	295381.6	1.069	5.000	4.624	92	70-130	
Ed3-NMePFOSA	81274.6	13C2-PFDA	295381.6	0.275	5.000	4.999	100	70-130	
Ed9-NEtPFOSAE	264447.2	13C2-PFDA	295381.6	0.895	5.000	4.656	93	70-130	
Ed5-NEtPFOSA	57059.6	13C2-PFDA	295381.6	0.193	5.000	4.531	91	70-130	
E13C2-PFTeDA	412151.2	13C2-PFDA	295381.6	1.395	5.000	4.899	98	70-130	

APPROVED
By JPT at 4:33 pm, 11/13/18

REVIEWED
By HMK at 1:48 pm, 11/14/18

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV13DCCV1-4 11/13/2018 4:25:30 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

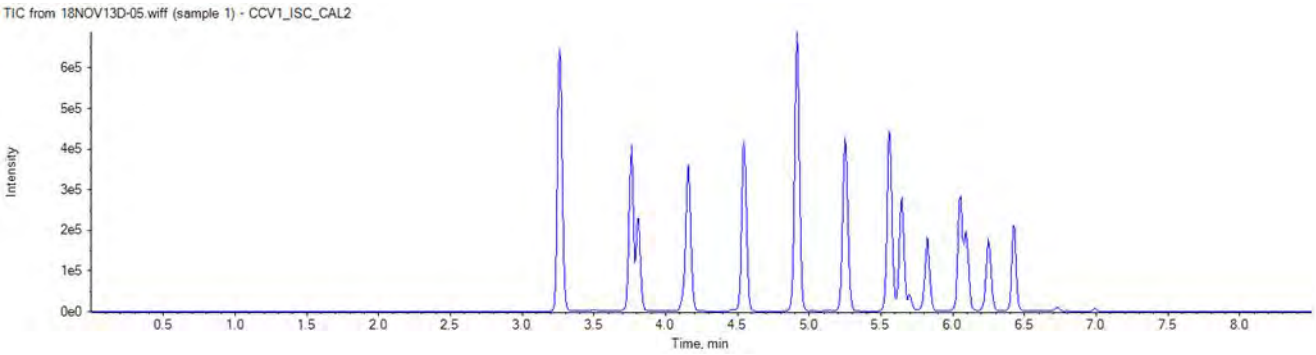
Analyte Quantitation Peak Table

Sample Name: CCV1_ISC_CAL2 **Instrument Name:** LM27631 **File Name:** 18NOV13D-05.wiff

Sample Wt	Sample Vol	Dilution Factor	PrepFactor
1.00000	1.000	1.00	1.000

Analyte Name	RT	RRT	Analyte Area Response	E	Int Typ	ES Name	ES RT	ES Area Response	Area Ratio	Sample Result (ng/g)
PFBA	3.26	1.000	80023.3		A	13C4-PFBA	3.26	766812.0	0.104	0.578
PFPeA	3.76	1.000	76472.6		A	13C5-PFPeA	3.76	751025.9	0.102	0.589
PFBS	3.81	1.000	41984.3		A	13C3-PFBS	3.81	427122.1	0.098	0.468
4:2-FTS	4.12	1.000	9629.9		M	13C2-4:2-FTS	4.12	54897.9	0.175	0.476
PFHxA	4.16	1.000	96444.0		A	13C5-PFHxA	4.16	705940.0	0.137	0.570
PFPeS	4.18	1.100	22297.9		A	13C3-PFBS	3.81	427122.1	0.052	0.507
PFHpA	4.55	1.000	93659.5		A	13C4-PFHpA	4.55	545224.8	0.172	0.569
PFHxS	4.55	1.000	34111.0		M	13C3-PFHxS	4.55	315188.2	0.108	0.525
6:2-FTS	4.90	1.000	9221.0		M	13C2-6:2-FTS	4.90	36348.0	0.254	0.614
PFHpS	4.91	1.080	30798.1		A	13C3-PFHxS	4.55	315188.2	0.098	0.514
PFOA	4.92	1.000	100905.0		A	13C8-PFOA	4.91	916289.6	0.110	0.588
PFOS	5.24	1.000	34555.4		M	13C8-PFOS	5.24	283234.2	0.122	0.534
PFNA	5.26	1.000	70400.6		A	13C9-PFNA	5.26	459889.6	0.153	0.552
PFNS	5.54	1.060	17583.2		A	13C8-PFOS	5.24	283234.2	0.062	0.434
PFDA	5.56	1.000	68441.3		A	13C6-PFDA	5.56	633571.3	0.108	0.573
8:2-FTS	5.56	1.000	5551.6		A	13C2-8:2-FTS	5.56	28239.6	0.197	0.458
PFOSA	5.64	1.000	70097.0		A	13C8-PFOSA	5.64	581964.0	0.120	0.588
NMeFOSAA	5.71	1.000	7238.6		A	d3-NMeFOSAA	5.70	75677.4	0.096	0.541
PFDS	5.80	1.110	14746.9		A	13C8-PFOS	5.24	283234.2	0.052	0.472
PFUnDA	5.82	1.000	55065.8		A	13C7-PFUnDA	5.82	262614.2	0.210	0.548
NEtFOSAA	5.84	1.000	8391.3		M	d5-NEtFOSAA	5.83	67382.4	0.125	0.653
PFDoDA	6.05	1.000	63306.6		A	13C2-PFDoDA	6.05	563416.3	0.112	0.572
10:2-FTS	6.07	1.090	4315.1		A	13C2-8:2-FTS	5.56	28239.6	0.153	0.509
NMePFOSAE	6.10	1.000	46107.4		A	d7-NMePFOSAE	6.09	315627.9	0.146	0.608
NMePFOSA	6.11	1.000	7580.7		A	d3-NMePFOSA	6.10	81274.6	0.093	0.460
PFDoS	6.22	1.190	7907.3		A	13C8-PFOS	5.24	283234.2	0.028	0.489
NEtPFOSAE	6.26	1.000	46594.2		A	d9-NEtPFOSAE	6.25	264447.2	0.176	0.565
NEtPFOSA	6.27	1.000	7426.1		A	d5-NEtPFOSA	6.26	57059.6	0.130	0.598
PFTrDA	6.25	1.030	52911.8		M	13C2-PFDoDA	6.05	563416.3	0.094	0.593
PFTeDA	6.43	1.000	38686.6		A	13C2-PFTeDA	6.43	412151.2	0.094	0.526
PFHxDA	6.73	1.050	18605.8		A	13C2-PFTeDA	6.43	412151.2	0.045	0.538
PFODA	6.99	1.090	15935.1		A	13C2-PFTeDA	6.43	412151.2	0.039	0.538

Total Ion Chromatogram

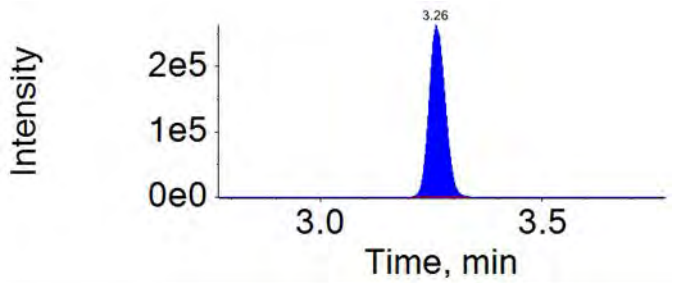


APPROVED
By JPT at 4:33 pm, 11/13/18

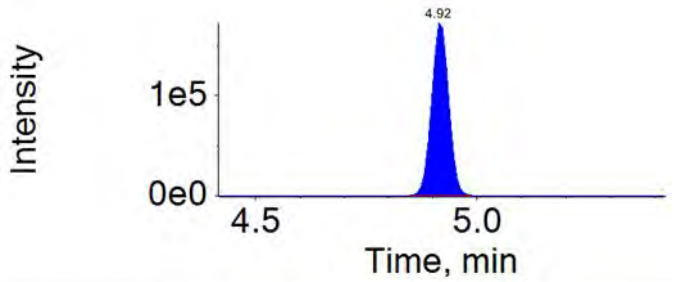
REVIEWED
By HMK at 1:48 pm, 11/14/18

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV13DCCV1-4 11/13/2018 4:25:30 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

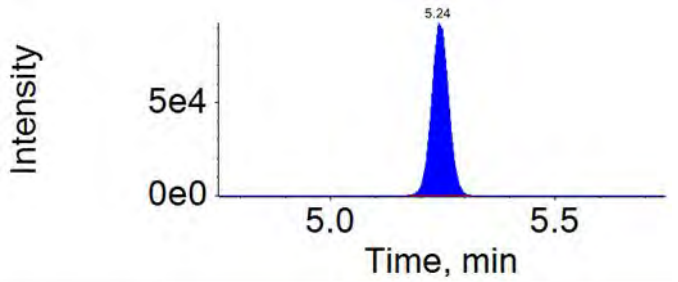
Injection Standard: 13C3-PFBA
216.0 / 172.0



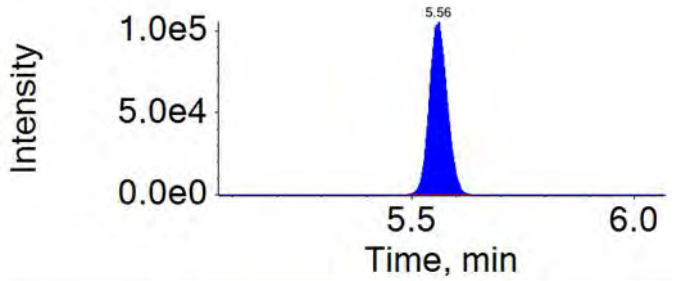
Injection Standard: 13C2-PFOA
415.0 / 370.0



Injection Standard: 13C4-PFOS
503.0 / 80.0



Injection Standard: 13C2-PFDA
515.0 / 470.0

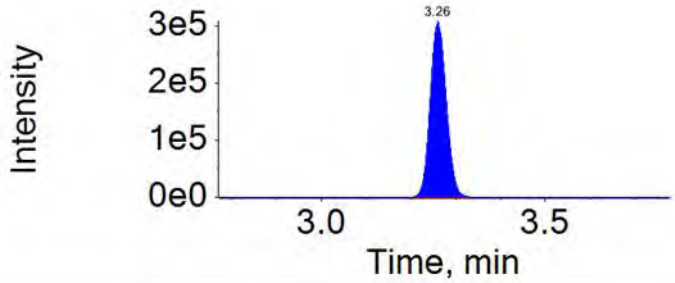


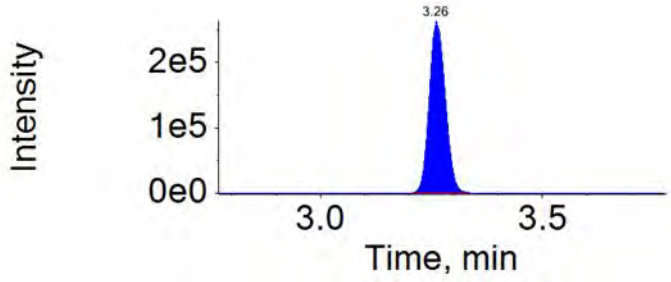
APPROVED
By JPT at 4:33 pm, 11/13/18

REVIEWED
By HMK at 1:48 pm, 11/14/18

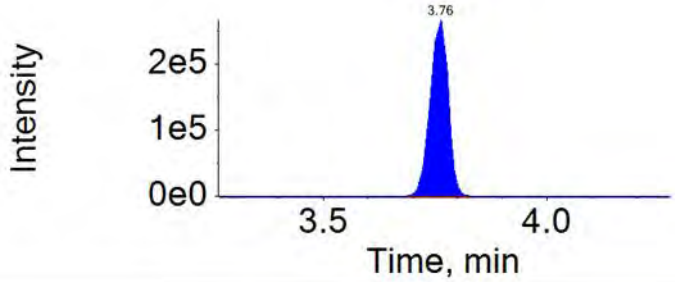
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV13DCCV1-4 11/13/2018 4:25:30 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

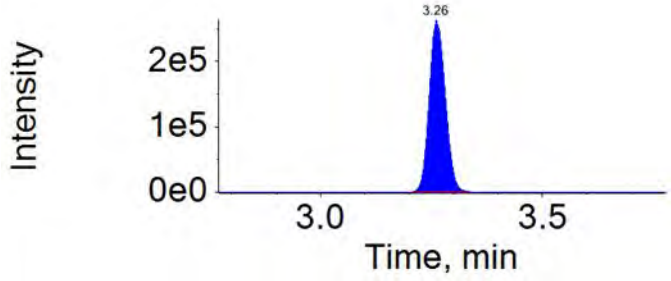
Extraction Standard: E13C4-PFBA	Injection Standard: 13C3-PFBA
217.0 / 172.0	216.0 / 172.0



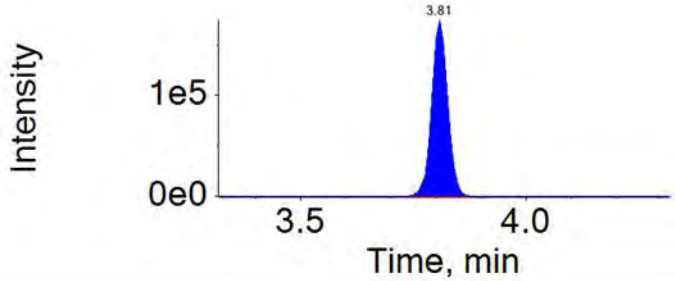


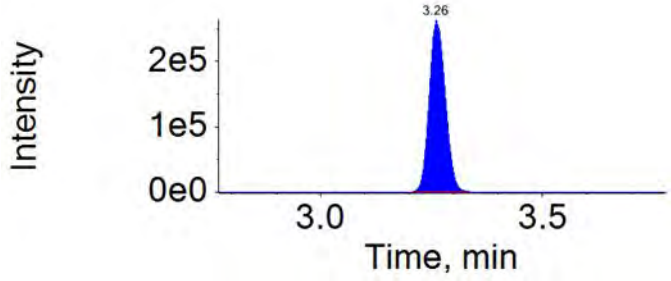
Extraction Standard: E13C5-PFPeA	Injection Standard: 13C3-PFBA
268.0 / 223.0	216.0 / 172.0



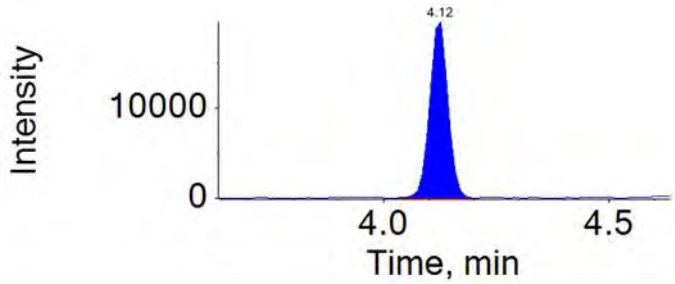


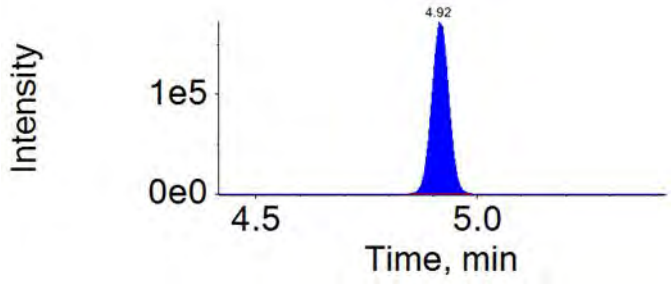
Extraction Standard: E13C3-PFBS	Injection Standard: 13C3-PFBA
302.0 / 80.0	216.0 / 172.0





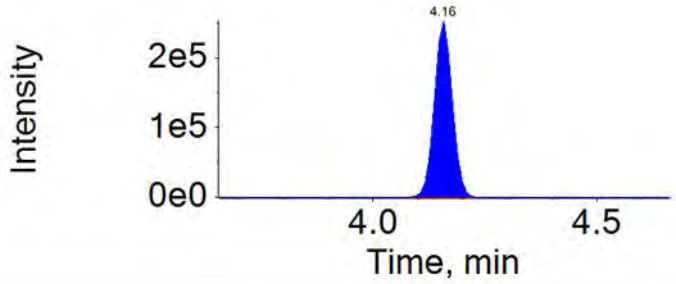
Extraction Standard: E13C2-4:2-FTS	Injection Standard: 13C2-PFOA
329.0 / 81.0	415.0 / 370.0

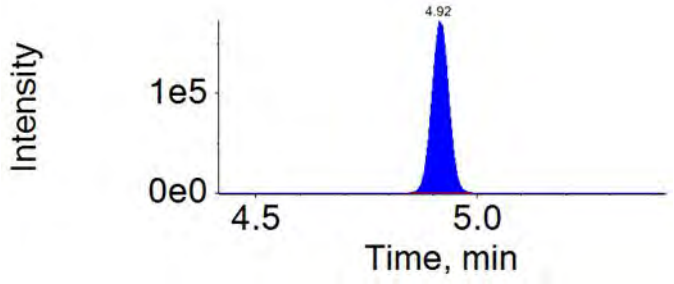




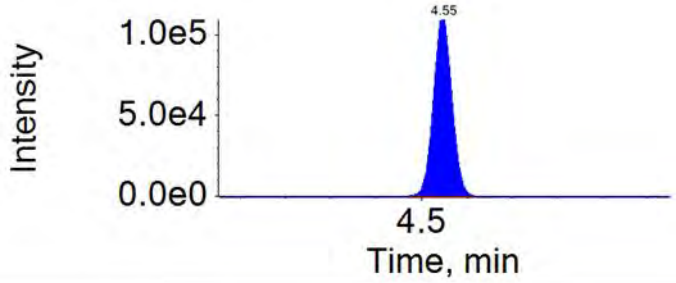
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV13DCCV1-4 11/13/2018 4:25:30 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

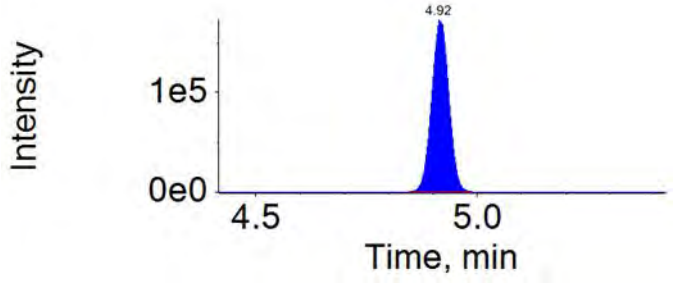
Extraction Standard: E13C5-PFHxA	Injection Standard: 13C2-PFOA
318.0 / 273.0	415.0 / 370.0



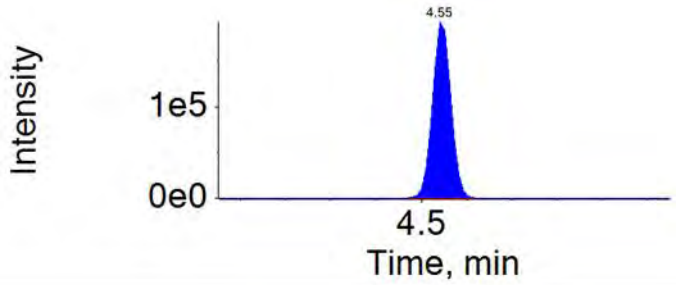


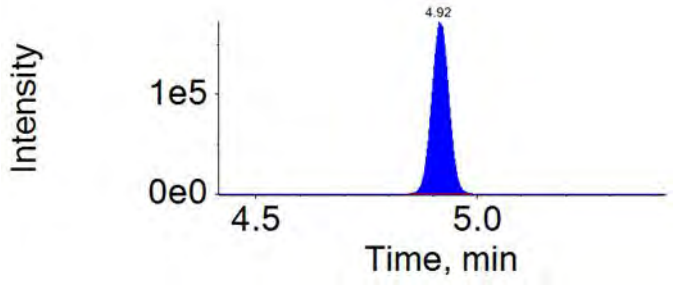
Extraction Standard: E13C3-PFHxS	Injection Standard: 13C2-PFOA
402.0 / 80.0	415.0 / 370.0



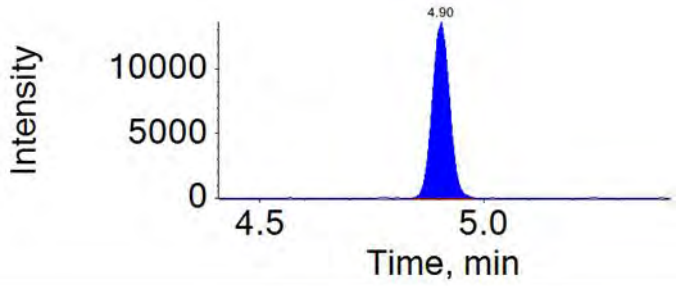


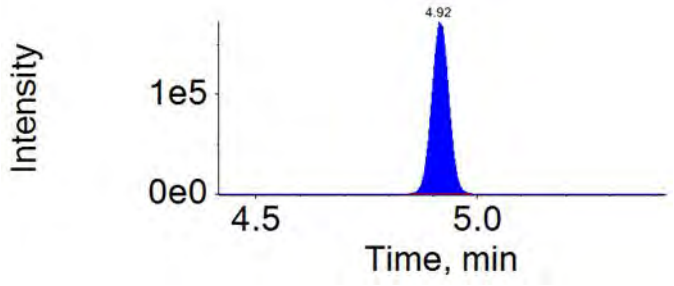
Extraction Standard: E13C4-PFHpA	Injection Standard: 13C2-PFOA
367.0 / 322.0	415.0 / 370.0





Extraction Standard: E13C2-6:2-FTS	Injection Standard: 13C2-PFOA
429.0 / 81.0	415.0 / 370.0





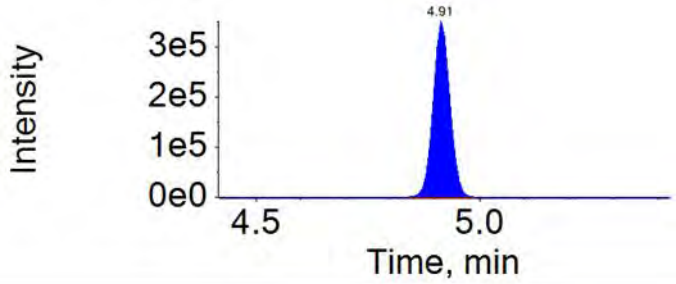
APPROVED
By JPT at 4:33 pm, 11/13/18

REVIEWED
By HMK at 1:48 pm, 11/14/18

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV13DCCV1-4 11/13/2018 4:25:30 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

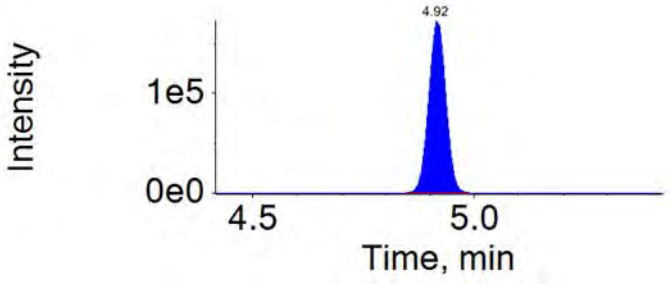
Extraction Standard: E13C8-PFOA

421.0 / 376.0



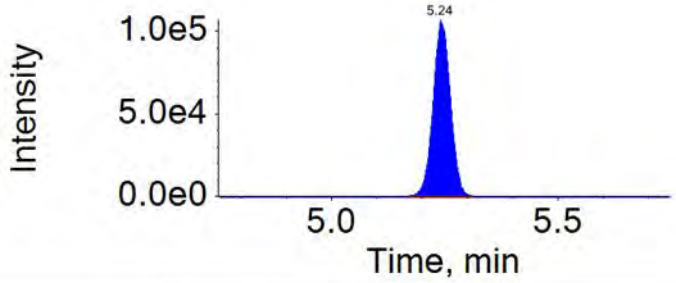
Injection Standard: 13C2-PFOA

415.0 / 370.0



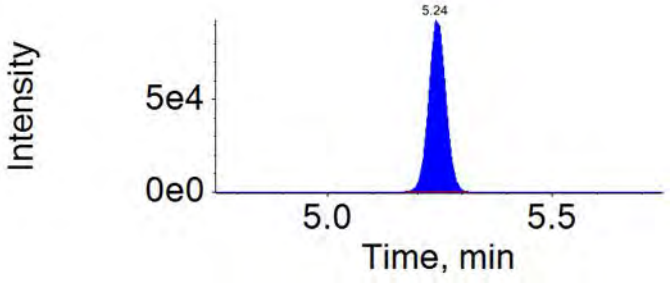
Extraction Standard: E13C8-PFOS

507.0 / 80.0



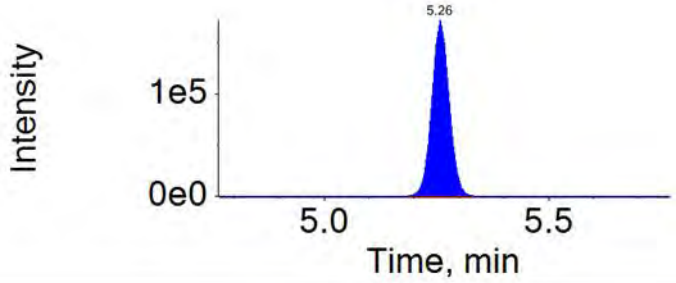
Injection Standard: 13C4-PFOS

503.0 / 80.0



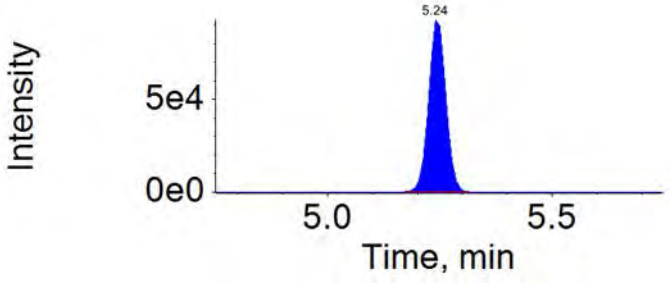
Extraction Standard: E13C9-PFNA

472.0 / 427.0



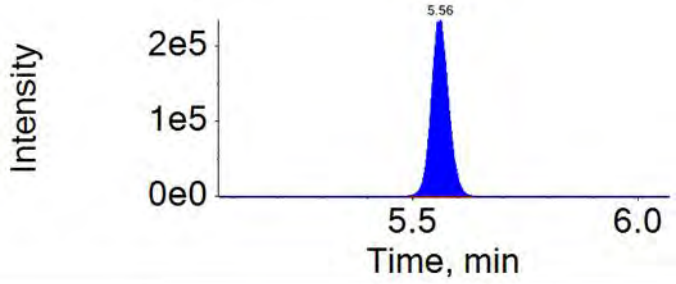
Injection Standard: 13C4-PFOS

503.0 / 80.0



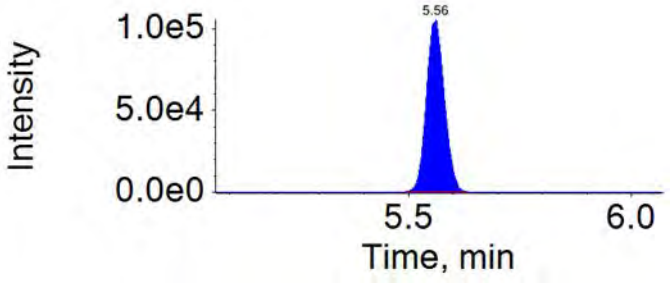
Extraction Standard: E13C6-PFDA

519.0 / 474.0



Injection Standard: 13C2-PFDA

515.0 / 470.0

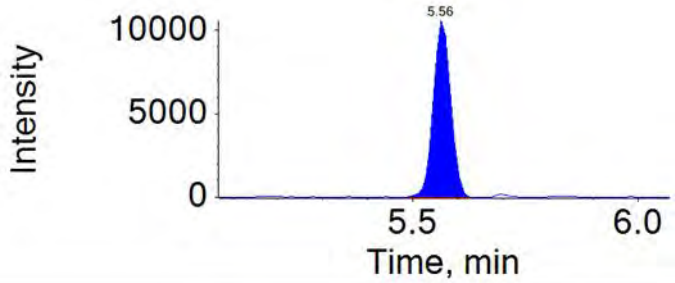


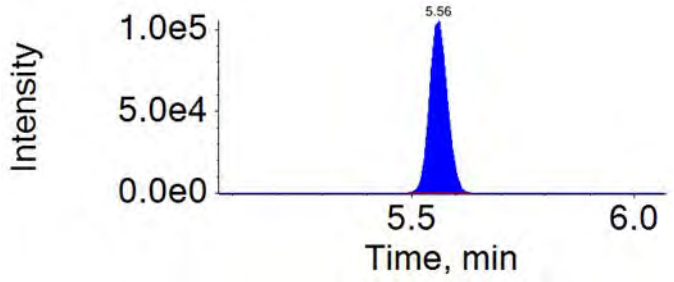
APPROVED
By JPT at 4:33 pm, 11/13/18

REVIEWED
By HMK at 1:48 pm, 11/14/18

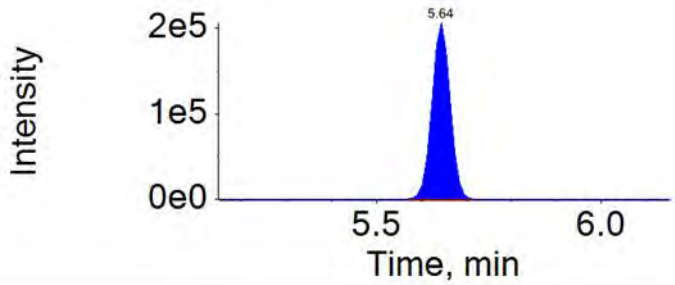
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV13DCCV1-4 11/13/2018 4:25:30 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

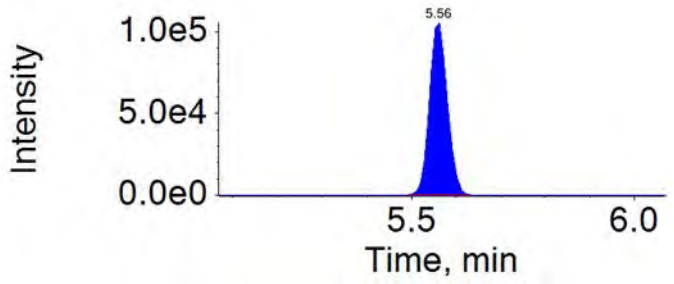
Extraction Standard: E13C2-8:2-FTS	Injection Standard: 13C2-PFDA
529.0 / 81.0	515.0 / 470.0



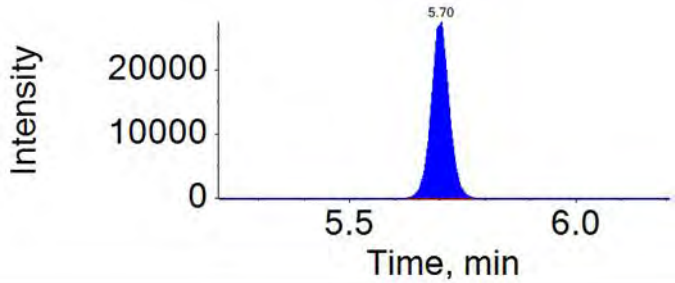


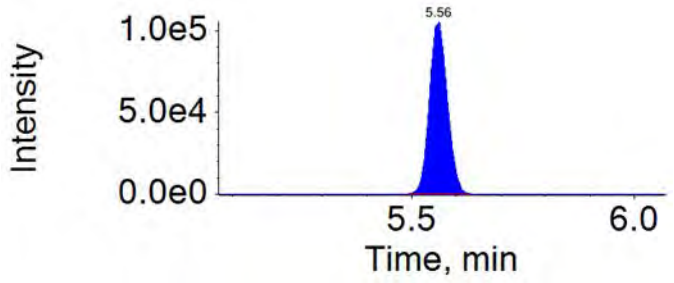
Extraction Standard: E13C8-PFOSA	Injection Standard: 13C2-PFDA
506.0 / 78.0	515.0 / 470.0



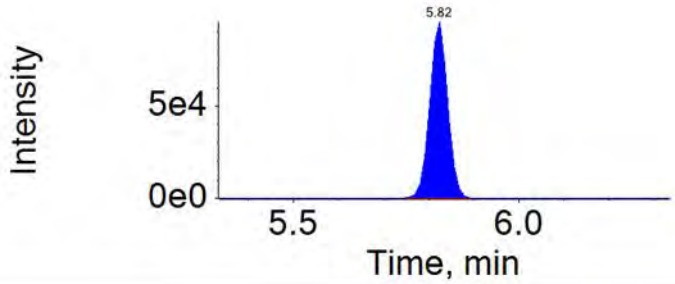


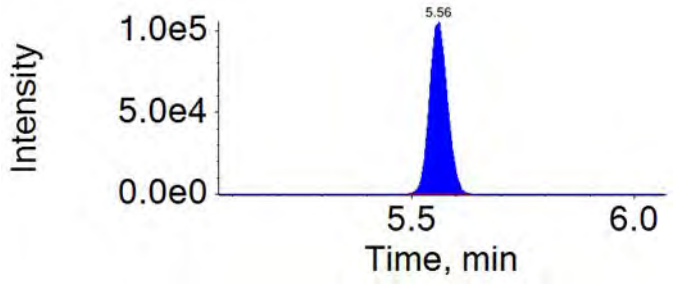
Extraction Standard: Ed3-NMeFOSAA	Injection Standard: 13C2-PFDA
573.0 / 419.0	515.0 / 470.0





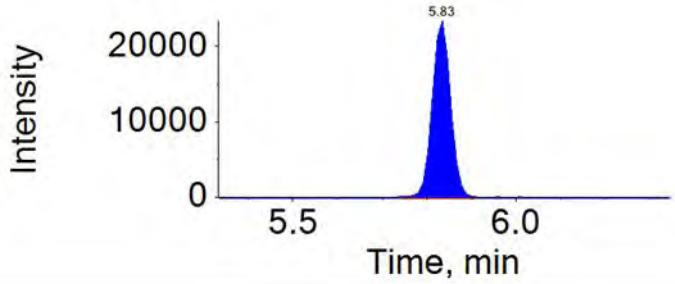
Extraction Standard: E13C7-PFUnDA	Injection Standard: 13C2-PFDA
570.0 / 525.0	515.0 / 470.0

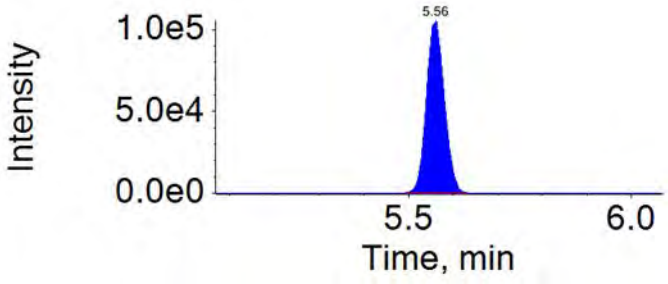




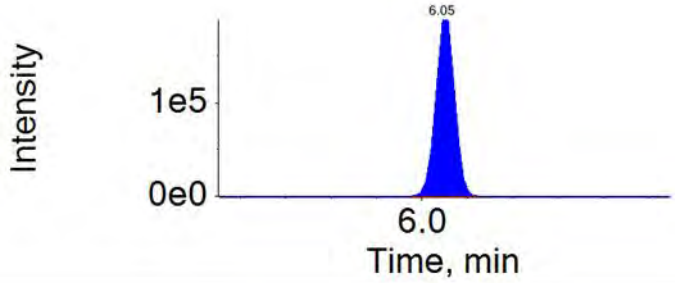
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV13DCCV1-4 11/13/2018 4:25:30 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

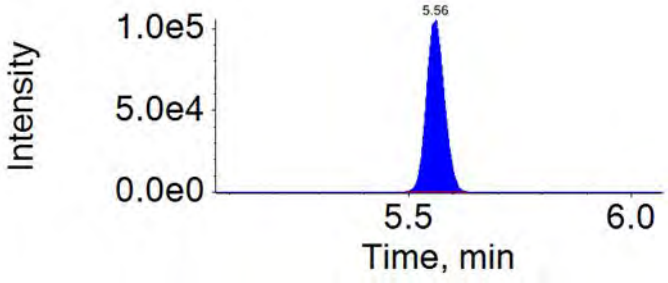
Extraction Standard: Ed5-NEtFOSAA	Injection Standard: 13C2-PFDA
589.0 / 419.0	515.0 / 470.0



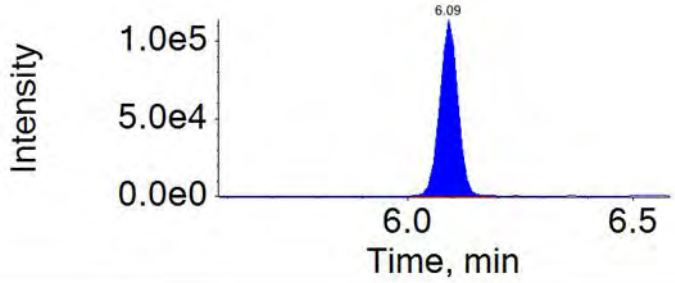


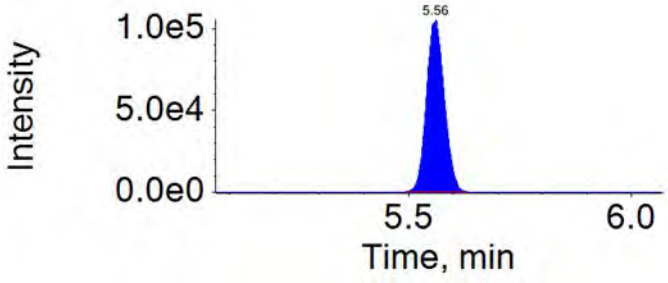
Extraction Standard: E13C2-PFDoDA	Injection Standard: 13C2-PFDA
615.0 / 570.0	515.0 / 470.0



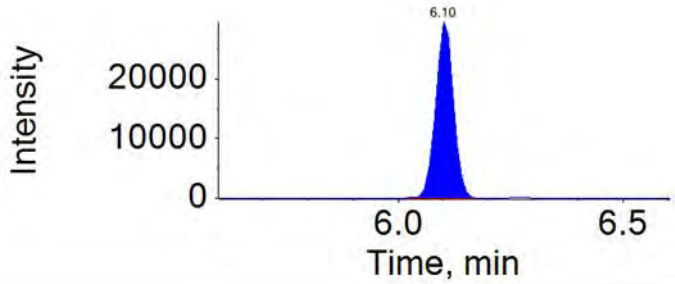


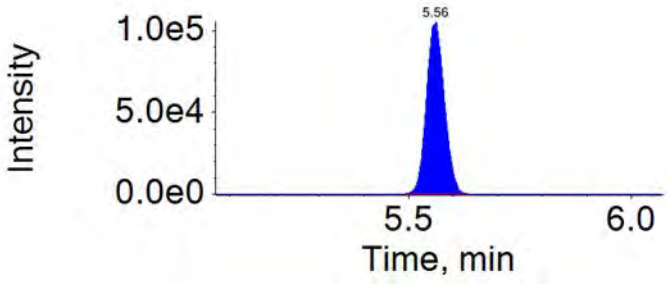
Extraction Standard: Ed7-NMePFOSAE	Injection Standard: 13C2-PFDA
623.0 / 59.0	515.0 / 470.0





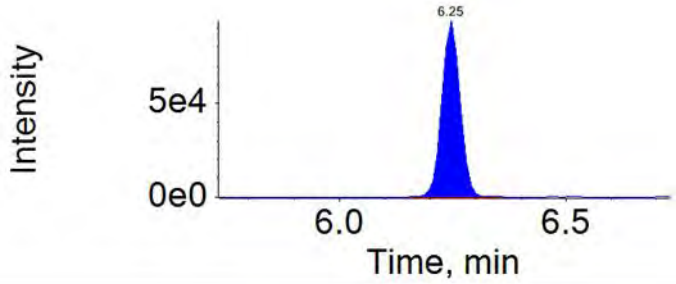
Extraction Standard: Ed3-NMePFOSA	Injection Standard: 13C2-PFDA
515.0 / 169.0	515.0 / 470.0

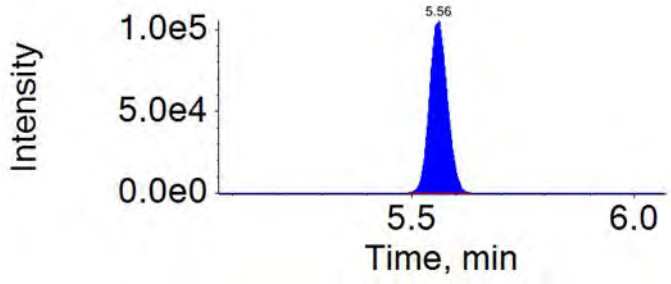




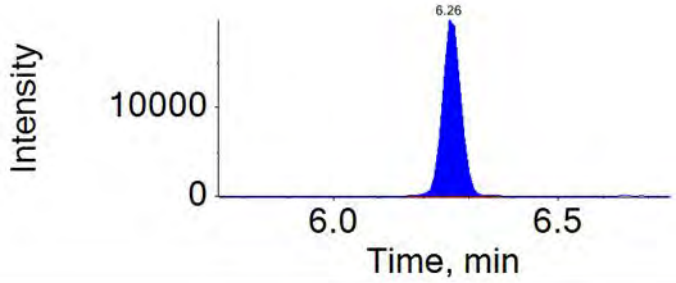
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV13DCCV1-4 11/13/2018 4:25:30 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

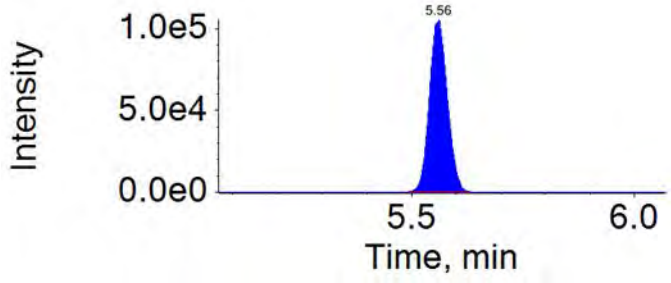
Extraction Standard: Ed9-NEtPFOSAE	Injection Standard: 13C2-PFDA
639.0 / 59.0	515.0 / 470.0



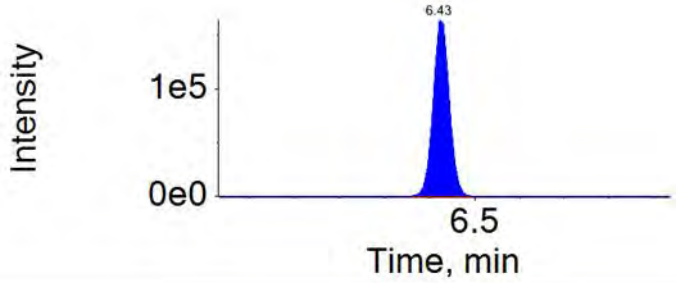


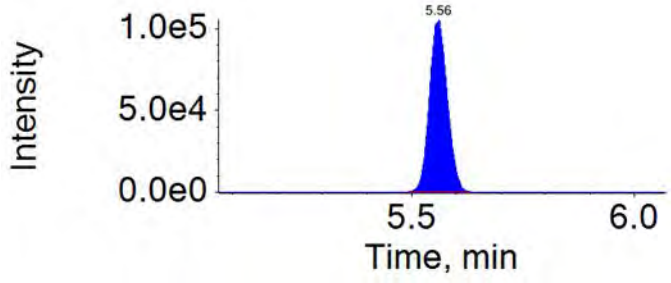
Extraction Standard: Ed5-NEtPFOSA	Injection Standard: 13C2-PFDA
531.0 / 169.0	515.0 / 470.0





Extraction Standard: E13C2-PFTeDA	Injection Standard: 13C2-PFDA
715.0 / 670.0	515.0 / 470.0



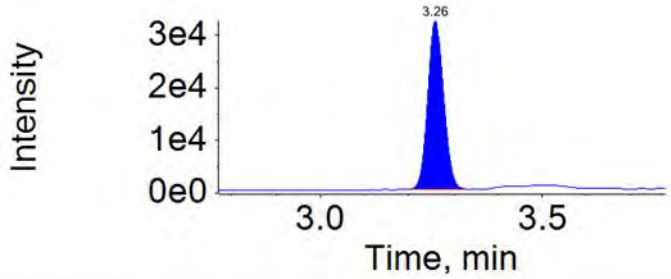


APPROVED
By JPT at 4:33 pm, 11/13/18

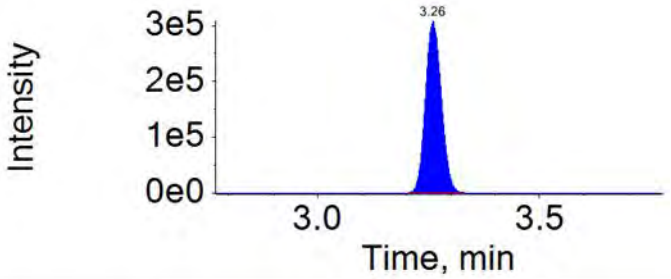
REVIEWED
By HMK at 1:48 pm, 11/14/18

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV13DCCV1-4 11/13/2018 4:25:30 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

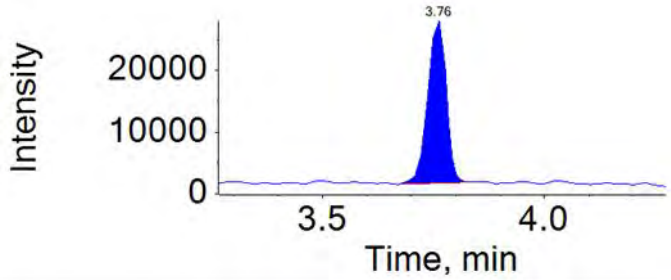
Analyte: PFBA
213.0 / 169.0



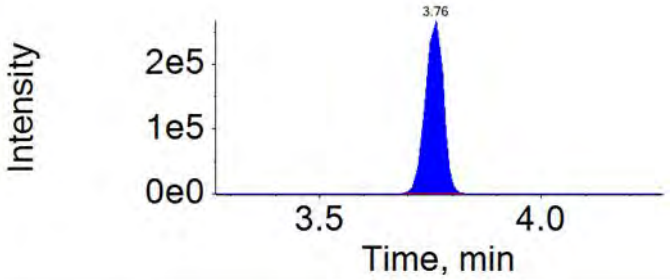
Extraction Standard: 13C4-PFBA
217.0 / 172.0



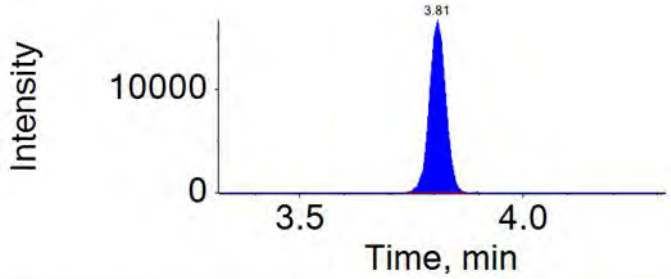
Analyte: PFPeA
263.0 / 219.0



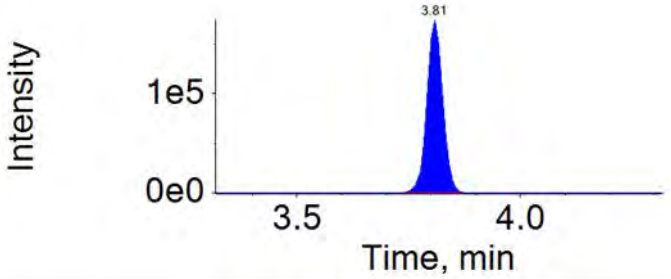
Extraction Standard: 13C5-PFPeA
268.0 / 223.0



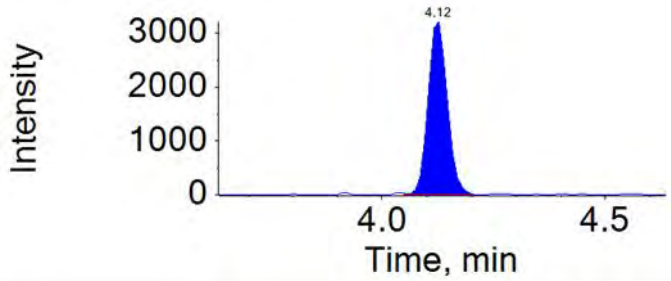
Analyte: PFBS
299.0 / 80.0



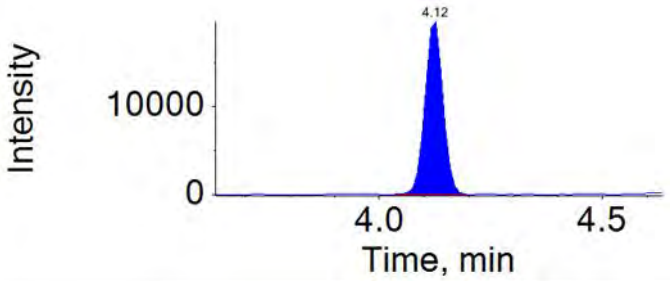
Extraction Standard: 13C3-PFBS
302.0 / 80.0



Analyte: 4:2-FTS
327.0 / 307.0



Extraction Standard: 13C2-4:2-FTS
329.0 / 81.0

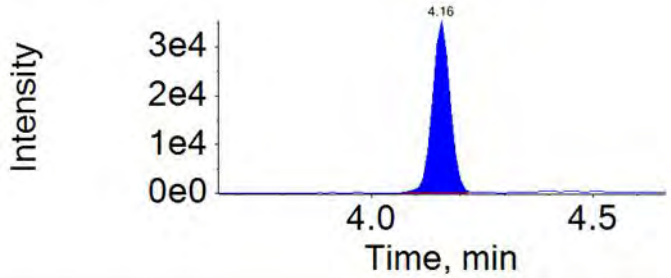


APPROVED
By JPT at 4:33 pm, 11/13/18

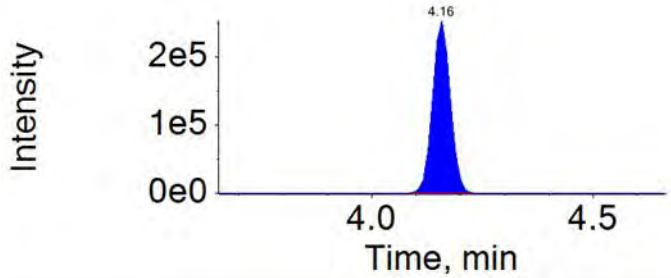
REVIEWED
By HMK at 1:48 pm, 11/14/18

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV13DCCV1-4 11/13/2018 4:25:30 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

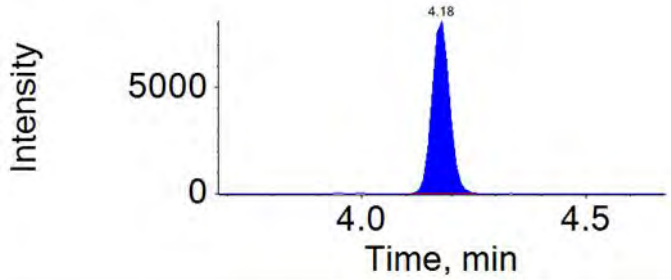
Analyte: PFHxA
313.0 / 269.0



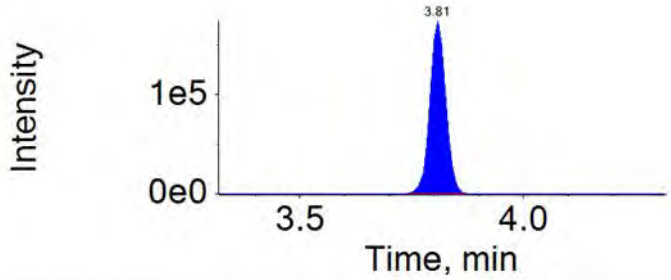
Extraction Standard: 13C5-PFHxA
318.0 / 273.0



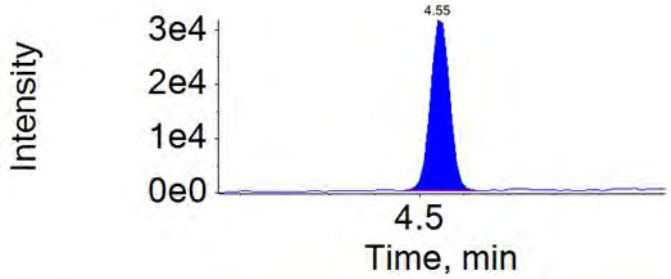
Analyte: PFPeS
349.0 / 80.0



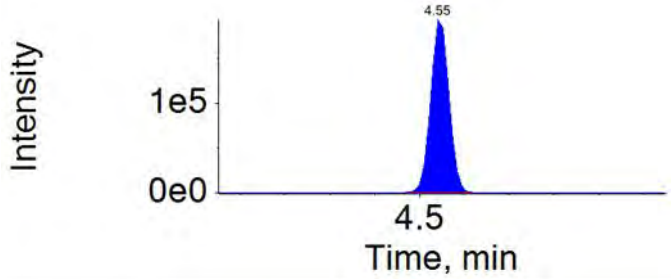
Extraction Standard: 13C3-PFBS
302.0 / 80.0



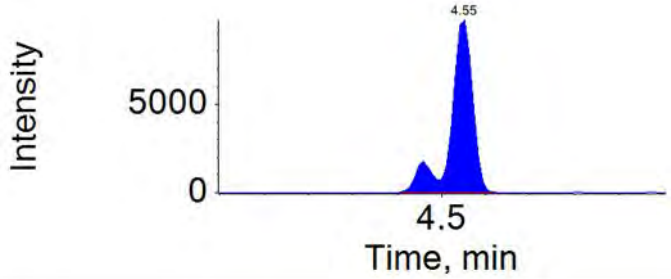
Analyte: PFHpA
363.0 / 319.0



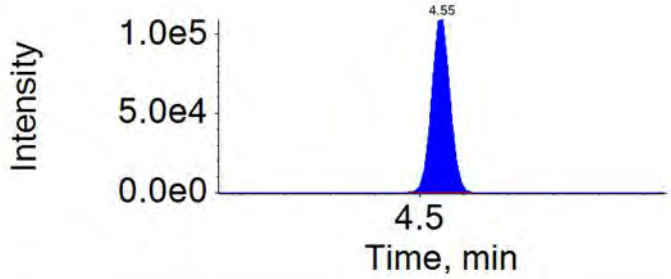
Extraction Standard: 13C4-PFHpA
367.0 / 322.0



Analyte: PFHxS
399.0 / 80.0



Extraction Standard: 13C3-PFHxS
402.0 / 80.0

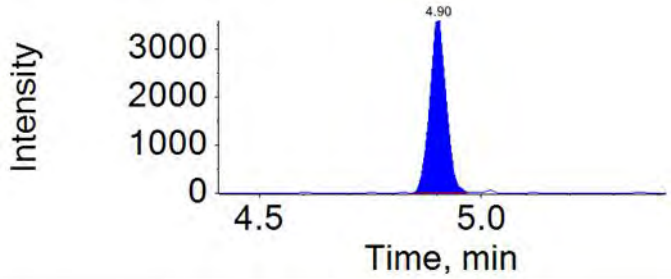


APPROVED
By JPT at 4:33 pm, 11/13/18

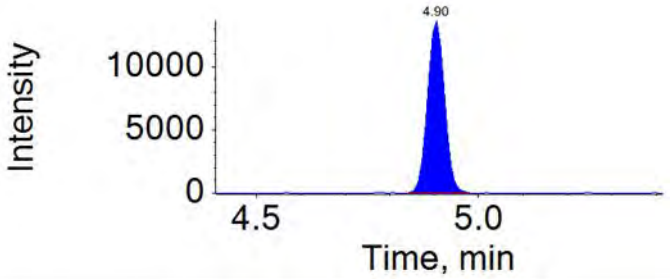
REVIEWED
By HMK at 1:48 pm, 11/14/18

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV13DCCV1-4 11/13/2018 4:25:30 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

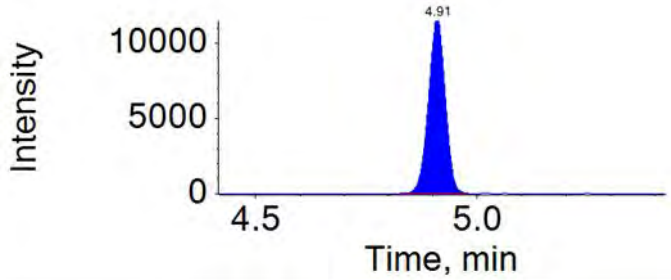
Analyte: 6:2-FTS
427.0 / 407.0



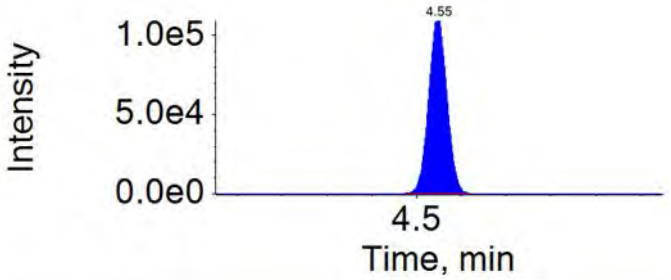
Extraction Standard: 13C2-6:2-FTS
429.0 / 81.0



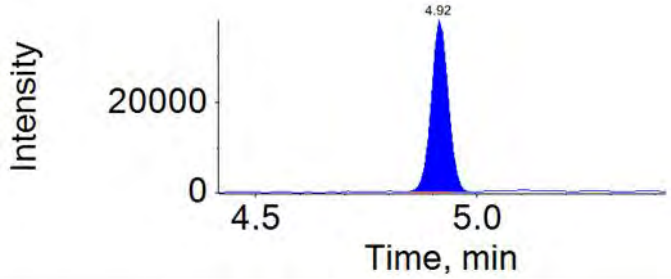
Analyte: PFHpS
449.0 / 80.0



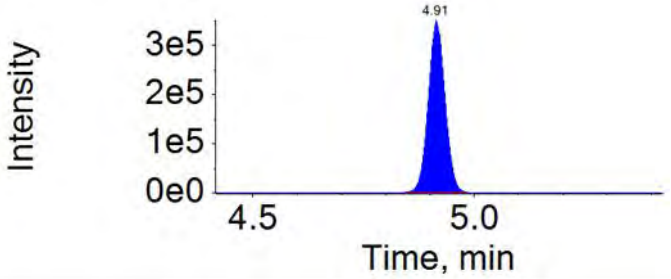
Extraction Standard: 13C3-PFHxS
402.0 / 80.0



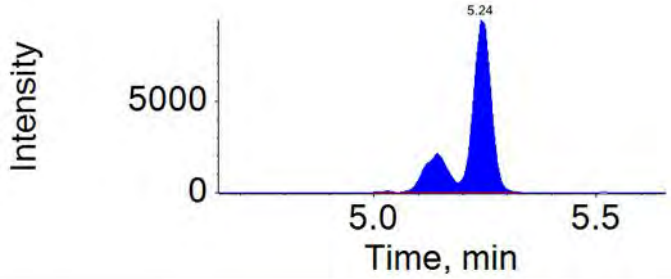
Analyte: PFOA
413.0 / 369.0



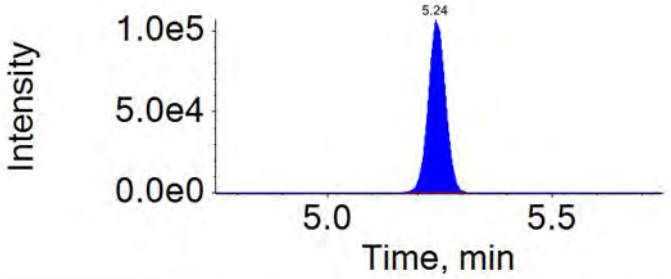
Extraction Standard: 13C8-PFOA
421.0 / 376.0



Analyte: PFOS
499.0 / 80.0



Extraction Standard: 13C8-PFOS
507.0 / 80.0

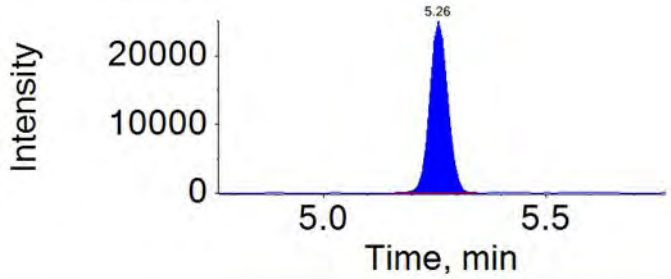


APPROVED
By JPT at 4:33 pm, 11/13/18

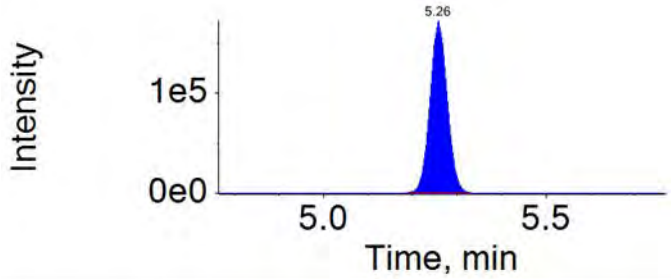
REVIEWED
By HMK at 1:48 pm, 11/14/18

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV13DCCV1-4 11/13/2018 4:25:30 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

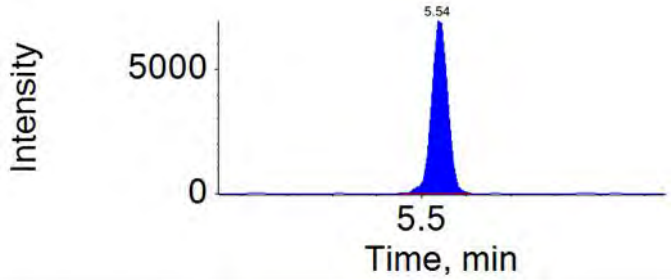
Analyte: PFNA
463.0 / 419.0



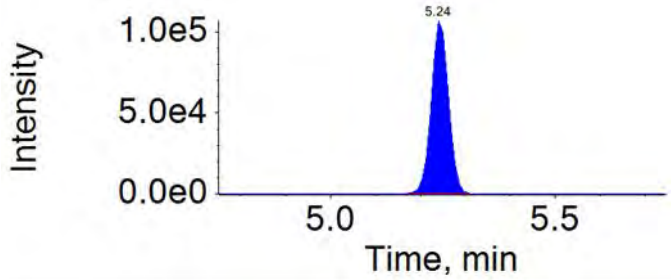
Extraction Standard: 13C9-PFNA
472.0 / 427.0



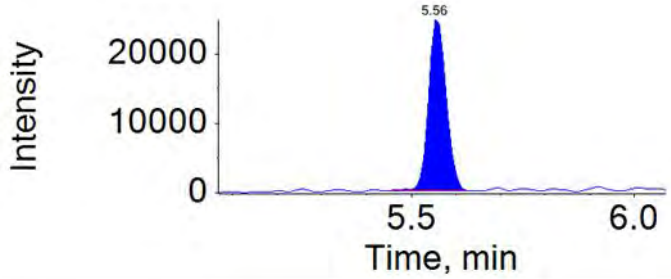
Analyte: PFNS
549.0 / 80.0



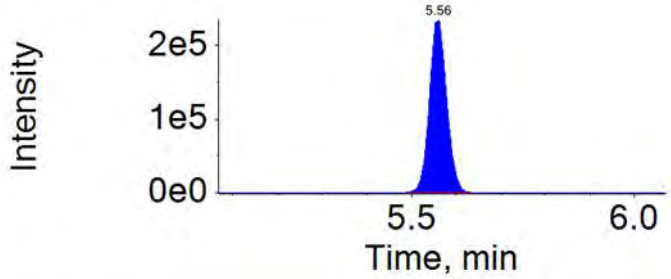
Extraction Standard: 13C8-PFOS
507.0 / 80.0



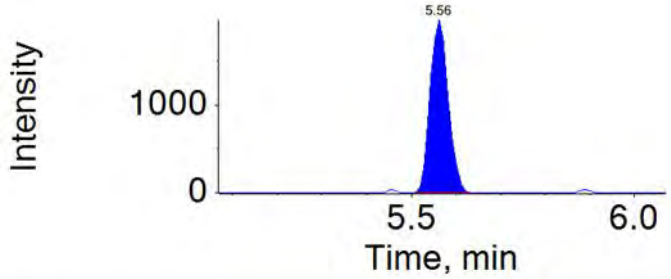
Analyte: PFDA
513.0 / 469.0



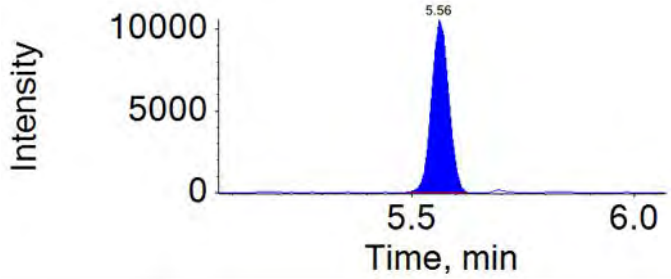
Extraction Standard: 13C6-PFDA
519.0 / 474.0



Analyte: 8:2-FTS
527.0 / 507.0



Extraction Standard: 13C2-8:2-FTS
529.0 / 81.0

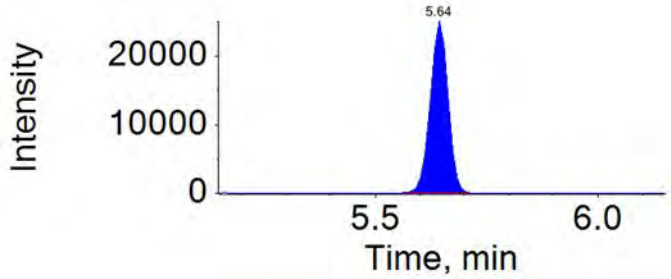


APPROVED
By JPT at 4:33 pm, 11/13/18

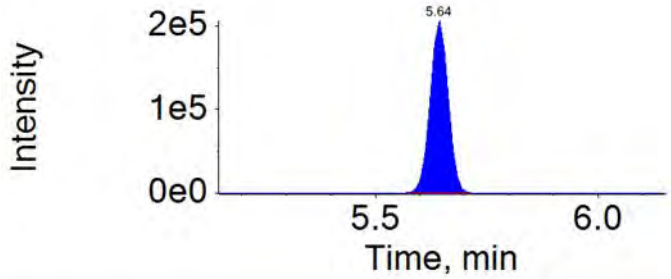
REVIEWED
By HMK at 1:48 pm, 11/14/18

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV13DCCV1-4 11/13/2018 4:25:30 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

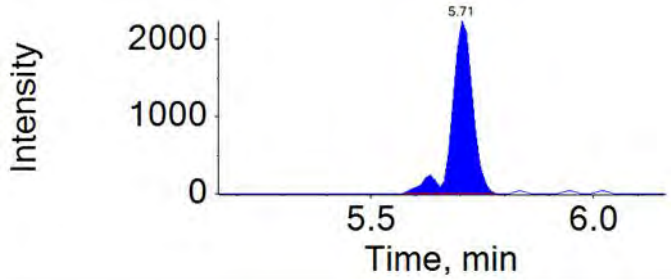
Analyte: PFOSA
498.0 / 78.0



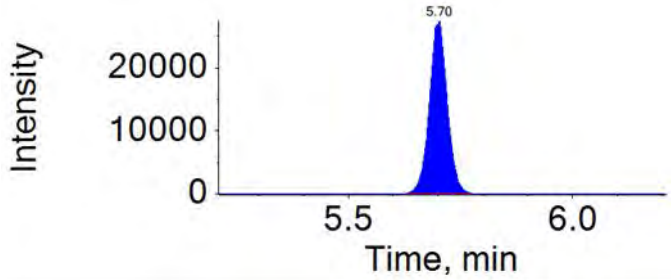
Extraction Standard: 13C8-PFOSA
506.0 / 78.0



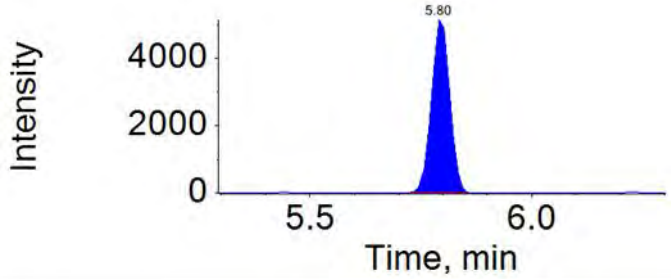
Analyte: NMeFOSAA
570.0 / 419.0



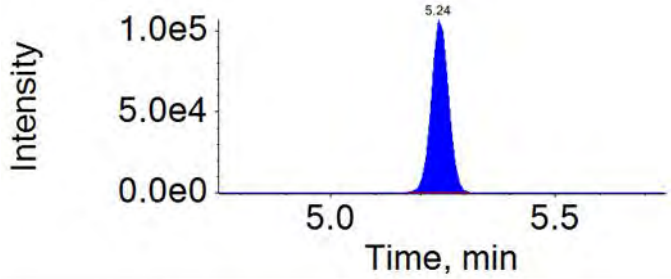
Extraction Standard: d3-NMeFOSAA
573.0 / 419.0



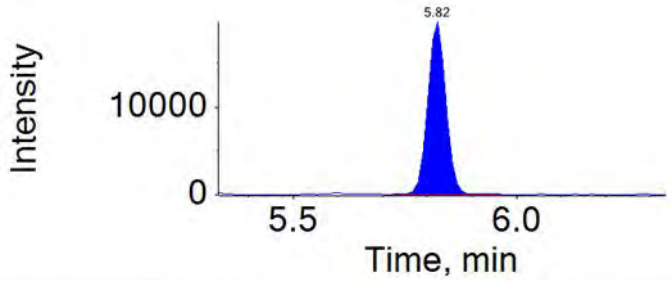
Analyte: PFDS
599.0 / 80.0



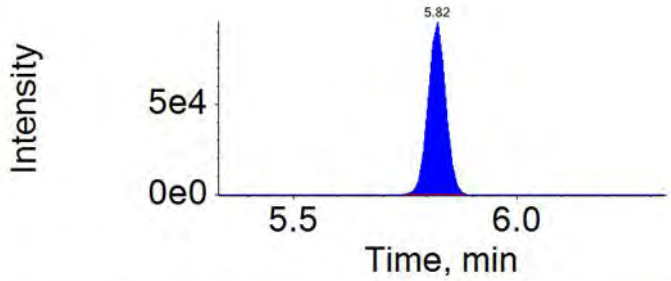
Extraction Standard: 13C8-PFOS
507.0 / 80.0



Analyte: PFUnDA
563.0 / 519.0



Extraction Standard: 13C7-PFUnDA
570.0 / 525.0

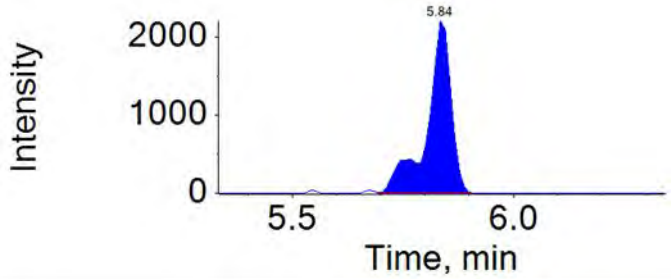


APPROVED
By JPT at 4:33 pm, 11/13/18

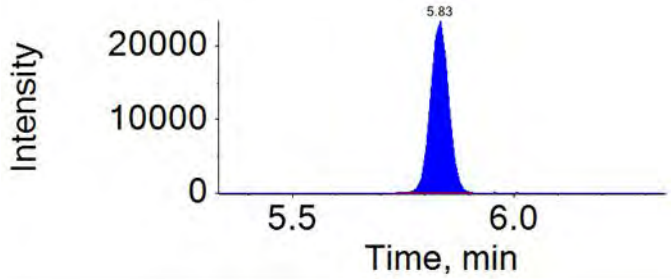
REVIEWED
By HMK at 1:48 pm, 11/14/18

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV13DCCV1-4 11/13/2018 4:25:30 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

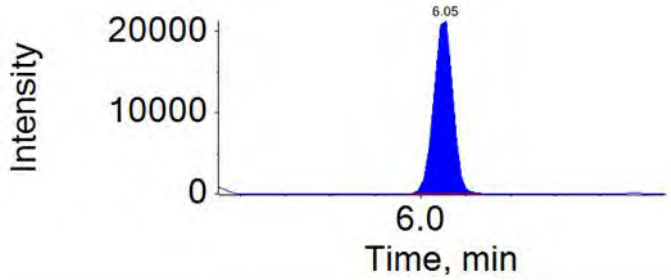
Analyte: NEtFOSAA
584.0 / 419.0



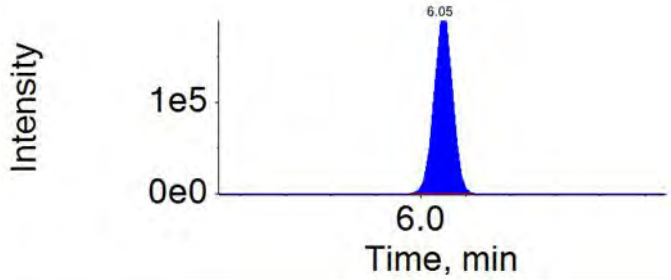
Extraction Standard: d5-NEtFOSAA
589.0 / 419.0



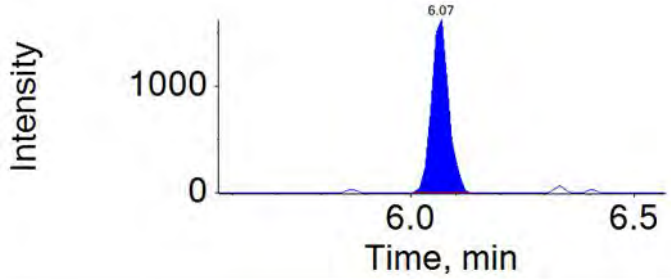
Analyte: PFDoDA
613.0 / 569.0



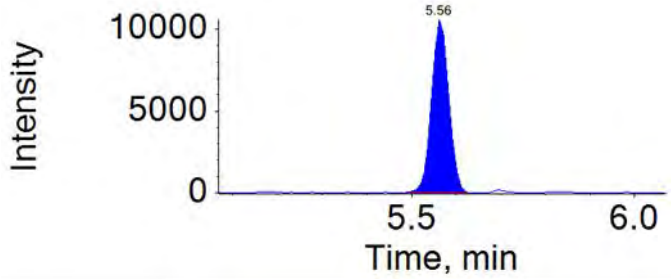
Extraction Standard: 13C2-PFDoDA
615.0 / 570.0



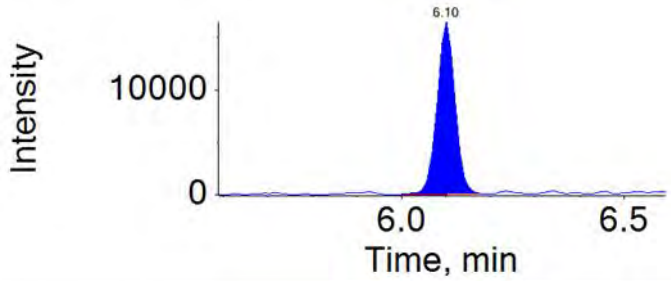
Analyte: 10:2-FTS
627.0 / 607.0



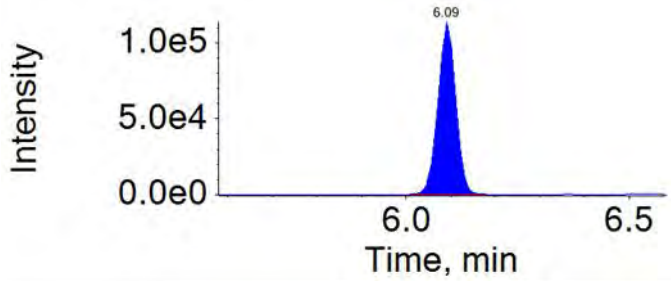
Extraction Standard: 13C2-8:2-FTS
529.0 / 81.0



Analyte: NMePFOSAE
616.0 / 59.0



Extraction Standard: d7-NMePFOSAE
623.0 / 59.0

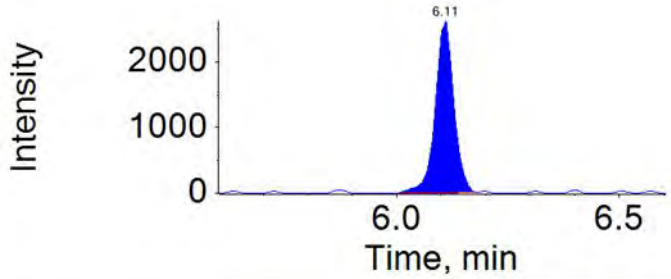


APPROVED
By JPT at 4:33 pm, 11/13/18

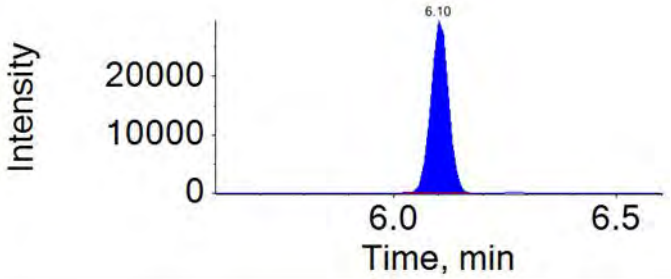
REVIEWED
By HMK at 1:48 pm, 11/14/18

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV13DCCV1-4 11/13/2018 4:25:30 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

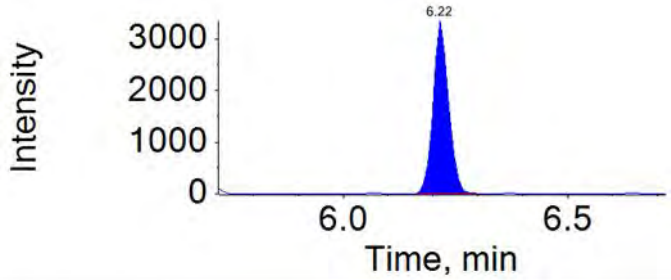
Analyte: NMePFOSA
512.0 / 169.0



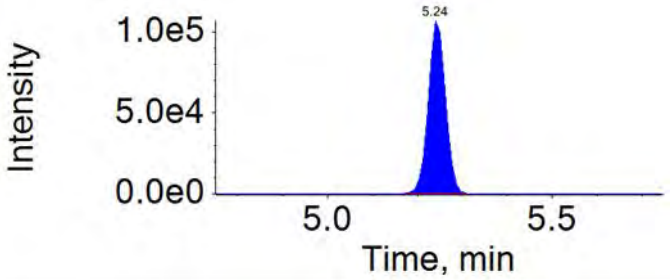
Extraction Standard: d3-NMePFOSA
515.0 / 169.0



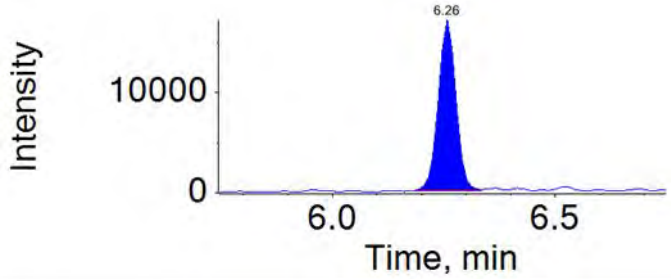
Analyte: PFDoS
699.0 / 80.0



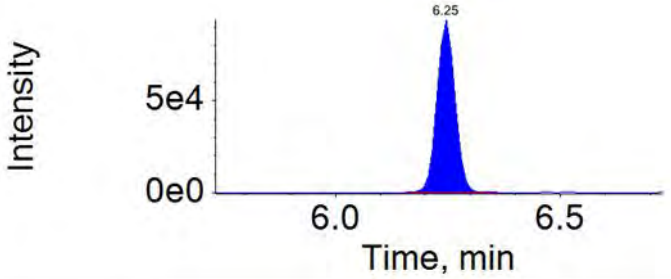
Extraction Standard: 13C8-PFOS
507.0 / 80.0



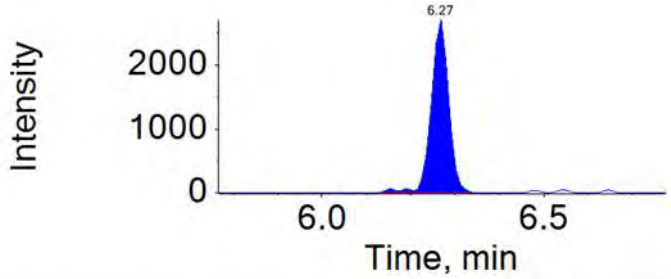
Analyte: NEtPFOSAE
630.0 / 59.0



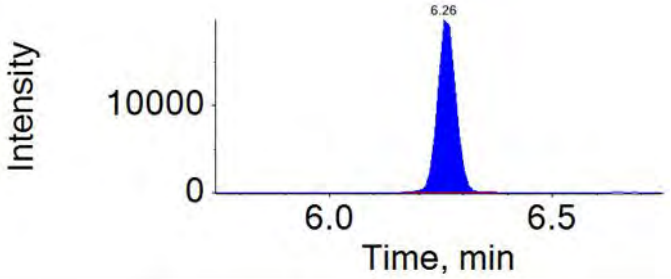
Extraction Standard: d9-NEtPFOSAE
639.0 / 59.0



Analyte: NEtPFOSA
526.0 / 169.0



Extraction Standard: d5-NEtPFOSA
531.0 / 169.0

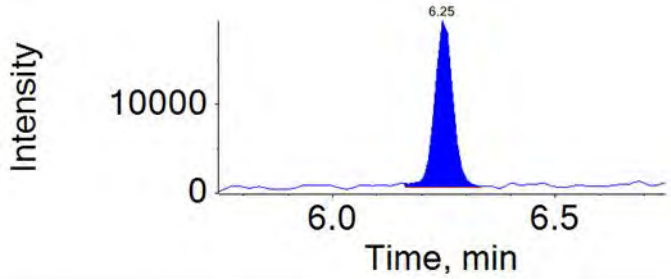


APPROVED
By JPT at 4:33 pm, 11/13/18

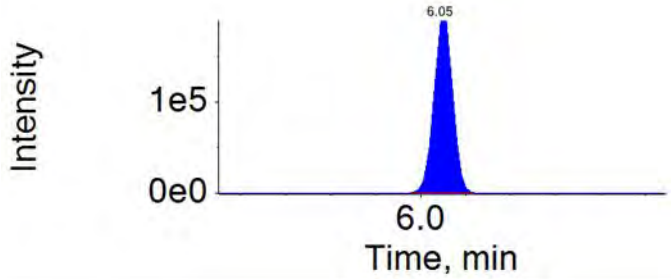
REVIEWED
By HMK at 1:48 pm, 11/14/18

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV13DCCV1-4 11/13/2018 4:25:30 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

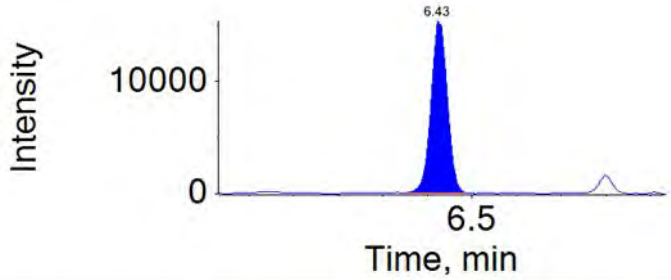
Analyte: PFTrDA
663.0 / 619.0



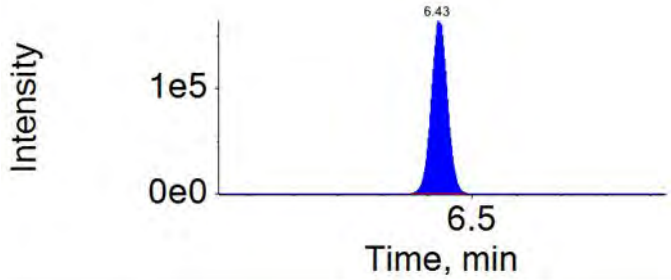
Extraction Standard: 13C2-PFDoDA
615.0 / 570.0



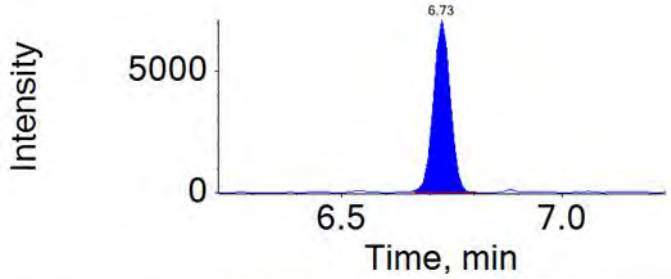
Analyte: PFTeDA
713.0 / 669.0



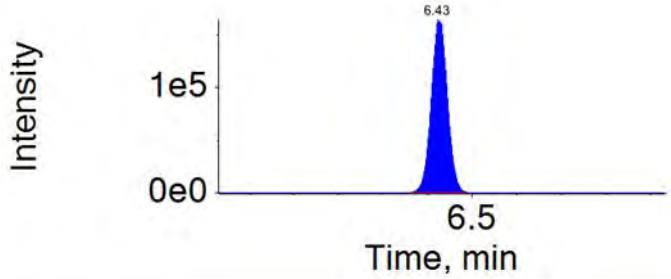
Extraction Standard: 13C2-PFTeDA
715.0 / 670.0



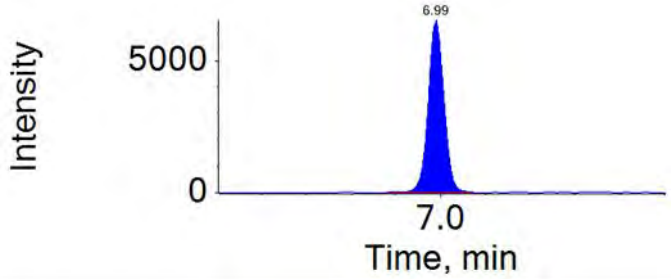
Analyte: PFHxDA
813.0 / 769.0



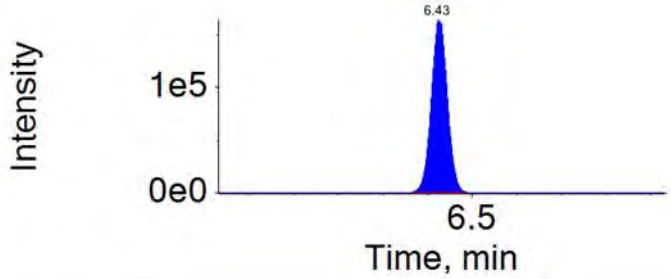
Extraction Standard: 13C2-PFTeDA
715.0 / 670.0



Analyte: PFODA
913.0 / 869.0



Extraction Standard: 13C2-PFTeDA
715.0 / 670.0



APPROVED
By JPT at 4:33 pm, 11/13/18

REVIEWED
By HMK at 1:48 pm, 11/14/18

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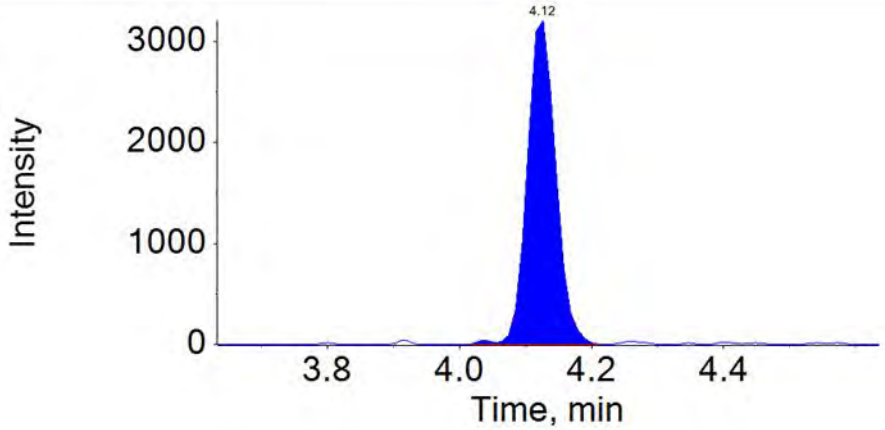
Auto Integrations prior to Manual Integration

Print Date: 11/13/2018 4:31 PM
Template: MQ-OrigInteg-16NOV21.docx

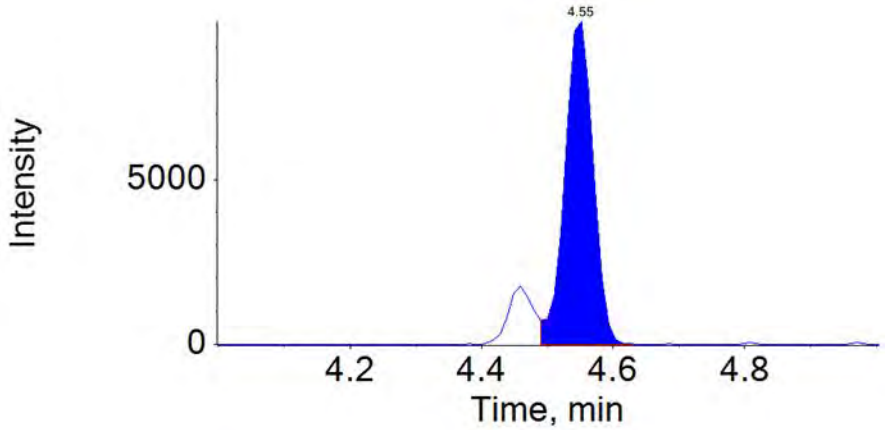
Results Table Name: 18NOV13DCCV1-4
Results Table Date: 11/13/2018 4:25:30 PM
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

Component Name:
4:2-FTS
RT (min.):
4.12
Peak Area:
9681.3
Mass Range:
327.0 / 307.0
File Name:
18NOV13D-05.wiff
Sample Name:
CCV1_ISC_CAL2



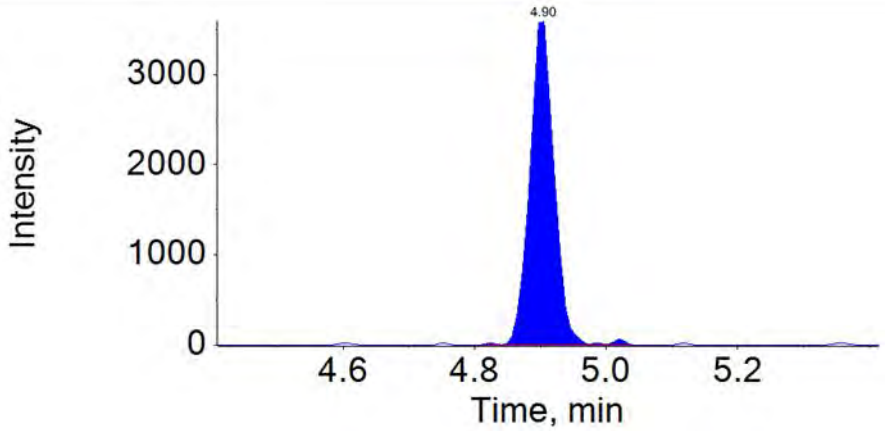
Integration Comment: incorrect integration

Component Name:
PFHxS
RT (min.):
4.55
Peak Area:
29488.0
Mass Range:
399.0 / 80.0
File Name:
18NOV13D-05.wiff
Sample Name:
CCV1_ISC_CAL2



Integration Comment: incorrect integration

Component Name:
6:2-FTS
RT (min.):
4.90
Peak Area:
9370.4
Mass Range:
427.0 / 407.0
File Name:
18NOV13D-05.wiff
Sample Name:
CCV1_ISC_CAL2



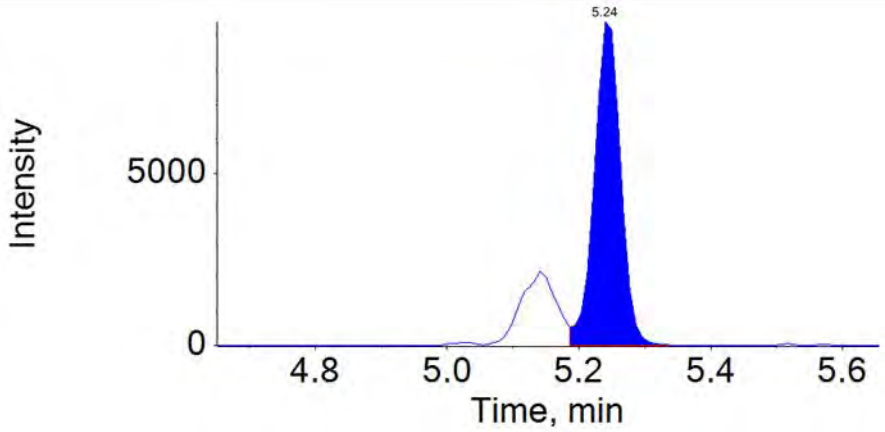
Integration Comment: incorrect integration

APPROVED
By JPT at 4:33 pm, 11/13/18

REVIEWED
By HMK at 1:48 pm, 11/14/18

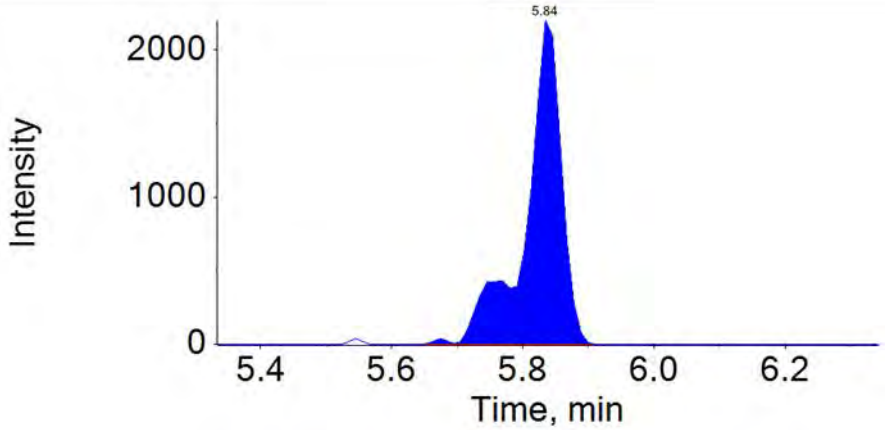
Results Table Name: 18NOV13DCCV1-4
Results Table Date: 11/13/2018 4:25:30 PM
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

Component Name:
PFOS
RT (min.):
5.24
Peak Area:
26298.4
Mass Range:
499.0 / 80.0
File Name:
18NOV13D-05.wiff
Sample Name:
CCV1_ISC_CAL2



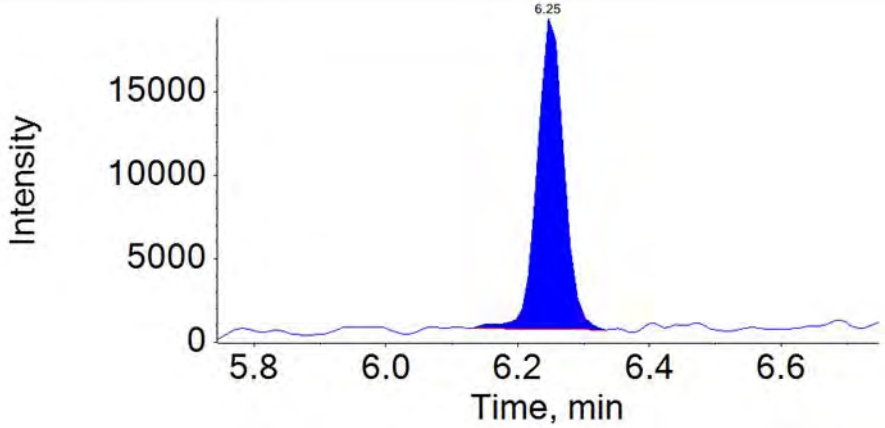
Integration Comment: incorrect integration

Component Name:
NEtFOSAA
RT (min.):
5.84
Peak Area:
8449.1
Mass Range:
584.0 / 419.0
File Name:
18NOV13D-05.wiff
Sample Name:
CCV1_ISC_CAL2



Integration Comment: incorrect integration

Component Name:
PFTrDA
RT (min.):
6.25
Peak Area:
52734.4
Mass Range:
663.0 / 619.0
File Name:
18NOV13D-05.wiff
Sample Name:
CCV1_ISC_CAL2



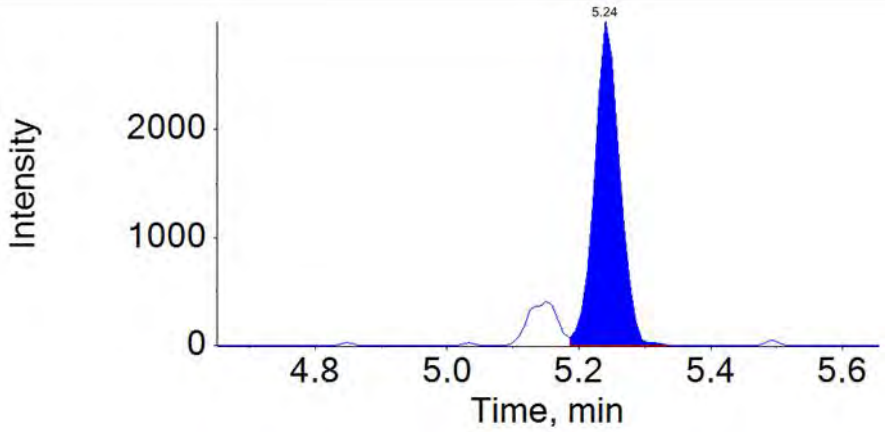
Integration Comment: incorrect integration

APPROVED
By JPT at 4:33 pm, 11/13/18

REVIEWED
By HMK at 1:48 pm, 11/14/18

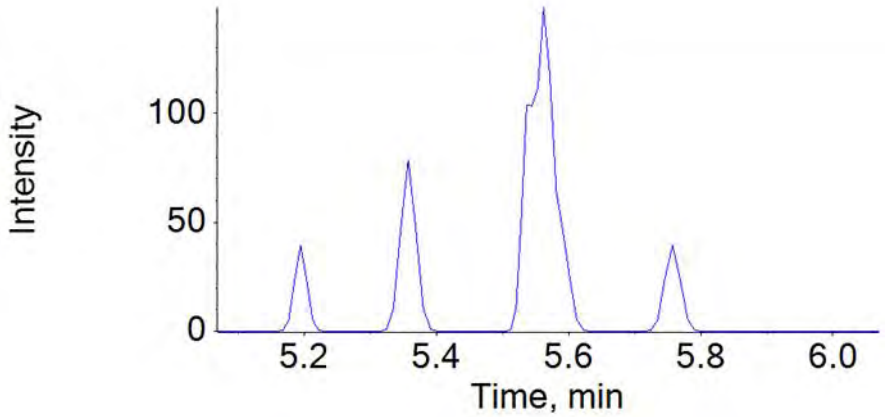
Results Table Name: 18NOV13DCCV1-4
Results Table Date: 11/13/2018 4:25:30 PM
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

Component Name:
PFOS_2
RT (min.):
5.24
Peak Area:
7996.8
Mass Range:
499.0 / 99.0
File Name:
18NOV13D-05.wiff
Sample Name:
CCV1_ISC_CAL2



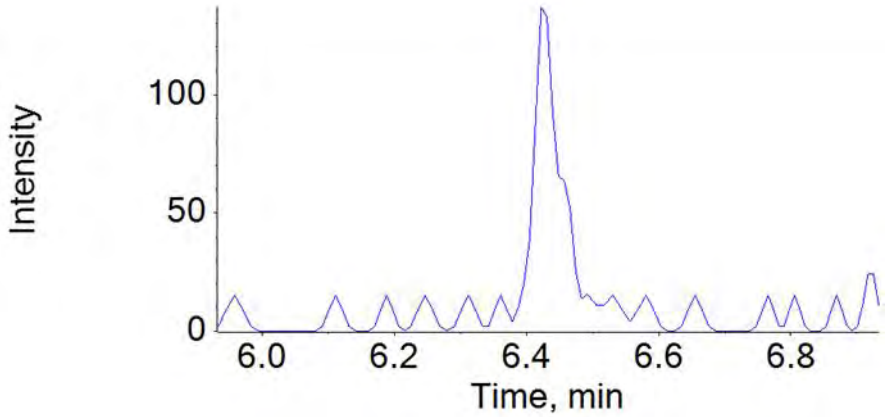
Integration Comment: incorrect integration

Component Name:
PFDA_2
RT (min.):
N/A
Peak Area:
N/A
Mass Range:
513.0 / 169.0
File Name:
18NOV13D-05.wiff
Sample Name:
CCV1_ISC_CAL2



Integration Comment: incorrect integration

Component Name:
PFTeDA_2
RT (min.):
N/A
Peak Area:
N/A
Mass Range:
713.0 / 169.0
File Name:
18NOV13D-05.wiff
Sample Name:
CCV1_ISC_CAL2



Integration Comment: incorrect integration

APPROVED
By JPT at 4:33 pm, 11/13/18

REVIEWED
By HMK at 1:48 pm, 11/14/18

Results Table Name: 18NOV13DCCV1-4
Results Table Date: 11/13/2018 4:25:30 PM

Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

APPROVED
By JPT at 4:33 pm, 11/13/18

REVIEWED
By HMK at 1:48 pm, 11/14/18

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LC-MS/MS Analysis Report

Printed: 11/13/2018 4:29:00 PM
Template: IonRatio18OCT10

Ion Ratio Report

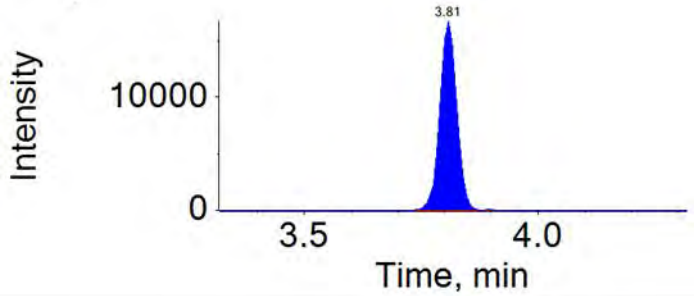
Sample Name: CCV1_ISC_CAL2 **Instrument Name:** LM27631 **File Name:** 18NOV13D-05.wiff

Component Name	RT	RRT	Analyte Area Response	Int Typ	Expected Ion Ratio	Ion Ratio	Ion Ratio % Diff	Ion Ratio Limit	Ion Ratio OOS
PFBS	3.81	1.00	41984.3	A	N/A	1.0000			
PFBS_2	3.81	1.00	15769.1	A	N/A	0.3756	3	50	
4:2-FTS	4.12	1.00	9629.9	M	N/A	1.0000			
4:2 FTS_2	4.12	1.00	7594.0	A	N/A	0.7886		#NA!	
PFHxA	4.16	1.00	96444.0	A	N/A	1.0000			
PFHxA_2	4.16	1.00	1277.6	A	N/A	0.0132	13	50	
PFPeS	4.18	1.10	22297.9	A	N/A	1.0000			
PFPeS_2	4.18	1.10	10707.8	A	N/A	0.4802	-8	50	
PFHpA	4.55	1.00	93659.5	A	N/A	1.0000			
PFHpA_2	4.55	1.00	4377.9	A	N/A	0.0467	-17	50	
PFHxS	4.55	1.00	34111.0	M	N/A	1.0000			
PFHxS_2	4.54	1.00	11982.0	A	N/A	0.3513	16	50	
6:2-FTS	4.90	1.00	9221.0	M	N/A	1.0000			
6:2 FTS_2	4.91	1.00	4725.6	A	N/A	0.5125		#NA!	
PFHpS	4.91	1.08	30798.1	A	N/A	1.0000			
PFHpS_2	4.91	1.08	13327.9	A	N/A	0.4328	6	50	
PFOA	4.92	1.00	100905.0	A	N/A	1.0000			
PFOA_2	4.91	1.00	5004.1	A	N/A	0.0496	-13	50	
PFOS	5.24	1.00	34555.4	M	N/A	1.0000			
PFOS_2	5.24	1.00	9315.9	M	N/A	0.2696	4	50	
PFNA	5.26	1.00	70400.6	A	N/A	1.0000			
PFNA_2	5.25	1.00	1189.7	A	N/A	0.0169	-26	50	
PFNS	5.54	1.06	17583.2	A	N/A	1.0000			
PFNS_2	5.54	1.06	8054.2	A	N/A	0.4581	-4	50	
PFDA	5.56	1.00	68441.3	A	N/A	1.0000			
PFDA_2	5.56	1.00	425.8	M	N/A	0.0062	-22	50	
8:2-FTS	5.56	1.00	5551.6	A	N/A	1.0000			
8:2 FTS_2	5.56	1.00	3895.7	A	N/A	0.7017		#NA!	
NMeFOSAA	5.71	1.00	7238.6	A	N/A	1.0000			
NMeFOSAA_2	5.70	1.00	1290.9	A	N/A	0.1783	-16	50	
PFDS	5.80	1.11	14746.9	A	N/A	1.0000			
PFDS_2	5.79	1.11	7890.7	A	N/A	0.5351	5	50	
PFUnDA	5.82	1.00	55065.8	A	N/A	1.0000			
PFUnDA_2	N/A	N/A	N/A	A	N/A	N/A		50	
NEtFOSAA	5.84	1.00	8391.3	M	N/A	1.0000			
NEtFOSAA_2	5.84	1.00	4219.2	A	N/A	0.5028	-13	50	
PFDoDA	6.05	1.00	63306.6	A	N/A	1.0000			
PFDoDA_2	6.06	1.00	973.7	A	N/A	0.0154	-6	50	
10:2-FTS	6.07	1.09	4315.1	A	N/A	1.0000			
10:2 FTS_2	6.06	1.09	3603.0	A	N/A	0.8350		#NA!	
PFTrDA	6.25	1.03	52911.8	M	N/A	1.0000			
PFTrDA_2	6.25	1.03	567.3	A	N/A	0.0107	16	50	
PFTeDA	6.43	1.00	38686.6	A	N/A	1.0000			
PFTeDA_2	6.43	1.00	380.7	M	N/A	0.0098	54	50	OOS
PFHxDA	6.73	1.05	18605.8	A	N/A	1.0000			
PFHxDA_2	6.73	1.05	1083.6	A	N/A	0.0582	-14	50	
PFODA	6.99	1.09	15935.1	A	N/A	1.0000			
PFODA_2	6.99	1.09	437.9	A	N/A	0.0275	2	50	

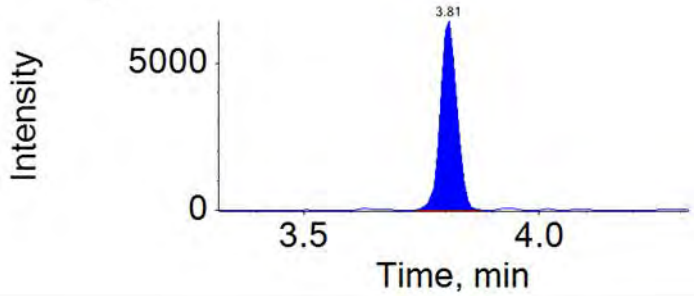
APPROVED
By JPT at 4:33 pm, 11/13/18

REVIEWED
By HMK at 1:48 pm, 11/14/18

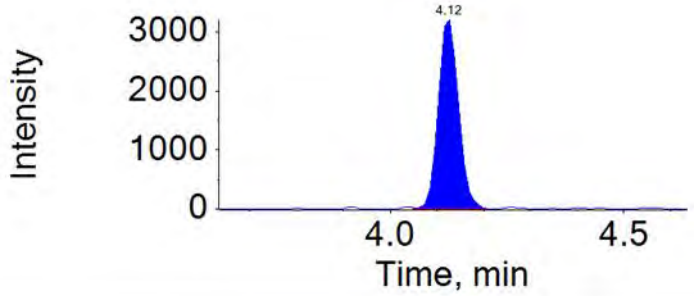
Component: PFBS
Primary Mass: 299.0 / 80.0



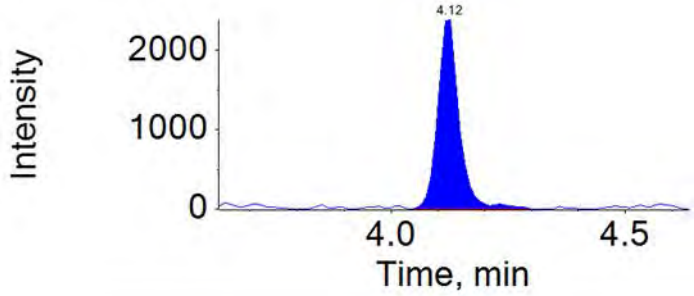
Component: PFBS_2
Secondary Mass: 299.0 / 99.0



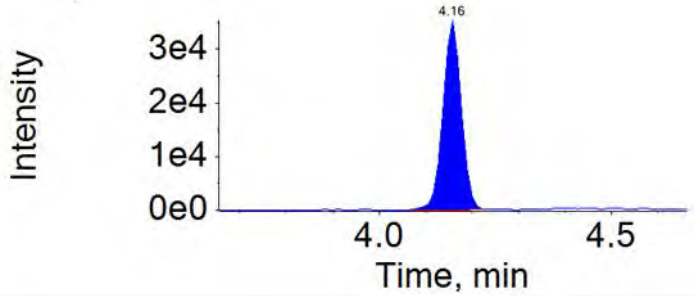
Component: 4:2-FTS
Primary Mass: 327.0 / 307.0



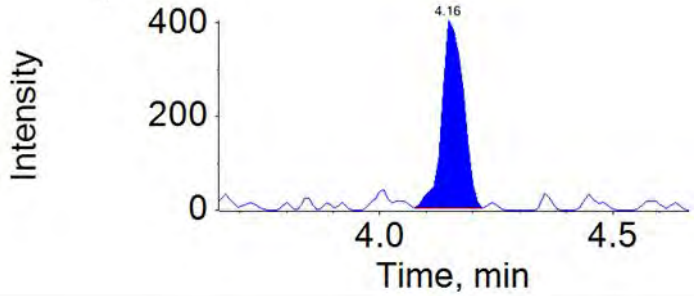
Component: 4:2 FTS_2
Secondary Mass: 327.0 / 81.0



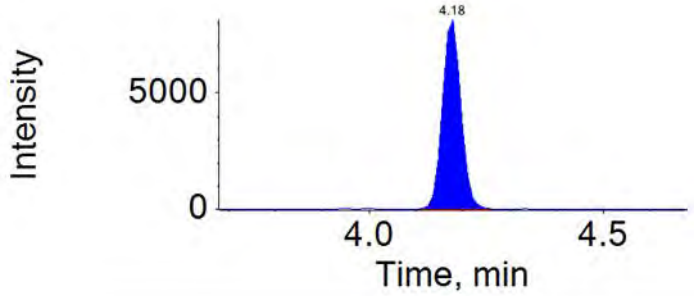
Component: PFHxA
Primary Mass: 313.0 / 269.0



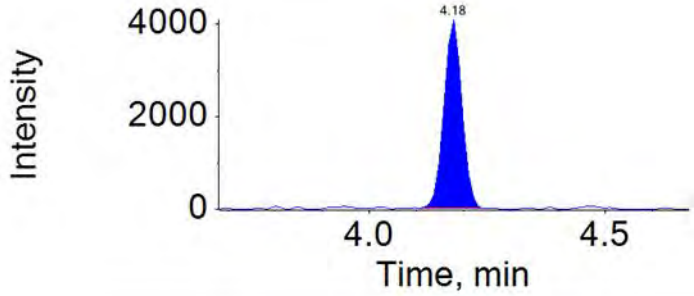
Component: PFHxA_2
Secondary Mass: 313.0 / 119.0



Component: PFPeS
Primary Mass: 349.0 / 80.0



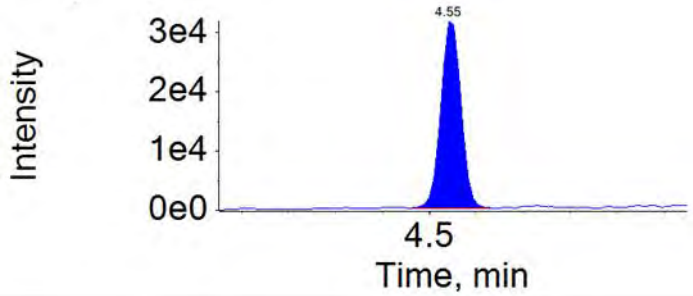
Component: PFPeS_2
Secondary Mass: 349.0 / 99.0



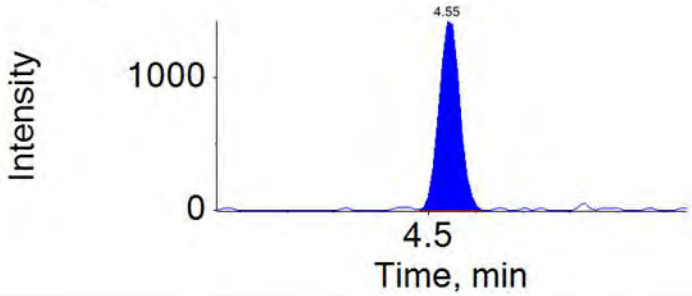
APPROVED
By JPT at 4:33 pm, 11/13/18

REVIEWED
By HMK at 1:48 pm, 11/14/18

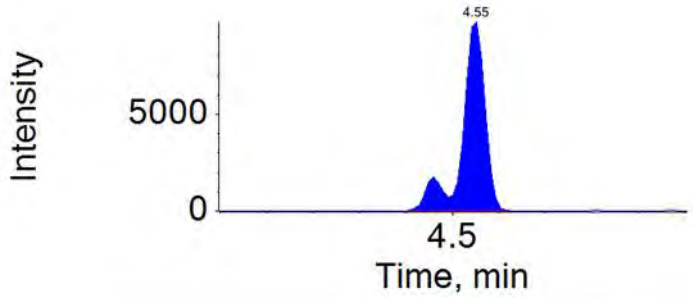
Component: PFHpA
Primary Mass: 363.0 / 319.0



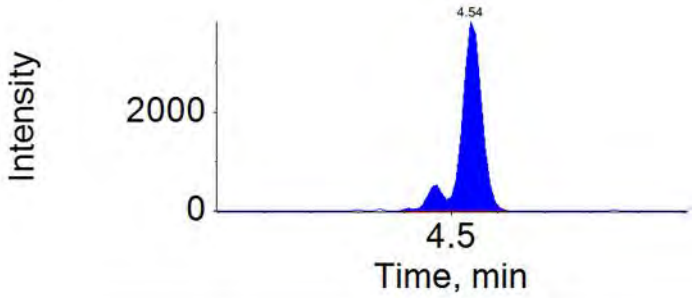
Component: PFHpA_2
Secondary Mass: 363.0 / 169.0



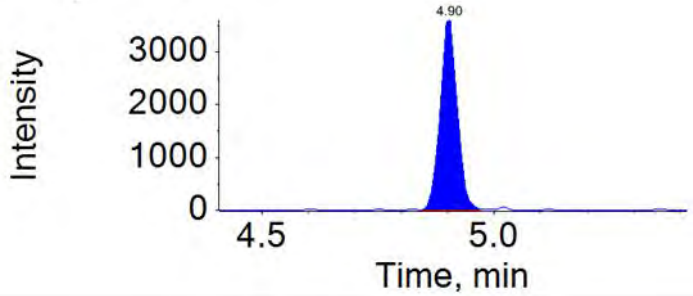
Component: PFHxS
Primary Mass: 399.0 / 80.0



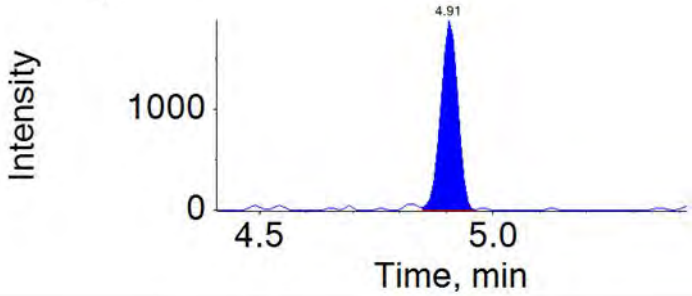
Component: PFHxS_2
Secondary Mass: 399.0 / 99.0



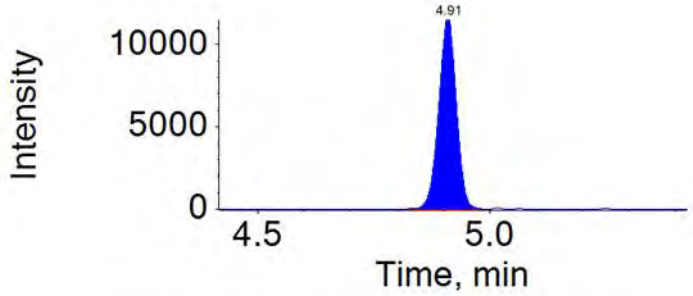
Component: 6:2-FTS
Primary Mass: 427.0 / 407.0



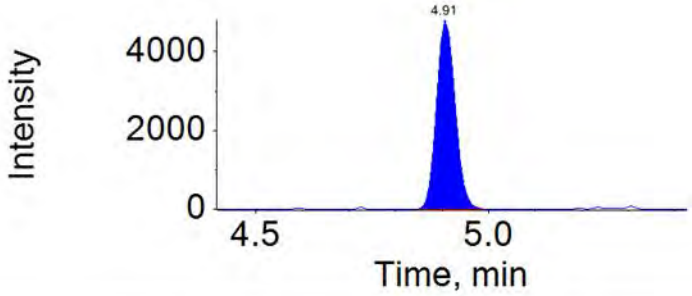
Component: 6:2 FTS_2
Secondary Mass: 427.0 / 81.0



Component: PFHpS
Primary Mass: 449.0 / 80.0



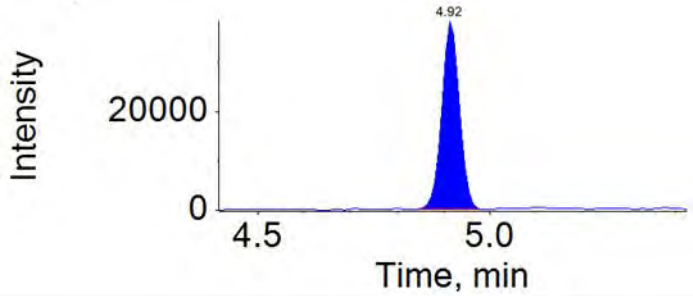
Component: PFHpS_2
Secondary Mass: 449.0 / 99.0



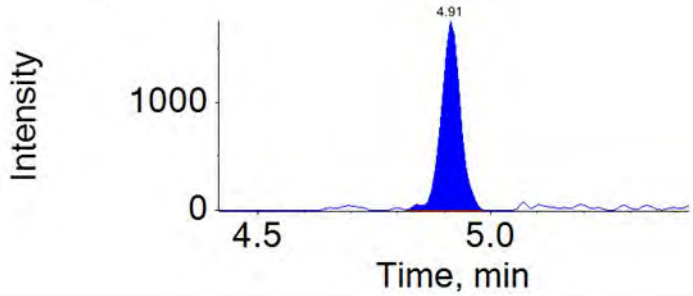
APPROVED
By JPT at 4:33 pm, 11/13/18

REVIEWED
By HMK at 1:48 pm, 11/14/18

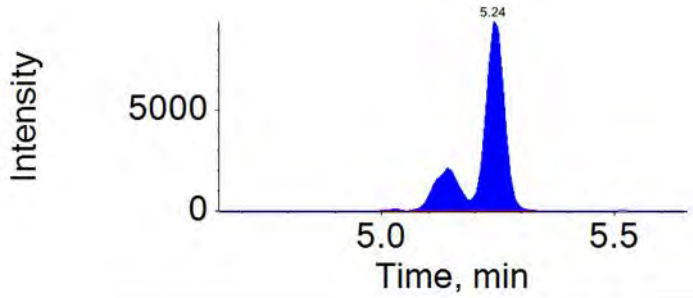
Component: PFOA
Primary Mass: 413.0 / 369.0



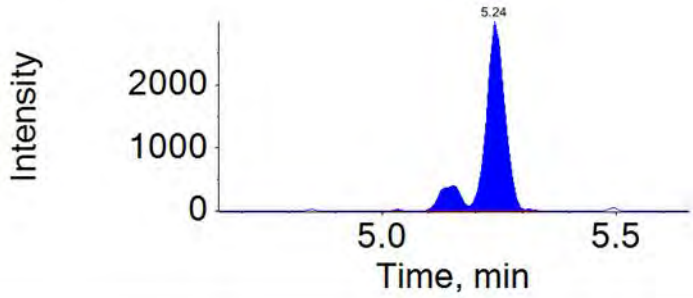
Component: PFOA_2
Secondary Mass: 413.0 / 169.0



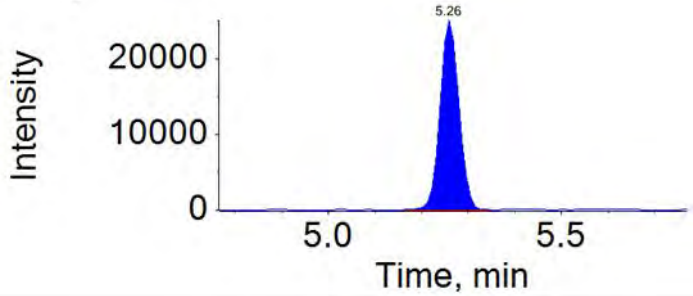
Component: PFOS
Primary Mass: 499.0 / 80.0



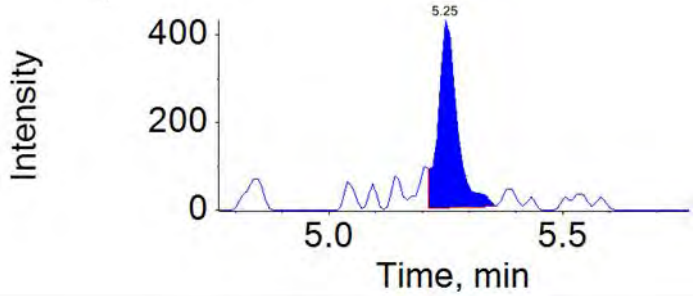
Component: PFOS_2
Secondary Mass: 499.0 / 99.0



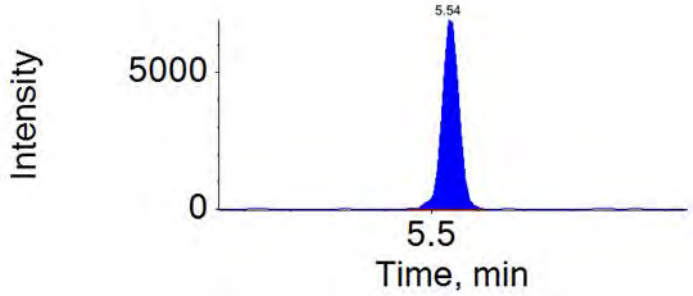
Component: PFNA
Primary Mass: 463.0 / 419.0



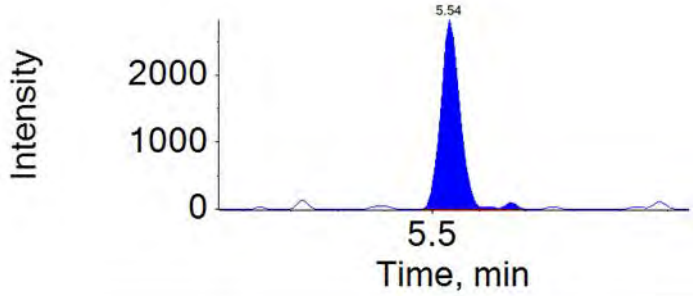
Component: PFNA_2
Secondary Mass: 463.0 / 169.0



Component: PFNS
Primary Mass: 549.0 / 80.0



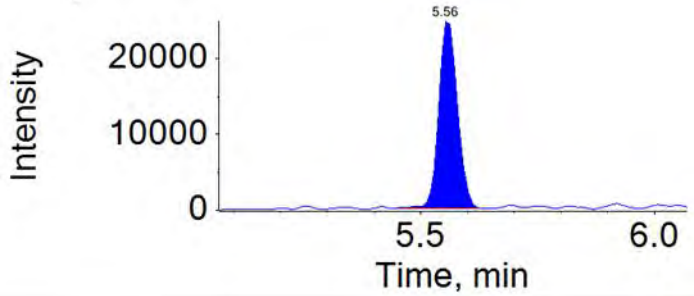
Component: PFNS_2
Secondary Mass: 549.0 / 99.0



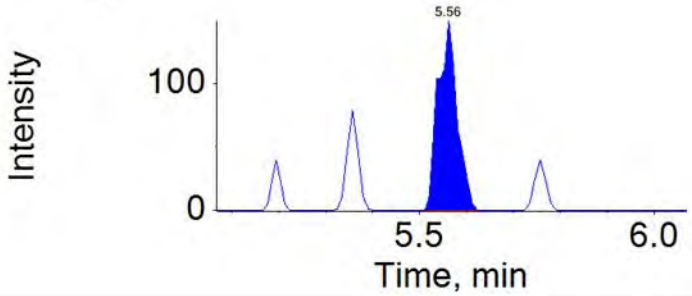
APPROVED
By JPT at 4:33 pm, 11/13/18

REVIEWED
By HMK at 1:48 pm, 11/14/18

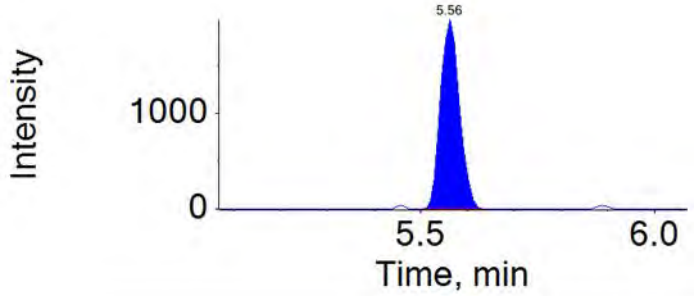
Component: PFDA
Primary Mass: 513.0 / 469.0



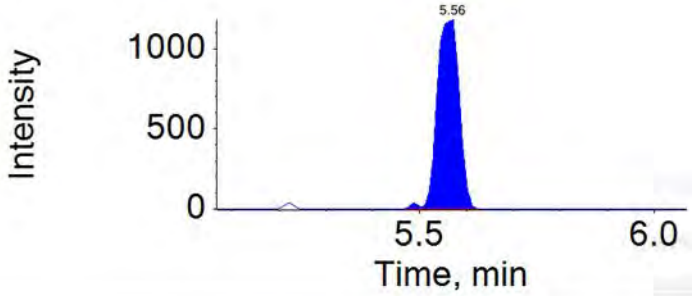
Component: PFDA_2
Secondary Mass: 513.0 / 169.0



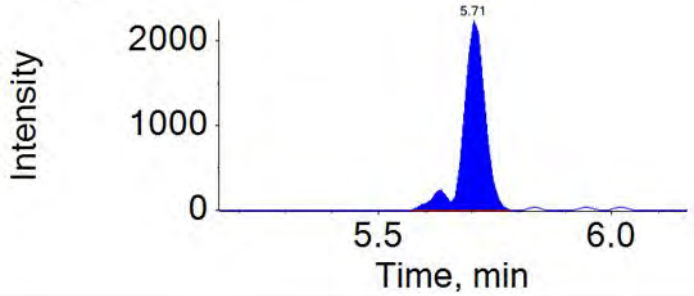
Component: 8:2-FTS
Primary Mass: 527.0 / 507.0



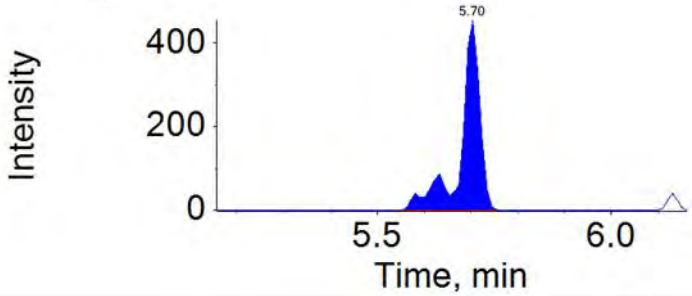
Component: 8:2 FTS_2
Secondary Mass: 527.0 / 81.0



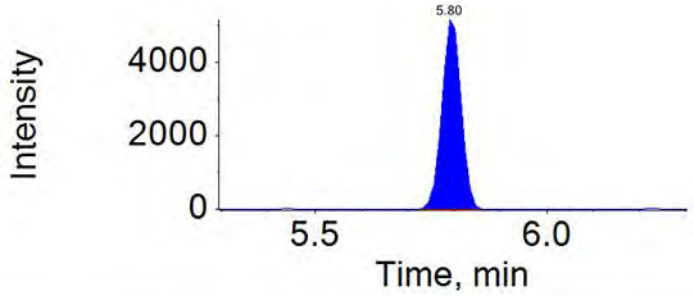
Component: NMeFOSAA
Primary Mass: 570.0 / 419.0



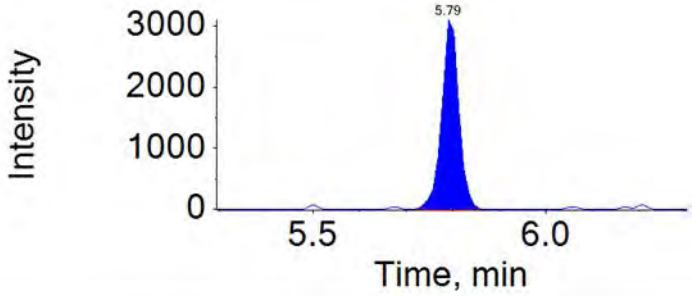
Component: NMeFOSAA_2
Secondary Mass: 570.0 / 483.0



Component: PFDS
Primary Mass: 599.0 / 80.0



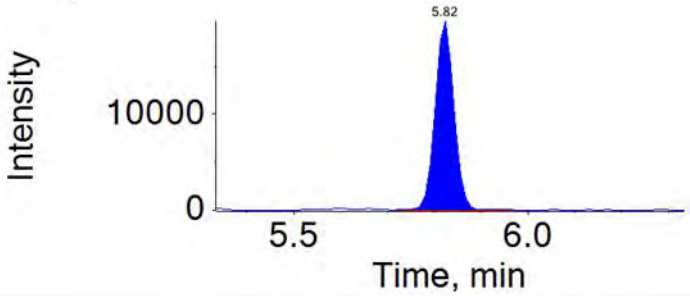
Component: PFDS_2
Secondary Mass: 599.0 / 99.0



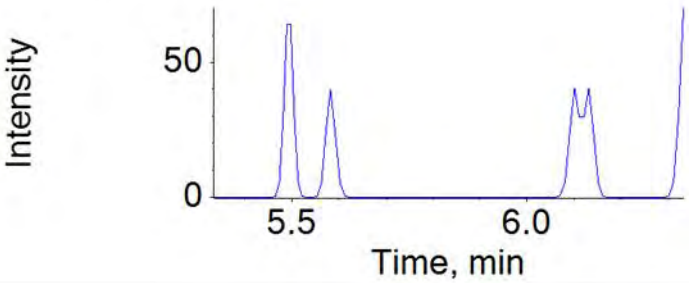
APPROVED
By JPT at 4:33 pm, 11/13/18

REVIEWED
By HMK at 1:48 pm, 11/14/18

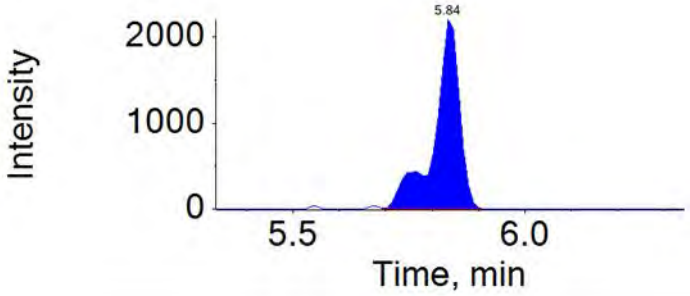
Component: PFUnDA
Primary Mass: 563.0 / 519.0



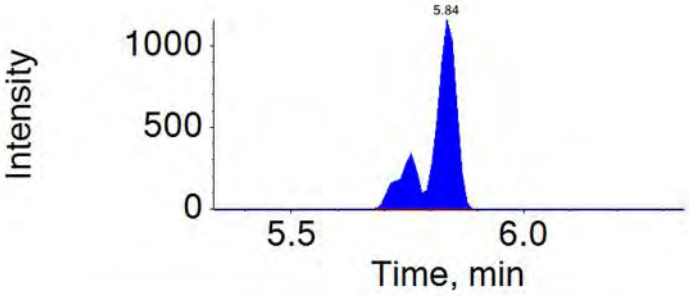
Component: PFUnDA_2
Secondary Mass: 563.0 / 169.0



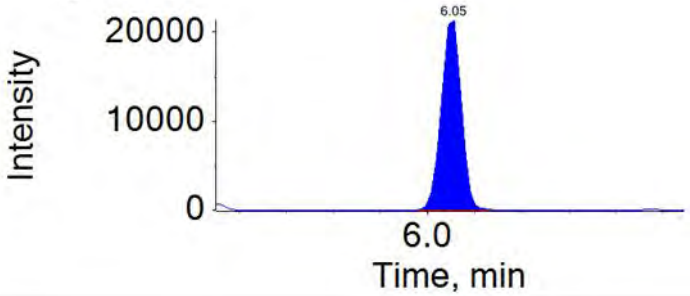
Component: NEtFOSAA
Primary Mass: 584.0 / 419.0



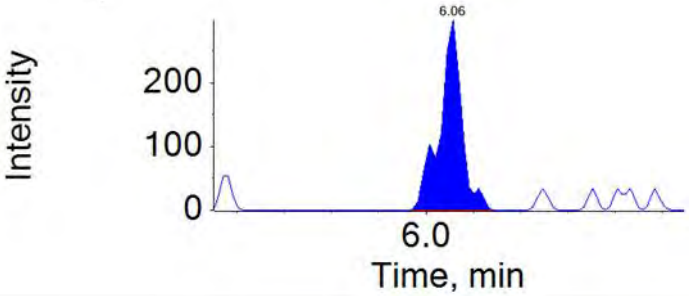
Component: NEtFOSAA_2
Secondary Mass: 584.0 / 526.0



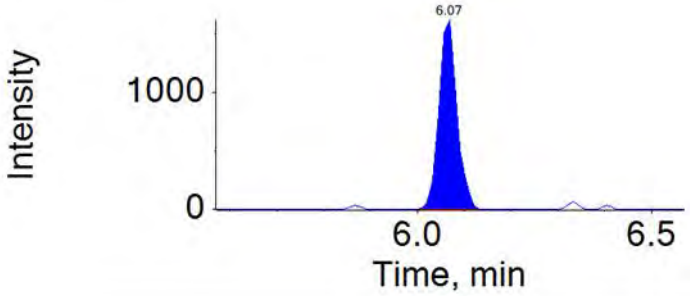
Component: PFDoDA
Primary Mass: 613.0 / 569.0



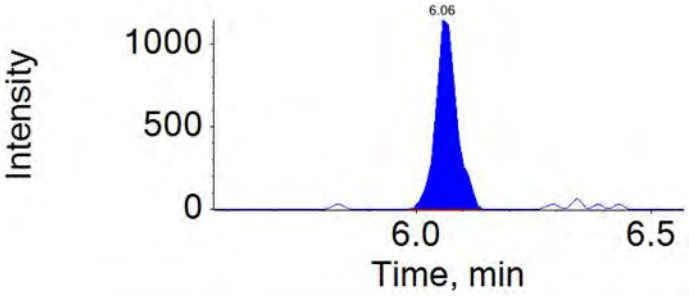
Component: PFDoDA_2
Secondary Mass: 613.0 / 169.0



Component: 10:2-FTS
Primary Mass: 627.0 / 607.0



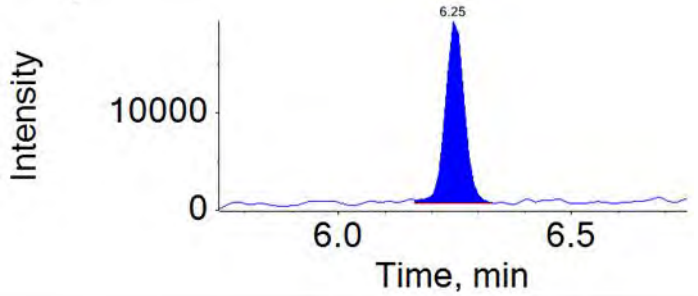
Component: 10:2 FTS_2
Secondary Mass: 627.0 / 81.0



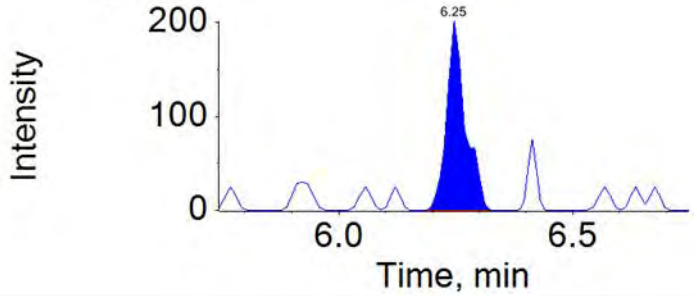
APPROVED
By JPT at 4:33 pm, 11/13/18

REVIEWED
By HMK at 1:48 pm, 11/14/18

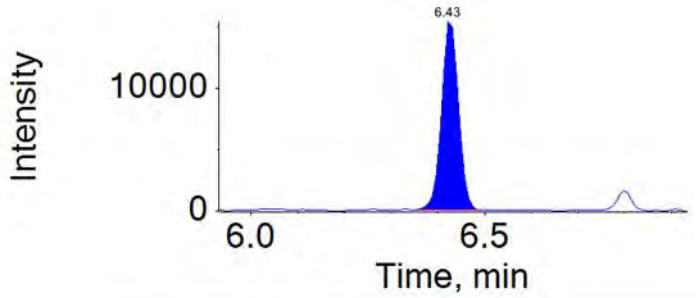
Component: PFTrDA
Primary Mass: 663.0 / 619.0



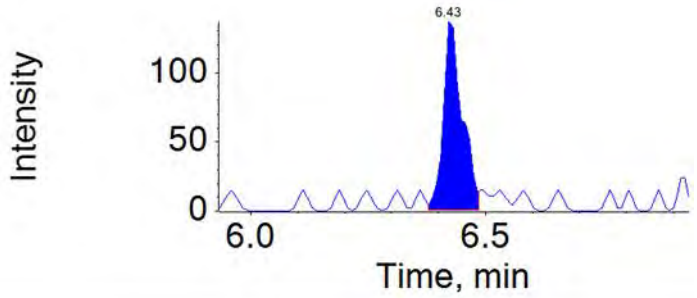
Component: PFTrDA_2
Secondary Mass: 663.0 / 169.0



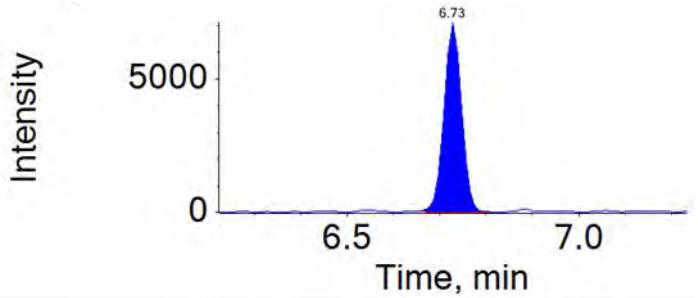
Component: PFTeDA
Primary Mass: 713.0 / 669.0



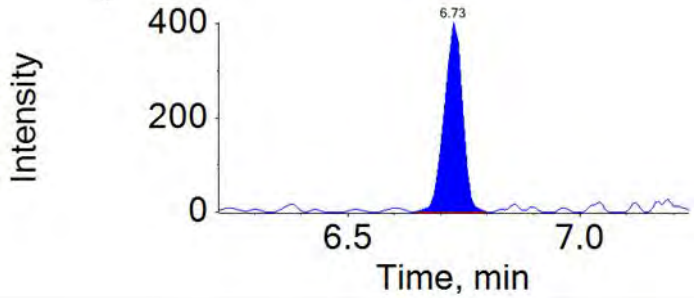
Component: PFTeDA_2
Secondary Mass: 713.0 / 169.0



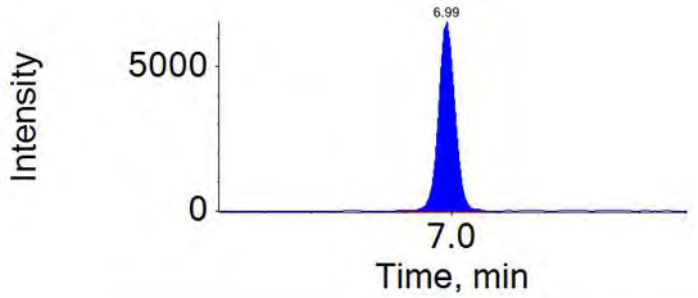
Component: PFHxDA
Primary Mass: 813.0 / 769.0



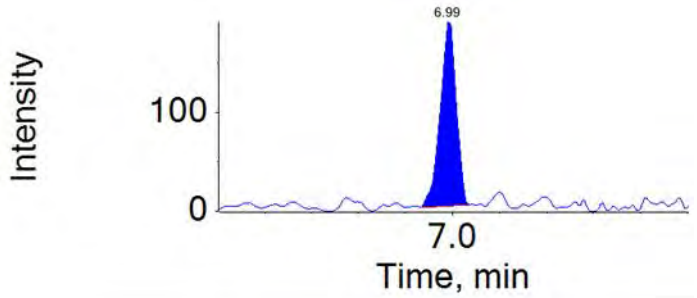
Component: PFHxDA_2
Secondary Mass: 813.0 / 169.0



Component: PFODA
Primary Mass: 913.0 / 869.0



Component: PFODA_2
Secondary Mass: 913.0 / 169.0



APPROVED
By JPT at 4:33 pm, 11/13/18

REVIEWED
By HMK at 1:48 pm, 11/14/18

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV13DCCV1-4 11/13/2018 4:25:30 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Sample Name:	INBLK			**Data File:**		18NOV13D-06.wiff
Sample ID:	methanol + labels			**Acquis Date:**		2018-11-13T09:53:05
Sample Type:	Unknown			**Instrument:**		LM27631
Vial Position:	1			**Acquis Method:**		18AUG13_3uL.dam
Injection Vol:	3.00			**Result Table:**		18NOV13DCCV1-4
QMethod File:	18AUG20QM			**ICAL Name:**		18NOV12DCAL
Batch Number:	N/A			**Operator:**		JPT12262
Sample Wt.:	1.00000			**Dilution Factor:**		1.00
Sample Vol.:	1.000			**Prep Factor:**		1.000

Injection Standard Peak Table

Injection Standard Area Reference File: 18NOV13D-05

Injection Standard Name	Inj Std Conc	Injection Std Peak Area	Rreference Injection Standard Area	Injection Std %Diff	Injection Std %Diff Limit	Injection Std %Diff OOS
13C3-PFBA	5.0	712182.6	661126.9	8	50	
13C2-PFOA	5.0	517114.2	466902.6	11	50	
13C4-PFOS	4.8	271947.8	247446.9	10	50	
13C2-PFDA	5.0	309024.7	295381.6	5	50	

Extraction Standard Peak Table

Extraction Standard Name	Ext Std Area	Inj Std Name	Inj Std Area	Area Ratio	Ext Std Conc	Ext Std Result	Ext Std %REC	Ext Std %REC Limit	Ext Std OOS
E13C4-PFBA	788556.3	13C3-PFBA	712182.6	1.107	5.000	4.964	99	70-130	
E13C5-PFPeA	789796.7	13C3-PFBA	712182.6	1.109	5.000	4.974	99	70-130	
E13C3-PFBS	465118.9	13C3-PFBA	712182.6	0.653	4.650	4.610	99	70-130	
E13C2-4:2-FTS	56775.7	13C2-PFOA	517114.2	0.110	4.670	4.890	105	70-130	
E13C5-PFHxA	691160.9	13C2-PFOA	517114.2	1.337	5.000	4.828	97	70-130	
E13C3-PFHxS	343877.9	13C2-PFOA	517114.2	0.665	4.730	4.563	96	70-130	
E13C4-PFHpA	573094.5	13C2-PFOA	517114.2	1.108	5.000	4.993	100	70-130	
E13C2-6:2-FTS	40405.9	13C2-PFOA	517114.2	0.078	4.750	5.228	110	70-130	
E13C8-PFOA	989330.5	13C2-PFOA	517114.2	1.913	5.000	5.271	105	70-130	
E13C8-PFOS	288721.3	13C4-PFOS	271947.8	1.062	4.780	4.704	98	70-130	
E13C9-PFNA	496672.5	13C4-PFOS	271947.8	1.826	5.000	5.092	102	70-130	
E13C6-PFDA	675627.9	13C2-PFDA	309024.7	2.186	5.000	5.102	102	70-130	
E13C2-8:2-FTS	30302.5	13C2-PFDA	309024.7	0.098	4.790	4.890	102	70-130	
E13C8-PFOSA	662561.8	13C2-PFDA	309024.7	2.144	5.000	4.753	95	70-130	
Ed3-NMeFOSAA	77164.8	13C2-PFDA	309024.7	0.250	5.000	4.507	90	70-130	
E13C7-PFUnDA	282164.2	13C2-PFDA	309024.7	0.913	5.000	5.301	106	70-130	
Ed5-NEtFOSAA	63151.8	13C2-PFDA	309024.7	0.204	5.000	4.323	86	70-130	
E13C2-PFDoDA	647992.1	13C2-PFDA	309024.7	2.097	5.000	5.444	109	70-130	
Ed7-NMePFOSAE	342687.6	13C2-PFDA	309024.7	1.109	5.000	4.799	96	70-130	
Ed3-NMePFOSA	79550.6	13C2-PFDA	309024.7	0.257	5.000	4.677	94	70-130	
Ed9-NEtPFOSAE	282226.0	13C2-PFDA	309024.7	0.913	5.000	4.750	95	70-130	
Ed5-NEtPFOSA	62508.0	13C2-PFDA	309024.7	0.202	5.000	4.745	95	70-130	
E13C2-PFTeDA	434458.5	13C2-PFDA	309024.7	1.406	5.000	4.936	99	70-130	

APPROVED
By JPT at 4:33 pm, 11/13/18

REVIEWED
By umar at 5:40 pm, 11/13/18

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV13DCCV1-4 11/13/2018 4:25:30 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

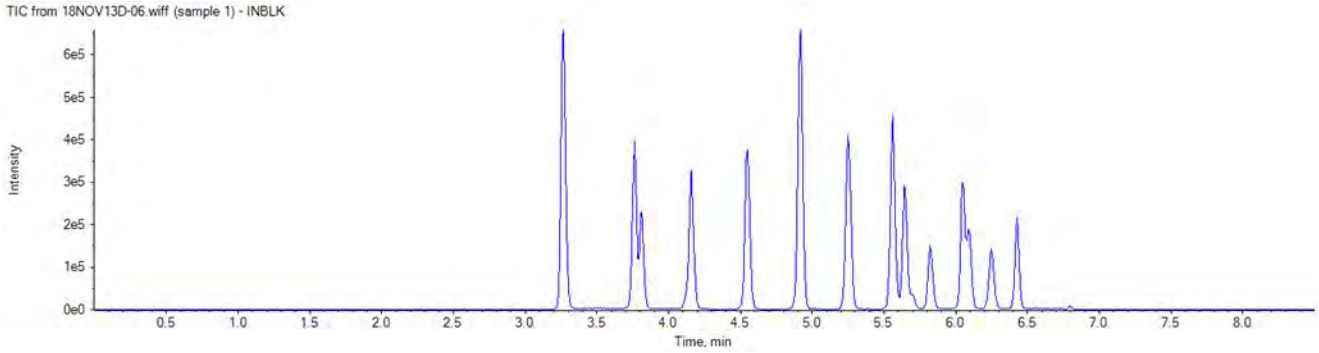
Analyte Quantitation Peak Table

Sample Name: INBLK **Instrument Name:** LM27631 **File Name:** 18NOV13D-06.wiff

Sample Wt	Sample Vol	Dilution Factor	PrepFactor
1.00000	1.000	1.00	1.000

Analyte Name	RT	RRT	Analyte Area Response	E	Int Typ	ES Name	ES RT	ES Area Response	Area Ratio	Sample Result (ng/g)
PFBA	N/A	N/A	N/A		A	13C4-PFBA	3.26	788556.3	N/A	
PFPeA	N/A	N/A	N/A		A	13C5-PFPeA	3.76	789796.7	N/A	
PFBS	N/A	N/A	N/A		A	13C3-PFBS	3.81	465118.9	N/A	
4:2-FTS	N/A	N/A	N/A		A	13C2-4:2-FTS	4.12	56775.7	N/A	
PFHxA	N/A	N/A	N/A		A	13C5-PFHxA	4.16	691160.9	N/A	
PFPeS	N/A	N/A	N/A		A	13C3-PFBS	3.81	465118.9	N/A	
PFHpA	N/A	N/A	N/A		A	13C4-PFHpA	4.55	573094.5	N/A	
PFHxS	N/A	N/A	N/A		A	13C3-PFHxS	4.55	343877.9	N/A	
6:2-FTS	N/A	N/A	N/A		A	13C2-6:2-FTS	4.91	40405.9	N/A	
PFHpS	N/A	N/A	N/A		A	13C3-PFHxS	4.55	343877.9	N/A	
PFOA	N/A	N/A	N/A		A	13C8-PFOA	4.92	989330.5	N/A	
PFOS	N/A	N/A	N/A		A	13C8-PFOS	5.24	288721.3	N/A	
PFNA	N/A	N/A	N/A		A	13C9-PFNA	5.26	496672.5	N/A	
PFNS	N/A	N/A	N/A		A	13C8-PFOS	5.24	288721.3	N/A	
PFDA	N/A	N/A	N/A		A	13C6-PFDA	5.56	675627.9	N/A	
8:2-FTS	N/A	N/A	N/A		A	13C2-8:2-FTS	5.56	30302.5	N/A	
PFOSA	N/A	N/A	N/A		A	13C8-PFOSA	5.65	662561.8	N/A	
NMeFOSAA	N/A	N/A	N/A		A	d3-NMeFOSAA	5.70	77164.8	N/A	
PFDS	N/A	N/A	N/A		A	13C8-PFOS	5.24	288721.3	N/A	
PFUnDA	N/A	N/A	N/A		A	13C7-PFUnDA	5.82	282164.2	N/A	
NEtFOSAA	N/A	N/A	N/A		A	d5-NEtFOSAA	5.83	63151.8	N/A	
PFDoDA	N/A	N/A	N/A		A	13C2-PFDoDA	6.05	647992.1	N/A	
10:2-FTS	N/A	N/A	N/A		A	13C2-8:2-FTS	5.56	30302.5	N/A	
NMePFOSAE	N/A	N/A	N/A		A	d7-NMePFOSAE	6.09	342687.6	N/A	
NMePFOSA	N/A	N/A	N/A		A	d3-NMePFOSA	6.10	79550.6	N/A	
PFDoS	N/A	N/A	N/A		A	13C8-PFOS	5.24	288721.3	N/A	
NEtPFOSAE	N/A	N/A	N/A		A	d9-NEtPFOSAE	6.25	282226.0	N/A	
NEtPFOSA	N/A	N/A	N/A		A	d5-NEtPFOSA	6.26	62508.0	N/A	
PFTrDA	N/A	N/A	N/A		A	13C2-PFDoDA	6.05	647992.1	N/A	
PFTeDA	N/A	N/A	N/A		A	13C2-PFTeDA	6.43	434458.5	N/A	
PFHxDA	N/A	N/A	N/A		A	13C2-PFTeDA	6.43	434458.5	N/A	
PFODA	N/A	N/A	N/A		A	13C2-PFTeDA	6.43	434458.5	N/A	

Total Ion Chromatogram

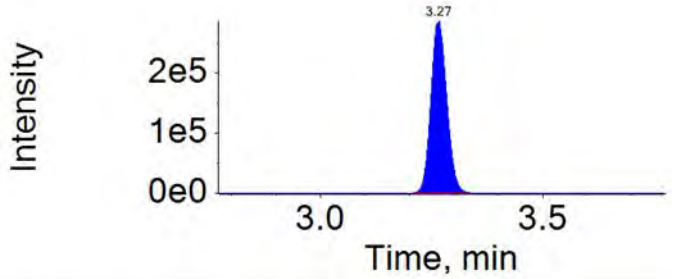


APPROVED
By JPT at 4:33 pm, 11/13/18

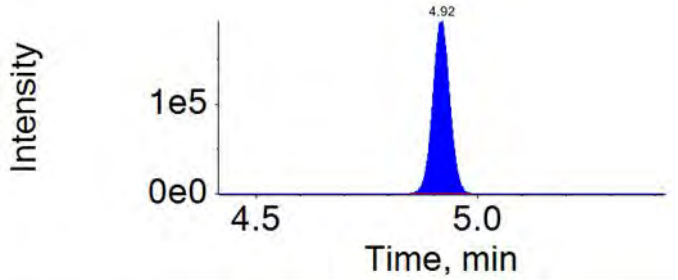
REVIEWED
By umar at 5:40 pm, 11/13/18

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV13DCCV1-4 11/13/2018 4:25:30 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

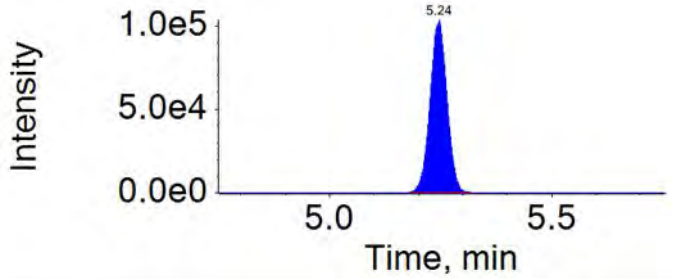
Injection Standard: 13C3-PFBA
216.0 / 172.0



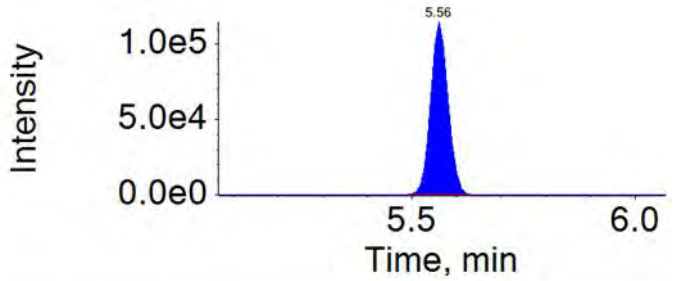
Injection Standard: 13C2-PFOA
415.0 / 370.0



Injection Standard: 13C4-PFOS
503.0 / 80.0

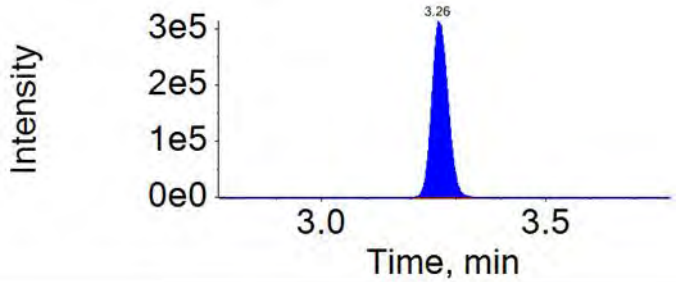


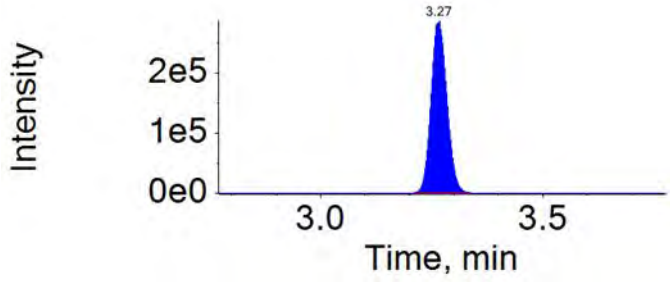
Injection Standard: 13C2-PFDA
515.0 / 470.0



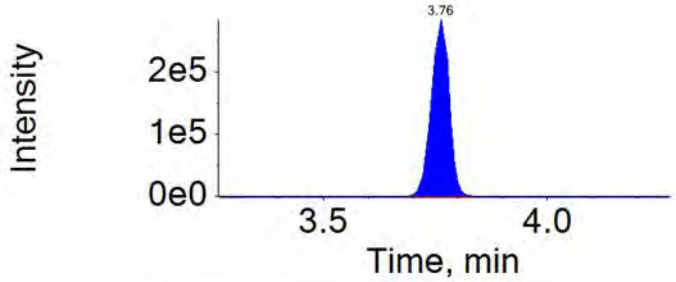
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV13DCCV1-4 11/13/2018 4:25:30 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

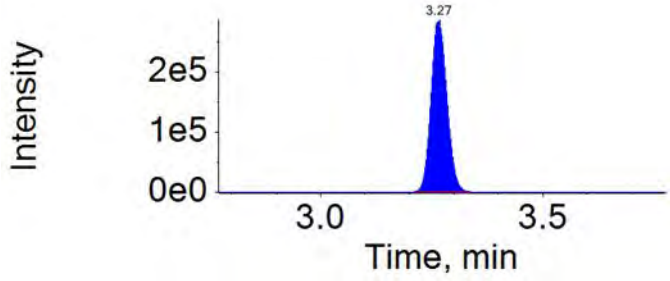
Extraction Standard: E13C4-PFBA	Injection Standard: 13C3-PFBA
217.0 / 172.0	216.0 / 172.0



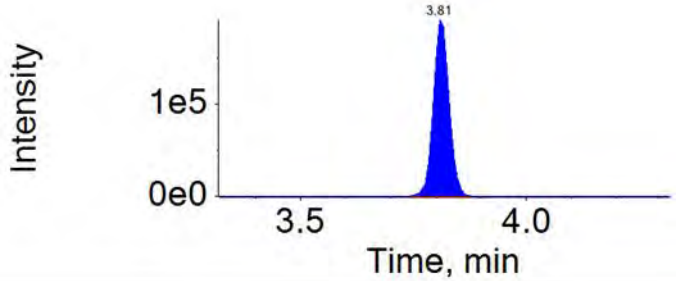


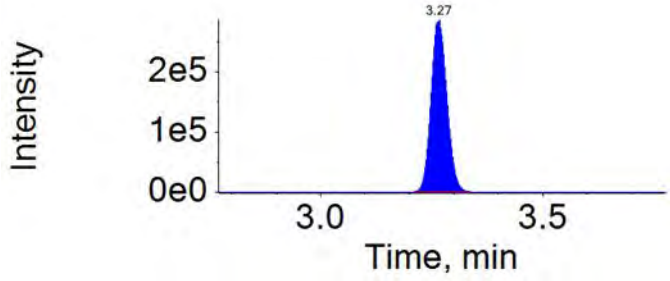
Extraction Standard: E13C5-PFPeA	Injection Standard: 13C3-PFBA
268.0 / 223.0	216.0 / 172.0



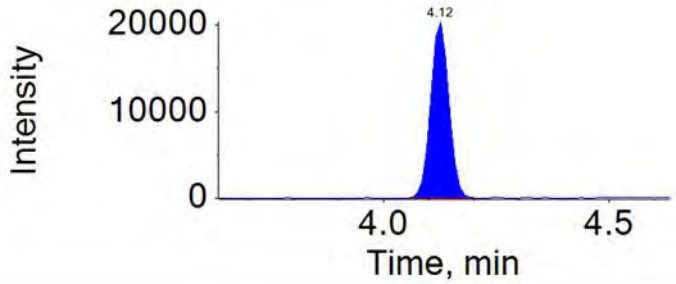


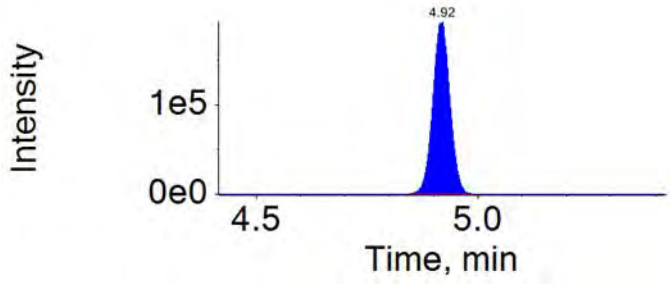
Extraction Standard: E13C3-PFBS	Injection Standard: 13C3-PFBA
302.0 / 80.0	216.0 / 172.0





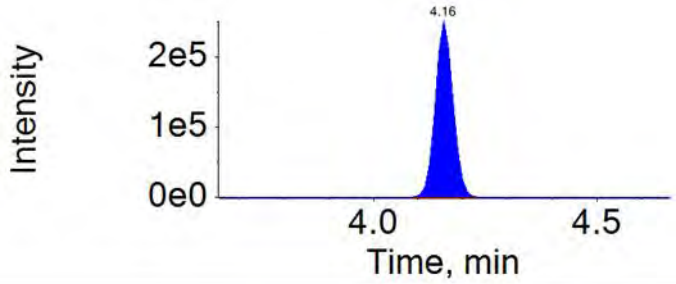
Extraction Standard: E13C2-4:2-FTS	Injection Standard: 13C2-PFOA
329.0 / 81.0	415.0 / 370.0

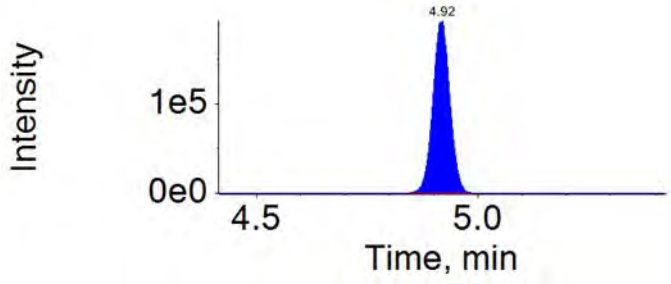




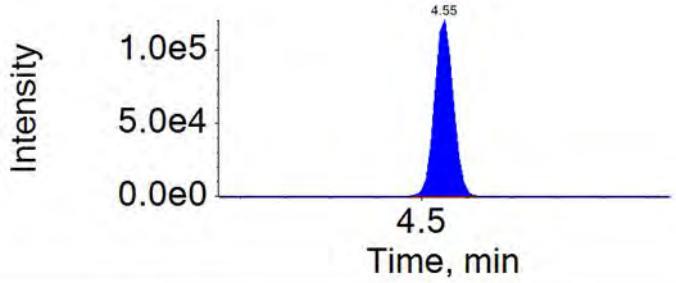
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV13DCCV1-4 11/13/2018 4:25:30 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

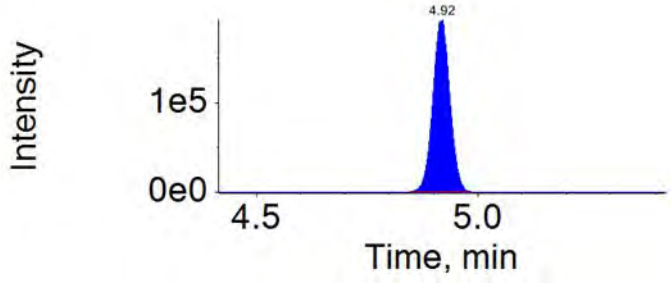
Extraction Standard: E13C5-PFHxA	Injection Standard: 13C2-PFOA
318.0 / 273.0	415.0 / 370.0



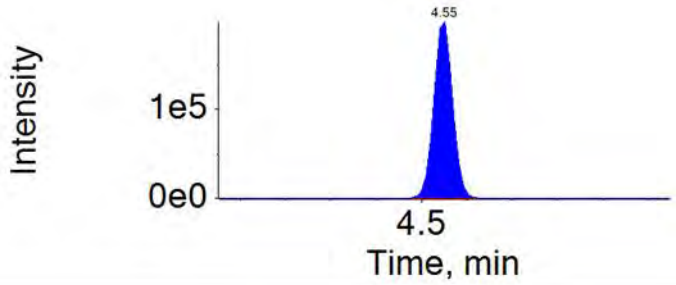


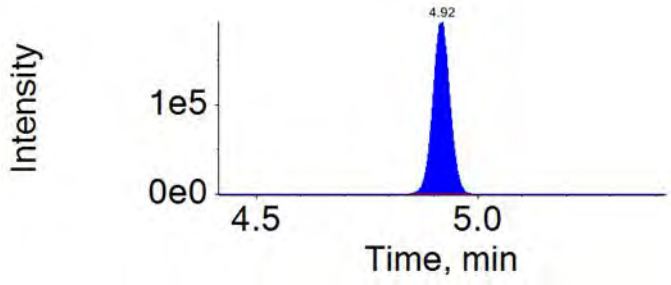
Extraction Standard: E13C3-PFHxS	Injection Standard: 13C2-PFOA
402.0 / 80.0	415.0 / 370.0



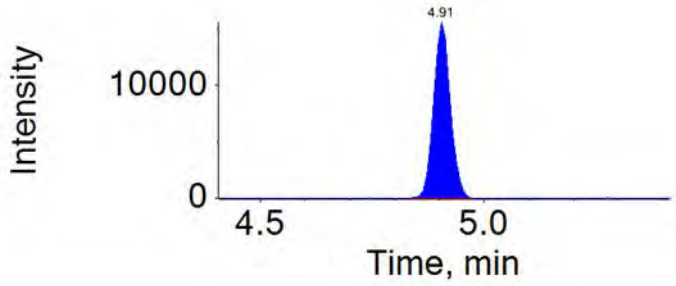


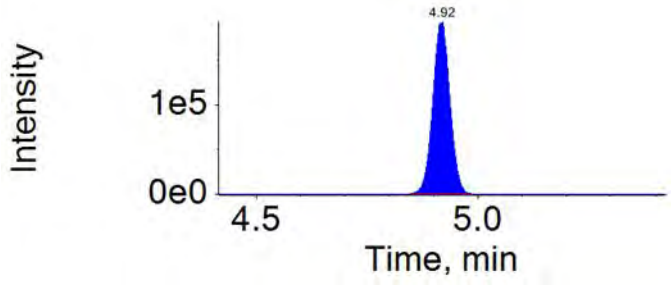
Extraction Standard: E13C4-PFHpA	Injection Standard: 13C2-PFOA
367.0 / 322.0	415.0 / 370.0





Extraction Standard: E13C2-6:2-FTS	Injection Standard: 13C2-PFOA
429.0 / 81.0	415.0 / 370.0



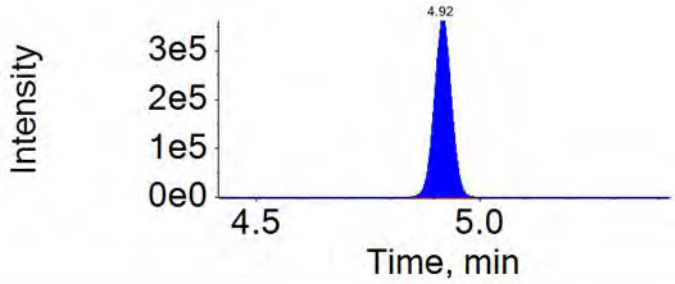


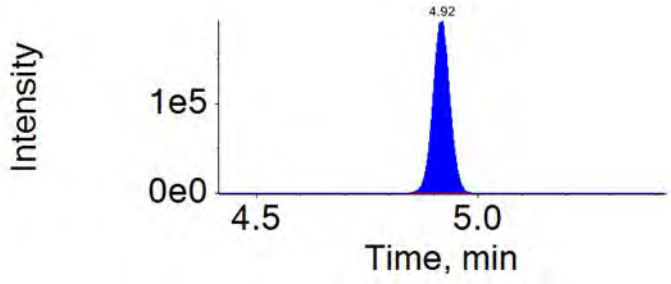
APPROVED
By JPT at 4:33 pm, 11/13/18

REVIEWED
By umar at 5:40 pm, 11/13/18

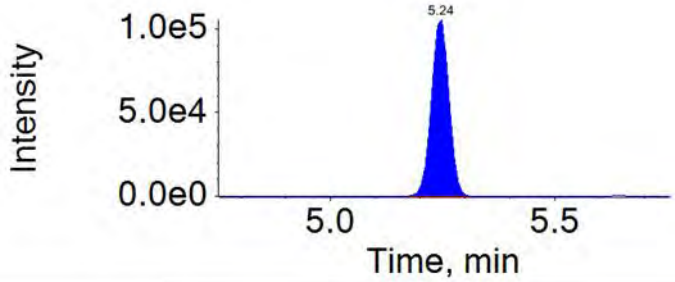
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV13DCCV1-4 11/13/2018 4:25:30 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

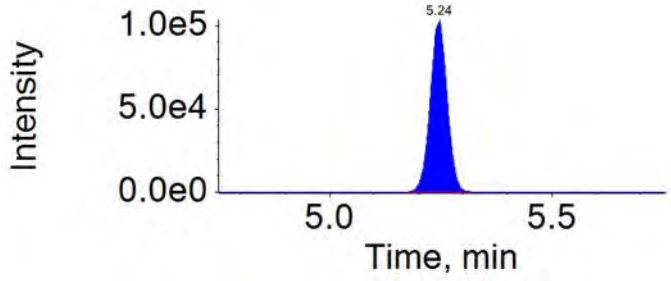
Extraction Standard: E13C8-PFOA	Injection Standard: 13C2-PFOA
421.0 / 376.0	415.0 / 370.0



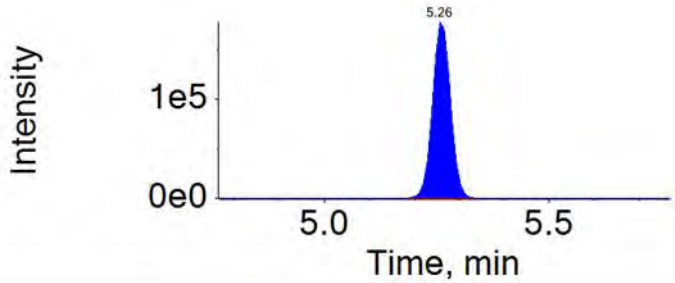


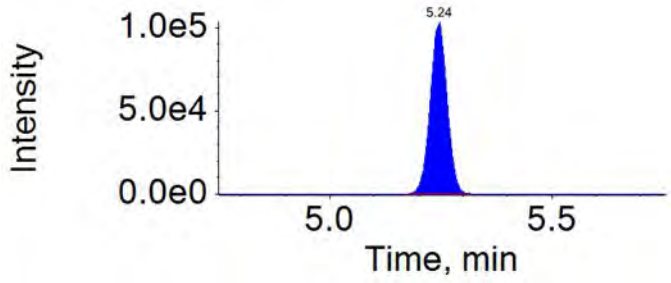
Extraction Standard: E13C8-PFOS	Injection Standard: 13C4-PFOS
507.0 / 80.0	503.0 / 80.0



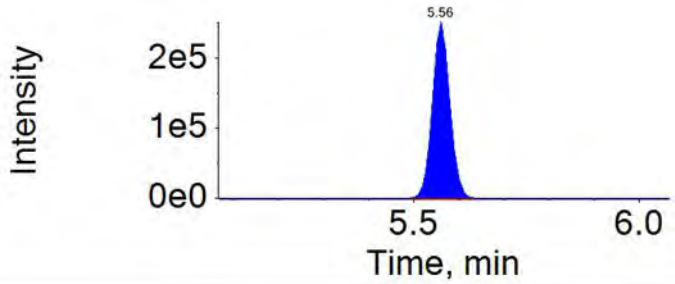


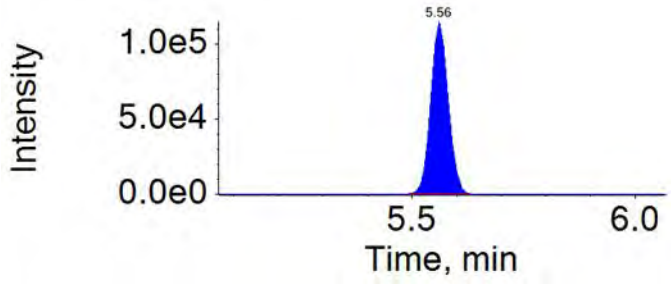
Extraction Standard: E13C9-PFNA	Injection Standard: 13C4-PFOS
472.0 / 427.0	503.0 / 80.0





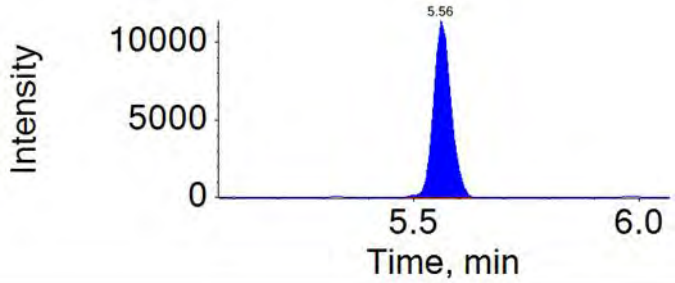
Extraction Standard: E13C6-PFDA	Injection Standard: 13C2-PFDA
519.0 / 474.0	515.0 / 470.0

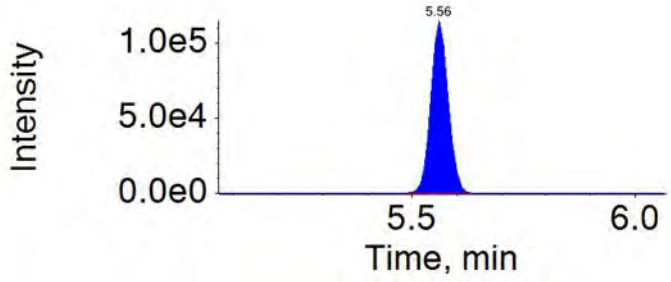




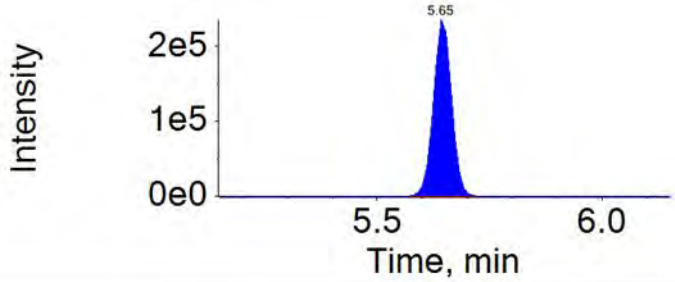
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV13DCCV1-4 11/13/2018 4:25:30 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

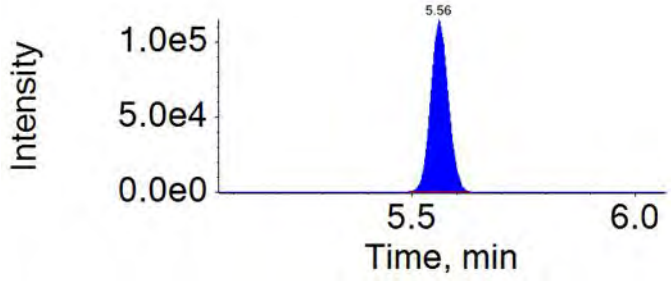
Extraction Standard: E13C2-8:2-FTS	Injection Standard: 13C2-PFDA
529.0 / 81.0	515.0 / 470.0



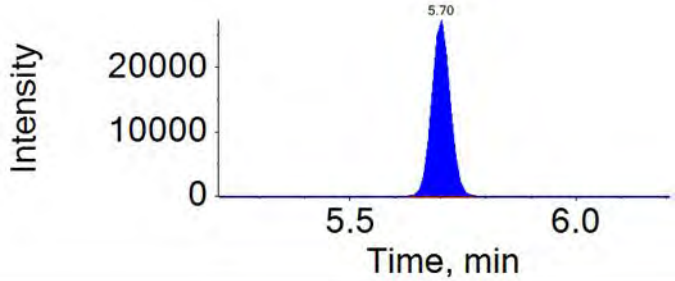


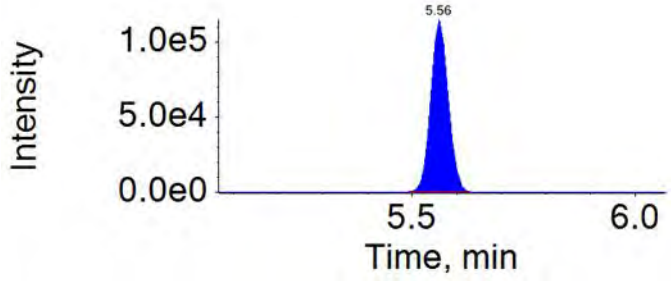
Extraction Standard: E13C8-PFOSA	Injection Standard: 13C2-PFDA
506.0 / 78.0	515.0 / 470.0



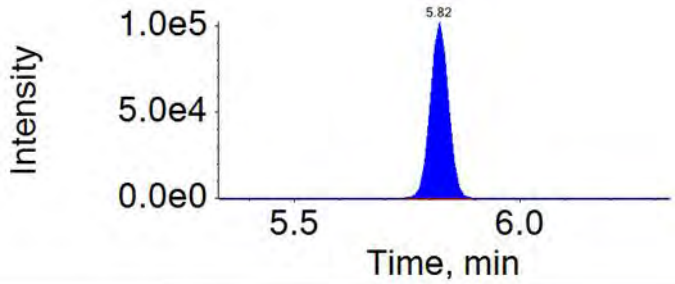


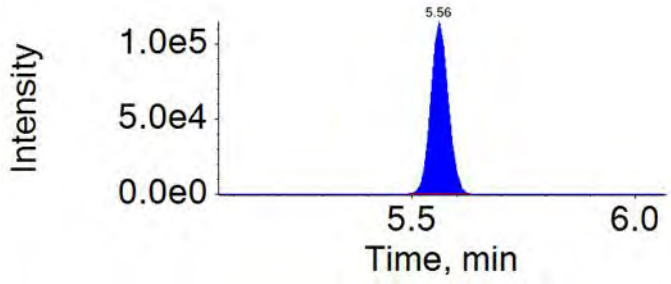
Extraction Standard: Ed3-NMeFOSAA	Injection Standard: 13C2-PFDA
573.0 / 419.0	515.0 / 470.0





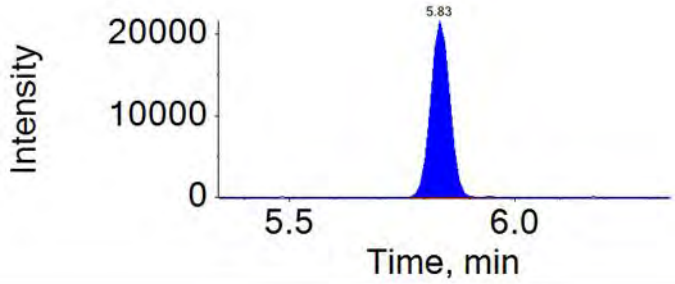
Extraction Standard: E13C7-PFUnDA	Injection Standard: 13C2-PFDA
570.0 / 525.0	515.0 / 470.0

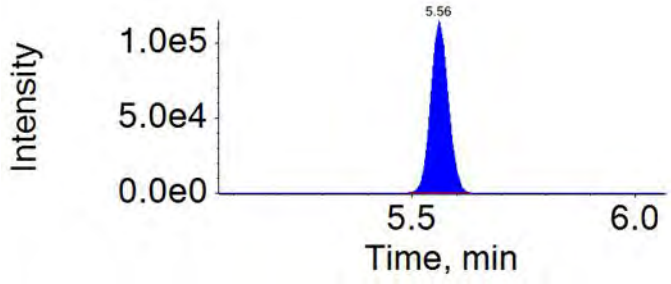




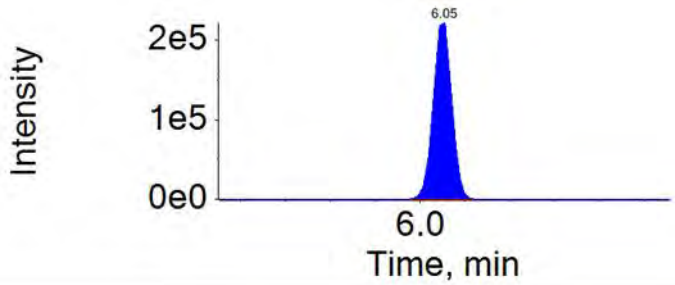
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV13DCCV1-4 11/13/2018 4:25:30 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

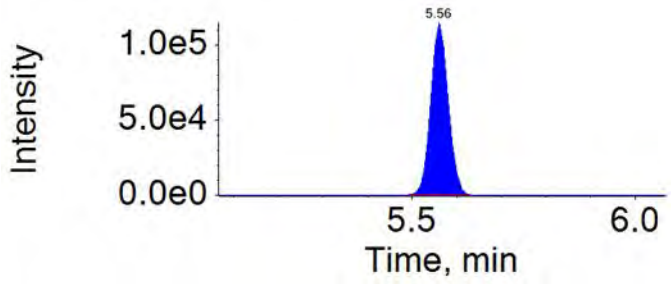
Extraction Standard: Ed5-NEtFOSAA	Injection Standard: 13C2-PFDA
589.0 / 419.0	515.0 / 470.0



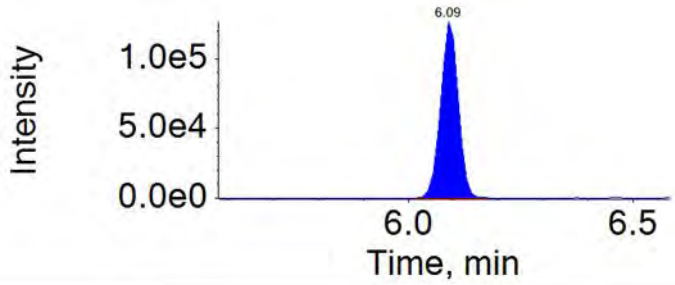


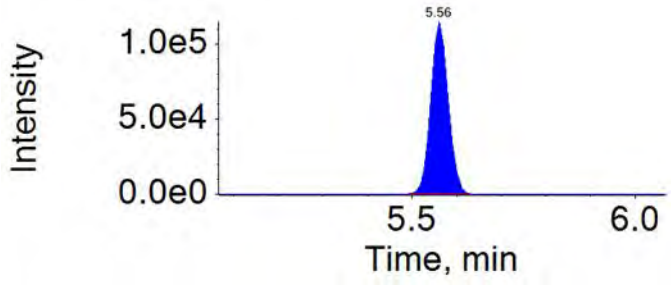
Extraction Standard: E13C2-PFDoDA	Injection Standard: 13C2-PFDA
615.0 / 570.0	515.0 / 470.0



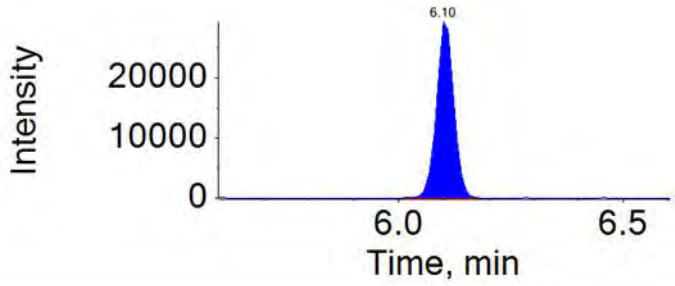


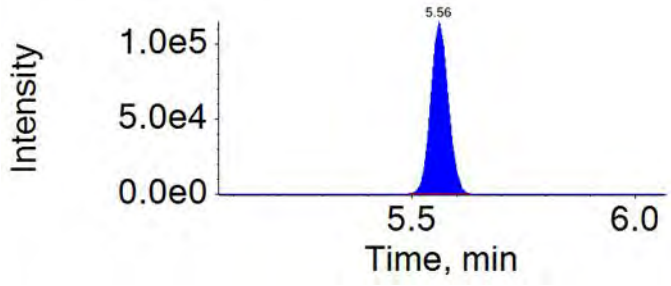
Extraction Standard: Ed7-NMePFOSAE	Injection Standard: 13C2-PFDA
623.0 / 59.0	515.0 / 470.0





Extraction Standard: Ed3-NMePFOSA	Injection Standard: 13C2-PFDA
515.0 / 169.0	515.0 / 470.0



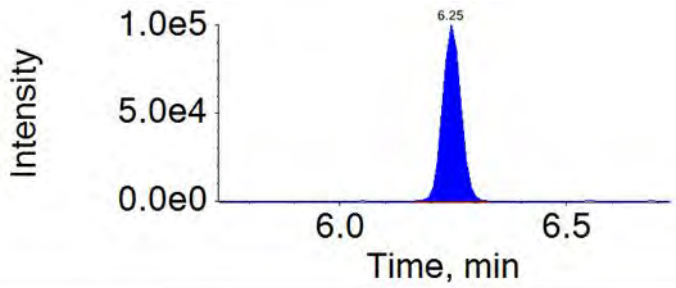


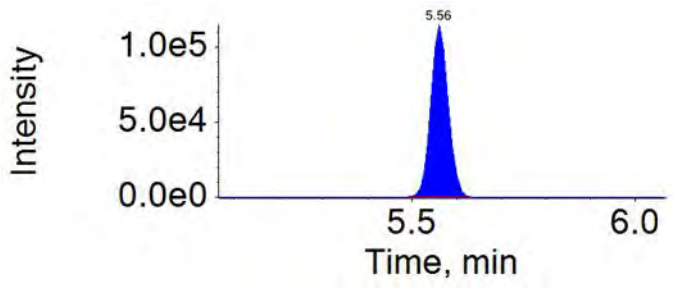
APPROVED
By JPT at 4:33 pm, 11/13/18

REVIEWED
By umar at 5:40 pm, 11/13/18

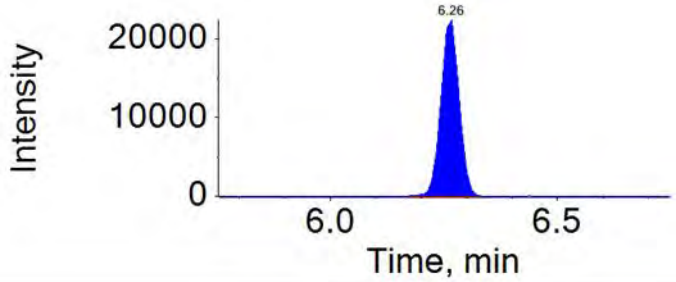
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV13DCCV1-4 11/13/2018 4:25:30 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

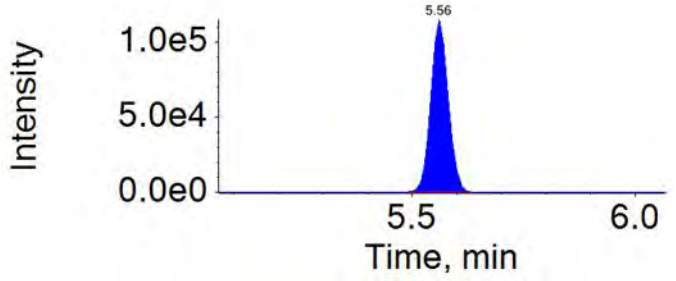
Extraction Standard: Ed9-NEtPFOSAE	Injection Standard: 13C2-PFDA
639.0 / 59.0	515.0 / 470.0



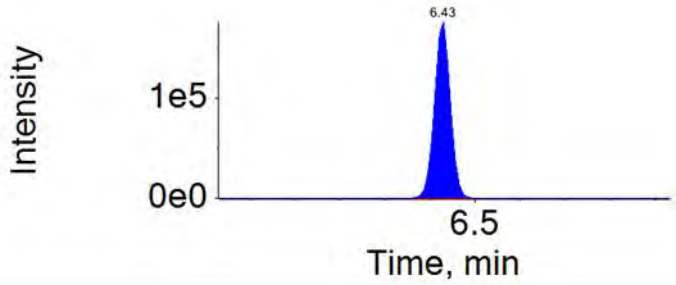


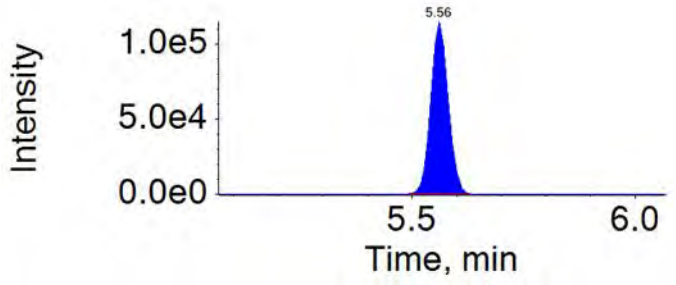
Extraction Standard: Ed5-NEtPFOSA	Injection Standard: 13C2-PFDA
531.0 / 169.0	515.0 / 470.0





Extraction Standard: E13C2-PFTeDA	Injection Standard: 13C2-PFDA
715.0 / 670.0	515.0 / 470.0



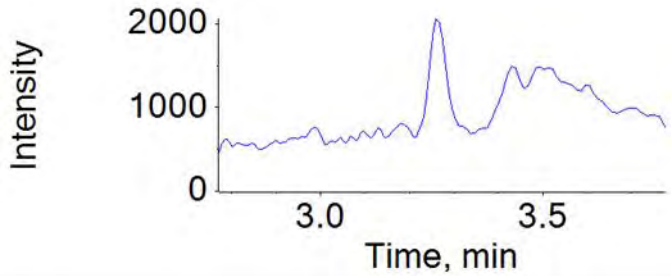


APPROVED
By JPT at 4:33 pm, 11/13/18

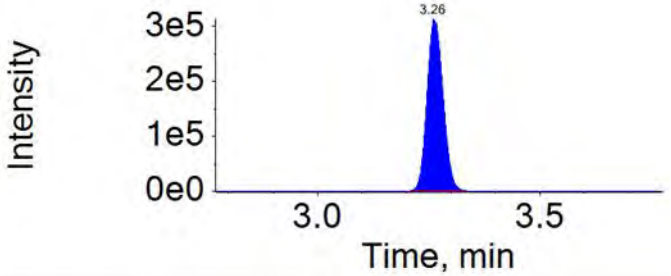
REVIEWED
By umar at 5:40 pm, 11/13/18

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV13DCCV1-4 11/13/2018 4:25:30 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

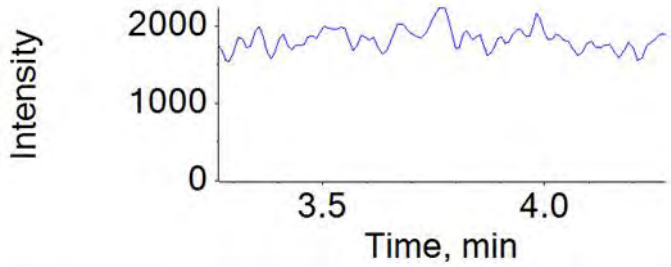
Analyte: PFBA
213.0 / 169.0



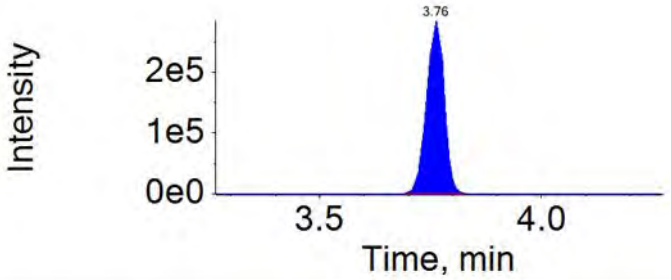
Extraction Standard: 13C4-PFBA
217.0 / 172.0



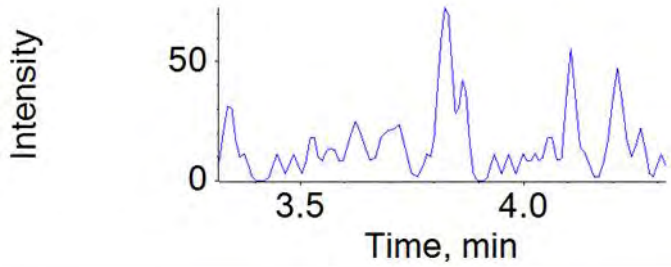
Analyte: PFPeA
263.0 / 219.0



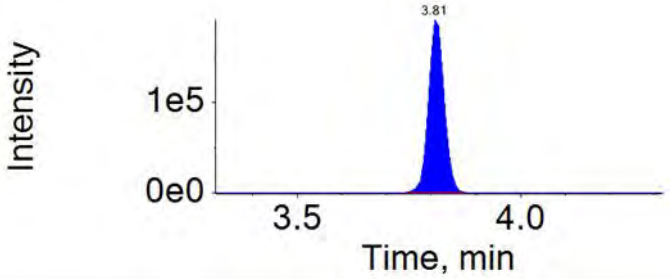
Extraction Standard: 13C5-PFPeA
268.0 / 223.0



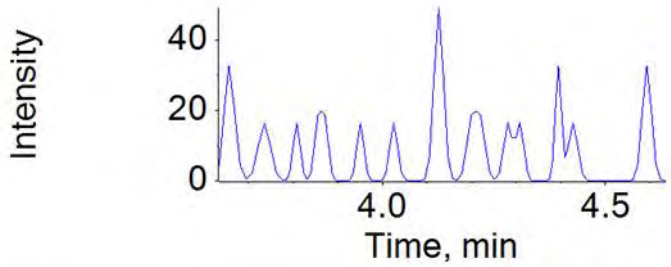
Analyte: PFBS
299.0 / 80.0



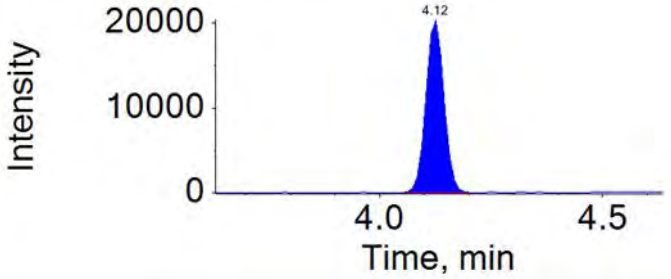
Extraction Standard: 13C3-PFBS
302.0 / 80.0



Analyte: 4:2-FTS
327.0 / 307.0



Extraction Standard: 13C2-4:2-FTS
329.0 / 81.0

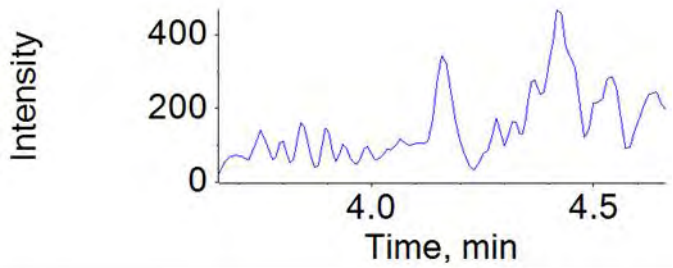


APPROVED
By JPT at 4:33 pm, 11/13/18

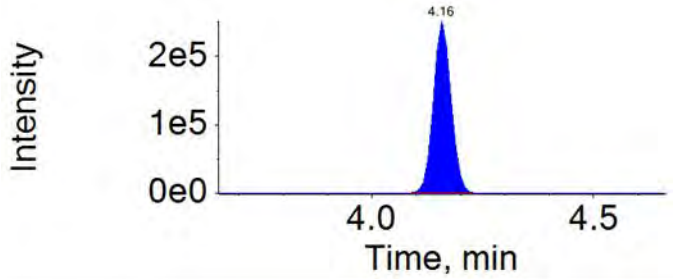
REVIEWED
By umar at 5:40 pm, 11/13/18

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV13DCCV1-4 11/13/2018 4:25:30 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

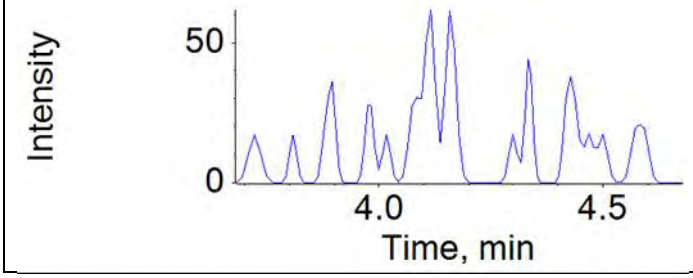
Analyte: PFHxA
313.0 / 269.0



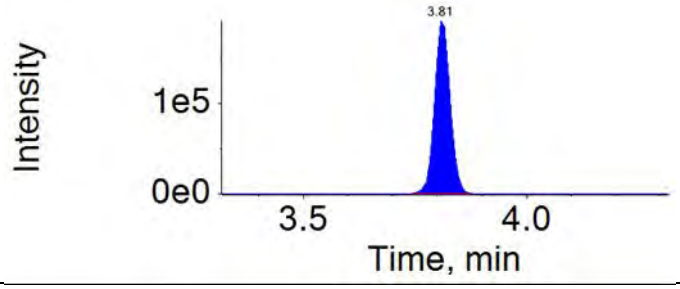
Extraction Standard: 13C5-PFHxA
318.0 / 273.0



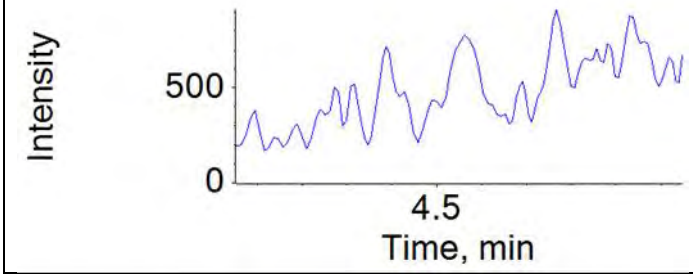
Analyte: PFPeS
349.0 / 80.0



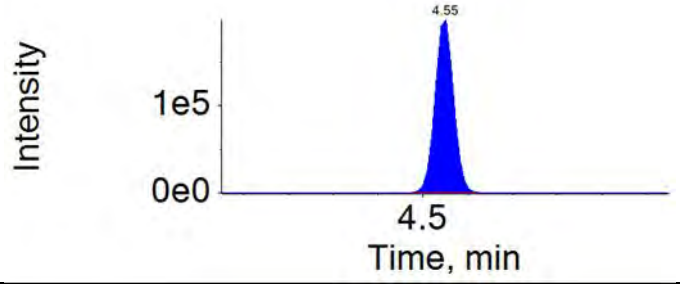
Extraction Standard: 13C3-PFBS
302.0 / 80.0



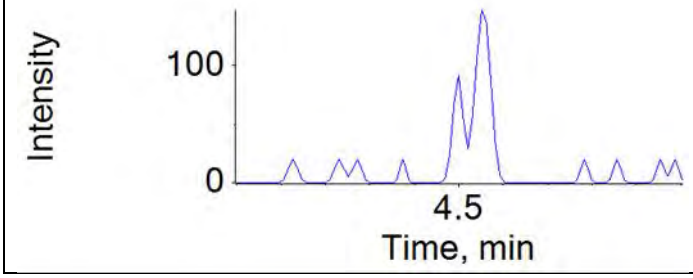
Analyte: PFHpA
363.0 / 319.0



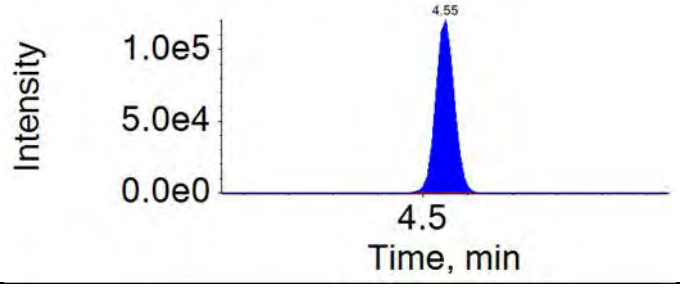
Extraction Standard: 13C4-PFHpA
367.0 / 322.0



Analyte: PFHxS
399.0 / 80.0



Extraction Standard: 13C3-PFHxS
402.0 / 80.0

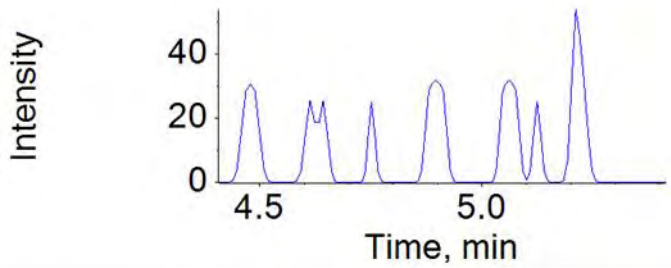


APPROVED
By JPT at 4:33 pm, 11/13/18

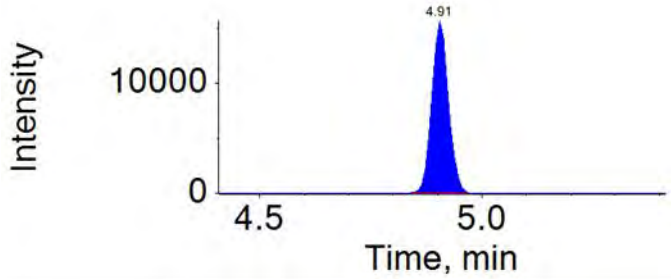
REVIEWED
By umar at 5:40 pm, 11/13/18

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV13DCCV1-4 11/13/2018 4:25:30 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

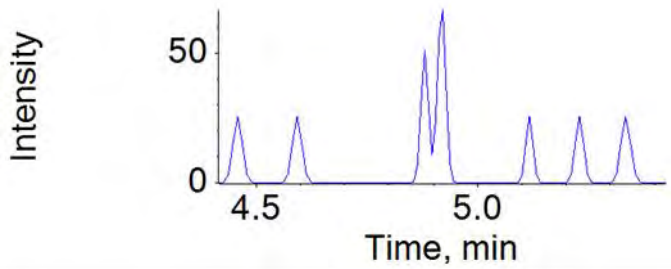
Analyte: 6:2-FTS
427.0 / 407.0



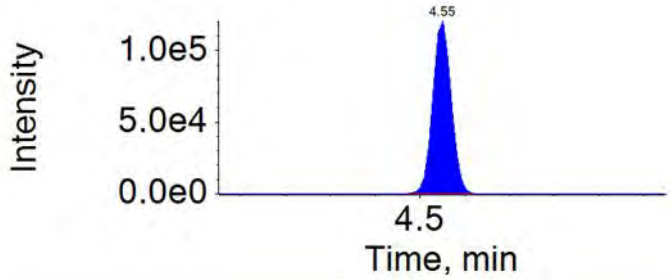
Extraction Standard: 13C2-6:2-FTS
429.0 / 81.0



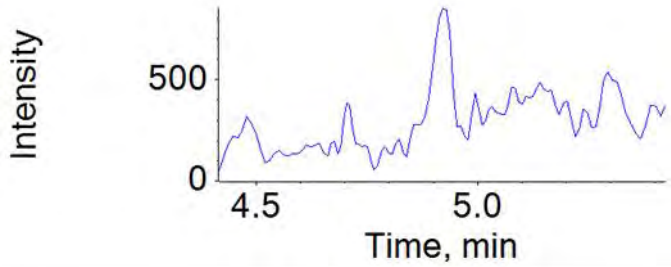
Analyte: PFHpS
449.0 / 80.0



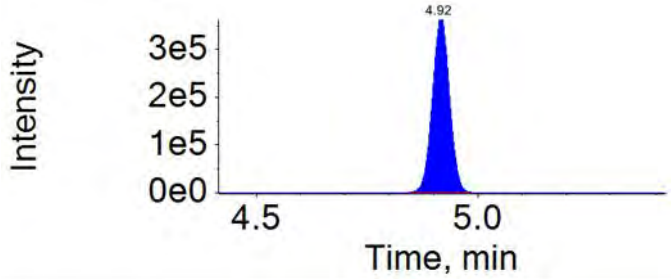
Extraction Standard: 13C3-PFHxS
402.0 / 80.0



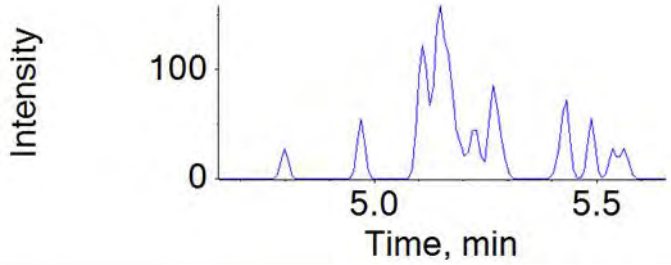
Analyte: PFOA
413.0 / 369.0



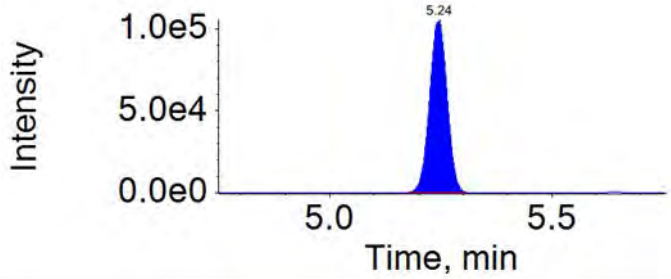
Extraction Standard: 13C8-PFOA
421.0 / 376.0



Analyte: PFOS
499.0 / 80.0

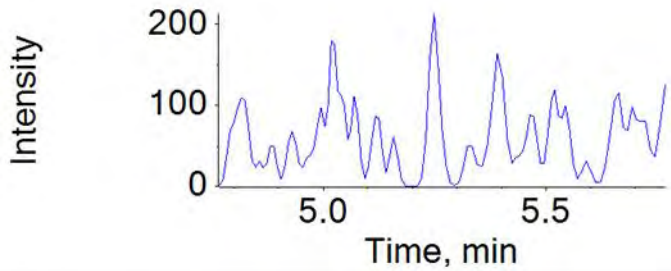


Extraction Standard: 13C8-PFOS
507.0 / 80.0

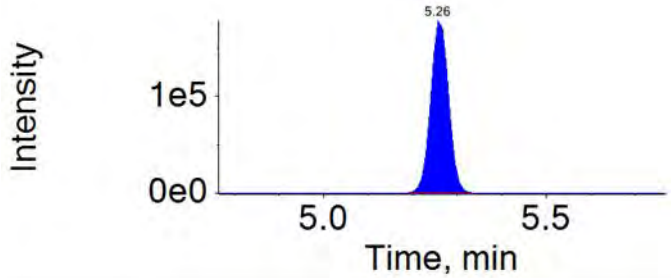


ICAL Name: 18NOV12DCAL **Result Table:** 18NOV13DCCV1-4 11/13/2018 4:25:30 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

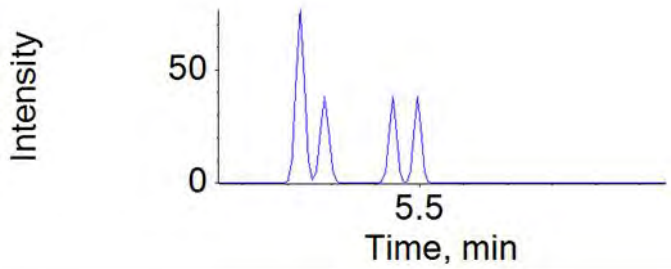
Analyte: PFNA
463.0 / 419.0



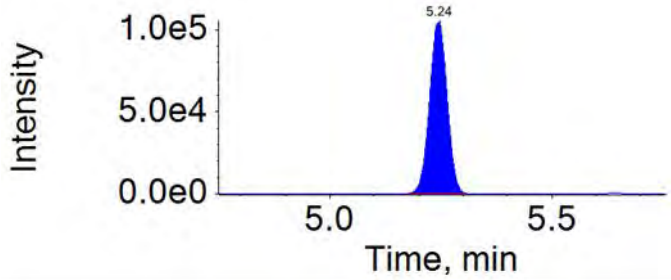
Extraction Standard: 13C9-PFNA
472.0 / 427.0



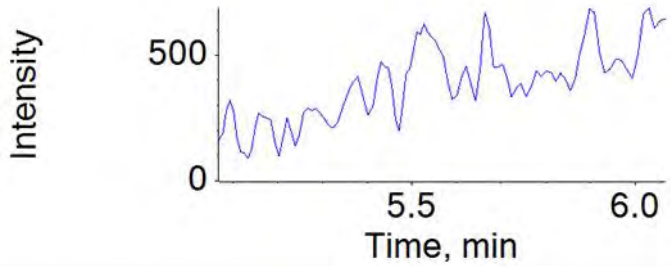
Analyte: PFNS
549.0 / 80.0



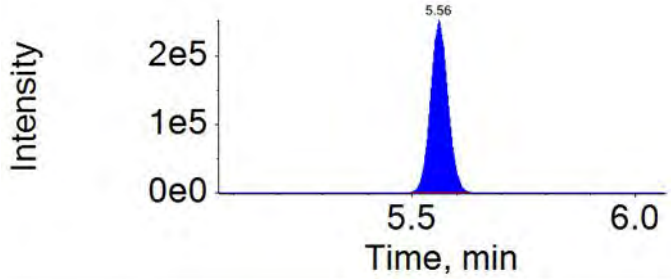
Extraction Standard: 13C8-PFOS
507.0 / 80.0



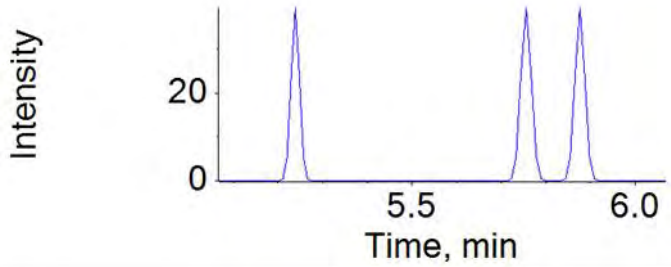
Analyte: PFDA
513.0 / 469.0



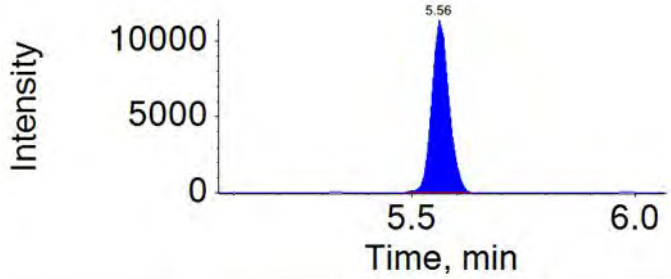
Extraction Standard: 13C6-PFDA
519.0 / 474.0



Analyte: 8:2-FTS
527.0 / 507.0



Extraction Standard: 13C2-8:2-FTS
529.0 / 81.0

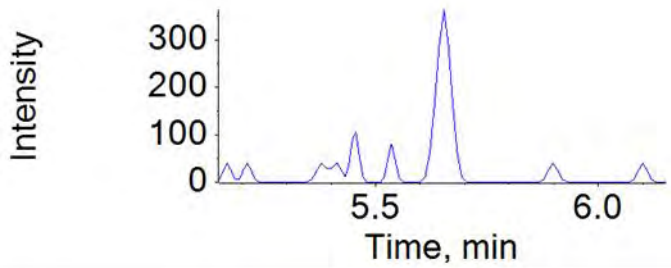


APPROVED
By JPT at 4:33 pm, 11/13/18

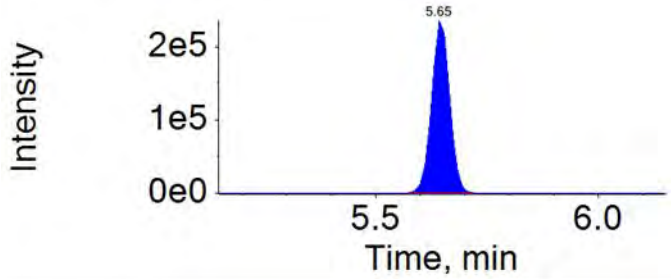
REVIEWED
By umar at 5:40 pm, 11/13/18

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV13DCCV1-4 11/13/2018 4:25:30 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

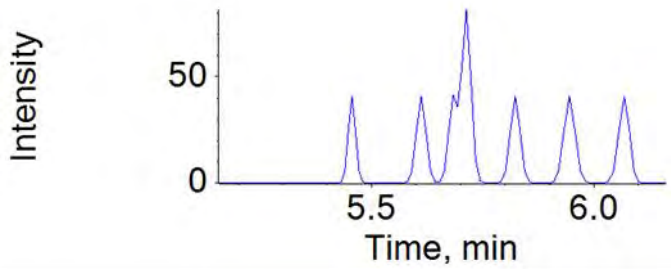
Analyte: PFOSA
498.0 / 78.0



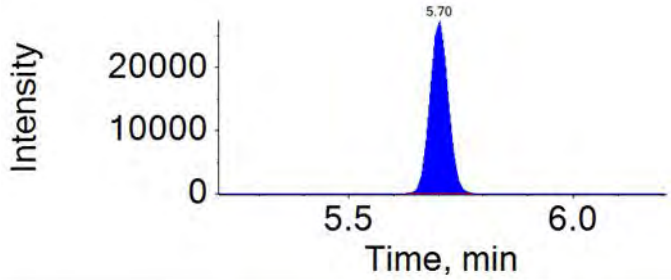
Extraction Standard: 13C8-PFOSA
506.0 / 78.0



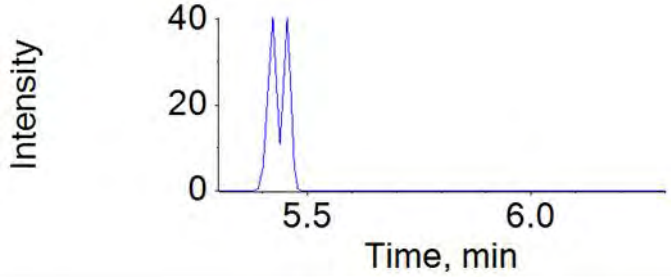
Analyte: NMeFOSAA
570.0 / 419.0



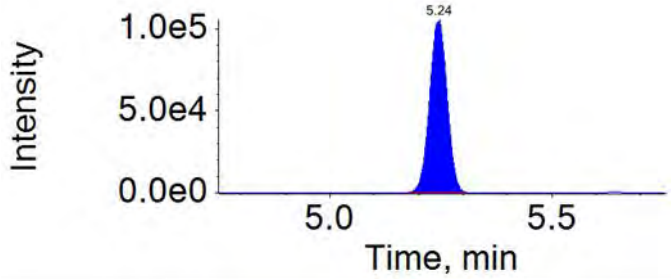
Extraction Standard: d3-NMeFOSAA
573.0 / 419.0



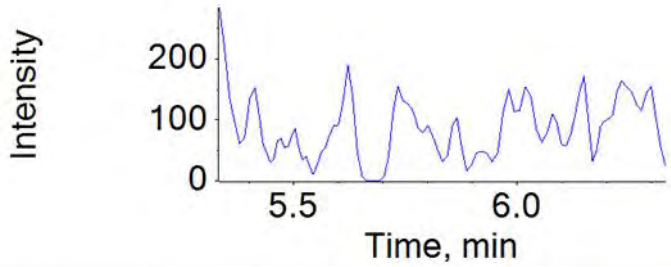
Analyte: PFDS
599.0 / 80.0



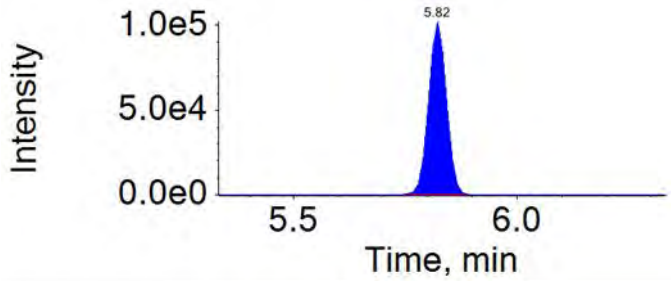
Extraction Standard: 13C8-PFOS
507.0 / 80.0



Analyte: PFUnDA
563.0 / 519.0



Extraction Standard: 13C7-PFUnDA
570.0 / 525.0

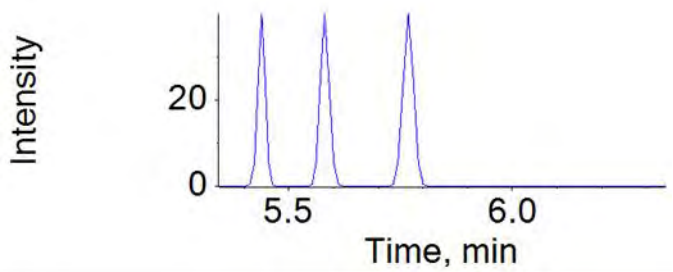


APPROVED
By JPT at 4:33 pm, 11/13/18

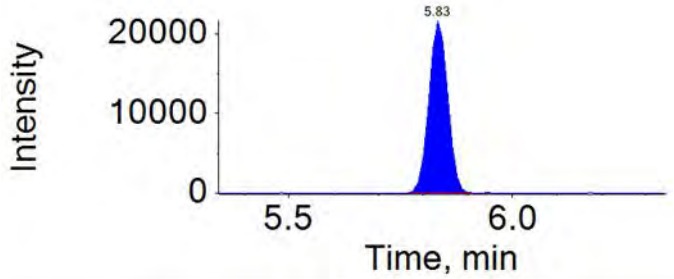
REVIEWED
By umar at 5:40 pm, 11/13/18

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV13DCCV1-4 11/13/2018 4:25:30 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

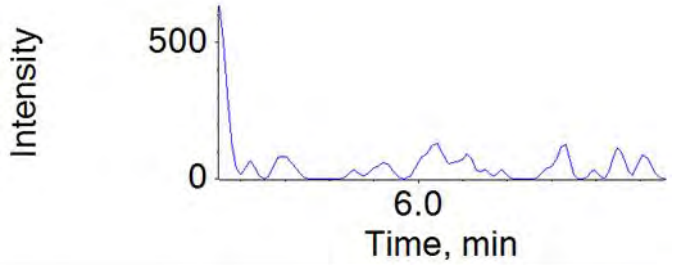
Analyte: NEtFOSAA
584.0 / 419.0



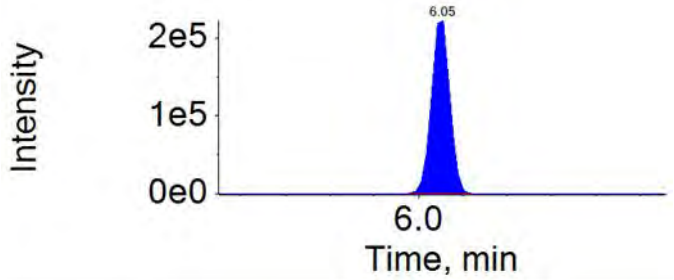
Extraction Standard: d5-NEtFOSAA
589.0 / 419.0



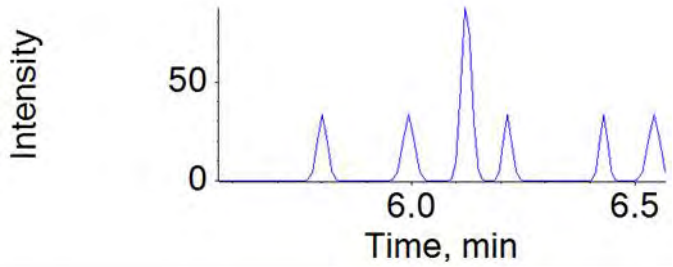
Analyte: PFDoDA
613.0 / 569.0



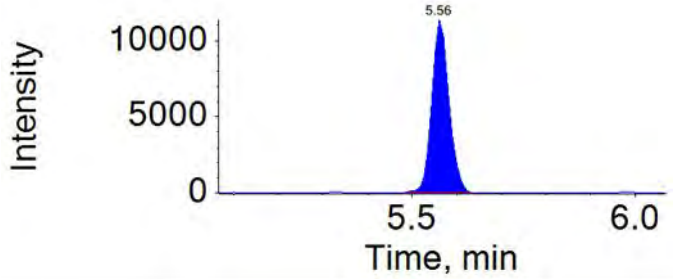
Extraction Standard: 13C2-PFDoDA
615.0 / 570.0



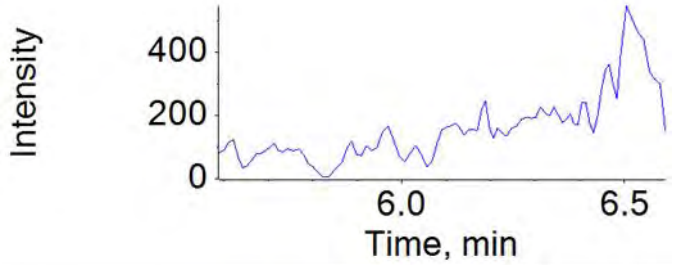
Analyte: 10:2-FTS
627.0 / 607.0



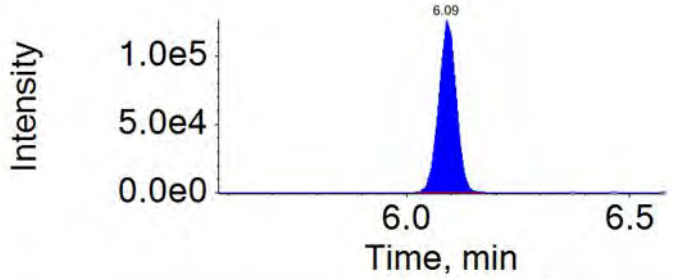
Extraction Standard: 13C2-8:2-FTS
529.0 / 81.0



Analyte: NMePFOSAE
616.0 / 59.0



Extraction Standard: d7-NMePFOSAE
623.0 / 59.0

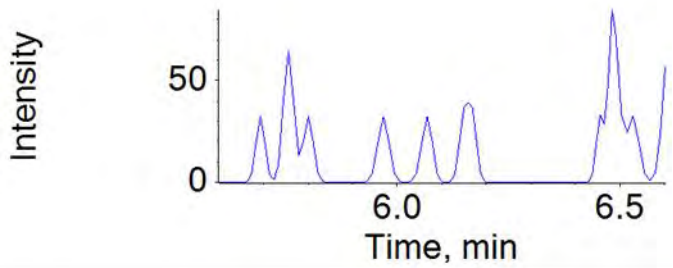


APPROVED
By JPT at 4:33 pm, 11/13/18

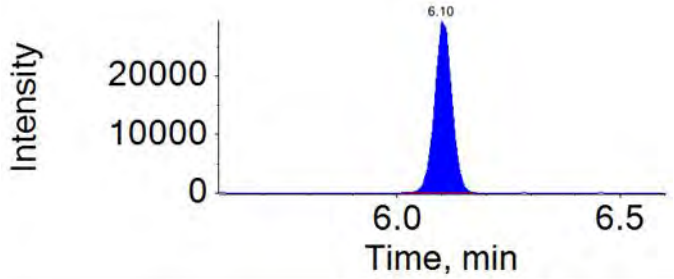
REVIEWED
By umar at 5:40 pm, 11/13/18

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV13DCCV1-4 11/13/2018 4:25:30 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

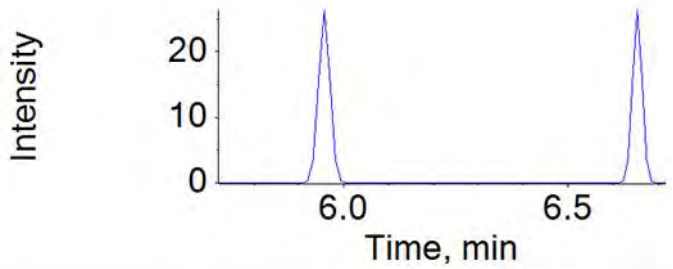
Analyte: NMePFOSA
512.0 / 169.0



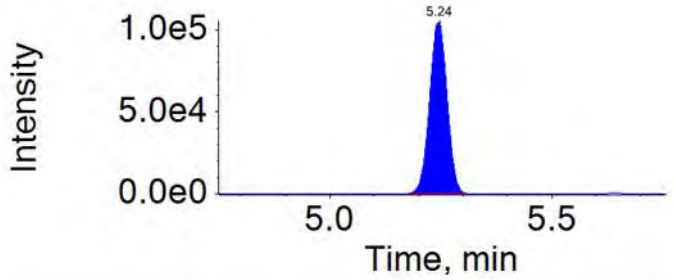
Extraction Standard: d3-NMePFOSA
515.0 / 169.0



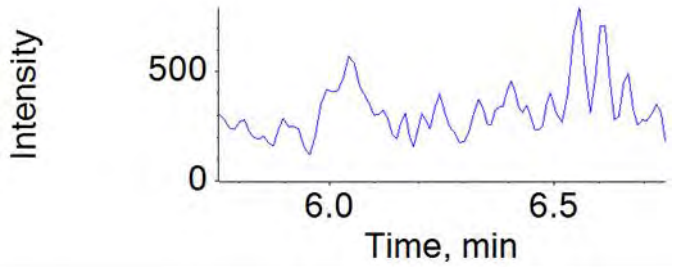
Analyte: PFDoS
699.0 / 80.0



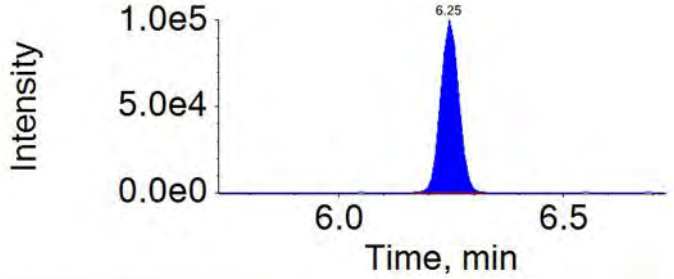
Extraction Standard: 13C8-PFOS
507.0 / 80.0



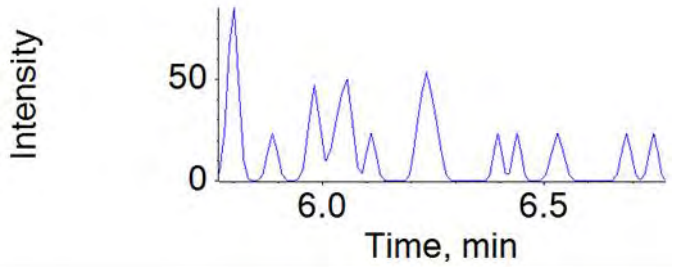
Analyte: NEtPFOSAE
630.0 / 59.0



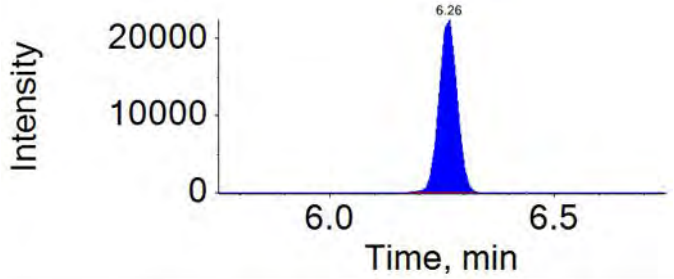
Extraction Standard: d9-NEtPFOSAE
639.0 / 59.0



Analyte: NEtPFOSA
526.0 / 169.0



Extraction Standard: d5-NEtPFOSA
531.0 / 169.0

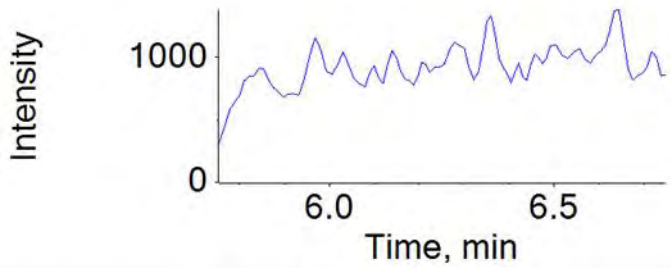


APPROVED
By JPT at 4:33 pm, 11/13/18

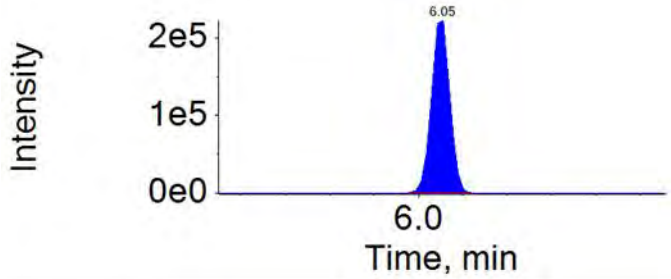
REVIEWED
By umar at 5:40 pm, 11/13/18

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV13DCCV1-4 11/13/2018 4:25:30 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

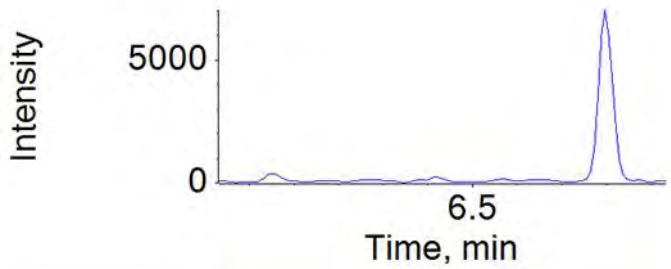
Analyte: PFTrDA
663.0 / 619.0



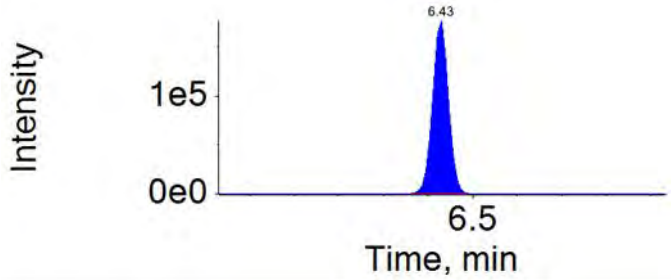
Extraction Standard: 13C2-PFDoDA
615.0 / 570.0



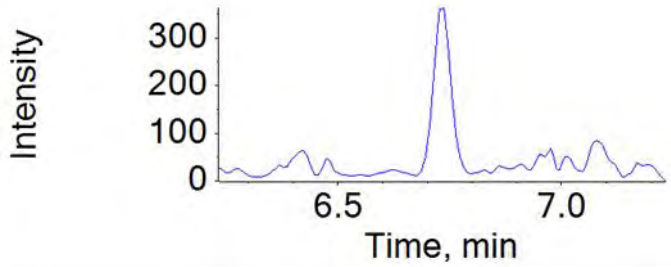
Analyte: PFTeDA
713.0 / 669.0



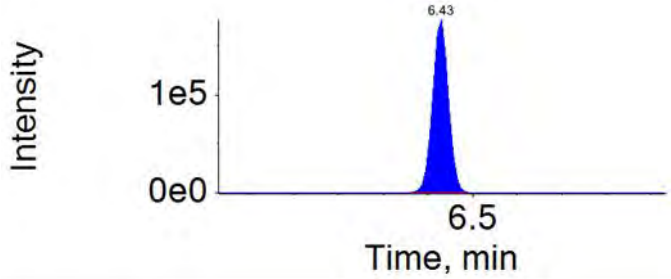
Extraction Standard: 13C2-PFTeDA
715.0 / 670.0



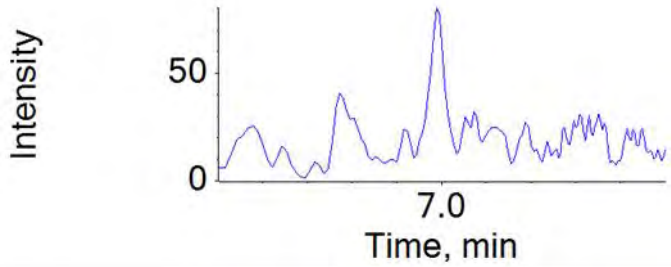
Analyte: PFHxDA
813.0 / 769.0



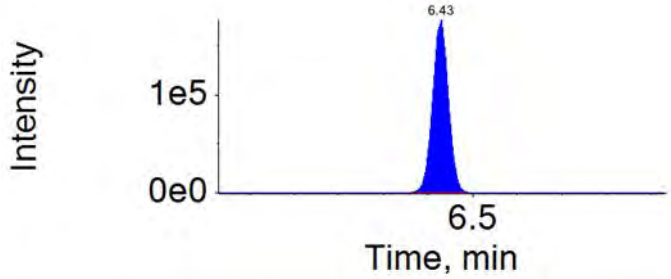
Extraction Standard: 13C2-PFTeDA
715.0 / 670.0



Analyte: PFODA
913.0 / 869.0



Extraction Standard: 13C2-PFTeDA
715.0 / 670.0



APPROVED
By JPT at 4:33 pm, 11/13/18

REVIEWED
By umar at 5:40 pm, 11/13/18

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LC-MS/MS Analysis Report

Printed: 11/13/2018 4:29:00 PM
Template: IonRatio18OCT10

Ion Ratio Report

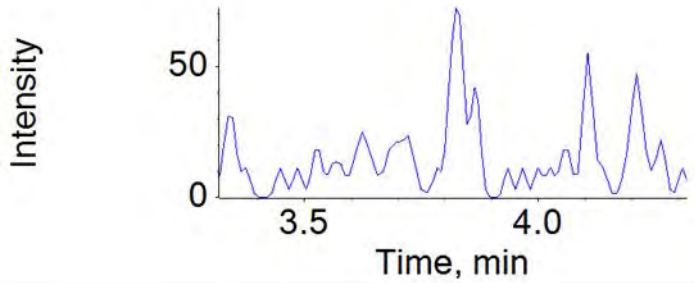
Sample Name: INBLK **Instrument Name:** LM27631 **File Name:** 18NOV13D-06.wiff

Component Name	RT	RRT	Analyte Area Response	Int Typ	Expected Ion Ratio	Ion Ratio	Ion Ratio % Diff	Ion Ratio Limit	Ion Ratio OOS
PFBS	N/A	N/A	N/A	A	N/A	N/A			
PFBS_2	N/A	N/A	N/A	A	N/A	N/A		50	
4:2-FTS	N/A	N/A	N/A	A	N/A	N/A			
4:2 FTS_2	N/A	N/A	N/A	A	N/A	N/A		#NA!	
PFHxA	N/A	N/A	N/A	A	N/A	N/A			
PFHxA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFPeS	N/A	N/A	N/A	A	N/A	N/A			
PFPeS_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFHpA	N/A	N/A	N/A	A	N/A	N/A			
PFHpA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFHxS	N/A	N/A	N/A	A	N/A	N/A			
PFHxS_2	N/A	N/A	N/A	A	N/A	N/A		50	
6:2-FTS	N/A	N/A	N/A	A	N/A	N/A			
6:2 FTS_2	N/A	N/A	N/A	A	N/A	N/A		#NA!	
PFHpS	N/A	N/A	N/A	A	N/A	N/A			
PFHpS_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFOA	N/A	N/A	N/A	A	N/A	N/A			
PFOA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFOS	N/A	N/A	N/A	A	N/A	N/A			
PFOS_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFNA	N/A	N/A	N/A	A	N/A	N/A			
PFNA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFNS	N/A	N/A	N/A	A	N/A	N/A			
PFNS_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFDA	N/A	N/A	N/A	A	N/A	N/A			
PFDA_2	N/A	N/A	N/A	A	N/A	N/A		50	
8:2-FTS	N/A	N/A	N/A	A	N/A	N/A			
8:2 FTS_2	N/A	N/A	N/A	A	N/A	N/A		#NA!	
NMeFOSAA	N/A	N/A	N/A	A	N/A	N/A			
NMeFOSAA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFDS	N/A	N/A	N/A	A	N/A	N/A			
PFDS_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFUnDA	N/A	N/A	N/A	A	N/A	N/A			
PFUnDA_2	N/A	N/A	N/A	A	N/A	N/A		50	
NEtFOSAA	N/A	N/A	N/A	A	N/A	N/A			
NEtFOSAA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFDoDA	N/A	N/A	N/A	A	N/A	N/A			
PFDoDA_2	N/A	N/A	N/A	A	N/A	N/A		50	
10:2-FTS	N/A	N/A	N/A	A	N/A	N/A			
10:2 FTS_2	N/A	N/A	N/A	A	N/A	N/A		#NA!	
PFTrDA	N/A	N/A	N/A	A	N/A	N/A			
PFTrDA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFTeDA	N/A	N/A	N/A	A	N/A	N/A			
PFTeDA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFHxDA	N/A	N/A	N/A	A	N/A	N/A			
PFHxDA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFODA	N/A	N/A	N/A	A	N/A	N/A			
PFODA_2	N/A	N/A	N/A	A	N/A	N/A		50	

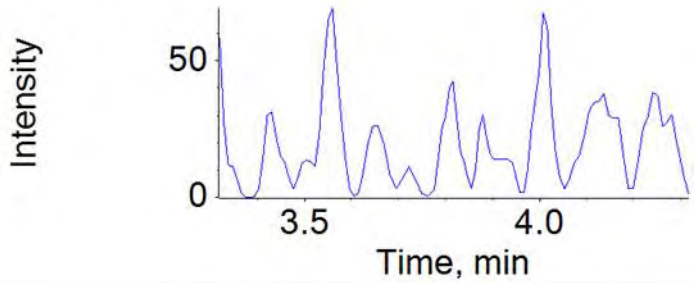
APPROVED
By JPT at 4:33 pm, 11/13/18

REVIEWED
By umar at 5:40 pm, 11/13/18

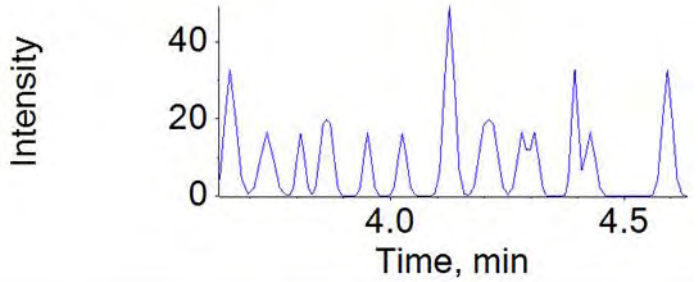
Component: PFBS
Primary Mass: 299.0 / 80.0



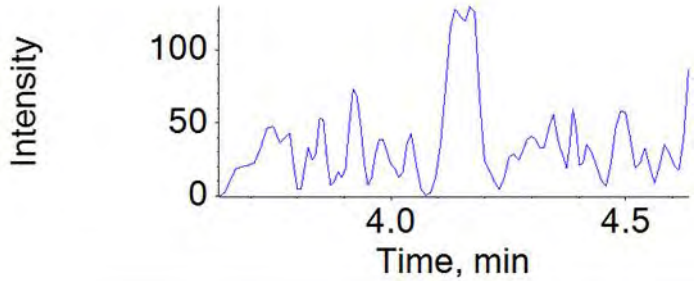
Component: PFBS_2
Secondary Mass: 299.0 / 99.0



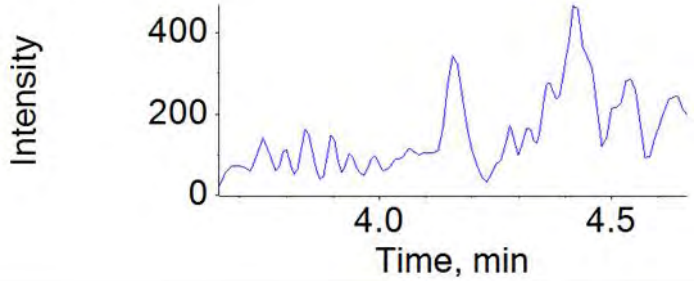
Component: 4:2-FTS
Primary Mass: 327.0 / 307.0



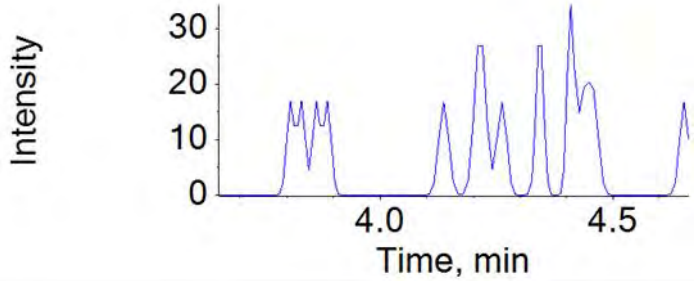
Component: 4:2 FTS_2
Secondary Mass: 327.0 / 81.0



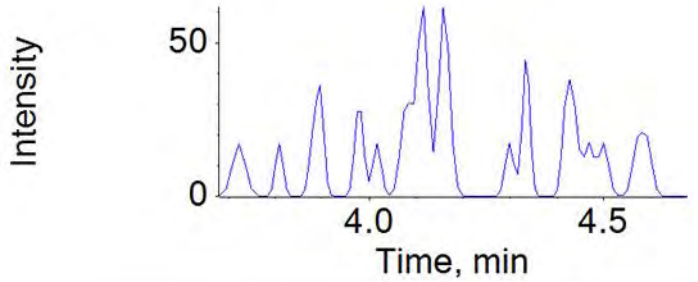
Component: PFHxA
Primary Mass: 313.0 / 269.0



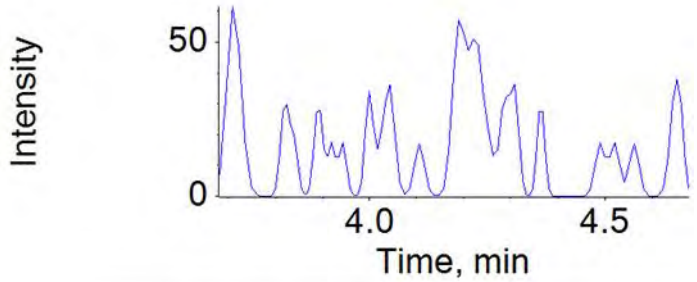
Component: PFHxA_2
Secondary Mass: 313.0 / 119.0



Component: PFPeS
Primary Mass: 349.0 / 80.0



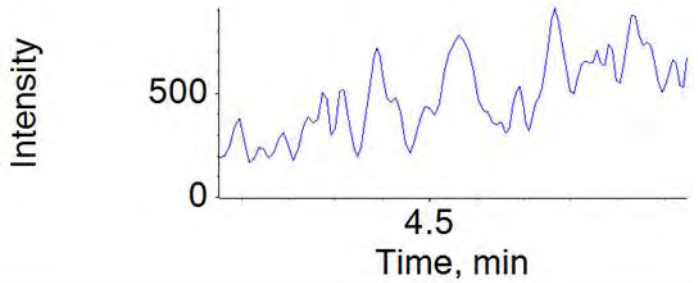
Component: PFPeS_2
Secondary Mass: 349.0 / 99.0



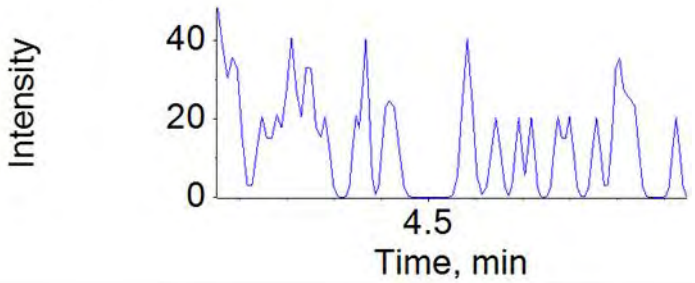
APPROVED
By JPT at 4:33 pm, 11/13/18

REVIEWED
By umar at 5:40 pm, 11/13/18

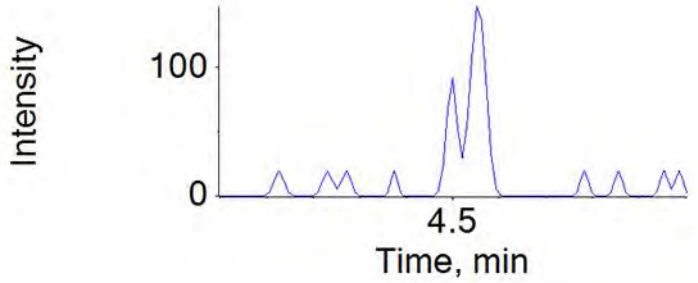
Component: PFHpA
Primary Mass: 363.0 / 319.0



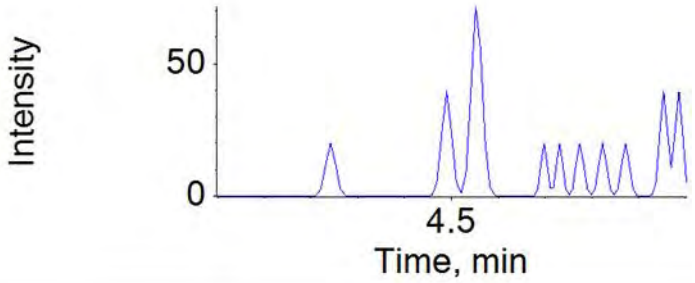
Component: PFHpA_2
Secondary Mass: 363.0 / 169.0



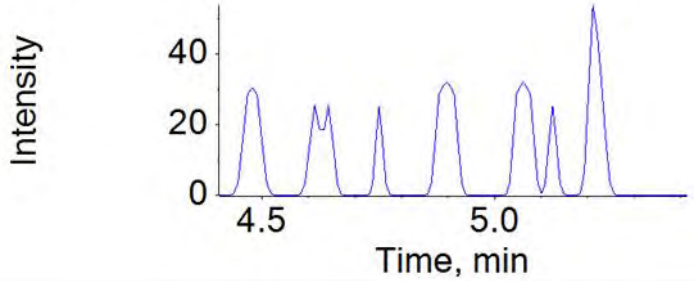
Component: PFHxS
Primary Mass: 399.0 / 80.0



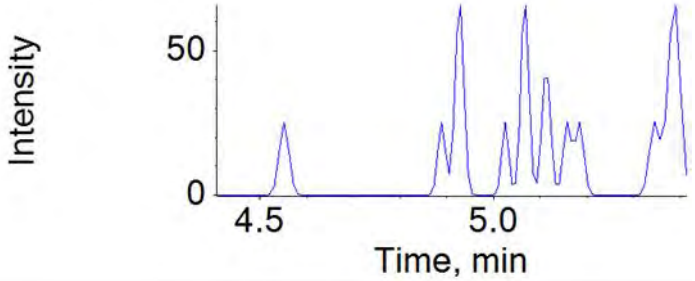
Component: PFHxS_2
Secondary Mass: 399.0 / 99.0



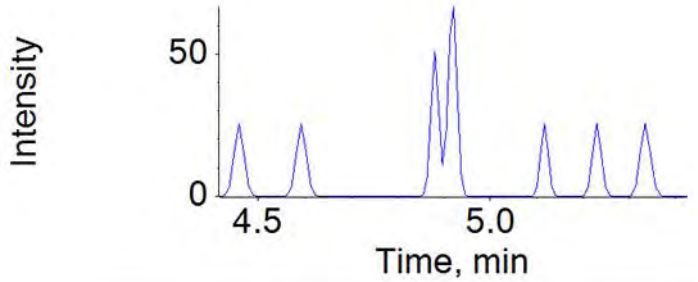
Component: 6:2-FTS
Primary Mass: 427.0 / 407.0



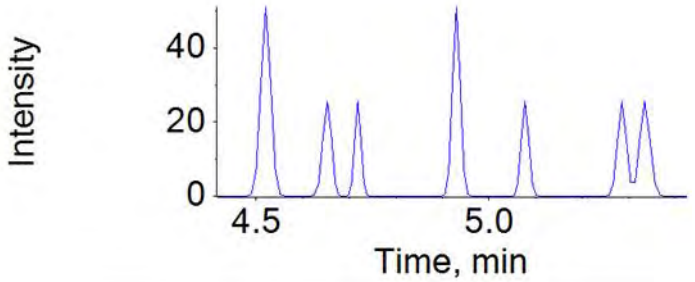
Component: 6:2 FTS_2
Secondary Mass: 427.0 / 81.0



Component: PFHpS
Primary Mass: 449.0 / 80.0



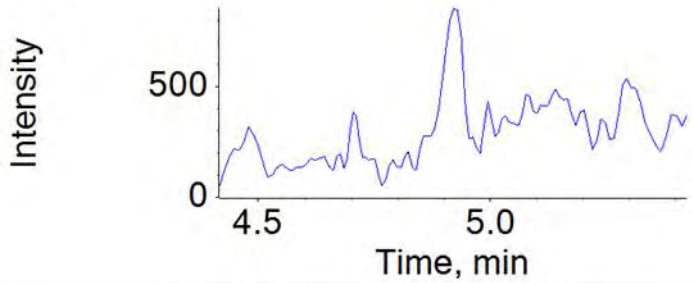
Component: PFHpS_2
Secondary Mass: 449.0 / 99.0



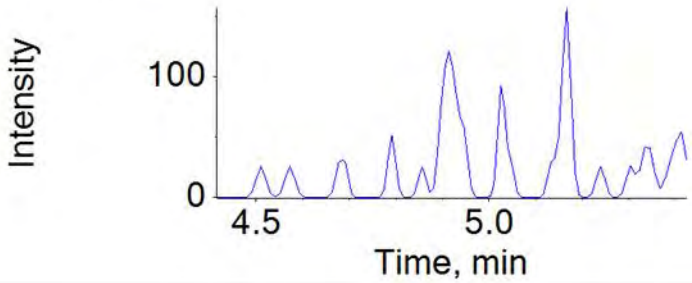
APPROVED
By JPT at 4:33 pm, 11/13/18

REVIEWED
By umar at 5:40 pm, 11/13/18

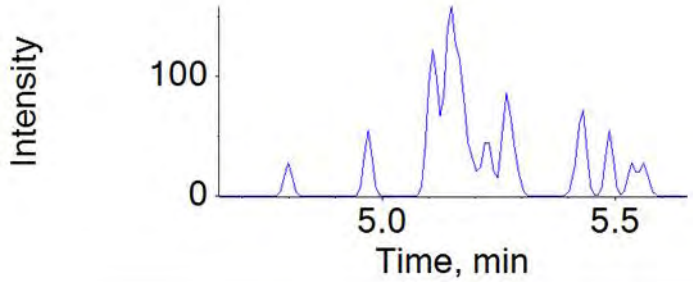
Component: PFOA
Primary Mass: 413.0 / 369.0



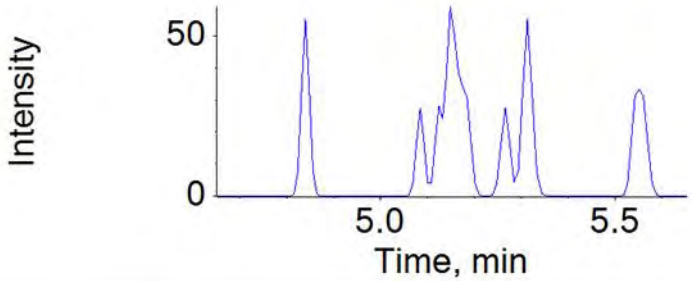
Component: PFOA_2
Secondary Mass: 413.0 / 169.0



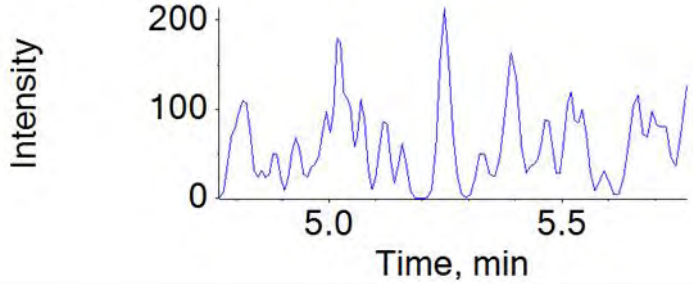
Component: PFOS
Primary Mass: 499.0 / 80.0



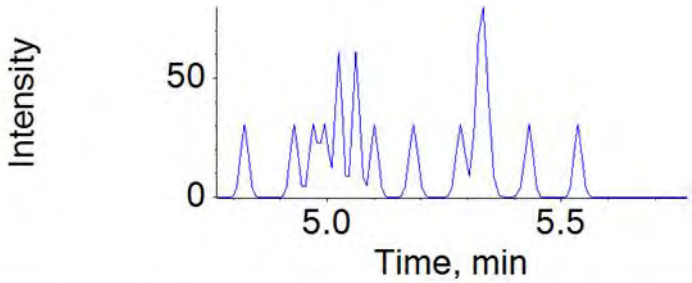
Component: PFOS_2
Secondary Mass: 499.0 / 99.0



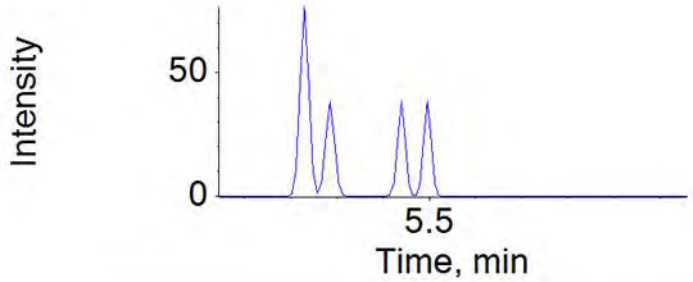
Component: PFNA
Primary Mass: 463.0 / 419.0



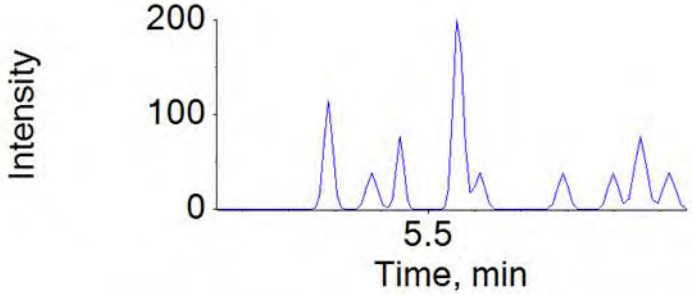
Component: PFNA_2
Secondary Mass: 463.0 / 169.0



Component: PFNS
Primary Mass: 549.0 / 80.0



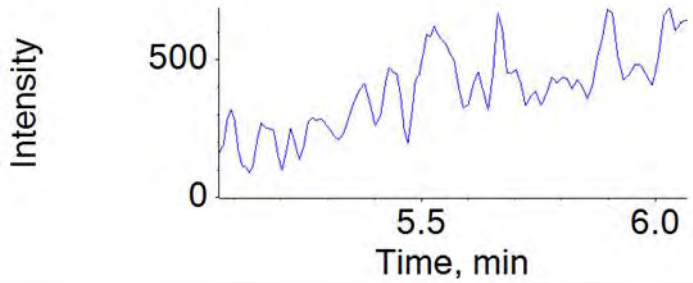
Component: PFNS_2
Secondary Mass: 549.0 / 99.0



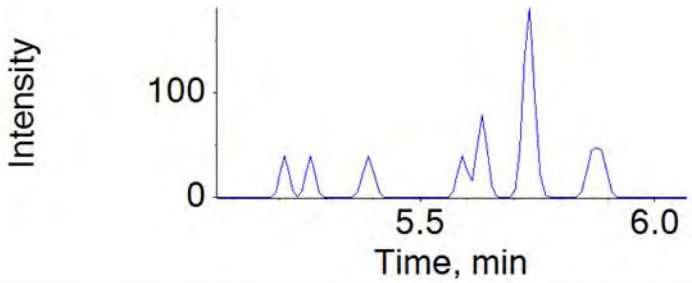
APPROVED
By JPT at 4:33 pm, 11/13/18

REVIEWED
By umar at 5:40 pm, 11/13/18

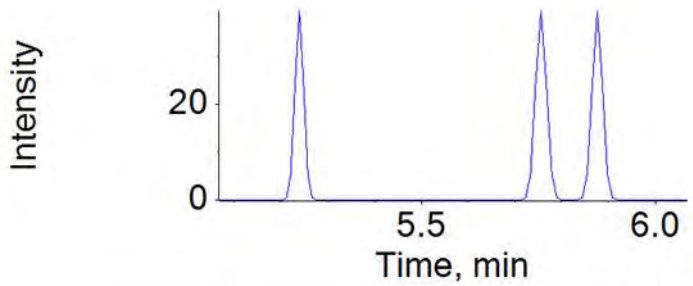
Component: PFDA
Primary Mass: 513.0 / 469.0



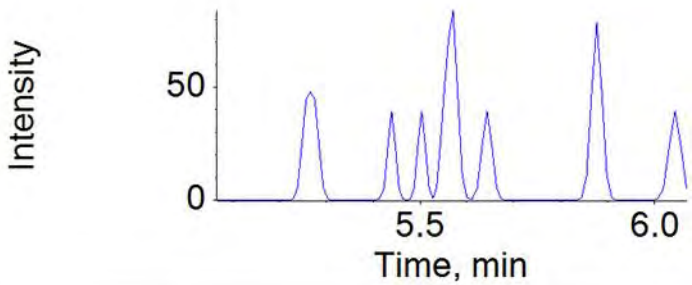
Component: PFDA_2
Secondary Mass: 513.0 / 169.0



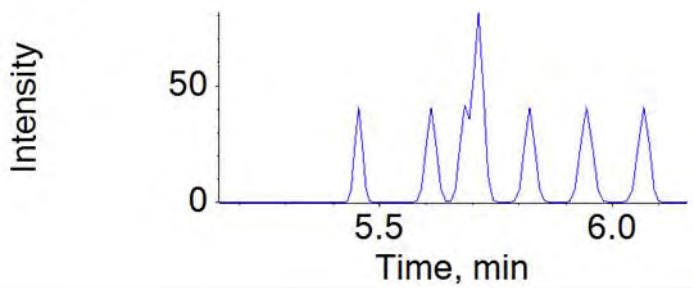
Component: 8:2-FTS
Primary Mass: 527.0 / 507.0



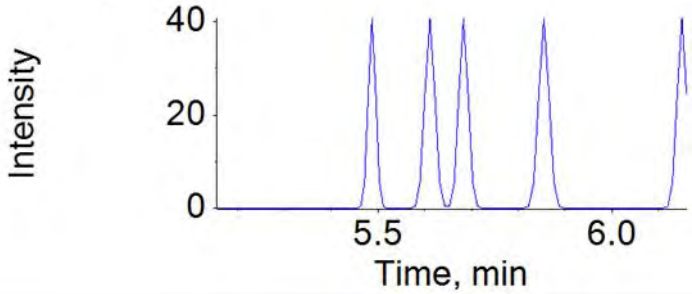
Component: 8:2 FTS_2
Secondary Mass: 527.0 / 81.0



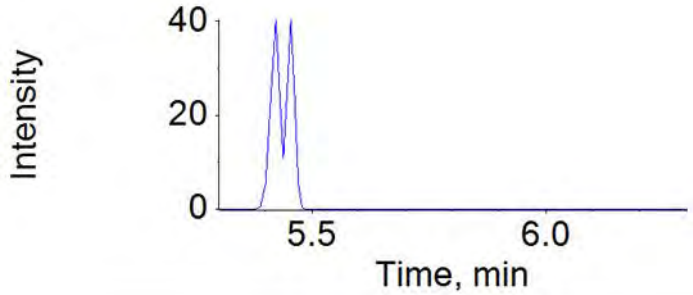
Component: NMeFOSAA
Primary Mass: 570.0 / 419.0



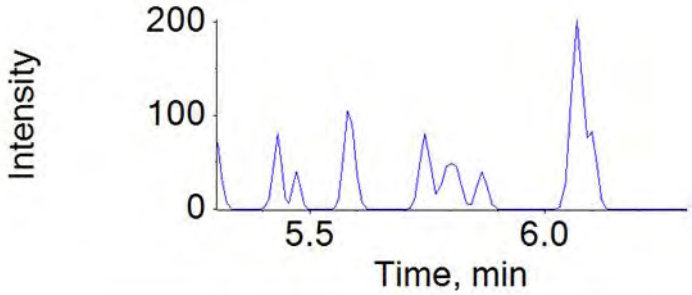
Component: NMeFOSAA_2
Secondary Mass: 570.0 / 483.0



Component: PFDS
Primary Mass: 599.0 / 80.0



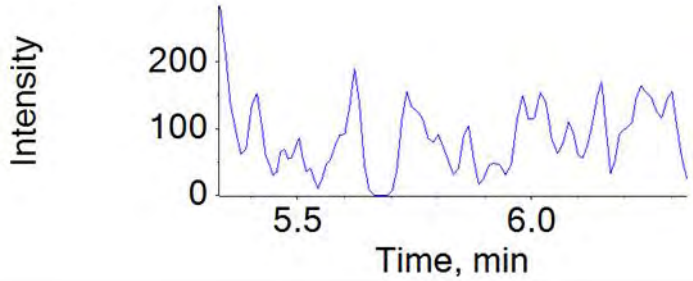
Component: PFDS_2
Secondary Mass: 599.0 / 99.0



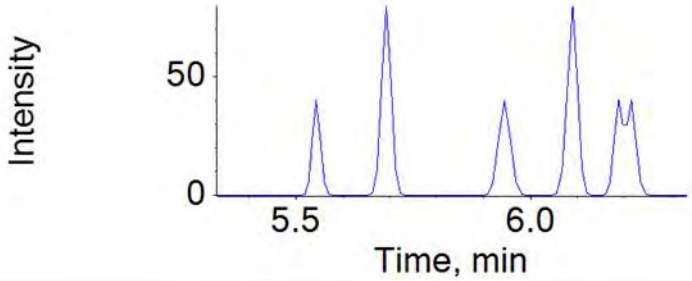
APPROVED
By JPT at 4:33 pm, 11/13/18

REVIEWED
By umar at 5:40 pm, 11/13/18

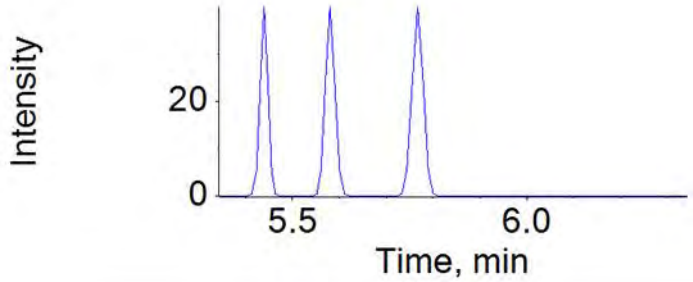
Component: PFUnDA
Primary Mass: 563.0 / 519.0



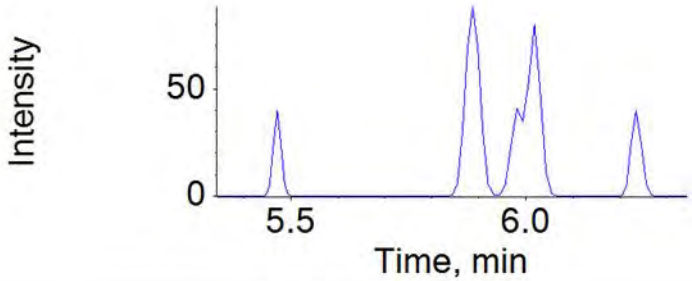
Component: PFUnDA_2
Secondary Mass: 563.0 / 169.0



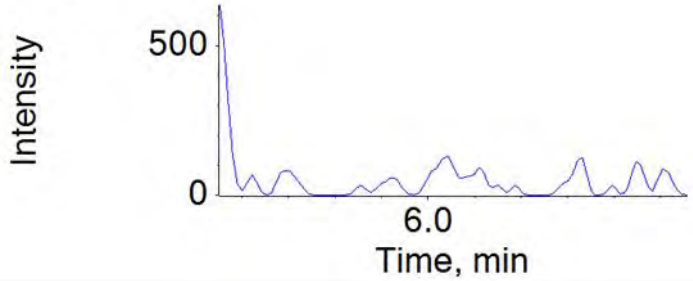
Component: NEtFOSAA
Primary Mass: 584.0 / 419.0



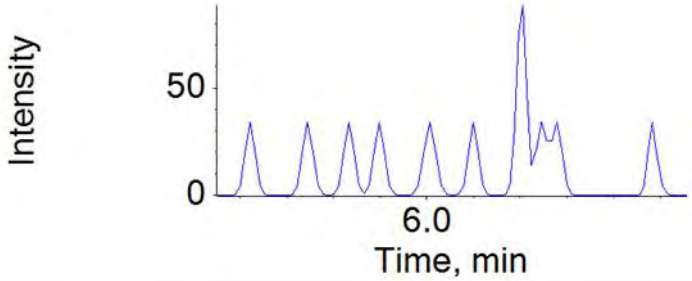
Component: NEtFOSAA_2
Secondary Mass: 584.0 / 526.0



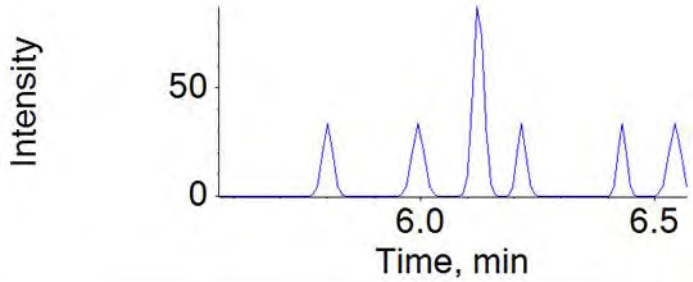
Component: PFDoDA
Primary Mass: 613.0 / 569.0



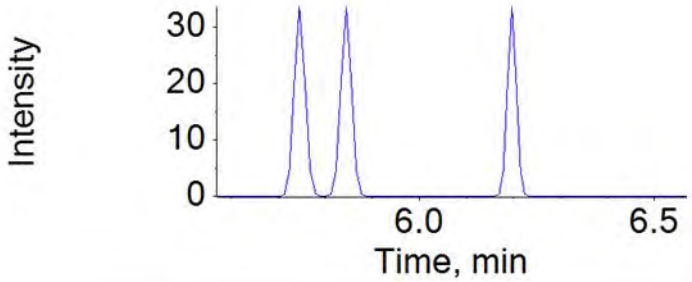
Component: PFDoDA_2
Secondary Mass: 613.0 / 169.0



Component: 10:2-FTS
Primary Mass: 627.0 / 607.0



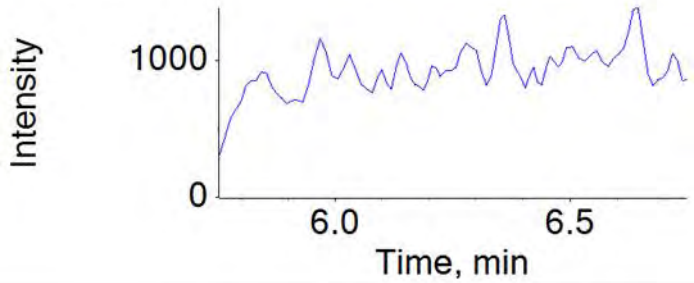
Component: 10:2 FTS_2
Secondary Mass: 627.0 / 81.0



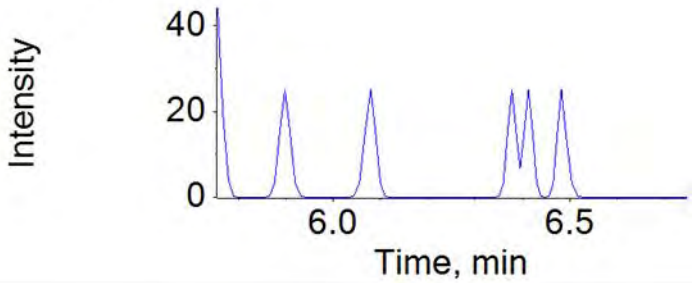
APPROVED
By JPT at 4:33 pm, 11/13/18

REVIEWED
By umar at 5:40 pm, 11/13/18

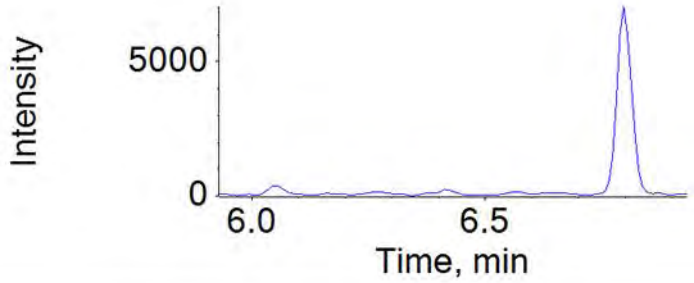
Component: PFTrDA
Primary Mass: 663.0 / 619.0



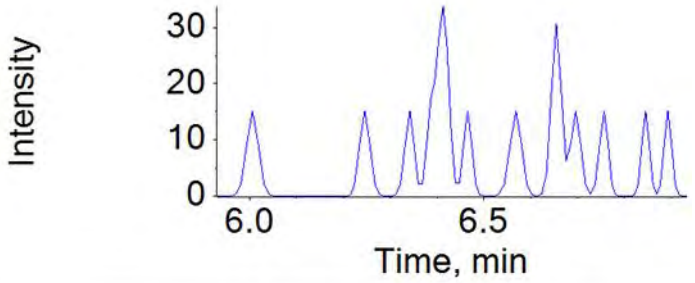
Component: PFTrDA_2
Secondary Mass: 663.0 / 169.0



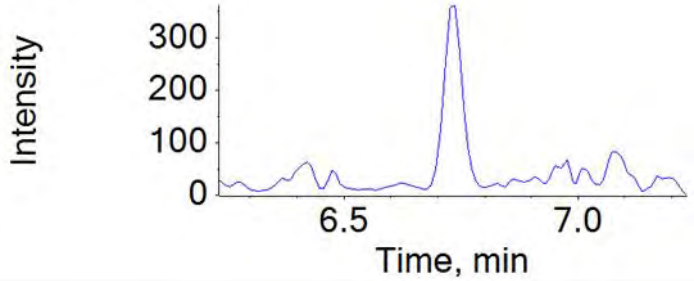
Component: PFTeDA
Primary Mass: 713.0 / 669.0



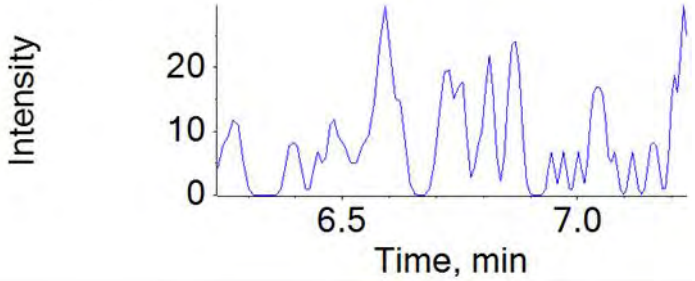
Component: PFTeDA_2
Secondary Mass: 713.0 / 169.0



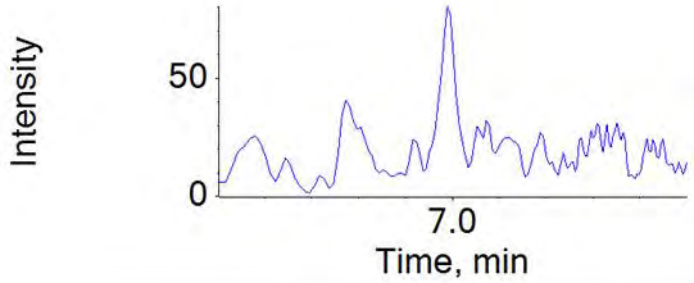
Component: PFHxDA
Primary Mass: 813.0 / 769.0



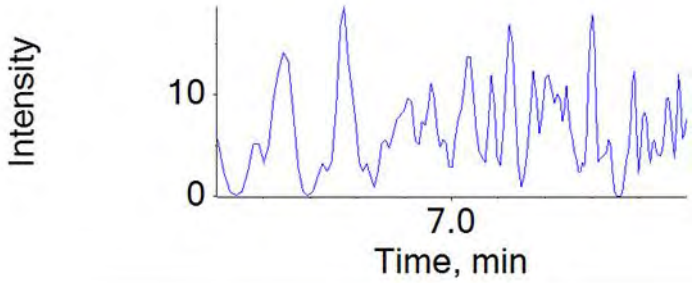
Component: PFHxDA_2
Secondary Mass: 813.0 / 169.0



Component: PFODA
Primary Mass: 913.0 / 869.0



Component: PFODA_2
Secondary Mass: 913.0 / 169.0



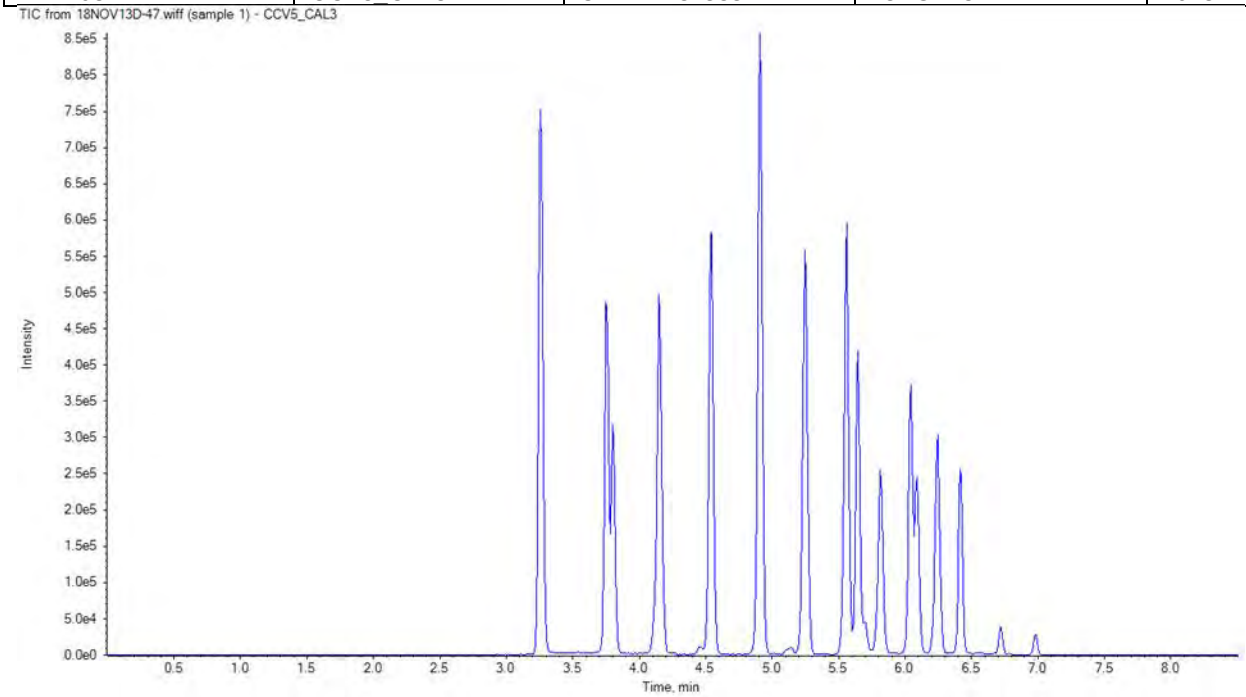
APPROVED
By JPT at 4:33 pm, 11/13/18

REVIEWED
By umar at 5:40 pm, 11/13/18

Continuing Calibration Verfication

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV13DCCV5 11/13/2018 4:55:52 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Instrument Name:	Sample Name:	Sample ID:	Sample File:	Acquisition Date:
LM27631	CCV5_CAL3	CALBRN31833B	18NOV13D-47.wiff	2018-11-13T16:38:29



Injection Standard Area Reference File: 18NOV13D-05

Injection Standard Name	Inj Std Conc	Injection Std Peak Area	Reference Injection Standard Area	Injection Std %Diff	Injection Std %Diff Limit	Injection Std %Diff OOS
13C3-PFBA	5.0	658776.2	661126.9	0	50	
13C2-PFOA	5.0	461523.7	466902.6	-1	50	
13C4-PFOS	4.8	249261.5	247446.9	1	50	
13C2-PFDA	5.0	278804.3	295381.6	-6	50	

APPROVED
By JPT at 5:00 pm, 11/13/18

REVIEWED
By umar at 5:42 pm, 11/13/18

Continuing Calibration Verfication

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV13DCCV5 11/13/2018 4:55:52 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Instrument Name:	Sample Name:	Sample ID:	Sample File:	Acquisition Date:
LM27631	CCV5_CAL3	CALBRN31833B	18NOV13D-47.wiff	2018-11-13T16:38:29

Analyte Name	Analyte Area	Sc /pk	Ext Std Name	Ext Std Area	Ext Std con	Area Ratio	RT (min)	RRT	Spec Amt	Calc Amt	% Diff	% Diff Lim	% Diff OOS
PFBA	307991.5	10	13C4-PFBA	752496.6	5.0	0.409	3.26	1.000	2.000	2.267	13	30	
PFPeA	295604.4	11	13C5-PFPeA	743769.5	5.0	0.397	3.76	1.000	2.000	2.301	15	30	
PFBS	173380.5	11	13C3-PFBS	423188.1	4.7	0.410	3.80	1.000	1.770	1.949	10	30	
4:2-FTS	39454.2	12	13C2-4:2-FTS	45745.2	4.7	0.862	4.12	1.000	1.870	2.342	25	30	
PFHxA	359338.4	11	13C5-PFHxA	670326.8	5.0	0.536	4.15	1.000	2.000	2.238	12	30	
PFPeS	86328.6	11	13C3-PFBS	423188.1	4.7	0.204	4.17	1.100	1.880	1.980	5	30	
PFHpA	366823.7	12	13C4-PFHpA	522354.9	5.0	0.702	4.54	1.000	2.000	2.328	16	30	
PFHxS	129050.1	18	13C3-PFHxS	314815.3	4.7	0.410	4.54	1.000	1.820	1.988	9	30	
6:2-FTS	28406.1	11	13C2-6:2-FTS	34309.0	4.8	0.828	4.90	1.000	1.900	2.004	5	30	
PFHpS	120412.1	11	13C3-PFHxS	314815.3	4.7	0.382	4.90	1.080	1.900	2.013	6	30	
PFOA	386893.4	11	13C8-PFOA	884816.5	5.0	0.437	4.91	1.000	2.000	2.335	17	30	
PFOS	124584.3	22	13C8-PFOS	257886.0	4.8	0.483	5.24	1.000	1.850	2.113	14	30	
PFNA	306064.7	11	13C9-PFNA	455726.4	5.0	0.672	5.25	1.000	2.000	2.422	21	30	
PFNS	81247.8	11	13C8-PFOS	257886.0	4.8	0.315	5.54	1.060	1.920	2.204	15	30	
PFDA	262885.4	11	13C6-PFDA	630322.1	5.0	0.417	5.56	1.000	2.000	2.211	11	30	
8:2-FTS	26997.8	11	13C2-8:2-FTS	26954.4	4.8	1.002	5.56	1.000	1.920	2.335	22	30	
PFOSA	277186.5	11	13C8-PFOSA	633039.8	5.0	0.438	5.64	1.000	2.000	2.139	7	30	
NMeFOSAA	26509.8	19	d3-NMeFOSAA	70625.2	5.0	0.375	5.70	1.000	2.000	2.121	6	30	
PFDS	57377.5	11	13C8-PFOS	257886.0	4.8	0.222	5.79	1.110	1.930	2.016	4	30	
PFUnDA	206119.4	11	13C7-PFUnDA	249545.0	5.0	0.826	5.82	1.000	2.000	2.159	8	30	
NEtFOSAA	24747.7	22	d5-NEtFOSAA	70781.7	5.0	0.350	5.83	1.000	2.000	1.833	-8	30	
PFDoDA	244015.0	12	13C2-PFDoDA	544733.3	5.0	0.448	6.04	1.000	2.000	2.281	14	30	
10:2-FTS	17038.2	12	13C2-8:2-FTS	26954.4	4.8	0.632	6.06	1.090	1.930	2.105	9	30	
NMePFOSAE	169972.6	11	d7-NMePFOSAE	305460.2	5.0	0.556	6.09	1.000	2.000	2.316	16	30	
NMePFOSA	31410.7	11	d3-NMePFOSA	76278.4	5.0	0.412	6.10	1.000	2.000	2.031	2	30	
PFDoS	28874.2	11	13C8-PFOS	257886.0	4.8	0.112	6.21	1.190	1.940	1.961	1	30	
NEtPFOSAE	179928.9	11	d9-NEtPFOSAE	263429.6	5.0	0.683	6.25	1.000	2.000	2.191	10	30	
NEtPFOSA	26596.2	11	d5-NEtPFOSA	59536.9	5.0	0.447	6.26	1.000	2.000	2.052	3	30	
PFTrDA	189964.3	11	13C2-PFDoDA	544733.3	5.0	0.349	6.24	1.030	2.000	2.201	10	30	
PFTeDA	156391.7	11	13C2-PFTeDA	396961.1	5.0	0.394	6.42	1.000	2.000	2.208	10	30	
PFHxDA	72132.1	11	13C2-PFTeDA	396961.1	5.0	0.182	6.72	1.050	2.000	2.165	8	30	
PFODA	59386.3	10	13C2-PFTeDA	396961.1	5.0	0.150	6.98	1.090	2.000	2.084	4	30	

APPROVED
By JPT at 5:00 pm, 11/13/18

REVIEWED
By umar at 5:42 pm, 11/13/18

Continuing Calibration Verfication

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV13DCCV5 11/13/2018 4:55:52 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

APPROVED
By JPT at 5:00 pm, 11/13/18

REVIEWED
By umar at 5:42 pm, 11/13/18

ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM
Result Table: 18NOV13DCCV5 11/13/2018 4:55:52 PM
Acquisition Method: 18AUG13_3uL.dam

Sample Name:	CCV5_CAL3			**Data File:**		18NOV13D-47.wiff
Sample ID:	CALBRN31833B			**Acquis Date:**		11/13/2018 4:38:29 PM
Sample Type:	Quality Control			**Instrument:**		LM27631
Vial Position:	5			**Acquis Method:**		18AUG13_3uL.dam
Injection Vol:	3.00			**Result Table:**		18NOV13DCCV5
QMethod File:	18AUG20QM			**ICAL Name:**		18NOV12DCAL
Batch Number:	N/A			**Operator:**		JPT12262
Sample Wt.:	1.00000			**Dilution Factor:**		1.00
Sample Vol.:	1.000			**Prep Factor:**		1.000

Injection Standard Peak Table

Injection Standard Area Reference File: 18NOV13D-05

Injection Standard Name	Inj Std Conc	Injection Std Peak Area	Rreference Injection Standard Area	Injection Std %Diff	Injection Std %Diff Limit	Injection Std %Diff OOS
13C3-PFBA	5.0	658776.2	661126.9	0	50	
13C2-PFOA	5.0	461523.7	466902.6	-1	50	
13C4-PFOS	4.8	249261.5	247446.9	1	50	
13C2-PFDA	5.0	278804.3	295381.6	-6	50	

Extraction Standard Peak Table

Extraction Standard Name	Ext Std Area	Inj Std Name	Inj Std Area	Area Ratio	Ext Std Conc	Ext Std Result	Ext Std %REC	Ext Std %REC Limit	Ext Std OOS
E13C4-PFBA	752496.6	13C3-PFBA	658776.2	1.142	5.000	5.121	102	70-130	
E13C5-PFPeA	743769.5	13C3-PFBA	658776.2	1.129	5.000	5.064	101	70-130	
E13C3-PFBS	423188.1	13C3-PFBA	658776.2	0.642	4.650	4.535	98	70-130	
E13C2-4:2-FTS	45745.2	13C2-PFOA	461523.7	0.099	4.670	4.415	95	70-130	
E13C5-PFHxA	670326.8	13C2-PFOA	461523.7	1.452	5.000	5.247	105	70-130	
E13C3-PFHxS	314815.3	13C2-PFOA	461523.7	0.682	4.730	4.681	99	70-130	
E13C4-PFHpA	522354.9	13C2-PFOA	461523.7	1.132	5.000	5.099	102	70-130	
E13C2-6:2-FTS	34309.0	13C2-PFOA	461523.7	0.074	4.750	4.974	105	70-130	
E13C8-PFOA	884816.5	13C2-PFOA	461523.7	1.917	5.000	5.282	106	70-130	
E13C8-PFOS	257886.0	13C4-PFOS	249261.5	1.035	4.780	4.584	96	70-130	
E13C9-PFNA	455726.4	13C4-PFOS	249261.5	1.828	5.000	5.098	102	70-130	
E13C6-PFDA	630322.1	13C2-PFDA	278804.3	2.261	5.000	5.276	106	70-130	
E13C2-8:2-FTS	26954.4	13C2-PFDA	278804.3	0.097	4.790	4.821	101	70-130	
E13C8-PFOSA	633039.8	13C2-PFDA	278804.3	2.271	5.000	5.034	101	70-130	
Ed3-NMeFOSAA	70625.1	13C2-PFDA	278804.3	0.253	5.000	4.572	91	70-130	
E13C7-PFUnDA	249545.0	13C2-PFDA	278804.3	0.895	5.000	5.197	104	70-130	
Ed5-NEtFOSAA	70781.7	13C2-PFDA	278804.3	0.254	5.000	5.371	107	70-130	
E13C2-PFDoDA	544733.3	13C2-PFDA	278804.3	1.954	5.000	5.073	101	70-130	
Ed7-NMePFOSAE	305460.2	13C2-PFDA	278804.3	1.096	5.000	4.741	95	70-130	
Ed3-NMePFOSA	76278.4	13C2-PFDA	278804.3	0.274	5.000	4.971	99	70-130	
Ed9-NEtPFOSAE	263429.6	13C2-PFDA	278804.3	0.945	5.000	4.914	98	70-130	
Ed5-NEtPFOSA	59536.9	13C2-PFDA	278804.3	0.214	5.000	5.009	100	70-130	
E13C2-PFTeDA	396961.1	13C2-PFDA	278804.3	1.424	5.000	4.999	100	70-130	

APPROVED
By JPT at 5:00 pm, 11/13/18

REVIEWED
By umar at 5:42 pm, 11/13/18

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV13DCCV5 11/13/2018 4:55:52 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

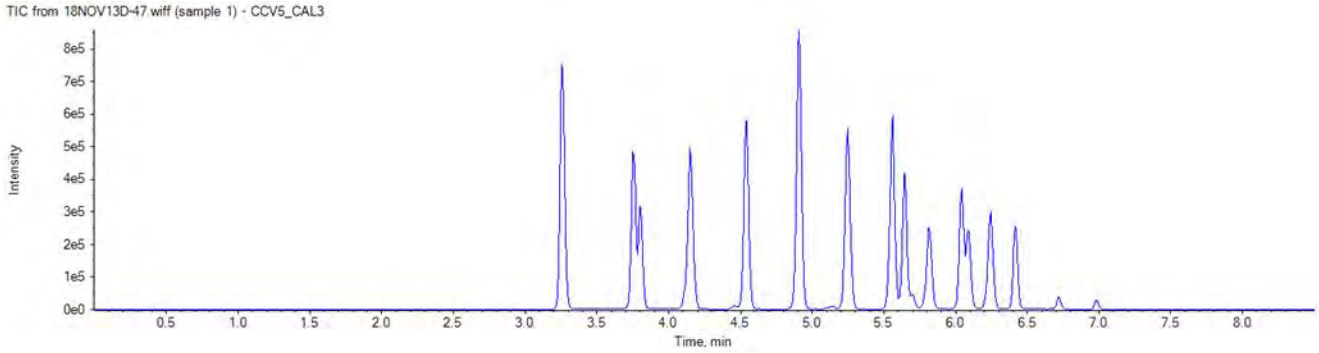
Analyte Quantitation Peak Table

Sample Name: CCV5_CAL3 **Instrument Name:** LM27631 **File Name:** 18NOV13D-47.wiff

Sample Wt	Sample Vol	Dilution Factor	PrepFactor
1.00000	1.000	1.00	1.000

Analyte Name	RT	RRT	Analyte Area Response	E	Int Typ	ES Name	ES RT	ES Area Response	Area Ratio	Sample Result (ng/g)
PFBA	3.26	1.000	307991.5		A	13C4-PFBA	3.26	752496.6	0.409	2.267
PFPeA	3.76	1.000	295604.4		A	13C5-PFPeA	3.76	743769.5	0.397	2.301
PFBS	3.80	1.000	173380.5		A	13C3-PFBS	3.80	423188.1	0.410	1.949
4:2-FTS	4.12	1.000	39454.2		A	13C2-4:2-FTS	4.12	45745.2	0.862	2.342
PFHxA	4.15	1.000	359338.4		A	13C5-PFHxA	4.15	670326.8	0.536	2.238
PFPeS	4.17	1.100	86328.6		A	13C3-PFBS	3.80	423188.1	0.204	1.980
PFHpA	4.54	1.000	366823.7		A	13C4-PFHpA	4.54	522354.9	0.702	2.328
PFHxS	4.54	1.000	129050.1		M	13C3-PFHxS	4.54	314815.3	0.410	1.988
6:2-FTS	4.90	1.000	28406.1		A	13C2-6:2-FTS	4.90	34309.0	0.828	2.004
PFHpS	4.90	1.080	120412.1		A	13C3-PFHxS	4.54	314815.3	0.382	2.013
PFOA	4.91	1.000	386893.4		A	13C8-PFOA	4.91	884816.5	0.437	2.335
PFOS	5.24	1.000	124584.3		M	13C8-PFOS	5.24	257886.0	0.483	2.113
PFNA	5.25	1.000	306064.7		A	13C9-PFNA	5.25	455726.4	0.672	2.422
PFNS	5.54	1.060	81247.8		A	13C8-PFOS	5.24	257886.0	0.315	2.204
PFDA	5.56	1.000	262885.4		A	13C6-PFDA	5.56	630322.1	0.417	2.211
8:2-FTS	5.56	1.000	26997.8		M	13C2-8:2-FTS	5.56	26954.4	1.002	2.335
PFOSA	5.64	1.000	277186.5		A	13C8-PFOSA	5.64	633039.8	0.438	2.139
NMeFOSAA	5.70	1.000	26509.8		M	d3-NMeFOSAA	5.70	70625.2	0.375	2.121
PFDS	5.79	1.110	57377.5		A	13C8-PFOS	5.24	257886.0	0.222	2.016
PFUnDA	5.82	1.000	206119.4		A	13C7-PFUnDA	5.82	249545.0	0.826	2.159
NEtFOSAA	5.83	1.000	24747.7		M	d5-NEtFOSAA	5.83	70781.7	0.350	1.833
PFDoDA	6.04	1.000	244015.0		A	13C2-PFDoDA	6.04	544733.3	0.448	2.281
10:2-FTS	6.06	1.090	17038.2		A	13C2-8:2-FTS	5.56	26954.4	0.632	2.105
NMePFOSAE	6.09	1.000	169972.6		A	d7-NMePFOSAE	6.08	305460.2	0.556	2.316
NMePFOSA	6.10	1.000	31410.7		A	d3-NMePFOSA	6.10	76278.4	0.412	2.031
PFDoS	6.21	1.190	28874.2		A	13C8-PFOS	5.24	257886.0	0.112	1.961
NEtPFOSAE	6.25	1.000	179928.9		A	d9-NEtPFOSAE	6.24	263429.6	0.683	2.191
NEtPFOSA	6.26	1.000	26596.2		A	d5-NEtPFOSA	6.26	59536.9	0.447	2.052
PFTrDA	6.24	1.030	189964.3		A	13C2-PFDoDA	6.04	544733.3	0.349	2.201
PFTeDA	6.42	1.000	156391.7		A	13C2-PFTeDA	6.42	396961.1	0.394	2.208
PFHxDA	6.72	1.050	72132.1		A	13C2-PFTeDA	6.42	396961.1	0.182	2.165
PFODA	6.98	1.090	59386.3		A	13C2-PFTeDA	6.42	396961.1	0.150	2.084

Total Ion Chromatogram

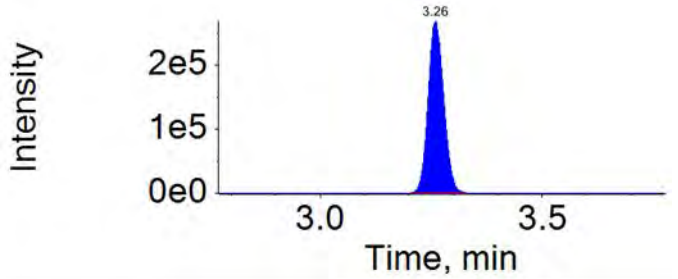


APPROVED
By JPT at 5:00 pm, 11/13/18

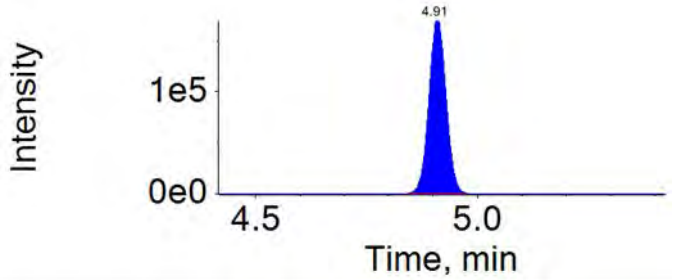
REVIEWED
By umar at 5:42 pm, 11/13/18

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV13DCCV5 11/13/2018 4:55:52 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

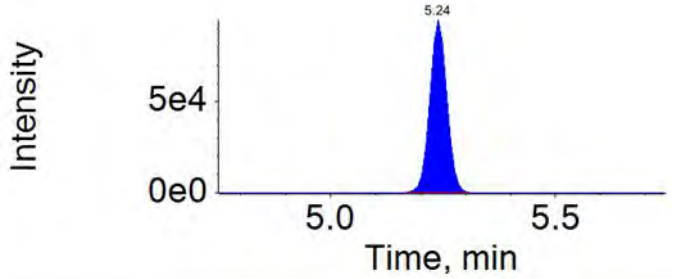
Injection Standard: 13C3-PFBA
216.0 / 172.0



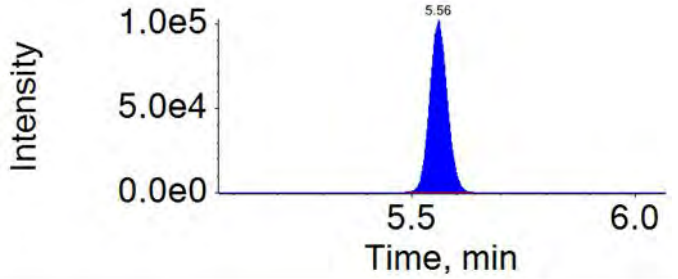
Injection Standard: 13C2-PFOA
415.0 / 370.0



Injection Standard: 13C4-PFOS
503.0 / 80.0



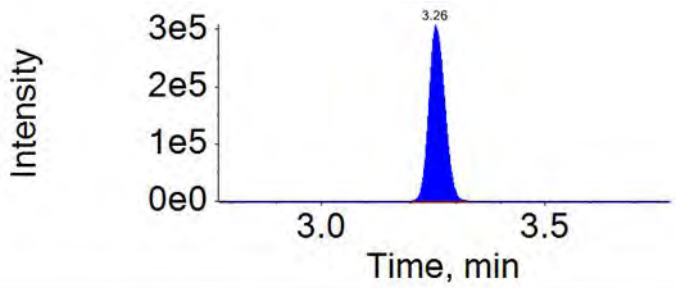
Injection Standard: 13C2-PFDA
515.0 / 470.0



ICAL Name: 18NOV12DCAL **Result Table:** 18NOV13DCCV5 11/13/2018 4:55:52 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

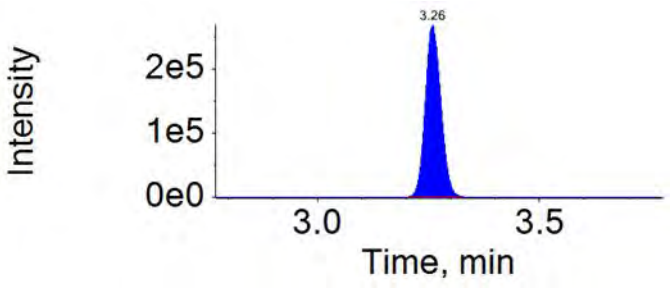
Extraction Standard: E13C4-PFBA

217.0 / 172.0



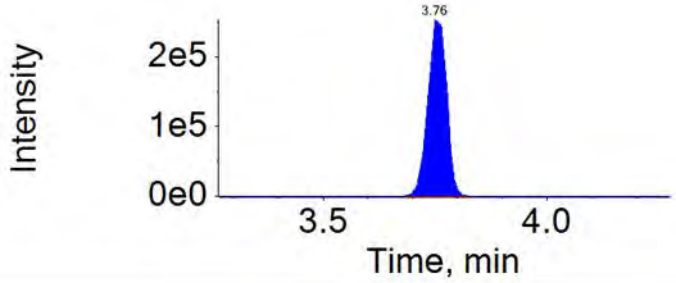
Injection Standard: 13C3-PFBA

216.0 / 172.0



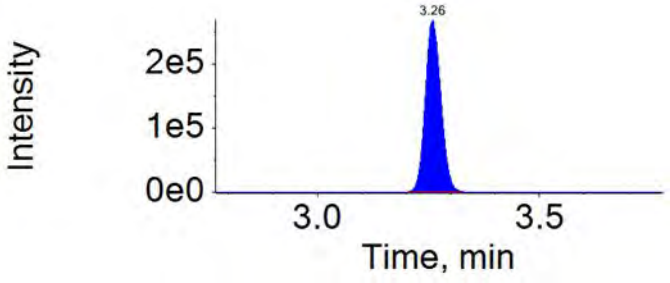
Extraction Standard: E13C5-PFPeA

268.0 / 223.0



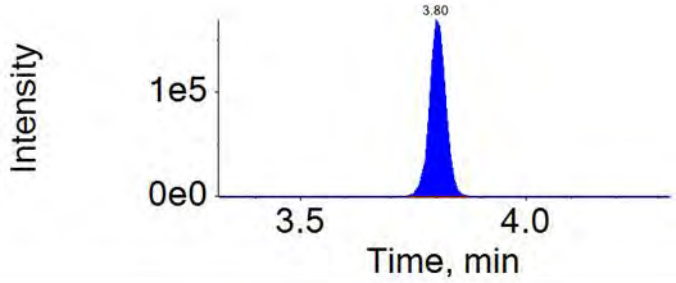
Injection Standard: 13C3-PFBA

216.0 / 172.0



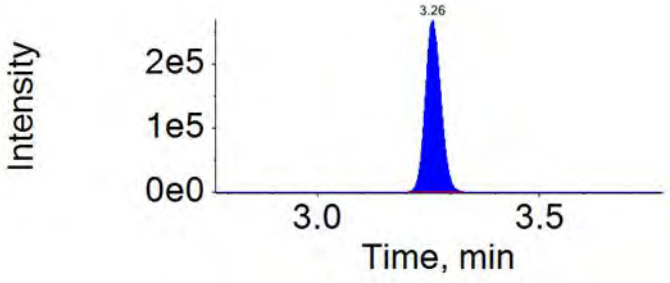
Extraction Standard: E13C3-PFBS

302.0 / 80.0



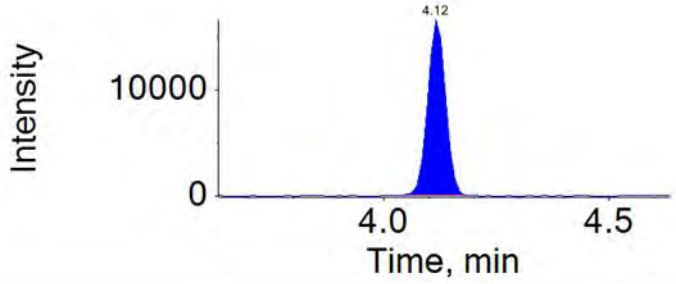
Injection Standard: 13C3-PFBA

216.0 / 172.0



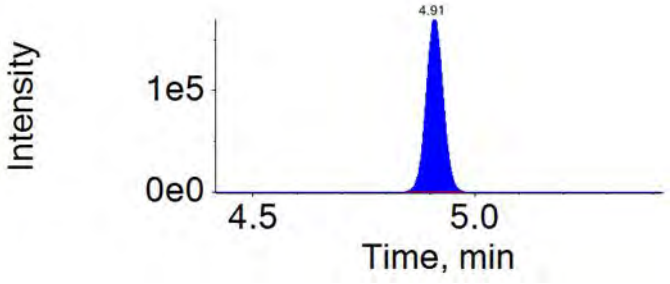
Extraction Standard: E13C2-4:2-FTS

329.0 / 81.0



Injection Standard: 13C2-PFOA

415.0 / 370.0

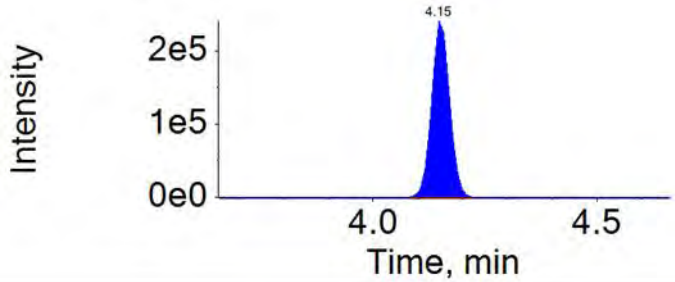


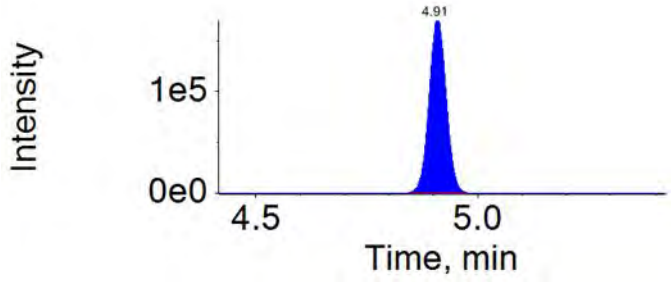
APPROVED
By JPT at 5:00 pm, 11/13/18

REVIEWED
By umar at 5:42 pm, 11/13/18

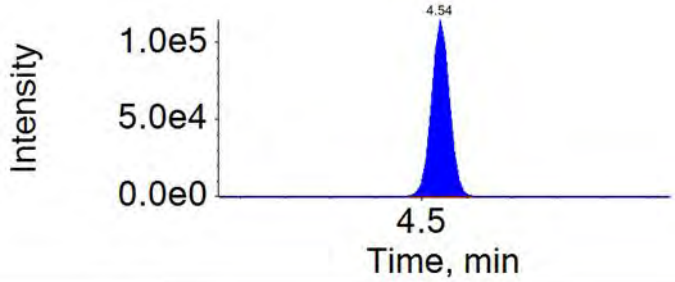
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV13DCCV5 11/13/2018 4:55:52 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

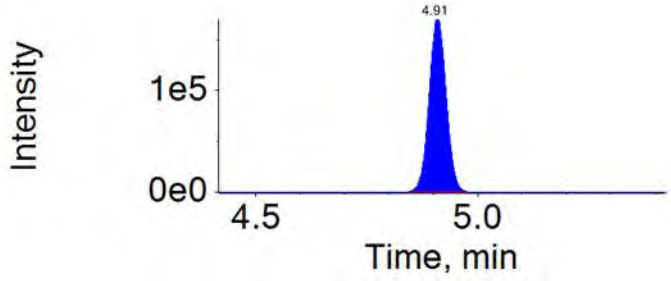
Extraction Standard: E13C5-PFHxA	Injection Standard: 13C2-PFOA
318.0 / 273.0	415.0 / 370.0



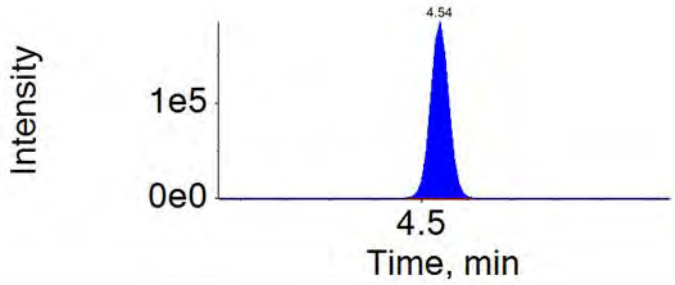


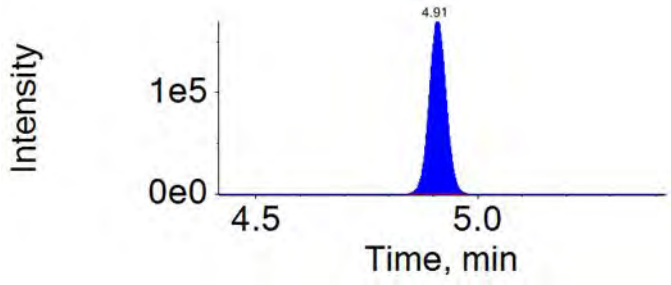
Extraction Standard: E13C3-PFHxS	Injection Standard: 13C2-PFOA
402.0 / 80.0	415.0 / 370.0



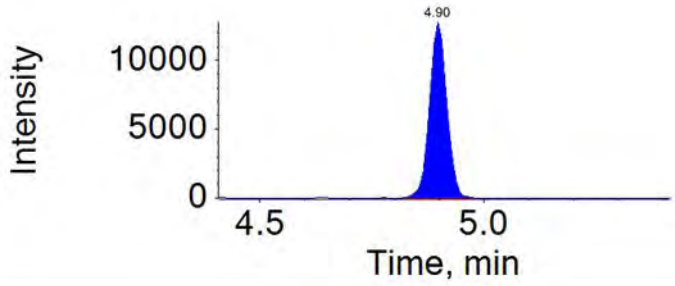


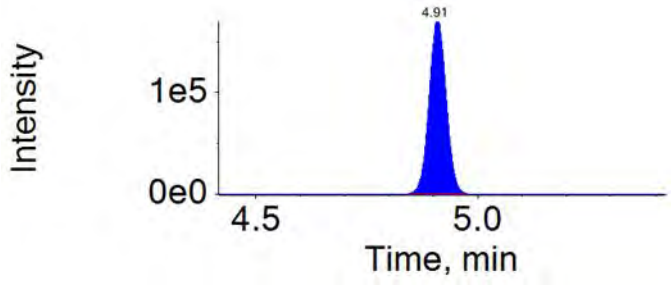
Extraction Standard: E13C4-PFHpA	Injection Standard: 13C2-PFOA
367.0 / 322.0	415.0 / 370.0





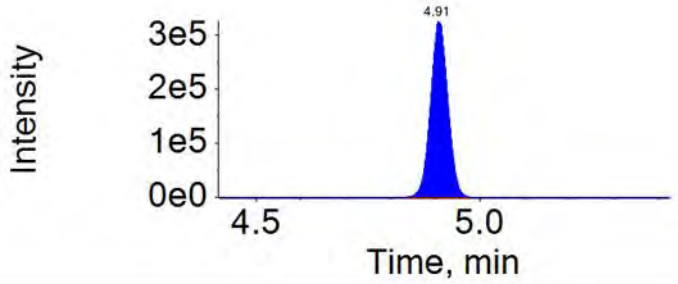
Extraction Standard: E13C2-6:2-FTS	Injection Standard: 13C2-PFOA
429.0 / 81.0	415.0 / 370.0



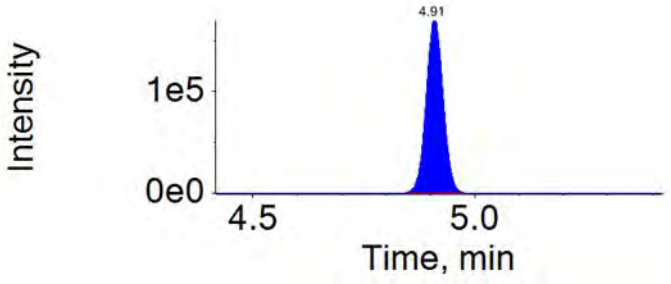


ICAL Name: 18NOV12DCAL **Result Table:** 18NOV13DCCV5 11/13/2018 4:55:52 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

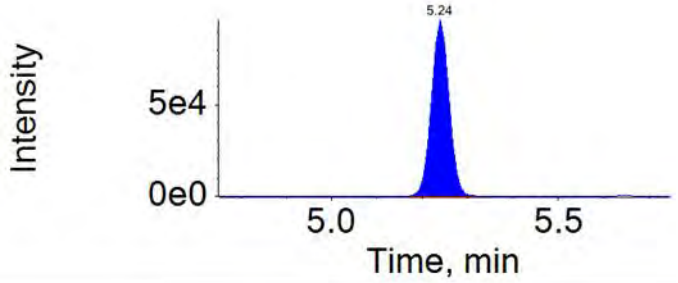
Extraction Standard: E13C8-PFOA
421.0 / 376.0



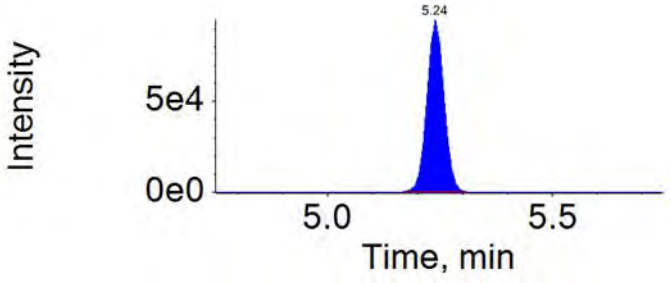
Injection Standard: 13C2-PFOA
415.0 / 370.0



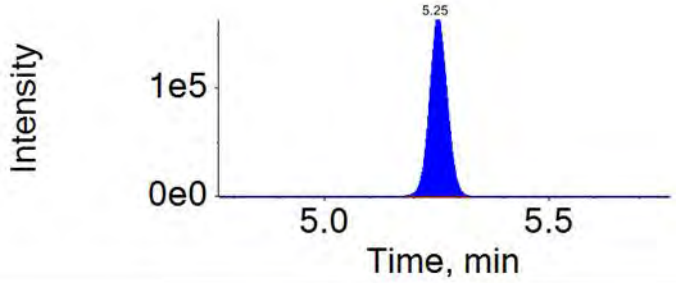
Extraction Standard: E13C8-PFOS
507.0 / 80.0



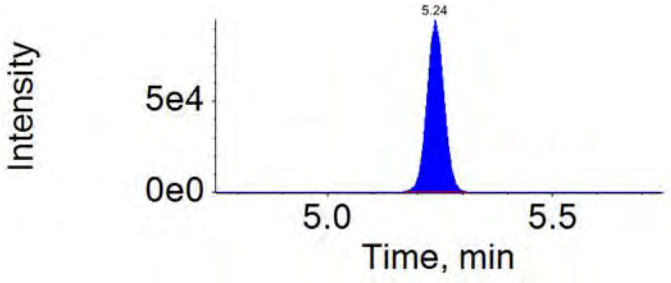
Injection Standard: 13C4-PFOS
503.0 / 80.0



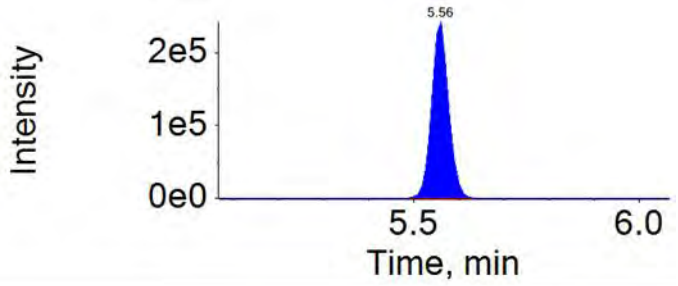
Extraction Standard: E13C9-PFNA
472.0 / 427.0



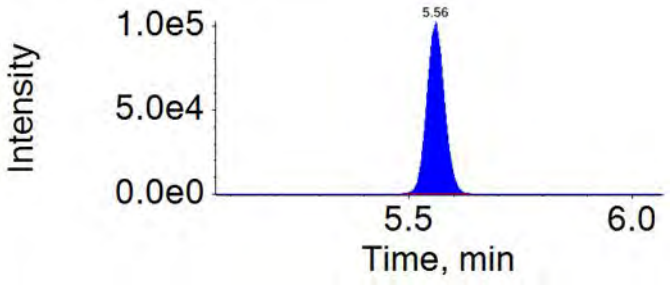
Injection Standard: 13C4-PFOS
503.0 / 80.0



Extraction Standard: E13C6-PFDA
519.0 / 474.0



Injection Standard: 13C2-PFDA
515.0 / 470.0

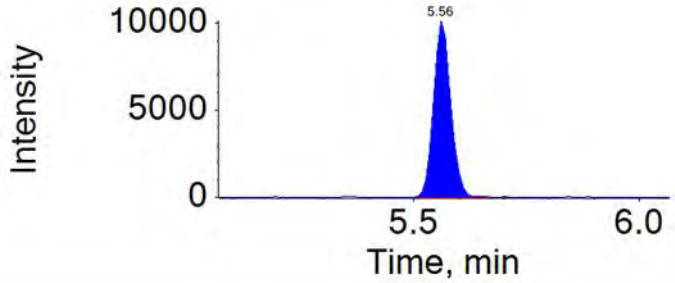


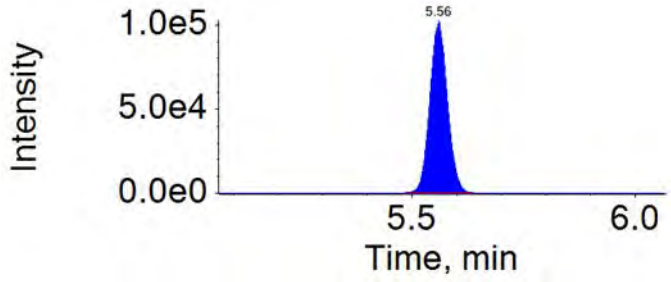
APPROVED
By JPT at 5:00 pm, 11/13/18

REVIEWED
By umar at 5:42 pm, 11/13/18

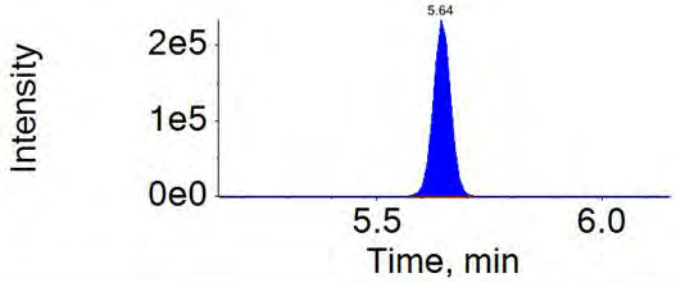
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV13DCCV5 11/13/2018 4:55:52 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

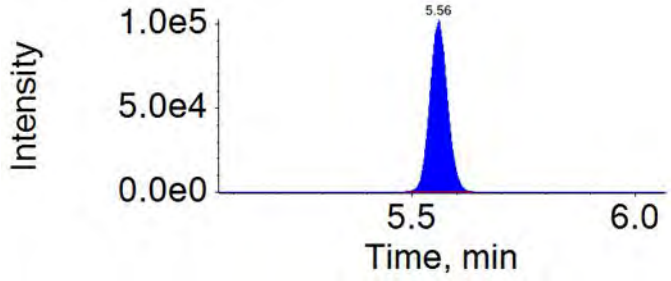
Extraction Standard: E13C2-8:2-FTS	Injection Standard: 13C2-PFDA
529.0 / 81.0	515.0 / 470.0



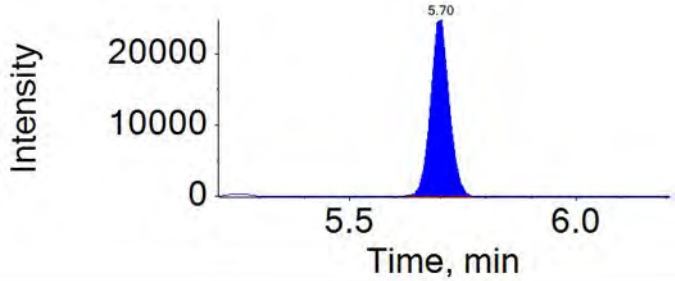


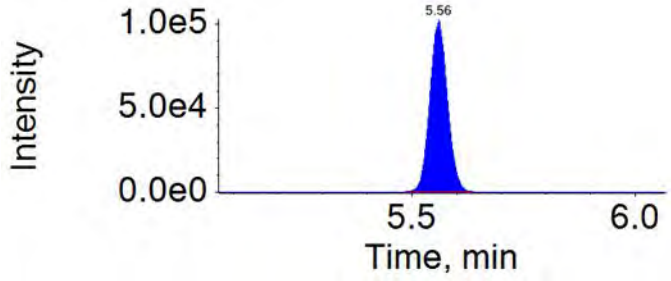
Extraction Standard: E13C8-PFOSA	Injection Standard: 13C2-PFDA
506.0 / 78.0	515.0 / 470.0



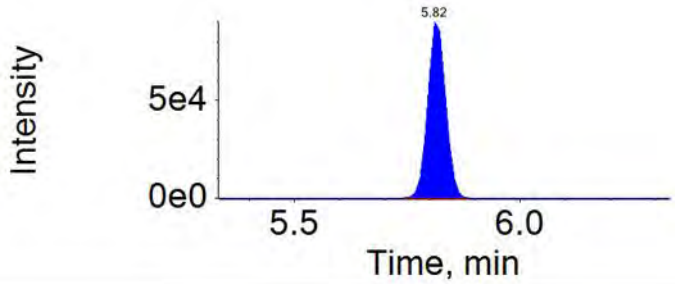


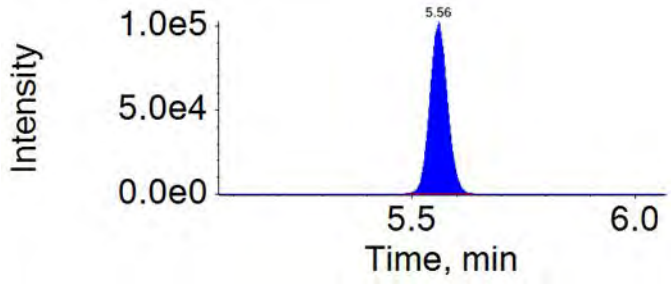
Extraction Standard: Ed3-NMeFOSAA	Injection Standard: 13C2-PFDA
573.0 / 419.0	515.0 / 470.0





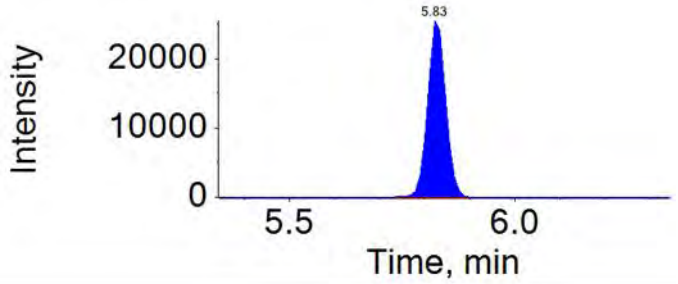
Extraction Standard: E13C7-PFUnDA	Injection Standard: 13C2-PFDA
570.0 / 525.0	515.0 / 470.0



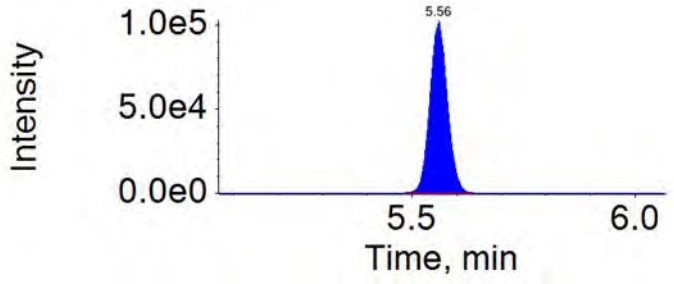


ICAL Name: 18NOV12DCAL **Result Table:** 18NOV13DCCV5 11/13/2018 4:55:52 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

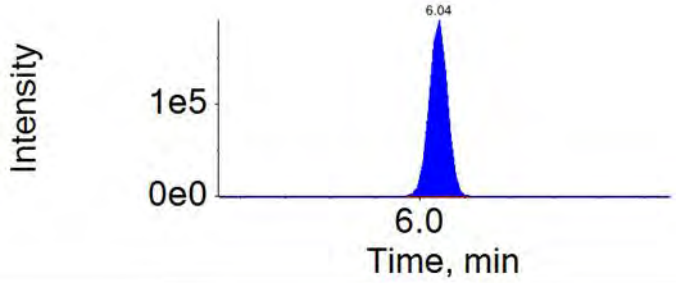
Extraction Standard: Ed5-NEtFOSAA
589.0 / 419.0



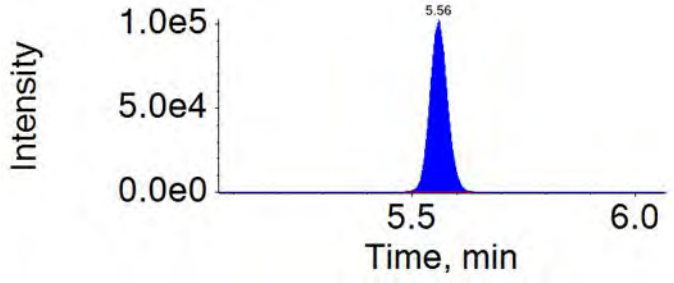
Injection Standard: 13C2-PFDA
515.0 / 470.0



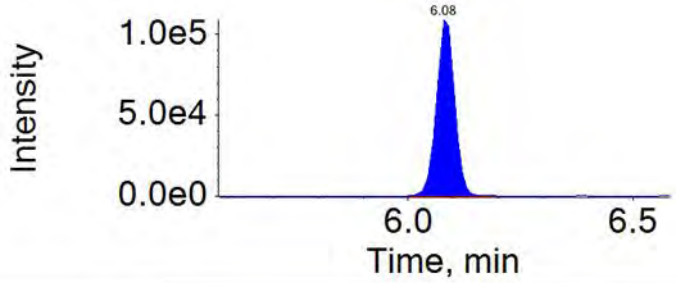
Extraction Standard: E13C2-PFDoDA
615.0 / 570.0



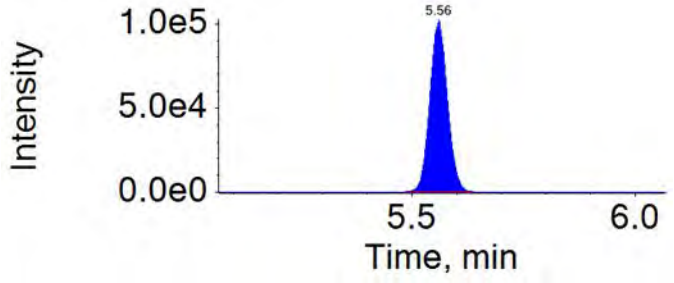
Injection Standard: 13C2-PFDA
515.0 / 470.0



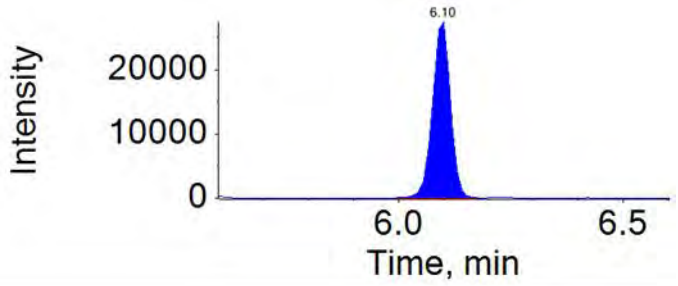
Extraction Standard: Ed7-NMePFOSAE
623.0 / 59.0



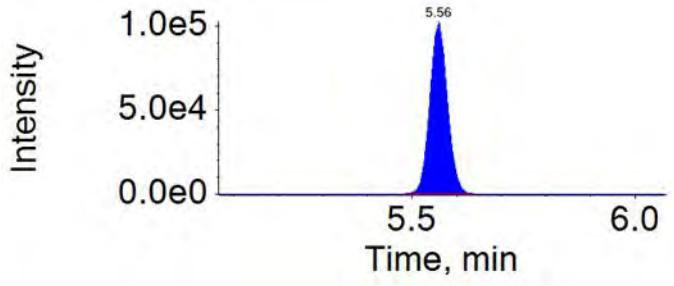
Injection Standard: 13C2-PFDA
515.0 / 470.0



Extraction Standard: Ed3-NMePFOSA
515.0 / 169.0



Injection Standard: 13C2-PFDA
515.0 / 470.0

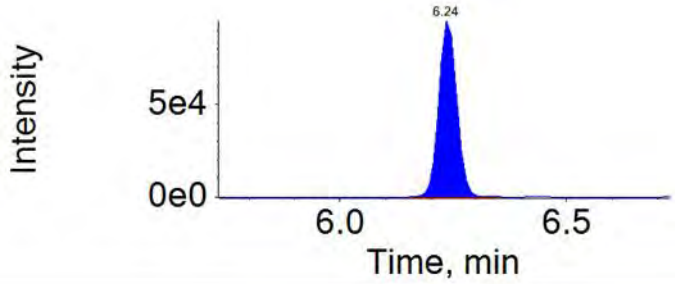


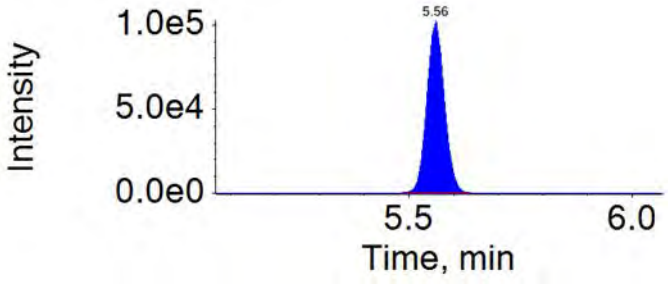
APPROVED
By JPT at 5:00 pm, 11/13/18

REVIEWED
By umar at 5:42 pm, 11/13/18

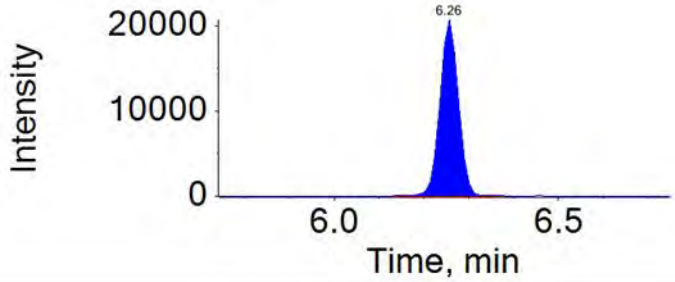
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV13DCCV5 11/13/2018 4:55:52 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

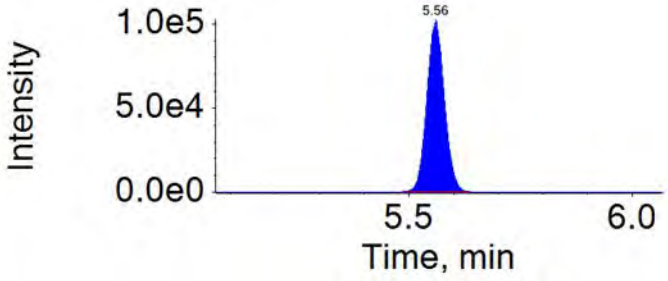
Extraction Standard: Ed9-NEtPFOSAE	Injection Standard: 13C2-PFDA
639.0 / 59.0	515.0 / 470.0



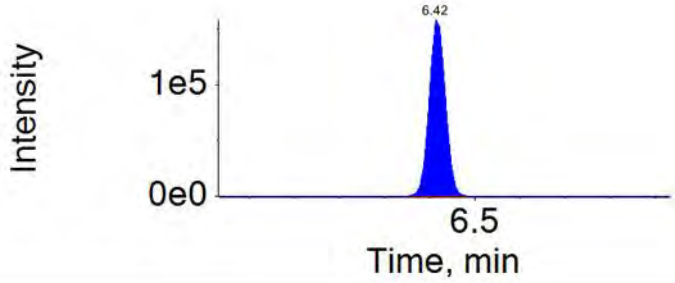


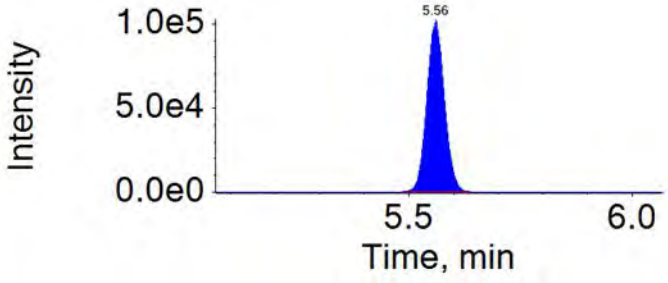
Extraction Standard: Ed5-NEtPFOSA	Injection Standard: 13C2-PFDA
531.0 / 169.0	515.0 / 470.0





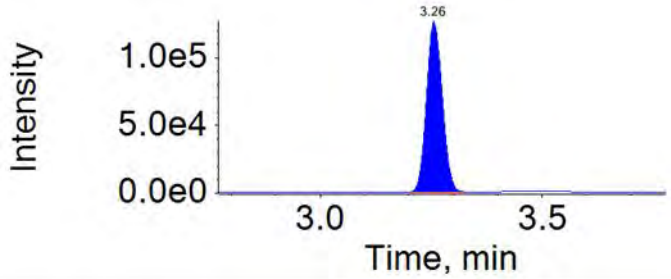
Extraction Standard: E13C2-PFTeDA	Injection Standard: 13C2-PFDA
715.0 / 670.0	515.0 / 470.0



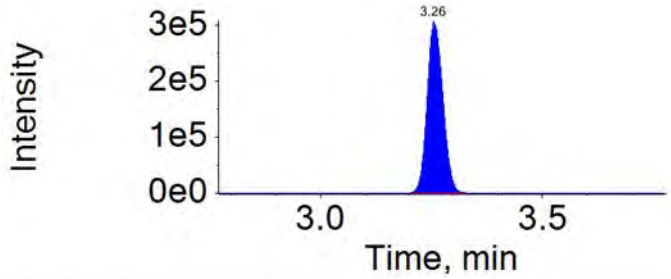


ICAL Name: 18NOV12DCAL **Result Table:** 18NOV13DCCV5 11/13/2018 4:55:52 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

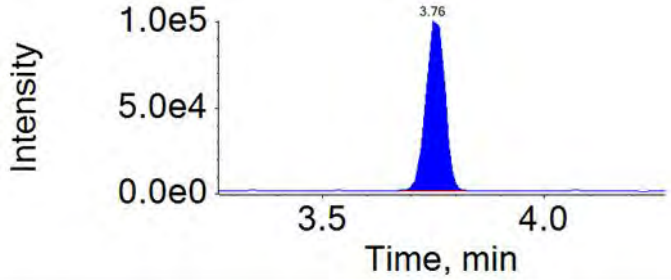
Analyte: PFBA
213.0 / 169.0



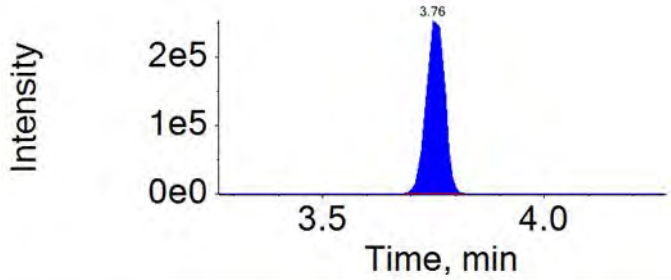
Extraction Standard: 13C4-PFBA
217.0 / 172.0



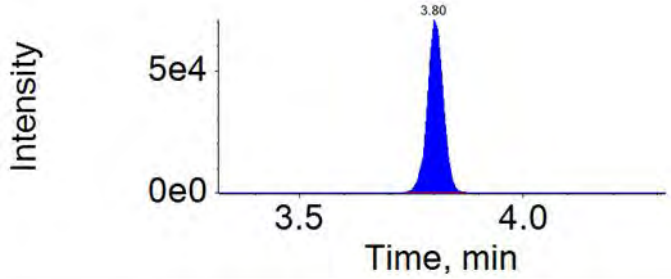
Analyte: PFPeA
263.0 / 219.0



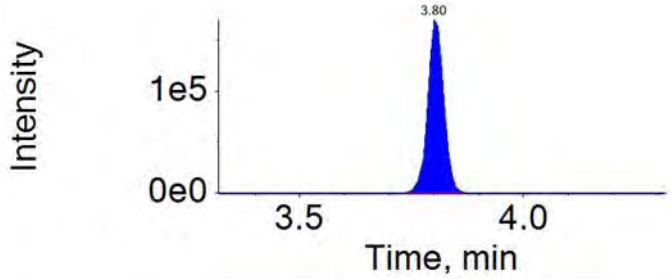
Extraction Standard: 13C5-PFPeA
268.0 / 223.0



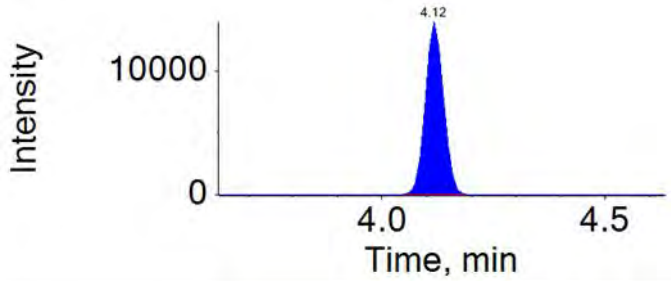
Analyte: PFBS
299.0 / 80.0



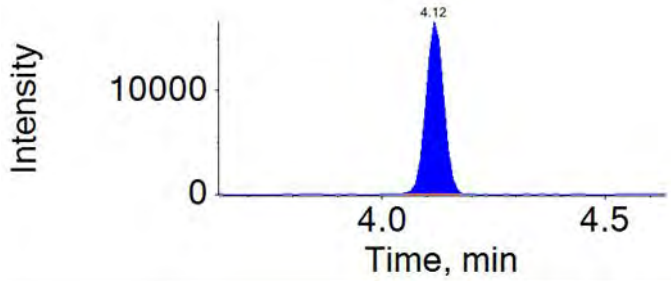
Extraction Standard: 13C3-PFBS
302.0 / 80.0



Analyte: 4:2-FTS
327.0 / 307.0



Extraction Standard: 13C2-4:2-FTS
329.0 / 81.0

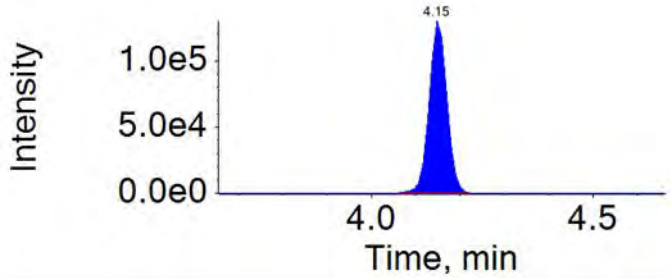


APPROVED
By JPT at 5:00 pm, 11/13/18

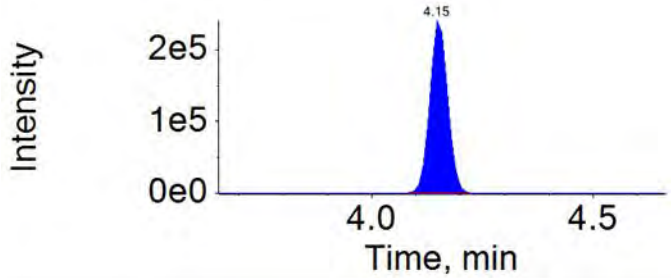
REVIEWED
By umar at 5:42 pm, 11/13/18

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV13DCCV5 11/13/2018 4:55:52 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

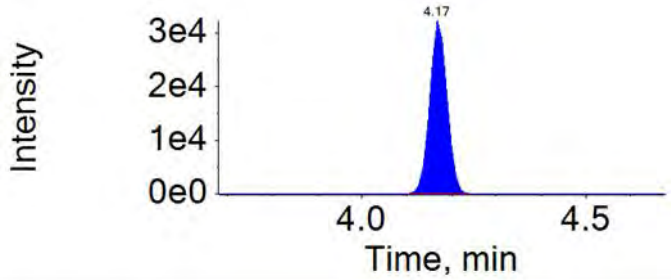
Analyte: PFHxA
313.0 / 269.0



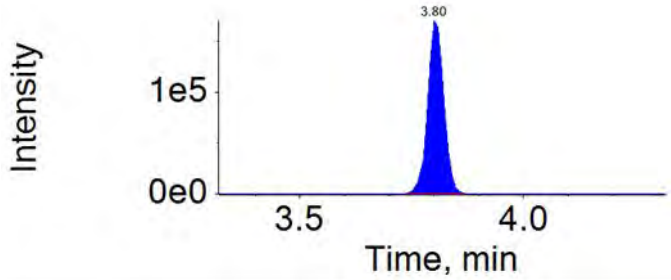
Extraction Standard: 13C5-PFHxA
318.0 / 273.0



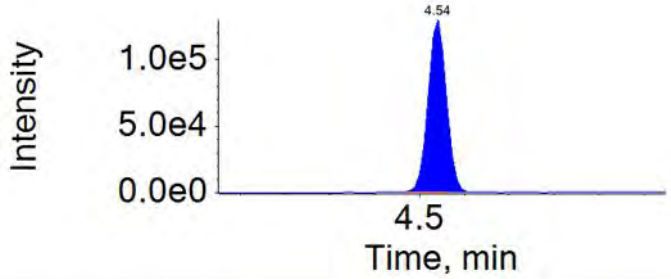
Analyte: PFPeS
349.0 / 80.0



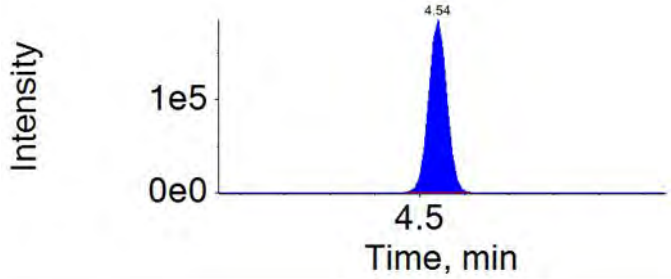
Extraction Standard: 13C3-PFBS
302.0 / 80.0



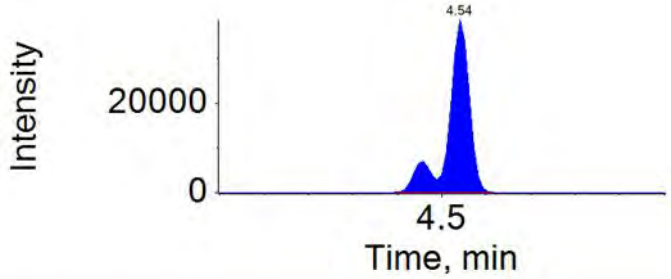
Analyte: PFHpA
363.0 / 319.0



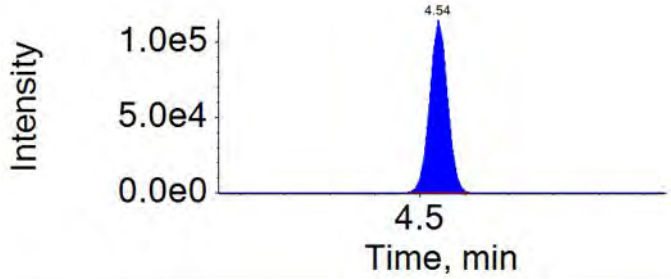
Extraction Standard: 13C4-PFHpA
367.0 / 322.0



Analyte: PFHxS
399.0 / 80.0

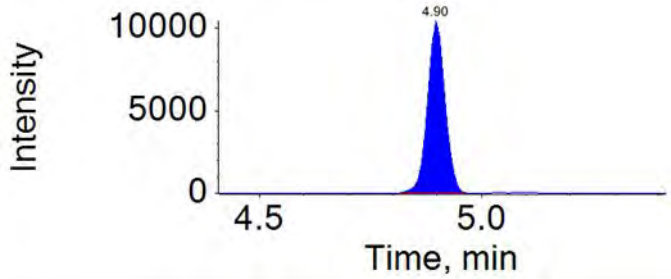


Extraction Standard: 13C3-PFHxS
402.0 / 80.0

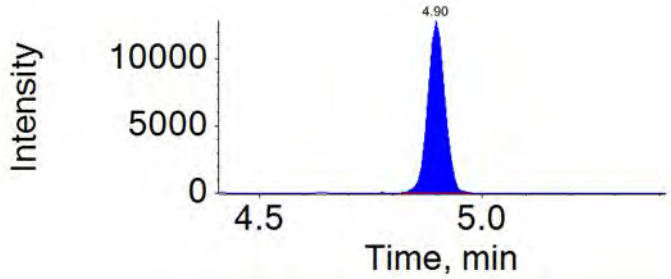


ICAL Name: 18NOV12DCAL **Result Table:** 18NOV13DCCV5 11/13/2018 4:55:52 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

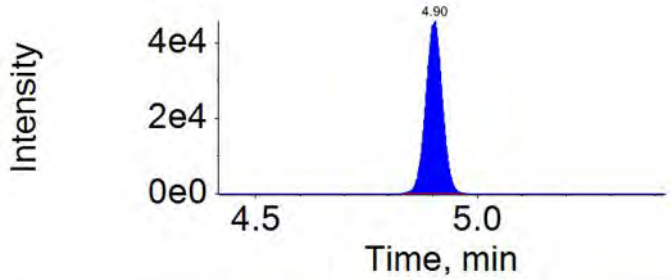
Analyte: 6:2-FTS
427.0 / 407.0



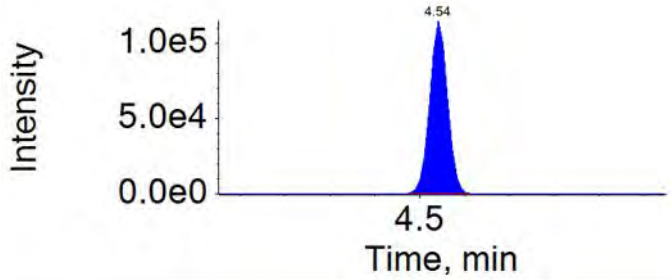
Extraction Standard: 13C2-6:2-FTS
429.0 / 81.0



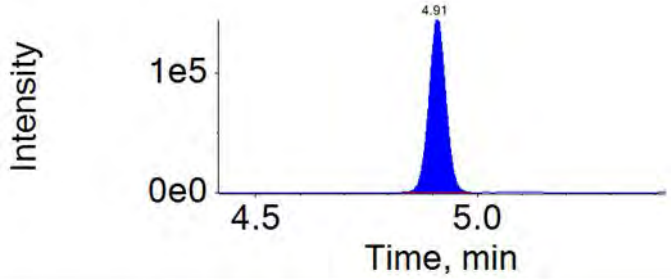
Analyte: PFHpS
449.0 / 80.0



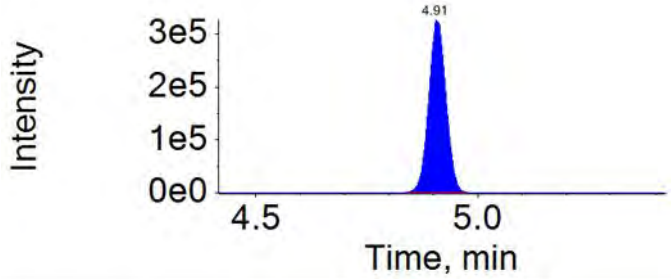
Extraction Standard: 13C3-PFHxS
402.0 / 80.0



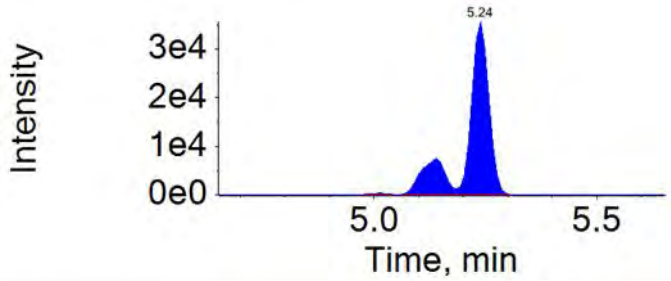
Analyte: PFOA
413.0 / 369.0



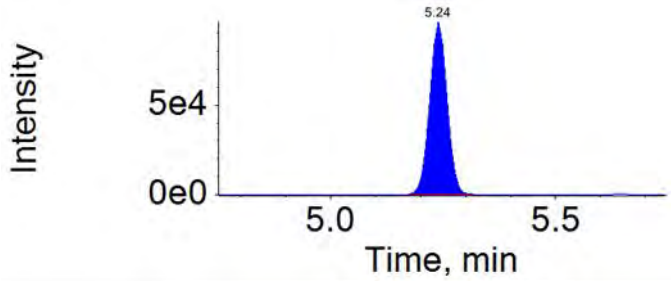
Extraction Standard: 13C8-PFOA
421.0 / 376.0



Analyte: PFOS
499.0 / 80.0



Extraction Standard: 13C8-PFOS
507.0 / 80.0

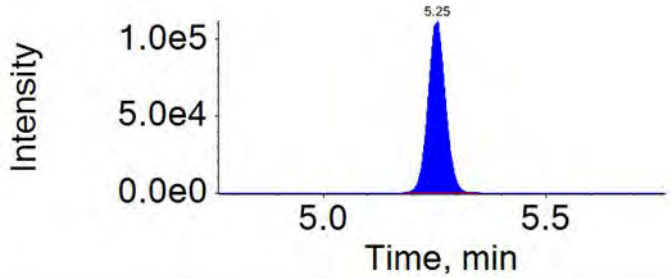


APPROVED
By JPT at 5:00 pm, 11/13/18

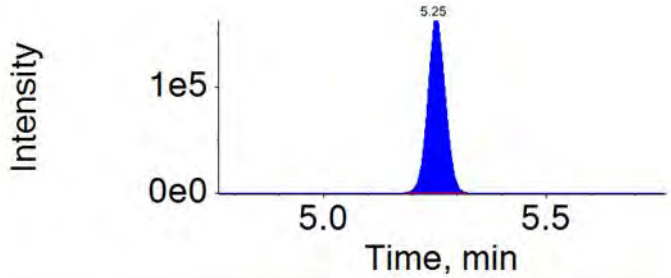
REVIEWED
By umar at 5:42 pm, 11/13/18

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV13DCCV5 11/13/2018 4:55:52 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

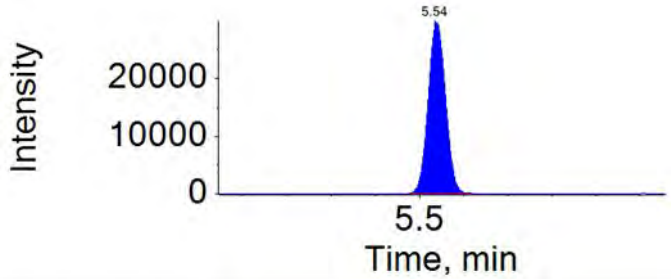
Analyte: PFNA
463.0 / 419.0



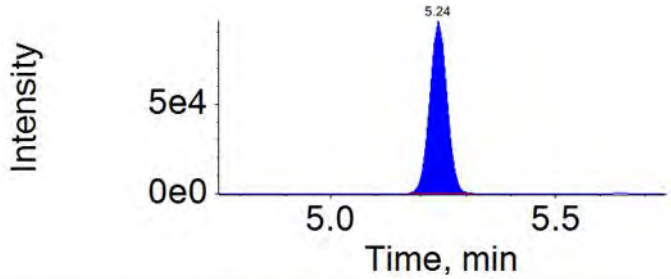
Extraction Standard: 13C9-PFNA
472.0 / 427.0



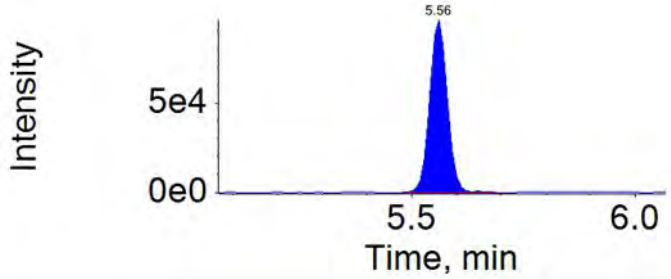
Analyte: PFNS
549.0 / 80.0



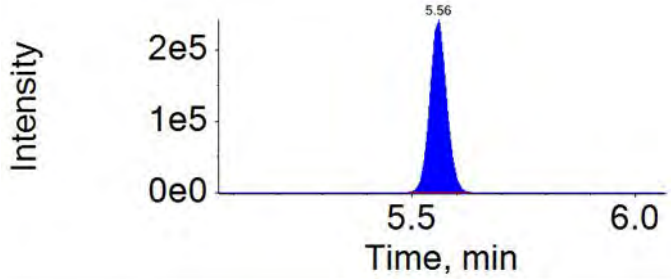
Extraction Standard: 13C8-PFOS
507.0 / 80.0



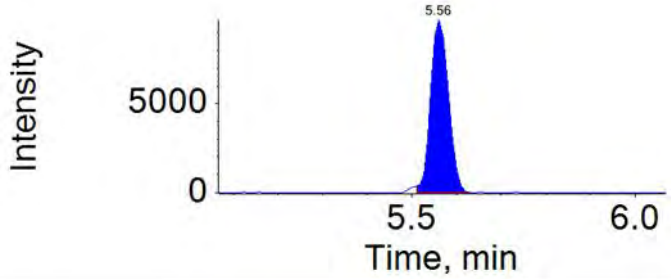
Analyte: PFDA
513.0 / 469.0



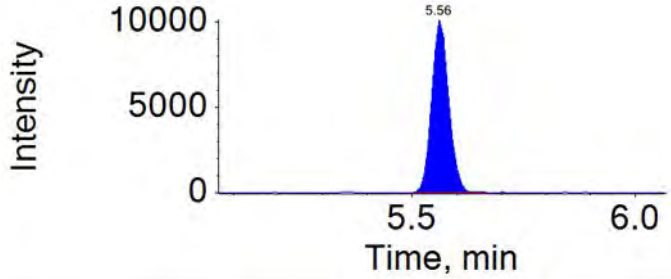
Extraction Standard: 13C6-PFDA
519.0 / 474.0



Analyte: 8:2-FTS
527.0 / 507.0



Extraction Standard: 13C2-8:2-FTS
529.0 / 81.0

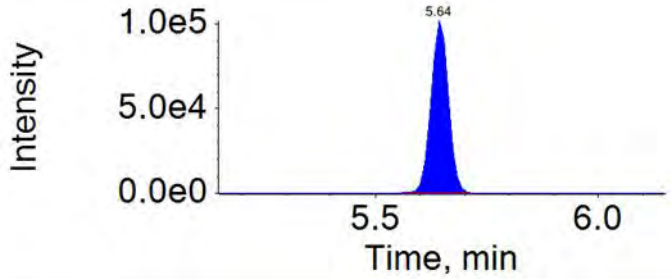


APPROVED
By JPT at 5:00 pm, 11/13/18

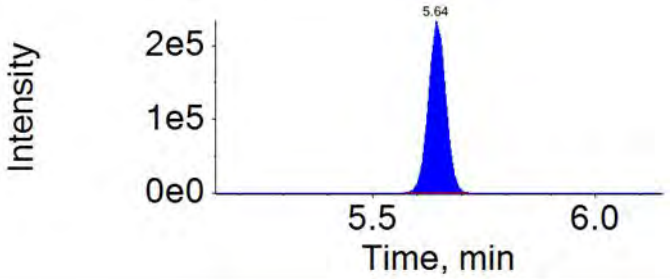
REVIEWED
By umar at 5:42 pm, 11/13/18

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV13DCCV5 11/13/2018 4:55:52 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

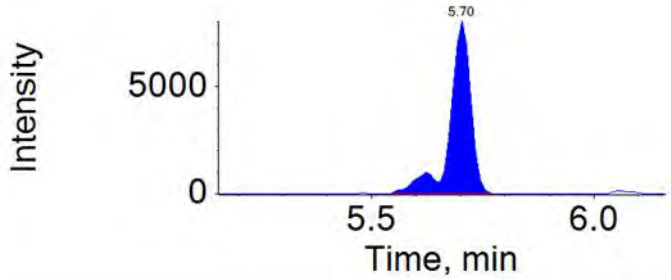
Analyte: PFOSA
498.0 / 78.0



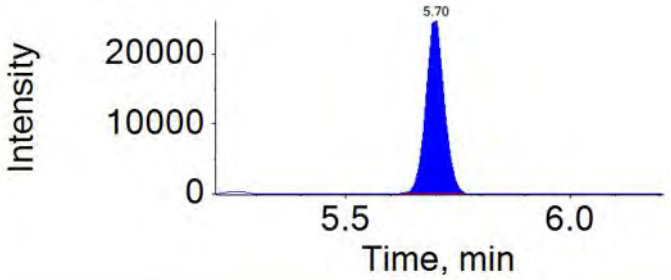
Extraction Standard: 13C8-PFOSA
506.0 / 78.0



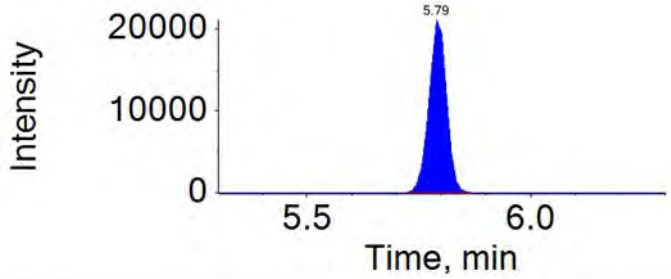
Analyte: NMeFOSAA
570.0 / 419.0



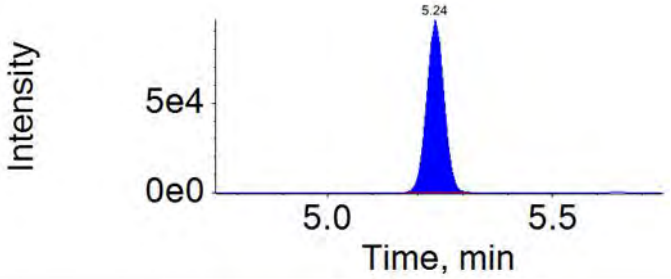
Extraction Standard: d3-NMeFOSAA
573.0 / 419.0



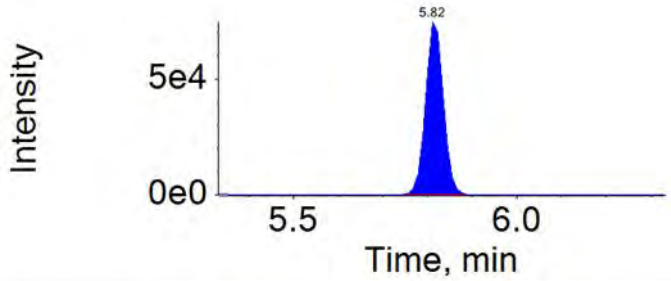
Analyte: PFDS
599.0 / 80.0



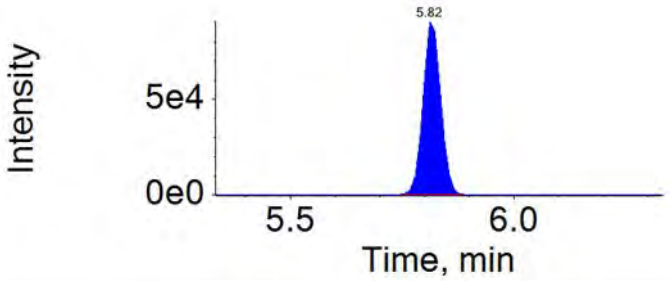
Extraction Standard: 13C8-PFOS
507.0 / 80.0



Analyte: PFUnDA
563.0 / 519.0



Extraction Standard: 13C7-PFUnDA
570.0 / 525.0

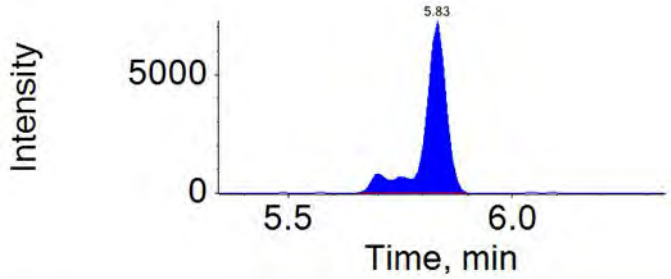


APPROVED
By JPT at 5:00 pm, 11/13/18

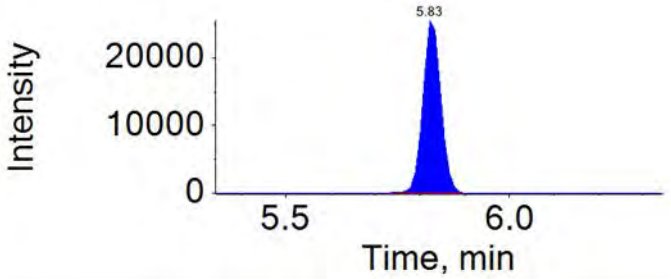
REVIEWED
By umar at 5:42 pm, 11/13/18

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV13DCCV5 11/13/2018 4:55:52 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

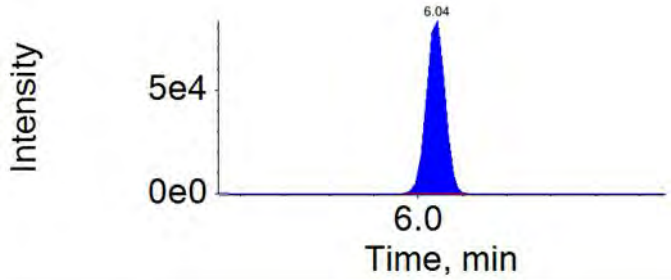
Analyte: NEtFOSAA
584.0 / 419.0



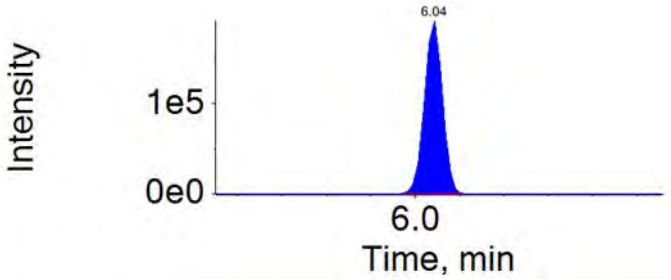
Extraction Standard: d5-NEtFOSAA
589.0 / 419.0



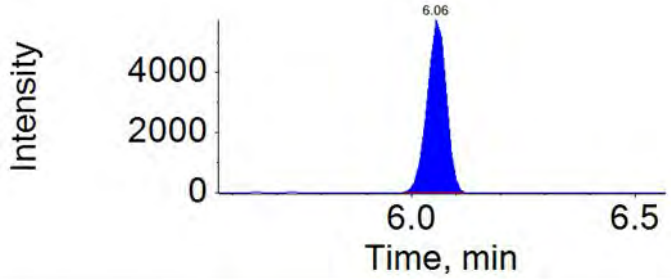
Analyte: PFDoDA
613.0 / 569.0



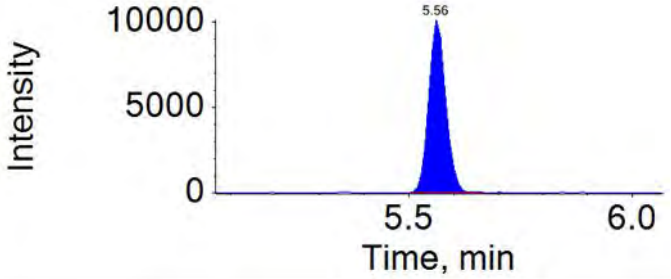
Extraction Standard: 13C2-PFDoDA
615.0 / 570.0



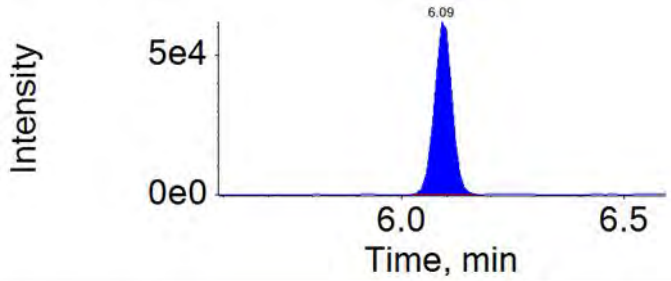
Analyte: 10:2-FTS
627.0 / 607.0



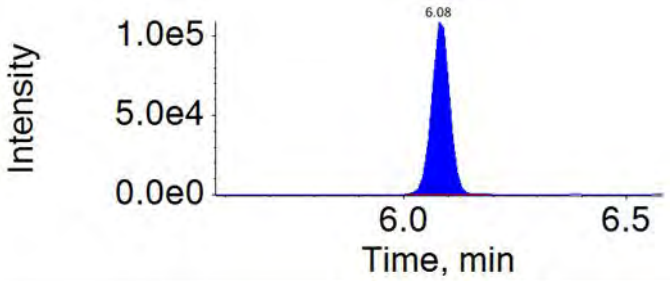
Extraction Standard: 13C2-8:2-FTS
529.0 / 81.0



Analyte: NMePFOSAE
616.0 / 59.0



Extraction Standard: d7-NMePFOSAE
623.0 / 59.0

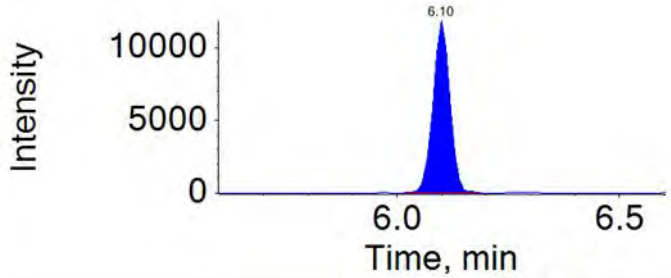


APPROVED
By JPT at 5:00 pm, 11/13/18

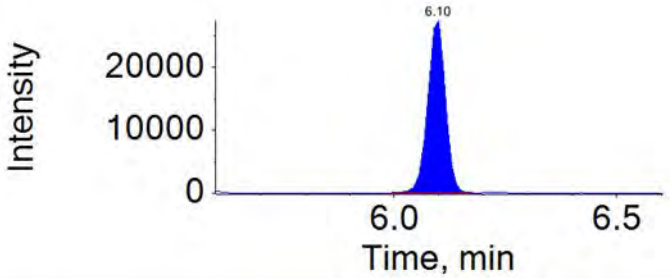
REVIEWED
By umar at 5:42 pm, 11/13/18

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV13DCCV5 11/13/2018 4:55:52 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

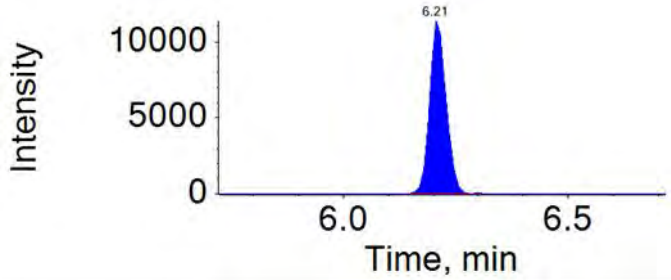
Analyte: NMePFOSA
512.0 / 169.0



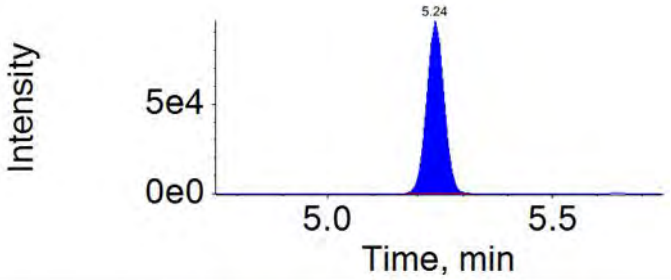
Extraction Standard: d3-NMePFOSA
515.0 / 169.0



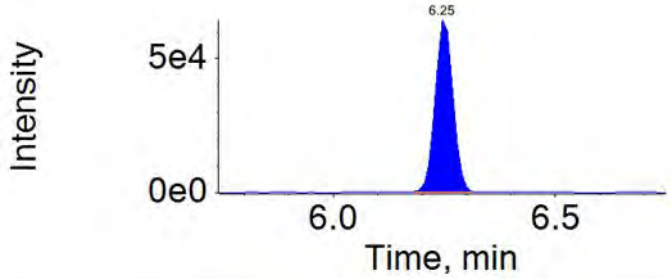
Analyte: PFDoS
699.0 / 80.0



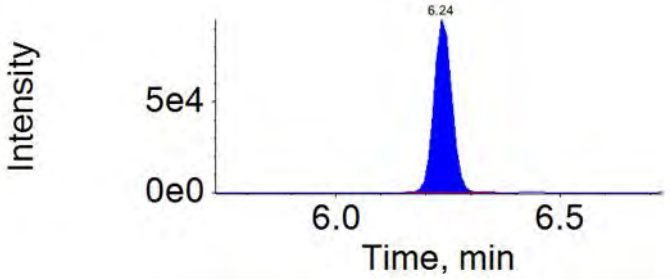
Extraction Standard: 13C8-PFOS
507.0 / 80.0



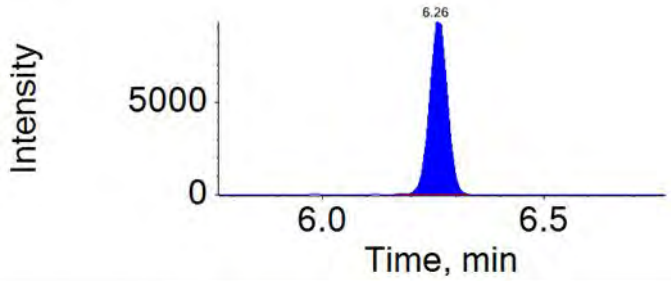
Analyte: NEtPFOSAE
630.0 / 59.0



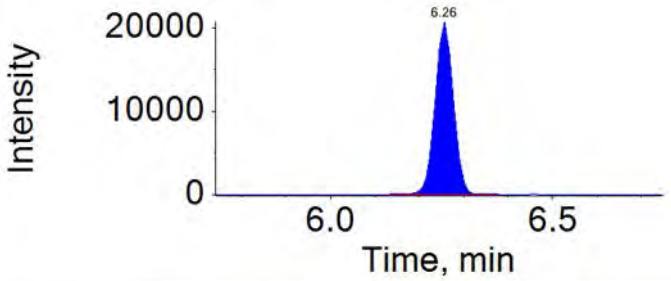
Extraction Standard: d9-NEtPFOSAE
639.0 / 59.0



Analyte: NEtPFOSA
526.0 / 169.0



Extraction Standard: d5-NEtPFOSA
531.0 / 169.0

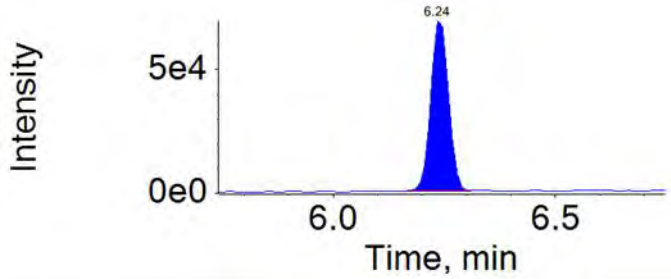


APPROVED
By JPT at 5:00 pm, 11/13/18

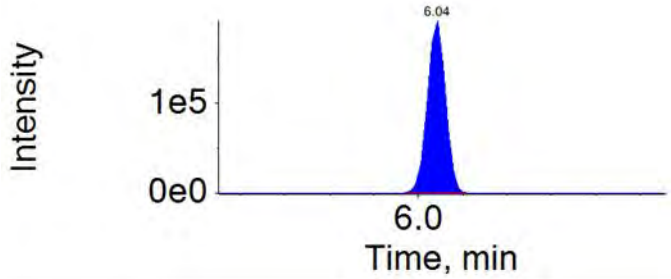
REVIEWED
By umar at 5:42 pm, 11/13/18

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV13DCCV5 11/13/2018 4:55:52 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

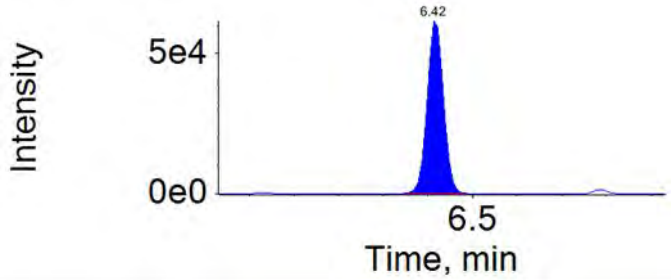
Analyte: PFTrDA
663.0 / 619.0



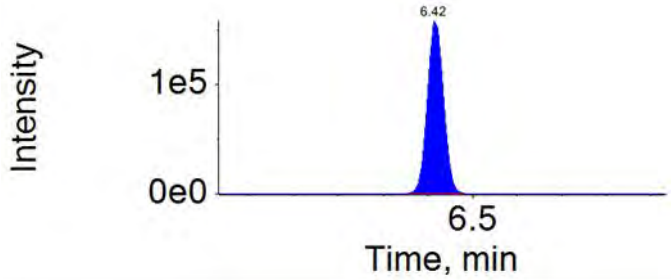
Extraction Standard: 13C2-PFDoDA
615.0 / 570.0



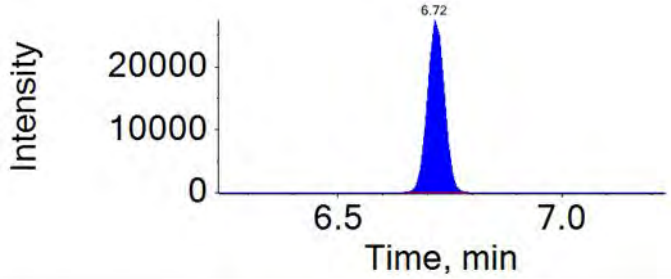
Analyte: PFTeDA
713.0 / 669.0



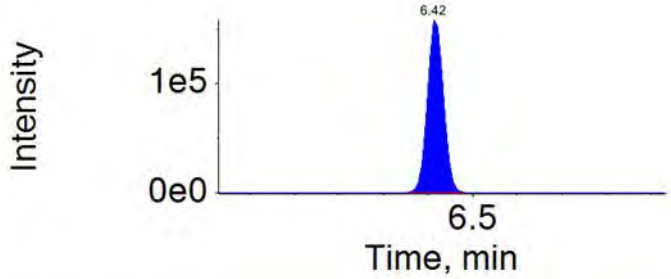
Extraction Standard: 13C2-PFTeDA
715.0 / 670.0



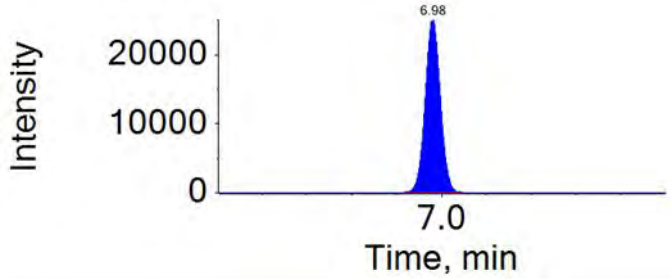
Analyte: PFHxDA
813.0 / 769.0



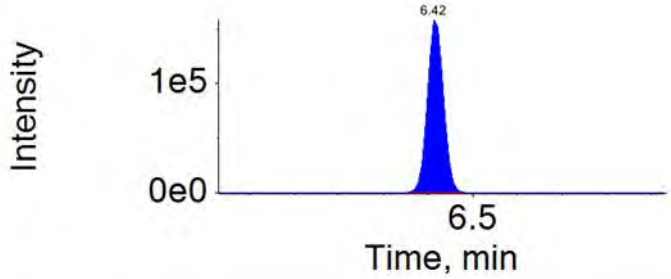
Extraction Standard: 13C2-PFTeDA
715.0 / 670.0



Analyte: PFODA
913.0 / 869.0



Extraction Standard: 13C2-PFTeDA
715.0 / 670.0



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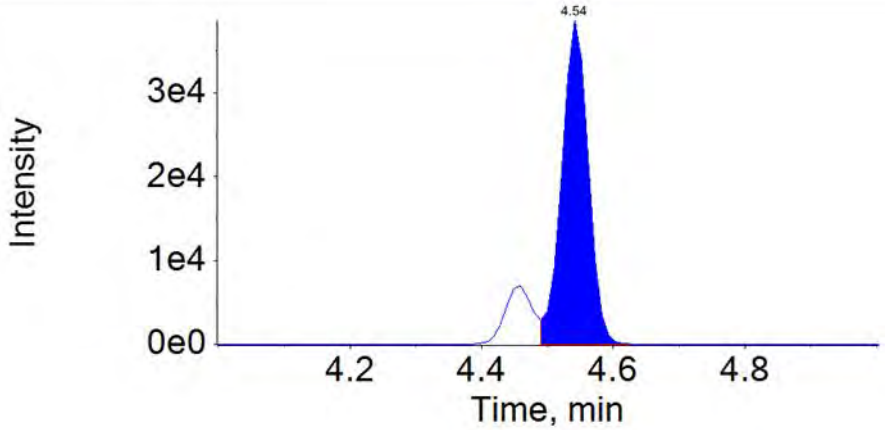
Auto Integrations prior to Manual Integration

Print Date: 11/13/2018 4:58 PM
Template: MQ-OrigInteg-16NOV21.docx

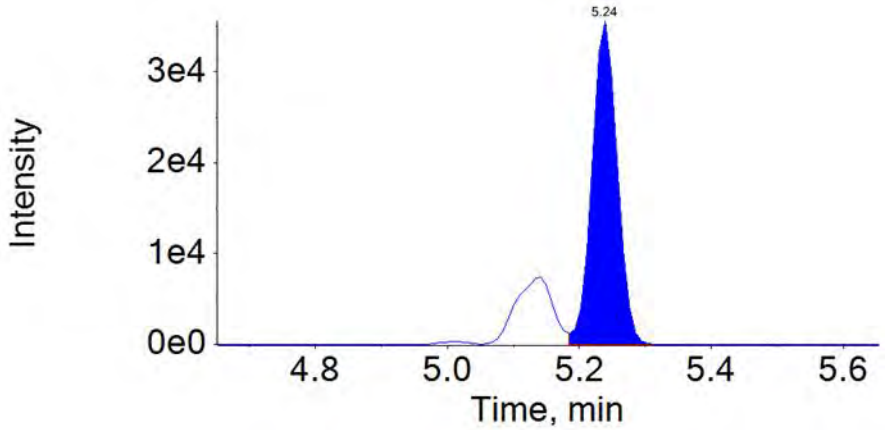
Results Table Name: 18NOV13DCCV5
Results Table Date: 11/13/2018 4:55:52 PM
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

Component Name:
PFHxS
RT (min.):
4.54
Peak Area:
108769.4
Mass Range:
399.0 / 80.0
File Name:
18NOV13D-47.wiff
Sample Name:
CCV5_CAL3



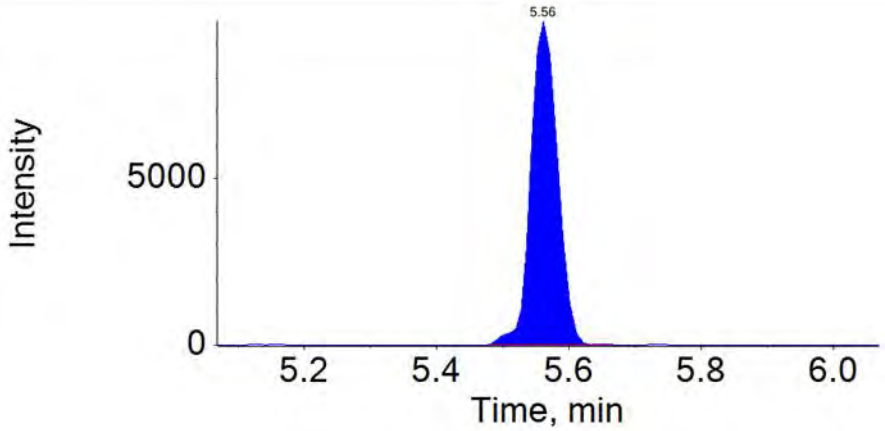
Integration Comment: incorrect integration

Component Name:
PFOS
RT (min.):
5.24
Peak Area:
94626.0
Mass Range:
499.0 / 80.0
File Name:
18NOV13D-47.wiff
Sample Name:
CCV5_CAL3



Integration Comment: incorrect integration

Component Name:
8:2-FTS
RT (min.):
5.56
Peak Area:
27504.4
Mass Range:
527.0 / 507.0
File Name:
18NOV13D-47.wiff
Sample Name:
CCV5_CAL3



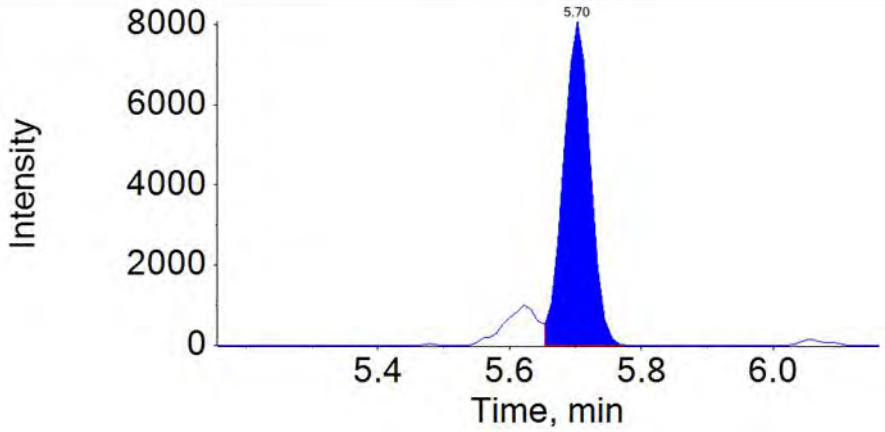
Integration Comment: incorrect integration

APPROVED
By JPT at 5:00 pm, 11/13/18

REVIEWED
By umar at 5:42 pm, 11/13/18

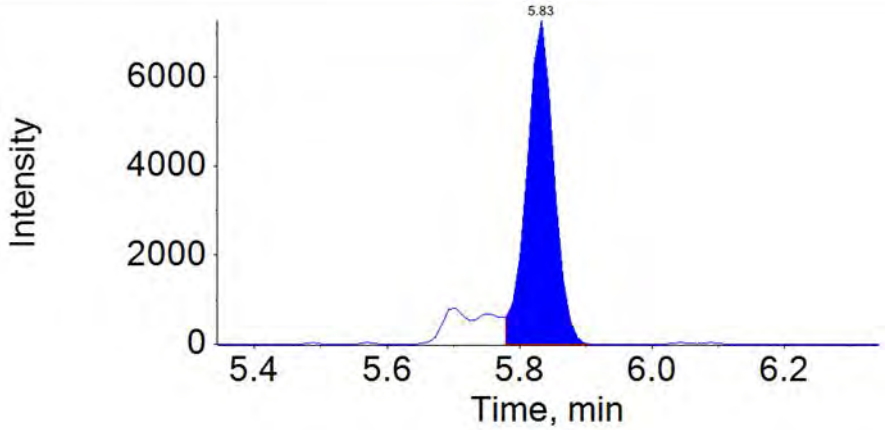
Results Table Name: 18NOV13DCCV5
Results Table Date: 11/13/2018 4:55:52 PM
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

Component Name:
NMeFOSAA
RT (min.):
5.70
Peak Area:
22968.6
Mass Range:
570.0 / 419.0
File Name:
18NOV13D-47.wiff
Sample Name:
CCV5_CAL3



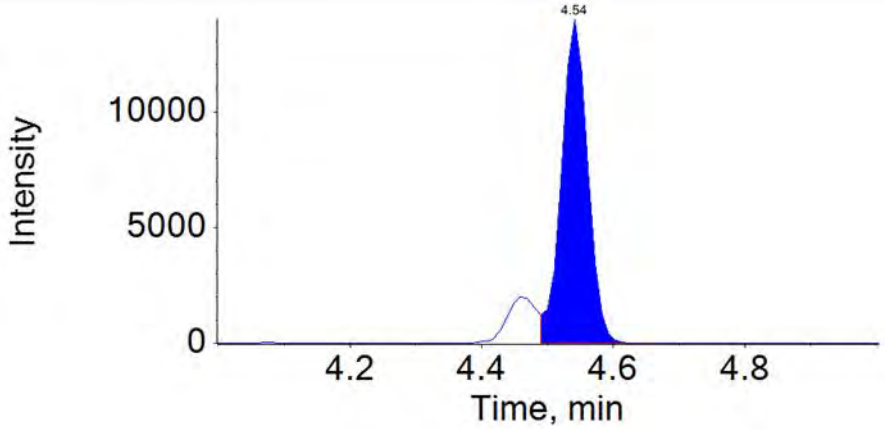
Integration Comment: incorrect integration

Component Name:
NEtFOSAA
RT (min.):
5.83
Peak Area:
20716.3
Mass Range:
584.0 / 419.0
File Name:
18NOV13D-47.wiff
Sample Name:
CCV5_CAL3



Integration Comment: incorrect integration

Component Name:
PFHxS_2
RT (min.):
4.54
Peak Area:
38766.8
Mass Range:
399.0 / 99.0
File Name:
18NOV13D-47.wiff
Sample Name:
CCV5_CAL3



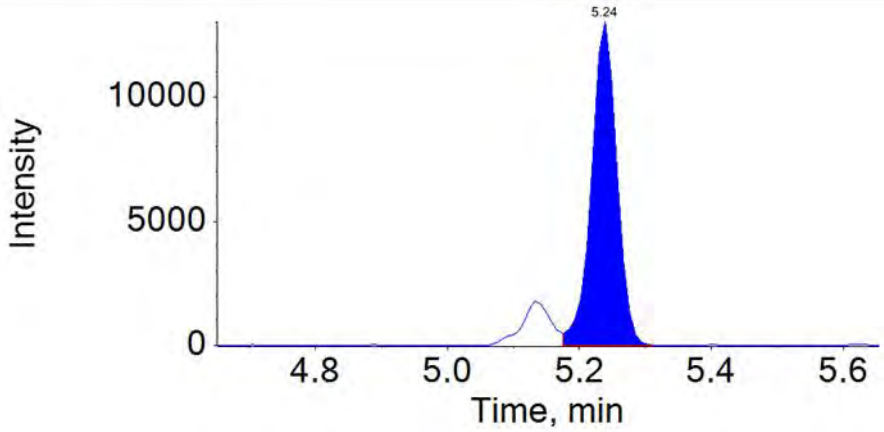
Integration Comment: incorrect integration

APPROVED
By JPT at 5:00 pm, 11/13/18

REVIEWED
By umar at 5:42 pm, 11/13/18

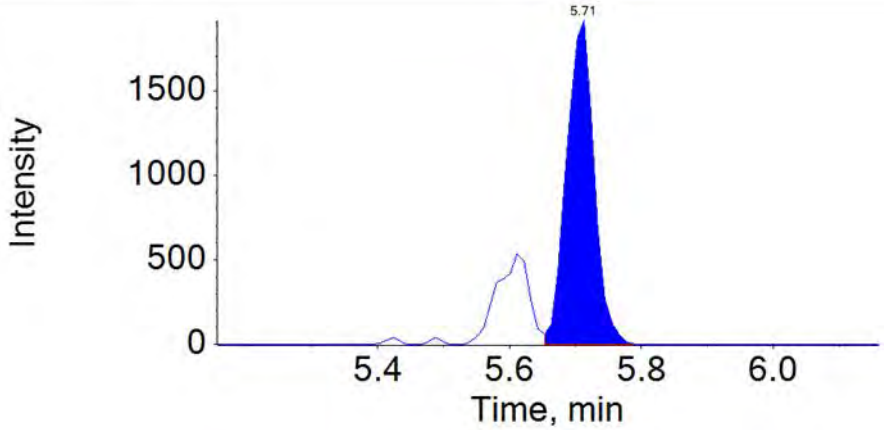
Results Table Name: 18NOV13DCCV5
Results Table Date: 11/13/2018 4:55:52 PM
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

Component Name:
PFOS_2
RT (min.):
5.24
Peak Area:
34981.3
Mass Range:
499.0 / 99.0
File Name:
18NOV13D-47.wiff
Sample Name:
CCV5_CAL3



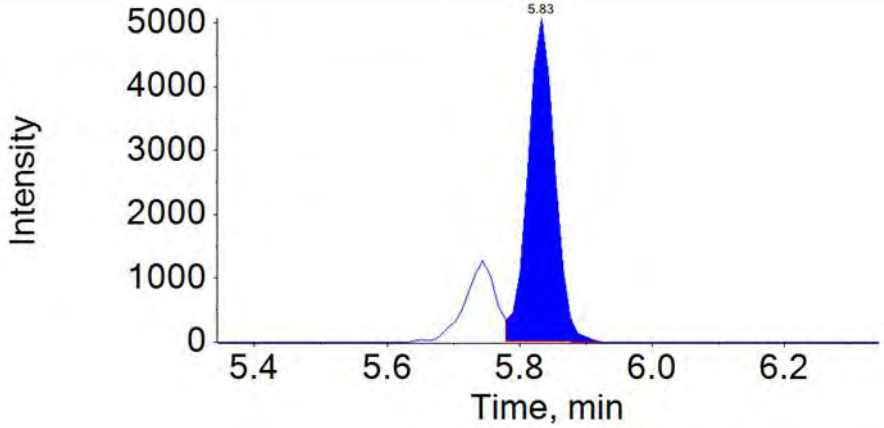
Integration Comment: incorrect integration

Component Name:
NMeFOSAA_2
RT (min.):
5.71
Peak Area:
5588.4
Mass Range:
570.0 / 483.0
File Name:
18NOV13D-47.wiff
Sample Name:
CCV5_CAL3



Integration Comment: incorrect integration

Component Name:
NEtFOSAA_2
RT (min.):
5.83
Peak Area:
14264.5
Mass Range:
584.0 / 526.0
File Name:
18NOV13D-47.wiff
Sample Name:
CCV5_CAL3



Integration Comment: incorrect integration

APPROVED
By JPT at 5:00 pm, 11/13/18

REVIEWED
By umar at 5:42 pm, 11/13/18

Results Table Name: 18NOV13DCCV5
Results Table Date: 11/13/2018 4:55:52 PM
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

APPROVED
By JPT at 5:00 pm, 11/13/18

REVIEWED
By umar at 5:42 pm, 11/13/18

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LC-MS/MS Analysis Report

Printed: 11/13/2018 4:58:00 PM
Template: IonRatio18OCT10

Ion Ratio Report

Sample Name: CCV5_CAL3 **Instrument Name:** LM27631 **File Name:** 18NOV13D-47.wiff

Component Name	RT	RRT	Analyte Area Response	Int Typ	Expected Ion Ratio	Ion Ratio	Ion Ratio % Diff	Ion Ratio Limit	Ion Ratio OOS
PFBS	3.80	1.00	173380.5	A	N/A	1.0000			
PFBS_2	3.80	1.00	61512.5	A	N/A	0.3548	-3	50	
4:2-FTS	4.12	1.00	39454.2	A	N/A	1.0000			
4:2 FTS_2	4.12	1.00	23650.9	A	N/A	0.5995		#NA!	
PFHxA	4.15	1.00	359338.4	A	N/A	1.0000			
PFHxA_2	4.15	1.00	4198.0	A	N/A	0.0117	-1	50	
PFPeS	4.17	1.10	86328.6	A	N/A	1.0000			
PFPeS_2	4.17	1.10	44335.6	A	N/A	0.5136	-1	50	
PFHpA	4.54	1.00	366823.7	A	N/A	1.0000			
PFHpA_2	4.54	1.00	21736.9	A	N/A	0.0593	5	50	
PFHxS	4.54	1.00	129050.1	M	N/A	1.0000			
PFHxS_2	4.54	1.00	44840.4	M	N/A	0.3475	14	50	
6:2-FTS	4.90	1.00	28406.1	A	N/A	1.0000			
6:2 FTS_2	4.90	1.00	18809.6	A	N/A	0.6622		#NA!	
PFHpS	4.90	1.08	120412.1	A	N/A	1.0000			
PFHpS_2	4.90	1.08	52184.3	A	N/A	0.4334	7	50	
PFOA	4.91	1.00	386893.4	A	N/A	1.0000			
PFOA_2	4.91	1.00	22543.1	A	N/A	0.0583	2	50	
PFOS	5.24	1.00	124584.3	M	N/A	1.0000			
PFOS_2	5.24	1.00	40408.3	M	N/A	0.3243	25	50	
PFNA	5.25	1.00	306064.7	A	N/A	1.0000			
PFNA_2	5.25	1.00	6242.3	A	N/A	0.0204	-11	50	
PFNS	5.54	1.06	81247.8	A	N/A	1.0000			
PFNS_2	5.54	1.06	36368.0	A	N/A	0.4476	-6	50	
PFDA	5.56	1.00	262885.4	A	N/A	1.0000			
PFDA_2	5.56	1.00	2149.2	A	N/A	0.0082	3	50	
8:2-FTS	5.56	1.00	26997.8	M	N/A	1.0000			
8:2 FTS_2	5.56	1.00	16168.3	A	N/A	0.5989		#NA!	
NMeFOSAA	5.70	1.00	26509.8	M	N/A	1.0000			
NMeFOSAA_2	5.71	1.00	7430.7	M	N/A	0.2803	32	50	
PFDS	5.79	1.11	57377.5	A	N/A	1.0000			
PFDS_2	5.79	1.11	32258.4	A	N/A	0.5622	10	50	
PFUnDA	5.82	1.00	206119.4	A	N/A	1.0000			
PFUnDA_2	5.81	1.00	715.1	A	N/A	0.0035	-17	50	
NEtFOSAA	5.83	1.00	24747.7	M	N/A	1.0000			
NEtFOSAA_2	5.83	1.00	18439.9	M	N/A	0.7451	28	50	
PFDoDA	6.04	1.00	244015.0	A	N/A	1.0000			
PFDoDA_2	6.04	1.00	4086.0	A	N/A	0.0167	3	50	
10:2-FTS	6.06	1.09	17038.2	A	N/A	1.0000			
10:2 FTS_2	6.06	1.09	12887.4	A	N/A	0.7564		#NA!	
PFTrDA	6.24	1.03	189964.3	A	N/A	1.0000			
PFTrDA_2	6.24	1.03	1890.9	A	N/A	0.0100	8	50	
PFTeDA	6.42	1.00	156391.7	A	N/A	1.0000			
PFTeDA_2	6.41	1.00	1243.6	A	N/A	0.0080	24	50	
PFHxDA	6.72	1.05	72132.1	A	N/A	1.0000			
PFHxDA_2	6.72	1.05	4816.8	A	N/A	0.0668	-1	50	
PFODA	6.98	1.09	59386.3	A	N/A	1.0000			
PFODA_2	6.98	1.09	1490.9	A	N/A	0.0251	-7	50	

APPROVED
By JPT at 5:00 pm, 11/13/18

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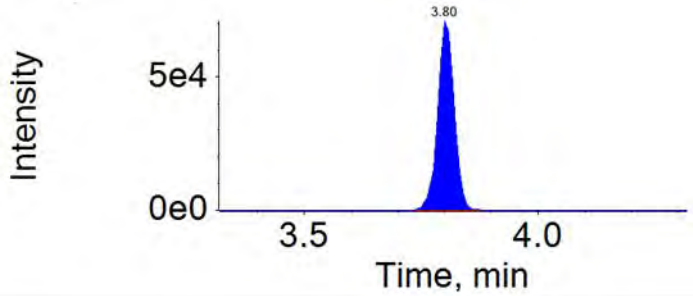
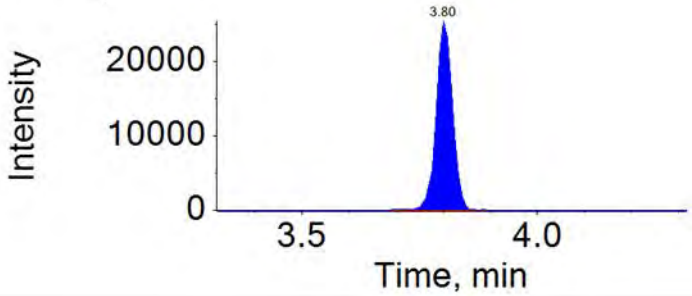
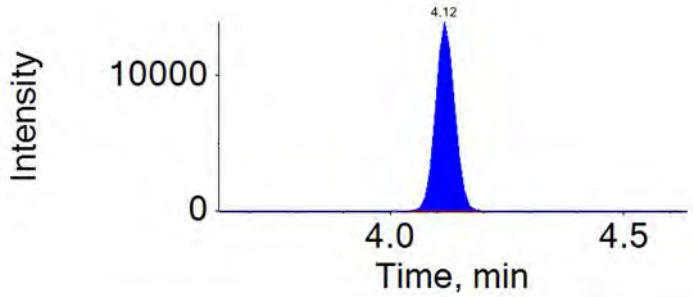
Component: PFBS
Primary Mass: 299.0 / 80.0



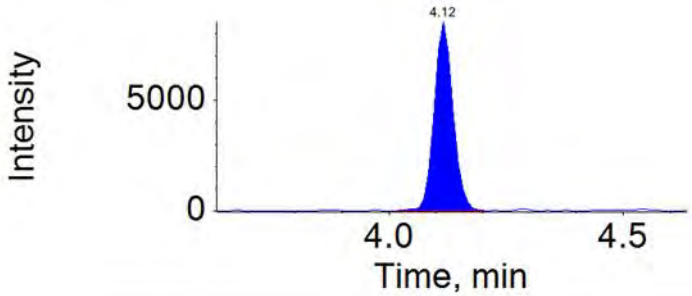
Component: PFBS_2
Secondary Mass: 299.0 / 99.0



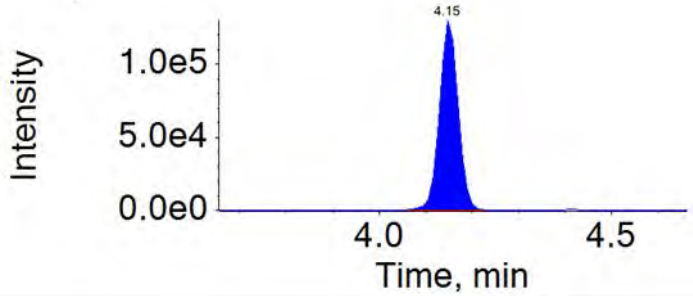
Component: 4:2-FTS
Primary Mass: 327.0 / 307.0



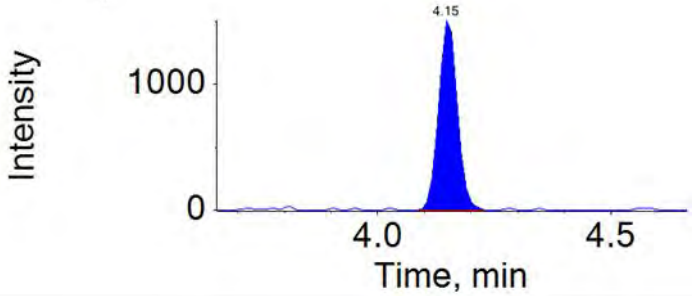
Component: 4:2 FTS_2
Secondary Mass: 327.0 / 81.0



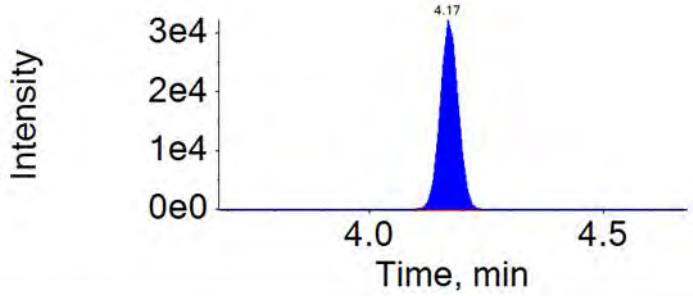
Component: PFHxA
Primary Mass: 313.0 / 269.0



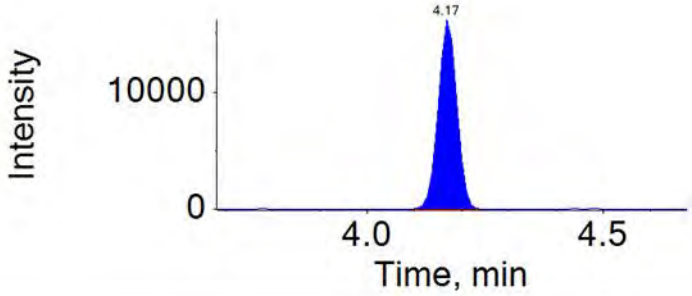
Component: PFHxA_2
Secondary Mass: 313.0 / 119.0



Component: PFPeS
Primary Mass: 349.0 / 80.0



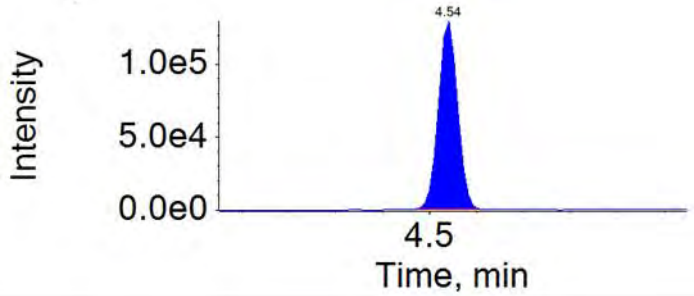
Component: PFPeS_2
Secondary Mass: 349.0 / 99.0



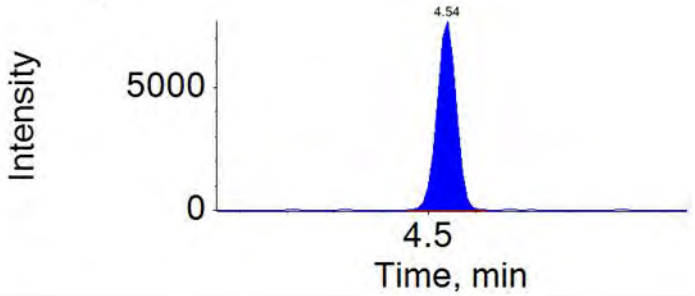
APPROVED
By JPT at 5:00 pm, 11/13/18

REVIEWED
By umar at 5:42 pm, 11/13/18

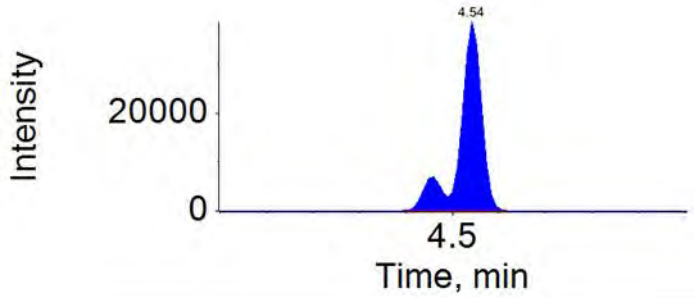
Component: PFHpA
Primary Mass: 363.0 / 319.0



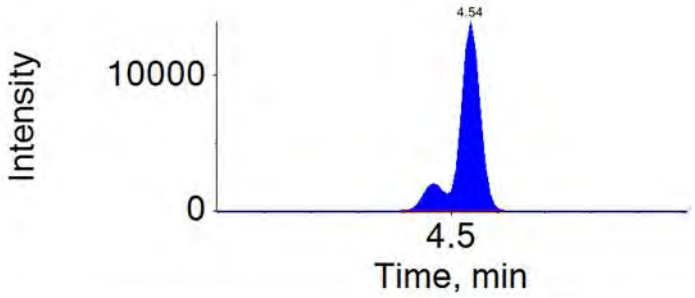
Component: PFHpA_2
Secondary Mass: 363.0 / 169.0



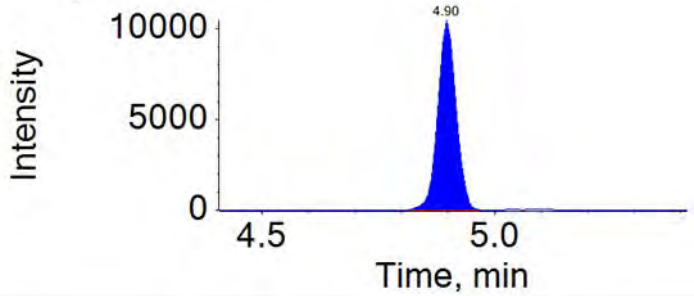
Component: PFHxS
Primary Mass: 399.0 / 80.0



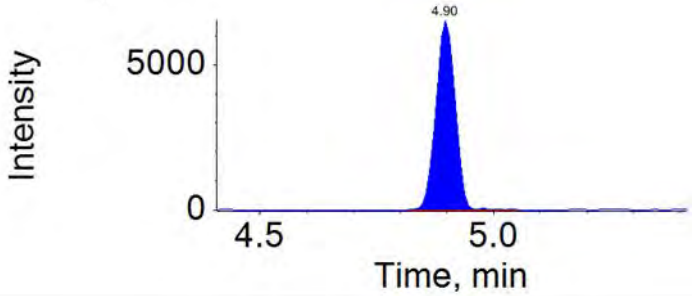
Component: PFHxS_2
Secondary Mass: 399.0 / 99.0



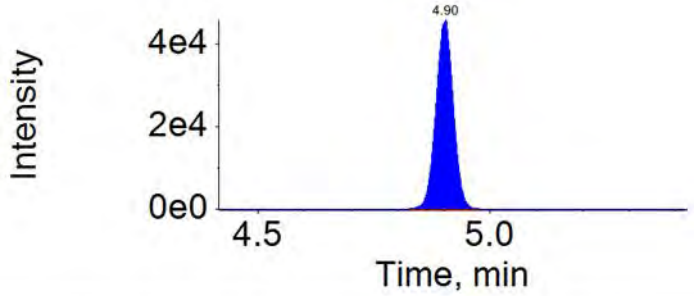
Component: 6:2-FTS
Primary Mass: 427.0 / 407.0



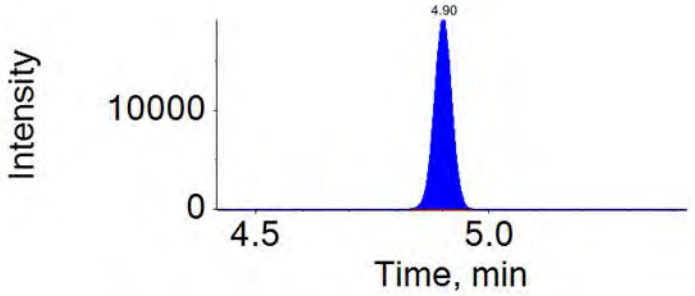
Component: 6:2 FTS_2
Secondary Mass: 427.0 / 81.0



Component: PFHpS
Primary Mass: 449.0 / 80.0



Component: PFHpS_2
Secondary Mass: 449.0 / 99.0



APPROVED
By JPT at 5:00 pm, 11/13/18

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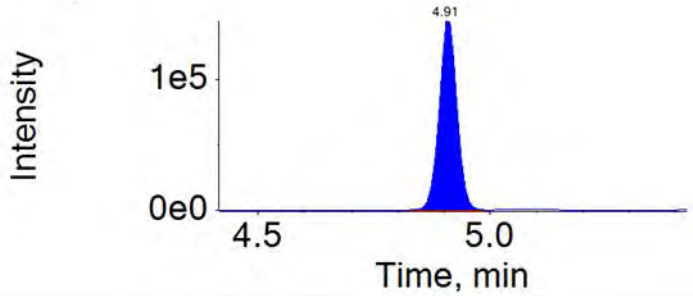
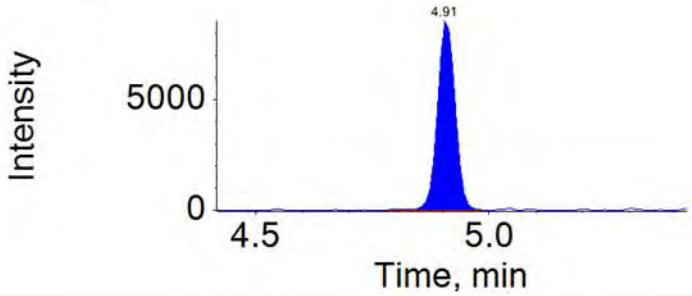
By umar at 5:42 pm, 11/13/18

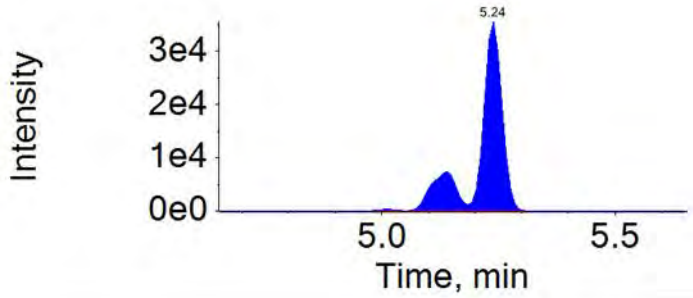
Component: PFOA
Primary Mass: 413.0 / 369.0



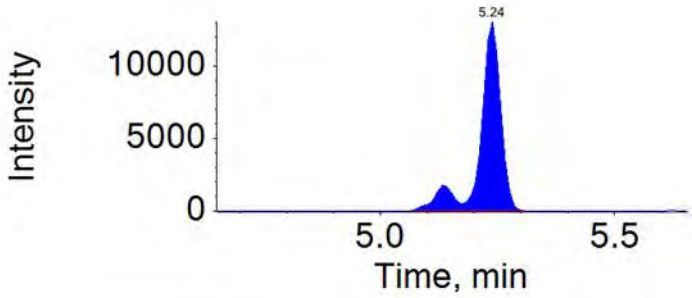
Component: PFOA_2
Secondary Mass: 413.0 / 169.0



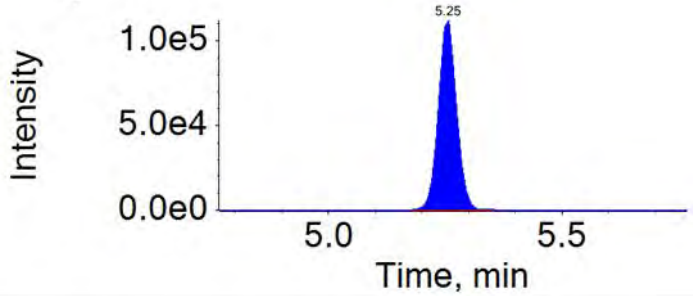
Component: PFOS
Primary Mass: 499.0 / 80.0



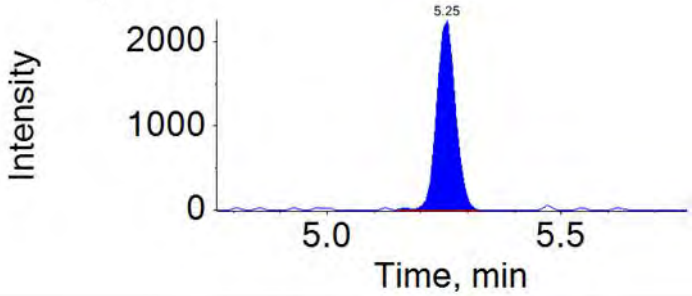
Component: PFOS_2
Secondary Mass: 499.0 / 99.0



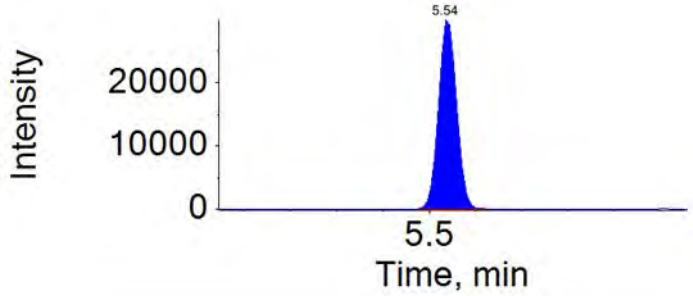
Component: PFNA
Primary Mass: 463.0 / 419.0



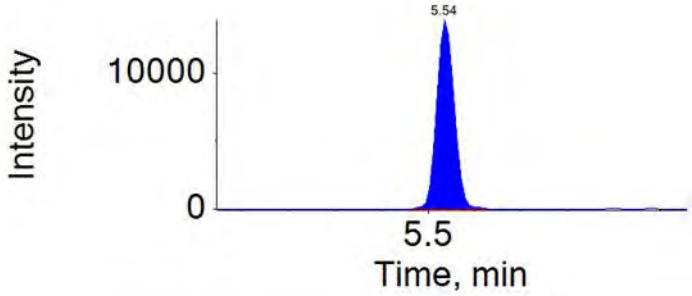
Component: PFNA_2
Secondary Mass: 463.0 / 169.0



Component: PFNS
Primary Mass: 549.0 / 80.0



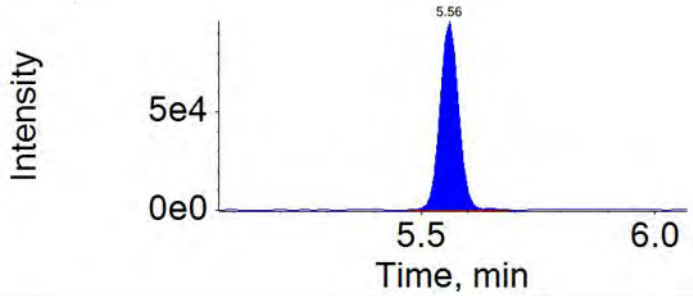
Component: PFNS_2
Secondary Mass: 549.0 / 99.0



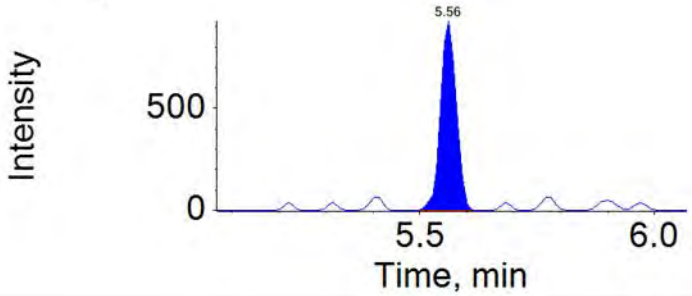
APPROVED
By JPT at 5:00 pm, 11/13/18

REVIEWED
By umar at 5:42 pm, 11/13/18

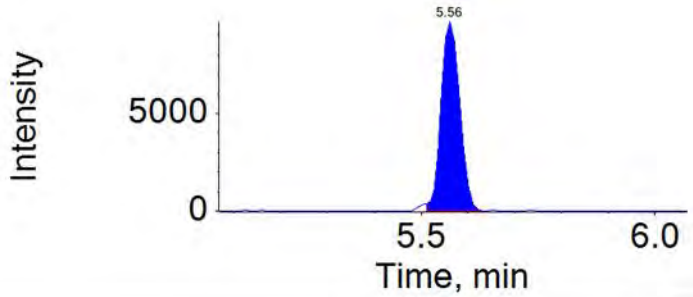
Component: PFDA
Primary Mass: 513.0 / 469.0



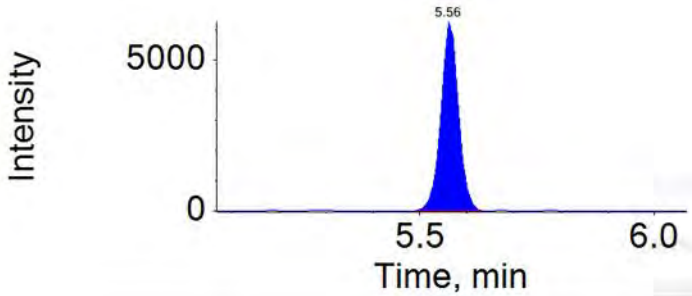
Component: PFDA_2
Secondary Mass: 513.0 / 169.0



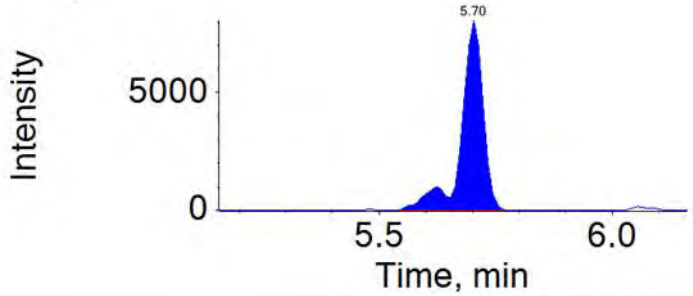
Component: 8:2-FTS
Primary Mass: 527.0 / 507.0



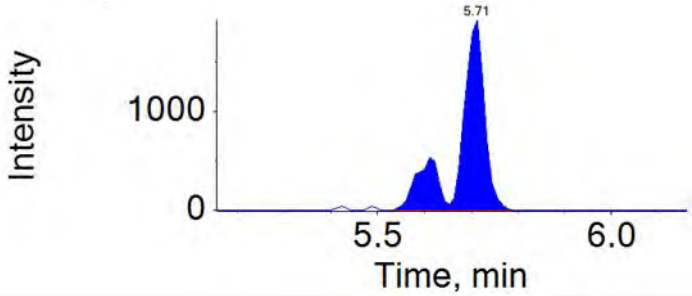
Component: 8:2 FTS_2
Secondary Mass: 527.0 / 81.0



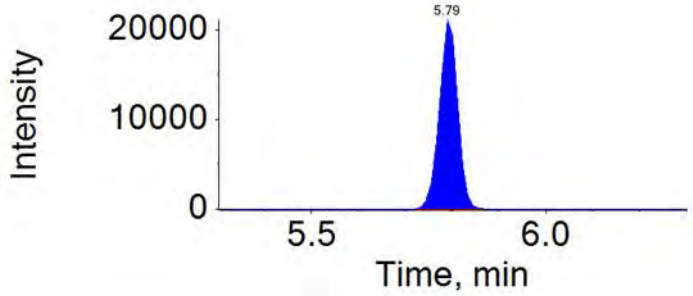
Component: NMeFOSAA
Primary Mass: 570.0 / 419.0



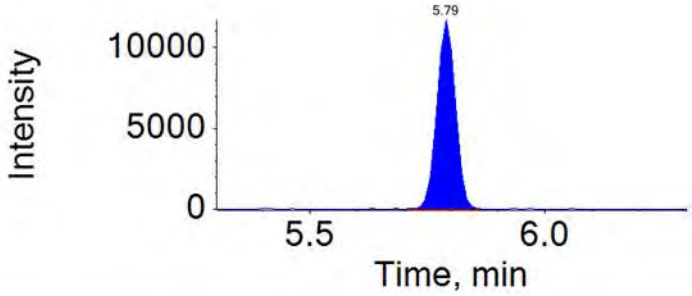
Component: NMeFOSAA_2
Secondary Mass: 570.0 / 483.0



Component: PFDS
Primary Mass: 599.0 / 80.0



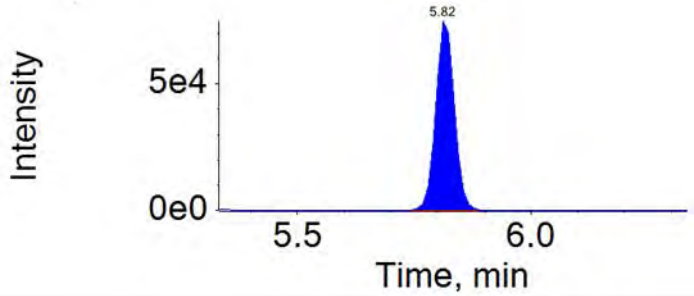
Component: PFDS_2
Secondary Mass: 599.0 / 99.0



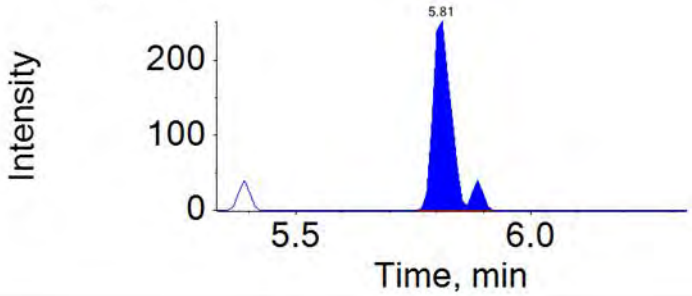
APPROVED
By JPT at 5:00 pm, 11/13/18

REVIEWED
By umar at 5:42 pm, 11/13/18

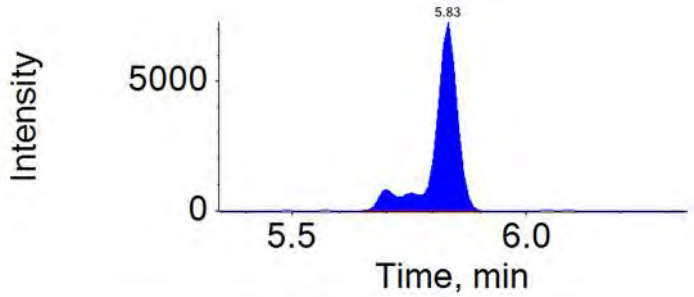
Component: PFUnDA
Primary Mass: 563.0 / 519.0



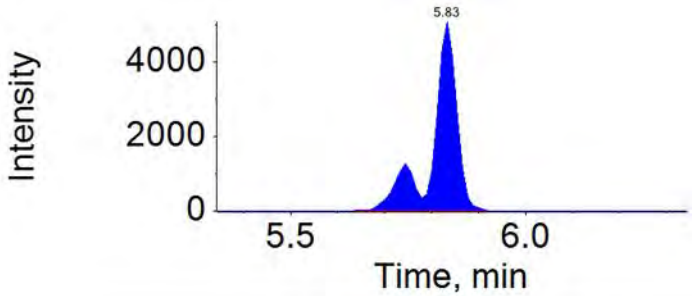
Component: PFUnDA_2
Secondary Mass: 563.0 / 169.0



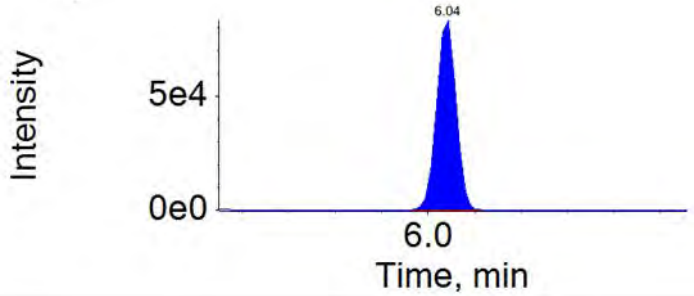
Component: NEtFOSAA
Primary Mass: 584.0 / 419.0



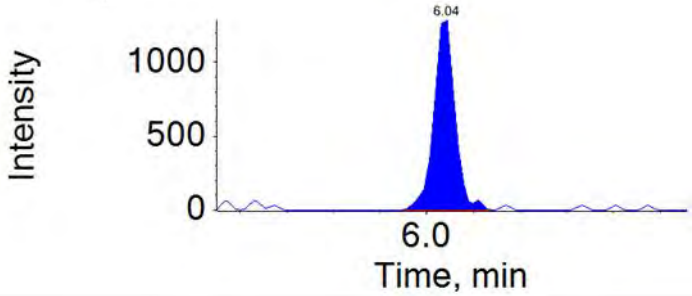
Component: NEtFOSAA_2
Secondary Mass: 584.0 / 526.0



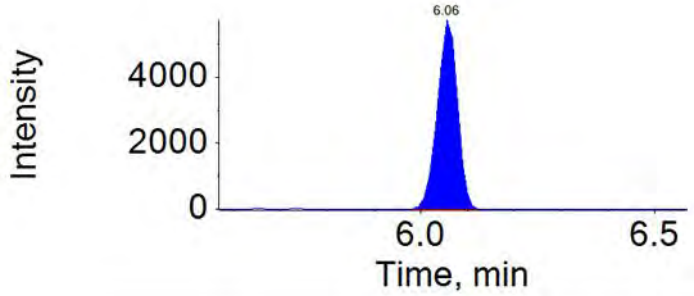
Component: PFDoDA
Primary Mass: 613.0 / 569.0



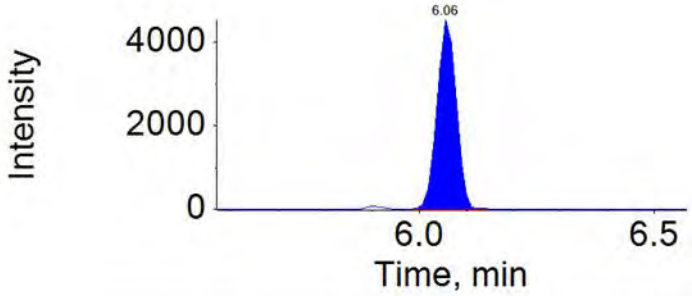
Component: PFDoDA_2
Secondary Mass: 613.0 / 169.0



Component: 10:2-FTS
Primary Mass: 627.0 / 607.0



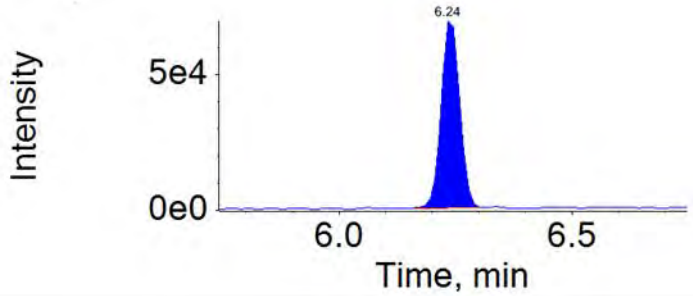
Component: 10:2 FTS_2
Secondary Mass: 627.0 / 81.0



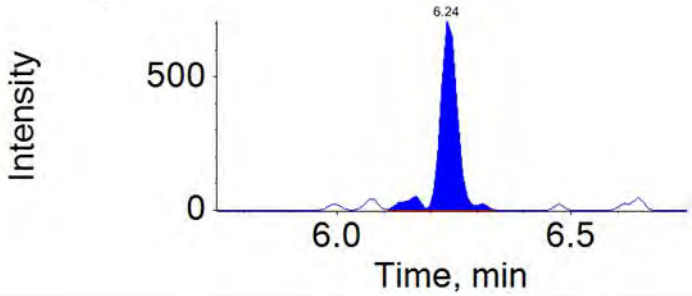
APPROVED
By JPT at 5:00 pm, 11/13/18

REVIEWED
By umar at 5:42 pm, 11/13/18

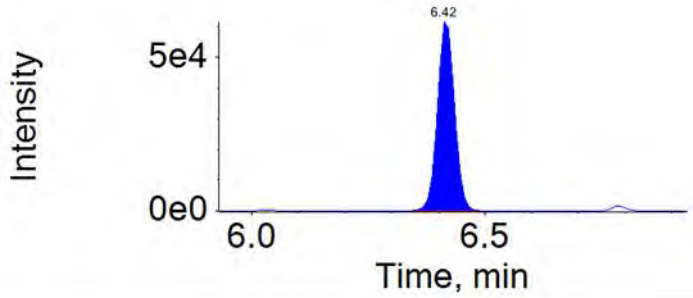
Component: PFTrDA
Primary Mass: 663.0 / 619.0



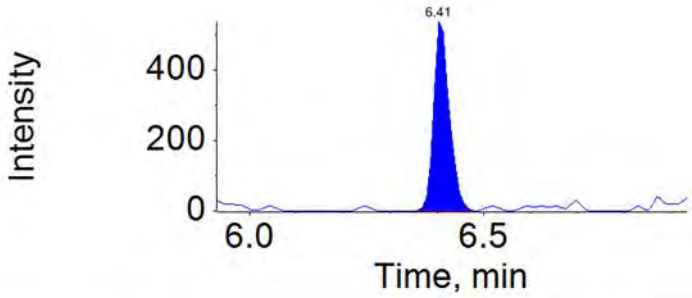
Component: PFTrDA_2
Secondary Mass: 663.0 / 169.0



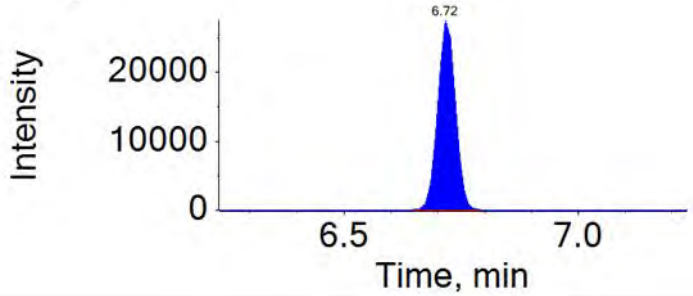
Component: PFTeDA
Primary Mass: 713.0 / 669.0



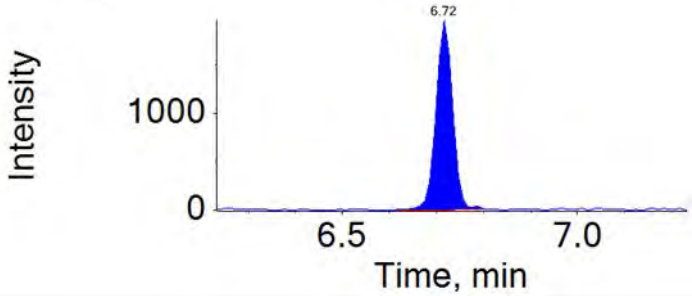
Component: PFTeDA_2
Secondary Mass: 713.0 / 169.0



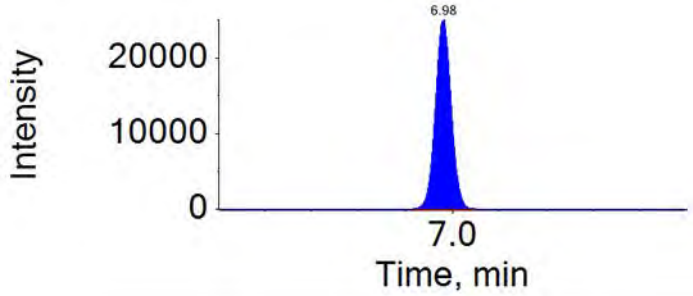
Component: PFHxDA
Primary Mass: 813.0 / 769.0



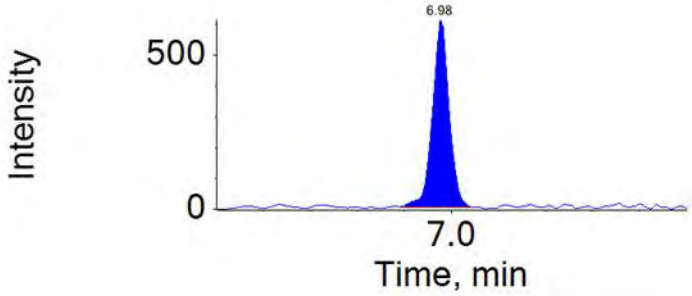
Component: PFHxDA_2
Secondary Mass: 813.0 / 169.0



Component: PFODA
Primary Mass: 913.0 / 869.0



Component: PFODA_2
Secondary Mass: 913.0 / 169.0



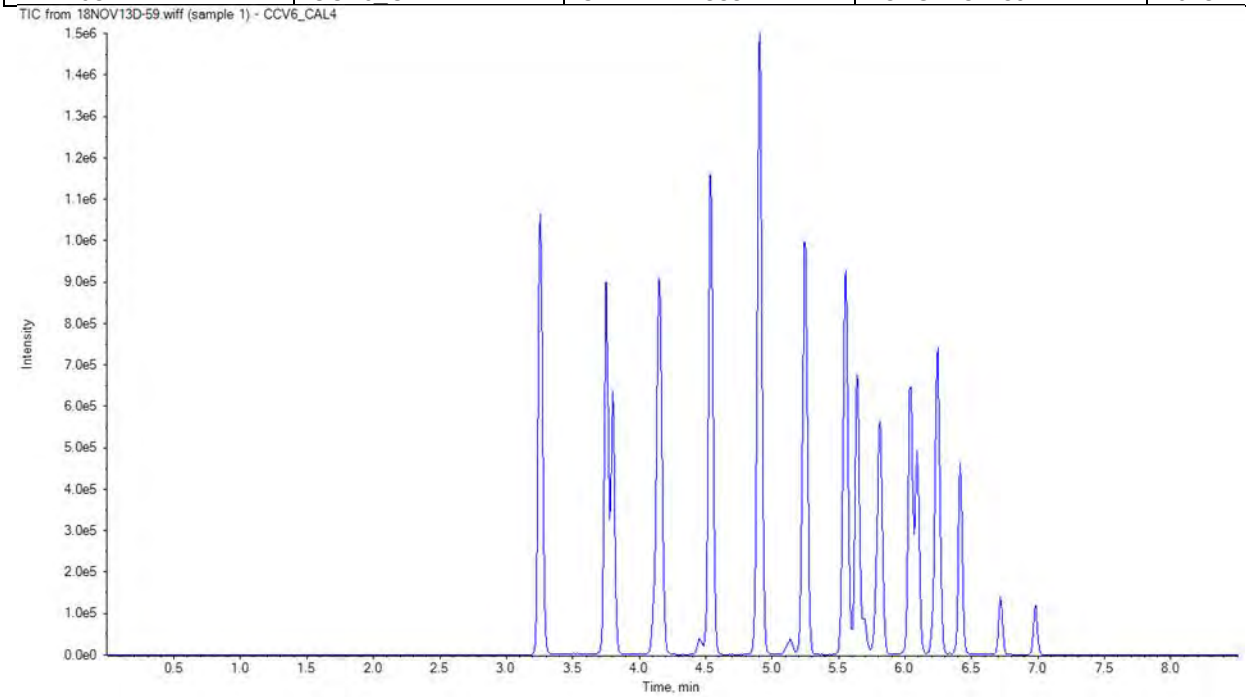
APPROVED
By JPT at 5:00 pm, 11/13/18

REVIEWED
By umar at 5:42 pm, 11/13/18

Continuing Calibration Verfication

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV13DCCV6-10 11/14/2018 9:23:22 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Instrument Name:	Sample Name:	Sample ID:	Sample File:	Acquisition Date:
LM27631	CCV6_CAL4	CALBRN41833B	18NOV13D-59.wiff	2018-11-13T18:26:35



Injection Standard Area Reference File: 18NOV13D-05

Injection Standard Name	Inj Std Conc	Injection Std Peak Area	Reference Injection Standard Area	Injection Std %Diff	Injection Std %Diff Limit	Injection Std %Diff OOS
13C3-PFBA	5.0	689002.2	661126.9	4	50	
13C2-PFOA	5.0	488195.5	466902.6	5	50	
13C4-PFOS	4.8	262087.6	247446.9	6	50	
13C2-PFDA	5.0	298931.2	295381.6	1	50	

APPROVED
By JPT at 10:19 am, 11/14/18

REVIEWED
By HMK at 12:08 pm, 11/15/18

Continuing Calibration Verfication

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV13DCCV6-10 11/14/2018 9:23:22 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Instrument Name:	Sample Name:	Sample ID:	Sample File:	Acquisition Date:
LM27631	CCV6_CAL4	CALBRN41833B	18NOV13D-59.wiff	2018-11-13T18:26:35

Analyte Name	Analyte Area	Sc /pk	Ext Std Name	Ext Std Area	Ext Std con	Area Ratio	RT (min)	RRT	Spec Amt	Calc Amt	% Diff	% Diff Lim	% Diff OOS
PFBA	1076242.9	10	13C4-PFBA	739348.8	5.0	1.456	3.25	1.000	8.000	8.064	1	30	
PFPeA	1084131.0	11	13C5-PFPeA	751308.4	5.0	1.443	3.75	1.000	8.000	8.353	4	30	
PFBS	640798.3	11	13C3-PFBS	430870.9	4.7	1.487	3.80	1.000	7.080	7.074	0	30	
4:2-FTS	136241.9	11	13C2-4:2-FTS	44628.3	4.7	3.053	4.11	1.000	7.470	8.288	11	30	
PFHxA	1308040.4	12	13C5-PFHxA	654393.1	5.0	1.999	4.15	1.000	8.000	8.346	4	30	
PFPeS	317036.6	11	13C3-PFBS	430870.9	4.7	0.736	4.17	1.100	7.500	7.144	-5	30	
PFHpA	1363723.9	12	13C4-PFHpA	519596.7	5.0	2.625	4.54	1.000	8.000	8.700	9	30	
PFHxS	455335.5	19	13C3-PFHxS	304253.5	4.7	1.497	4.54	1.000	7.300	7.256	-1	30	
6:2-FTS	104080.7	11	13C2-6:2-FTS	30823.2	4.8	3.377	4.89	1.000	7.580	8.171	8	30	
PFHpS	430779.1	11	13C3-PFHxS	304253.5	4.7	1.416	4.90	1.080	7.610	7.453	-2	30	
PFOA	1332914.9	11	13C8-PFOA	902430.4	5.0	1.477	4.91	1.000	8.000	7.889	-1	30	
PFOS	448218.9	22	13C8-PFOS	279354.2	4.8	1.604	5.24	1.000	7.400	7.017	-5	30	
PFNA	1116186.2	11	13C9-PFNA	458195.1	5.0	2.436	5.25	1.000	8.000	8.784	10	30	
PFNS	284997.7	11	13C8-PFOS	279354.2	4.8	1.020	5.53	1.060	7.680	7.138	-7	30	
PFDA	921516.9	11	13C6-PFDA	614251.8	5.0	1.500	5.55	1.000	8.000	7.953	-1	30	
8:2-FTS	84403.2	11	13C2-8:2-FTS	28156.0	4.8	2.998	5.56	1.000	7.660	6.989	-9	30	
PFOSA	986012.7	11	13C8-PFOSA	596077.7	5.0	1.654	5.64	1.000	8.000	8.080	1	30	
NMeFOSAA	105636.9	18	d3-NMeFOSAA	70909.1	5.0	1.490	5.70	1.000	8.000	8.420	5	30	
PFDS	224576.1	11	13C8-PFOS	279354.2	4.8	0.804	5.79	1.110	7.700	7.284	-5	30	
PFUnDA	818489.4	11	13C7-PFUnDA	248641.1	5.0	3.292	5.81	1.000	8.000	8.606	8	30	
NEtFOSAA	94592.3	22	d5-NEtFOSAA	66568.4	5.0	1.421	5.83	1.000	8.000	7.449	-7	30	
PFDoDA	868518.8	12	13C2-PFDoDA	558914.6	5.0	1.554	6.04	1.000	8.000	7.913	-1	30	
10:2-FTS	65963.7	11	13C2-8:2-FTS	28156.0	4.8	2.343	6.06	1.090	7.710	7.803	1	30	
NMePFOSAE	625058.6	11	d7-NMePFOSAE	323005.4	5.0	1.935	6.09	1.000	8.000	8.054	1	30	
NMePFOSA	111739.5	11	d3-NMePFOSA	76792.7	5.0	1.455	6.10	1.000	8.000	7.178	-10	30	
PFDoS	113317.4	11	13C8-PFOS	279354.2	4.8	0.406	6.21	1.190	7.740	7.105	-8	30	
NEtPFOSAE	663058.5	11	d9-NEtPFOSAE	264184.7	5.0	2.510	6.25	1.000	8.000	8.052	1	30	
NEtPFOSA	99586.1	11	d5-NEtPFOSA	58317.7	5.0	1.708	6.26	1.000	8.000	7.842	-2	30	
PFTrDA	725189.3	11	13C2-PFDoDA	558914.6	5.0	1.297	6.24	1.030	8.000	8.189	2	30	
PFTeDA	584375.2	10	13C2-PFTeDA	391231.2	5.0	1.494	6.42	1.000	8.000	8.373	5	30	
PFHxDA	270067.9	11	13C2-PFTeDA	391231.2	5.0	0.690	6.72	1.050	8.000	8.224	3	30	
PFODA	242463.9	10	13C2-PFTeDA	391231.2	5.0	0.620	6.98	1.090	8.000	8.631	8	30	

APPROVED
By JPT at 10:19 am, 11/14/18

REVIEWED
By HMK at 12:08 pm, 11/15/18

Continuing Calibration Verfication

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV13DCCV6-10 11/14/2018 9:23:22 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

APPROVED
By JPT at 10:19 am, 11/14/18

REVIEWED
By HMK at 12:08 pm, 11/15/18

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LC-MS/MS
DOD Analysis Report

Printed: 11/14/2018 9:26:00 AM
Template: DOD-Sample-18JUN22.docx

ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM
Result Table: 18NOV13DCCV6-10 11/14/2018 9:23:22 AM
Acquisition Method: 18AUG13_3uL.dam

Sample Name:	CCV6_CAL4			**Data File:**		18NOV13D-59.wiff
Sample ID:	CALBRN41833B			**Acquis Date:**		2018-11-13T18:26:35
Sample Type:	Quality Control			**Instrument:**		LM27631
Vial Position:	6			**Acquis Method:**		18AUG13_3uL.dam
Injection Vol:	3.00			**Result Table:**		18NOV13DCCV6-10
QMethod File:	18AUG20QM			**ICAL Name:**		18NOV12DCAL
Batch Number:	N/A			**Operator:**		JPT12262
Sample Wt.:	1.00000			**Dilution Factor:**		1.00
Sample Vol.:	1.000			**Prep Factor:**		1.000

Injection Standard Peak Table

Injection Standard Area Reference File: 18NOV13D-05

Injection Standard Name	Inj Std Conc	Injection Std Peak Area	Rreference Injection Standard Area	Injection Std %Diff	Injection Std %Diff Limit	Injection Std %Diff OOS
13C3-PFBA	5.0	689002.2	661126.9	4	50	
13C2-PFOA	5.0	488195.5	466902.6	5	50	
13C4-PFOS	4.8	262087.6	247446.9	6	50	
13C2-PFDA	5.0	298931.2	295381.6	1	50	

Extraction Standard Peak Table

Extraction Standard Name	Ext Std Area	Inj Std Name	Inj Std Area	Area Ratio	Ext Std Conc	Ext Std Result	Ext Std %REC	Ext Std %REC Limit	Ext Std OOS
E13C4-PFBA	739348.8	13C3-PFBA	689002.2	1.073	5.000	4.811	96	70-130	
E13C5-PFPeA	751308.4	13C3-PFBA	689002.2	1.090	5.000	4.891	98	70-130	
E13C3-PFBS	430870.9	13C3-PFBA	689002.2	0.625	4.650	4.414	95	70-130	
E13C2-4:2-FTS	44628.3	13C2-PFOA	488195.5	0.091	4.670	4.071	87	70-130	
E13C5-PFHxA	654393.1	13C2-PFOA	488195.5	1.340	5.000	4.842	97	70-130	
E13C3-PFHxS	304253.5	13C2-PFOA	488195.5	0.623	4.730	4.276	90	70-130	
E13C4-PFHpA	519596.7	13C2-PFOA	488195.5	1.064	5.000	4.795	96	70-130	
E13C2-6:2-FTS	30823.2	13C2-PFOA	488195.5	0.063	4.750	4.224	89	70-130	
E13C8-PFOA	902430.4	13C2-PFOA	488195.5	1.849	5.000	5.093	102	70-130	
E13C8-PFOS	279354.2	13C4-PFOS	262087.6	1.066	4.780	4.723	99	70-130	
E13C9-PFNA	458195.1	13C4-PFOS	262087.6	1.748	5.000	4.874	97	70-130	
E13C6-PFDA	614251.8	13C2-PFDA	298931.2	2.055	5.000	4.795	96	70-130	
E13C2-8:2-FTS	28156.0	13C2-PFDA	298931.2	0.094	4.790	4.697	98	70-130	
E13C8-PFOSA	596077.7	13C2-PFDA	298931.2	1.994	5.000	4.421	88	70-130	
Ed3-NMeFOSAA	70909.1	13C2-PFDA	298931.2	0.237	5.000	4.282	86	70-130	
E13C7-PFUnDA	248641.1	13C2-PFDA	298931.2	0.832	5.000	4.829	97	70-130	
Ed5-NEtFOSAA	66568.4	13C2-PFDA	298931.2	0.223	5.000	4.711	94	70-130	
E13C2-PFDoDA	558914.6	13C2-PFDA	298931.2	1.870	5.000	4.854	97	70-130	
Ed7-NMePFOSAE	323005.4	13C2-PFDA	298931.2	1.081	5.000	4.676	94	70-130	
Ed3-NMePFOSA	76792.7	13C2-PFDA	298931.2	0.257	5.000	4.667	93	70-130	
Ed9-NEtPFOSAE	264184.7	13C2-PFDA	298931.2	0.884	5.000	4.597	92	70-130	
Ed5-NEtPFOSA	58317.7	13C2-PFDA	298931.2	0.195	5.000	4.576	92	70-130	
E13C2-PFTeDA	391231.2	13C2-PFDA	298931.2	1.309	5.000	4.595	92	70-130	

APPROVED
By JPT at 10:19 am, 11/14/18

REVIEWED
By HMK at 12:08 pm, 11/15/18

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV13DCCV6-10 11/14/2018 9:23:22 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

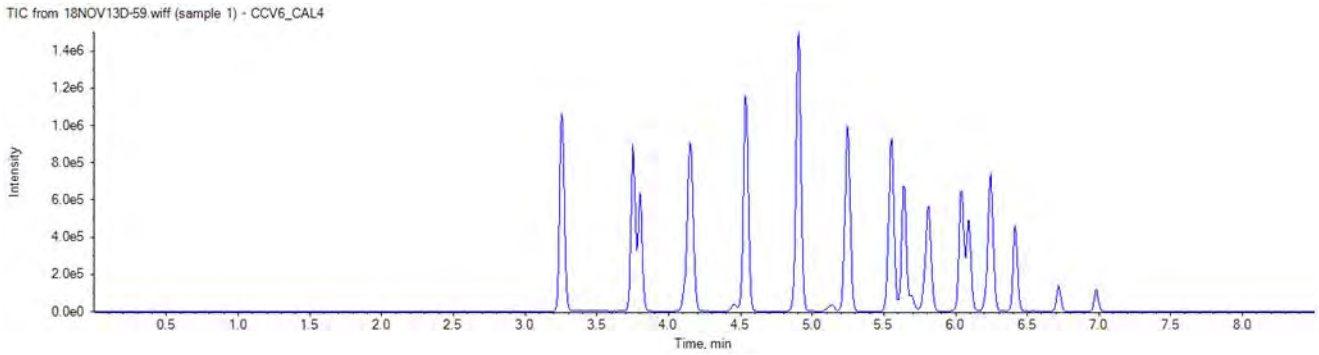
Analyte Quantitation Peak Table

Sample Name: CCV6_CAL4 **Instrument Name:** LM27631 **File Name:** 18NOV13D-59.wiff

Sample Wt	Sample Vol	Dilution Factor	PrepFactor
1.00000	1.000	1.00	1.000

Analyte Name	RT	RRT	Analyte Area Response	E	Int Typ	ES Name	ES RT	ES Area Response	Area Ratio	Sample Result (ng/g)
PFBA	3.25	1.000	1076242.9		A	13C4-PFBA	3.25	739348.8	1.456	8.064
PFPeA	3.75	1.000	1084131.0		A	13C5-PFPeA	3.75	751308.4	1.443	8.353
PFBS	3.80	1.000	640798.3		A	13C3-PFBS	3.80	430870.9	1.487	7.074
4:2-FTS	4.11	1.000	136241.9		A	13C2-4:2-FTS	4.12	44628.3	3.053	8.288
PFHxA	4.15	1.000	1308040.4		A	13C5-PFHxA	4.15	654393.1	1.999	8.346
PFPeS	4.17	1.100	317036.6		A	13C3-PFBS	3.80	430870.9	0.736	7.144
PFHpA	4.54	1.000	1363723.9		A	13C4-PFHpA	4.54	519596.7	2.625	8.700
PFHxS	4.54	1.000	455335.5		M	13C3-PFHxS	4.54	304253.5	1.497	7.256
6:2-FTS	4.89	1.000	104080.7		A	13C2-6:2-FTS	4.90	30823.2	3.377	8.171
PFHpS	4.90	1.080	430779.1		A	13C3-PFHxS	4.54	304253.5	1.416	7.453
PFOA	4.91	1.000	1332914.9		A	13C8-PFOA	4.91	902430.4	1.477	7.889
PFOS	5.24	1.000	448218.9		M	13C8-PFOS	5.24	279354.2	1.604	7.017
PFNA	5.25	1.000	1116186.2		A	13C9-PFNA	5.25	458195.1	2.436	8.784
PFNS	5.53	1.060	284997.7		A	13C8-PFOS	5.24	279354.2	1.020	7.138
PFDA	5.55	1.000	921516.9		A	13C6-PFDA	5.55	614251.8	1.500	7.953
8:2-FTS	5.56	1.000	84403.2		A	13C2-8:2-FTS	5.56	28156.0	2.998	6.989
PFOSA	5.64	1.000	986012.7		A	13C8-PFOSA	5.64	596077.7	1.654	8.080
NMeFOSAA	5.70	1.000	105636.9		M	d3-NMeFOSAA	5.69	70909.1	1.490	8.420
PFDS	5.79	1.110	224576.1		A	13C8-PFOS	5.24	279354.2	0.804	7.284
PFUnDA	5.81	1.000	818489.4		A	13C7-PFUnDA	5.81	248641.1	3.292	8.606
NEtFOSAA	5.83	1.000	94592.3		A	d5-NEtFOSAA	5.82	66568.4	1.421	7.449
PFDoDA	6.04	1.000	868518.8		A	13C2-PFDoDA	6.04	558914.6	1.554	7.913
10:2-FTS	6.06	1.090	65963.7		A	13C2-8:2-FTS	5.56	28156.0	2.343	7.803
NMePFOSAE	6.09	1.000	625058.6		A	d7-NMePFOSAE	6.08	323005.4	1.935	8.054
NMePFOSA	6.10	1.000	111739.5		A	d3-NMePFOSA	6.10	76792.7	1.455	7.178
PFDoS	6.21	1.190	113317.4		A	13C8-PFOS	5.24	279354.2	0.406	7.105
NEtPFOSAE	6.25	1.000	663058.5		A	d9-NEtPFOSAE	6.24	264184.7	2.510	8.052
NEtPFOSA	6.26	1.000	99586.1		A	d5-NEtPFOSA	6.26	58317.7	1.708	7.842
PFTrDA	6.24	1.030	725189.3		A	13C2-PFDoDA	6.04	558914.6	1.297	8.189
PFTeDA	6.42	1.000	584375.2		A	13C2-PFTeDA	6.42	391231.2	1.494	8.373
PFHxDA	6.72	1.050	270067.9		A	13C2-PFTeDA	6.42	391231.2	0.690	8.224
PFODA	6.98	1.090	242463.9		A	13C2-PFTeDA	6.42	391231.2	0.620	8.631

Total Ion Chromatogram

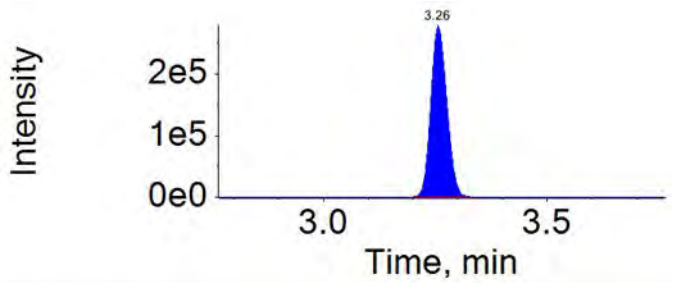


APPROVED
By JPT at 10:19 am, 11/14/18

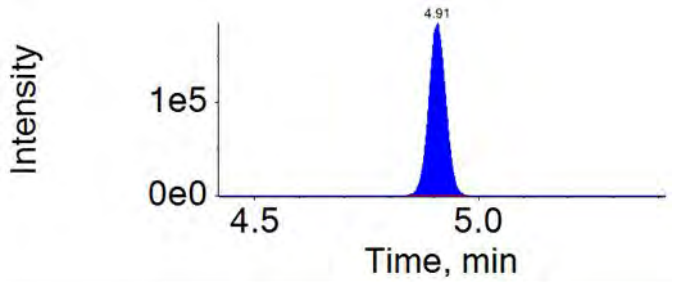
REVIEWED
By HMK at 12:08 pm, 11/15/18

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV13DCCV6-10 11/14/2018 9:23:22 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

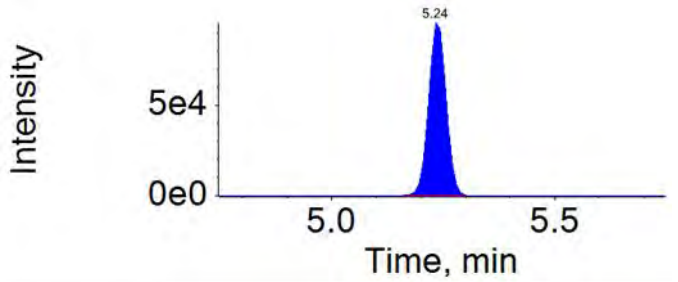
Injection Standard: 13C3-PFBA
216.0 / 172.0



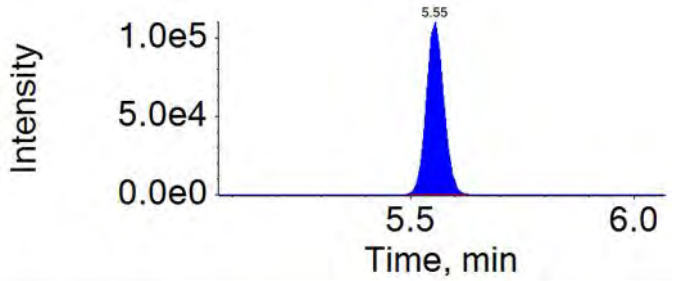
Injection Standard: 13C2-PFOA
415.0 / 370.0



Injection Standard: 13C4-PFOS
503.0 / 80.0



Injection Standard: 13C2-PFDA
515.0 / 470.0

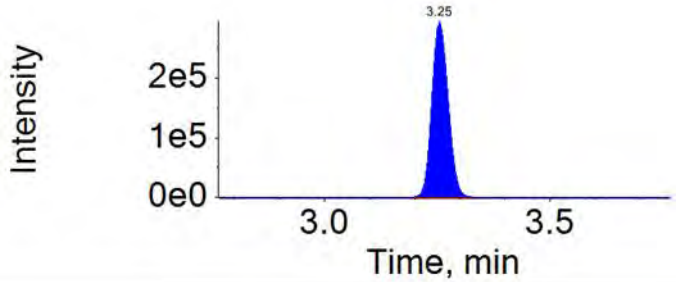


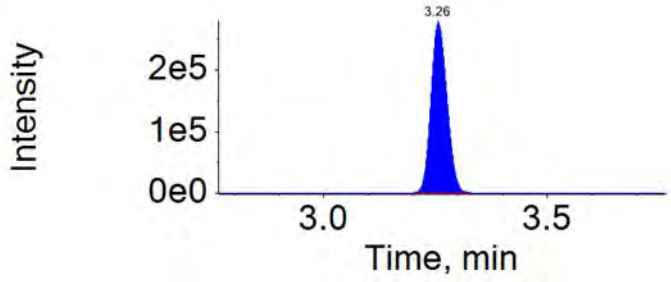
APPROVED
By JPT at 10:19 am, 11/14/18

REVIEWED
By HMK at 12:08 pm, 11/15/18

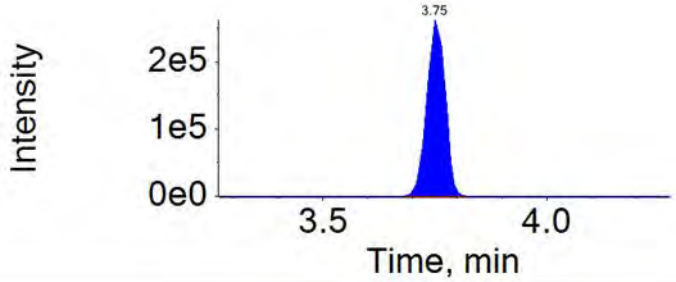
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV13DCCV6-10 11/14/2018 9:23:22 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

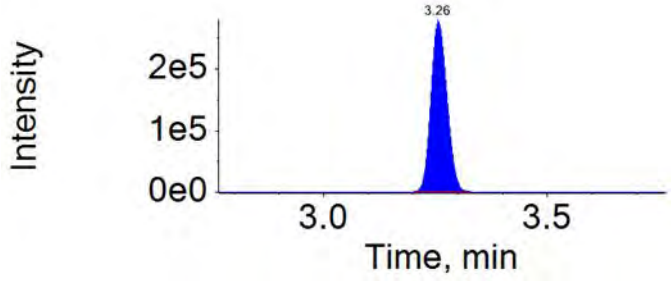
Extraction Standard: E13C4-PFBA	Injection Standard: 13C3-PFBA
217.0 / 172.0	216.0 / 172.0



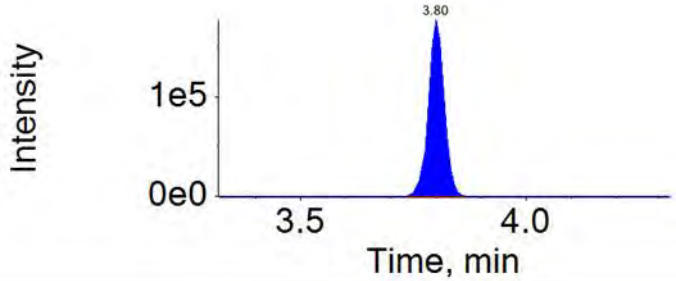


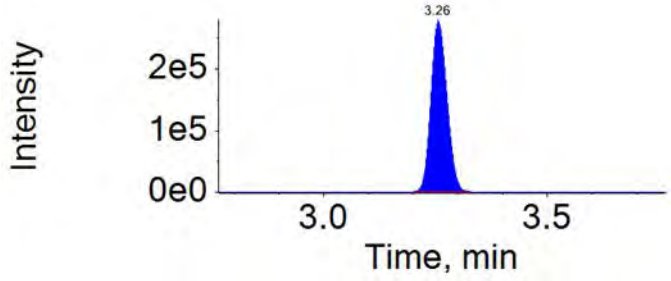
Extraction Standard: E13C5-PFPeA	Injection Standard: 13C3-PFBA
268.0 / 223.0	216.0 / 172.0



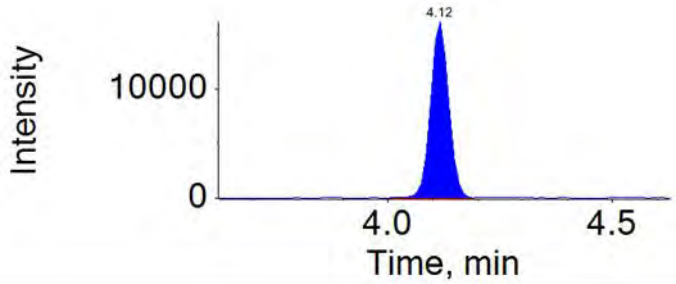


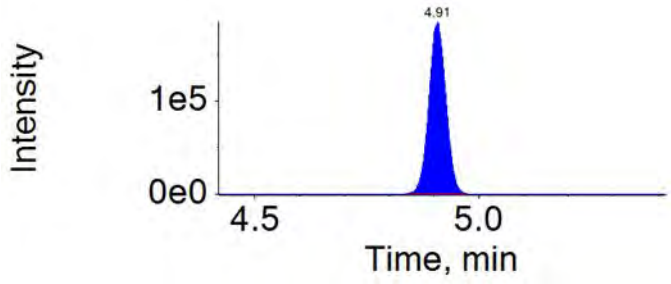
Extraction Standard: E13C3-PFBS	Injection Standard: 13C3-PFBA
302.0 / 80.0	216.0 / 172.0





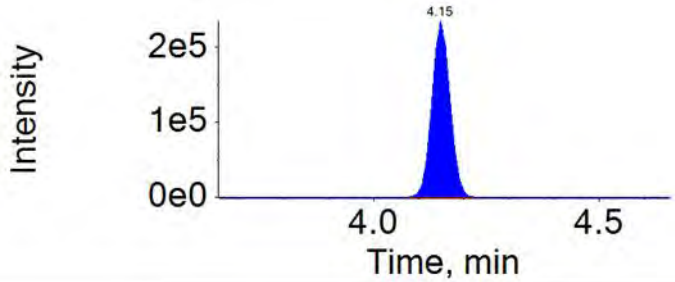
Extraction Standard: E13C2-4:2-FTS	Injection Standard: 13C2-PFOA
329.0 / 81.0	415.0 / 370.0

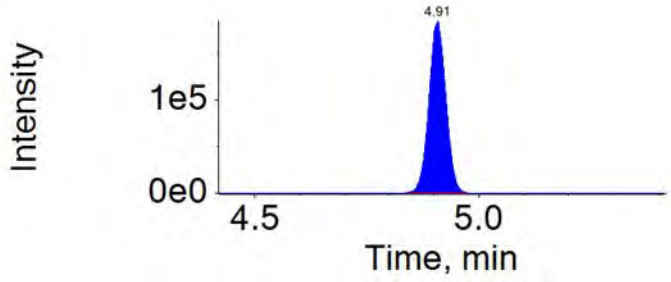




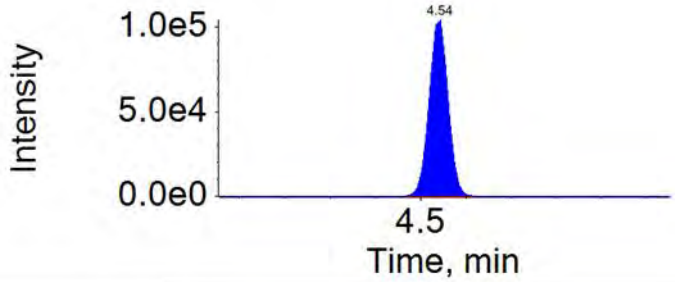
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV13DCCV6-10 11/14/2018 9:23:22 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

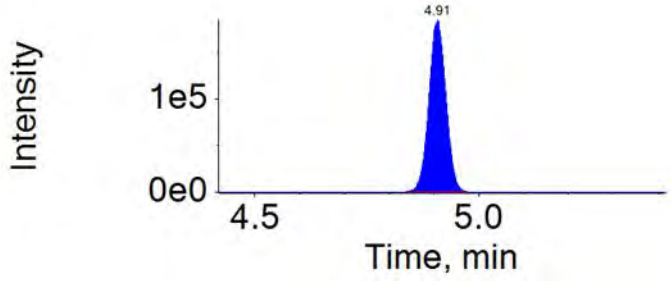
Extraction Standard: E13C5-PFHxA	Injection Standard: 13C2-PFOA
318.0 / 273.0	415.0 / 370.0



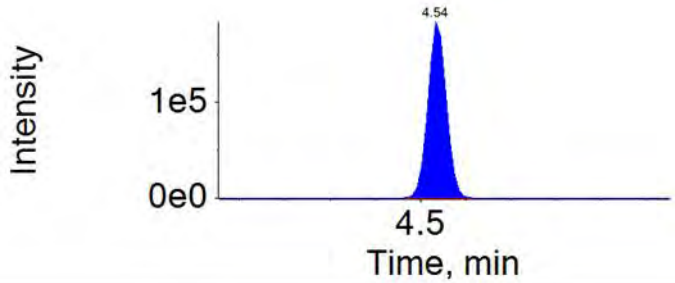


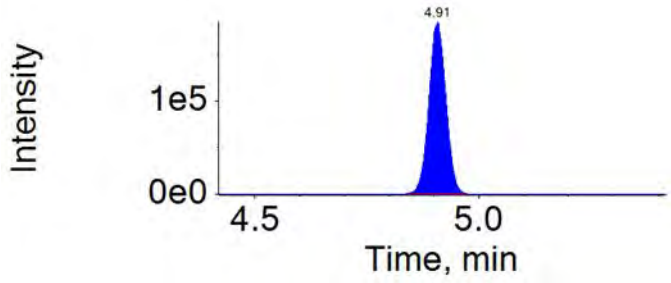
Extraction Standard: E13C3-PFHxS	Injection Standard: 13C2-PFOA
402.0 / 80.0	415.0 / 370.0



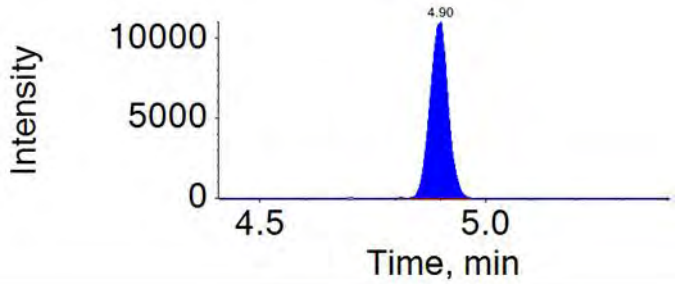


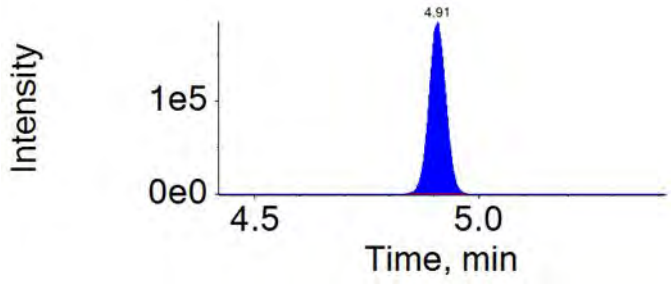
Extraction Standard: E13C4-PFHpA	Injection Standard: 13C2-PFOA
367.0 / 322.0	415.0 / 370.0





Extraction Standard: E13C2-6:2-FTS	Injection Standard: 13C2-PFOA
429.0 / 81.0	415.0 / 370.0

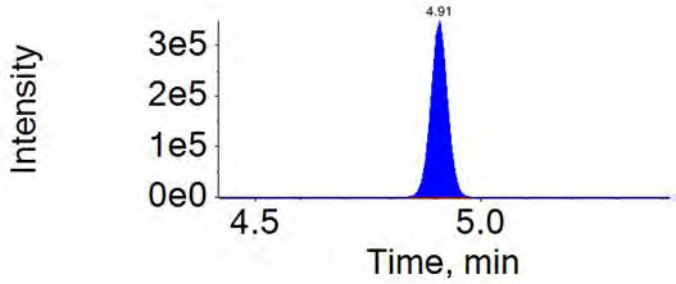




ICAL Name: 18NOV12DCAL **Result Table:** 18NOV13DCCV6-10 11/14/2018 9:23:22 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

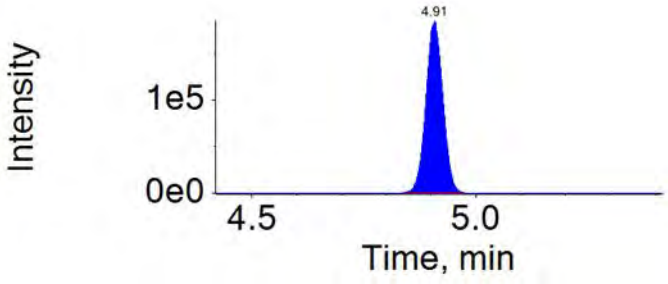
Extraction Standard: E13C8-PFOA

421.0 / 376.0



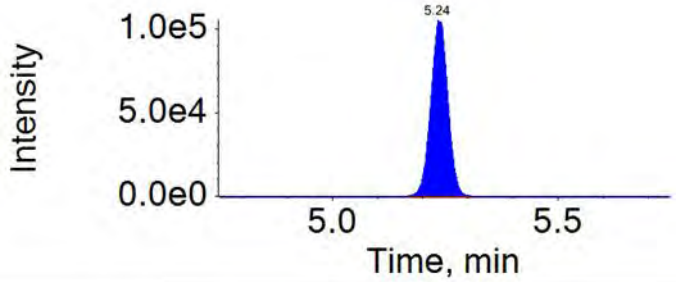
Injection Standard: 13C2-PFOA

415.0 / 370.0



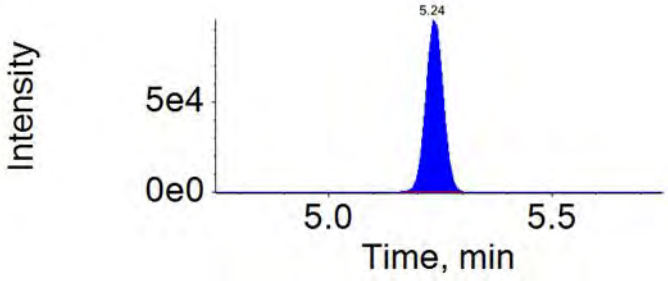
Extraction Standard: E13C8-PFOS

507.0 / 80.0



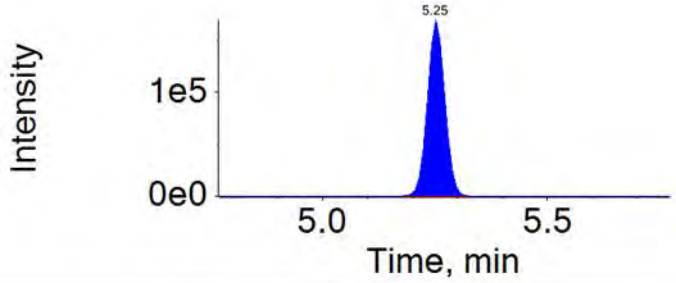
Injection Standard: 13C4-PFOS

503.0 / 80.0



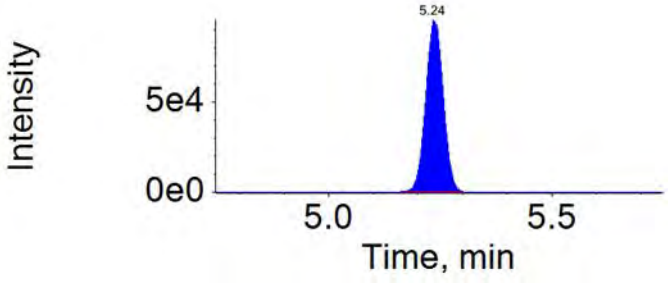
Extraction Standard: E13C9-PFNA

472.0 / 427.0



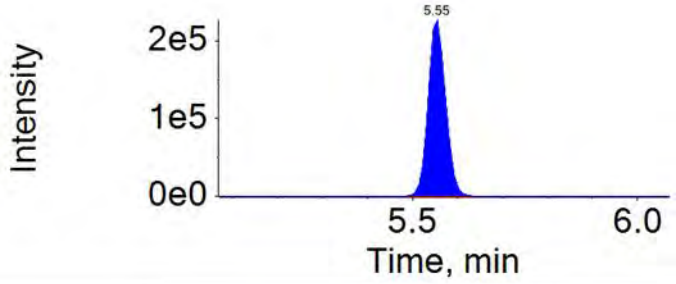
Injection Standard: 13C4-PFOS

503.0 / 80.0



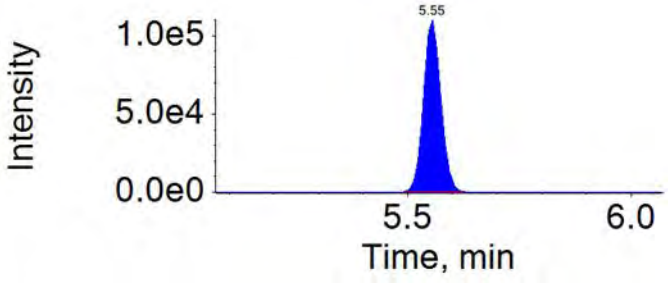
Extraction Standard: E13C6-PFDA

519.0 / 474.0



Injection Standard: 13C2-PFDA

515.0 / 470.0

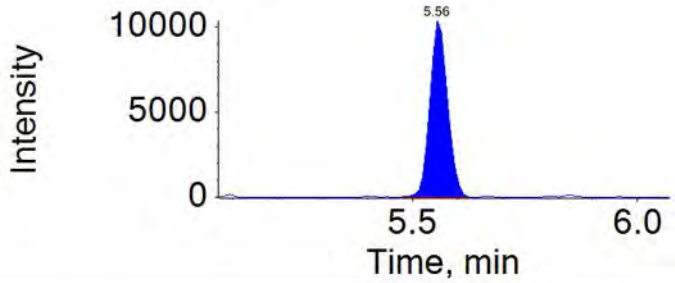


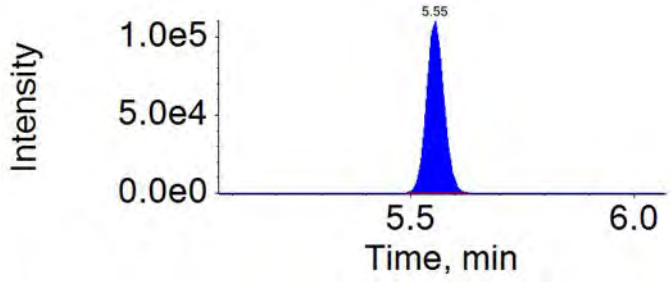
APPROVED
By JPT at 10:19 am, 11/14/18

REVIEWED
By HMK at 12:08 pm, 11/15/18

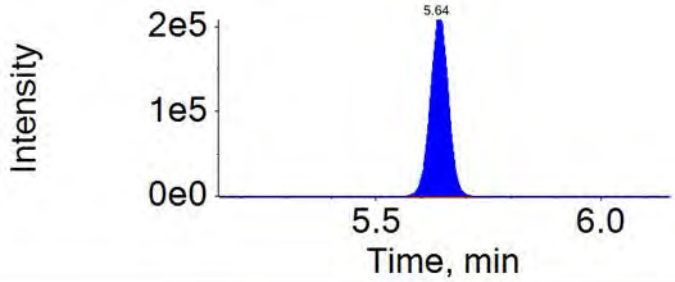
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV13DCCV6-10 11/14/2018 9:23:22 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

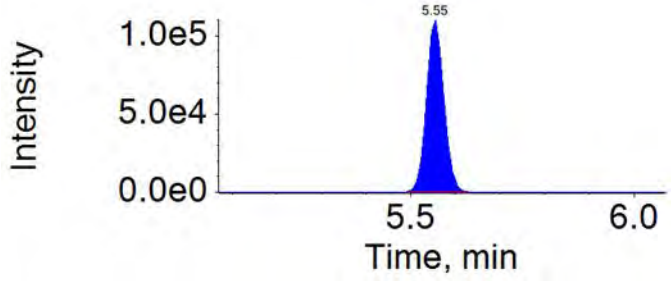
Extraction Standard: E13C2-8:2-FTS	Injection Standard: 13C2-PFDA
529.0 / 81.0	515.0 / 470.0



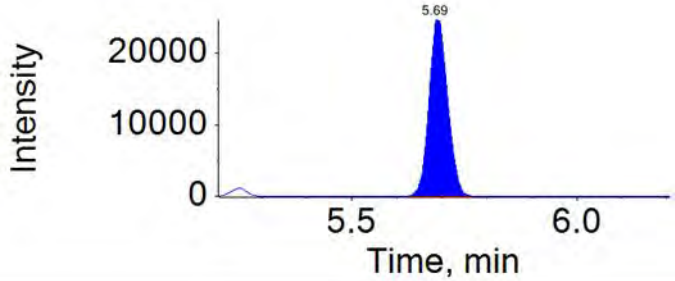


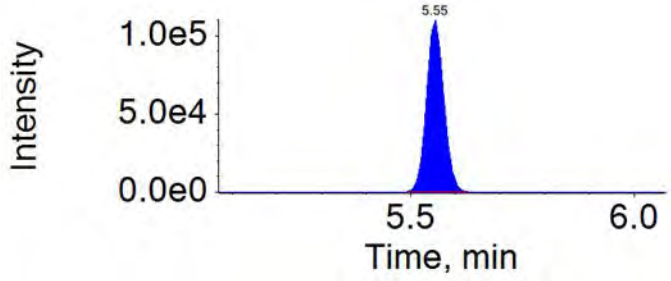
Extraction Standard: E13C8-PFOSA	Injection Standard: 13C2-PFDA
506.0 / 78.0	515.0 / 470.0



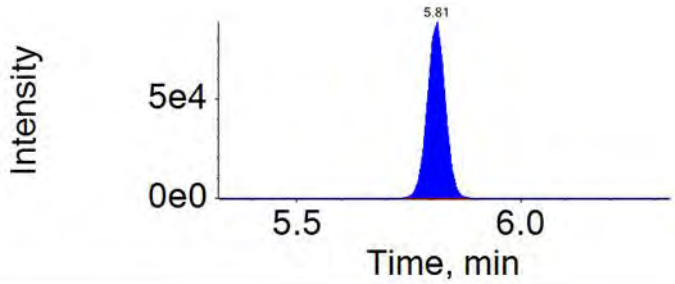


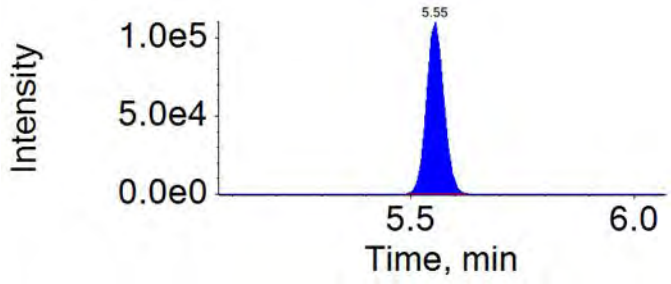
Extraction Standard: Ed3-NMeFOSAA	Injection Standard: 13C2-PFDA
573.0 / 419.0	515.0 / 470.0





Extraction Standard: E13C7-PFUnDA	Injection Standard: 13C2-PFDA
570.0 / 525.0	515.0 / 470.0



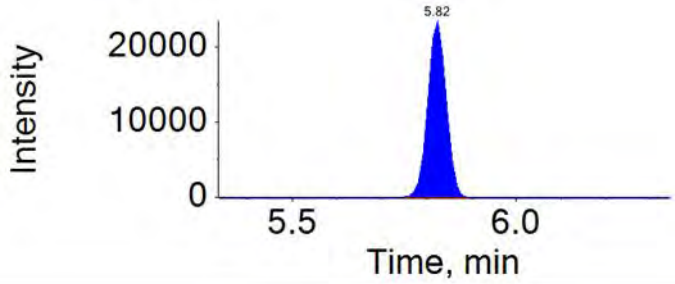


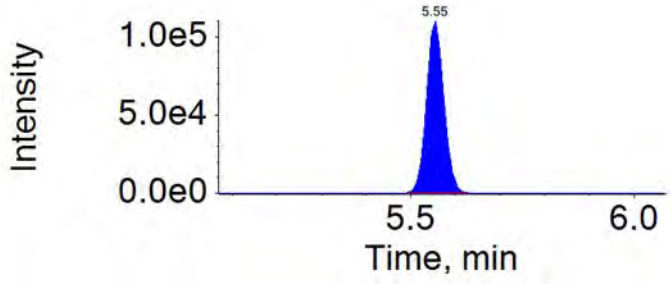
APPROVED
By JPT at 10:19 am, 11/14/18

REVIEWED
By HMK at 12:08 pm, 11/15/18

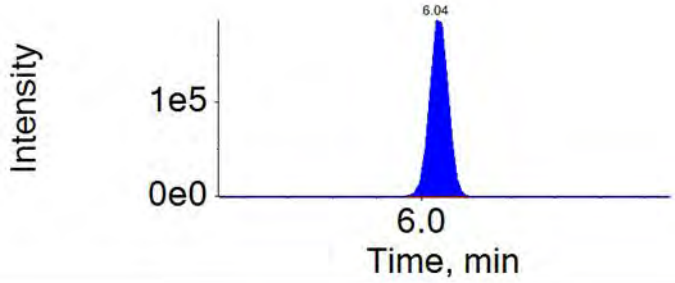
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV13DCCV6-10 11/14/2018 9:23:22 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

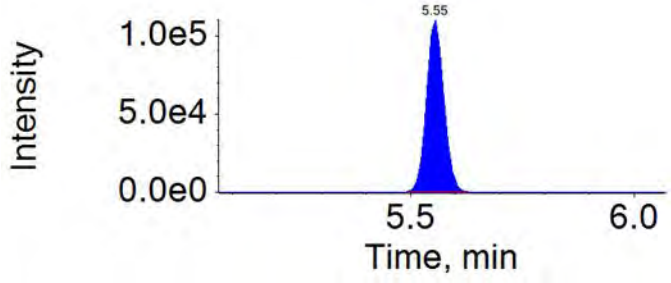
Extraction Standard: Ed5-NEtFOSAA	Injection Standard: 13C2-PFDA
589.0 / 419.0	515.0 / 470.0



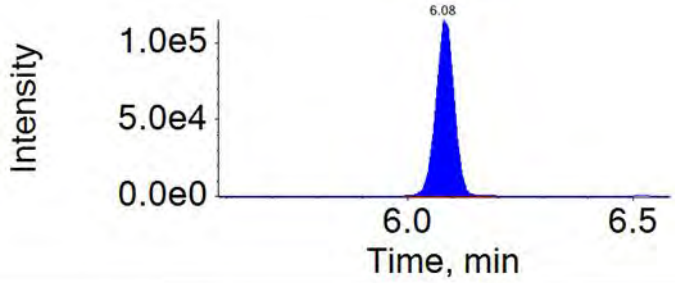


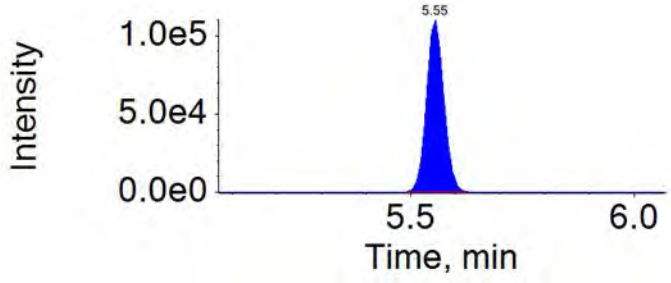
Extraction Standard: E13C2-PFDoDA	Injection Standard: 13C2-PFDA
615.0 / 570.0	515.0 / 470.0



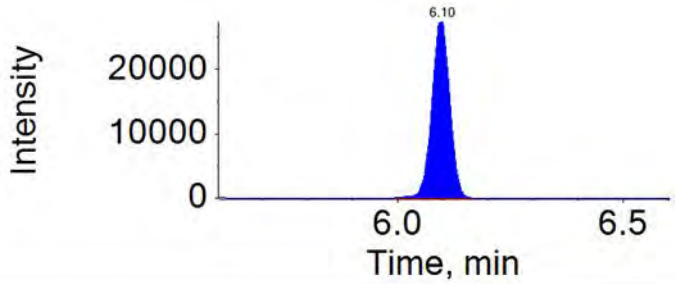


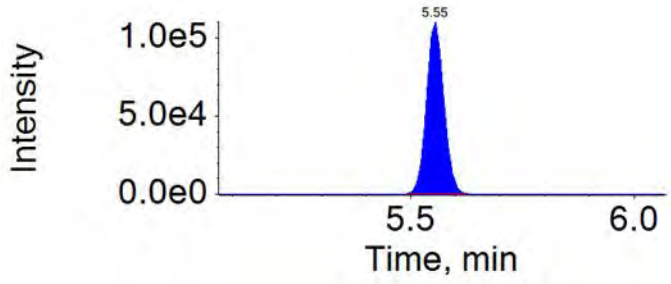
Extraction Standard: Ed7-NMePFOSAE	Injection Standard: 13C2-PFDA
623.0 / 59.0	515.0 / 470.0





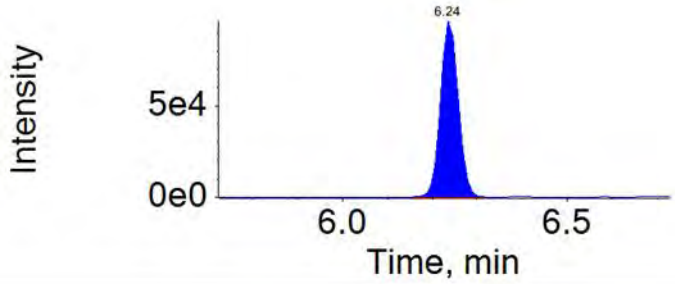
Extraction Standard: Ed3-NMePFOSA	Injection Standard: 13C2-PFDA
515.0 / 169.0	515.0 / 470.0

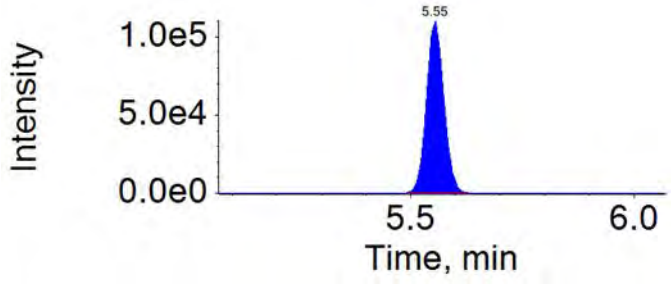




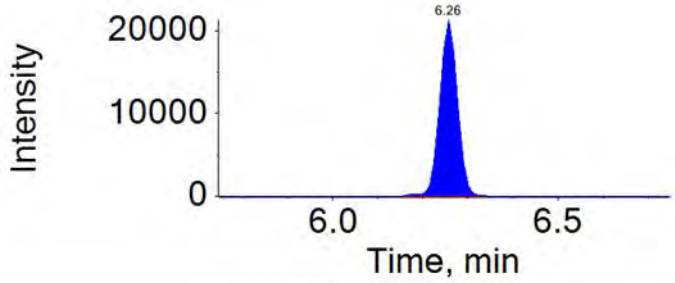
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV13DCCV6-10 11/14/2018 9:23:22 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

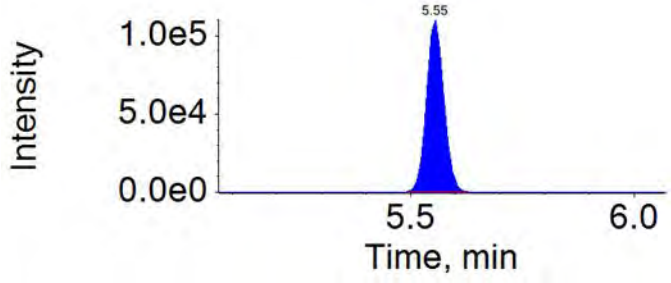
Extraction Standard: Ed9-NEtPFOSAE	Injection Standard: 13C2-PFDA
639.0 / 59.0	515.0 / 470.0



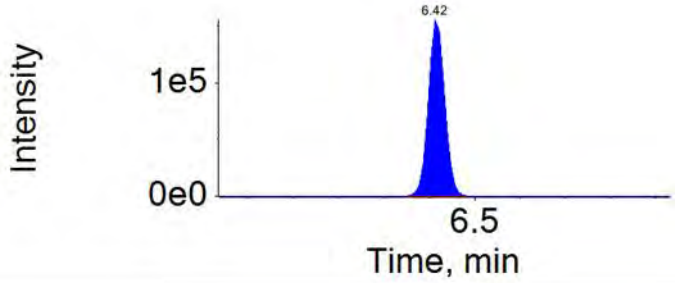


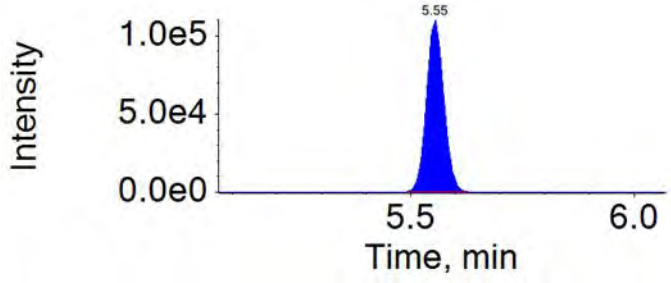
Extraction Standard: Ed5-NEtPFOSA	Injection Standard: 13C2-PFDA
531.0 / 169.0	515.0 / 470.0





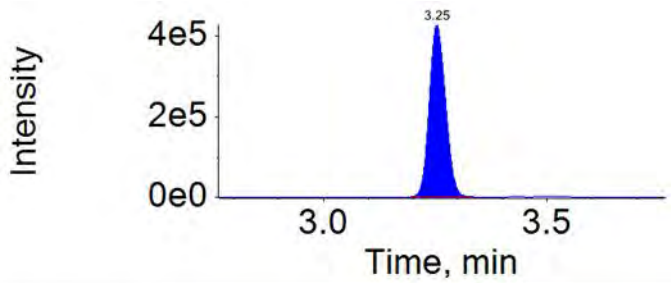
Extraction Standard: E13C2-PFTeDA	Injection Standard: 13C2-PFDA
715.0 / 670.0	515.0 / 470.0



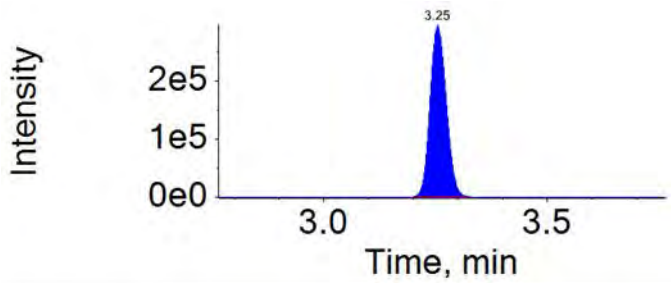


ICAL Name: 18NOV12DCAL **Result Table:** 18NOV13DCCV6-10 11/14/2018 9:23:22 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

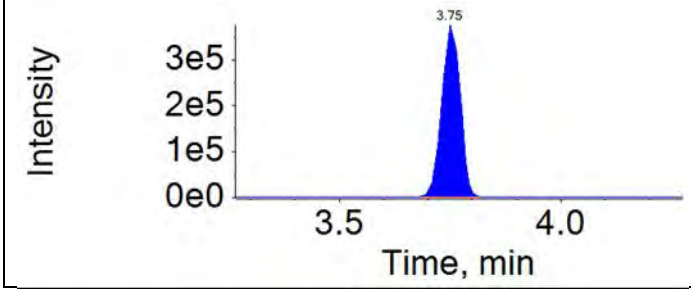
Analyte: PFBA
213.0 / 169.0



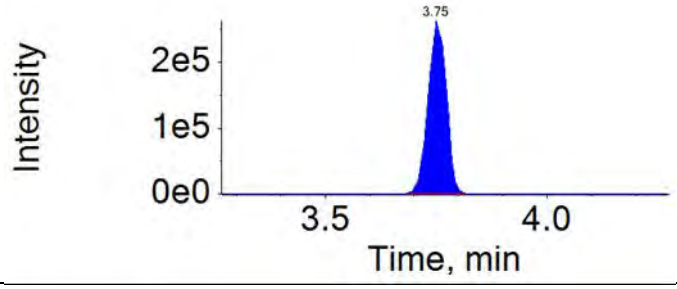
Extraction Standard: 13C4-PFBA
217.0 / 172.0



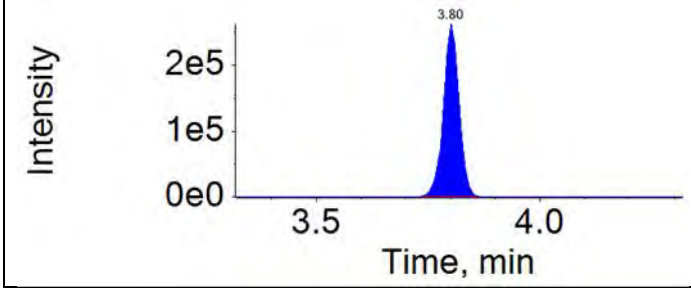
Analyte: PFPeA
263.0 / 219.0



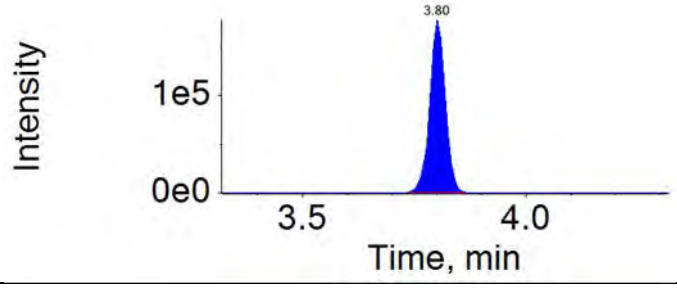
Extraction Standard: 13C5-PFPeA
268.0 / 223.0



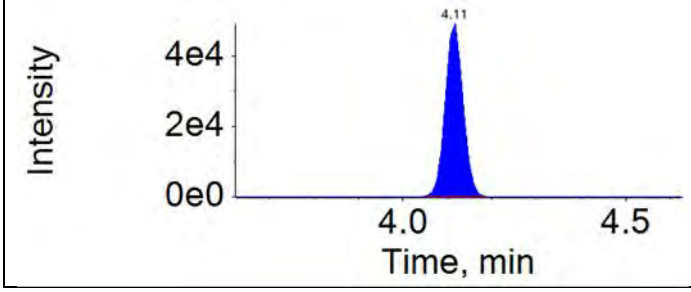
Analyte: PFBS
299.0 / 80.0



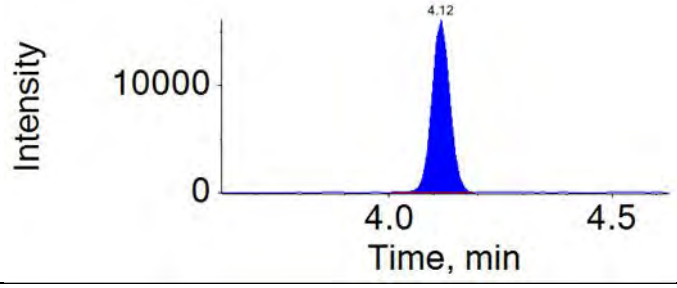
Extraction Standard: 13C3-PFBS
302.0 / 80.0



Analyte: 4:2-FTS
327.0 / 307.0



Extraction Standard: 13C2-4:2-FTS
329.0 / 81.0

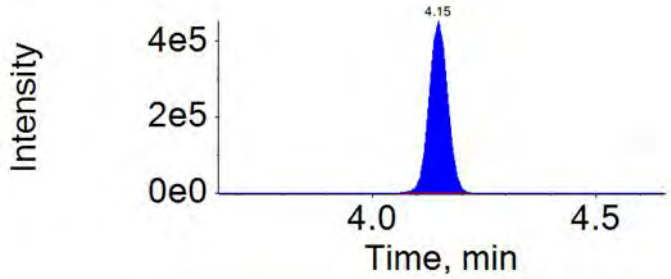


APPROVED
By JPT at 10:19 am, 11/14/18

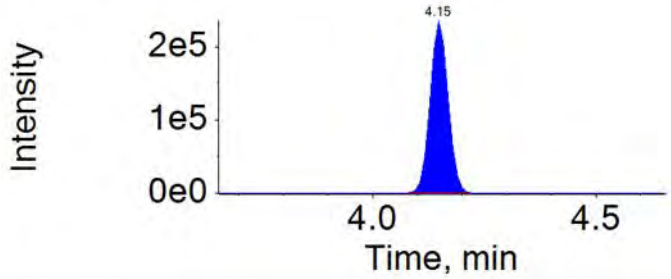
REVIEWED
By HMK at 12:08 pm, 11/15/18

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV13DCCV6-10 11/14/2018 9:23:22 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

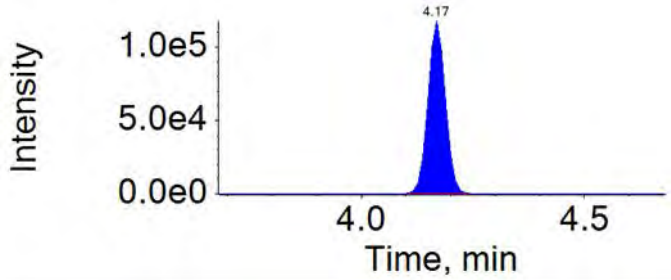
Analyte: PFHxA
313.0 / 269.0



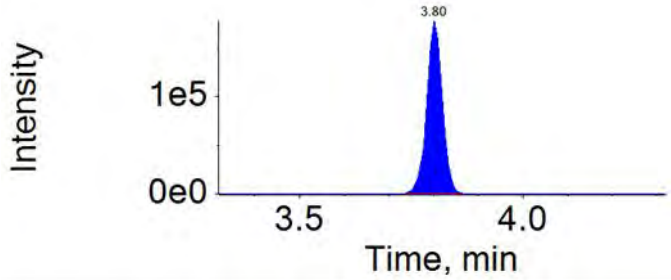
Extraction Standard: 13C5-PFHxA
318.0 / 273.0



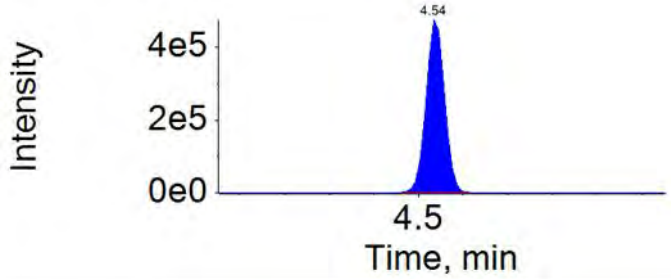
Analyte: PFPeS
349.0 / 80.0



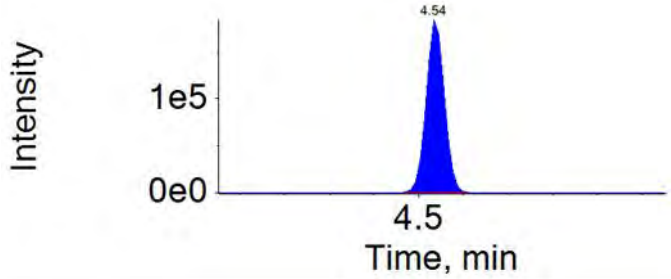
Extraction Standard: 13C3-PFBS
302.0 / 80.0



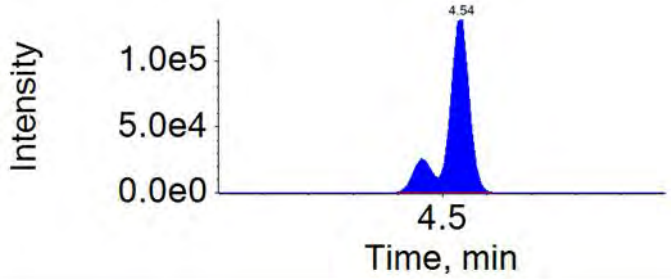
Analyte: PFHpA
363.0 / 319.0



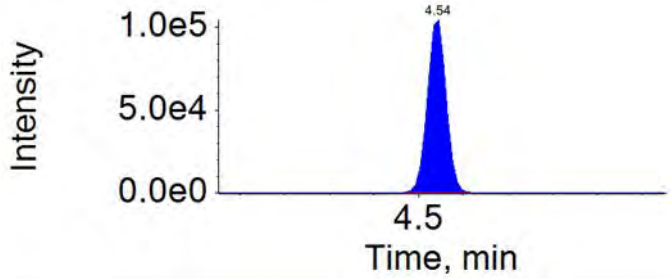
Extraction Standard: 13C4-PFHpA
367.0 / 322.0



Analyte: PFHxS
399.0 / 80.0



Extraction Standard: 13C3-PFHxS
402.0 / 80.0

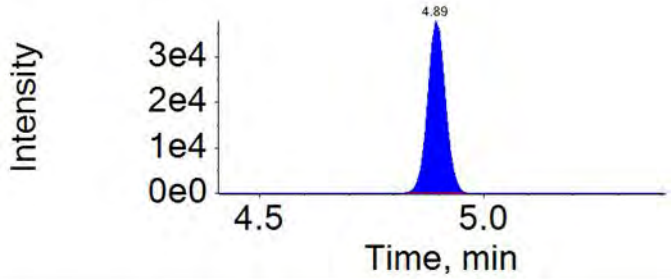


APPROVED
By JPT at 10:19 am, 11/14/18

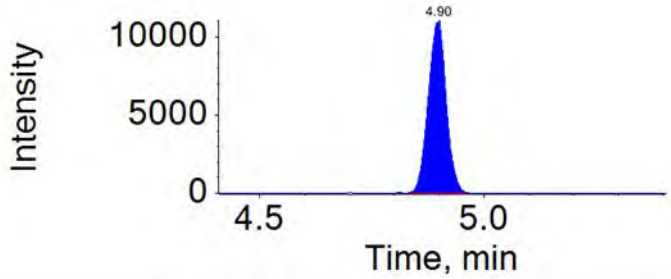
REVIEWED
By HMK at 12:08 pm, 11/15/18

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV13DCCV6-10 11/14/2018 9:23:22 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

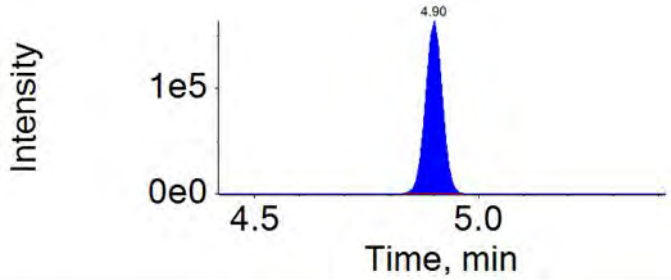
Analyte: 6:2-FTS
427.0 / 407.0



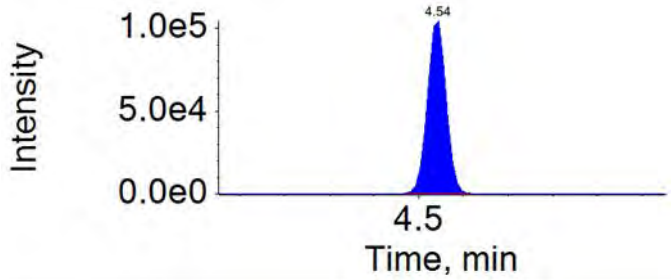
Extraction Standard: 13C2-6:2-FTS
429.0 / 81.0



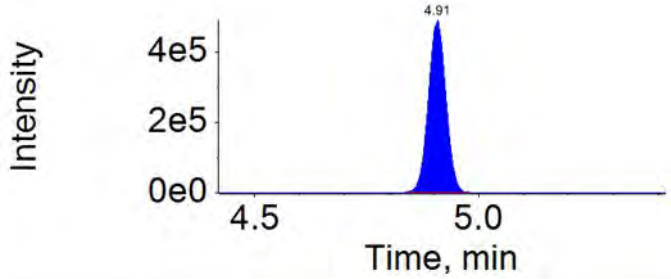
Analyte: PFHpS
449.0 / 80.0



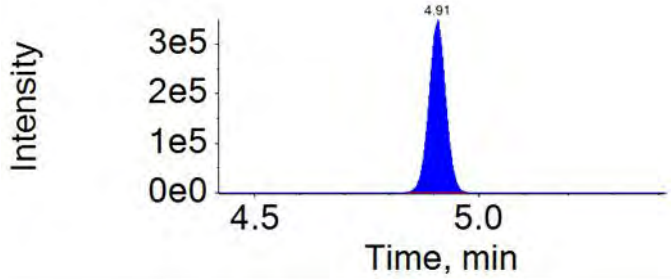
Extraction Standard: 13C3-PFHxS
402.0 / 80.0



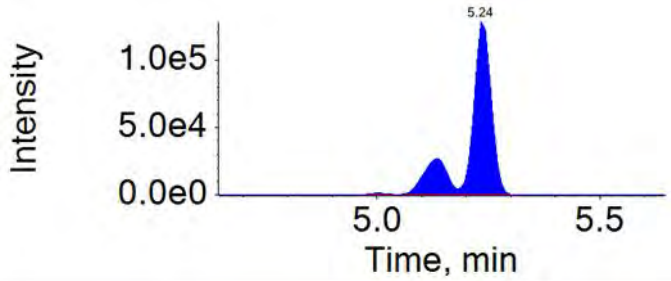
Analyte: PFOA
413.0 / 369.0



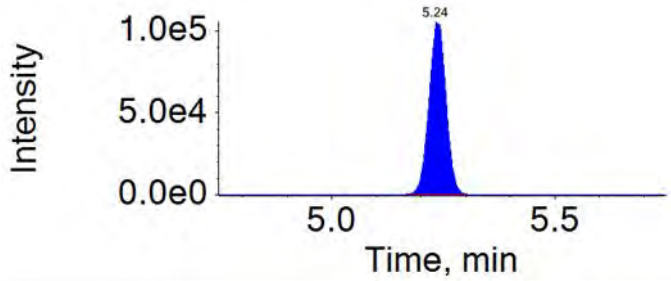
Extraction Standard: 13C8-PFOA
421.0 / 376.0



Analyte: PFOS
499.0 / 80.0



Extraction Standard: 13C8-PFOS
507.0 / 80.0

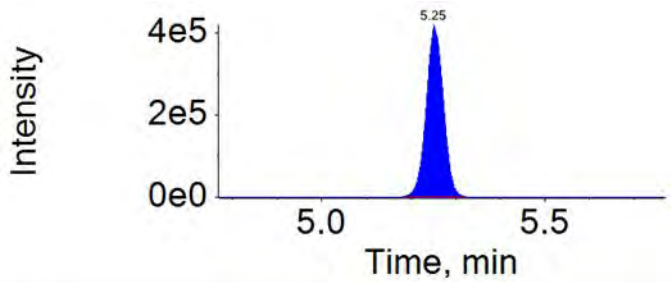


APPROVED
By JPT at 10:19 am, 11/14/18

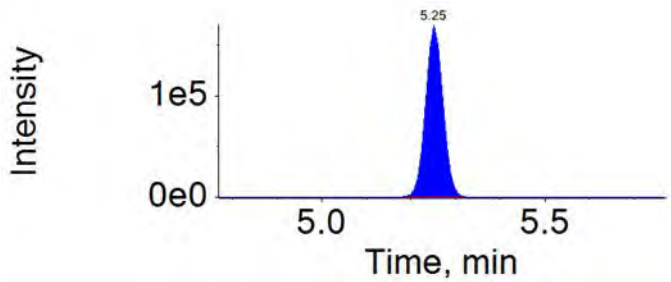
REVIEWED
By HMK at 12:08 pm, 11/15/18

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV13DCCV6-10 11/14/2018 9:23:22 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

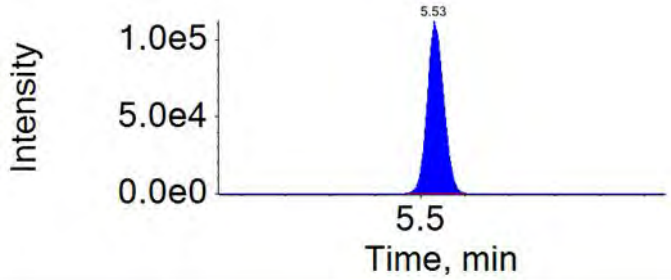
Analyte: PFNA
463.0 / 419.0



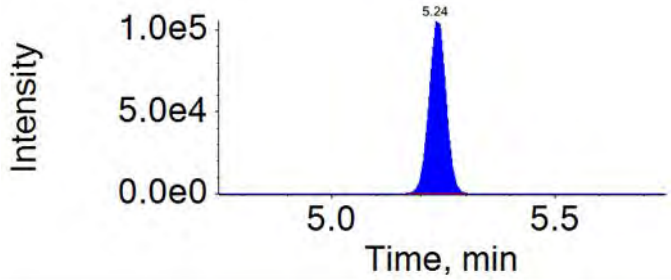
Extraction Standard: 13C9-PFNA
472.0 / 427.0



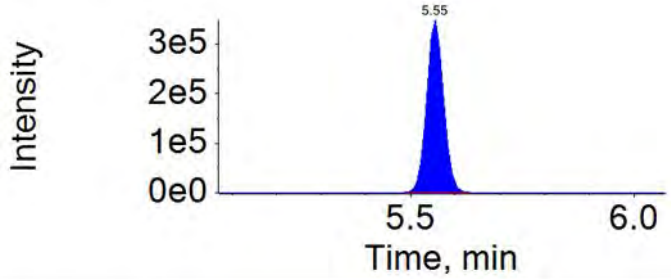
Analyte: PFNS
549.0 / 80.0



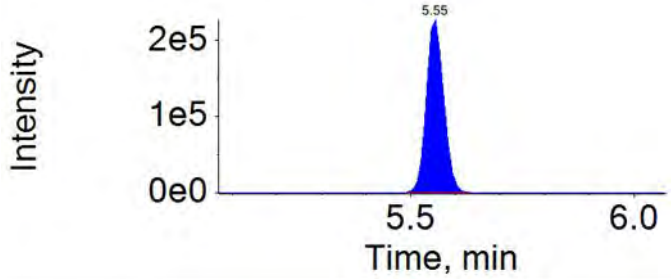
Extraction Standard: 13C8-PFOS
507.0 / 80.0



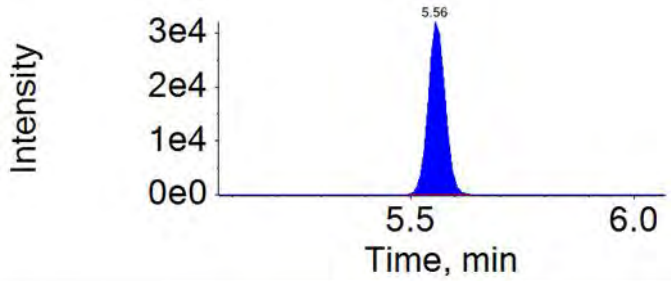
Analyte: PFDA
513.0 / 469.0



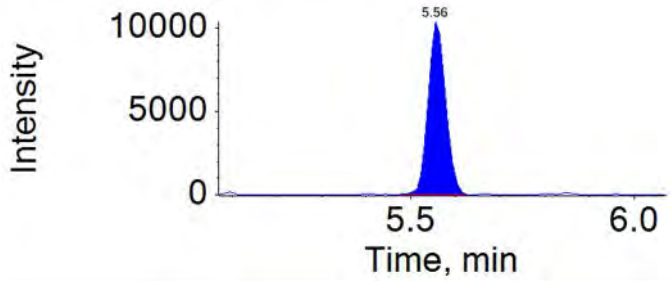
Extraction Standard: 13C6-PFDA
519.0 / 474.0



Analyte: 8:2-FTS
527.0 / 507.0



Extraction Standard: 13C2-8:2-FTS
529.0 / 81.0

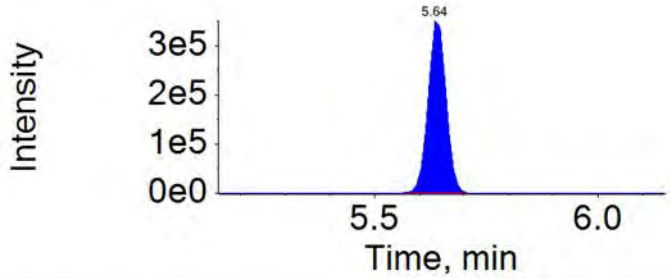


APPROVED
By JPT at 10:19 am, 11/14/18

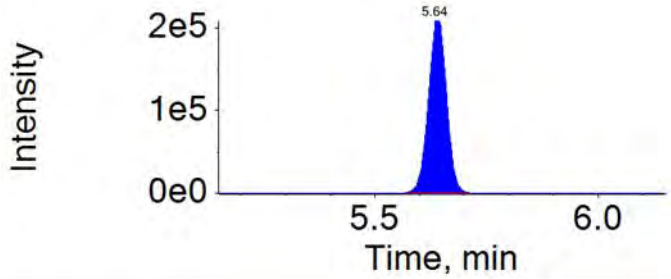
REVIEWED
By HMK at 12:08 pm, 11/15/18

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV13DCCV6-10 11/14/2018 9:23:22 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

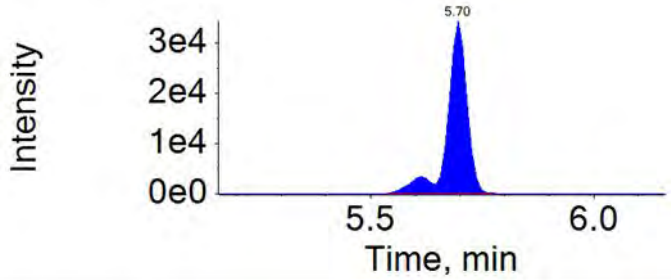
Analyte: PFOSA
498.0 / 78.0



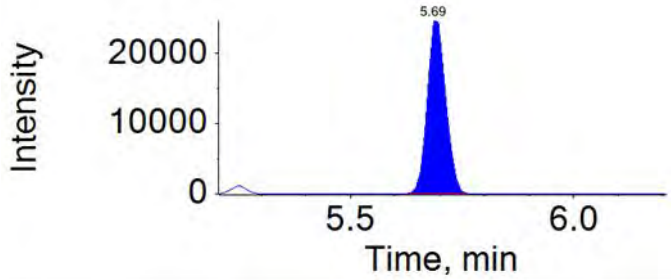
Extraction Standard: 13C8-PFOSA
506.0 / 78.0



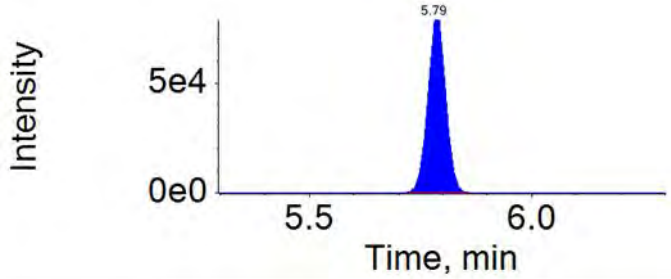
Analyte: NMeFOSAA
570.0 / 419.0



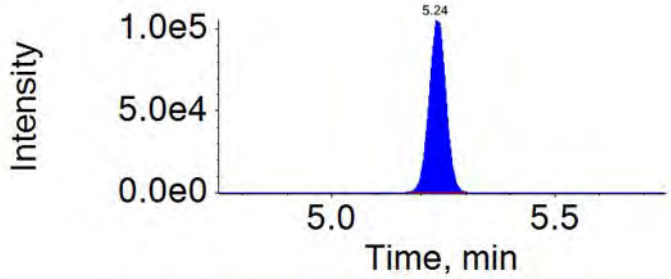
Extraction Standard: d3-NMeFOSAA
573.0 / 419.0



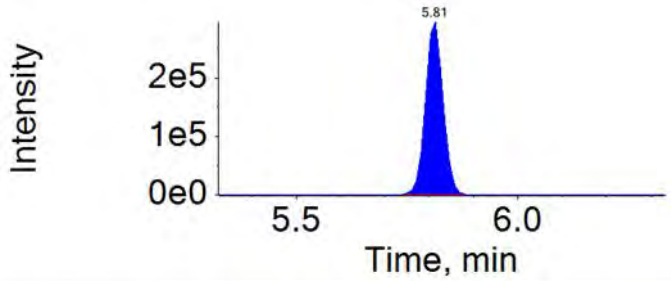
Analyte: PFDS
599.0 / 80.0



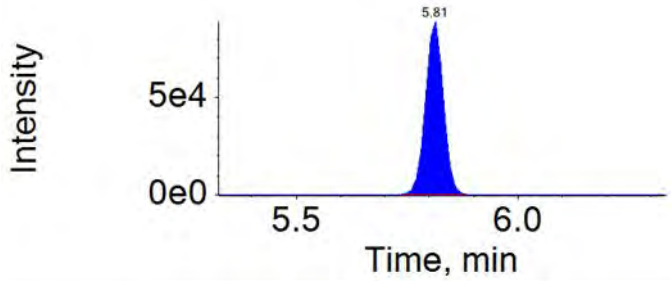
Extraction Standard: 13C8-PFOS
507.0 / 80.0



Analyte: PFUnDA
563.0 / 519.0



Extraction Standard: 13C7-PFUnDA
570.0 / 525.0

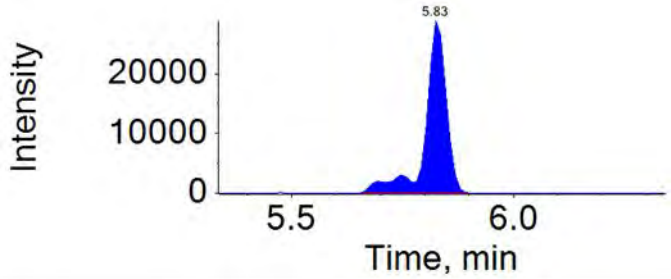


APPROVED
By JPT at 10:19 am, 11/14/18

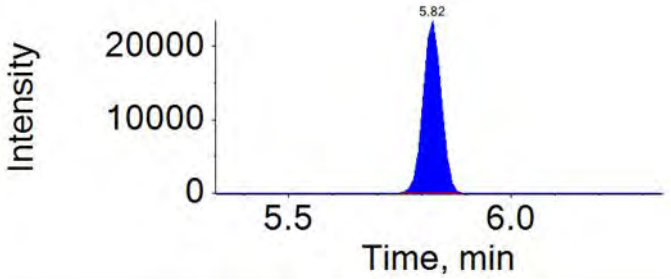
REVIEWED
By HMK at 12:08 pm, 11/15/18

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV13DCCV6-10 11/14/2018 9:23:22 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

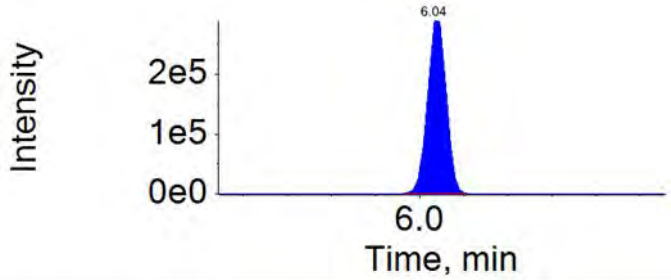
Analyte: NEtFOSAA
584.0 / 419.0



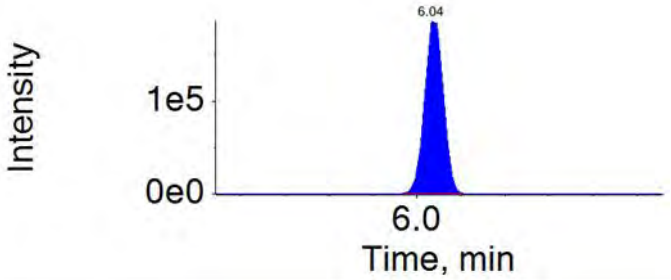
Extraction Standard: d5-NEtFOSAA
589.0 / 419.0



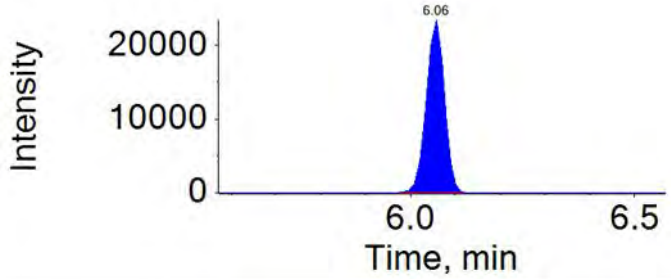
Analyte: PFDoDA
613.0 / 569.0



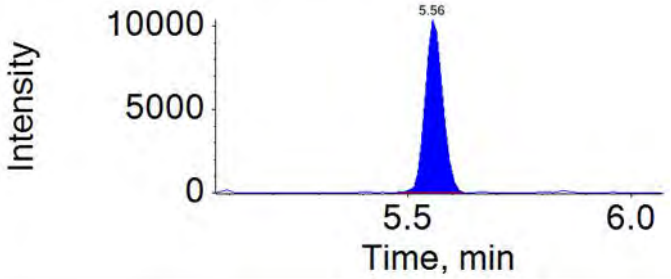
Extraction Standard: 13C2-PFDoDA
615.0 / 570.0



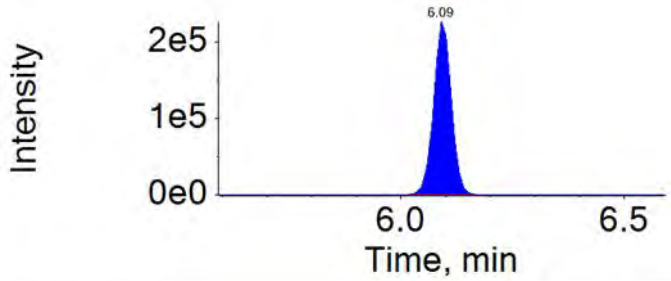
Analyte: 10:2-FTS
627.0 / 607.0



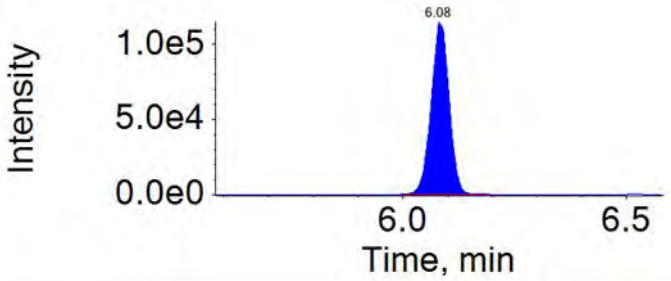
Extraction Standard: 13C2-8:2-FTS
529.0 / 81.0



Analyte: NMePFOSAE
616.0 / 59.0



Extraction Standard: d7-NMePFOSAE
623.0 / 59.0

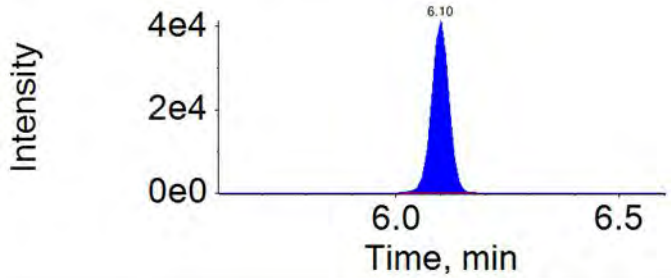


APPROVED
By JPT at 10:19 am, 11/14/18

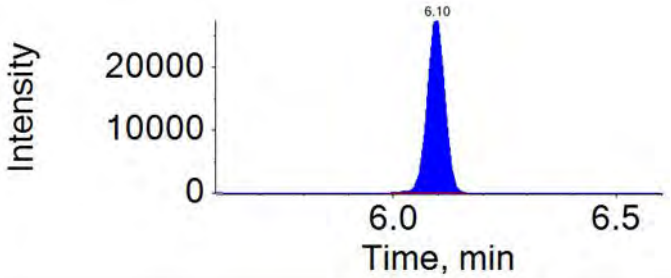
REVIEWED
By HMK at 12:08 pm, 11/15/18

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV13DCCV6-10 11/14/2018 9:23:22 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

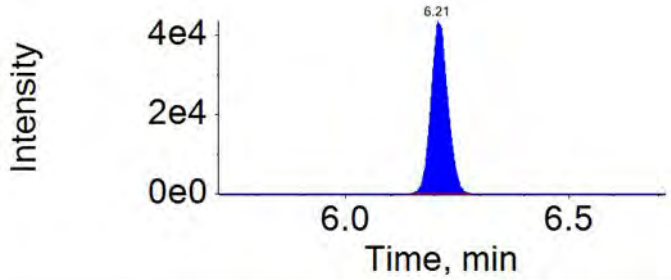
Analyte: NMePFOSA
512.0 / 169.0



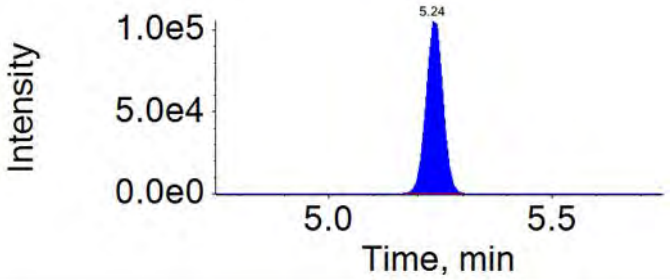
Extraction Standard: d3-NMePFOSA
515.0 / 169.0



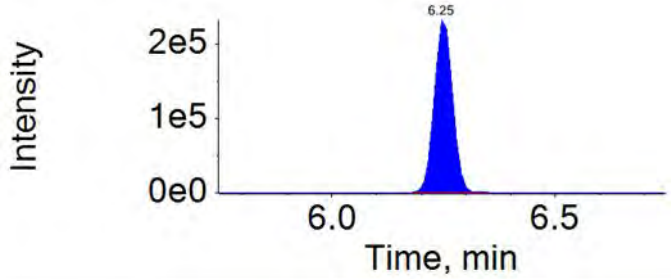
Analyte: PFDoS
699.0 / 80.0



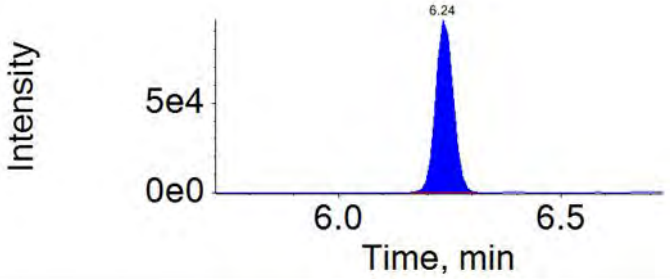
Extraction Standard: 13C8-PFOS
507.0 / 80.0



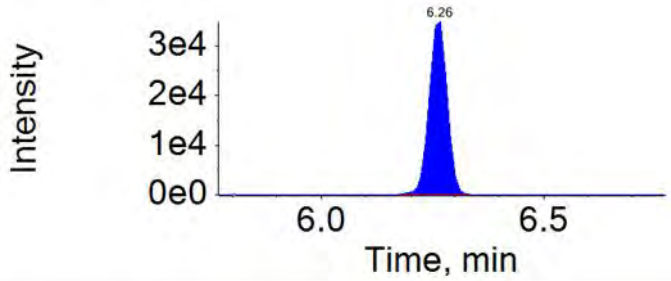
Analyte: NEtPFOSAE
630.0 / 59.0



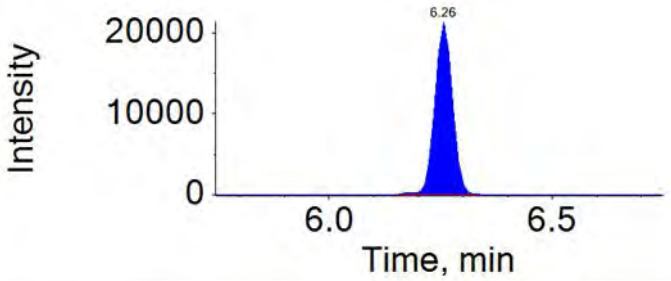
Extraction Standard: d9-NEtPFOSAE
639.0 / 59.0



Analyte: NEtPFOSA
526.0 / 169.0



Extraction Standard: d5-NEtPFOSA
531.0 / 169.0

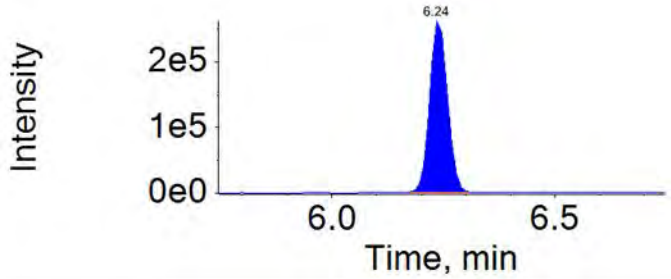


APPROVED
By JPT at 10:19 am, 11/14/18

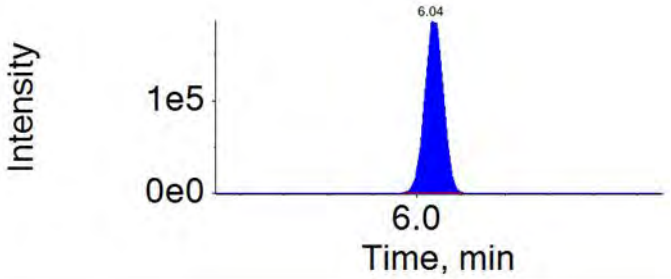
REVIEWED
By HMK at 12:08 pm, 11/15/18

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV13DCCV6-10 11/14/2018 9:23:22 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

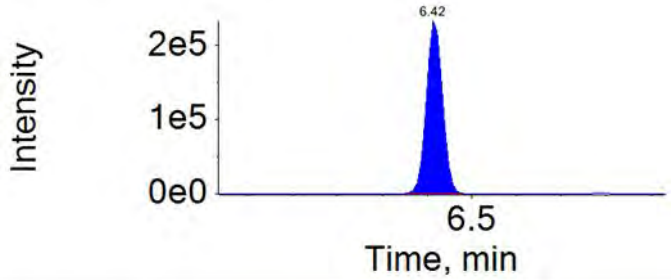
Analyte: PFTrDA
663.0 / 619.0



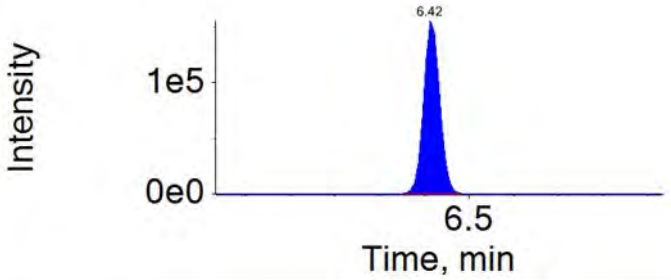
Extraction Standard: 13C2-PFDoDA
615.0 / 570.0



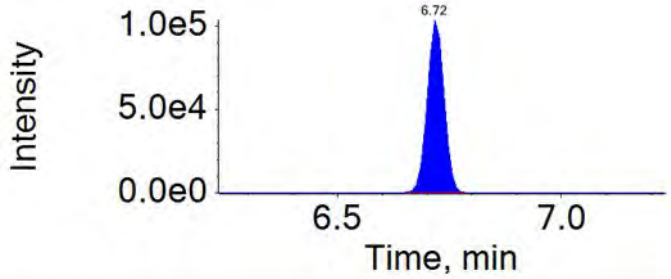
Analyte: PFTeDA
713.0 / 669.0



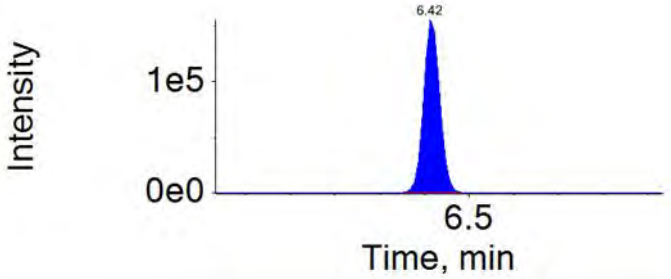
Extraction Standard: 13C2-PFTeDA
715.0 / 670.0



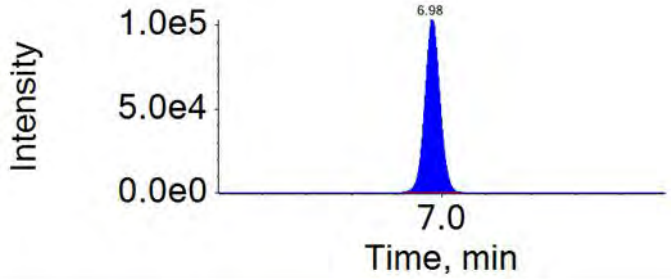
Analyte: PFHxDA
813.0 / 769.0



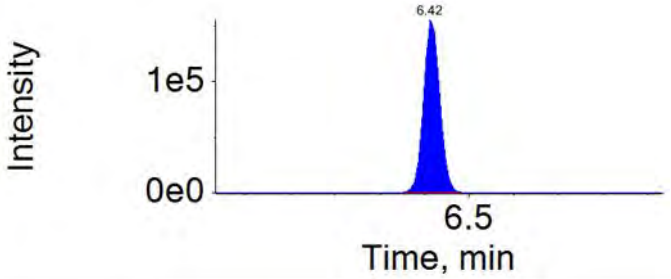
Extraction Standard: 13C2-PFTeDA
715.0 / 670.0



Analyte: PFODA
913.0 / 869.0



Extraction Standard: 13C2-PFTeDA
715.0 / 670.0



APPROVED
By JPT at 10:19 am, 11/14/18

REVIEWED
By HMK at 12:08 pm, 11/15/18

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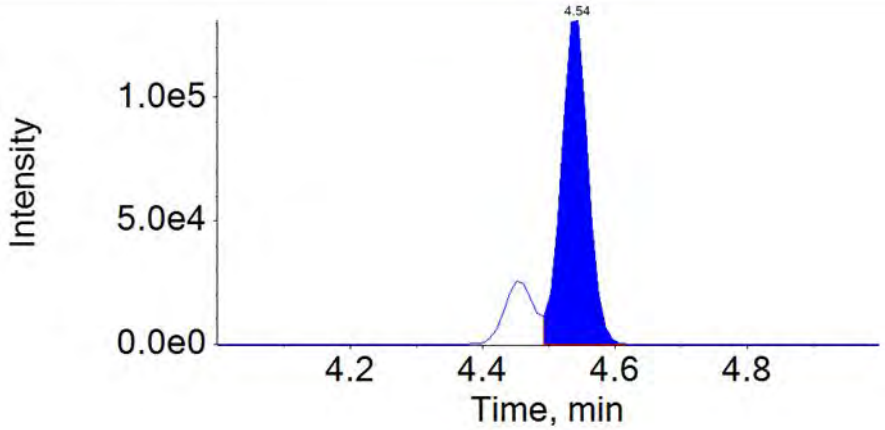
Auto Integrations prior to Manual Integration

Print Date: 11/14/2018 9:57 AM
Template: MQ-OrigInteg-16NOV21.docx

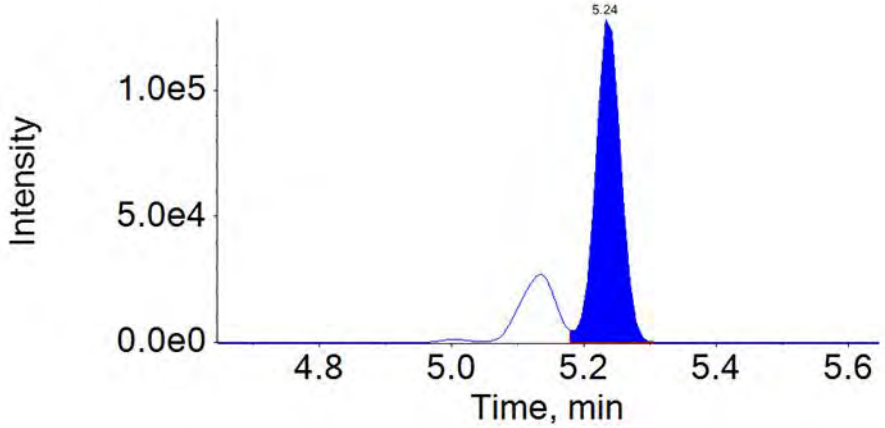
Results Table Name: 18NOV13DCCV6-10
Results Table Date: 11/14/2018 9:23:22 AM
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

Component Name:
PFHxS
RT (min.):
4.54
Peak Area:
374699.4
Mass Range:
399.0 / 80.0
File Name:
18NOV13D-59.wiff
Sample Name:
CCV6_CAL4



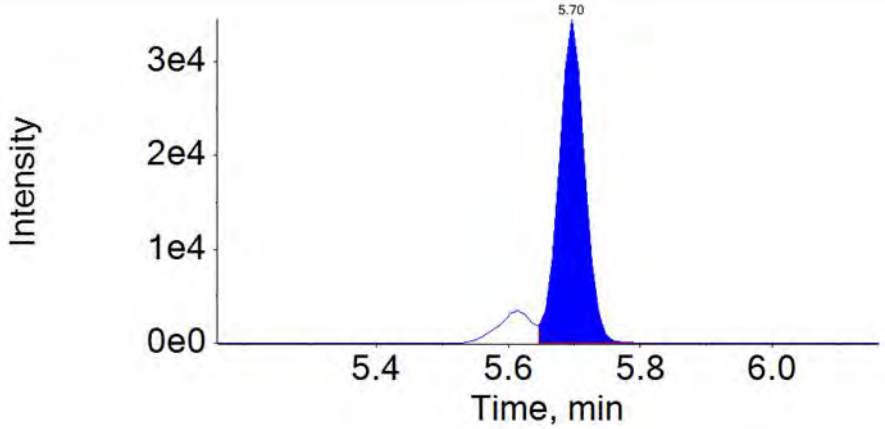
Integration Comment: incorrect integration

Component Name:
PFOS
RT (min.):
5.24
Peak Area:
342796.1
Mass Range:
499.0 / 80.0
File Name:
18NOV13D-59.wiff
Sample Name:
CCV6_CAL4



Integration Comment: incorrect integration

Component Name:
NMeFOSAA
RT (min.):
5.70
Peak Area:
93372.4
Mass Range:
570.0 / 419.0
File Name:
18NOV13D-59.wiff
Sample Name:
CCV6_CAL4



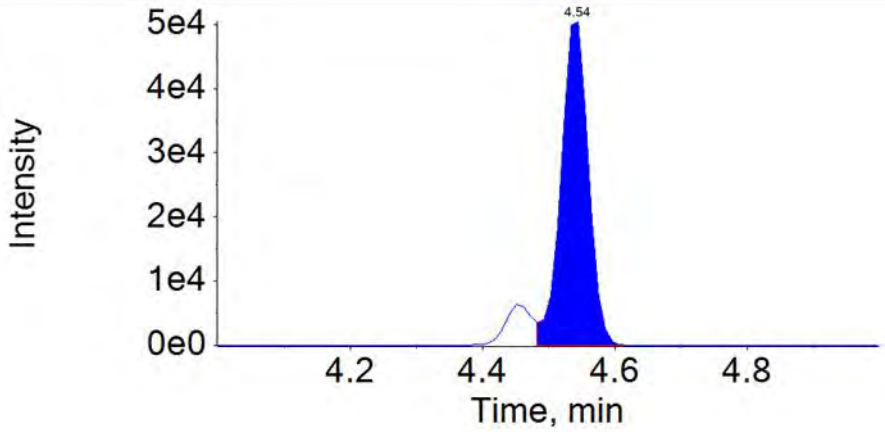
Integration Comment: incorrect integration

APPROVED
By JPT at 10:19 am, 11/14/18

REVIEWED
By HMK at 12:08 pm, 11/15/18

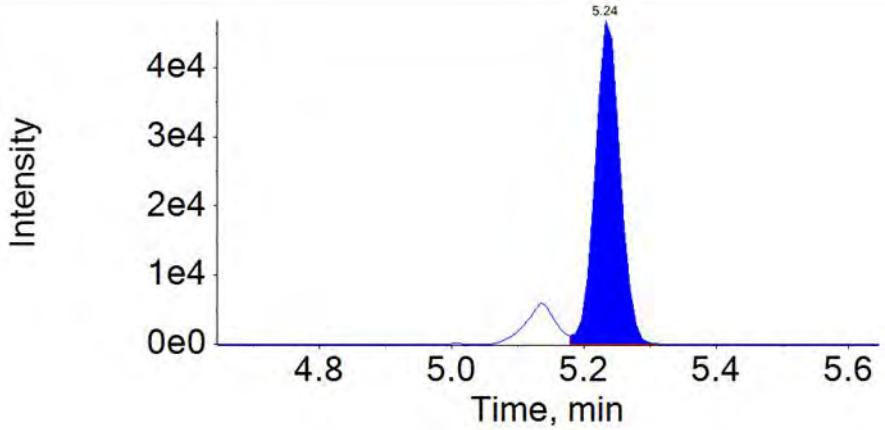
Results Table Name: 18NOV13DCCV6-10
Results Table Date: 11/14/2018 9:23:22 AM
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

Component Name:
PFHxS_2
RT (min.):
4.54
Peak Area:
145898.6
Mass Range:
399.0 / 99.0
File Name:
18NOV13D-59.wiff
Sample Name:
CCV6_CAL4



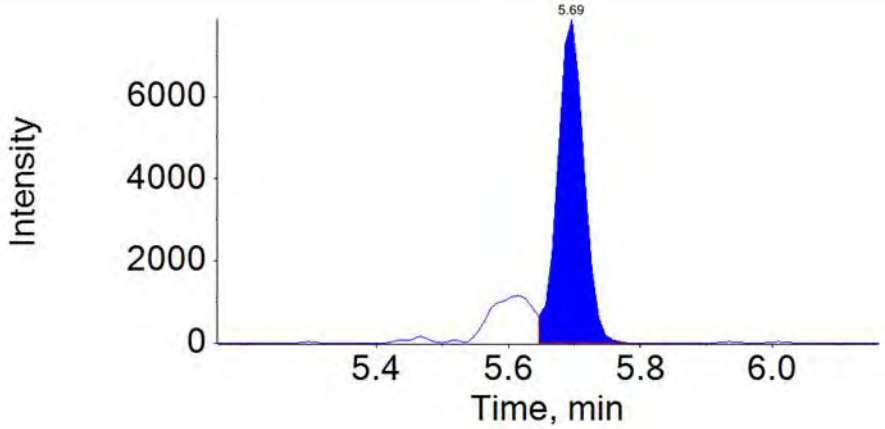
Integration Comment: incorrect integration

Component Name:
PFOS_2
RT (min.):
5.24
Peak Area:
123075.4
Mass Range:
499.0 / 99.0
File Name:
18NOV13D-59.wiff
Sample Name:
CCV6_CAL4



Integration Comment: incorrect integration

Component Name:
NMeFOSAA_2
RT (min.):
5.69
Peak Area:
21804.6
Mass Range:
570.0 / 483.0
File Name:
18NOV13D-59.wiff
Sample Name:
CCV6_CAL4



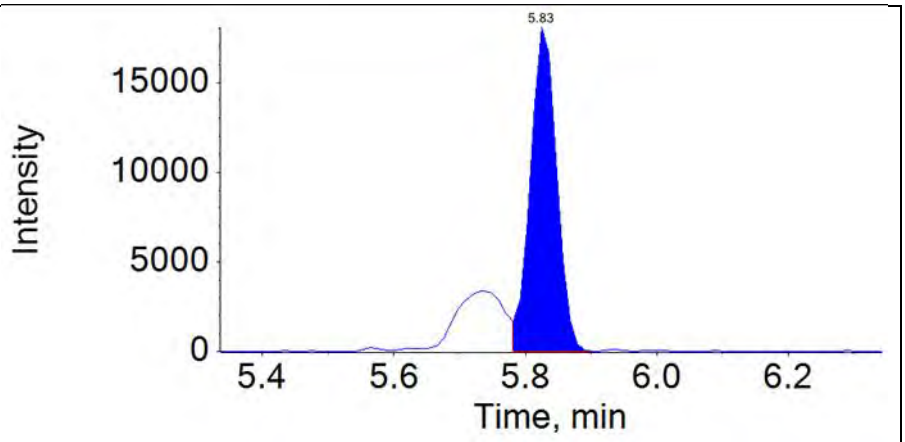
Integration Comment: incorrect integration

APPROVED
By JPT at 10:19 am, 11/14/18

REVIEWED
By HMK at 12:08 pm, 11/15/18

Results Table Name: 18NOV13DCCV6-10
Results Table Date: 11/14/2018 9:23:22 AM
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

Component Name:
NEtFOSAA_2
RT (min.):
5.83
Peak Area:
49988.2
Mass Range:
584.0 / 526.0
File Name:
18NOV13D-59.wiff
Sample Name:
CCV6_CAL4



Integration Comment: incorrect integration

APPROVED
By JPT at 10:19 am, 11/14/18

REVIEWED
By HMK at 12:08 pm, 11/15/18

Results Table Name: 18NOV13DCCV6-10
Results Table Date: 11/14/2018 9:23:22 AM
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

APPROVED
By JPT at 10:19 am, 11/14/18

REVIEWED
By HMK at 12:08 pm, 11/15/18

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LC-MS/MS Analysis Report

Printed: 11/14/2018 9:52:00 AM
Template: IonRatio18OCT10

Ion Ratio Report

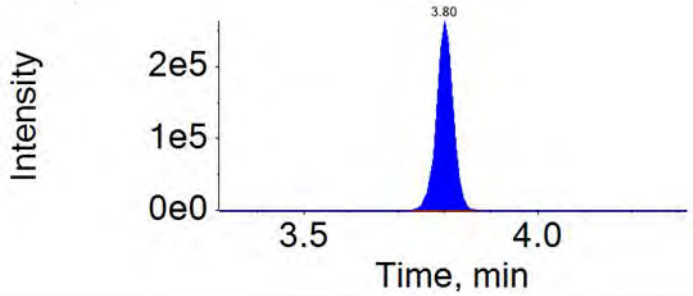
Sample Name: CCV6_CAL4 **Instrument Name:** LM27631 **File Name:** 18NOV13D-59.wiff

Component Name	RT	RRT	Analyte Area Response	Int Typ	Expected Ion Ratio	Ion Ratio	Ion Ratio % Diff	Ion Ratio Limit	Ion Ratio OOS
PFBS	3.80	1.00	640798.3	A	N/A	1.0000			
PFBS_2	3.80	1.00	236343.5	A	N/A	0.3688	1	50	
4:2-FTS	4.11	1.00	136241.9	A	N/A	1.0000			
4:2-FTS_2	4.11	1.00	84707.8	A	N/A	0.6217	-7	50	
PFHxA	4.15	1.00	1308040.4	A	N/A	1.0000			
PFHxA_2	4.15	1.00	13454.0	A	N/A	0.0103	-13	50	
PFPeS	4.17	1.10	317036.6	A	N/A	1.0000			
PFPeS_2	4.17	1.10	169995.6	A	N/A	0.5362	3	50	
PFHpA	4.54	1.00	1363723.9	A	N/A	1.0000			
PFHpA_2	4.54	1.00	73775.5	A	N/A	0.0541	-4	50	
PFHxS	4.54	1.00	455335.5	M	N/A	1.0000			
PFHxS_2	4.54	1.00	163623.6	M	N/A	0.3593	18	50	
6:2-FTS	4.89	1.00	104080.7	A	N/A	1.0000			
6:2-FTS_2	4.90	1.00	64783.3	A	N/A	0.6224	-5	50	
PFHpS	4.90	1.08	430779.1	A	N/A	1.0000			
PFHpS_2	4.90	1.08	186686.6	A	N/A	0.4334	7	50	
PFOA	4.91	1.00	1332914.9	A	N/A	1.0000			
PFOA_2	4.91	1.00	75816.1	A	N/A	0.0569	0	50	
PFOS	5.24	1.00	448218.9	M	N/A	1.0000			
PFOS_2	5.24	1.00	142290.9	M	N/A	0.3175	23	50	
PFNA	5.25	1.00	1116186.2	A	N/A	1.0000			
PFNA_2	5.25	1.00	21032.6	A	N/A	0.0188	-18	50	
PFNS	5.53	1.06	284997.7	A	N/A	1.0000			
PFNS_2	5.53	1.06	133766.5	A	N/A	0.4694	-2	50	
PFDA	5.55	1.00	921516.9	A	N/A	1.0000			
PFDA_2	5.55	1.00	5496.3	A	N/A	0.0060	-25	50	
8:2-FTS	5.56	1.00	84403.2	A	N/A	1.0000			
8:2-FTS_2	5.56	1.00	51614.2	A	N/A	0.6115	-8	50	
NMeFOSAA	5.70	1.00	105636.9	M	N/A	1.0000			
NMeFOSAA_2	5.69	1.00	27030.7	M	N/A	0.2559	20	50	
PFDS	5.79	1.11	224576.1	A	N/A	1.0000			
PFDS_2	5.79	1.10	111631.1	A	N/A	0.4971	-2	50	
PFUnDA	5.81	1.00	818489.4	A	N/A	1.0000			
PFUnDA_2	5.81	1.00	2795.4	A	N/A	0.0034	-18	50	
NEtFOSAA	5.83	1.00	94592.3	A	N/A	1.0000			
NEtFOSAA_2	5.83	1.00	67537.4	M	N/A	0.7140	23	50	
PFDoDA	6.04	1.00	868518.8	A	N/A	1.0000			
PFDoDA_2	6.04	1.00	10806.1	A	N/A	0.0124	-24	50	
10:2-FTS	6.06	1.09	65963.7	A	N/A	1.0000			
10:2-FTS_2	6.06	1.09	43156.1	A	N/A	0.6542	1	50	
PFTrDA	6.24	1.03	725189.3	A	N/A	1.0000			
PFTrDA_2	6.24	1.03	6699.6	A	N/A	0.0092	0	50	
PFTeDA	6.42	1.00	584375.2	A	N/A	1.0000			
PFTeDA_2	6.42	1.00	3497.9	A	N/A	0.0060	-7	50	
PFHxDA	6.72	1.05	270067.9	A	N/A	1.0000			
PFHxDA_2	6.72	1.05	16619.2	A	N/A	0.0615	-9	50	
PFODA	6.98	1.09	242463.9	A	N/A	1.0000			
PFODA_2	6.98	1.09	6179.9	A	N/A	0.0255	-6	50	

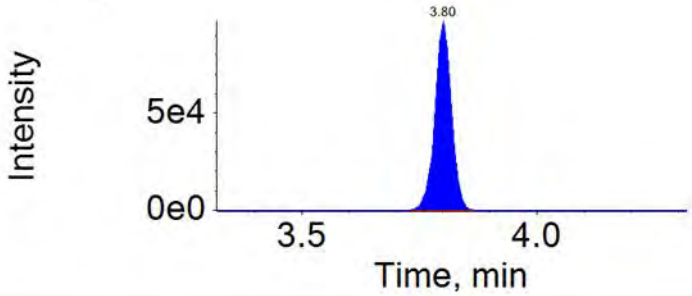
APPROVED
By JPT at 10:19 am, 11/14/18

REVIEWED
By HMK at 12:08 pm, 11/15/18

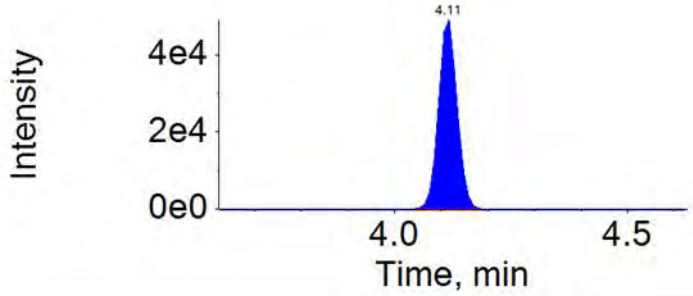
Component: PFBS
Primary Mass: 299.0 / 80.0



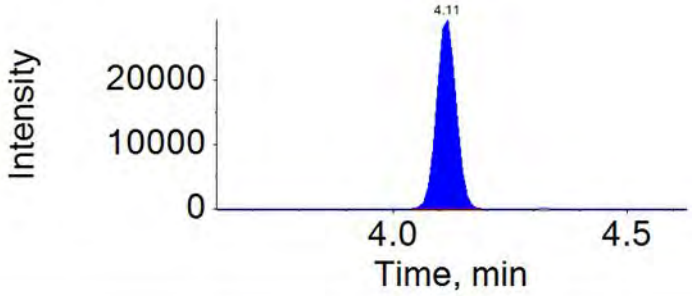
Component: PFBS_2
Secondary Mass: 299.0 / 99.0



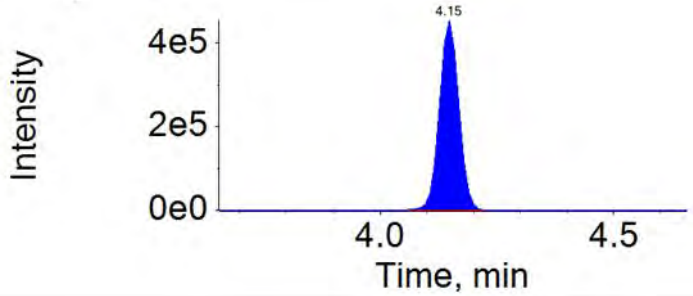
Component: 4:2-FTS
Primary Mass: 327.0 / 307.0



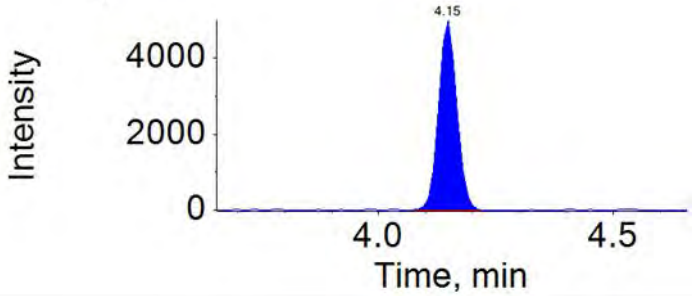
Component: 4:2-FTS_2
Secondary Mass: 327.0 / 81.0



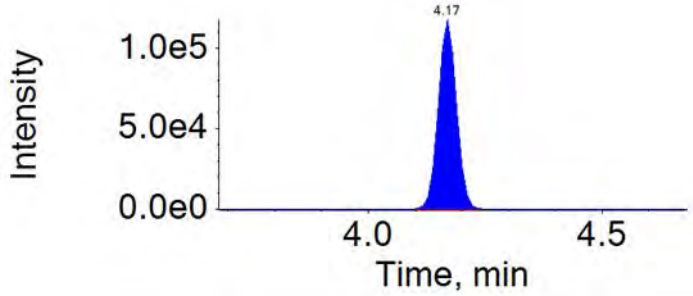
Component: PFHxA
Primary Mass: 313.0 / 269.0



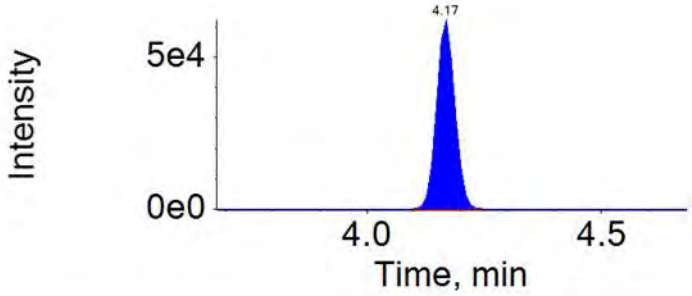
Component: PFHxA_2
Secondary Mass: 313.0 / 119.0



Component: PFPeS
Primary Mass: 349.0 / 80.0



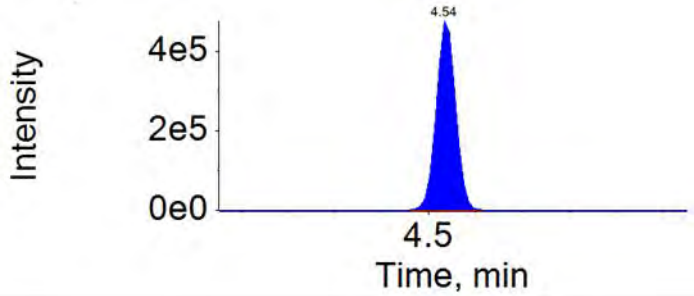
Component: PFPeS_2
Secondary Mass: 349.0 / 99.0



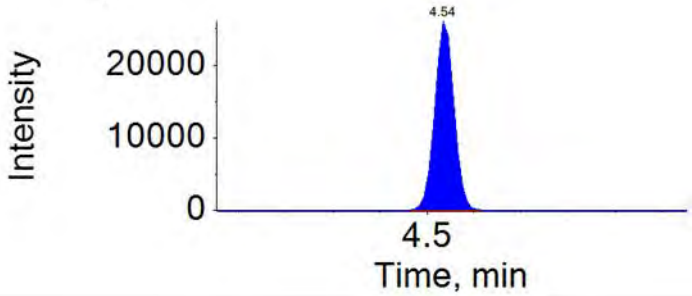
APPROVED
By JPT at 10:19 am, 11/14/18

REVIEWED
By HMK at 12:08 pm, 11/15/18

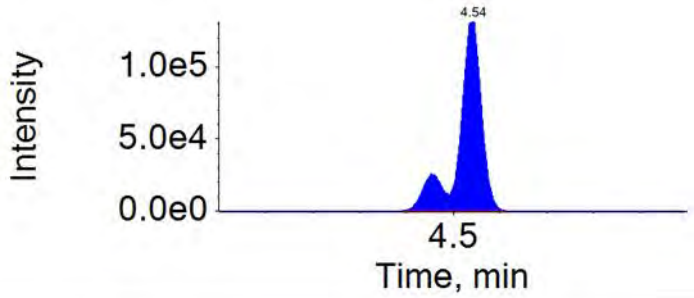
Component: PFHpA
Primary Mass: 363.0 / 319.0



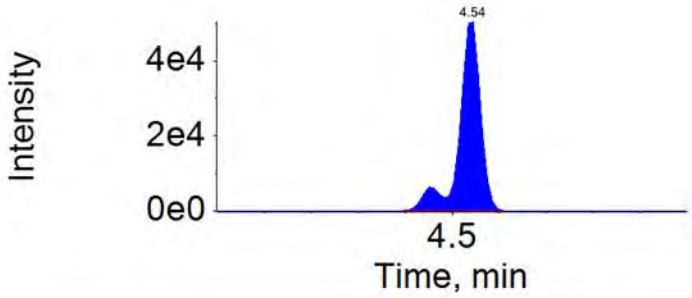
Component: PFHpA_2
Secondary Mass: 363.0 / 169.0



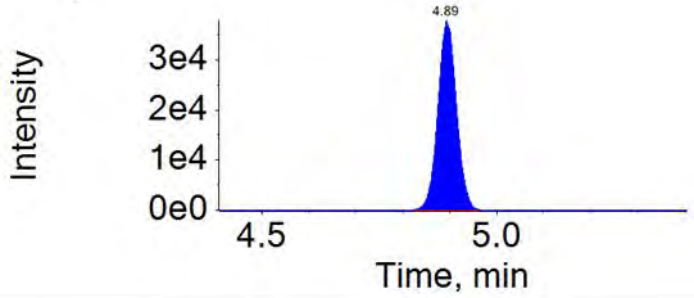
Component: PFHxS
Primary Mass: 399.0 / 80.0



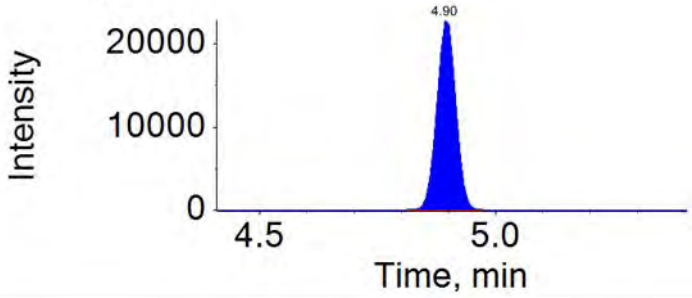
Component: PFHxS_2
Secondary Mass: 399.0 / 99.0



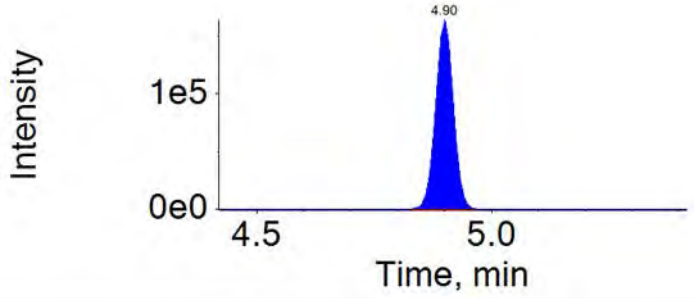
Component: 6:2-FTS
Primary Mass: 427.0 / 407.0



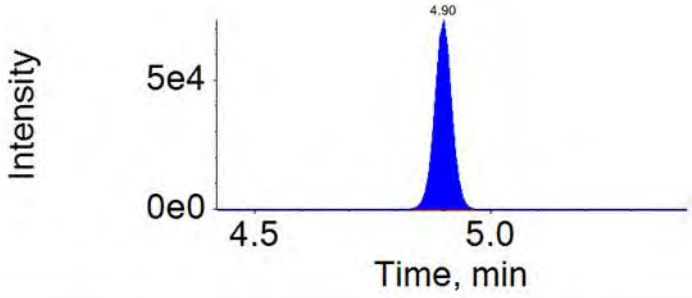
Component: 6:2-FTS_2
Secondary Mass: 427.0 / 81.0



Component: PFHpS
Primary Mass: 449.0 / 80.0



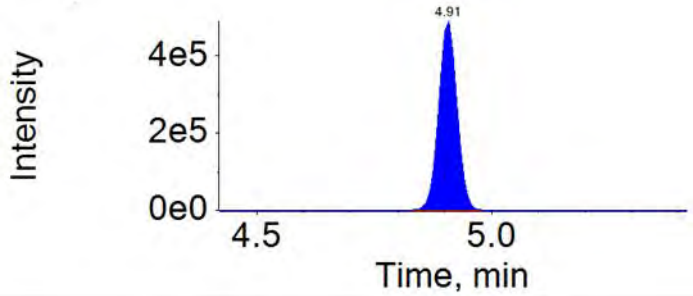
Component: PFHpS_2
Secondary Mass: 449.0 / 99.0



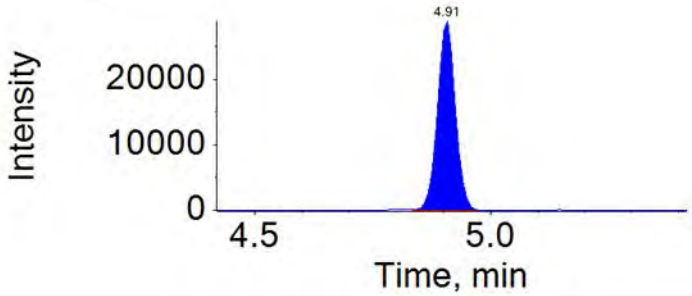
APPROVED
By JPT at 10:19 am, 11/14/18

REVIEWED
By HMK at 12:08 pm, 11/15/18

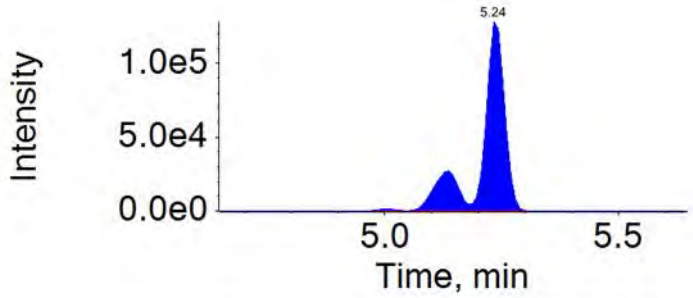
Component: PFOA
Primary Mass: 413.0 / 369.0



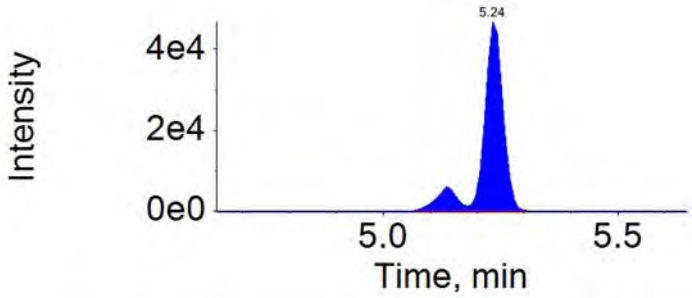
Component: PFOA_2
Secondary Mass: 413.0 / 169.0



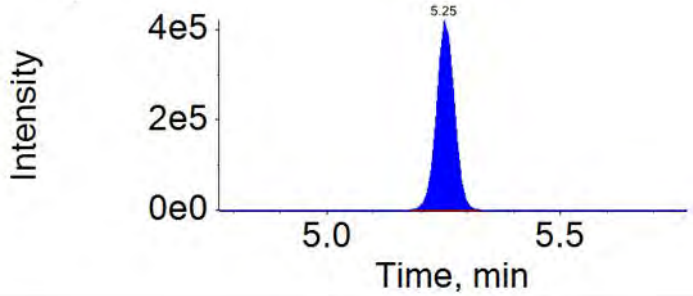
Component: PFOS
Primary Mass: 499.0 / 80.0



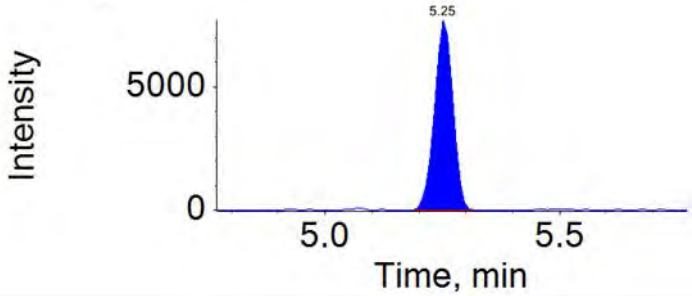
Component: PFOS_2
Secondary Mass: 499.0 / 99.0



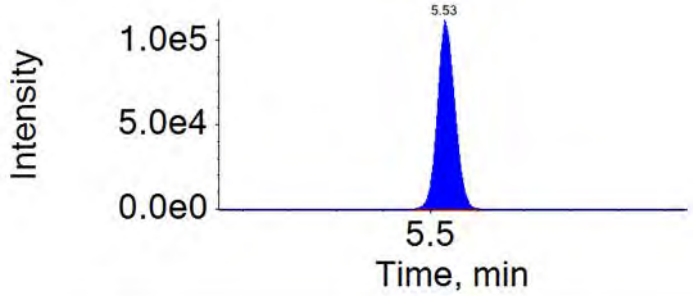
Component: PFNA
Primary Mass: 463.0 / 419.0



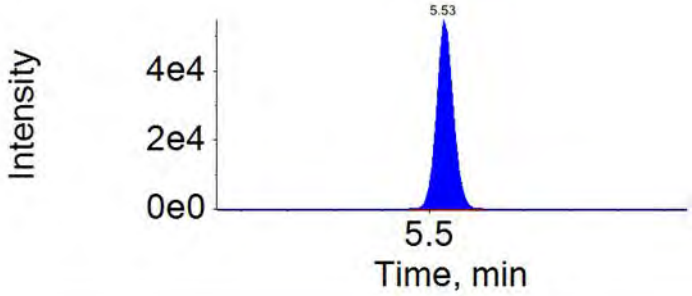
Component: PFNA_2
Secondary Mass: 463.0 / 169.0



Component: PFNS
Primary Mass: 549.0 / 80.0



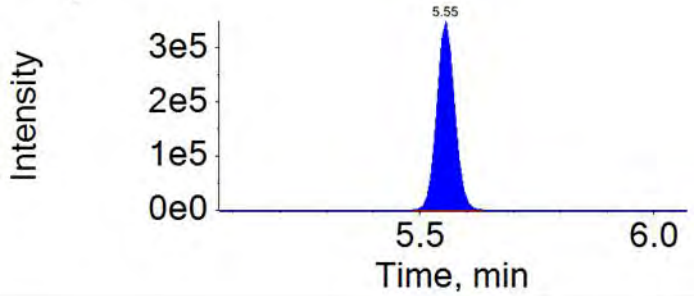
Component: PFNS_2
Secondary Mass: 549.0 / 99.0



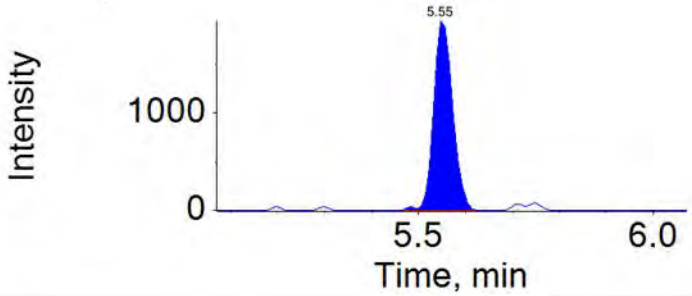
APPROVED
By JPT at 10:19 am, 11/14/18

REVIEWED
By HMK at 12:08 pm, 11/15/18

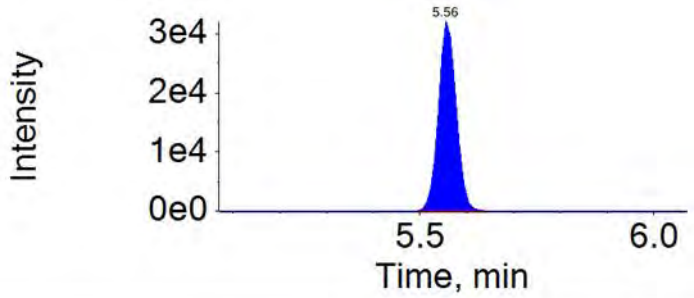
Component: PFDA
Primary Mass: 513.0 / 469.0



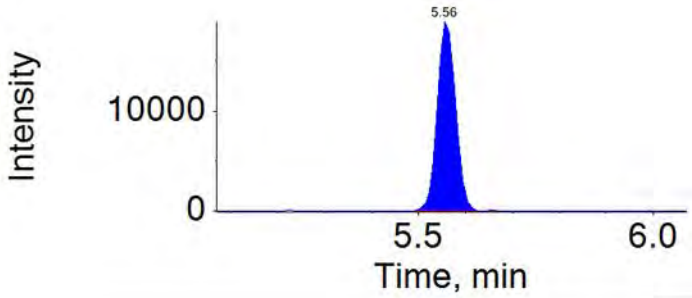
Component: PFDA_2
Secondary Mass: 513.0 / 169.0



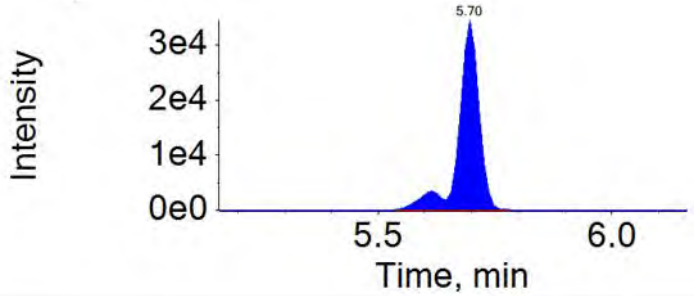
Component: 8:2-FTS
Primary Mass: 527.0 / 507.0



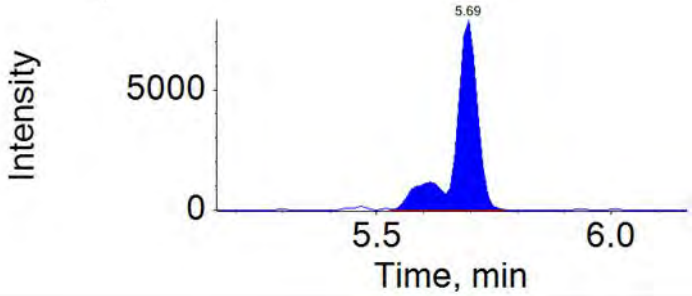
Component: 8:2-FTS_2
Secondary Mass: 527.0 / 81.0



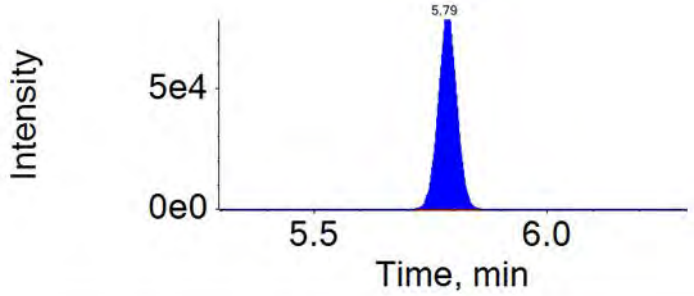
Component: NMeFOSAA
Primary Mass: 570.0 / 419.0



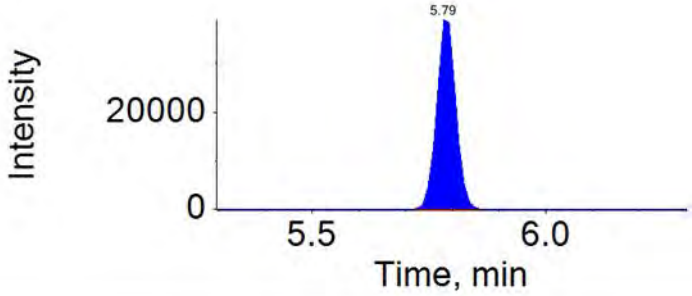
Component: NMeFOSAA_2
Secondary Mass: 570.0 / 483.0



Component: PFDS
Primary Mass: 599.0 / 80.0



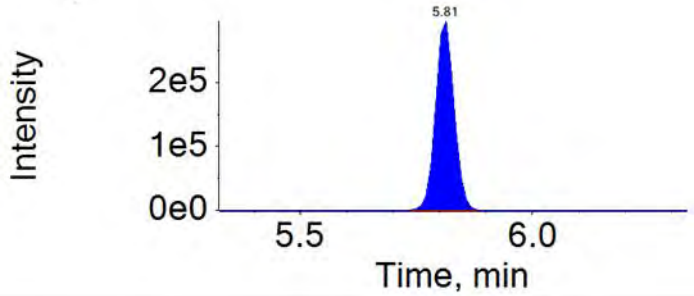
Component: PFDS_2
Secondary Mass: 599.0 / 99.0



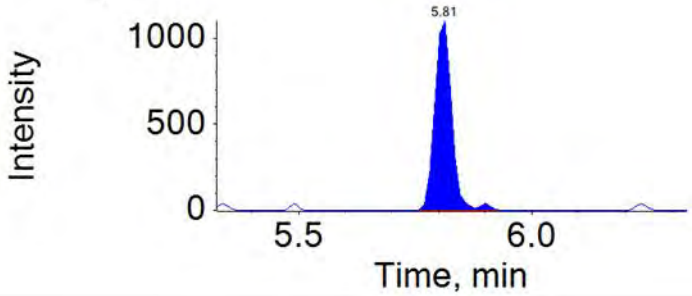
APPROVED
By JPT at 10:19 am, 11/14/18

REVIEWED
By HMK at 12:08 pm, 11/15/18

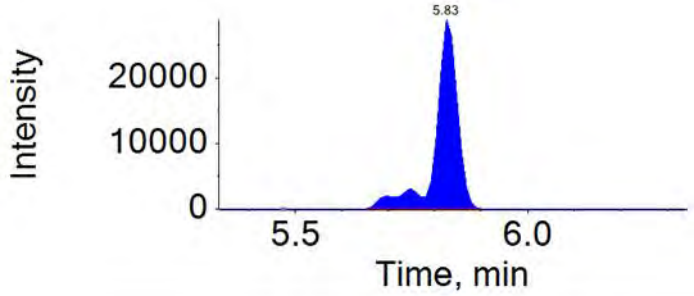
Component: PFUnDA
Primary Mass: 563.0 / 519.0



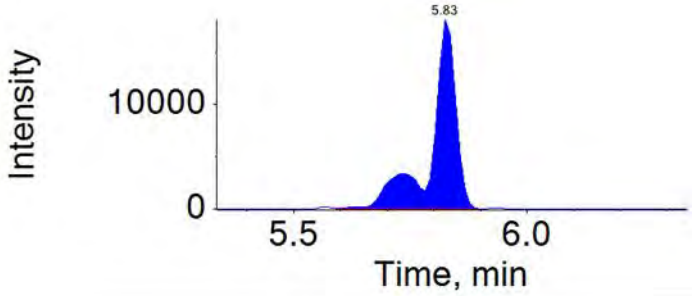
Component: PFUnDA_2
Secondary Mass: 563.0 / 169.0



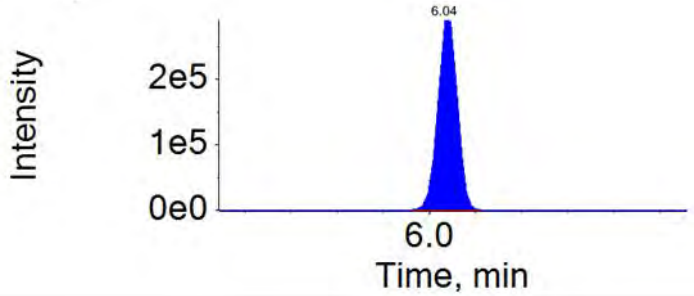
Component: NEtFOSAA
Primary Mass: 584.0 / 419.0



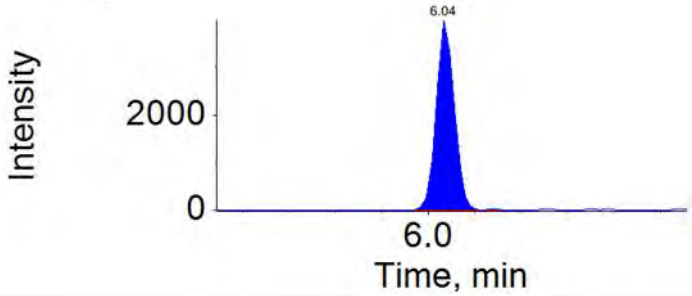
Component: NEtFOSAA_2
Secondary Mass: 584.0 / 526.0



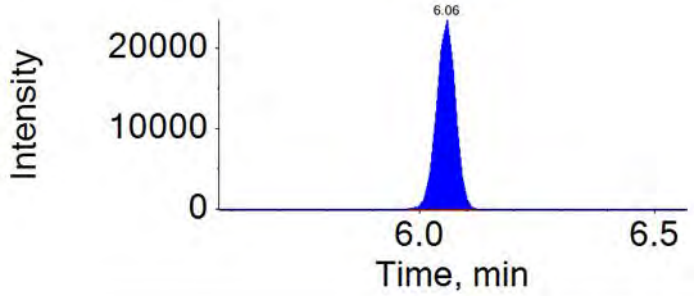
Component: PFDoDA
Primary Mass: 613.0 / 569.0



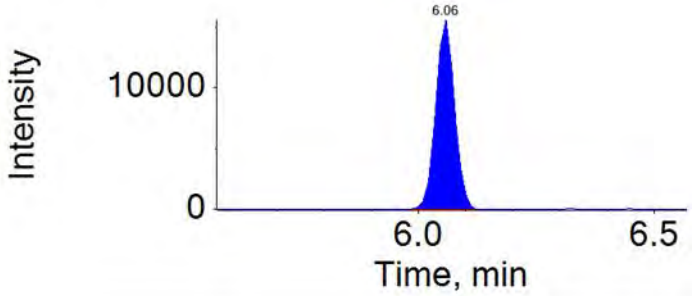
Component: PFDoDA_2
Secondary Mass: 613.0 / 169.0



Component: 10:2-FTS
Primary Mass: 627.0 / 607.0



Component: 10:2-FTS_2
Secondary Mass: 627.0 / 81.0



APPROVED
By JPT at 10:19 am, 11/14/18

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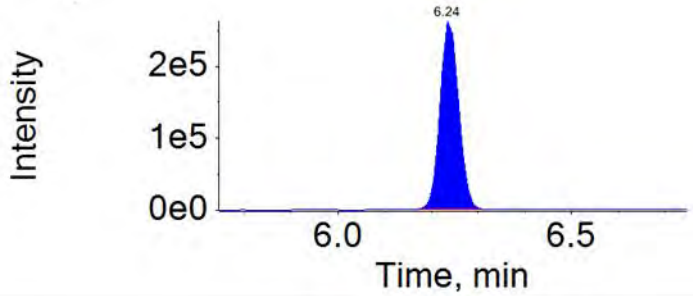
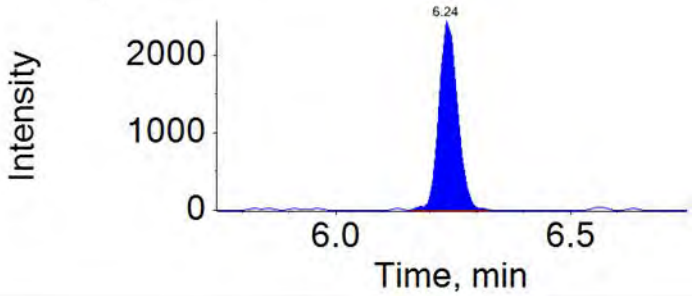
By HMK at 12:08 pm, 11/15/18

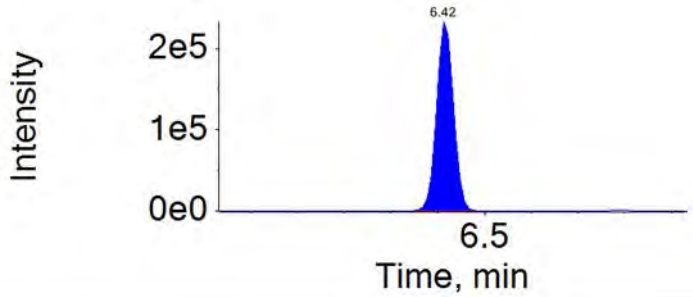
Component: PFTrDA
Primary Mass: 663.0 / 619.0



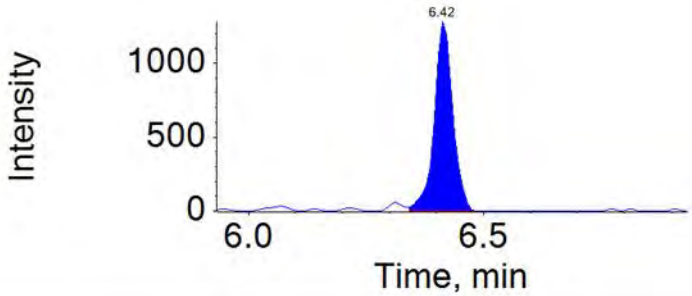
Component: PFTrDA_2
Secondary Mass: 663.0 / 169.0



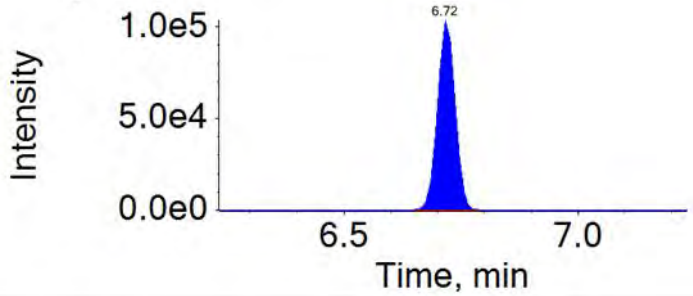
Component: PFTeDA
Primary Mass: 713.0 / 669.0



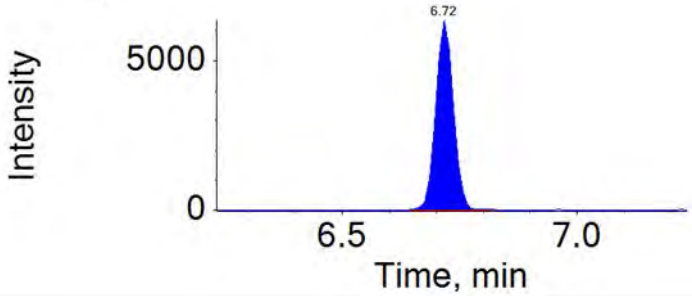
Component: PFTeDA_2
Secondary Mass: 713.0 / 169.0



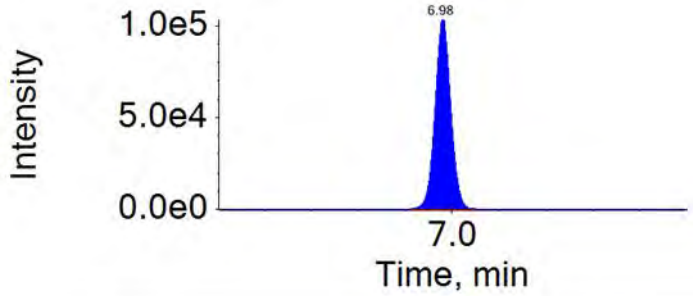
Component: PFHxDA
Primary Mass: 813.0 / 769.0



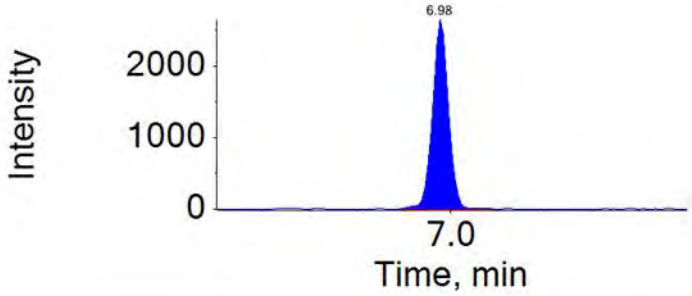
Component: PFHxDA_2
Secondary Mass: 813.0 / 169.0



Component: PFODA
Primary Mass: 913.0 / 869.0



Component: PFODA_2
Secondary Mass: 913.0 / 169.0



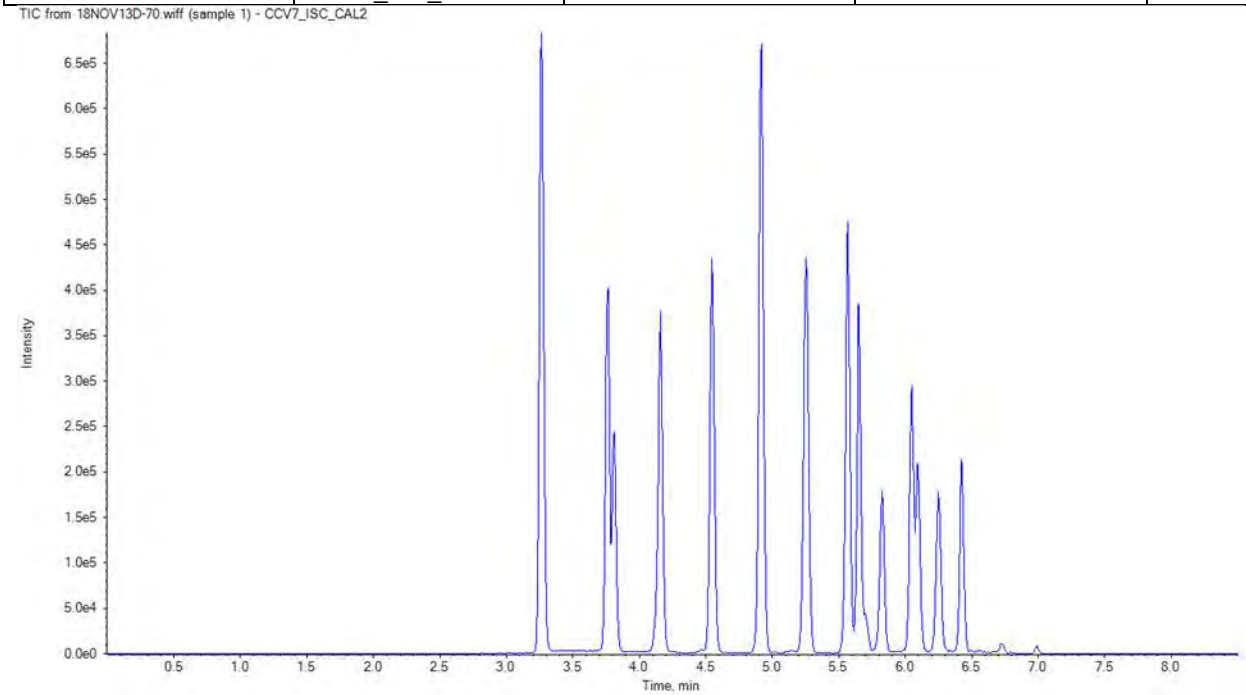
APPROVED
By JPT at 10:19 am, 11/14/18

REVIEWED
By HMK at 12:08 pm, 11/15/18

Instrument Sensitivity Check/ Continuing Calibration Verfication

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV13DCCV6-10 11/14/2018 9:23:22 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Instrument Name:	Sample Name:	Sample ID:	Sample File:	Acquisition Date:
LM27631	CCV7_ISC_CAL2	CALBRN21833C	18NOV13D-70.wiff	2018-11-13T20:05:50



Injection Standard Area Reference File: 18NOV13D-05

Injection Standard Name	Inj Std Conc	Injection Std Peak Area	Reference Injection Standard Area	Injection Std %Diff	Injection Std %Diff Limit	Injection Std %Diff OOS
13C3-PFBA	5.0	694207.9	661126.9	5	50	
13C2-PFOA	5.0	459941.7	466902.6	-1	50	
13C4-PFOS	4.8	255750.7	247446.9	3	50	
13C2-PFDA	5.0	290128.8	295381.6	-2	50	

APPROVED
By JPT at 10:19 am, 11/14/18

REVIEWED
By HMK at 12:08 pm, 11/15/18

Instrument Sensitivity Check/ Continuing Calibration Verfication

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV13DCCV6-10 11/14/2018 9:23:22 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Instrument Name:	Sample Name:	Sample ID:	Sample File:	Acquisition Date:
LM27631	CCV7_ISC_CAL2	CALBRN21833C	18NOV13D-70.wiff	2018-11-13T20:05:50

Analyte Name	Analyte Area	Sc /pk	Ext Std Name	Ext Std Area	Ext Std con	Area Ratio	RT (min)	RRT	Spec Amt	Calc Amt	% Diff	% Diff Lim	% Diff OOS
PFBA	82822.6	10	13C4-PFBA	794083.3	5.0	0.104	3.26	1.000	0.600	0.578	-4	30	
PFPeA	81055.9	12	13C5-PFPeA	792572.2	5.0	0.102	3.76	1.000	0.600	0.592	-1	30	
PFBS	44748.4	10	13C3-PFBS	444339.4	4.7	0.101	3.81	1.000	0.531	0.479	-10	30	
4:2-FTS	10227.9	11	13C2-4:2-FTS	48673.4	4.7	0.210	4.12	1.000	0.560	0.571	2	30	
PFHxA	99315.8	12	13C5-PFHxA	688417.1	5.0	0.144	4.16	1.000	0.600	0.602	0	30	
PFPeS	20643.5	11	13C3-PFBS	444339.4	4.7	0.046	4.18	1.100	0.563	0.451	-20	30	
PFHpA	100331.5	12	13C4-PFHpA	550411.8	5.0	0.182	4.55	1.000	0.600	0.604	1	30	
PFHxS	31708.2	19	13C3-PFHxS	324046.0	4.7	0.098	4.55	1.000	0.547	0.474	-13	30	
6:2-FTS	7892.9	11	13C2-6:2-FTS	37193.2	4.8	0.212	4.91	1.000	0.569	0.514	-10	30	
PFHpS	33549.6	11	13C3-PFHxS	324046.0	4.7	0.104	4.91	1.080	0.571	0.545	-5	30	
PFOA	99271.9	11	13C8-PFOA	929694.9	5.0	0.107	4.92	1.000	0.600	0.570	-5	30	
PFOS	31066.6	22	13C8-PFOS	300516.6	4.8	0.103	5.25	1.000	0.555	0.452	-19	30	
PFNA	76669.8	11	13C9-PFNA	494743.8	5.0	0.155	5.26	1.000	0.600	0.559	-7	30	
PFNS	20590.8	11	13C8-PFOS	300516.6	4.8	0.069	5.54	1.060	0.576	0.479	-17	30	
PFDA	68910.7	11	13C6-PFDA	651463.7	5.0	0.106	5.57	1.000	0.600	0.561	-7	30	
8:2-FTS	6302.1	11	13C2-8:2-FTS	27557.4	4.8	0.229	5.57	1.000	0.575	0.533	-7	30	
PFOSA	68001.2	11	13C8-PFOSA	708843.9	5.0	0.096	5.65	1.000	0.600	0.469	-22	30	
NMeFOSAA	7189.6	18	d3-NMeFOSAA	79139.2	5.0	0.091	5.71	1.000	0.600	0.513	-14	30	
PFDS	15267.4	12	13C8-PFOS	300516.6	4.8	0.051	5.80	1.110	0.578	0.460	-20	30	
PFUnDA	57084.2	11	13C7-PFUnDA	270143.6	5.0	0.211	5.82	1.000	0.600	0.552	-8	30	
NEtFOSAA	8326.9	25	d5-NEtFOSAA	69023.8	5.0	0.121	5.84	1.000	0.600	0.632	5	30	
PFDoDA	56287.6	11	13C2-PFDoDA	570187.4	5.0	0.099	6.05	1.000	0.600	0.503	-16	30	
10:2-FTS	4746.6	13	13C2-8:2-FTS	27557.4	4.8	0.172	6.07	1.090	0.578	0.574	-1	30	
NMePFOSAE	49314.1	12	d7-NMePFOSAE	343581.8	5.0	0.144	6.10	1.000	0.600	0.597	0	30	
NMePFOSA	7849.7	12	d3-NMePFOSA	77880.3	5.0	0.101	6.11	1.000	0.600	0.497	-17	30	
PFDoS	8763.7	11	13C8-PFOS	300516.6	4.8	0.029	6.22	1.190	0.581	0.511	-12	30	
NEtPFOSAE	48120.8	11	d9-NEtPFOSAE	267333.3	5.0	0.180	6.26	1.000	0.600	0.578	-4	30	
NEtPFOSA	6805.8	12	d5-NEtPFOSA	65391.1	5.0	0.104	6.27	1.000	0.600	0.478	-20	30	
PFTrDA	51310.9	12	13C2-PFDoDA	570187.4	5.0	0.090	6.25	1.030	0.600	0.568	-5	30	
PFTeDA	40355.1	10	13C2-PFTeDA	402549.8	5.0	0.100	6.42	1.000	0.600	0.562	-6	30	
PFHxDA	19659.8	11	13C2-PFTeDA	402549.8	5.0	0.049	6.73	1.050	0.600	0.582	-3	30	
PFODA	16393.2	10	13C2-PFTeDA	402549.8	5.0	0.041	6.99	1.090	0.600	0.567	-5	30	

APPROVED
By JPT at 10:19 am, 11/14/18

REVIEWED
By HMK at 12:08 pm, 11/15/18

Instrument Sensitivity Check/
Continuing Calibration Verfication

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV13DCCV6-10 11/14/2018 9:23:22 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

APPROVED
By JPT at 10:19 am, 11/14/18

REVIEWED
By HMK at 12:08 pm, 11/15/18

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV13DCCV6-10 11/14/2018 9:23:22 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Sample Name:	CCV7_ISC_CAL2			**Data File:**		18NOV13D-70.wiff
Sample ID:	CALBRN21833C			**Acquis Date:**		2018-11-13T20:05:50
Sample Type:	Quality Control			**Instrument:**		LM27631
Vial Position:	4			**Acquis Method:**		18AUG13_3uL.dam
Injection Vol:	3.00			**Result Table:**		18NOV13DCCV6-10
QMethod File:	18AUG20QM			**ICAL Name:**		18NOV12DCAL
Batch Number:	N/A			**Operator:**		JPT12262
Sample Wt.:	1.00000			**Dilution Factor:**		1.00
Sample Vol.:	1.000			**Prep Factor:**		1.000

Injection Standard Peak Table

Injection Standard Area Reference File: 18NOV13D-05

Injection Standard Name	Inj Std Conc	Injection Std Peak Area	Rreference Injection Standard Area	Injection Std %Diff	Injection Std %Diff Limit	Injection Std %Diff OOS
13C3-PFBA	5.0	694207.9	661126.9	5	50	
13C2-PFOA	5.0	459941.7	466902.6	-1	50	
13C4-PFOS	4.8	255750.7	247446.9	3	50	
13C2-PFDA	5.0	290128.8	295381.6	-2	50	

Extraction Standard Peak Table

Extraction Standard Name	Ext Std Area	Inj Std Name	Inj Std Area	Area Ratio	Ext Std Conc	Ext Std Result	Ext Std %REC	Ext Std %REC Limit	Ext Std OOS
E13C4-PFBA	794083.3	13C3-PFBA	694207.9	1.144	5.000	5.128	103	70-130	
E13C5-PFPeA	792572.2	13C3-PFBA	694207.9	1.142	5.000	5.121	102	70-130	
E13C3-PFBS	444339.4	13C3-PFBA	694207.9	0.640	4.650	4.518	97	70-130	
E13C2-4:2-FTS	48673.4	13C2-PFOA	459941.7	0.106	4.670	4.713	101	70-130	
E13C5-PFHxA	688417.1	13C2-PFOA	459941.7	1.497	5.000	5.407	108	70-130	
E13C3-PFHxS	324046.0	13C2-PFOA	459941.7	0.705	4.730	4.834	102	70-130	
E13C4-PFHpA	550411.8	13C2-PFOA	459941.7	1.197	5.000	5.391	108	70-130	
E13C2-6:2-FTS	37193.2	13C2-PFOA	459941.7	0.081	4.750	5.410	114	70-130	
E13C8-PFOA	929694.9	13C2-PFOA	459941.7	2.021	5.000	5.569	111	70-130	
E13C8-PFOS	300516.6	13C4-PFOS	255750.7	1.175	4.780	5.206	109	70-130	
E13C9-PFNA	494743.8	13C4-PFOS	255750.7	1.934	5.000	5.394	108	70-130	
E13C6-PFDA	651463.7	13C2-PFDA	290128.8	2.245	5.000	5.240	105	70-130	
E13C2-8:2-FTS	27557.4	13C2-PFDA	290128.8	0.095	4.790	4.737	99	70-130	
E13C8-PFOSA	708843.9	13C2-PFDA	290128.8	2.443	5.000	5.417	108	70-130	
Ed3-NMeFOSAA	79139.2	13C2-PFDA	290128.8	0.273	5.000	4.924	98	70-130	
E13C7-PFUnDA	270143.6	13C2-PFDA	290128.8	0.931	5.000	5.406	108	70-130	
Ed5-NEtFOSAA	69023.8	13C2-PFDA	290128.8	0.238	5.000	5.033	101	70-130	
E13C2-PFDoDA	570187.4	13C2-PFDA	290128.8	1.965	5.000	5.103	102	70-130	
Ed7-NMePFOSAE	343581.8	13C2-PFDA	290128.8	1.184	5.000	5.125	102	70-130	
Ed3-NMePFOSA	77880.3	13C2-PFDA	290128.8	0.268	5.000	4.877	98	70-130	
Ed9-NEtPFOSAE	267333.3	13C2-PFDA	290128.8	0.921	5.000	4.792	96	70-130	
Ed5-NEtPFOSA	65391.1	13C2-PFDA	290128.8	0.225	5.000	5.287	106	70-130	
E13C2-PFTeDA	402549.8	13C2-PFDA	290128.8	1.387	5.000	4.871	97	70-130	

APPROVED
By JPT at 10:19 am, 11/14/18

REVIEWED
By HMK at 12:08 pm, 11/15/18

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV13DCCV6-10 11/14/2018 9:23:22 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

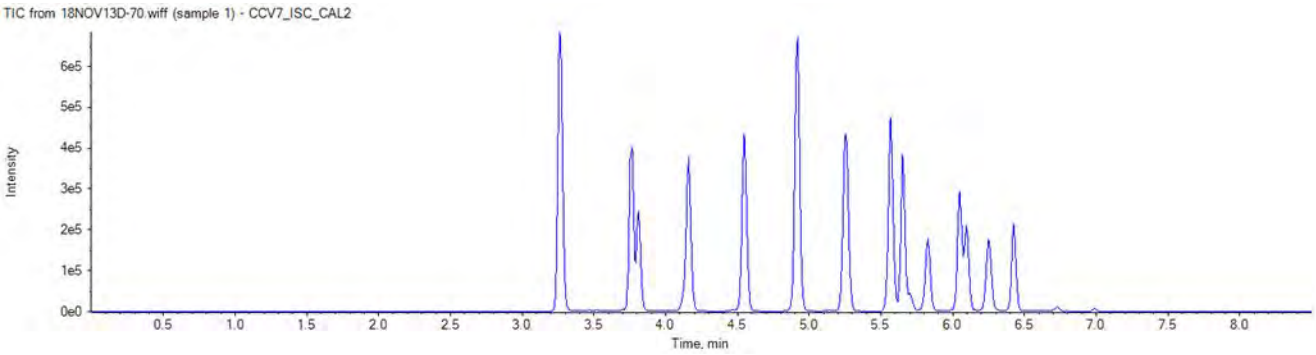
Analyte Quantitation Peak Table

Sample Name: CCV7_ISC_CAL2 **Instrument Name:** LM27631 **File Name:** 18NOV13D-70.wiff

Sample Wt	Sample Vol	Dilution Factor	PrepFactor
1.00000	1.000	1.00	1.000

Analyte Name	RT	RRT	Analyte Area Response	E	Int Typ	ES Name	ES RT	ES Area Response	Area Ratio	Sample Result (ng/g)
PFBA	3.26	1.000	82822.6		A	13C4-PFBA	3.26	794083.3	0.104	0.578
PFPeA	3.76	1.000	81055.9		A	13C5-PFPeA	3.76	792572.2	0.102	0.592
PFBS	3.81	1.000	44748.4		A	13C3-PFBS	3.81	444339.4	0.101	0.479
4:2-FTS	4.12	1.000	10227.9		A	13C2-4:2-FTS	4.12	48673.4	0.210	0.571
PFHxA	4.16	1.000	99315.8		A	13C5-PFHxA	4.16	688417.1	0.144	0.602
PFPeS	4.18	1.100	20643.5		A	13C3-PFBS	3.81	444339.4	0.046	0.451
PFHpA	4.55	1.000	100331.5		A	13C4-PFHpA	4.55	550411.8	0.182	0.604
PFHxS	4.55	1.000	31708.2		M	13C3-PFHxS	4.55	324046.0	0.098	0.474
6:2-FTS	4.91	1.000	7892.9		A	13C2-6:2-FTS	4.90	37193.2	0.212	0.514
PFHpS	4.91	1.080	33549.6		A	13C3-PFHxS	4.55	324046.0	0.104	0.545
PFOA	4.92	1.000	99271.9		A	13C8-PFOA	4.92	929694.9	0.107	0.570
PFOS	5.25	1.000	31066.6		M	13C8-PFOS	5.25	300516.6	0.103	0.452
PFNA	5.26	1.000	76669.8		A	13C9-PFNA	5.26	494743.8	0.155	0.559
PFNS	5.54	1.060	20590.8		A	13C8-PFOS	5.25	300516.6	0.069	0.479
PFDA	5.57	1.000	68910.7		A	13C6-PFDA	5.57	651463.7	0.106	0.561
8:2-FTS	5.57	1.000	6302.1		A	13C2-8:2-FTS	5.57	27557.4	0.229	0.533
PFOSA	5.65	1.000	68001.2		A	13C8-PFOSA	5.65	708843.9	0.096	0.469
NMeFOSAA	5.71	1.000	7189.6		M	d3-NMeFOSAA	5.71	79139.2	0.091	0.513
PFDS	5.80	1.110	15267.4		M	13C8-PFOS	5.25	300516.6	0.051	0.460
PFUnDA	5.82	1.000	57084.2		A	13C7-PFUnDA	5.82	270143.6	0.211	0.552
NEtFOSAA	5.84	1.000	8326.9		M	d5-NEtFOSAA	5.83	69023.8	0.121	0.632
PFDoDA	6.05	1.000	56287.6		A	13C2-PFDoDA	6.05	570187.4	0.099	0.503
10:2-FTS	6.07	1.090	4746.6		M	13C2-8:2-FTS	5.57	27557.4	0.172	0.574
NMePFOSAE	6.10	1.000	49314.1		A	d7-NMePFOSAE	6.09	343581.8	0.144	0.597
NMePFOSA	6.11	1.000	7849.7		A	d3-NMePFOSA	6.10	77880.3	0.101	0.497
PFDoS	6.22	1.190	8763.7		A	13C8-PFOS	5.25	300516.6	0.029	0.511
NEtPFOSAE	6.26	1.000	48120.8		A	d9-NEtPFOSAE	6.25	267333.3	0.180	0.578
NEtPFOSA	6.27	1.000	6805.8		A	d5-NEtPFOSA	6.27	65391.1	0.104	0.478
PFTrDA	6.25	1.030	51310.9		M	13C2-PFDoDA	6.05	570187.4	0.090	0.568
PFTeDA	6.42	1.000	40355.1		A	13C2-PFTeDA	6.43	402549.8	0.100	0.562
PFHxDA	6.73	1.050	19659.8		A	13C2-PFTeDA	6.43	402549.8	0.049	0.582
PFODA	6.99	1.090	16393.2		A	13C2-PFTeDA	6.43	402549.8	0.041	0.567

Total Ion Chromatogram

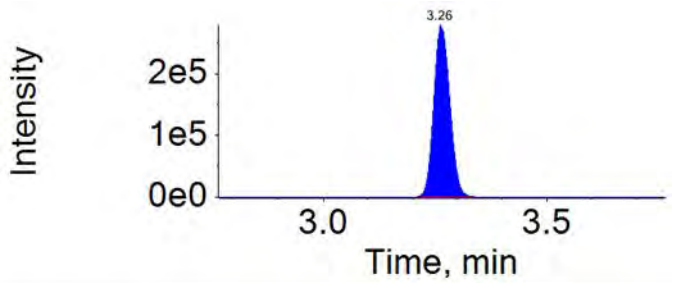


APPROVED
By JPT at 10:19 am, 11/14/18

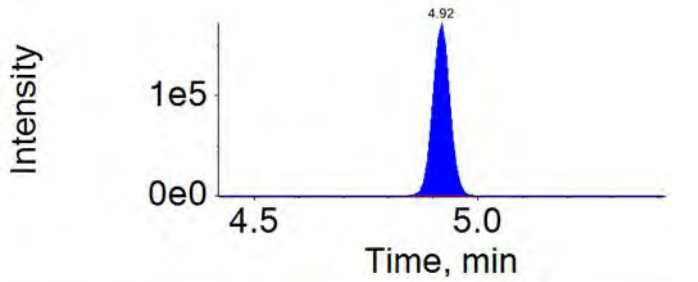
REVIEWED
By HMK at 12:08 pm, 11/15/18

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV13DCCV6-10 11/14/2018 9:23:22 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

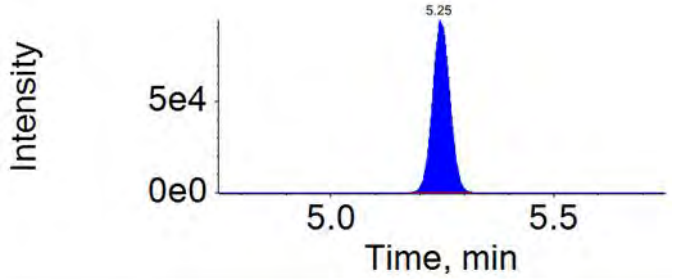
Injection Standard: 13C3-PFBA
216.0 / 172.0



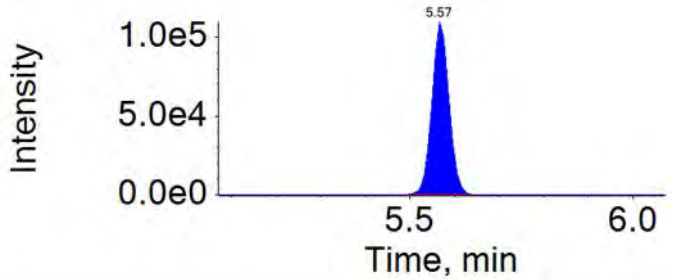
Injection Standard: 13C2-PFOA
415.0 / 370.0



Injection Standard: 13C4-PFOS
503.0 / 80.0

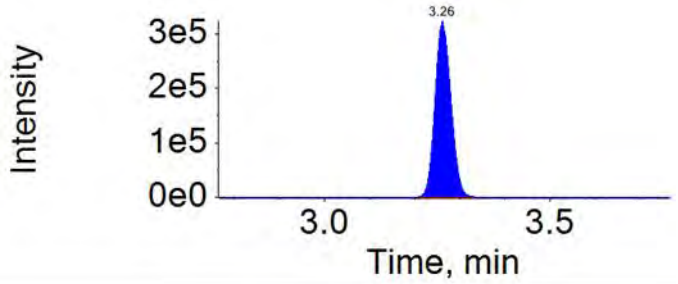


Injection Standard: 13C2-PFDA
515.0 / 470.0

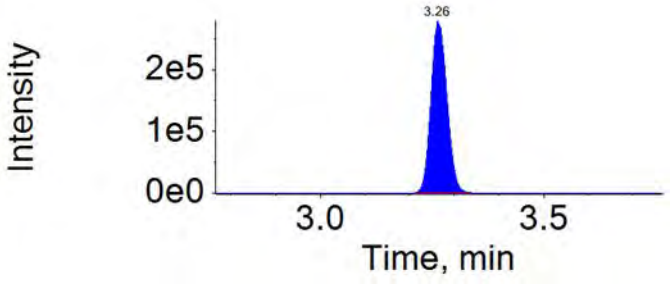


ICAL Name: 18NOV12DCAL **Result Table:** 18NOV13DCCV6-10 11/14/2018 9:23:22 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

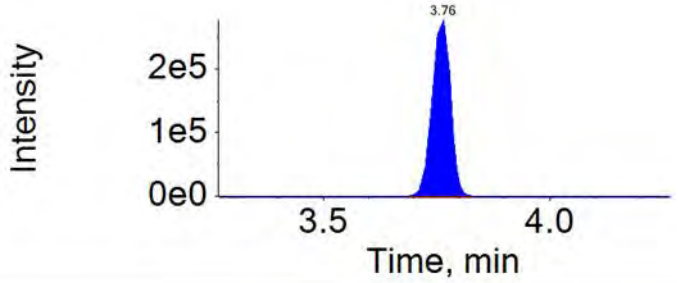
Extraction Standard: E13C4-PFBA
217.0 / 172.0



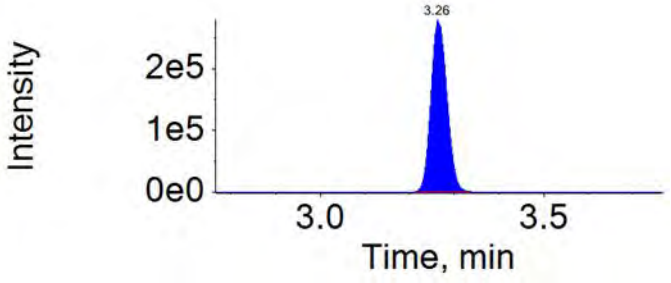
Injection Standard: 13C3-PFBA
216.0 / 172.0



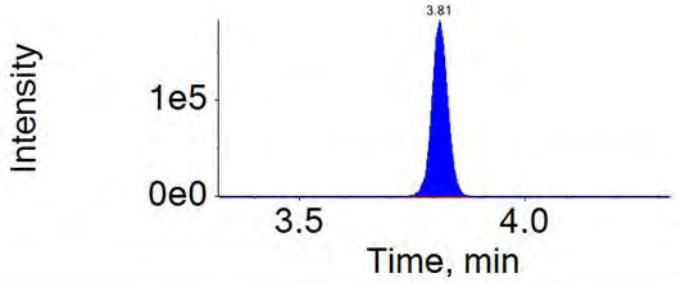
Extraction Standard: E13C5-PFPeA
268.0 / 223.0



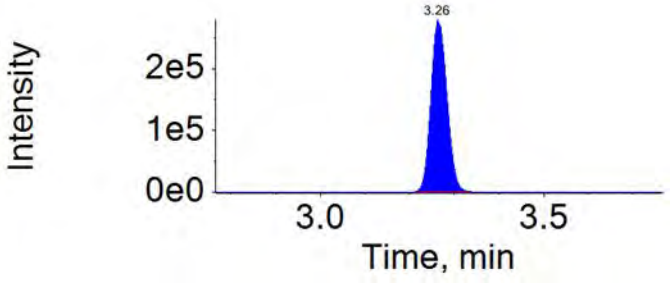
Injection Standard: 13C3-PFBA
216.0 / 172.0



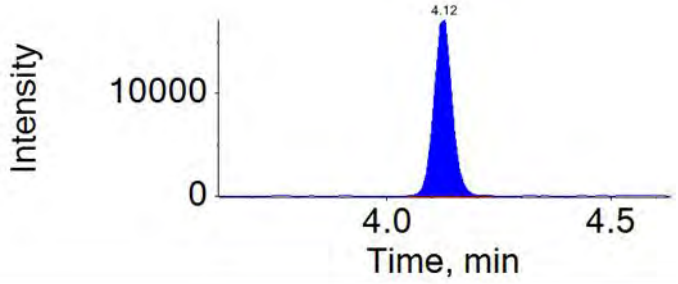
Extraction Standard: E13C3-PFBS
302.0 / 80.0



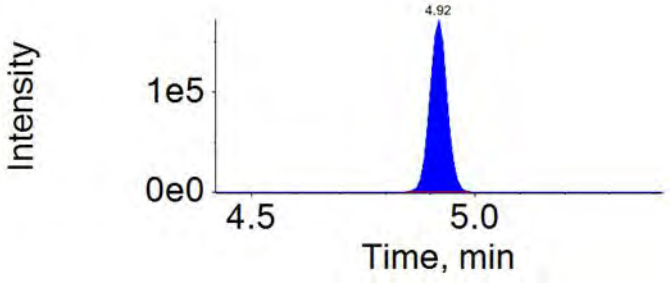
Injection Standard: 13C3-PFBA
216.0 / 172.0



Extraction Standard: E13C2-4:2-FTS
329.0 / 81.0



Injection Standard: 13C2-PFOA
415.0 / 370.0

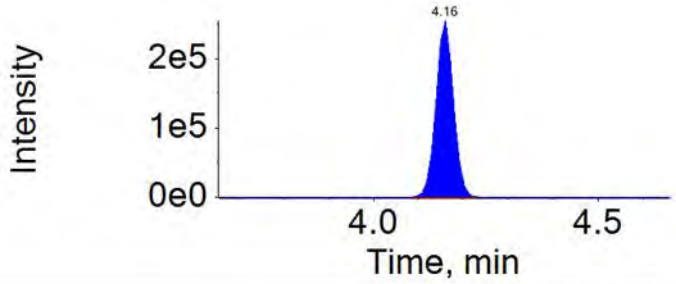


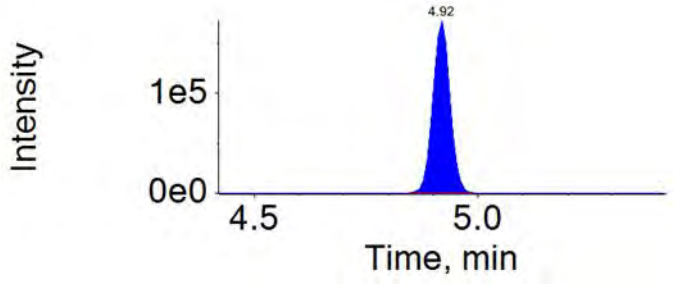
APPROVED
By JPT at 10:19 am, 11/14/18

REVIEWED
By HMK at 12:08 pm, 11/15/18

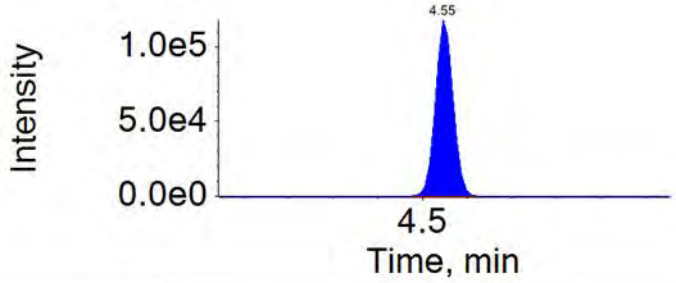
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV13DCCV6-10 11/14/2018 9:23:22 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

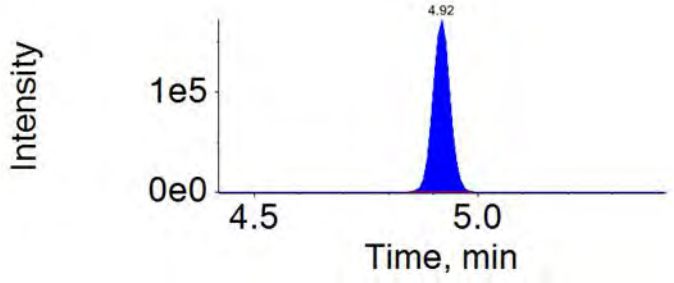
Extraction Standard: E13C5-PFHxA	Injection Standard: 13C2-PFOA
318.0 / 273.0	415.0 / 370.0



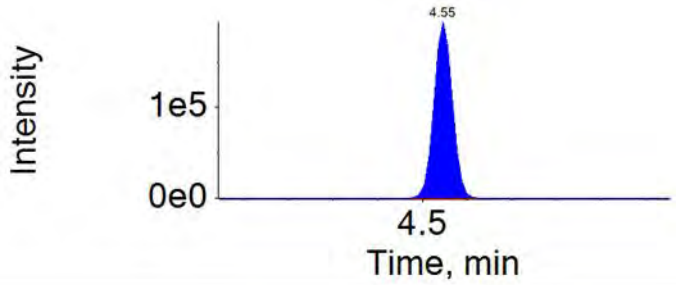


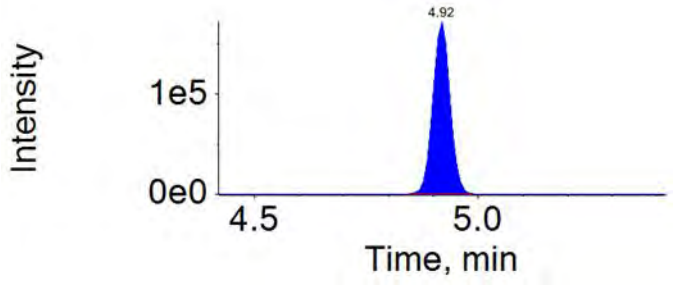
Extraction Standard: E13C3-PFHxS	Injection Standard: 13C2-PFOA
402.0 / 80.0	415.0 / 370.0



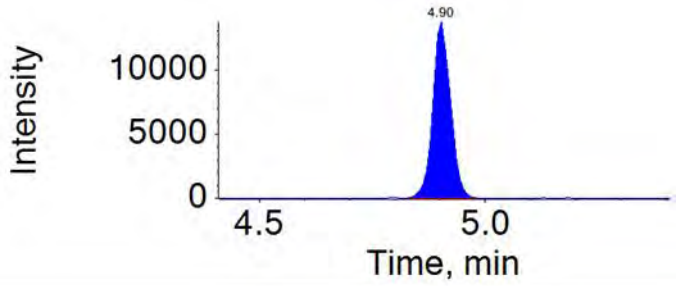


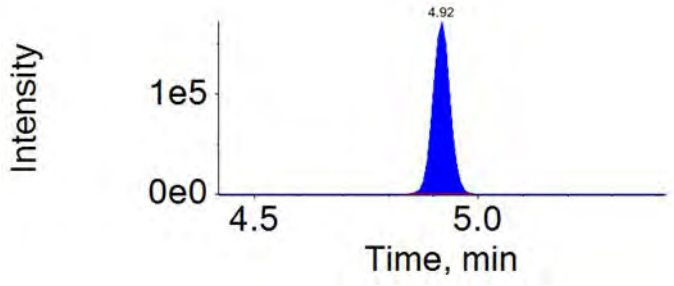
Extraction Standard: E13C4-PFHpA	Injection Standard: 13C2-PFOA
367.0 / 322.0	415.0 / 370.0





Extraction Standard: E13C2-6:2-FTS	Injection Standard: 13C2-PFOA
429.0 / 81.0	415.0 / 370.0

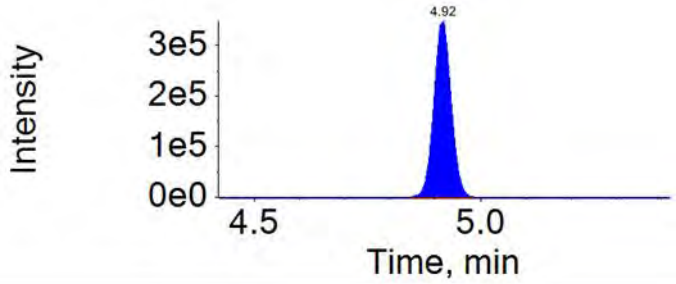




ICAL Name: 18NOV12DCAL **Result Table:** 18NOV13DCCV6-10 11/14/2018 9:23:22 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

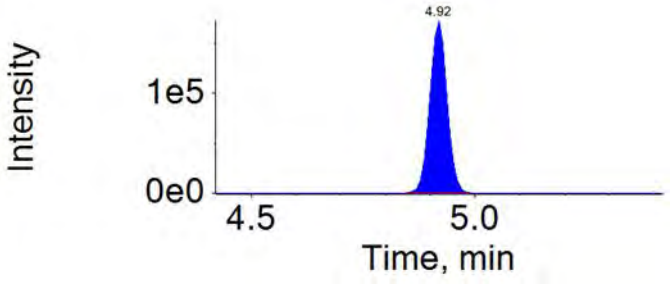
Extraction Standard: E13C8-PFOA

421.0 / 376.0



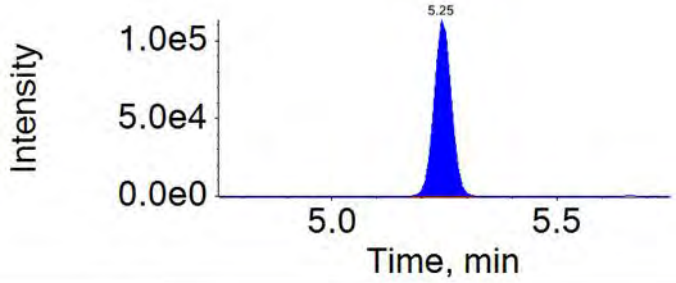
Injection Standard: 13C2-PFOA

415.0 / 370.0



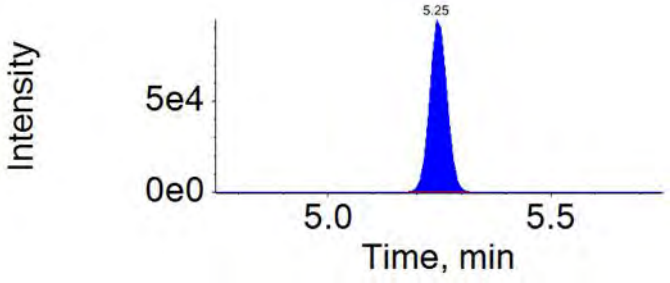
Extraction Standard: E13C8-PFOS

507.0 / 80.0



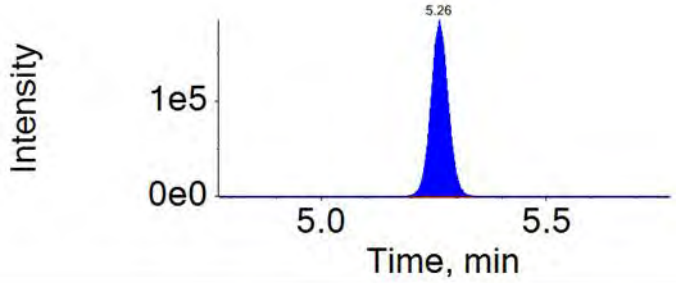
Injection Standard: 13C4-PFOS

503.0 / 80.0



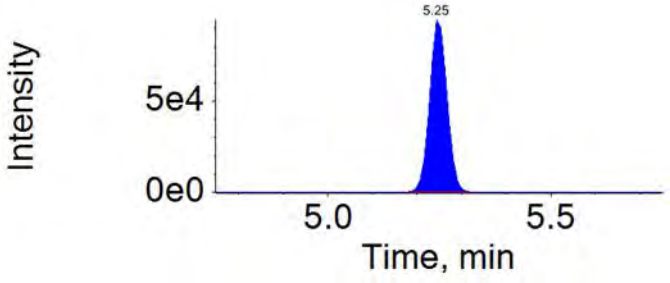
Extraction Standard: E13C9-PFNA

472.0 / 427.0



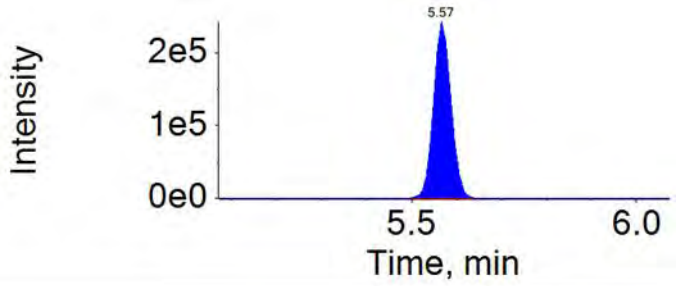
Injection Standard: 13C4-PFOS

503.0 / 80.0



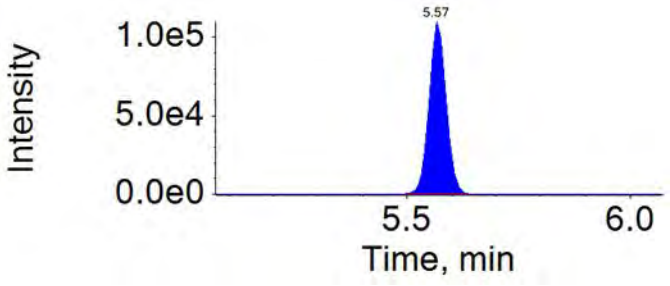
Extraction Standard: E13C6-PFDA

519.0 / 474.0



Injection Standard: 13C2-PFDA

515.0 / 470.0

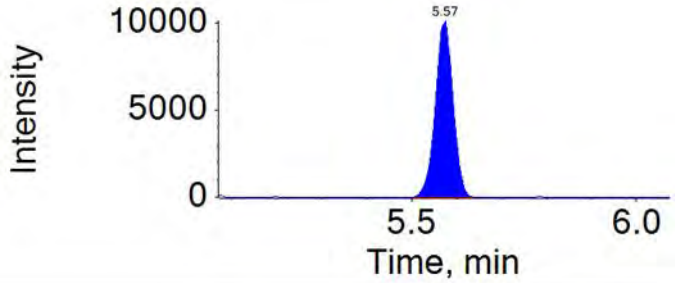


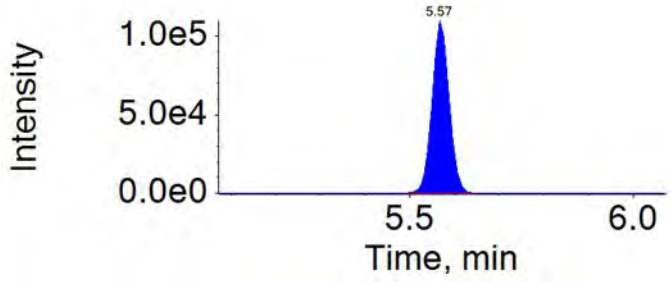
APPROVED
By JPT at 10:19 am, 11/14/18

REVIEWED
By HMK at 12:08 pm, 11/15/18

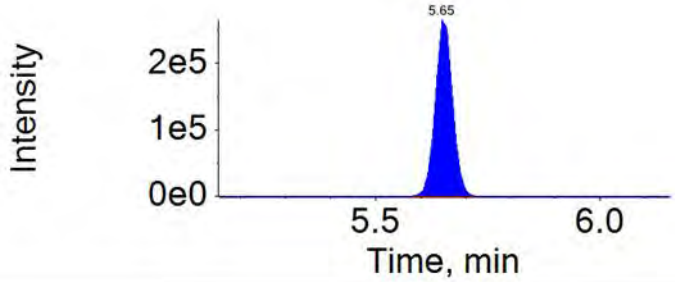
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV13DCCV6-10 11/14/2018 9:23:22 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

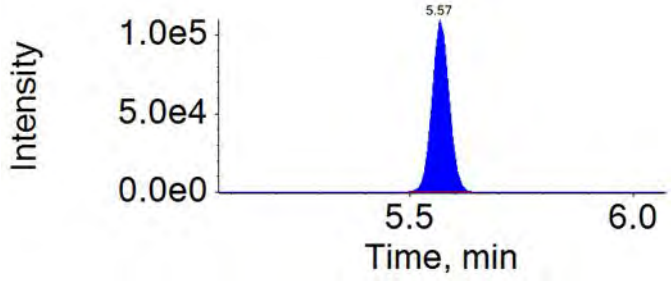
Extraction Standard: E13C2-8:2-FTS	Injection Standard: 13C2-PFDA
529.0 / 81.0	515.0 / 470.0



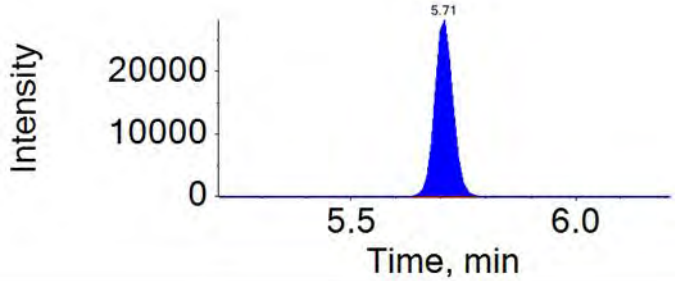


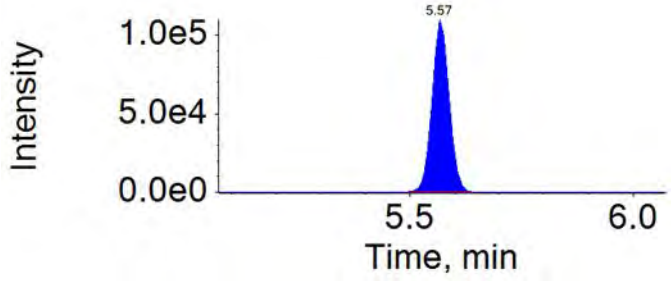
Extraction Standard: E13C8-PFOSA	Injection Standard: 13C2-PFDA
506.0 / 78.0	515.0 / 470.0



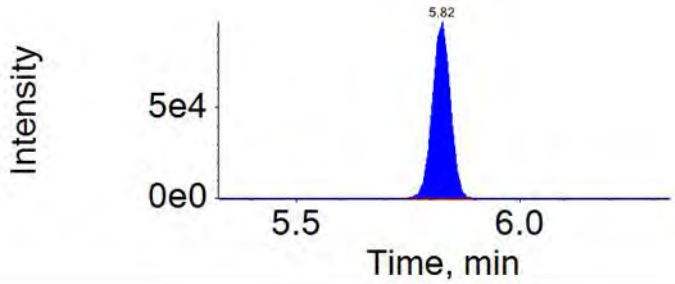


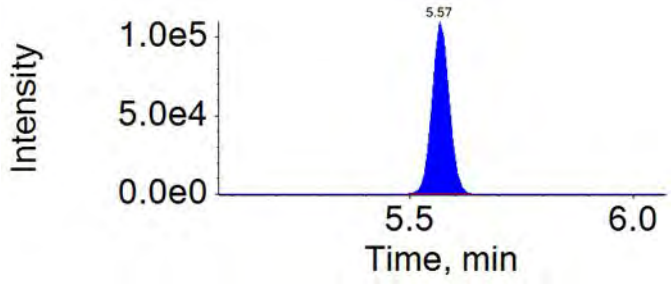
Extraction Standard: Ed3-NMeFOSAA	Injection Standard: 13C2-PFDA
573.0 / 419.0	515.0 / 470.0





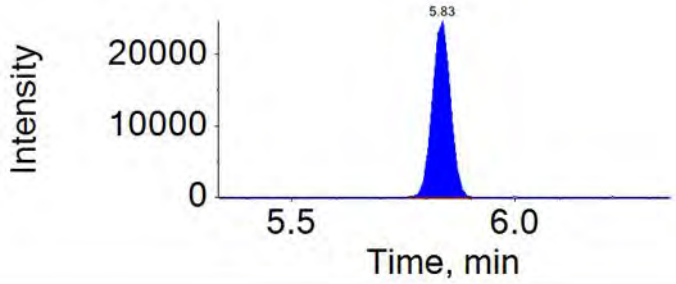
Extraction Standard: E13C7-PFUnDA	Injection Standard: 13C2-PFDA
570.0 / 525.0	515.0 / 470.0

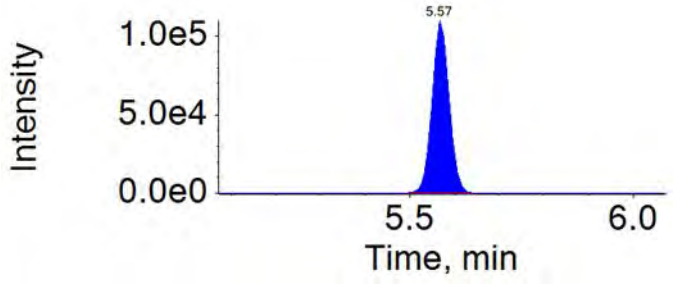




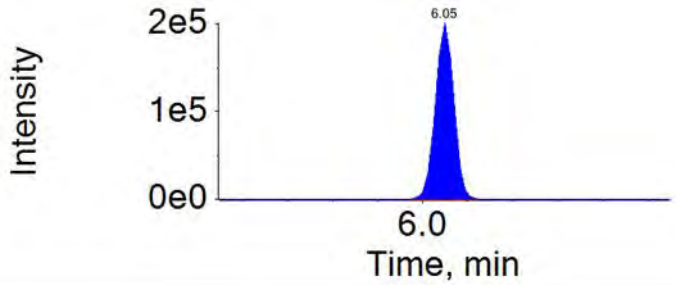
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV13DCCV6-10 11/14/2018 9:23:22 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

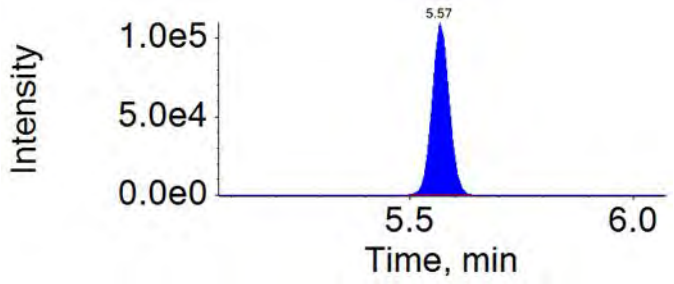
Extraction Standard: Ed5-NEtFOSAA	Injection Standard: 13C2-PFDA
589.0 / 419.0	515.0 / 470.0



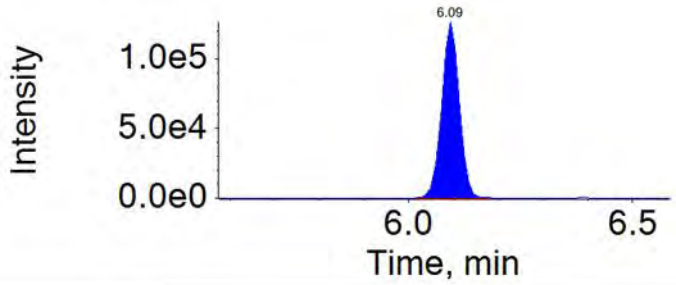


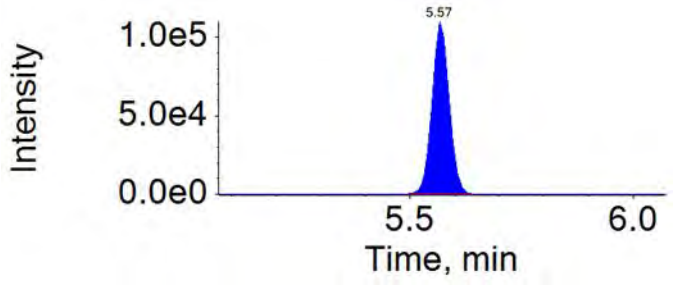
Extraction Standard: E13C2-PFDoDA	Injection Standard: 13C2-PFDA
615.0 / 570.0	515.0 / 470.0



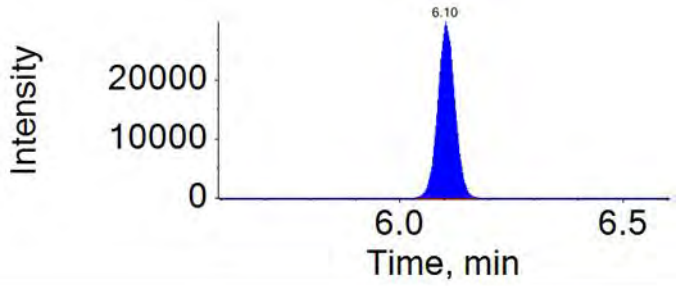


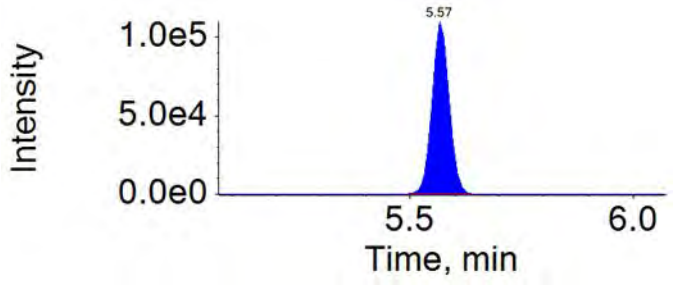
Extraction Standard: Ed7-NMePFOSAE	Injection Standard: 13C2-PFDA
623.0 / 59.0	515.0 / 470.0





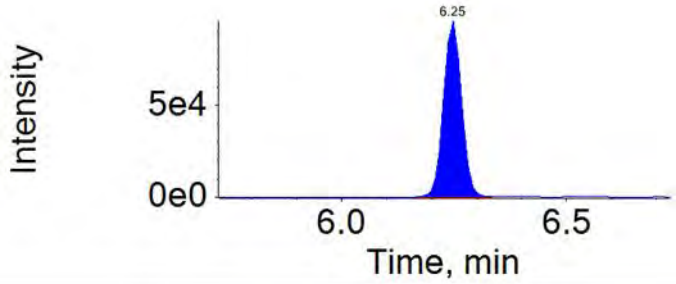
Extraction Standard: Ed3-NMePFOSA	Injection Standard: 13C2-PFDA
515.0 / 169.0	515.0 / 470.0

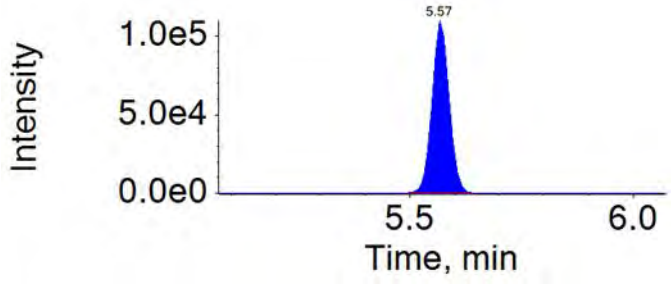




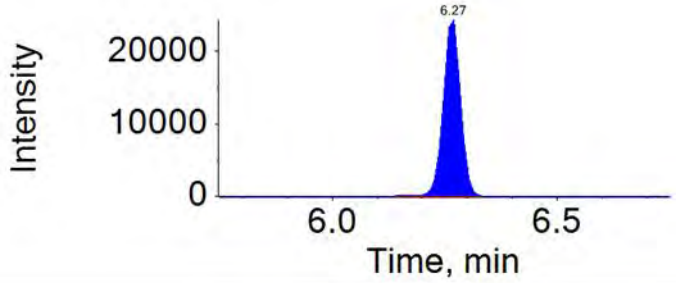
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV13DCCV6-10 11/14/2018 9:23:22 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

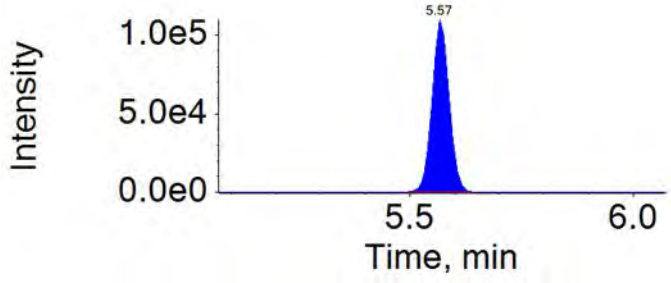
Extraction Standard: Ed9-NEtPFOSAE	Injection Standard: 13C2-PFDA
639.0 / 59.0	515.0 / 470.0



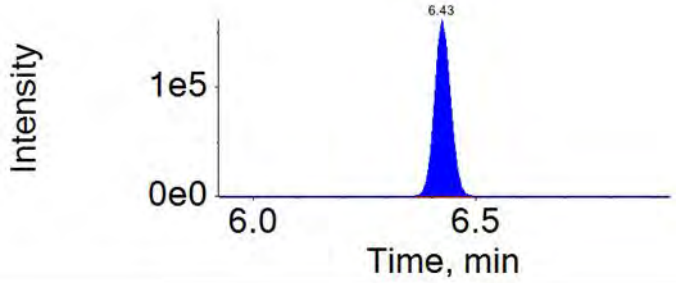


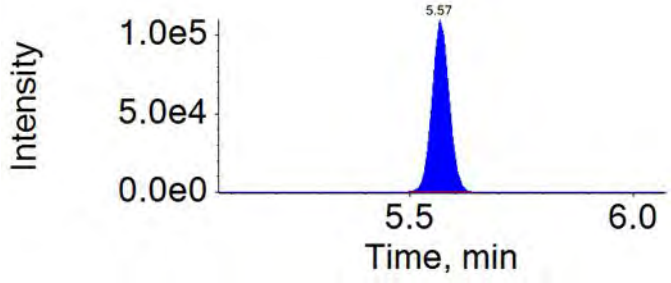
Extraction Standard: Ed5-NEtPFOSA	Injection Standard: 13C2-PFDA
531.0 / 169.0	515.0 / 470.0





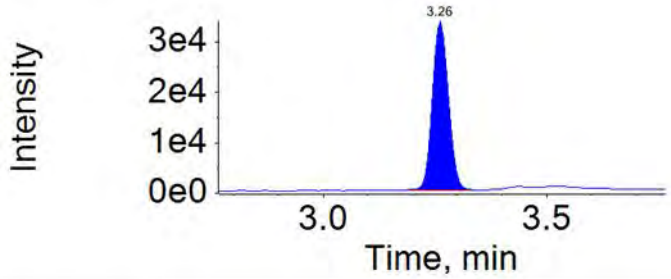
Extraction Standard: E13C2-PFTeDA	Injection Standard: 13C2-PFDA
715.0 / 670.0	515.0 / 470.0



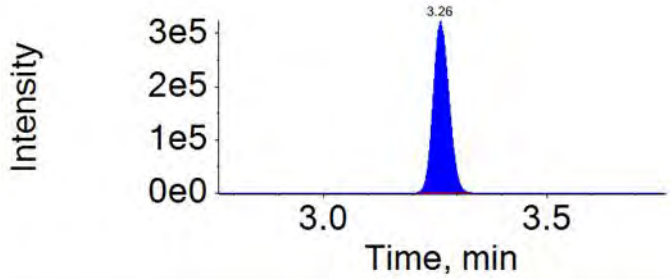


ICAL Name: 18NOV12DCAL **Result Table:** 18NOV13DCCV6-10 11/14/2018 9:23:22 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

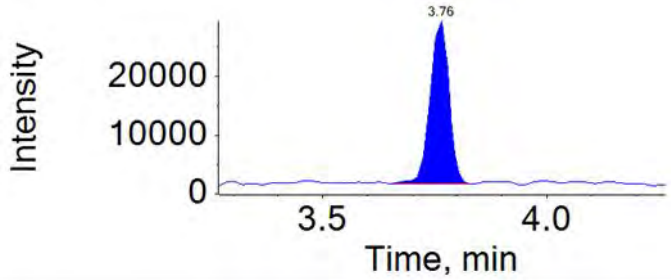
Analyte: PFBA
213.0 / 169.0



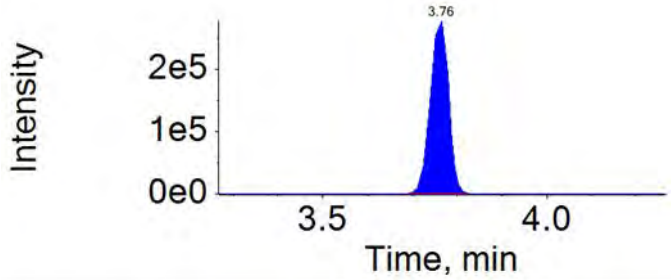
Extraction Standard: 13C4-PFBA
217.0 / 172.0



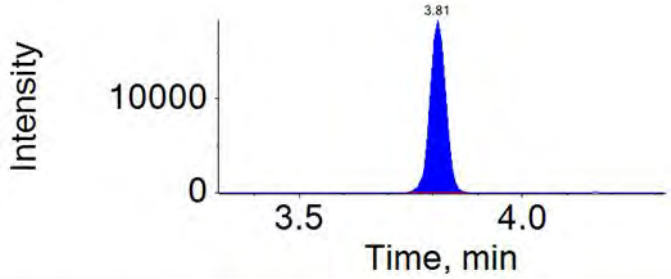
Analyte: PFPeA
263.0 / 219.0



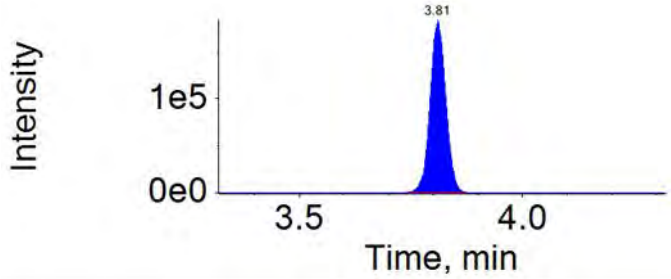
Extraction Standard: 13C5-PFPeA
268.0 / 223.0



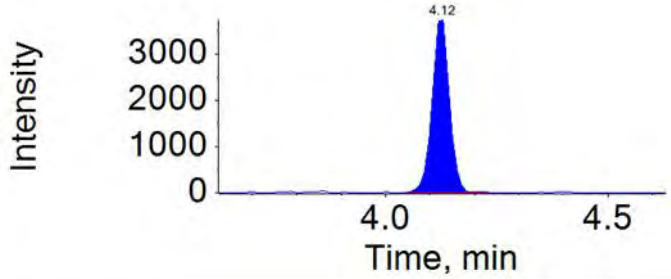
Analyte: PFBS
299.0 / 80.0



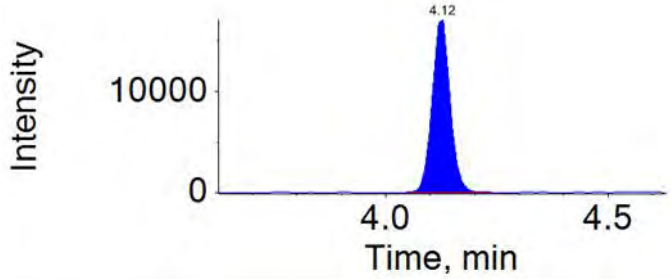
Extraction Standard: 13C3-PFBS
302.0 / 80.0



Analyte: 4:2-FTS
327.0 / 307.0



Extraction Standard: 13C2-4:2-FTS
329.0 / 81.0

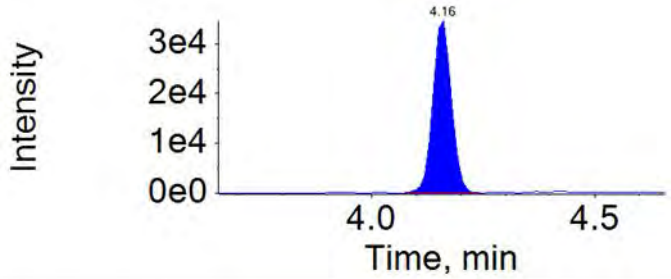


APPROVED
By JPT at 10:19 am, 11/14/18

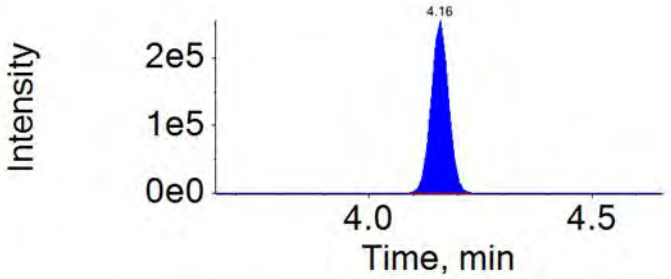
REVIEWED
By HMK at 12:08 pm, 11/15/18

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV13DCCV6-10 11/14/2018 9:23:22 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

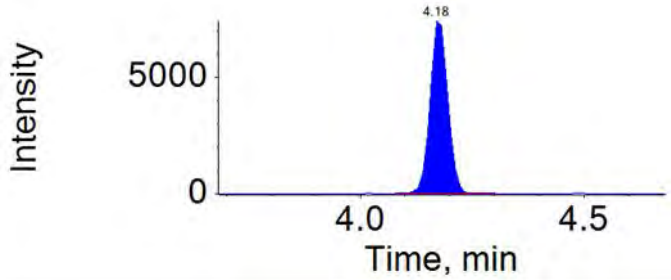
Analyte: PFHxA
313.0 / 269.0



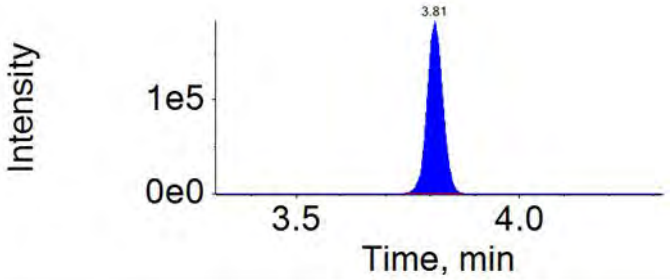
Extraction Standard: 13C5-PFHxA
318.0 / 273.0



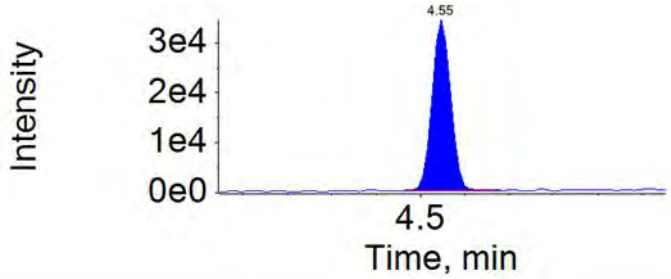
Analyte: PFPeS
349.0 / 80.0



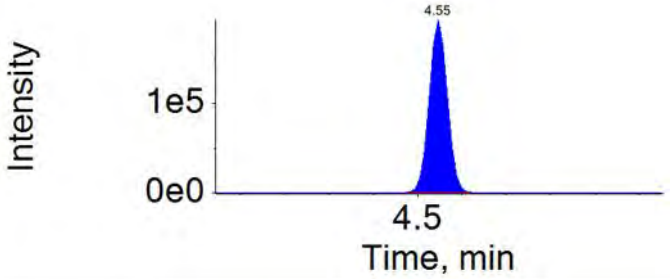
Extraction Standard: 13C3-PFBS
302.0 / 80.0



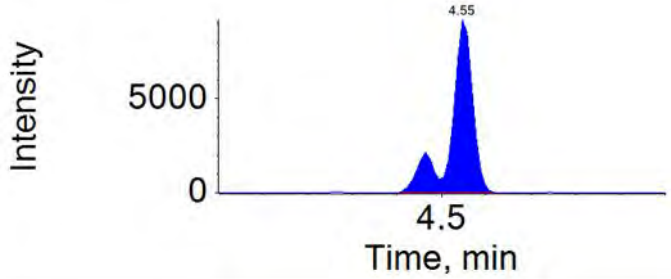
Analyte: PFHpA
363.0 / 319.0



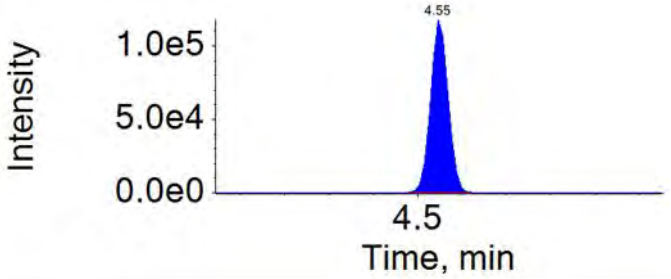
Extraction Standard: 13C4-PFHpA
367.0 / 322.0



Analyte: PFHxS
399.0 / 80.0



Extraction Standard: 13C3-PFHxS
402.0 / 80.0

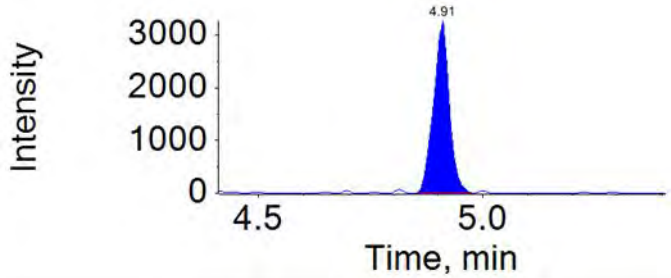


APPROVED
By JPT at 10:19 am, 11/14/18

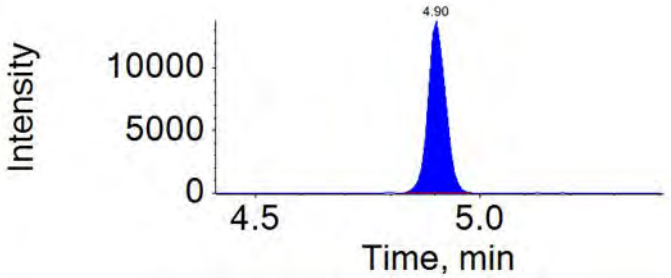
REVIEWED
By HMK at 12:08 pm, 11/15/18

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV13DCCV6-10 11/14/2018 9:23:22 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

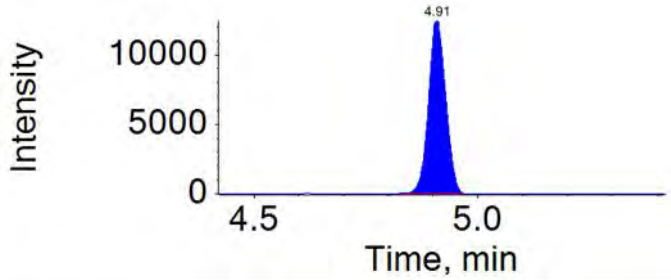
Analyte: 6:2-FTS
427.0 / 407.0



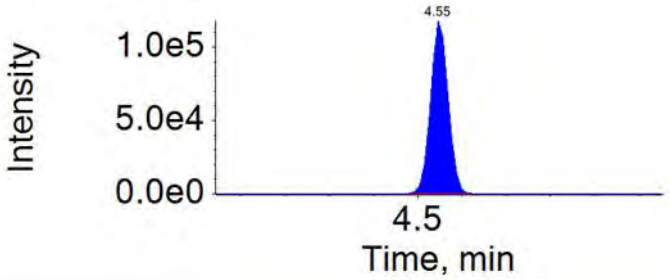
Extraction Standard: 13C2-6:2-FTS
429.0 / 81.0



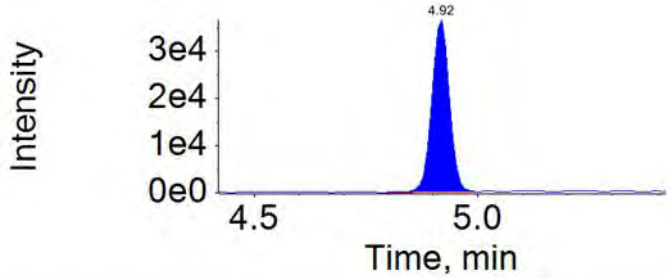
Analyte: PFHpS
449.0 / 80.0



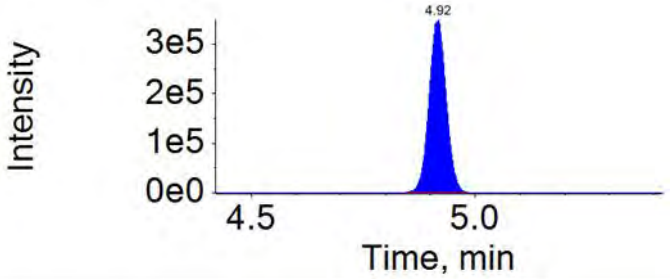
Extraction Standard: 13C3-PFHxS
402.0 / 80.0



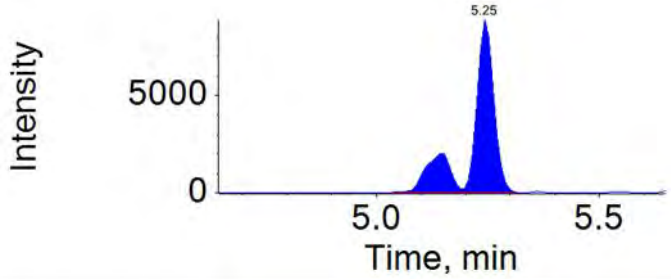
Analyte: PFOA
413.0 / 369.0



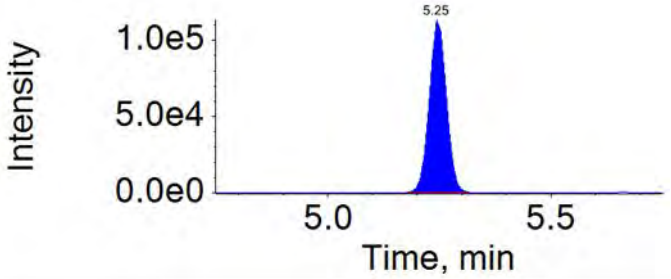
Extraction Standard: 13C8-PFOA
421.0 / 376.0



Analyte: PFOS
499.0 / 80.0



Extraction Standard: 13C8-PFOS
507.0 / 80.0

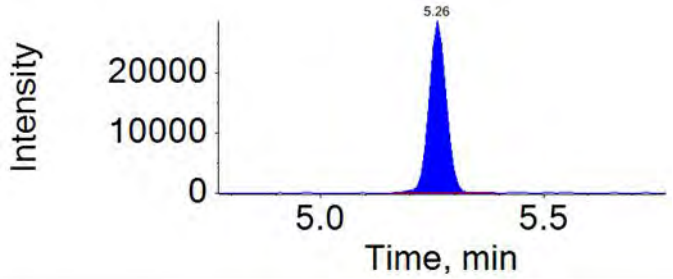


APPROVED
By JPT at 10:19 am, 11/14/18

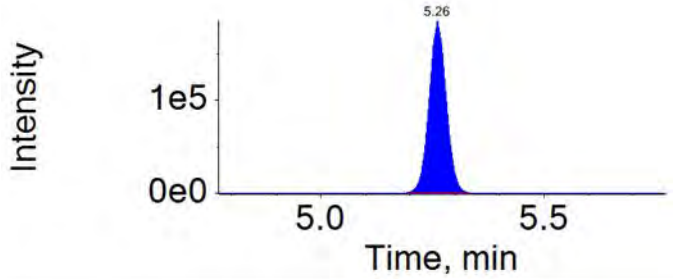
REVIEWED
By HMK at 12:08 pm, 11/15/18

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV13DCCV6-10 11/14/2018 9:23:22 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

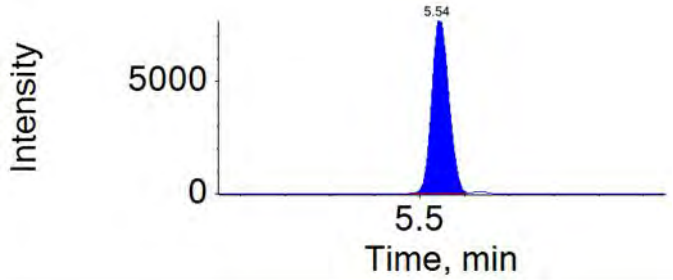
Analyte: PFNA
463.0 / 419.0



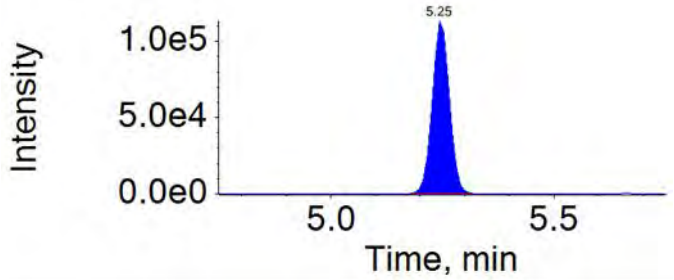
Extraction Standard: 13C9-PFNA
472.0 / 427.0



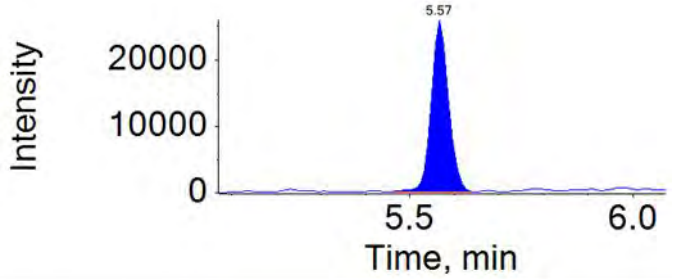
Analyte: PFNS
549.0 / 80.0



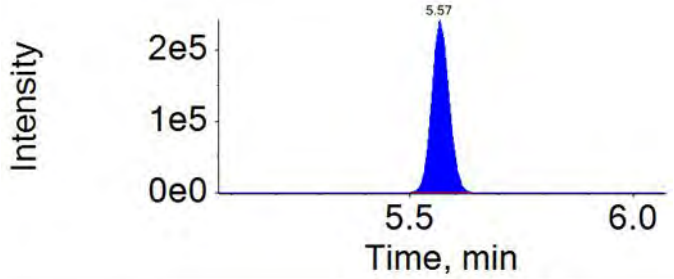
Extraction Standard: 13C8-PFOS
507.0 / 80.0



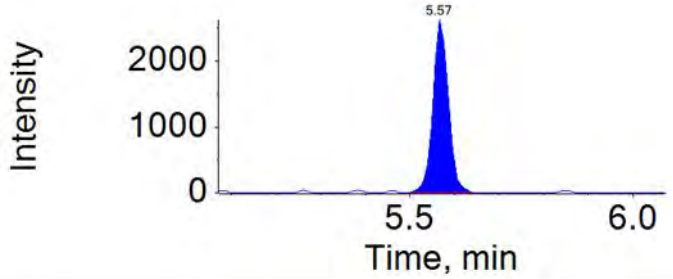
Analyte: PFDA
513.0 / 469.0



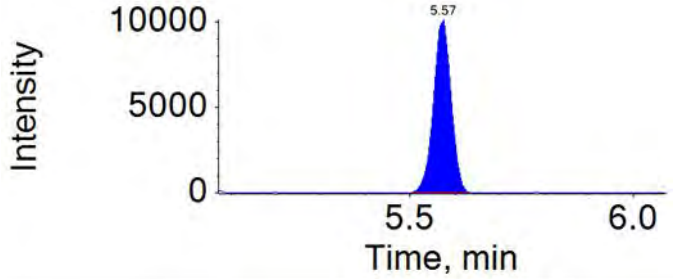
Extraction Standard: 13C6-PFDA
519.0 / 474.0



Analyte: 8:2-FTS
527.0 / 507.0



Extraction Standard: 13C2-8:2-FTS
529.0 / 81.0

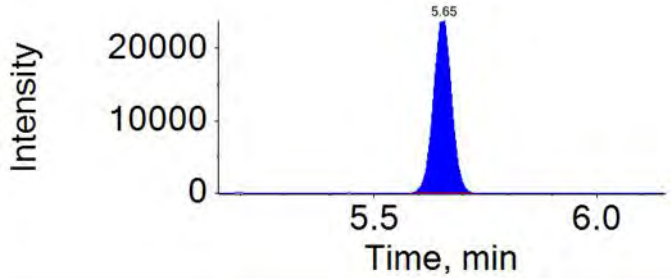


APPROVED
By JPT at 10:19 am, 11/14/18

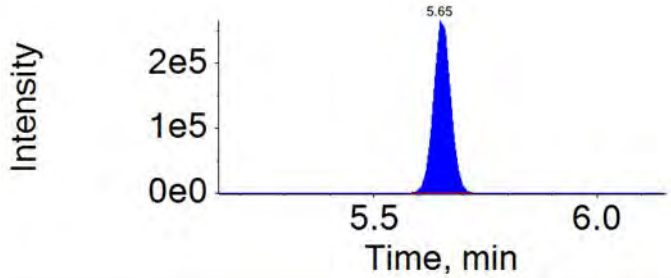
REVIEWED
By HMK at 12:08 pm, 11/15/18

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV13DCCV6-10 11/14/2018 9:23:22 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

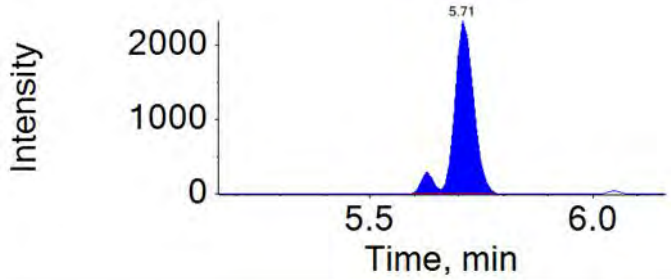
Analyte: PFOSA
498.0 / 78.0



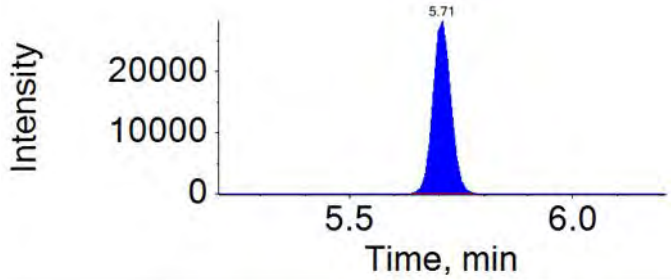
Extraction Standard: 13C8-PFOSA
506.0 / 78.0



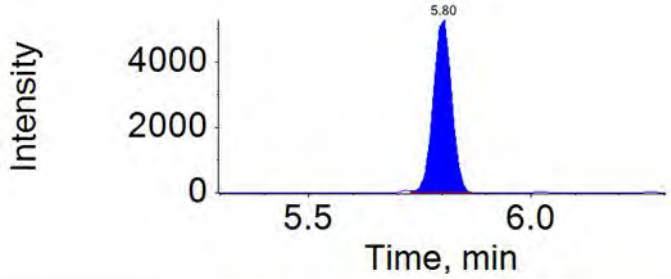
Analyte: NMeFOSAA
570.0 / 419.0



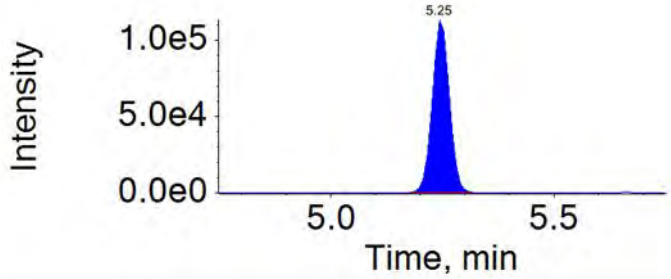
Extraction Standard: d3-NMeFOSAA
573.0 / 419.0



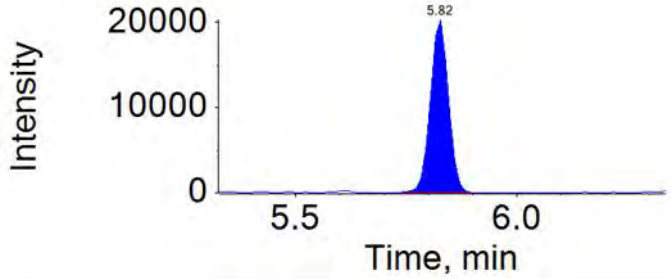
Analyte: PFDS
599.0 / 80.0



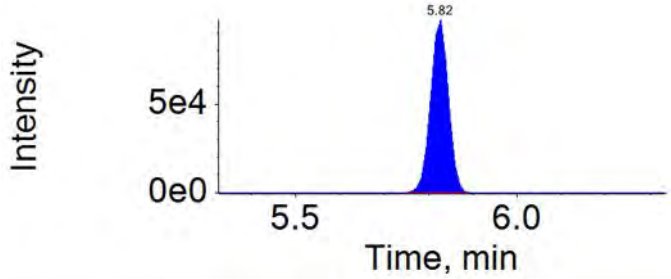
Extraction Standard: 13C8-PFOS
507.0 / 80.0



Analyte: PFUnDA
563.0 / 519.0



Extraction Standard: 13C7-PFUnDA
570.0 / 525.0

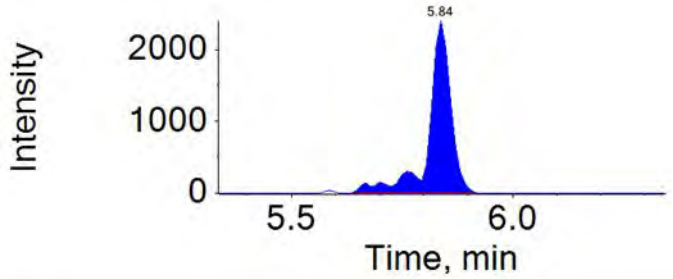


APPROVED
By JPT at 10:19 am, 11/14/18

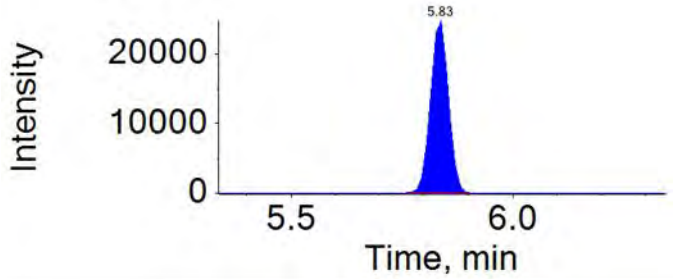
REVIEWED
By HMK at 12:08 pm, 11/15/18

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV13DCCV6-10 11/14/2018 9:23:22 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

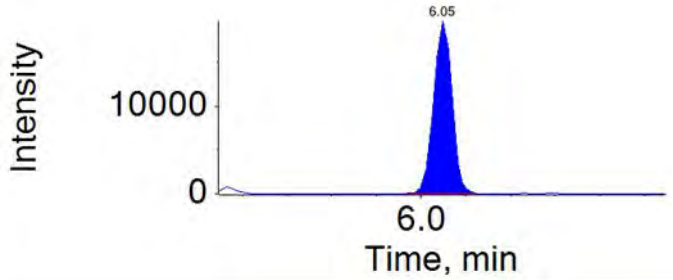
Analyte: NEtFOSAA
584.0 / 419.0



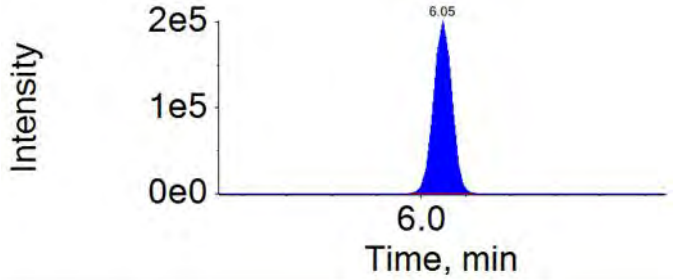
Extraction Standard: d5-NEtFOSAA
589.0 / 419.0



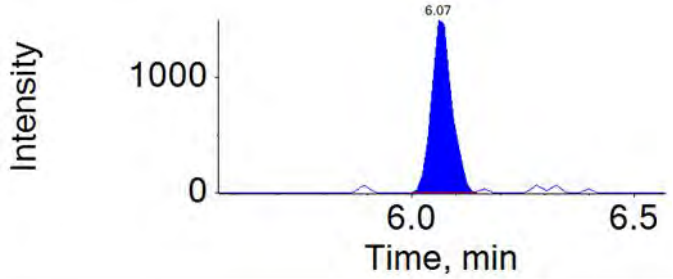
Analyte: PFDoDA
613.0 / 569.0



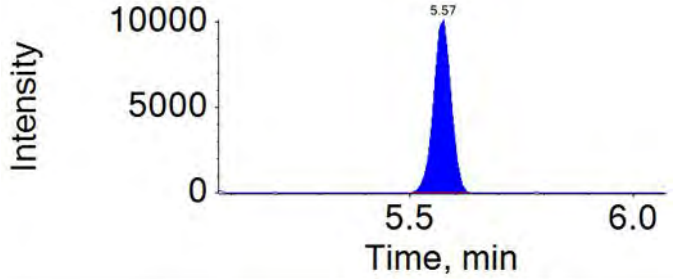
Extraction Standard: 13C2-PFDoDA
615.0 / 570.0



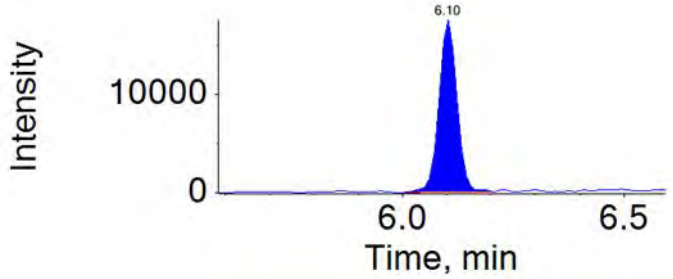
Analyte: 10:2-FTS
627.0 / 607.0



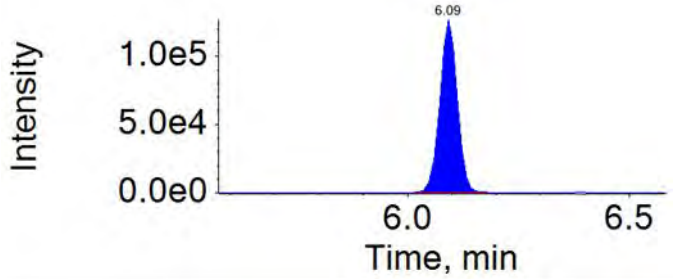
Extraction Standard: 13C2-8:2-FTS
529.0 / 81.0



Analyte: NMePFOSAE
616.0 / 59.0



Extraction Standard: d7-NMePFOSAE
623.0 / 59.0

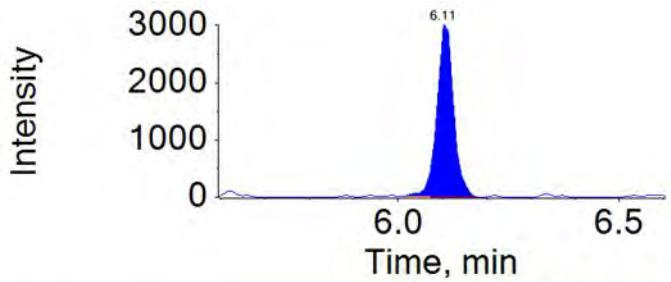


APPROVED
By JPT at 10:19 am, 11/14/18

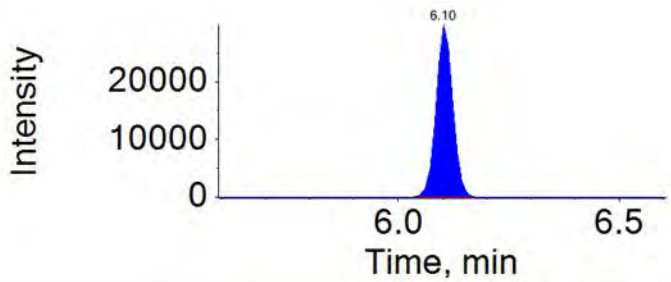
REVIEWED
By HMK at 12:08 pm, 11/15/18

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV13DCCV6-10 11/14/2018 9:23:22 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

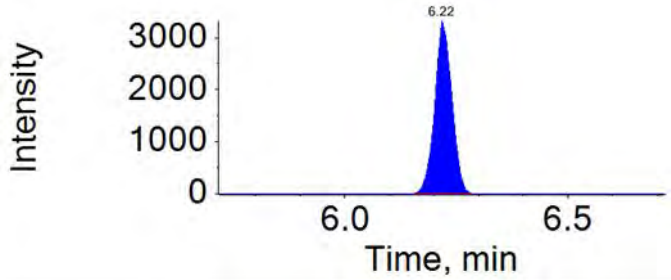
Analyte: NMePFOSA
512.0 / 169.0



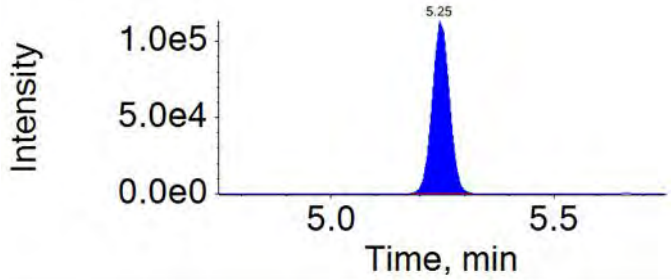
Extraction Standard: d3-NMePFOSA
515.0 / 169.0



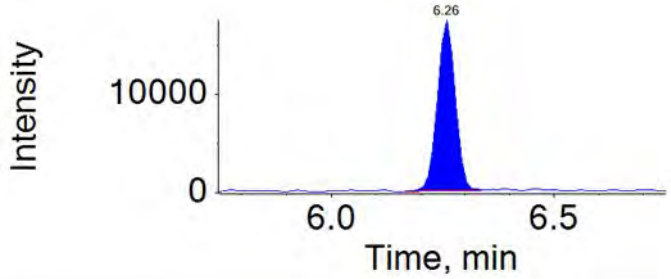
Analyte: PFDoS
699.0 / 80.0



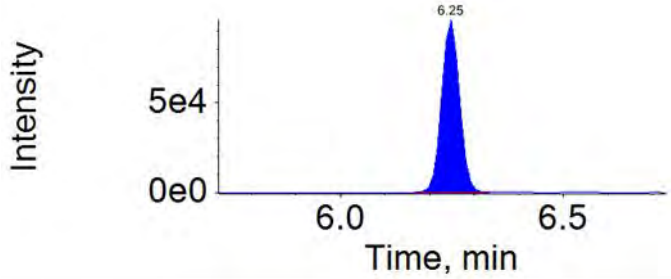
Extraction Standard: 13C8-PFOS
507.0 / 80.0



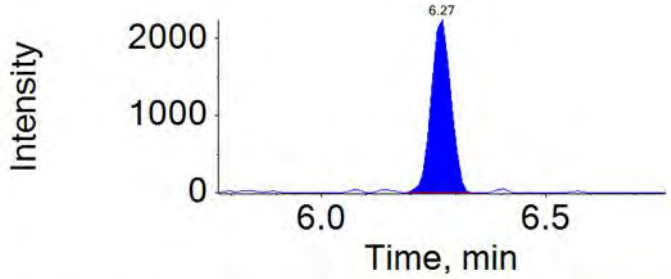
Analyte: NEtPFOSAE
630.0 / 59.0



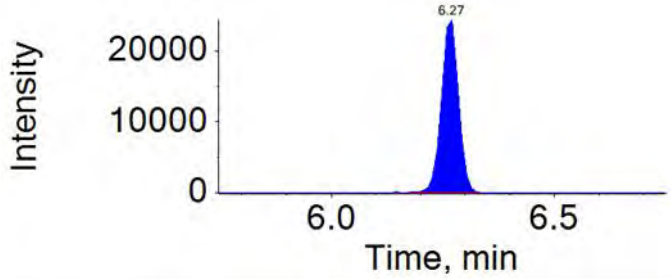
Extraction Standard: d9-NEtPFOSAE
639.0 / 59.0



Analyte: NEtPFOSA
526.0 / 169.0



Extraction Standard: d5-NEtPFOSA
531.0 / 169.0

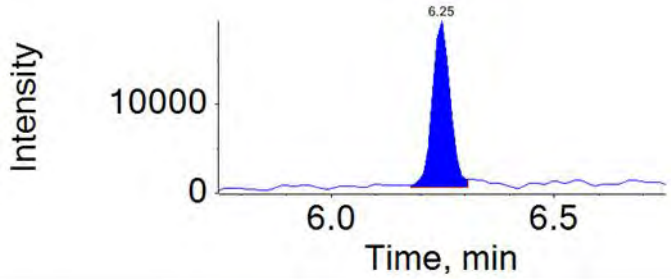


APPROVED
By JPT at 10:19 am, 11/14/18

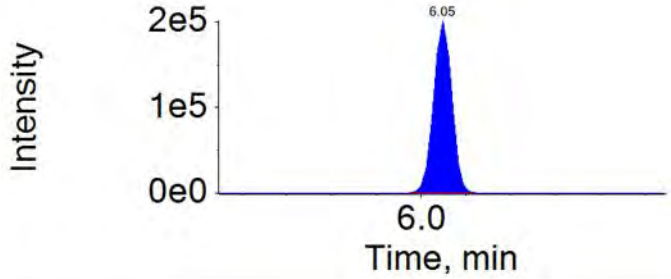
REVIEWED
By HMK at 12:08 pm, 11/15/18

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV13DCCV6-10 11/14/2018 9:23:22 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

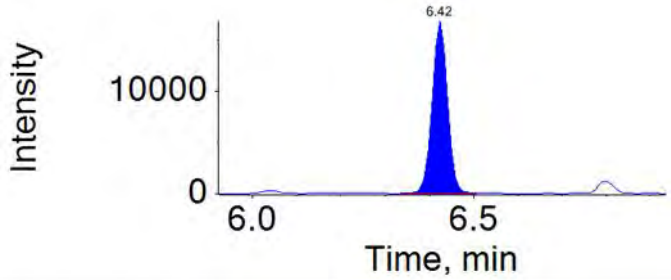
Analyte: PFTrDA
663.0 / 619.0



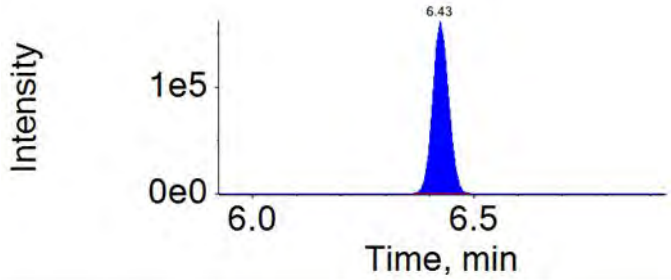
Extraction Standard: 13C2-PFDoDA
615.0 / 570.0



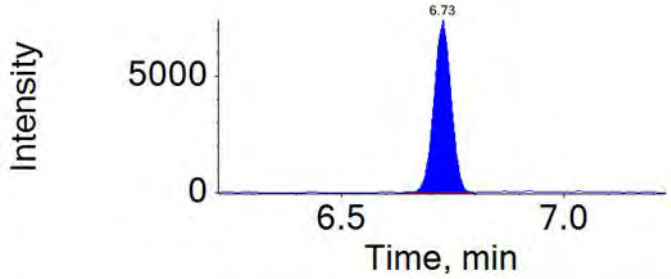
Analyte: PFTeDA
713.0 / 669.0



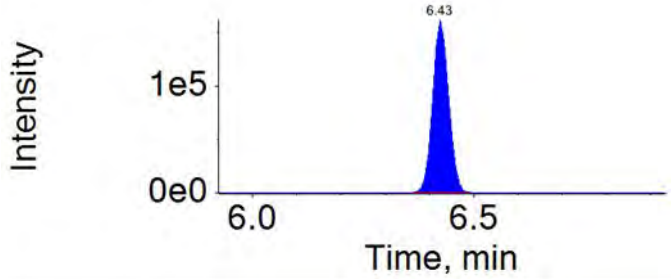
Extraction Standard: 13C2-PFTeDA
715.0 / 670.0



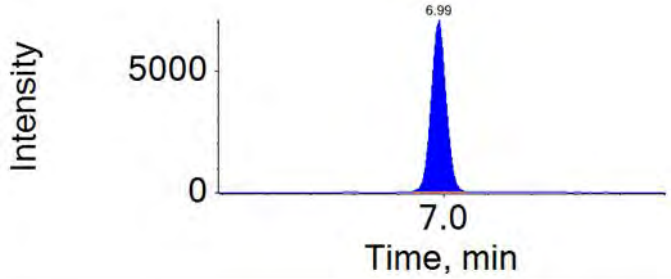
Analyte: PFHxDA
813.0 / 769.0



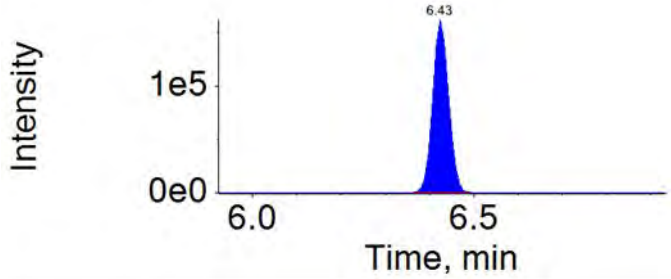
Extraction Standard: 13C2-PFTeDA
715.0 / 670.0



Analyte: PFODA
913.0 / 869.0



Extraction Standard: 13C2-PFTeDA
715.0 / 670.0



APPROVED
By JPT at 10:19 am, 11/14/18

REVIEWED
By HMK at 12:08 pm, 11/15/18

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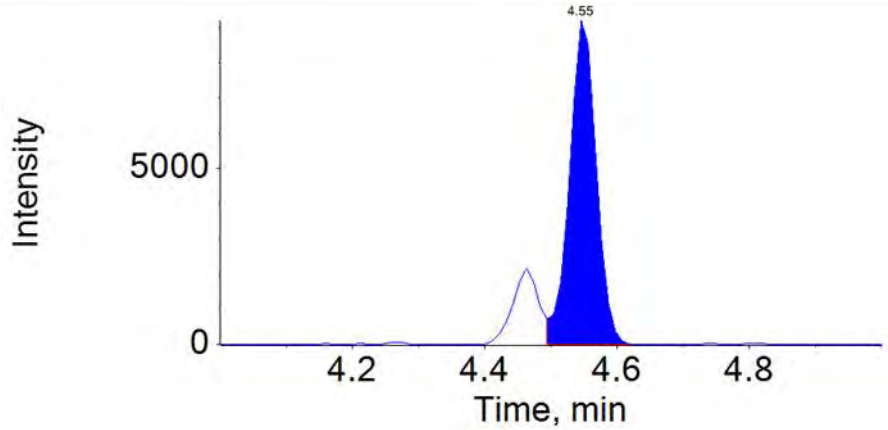
Auto Integrations prior to Manual Integration

Print Date: 11/14/2018 9:57 AM
Template: MQ-OrigInteg-16NOV21.docx

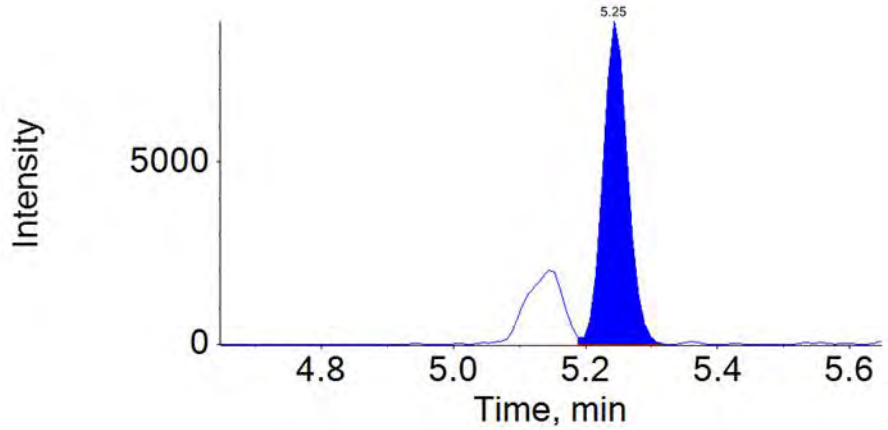
Results Table Name: 18NOV13DCCV6-10
Results Table Date: 11/14/2018 9:23:22 AM
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

Component Name:
PFHxS
RT (min.):
4.55
Peak Area:
25923.5
Mass Range:
399.0 / 80.0
File Name:
18NOV13D-70.wiff
Sample Name:
CCV7_ISC_CAL2



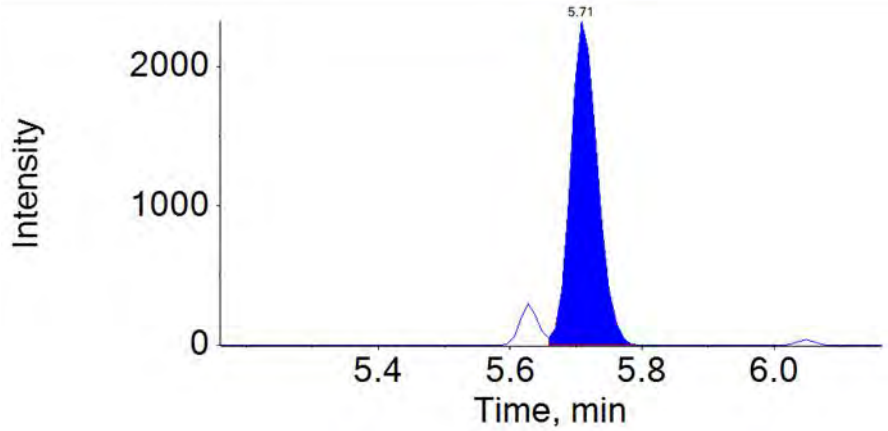
Integration Comment: incorrect integration

Component Name:
PFOS
RT (min.):
5.25
Peak Area:
23087.5
Mass Range:
499.0 / 80.0
File Name:
18NOV13D-70.wiff
Sample Name:
CCV7_ISC_CAL2



Integration Comment: incorrect integration

Component Name:
NMeFOSAA
RT (min.):
5.71
Peak Area:
6618.0
Mass Range:
570.0 / 419.0
File Name:
18NOV13D-70.wiff
Sample Name:
CCV7_ISC_CAL2



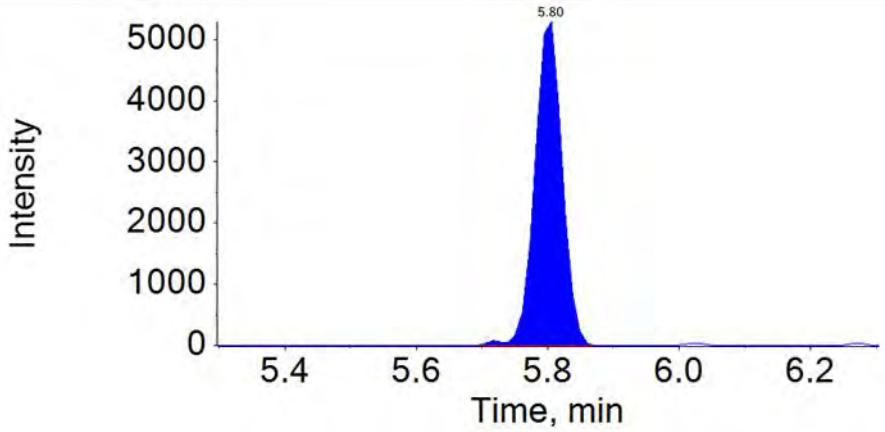
Integration Comment: incorrect integration

APPROVED
By JPT at 10:19 am, 11/14/18

REVIEWED
By HMK at 12:08 pm, 11/15/18

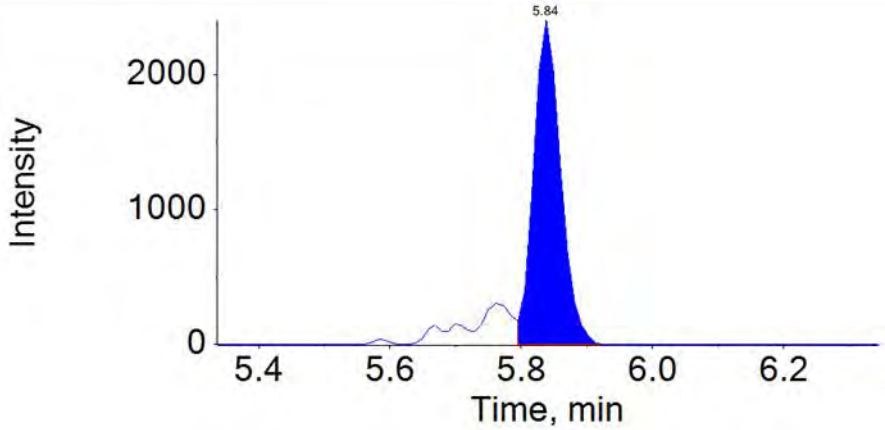
Results Table Name: 18NOV13DCCV6-10
Results Table Date: 11/14/2018 9:23:22 AM
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

Component Name:
PFDS
RT (min.):
5.80
Peak Area:
15376.9
Mass Range:
599.0 / 80.0
File Name:
18NOV13D-70.wiff
Sample Name:
CCV7_ISC_CAL2



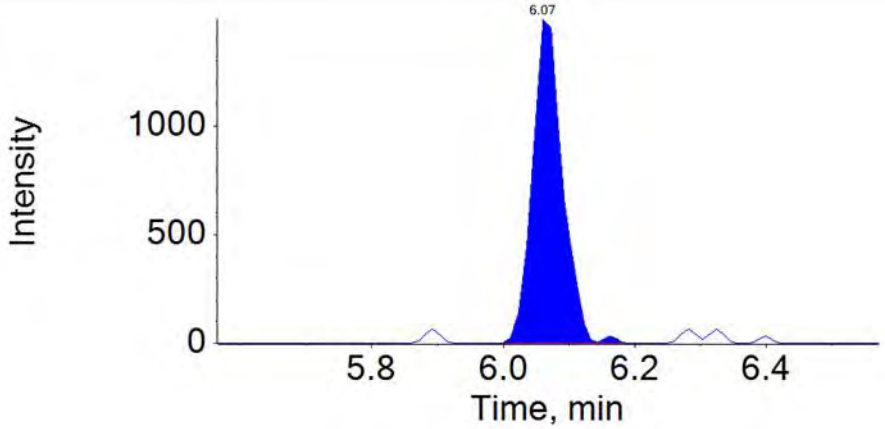
Integration Comment: incorrect integration

Component Name:
NEtFOSAA
RT (min.):
5.84
Peak Area:
6862.7
Mass Range:
584.0 / 419.0
File Name:
18NOV13D-70.wiff
Sample Name:
CCV7_ISC_CAL2



Integration Comment: incorrect integration

Component Name:
10:2-FTS
RT (min.):
6.07
Peak Area:
4792.1
Mass Range:
627.0 / 607.0
File Name:
18NOV13D-70.wiff
Sample Name:
CCV7_ISC_CAL2



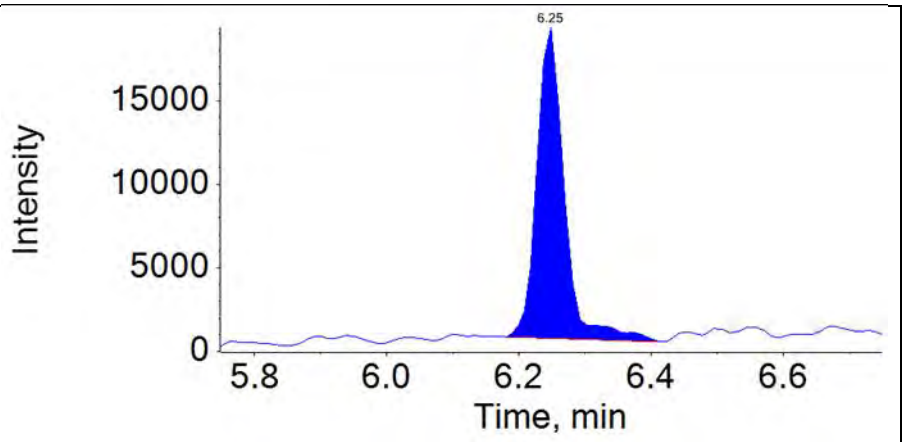
Integration Comment: incorrect integration

APPROVED
By JPT at 10:19 am, 11/14/18

REVIEWED
By HMK at 12:08 pm, 11/15/18

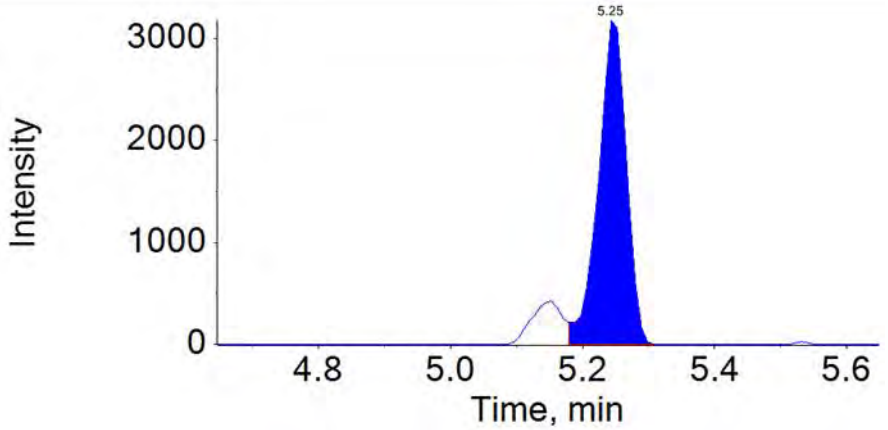
Results Table Name: 18NOV13DCCV6-10
Results Table Date: 11/14/2018 9:23:22 AM
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

Component Name:
PFTrDA
RT (min.):
6.25
Peak Area:
54052.6
Mass Range:
663.0 / 619.0
File Name:
18NOV13D-70.wiff
Sample Name:
CCV7_ISC_CAL2



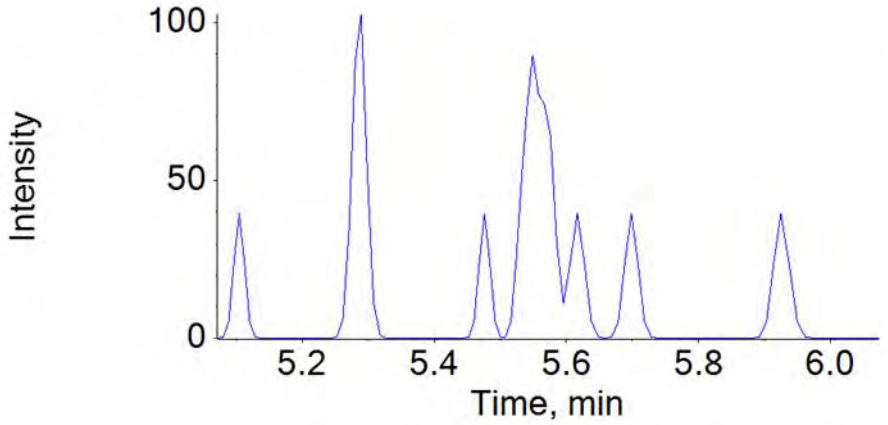
Integration Comment: incorrect integration

Component Name:
PFOS_2
RT (min.):
5.25
Peak Area:
9405.7
Mass Range:
499.0 / 99.0
File Name:
18NOV13D-70.wiff
Sample Name:
CCV7_ISC_CAL2



Integration Comment: incorrect integration

Component Name:
PFDA_2
RT (min.):
N/A
Peak Area:
N/A
Mass Range:
513.0 / 169.0
File Name:
18NOV13D-70.wiff
Sample Name:
CCV7_ISC_CAL2



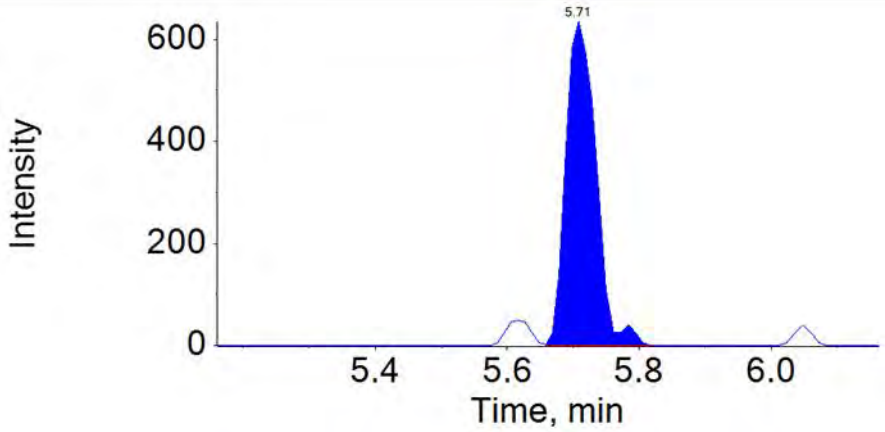
Integration Comment: incorrect integration

APPROVED
By JPT at 10:19 am, 11/14/18

REVIEWED
By HMK at 12:08 pm, 11/15/18

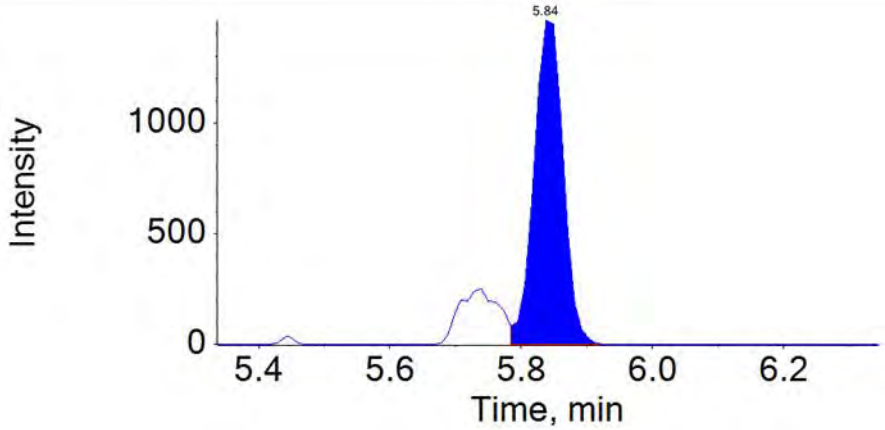
Results Table Name: 18NOV13DCCV6-10
Results Table Date: 11/14/2018 9:23:22 AM
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

Component Name:
NMeFOSAA_2
RT (min.):
5.71
Peak Area:
2040.2
Mass Range:
570.0 / 483.0
File Name:
18NOV13D-70.wiff
Sample Name:
CCV7_ISC_CAL2



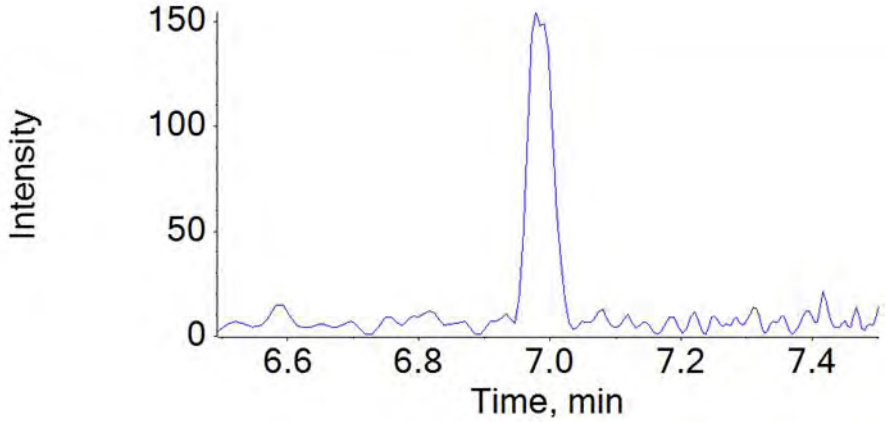
Integration Comment: incorrect integration

Component Name:
NEtFOSAA_2
RT (min.):
5.84
Peak Area:
4549.6
Mass Range:
584.0 / 526.0
File Name:
18NOV13D-70.wiff
Sample Name:
CCV7_ISC_CAL2



Integration Comment: incorrect integration

Component Name:
PFODA_2
RT (min.):
N/A
Peak Area:
N/A
Mass Range:
913.0 / 169.0
File Name:
18NOV13D-70.wiff
Sample Name:
CCV7_ISC_CAL2



Integration Comment: incorrect integration

APPROVED
By JPT at 10:19 am, 11/14/18

REVIEWED
By HMK at 12:08 pm, 11/15/18

Results Table Name: 18NOV13DCCV6-10
Results Table Date: 11/14/2018 9:23:22 AM
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

APPROVED
By JPT at 10:19 am, 11/14/18

REVIEWED
By HMK at 12:08 pm, 11/15/18

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LC-MS/MS Analysis Report

Printed: 11/14/2018 9:52:00 AM
Template: IonRatio18OCT10

Ion Ratio Report

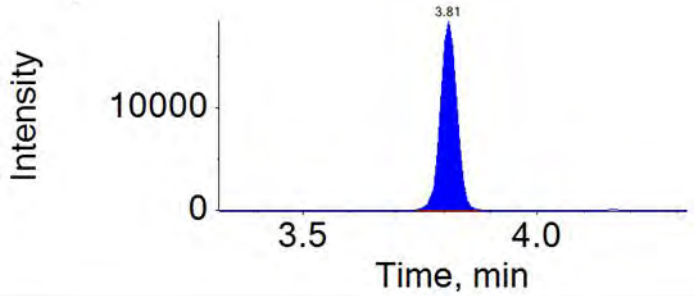
Sample Name: CCV7_ISC_CAL2 **Instrument Name:** LM27631 **File Name:** 18NOV13D-70.wiff

Component Name	RT	RRT	Analyte Area Response	Int Typ	Expected Ion Ratio	Ion Ratio	Ion Ratio % Diff	Ion Ratio Limit	Ion Ratio OOS
PFBS	3.81	1.00	44748.4	A	N/A	1.0000			
PFBS_2	3.81	1.00	17621.4	A	N/A	0.3938	8	50	
4:2-FTS	4.12	1.00	10227.9	A	N/A	1.0000			
4:2-FTS_2	4.12	1.00	6541.6	A	N/A	0.6396	-4	50	
PFHxA	4.16	1.00	99315.8	A	N/A	1.0000			
PFHxA_2	4.15	1.00	1080.0	A	N/A	0.0109	-8	50	
PFPeS	4.18	1.10	20643.5	A	N/A	1.0000			
PFPeS_2	4.18	1.10	11156.2	A	N/A	0.5404	4	50	
PFHpA	4.55	1.00	100331.5	A	N/A	1.0000			
PFHpA_2	4.55	1.00	4955.0	A	N/A	0.0494	-12	50	
PFHxS	4.55	1.00	31708.2	M	N/A	1.0000			
PFHxS_2	4.55	1.00	10583.6	A	N/A	0.3338	10	50	
6:2-FTS	4.91	1.00	7892.9	A	N/A	1.0000			
6:2-FTS_2	4.90	1.00	5118.0	A	N/A	0.6484	-1	50	
PFHpS	4.91	1.08	33549.6	A	N/A	1.0000			
PFHpS_2	4.91	1.08	13576.8	A	N/A	0.4047	0	50	
PFOA	4.92	1.00	99271.9	A	N/A	1.0000			
PFOA_2	4.91	1.00	5171.9	A	N/A	0.0521	-8	50	
PFOS	5.25	1.00	31066.6	M	N/A	1.0000			
PFOS_2	5.25	1.00	10777.6	M	N/A	0.3469	34	50	
PFNA	5.26	1.00	76669.8	A	N/A	1.0000			
PFNA_2	5.26	1.00	2211.6	A	N/A	0.0288	26	50	
PFNS	5.54	1.06	20590.8	A	N/A	1.0000			
PFNS_2	5.55	1.06	9151.7	A	N/A	0.4445	-7	50	
PFDA	5.57	1.00	68910.7	A	N/A	1.0000			
PFDA_2	5.56	1.00	259.0	M	N/A	0.0038	-53	50	OOS
8:2-FTS	5.57	1.00	6302.1	A	N/A	1.0000			
8:2-FTS_2	5.57	1.00	2753.9	A	N/A	0.4370	-35	50	
NMeFOSAA	5.71	1.00	7189.6	M	N/A	1.0000			
NMeFOSAA_2	5.71	1.00	2103.2	M	N/A	0.2925	38	50	
PFDS	5.80	1.11	15267.4	M	N/A	1.0000			
PFDS_2	5.80	1.11	6667.0	A	N/A	0.4367	-14	50	
PFUnDA	5.82	1.00	57084.2	A	N/A	1.0000			
PFUnDA_2	5.84	1.00	584.1	A	N/A	0.0102	146	50	OOS
NEtFOSAA	5.84	1.00	8326.9	M	N/A	1.0000			
NEtFOSAA_2	5.84	1.00	5605.2	M	N/A	0.6731	16	50	
PFDoDA	6.05	1.00	56287.6	A	N/A	1.0000			
PFDoDA_2	6.05	1.00	1236.4	A	N/A	0.0220	34	50	
10:2-FTS	6.07	1.09	4746.6	M	N/A	1.0000			
10:2-FTS_2	6.07	1.09	3956.4	A	N/A	0.8335	29	50	
PFTrDA	6.25	1.03	51310.9	M	N/A	1.0000			
PFTrDA_2	6.25	1.03	755.8	A	N/A	0.0147	60	50	OOS
PFTeDA	6.42	1.00	40355.1	A	N/A	1.0000			
PFTeDA_2	6.42	1.00	381.4	A	N/A	0.0095	47	50	
PFHxDA	6.73	1.05	19659.8	A	N/A	1.0000			
PFHxDA_2	6.73	1.05	1092.3	A	N/A	0.0556	-18	50	
PFODA	6.99	1.09	16393.2	A	N/A	1.0000			
PFODA_2	6.98	1.09	424.7	M	N/A	0.0259	-4	50	

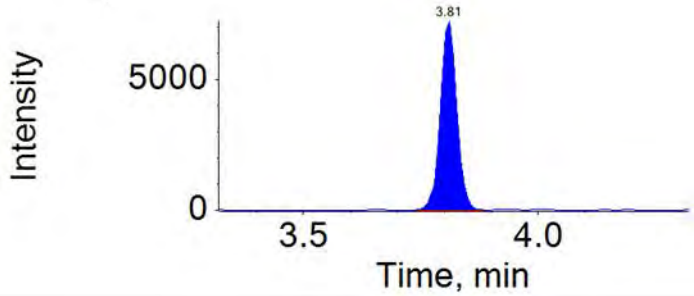
APPROVED
By JPT at 10:19 am, 11/14/18

REVIEWED
By HMK at 12:08 pm, 11/15/18

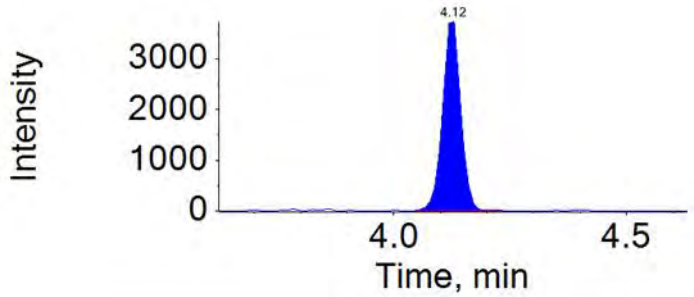
Component: PFBS
Primary Mass: 299.0 / 80.0



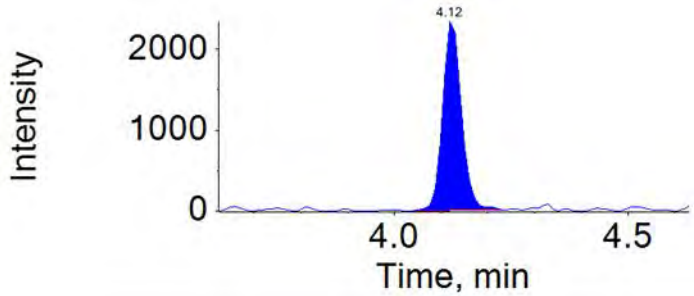
Component: PFBS_2
Secondary Mass: 299.0 / 99.0



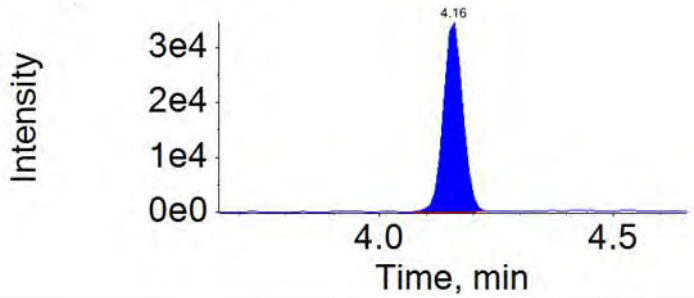
Component: 4:2-FTS
Primary Mass: 327.0 / 307.0



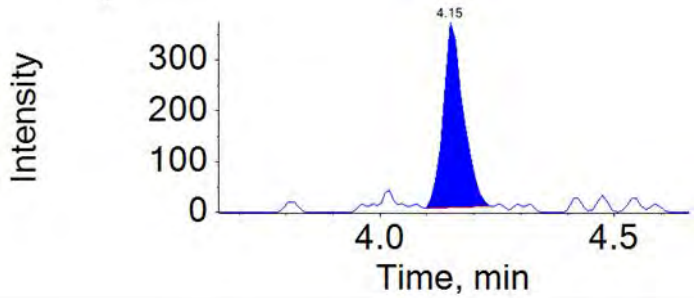
Component: 4:2-FTS_2
Secondary Mass: 327.0 / 81.0



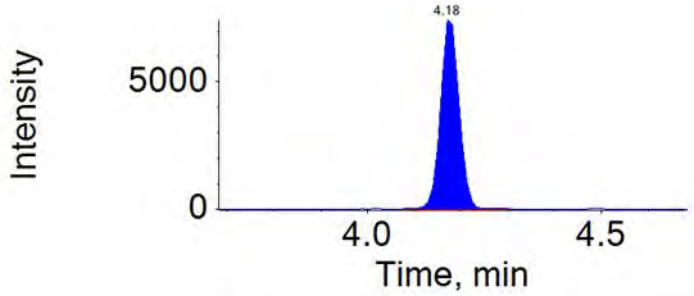
Component: PFHxA
Primary Mass: 313.0 / 269.0



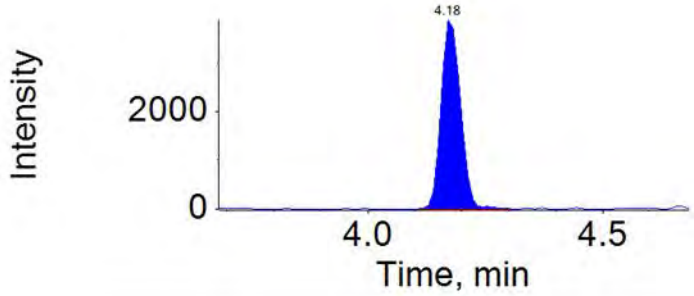
Component: PFHxA_2
Secondary Mass: 313.0 / 119.0



Component: PFPeS
Primary Mass: 349.0 / 80.0



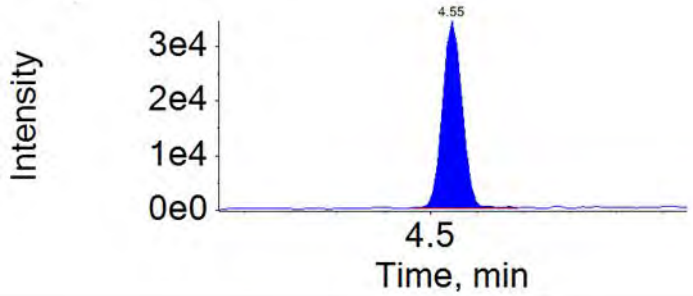
Component: PFPeS_2
Secondary Mass: 349.0 / 99.0



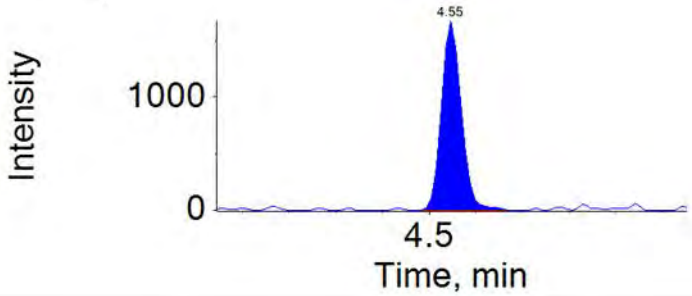
APPROVED
By JPT at 10:19 am, 11/14/18

REVIEWED
By HMK at 12:08 pm, 11/15/18

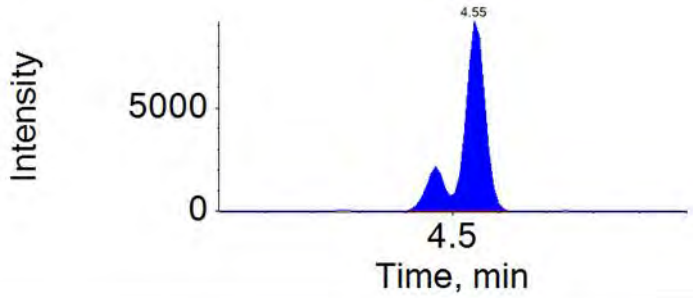
Component: PFHpA
Primary Mass: 363.0 / 319.0



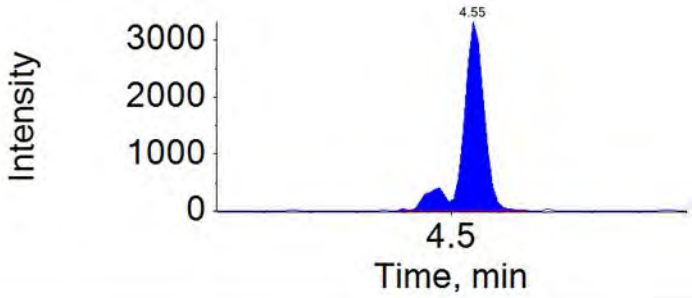
Component: PFHpA_2
Secondary Mass: 363.0 / 169.0



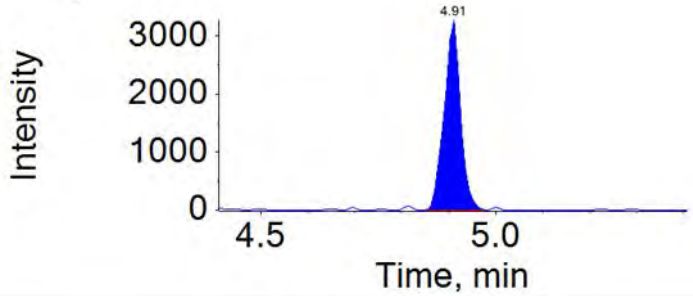
Component: PFHxS
Primary Mass: 399.0 / 80.0



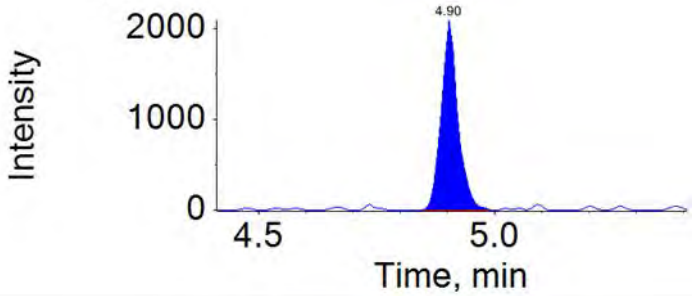
Component: PFHxS_2
Secondary Mass: 399.0 / 99.0



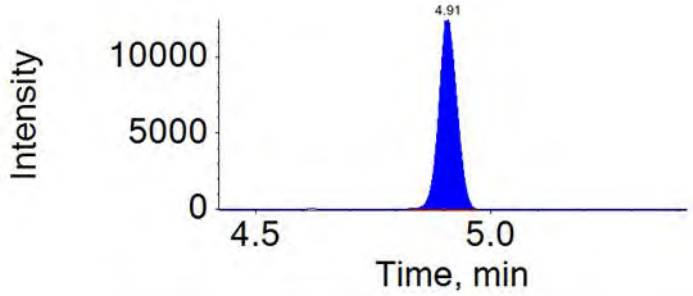
Component: 6:2-FTS
Primary Mass: 427.0 / 407.0



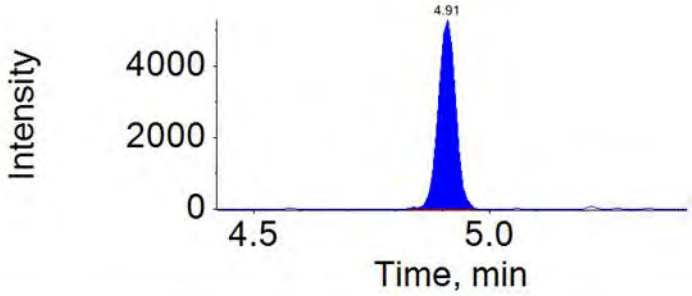
Component: 6:2-FTS_2
Secondary Mass: 427.0 / 81.0



Component: PFHpS
Primary Mass: 449.0 / 80.0



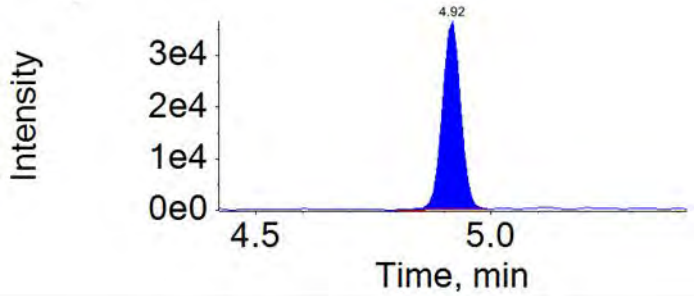
Component: PFHpS_2
Secondary Mass: 449.0 / 99.0



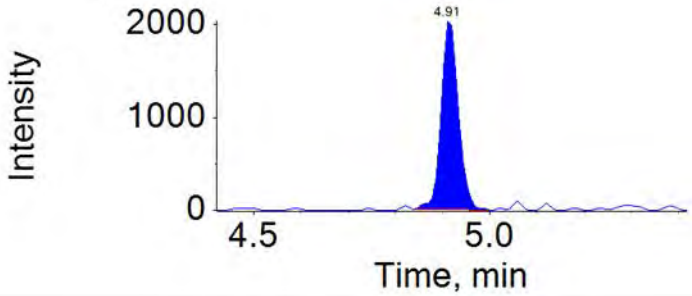
APPROVED
By JPT at 10:19 am, 11/14/18

REVIEWED
By HMK at 12:08 pm, 11/15/18

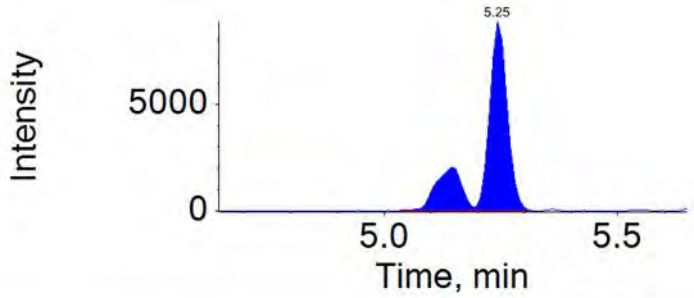
Component: PFOA
Primary Mass: 413.0 / 369.0



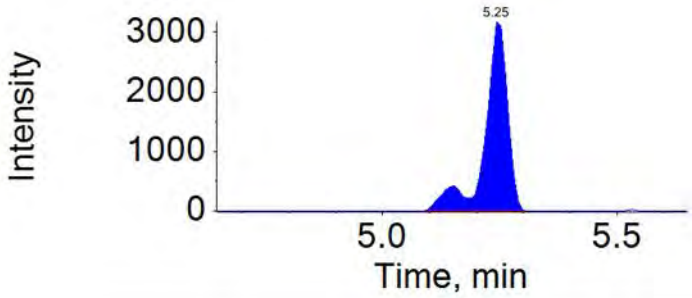
Component: PFOA_2
Secondary Mass: 413.0 / 169.0



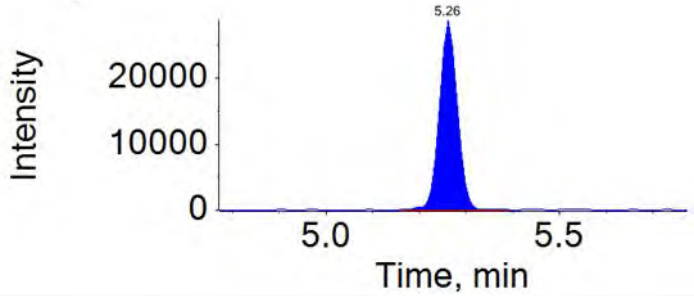
Component: PFOS
Primary Mass: 499.0 / 80.0



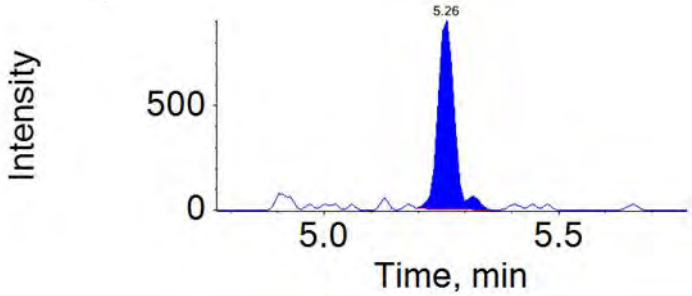
Component: PFOS_2
Secondary Mass: 499.0 / 99.0



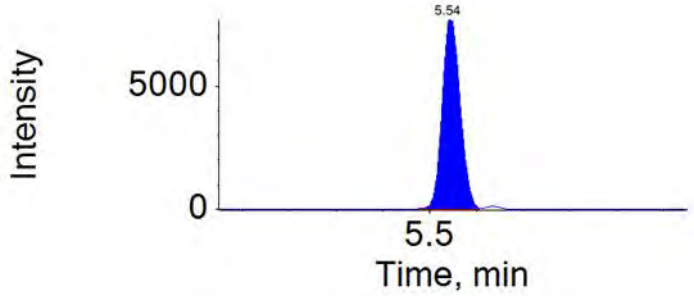
Component: PFNA
Primary Mass: 463.0 / 419.0



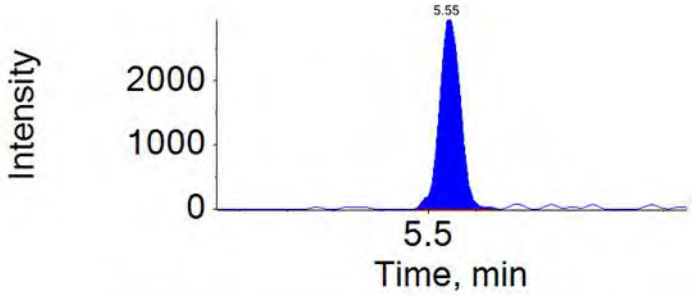
Component: PFNA_2
Secondary Mass: 463.0 / 169.0



Component: PFNS
Primary Mass: 549.0 / 80.0



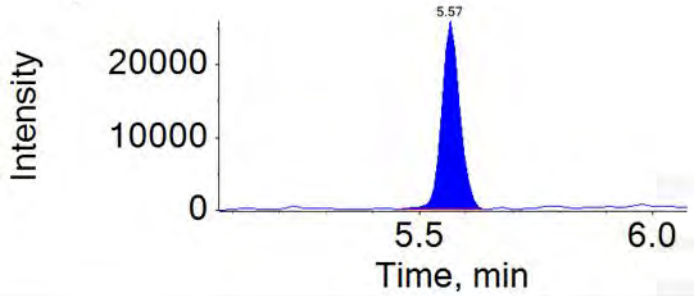
Component: PFNS_2
Secondary Mass: 549.0 / 99.0



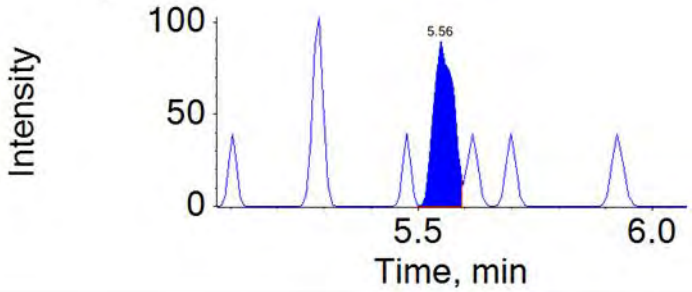
APPROVED
By JPT at 10:19 am, 11/14/18

REVIEWED
By HMK at 12:08 pm, 11/15/18

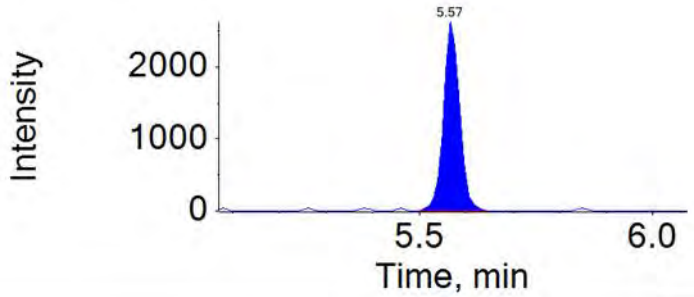
Component: PFDA
Primary Mass: 513.0 / 469.0



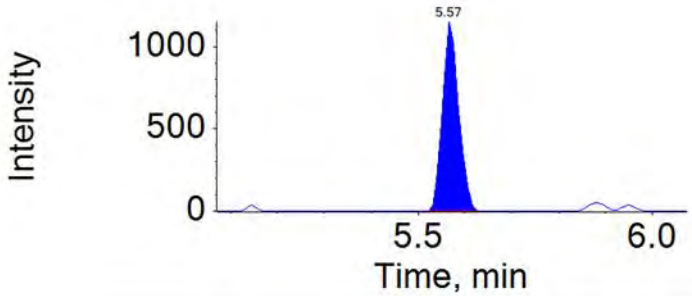
Component: PFDA_2
Secondary Mass: 513.0 / 169.0



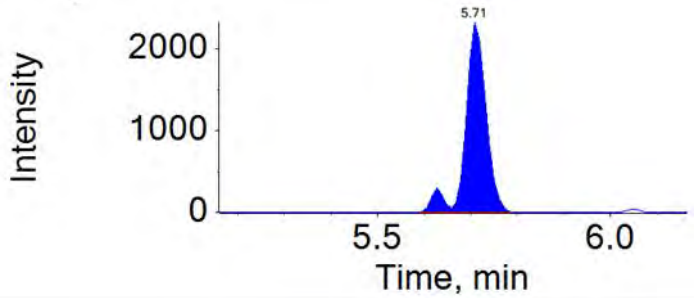
Component: 8:2-FTS
Primary Mass: 527.0 / 507.0



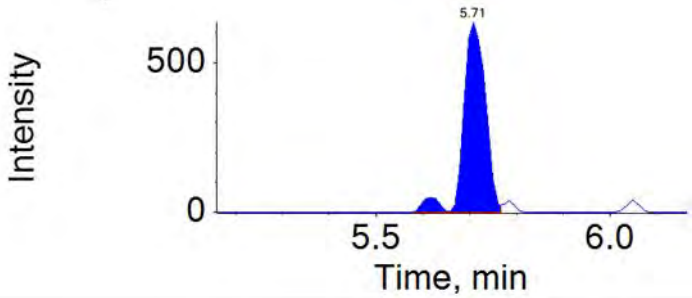
Component: 8:2-FTS_2
Secondary Mass: 527.0 / 81.0



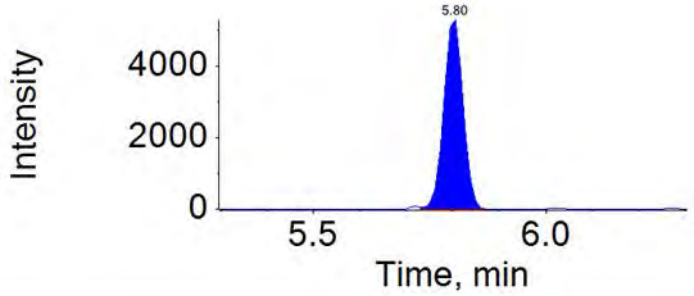
Component: NMeFOSAA
Primary Mass: 570.0 / 419.0



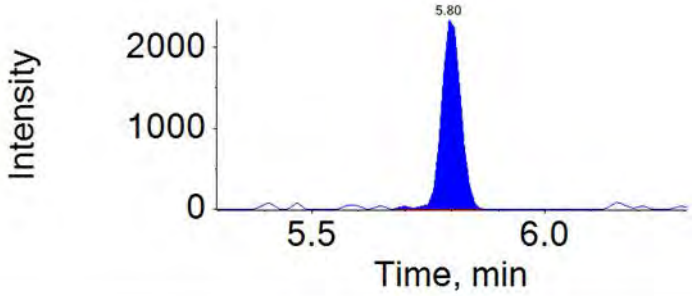
Component: NMeFOSAA_2
Secondary Mass: 570.0 / 483.0



Component: PFDS
Primary Mass: 599.0 / 80.0



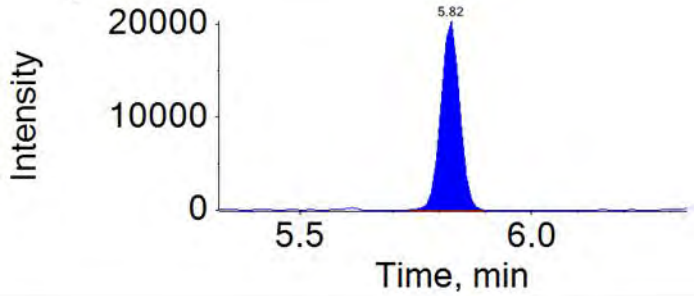
Component: PFDS_2
Secondary Mass: 599.0 / 99.0



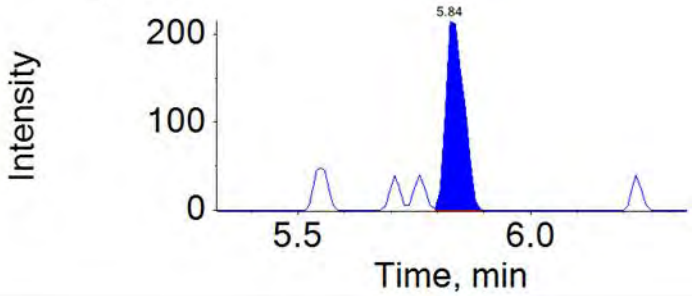
APPROVED
By JPT at 10:19 am, 11/14/18

REVIEWED
By HMK at 12:08 pm, 11/15/18

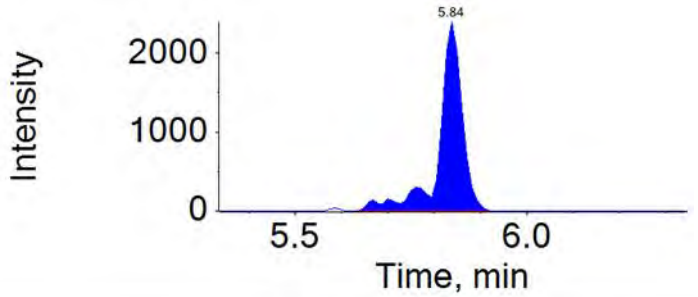
Component: PFUnDA
Primary Mass: 563.0 / 519.0



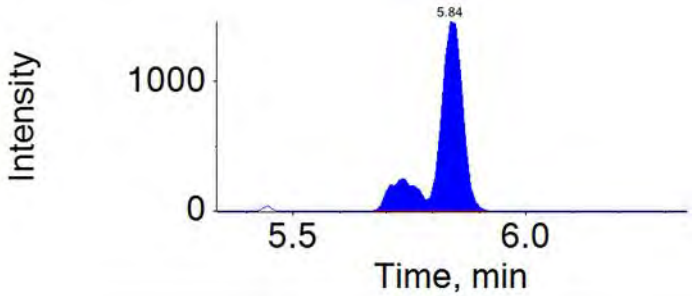
Component: PFUnDA_2
Secondary Mass: 563.0 / 169.0



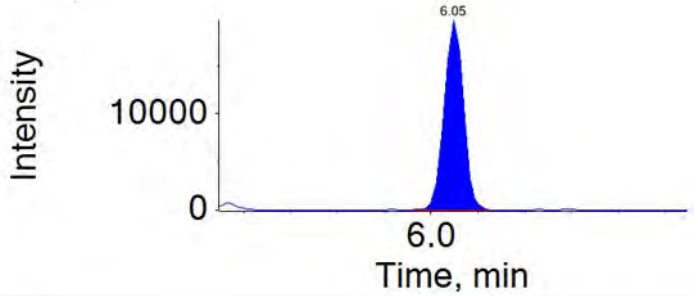
Component: NEtFOSAA
Primary Mass: 584.0 / 419.0



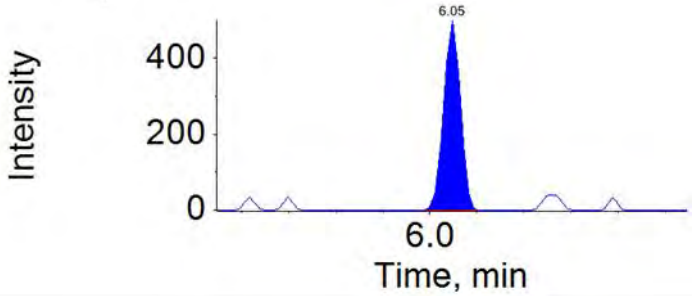
Component: NEtFOSAA_2
Secondary Mass: 584.0 / 526.0



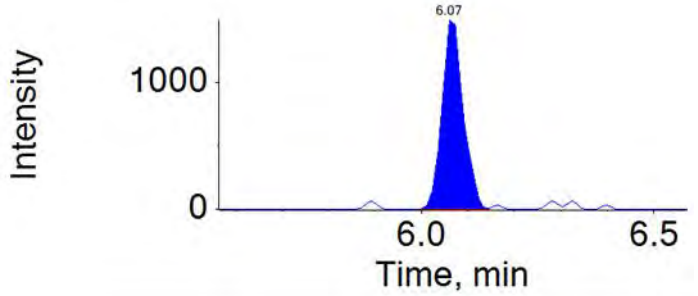
Component: PFDoDA
Primary Mass: 613.0 / 569.0



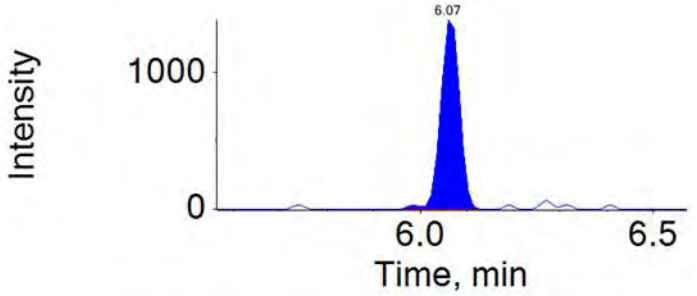
Component: PFDoDA_2
Secondary Mass: 613.0 / 169.0



Component: 10:2-FTS
Primary Mass: 627.0 / 607.0



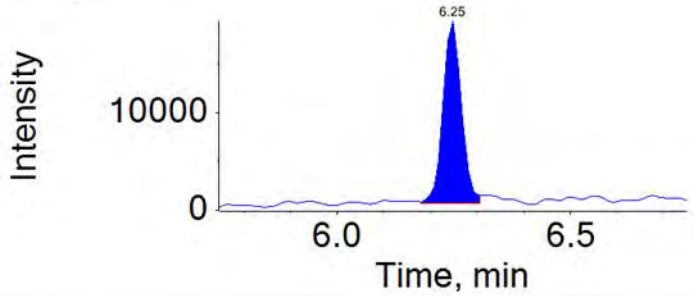
Component: 10:2-FTS_2
Secondary Mass: 627.0 / 81.0



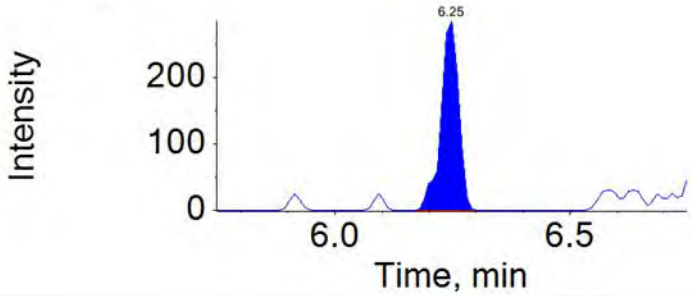
APPROVED
By JPT at 10:19 am, 11/14/18

REVIEWED
By HMK at 12:08 pm, 11/15/18

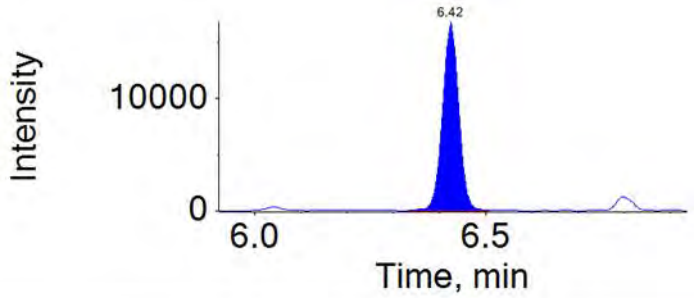
Component: PFTrDA
Primary Mass: 663.0 / 619.0



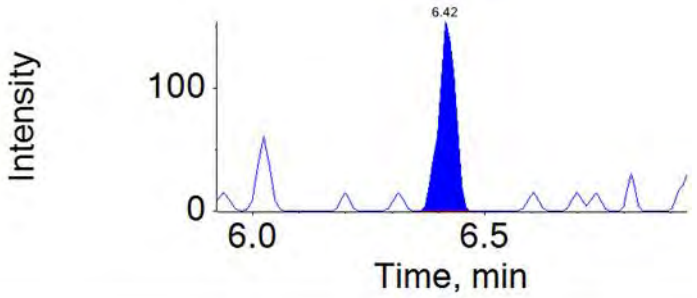
Component: PFTrDA_2
Secondary Mass: 663.0 / 169.0



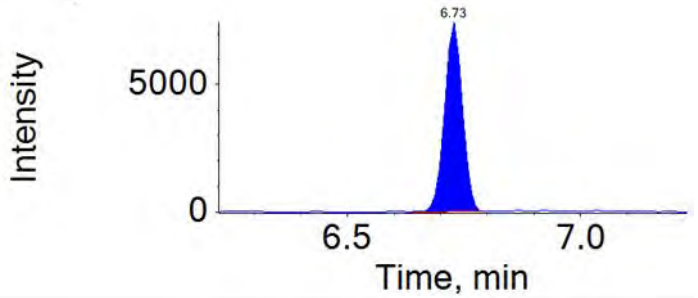
Component: PFTeDA
Primary Mass: 713.0 / 669.0



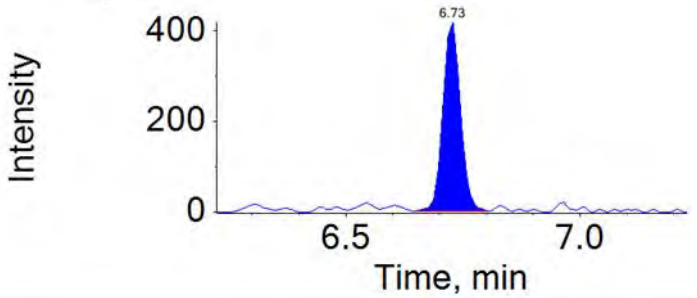
Component: PFTeDA_2
Secondary Mass: 713.0 / 169.0



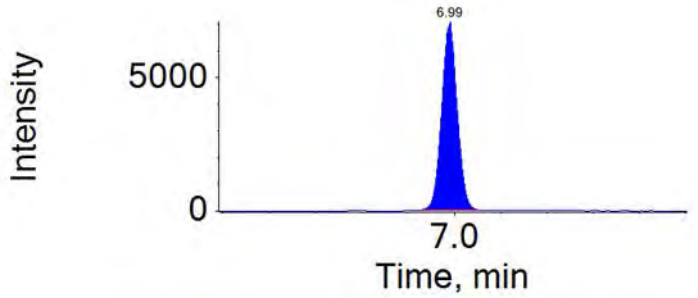
Component: PFHxDA
Primary Mass: 813.0 / 769.0



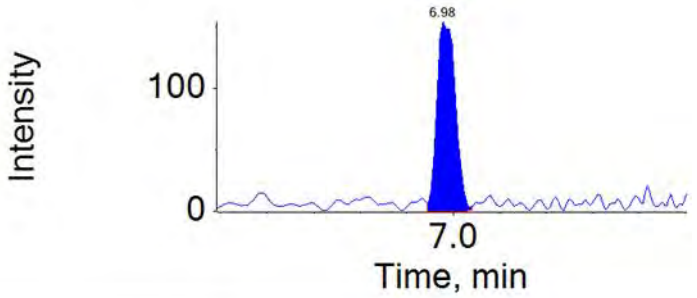
Component: PFHxDA_2
Secondary Mass: 813.0 / 169.0



Component: PFODA
Primary Mass: 913.0 / 869.0



Component: PFODA_2
Secondary Mass: 913.0 / 169.0



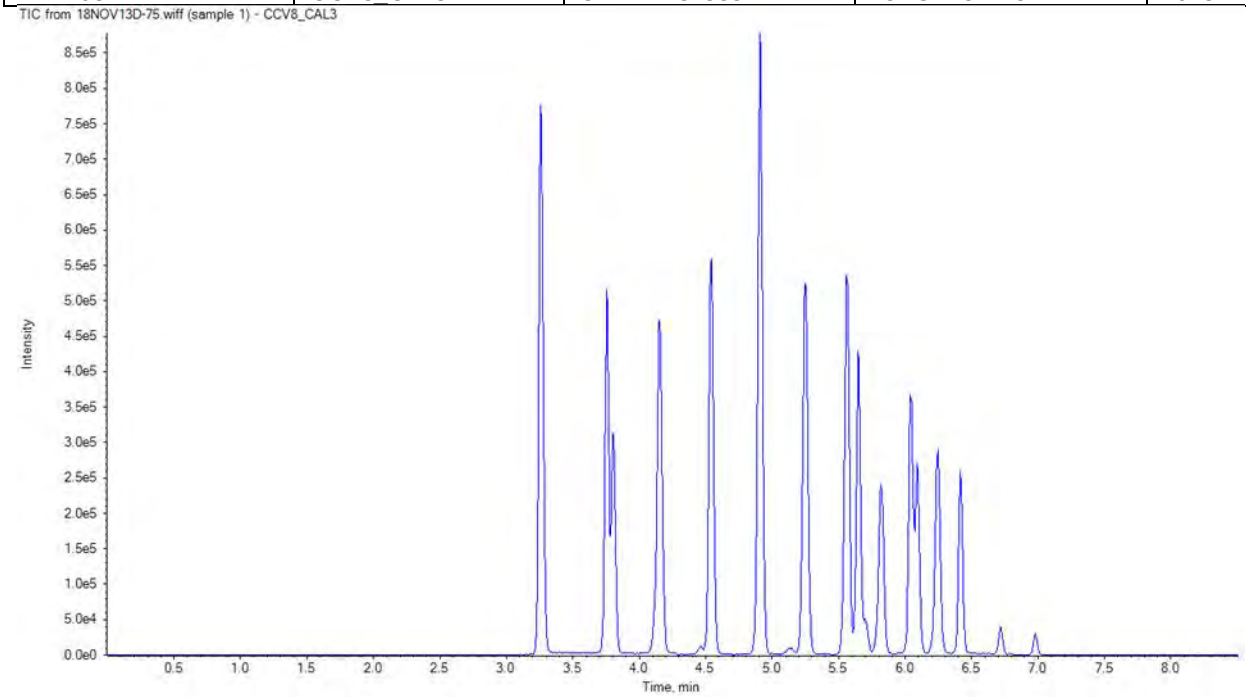
APPROVED
By JPT at 10:19 am, 11/14/18

REVIEWED
By HMK at 12:08 pm, 11/15/18

Continuing Calibration Verfication

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV13DCCV6-10 11/14/2018 9:23:22 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Instrument Name:	Sample Name:	Sample ID:	Sample File:	Acquisition Date:
LM27631	CCV8_CAL3	CALBRN31833B	18NOV13D-75.wiff	2018-11-13T20:50:50



Injection Standard Area Reference File: 18NOV13D-05

Injection Standard Name	Inj Std Conc	Injection Std Peak Area	Reference Injection Standard Area	Injection Std %Diff	Injection Std %Diff Limit	Injection Std %Diff OOS
13C3-PFBA	5.0	677236.0	661126.9	2	50	
13C2-PFOA	5.0	476188.5	466902.6	2	50	
13C4-PFOS	4.8	249425.9	247446.9	1	50	
13C2-PFDA	5.0	301134.4	295381.6	2	50	

APPROVED
By JPT at 10:19 am, 11/14/18

REVIEWED
By HMK at 12:08 pm, 11/15/18

Continuing Calibration Verfication

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV13DCCV6-10 11/14/2018 9:23:22 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Instrument Name:	Sample Name:	Sample ID:	Sample File:	Acquisition Date:
LM27631	CCV8_CAL3	CALBRN31833B	18NOV13D-75.wiff	2018-11-13T20:50:50

Analyte Name	Analyte Area	Sc /pk	Ext Std Name	Ext Std Area	Ext Std con	Area Ratio	RT (min)	RRT	Spec Amt	Calc Amt	% Diff	% Diff Lim	% Diff OOS
PFBA	313571.3	10	13C4-PFBA	763653.2	5.0	0.411	3.26	1.000	2.000	2.275	14	30	
PFPeA	300703.6	11	13C5-PFPeA	724132.2	5.0	0.415	3.76	1.000	2.000	2.404	20	30	
PFBS	163827.3	10	13C3-PFBS	424378.7	4.7	0.386	3.81	1.000	1.770	1.836	4	30	
4:2-FTS	36732.1	11	13C2-4:2-FTS	45759.0	4.7	0.803	4.12	1.000	1.870	2.179	17	30	
PFHxA	368369.9	11	13C5-PFHxA	667148.2	5.0	0.552	4.15	1.000	2.000	2.305	15	30	
PFPeS	86830.0	11	13C3-PFBS	424378.7	4.7	0.205	4.17	1.100	1.880	1.986	6	30	
PFHpA	381648.1	12	13C4-PFHpA	524487.4	5.0	0.728	4.54	1.000	2.000	2.412	21	30	
PFHxS	120620.0	18	13C3-PFHxS	305119.8	4.7	0.395	4.54	1.000	1.820	1.917	5	30	
6:2-FTS	29955.6	11	13C2-6:2-FTS	33996.9	4.8	0.881	4.90	1.000	1.900	2.132	12	30	
PFHpS	124978.6	11	13C3-PFHxS	305119.8	4.7	0.410	4.90	1.080	1.900	2.156	13	30	
PFOA	370871.7	11	13C8-PFOA	896019.1	5.0	0.414	4.91	1.000	2.000	2.211	11	30	
PFOS	121266.0	22	13C8-PFOS	262452.5	4.8	0.462	5.24	1.000	1.850	2.021	9	30	
PFNA	316299.3	11	13C9-PFNA	461195.7	5.0	0.686	5.26	1.000	2.000	2.473	24	30	
PFNS	80029.9	10	13C8-PFOS	262452.5	4.8	0.305	5.54	1.060	1.920	2.133	11	30	
PFDA	256216.2	11	13C6-PFDA	617444.2	5.0	0.415	5.56	1.000	2.000	2.200	10	30	
8:2-FTS	28382.5	11	13C2-8:2-FTS	24989.9	4.8	1.136	5.57	1.000	1.920	2.648	38	30	OOS
PFOSA	263789.6	11	13C8-PFOSA	655783.7	5.0	0.402	5.65	1.000	2.000	1.965	-2	30	
NMeFOSAA	31495.4	18	d3-NMeFOSAA	74750.7	5.0	0.421	5.70	1.000	2.000	2.381	19	30	
PFDS	65705.8	11	13C8-PFOS	262452.5	4.8	0.250	5.80	1.110	1.930	2.268	18	30	
PFUnDA	213158.1	11	13C7-PFUnDA	252074.1	5.0	0.846	5.82	1.000	2.000	2.211	11	30	
NEtFOSAA	24925.7	20	d5-NEtFOSAA	65513.1	5.0	0.380	5.83	1.000	2.000	1.994	0	30	
PFDoDA	240882.2	12	13C2-PFDoDA	557852.9	5.0	0.432	6.04	1.000	2.000	2.199	10	30	
10:2-FTS	15993.2	12	13C2-8:2-FTS	24989.9	4.8	0.640	6.06	1.090	1.930	2.132	10	30	
NMePFOSAE	174650.7	11	d7-NMePFOSAE	338752.5	5.0	0.516	6.10	1.000	2.000	2.146	7	30	
NMePFOSA	33001.3	11	d3-NMePFOSA	79440.5	5.0	0.415	6.10	1.000	2.000	2.049	2	30	
PFDoS	30782.0	11	13C8-PFOS	262452.5	4.8	0.117	6.21	1.180	1.940	2.054	6	30	
NEtPFOSAE	183746.8	11	d9-NEtPFOSAE	272078.0	5.0	0.675	6.25	1.000	2.000	2.167	8	30	
NEtPFOSA	28072.1	11	d5-NEtPFOSA	60072.5	5.0	0.467	6.26	1.000	2.000	2.146	7	30	
PFTrDA	193853.2	11	13C2-PFDoDA	557852.9	5.0	0.347	6.24	1.030	2.000	2.193	10	30	
PFTeDA	160382.3	10	13C2-PFTeDA	387501.6	5.0	0.414	6.42	1.000	2.000	2.320	16	30	
PFHxDA	74288.2	11	13C2-PFTeDA	387501.6	5.0	0.192	6.72	1.050	2.000	2.284	14	30	
PFODA	61455.0	10	13C2-PFTeDA	387501.6	5.0	0.159	6.98	1.090	2.000	2.209	10	30	

APPROVED
By JPT at 10:19 am, 11/14/18

REVIEWED
By HMK at 12:08 pm, 11/15/18

Continuing Calibration Verfication

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV13DCCV6-10 11/14/2018 9:23:22 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

APPROVED
By JPT at 10:19 am, 11/14/18

REVIEWED
By HMK at 12:08 pm, 11/15/18

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV13DCCV6-10 11/14/2018 9:23:22 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Sample Name:	CCV8_CAL3			**Data File:**		18NOV13D-75.wiff
Sample ID:	CALBRN31833B			**Acquis Date:**		2018-11-13T20:50:50
Sample Type:	Quality Control			**Instrument:**		LM27631
Vial Position:	5			**Acquis Method:**		18AUG13_3uL.dam
Injection Vol:	3.00			**Result Table:**		18NOV13DCCV6-10
QMethod File:	18AUG20QM			**ICAL Name:**		18NOV12DCAL
Batch Number:	N/A			**Operator:**		JPT12262
Sample Wt.:	1.00000			**Dilution Factor:**		1.00
Sample Vol.:	1.000			**Prep Factor:**		1.000

Injection Standard Peak Table

Injection Standard Area Reference File: 18NOV13D-05

Injection Standard Name	Inj Std Conc	Injection Std Peak Area	Rreference Injection Standard Area	Injection Std %Diff	Injection Std %Diff Limit	Injection Std %Diff OOS
13C3-PFBA	5.0	677236.0	661126.9	2	50	
13C2-PFOA	5.0	476188.5	466902.6	2	50	
13C4-PFOS	4.8	249425.9	247446.9	1	50	
13C2-PFDA	5.0	301134.4	295381.6	2	50	

Extraction Standard Peak Table

Extraction Standard Name	Ext Std Area	Inj Std Name	Inj Std Area	Area Ratio	Ext Std Conc	Ext Std Result	Ext Std %REC	Ext Std %REC Limit	Ext Std OOS
E13C4-PFBA	763653.2	13C3-PFBA	677236.0	1.128	5.000	5.055	101	70-130	
E13C5-PFPeA	724132.2	13C3-PFBA	677236.0	1.069	5.000	4.796	96	70-130	
E13C3-PFBS	424378.7	13C3-PFBA	677236.0	0.627	4.650	4.424	95	70-130	
E13C2-4:2-FTS	45759.0	13C2-PFOA	476188.5	0.096	4.670	4.280	92	70-130	
E13C5-PFHxA	667148.2	13C2-PFOA	476188.5	1.401	5.000	5.061	101	70-130	
E13C3-PFHxS	305119.8	13C2-PFOA	476188.5	0.641	4.730	4.397	93	70-130	
E13C4-PFHpA	524487.4	13C2-PFOA	476188.5	1.101	5.000	4.962	99	70-130	
E13C2-6:2-FTS	33996.9	13C2-PFOA	476188.5	0.071	4.750	4.777	101	70-130	
E13C8-PFOA	896019.1	13C2-PFOA	476188.5	1.882	5.000	5.184	104	70-130	
E13C8-PFOS	262452.5	13C4-PFOS	249425.9	1.052	4.780	4.662	98	70-130	
E13C9-PFNA	461195.7	13C4-PFOS	249425.9	1.849	5.000	5.155	103	70-130	
E13C6-PFDA	617444.2	13C2-PFDA	301134.4	2.050	5.000	4.785	96	70-130	
E13C2-8:2-FTS	24989.9	13C2-PFDA	301134.4	0.083	4.790	4.139	86	70-130	
E13C8-PFOSA	655783.7	13C2-PFDA	301134.4	2.178	5.000	4.828	97	70-130	
Ed3-NMeFOSAA	74750.7	13C2-PFDA	301134.4	0.248	5.000	4.481	90	70-130	
E13C7-PFUnDA	252074.1	13C2-PFDA	301134.4	0.837	5.000	4.860	97	70-130	
Ed5-NEtFOSAA	65513.1	13C2-PFDA	301134.4	0.218	5.000	4.603	92	70-130	
E13C2-PFDoDA	557852.9	13C2-PFDA	301134.4	1.853	5.000	4.810	96	70-130	
Ed7-NMePFOSAE	338752.5	13C2-PFDA	301134.4	1.125	5.000	4.868	97	70-130	
Ed3-NMePFOSA	79440.5	13C2-PFDA	301134.4	0.264	5.000	4.793	96	70-130	
Ed9-NEtPFOSAE	272078.0	13C2-PFDA	301134.4	0.904	5.000	4.699	94	70-130	
Ed5-NEtPFOSA	60072.5	13C2-PFDA	301134.4	0.199	5.000	4.680	94	70-130	
E13C2-PFTeDA	387501.6	13C2-PFDA	301134.4	1.287	5.000	4.518	90	70-130	

APPROVED
By JPT at 10:19 am, 11/14/18

REVIEWED
By HMK at 12:08 pm, 11/15/18

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV13DCCV6-10 11/14/2018 9:23:22 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

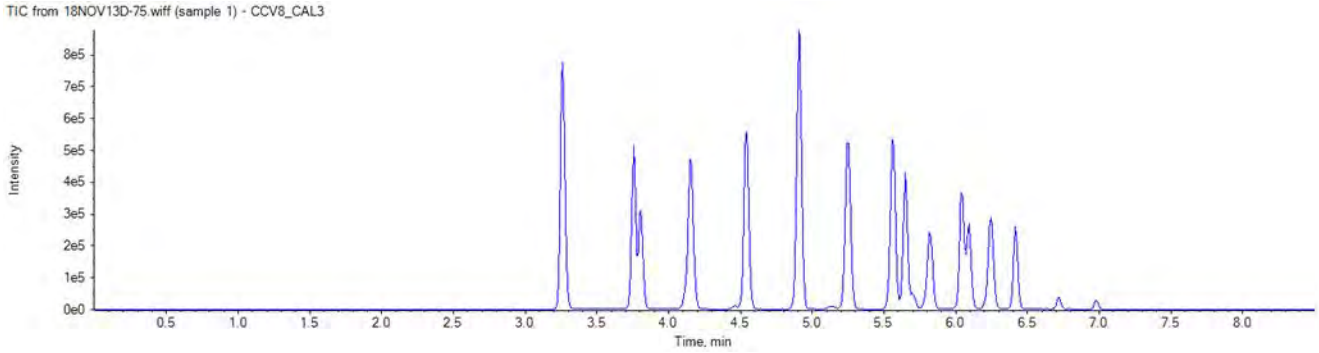
Analyte Quantitation Peak Table

Sample Name: CCV8_CAL3 **Instrument Name:** LM27631 **File Name:** 18NOV13D-75.wiff

Sample Wt	Sample Vol	Dilution Factor	PrepFactor
1.00000	1.000	1.00	1.000

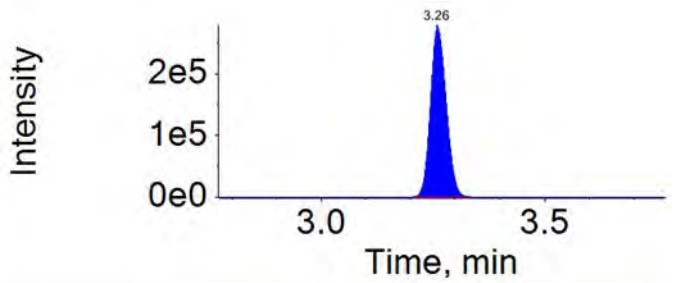
Analyte Name	RT	RRT	Analyte Area Response	E	Int Typ	ES Name	ES RT	ES Area Response	Area Ratio	Sample Result (ng/g)
PFBA	3.26	1.000	313571.3		A	13C4-PFBA	3.26	763653.2	0.411	2.275
PFPeA	3.76	1.000	300703.6		A	13C5-PFPeA	3.76	724132.2	0.415	2.404
PFBS	3.81	1.000	163827.3		A	13C3-PFBS	3.81	424378.7	0.386	1.836
4:2-FTS	4.12	1.000	36732.1		A	13C2-4:2-FTS	4.12	45759.0	0.803	2.179
PFHxA	4.15	1.000	368369.9		A	13C5-PFHxA	4.15	667148.2	0.552	2.305
PFPeS	4.17	1.100	86830.0		A	13C3-PFBS	3.81	424378.7	0.205	1.986
PFHpA	4.54	1.000	381648.1		A	13C4-PFHpA	4.54	524487.4	0.728	2.412
PFHxS	4.54	1.000	120620.0		M	13C3-PFHxS	4.54	305119.8	0.395	1.917
6:2-FTS	4.90	1.000	29955.6		A	13C2-6:2-FTS	4.90	33996.9	0.881	2.132
PFHpS	4.90	1.080	124978.6		A	13C3-PFHxS	4.54	305119.8	0.410	2.156
PFOA	4.91	1.000	370871.7		A	13C8-PFOA	4.91	896019.1	0.414	2.211
PFOS	5.24	1.000	121266.0		M	13C8-PFOS	5.24	262452.5	0.462	2.021
PFNA	5.26	1.000	316299.3		A	13C9-PFNA	5.26	461195.7	0.686	2.473
PFNS	5.54	1.060	80029.9		A	13C8-PFOS	5.24	262452.5	0.305	2.133
PFDA	5.56	1.000	256216.2		A	13C6-PFDA	5.56	617444.2	0.415	2.200
8:2-FTS	5.57	1.000	28382.5		A	13C2-8:2-FTS	5.57	24989.9	1.136	2.648
PFOSA	5.65	1.000	263789.6		A	13C8-PFOSA	5.65	655783.7	0.402	1.965
NMeFOSAA	5.70	1.000	31495.4		M	d3-NMeFOSAA	5.70	74750.7	0.421	2.381
PFDS	5.80	1.110	65705.8		A	13C8-PFOS	5.24	262452.5	0.250	2.268
PFUnDA	5.82	1.000	213158.1		A	13C7-PFUnDA	5.82	252074.1	0.846	2.211
NEtFOSAA	5.83	1.000	24925.7		A	d5-NEtFOSAA	5.83	65513.1	0.380	1.994
PFDoDA	6.04	1.000	240882.2		A	13C2-PFDoDA	6.04	557852.9	0.432	2.199
10:2-FTS	6.06	1.090	15993.2		A	13C2-8:2-FTS	5.57	24989.9	0.640	2.132
NMePFOSAE	6.10	1.000	174650.7		A	d7-NMePFOSAE	6.09	338752.5	0.516	2.146
NMePFOSA	6.10	1.000	33001.3		A	d3-NMePFOSA	6.10	79440.5	0.415	2.049
PFDoS	6.21	1.180	30782.0		A	13C8-PFOS	5.24	262452.5	0.117	2.054
NEtPFOSAE	6.25	1.000	183746.8		A	d9-NEtPFOSAE	6.24	272078.0	0.675	2.167
NEtPFOSA	6.26	1.000	28072.1		A	d5-NEtPFOSA	6.26	60072.5	0.467	2.146
PFTrDA	6.24	1.030	193853.2		A	13C2-PFDoDA	6.04	557852.9	0.347	2.193
PFTeDA	6.42	1.000	160382.3		A	13C2-PFTeDA	6.42	387501.6	0.414	2.320
PFHxDA	6.72	1.050	74288.2		A	13C2-PFTeDA	6.42	387501.6	0.192	2.284
PFODA	6.98	1.090	61455.0		A	13C2-PFTeDA	6.42	387501.6	0.159	2.209

Total Ion Chromatogram

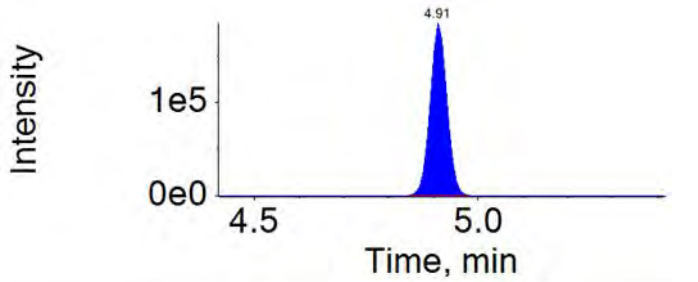


ICAL Name: 18NOV12DCAL **Result Table:** 18NOV13DCCV6-10 11/14/2018 9:23:22 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

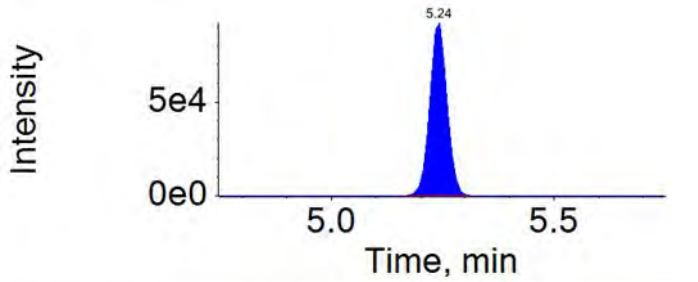
Injection Standard: 13C3-PFBA
216.0 / 172.0



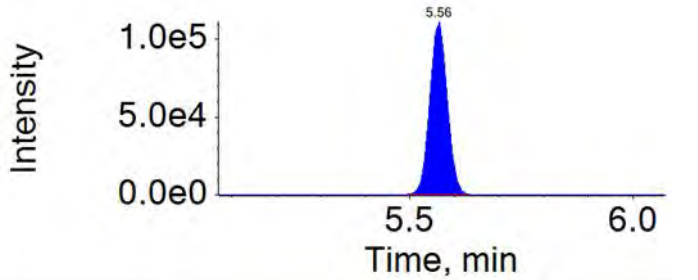
Injection Standard: 13C2-PFOA
415.0 / 370.0



Injection Standard: 13C4-PFOS
503.0 / 80.0

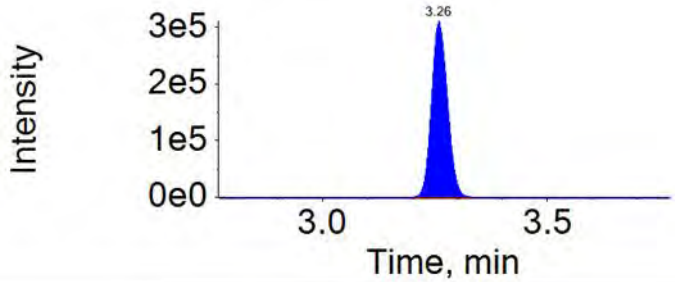


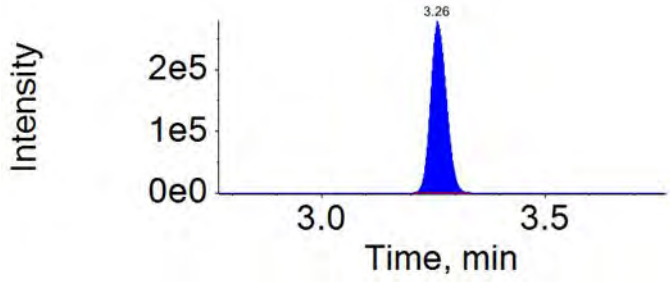
Injection Standard: 13C2-PFDA
515.0 / 470.0



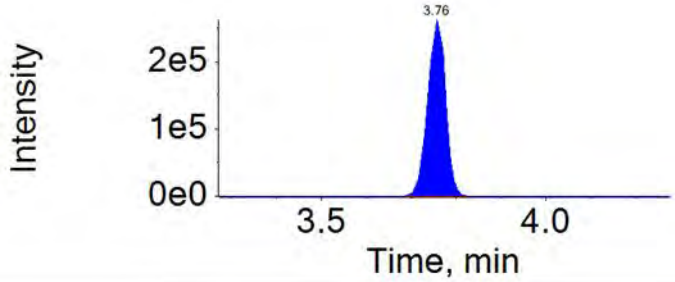
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV13DCCV6-10 11/14/2018 9:23:22 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

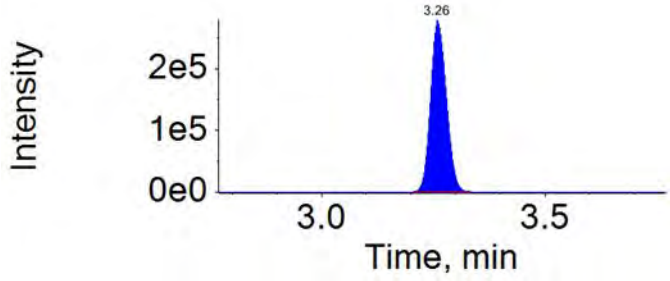
Extraction Standard: E13C4-PFBA	Injection Standard: 13C3-PFBA
217.0 / 172.0	216.0 / 172.0



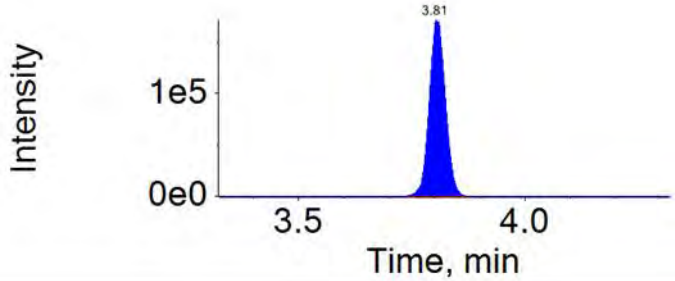


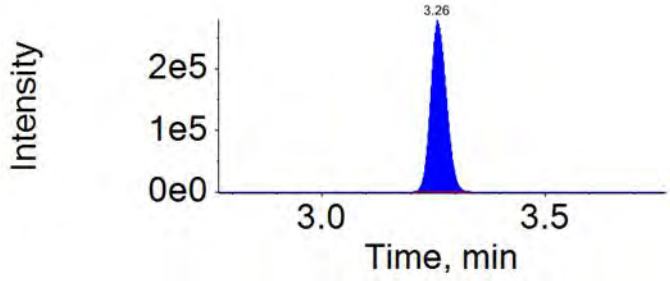
Extraction Standard: E13C5-PFPeA	Injection Standard: 13C3-PFBA
268.0 / 223.0	216.0 / 172.0



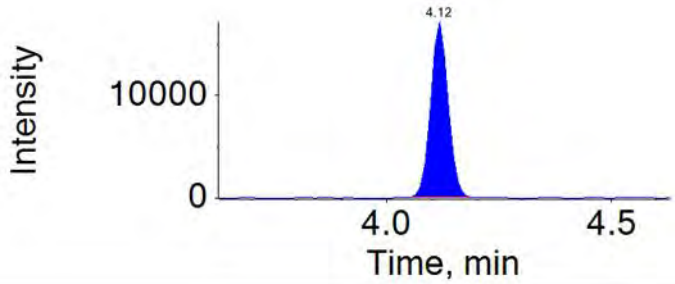


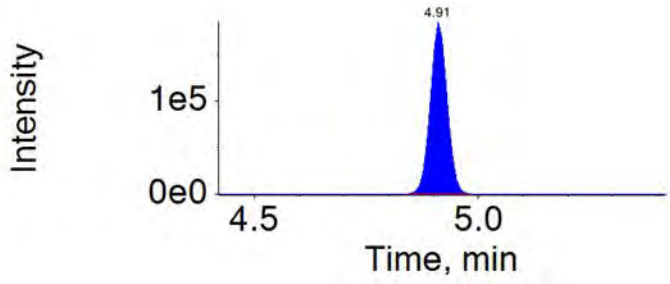
Extraction Standard: E13C3-PFBS	Injection Standard: 13C3-PFBA
302.0 / 80.0	216.0 / 172.0





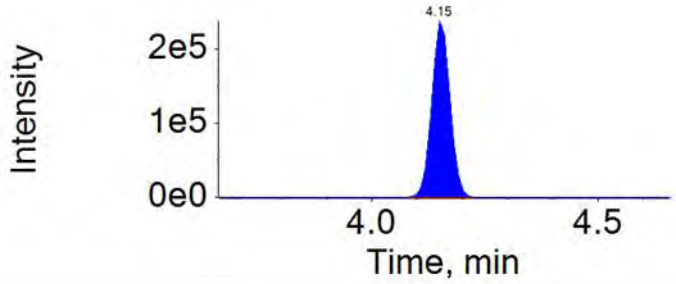
Extraction Standard: E13C2-4:2-FTS	Injection Standard: 13C2-PFOA
329.0 / 81.0	415.0 / 370.0

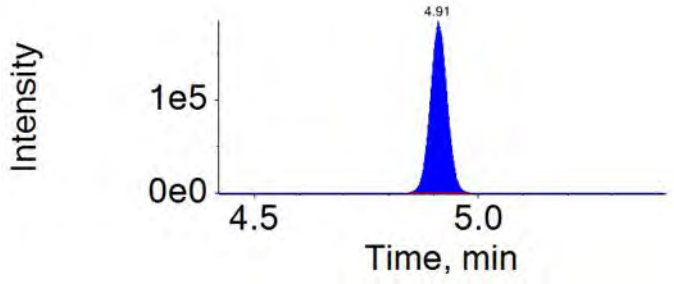




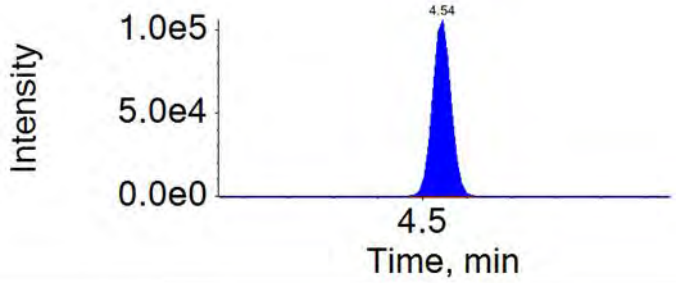
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV13DCCV6-10 11/14/2018 9:23:22 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

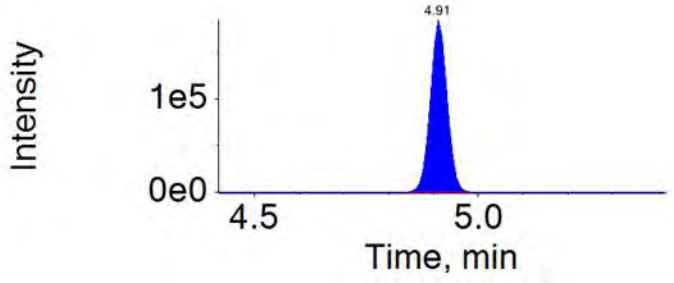
Extraction Standard: E13C5-PFHxA	Injection Standard: 13C2-PFOA
318.0 / 273.0	415.0 / 370.0



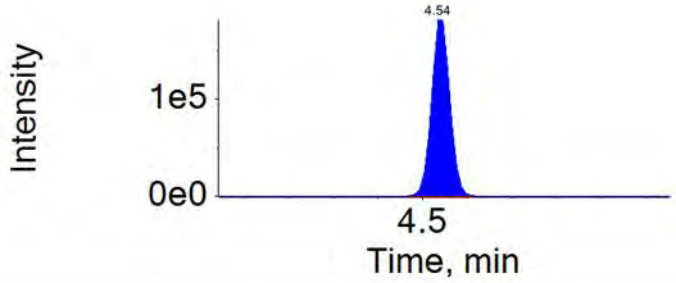


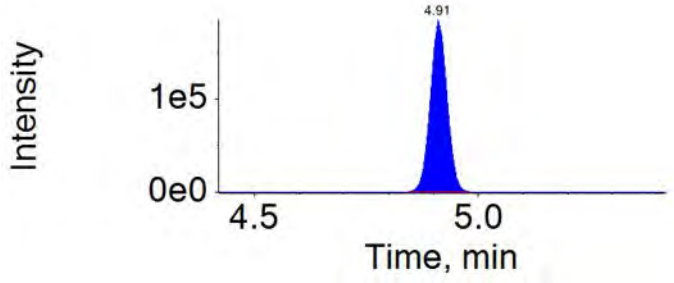
Extraction Standard: E13C3-PFHxS	Injection Standard: 13C2-PFOA
402.0 / 80.0	415.0 / 370.0



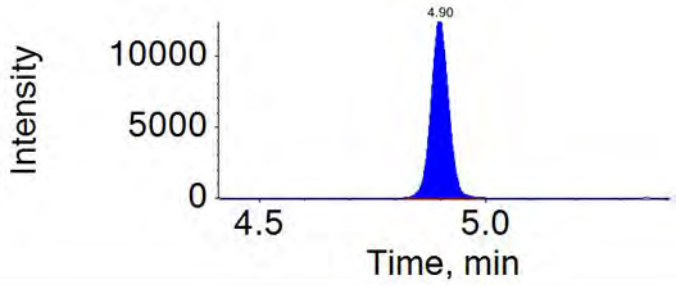


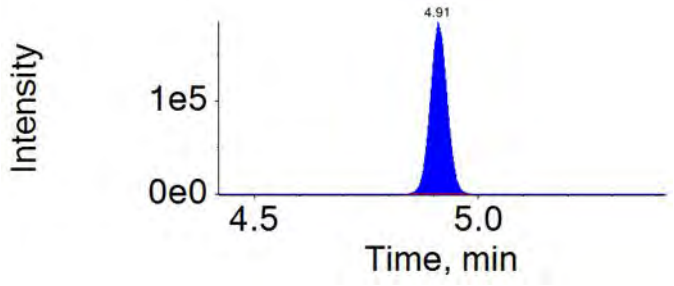
Extraction Standard: E13C4-PFHpA	Injection Standard: 13C2-PFOA
367.0 / 322.0	415.0 / 370.0





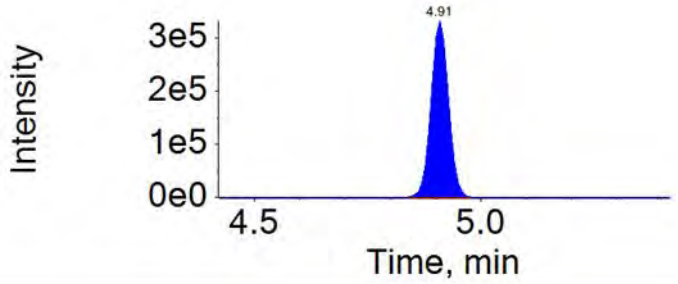
Extraction Standard: E13C2-6:2-FTS	Injection Standard: 13C2-PFOA
429.0 / 81.0	415.0 / 370.0



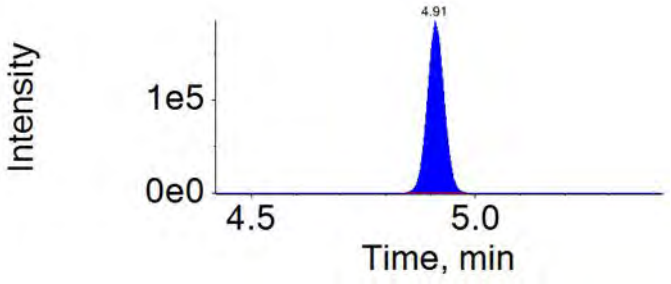


ICAL Name: 18NOV12DCAL **Result Table:** 18NOV13DCCV6-10 11/14/2018 9:23:22 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

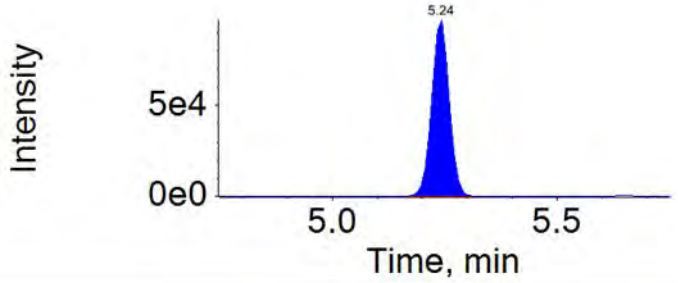
Extraction Standard: E13C8-PFOA
421.0 / 376.0



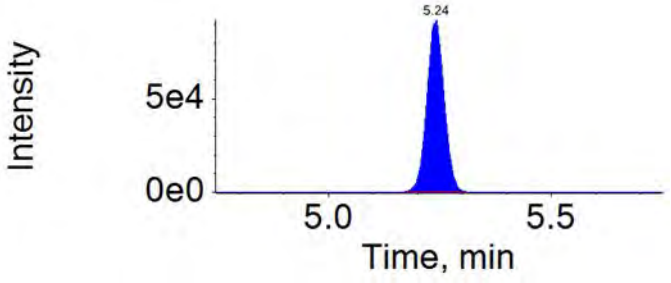
Injection Standard: 13C2-PFOA
415.0 / 370.0



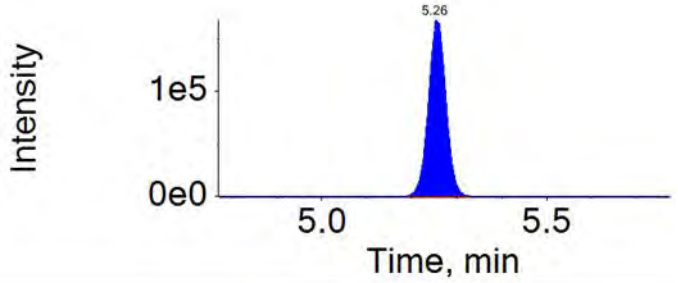
Extraction Standard: E13C8-PFOS
507.0 / 80.0



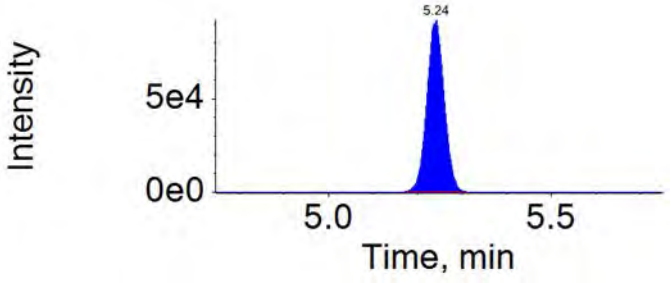
Injection Standard: 13C4-PFOS
503.0 / 80.0



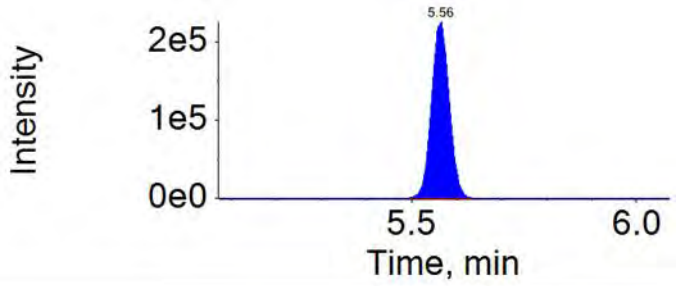
Extraction Standard: E13C9-PFNA
472.0 / 427.0



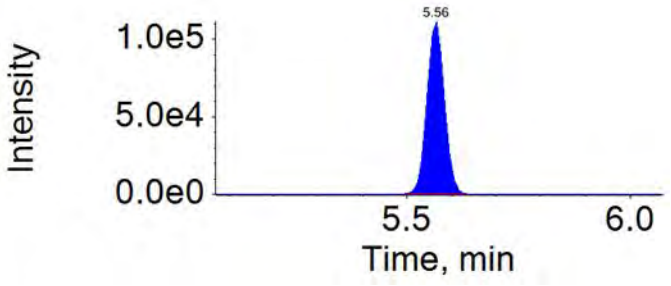
Injection Standard: 13C4-PFOS
503.0 / 80.0



Extraction Standard: E13C6-PFDA
519.0 / 474.0



Injection Standard: 13C2-PFDA
515.0 / 470.0

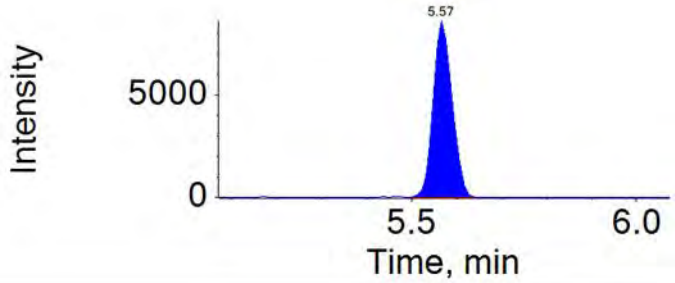


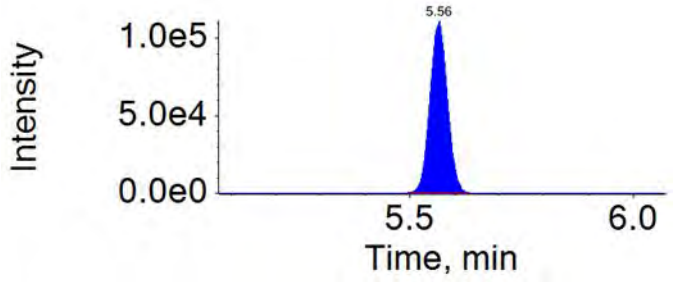
APPROVED
By JPT at 10:19 am, 11/14/18

REVIEWED
By HMK at 12:08 pm, 11/15/18

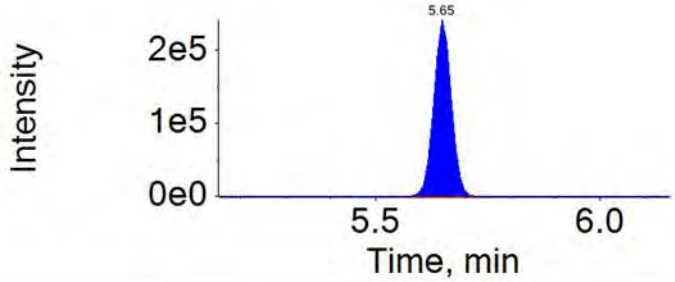
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV13DCCV6-10 11/14/2018 9:23:22 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

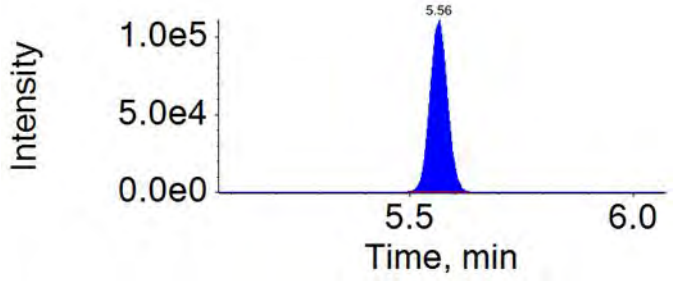
Extraction Standard: E13C2-8:2-FTS	Injection Standard: 13C2-PFDA
529.0 / 81.0	515.0 / 470.0



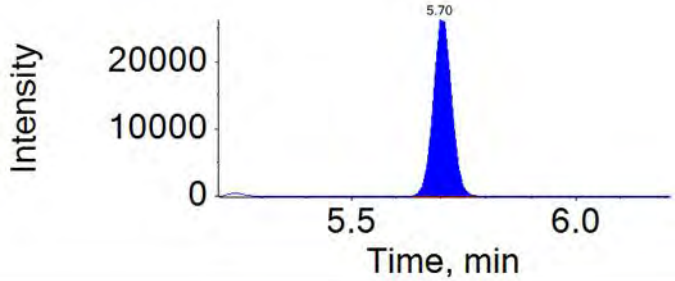


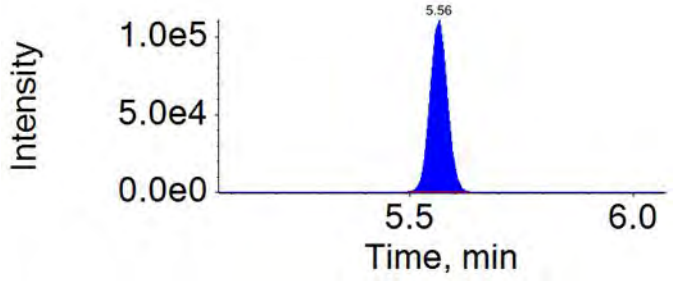
Extraction Standard: E13C8-PFOSA	Injection Standard: 13C2-PFDA
506.0 / 78.0	515.0 / 470.0



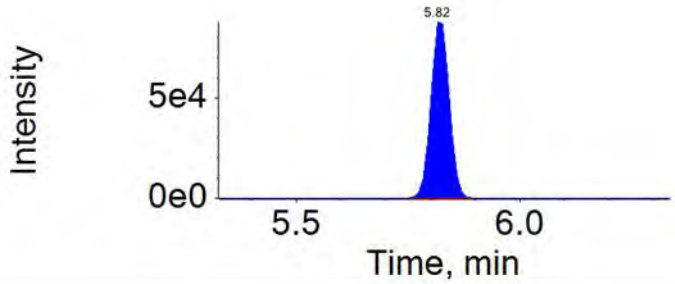


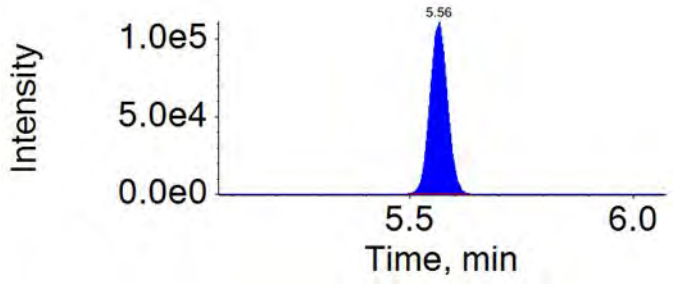
Extraction Standard: Ed3-NMeFOSAA	Injection Standard: 13C2-PFDA
573.0 / 419.0	515.0 / 470.0





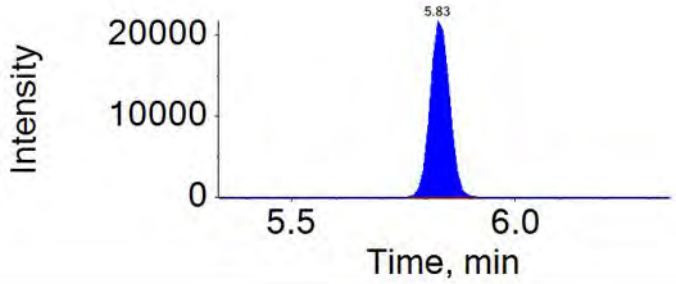
Extraction Standard: E13C7-PFUnDA	Injection Standard: 13C2-PFDA
570.0 / 525.0	515.0 / 470.0

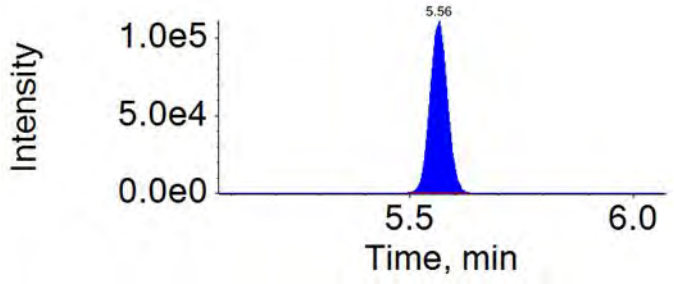




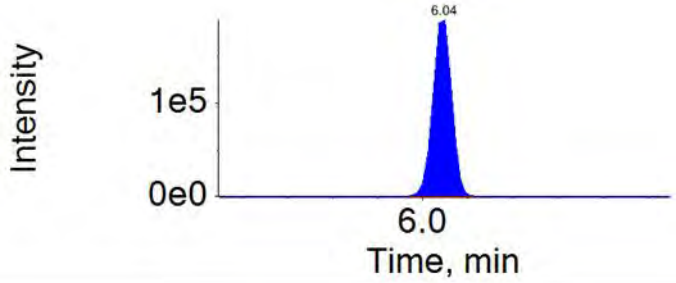
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV13DCCV6-10 11/14/2018 9:23:22 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

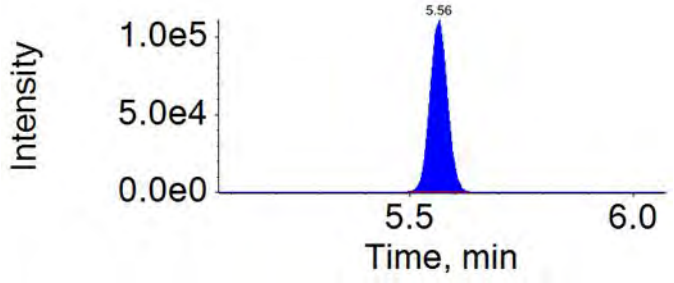
Extraction Standard: Ed5-NEtFOSAA	Injection Standard: 13C2-PFDA
589.0 / 419.0	515.0 / 470.0



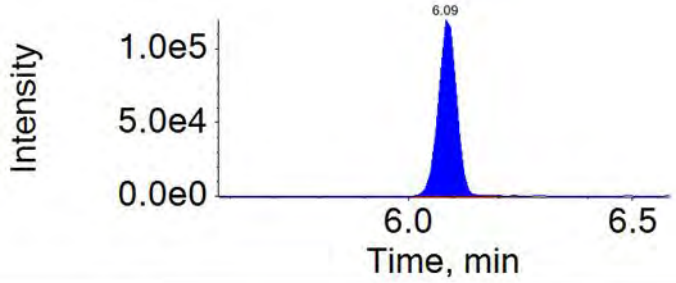


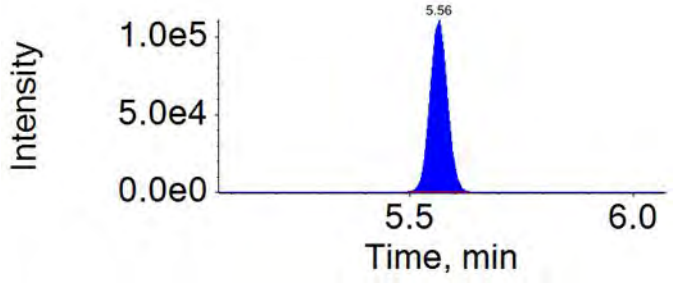
Extraction Standard: E13C2-PFDoDA	Injection Standard: 13C2-PFDA
615.0 / 570.0	515.0 / 470.0



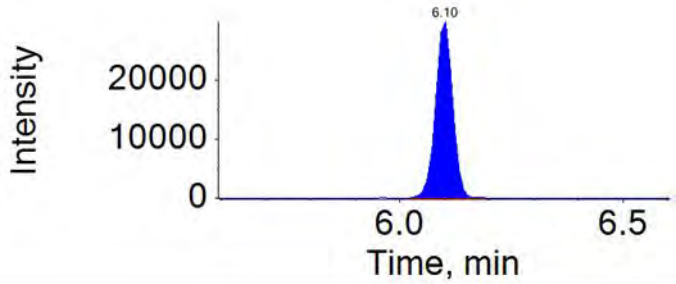


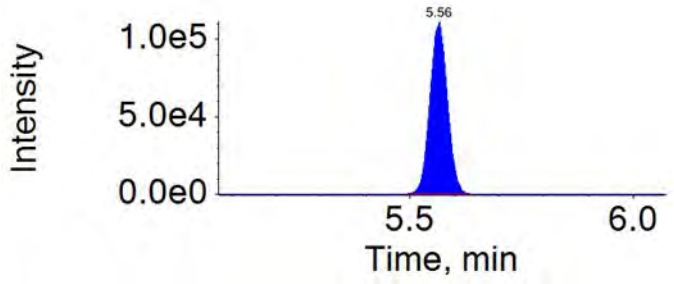
Extraction Standard: Ed7-NMePFOSAE	Injection Standard: 13C2-PFDA
623.0 / 59.0	515.0 / 470.0





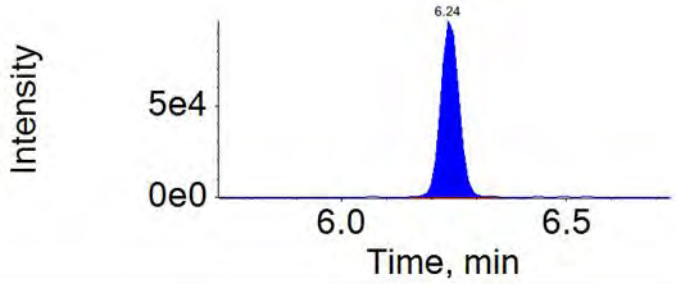
Extraction Standard: Ed3-NMePFOSA	Injection Standard: 13C2-PFDA
515.0 / 169.0	515.0 / 470.0

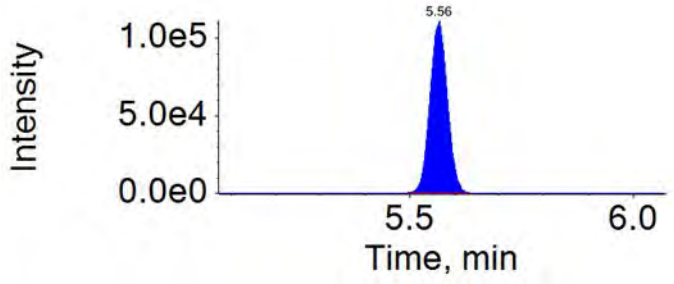




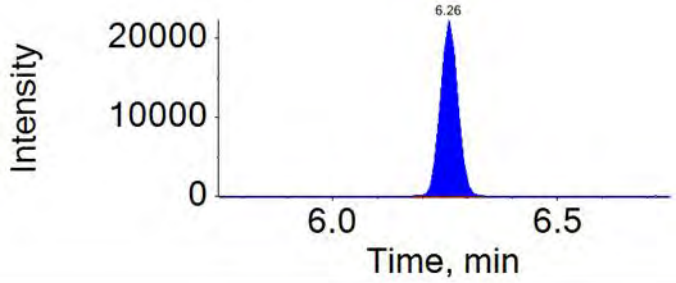
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV13DCCV6-10 11/14/2018 9:23:22 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

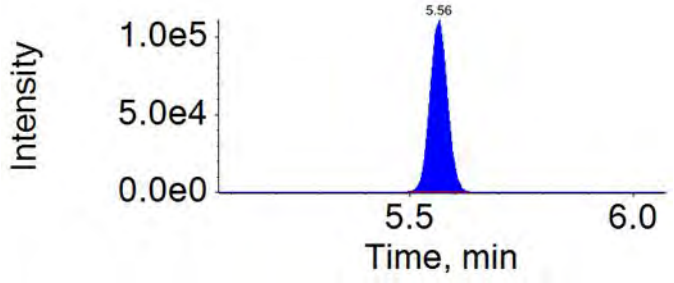
Extraction Standard: Ed9-NEtPFOSAE	Injection Standard: 13C2-PFDA
639.0 / 59.0	515.0 / 470.0



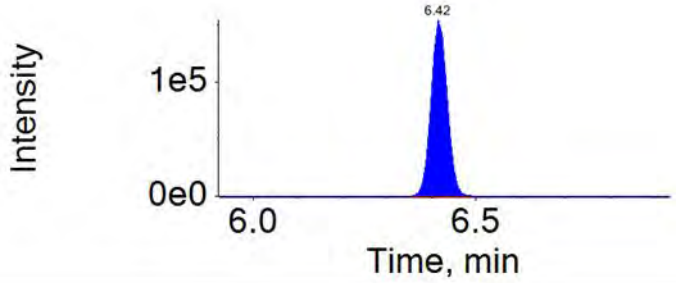


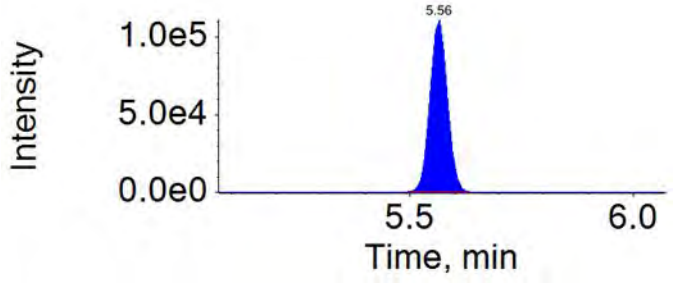
Extraction Standard: Ed5-NEtPFOSA	Injection Standard: 13C2-PFDA
531.0 / 169.0	515.0 / 470.0





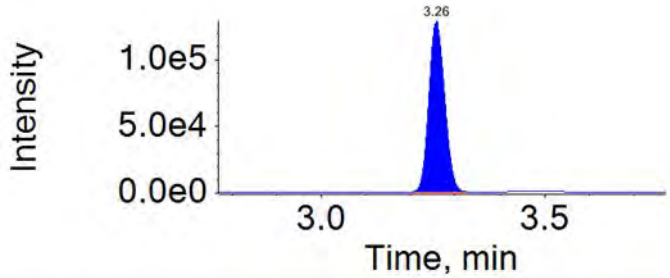
Extraction Standard: E13C2-PFTeDA	Injection Standard: 13C2-PFDA
715.0 / 670.0	515.0 / 470.0



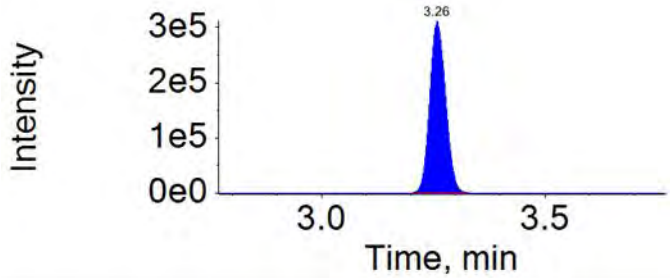


ICAL Name: 18NOV12DCAL **Result Table:** 18NOV13DCCV6-10 11/14/2018 9:23:22 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

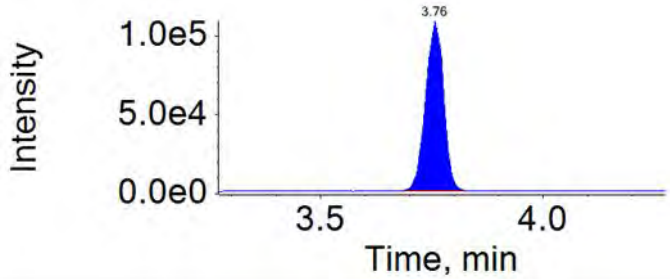
Analyte: PFBA
213.0 / 169.0



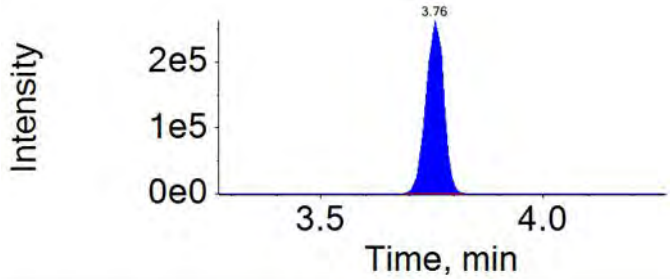
Extraction Standard: 13C4-PFBA
217.0 / 172.0



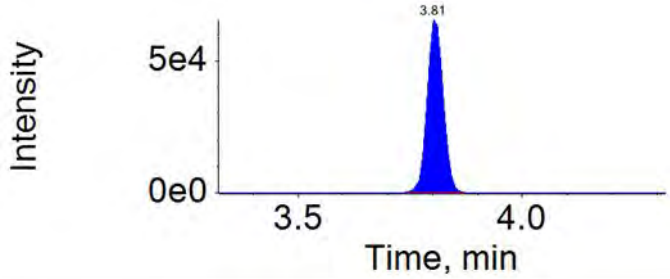
Analyte: PFPeA
263.0 / 219.0



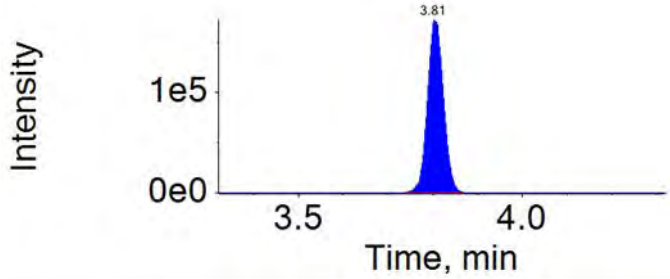
Extraction Standard: 13C5-PFPeA
268.0 / 223.0



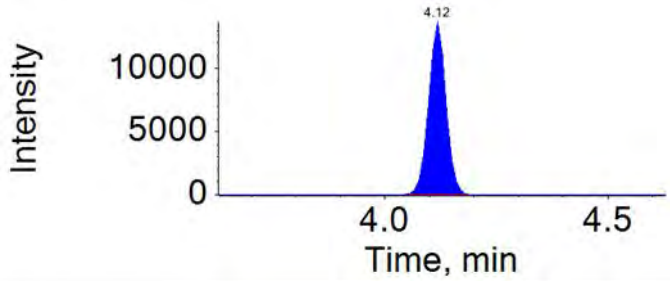
Analyte: PFBS
299.0 / 80.0



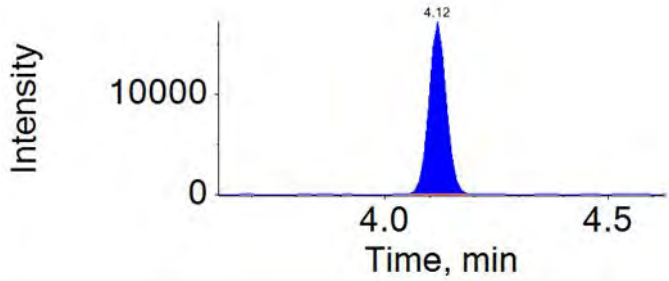
Extraction Standard: 13C3-PFBS
302.0 / 80.0



Analyte: 4:2-FTS
327.0 / 307.0



Extraction Standard: 13C2-4:2-FTS
329.0 / 81.0

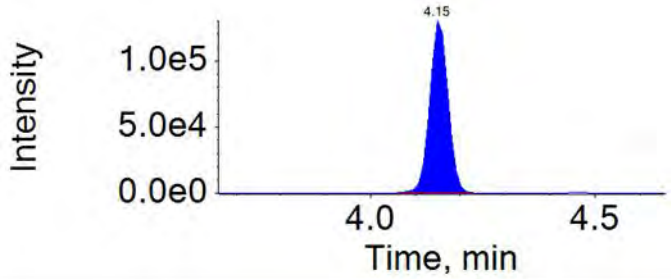


APPROVED
By JPT at 10:19 am, 11/14/18

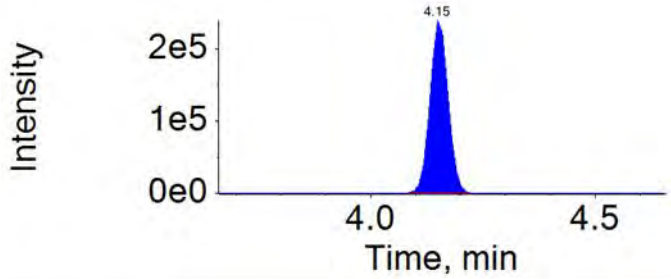
REVIEWED
By HMK at 12:08 pm, 11/15/18

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV13DCCV6-10 11/14/2018 9:23:22 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

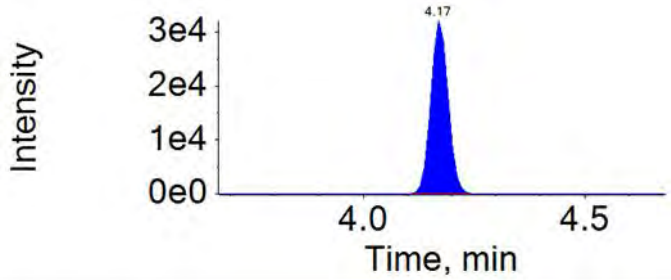
Analyte: PFHxA
313.0 / 269.0



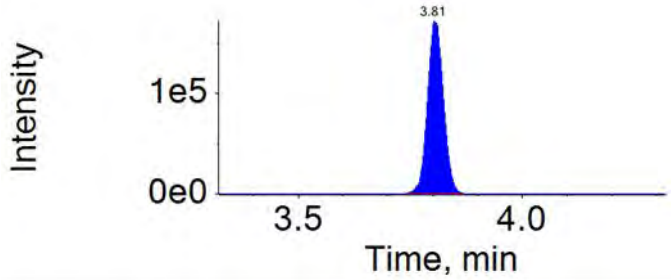
Extraction Standard: 13C5-PFHxA
318.0 / 273.0



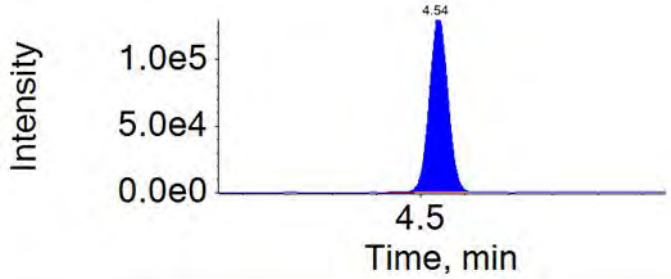
Analyte: PFPeS
349.0 / 80.0



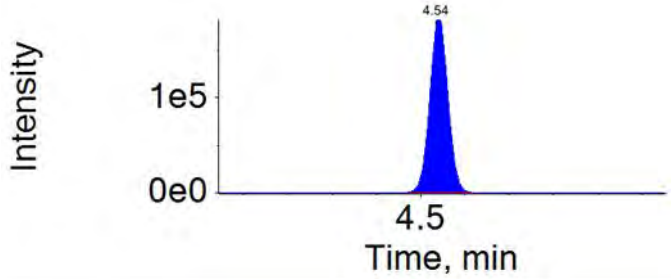
Extraction Standard: 13C3-PFBS
302.0 / 80.0



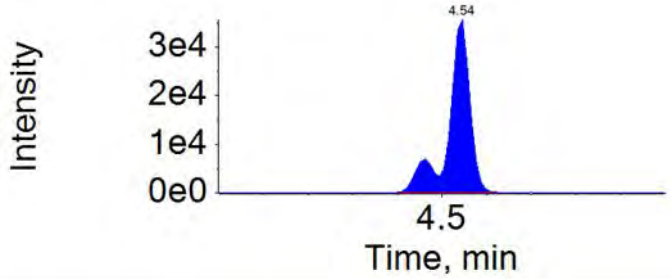
Analyte: PFHpA
363.0 / 319.0



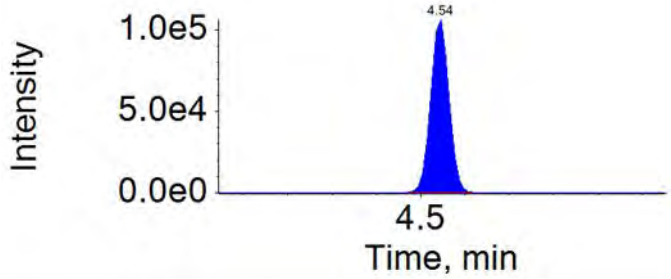
Extraction Standard: 13C4-PFHpA
367.0 / 322.0



Analyte: PFHxS
399.0 / 80.0



Extraction Standard: 13C3-PFHxS
402.0 / 80.0

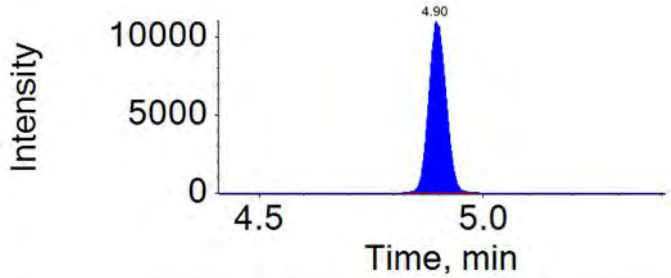


APPROVED
By JPT at 10:19 am, 11/14/18

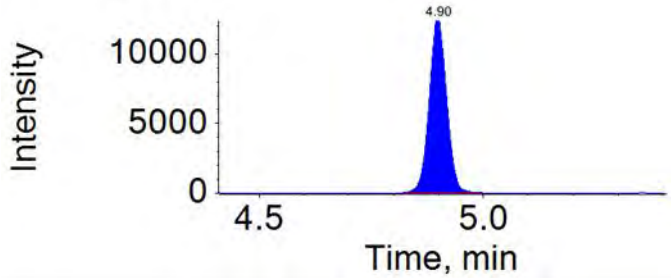
REVIEWED
By HMK at 12:08 pm, 11/15/18

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV13DCCV6-10 11/14/2018 9:23:22 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

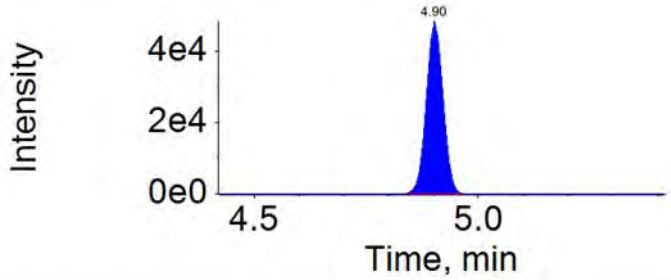
Analyte: 6:2-FTS
427.0 / 407.0



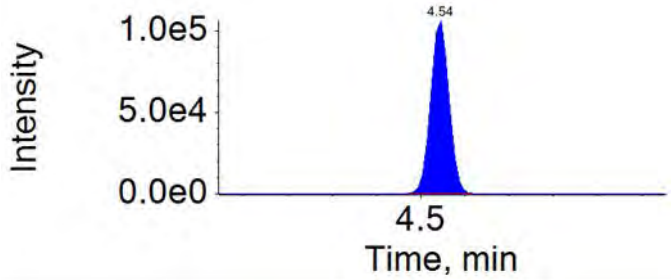
Extraction Standard: 13C2-6:2-FTS
429.0 / 81.0



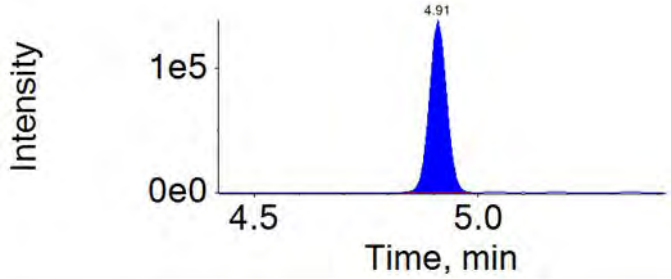
Analyte: PFHpS
449.0 / 80.0



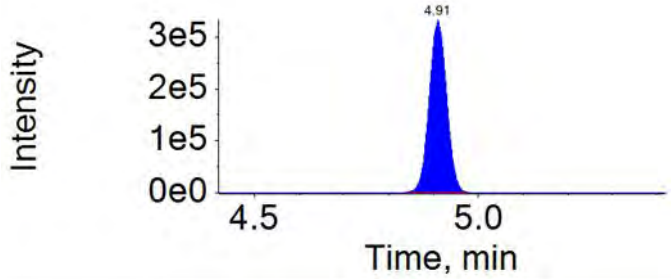
Extraction Standard: 13C3-PFHxS
402.0 / 80.0



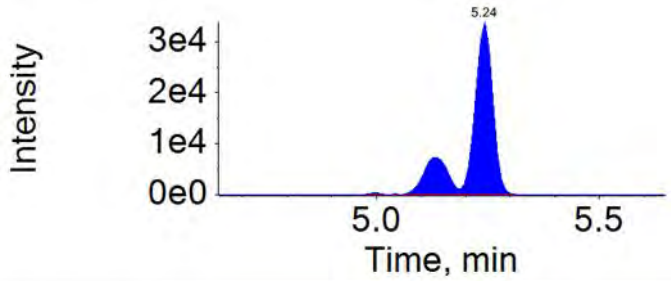
Analyte: PFOA
413.0 / 369.0



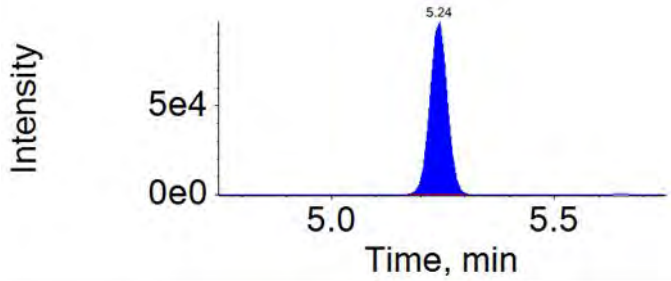
Extraction Standard: 13C8-PFOA
421.0 / 376.0



Analyte: PFOS
499.0 / 80.0



Extraction Standard: 13C8-PFOS
507.0 / 80.0

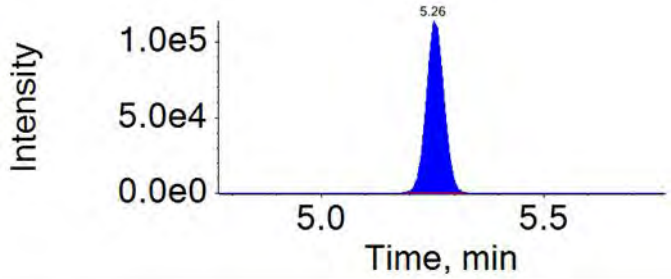


APPROVED
By JPT at 10:19 am, 11/14/18

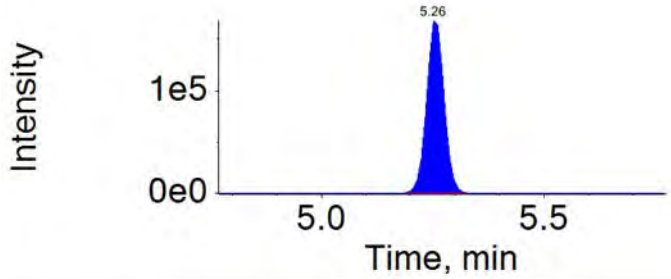
REVIEWED
By HMK at 12:08 pm, 11/15/18

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV13DCCV6-10 11/14/2018 9:23:22 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

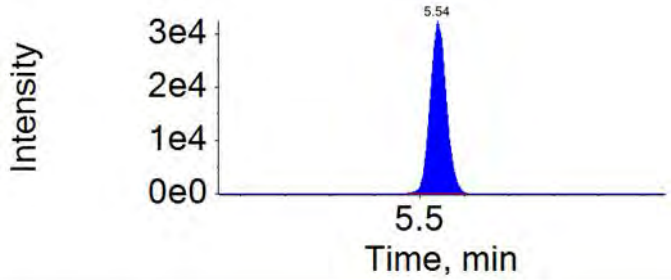
Analyte: PFNA
463.0 / 419.0



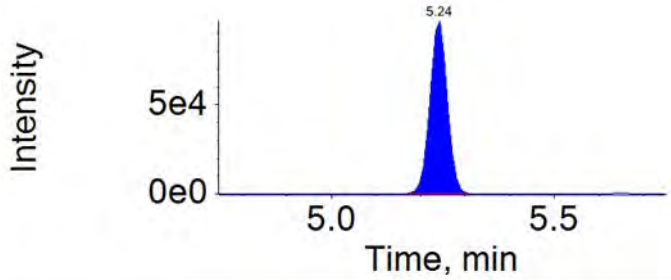
Extraction Standard: 13C9-PFNA
472.0 / 427.0



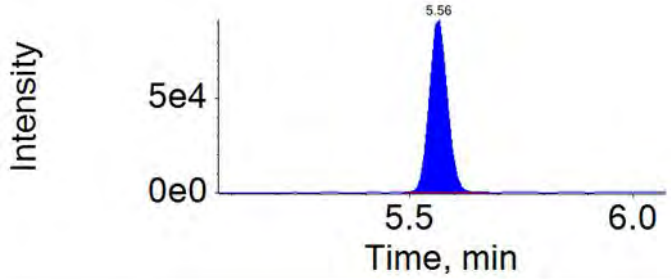
Analyte: PFNS
549.0 / 80.0



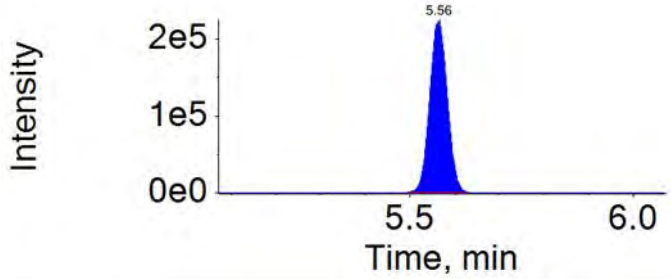
Extraction Standard: 13C8-PFOS
507.0 / 80.0



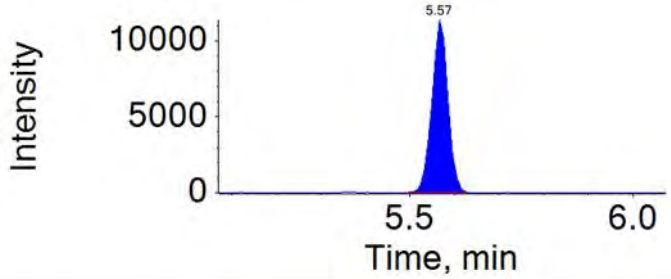
Analyte: PFDA
513.0 / 469.0



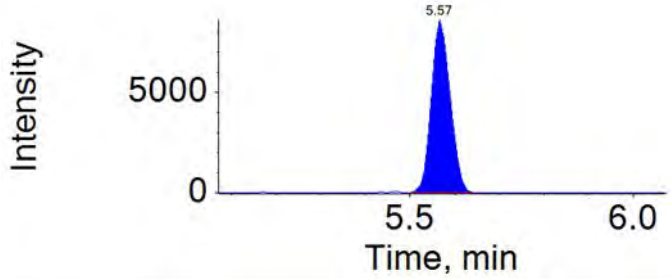
Extraction Standard: 13C6-PFDA
519.0 / 474.0



Analyte: 8:2-FTS
527.0 / 507.0



Extraction Standard: 13C2-8:2-FTS
529.0 / 81.0

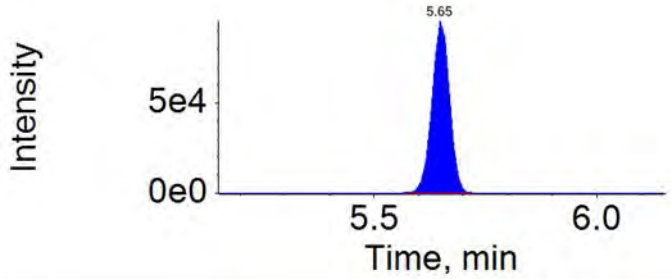


APPROVED
By JPT at 10:19 am, 11/14/18

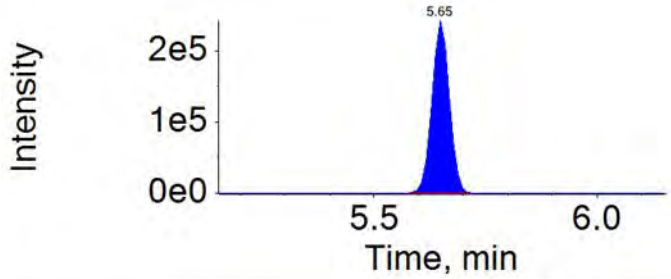
REVIEWED
By HMK at 12:08 pm, 11/15/18

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV13DCCV6-10 11/14/2018 9:23:22 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

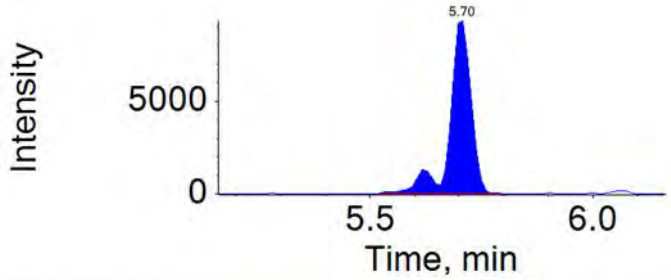
Analyte: PFOSA
498.0 / 78.0



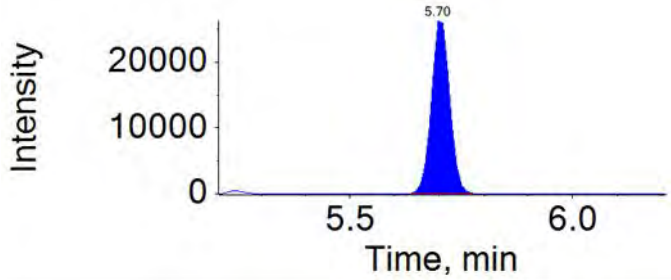
Extraction Standard: 13C8-PFOSA
506.0 / 78.0



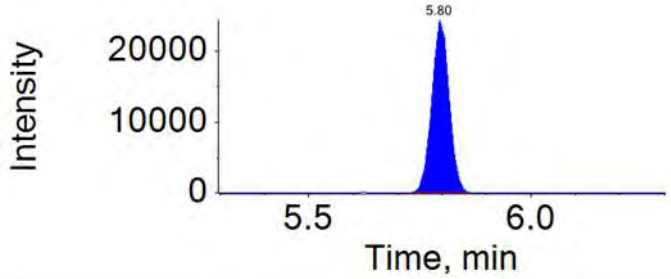
Analyte: NMeFOSAA
570.0 / 419.0



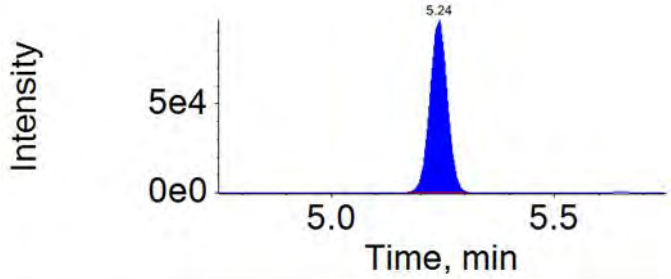
Extraction Standard: d3-NMeFOSAA
573.0 / 419.0



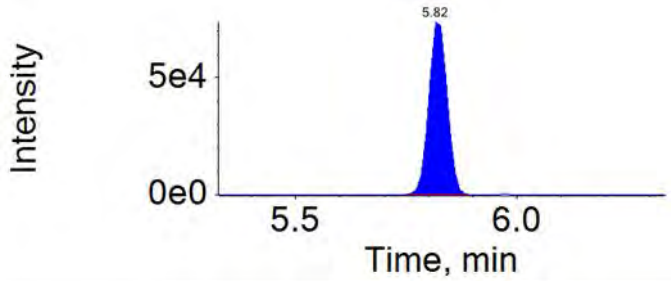
Analyte: PFDS
599.0 / 80.0



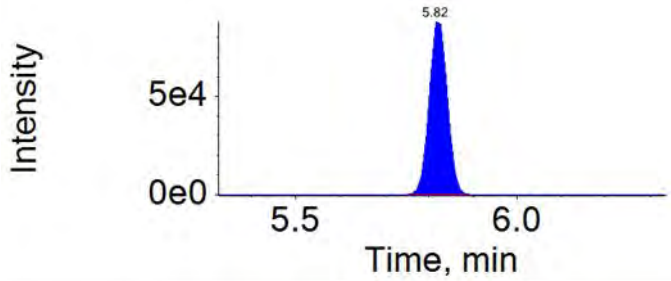
Extraction Standard: 13C8-PFOS
507.0 / 80.0



Analyte: PFUnDA
563.0 / 519.0



Extraction Standard: 13C7-PFUnDA
570.0 / 525.0

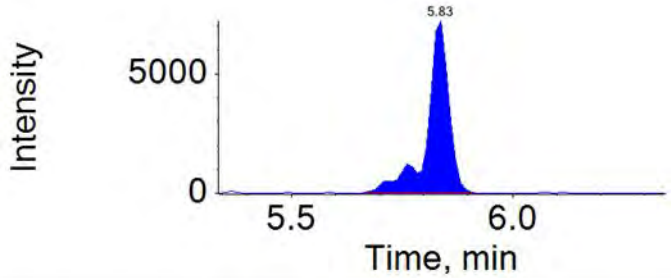


APPROVED
By JPT at 10:19 am, 11/14/18

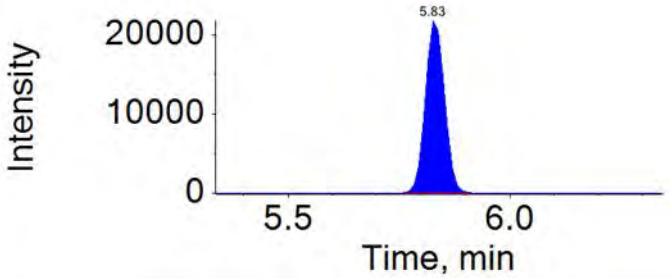
REVIEWED
By HMK at 12:08 pm, 11/15/18

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV13DCCV6-10 11/14/2018 9:23:22 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

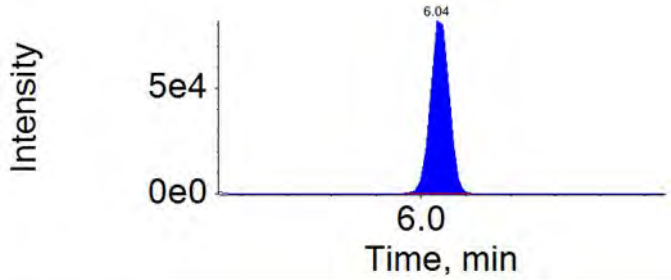
Analyte: NEtFOSAA
584.0 / 419.0



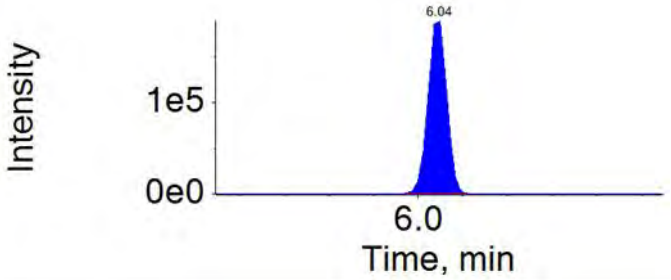
Extraction Standard: d5-NEtFOSAA
589.0 / 419.0



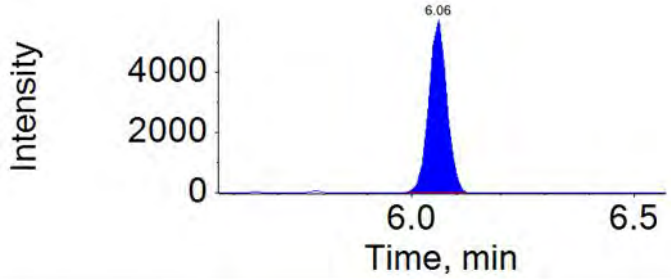
Analyte: PFDoDA
613.0 / 569.0



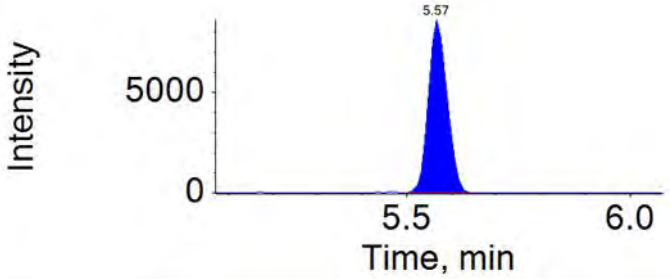
Extraction Standard: 13C2-PFDoDA
615.0 / 570.0



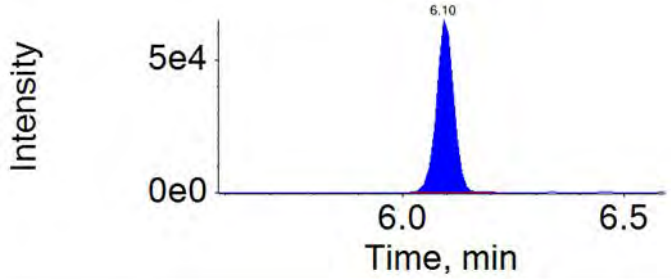
Analyte: 10:2-FTS
627.0 / 607.0



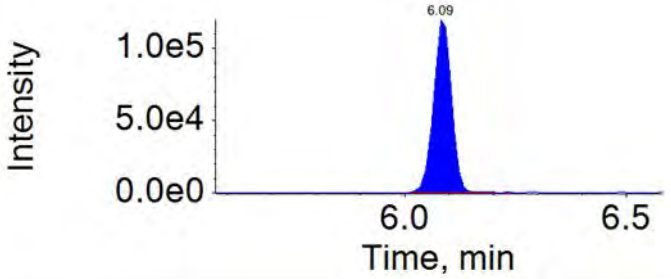
Extraction Standard: 13C2-8:2-FTS
529.0 / 81.0



Analyte: NMePFOSAE
616.0 / 59.0



Extraction Standard: d7-NMePFOSAE
623.0 / 59.0

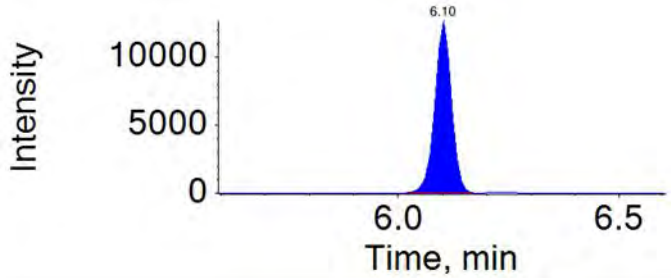


APPROVED
By JPT at 10:19 am, 11/14/18

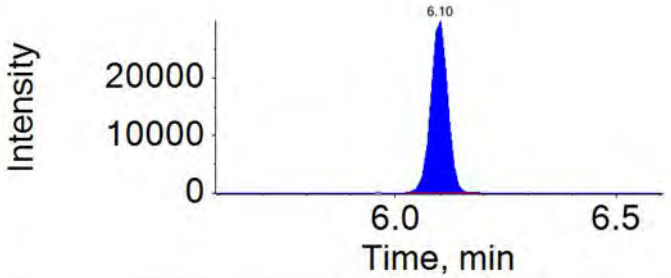
REVIEWED
By HMK at 12:08 pm, 11/15/18

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV13DCCV6-10 11/14/2018 9:23:22 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

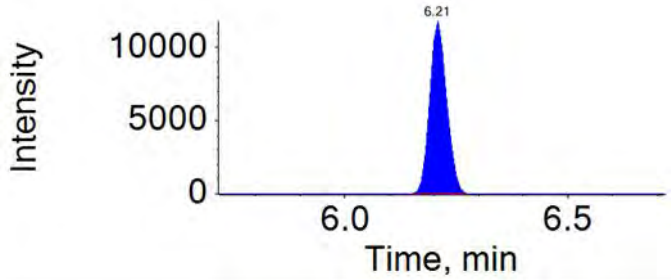
Analyte: NMePFOSA
512.0 / 169.0



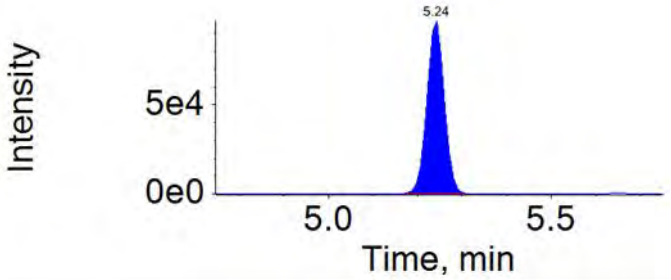
Extraction Standard: d3-NMePFOSA
515.0 / 169.0



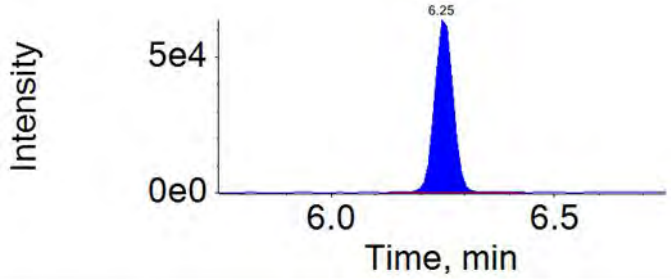
Analyte: PFDoS
699.0 / 80.0



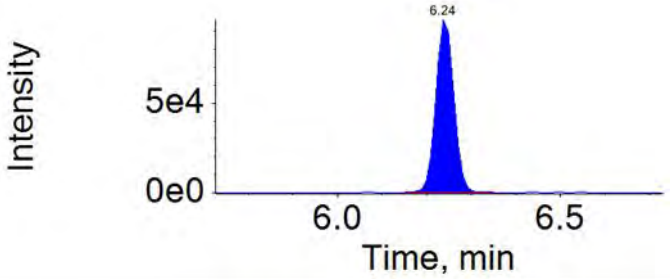
Extraction Standard: 13C8-PFOS
507.0 / 80.0



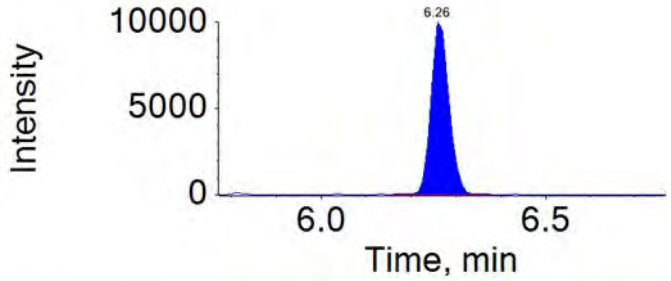
Analyte: NEtPFOSAE
630.0 / 59.0



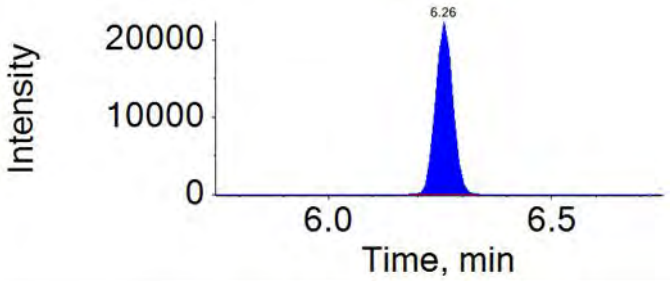
Extraction Standard: d9-NEtPFOSAE
639.0 / 59.0



Analyte: NEtPFOSA
526.0 / 169.0



Extraction Standard: d5-NEtPFOSA
531.0 / 169.0

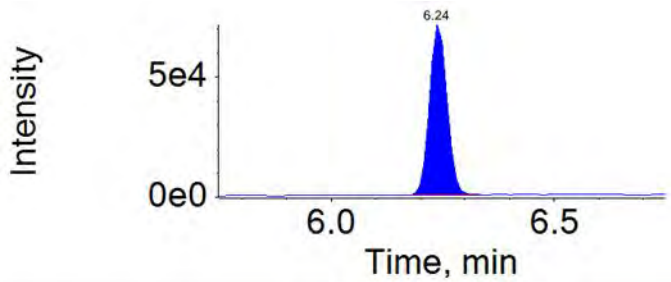


APPROVED
By JPT at 10:19 am, 11/14/18

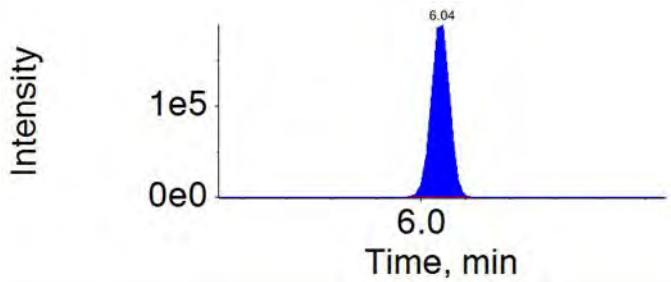
REVIEWED
By HMK at 12:08 pm, 11/15/18

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV13DCCV6-10 11/14/2018 9:23:22 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

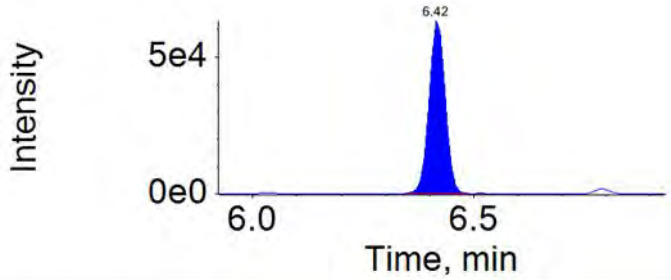
Analyte: PFTrDA
663.0 / 619.0



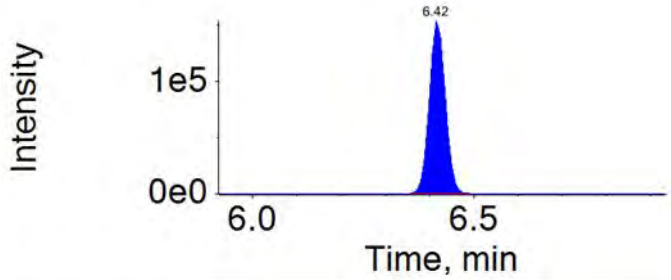
Extraction Standard: 13C2-PFDoDA
615.0 / 570.0



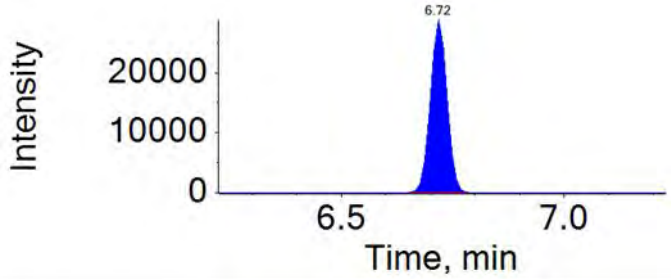
Analyte: PFTeDA
713.0 / 669.0



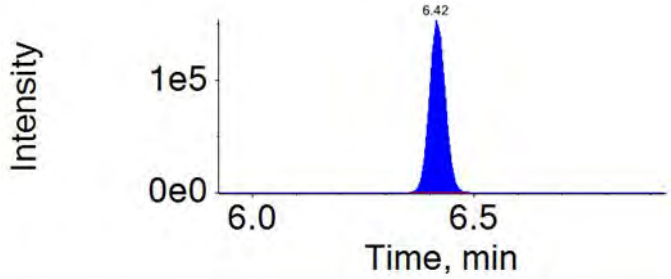
Extraction Standard: 13C2-PFTeDA
715.0 / 670.0



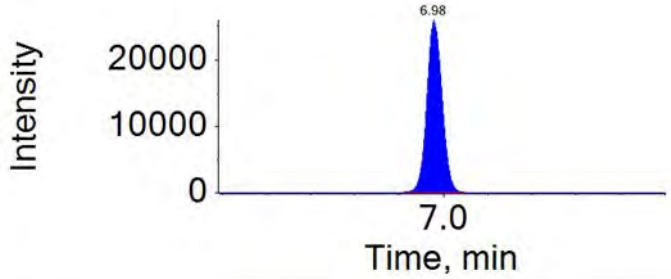
Analyte: PFHxDA
813.0 / 769.0



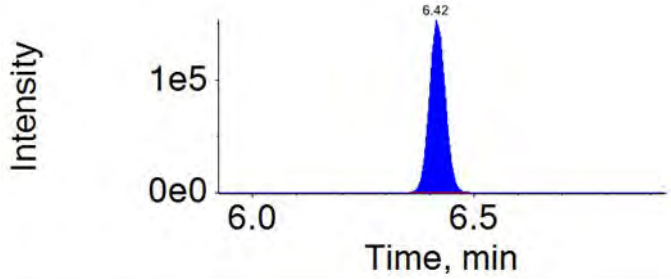
Extraction Standard: 13C2-PFTeDA
715.0 / 670.0



Analyte: PFODA
913.0 / 869.0



Extraction Standard: 13C2-PFTeDA
715.0 / 670.0



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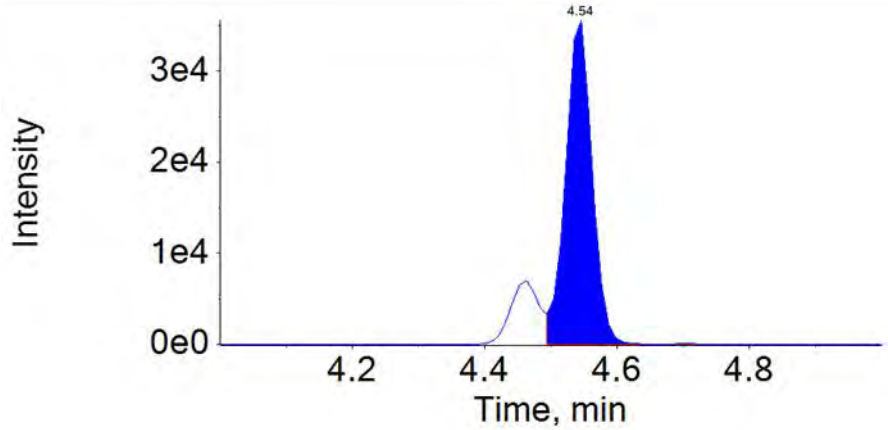
Auto Integrations prior to Manual Integration

Print Date: 11/14/2018 9:57 AM
Template: MQ-OrigInteg-16NOV21.docx

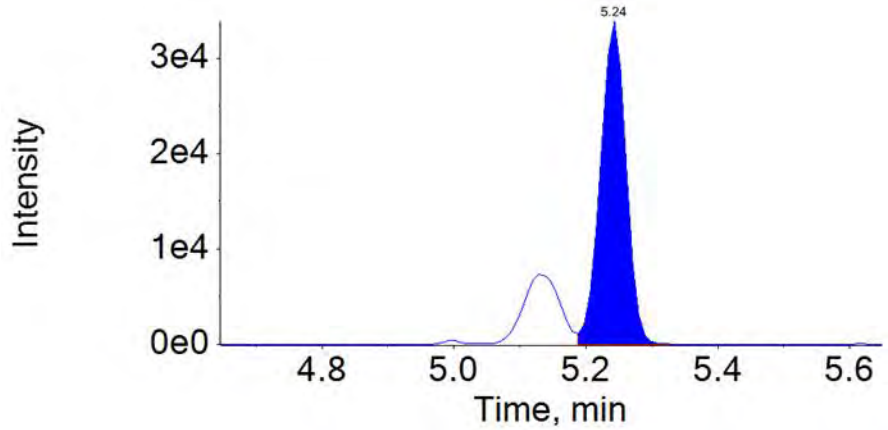
Results Table Name: 18NOV13DCCV6-10
Results Table Date: 11/14/2018 9:23:22 AM
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

Component Name:
PFHxS
RT (min.):
4.54
Peak Area:
99768.5
Mass Range:
399.0 / 80.0
File Name:
18NOV13D-75.wiff
Sample Name:
CCV8_CAL3



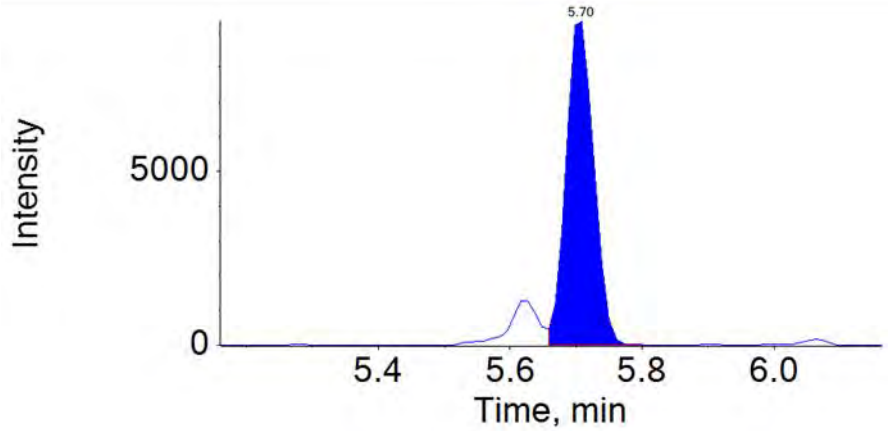
Integration Comment: incorrect integration

Component Name:
PFOS
RT (min.):
5.24
Peak Area:
91682.6
Mass Range:
499.0 / 80.0
File Name:
18NOV13D-75.wiff
Sample Name:
CCV8_CAL3



Integration Comment: incorrect integration

Component Name:
NMeFOSAA
RT (min.):
5.70
Peak Area:
27428.2
Mass Range:
570.0 / 419.0
File Name:
18NOV13D-75.wiff
Sample Name:
CCV8_CAL3



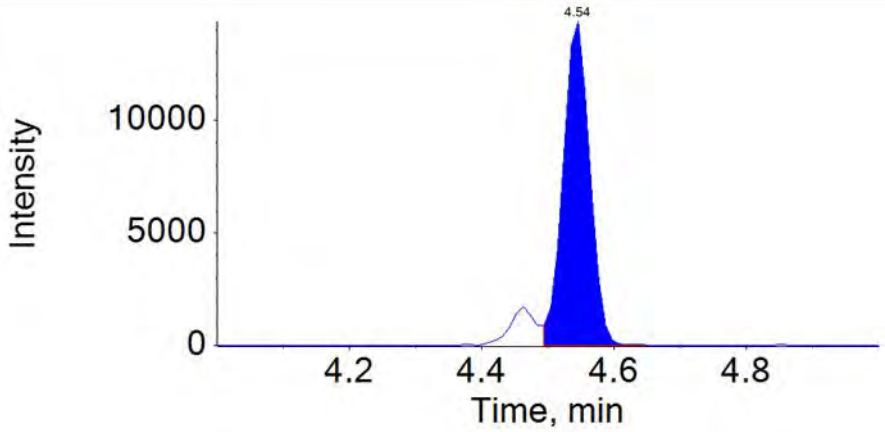
Integration Comment: incorrect integration

APPROVED
By JPT at 10:19 am, 11/14/18

REVIEWED
By HMK at 12:08 pm, 11/15/18

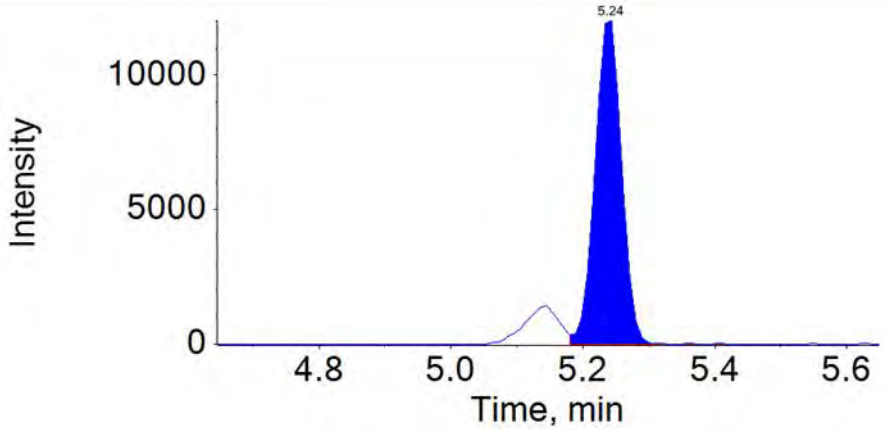
Results Table Name: 18NOV13DCCV6-10
Results Table Date: 11/14/2018 9:23:22 AM
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

Component Name:
PFHxS_2
RT (min.):
4.54
Peak Area:
40321.5
Mass Range:
399.0 / 99.0
File Name:
18NOV13D-75.wiff
Sample Name:
CCV8_CAL3



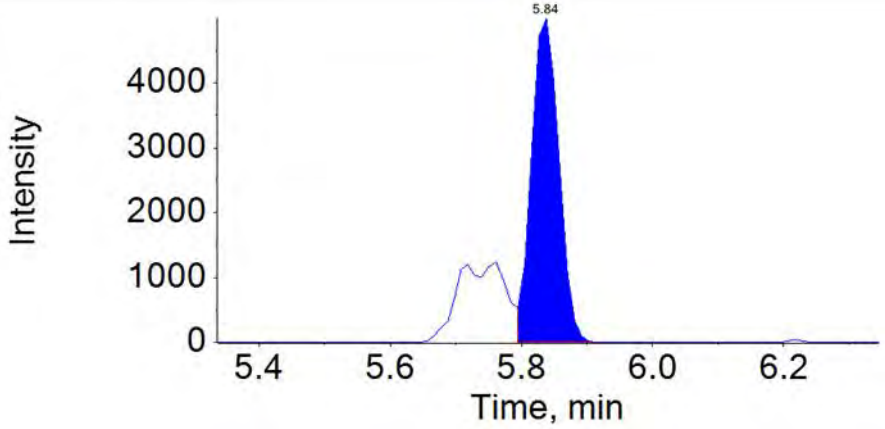
Integration Comment: incorrect integration

Component Name:
PFOS_2
RT (min.):
5.24
Peak Area:
33990.2
Mass Range:
499.0 / 99.0
File Name:
18NOV13D-75.wiff
Sample Name:
CCV8_CAL3



Integration Comment: incorrect integration

Component Name:
NEtFOSAA_2
RT (min.):
5.84
Peak Area:
14522.0
Mass Range:
584.0 / 526.0
File Name:
18NOV13D-75.wiff
Sample Name:
CCV8_CAL3



Integration Comment: incorrect integration

APPROVED
By JPT at 10:19 am, 11/14/18

REVIEWED
By HMK at 12:08 pm, 11/15/18

Results Table Name: 18NOV13DCCV6-10
Results Table Date: 11/14/2018 9:23:22 AM
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

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By HMK at 12:08 pm, 11/15/18

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LC-MS/MS Analysis Report

Printed: 11/14/2018 9:52:00 AM
Template: IonRatio18OCT10

Ion Ratio Report

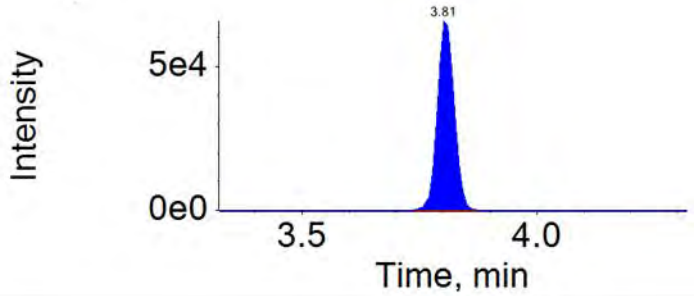
Sample Name: CCV8_CAL3 **Instrument Name:** LM27631 **File Name:** 18NOV13D-75.wiff

Component Name	RT	RRT	Analyte Area Response	Int Typ	Expected Ion Ratio	Ion Ratio	Ion Ratio % Diff	Ion Ratio Limit	Ion Ratio OOS
PFBS	3.81	1.00	163827.3	A	N/A	1.0000			
PFBS_2	3.81	1.00	60373.0	A	N/A	0.3685	1	50	
4:2-FTS	4.12	1.00	36732.1	A	N/A	1.0000			
4:2-FTS_2	4.12	1.00	23250.0	A	N/A	0.6330	-5	50	
PFHxA	4.15	1.00	368369.9	A	N/A	1.0000			
PFHxA_2	4.15	1.00	4248.8	A	N/A	0.0115	-2	50	
PFPeS	4.17	1.10	86830.0	A	N/A	1.0000			
PFPeS_2	4.17	1.10	45953.4	A	N/A	0.5292	2	50	
PFHpA	4.54	1.00	381648.1	A	N/A	1.0000			
PFHpA_2	4.54	1.00	18749.7	A	N/A	0.0491	-13	50	
PFHxS	4.54	1.00	120620.0	M	N/A	1.0000			
PFHxS_2	4.54	1.00	44988.2	M	N/A	0.3730	23	50	
6:2-FTS	4.90	1.00	29955.6	A	N/A	1.0000			
6:2-FTS_2	4.90	1.00	21994.6	A	N/A	0.7342	12	50	
PFHpS	4.90	1.08	124978.6	A	N/A	1.0000			
PFHpS_2	4.90	1.08	50847.1	A	N/A	0.4068	0	50	
PFOA	4.91	1.00	370871.7	A	N/A	1.0000			
PFOA_2	4.91	1.00	20675.2	A	N/A	0.0557	-2	50	
PFOS	5.24	1.00	121266.0	M	N/A	1.0000			
PFOS_2	5.24	1.00	39061.1	M	N/A	0.3221	25	50	
PFNA	5.26	1.00	316299.3	A	N/A	1.0000			
PFNA_2	5.26	1.00	6057.3	A	N/A	0.0192	-17	50	
PFNS	5.54	1.06	80029.9	A	N/A	1.0000			
PFNS_2	5.54	1.06	37067.0	A	N/A	0.4632	-3	50	
PFDA	5.56	1.00	256216.2	A	N/A	1.0000			
PFDA_2	5.56	1.00	1458.0	A	N/A	0.0057	-28	50	
8:2-FTS	5.57	1.00	28382.5	A	N/A	1.0000			
8:2-FTS_2	5.56	1.00	11972.4	A	N/A	0.4218	-37	50	
NMeFOSAA	5.70	1.00	31495.4	M	N/A	1.0000			
NMeFOSAA_2	5.70	1.00	7762.9	A	N/A	0.2465	16	50	
PFDS	5.80	1.11	65705.8	A	N/A	1.0000			
PFDS_2	5.80	1.11	28381.3	A	N/A	0.4319	-15	50	
PFUnDA	5.82	1.00	213158.1	A	N/A	1.0000			
PFUnDA_2	5.82	1.00	843.7	A	N/A	0.0040	-5	50	
NEtFOSAA	5.83	1.00	24925.7	A	N/A	1.0000			
NEtFOSAA_2	5.84	1.00	20917.8	M	N/A	0.8392	45	50	
PFDoDA	6.04	1.00	240882.2	A	N/A	1.0000			
PFDoDA_2	6.04	1.00	2117.4	A	N/A	0.0088	-46	50	
10:2-FTS	6.06	1.09	15993.2	A	N/A	1.0000			
10:2-FTS_2	6.06	1.09	12912.6	A	N/A	0.8074	25	50	
PFTrDA	6.24	1.03	193853.2	A	N/A	1.0000			
PFTrDA_2	6.24	1.03	1588.7	A	N/A	0.0082	-11	50	
PFTeDA	6.42	1.00	160382.3	A	N/A	1.0000			
PFTeDA_2	6.42	1.00	954.2	A	N/A	0.0059	-7	50	
PFHxDA	6.72	1.05	74288.2	A	N/A	1.0000			
PFHxDA_2	6.72	1.05	4804.5	A	N/A	0.0647	-4	50	
PFODA	6.98	1.09	61455.0	A	N/A	1.0000			
PFODA_2	6.98	1.09	1528.5	A	N/A	0.0249	-8	50	

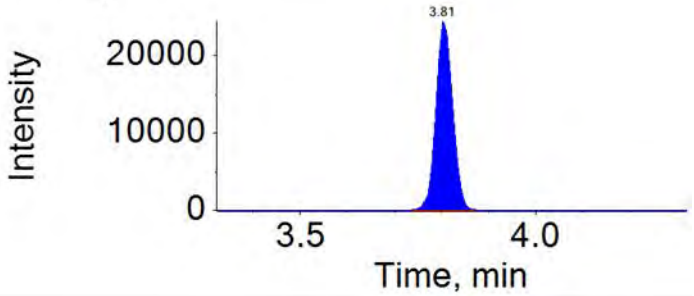
APPROVED
By JPT at 10:19 am, 11/14/18

REVIEWED
By HMK at 12:08 pm, 11/15/18

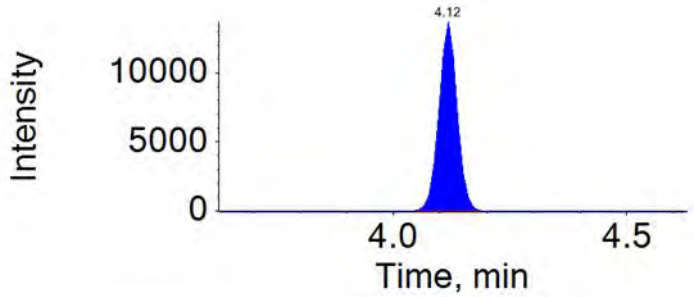
Component: PFBS
Primary Mass: 299.0 / 80.0



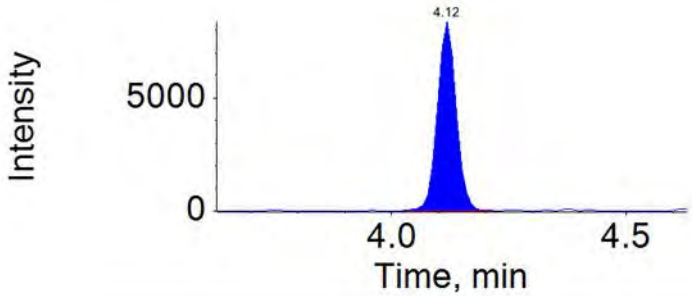
Component: PFBS_2
Secondary Mass: 299.0 / 99.0



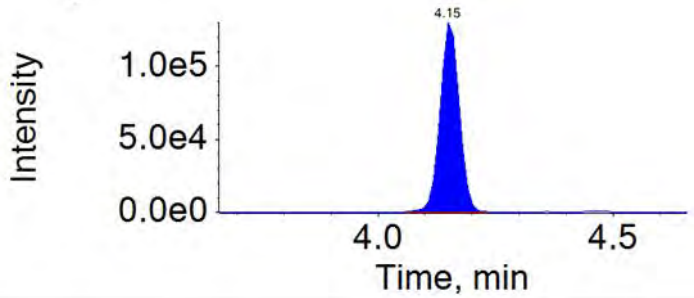
Component: 4:2-FTS
Primary Mass: 327.0 / 307.0



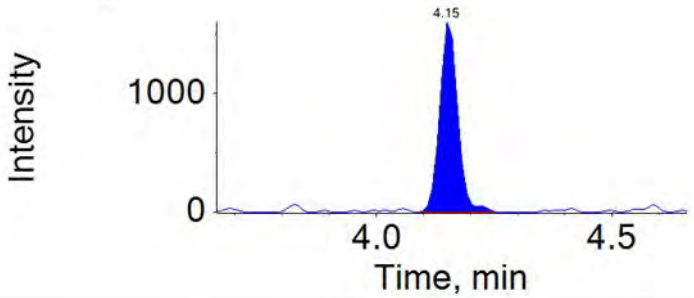
Component: 4:2-FTS_2
Secondary Mass: 327.0 / 81.0



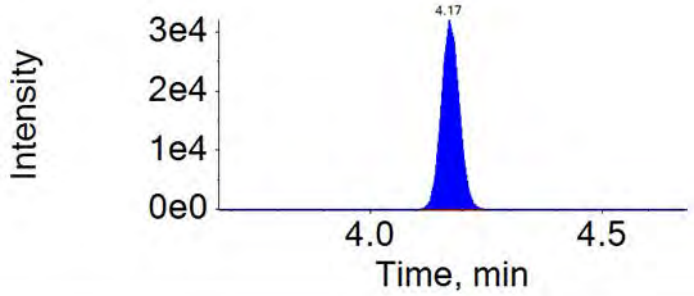
Component: PFHxA
Primary Mass: 313.0 / 269.0



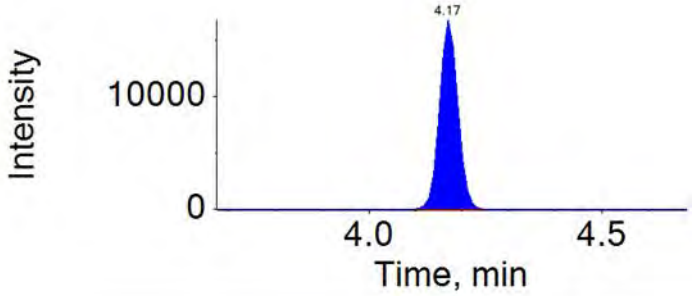
Component: PFHxA_2
Secondary Mass: 313.0 / 119.0



Component: PFPeS
Primary Mass: 349.0 / 80.0



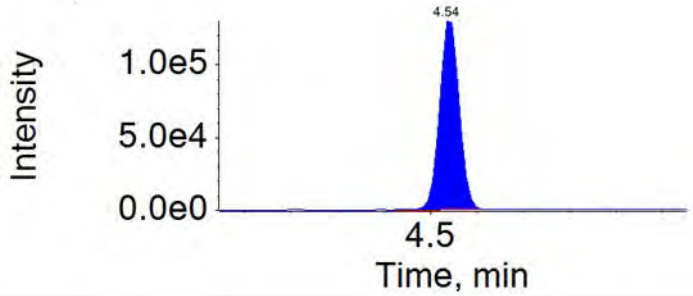
Component: PFPeS_2
Secondary Mass: 349.0 / 99.0



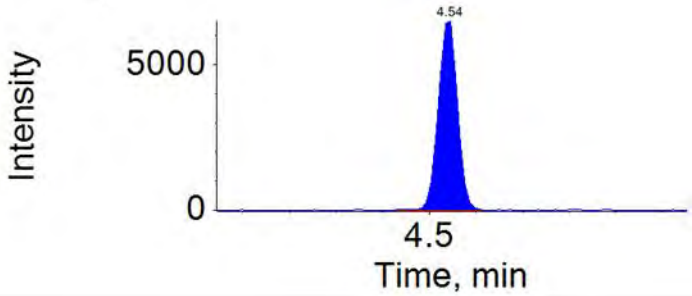
APPROVED
By JPT at 10:19 am, 11/14/18

REVIEWED
By HMK at 12:08 pm, 11/15/18

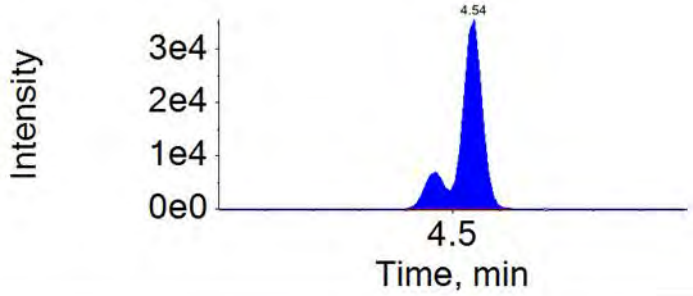
Component: PFHpA
Primary Mass: 363.0 / 319.0



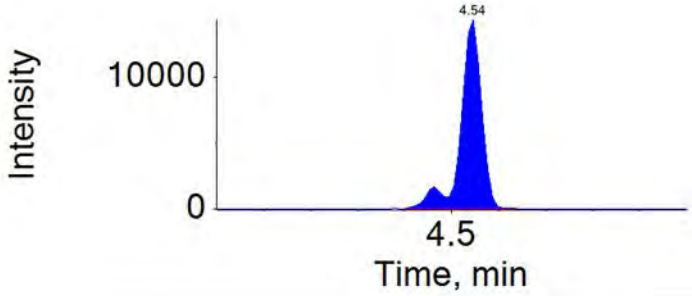
Component: PFHpA_2
Secondary Mass: 363.0 / 169.0



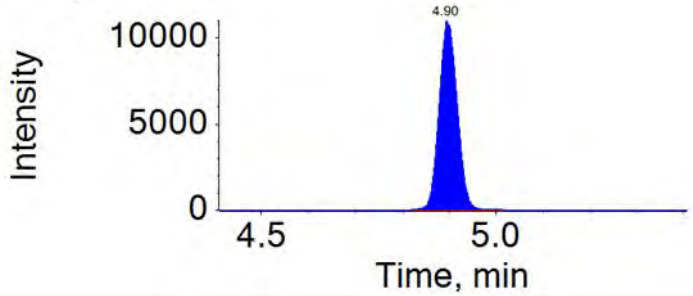
Component: PFHxS
Primary Mass: 399.0 / 80.0



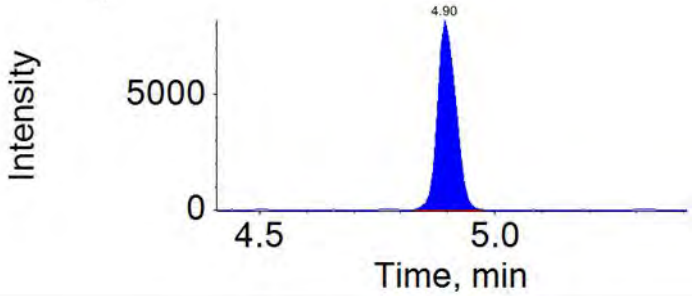
Component: PFHxS_2
Secondary Mass: 399.0 / 99.0



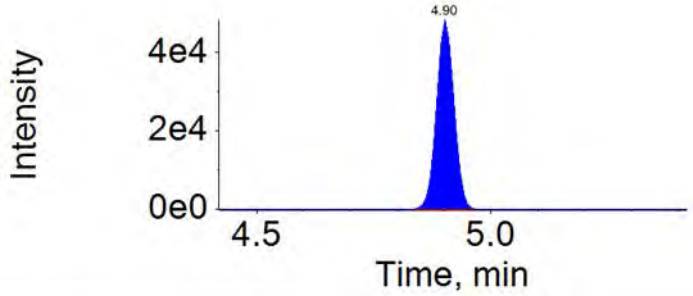
Component: 6:2-FTS
Primary Mass: 427.0 / 407.0



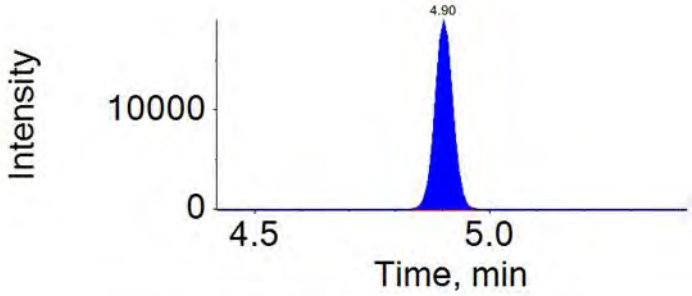
Component: 6:2-FTS_2
Secondary Mass: 427.0 / 81.0



Component: PFHpS
Primary Mass: 449.0 / 80.0



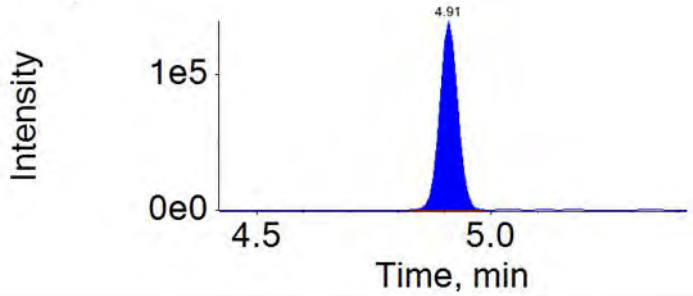
Component: PFHpS_2
Secondary Mass: 449.0 / 99.0



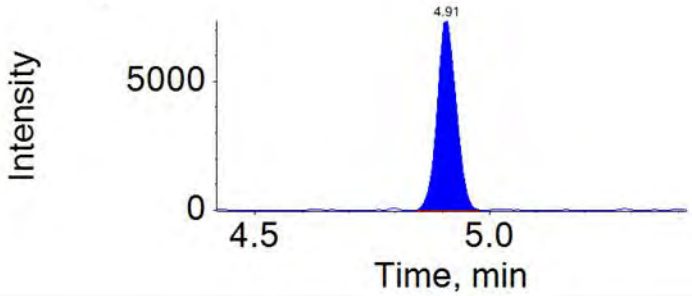
APPROVED
By JPT at 10:19 am, 11/14/18

REVIEWED
By HMK at 12:08 pm, 11/15/18

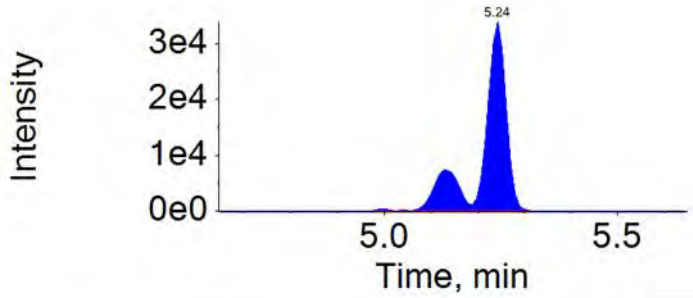
Component: PFOA
Primary Mass: 413.0 / 369.0



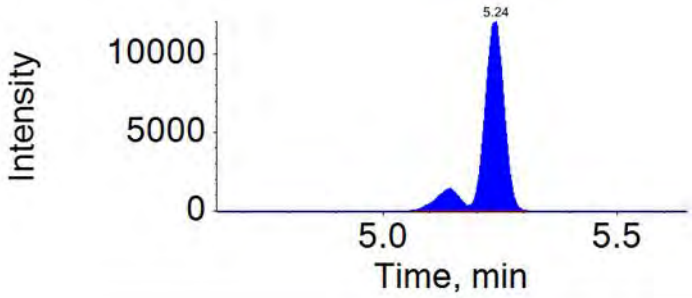
Component: PFOA_2
Secondary Mass: 413.0 / 169.0



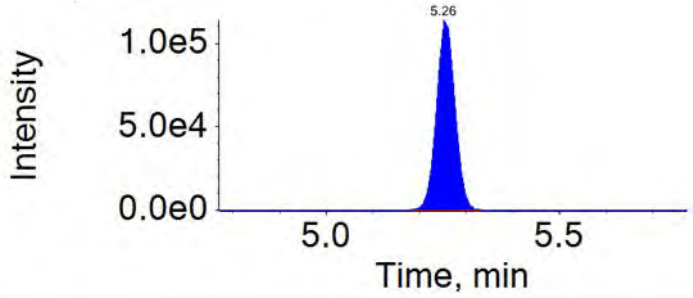
Component: PFOS
Primary Mass: 499.0 / 80.0



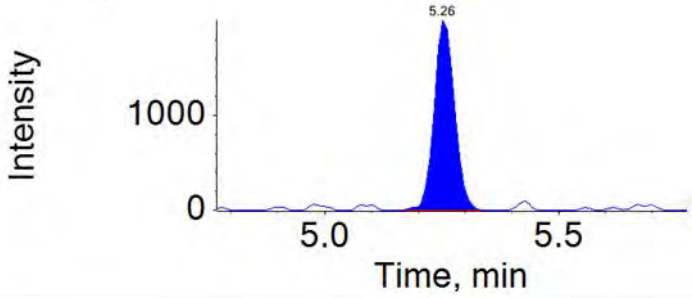
Component: PFOS_2
Secondary Mass: 499.0 / 99.0



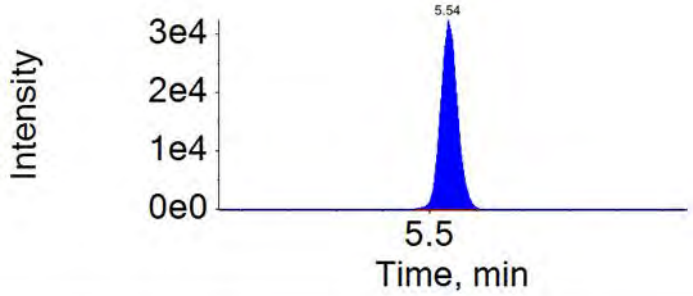
Component: PFNA
Primary Mass: 463.0 / 419.0



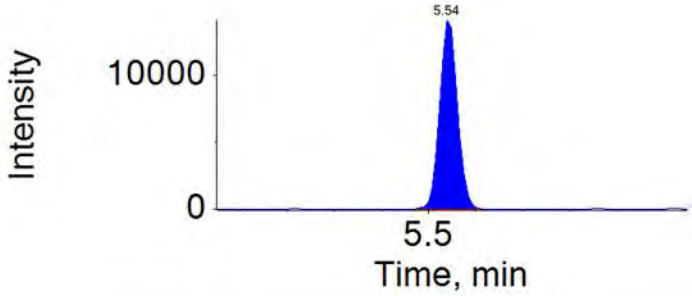
Component: PFNA_2
Secondary Mass: 463.0 / 169.0



Component: PFNS
Primary Mass: 549.0 / 80.0



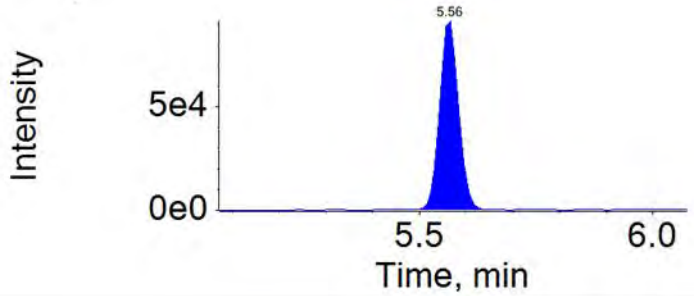
Component: PFNS_2
Secondary Mass: 549.0 / 99.0



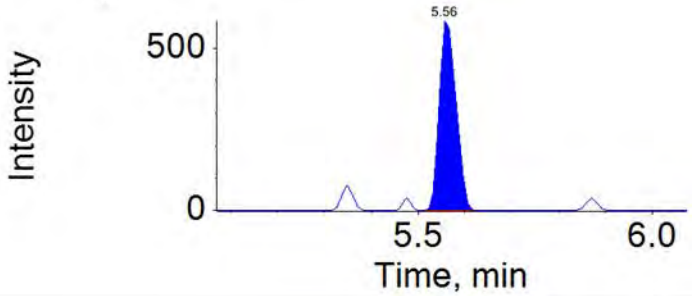
APPROVED
By JPT at 10:19 am, 11/14/18

REVIEWED
By HMK at 12:08 pm, 11/15/18

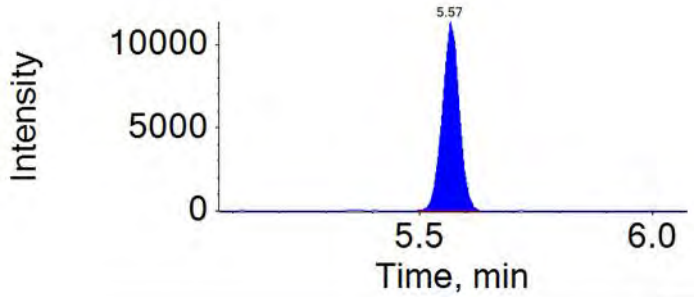
Component: PFDA
Primary Mass: 513.0 / 469.0



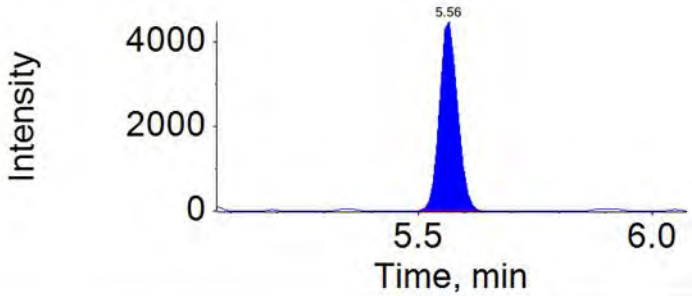
Component: PFDA_2
Secondary Mass: 513.0 / 169.0



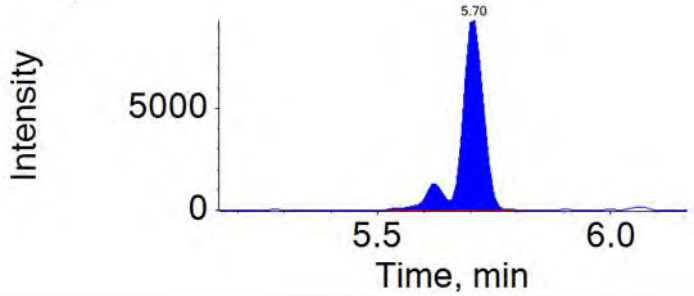
Component: 8:2-FTS
Primary Mass: 527.0 / 507.0



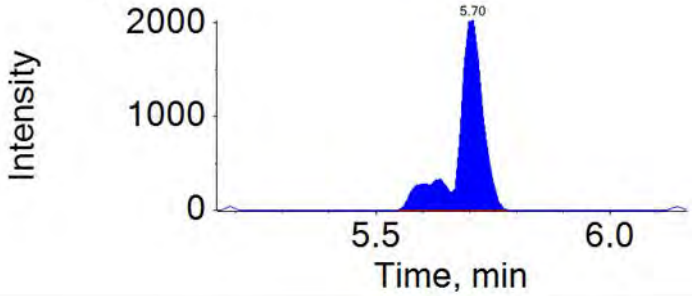
Component: 8:2-FTS_2
Secondary Mass: 527.0 / 81.0



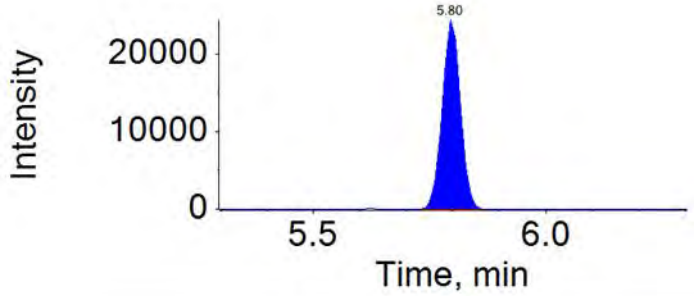
Component: NMeFOSAA
Primary Mass: 570.0 / 419.0



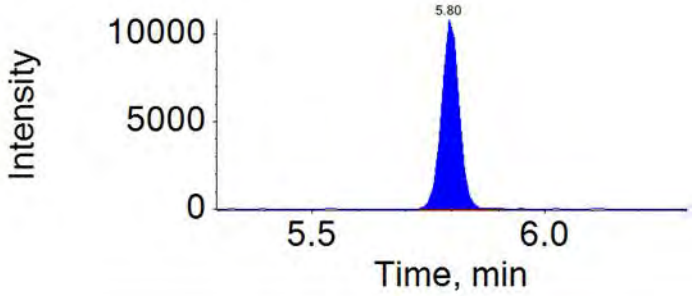
Component: NMeFOSAA_2
Secondary Mass: 570.0 / 483.0



Component: PFDS
Primary Mass: 599.0 / 80.0



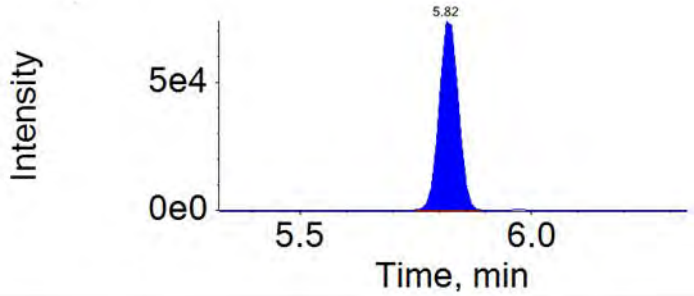
Component: PFDS_2
Secondary Mass: 599.0 / 99.0



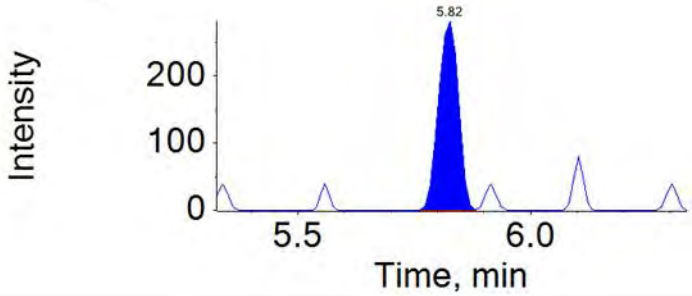
APPROVED
By JPT at 10:19 am, 11/14/18

REVIEWED
By HMK at 12:08 pm, 11/15/18

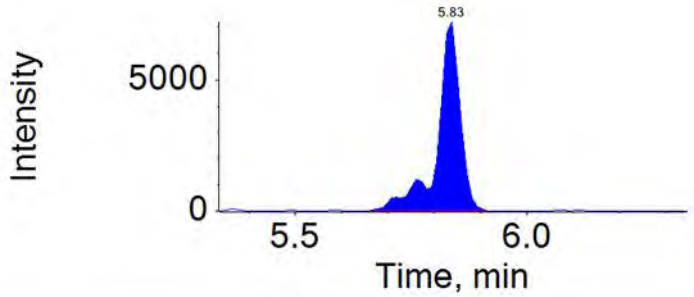
Component: PFUnDA
Primary Mass: 563.0 / 519.0



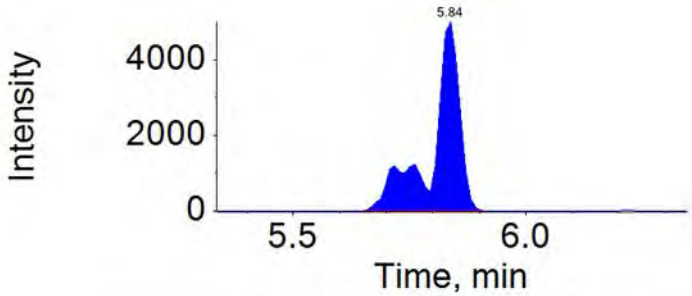
Component: PFUnDA_2
Secondary Mass: 563.0 / 169.0



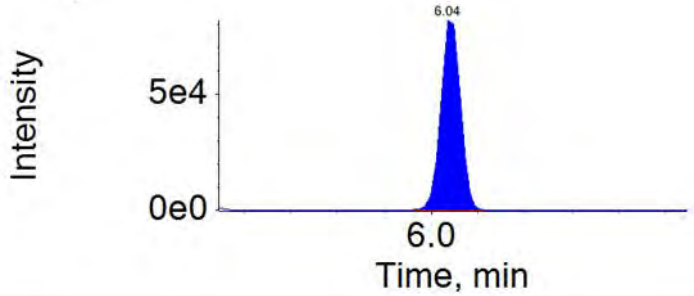
Component: NEtFOSAA
Primary Mass: 584.0 / 419.0



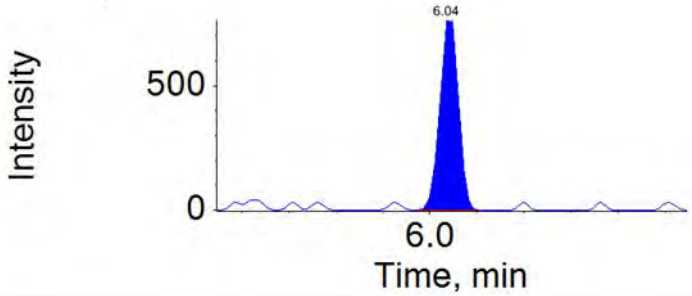
Component: NEtFOSAA_2
Secondary Mass: 584.0 / 526.0



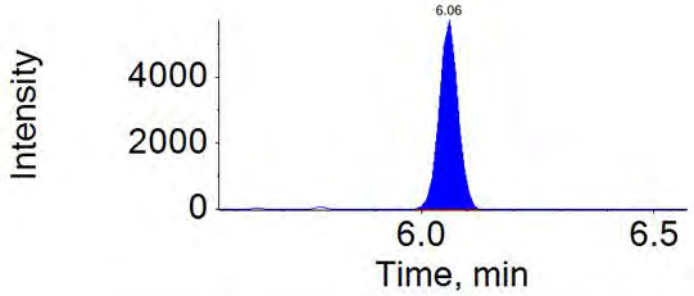
Component: PFDoDA
Primary Mass: 613.0 / 569.0



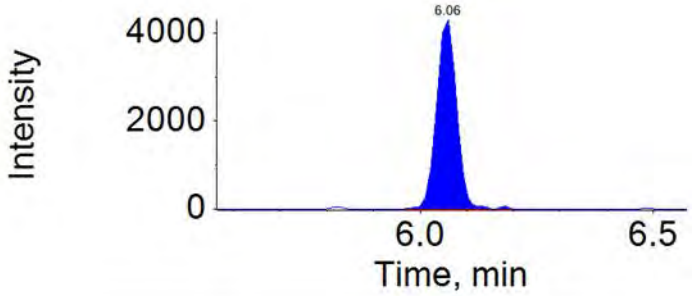
Component: PFDoDA_2
Secondary Mass: 613.0 / 169.0



Component: 10:2-FTS
Primary Mass: 627.0 / 607.0



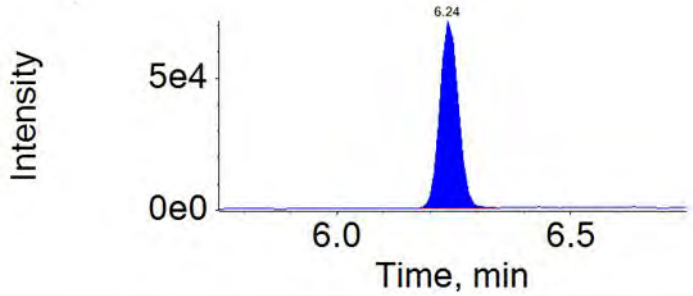
Component: 10:2-FTS_2
Secondary Mass: 627.0 / 81.0



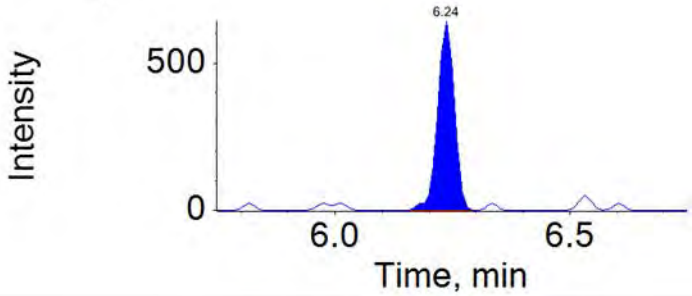
APPROVED
By JPT at 10:19 am, 11/14/18

REVIEWED
By HMK at 12:08 pm, 11/15/18

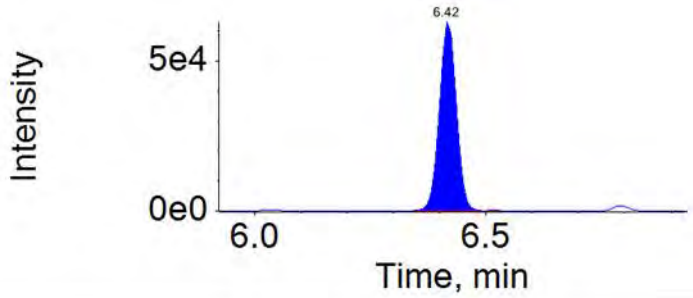
Component: PFTrDA
Primary Mass: 663.0 / 619.0



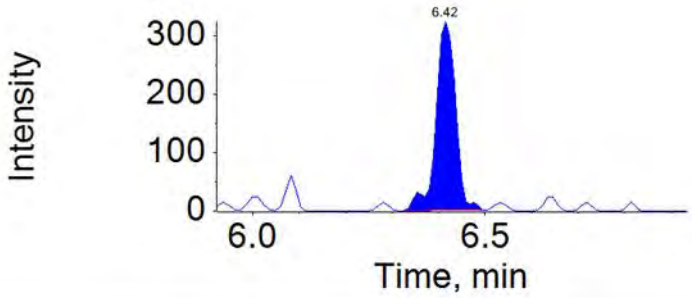
Component: PFTrDA_2
Secondary Mass: 663.0 / 169.0



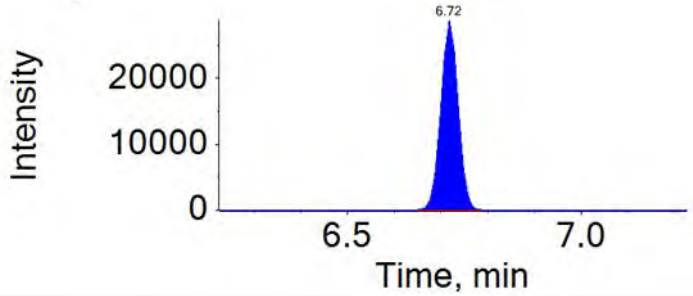
Component: PFTeDA
Primary Mass: 713.0 / 669.0



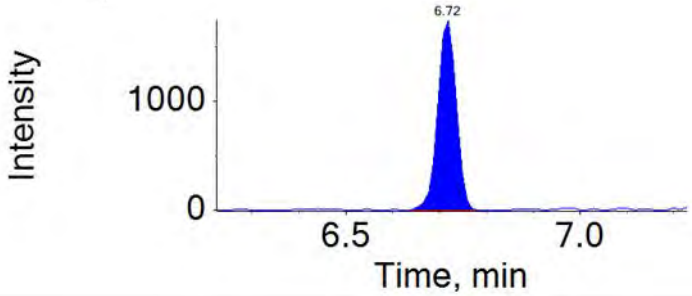
Component: PFTeDA_2
Secondary Mass: 713.0 / 169.0



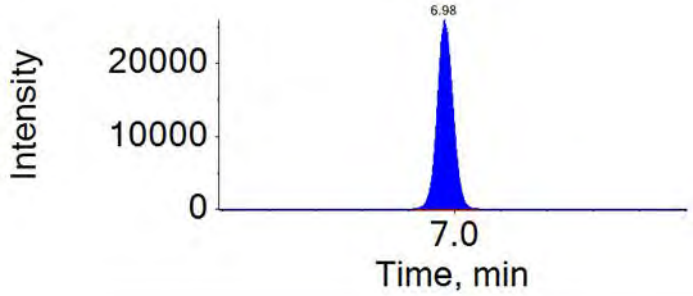
Component: PFHxDA
Primary Mass: 813.0 / 769.0



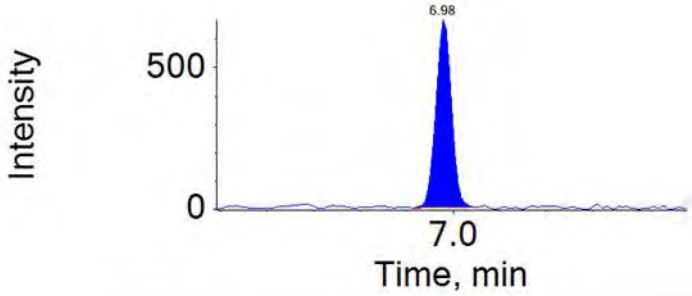
Component: PFHxDA_2
Secondary Mass: 813.0 / 169.0



Component: PFODA
Primary Mass: 913.0 / 869.0



Component: PFODA_2
Secondary Mass: 913.0 / 169.0



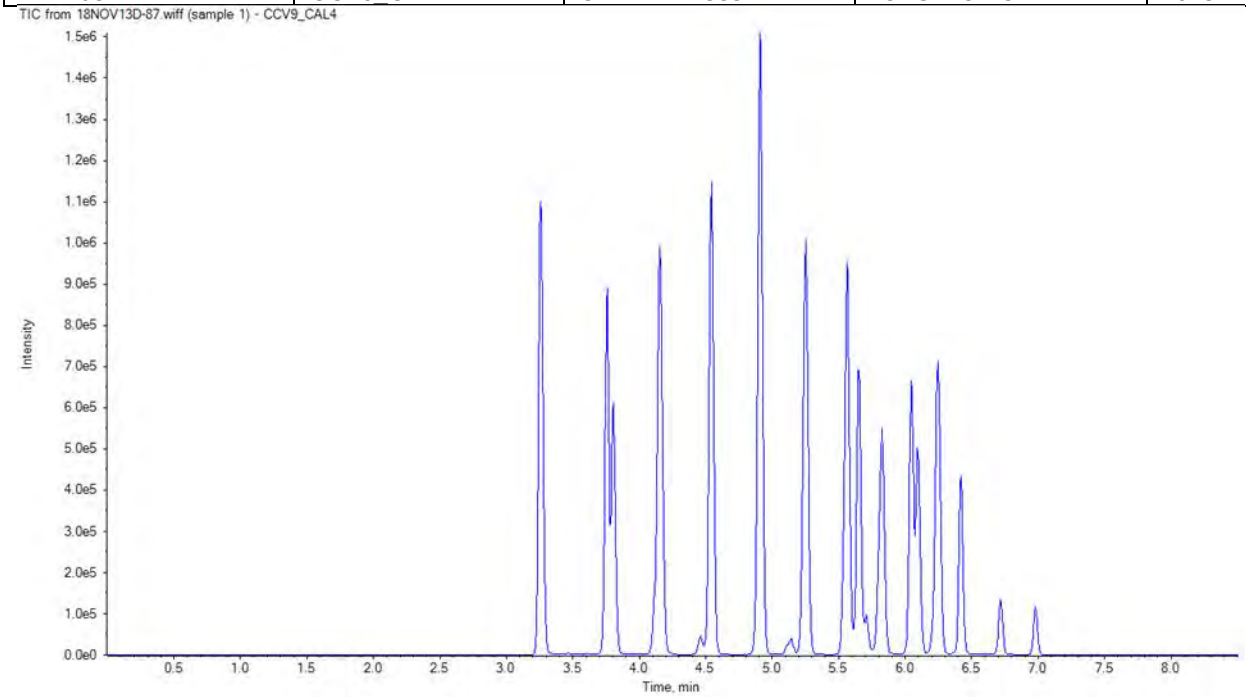
APPROVED
By JPT at 10:19 am, 11/14/18

REVIEWED
By HMK at 12:08 pm, 11/15/18

Continuing Calibration Verfication

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV13DCCV6-10 11/14/2018 9:23:22 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Instrument Name:	Sample Name:	Sample ID:	Sample File:	Acquisition Date:
LM27631	CCV9_CAL4	CALBRN41833B	18NOV13D-87.wiff	2018-11-13T22:38:59



Injection Standard Area Reference File: 18NOV13D-05

Injection Standard Name	Inj Std Conc	Injection Std Peak Area	Reference Injection Standard Area	Injection Std %Diff	Injection Std %Diff Limit	Injection Std %Diff OOS
13C3-PFBA	5.0	690147.8	661126.9	4	50	
13C2-PFOA	5.0	488777.0	466902.6	5	50	
13C4-PFOS	4.8	265373.5	247446.9	7	50	
13C2-PFDA	5.0	293357.8	295381.6	-1	50	

APPROVED
By JPT at 10:19 am, 11/14/18

REVIEWED
By HMK at 11:03 am, 11/15/18

Continuing Calibration Verfication

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV13DCCV6-10 11/14/2018 9:23:22 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Instrument Name:	Sample Name:	Sample ID:	Sample File:	Acquisition Date:
LM27631	CCV9_CAL4	CALBRN41833B	18NOV13D-87.wiff	2018-11-13T22:38:59

Analyte Name	Analyte Area	Sc /pk	Ext Std Name	Ext Std Area	Ext Std con	Area Ratio	RT (min)	RRT	Spec Amt	Calc Amt	% Diff	% Diff Lim	% Diff OOS
PFBA	1112223.3	10	13C4-PFBA	756551.9	5.0	1.470	3.26	1.000	8.000	8.144	2	30	
PFPeA	1081363.0	11	13C5-PFPeA	739929.3	5.0	1.461	3.76	1.000	8.000	8.460	6	30	
PFBS	612489.9	11	13C3-PFBS	418251.4	4.7	1.464	3.81	1.000	7.080	6.966	-2	30	
4:2-FTS	136144.9	11	13C2-4:2-FTS	52046.3	4.7	2.616	4.12	1.000	7.470	7.102	-5	30	
PFHxA	1350925.6	11	13C5-PFHxA	672141.1	5.0	2.010	4.15	1.000	8.000	8.392	5	30	
PFPeS	313924.4	11	13C3-PFBS	418251.4	4.7	0.751	4.17	1.100	7.500	7.287	-3	30	
PFHpA	1333013.6	12	13C4-PFHpA	517067.8	5.0	2.578	4.54	1.000	8.000	8.545	7	30	
PFHxS	472675.8	19	13C3-PFHxS	310608.1	4.7	1.522	4.54	1.000	7.300	7.379	1	30	
6:2-FTS	106444.9	11	13C2-6:2-FTS	32887.8	4.8	3.237	4.90	1.000	7.580	7.832	3	30	
PFHpS	467233.5	11	13C3-PFHxS	310608.1	4.7	1.504	4.90	1.080	7.610	7.918	4	30	
PFOA	1329657.8	11	13C8-PFOA	882083.7	5.0	1.507	4.91	1.000	8.000	8.051	1	30	
PFOS	450726.1	22	13C8-PFOS	282129.7	4.8	1.598	5.24	1.000	7.400	6.986	-6	30	
PFNA	1144678.1	11	13C9-PFNA	468220.9	5.0	2.445	5.26	1.000	8.000	8.816	10	30	
PFNS	290730.6	11	13C8-PFOS	282129.7	4.8	1.030	5.54	1.060	7.680	7.210	-6	30	
PFDA	926038.5	11	13C6-PFDA	597713.3	5.0	1.549	5.56	1.000	8.000	8.214	3	30	
8:2-FTS	88095.7	11	13C2-8:2-FTS	23981.2	4.8	3.674	5.57	1.000	7.660	8.565	12	30	
PFOSA	993745.2	11	13C8-PFOSA	633301.9	5.0	1.569	5.65	1.000	8.000	7.664	-4	30	
NMeFOSAA	109827.8	18	d3-NMeFOSAA	75436.1	5.0	1.456	5.71	1.000	8.000	8.228	3	30	
PFDS	245198.7	11	13C8-PFOS	282129.7	4.8	0.869	5.80	1.110	7.700	7.875	2	30	
PFUnDA	757355.4	11	13C7-PFUnDA	244941.1	5.0	3.092	5.83	1.000	8.000	8.083	1	30	
NEtFOSAA	98288.7	21	d5-NEtFOSAA	66804.3	5.0	1.471	5.84	1.000	8.000	7.713	-4	30	
PFDoDA	854564.1	11	13C2-PFDoDA	541325.3	5.0	1.579	6.05	1.000	8.000	8.039	0	30	
10:2-FTS	60995.0	11	13C2-8:2-FTS	23981.2	4.8	2.543	6.06	1.090	7.710	8.472	10	30	
NMePFOSAE	646596.6	11	d7-NMePFOSAE	323518.8	5.0	1.999	6.10	1.000	8.000	8.318	4	30	
NMePFOSA	119142.3	11	d3-NMePFOSA	76957.0	5.0	1.548	6.10	1.000	8.000	7.638	-5	30	
PFDoS	112141.3	11	13C8-PFOS	282129.7	4.8	0.397	6.21	1.190	7.740	6.962	-10	30	
NEtPFOSAE	681108.2	11	d9-NEtPFOSAE	277776.6	5.0	2.452	6.25	1.000	8.000	7.867	-2	30	
NEtPFOSA	100038.5	11	d5-NEtPFOSA	60850.8	5.0	1.644	6.26	1.000	8.000	7.550	-6	30	
PFTrDA	724225.3	11	13C2-PFDoDA	541325.3	5.0	1.338	6.24	1.030	8.000	8.444	6	30	
PFTeDA	544053.5	11	13C2-PFTeDA	386437.2	5.0	1.408	6.42	1.000	8.000	7.892	-1	30	
PFHxDA	274012.8	11	13C2-PFTeDA	386437.2	5.0	0.709	6.72	1.050	8.000	8.448	6	30	
PFODA	242380.9	10	13C2-PFTeDA	386437.2	5.0	0.627	6.98	1.090	8.000	8.735	9	30	

APPROVED
By JPT at 10:19 am, 11/14/18

REVIEWED
By HMK at 11:03 am, 11/15/18

Continuing Calibration Verfication

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV13DCCV6-10 11/14/2018 9:23:22 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

APPROVED
By JPT at 10:19 am, 11/14/18

REVIEWED
By HMK at 11:03 am, 11/15/18

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV13DCCV6-10 11/14/2018 9:23:22 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Sample Name:	CCV9_CAL4			**Data File:**		18NOV13D-87.wiff
Sample ID:	CALBRN41833B			**Acquis Date:**		2018-11-13T22:38:59
Sample Type:	Quality Control			**Instrument:**		LM27631
Vial Position:	6			**Acquis Method:**		18AUG13_3uL.dam
Injection Vol:	3.00			**Result Table:**		18NOV13DCCV6-10
QMethod File:	18AUG20QM			**ICAL Name:**		18NOV12DCAL
Batch Number:	N/A			**Operator:**		JPT12262
Sample Wt.:	1.00000			**Dilution Factor:**		1.00
Sample Vol.:	1.000			**Prep Factor:**		1.000

Injection Standard Peak Table

Injection Standard Area Reference File: 18NOV13D-05

Injection Standard Name	Inj Std Conc	Injection Std Peak Area	Rreference Injection Standard Area	Injection Std %Diff	Injection Std %Diff Limit	Injection Std %Diff OOS
13C3-PFBA	5.0	690147.8	661126.9	4	50	
13C2-PFOA	5.0	488777.0	466902.6	5	50	
13C4-PFOS	4.8	265373.5	247446.9	7	50	
13C2-PFDA	5.0	293357.8	295381.6	-1	50	

Extraction Standard Peak Table

Extraction Standard Name	Ext Std Area	Inj Std Name	Inj Std Area	Area Ratio	Ext Std Conc	Ext Std Result	Ext Std %REC	Ext Std %REC Limit	Ext Std OOS
E13C4-PFBA	756551.9	13C3-PFBA	690147.8	1.096	5.000	4.915	98	70-130	
E13C5-PFPeA	739929.3	13C3-PFBA	690147.8	1.072	5.000	4.809	96	70-130	
E13C3-PFBS	418251.4	13C3-PFBA	690147.8	0.606	4.650	4.278	92	70-130	
E13C2-4:2-FTS	52046.3	13C2-PFOA	488777.0	0.106	4.670	4.743	102	70-130	
E13C5-PFHxA	672141.1	13C2-PFOA	488777.0	1.375	5.000	4.967	99	70-130	
E13C3-PFHxS	310608.1	13C2-PFOA	488777.0	0.635	4.730	4.361	92	70-130	
E13C4-PFHpA	517067.8	13C2-PFOA	488777.0	1.058	5.000	4.766	95	70-130	
E13C2-6:2-FTS	32887.8	13C2-PFOA	488777.0	0.067	4.750	4.502	95	70-130	
E13C8-PFOA	882083.7	13C2-PFOA	488777.0	1.805	5.000	4.972	99	70-130	
E13C8-PFOS	282129.7	13C4-PFOS	265373.5	1.063	4.780	4.711	99	70-130	
E13C9-PFNA	468220.9	13C4-PFOS	265373.5	1.764	5.000	4.919	98	70-130	
E13C6-PFDA	597713.3	13C2-PFDA	293357.8	2.037	5.000	4.755	95	70-130	
E13C2-8:2-FTS	23981.2	13C2-PFDA	293357.8	0.082	4.790	4.077	85	70-130	
E13C8-PFOSA	633301.9	13C2-PFDA	293357.8	2.159	5.000	4.786	96	70-130	
Ed3-NMeFOSAA	75436.1	13C2-PFDA	293357.8	0.257	5.000	4.642	93	70-130	
E13C7-PFUnDA	244941.1	13C2-PFDA	293357.8	0.835	5.000	4.848	97	70-130	
Ed5-NEtFOSAA	66804.3	13C2-PFDA	293357.8	0.228	5.000	4.818	96	70-130	
E13C2-PFDoDA	541325.3	13C2-PFDA	293357.8	1.845	5.000	4.791	96	70-130	
Ed7-NMePFOSAE	323518.8	13C2-PFDA	293357.8	1.103	5.000	4.772	95	70-130	
Ed3-NMePFOSA	76957.0	13C2-PFDA	293357.8	0.262	5.000	4.766	95	70-130	
Ed9-NEtPFOSAE	277776.6	13C2-PFDA	293357.8	0.947	5.000	4.925	98	70-130	
Ed5-NEtPFOSA	60850.8	13C2-PFDA	293357.8	0.207	5.000	4.866	97	70-130	
E13C2-PFTeDA	386437.2	13C2-PFDA	293357.8	1.317	5.000	4.625	92	70-130	

APPROVED
By JPT at 10:19 am, 11/14/18

REVIEWED
By HMK at 11:03 am, 11/15/18

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV13DCCV6-10 11/14/2018 9:23:22 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

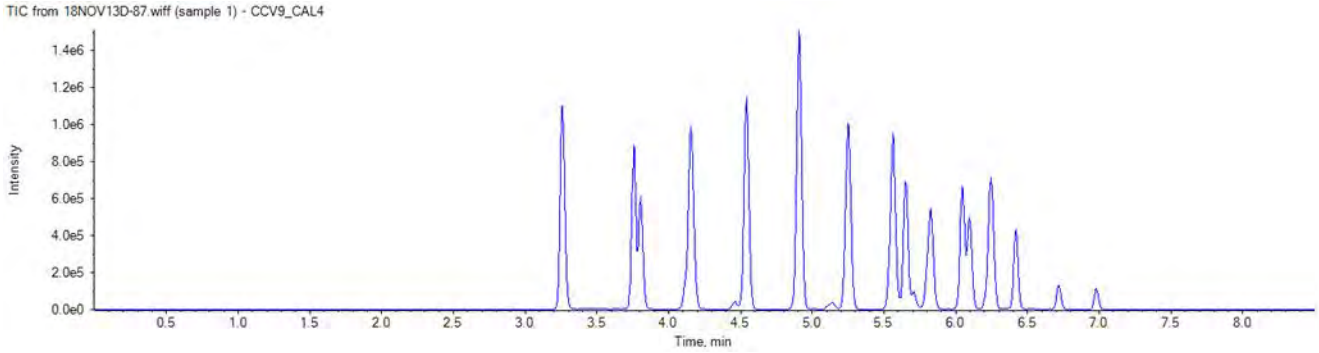
Analyte Quantitation Peak Table

Sample Name: CCV9_CAL4 **Instrument Name:** LM27631 **File Name:** 18NOV13D-87.wiff

Sample Wt	Sample Vol	Dilution Factor	PrepFactor
1.00000	1.000	1.00	1.000

Analyte Name	RT	RRT	Analyte Area Response	E	Int Typ	ES Name	ES RT	ES Area Response	Area Ratio	Sample Result (ng/g)
PFBA	3.26	1.000	1112223.3		A	13C4-PFBA	3.26	756551.9	1.470	8.144
PFPeA	3.76	1.000	1081363.0		A	13C5-PFPeA	3.76	739929.3	1.461	8.460
PFBS	3.81	1.000	612489.9		A	13C3-PFBS	3.81	418251.4	1.464	6.966
4:2-FTS	4.12	1.000	136144.9		A	13C2-4:2-FTS	4.12	52046.3	2.616	7.102
PFHxA	4.15	1.000	1350925.6		A	13C5-PFHxA	4.15	672141.1	2.010	8.392
PFPeS	4.17	1.100	313924.4		A	13C3-PFBS	3.81	418251.4	0.751	7.287
PFHpA	4.54	1.000	1333013.6		A	13C4-PFHpA	4.54	517067.8	2.578	8.545
PFHxS	4.54	1.000	472675.8		M	13C3-PFHxS	4.54	310608.1	1.522	7.379
6:2-FTS	4.90	1.000	106444.9		A	13C2-6:2-FTS	4.90	32887.8	3.237	7.832
PFHpS	4.90	1.080	467233.5		A	13C3-PFHxS	4.54	310608.1	1.504	7.918
PFOA	4.91	1.000	1329657.8		A	13C8-PFOA	4.91	882083.7	1.507	8.051
PFOS	5.24	1.000	450726.1		M	13C8-PFOS	5.24	282129.7	1.598	6.986
PFNA	5.26	1.000	1144678.1		A	13C9-PFNA	5.26	468220.9	2.445	8.816
PFNS	5.54	1.060	290730.6		A	13C8-PFOS	5.24	282129.7	1.030	7.210
PFDA	5.56	1.000	926038.5		A	13C6-PFDA	5.56	597713.3	1.549	8.214
8:2-FTS	5.57	1.000	88095.7		A	13C2-8:2-FTS	5.57	23981.2	3.674	8.565
PFOSA	5.65	1.000	993745.2		A	13C8-PFOSA	5.65	633301.9	1.569	7.664
NMeFOSAA	5.71	1.000	109827.8		M	d3-NMeFOSAA	5.71	75436.1	1.456	8.228
PFDS	5.80	1.110	245198.7		A	13C8-PFOS	5.24	282129.7	0.869	7.875
PFUnDA	5.83	1.000	757355.4		A	13C7-PFUnDA	5.83	244941.1	3.092	8.083
NEtFOSAA	5.84	1.000	98288.7		A	d5-NEtFOSAA	5.84	66804.3	1.471	7.713
PFDoDA	6.05	1.000	854564.1		A	13C2-PFDoDA	6.05	541325.3	1.579	8.039
10:2-FTS	6.06	1.090	60995.0		A	13C2-8:2-FTS	5.57	23981.2	2.543	8.472
NMePFOSAE	6.10	1.000	646596.6		A	d7-NMePFOSAE	6.09	323518.8	1.999	8.318
NMePFOSA	6.10	1.000	119142.3		A	d3-NMePFOSA	6.10	76957.0	1.548	7.638
PFDoS	6.21	1.190	112141.3		A	13C8-PFOS	5.24	282129.7	0.397	6.962
NEtPFOSAE	6.25	1.000	681108.2		A	d9-NEtPFOSAE	6.24	277776.6	2.452	7.867
NEtPFOSA	6.26	1.000	100038.5		A	d5-NEtPFOSA	6.26	60850.8	1.644	7.550
PFTrDA	6.24	1.030	724225.3		A	13C2-PFDoDA	6.05	541325.3	1.338	8.444
PFTeDA	6.42	1.000	544053.5		A	13C2-PFTeDA	6.42	386437.2	1.408	7.892
PFHxDA	6.72	1.050	274012.8		A	13C2-PFTeDA	6.42	386437.2	0.709	8.448
PFODA	6.98	1.090	242380.9		A	13C2-PFTeDA	6.42	386437.2	0.627	8.735

Total Ion Chromatogram

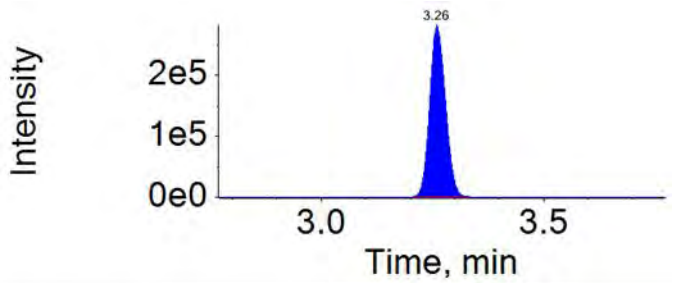


APPROVED
By JPT at 10:19 am, 11/14/18

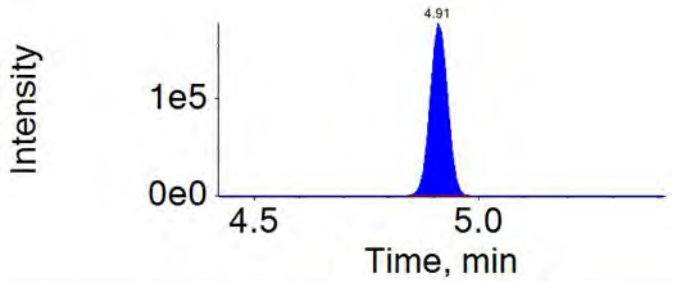
REVIEWED
By HMK at 11:03 am, 11/15/18

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV13DCCV6-10 11/14/2018 9:23:22 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

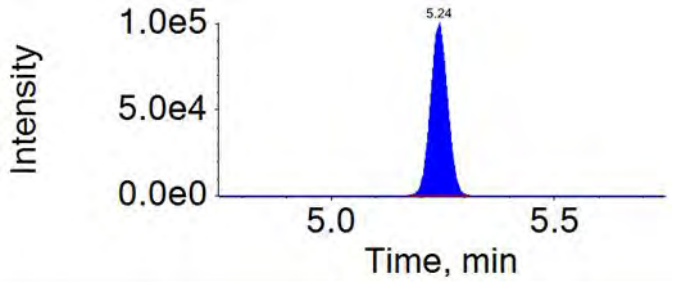
Injection Standard: 13C3-PFBA
216.0 / 172.0



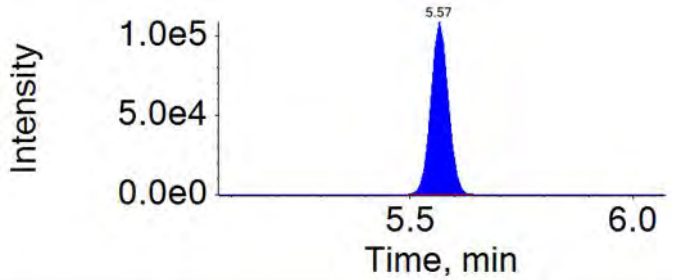
Injection Standard: 13C2-PFOA
415.0 / 370.0



Injection Standard: 13C4-PFOS
503.0 / 80.0

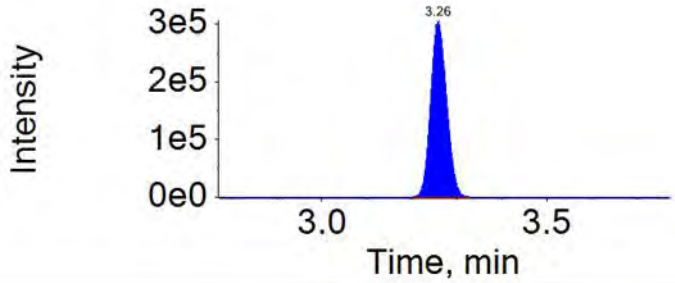


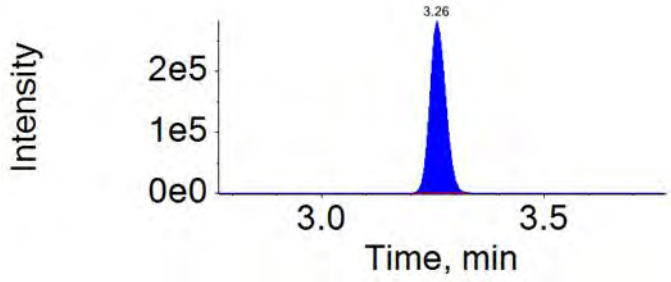
Injection Standard: 13C2-PFDA
515.0 / 470.0



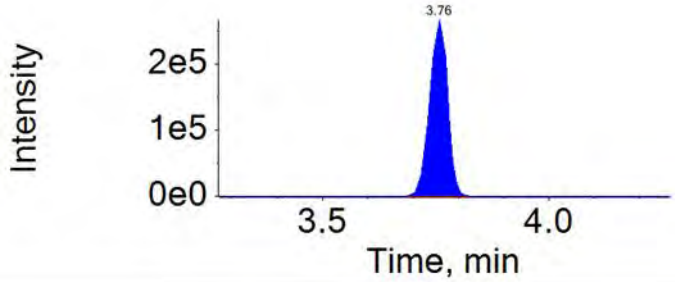
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV13DCCV6-10 11/14/2018 9:23:22 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

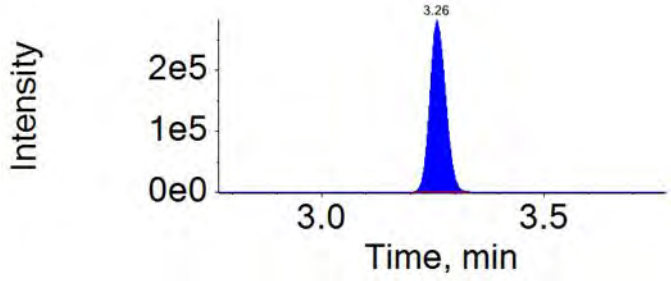
Extraction Standard: E13C4-PFBA	Injection Standard: 13C3-PFBA
217.0 / 172.0	216.0 / 172.0



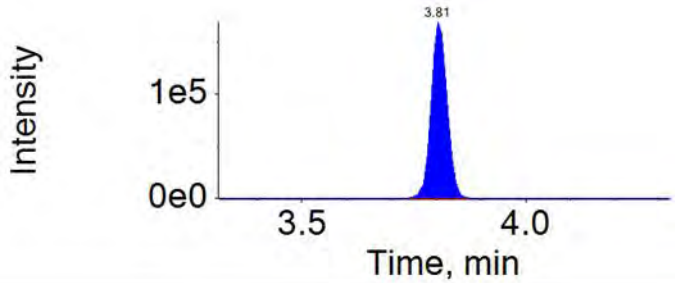


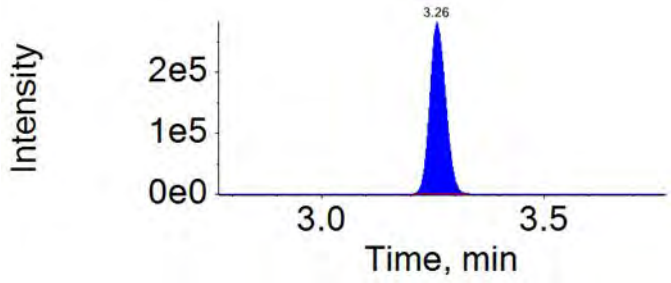
Extraction Standard: E13C5-PFPeA	Injection Standard: 13C3-PFBA
268.0 / 223.0	216.0 / 172.0



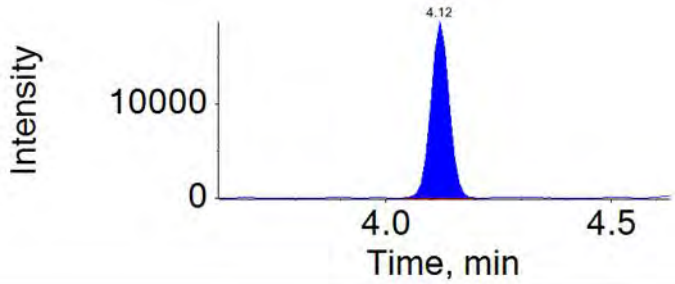


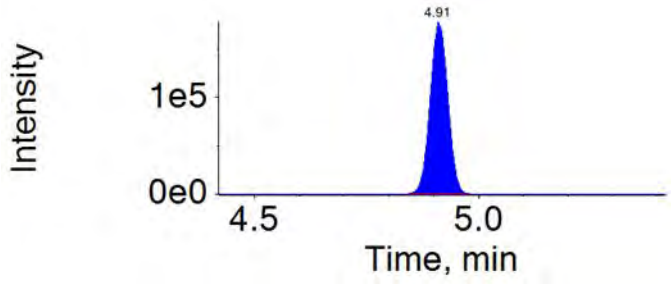
Extraction Standard: E13C3-PFBS	Injection Standard: 13C3-PFBA
302.0 / 80.0	216.0 / 172.0





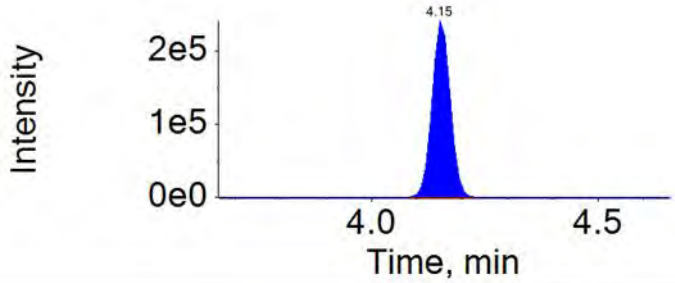
Extraction Standard: E13C2-4:2-FTS	Injection Standard: 13C2-PFOA
329.0 / 81.0	415.0 / 370.0

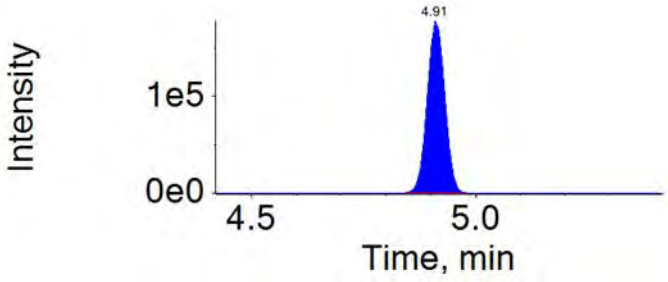




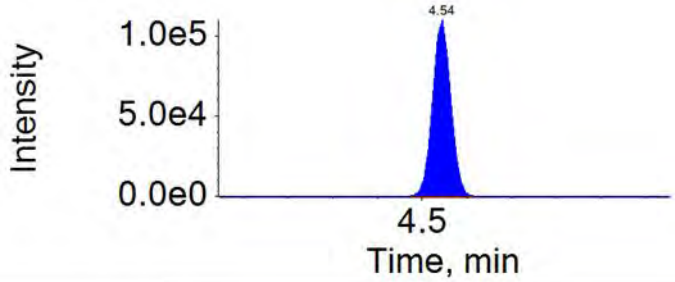
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV13DCCV6-10 11/14/2018 9:23:22 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

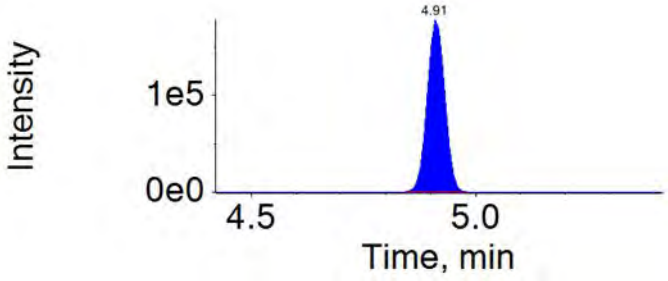
Extraction Standard: E13C5-PFHxA	Injection Standard: 13C2-PFOA
318.0 / 273.0	415.0 / 370.0



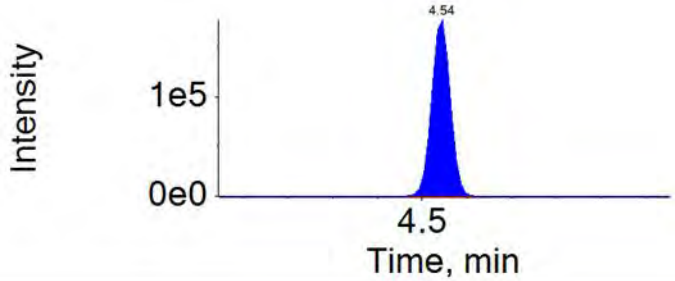


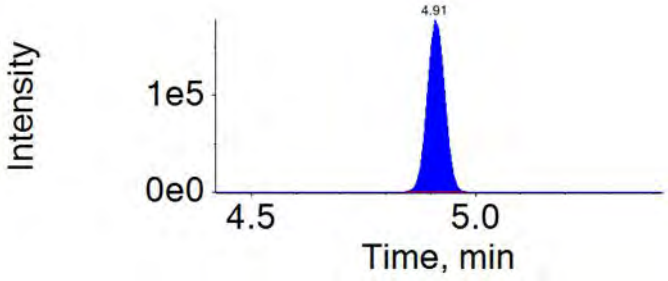
Extraction Standard: E13C3-PFHxS	Injection Standard: 13C2-PFOA
402.0 / 80.0	415.0 / 370.0



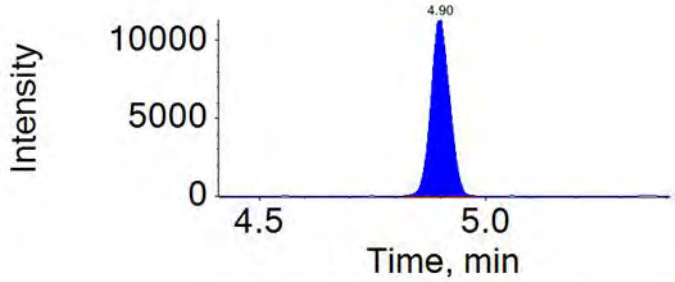


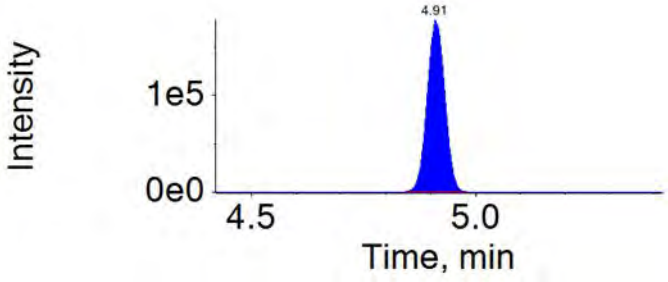
Extraction Standard: E13C4-PFHpA	Injection Standard: 13C2-PFOA
367.0 / 322.0	415.0 / 370.0





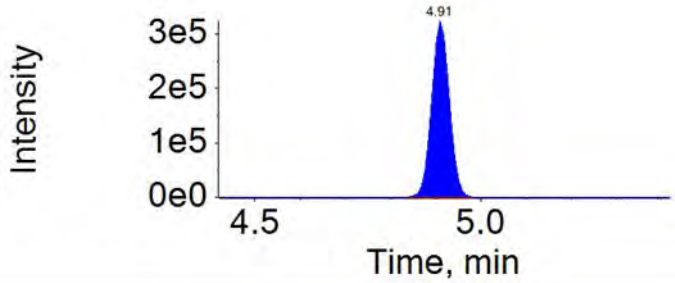
Extraction Standard: E13C2-6:2-FTS	Injection Standard: 13C2-PFOA
429.0 / 81.0	415.0 / 370.0

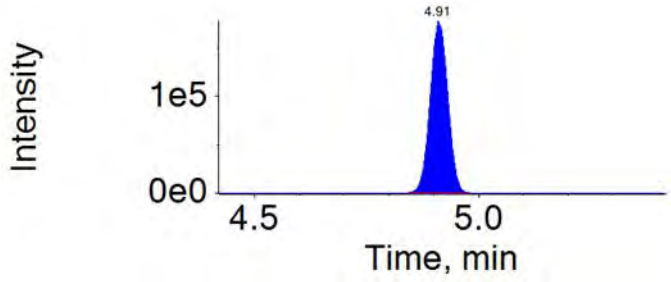




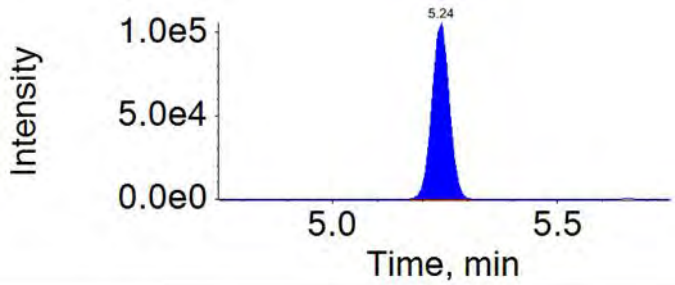
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV13DCCV6-10 11/14/2018 9:23:22 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

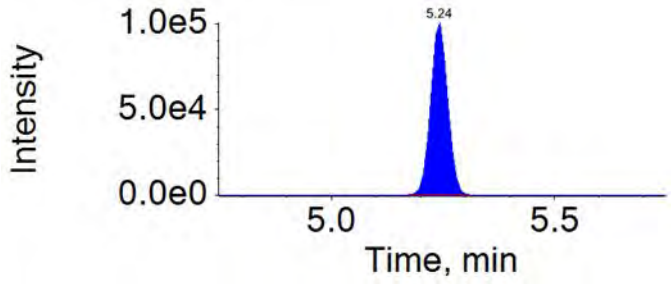
Extraction Standard: E13C8-PFOA	Injection Standard: 13C2-PFOA
421.0 / 376.0	415.0 / 370.0



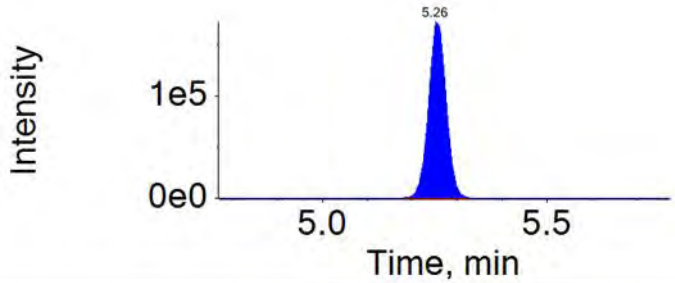


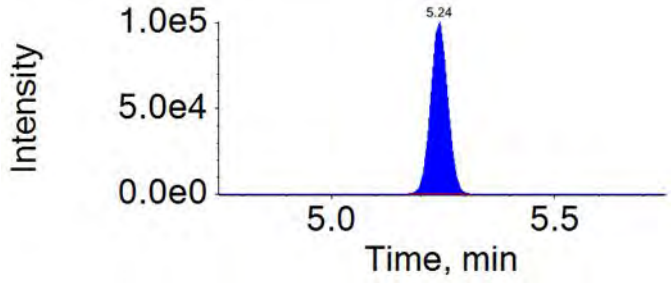
Extraction Standard: E13C8-PFOS	Injection Standard: 13C4-PFOS
507.0 / 80.0	503.0 / 80.0



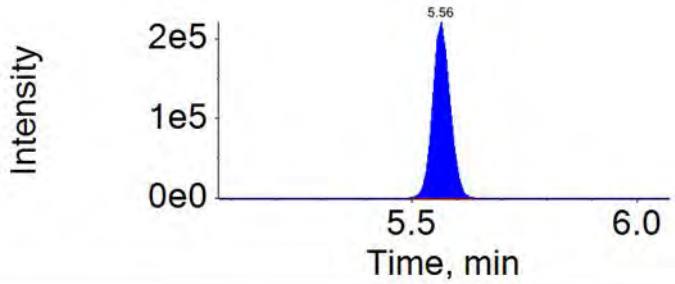


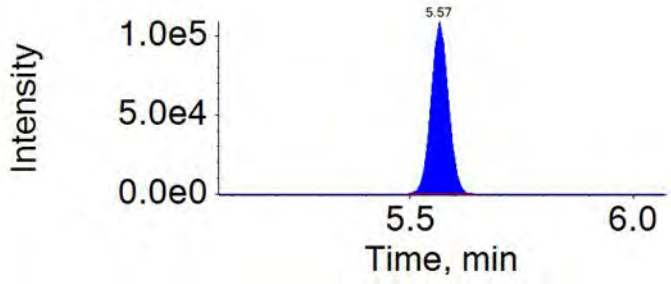
Extraction Standard: E13C9-PFNA	Injection Standard: 13C4-PFOS
472.0 / 427.0	503.0 / 80.0





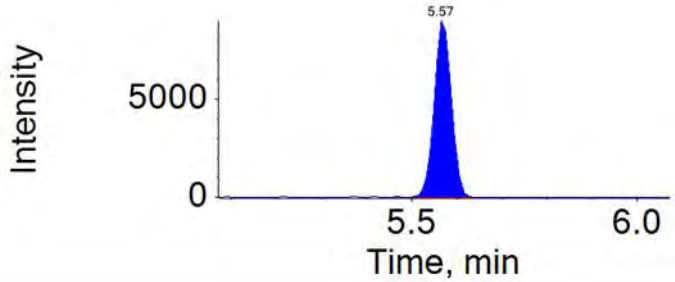
Extraction Standard: E13C6-PFDA	Injection Standard: 13C2-PFDA
519.0 / 474.0	515.0 / 470.0

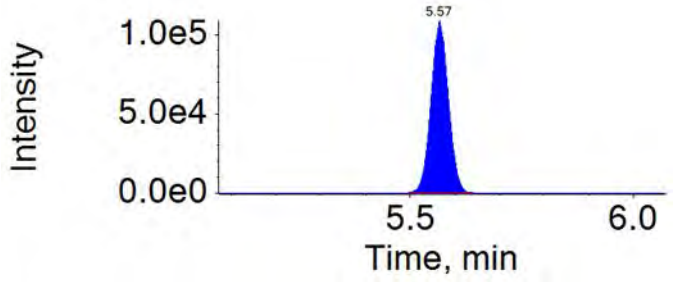




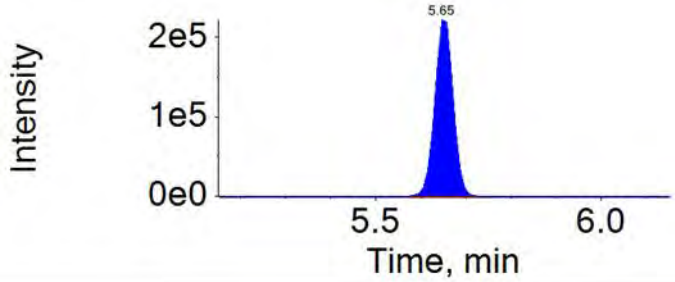
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV13DCCV6-10 11/14/2018 9:23:22 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

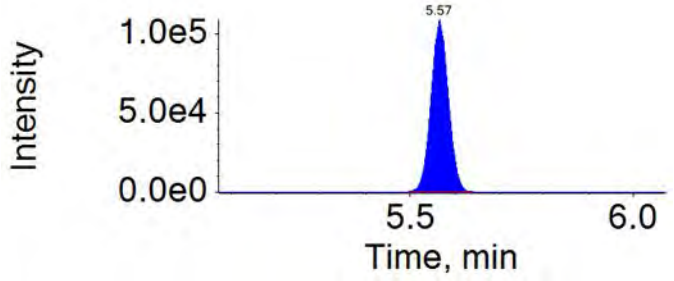
Extraction Standard: E13C2-8:2-FTS	Injection Standard: 13C2-PFDA
529.0 / 81.0	515.0 / 470.0



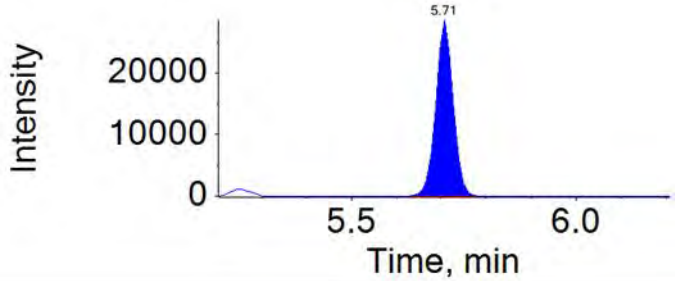


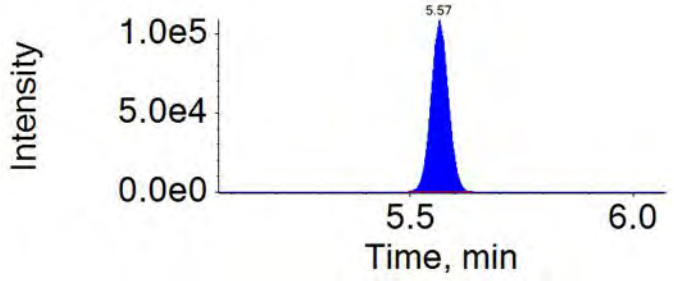
Extraction Standard: E13C8-PFOSA	Injection Standard: 13C2-PFDA
506.0 / 78.0	515.0 / 470.0



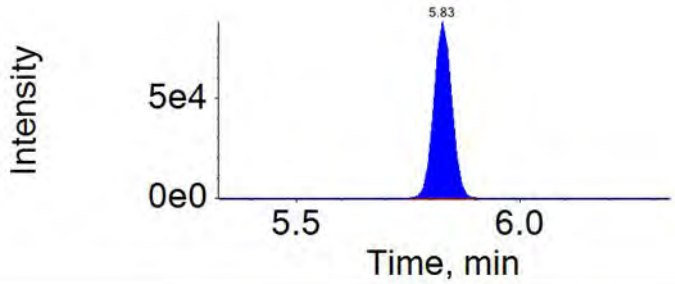


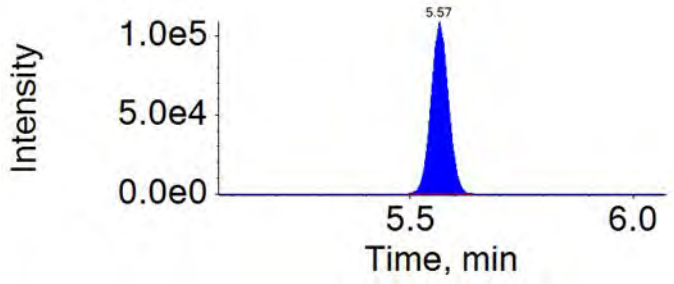
Extraction Standard: Ed3-NMeFOSAA	Injection Standard: 13C2-PFDA
573.0 / 419.0	515.0 / 470.0





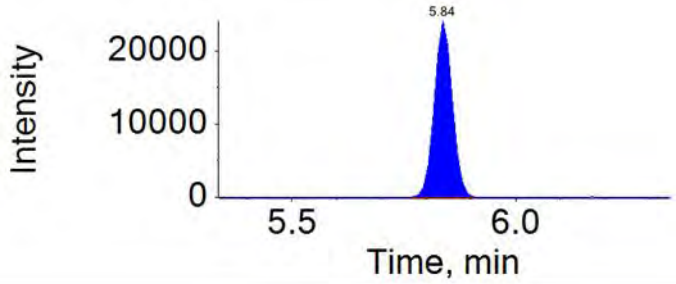
Extraction Standard: E13C7-PFUnDA	Injection Standard: 13C2-PFDA
570.0 / 525.0	515.0 / 470.0

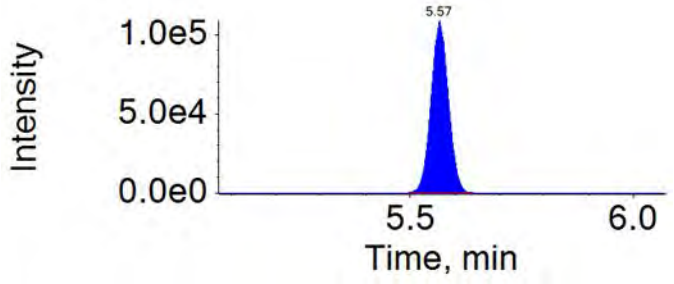




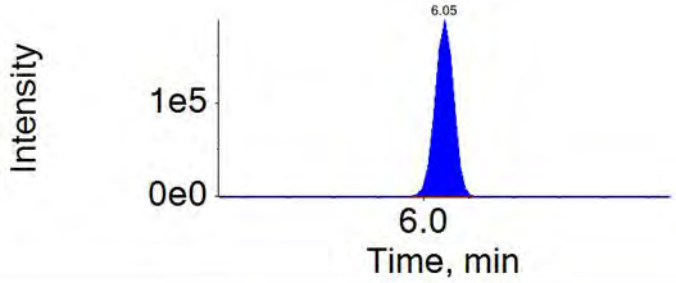
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV13DCCV6-10 11/14/2018 9:23:22 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

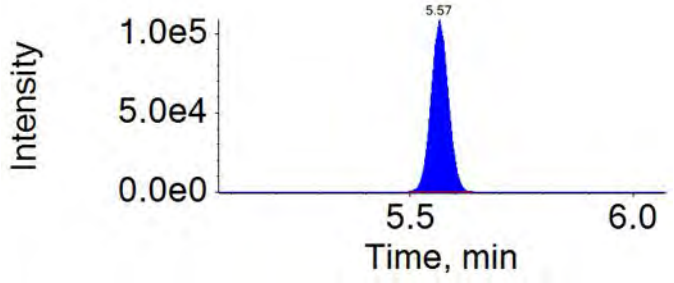
Extraction Standard: Ed5-NEtFOSAA	Injection Standard: 13C2-PFDA
589.0 / 419.0	515.0 / 470.0



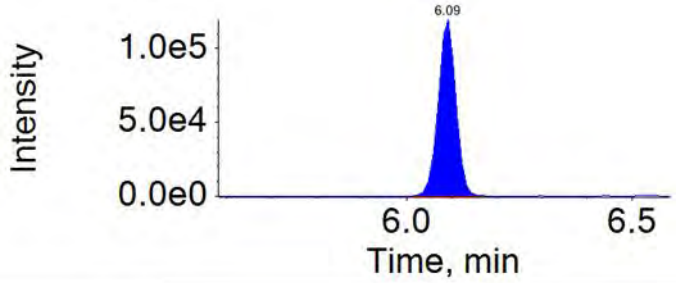


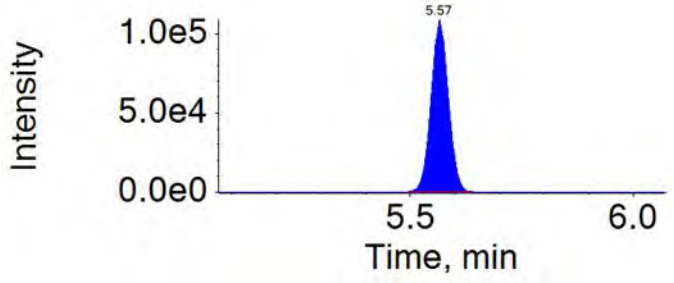
Extraction Standard: E13C2-PFDoDA	Injection Standard: 13C2-PFDA
615.0 / 570.0	515.0 / 470.0



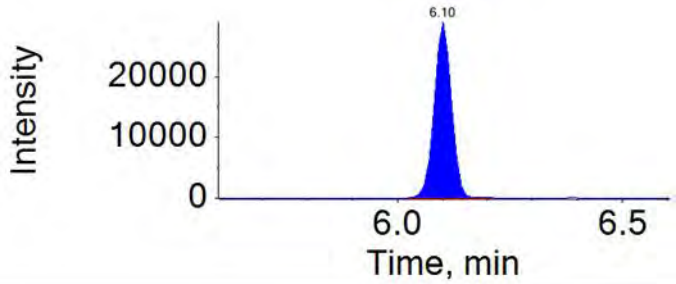


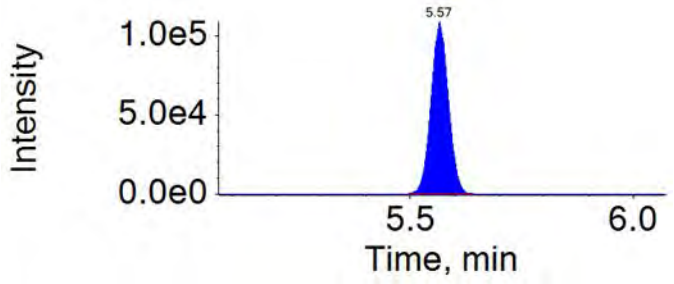
Extraction Standard: Ed7-NMePFOSAE	Injection Standard: 13C2-PFDA
623.0 / 59.0	515.0 / 470.0





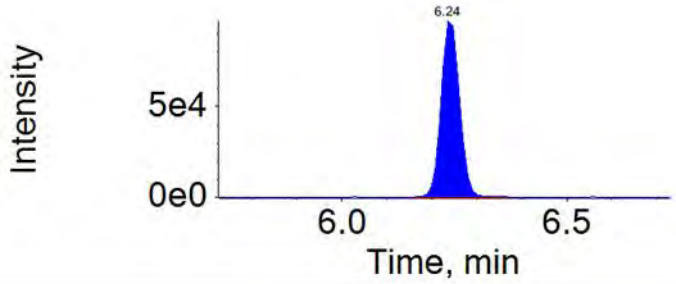
Extraction Standard: Ed3-NMePFOSA	Injection Standard: 13C2-PFDA
515.0 / 169.0	515.0 / 470.0

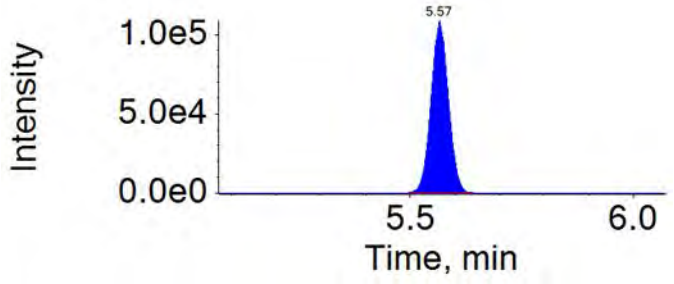




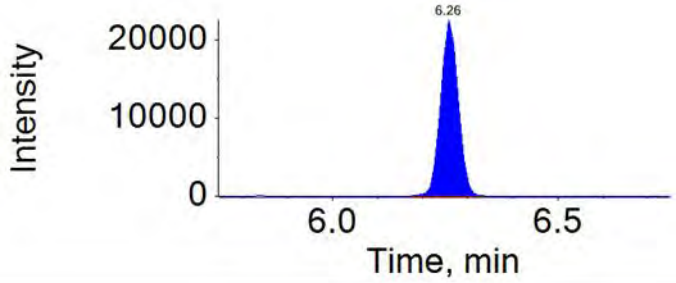
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV13DCCV6-10 11/14/2018 9:23:22 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

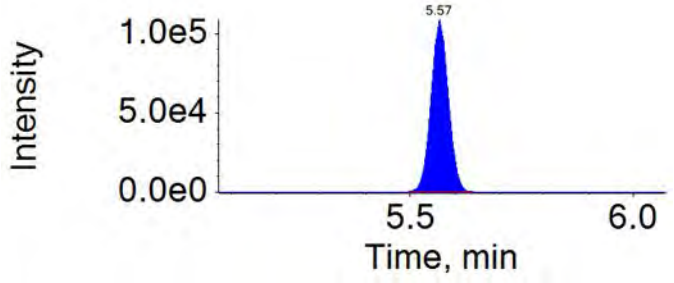
Extraction Standard: Ed9-NEtPFOSAE	Injection Standard: 13C2-PFDA
639.0 / 59.0	515.0 / 470.0



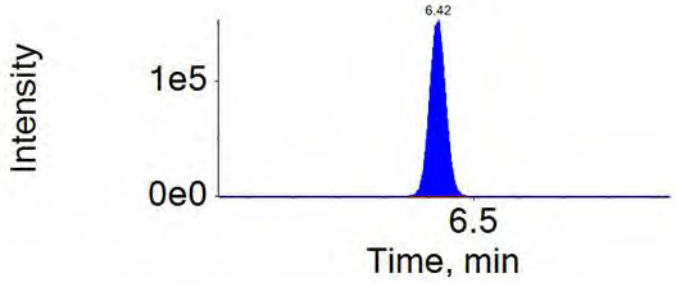


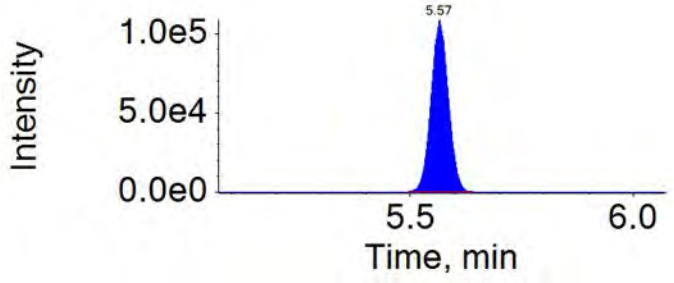
Extraction Standard: Ed5-NEtPFOSA	Injection Standard: 13C2-PFDA
531.0 / 169.0	515.0 / 470.0





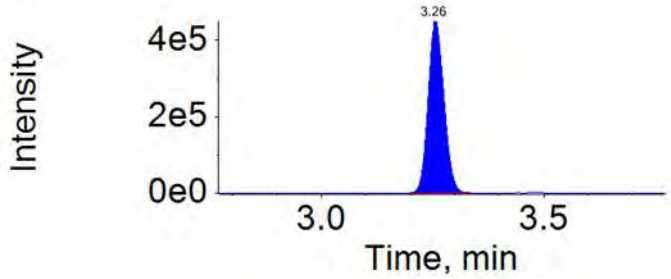
Extraction Standard: E13C2-PFTeDA	Injection Standard: 13C2-PFDA
715.0 / 670.0	515.0 / 470.0



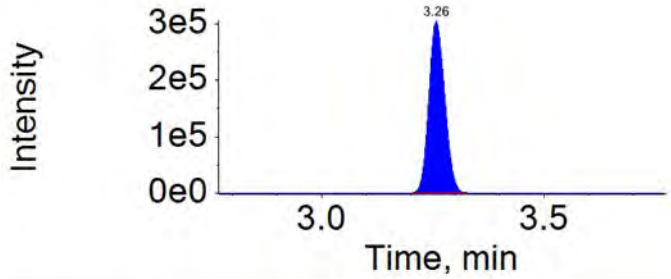


ICAL Name: 18NOV12DCAL **Result Table:** 18NOV13DCCV6-10 11/14/2018 9:23:22 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

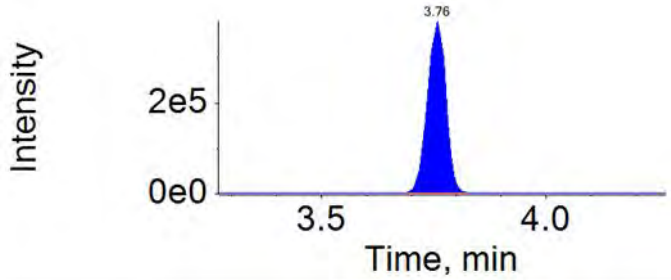
Analyte: PFBA
213.0 / 169.0



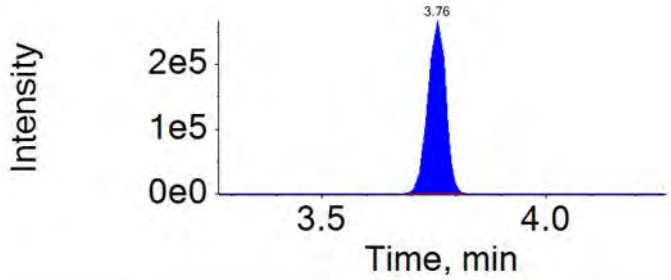
Extraction Standard: 13C4-PFBA
217.0 / 172.0



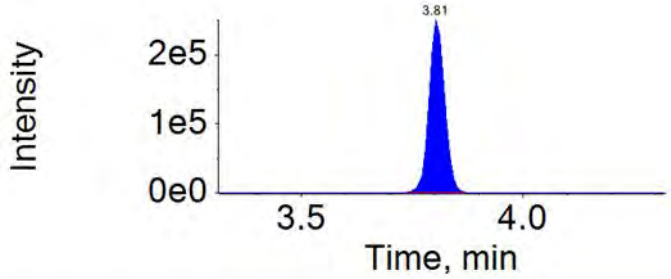
Analyte: PFPeA
263.0 / 219.0



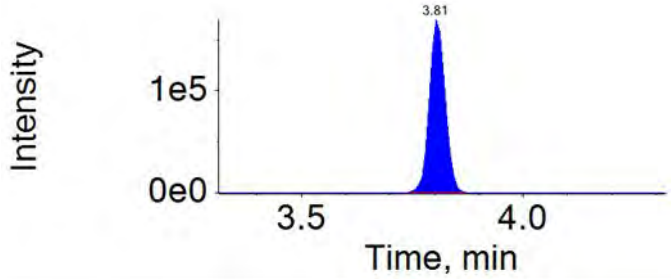
Extraction Standard: 13C5-PFPeA
268.0 / 223.0



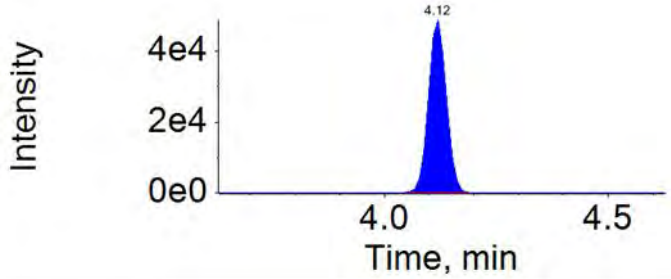
Analyte: PFBS
299.0 / 80.0



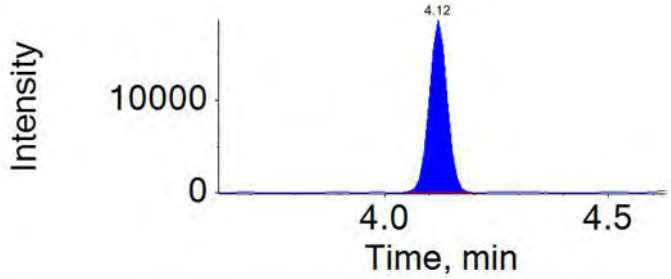
Extraction Standard: 13C3-PFBS
302.0 / 80.0



Analyte: 4:2-FTS
327.0 / 307.0



Extraction Standard: 13C2-4:2-FTS
329.0 / 81.0

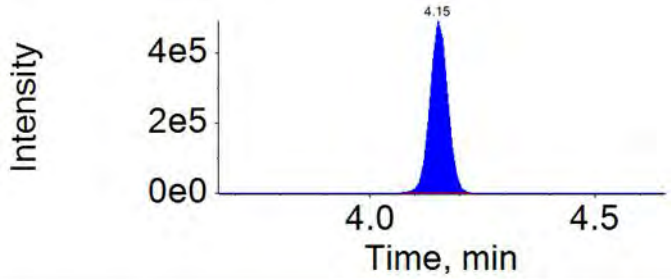


APPROVED
By JPT at 10:19 am, 11/14/18

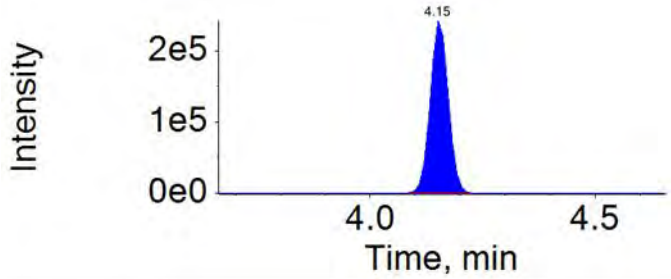
REVIEWED
By HMK at 11:03 am, 11/15/18

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV13DCCV6-10 11/14/2018 9:23:22 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

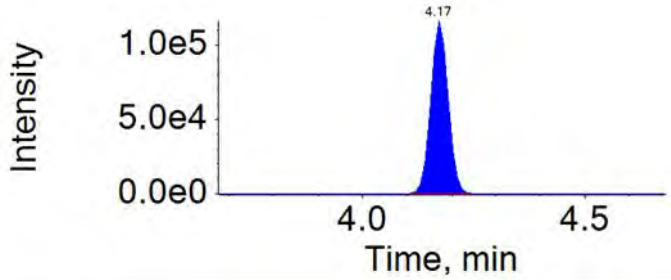
Analyte: PFHxA
313.0 / 269.0



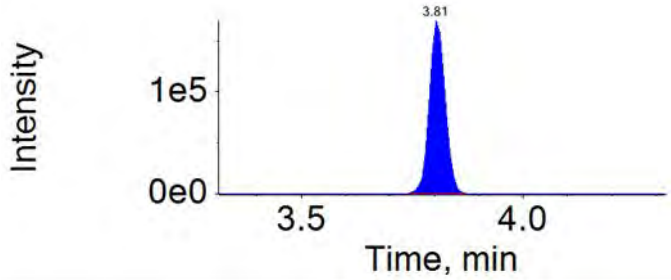
Extraction Standard: 13C5-PFHxA
318.0 / 273.0



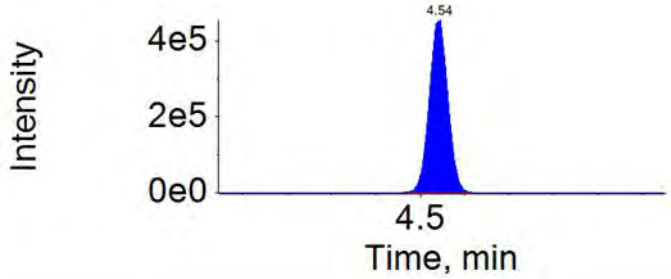
Analyte: PFPeS
349.0 / 80.0



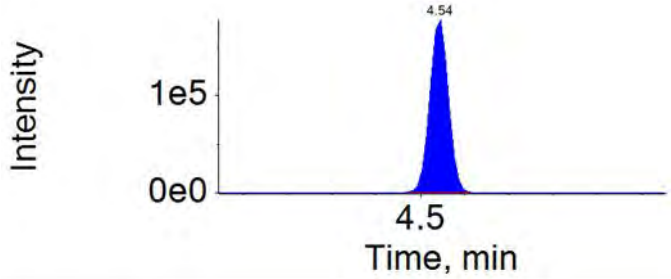
Extraction Standard: 13C3-PFBS
302.0 / 80.0



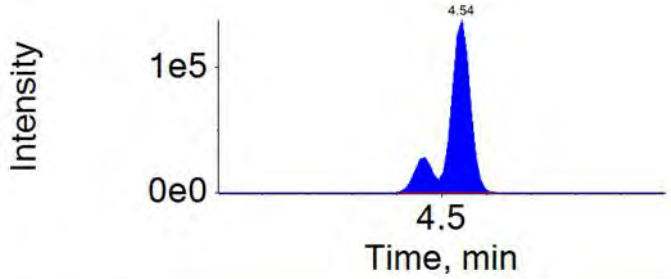
Analyte: PFHpA
363.0 / 319.0



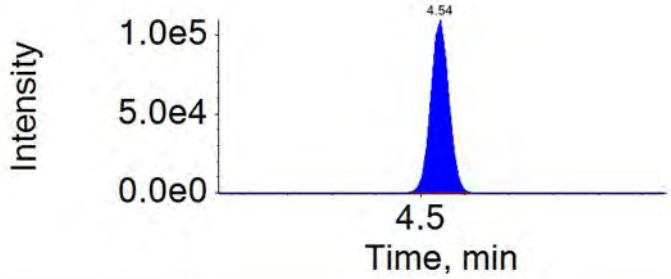
Extraction Standard: 13C4-PFHpA
367.0 / 322.0



Analyte: PFHxS
399.0 / 80.0



Extraction Standard: 13C3-PFHxS
402.0 / 80.0

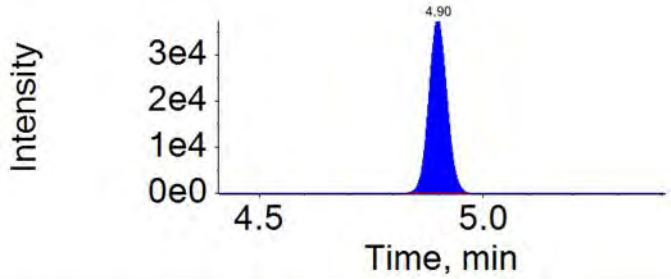


APPROVED
By JPT at 10:19 am, 11/14/18

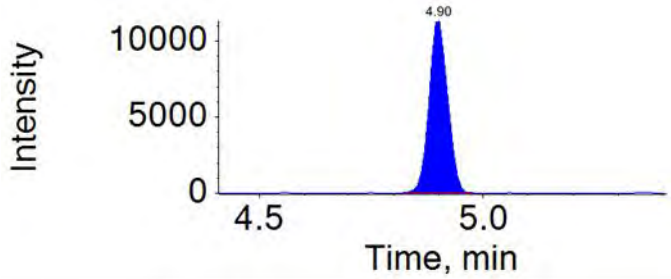
REVIEWED
By HMK at 11:03 am, 11/15/18

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV13DCCV6-10 11/14/2018 9:23:22 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

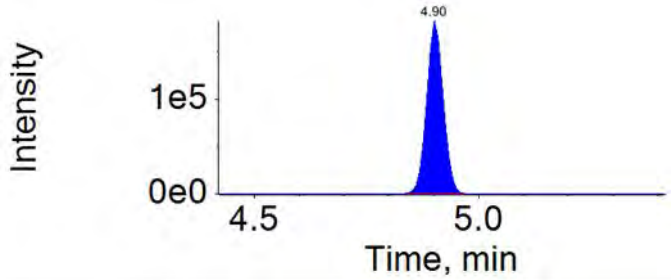
Analyte: 6:2-FTS
427.0 / 407.0



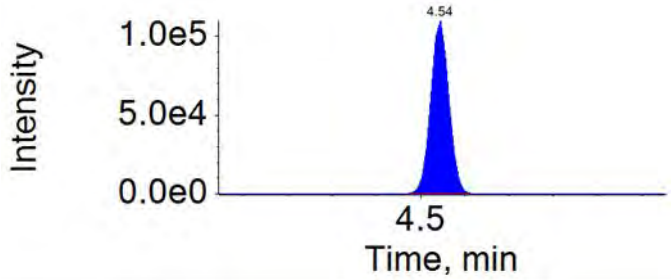
Extraction Standard: 13C2-6:2-FTS
429.0 / 81.0



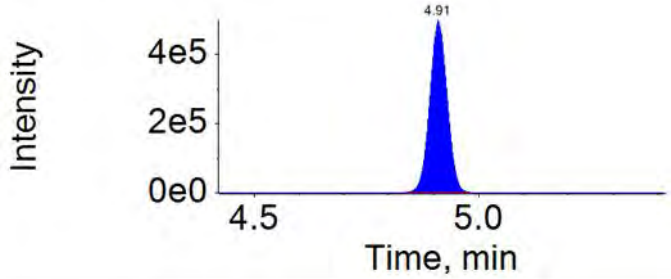
Analyte: PFHpS
449.0 / 80.0



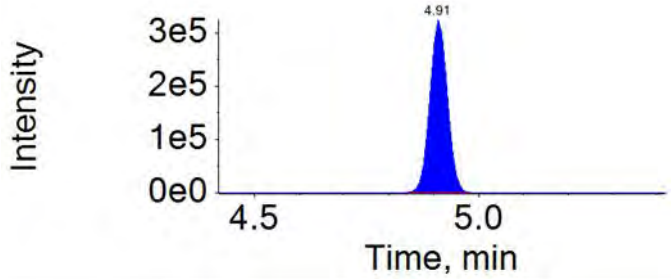
Extraction Standard: 13C3-PFHxS
402.0 / 80.0



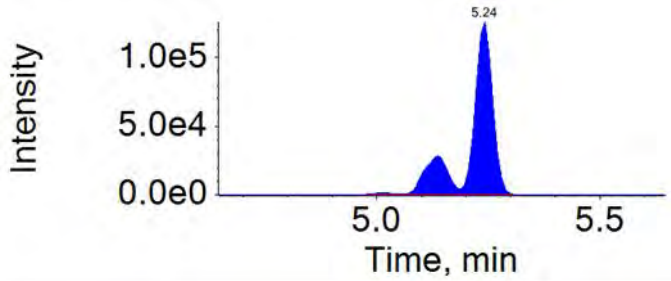
Analyte: PFOA
413.0 / 369.0



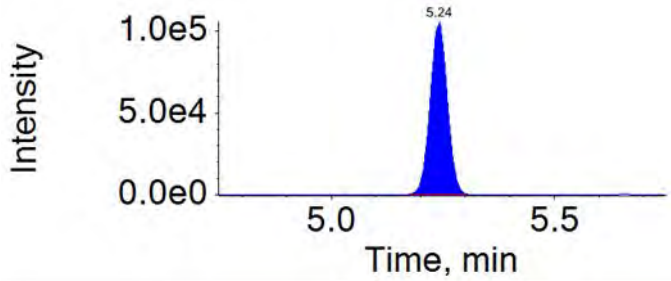
Extraction Standard: 13C8-PFOA
421.0 / 376.0



Analyte: PFOS
499.0 / 80.0



Extraction Standard: 13C8-PFOS
507.0 / 80.0

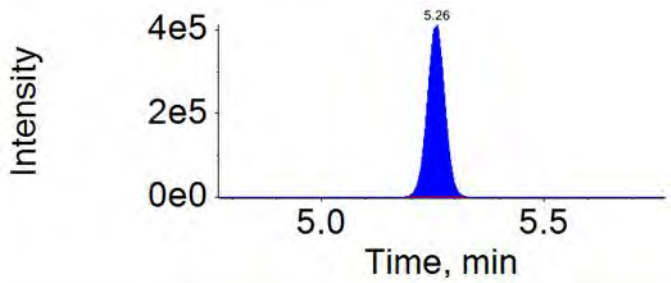


APPROVED
By JPT at 10:19 am, 11/14/18

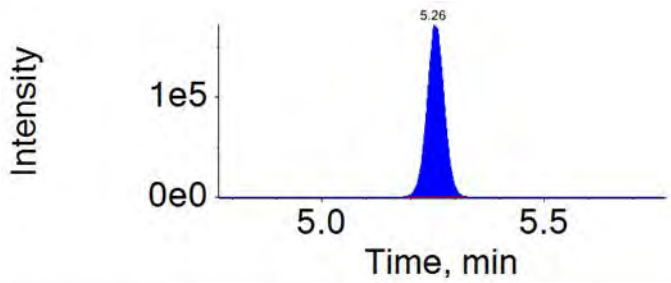
REVIEWED
By HMK at 11:03 am, 11/15/18

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV13DCCV6-10 11/14/2018 9:23:22 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

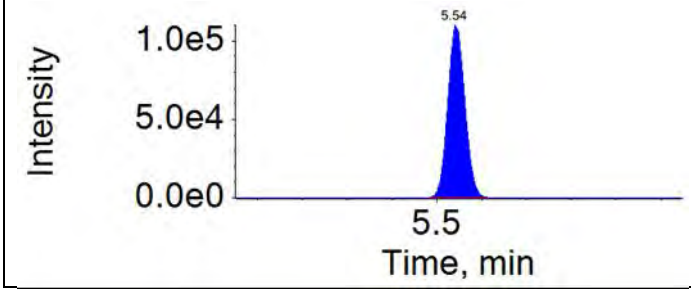
Analyte: PFNA
463.0 / 419.0



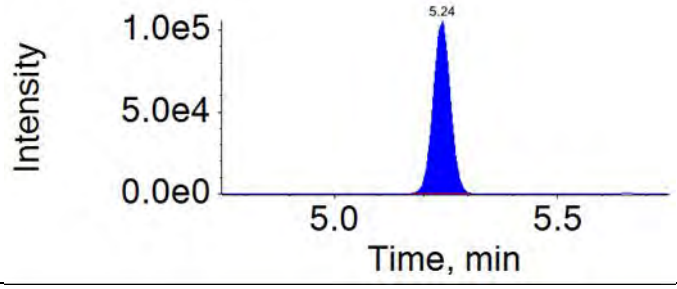
Extraction Standard: 13C9-PFNA
472.0 / 427.0



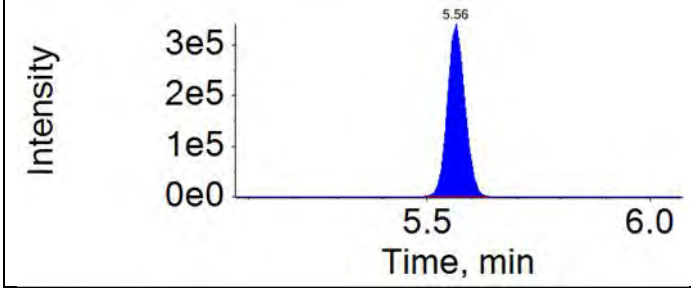
Analyte: PFNS
549.0 / 80.0



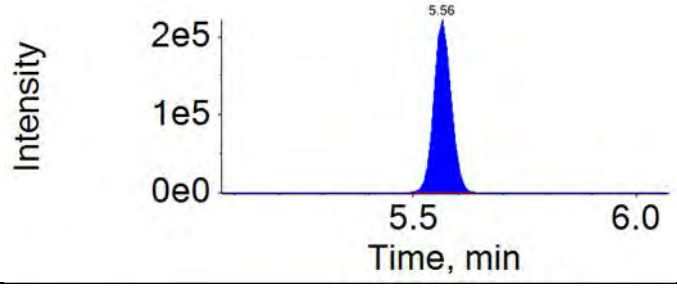
Extraction Standard: 13C8-PFOS
507.0 / 80.0



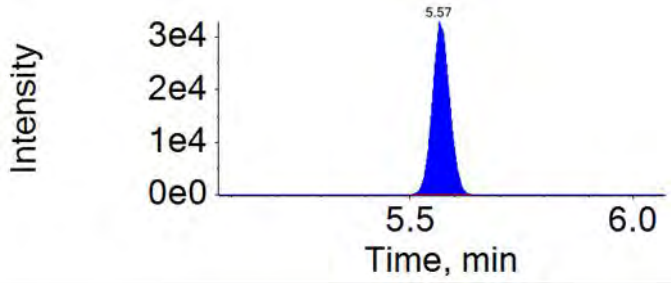
Analyte: PFDA
513.0 / 469.0



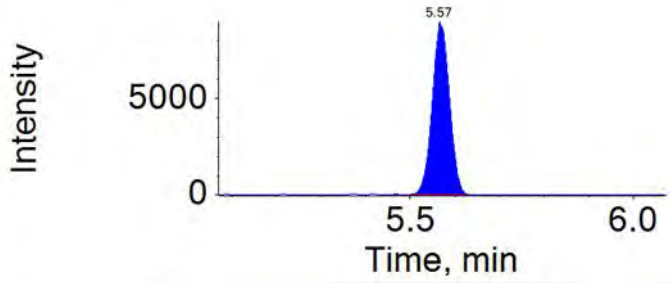
Extraction Standard: 13C6-PFDA
519.0 / 474.0



Analyte: 8:2-FTS
527.0 / 507.0



Extraction Standard: 13C2-8:2-FTS
529.0 / 81.0

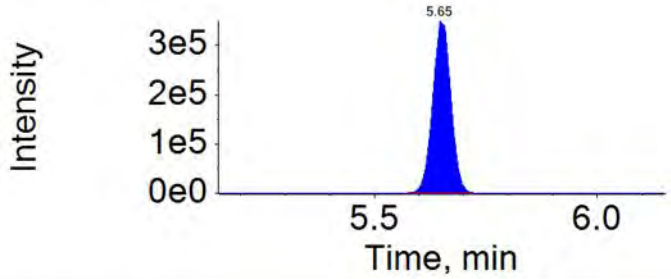


APPROVED
By JPT at 10:19 am, 11/14/18

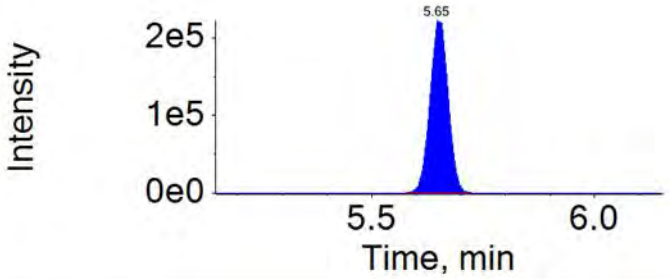
REVIEWED
By HMK at 11:03 am, 11/15/18

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV13DCCV6-10 11/14/2018 9:23:22 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

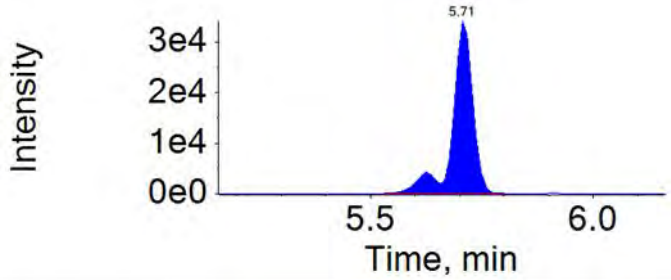
Analyte: PFOSA
498.0 / 78.0



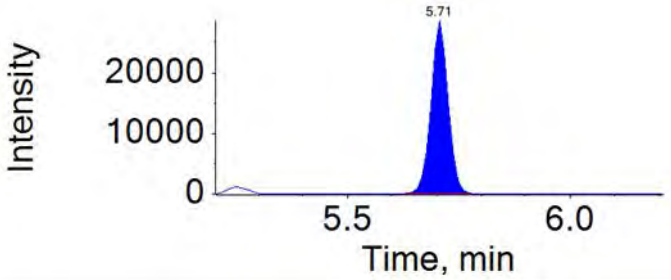
Extraction Standard: 13C8-PFOSA
506.0 / 78.0



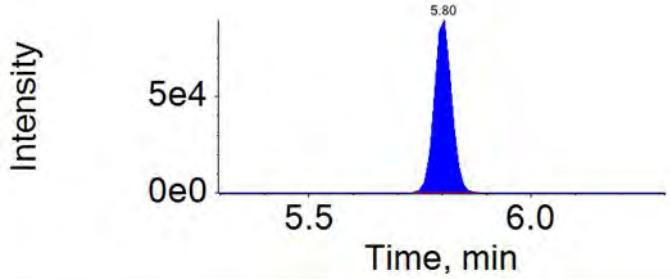
Analyte: NMeFOSAA
570.0 / 419.0



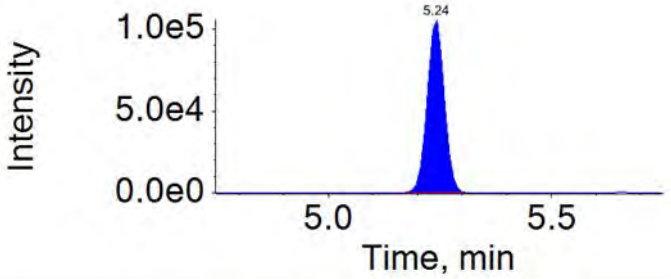
Extraction Standard: d3-NMeFOSAA
573.0 / 419.0



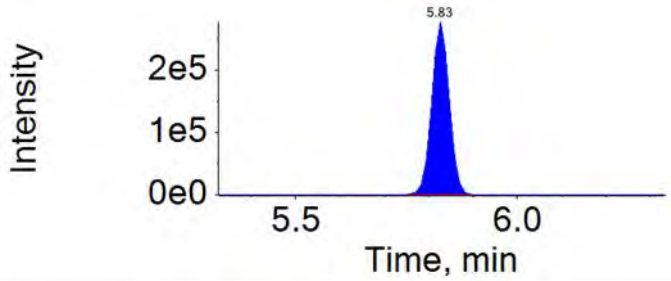
Analyte: PFDS
599.0 / 80.0



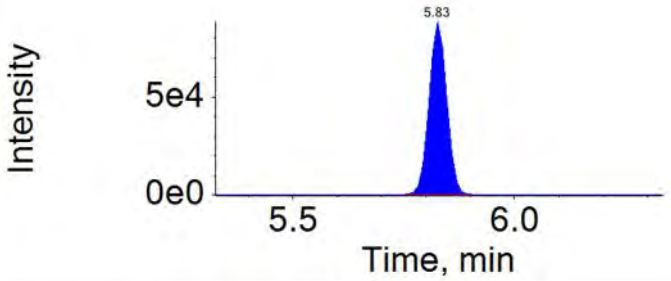
Extraction Standard: 13C8-PFOS
507.0 / 80.0



Analyte: PFUnDA
563.0 / 519.0



Extraction Standard: 13C7-PFUnDA
570.0 / 525.0

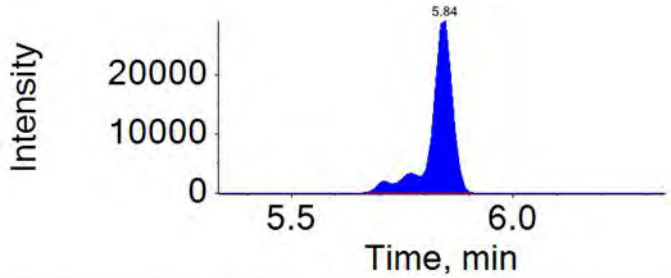


APPROVED
By JPT at 10:19 am, 11/14/18

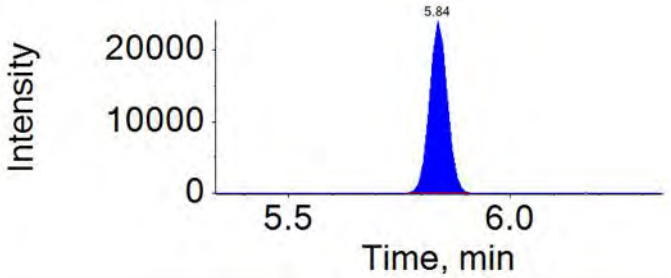
REVIEWED
By HMK at 11:03 am, 11/15/18

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV13DCCV6-10 11/14/2018 9:23:22 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

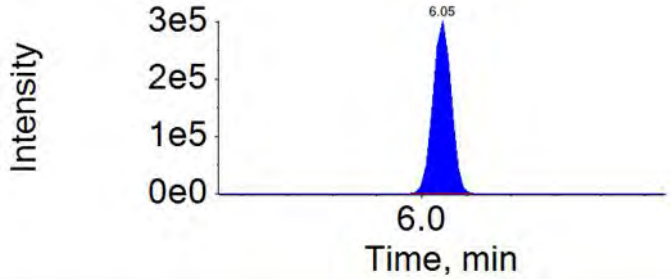
Analyte: NEtFOSAA
584.0 / 419.0



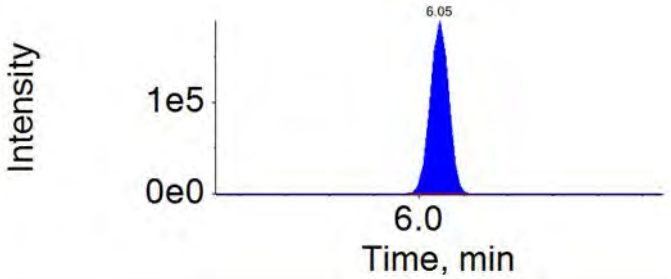
Extraction Standard: d5-NEtFOSAA
589.0 / 419.0



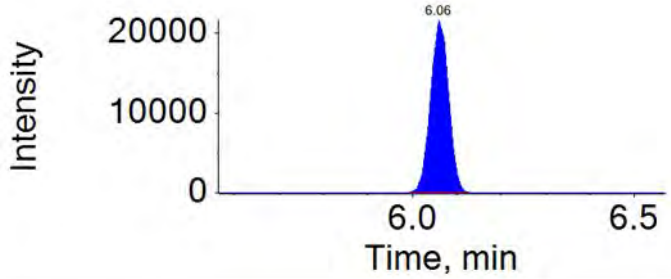
Analyte: PFDoDA
613.0 / 569.0



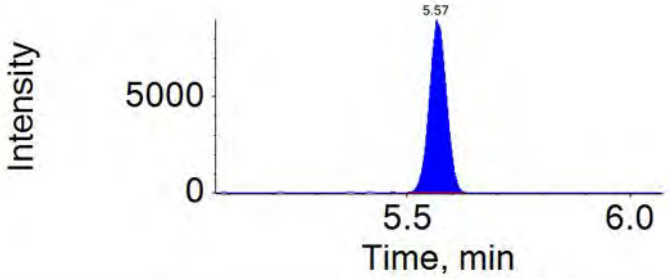
Extraction Standard: 13C2-PFDoDA
615.0 / 570.0



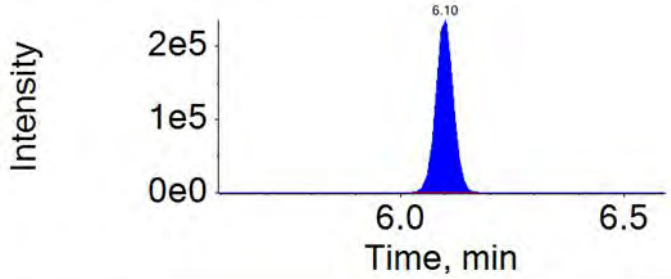
Analyte: 10:2-FTS
627.0 / 607.0



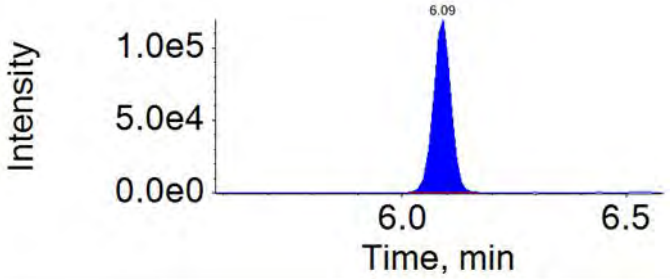
Extraction Standard: 13C2-8:2-FTS
529.0 / 81.0



Analyte: NMePFOSAE
616.0 / 59.0



Extraction Standard: d7-NMePFOSAE
623.0 / 59.0

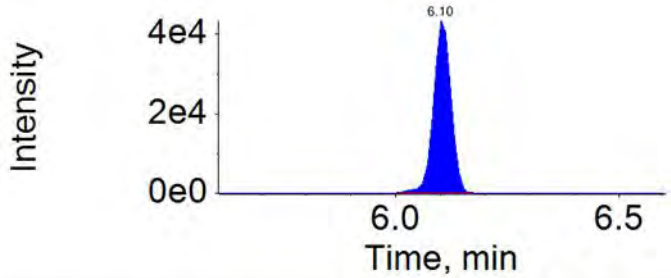


APPROVED
By JPT at 10:19 am, 11/14/18

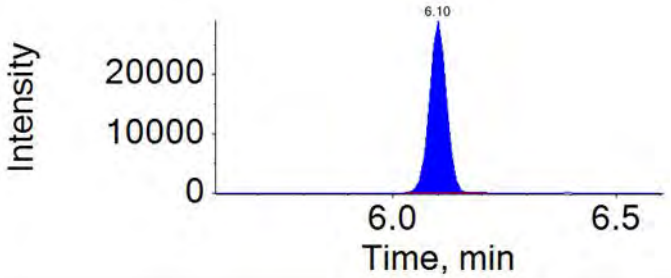
REVIEWED
By HMK at 11:03 am, 11/15/18

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV13DCCV6-10 11/14/2018 9:23:22 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

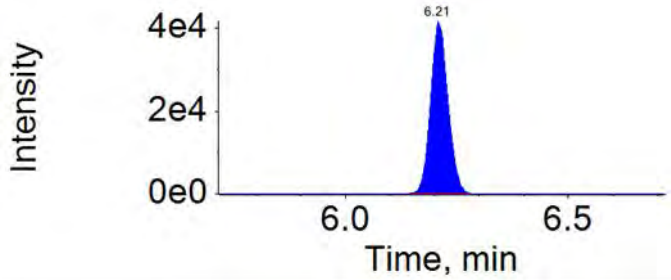
Analyte: NMePFOSA
512.0 / 169.0



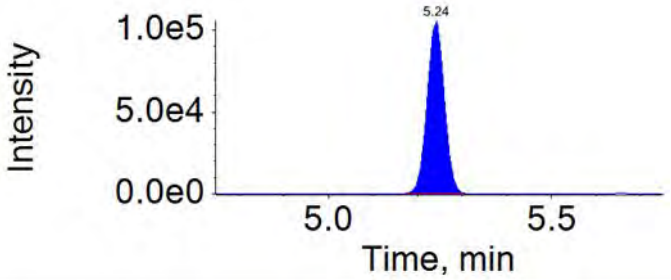
Extraction Standard: d3-NMePFOSA
515.0 / 169.0



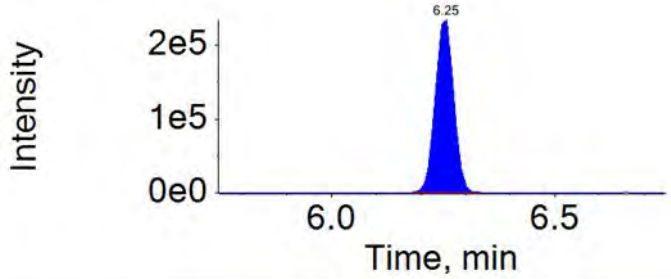
Analyte: PFDoS
699.0 / 80.0



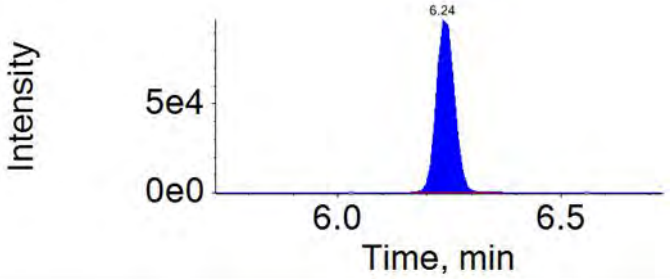
Extraction Standard: 13C8-PFOS
507.0 / 80.0



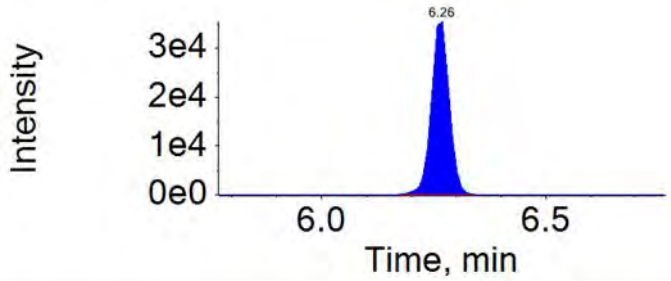
Analyte: NEtPFOSAE
630.0 / 59.0



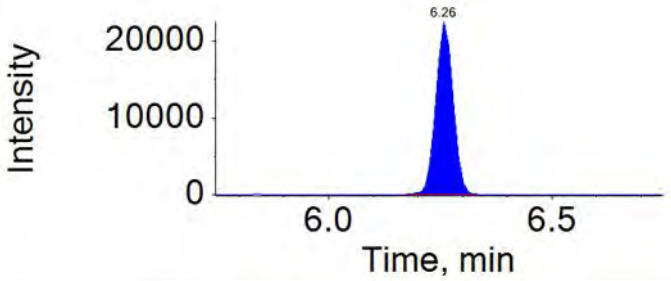
Extraction Standard: d9-NEtPFOSAE
639.0 / 59.0



Analyte: NEtPFOSA
526.0 / 169.0



Extraction Standard: d5-NEtPFOSA
531.0 / 169.0

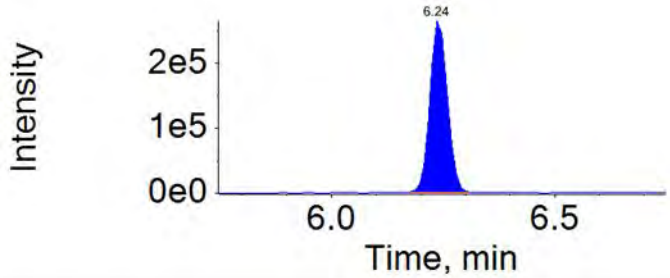


APPROVED
By JPT at 10:19 am, 11/14/18

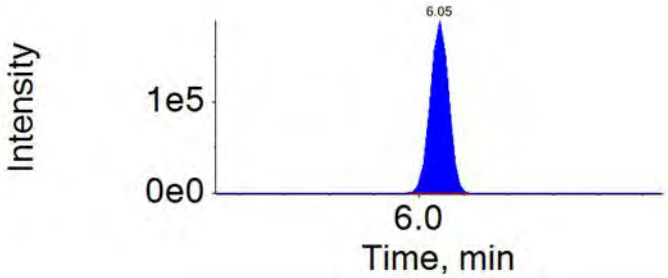
REVIEWED
By HMK at 11:03 am, 11/15/18

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV13DCCV6-10 11/14/2018 9:23:22 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

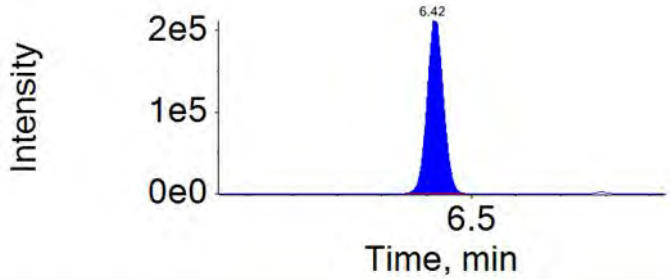
Analyte: PFTrDA
663.0 / 619.0



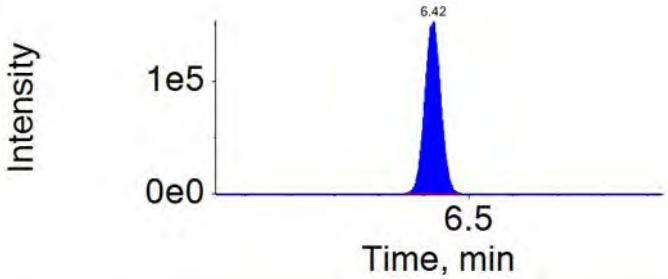
Extraction Standard: 13C2-PFDoDA
615.0 / 570.0



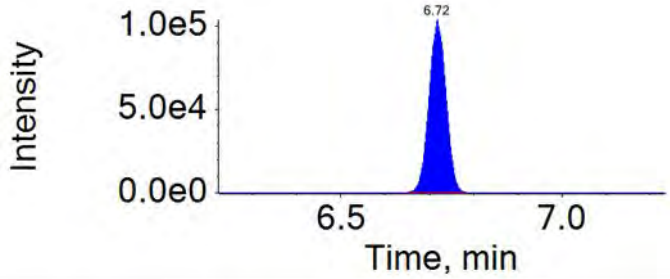
Analyte: PFTeDA
713.0 / 669.0



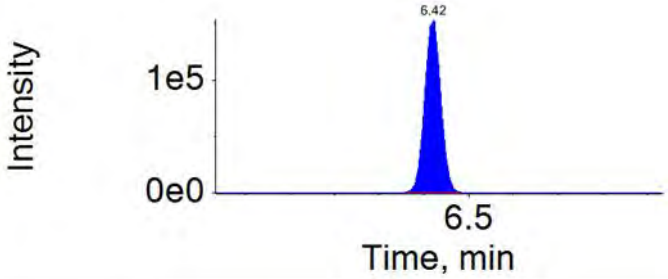
Extraction Standard: 13C2-PFTeDA
715.0 / 670.0



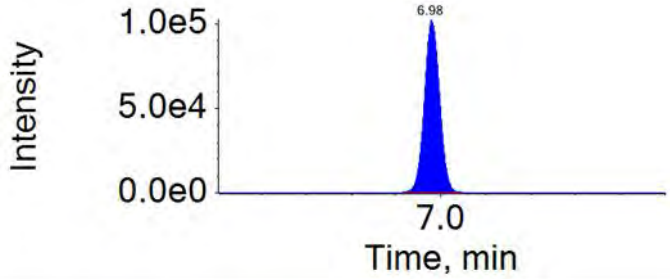
Analyte: PFHxDA
813.0 / 769.0



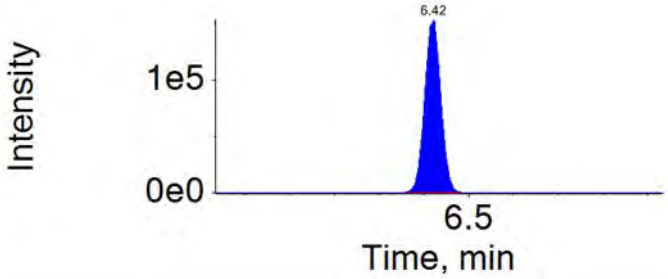
Extraction Standard: 13C2-PFTeDA
715.0 / 670.0



Analyte: PFODA
913.0 / 869.0



Extraction Standard: 13C2-PFTeDA
715.0 / 670.0



APPROVED
By JPT at 10:19 am, 11/14/18

REVIEWED
By HMK at 11:03 am, 11/15/18

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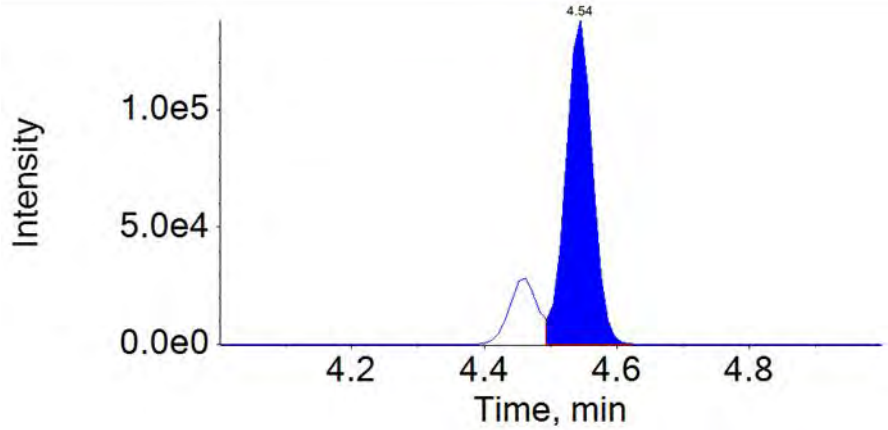
Auto Integrations prior to Manual Integration

Print Date: 11/14/2018 9:57 AM
Template: MQ-OrigInteg-16NOV21.docx

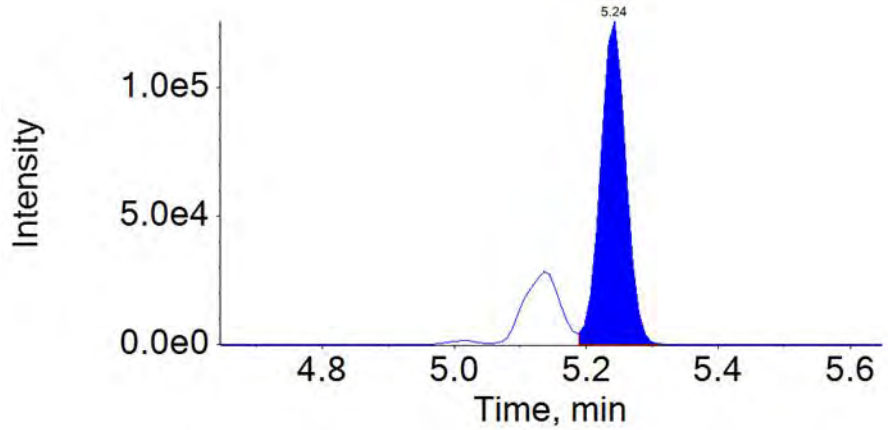
Results Table Name: 18NOV13DCCV6-10
Results Table Date: 11/14/2018 9:23:22 AM
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

Component Name:
PFHxS
RT (min.):
4.54
Peak Area:
390146.9
Mass Range:
399.0 / 80.0
File Name:
18NOV13D-87.wiff
Sample Name:
CCV9_CAL4



Integration Comment: incorrect integration

Component Name:
PFOS
RT (min.):
5.24
Peak Area:
337320.5
Mass Range:
499.0 / 80.0
File Name:
18NOV13D-87.wiff
Sample Name:
CCV9_CAL4



Integration Comment: incorrect integration

Component Name:
NMeFOSAA
RT (min.):
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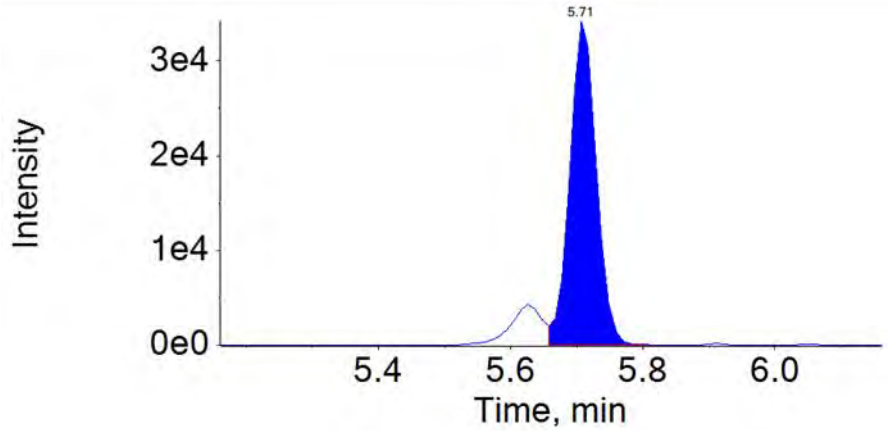
Peak Area:
95648.7
Mass Range:
570.0 / 419.0
File Name:
18NOV13D-87.wiff
Sample Name:
CCV9_CAL4



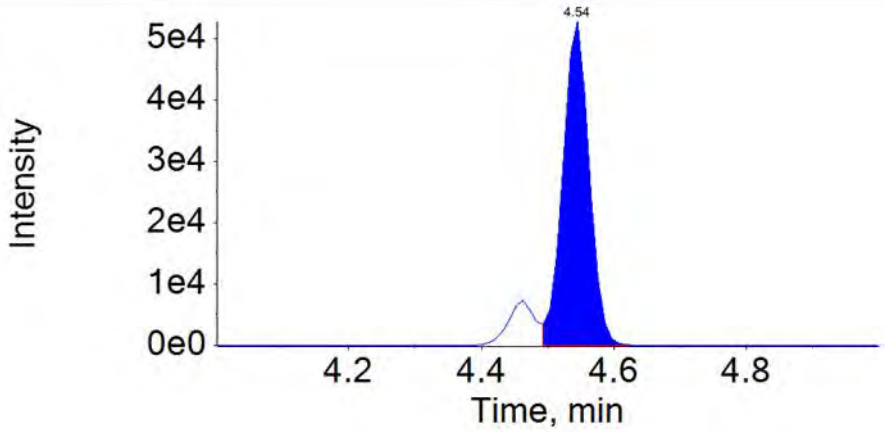
Integration Comment: incorrect integration

APPROVED
By JPT at 10:19 am, 11/14/18

REVIEWED
By HMK at 11:03 am, 11/15/18

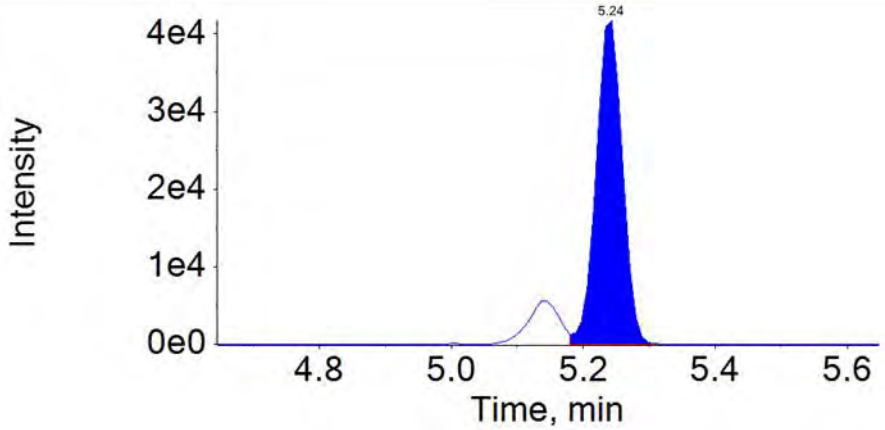
Results Table Name: 18NOV13DCCV6-10
Results Table Date: 11/14/2018 9:23:22 AM
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

Component Name:
PFHxS_2
RT (min.):
4.54
Peak Area:
146357.3
Mass Range:
399.0 / 99.0
File Name:
18NOV13D-87.wiff
Sample Name:
CCV9_CAL4



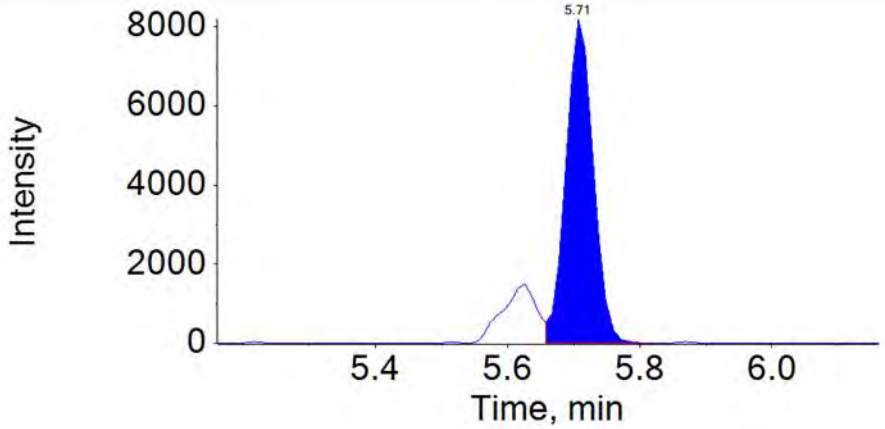
Integration Comment: incorrect integration

Component Name:
PFOS_2
RT (min.):
5.24
Peak Area:
116171.3
Mass Range:
499.0 / 99.0
File Name:
18NOV13D-87.wiff
Sample Name:
CCV9_CAL4



Integration Comment: incorrect integration

Component Name:
NMeFOSAA_2
RT (min.):
5.71
Peak Area:
23702.5
Mass Range:
570.0 / 483.0
File Name:
18NOV13D-87.wiff
Sample Name:
CCV9_CAL4



Integration Comment: incorrect integration

APPROVED
By JPT at 10:19 am, 11/14/18

REVIEWED
By HMK at 11:03 am, 11/15/18

Results Table Name: 18NOV13DCCV6-10
Results Table Date: 11/14/2018 9:23:22 AM
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

APPROVED
By JPT at 10:19 am, 11/14/18

REVIEWED
By HMK at 11:03 am, 11/15/18

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LC-MS/MS Analysis Report

Printed: 11/14/2018 9:52:00 AM
Template: IonRatio18OCT10

Ion Ratio Report

Sample Name: CCV9_CAL4 **Instrument Name:** LM27631 **File Name:** 18NOV13D-87.wiff

Component Name	RT	RRT	Analyte Area Response	Int Typ	Expected Ion Ratio	Ion Ratio	Ion Ratio % Diff	Ion Ratio Limit	Ion Ratio OOS
PFBS	3.81	1.00	612489.9	A	N/A	1.0000			
PFBS_2	3.81	1.00	227294.6	A	N/A	0.3711	2	50	
4:2-FTS	4.12	1.00	136144.9	A	N/A	1.0000			
4:2-FTS_2	4.12	1.00	84417.7	A	N/A	0.6201	-7	50	
PFHxA	4.15	1.00	1350925.6	A	N/A	1.0000			
PFHxA_2	4.15	1.00	15487.2	A	N/A	0.0115	-3	50	
PFPeS	4.17	1.10	313924.4	A	N/A	1.0000			
PFPeS_2	4.17	1.10	168136.2	A	N/A	0.5356	3	50	
PFHpA	4.54	1.00	1333013.6	A	N/A	1.0000			
PFHpA_2	4.54	1.00	73565.8	A	N/A	0.0552	-2	50	
PFHxS	4.54	1.00	472675.8	M	N/A	1.0000			
PFHxS_2	4.54	1.00	167085.1	M	N/A	0.3535	16	50	
6:2-FTS	4.90	1.00	106444.9	A	N/A	1.0000			
6:2-FTS_2	4.90	1.00	66085.0	A	N/A	0.6208	-6	50	
PFHpS	4.90	1.08	467233.5	A	N/A	1.0000			
PFHpS_2	4.90	1.08	175963.2	A	N/A	0.3766	-7	50	
PFOA	4.91	1.00	1329657.8	A	N/A	1.0000			
PFOA_2	4.91	1.00	73275.2	A	N/A	0.0551	-3	50	
PFOS	5.24	1.00	450726.1	M	N/A	1.0000			
PFOS_2	5.24	1.00	134942.5	M	N/A	0.2994	16	50	
PFNA	5.26	1.00	1144678.1	A	N/A	1.0000			
PFNA_2	5.26	1.00	23558.7	A	N/A	0.0206	-10	50	
PFNS	5.54	1.06	290730.6	A	N/A	1.0000			
PFNS_2	5.54	1.06	132663.6	A	N/A	0.4563	-4	50	
PFDA	5.56	1.00	926038.5	A	N/A	1.0000			
PFDA_2	5.56	1.00	5805.8	A	N/A	0.0063	-21	50	
8:2-FTS	5.57	1.00	88095.7	A	N/A	1.0000			
8:2-FTS_2	5.57	1.00	55628.5	A	N/A	0.6315	-5	50	
NMeFOSAA	5.71	1.00	109827.8	M	N/A	1.0000			
NMeFOSAA_2	5.71	1.00	29052.4	M	N/A	0.2645	24	50	
PFDS	5.80	1.11	245198.7	A	N/A	1.0000			
PFDS_2	5.80	1.11	115810.7	A	N/A	0.4723	-7	50	
PFUnDA	5.83	1.00	757355.4	A	N/A	1.0000			
PFUnDA_2	5.83	1.00	2794.8	A	N/A	0.0037	-11	50	
NEtFOSAA	5.84	1.00	98288.7	A	N/A	1.0000			
NEtFOSAA_2	5.84	1.00	63645.4	A	N/A	0.6475	12	50	
PFDoDA	6.05	1.00	854564.1	A	N/A	1.0000			
PFDoDA_2	6.05	1.00	11832.5	A	N/A	0.0138	-15	50	
10:2-FTS	6.06	1.09	60995.0	A	N/A	1.0000			
10:2-FTS_2	6.06	1.09	43340.1	A	N/A	0.7106	10	50	
PFTrDA	6.24	1.03	724225.3	A	N/A	1.0000			
PFTrDA_2	6.24	1.03	5936.4	A	N/A	0.0082	-11	50	
PFTeDA	6.42	1.00	544053.5	A	N/A	1.0000			
PFTeDA_2	6.42	1.00	4187.3	A	N/A	0.0077	20	50	
PFHxDA	6.72	1.05	274012.8	A	N/A	1.0000			
PFHxDA_2	6.72	1.05	16694.4	A	N/A	0.0609	-10	50	
PFODA	6.98	1.09	242380.9	A	N/A	1.0000			
PFODA_2	6.98	1.09	6020.4	A	N/A	0.0248	-8	50	

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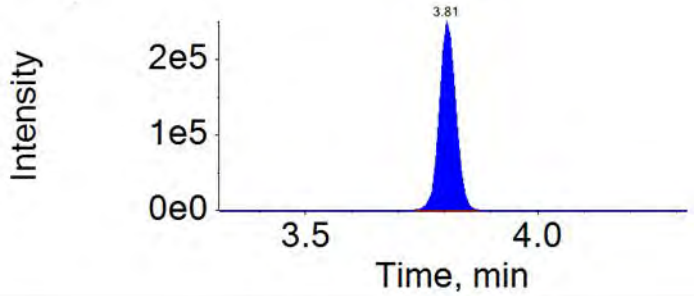
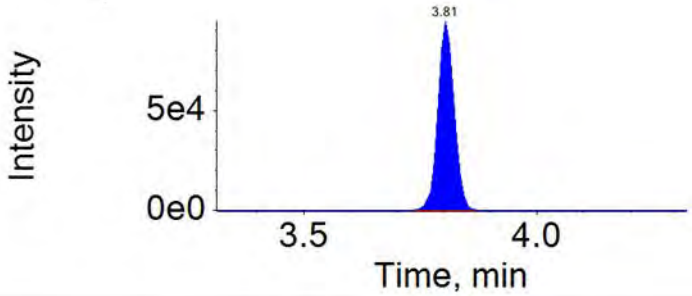
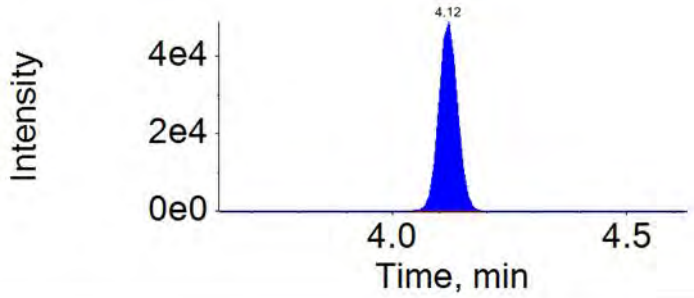
Component: PFBS
Primary Mass: 299.0 / 80.0



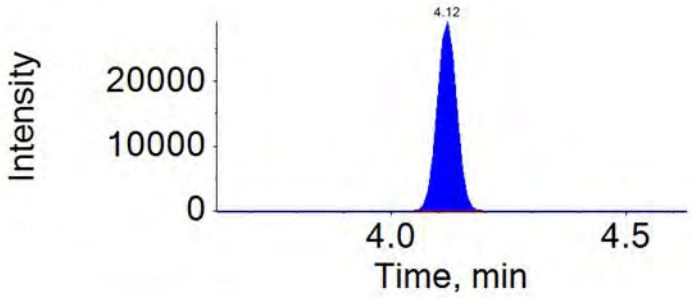
Component: PFBS_2
Secondary Mass: 299.0 / 99.0



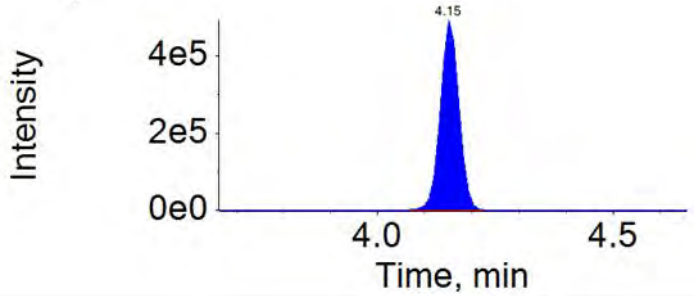
Component: 4:2-FTS
Primary Mass: 327.0 / 307.0



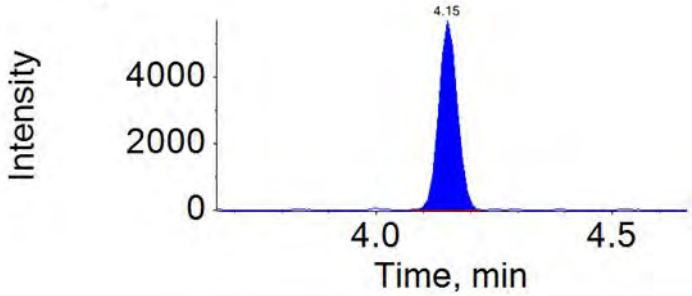
Component: 4:2-FTS_2
Secondary Mass: 327.0 / 81.0



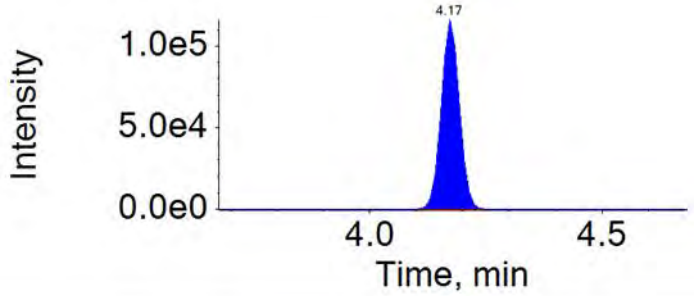
Component: PFHxA
Primary Mass: 313.0 / 269.0



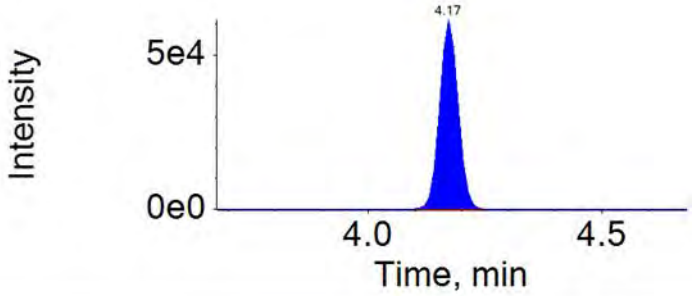
Component: PFHxA_2
Secondary Mass: 313.0 / 119.0



Component: PFPeS
Primary Mass: 349.0 / 80.0



Component: PFPeS_2
Secondary Mass: 349.0 / 99.0



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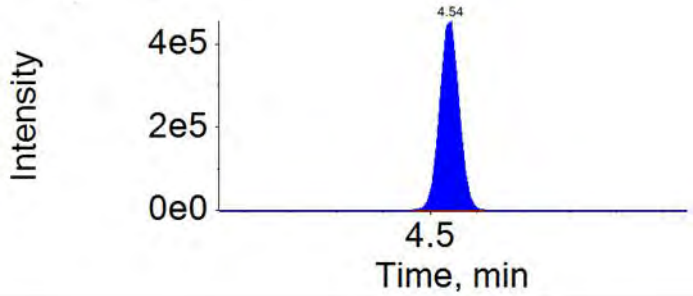
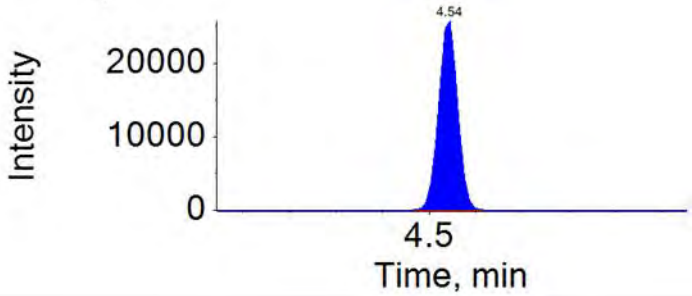
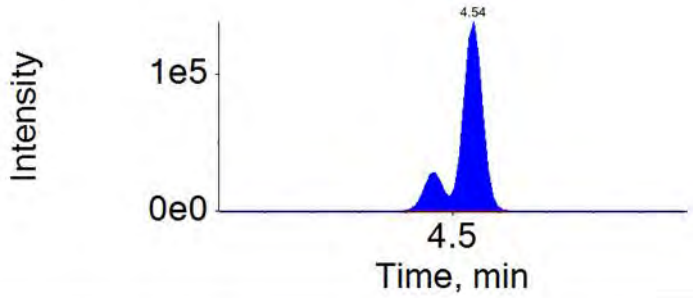
Component: PFHpA
Primary Mass: 363.0 / 319.0



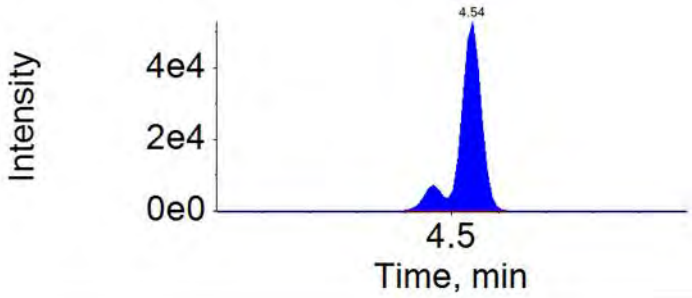
Component: PFHpA_2
Secondary Mass: 363.0 / 169.0



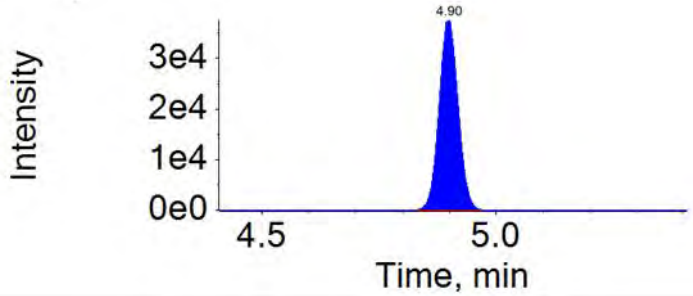
Component: PFHxS
Primary Mass: 399.0 / 80.0



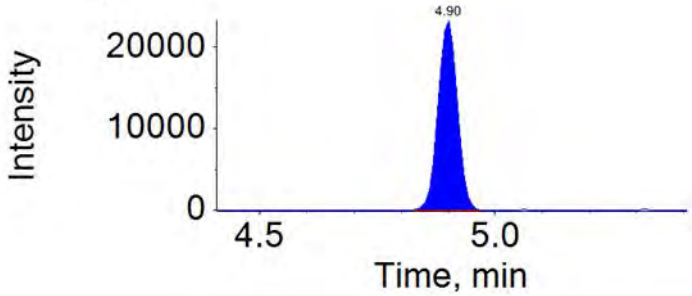
Component: PFHxS_2
Secondary Mass: 399.0 / 99.0



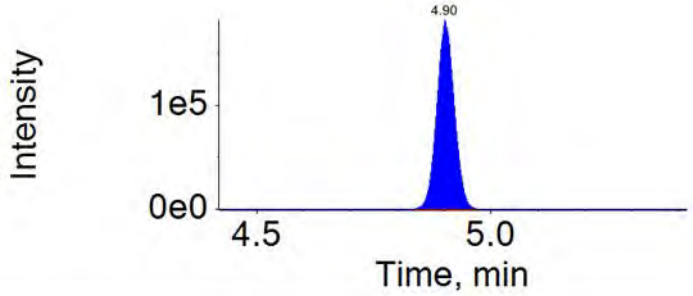
Component: 6:2-FTS
Primary Mass: 427.0 / 407.0



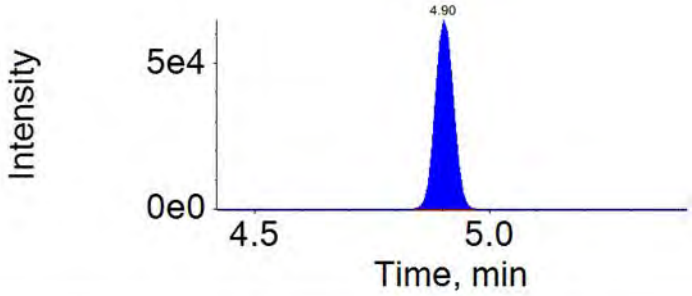
Component: 6:2-FTS_2
Secondary Mass: 427.0 / 81.0



Component: PFHpS
Primary Mass: 449.0 / 80.0



Component: PFHpS_2
Secondary Mass: 449.0 / 99.0



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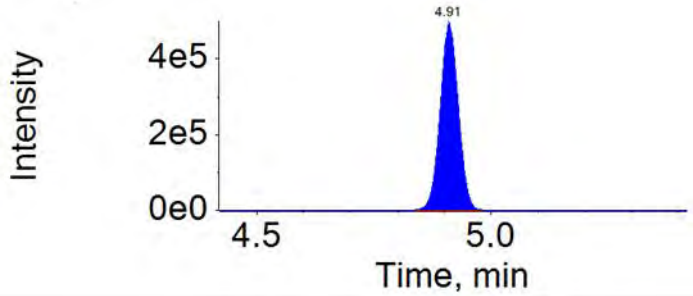
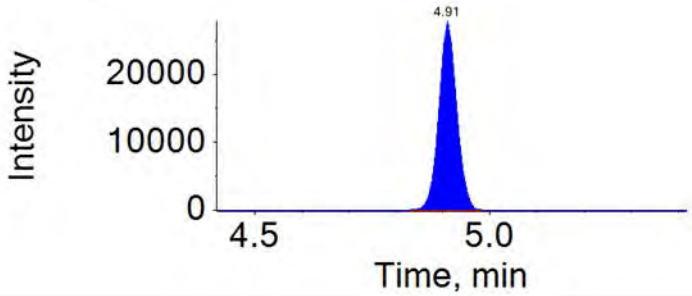
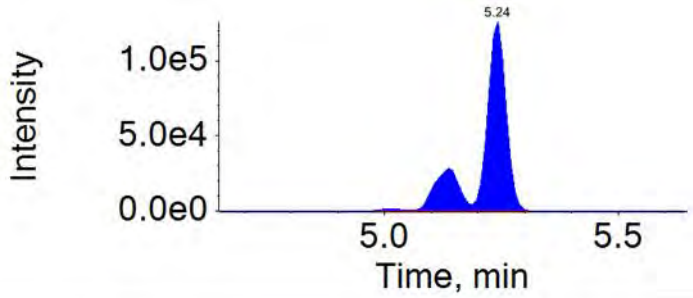
Component: PFOA
Primary Mass: 413.0 / 369.0



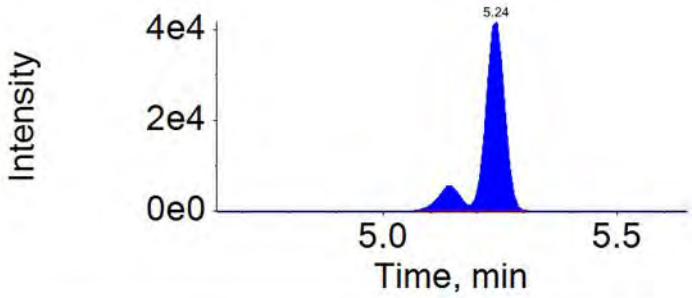
Component: PFOA_2
Secondary Mass: 413.0 / 169.0



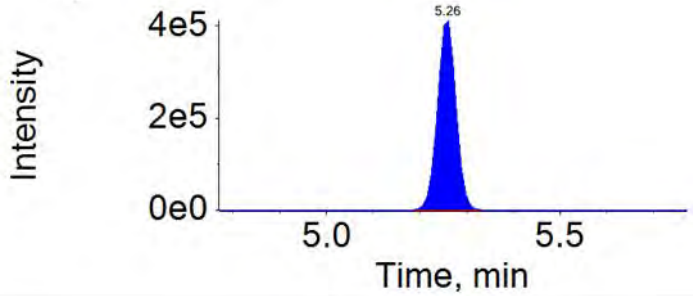
Component: PFOS
Primary Mass: 499.0 / 80.0



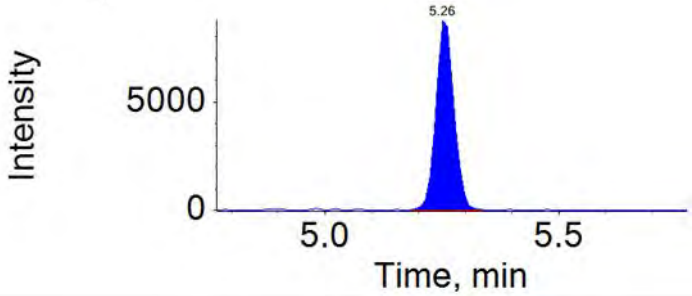
Component: PFOS_2
Secondary Mass: 499.0 / 99.0



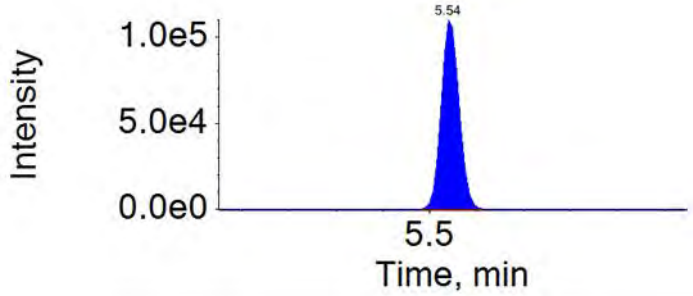
Component: PFNA
Primary Mass: 463.0 / 419.0



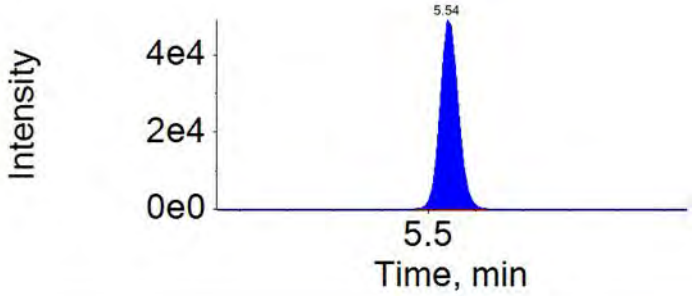
Component: PFNA_2
Secondary Mass: 463.0 / 169.0



Component: PFNS
Primary Mass: 549.0 / 80.0



Component: PFNS_2
Secondary Mass: 549.0 / 99.0



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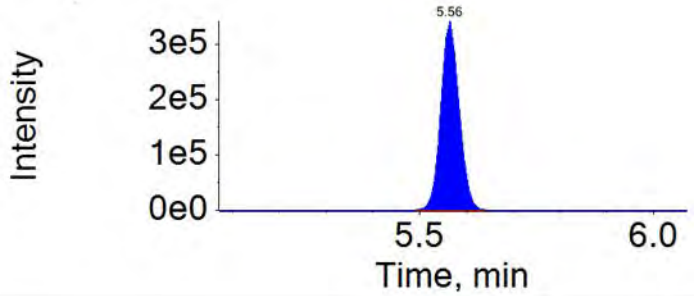
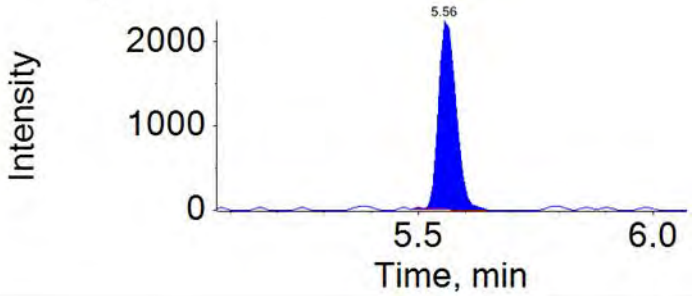
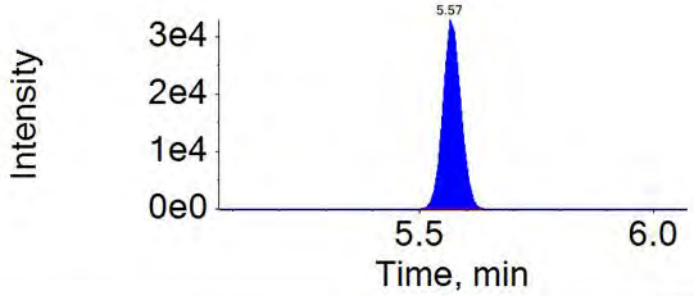
Component: PFDA
Primary Mass: 513.0 / 469.0



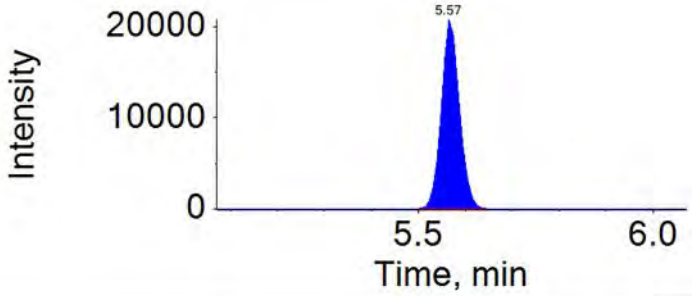
Component: PFDA_2
Secondary Mass: 513.0 / 169.0



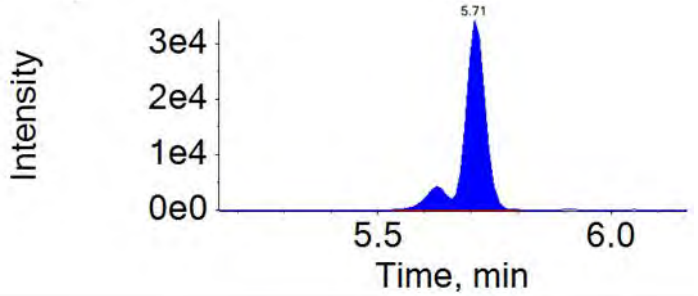
Component: 8:2-FTS
Primary Mass: 527.0 / 507.0



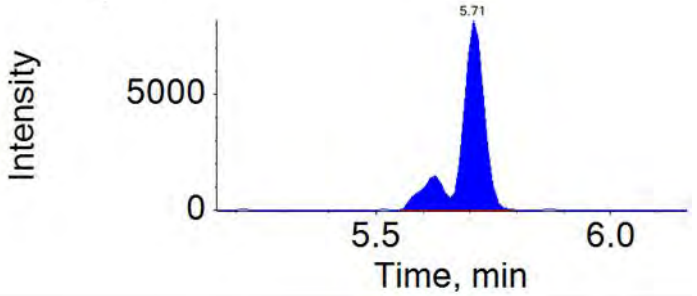
Component: 8:2-FTS_2
Secondary Mass: 527.0 / 81.0



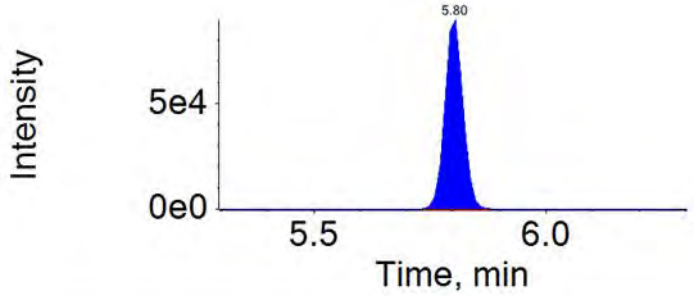
Component: NMeFOSAA
Primary Mass: 570.0 / 419.0



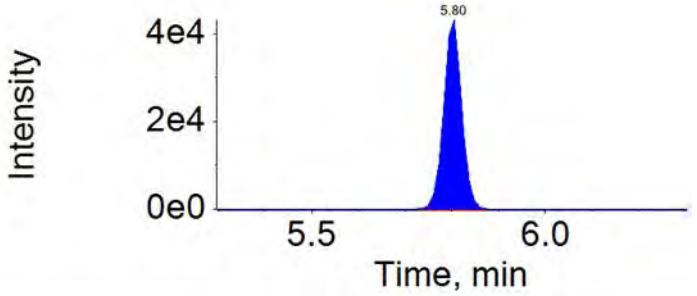
Component: NMeFOSAA_2
Secondary Mass: 570.0 / 483.0



Component: PFDS
Primary Mass: 599.0 / 80.0



Component: PFDS_2
Secondary Mass: 599.0 / 99.0



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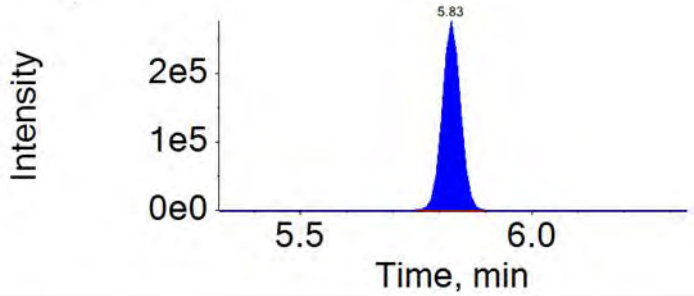
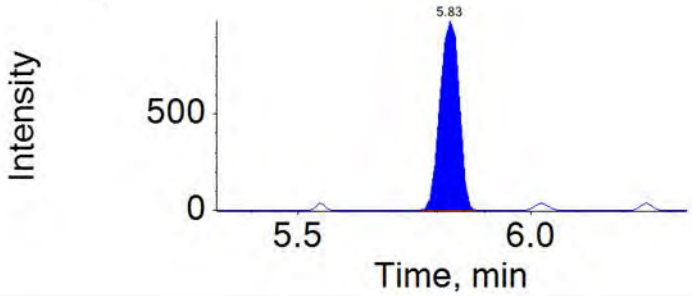
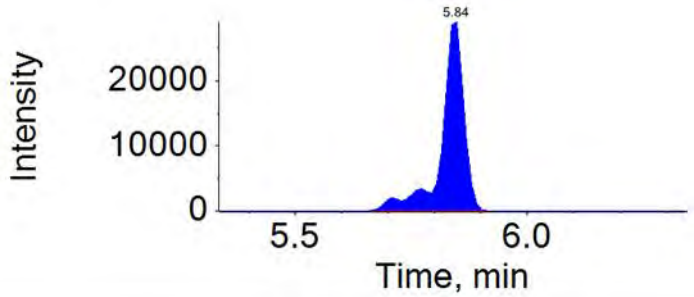
Component: PFUnDA
Primary Mass: 563.0 / 519.0



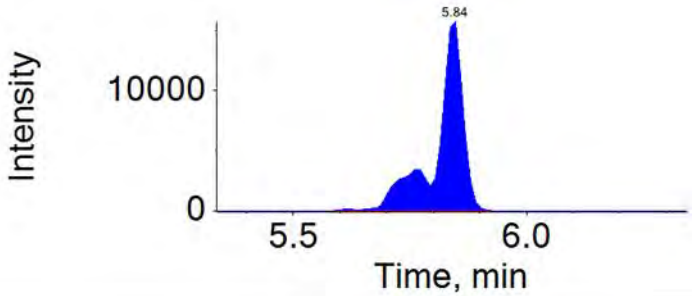
Component: PFUnDA_2
Secondary Mass: 563.0 / 169.0



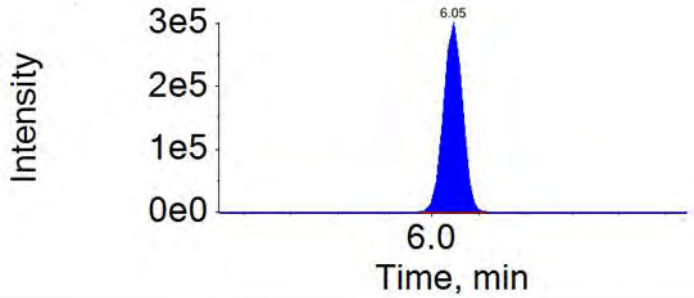
Component: NEtFOSAA
Primary Mass: 584.0 / 419.0



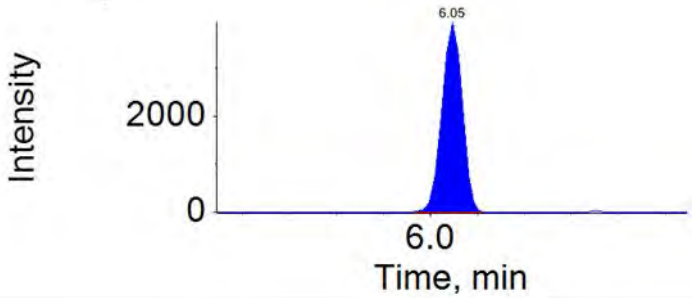
Component: NEtFOSAA_2
Secondary Mass: 584.0 / 526.0



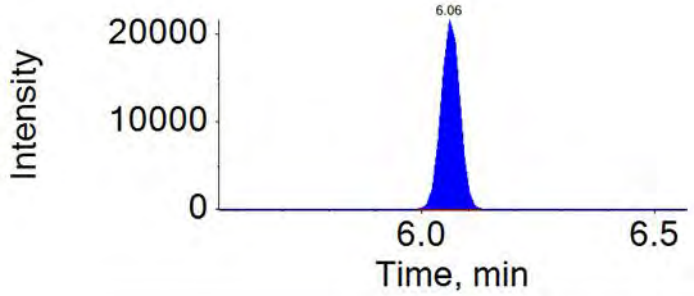
Component: PFDoDA
Primary Mass: 613.0 / 569.0



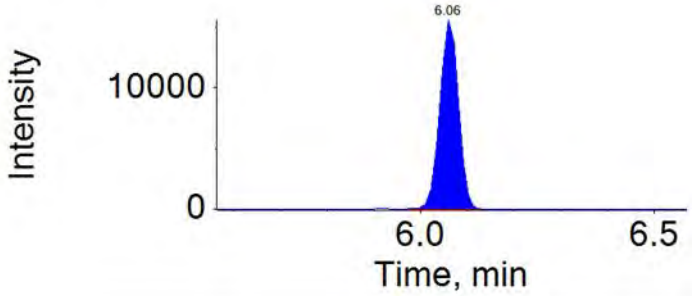
Component: PFDoDA_2
Secondary Mass: 613.0 / 169.0



Component: 10:2-FTS
Primary Mass: 627.0 / 607.0



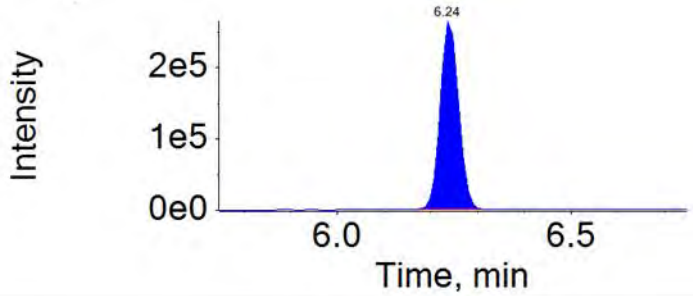
Component: 10:2-FTS_2
Secondary Mass: 627.0 / 81.0



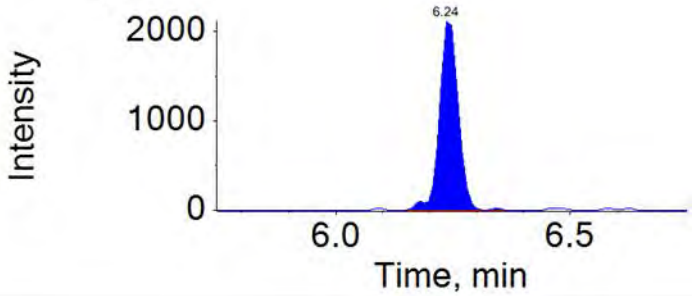
APPROVED
By JPT at 10:19 am, 11/14/18

REVIEWED
By HMK at 11:03 am, 11/15/18

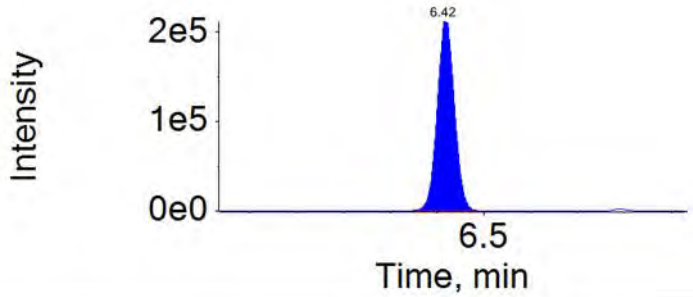
Component: PFTrDA
Primary Mass: 663.0 / 619.0



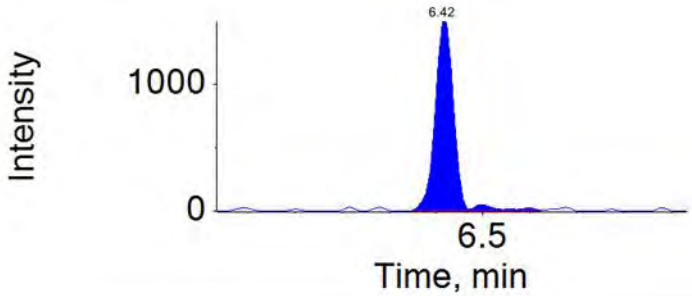
Component: PFTrDA_2
Secondary Mass: 663.0 / 169.0



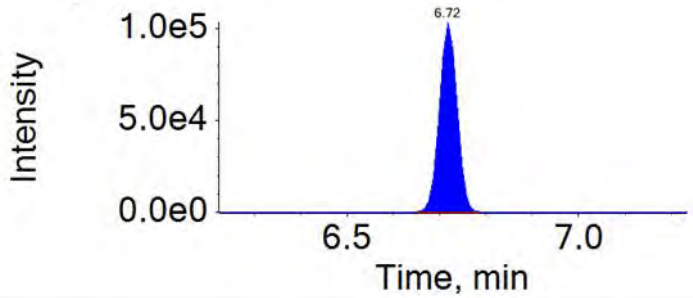
Component: PFTeDA
Primary Mass: 713.0 / 669.0



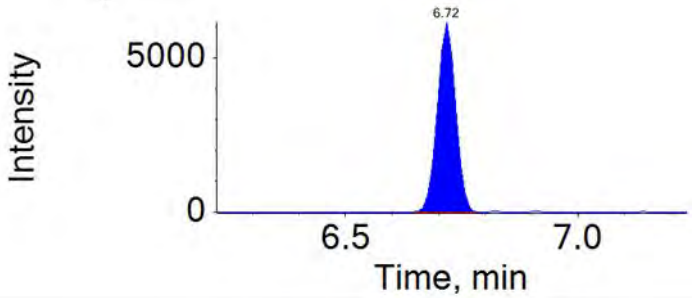
Component: PFTeDA_2
Secondary Mass: 713.0 / 169.0



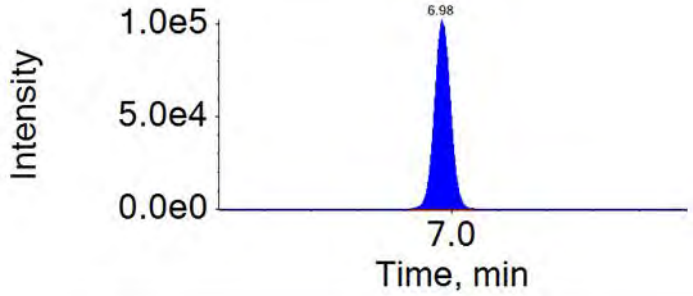
Component: PFHxDA
Primary Mass: 813.0 / 769.0



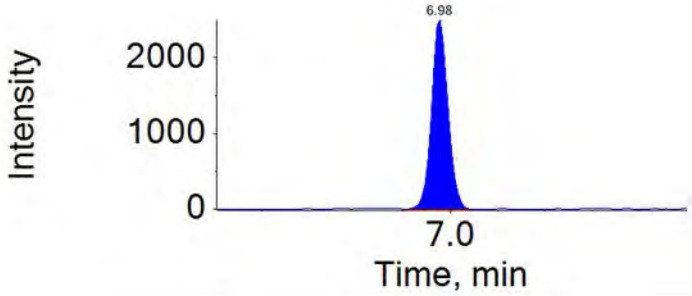
Component: PFHxDA_2
Secondary Mass: 813.0 / 169.0



Component: PFODA
Primary Mass: 913.0 / 869.0



Component: PFODA_2
Secondary Mass: 913.0 / 169.0



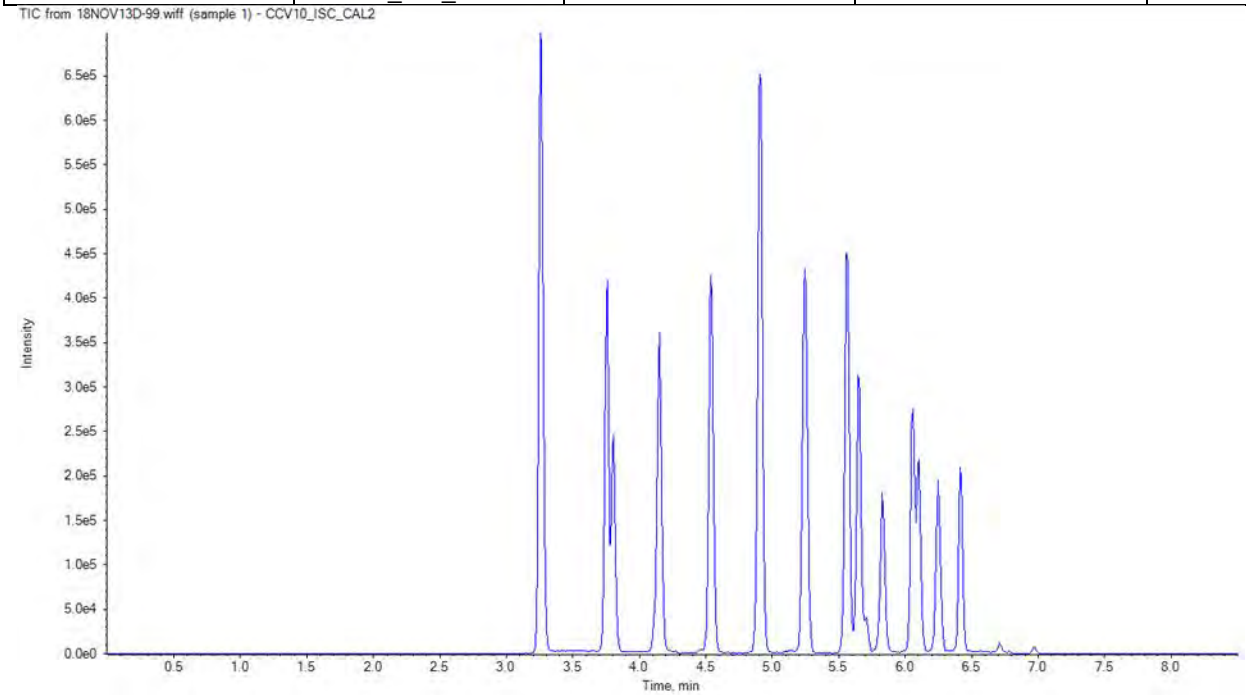
APPROVED
By JPT at 10:19 am, 11/14/18

REVIEWED
By HMK at 11:03 am, 11/15/18

Instrument Sensitivity Check/ Continuing Calibration Verfication

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV13DCCV6-10 11/14/2018 9:23:22 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Instrument Name:	Sample Name:	Sample ID:	Sample File:	Acquisition Date:
LM27631	CCV10_ISC_CAL2	CALBRN21833C	18NOV13D-99.wiff	2018-11-14T00:27:10



Injection Standard Area Reference File: 18NOV13D-05

Injection Standard Name	Inj Std Conc	Injection Std Peak Area	Reference Injection Standard Area	Injection Std %Diff	Injection Std %Diff Limit	Injection Std %Diff OOS
13C3-PFBA	5.0	701148.7	661126.9	6	50	
13C2-PFOA	5.0	466429.2	466902.6	0	50	
13C4-PFOS	4.8	263459.4	247446.9	6	50	
13C2-PFDA	5.0	306379.5	295381.6	4	50	

APPROVED
By JPT at 10:19 am, 11/14/18

REVIEWED
By HMK at 11:03 am, 11/15/18

Instrument Sensitivity Check/ Continuing Calibration Verfication

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV13DCCV6-10 11/14/2018 9:23:22 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Instrument Name:	Sample Name:	Sample ID:	Sample File:	Acquisition Date:
LM27631	CCV10_ISC_CAL2	CALBRN21833C	18NOV13D-99.wiff	2018-11-14T00:27:10

Analyte Name	Analyte Area	Sc /pk	Ext Std Name	Ext Std Area	Ext Std con	Area Ratio	RT (min)	RRT	Spec Amt	Calc Amt	% Diff	% Diff Lim	% Diff OOS
PFBA	85722.6	10	13C4-PFBA	794200.1	5.0	0.108	3.26	1.000	0.600	0.598	0	30	
PFPeA	81021.1	11	13C5-PFPeA	765826.9	5.0	0.106	3.76	1.000	0.600	0.612	2	30	
PFBS	41175.6	11	13C3-PFBS	440650.1	4.7	0.093	3.80	1.000	0.531	0.444	-16	30	
4:2-FTS	10558.5	11	13C2-4:2-FTS	50222.6	4.7	0.210	4.12	1.000	0.560	0.571	2	30	
PFHxA	93239.0	11	13C5-PFHxA	671724.6	5.0	0.139	4.15	1.000	0.600	0.580	-3	30	
PFPeS	22889.9	11	13C3-PFBS	440650.1	4.7	0.052	4.17	1.100	0.563	0.504	-10	30	
PFHpA	100485.7	12	13C4-PFHpA	540437.9	5.0	0.186	4.54	1.000	0.600	0.616	3	30	
PFHxS	31363.2	19	13C3-PFHxS	339754.0	4.7	0.092	4.54	1.000	0.547	0.448	-18	30	
6:2-FTS	8290.1	11	13C2-6:2-FTS	36346.5	4.8	0.228	4.90	1.000	0.569	0.552	-3	30	
PFHpS	32176.2	11	13C3-PFHxS	339754.0	4.7	0.095	4.90	1.080	0.571	0.499	-13	30	
PFOA	97413.0	11	13C8-PFOA	936164.3	5.0	0.104	4.91	1.000	0.600	0.556	-7	30	
PFOS	33335.6	22	13C8-PFOS	297160.3	4.8	0.112	5.24	1.000	0.555	0.491	-12	30	
PFNA	79913.2	11	13C9-PFNA	481109.4	5.0	0.166	5.25	1.000	0.600	0.599	0	30	
PFNS	19973.6	11	13C8-PFOS	297160.3	4.8	0.067	5.54	1.060	0.576	0.470	-18	30	
PFDA	70350.5	11	13C6-PFDA	657345.2	5.0	0.107	5.56	1.000	0.600	0.567	-5	30	
8:2-FTS	8485.5	11	13C2-8:2-FTS	30328.4	4.8	0.280	5.57	1.000	0.575	0.652	13	30	
PFOSA	72323.9	11	13C8-PFOSA	655976.7	5.0	0.110	5.65	1.000	0.600	0.539	-10	30	
NMeFOSAA	6785.4	17	d3-NMeFOSAA	78031.2	5.0	0.087	5.71	1.000	0.600	0.491	-18	30	
PFDS	17445.5	11	13C8-PFOS	297160.3	4.8	0.059	5.80	1.110	0.578	0.532	-8	30	
PFUnDA	58618.2	11	13C7-PFUnDA	265235.1	5.0	0.221	5.83	1.000	0.600	0.578	-4	30	
NEtFOSAA	6596.5	17	d5-NEtFOSAA	68361.4	5.0	0.096	5.84	1.000	0.600	0.506	-16	30	
PFDoDA	63697.0	11	13C2-PFDoDA	549890.8	5.0	0.116	6.06	1.000	0.600	0.590	-2	30	
10:2-FTS	3987.7	11	13C2-8:2-FTS	30328.4	4.8	0.131	6.07	1.090	0.578	0.438	-24	30	
NMePFOSAE	47697.3	11	d7-NMePFOSAE	349940.7	5.0	0.136	6.11	1.000	0.600	0.567	-5	30	
NMePFOSA	7370.2	11	d3-NMePFOSA	81197.5	5.0	0.091	6.12	1.000	0.600	0.448	-25	30	
PFDoS	7092.3	11	13C8-PFOS	297160.3	4.8	0.024	6.21	1.190	0.581	0.418	-28	30	
NEtPFOSAE	49226.5	11	d9-NEtPFOSAE	277789.9	5.0	0.177	6.26	1.000	0.600	0.569	-5	30	
NEtPFOSA	7502.0	11	d5-NEtPFOSA	60763.0	5.0	0.123	6.27	1.000	0.600	0.567	-6	30	
PFTrDA	52624.9	11	13C2-PFDoDA	549890.8	5.0	0.096	6.24	1.030	0.600	0.604	1	30	
PFTeDA	42186.4	10	13C2-PFTeDA	399717.5	5.0	0.106	6.42	1.000	0.600	0.592	-1	30	
PFHxDA	18374.7	11	13C2-PFTeDA	399717.5	5.0	0.046	6.71	1.050	0.600	0.548	-9	30	
PFODA	15437.7	10	13C2-PFTeDA	399717.5	5.0	0.039	6.97	1.090	0.600	0.538	-10	30	

APPROVED
By JPT at 10:19 am, 11/14/18

REVIEWED
By HMK at 11:03 am, 11/15/18

Instrument Sensitivity Check/
Continuing Calibration Verfication

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV13DCCV6-10 11/14/2018 9:23:22 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

APPROVED
By JPT at 10:19 am, 11/14/18

REVIEWED
By HMK at 11:03 am, 11/15/18

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV13DCCV6-10 11/14/2018 9:23:22 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Sample Name:	CCV10_ISC_CAL2			**Data File:**		18NOV13D-99.wiff
Sample ID:	CALBRN21833C			**Acquis Date:**		2018-11-14T00:27:10
Sample Type:	Quality Control			**Instrument:**		LM27631
Vial Position:	4			**Acquis Method:**		18AUG13_3uL.dam
Injection Vol:	3.00			**Result Table:**		18NOV13DCCV6-10
QMethod File:	18AUG20QM			**ICAL Name:**		18NOV12DCAL
Batch Number:	N/A			**Operator:**		JPT12262
Sample Wt.:	1.00000			**Dilution Factor:**		1.00
Sample Vol.:	1.000			**Prep Factor:**		1.000

Injection Standard Peak Table

Injection Standard Area Reference File: 18NOV13D-05

Injection Standard Name	Inj Std Conc	Injection Std Peak Area	Rreference Injection Standard Area	Injection Std %Diff	Injection Std %Diff Limit	Injection Std %Diff OOS
13C3-PFBA	5.0	701148.7	661126.9	6	50	
13C2-PFOA	5.0	466429.2	466902.6	0	50	
13C4-PFOS	4.8	263459.4	247446.9	6	50	
13C2-PFDA	5.0	306379.5	295381.6	4	50	

Extraction Standard Peak Table

Extraction Standard Name	Ext Std Area	Inj Std Name	Inj Std Area	Area Ratio	Ext Std Conc	Ext Std Result	Ext Std %REC	Ext Std %REC Limit	Ext Std OOS
E13C4-PFBA	794200.1	13C3-PFBA	701148.7	1.133	5.000	5.078	102	70-130	
E13C5-PFPeA	765826.9	13C3-PFBA	701148.7	1.092	5.000	4.899	98	70-130	
E13C3-PFBS	440650.1	13C3-PFBA	701148.7	0.628	4.650	4.436	95	70-130	
E13C2-4:2-FTS	50222.6	13C2-PFOA	466429.2	0.108	4.670	4.796	103	70-130	
E13C5-PFHxA	671724.6	13C2-PFOA	466429.2	1.440	5.000	5.202	104	70-130	
E13C3-PFHxS	339754.0	13C2-PFOA	466429.2	0.728	4.730	4.998	106	70-130	
E13C4-PFHpA	540437.9	13C2-PFOA	466429.2	1.159	5.000	5.220	104	70-130	
E13C2-6:2-FTS	36346.5	13C2-PFOA	466429.2	0.078	4.750	5.214	110	70-130	
E13C8-PFOA	936164.3	13C2-PFOA	466429.2	2.007	5.000	5.530	111	70-130	
E13C8-PFOS	297160.3	13C4-PFOS	263459.4	1.128	4.780	4.998	105	70-130	
E13C9-PFNA	481109.4	13C4-PFOS	263459.4	1.826	5.000	5.091	102	70-130	
E13C6-PFDA	657345.2	13C2-PFDA	306379.5	2.146	5.000	5.007	100	70-130	
E13C2-8:2-FTS	30328.4	13C2-PFDA	306379.5	0.099	4.790	4.937	103	70-130	
E13C8-PFOSA	655976.7	13C2-PFDA	306379.5	2.141	5.000	4.747	95	70-130	
Ed3-NMeFOSAA	78031.2	13C2-PFDA	306379.5	0.255	5.000	4.597	92	70-130	
E13C7-PFUnDA	265235.1	13C2-PFDA	306379.5	0.866	5.000	5.026	101	70-130	
Ed5-NEtFOSAA	68361.4	13C2-PFDA	306379.5	0.223	5.000	4.721	94	70-130	
E13C2-PFDoDA	549890.8	13C2-PFDA	306379.5	1.795	5.000	4.660	93	70-130	
Ed7-NMePFOSAE	349940.7	13C2-PFDA	306379.5	1.142	5.000	4.943	99	70-130	
Ed3-NMePFOSA	81197.5	13C2-PFDA	306379.5	0.265	5.000	4.815	96	70-130	
Ed9-NEtPFOSAE	277789.9	13C2-PFDA	306379.5	0.907	5.000	4.716	94	70-130	
Ed5-NEtPFOSA	60763.0	13C2-PFDA	306379.5	0.198	5.000	4.652	93	70-130	
E13C2-PFTeDA	399717.5	13C2-PFDA	306379.5	1.305	5.000	4.580	92	70-130	

APPROVED
By JPT at 10:19 am, 11/14/18

REVIEWED
By HMK at 11:03 am, 11/15/18

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV13DCCV6-10 11/14/2018 9:23:22 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

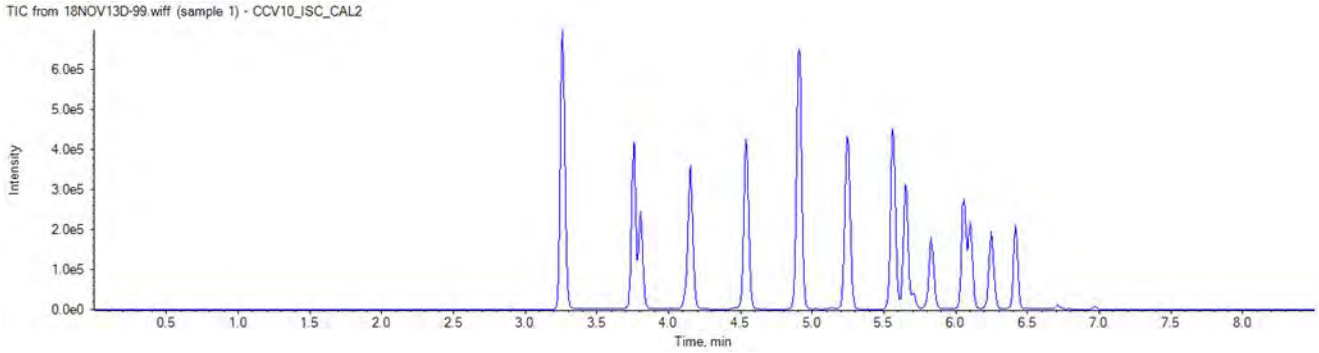
Analyte Quantitation Peak Table

Sample Name: CCV10_ISC_CAL2 **Instrument Name:** LM27631 **File Name:** 18NOV13D-99.wiff

Sample Wt	Sample Vol	Dilution Factor	PrepFactor
1.00000	1.000	1.00	1.000

Analyte Name	RT	RRT	Analyte Area Response	E	Int Typ	ES Name	ES RT	ES Area Response	Area Ratio	Sample Result (ng/g)
PFBA	3.26	1.000	85722.6		A	13C4-PFBA	3.26	794200.1	0.108	0.598
PFPeA	3.76	1.000	81021.1		A	13C5-PFPeA	3.76	765826.9	0.106	0.612
PFBS	3.80	1.000	41175.6		A	13C3-PFBS	3.80	440650.1	0.093	0.444
4:2-FTS	4.12	1.000	10558.5		A	13C2-4:2-FTS	4.12	50222.6	0.210	0.571
PFHxA	4.15	1.000	93239.0		A	13C5-PFHxA	4.15	671724.6	0.139	0.580
PFPeS	4.17	1.100	22889.9		A	13C3-PFBS	3.80	440650.1	0.052	0.504
PFHpA	4.54	1.000	100485.7		A	13C4-PFHpA	4.54	540437.9	0.186	0.616
PFHxS	4.54	1.000	31363.2		M	13C3-PFHxS	4.54	339754.0	0.092	0.448
6:2-FTS	4.90	1.000	8290.1		A	13C2-6:2-FTS	4.90	36346.5	0.228	0.552
PFHpS	4.90	1.080	32176.2		A	13C3-PFHxS	4.54	339754.0	0.095	0.499
PFOA	4.91	1.000	97413.0		A	13C8-PFOA	4.91	936164.3	0.104	0.556
PFOS	5.24	1.000	33335.6		M	13C8-PFOS	5.24	297160.3	0.112	0.491
PFNA	5.25	1.000	79913.2		A	13C9-PFNA	5.25	481109.4	0.166	0.599
PFNS	5.54	1.060	19973.6		A	13C8-PFOS	5.24	297160.3	0.067	0.470
PFDA	5.56	1.000	70350.5		M	13C6-PFDA	5.56	657345.2	0.107	0.567
8:2-FTS	5.57	1.000	8485.5		A	13C2-8:2-FTS	5.56	30328.4	0.280	0.652
PFOSA	5.65	1.000	72323.9		A	13C8-PFOSA	5.65	655976.7	0.110	0.539
NMeFOSAA	5.71	1.000	6785.4		A	d3-NMeFOSAA	5.71	78031.2	0.087	0.491
PFDS	5.80	1.110	17445.5		A	13C8-PFOS	5.24	297160.3	0.059	0.532
PFUnDA	5.83	1.000	58618.2		A	13C7-PFUnDA	5.83	265235.1	0.221	0.578
NEtFOSAA	5.84	1.000	6596.5		A	d5-NEtFOSAA	5.84	68361.4	0.096	0.506
PFDoDA	6.06	1.000	63697.0		A	13C2-PFDoDA	6.06	549890.8	0.116	0.590
10:2-FTS	6.07	1.090	3987.7		M	13C2-8:2-FTS	5.56	30328.4	0.131	0.438
NMePFOSAE	6.11	1.000	47697.3		M	d7-NMePFOSAE	6.10	349940.7	0.136	0.567
NMePFOSA	6.12	1.000	7370.2		M	d3-NMePFOSA	6.11	81197.5	0.091	0.448
PFDoS	6.21	1.190	7092.3		A	13C8-PFOS	5.24	297160.3	0.024	0.418
NEtPFOSAE	6.26	1.000	49226.5		A	d9-NEtPFOSAE	6.24	277789.9	0.177	0.569
NEtPFOSA	6.27	1.000	7502.0		M	d5-NEtPFOSA	6.26	60763.0	0.123	0.567
PFTrDA	6.24	1.030	52624.9		M	13C2-PFDoDA	6.06	549890.8	0.096	0.604
PFTeDA	6.42	1.000	42186.4		A	13C2-PFTeDA	6.42	399717.5	0.106	0.592
PFHxDA	6.71	1.050	18374.7		A	13C2-PFTeDA	6.42	399717.5	0.046	0.548
PFODA	6.97	1.090	15437.7		A	13C2-PFTeDA	6.42	399717.5	0.039	0.538

Total Ion Chromatogram

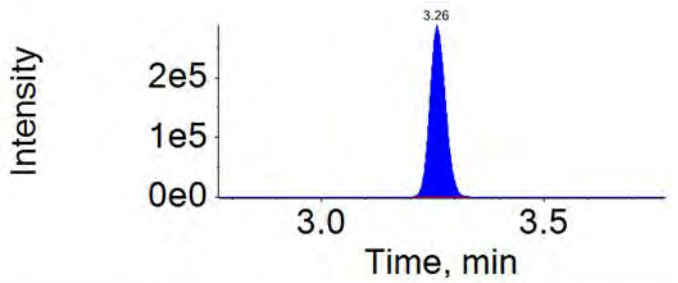


APPROVED
By JPT at 10:19 am, 11/14/18

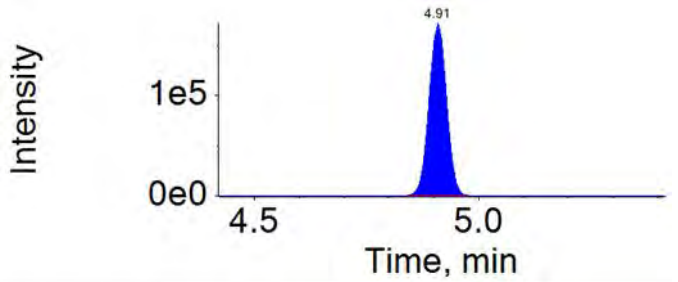
REVIEWED
By HMK at 11:03 am, 11/15/18

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV13DCCV6-10 11/14/2018 9:23:22 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

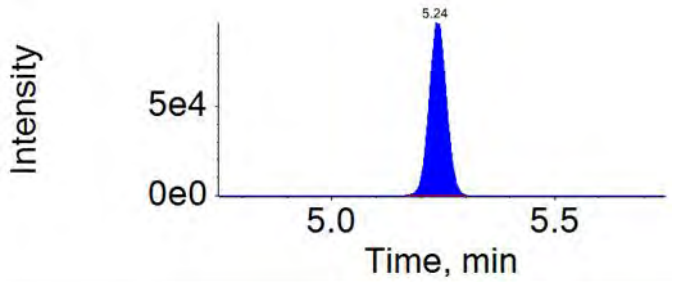
Injection Standard: 13C3-PFBA
216.0 / 172.0



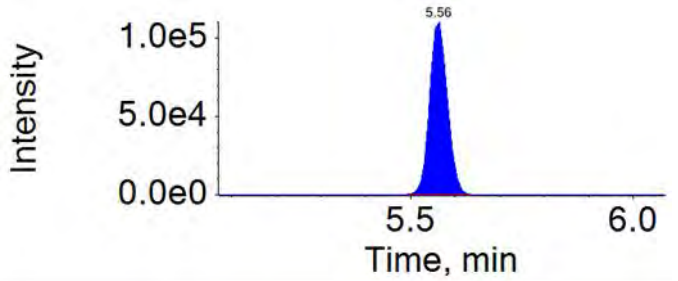
Injection Standard: 13C2-PFOA
415.0 / 370.0



Injection Standard: 13C4-PFOS
503.0 / 80.0

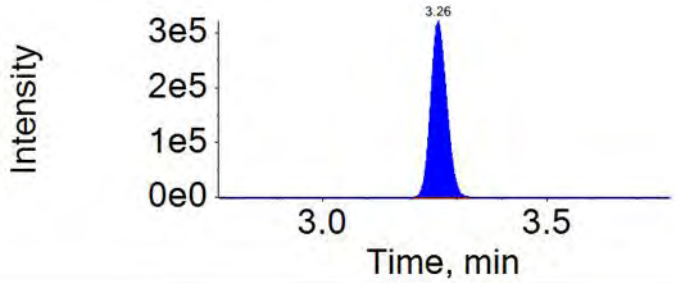


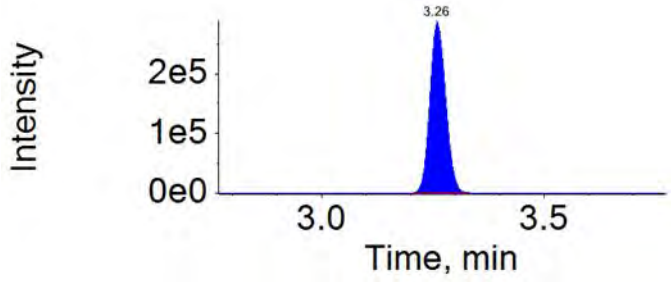
Injection Standard: 13C2-PFDA
515.0 / 470.0



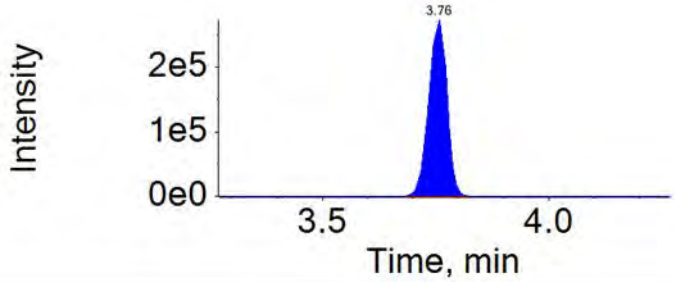
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV13DCCV6-10 11/14/2018 9:23:22 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

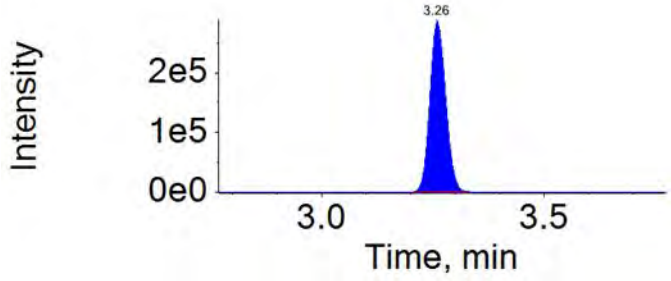
Extraction Standard: E13C4-PFBA	Injection Standard: 13C3-PFBA
217.0 / 172.0	216.0 / 172.0



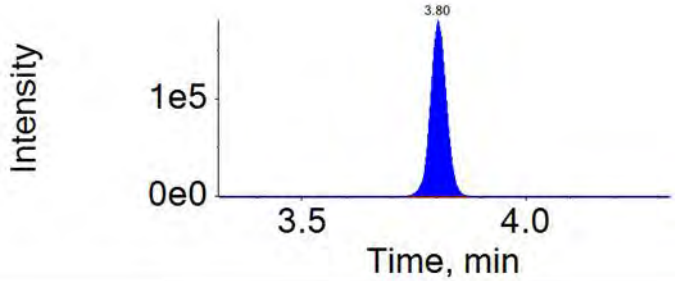


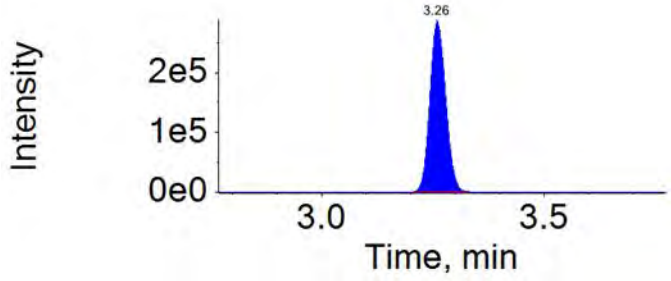
Extraction Standard: E13C5-PFPeA	Injection Standard: 13C3-PFBA
268.0 / 223.0	216.0 / 172.0



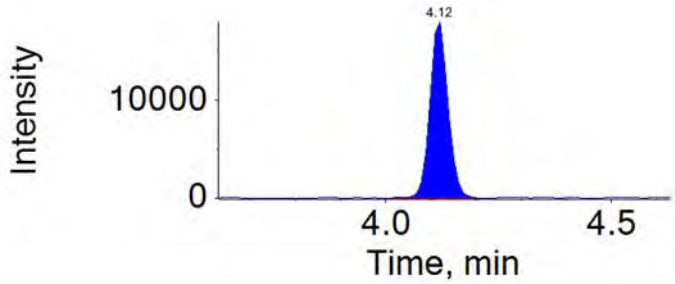


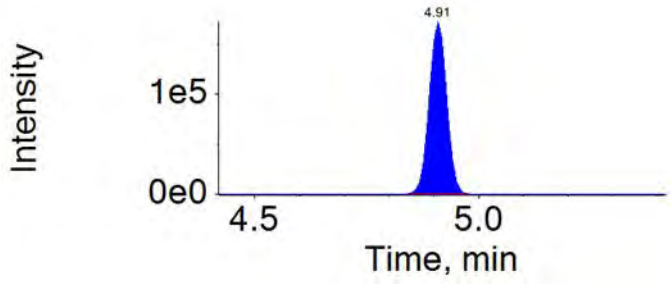
Extraction Standard: E13C3-PFBS	Injection Standard: 13C3-PFBA
302.0 / 80.0	216.0 / 172.0





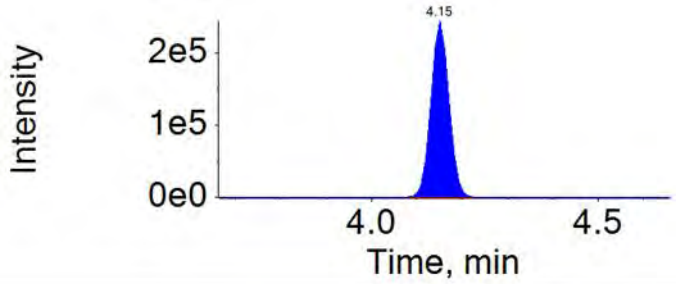
Extraction Standard: E13C2-4:2-FTS	Injection Standard: 13C2-PFOA
329.0 / 81.0	415.0 / 370.0

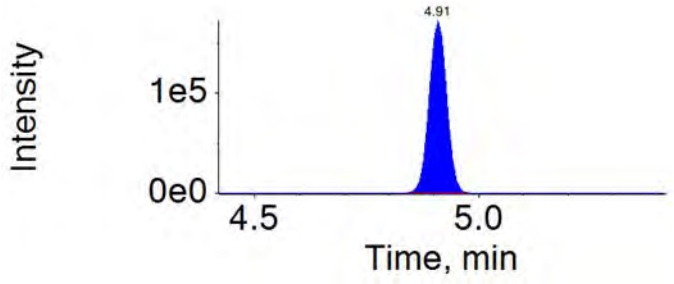




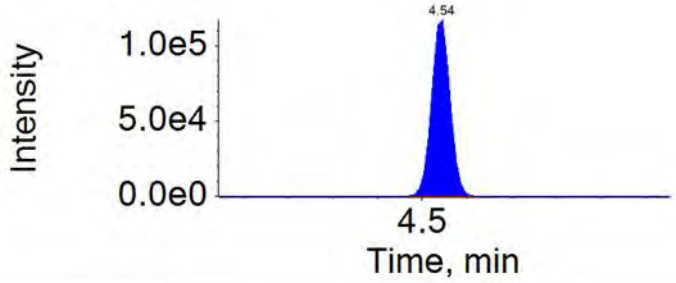
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV13DCCV6-10 11/14/2018 9:23:22 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

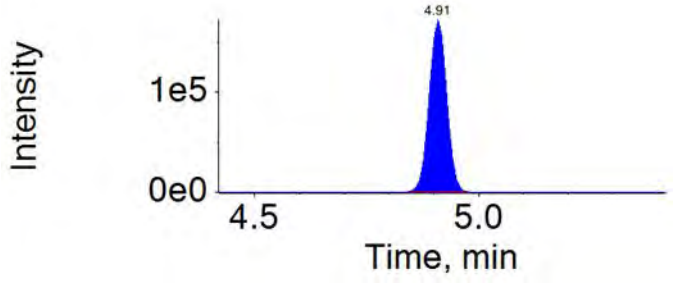
Extraction Standard: E13C5-PFHxA	Injection Standard: 13C2-PFOA
318.0 / 273.0	415.0 / 370.0



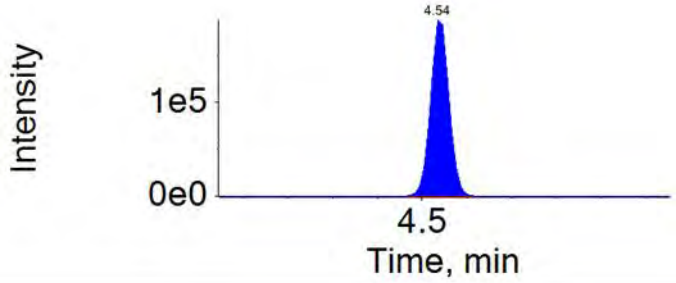


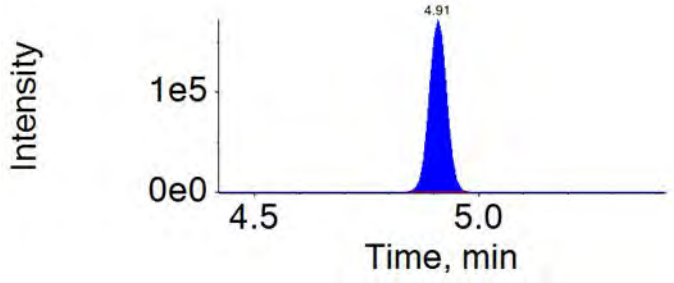
Extraction Standard: E13C3-PFHxS	Injection Standard: 13C2-PFOA
402.0 / 80.0	415.0 / 370.0



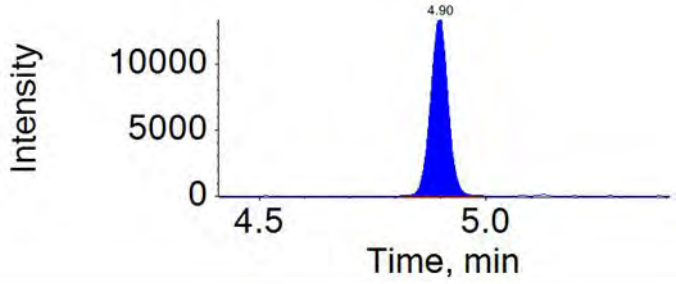


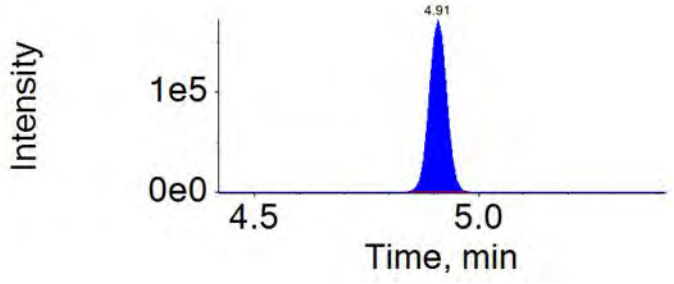
Extraction Standard: E13C4-PFHpA	Injection Standard: 13C2-PFOA
367.0 / 322.0	415.0 / 370.0





Extraction Standard: E13C2-6:2-FTS	Injection Standard: 13C2-PFOA
429.0 / 81.0	415.0 / 370.0

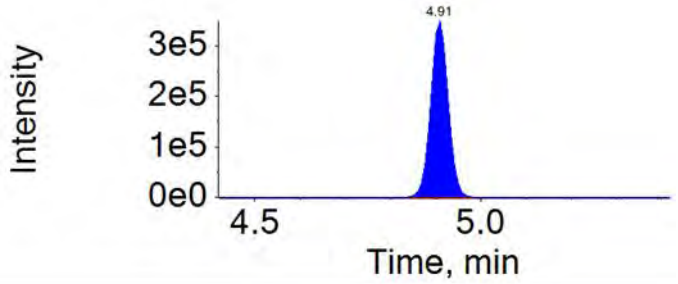




ICAL Name: 18NOV12DCAL **Result Table:** 18NOV13DCCV6-10 11/14/2018 9:23:22 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

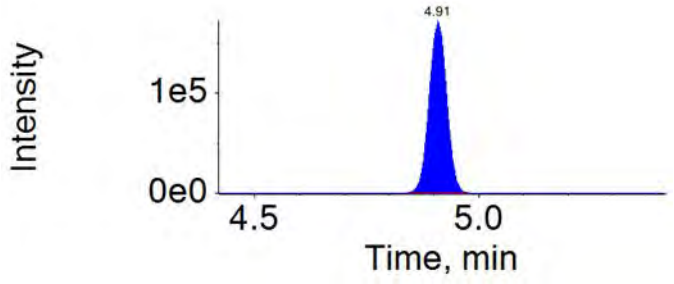
Extraction Standard: E13C8-PFOA

421.0 / 376.0



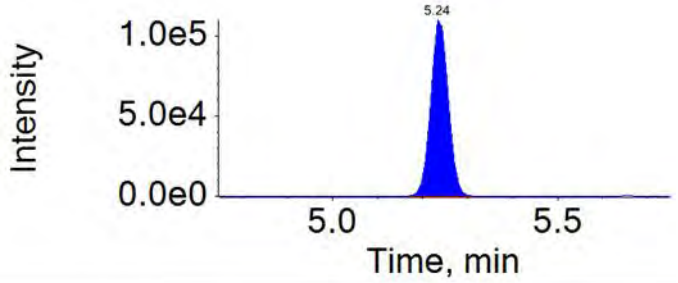
Injection Standard: 13C2-PFOA

415.0 / 370.0



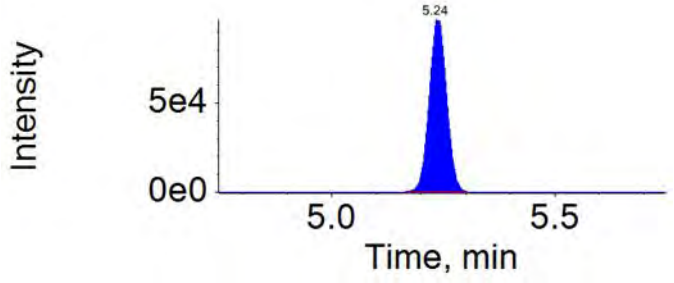
Extraction Standard: E13C8-PFOS

507.0 / 80.0



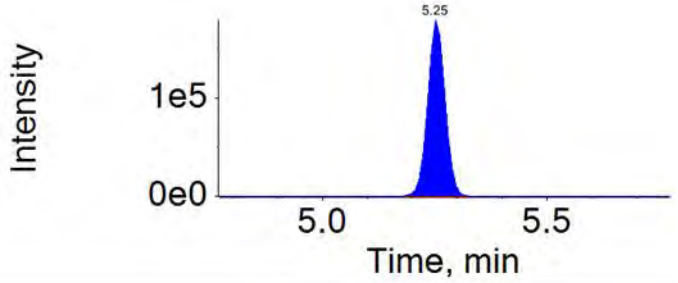
Injection Standard: 13C4-PFOS

503.0 / 80.0



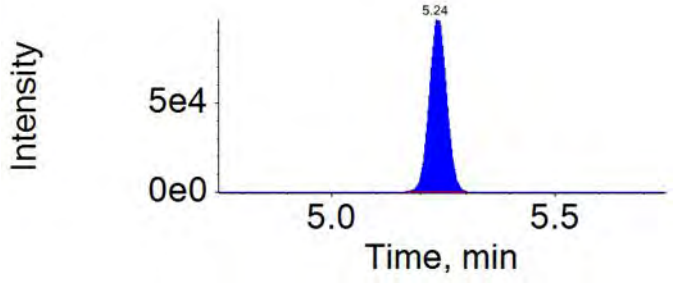
Extraction Standard: E13C9-PFNA

472.0 / 427.0



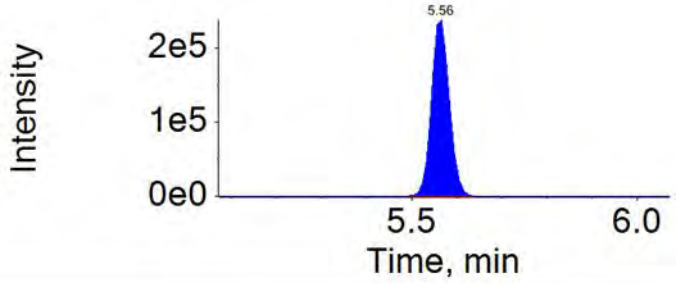
Injection Standard: 13C4-PFOS

503.0 / 80.0



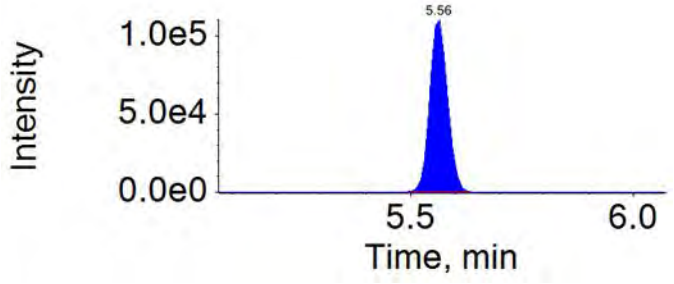
Extraction Standard: E13C6-PFDA

519.0 / 474.0



Injection Standard: 13C2-PFDA

515.0 / 470.0

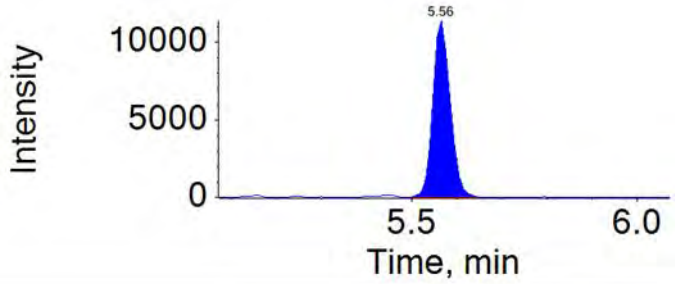


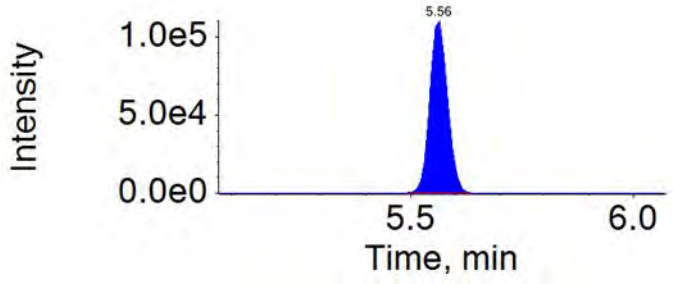
APPROVED
By JPT at 10:19 am, 11/14/18

REVIEWED
By HMK at 11:03 am, 11/15/18

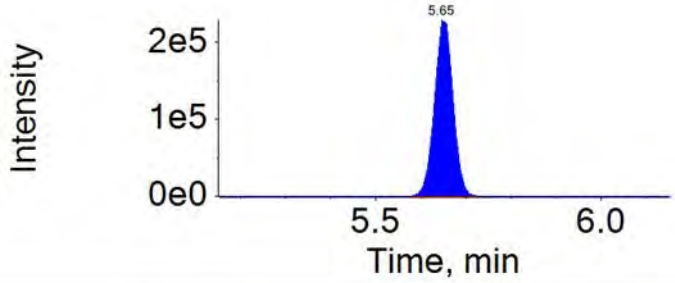
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV13DCCV6-10 11/14/2018 9:23:22 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

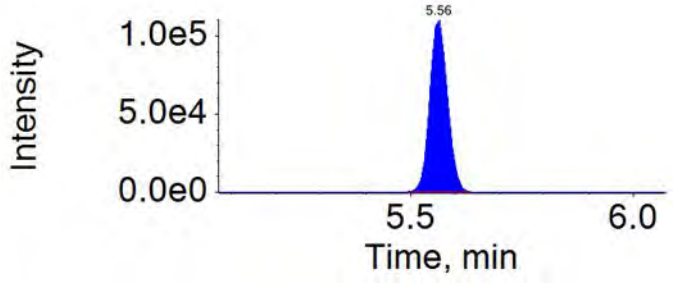
Extraction Standard: E13C2-8:2-FTS	Injection Standard: 13C2-PFDA
529.0 / 81.0	515.0 / 470.0



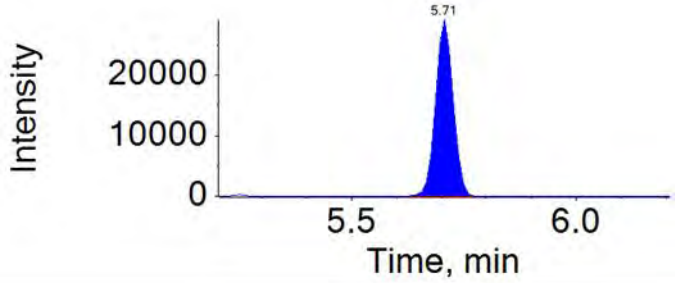


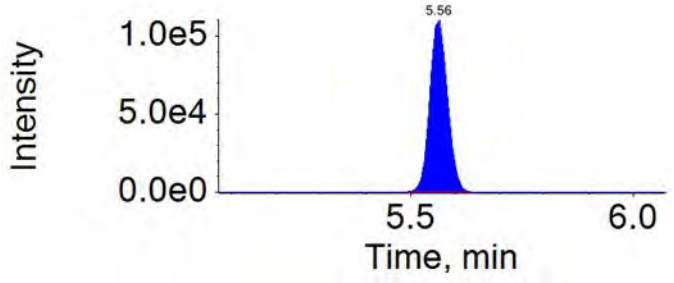
Extraction Standard: E13C8-PFOSA	Injection Standard: 13C2-PFDA
506.0 / 78.0	515.0 / 470.0



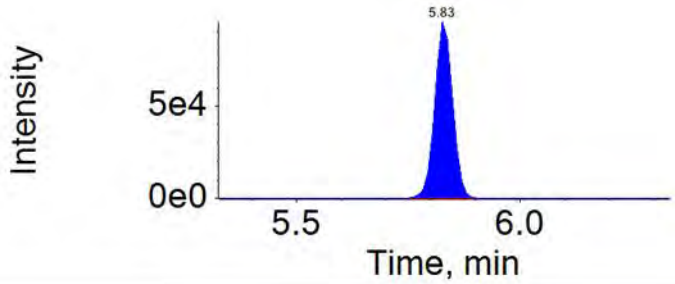


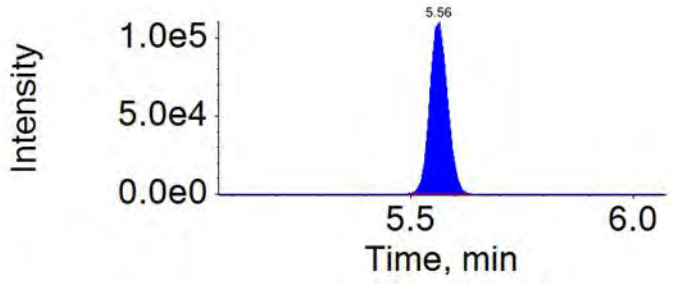
Extraction Standard: Ed3-NMeFOSAA	Injection Standard: 13C2-PFDA
573.0 / 419.0	515.0 / 470.0





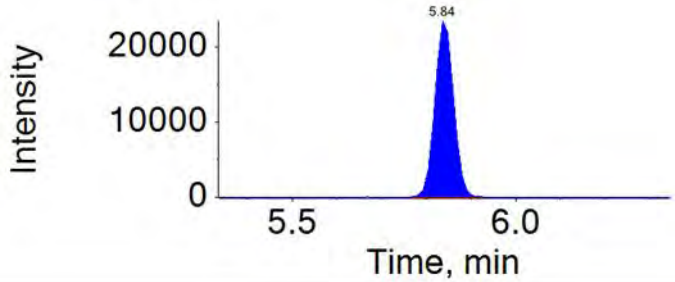
Extraction Standard: E13C7-PFUnDA	Injection Standard: 13C2-PFDA
570.0 / 525.0	515.0 / 470.0

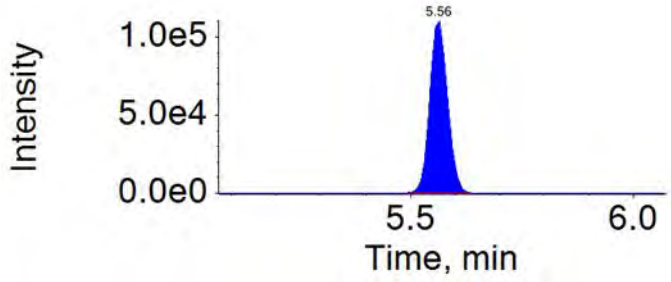




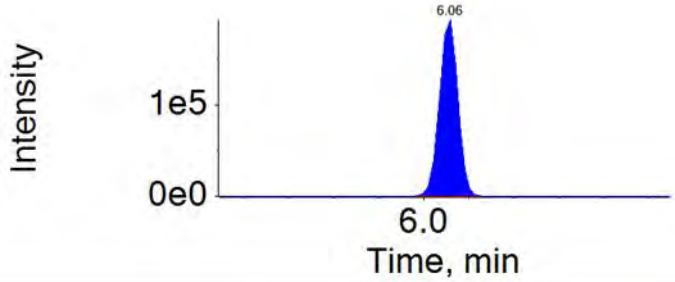
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV13DCCV6-10 11/14/2018 9:23:22 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

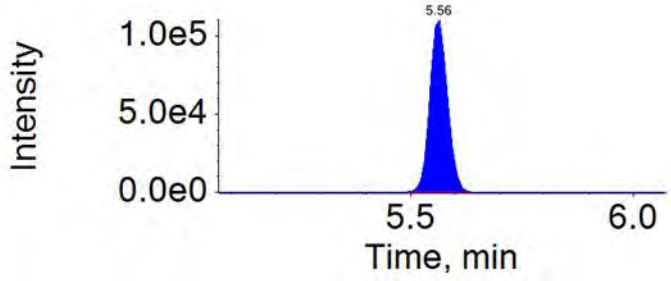
Extraction Standard: Ed5-NEtFOSAA	Injection Standard: 13C2-PFDA
589.0 / 419.0	515.0 / 470.0



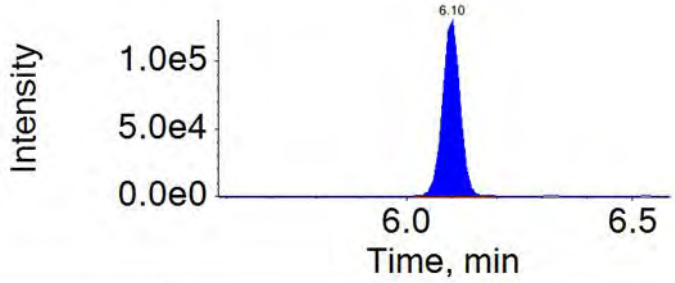


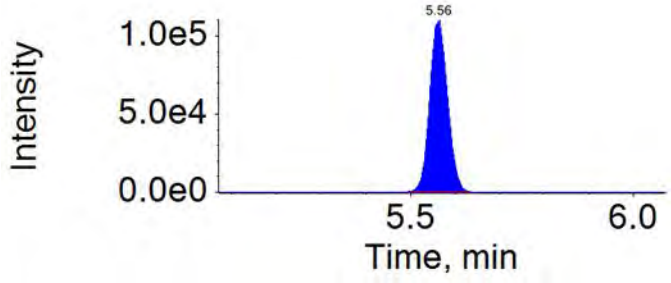
Extraction Standard: E13C2-PFDoDA	Injection Standard: 13C2-PFDA
615.0 / 570.0	515.0 / 470.0



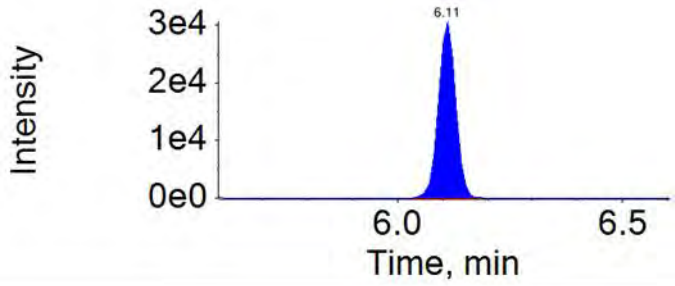


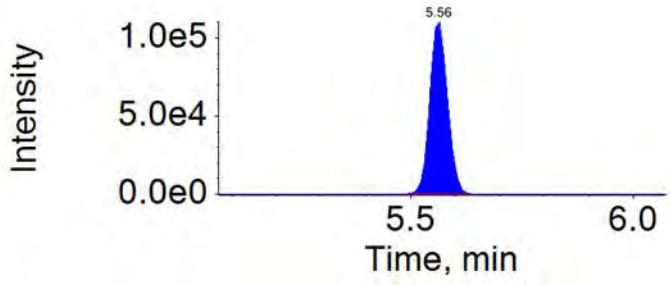
Extraction Standard: Ed7-NMePFOSAE	Injection Standard: 13C2-PFDA
623.0 / 59.0	515.0 / 470.0





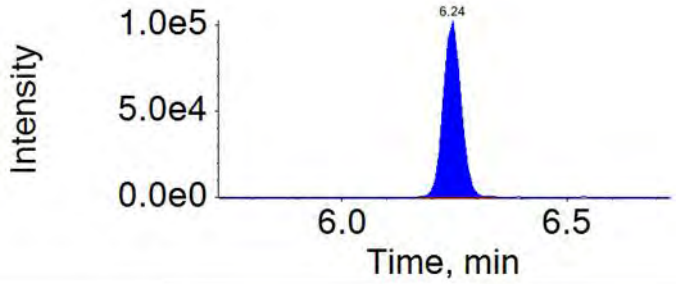
Extraction Standard: Ed3-NMePFOSA	Injection Standard: 13C2-PFDA
515.0 / 169.0	515.0 / 470.0

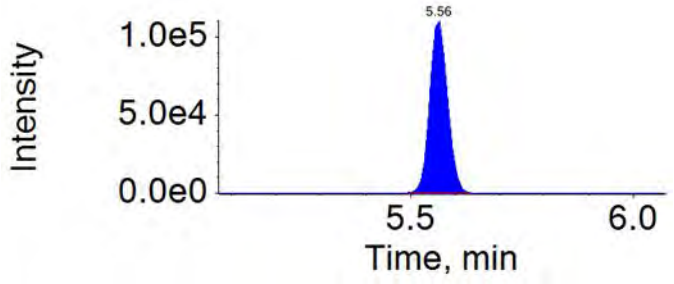




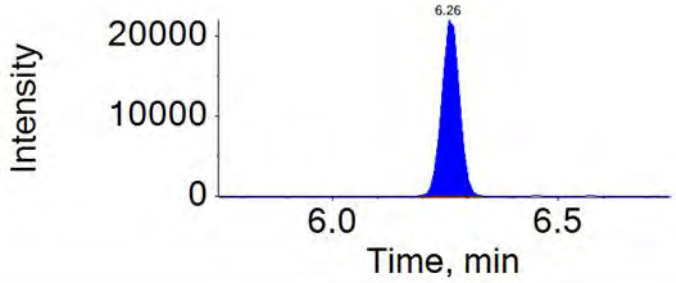
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV13DCCV6-10 11/14/2018 9:23:22 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

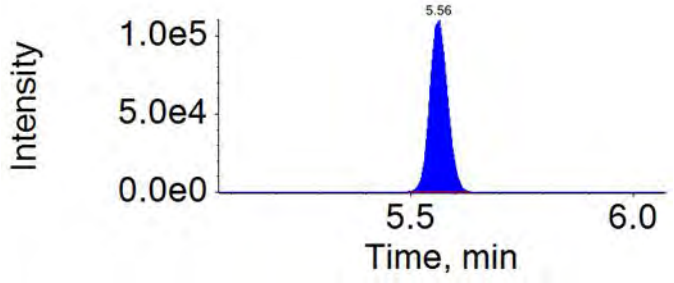
Extraction Standard: Ed9-NEtPFOSAE	Injection Standard: 13C2-PFDA
639.0 / 59.0	515.0 / 470.0



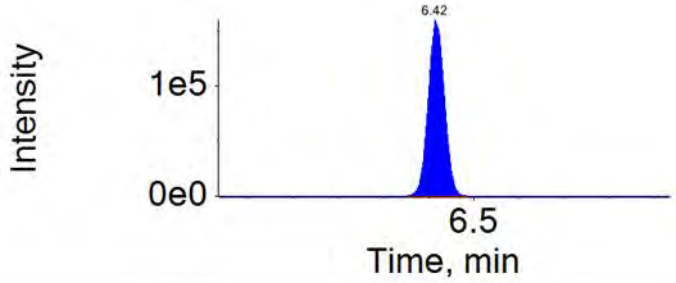


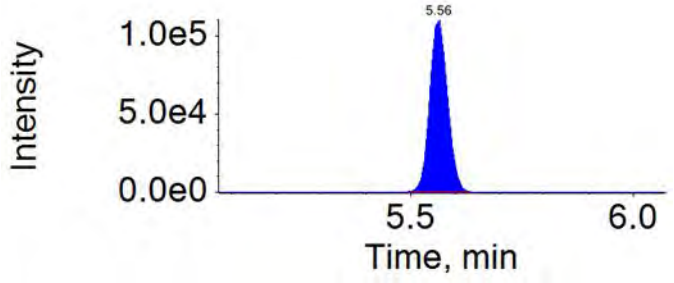
Extraction Standard: Ed5-NEtPFOSA	Injection Standard: 13C2-PFDA
531.0 / 169.0	515.0 / 470.0





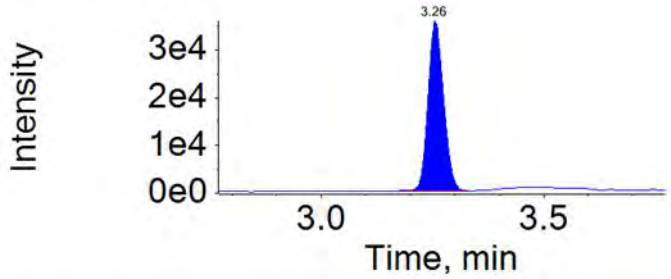
Extraction Standard: E13C2-PFTeDA	Injection Standard: 13C2-PFDA
715.0 / 670.0	515.0 / 470.0



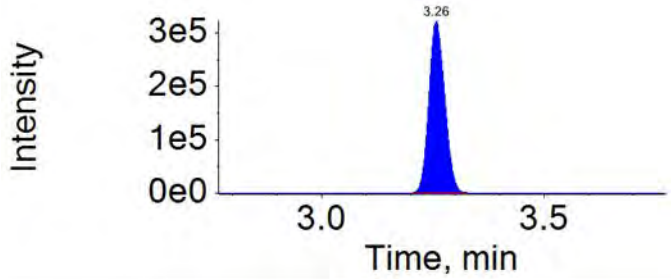


ICAL Name: 18NOV12DCAL **Result Table:** 18NOV13DCCV6-10 11/14/2018 9:23:22 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

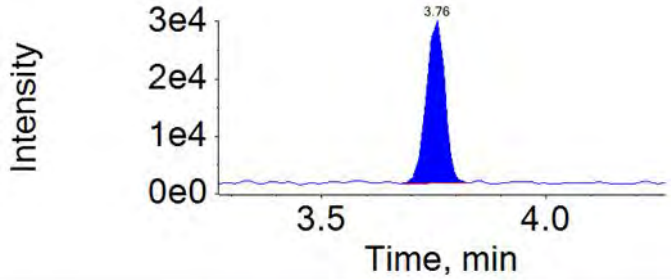
Analyte: PFBA
213.0 / 169.0



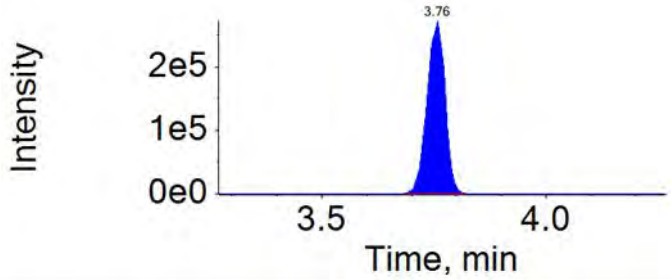
Extraction Standard: 13C4-PFBA
217.0 / 172.0



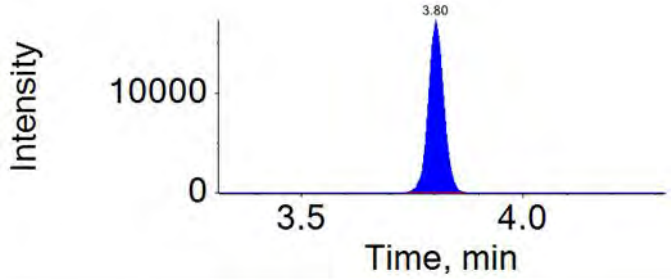
Analyte: PFPeA
263.0 / 219.0



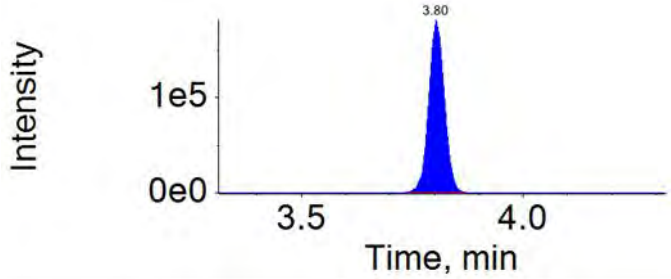
Extraction Standard: 13C5-PFPeA
268.0 / 223.0



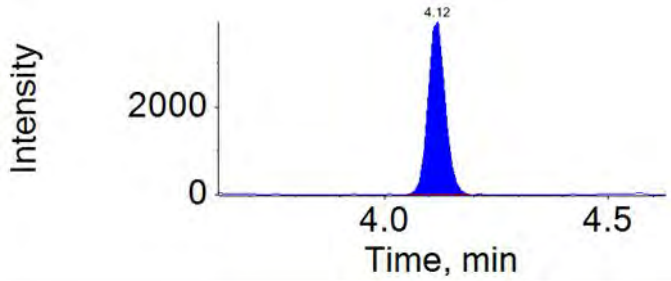
Analyte: PFBS
299.0 / 80.0



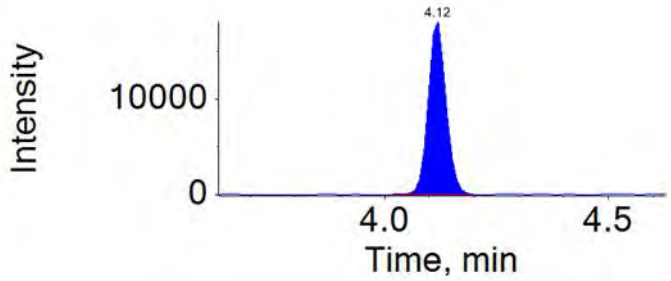
Extraction Standard: 13C3-PFBS
302.0 / 80.0



Analyte: 4:2-FTS
327.0 / 307.0



Extraction Standard: 13C2-4:2-FTS
329.0 / 81.0

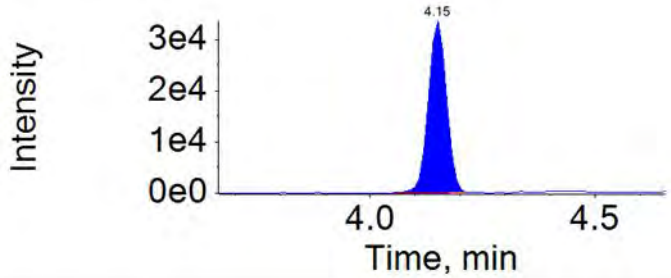


APPROVED
By JPT at 10:19 am, 11/14/18

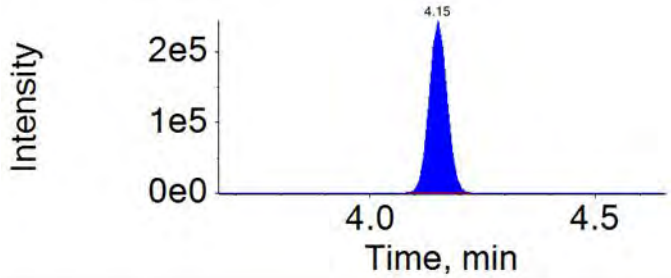
REVIEWED
By HMK at 11:03 am, 11/15/18

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV13DCCV6-10 11/14/2018 9:23:22 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

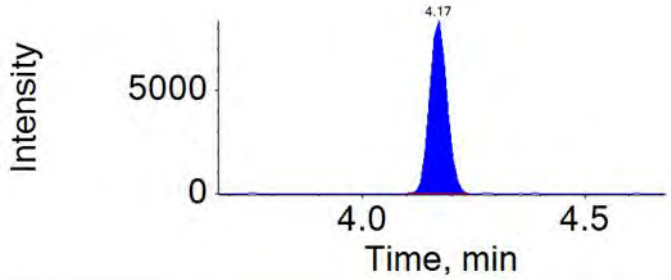
Analyte: PFHxA
313.0 / 269.0



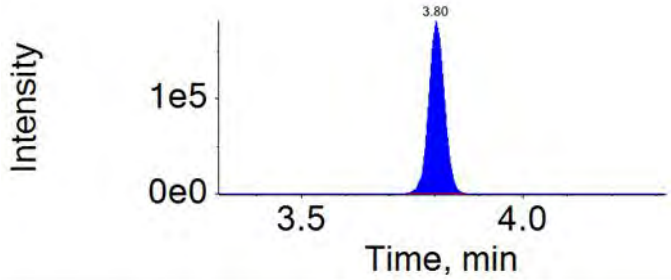
Extraction Standard: 13C5-PFHxA
318.0 / 273.0



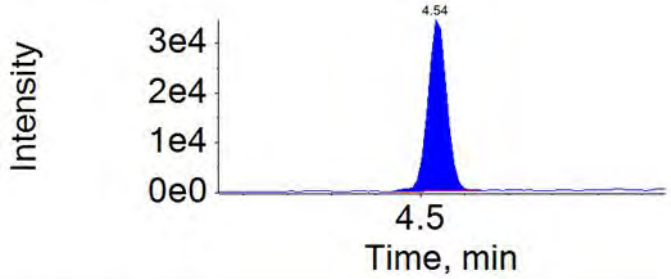
Analyte: PFPeS
349.0 / 80.0



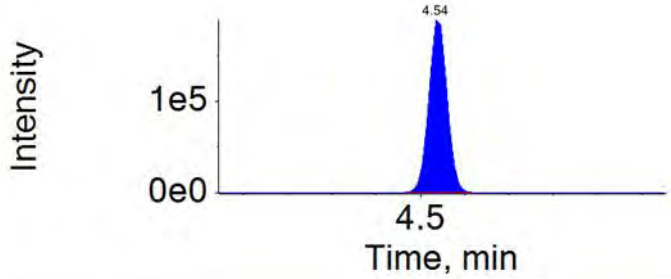
Extraction Standard: 13C3-PFBS
302.0 / 80.0



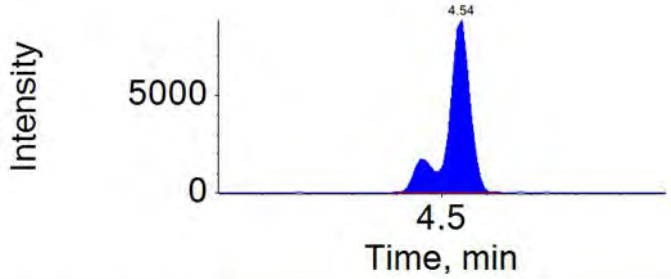
Analyte: PFHpA
363.0 / 319.0



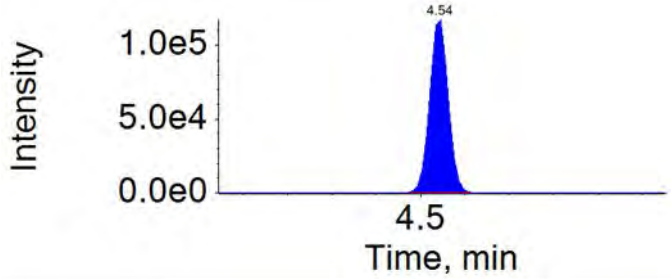
Extraction Standard: 13C4-PFHpA
367.0 / 322.0



Analyte: PFHxS
399.0 / 80.0



Extraction Standard: 13C3-PFHxS
402.0 / 80.0

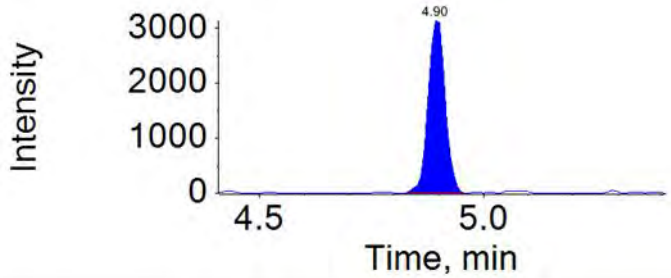


APPROVED
By JPT at 10:19 am, 11/14/18

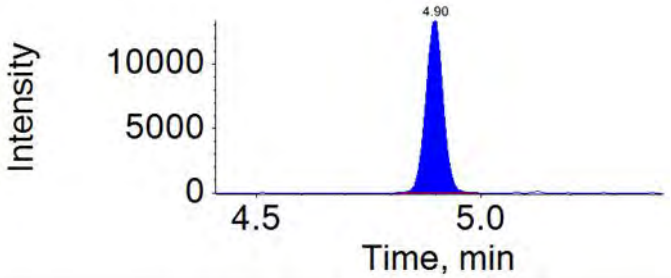
REVIEWED
By HMK at 11:03 am, 11/15/18

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV13DCCV6-10 11/14/2018 9:23:22 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

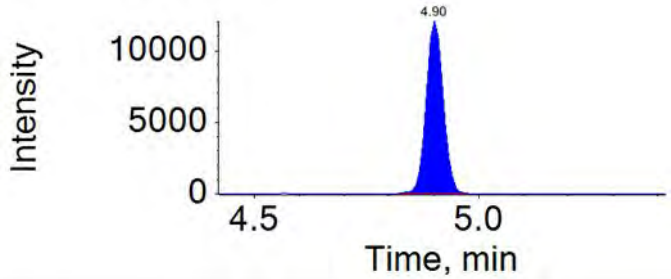
Analyte: 6:2-FTS
427.0 / 407.0



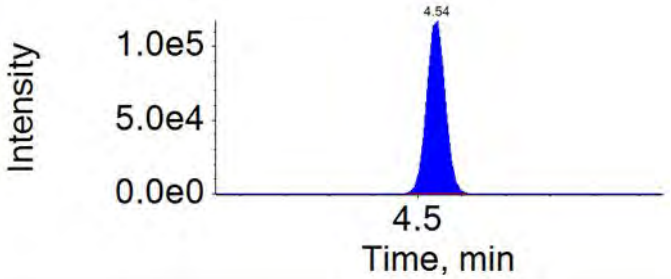
Extraction Standard: 13C2-6:2-FTS
429.0 / 81.0



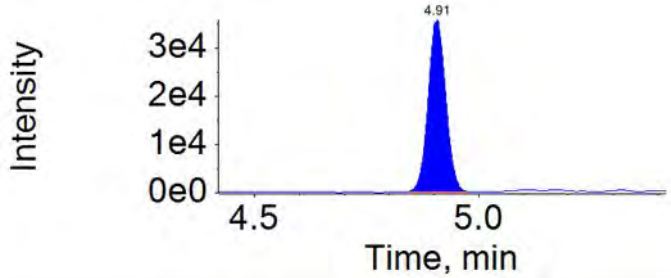
Analyte: PFHpS
449.0 / 80.0



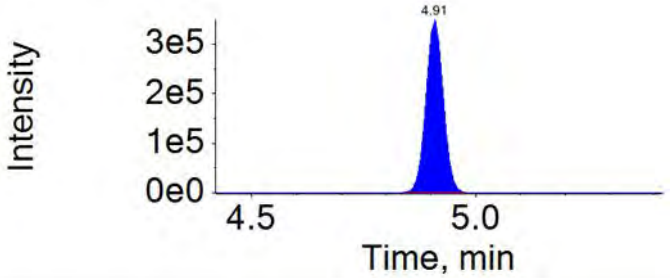
Extraction Standard: 13C3-PFHxS
402.0 / 80.0



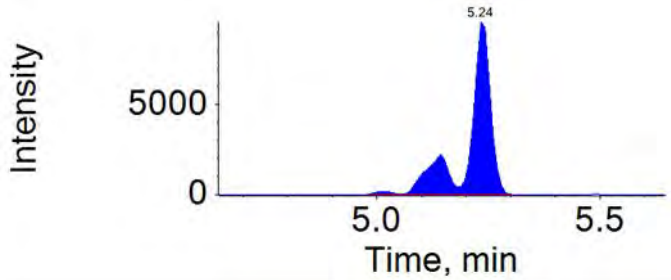
Analyte: PFOA
413.0 / 369.0



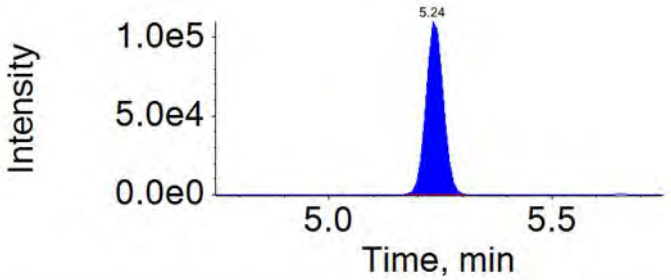
Extraction Standard: 13C8-PFOA
421.0 / 376.0



Analyte: PFOS
499.0 / 80.0



Extraction Standard: 13C8-PFOS
507.0 / 80.0

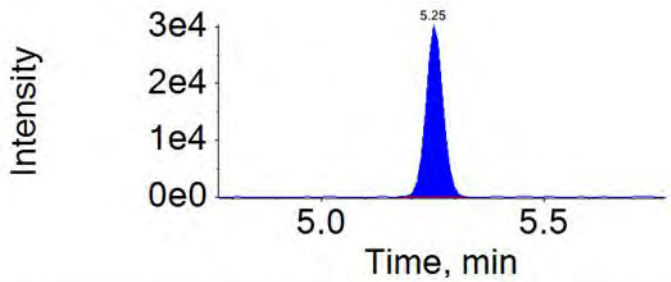


APPROVED
By JPT at 10:19 am, 11/14/18

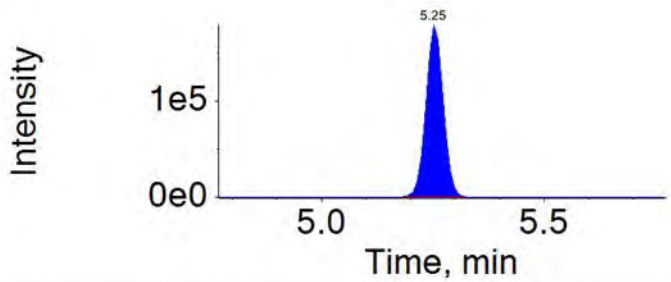
REVIEWED
By HMK at 11:03 am, 11/15/18

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV13DCCV6-10 11/14/2018 9:23:22 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

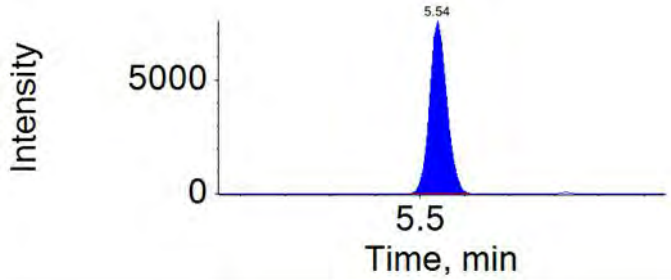
Analyte: PFNA
463.0 / 419.0



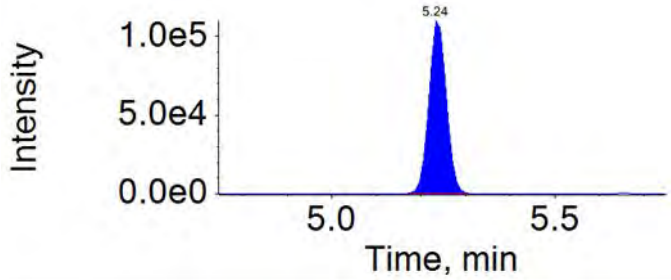
Extraction Standard: 13C9-PFNA
472.0 / 427.0



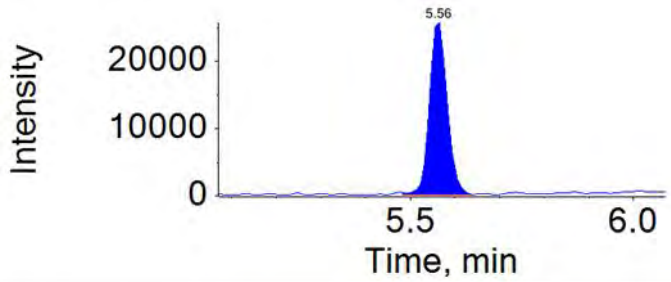
Analyte: PFNS
549.0 / 80.0



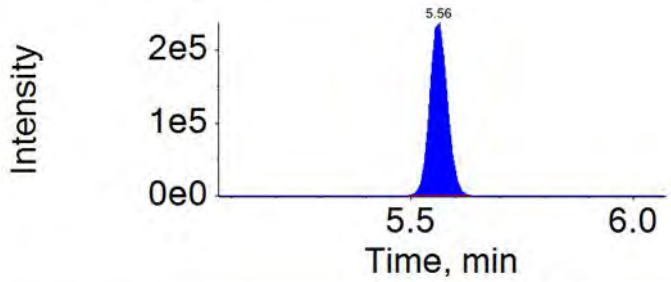
Extraction Standard: 13C8-PFOS
507.0 / 80.0



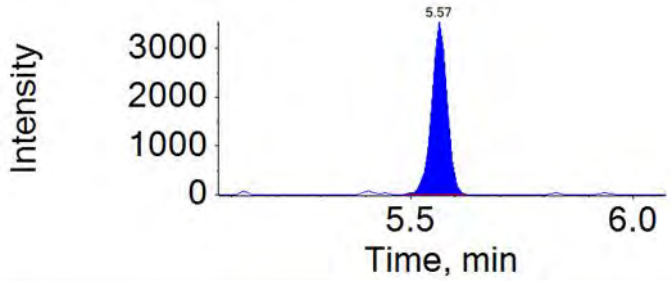
Analyte: PFDA
513.0 / 469.0



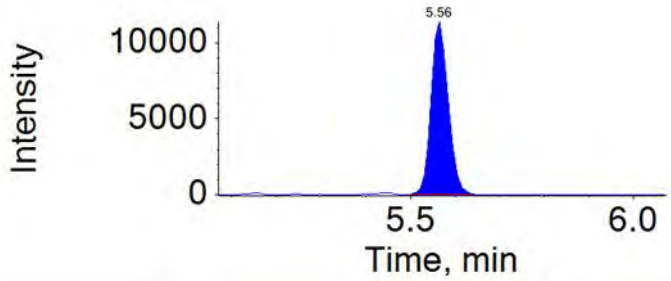
Extraction Standard: 13C6-PFDA
519.0 / 474.0



Analyte: 8:2-FTS
527.0 / 507.0



Extraction Standard: 13C2-8:2-FTS
529.0 / 81.0

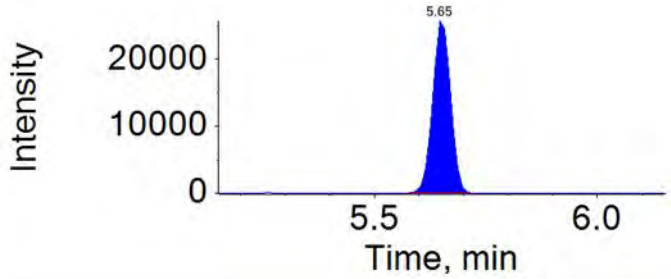


APPROVED
By JPT at 10:19 am, 11/14/18

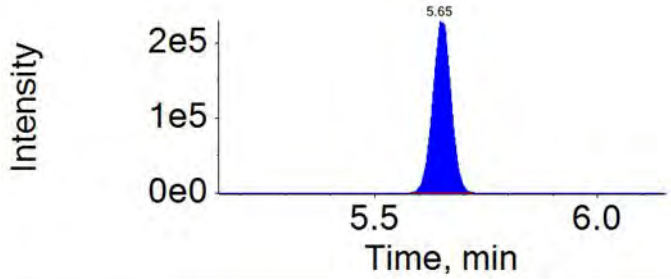
REVIEWED
By HMK at 11:03 am, 11/15/18

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV13DCCV6-10 11/14/2018 9:23:22 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

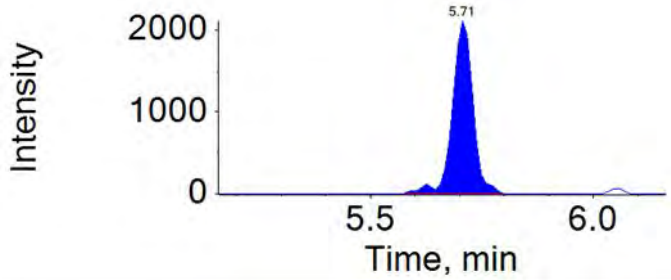
Analyte: PFOSA
498.0 / 78.0



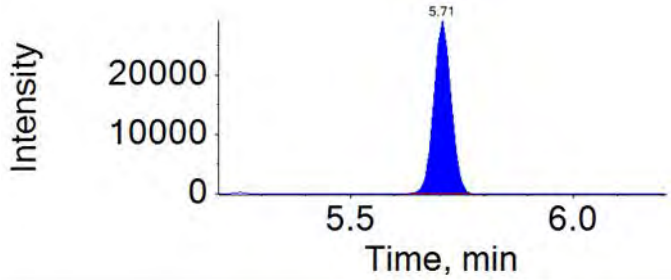
Extraction Standard: 13C8-PFOSA
506.0 / 78.0



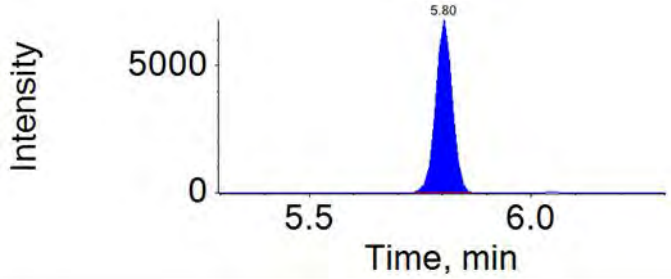
Analyte: NMeFOSAA
570.0 / 419.0



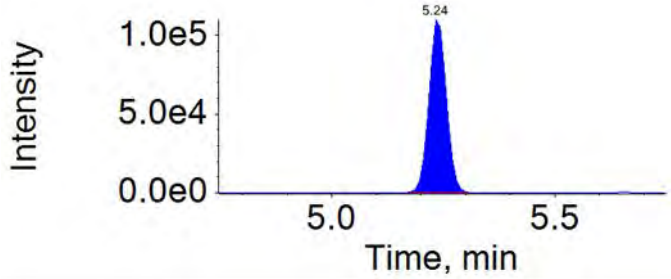
Extraction Standard: d3-NMeFOSAA
573.0 / 419.0



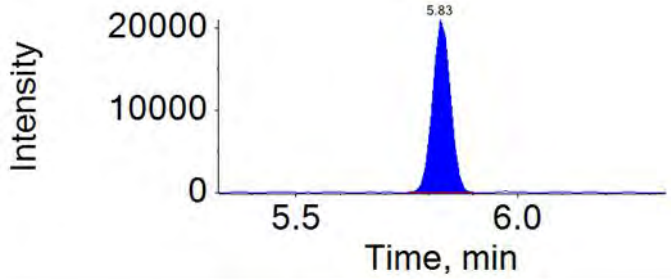
Analyte: PFDS
599.0 / 80.0



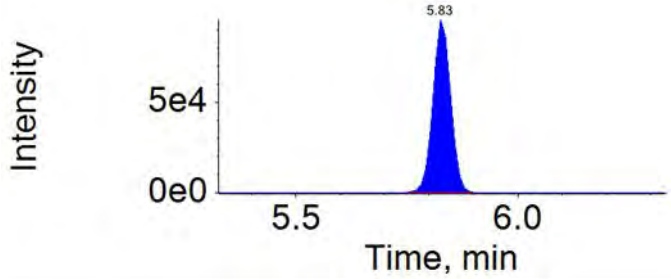
Extraction Standard: 13C8-PFOS
507.0 / 80.0



Analyte: PFUnDA
563.0 / 519.0



Extraction Standard: 13C7-PFUnDA
570.0 / 525.0

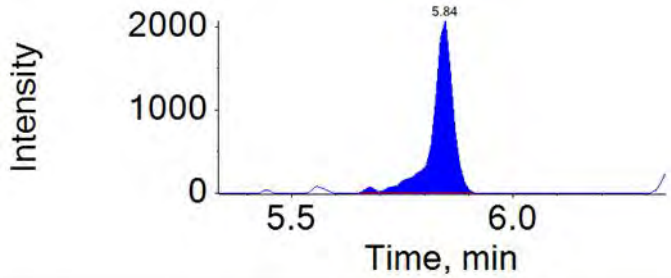


APPROVED
By JPT at 10:19 am, 11/14/18

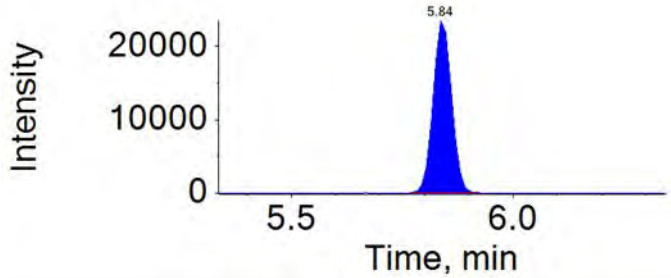
REVIEWED
By HMK at 11:03 am, 11/15/18

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV13DCCV6-10 11/14/2018 9:23:22 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

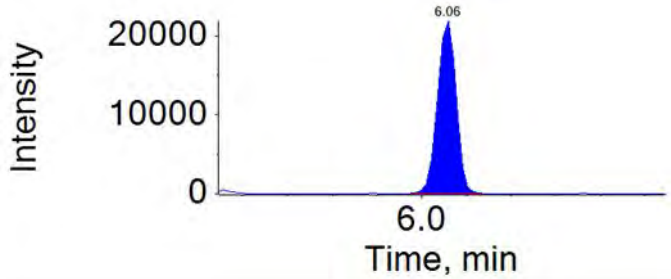
Analyte: NEtFOSAA
584.0 / 419.0



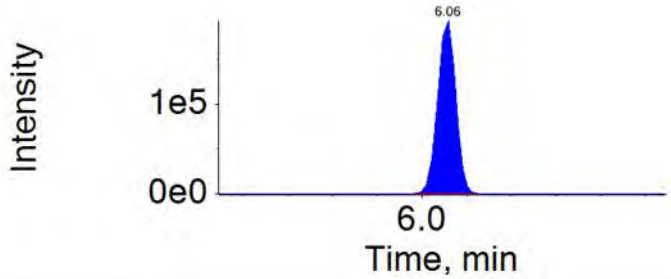
Extraction Standard: d5-NEtFOSAA
589.0 / 419.0



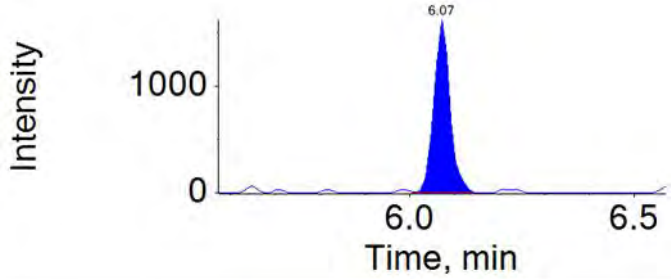
Analyte: PFDoDA
613.0 / 569.0



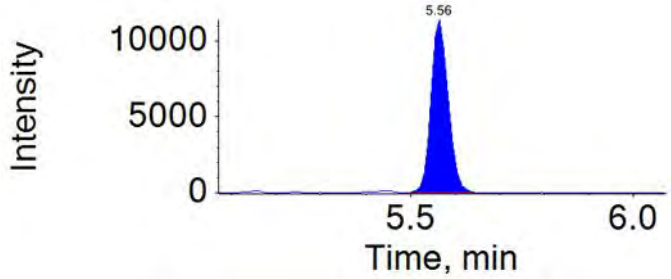
Extraction Standard: 13C2-PFDoDA
615.0 / 570.0



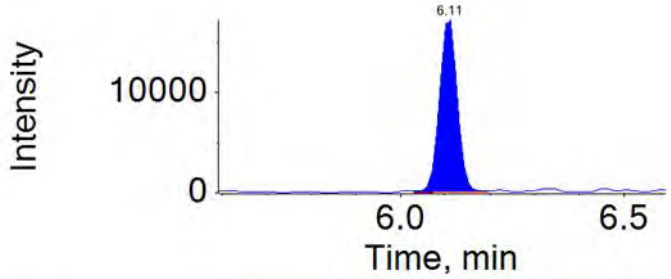
Analyte: 10:2-FTS
627.0 / 607.0



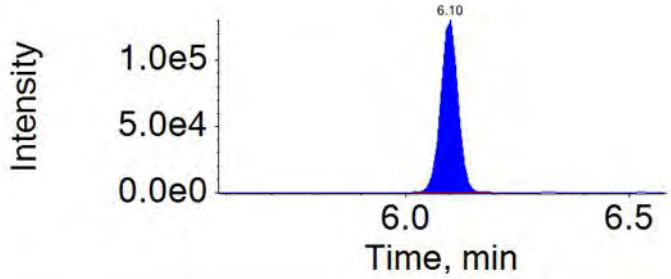
Extraction Standard: 13C2-8:2-FTS
529.0 / 81.0



Analyte: NMePFOSAE
616.0 / 59.0



Extraction Standard: d7-NMePFOSAE
623.0 / 59.0

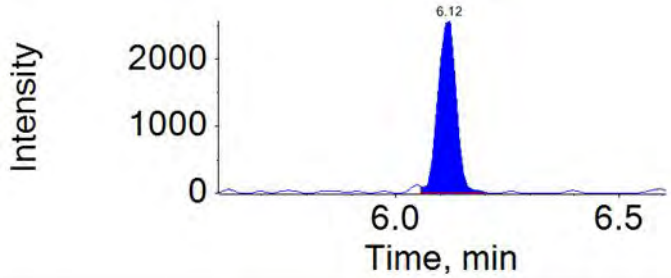


APPROVED
By JPT at 10:19 am, 11/14/18

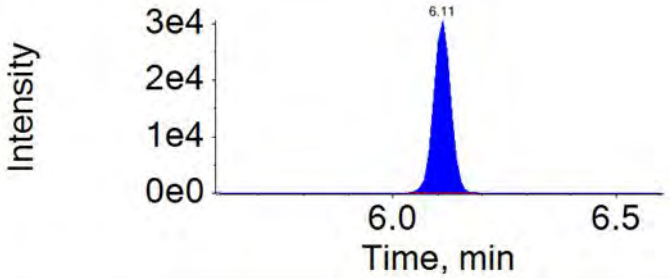
REVIEWED
By HMK at 11:03 am, 11/15/18

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV13DCCV6-10 11/14/2018 9:23:22 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

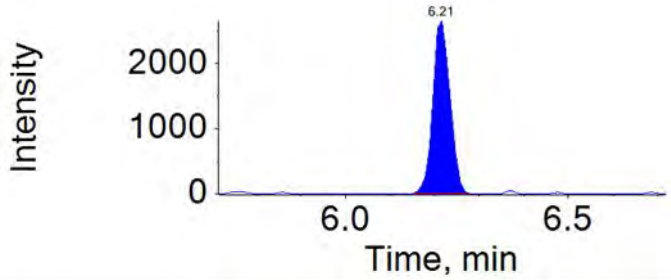
Analyte: NMePFOSA
512.0 / 169.0



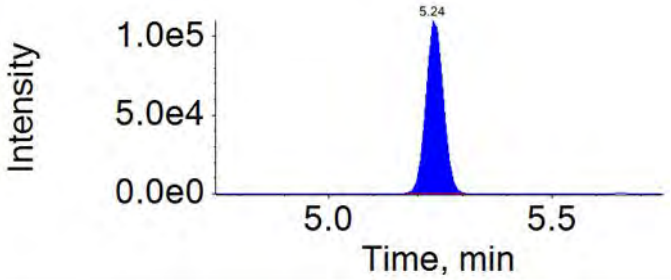
Extraction Standard: d3-NMePFOSA
515.0 / 169.0



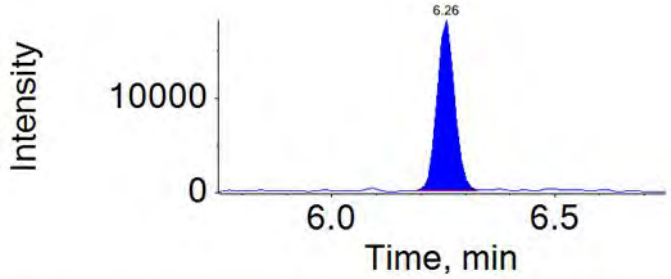
Analyte: PFDoS
699.0 / 80.0



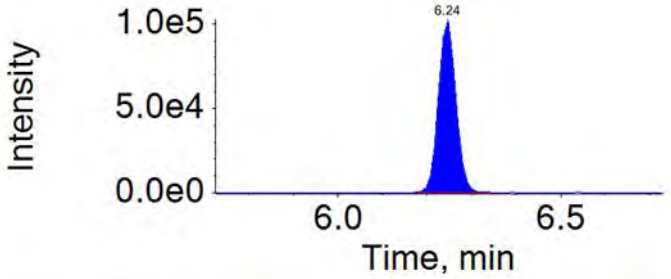
Extraction Standard: 13C8-PFOS
507.0 / 80.0



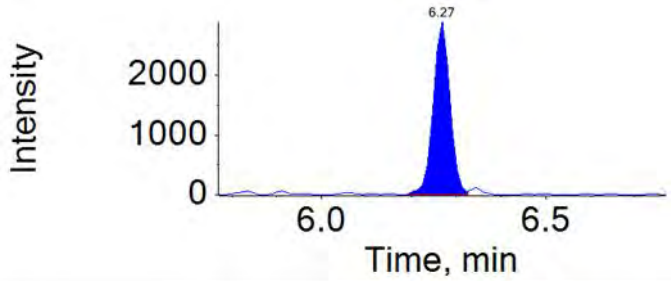
Analyte: NEtPFOSAE
630.0 / 59.0



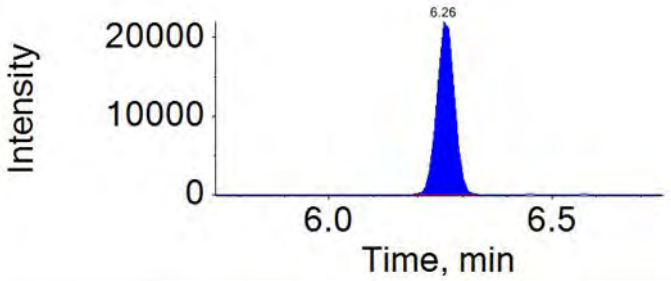
Extraction Standard: d9-NEtPFOSAE
639.0 / 59.0



Analyte: NEtPFOSA
526.0 / 169.0



Extraction Standard: d5-NEtPFOSA
531.0 / 169.0

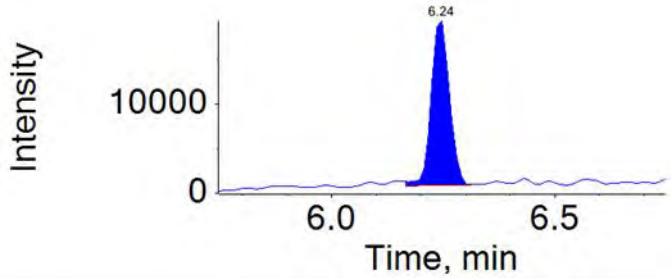


APPROVED
By JPT at 10:19 am, 11/14/18

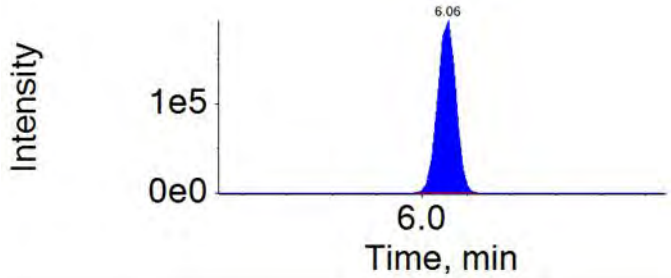
REVIEWED
By HMK at 11:03 am, 11/15/18

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV13DCCV6-10 11/14/2018 9:23:22 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

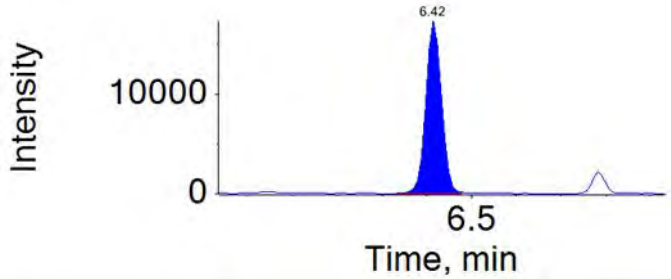
Analyte: PFTrDA
663.0 / 619.0



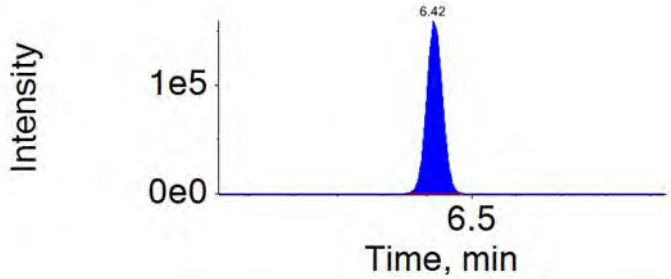
Extraction Standard: 13C2-PFDoDA
615.0 / 570.0



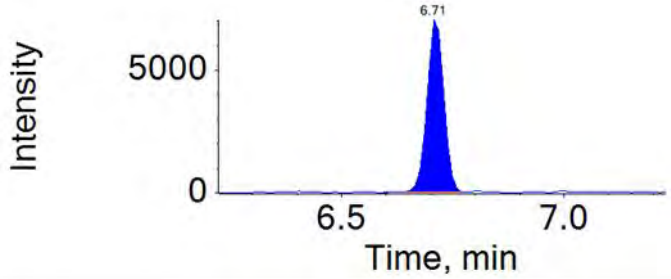
Analyte: PFTeDA
713.0 / 669.0



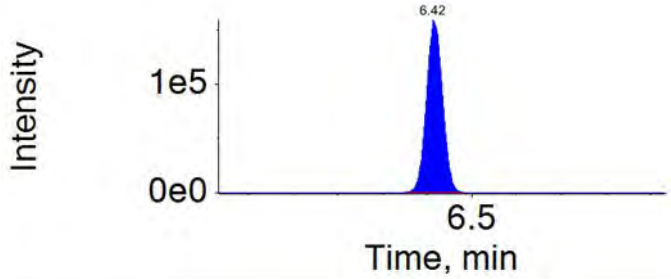
Extraction Standard: 13C2-PFTeDA
715.0 / 670.0



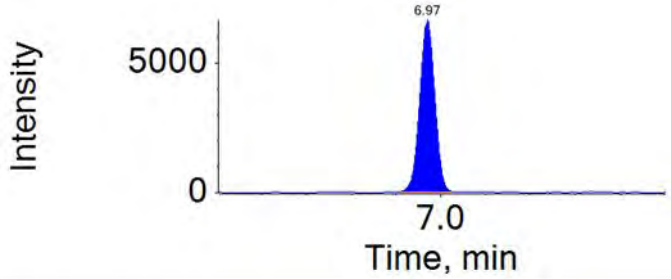
Analyte: PFHxDA
813.0 / 769.0



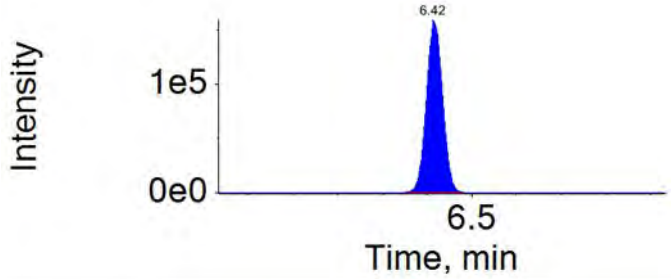
Extraction Standard: 13C2-PFTeDA
715.0 / 670.0



Analyte: PFODA
913.0 / 869.0



Extraction Standard: 13C2-PFTeDA
715.0 / 670.0



APPROVED
By JPT at 10:19 am, 11/14/18

REVIEWED
By HMK at 11:03 am, 11/15/18

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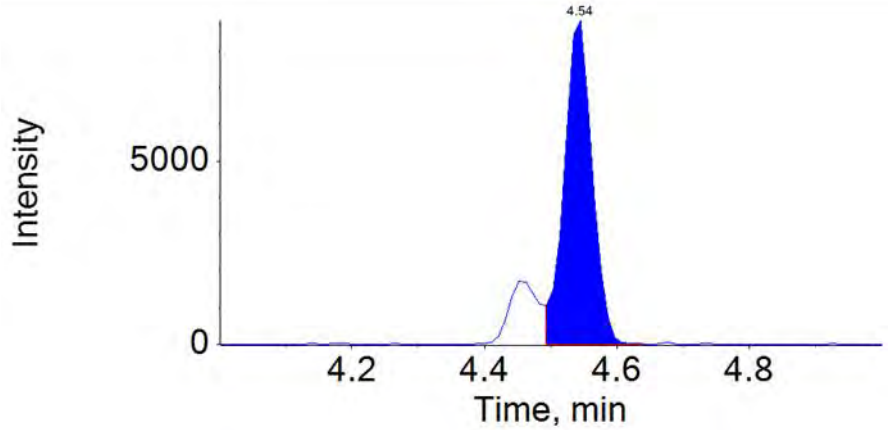
Auto Integrations prior to Manual Integration

Print Date: 11/14/2018 9:57 AM
Template: MQ-OrigInteg-16NOV21.docx

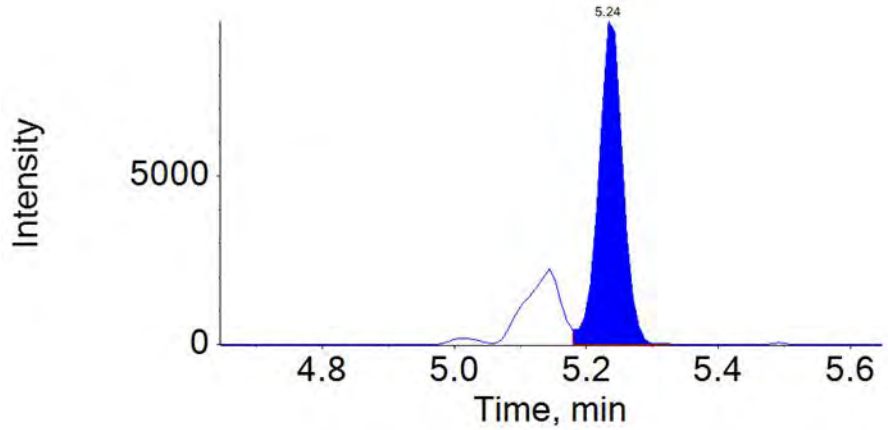
Results Table Name: 18NOV13DCCV6-10
Results Table Date: 11/14/2018 9:23:22 AM
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

Component Name:
PFHxS
RT (min.):
4.54
Peak Area:
25916.1
Mass Range:
399.0 / 80.0
File Name:
18NOV13D-99.wiff
Sample Name:
CCV10_ISC_CAL2



Integration Comment: incorrect integration

Component Name:
PFOS
RT (min.):
5.24
Peak Area:
24570.9
Mass Range:
499.0 / 80.0
File Name:
18NOV13D-99.wiff
Sample Name:
CCV10_ISC_CAL2



Integration Comment: incorrect integration

Component Name:
PFDA
RT (min.):
5.56
Peak Area:
70744.4
Mass Range:
513.0 / 469.0
File Name:
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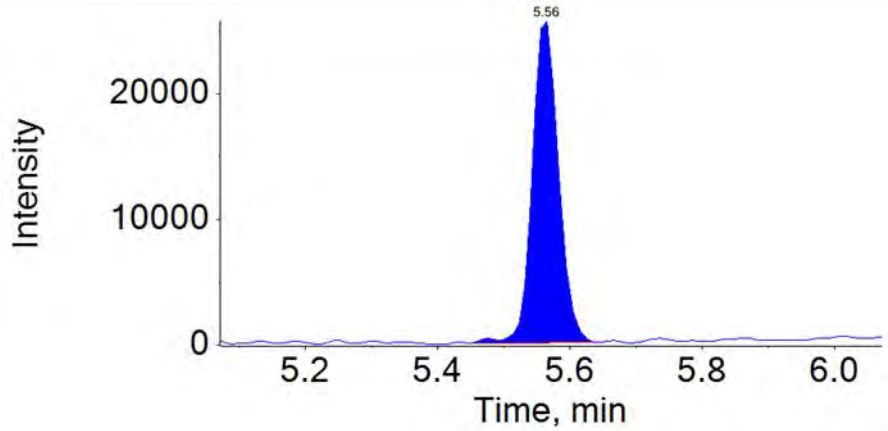
Sample Name:
CCV10_ISC_CAL2



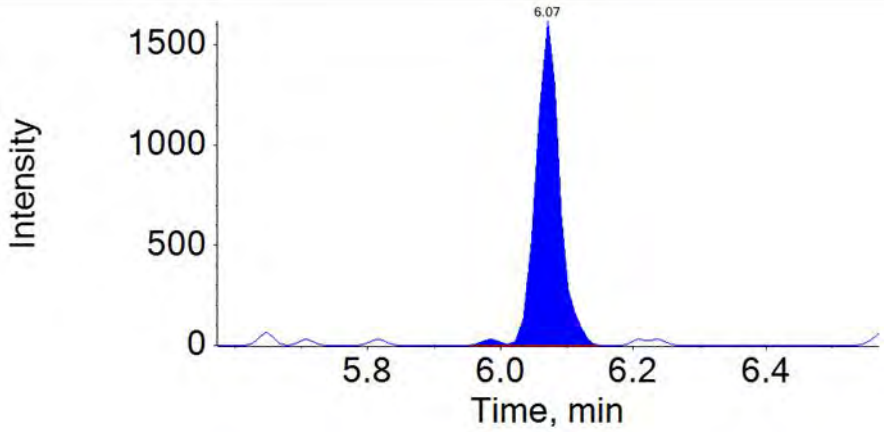
Integration Comment: incorrect integration

APPROVED
By JPT at 10:19 am, 11/14/18

REVIEWED
By HMK at 11:03 am, 11/15/18

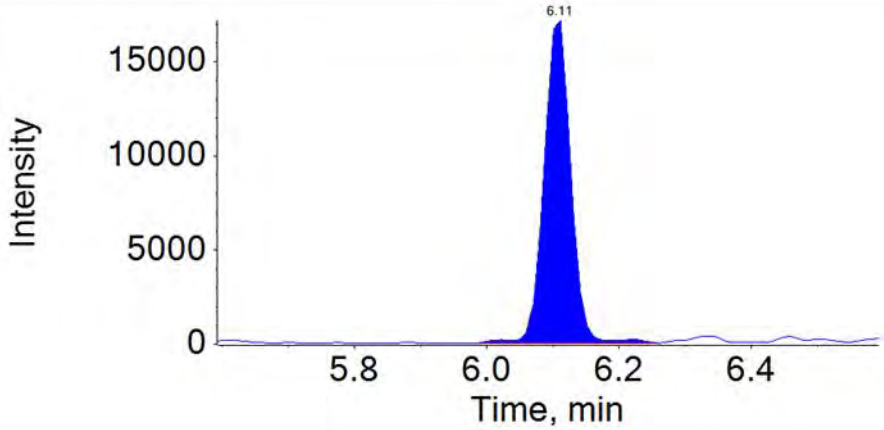
Results Table Name: 18NOV13DCCV6-10
Results Table Date: 11/14/2018 9:23:22 AM
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

Component Name:
10:2-FTS
RT (min.):
6.07
Peak Area:
4044.7
Mass Range:
627.0 / 607.0
File Name:
18NOV13D-99.wiff
Sample Name:
CCV10_ISC_CAL2



Integration Comment: incorrect integration

Component Name:
NMePFOSAE
RT (min.):
6.11
Peak Area:
48601.8
Mass Range:
616.0 / 59.0
File Name:
18NOV13D-99.wiff
Sample Name:
CCV10_ISC_CAL2



Integration Comment: incorrect integration

Component Name:
NMePFOSA
RT (min.):
6.12
Peak Area:
7535.9
Mass Range:
512.0 / 169.0
File Name:
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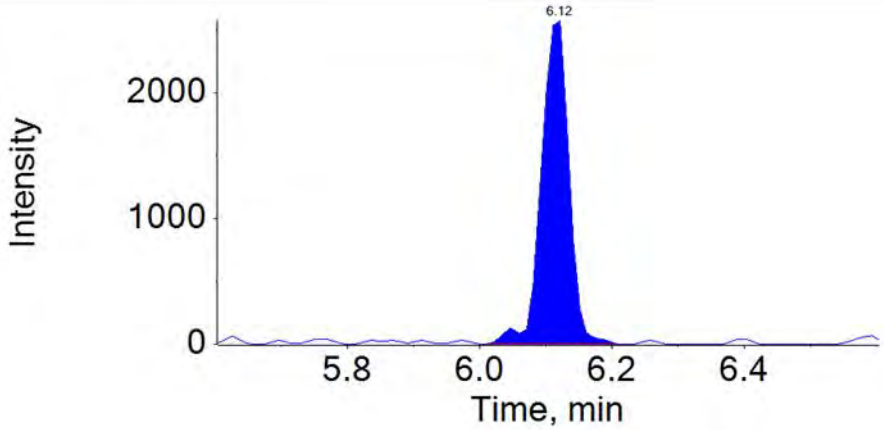
Sample Name:
CCV10_ISC_CAL2



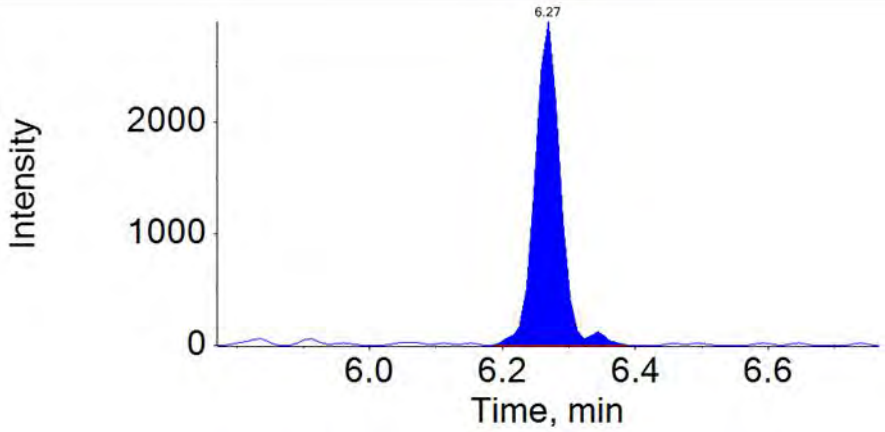
Integration Comment: incorrect integration

APPROVED
By JPT at 10:19 am, 11/14/18

REVIEWED
By HMK at 11:03 am, 11/15/18

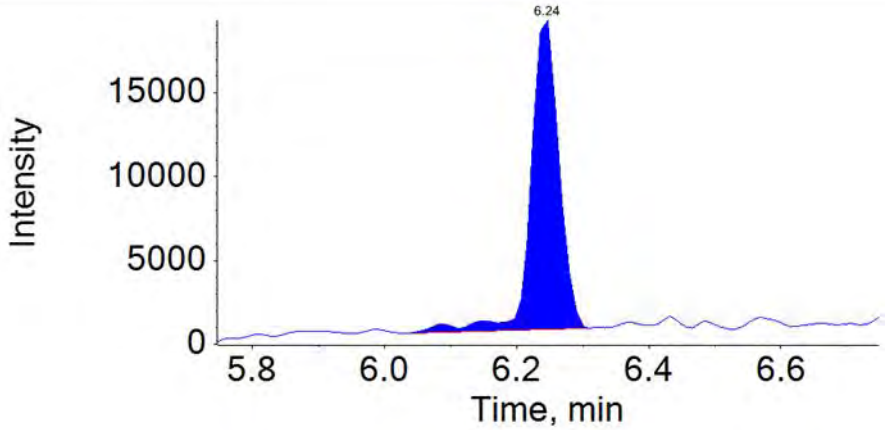
Results Table Name: 18NOV13DCCV6-10
Results Table Date: 11/14/2018 9:23:22 AM
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

Component Name:
NEtPFOSA
RT (min.):
6.27
Peak Area:
7718.3
Mass Range:
526.0 / 169.0
File Name:
18NOV13D-99.wiff
Sample Name:
CCV10_ISC_CAL2



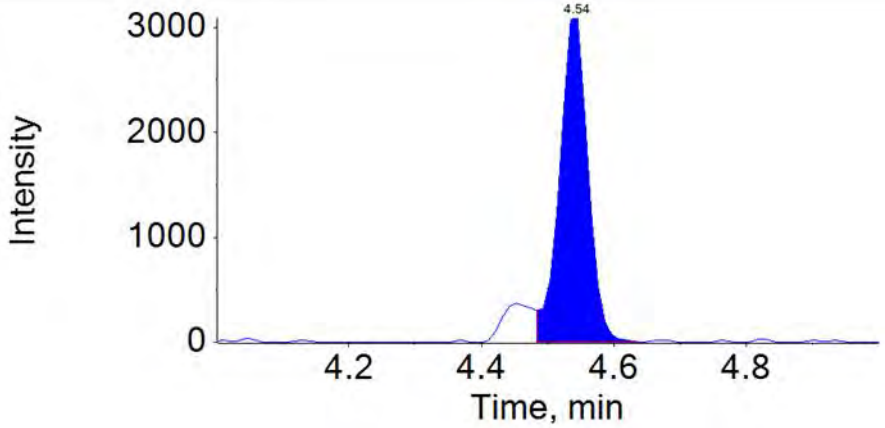
Integration Comment: incorrect integration

Component Name:
PFTrDA
RT (min.):
6.24
Peak Area:
55360.1
Mass Range:
663.0 / 619.0
File Name:
18NOV13D-99.wiff
Sample Name:
CCV10_ISC_CAL2



Integration Comment: incorrect integration

Component Name:
PFHxS_2
RT (min.):
4.54
Peak Area:
9292.7
Mass Range:
399.0 / 99.0
File Name:
18NOV13D-99.wiff
Sample Name:
CCV10_ISC_CAL2



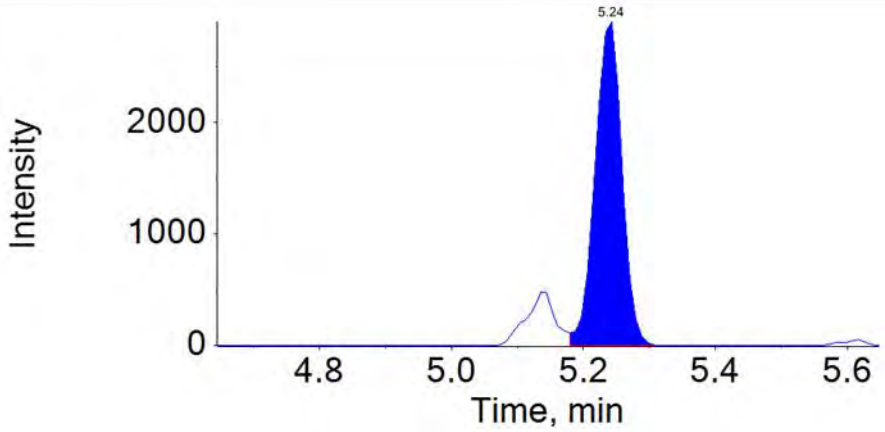
Integration Comment: incorrect integration

APPROVED
By JPT at 10:19 am, 11/14/18

REVIEWED
By HMK at 11:03 am, 11/15/18

Results Table Name: 18NOV13DCCV6-10
Results Table Date: 11/14/2018 9:23:22 AM
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

Component Name:
PFOS_2
RT (min.):
5.24
Peak Area:
8250.8
Mass Range:
499.0 / 99.0
File Name:
18NOV13D-99.wiff
Sample Name:
CCV10_ISC_CAL2



Integration Comment: incorrect integration

Component Name:
NMeFOSAA_2
RT (min.):
5.72
Peak Area:
1110.3
Mass Range:
570.0 / 483.0
File Name:
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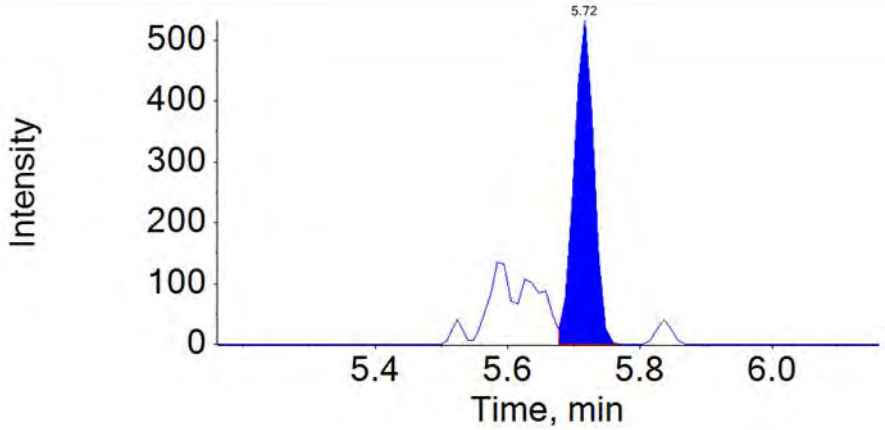
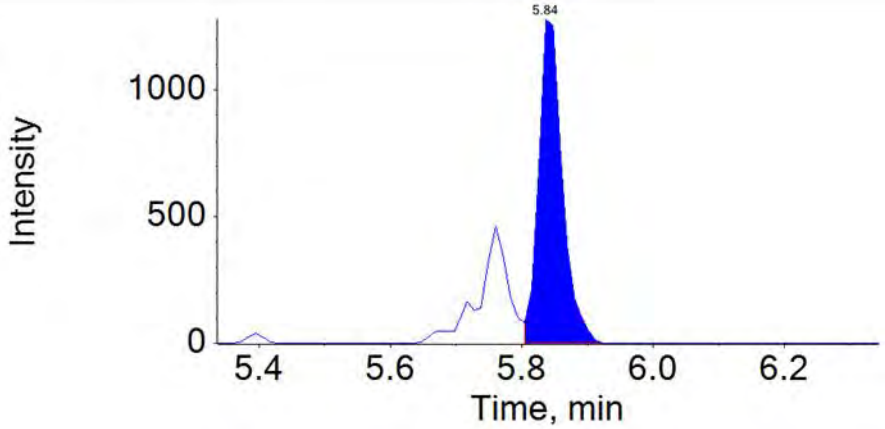
Sample Name:
CCV10_ISC_CAL2



Integration Comment: incorrect integration

Component Name:
NEtFOSAA_2
RT (min.):
5.84
Peak Area:
3230.4
Mass Range:
584.0 / 526.0
File Name:
18NOV13D-99.wiff
Sample Name:
CCV10_ISC_CAL2



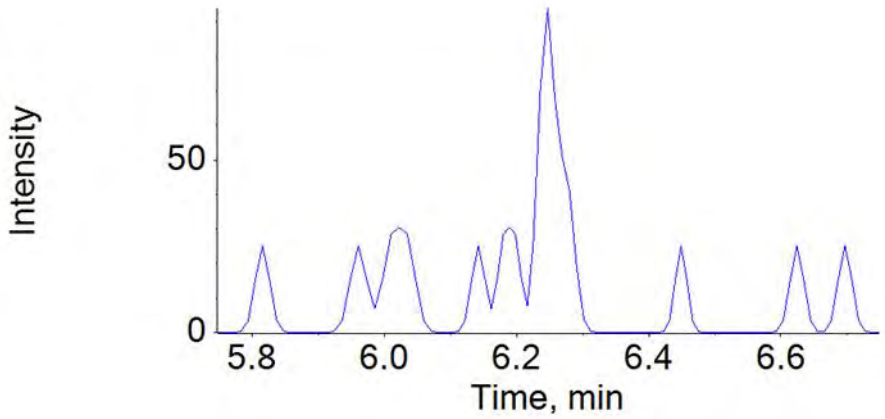
Integration Comment: incorrect integration

APPROVED
By JPT at 10:19 am, 11/14/18

REVIEWED
By HMK at 11:03 am, 11/15/18

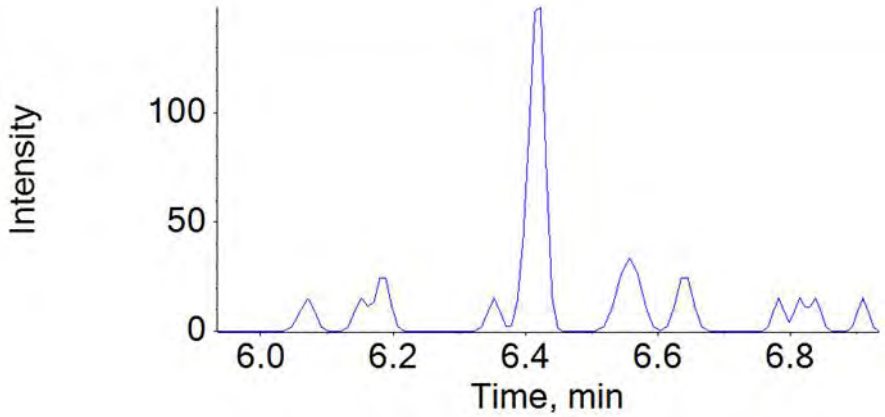
Results Table Name: 18NOV13DCCV6-10
Results Table Date: 11/14/2018 9:23:22 AM
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

Component Name:
PFTrDA_2
RT (min.):
N/A
Peak Area:
N/A
Mass Range:
663.0 / 169.0
File Name:
18NOV13D-99.wiff
Sample Name:
CCV10_ISC_CAL2



Integration Comment: incorrect integration

Component Name:
PFTeDA_2
RT (min.):
N/A
Peak Area:
N/A
Mass Range:
713.0 / 169.0
File Name:
18NOV13D-99.wiff
Sample Name:
CCV10_ISC_CAL2



Integration Comment: incorrect integration

APPROVED
By JPT at 10:19 am, 11/14/18

REVIEWED
By HMK at 11:03 am, 11/15/18

Results Table Name: 18NOV13DCCV6-10
Results Table Date: 11/14/2018 9:23:22 AM

Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

APPROVED
By JPT at 10:19 am, 11/14/18

REVIEWED
By HMK at 11:03 am, 11/15/18

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LC-MS/MS Analysis Report

Printed: 11/14/2018 9:52:00 AM
Template: IonRatio18OCT10

Ion Ratio Report

Sample Name: CCV10_ISC_CAL2 **Instrument Name:** LM27631 **File Name:** 18NOV13D-99.wiff

Component Name	RT	RRT	Analyte Area Response	Int Typ	Expected Ion Ratio	Ion Ratio	Ion Ratio % Diff	Ion Ratio Limit	Ion Ratio OOS
PFBS	3.80	1.00	41175.6	A	N/A	1.0000			
PFBS_2	3.80	1.00	15615.5	A	N/A	0.3792	4	50	
4:2-FTS	4.12	1.00	10558.5	A	N/A	1.0000			
4:2-FTS_2	4.12	1.00	6806.1	A	N/A	0.6446	-4	50	
PFHxA	4.15	1.00	93239.0	A	N/A	1.0000			
PFHxA_2	4.15	1.00	1287.4	A	N/A	0.0138	17	50	
PFPeS	4.17	1.10	22889.9	A	N/A	1.0000			
PFPeS_2	4.17	1.10	11656.4	A	N/A	0.5092	-2	50	
PFHpA	4.54	1.00	100485.7	A	N/A	1.0000			
PFHpA_2	4.54	1.00	5462.5	A	N/A	0.0544	-3	50	
PFHxS	4.54	1.00	31363.2	M	N/A	1.0000			
PFHxS_2	4.54	1.00	10486.7	M	N/A	0.3344	10	50	
6:2-FTS	4.90	1.00	8290.1	A	N/A	1.0000			
6:2-FTS_2	4.90	1.00	6077.6	A	N/A	0.7331	12	50	
PFHpS	4.90	1.08	32176.2	A	N/A	1.0000			
PFHpS_2	4.90	1.08	13354.0	A	N/A	0.4150	2	50	
PFOA	4.91	1.00	97413.0	A	N/A	1.0000			
PFOA_2	4.91	1.00	5674.1	A	N/A	0.0582	2	50	
PFOS	5.24	1.00	33335.6	M	N/A	1.0000			
PFOS_2	5.24	1.00	9712.1	M	N/A	0.2913	13	50	
PFNA	5.25	1.00	79913.2	A	N/A	1.0000			
PFNA_2	5.26	1.00	1813.0	A	N/A	0.0227	-1	50	
PFNS	5.54	1.06	19973.6	A	N/A	1.0000			
PFNS_2	5.54	1.06	9634.3	A	N/A	0.4824	1	50	
PFDA	5.56	1.00	70350.5	M	N/A	1.0000			
PFDA_2	5.58	1.00	335.7	A	N/A	0.0048	-40	50	
8:2-FTS	5.57	1.00	8485.5	A	N/A	1.0000			
8:2-FTS_2	5.57	1.00	4170.9	A	N/A	0.4915	-26	50	
NMeFOSAA	5.71	1.00	6785.4	A	N/A	1.0000			
NMeFOSAA_2	5.72	1.00	1729.4	M	N/A	0.2549	20	50	
PFDS	5.80	1.11	17445.5	A	N/A	1.0000			
PFDS_2	5.81	1.11	10495.3	A	N/A	0.6016	18	50	
PFUnDA	5.83	1.00	58618.2	A	N/A	1.0000			
PFUnDA_2	5.83	1.00	715.3	A	N/A	0.0122	193	50	OOS
NEtFOSAA	5.84	1.00	6596.5	A	N/A	1.0000			
NEtFOSAA_2	5.84	1.00	4673.0	M	N/A	0.7084	22	50	
PFDoDA	6.06	1.00	63697.0	A	N/A	1.0000			
PFDoDA_2	6.05	1.00	897.5	A	N/A	0.0141	-14	50	
10:2-FTS	6.07	1.09	3987.7	M	N/A	1.0000			
10:2-FTS_2	6.07	1.09	2443.3	A	N/A	0.6127	-5	50	
PFTrDA	6.24	1.03	52624.9	M	N/A	1.0000			
PFTrDA_2	6.25	1.03	251.1	M	N/A	0.0048	-48	50	
PFTeDA	6.42	1.00	42186.4	A	N/A	1.0000			
PFTeDA_2	6.42	1.00	282.1	M	N/A	0.0067	4	50	
PFHxDA	6.71	1.05	18374.7	A	N/A	1.0000			
PFHxDA_2	6.71	1.05	1401.6	A	N/A	0.0763	13	50	

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By JPT at 10:19 am, 11/14/18

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By HMK at 11:03 am, 11/15/18

PFODA	6.97	1.09	15437.7	A	N/A	1.0000			
PFODA_2	6.97	1.09	382.9	A	N/A	0.0248	-8	50	

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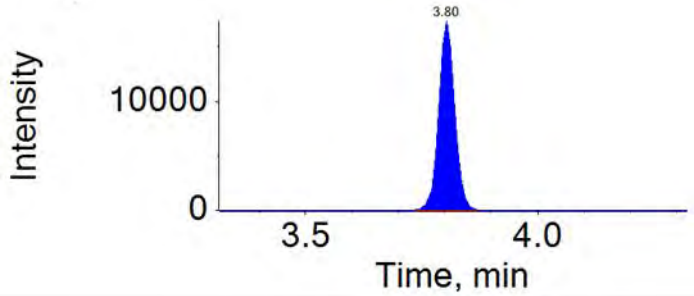
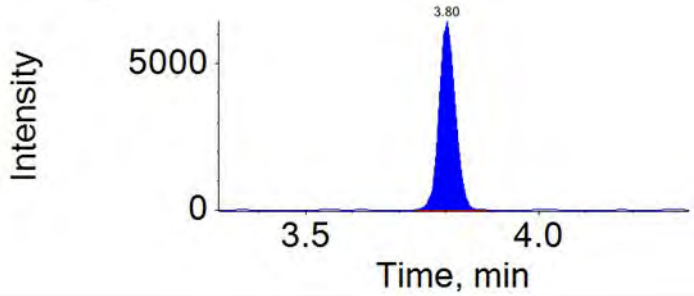
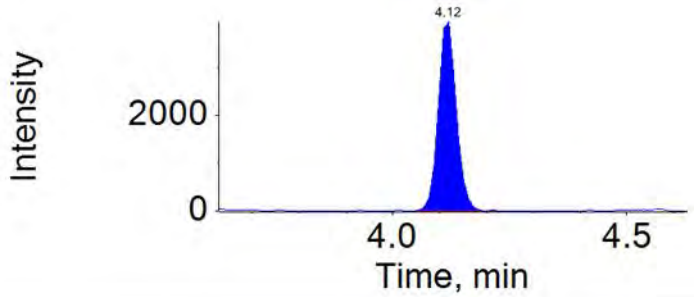
Component: PFBS
Primary Mass: 299.0 / 80.0



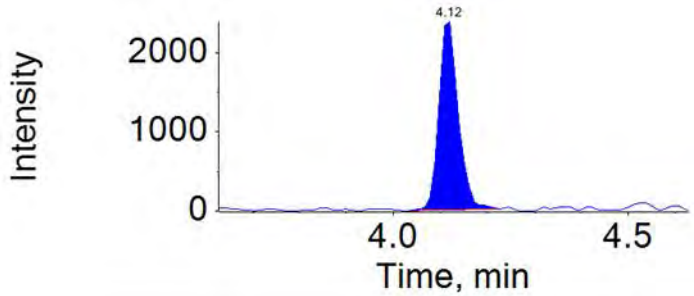
Component: PFBS_2
Secondary Mass: 299.0 / 99.0



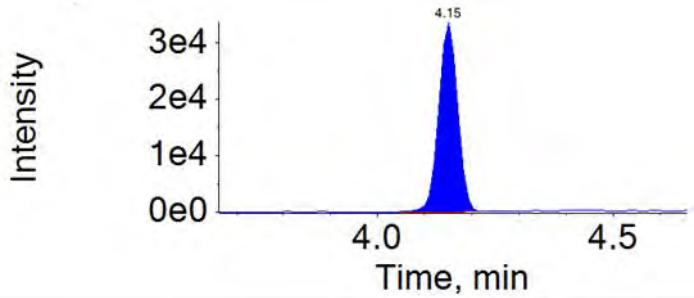
Component: 4:2-FTS
Primary Mass: 327.0 / 307.0



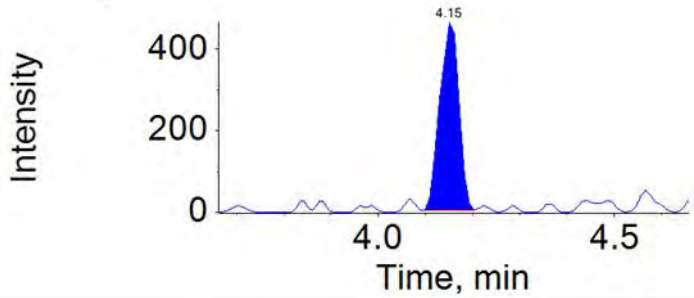
Component: 4:2-FTS_2
Secondary Mass: 327.0 / 81.0



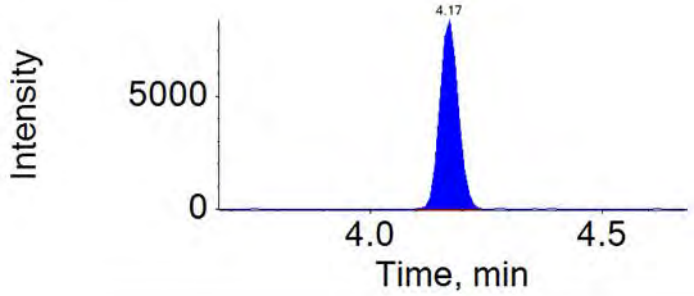
Component: PFHxA
Primary Mass: 313.0 / 269.0



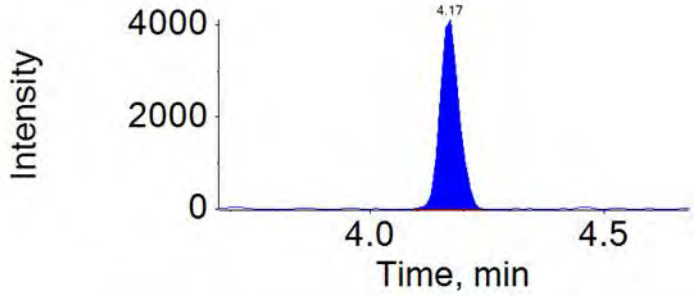
Component: PFHxA_2
Secondary Mass: 313.0 / 119.0



Component: PFPeS
Primary Mass: 349.0 / 80.0



Component: PFPeS_2
Secondary Mass: 349.0 / 99.0



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By JPT at 10:19 am, 11/14/18

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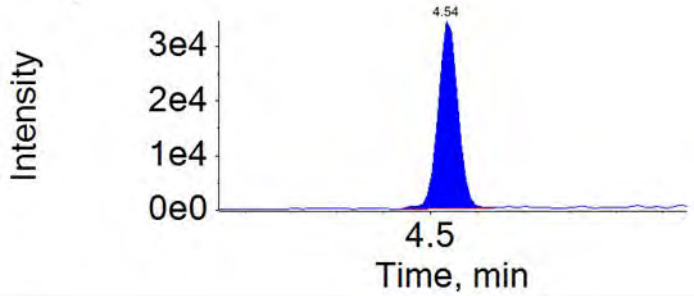
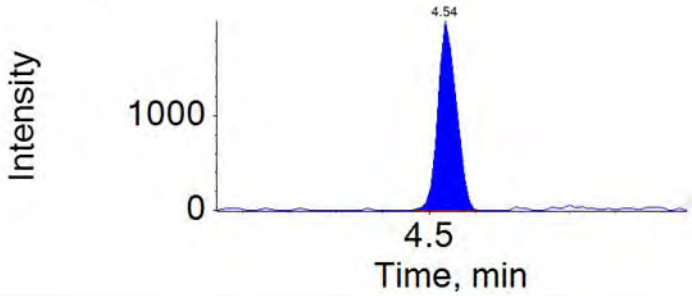
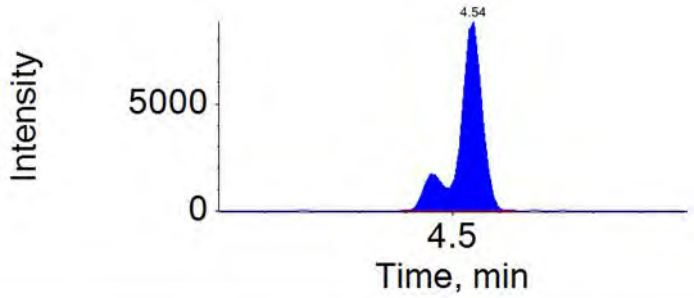
Component: PFHpA
Primary Mass: 363.0 / 319.0



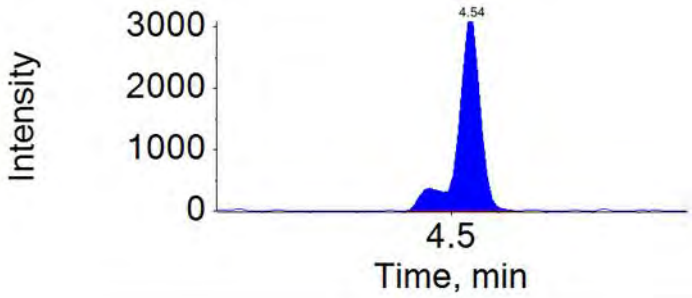
Component: PFHpA_2
Secondary Mass: 363.0 / 169.0



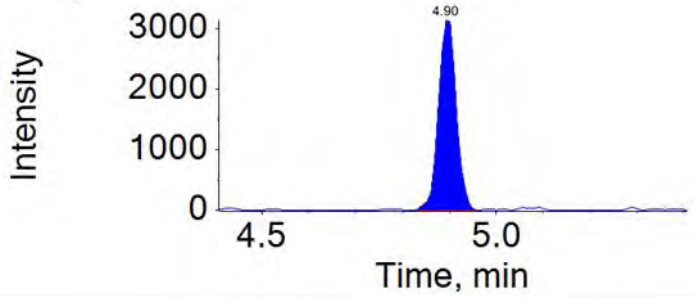
Component: PFHxS
Primary Mass: 399.0 / 80.0



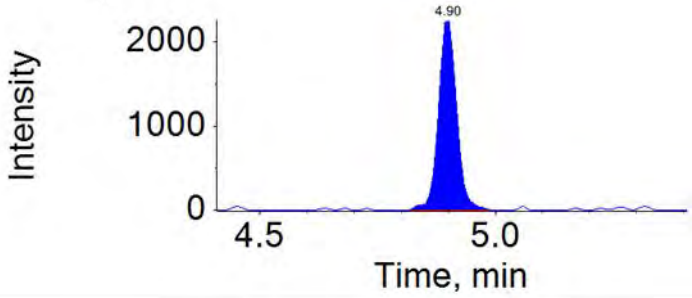
Component: PFHxS_2
Secondary Mass: 399.0 / 99.0



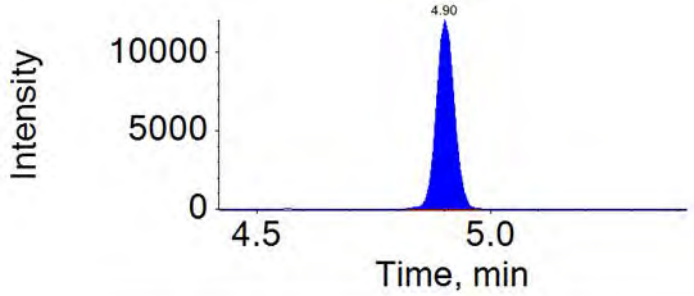
Component: 6:2-FTS
Primary Mass: 427.0 / 407.0



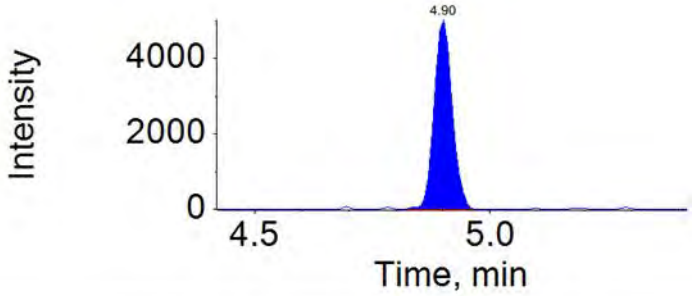
Component: 6:2-FTS_2
Secondary Mass: 427.0 / 81.0



Component: PFHpS
Primary Mass: 449.0 / 80.0



Component: PFHpS_2
Secondary Mass: 449.0 / 99.0



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By JPT at 10:19 am, 11/14/18

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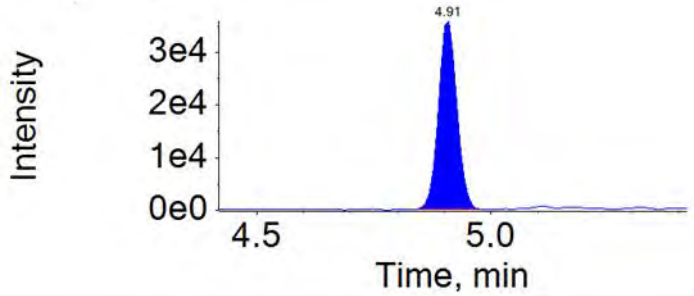
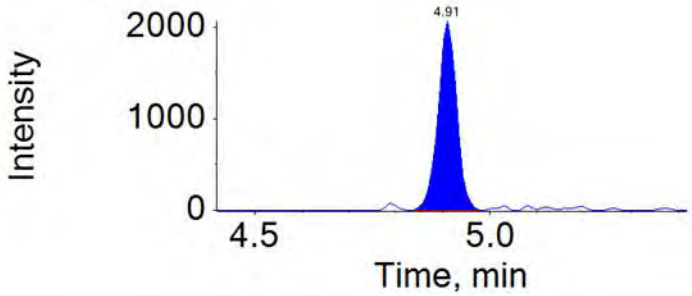
By HMK at 11:03 am, 11/15/18

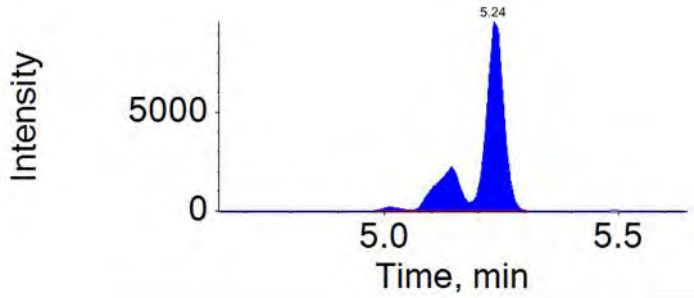
Component: PFOA
Primary Mass: 413.0 / 369.0



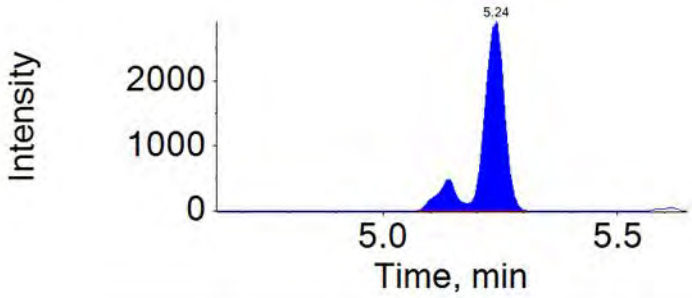
Component: PFOA_2
Secondary Mass: 413.0 / 169.0



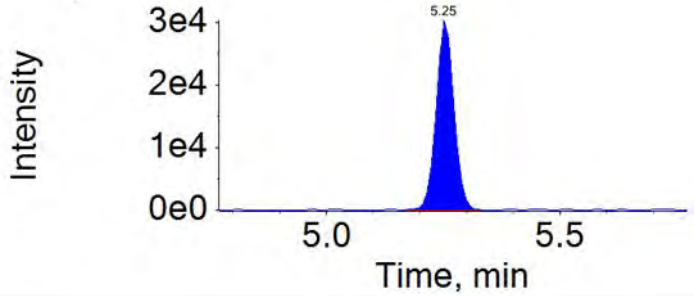
Component: PFOS
Primary Mass: 499.0 / 80.0



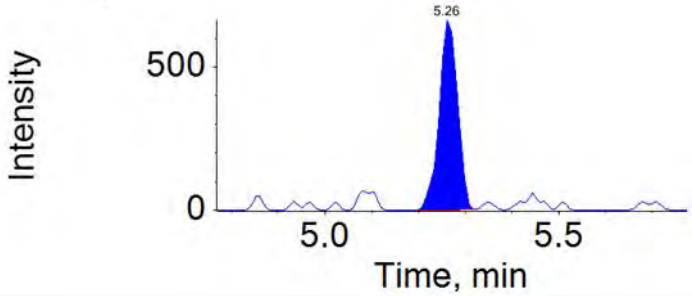
Component: PFOS_2
Secondary Mass: 499.0 / 99.0



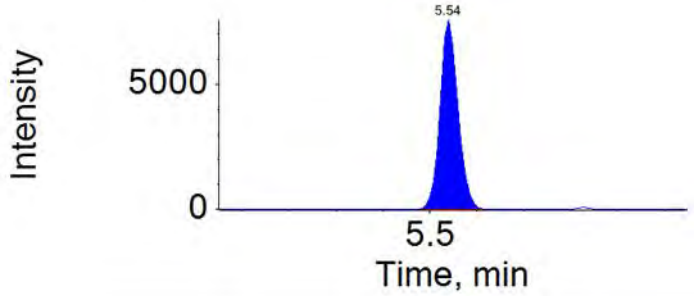
Component: PFNA
Primary Mass: 463.0 / 419.0



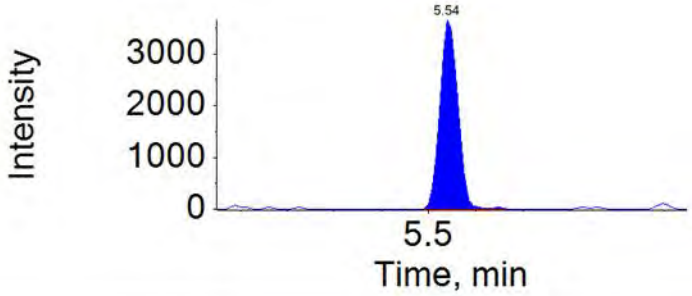
Component: PFNA_2
Secondary Mass: 463.0 / 169.0



Component: PFNS
Primary Mass: 549.0 / 80.0



Component: PFNS_2
Secondary Mass: 549.0 / 99.0



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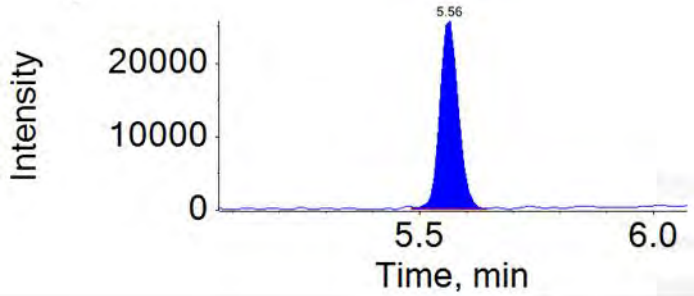
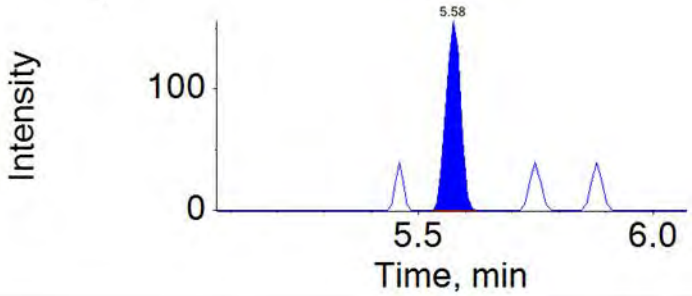
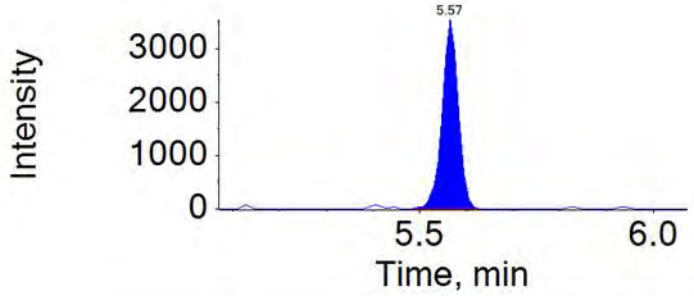
Component: PFDA
Primary Mass: 513.0 / 469.0



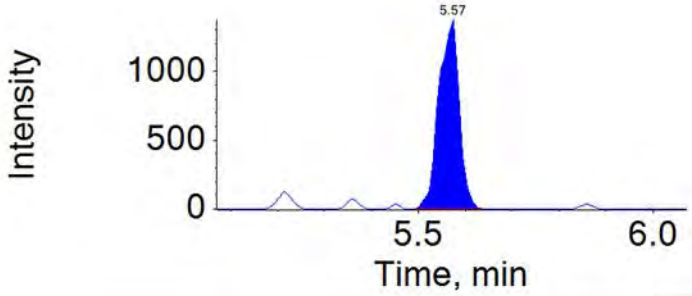
Component: PFDA_2
Secondary Mass: 513.0 / 169.0



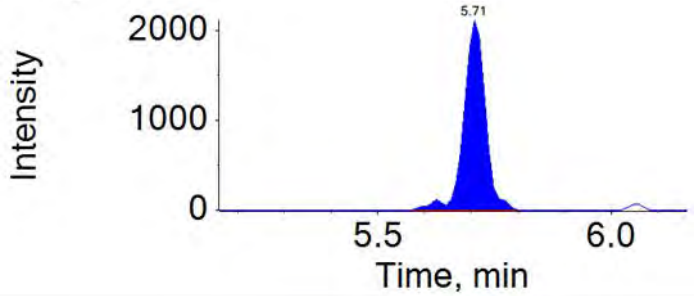
Component: 8:2-FTS
Primary Mass: 527.0 / 507.0



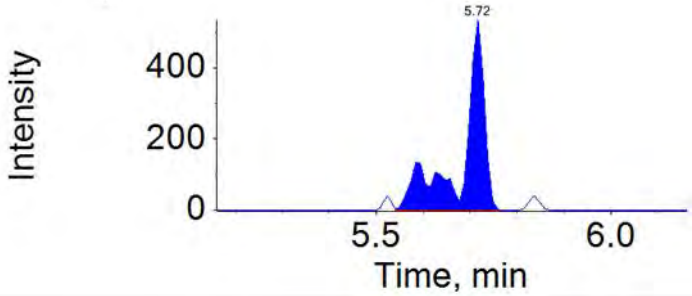
Component: 8:2-FTS_2
Secondary Mass: 527.0 / 81.0



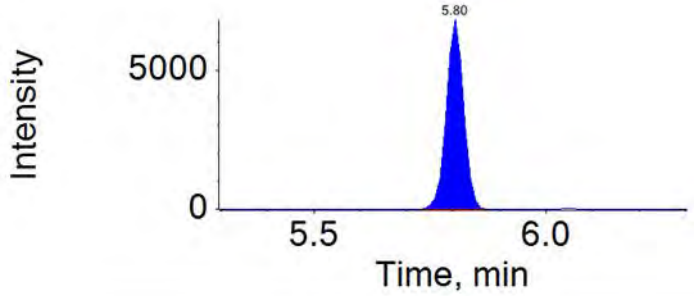
Component: NMeFOSAA
Primary Mass: 570.0 / 419.0



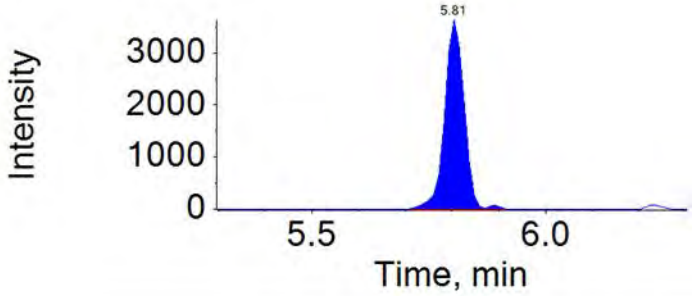
Component: NMeFOSAA_2
Secondary Mass: 570.0 / 483.0



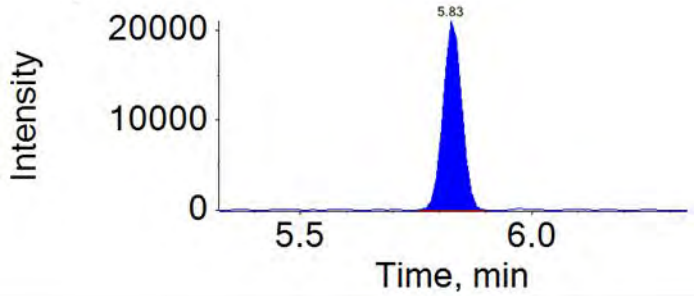
Component: PFDS
Primary Mass: 599.0 / 80.0



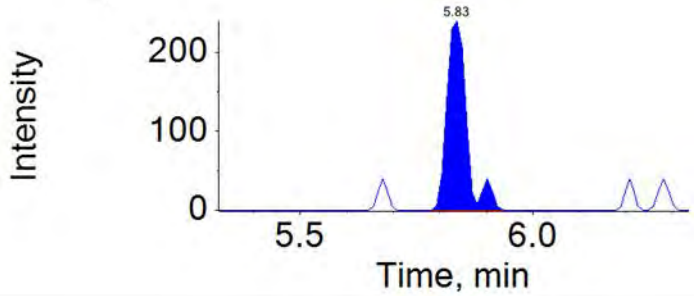
Component: PFDS_2
Secondary Mass: 599.0 / 99.0



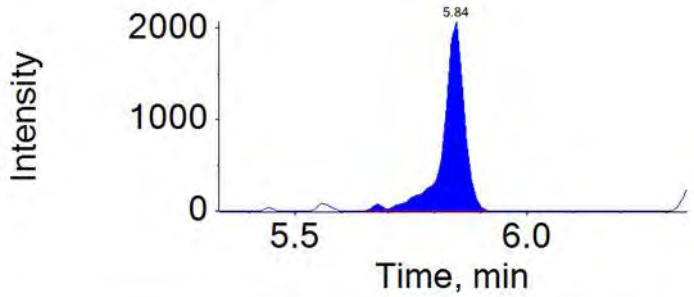
Component: PFUnDA
Primary Mass: 563.0 / 519.0



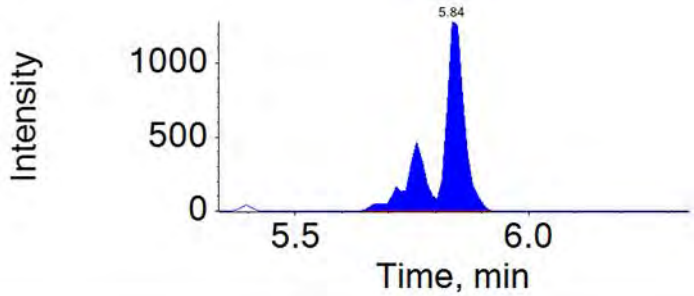
Component: PFUnDA_2
Secondary Mass: 563.0 / 169.0



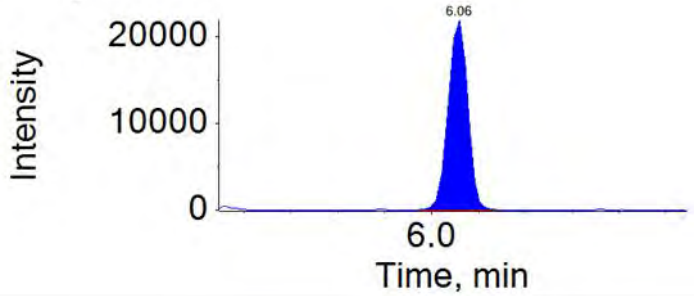
Component: NEtFOSAA
Primary Mass: 584.0 / 419.0



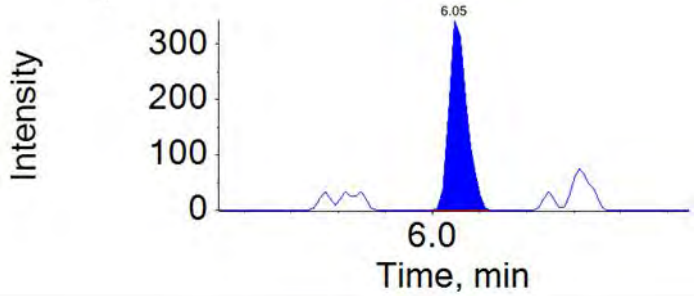
Component: NEtFOSAA_2
Secondary Mass: 584.0 / 526.0



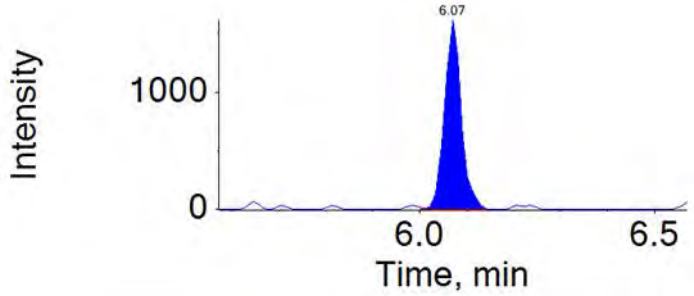
Component: PFDoDA
Primary Mass: 613.0 / 569.0



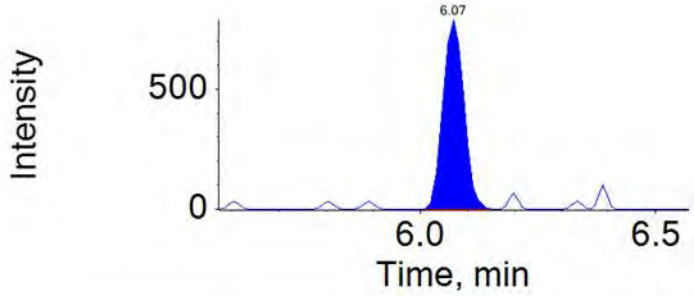
Component: PFDoDA_2
Secondary Mass: 613.0 / 169.0



Component: 10:2-FTS
Primary Mass: 627.0 / 607.0



Component: 10:2-FTS_2
Secondary Mass: 627.0 / 81.0



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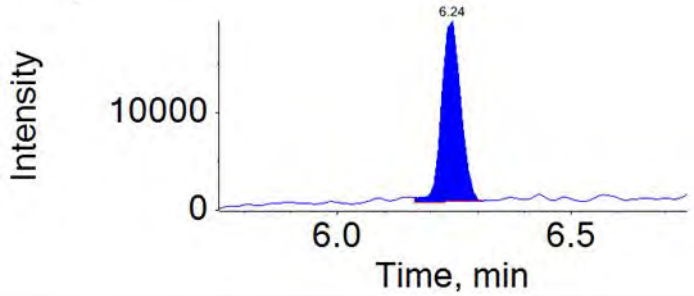
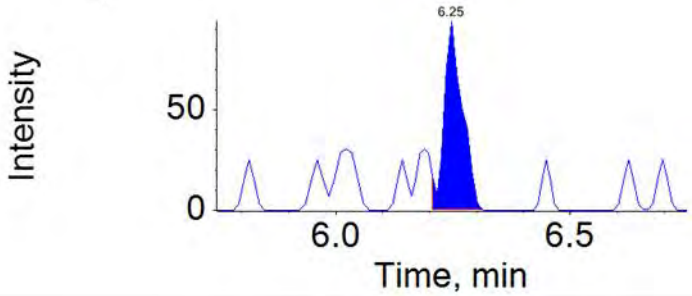
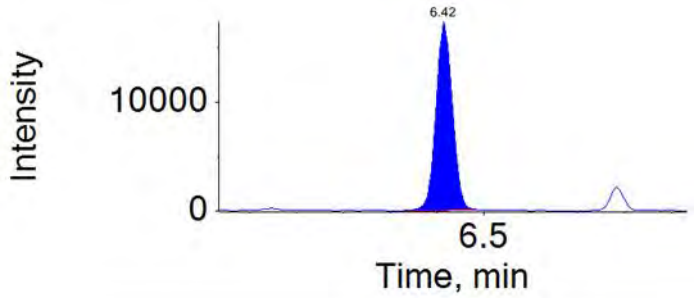
Component: PFTrDA
Primary Mass: 663.0 / 619.0



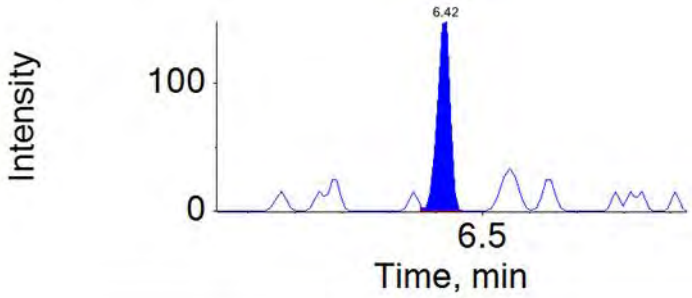
Component: PFTrDA_2
Secondary Mass: 663.0 / 169.0



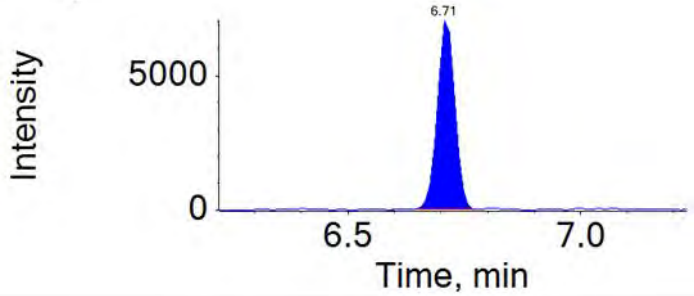
Component: PFTeDA
Primary Mass: 713.0 / 669.0



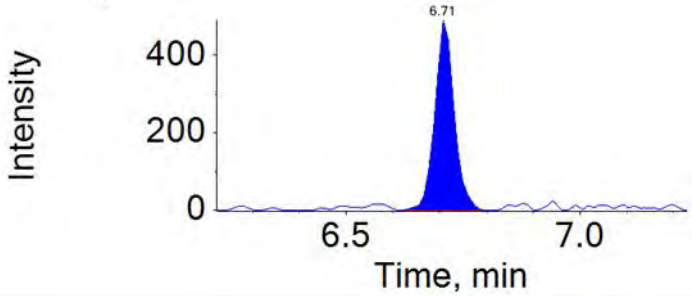
Component: PFTeDA_2
Secondary Mass: 713.0 / 169.0



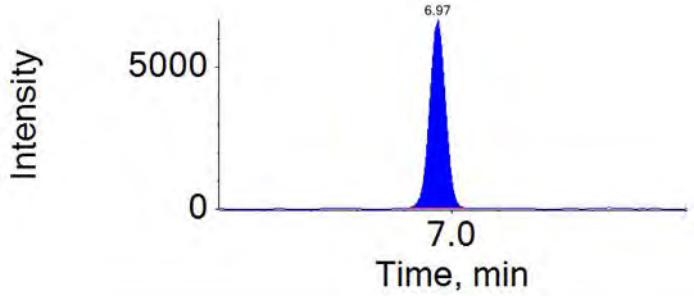
Component: PFHxDA
Primary Mass: 813.0 / 769.0



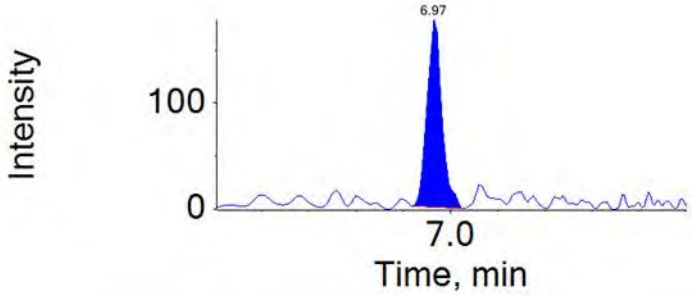
Component: PFHxDA_2
Secondary Mass: 813.0 / 169.0



Component: PFODA
Primary Mass: 913.0 / 869.0



Component: PFODA_2
Secondary Mass: 913.0 / 169.0



APPROVED
By JPT at 10:19 am, 11/14/18

REVIEWED
By HMK at 11:03 am, 11/15/18

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV28DCAL **QMethod Name:** 18AUG20QM
Result Table: 18NOV28DCAL_Updated1/10/2019 3:36:50 PM **Acquisition Method:** 18AUG13_3uL.dam

Sample File Name	Acquisition Date	Sample ID	Sample Name
18NOV28DCAL-06.wiff	11/28/2018 1:42:10 PM	CALBRN11833C	CAL1
18NOV28DCAL-07.wiff	11/28/2018 1:51:13 PM	CALBRN21833C	CAL2
18NOV28DCAL-08.wiff	11/28/2018 2:00:13 PM	CALBRN31833B	CAL3
18NOV28DCAL-09.wiff	11/28/2018 2:09:13 PM	CALBRN41833B	CAL4
18NOV28DCAL-10.wiff	11/28/2018 2:18:16 PM	CALBRN51833B	CAL5
18NOV28DCAL-11.wiff	11/28/2018 2:27:16 PM	CALBRN61833B	CAL6
18NOV28DCAL-12.wiff	11/28/2018 2:36:16 PM	CALBRN71833B	CAL7

CAL3 Injection Standard Areas

Sample Name	Injection Std Name	Injection Std Area
CAL3	13C3-PFBA	887248.9
CAL3	13C2-PFOA	498501.6
CAL3	13C4-PFOS	283214.2
CAL3	13C2-PFDA	441790.6

APPROVED
By MCD at 3:40 pm, 1/10/19

REVIEWED
By UCMR at 7:00 pm, 1/21/19

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV28DCAL **QMethod Name:** 18AUG20QM
Result Table: 18NOV28DCAL_Updated1/10/2019 3:36:50 PM **Acquisition Method:** 18AUG13_3uL.dam

Response Factor Table

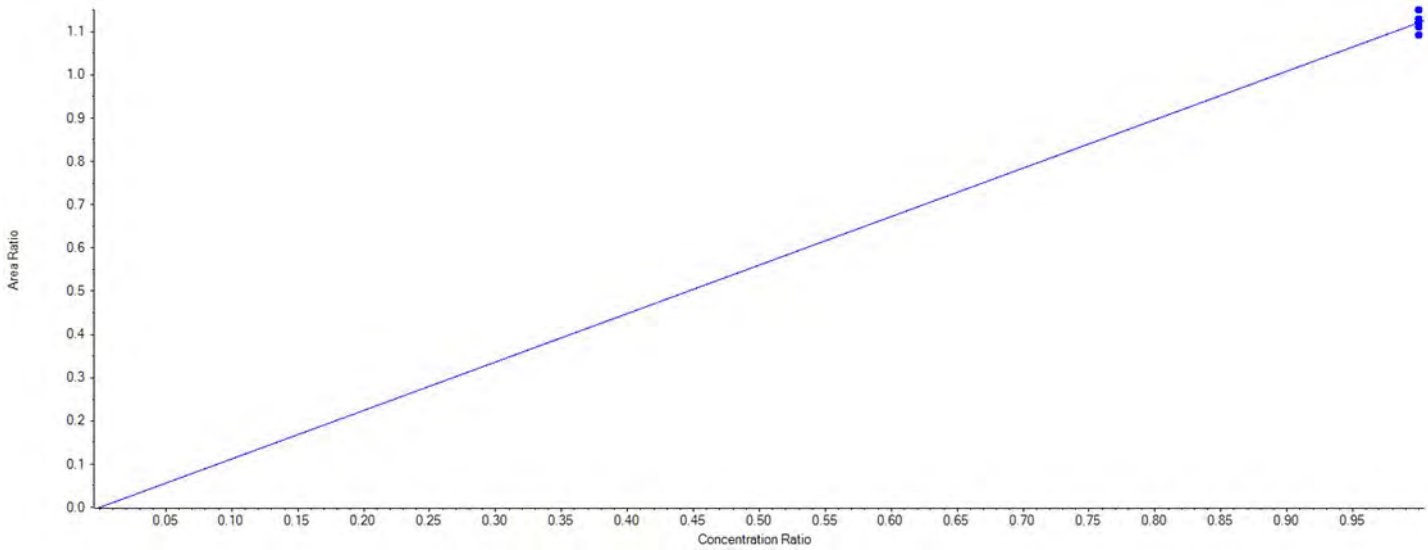
Analyte Name	CAL 1	CAL 2	CAL 3	CAL 4	CAL 5	CAL 6	CAL 7	%RSD	Limit	OOS	r^2	OOS
PFBA	1.080	0.888	1.015	0.915	0.953	0.891	N/A	7	20		0.999	
PFPeA	1.146	0.858	1.164	0.972	1.027	N/A	N/A	11	20		0.997	
PFBS	1.048	0.856	1.054	0.915	0.956	0.951	0.964	7	20		1.000	
4:2-FTS	1.863	1.681	1.998	1.784	1.847	1.760	1.708	6	20		0.999	
PFHxA	1.451	1.216	1.377	1.252	1.229	N/A	N/A	7	20		0.999	
PFPeS	0.506	0.448	0.528	0.456	0.472	0.446	0.463	6	20		0.999	
PFHpA	1.943	1.531	1.813	1.585	1.614	N/A	N/A	9	20		0.999	
PFHxS	1.004	0.803	1.016	0.911	1.002	0.973	1.040	8	20		0.999	
6:2-FTS	2.165	1.891	2.059	2.052	1.835	1.766	N/A	7	20		0.998	
PFHpS	1.044	0.805	0.986	0.926	0.943	0.954	0.947	7	20		1.000	
PFOA	1.031	0.860	1.063	1.011	0.988	0.950	N/A	7	20		0.999	
PFOS	1.059	0.938	1.163	1.051	1.126	1.119	1.160	7	20		0.999	
PFNA	1.496	1.303	1.470	1.315	1.403	1.256	N/A	6	20		0.997	
PFNS	0.763	0.638	0.735	0.777	0.756	0.755	0.758	6	20		1.000	
PFDA	0.983	0.901	1.042	0.908	0.922	0.863	0.880	6	20		0.999	
8:2-FTS	2.600	2.366	2.661	2.405	2.587	N/A	N/A	5	20		0.999	
PFOSA	1.045	0.925	1.050	0.976	1.003	0.980	N/A	4	20		1.000	
NMeFOSAA	0.755	0.760	0.870	0.777	0.807	0.800	0.770	5	20		0.999	
PFDS	0.533	0.491	0.644	0.594	0.609	0.592	0.608	8	20		1.000	
PFUnDA	1.551	1.312	1.564	1.466	1.465	1.452	1.350	6	20		0.998	
NEtFOSAA	0.994	0.958	1.016	0.921	1.027	1.030	1.034	4	20		1.000	
PFDoDA	1.137	0.896	1.115	0.896	0.918	0.904	N/A	11	20		0.999	
10:2-FTS	2.409	2.294	2.697	2.170	2.584	2.172	2.078	9	20		0.994	
NMePFOSAE	1.232	1.162	1.330	1.183	1.252	1.229	1.152	5	20		0.999	
NMePFOSA	0.955	0.904	1.028	0.928	0.970	0.938	0.940	4	20		1.000	
PFDoS	0.310	0.304	0.325	0.333	0.321	0.319	0.343	4	20		0.999	
NEtPFOSAE	1.702	1.382	1.766	1.478	1.516	1.392	1.348	10	20		0.998	
NEtPFOSA	1.208	0.986	1.184	1.112	1.104	1.170	1.090	6	20		0.999	
PFTrDA	1.034	0.859	1.068	0.881	0.826	0.812	N/A	11	20		0.998	
PFTeDA	0.975	0.858	1.016	0.886	0.921	0.861	N/A	6	20		0.999	
PFHxDA	0.549	0.429	0.516	0.455	0.493	0.431	0.426	10	20		0.997	
PFODA	0.411	0.354	0.413	0.374	0.405	0.373	0.370	6	20		0.999	

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV28DCAL **QMethod Name:** 18AUG20QM
Result Table: 18NOV28DCAL_Updated1/10/2019 3:36:50 PM **Acquisition Method:** 18AUG13_3uL.dam

E13C4-PFBA

y = 1.12068 x (std. dev. = 0.01800) (weighting: None)



Extraction Standard Calibration Verification

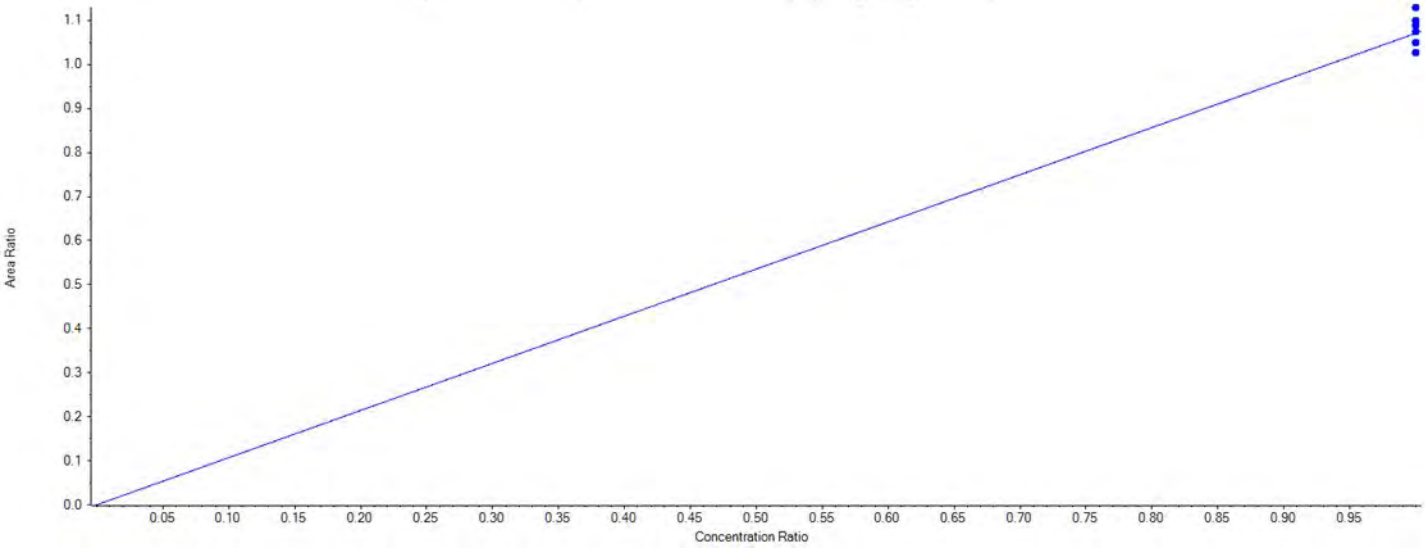
Sample Name	E13C4-PFBA Area	13C3-PFBA Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	1018752.8	907350.543	True	5.00	1.123	3.28	1.000	5.000	5.009	0	30	
CAL2	1033122.1	898154.232	True	5.00	1.150	3.27	1.000	5.000	5.132	3	30	
CAL3	993144.1	887248.863	True	5.00	1.119	3.28	1.000	5.000	4.994	0	30	
CAL4	974000.9	892443.927	True	5.00	1.091	3.28	1.000	5.000	4.869	-3	30	
CAL5	951695.0	857159.817	True	5.00	1.110	3.28	1.000	5.000	4.954	-1	30	
CAL6	897566.7	793954.989	True	5.00	1.131	3.27	1.000	5.000	5.044	1	30	
CAL7	803704.8	717475.737	True	5.00	1.120	3.27	1.000	5.000	4.998	0	30	

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV28DCAL **QMethod Name:** 18AUG20QM
Result Table: 18NOV28DCAL_Updated1/10/2019 3:36:50 PM **Acquisition Method:** 18AUG13_3uL.dam

E13C5-PFPeA

y = 1.07075 x (std. dev. = 0.03855) (weighting: None)



Extraction Standard Calibration Verification

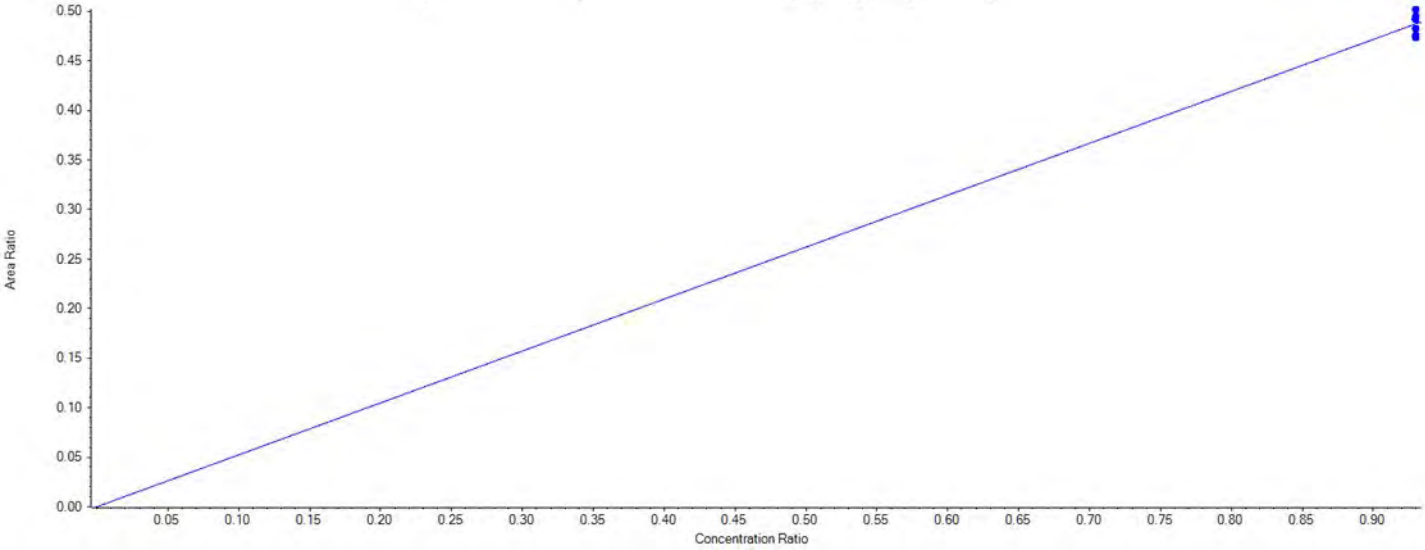
Sample Name	E13C5-PFPeA Area	13C3-PFBA Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	975339.0	907350.543	True	5.00	1.075	3.77	1.150	5.000	5.019	0	30	
CAL2	1014125.0	898154.232	True	5.00	1.129	3.77	1.150	5.000	5.273	5	30	
CAL3	910953.7	887248.863	True	5.00	1.027	3.78	1.150	5.000	4.794	-4	30	
CAL4	915824.6	892443.927	True	5.00	1.026	3.77	1.150	5.000	4.792	-4	30	
CAL5	900153.4	857159.817	True	5.00	1.050	3.78	1.150	5.000	4.904	-2	30	
CAL6	872922.6	793954.989	True	5.00	1.099	3.77	1.150	5.000	5.134	3	30	
CAL7	781113.8	717475.737	True	5.00	1.089	3.77	1.150	5.000	5.084	2	30	

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV28DCAL **QMethod Name:** 18AUG20QM
Result Table: 18NOV28DCAL_Updated1/10/2019 3:36:50 PM **Acquisition Method:** 18AUG13_3uL.dam

E13C3-PFBS

y = 0.52409 x (std. dev. = 0.01145) (weighting: None)



Extraction Standard Calibration Verification

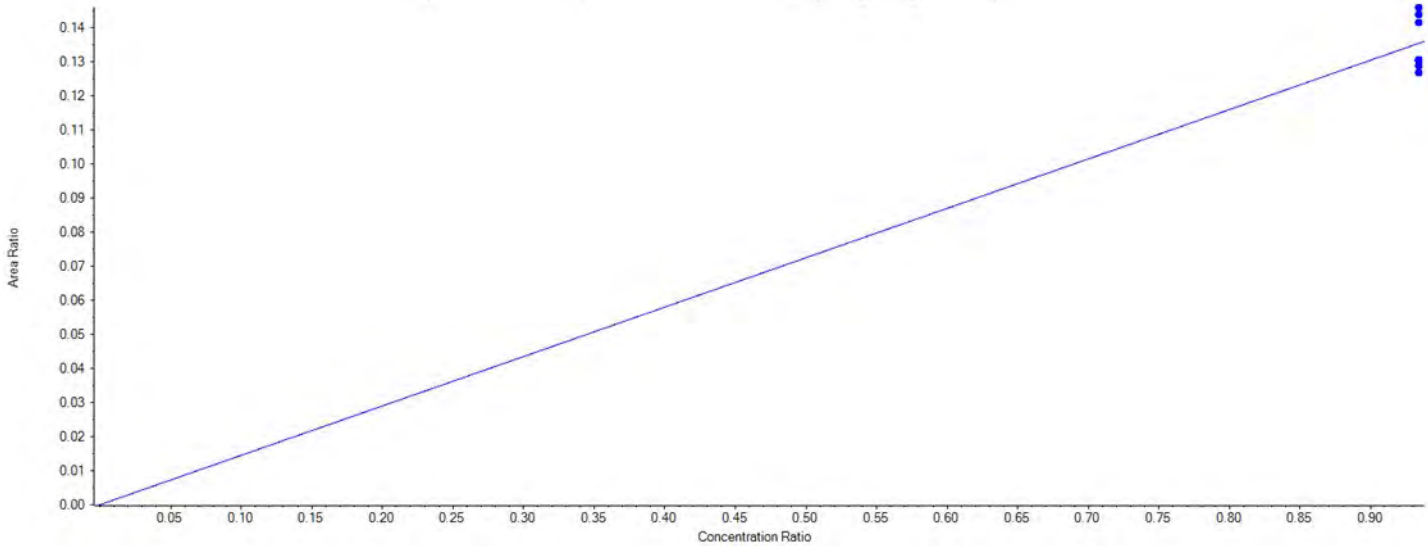
Sample Name	E13C3-PFBS Area	13C3-PFBA Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	437838.9	907350.543	True	5.00	0.483	3.82	1.160	4.650	4.604	-1	30	
CAL2	442149.9	898154.232	True	5.00	0.492	3.82	1.160	4.650	4.697	1	30	
CAL3	419929.2	887248.863	True	5.00	0.473	3.82	1.170	4.650	4.515	-3	30	
CAL4	424041.3	892443.927	True	5.00	0.475	3.82	1.160	4.650	4.533	-3	30	
CAL5	424059.2	857159.817	True	5.00	0.495	3.83	1.160	4.650	4.720	2	30	
CAL6	398441.3	793954.989	True	5.00	0.502	3.82	1.160	4.650	4.788	3	30	
CAL7	352994.8	717475.737	True	5.00	0.492	3.82	1.160	4.650	4.694	1	30	

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV28DCAL **QMethod Name:** 18AUG20QM
Result Table: 18NOV28DCAL_Updated1/10/2019 3:36:50 PM **Acquisition Method:** 18AUG13_3uL.dam

E13C2-4:2-FTS

y = 0.14509 x (std. dev. = 0.00860) (weighting: None)



Extraction Standard Calibration Verification

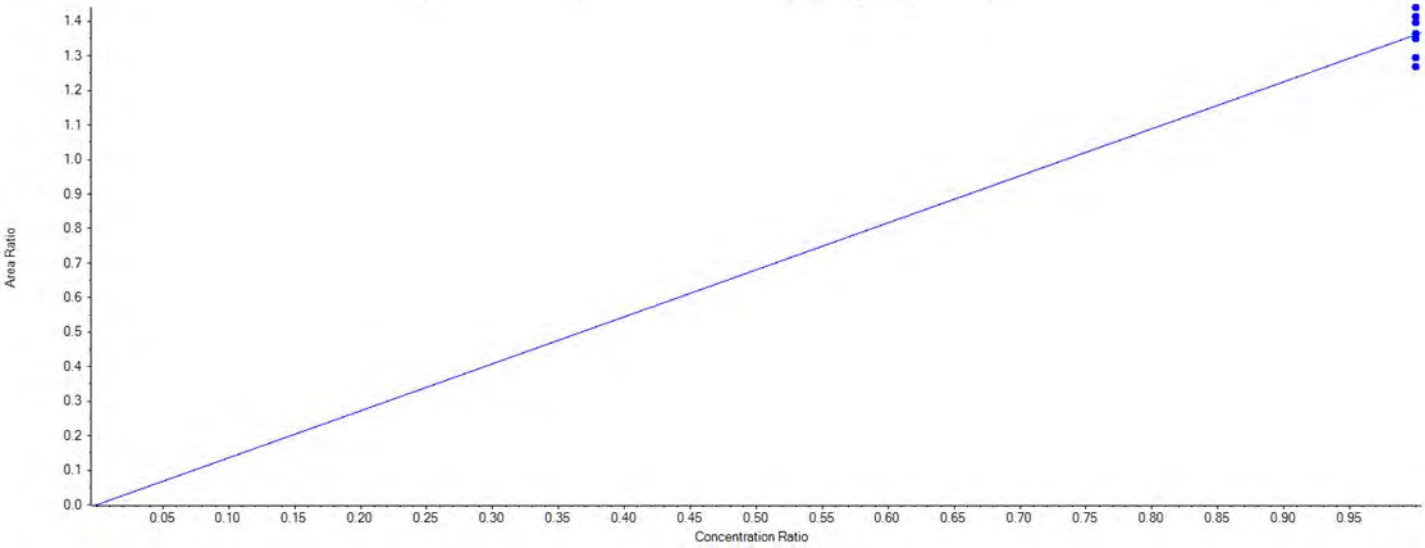
Sample Name	E13C2-4:2-FTS Area	13C2-PFOA Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	75119.1	521822.847	True	5.00	0.144	4.13	0.840	4.670	4.961	6	30	
CAL2	72067.1	493545.206	True	5.00	0.146	4.13	0.840	4.670	5.032	8	30	
CAL3	70629.1	498501.619	True	5.00	0.142	4.14	0.840	4.670	4.883	5	30	
CAL4	67043.7	528506.765	True	5.00	0.127	4.13	0.840	4.670	4.372	-6	30	
CAL5	67423.0	516457.167	True	5.00	0.131	4.14	0.840	4.670	4.499	-4	30	
CAL6	65255.4	499608.504	True	5.00	0.131	4.13	0.840	4.670	4.501	-4	30	
CAL7	62236.8	482796.463	True	5.00	0.129	4.13	0.840	4.670	4.442	-5	30	

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV28DCAL **QMethod Name:** 18AUG20QM
Result Table: 18NOV28DCAL_Updated1/10/2019 3:36:50 PM **Acquisition Method:** 18AUG13_3uL.dam

E13C5-PFHxA

y = 1.36129 x (std. dev. = 0.06204) (weighting: None)



Extraction Standard Calibration Verification

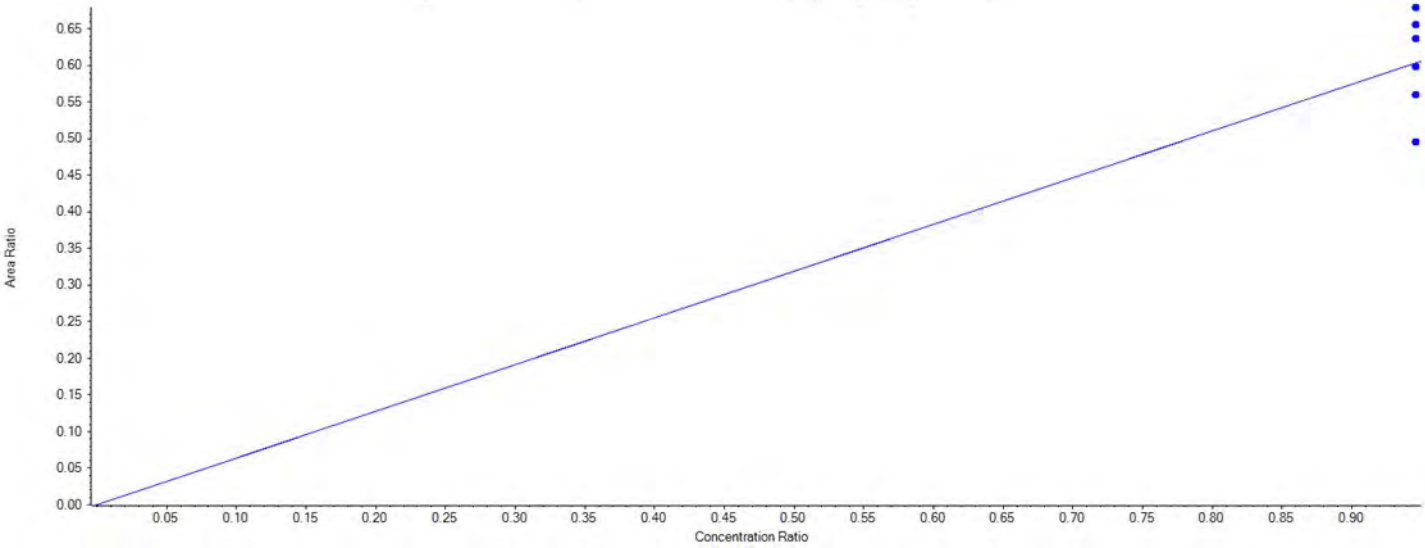
Sample Name	E13C5-PFHxA Area	13C2-PFOA Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	728340.5	521822.847	True	5.00	1.396	4.17	0.850	5.000	5.127	3	30	
CAL2	697229.0	493545.206	True	5.00	1.413	4.16	0.850	5.000	5.189	4	30	
CAL3	717900.1	498501.619	True	5.00	1.440	4.17	0.850	5.000	5.290	6	30	
CAL4	670407.7	528506.765	True	5.00	1.268	4.17	0.850	5.000	4.659	-7	30	
CAL5	704953.5	516457.167	True	5.00	1.365	4.17	0.850	5.000	5.014	0	30	
CAL6	675219.8	499608.504	True	5.00	1.351	4.16	0.850	5.000	4.964	-1	30	
CAL7	625449.8	482796.463	True	5.00	1.295	4.16	0.850	5.000	4.758	-5	30	

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV28DCAL **QMethod Name:** 18AUG20QM
Result Table: 18NOV28DCAL_Updated1/10/2019 3:36:50 PM **Acquisition Method:** 18AUG13_3uL.dam

E13C3-PFHxS

y = 0.63794 x (std. dev. = 0.06553) (weighting: None)



Extraction Standard Calibration Verification

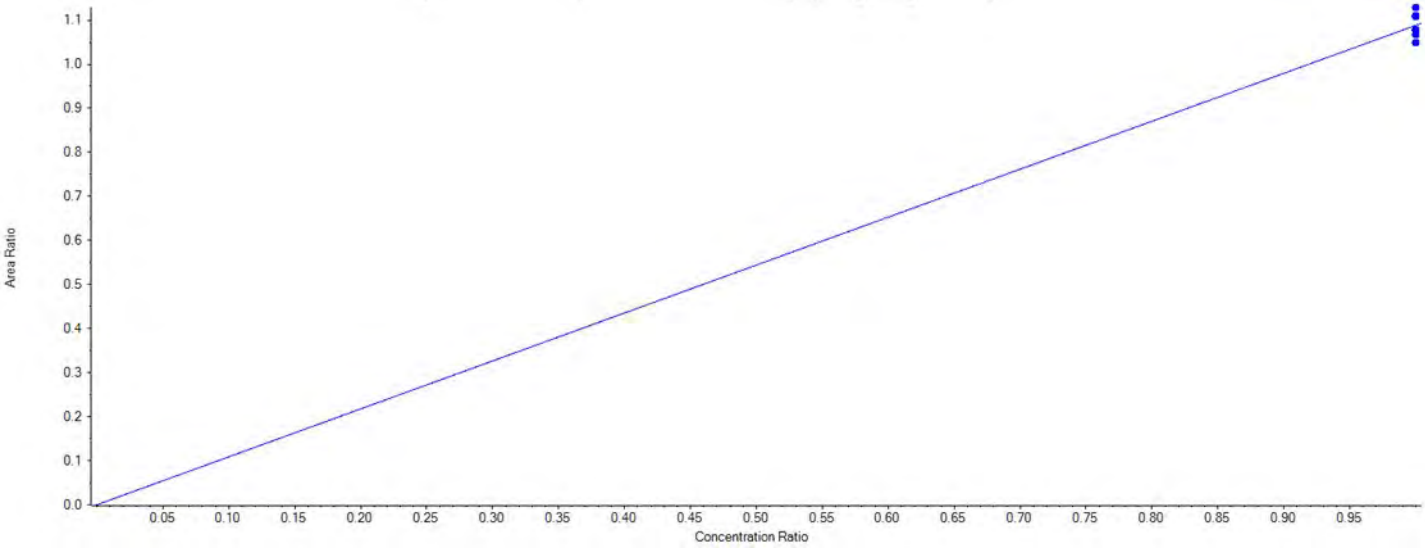
Sample Name	E13C3-PFHxS Area	13C2-PFOA Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	331982.9	521822.847	True	5.00	0.636	4.56	0.930	4.730	4.986	5	30	
CAL2	335129.7	493545.206	True	5.00	0.679	4.55	0.930	4.730	5.322	13	30	
CAL3	326982.4	498501.619	True	5.00	0.656	4.56	0.930	4.730	5.141	9	30	
CAL4	316393.3	528506.765	True	5.00	0.599	4.56	0.930	4.730	4.692	-1	30	
CAL5	309184.7	516457.167	True	5.00	0.599	4.56	0.930	4.730	4.692	-1	30	
CAL6	279894.6	499608.504	True	5.00	0.560	4.55	0.930	4.730	4.391	-7	30	
CAL7	239327.4	482796.463	True	5.00	0.496	4.56	0.930	4.730	3.885	-18	30	

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV28DCAL **QMethod Name:** 18AUG20QM
Result Table: 18NOV28DCAL_Updated1/10/2019 3:36:50 PM **Acquisition Method:** 18AUG13_3uL.dam

E13C4-PFHpA

y = 1.08817 x (std. dev. = 0.02857) (weighting: None)



Extraction Standard Calibration Verification

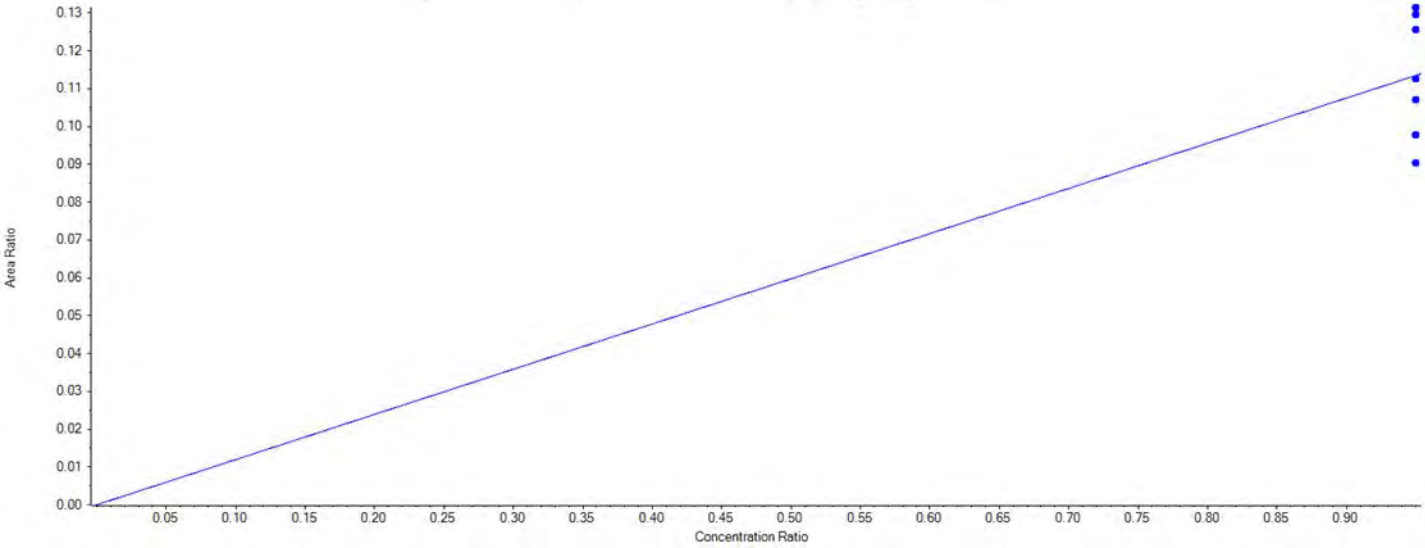
Sample Name	E13C4-PFHpA Area	13C2-PFOA Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	547365.1	521822.847	True	5.00	1.049	4.55	0.920	5.000	4.820	-4	30	
CAL2	547372.0	493545.206	True	5.00	1.109	4.55	0.920	5.000	5.096	2	30	
CAL3	535993.3	498501.619	True	5.00	1.075	4.56	0.920	5.000	4.940	-1	30	
CAL4	563673.9	528506.765	True	5.00	1.067	4.55	0.920	5.000	4.901	-2	30	
CAL5	556455.9	516457.167	True	5.00	1.077	4.56	0.920	5.000	4.951	-1	30	
CAL6	555281.5	499608.504	True	5.00	1.111	4.55	0.920	5.000	5.107	2	30	
CAL7	544866.9	482796.463	True	5.00	1.129	4.55	0.920	5.000	5.186	4	30	

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV28DCAL **QMethod Name:** 18AUG20QM
Result Table: 18NOV28DCAL_Updated1/10/2019 3:36:50 PM **Acquisition Method:** 18AUG13_3uL.dam

E13C2-6:2-FTS

y = 0.11945 x (std. dev. = 0.01690) (weighting: None)



Extraction Standard Calibration Verification

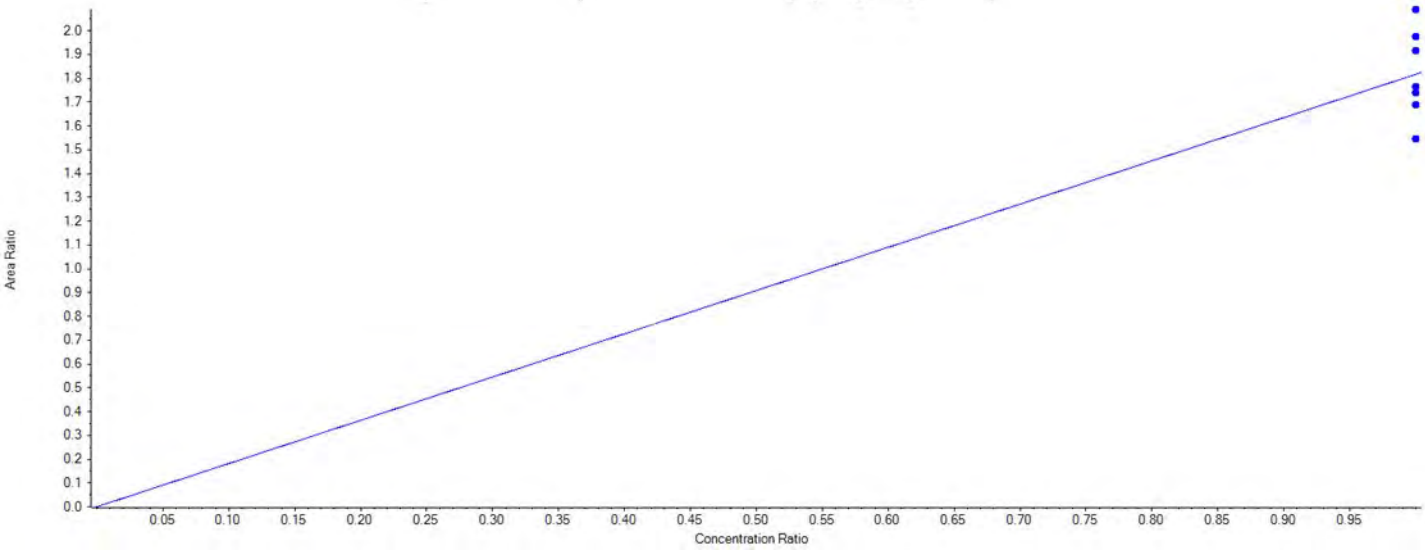
Sample Name	E13C2-6:2-FTS Area	13C2-PFOA Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	65543.8	521822.847	True	5.00	0.126	4.91	1.000	4.750	5.258	11	30	
CAL2	63922.7	493545.206	True	5.00	0.130	4.91	1.000	4.750	5.422	14	30	
CAL3	65518.3	498501.619	True	5.00	0.131	4.92	1.000	4.750	5.502	16	30	
CAL4	56580.1	528506.765	True	5.00	0.107	4.91	1.000	4.750	4.481	-6	30	
CAL5	58122.8	516457.167	True	5.00	0.113	4.92	1.000	4.750	4.711	-1	30	
CAL6	48807.6	499608.504	True	5.00	0.098	4.91	1.000	4.750	4.089	-14	30	
CAL7	43678.3	482796.463	True	5.00	0.090	4.91	1.000	4.750	3.787	-20	30	

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV28DCAL **QMethod Name:** 18AUG20QM
Result Table: 18NOV28DCAL_Updated1/10/2019 3:36:50 PM **Acquisition Method:** 18AUG13_3uL.dam

E13C8-PFOA

y = 1.81654 x (std. dev. = 0.18621) (weighting: None)



Extraction Standard Calibration Verification

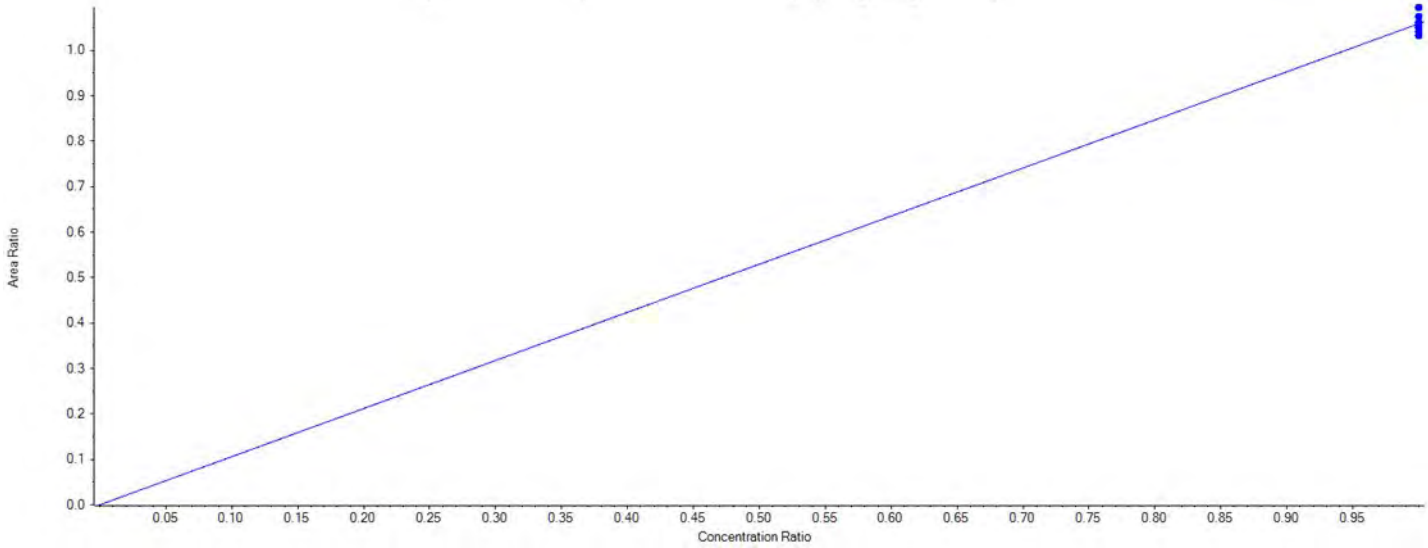
Sample Name	E13C8-PFOA Area	13C2-PFOA Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	1030597.9	521822.847	True	5.00	1.975	4.92	1.000	5.000	5.436	9	30	
CAL2	1030866.6	493545.206	True	5.00	2.089	4.92	1.000	5.000	5.749	15	30	
CAL3	954678.0	498501.619	True	5.00	1.915	4.93	1.000	5.000	5.271	5	30	
CAL4	918995.3	528506.765	True	5.00	1.739	4.92	1.000	5.000	4.786	-4	30	
CAL5	911756.1	516457.167	True	5.00	1.765	4.93	1.000	5.000	4.859	-3	30	
CAL6	843522.3	499608.504	True	5.00	1.688	4.92	1.000	5.000	4.647	-7	30	
CAL7	745616.3	482796.463	True	5.00	1.544	4.92	1.000	5.000	4.251	-15	30	

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV28DCAL **QMethod Name:** 18AUG20QM
Result Table: 18NOV28DCAL_Updated1/10/2019 3:36:50 PM **Acquisition Method:** 18AUG13_3uL.dam

E13C8-PFOS

y = 1.05888 x (std. dev. = 0.02078) (weighting: None)



Extraction Standard Calibration Verification

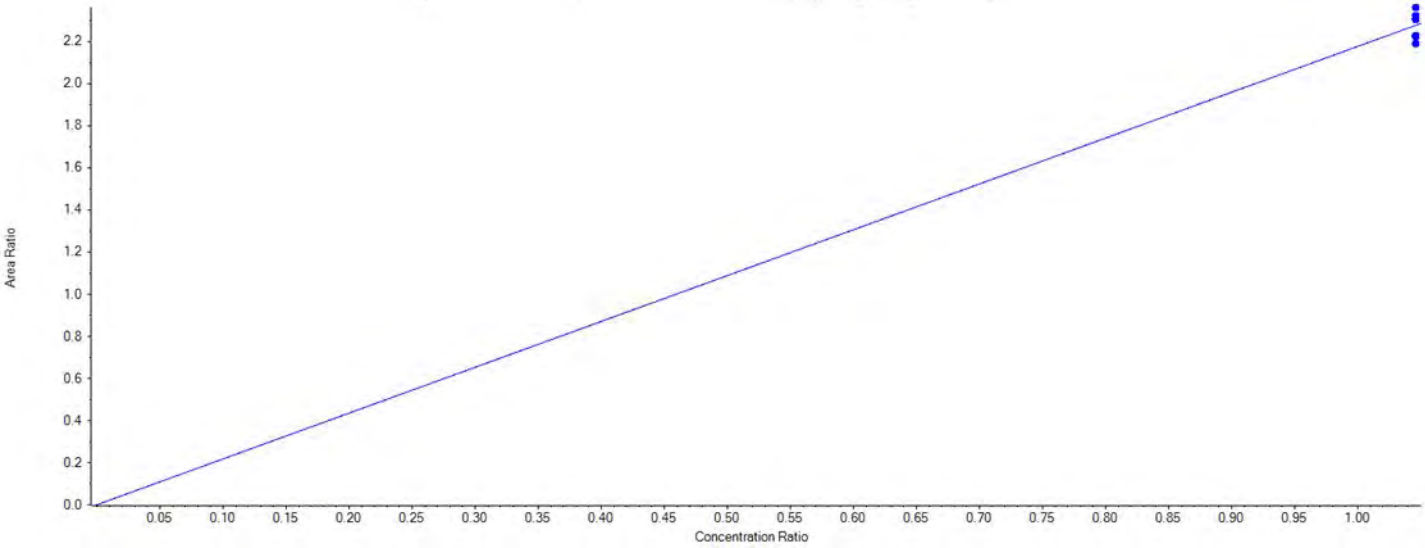
Sample Name	E13C8-PFOS Area	13C4-PFOS Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	318525.4	296225.157	True	4.78	1.075	5.25	1.000	4.780	4.854	2	30	
CAL2	313894.3	295669.685	True	4.78	1.062	5.25	1.000	4.780	4.792	0	30	
CAL3	309913.7	283214.231	True	4.78	1.094	5.26	1.000	4.780	4.940	3	30	
CAL4	296147.5	281778.555	True	4.78	1.051	5.25	1.000	4.780	4.744	-1	30	
CAL5	299574.5	287732.638	True	4.78	1.041	5.26	1.000	4.780	4.700	-2	30	
CAL6	279204.4	264408.934	True	4.78	1.056	5.25	1.000	4.780	4.767	0	30	
CAL7	250004.2	242045.223	True	4.78	1.033	5.25	1.000	4.780	4.663	-2	30	

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV28DCAL **QMethod Name:** 18AUG20QM
Result Table: 18NOV28DCAL_Updated1/10/2019 3:36:50 PM **Acquisition Method:** 18AUG13_3uL.dam

E13C9-PFNA

y = 2.17630 x (std. dev. = 0.05982) (weighting: None)



Extraction Standard Calibration Verification

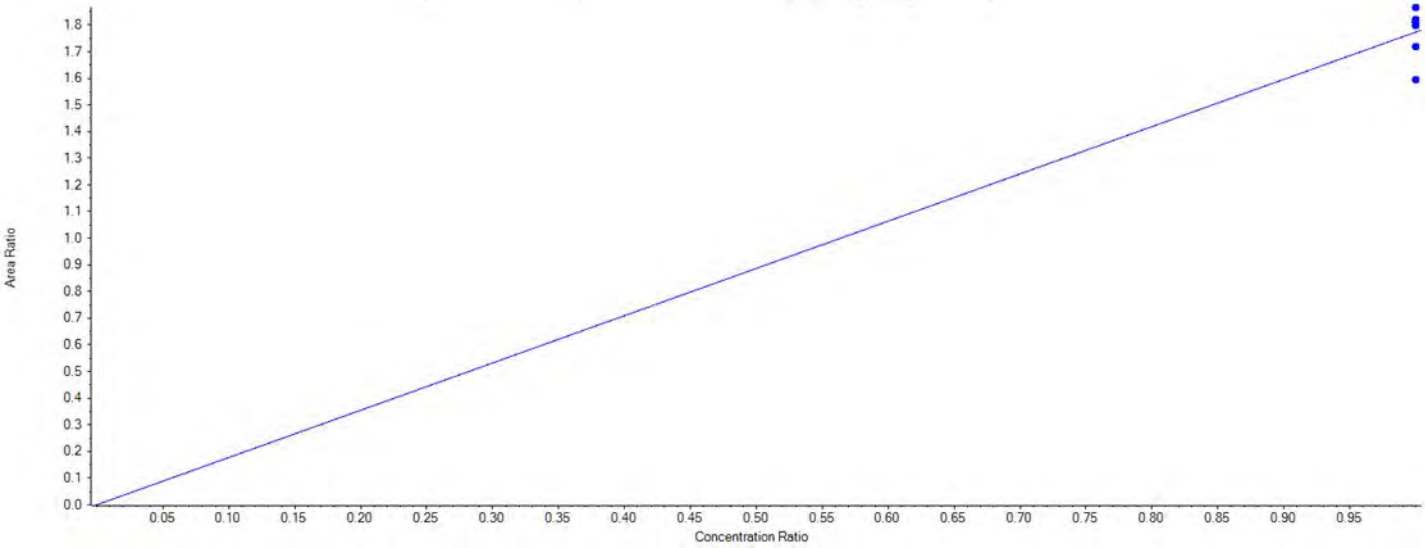
Sample Name	E13C9-PFNA Area	13C4-PFOS Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	659714.6	296225.157	True	4.78	2.227	5.27	1.000	5.000	4.892	-2	30	
CAL2	682380.7	295669.685	True	4.78	2.308	5.26	1.000	5.000	5.069	1	30	
CAL3	629954.6	283214.231	True	4.78	2.224	5.27	1.000	5.000	4.885	-2	30	
CAL4	648727.0	281778.555	True	4.78	2.302	5.27	1.000	5.000	5.057	1	30	
CAL5	630201.5	287732.638	True	4.78	2.190	5.27	1.000	5.000	4.811	-4	30	
CAL6	624202.7	264408.934	True	4.78	2.361	5.26	1.000	5.000	5.185	4	30	
CAL7	562206.9	242045.223	True	4.78	2.323	5.27	1.000	5.000	5.102	2	30	

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV28DCAL **QMethod Name:** 18AUG20QM
Result Table: 18NOV28DCAL_Updated1/10/2019 3:36:50 PM **Acquisition Method:** 18AUG13_3uL.dam

E13C6-PFDA

y = 1.77338 x (std. dev. = 0.09043) (weighting: None)



Extraction Standard Calibration Verification

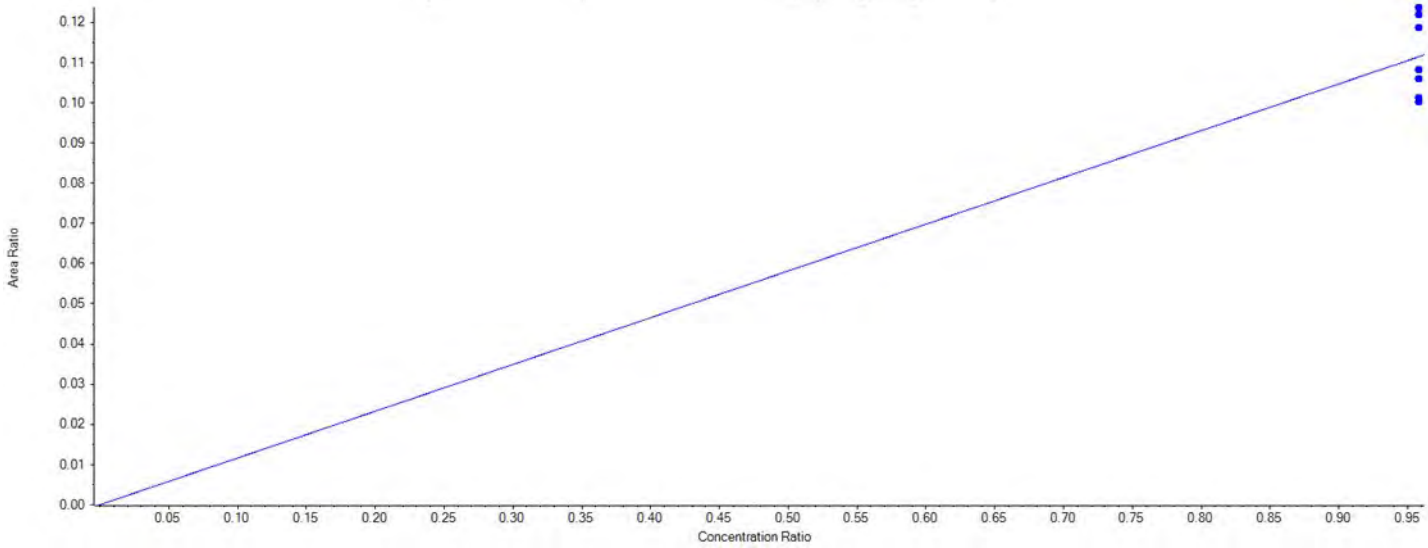
Sample Name	E13C6-PFDA Area	13C2-PFDA Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	855362.9	476146.560	True	5.00	1.796	5.57	1.000	5.000	5.065	1	30	
CAL2	839100.7	460926.236	True	5.00	1.820	5.56	1.000	5.000	5.133	3	30	
CAL3	824072.9	441790.617	True	5.00	1.865	5.57	1.000	5.000	5.259	5	30	
CAL4	841970.5	489439.830	True	5.00	1.720	5.57	1.000	5.000	4.850	-3	30	
CAL5	833462.1	460232.679	True	5.00	1.811	5.57	1.000	5.000	5.106	2	30	
CAL6	758832.8	419913.240	True	5.00	1.807	5.56	1.000	5.000	5.095	2	30	
CAL7	645932.5	405454.995	True	5.00	1.593	5.57	1.000	5.000	4.492	-10	30	

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV28DCAL **QMethod Name:** 18AUG20QM
Result Table: 18NOV28DCAL_Updated1/10/2019 3:36:50 PM **Acquisition Method:** 18AUG13_3uL.dam

E13C2-8:2-FTS

y = 0.11633 x (std. dev. = 0.01027) (weighting: None)



Extraction Standard Calibration Verification

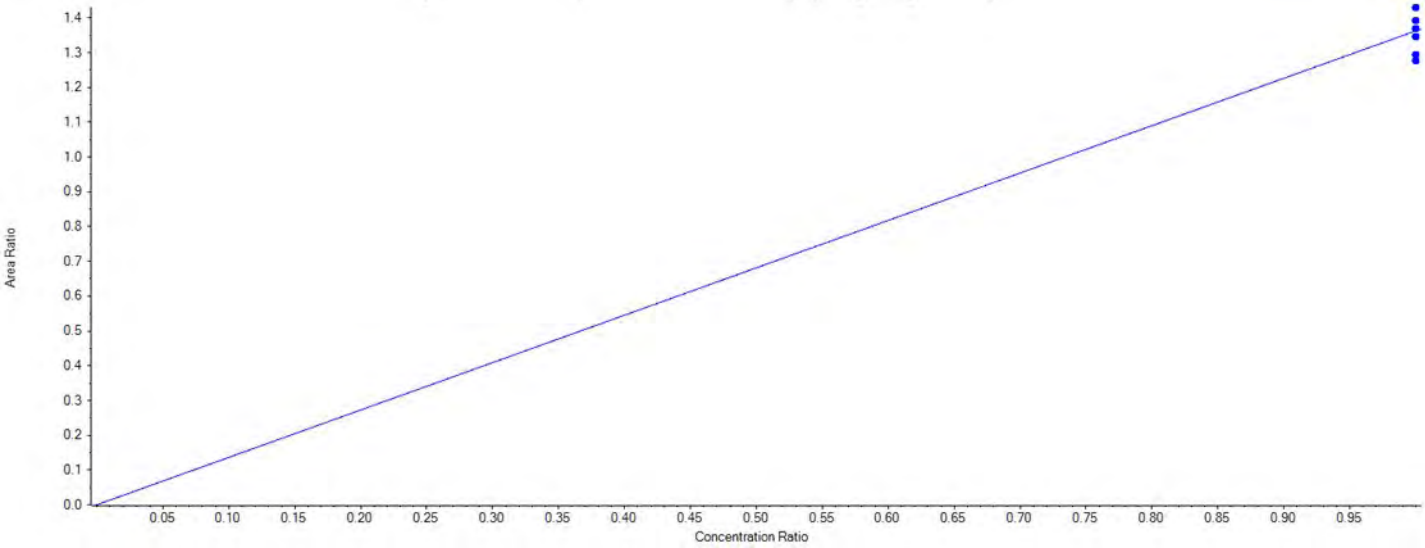
Sample Name	E13C2-8:2-FTS Area	13C2-PFDA Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	58895.0	476146.560	True	5.00	0.124	5.57	1.000	4.790	5.316	11	30	
CAL2	54757.9	460926.236	True	5.00	0.119	5.57	1.000	4.790	5.106	7	30	
CAL3	53847.1	441790.617	True	5.00	0.122	5.58	1.000	4.790	5.239	9	30	
CAL4	52961.9	489439.830	True	5.00	0.108	5.57	1.000	4.790	4.651	-3	30	
CAL5	46142.4	460232.679	True	5.00	0.100	5.58	1.000	4.790	4.309	-10	30	
CAL6	44487.5	419913.240	True	5.00	0.106	5.57	1.000	4.790	4.553	-5	30	
CAL7	41093.0	405454.995	True	5.00	0.101	5.57	1.000	4.790	4.356	-9	30	

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV28DCAL **QMethod Name:** 18AUG20QM
Result Table: 18NOV28DCAL_Updated1/10/2019 3:36:50 PM **Acquisition Method:** 18AUG13_3uL.dam

E13C8-PFOSA

y = 1.36266 x (std. dev. = 0.06042) (weighting: None)



Extraction Standard Calibration Verification

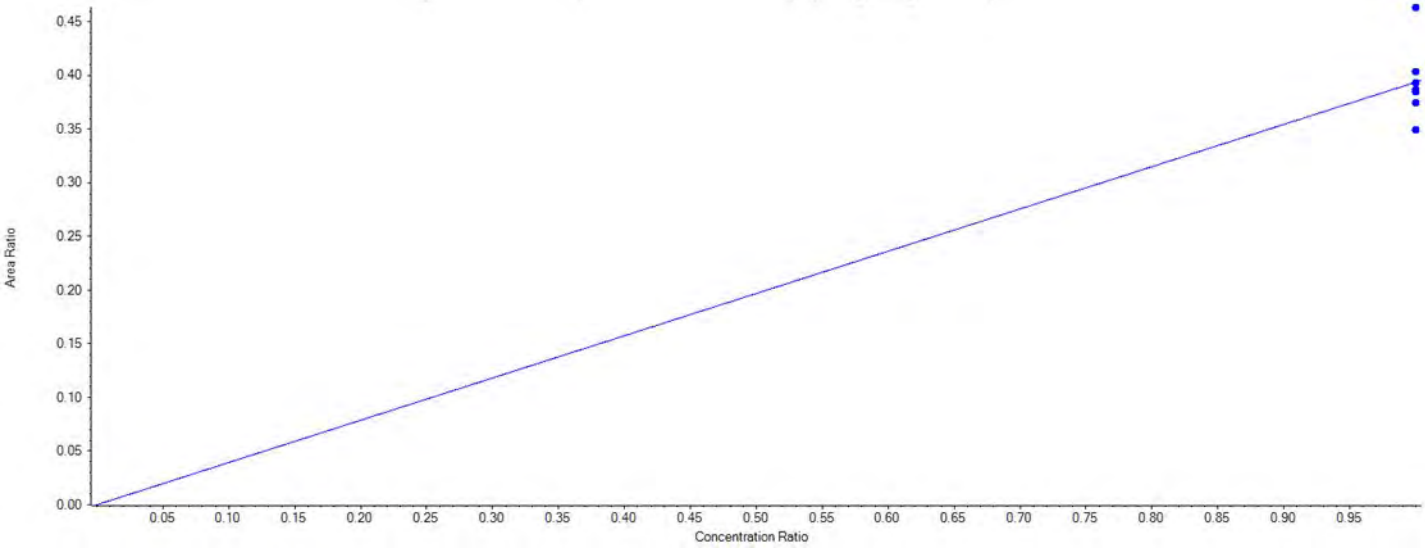
Sample Name	E13C8-PFOSA Area	13C2-PFDA Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	662264.7	476146.560	True	5.00	1.391	5.65	1.020	5.000	5.104	2	30	
CAL2	658778.5	460926.236	True	5.00	1.429	5.65	1.020	5.000	5.244	5	30	
CAL3	631627.9	441790.617	True	5.00	1.430	5.66	1.020	5.000	5.246	5	30	
CAL4	625021.8	489439.830	True	5.00	1.277	5.65	1.020	5.000	4.686	-6	30	
CAL5	596189.5	460232.679	True	5.00	1.295	5.66	1.020	5.000	4.753	-5	30	
CAL6	565326.0	419913.240	True	5.00	1.346	5.65	1.020	5.000	4.940	-1	30	
CAL7	555500.5	405454.995	True	5.00	1.370	5.65	1.020	5.000	5.027	1	30	

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV28DCAL **QMethod Name:** 18AUG20QM
Result Table: 18NOV28DCAL_Updated1/10/2019 3:36:50 PM **Acquisition Method:** 18AUG13_3uL.dam

Ed3-NMeFOSAA

y = 0.39380 x (std. dev. = 0.03499) (weighting: None)



Extraction Standard Calibration Verification

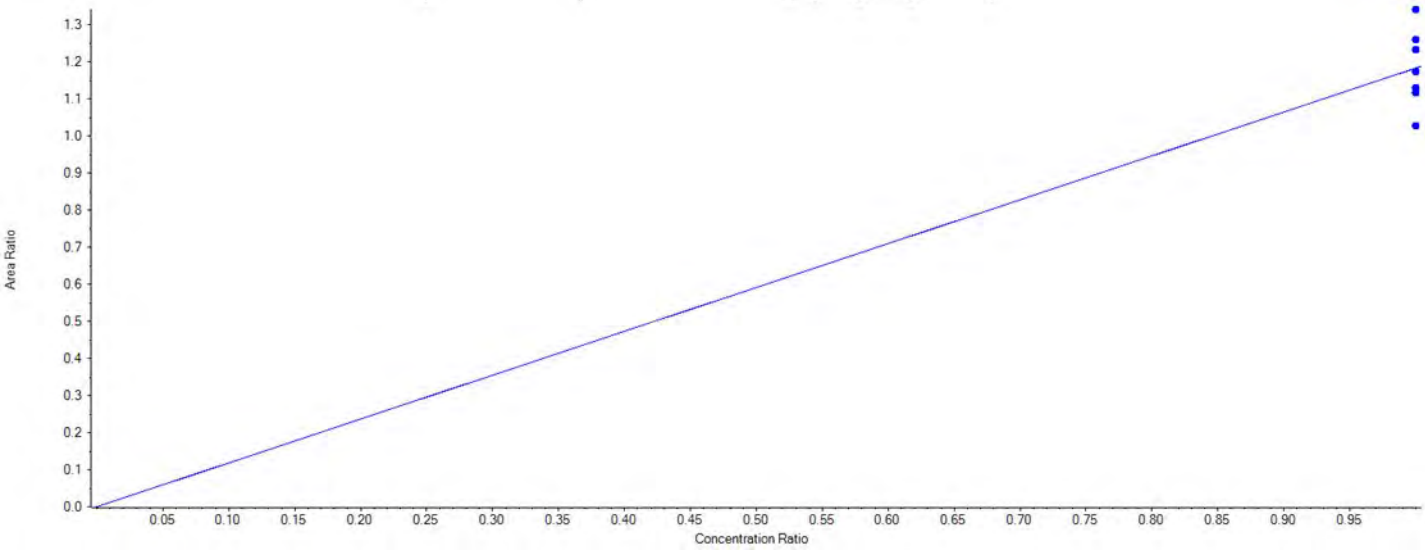
Sample Name	Ed3-NMeFOSAA Area	13C2-PFDA Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	220597.3	476146.560	True	5.00	0.463	5.71	1.030	5.000	5.882	18	30	
CAL2	181261.2	460926.236	True	5.00	0.393	5.70	1.020	5.000	4.993	0	30	
CAL3	178338.1	441790.617	True	5.00	0.404	5.71	1.020	5.000	5.125	3	30	
CAL4	171203.9	489439.830	True	5.00	0.350	5.71	1.030	5.000	4.441	-11	30	
CAL5	172574.2	460232.679	True	5.00	0.375	5.71	1.020	5.000	4.761	-5	30	
CAL6	161673.3	419913.240	True	5.00	0.385	5.70	1.030	5.000	4.888	-2	30	
CAL7	156760.8	405454.995	True	5.00	0.387	5.71	1.030	5.000	4.909	-2	30	

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV28DCAL **QMethod Name:** 18AUG20QM
Result Table: 18NOV28DCAL_Updated1/10/2019 3:36:50 PM **Acquisition Method:** 18AUG13_3uL.dam

E13C7-PFUnDA

y = 1.18305 x (std. dev. = 0.10419) (weighting: None)



Extraction Standard Calibration Verification

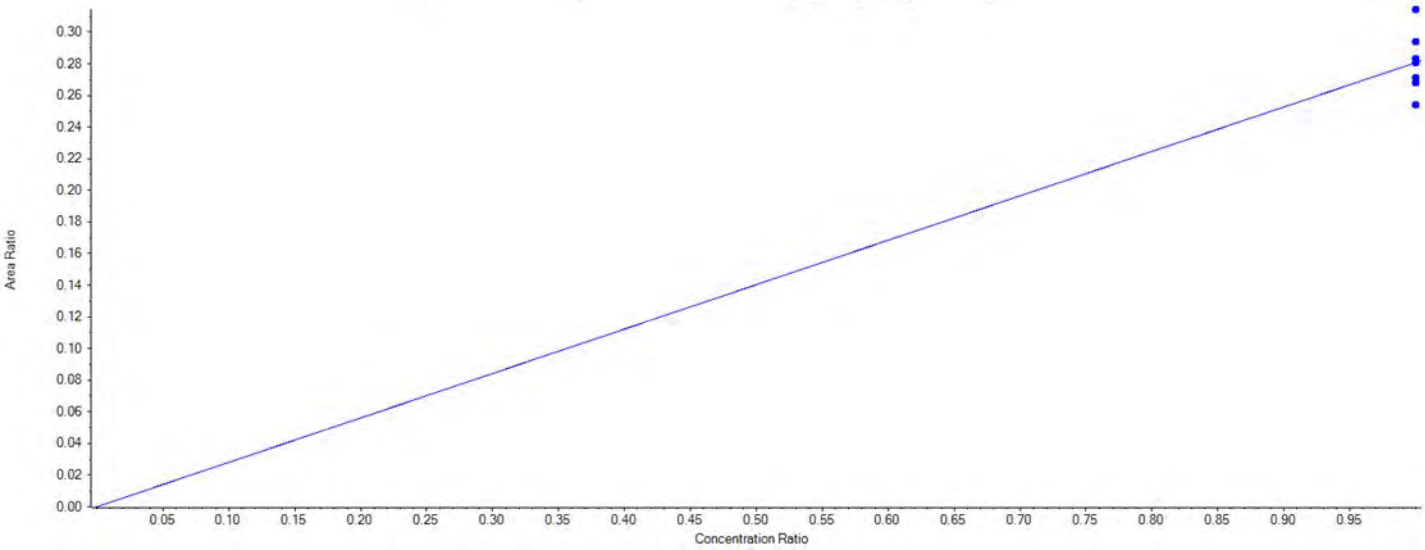
Sample Name	E13C7-PFUnDA Area	13C2-PFDA Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	587155.4	476146.560	True	5.00	1.233	5.83	1.050	5.000	5.212	4	30	
CAL2	581207.0	460926.236	True	5.00	1.261	5.82	1.050	5.000	5.329	7	30	
CAL3	592495.7	441790.617	True	5.00	1.341	5.83	1.050	5.000	5.668	13	30	
CAL4	546359.3	489439.830	True	5.00	1.116	5.83	1.050	5.000	4.718	-6	30	
CAL5	539842.9	460232.679	True	5.00	1.173	5.83	1.050	5.000	4.957	-1	30	
CAL6	474122.1	419913.240	True	5.00	1.129	5.82	1.050	5.000	4.772	-5	30	
CAL7	416723.9	405454.995	True	5.00	1.028	5.83	1.050	5.000	4.344	-13	30	

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV28DCAL **QMethod Name:** 18AUG20QM
Result Table: 18NOV28DCAL_Updated1/10/2019 3:36:50 PM **Acquisition Method:** 18AUG13_3uL.dam

Ed5-NEtFOSAA

y = 0.28066 x (std. dev. = 0.01949) (weighting: None)



Extraction Standard Calibration Verification

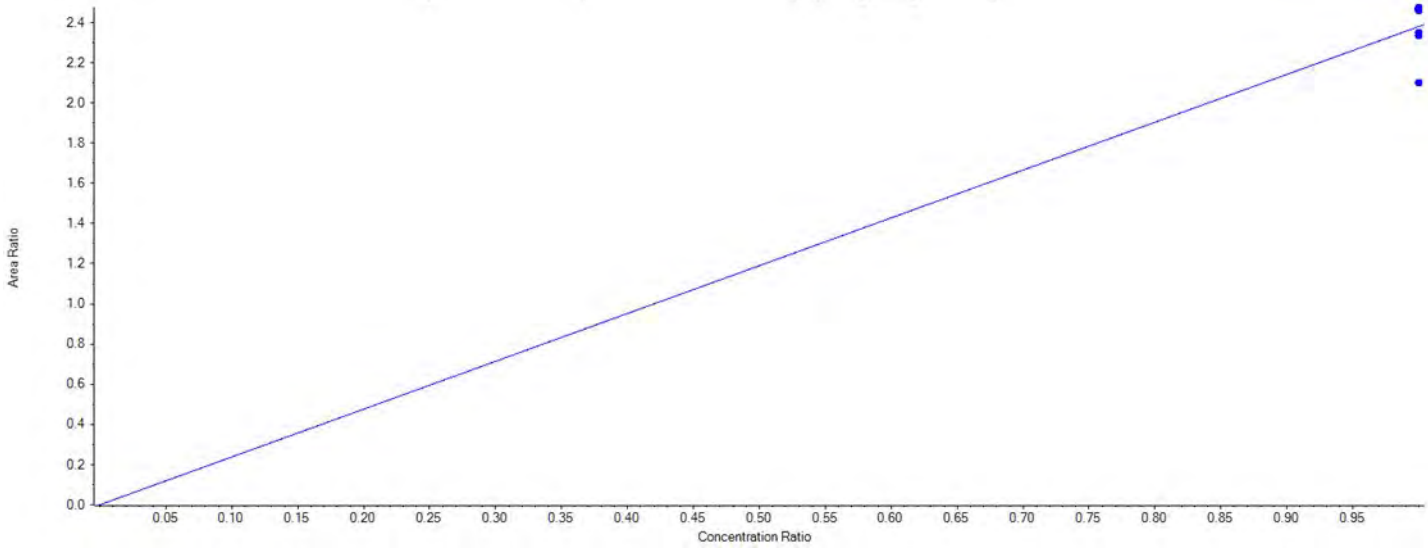
Sample Name	Ed5-NEtFOSAA Area	13C2-PFDA Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	127543.5	476146.560	True	5.00	0.268	5.84	1.050	5.000	4.772	-5	30	
CAL2	144803.2	460926.236	True	5.00	0.314	5.83	1.050	5.000	5.597	12	30	
CAL3	129810.7	441790.617	True	5.00	0.294	5.84	1.050	5.000	5.235	5	30	
CAL4	138500.8	489439.830	True	5.00	0.283	5.84	1.050	5.000	5.041	1	30	
CAL5	124785.0	460232.679	True	5.00	0.271	5.85	1.050	5.000	4.830	-3	30	
CAL6	117934.2	419913.240	True	5.00	0.281	5.83	1.050	5.000	5.004	0	30	
CAL7	102891.6	405454.995	True	5.00	0.254	5.84	1.050	5.000	4.521	-10	30	

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV28DCAL **QMethod Name:** 18AUG20QM
Result Table: 18NOV28DCAL_Updated1/10/2019 3:36:50 PM **Acquisition Method:** 18AUG13_3uL.dam

E13C2-PFDoDA

y = 2.37975 x (std. dev. = 0.13603) (weighting: None)



Extraction Standard Calibration Verification

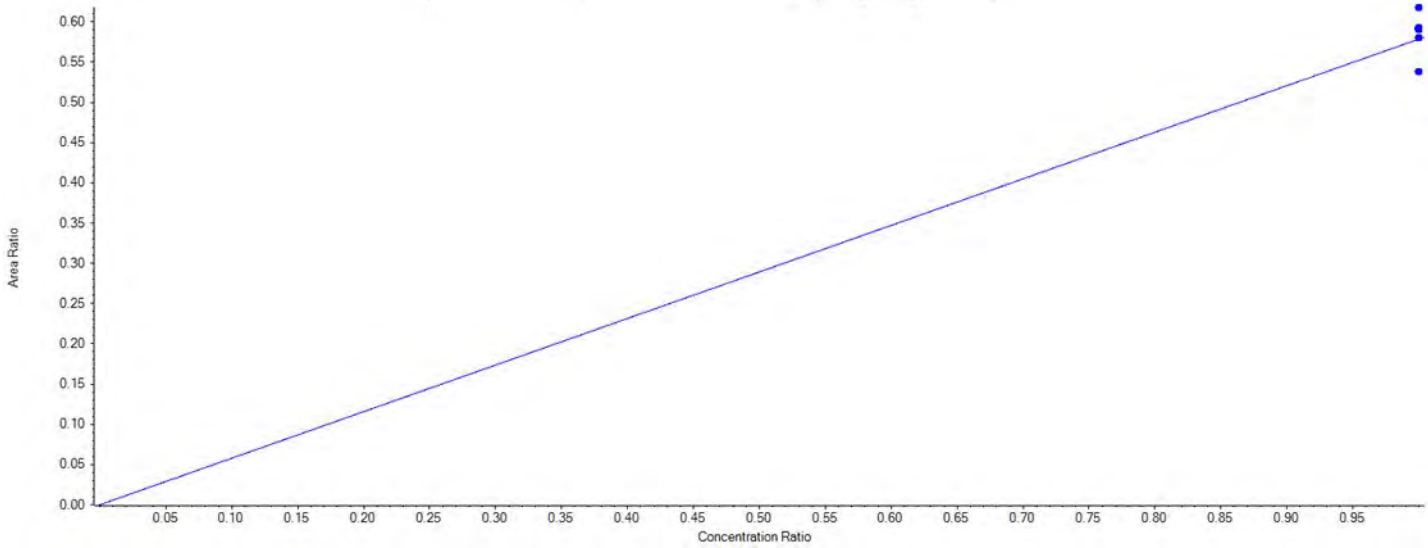
Sample Name	E13C2-PFDoDA Area	13C2-PFDA Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	1173339.1	476146.560	True	5.00	2.464	6.06	1.090	5.000	5.178	4	30	
CAL2	1140522.3	460926.236	True	5.00	2.474	6.05	1.090	5.000	5.199	4	30	
CAL3	1091194.9	441790.617	True	5.00	2.470	6.06	1.090	5.000	5.189	4	30	
CAL4	1150927.4	489439.830	True	5.00	2.352	6.06	1.090	5.000	4.941	-1	30	
CAL5	1133027.9	460232.679	True	5.00	2.462	6.06	1.090	5.000	5.173	3	30	
CAL6	980215.4	419913.240	True	5.00	2.334	6.05	1.090	5.000	4.905	-2	30	
CAL7	852235.6	405454.995	True	5.00	2.102	6.06	1.090	5.000	4.416	-12	30	

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV28DCAL **QMethod Name:** 18AUG20QM
Result Table: 18NOV28DCAL_Updated1/10/2019 3:36:50 PM **Acquisition Method:** 18AUG13_3uL.dam

Ed7-NMePFOSAE

y = 0.57855 x (std. dev. = 0.02979) (weighting: None)



Extraction Standard Calibration Verification

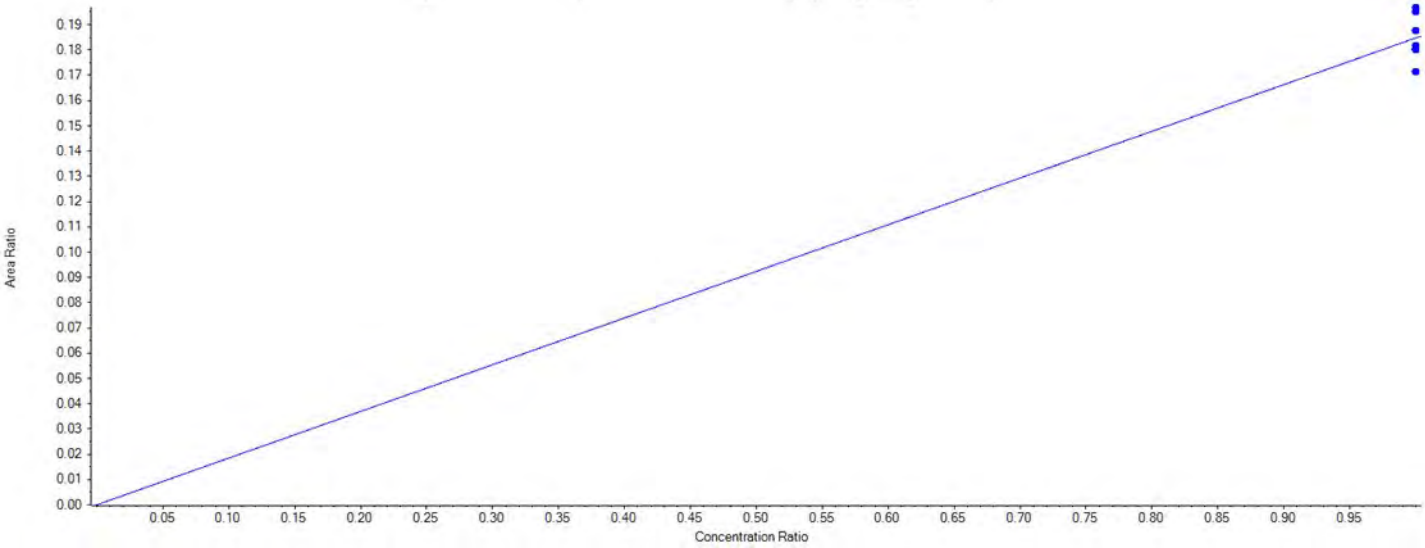
Sample Name	Ed7-NMePFOSAE Area	13C2-PFDA Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	281912.7	476146.560	True	5.00	0.592	6.09	1.090	5.000	5.117	2	30	
CAL2	272071.3	460926.236	True	5.00	0.590	6.09	1.090	5.000	5.101	2	30	
CAL3	256577.3	441790.617	True	5.00	0.581	6.10	1.090	5.000	5.019	0	30	
CAL4	263412.8	489439.830	True	5.00	0.538	6.10	1.090	5.000	4.651	-7	30	
CAL5	247663.8	460232.679	True	5.00	0.538	6.10	1.090	5.000	4.651	-7	30	
CAL6	248871.1	419913.240	True	5.00	0.593	6.09	1.100	5.000	5.122	2	30	
CAL7	250467.6	405454.995	True	5.00	0.618	6.10	1.090	5.000	5.339	7	30	

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV28DCAL **QMethod Name:** 18AUG20QM
Result Table: 18NOV28DCAL_Updated1/10/2019 3:36:50 PM **Acquisition Method:** 18AUG13_3uL.dam

Ed3-NMePFOSA

y = 0.18475 x (std. dev. = 0.00902) (weighting: None)



Extraction Standard Calibration Verification

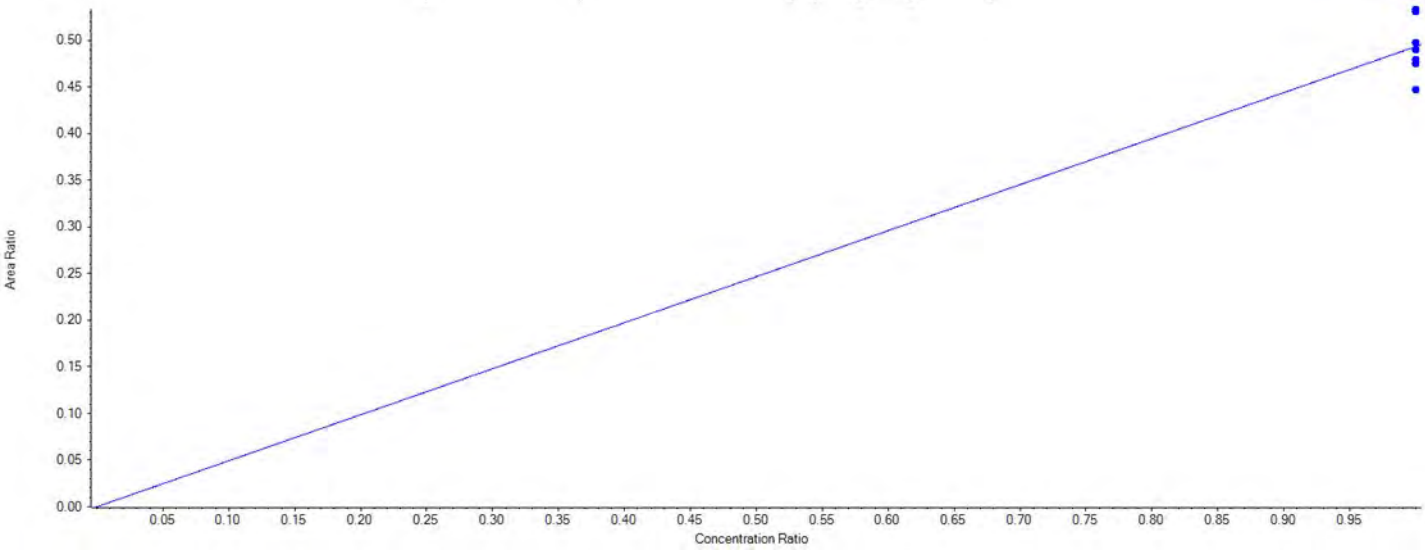
Sample Name	Ed3-NMePFOSA Area	13C2-PFDA Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	85678.0	476146.560	True	5.00	0.180	6.11	1.100	5.000	4.870	-3	30	
CAL2	86471.7	460926.236	True	5.00	0.188	6.10	1.100	5.000	5.077	2	30	
CAL3	80294.1	441790.617	True	5.00	0.182	6.11	1.100	5.000	4.919	-2	30	
CAL4	83886.6	489439.830	True	5.00	0.171	6.11	1.100	5.000	4.639	-7	30	
CAL5	83129.0	460232.679	True	5.00	0.181	6.11	1.100	5.000	4.888	-2	30	
CAL6	81949.3	419913.240	True	5.00	0.195	6.10	1.100	5.000	5.282	6	30	
CAL7	79780.2	405454.995	True	5.00	0.197	6.11	1.100	5.000	5.325	7	30	

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV28DCAL **QMethod Name:** 18AUG20QM
Result Table: 18NOV28DCAL_Updated1/10/2019 3:36:50 PM **Acquisition Method:** 18AUG13_3uL.dam

Ed9-NEtPFOSAE

y = 0.49318 x (std. dev. = 0.03079) (weighting: None)



Extraction Standard Calibration Verification

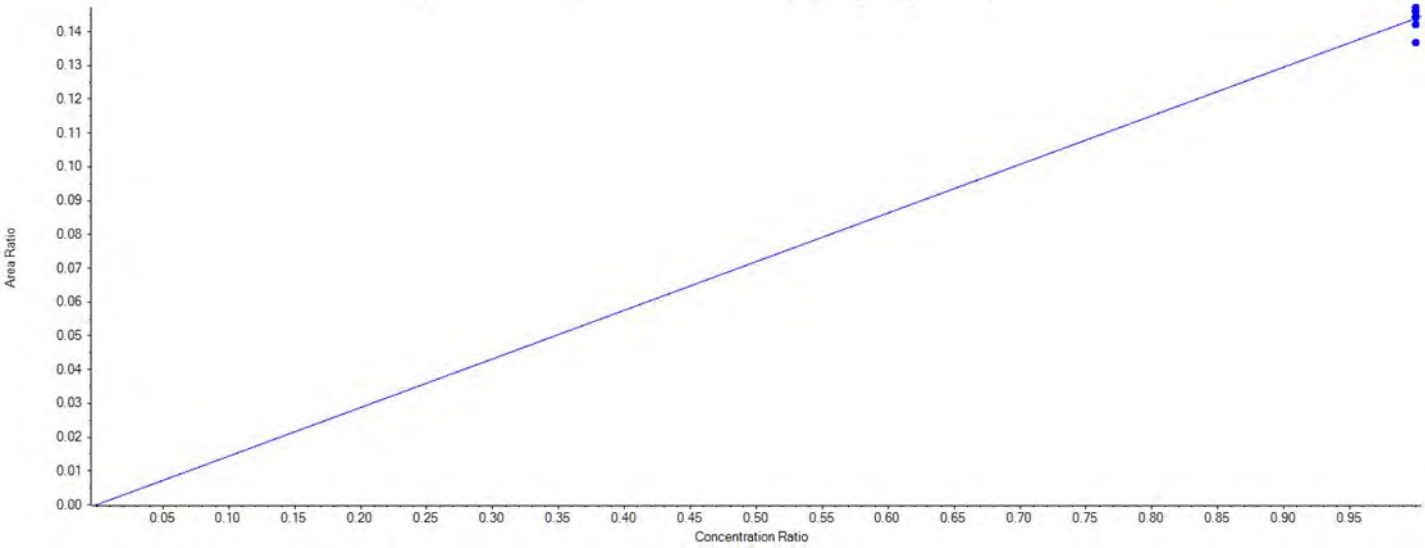
Sample Name	Ed9-NEtPFOSAE Area	13C2-PFDA Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	226256.0	476146.560	True	5.00	0.475	6.25	1.120	5.000	4.818	-4	30	
CAL2	229050.7	460926.236	True	5.00	0.497	6.24	1.120	5.000	5.038	1	30	
CAL3	216571.5	441790.617	True	5.00	0.490	6.25	1.120	5.000	4.970	-1	30	
CAL4	218635.8	489439.830	True	5.00	0.447	6.25	1.120	5.000	4.529	-9	30	
CAL5	220689.9	460232.679	True	5.00	0.480	6.26	1.120	5.000	4.861	-3	30	
CAL6	222924.1	419913.240	True	5.00	0.531	6.24	1.120	5.000	5.382	8	30	
CAL7	216042.0	405454.995	True	5.00	0.533	6.25	1.120	5.000	5.402	8	30	

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV28DCAL **QMethod Name:** 18AUG20QM
Result Table: 18NOV28DCAL_Updated1/10/2019 3:36:50 PM **Acquisition Method:** 18AUG13_3uL.dam

Ed5-NEtPFOSA

y = 0.14390 x (std. dev. = 0.00352) (weighting: None)



Extraction Standard Calibration Verification

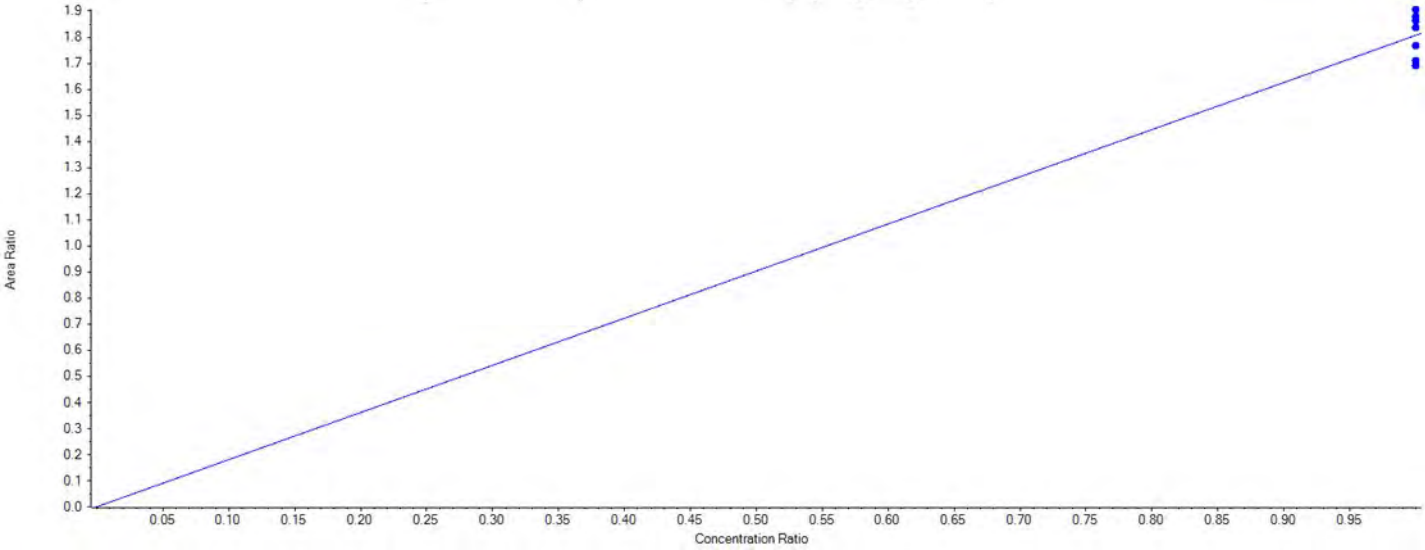
Sample Name	Ed5-NEtPFOSA Area	13C2-PFDA Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	70050.4	476146.560	True	5.00	0.147	6.27	1.130	5.000	5.112	2	30	
CAL2	66646.8	460926.236	True	5.00	0.145	6.26	1.130	5.000	5.024	0	30	
CAL3	64623.7	441790.617	True	5.00	0.146	6.27	1.130	5.000	5.083	2	30	
CAL4	66966.4	489439.830	True	5.00	0.137	6.27	1.130	5.000	4.754	-5	30	
CAL5	66384.6	460232.679	True	5.00	0.144	6.27	1.130	5.000	5.012	0	30	
CAL6	59705.8	419913.240	True	5.00	0.142	6.26	1.130	5.000	4.941	-1	30	
CAL7	59209.1	405454.995	True	5.00	0.146	6.27	1.130	5.000	5.074	1	30	

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV28DCAL **QMethod Name:** 18AUG20QM
Result Table: 18NOV28DCAL_Updated1/10/2019 3:36:50 PM **Acquisition Method:** 18AUG13_3uL.dam

E13C2-PFTeDA

y = 1.80693 x (std. dev. = 0.08557) (weighting: None)



Extraction Standard Calibration Verification

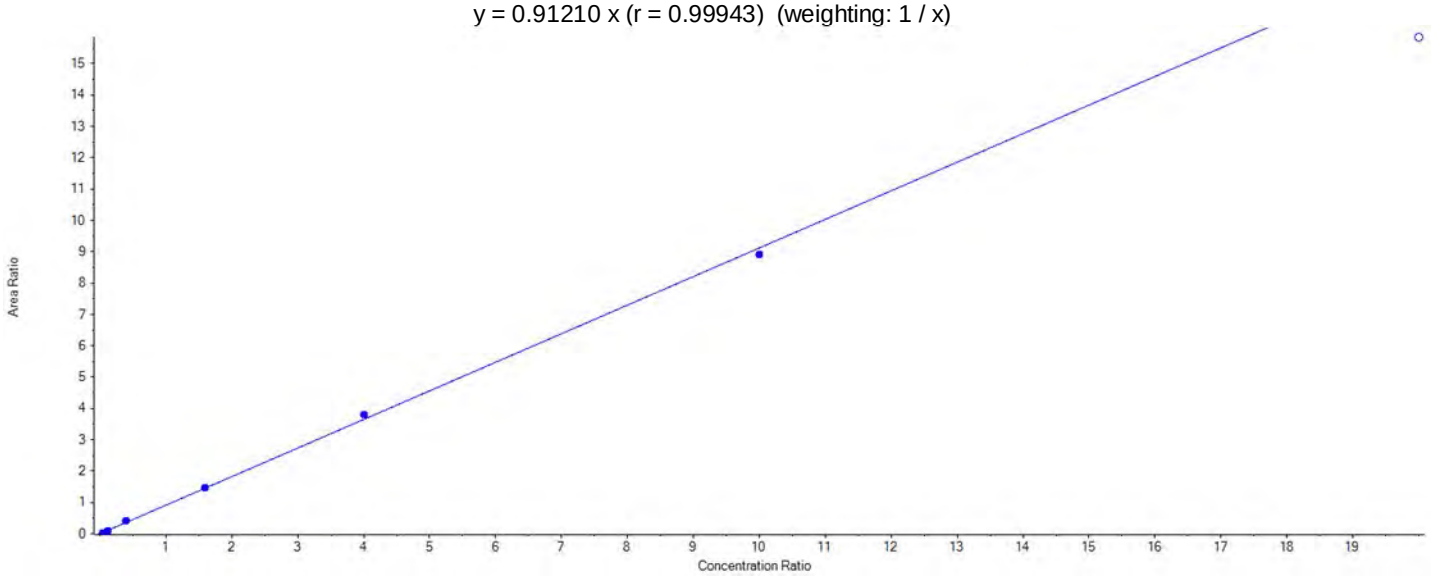
Sample Name	E13C2-PFTeDA Area	13C2-PFDA Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	873945.6	476146.560	True	5.00	1.835	6.43	1.160	5.000	5.079	2	30	
CAL2	858145.1	460926.236	True	5.00	1.862	6.43	1.150	5.000	5.152	3	30	
CAL3	841931.1	441790.617	True	5.00	1.906	6.43	1.150	5.000	5.273	5	30	
CAL4	826670.0	489439.830	True	5.00	1.689	6.43	1.160	5.000	4.674	-7	30	
CAL5	786107.5	460232.679	True	5.00	1.708	6.44	1.150	5.000	4.726	-5	30	
CAL6	789168.4	419913.240	True	5.00	1.879	6.43	1.160	5.000	5.200	4	30	
CAL7	717297.7	405454.995	True	5.00	1.769	6.43	1.160	5.000	4.895	-2	30	

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV28DCAL **QMethod Name:** 18AUG20QM
Result Table: 18NOV28DCAL_Updated1/10/2019 3:36:50 PM **Acquisition Method:** 18AUG13_3uL.dam

PFBA

y = 0.91210 x (r = 0.99943) (weighting: 1 / x)



Component Calibration Verification

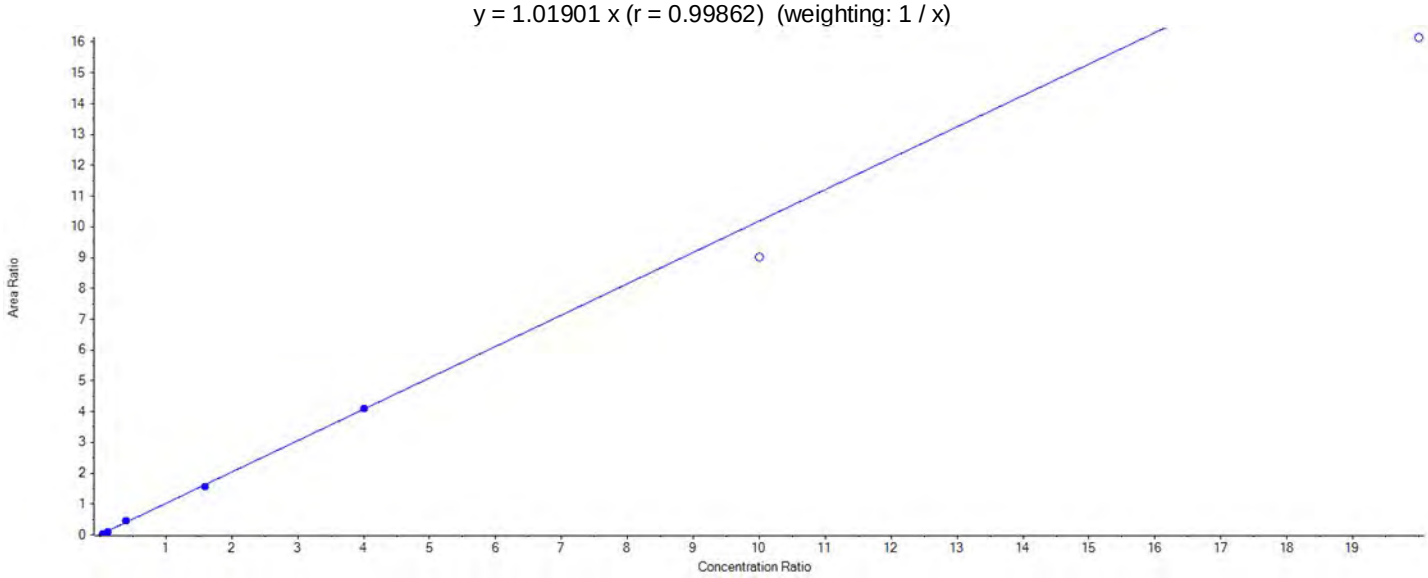
Sample Name	PFBA Area	S/N	13C4-PFBA Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	43996.2	249.7	1018752.836	True	5.00	0.043	3.28	1.000	0.200	0.237	18	30	
CAL2	110036.6	487.6	1033122.100	True	5.00	0.107	3.27	1.000	0.600	0.584	-3	30	
CAL3	403055.8	822.1	993144.063	True	5.00	0.406	3.28	1.000	2.000	2.225	11	30	
CAL4	1425164.4	1298.8	974000.882	True	5.00	1.463	3.28	1.000	8.000	8.021	0	30	
CAL5	3627061.5	1931.2	951694.967	True	5.00	3.811	3.28	1.000	20.000	20.892	4	30	
CAL6	7996964.8	2615.4	897566.729	True	5.00	8.910	3.27	1.000	50.000	48.841	-2	30	
CAL7	12734942.7	3050.8	803704.793	False	5.00	15.845	3.27	1.000	100.000	86.862	-13	30	

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV28DCAL **QMethod Name:** 18AUG20QM
Result Table: 18NOV28DCAL_Updated1/10/2019 3:36:50 PM **Acquisition Method:** 18AUG13_3uL.dam

PFPeA

y = 1.01901 x (r = 0.99862) (weighting: 1 / x)



Component Calibration Verification

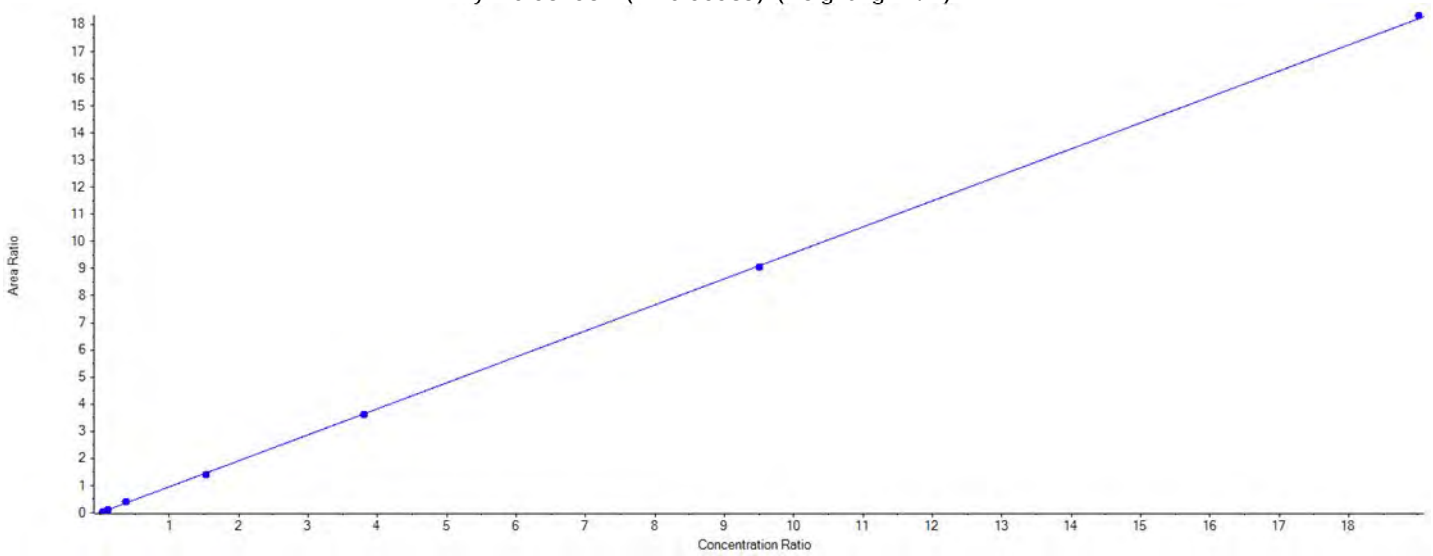
Sample Name	PFPeA Area	S/N	13C5-PFPeA Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	44706.1	168.1	975339.046	True	5.00	0.046	3.77	1.000	0.200	0.225	12	30	
CAL2	104393.1	258.3	1014125.030	True	5.00	0.103	3.77	1.000	0.600	0.505	-16	30	
CAL3	424089.1	470.0	910953.705	True	5.00	0.466	3.78	1.000	2.000	2.284	14	30	
CAL4	1424845.3	869.3	915824.561	True	5.00	1.556	3.77	1.000	8.000	7.634	-5	30	
CAL5	3696889.3	1332.4	900153.389	True	5.00	4.107	3.78	1.000	20.000	20.152	1	30	
CAL6	7873655.4	2197.1	872922.614	False	5.00	9.020	3.77	1.000	50.000	44.258	-11	30	
CAL7	12611040.3	1779.7	781113.823	False	5.00	16.145	3.77	1.000	100.000	79.219	-21	30	

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV28DCAL **QMethod Name:** 18AUG20QM
Result Table: 18NOV28DCAL_Updated1/10/2019 3:36:50 PM **Acquisition Method:** 18AUG13_3uL.dam

PFBS

y = 0.95795 x (r = 0.99985) (weighting: 1 / x)



Component Calibration Verification

Sample Name	PFBS Area	S/N	13C3-PFBS Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	17465.3	759.3	437838.938	True	4.65	0.040	3.82	1.000	0.177	0.194	9	30	
CAL2	43237.4	921.9	442149.949	True	4.65	0.098	3.81	1.000	0.531	0.475	-11	30	
CAL3	168534.1	2117.3	419929.218	True	4.65	0.401	3.82	1.000	1.770	1.948	10	30	
CAL4	590590.2	3233.1	424041.313	True	4.65	1.393	3.82	1.000	7.080	6.761	-5	30	
CAL5	1542881.7	3193.4	424059.219	True	4.65	3.638	3.82	1.000	17.700	17.661	0	30	
CAL6	3600470.8	4364.1	398441.322	True	4.65	9.036	3.82	1.000	44.200	43.864	-1	30	
CAL7	6468971.4	4045.2	352994.776	True	4.65	18.326	3.82	1.000	88.400	88.956	1	30	

APPROVED
By MCD at 3:40 pm, 1/10/19

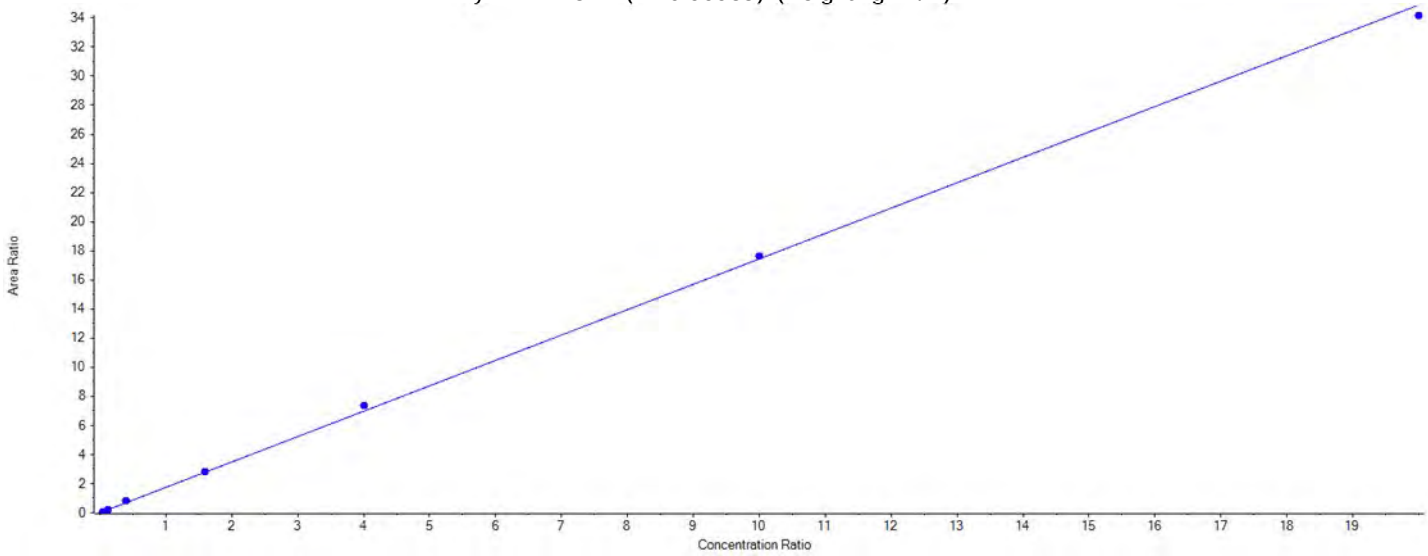
REVIEWED
By UCMR at 7:00 pm, 1/21/19

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV28DCAL **QMethod Name:** 18AUG20QM
Result Table: 18NOV28DCAL_Updated1/10/2019 3:36:50 PM **Acquisition Method:** 18AUG13_3uL.dam

4:2-FTS

y = 1.74452 x (r = 0.99955) (weighting: 1 / x)



Component Calibration Verification

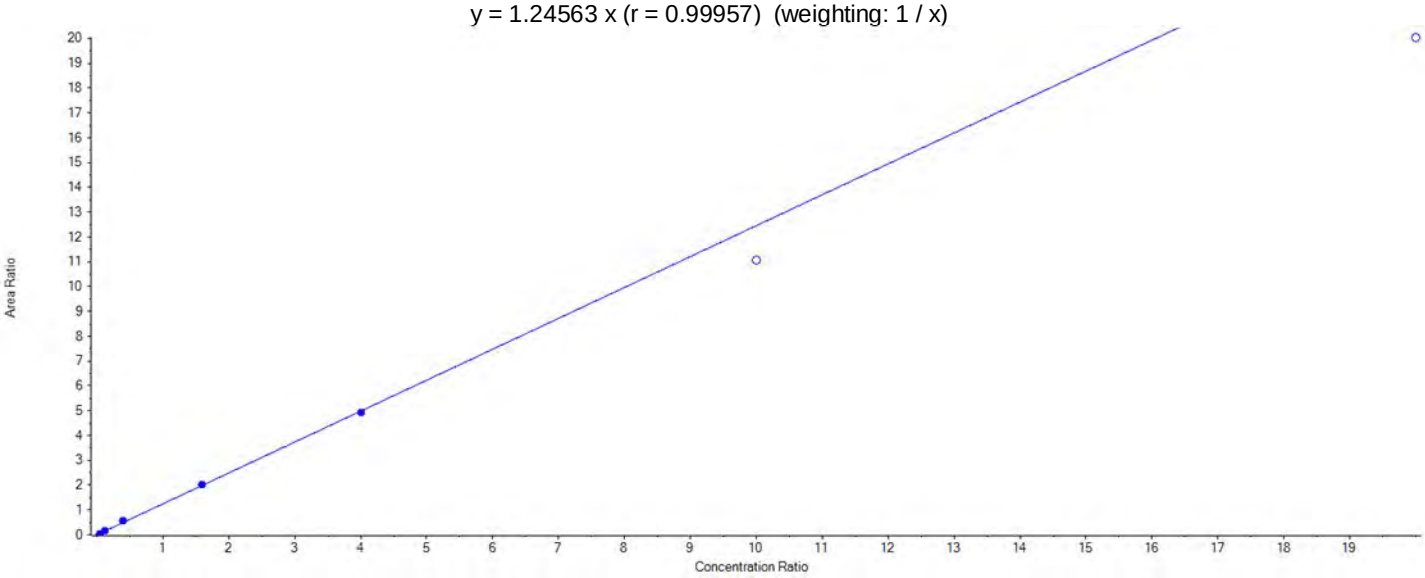
Sample Name	4:2-FTS Area	S/N	13C2-4:2-FTS Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	5603.8	2243.2	75119.122	True	4.67	0.075	4.13	1.000	0.187	0.200	7	30	
CAL2	14524.8	4777.1	72067.149	True	4.67	0.202	4.13	1.000	0.560	0.540	-4	30	
CAL3	56502.5	1225.4	70629.114	True	4.67	0.800	4.14	1.000	1.870	2.142	15	30	
CAL4	191344.6	1753.2	67043.698	True	4.67	2.854	4.13	1.000	7.470	7.640	2	30	
CAL5	498650.7	4269.7	67422.965	True	4.67	7.396	4.14	1.000	18.700	19.798	6	30	
CAL6	1148569.2	2995.6	65255.390	True	4.67	17.601	4.13	1.000	46.700	47.117	1	30	
CAL7	2126148.2	3609.5	62236.773	True	4.67	34.162	4.13	1.000	93.400	91.451	-2	30	

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV28DCAL **QMethod Name:** 18AUG20QM
Result Table: 18NOV28DCAL_Updated1/10/2019 3:36:50 PM **Acquisition Method:** 18AUG13_3uL.dam

PFHxA

y = 1.24563 x (r = 0.99957) (weighting: 1 / x)



Component Calibration Verification

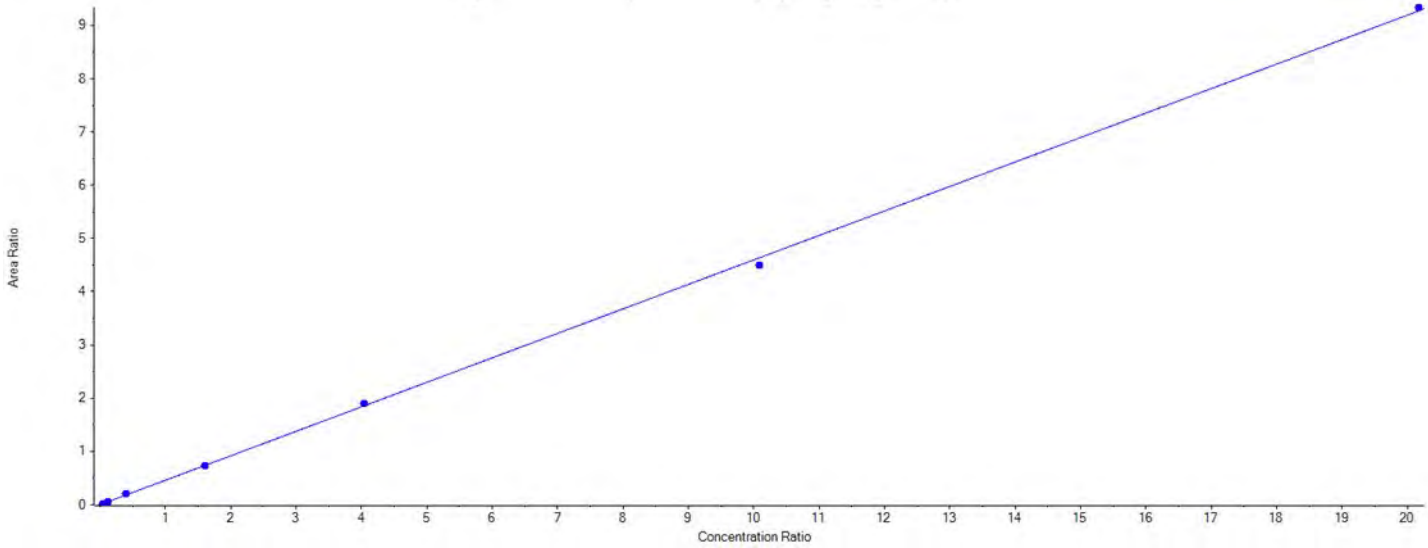
Sample Name	PFHxA Area	S/N	13C5-PFHxA Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	42281.8	270.9	728340.451	True	5.00	0.058	4.17	1.000	0.200	0.233	17	30	
CAL2	101713.2	383.4	697229.019	True	5.00	0.146	4.16	1.000	0.600	0.586	-2	30	
CAL3	395421.4	731.7	717900.058	True	5.00	0.551	4.17	1.000	2.000	2.211	11	30	
CAL4	1343216.4	1177.9	670407.711	True	5.00	2.004	4.16	1.000	8.000	8.042	1	30	
CAL5	3464657.3	1836.2	704953.498	True	5.00	4.915	4.17	1.000	20.000	19.728	-1	30	
CAL6	7468739.1	2191.3	675219.804	False	5.00	11.061	4.16	1.000	50.000	44.400	-11	30	
CAL7	12530843.0	2376.6	625449.752	False	5.00	20.035	4.16	1.000	100.000	80.421	-20	30	

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV28DCAL **QMethod Name:** 18AUG20QM
Result Table: 18NOV28DCAL_Updated1/10/2019 3:36:50 PM **Acquisition Method:** 18AUG13_3uL.dam

PFPeS

y = 0.45971 x (r = 0.99971) (weighting: 1 / x)



Component Calibration Verification

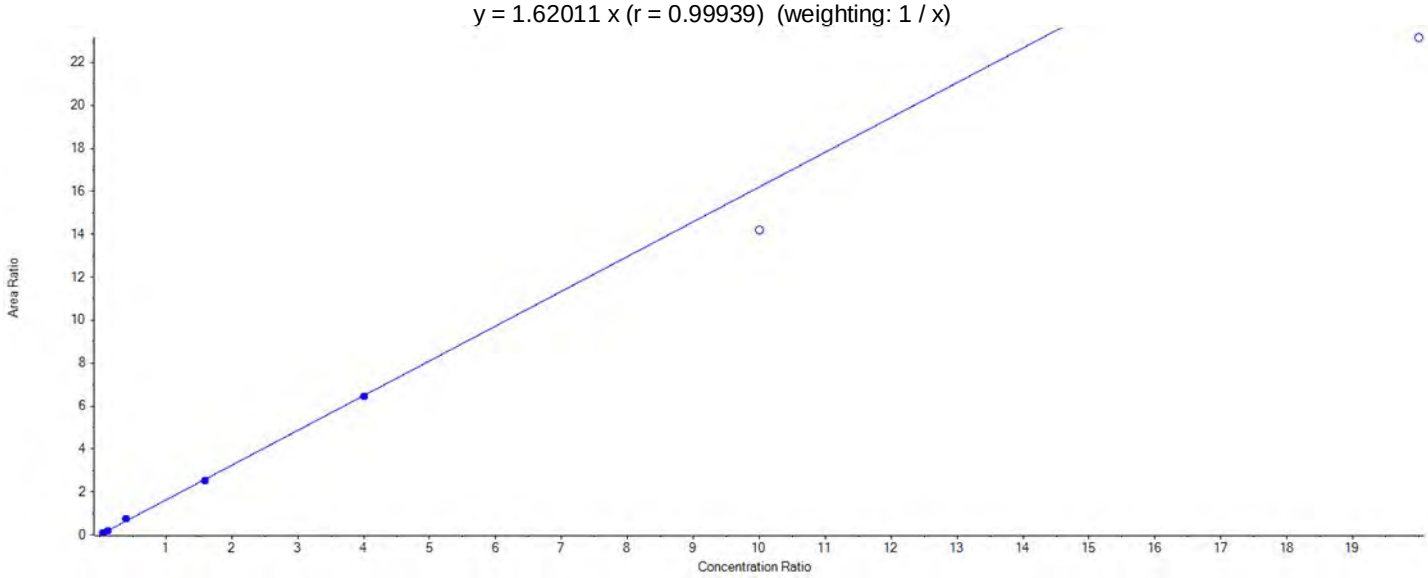
Sample Name	PFPeS Area	S/N	13C3-PFBS Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	8956.0	383.7	437838.938	True	4.65	0.020	4.19	1.100	0.188	0.207	10	30	
CAL2	24007.2	778.6	442149.949	True	4.65	0.054	4.18	1.100	0.563	0.549	-2	30	
CAL3	89559.7	2347.5	419929.218	True	4.65	0.213	4.19	1.100	1.880	2.157	15	30	
CAL4	311741.6	2021.0	424041.313	True	4.65	0.735	4.19	1.100	7.500	7.436	-1	30	
CAL5	809728.0	3003.6	424059.219	True	4.65	1.909	4.19	1.100	18.800	19.314	3	30	
CAL6	1793808.0	3890.0	398441.322	True	4.65	4.502	4.18	1.100	46.900	45.538	-3	30	
CAL7	3295381.6	3138.3	352994.776	True	4.65	9.335	4.18	1.100	93.800	94.429	1	30	

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV28DCAL **QMethod Name:** 18AUG20QM
Result Table: 18NOV28DCAL_Updated1/10/2019 3:36:50 PM **Acquisition Method:** 18AUG13_3uL.dam

PFHpA

y = 1.62011 x (r = 0.99939) (weighting: 1 / x)



Component Calibration Verification

Sample Name	PFHpA Area	S/N	13C4-PFHpA Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	42530.6	366.7	547365.130	True	5.00	0.078	4.56	1.000	0.200	0.240	20	30	
CAL2	100593.8	599.3	547371.985	True	5.00	0.184	4.55	1.000	0.600	0.567	-5	30	
CAL3	388626.7	1091.3	535993.324	True	5.00	0.725	4.56	1.000	2.000	2.238	12	30	
CAL4	1429895.3	2152.8	563673.949	True	5.00	2.537	4.55	1.000	8.000	7.829	-2	30	
CAL5	3592806.2	2355.3	556455.908	True	5.00	6.457	4.56	1.000	20.000	19.926	0	30	
CAL6	7873271.2	3361.6	555281.473	False	5.00	14.179	4.55	1.000	50.000	43.759	-12	30	
CAL7	12619701.6	2617.8	544866.925	False	5.00	23.161	4.55	1.000	100.000	71.480	-29	30	

APPROVED
By MCD at 3:40 pm, 1/10/19

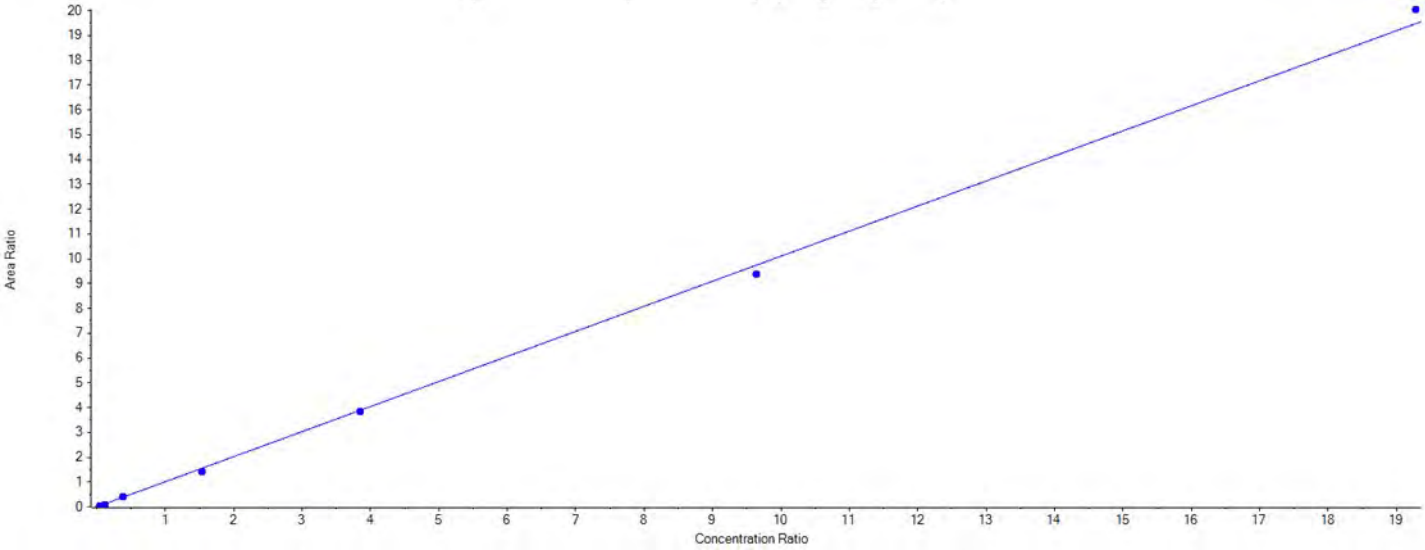
REVIEWED
By UCMR at 7:00 pm, 1/21/19

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV28DCAL **QMethod Name:** 18AUG20QM
Result Table: 18NOV28DCAL_Updated1/10/2019 3:36:50 PM **Acquisition Method:** 18AUG13_3uL.dam

PFHxS

y = 1.01020 x (r = 0.99931) (weighting: 1 / x)



Component Calibration Verification

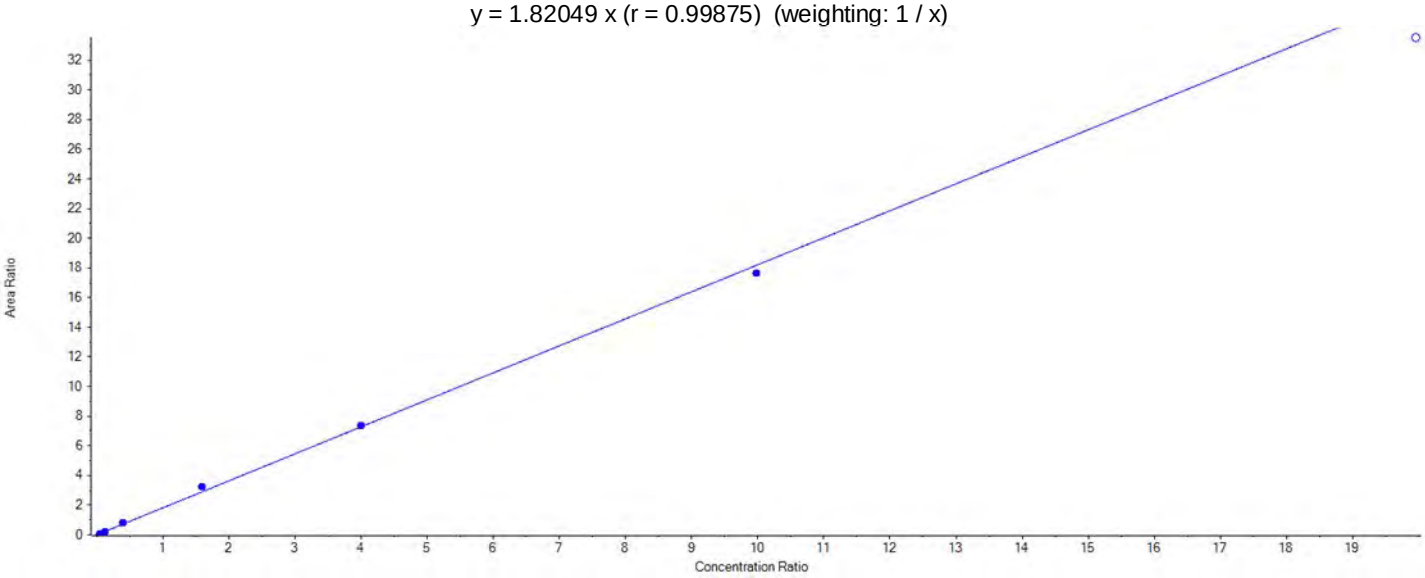
Sample Name	PFHxS Area	S/N	13C3-PFHxS Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	12830.8	10643.6	331982.904	True	4.73	0.039	4.56	1.000	0.182	0.181	-1	30	
CAL2	31104.5	1568.4	335129.691	True	4.73	0.093	4.55	1.000	0.547	0.435	-21	30	
CAL3	127889.2	1553.1	326982.370	True	4.73	0.391	4.56	1.000	1.820	1.831	1	30	
CAL4	444626.0	1772.0	316393.280	True	4.73	1.405	4.56	1.000	7.300	6.580	-10	30	
CAL5	1191482.7	2091.1	309184.702	True	4.73	3.854	4.56	1.000	18.200	18.044	-1	30	
CAL6	2625950.9	1900.1	279894.643	True	4.73	9.382	4.55	1.000	45.600	43.929	-4	30	
CAL7	4797026.7	1752.4	239327.412	True	4.73	20.044	4.55	1.000	91.200	93.850	3	30	

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV28DCAL **QMethod Name:** 18AUG20QM
Result Table: 18NOV28DCAL_Updated1/10/2019 3:36:50 PM **Acquisition Method:** 18AUG13_3uL.dam

6:2-FTS

y = 1.82049 x (r = 0.99875) (weighting: 1 / x)



Component Calibration Verification

Sample Name	6:2-FTS Area	S/N	13C2-6:2-FTS Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	5676.7	534.7	65543.766	True	4.75	0.087	4.91	1.000	0.190	0.226	19	30	
CAL2	14479.8	1089.2	63922.654	True	4.75	0.227	4.91	1.000	0.569	0.591	4	30	
CAL3	53951.0	2408.1	65518.288	True	4.75	0.823	4.92	1.000	1.900	2.149	13	30	
CAL4	185311.5	2003.0	56580.079	True	4.75	3.275	4.91	1.000	7.580	8.546	13	30	
CAL5	426727.7	3587.1	58122.789	True	4.75	7.342	4.92	1.000	19.000	19.156	1	30	
CAL6	859948.6	2867.7	48807.560	True	4.75	17.619	4.90	1.000	47.400	45.972	-3	30	
CAL7	1464447.0	3167.3	43678.325	False	4.75	33.528	4.91	1.000	94.800	87.481	-8	30	

APPROVED
By MCD at 3:40 pm, 1/10/19

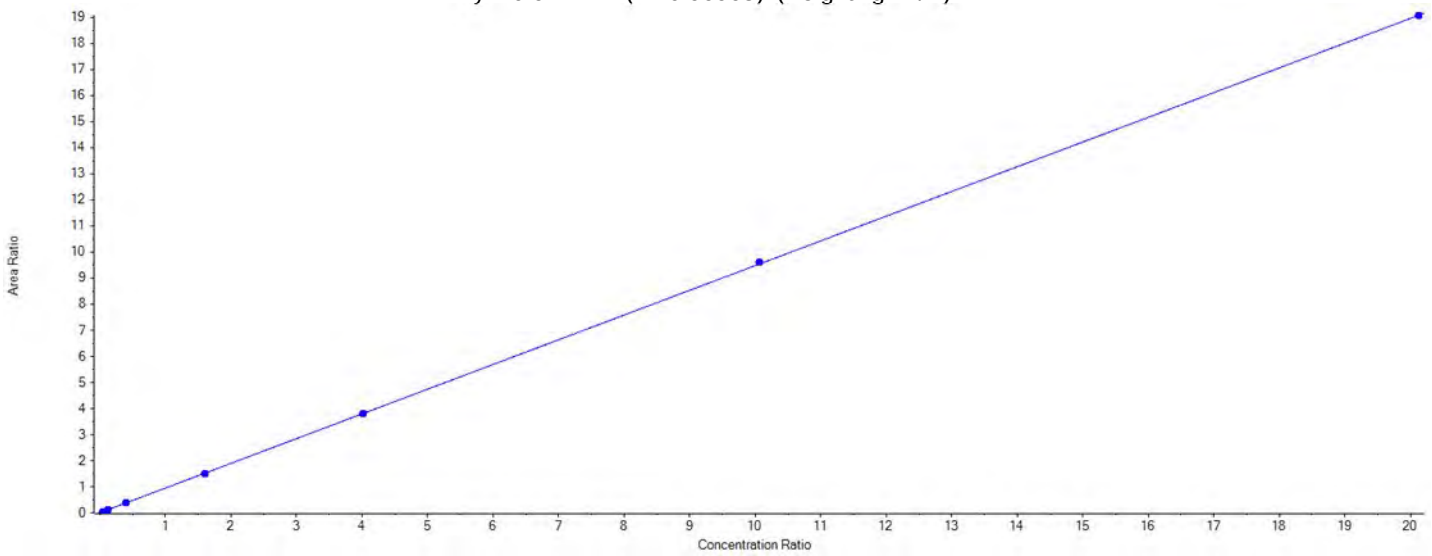
REVIEWED
By UCMR at 7:00 pm, 1/21/19

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV28DCAL **QMethod Name:** 18AUG20QM
Result Table: 18NOV28DCAL_Updated1/10/2019 3:36:50 PM **Acquisition Method:** 18AUG13_3uL.dam

PFHpS

y = 0.94774 x (r = 0.99993) (weighting: 1 / x)



Component Calibration Verification

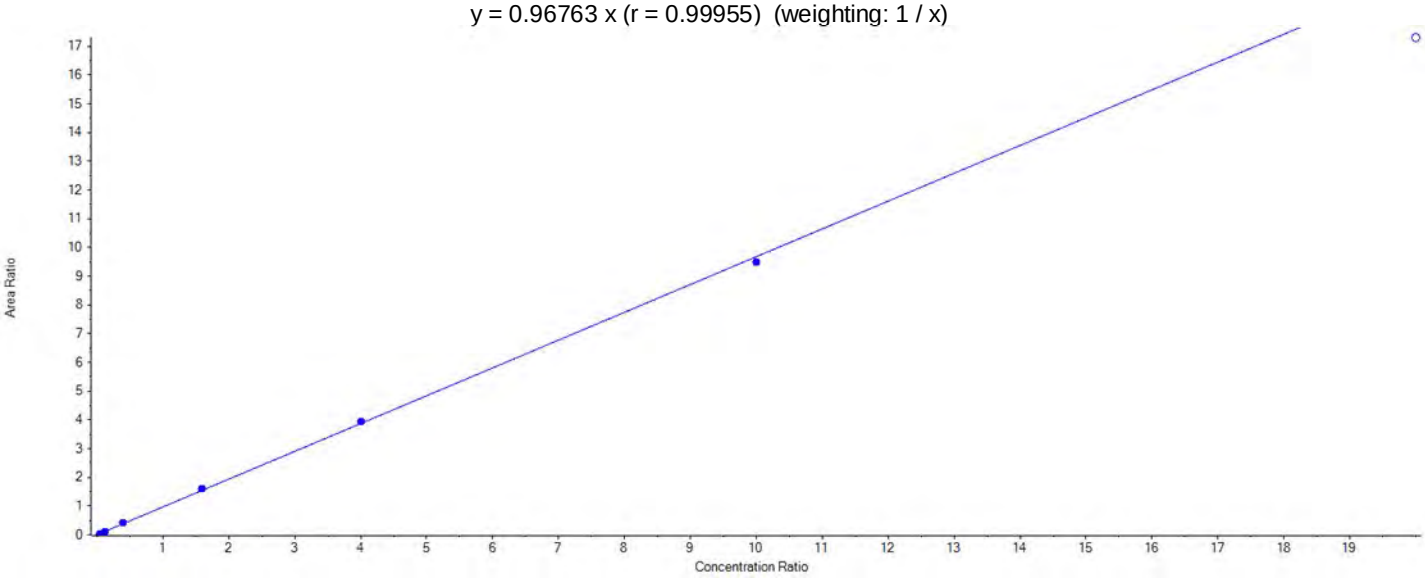
Sample Name	PFHpS Area	S/N	13C3-PFHxS Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	13921.8	19272.6	331982.904	True	4.73	0.042	4.92	1.080	0.190	0.209	10	30	
CAL2	32553.7	4447.1	335129.691	True	4.73	0.097	4.91	1.080	0.571	0.485	-15	30	
CAL3	129450.9	9073.5	326982.370	True	4.73	0.396	4.92	1.080	1.900	1.976	4	30	
CAL4	471580.6	3167.3	316393.280	True	4.73	1.490	4.92	1.080	7.610	7.439	-2	30	
CAL5	1171216.6	2826.6	309184.702	True	4.73	3.788	4.92	1.080	19.000	18.906	0	30	
CAL6	2686833.3	2573.7	279894.643	True	4.73	9.599	4.91	1.080	47.600	47.909	1	30	
CAL7	4562639.6	2438.6	239327.412	True	4.73	19.064	4.91	1.080	95.200	95.147	0	30	

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV28DCAL **QMethod Name:** 18AUG20QM
Result Table: 18NOV28DCAL_Updated1/10/2019 3:36:50 PM **Acquisition Method:** 18AUG13_3uL.dam

PFOA

y = 0.96763 x (r = 0.99955) (weighting: 1 / x)



Component Calibration Verification

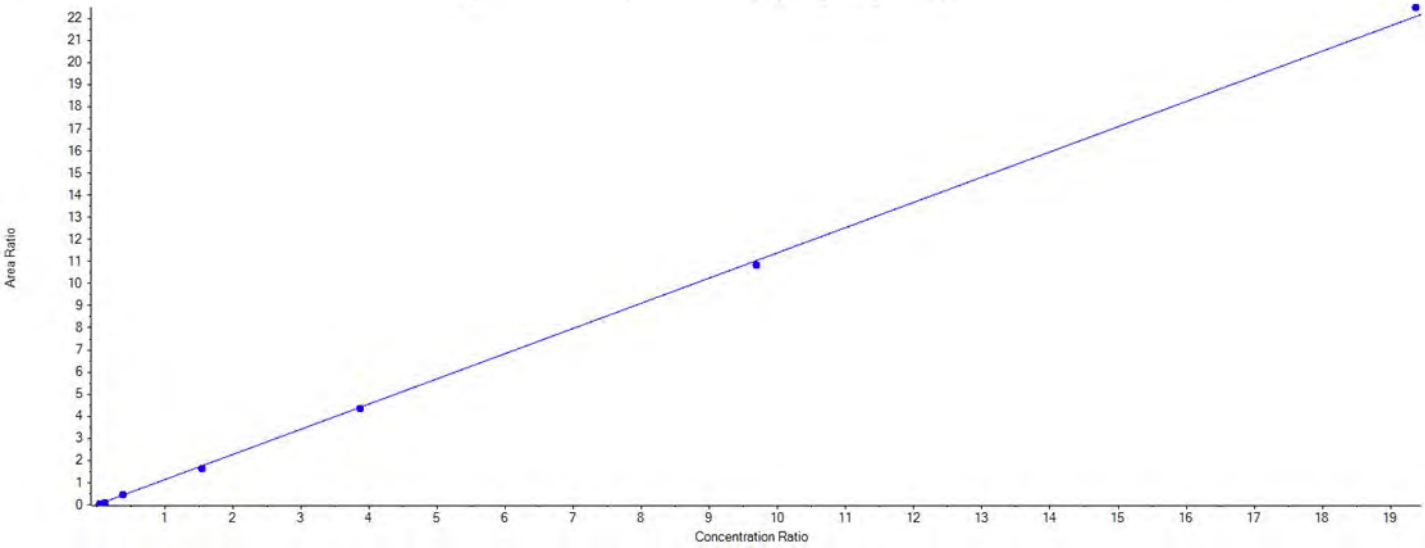
Sample Name	PFOA Area	S/N	13C8-PFOA Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	42517.4	185.7	1030597.916	True	5.00	0.041	4.93	1.000	0.200	0.213	7	30	
CAL2	106420.8	337.5	1030866.619	True	5.00	0.103	4.92	1.000	0.600	0.533	-11	30	
CAL3	405879.4	495.1	954677.960	True	5.00	0.425	4.93	1.000	2.000	2.197	10	30	
CAL4	1486960.4	1291.2	918995.325	True	5.00	1.618	4.92	1.000	8.000	8.361	5	30	
CAL5	3601538.3	1584.3	911756.077	True	5.00	3.950	4.93	1.000	20.000	20.411	2	30	
CAL6	8012665.3	1863.3	843522.332	True	5.00	9.499	4.92	1.000	50.000	49.084	-2	30	
CAL7	12900182.7	2063.6	745616.325	False	5.00	17.301	4.92	1.000	100.000	89.401	-11	30	

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV28DCAL **QMethod Name:** 18AUG20QM
Result Table: 18NOV28DCAL_Updated1/10/2019 3:36:50 PM **Acquisition Method:** 18AUG13_3uL.dam

PFOS

y = 1.13953 x (r = 0.99969) (weighting: 1 / x)



Component Calibration Verification

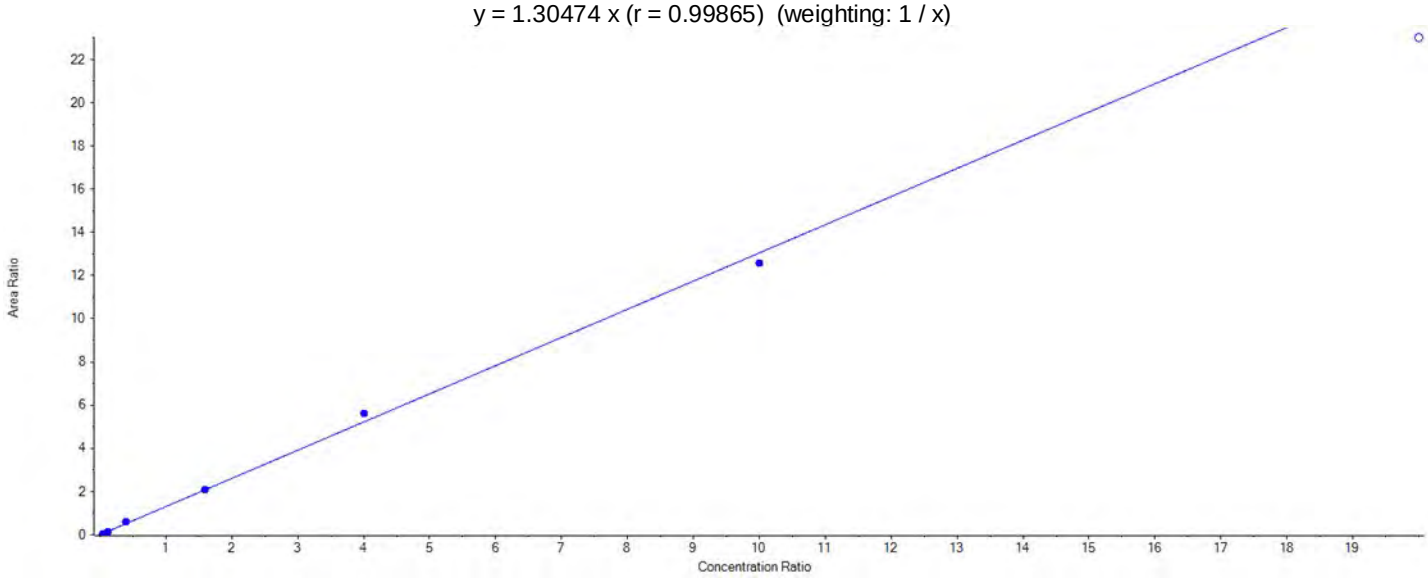
Sample Name	PFOS Area	S/N	13C8-PFOS Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	13060.0	1060.4	318525.429	True	4.78	0.041	5.25	1.000	0.185	0.172	-7	30	
CAL2	34203.6	972.6	313894.271	True	4.78	0.109	5.25	1.000	0.555	0.457	-18	30	
CAL3	139506.6	732.7	309913.737	True	4.78	0.450	5.26	1.000	1.850	1.888	2	30	
CAL4	481950.0	1137.9	296147.525	True	4.78	1.627	5.25	1.000	7.400	6.826	-8	30	
CAL5	1305020.5	988.3	299574.476	True	4.78	4.356	5.26	1.000	18.500	18.273	-1	30	
CAL6	3026664.4	1448.1	279204.362	True	4.78	10.840	5.25	1.000	46.300	45.472	-2	30	
CAL7	5620329.0	1278.0	250004.233	True	4.78	22.481	5.25	1.000	92.600	94.301	2	30	

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV28DCAL **QMethod Name:** 18AUG20QM
Result Table: 18NOV28DCAL_Updated1/10/2019 3:36:50 PM **Acquisition Method:** 18AUG13_3uL.dam

PFNA

y = 1.30474 x (r = 0.99865) (weighting: 1 / x)



Component Calibration Verification

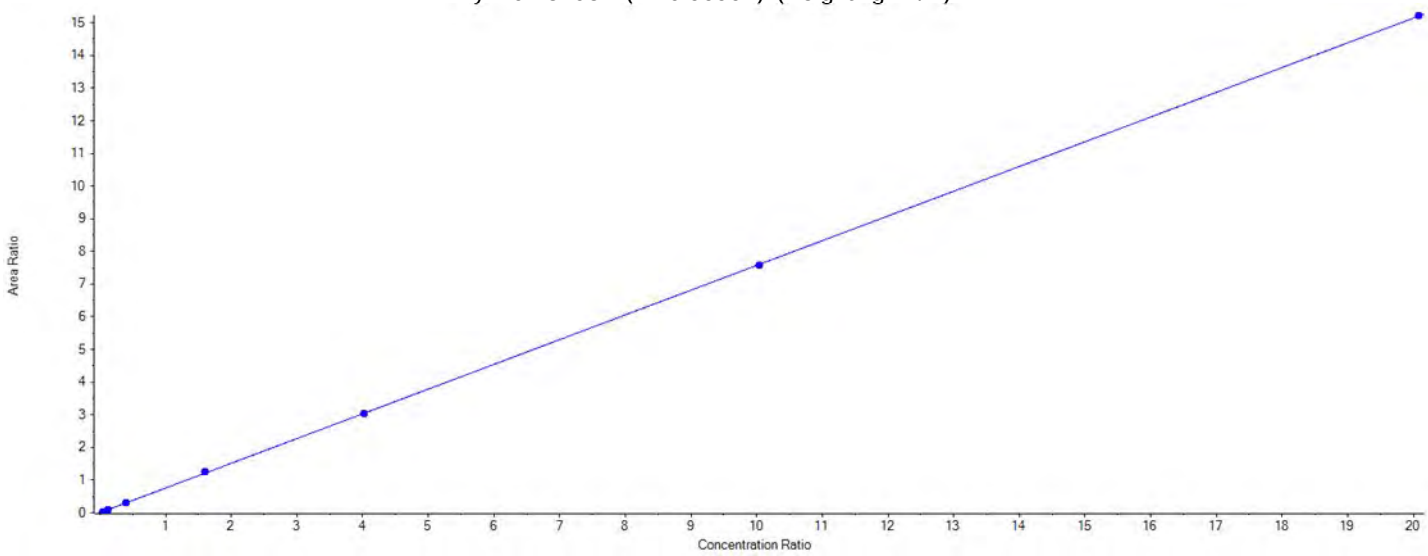
Sample Name	PFNA Area	S/N	13C9-PFNA Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	39485.1	336.0	659714.648	True	5.00	0.060	5.27	1.000	0.200	0.229	15	30	
CAL2	106720.9	560.6	682380.696	True	5.00	0.156	5.26	1.000	0.600	0.599	0	30	
CAL3	370292.0	1397.5	629954.590	True	5.00	0.588	5.27	1.000	2.000	2.253	13	30	
CAL4	1365056.4	2099.1	648727.023	True	5.00	2.104	5.27	1.000	8.000	8.064	1	30	
CAL5	3536255.1	3740.5	630201.519	True	5.00	5.611	5.27	1.000	20.000	21.504	8	30	
CAL6	7843086.9	3448.1	624202.702	True	5.00	12.565	5.26	1.000	50.000	48.151	-4	30	
CAL7	12939629.1	3220.8	562206.893	False	5.00	23.016	5.27	1.000	100.000	88.201	-12	30	

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV28DCAL **QMethod Name:** 18AUG20QM
Result Table: 18NOV28DCAL_Updated1/10/2019 3:36:50 PM **Acquisition Method:** 18AUG13_3uL.dam

PFNS

y = 0.75705 x (r = 0.99994) (weighting: 1 / x)



Component Calibration Verification

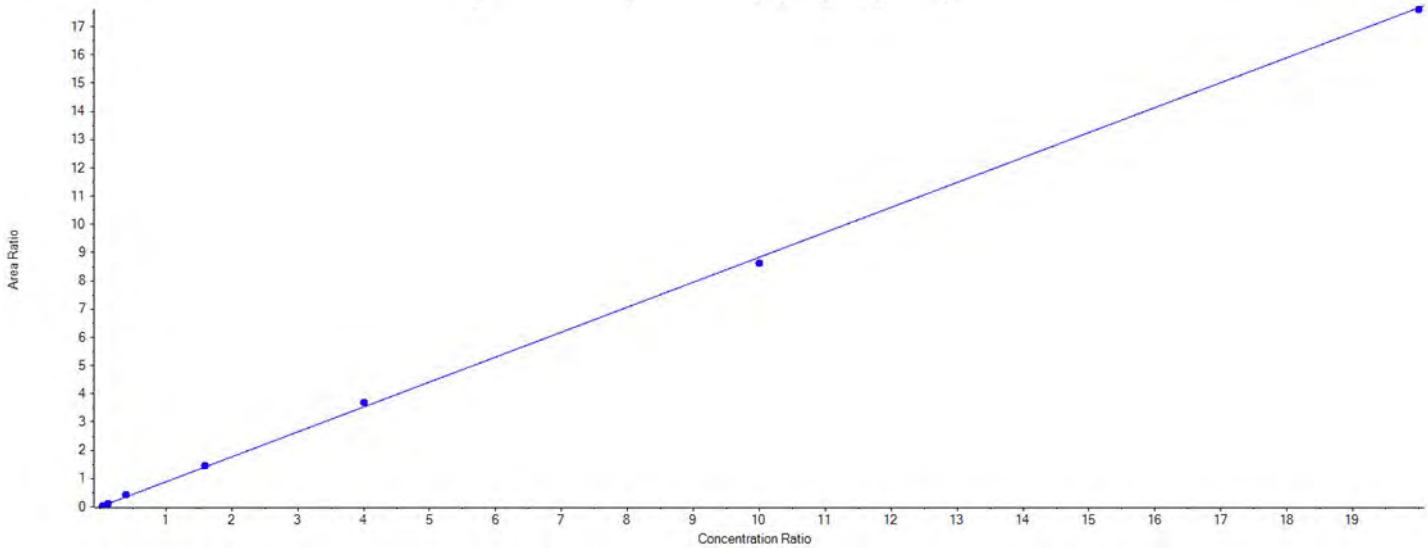
Sample Name	PFNS Area	S/N	13C8-PFOS Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	9756.6	2226.5	318525.429	True	4.78	0.031	5.55	1.060	0.192	0.193	1	30	
CAL2	24149.9	10822.9	313894.271	True	4.78	0.077	5.54	1.060	0.576	0.486	-16	30	
CAL3	91471.0	43486.9	309913.737	True	4.78	0.295	5.55	1.060	1.920	1.864	-3	30	
CAL4	369833.4	4460.8	296147.525	True	4.78	1.249	5.55	1.060	7.680	7.885	3	30	
CAL5	909879.2	4615.6	299574.476	True	4.78	3.037	5.55	1.060	19.200	19.177	0	30	
CAL6	2116661.5	2721.3	279204.362	True	4.78	7.581	5.54	1.060	48.000	47.867	0	30	
CAL7	3804945.2	2191.8	250004.233	True	4.78	15.220	5.54	1.060	96.000	96.096	0	30	

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV28DCAL **QMethod Name:** 18AUG20QM
Result Table: 18NOV28DCAL_Updated1/10/2019 3:36:50 PM **Acquisition Method:** 18AUG13_3uL.dam

PFDA

y = 0.88335 x (r = 0.99965) (weighting: 1 / x)



Component Calibration Verification

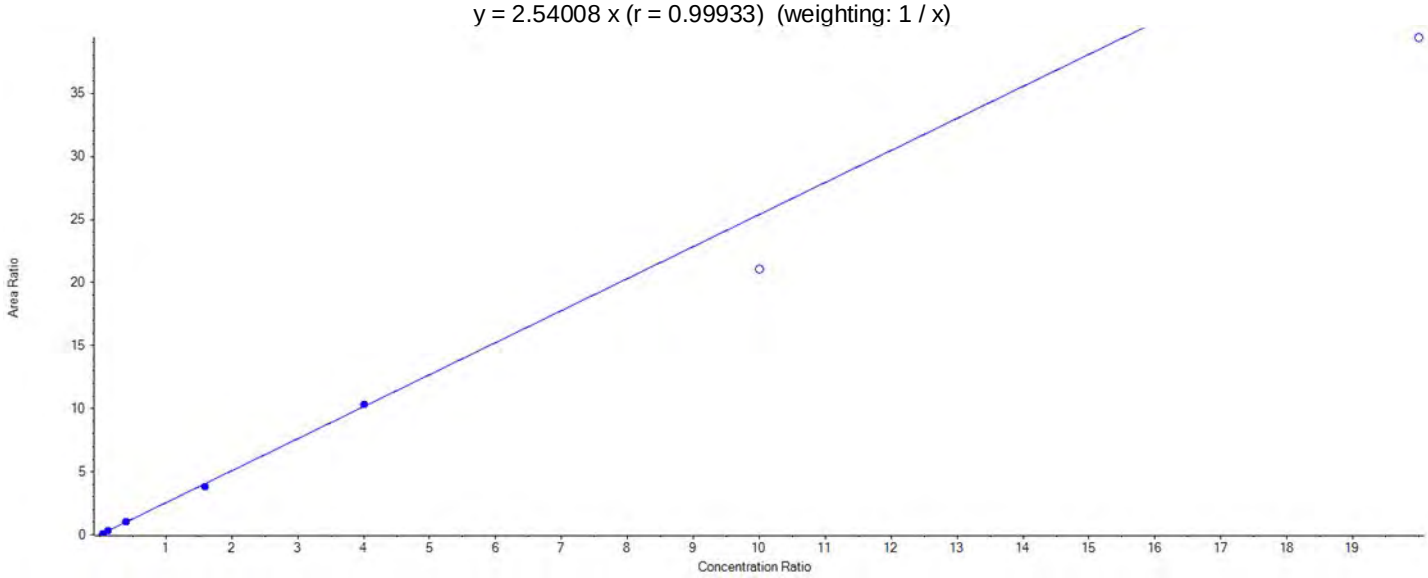
Sample Name	PFDA Area	S/N	13C6-PFDA Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	33621.2	252.1	855362.920	True	5.00	0.039	5.57	1.000	0.200	0.222	11	30	
CAL2	90730.3	547.0	839100.670	True	5.00	0.108	5.57	1.000	0.600	0.612	2	30	
CAL3	343523.0	1010.2	824072.930	True	5.00	0.417	5.57	1.000	2.000	2.360	18	30	
CAL4	1223810.4	1419.5	841970.480	True	5.00	1.454	5.57	1.000	8.000	8.227	3	30	
CAL5	3072749.0	2173.2	833462.150	True	5.00	3.687	5.57	1.000	20.000	20.868	4	30	
CAL6	6551370.5	3228.5	758832.768	True	5.00	8.633	5.56	1.000	50.000	48.868	-2	30	
CAL7	11371047.0	2538.0	645932.474	True	5.00	17.604	5.57	1.000	100.000	99.643	0	30	

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV28DCAL **QMethod Name:** 18AUG20QM
Result Table: 18NOV28DCAL_Updated1/10/2019 3:36:50 PM **Acquisition Method:** 18AUG13_3uL.dam

8:2-FTS

y = 2.54008 x (r = 0.99933) (weighting: 1 / x)



Component Calibration Verification

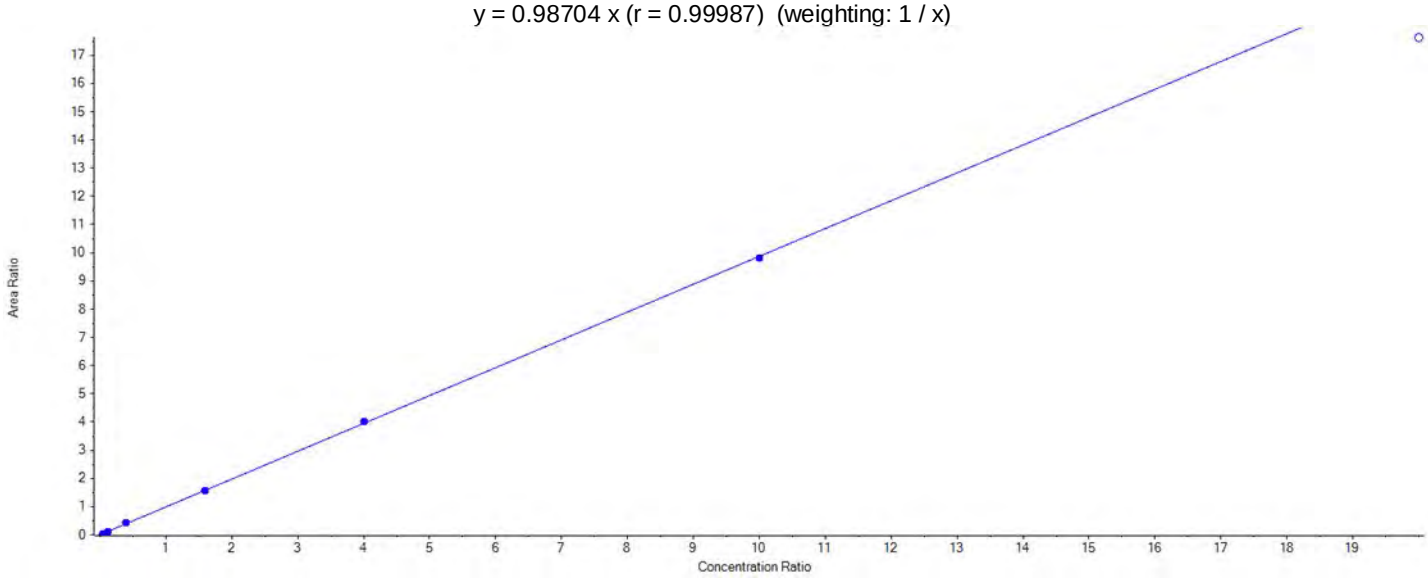
Sample Name	8:2-FTS Area	S/N	13C2-8:2-FTS Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	6138.7	138.9	58895.024	True	4.79	0.104	5.57	1.000	0.192	0.197	2	30	
CAL2	15550.2	278.8	54757.914	True	4.79	0.284	5.57	1.000	0.575	0.536	-7	30	
CAL3	57433.9	686.2	53847.149	True	4.79	1.067	5.57	1.000	1.920	2.011	5	30	
CAL4	203687.7	1309.3	52961.880	True	4.79	3.846	5.57	1.000	7.660	7.253	-5	30	
CAL5	478390.1	1550.6	46142.417	True	4.79	10.368	5.58	1.000	19.200	19.551	2	30	
CAL6	938590.1	1617.4	44487.495	False	4.79	21.098	5.57	1.000	47.900	39.786	-17	30	
CAL7	1620286.0	2884.0	41093.046	False	4.79	39.430	5.57	1.000	95.800	74.355	-22	30	

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV28DCAL **QMethod Name:** 18AUG20QM
Result Table: 18NOV28DCAL_Updated1/10/2019 3:36:50 PM **Acquisition Method:** 18AUG13_3uL.dam

PFOSA

y = 0.98704 x (r = 0.99987) (weighting: 1 / x)



Component Calibration Verification

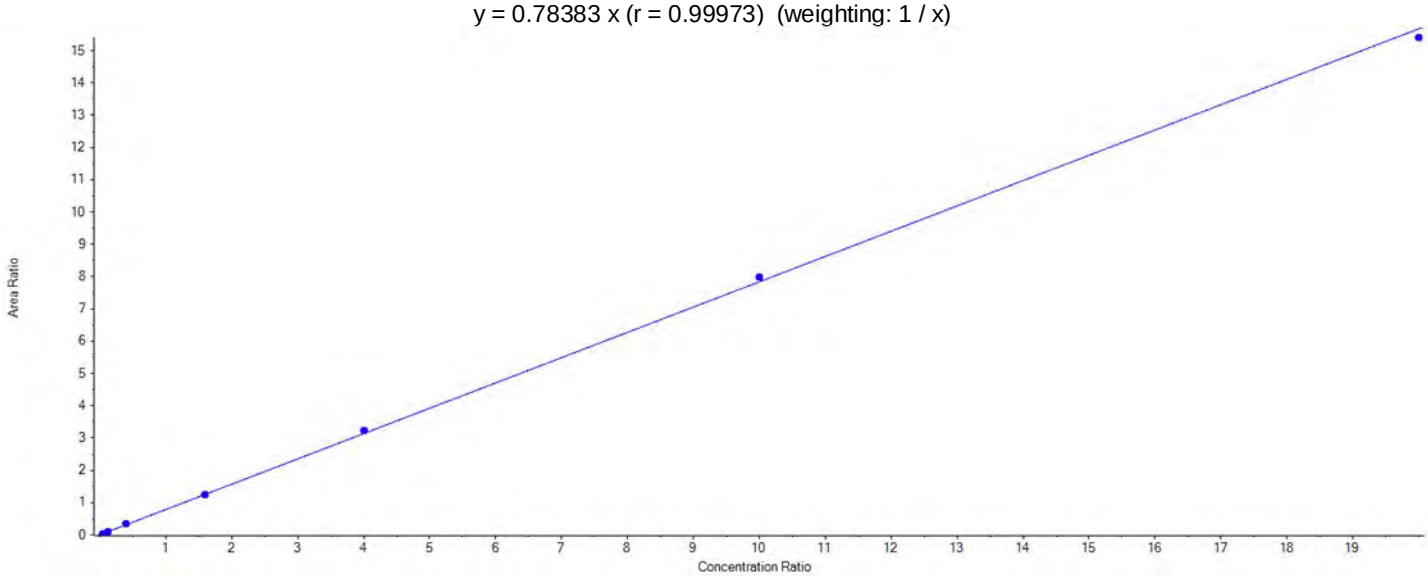
Sample Name	PFOSA Area	S/N	13C8-PFOSA Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	27693.0	14496.4	662264.748	True	5.00	0.042	5.65	1.000	0.200	0.212	6	30	
CAL2	73112.3	749.8	658778.467	True	5.00	0.111	5.65	1.000	0.600	0.562	-6	30	
CAL3	265394.0	1340.3	631627.878	True	5.00	0.420	5.66	1.000	2.000	2.128	6	30	
CAL4	976434.1	2479.8	625021.840	True	5.00	1.562	5.65	1.000	8.000	7.914	-1	30	
CAL5	2392584.6	2838.0	596189.464	True	5.00	4.013	5.66	1.000	20.000	20.329	2	30	
CAL6	5541493.1	2884.6	565326.016	True	5.00	9.802	5.65	1.000	50.000	49.655	-1	30	
CAL7	9792009.5	2446.5	555500.490	False	5.00	17.627	5.65	1.000	100.000	89.294	-11	30	

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV28DCAL **QMethod Name:** 18AUG20QM
Result Table: 18NOV28DCAL_Updated1/10/2019 3:36:50 PM **Acquisition Method:** 18AUG13_3uL.dam

NMeFOSAA

y = 0.78383 x (r = 0.99973) (weighting: 1 / x)



Component Calibration Verification

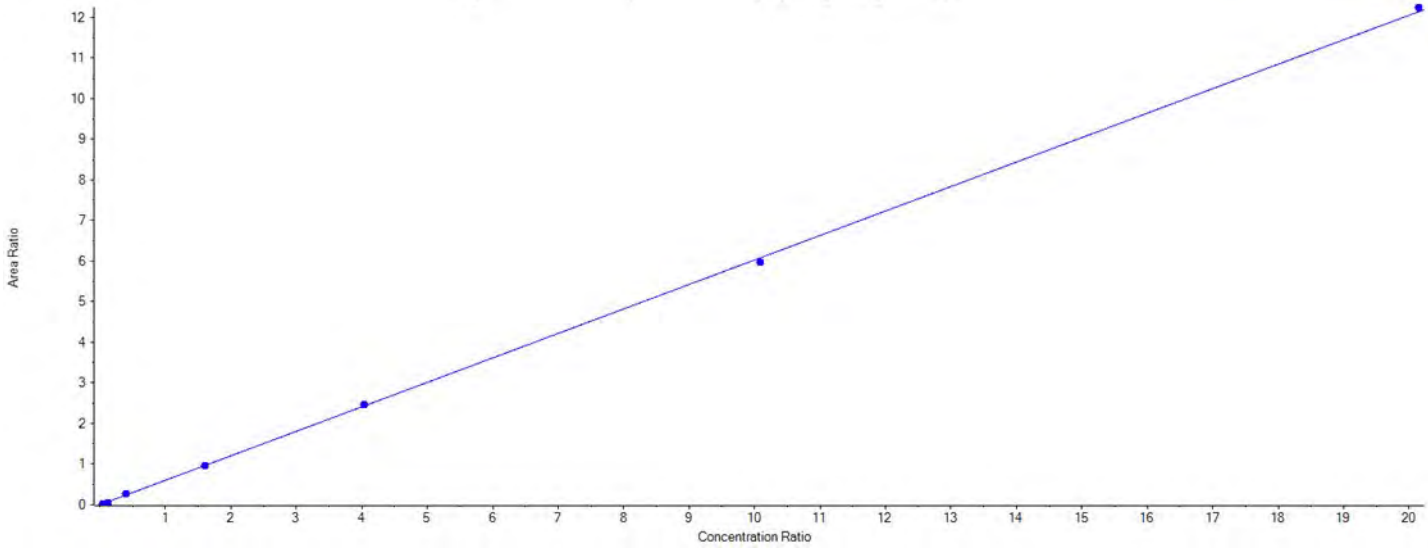
Sample Name	NMeFOSAA Area	S/N	d3-NMeFOSAA Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	6661.0	153.4	220597.274	True	5.00	0.030	5.71	1.000	0.200	0.193	-4	30	
CAL2	16533.1	308.9	181261.245	True	5.00	0.091	5.70	1.000	0.600	0.582	-3	30	
CAL3	62054.8	533.8	178338.072	True	5.00	0.348	5.71	1.000	2.000	2.220	11	30	
CAL4	212775.3	1656.4	171203.949	True	5.00	1.243	5.71	1.000	8.000	7.928	-1	30	
CAL5	557354.6	1407.3	172574.166	True	5.00	3.230	5.71	1.000	20.000	20.602	3	30	
CAL6	1292829.8	1422.7	161673.270	True	5.00	7.997	5.70	1.000	50.000	51.010	2	30	
CAL7	2414874.8	1441.0	156760.846	True	5.00	15.405	5.71	1.000	100.000	98.267	-2	30	

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV28DCAL **QMethod Name:** 18AUG20QM
Result Table: 18NOV28DCAL_Updated1/10/2019 3:36:50 PM **Acquisition Method:** 18AUG13_3uL.dam

PFDS

y = 0.60287 x (r = 0.99985) (weighting: 1 / x)



Component Calibration Verification

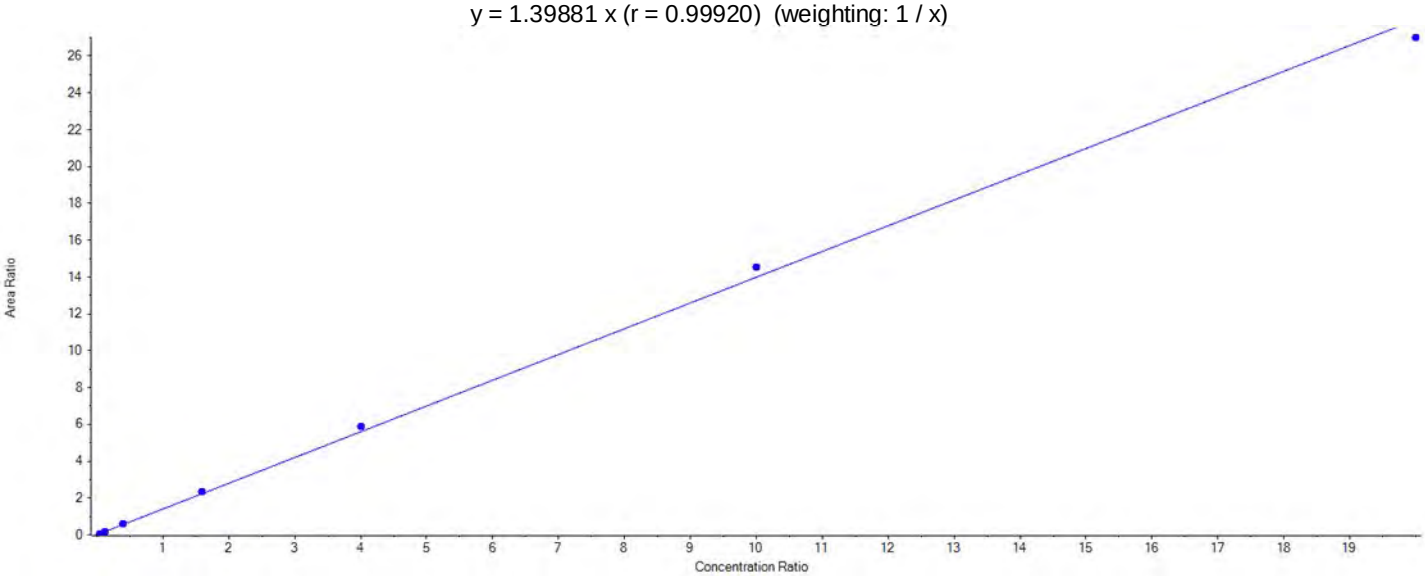
Sample Name	PFDS Area	S/N	13C8-PFOS Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	6850.7	4223.9	318525.429	True	4.78	0.022	5.81	1.110	0.193	0.171	-12	30	
CAL2	18654.8	1288.4	313894.271	True	4.78	0.059	5.80	1.100	0.578	0.471	-18	30	
CAL3	80537.4	288059.6	309913.737	True	4.78	0.260	5.80	1.100	1.930	2.060	7	30	
CAL4	283198.5	3741.0	296147.525	True	4.78	0.956	5.80	1.100	7.700	7.582	-2	30	
CAL5	737231.9	1757.0	299574.476	True	4.78	2.461	5.81	1.100	19.300	19.512	1	30	
CAL6	1665920.2	2887.4	279204.362	True	4.78	5.967	5.80	1.100	48.200	47.309	-2	30	
CAL7	3061543.5	4095.0	250004.233	True	4.78	12.246	5.80	1.110	96.300	97.096	1	30	

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV28DCAL **QMethod Name:** 18AUG20QM
Result Table: 18NOV28DCAL_Updated1/10/2019 3:36:50 PM **Acquisition Method:** 18AUG13_3uL.dam

PFUnDA

y = 1.39881 x (r = 0.99920) (weighting: 1 / x)



Component Calibration Verification

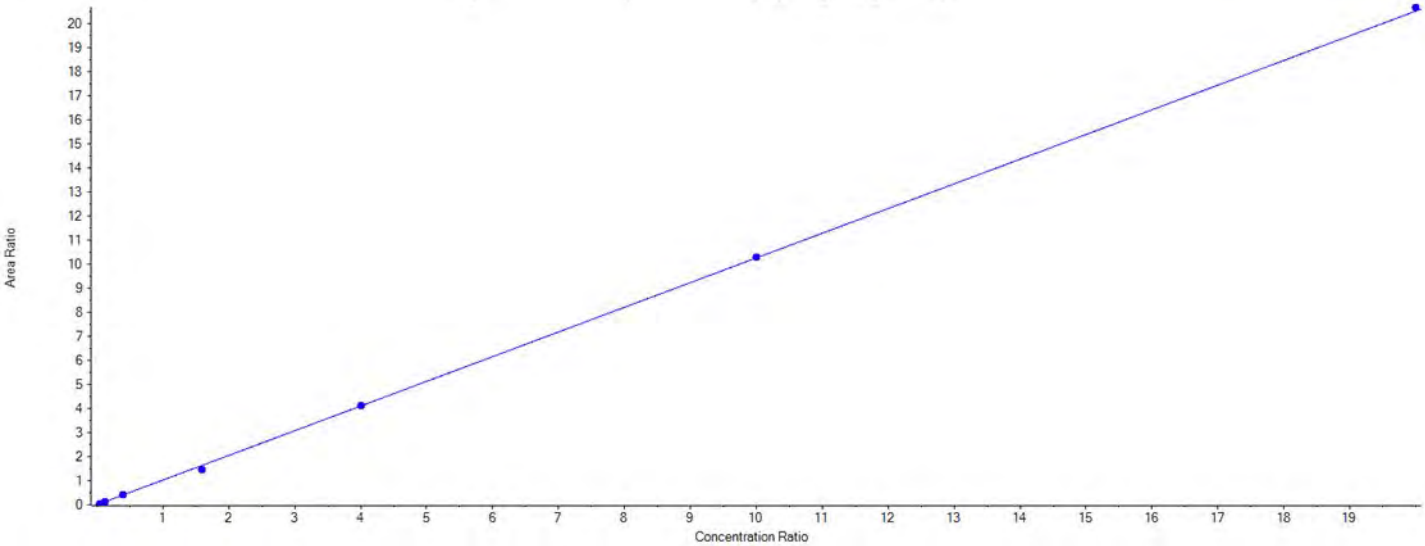
Sample Name	PFUnDA Area	S/N	13C7-PFUnDA Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	36428.0	274.5	587155.422	True	5.00	0.062	5.82	1.000	0.200	0.222	11	30	
CAL2	91490.4	441.2	581206.992	True	5.00	0.157	5.82	1.000	0.600	0.563	-6	30	
CAL3	370693.6	883.5	592495.657	True	5.00	0.626	5.83	1.000	2.000	2.236	12	30	
CAL4	1281938.5	1471.5	546359.257	True	5.00	2.346	5.83	1.000	8.000	8.387	5	30	
CAL5	3163283.8	2050.7	539842.914	True	5.00	5.860	5.83	1.000	20.000	20.945	5	30	
CAL6	6885622.6	2756.7	474122.075	True	5.00	14.523	5.82	1.000	50.000	51.912	4	30	
CAL7	11254483.8	2696.8	416723.902	True	5.00	27.007	5.83	1.000	100.000	96.536	-3	30	

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV28DCAL **QMethod Name:** 18AUG20QM
Result Table: 18NOV28DCAL_Updated1/10/2019 3:36:50 PM **Acquisition Method:** 18AUG13_3uL.dam

NEtFOSAA

y = 1.02663 x (r = 0.99975) (weighting: 1 / x)



Component Calibration Verification

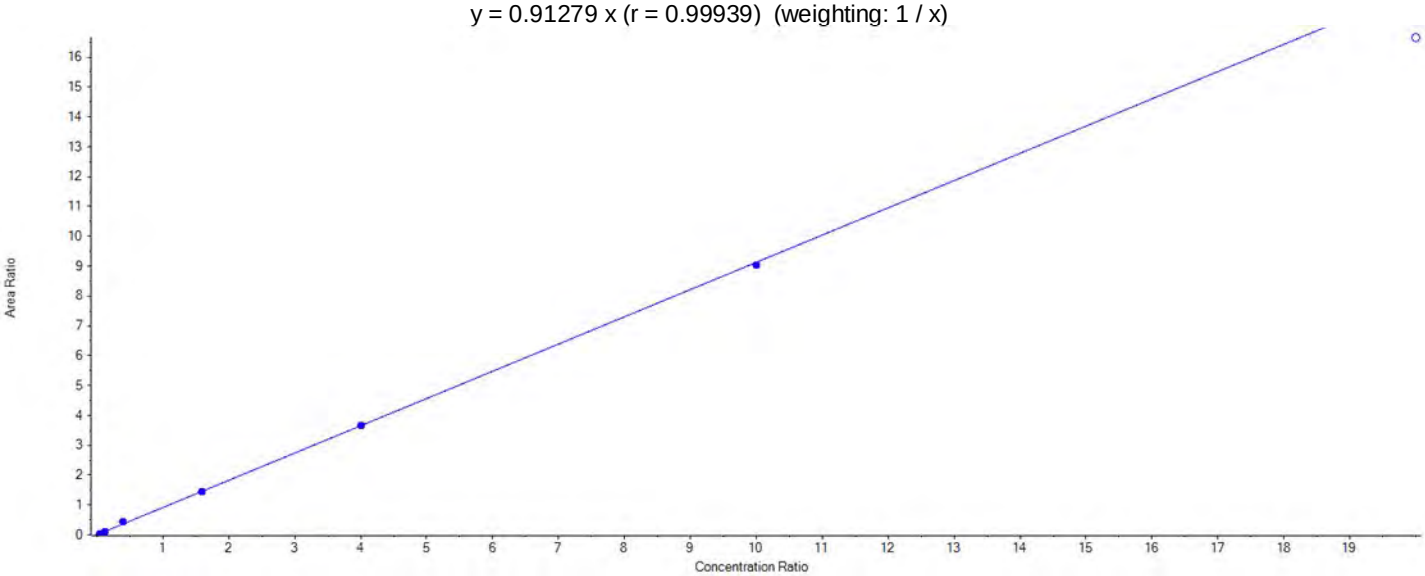
Sample Name	NEtFOSAA Area	S/N	d5-NEtFOSAA Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	5069.2	122.5	127543.478	True	5.00	0.040	5.85	1.000	0.200	0.194	-3	30	
CAL2	16643.3	670.6	144803.235	True	5.00	0.115	5.84	1.000	0.600	0.560	-7	30	
CAL3	52769.5	534.0	129810.704	True	5.00	0.407	5.84	1.000	2.000	1.980	-1	30	
CAL4	204048.6	1145.4	138500.791	True	5.00	1.473	5.84	1.000	8.000	7.175	-10	30	
CAL5	512792.4	1631.6	124785.046	True	5.00	4.109	5.85	1.000	20.000	20.014	0	30	
CAL6	1214766.4	1707.9	117934.241	True	5.00	10.300	5.84	1.000	50.000	50.166	0	30	
CAL7	2127663.4	1866.1	102891.604	True	5.00	20.679	5.85	1.000	100.000	100.712	1	30	

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV28DCAL **QMethod Name:** 18AUG20QM
Result Table: 18NOV28DCAL_Updated1/10/2019 3:36:50 PM **Acquisition Method:** 18AUG13_3uL.dam

PFDoDA

y = 0.91279 x (r = 0.99939) (weighting: 1 / x)



Component Calibration Verification

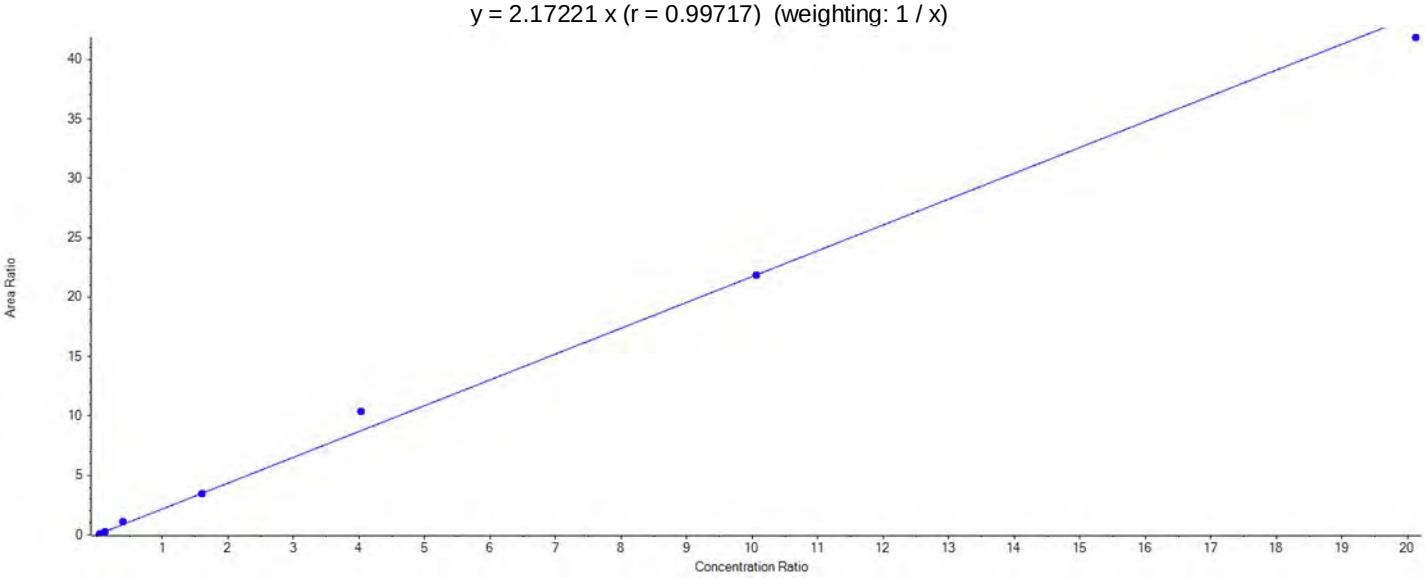
Sample Name	PFDoDA Area	S/N	13C2-PFDoDA Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	53386.6	440.3	1173339.125	True	5.00	0.045	6.06	1.000	0.200	0.249	25	30	
CAL2	122586.0	435.7	1140522.314	True	5.00	0.107	6.05	1.000	0.600	0.589	-2	30	
CAL3	486489.2	1014.9	1091194.874	True	5.00	0.446	6.06	1.000	2.000	2.442	22	30	
CAL4	1650301.1	2076.9	1150927.360	True	5.00	1.434	6.06	1.000	8.000	7.854	-2	30	
CAL5	4161895.9	2283.1	1133027.856	True	5.00	3.673	6.06	1.000	20.000	20.121	1	30	
CAL6	8865844.7	2437.0	980215.411	True	5.00	9.045	6.05	1.000	50.000	49.545	-1	30	
CAL7	14195839.1	2288.5	852235.609	False	5.00	16.657	6.06	1.000	100.000	91.243	-9	30	

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV28DCAL **QMethod Name:** 18AUG20QM
Result Table: 18NOV28DCAL_Updated1/10/2019 3:36:50 PM **Acquisition Method:** 18AUG13_3uL.dam

10:2-FTS

y = 2.17221 x (r = 0.99717) (weighting: 1 / x)



Component Calibration Verification

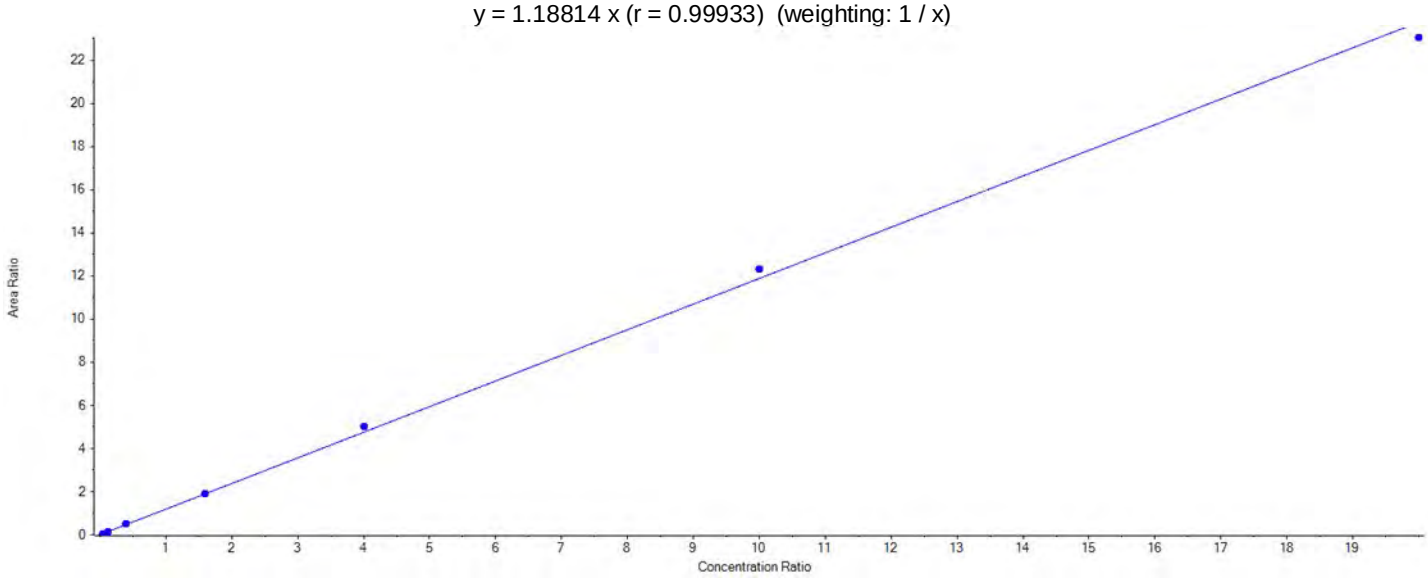
Sample Name	10:2-FTS Area	S/N	13C2-8:2-FTS Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	5717.7	1172.1	58895.024	True	4.79	0.097	6.07	1.090	0.193	0.214	11	30	
CAL2	15157.8	2880.5	54757.914	True	4.79	0.277	6.07	1.090	0.578	0.610	6	30	
CAL3	58508.2	2664.2	53847.149	True	4.79	1.087	6.07	1.090	1.930	2.396	24	30	
CAL4	184968.5	809.2	52961.880	True	4.79	3.492	6.08	1.090	7.710	7.701	0	30	
CAL5	480384.1	12789.5	46142.417	True	4.79	10.411	6.08	1.090	19.300	22.957	19	30	
CAL6	972346.8	3139.7	44487.495	True	4.79	21.857	6.07	1.090	48.200	48.197	0	30	
CAL7	1718827.3	2423.5	41093.046	True	4.79	41.828	6.08	1.090	96.400	92.235	-4	30	

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV28DCAL **QMethod Name:** 18AUG20QM
Result Table: 18NOV28DCAL_Updated1/10/2019 3:36:50 PM **Acquisition Method:** 18AUG13_3uL.dam

NMePFOSAE

y = 1.18814 x (r = 0.99933) (weighting: 1 / x)



Component Calibration Verification

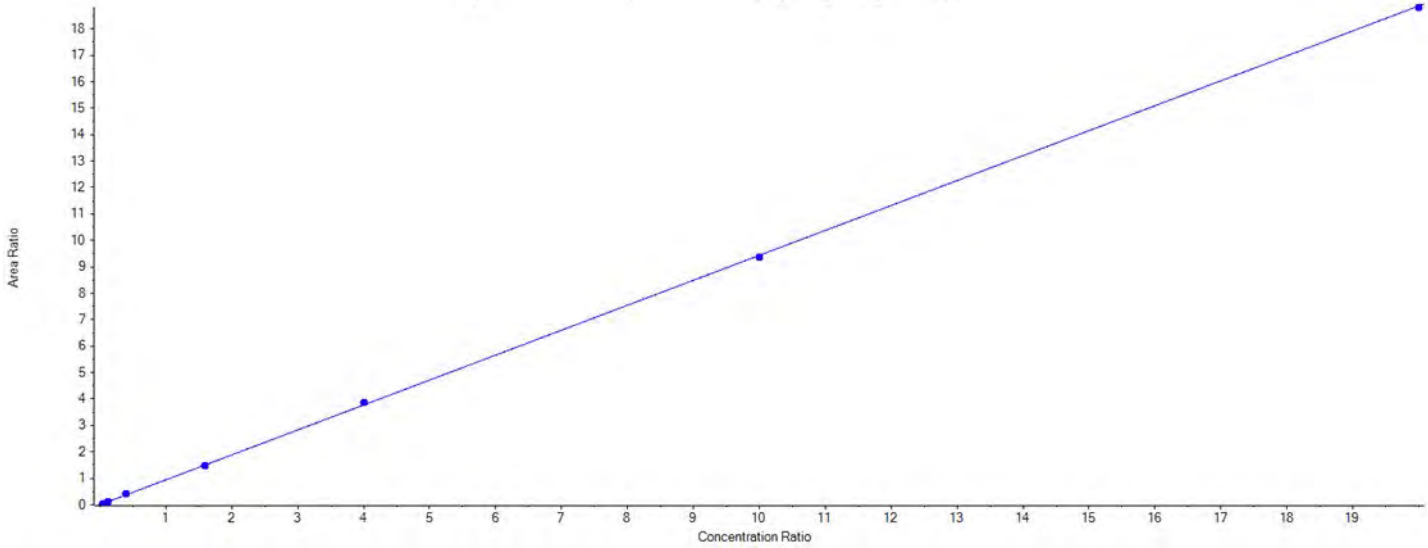
Sample Name	NMePFOSAE Area	S/N	d7-NMePFOSAE Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	13889.2	162.0	281912.738	True	5.00	0.049	6.10	1.000	0.200	0.207	4	30	
CAL2	37932.7	340.7	272071.295	True	5.00	0.139	6.10	1.000	0.600	0.587	-2	30	
CAL3	136518.3	546.2	256577.302	True	5.00	0.532	6.11	1.000	2.000	2.239	12	30	
CAL4	498735.8	911.9	263412.818	True	5.00	1.893	6.11	1.000	8.000	7.968	0	30	
CAL5	1240182.1	1072.1	247663.757	True	5.00	5.008	6.11	1.000	20.000	21.073	5	30	
CAL6	3059430.5	1565.7	248871.057	True	5.00	12.293	6.10	1.000	50.000	51.733	3	30	
CAL7	5772837.2	1358.0	250467.595	True	5.00	23.048	6.11	1.000	100.000	96.993	-3	30	

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV28DCAL **QMethod Name:** 18AUG20QM
Result Table: 18NOV28DCAL_Updated1/10/2019 3:36:50 PM **Acquisition Method:** 18AUG13_3uL.dam

NMePFOSA

y = 0.94317 x (r = 0.99989) (weighting: 1 / x)



Component Calibration Verification

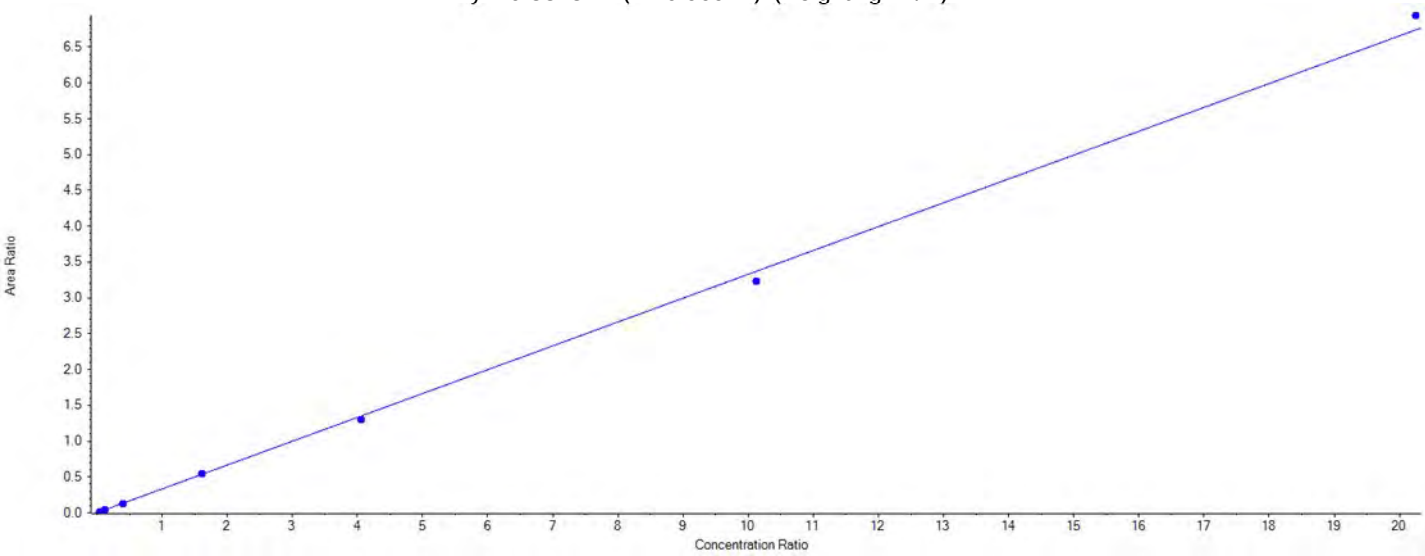
Sample Name	NMePFOSA Area	S/N	d3-NMePFOSA Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	3274.2	928.4	85677.959	True	5.00	0.038	6.11	1.000	0.200	0.203	1	30	
CAL2	9381.3	543.9	86471.674	True	5.00	0.108	6.11	1.000	0.600	0.575	-4	30	
CAL3	33009.7	588.1	80294.101	True	5.00	0.411	6.11	1.000	2.000	2.179	9	30	
CAL4	124582.5	1113.8	83886.643	True	5.00	1.485	6.11	1.000	8.000	7.873	-2	30	
CAL5	322671.1	1106.7	83129.042	True	5.00	3.882	6.12	1.000	20.000	20.577	3	30	
CAL6	768521.6	1393.3	81949.264	True	5.00	9.378	6.11	1.000	50.000	49.716	-1	30	
CAL7	1500056.2	1711.5	79780.244	True	5.00	18.802	6.11	1.000	100.000	99.677	0	30	

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV28DCAL **QMethod Name:** 18AUG20QM
Result Table: 18NOV28DCAL_Updated1/10/2019 3:36:50 PM **Acquisition Method:** 18AUG13_3uL.dam

PFDoS

y = 0.33284 x (r = 0.99942) (weighting: 1 / x)



Component Calibration Verification

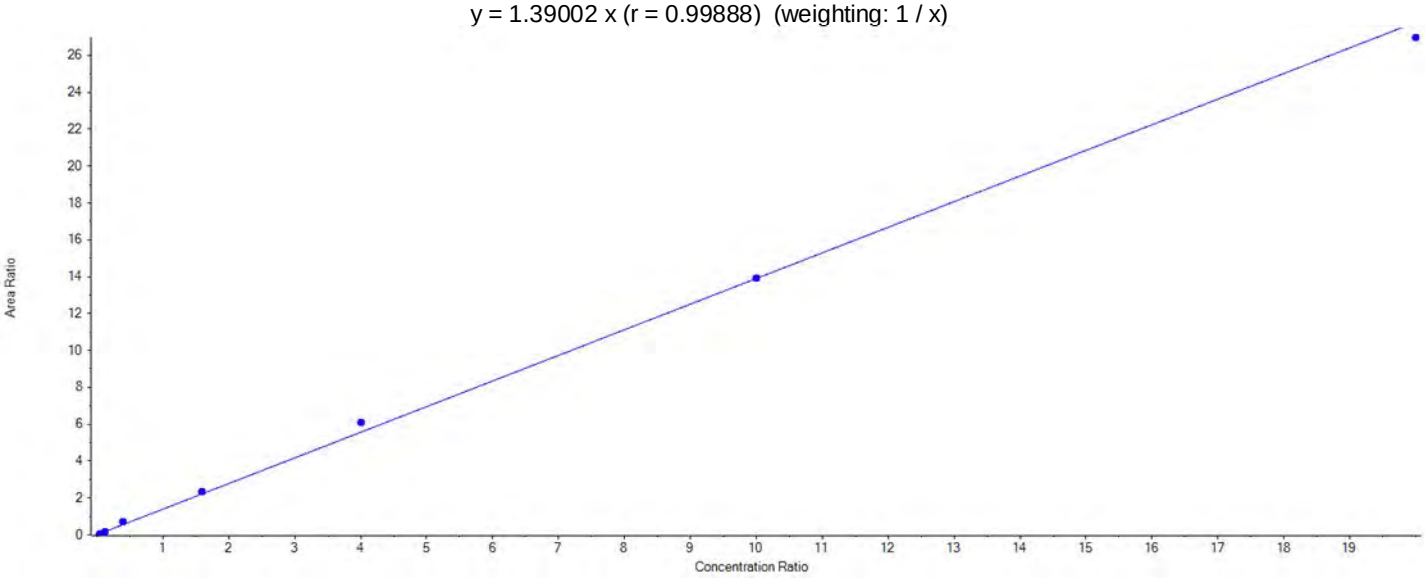
Sample Name	PFDoS Area	S/N	13C8-PFOS Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	4012.1	80345.8	318525.429	True	4.78	0.013	6.23	1.190	0.194	0.181	-7	30	
CAL2	11606.3	870710.1	313894.271	True	4.78	0.037	6.22	1.190	0.581	0.531	-9	30	
CAL3	40838.1	5802.7	309913.737	True	4.78	0.132	6.23	1.180	1.940	1.892	-2	30	
CAL4	159682.3	51383.7	296147.525	True	4.78	0.539	6.23	1.190	7.740	7.744	0	30	
CAL5	390444.7	2445.2	299574.476	True	4.78	1.303	6.23	1.190	19.400	18.718	-4	30	
CAL6	900508.4	3292.0	279204.362	True	4.78	3.225	6.22	1.190	48.400	46.320	-4	30	
CAL7	1735049.5	2191.9	250004.233	True	4.78	6.940	6.22	1.190	96.800	99.670	3	30	

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV28DCAL **QMethod Name:** 18AUG20QM
Result Table: 18NOV28DCAL_Updated1/10/2019 3:36:50 PM **Acquisition Method:** 18AUG13_3uL.dam

NEtPFOSAE

y = 1.39002 x (r = 0.99888) (weighting: 1 / x)



Component Calibration Verification

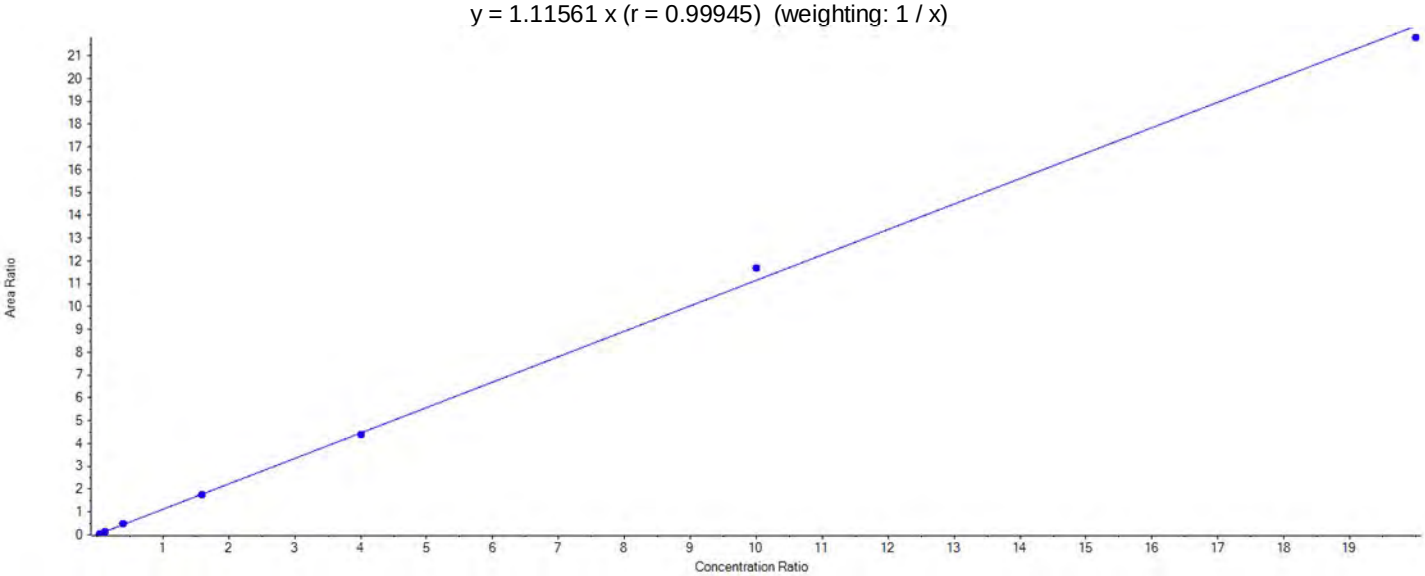
Sample Name	NEtPFOSAE Area	S/N	d9-NEtPFOSAE Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	15402.7	148.0	226256.026	True	5.00	0.068	6.26	1.000	0.200	0.245	22	30	
CAL2	37977.7	267.1	229050.658	True	5.00	0.166	6.26	1.000	0.600	0.596	-1	30	
CAL3	152952.1	535.6	216571.501	True	5.00	0.706	6.26	1.000	2.000	2.540	27	30	
CAL4	516882.1	779.8	218635.780	True	5.00	2.364	6.26	1.000	8.000	8.504	6	30	
CAL5	1338584.5	1109.4	220689.862	True	5.00	6.065	6.27	1.000	20.000	21.818	9	30	
CAL6	3104174.6	1257.6	222924.109	True	5.00	13.925	6.26	1.000	50.000	50.088	0	30	
CAL7	5826370.7	1137.3	216042.000	True	5.00	26.969	6.26	1.000	100.000	97.008	-3	30	

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV28DCAL **QMethod Name:** 18AUG20QM
Result Table: 18NOV28DCAL_Updated1/10/2019 3:36:50 PM **Acquisition Method:** 18AUG13_3uL.dam

NEtPFOSA

y = 1.11561 x (r = 0.99945) (weighting: 1 / x)



Component Calibration Verification

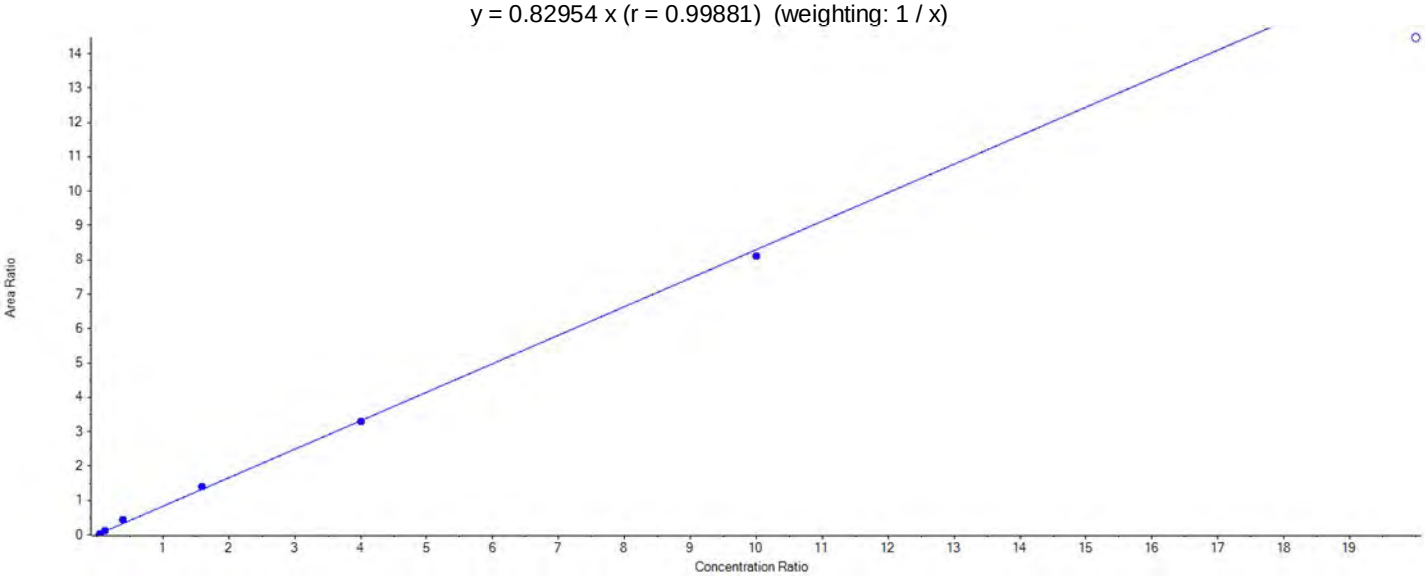
Sample Name	NEtPFOSA Area	S/N	d5-NEtPFOSA Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	3384.4	107.2	70050.412	True	5.00	0.048	6.27	1.000	0.200	0.217	8	30	
CAL2	7883.3	201.2	66646.838	True	5.00	0.118	6.27	1.000	0.600	0.530	-12	30	
CAL3	30595.3	507.0	64623.659	True	5.00	0.473	6.27	1.000	2.000	2.122	6	30	
CAL4	119152.1	624.5	66966.371	True	5.00	1.779	6.28	1.000	8.000	7.975	0	30	
CAL5	293215.8	1053.2	66384.647	True	5.00	4.417	6.28	1.000	20.000	19.796	-1	30	
CAL6	698744.6	1184.9	59705.755	True	5.00	11.703	6.27	1.000	50.000	52.452	5	30	
CAL7	1290814.8	1076.0	59209.120	True	5.00	21.801	6.27	1.000	100.000	97.709	-2	30	

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV28DCAL **QMethod Name:** 18AUG20QM
Result Table: 18NOV28DCAL_Updated1/10/2019 3:36:50 PM **Acquisition Method:** 18AUG13_3uL.dam

PFTrDA

y = 0.82954 x (r = 0.99881) (weighting: 1 / x)



Component Calibration Verification

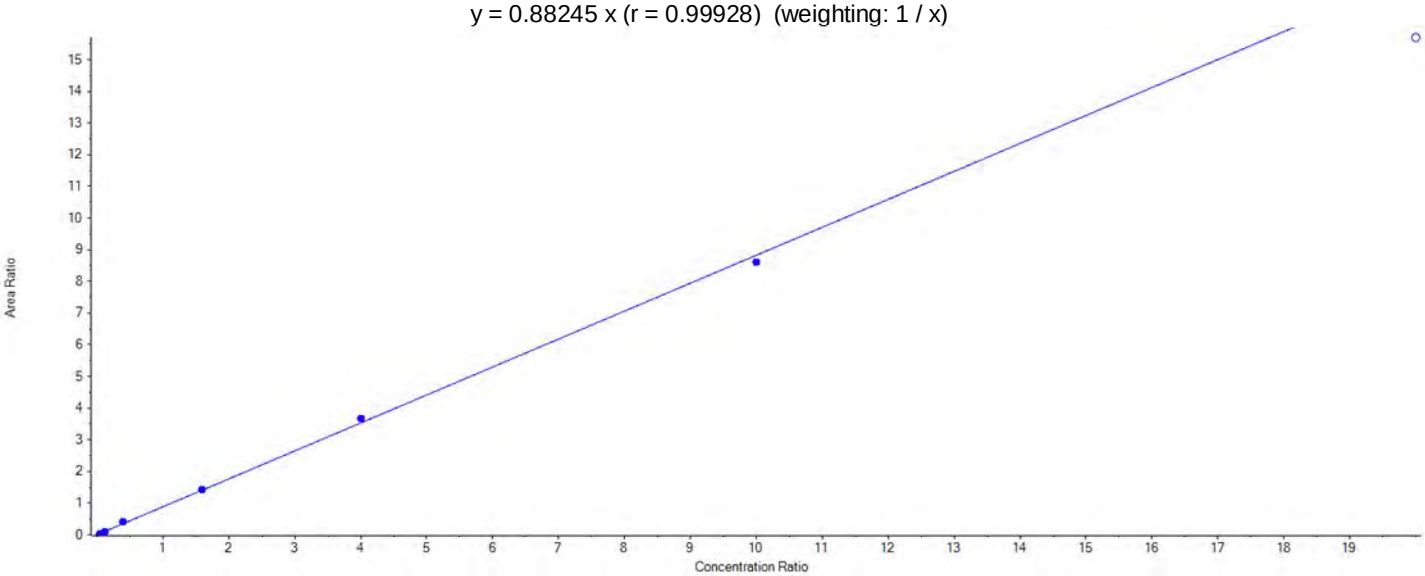
Sample Name	PFTrDA Area	S/N	13C2-PFDoDA Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	48537.6	415.6	1173339.125	True	5.00	0.041	6.26	1.030	0.200	0.249	25	30	
CAL2	117562.3	613.3	1140522.314	True	5.00	0.103	6.25	1.030	0.600	0.621	4	30	
CAL3	466266.9	1132.7	1091194.874	True	5.00	0.427	6.26	1.030	2.000	2.576	29	30	
CAL4	1622977.7	2016.4	1150927.360	True	5.00	1.410	6.26	1.030	8.000	8.500	6	30	
CAL5	3743763.6	1689.2	1133027.856	True	5.00	3.304	6.26	1.030	20.000	19.916	0	30	
CAL6	7958673.4	2584.3	980215.411	True	5.00	8.119	6.25	1.030	50.000	48.938	-2	30	
CAL7	12329126.1	2217.5	852235.609	False	5.00	14.467	6.26	1.030	100.000	87.197	-13	30	

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV28DCAL **QMethod Name:** 18AUG20QM
Result Table: 18NOV28DCAL_Updated1/10/2019 3:36:50 PM **Acquisition Method:** 18AUG13_3uL.dam

PFTeDA

y = 0.88245 x (r = 0.99928) (weighting: 1 / x)



Component Calibration Verification

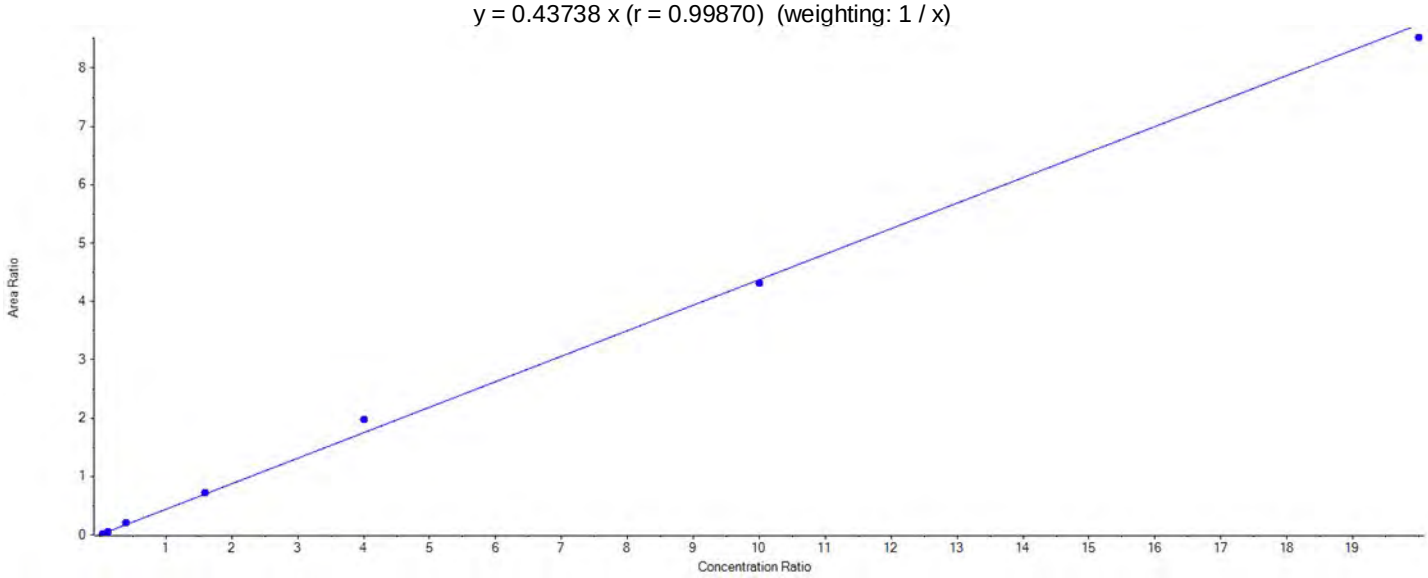
Sample Name	PFTeDA Area	S/N	13C2-PFTeDA Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	34099.2	261.8	873945.602	True	5.00	0.039	6.43	1.000	0.200	0.221	11	30	
CAL2	88360.3	524.6	858145.146	True	5.00	0.103	6.43	1.000	0.600	0.583	-3	30	
CAL3	342239.8	919.9	841931.091	True	5.00	0.406	6.43	1.000	2.000	2.303	15	30	
CAL4	1172052.0	1455.1	826669.980	True	5.00	1.418	6.43	1.000	8.000	8.033	0	30	
CAL5	2897106.2	1865.2	786107.475	True	5.00	3.685	6.44	1.000	20.000	20.882	4	30	
CAL6	6793735.3	2537.2	789168.429	True	5.00	8.609	6.43	1.000	50.000	48.777	-2	30	
CAL7	11258874.1	2188.3	717297.714	False	5.00	15.696	6.43	1.000	100.000	88.936	-11	30	

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV28DCAL **QMethod Name:** 18AUG20QM
Result Table: 18NOV28DCAL_Updated1/10/2019 3:36:50 PM **Acquisition Method:** 18AUG13_3uL.dam

PFHxDA

y = 0.43738 x (r = 0.99870) (weighting: 1 / x)



Component Calibration Verification

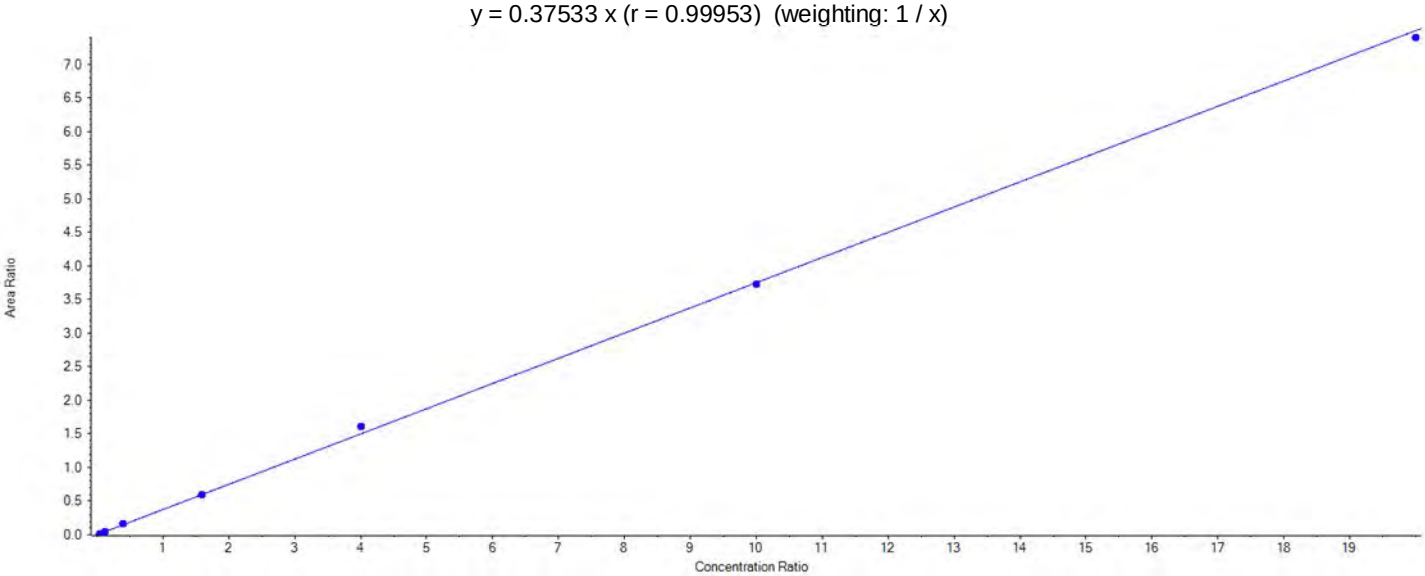
Sample Name	PFHxDA Area	S/N	13C2-PFTeDA Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	19206.4	679.6	873945.602	True	5.00	0.022	6.74	1.050	0.200	0.251	26	30	
CAL2	44164.6	964.5	858145.146	True	5.00	0.051	6.73	1.050	0.600	0.588	-2	30	
CAL3	173721.0	2652.8	841931.091	True	5.00	0.206	6.74	1.050	2.000	2.359	18	30	
CAL4	601723.8	3198.2	826669.980	True	5.00	0.728	6.74	1.050	8.000	8.321	4	30	
CAL5	1551331.1	2619.4	786107.475	True	5.00	1.973	6.74	1.050	20.000	22.560	13	30	
CAL6	3402004.4	2973.0	789168.429	True	5.00	4.311	6.73	1.050	50.000	49.281	-1	30	
CAL7	6113985.1	2964.4	717297.714	True	5.00	8.524	6.73	1.050	100.000	97.440	-3	30	

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV28DCAL **QMethod Name:** 18AUG20QM
Result Table: 18NOV28DCAL_Updated1/10/2019 3:36:50 PM **Acquisition Method:** 18AUG13_3uL.dam

PFODA

y = 0.37533 x (r = 0.99953) (weighting: 1 / x)



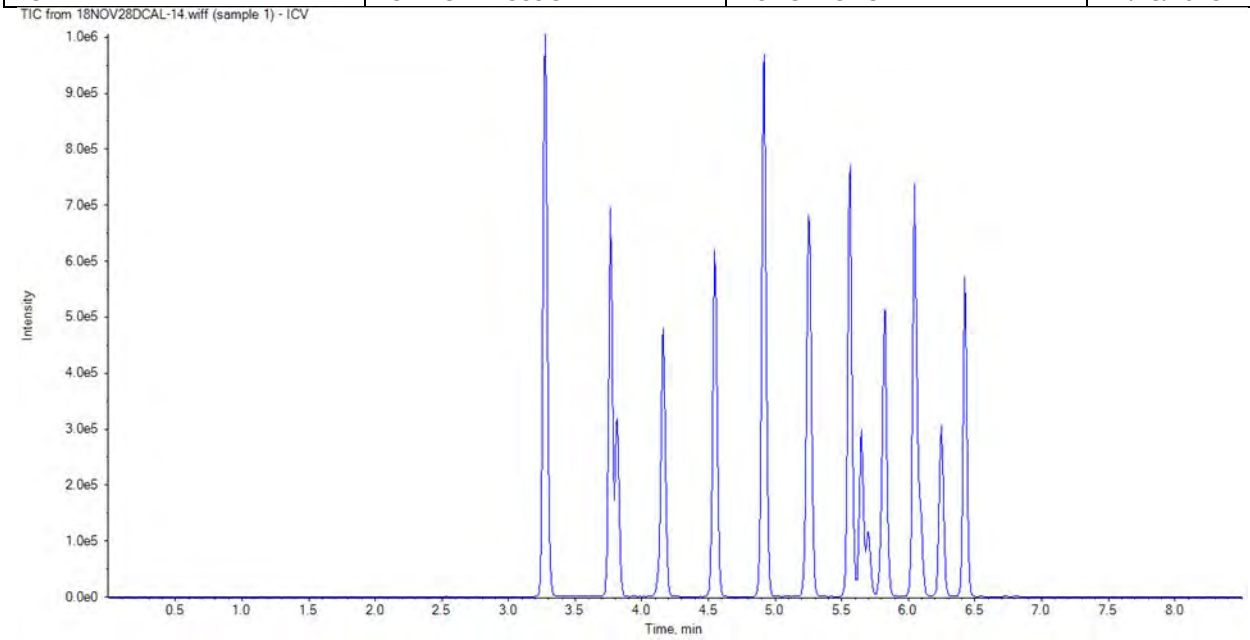
Component Calibration Verification

Sample Name	PFODA Area	S/N	13C2-PFTeDA Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	14378.0	1085.0	873945.602	True	5.00	0.016	7.00	1.090	0.200	0.219	10	30	
CAL2	36421.5	1561.1	858145.146	True	5.00	0.042	6.99	1.090	0.600	0.565	-6	30	
CAL3	139071.5	2402.7	841931.091	True	5.00	0.165	7.00	1.090	2.000	2.201	10	30	
CAL4	494210.7	3411.6	826669.980	True	5.00	0.598	7.00	1.090	8.000	7.964	0	30	
CAL5	1272897.4	4522.2	786107.475	True	5.00	1.619	7.00	1.090	20.000	21.571	8	30	
CAL6	2942000.1	3495.7	789168.429	True	5.00	3.728	6.99	1.090	50.000	49.663	-1	30	
CAL7	5309889.9	3965.5	717297.714	True	5.00	7.403	7.00	1.090	100.000	98.616	-1	30	

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV28DCAL **QMethod Name:** 18AUG20QM
Result Table: 18NOV28DCAL_Updated1/10/2019 3:36:50 PM **Acquisition Method:** 18AUG13_3uL.dam

Sample Name	Sample ID:	Sample File:	Acquisition Date:
ICV	ICVMODX1833G	18NOV28DCAL-14.wiff	11/28/2018 2:54:22 PM



Injection Standard Name	Inj Std Conc	Injection Std Peak Area	CAL3 Injection Standard Area	Injection Std %Diff	Injection Std %Diff Limit	Injection Std %Diff OOS
13C3-PFBA	5.000	909586.4	887248.9	2.5	50	
13C2-PFOA	5.000	531347.1	498501.6	6.6	50	
13C4-PFOS	4.780	296756.3	283214.2	4.8	50	
13C2-PFDA	5.000	468972.3	441790.6	6.2	50	

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV28DCAL **QMethod Name:** 18AUG20QM
Result Table: 18NOV28DCAL_Updated1/10/2019 3:36:50 PM **Acquisition Method:** 18AUG13_3uL.dam

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV28DCAL **QMethod Name:** 18AUG20QM
Result Table: 18NOV28DCAL_Updated1/10/2019 3:36:50 PM **Acquisition Method:** 18AUG13_3uL.dam

Sample Name	Sample ID:	Sample File:	Acquisition Date:
ICV	ICVMODX1833G	18NOV28DCAL-14.wiff	11/28/2018 2:54:22 PM

Analyte Name	Analyte Area	Ext Std Name	Ext Std Area	Ext Std Con	Area Ratio	RT (min)	RRT	Spec Amt	Calc Amt	% Diff	% Diff Lim	% Diff OOS
PFBA	387187.0	13C4-PFBA	992615.758	5.00	0.390	3.27	1.00	2.000	2.138	7	30	
PFPeA	377961.6	13C5-PFPeA	975580.855	5.00	0.387	3.77	1.00	2.000	1.901	-5	30	
PFBS	159425.0	13C3-PFBS	446010.999	4.65	0.357	3.81	1.00	1.769	1.735	-2	30	
4:2-FTS	N/A	13C2-4:2-FTS	68184.320	4.67	N/A	N/A	N/A	0.000	N/A		30	
PFHxA	369137.1	13C5-PFHxA	699371.272	5.00	0.528	4.16	1.00	2.000	2.119	6	30	
PFPeS	N/A	13C3-PFBS	446010.999	4.65	N/A	N/A	N/A	0.000	N/A		30	
PFHpA	373590.8	13C4-PFHpA	556403.086	5.00	0.671	4.55	1.00	2.000	2.072	4	30	
PFHxS	125085.3	13C3-PFHxS	317108.955	4.73	0.394	4.55	1.00	1.890	1.847	-2	30	
6:2-FTS	N/A	13C2-6:2-FTS	63350.515	4.75	N/A	N/A	N/A	0.000	N/A		30	
PFHpS	131043.1	13C3-PFHxS	317108.955	4.73	0.413	4.91	1.08	1.900	2.062	9	30	
PFOA	404358.9	13C8-PFOA	1001731.379	5.00	0.404	4.92	1.00	2.000	2.086	4	30	
PFOS	122334.6	13C8-PFOS	316117.130	4.78	0.387	5.25	1.00	1.910	1.623	-15	30	
PFNA	351872.0	13C9-PFNA	647064.116	5.00	0.544	5.26	1.00	2.000	2.084	4	30	
PFNS	N/A	13C8-PFOS	316117.130	4.78	N/A	N/A	N/A	0.000	N/A		30	
PFDA	325191.9	13C6-PFDA	857032.881	5.00	0.379	5.56	1.00	2.000	2.148	7	30	
8:2-FTS	N/A	13C2-8:2-FTS	51912.864	4.79	N/A	N/A	N/A	0.000	N/A		30	
PFOSA	N/A	13C8-PFOSA	637370.645	5.00	N/A	N/A	N/A	0.000	N/A		30	
NMeFOSAA	74168.8	d3-NMeFOSAA	183040.018	5.00	0.405	5.70	1.00	2.000	2.585	29	30	
PFDS	72374.3	13C8-PFOS	316117.130	4.78	0.229	5.79	1.10	1.930	1.815	-6	30	
PFUnDA	354099.8	13C7-PFUnDA	559327.431	5.00	0.633	5.82	1.00	2.000	2.263	13	30	
NEtFOSAA	57367.9	d5-NEtFOSAA	140839.958	5.00	0.407	5.83	1.00	2.000	1.984	-1	30	
PFDoDA	427818.9	13C2-PFDoDA	1134142.098	5.00	0.377	6.05	1.00	2.000	2.066	3	30	
10:2-FTS	N/A	13C2-8:2-FTS	51912.864	4.79	N/A	N/A	N/A	0.000	N/A		30	
NMePFOSAE	N/A	d7-NMePFOSAE	262732.239	5.00	N/A	N/A	N/A	0.000	N/A		30	
NMePFOSA	N/A	d3-NMePFOSA	81059.543	5.00	N/A	N/A	N/A	0.000	N/A		30	
PFDoS	N/A	13C8-PFOS	316117.130	4.78	N/A	N/A	N/A	0.000	N/A		30	
NEtPFOSAE	N/A	d9-NEtPFOSAE	227167.682	5.00	N/A	N/A	N/A	0.000	N/A		30	
NEtPFOSA	N/A	d5-NEtPFOSA	67297.847	5.00	N/A	N/A	N/A	0.000	N/A		30	

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV28DCAL **QMethod Name:** 18AUG20QM
Result Table: 18NOV28DCAL_Updated1/10/2019 3:36:50 PM **Acquisition Method:** 18AUG13_3uL.dam

PFTrDA	416758.4	13C2-PFDoDA	1134142.098	5.00	0.367	6.25	1.03	2.000	2.215	11	30	
PFTeDA	312632.1	13C2-PFTeDA	820071.667	5.00	0.381	6.42	1.00	2.000	2.160	8	30	
PFHxDA	N/A	13C2-PFTeDA	820071.667	5.00	N/A	N/A	N/A	0.000	N/A		30	
PFODA	N/A	13C2-PFTeDA	820071.667	5.00	N/A	N/A	N/A	0.000	N/A		30	

ICAL Name: 18NOV28DCAL
QMethod Name: 18AUG20QM
Result Table: 18NOV28DCAL 11/28/2018 4:47:11 PM
Acquisition Method: 18AUG13_3uL.dam

Sample Name:	CAL1			**Data File:**		18NOV28DCAL-06.wiff
Sample ID:	CALBRN11833C			**Acquis Date:**		2018-11-28T13:42:10
Sample Type:	Standard			**Instrument:**		LM27631
Vial Position:	3			**Acquis Method:**		18AUG13_3uL.dam
Injection Vol:	3.00			**Result Table:**		18NOV28DCAL
QMethod File:	18AUG20QM			**ICAL Name:**		18NOV28DCAL
Batch Number:	N/A			**Operator:**		MCD7824
Sample Wt.:	1.00000			**Dilution Factor:**		1.00
Sample Vol.:	1.000			**Prep Factor:**		1.000

Injection Standard Peak Table

Injection Standard Area Reference File: 18NOV28DCAL-08

Injection Standard Name	Inj Std Conc	Injection Std Peak Area	Rreference Injection Standard Area	Injection Std %Diff	Injection Std %Diff Limit	Injection Std %Diff OOS
13C3-PFBA	5.0	907350.5	887248.9	2	50	
13C2-PFOA	5.0	521822.9	498501.6	5	50	
13C4-PFOS	4.8	296225.2	283214.2	5	50	
13C2-PFDA	5.0	476146.6	441790.6	8	50	

Extraction Standard Peak Table

Extraction Standard Name	Ext Std Area	Inj Std Name	Inj Std Area	Area Ratio	Ext Std Conc	Ext Std Result	Ext Std %REC	Ext Std %REC Limit	Ext Std OOS
E13C4-PFBA	1018752.8	13C3-PFBA	907350.5	1.123	5.000	5.009	100	70-130	
E13C5-PFPeA	975339.1	13C3-PFBA	907350.5	1.075	5.000	5.019	100	70-130	
E13C3-PFBS	437838.9	13C3-PFBA	907350.5	0.483	4.650	4.604	99	70-130	
E13C2-4:2-FTS	75119.1	13C2-PFOA	521822.9	0.144	4.670	4.961	106	70-130	
E13C5-PFHxA	728340.5	13C2-PFOA	521822.9	1.396	5.000	5.127	103	70-130	
E13C3-PFHxS	331982.9	13C2-PFOA	521822.9	0.636	4.730	4.986	105	70-130	
E13C4-PFHpA	547365.1	13C2-PFOA	521822.9	1.049	5.000	4.820	96	70-130	
E13C2-6:2-FTS	65543.8	13C2-PFOA	521822.9	0.126	4.750	5.258	111	70-130	
E13C8-PFOA	1030597.9	13C2-PFOA	521822.9	1.975	5.000	5.436	109	70-130	
E13C8-PFOS	318525.4	13C4-PFOS	296225.2	1.075	4.780	4.854	102	70-130	
E13C9-PFNA	659714.7	13C4-PFOS	296225.2	2.227	5.000	4.892	98	70-130	
E13C6-PFDA	855362.9	13C2-PFDA	476146.6	1.796	5.000	5.065	101	70-130	
E13C2-8:2-FTS	58895.0	13C2-PFDA	476146.6	0.124	4.790	5.316	111	70-130	
E13C8-PFOSA	662264.8	13C2-PFDA	476146.6	1.391	5.000	5.104	102	70-130	
Ed3-NMeFOSAA	220597.3	13C2-PFDA	476146.6	0.463	5.000	5.882	118	70-130	
E13C7-PFUnDA	587155.4	13C2-PFDA	476146.6	1.233	5.000	5.212	104	70-130	
Ed5-NEtFOSAA	127543.5	13C2-PFDA	476146.6	0.268	5.000	4.772	95	70-130	
E13C2-PFDoDA	1173339.1	13C2-PFDA	476146.6	2.464	5.000	5.178	104	70-130	
Ed7-NMePFOSAE	281912.7	13C2-PFDA	476146.6	0.592	5.000	5.117	102	70-130	
Ed3-NMePFOSA	85678.0	13C2-PFDA	476146.6	0.180	5.000	4.870	97	70-130	
Ed9-NEtPFOSAE	226256.0	13C2-PFDA	476146.6	0.475	5.000	4.818	96	70-130	
Ed5-NEtPFOSA	70050.4	13C2-PFDA	476146.6	0.147	5.000	5.112	102	70-130	
E13C2-PFTeDA	873945.6	13C2-PFDA	476146.6	1.835	5.000	5.079	102	70-130	

APPROVED
By MCD at 5:00 pm, 11/28/18

REVIEWED
By HMK at 12:21 pm, 11/29/18

ICAL Name: 18NOV28DCAL **Result Table:** 18NOV28DCAL 11/28/2018 4:47:11 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

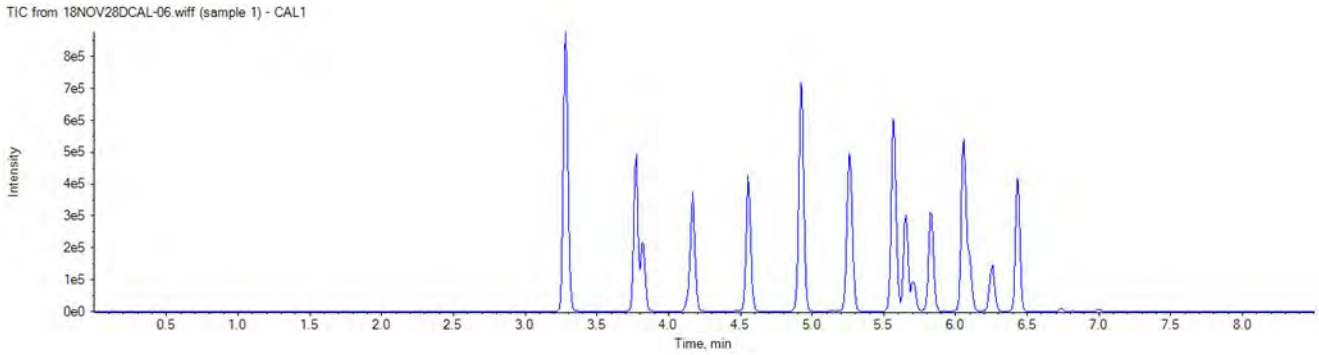
Analyte Quantitation Peak Table

Sample Name: CAL1 **Instrument Name:** LM27631 **File Name:** 18NOV28DCAL-06.wiff

Sample Wt	Sample Vol	Dilution Factor	PrepFactor
1.00000	1.000	1.00	1.000

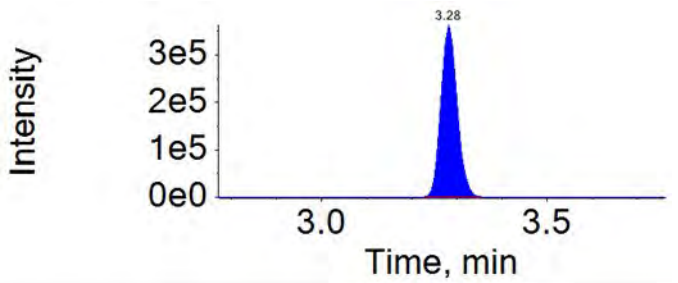
Analyte Name	RT	RRT	Analyte Area Response	E	Int Typ	ES Name	ES RT	ES Area Response	Area Ratio	Sample Result (ng/g)
PFBA	3.28	1.000	43996.2		A	13C4-PFBA	3.28	1018752.8	0.043	0.237
PFPeA	3.77	1.000	44706.1		A	13C5-PFPeA	3.77	975339.1	0.046	0.225
PFBS	3.82	1.000	17465.3		A	13C3-PFBS	3.82	437838.9	0.040	0.194
4:2-FTS	4.13	1.000	5603.9		A	13C2-4:2-FTS	4.13	75119.1	0.075	0.200
PFHxA	4.17	1.000	42281.8		A	13C5-PFHxA	4.17	728340.5	0.058	0.233
PFPeS	4.19	1.100	8956.0		A	13C3-PFBS	3.82	437838.9	0.020	0.207
PFHpA	4.56	1.000	42530.6		A	13C4-PFHpA	4.55	547365.1	0.078	0.240
PFHxS	4.56	1.000	12830.8		M	13C3-PFHxS	4.56	331982.9	0.039	0.181
6:2-FTS	4.91	1.000	5676.8		A	13C2-6:2-FTS	4.91	65543.8	0.087	0.226
PFHpS	4.92	1.080	13921.8		A	13C3-PFHxS	4.56	331982.9	0.042	0.209
PFOA	4.93	1.000	42517.4		A	13C8-PFOA	4.92	1030597.9	0.041	0.213
PFOS	5.25	1.000	13060.0		M	13C8-PFOS	5.25	318525.4	0.041	0.172
PFNA	5.27	1.000	39485.1		A	13C9-PFNA	5.27	659714.7	0.060	0.229
PFNS	5.55	1.060	9756.6		A	13C8-PFOS	5.25	318525.4	0.031	0.193
PFDA	5.57	1.000	33621.2		A	13C6-PFDA	5.57	855362.9	0.039	0.222
8:2-FTS	5.57	1.000	6138.7		A	13C2-8:2-FTS	5.57	58895.0	0.104	0.197
PFOSA	5.65	1.000	27693.0		A	13C8-PFOSA	5.65	662264.8	0.042	0.212
NMeFOSAA	5.71	1.000	6661.0		M	d3-NMeFOSAA	5.71	220597.3	0.030	0.193
PFDS	5.81	1.110	6850.7		A	13C8-PFOS	5.25	318525.4	0.022	0.171
PFUnDA	5.82	1.000	36428.0		A	13C7-PFUnDA	5.83	587155.4	0.062	0.222
NEtFOSAA	5.85	1.000	5069.2		M	d5-NEtFOSAA	5.84	127543.5	0.040	0.194
PFDoDA	6.06	1.000	53386.6		A	13C2-PFDoDA	6.06	1173339.1	0.045	0.249
10:2-FTS	6.07	1.090	5717.7		A	13C2-8:2-FTS	5.57	58895.0	0.097	0.214
NMePFOSAE	6.10	1.000	13889.2		A	d7-NMePFOSAE	6.09	281912.7	0.049	0.207
NMePFOSA	6.11	1.000	3274.2		A	d3-NMePFOSA	6.11	85678.0	0.038	0.203
PFDoS	6.23	1.190	4012.1		A	13C8-PFOS	5.25	318525.4	0.013	0.181
NEtPFOSAE	6.26	1.000	15402.7		A	d9-NEtPFOSAE	6.25	226256.0	0.068	0.245
NEtPFOSA	6.27	1.000	3384.4		A	d5-NEtPFOSA	6.27	70050.4	0.048	0.217
PFTrDA	6.26	1.030	48537.6		A	13C2-PFDoDA	6.06	1173339.1	0.041	0.249
PFTeDA	6.43	1.000	34099.2		A	13C2-PFTeDA	6.43	873945.6	0.039	0.221
PFHxDA	6.74	1.050	19206.4		A	13C2-PFTeDA	6.43	873945.6	0.022	0.251
PFODA	7.00	1.090	14378.0		A	13C2-PFTeDA	6.43	873945.6	0.016	0.219

Total Ion Chromatogram

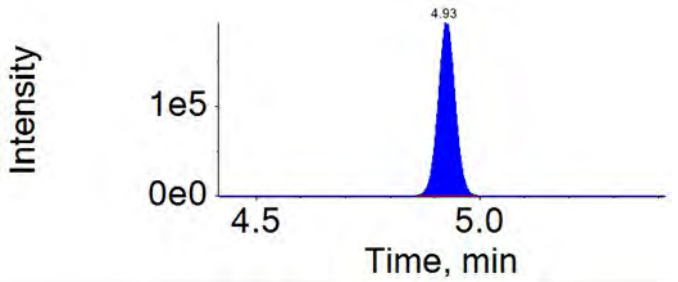


ICAL Name: 18NOV28DCAL **Result Table:** 18NOV28DCAL 11/28/2018 4:47:11 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

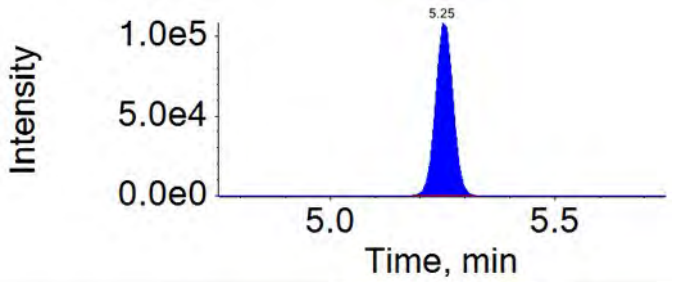
Injection Standard: 13C3-PFBA
216.0 / 172.0



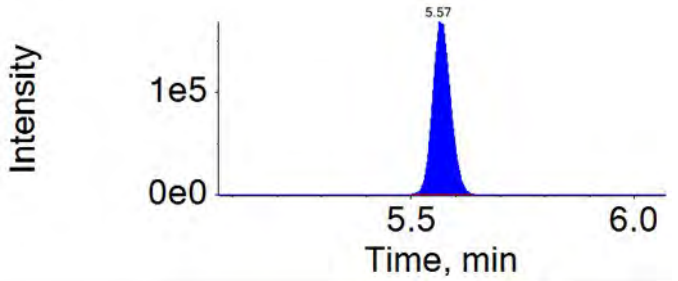
Injection Standard: 13C2-PFOA
415.0 / 370.0



Injection Standard: 13C4-PFOS
503.0 / 80.0



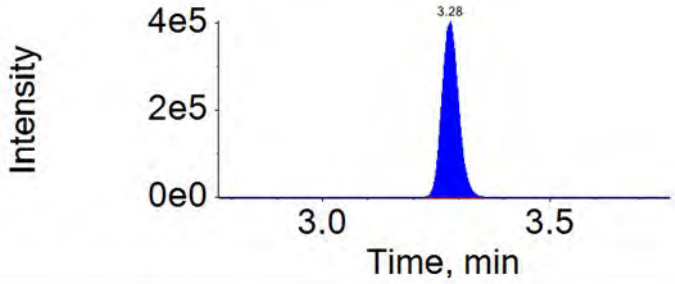
Injection Standard: 13C2-PFDA
515.0 / 470.0



ICAL Name: 18NOV28DCAL **Result Table:** 18NOV28DCAL 11/28/2018 4:47:11 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

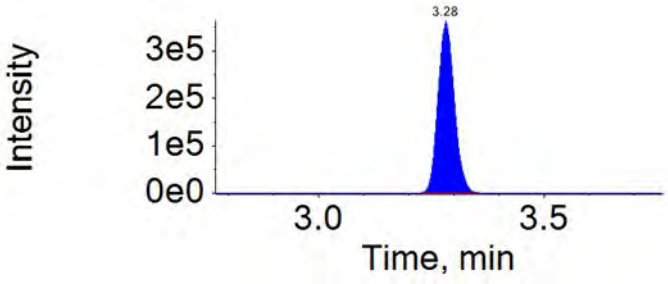
Extraction Standard: E13C4-PFBA

217.0 / 172.0



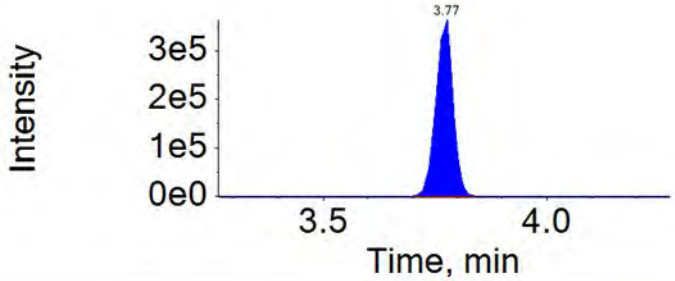
Injection Standard: 13C3-PFBA

216.0 / 172.0



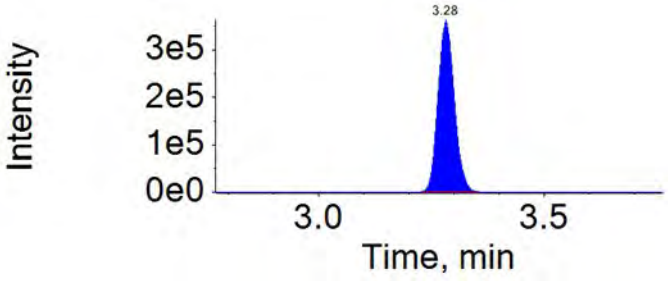
Extraction Standard: E13C5-PFPeA

268.0 / 223.0



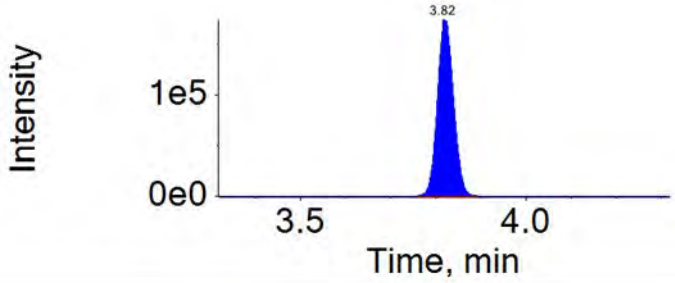
Injection Standard: 13C3-PFBA

216.0 / 172.0



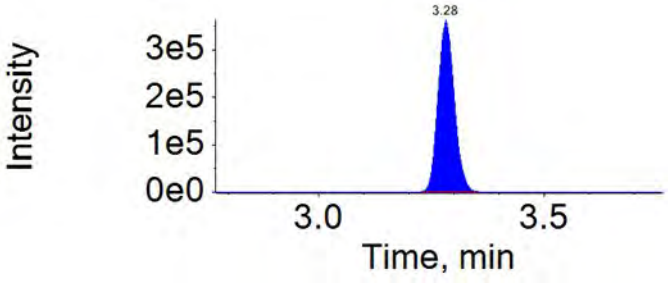
Extraction Standard: E13C3-PFBS

302.0 / 80.0



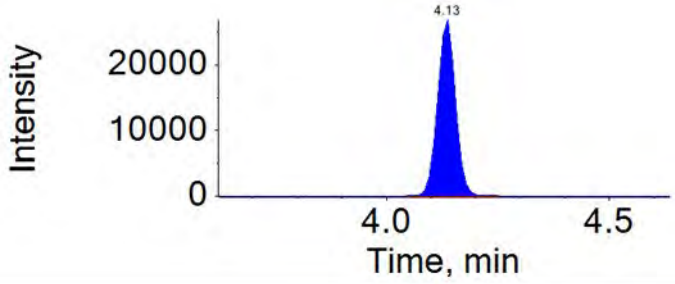
Injection Standard: 13C3-PFBA

216.0 / 172.0



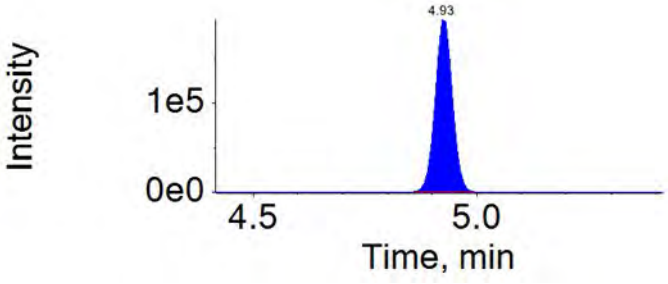
Extraction Standard: E13C2-4:2-FTS

329.0 / 81.0



Injection Standard: 13C2-PFOA

415.0 / 370.0

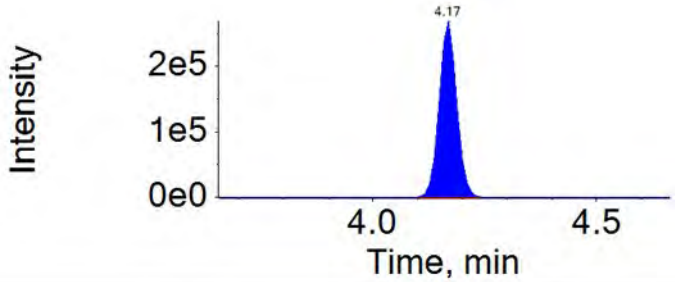


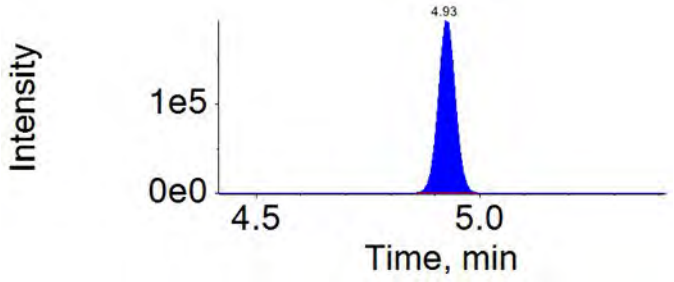
APPROVED
By MCD at 5:00 pm, 11/28/18

REVIEWED
By HMK at 12:21 pm, 11/29/18

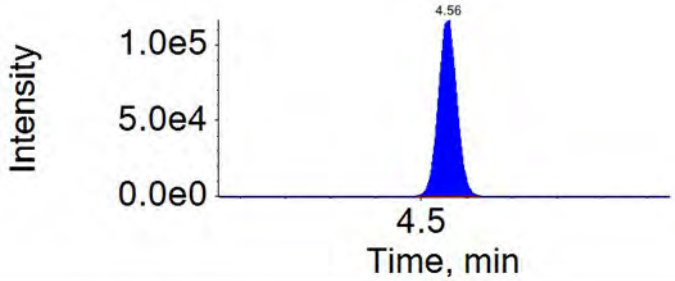
ICAL Name: 18NOV28DCAL **Result Table:** 18NOV28DCAL 11/28/2018 4:47:11 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

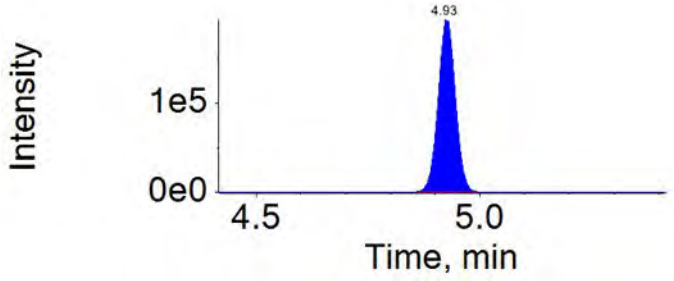
Extraction Standard: E13C5-PFHxA	Injection Standard: 13C2-PFOA
318.0 / 273.0	415.0 / 370.0



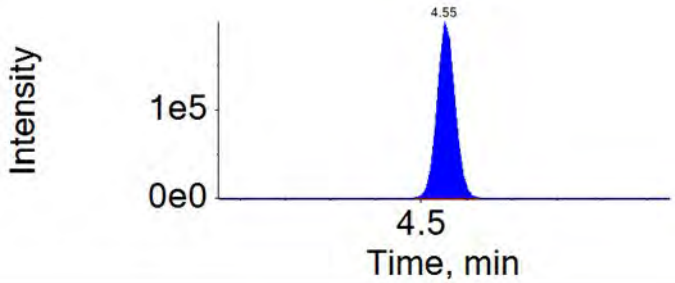


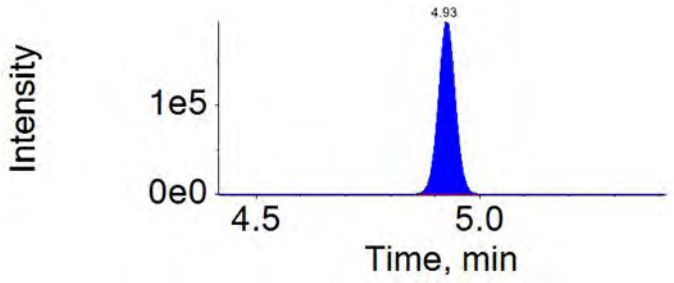
Extraction Standard: E13C3-PFHxS	Injection Standard: 13C2-PFOA
402.0 / 80.0	415.0 / 370.0



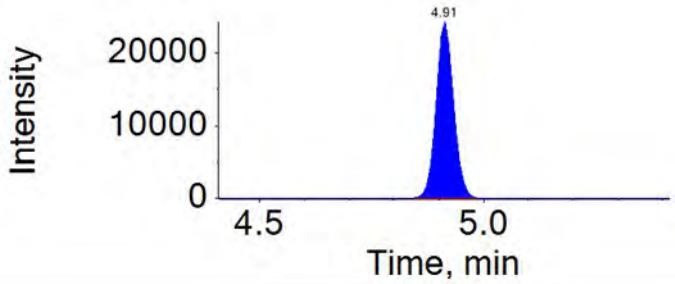


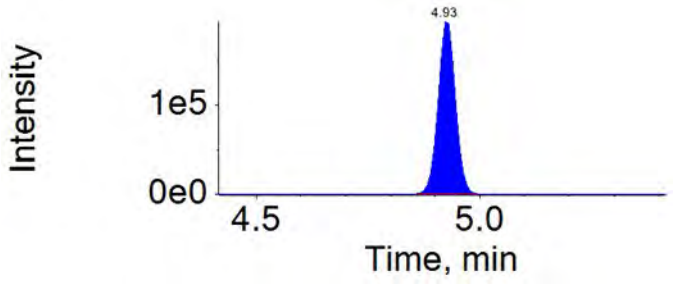
Extraction Standard: E13C4-PFHpA	Injection Standard: 13C2-PFOA
367.0 / 322.0	415.0 / 370.0





Extraction Standard: E13C2-6:2-FTS	Injection Standard: 13C2-PFOA
429.0 / 81.0	415.0 / 370.0

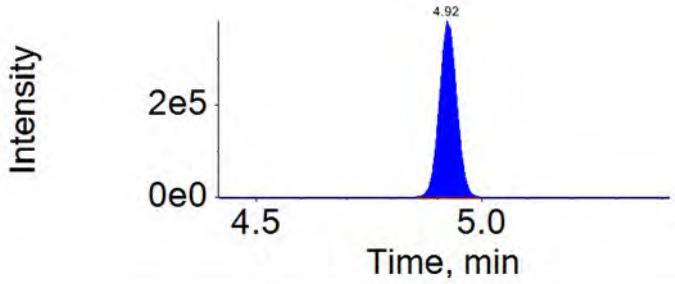




ICAL Name: 18NOV28DCAL **Result Table:** 18NOV28DCAL 11/28/2018 4:47:11 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

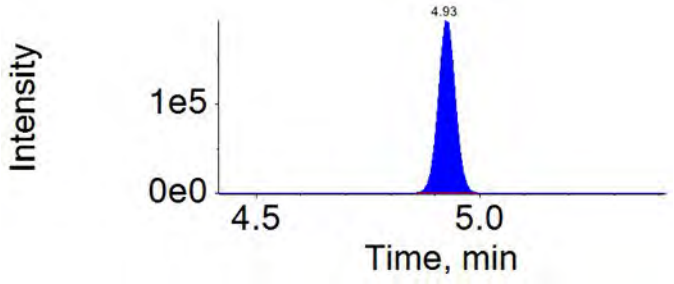
Extraction Standard: E13C8-PFOA

421.0 / 376.0



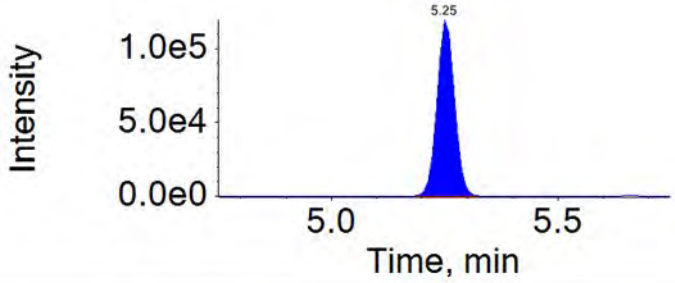
Injection Standard: 13C2-PFOA

415.0 / 370.0



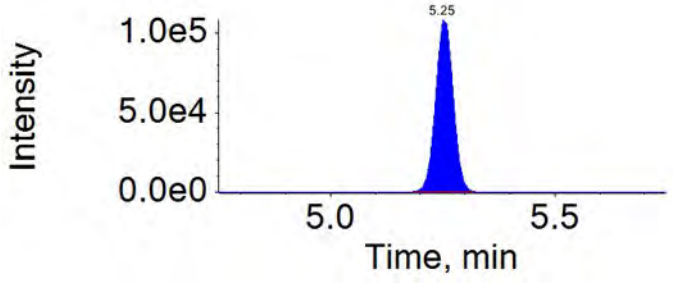
Extraction Standard: E13C8-PFOS

507.0 / 80.0



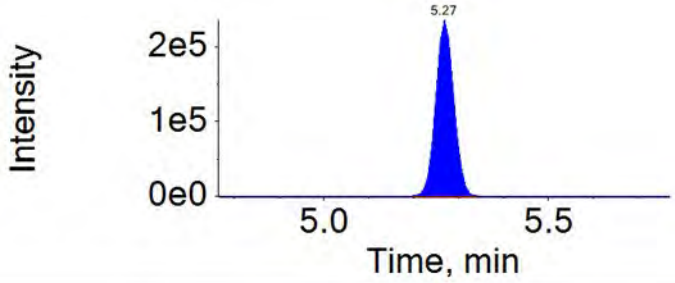
Injection Standard: 13C4-PFOS

503.0 / 80.0



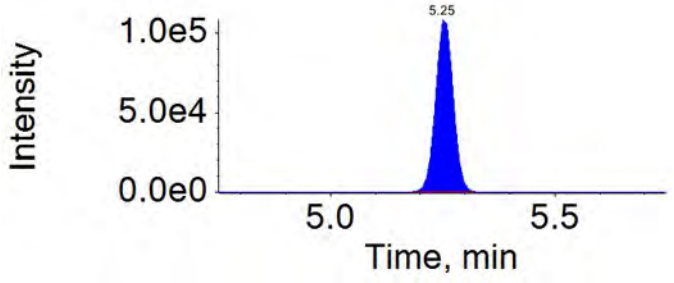
Extraction Standard: E13C9-PFNA

472.0 / 427.0



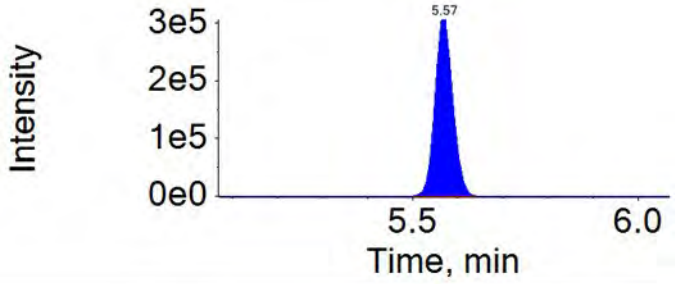
Injection Standard: 13C4-PFOS

503.0 / 80.0



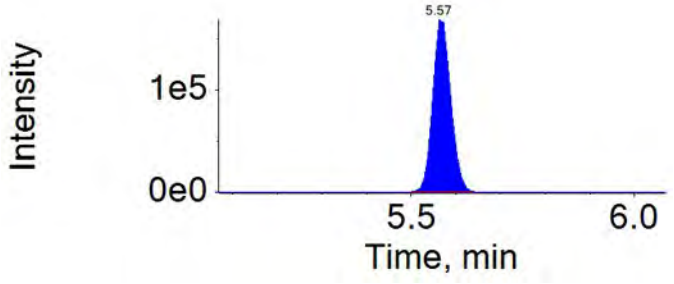
Extraction Standard: E13C6-PFDA

519.0 / 474.0



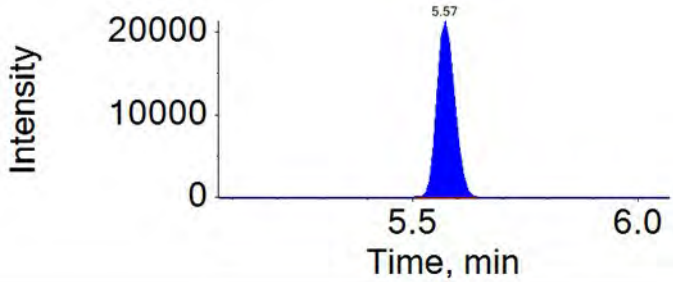
Injection Standard: 13C2-PFDA

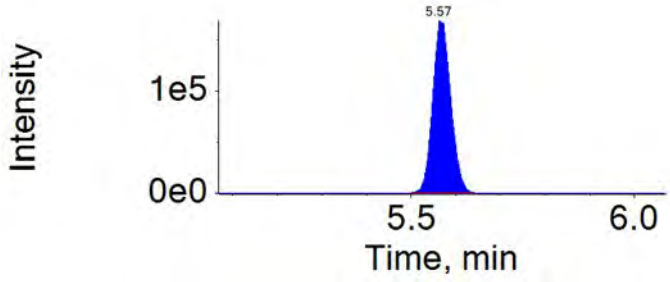
515.0 / 470.0



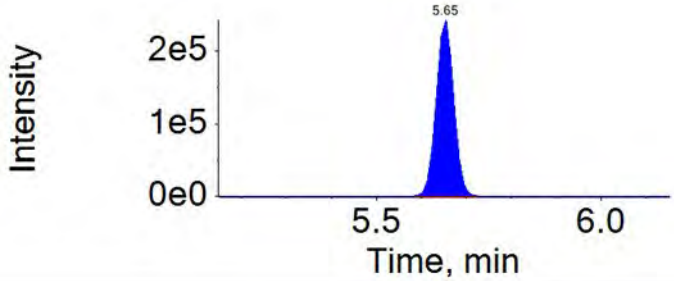
ICAL Name: 18NOV28DCAL **Result Table:** 18NOV28DCAL 11/28/2018 4:47:11 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

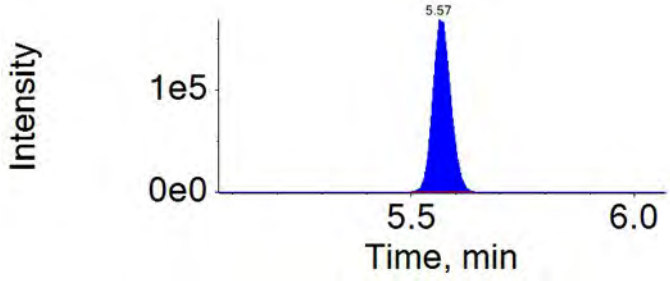
Extraction Standard: E13C2-8:2-FTS	Injection Standard: 13C2-PFDA
529.0 / 81.0	515.0 / 470.0



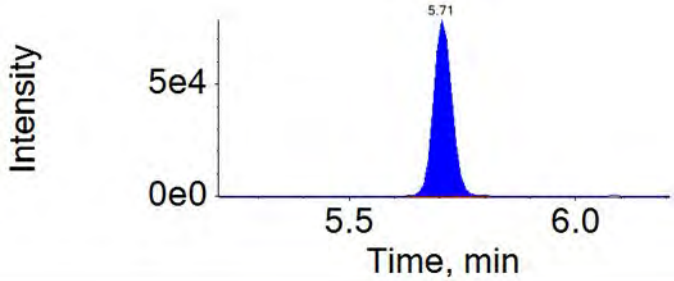


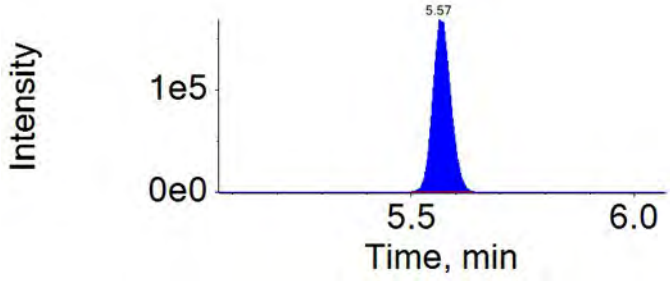
Extraction Standard: E13C8-PFOSA	Injection Standard: 13C2-PFDA
506.0 / 78.0	515.0 / 470.0



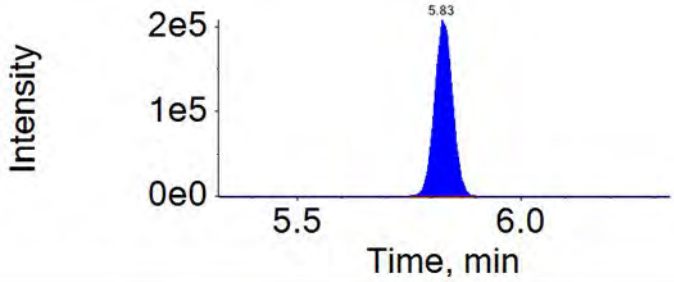


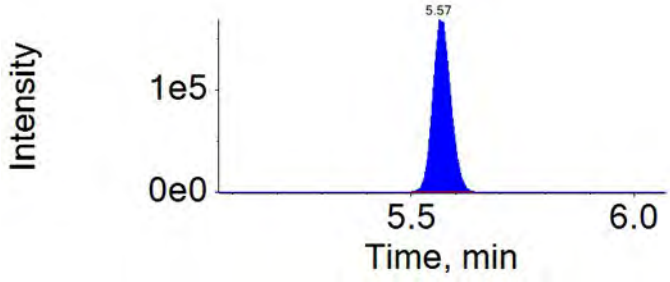
Extraction Standard: Ed3-NMeFOSAA	Injection Standard: 13C2-PFDA
573.0 / 419.0	515.0 / 470.0





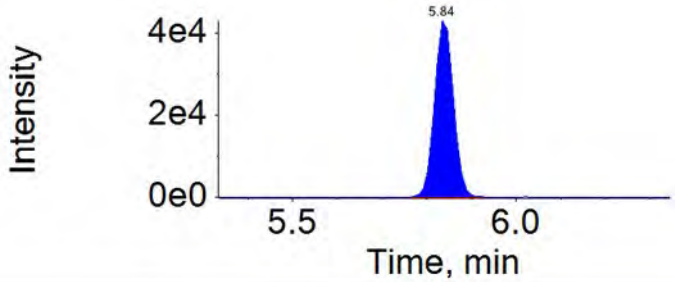
Extraction Standard: E13C7-PFUnDA	Injection Standard: 13C2-PFDA
570.0 / 525.0	515.0 / 470.0

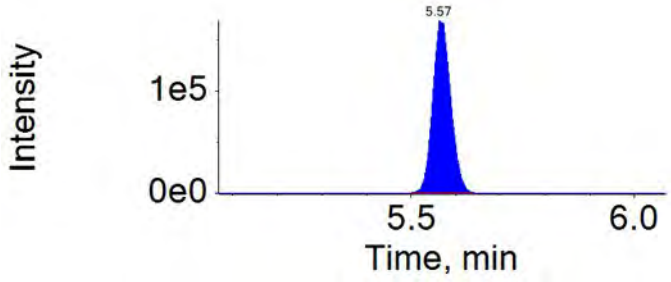




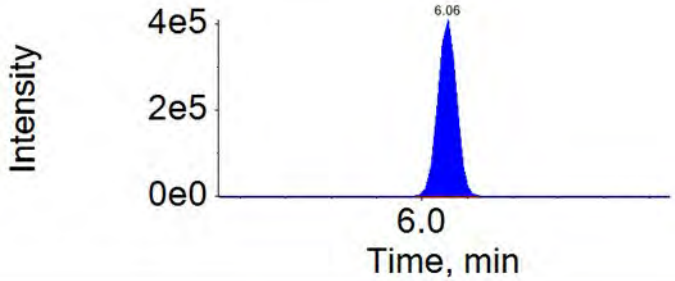
ICAL Name: 18NOV28DCAL **Result Table:** 18NOV28DCAL 11/28/2018 4:47:11 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

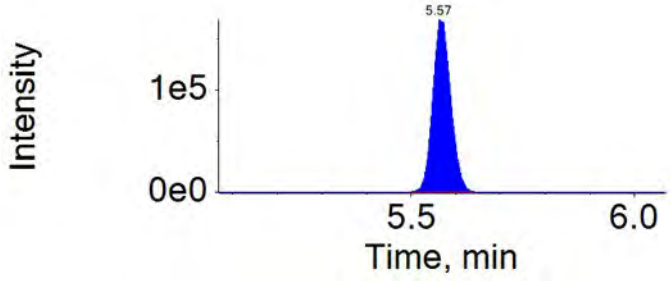
Extraction Standard: Ed5-NEtFOSAA	Injection Standard: 13C2-PFDA
589.0 / 419.0	515.0 / 470.0



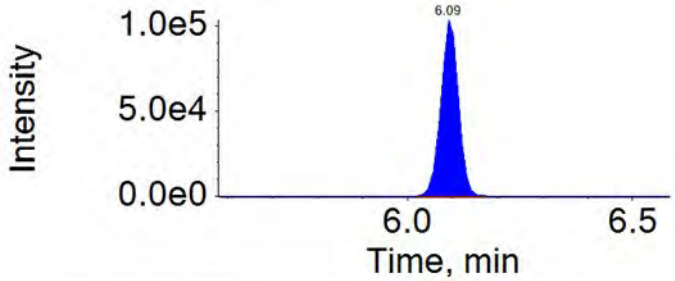


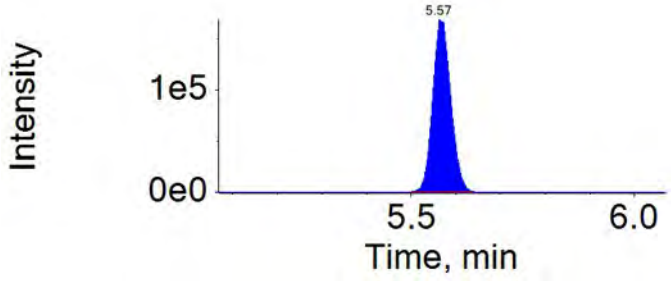
Extraction Standard: E13C2-PFDoDA	Injection Standard: 13C2-PFDA
615.0 / 570.0	515.0 / 470.0



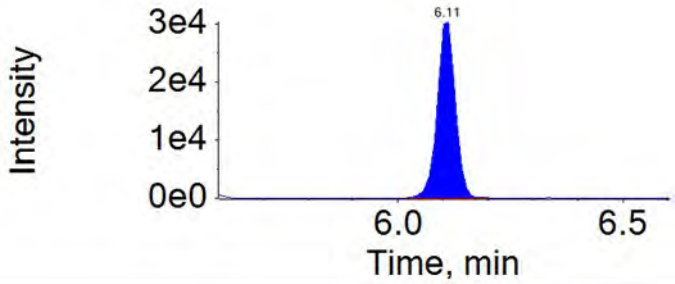


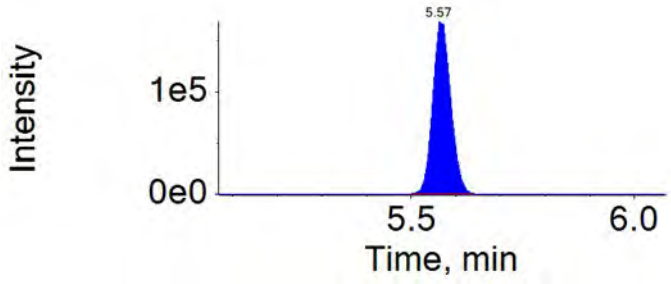
Extraction Standard: Ed7-NMePFOSAE	Injection Standard: 13C2-PFDA
623.0 / 59.0	515.0 / 470.0





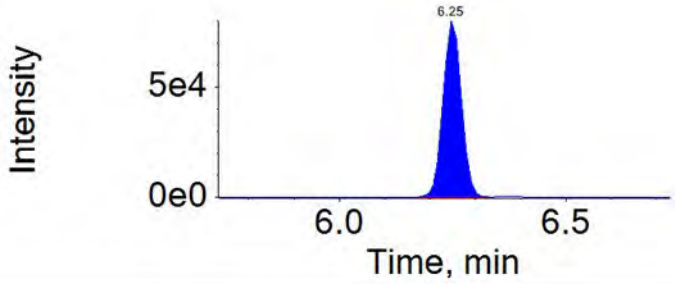
Extraction Standard: Ed3-NMePFOSA	Injection Standard: 13C2-PFDA
515.0 / 169.0	515.0 / 470.0

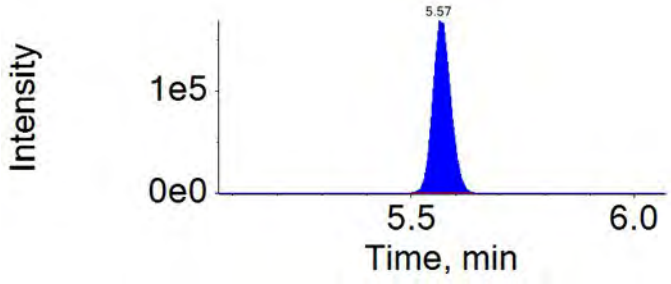




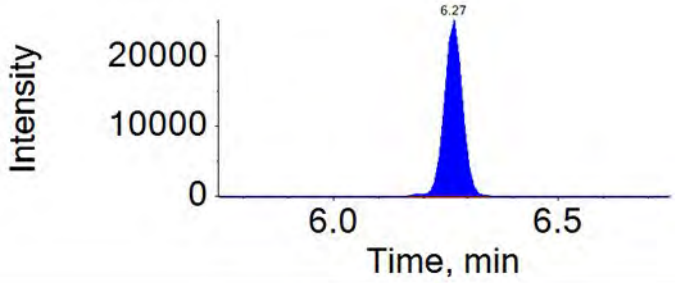
ICAL Name: 18NOV28DCAL **Result Table:** 18NOV28DCAL 11/28/2018 4:47:11 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

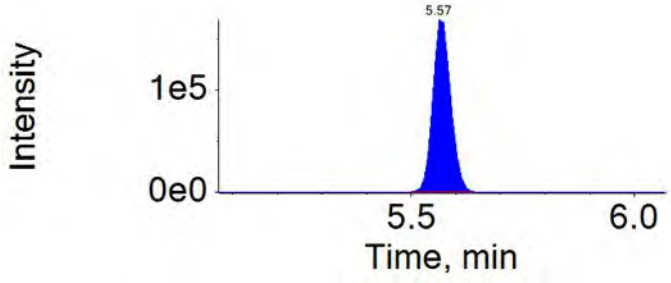
Extraction Standard: Ed9-NEtPFOSAE	Injection Standard: 13C2-PFDA
639.0 / 59.0	515.0 / 470.0



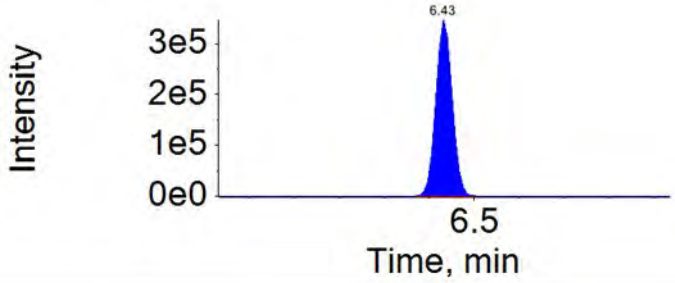


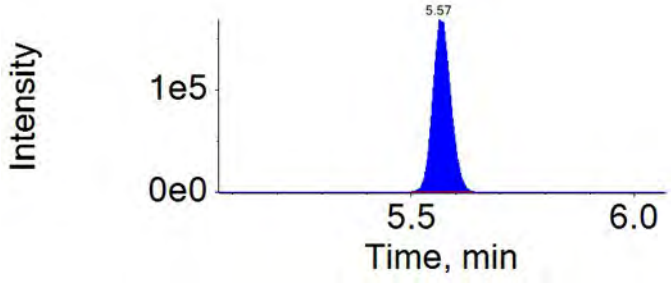
Extraction Standard: Ed5-NEtPFOSA	Injection Standard: 13C2-PFDA
531.0 / 169.0	515.0 / 470.0





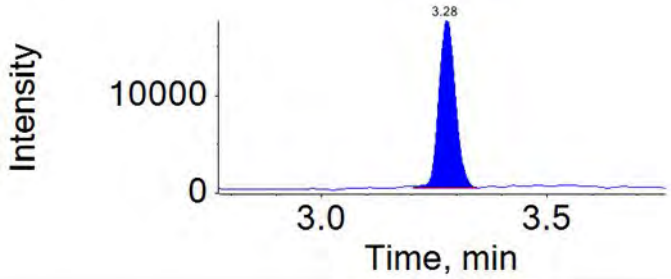
Extraction Standard: E13C2-PFTeDA	Injection Standard: 13C2-PFDA
715.0 / 670.0	515.0 / 470.0



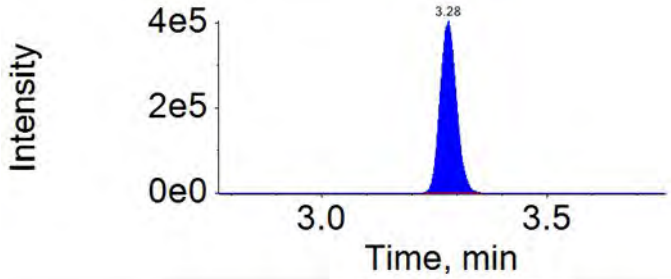


ICAL Name: 18NOV28DCAL **Result Table:** 18NOV28DCAL 11/28/2018 4:47:11 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

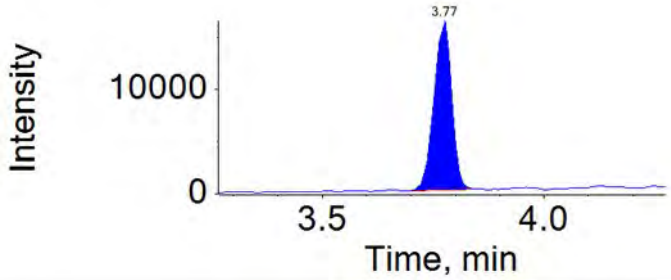
Analyte: PFBA
213.0 / 169.0



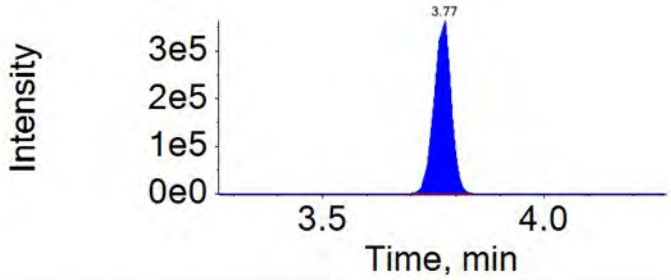
Extraction Standard: 13C4-PFBA
217.0 / 172.0



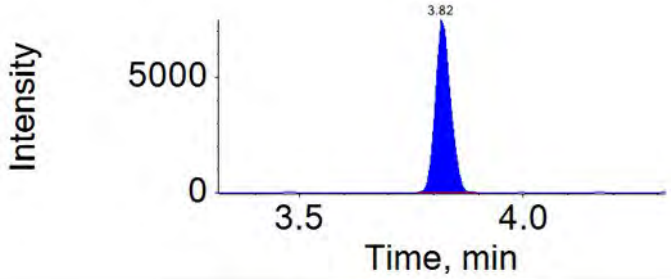
Analyte: PFPeA
263.0 / 219.0



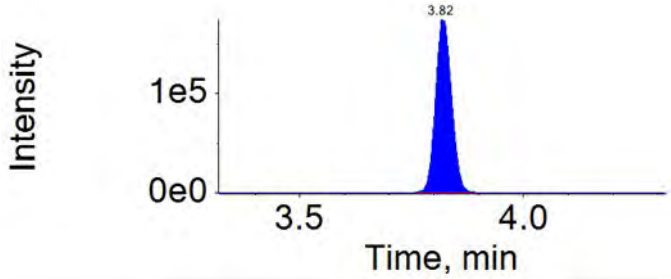
Extraction Standard: 13C5-PFPeA
268.0 / 223.0



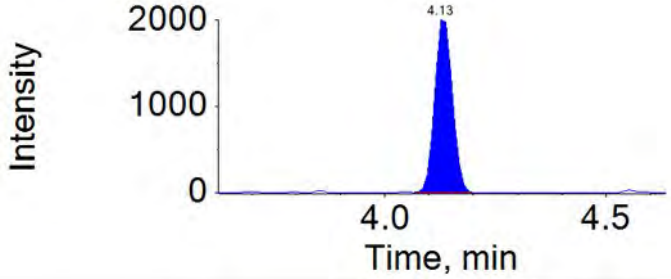
Analyte: PFBS
299.0 / 80.0



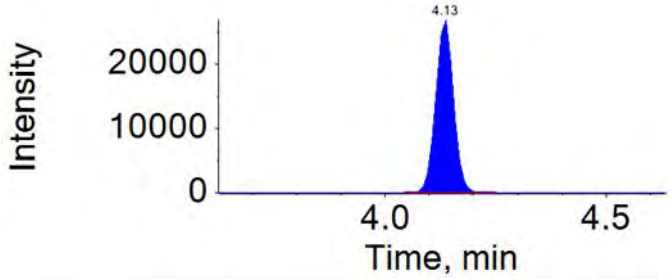
Extraction Standard: 13C3-PFBS
302.0 / 80.0



Analyte: 4:2-FTS
327.0 / 307.0



Extraction Standard: 13C2-4:2-FTS
329.0 / 81.0

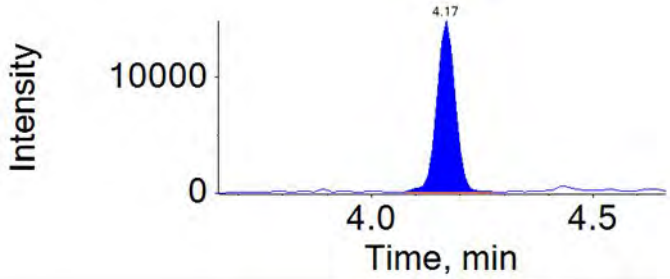


APPROVED
By MCD at 5:00 pm, 11/28/18

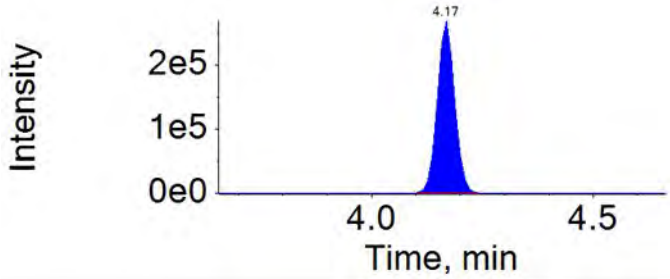
REVIEWED
By HMK at 12:22 pm, 11/29/18

ICAL Name: 18NOV28DCAL **Result Table:** 18NOV28DCAL 11/28/2018 4:47:11 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

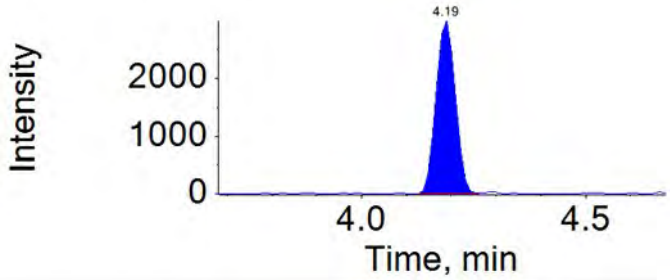
Analyte: PFHxA
313.0 / 269.0



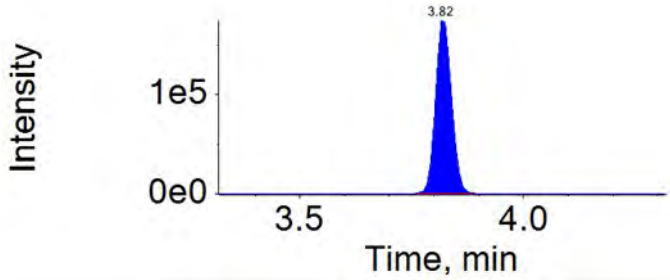
Extraction Standard: 13C5-PFHxA
318.0 / 273.0



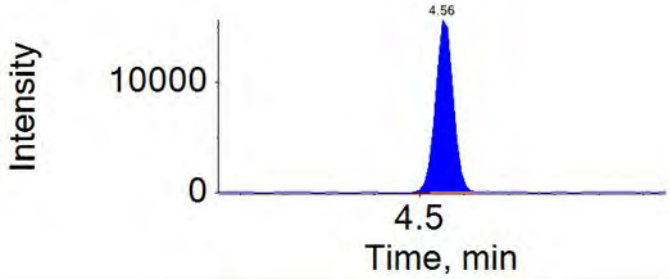
Analyte: PFPeS
349.0 / 80.0



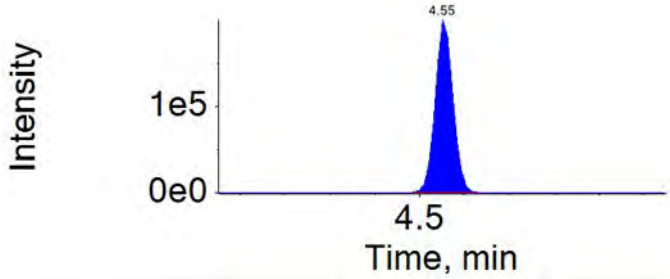
Extraction Standard: 13C3-PFBS
302.0 / 80.0



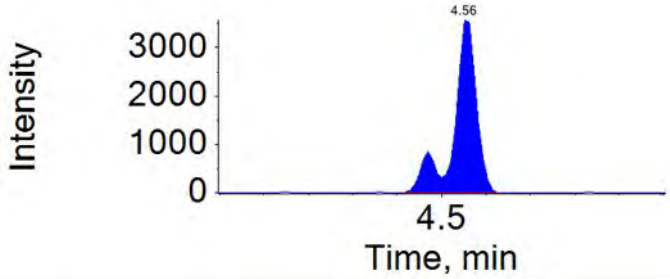
Analyte: PFHpA
363.0 / 319.0



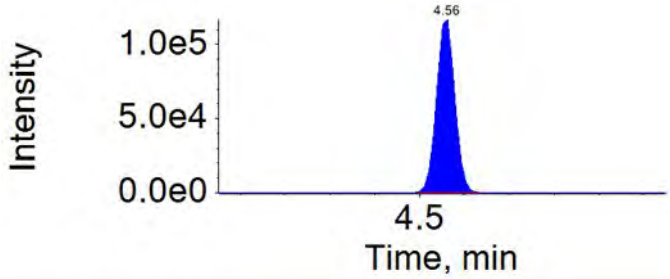
Extraction Standard: 13C4-PFHpA
367.0 / 322.0



Analyte: PFHxS
399.0 / 80.0



Extraction Standard: 13C3-PFHxS
402.0 / 80.0

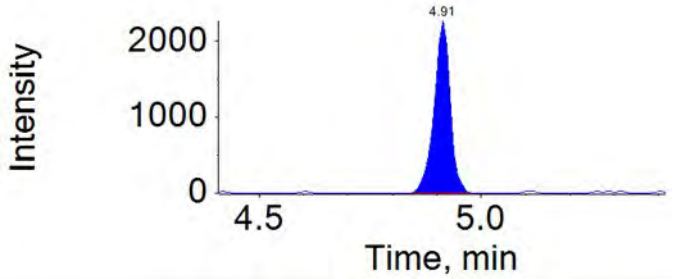


APPROVED
By MCD at 5:00 pm, 11/28/18

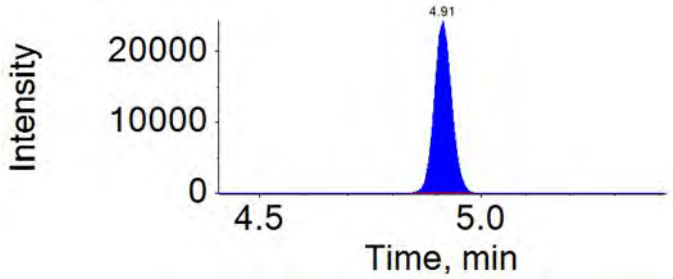
REVIEWED
By HMK at 12:22 pm, 11/29/18

ICAL Name: 18NOV28DCAL **Result Table:** 18NOV28DCAL 11/28/2018 4:47:11 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

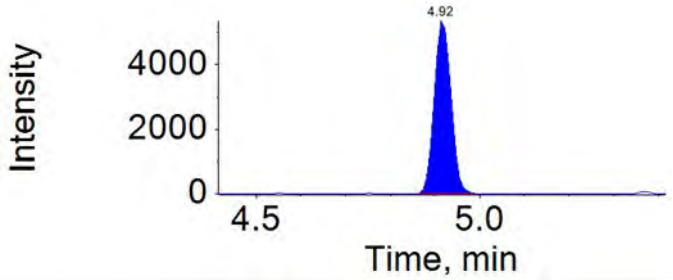
Analyte: 6:2-FTS
427.0 / 407.0



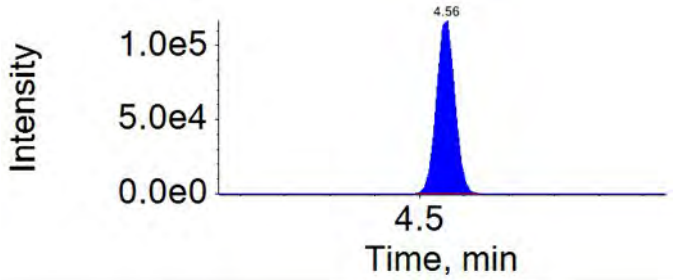
Extraction Standard: 13C2-6:2-FTS
429.0 / 81.0



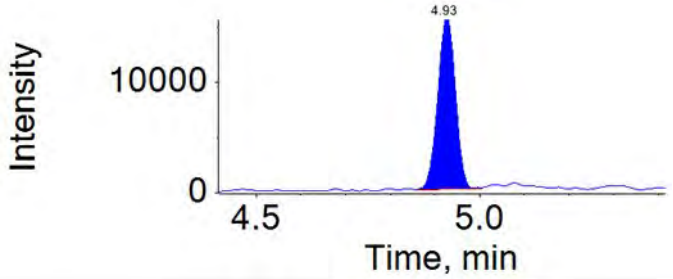
Analyte: PFHpS
449.0 / 80.0



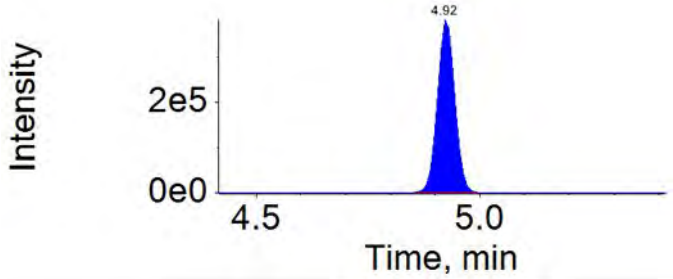
Extraction Standard: 13C3-PFHxS
402.0 / 80.0



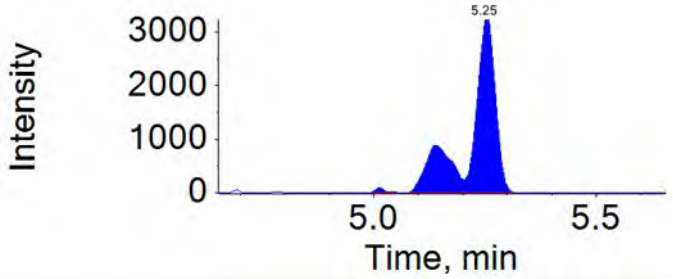
Analyte: PFOA
413.0 / 369.0



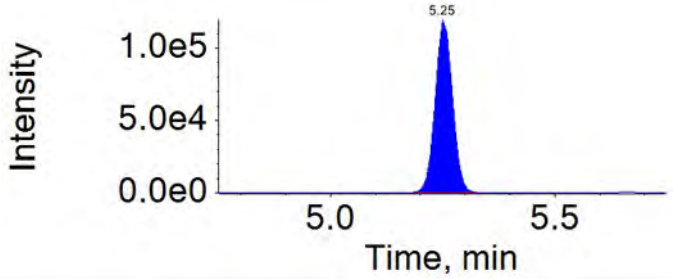
Extraction Standard: 13C8-PFOA
421.0 / 376.0



Analyte: PFOS
499.0 / 80.0



Extraction Standard: 13C8-PFOS
507.0 / 80.0

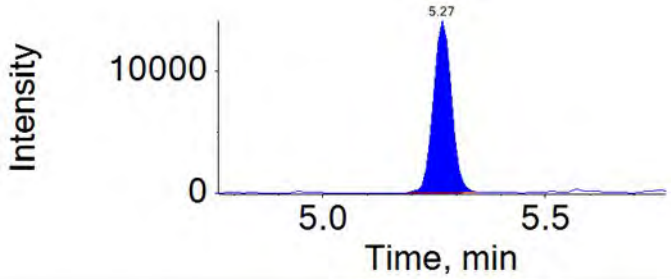


APPROVED
By MCD at 5:00 pm, 11/28/18

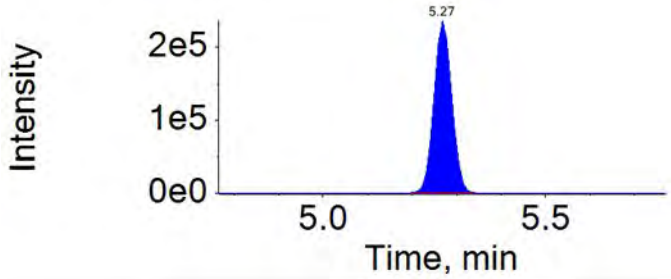
REVIEWED
By HMK at 12:22 pm, 11/29/18

ICAL Name: 18NOV28DCAL **Result Table:** 18NOV28DCAL 11/28/2018 4:47:11 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

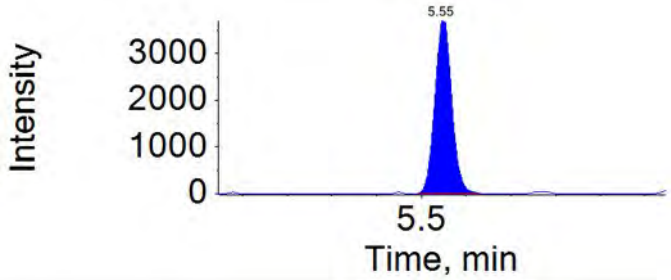
Analyte: PFNA
463.0 / 419.0



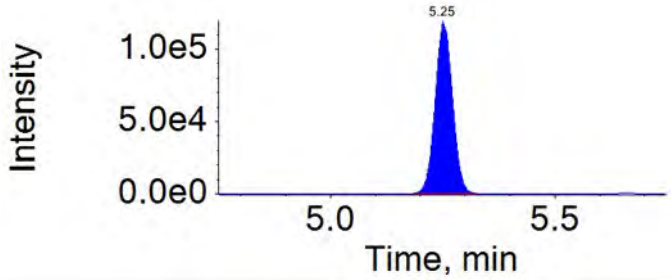
Extraction Standard: 13C9-PFNA
472.0 / 427.0



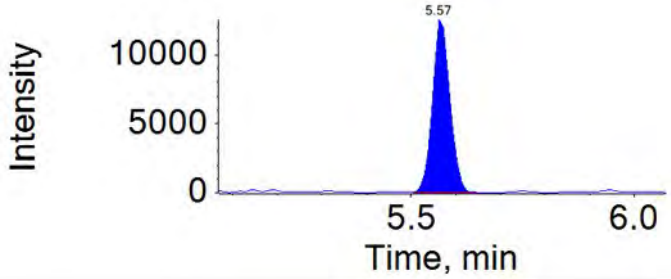
Analyte: PFNS
549.0 / 80.0



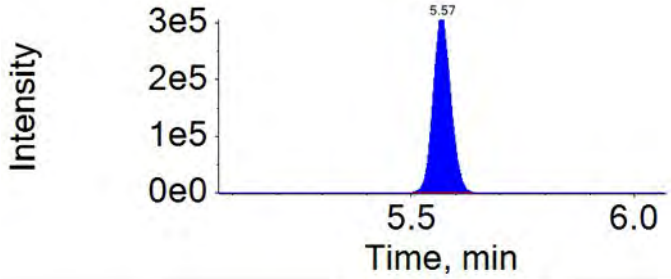
Extraction Standard: 13C8-PFOS
507.0 / 80.0



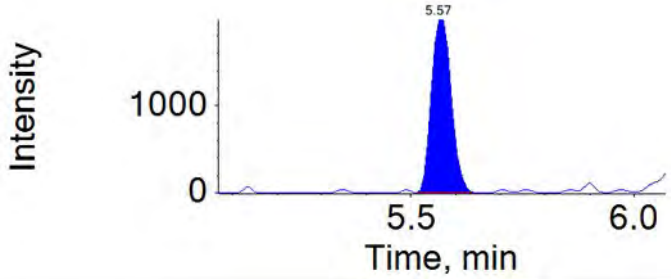
Analyte: PFDA
513.0 / 469.0



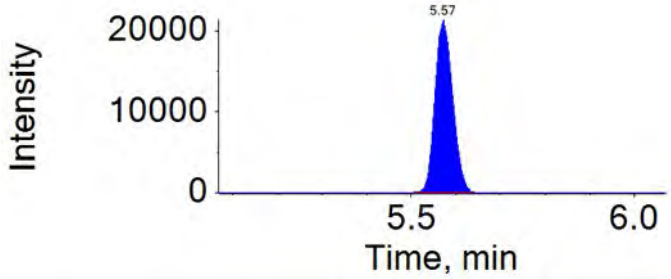
Extraction Standard: 13C6-PFDA
519.0 / 474.0



Analyte: 8:2-FTS
527.0 / 507.0



Extraction Standard: 13C2-8:2-FTS
529.0 / 81.0

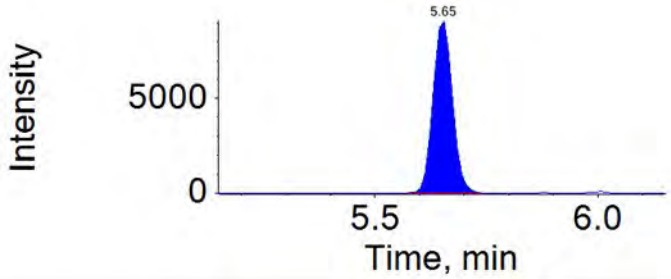


APPROVED
By MCD at 5:00 pm, 11/28/18

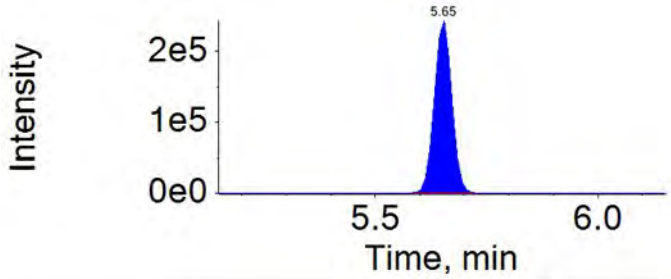
REVIEWED
By HMK at 12:22 pm, 11/29/18

ICAL Name: 18NOV28DCAL **Result Table:** 18NOV28DCAL 11/28/2018 4:47:11 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

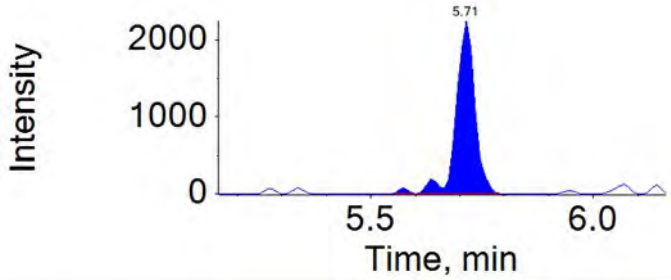
Analyte: PFOSA
498.0 / 78.0



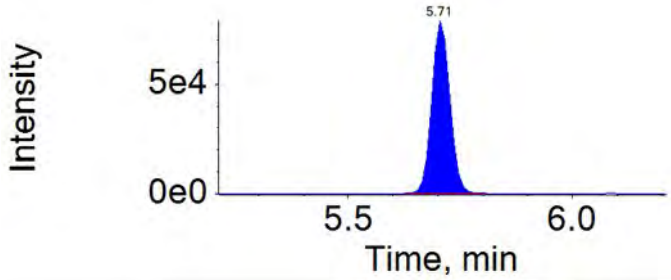
Extraction Standard: 13C8-PFOSA
506.0 / 78.0



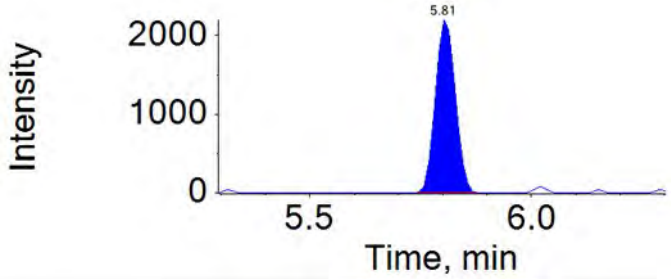
Analyte: NMeFOSAA
570.0 / 419.0



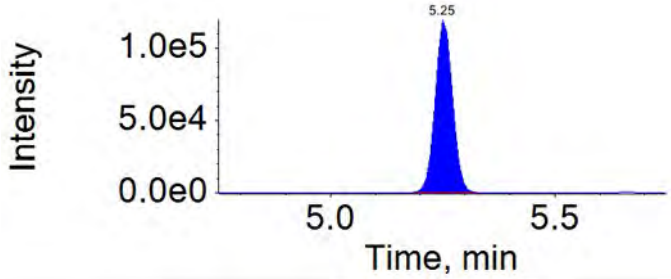
Extraction Standard: d3-NMeFOSAA
573.0 / 419.0



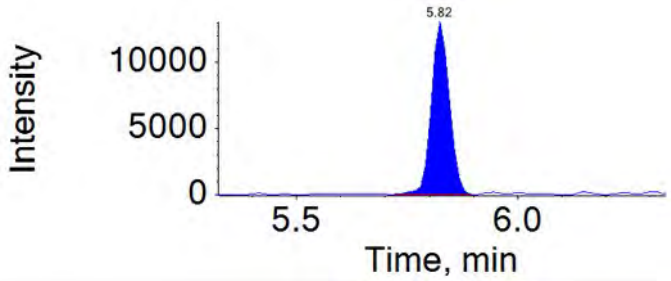
Analyte: PFDS
599.0 / 80.0



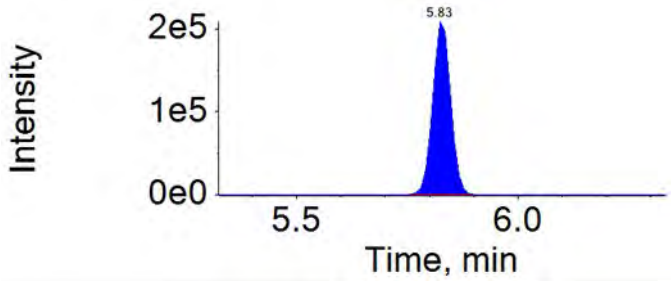
Extraction Standard: 13C8-PFOS
507.0 / 80.0



Analyte: PFUnDA
563.0 / 519.0



Extraction Standard: 13C7-PFUnDA
570.0 / 525.0

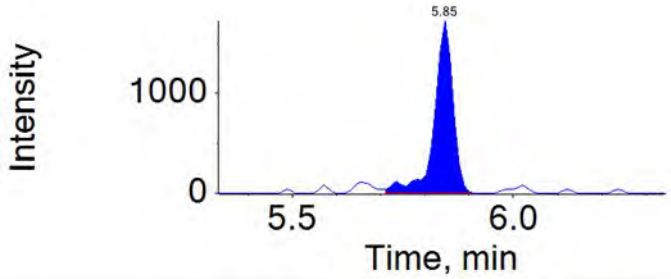


APPROVED
By MCD at 5:00 pm, 11/28/18

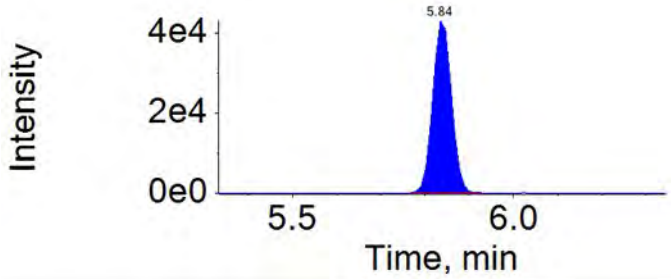
REVIEWED
By HMK at 12:22 pm, 11/29/18

ICAL Name: 18NOV28DCAL **Result Table:** 18NOV28DCAL 11/28/2018 4:47:11 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

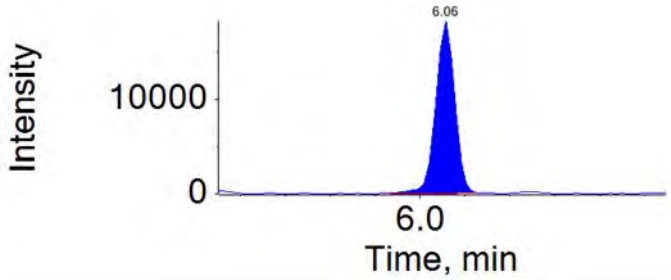
Analyte: NEtFOSAA
584.0 / 419.0



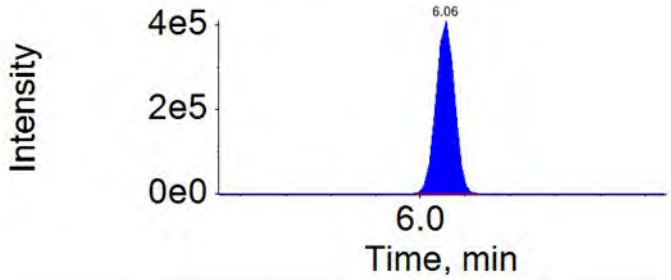
Extraction Standard: d5-NEtFOSAA
589.0 / 419.0



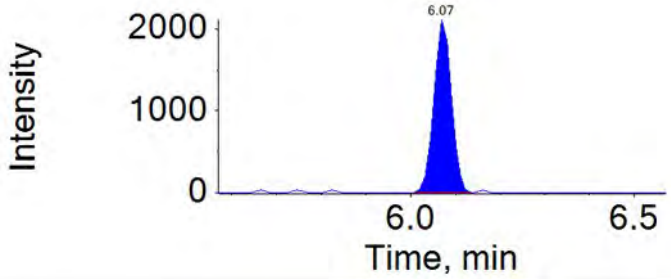
Analyte: PFDoDA
613.0 / 569.0



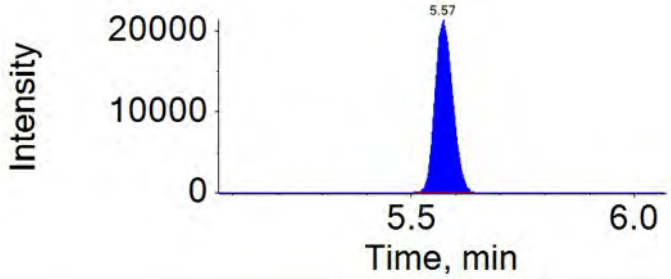
Extraction Standard: 13C2-PFDoDA
615.0 / 570.0



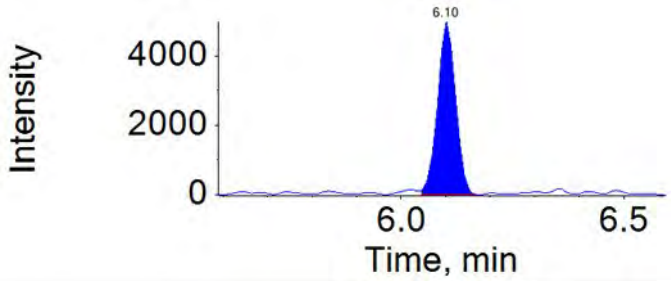
Analyte: 10:2-FTS
627.0 / 607.0



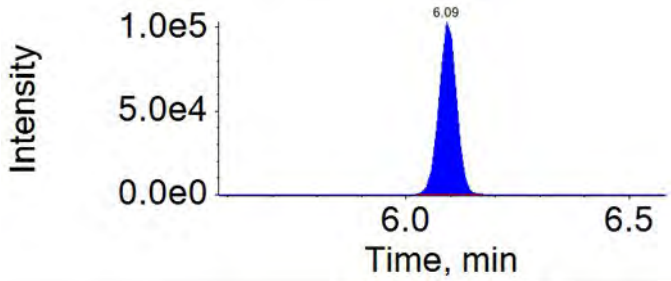
Extraction Standard: 13C2-8:2-FTS
529.0 / 81.0



Analyte: NMePFOSAE
616.0 / 59.0



Extraction Standard: d7-NMePFOSAE
623.0 / 59.0

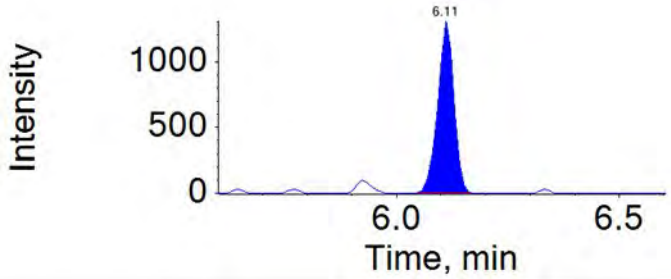


APPROVED
By MCD at 5:00 pm, 11/28/18

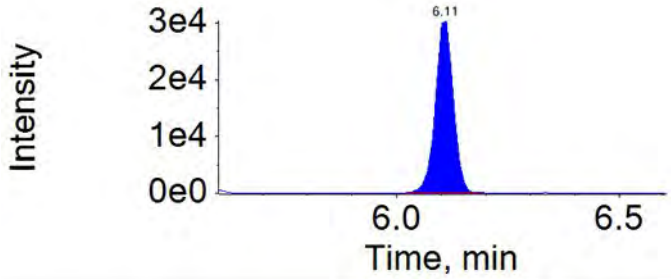
REVIEWED
By HMK at 12:22 pm, 11/29/18

ICAL Name: 18NOV28DCAL **Result Table:** 18NOV28DCAL 11/28/2018 4:47:11 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

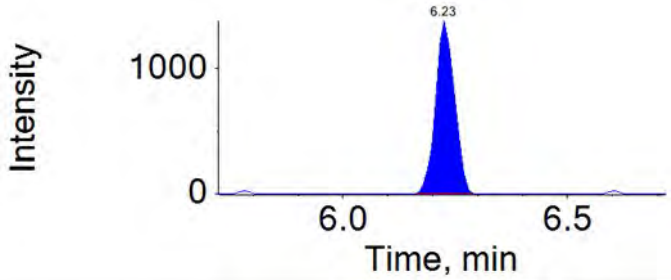
Analyte: NMePFOSA
512.0 / 169.0



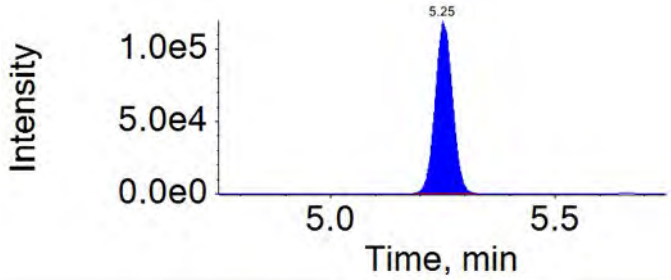
Extraction Standard: d3-NMePFOSA
515.0 / 169.0



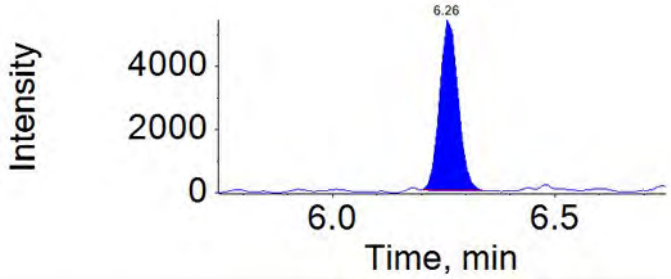
Analyte: PFDoS
699.0 / 80.0



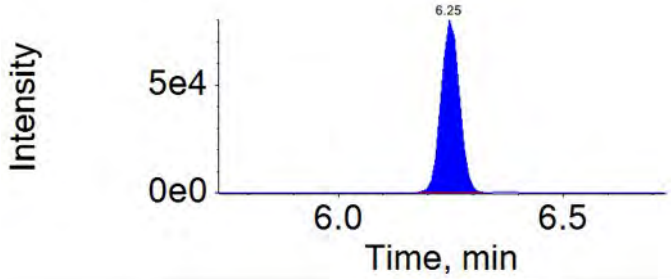
Extraction Standard: 13C8-PFOS
507.0 / 80.0



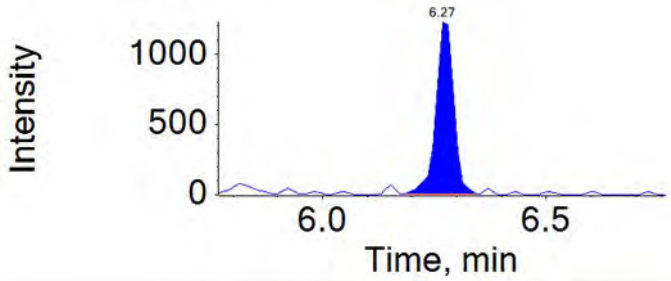
Analyte: NEtPFOSAE
630.0 / 59.0



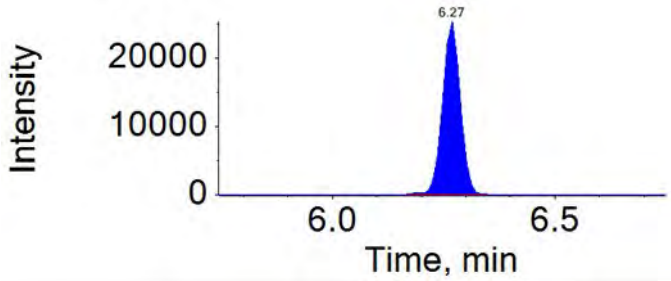
Extraction Standard: d9-NEtPFOSAE
639.0 / 59.0



Analyte: NEtPFOSA
526.0 / 169.0



Extraction Standard: d5-NEtPFOSA
531.0 / 169.0

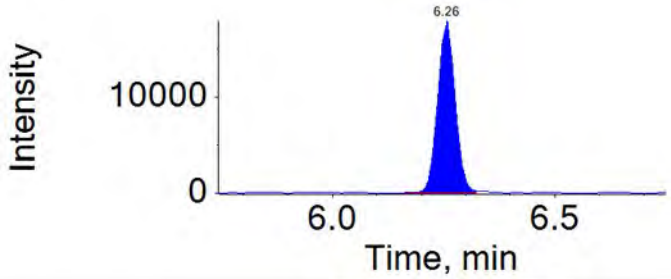


APPROVED
By MCD at 5:00 pm, 11/28/18

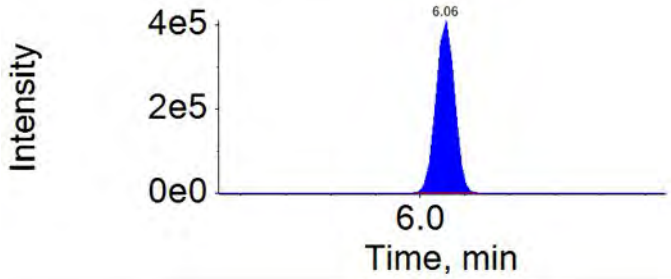
REVIEWED
By HMK at 12:22 pm, 11/29/18

ICAL Name: 18NOV28DCAL **Result Table:** 18NOV28DCAL 11/28/2018 4:47:11 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

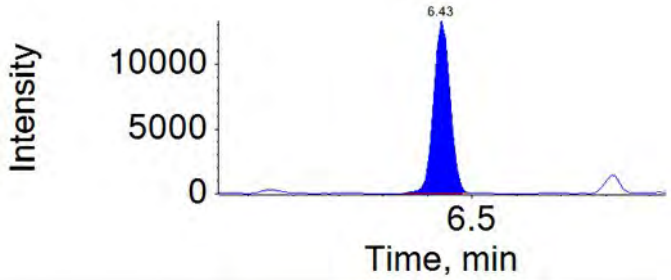
Analyte: PFTrDA
663.0 / 619.0



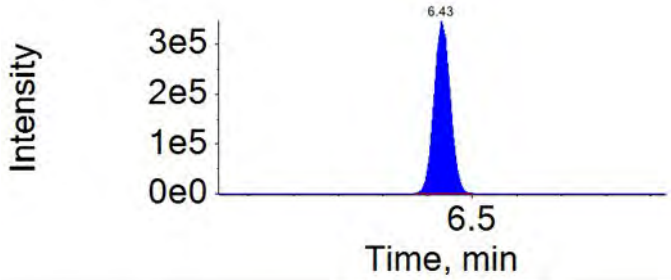
Extraction Standard: 13C2-PFDoDA
615.0 / 570.0



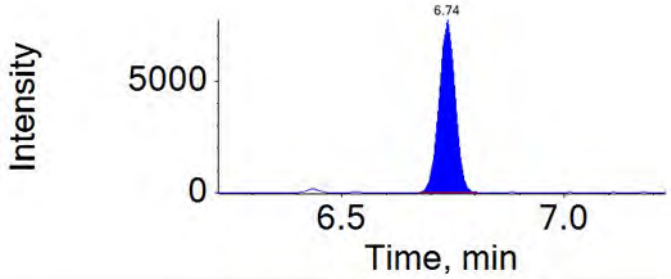
Analyte: PFTeDA
713.0 / 669.0



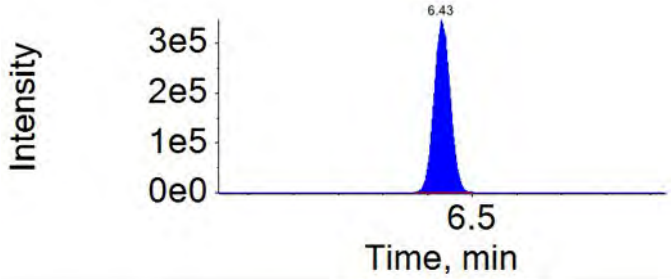
Extraction Standard: 13C2-PFTeDA
715.0 / 670.0



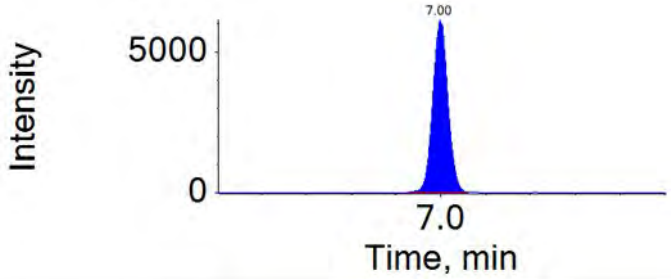
Analyte: PFHxDA
813.0 / 769.0



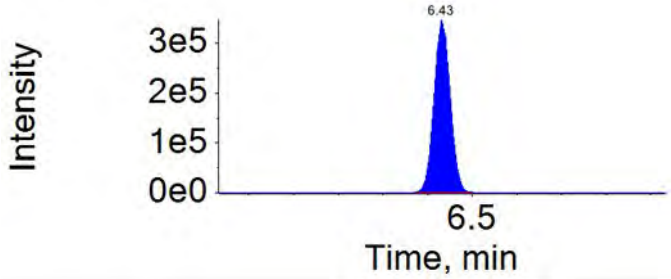
Extraction Standard: 13C2-PFTeDA
715.0 / 670.0



Analyte: PFODA
913.0 / 869.0



Extraction Standard: 13C2-PFTeDA
715.0 / 670.0



APPROVED
By MCD at 5:00 pm, 11/28/18

REVIEWED
By HMK at 12:22 pm, 11/29/18

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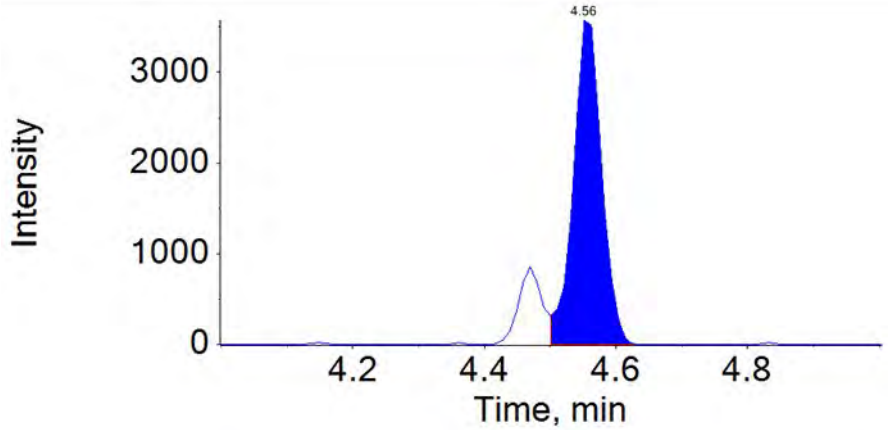
Auto Integrations prior to Manual Integration

Print Date: 11/28/2018 4:54 PM
Template: MQ-OrigInteg-16NOV21.docx

Results Table Name: 18NOV28DCAL
Results Table Date: 11/28/2018 4:52:53 PM

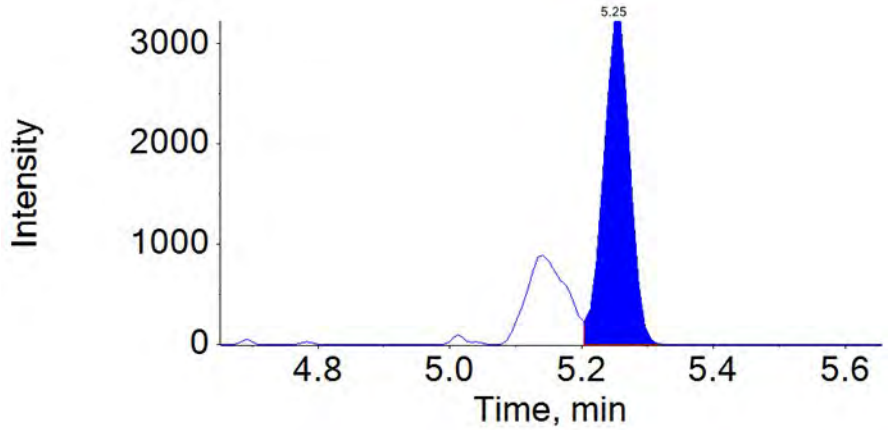
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

Component Name:
PFHxS
RT (min.):
4.56
Peak Area:
10746.52
Mass Range:
399.0 / 80.0
File Name:
18NOV28DCAL-06.wiff
Sample Name:
CAL1



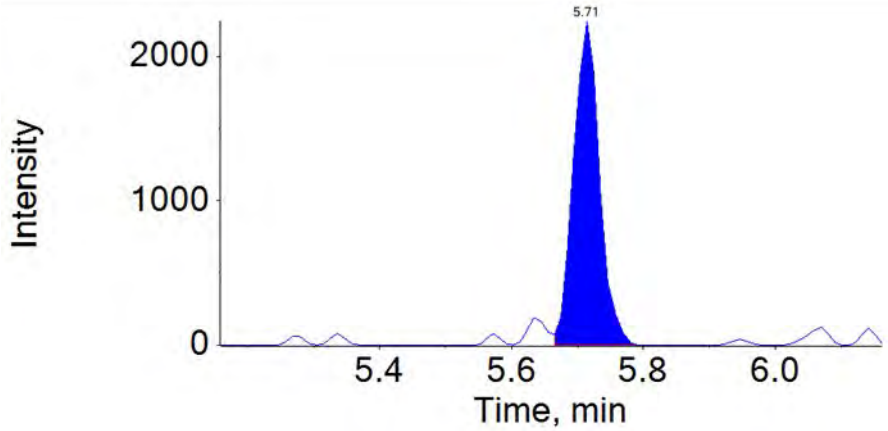
Integration Comment: incorrect integration

Component Name:
PFOS
RT (min.):
5.25
Peak Area:
9112.28
Mass Range:
499.0 / 80.0
File Name:
18NOV28DCAL-06.wiff
Sample Name:
CAL1



Integration Comment: incorrect integration

Component Name:
NMeFOSAA
RT (min.):
5.71
Peak Area:
6150.80
Mass Range:
570.0 / 419.0
File Name:
18NOV28DCAL-06.wiff
Sample Name:
CAL1



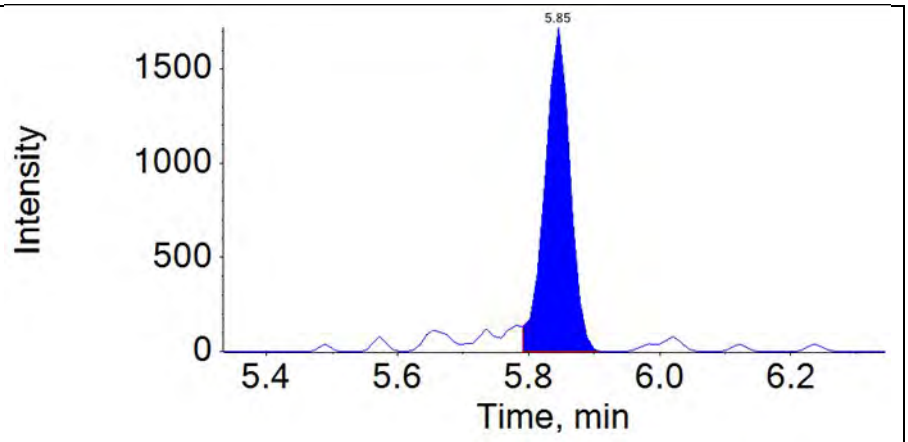
Integration Comment: incorrect integration

APPROVED
By MCD at 5:00 pm, 11/28/18

REVIEWED
By HMK at 12:22 pm, 11/29/18

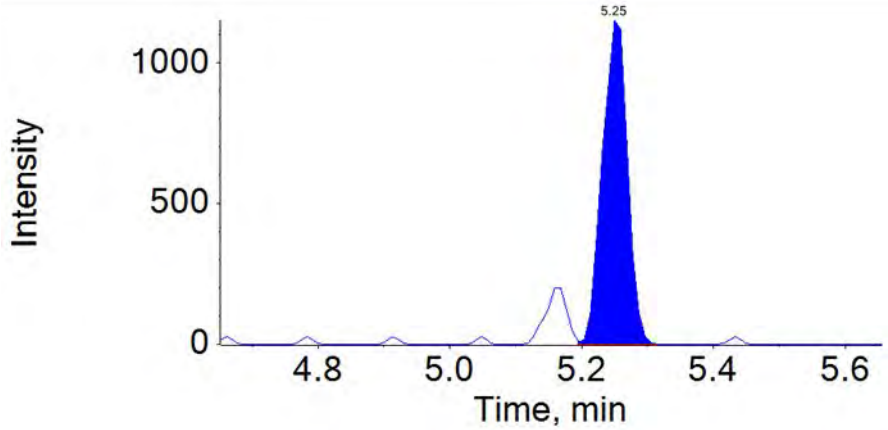
Results Table Name: 18NOV28DCAL
Results Table Date: 11/28/2018 4:52:53 PM
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

Component Name:
NEtFOSAA
RT (min.):
5.85
Peak Area:
4598.18
Mass Range:
584.0 / 419.0
File Name:
18NOV28DCAL-06.wiff
Sample Name:
CAL1



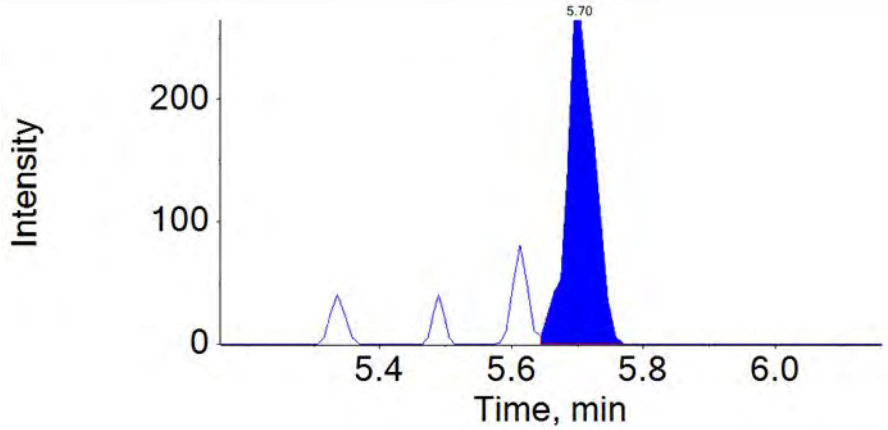
Integration Comment: incorrect integration

Component Name:
PFOS_2
RT (min.):
5.25
Peak Area:
3075.05
Mass Range:
499.0 / 99.0
File Name:
18NOV28DCAL-06.wiff
Sample Name:
CAL1



Integration Comment: incorrect integration

Component Name:
NMeFOSAA_2
RT (min.):
5.70
Peak Area:
797.95
Mass Range:
570.0 / 483.0
File Name:
18NOV28DCAL-06.wiff
Sample Name:
CAL1



Integration Comment: incorrect integration

APPROVED
By MCD at 5:00 pm, 11/28/18

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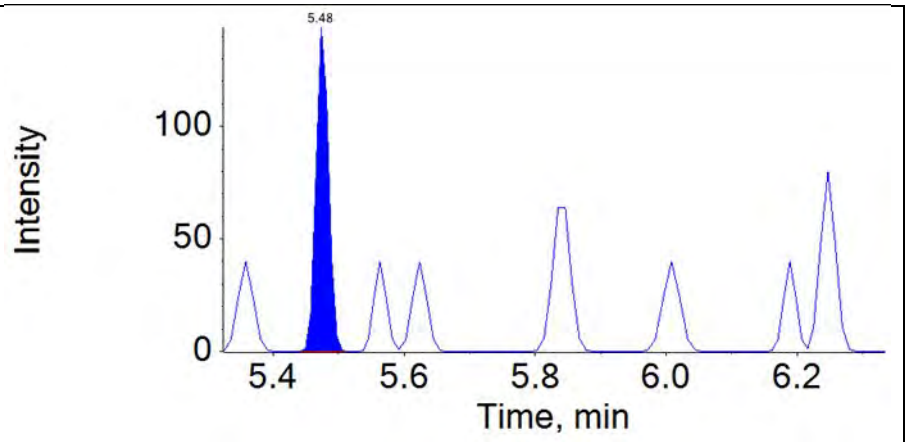
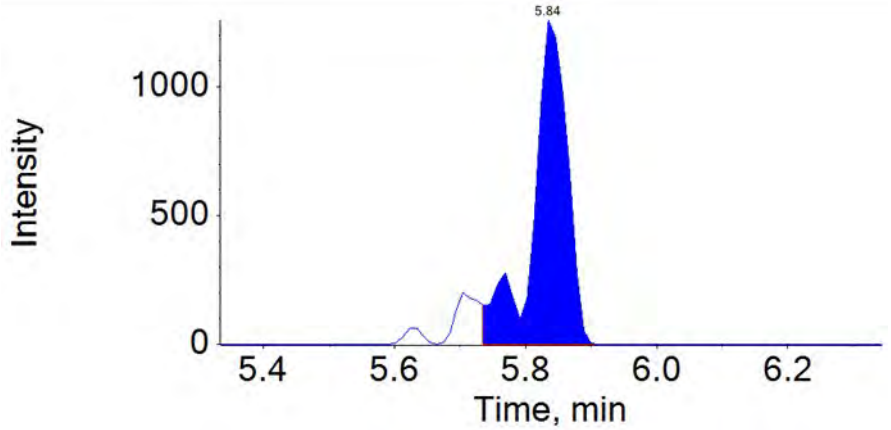
Results Table Name: 18NOV28DCAL
Results Table Date: 11/28/2018 4:52:53 PM
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

Component Name:
PFUnDA_2
RT (min.):
5.48
Peak Area:
191.73
Mass Range:
563.0 / 169.0
File Name:
18NOV28DCAL-06.wiff
Sample Name:
CAL1



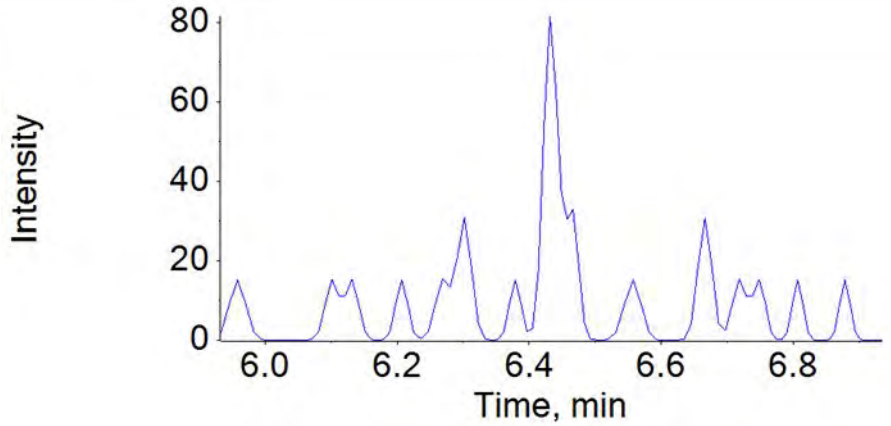
Integration Comment: incorrect integration

Component Name:
NEtFOSAA_2
RT (min.):
5.84
Peak Area:
4606.52
Mass Range:
584.0 / 526.0
File Name:
18NOV28DCAL-06.wiff
Sample Name:
CAL1



Integration Comment: incorrect integration

Component Name:
PFTeDA_2
RT (min.):
N/A
Peak Area:
N/A
Mass Range:
713.0 / 169.0
File Name:
18NOV28DCAL-06.wiff
Sample Name:
CAL1



Integration Comment: incorrect integration

APPROVED
By MCD at 5:00 pm, 11/28/18

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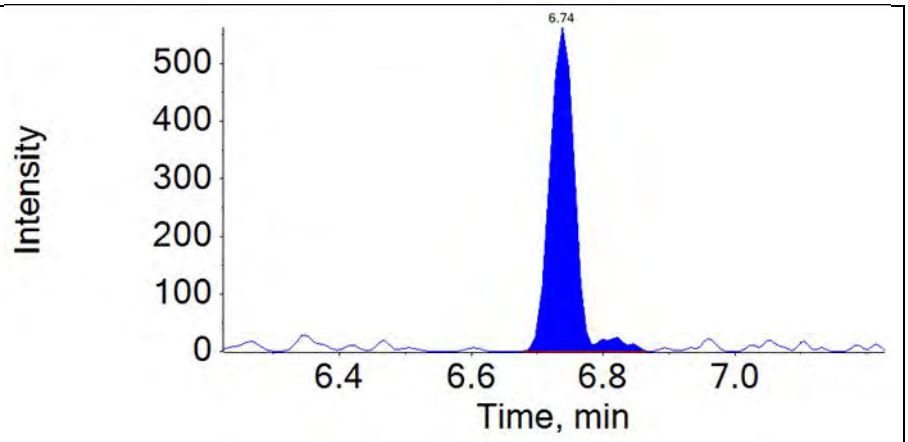
By HMK at 12:22 pm, 11/29/18

Results Table Name: 18NOV28DCAL
Results Table Date: 11/28/2018 4:52:53 PM
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

Component Name:
PFHxDA_2
RT (min.):
6.74
Peak Area:
1494.10
Mass Range:
813.0 / 169.0
File Name:
18NOV28DCAL-06.wiff
Sample Name:
CAL1



Integration Comment: incorrect integration

APPROVED
By MCD at 5:00 pm, 11/28/18

REVIEWED
By HMK at 12:22 pm, 11/29/18

Results Table Name: 18NOV28DCAL
Results Table Date: 11/28/2018 4:52:53 PM
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

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By MCD at 5:00 pm, 11/28/18

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By HMK at 12:22 pm, 11/29/18

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LC-MS/MS Analysis Report

Printed: 11/28/2018 4:51:00 PM
Template: IonRatio18OCT10

Ion Ratio Report

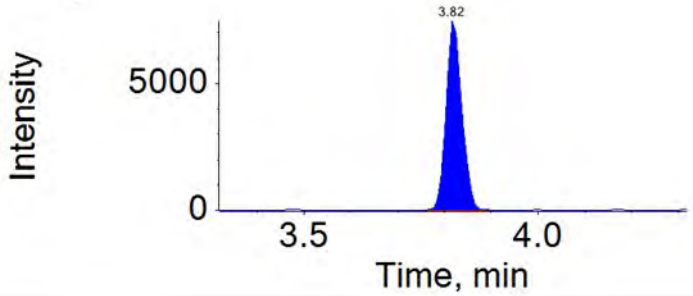
Sample Name: CAL1 **Instrument Name:** LM27631 **File Name:** 18NOV28DCAL-06.wiff

Component Name	RT	RRT	Analyte Area Response	Int Typ	Expected Ion Ratio	Ion Ratio	Ion Ratio % Diff	Ion Ratio Limit	Ion Ratio OOS
PFBS	3.82	1.00	17465.33	A	0.3655	0.3500			
PFBS_2	3.82	1.00	6112.35	A	0.3655	0.3500	-4	50	
4:2-FTS	4.13	1.00	5603.85	A	0.6383	0.6370			
4:2-FTS_2	4.14	1.00	3569.81	A	0.6383	0.6370	0	50	
PFHxA	4.17	1.00	42281.82	A	0.0103	0.0074			
PFHxA_2	4.16	1.00	313.30	A	0.0103	0.0074	-28	50	
PFPeS	4.19	1.10	8955.98	A	0.4976	0.5230			
PFPeS_2	4.18	1.10	4684.40	A	0.4976	0.5230	5	50	
PFHpA	4.56	1.00	42530.61	A	0.0557	0.0604			
PFHpA_2	4.55	1.00	2568.03	A	0.0557	0.0604	8	50	
PFHxS	4.56	1.00	12830.81	M	0.3693	0.3957			
PFHxS_2	4.56	1.00	5077.16	A	0.3693	0.3957	7	50	
6:2-FTS	4.91	1.00	5676.75	A	0.6625	0.7816			
6:2-FTS_2	4.91	1.00	4436.90	A	0.6625	0.7816	18	50	
PFHpS	4.92	1.08	13921.77	A	0.3915	0.3588			
PFHpS_2	4.92	1.08	4994.54	A	0.3915	0.3588	-8	50	
PFOA	4.93	1.00	42517.38	A	0.0573	0.0573			
PFOA_2	4.93	1.00	2436.09	A	0.0573	0.0573	0	50	
PFOS	5.25	1.00	13060.03	M	0.2960	0.2736			
PFOS_2	5.25	1.00	3573.10	M	0.2960	0.2736	-8	50	
PFNA	5.27	1.00	39485.10	A	0.0201	0.0194			
PFNA_2	5.27	1.00	766.34	A	0.0201	0.0194	-3	50	
PFNS	5.55	1.06	9756.60	A	0.4794	0.4912			
PFNS_2	5.55	1.06	4792.59	A	0.4794	0.4912	2	50	
PFDA	5.57	1.00	33621.18	A	0.0075	0.0082			
PFDA_2	5.57	1.00	276.74	A	0.0075	0.0082	10	50	
8:2-FTS	5.57	1.00	6138.74	A	0.5380	0.4422			
8:2-FTS_2	5.57	1.00	2714.43	A	0.5380	0.4422	-18	50	
NMeFOSAA	5.71	1.00	6660.95	M	0.2305	0.1393			
NMeFOSAA_2	5.70	1.00	927.90	M	0.2305	0.1393	-40	50	
PFDS	5.81	1.11	6850.74	A	0.5356	0.6929			
PFDS_2	5.80	1.10	4746.55	A	0.5356	0.6929	29	50	
PFUnDA	5.82	1.00	36428.01	A	0.0038	0.0036			
PFUnDA_2	5.84	1.00	129.75	M	0.0038	0.0036	-6	50	
NEtFOSAA	5.85	1.00	5069.19	M	0.7356	1.0075			
NEtFOSAA_2	5.84	1.00	5107.05	M	0.7356	1.0075	37	50	
PFDoDA	6.06	1.00	53386.61	A	0.0130	0.0169			
PFDoDA_2	6.06	1.00	904.01	A	0.0130	0.0169	30	50	
10:2-FTS	6.07	1.09	5717.74	A	0.6989	0.8898			
10:2-FTS_2	6.07	1.09	5087.40	A	0.6989	0.8898	27	50	
PFTrDA	6.26	1.03	48537.57	A	0.0090	0.0125			
PFTrDA_2	6.26	1.03	607.67	A	0.0090	0.0125	39	50	
PFTeDA	6.43	1.00	34099.24	A	0.0056	0.0053			
PFTeDA_2	6.43	1.00	180.96	M	0.0056	0.0053	-5	50	
PFHxDA	6.74	1.05	19206.41	A	0.0646	0.0740			
PFHxDA_2	6.74	1.05	1422.14	M	0.0646	0.0740	15	50	
PFODA	7.00	1.09	14377.98	A	0.0264	0.0304			
PFODA_2	7.00	1.09	436.46	A	0.0264	0.0304	15	50	

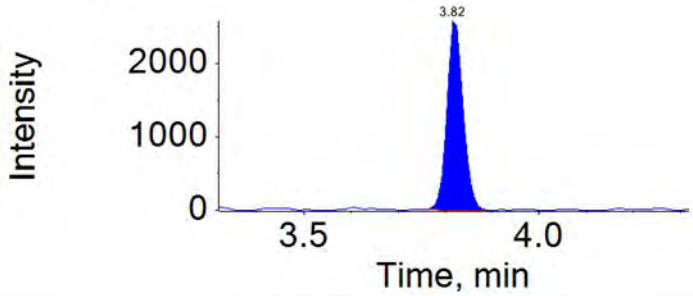
APPROVED
By MCD at 5:00 pm, 11/28/18

REVIEWED
By HMK at 12:22 pm, 11/29/18

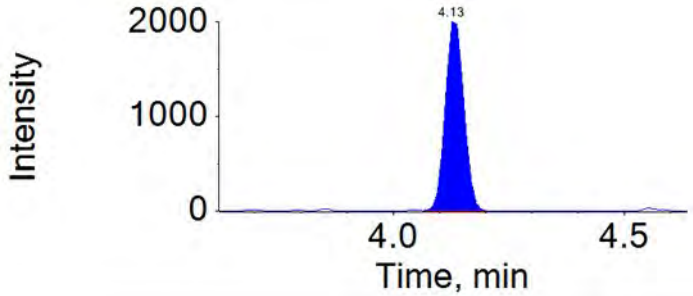
Component: PFBS
Primary Mass: 299.0 / 80.0



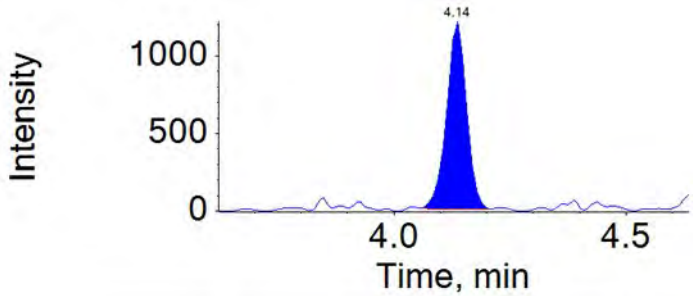
Component: PFBS_2
Secondary Mass: 299.0 / 99.0



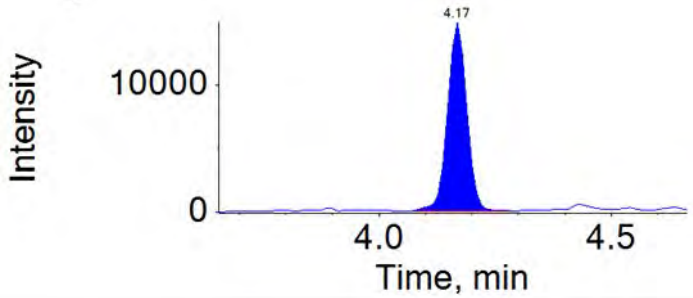
Component: 4:2-FTS
Primary Mass: 327.0 / 307.0



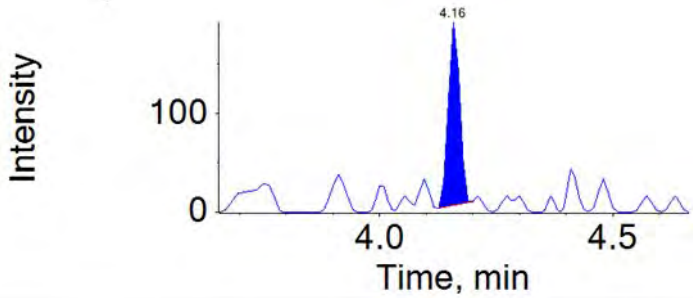
Component: 4:2-FTS_2
Secondary Mass: 327.0 / 81.0



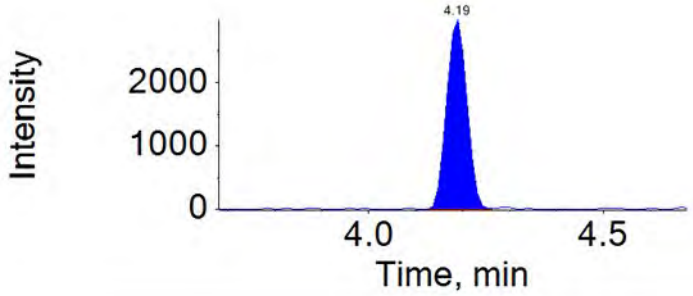
Component: PFHxA
Primary Mass: 313.0 / 269.0



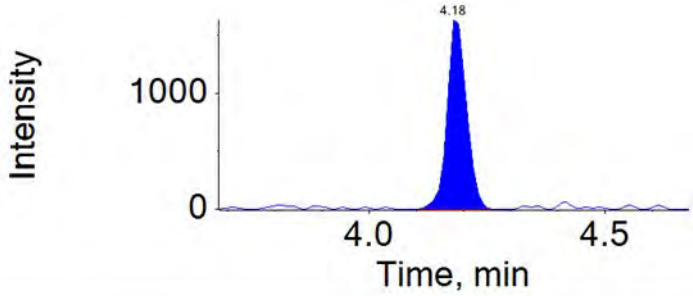
Component: PFHxA_2
Secondary Mass: 313.0 / 119.0



Component: PFPeS
Primary Mass: 349.0 / 80.0



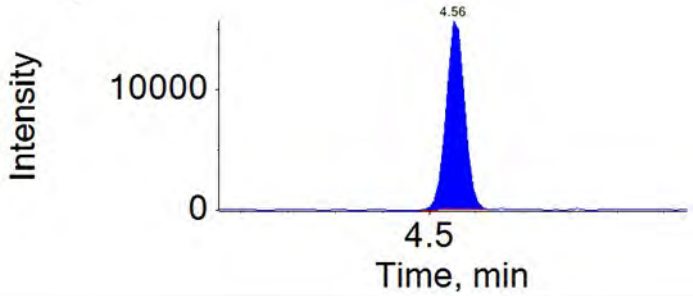
Component: PFPeS_2
Secondary Mass: 349.0 / 99.0



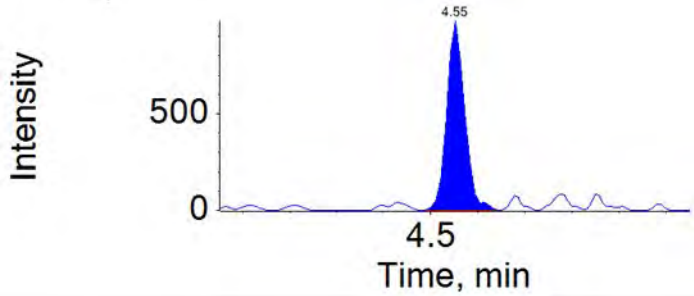
APPROVED
By MCD at 5:00 pm, 11/28/18

REVIEWED
By HMK at 12:22 pm, 11/29/18

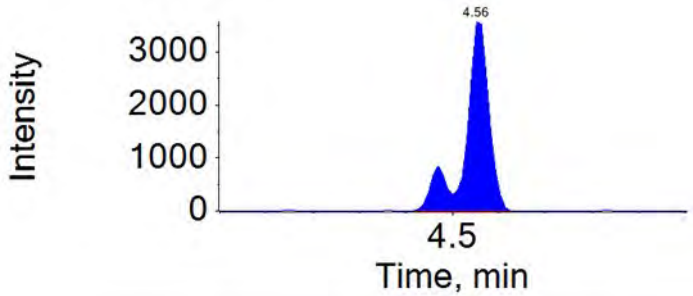
Component: PFHpA
Primary Mass: 363.0 / 319.0



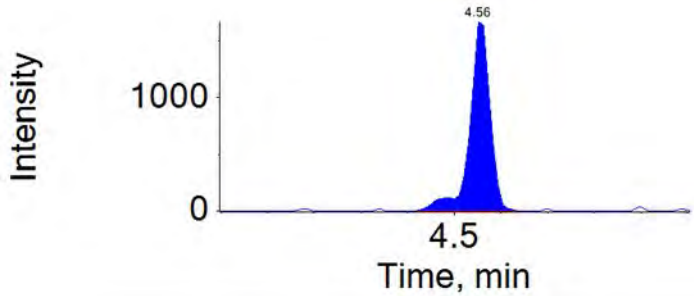
Component: PFHpA_2
Secondary Mass: 363.0 / 169.0



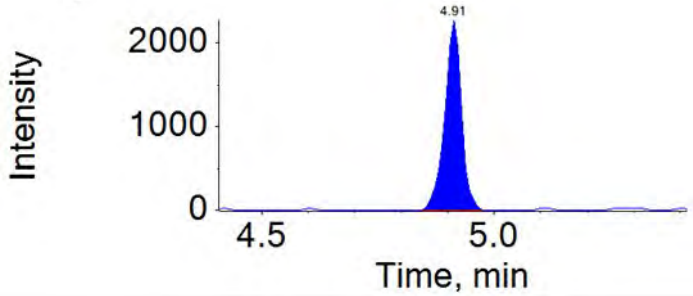
Component: PFHxS
Primary Mass: 399.0 / 80.0



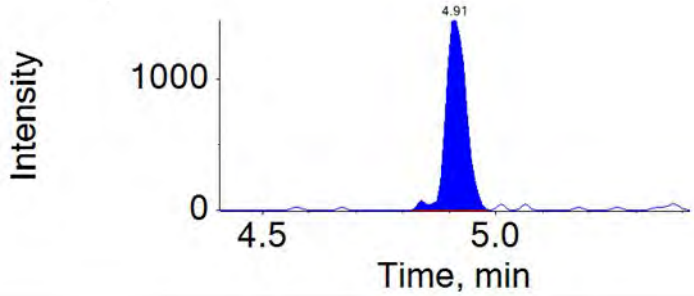
Component: PFHxS_2
Secondary Mass: 399.0 / 99.0



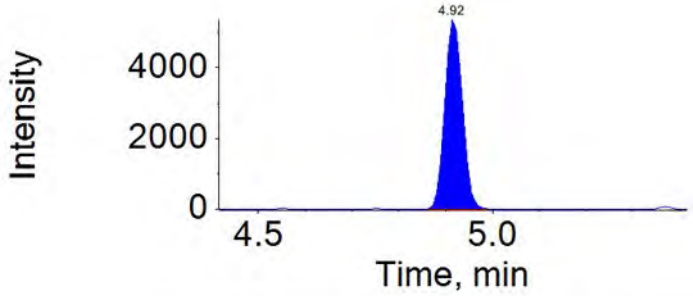
Component: 6:2-FTS
Primary Mass: 427.0 / 407.0



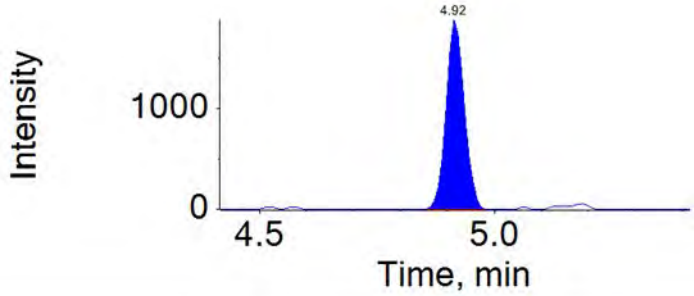
Component: 6:2-FTS_2
Secondary Mass: 427.0 / 81.0



Component: PFHpS
Primary Mass: 449.0 / 80.0



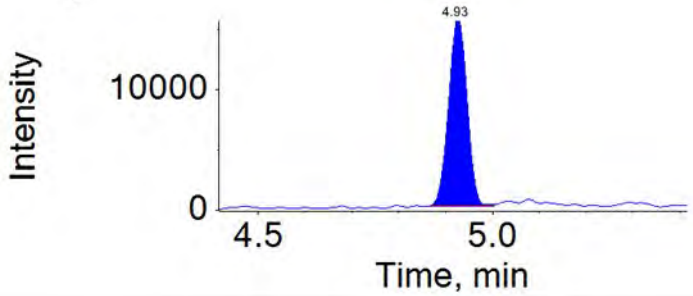
Component: PFHpS_2
Secondary Mass: 449.0 / 99.0



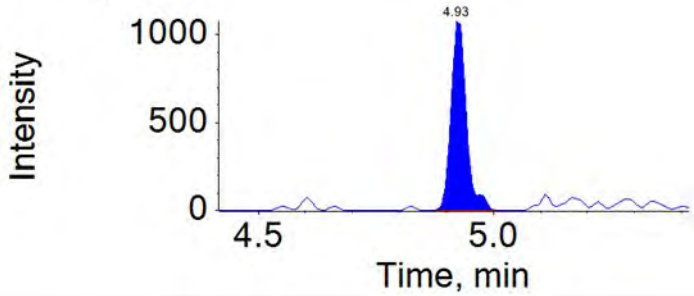
APPROVED
By MCD at 5:00 pm, 11/28/18

REVIEWED
By HMK at 12:22 pm, 11/29/18

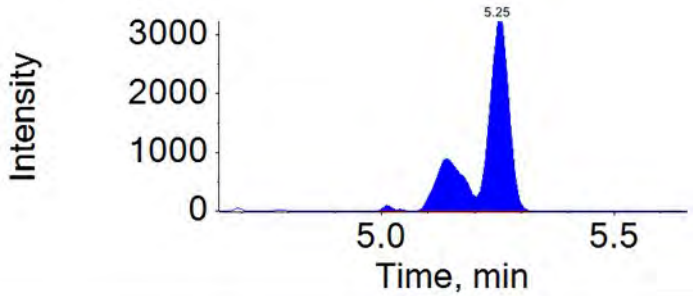
Component: PFOA
Primary Mass: 413.0 / 369.0



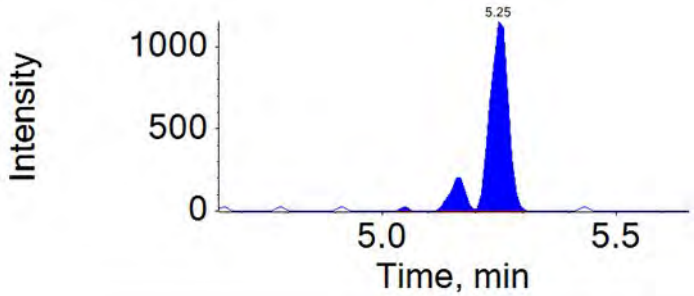
Component: PFOA_2
Secondary Mass: 413.0 / 169.0



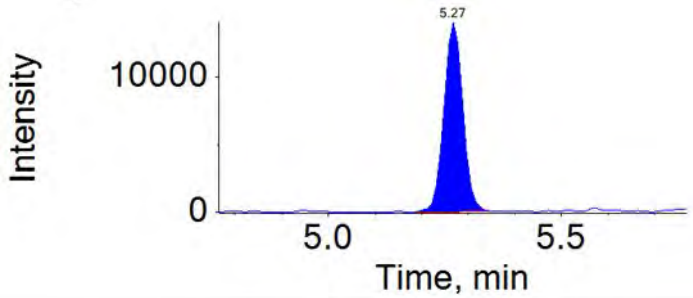
Component: PFOS
Primary Mass: 499.0 / 80.0



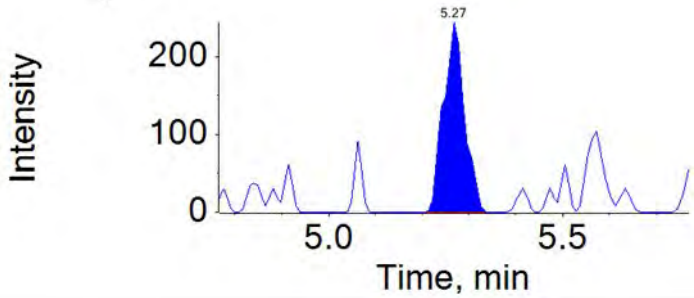
Component: PFOS_2
Secondary Mass: 499.0 / 99.0



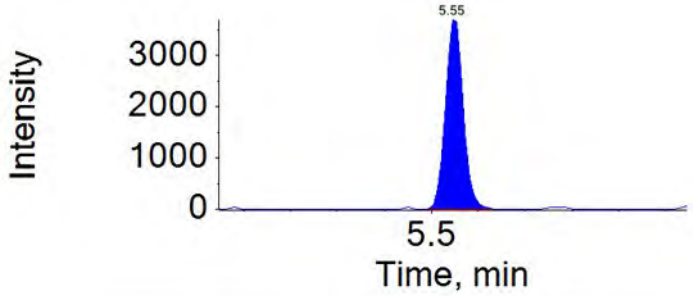
Component: PFNA
Primary Mass: 463.0 / 419.0



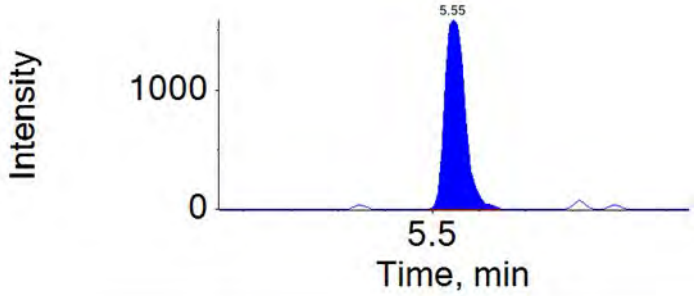
Component: PFNA_2
Secondary Mass: 463.0 / 169.0



Component: PFNS
Primary Mass: 549.0 / 80.0



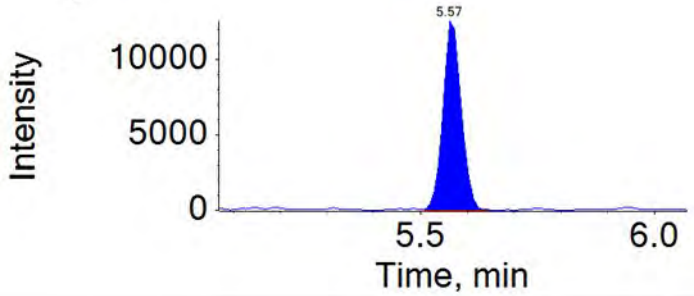
Component: PFNS_2
Secondary Mass: 549.0 / 99.0



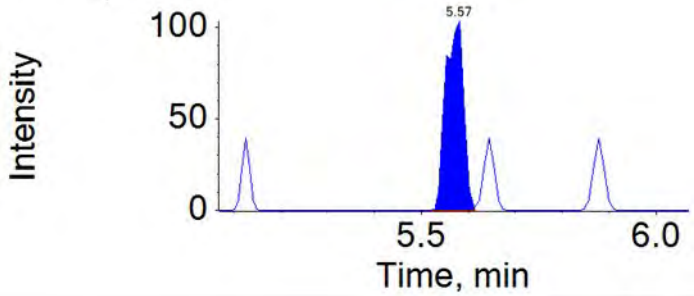
APPROVED
By MCD at 5:00 pm, 11/28/18

REVIEWED
By HMK at 12:22 pm, 11/29/18

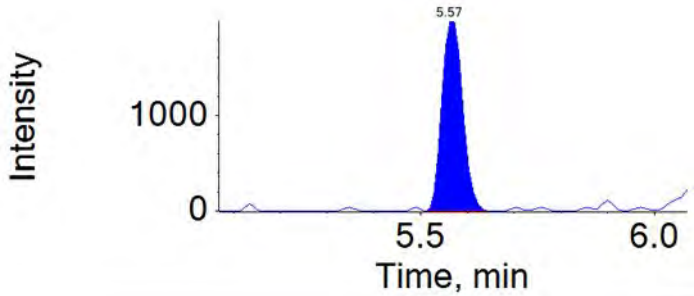
Component: PFDA
Primary Mass: 513.0 / 469.0



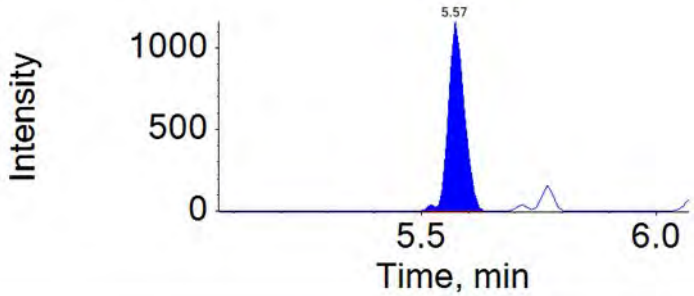
Component: PFDA_2
Secondary Mass: 513.0 / 169.0



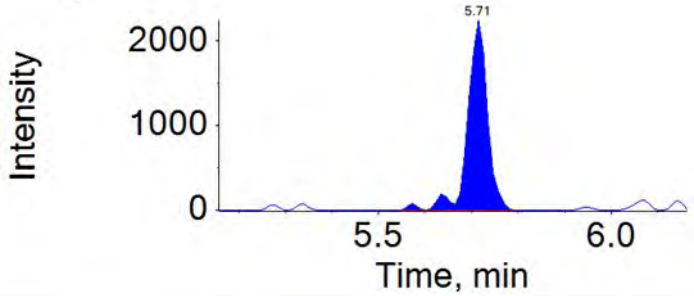
Component: 8:2-FTS
Primary Mass: 527.0 / 507.0



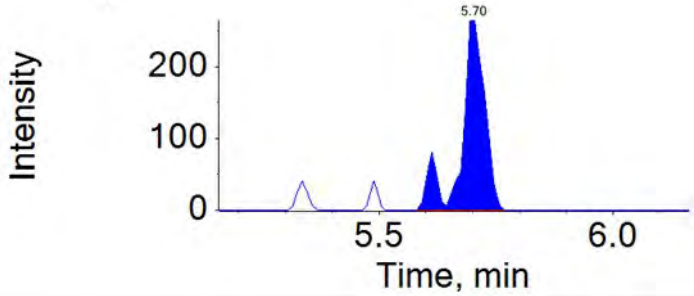
Component: 8:2-FTS_2
Secondary Mass: 527.0 / 81.0



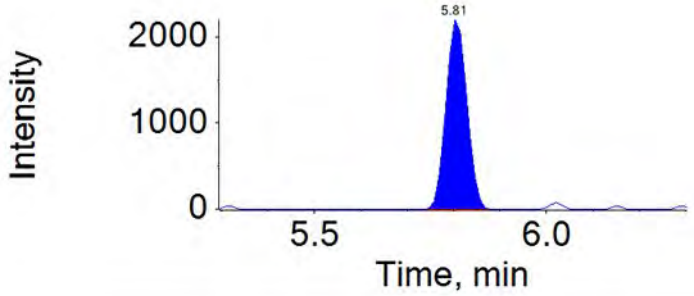
Component: NMeFOSAA
Primary Mass: 570.0 / 419.0



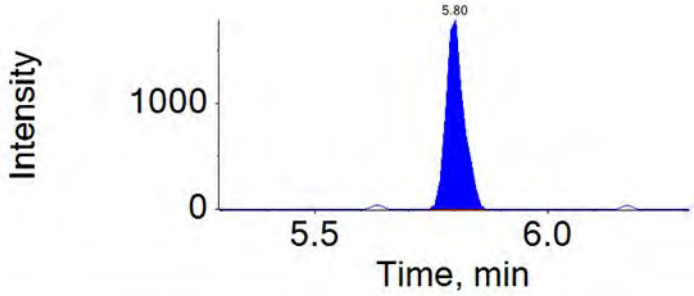
Component: NMeFOSAA_2
Secondary Mass: 570.0 / 483.0



Component: PFDS
Primary Mass: 599.0 / 80.0



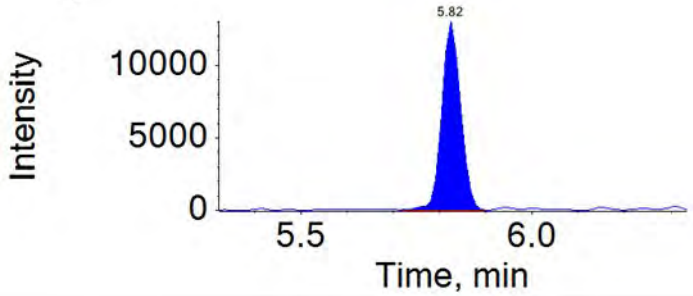
Component: PFDS_2
Secondary Mass: 599.0 / 99.0



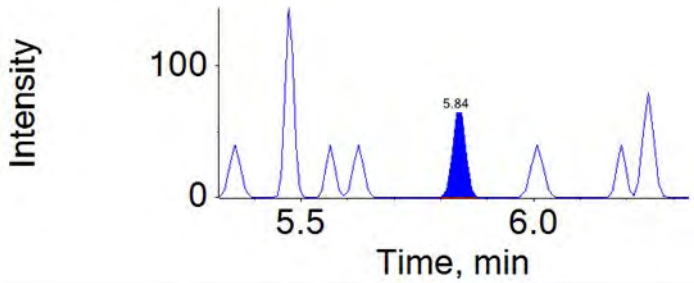
APPROVED
By MCD at 5:00 pm, 11/28/18

REVIEWED
By HMK at 12:22 pm, 11/29/18

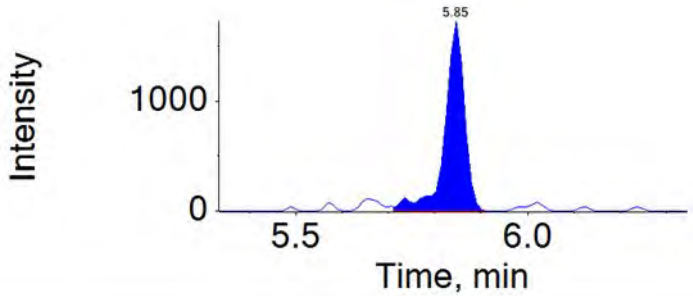
Component: PFUnDA
Primary Mass: 563.0 / 519.0



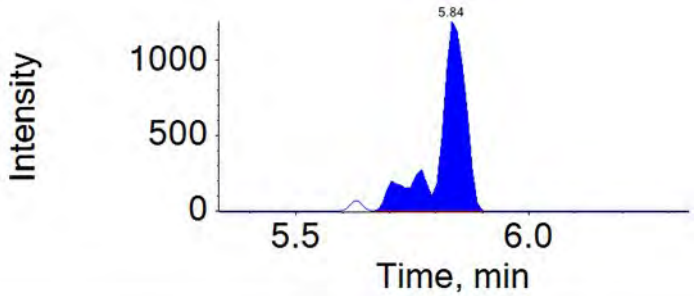
Component: PFUnDA_2
Secondary Mass: 563.0 / 169.0



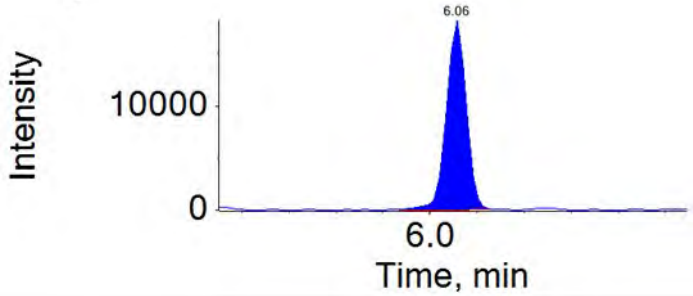
Component: NEtFOSAA
Primary Mass: 584.0 / 419.0



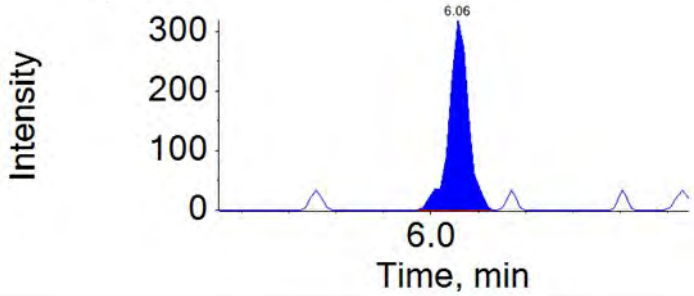
Component: NEtFOSAA_2
Secondary Mass: 584.0 / 526.0



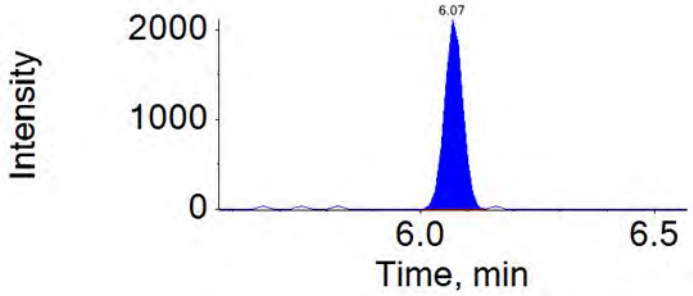
Component: PFDoDA
Primary Mass: 613.0 / 569.0



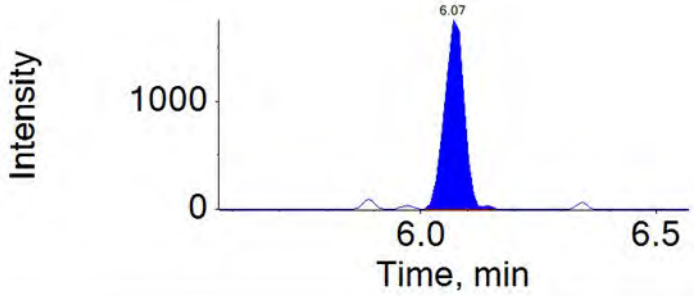
Component: PFDoDA_2
Secondary Mass: 613.0 / 169.0



Component: 10:2-FTS
Primary Mass: 627.0 / 607.0



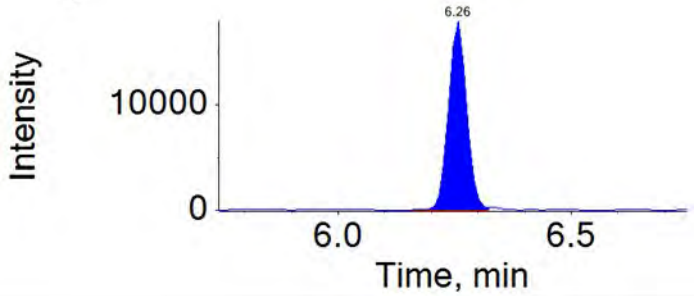
Component: 10:2-FTS_2
Secondary Mass: 627.0 / 81.0



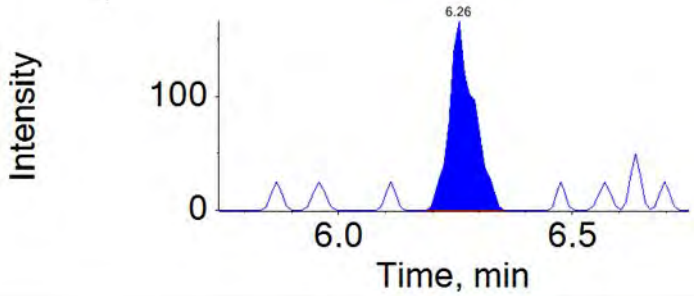
APPROVED
By MCD at 5:00 pm, 11/28/18

REVIEWED
By HMK at 12:22 pm, 11/29/18

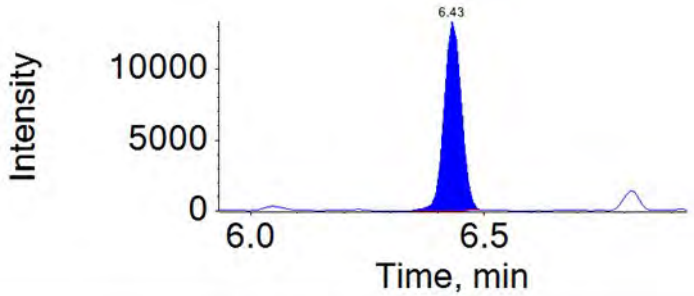
Component: PFTrDA
Primary Mass: 663.0 / 619.0



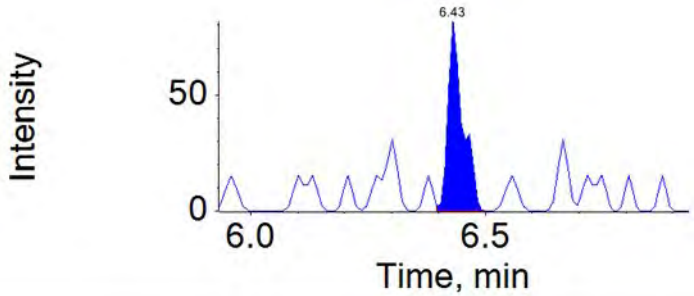
Component: PFTrDA_2
Secondary Mass: 663.0 / 169.0



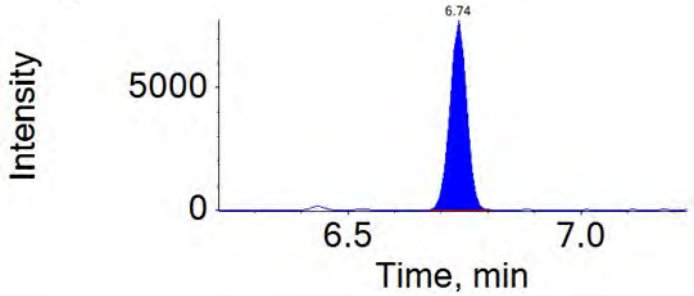
Component: PFTeDA
Primary Mass: 713.0 / 669.0



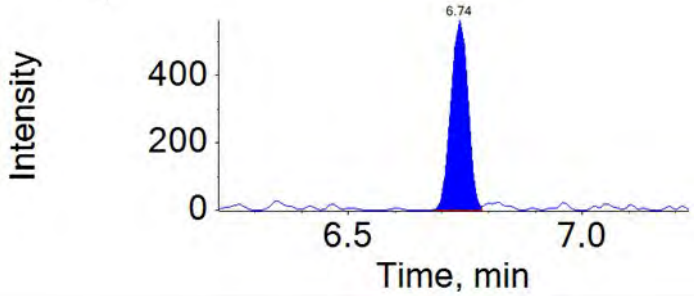
Component: PFTeDA_2
Secondary Mass: 713.0 / 169.0



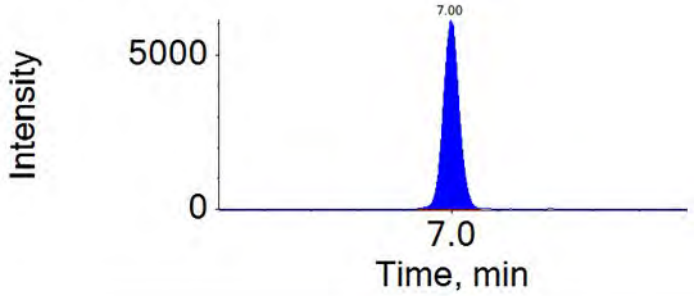
Component: PFHxDA
Primary Mass: 813.0 / 769.0



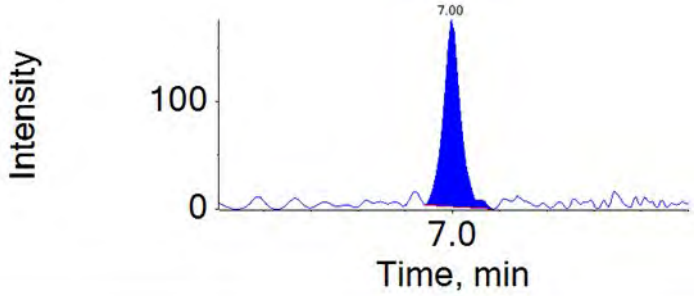
Component: PFHxDA_2
Secondary Mass: 813.0 / 169.0



Component: PFODA
Primary Mass: 913.0 / 869.0



Component: PFODA_2
Secondary Mass: 913.0 / 169.0



APPROVED
By MCD at 5:00 pm, 11/28/18

REVIEWED
By HMK at 12:22 pm, 11/29/18

ICAL Name: 18NOV28DCAL **Result Table:** 18NOV28DCAL 11/28/2018 4:47:11 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Sample Name:	CAL2			**Data File:**		18NOV28DCAL-07.wiff
Sample ID:	CALBRN21833C			**Acquis Date:**		2018-11-28T13:51:13
Sample Type:	Standard			**Instrument:**		LM27631
Vial Position:	4			**Acquis Method:**		18AUG13_3uL.dam
Injection Vol:	3.00			**Result Table:**		18NOV28DCAL
QMethod File:	18AUG20QM			**ICAL Name:**		18NOV28DCAL
Batch Number:	N/A			**Operator:**		MCD7824
Sample Wt.:	1.00000			**Dilution Factor:**		1.00
Sample Vol.:	1.000			**Prep Factor:**		1.000

Injection Standard Peak Table

Injection Standard Area Reference File: 18NOV28DCAL-08

Injection Standard Name	Inj Std Conc	Injection Std Peak Area	Rreference Injection Standard Area	Injection Std %Diff	Injection Std %Diff Limit	Injection Std %Diff OOS
13C3-PFBA	5.0	898154.2	887248.9	1	50	
13C2-PFOA	5.0	493545.2	498501.6	-1	50	
13C4-PFOS	4.8	295669.7	283214.2	4	50	
13C2-PFDA	5.0	460926.2	441790.6	4	50	

Extraction Standard Peak Table

Extraction Standard Name	Ext Std Area	Inj Std Name	Inj Std Area	Area Ratio	Ext Std Conc	Ext Std Result	Ext Std %REC	Ext Std %REC Limit	Ext Std OOS
E13C4-PFBA	1033122.1	13C3-PFBA	898154.2	1.150	5.000	5.132	103	70-130	
E13C5-PFPeA	1014125.0	13C3-PFBA	898154.2	1.129	5.000	5.273	105	70-130	
E13C3-PFBS	442150.0	13C3-PFBA	898154.2	0.492	4.650	4.697	101	70-130	
E13C2-4:2-FTS	72067.2	13C2-PFOA	493545.2	0.146	4.670	5.032	108	70-130	
E13C5-PFHxA	697229.0	13C2-PFOA	493545.2	1.413	5.000	5.189	104	70-130	
E13C3-PFHxS	335129.7	13C2-PFOA	493545.2	0.679	4.730	5.322	113	70-130	
E13C4-PFHpA	547372.0	13C2-PFOA	493545.2	1.109	5.000	5.096	102	70-130	
E13C2-6:2-FTS	63922.7	13C2-PFOA	493545.2	0.130	4.750	5.422	114	70-130	
E13C8-PFOA	1030866.6	13C2-PFOA	493545.2	2.089	5.000	5.749	115	70-130	
E13C8-PFOS	313894.3	13C4-PFOS	295669.7	1.062	4.780	4.792	100	70-130	
E13C9-PFNA	682380.7	13C4-PFOS	295669.7	2.308	5.000	5.069	101	70-130	
E13C6-PFDA	839100.7	13C2-PFDA	460926.2	1.820	5.000	5.133	103	70-130	
E13C2-8:2-FTS	54757.9	13C2-PFDA	460926.2	0.119	4.790	5.106	107	70-130	
E13C8-PFOSA	658778.5	13C2-PFDA	460926.2	1.429	5.000	5.244	105	70-130	
Ed3-NMeFOSAA	181261.3	13C2-PFDA	460926.2	0.393	5.000	4.993	100	70-130	
E13C7-PFUnDA	581207.0	13C2-PFDA	460926.2	1.261	5.000	5.329	107	70-130	
Ed5-NEtFOSAA	144803.2	13C2-PFDA	460926.2	0.314	5.000	5.597	112	70-130	
E13C2-PFDoDA	1140522.3	13C2-PFDA	460926.2	2.474	5.000	5.199	104	70-130	
Ed7-NMePFOSAE	272071.3	13C2-PFDA	460926.2	0.590	5.000	5.101	102	70-130	
Ed3-NMePFOSA	86471.7	13C2-PFDA	460926.2	0.188	5.000	5.077	102	70-130	
Ed9-NEtPFOSAE	229050.7	13C2-PFDA	460926.2	0.497	5.000	5.038	101	70-130	
Ed5-NEtPFOSA	66646.8	13C2-PFDA	460926.2	0.145	5.000	5.024	100	70-130	
E13C2-PFTeDA	858145.2	13C2-PFDA	460926.2	1.862	5.000	5.152	103	70-130	

APPROVED
By MCD at 5:00 pm, 11/28/18

REVIEWED
By HMK at 12:22 pm, 11/29/18

ICAL Name: 18NOV28DCAL **Result Table:** 18NOV28DCAL 11/28/2018 4:47:11 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

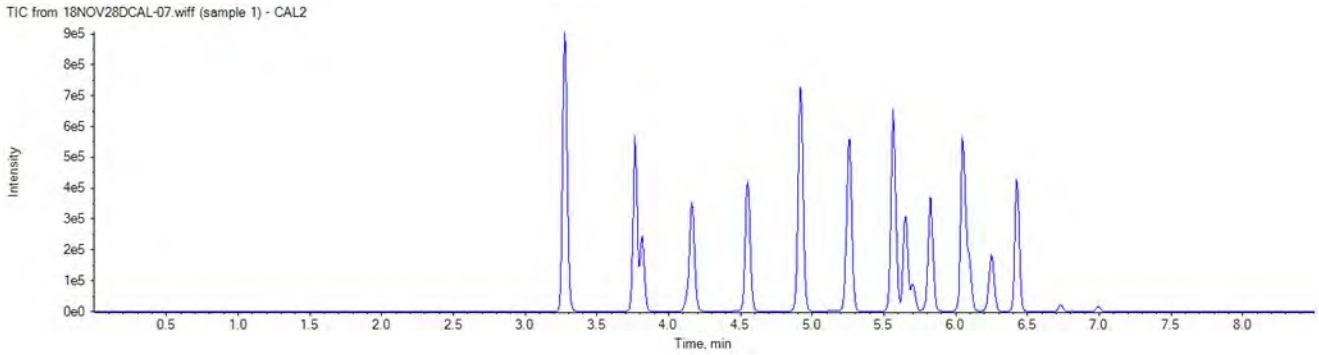
Analyte Quantitation Peak Table

Sample Name: CAL2 **Instrument Name:** LM27631 **File Name:** 18NOV28DCAL-07.wiff

Sample Wt	Sample Vol	Dilution Factor	PrepFactor
1.00000	1.000	1.00	1.000

Analyte Name	RT	RRT	Analyte Area Response	E	Int Typ	ES Name	ES RT	ES Area Response	Area Ratio	Sample Result (ng/g)
PFBA	3.27	1.000	110036.6		A	13C4-PFBA	3.27	1033122.1	0.107	0.584
PFPeA	3.77	1.000	104393.1		A	13C5-PFPeA	3.77	1014125.0	0.103	0.505
PFBS	3.81	1.000	43237.4		A	13C3-PFBS	3.82	442150.0	0.098	0.475
4:2-FTS	4.13	1.000	14524.8		A	13C2-4:2-FTS	4.13	72067.2	0.202	0.540
PFHxA	4.16	1.000	101713.2		A	13C5-PFHxA	4.16	697229.0	0.146	0.586
PFPeS	4.18	1.100	24007.3		A	13C3-PFBS	3.82	442150.0	0.054	0.549
PFHpA	4.55	1.000	100593.8		A	13C4-PFHpA	4.55	547372.0	0.184	0.567
PFHxS	4.55	1.000	31104.5		M	13C3-PFHxS	4.55	335129.7	0.093	0.435
6:2-FTS	4.91	1.000	14479.8		A	13C2-6:2-FTS	4.91	63922.7	0.227	0.591
PFHpS	4.91	1.080	32553.7		A	13C3-PFHxS	4.55	335129.7	0.097	0.485
PFOA	4.92	1.000	106420.8		A	13C8-PFOA	4.92	1030866.6	0.103	0.533
PFOS	5.25	1.000	34203.6		M	13C8-PFOS	5.25	313894.3	0.109	0.457
PFNA	5.26	1.000	106720.9		A	13C9-PFNA	5.26	682380.7	0.156	0.599
PFNS	5.54	1.060	24149.9		A	13C8-PFOS	5.25	313894.3	0.077	0.486
PFDA	5.57	1.000	90730.3		A	13C6-PFDA	5.56	839100.7	0.108	0.612
8:2-FTS	5.57	1.000	15550.2		A	13C2-8:2-FTS	5.57	54757.9	0.284	0.536
PFOSA	5.65	1.000	73112.3		A	13C8-PFOSA	5.65	658778.5	0.111	0.562
NMeFOSAA	5.70	1.000	16533.1		A	d3-NMeFOSAA	5.70	181261.3	0.091	0.582
PFDS	5.80	1.100	18654.8		A	13C8-PFOS	5.25	313894.3	0.059	0.471
PFUnDA	5.82	1.000	91490.4		A	13C7-PFUnDA	5.82	581207.0	0.157	0.563
NEtFOSAA	5.84	1.000	16643.3		A	d5-NEtFOSAA	5.83	144803.2	0.115	0.560
PFDoDA	6.05	1.000	122586.0		A	13C2-PFDoDA	6.05	1140522.3	0.107	0.589
10:2-FTS	6.07	1.090	15157.8		A	13C2-8:2-FTS	5.57	54757.9	0.277	0.610
NMePFOSAE	6.10	1.000	37932.7		A	d7-NMePFOSAE	6.09	272071.3	0.139	0.587
NMePFOSA	6.11	1.000	9381.3		A	d3-NMePFOSA	6.10	86471.7	0.108	0.575
PFDoS	6.22	1.190	11606.3		A	13C8-PFOS	5.25	313894.3	0.037	0.531
NEtPFOSAE	6.26	1.000	37977.7		A	d9-NEtPFOSAE	6.24	229050.7	0.166	0.596
NEtPFOSA	6.27	1.000	7883.3		A	d5-NEtPFOSA	6.26	66646.8	0.118	0.530
PFTrDA	6.25	1.030	117562.3		A	13C2-PFDoDA	6.05	1140522.3	0.103	0.621
PFTeDA	6.43	1.000	88360.3		A	13C2-PFTeDA	6.43	858145.2	0.103	0.583
PFHxDA	6.73	1.050	44164.6		A	13C2-PFTeDA	6.43	858145.2	0.051	0.588
PFODA	6.99	1.090	36421.5		A	13C2-PFTeDA	6.43	858145.2	0.042	0.565

Total Ion Chromatogram

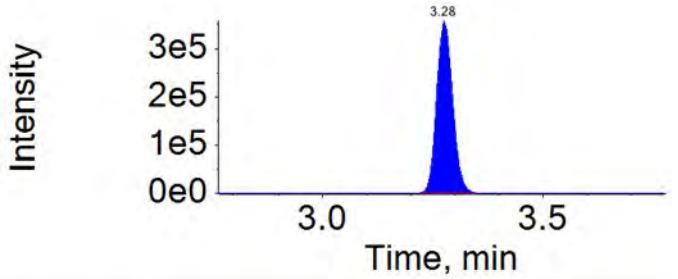


APPROVED
By MCD at 5:00 pm, 11/28/18

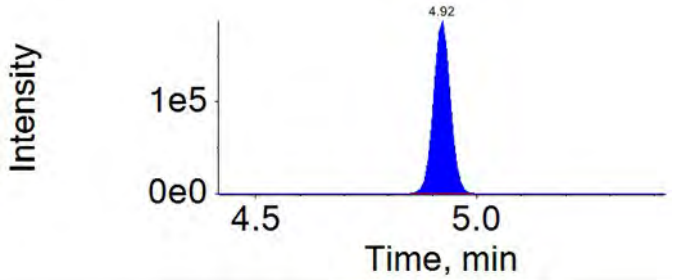
REVIEWED
By HMK at 12:22 pm, 11/29/18

ICAL Name: 18NOV28DCAL
QMethod Name: 18AUG20QM
Result Table: 18NOV28DCAL 11/28/2018 4:47:11 PM
Acquisition Method: 18AUG13_3uL.dam

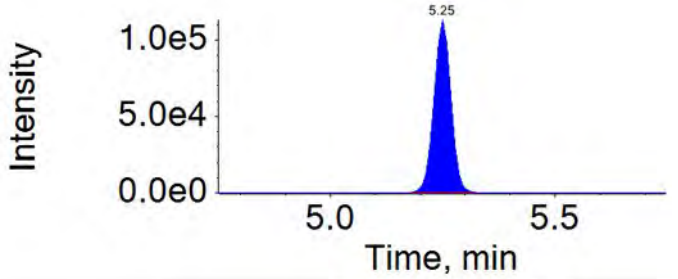
Injection Standard: 13C3-PFBA
216.0 / 172.0



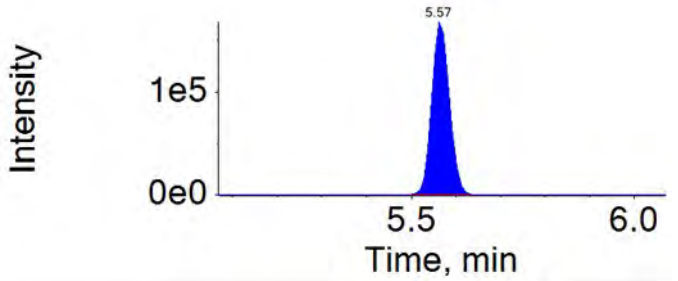
Injection Standard: 13C2-PFOA
415.0 / 370.0



Injection Standard: 13C4-PFOS
503.0 / 80.0

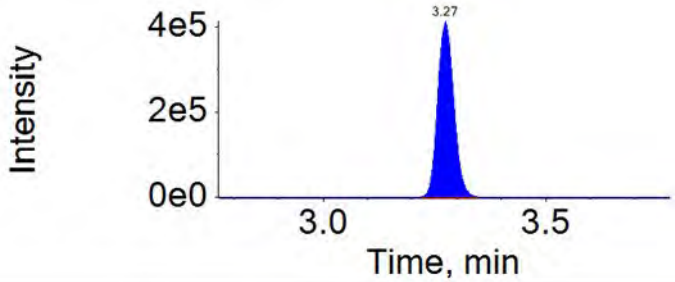


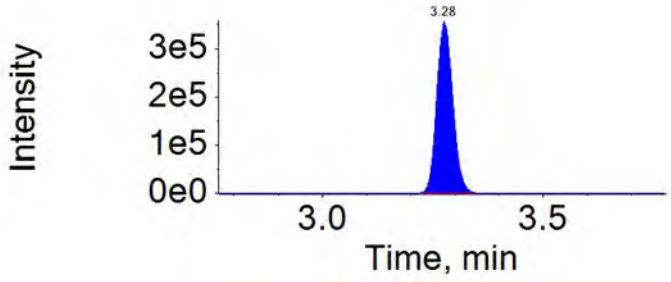
Injection Standard: 13C2-PFDA
515.0 / 470.0



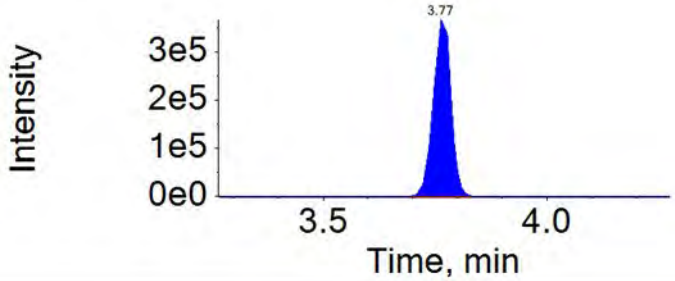
ICAL Name: 18NOV28DCAL **Result Table:** 18NOV28DCAL 11/28/2018 4:47:11 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

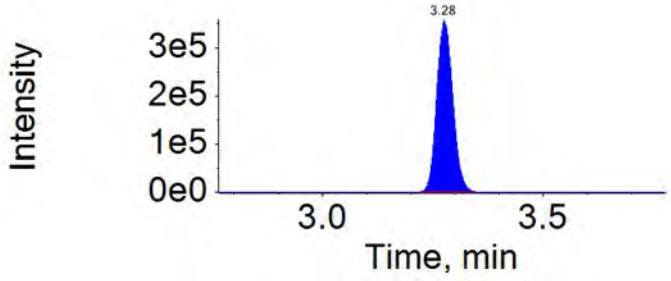
Extraction Standard: E13C4-PFBA	Injection Standard: 13C3-PFBA
217.0 / 172.0	216.0 / 172.0



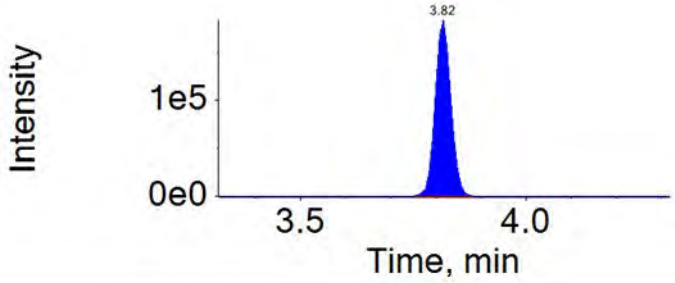


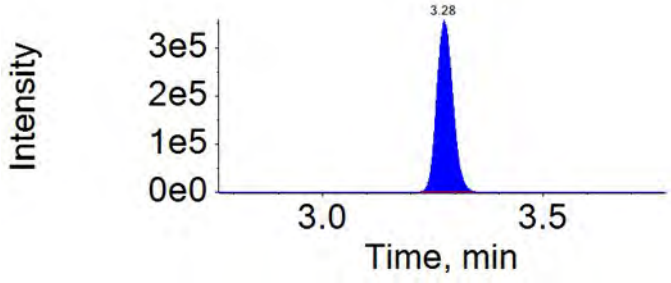
Extraction Standard: E13C5-PFPeA	Injection Standard: 13C3-PFBA
268.0 / 223.0	216.0 / 172.0



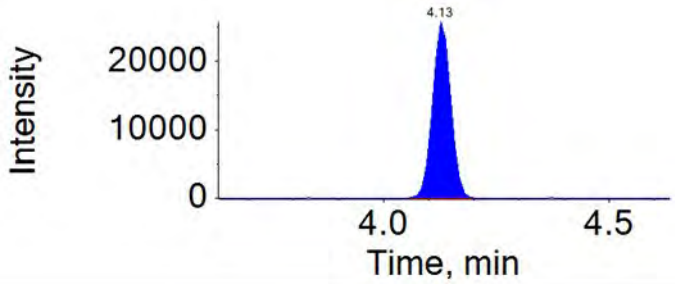


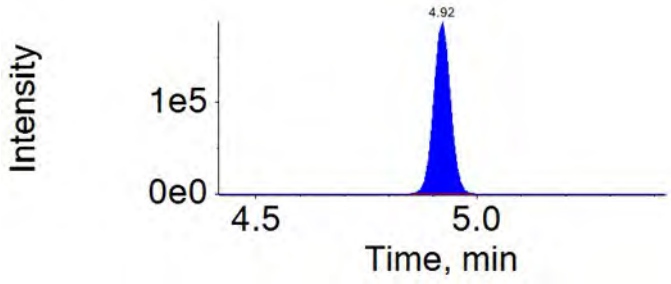
Extraction Standard: E13C3-PFBS	Injection Standard: 13C3-PFBA
302.0 / 80.0	216.0 / 172.0





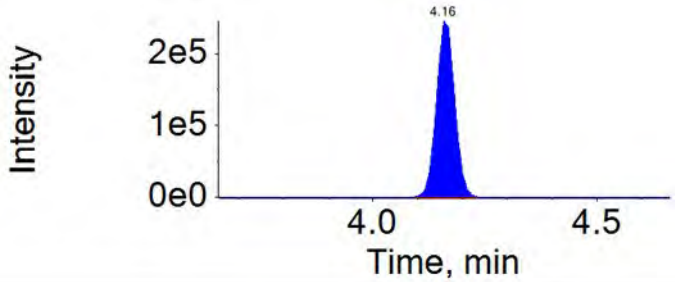
Extraction Standard: E13C2-4:2-FTS	Injection Standard: 13C2-PFOA
329.0 / 81.0	415.0 / 370.0

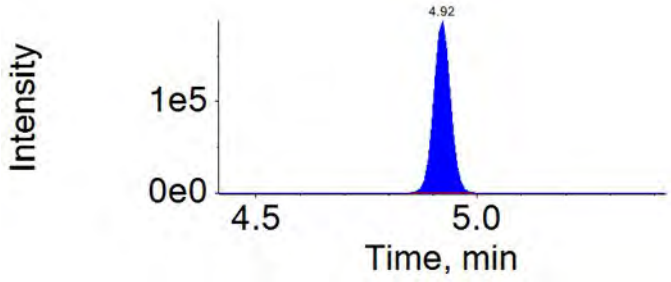




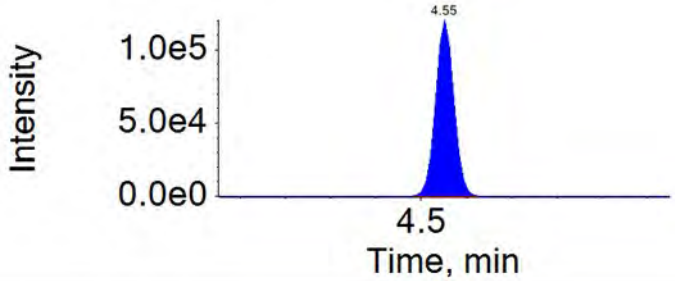
ICAL Name: 18NOV28DCAL **Result Table:** 18NOV28DCAL 11/28/2018 4:47:11 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

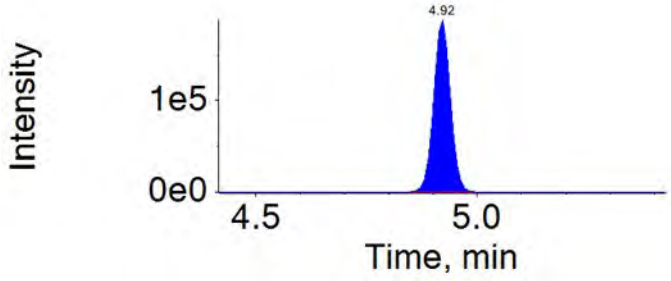
Extraction Standard: E13C5-PFHxA	Injection Standard: 13C2-PFOA
318.0 / 273.0	415.0 / 370.0



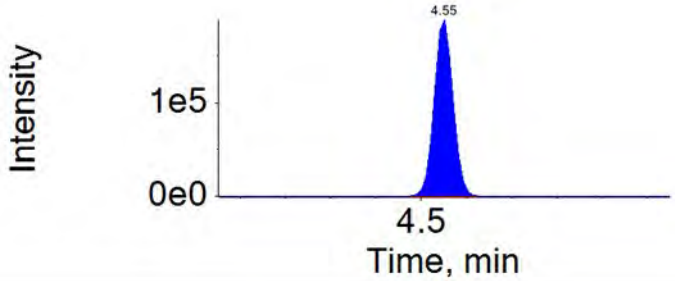


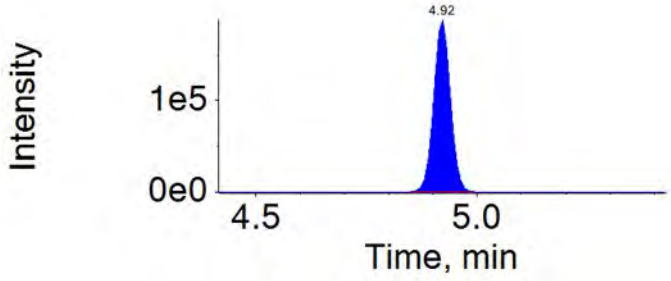
Extraction Standard: E13C3-PFHxS	Injection Standard: 13C2-PFOA
402.0 / 80.0	415.0 / 370.0



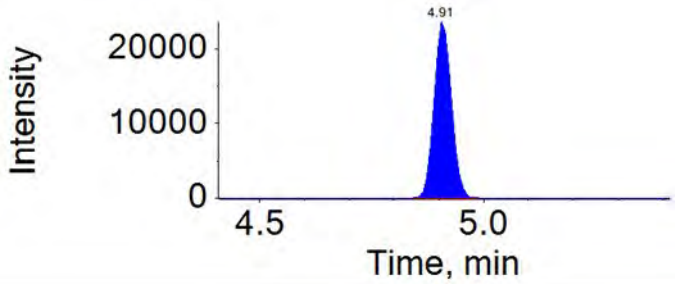


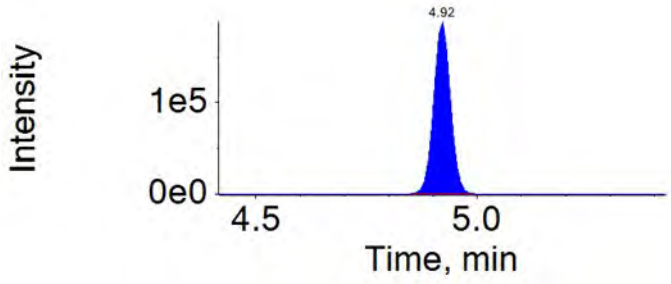
Extraction Standard: E13C4-PFHpA	Injection Standard: 13C2-PFOA
367.0 / 322.0	415.0 / 370.0





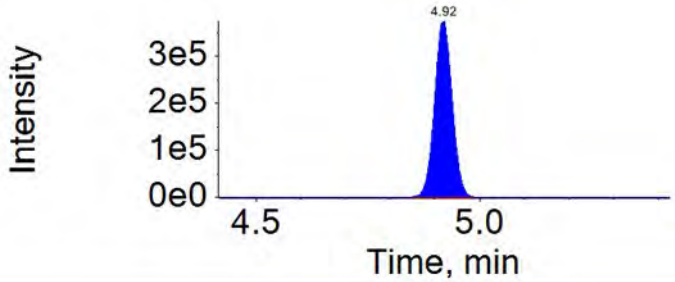
Extraction Standard: E13C2-6:2-FTS	Injection Standard: 13C2-PFOA
429.0 / 81.0	415.0 / 370.0

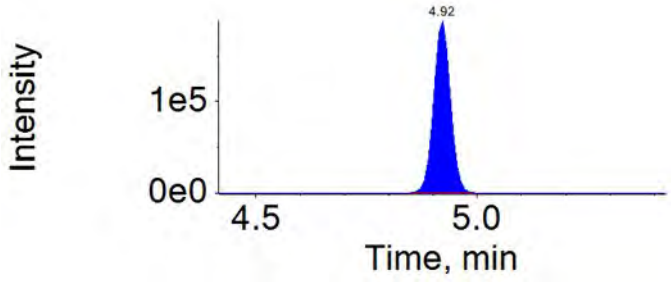




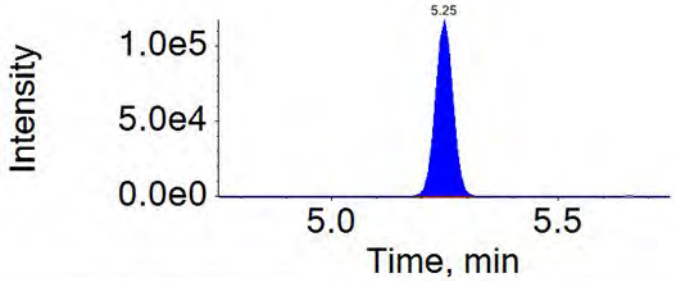
ICAL Name: 18NOV28DCAL **Result Table:** 18NOV28DCAL 11/28/2018 4:47:11 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

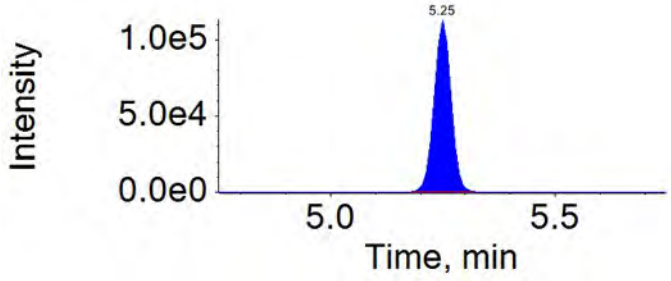
Extraction Standard: E13C8-PFOA	Injection Standard: 13C2-PFOA
421.0 / 376.0	415.0 / 370.0



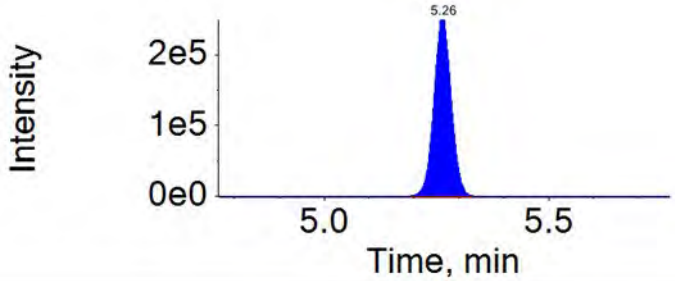


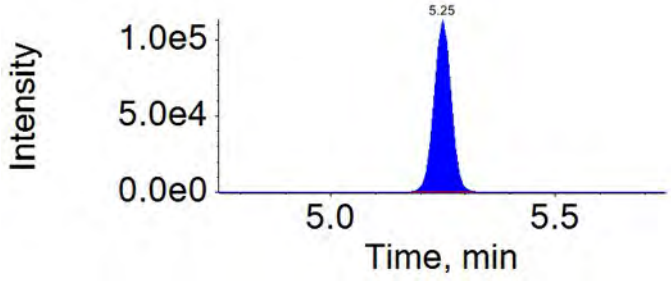
Extraction Standard: E13C8-PFOS	Injection Standard: 13C4-PFOS
507.0 / 80.0	503.0 / 80.0



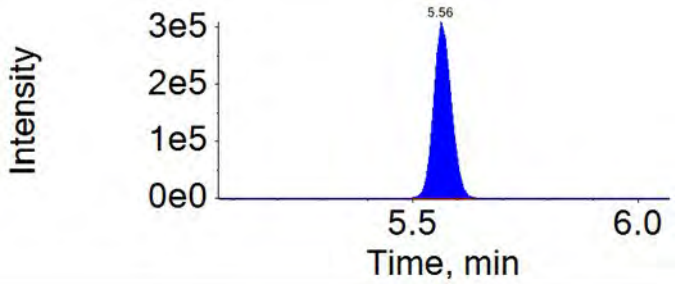


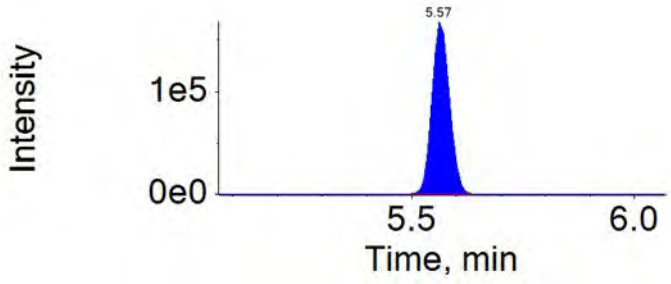
Extraction Standard: E13C9-PFNA	Injection Standard: 13C4-PFOS
472.0 / 427.0	503.0 / 80.0





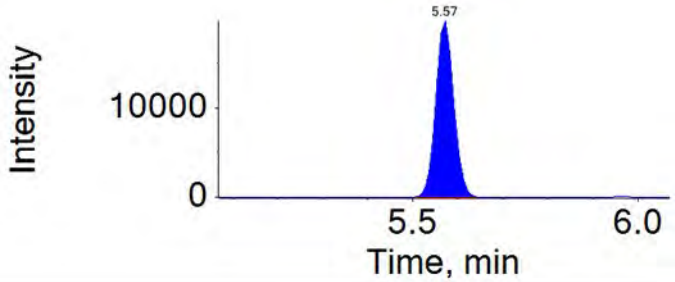
Extraction Standard: E13C6-PFDA	Injection Standard: 13C2-PFDA
519.0 / 474.0	515.0 / 470.0

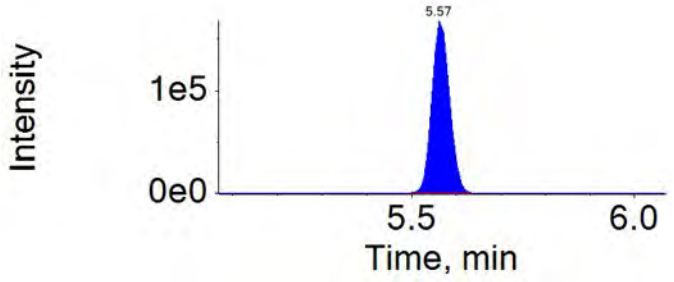




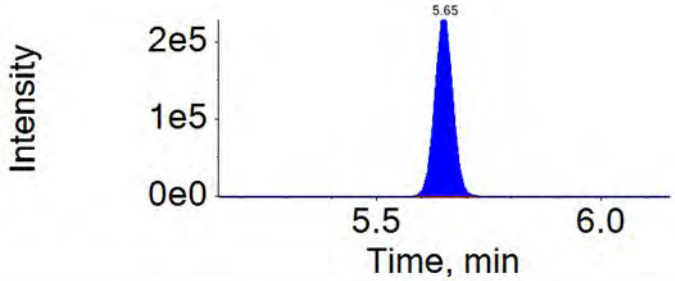
ICAL Name: 18NOV28DCAL **Result Table:** 18NOV28DCAL 11/28/2018 4:47:11 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

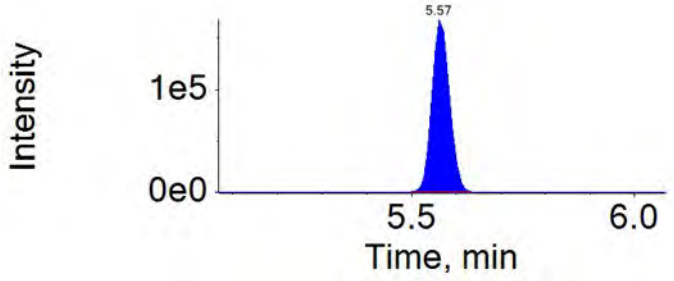
Extraction Standard: E13C2-8:2-FTS	Injection Standard: 13C2-PFDA
529.0 / 81.0	515.0 / 470.0



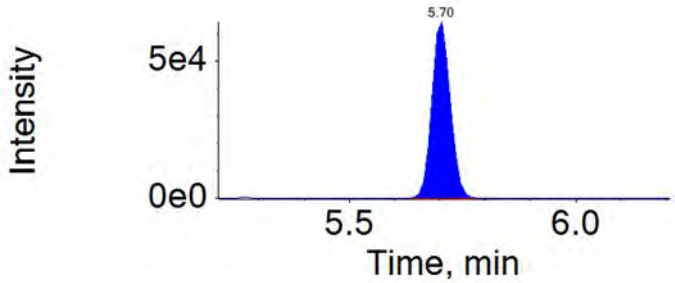


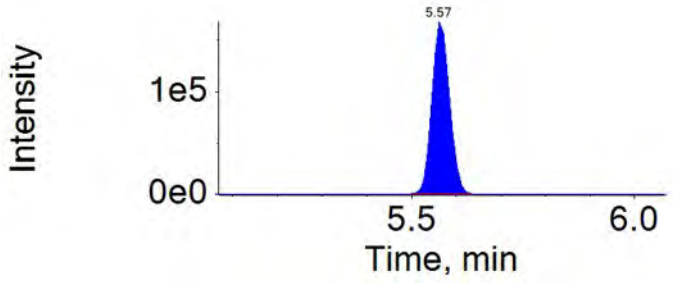
Extraction Standard: E13C8-PFOSA	Injection Standard: 13C2-PFDA
506.0 / 78.0	515.0 / 470.0



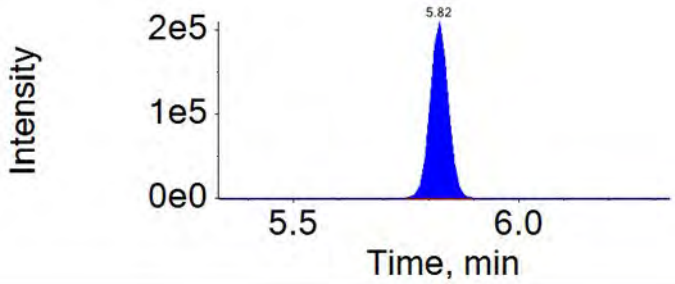


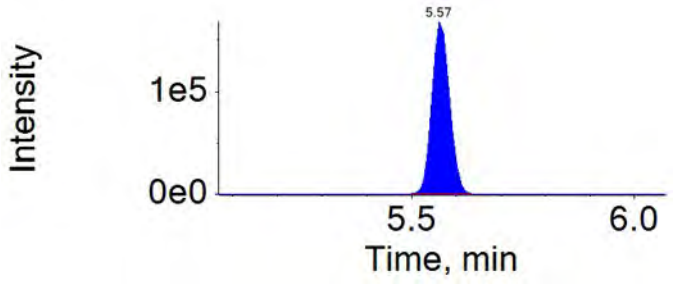
Extraction Standard: Ed3-NMeFOSAA	Injection Standard: 13C2-PFDA
573.0 / 419.0	515.0 / 470.0





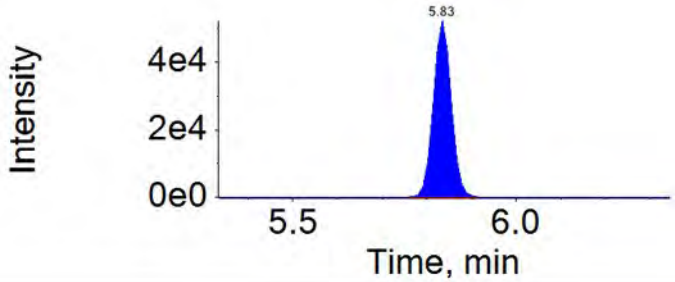
Extraction Standard: E13C7-PFUnDA	Injection Standard: 13C2-PFDA
570.0 / 525.0	515.0 / 470.0

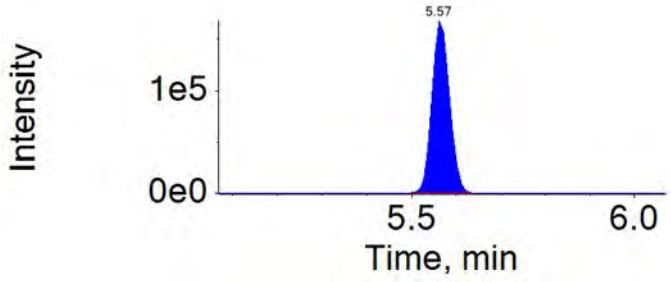




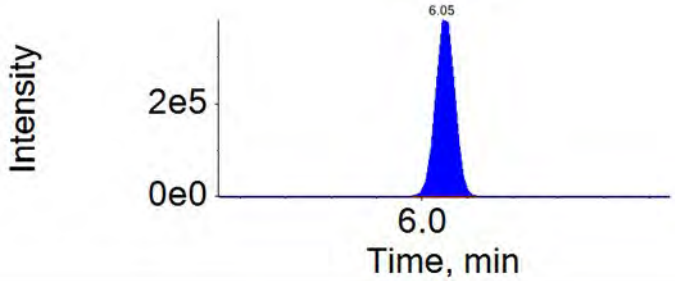
ICAL Name: 18NOV28DCAL **Result Table:** 18NOV28DCAL 11/28/2018 4:47:11 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

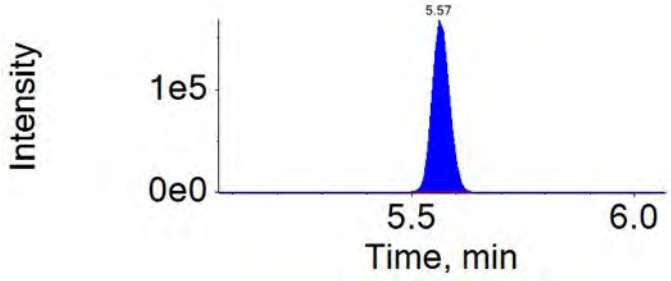
Extraction Standard: Ed5-NEtFOSAA	Injection Standard: 13C2-PFDA
589.0 / 419.0	515.0 / 470.0



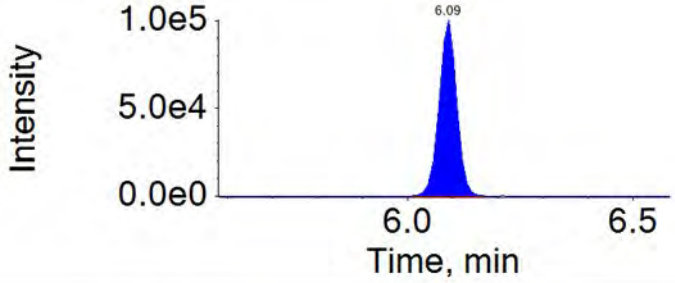


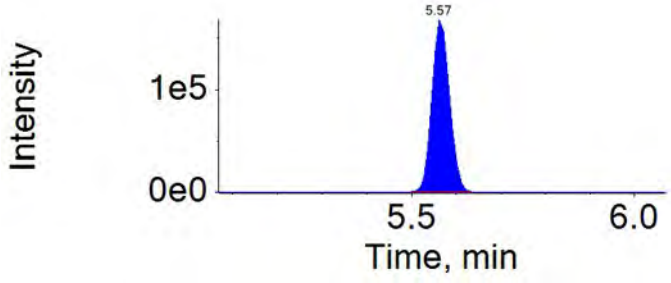
Extraction Standard: E13C2-PFDoDA	Injection Standard: 13C2-PFDA
615.0 / 570.0	515.0 / 470.0



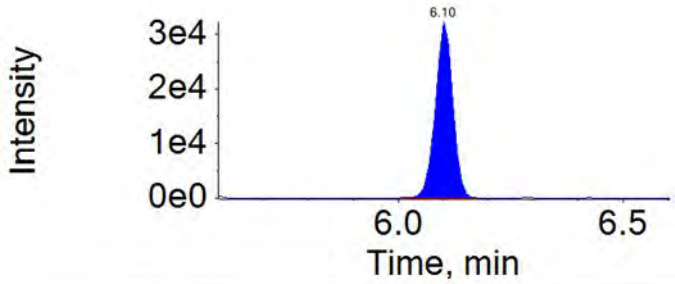


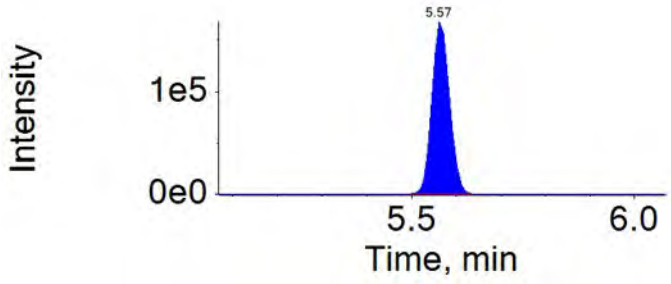
Extraction Standard: Ed7-NMePFOSAE	Injection Standard: 13C2-PFDA
623.0 / 59.0	515.0 / 470.0





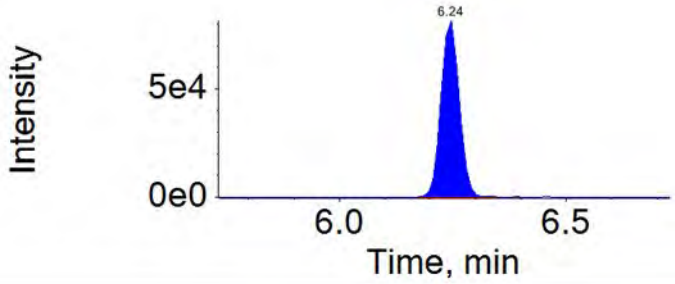
Extraction Standard: Ed3-NMePFOSA	Injection Standard: 13C2-PFDA
515.0 / 169.0	515.0 / 470.0

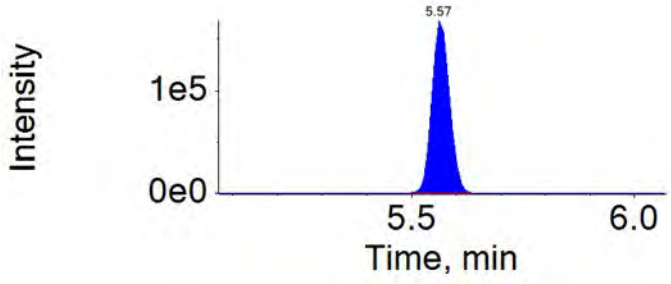




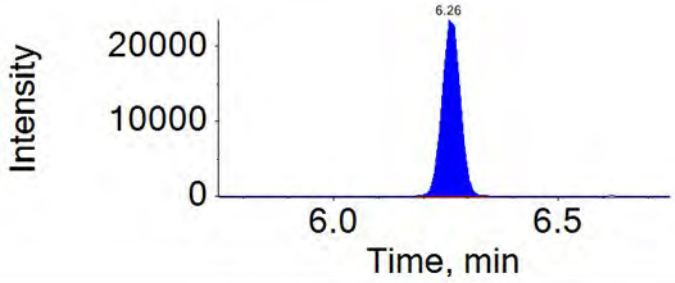
ICAL Name: 18NOV28DCAL **Result Table:** 18NOV28DCAL 11/28/2018 4:47:11 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

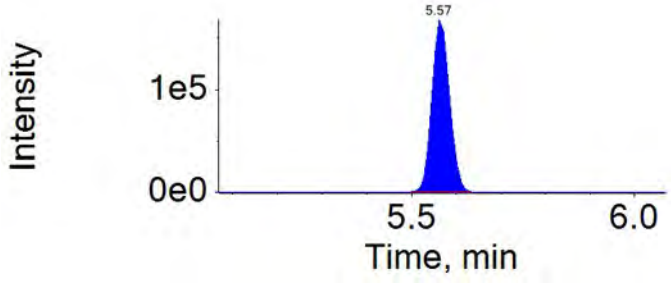
Extraction Standard: Ed9-NEtPFOSAE	Injection Standard: 13C2-PFDA
639.0 / 59.0	515.0 / 470.0



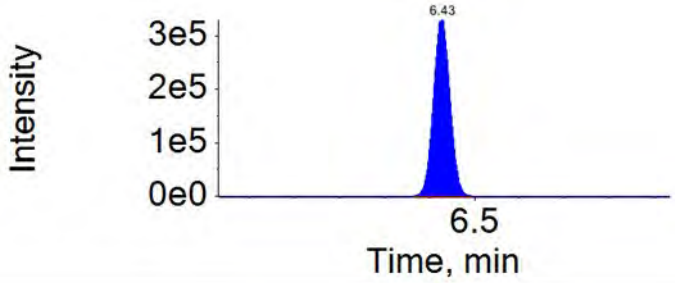


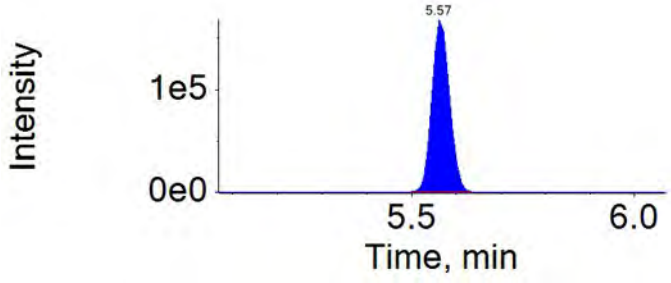
Extraction Standard: Ed5-NEtPFOSA	Injection Standard: 13C2-PFDA
531.0 / 169.0	515.0 / 470.0





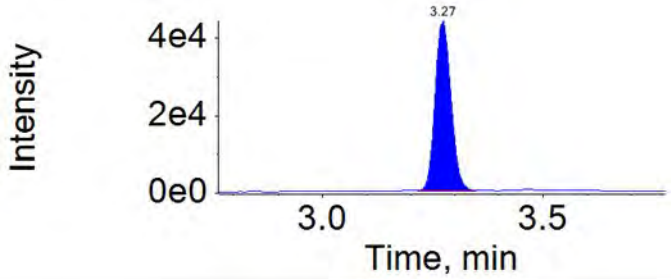
Extraction Standard: E13C2-PFTeDA	Injection Standard: 13C2-PFDA
715.0 / 670.0	515.0 / 470.0



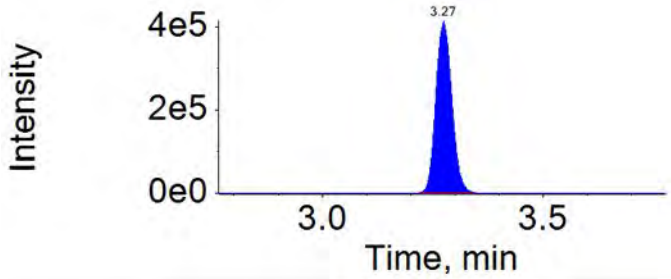


ICAL Name: 18NOV28DCAL **Result Table:** 18NOV28DCAL 11/28/2018 4:47:11 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

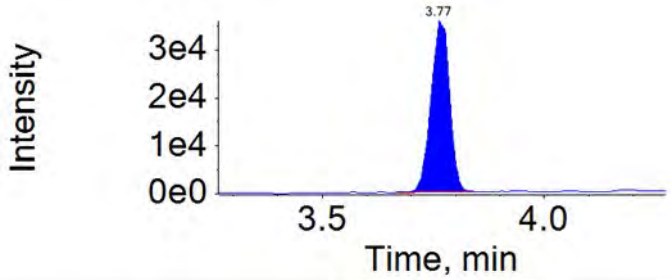
Analyte: PFBA
213.0 / 169.0



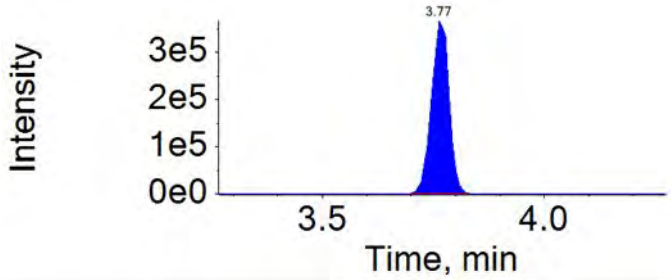
Extraction Standard: 13C4-PFBA
217.0 / 172.0



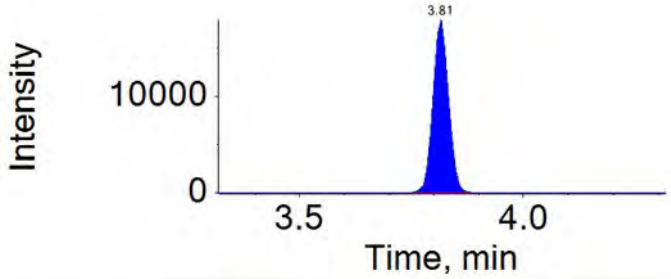
Analyte: PFPeA
263.0 / 219.0



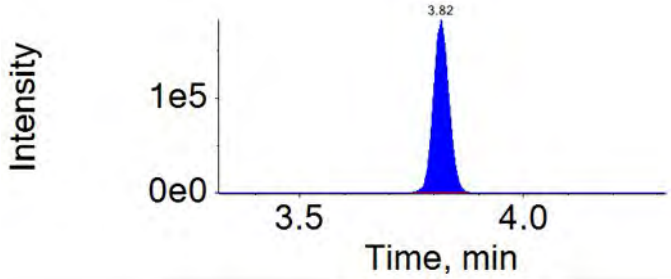
Extraction Standard: 13C5-PFPeA
268.0 / 223.0



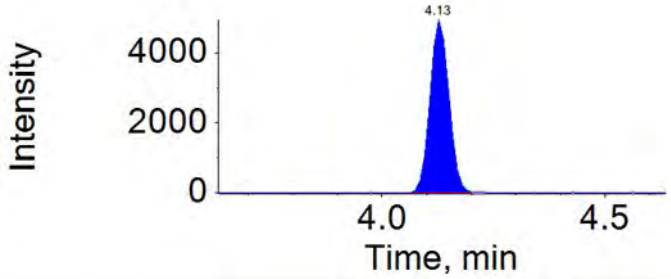
Analyte: PFBS
299.0 / 80.0



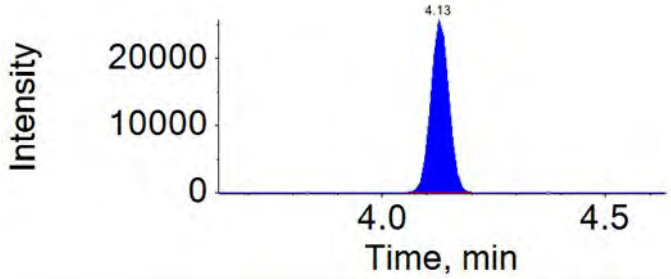
Extraction Standard: 13C3-PFBS
302.0 / 80.0



Analyte: 4:2-FTS
327.0 / 307.0



Extraction Standard: 13C2-4:2-FTS
329.0 / 81.0

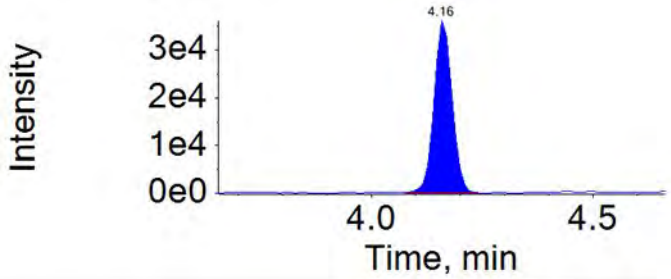


APPROVED
By MCD at 5:00 pm, 11/28/18

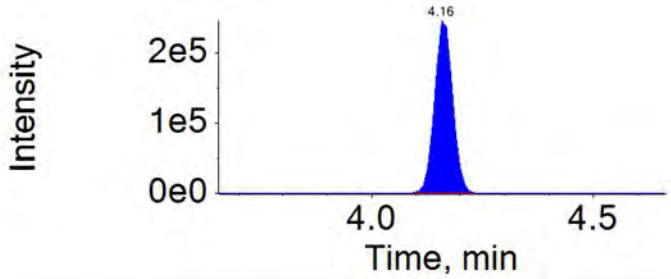
REVIEWED
By HMK at 12:22 pm, 11/29/18

ICAL Name: 18NOV28DCAL **Result Table:** 18NOV28DCAL 11/28/2018 4:47:11 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

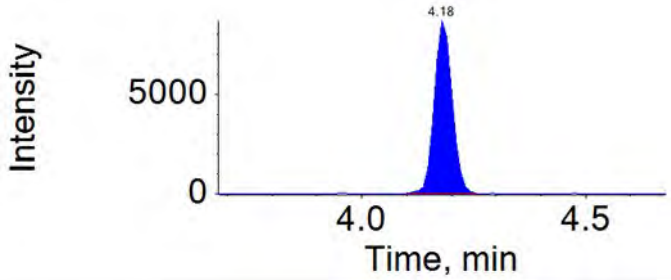
Analyte: PFHxA
313.0 / 269.0



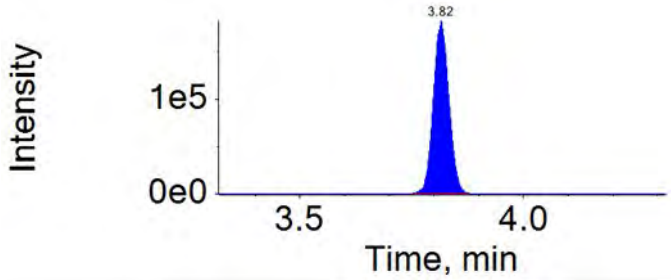
Extraction Standard: 13C5-PFHxA
318.0 / 273.0



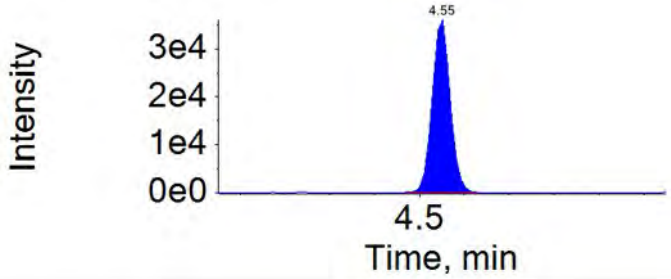
Analyte: PFPeS
349.0 / 80.0



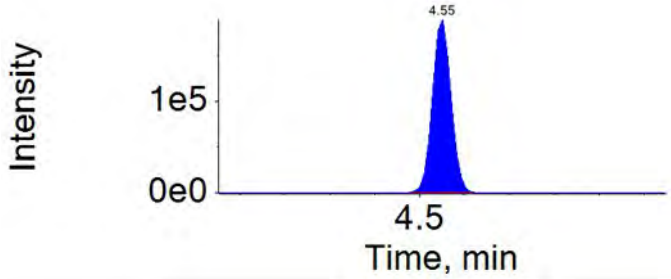
Extraction Standard: 13C3-PFBS
302.0 / 80.0



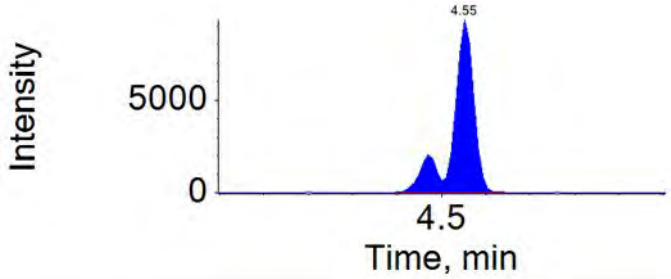
Analyte: PFHpA
363.0 / 319.0



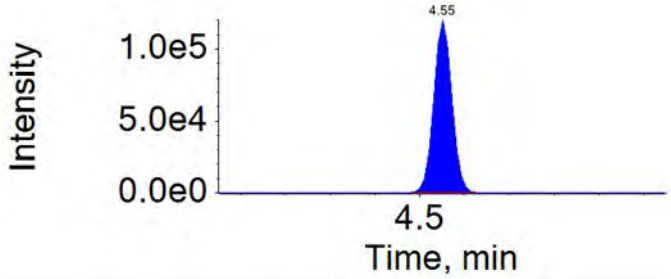
Extraction Standard: 13C4-PFHpA
367.0 / 322.0



Analyte: PFHxS
399.0 / 80.0



Extraction Standard: 13C3-PFHxS
402.0 / 80.0

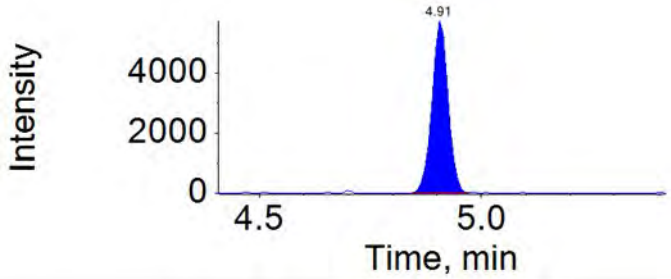


APPROVED
By MCD at 5:00 pm, 11/28/18

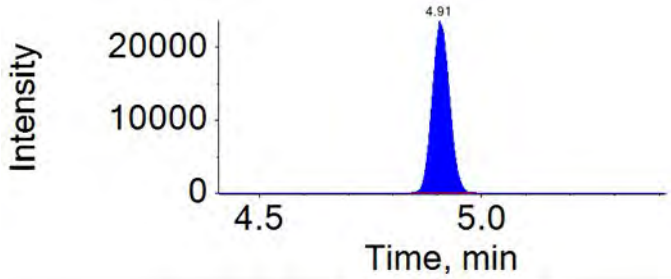
REVIEWED
By HMK at 12:22 pm, 11/29/18

ICAL Name: 18NOV28DCAL **Result Table:** 18NOV28DCAL 11/28/2018 4:47:11 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

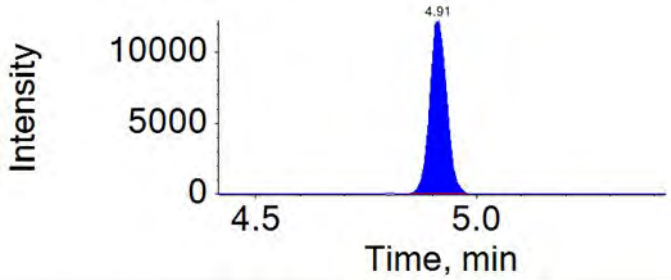
Analyte: 6:2-FTS
427.0 / 407.0



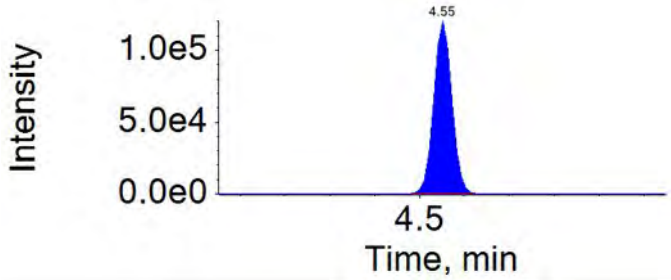
Extraction Standard: 13C2-6:2-FTS
429.0 / 81.0



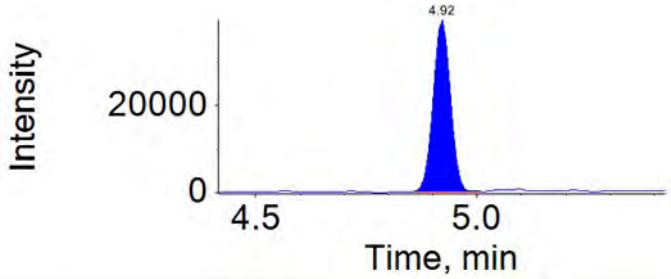
Analyte: PFHpS
449.0 / 80.0



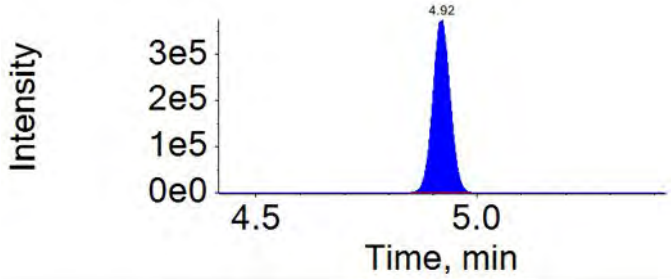
Extraction Standard: 13C3-PFHxS
402.0 / 80.0



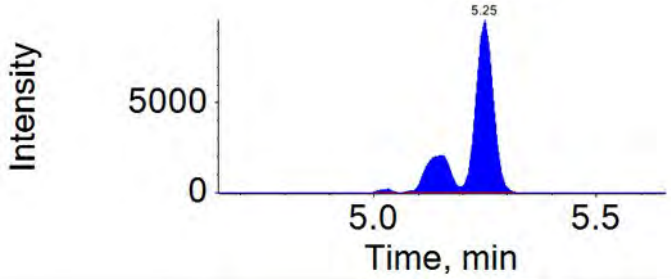
Analyte: PFOA
413.0 / 369.0



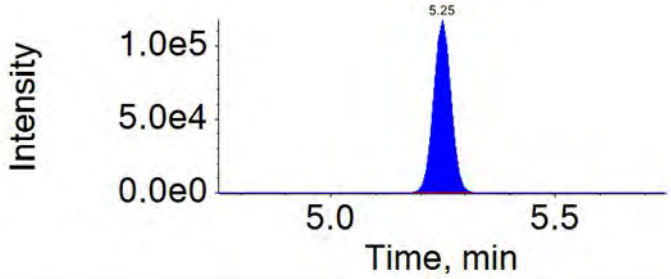
Extraction Standard: 13C8-PFOA
421.0 / 376.0



Analyte: PFOS
499.0 / 80.0

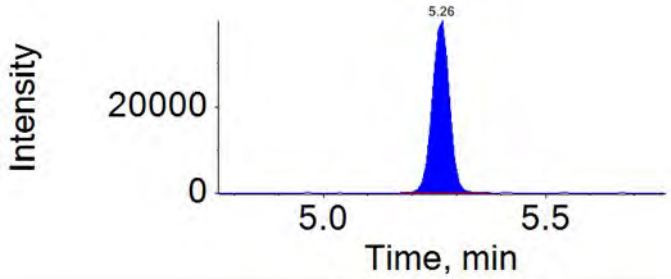


Extraction Standard: 13C8-PFOS
507.0 / 80.0

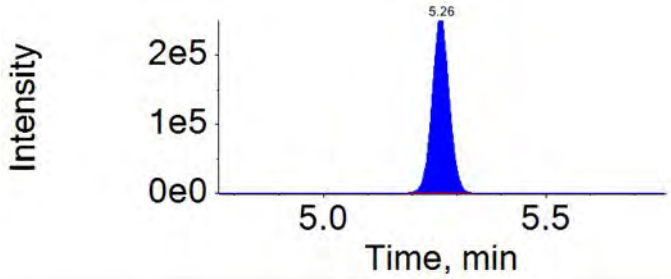


ICAL Name: 18NOV28DCAL **Result Table:** 18NOV28DCAL 11/28/2018 4:47:11 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

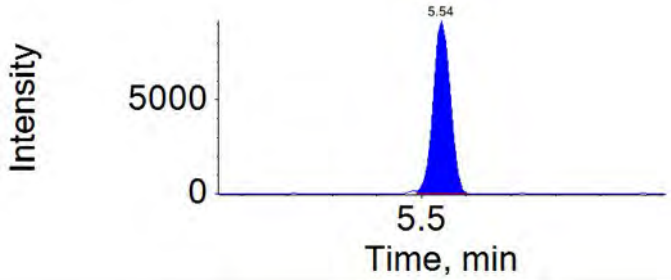
Analyte: PFNA
463.0 / 419.0



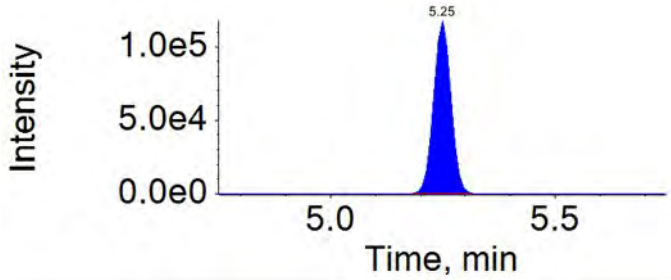
Extraction Standard: 13C9-PFNA
472.0 / 427.0



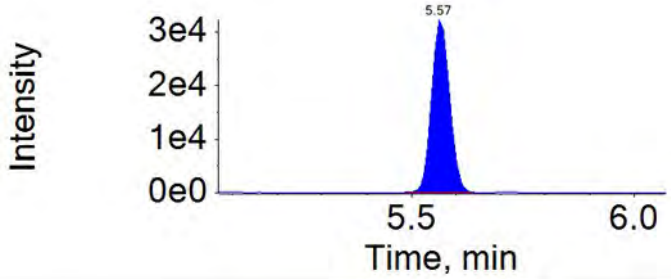
Analyte: PFNS
549.0 / 80.0



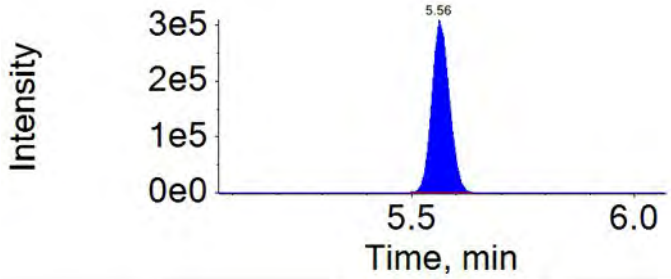
Extraction Standard: 13C8-PFOS
507.0 / 80.0



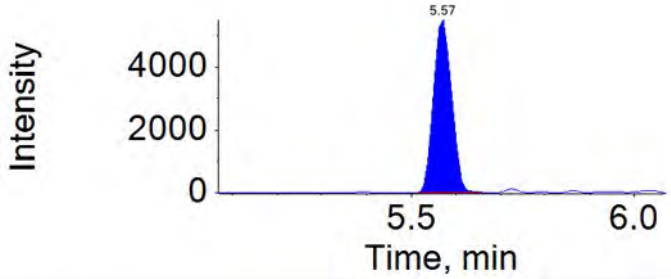
Analyte: PFDA
513.0 / 469.0



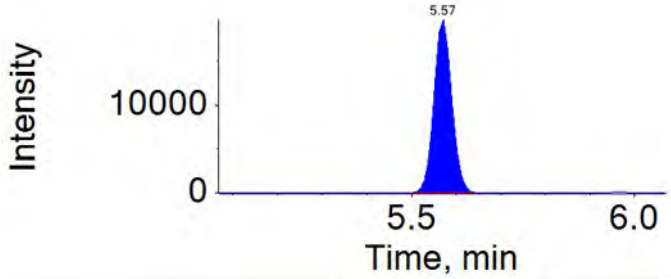
Extraction Standard: 13C6-PFDA
519.0 / 474.0



Analyte: 8:2-FTS
527.0 / 507.0

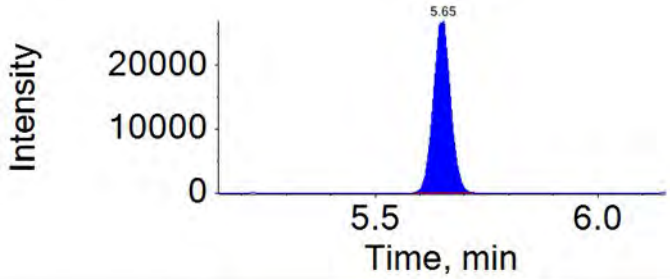


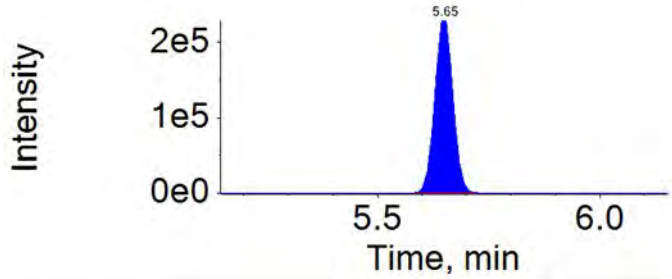
Extraction Standard: 13C2-8:2-FTS
529.0 / 81.0



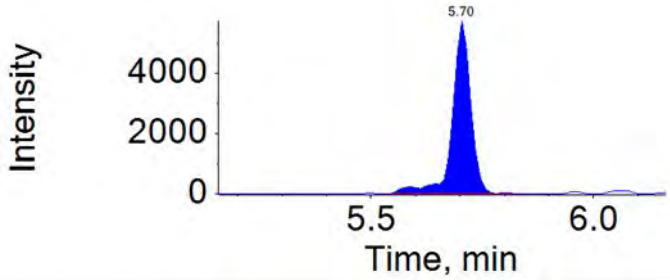
ICAL Name: 18NOV28DCAL **Result Table:** 18NOV28DCAL 11/28/2018 4:47:11 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

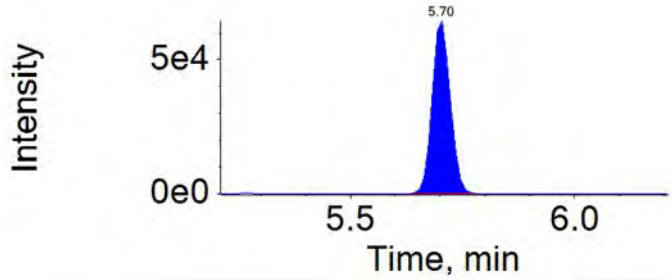
Analyte: PFOSA	Extraction Standard: 13C8-PFOSA
498.0 / 78.0	506.0 / 78.0



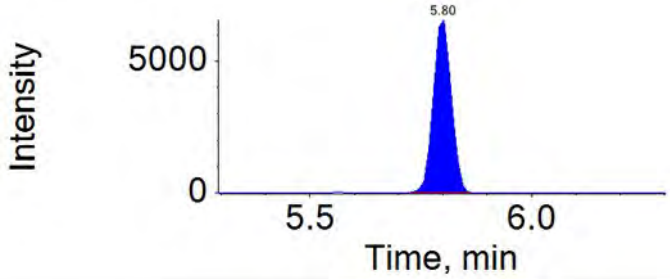


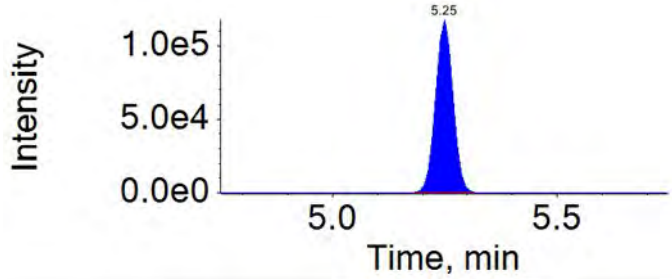
Analyte: NMeFOSAA	Extraction Standard: d3-NMeFOSAA
570.0 / 419.0	573.0 / 419.0



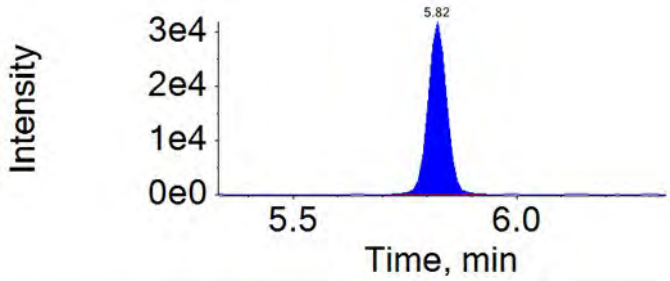


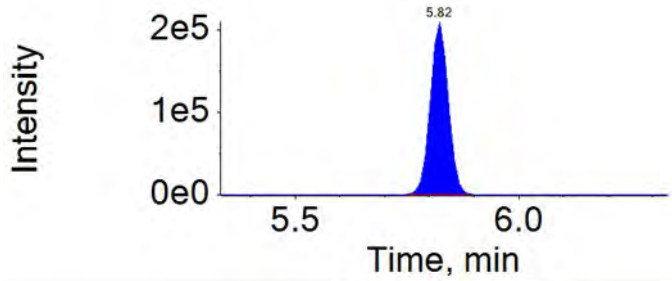
Analyte: PFDS	Extraction Standard: 13C8-PFOS
599.0 / 80.0	507.0 / 80.0





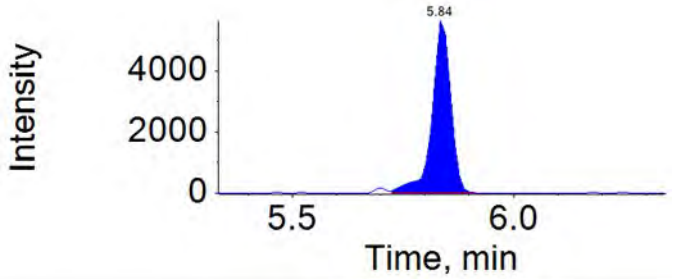
Analyte: PFUnDA	Extraction Standard: 13C7-PFUnDA
563.0 / 519.0	570.0 / 525.0



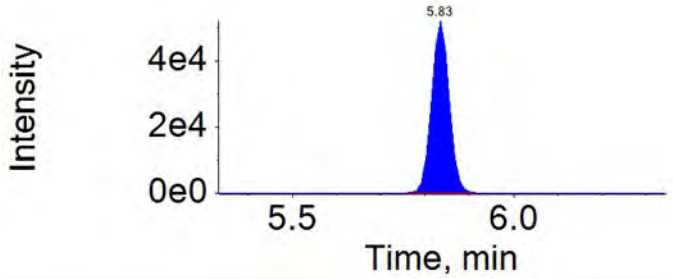


ICAL Name: 18NOV28DCAL **Result Table:** 18NOV28DCAL 11/28/2018 4:47:11 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

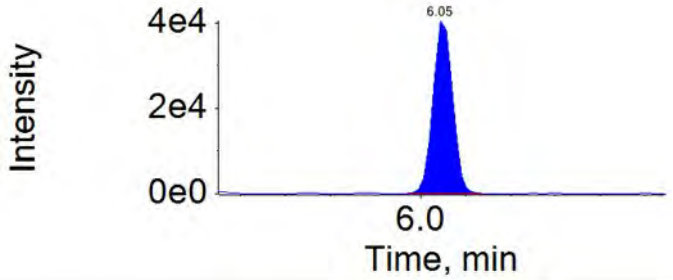
Analyte: NEtFOSAA
584.0 / 419.0



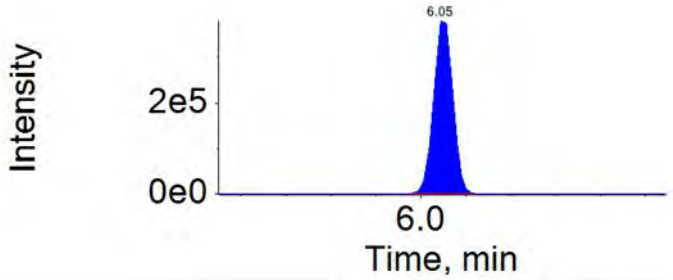
Extraction Standard: d5-NEtFOSAA
589.0 / 419.0



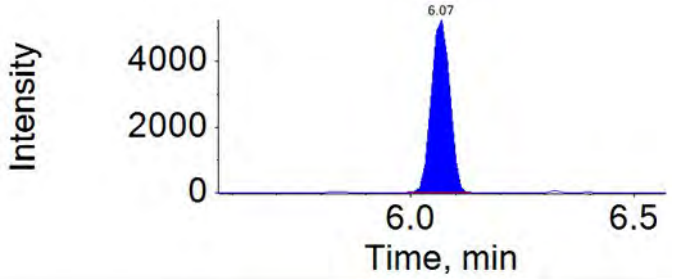
Analyte: PFDoDA
613.0 / 569.0



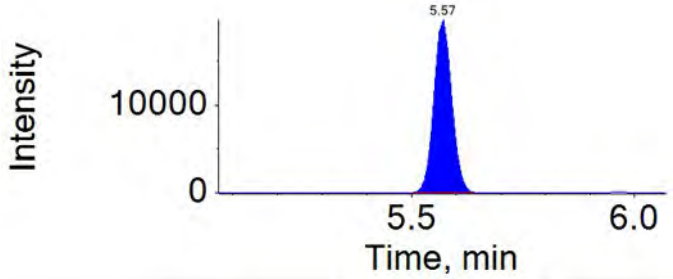
Extraction Standard: 13C2-PFDoDA
615.0 / 570.0



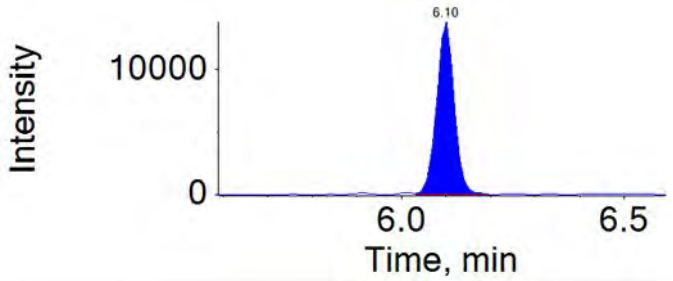
Analyte: 10:2-FTS
627.0 / 607.0



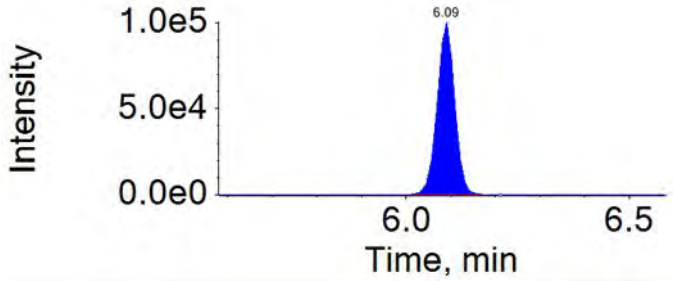
Extraction Standard: 13C2-8:2-FTS
529.0 / 81.0



Analyte: NMePFOSAE
616.0 / 59.0



Extraction Standard: d7-NMePFOSAE
623.0 / 59.0

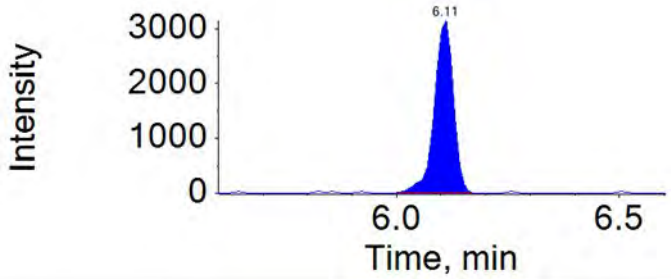


APPROVED
By MCD at 5:00 pm, 11/28/18

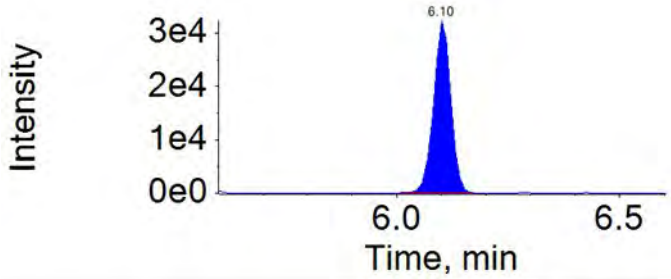
REVIEWED
By HMK at 12:22 pm, 11/29/18

ICAL Name: 18NOV28DCAL **Result Table:** 18NOV28DCAL 11/28/2018 4:47:11 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

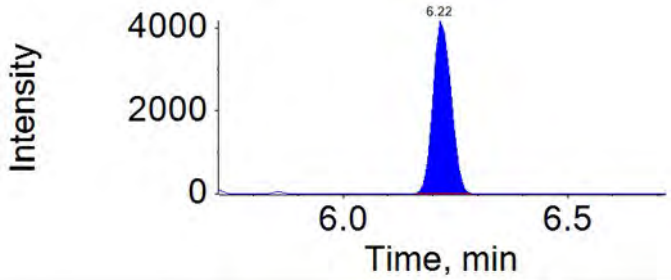
Analyte: NMePFOSA
512.0 / 169.0



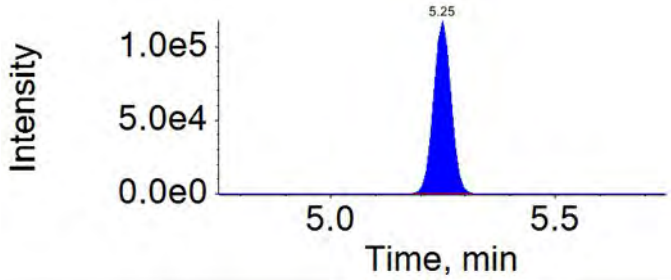
Extraction Standard: d3-NMePFOSA
515.0 / 169.0



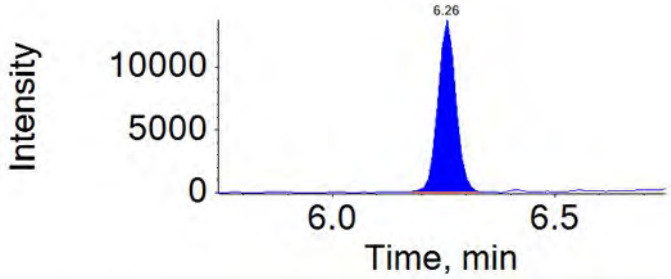
Analyte: PFDoS
699.0 / 80.0



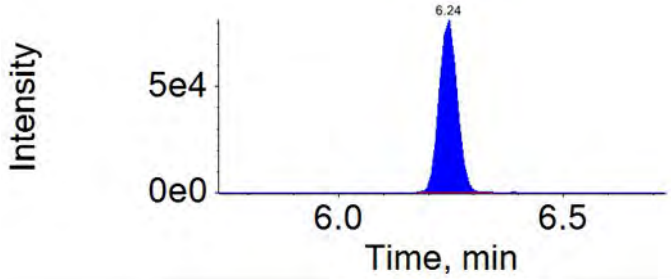
Extraction Standard: 13C8-PFOS
507.0 / 80.0



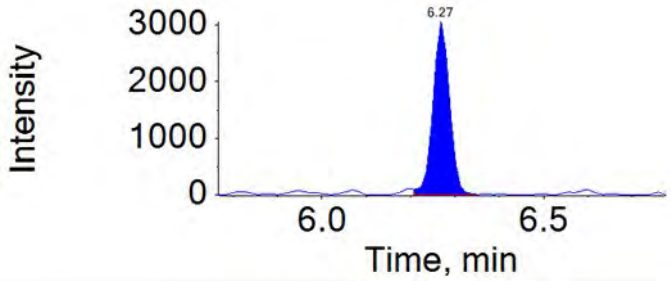
Analyte: NEtPFOSAE
630.0 / 59.0



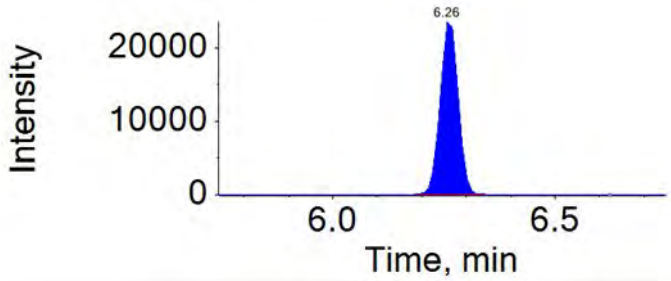
Extraction Standard: d9-NEtPFOSAE
639.0 / 59.0



Analyte: NEtPFOSA
526.0 / 169.0



Extraction Standard: d5-NEtPFOSA
531.0 / 169.0

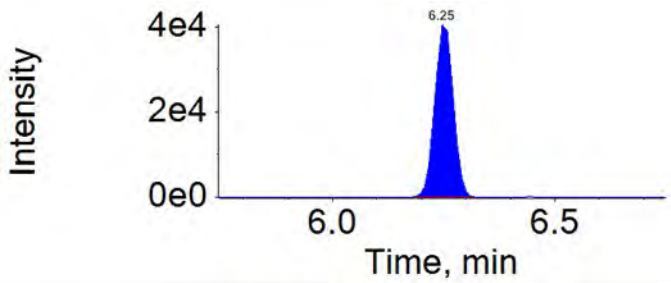


APPROVED
By MCD at 5:00 pm, 11/28/18

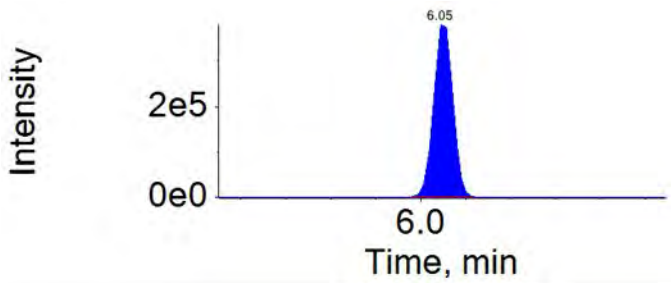
REVIEWED
By HMK at 12:22 pm, 11/29/18

ICAL Name: 18NOV28DCAL **Result Table:** 18NOV28DCAL 11/28/2018 4:47:11 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

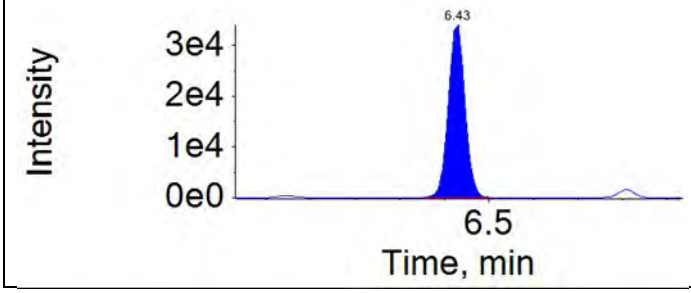
Analyte: PFTrDA
663.0 / 619.0



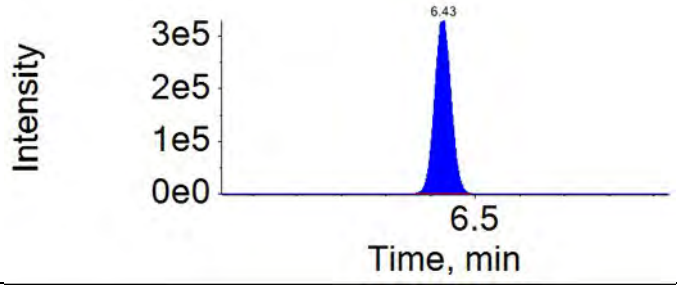
Extraction Standard: 13C2-PFDoDA
615.0 / 570.0



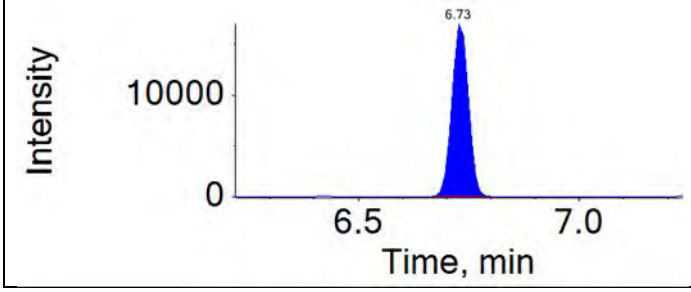
Analyte: PFTeDA
713.0 / 669.0



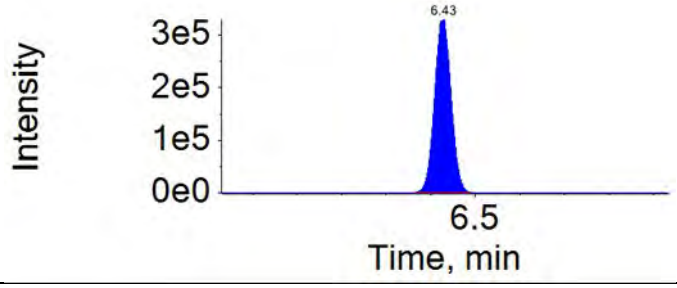
Extraction Standard: 13C2-PFTeDA
715.0 / 670.0



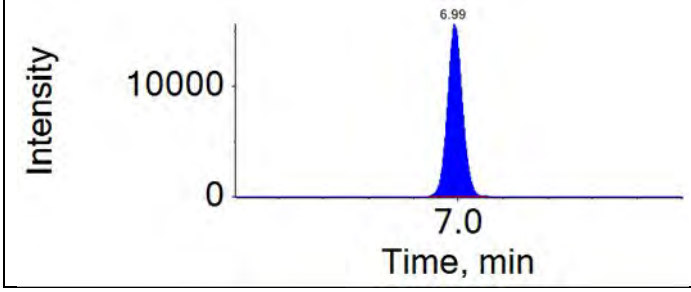
Analyte: PFHxDA
813.0 / 769.0



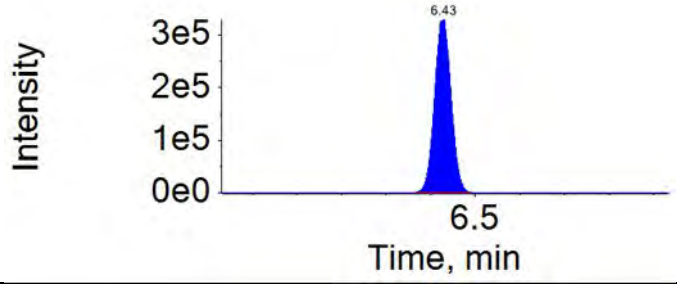
Extraction Standard: 13C2-PFTeDA
715.0 / 670.0



Analyte: PFODA
913.0 / 869.0



Extraction Standard: 13C2-PFTeDA
715.0 / 670.0



APPROVED
By MCD at 5:00 pm, 11/28/18

REVIEWED
By HMK at 12:22 pm, 11/29/18

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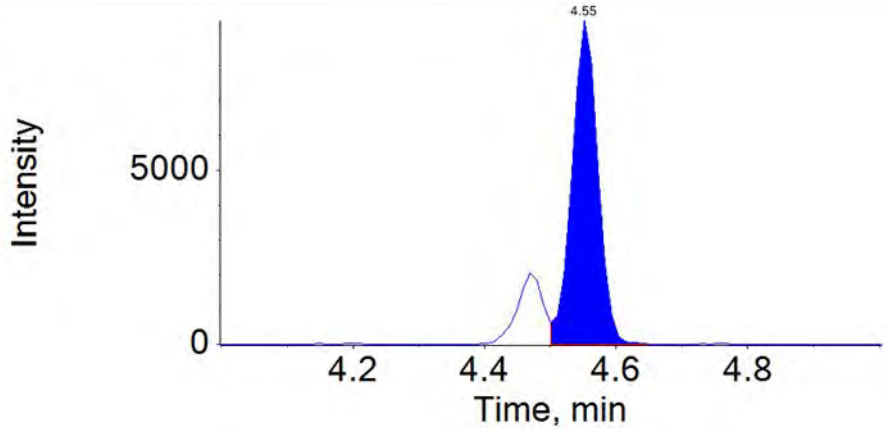
Auto Integrations prior to Manual Integration

Print Date: 11/28/2018 4:54 PM
Template: MQ-OrigInteg-16NOV21.docx

Results Table Name: 18NOV28DCAL
Results Table Date: 11/28/2018 4:52:53 PM

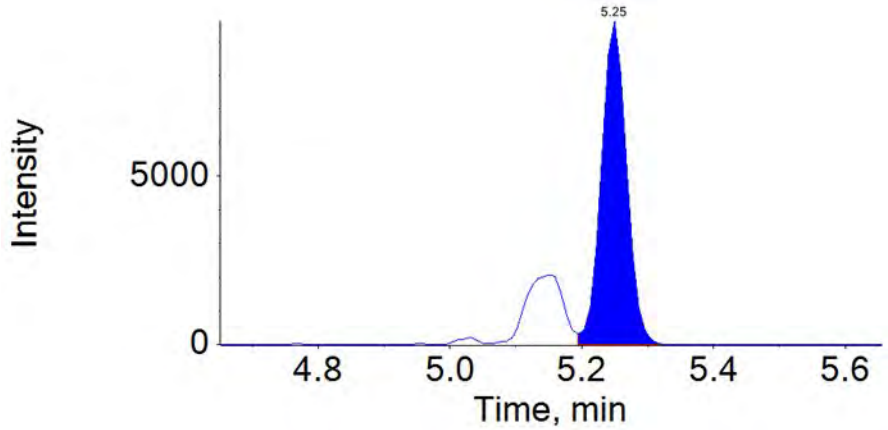
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

Component Name:
PFHxS
RT (min.):
4.55
Peak Area:
25567.97
Mass Range:
399.0 / 80.0
File Name:
18NOV28DCAL-07.wiff
Sample Name:
CAL2



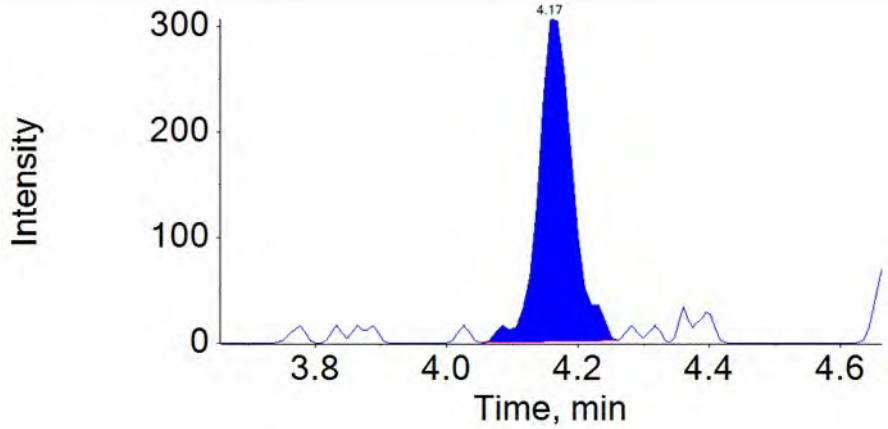
Integration Comment: incorrect integration

Component Name:
PFOS
RT (min.):
5.25
Peak Area:
25590.10
Mass Range:
499.0 / 80.0
File Name:
18NOV28DCAL-07.wiff
Sample Name:
CAL2



Integration Comment: incorrect integration

Component Name:
PFHxA_2
RT (min.):
4.17
Peak Area:
1118.24
Mass Range:
313.0 / 119.0
File Name:
18NOV28DCAL-07.wiff
Sample Name:
CAL2



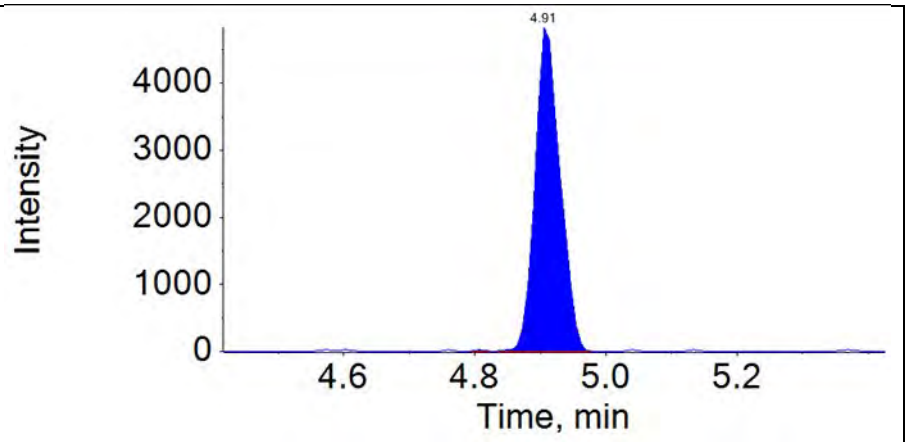
Integration Comment: incorrect integration

APPROVED
By MCD at 5:00 pm, 11/28/18

REVIEWED
By HMK at 12:22 pm, 11/29/18

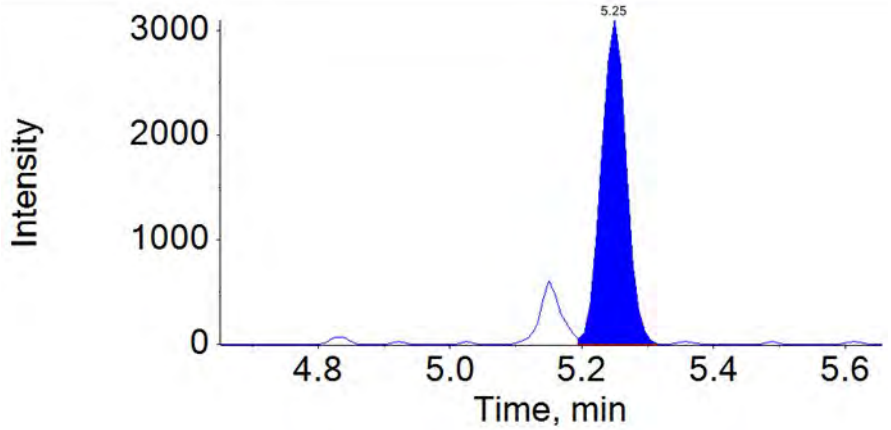
Results Table Name: 18NOV28DCAL
Results Table Date: 11/28/2018 4:52:53 PM
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

Component Name:
PFHpS_2
RT (min.):
4.91
Peak Area:
12887.35
Mass Range:
449.0 / 99.0
File Name:
18NOV28DCAL-07.wiff
Sample Name:
CAL2



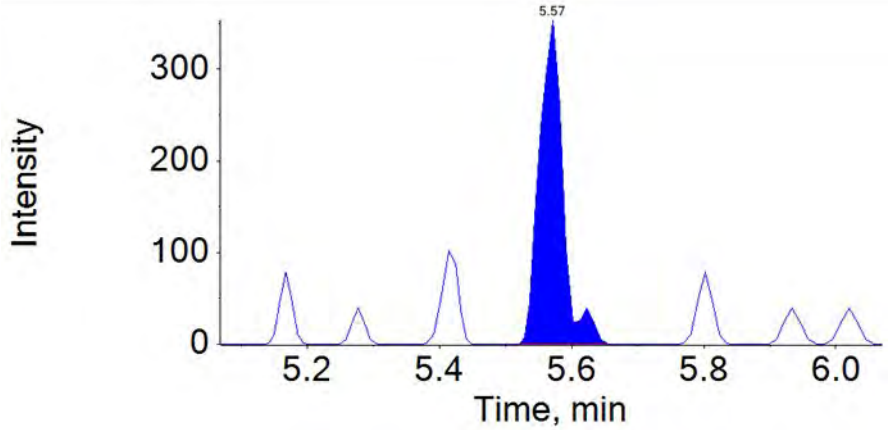
Integration Comment: incorrect integration

Component Name:
PFOS_2
RT (min.):
5.25
Peak Area:
8192.52
Mass Range:
499.0 / 99.0
File Name:
18NOV28DCAL-07.wiff
Sample Name:
CAL2



Integration Comment: incorrect integration

Component Name:
PFDA_2
RT (min.):
5.57
Peak Area:
886.81
Mass Range:
513.0 / 169.0
File Name:
18NOV28DCAL-07.wiff
Sample Name:
CAL2



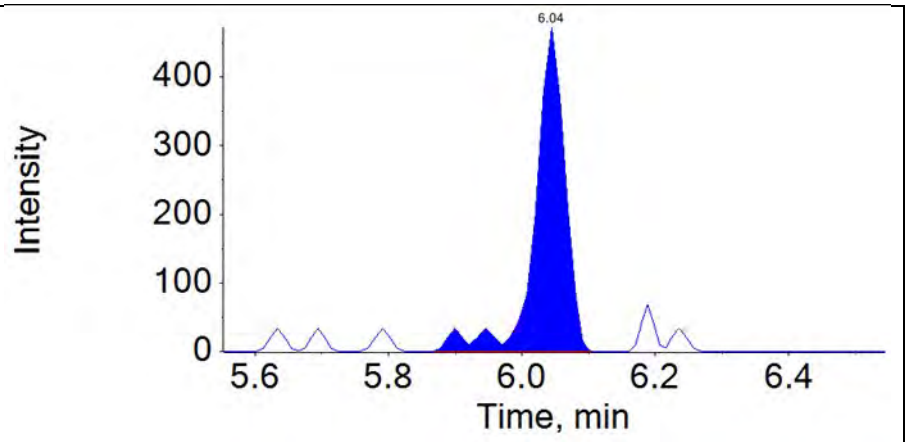
Integration Comment: incorrect integration

APPROVED
By MCD at 5:00 pm, 11/28/18

REVIEWED
By HMK at 12:22 pm, 11/29/18

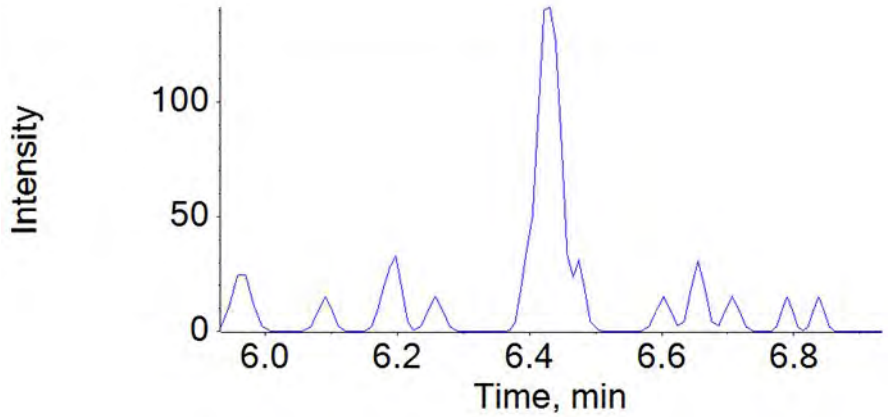
Results Table Name: 18NOV28DCAL
Results Table Date: 11/28/2018 4:52:53 PM
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

Component Name:
PFDoDA_2
RT (min.):
6.04
Peak Area:
1485.68
Mass Range:
613.0 / 169.0
File Name:
18NOV28DCAL-07.wiff
Sample Name:
CAL2



Integration Comment: incorrect integration

Component Name:
PFTeDA_2
RT (min.):
N/A
Peak Area:
N/A
Mass Range:
713.0 / 169.0
File Name:
18NOV28DCAL-07.wiff
Sample Name:
CAL2



Integration Comment: incorrect integration

APPROVED
By MCD at 5:00 pm, 11/28/18

REVIEWED
By HMK at 12:22 pm, 11/29/18

Results Table Name: 18NOV28DCAL
Results Table Date: 11/28/2018 4:52:53 PM
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

APPROVED
By MCD at 5:00 pm, 11/28/18

REVIEWED
By HMK at 12:22 pm, 11/29/18

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LC-MS/MS Analysis Report

Printed: 11/28/2018 4:51:00 PM
Template: IonRatio18OCT10

Ion Ratio Report

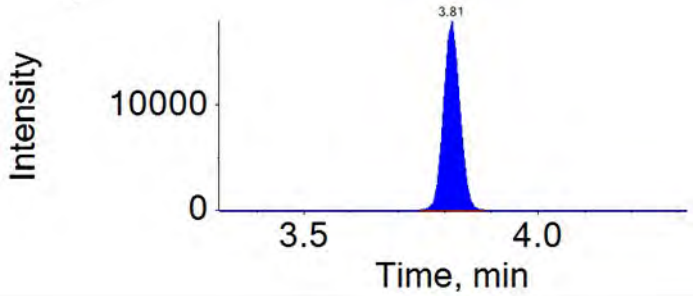
Sample Name: CAL2 **Instrument Name:** LM27631 **File Name:** 18NOV28DCAL-07.wiff

Component Name	RT	RRT	Analyte Area Response	Int Typ	Expected Ion Ratio	Ion Ratio	Ion Ratio % Diff	Ion Ratio Limit	Ion Ratio OOS
PFBS	3.81	1.00	43237.36	A	0.3655	0.3673			
PFBS_2	3.81	1.00	15879.57	A	0.3655	0.3673	0	50	
4:2-FTS	4.13	1.00	14524.83	A	0.6383	0.6894			
4:2-FTS_2	4.13	1.00	10014.03	A	0.6383	0.6894	8	50	
PFHxA	4.16	1.00	101713.19	A	0.0103	0.0108			
PFHxA_2	4.17	1.00	1097.96	M	0.0103	0.0108	4	50	
PFPeS	4.18	1.10	24007.25	A	0.4976	0.4701			
PFPeS_2	4.18	1.10	11284.85	A	0.4976	0.4701	-6	50	
PFHpA	4.55	1.00	100593.81	A	0.0557	0.0562			
PFHpA_2	4.55	1.00	5648.69	A	0.0557	0.0562	1	50	
PFHxS	4.55	1.00	31104.49	M	0.3693	0.4064			
PFHxS_2	4.55	1.00	12640.83	A	0.3693	0.4064	10	50	
6:2-FTS	4.91	1.00	14479.84	A	0.6625	0.5750			
6:2-FTS_2	4.91	1.00	8326.49	A	0.6625	0.5750	-13	50	
PFHpS	4.91	1.08	32553.66	A	0.3915	0.3950			
PFHpS_2	4.91	1.08	12858.96	M	0.3915	0.3950	1	50	
PFOA	4.92	1.00	106420.83	A	0.0573	0.0580			
PFOA_2	4.92	1.00	6175.90	A	0.0573	0.0580	1	50	
PFOS	5.25	1.00	34203.58	M	0.2960	0.2799			
PFOS_2	5.25	1.00	9573.24	M	0.2960	0.2799	-5	50	
PFNA	5.26	1.00	106720.90	A	0.0201	0.0208			
PFNA_2	5.26	1.00	2222.59	A	0.0201	0.0208	4	50	
PFNS	5.54	1.06	24149.87	A	0.4794	0.4687			
PFNS_2	5.55	1.06	11319.26	A	0.4794	0.4687	-2	50	
PFDA	5.57	1.00	90730.27	A	0.0075	0.0091			
PFDA_2	5.57	1.00	822.55	M	0.0075	0.0091	21	50	
8:2-FTS	5.57	1.00	15550.17	A	0.5380	0.4749			
8:2-FTS_2	5.57	1.00	7384.51	A	0.5380	0.4749	-12	50	
NMeFOSAA	5.70	1.00	16533.06	A	0.2305	0.2819			
NMeFOSAA_2	5.70	1.00	4660.20	A	0.2305	0.2819	22	50	
PFDS	5.80	1.10	18654.75	A	0.5356	0.5747			
PFDS_2	5.80	1.10	10721.43	A	0.5356	0.5747	7	50	
PFUnDA	5.82	1.00	91490.40	A	0.0038	0.0043			
PFUnDA_2	5.83	1.00	389.41	A	0.0038	0.0043	12	50	
NEtFOSAA	5.84	1.00	16643.25	A	0.7356	0.5363			
NEtFOSAA_2	5.84	1.00	8925.35	A	0.7356	0.5363	-27	50	
PFDoDA	6.05	1.00	122586.00	A	0.0130	0.0112			
PFDoDA_2	6.04	1.00	1368.20	M	0.0130	0.0112	-14	50	
10:2-FTS	6.07	1.09	15157.77	A	0.6989	0.5470			
10:2-FTS_2	6.07	1.09	8291.25	A	0.6989	0.5470	-22	50	
PFTrDA	6.25	1.03	117562.28	A	0.0090	0.0079			
PFTrDA_2	6.25	1.03	932.63	A	0.0090	0.0079	-12	50	
PFTeDA	6.43	1.00	88360.25	A	0.0056	0.0048			
PFTeDA_2	6.43	1.00	423.54	M	0.0056	0.0048	-15	50	
PFHxDA	6.73	1.05	44164.63	A	0.0646	0.0656			
PFHxDA_2	6.73	1.05	2895.58	A	0.0646	0.0656	2	50	
PFODA	6.99	1.09	36421.52	A	0.0264	0.0257			
PFODA_2	6.99	1.09	935.28	A	0.0264	0.0257	-3	50	

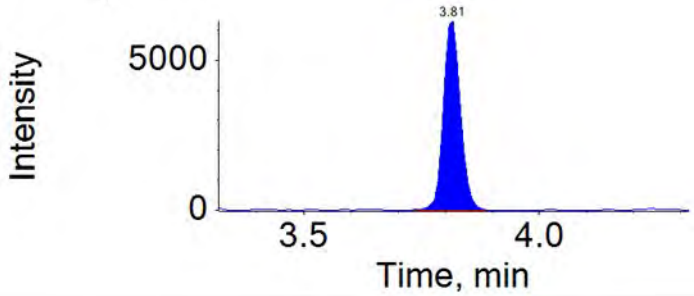
APPROVED
By MCD at 5:00 pm, 11/28/18

REVIEWED
By HMK at 12:22 pm, 11/29/18

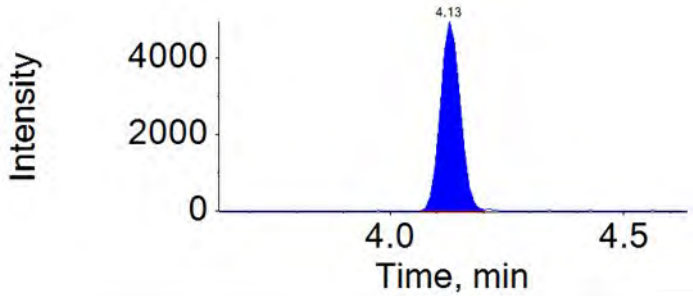
Component: PFBS
Primary Mass: 299.0 / 80.0



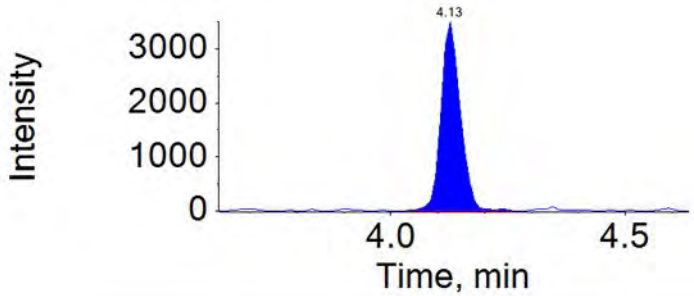
Component: PFBS_2
Secondary Mass: 299.0 / 99.0



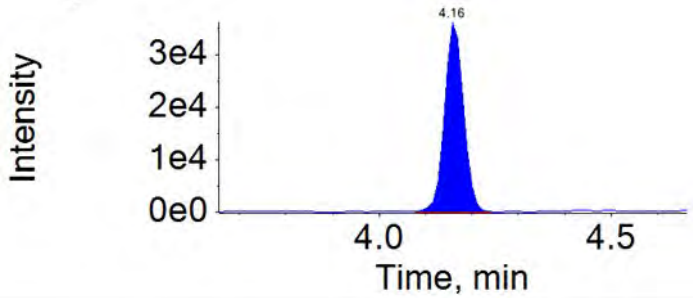
Component: 4:2-FTS
Primary Mass: 327.0 / 307.0



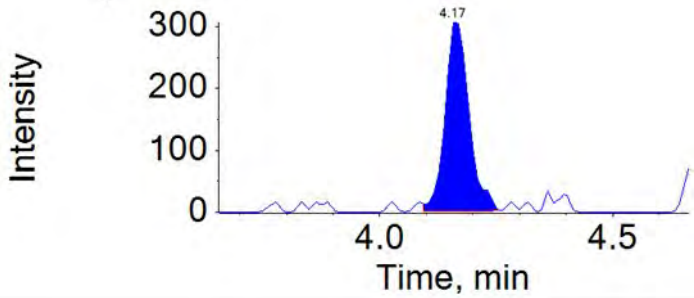
Component: 4:2-FTS_2
Secondary Mass: 327.0 / 81.0



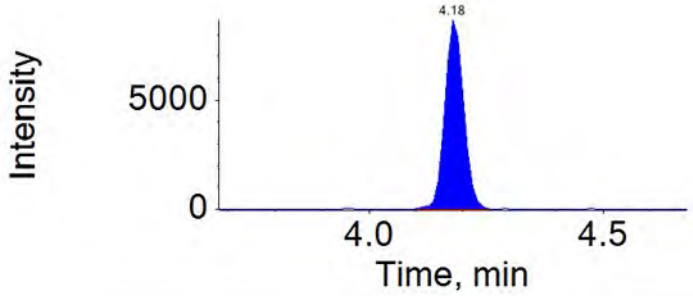
Component: PFHxA
Primary Mass: 313.0 / 269.0



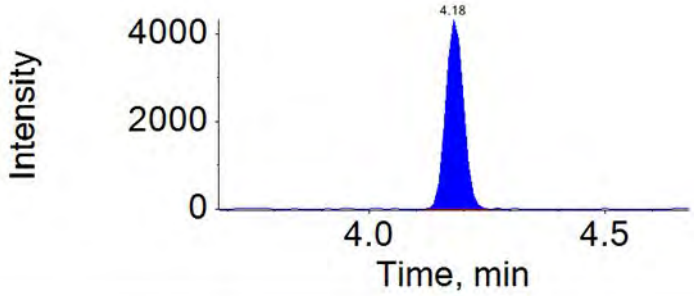
Component: PFHxA_2
Secondary Mass: 313.0 / 119.0



Component: PFPeS
Primary Mass: 349.0 / 80.0



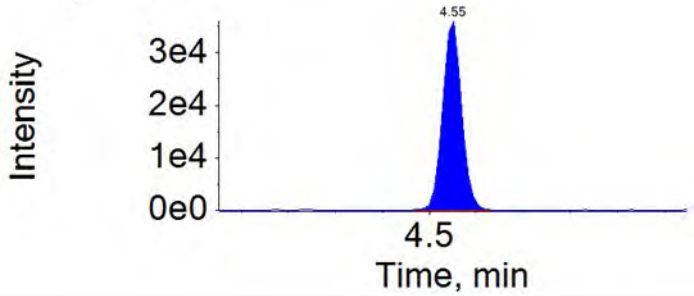
Component: PFPeS_2
Secondary Mass: 349.0 / 99.0



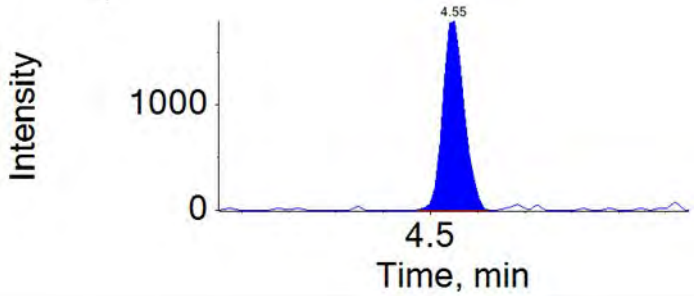
APPROVED
By MCD at 5:00 pm, 11/28/18

REVIEWED
By HMK at 12:22 pm, 11/29/18

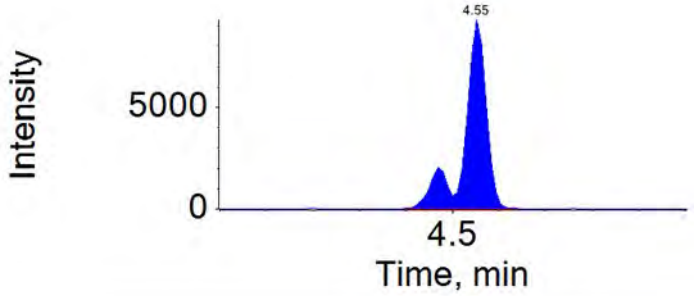
Component: PFHpA
Primary Mass: 363.0 / 319.0



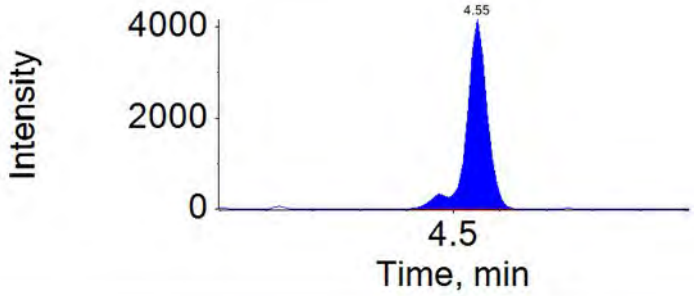
Component: PFHpA_2
Secondary Mass: 363.0 / 169.0



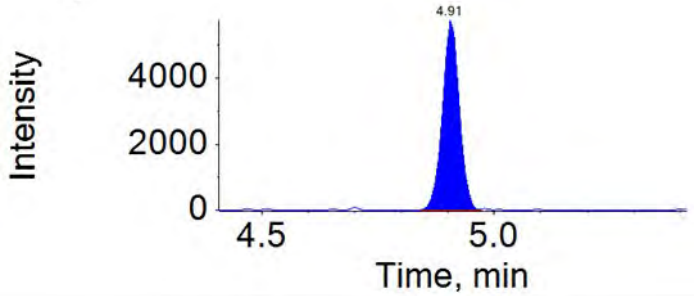
Component: PFHxS
Primary Mass: 399.0 / 80.0



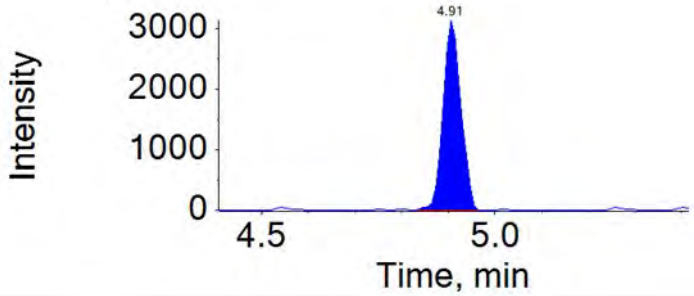
Component: PFHxS_2
Secondary Mass: 399.0 / 99.0



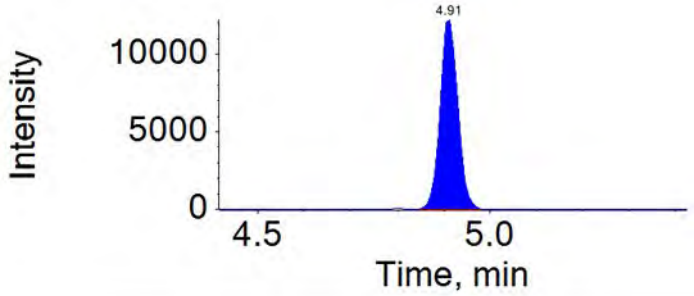
Component: 6:2-FTS
Primary Mass: 427.0 / 407.0



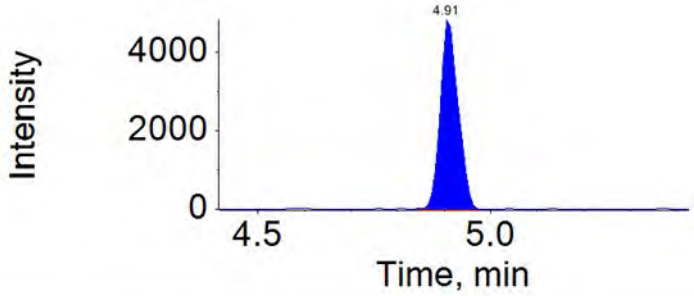
Component: 6:2-FTS_2
Secondary Mass: 427.0 / 81.0



Component: PFHpS
Primary Mass: 449.0 / 80.0



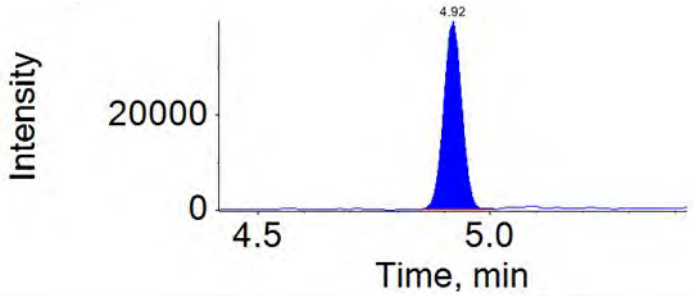
Component: PFHpS_2
Secondary Mass: 449.0 / 99.0



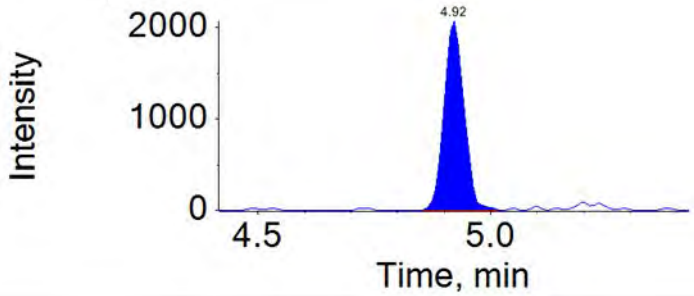
APPROVED
By MCD at 5:00 pm, 11/28/18

REVIEWED
By HMK at 12:22 pm, 11/29/18

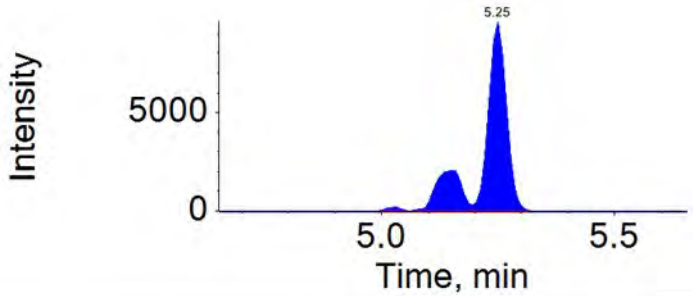
Component: PFOA
Primary Mass: 413.0 / 369.0



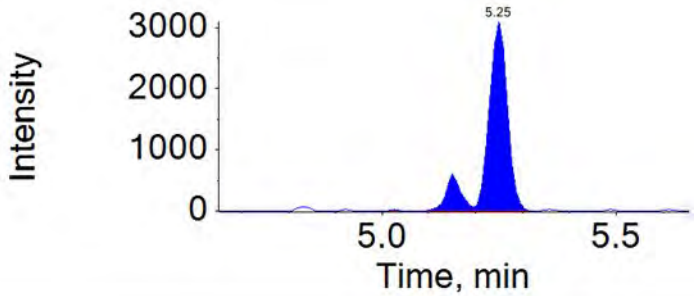
Component: PFOA_2
Secondary Mass: 413.0 / 169.0



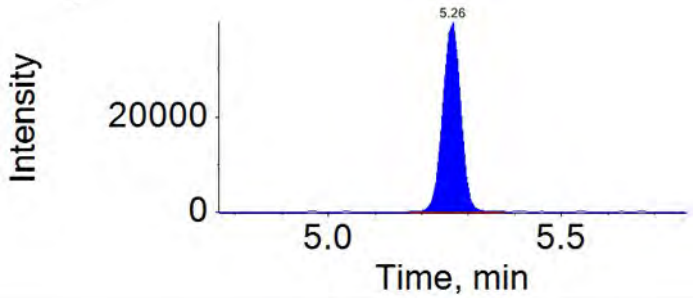
Component: PFOS
Primary Mass: 499.0 / 80.0



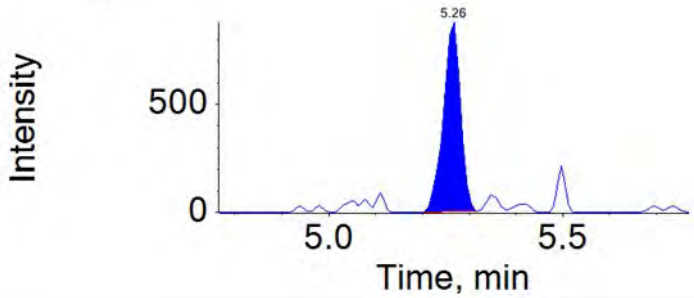
Component: PFOS_2
Secondary Mass: 499.0 / 99.0



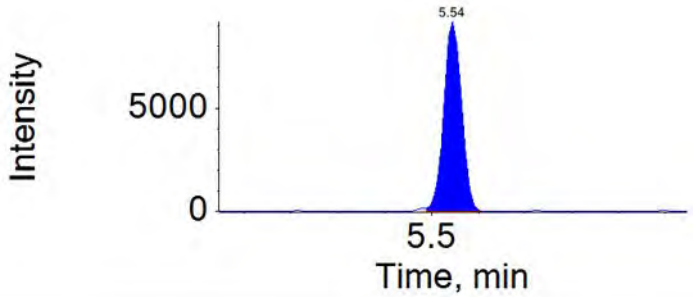
Component: PFNA
Primary Mass: 463.0 / 419.0



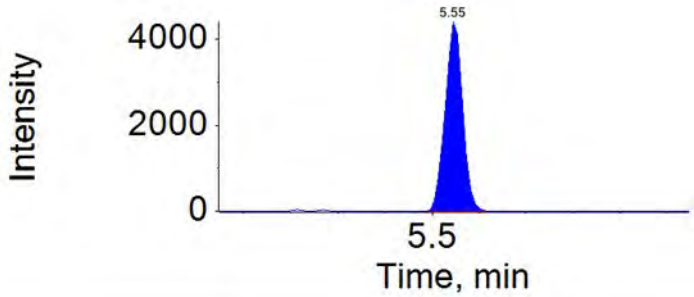
Component: PFNA_2
Secondary Mass: 463.0 / 169.0



Component: PFNS
Primary Mass: 549.0 / 80.0



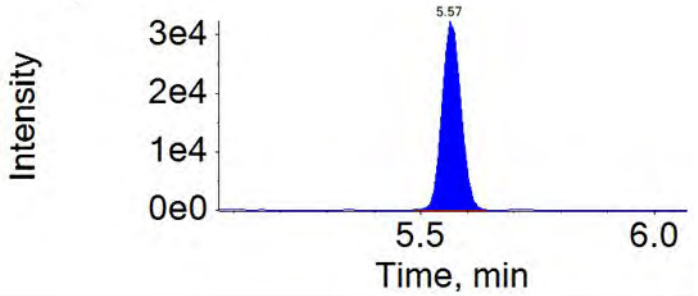
Component: PFNS_2
Secondary Mass: 549.0 / 99.0



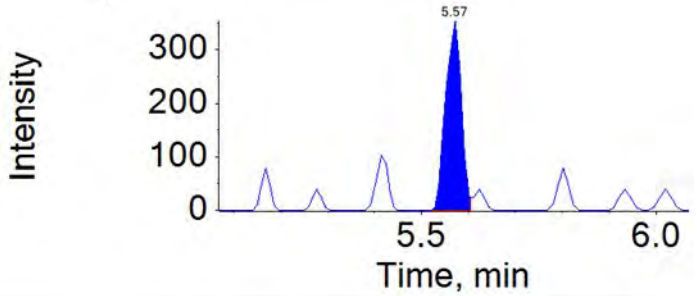
APPROVED
By MCD at 5:00 pm, 11/28/18

REVIEWED
By HMK at 12:22 pm, 11/29/18

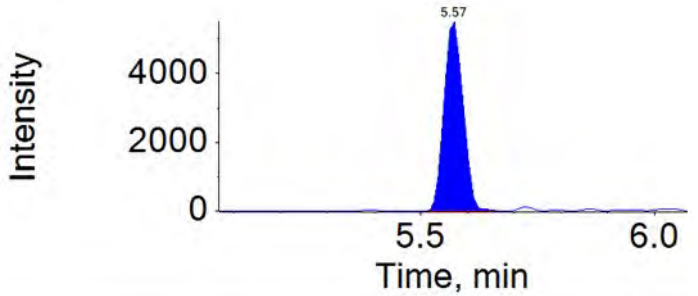
Component: PFDA
Primary Mass: 513.0 / 469.0



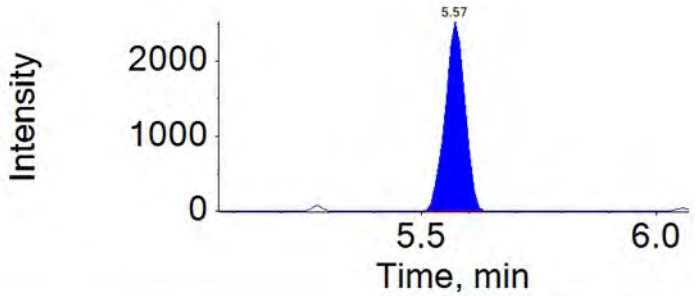
Component: PFDA_2
Secondary Mass: 513.0 / 169.0



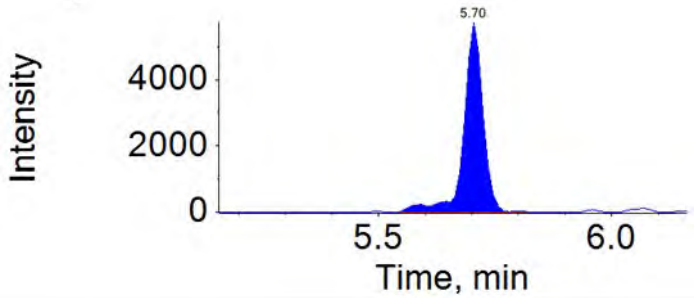
Component: 8:2-FTS
Primary Mass: 527.0 / 507.0



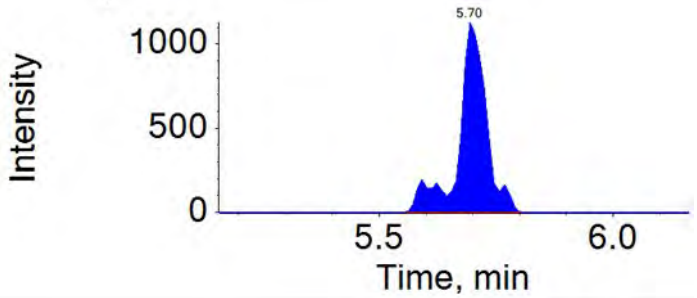
Component: 8:2-FTS_2
Secondary Mass: 527.0 / 81.0



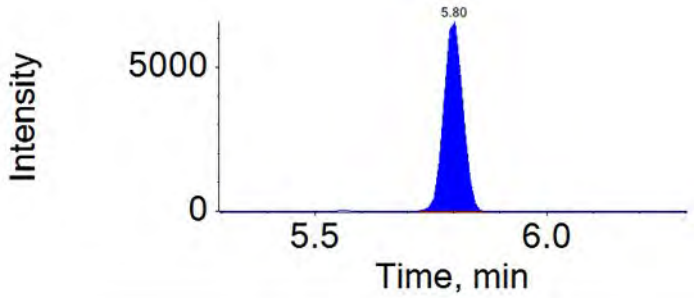
Component: NMeFOSAA
Primary Mass: 570.0 / 419.0



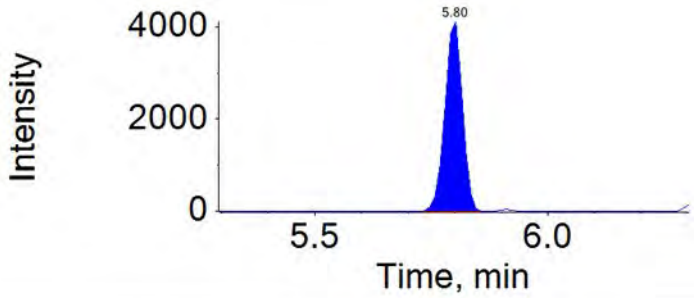
Component: NMeFOSAA_2
Secondary Mass: 570.0 / 483.0



Component: PFDS
Primary Mass: 599.0 / 80.0



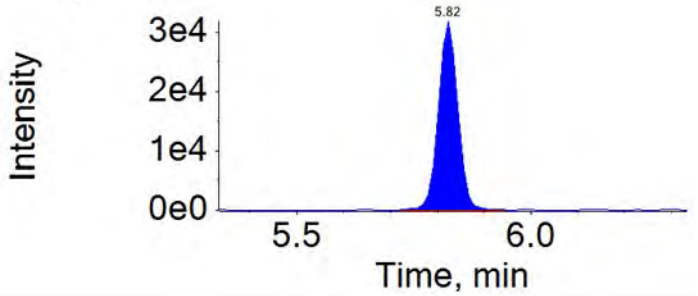
Component: PFDS_2
Secondary Mass: 599.0 / 99.0



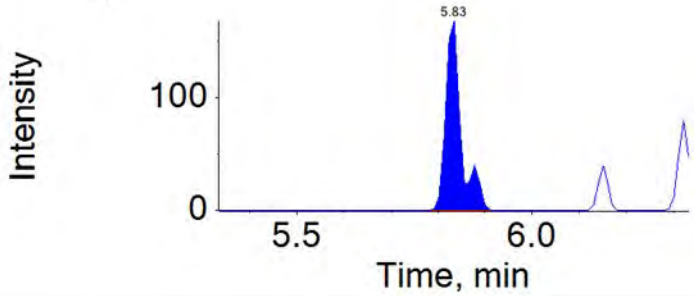
APPROVED
By MCD at 5:00 pm, 11/28/18

REVIEWED
By HMK at 12:22 pm, 11/29/18

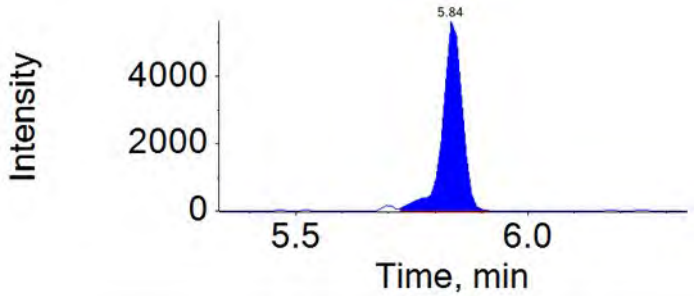
Component: PFUnDA
Primary Mass: 563.0 / 519.0



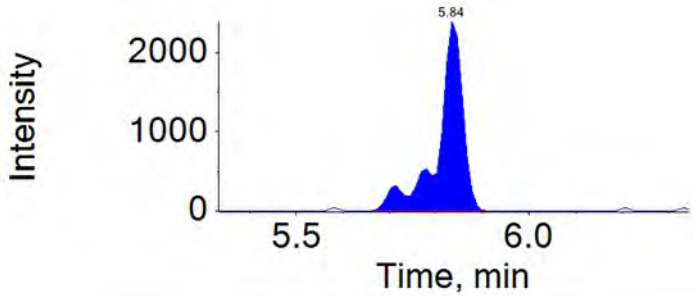
Component: PFUnDA_2
Secondary Mass: 563.0 / 169.0



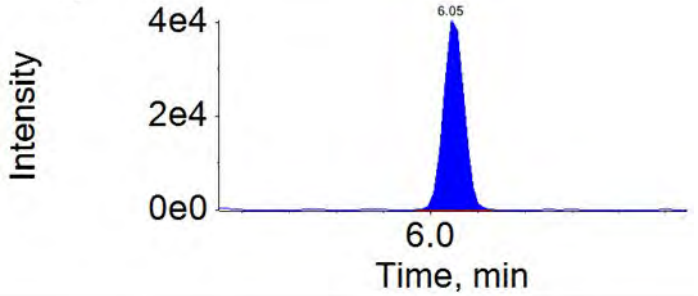
Component: NEtFOSAA
Primary Mass: 584.0 / 419.0



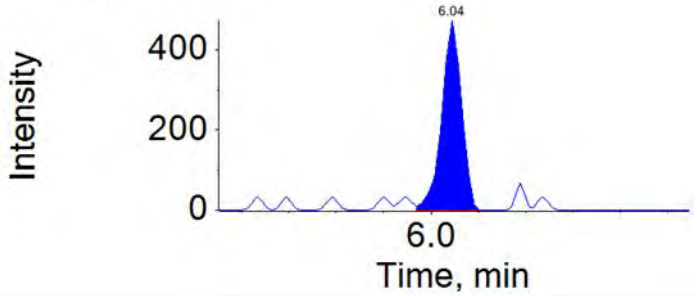
Component: NEtFOSAA_2
Secondary Mass: 584.0 / 526.0



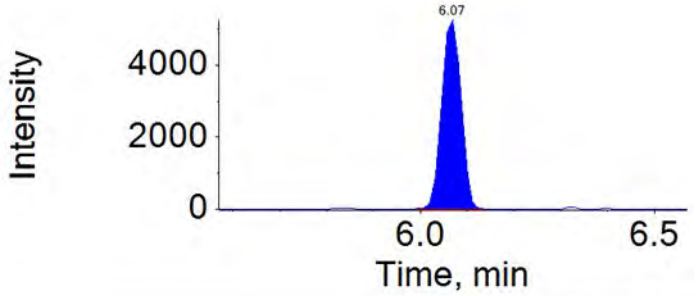
Component: PFDoDA
Primary Mass: 613.0 / 569.0



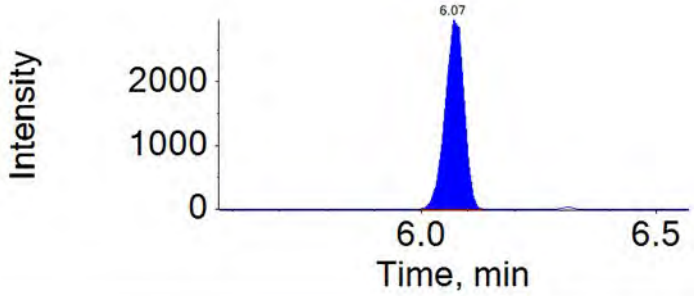
Component: PFDoDA_2
Secondary Mass: 613.0 / 169.0



Component: 10:2-FTS
Primary Mass: 627.0 / 607.0



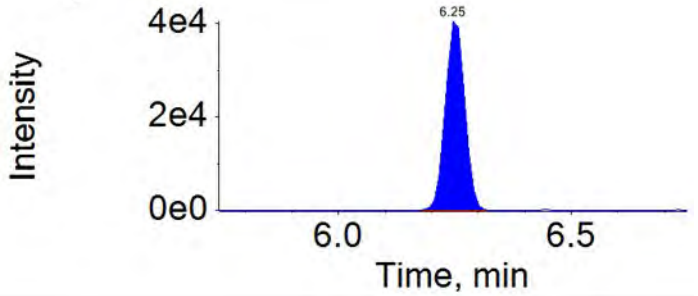
Component: 10:2-FTS_2
Secondary Mass: 627.0 / 81.0



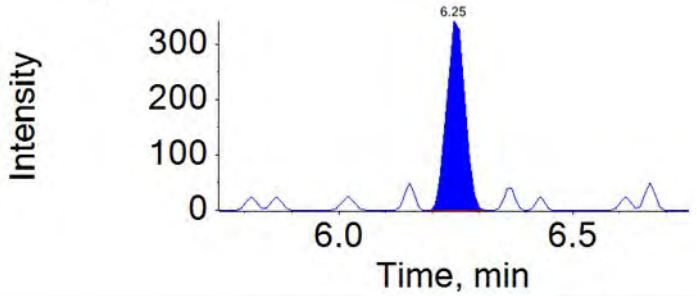
APPROVED
By MCD at 5:00 pm, 11/28/18

REVIEWED
By HMK at 12:22 pm, 11/29/18

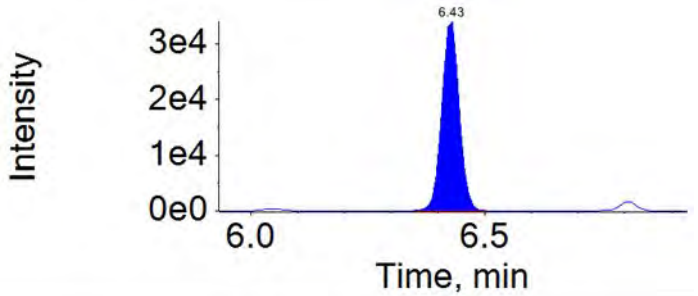
Component: PFTrDA
Primary Mass: 663.0 / 619.0



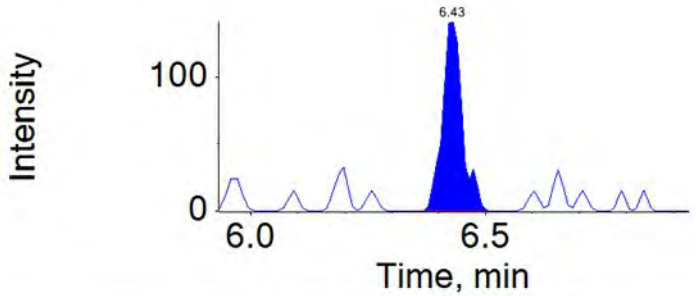
Component: PFTrDA_2
Secondary Mass: 663.0 / 169.0



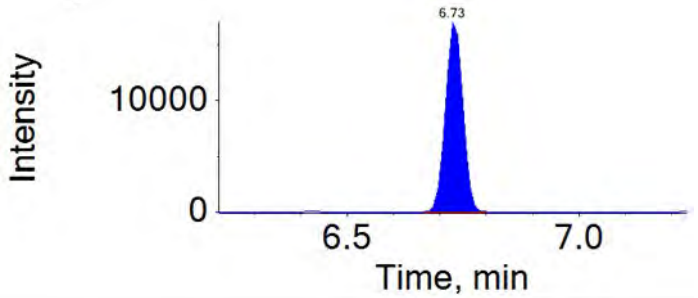
Component: PFTeDA
Primary Mass: 713.0 / 669.0



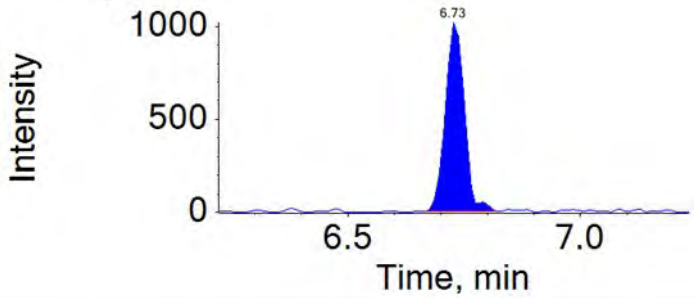
Component: PFTeDA_2
Secondary Mass: 713.0 / 169.0



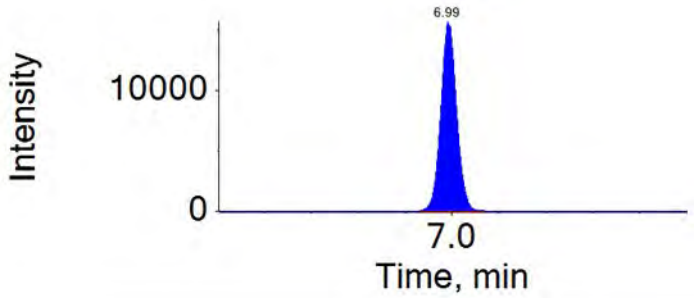
Component: PFHxDA
Primary Mass: 813.0 / 769.0



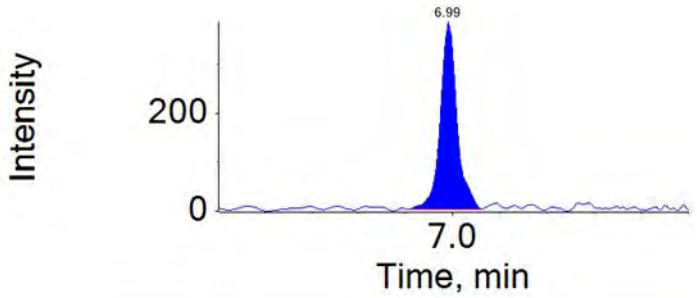
Component: PFHxDA_2
Secondary Mass: 813.0 / 169.0



Component: PFODA
Primary Mass: 913.0 / 869.0



Component: PFODA_2
Secondary Mass: 913.0 / 169.0



APPROVED
By MCD at 5:00 pm, 11/28/18

REVIEWED
By HMK at 12:22 pm, 11/29/18

ICAL Name: 18NOV28DCAL **Result Table:** 18NOV28DCAL 11/28/2018 4:47:11 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Sample Name:	CAL3			**Data File:**		18NOV28DCAL-08.wiff
Sample ID:	CALBRN31833B			**Acquis Date:**		2018-11-28T14:00:13
Sample Type:	Standard			**Instrument:**		LM27631
Vial Position:	5			**Acquis Method:**		18AUG13_3uL.dam
Injection Vol:	3.00			**Result Table:**		18NOV28DCAL
QMethod File:	18AUG20QM			**ICAL Name:**		18NOV28DCAL
Batch Number:	N/A			**Operator:**		MCD7824
Sample Wt.:	1.00000			**Dilution Factor:**		1.00
Sample Vol.:	1.000			**Prep Factor:**		1.000

Injection Standard Peak Table

Injection Standard Area Reference File: 18NOV28DCAL-08

Injection Standard Name	Inj Std Conc	Injection Std Peak Area	Rreference Injection Standard Area	Injection Std %Diff	Injection Std %Diff Limit	Injection Std %Diff OOS
13C3-PFBA	5.0	887248.9	887248.9	0	50	
13C2-PFOA	5.0	498501.6	498501.6	0	50	
13C4-PFOS	4.8	283214.2	283214.2	0	50	
13C2-PFDA	5.0	441790.6	441790.6	0	50	

Extraction Standard Peak Table

Extraction Standard Name	Ext Std Area	Inj Std Name	Inj Std Area	Area Ratio	Ext Std Conc	Ext Std Result	Ext Std %REC	Ext Std %REC Limit	Ext Std OOS
E13C4-PFBA	993144.1	13C3-PFBA	887248.9	1.119	5.000	4.994	100	70-130	
E13C5-PFPeA	910953.7	13C3-PFBA	887248.9	1.027	5.000	4.794	96	70-130	
E13C3-PFBS	419929.2	13C3-PFBA	887248.9	0.473	4.650	4.515	97	70-130	
E13C2-4:2-FTS	70629.1	13C2-PFOA	498501.6	0.142	4.670	4.883	105	70-130	
E13C5-PFHxA	717900.1	13C2-PFOA	498501.6	1.440	5.000	5.290	106	70-130	
E13C3-PFHxS	326982.4	13C2-PFOA	498501.6	0.656	4.730	5.141	109	70-130	
E13C4-PFHpA	535993.3	13C2-PFOA	498501.6	1.075	5.000	4.940	99	70-130	
E13C2-6:2-FTS	65518.3	13C2-PFOA	498501.6	0.131	4.750	5.502	116	70-130	
E13C8-PFOA	954678.0	13C2-PFOA	498501.6	1.915	5.000	5.271	105	70-130	
E13C8-PFOS	309913.7	13C4-PFOS	283214.2	1.094	4.780	4.940	103	70-130	
E13C9-PFNA	629954.6	13C4-PFOS	283214.2	2.224	5.000	4.885	98	70-130	
E13C6-PFDA	824072.9	13C2-PFDA	441790.6	1.865	5.000	5.259	105	70-130	
E13C2-8:2-FTS	53847.2	13C2-PFDA	441790.6	0.122	4.790	5.239	109	70-130	
E13C8-PFOSA	631627.9	13C2-PFDA	441790.6	1.430	5.000	5.246	105	70-130	
Ed3-NMeFOSAA	178338.1	13C2-PFDA	441790.6	0.404	5.000	5.125	103	70-130	
E13C7-PFUnDA	592495.7	13C2-PFDA	441790.6	1.341	5.000	5.668	113	70-130	
Ed5-NEtFOSAA	129810.7	13C2-PFDA	441790.6	0.294	5.000	5.235	105	70-130	
E13C2-PFDoDA	1091194.9	13C2-PFDA	441790.6	2.470	5.000	5.189	104	70-130	
Ed7-NMePFOSAE	256577.3	13C2-PFDA	441790.6	0.581	5.000	5.019	100	70-130	
Ed3-NMePFOSA	80294.1	13C2-PFDA	441790.6	0.182	5.000	4.919	98	70-130	
Ed9-NEtPFOSAE	216571.5	13C2-PFDA	441790.6	0.490	5.000	4.970	99	70-130	
Ed5-NEtPFOSA	64623.7	13C2-PFDA	441790.6	0.146	5.000	5.083	102	70-130	
E13C2-PFTeDA	841931.1	13C2-PFDA	441790.6	1.906	5.000	5.273	105	70-130	

APPROVED
By MCD at 5:00 pm, 11/28/18

REVIEWED
By HMK at 12:22 pm, 11/29/18

ICAL Name: 18NOV28DCAL **Result Table:** 18NOV28DCAL 11/28/2018 4:47:11 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

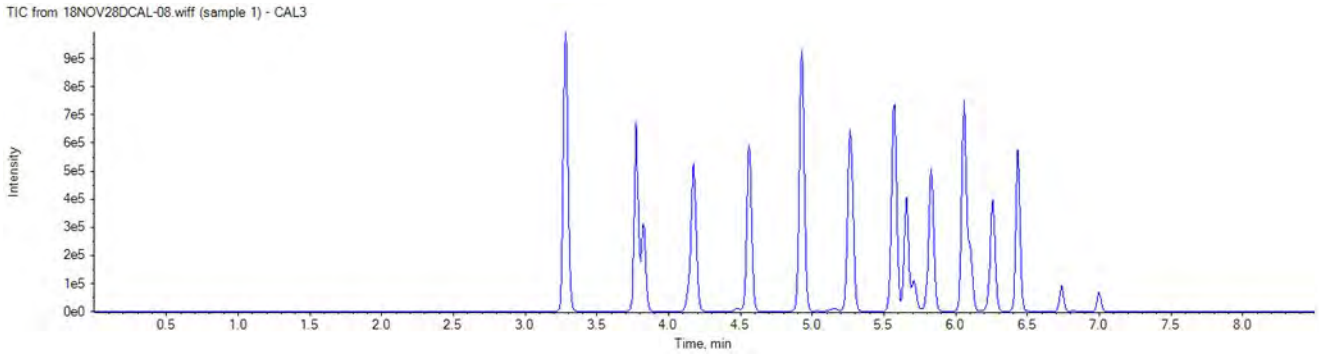
Analyte Quantitation Peak Table

Sample Name: CAL3 **Instrument Name:** LM27631 **File Name:** 18NOV28DCAL-08.wiff

Sample Wt	Sample Vol	Dilution Factor	PrepFactor
1.00000	1.000	1.00	1.000

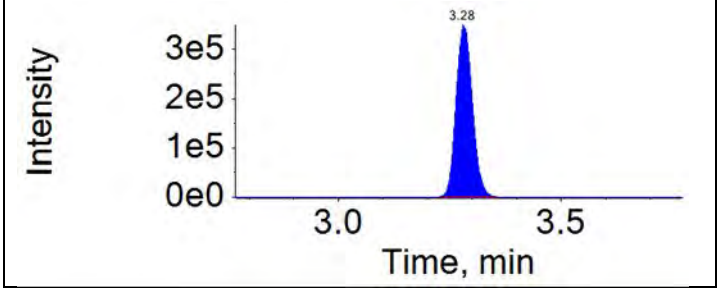
Analyte Name	RT	RRT	Analyte Area Response	E	Int Typ	ES Name	ES RT	ES Area Response	Area Ratio	Sample Result (ng/g)
PFBA	3.28	1.000	403055.9		A	13C4-PFBA	3.28	993144.1	0.406	2.225
PFPeA	3.78	1.000	424089.1		A	13C5-PFPeA	3.78	910953.7	0.466	2.284
PFBS	3.82	1.000	168534.1		A	13C3-PFBS	3.82	419929.2	0.401	1.948
4:2-FTS	4.14	1.000	56502.5		A	13C2-4:2-FTS	4.14	70629.1	0.800	2.142
PFHxA	4.17	1.000	395421.4		A	13C5-PFHxA	4.17	717900.1	0.551	2.211
PFPeS	4.19	1.100	89559.7		A	13C3-PFBS	3.82	419929.2	0.213	2.157
PFHpA	4.56	1.000	388626.7		A	13C4-PFHpA	4.56	535993.3	0.725	2.238
PFHxS	4.56	1.000	127889.2		M	13C3-PFHxS	4.56	326982.4	0.391	1.831
6:2-FTS	4.92	1.000	53951.0		A	13C2-6:2-FTS	4.92	65518.3	0.823	2.149
PFHpS	4.92	1.080	129450.9		A	13C3-PFHxS	4.56	326982.4	0.396	1.976
PFOA	4.93	1.000	405879.4		A	13C8-PFOA	4.93	954678.0	0.425	2.197
PFOS	5.26	1.000	139506.6		M	13C8-PFOS	5.26	309913.7	0.450	1.888
PFNA	5.27	1.000	370292.0		A	13C9-PFNA	5.27	629954.6	0.588	2.253
PFNS	5.55	1.060	91471.0		A	13C8-PFOS	5.26	309913.7	0.295	1.864
PFDA	5.57	1.000	343523.0		A	13C6-PFDA	5.57	824072.9	0.417	2.360
8:2-FTS	5.57	1.000	57433.9		A	13C2-8:2-FTS	5.58	53847.2	1.067	2.011
PFOSA	5.66	1.000	265394.0		A	13C8-PFOSA	5.66	631627.9	0.420	2.128
NMeFOSAA	5.71	1.000	62054.8		A	d3-NMeFOSAA	5.71	178338.1	0.348	2.220
PFDS	5.80	1.100	80537.4		A	13C8-PFOS	5.26	309913.7	0.260	2.060
PFUnDA	5.83	1.000	370693.6		A	13C7-PFUnDA	5.83	592495.7	0.626	2.236
NEtFOSAA	5.84	1.000	52769.5		M	d5-NEtFOSAA	5.84	129810.7	0.407	1.980
PFDoDA	6.06	1.000	486489.2		A	13C2-PFDoDA	6.06	1091194.9	0.446	2.442
10:2-FTS	6.07	1.090	58508.2		A	13C2-8:2-FTS	5.58	53847.2	1.087	2.396
NMePFOSAE	6.11	1.000	136518.3		A	d7-NMePFOSAE	6.10	256577.3	0.532	2.239
NMePFOSA	6.11	1.000	33009.7		A	d3-NMePFOSA	6.11	80294.1	0.411	2.179
PFDoS	6.23	1.180	40838.1		A	13C8-PFOS	5.26	309913.7	0.132	1.892
NEtPFOSAE	6.26	1.000	152952.1		A	d9-NEtPFOSAE	6.25	216571.5	0.706	2.540
NEtPFOSA	6.27	1.000	30595.3		A	d5-NEtPFOSA	6.27	64623.7	0.473	2.122
PFTrDA	6.26	1.030	466266.9		A	13C2-PFDoDA	6.06	1091194.9	0.427	2.576
PFTeDA	6.43	1.000	342239.8		A	13C2-PFTeDA	6.43	841931.1	0.406	2.303
PFHxDA	6.74	1.050	173721.0		A	13C2-PFTeDA	6.43	841931.1	0.206	2.359
PFODA	7.00	1.090	139071.5		A	13C2-PFTeDA	6.43	841931.1	0.165	2.201

Total Ion Chromatogram

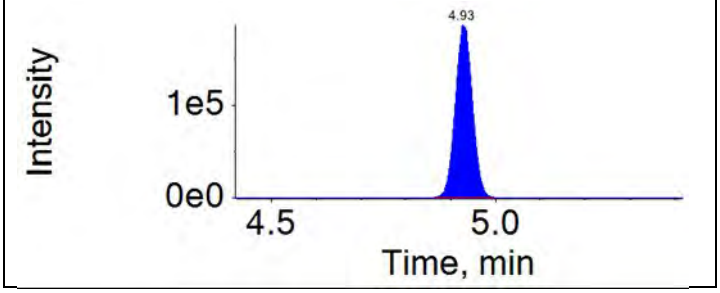


ICAL Name: 18NOV28DCAL **Result Table:** 18NOV28DCAL 11/28/2018 4:47:11 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

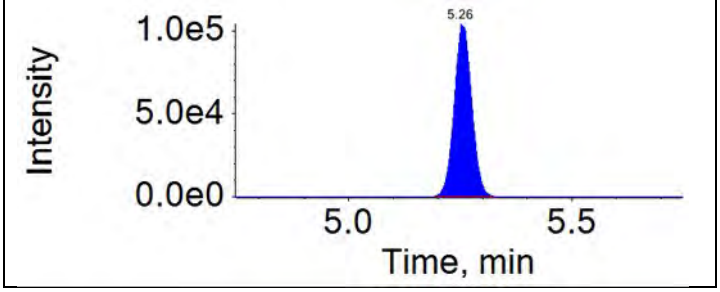
Injection Standard: 13C3-PFBA
216.0 / 172.0



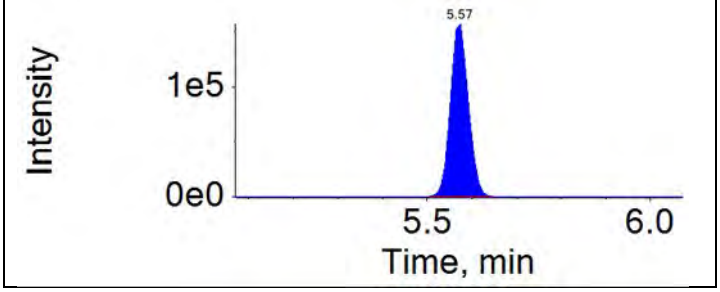
Injection Standard: 13C2-PFOA
415.0 / 370.0



Injection Standard: 13C4-PFOS
503.0 / 80.0

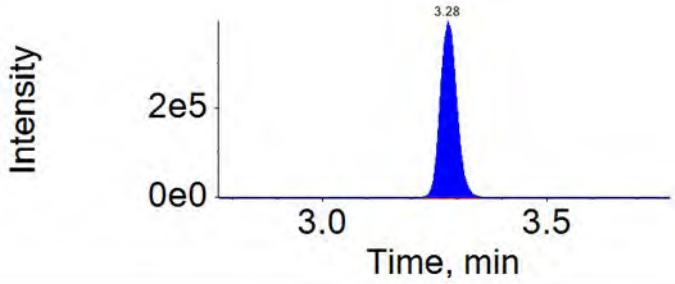


Injection Standard: 13C2-PFDA
515.0 / 470.0

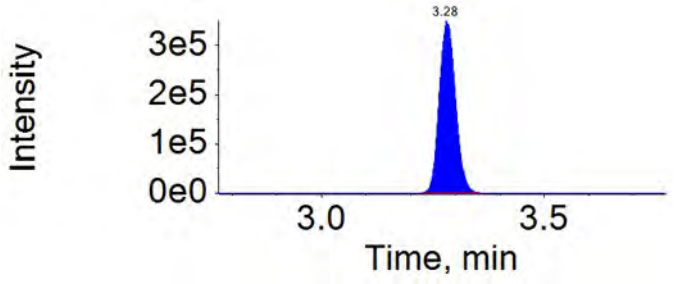


ICAL Name: 18NOV28DCAL **Result Table:** 18NOV28DCAL 11/28/2018 4:47:11 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

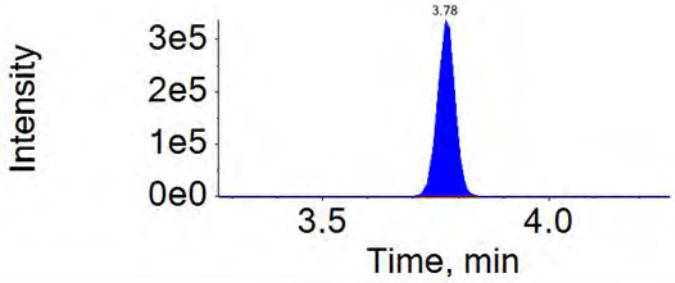
Extraction Standard: E13C4-PFBA
217.0 / 172.0



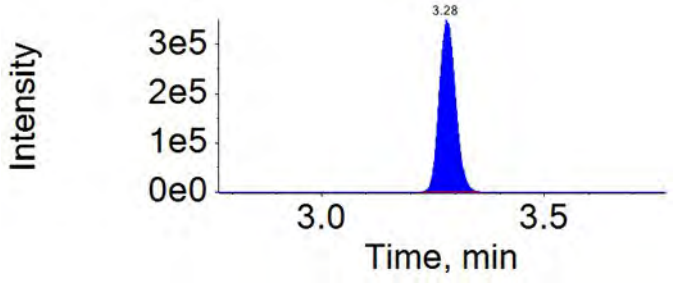
Injection Standard: 13C3-PFBA
216.0 / 172.0



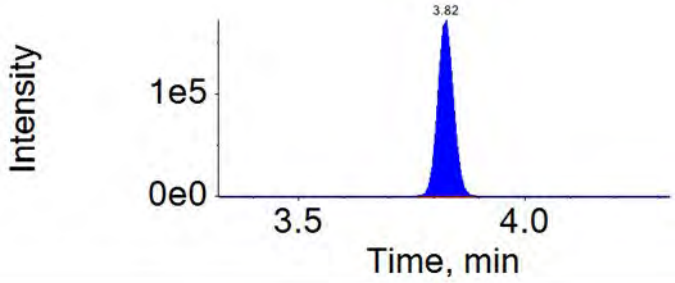
Extraction Standard: E13C5-PFPeA
268.0 / 223.0



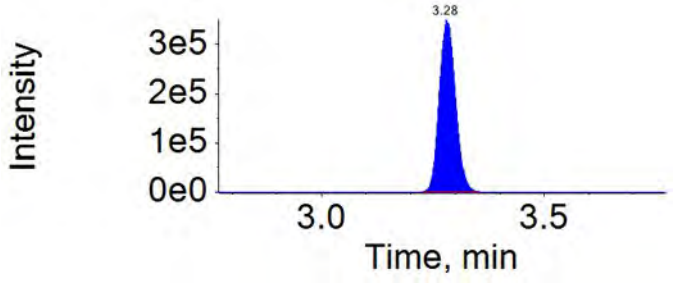
Injection Standard: 13C3-PFBA
216.0 / 172.0



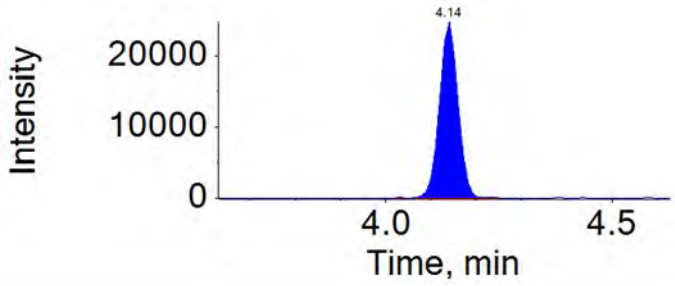
Extraction Standard: E13C3-PFBS
302.0 / 80.0



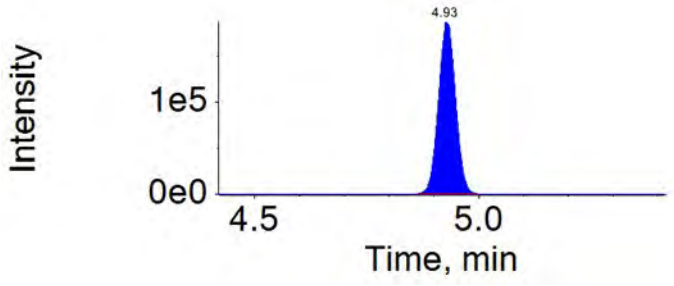
Injection Standard: 13C3-PFBA
216.0 / 172.0



Extraction Standard: E13C2-4:2-FTS
329.0 / 81.0

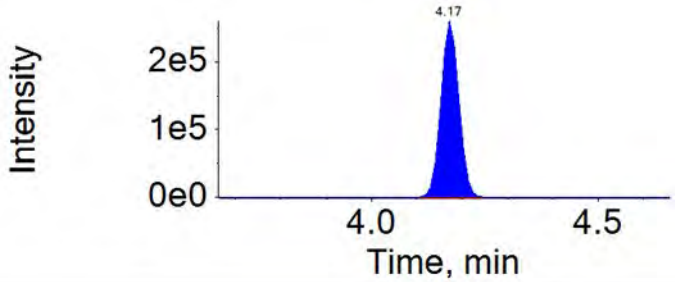


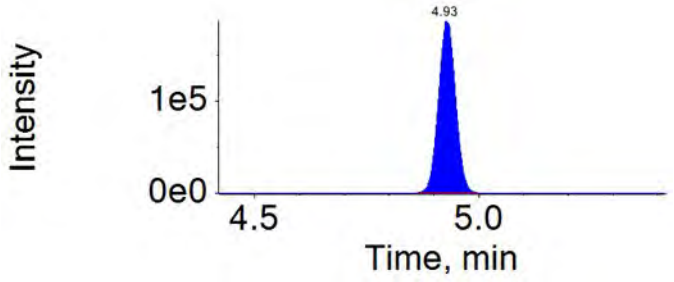
Injection Standard: 13C2-PFOA
415.0 / 370.0



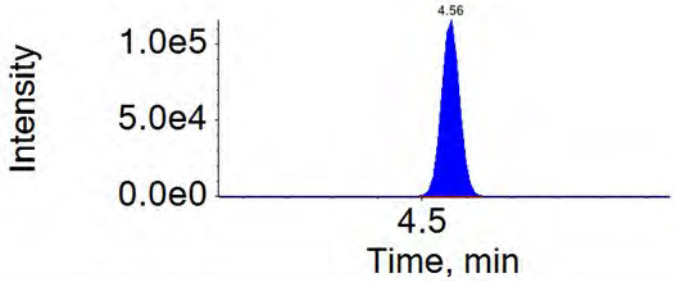
ICAL Name: 18NOV28DCAL **Result Table:** 18NOV28DCAL 11/28/2018 4:47:11 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

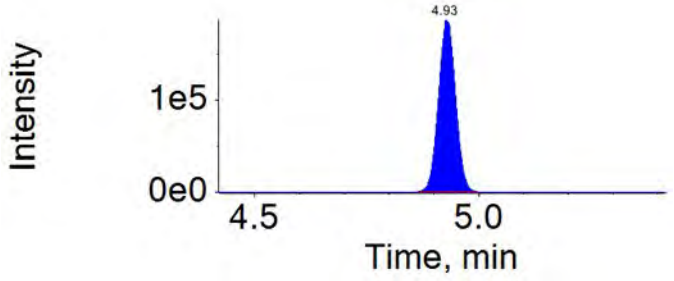
Extraction Standard: E13C5-PFHxA	Injection Standard: 13C2-PFOA
318.0 / 273.0	415.0 / 370.0



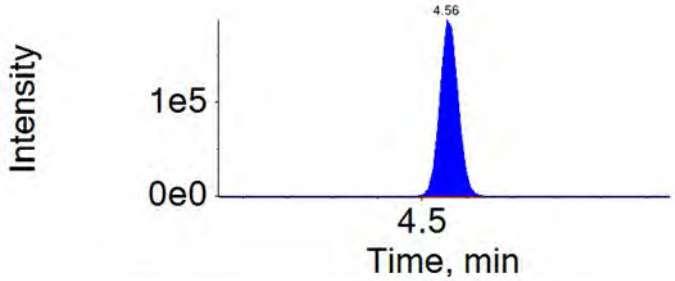


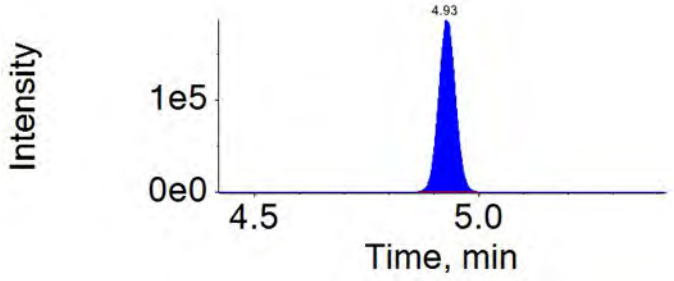
Extraction Standard: E13C3-PFHxS	Injection Standard: 13C2-PFOA
402.0 / 80.0	415.0 / 370.0



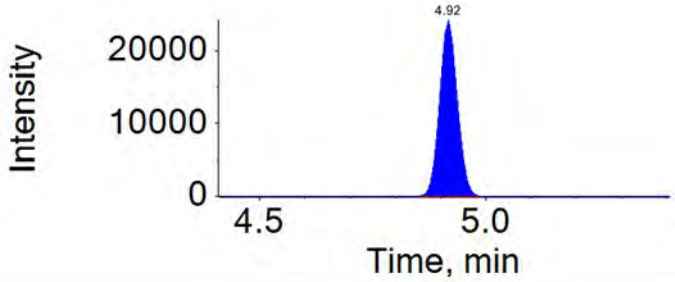


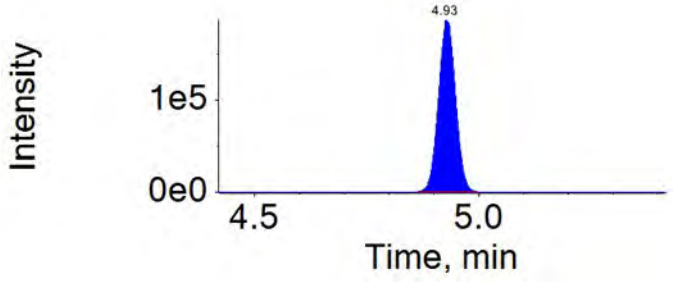
Extraction Standard: E13C4-PFHpA	Injection Standard: 13C2-PFOA
367.0 / 322.0	415.0 / 370.0





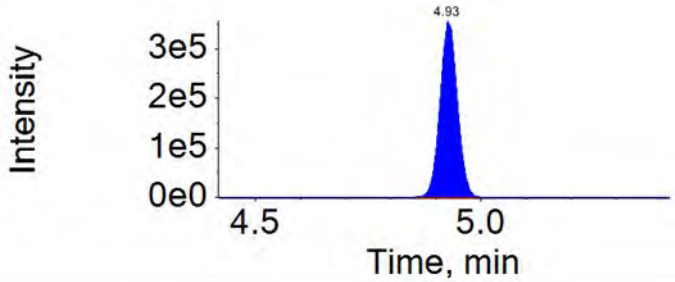
Extraction Standard: E13C2-6:2-FTS	Injection Standard: 13C2-PFOA
429.0 / 81.0	415.0 / 370.0

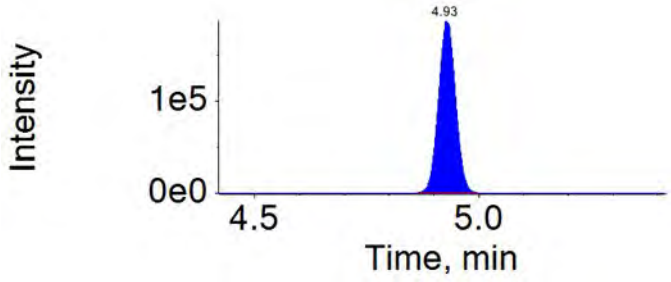




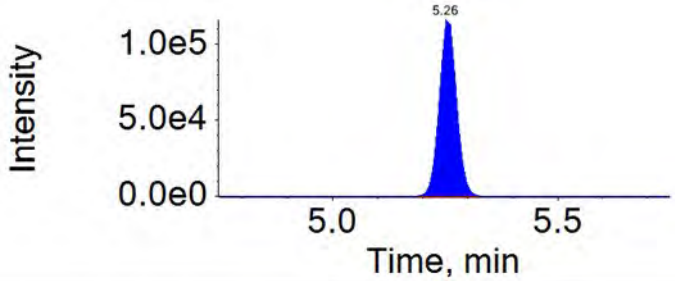
ICAL Name: 18NOV28DCAL **Result Table:** 18NOV28DCAL 11/28/2018 4:47:11 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

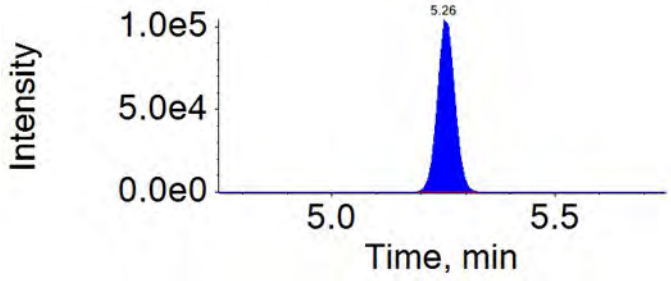
Extraction Standard: E13C8-PFOA	Injection Standard: 13C2-PFOA
421.0 / 376.0	415.0 / 370.0



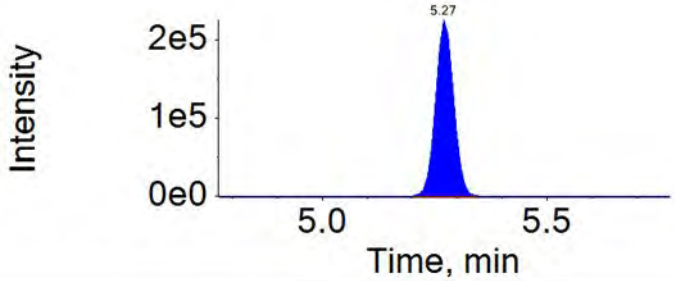


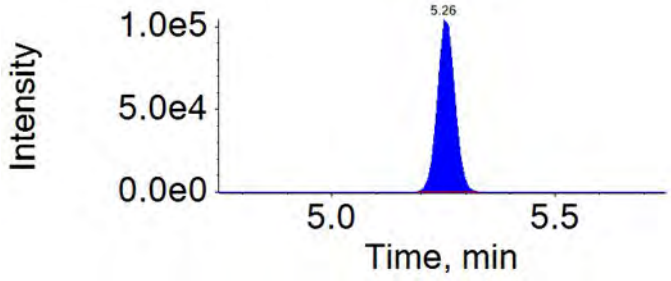
Extraction Standard: E13C8-PFOS	Injection Standard: 13C4-PFOS
507.0 / 80.0	503.0 / 80.0



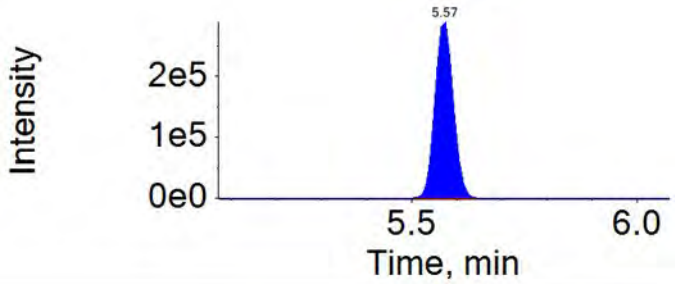


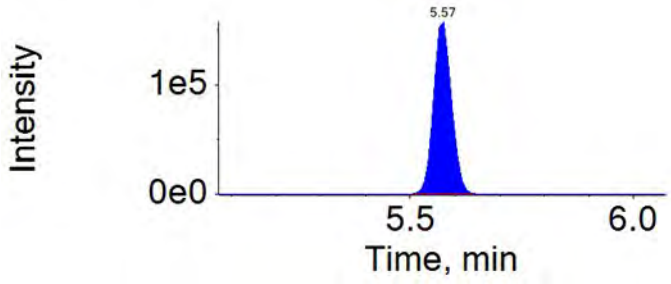
Extraction Standard: E13C9-PFNA	Injection Standard: 13C4-PFOS
472.0 / 427.0	503.0 / 80.0





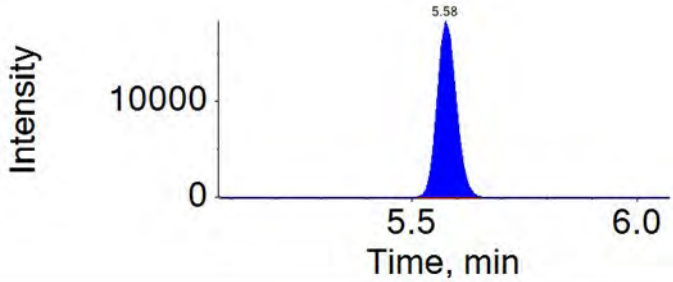
Extraction Standard: E13C6-PFDA	Injection Standard: 13C2-PFDA
519.0 / 474.0	515.0 / 470.0

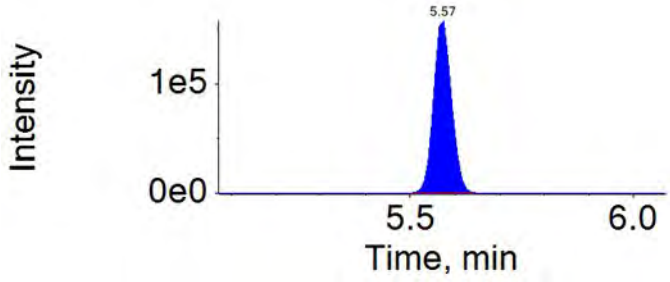




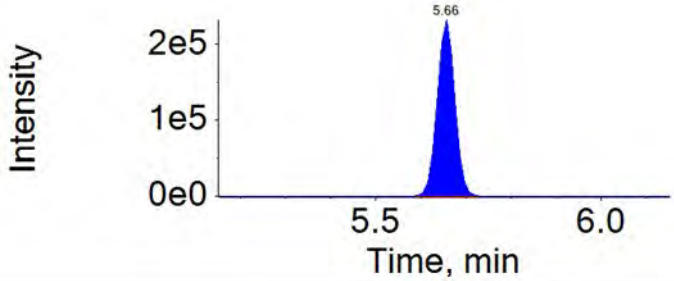
ICAL Name: 18NOV28DCAL **Result Table:** 18NOV28DCAL 11/28/2018 4:47:11 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

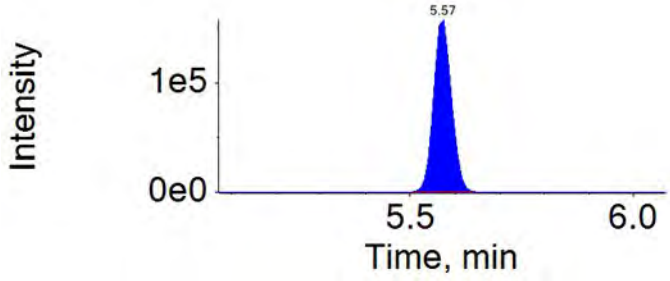
Extraction Standard: E13C2-8:2-FTS	Injection Standard: 13C2-PFDA
529.0 / 81.0	515.0 / 470.0



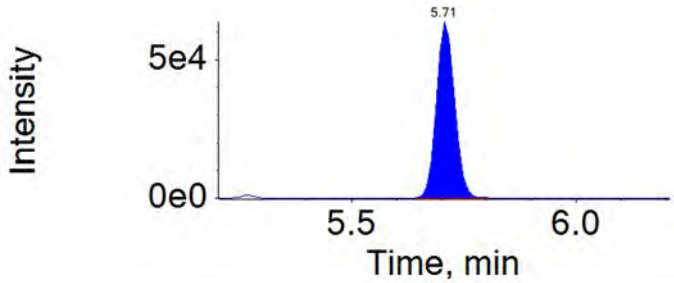


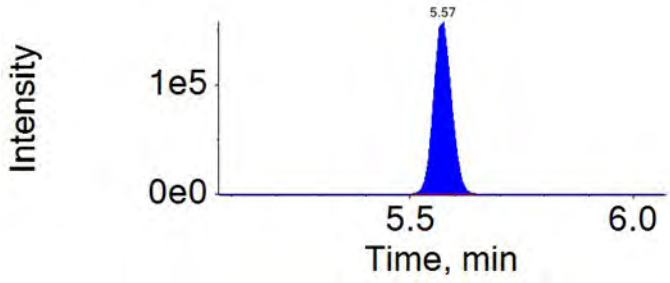
Extraction Standard: E13C8-PFOSA	Injection Standard: 13C2-PFDA
506.0 / 78.0	515.0 / 470.0



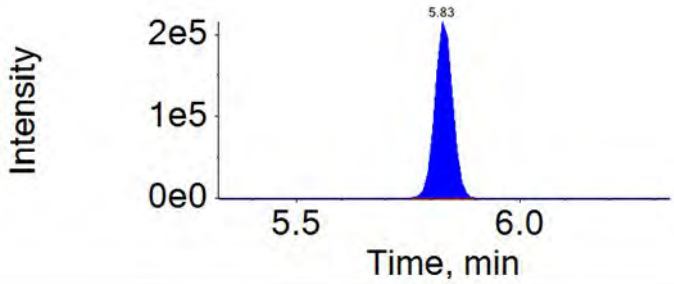


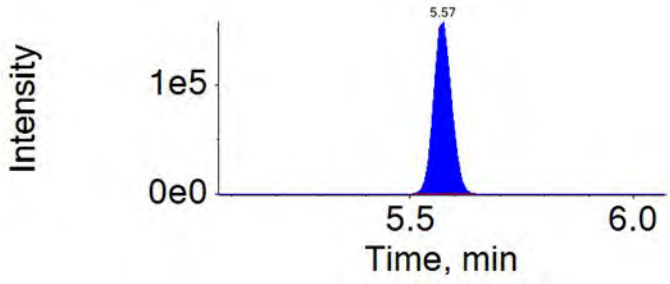
Extraction Standard: Ed3-NMeFOSAA	Injection Standard: 13C2-PFDA
573.0 / 419.0	515.0 / 470.0





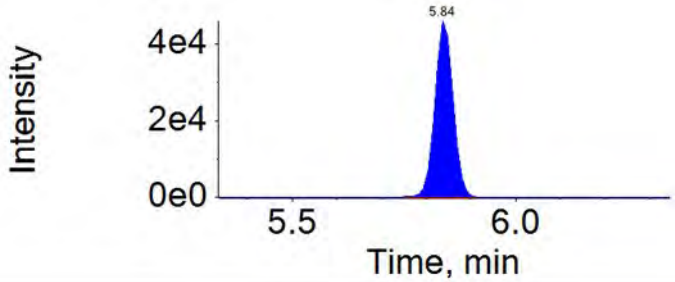
Extraction Standard: E13C7-PFUnDA	Injection Standard: 13C2-PFDA
570.0 / 525.0	515.0 / 470.0

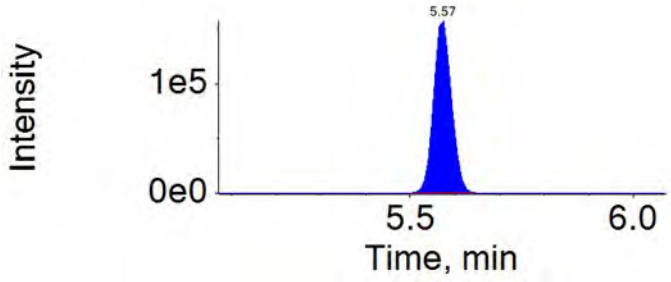




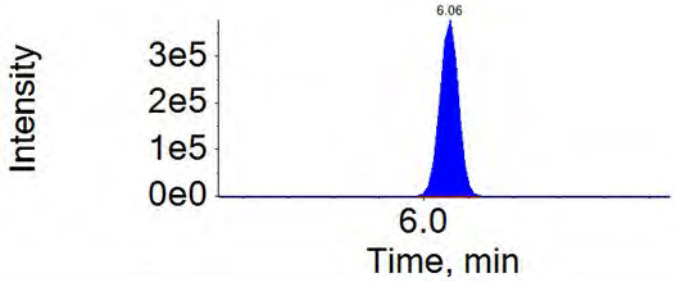
ICAL Name: 18NOV28DCAL **Result Table:** 18NOV28DCAL 11/28/2018 4:47:11 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

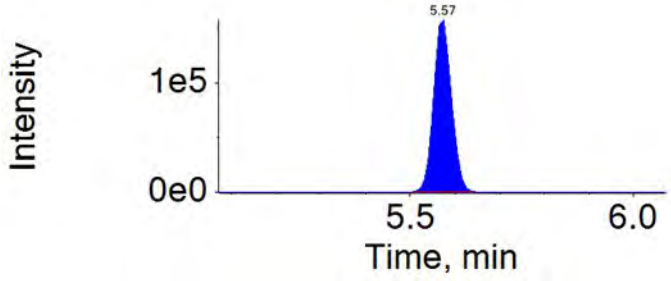
Extraction Standard: Ed5-NEtFOSAA	Injection Standard: 13C2-PFDA
589.0 / 419.0	515.0 / 470.0



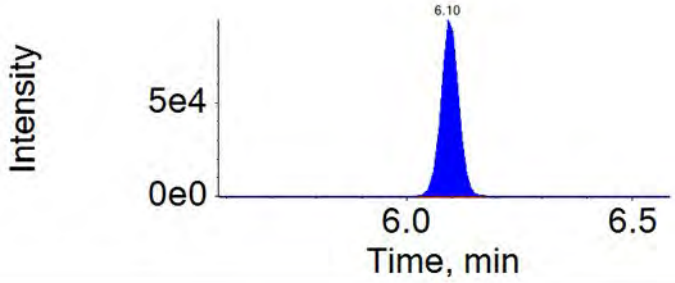


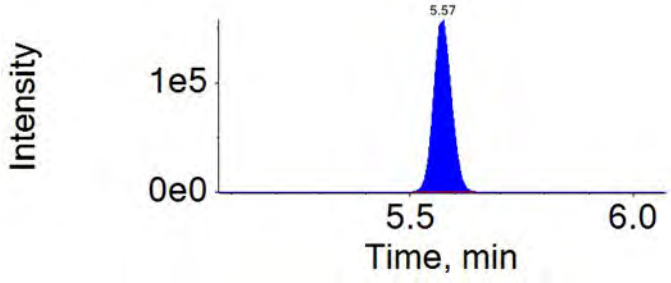
Extraction Standard: E13C2-PFDoDA	Injection Standard: 13C2-PFDA
615.0 / 570.0	515.0 / 470.0



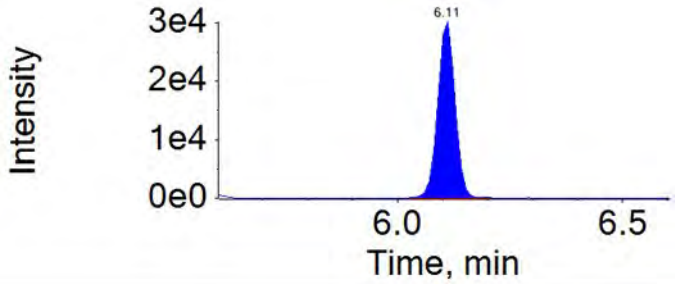


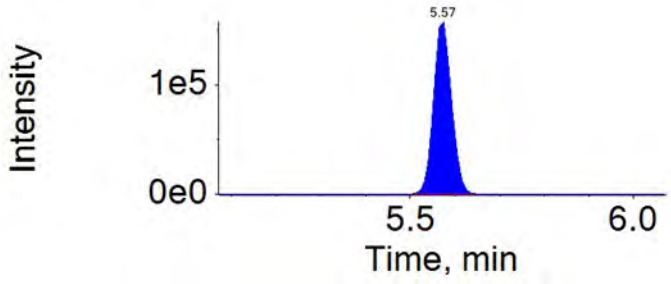
Extraction Standard: Ed7-NMePFOSAE	Injection Standard: 13C2-PFDA
623.0 / 59.0	515.0 / 470.0





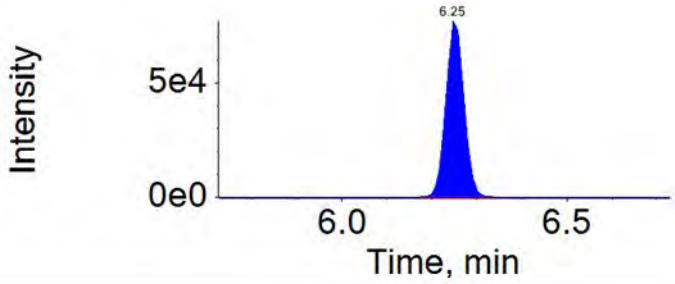
Extraction Standard: Ed3-NMePFOSA	Injection Standard: 13C2-PFDA
515.0 / 169.0	515.0 / 470.0

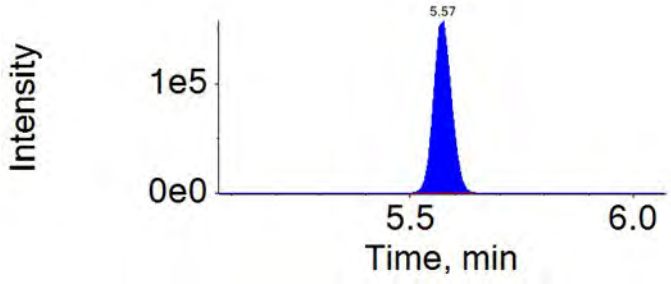




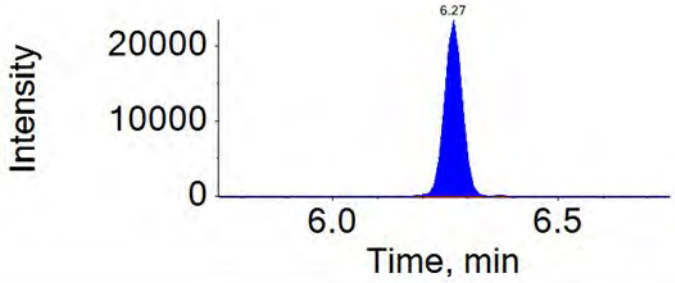
ICAL Name: 18NOV28DCAL **Result Table:** 18NOV28DCAL 11/28/2018 4:47:11 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

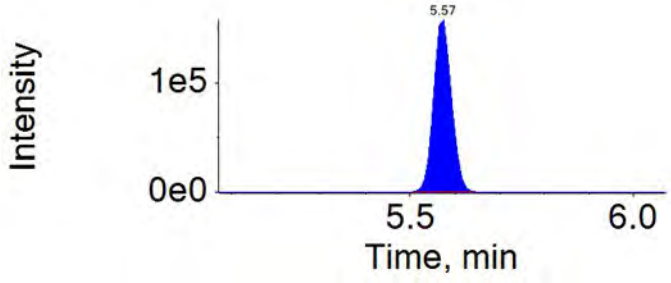
Extraction Standard: Ed9-NEtPFOSAE	Injection Standard: 13C2-PFDA
639.0 / 59.0	515.0 / 470.0



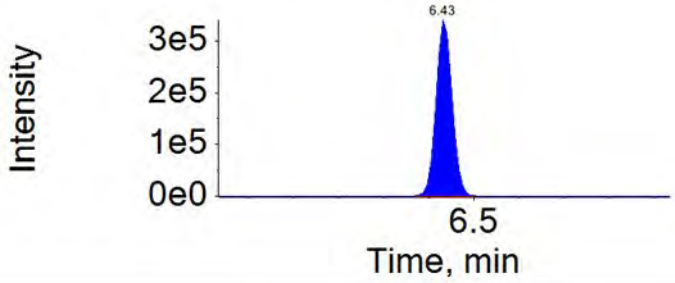


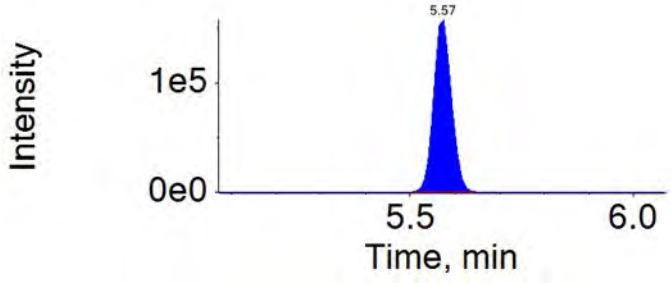
Extraction Standard: Ed5-NEtPFOSA	Injection Standard: 13C2-PFDA
531.0 / 169.0	515.0 / 470.0





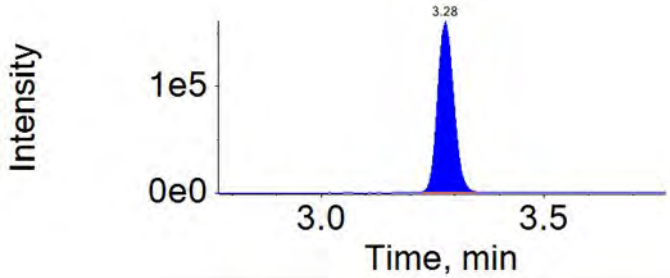
Extraction Standard: E13C2-PFTeDA	Injection Standard: 13C2-PFDA
715.0 / 670.0	515.0 / 470.0



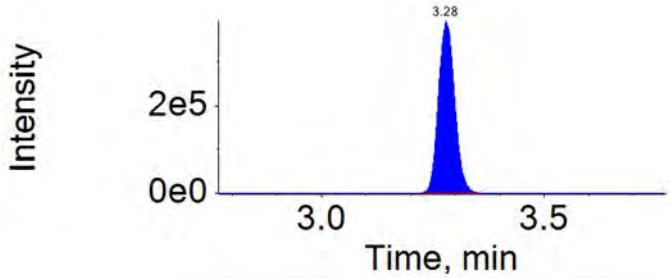


ICAL Name: 18NOV28DCAL **Result Table:** 18NOV28DCAL 11/28/2018 4:47:11 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

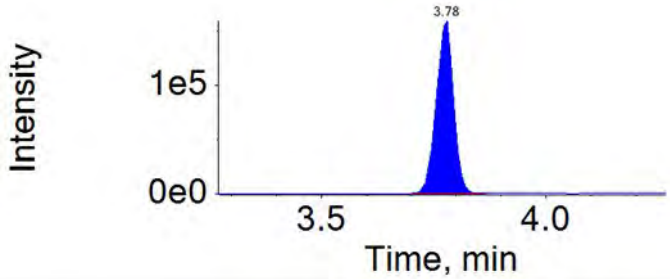
Analyte: PFBA
213.0 / 169.0



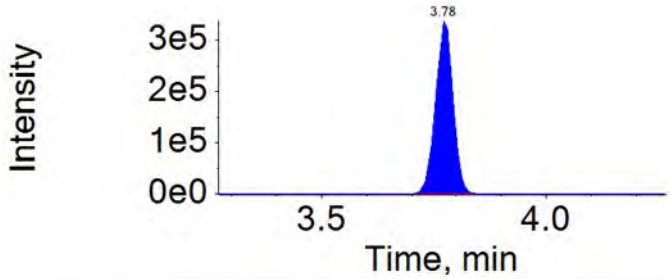
Extraction Standard: 13C4-PFBA
217.0 / 172.0



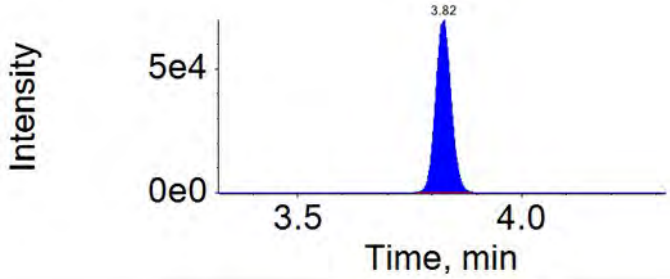
Analyte: PFPeA
263.0 / 219.0



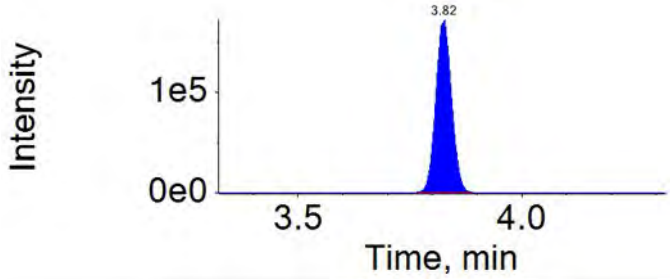
Extraction Standard: 13C5-PFPeA
268.0 / 223.0



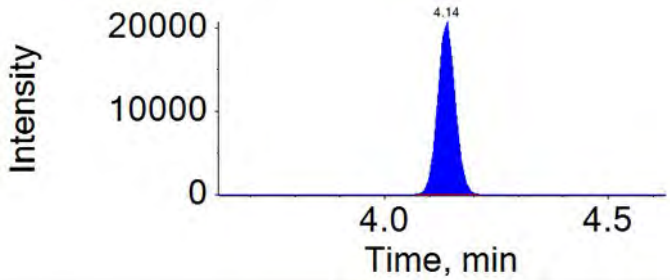
Analyte: PFBS
299.0 / 80.0



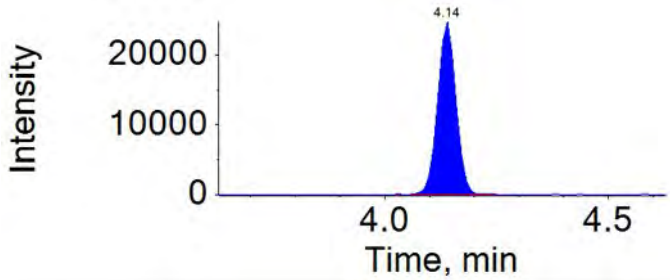
Extraction Standard: 13C3-PFBS
302.0 / 80.0



Analyte: 4:2-FTS
327.0 / 307.0



Extraction Standard: 13C2-4:2-FTS
329.0 / 81.0

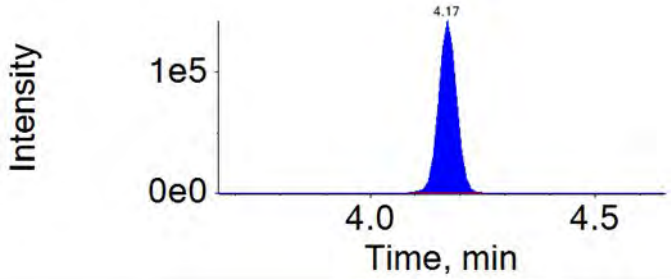


APPROVED
By MCD at 5:00 pm, 11/28/18

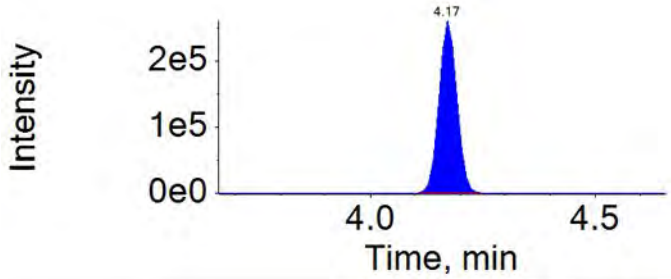
REVIEWED
By HMK at 12:22 pm, 11/29/18

ICAL Name: 18NOV28DCAL **Result Table:** 18NOV28DCAL 11/28/2018 4:47:11 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

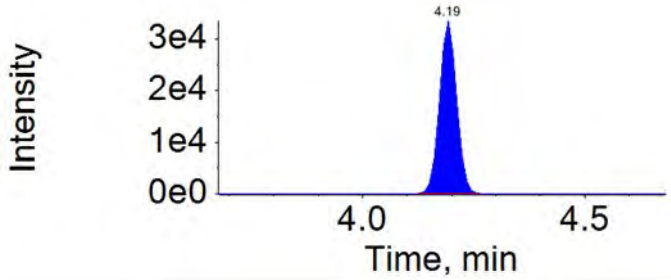
Analyte: PFHxA
313.0 / 269.0



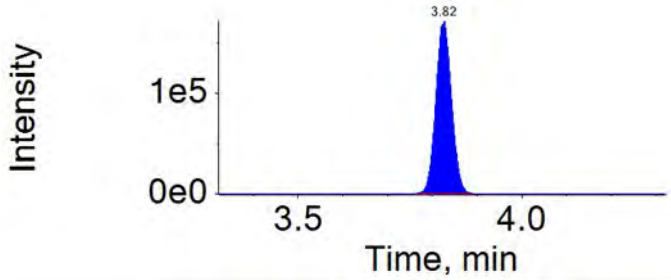
Extraction Standard: 13C5-PFHxA
318.0 / 273.0



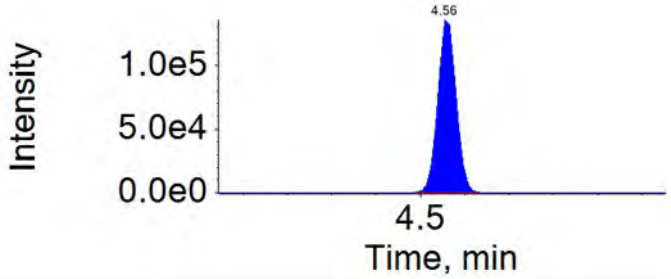
Analyte: PFPeS
349.0 / 80.0



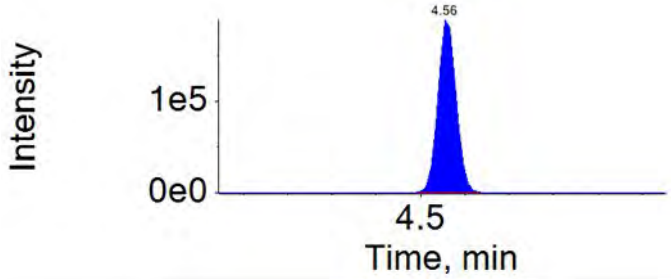
Extraction Standard: 13C3-PFBS
302.0 / 80.0



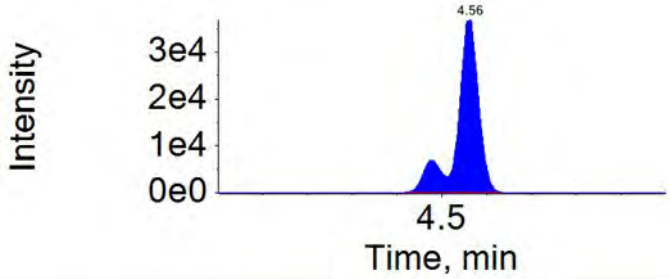
Analyte: PFHpA
363.0 / 319.0



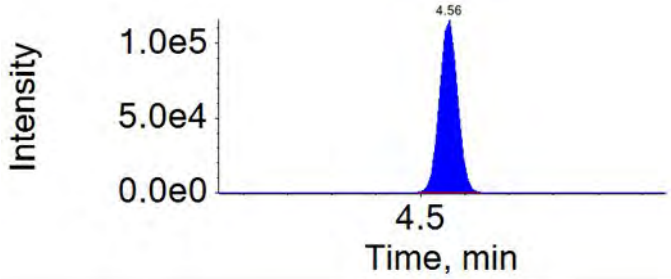
Extraction Standard: 13C4-PFHpA
367.0 / 322.0



Analyte: PFHxS
399.0 / 80.0



Extraction Standard: 13C3-PFHxS
402.0 / 80.0

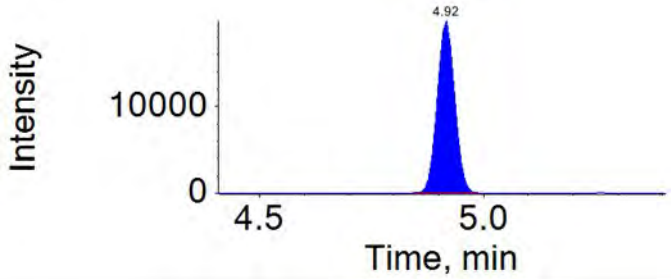


APPROVED
By MCD at 5:00 pm, 11/28/18

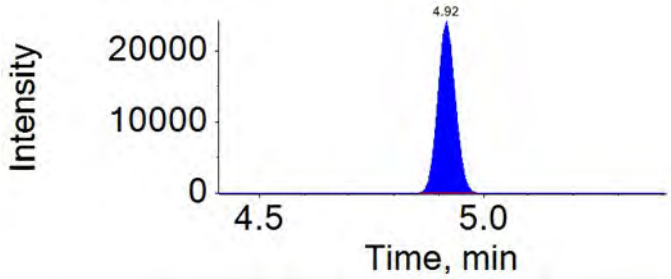
REVIEWED
By HMK at 12:22 pm, 11/29/18

ICAL Name: 18NOV28DCAL **Result Table:** 18NOV28DCAL 11/28/2018 4:47:11 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

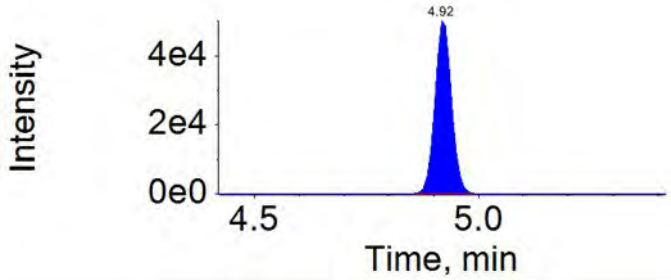
Analyte: 6:2-FTS
427.0 / 407.0



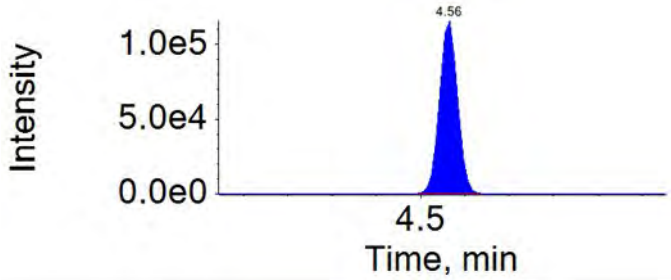
Extraction Standard: 13C2-6:2-FTS
429.0 / 81.0



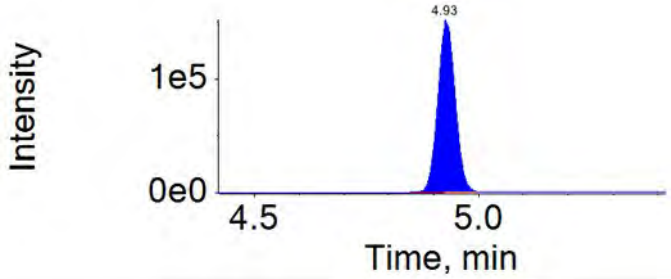
Analyte: PFHpS
449.0 / 80.0



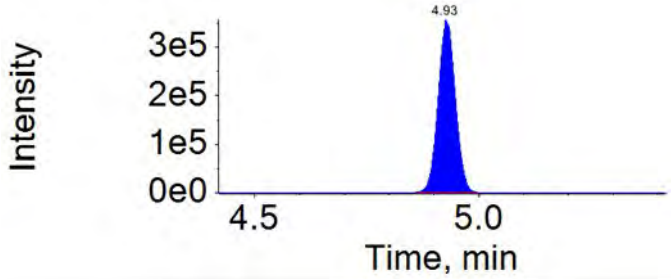
Extraction Standard: 13C3-PFHxS
402.0 / 80.0



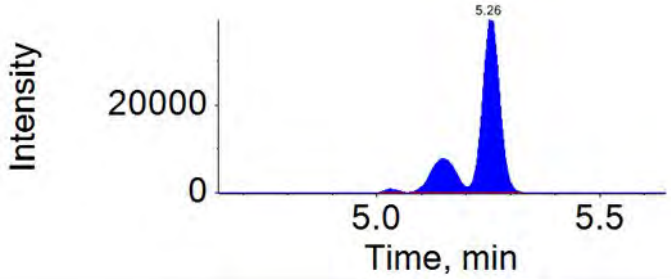
Analyte: PFOA
413.0 / 369.0



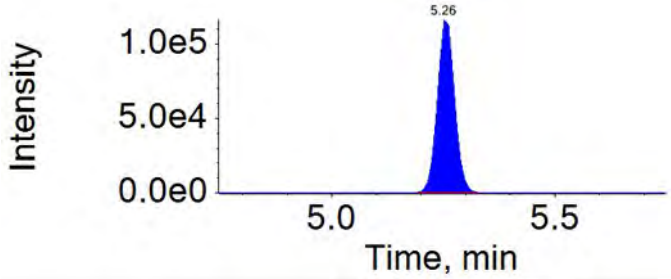
Extraction Standard: 13C8-PFOA
421.0 / 376.0



Analyte: PFOS
499.0 / 80.0

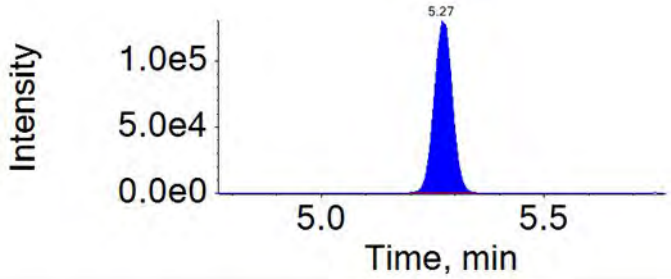


Extraction Standard: 13C8-PFOS
507.0 / 80.0

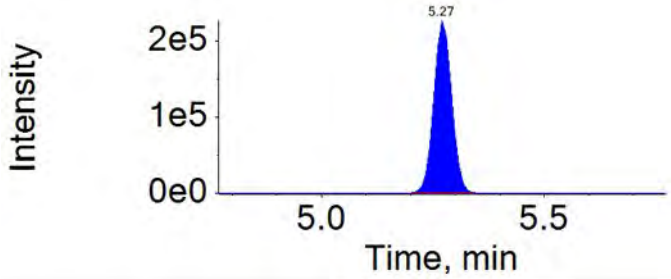


ICAL Name: 18NOV28DCAL **Result Table:** 18NOV28DCAL 11/28/2018 4:47:11 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

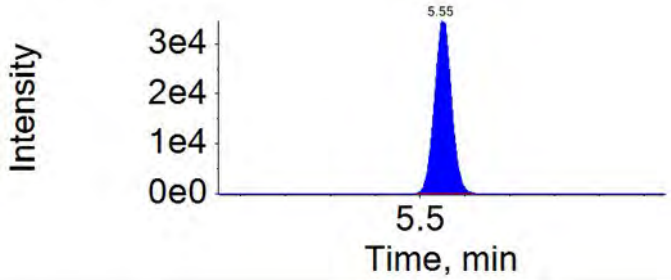
Analyte: PFNA
463.0 / 419.0



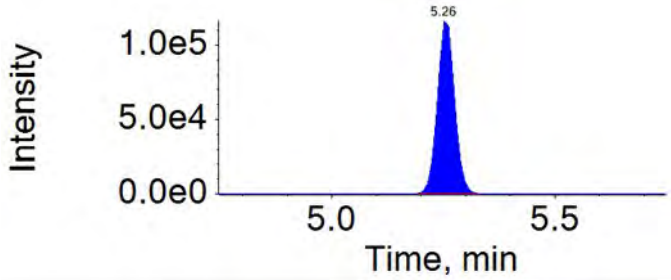
Extraction Standard: 13C9-PFNA
472.0 / 427.0



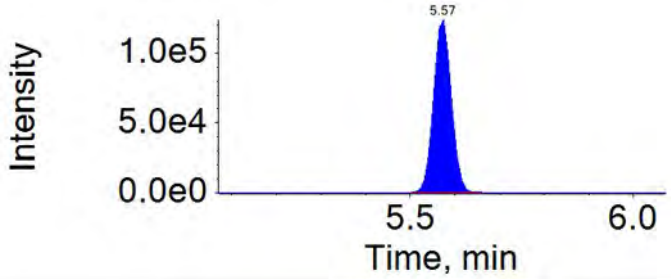
Analyte: PFNS
549.0 / 80.0



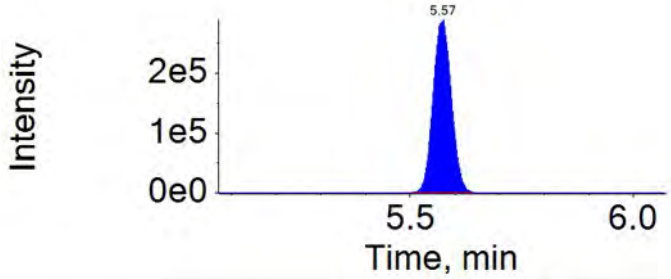
Extraction Standard: 13C8-PFOS
507.0 / 80.0



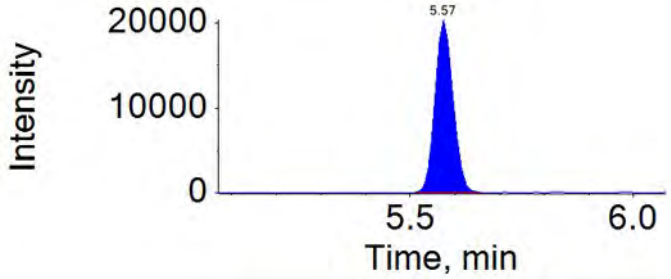
Analyte: PFDA
513.0 / 469.0



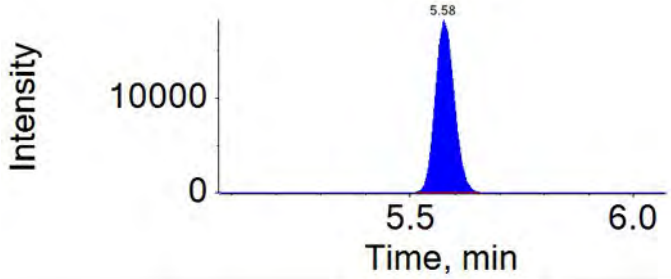
Extraction Standard: 13C6-PFDA
519.0 / 474.0



Analyte: 8:2-FTS
527.0 / 507.0



Extraction Standard: 13C2-8:2-FTS
529.0 / 81.0

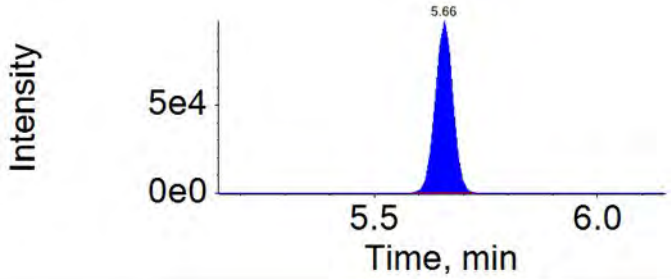


APPROVED
By MCD at 5:00 pm, 11/28/18

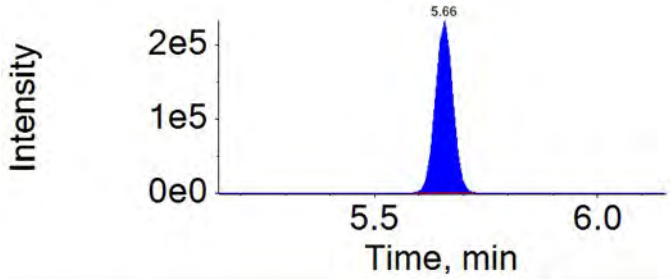
REVIEWED
By HMK at 12:22 pm, 11/29/18

ICAL Name: 18NOV28DCAL **Result Table:** 18NOV28DCAL 11/28/2018 4:47:11 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

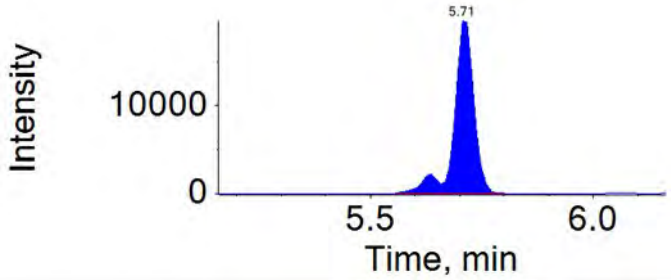
Analyte: PFOSA
498.0 / 78.0



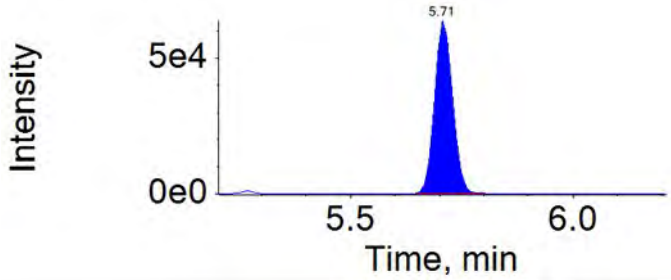
Extraction Standard: 13C8-PFOSA
506.0 / 78.0



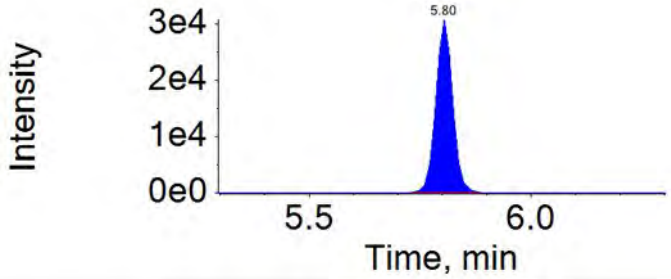
Analyte: NMeFOSAA
570.0 / 419.0



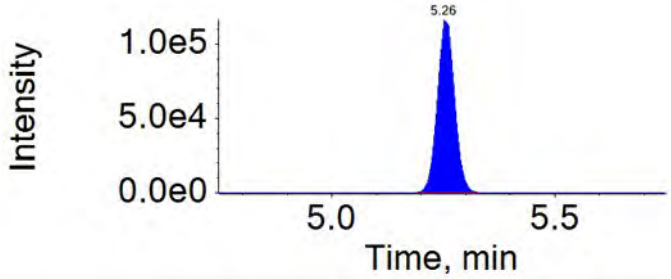
Extraction Standard: d3-NMeFOSAA
573.0 / 419.0



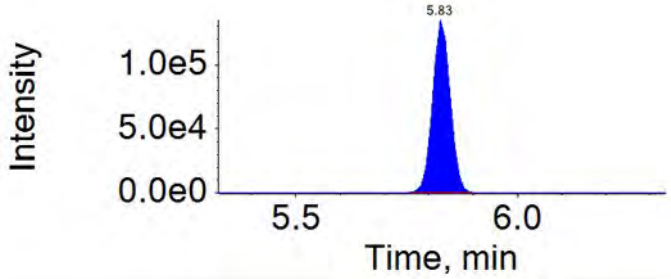
Analyte: PFDS
599.0 / 80.0



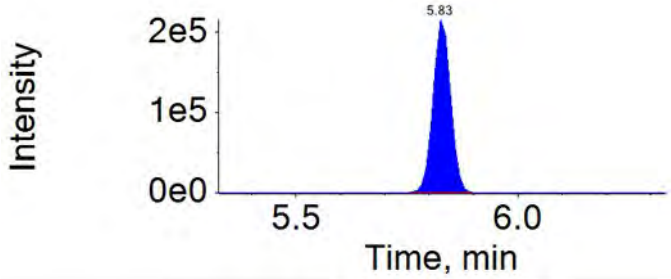
Extraction Standard: 13C8-PFOS
507.0 / 80.0



Analyte: PFUnDA
563.0 / 519.0

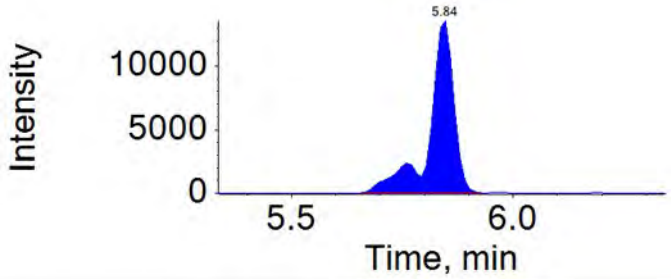


Extraction Standard: 13C7-PFUnDA
570.0 / 525.0

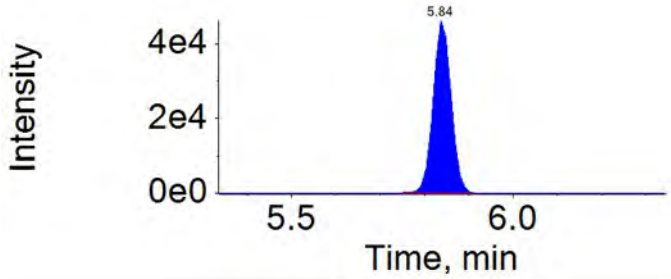


ICAL Name: 18NOV28DCAL **Result Table:** 18NOV28DCAL 11/28/2018 4:47:11 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

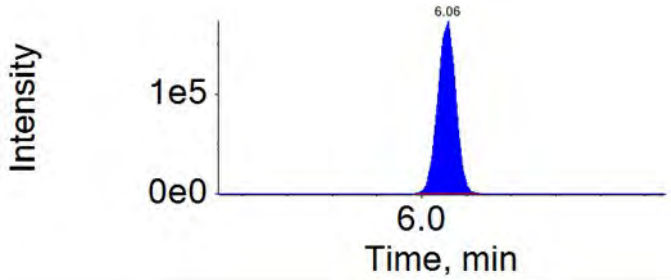
Analyte: NEtFOSAA
584.0 / 419.0



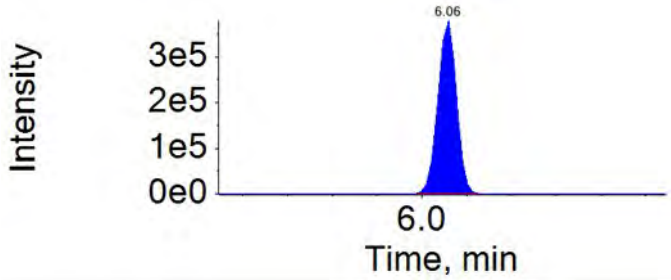
Extraction Standard: d5-NEtFOSAA
589.0 / 419.0



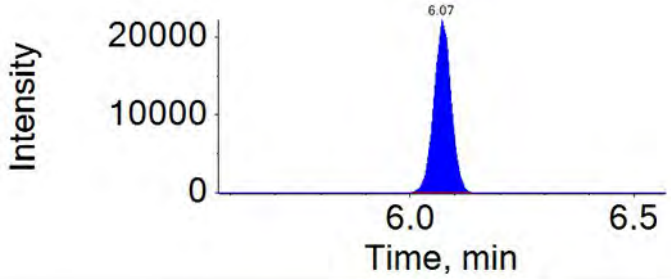
Analyte: PFDoDA
613.0 / 569.0



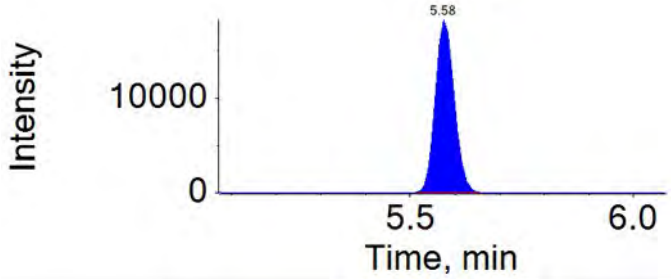
Extraction Standard: 13C2-PFDoDA
615.0 / 570.0



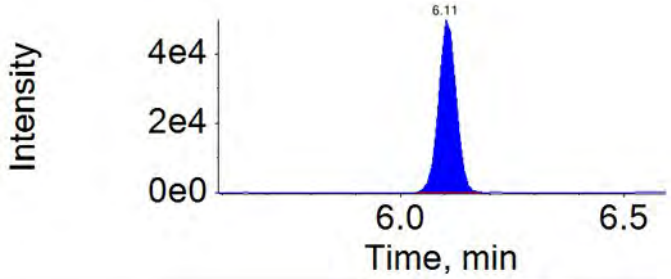
Analyte: 10:2-FTS
627.0 / 607.0



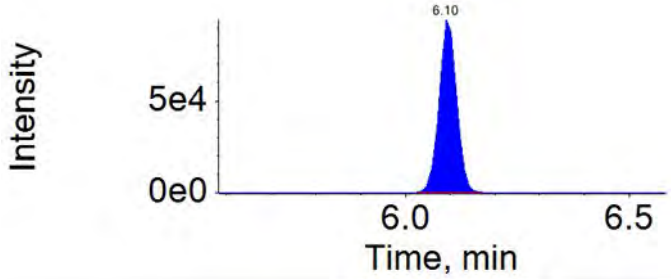
Extraction Standard: 13C2-8:2-FTS
529.0 / 81.0



Analyte: NMePFOSAE
616.0 / 59.0



Extraction Standard: d7-NMePFOSAE
623.0 / 59.0

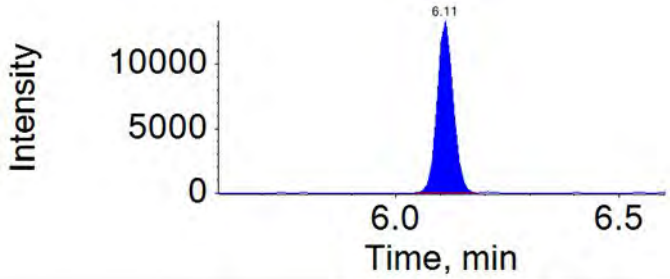


APPROVED
By MCD at 5:00 pm, 11/28/18

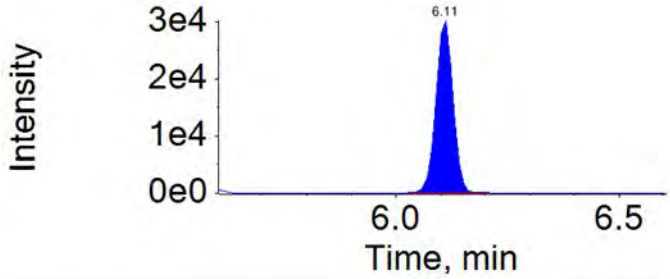
REVIEWED
By HMK at 12:22 pm, 11/29/18

ICAL Name: 18NOV28DCAL **Result Table:** 18NOV28DCAL 11/28/2018 4:47:11 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

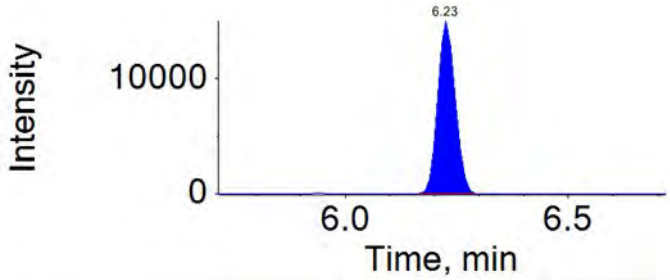
Analyte: NMePFOSA
512.0 / 169.0



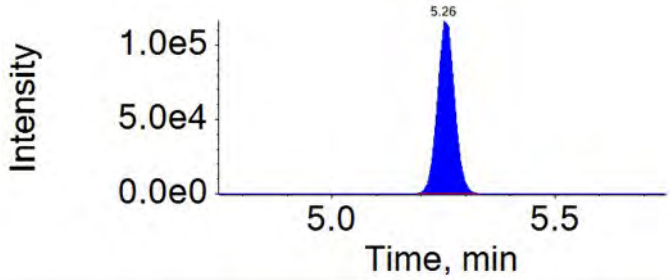
Extraction Standard: d3-NMePFOSA
515.0 / 169.0



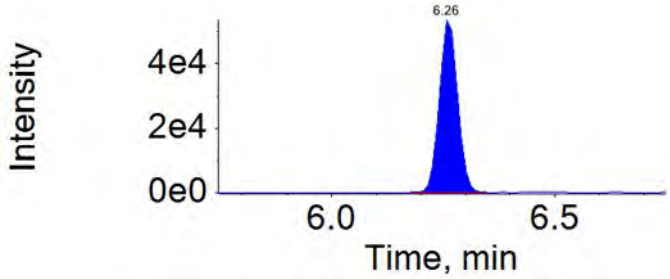
Analyte: PFDoS
699.0 / 80.0



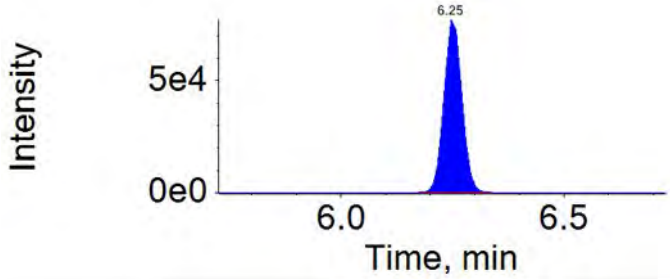
Extraction Standard: 13C8-PFOS
507.0 / 80.0



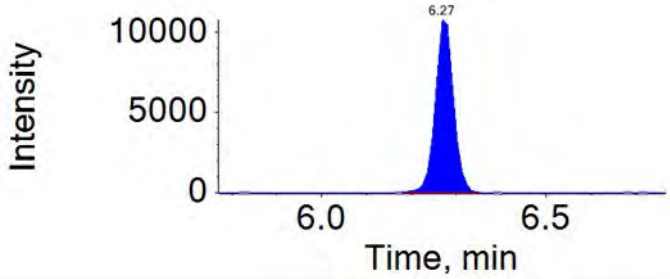
Analyte: NEtPFOSAE
630.0 / 59.0



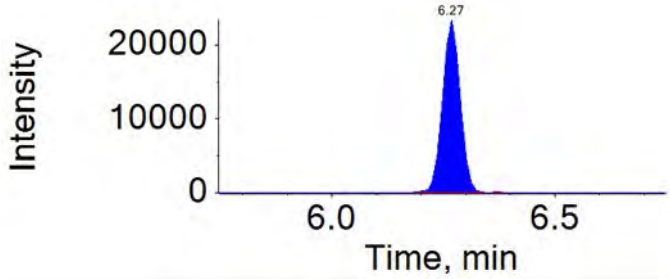
Extraction Standard: d9-NEtPFOSAE
639.0 / 59.0



Analyte: NEtPFOSA
526.0 / 169.0



Extraction Standard: d5-NEtPFOSA
531.0 / 169.0



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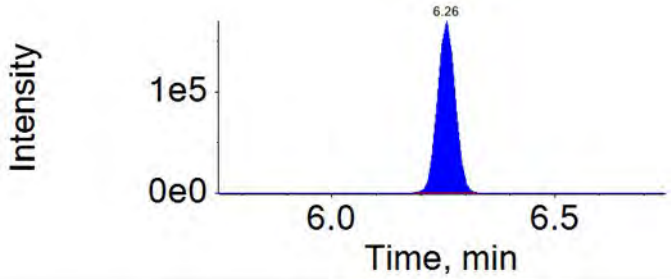
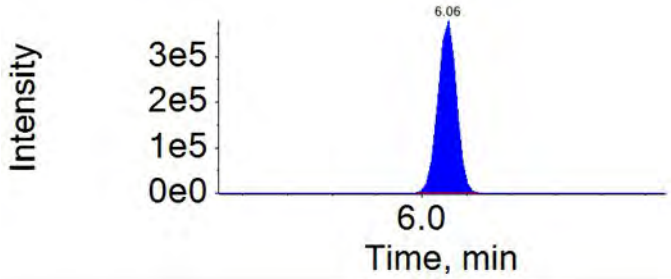
REVIEWED
By HMK at 12:22 pm, 11/29/18

ICAL Name: 18NOV28DCAL **Result Table:** 18NOV28DCAL 11/28/2018 4:47:11 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

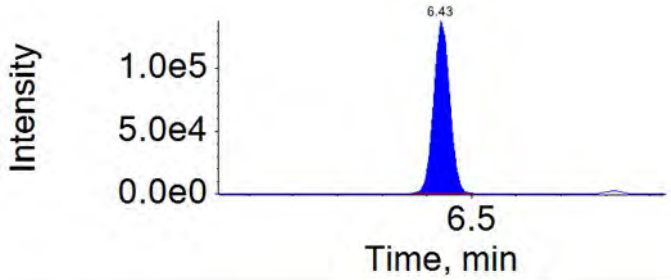
Analyte: PFTrDA
663.0 / 619.0



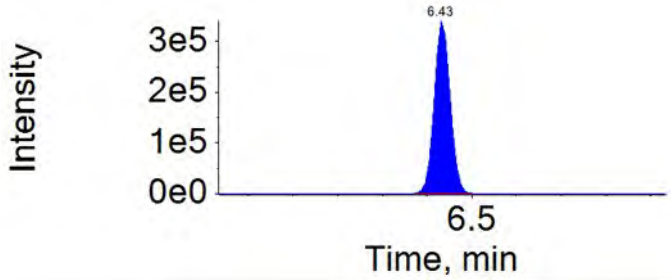
Extraction Standard: 13C2-PFDoDA
615.0 / 570.0



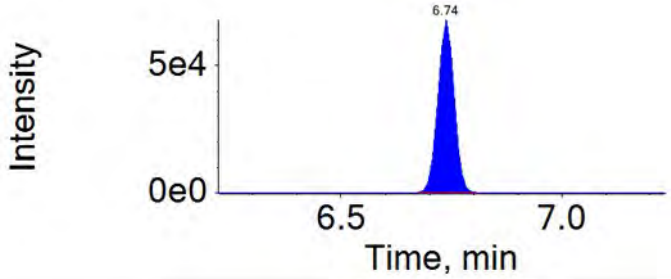
Analyte: PFTeDA
713.0 / 669.0



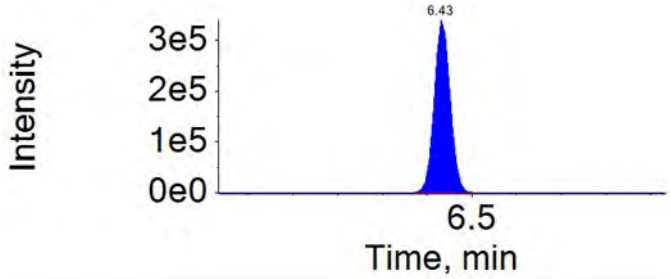
Extraction Standard: 13C2-PFTeDA
715.0 / 670.0



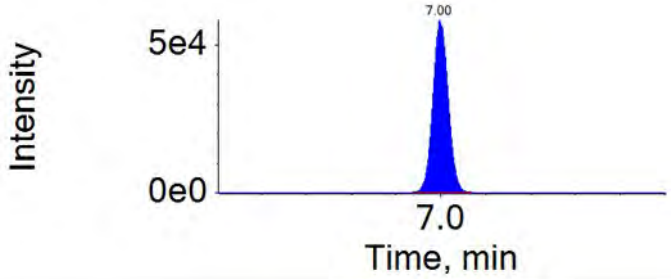
Analyte: PFHxDA
813.0 / 769.0



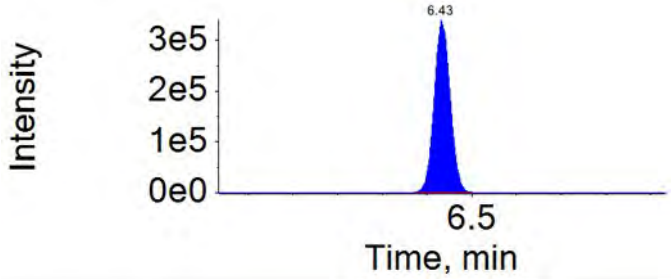
Extraction Standard: 13C2-PFTeDA
715.0 / 670.0



Analyte: PFODA
913.0 / 869.0



Extraction Standard: 13C2-PFTeDA
715.0 / 670.0



APPROVED
By MCD at 5:00 pm, 11/28/18

REVIEWED
By HMK at 12:22 pm, 11/29/18

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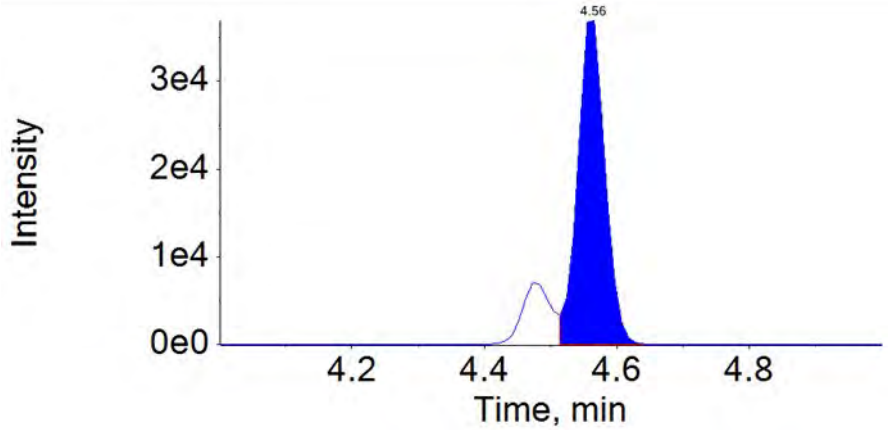
Auto Integrations prior to Manual Integration

Print Date: 11/28/2018 4:54 PM
Template: MQ-OrigInteg-16NOV21.docx

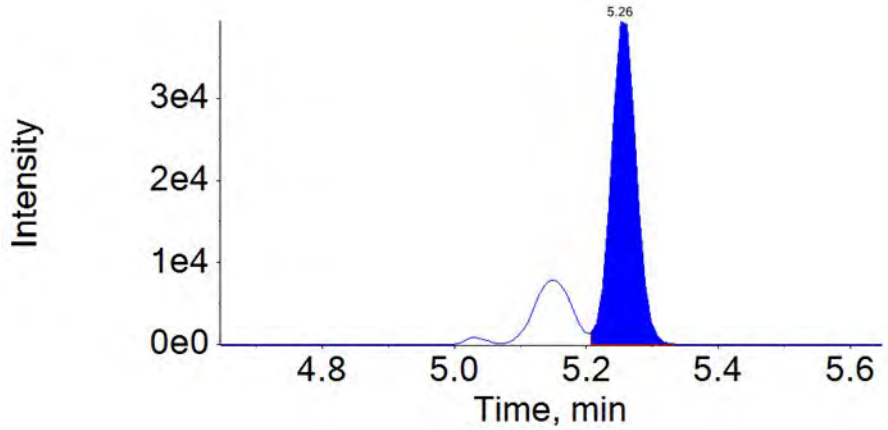
Results Table Name: 18NOV28DCAL
Results Table Date: 11/28/2018 4:52:53 PM
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

Component Name:
PFHxS
RT (min.):
4.56
Peak Area:
106597.62
Mass Range:
399.0 / 80.0
File Name:
18NOV28DCAL-08.wiff
Sample Name:
CAL3



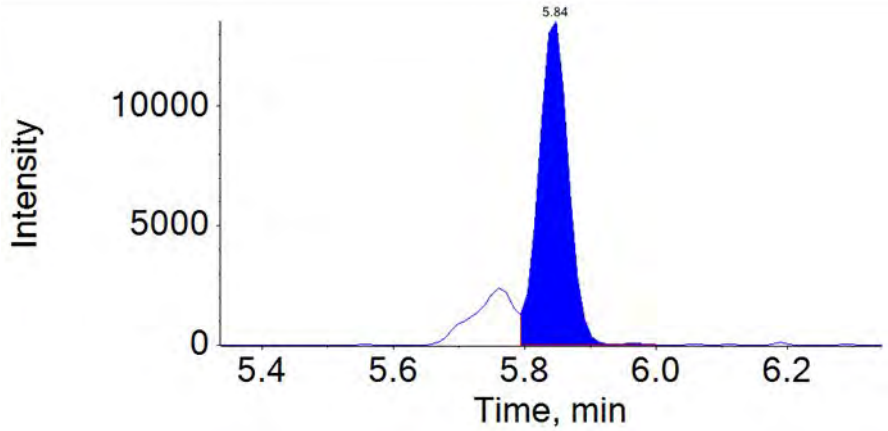
Integration Comment: incorrect integration

Component Name:
PFOS
RT (min.):
5.26
Peak Area:
105925.26
Mass Range:
499.0 / 80.0
File Name:
18NOV28DCAL-08.wiff
Sample Name:
CAL3



Integration Comment: incorrect integration

Component Name:
NEtFOSAA
RT (min.):
5.84
Peak Area:
42641.99
Mass Range:
584.0 / 419.0
File Name:
18NOV28DCAL-08.wiff
Sample Name:
CAL3



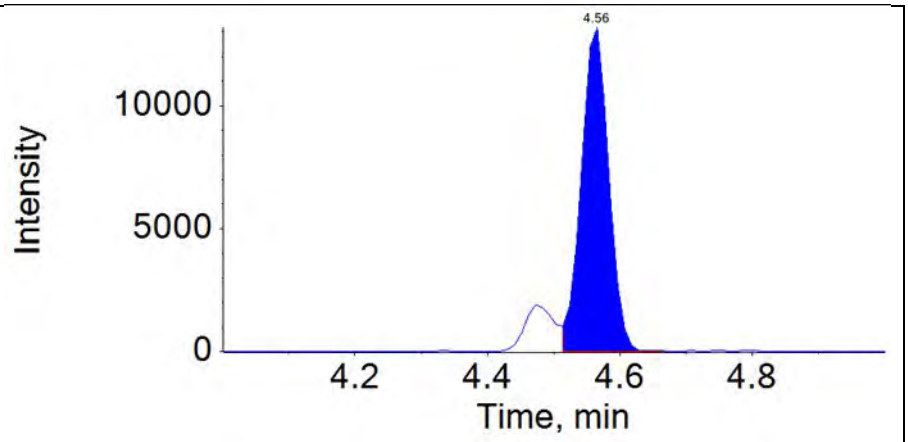
Integration Comment: incorrect integration

APPROVED
By MCD at 5:00 pm, 11/28/18

REVIEWED
By HMK at 12:22 pm, 11/29/18

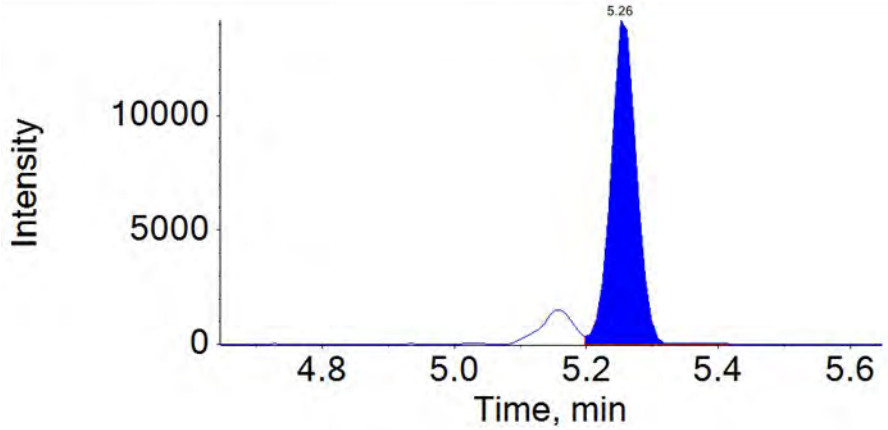
Results Table Name: 18NOV28DCAL
Results Table Date: 11/28/2018 4:52:53 PM
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

Component Name:
PFHxS_2
RT (min.):
4.56
Peak Area:
37946.39
Mass Range:
399.0 / 99.0
File Name:
18NOV28DCAL-08.wiff
Sample Name:
CAL3



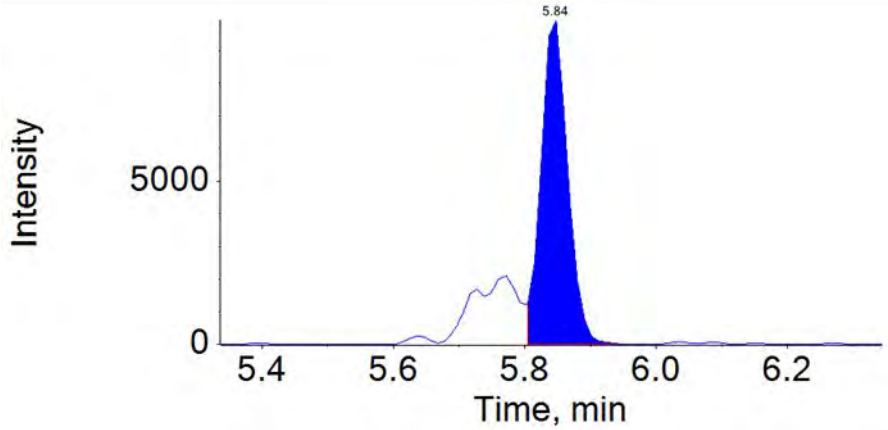
Integration Comment: incorrect integration

Component Name:
PFOS_2
RT (min.):
5.26
Peak Area:
38423.09
Mass Range:
499.0 / 99.0
File Name:
18NOV28DCAL-08.wiff
Sample Name:
CAL3



Integration Comment: incorrect integration

Component Name:
NEtFOSAA_2
RT (min.):
5.84
Peak Area:
27991.83
Mass Range:
584.0 / 526.0
File Name:
18NOV28DCAL-08.wiff
Sample Name:
CAL3



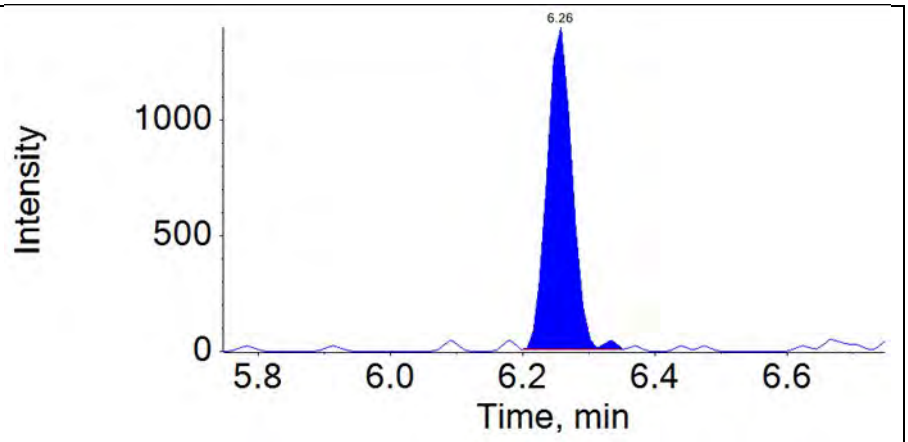
Integration Comment: incorrect integration

APPROVED
By MCD at 5:00 pm, 11/28/18

REVIEWED
By HMK at 12:22 pm, 11/29/18

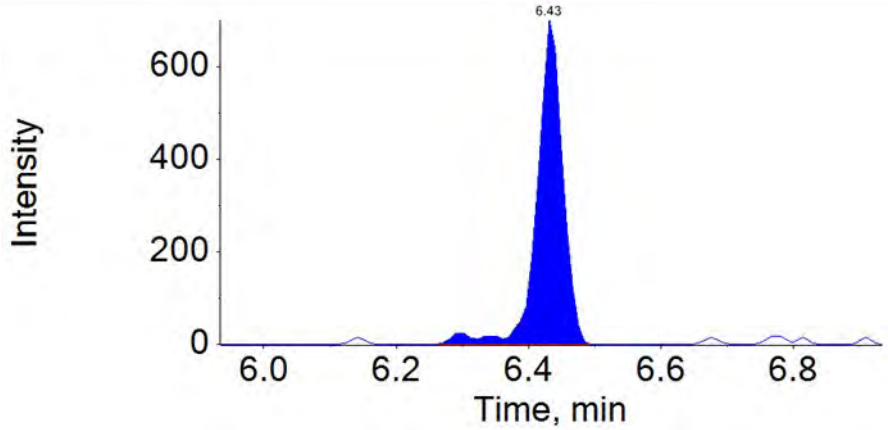
Results Table Name: 18NOV28DCAL
Results Table Date: 11/28/2018 4:52:53 PM
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

Component Name:
PFTrDA_2
RT (min.):
6.26
Peak Area:
3672.17
Mass Range:
663.0 / 169.0
File Name:
18NOV28DCAL-08.wiff
Sample Name:
CAL3



Integration Comment: incorrect integration

Component Name:
PFTeDA_2
RT (min.):
6.43
Peak Area:
1900.22
Mass Range:
713.0 / 169.0
File Name:
18NOV28DCAL-08.wiff
Sample Name:
CAL3



Integration Comment: incorrect integration

APPROVED
By MCD at 5:00 pm, 11/28/18

REVIEWED
By HMK at 12:22 pm, 11/29/18

Results Table Name: 18NOV28DCAL
Results Table Date: 11/28/2018 4:52:53 PM
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

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By MCD at 5:00 pm, 11/28/18

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By HMK at 12:22 pm, 11/29/18

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LC-MS/MS Analysis Report

Printed: 11/28/2018 4:51:00 PM
Template: IonRatio18OCT10

Ion Ratio Report

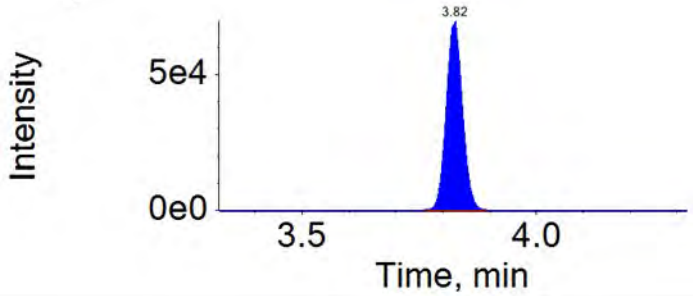
Sample Name: CAL3 **Instrument Name:** LM27631 **File Name:** 18NOV28DCAL-08.wiff

Component Name	RT	RRT	Analyte Area Response	Int Typ	Expected Ion Ratio	Ion Ratio	Ion Ratio % Diff	Ion Ratio Limit	Ion Ratio OOS
PFBS	3.82	1.00	168534.11	A	0.3655	0.3659			
PFBS_2	3.82	1.00	61662.80	A	0.3655	0.3659	0	50	
4:2-FTS	4.14	1.00	56502.46	A	0.6383	0.6021			
4:2-FTS_2	4.14	1.00	34020.61	A	0.6383	0.6021	-6	50	
PFHxA	4.17	1.00	395421.36	A	0.0103	0.0110			
PFHxA_2	4.18	1.00	4355.12	A	0.0103	0.0110	7	50	
PFPeS	4.19	1.10	89559.66	A	0.4976	0.4878			
PFPeS_2	4.19	1.10	43683.81	A	0.4976	0.4878	-2	50	
PFHpA	4.56	1.00	388626.66	A	0.0557	0.0548			
PFHpA_2	4.56	1.00	21286.44	A	0.0557	0.0548	-2	50	
PFHxS	4.56	1.00	127889.21	M	0.3693	0.3421			
PFHxS_2	4.56	1.00	43748.70	M	0.3693	0.3421	-7	50	
6:2-FTS	4.92	1.00	53951.03	A	0.6625	0.6864			
6:2-FTS_2	4.92	1.00	37034.45	A	0.6625	0.6864	4	50	
PFHpS	4.92	1.08	129450.89	A	0.3915	0.3990			
PFHpS_2	4.92	1.08	51651.50	A	0.3915	0.3990	2	50	
PFOA	4.93	1.00	405879.42	A	0.0573	0.0559			
PFOA_2	4.93	1.00	22683.88	A	0.0573	0.0559	-2	50	
PFOS	5.26	1.00	139506.62	M	0.2960	0.3122			
PFOS_2	5.26	1.00	43549.51	M	0.2960	0.3122	5	50	
PFNA	5.27	1.00	370292.03	A	0.0201	0.0194			
PFNA_2	5.27	1.00	7190.40	A	0.0201	0.0194	-3	50	
PFNS	5.55	1.06	91471.00	A	0.4794	0.4837			
PFNS_2	5.55	1.06	44242.69	A	0.4794	0.4837	1	50	
PFDA	5.57	1.00	343523.00	A	0.0075	0.0062			
PFDA_2	5.58	1.00	2142.58	A	0.0075	0.0062	-17	50	
8:2-FTS	5.57	1.00	57433.88	A	0.5380	0.6364			
8:2-FTS_2	5.57	1.00	36548.28	A	0.5380	0.6364	18	50	
NMeFOSAA	5.71	1.00	62054.84	A	0.2305	0.1960			
NMeFOSAA_2	5.71	1.00	12164.14	A	0.2305	0.1960	-15	50	
PFDS	5.80	1.10	80537.37	A	0.5356	0.4311			
PFDS_2	5.80	1.10	34716.06	A	0.5356	0.4311	-20	50	
PFUnDA	5.83	1.00	370693.61	A	0.0038	0.0032			
PFUnDA_2	5.83	1.00	1171.38	A	0.0038	0.0032	-17	50	
NEtFOSAA	5.84	1.00	52769.46	M	0.7356	0.7268			
NEtFOSAA_2	5.84	1.00	38354.97	M	0.7356	0.7268	-1	50	
PFDoDA	6.06	1.00	486489.15	A	0.0130	0.0107			
PFDoDA_2	6.06	1.00	5227.64	A	0.0130	0.0107	-18	50	
10:2-FTS	6.07	1.09	58508.21	A	0.6989	0.5755			
10:2-FTS_2	6.07	1.09	33673.51	A	0.6989	0.5755	-18	50	
PFTrDA	6.26	1.03	466266.85	A	0.0090	0.0078			
PFTrDA_2	6.26	1.03	3621.63	M	0.0090	0.0078	-14	50	
PFTeDA	6.43	1.00	342239.84	A	0.0056	0.0053			
PFTeDA_2	6.43	1.00	1811.16	M	0.0056	0.0053	-6	50	
PFHxDA	6.74	1.05	173721.02	A	0.0646	0.0595			
PFHxDA_2	6.74	1.05	10340.87	A	0.0646	0.0595	-8	50	
PFODA	7.00	1.09	139071.53	A	0.0264	0.0248			
PFODA_2	7.00	1.09	3451.82	A	0.0264	0.0248	-6	50	

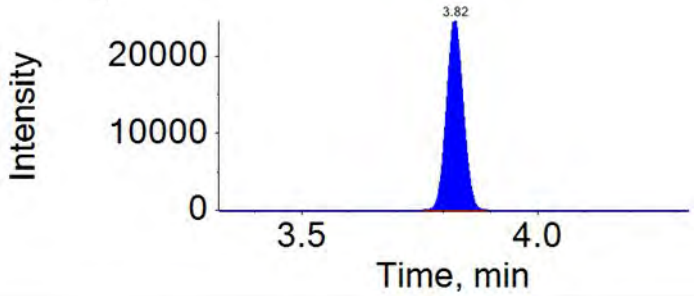
APPROVED
By MCD at 5:00 pm, 11/28/18

REVIEWED
By HMK at 12:22 pm, 11/29/18

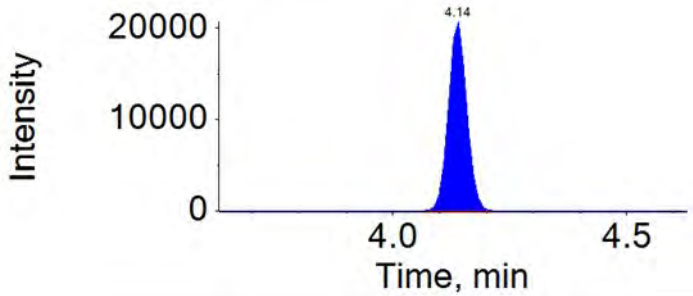
Component: PFBS
Primary Mass: 299.0 / 80.0



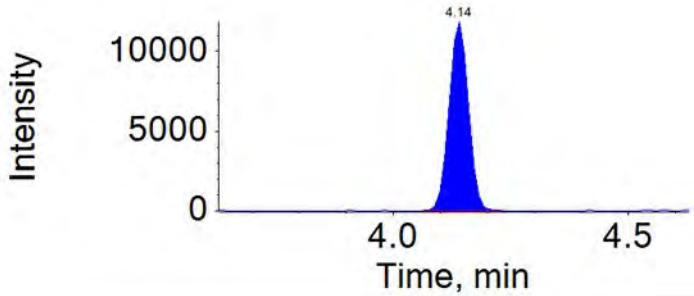
Component: PFBS_2
Secondary Mass: 299.0 / 99.0



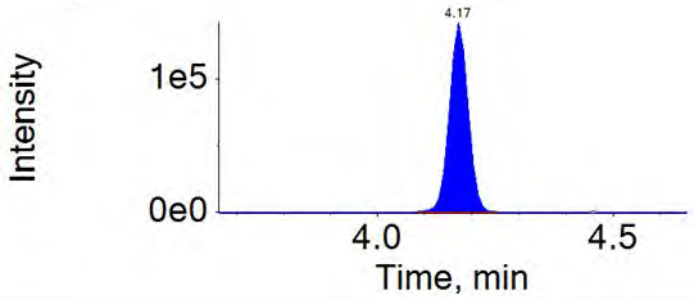
Component: 4:2-FTS
Primary Mass: 327.0 / 307.0



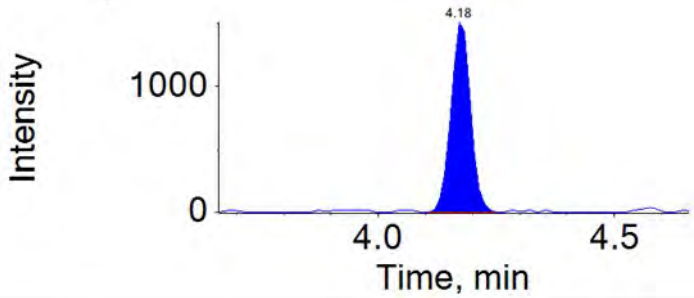
Component: 4:2-FTS_2
Secondary Mass: 327.0 / 81.0



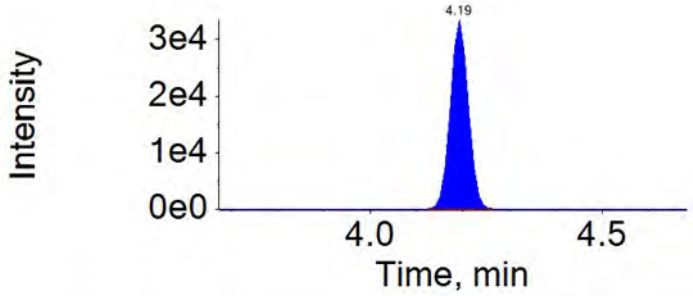
Component: PFHxA
Primary Mass: 313.0 / 269.0



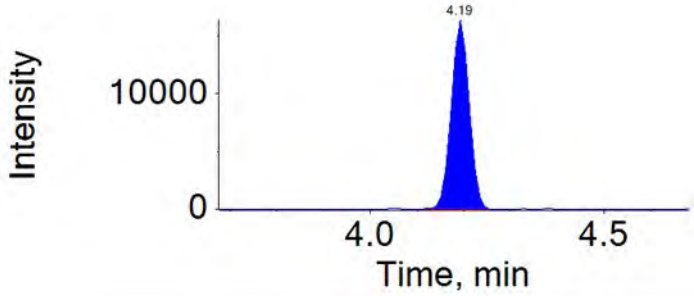
Component: PFHxA_2
Secondary Mass: 313.0 / 119.0



Component: PFPeS
Primary Mass: 349.0 / 80.0



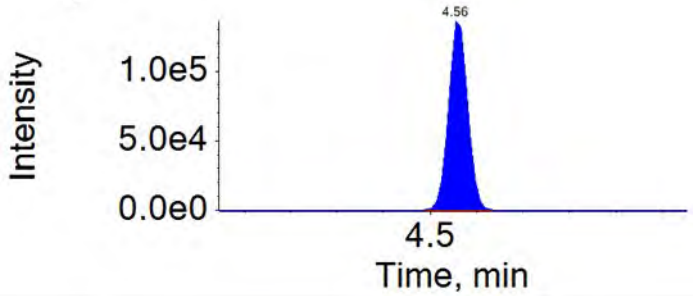
Component: PFPeS_2
Secondary Mass: 349.0 / 99.0



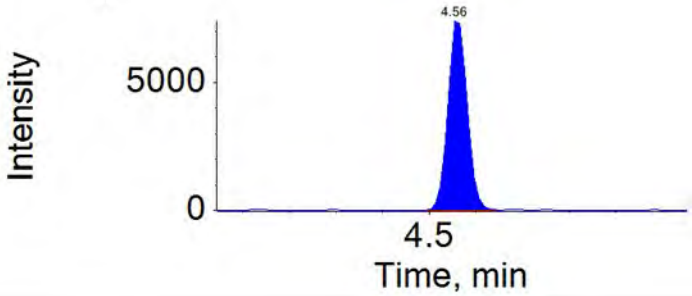
APPROVED
By MCD at 5:00 pm, 11/28/18

REVIEWED
By HMK at 12:22 pm, 11/29/18

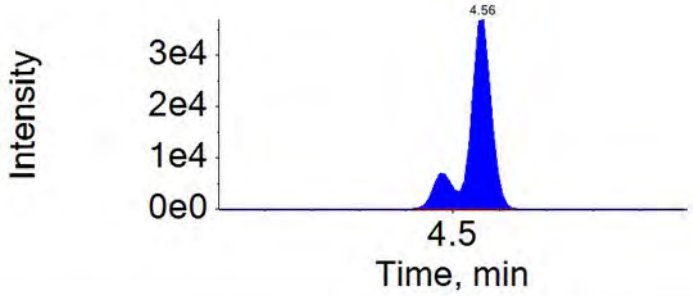
Component: PFHpA
Primary Mass: 363.0 / 319.0



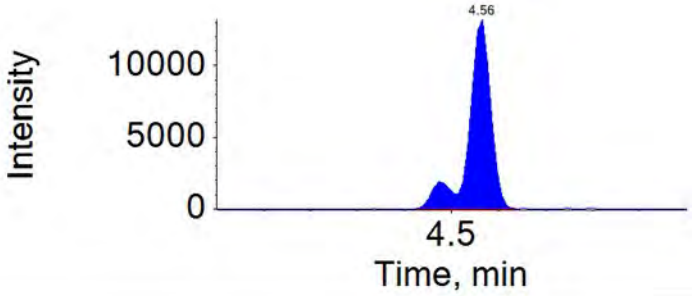
Component: PFHpA_2
Secondary Mass: 363.0 / 169.0



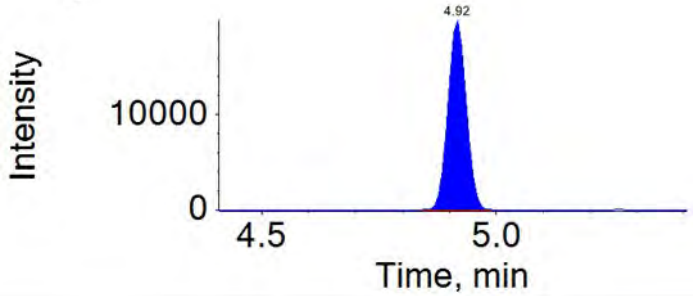
Component: PFHxS
Primary Mass: 399.0 / 80.0



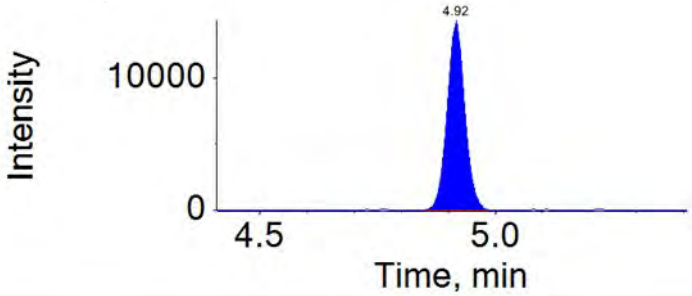
Component: PFHxS_2
Secondary Mass: 399.0 / 99.0



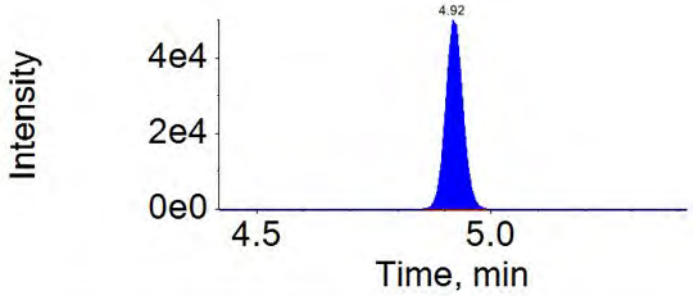
Component: 6:2-FTS
Primary Mass: 427.0 / 407.0



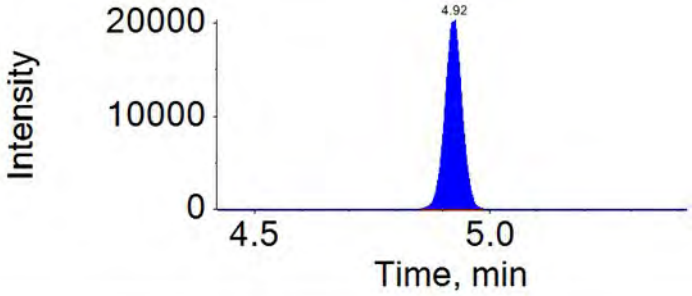
Component: 6:2-FTS_2
Secondary Mass: 427.0 / 81.0



Component: PFHpS
Primary Mass: 449.0 / 80.0



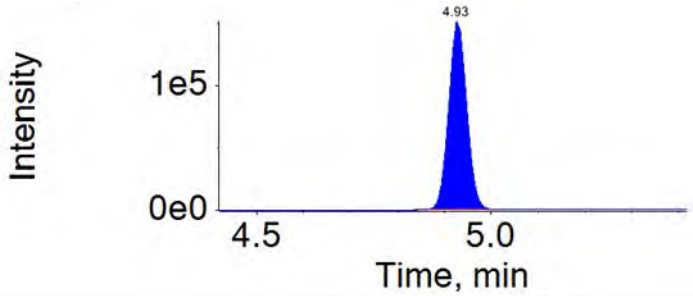
Component: PFHpS_2
Secondary Mass: 449.0 / 99.0



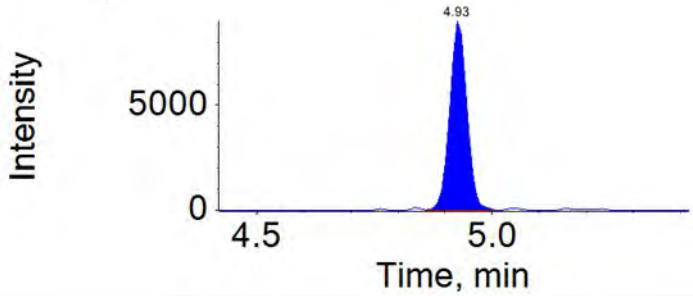
APPROVED
By MCD at 5:00 pm, 11/28/18

REVIEWED
By HMK at 12:22 pm, 11/29/18

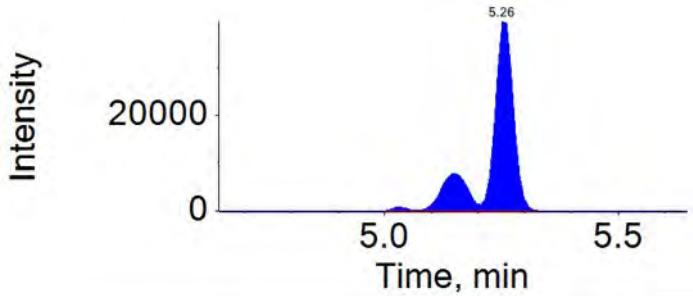
Component: PFOA
Primary Mass: 413.0 / 369.0



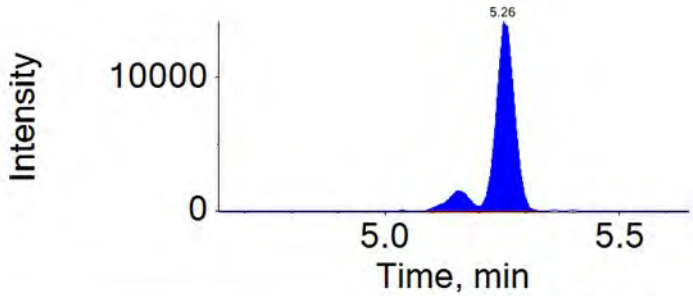
Component: PFOA_2
Secondary Mass: 413.0 / 169.0



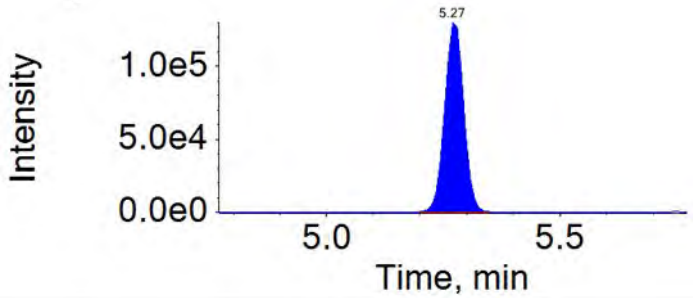
Component: PFOS
Primary Mass: 499.0 / 80.0



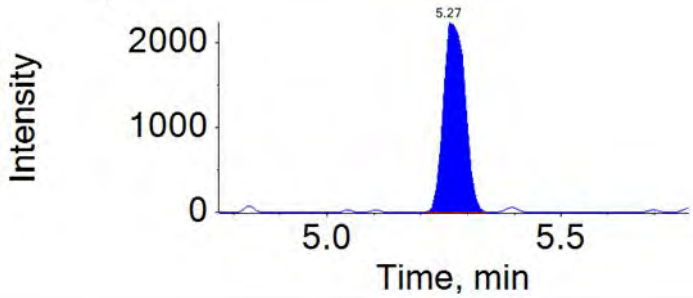
Component: PFOS_2
Secondary Mass: 499.0 / 99.0



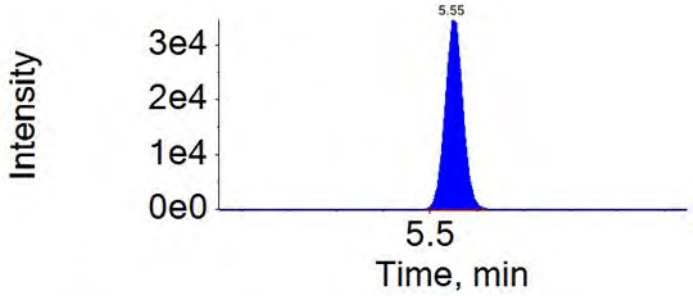
Component: PFNA
Primary Mass: 463.0 / 419.0



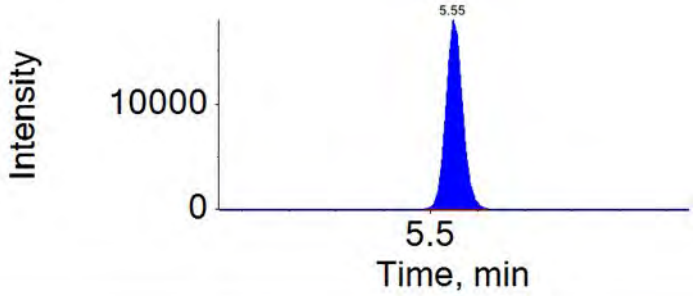
Component: PFNA_2
Secondary Mass: 463.0 / 169.0



Component: PFNS
Primary Mass: 549.0 / 80.0



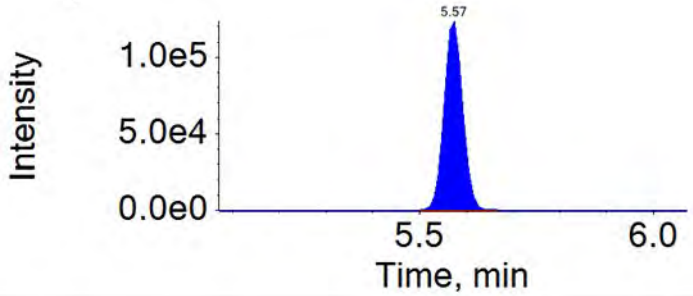
Component: PFNS_2
Secondary Mass: 549.0 / 99.0



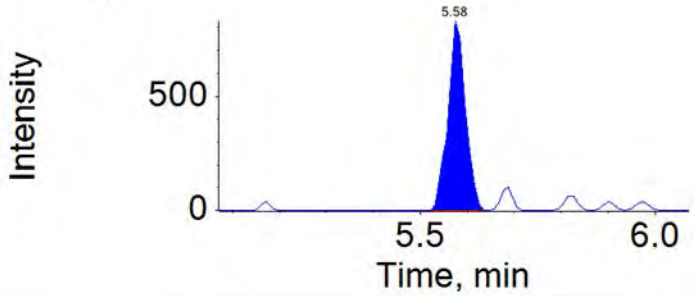
APPROVED
By MCD at 5:00 pm, 11/28/18

REVIEWED
By HMK at 12:22 pm, 11/29/18

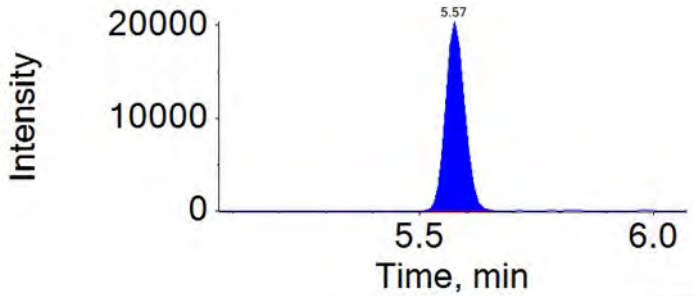
Component: PFDA
Primary Mass: 513.0 / 469.0



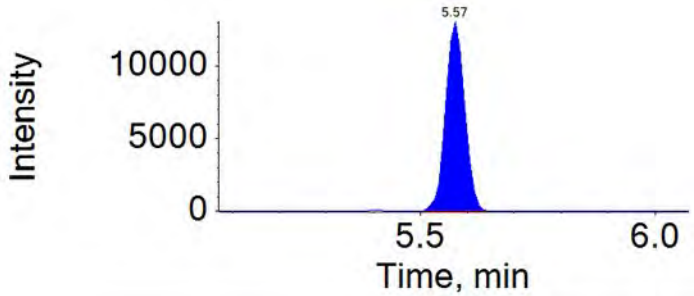
Component: PFDA_2
Secondary Mass: 513.0 / 169.0



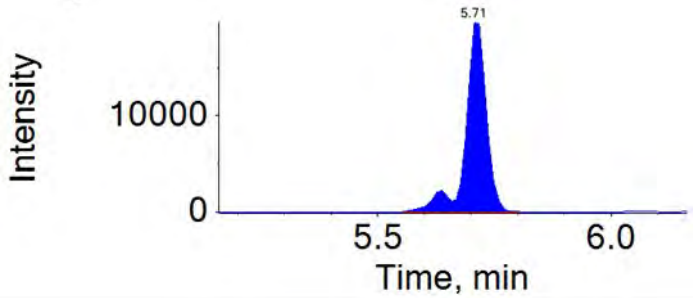
Component: 8:2-FTS
Primary Mass: 527.0 / 507.0



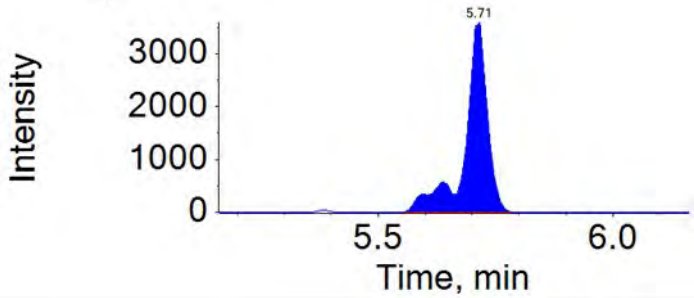
Component: 8:2-FTS_2
Secondary Mass: 527.0 / 81.0



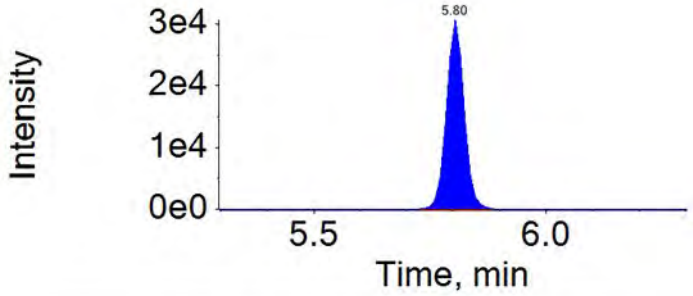
Component: NMeFOSAA
Primary Mass: 570.0 / 419.0



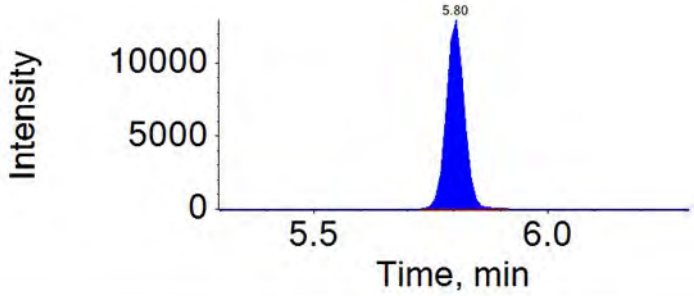
Component: NMeFOSAA_2
Secondary Mass: 570.0 / 483.0



Component: PFDS
Primary Mass: 599.0 / 80.0



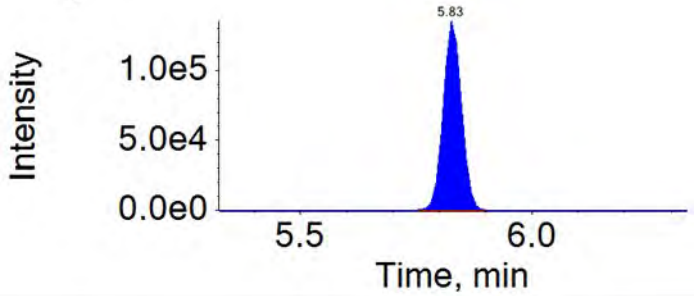
Component: PFDS_2
Secondary Mass: 599.0 / 99.0



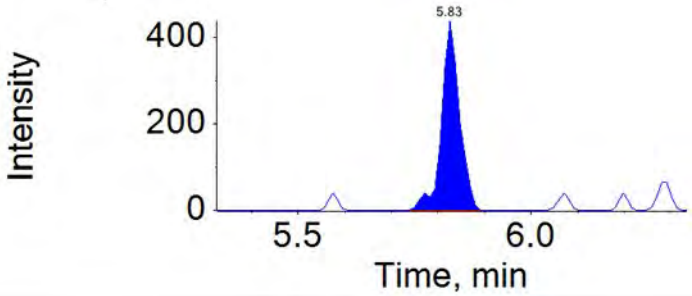
APPROVED
By MCD at 5:00 pm, 11/28/18

REVIEWED
By HMK at 12:22 pm, 11/29/18

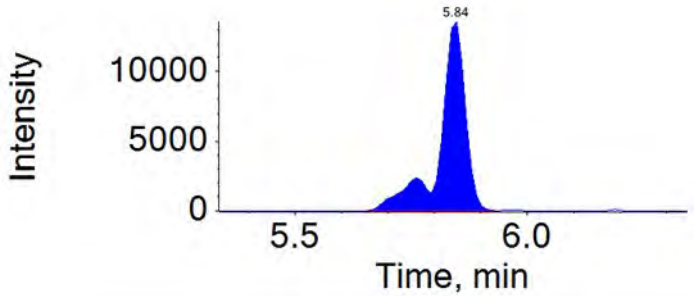
Component: PFUnDA
Primary Mass: 563.0 / 519.0



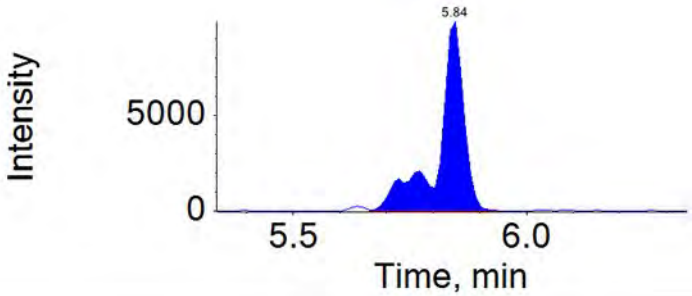
Component: PFUnDA_2
Secondary Mass: 563.0 / 169.0



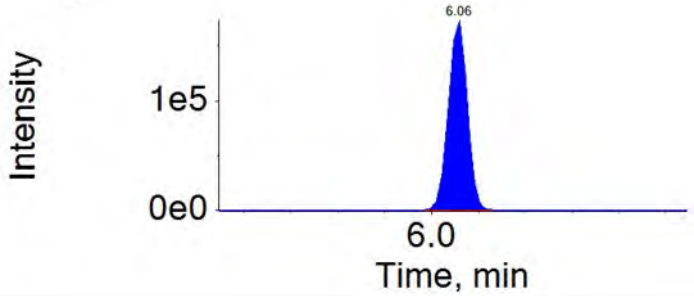
Component: NEtFOSAA
Primary Mass: 584.0 / 419.0



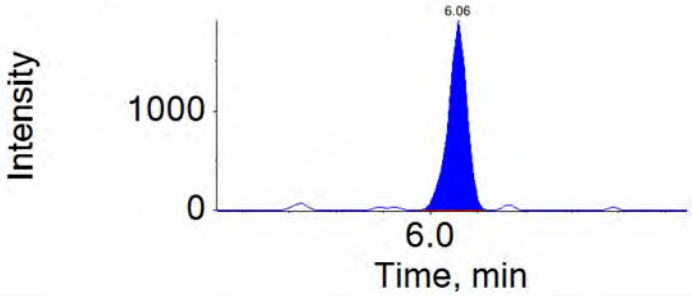
Component: NEtFOSAA_2
Secondary Mass: 584.0 / 526.0



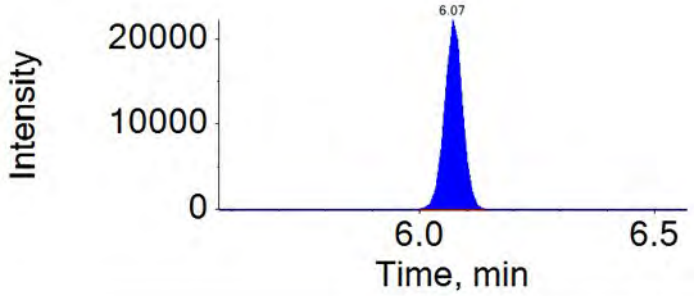
Component: PFDoDA
Primary Mass: 613.0 / 569.0



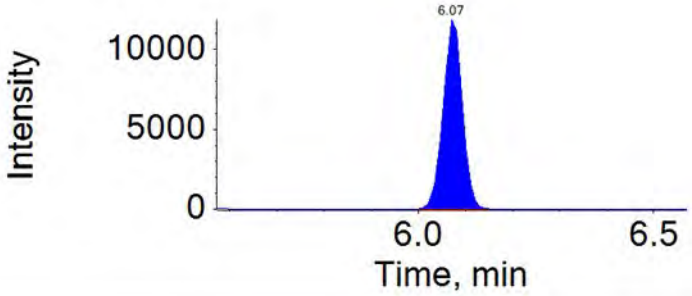
Component: PFDoDA_2
Secondary Mass: 613.0 / 169.0



Component: 10:2-FTS
Primary Mass: 627.0 / 607.0



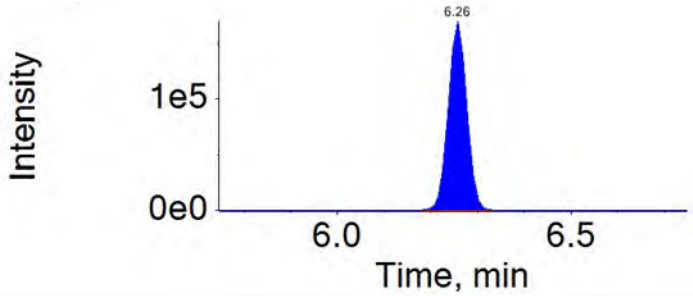
Component: 10:2-FTS_2
Secondary Mass: 627.0 / 81.0



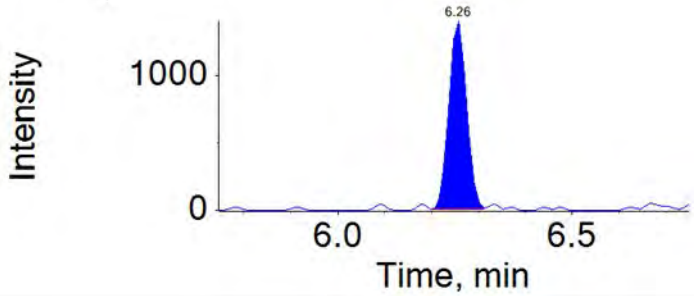
APPROVED
By MCD at 5:00 pm, 11/28/18

REVIEWED
By HMK at 12:22 pm, 11/29/18

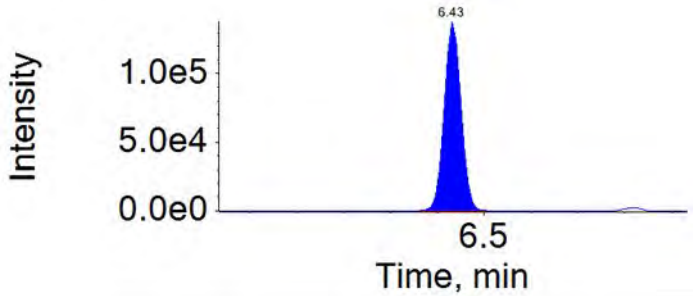
Component: PFTrDA
Primary Mass: 663.0 / 619.0



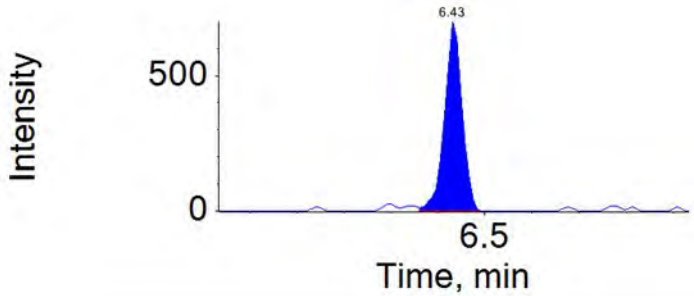
Component: PFTrDA_2
Secondary Mass: 663.0 / 169.0



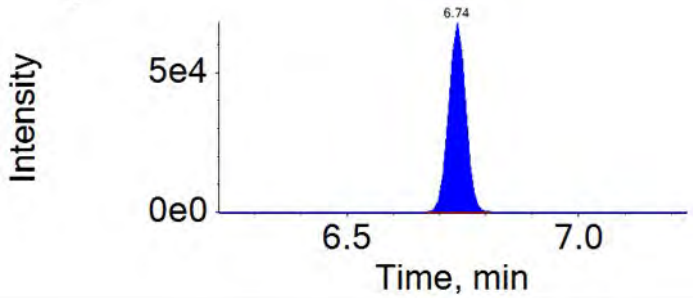
Component: PFTeDA
Primary Mass: 713.0 / 669.0



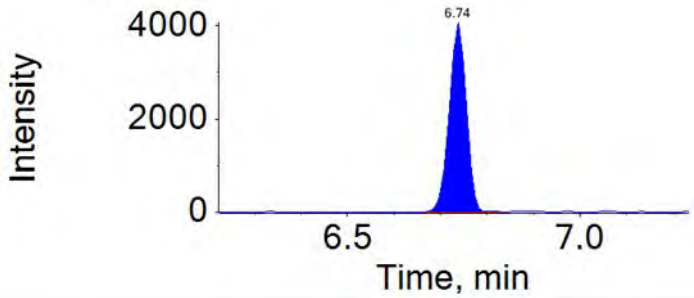
Component: PFTeDA_2
Secondary Mass: 713.0 / 169.0



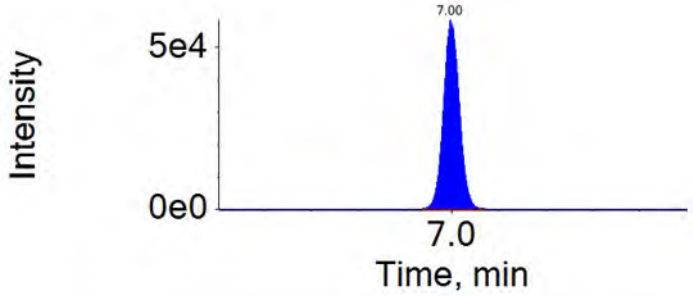
Component: PFHxDA
Primary Mass: 813.0 / 769.0



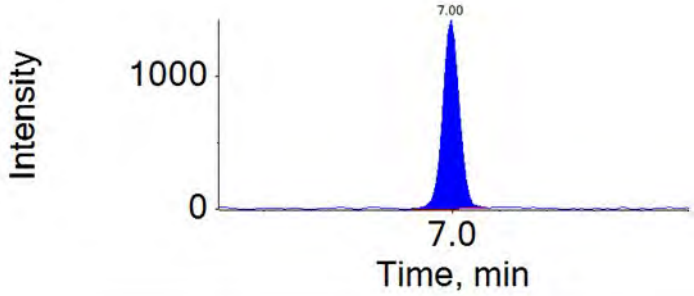
Component: PFHxDA_2
Secondary Mass: 813.0 / 169.0



Component: PFODA
Primary Mass: 913.0 / 869.0



Component: PFODA_2
Secondary Mass: 913.0 / 169.0



APPROVED
By MCD at 5:00 pm, 11/28/18

REVIEWED
By HMK at 12:22 pm, 11/29/18

ICAL Name: 18NOV28DCAL **Result Table:** 18NOV28DCAL 11/28/2018 4:47:11 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Sample Name:	CAL4			**Data File:**		18NOV28DCAL-09.wiff
Sample ID:	CALBRN41833B			**Acquis Date:**		2018-11-28T14:09:13
Sample Type:	Standard			**Instrument:**		LM27631
Vial Position:	6			**Acquis Method:**		18AUG13_3uL.dam
Injection Vol:	3.00			**Result Table:**		18NOV28DCAL
QMethod File:	18AUG20QM			**ICAL Name:**		18NOV28DCAL
Batch Number:	N/A			**Operator:**		MCD7824
Sample Wt.:	1.00000			**Dilution Factor:**		1.00
Sample Vol.:	1.000			**Prep Factor:**		1.000

Injection Standard Peak Table

Injection Standard Area Reference File: 18NOV28DCAL-08

Injection Standard Name	Inj Std Conc	Injection Std Peak Area	Rreference Injection Standard Area	Injection Std %Diff	Injection Std %Diff Limit	Injection Std %Diff OOS
13C3-PFBA	5.0	892443.9	887248.9	1	50	
13C2-PFOA	5.0	528506.8	498501.6	6	50	
13C4-PFOS	4.8	281778.6	283214.2	-1	50	
13C2-PFDA	5.0	489439.8	441790.6	11	50	

Extraction Standard Peak Table

Extraction Standard Name	Ext Std Area	Inj Std Name	Inj Std Area	Area Ratio	Ext Std Conc	Ext Std Result	Ext Std %REC	Ext Std %REC Limit	Ext Std OOS
E13C4-PFBA	974000.9	13C3-PFBA	892443.9	1.091	5.000	4.869	97	70-130	
E13C5-PFPeA	915824.6	13C3-PFBA	892443.9	1.026	5.000	4.792	96	70-130	
E13C3-PFBS	424041.3	13C3-PFBA	892443.9	0.475	4.650	4.533	97	70-130	
E13C2-4:2-FTS	67043.7	13C2-PFOA	528506.8	0.127	4.670	4.372	94	70-130	
E13C5-PFHxA	670407.7	13C2-PFOA	528506.8	1.268	5.000	4.659	93	70-130	
E13C3-PFHxS	316393.3	13C2-PFOA	528506.8	0.599	4.730	4.692	99	70-130	
E13C4-PFHpA	563674.0	13C2-PFOA	528506.8	1.067	5.000	4.901	98	70-130	
E13C2-6:2-FTS	56580.1	13C2-PFOA	528506.8	0.107	4.750	4.481	94	70-130	
E13C8-PFOA	918995.3	13C2-PFOA	528506.8	1.739	5.000	4.786	96	70-130	
E13C8-PFOS	296147.5	13C4-PFOS	281778.6	1.051	4.780	4.744	99	70-130	
E13C9-PFNA	648727.0	13C4-PFOS	281778.6	2.302	5.000	5.057	101	70-130	
E13C6-PFDA	841970.5	13C2-PFDA	489439.8	1.720	5.000	4.850	97	70-130	
E13C2-8:2-FTS	52961.9	13C2-PFDA	489439.8	0.108	4.790	4.651	97	70-130	
E13C8-PFOSA	625021.8	13C2-PFDA	489439.8	1.277	5.000	4.686	94	70-130	
Ed3-NMeFOSAA	171204.0	13C2-PFDA	489439.8	0.350	5.000	4.441	89	70-130	
E13C7-PFUnDA	546359.3	13C2-PFDA	489439.8	1.116	5.000	4.718	94	70-130	
Ed5-NEtFOSAA	138500.8	13C2-PFDA	489439.8	0.283	5.000	5.041	101	70-130	
E13C2-PFDoDA	1150927.4	13C2-PFDA	489439.8	2.352	5.000	4.941	99	70-130	
Ed7-NMePFOSAE	263412.8	13C2-PFDA	489439.8	0.538	5.000	4.651	93	70-130	
Ed3-NMePFOSA	83886.6	13C2-PFDA	489439.8	0.171	5.000	4.639	93	70-130	
Ed9-NEtPFOSAE	218635.8	13C2-PFDA	489439.8	0.447	5.000	4.529	91	70-130	
Ed5-NEtPFOSA	66966.4	13C2-PFDA	489439.8	0.137	5.000	4.754	95	70-130	
E13C2-PFTeDA	826670.0	13C2-PFDA	489439.8	1.689	5.000	4.674	93	70-130	

APPROVED
By MCD at 5:00 pm, 11/28/18

REVIEWED
By HMK at 12:22 pm, 11/29/18

ICAL Name: 18NOV28DCAL **Result Table:** 18NOV28DCAL 11/28/2018 4:47:11 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

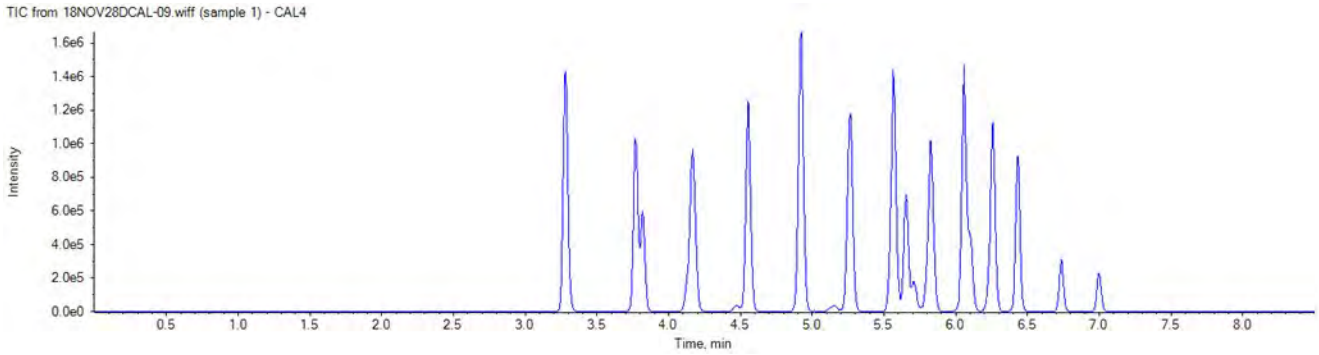
Analyte Quantitation Peak Table

Sample Name: CAL4 **Instrument Name:** LM27631 **File Name:** 18NOV28DCAL-09.wiff

Sample Wt	Sample Vol	Dilution Factor	PrepFactor
1.00000	1.000	1.00	1.000

Analyte Name	RT	RRT	Analyte Area Response	E	Int Typ	ES Name	ES RT	ES Area Response	Area Ratio	Sample Result (ng/g)
PFBA	3.28	1.000	1425164.4		A	13C4-PFBA	3.28	974000.9	1.463	8.021
PFPeA	3.77	1.000	1424845.3		A	13C5-PFPeA	3.77	915824.6	1.556	7.634
PFBS	3.82	1.000	590590.3		A	13C3-PFBS	3.82	424041.3	1.393	6.761
4:2-FTS	4.13	1.000	191344.6		A	13C2-4:2-FTS	4.13	67043.7	2.854	7.640
PFHxA	4.16	1.000	1343216.4		A	13C5-PFHxA	4.17	670407.7	2.004	8.042
PFPeS	4.19	1.100	311741.6		A	13C3-PFBS	3.82	424041.3	0.735	7.436
PFHpA	4.55	1.000	1429895.3		A	13C4-PFHpA	4.55	563674.0	2.537	7.829
PFHxS	4.56	1.000	444626.0		M	13C3-PFHxS	4.56	316393.3	1.405	6.580
6:2-FTS	4.91	1.000	185311.5		A	13C2-6:2-FTS	4.91	56580.1	3.275	8.546
PFHpS	4.92	1.080	471580.6		A	13C3-PFHxS	4.56	316393.3	1.490	7.439
PFOA	4.92	1.000	1486960.4		A	13C8-PFOA	4.92	918995.3	1.618	8.361
PFOS	5.25	1.000	481950.0		M	13C8-PFOS	5.25	296147.5	1.627	6.826
PFNA	5.27	1.000	1365056.4		A	13C9-PFNA	5.27	648727.0	2.104	8.064
PFNS	5.55	1.060	369833.4		A	13C8-PFOS	5.25	296147.5	1.249	7.885
PFDA	5.57	1.000	1223810.4		A	13C6-PFDA	5.57	841970.5	1.454	8.227
8:2-FTS	5.57	1.000	203687.7		A	13C2-8:2-FTS	5.57	52961.9	3.846	7.253
PFOSA	5.65	1.000	976434.1		A	13C8-PFOSA	5.65	625021.8	1.562	7.914
NMeFOSAA	5.71	1.000	212775.3		M	d3-NMeFOSAA	5.71	171204.0	1.243	7.928
PFDS	5.80	1.100	283198.5		A	13C8-PFOS	5.25	296147.5	0.956	7.582
PFUnDA	5.83	1.000	1281938.5		A	13C7-PFUnDA	5.83	546359.3	2.346	8.387
NEtFOSAA	5.84	1.000	204048.6		M	d5-NEtFOSAA	5.84	138500.8	1.473	7.175
PFDoDA	6.06	1.000	1650301.1		A	13C2-PFDoDA	6.06	1150927.4	1.434	7.854
10:2-FTS	6.08	1.090	184968.5		A	13C2-8:2-FTS	5.57	52961.9	3.492	7.701
NMePFOSAE	6.11	1.000	498735.8		A	d7-NMePFOSAE	6.10	263412.8	1.893	7.968
NMePFOSA	6.11	1.000	124582.5		A	d3-NMePFOSA	6.11	83886.6	1.485	7.873
PFDoS	6.23	1.190	159682.3		A	13C8-PFOS	5.25	296147.5	0.539	7.744
NEtPFOSAE	6.26	1.000	516882.1		A	d9-NEtPFOSAE	6.25	218635.8	2.364	8.504
NEtPFOSA	6.28	1.000	119152.1		A	d5-NEtPFOSA	6.27	66966.4	1.779	7.975
PFTrDA	6.26	1.030	1622977.7		A	13C2-PFDoDA	6.06	1150927.4	1.410	8.500
PFTeDA	6.43	1.000	1172052.0		A	13C2-PFTeDA	6.43	826670.0	1.418	8.033
PFHxDA	6.74	1.050	601723.8		A	13C2-PFTeDA	6.43	826670.0	0.728	8.321
PFODA	7.00	1.090	494210.7		A	13C2-PFTeDA	6.43	826670.0	0.598	7.964

Total Ion Chromatogram

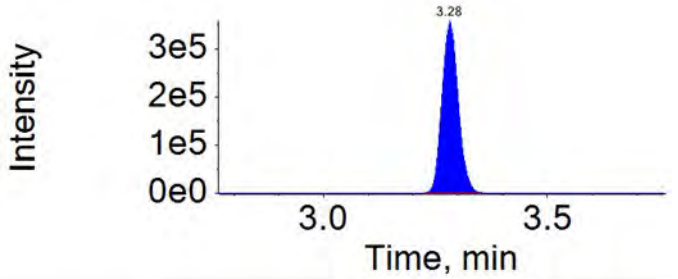


APPROVED
By MCD at 5:00 pm, 11/28/18

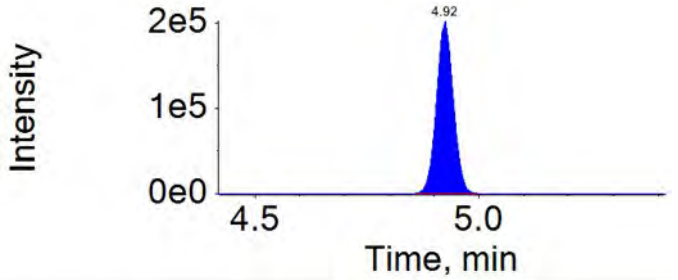
REVIEWED
By HMK at 12:22 pm, 11/29/18

ICAL Name: 18NOV28DCAL **Result Table:** 18NOV28DCAL 11/28/2018 4:47:11 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

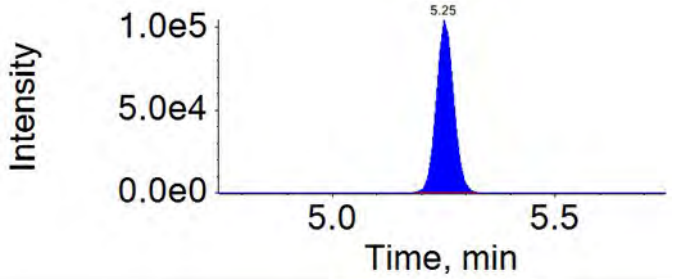
Injection Standard: 13C3-PFBA
216.0 / 172.0



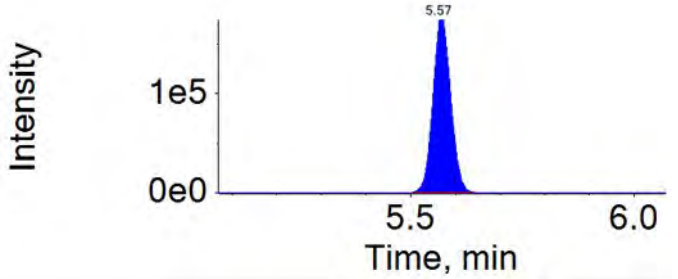
Injection Standard: 13C2-PFOA
415.0 / 370.0



Injection Standard: 13C4-PFOS
503.0 / 80.0



Injection Standard: 13C2-PFDA
515.0 / 470.0

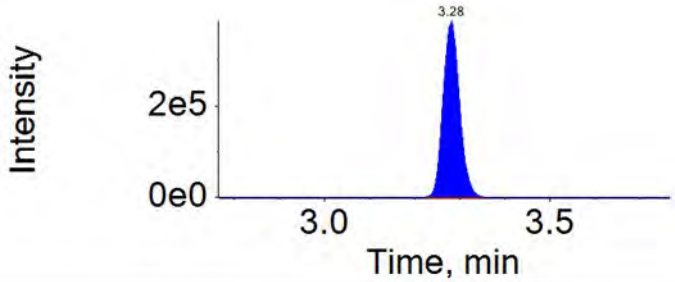


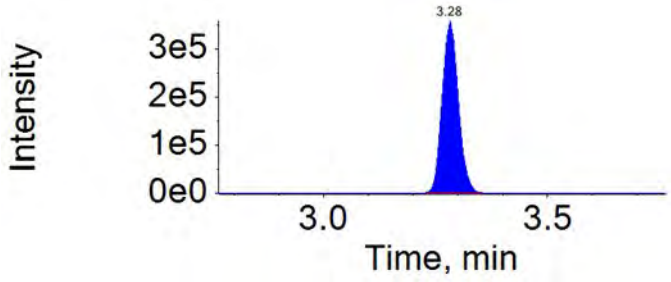
APPROVED
By MCD at 5:00 pm, 11/28/18

REVIEWED
By HMK at 12:22 pm, 11/29/18

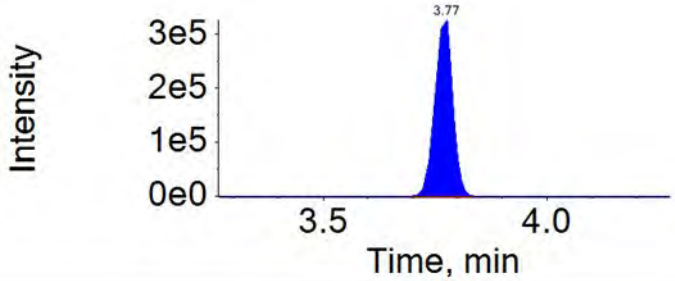
ICAL Name: 18NOV28DCAL **Result Table:** 18NOV28DCAL 11/28/2018 4:47:11 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

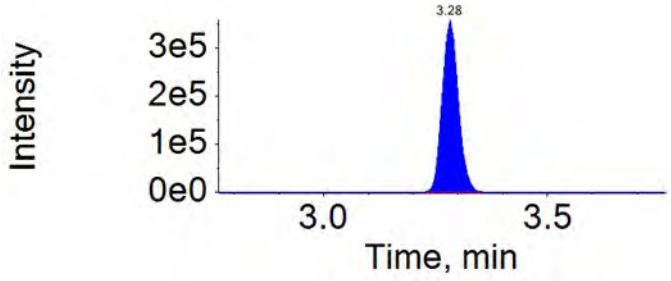
Extraction Standard: E13C4-PFBA	Injection Standard: 13C3-PFBA
217.0 / 172.0	216.0 / 172.0



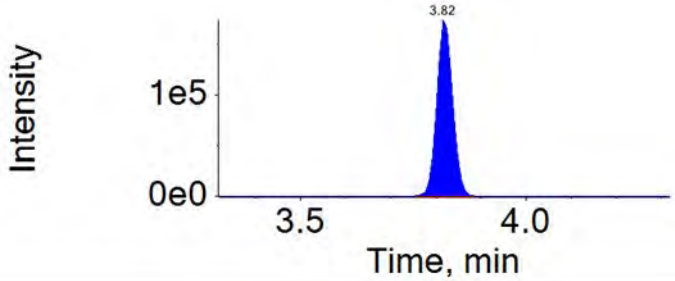


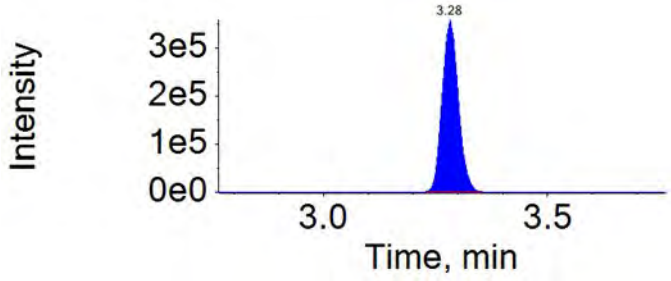
Extraction Standard: E13C5-PFPeA	Injection Standard: 13C3-PFBA
268.0 / 223.0	216.0 / 172.0



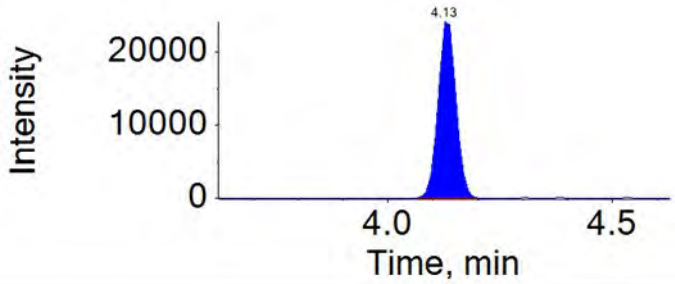


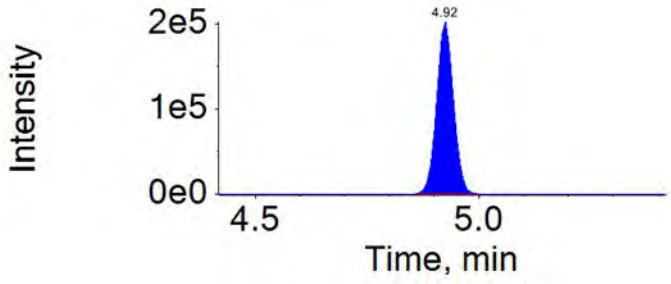
Extraction Standard: E13C3-PFBS	Injection Standard: 13C3-PFBA
302.0 / 80.0	216.0 / 172.0





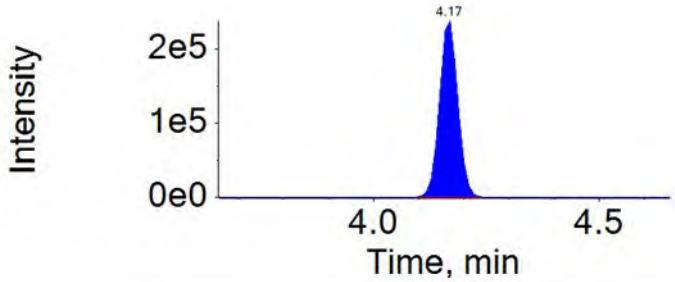
Extraction Standard: E13C2-4:2-FTS	Injection Standard: 13C2-PFOA
329.0 / 81.0	415.0 / 370.0

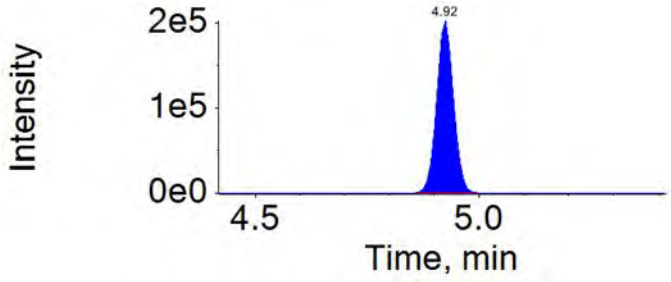




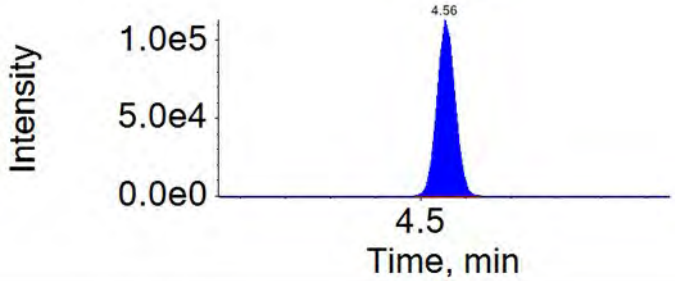
ICAL Name: 18NOV28DCAL **Result Table:** 18NOV28DCAL 11/28/2018 4:47:11 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

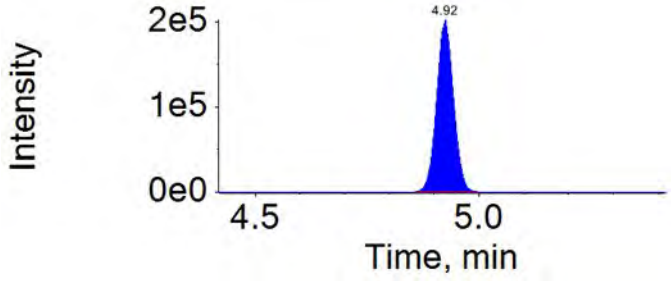
Extraction Standard: E13C5-PFHxA	Injection Standard: 13C2-PFOA
318.0 / 273.0	415.0 / 370.0



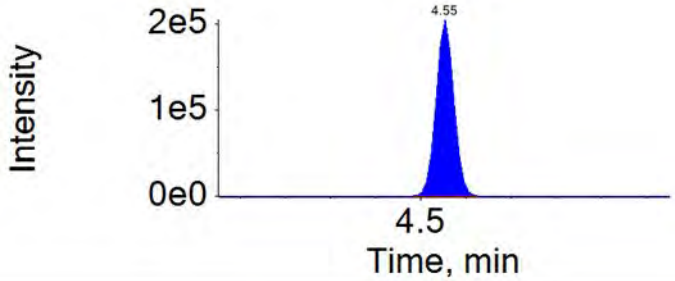


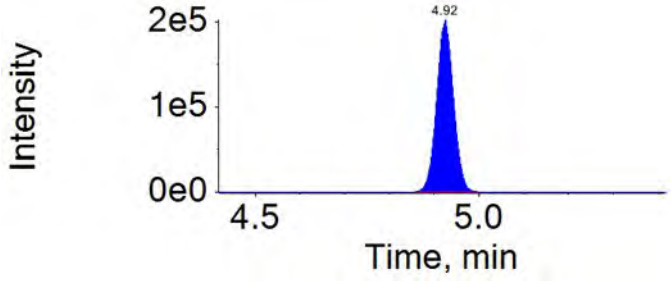
Extraction Standard: E13C3-PFHxS	Injection Standard: 13C2-PFOA
402.0 / 80.0	415.0 / 370.0



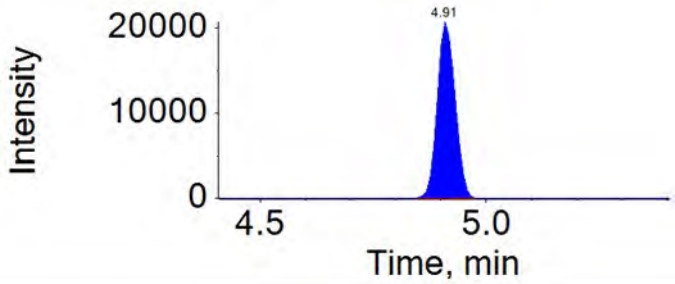


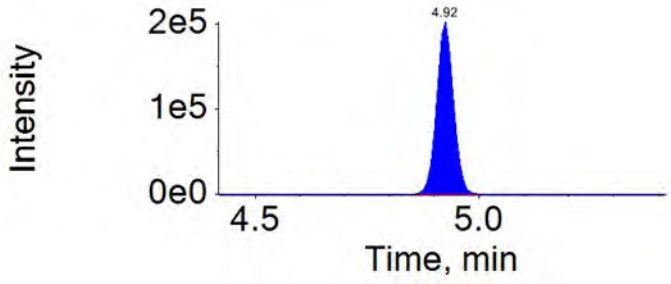
Extraction Standard: E13C4-PFHpA	Injection Standard: 13C2-PFOA
367.0 / 322.0	415.0 / 370.0





Extraction Standard: E13C2-6:2-FTS	Injection Standard: 13C2-PFOA
429.0 / 81.0	415.0 / 370.0

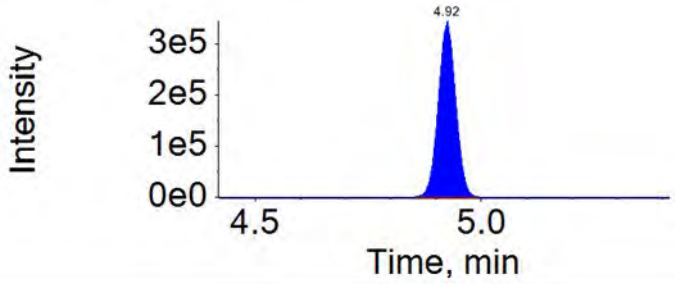




ICAL Name: 18NOV28DCAL **Result Table:** 18NOV28DCAL 11/28/2018 4:47:11 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

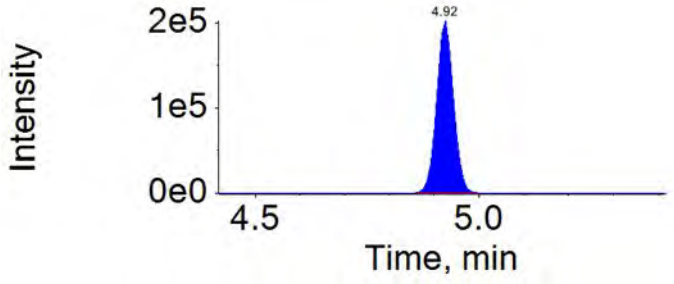
Extraction Standard: E13C8-PFOA

421.0 / 376.0



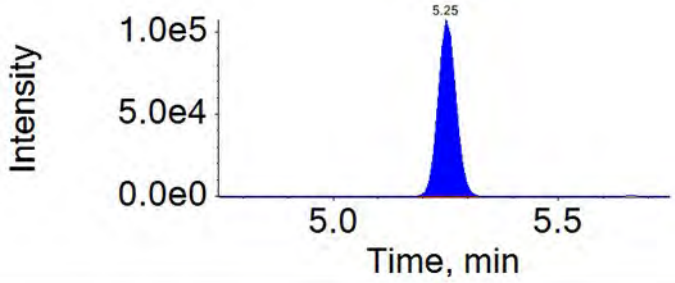
Injection Standard: 13C2-PFOA

415.0 / 370.0



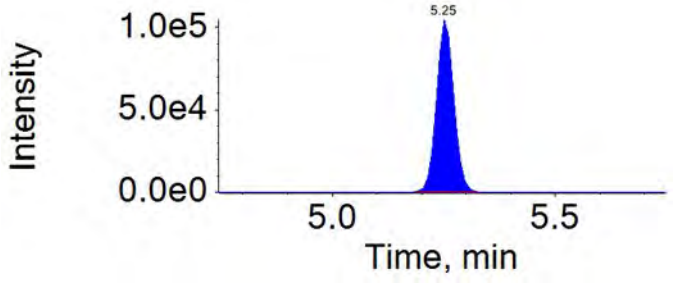
Extraction Standard: E13C8-PFOS

507.0 / 80.0



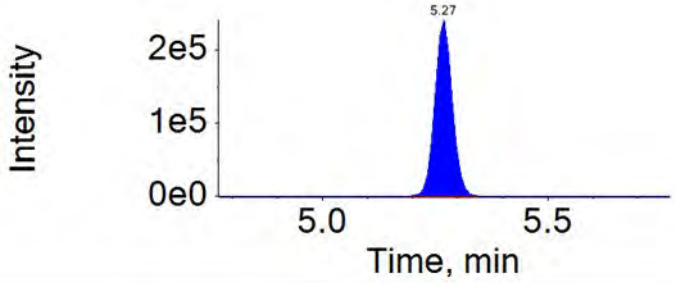
Injection Standard: 13C4-PFOS

503.0 / 80.0



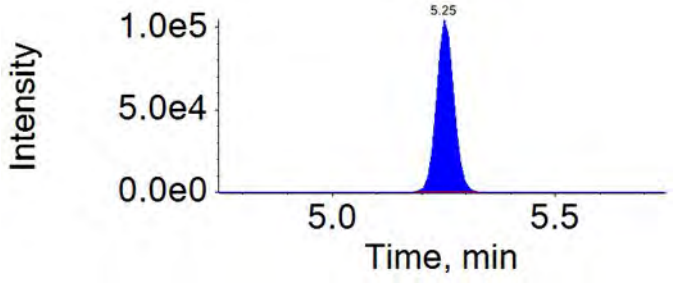
Extraction Standard: E13C9-PFNA

472.0 / 427.0



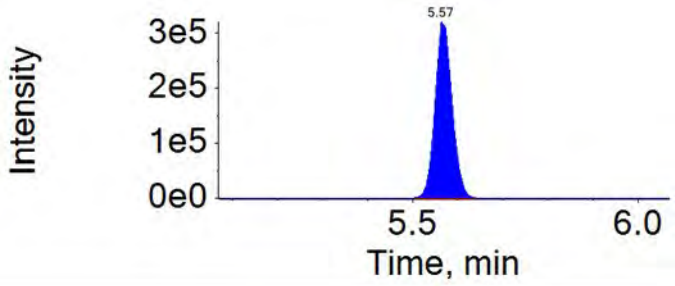
Injection Standard: 13C4-PFOS

503.0 / 80.0



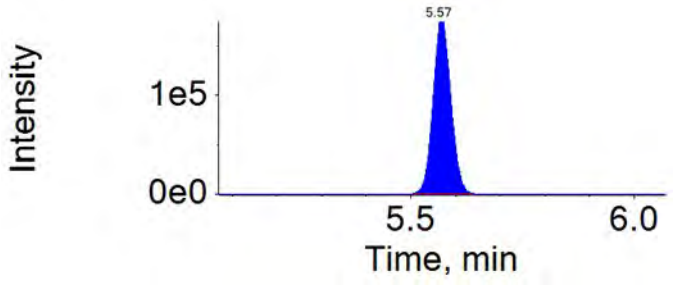
Extraction Standard: E13C6-PFDA

519.0 / 474.0



Injection Standard: 13C2-PFDA

515.0 / 470.0

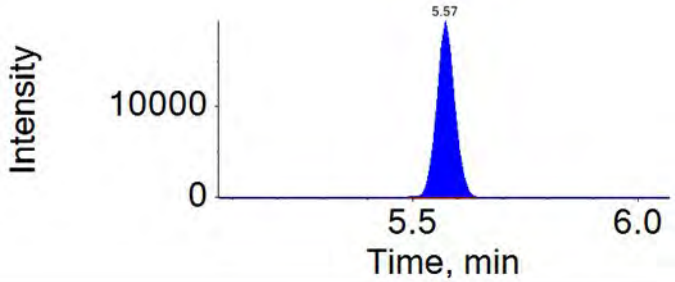


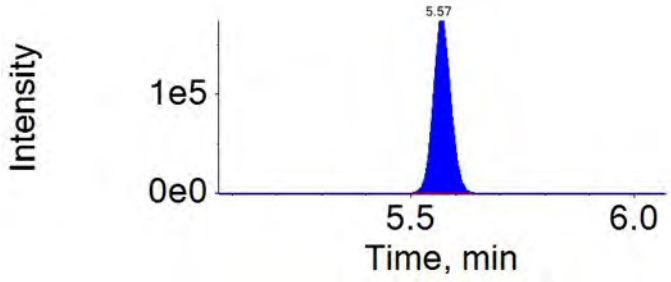
APPROVED
By MCD at 5:00 pm, 11/28/18

REVIEWED
By HMK at 12:22 pm, 11/29/18

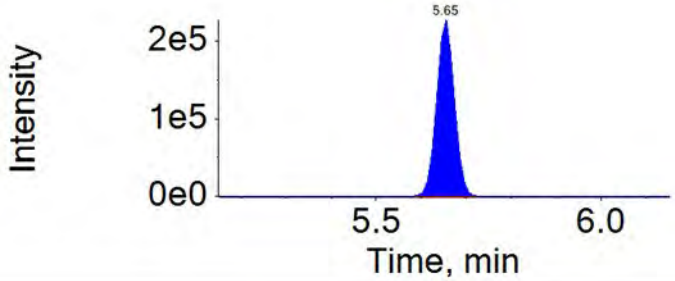
ICAL Name: 18NOV28DCAL **Result Table:** 18NOV28DCAL 11/28/2018 4:47:11 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

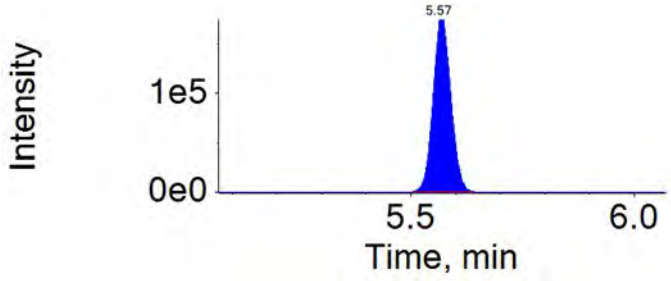
Extraction Standard: E13C2-8:2-FTS	Injection Standard: 13C2-PFDA
529.0 / 81.0	515.0 / 470.0



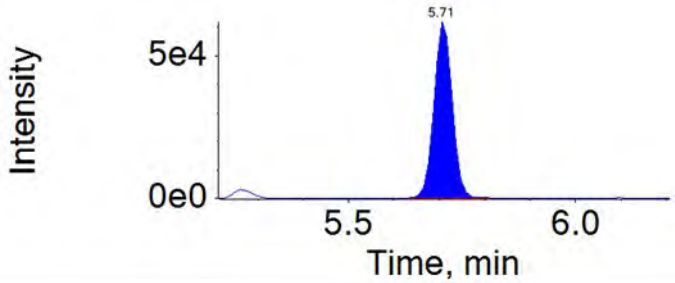


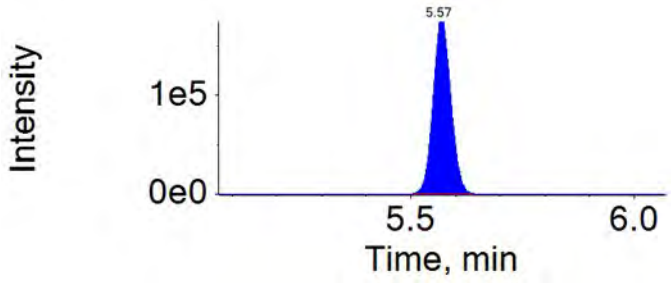
Extraction Standard: E13C8-PFOSA	Injection Standard: 13C2-PFDA
506.0 / 78.0	515.0 / 470.0



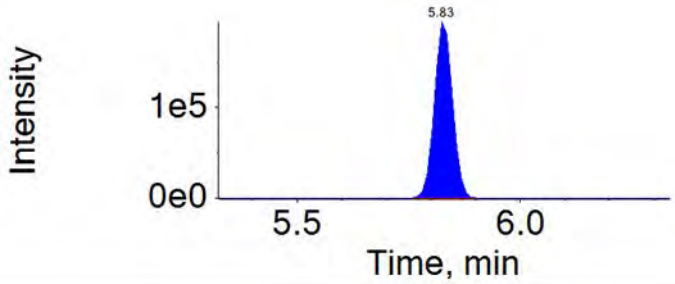


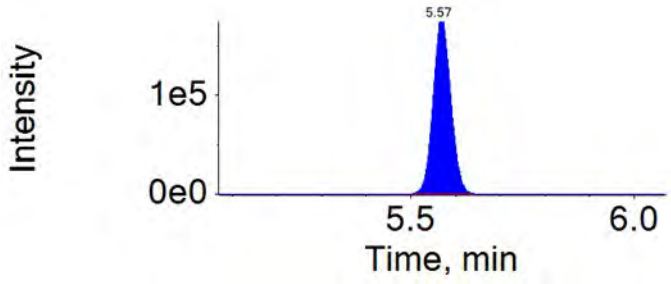
Extraction Standard: Ed3-NMeFOSAA	Injection Standard: 13C2-PFDA
573.0 / 419.0	515.0 / 470.0





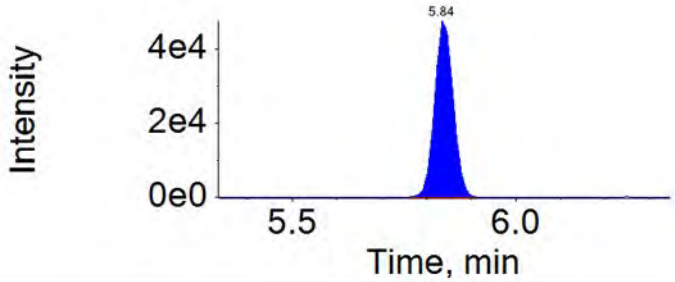
Extraction Standard: E13C7-PFUnDA	Injection Standard: 13C2-PFDA
570.0 / 525.0	515.0 / 470.0

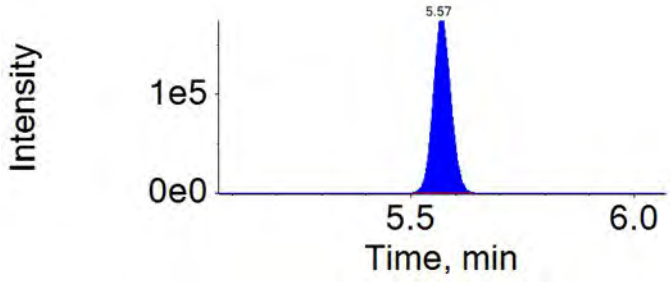




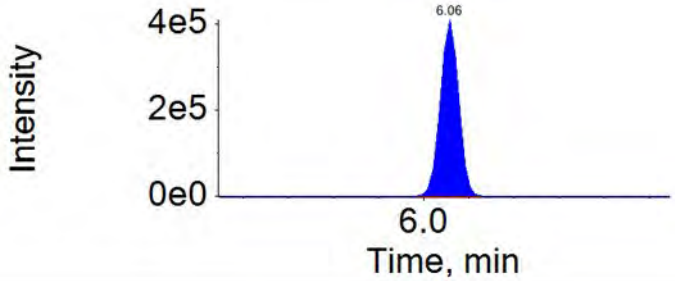
ICAL Name: 18NOV28DCAL **Result Table:** 18NOV28DCAL 11/28/2018 4:47:11 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

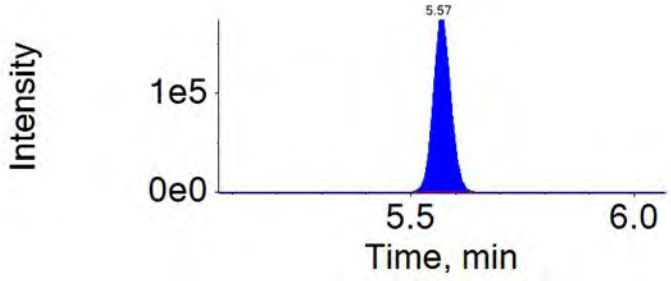
Extraction Standard: Ed5-NEtFOSAA	Injection Standard: 13C2-PFDA
589.0 / 419.0	515.0 / 470.0



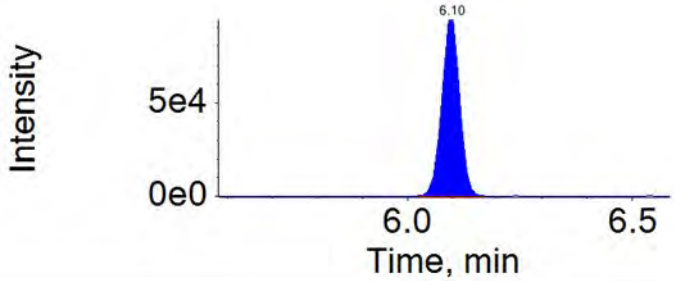


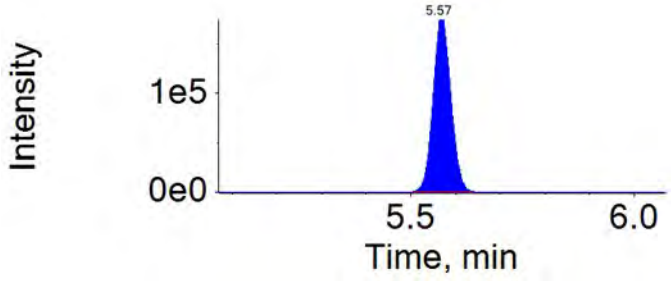
Extraction Standard: E13C2-PFDoDA	Injection Standard: 13C2-PFDA
615.0 / 570.0	515.0 / 470.0



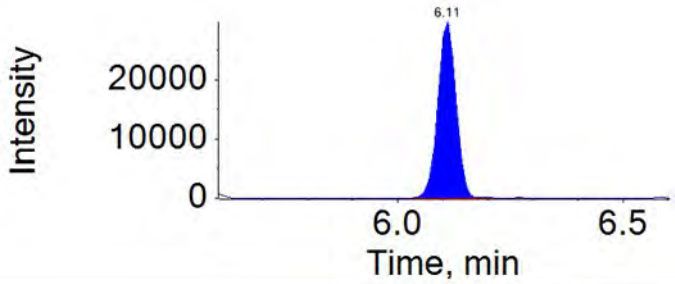


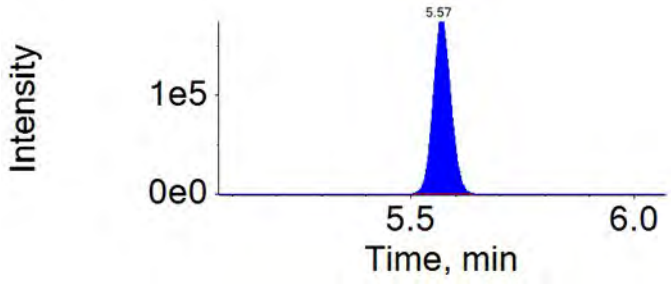
Extraction Standard: Ed7-NMePFOSAE	Injection Standard: 13C2-PFDA
623.0 / 59.0	515.0 / 470.0





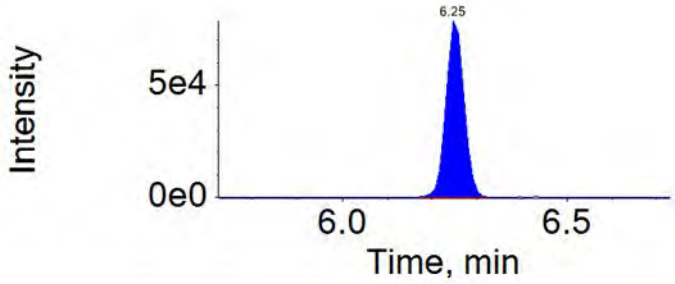
Extraction Standard: Ed3-NMePFOSA	Injection Standard: 13C2-PFDA
515.0 / 169.0	515.0 / 470.0

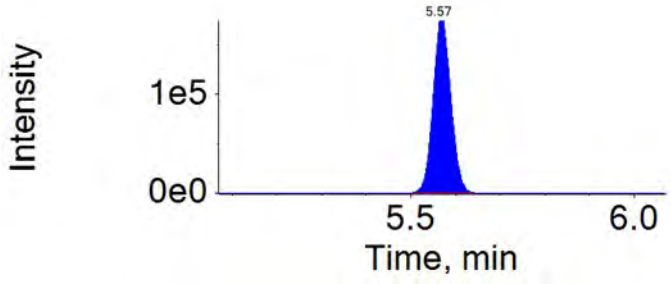




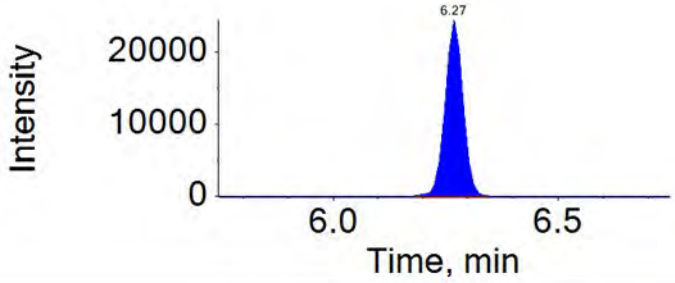
ICAL Name: 18NOV28DCAL **Result Table:** 18NOV28DCAL 11/28/2018 4:47:11 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

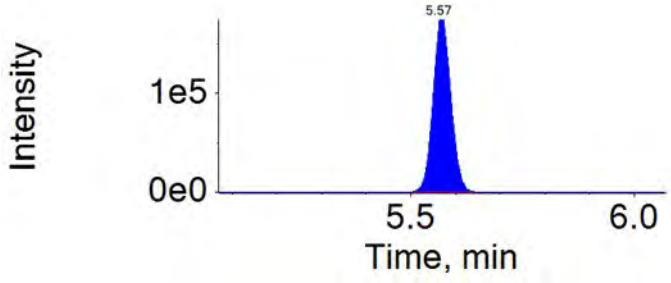
Extraction Standard: Ed9-NEtPFOSAE	Injection Standard: 13C2-PFDA
639.0 / 59.0	515.0 / 470.0



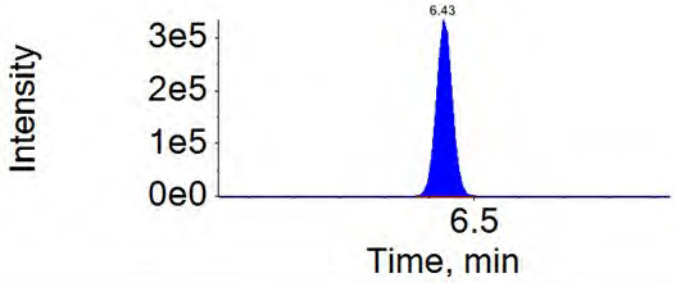


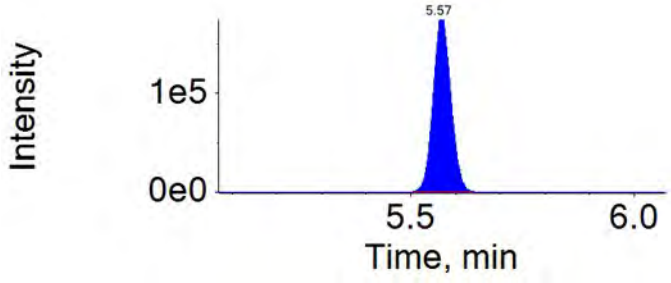
Extraction Standard: Ed5-NEtPFOSA	Injection Standard: 13C2-PFDA
531.0 / 169.0	515.0 / 470.0





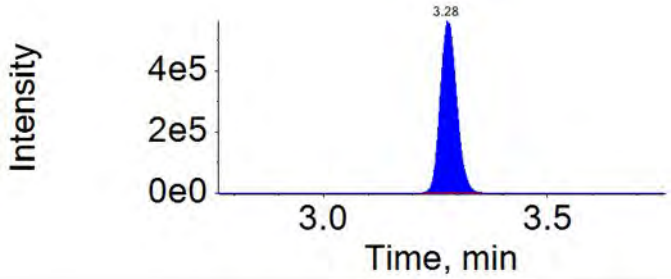
Extraction Standard: E13C2-PFTeDA	Injection Standard: 13C2-PFDA
715.0 / 670.0	515.0 / 470.0



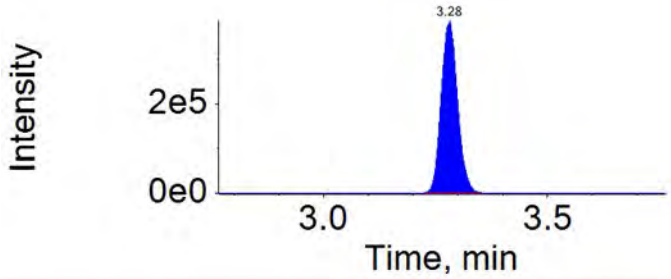


ICAL Name: 18NOV28DCAL **Result Table:** 18NOV28DCAL 11/28/2018 4:47:11 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

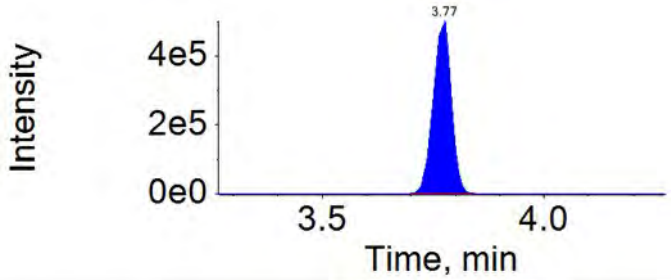
Analyte: PFBA
213.0 / 169.0



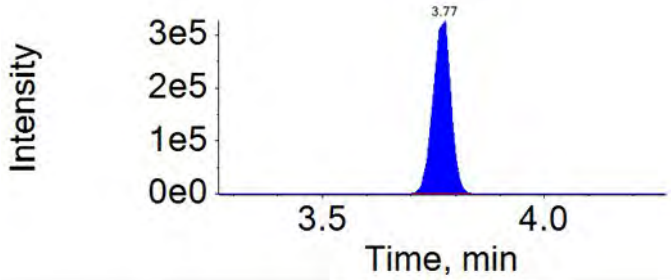
Extraction Standard: 13C4-PFBA
217.0 / 172.0



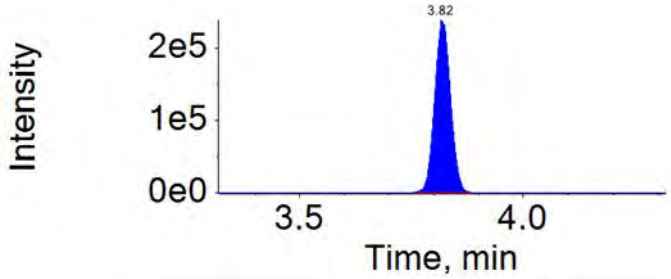
Analyte: PFPeA
263.0 / 219.0



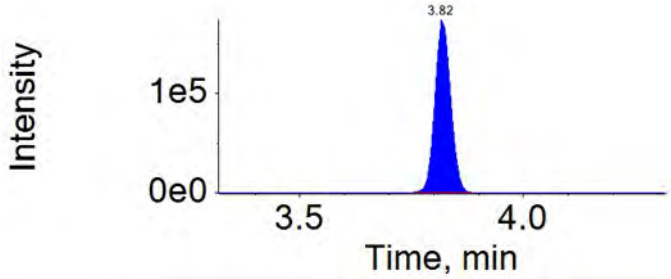
Extraction Standard: 13C5-PFPeA
268.0 / 223.0



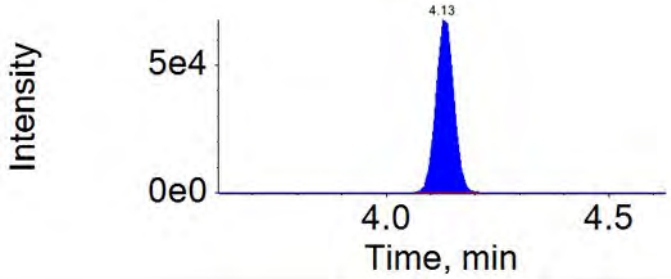
Analyte: PFBS
299.0 / 80.0



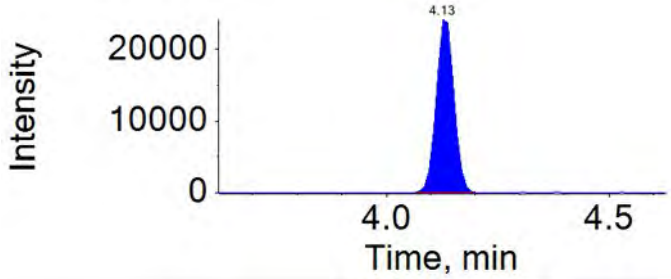
Extraction Standard: 13C3-PFBS
302.0 / 80.0



Analyte: 4:2-FTS
327.0 / 307.0



Extraction Standard: 13C2-4:2-FTS
329.0 / 81.0

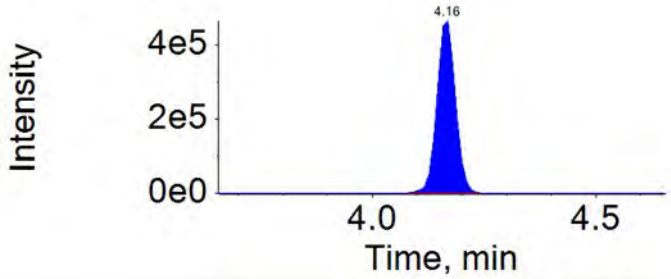


APPROVED
By MCD at 5:00 pm, 11/28/18

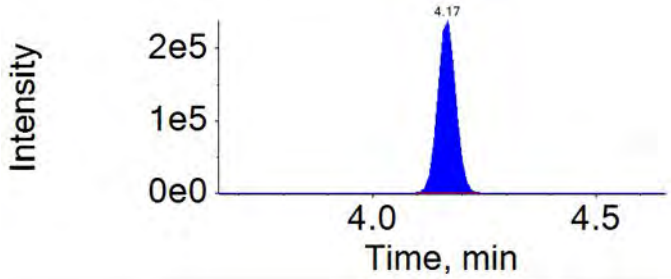
REVIEWED
By HMK at 12:22 pm, 11/29/18

ICAL Name: 18NOV28DCAL **Result Table:** 18NOV28DCAL 11/28/2018 4:47:11 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

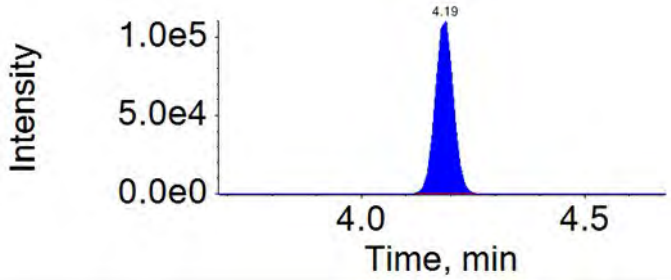
Analyte: PFHxA
313.0 / 269.0



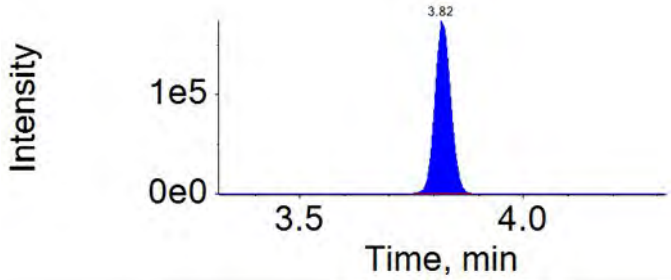
Extraction Standard: 13C5-PFHxA
318.0 / 273.0



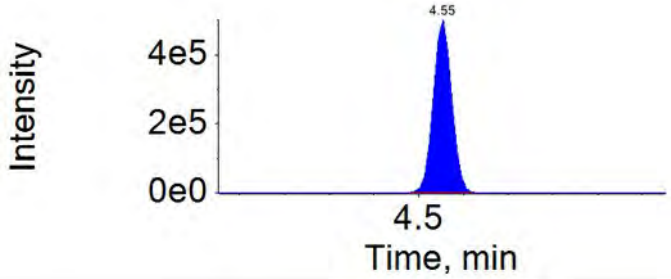
Analyte: PFPeS
349.0 / 80.0



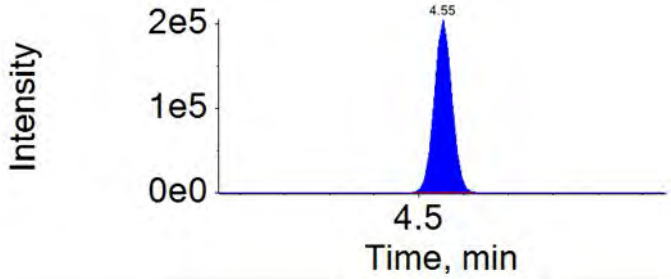
Extraction Standard: 13C3-PFBS
302.0 / 80.0



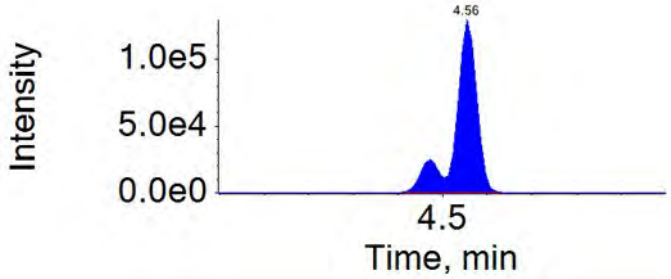
Analyte: PFHpA
363.0 / 319.0



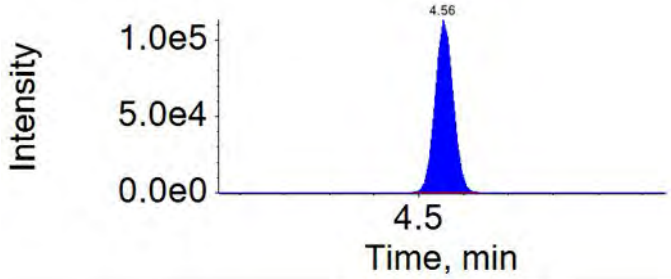
Extraction Standard: 13C4-PFHpA
367.0 / 322.0



Analyte: PFHxS
399.0 / 80.0



Extraction Standard: 13C3-PFHxS
402.0 / 80.0

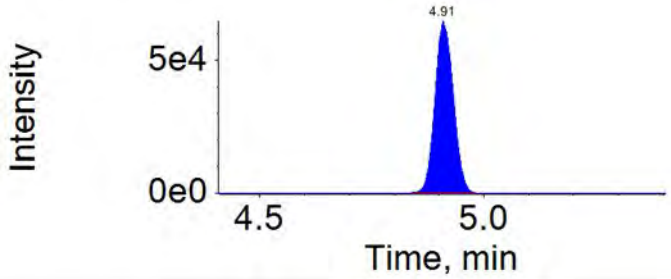


APPROVED
By MCD at 5:00 pm, 11/28/18

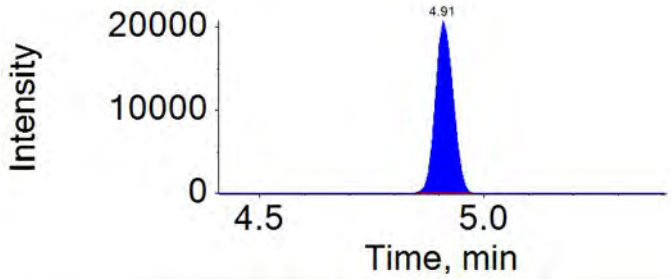
REVIEWED
By HMK at 12:22 pm, 11/29/18

ICAL Name: 18NOV28DCAL **Result Table:** 18NOV28DCAL 11/28/2018 4:47:11 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

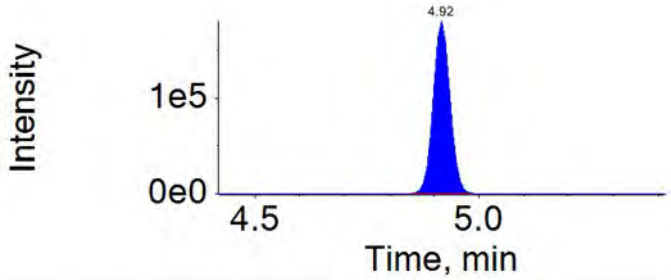
Analyte: 6:2-FTS
427.0 / 407.0



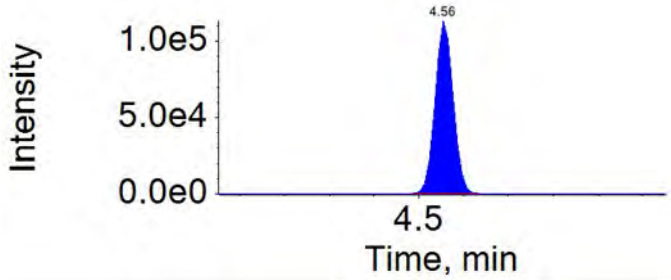
Extraction Standard: 13C2-6:2-FTS
429.0 / 81.0



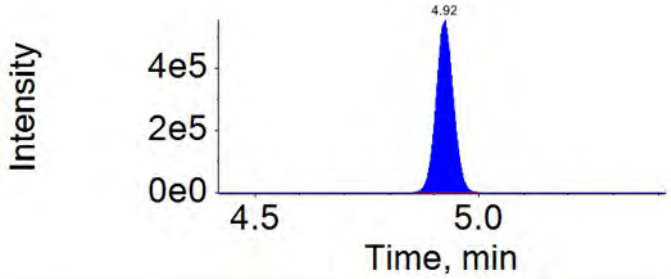
Analyte: PFHpS
449.0 / 80.0



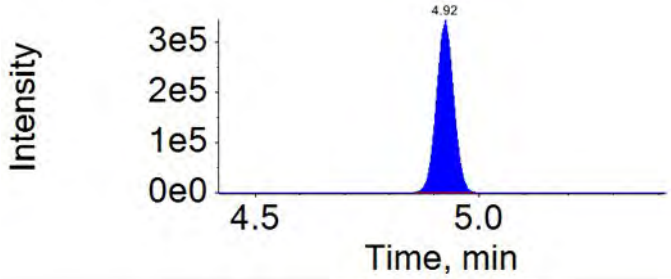
Extraction Standard: 13C3-PFHxS
402.0 / 80.0



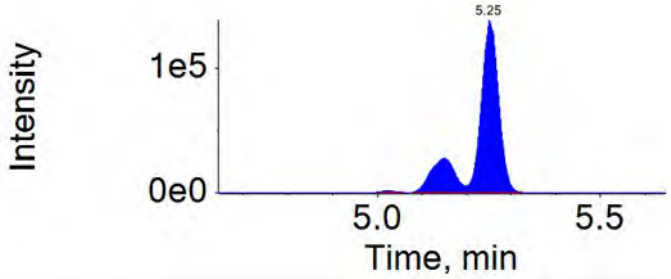
Analyte: PFOA
413.0 / 369.0



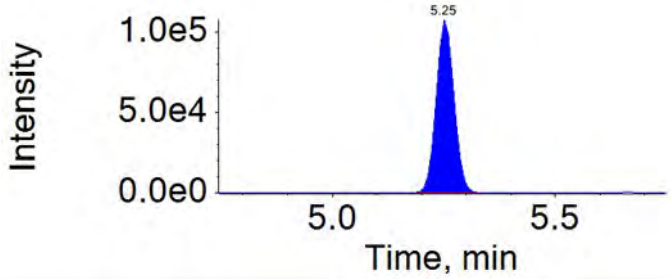
Extraction Standard: 13C8-PFOA
421.0 / 376.0



Analyte: PFOS
499.0 / 80.0



Extraction Standard: 13C8-PFOS
507.0 / 80.0

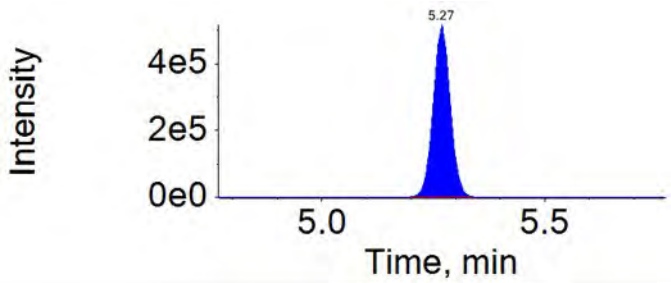


APPROVED
By MCD at 5:00 pm, 11/28/18

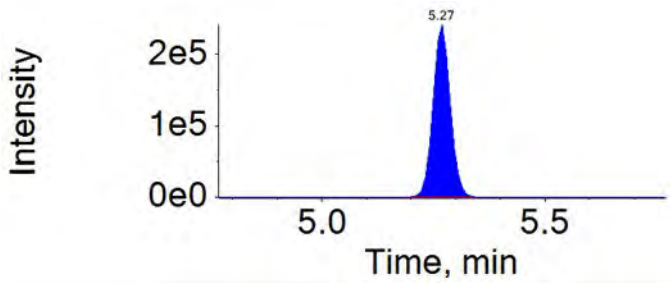
REVIEWED
By HMK at 12:22 pm, 11/29/18

ICAL Name: 18NOV28DCAL **Result Table:** 18NOV28DCAL 11/28/2018 4:47:11 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

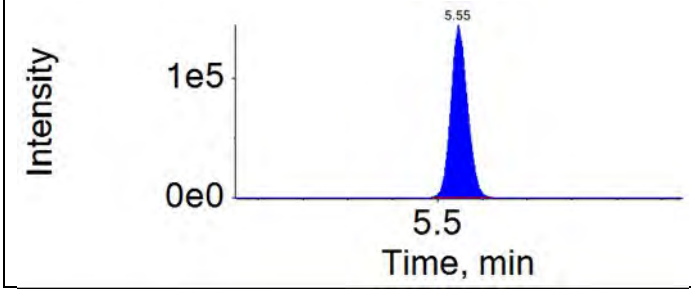
Analyte: PFNA
463.0 / 419.0



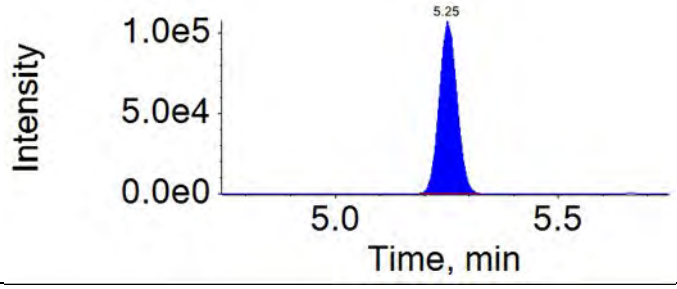
Extraction Standard: 13C9-PFNA
472.0 / 427.0



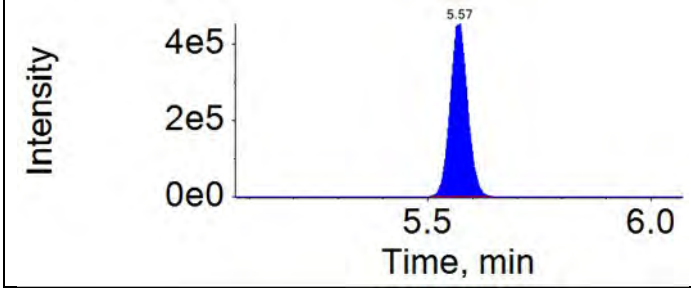
Analyte: PFNS
549.0 / 80.0



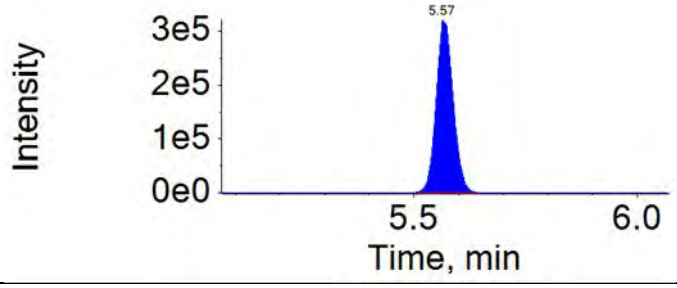
Extraction Standard: 13C8-PFOS
507.0 / 80.0



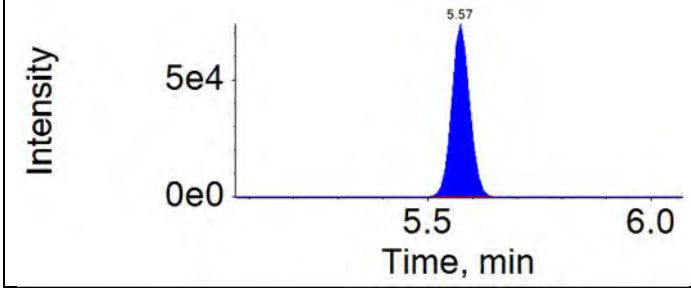
Analyte: PFDA
513.0 / 469.0



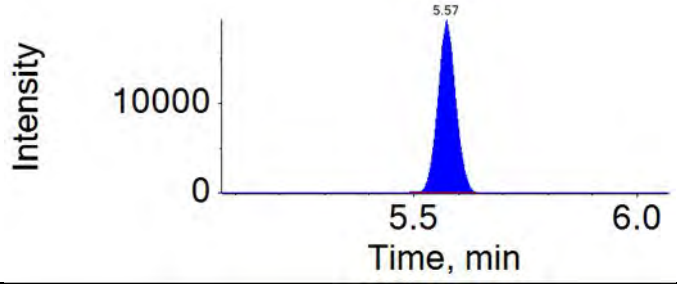
Extraction Standard: 13C6-PFDA
519.0 / 474.0



Analyte: 8:2-FTS
527.0 / 507.0



Extraction Standard: 13C2-8:2-FTS
529.0 / 81.0

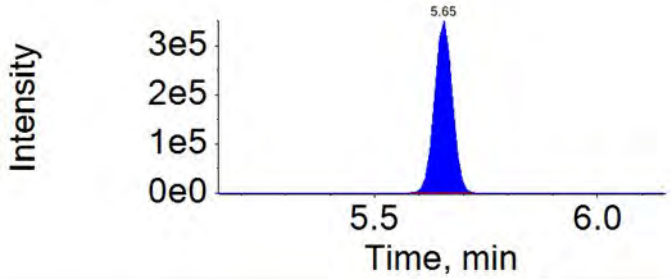


APPROVED
By MCD at 5:00 pm, 11/28/18

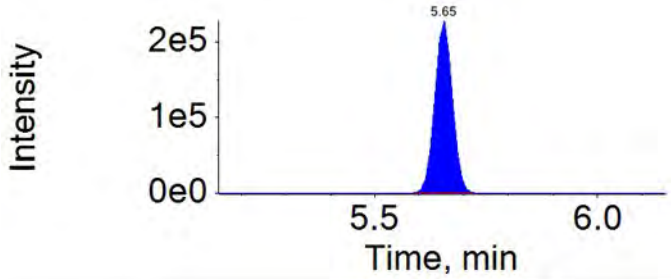
REVIEWED
By HMK at 12:22 pm, 11/29/18

ICAL Name: 18NOV28DCAL **Result Table:** 18NOV28DCAL 11/28/2018 4:47:11 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

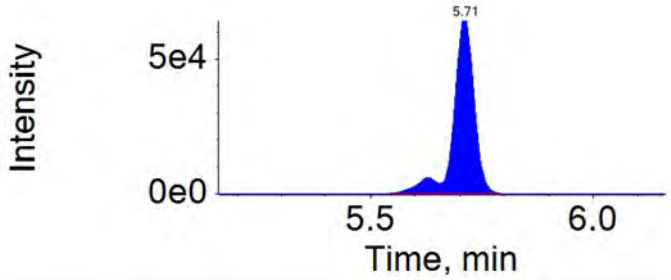
Analyte: PFOSA
498.0 / 78.0



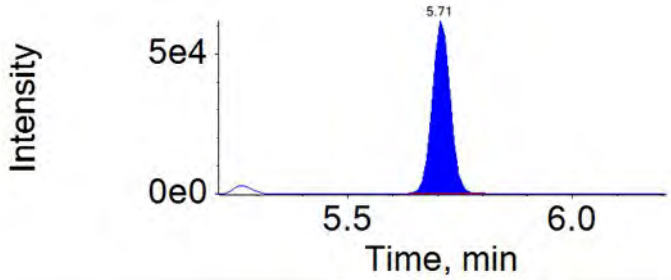
Extraction Standard: 13C8-PFOSA
506.0 / 78.0



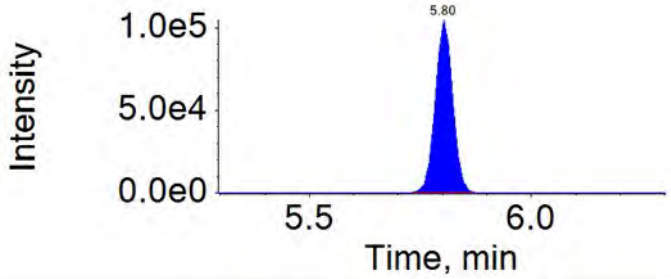
Analyte: NMeFOSAA
570.0 / 419.0



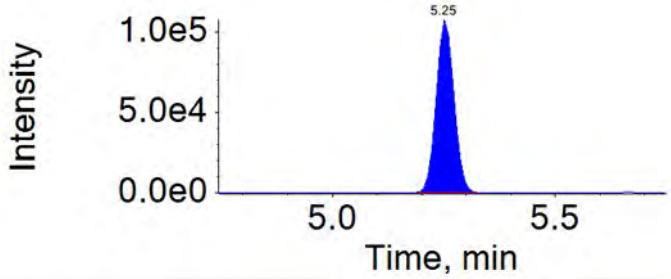
Extraction Standard: d3-NMeFOSAA
573.0 / 419.0



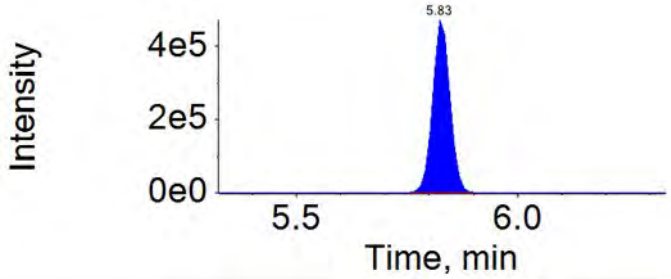
Analyte: PFDS
599.0 / 80.0



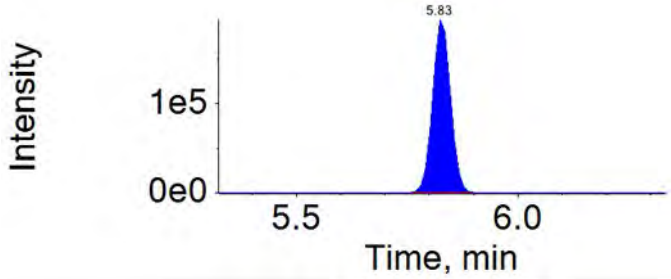
Extraction Standard: 13C8-PFOS
507.0 / 80.0



Analyte: PFUnDA
563.0 / 519.0



Extraction Standard: 13C7-PFUnDA
570.0 / 525.0

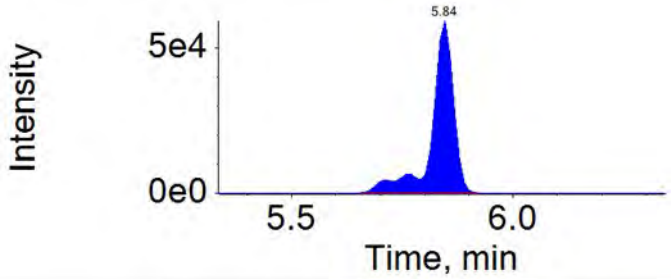


APPROVED
By MCD at 5:00 pm, 11/28/18

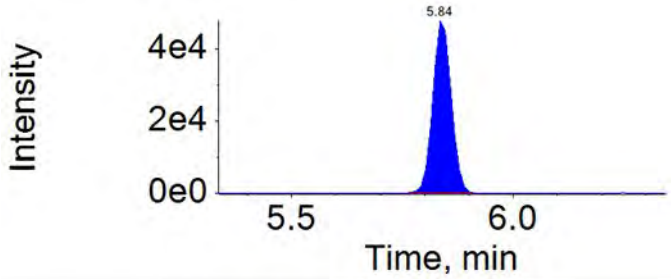
REVIEWED
By HMK at 12:22 pm, 11/29/18

ICAL Name: 18NOV28DCAL **Result Table:** 18NOV28DCAL 11/28/2018 4:47:11 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

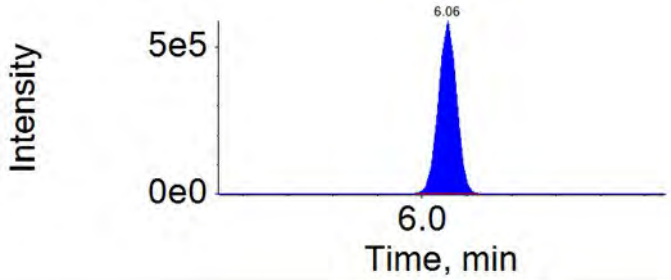
Analyte: NEtFOSAA
584.0 / 419.0



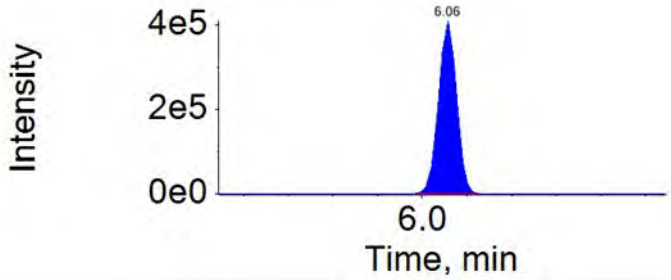
Extraction Standard: d5-NEtFOSAA
589.0 / 419.0



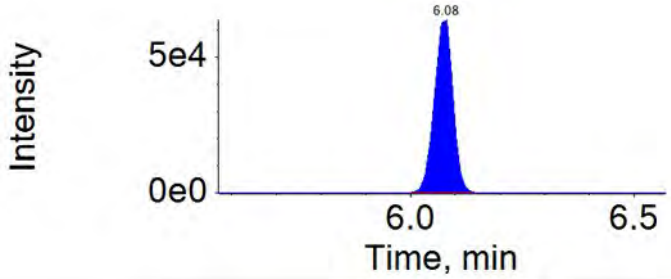
Analyte: PFDoDA
613.0 / 569.0



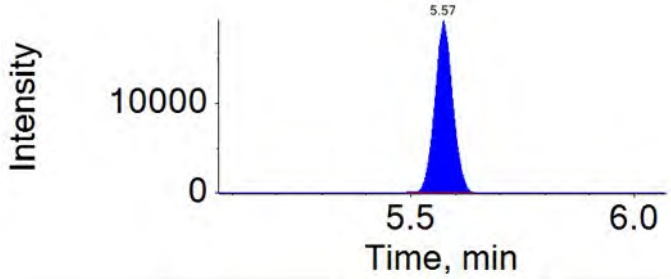
Extraction Standard: 13C2-PFDoDA
615.0 / 570.0



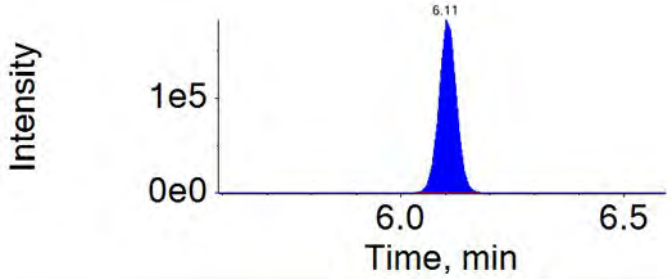
Analyte: 10:2-FTS
627.0 / 607.0



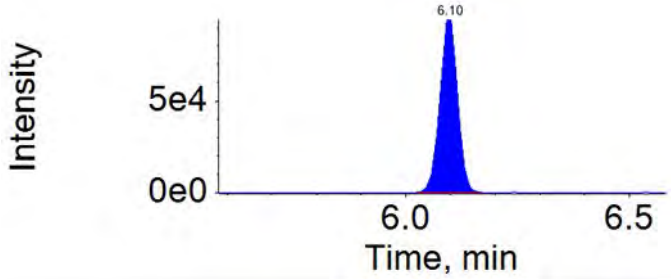
Extraction Standard: 13C2-8:2-FTS
529.0 / 81.0



Analyte: NMePFOSAE
616.0 / 59.0



Extraction Standard: d7-NMePFOSAE
623.0 / 59.0

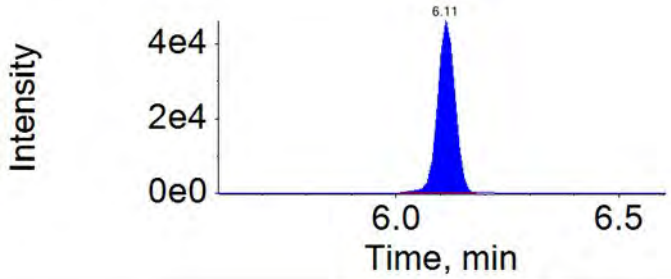


APPROVED
By MCD at 5:00 pm, 11/28/18

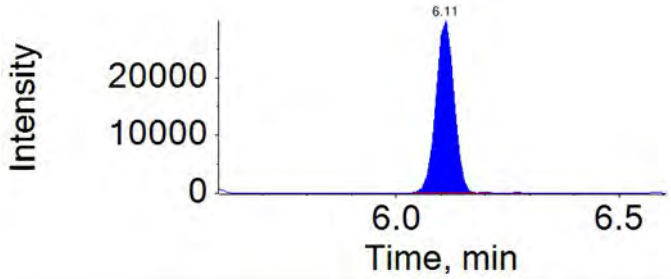
REVIEWED
By HMK at 12:22 pm, 11/29/18

ICAL Name: 18NOV28DCAL **Result Table:** 18NOV28DCAL 11/28/2018 4:47:11 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

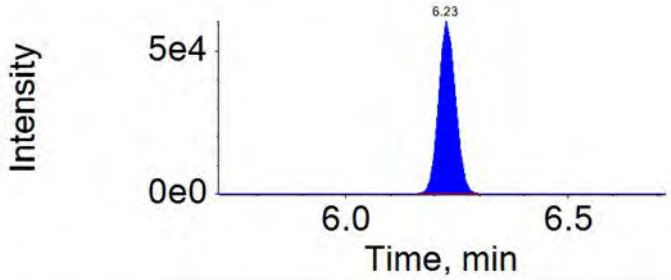
Analyte: NMePFOSA
512.0 / 169.0



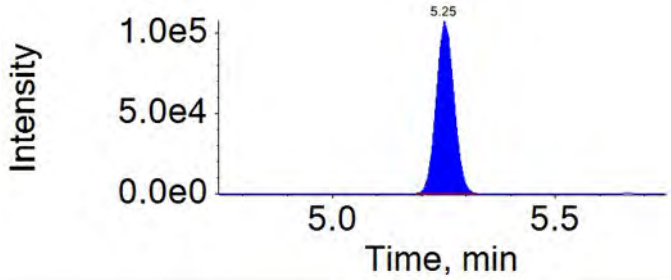
Extraction Standard: d3-NMePFOSA
515.0 / 169.0



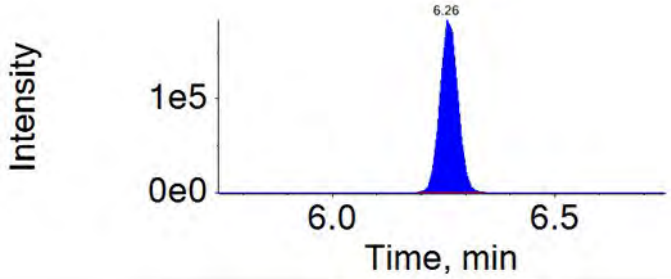
Analyte: PFDoS
699.0 / 80.0



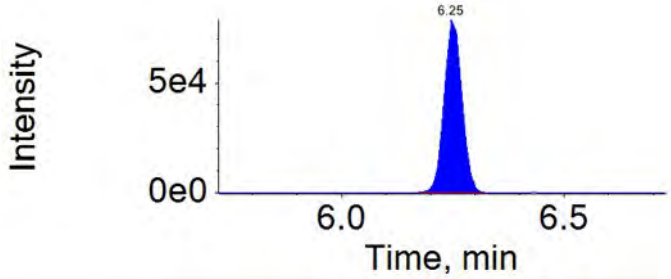
Extraction Standard: 13C8-PFOS
507.0 / 80.0



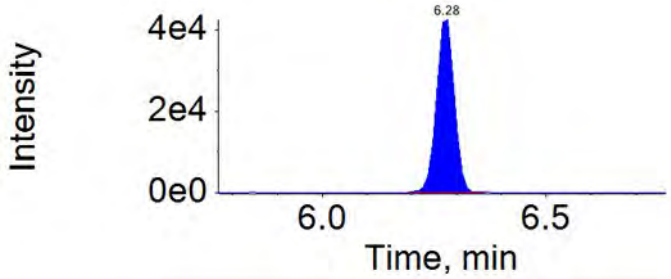
Analyte: NEtPFOSAE
630.0 / 59.0



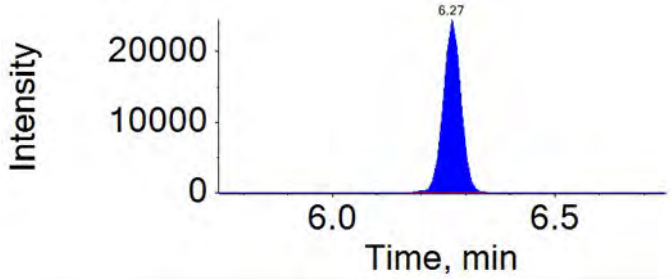
Extraction Standard: d9-NEtPFOSAE
639.0 / 59.0



Analyte: NEtPFOSA
526.0 / 169.0



Extraction Standard: d5-NEtPFOSA
531.0 / 169.0

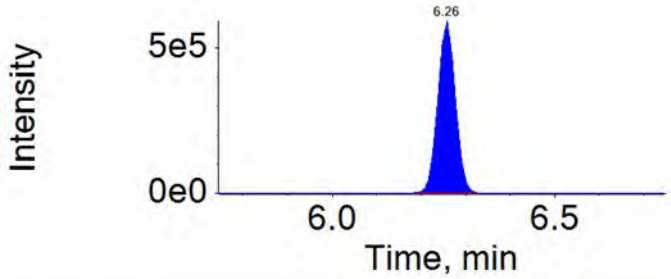


APPROVED
By MCD at 5:00 pm, 11/28/18

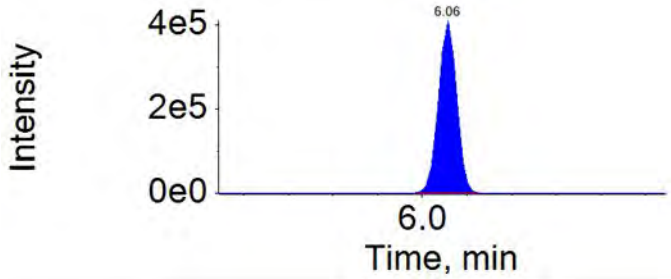
REVIEWED
By HMK at 12:22 pm, 11/29/18

ICAL Name: 18NOV28DCAL **Result Table:** 18NOV28DCAL 11/28/2018 4:47:11 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

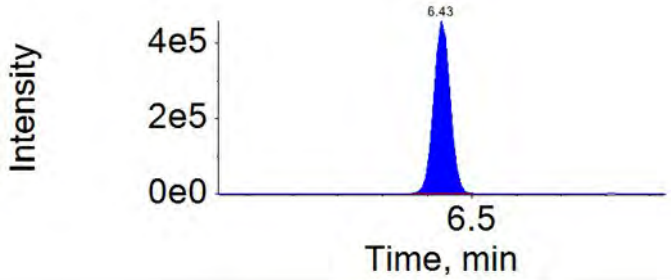
Analyte: PFTrDA
663.0 / 619.0



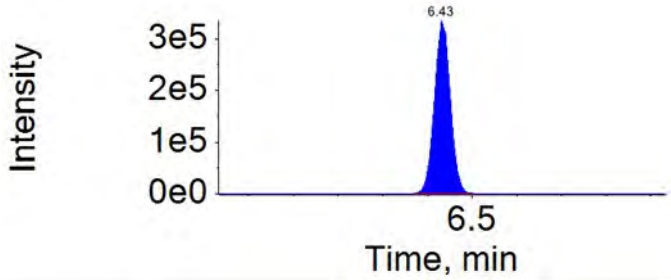
Extraction Standard: 13C2-PFDoDA
615.0 / 570.0



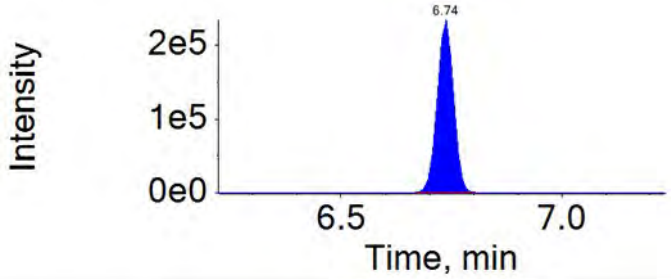
Analyte: PFTeDA
713.0 / 669.0



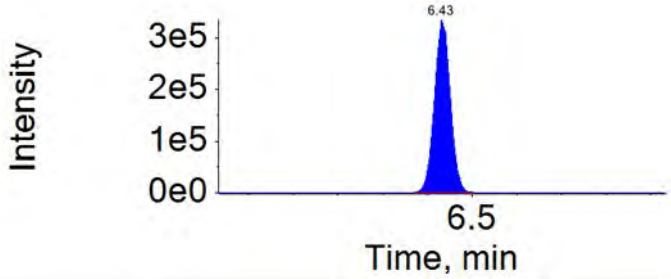
Extraction Standard: 13C2-PFTeDA
715.0 / 670.0



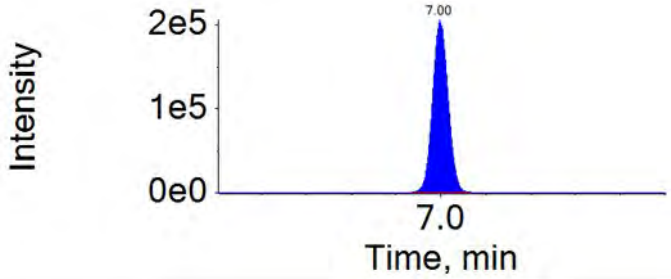
Analyte: PFHxDA
813.0 / 769.0



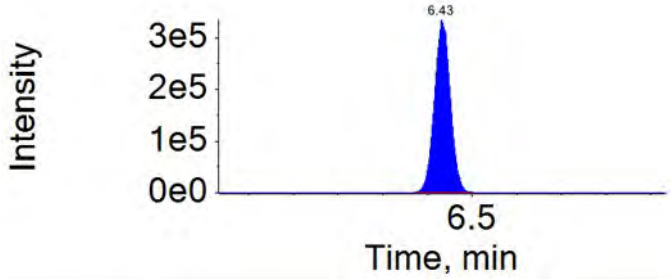
Extraction Standard: 13C2-PFTeDA
715.0 / 670.0



Analyte: PFODA
913.0 / 869.0



Extraction Standard: 13C2-PFTeDA
715.0 / 670.0



APPROVED
By MCD at 5:00 pm, 11/28/18

REVIEWED
By HMK at 12:22 pm, 11/29/18

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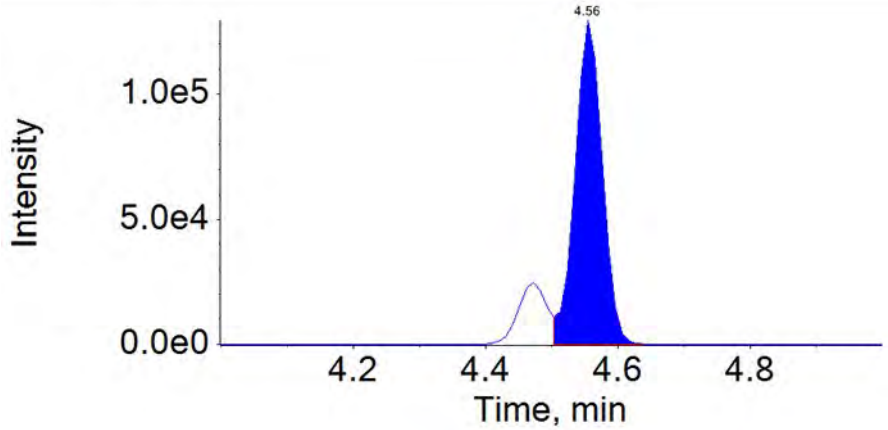
Auto Integrations prior to Manual Integration

Print Date: 11/28/2018 4:54 PM
Template: MQ-OrigInteg-16NOV21.docx

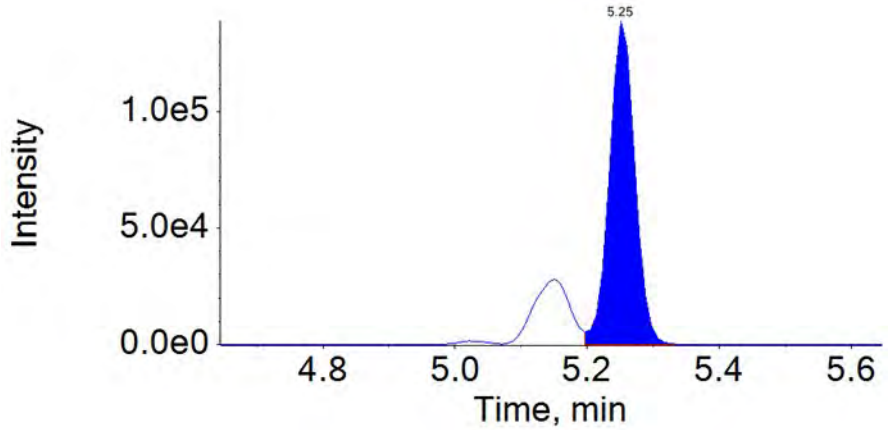
Results Table Name: 18NOV28DCAL
Results Table Date: 11/28/2018 4:52:53 PM
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

Component Name:
PFHxS
RT (min.):
4.56
Peak Area:
371393.69
Mass Range:
399.0 / 80.0
File Name:
18NOV28DCAL-09.wiff
Sample Name:
CAL4



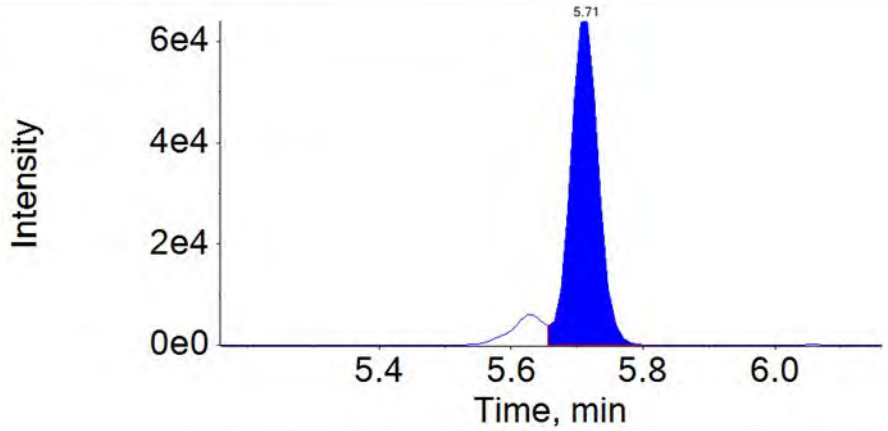
Integration Comment: incorrect integration

Component Name:
PFOS
RT (min.):
5.25
Peak Area:
370801.21
Mass Range:
499.0 / 80.0
File Name:
18NOV28DCAL-09.wiff
Sample Name:
CAL4



Integration Comment: incorrect integration

Component Name:
NMeFOSAA
RT (min.):
5.71
Peak Area:
191931.92
Mass Range:
570.0 / 419.0
File Name:
18NOV28DCAL-09.wiff
Sample Name:
CAL4



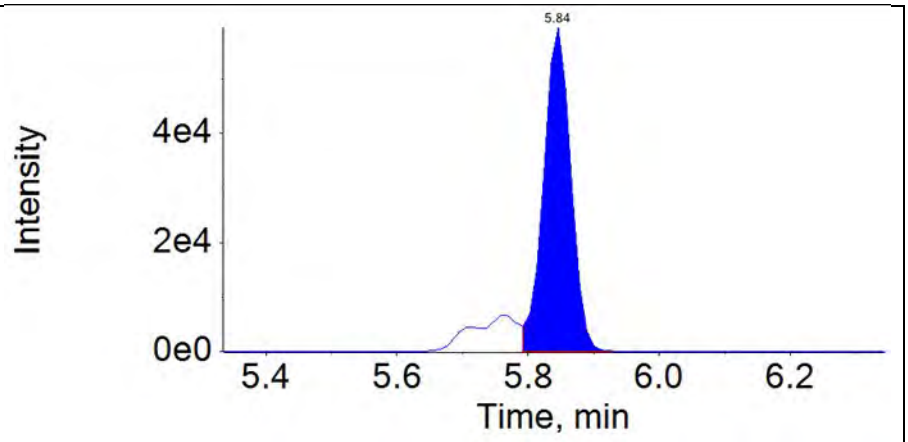
Integration Comment: incorrect integration

APPROVED
By MCD at 5:00 pm, 11/28/18

REVIEWED
By HMK at 12:22 pm, 11/29/18

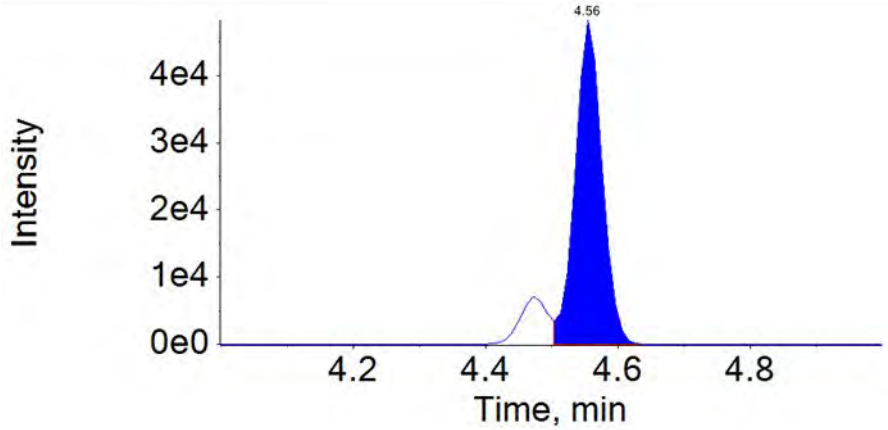
Results Table Name: 18NOV28DCAL
Results Table Date: 11/28/2018 4:52:53 PM
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

Component Name:
NEtFOSAA
RT (min.):
5.84
Peak Area:
171264.64
Mass Range:
584.0 / 419.0
File Name:
18NOV28DCAL-09.wiff
Sample Name:
CAL4



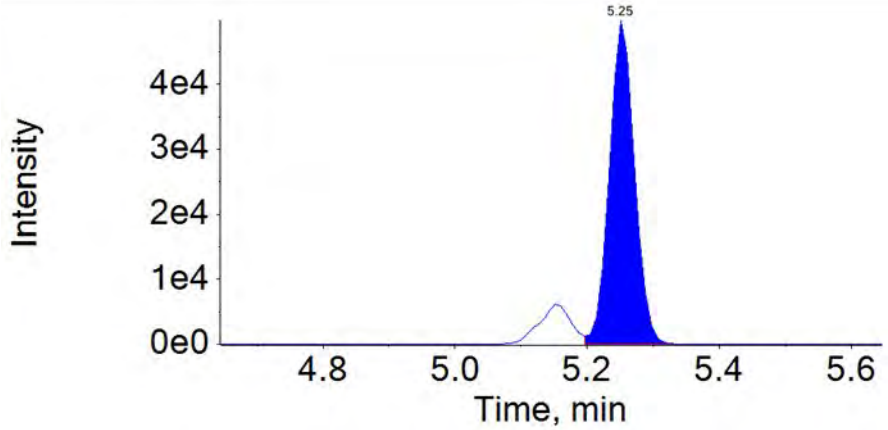
Integration Comment: incorrect integration

Component Name:
PFHxS_2
RT (min.):
4.56
Peak Area:
136580.68
Mass Range:
399.0 / 99.0
File Name:
18NOV28DCAL-09.wiff
Sample Name:
CAL4



Integration Comment: incorrect integration

Component Name:
PFOS_2
RT (min.):
5.25
Peak Area:
131435.94
Mass Range:
499.0 / 99.0
File Name:
18NOV28DCAL-09.wiff
Sample Name:
CAL4



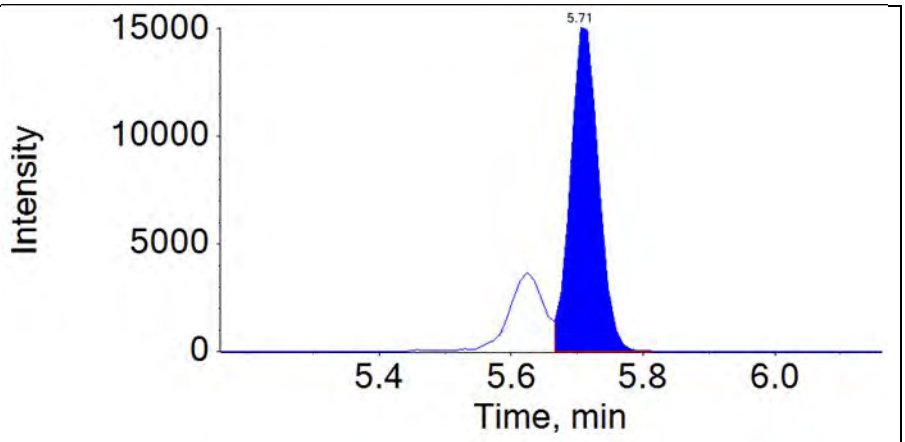
Integration Comment: incorrect integration

APPROVED
By MCD at 5:00 pm, 11/28/18

REVIEWED
By HMK at 12:22 pm, 11/29/18

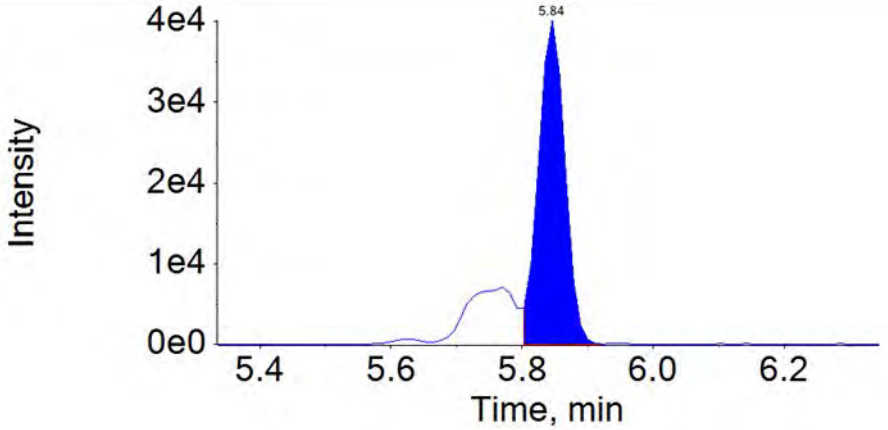
Results Table Name: 18NOV28DCAL
Results Table Date: 11/28/2018 4:52:53 PM
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

Component Name:
NMeFOSAA_2
RT (min.):
5.71
Peak Area:
44801.82
Mass Range:
570.0 / 483.0
File Name:
18NOV28DCAL-09.wiff
Sample Name:
CAL4



Integration Comment: incorrect integration

Component Name:
NEtFOSAA_2
RT (min.):
5.84
Peak Area:
112154.28
Mass Range:
584.0 / 526.0
File Name:
18NOV28DCAL-09.wiff
Sample Name:
CAL4



Integration Comment: incorrect integration

APPROVED
By MCD at 5:00 pm, 11/28/18

REVIEWED
By HMK at 12:22 pm, 11/29/18

Results Table Name: 18NOV28DCAL
Results Table Date: 11/28/2018 4:52:53 PM
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

APPROVED
By MCD at 5:00 pm, 11/28/18

REVIEWED
By HMK at 12:22 pm, 11/29/18

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LC-MS/MS Analysis Report

Printed: 11/28/2018 4:51:00 PM
Template: IonRatio18OCT10

Ion Ratio Report

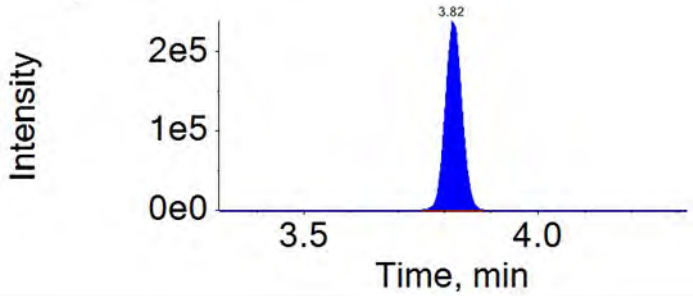
Sample Name: CAL4 **Instrument Name:** LM27631 **File Name:** 18NOV28DCAL-09.wiff

Component Name	RT	RRT	Analyte Area Response	Int Typ	Expected Ion Ratio	Ion Ratio	Ion Ratio % Diff	Ion Ratio Limit	Ion Ratio OOS
PFBS	3.82	1.00	590590.25	A	0.3655	0.3782			
PFBS_2	3.82	1.00	223343.90	A	0.3655	0.3782	3	50	
4:2-FTS	4.13	1.00	191344.61	A	0.6383	0.6348			
4:2-FTS_2	4.13	1.00	121465.15	A	0.6383	0.6348	-1	50	
PFHxA	4.16	1.00	1343216.41	A	0.0103	0.0115			
PFHxA_2	4.16	1.00	15497.56	A	0.0103	0.0115	12	50	
PFPeS	4.19	1.10	311741.60	A	0.4976	0.5181			
PFPeS_2	4.18	1.10	161508.14	A	0.4976	0.5181	4	50	
PFHpA	4.55	1.00	1429895.33	A	0.0557	0.0548			
PFHpA_2	4.55	1.00	78335.37	A	0.0557	0.0548	-2	50	
PFHxS	4.56	1.00	444626.01	M	0.3693	0.3529			
PFHxS_2	4.56	1.00	156906.17	M	0.3693	0.3529	-4	50	
6:2-FTS	4.91	1.00	185311.52	A	0.6625	0.6163			
6:2-FTS_2	4.91	1.00	114201.19	A	0.6625	0.6163	-7	50	
PFHpS	4.92	1.08	471580.62	A	0.3915	0.4081			
PFHpS_2	4.92	1.08	192431.36	A	0.3915	0.4081	4	50	
PFOA	4.92	1.00	1486960.43	A	0.0573	0.0582			
PFOA_2	4.92	1.00	86577.54	A	0.0573	0.0582	2	50	
PFOS	5.25	1.00	481949.96	M	0.2960	0.3159			
PFOS_2	5.25	1.00	152242.35	M	0.2960	0.3159	7	50	
PFNA	5.27	1.00	1365056.35	A	0.0201	0.0213			
PFNA_2	5.27	1.00	29087.24	A	0.0201	0.0213	6	50	
PFNS	5.55	1.06	369833.35	A	0.4794	0.4744			
PFNS_2	5.55	1.06	175461.18	A	0.4794	0.4744	-1	50	
PFDA	5.57	1.00	1223810.41	A	0.0075	0.0072			
PFDA_2	5.57	1.00	8850.86	A	0.0075	0.0072	-3	50	
8:2-FTS	5.57	1.00	203687.69	A	0.5380	0.5664			
8:2-FTS_2	5.57	1.00	115365.33	A	0.5380	0.5664	5	50	
NMeFOSAA	5.71	1.00	212775.33	M	0.2305	0.2723			
NMeFOSAA_2	5.71	1.00	57947.55	M	0.2305	0.2723	18	50	
PFDS	5.80	1.10	283198.51	A	0.5356	0.5185			
PFDS_2	5.80	1.10	146842.40	A	0.5356	0.5185	-3	50	
PFUnDA	5.83	1.00	1281938.52	A	0.0038	0.0041			
PFUnDA_2	5.83	1.00	5262.94	A	0.0038	0.0041	8	50	
NEtFOSAA	5.84	1.00	204048.64	M	0.7356	0.7330			
NEtFOSAA_2	5.84	1.00	149571.11	M	0.7356	0.7330	0	50	
PFDoDA	6.06	1.00	1650301.08	A	0.0130	0.0137			
PFDoDA_2	6.06	1.00	22542.02	A	0.0130	0.0137	5	50	
10:2-FTS	6.08	1.09	184968.53	A	0.6989	0.7539			
10:2-FTS_2	6.07	1.09	139452.05	A	0.6989	0.7539	8	50	
PFTrDA	6.26	1.03	1622977.68	A	0.0090	0.0088			
PFTrDA_2	6.26	1.03	14275.05	A	0.0090	0.0088	-2	50	
PFTeDA	6.43	1.00	1172052.04	A	0.0056	0.0065			
PFTeDA_2	6.43	1.00	7656.17	A	0.0056	0.0065	16	50	
PFHxDA	6.74	1.05	601723.77	A	0.0646	0.0614			
PFHxDA_2	6.73	1.05	36942.33	A	0.0646	0.0614	-5	50	
PFODA	7.00	1.09	494210.71	A	0.0264	0.0257			
PFODA_2	7.00	1.09	12722.45	A	0.0264	0.0257	-3	50	

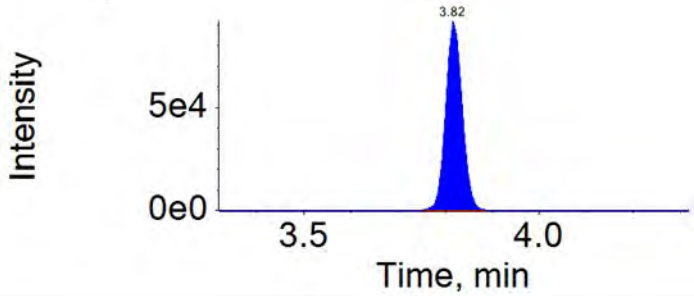
APPROVED
By MCD at 5:00 pm, 11/28/18

REVIEWED
By HMK at 12:22 pm, 11/29/18

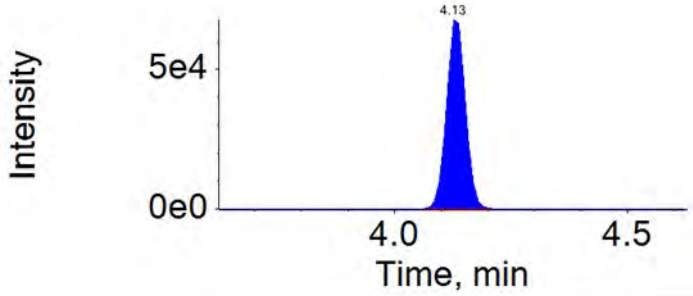
Component: PFBS
Primary Mass: 299.0 / 80.0



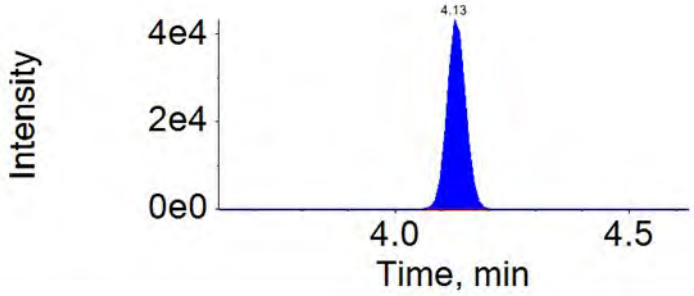
Component: PFBS_2
Secondary Mass: 299.0 / 99.0



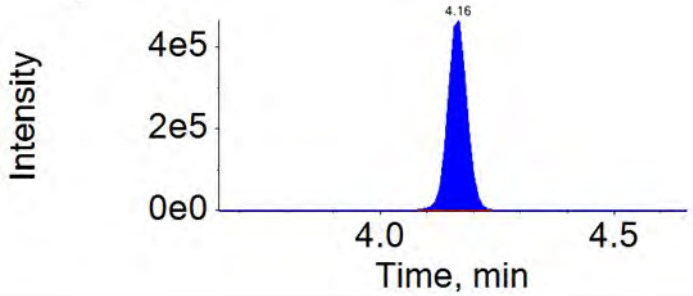
Component: 4:2-FTS
Primary Mass: 327.0 / 307.0



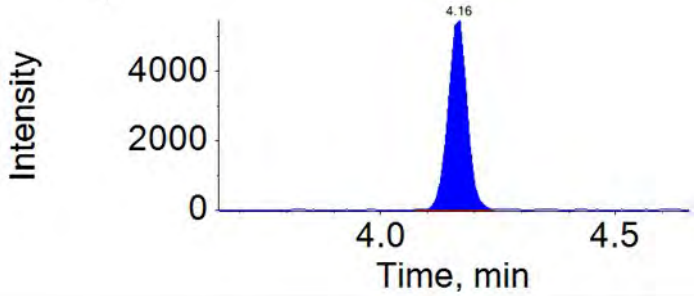
Component: 4:2-FTS_2
Secondary Mass: 327.0 / 81.0



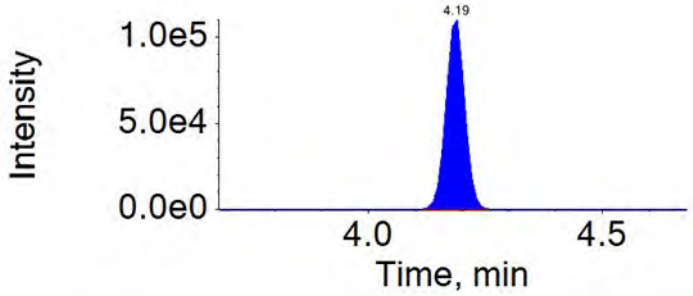
Component: PFHxA
Primary Mass: 313.0 / 269.0



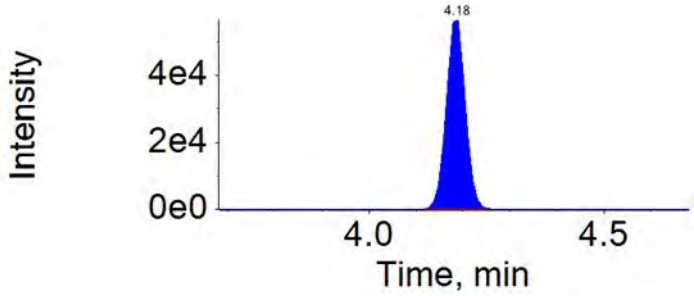
Component: PFHxA_2
Secondary Mass: 313.0 / 119.0



Component: PFPeS
Primary Mass: 349.0 / 80.0



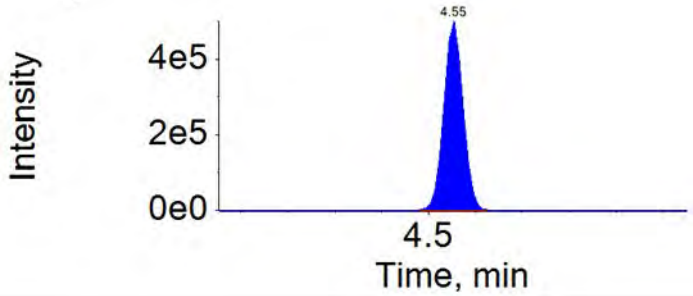
Component: PFPeS_2
Secondary Mass: 349.0 / 99.0



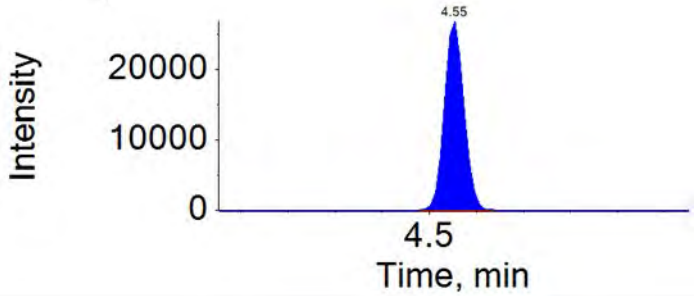
APPROVED
By MCD at 5:00 pm, 11/28/18

REVIEWED
By HMK at 12:22 pm, 11/29/18

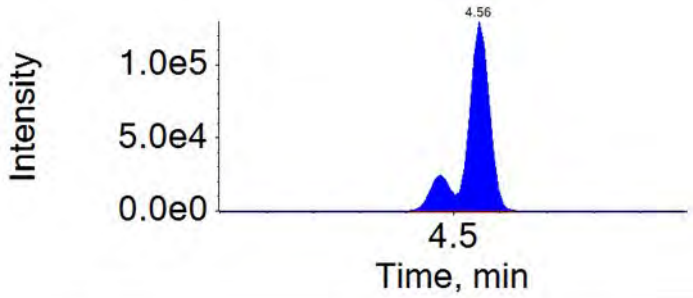
Component: PFHpA
Primary Mass: 363.0 / 319.0



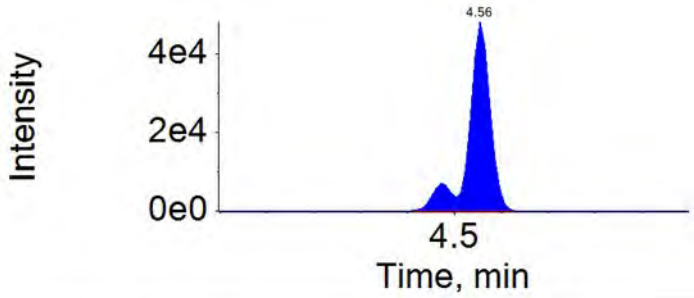
Component: PFHpA_2
Secondary Mass: 363.0 / 169.0



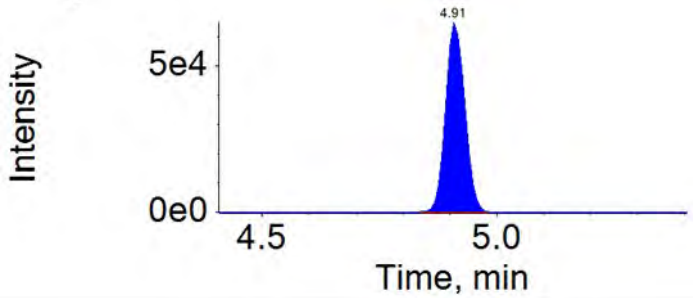
Component: PFHxS
Primary Mass: 399.0 / 80.0



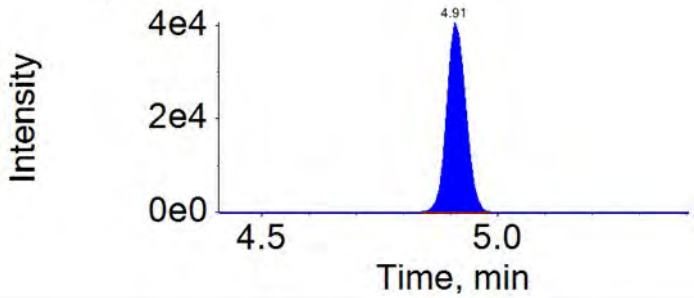
Component: PFHxS_2
Secondary Mass: 399.0 / 99.0



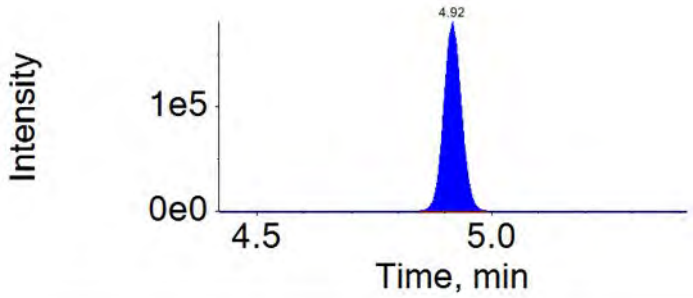
Component: 6:2-FTS
Primary Mass: 427.0 / 407.0



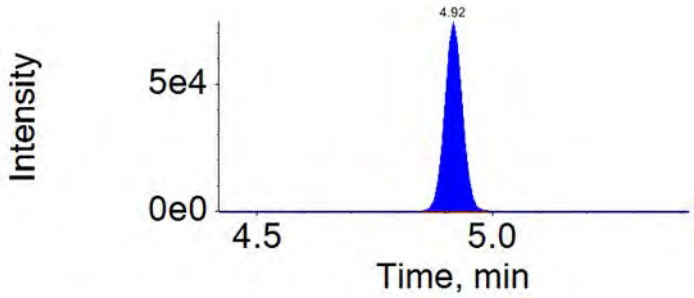
Component: 6:2-FTS_2
Secondary Mass: 427.0 / 81.0



Component: PFHpS
Primary Mass: 449.0 / 80.0



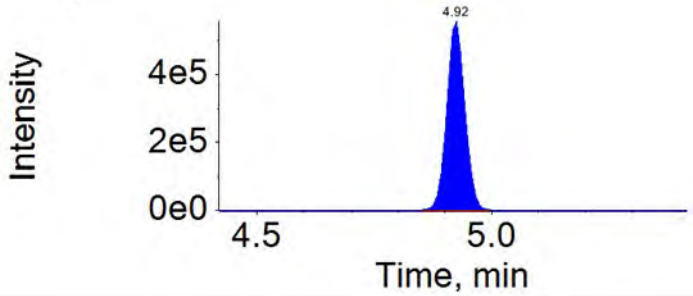
Component: PFHpS_2
Secondary Mass: 449.0 / 99.0



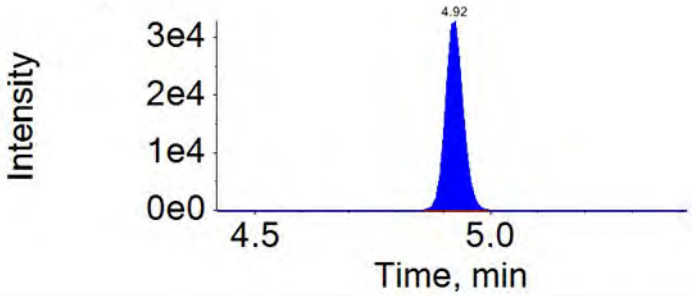
APPROVED
By MCD at 5:00 pm, 11/28/18

REVIEWED
By HMK at 12:22 pm, 11/29/18

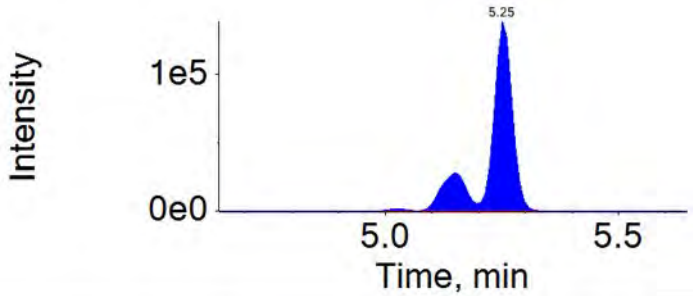
Component: PFOA
Primary Mass: 413.0 / 369.0



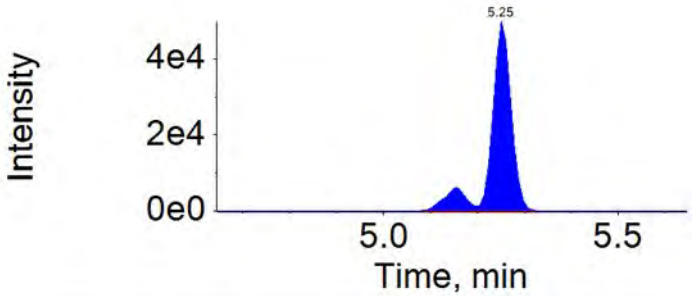
Component: PFOA_2
Secondary Mass: 413.0 / 169.0



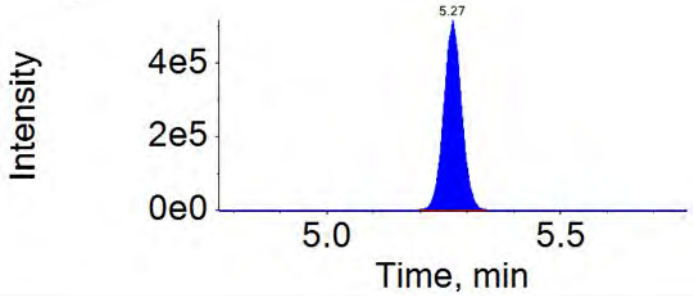
Component: PFOS
Primary Mass: 499.0 / 80.0



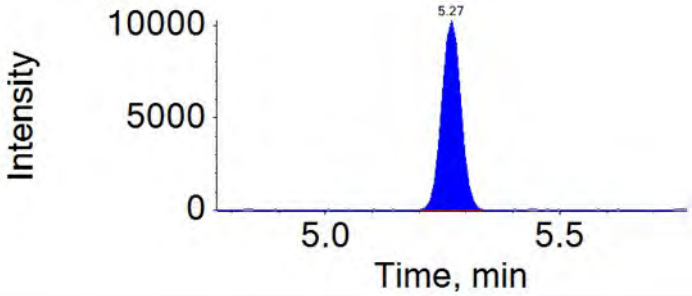
Component: PFOS_2
Secondary Mass: 499.0 / 99.0



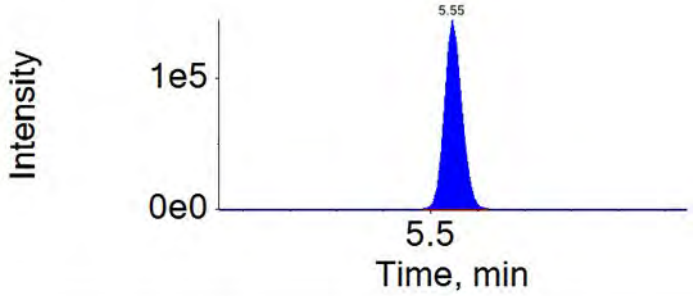
Component: PFNA
Primary Mass: 463.0 / 419.0



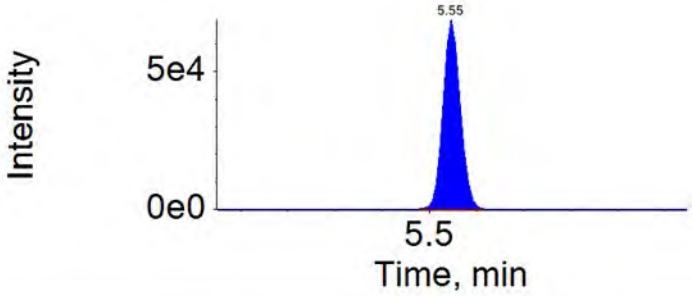
Component: PFNA_2
Secondary Mass: 463.0 / 169.0



Component: PFNS
Primary Mass: 549.0 / 80.0



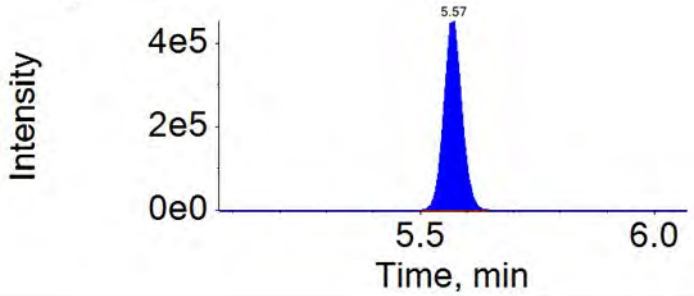
Component: PFNS_2
Secondary Mass: 549.0 / 99.0



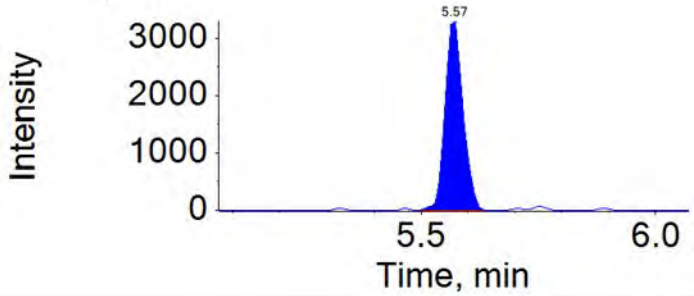
APPROVED
By MCD at 5:00 pm, 11/28/18

REVIEWED
By HMK at 12:22 pm, 11/29/18

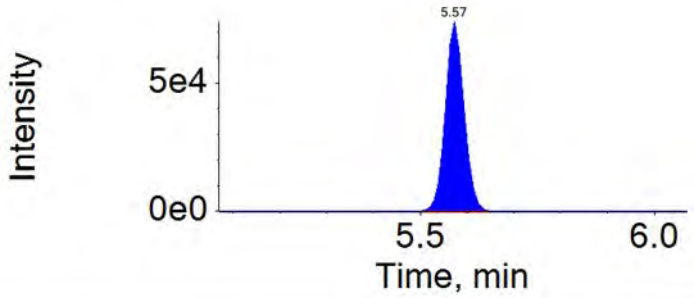
Component: PFDA
Primary Mass: 513.0 / 469.0



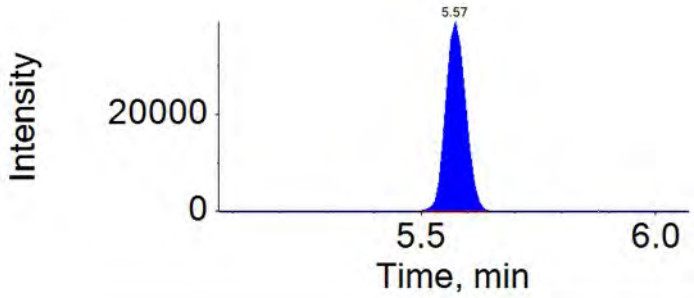
Component: PFDA_2
Secondary Mass: 513.0 / 169.0



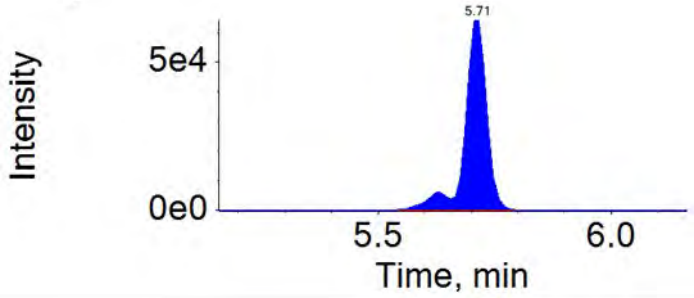
Component: 8:2-FTS
Primary Mass: 527.0 / 507.0



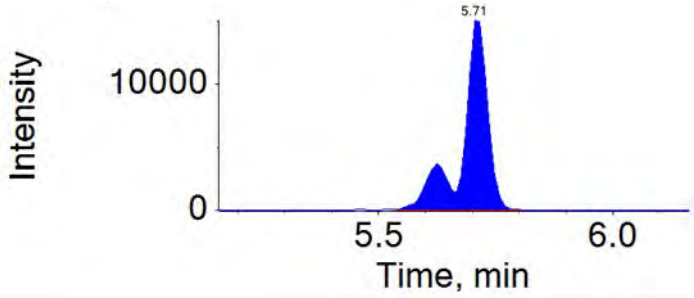
Component: 8:2-FTS_2
Secondary Mass: 527.0 / 81.0



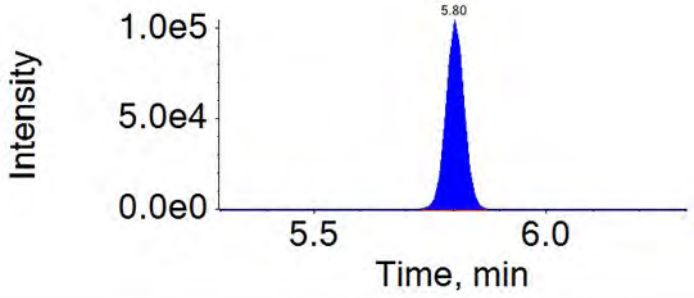
Component: NMeFOSAA
Primary Mass: 570.0 / 419.0



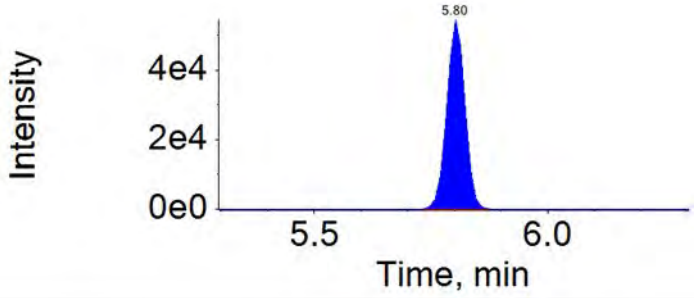
Component: NMeFOSAA_2
Secondary Mass: 570.0 / 483.0



Component: PFDS
Primary Mass: 599.0 / 80.0



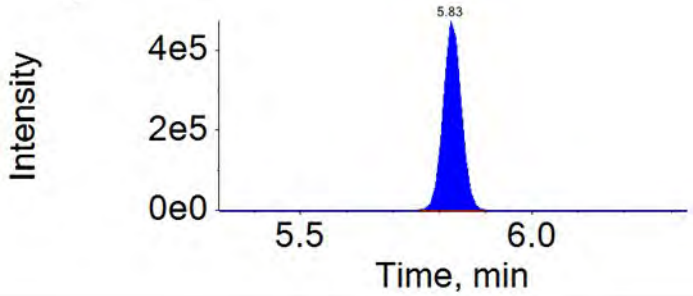
Component: PFDS_2
Secondary Mass: 599.0 / 99.0



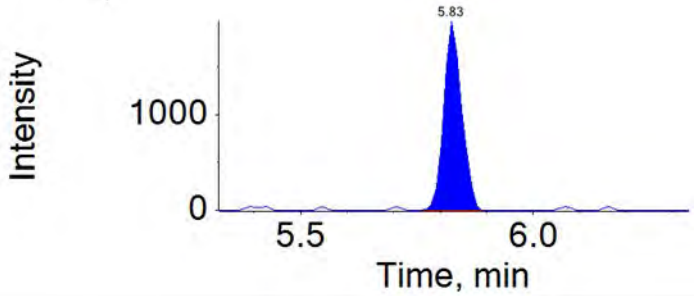
APPROVED
By MCD at 5:00 pm, 11/28/18

REVIEWED
By HMK at 12:22 pm, 11/29/18

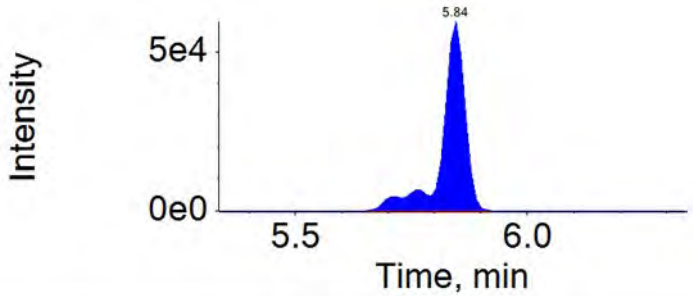
Component: PFUnDA
Primary Mass: 563.0 / 519.0



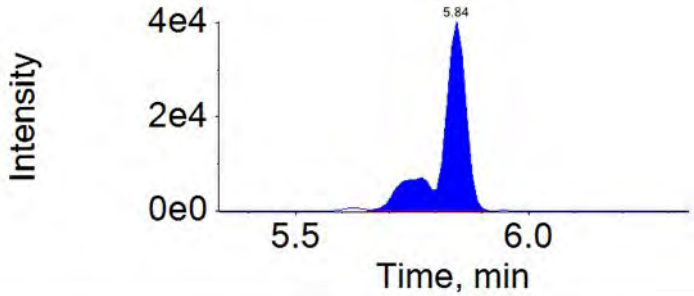
Component: PFUnDA_2
Secondary Mass: 563.0 / 169.0



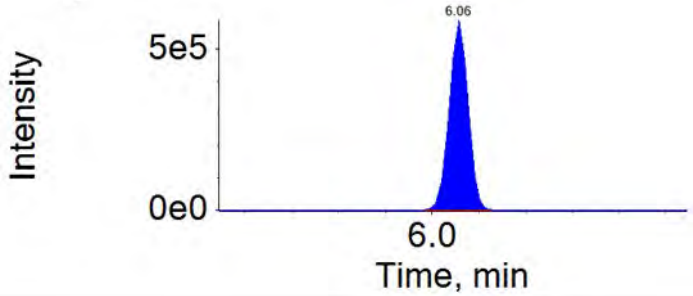
Component: NEtFOSAA
Primary Mass: 584.0 / 419.0



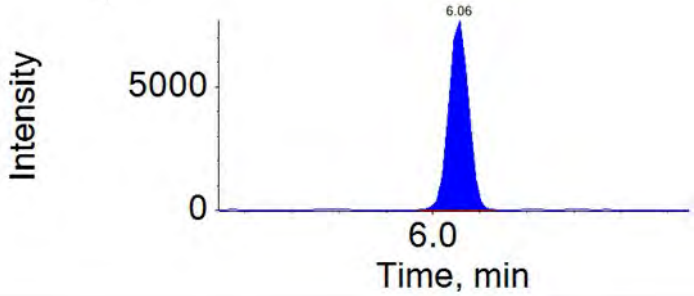
Component: NEtFOSAA_2
Secondary Mass: 584.0 / 526.0



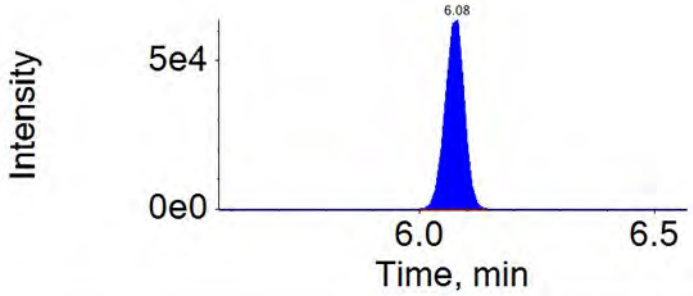
Component: PFDoDA
Primary Mass: 613.0 / 569.0



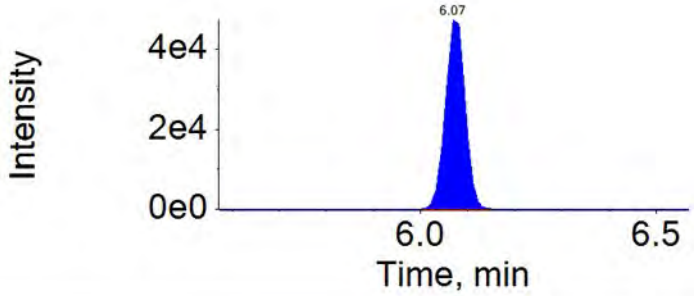
Component: PFDoDA_2
Secondary Mass: 613.0 / 169.0



Component: 10:2-FTS
Primary Mass: 627.0 / 607.0



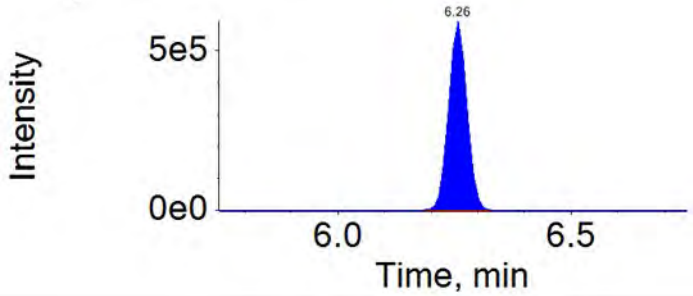
Component: 10:2-FTS_2
Secondary Mass: 627.0 / 81.0



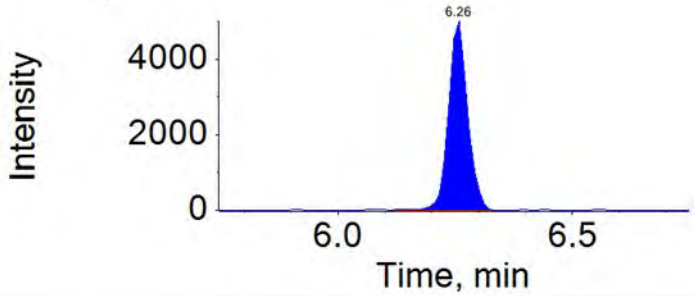
APPROVED
By MCD at 5:00 pm, 11/28/18

REVIEWED
By HMK at 12:22 pm, 11/29/18

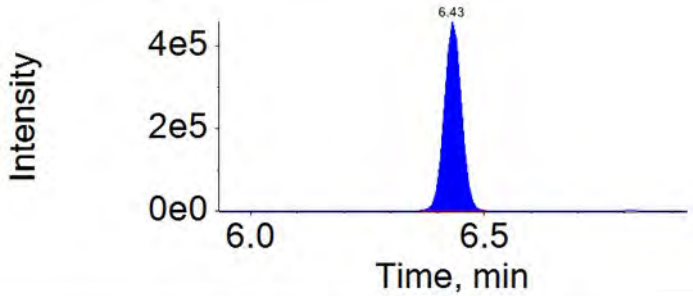
Component: PFTrDA
Primary Mass: 663.0 / 619.0



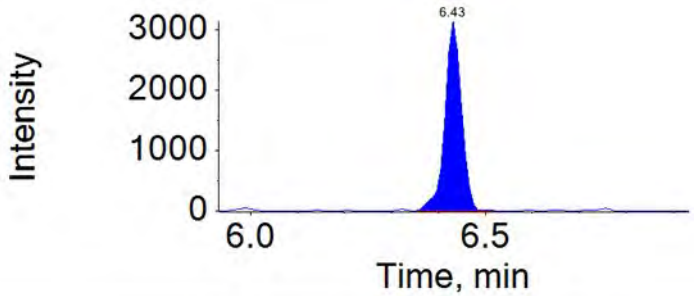
Component: PFTrDA_2
Secondary Mass: 663.0 / 169.0



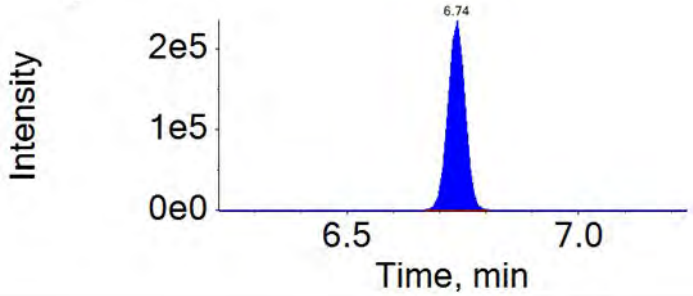
Component: PFTeDA
Primary Mass: 713.0 / 669.0



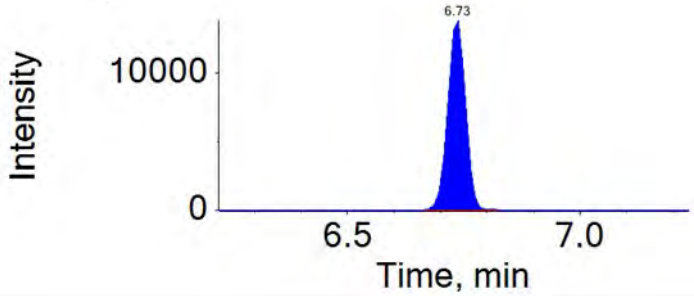
Component: PFTeDA_2
Secondary Mass: 713.0 / 169.0



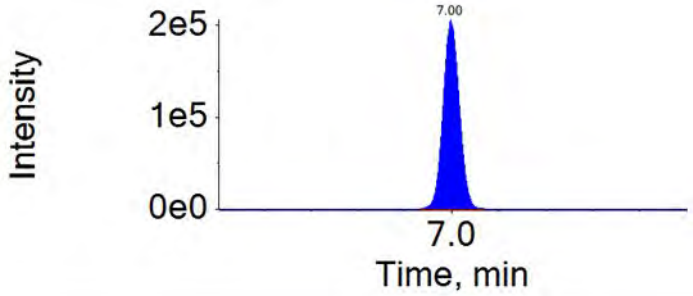
Component: PFHxDA
Primary Mass: 813.0 / 769.0



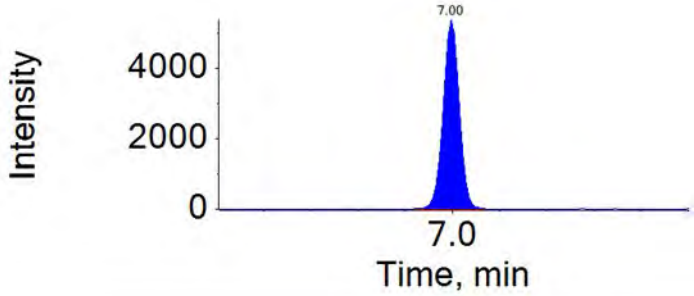
Component: PFHxDA_2
Secondary Mass: 813.0 / 169.0



Component: PFODA
Primary Mass: 913.0 / 869.0



Component: PFODA_2
Secondary Mass: 913.0 / 169.0



APPROVED
By MCD at 5:00 pm, 11/28/18

REVIEWED
By HMK at 12:22 pm, 11/29/18

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LC-MS/MS
DOD Analysis Report

Printed: 11/28/2018 4:50:00 PM
Template: DOD-Sample-18JUN22.docx

ICAL Name: 18NOV28DCAL
QMethod Name: 18AUG20QM
Result Table: 18NOV28DCAL 11/28/2018 4:47:11 PM
Acquisition Method: 18AUG13_3uL.dam

Sample Name:	CAL5			**Data File:**		18NOV28DCAL-10.wiff
Sample ID:	CALBRN51833B			**Acquis Date:**		2018-11-28T14:18:16
Sample Type:	Standard			**Instrument:**		LM27631
Vial Position:	7			**Acquis Method:**		18AUG13_3uL.dam
Injection Vol:	3.00			**Result Table:**		18NOV28DCAL
QMethod File:	18AUG20QM			**ICAL Name:**		18NOV28DCAL
Batch Number:	N/A			**Operator:**		MCD7824
Sample Wt.:	1.00000			**Dilution Factor:**		1.00
Sample Vol.:	1.000			**Prep Factor:**		1.000

Injection Standard Peak Table

Injection Standard Area Reference File: 18NOV28DCAL-08

Injection Standard Name	Inj Std Conc	Injection Std Peak Area	Rreference Injection Standard Area	Injection Std %Diff	Injection Std %Diff Limit	Injection Std %Diff OOS
13C3-PFBA	5.0	857159.8	887248.9	-3	50	
13C2-PFOA	5.0	516457.2	498501.6	4	50	
13C4-PFOS	4.8	287732.6	283214.2	2	50	
13C2-PFDA	5.0	460232.7	441790.6	4	50	

Extraction Standard Peak Table

Extraction Standard Name	Ext Std Area	Inj Std Name	Inj Std Area	Area Ratio	Ext Std Conc	Ext Std Result	Ext Std %REC	Ext Std %REC Limit	Ext Std OOS
E13C4-PFBA	951695.0	13C3-PFBA	857159.8	1.110	5.000	4.954	99	70-130	
E13C5-PFPeA	900153.4	13C3-PFBA	857159.8	1.050	5.000	4.904	98	70-130	
E13C3-PFBS	424059.2	13C3-PFBA	857159.8	0.495	4.650	4.720	102	70-130	
E13C2-4:2-FTS	67423.0	13C2-PFOA	516457.2	0.131	4.670	4.499	96	70-130	
E13C5-PFHxA	704953.5	13C2-PFOA	516457.2	1.365	5.000	5.014	100	70-130	
E13C3-PFHxS	309184.7	13C2-PFOA	516457.2	0.599	4.730	4.692	99	70-130	
E13C4-PFHpA	556455.9	13C2-PFOA	516457.2	1.077	5.000	4.951	99	70-130	
E13C2-6:2-FTS	58122.8	13C2-PFOA	516457.2	0.113	4.750	4.711	99	70-130	
E13C8-PFOA	911756.1	13C2-PFOA	516457.2	1.765	5.000	4.859	97	70-130	
E13C8-PFOS	299574.5	13C4-PFOS	287732.6	1.041	4.780	4.700	98	70-130	
E13C9-PFNA	630201.5	13C4-PFOS	287732.6	2.190	5.000	4.811	96	70-130	
E13C6-PFDA	833462.2	13C2-PFDA	460232.7	1.811	5.000	5.106	102	70-130	
E13C2-8:2-FTS	46142.4	13C2-PFDA	460232.7	0.100	4.790	4.309	90	70-130	
E13C8-PFOSA	596189.5	13C2-PFDA	460232.7	1.295	5.000	4.753	95	70-130	
Ed3-NMeFOSAA	172574.2	13C2-PFDA	460232.7	0.375	5.000	4.761	95	70-130	
E13C7-PFUnDA	539842.9	13C2-PFDA	460232.7	1.173	5.000	4.957	99	70-130	
Ed5-NEtFOSAA	124785.1	13C2-PFDA	460232.7	0.271	5.000	4.830	97	70-130	
E13C2-PFDoDA	1133027.9	13C2-PFDA	460232.7	2.462	5.000	5.173	103	70-130	
Ed7-NMePFOSAE	247663.8	13C2-PFDA	460232.7	0.538	5.000	4.651	93	70-130	
Ed3-NMePFOSA	83129.0	13C2-PFDA	460232.7	0.181	5.000	4.888	98	70-130	
Ed9-NEtPFOSAE	220689.9	13C2-PFDA	460232.7	0.480	5.000	4.861	97	70-130	
Ed5-NEtPFOSA	66384.7	13C2-PFDA	460232.7	0.144	5.000	5.012	100	70-130	
E13C2-PFTeDA	786107.5	13C2-PFDA	460232.7	1.708	5.000	4.726	95	70-130	

APPROVED
By MCD at 5:00 pm, 11/28/18

REVIEWED
By HMK at 12:22 pm, 11/29/18

ICAL Name: 18NOV28DCAL **Result Table:** 18NOV28DCAL 11/28/2018 4:47:11 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

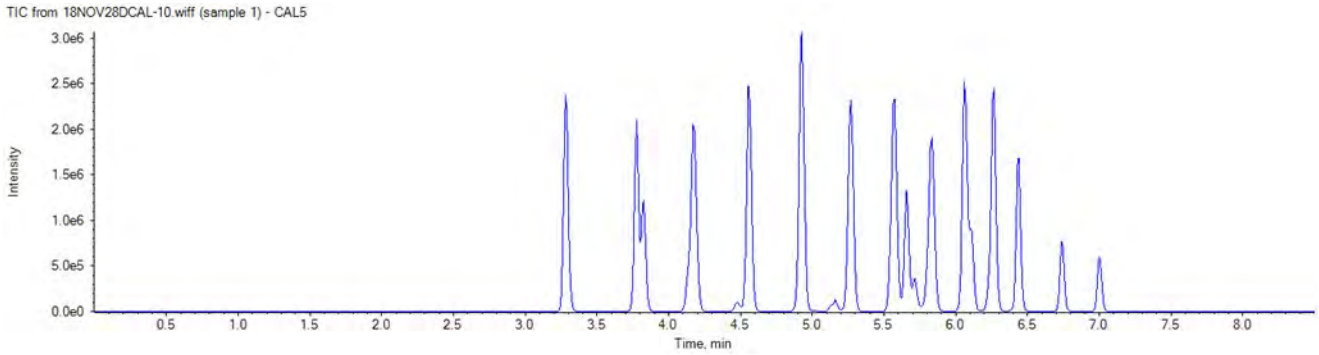
Analyte Quantitation Peak Table

Sample Name: CAL5 **Instrument Name:** LM27631 **File Name:** 18NOV28DCAL-10.wiff

Sample Wt	Sample Vol	Dilution Factor	PrepFactor
1.00000	1.000	1.00	1.000

Analyte Name	RT	RRT	Analyte Area Response	E	Int Typ	ES Name	ES RT	ES Area Response	Area Ratio	Sample Result (ng/g)
PFBA	3.28	1.000	3627061.5		A	13C4-PFBA	3.28	951695.0	3.811	20.892
PFPeA	3.78	1.000	3696889.3		A	13C5-PFPeA	3.78	900153.4	4.107	20.152
PFBS	3.82	1.000	1542881.7		A	13C3-PFBS	3.83	424059.2	3.638	17.661
4:2-FTS	4.14	1.000	498650.7		A	13C2-4:2-FTS	4.14	67423.0	7.396	19.798
PFHxA	4.17	1.000	3464657.3		A	13C5-PFHxA	4.17	704953.5	4.915	19.728
PFPeS	4.19	1.100	809728.0		A	13C3-PFBS	3.83	424059.2	1.909	19.314
PFHpA	4.56	1.000	3592806.2		A	13C4-PFHpA	4.56	556455.9	6.457	19.926
PFHxS	4.56	1.000	1191482.7		M	13C3-PFHxS	4.56	309184.7	3.854	18.044
6:2-FTS	4.92	1.000	426727.7		A	13C2-6:2-FTS	4.92	58122.8	7.342	19.156
PFHpS	4.92	1.080	1171216.6		A	13C3-PFHxS	4.56	309184.7	3.788	18.906
PFOA	4.93	1.000	3601538.3		A	13C8-PFOA	4.93	911756.1	3.950	20.411
PFOS	5.26	1.000	1305020.5		M	13C8-PFOS	5.26	299574.5	4.356	18.273
PFNA	5.27	1.000	3536255.1		A	13C9-PFNA	5.27	630201.5	5.611	21.504
PFNS	5.55	1.060	909879.2		A	13C8-PFOS	5.26	299574.5	3.037	19.177
PFDA	5.57	1.000	3072749.0		A	13C6-PFDA	5.57	833462.2	3.687	20.868
8:2-FTS	5.58	1.000	478390.1		A	13C2-8:2-FTS	5.58	46142.4	10.368	19.551
PFOSA	5.66	1.000	2392584.6		A	13C8-PFOSA	5.66	596189.5	4.013	20.329
NMeFOSAA	5.71	1.000	557354.6		M	d3-NMeFOSAA	5.71	172574.2	3.230	20.602
PFDS	5.81	1.100	737231.9		A	13C8-PFOS	5.26	299574.5	2.461	19.512
PFUnDA	5.83	1.000	3163283.8		A	13C7-PFUnDA	5.83	539842.9	5.860	20.945
NEtFOSAA	5.85	1.000	512792.4		M	d5-NEtFOSAA	5.85	124785.1	4.109	20.014
PFDoDA	6.06	1.000	4161895.9		A	13C2-PFDoDA	6.06	1133027.9	3.673	20.121
10:2-FTS	6.08	1.090	480384.1		A	13C2-8:2-FTS	5.58	46142.4	10.411	22.957
NMePFOSAE	6.11	1.000	1240182.1		A	d7-NMePFOSAE	6.10	247663.8	5.008	21.073
NMePFOSA	6.12	1.000	322671.1		A	d3-NMePFOSA	6.11	83129.0	3.882	20.577
PFDoS	6.23	1.190	390444.7		A	13C8-PFOS	5.26	299574.5	1.303	18.718
NEtPFOSAE	6.27	1.000	1338584.5		A	d9-NEtPFOSAE	6.26	220689.9	6.065	21.818
NEtPFOSA	6.28	1.000	293215.8		A	d5-NEtPFOSA	6.27	66384.7	4.417	19.796
PFTrDA	6.26	1.030	3743763.6		A	13C2-PFDoDA	6.06	1133027.9	3.304	19.916
PFTeDA	6.44	1.000	2897106.2		A	13C2-PFTeDA	6.44	786107.5	3.685	20.882
PFHxDA	6.74	1.050	1551331.1		A	13C2-PFTeDA	6.44	786107.5	1.973	22.560
PFODA	7.00	1.090	1272897.4		A	13C2-PFTeDA	6.44	786107.5	1.619	21.571

Total Ion Chromatogram

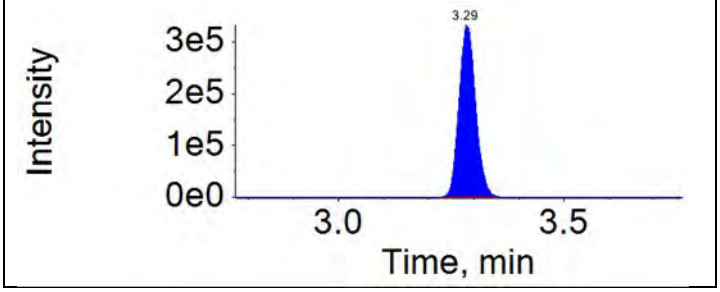


APPROVED
By MCD at 5:00 pm, 11/28/18

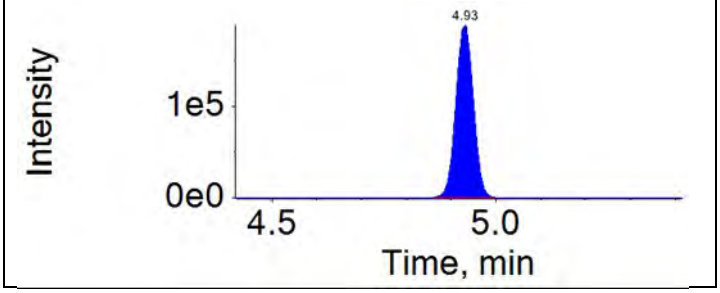
REVIEWED
By HMK at 12:22 pm, 11/29/18

ICAL Name: 18NOV28DCAL **Result Table:** 18NOV28DCAL 11/28/2018 4:47:11 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

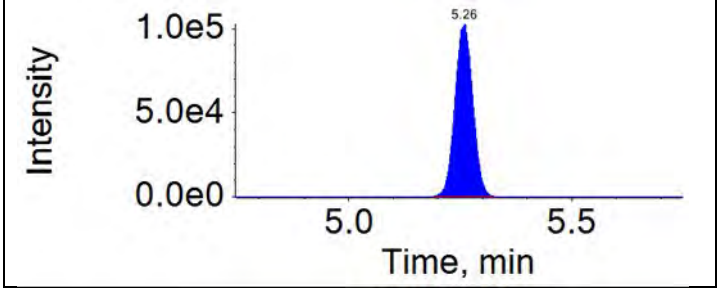
Injection Standard: 13C3-PFBA
216.0 / 172.0



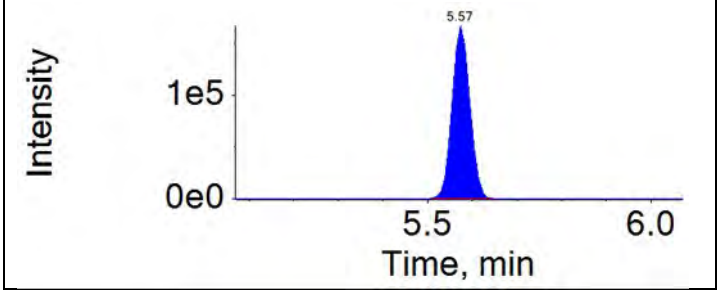
Injection Standard: 13C2-PFOA
415.0 / 370.0



Injection Standard: 13C4-PFOS
503.0 / 80.0

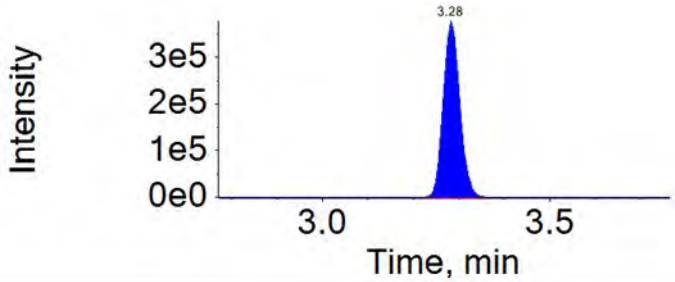


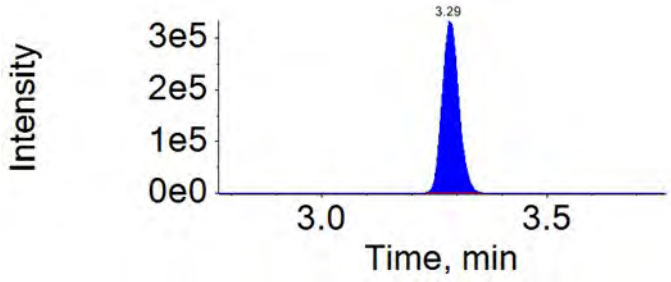
Injection Standard: 13C2-PFDA
515.0 / 470.0



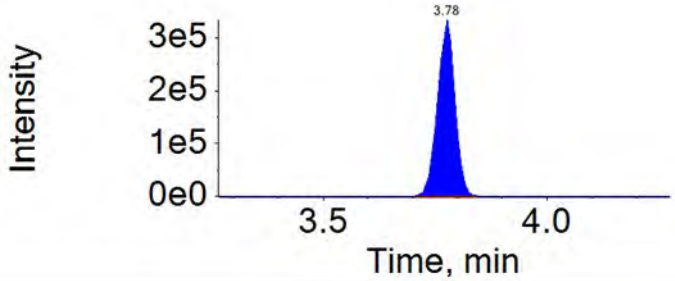
ICAL Name: 18NOV28DCAL **Result Table:** 18NOV28DCAL 11/28/2018 4:47:11 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

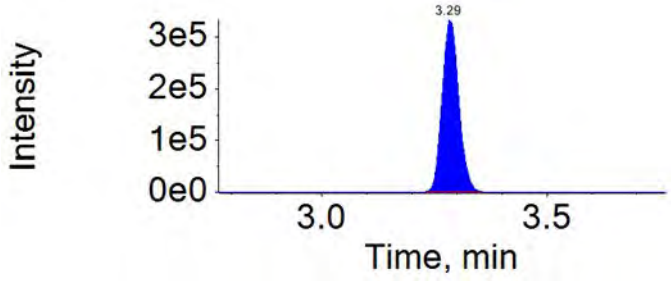
Extraction Standard: E13C4-PFBA	Injection Standard: 13C3-PFBA
217.0 / 172.0	216.0 / 172.0



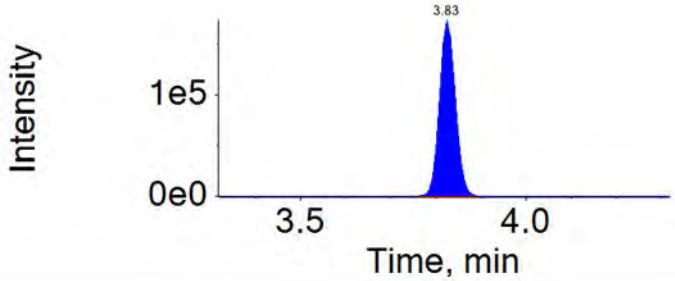


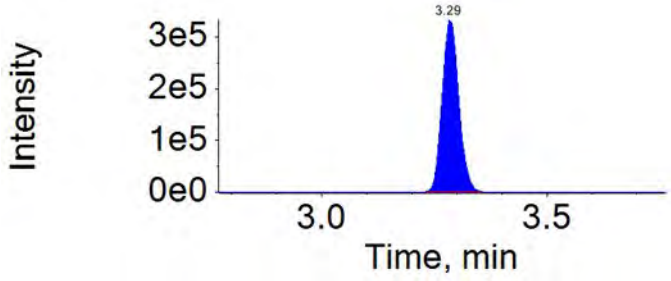
Extraction Standard: E13C5-PFPeA	Injection Standard: 13C3-PFBA
268.0 / 223.0	216.0 / 172.0



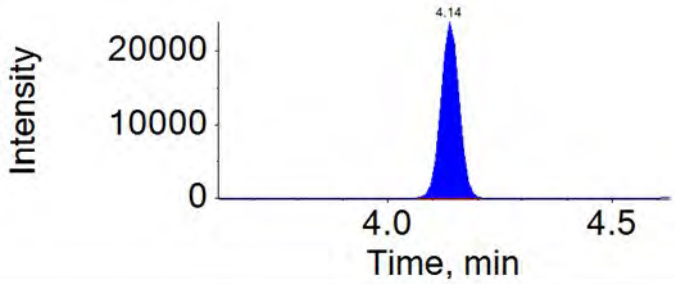


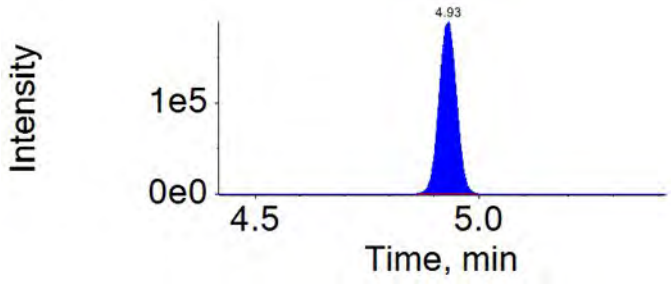
Extraction Standard: E13C3-PFBS	Injection Standard: 13C3-PFBA
302.0 / 80.0	216.0 / 172.0





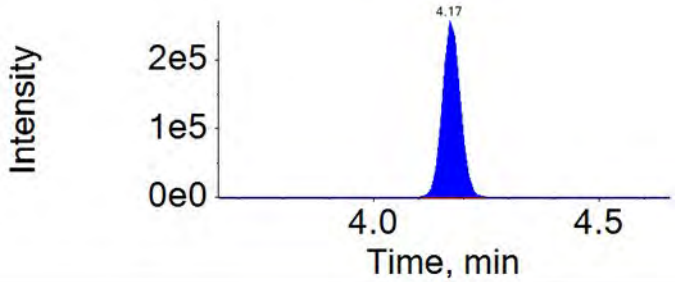
Extraction Standard: E13C2-4:2-FTS	Injection Standard: 13C2-PFOA
329.0 / 81.0	415.0 / 370.0

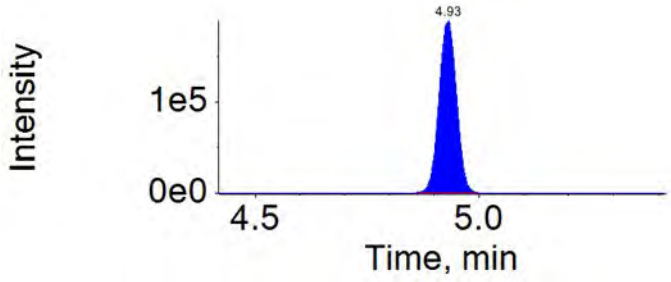




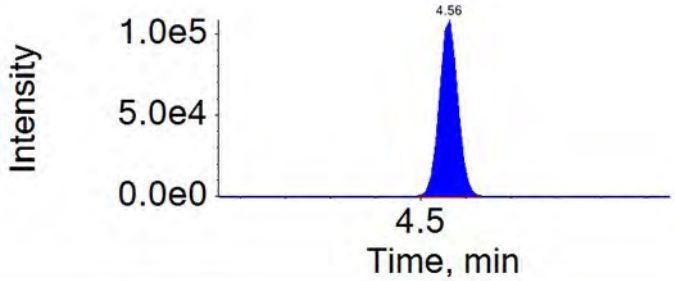
ICAL Name: 18NOV28DCAL **Result Table:** 18NOV28DCAL 11/28/2018 4:47:11 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

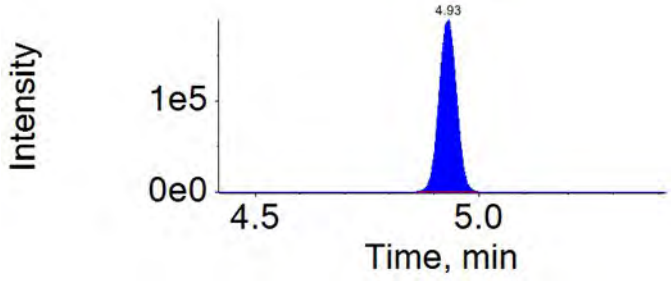
Extraction Standard: E13C5-PFHxA	Injection Standard: 13C2-PFOA
318.0 / 273.0	415.0 / 370.0



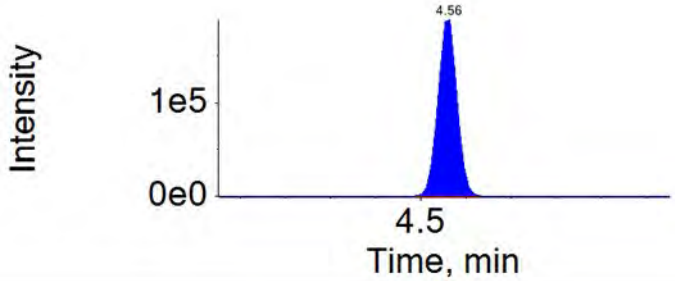


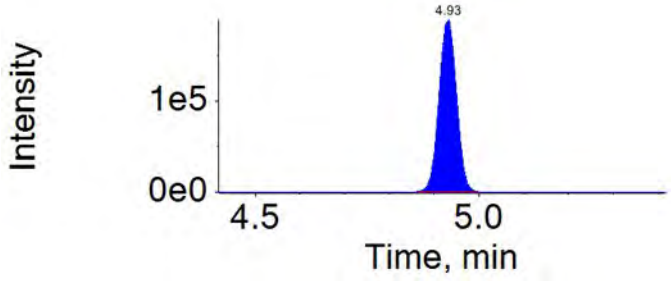
Extraction Standard: E13C3-PFHxS	Injection Standard: 13C2-PFOA
402.0 / 80.0	415.0 / 370.0



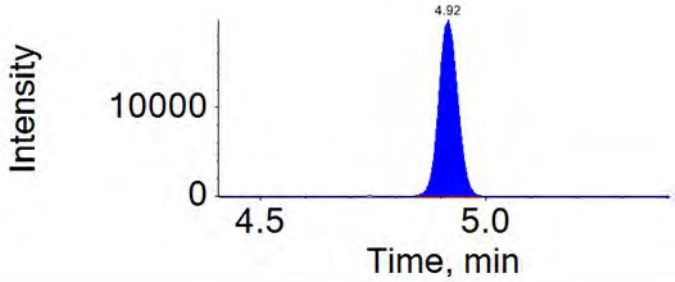


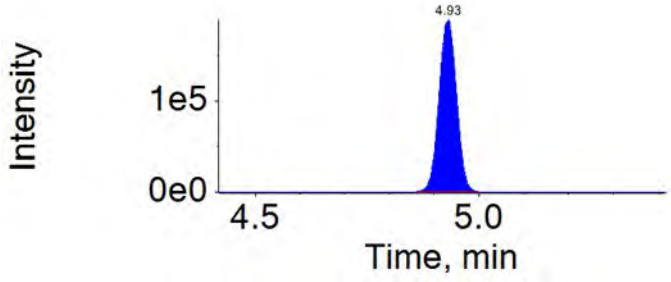
Extraction Standard: E13C4-PFHpA	Injection Standard: 13C2-PFOA
367.0 / 322.0	415.0 / 370.0





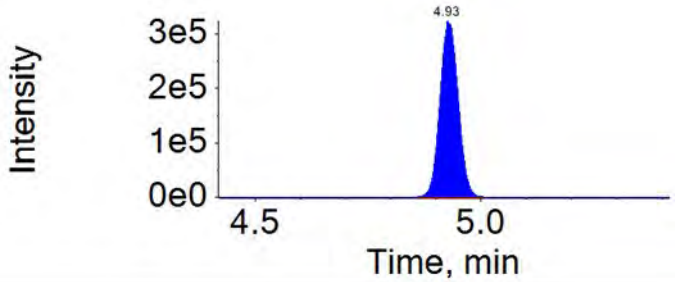
Extraction Standard: E13C2-6:2-FTS	Injection Standard: 13C2-PFOA
429.0 / 81.0	415.0 / 370.0

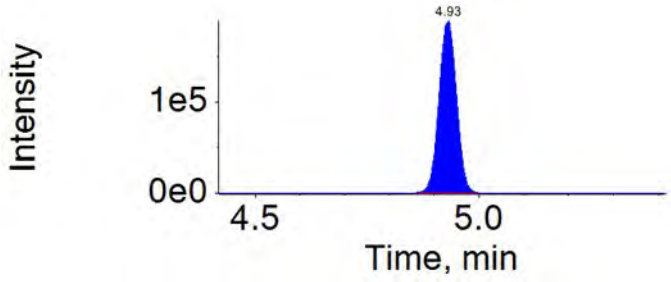




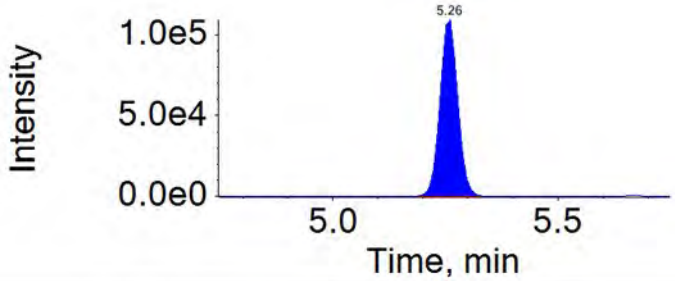
ICAL Name: 18NOV28DCAL **Result Table:** 18NOV28DCAL 11/28/2018 4:47:11 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

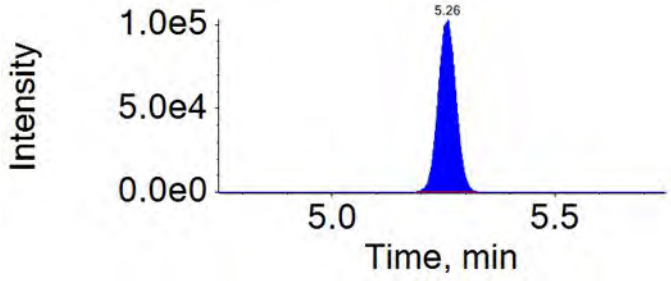
Extraction Standard: E13C8-PFOA	Injection Standard: 13C2-PFOA
421.0 / 376.0	415.0 / 370.0



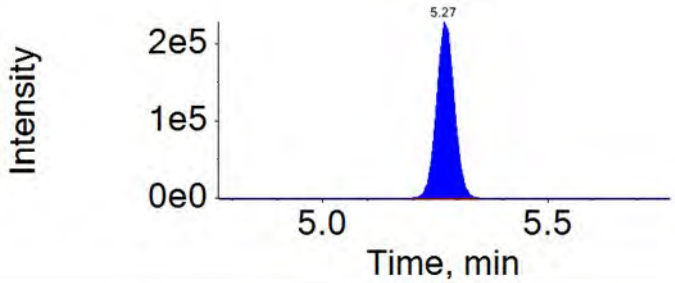


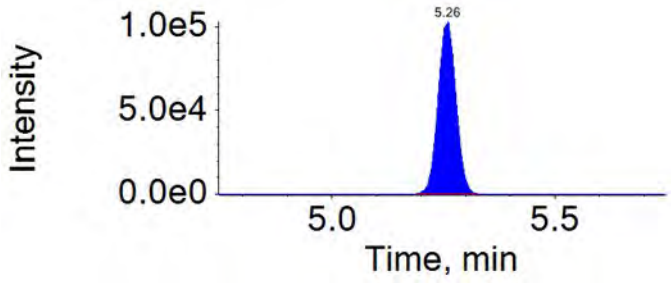
Extraction Standard: E13C8-PFOS	Injection Standard: 13C4-PFOS
507.0 / 80.0	503.0 / 80.0



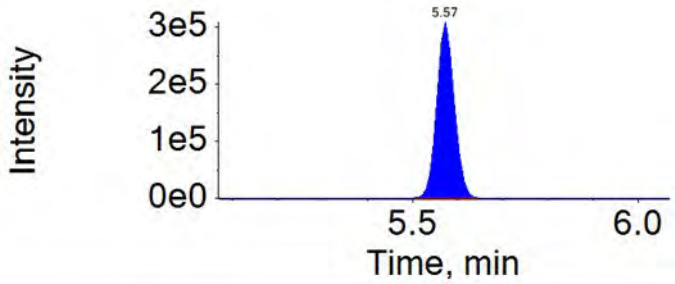


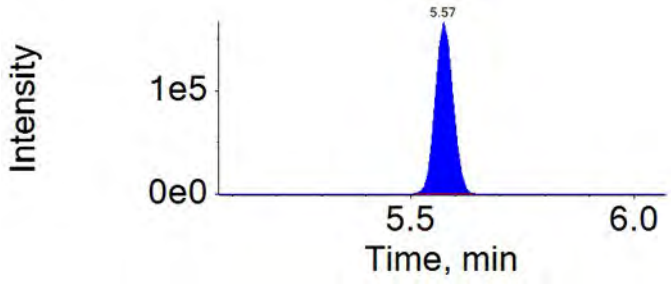
Extraction Standard: E13C9-PFNA	Injection Standard: 13C4-PFOS
472.0 / 427.0	503.0 / 80.0





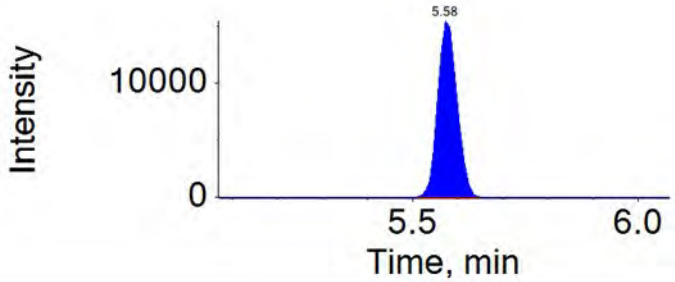
Extraction Standard: E13C6-PFDA	Injection Standard: 13C2-PFDA
519.0 / 474.0	515.0 / 470.0

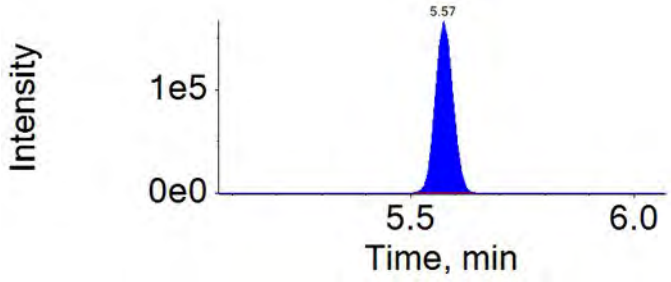




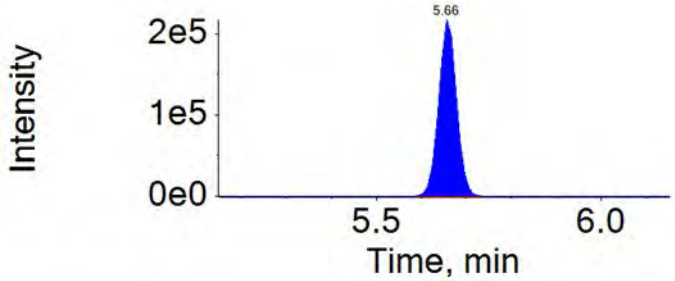
ICAL Name: 18NOV28DCAL **Result Table:** 18NOV28DCAL 11/28/2018 4:47:11 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

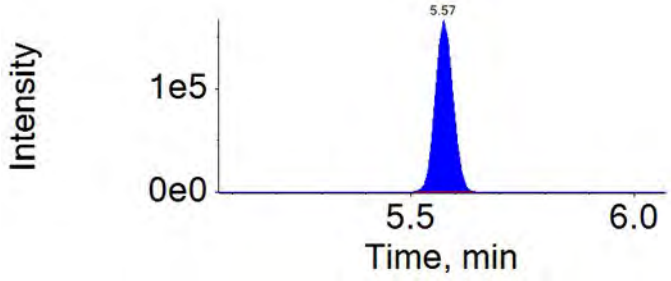
Extraction Standard: E13C2-8:2-FTS	Injection Standard: 13C2-PFDA
529.0 / 81.0	515.0 / 470.0



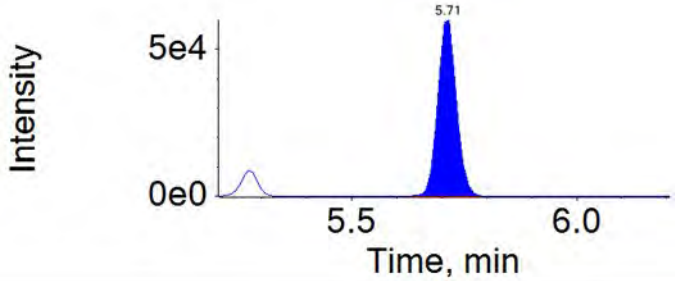


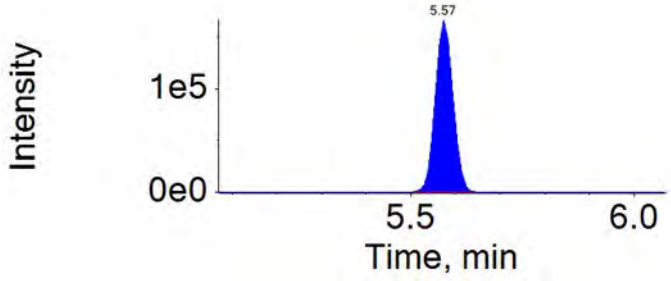
Extraction Standard: E13C8-PFOSA	Injection Standard: 13C2-PFDA
506.0 / 78.0	515.0 / 470.0



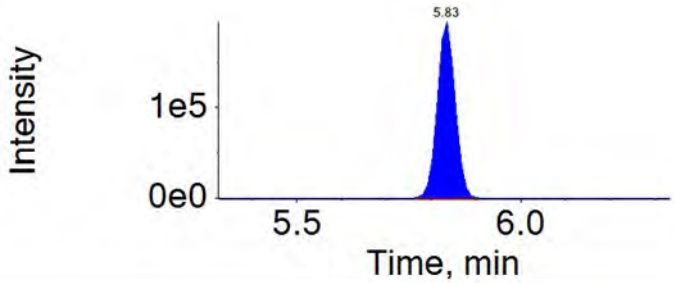


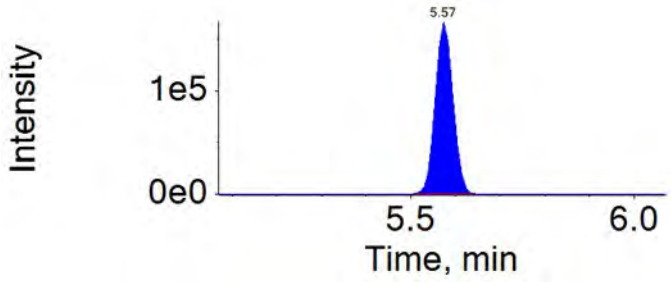
Extraction Standard: Ed3-NMeFOSAA	Injection Standard: 13C2-PFDA
573.0 / 419.0	515.0 / 470.0





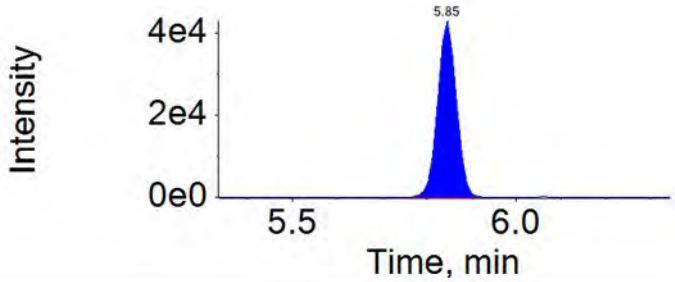
Extraction Standard: E13C7-PFUnDA	Injection Standard: 13C2-PFDA
570.0 / 525.0	515.0 / 470.0

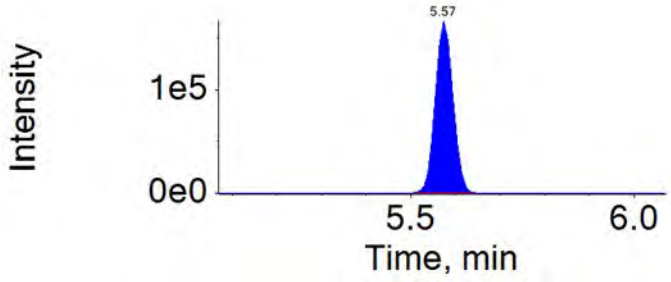




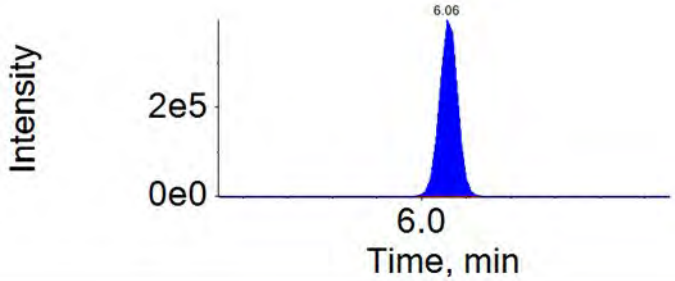
ICAL Name: 18NOV28DCAL **Result Table:** 18NOV28DCAL 11/28/2018 4:47:11 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

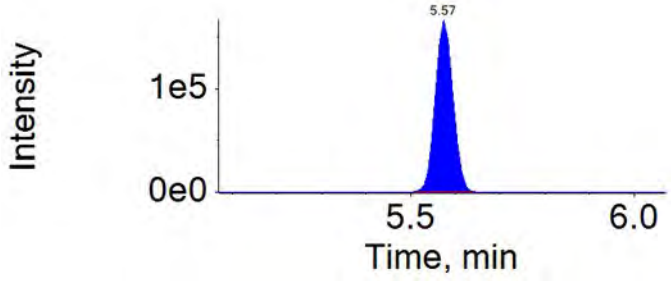
Extraction Standard: Ed5-NEtFOSAA	Injection Standard: 13C2-PFDA
589.0 / 419.0	515.0 / 470.0



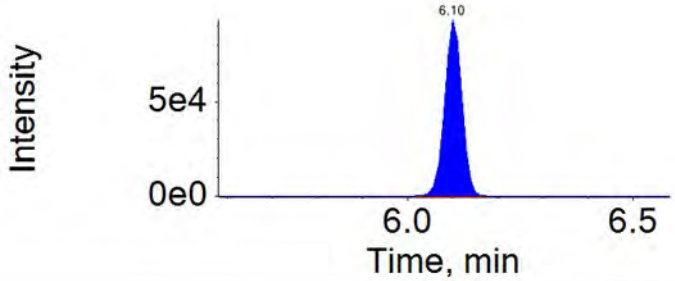


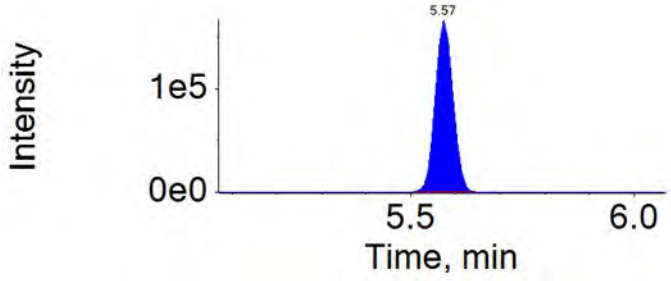
Extraction Standard: E13C2-PFDoDA	Injection Standard: 13C2-PFDA
615.0 / 570.0	515.0 / 470.0



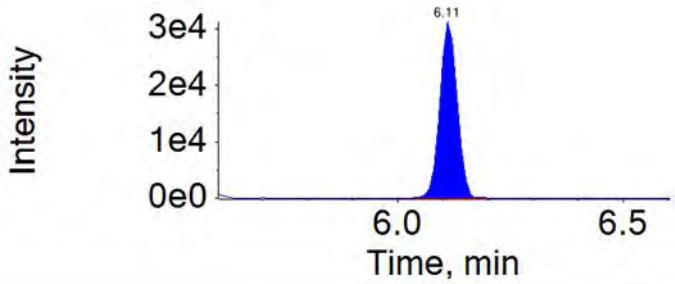


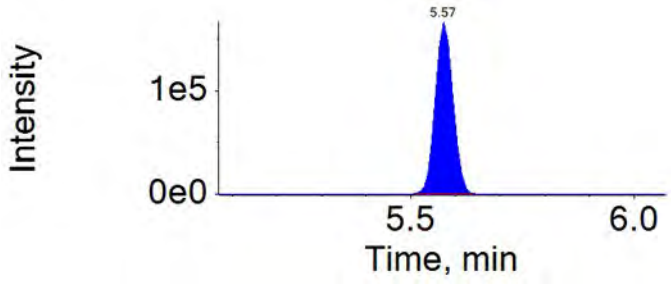
Extraction Standard: Ed7-NMePFOSAE	Injection Standard: 13C2-PFDA
623.0 / 59.0	515.0 / 470.0





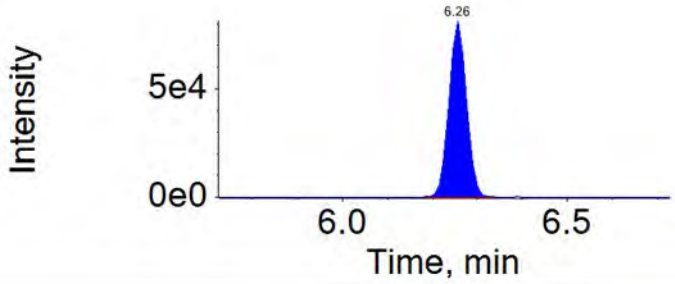
Extraction Standard: Ed3-NMePFOSA	Injection Standard: 13C2-PFDA
515.0 / 169.0	515.0 / 470.0

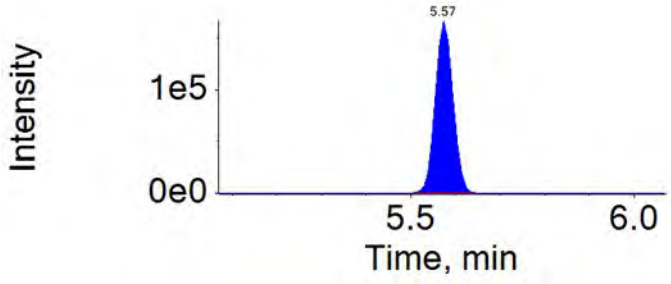




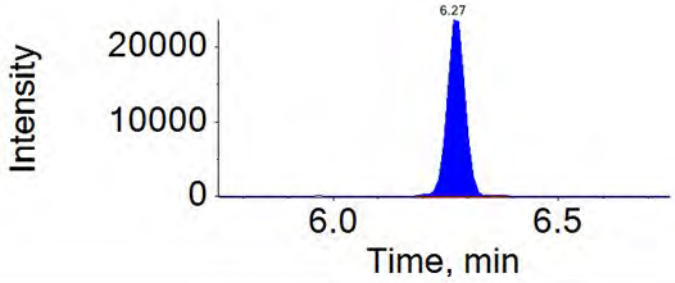
ICAL Name: 18NOV28DCAL **Result Table:** 18NOV28DCAL 11/28/2018 4:47:11 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

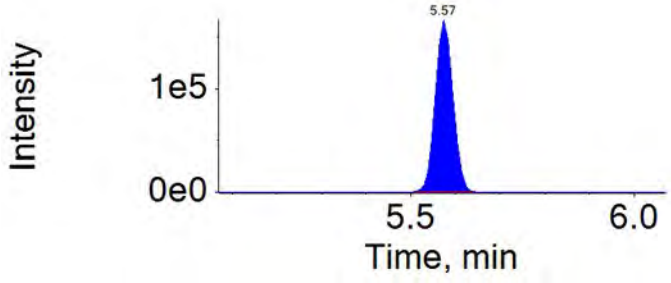
Extraction Standard: Ed9-NEtPFOSAE	Injection Standard: 13C2-PFDA
639.0 / 59.0	515.0 / 470.0



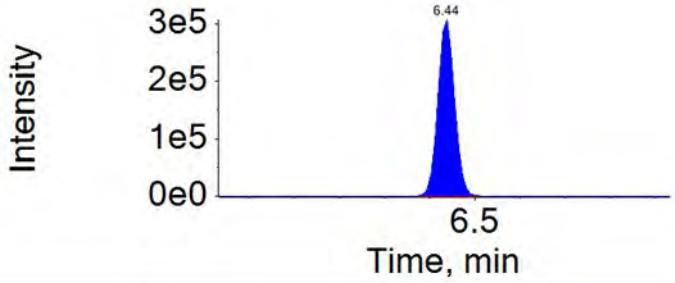


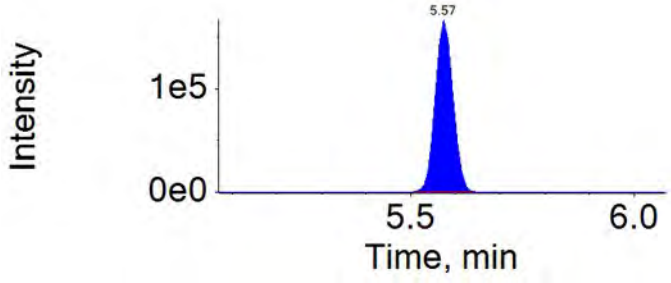
Extraction Standard: Ed5-NEtPFOSA	Injection Standard: 13C2-PFDA
531.0 / 169.0	515.0 / 470.0





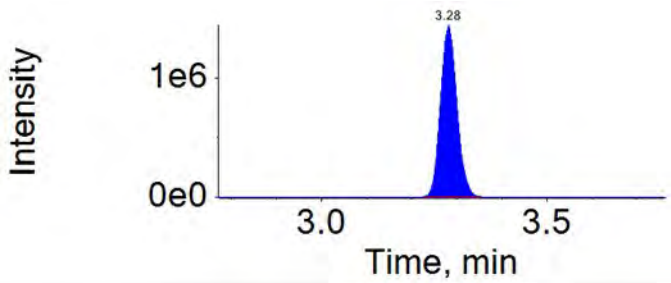
Extraction Standard: E13C2-PFTeDA	Injection Standard: 13C2-PFDA
715.0 / 670.0	515.0 / 470.0



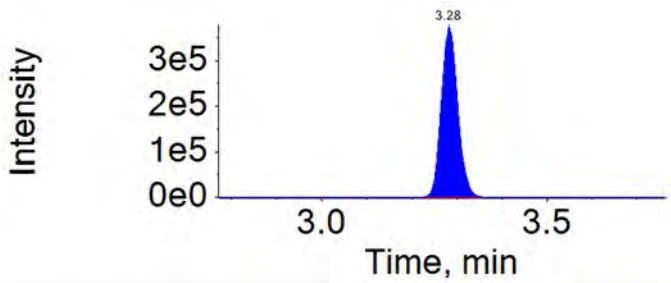


ICAL Name: 18NOV28DCAL **Result Table:** 18NOV28DCAL 11/28/2018 4:47:11 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

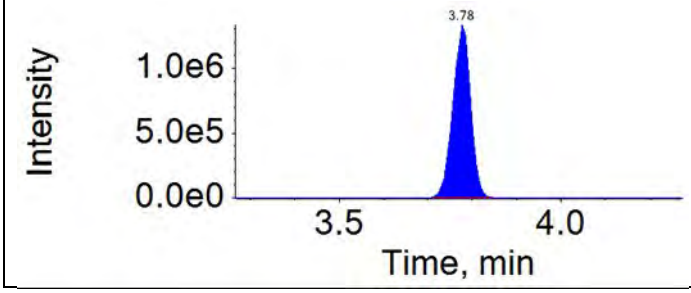
Analyte: PFBA
213.0 / 169.0



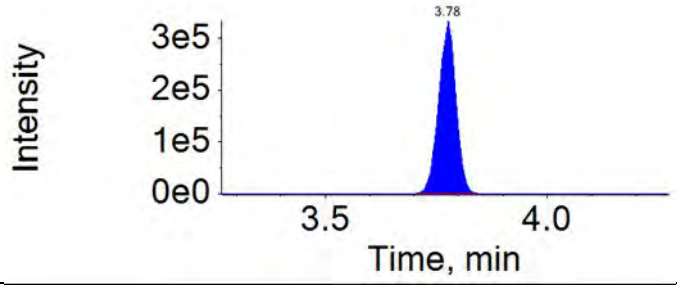
Extraction Standard: 13C4-PFBA
217.0 / 172.0



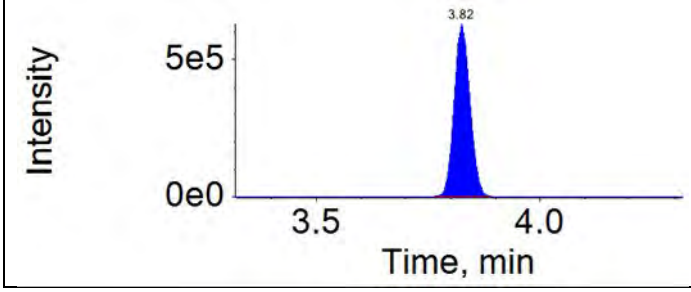
Analyte: PFPeA
263.0 / 219.0



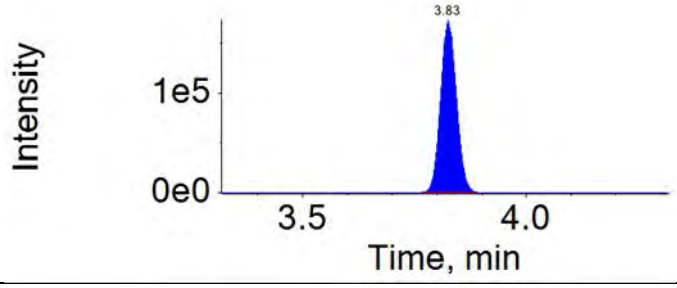
Extraction Standard: 13C5-PFPeA
268.0 / 223.0



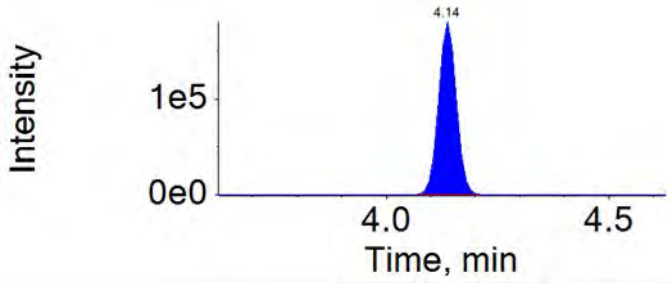
Analyte: PFBS
299.0 / 80.0



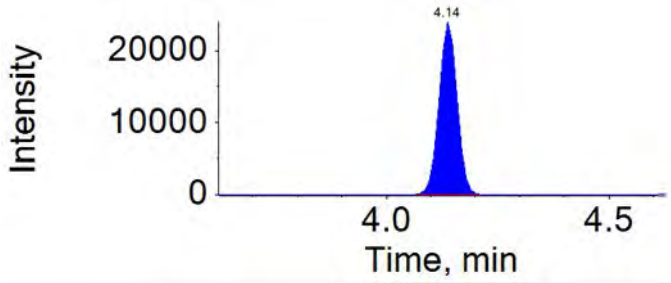
Extraction Standard: 13C3-PFBS
302.0 / 80.0



Analyte: 4:2-FTS
327.0 / 307.0

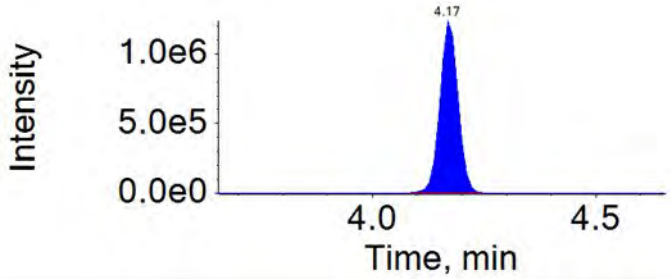


Extraction Standard: 13C2-4:2-FTS
329.0 / 81.0

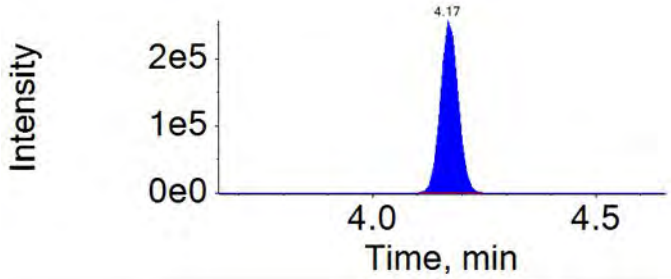


ICAL Name: 18NOV28DCAL **Result Table:** 18NOV28DCAL 11/28/2018 4:47:11 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

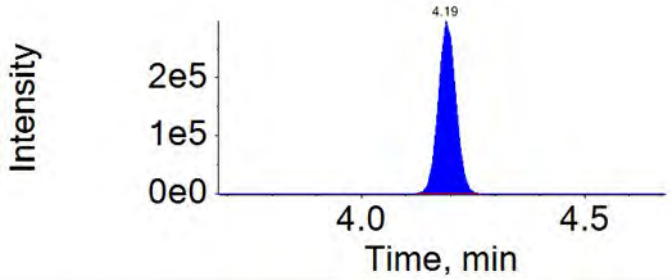
Analyte: PFHxA
313.0 / 269.0



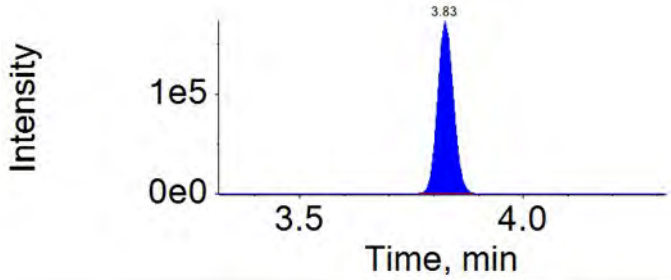
Extraction Standard: 13C5-PFHxA
318.0 / 273.0



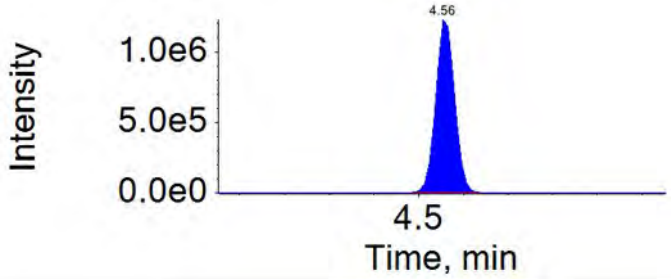
Analyte: PFPeS
349.0 / 80.0



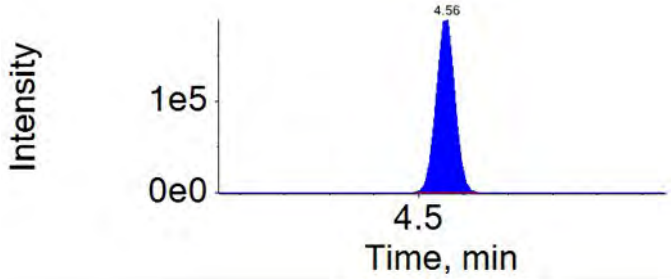
Extraction Standard: 13C3-PFBS
302.0 / 80.0



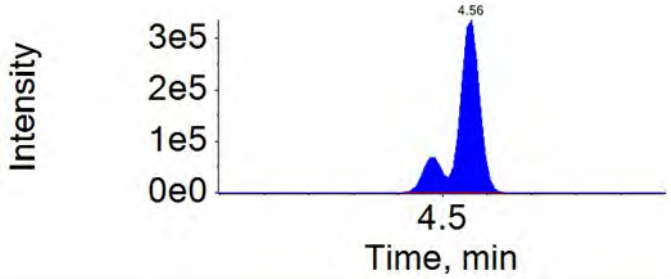
Analyte: PFHpA
363.0 / 319.0



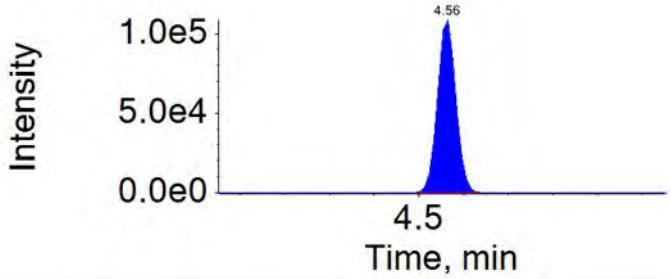
Extraction Standard: 13C4-PFHpA
367.0 / 322.0



Analyte: PFHxS
399.0 / 80.0



Extraction Standard: 13C3-PFHxS
402.0 / 80.0

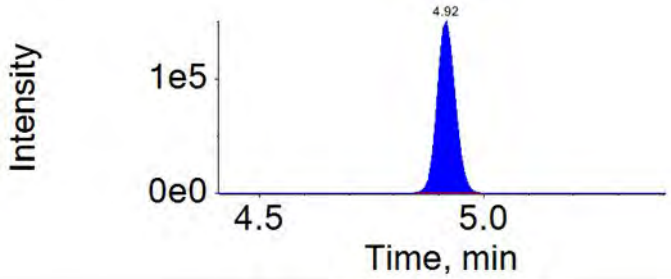


APPROVED
By MCD at 5:00 pm, 11/28/18

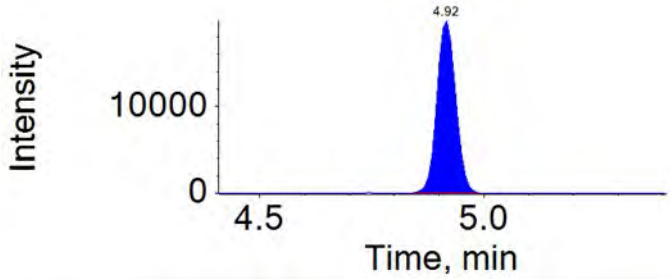
REVIEWED
By HMK at 12:22 pm, 11/29/18

ICAL Name: 18NOV28DCAL **Result Table:** 18NOV28DCAL 11/28/2018 4:47:11 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

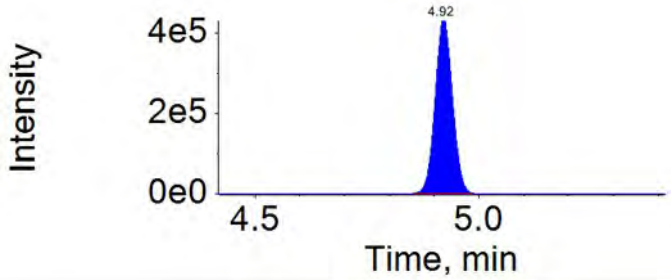
Analyte: 6:2-FTS
427.0 / 407.0



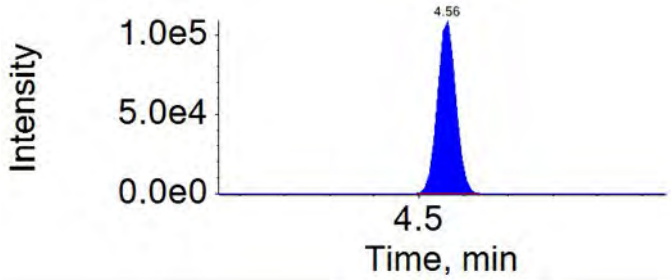
Extraction Standard: 13C2-6:2-FTS
429.0 / 81.0



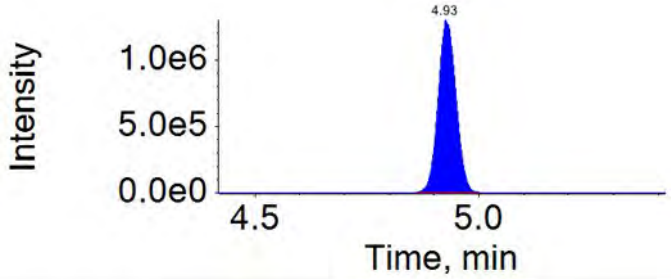
Analyte: PFHpS
449.0 / 80.0



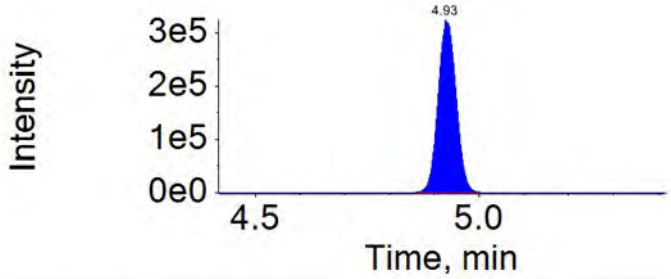
Extraction Standard: 13C3-PFHxS
402.0 / 80.0



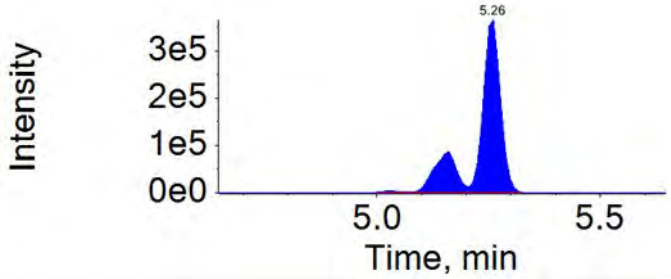
Analyte: PFOA
413.0 / 369.0



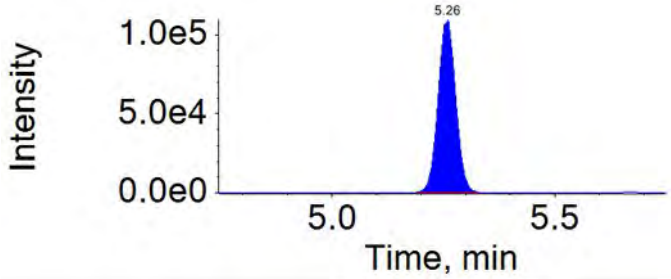
Extraction Standard: 13C8-PFOA
421.0 / 376.0



Analyte: PFOS
499.0 / 80.0



Extraction Standard: 13C8-PFOS
507.0 / 80.0

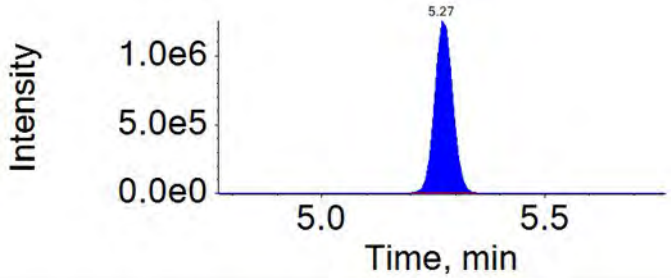


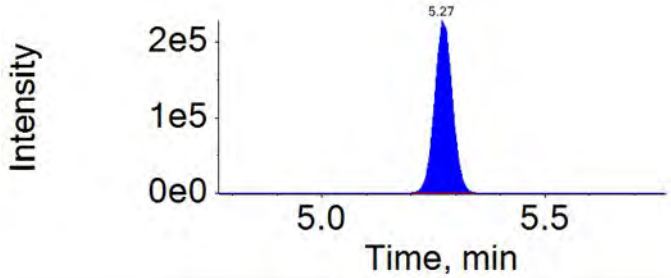
APPROVED
By MCD at 5:00 pm, 11/28/18

REVIEWED
By HMK at 12:22 pm, 11/29/18

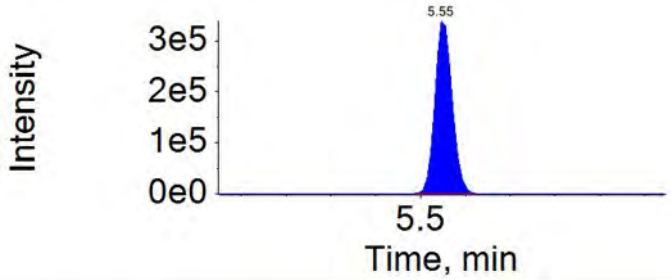
ICAL Name: 18NOV28DCAL **Result Table:** 18NOV28DCAL 11/28/2018 4:47:11 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

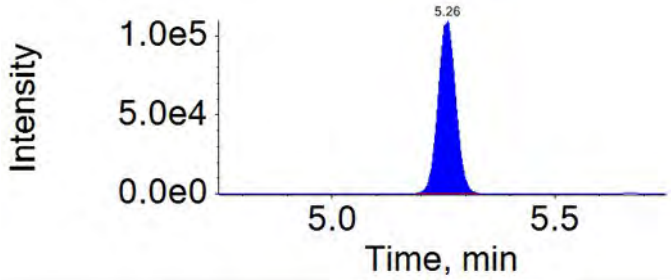
Analyte: PFNA	Extraction Standard: 13C9-PFNA
463.0 / 419.0	472.0 / 427.0



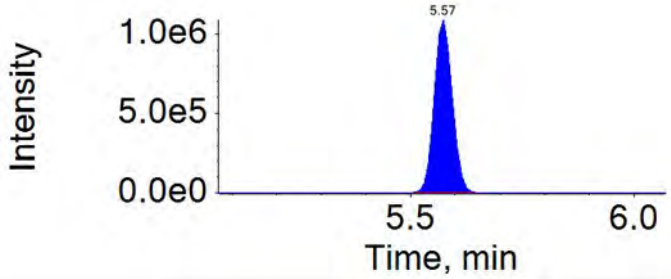


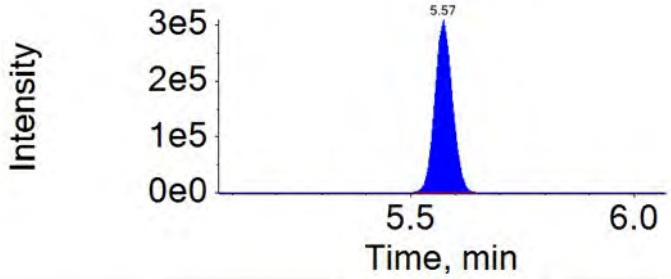
Analyte: PFNS	Extraction Standard: 13C8-PFOS
549.0 / 80.0	507.0 / 80.0



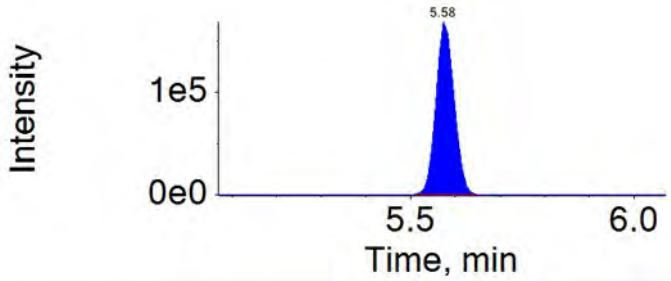


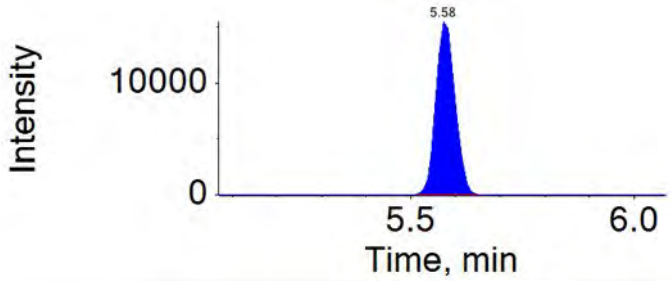
Analyte: PFDA	Extraction Standard: 13C6-PFDA
513.0 / 469.0	519.0 / 474.0





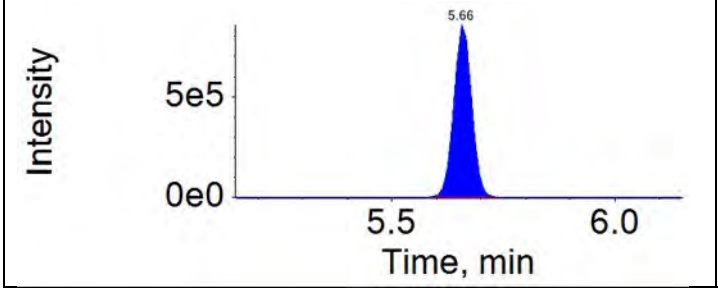
Analyte: 8:2-FTS	Extraction Standard: 13C2-8:2-FTS
527.0 / 507.0	529.0 / 81.0



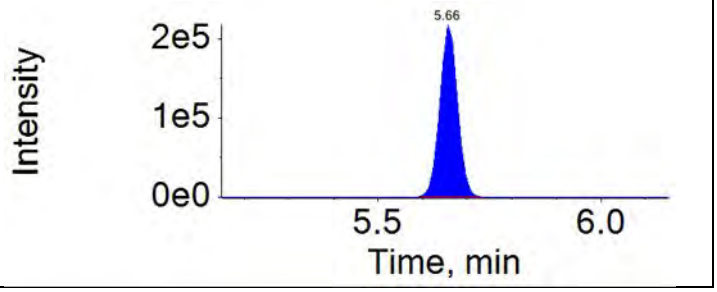


ICAL Name: 18NOV28DCAL **Result Table:** 18NOV28DCAL 11/28/2018 4:47:11 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

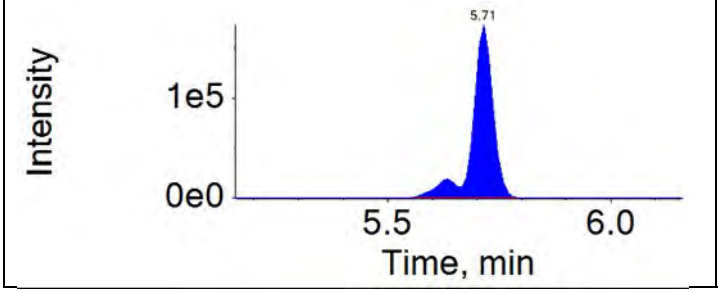
Analyte: PFOSA
498.0 / 78.0



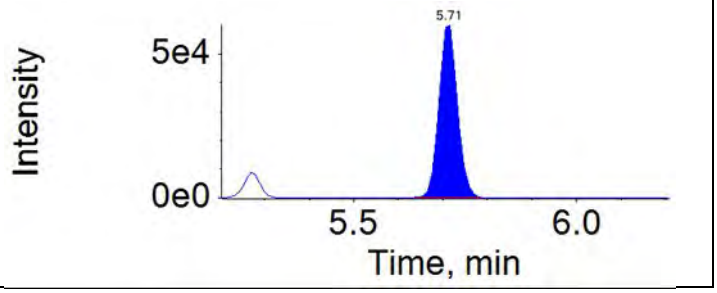
Extraction Standard: 13C8-PFOSA
506.0 / 78.0



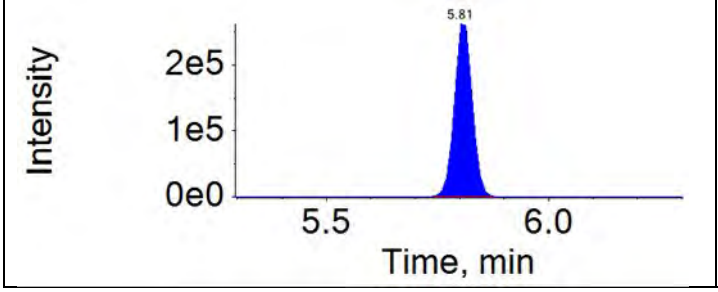
Analyte: NMeFOSAA
570.0 / 419.0



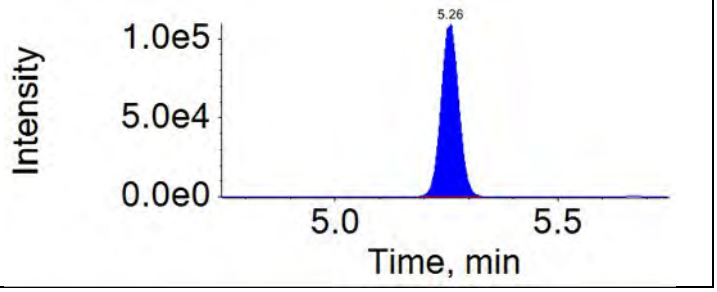
Extraction Standard: d3-NMeFOSAA
573.0 / 419.0



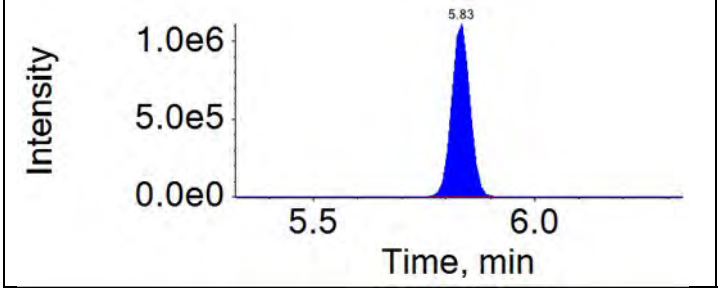
Analyte: PFDS
599.0 / 80.0



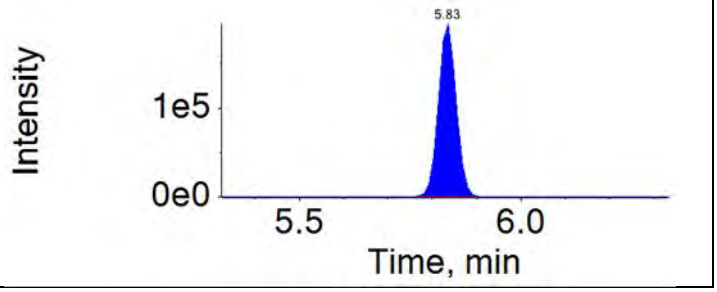
Extraction Standard: 13C8-PFOS
507.0 / 80.0



Analyte: PFUnDA
563.0 / 519.0



Extraction Standard: 13C7-PFUnDA
570.0 / 525.0

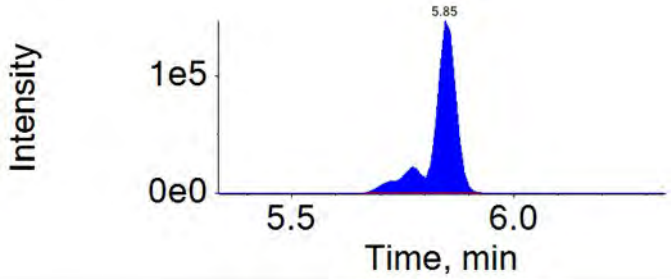


APPROVED
By MCD at 5:00 pm, 11/28/18

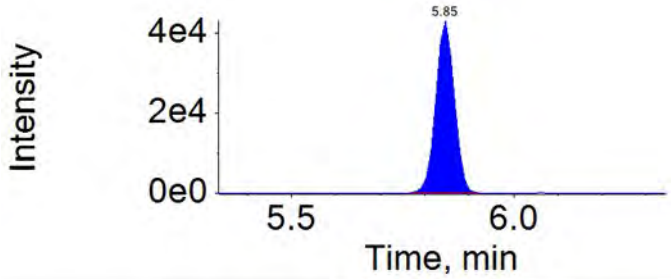
REVIEWED
By HMK at 12:22 pm, 11/29/18

ICAL Name: 18NOV28DCAL **Result Table:** 18NOV28DCAL 11/28/2018 4:47:11 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

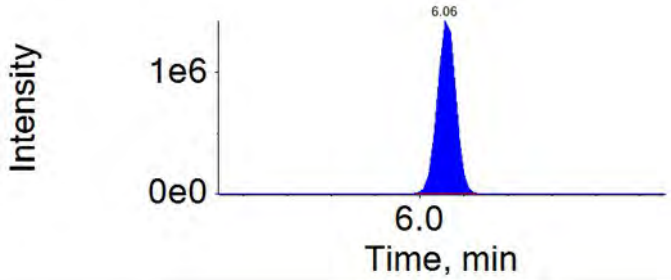
Analyte: NEtFOSAA
584.0 / 419.0



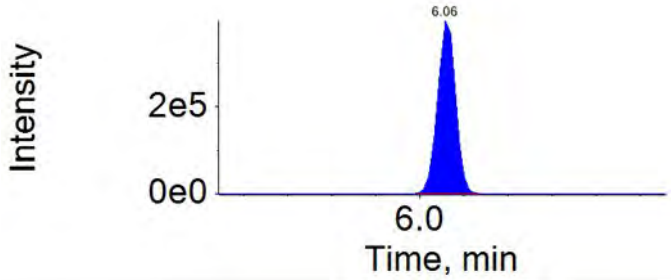
Extraction Standard: d5-NEtFOSAA
589.0 / 419.0



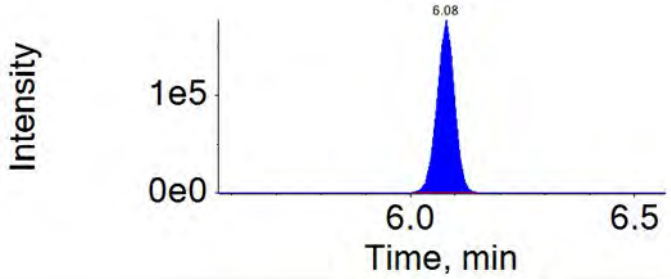
Analyte: PFDoDA
613.0 / 569.0



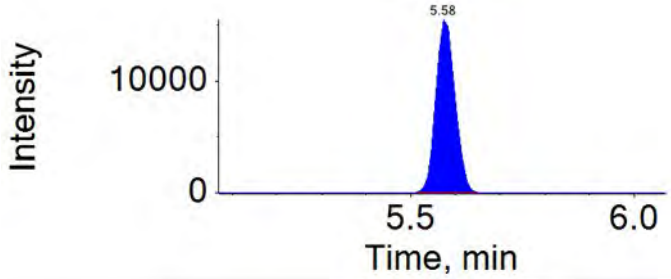
Extraction Standard: 13C2-PFDoDA
615.0 / 570.0



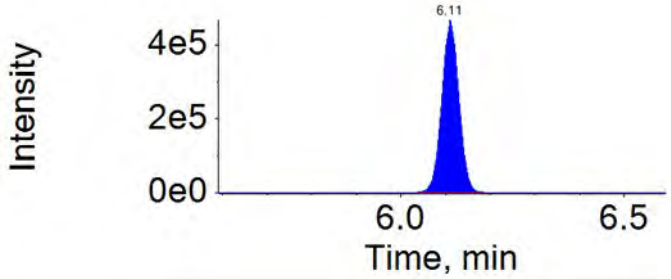
Analyte: 10:2-FTS
627.0 / 607.0



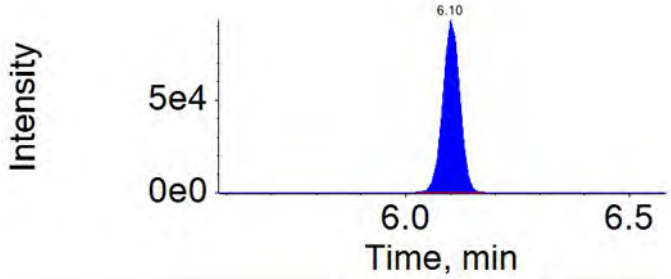
Extraction Standard: 13C2-8:2-FTS
529.0 / 81.0



Analyte: NMePFOSAE
616.0 / 59.0



Extraction Standard: d7-NMePFOSAE
623.0 / 59.0

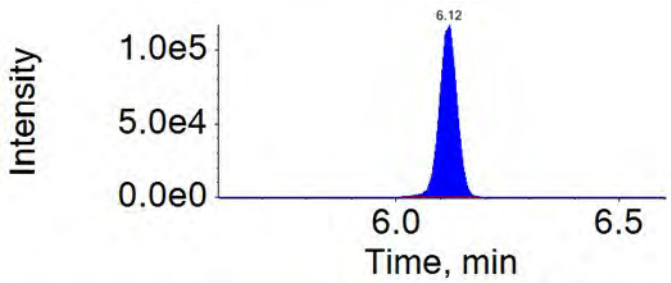


APPROVED
By MCD at 5:00 pm, 11/28/18

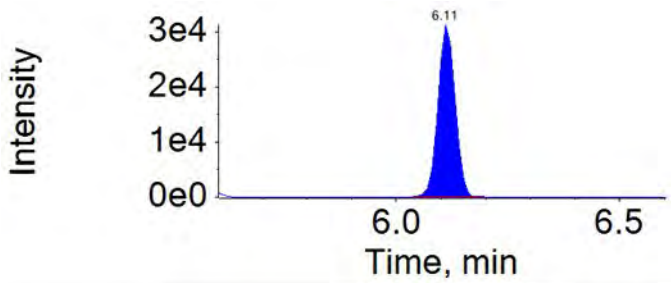
REVIEWED
By HMK at 12:22 pm, 11/29/18

ICAL Name: 18NOV28DCAL **Result Table:** 18NOV28DCAL 11/28/2018 4:47:11 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

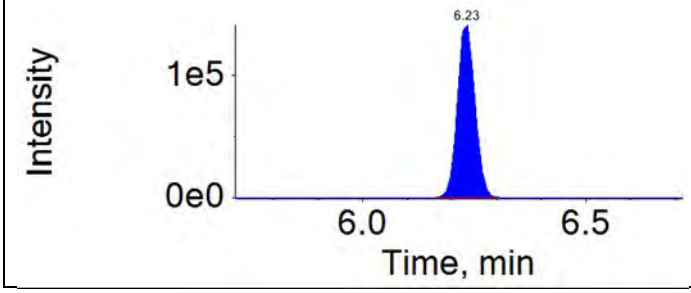
Analyte: NMePFOSA
512.0 / 169.0



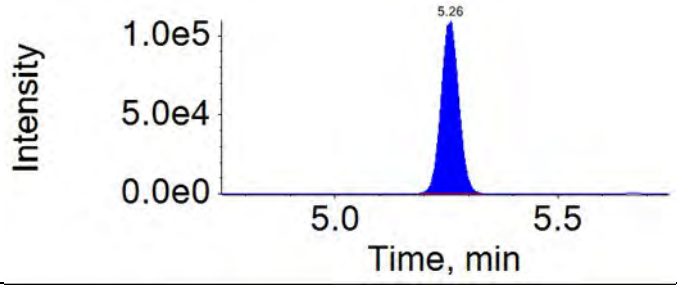
Extraction Standard: d3-NMePFOSA
515.0 / 169.0



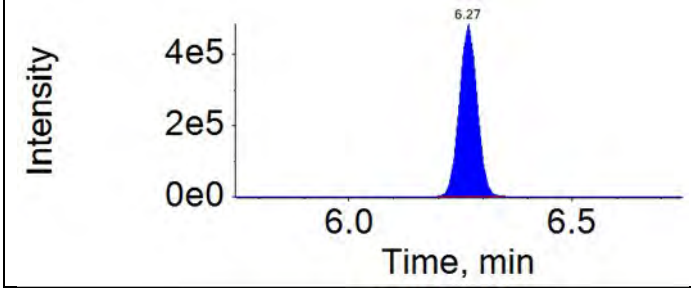
Analyte: PFDoS
699.0 / 80.0



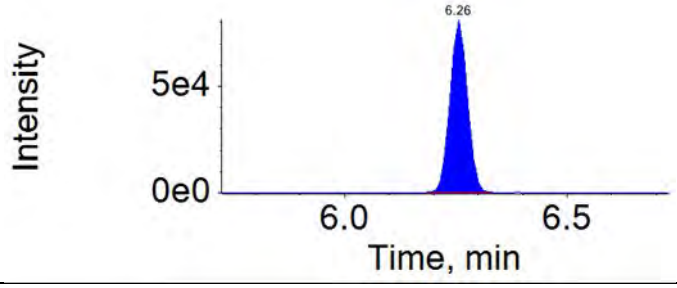
Extraction Standard: 13C8-PFOS
507.0 / 80.0



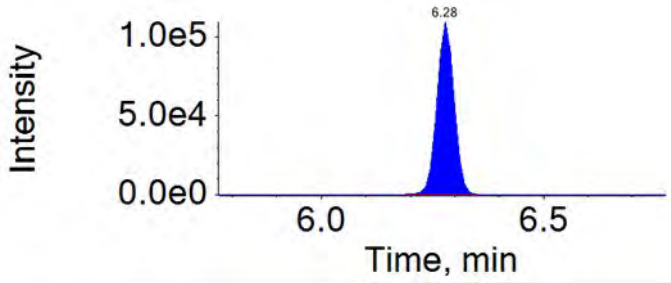
Analyte: NEtPFOSAE
630.0 / 59.0



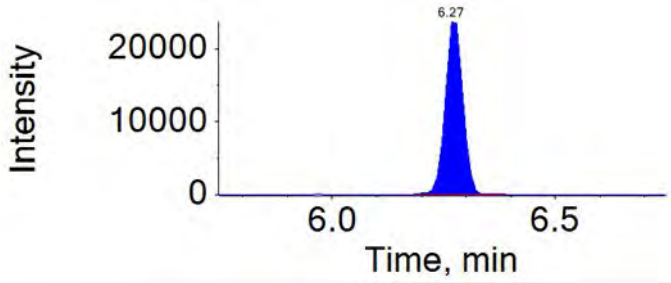
Extraction Standard: d9-NEtPFOSAE
639.0 / 59.0



Analyte: NEtPFOSA
526.0 / 169.0



Extraction Standard: d5-NEtPFOSA
531.0 / 169.0

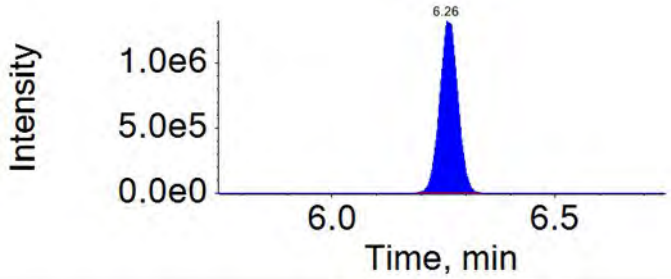


APPROVED
By MCD at 5:00 pm, 11/28/18

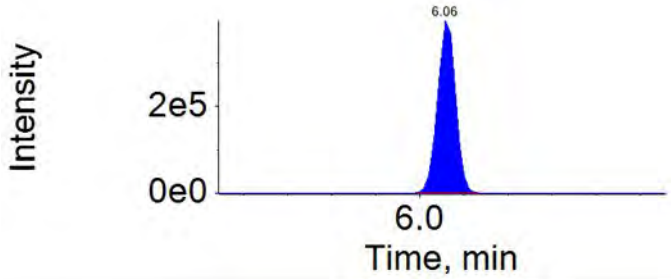
REVIEWED
By HMK at 12:22 pm, 11/29/18

ICAL Name: 18NOV28DCAL **Result Table:** 18NOV28DCAL 11/28/2018 4:47:11 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

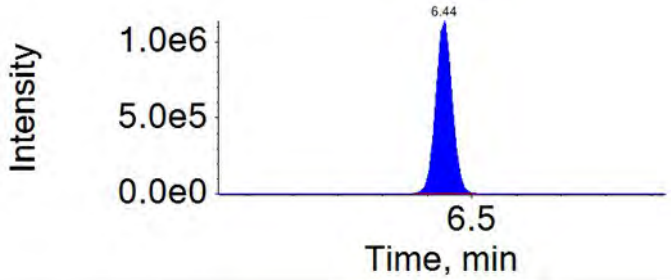
Analyte: PFTrDA
663.0 / 619.0



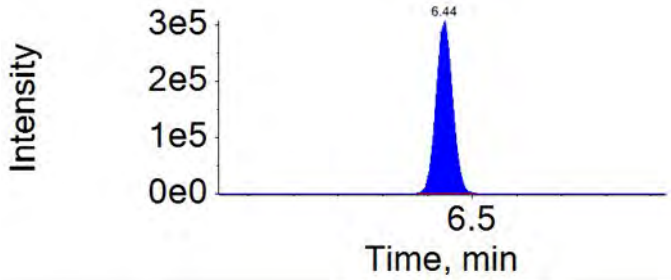
Extraction Standard: 13C2-PFDoDA
615.0 / 570.0



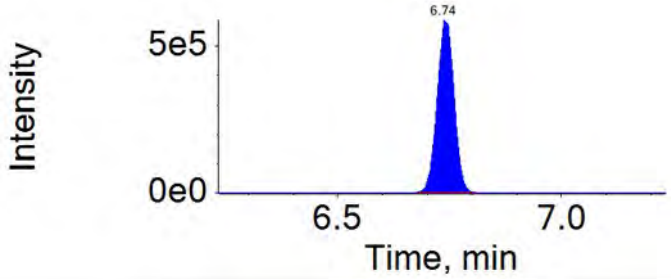
Analyte: PFTeDA
713.0 / 669.0



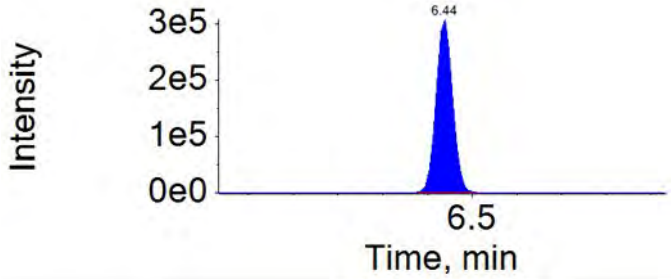
Extraction Standard: 13C2-PFTeDA
715.0 / 670.0



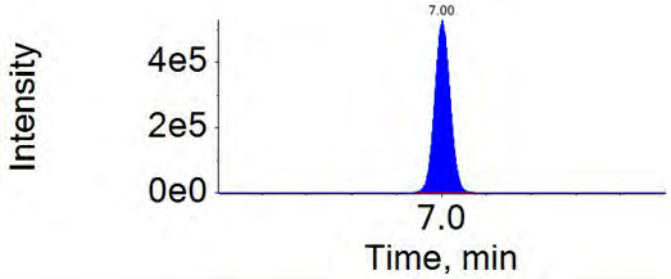
Analyte: PFHxDA
813.0 / 769.0



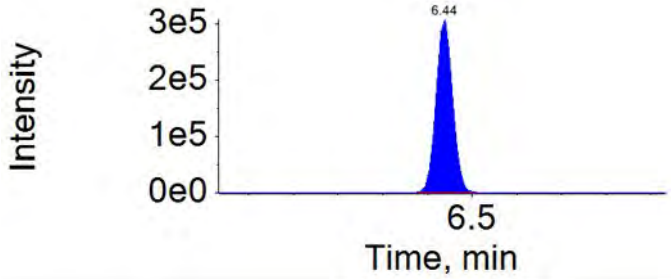
Extraction Standard: 13C2-PFTeDA
715.0 / 670.0



Analyte: PFODA
913.0 / 869.0



Extraction Standard: 13C2-PFTeDA
715.0 / 670.0



APPROVED
By MCD at 5:00 pm, 11/28/18

REVIEWED
By HMK at 12:22 pm, 11/29/18

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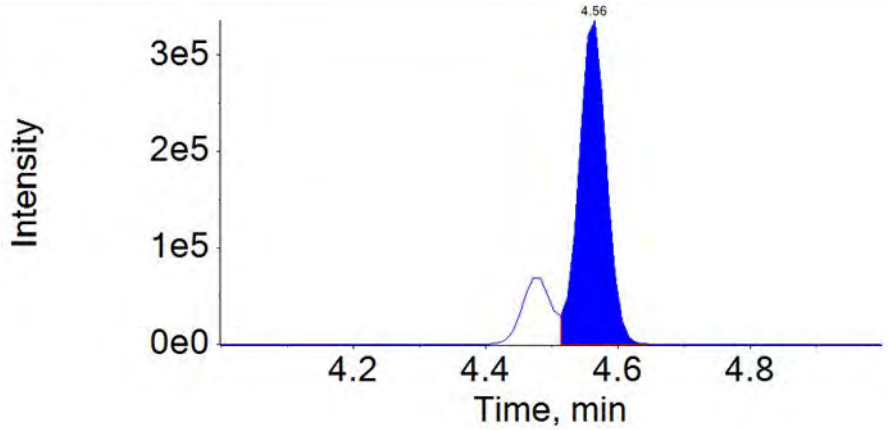
Auto Integrations prior to Manual Integration

Print Date: 11/28/2018 4:54 PM
Template: MQ-OrigInteg-16NOV21.docx

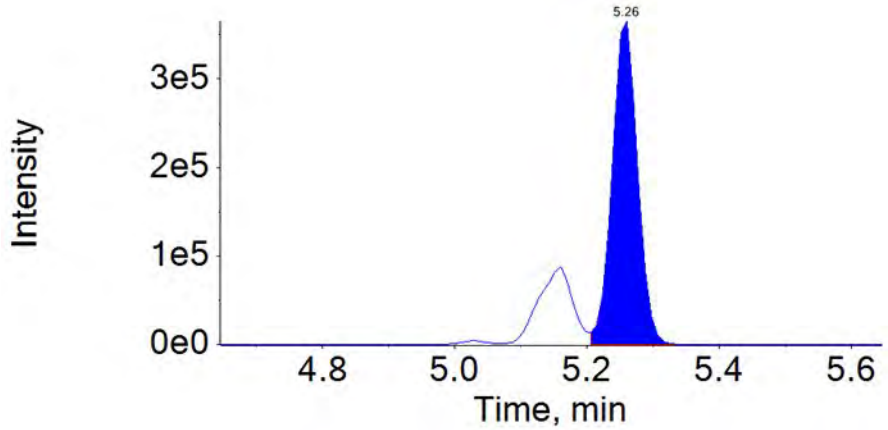
Results Table Name: 18NOV28DCAL
Results Table Date: 11/28/2018 4:52:53 PM
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

Component Name:
PFHxS
RT (min.):
4.56
Peak Area:
976399.82
Mass Range:
399.0 / 80.0
File Name:
18NOV28DCAL-10.wiff
Sample Name:
CAL5



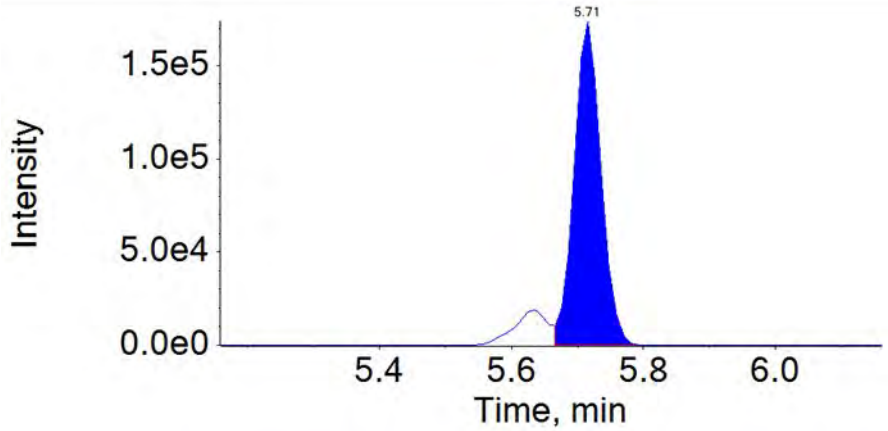
Integration Comment: incorrect integration

Component Name:
PFOS
RT (min.):
5.26
Peak Area:
977368.32
Mass Range:
499.0 / 80.0
File Name:
18NOV28DCAL-10.wiff
Sample Name:
CAL5



Integration Comment: incorrect integration

Component Name:
NMeFOSAA
RT (min.):
5.71
Peak Area:
489906.15
Mass Range:
570.0 / 419.0
File Name:
18NOV28DCAL-10.wiff
Sample Name:
CAL5



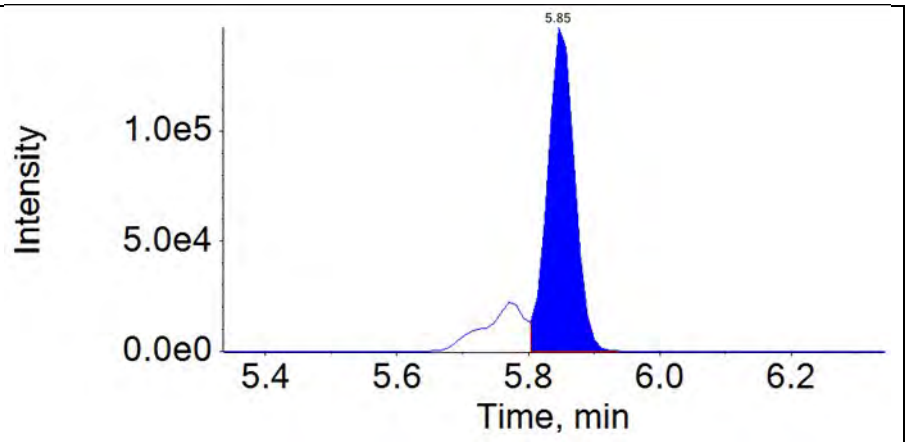
Integration Comment: incorrect integration

APPROVED
By MCD at 5:00 pm, 11/28/18

REVIEWED
By HMK at 12:22 pm, 11/29/18

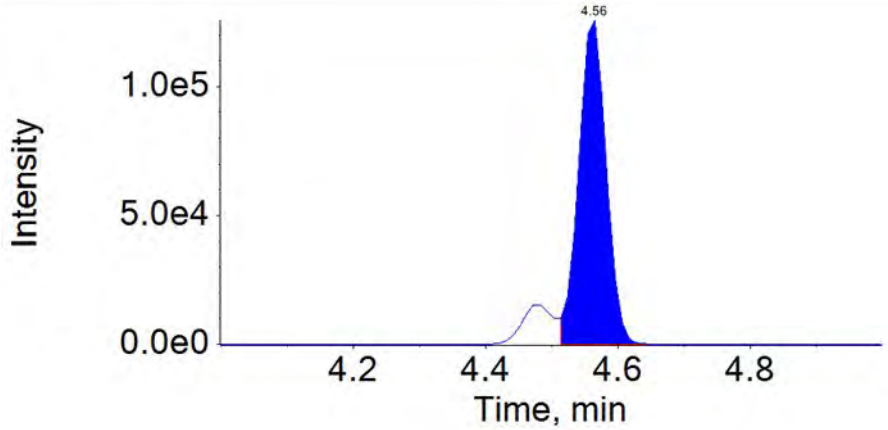
Results Table Name: 18NOV28DCAL
Results Table Date: 11/28/2018 4:52:53 PM
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

Component Name:
NEtFOSAA
RT (min.):
5.85
Peak Area:
417736.88
Mass Range:
584.0 / 419.0
File Name:
18NOV28DCAL-10.wiff
Sample Name:
CAL5



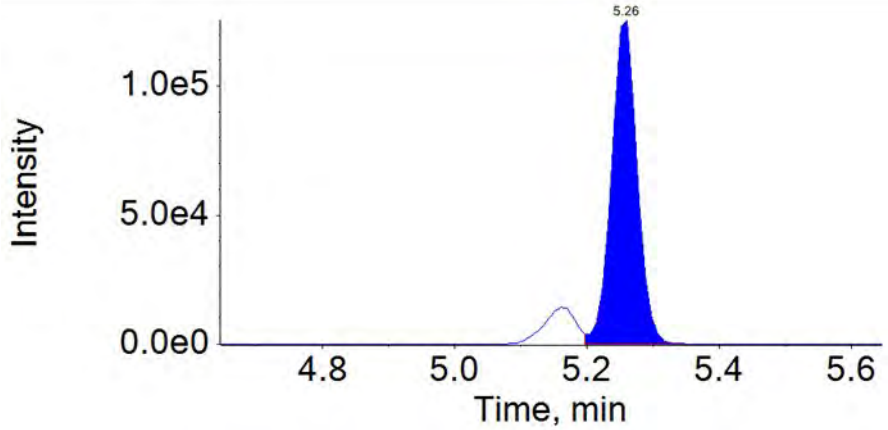
Integration Comment: incorrect integration

Component Name:
PFHxS_2
RT (min.):
4.56
Peak Area:
364661.03
Mass Range:
399.0 / 99.0
File Name:
18NOV28DCAL-10.wiff
Sample Name:
CAL5



Integration Comment: incorrect integration

Component Name:
PFOS_2
RT (min.):
5.26
Peak Area:
341158.00
Mass Range:
499.0 / 99.0
File Name:
18NOV28DCAL-10.wiff
Sample Name:
CAL5



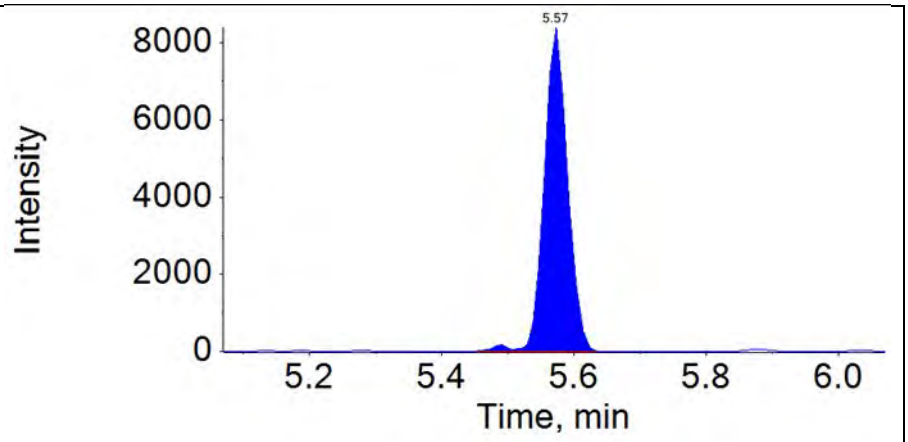
Integration Comment: incorrect integration

APPROVED
By MCD at 5:00 pm, 11/28/18

REVIEWED
By HMK at 12:22 pm, 11/29/18

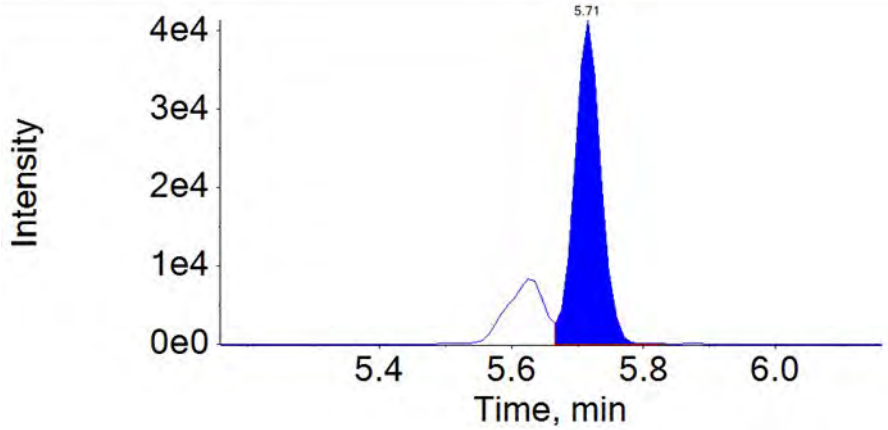
Results Table Name: 18NOV28DCAL
Results Table Date: 11/28/2018 4:52:53 PM
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

Component Name:
PFDA_2
RT (min.):
5.57
Peak Area:
20732.67
Mass Range:
513.0 / 169.0
File Name:
18NOV28DCAL-10.wiff
Sample Name:
CAL5



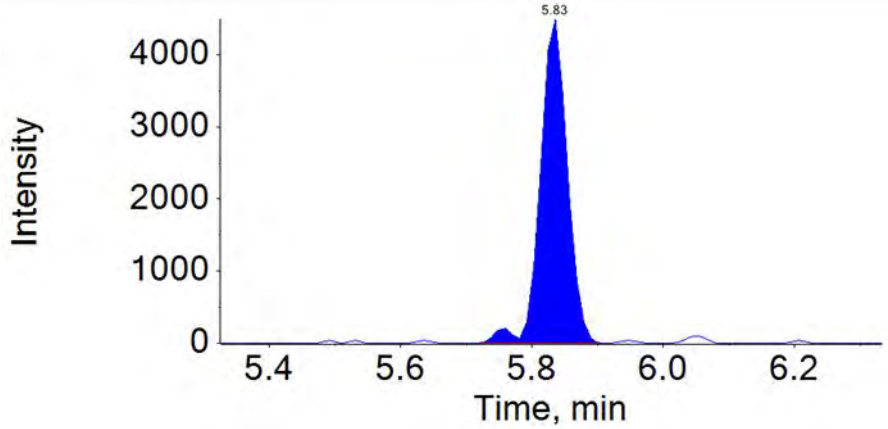
Integration Comment: incorrect integration

Component Name:
NMeFOSAA_2
RT (min.):
5.71
Peak Area:
113720.56
Mass Range:
570.0 / 483.0
File Name:
18NOV28DCAL-10.wiff
Sample Name:
CAL5



Integration Comment: incorrect integration

Component Name:
PFUnDA_2
RT (min.):
5.83
Peak Area:
12880.94
Mass Range:
563.0 / 169.0
File Name:
18NOV28DCAL-10.wiff
Sample Name:
CAL5



Integration Comment: incorrect integration

APPROVED
By MCD at 5:00 pm, 11/28/18

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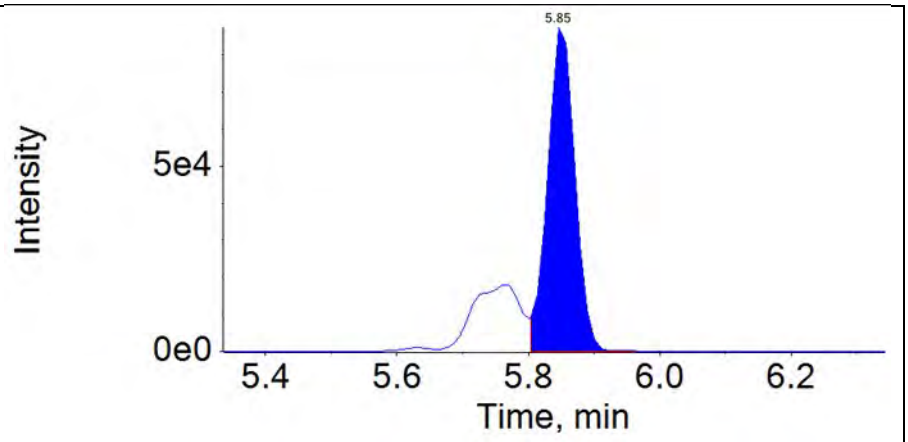
By HMK at 12:22 pm, 11/29/18

Results Table Name: 18NOV28DCAL
Results Table Date: 11/28/2018 4:52:53 PM
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

Component Name:
NEtFOSAA_2
RT (min.):
5.85
Peak Area:
253789.74
Mass Range:
584.0 / 526.0
File Name:
18NOV28DCAL-10.wiff
Sample Name:
CAL5



Integration Comment: incorrect integration

APPROVED
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By HMK at 12:22 pm, 11/29/18

Results Table Name: 18NOV28DCAL
Results Table Date: 11/28/2018 4:52:53 PM
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

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LC-MS/MS Analysis Report

Printed: 11/28/2018 4:51:00 PM
Template: IonRatio18OCT10

Ion Ratio Report

Sample Name: CAL5 **Instrument Name:** LM27631 **File Name:** 18NOV28DCAL-10.wiff

Component Name	RT	RRT	Analyte Area Response	Int Typ	Expected Ion Ratio	Ion Ratio	Ion Ratio % Diff	Ion Ratio Limit	Ion Ratio OOS
PFBS	3.82	1.00	1542881.65	A	0.3655	0.3660			
PFBS_2	3.82	1.00	564738.60	A	0.3655	0.3660	0	50	
4:2-FTS	4.14	1.00	498650.67	A	0.6383	0.6282			
4:2-FTS_2	4.14	1.00	313233.41	A	0.6383	0.6282	-2	50	
PFHxA	4.17	1.00	3464657.28	A	0.0103	0.0109			
PFHxA_2	4.17	1.00	37840.59	A	0.0103	0.0109	6	50	
PFPeS	4.19	1.10	809727.98	A	0.4976	0.4890			
PFPeS_2	4.19	1.10	395964.11	A	0.4976	0.4890	-2	50	
PFHpA	4.56	1.00	3592806.18	A	0.0557	0.0523			
PFHpA_2	4.56	1.00	187766.14	A	0.0557	0.0523	-6	50	
PFHxS	4.56	1.00	1191482.72	M	0.3693	0.3492			
PFHxS_2	4.56	1.00	416064.44	M	0.3693	0.3492	-5	50	
6:2-FTS	4.92	1.00	426727.66	A	0.6625	0.6532			
6:2-FTS_2	4.92	1.00	278752.30	A	0.6625	0.6532	-1	50	
PFHpS	4.92	1.08	1171216.60	A	0.3915	0.3965			
PFHpS_2	4.92	1.08	464342.40	A	0.3915	0.3965	1	50	
PFOA	4.93	1.00	3601538.31	A	0.0573	0.0569			
PFOA_2	4.93	1.00	205017.31	A	0.0573	0.0569	-1	50	
PFOS	5.26	1.00	1305020.45	M	0.2960	0.2984			
PFOS_2	5.26	1.00	389398.22	M	0.2960	0.2984	1	50	
PFNA	5.27	1.00	3536255.08	A	0.0201	0.0194			
PFNA_2	5.27	1.00	68777.91	A	0.0201	0.0194	-3	50	
PFNS	5.55	1.06	909879.21	A	0.4794	0.4787			
PFNS_2	5.55	1.06	435583.86	A	0.4794	0.4787	0	50	
PFDA	5.57	1.00	3072749.00	A	0.0075	0.0067			
PFDA_2	5.57	1.00	20445.65	M	0.0075	0.0067	-11	50	
8:2-FTS	5.58	1.00	478390.07	A	0.5380	0.5702			
8:2-FTS_2	5.58	1.00	272796.88	A	0.5380	0.5702	6	50	
NMeFOSAA	5.71	1.00	557354.59	M	0.2305	0.2631			
NMeFOSAA_2	5.71	1.00	146652.83	M	0.2305	0.2631	14	50	
PFDS	5.81	1.10	737231.87	A	0.5356	0.4610			
PFDS_2	5.81	1.10	339890.15	A	0.5356	0.4610	-14	50	
PFUnDA	5.83	1.00	3163283.79	A	0.0038	0.0039			
PFUnDA_2	5.83	1.00	12485.39	M	0.0038	0.0039	4	50	
NEtFOSAA	5.85	1.00	512792.42	M	0.7356	0.6745			
NEtFOSAA_2	5.85	1.00	345864.54	M	0.7356	0.6745	-8	50	
PFDoDA	6.06	1.00	4161895.87	A	0.0130	0.0126			
PFDoDA_2	6.06	1.00	52575.90	A	0.0130	0.0126	-3	50	
10:2-FTS	6.08	1.09	480384.06	A	0.6989	0.7284			
10:2-FTS_2	6.08	1.09	349903.28	A	0.6989	0.7284	4	50	
PFTrDA	6.26	1.03	3743763.62	A	0.0090	0.0080			
PFTrDA_2	6.26	1.03	30122.74	A	0.0090	0.0080	-11	50	
PFTeDA	6.44	1.00	2897106.24	A	0.0056	0.0061			
PFTeDA_2	6.44	1.00	17720.47	A	0.0056	0.0061	9	50	
PFHxDA	6.74	1.05	1551331.12	A	0.0646	0.0623			
PFHxDA_2	6.74	1.05	96698.01	A	0.0646	0.0623	-3	50	
PFODA	7.00	1.09	1272897.40	A	0.0264	0.0256			
PFODA_2	7.00	1.09	32592.46	A	0.0264	0.0256	-3	50	

APPROVED
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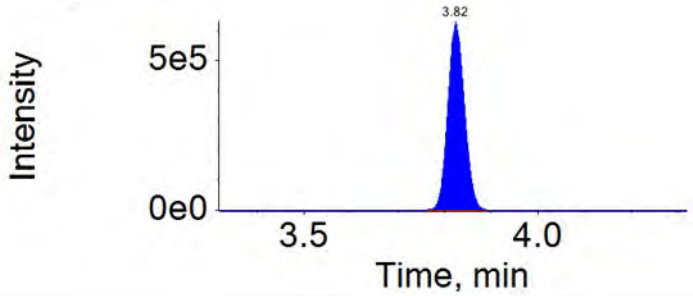
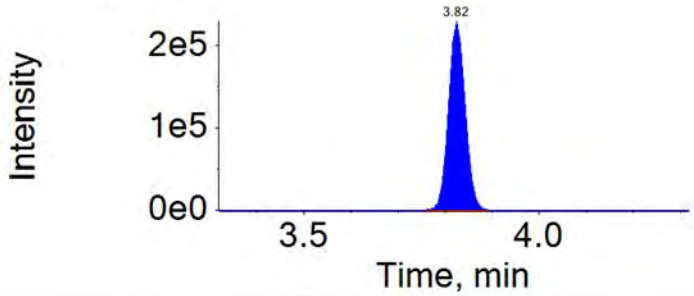
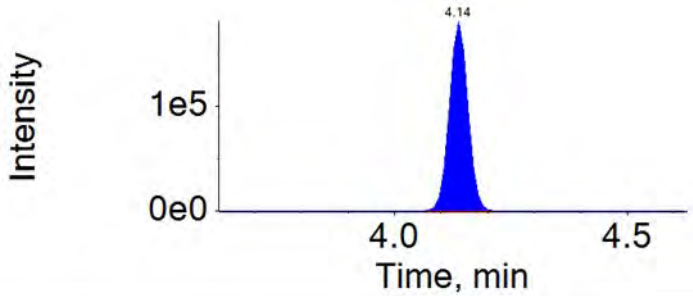
Component: PFBS
Primary Mass: 299.0 / 80.0



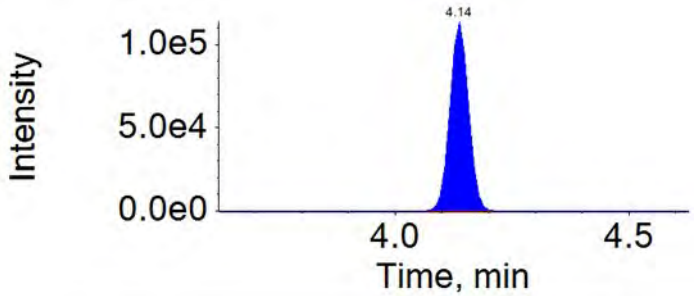
Component: PFBS_2
Secondary Mass: 299.0 / 99.0



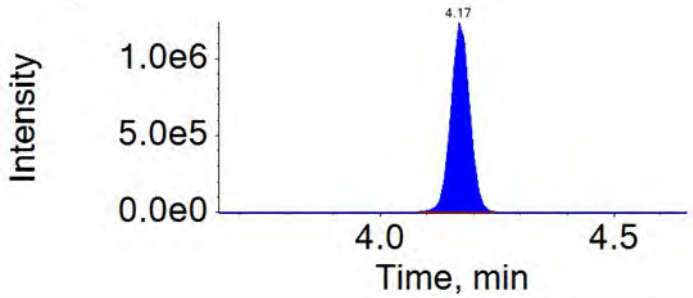
Component: 4:2-FTS
Primary Mass: 327.0 / 307.0



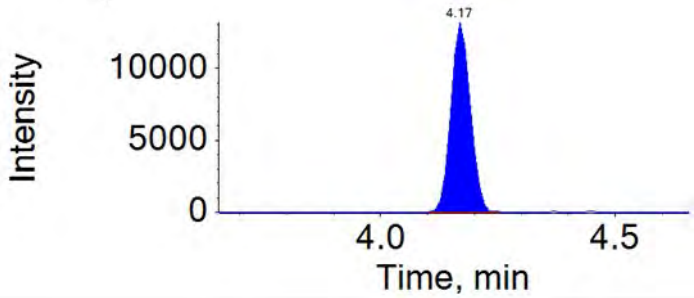
Component: 4:2-FTS_2
Secondary Mass: 327.0 / 81.0



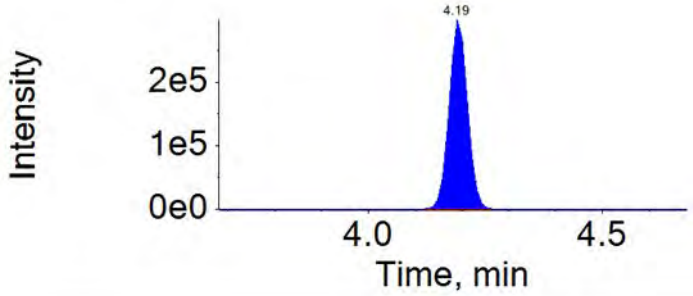
Component: PFHxA
Primary Mass: 313.0 / 269.0



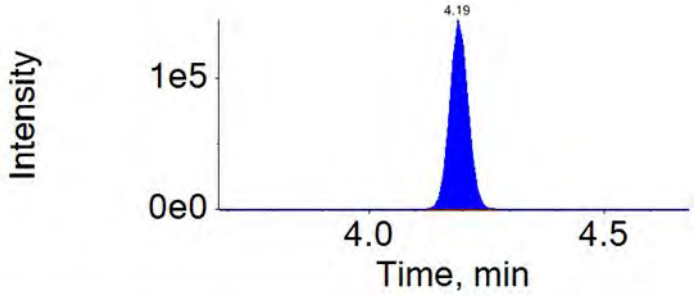
Component: PFHxA_2
Secondary Mass: 313.0 / 119.0



Component: PFPeS
Primary Mass: 349.0 / 80.0



Component: PFPeS_2
Secondary Mass: 349.0 / 99.0



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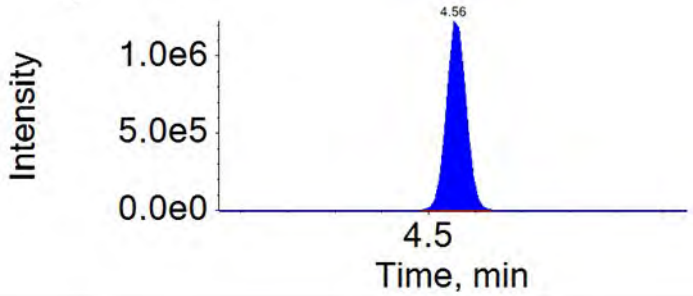
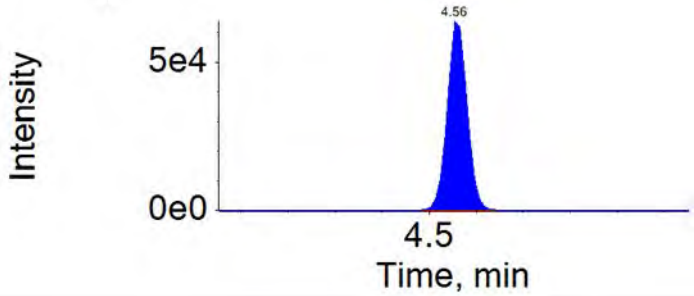
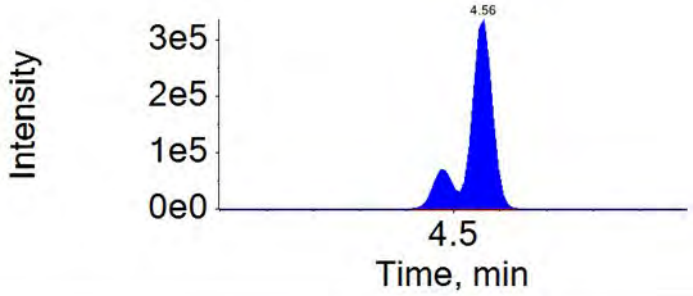
Component: PFHpA
Primary Mass: 363.0 / 319.0



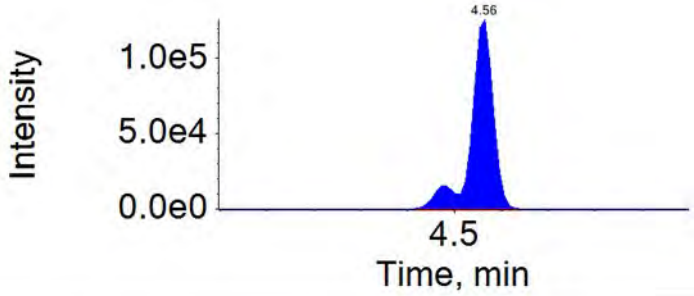
Component: PFHpA_2
Secondary Mass: 363.0 / 169.0



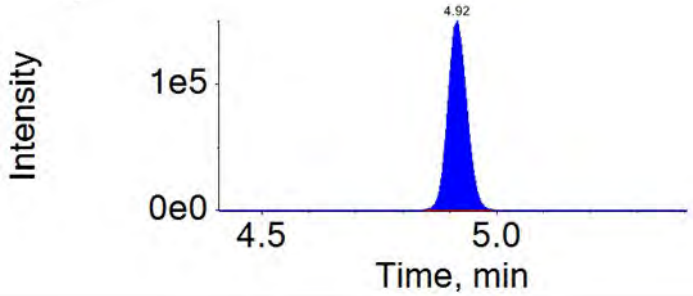
Component: PFHxS
Primary Mass: 399.0 / 80.0



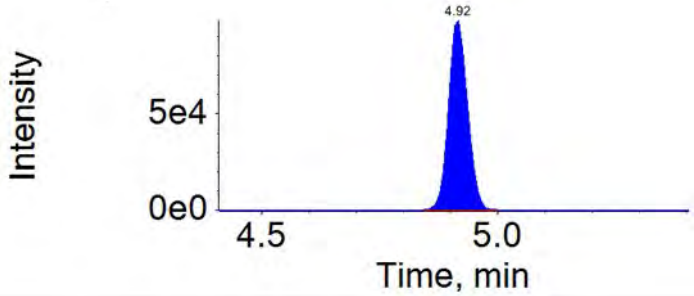
Component: PFHxS_2
Secondary Mass: 399.0 / 99.0



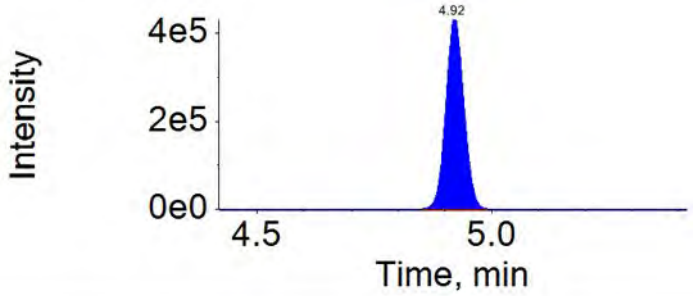
Component: 6:2-FTS
Primary Mass: 427.0 / 407.0



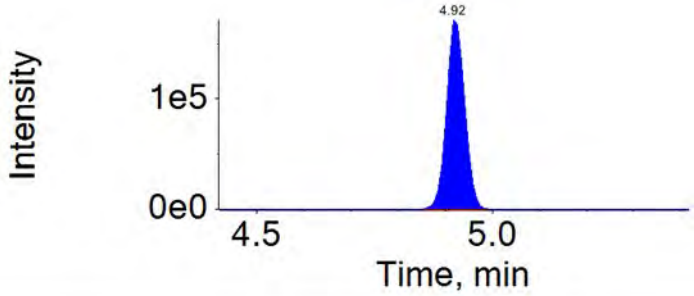
Component: 6:2-FTS_2
Secondary Mass: 427.0 / 81.0



Component: PFHpS
Primary Mass: 449.0 / 80.0



Component: PFHpS_2
Secondary Mass: 449.0 / 99.0



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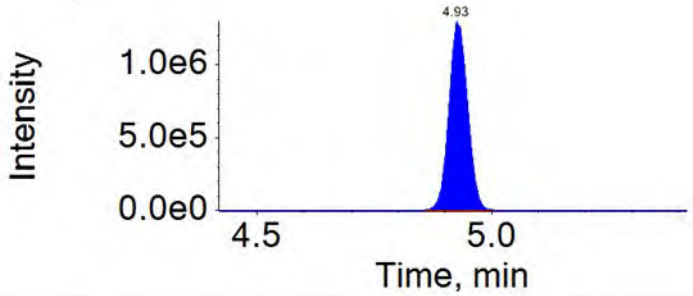
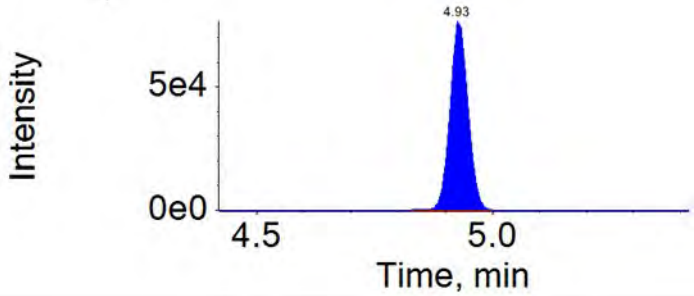
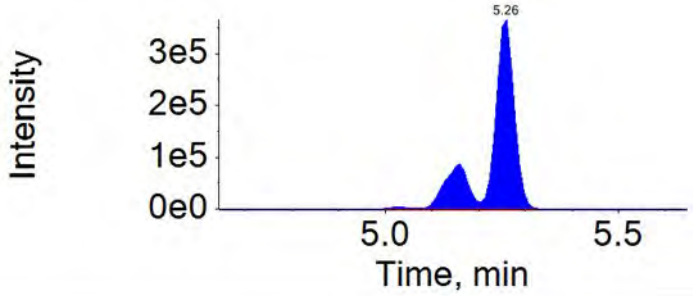
Component: PFOA
Primary Mass: 413.0 / 369.0



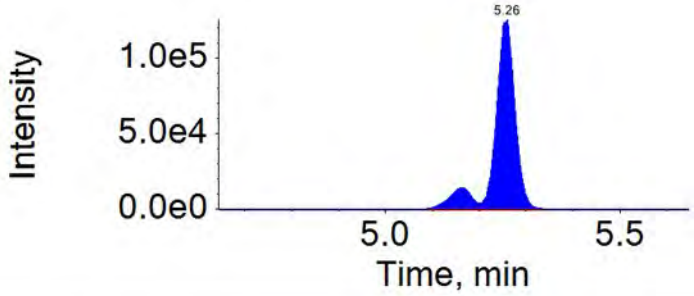
Component: PFOA_2
Secondary Mass: 413.0 / 169.0



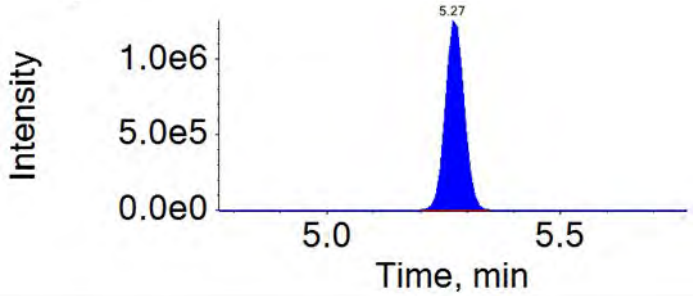
Component: PFOS
Primary Mass: 499.0 / 80.0



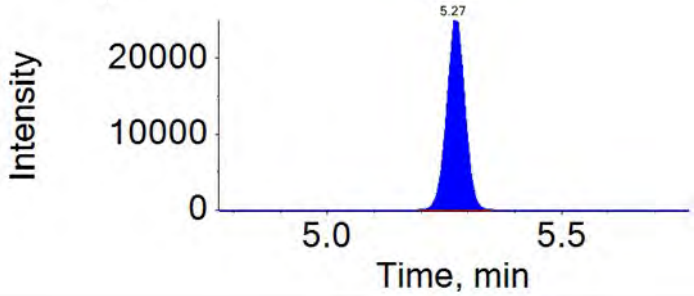
Component: PFOS_2
Secondary Mass: 499.0 / 99.0



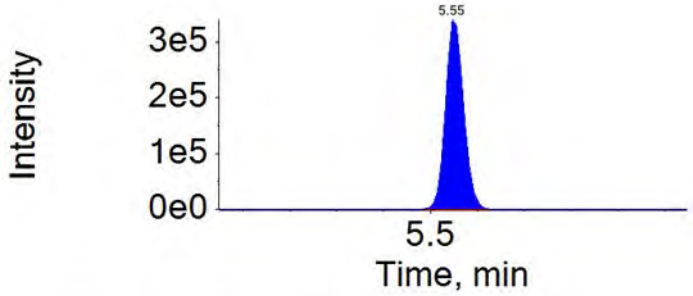
Component: PFNA
Primary Mass: 463.0 / 419.0



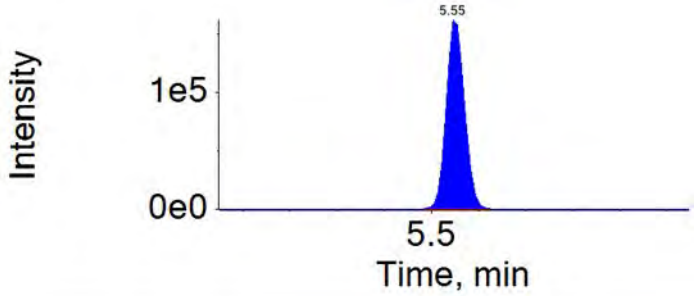
Component: PFNA_2
Secondary Mass: 463.0 / 169.0



Component: PFNS
Primary Mass: 549.0 / 80.0



Component: PFNS_2
Secondary Mass: 549.0 / 99.0



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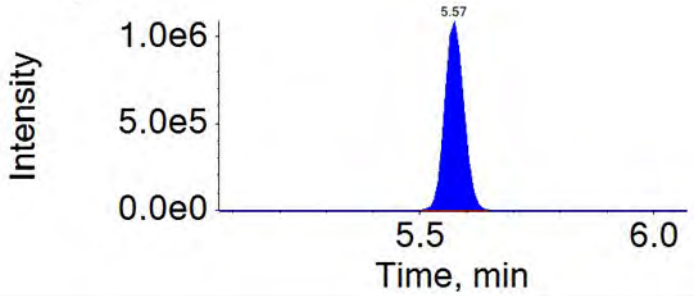
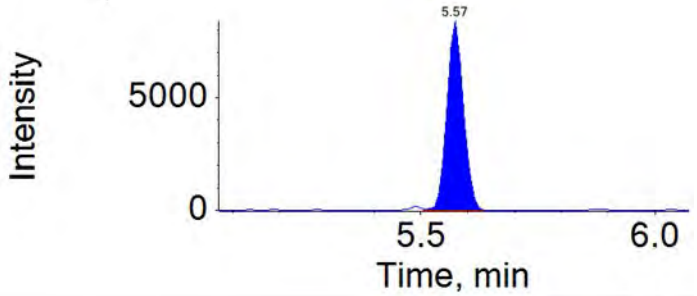
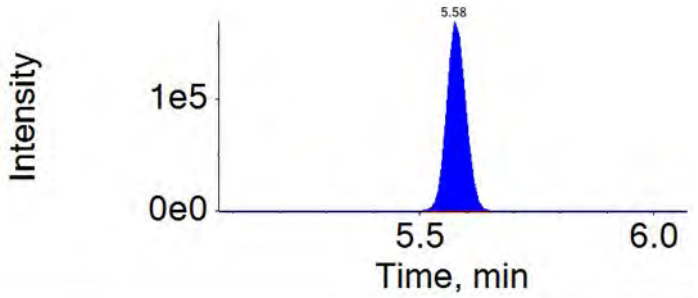
Component: PFDA
Primary Mass: 513.0 / 469.0



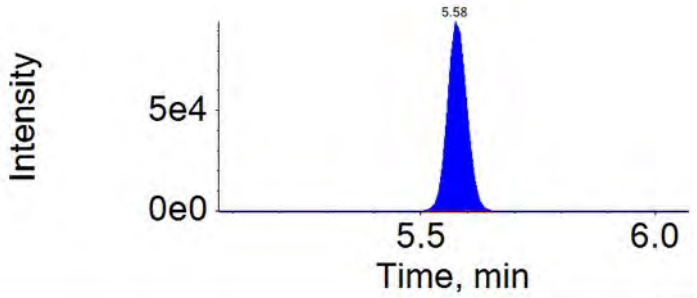
Component: PFDA_2
Secondary Mass: 513.0 / 169.0



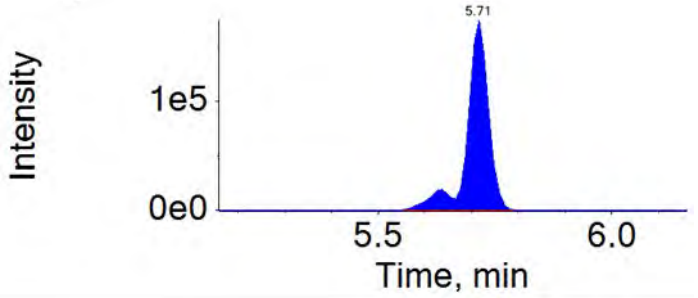
Component: 8:2-FTS
Primary Mass: 527.0 / 507.0



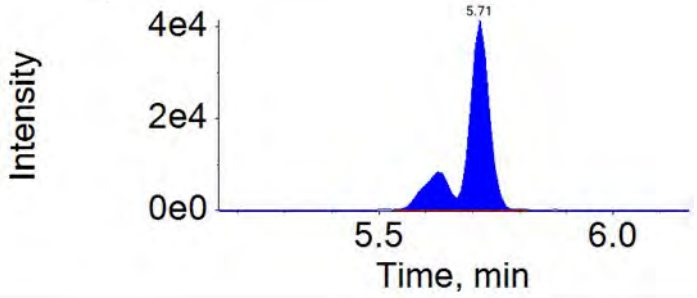
Component: 8:2-FTS_2
Secondary Mass: 527.0 / 81.0



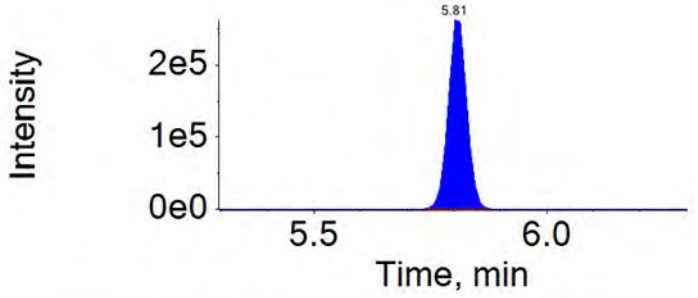
Component: NMeFOSAA
Primary Mass: 570.0 / 419.0



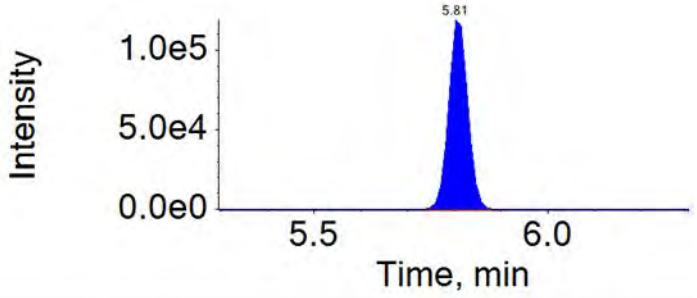
Component: NMeFOSAA_2
Secondary Mass: 570.0 / 483.0



Component: PFDS
Primary Mass: 599.0 / 80.0



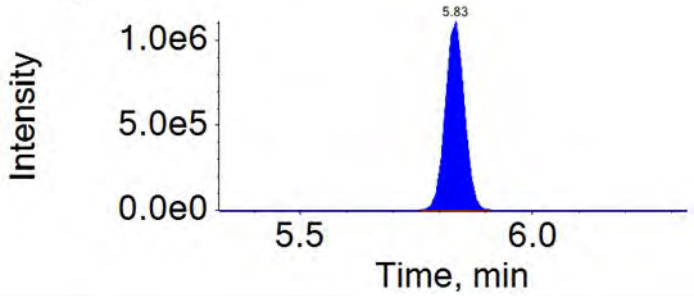
Component: PFDS_2
Secondary Mass: 599.0 / 99.0



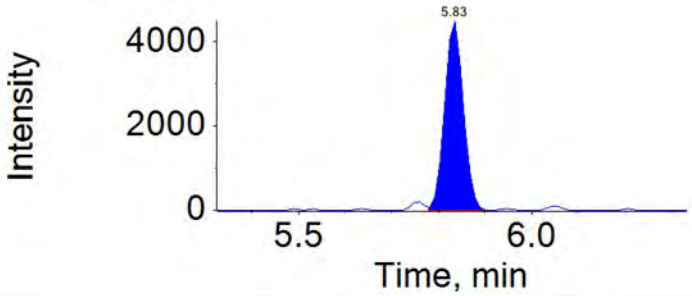
APPROVED
By MCD at 5:00 pm, 11/28/18

REVIEWED
By HMK at 12:22 pm, 11/29/18

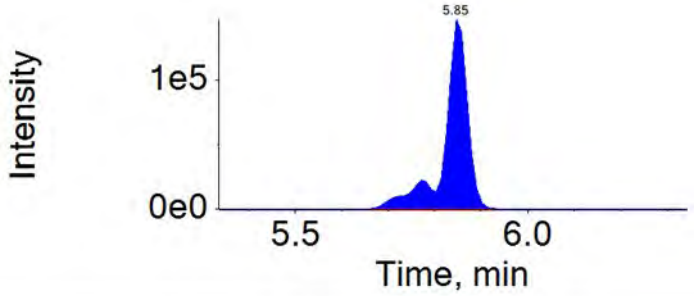
Component: PFUnDA
Primary Mass: 563.0 / 519.0



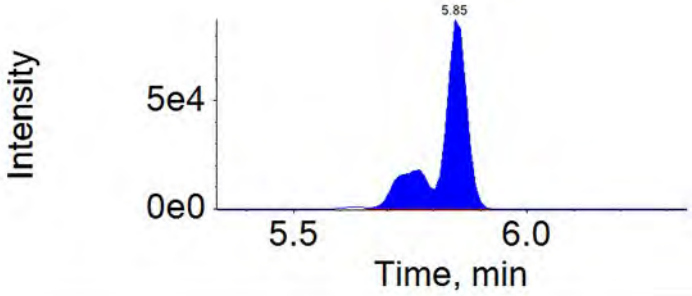
Component: PFUnDA_2
Secondary Mass: 563.0 / 169.0



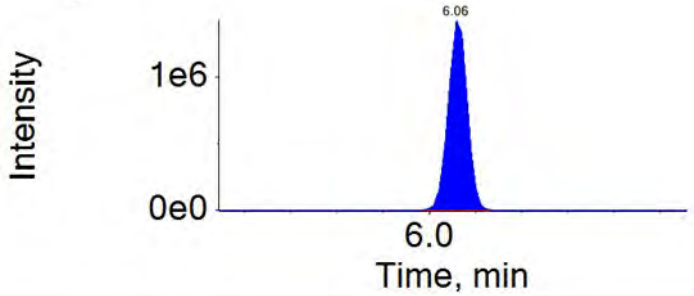
Component: NEtFOSAA
Primary Mass: 584.0 / 419.0



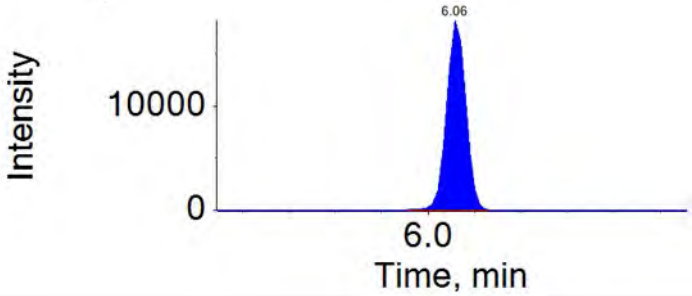
Component: NEtFOSAA_2
Secondary Mass: 584.0 / 526.0



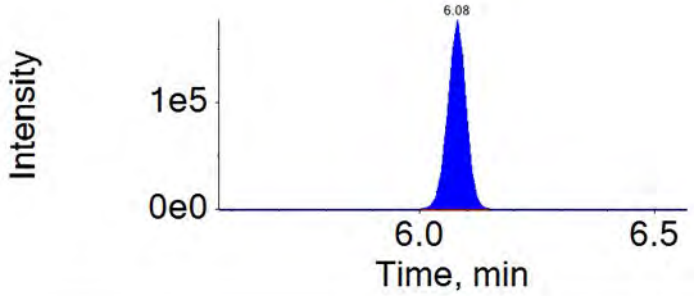
Component: PFDoDA
Primary Mass: 613.0 / 569.0



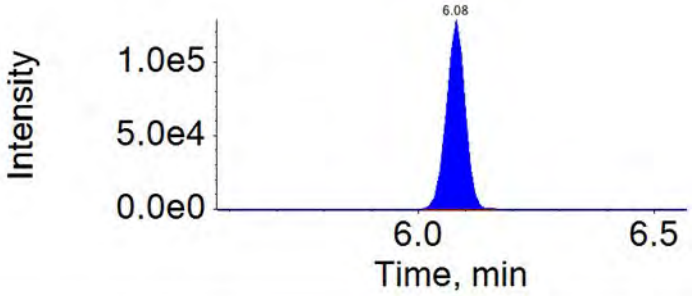
Component: PFDoDA_2
Secondary Mass: 613.0 / 169.0



Component: 10:2-FTS
Primary Mass: 627.0 / 607.0



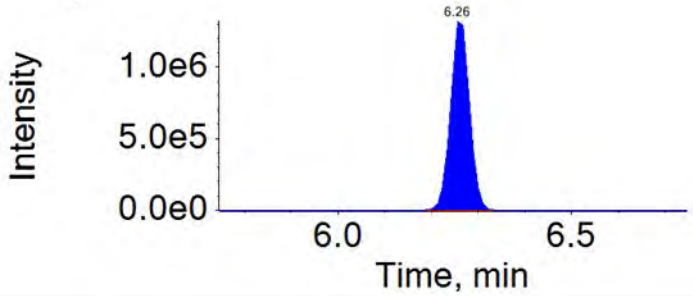
Component: 10:2-FTS_2
Secondary Mass: 627.0 / 81.0



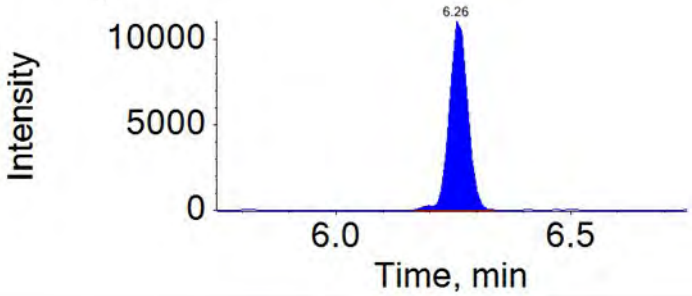
APPROVED
By MCD at 5:00 pm, 11/28/18

REVIEWED
By HMK at 12:22 pm, 11/29/18

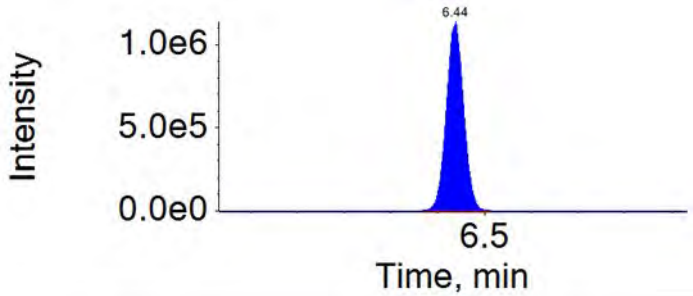
Component: PFTrDA
Primary Mass: 663.0 / 619.0



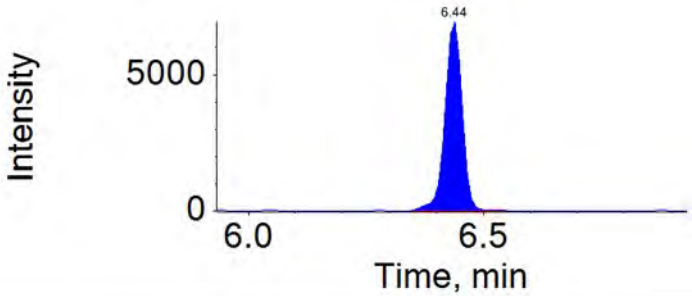
Component: PFTrDA_2
Secondary Mass: 663.0 / 169.0



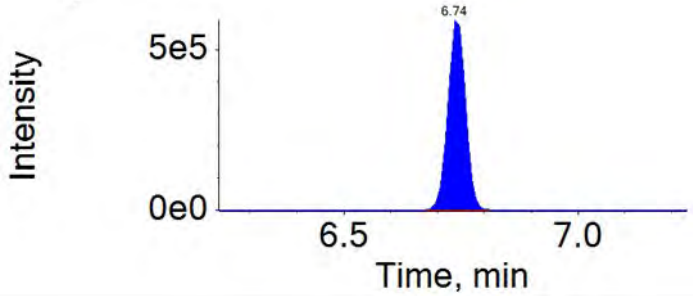
Component: PFTeDA
Primary Mass: 713.0 / 669.0



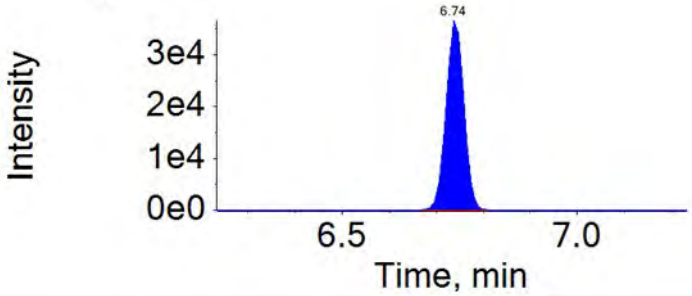
Component: PFTeDA_2
Secondary Mass: 713.0 / 169.0



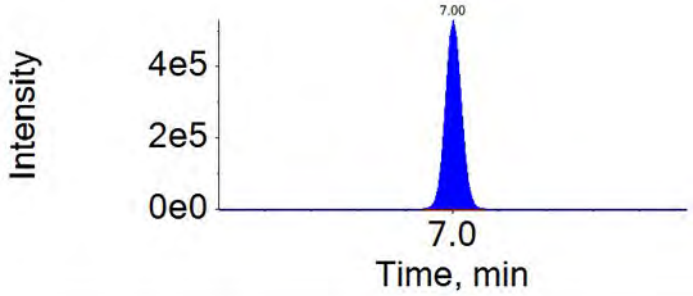
Component: PFHxDA
Primary Mass: 813.0 / 769.0



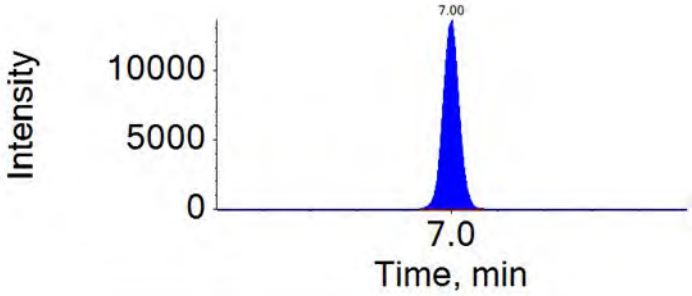
Component: PFHxDA_2
Secondary Mass: 813.0 / 169.0



Component: PFODA
Primary Mass: 913.0 / 869.0



Component: PFODA_2
Secondary Mass: 913.0 / 169.0



APPROVED
By MCD at 5:00 pm, 11/28/18

REVIEWED
By HMK at 12:22 pm, 11/29/18

ICAL Name: 18NOV28DCAL **Result Table:** 18NOV28DCAL 11/28/2018 4:47:11 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Sample Name:	CAL6			**Data File:**		18NOV28DCAL-11.wiff
Sample ID:	CALBRN61833B			**Acquis Date:**		2018-11-28T14:27:16
Sample Type:	Standard			**Instrument:**		LM27631
Vial Position:	8			**Acquis Method:**		18AUG13_3uL.dam
Injection Vol:	3.00			**Result Table:**		18NOV28DCAL
QMethod File:	18AUG20QM			**ICAL Name:**		18NOV28DCAL
Batch Number:	N/A			**Operator:**		MCD7824
Sample Wt.:	1.00000			**Dilution Factor:**		1.00
Sample Vol.:	1.000			**Prep Factor:**		1.000

Injection Standard Peak Table

Injection Standard Area Reference File: 18NOV28DCAL-08

Injection Standard Name	Inj Std Conc	Injection Std Peak Area	Rreference Injection Standard Area	Injection Std %Diff	Injection Std %Diff Limit	Injection Std %Diff OOS
13C3-PFBA	5.0	793955.0	887248.9	-11	50	
13C2-PFOA	5.0	499608.5	498501.6	0	50	
13C4-PFOS	4.8	264408.9	283214.2	-7	50	
13C2-PFDA	5.0	419913.2	441790.6	-5	50	

Extraction Standard Peak Table

Extraction Standard Name	Ext Std Area	Inj Std Name	Inj Std Area	Area Ratio	Ext Std Conc	Ext Std Result	Ext Std %REC	Ext Std %REC Limit	Ext Std OOS
E13C4-PFBA	897566.7	13C3-PFBA	793955.0	1.131	5.000	5.044	101	70-130	
E13C5-PFPeA	872922.6	13C3-PFBA	793955.0	1.099	5.000	5.134	103	70-130	
E13C3-PFBS	398441.3	13C3-PFBA	793955.0	0.502	4.650	4.788	103	70-130	
E13C2-4:2-FTS	65255.4	13C2-PFOA	499608.5	0.131	4.670	4.501	96	70-130	
E13C5-PFHxA	675219.8	13C2-PFOA	499608.5	1.351	5.000	4.964	99	70-130	
E13C3-PFHxS	279894.6	13C2-PFOA	499608.5	0.560	4.730	4.391	93	70-130	
E13C4-PFHpA	555281.5	13C2-PFOA	499608.5	1.111	5.000	5.107	102	70-130	
E13C2-6:2-FTS	48807.6	13C2-PFOA	499608.5	0.098	4.750	4.089	86	70-130	
E13C8-PFOA	843522.3	13C2-PFOA	499608.5	1.688	5.000	4.647	93	70-130	
E13C8-PFOS	279204.4	13C4-PFOS	264408.9	1.056	4.780	4.767	100	70-130	
E13C9-PFNA	624202.7	13C4-PFOS	264408.9	2.361	5.000	5.185	104	70-130	
E13C6-PFDA	758832.8	13C2-PFDA	419913.2	1.807	5.000	5.095	102	70-130	
E13C2-8:2-FTS	44487.5	13C2-PFDA	419913.2	0.106	4.790	4.553	95	70-130	
E13C8-PFOSA	565326.0	13C2-PFDA	419913.2	1.346	5.000	4.940	99	70-130	
Ed3-NMeFOSAA	161673.3	13C2-PFDA	419913.2	0.385	5.000	4.888	98	70-130	
E13C7-PFUnDA	474122.1	13C2-PFDA	419913.2	1.129	5.000	4.772	95	70-130	
Ed5-NEtFOSAA	117934.2	13C2-PFDA	419913.2	0.281	5.000	5.004	100	70-130	
E13C2-PFDoDA	980215.4	13C2-PFDA	419913.2	2.334	5.000	4.905	98	70-130	
Ed7-NMePFOSAE	248871.1	13C2-PFDA	419913.2	0.593	5.000	5.122	102	70-130	
Ed3-NMePFOSA	81949.3	13C2-PFDA	419913.2	0.195	5.000	5.282	106	70-130	
Ed9-NEtPFOSAE	222924.1	13C2-PFDA	419913.2	0.531	5.000	5.382	108	70-130	
Ed5-NEtPFOSA	59705.8	13C2-PFDA	419913.2	0.142	5.000	4.941	99	70-130	
E13C2-PFTeDA	789168.4	13C2-PFDA	419913.2	1.879	5.000	5.200	104	70-130	

APPROVED
By MCD at 5:00 pm, 11/28/18

REVIEWED
By HMK at 12:22 pm, 11/29/18

ICAL Name: 18NOV28DCAL **Result Table:** 18NOV28DCAL 11/28/2018 4:47:11 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

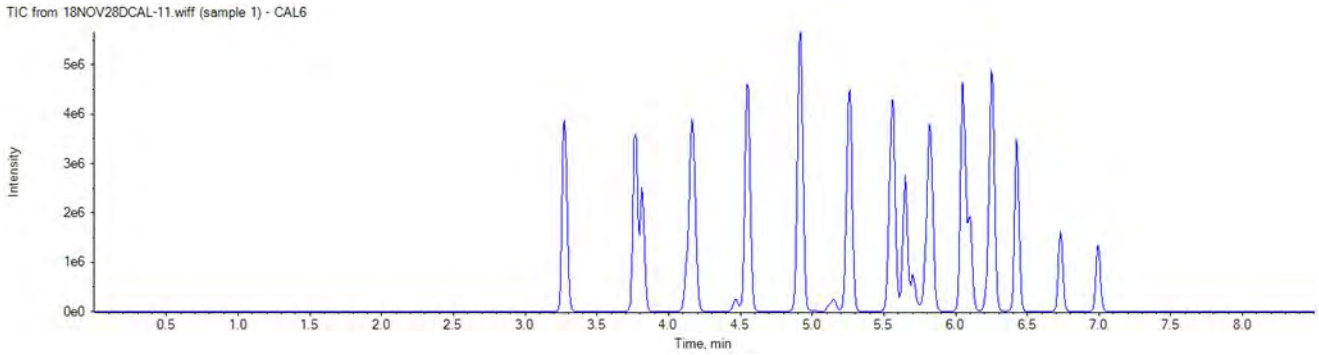
Analyte Quantitation Peak Table

Sample Name: CAL6 **Instrument Name:** LM27631 **File Name:** 18NOV28DCAL-11.wiff

Sample Wt	Sample Vol	Dilution Factor	PrepFactor
1.00000	1.000	1.00	1.000

Analyte Name	RT	RRT	Analyte Area Response	E	Int Typ	ES Name	ES RT	ES Area Response	Area Ratio	Sample Result (ng/g)
PFBA	3.27	1.000	7996964.8		A	13C4-PFBA	3.27	897566.7	8.910	48.841
PFPeA	3.77	1.000	7873655.4		A	13C5-PFPeA	3.77	872922.6	9.020	44.258
PFBS	3.82	1.000	3600470.8		A	13C3-PFBS	3.82	398441.3	9.036	43.864
4:2-FTS	4.13	1.000	1148569.2		A	13C2-4:2-FTS	4.13	65255.4	17.601	47.117
PFHxA	4.16	1.000	7468739.1		A	13C5-PFHxA	4.16	675219.8	11.061	44.400
PFPeS	4.18	1.100	1793808.0		A	13C3-PFBS	3.82	398441.3	4.502	45.538
PFHpA	4.55	1.000	7873271.2		A	13C4-PFHpA	4.55	555281.5	14.179	43.759
PFHxS	4.55	1.000	2625950.9		M	13C3-PFHxS	4.55	279894.6	9.382	43.929
6:2-FTS	4.90	1.000	859948.6		A	13C2-6:2-FTS	4.91	48807.6	17.619	45.972
PFHpS	4.91	1.080	2686833.3		A	13C3-PFHxS	4.55	279894.6	9.599	47.909
PFOA	4.92	1.000	8012665.3		A	13C8-PFOA	4.92	843522.3	9.499	49.084
PFOS	5.25	1.000	3026664.5		M	13C8-PFOS	5.25	279204.4	10.840	45.472
PFNA	5.26	1.000	7843086.9		A	13C9-PFNA	5.26	624202.7	12.565	48.151
PFNS	5.54	1.060	2116661.5		A	13C8-PFOS	5.25	279204.4	7.581	47.867
PFDA	5.56	1.000	6551370.5		A	13C6-PFDA	5.56	758832.8	8.633	48.868
8:2-FTS	5.57	1.000	938590.1		A	13C2-8:2-FTS	5.57	44487.5	21.098	39.786
PFOSA	5.65	1.000	5541493.1		A	13C8-PFOSA	5.65	565326.0	9.802	49.655
NMeFOSAA	5.70	1.000	1292829.8		A	d3-NMeFOSAA	5.70	161673.3	7.997	51.010
PFDS	5.80	1.100	1665920.2		A	13C8-PFOS	5.25	279204.4	5.967	47.309
PFUnDA	5.82	1.000	6885622.6		A	13C7-PFUnDA	5.82	474122.1	14.523	51.912
NEtFOSAA	5.84	1.000	1214766.4		M	d5-NEtFOSAA	5.83	117934.2	10.300	50.166
PFDoDA	6.05	1.000	8865844.7		A	13C2-PFDoDA	6.05	980215.4	9.045	49.545
10:2-FTS	6.07	1.090	972346.9		A	13C2-8:2-FTS	5.57	44487.5	21.857	48.197
NMePFOSAE	6.10	1.000	3059430.5		A	d7-NMePFOSAE	6.09	248871.1	12.293	51.733
NMePFOSA	6.11	1.000	768521.6		A	d3-NMePFOSA	6.10	81949.3	9.378	49.716
PFDoS	6.22	1.190	900508.4		A	13C8-PFOS	5.25	279204.4	3.225	46.320
NEtPFOSAE	6.26	1.000	3104174.6		A	d9-NEtPFOSAE	6.24	222924.1	13.925	50.088
NEtPFOSA	6.27	1.000	698744.6		A	d5-NEtPFOSA	6.26	59705.8	11.703	52.452
PFTrDA	6.25	1.030	7958673.4		A	13C2-PFDoDA	6.05	980215.4	8.119	48.938
PFTeDA	6.43	1.000	6793735.3		A	13C2-PFTeDA	6.43	789168.4	8.609	48.777
PFHxDA	6.73	1.050	3402004.5		A	13C2-PFTeDA	6.43	789168.4	4.311	49.281
PFODA	6.99	1.090	2942000.1		A	13C2-PFTeDA	6.43	789168.4	3.728	49.663

Total Ion Chromatogram

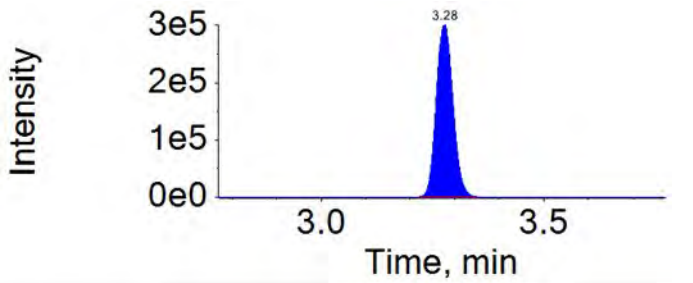


APPROVED
By MCD at 5:00 pm, 11/28/18

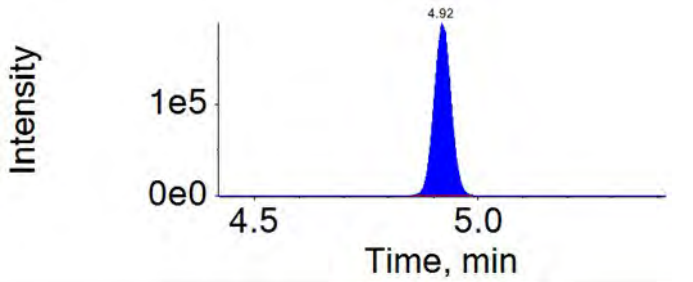
REVIEWED
By HMK at 12:22 pm, 11/29/18

ICAL Name: 18NOV28DCAL
QMethod Name: 18AUG20QM
Result Table: 18NOV28DCAL 11/28/2018 4:47:11 PM
Acquisition Method: 18AUG13_3uL.dam

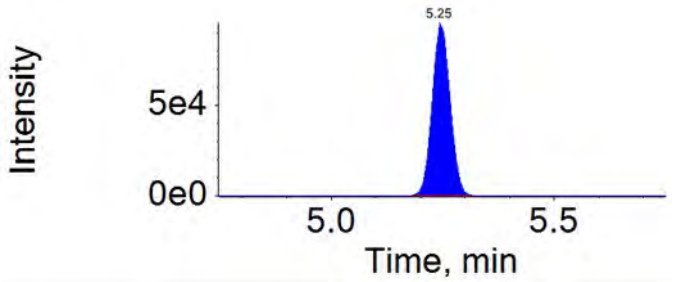
Injection Standard: 13C3-PFBA
216.0 / 172.0



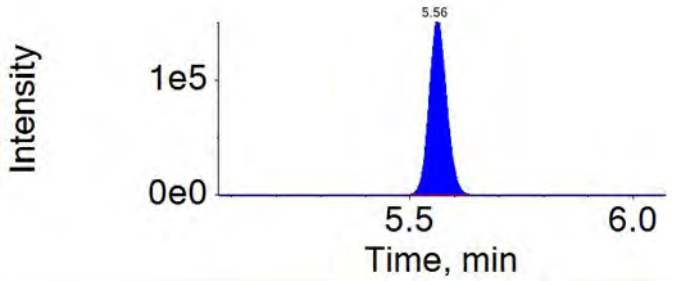
Injection Standard: 13C2-PFOA
415.0 / 370.0



Injection Standard: 13C4-PFOS
503.0 / 80.0



Injection Standard: 13C2-PFDA
515.0 / 470.0

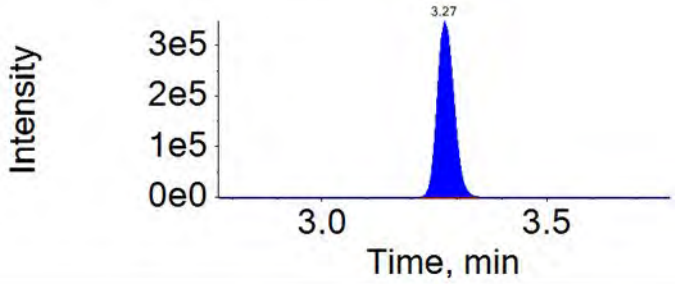


APPROVED
By MCD at 5:00 pm, 11/28/18

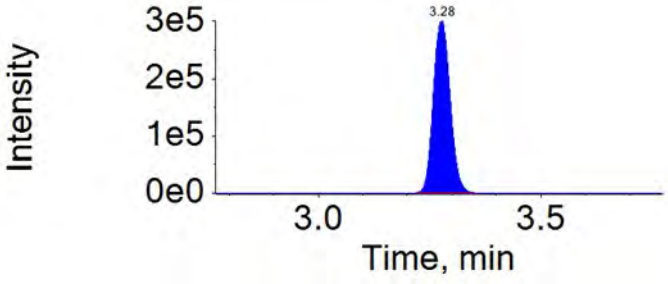
REVIEWED
By HMK at 12:22 pm, 11/29/18

ICAL Name: 18NOV28DCAL **Result Table:** 18NOV28DCAL 11/28/2018 4:47:11 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

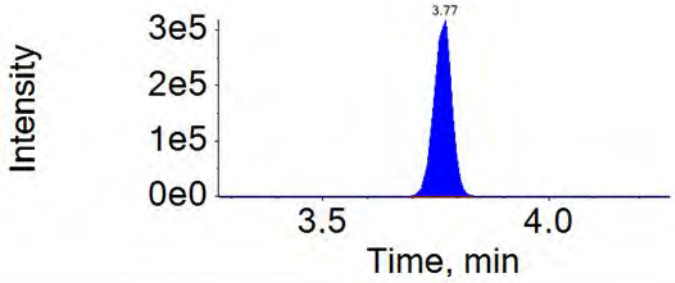
Extraction Standard: E13C4-PFBA
217.0 / 172.0



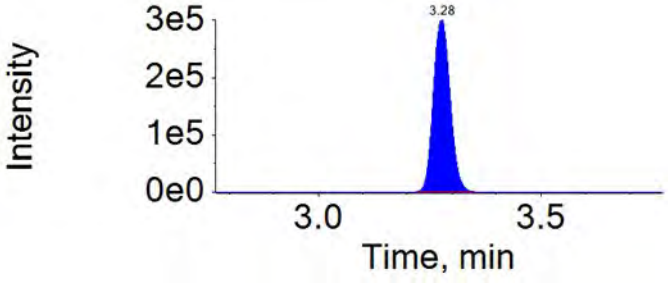
Injection Standard: 13C3-PFBA
216.0 / 172.0



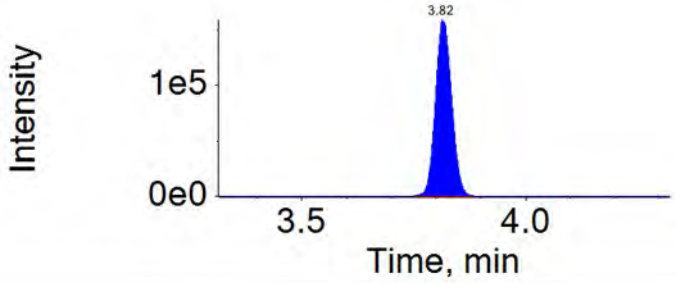
Extraction Standard: E13C5-PFPeA
268.0 / 223.0



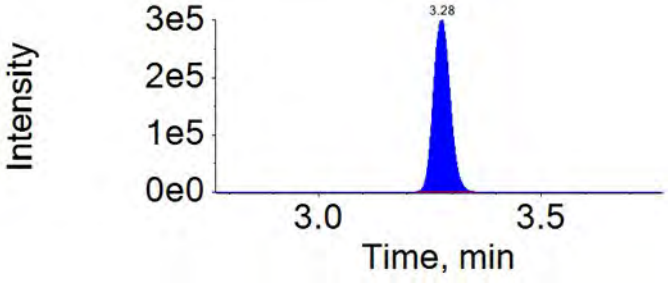
Injection Standard: 13C3-PFBA
216.0 / 172.0



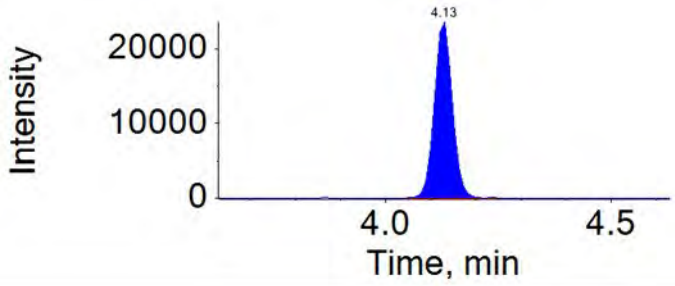
Extraction Standard: E13C3-PFBS
302.0 / 80.0



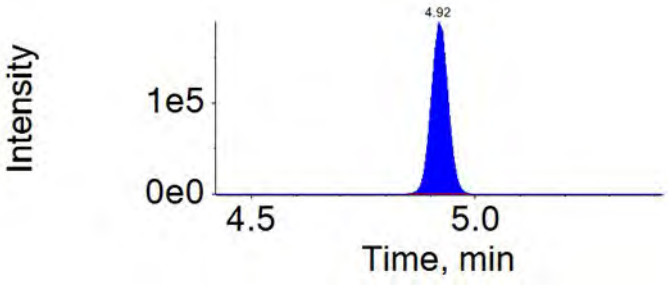
Injection Standard: 13C3-PFBA
216.0 / 172.0



Extraction Standard: E13C2-4:2-FTS
329.0 / 81.0

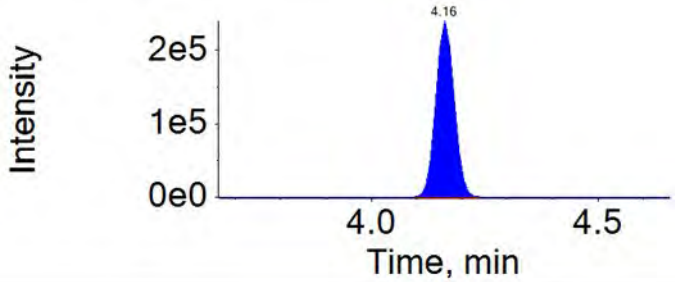


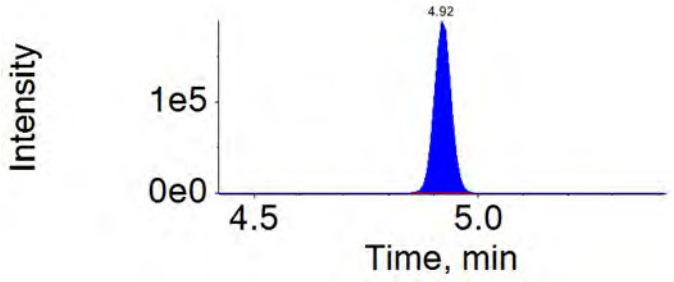
Injection Standard: 13C2-PFOA
415.0 / 370.0



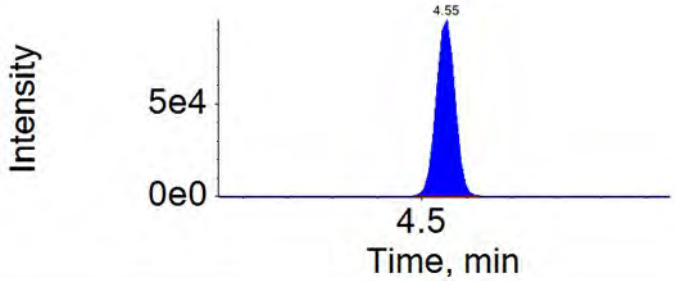
ICAL Name: 18NOV28DCAL **Result Table:** 18NOV28DCAL 11/28/2018 4:47:11 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

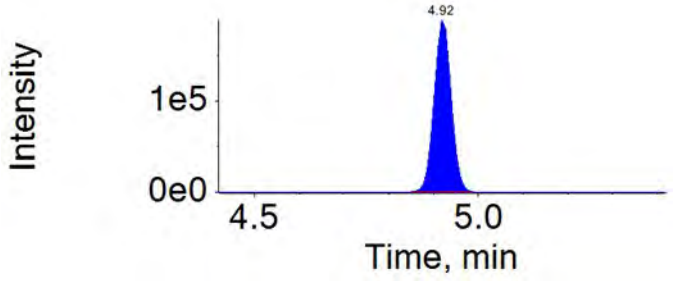
Extraction Standard: E13C5-PFHxA	Injection Standard: 13C2-PFOA
318.0 / 273.0	415.0 / 370.0



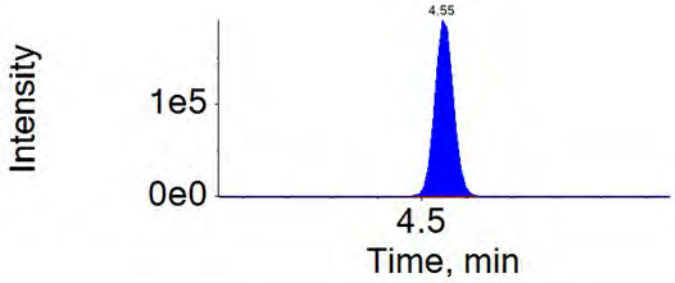


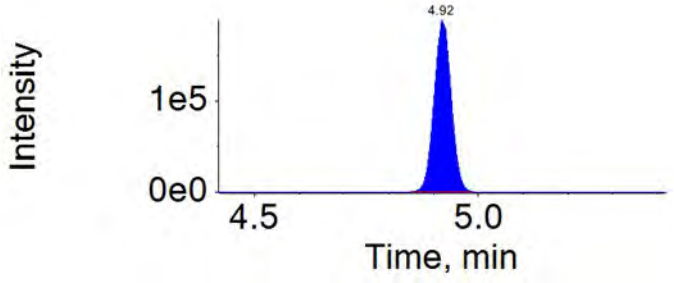
Extraction Standard: E13C3-PFHxS	Injection Standard: 13C2-PFOA
402.0 / 80.0	415.0 / 370.0



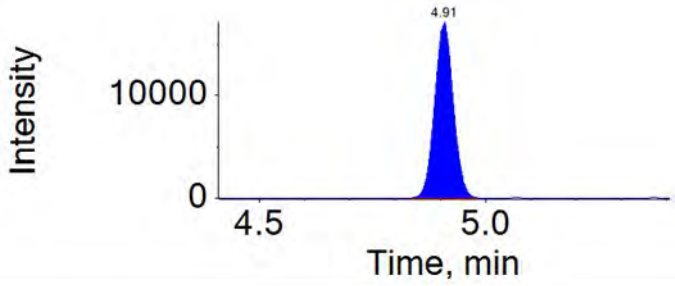


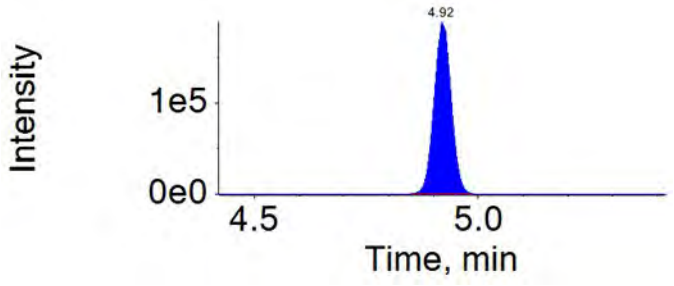
Extraction Standard: E13C4-PFHpA	Injection Standard: 13C2-PFOA
367.0 / 322.0	415.0 / 370.0





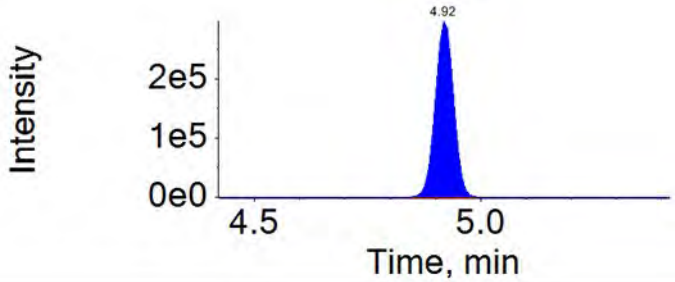
Extraction Standard: E13C2-6:2-FTS	Injection Standard: 13C2-PFOA
429.0 / 81.0	415.0 / 370.0

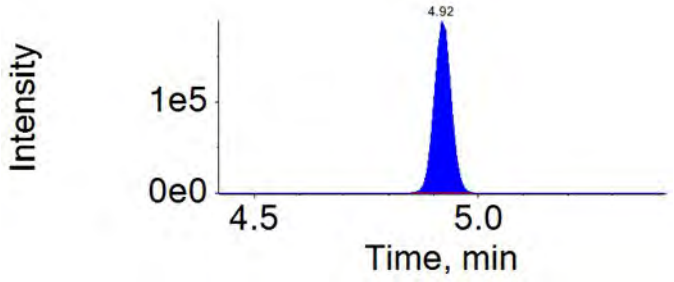




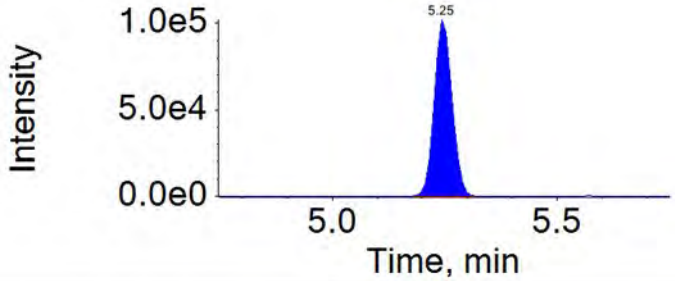
ICAL Name: 18NOV28DCAL **Result Table:** 18NOV28DCAL 11/28/2018 4:47:11 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

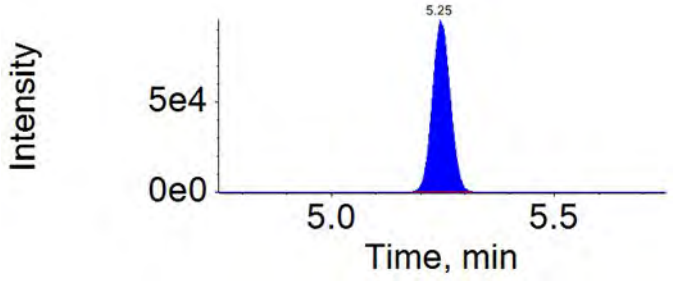
Extraction Standard: E13C8-PFOA	Injection Standard: 13C2-PFOA
421.0 / 376.0	415.0 / 370.0



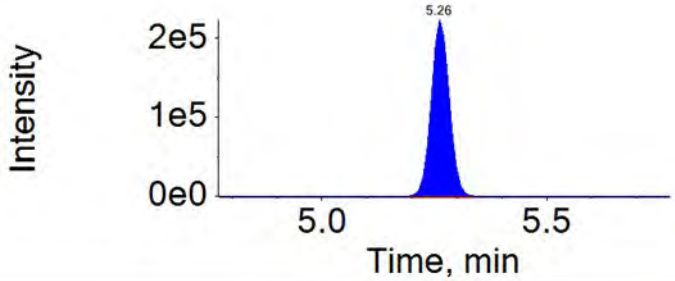


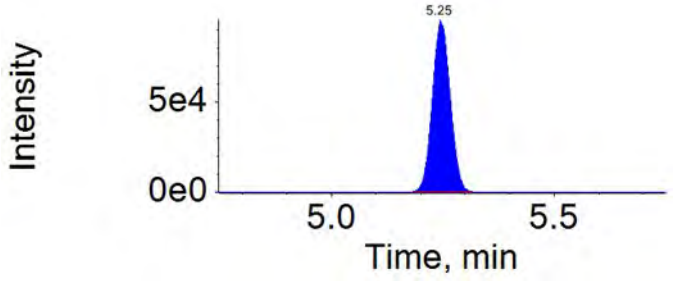
Extraction Standard: E13C8-PFOS	Injection Standard: 13C4-PFOS
507.0 / 80.0	503.0 / 80.0



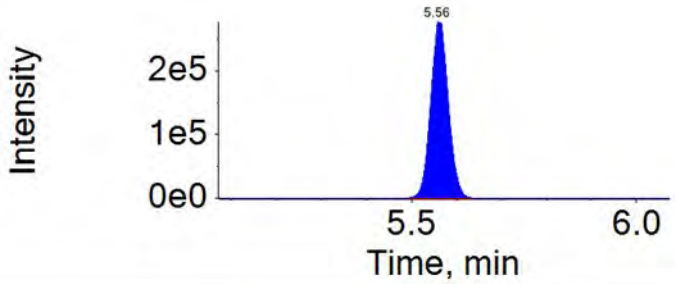


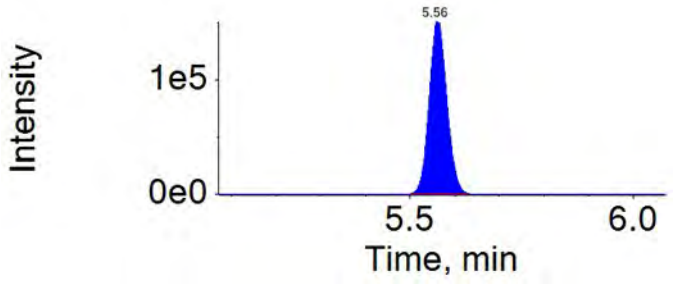
Extraction Standard: E13C9-PFNA	Injection Standard: 13C4-PFOS
472.0 / 427.0	503.0 / 80.0





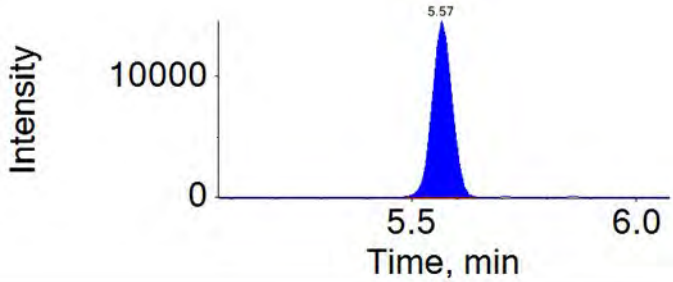
Extraction Standard: E13C6-PFDA	Injection Standard: 13C2-PFDA
519.0 / 474.0	515.0 / 470.0

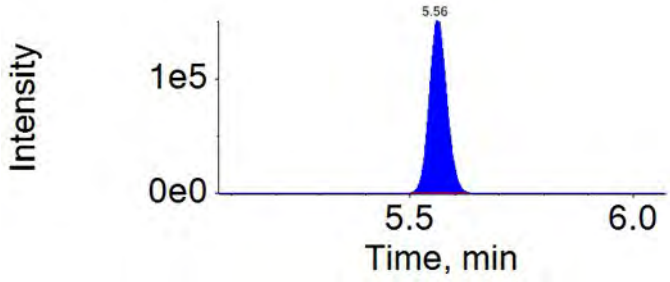




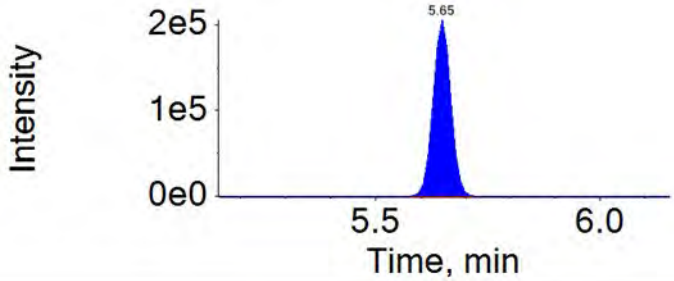
ICAL Name: 18NOV28DCAL **Result Table:** 18NOV28DCAL 11/28/2018 4:47:11 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

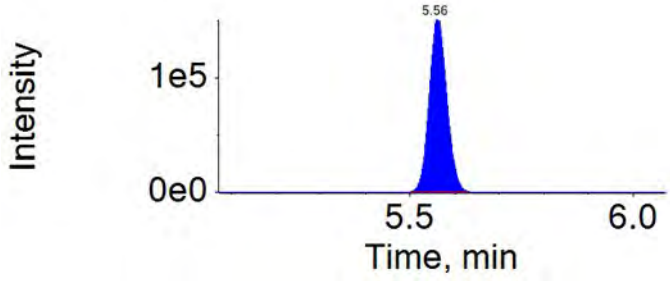
Extraction Standard: E13C2-8:2-FTS	Injection Standard: 13C2-PFDA
529.0 / 81.0	515.0 / 470.0



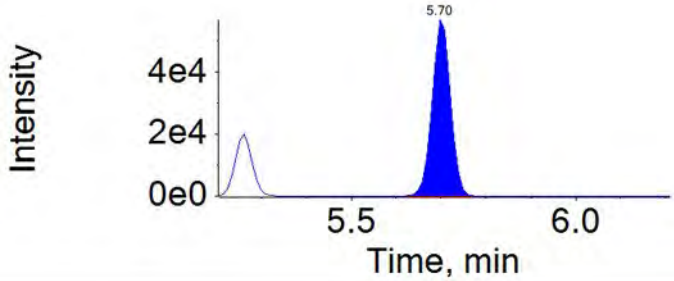


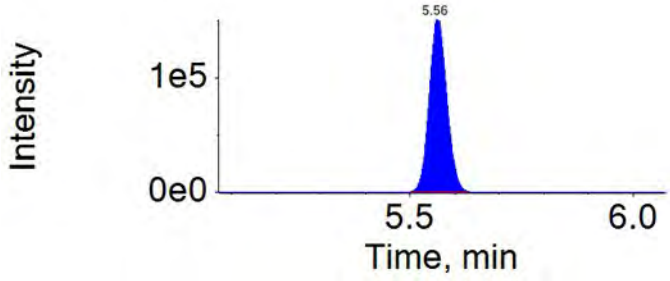
Extraction Standard: E13C8-PFOSA	Injection Standard: 13C2-PFDA
506.0 / 78.0	515.0 / 470.0



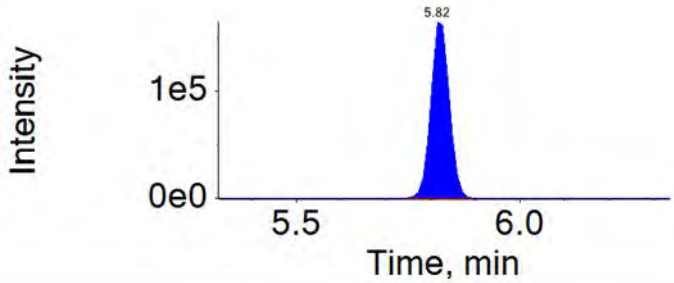


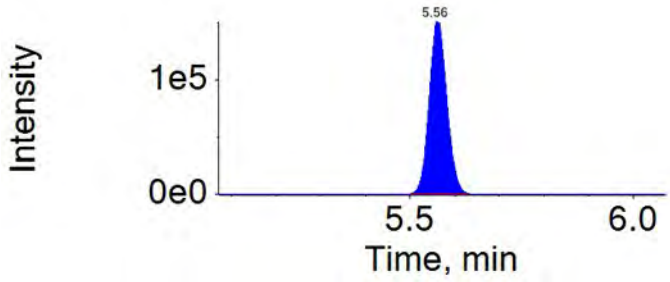
Extraction Standard: Ed3-NMeFOSAA	Injection Standard: 13C2-PFDA
573.0 / 419.0	515.0 / 470.0





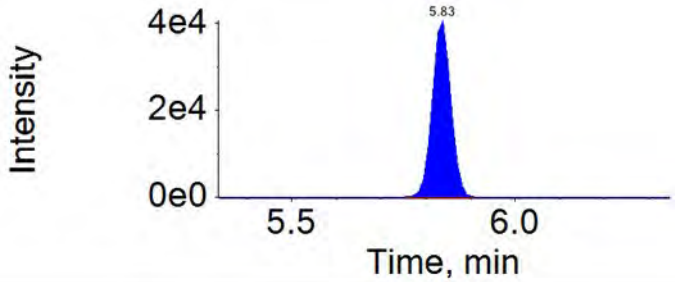
Extraction Standard: E13C7-PFUnDA	Injection Standard: 13C2-PFDA
570.0 / 525.0	515.0 / 470.0

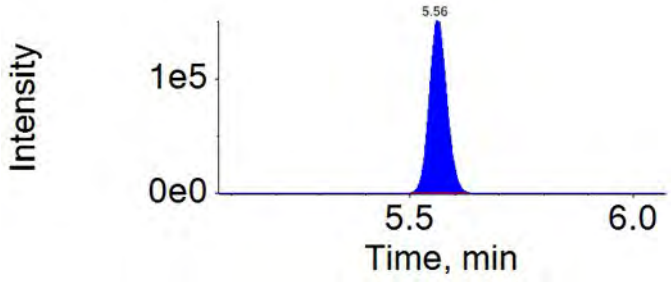




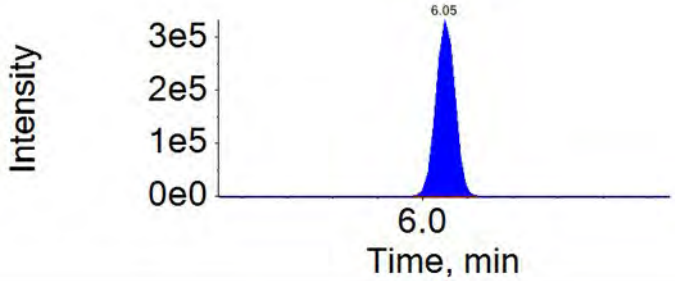
ICAL Name: 18NOV28DCAL **Result Table:** 18NOV28DCAL 11/28/2018 4:47:11 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

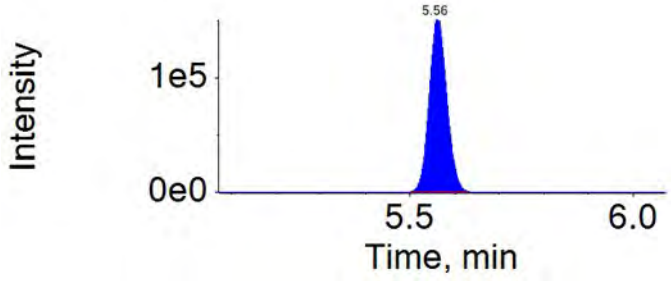
Extraction Standard: Ed5-NEtFOSAA	Injection Standard: 13C2-PFDA
589.0 / 419.0	515.0 / 470.0



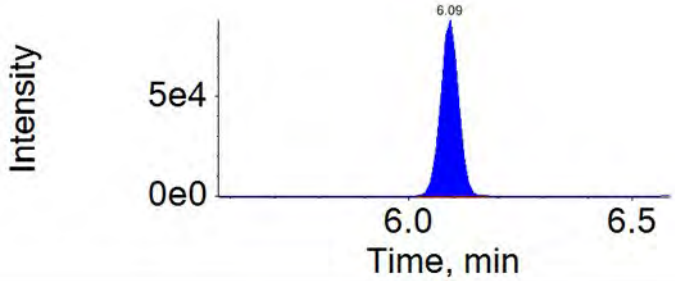


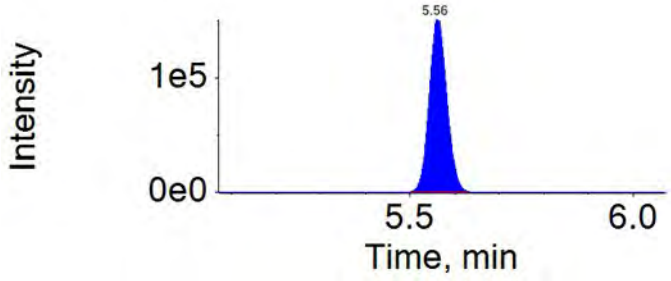
Extraction Standard: E13C2-PFDoDA	Injection Standard: 13C2-PFDA
615.0 / 570.0	515.0 / 470.0



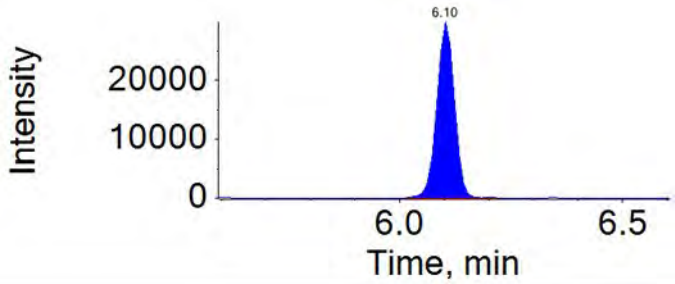


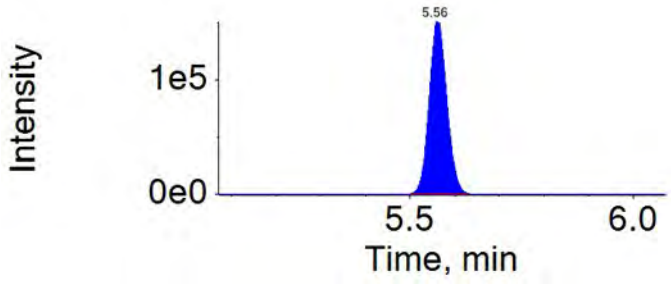
Extraction Standard: Ed7-NMePFOSAE	Injection Standard: 13C2-PFDA
623.0 / 59.0	515.0 / 470.0





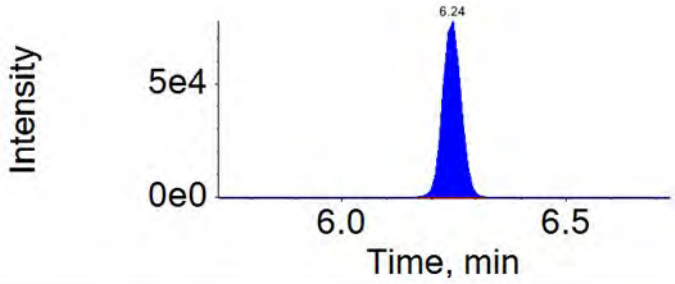
Extraction Standard: Ed3-NMePFOSA	Injection Standard: 13C2-PFDA
515.0 / 169.0	515.0 / 470.0

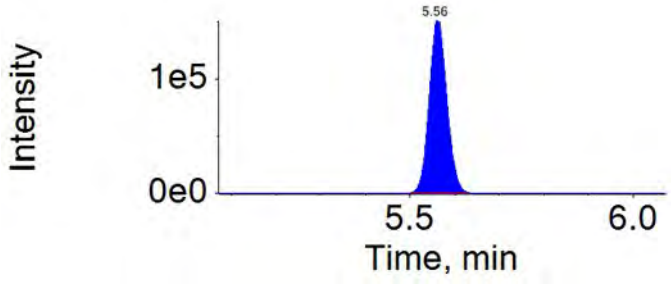




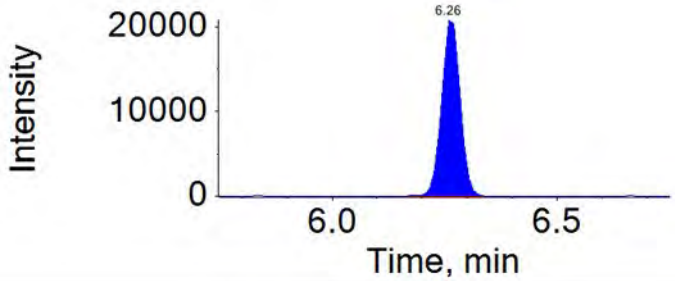
ICAL Name: 18NOV28DCAL **Result Table:** 18NOV28DCAL 11/28/2018 4:47:11 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

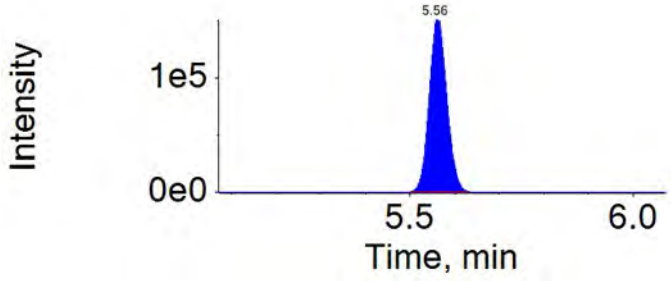
Extraction Standard: Ed9-NEtPFOSAE	Injection Standard: 13C2-PFDA
639.0 / 59.0	515.0 / 470.0



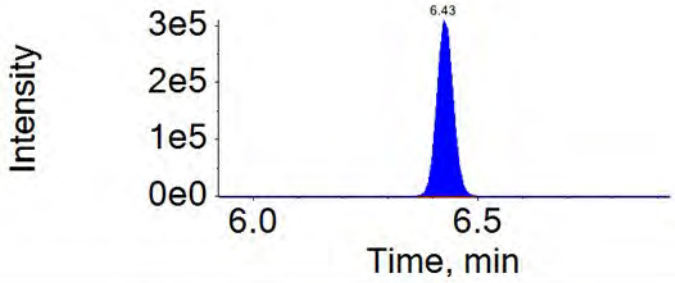


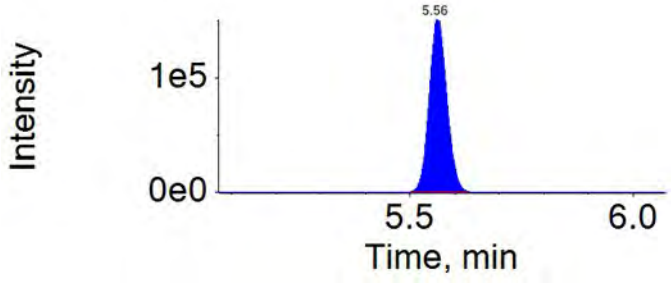
Extraction Standard: Ed5-NEtPFOSA	Injection Standard: 13C2-PFDA
531.0 / 169.0	515.0 / 470.0





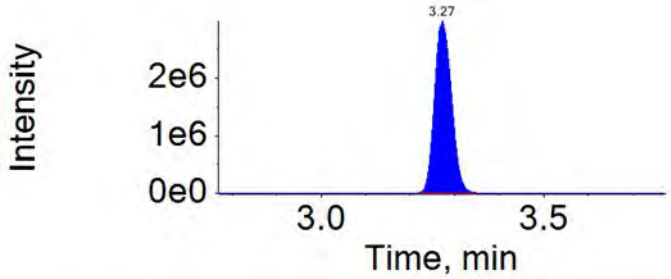
Extraction Standard: E13C2-PFTeDA	Injection Standard: 13C2-PFDA
715.0 / 670.0	515.0 / 470.0



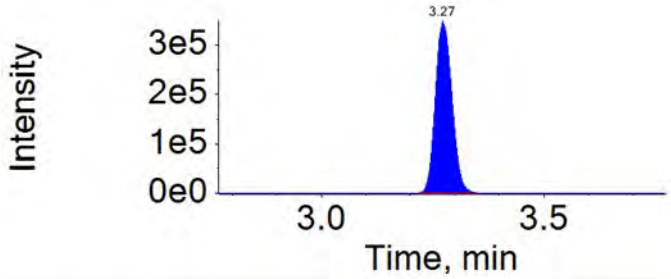


ICAL Name: 18NOV28DCAL **Result Table:** 18NOV28DCAL 11/28/2018 4:47:11 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

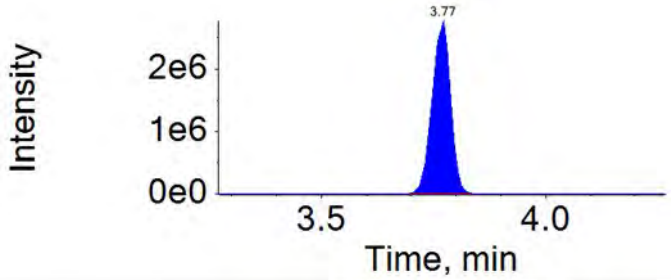
Analyte: PFBA
213.0 / 169.0



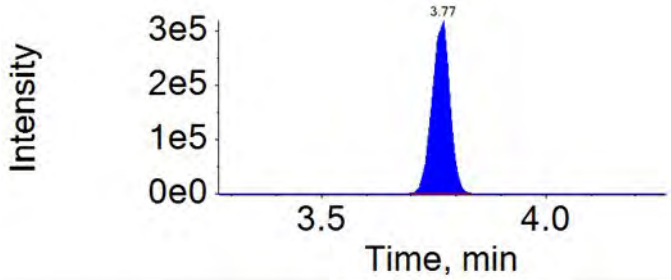
Extraction Standard: 13C4-PFBA
217.0 / 172.0



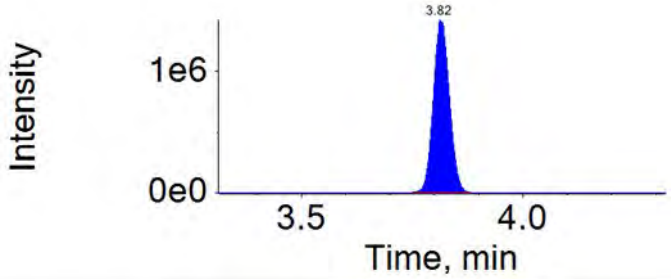
Analyte: PFPeA
263.0 / 219.0



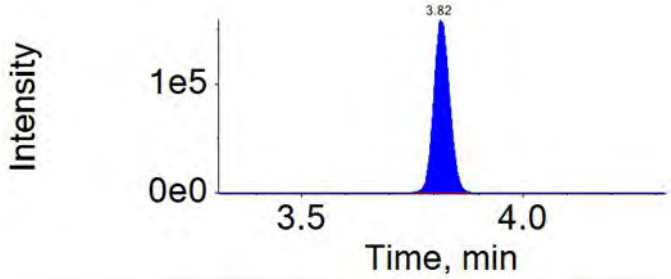
Extraction Standard: 13C5-PFPeA
268.0 / 223.0



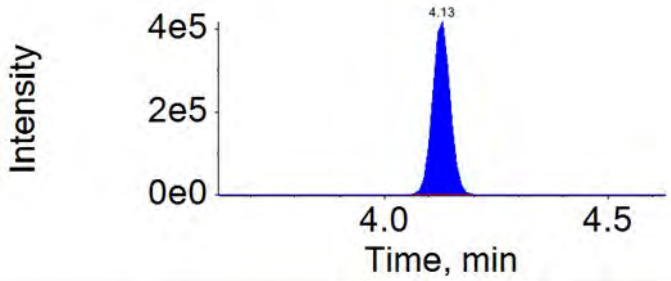
Analyte: PFBS
299.0 / 80.0



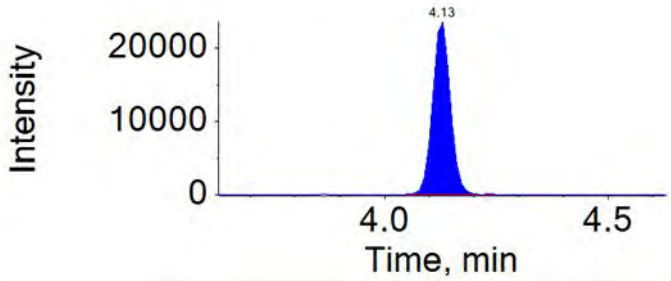
Extraction Standard: 13C3-PFBS
302.0 / 80.0



Analyte: 4:2-FTS
327.0 / 307.0



Extraction Standard: 13C2-4:2-FTS
329.0 / 81.0

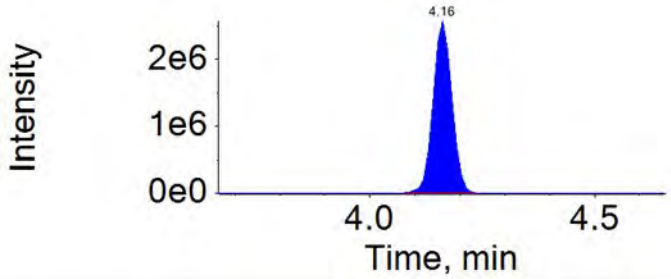


APPROVED
By MCD at 5:00 pm, 11/28/18

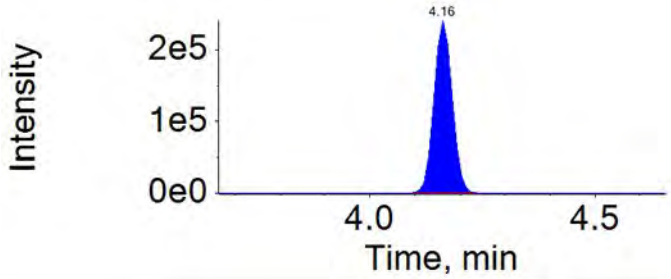
REVIEWED
By HMK at 12:22 pm, 11/29/18

ICAL Name: 18NOV28DCAL **Result Table:** 18NOV28DCAL 11/28/2018 4:47:11 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

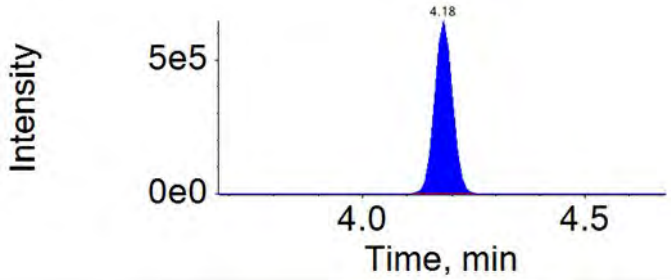
Analyte: PFHxA
313.0 / 269.0



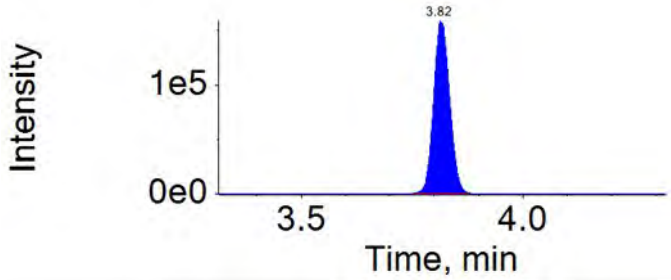
Extraction Standard: 13C5-PFHxA
318.0 / 273.0



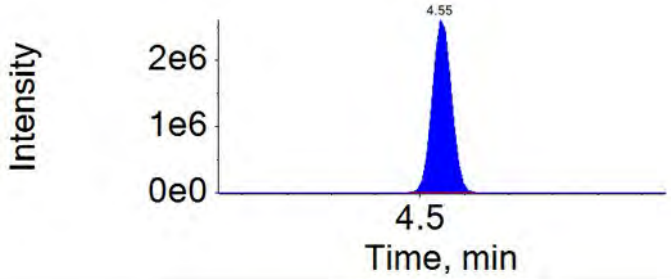
Analyte: PFPeS
349.0 / 80.0



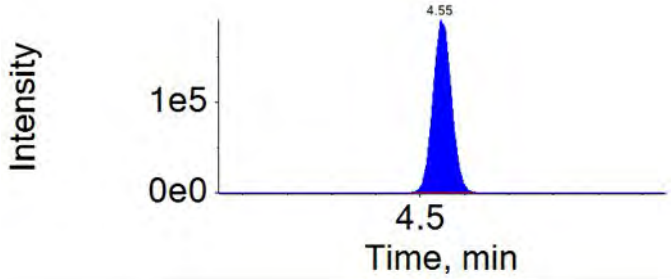
Extraction Standard: 13C3-PFBS
302.0 / 80.0



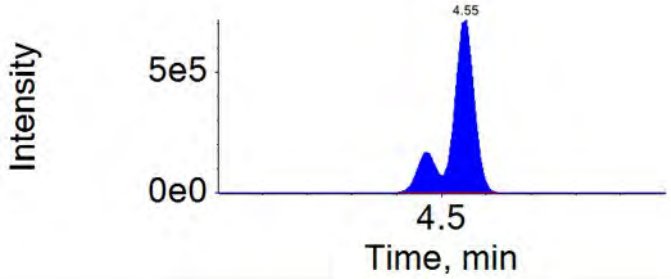
Analyte: PFHpA
363.0 / 319.0



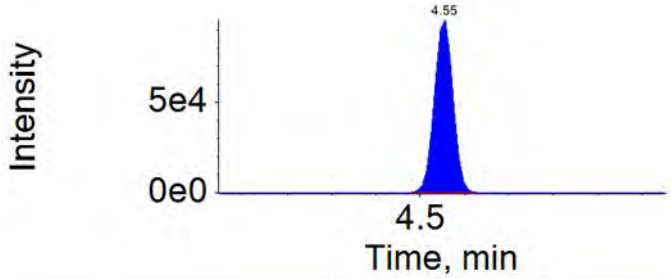
Extraction Standard: 13C4-PFHpA
367.0 / 322.0



Analyte: PFHxS
399.0 / 80.0



Extraction Standard: 13C3-PFHxS
402.0 / 80.0

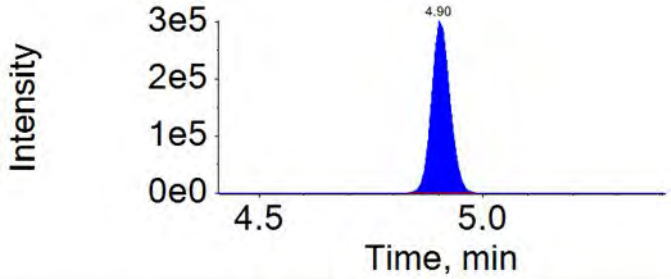


APPROVED
By MCD at 5:00 pm, 11/28/18

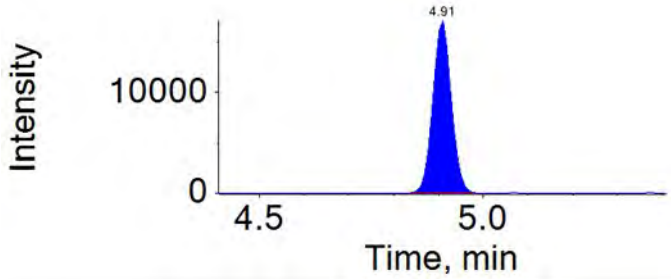
REVIEWED
By HMK at 12:22 pm, 11/29/18

ICAL Name: 18NOV28DCAL **Result Table:** 18NOV28DCAL 11/28/2018 4:47:11 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

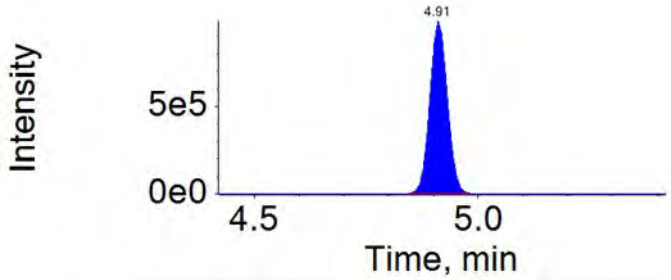
Analyte: 6:2-FTS
427.0 / 407.0



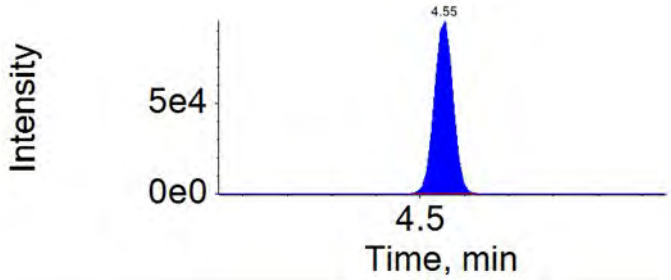
Extraction Standard: 13C2-6:2-FTS
429.0 / 81.0



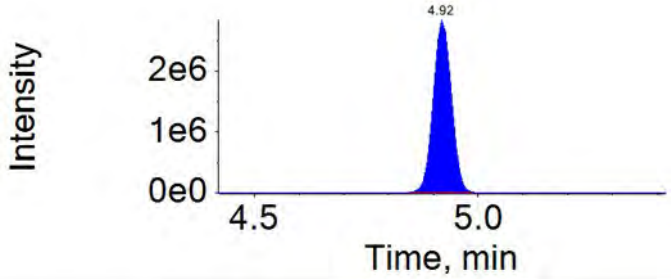
Analyte: PFHpS
449.0 / 80.0



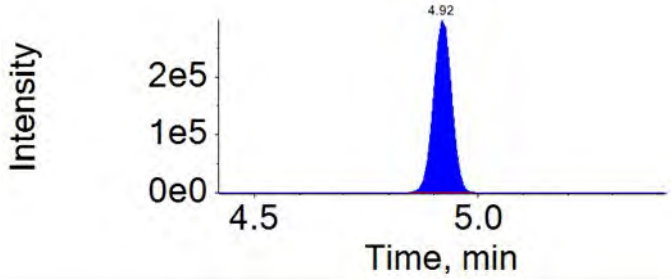
Extraction Standard: 13C3-PFHxS
402.0 / 80.0



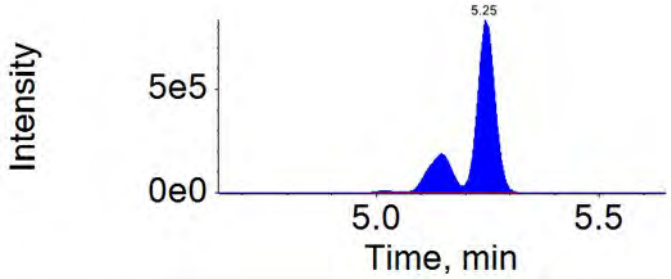
Analyte: PFOA
413.0 / 369.0



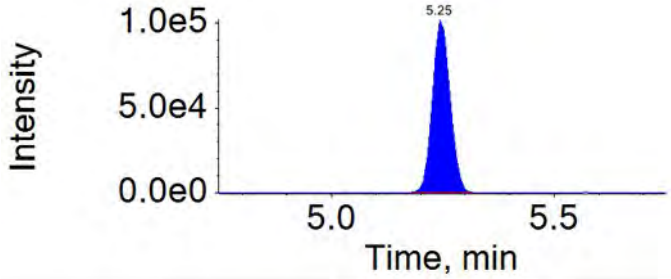
Extraction Standard: 13C8-PFOA
421.0 / 376.0



Analyte: PFOS
499.0 / 80.0



Extraction Standard: 13C8-PFOS
507.0 / 80.0

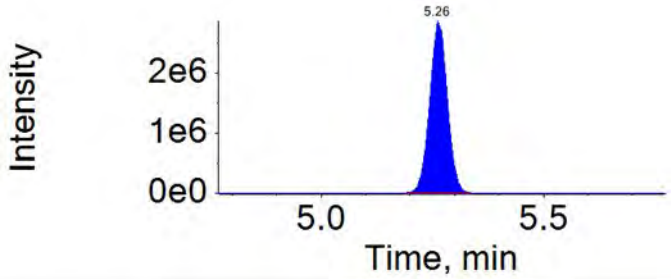


APPROVED
By MCD at 5:00 pm, 11/28/18

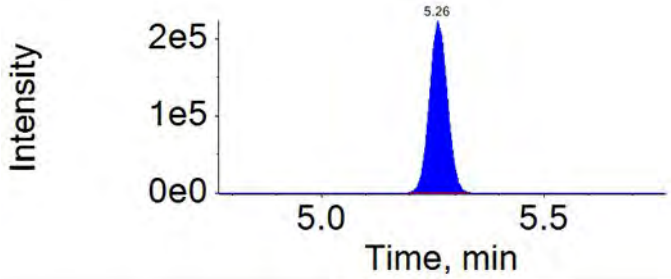
REVIEWED
By HMK at 12:22 pm, 11/29/18

ICAL Name: 18NOV28DCAL **Result Table:** 18NOV28DCAL 11/28/2018 4:47:11 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

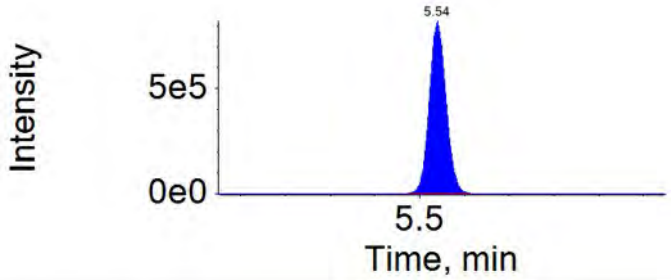
Analyte: PFNA
463.0 / 419.0



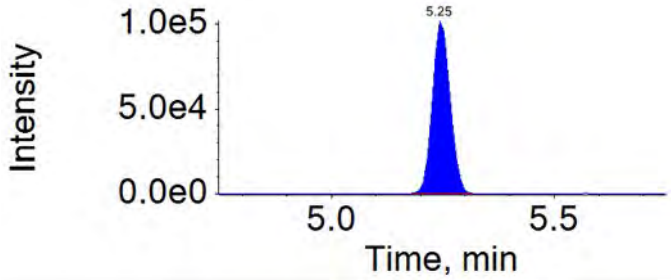
Extraction Standard: 13C9-PFNA
472.0 / 427.0



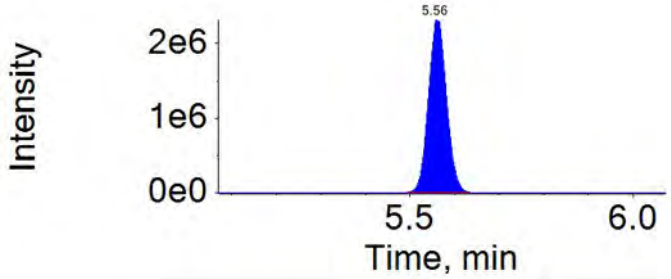
Analyte: PFNS
549.0 / 80.0



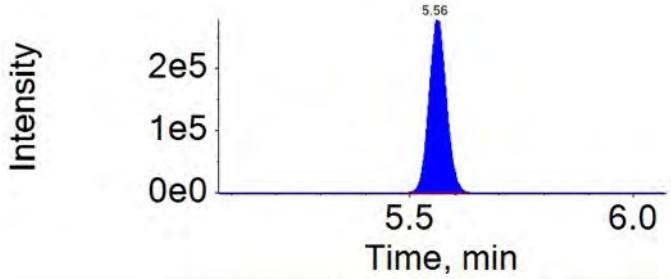
Extraction Standard: 13C8-PFOS
507.0 / 80.0



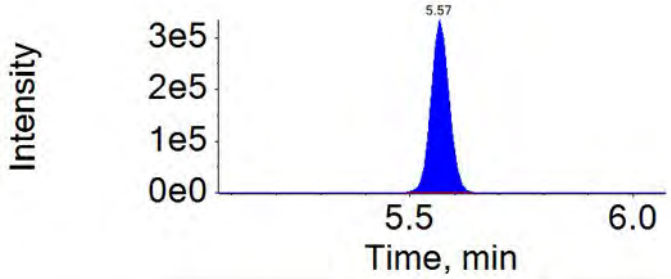
Analyte: PFDA
513.0 / 469.0



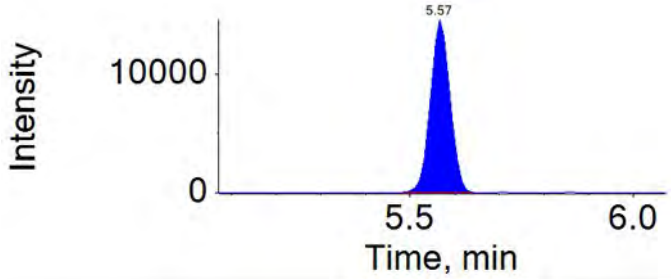
Extraction Standard: 13C6-PFDA
519.0 / 474.0



Analyte: 8:2-FTS
527.0 / 507.0



Extraction Standard: 13C2-8:2-FTS
529.0 / 81.0

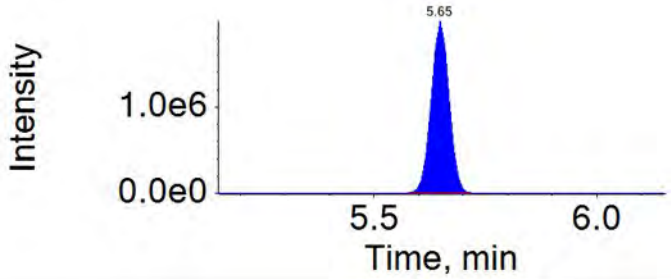


APPROVED
By MCD at 5:00 pm, 11/28/18

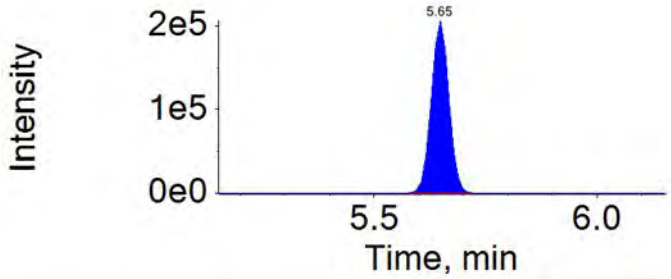
REVIEWED
By HMK at 12:22 pm, 11/29/18

ICAL Name: 18NOV28DCAL **Result Table:** 18NOV28DCAL 11/28/2018 4:47:11 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

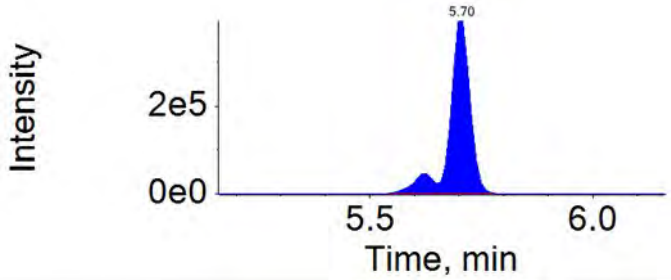
Analyte: PFOSA
498.0 / 78.0



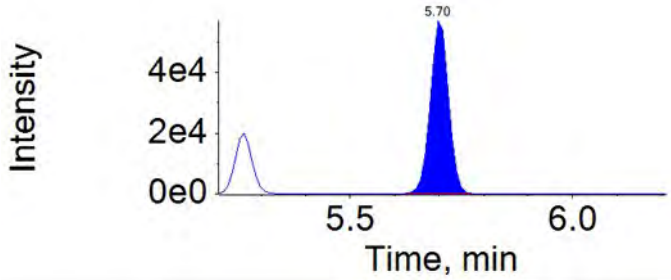
Extraction Standard: 13C8-PFOSA
506.0 / 78.0



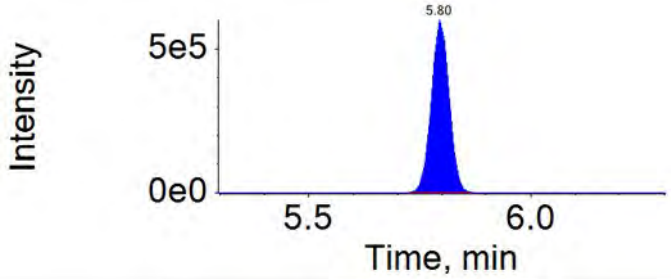
Analyte: NMeFOSAA
570.0 / 419.0



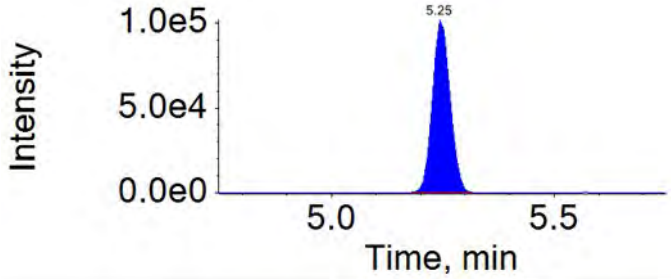
Extraction Standard: d3-NMeFOSAA
573.0 / 419.0



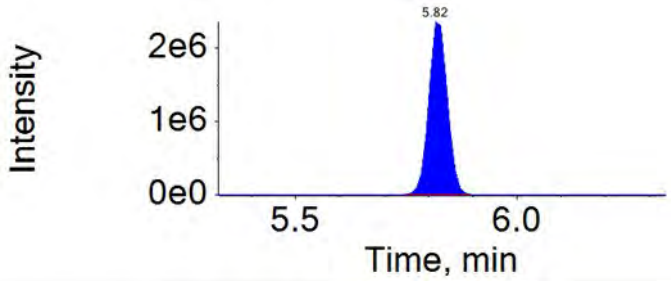
Analyte: PFDS
599.0 / 80.0



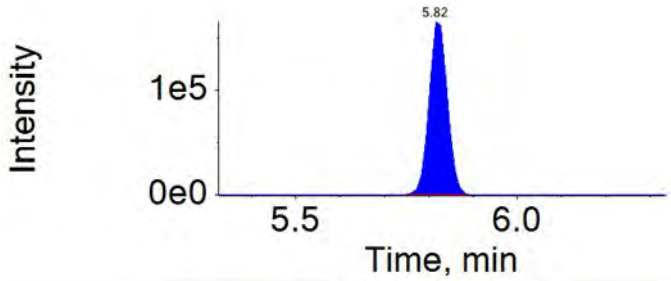
Extraction Standard: 13C8-PFOS
507.0 / 80.0



Analyte: PFUnDA
563.0 / 519.0



Extraction Standard: 13C7-PFUnDA
570.0 / 525.0

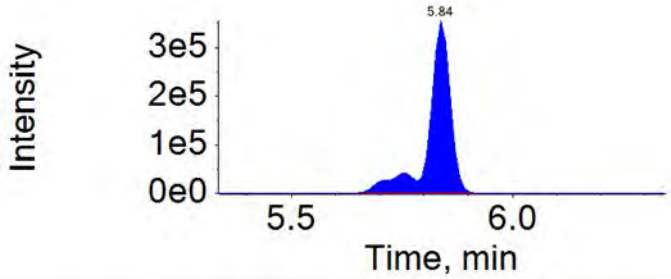


APPROVED
By MCD at 5:00 pm, 11/28/18

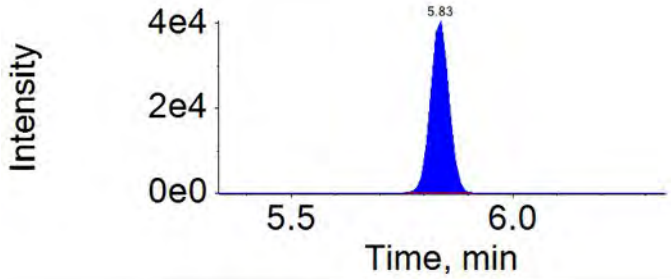
REVIEWED
By HMK at 12:22 pm, 11/29/18

ICAL Name: 18NOV28DCAL **Result Table:** 18NOV28DCAL 11/28/2018 4:47:11 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

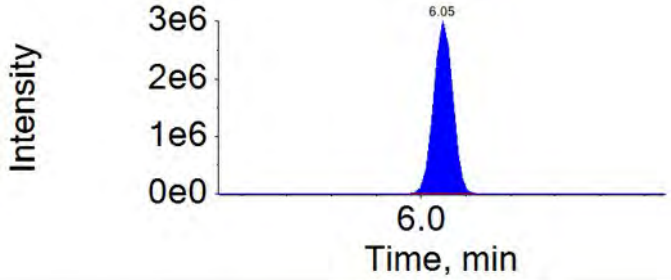
Analyte: NEtFOSAA
584.0 / 419.0



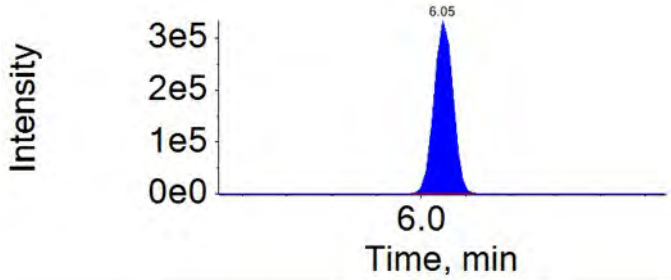
Extraction Standard: d5-NEtFOSAA
589.0 / 419.0



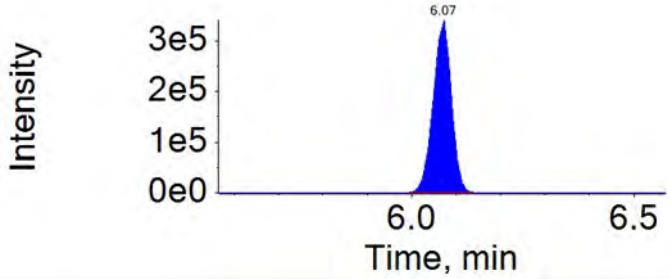
Analyte: PFDoDA
613.0 / 569.0



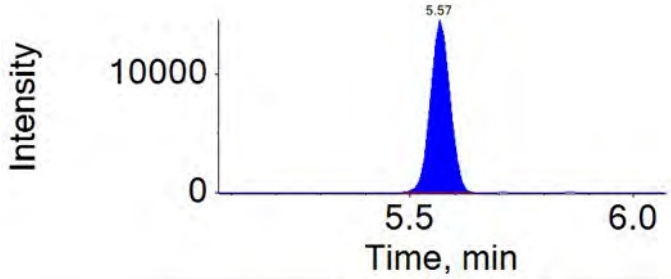
Extraction Standard: 13C2-PFDoDA
615.0 / 570.0



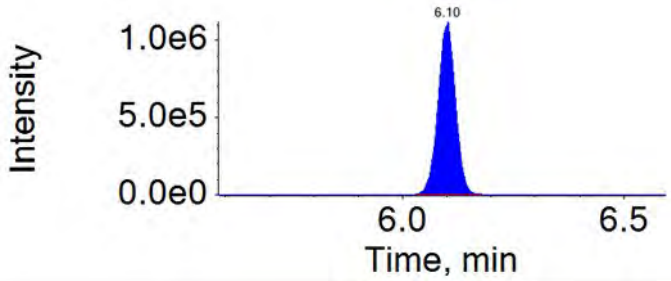
Analyte: 10:2-FTS
627.0 / 607.0



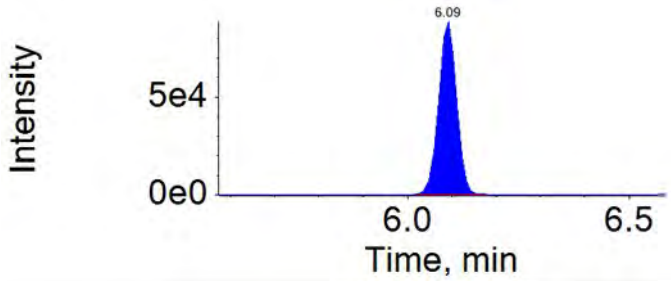
Extraction Standard: 13C2-8:2-FTS
529.0 / 81.0



Analyte: NMePFOSAE
616.0 / 59.0



Extraction Standard: d7-NMePFOSAE
623.0 / 59.0

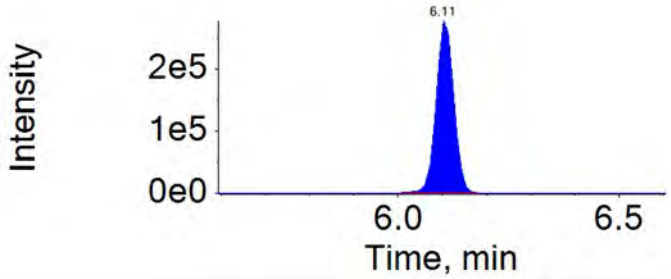


APPROVED
By MCD at 5:00 pm, 11/28/18

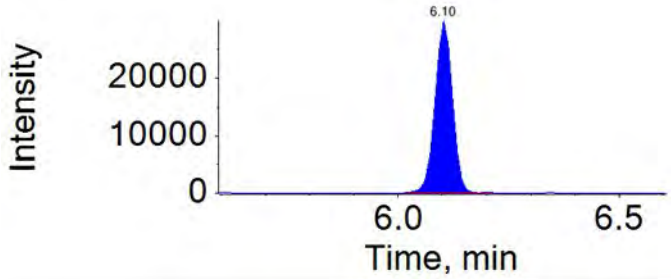
REVIEWED
By HMK at 12:22 pm, 11/29/18

ICAL Name: 18NOV28DCAL **Result Table:** 18NOV28DCAL 11/28/2018 4:47:11 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

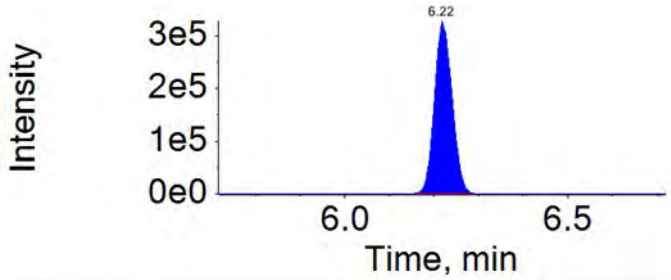
Analyte: NMePFOSA
512.0 / 169.0



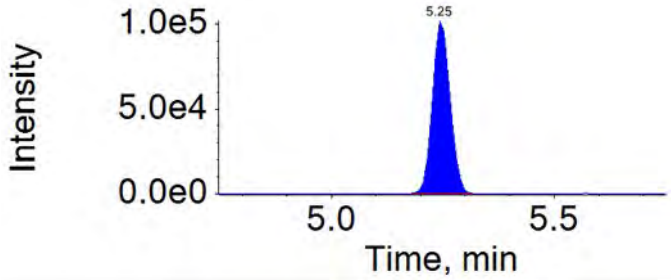
Extraction Standard: d3-NMePFOSA
515.0 / 169.0



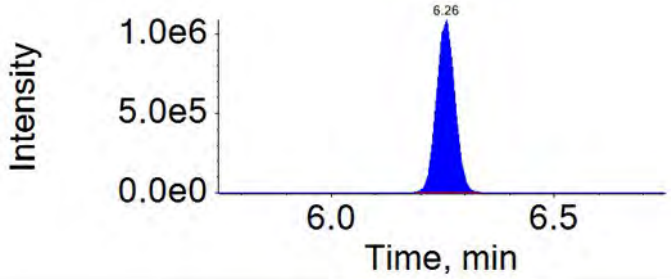
Analyte: PFDoS
699.0 / 80.0



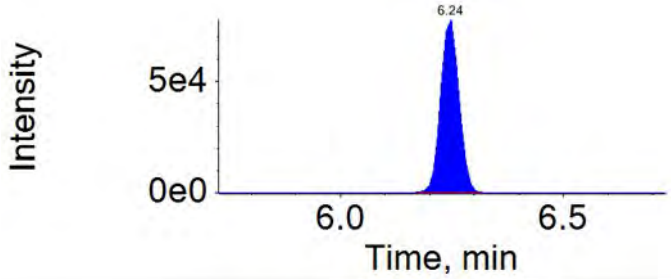
Extraction Standard: 13C8-PFOS
507.0 / 80.0



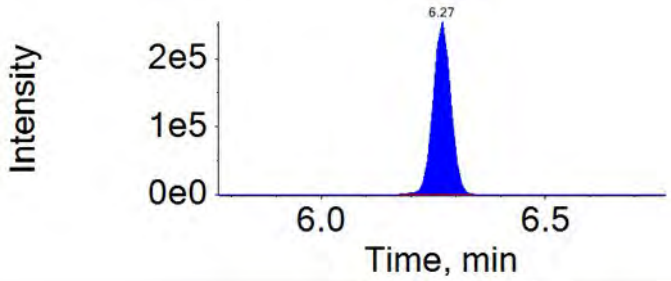
Analyte: NEtPFOSAE
630.0 / 59.0



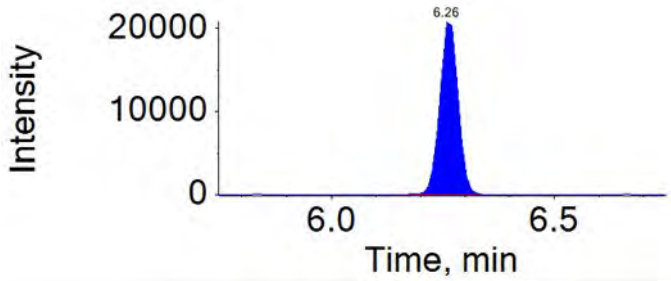
Extraction Standard: d9-NEtPFOSAE
639.0 / 59.0



Analyte: NEtPFOSA
526.0 / 169.0



Extraction Standard: d5-NEtPFOSA
531.0 / 169.0

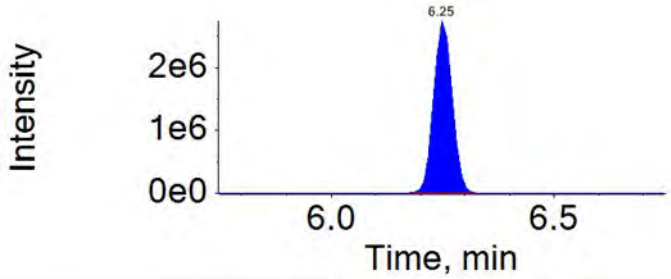


APPROVED
By MCD at 5:00 pm, 11/28/18

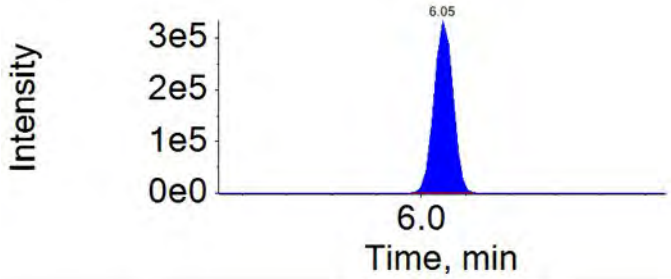
REVIEWED
By HMK at 12:22 pm, 11/29/18

ICAL Name: 18NOV28DCAL **Result Table:** 18NOV28DCAL 11/28/2018 4:47:11 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

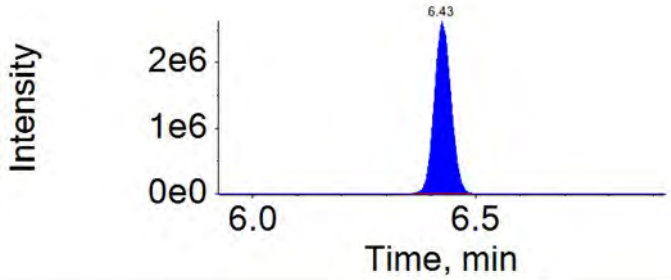
Analyte: PFTrDA
663.0 / 619.0



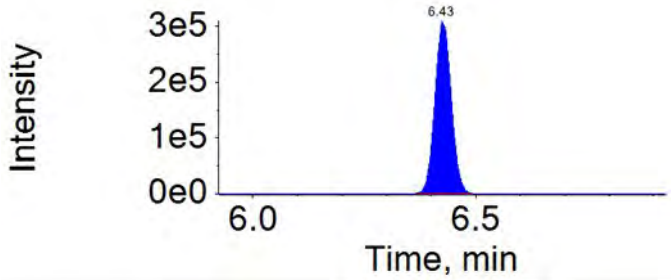
Extraction Standard: 13C2-PFDoDA
615.0 / 570.0



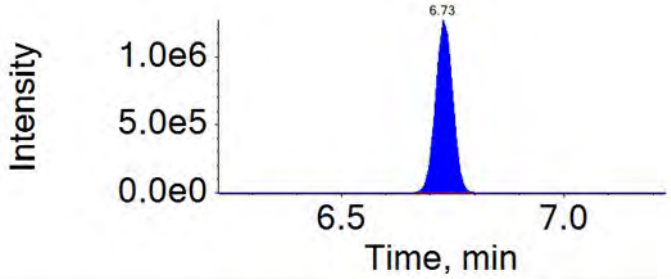
Analyte: PFTeDA
713.0 / 669.0



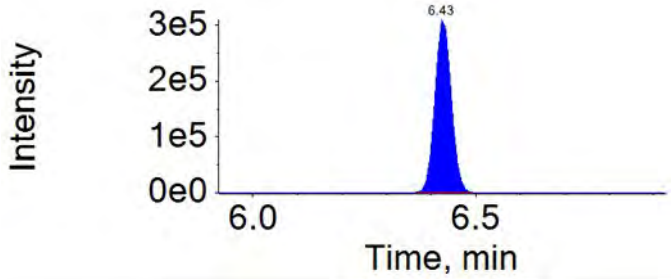
Extraction Standard: 13C2-PFTeDA
715.0 / 670.0



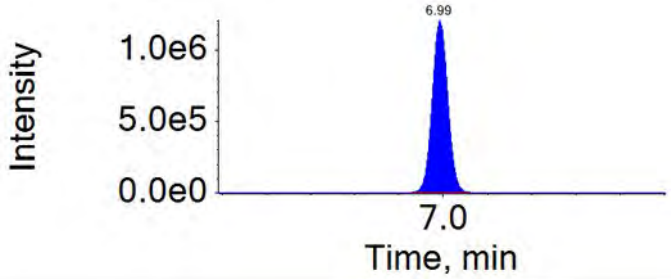
Analyte: PFHxDA
813.0 / 769.0



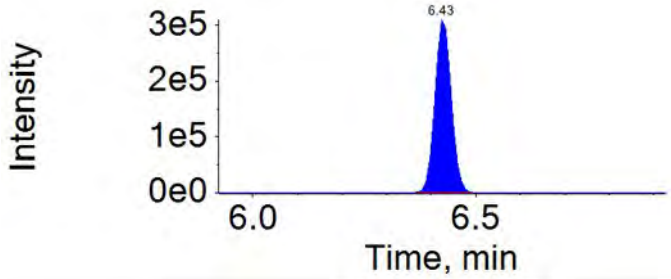
Extraction Standard: 13C2-PFTeDA
715.0 / 670.0



Analyte: PFODA
913.0 / 869.0



Extraction Standard: 13C2-PFTeDA
715.0 / 670.0



APPROVED
By MCD at 5:00 pm, 11/28/18

REVIEWED
By HMK at 12:22 pm, 11/29/18

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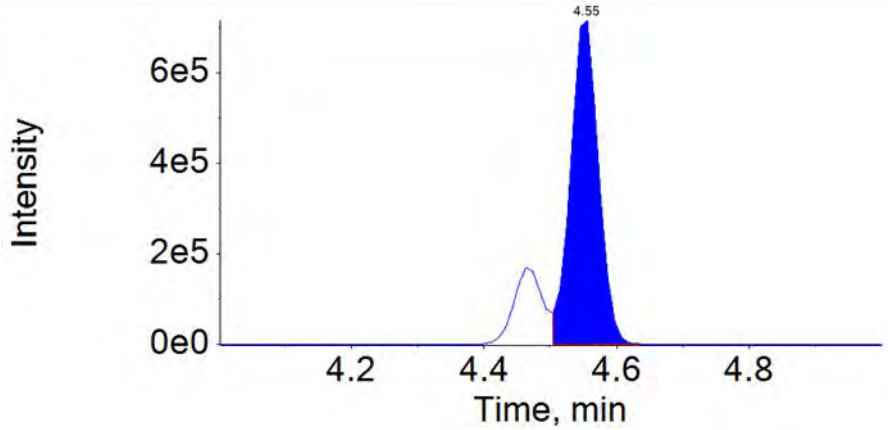
Auto Integrations prior to Manual Integration

Print Date: 11/28/2018 4:54 PM
Template: MQ-OrigInteg-16NOV21.docx

Results Table Name: 18NOV28DCAL
Results Table Date: 11/28/2018 4:52:53 PM

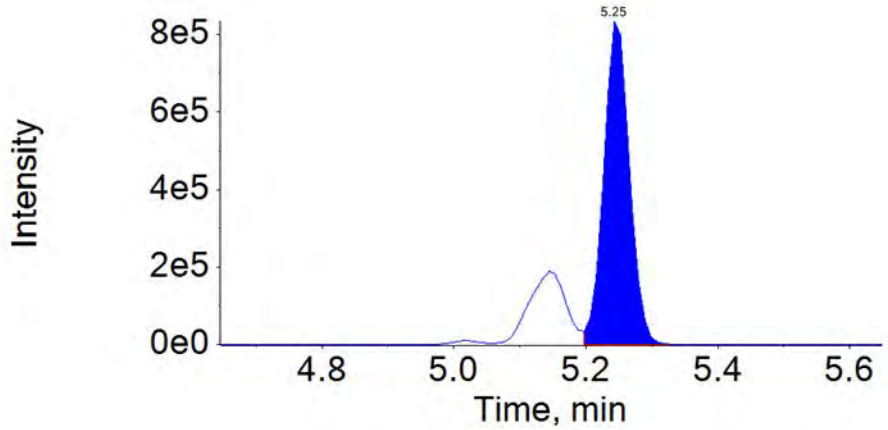
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

Component Name:
PFHxS
RT (min.):
4.55
Peak Area:
2110073.26
Mass Range:
399.0 / 80.0
File Name:
18NOV28DCAL-11.wiff
Sample Name:
CAL6



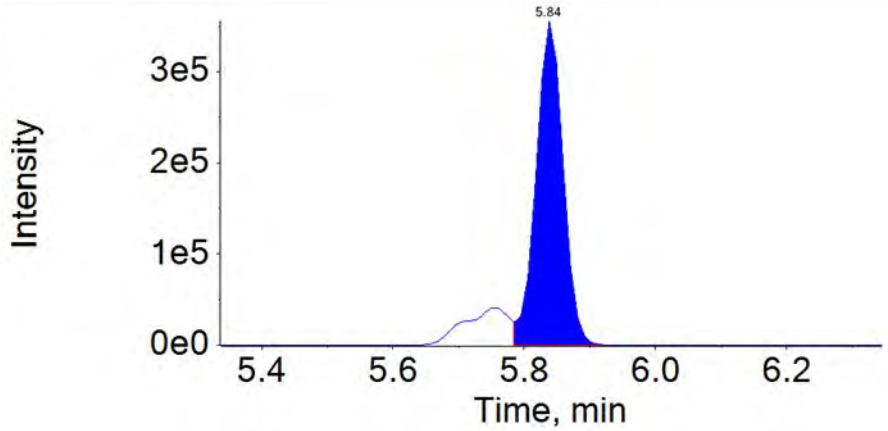
Integration Comment: incorrect integration

Component Name:
PFOS
RT (min.):
5.25
Peak Area:
2264157.02
Mass Range:
499.0 / 80.0
File Name:
18NOV28DCAL-11.wiff
Sample Name:
CAL6



Integration Comment: incorrect integration

Component Name:
NEtFOSAA
RT (min.):
5.84
Peak Area:
1021470.64
Mass Range:
584.0 / 419.0
File Name:
18NOV28DCAL-11.wiff
Sample Name:
CAL6



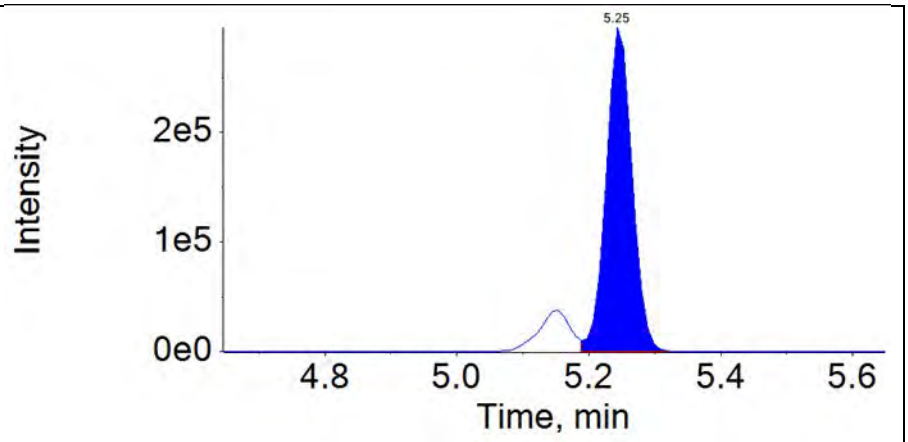
Integration Comment: incorrect integration

APPROVED
By MCD at 5:00 pm, 11/28/18

REVIEWED
By HMK at 12:22 pm, 11/29/18

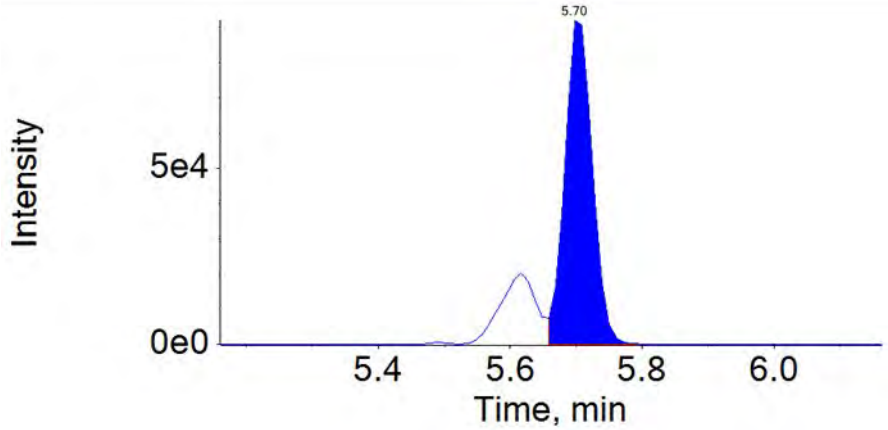
Results Table Name: 18NOV28DCAL
Results Table Date: 11/28/2018 4:52:53 PM
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

Component Name:
PFOS_2
RT (min.):
5.25
Peak Area:
810528.26
Mass Range:
499.0 / 99.0
File Name:
18NOV28DCAL-11.wiff
Sample Name:
CAL6



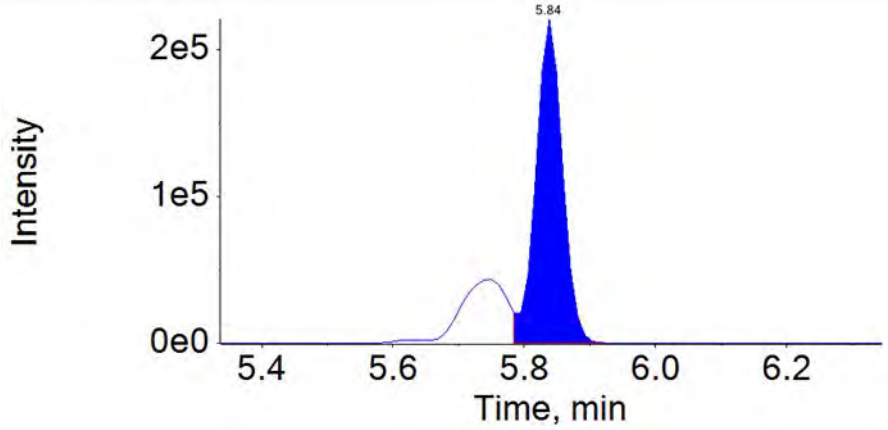
Integration Comment: incorrect integration

Component Name:
NMeFOSAA_2
RT (min.):
5.70
Peak Area:
267798.15
Mass Range:
570.0 / 483.0
File Name:
18NOV28DCAL-11.wiff
Sample Name:
CAL6



Integration Comment: incorrect integration

Component Name:
NEtFOSAA_2
RT (min.):
5.84
Peak Area:
625806.77
Mass Range:
584.0 / 526.0
File Name:
18NOV28DCAL-11.wiff
Sample Name:
CAL6



Integration Comment: incorrect integration

APPROVED
By MCD at 5:00 pm, 11/28/18

REVIEWED
By HMK at 12:22 pm, 11/29/18

Results Table Name: 18NOV28DCAL
Results Table Date: 11/28/2018 4:52:53 PM

Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

APPROVED
By MCD at 5:00 pm, 11/28/18

REVIEWED
By HMK at 12:22 pm, 11/29/18

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LC-MS/MS Analysis Report

Printed: 11/28/2018 4:51:00 PM
Template: IonRatio18OCT10

Ion Ratio Report

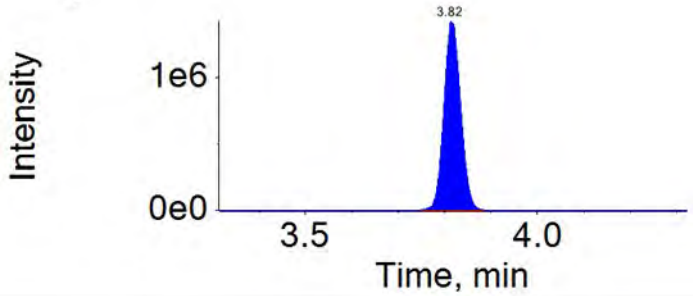
Sample Name: CAL6 **Instrument Name:** LM27631 **File Name:** 18NOV28DCAL-11.wiff

Component Name	RT	RRT	Analyte Area Response	Int Typ	Expected Ion Ratio	Ion Ratio	Ion Ratio % Diff	Ion Ratio Limit	Ion Ratio OOS
PFBS	3.82	1.00	3600470.83	A	0.3655	0.3566			
PFBS_2	3.82	1.00	1284104.34	A	0.3655	0.3566	-2	50	
4:2-FTS	4.13	1.00	1148569.18	A	0.6383	0.6279			
4:2-FTS_2	4.13	1.00	721221.12	A	0.6383	0.6279	-2	50	
PFHxA	4.16	1.00	7468739.11	A	0.0103	0.0117			
PFHxA_2	4.16	1.00	87256.25	A	0.0103	0.0117	13	50	
PFPeS	4.18	1.10	1793808.03	A	0.4976	0.5229			
PFPeS_2	4.18	1.10	937895.85	A	0.4976	0.5229	5	50	
PFHpA	4.55	1.00	7873271.20	A	0.0557	0.0567			
PFHpA_2	4.55	1.00	446309.31	A	0.0557	0.0567	2	50	
PFHxS	4.55	1.00	2625950.90	M	0.3693	0.3570			
PFHxS_2	4.55	1.00	937577.08	A	0.3693	0.3570	-3	50	
6:2-FTS	4.90	1.00	859948.62	A	0.6625	0.6492			
6:2-FTS_2	4.90	1.00	558302.88	A	0.6625	0.6492	-2	50	
PFHpS	4.91	1.08	2686833.27	A	0.3915	0.4117			
PFHpS_2	4.91	1.08	1106038.20	A	0.3915	0.4117	5	50	
PFOA	4.92	1.00	8012665.34	A	0.0573	0.0550			
PFOA_2	4.92	1.00	440521.78	A	0.0573	0.0550	-4	50	
PFOS	5.25	1.00	3026664.45	M	0.2960	0.3091			
PFOS_2	5.25	1.00	935561.90	M	0.2960	0.3091	4	50	
PFNA	5.26	1.00	7843086.90	A	0.0201	0.0194			
PFNA_2	5.26	1.00	152065.57	A	0.0201	0.0194	-3	50	
PFNS	5.54	1.06	2116661.52	A	0.4794	0.4605			
PFNS_2	5.54	1.06	974696.88	A	0.4794	0.4605	-4	50	
PFDA	5.56	1.00	6551370.45	A	0.0075	0.0069			
PFDA_2	5.56	1.00	45516.35	A	0.0075	0.0069	-7	50	
8:2-FTS	5.57	1.00	938590.07	A	0.5380	0.5988			
8:2-FTS_2	5.57	1.00	561991.71	A	0.5380	0.5988	11	50	
NMeFOSAA	5.70	1.00	1292829.79	A	0.2305	0.2668			
NMeFOSAA_2	5.70	1.00	344955.19	M	0.2305	0.2668	16	50	
PFDS	5.80	1.10	1665920.17	A	0.5356	0.4889			
PFDS_2	5.80	1.10	814397.56	A	0.5356	0.4889	-9	50	
PFUnDA	5.82	1.00	6885622.64	A	0.0038	0.0040			
PFUnDA_2	5.82	1.00	27237.03	A	0.0038	0.0040	4	50	
NEtFOSAA	5.84	1.00	1214766.38	M	0.7356	0.6821			
NEtFOSAA_2	5.84	1.00	828574.74	M	0.7356	0.6821	-7	50	
PFDoDA	6.05	1.00	8865844.73	A	0.0130	0.0133			
PFDoDA_2	6.05	1.00	118287.14	A	0.0130	0.0133	2	50	
10:2-FTS	6.07	1.09	972346.85	A	0.6989	0.7475			
10:2-FTS_2	6.07	1.09	726827.33	A	0.6989	0.7475	7	50	
PFTrDA	6.25	1.03	7958673.38	A	0.0090	0.0094			
PFTrDA_2	6.25	1.03	74438.34	A	0.0090	0.0094	4	50	
PFTeDA	6.43	1.00	6793735.34	A	0.0056	0.0064			
PFTeDA_2	6.43	1.00	43469.69	A	0.0056	0.0064	14	50	
PFHxDA	6.73	1.05	3402004.45	A	0.0646	0.0655			
PFHxDA_2	6.73	1.05	222711.21	A	0.0646	0.0655	1	50	
PFODA	6.99	1.09	2942000.06	A	0.0264	0.0267			
PFODA_2	6.99	1.09	78596.75	A	0.0264	0.0267	1	50	

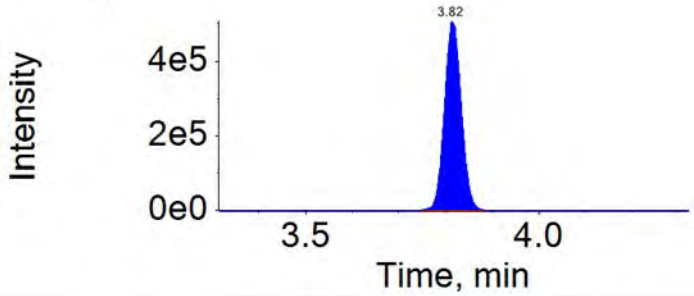
APPROVED
By MCD at 5:00 pm, 11/28/18

REVIEWED
By HMK at 12:22 pm, 11/29/18

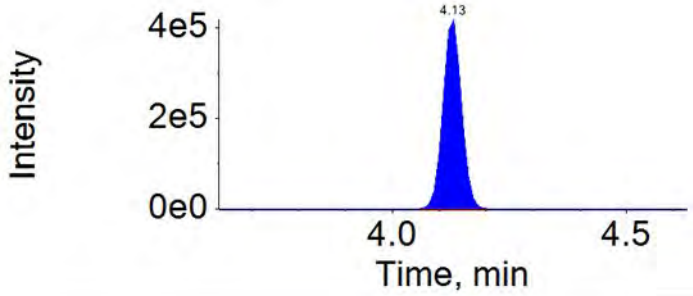
Component: PFBS
Primary Mass: 299.0 / 80.0



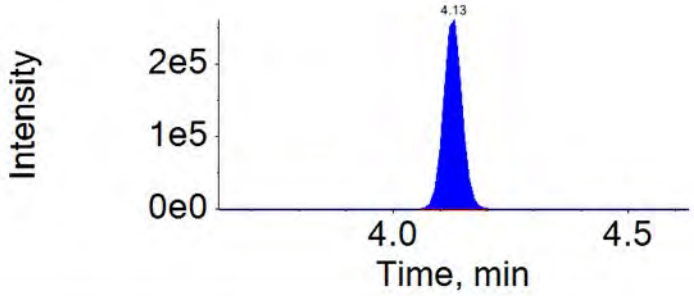
Component: PFBS_2
Secondary Mass: 299.0 / 99.0



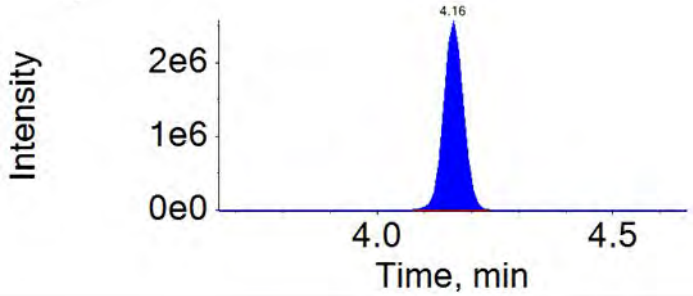
Component: 4:2-FTS
Primary Mass: 327.0 / 307.0



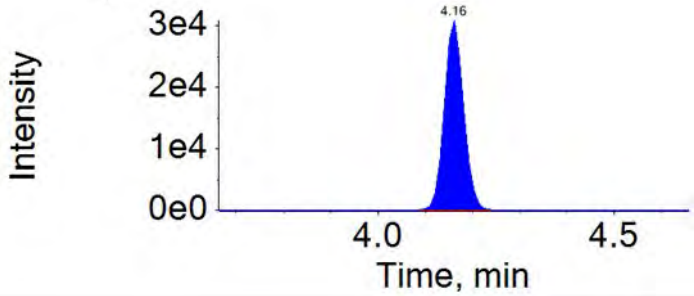
Component: 4:2-FTS_2
Secondary Mass: 327.0 / 81.0



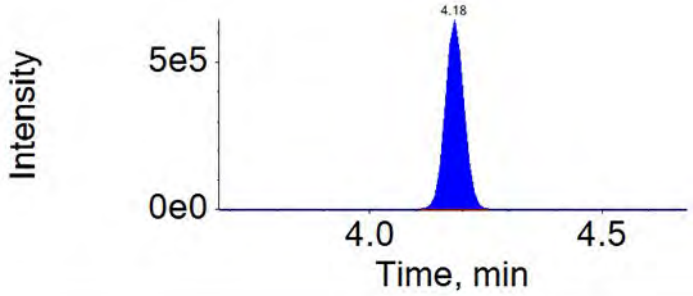
Component: PFHxA
Primary Mass: 313.0 / 269.0



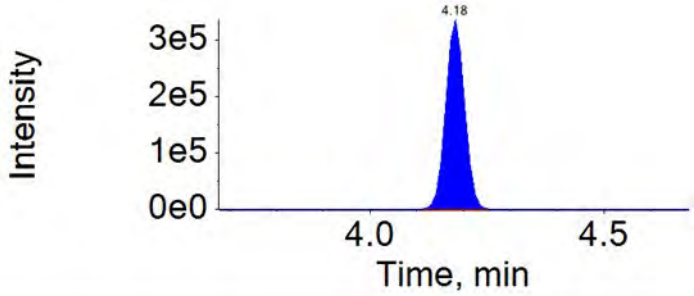
Component: PFHxA_2
Secondary Mass: 313.0 / 119.0



Component: PFPeS
Primary Mass: 349.0 / 80.0



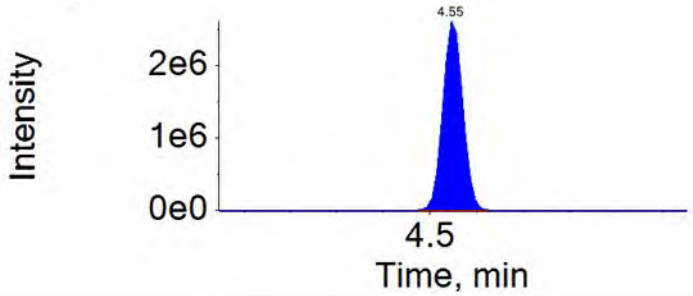
Component: PFPeS_2
Secondary Mass: 349.0 / 99.0



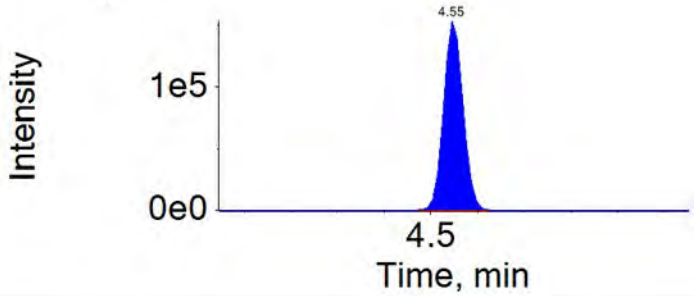
APPROVED
By MCD at 5:00 pm, 11/28/18

REVIEWED
By HMK at 12:22 pm, 11/29/18

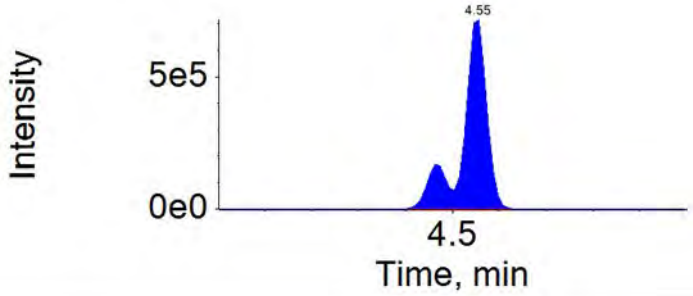
Component: PFHpA
Primary Mass: 363.0 / 319.0



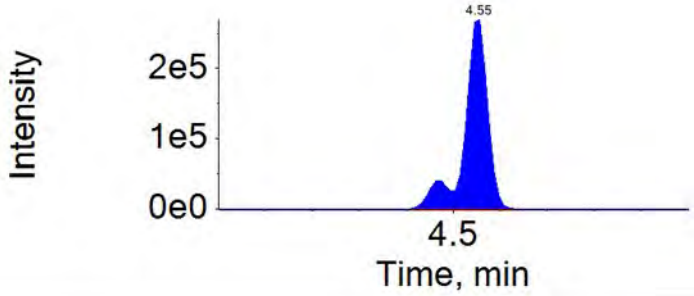
Component: PFHpA_2
Secondary Mass: 363.0 / 169.0



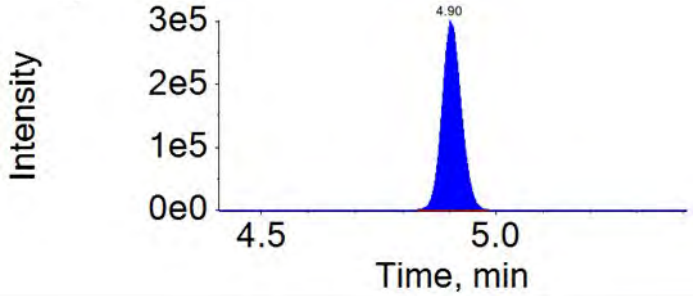
Component: PFHxS
Primary Mass: 399.0 / 80.0



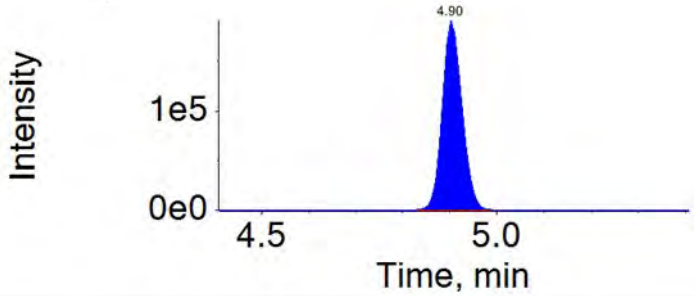
Component: PFHxS_2
Secondary Mass: 399.0 / 99.0



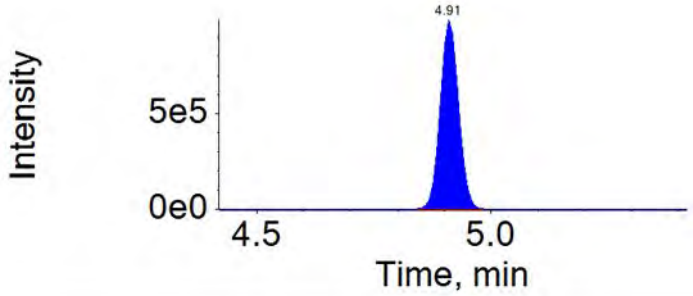
Component: 6:2-FTS
Primary Mass: 427.0 / 407.0



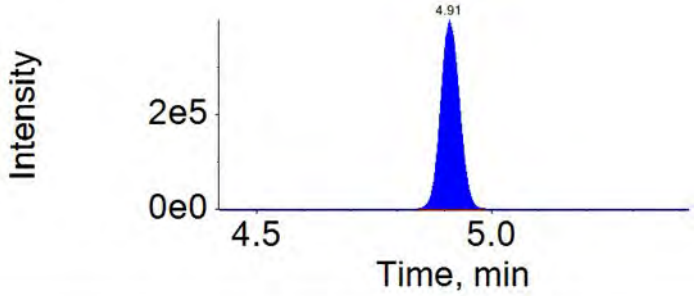
Component: 6:2-FTS_2
Secondary Mass: 427.0 / 81.0



Component: PFHpS
Primary Mass: 449.0 / 80.0



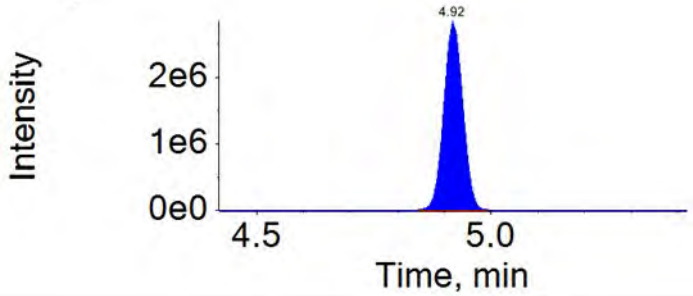
Component: PFHpS_2
Secondary Mass: 449.0 / 99.0



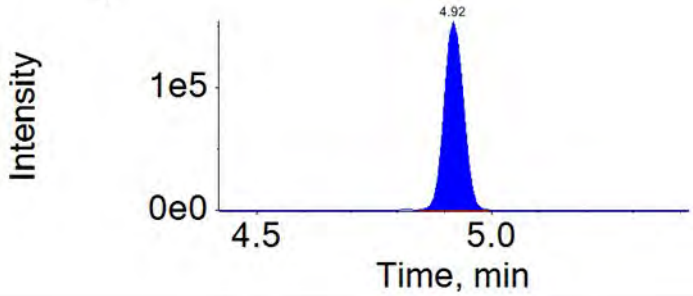
APPROVED
By MCD at 5:00 pm, 11/28/18

REVIEWED
By HMK at 12:22 pm, 11/29/18

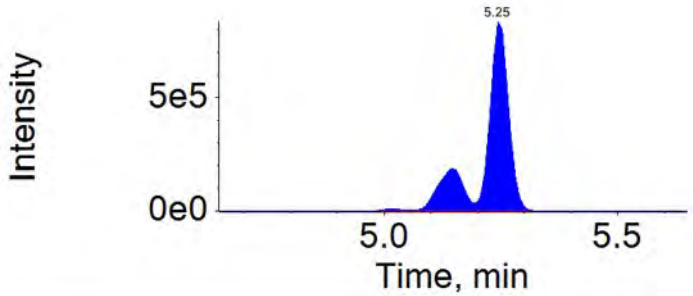
Component: PFOA
Primary Mass: 413.0 / 369.0



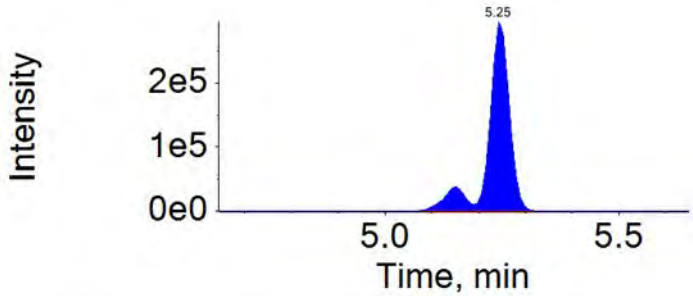
Component: PFOA_2
Secondary Mass: 413.0 / 169.0



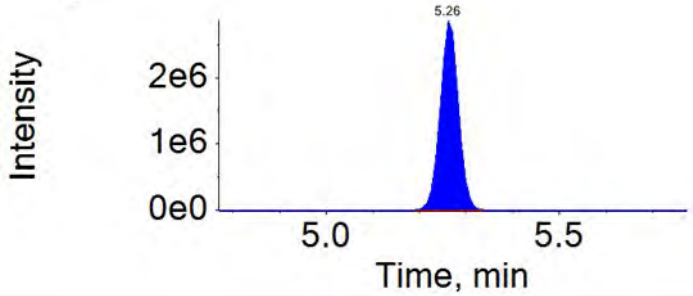
Component: PFOS
Primary Mass: 499.0 / 80.0



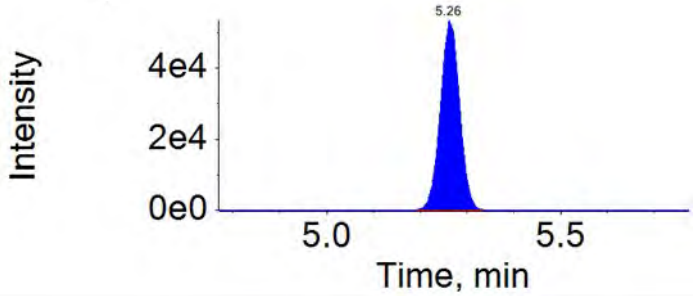
Component: PFOS_2
Secondary Mass: 499.0 / 99.0



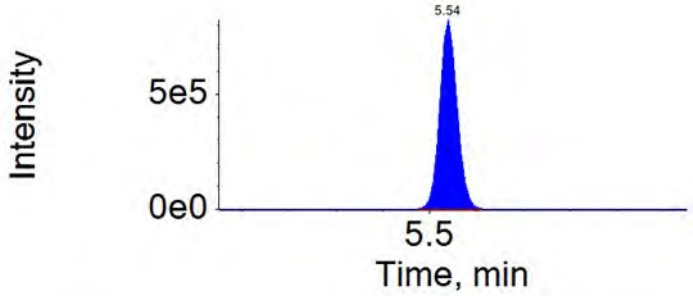
Component: PFNA
Primary Mass: 463.0 / 419.0



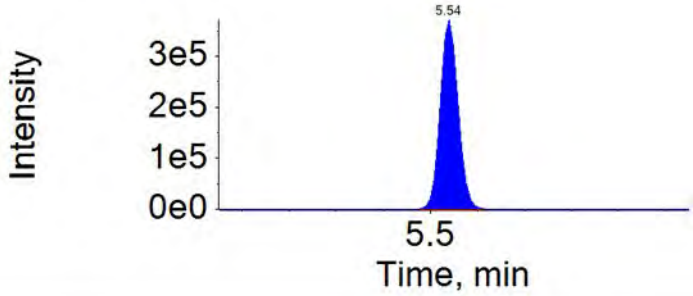
Component: PFNA_2
Secondary Mass: 463.0 / 169.0



Component: PFNS
Primary Mass: 549.0 / 80.0



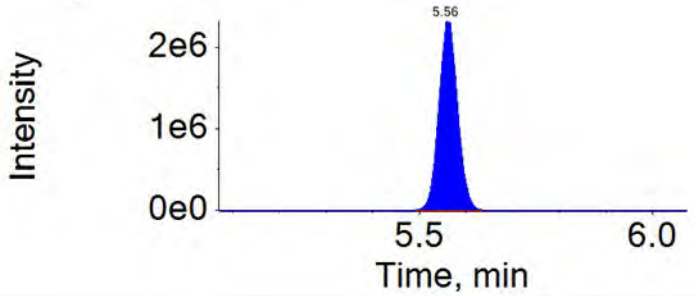
Component: PFNS_2
Secondary Mass: 549.0 / 99.0



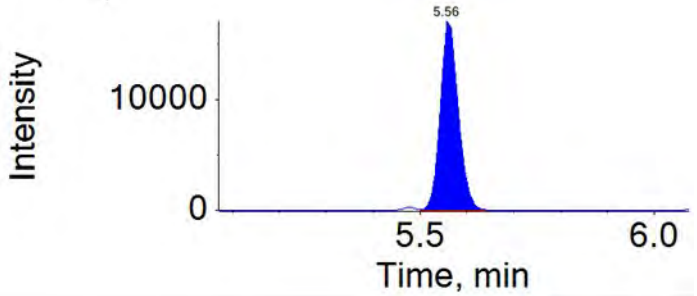
APPROVED
By MCD at 5:00 pm, 11/28/18

REVIEWED
By HMK at 12:22 pm, 11/29/18

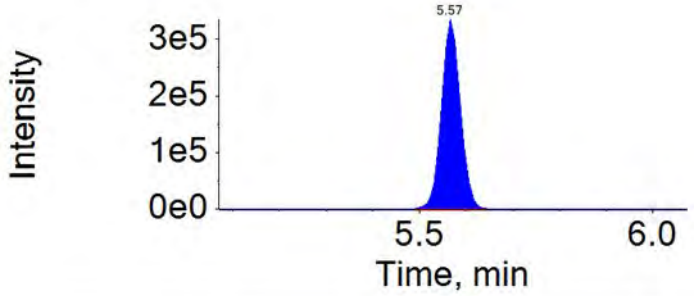
Component: PFDA
Primary Mass: 513.0 / 469.0



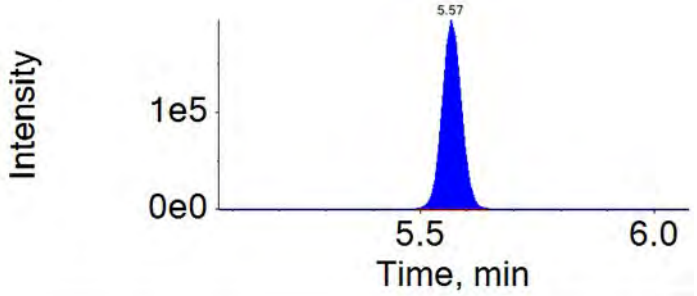
Component: PFDA_2
Secondary Mass: 513.0 / 169.0



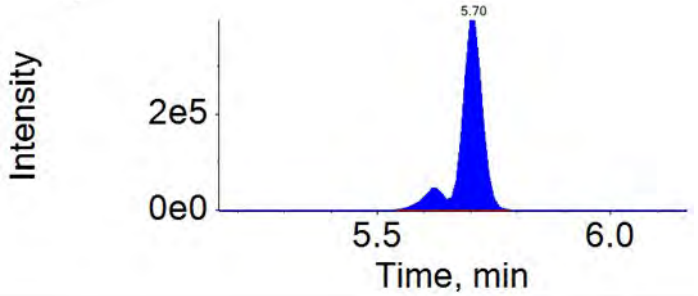
Component: 8:2-FTS
Primary Mass: 527.0 / 507.0



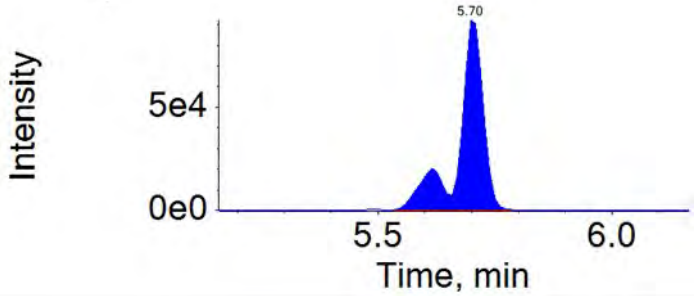
Component: 8:2-FTS_2
Secondary Mass: 527.0 / 81.0



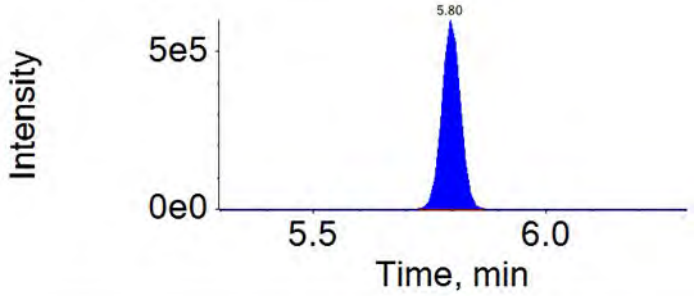
Component: NMeFOSAA
Primary Mass: 570.0 / 419.0



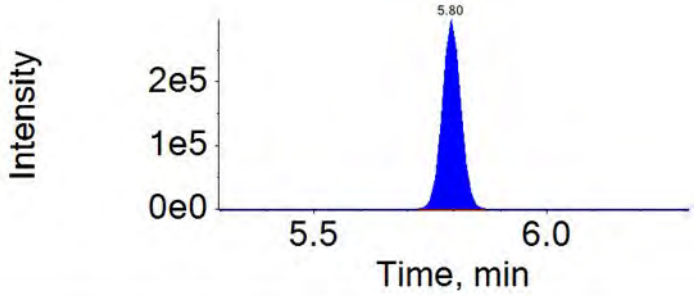
Component: NMeFOSAA_2
Secondary Mass: 570.0 / 483.0



Component: PFDS
Primary Mass: 599.0 / 80.0



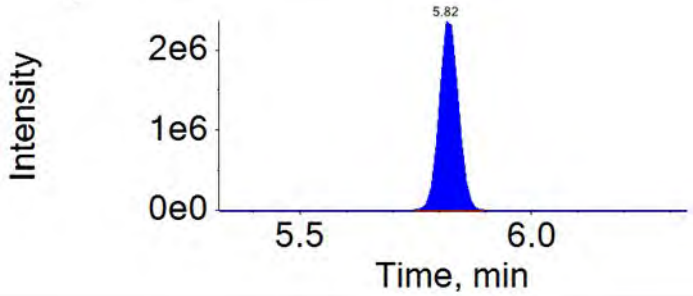
Component: PFDS_2
Secondary Mass: 599.0 / 99.0



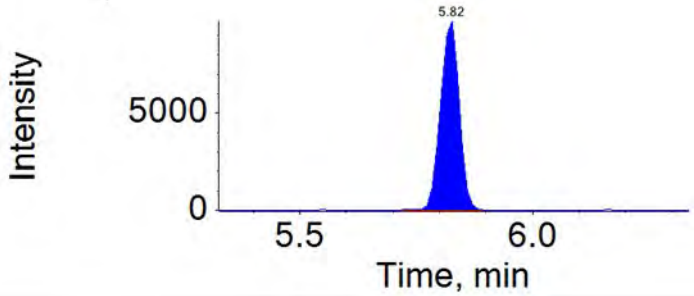
APPROVED
By MCD at 5:00 pm, 11/28/18

REVIEWED
By HMK at 12:22 pm, 11/29/18

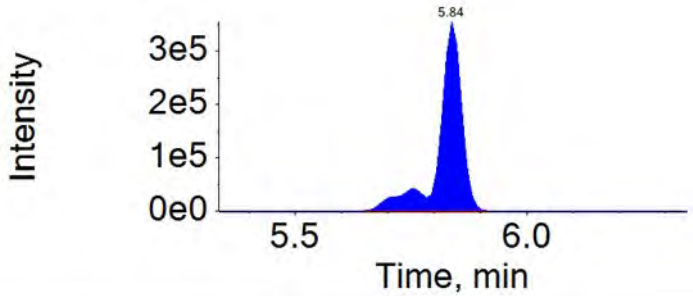
Component: PFUnDA
Primary Mass: 563.0 / 519.0



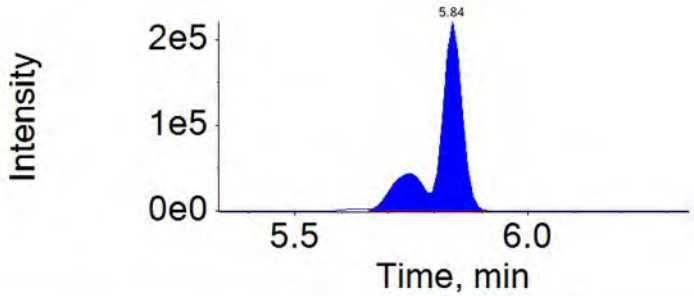
Component: PFUnDA_2
Secondary Mass: 563.0 / 169.0



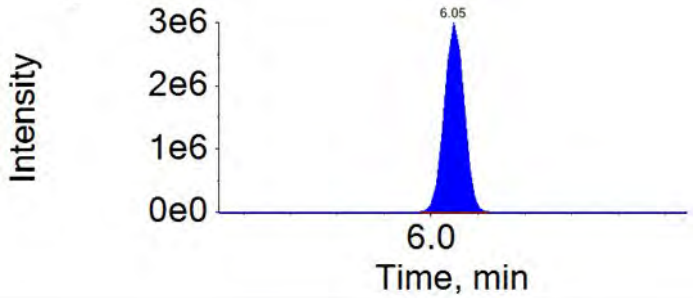
Component: NEtFOSAA
Primary Mass: 584.0 / 419.0



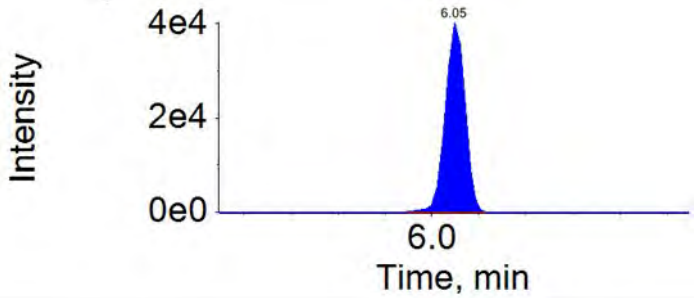
Component: NEtFOSAA_2
Secondary Mass: 584.0 / 526.0



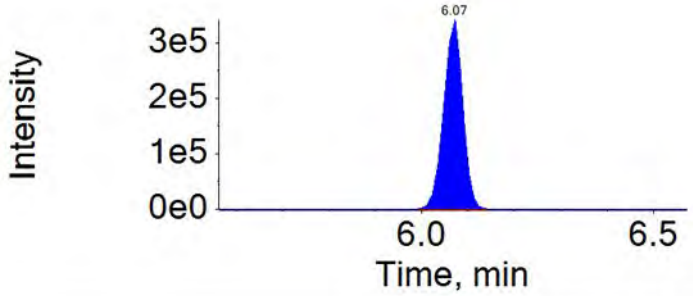
Component: PFDoDA
Primary Mass: 613.0 / 569.0



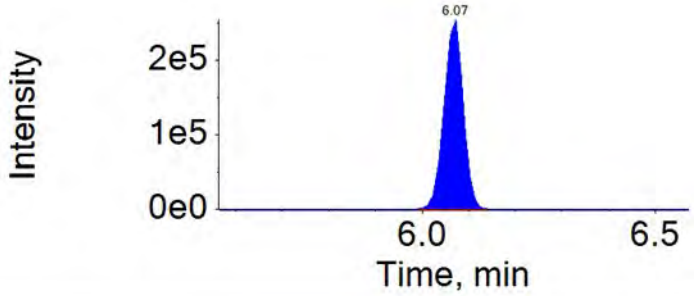
Component: PFDoDA_2
Secondary Mass: 613.0 / 169.0



Component: 10:2-FTS
Primary Mass: 627.0 / 607.0



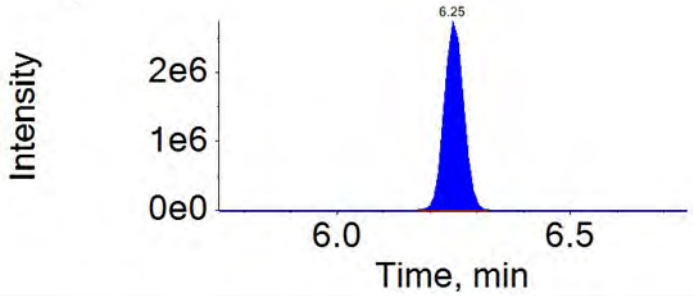
Component: 10:2-FTS_2
Secondary Mass: 627.0 / 81.0



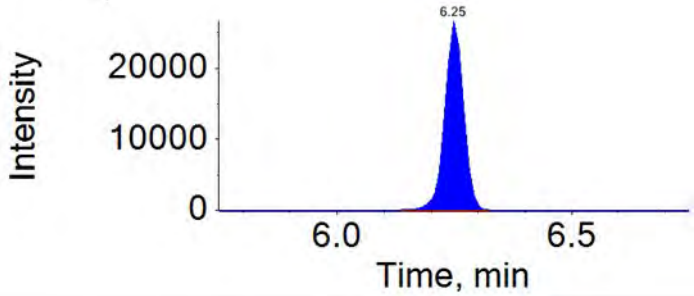
APPROVED
By MCD at 5:00 pm, 11/28/18

REVIEWED
By HMK at 12:22 pm, 11/29/18

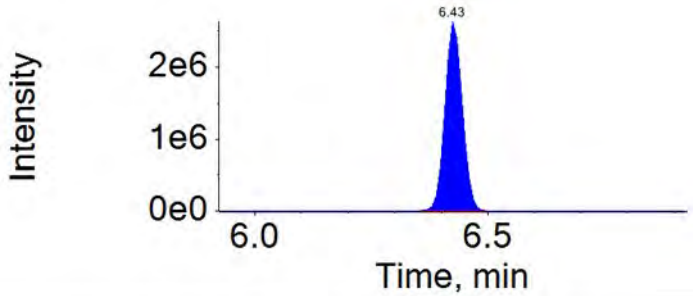
Component: PFTrDA
Primary Mass: 663.0 / 619.0



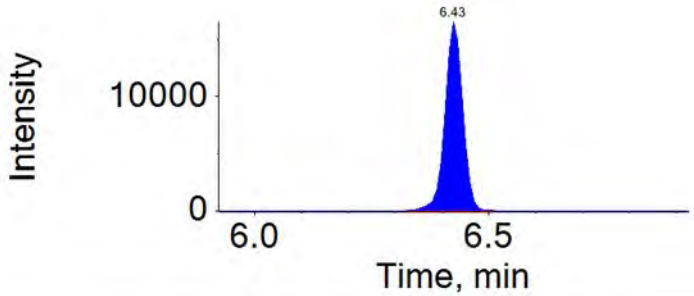
Component: PFTrDA_2
Secondary Mass: 663.0 / 169.0



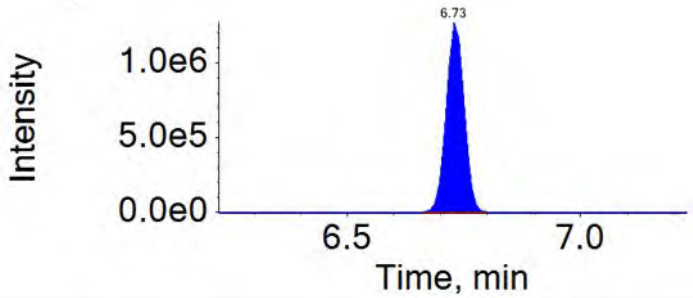
Component: PFTeDA
Primary Mass: 713.0 / 669.0



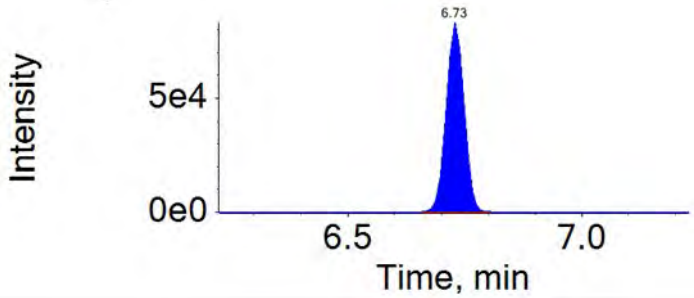
Component: PFTeDA_2
Secondary Mass: 713.0 / 169.0



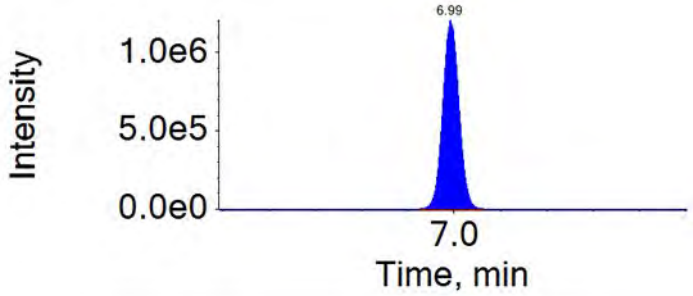
Component: PFHxDA
Primary Mass: 813.0 / 769.0



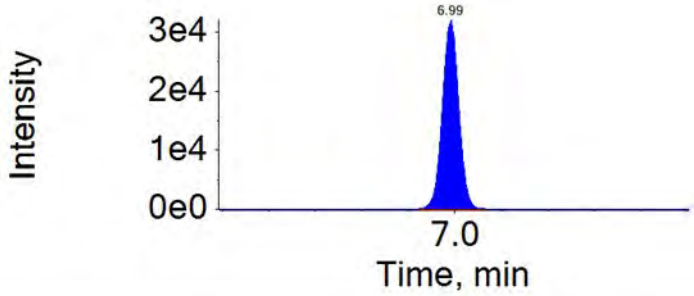
Component: PFHxDA_2
Secondary Mass: 813.0 / 169.0



Component: PFODA
Primary Mass: 913.0 / 869.0



Component: PFODA_2
Secondary Mass: 913.0 / 169.0



APPROVED
By MCD at 5:00 pm, 11/28/18

REVIEWED
By HMK at 12:22 pm, 11/29/18

ICAL Name: 18NOV28DCAL **Result Table:** 18NOV28DCAL 11/28/2018 4:47:11 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Sample Name:	CAL7			**Data File:**		18NOV28DCAL-12.wiff
Sample ID:	CALBRN71833B			**Acquis Date:**		2018-11-28T14:36:16
Sample Type:	Standard			**Instrument:**		LM27631
Vial Position:	9			**Acquis Method:**		18AUG13_3uL.dam
Injection Vol:	3.00			**Result Table:**		18NOV28DCAL
QMethod File:	18AUG20QM			**ICAL Name:**		18NOV28DCAL
Batch Number:	N/A			**Operator:**		MCD7824
Sample Wt.:	1.00000			**Dilution Factor:**		1.00
Sample Vol.:	1.000			**Prep Factor:**		1.000

Injection Standard Peak Table

Injection Standard Area Reference File: 18NOV28DCAL-08

Injection Standard Name	Inj Std Conc	Injection Std Peak Area	Rreference Injection Standard Area	Injection Std %Diff	Injection Std %Diff Limit	Injection Std %Diff OOS
13C3-PFBA	5.0	717475.7	887248.9	-19	50	
13C2-PFOA	5.0	482796.5	498501.6	-3	50	
13C4-PFOS	4.8	242045.2	283214.2	-15	50	
13C2-PFDA	5.0	405455.0	441790.6	-8	50	

Extraction Standard Peak Table

Extraction Standard Name	Ext Std Area	Inj Std Name	Inj Std Area	Area Ratio	Ext Std Conc	Ext Std Result	Ext Std %REC	Ext Std %REC Limit	Ext Std OOS
E13C4-PFBA	803704.8	13C3-PFBA	717475.7	1.120	5.000	4.998	100	70-130	
E13C5-PFPeA	781113.8	13C3-PFBA	717475.7	1.089	5.000	5.084	102	70-130	
E13C3-PFBS	352994.8	13C3-PFBA	717475.7	0.492	4.650	4.694	101	70-130	
E13C2-4:2-FTS	62236.8	13C2-PFOA	482796.5	0.129	4.670	4.442	95	70-130	
E13C5-PFHxA	625449.8	13C2-PFOA	482796.5	1.295	5.000	4.758	95	70-130	
E13C3-PFHxS	239327.4	13C2-PFOA	482796.5	0.496	4.730	3.885	82	70-130	
E13C4-PFHpA	544866.9	13C2-PFOA	482796.5	1.129	5.000	5.186	104	70-130	
E13C2-6:2-FTS	43678.3	13C2-PFOA	482796.5	0.090	4.750	3.787	80	70-130	
E13C8-PFOA	745616.3	13C2-PFOA	482796.5	1.544	5.000	4.251	85	70-130	
E13C8-PFOS	250004.2	13C4-PFOS	242045.2	1.033	4.780	4.663	98	70-130	
E13C9-PFNA	562206.9	13C4-PFOS	242045.2	2.323	5.000	5.102	102	70-130	
E13C6-PFDA	645932.5	13C2-PFDA	405455.0	1.593	5.000	4.492	90	70-130	
E13C2-8:2-FTS	41093.1	13C2-PFDA	405455.0	0.101	4.790	4.356	91	70-130	
E13C8-PFOSA	555500.5	13C2-PFDA	405455.0	1.370	5.000	5.027	101	70-130	
Ed3-NMeFOSAA	156760.9	13C2-PFDA	405455.0	0.387	5.000	4.909	98	70-130	
E13C7-PFUnDA	416723.9	13C2-PFDA	405455.0	1.028	5.000	4.344	87	70-130	
Ed5-NEtFOSAA	102891.6	13C2-PFDA	405455.0	0.254	5.000	4.521	90	70-130	
E13C2-PFDoDA	852235.6	13C2-PFDA	405455.0	2.102	5.000	4.416	88	70-130	
Ed7-NMePFOSAE	250467.6	13C2-PFDA	405455.0	0.618	5.000	5.339	107	70-130	
Ed3-NMePFOSA	79780.2	13C2-PFDA	405455.0	0.197	5.000	5.325	107	70-130	
Ed9-NEtPFOSAE	216042.0	13C2-PFDA	405455.0	0.533	5.000	5.402	108	70-130	
Ed5-NEtPFOSA	59209.1	13C2-PFDA	405455.0	0.146	5.000	5.074	101	70-130	
E13C2-PFTeDA	717297.7	13C2-PFDA	405455.0	1.769	5.000	4.895	98	70-130	

APPROVED
By MCD at 5:00 pm, 11/28/18

REVIEWED
By HMK at 12:22 pm, 11/29/18

ICAL Name: 18NOV28DCAL **Result Table:** 18NOV28DCAL 11/28/2018 4:47:11 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

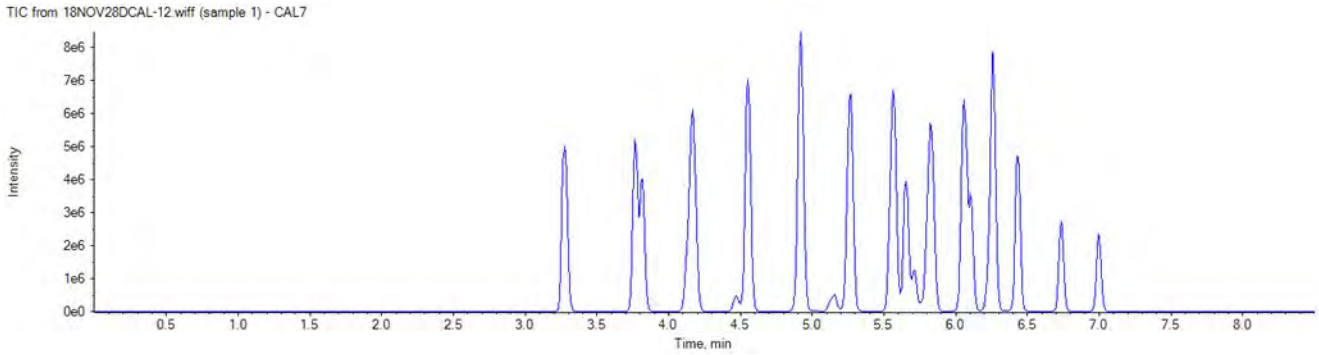
Analyte Quantitation Peak Table

Sample Name: CAL7 **Instrument Name:** LM27631 **File Name:** 18NOV28DCAL-12.wiff

Sample Wt	Sample Vol	Dilution Factor	PrepFactor
1.00000	1.000	1.00	1.000

Analyte Name	RT	RRT	Analyte Area Response	E	Int Typ	ES Name	ES RT	ES Area Response	Area Ratio	Sample Result (ng/g)
PFBA	3.27	1.000	12734942.7		A	13C4-PFBA	3.27	803704.8	15.845	86.862
PFPeA	3.77	1.000	12611040.3		A	13C5-PFPeA	3.77	781113.8	16.145	79.219
PFBS	3.82	1.000	6468971.4		A	13C3-PFBS	3.82	352994.8	18.326	88.956
4:2-FTS	4.13	1.000	2126148.2		A	13C2-4:2-FTS	4.13	62236.8	34.162	91.451
PFHxA	4.16	1.000	12530843.0		A	13C5-PFHxA	4.16	625449.8	20.035	80.421
PFPeS	4.18	1.100	3295381.6		A	13C3-PFBS	3.82	352994.8	9.335	94.429
PFHpA	4.55	1.000	12619701.7		A	13C4-PFHpA	4.55	544866.9	23.161	71.480
PFHxS	4.55	1.000	4797026.8		M	13C3-PFHxS	4.56	239327.4	20.044	93.850
6:2-FTS	4.91	1.000	1464447.0		A	13C2-6:2-FTS	4.91	43678.3	33.528	87.481
PFHpS	4.91	1.080	4562639.6		A	13C3-PFHxS	4.56	239327.4	19.064	95.147
PFOA	4.92	1.000	12900182.7		A	13C8-PFOA	4.92	745616.3	17.301	89.401
PFOS	5.25	1.000	5620329.0		M	13C8-PFOS	5.25	250004.2	22.481	94.301
PFNA	5.27	1.000	12939629.1		A	13C9-PFNA	5.27	562206.9	23.016	88.201
PFNS	5.54	1.060	3804945.2		A	13C8-PFOS	5.25	250004.2	15.220	96.096
PFDA	5.57	1.000	11371047.0		A	13C6-PFDA	5.57	645932.5	17.604	99.643
8:2-FTS	5.57	1.000	1620286.0		A	13C2-8:2-FTS	5.57	41093.1	39.430	74.355
PFOSA	5.65	1.000	9792009.5		A	13C8-PFOSA	5.65	555500.5	17.627	89.294
NMeFOSAA	5.71	1.000	2414874.8		M	d3-NMeFOSAA	5.71	156760.9	15.405	98.267
PFDS	5.80	1.110	3061543.5		A	13C8-PFOS	5.25	250004.2	12.246	97.096
PFUnDA	5.83	1.000	11254483.8		A	13C7-PFUnDA	5.83	416723.9	27.007	96.536
NEtFOSAA	5.85	1.000	2127663.4		A	d5-NEtFOSAA	5.84	102891.6	20.679	100.712
PFDoDA	6.06	1.000	14195839.1		A	13C2-PFDoDA	6.06	852235.6	16.657	91.243
10:2-FTS	6.08	1.090	1718827.3		A	13C2-8:2-FTS	5.57	41093.1	41.828	92.235
NMePFOSAE	6.11	1.000	5772837.2		A	d7-NMePFOSAE	6.10	250467.6	23.048	96.993
NMePFOSA	6.11	1.000	1500056.3		A	d3-NMePFOSA	6.11	79780.2	18.802	99.677
PFDoS	6.22	1.190	1735049.5		A	13C8-PFOS	5.25	250004.2	6.940	99.670
NEtPFOSAE	6.26	1.000	5826370.7		A	d9-NEtPFOSAE	6.25	216042.0	26.969	97.008
NEtPFOSA	6.27	1.000	1290814.8		A	d5-NEtPFOSA	6.27	59209.1	21.801	97.709
PFTrDA	6.26	1.030	12329126.1		A	13C2-PFDoDA	6.06	852235.6	14.467	87.197
PFTeDA	6.43	1.000	11258874.1		A	13C2-PFTeDA	6.43	717297.7	15.696	88.936
PFHxDA	6.73	1.050	6113985.2		A	13C2-PFTeDA	6.43	717297.7	8.524	97.440
PFODA	7.00	1.090	5309889.9		A	13C2-PFTeDA	6.43	717297.7	7.403	98.616

Total Ion Chromatogram

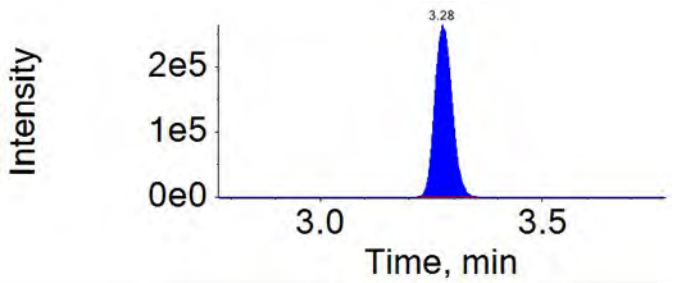


APPROVED
By MCD at 5:00 pm, 11/28/18

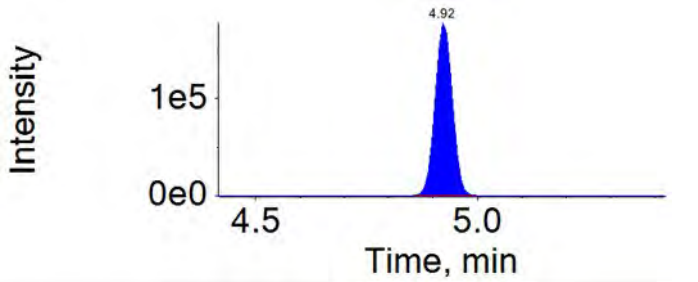
REVIEWED
By HMK at 12:22 pm, 11/29/18

ICAL Name: 18NOV28DCAL **Result Table:** 18NOV28DCAL 11/28/2018 4:47:11 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

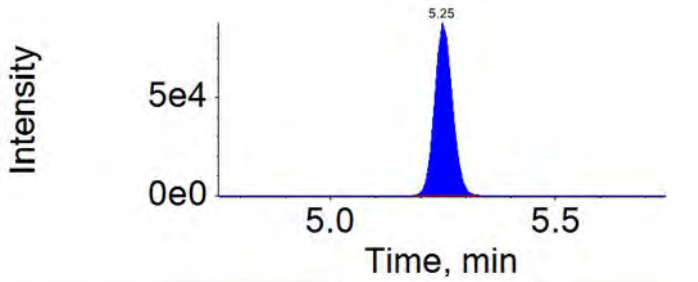
Injection Standard: 13C3-PFBA
216.0 / 172.0



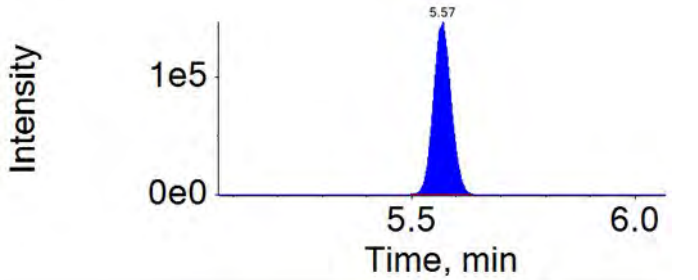
Injection Standard: 13C2-PFOA
415.0 / 370.0



Injection Standard: 13C4-PFOS
503.0 / 80.0

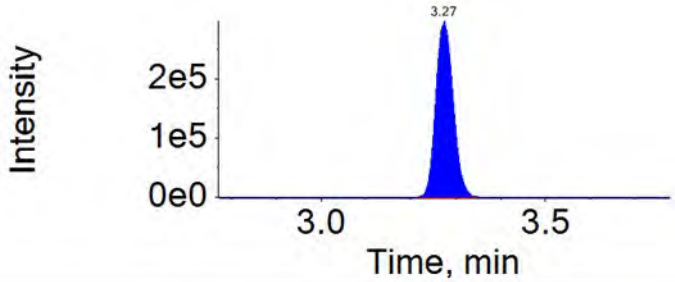


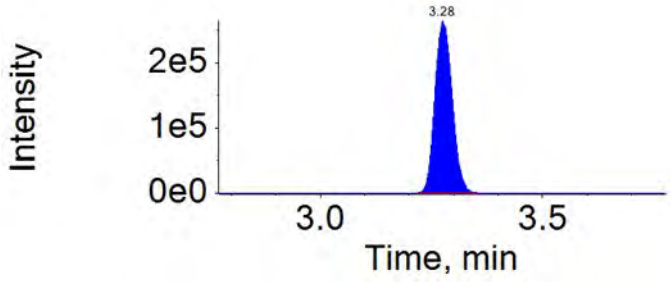
Injection Standard: 13C2-PFDA
515.0 / 470.0



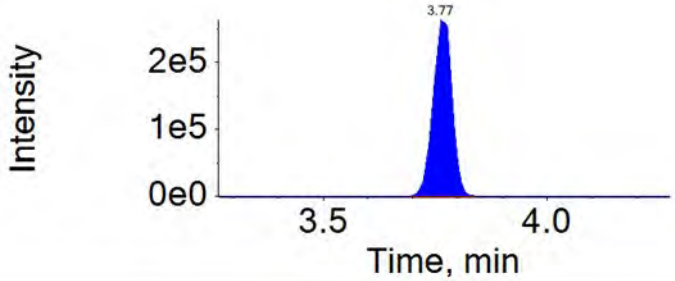
ICAL Name: 18NOV28DCAL **Result Table:** 18NOV28DCAL 11/28/2018 4:47:11 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

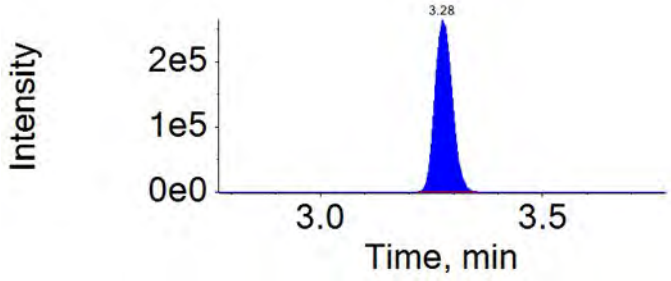
Extraction Standard: E13C4-PFBA	Injection Standard: 13C3-PFBA
217.0 / 172.0	216.0 / 172.0



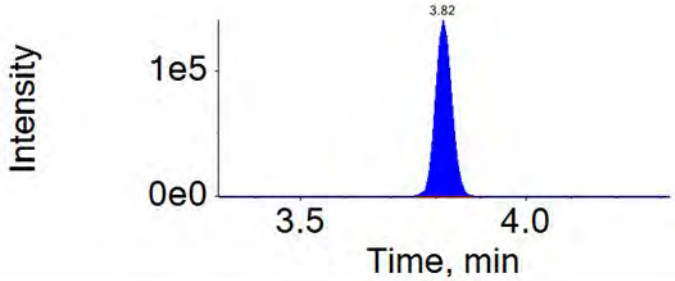


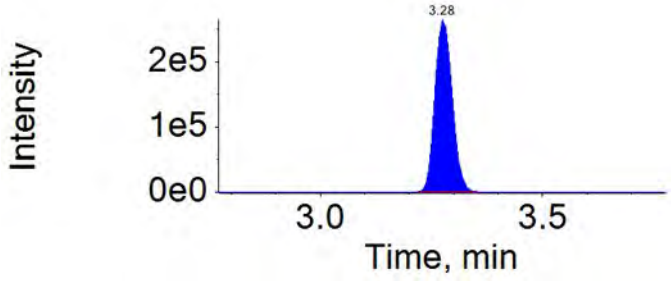
Extraction Standard: E13C5-PFPeA	Injection Standard: 13C3-PFBA
268.0 / 223.0	216.0 / 172.0



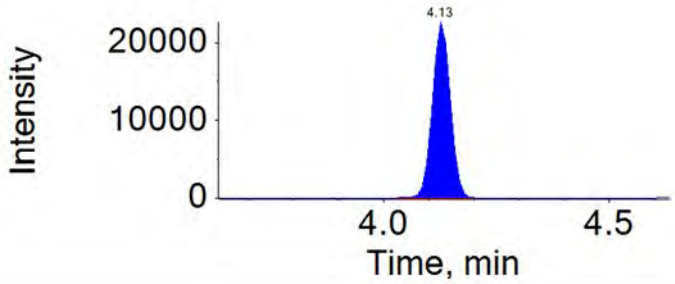


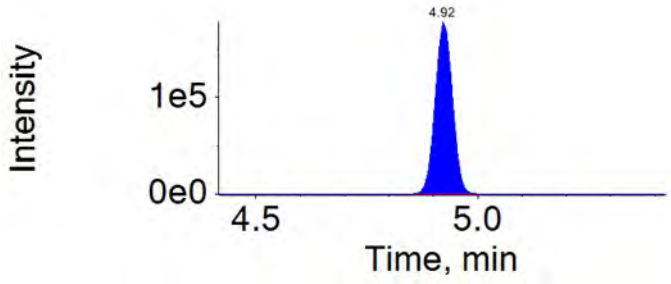
Extraction Standard: E13C3-PFBS	Injection Standard: 13C3-PFBA
302.0 / 80.0	216.0 / 172.0





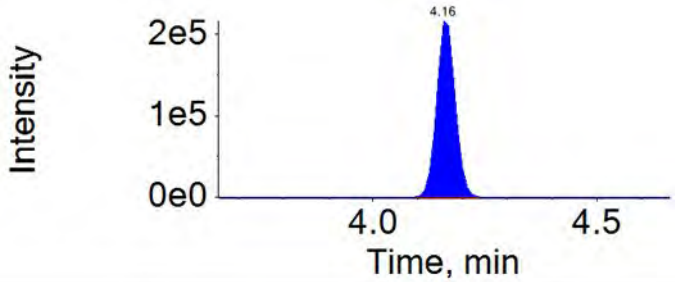
Extraction Standard: E13C2-4:2-FTS	Injection Standard: 13C2-PFOA
329.0 / 81.0	415.0 / 370.0

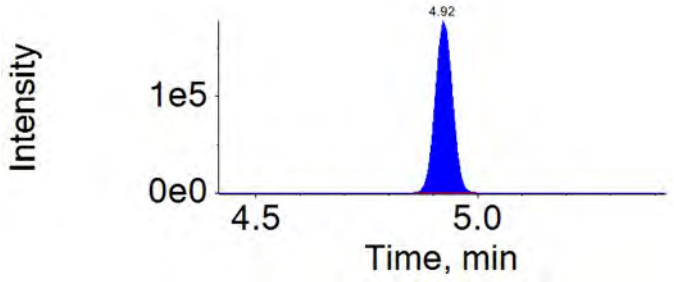




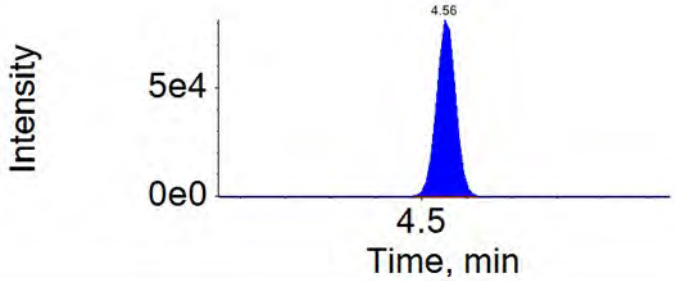
ICAL Name: 18NOV28DCAL **Result Table:** 18NOV28DCAL 11/28/2018 4:47:11 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

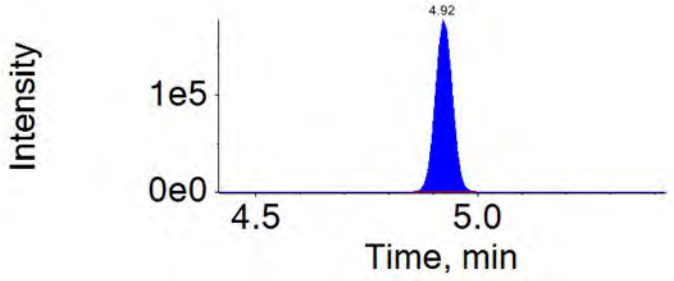
Extraction Standard: E13C5-PFHxA	Injection Standard: 13C2-PFOA
318.0 / 273.0	415.0 / 370.0



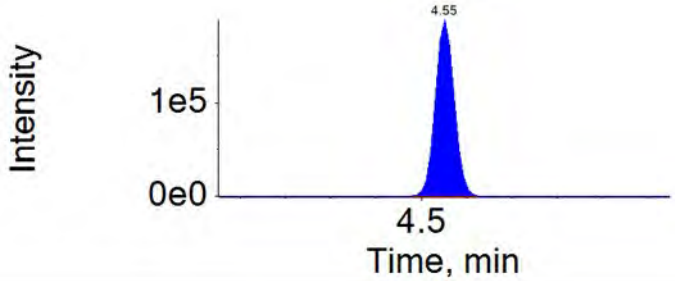


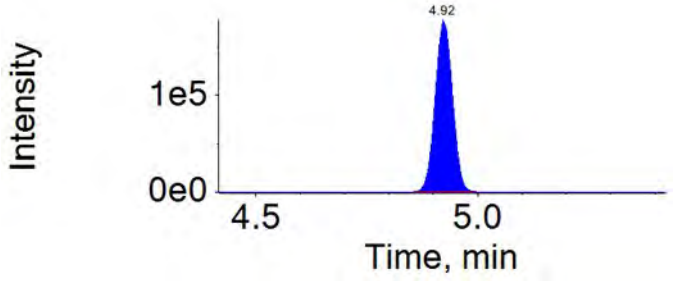
Extraction Standard: E13C3-PFHxS	Injection Standard: 13C2-PFOA
402.0 / 80.0	415.0 / 370.0



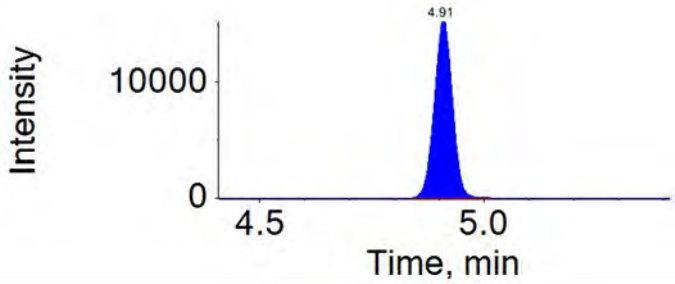


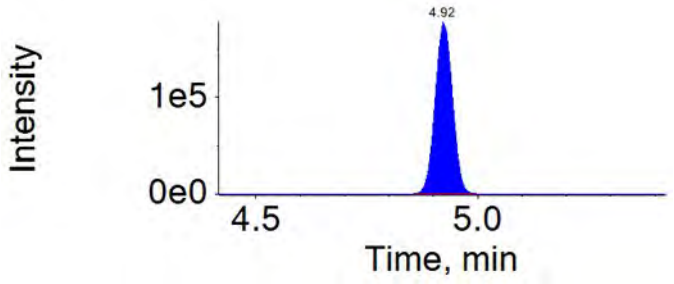
Extraction Standard: E13C4-PFHpA	Injection Standard: 13C2-PFOA
367.0 / 322.0	415.0 / 370.0





Extraction Standard: E13C2-6:2-FTS	Injection Standard: 13C2-PFOA
429.0 / 81.0	415.0 / 370.0

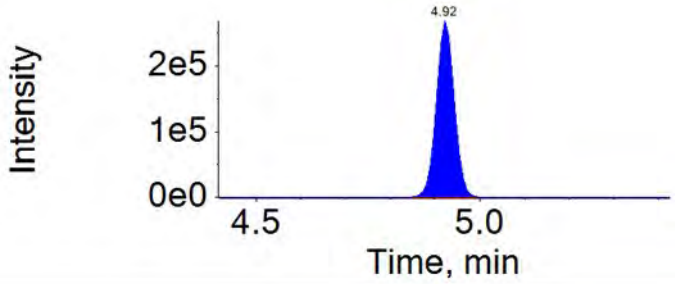




ICAL Name: 18NOV28DCAL **Result Table:** 18NOV28DCAL 11/28/2018 4:47:11 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

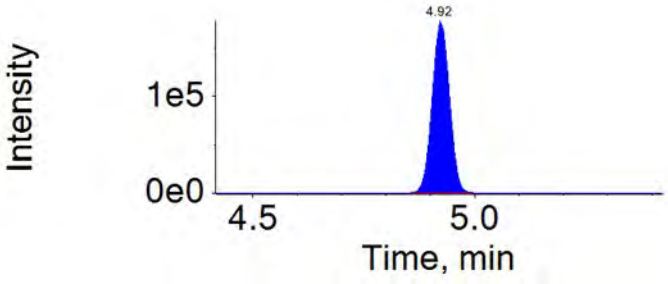
Extraction Standard: E13C8-PFOA

421.0 / 376.0



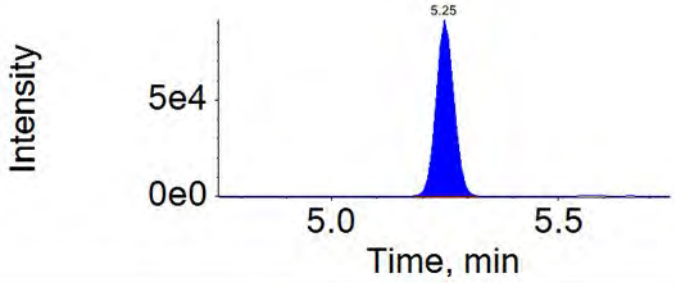
Injection Standard: 13C2-PFOA

415.0 / 370.0



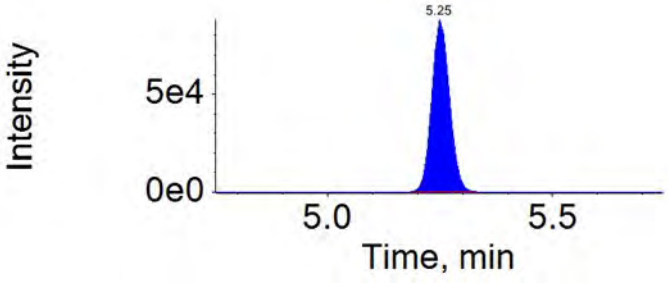
Extraction Standard: E13C8-PFOS

507.0 / 80.0



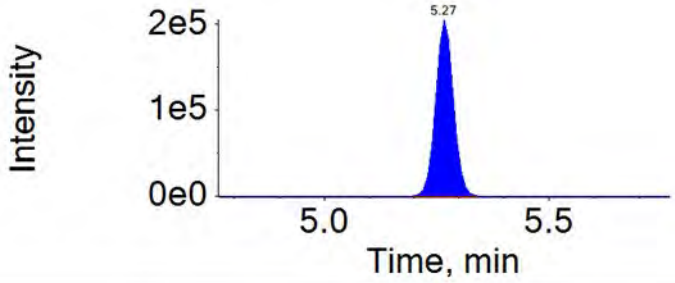
Injection Standard: 13C4-PFOS

503.0 / 80.0



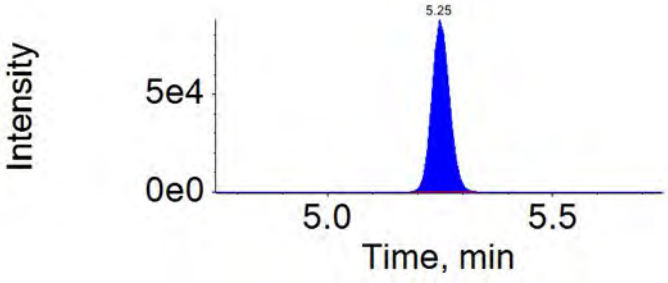
Extraction Standard: E13C9-PFNA

472.0 / 427.0



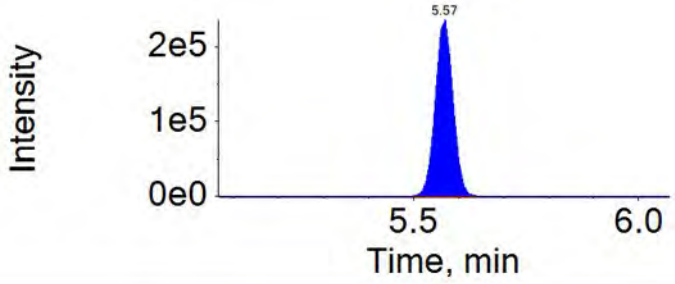
Injection Standard: 13C4-PFOS

503.0 / 80.0



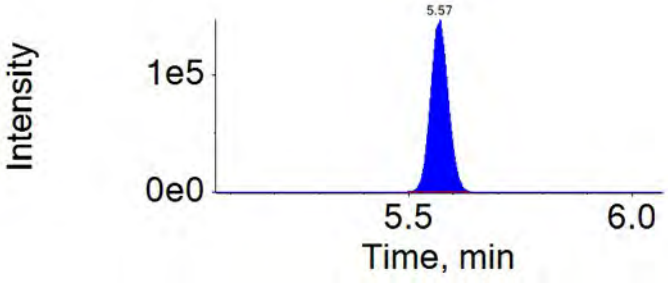
Extraction Standard: E13C6-PFDA

519.0 / 474.0



Injection Standard: 13C2-PFDA

515.0 / 470.0

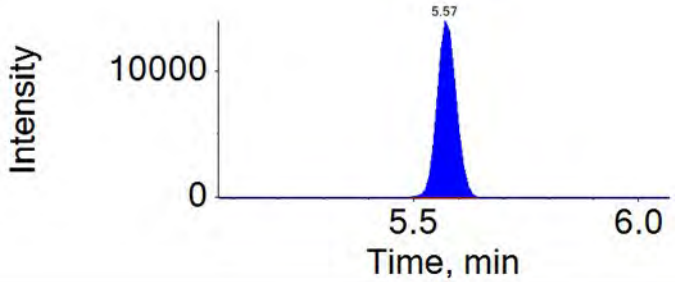


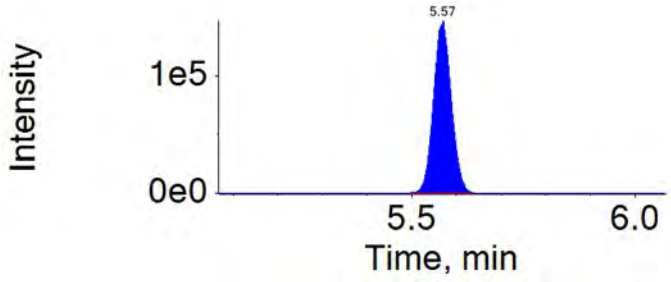
APPROVED
By MCD at 5:01 pm, 11/28/18

REVIEWED
By HMK at 12:22 pm, 11/29/18

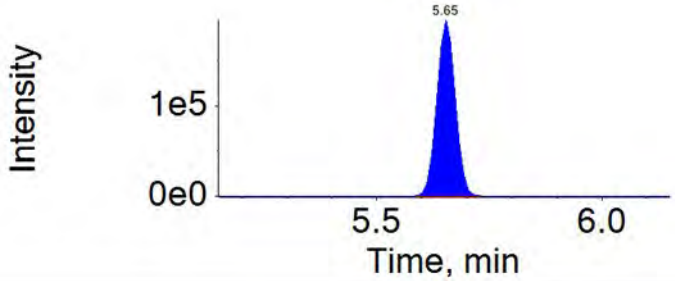
ICAL Name: 18NOV28DCAL **Result Table:** 18NOV28DCAL 11/28/2018 4:47:11 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

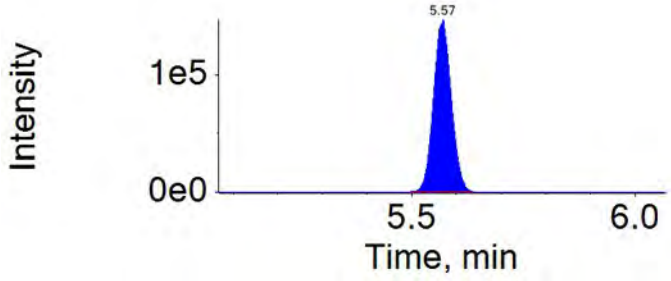
Extraction Standard: E13C2-8:2-FTS	Injection Standard: 13C2-PFDA
529.0 / 81.0	515.0 / 470.0



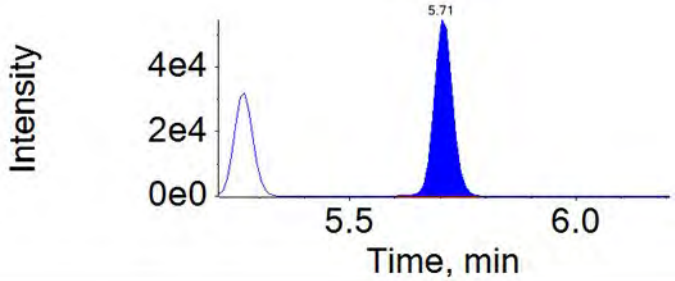


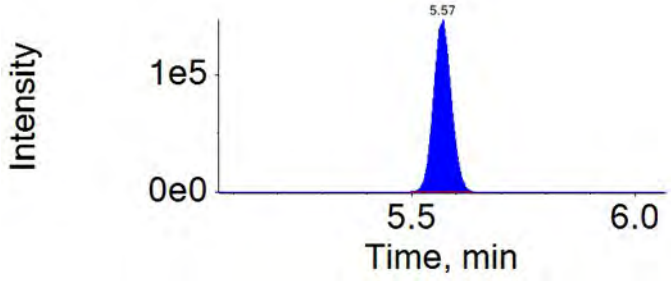
Extraction Standard: E13C8-PFOSA	Injection Standard: 13C2-PFDA
506.0 / 78.0	515.0 / 470.0



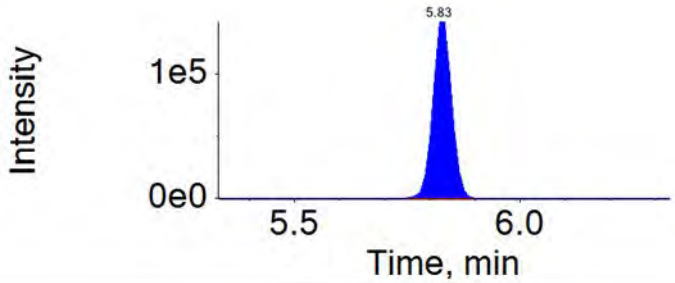


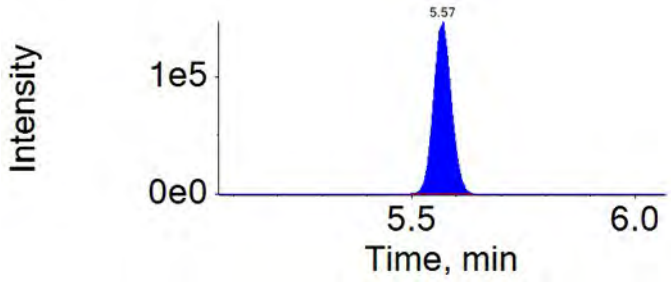
Extraction Standard: Ed3-NMeFOSAA	Injection Standard: 13C2-PFDA
573.0 / 419.0	515.0 / 470.0





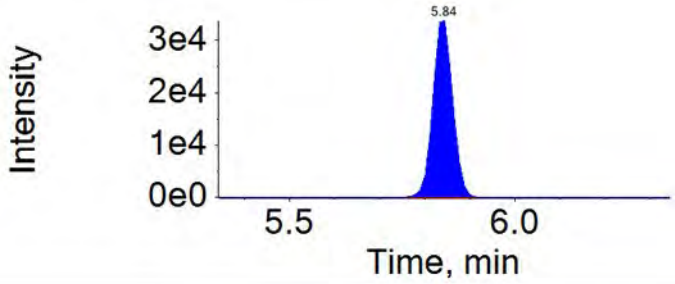
Extraction Standard: E13C7-PFUnDA	Injection Standard: 13C2-PFDA
570.0 / 525.0	515.0 / 470.0

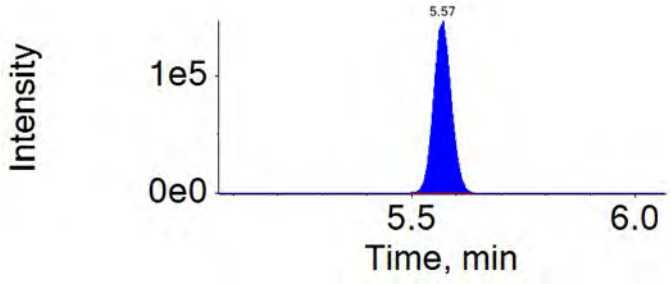




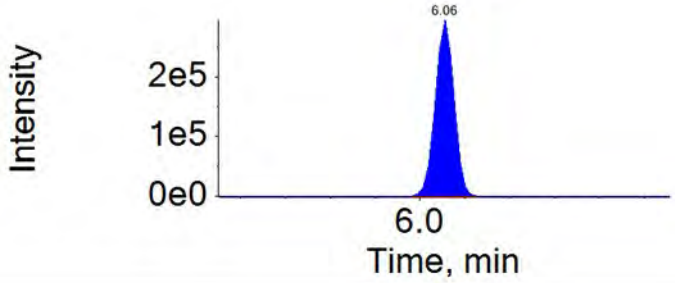
ICAL Name: 18NOV28DCAL **Result Table:** 18NOV28DCAL 11/28/2018 4:47:11 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

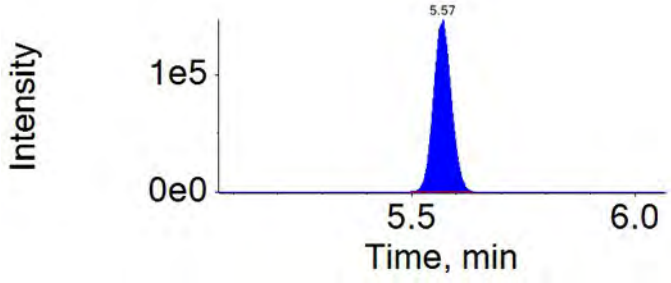
Extraction Standard: Ed5-NEtFOSAA	Injection Standard: 13C2-PFDA
589.0 / 419.0	515.0 / 470.0



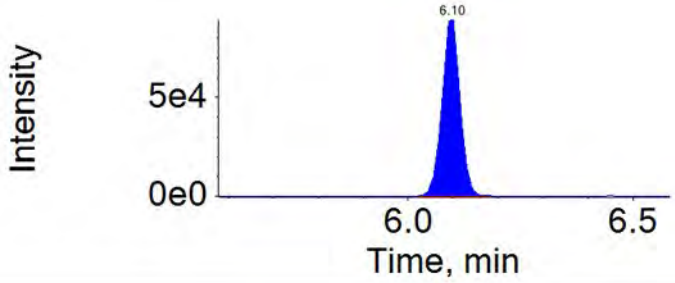


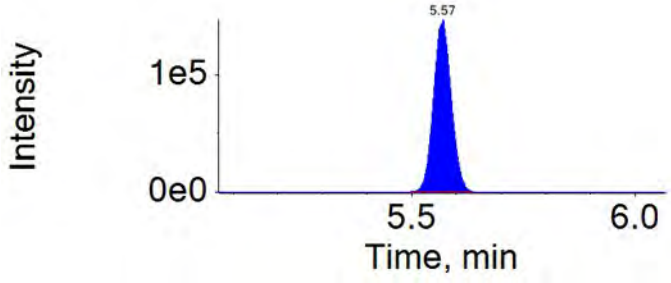
Extraction Standard: E13C2-PFDoDA	Injection Standard: 13C2-PFDA
615.0 / 570.0	515.0 / 470.0



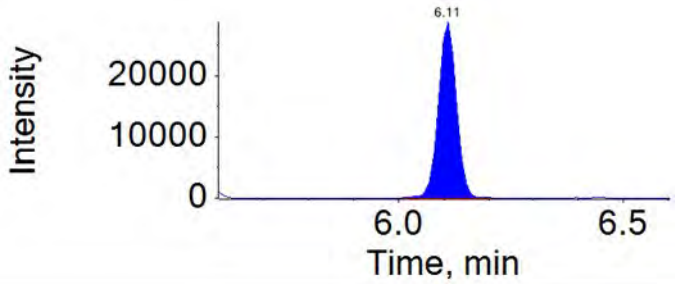


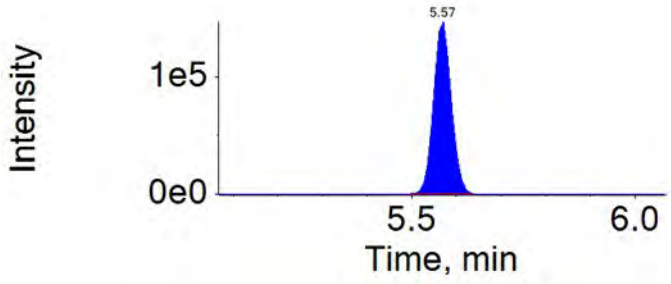
Extraction Standard: Ed7-NMePFOSAE	Injection Standard: 13C2-PFDA
623.0 / 59.0	515.0 / 470.0





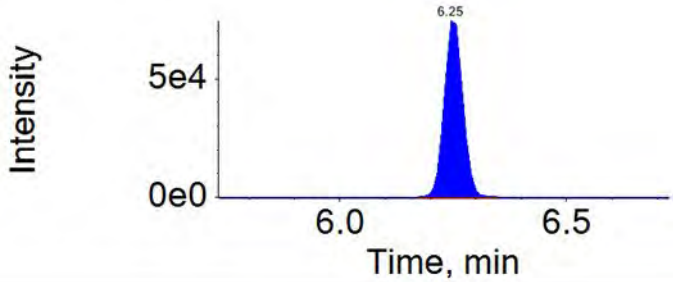
Extraction Standard: Ed3-NMePFOSA	Injection Standard: 13C2-PFDA
515.0 / 169.0	515.0 / 470.0

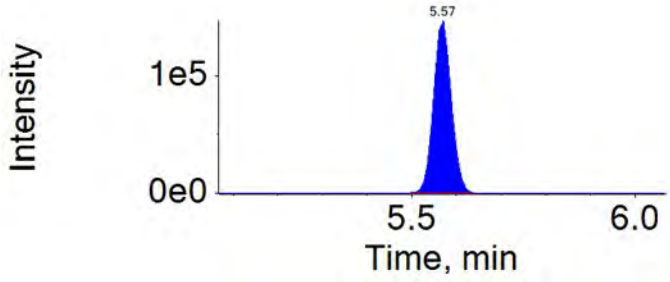




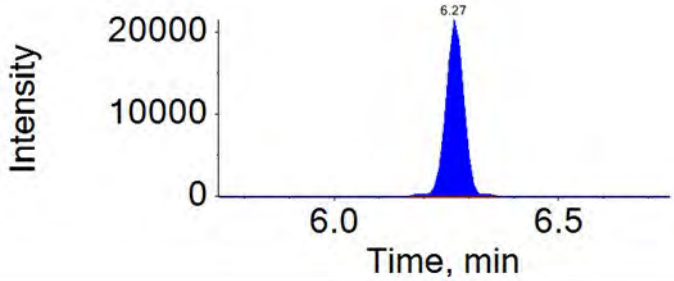
ICAL Name: 18NOV28DCAL **Result Table:** 18NOV28DCAL 11/28/2018 4:47:11 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

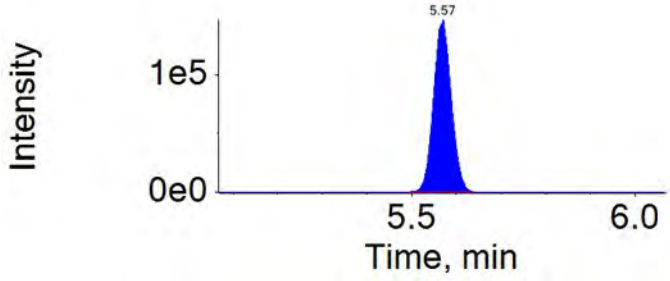
Extraction Standard: Ed9-NEtPFOSAE	Injection Standard: 13C2-PFDA
639.0 / 59.0	515.0 / 470.0



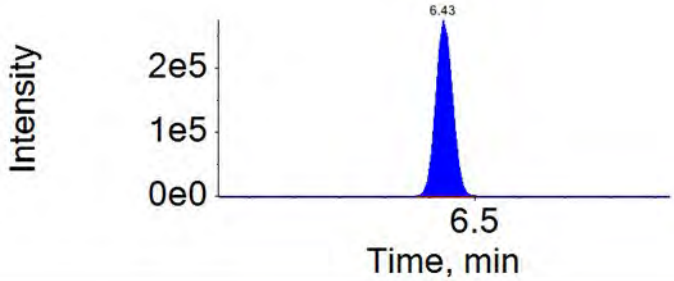


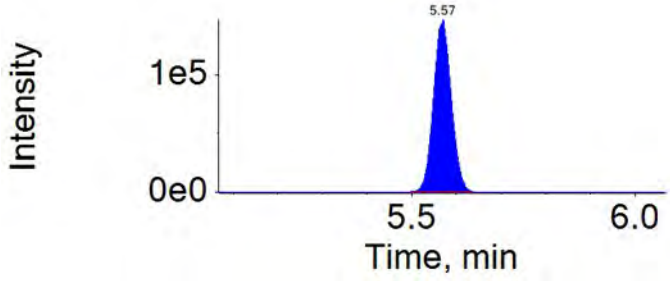
Extraction Standard: Ed5-NEtPFOSA	Injection Standard: 13C2-PFDA
531.0 / 169.0	515.0 / 470.0





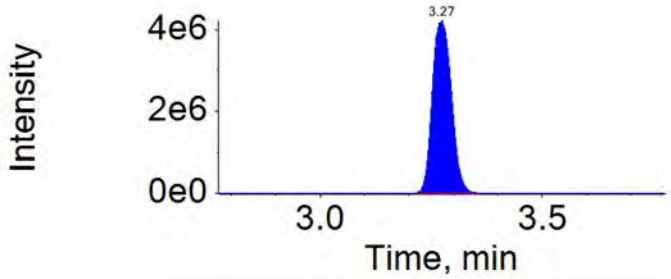
Extraction Standard: E13C2-PFTeDA	Injection Standard: 13C2-PFDA
715.0 / 670.0	515.0 / 470.0



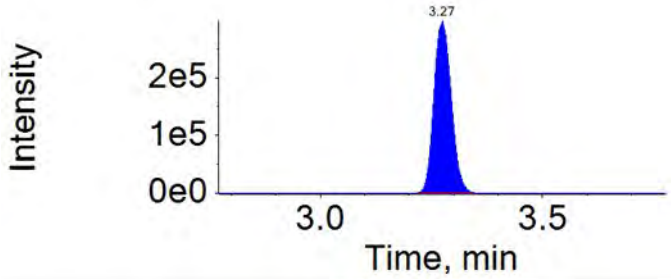


ICAL Name: 18NOV28DCAL **Result Table:** 18NOV28DCAL 11/28/2018 4:47:11 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

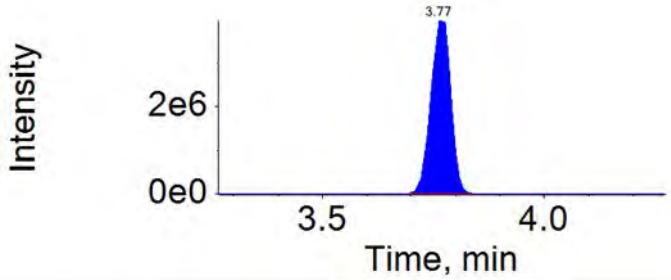
Analyte: PFBA
213.0 / 169.0



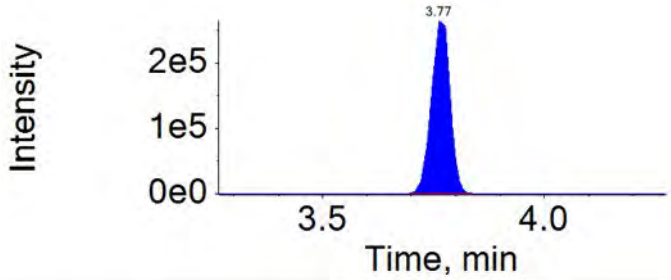
Extraction Standard: 13C4-PFBA
217.0 / 172.0



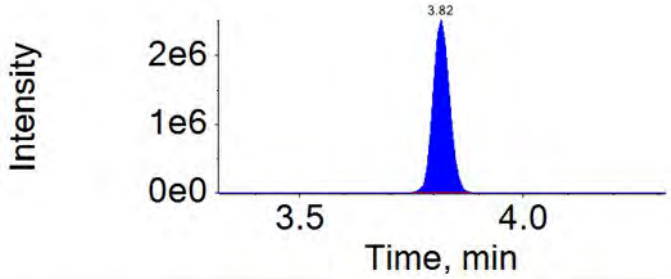
Analyte: PFPeA
263.0 / 219.0



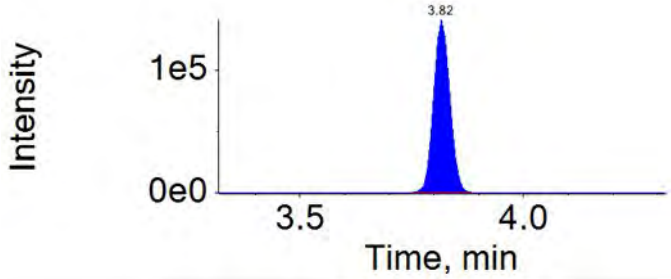
Extraction Standard: 13C5-PFPeA
268.0 / 223.0



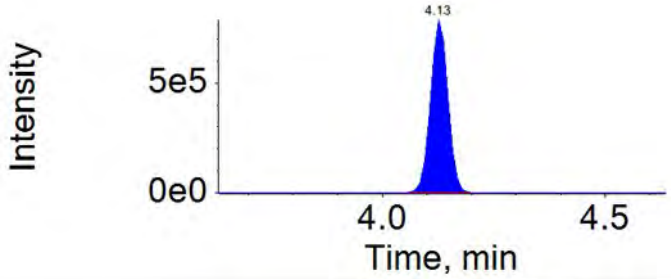
Analyte: PFBS
299.0 / 80.0



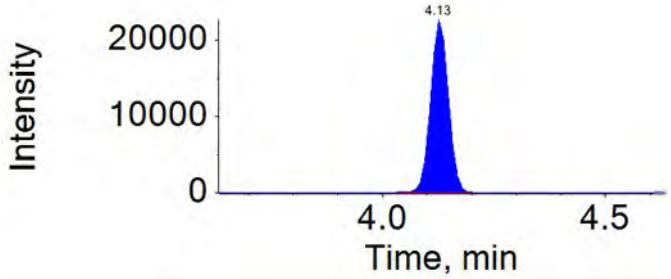
Extraction Standard: 13C3-PFBS
302.0 / 80.0



Analyte: 4:2-FTS
327.0 / 307.0



Extraction Standard: 13C2-4:2-FTS
329.0 / 81.0

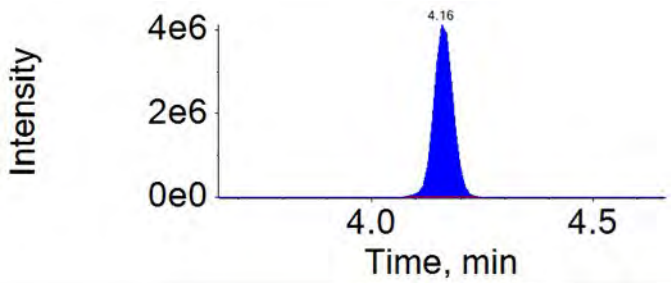


APPROVED
By MCD at 5:01 pm, 11/28/18

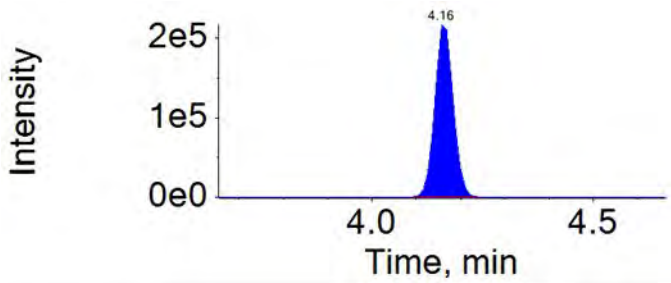
REVIEWED
By HMK at 12:22 pm, 11/29/18

ICAL Name: 18NOV28DCAL **Result Table:** 18NOV28DCAL 11/28/2018 4:47:11 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

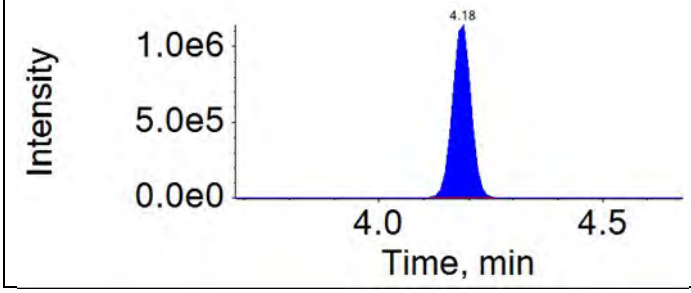
Analyte: PFHxA
313.0 / 269.0



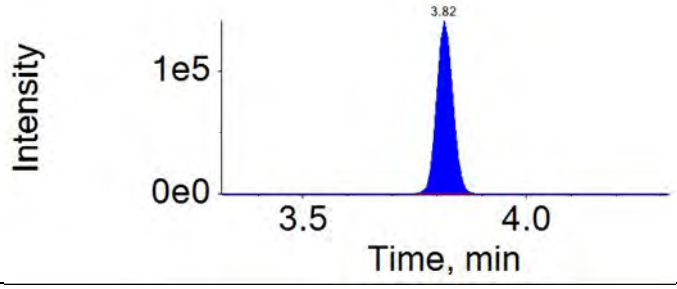
Extraction Standard: 13C5-PFHxA
318.0 / 273.0



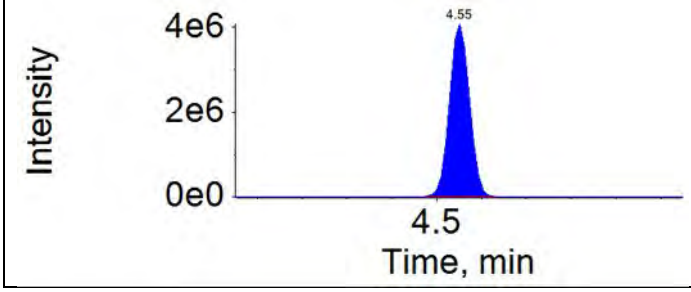
Analyte: PFPeS
349.0 / 80.0



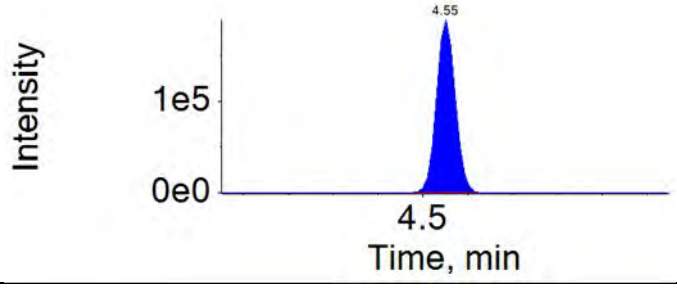
Extraction Standard: 13C3-PFBS
302.0 / 80.0



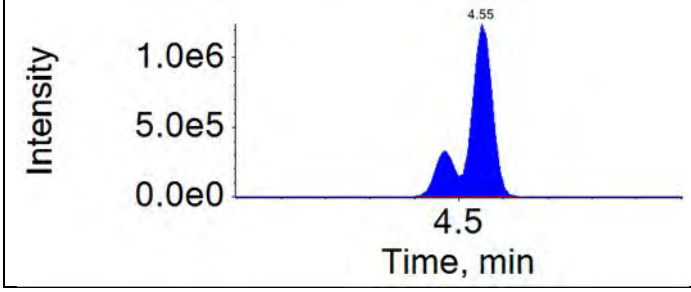
Analyte: PFHpA
363.0 / 319.0



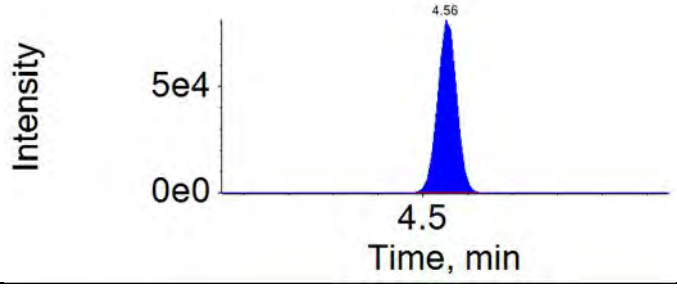
Extraction Standard: 13C4-PFHpA
367.0 / 322.0



Analyte: PFHxS
399.0 / 80.0



Extraction Standard: 13C3-PFHxS
402.0 / 80.0

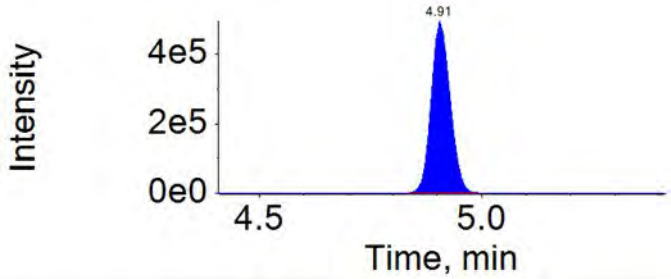


APPROVED
By MCD at 5:01 pm, 11/28/18

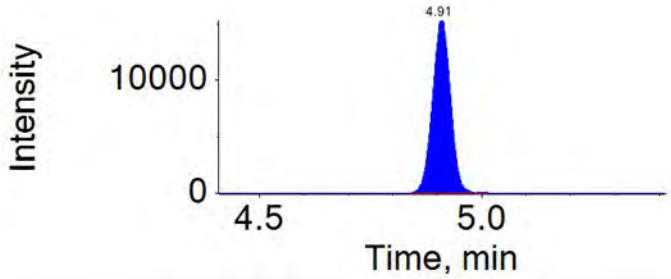
REVIEWED
By HMK at 12:22 pm, 11/29/18

ICAL Name: 18NOV28DCAL **Result Table:** 18NOV28DCAL 11/28/2018 4:47:11 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

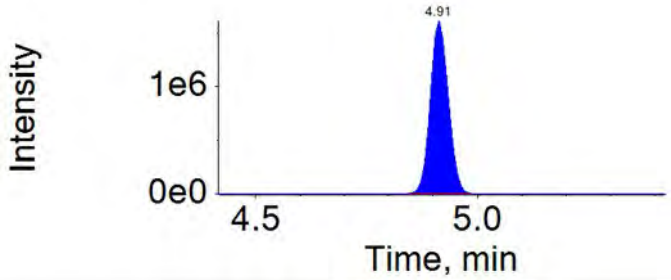
Analyte: 6:2-FTS
427.0 / 407.0



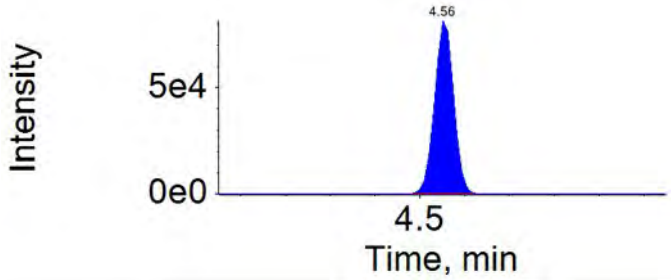
Extraction Standard: 13C2-6:2-FTS
429.0 / 81.0



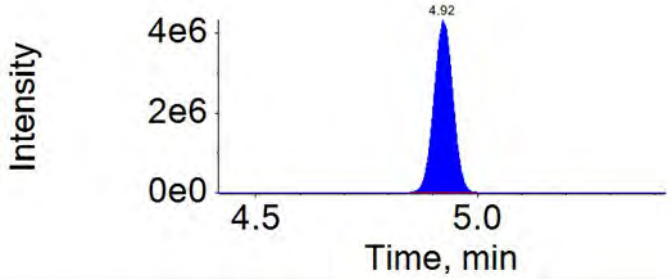
Analyte: PFHpS
449.0 / 80.0



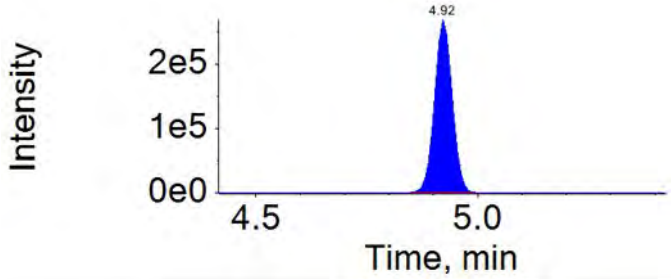
Extraction Standard: 13C3-PFHxS
402.0 / 80.0



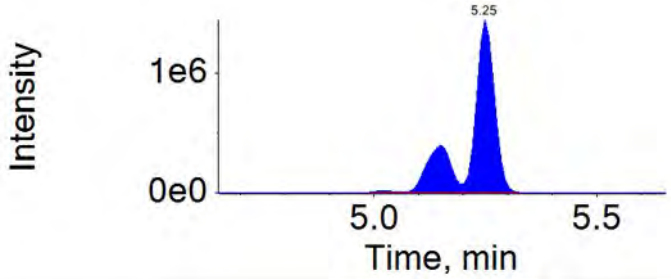
Analyte: PFOA
413.0 / 369.0



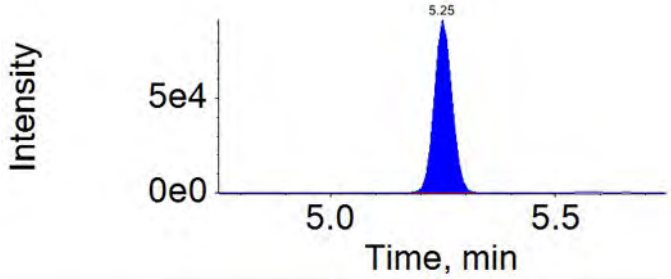
Extraction Standard: 13C8-PFOA
421.0 / 376.0



Analyte: PFOS
499.0 / 80.0



Extraction Standard: 13C8-PFOS
507.0 / 80.0

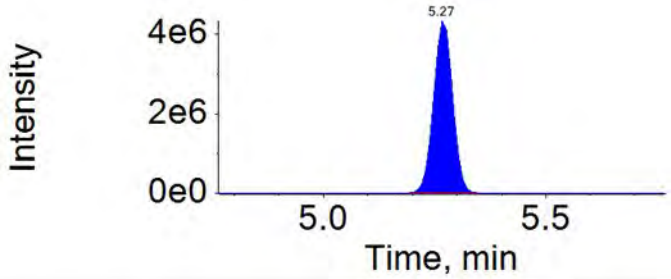


APPROVED
By MCD at 5:01 pm, 11/28/18

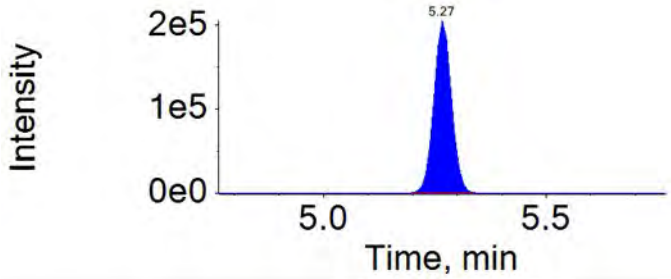
REVIEWED
By HMK at 12:22 pm, 11/29/18

ICAL Name: 18NOV28DCAL **Result Table:** 18NOV28DCAL 11/28/2018 4:47:11 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

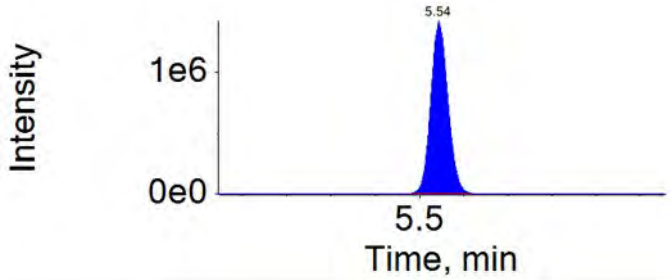
Analyte: PFNA
463.0 / 419.0



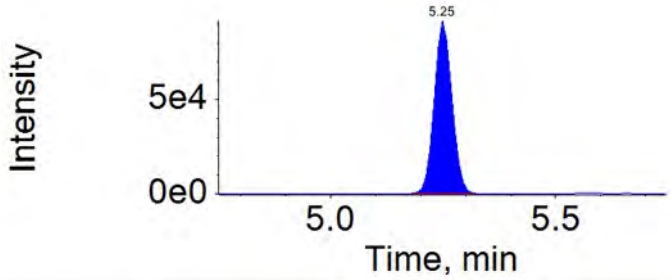
Extraction Standard: 13C9-PFNA
472.0 / 427.0



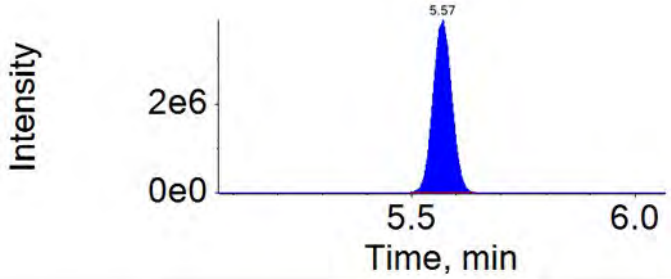
Analyte: PFNS
549.0 / 80.0



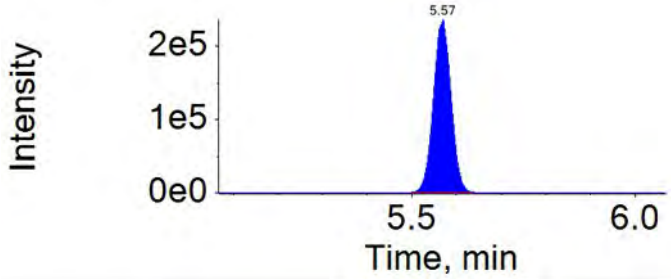
Extraction Standard: 13C8-PFOS
507.0 / 80.0



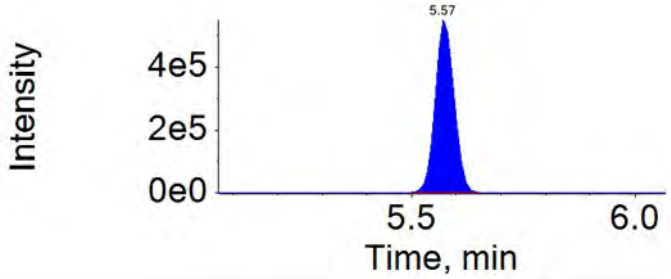
Analyte: PFDA
513.0 / 469.0



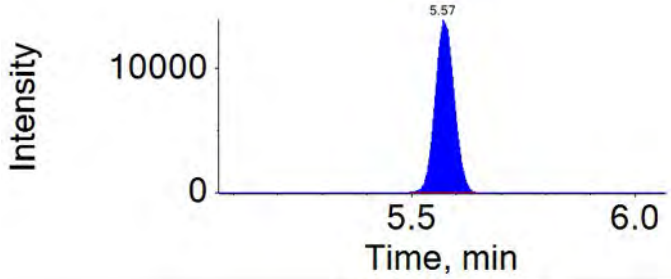
Extraction Standard: 13C6-PFDA
519.0 / 474.0



Analyte: 8:2-FTS
527.0 / 507.0



Extraction Standard: 13C2-8:2-FTS
529.0 / 81.0

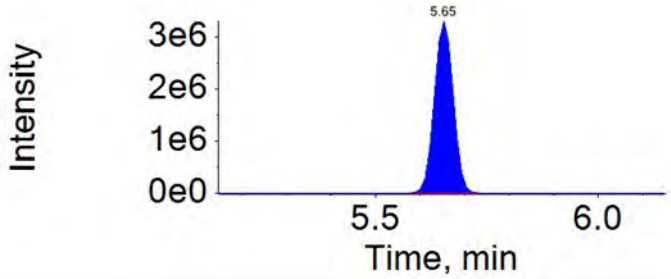


APPROVED
By MCD at 5:01 pm, 11/28/18

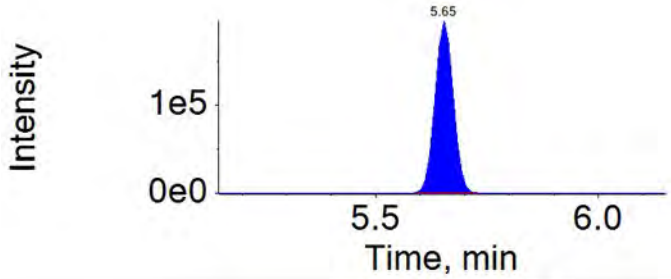
REVIEWED
By HMK at 12:22 pm, 11/29/18

ICAL Name: 18NOV28DCAL **Result Table:** 18NOV28DCAL 11/28/2018 4:47:11 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

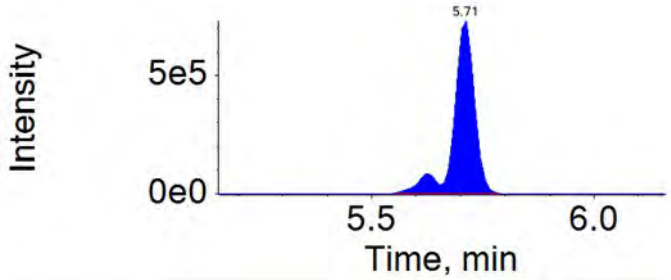
Analyte: PFOSA
498.0 / 78.0



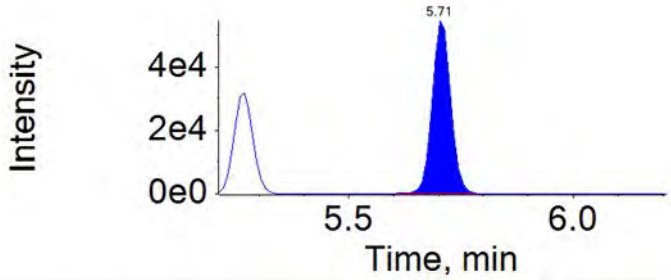
Extraction Standard: 13C8-PFOSA
506.0 / 78.0



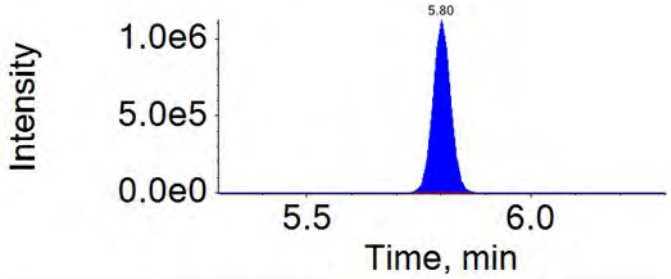
Analyte: NMeFOSAA
570.0 / 419.0



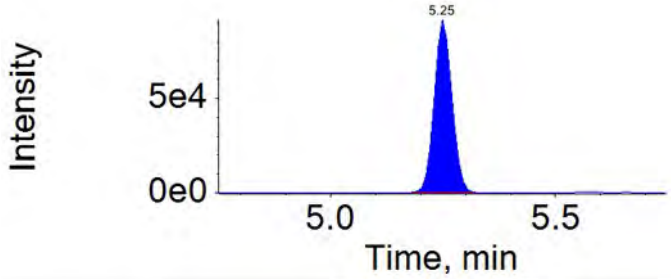
Extraction Standard: d3-NMeFOSAA
573.0 / 419.0



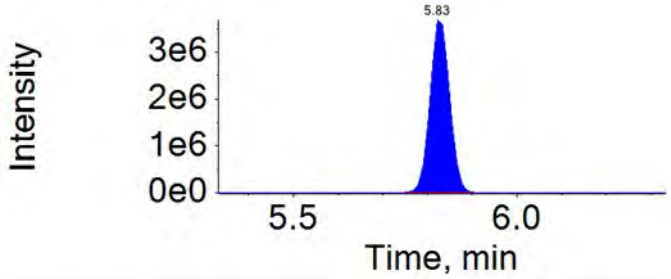
Analyte: PFDS
599.0 / 80.0



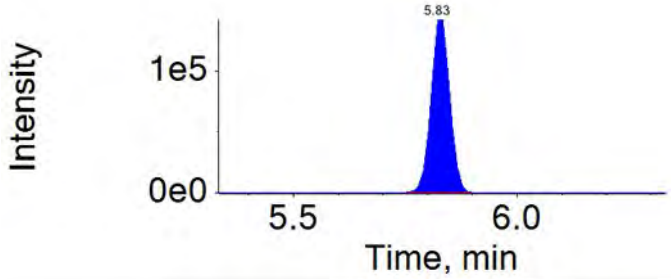
Extraction Standard: 13C8-PFOS
507.0 / 80.0



Analyte: PFUnDA
563.0 / 519.0



Extraction Standard: 13C7-PFUnDA
570.0 / 525.0

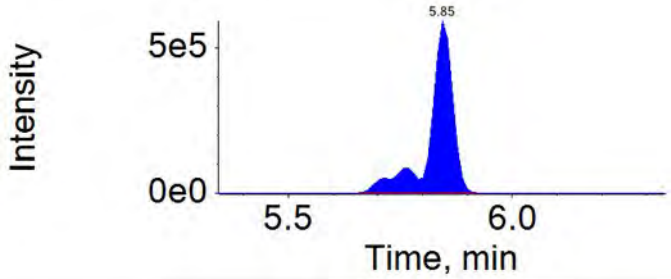


APPROVED
By MCD at 5:01 pm, 11/28/18

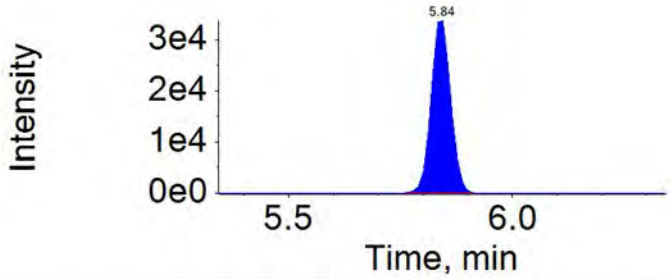
REVIEWED
By HMK at 12:22 pm, 11/29/18

ICAL Name: 18NOV28DCAL **Result Table:** 18NOV28DCAL 11/28/2018 4:47:11 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

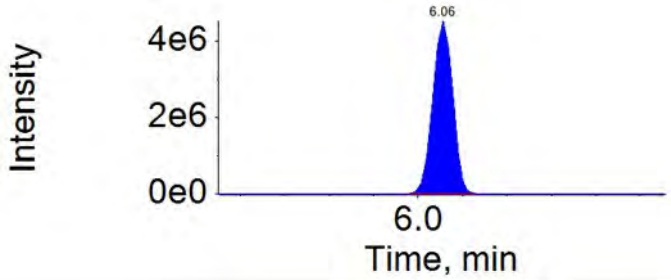
Analyte: NEtFOSAA
584.0 / 419.0



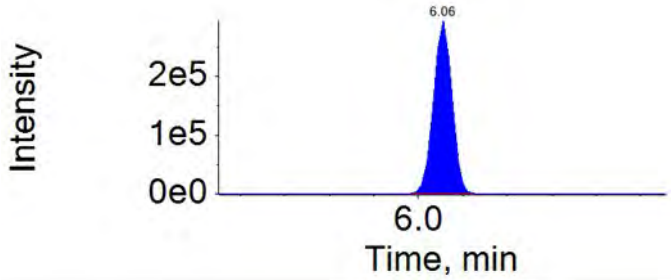
Extraction Standard: d5-NEtFOSAA
589.0 / 419.0



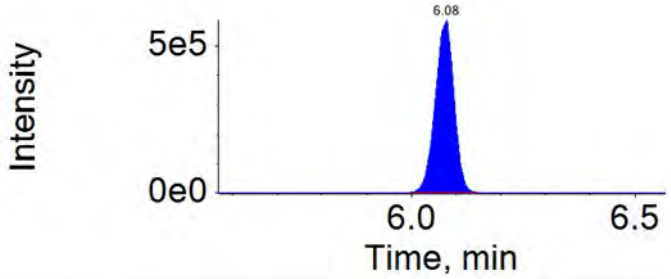
Analyte: PFDoDA
613.0 / 569.0



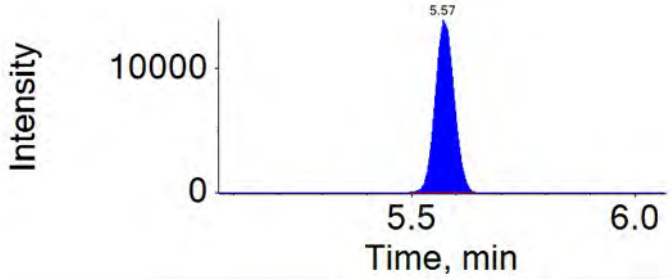
Extraction Standard: 13C2-PFDoDA
615.0 / 570.0



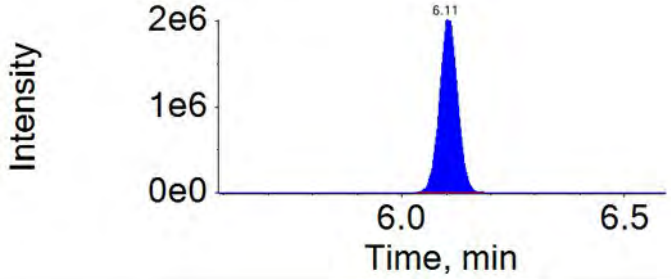
Analyte: 10:2-FTS
627.0 / 607.0



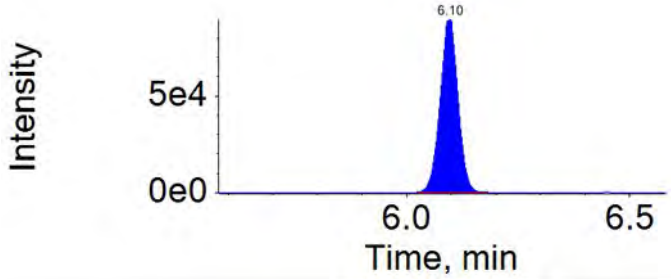
Extraction Standard: 13C2-8:2-FTS
529.0 / 81.0



Analyte: NMePFOSAE
616.0 / 59.0



Extraction Standard: d7-NMePFOSAE
623.0 / 59.0

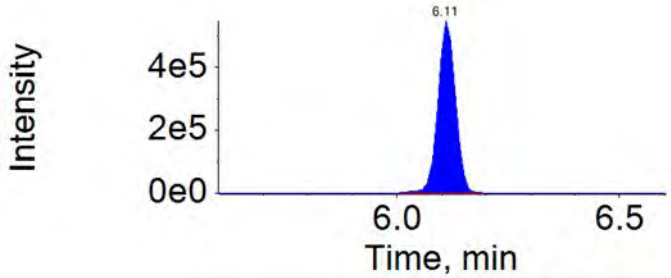


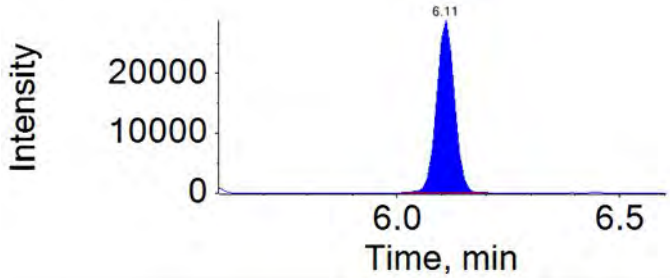
APPROVED
By MCD at 5:01 pm, 11/28/18

REVIEWED
By HMK at 12:22 pm, 11/29/18

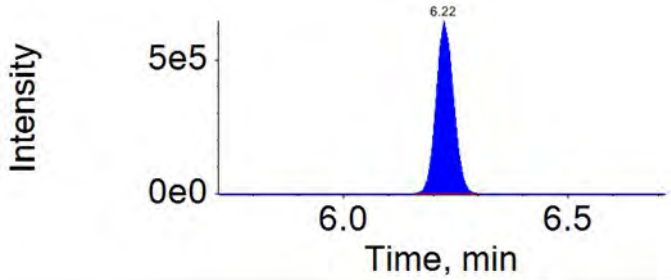
ICAL Name: 18NOV28DCAL **Result Table:** 18NOV28DCAL 11/28/2018 4:47:11 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

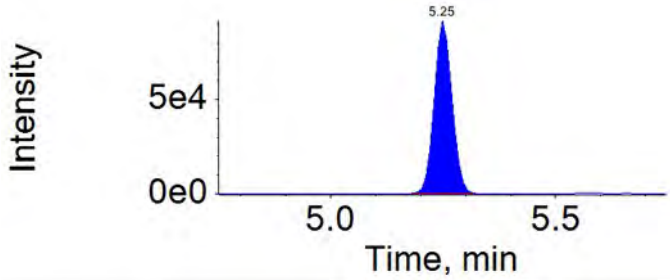
Analyte: NMePFOSA	Extraction Standard: d3-NMePFOSA
512.0 / 169.0	515.0 / 169.0



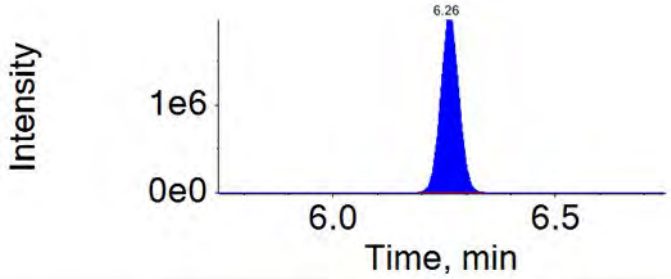


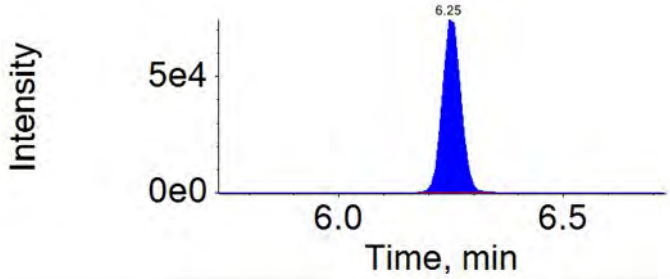
Analyte: PFDoS	Extraction Standard: 13C8-PFOS
699.0 / 80.0	507.0 / 80.0



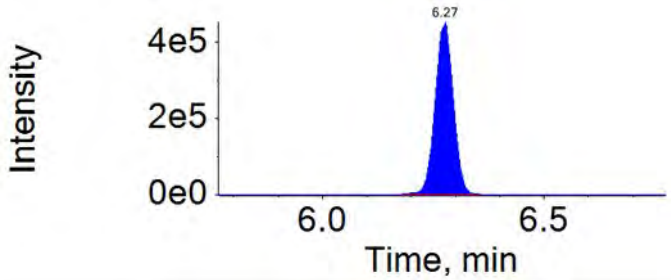


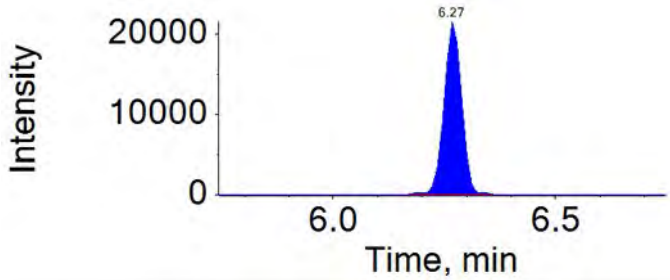
Analyte: NEtPFOSAE	Extraction Standard: d9-NEtPFOSAE
630.0 / 59.0	639.0 / 59.0





Analyte: NEtPFOSA	Extraction Standard: d5-NEtPFOSA
526.0 / 169.0	531.0 / 169.0



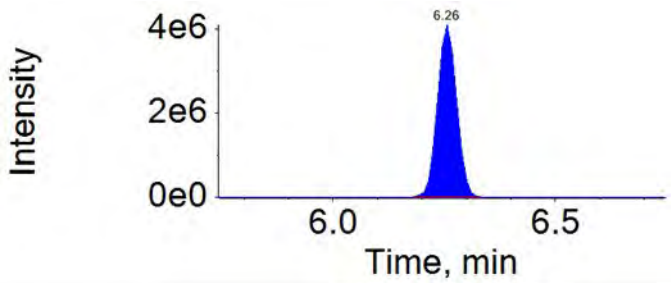


APPROVED
By MCD at 5:01 pm, 11/28/18

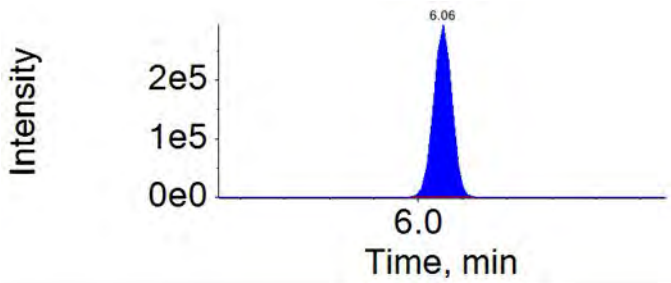
REVIEWED
By HMK at 12:22 pm, 11/29/18

ICAL Name: 18NOV28DCAL **Result Table:** 18NOV28DCAL 11/28/2018 4:47:11 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

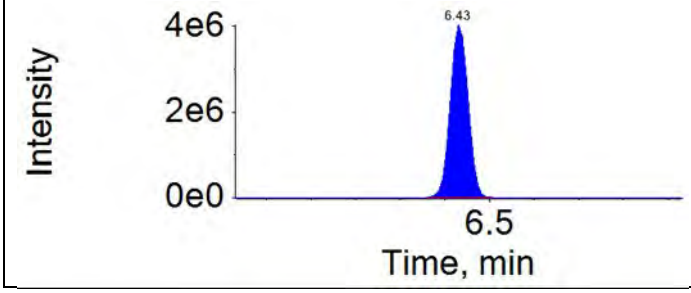
Analyte: PFTrDA
663.0 / 619.0



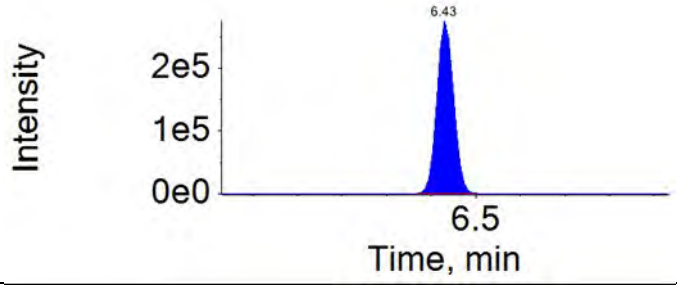
Extraction Standard: 13C2-PFDoDA
615.0 / 570.0



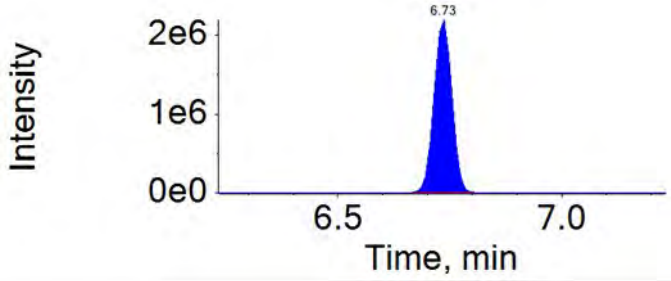
Analyte: PFTeDA
713.0 / 669.0



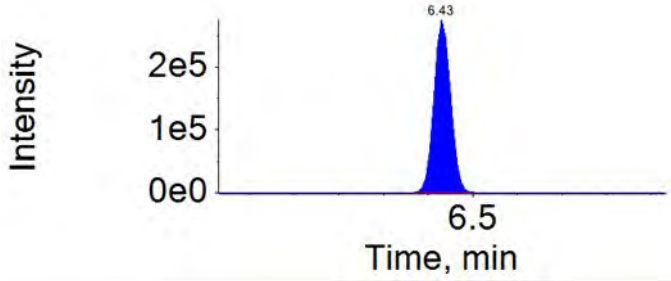
Extraction Standard: 13C2-PFTeDA
715.0 / 670.0



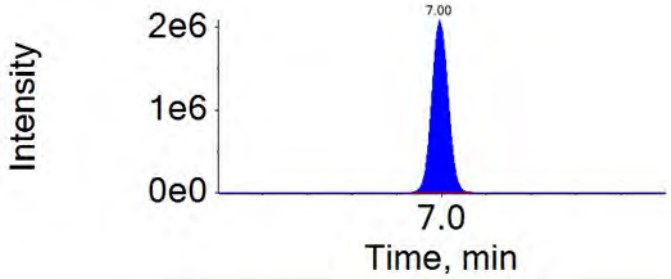
Analyte: PFHxDA
813.0 / 769.0



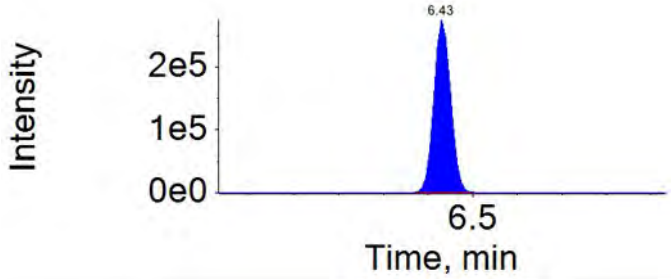
Extraction Standard: 13C2-PFTeDA
715.0 / 670.0



Analyte: PFODA
913.0 / 869.0



Extraction Standard: 13C2-PFTeDA
715.0 / 670.0



APPROVED
By MCD at 5:01 pm, 11/28/18

REVIEWED
By HMK at 12:22 pm, 11/29/18

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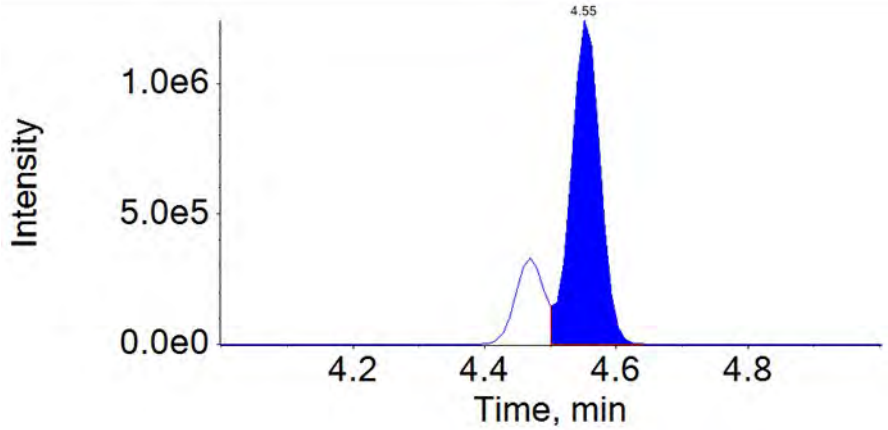
Auto Integrations prior to Manual Integration

Print Date: 11/28/2018 4:55 PM
Template: MQ-OrigInteg-16NOV21.docx

Results Table Name: 18NOV28DCAL
Results Table Date: 11/28/2018 4:52:53 PM

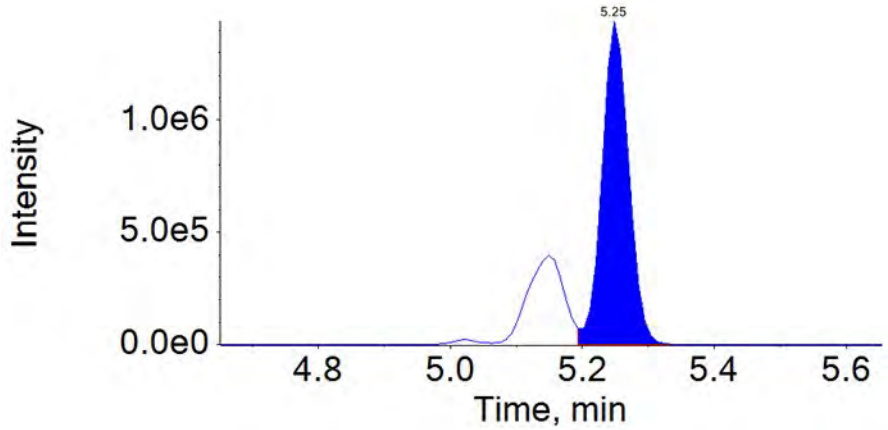
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

Component Name:
PFHxS
RT (min.):
4.55
Peak Area:
3819927.07
Mass Range:
399.0 / 80.0
File Name:
18NOV28DCAL-12.wiff
Sample Name:
CAL7



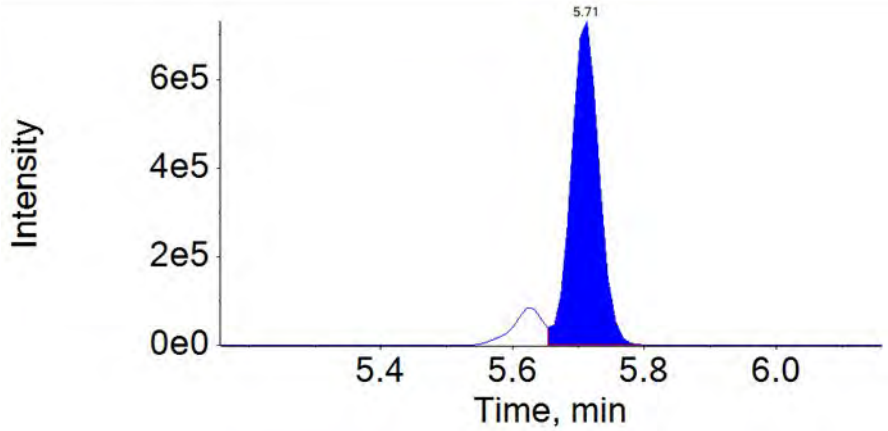
Integration Comment: incorrect integration

Component Name:
PFOS
RT (min.):
5.25
Peak Area:
4044104.57
Mass Range:
499.0 / 80.0
File Name:
18NOV28DCAL-12.wiff
Sample Name:
CAL7



Integration Comment: incorrect integration

Component Name:
NMeFOSAA
RT (min.):
5.71
Peak Area:
2148433.90
Mass Range:
570.0 / 419.0
File Name:
18NOV28DCAL-12.wiff
Sample Name:
CAL7



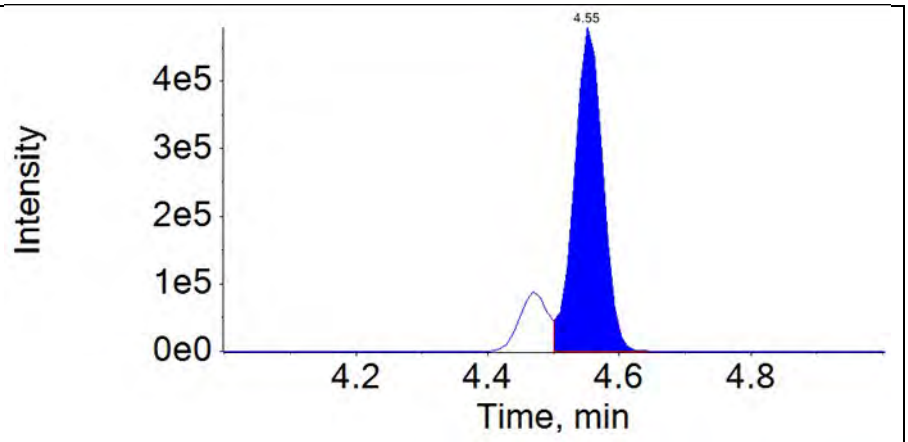
Integration Comment: incorrect integration

APPROVED
By MCD at 5:01 pm, 11/28/18

REVIEWED
By HMK at 12:22 pm, 11/29/18

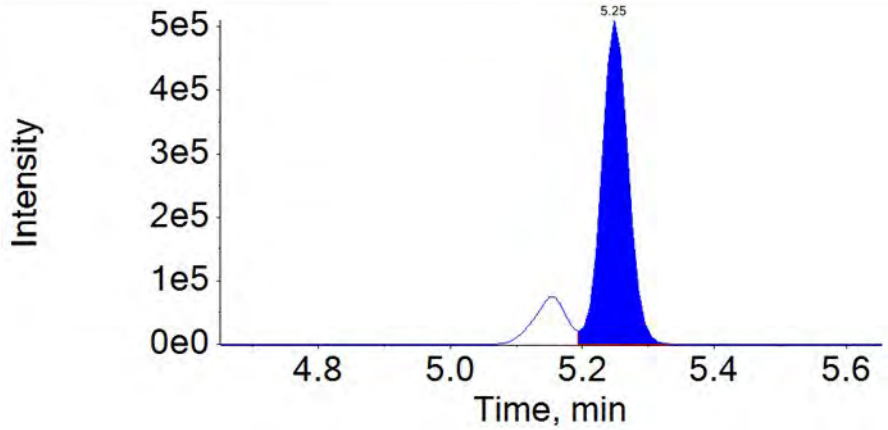
Results Table Name: 18NOV28DCAL
Results Table Date: 11/28/2018 4:52:53 PM
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

Component Name:
PFHxS_2
RT (min.):
4.55
Peak Area:
1444685.25
Mass Range:
399.0 / 99.0
File Name:
18NOV28DCAL-12.wiff
Sample Name:
CAL7



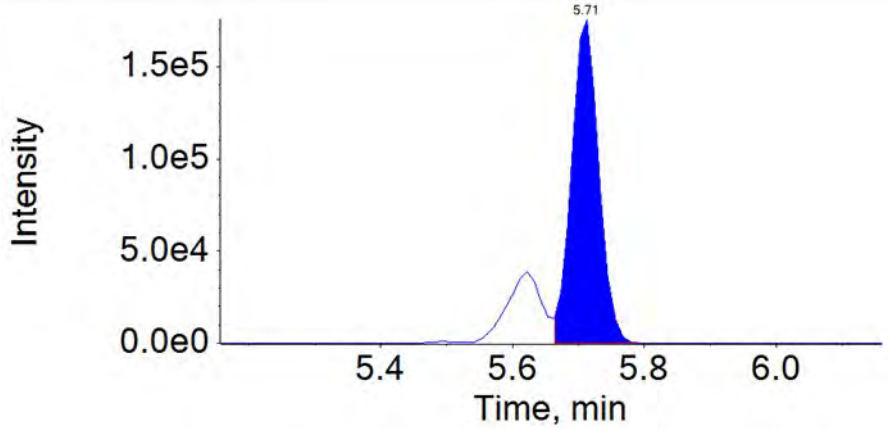
Integration Comment: incorrect integration

Component Name:
PFOS_2
RT (min.):
5.25
Peak Area:
1428771.10
Mass Range:
499.0 / 99.0
File Name:
18NOV28DCAL-12.wiff
Sample Name:
CAL7



Integration Comment: incorrect integration

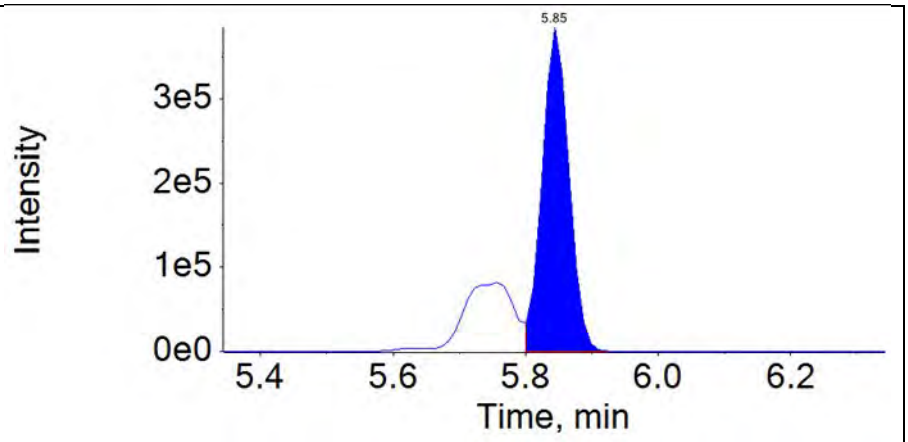
Component Name:
NMeFOSAA_2
RT (min.):
5.71
Peak Area:
503982.25
Mass Range:
570.0 / 483.0
File Name:
18NOV28DCAL-12.wiff
Sample Name:
CAL7



Integration Comment: incorrect integration

Results Table Name: 18NOV28DCAL
Results Table Date: 11/28/2018 4:52:53 PM
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

Component Name:
NEtFOSAA_2
RT (min.):
5.85
Peak Area:
1078966.66
Mass Range:
584.0 / 526.0
File Name:
18NOV28DCAL-12.wiff
Sample Name:
CAL7



Integration Comment: incorrect integration

APPROVED
By MCD at 5:01 pm, 11/28/18

REVIEWED
By HMK at 12:22 pm, 11/29/18

Results Table Name: 18NOV28DCAL
Results Table Date: 11/28/2018 4:52:53 PM
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

APPROVED
By MCD at 5:01 pm, 11/28/18

REVIEWED
By HMK at 12:22 pm, 11/29/18

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LC-MS/MS Analysis Report

Printed: 11/28/2018 4:52:00 PM
Template: IonRatio18OCT10

Ion Ratio Report

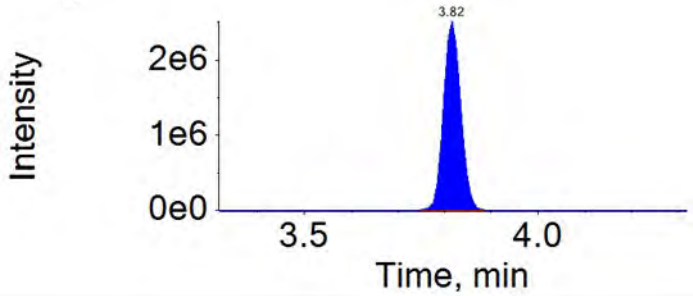
Sample Name: CAL7 **Instrument Name:** LM27631 **File Name:** 18NOV28DCAL-12.wiff

Component Name	RT	RRT	Analyte Area Response	Int Typ	Expected Ion Ratio	Ion Ratio	Ion Ratio % Diff	Ion Ratio Limit	Ion Ratio OOS
PFBS	3.82	1.00	6468971.36	A	0.3655	0.3712			
PFBS_2	3.82	1.00	2401069.30	A	0.3655	0.3712	2	50	
4:2-FTS	4.13	1.00	2126148.19	A	0.6383	0.6227			
4:2-FTS_2	4.13	1.00	1323869.93	A	0.6383	0.6227	-2	50	
PFHxA	4.16	1.00	12530842.98	A	0.0103	0.0129			
PFHxA_2	4.16	1.00	161470.85	A	0.0103	0.0129	25	50	
PFPeS	4.18	1.10	3295381.64	A	0.4976	0.5155			
PFPeS_2	4.18	1.10	1698903.95	A	0.4976	0.5155	4	50	
PFHpA	4.55	1.00	12619701.65	A	0.0557	0.0605			
PFHpA_2	4.55	1.00	763765.05	A	0.0557	0.0605	9	50	
PFHxS	4.55	1.00	4797026.75	M	0.3693	0.3544			
PFHxS_2	4.55	1.00	1700170.72	M	0.3693	0.3544	-4	50	
6:2-FTS	4.91	1.00	1464447.02	A	0.6625	0.6198			
6:2-FTS_2	4.91	1.00	907687.80	A	0.6625	0.6198	-6	50	
PFHpS	4.91	1.08	4562639.61	A	0.3915	0.4054			
PFHpS_2	4.91	1.08	1849493.91	A	0.3915	0.4054	4	50	
PFOA	4.92	1.00	12900182.71	A	0.0573	0.0647			
PFOA_2	4.92	1.00	835020.05	A	0.0573	0.0647	13	50	
PFOS	5.25	1.00	5620328.96	M	0.2960	0.3007			
PFOS_2	5.25	1.00	1690188.73	M	0.2960	0.3007	2	50	
PFNA	5.27	1.00	12939629.11	A	0.0201	0.0225			
PFNA_2	5.27	1.00	291130.29	A	0.0201	0.0225	12	50	
PFNS	5.54	1.06	3804945.18	A	0.4794	0.4635			
PFNS_2	5.54	1.06	1763659.34	A	0.4794	0.4635	-3	50	
PFDA	5.57	1.00	11371046.97	A	0.0075	0.0075			
PFDA_2	5.57	1.00	85605.85	A	0.0075	0.0075	1	50	
8:2-FTS	5.57	1.00	1620286.00	A	0.5380	0.5778			
8:2-FTS_2	5.57	1.00	936181.88	A	0.5380	0.5778	7	50	
NMeFOSAA	5.71	1.00	2414874.82	M	0.2305	0.2675			
NMeFOSAA_2	5.71	1.00	645922.89	M	0.2305	0.2675	16	50	
PFDS	5.80	1.11	3061543.49	A	0.5356	0.4828			
PFDS_2	5.80	1.11	1477981.79	A	0.5356	0.4828	-10	50	
PFUnDA	5.83	1.00	11254483.78	A	0.0038	0.0041			
PFUnDA_2	5.83	1.00	46090.29	A	0.0038	0.0041	8	50	
NEtFOSAA	5.85	1.00	2127663.38	A	0.7356	0.7070			
NEtFOSAA_2	5.85	1.00	1504160.93	M	0.7356	0.7070	-4	50	
PFDoDA	6.06	1.00	14195839.12	A	0.0130	0.0161			
PFDoDA_2	6.05	1.00	228700.97	A	0.0130	0.0161	24	50	
10:2-FTS	6.08	1.09	1718827.31	A	0.6989	0.7147			
10:2-FTS_2	6.08	1.09	1228426.74	A	0.6989	0.7147	2	50	
PFTrDA	6.26	1.03	12329126.07	A	0.0090	0.0102			
PFTrDA_2	6.26	1.03	125163.76	A	0.0090	0.0102	13	50	
PFTeDA	6.43	1.00	11258874.06	A	0.0056	0.0072			
PFTeDA_2	6.43	1.00	81360.66	A	0.0056	0.0072	29	50	
PFHxDA	6.73	1.05	6113985.15	A	0.0646	0.0666			
PFHxDA_2	6.73	1.05	406918.04	A	0.0646	0.0666	3	50	
PFODA	7.00	1.09	5309889.90	A	0.0264	0.0282			
PFODA_2	6.99	1.09	149760.81	A	0.0264	0.0282	7	50	

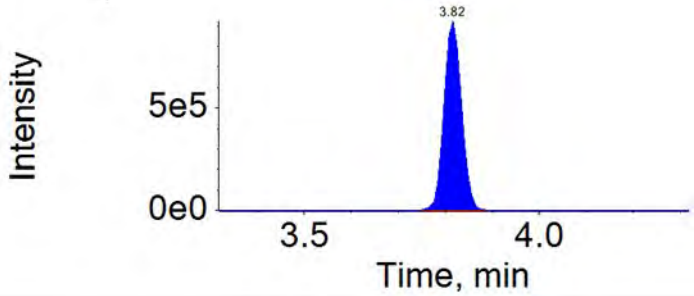
APPROVED
By MCD at 5:01 pm, 11/28/18

REVIEWED
By HMK at 12:22 pm, 11/29/18

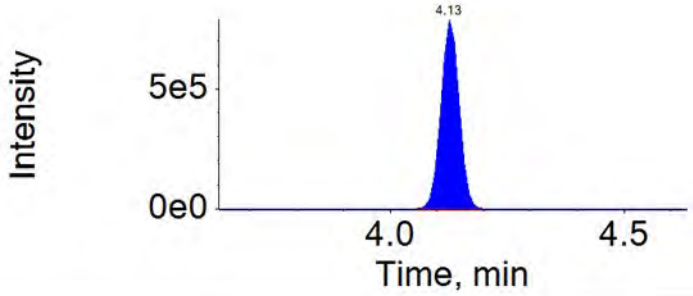
Component: PFBS
Primary Mass: 299.0 / 80.0



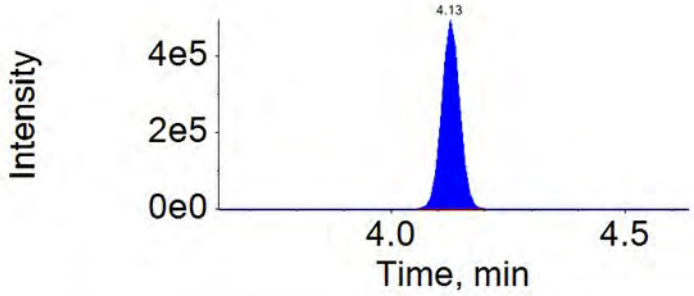
Component: PFBS_2
Secondary Mass: 299.0 / 99.0



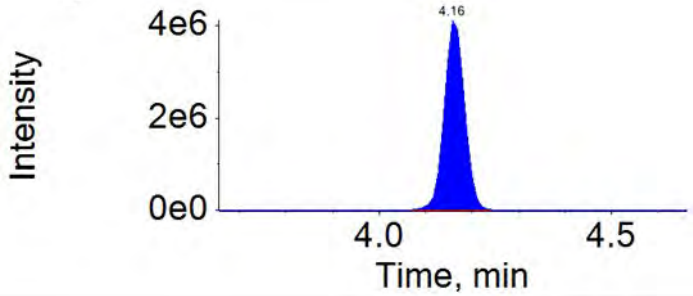
Component: 4:2-FTS
Primary Mass: 327.0 / 307.0



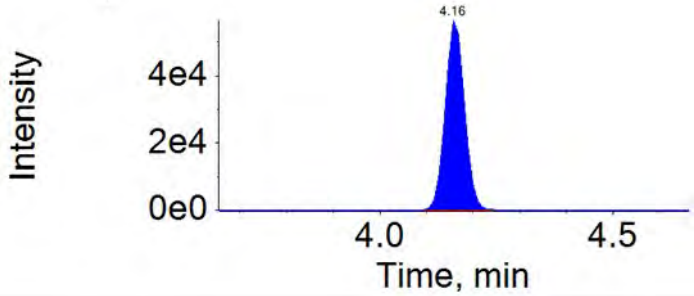
Component: 4:2-FTS_2
Secondary Mass: 327.0 / 81.0



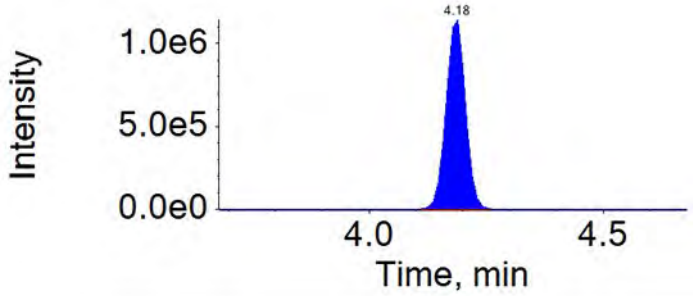
Component: PFHxA
Primary Mass: 313.0 / 269.0



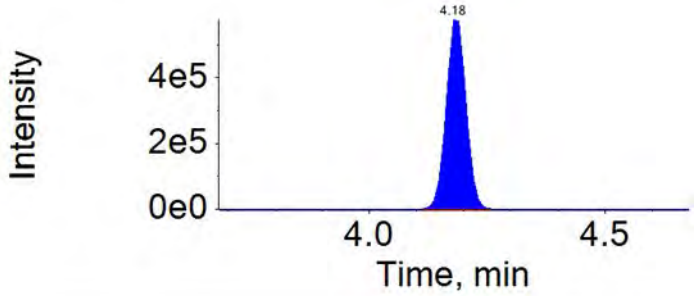
Component: PFHxA_2
Secondary Mass: 313.0 / 119.0



Component: PFPeS
Primary Mass: 349.0 / 80.0



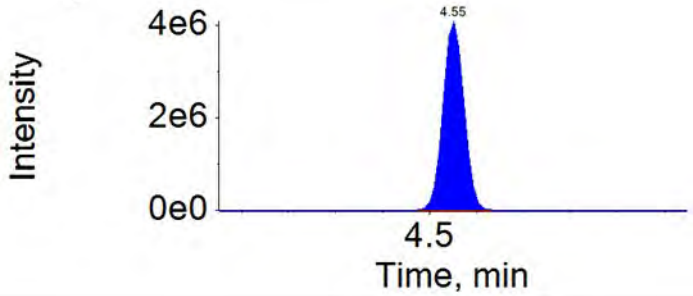
Component: PFPeS_2
Secondary Mass: 349.0 / 99.0



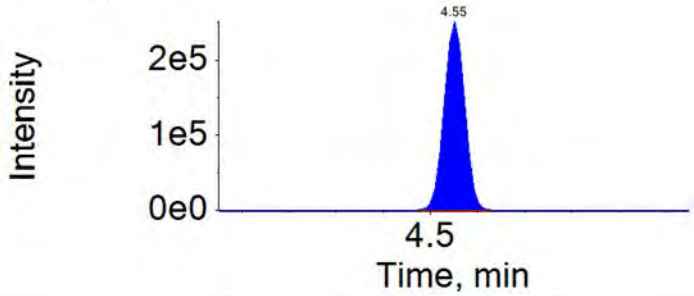
APPROVED
By MCD at 5:01 pm, 11/28/18

REVIEWED
By HMK at 12:22 pm, 11/29/18

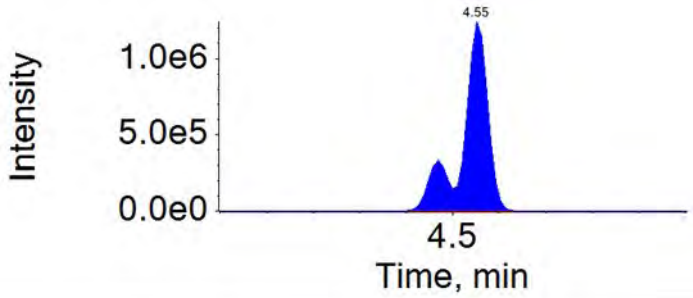
Component: PFHpA
Primary Mass: 363.0 / 319.0



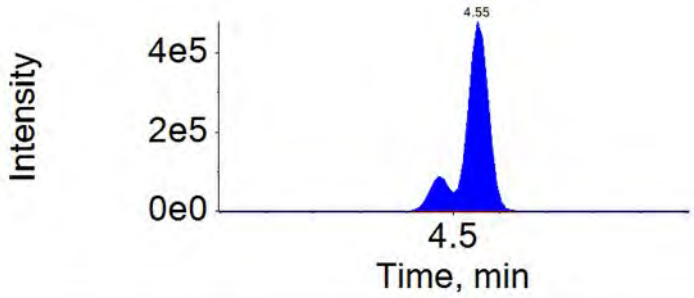
Component: PFHpA_2
Secondary Mass: 363.0 / 169.0



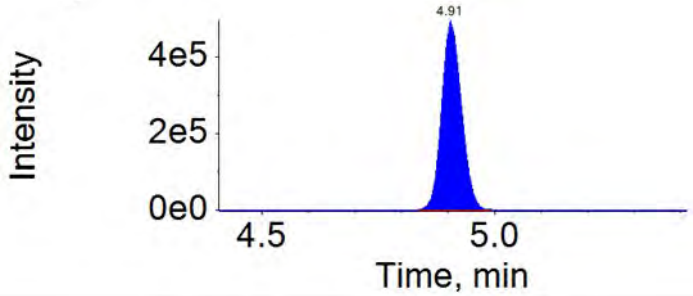
Component: PFHxS
Primary Mass: 399.0 / 80.0



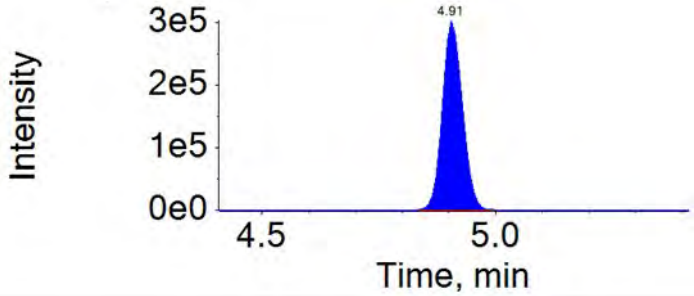
Component: PFHxS_2
Secondary Mass: 399.0 / 99.0



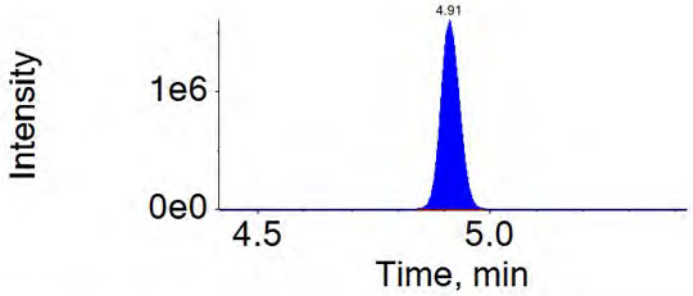
Component: 6:2-FTS
Primary Mass: 427.0 / 407.0



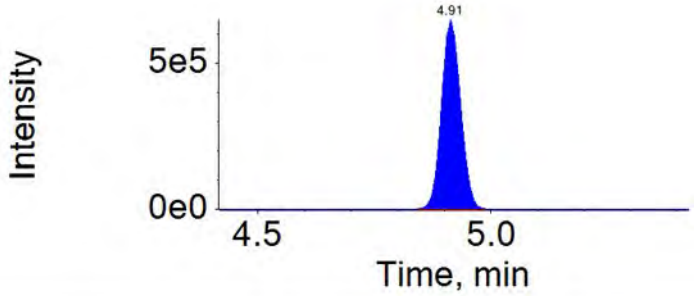
Component: 6:2-FTS_2
Secondary Mass: 427.0 / 81.0



Component: PFHpS
Primary Mass: 449.0 / 80.0



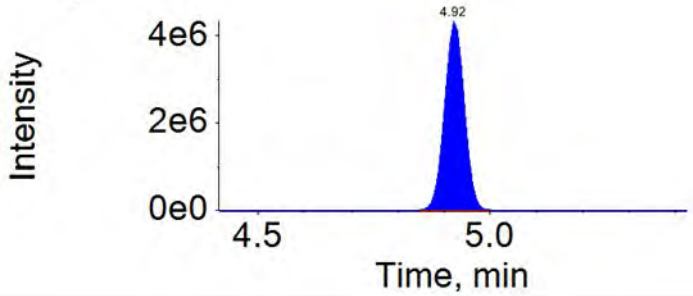
Component: PFHpS_2
Secondary Mass: 449.0 / 99.0



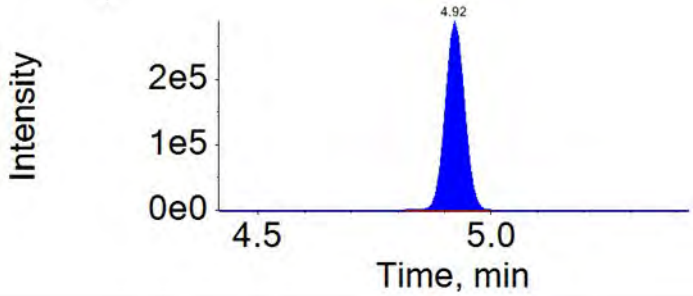
APPROVED
By MCD at 5:01 pm, 11/28/18

REVIEWED
By HMK at 12:22 pm, 11/29/18

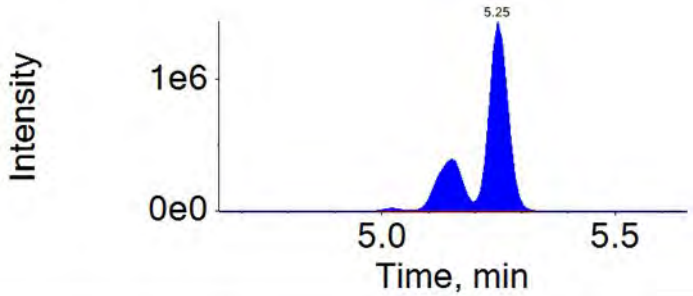
Component: PFOA
Primary Mass: 413.0 / 369.0



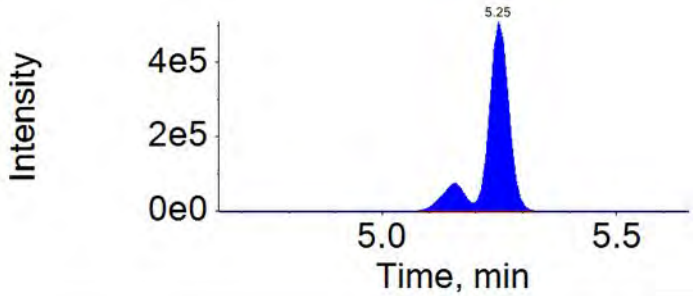
Component: PFOA_2
Secondary Mass: 413.0 / 169.0



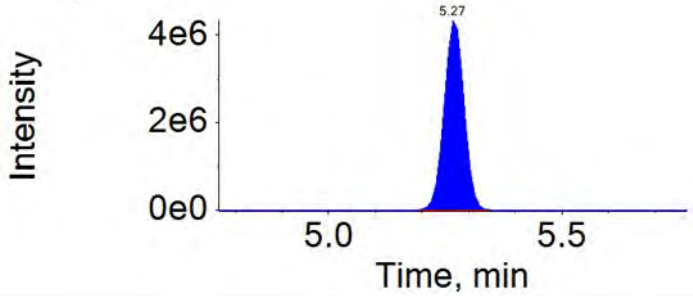
Component: PFOS
Primary Mass: 499.0 / 80.0



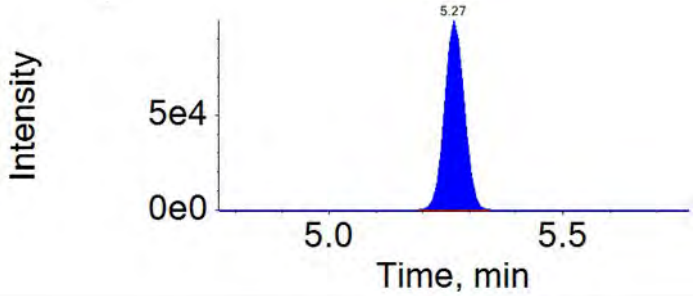
Component: PFOS_2
Secondary Mass: 499.0 / 99.0



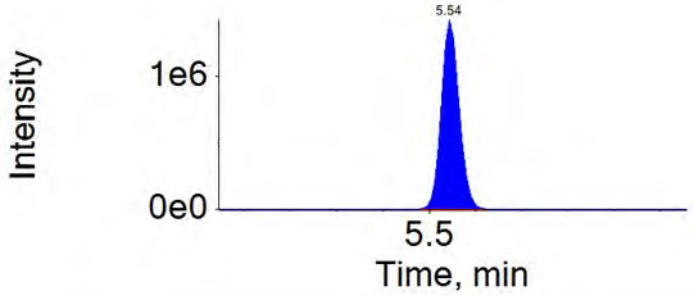
Component: PFNA
Primary Mass: 463.0 / 419.0



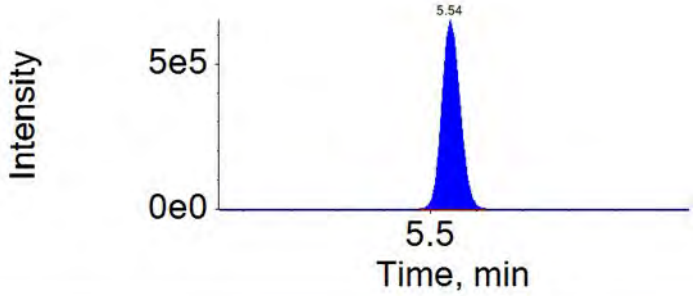
Component: PFNA_2
Secondary Mass: 463.0 / 169.0



Component: PFNS
Primary Mass: 549.0 / 80.0



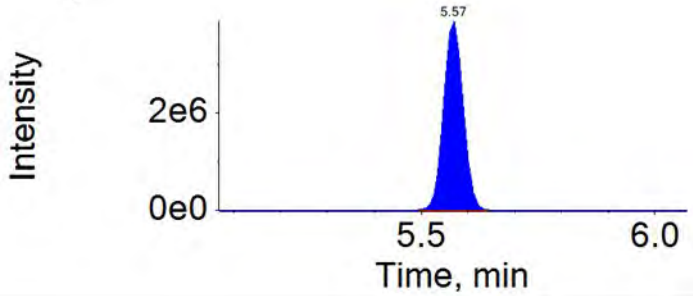
Component: PFNS_2
Secondary Mass: 549.0 / 99.0



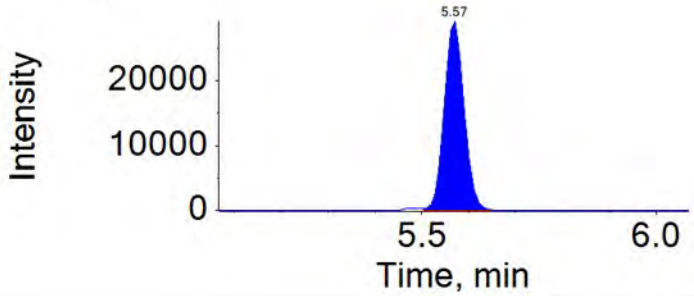
APPROVED
By MCD at 5:01 pm, 11/28/18

REVIEWED
By HMK at 12:22 pm, 11/29/18

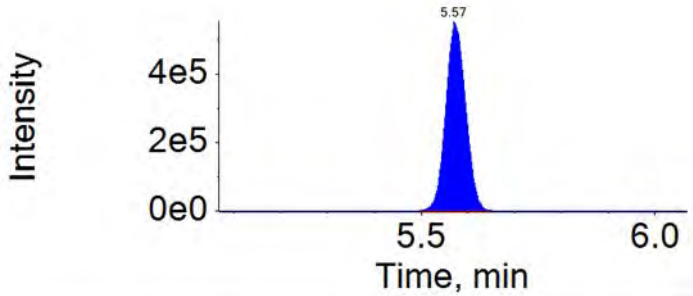
Component: PFDA
Primary Mass: 513.0 / 469.0



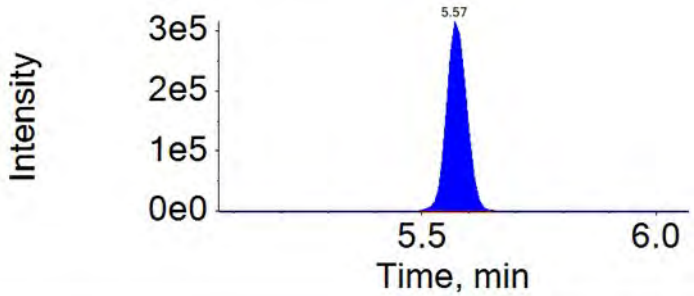
Component: PFDA_2
Secondary Mass: 513.0 / 169.0



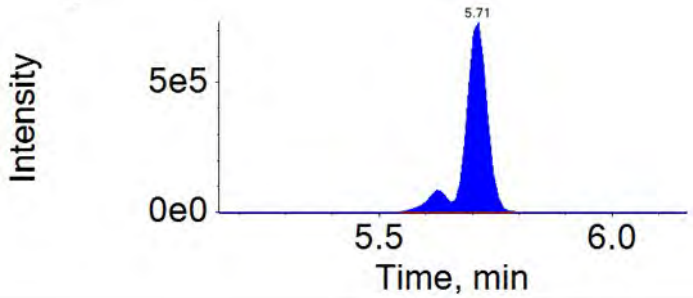
Component: 8:2-FTS
Primary Mass: 527.0 / 507.0



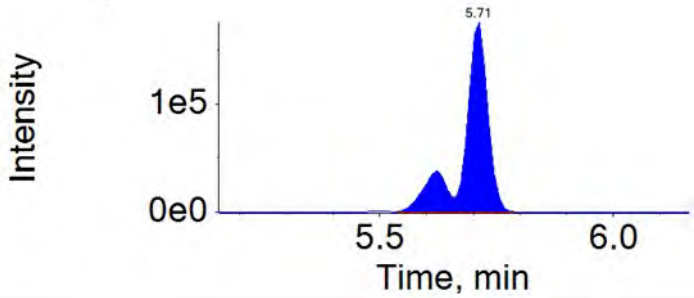
Component: 8:2-FTS_2
Secondary Mass: 527.0 / 81.0



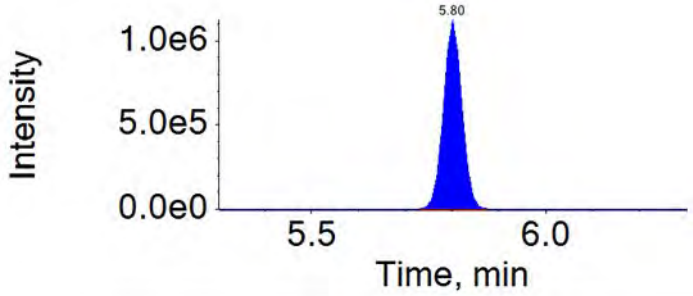
Component: NMeFOSAA
Primary Mass: 570.0 / 419.0



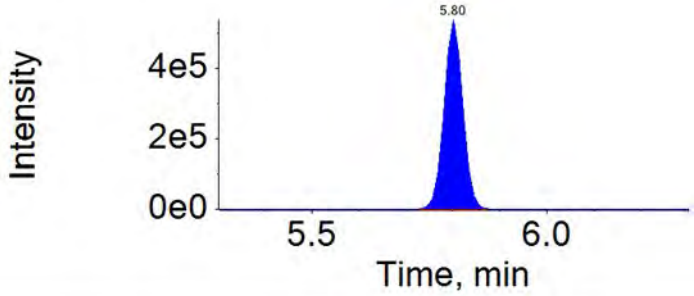
Component: NMeFOSAA_2
Secondary Mass: 570.0 / 483.0



Component: PFDS
Primary Mass: 599.0 / 80.0



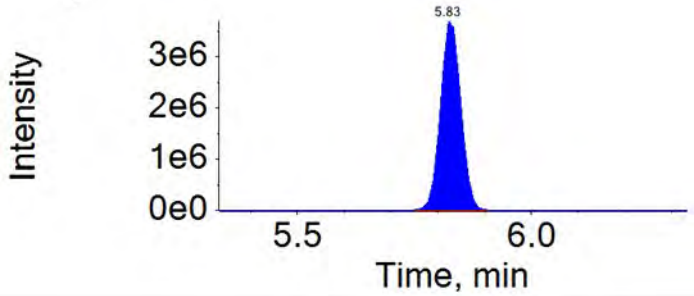
Component: PFDS_2
Secondary Mass: 599.0 / 99.0



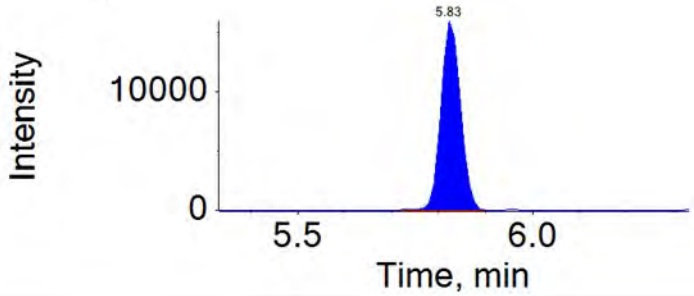
APPROVED
By MCD at 5:01 pm, 11/28/18

REVIEWED
By HMK at 12:22 pm, 11/29/18

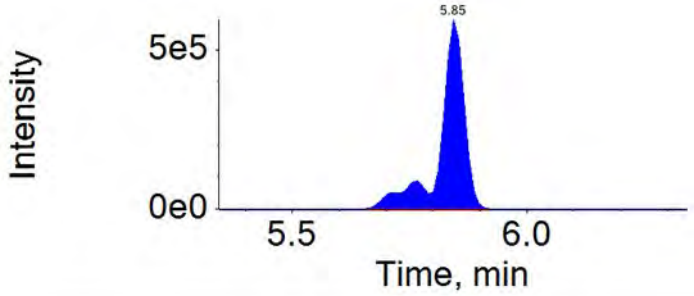
Component: PFUnDA
Primary Mass: 563.0 / 519.0



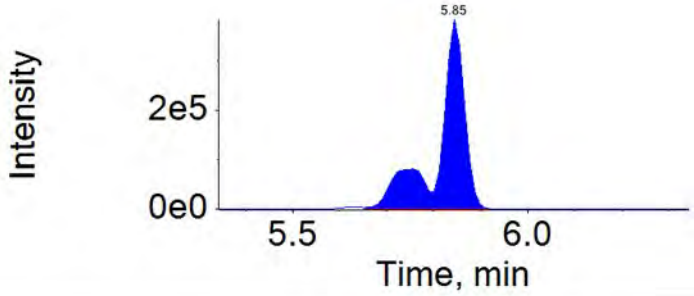
Component: PFUnDA_2
Secondary Mass: 563.0 / 169.0



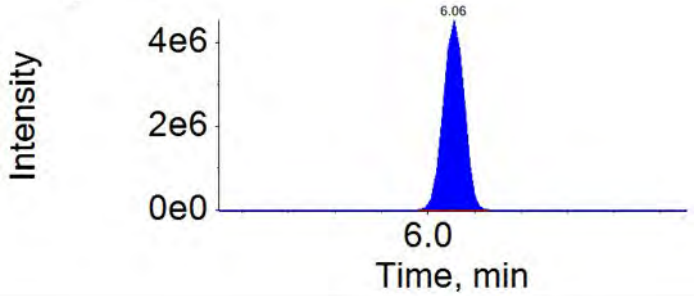
Component: NEtFOSAA
Primary Mass: 584.0 / 419.0



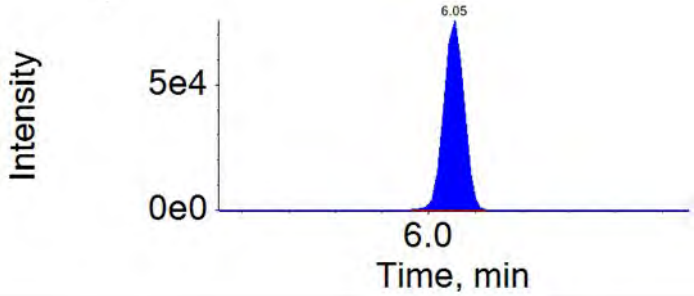
Component: NEtFOSAA_2
Secondary Mass: 584.0 / 526.0



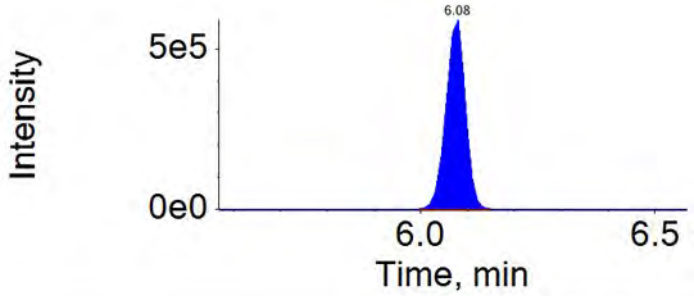
Component: PFDoDA
Primary Mass: 613.0 / 569.0



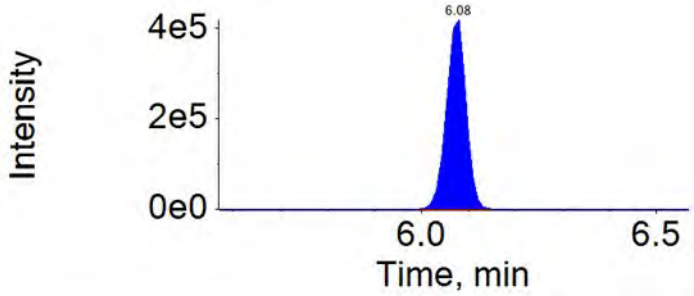
Component: PFDoDA_2
Secondary Mass: 613.0 / 169.0



Component: 10:2-FTS
Primary Mass: 627.0 / 607.0



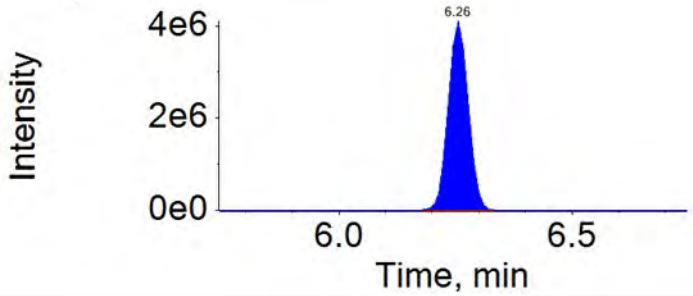
Component: 10:2-FTS_2
Secondary Mass: 627.0 / 81.0



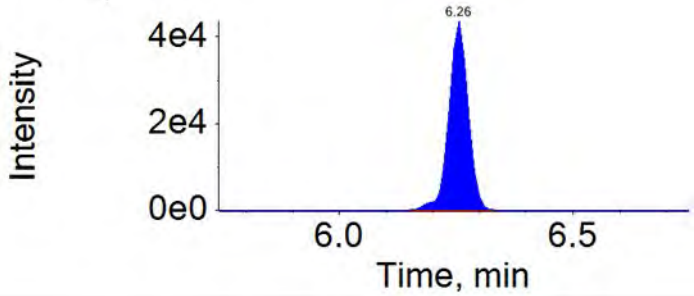
APPROVED
By MCD at 5:01 pm, 11/28/18

REVIEWED
By HMK at 12:22 pm, 11/29/18

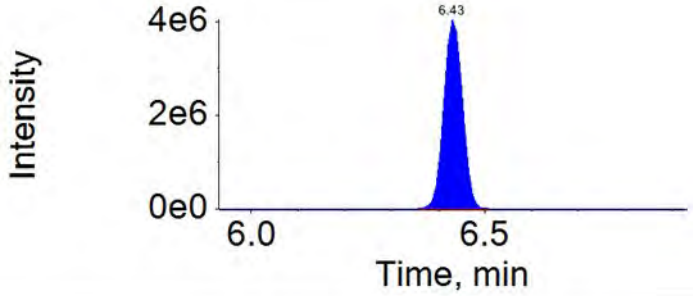
Component: PFTrDA
Primary Mass: 663.0 / 619.0



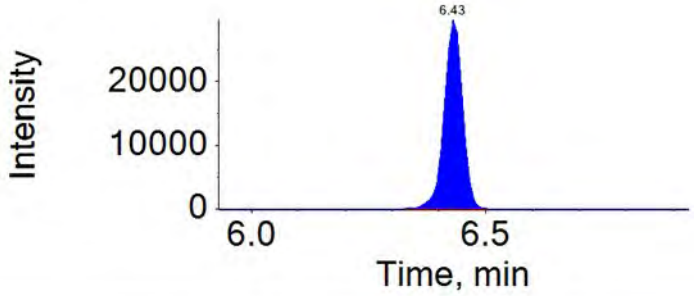
Component: PFTrDA_2
Secondary Mass: 663.0 / 169.0



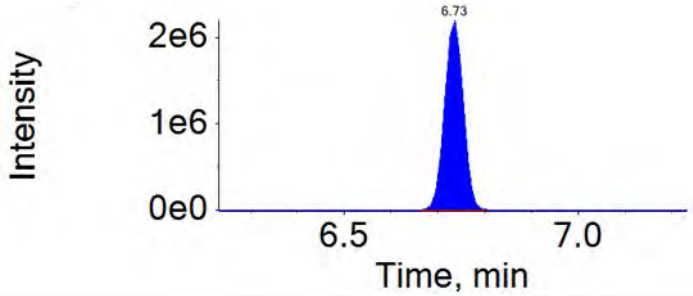
Component: PFTeDA
Primary Mass: 713.0 / 669.0



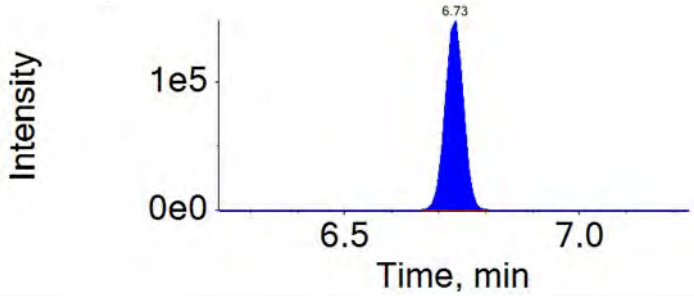
Component: PFTeDA_2
Secondary Mass: 713.0 / 169.0



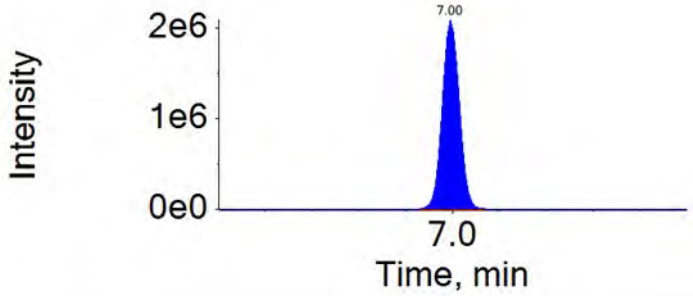
Component: PFHxDA
Primary Mass: 813.0 / 769.0



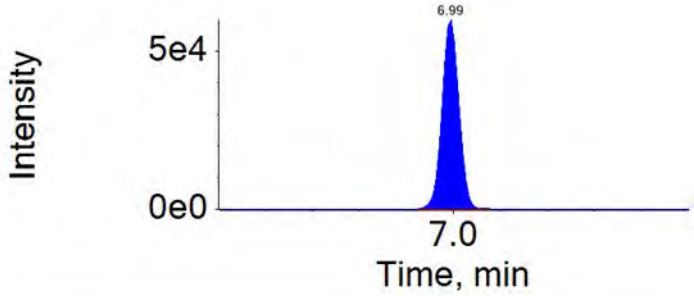
Component: PFHxDA_2
Secondary Mass: 813.0 / 169.0



Component: PFODA
Primary Mass: 913.0 / 869.0



Component: PFODA_2
Secondary Mass: 913.0 / 169.0



APPROVED
By MCD at 5:01 pm, 11/28/18

REVIEWED
By HMK at 12:22 pm, 11/29/18

eurofins | Lancaster Laboratories

LC-MS/MS
DOD Analysis Report

Printed: 11/29/2018 1:06:00 PM
Template: DOD-Sample-18JUN22.docx

ICAL Name: 18NOV28DCAL
QMethod Name: 18AUG20QM
Result Table: 18NOV28DCAL 11/29/2018 1:05:58 PM
Acquisition Method: 18AUG13_3uL.dam

Sample Name:	Instrument Blank			**Data File:**		18NOV28DCAL-13.wiff
Sample ID:	methanol			**Acquis Date:**		11/28/2018 2:45:19 PM
Sample Type:	Unknown			**Instrument:**		LM27631
Vial Position:	1			**Acquis Method:**		18AUG13_3uL.dam
Injection Vol:	3.00			**Result Table:**		18NOV28DCAL
QMethod File:	18AUG20QM			**ICAL Name:**		18NOV28DCAL
Batch Number:	N/A			**Operator:**		JPT12262
Sample Wt.:	1.00000			**Dilution Factor:**		1.00
Sample Vol.:	1.000			**Prep Factor:**		1.000

Injection Standard Peak Table

Injection Standard Area Reference File: 18NOV28DCAL-08

Injection Standard Name	Inj Std Conc	Injection Std Peak Area	Rreference Injection Standard Area	Injection Std %Diff	Injection Std %Diff Limit	Injection Std %Diff OOS
13C3-PFBA	5.0	1143174.3	887248.9	29	50	
13C2-PFOA	5.0	661239.2	498501.6	33	50	
13C4-PFOS	4.8	389955.6	283214.2	38	50	
13C2-PFDA	5.0	588197.1	441790.6	33	50	

Extraction Standard Peak Table

Extraction Standard Name	Ext Std Area	Inj Std Name	Inj Std Area	Area Ratio	Ext Std Conc	Ext Std Result	Ext Std %REC	Ext Std %REC Limit	Ext Std OOS
E13C4-PFBA	1266298.2	13C3-PFBA	1143174.3	1.108	5.000	4.942	99	70-130	
E13C5-PFPeA	1221656.2	13C3-PFBA	1143174.3	1.069	5.000	4.990	100	70-130	
E13C3-PFBS	546183.1	13C3-PFBA	1143174.3	0.478	4.650	4.558	98	70-130	
E13C2-4:2-FTS	92907.1	13C2-PFOA	661239.2	0.141	4.670	4.842	104	70-130	
E13C5-PFHxA	881698.8	13C2-PFOA	661239.2	1.333	5.000	4.898	98	70-130	
E13C3-PFHxS	397088.3	13C2-PFOA	661239.2	0.601	4.730	4.707	100	70-130	
E13C4-PFHpA	684654.8	13C2-PFOA	661239.2	1.035	5.000	4.758	95	70-130	
E13C2-6:2-FTS	90195.6	13C2-PFOA	661239.2	0.136	4.750	5.710	120	70-130	
E13C8-PFOA	1243060.3	13C2-PFOA	661239.2	1.880	5.000	5.174	103	70-130	
E13C8-PFOS	389085.3	13C4-PFOS	389955.6	0.998	4.780	4.504	94	70-130	
E13C9-PFNA	823058.9	13C4-PFOS	389955.6	2.111	5.000	4.636	93	70-130	
E13C6-PFDA	1069720.1	13C2-PFDA	588197.1	1.819	5.000	5.128	103	70-130	
E13C2-8:2-FTS	97960.5	13C2-PFDA	588197.1	0.167	4.790	7.158	149	70-130	OOS
E13C8-PFOSA	873157.2	13C2-PFDA	588197.1	1.484	5.000	5.447	109	70-130	
Ed3-NMeFOSAA	242996.3	13C2-PFDA	588197.1	0.413	5.000	5.245	105	70-130	
E13C7-PFUnDA	700966.1	13C2-PFDA	588197.1	1.192	5.000	5.037	101	70-130	
Ed5-NEtFOSAA	159876.3	13C2-PFDA	588197.1	0.272	5.000	4.842	97	70-130	
E13C2-PFDoDA	1371772.4	13C2-PFDA	588197.1	2.332	5.000	4.900	98	70-130	
Ed7-NMePFOSAE	354362.2	13C2-PFDA	588197.1	0.602	5.000	5.207	104	70-130	
Ed3-NMePFOSA	104834.4	13C2-PFDA	588197.1	0.178	5.000	4.824	96	70-130	
Ed9-NEtPFOSAE	319017.0	13C2-PFDA	588197.1	0.542	5.000	5.499	110	70-130	
Ed5-NEtPFOSA	85061.1	13C2-PFDA	588197.1	0.145	5.000	5.025	100	70-130	
E13C2-PFTeDA	1062806.7	13C2-PFDA	588197.1	1.807	5.000	5.000	100	70-130	

APPROVED
By JPT at 1:11 pm, 11/29/18

REVIEWED
By HMK at 1:17 pm, 11/29/18

ICAL Name: 18NOV28DCAL **Result Table:** 18NOV28DCAL 11/29/2018 1:05:58 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

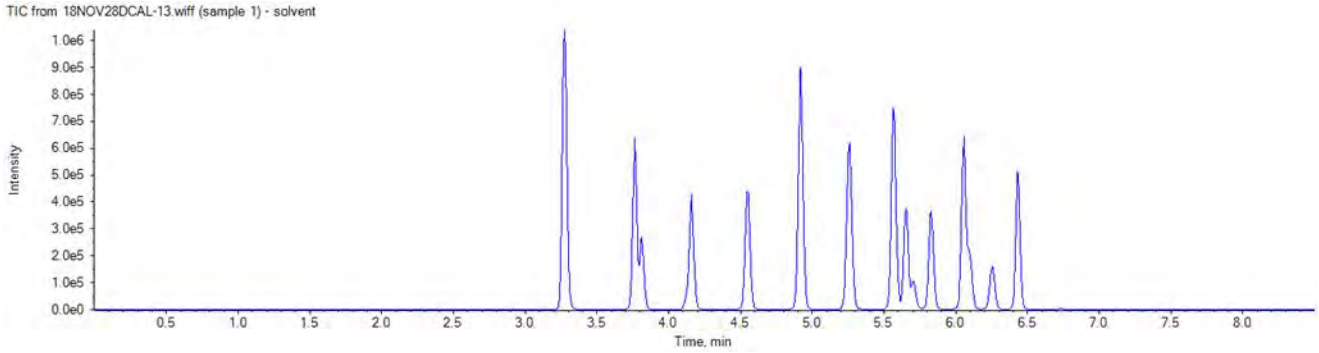
Analyte Quantitation Peak Table

Sample Name: Instrument Blank **Instrument Name:** LM27631 **File Name:** 18NOV28DCAL-13.wiff

Sample Wt	Sample Vol	Dilution Factor	PrepFactor
1.00000	1.000	1.00	1.000

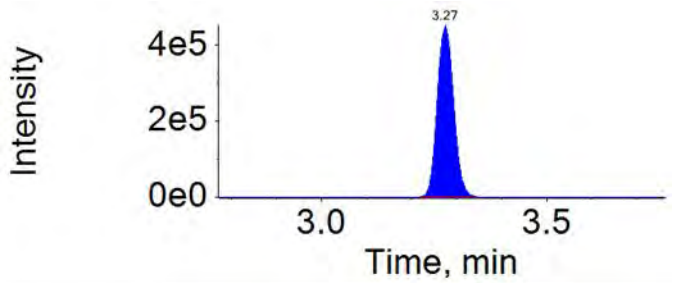
Analyte Name	RT	RRT	Analyte Area Response	E	Int Typ	ES Name	ES RT	ES Area Response	Area Ratio	Sample Result (ng/g)
PFBA	N/A	N/A	N/A		A	13C4-PFBA	3.27	1266298.2	N/A	
PFPeA	N/A	N/A	N/A		A	13C5-PFPeA	3.76	1221656.2	N/A	
PFBS	N/A	N/A	N/A		A	13C3-PFBS	3.81	546183.1	N/A	
4:2-FTS	N/A	N/A	N/A		A	13C2-4:2-FTS	4.13	92907.1	N/A	
PFHxA	N/A	N/A	N/A		A	13C5-PFHxA	4.16	881698.8	N/A	
PFPeS	N/A	N/A	N/A		A	13C3-PFBS	3.81	546183.1	N/A	
PFHpA	N/A	N/A	N/A		A	13C4-PFHpA	4.55	684654.8	N/A	
PFHxS	N/A	N/A	N/A		A	13C3-PFHxS	4.55	397088.3	N/A	
6:2-FTS	N/A	N/A	N/A		A	13C2-6:2-FTS	4.91	90195.6	N/A	
PFHpS	N/A	N/A	N/A		A	13C3-PFHxS	4.55	397088.3	N/A	
PFOA	N/A	N/A	N/A		A	13C8-PFOA	4.92	1243060.3	N/A	
PFOS	N/A	N/A	N/A		A	13C8-PFOS	5.25	389085.3	N/A	
PFNA	N/A	N/A	N/A		A	13C9-PFNA	5.27	823058.9	N/A	
PFNS	N/A	N/A	N/A		A	13C8-PFOS	5.25	389085.3	N/A	
PFDA	N/A	N/A	N/A		A	13C6-PFDA	5.57	1069720.1	N/A	
8:2-FTS	N/A	N/A	N/A		A	13C2-8:2-FTS	5.57	97960.5	N/A	
PFOSA	N/A	N/A	N/A		A	13C8-PFOSA	5.65	873157.2	N/A	
NMeFOSAA	N/A	N/A	N/A		A	d3-NMeFOSAA	5.71	242996.3	N/A	
PFDS	N/A	N/A	N/A		A	13C8-PFOS	5.25	389085.3	N/A	
PFUnDA	N/A	N/A	N/A		A	13C7-PFUnDA	5.83	700966.1	N/A	
NEtFOSAA	N/A	N/A	N/A		A	d5-NEtFOSAA	5.84	159876.3	N/A	
PFDoDA	N/A	N/A	N/A		A	13C2-PFDoDA	6.06	1371772.4	N/A	
10:2-FTS	N/A	N/A	N/A		A	13C2-8:2-FTS	5.57	97960.5	N/A	
NMePFOSAE	N/A	N/A	N/A		A	d7-NMePFOSAE	6.10	354362.2	N/A	
NMePFOSA	N/A	N/A	N/A		A	d3-NMePFOSA	6.11	104834.4	N/A	
PFDoS	N/A	N/A	N/A		A	13C8-PFOS	5.25	389085.3	N/A	
NEtPFOSAE	N/A	N/A	N/A		A	d9-NEtPFOSAE	6.25	319017.0	N/A	
NEtPFOSA	N/A	N/A	N/A		A	d5-NEtPFOSA	6.27	85061.1	N/A	
PFTrDA	N/A	N/A	N/A		A	13C2-PFDoDA	6.06	1371772.4	N/A	
PFTeDA	N/A	N/A	N/A		A	13C2-PFTeDA	6.43	1062806.7	N/A	
PFHxDA	6.74	1.050	6327.1		A	13C2-PFTeDA	6.43	1062806.7	0.006	0.068
PFODA	7.00	1.090	3886.6		A	13C2-PFTeDA	6.43	1062806.7	0.004	0.049

Total Ion Chromatogram

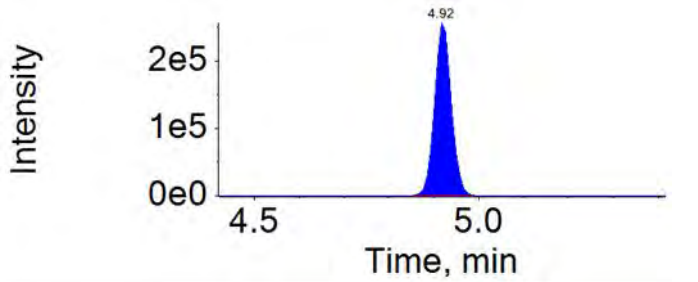


ICAL Name: 18NOV28DCAL **Result Table:** 18NOV28DCAL 11/29/2018 1:05:58 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

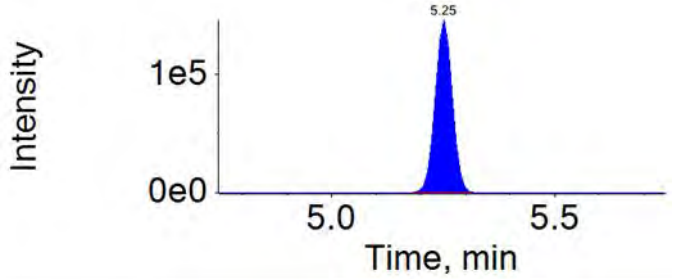
Injection Standard: 13C3-PFBA
216.0 / 172.0



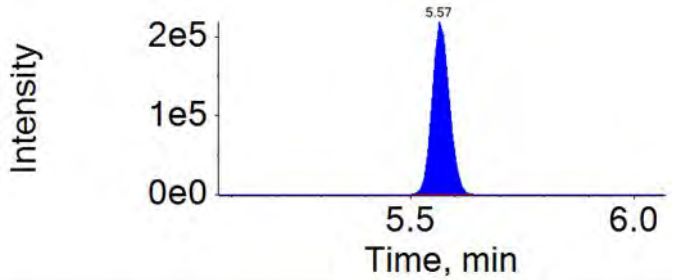
Injection Standard: 13C2-PFOA
415.0 / 370.0



Injection Standard: 13C4-PFOS
503.0 / 80.0

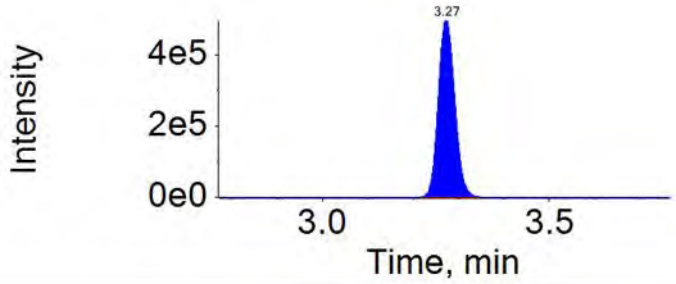


Injection Standard: 13C2-PFDA
515.0 / 470.0

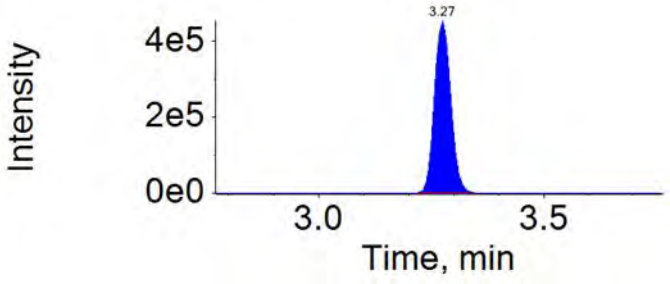


ICAL Name: 18NOV28DCAL **Result Table:** 18NOV28DCAL 11/29/2018 1:05:58 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

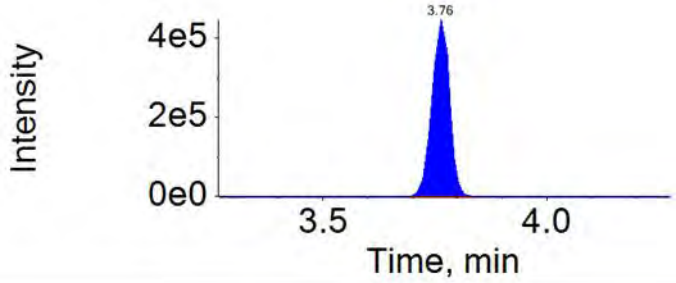
Extraction Standard: E13C4-PFBA
217.0 / 172.0



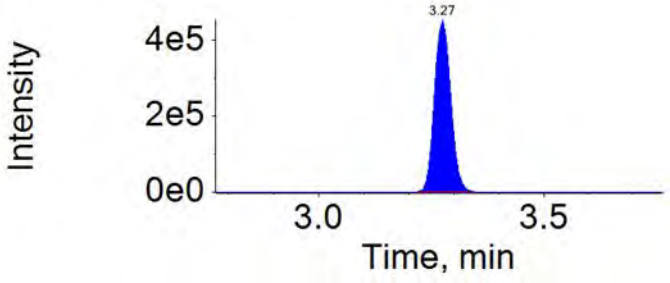
Injection Standard: 13C3-PFBA
216.0 / 172.0



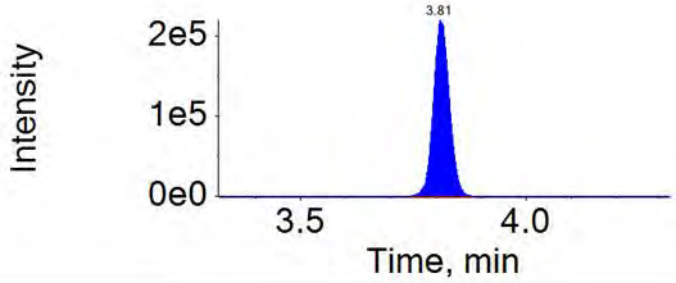
Extraction Standard: E13C5-PFPeA
268.0 / 223.0



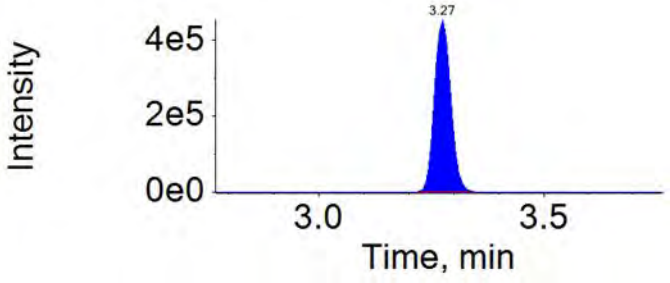
Injection Standard: 13C3-PFBA
216.0 / 172.0



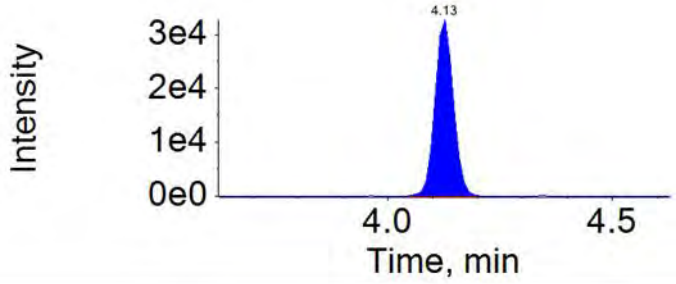
Extraction Standard: E13C3-PFBS
302.0 / 80.0



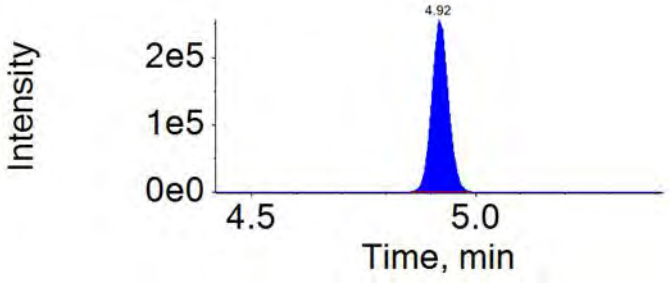
Injection Standard: 13C3-PFBA
216.0 / 172.0



Extraction Standard: E13C2-4:2-FTS
329.0 / 81.0



Injection Standard: 13C2-PFOA
415.0 / 370.0

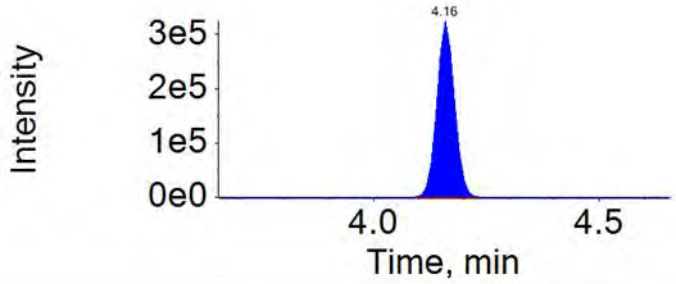


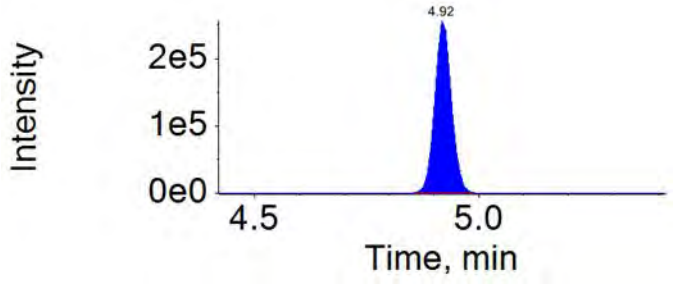
APPROVED
By JPT at 1:11 pm, 11/29/18

REVIEWED
By HMK at 1:17 pm, 11/29/18

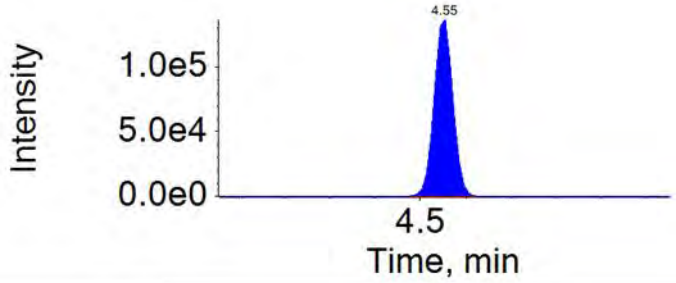
ICAL Name: 18NOV28DCAL **Result Table:** 18NOV28DCAL 11/29/2018 1:05:58 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

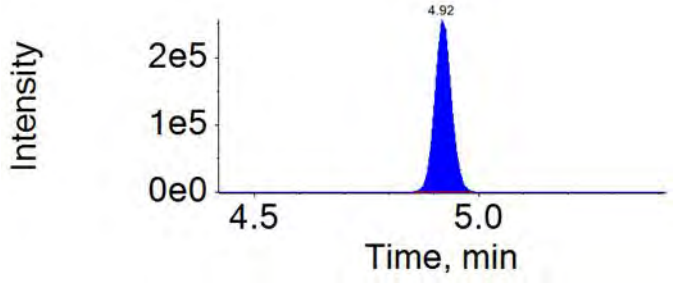
Extraction Standard: E13C5-PFHxA	Injection Standard: 13C2-PFOA
318.0 / 273.0	415.0 / 370.0



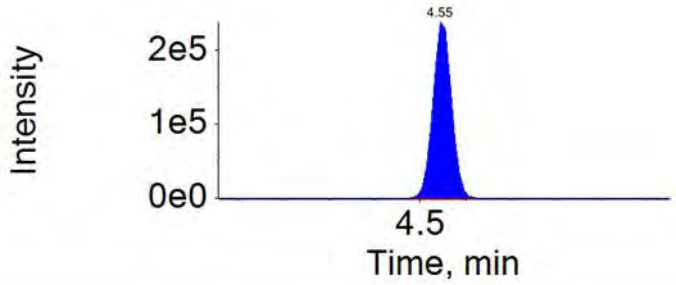


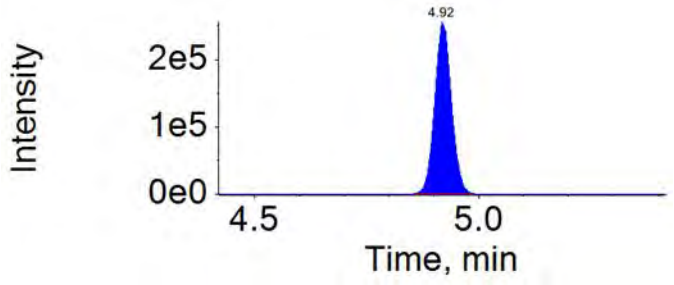
Extraction Standard: E13C3-PFHxS	Injection Standard: 13C2-PFOA
402.0 / 80.0	415.0 / 370.0



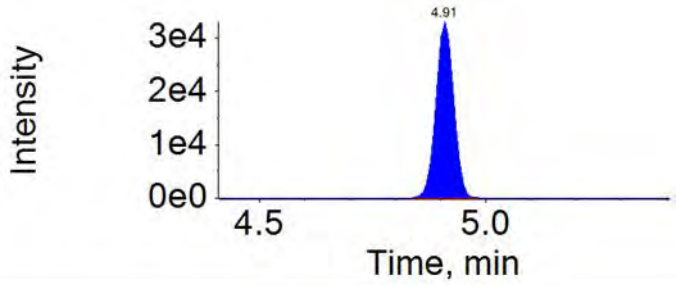


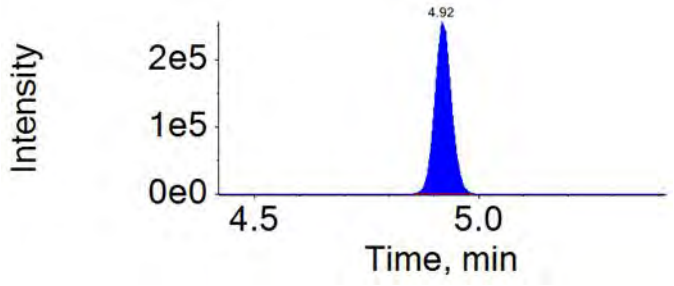
Extraction Standard: E13C4-PFHpA	Injection Standard: 13C2-PFOA
367.0 / 322.0	415.0 / 370.0





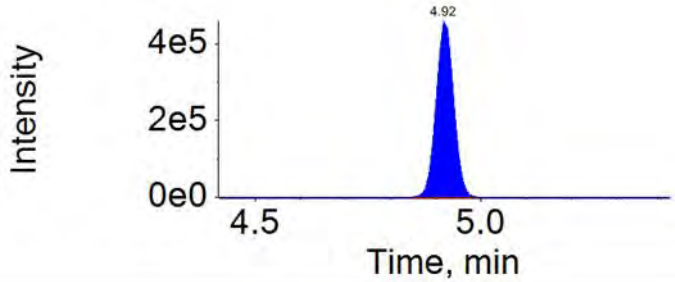
Extraction Standard: E13C2-6:2-FTS	Injection Standard: 13C2-PFOA
429.0 / 81.0	415.0 / 370.0

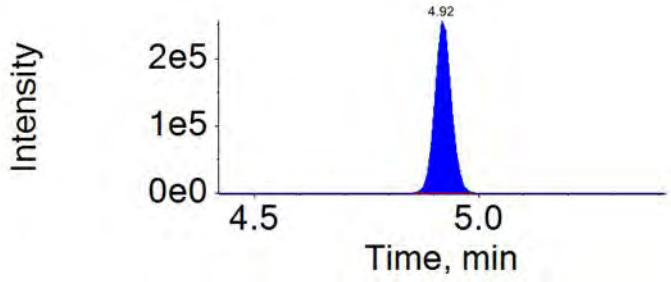




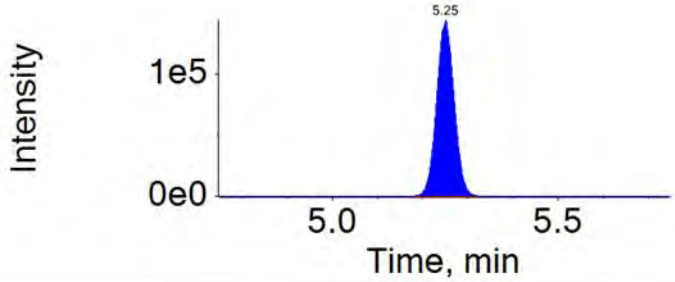
ICAL Name: 18NOV28DCAL **Result Table:** 18NOV28DCAL 11/29/2018 1:05:58 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

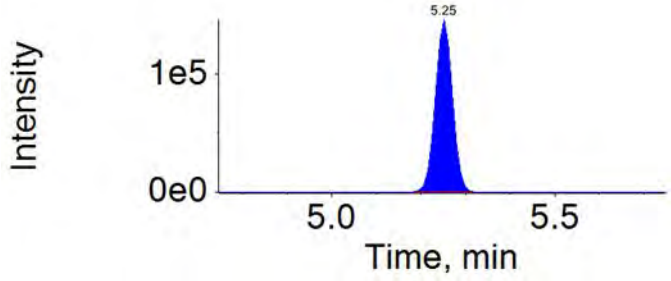
Extraction Standard: E13C8-PFOA	Injection Standard: 13C2-PFOA
421.0 / 376.0	415.0 / 370.0



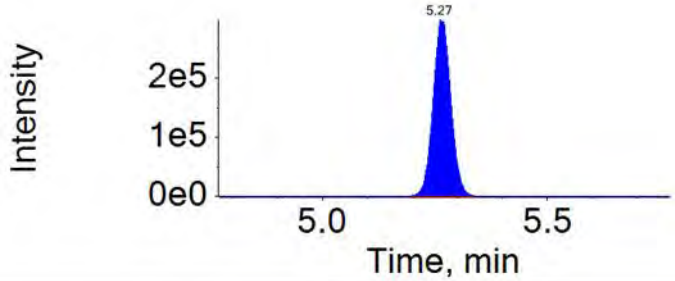


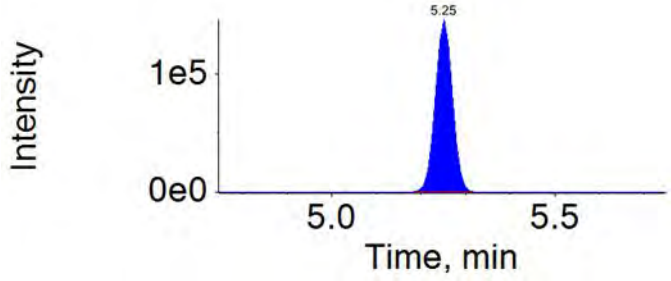
Extraction Standard: E13C8-PFOS	Injection Standard: 13C4-PFOS
507.0 / 80.0	503.0 / 80.0



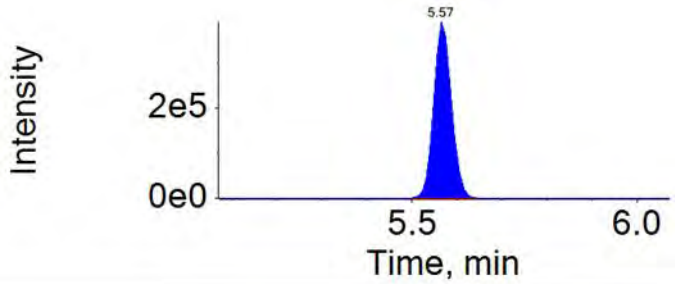


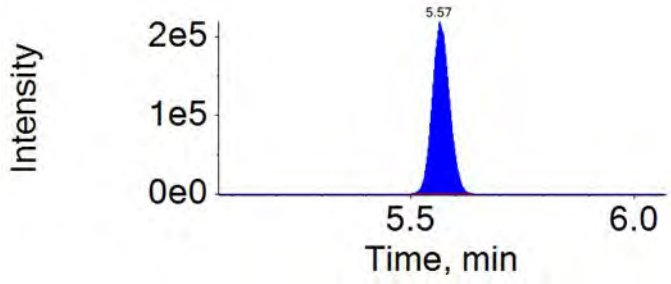
Extraction Standard: E13C9-PFNA	Injection Standard: 13C4-PFOS
472.0 / 427.0	503.0 / 80.0





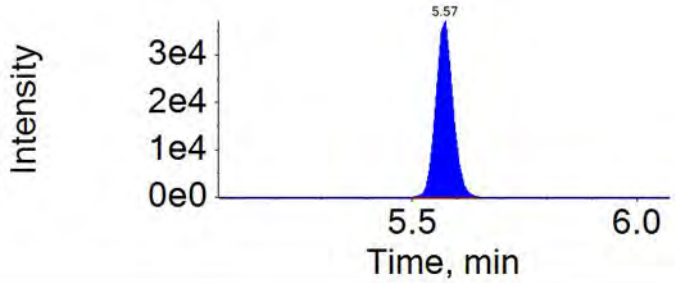
Extraction Standard: E13C6-PFDA	Injection Standard: 13C2-PFDA
519.0 / 474.0	515.0 / 470.0

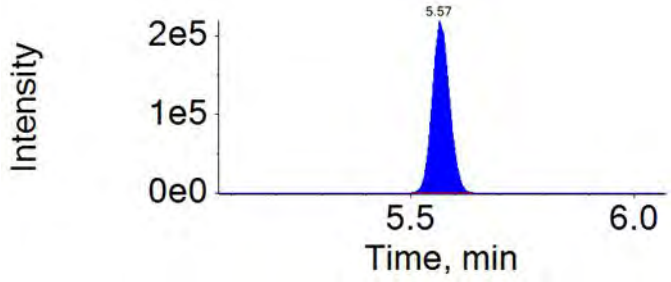




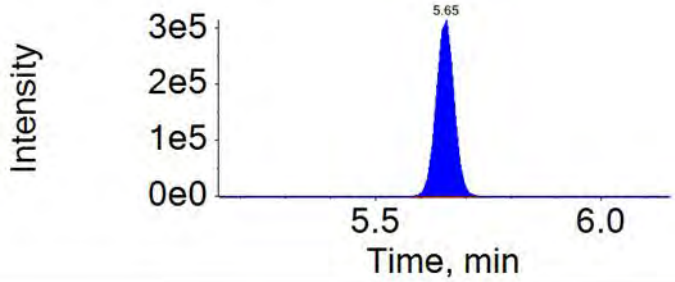
ICAL Name: 18NOV28DCAL **Result Table:** 18NOV28DCAL 11/29/2018 1:05:58 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

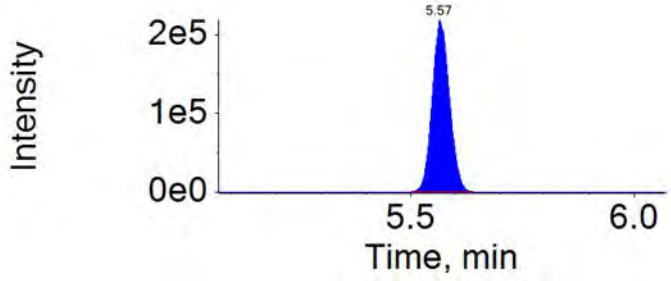
Extraction Standard: E13C2-8:2-FTS	Injection Standard: 13C2-PFDA
529.0 / 81.0	515.0 / 470.0



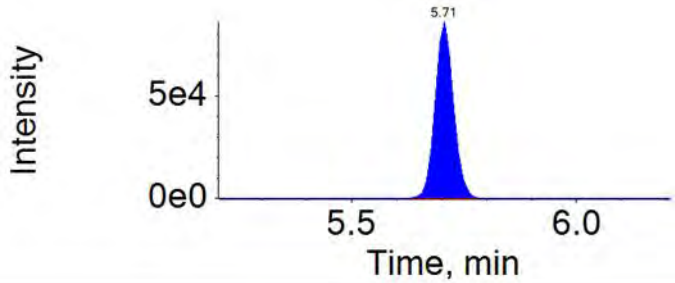


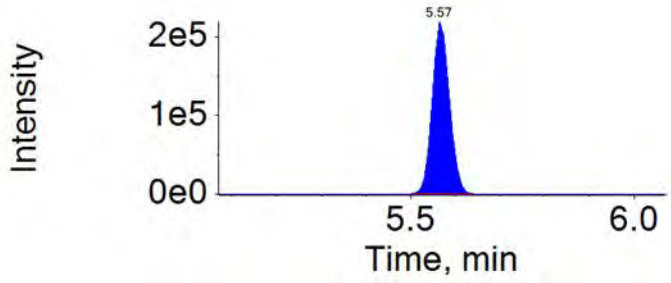
Extraction Standard: E13C8-PFOSA	Injection Standard: 13C2-PFDA
506.0 / 78.0	515.0 / 470.0



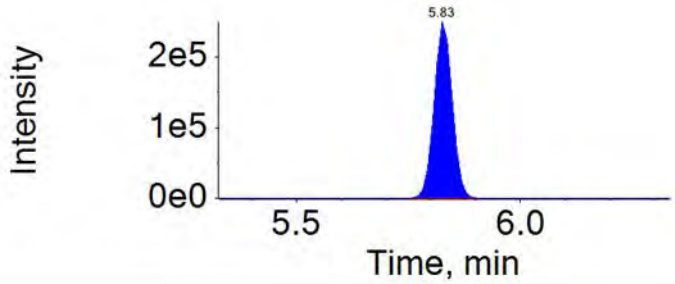


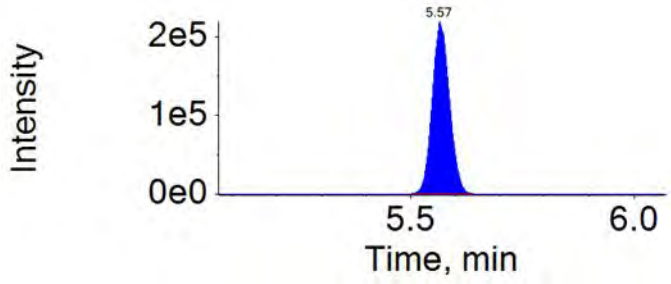
Extraction Standard: Ed3-NMeFOSAA	Injection Standard: 13C2-PFDA
573.0 / 419.0	515.0 / 470.0





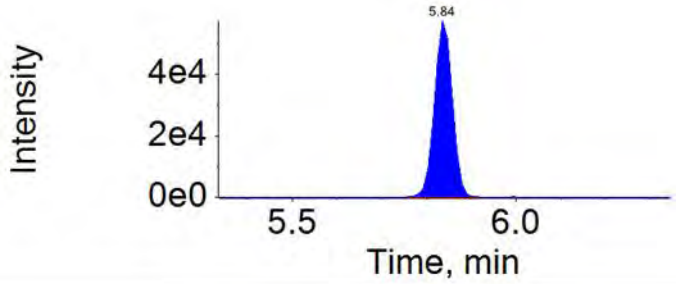
Extraction Standard: E13C7-PFUnDA	Injection Standard: 13C2-PFDA
570.0 / 525.0	515.0 / 470.0

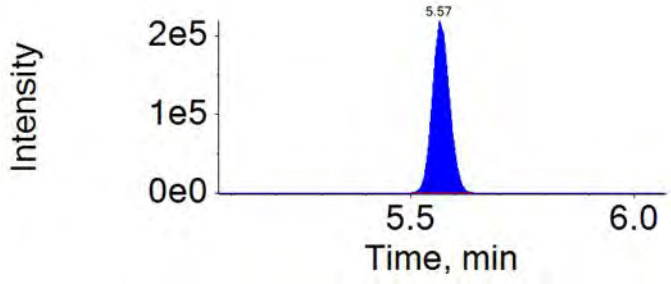




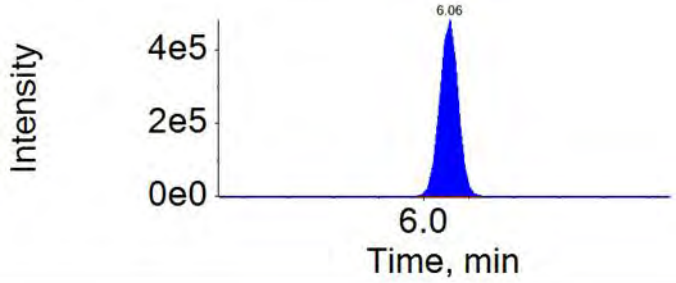
ICAL Name: 18NOV28DCAL **Result Table:** 18NOV28DCAL 11/29/2018 1:05:58 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

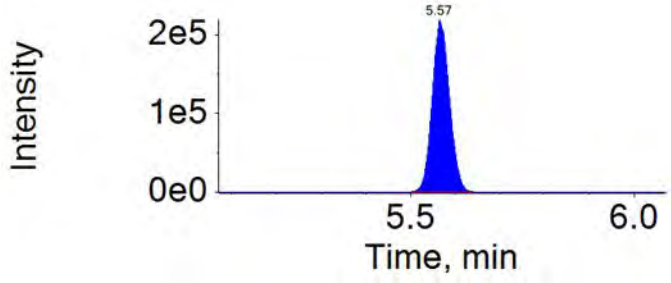
Extraction Standard: Ed5-NEtFOSAA	Injection Standard: 13C2-PFDA
589.0 / 419.0	515.0 / 470.0



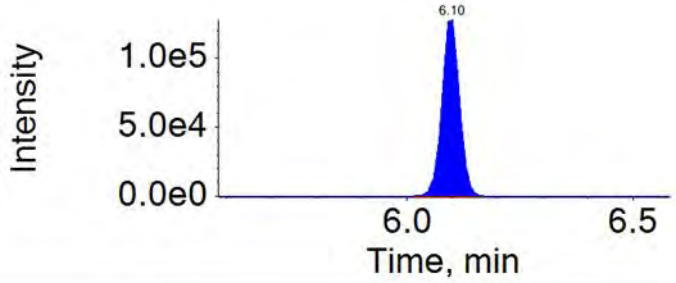


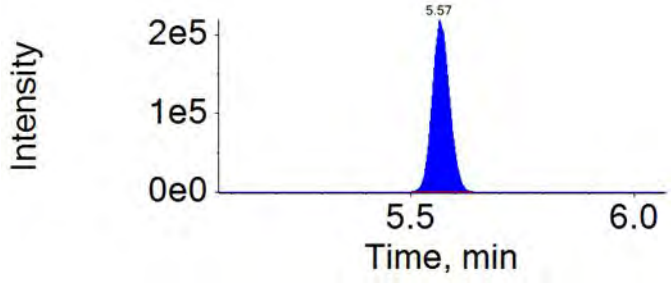
Extraction Standard: E13C2-PFDoDA	Injection Standard: 13C2-PFDA
615.0 / 570.0	515.0 / 470.0



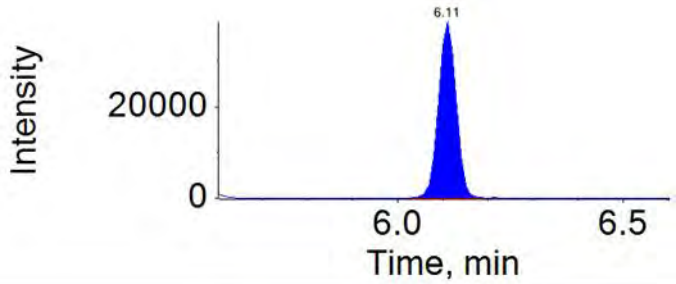


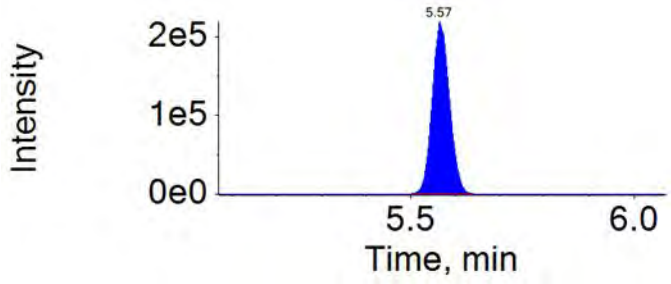
Extraction Standard: Ed7-NMePFOSAE	Injection Standard: 13C2-PFDA
623.0 / 59.0	515.0 / 470.0





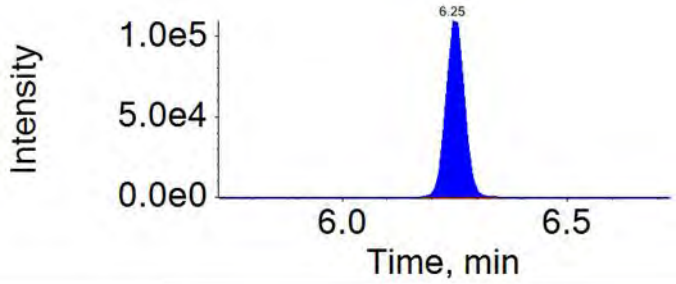
Extraction Standard: Ed3-NMePFOSA	Injection Standard: 13C2-PFDA
515.0 / 169.0	515.0 / 470.0

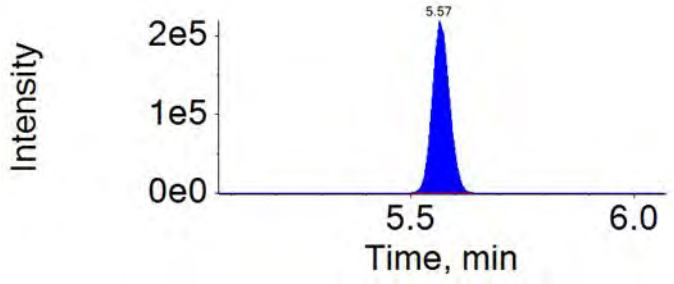




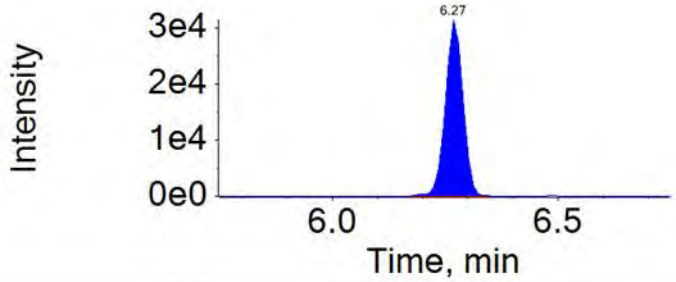
ICAL Name: 18NOV28DCAL **Result Table:** 18NOV28DCAL 11/29/2018 1:05:58 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

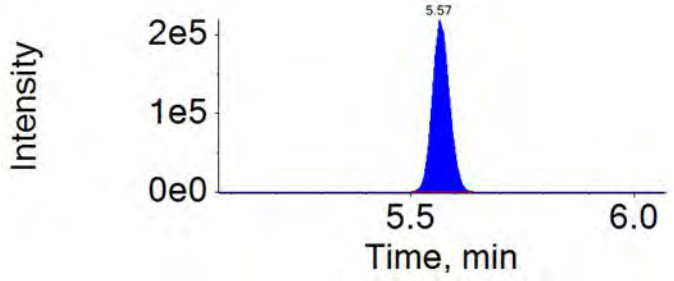
Extraction Standard: Ed9-NEtPFOSAE	Injection Standard: 13C2-PFDA
639.0 / 59.0	515.0 / 470.0



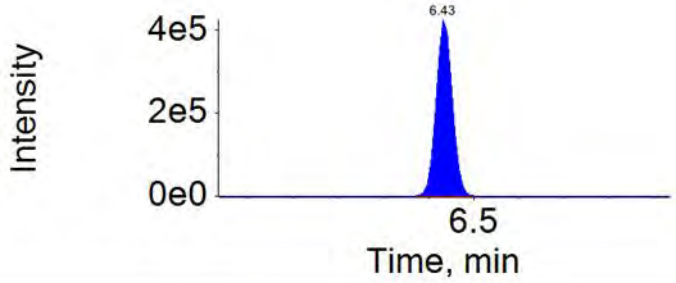


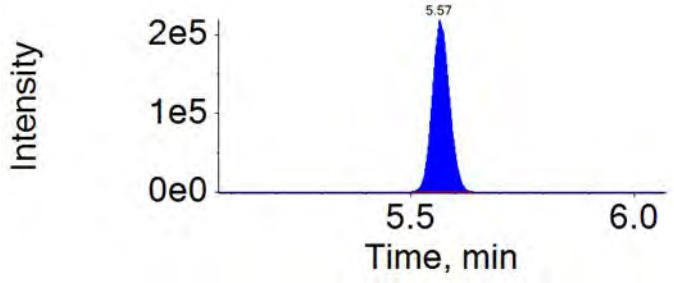
Extraction Standard: Ed5-NEtPFOSA	Injection Standard: 13C2-PFDA
531.0 / 169.0	515.0 / 470.0





Extraction Standard: E13C2-PFTeDA	Injection Standard: 13C2-PFDA
715.0 / 670.0	515.0 / 470.0



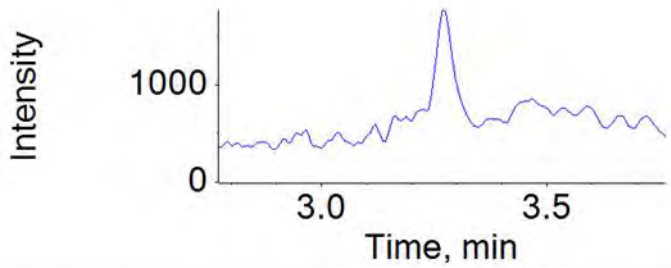


APPROVED
By JPT at 1:11 pm, 11/29/18

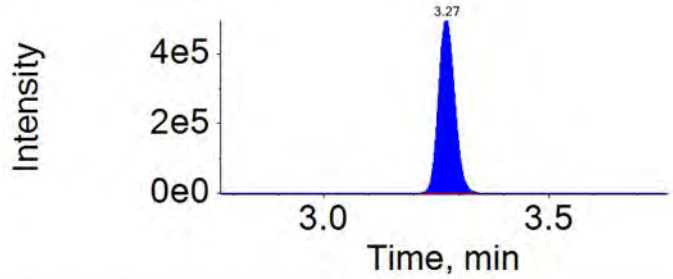
REVIEWED
By HMK at 1:17 pm, 11/29/18

ICAL Name: 18NOV28DCAL **Result Table:** 18NOV28DCAL 11/29/2018 1:05:58 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

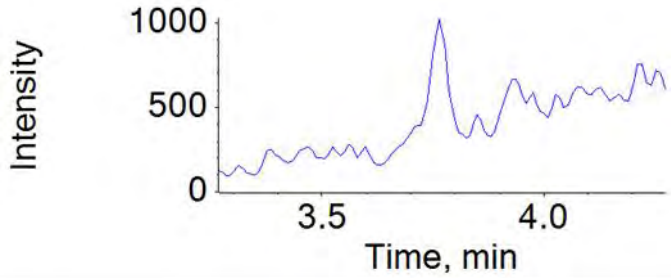
Analyte: PFBA
213.0 / 169.0



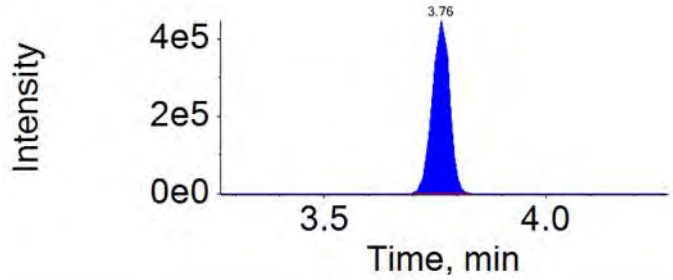
Extraction Standard: 13C4-PFBA
217.0 / 172.0



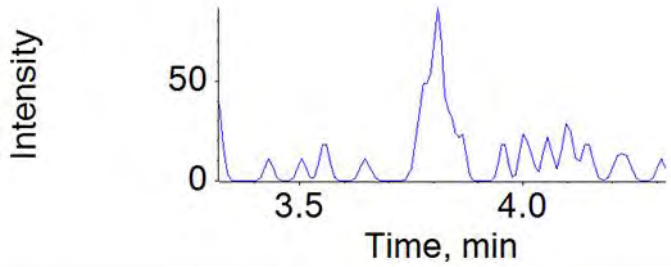
Analyte: PFPeA
263.0 / 219.0



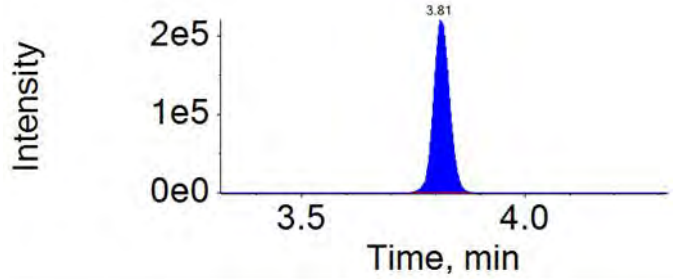
Extraction Standard: 13C5-PFPeA
268.0 / 223.0



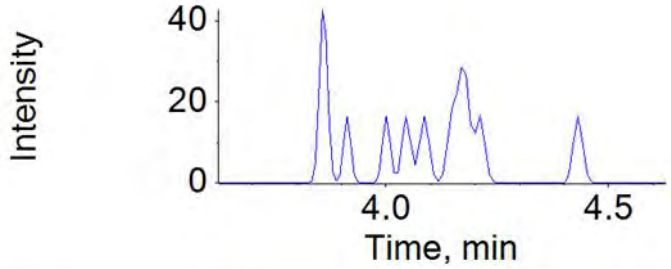
Analyte: PFBS
299.0 / 80.0



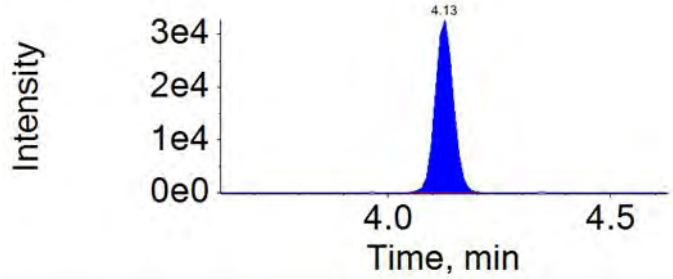
Extraction Standard: 13C3-PFBS
302.0 / 80.0



Analyte: 4:2-FTS
327.0 / 307.0



Extraction Standard: 13C2-4:2-FTS
329.0 / 81.0

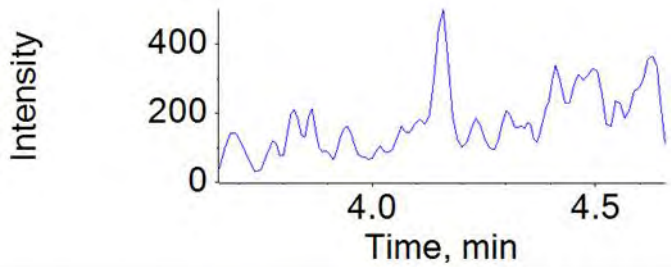


APPROVED
By JPT at 1:11 pm, 11/29/18

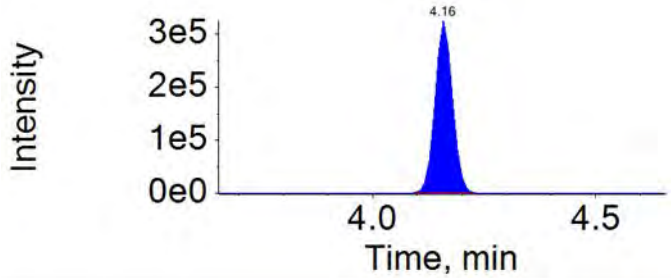
REVIEWED
By HMK at 1:17 pm, 11/29/18

ICAL Name: 18NOV28DCAL **Result Table:** 18NOV28DCAL 11/29/2018 1:05:58 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

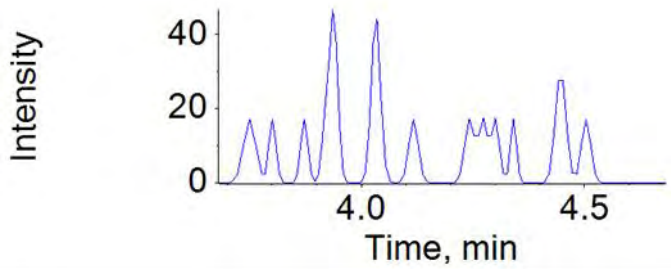
Analyte: PFHxA
313.0 / 269.0



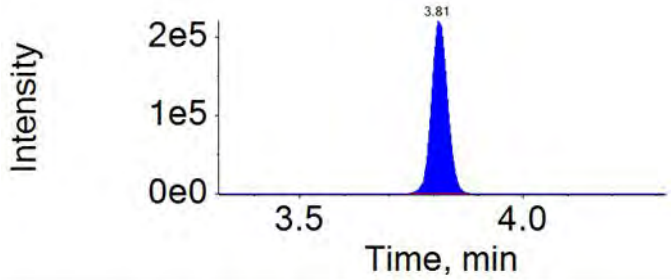
Extraction Standard: 13C5-PFHxA
318.0 / 273.0



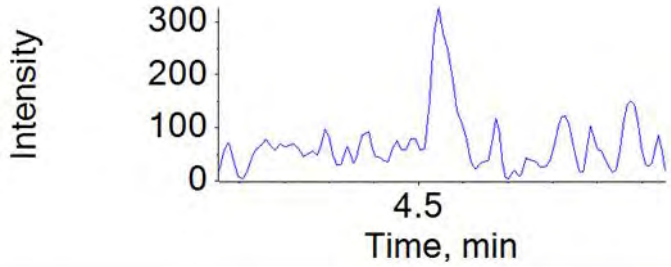
Analyte: PFPeS
349.0 / 80.0



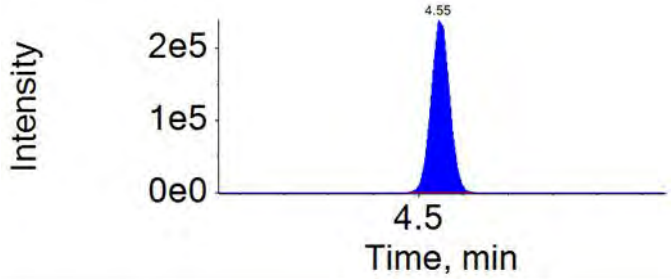
Extraction Standard: 13C3-PFBS
302.0 / 80.0



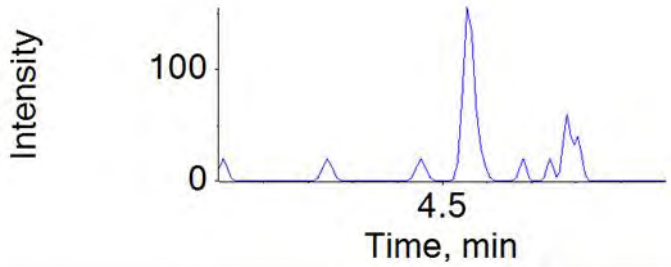
Analyte: PFHpA
363.0 / 319.0



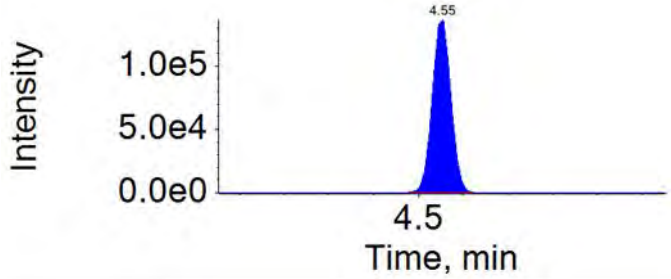
Extraction Standard: 13C4-PFHpA
367.0 / 322.0



Analyte: PFHxS
399.0 / 80.0



Extraction Standard: 13C3-PFHxS
402.0 / 80.0

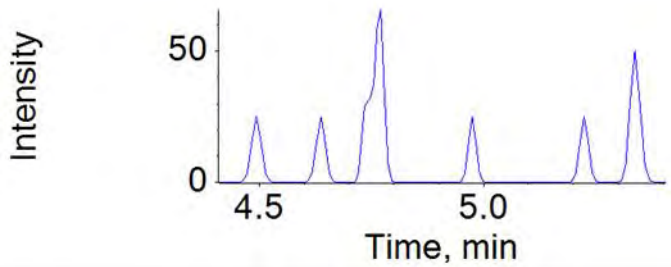


APPROVED
By JPT at 1:11 pm, 11/29/18

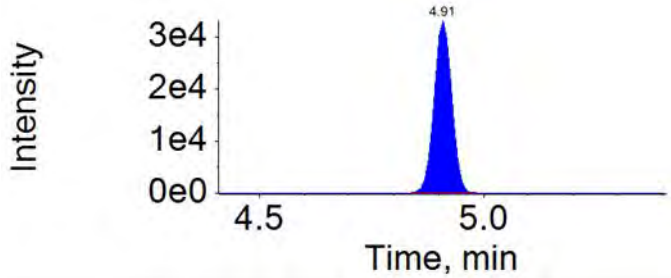
REVIEWED
By HMK at 1:17 pm, 11/29/18

ICAL Name: 18NOV28DCAL **Result Table:** 18NOV28DCAL 11/29/2018 1:05:58 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

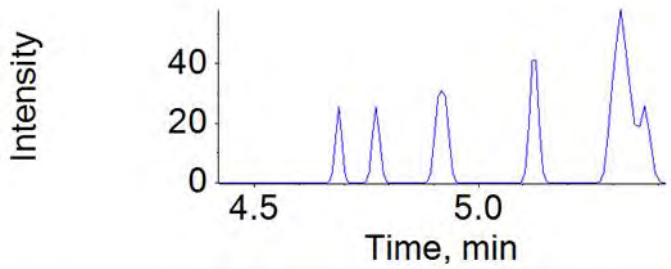
Analyte: 6:2-FTS
427.0 / 407.0



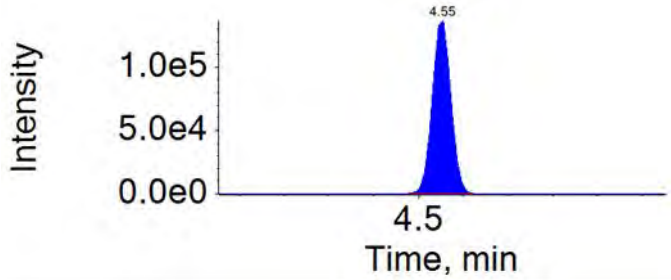
Extraction Standard: 13C2-6:2-FTS
429.0 / 81.0



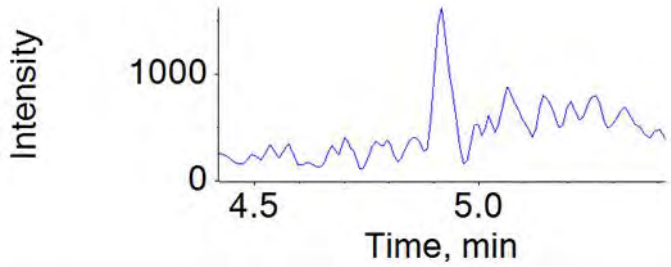
Analyte: PFHpS
449.0 / 80.0



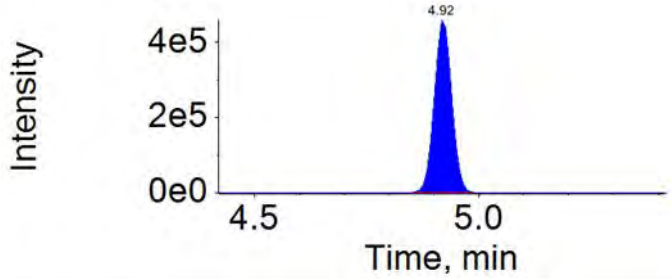
Extraction Standard: 13C3-PFHxS
402.0 / 80.0



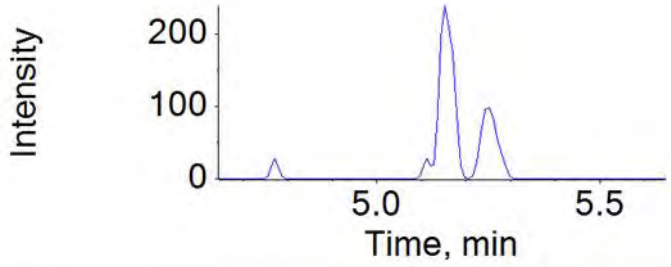
Analyte: PFOA
413.0 / 369.0



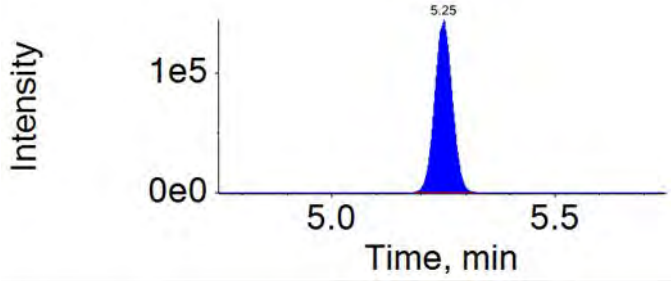
Extraction Standard: 13C8-PFOA
421.0 / 376.0



Analyte: PFOS
499.0 / 80.0



Extraction Standard: 13C8-PFOS
507.0 / 80.0



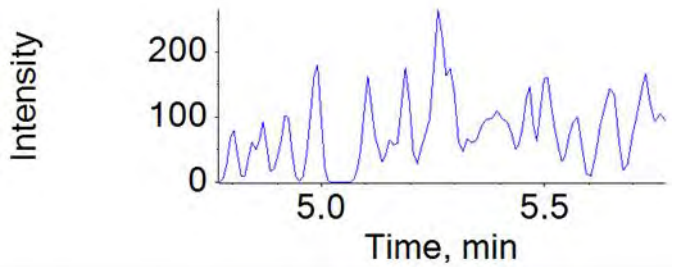
APPROVED
By JPT at 1:11 pm, 11/29/18

REVIEWED
By HMK at 1:17 pm, 11/29/18

ICAL Name: 18NOV28DCAL **Result Table:** 18NOV28DCAL 11/29/2018 1:05:58 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

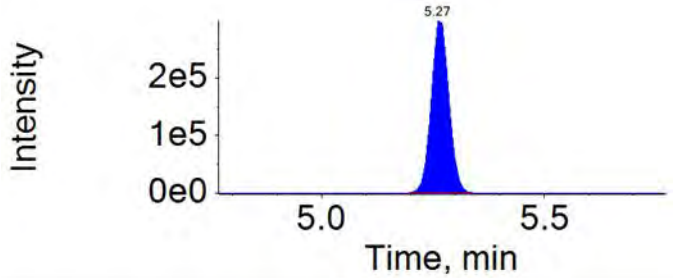
Analyte: PFNA

463.0 / 419.0



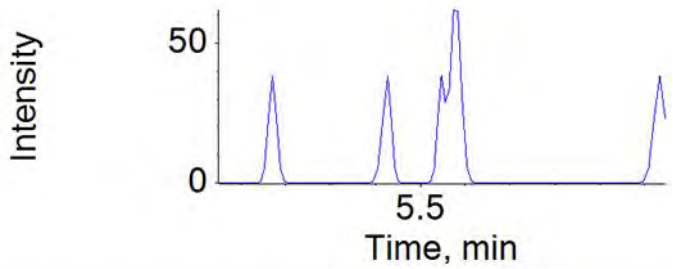
Extraction Standard: 13C9-PFNA

472.0 / 427.0



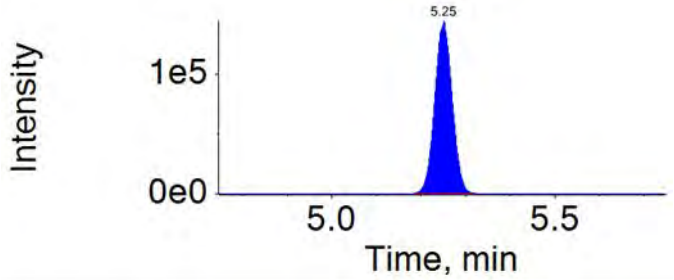
Analyte: PFNS

549.0 / 80.0



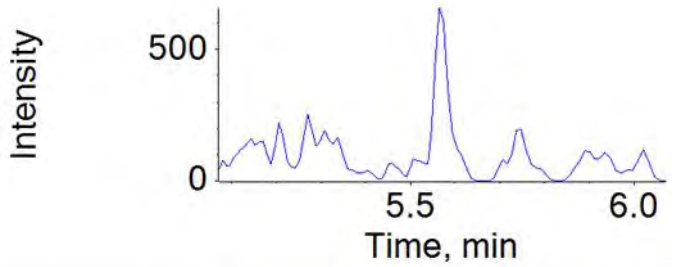
Extraction Standard: 13C8-PFOS

507.0 / 80.0



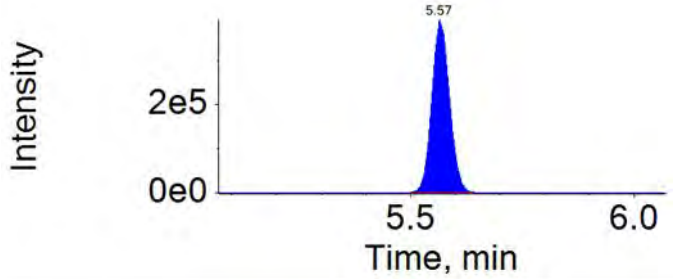
Analyte: PFDA

513.0 / 469.0



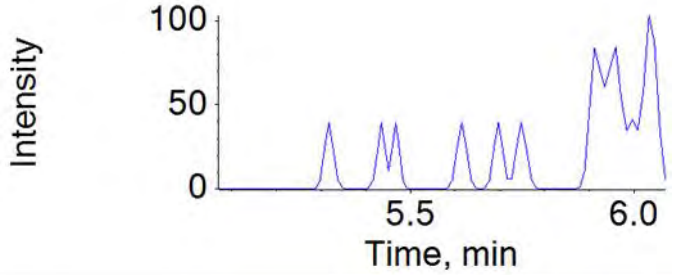
Extraction Standard: 13C6-PFDA

519.0 / 474.0



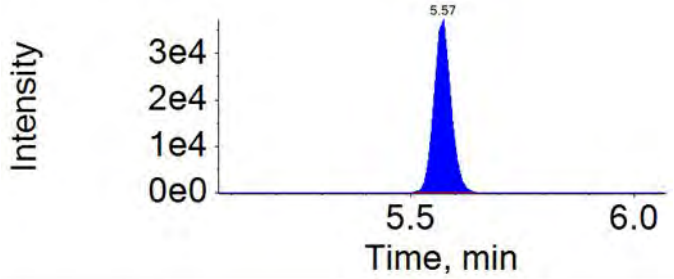
Analyte: 8:2-FTS

527.0 / 507.0



Extraction Standard: 13C2-8:2-FTS

529.0 / 81.0

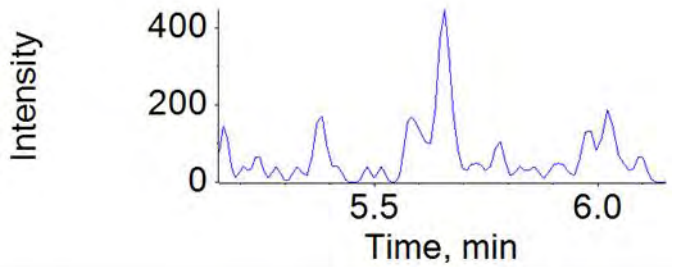


APPROVED
By JPT at 1:11 pm, 11/29/18

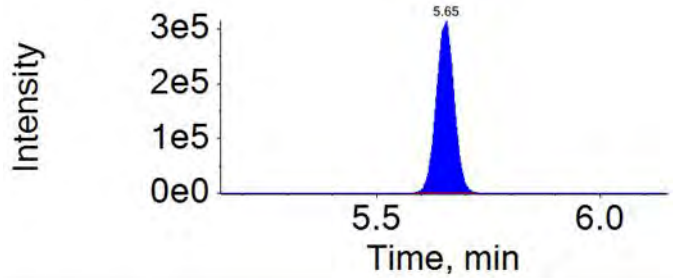
REVIEWED
By HMK at 1:17 pm, 11/29/18

ICAL Name: 18NOV28DCAL **Result Table:** 18NOV28DCAL 11/29/2018 1:05:58 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

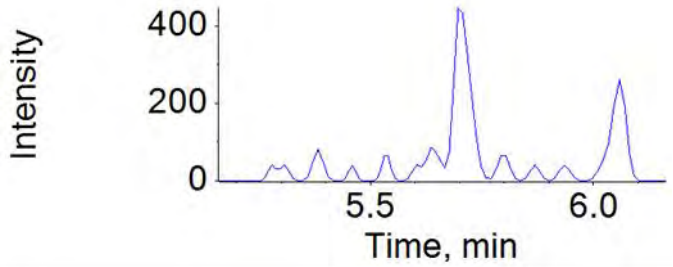
Analyte: PFOSA
498.0 / 78.0



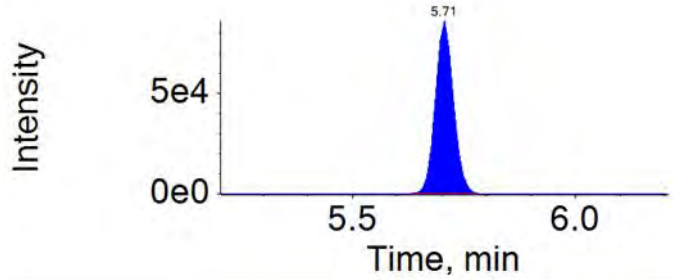
Extraction Standard: 13C8-PFOSA
506.0 / 78.0



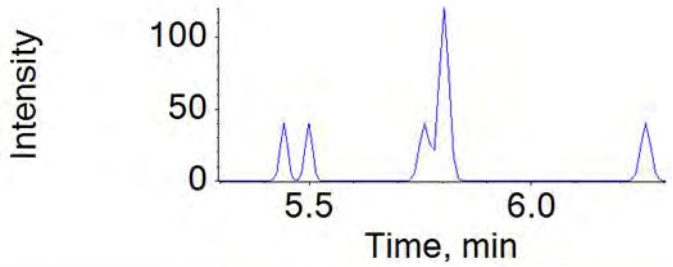
Analyte: NMeFOSAA
570.0 / 419.0



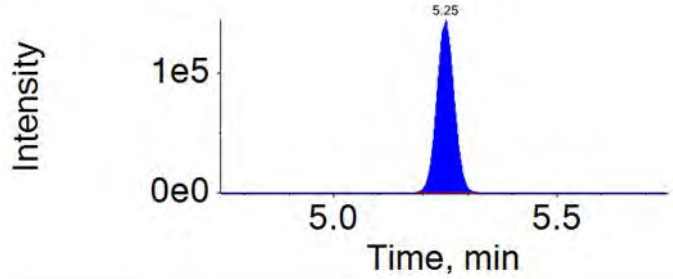
Extraction Standard: d3-NMeFOSAA
573.0 / 419.0



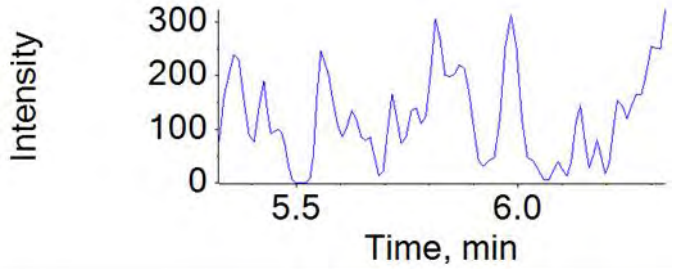
Analyte: PFDS
599.0 / 80.0



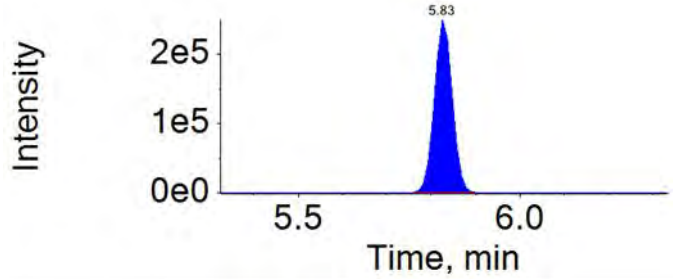
Extraction Standard: 13C8-PFOS
507.0 / 80.0



Analyte: PFUnDA
563.0 / 519.0



Extraction Standard: 13C7-PFUnDA
570.0 / 525.0

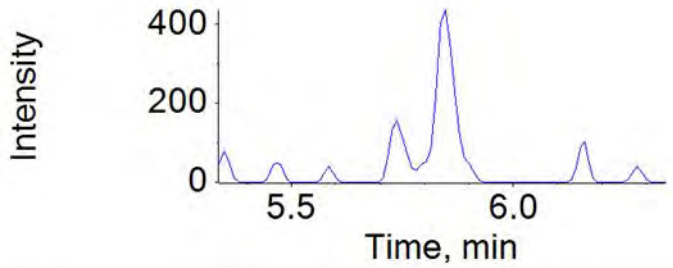


APPROVED
By JPT at 1:11 pm, 11/29/18

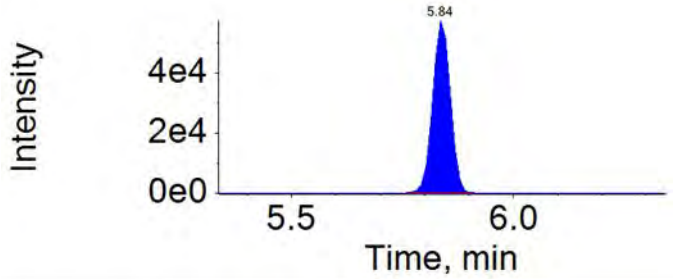
REVIEWED
By HMK at 1:17 pm, 11/29/18

ICAL Name: 18NOV28DCAL **Result Table:** 18NOV28DCAL 11/29/2018 1:05:58 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

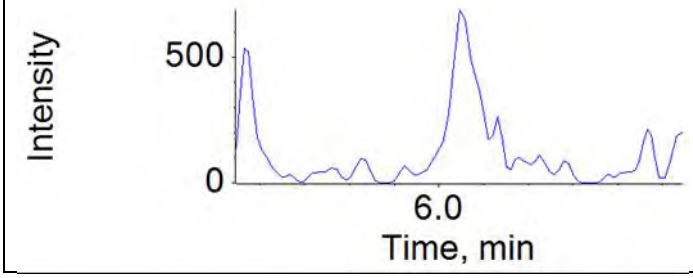
Analyte: NEtFOSAA
584.0 / 419.0



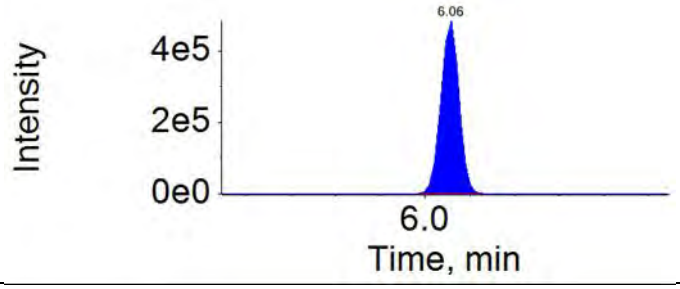
Extraction Standard: d5-NEtFOSAA
589.0 / 419.0



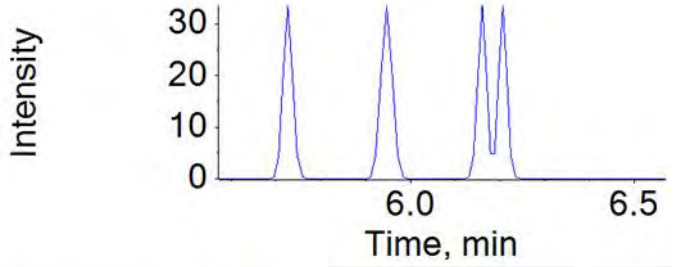
Analyte: PFDoDA
613.0 / 569.0



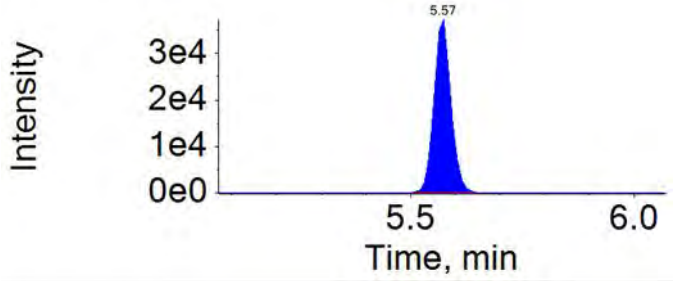
Extraction Standard: 13C2-PFDoDA
615.0 / 570.0



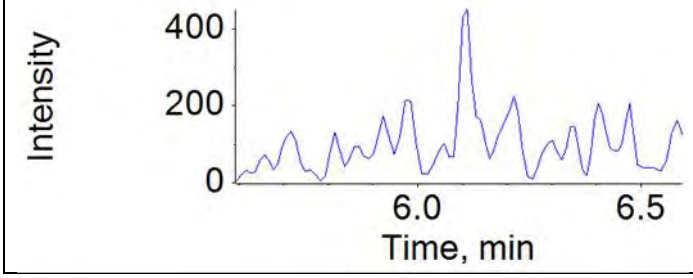
Analyte: 10:2-FTS
627.0 / 607.0



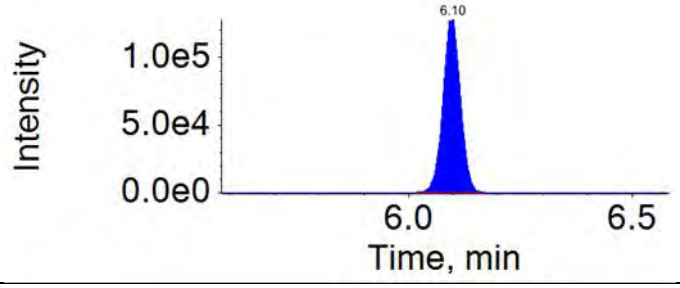
Extraction Standard: 13C2-8:2-FTS
529.0 / 81.0



Analyte: NMePFOSAE
616.0 / 59.0



Extraction Standard: d7-NMePFOSAE
623.0 / 59.0

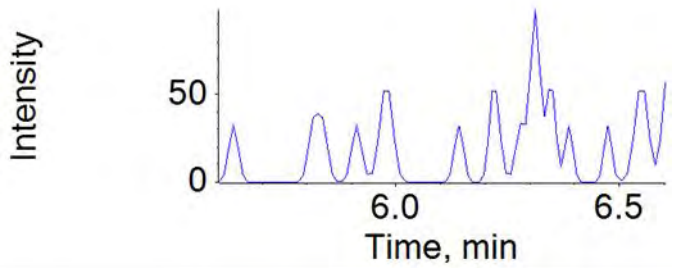


APPROVED
By JPT at 1:11 pm, 11/29/18

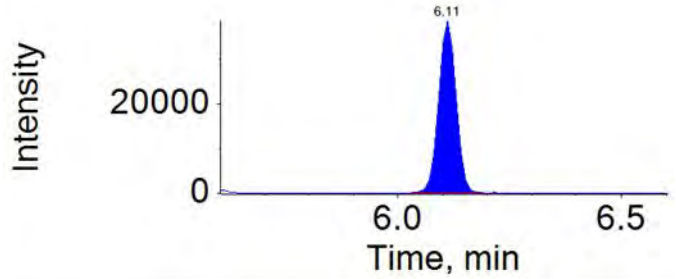
REVIEWED
By HMK at 1:17 pm, 11/29/18

ICAL Name: 18NOV28DCAL **Result Table:** 18NOV28DCAL 11/29/2018 1:05:58 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

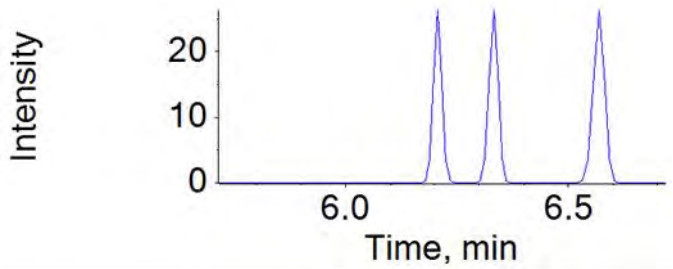
Analyte: NMePFOSA
512.0 / 169.0



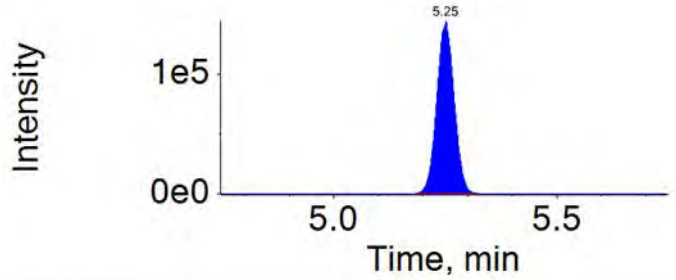
Extraction Standard: d3-NMePFOSA
515.0 / 169.0



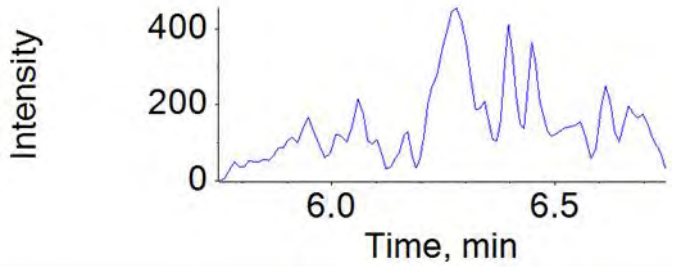
Analyte: PFDoS
699.0 / 80.0



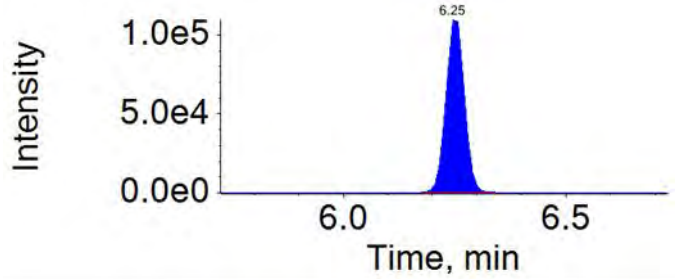
Extraction Standard: 13C8-PFOS
507.0 / 80.0



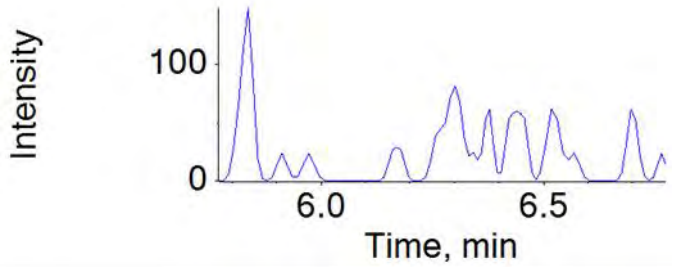
Analyte: NEtPFOSAE
630.0 / 59.0



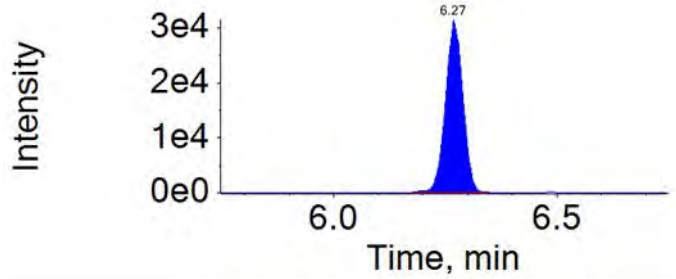
Extraction Standard: d9-NEtPFOSAE
639.0 / 59.0



Analyte: NEtPFOSA
526.0 / 169.0



Extraction Standard: d5-NEtPFOSA
531.0 / 169.0

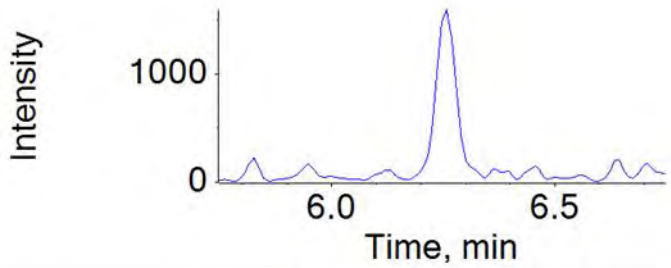


APPROVED
By JPT at 1:11 pm, 11/29/18

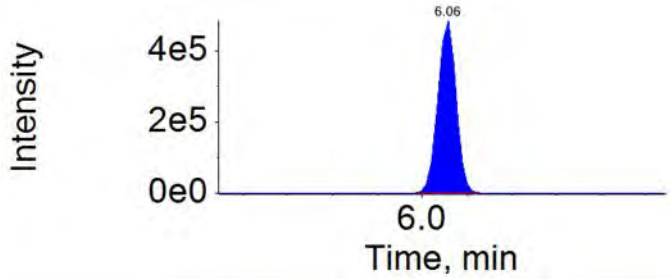
REVIEWED
By HMK at 1:17 pm, 11/29/18

ICAL Name: 18NOV28DCAL **Result Table:** 18NOV28DCAL 11/29/2018 1:05:58 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

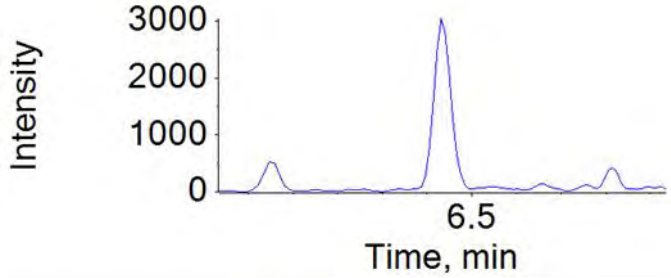
Analyte: PFTrDA
663.0 / 619.0



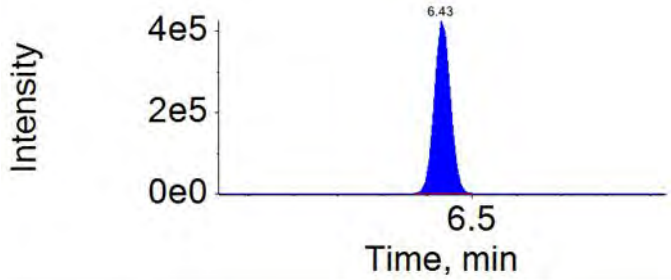
Extraction Standard: 13C2-PFDoDA
615.0 / 570.0



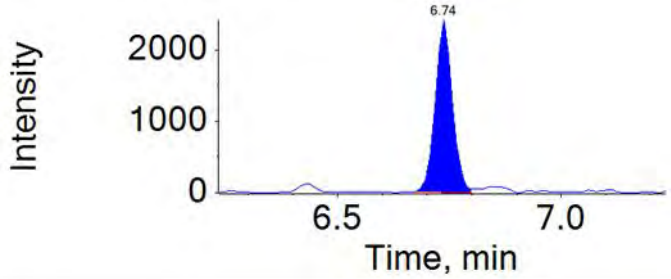
Analyte: PFTeDA
713.0 / 669.0



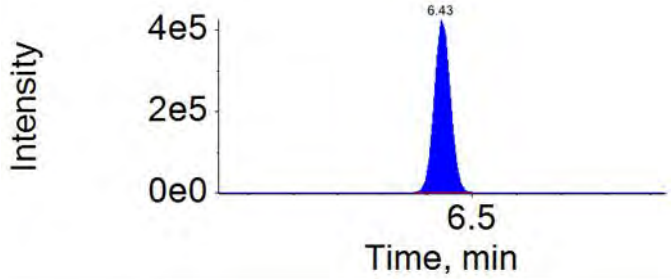
Extraction Standard: 13C2-PFTeDA
715.0 / 670.0



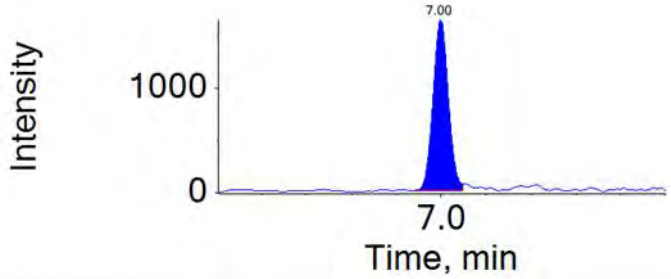
Analyte: PFHxDA
813.0 / 769.0



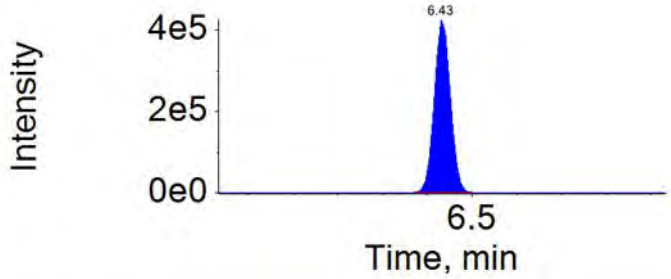
Extraction Standard: 13C2-PFTeDA
715.0 / 670.0



Analyte: PFODA
913.0 / 869.0



Extraction Standard: 13C2-PFTeDA
715.0 / 670.0



APPROVED
By JPT at 1:11 pm, 11/29/18

REVIEWED
By HMK at 1:17 pm, 11/29/18

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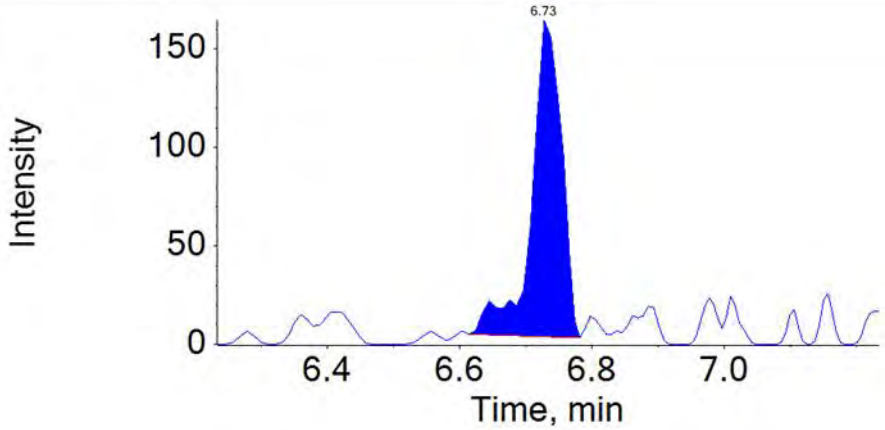
Auto Integrations prior to Manual Integration

Print Date: 11/29/2018 1:09 PM
Template: MQ-OrigInteg-16NOV21.docx

Results Table Name: 18NOV28DCAL
Results Table Date: 11/29/2018 1:05:58 PM

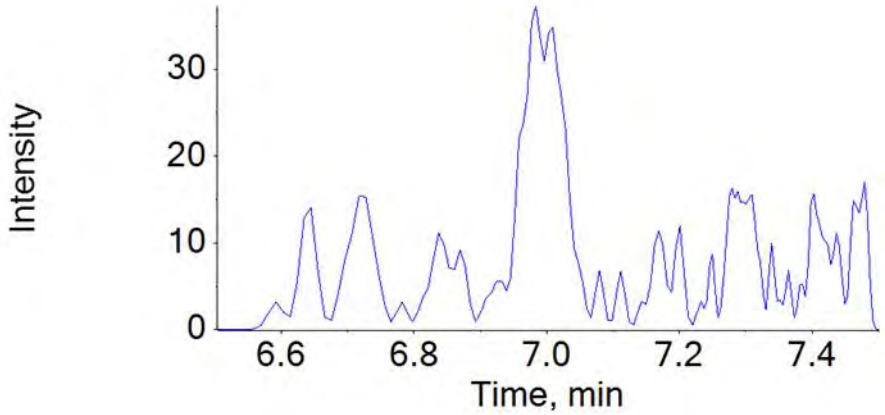
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

Component Name:
PFHxDA_2
RT (min.):
6.73
Peak Area:
511.31
Mass Range:
813.0 / 169.0
File Name:
18NOV28DCAL-13.wiff
Sample Name:
Instrument Blank



Integration Comment: incorrect integration

Component Name:
PFODA_2
RT (min.):
N/A
Peak Area:
N/A
Mass Range:
913.0 / 169.0
File Name:
18NOV28DCAL-13.wiff
Sample Name:
Instrument Blank



Integration Comment: incorrect integration

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Results Table Name: 18NOV28DCAL
Results Table Date: 11/29/2018 1:05:58 PM

Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

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LC-MS/MS Analysis Report

Printed: 11/29/2018 1:07:00 PM
Template: IonRatio18OCT10

Ion Ratio Report

Sample Name: Instrument Blank **Instrument Name:** LM27631 **File Name:** 18NOV28DCAL-13.wiff

Component Name	RT	RRT	Analyte Area Response	Int Typ	Expected Ion Ratio	Ion Ratio	Ion Ratio % Diff	Ion Ratio Limit	Ion Ratio OOS
PFBS	N/A	N/A	N/A	A	N/A	N/A			
PFBS_2	N/A	N/A	N/A	A	N/A	N/A		50	
4:2-FTS	N/A	N/A	N/A	A	N/A	N/A			
4:2-FTS_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFHxA	N/A	N/A	N/A	A	N/A	N/A			
PFHxA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFPeS	N/A	N/A	N/A	A	N/A	N/A			
PFPeS_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFHpA	N/A	N/A	N/A	A	N/A	N/A			
PFHpA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFHxS	N/A	N/A	N/A	A	N/A	N/A			
PFHxS_2	N/A	N/A	N/A	A	N/A	N/A		50	
6:2-FTS	N/A	N/A	N/A	A	N/A	N/A			
6:2-FTS_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFHpS	N/A	N/A	N/A	A	N/A	N/A			
PFHpS_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFOA	N/A	N/A	N/A	A	N/A	N/A			
PFOA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFOS	N/A	N/A	N/A	A	N/A	N/A			
PFOS_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFNA	N/A	N/A	N/A	A	N/A	N/A			
PFNA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFNS	N/A	N/A	N/A	A	N/A	N/A			
PFNS_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFDA	N/A	N/A	N/A	A	N/A	N/A			
PFDA_2	N/A	N/A	N/A	A	N/A	N/A		50	
8:2-FTS	N/A	N/A	N/A	A	N/A	N/A			
8:2-FTS_2	N/A	N/A	N/A	A	N/A	N/A		50	
NMeFOSAA	N/A	N/A	N/A	A	N/A	N/A			
NMeFOSAA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFDS	N/A	N/A	N/A	A	N/A	N/A			
PFDS_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFUnDA	N/A	N/A	N/A	A	N/A	N/A			
PFUnDA_2	N/A	N/A	N/A	A	N/A	N/A		50	
NEtFOSAA	N/A	N/A	N/A	A	N/A	N/A			
NEtFOSAA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFDoDA	N/A	N/A	N/A	A	N/A	N/A			
PFDoDA_2	N/A	N/A	N/A	A	N/A	N/A		50	
10:2-FTS	N/A	N/A	N/A	A	N/A	N/A			
10:2-FTS_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFTrDA	N/A	N/A	N/A	A	N/A	N/A			
PFTrDA_2	6.25	1.03	266.70	A	N/A	N/A		50	
PFTeDA	N/A	N/A	N/A	A	N/A	N/A			
PFTeDA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFHxDA	6.74	1.05	6327.14	A	N/A	1.0000			
PFHxDA_2	6.73	1.05	465.21	M	N/A	0.0735	13	50	
PFODA	7.00	1.09	3886.61	A	N/A	1.0000			
PFODA_2	6.99	1.09	153.16	M	N/A	0.0394	47	50	

APPROVED
By JPT at 1:11 pm, 11/29/18

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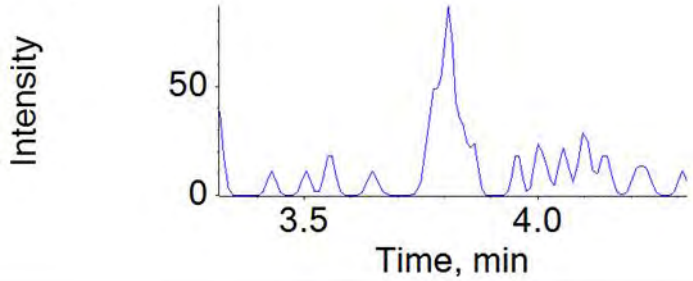
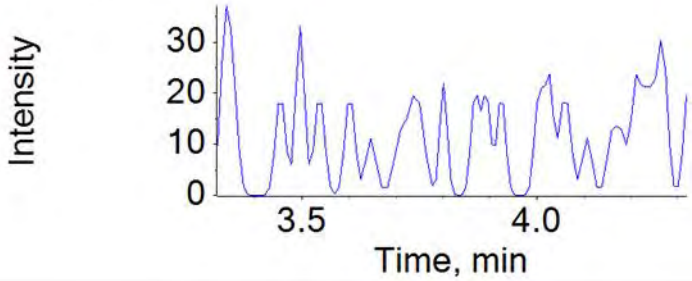
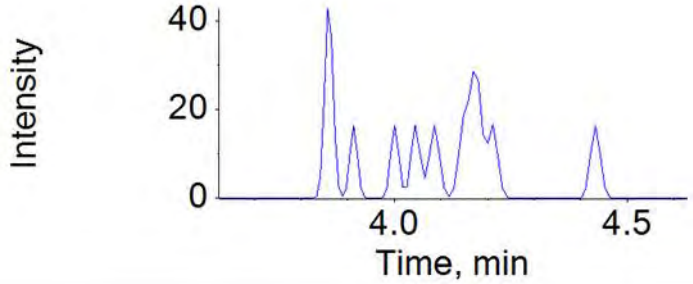
Component: PFBS
Primary Mass: 299.0 / 80.0



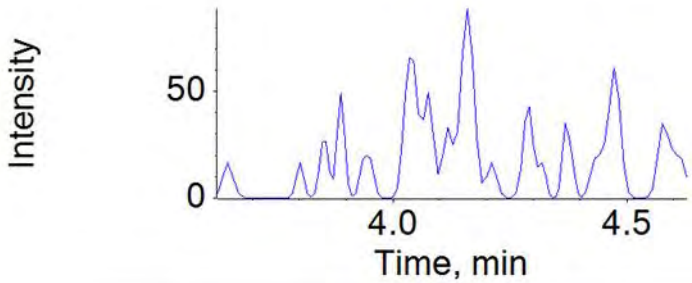
Component: PFBS_2
Secondary Mass: 299.0 / 99.0



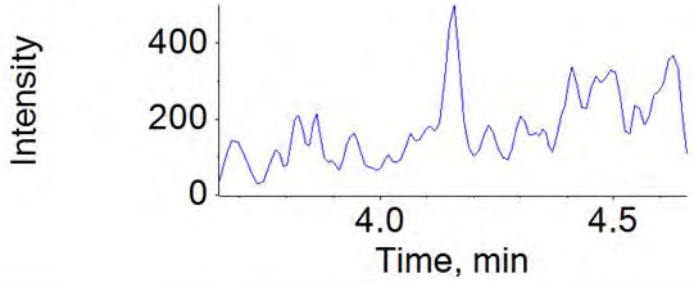
Component: 4:2-FTS
Primary Mass: 327.0 / 307.0



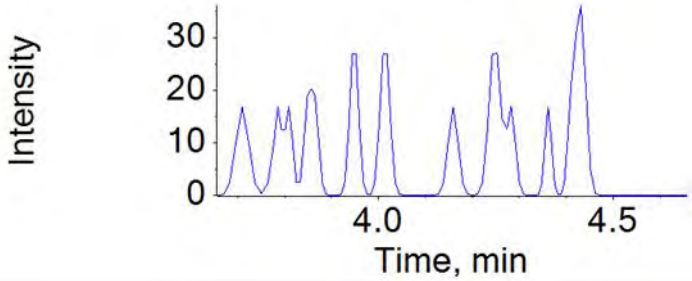
Component: 4:2-FTS_2
Secondary Mass: 327.0 / 81.0



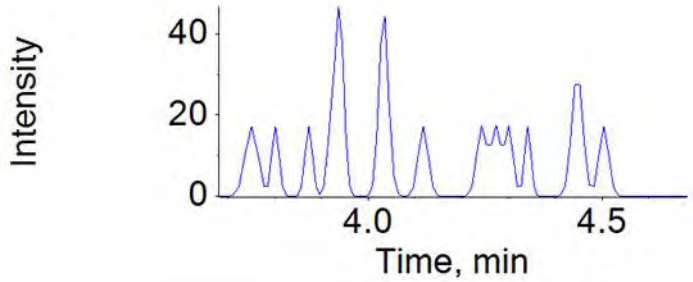
Component: PFHxA
Primary Mass: 313.0 / 269.0



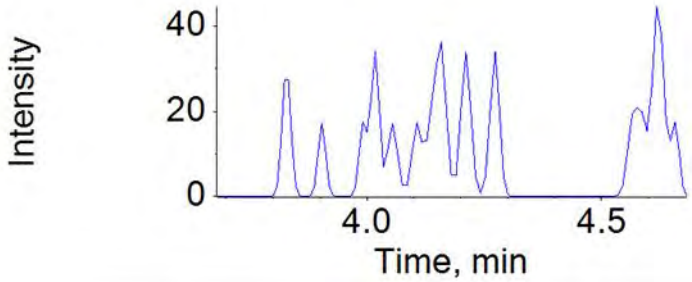
Component: PFHxA_2
Secondary Mass: 313.0 / 119.0



Component: PFPeS
Primary Mass: 349.0 / 80.0



Component: PFPeS_2
Secondary Mass: 349.0 / 99.0



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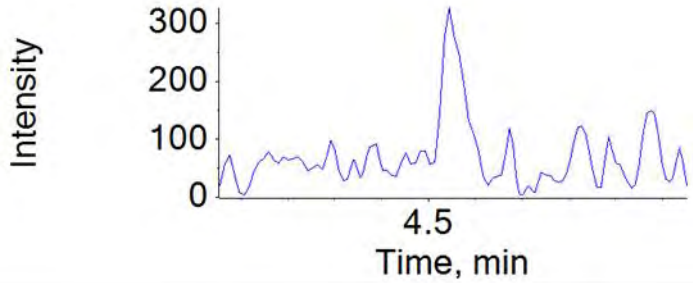
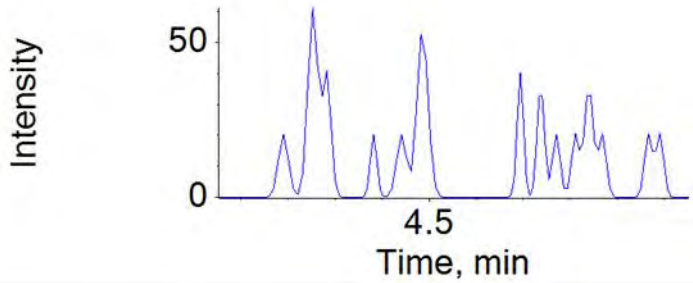
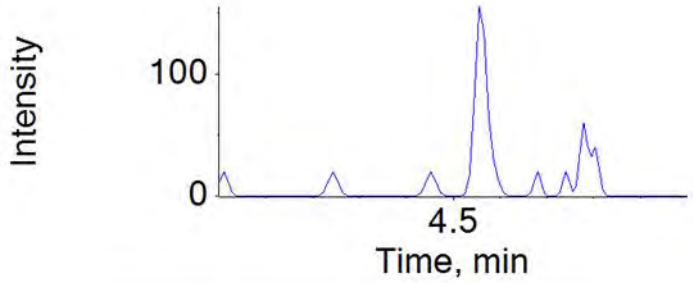
Component: PFHpA
Primary Mass: 363.0 / 319.0



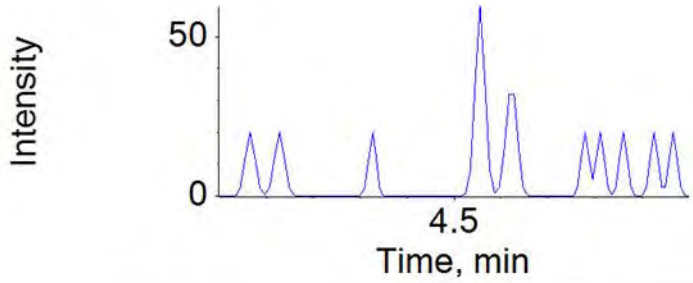
Component: PFHpA_2
Secondary Mass: 363.0 / 169.0



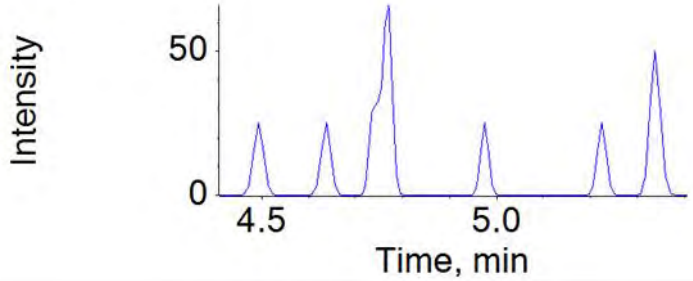
Component: PFHxS
Primary Mass: 399.0 / 80.0



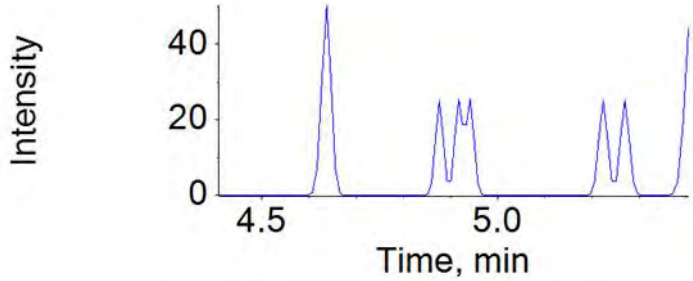
Component: PFHxS_2
Secondary Mass: 399.0 / 99.0



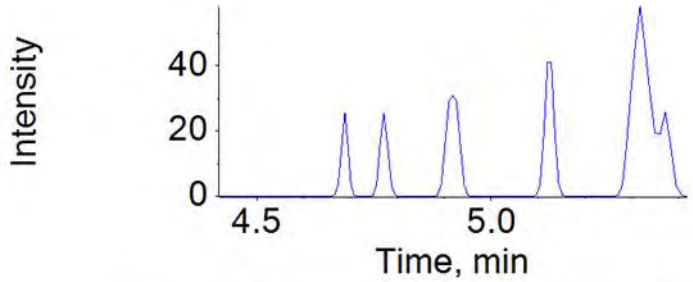
Component: 6:2-FTS
Primary Mass: 427.0 / 407.0



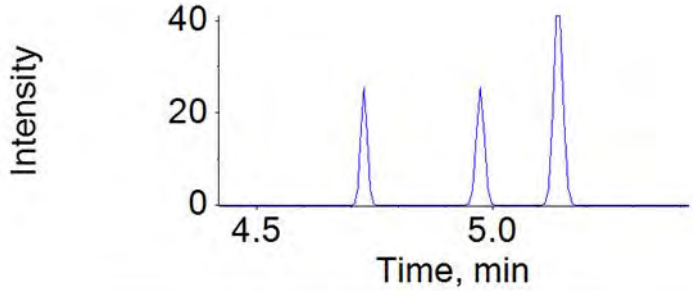
Component: 6:2-FTS_2
Secondary Mass: 427.0 / 81.0



Component: PFHpS
Primary Mass: 449.0 / 80.0



Component: PFHpS_2
Secondary Mass: 449.0 / 99.0



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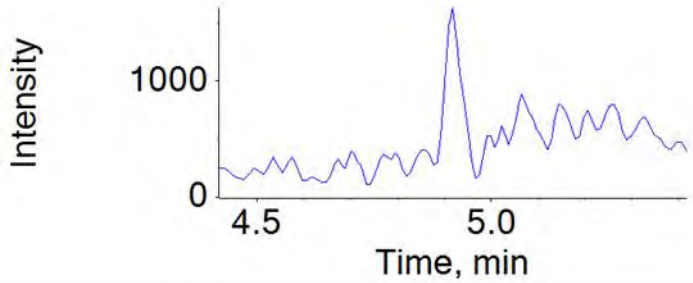
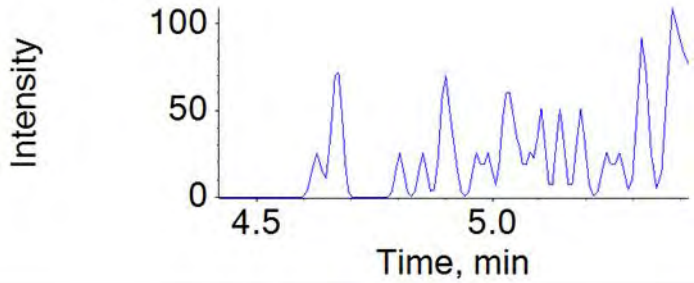
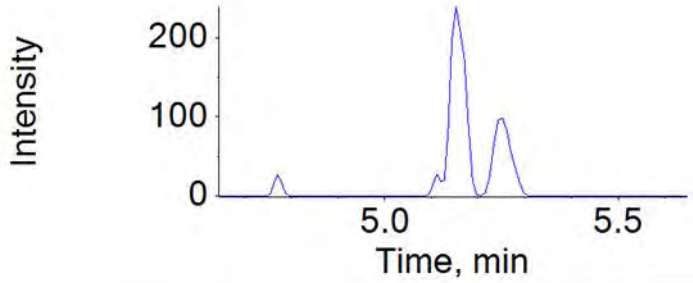
Component: PFOA
Primary Mass: 413.0 / 369.0



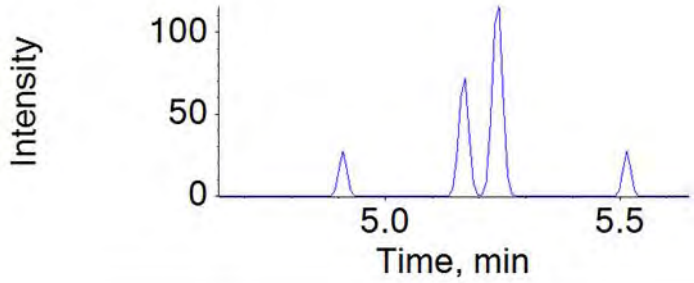
Component: PFOA_2
Secondary Mass: 413.0 / 169.0



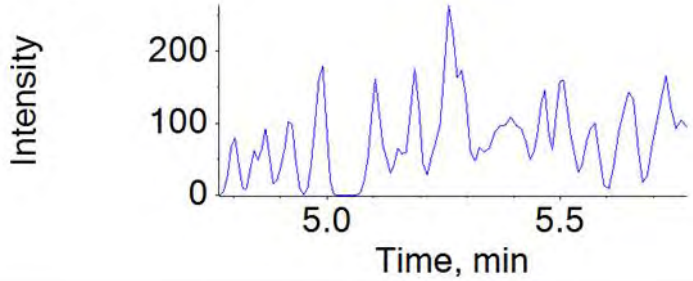
Component: PFOS
Primary Mass: 499.0 / 80.0



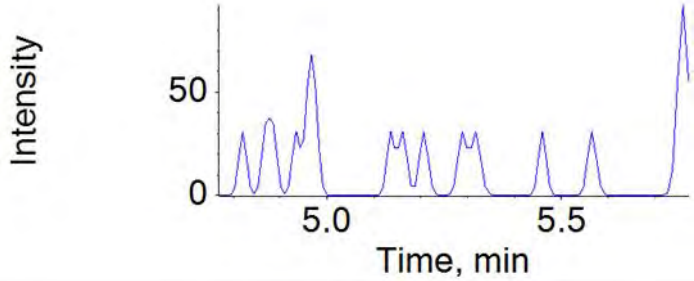
Component: PFOS_2
Secondary Mass: 499.0 / 99.0



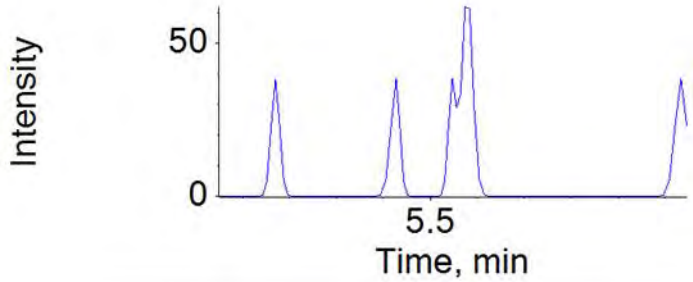
Component: PFNA
Primary Mass: 463.0 / 419.0



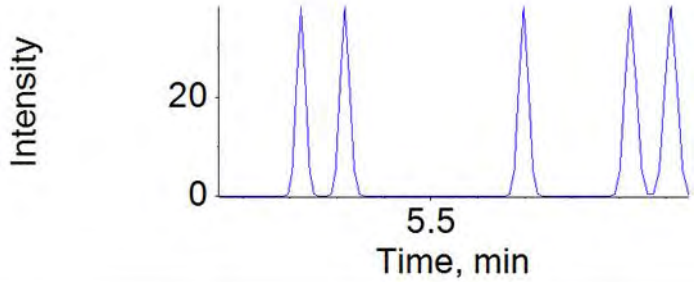
Component: PFNA_2
Secondary Mass: 463.0 / 169.0



Component: PFNS
Primary Mass: 549.0 / 80.0



Component: PFNS_2
Secondary Mass: 549.0 / 99.0



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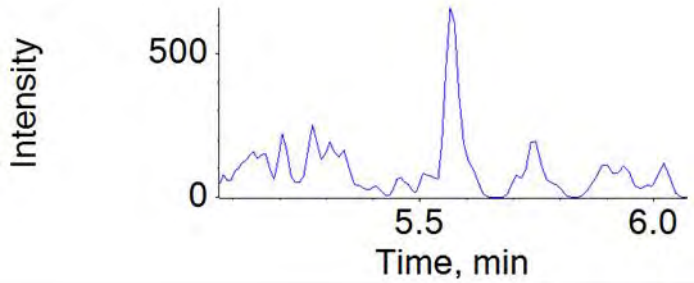
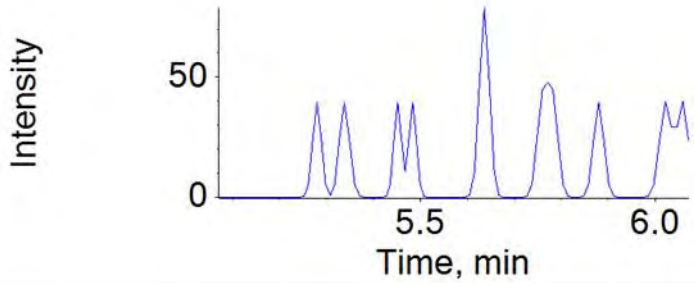
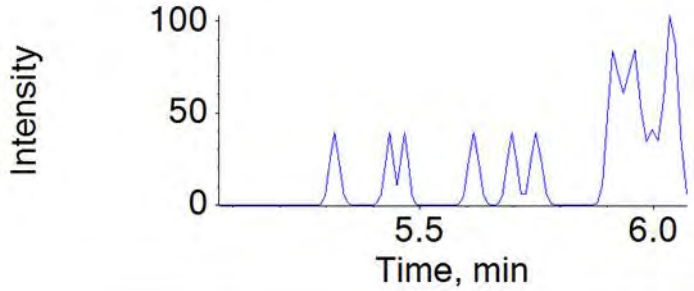
Component: PFDA
Primary Mass: 513.0 / 469.0



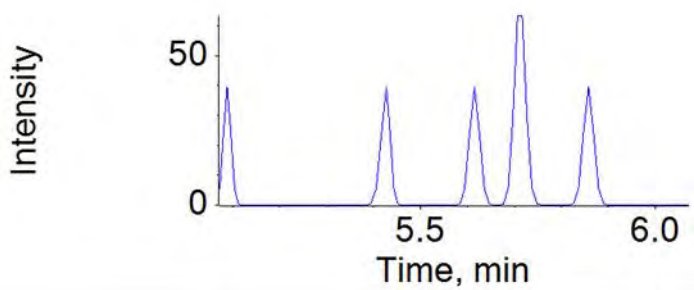
Component: PFDA_2
Secondary Mass: 513.0 / 169.0



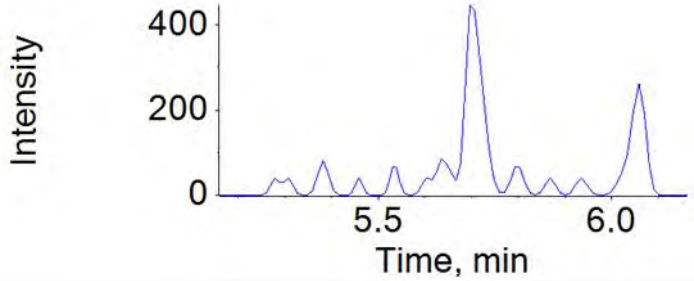
Component: 8:2-FTS
Primary Mass: 527.0 / 507.0



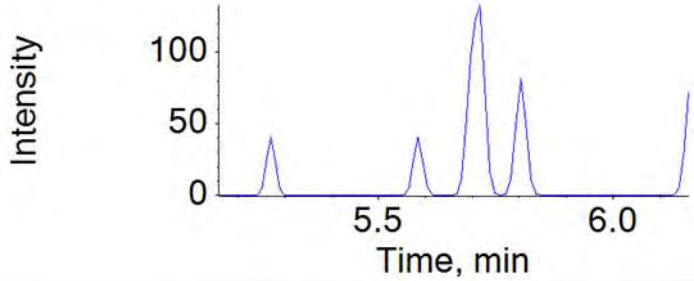
Component: 8:2-FTS_2
Secondary Mass: 527.0 / 81.0



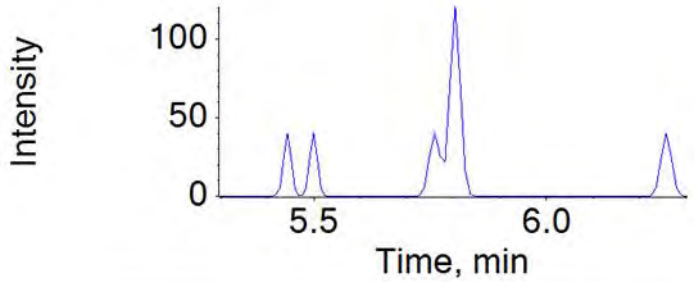
Component: NMeFOSAA
Primary Mass: 570.0 / 419.0



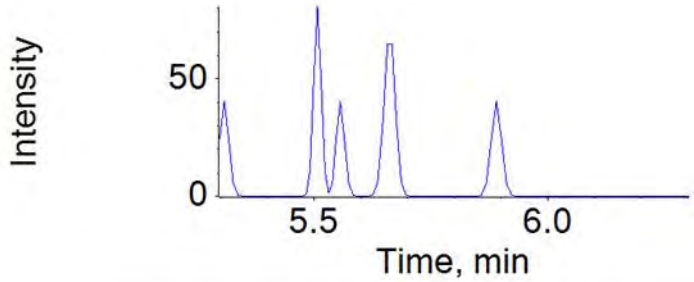
Component: NMeFOSAA_2
Secondary Mass: 570.0 / 483.0



Component: PFDS
Primary Mass: 599.0 / 80.0



Component: PFDS_2
Secondary Mass: 599.0 / 99.0



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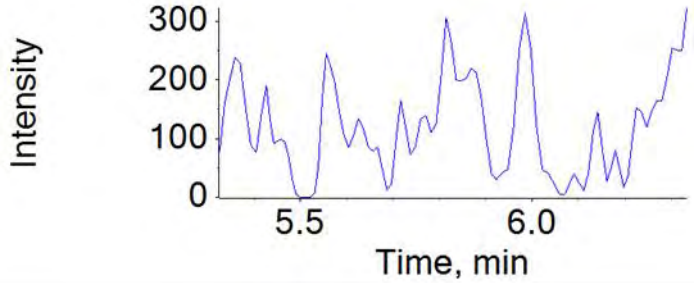
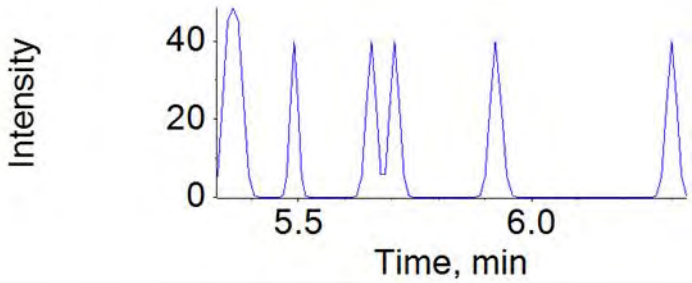
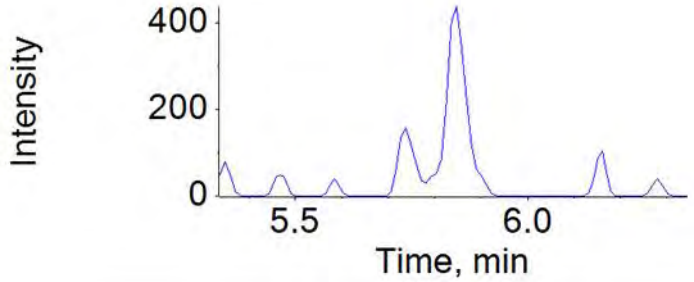
Component: PFUnDA
Primary Mass: 563.0 / 519.0



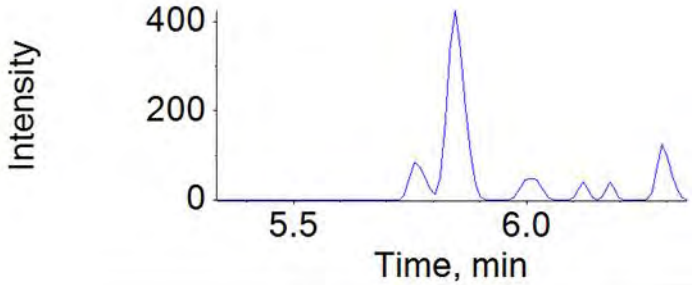
Component: PFUnDA_2
Secondary Mass: 563.0 / 169.0



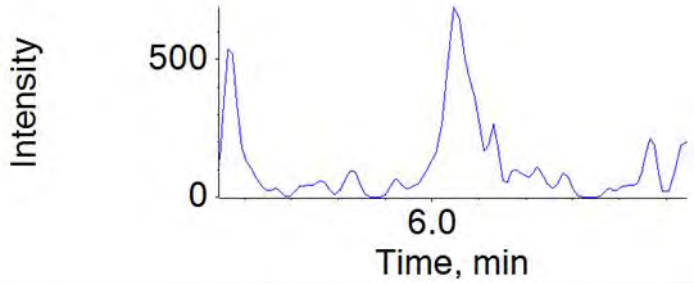
Component: NEtFOSAA
Primary Mass: 584.0 / 419.0



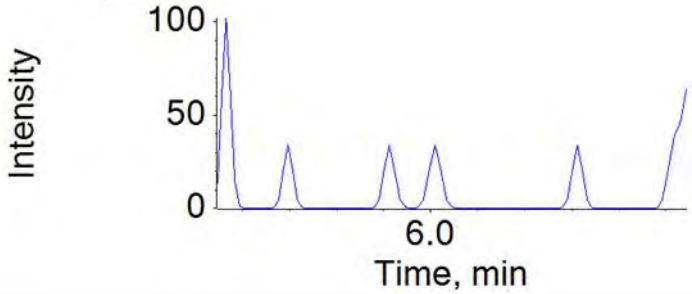
Component: NEtFOSAA_2
Secondary Mass: 584.0 / 526.0



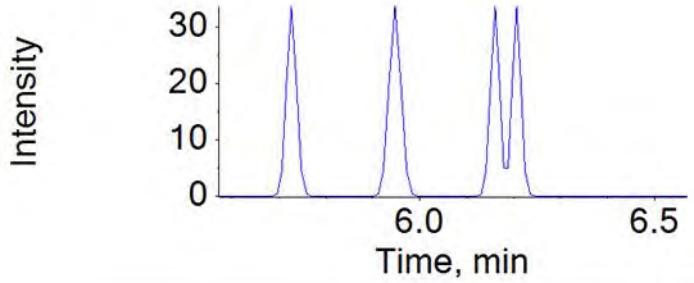
Component: PFDoDA
Primary Mass: 613.0 / 569.0



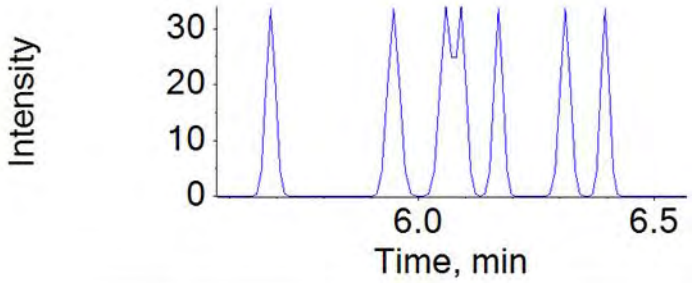
Component: PFDoDA_2
Secondary Mass: 613.0 / 169.0



Component: 10:2-FTS
Primary Mass: 627.0 / 607.0



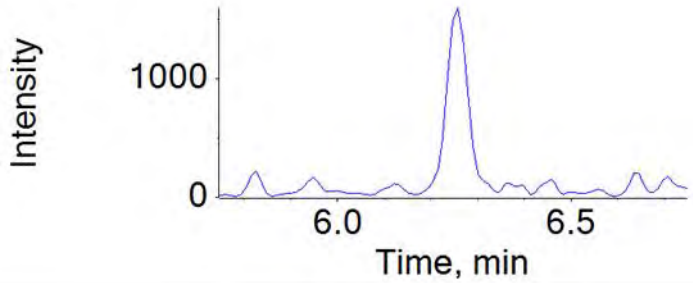
Component: 10:2-FTS_2
Secondary Mass: 627.0 / 81.0



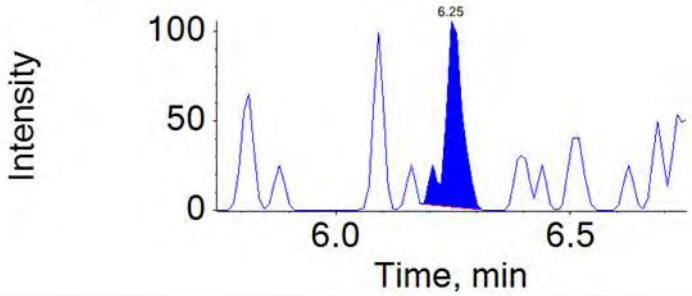
APPROVED
By JPT at 1:11 pm, 11/29/18

REVIEWED
By HMK at 1:17 pm, 11/29/18

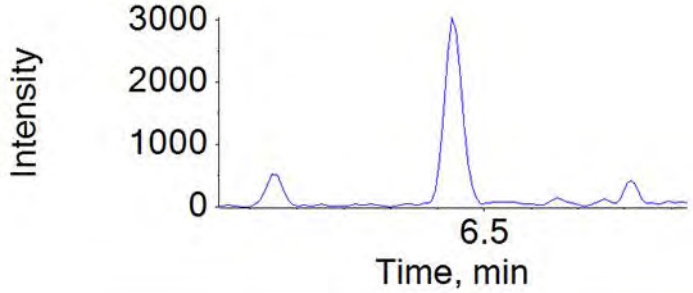
Component: PFTrDA
Primary Mass: 663.0 / 619.0



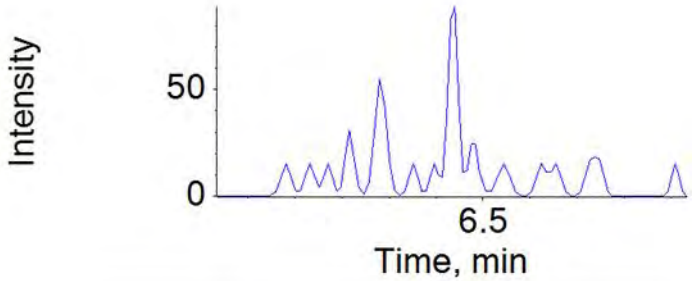
Component: PFTrDA_2
Secondary Mass: 663.0 / 169.0



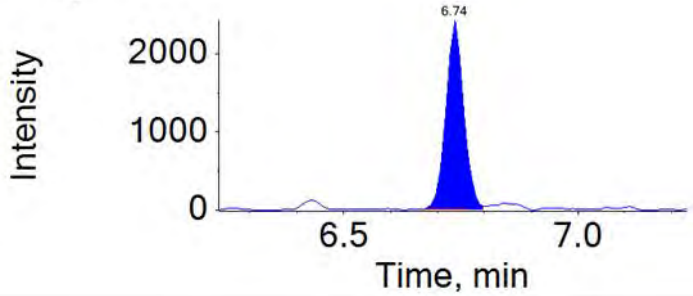
Component: PFTeDA
Primary Mass: 713.0 / 669.0



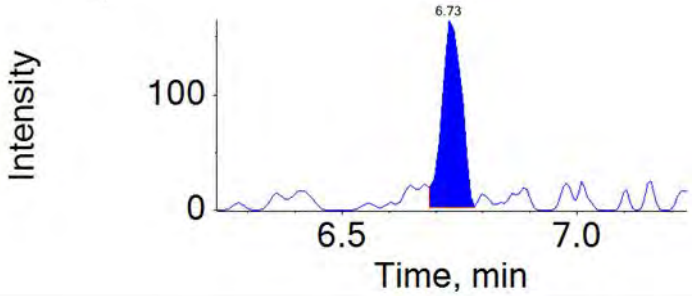
Component: PFTeDA_2
Secondary Mass: 713.0 / 169.0



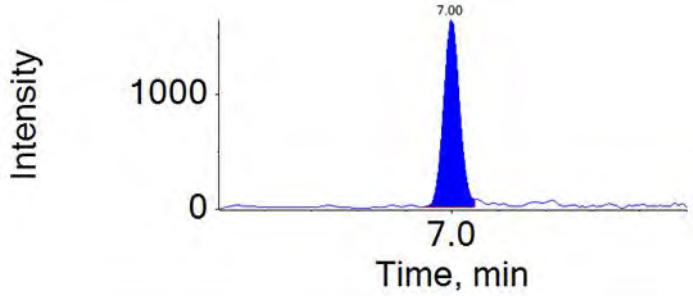
Component: PFHxDA
Primary Mass: 813.0 / 769.0



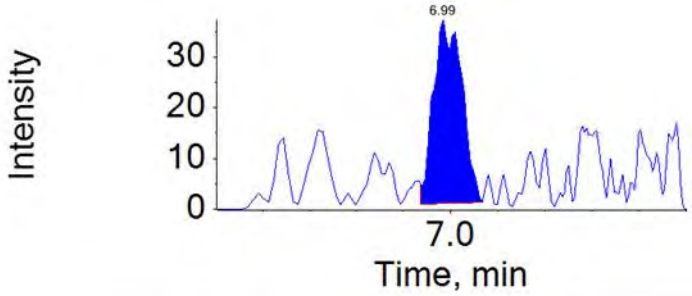
Component: PFHxDA_2
Secondary Mass: 813.0 / 169.0



Component: PFODA
Primary Mass: 913.0 / 869.0



Component: PFODA_2
Secondary Mass: 913.0 / 169.0



APPROVED
By JPT at 1:11 pm, 11/29/18

REVIEWED
By HMK at 1:17 pm, 11/29/18

ICAL Name: 18NOV28DCAL **Result Table:** 18NOV28DCAL 11/28/2018 4:47:11 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Sample Name:	MDL			**Data File:**		18NOV28DCAL-05.wiff
Sample ID:	MDLMODX1833F			**Acquis Date:**		2018-11-28T13:33:07
Sample Type:	Unknown			**Instrument:**		LM27631
Vial Position:	2			**Acquis Method:**		18AUG13_3uL.dam
Injection Vol:	3.00			**Result Table:**		18NOV28DCAL
QMethod File:	18AUG20QM			**ICAL Name:**		18NOV28DCAL
Batch Number:	N/A			**Operator:**		MCD7824
Sample Wt.:	1.00000			**Dilution Factor:**		1.00
Sample Vol.:	1.000			**Prep Factor:**		1.000

Injection Standard Peak Table

Injection Standard Area Reference File: 18NOV28DCAL-08

Injection Standard Name	Inj Std Conc	Injection Std Peak Area	Rreference Injection Standard Area	Injection Std %Diff	Injection Std %Diff Limit	Injection Std %Diff OOS
13C3-PFBA	5.0	1202955.4	887248.9	36	50	
13C2-PFOA	5.0	664292.2	498501.6	33	50	
13C4-PFOS	4.8	375981.9	283214.2	33	50	
13C2-PFDA	5.0	580456.5	441790.6	31	50	

Extraction Standard Peak Table

Extraction Standard Name	Ext Std Area	Inj Std Name	Inj Std Area	Area Ratio	Ext Std Conc	Ext Std Result	Ext Std %REC	Ext Std %REC Limit	Ext Std OOS
E13C4-PFBA	1367472.9	13C3-PFBA	1202955.4	1.137	5.000	5.072	101	70-130	
E13C5-PFPeA	1239583.2	13C3-PFBA	1202955.4	1.030	5.000	4.812	96	70-130	
E13C3-PFBS	565097.8	13C3-PFBA	1202955.4	0.470	4.650	4.482	96	70-130	
E13C2-4:2-FTS	91419.7	13C2-PFOA	664292.2	0.138	4.670	4.743	102	70-130	
E13C5-PFHxA	909464.7	13C2-PFOA	664292.2	1.369	5.000	5.029	101	70-130	
E13C3-PFHxS	412697.5	13C2-PFOA	664292.2	0.621	4.730	4.869	103	70-130	
E13C4-PFHpA	736898.5	13C2-PFOA	664292.2	1.109	5.000	5.097	102	70-130	
E13C2-6:2-FTS	78325.6	13C2-PFOA	664292.2	0.118	4.750	4.936	104	70-130	
E13C8-PFOA	1322963.7	13C2-PFOA	664292.2	1.992	5.000	5.482	110	70-130	
E13C8-PFOS	393817.9	13C4-PFOS	375981.9	1.047	4.780	4.728	99	70-130	
E13C9-PFNA	850571.5	13C4-PFOS	375981.9	2.262	5.000	4.969	99	70-130	
E13C6-PFDA	1044197.2	13C2-PFDA	580456.5	1.799	5.000	5.072	101	70-130	
E13C2-8:2-FTS	65872.4	13C2-PFDA	580456.5	0.113	4.790	4.877	102	70-130	
E13C8-PFOSA	757176.1	13C2-PFDA	580456.5	1.304	5.000	4.786	96	70-130	
Ed3-NMeFOSAA	233869.6	13C2-PFDA	580456.5	0.403	5.000	5.116	102	70-130	
E13C7-PFUnDA	717824.6	13C2-PFDA	580456.5	1.237	5.000	5.227	105	70-130	
Ed5-NEtFOSAA	174037.9	13C2-PFDA	580456.5	0.300	5.000	5.342	107	70-130	
E13C2-PFDoDA	1443367.4	13C2-PFDA	580456.5	2.487	5.000	5.225	104	70-130	
Ed7-NMePFOSAE	318648.0	13C2-PFDA	580456.5	0.549	5.000	4.744	95	70-130	
Ed3-NMePFOSA	103103.2	13C2-PFDA	580456.5	0.178	5.000	4.807	96	70-130	
Ed9-NEtPFOSAE	276598.5	13C2-PFDA	580456.5	0.477	5.000	4.831	97	70-130	
Ed5-NEtPFOSA	84232.4	13C2-PFDA	580456.5	0.145	5.000	5.042	101	70-130	
E13C2-PFTeDA	1044681.2	13C2-PFDA	580456.5	1.800	5.000	4.980	100	70-130	

APPROVED
By MCD at 5:01 pm, 11/28/18

REVIEWED
By HMK at 12:22 pm, 11/29/18

ICAL Name: 18NOV28DCAL **Result Table:** 18NOV28DCAL 11/28/2018 4:47:11 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

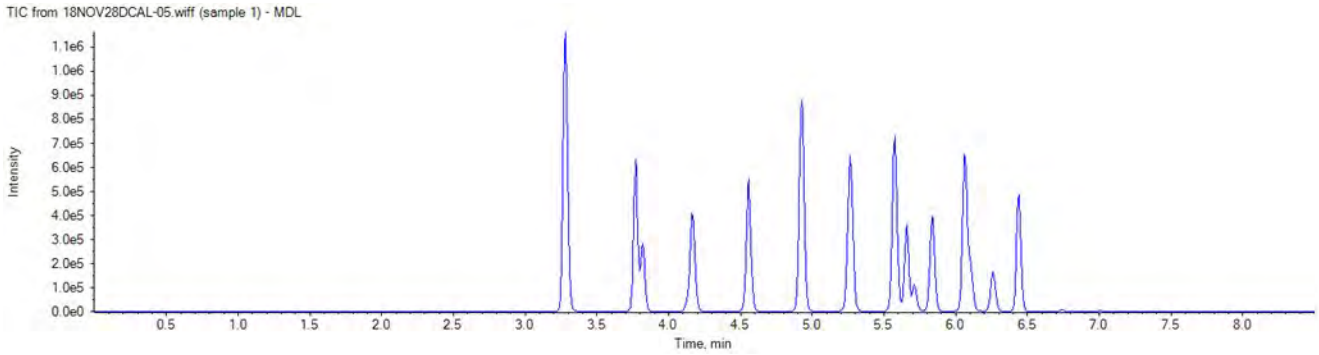
Analyte Quantitation Peak Table

Sample Name: MDL **Instrument Name:** LM27631 **File Name:** 18NOV28DCAL-05.wiff

Sample Wt	Sample Vol	Dilution Factor	PrepFactor
1.00000	1.000	1.00	1.000

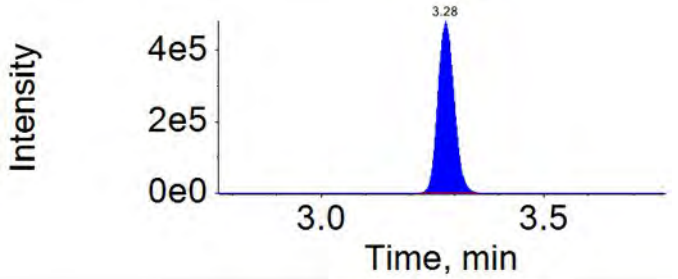
Analyte Name	RT	RRT	Analyte Area Response	E	Int Typ	ES Name	ES RT	ES Area Response	Area Ratio	Sample Result (ng/g)
PFBA	3.28	1.000	44840.3		A	13C4-PFBA	3.28	1367472.9	0.033	0.180
PFPeA	3.77	1.000	35372.3		A	13C5-PFPeA	3.77	1239583.2	0.029	0.140
PFBS	3.82	1.000	12605.1		A	13C3-PFBS	3.82	565097.8	0.022	0.108
4:2-FTS	4.13	1.000	2928.7		A	13C2-4:2-FTS	4.13	91419.7	0.032	0.086
PFHxA	4.17	1.000	32436.1		A	13C5-PFHxA	4.17	909464.7	0.036	0.143
PFPeS	4.19	1.100	5200.8		A	13C3-PFBS	3.82	565097.8	0.009	0.093
PFHpA	4.56	1.000	34134.5		A	13C4-PFHpA	4.56	736898.5	0.046	0.143
PFHxS	4.56	1.000	11072.6		A	13C3-PFHxS	4.56	412697.5	0.027	0.126
6:2-FTS	4.91	1.000	4195.7		A	13C2-6:2-FTS	4.91	78325.6	0.054	0.140
PFHpS	4.92	1.080	10674.9		A	13C3-PFHxS	4.56	412697.5	0.026	0.129
PFOA	4.93	1.000	35831.5		A	13C8-PFOA	4.93	1322963.7	0.027	0.140
PFOS	5.25	1.000	10490.3		A	13C8-PFOS	5.26	393817.9	0.027	0.112
PFNA	5.27	1.000	29535.3		A	13C9-PFNA	5.27	850571.5	0.035	0.133
PFNS	5.55	1.060	5896.9		A	13C8-PFOS	5.26	393817.9	0.015	0.095
PFDA	5.58	1.000	28044.3		A	13C6-PFDA	5.57	1044197.2	0.027	0.152
8:2-FTS	5.58	1.000	3464.6		A	13C2-8:2-FTS	5.58	65872.4	0.053	0.099
PFOSA	5.66	1.000	18214.8		A	13C8-PFOSA	5.66	757176.1	0.024	0.122
NMeFOSAA	5.71	1.000	6753.7		A	d3-NMeFOSAA	5.71	233869.6	0.029	0.184
PFDS	5.81	1.100	7418.0		A	13C8-PFOS	5.26	393817.9	0.019	0.149
PFUnDA	5.83	1.000	27644.3		A	13C7-PFUnDA	5.83	717824.6	0.039	0.138
NEtFOSAA	5.85	1.000	5734.3		M	d5-NEtFOSAA	5.84	174037.9	0.033	0.160
PFDoDA	6.06	1.000	38884.2		A	13C2-PFDoDA	6.06	1443367.4	0.027	0.148
10:2-FTS	6.08	1.090	3761.8		A	13C2-8:2-FTS	5.58	65872.4	0.057	0.126
NMePFOSAE	6.11	1.000	9196.7		A	d7-NMePFOSAE	6.10	318648.0	0.029	0.121
NMePFOSA	6.11	1.000	2590.4		A	d3-NMePFOSA	6.11	103103.2	0.025	0.133
PFDoS	6.24	1.190	2522.1		A	13C8-PFOS	5.26	393817.9	0.006	0.092
NEtPFOSAE	6.27	1.000	9043.7		A	d9-NEtPFOSAE	6.26	276598.5	0.033	0.118
NEtPFOSA	6.29	1.000	1641.5		A	d5-NEtPFOSA	6.27	84232.4	0.019	0.087
PFTrDA	6.26	1.030	35013.3		A	13C2-PFDoDA	6.06	1443367.4	0.024	0.146
PFTeDA	6.44	1.000	27817.6		A	13C2-PFTeDA	6.44	1044681.2	0.027	0.151
PFHxDA	6.74	1.050	13033.4		A	13C2-PFTeDA	6.44	1044681.2	0.012	0.143
PFODA	7.00	1.090	8671.1		A	13C2-PFTeDA	6.44	1044681.2	0.008	0.111

Total Ion Chromatogram

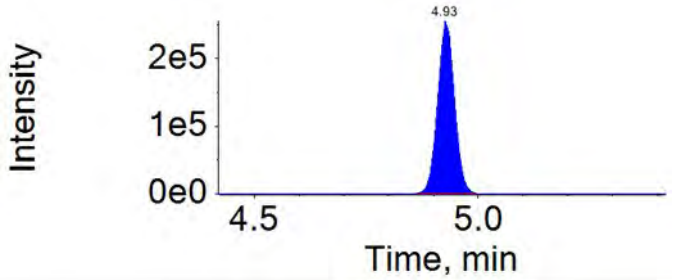


ICAL Name: 18NOV28DCAL **Result Table:** 18NOV28DCAL 11/28/2018 4:47:11 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

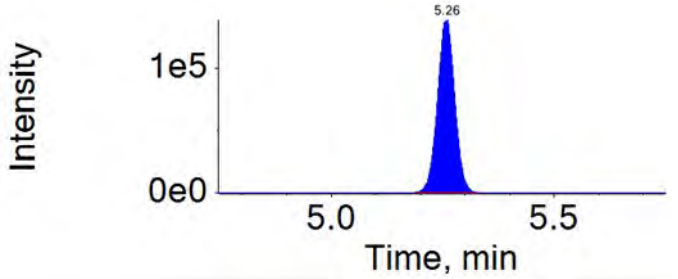
Injection Standard: 13C3-PFBA
216.0 / 172.0



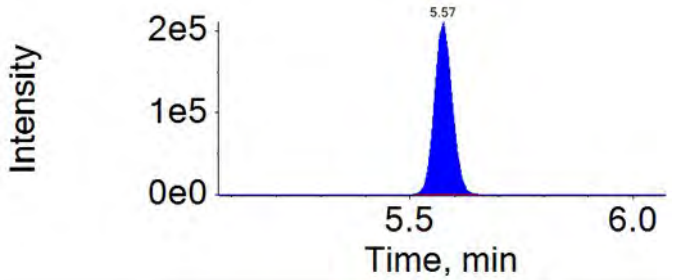
Injection Standard: 13C2-PFOA
415.0 / 370.0



Injection Standard: 13C4-PFOS
503.0 / 80.0

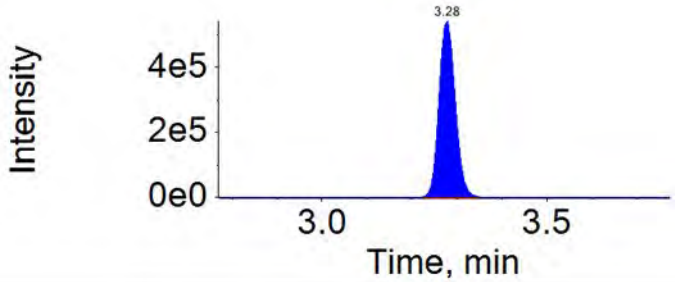


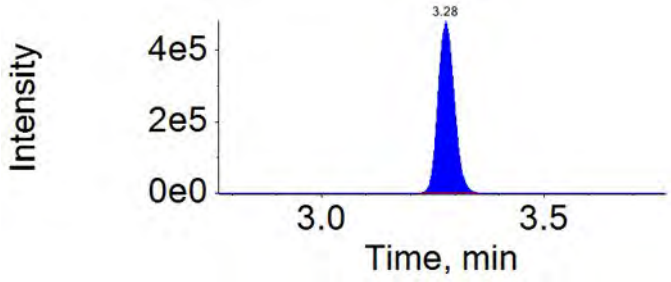
Injection Standard: 13C2-PFDA
515.0 / 470.0



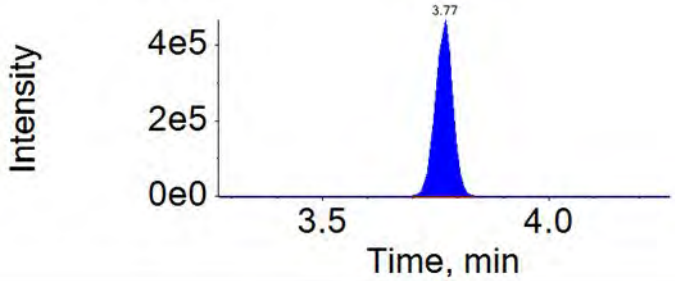
ICAL Name: 18NOV28DCAL **Result Table:** 18NOV28DCAL 11/28/2018 4:47:11 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

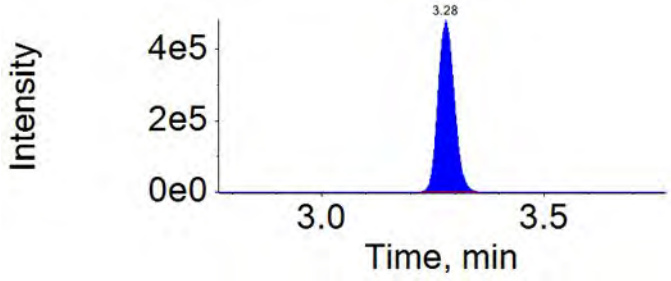
Extraction Standard: E13C4-PFBA	Injection Standard: 13C3-PFBA
217.0 / 172.0	216.0 / 172.0



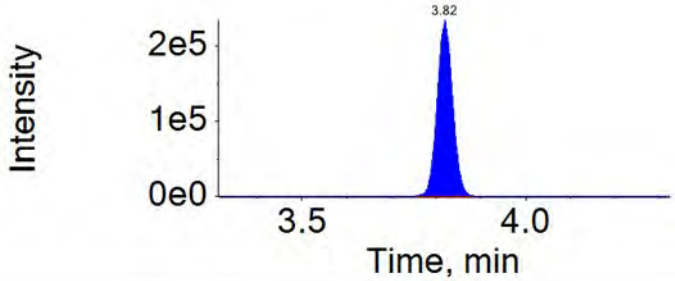


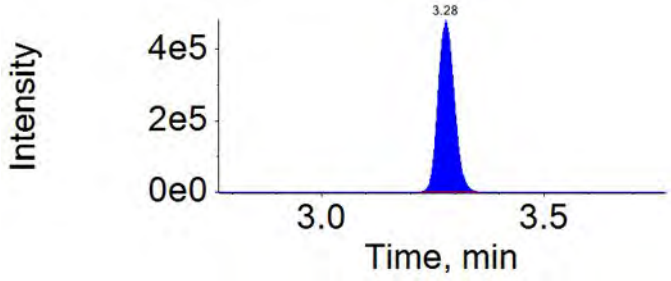
Extraction Standard: E13C5-PFPeA	Injection Standard: 13C3-PFBA
268.0 / 223.0	216.0 / 172.0



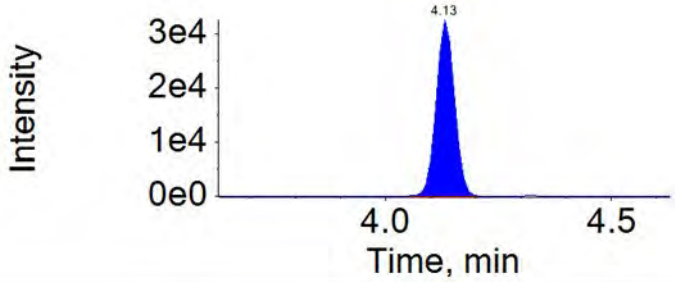


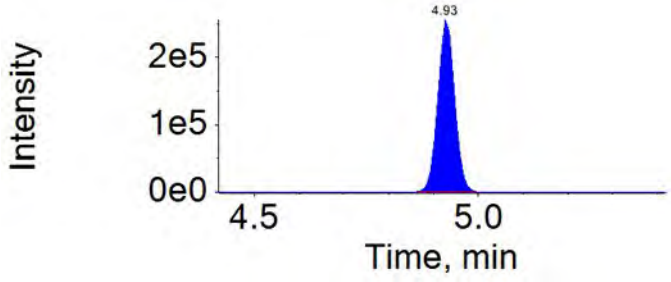
Extraction Standard: E13C3-PFBS	Injection Standard: 13C3-PFBA
302.0 / 80.0	216.0 / 172.0





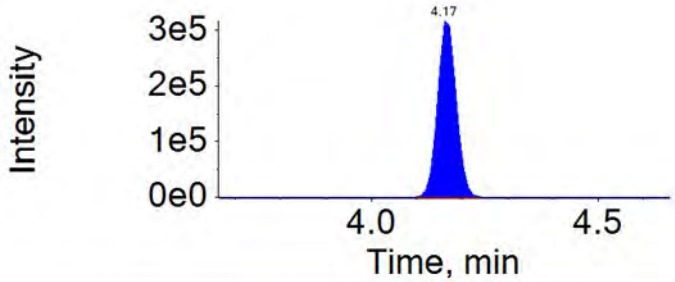
Extraction Standard: E13C2-4:2-FTS	Injection Standard: 13C2-PFOA
329.0 / 81.0	415.0 / 370.0

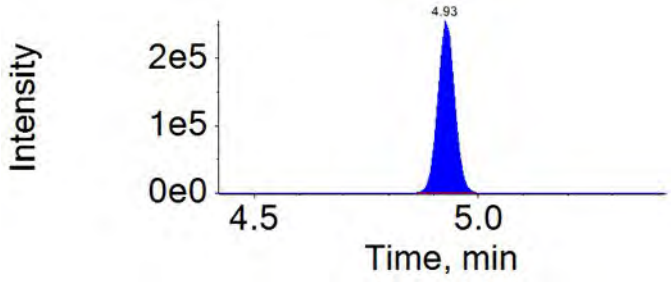




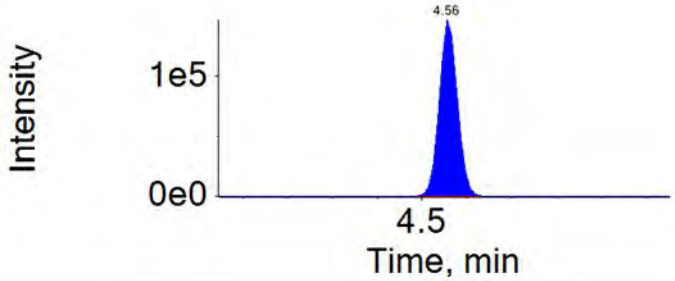
ICAL Name: 18NOV28DCAL **Result Table:** 18NOV28DCAL 11/28/2018 4:47:11 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

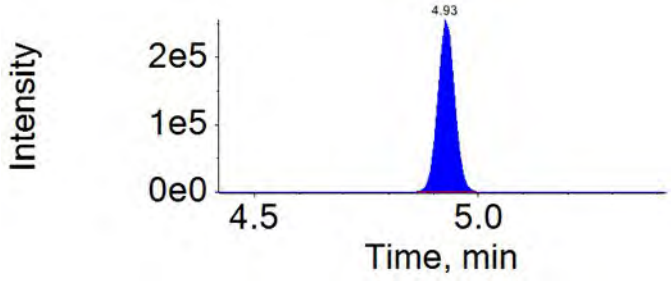
Extraction Standard: E13C5-PFHxA	Injection Standard: 13C2-PFOA
318.0 / 273.0	415.0 / 370.0



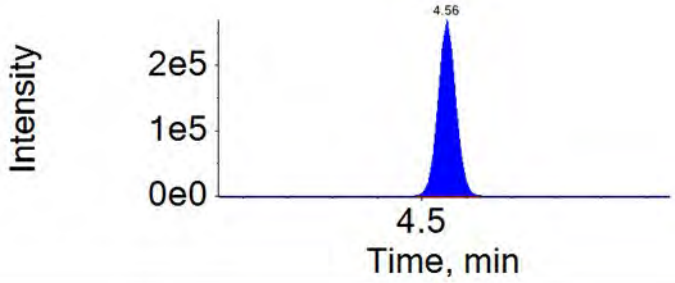


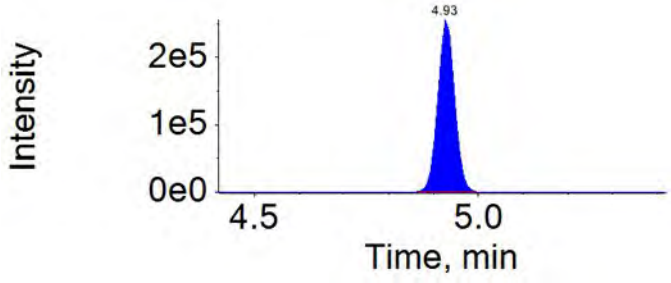
Extraction Standard: E13C3-PFHxS	Injection Standard: 13C2-PFOA
402.0 / 80.0	415.0 / 370.0



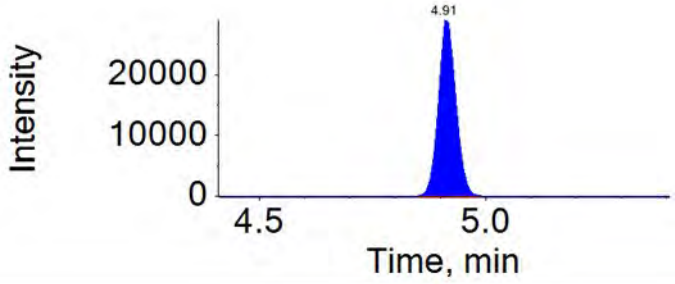


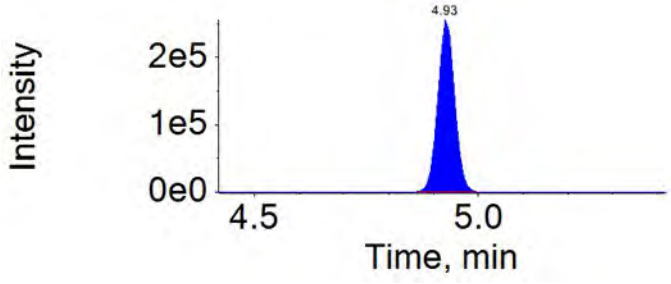
Extraction Standard: E13C4-PFHpA	Injection Standard: 13C2-PFOA
367.0 / 322.0	415.0 / 370.0





Extraction Standard: E13C2-6:2-FTS	Injection Standard: 13C2-PFOA
429.0 / 81.0	415.0 / 370.0



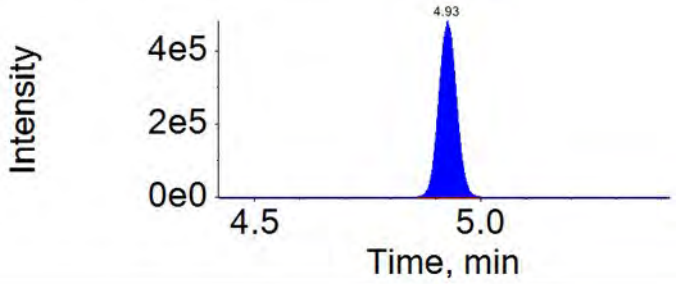


APPROVED
By MCD at 5:01 pm, 11/28/18

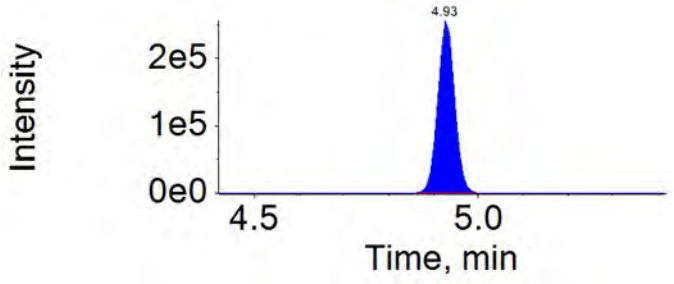
REVIEWED
By HMK at 12:22 pm, 11/29/18

ICAL Name: 18NOV28DCAL **Result Table:** 18NOV28DCAL 11/28/2018 4:47:11 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

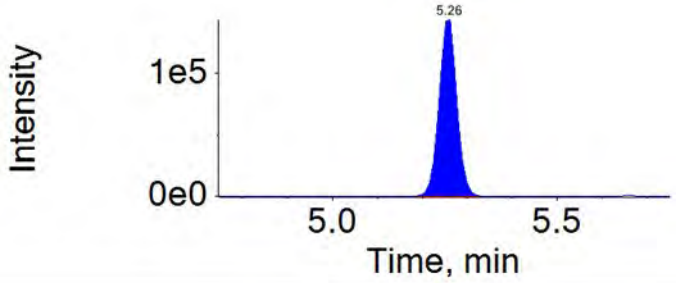
Extraction Standard: E13C8-PFOA
421.0 / 376.0



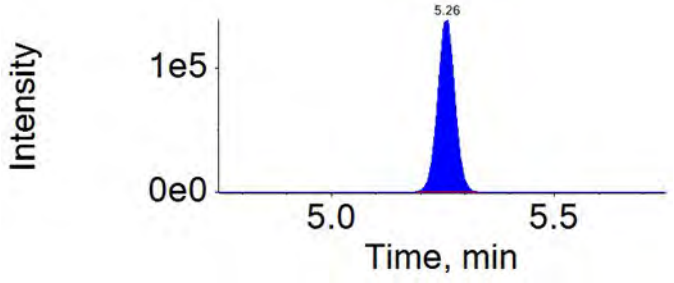
Injection Standard: 13C2-PFOA
415.0 / 370.0



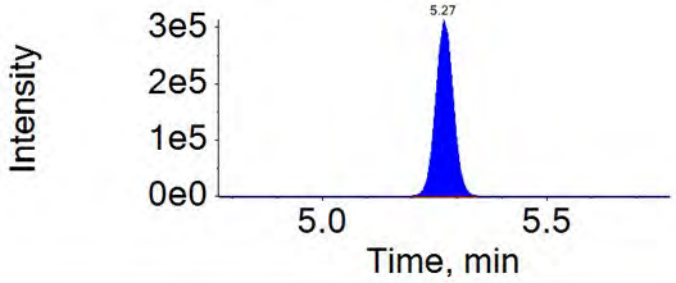
Extraction Standard: E13C8-PFOS
507.0 / 80.0



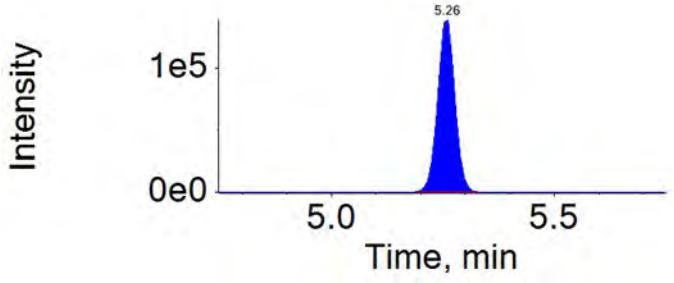
Injection Standard: 13C4-PFOS
503.0 / 80.0



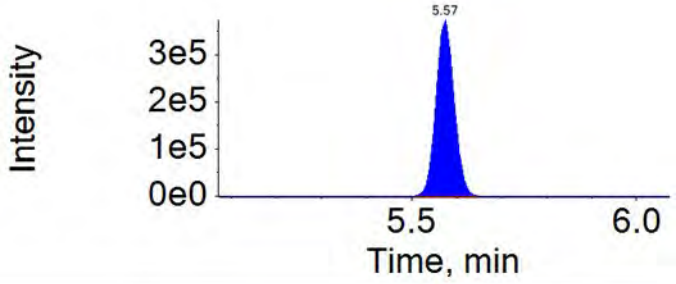
Extraction Standard: E13C9-PFNA
472.0 / 427.0



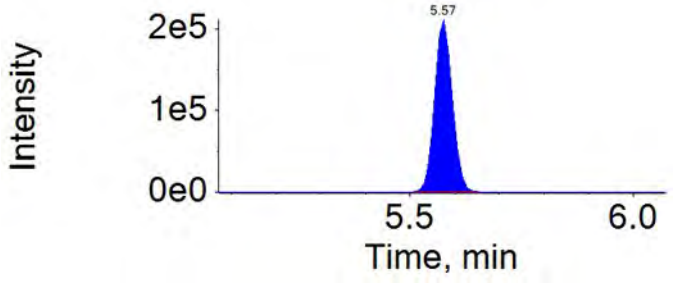
Injection Standard: 13C4-PFOS
503.0 / 80.0



Extraction Standard: E13C6-PFDA
519.0 / 474.0

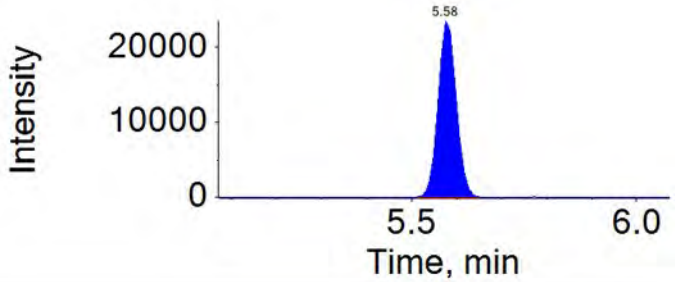


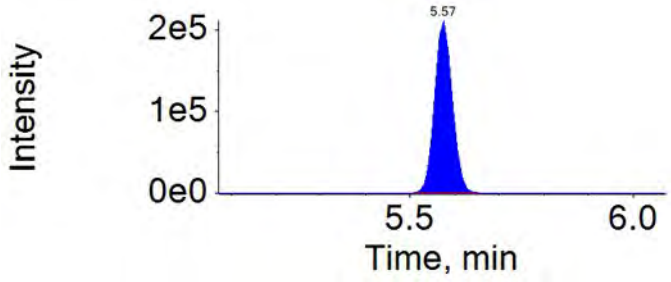
Injection Standard: 13C2-PFDA
515.0 / 470.0



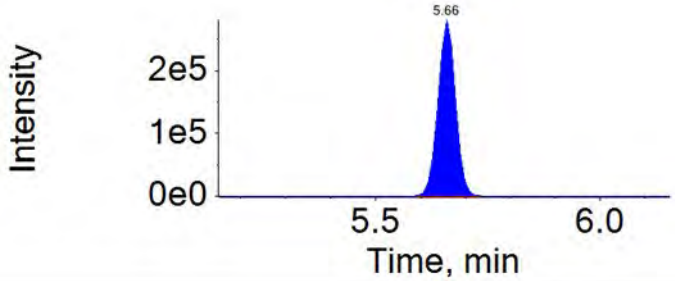
ICAL Name: 18NOV28DCAL **Result Table:** 18NOV28DCAL 11/28/2018 4:47:11 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

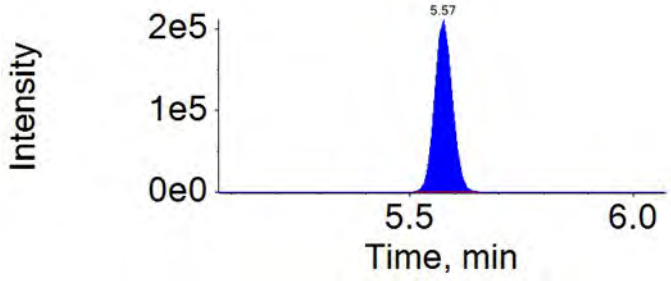
Extraction Standard: E13C2-8:2-FTS	Injection Standard: 13C2-PFDA
529.0 / 81.0	515.0 / 470.0



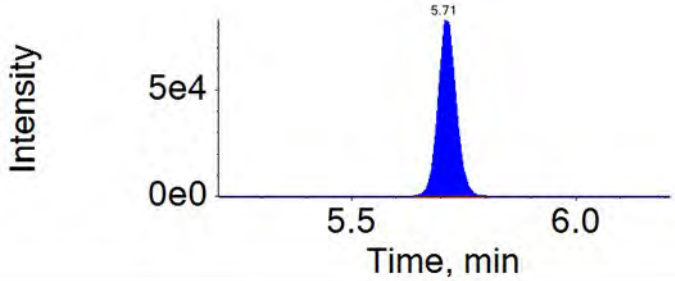


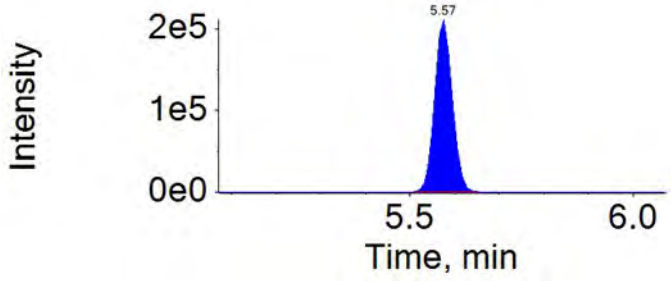
Extraction Standard: E13C8-PFOSA	Injection Standard: 13C2-PFDA
506.0 / 78.0	515.0 / 470.0



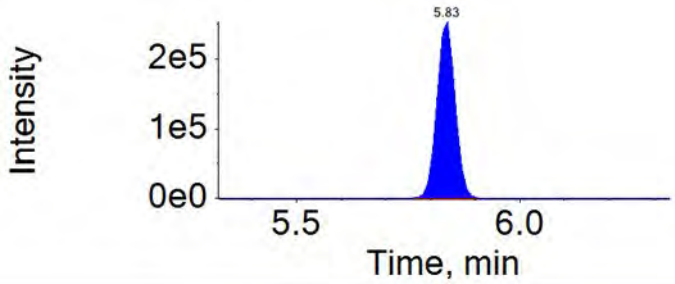


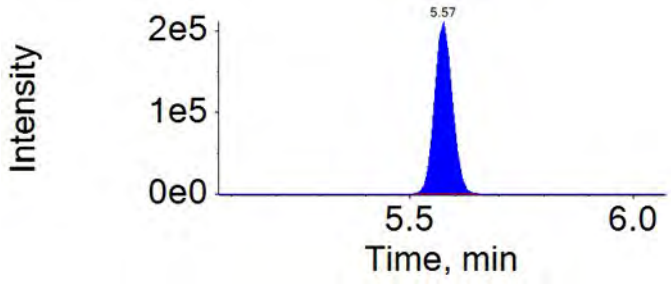
Extraction Standard: Ed3-NMeFOSAA	Injection Standard: 13C2-PFDA
573.0 / 419.0	515.0 / 470.0





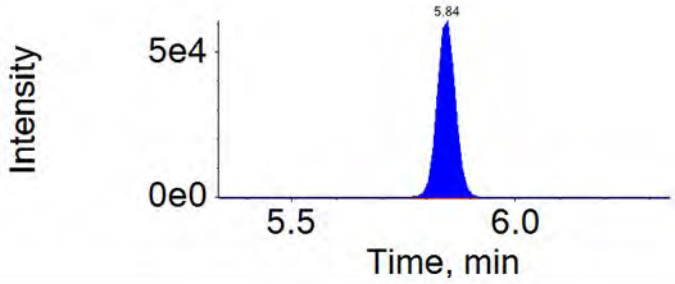
Extraction Standard: E13C7-PFUnDA	Injection Standard: 13C2-PFDA
570.0 / 525.0	515.0 / 470.0

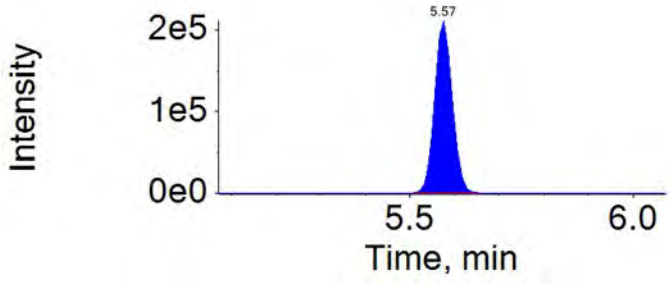




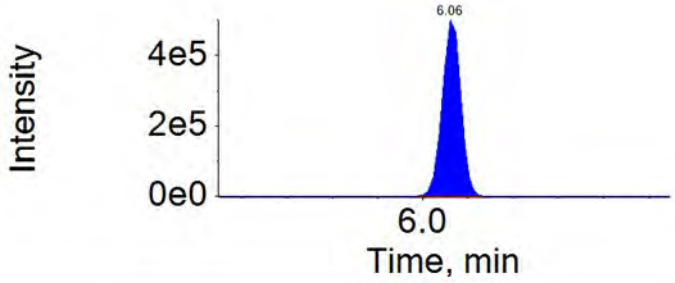
ICAL Name: 18NOV28DCAL **Result Table:** 18NOV28DCAL 11/28/2018 4:47:11 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

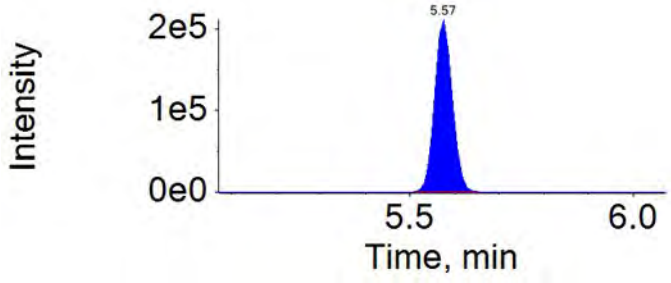
Extraction Standard: Ed5-NEtFOSAA	Injection Standard: 13C2-PFDA
589.0 / 419.0	515.0 / 470.0



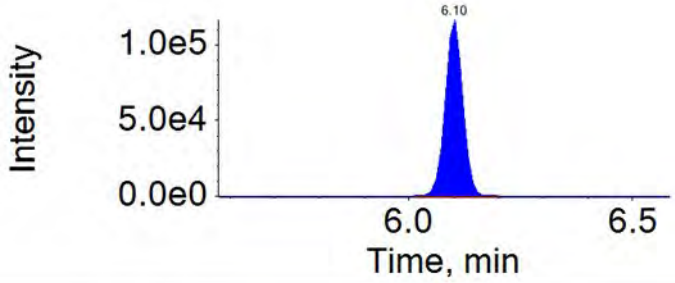


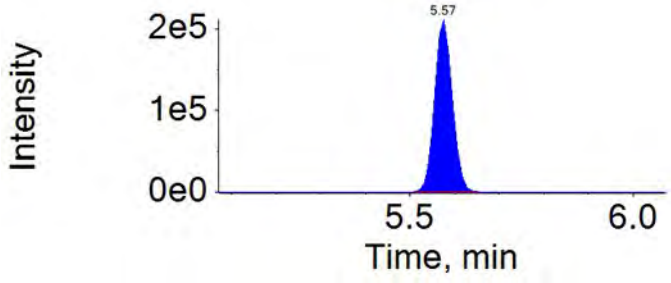
Extraction Standard: E13C2-PFDoDA	Injection Standard: 13C2-PFDA
615.0 / 570.0	515.0 / 470.0



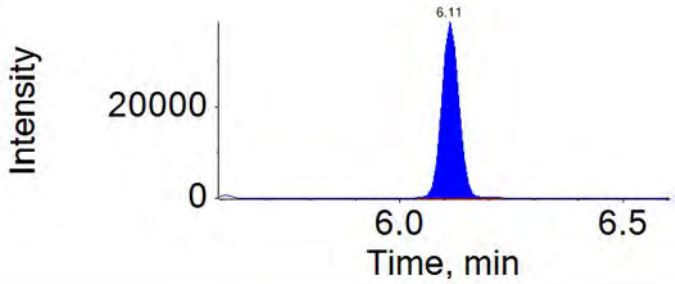


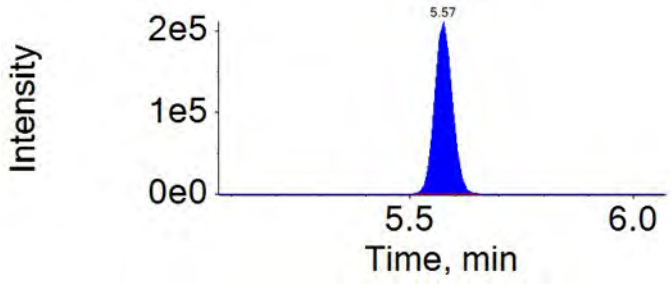
Extraction Standard: Ed7-NMePFOSAE	Injection Standard: 13C2-PFDA
623.0 / 59.0	515.0 / 470.0





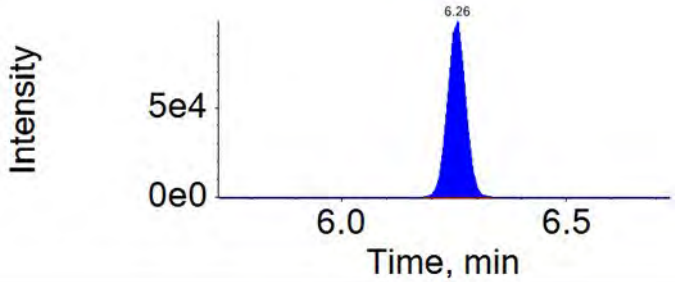
Extraction Standard: Ed3-NMePFOSA	Injection Standard: 13C2-PFDA
515.0 / 169.0	515.0 / 470.0

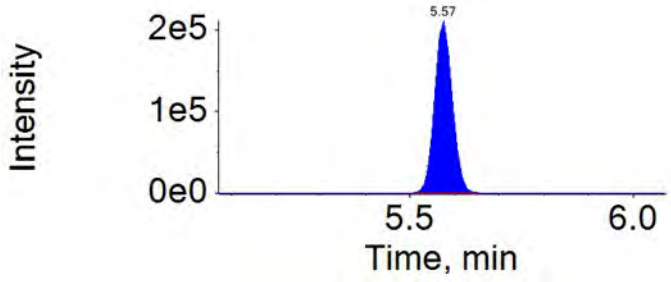




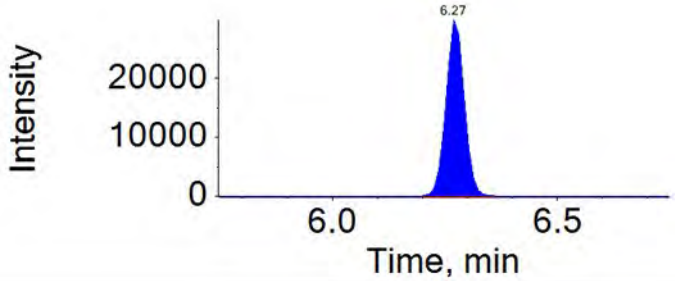
ICAL Name: 18NOV28DCAL **Result Table:** 18NOV28DCAL 11/28/2018 4:47:11 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

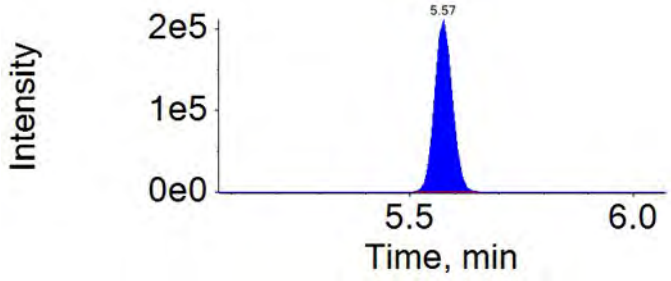
Extraction Standard: Ed9-NEtPFOSAE	Injection Standard: 13C2-PFDA
639.0 / 59.0	515.0 / 470.0



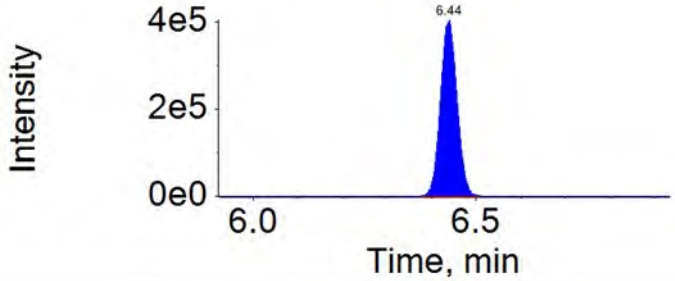


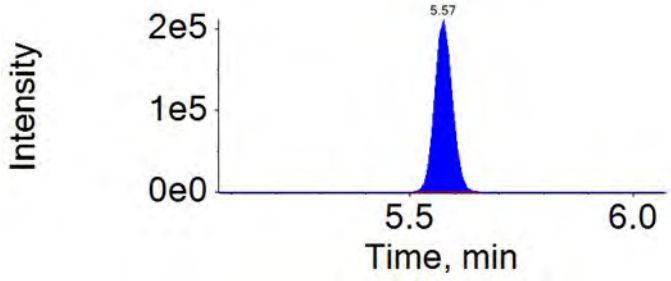
Extraction Standard: Ed5-NEtPFOSA	Injection Standard: 13C2-PFDA
531.0 / 169.0	515.0 / 470.0





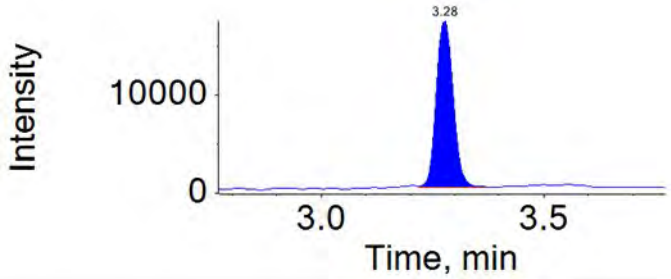
Extraction Standard: E13C2-PFTeDA	Injection Standard: 13C2-PFDA
715.0 / 670.0	515.0 / 470.0



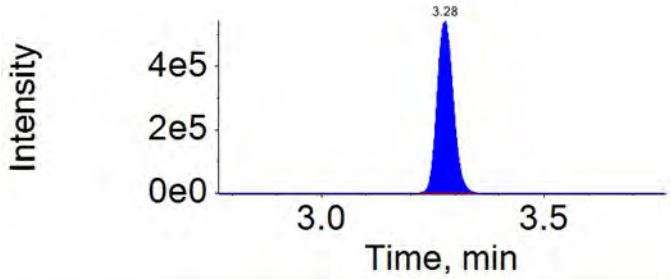


ICAL Name: 18NOV28DCAL **Result Table:** 18NOV28DCAL 11/28/2018 4:47:11 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

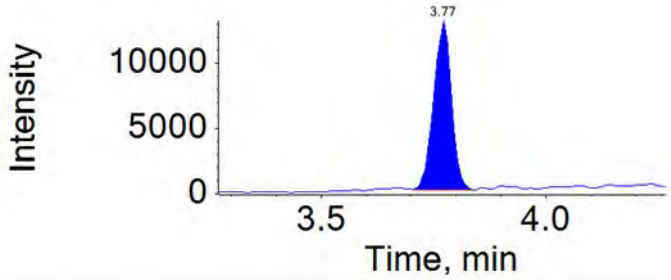
Analyte: PFBA
213.0 / 169.0



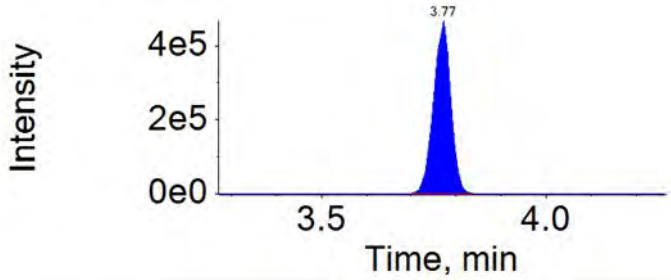
Extraction Standard: 13C4-PFBA
217.0 / 172.0



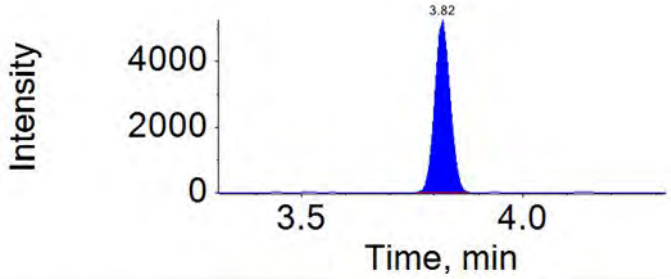
Analyte: PFPeA
263.0 / 219.0



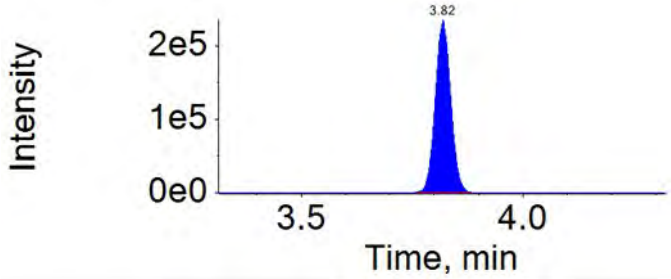
Extraction Standard: 13C5-PFPeA
268.0 / 223.0



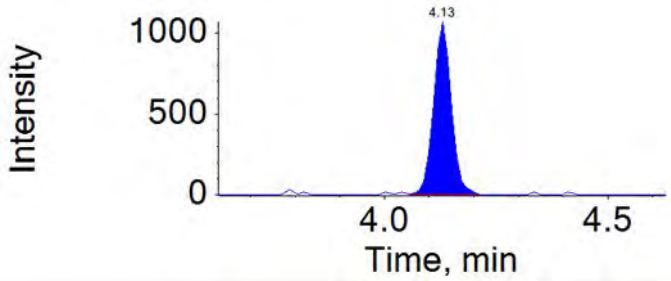
Analyte: PFBS
299.0 / 80.0



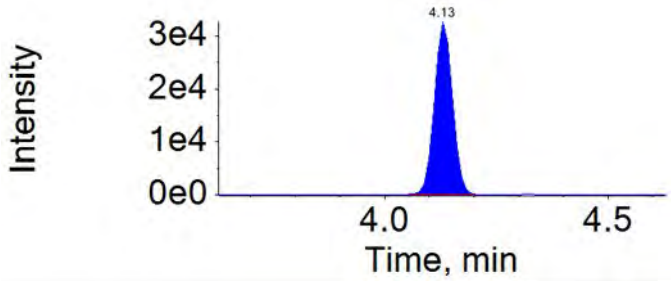
Extraction Standard: 13C3-PFBS
302.0 / 80.0



Analyte: 4:2-FTS
327.0 / 307.0



Extraction Standard: 13C2-4:2-FTS
329.0 / 81.0

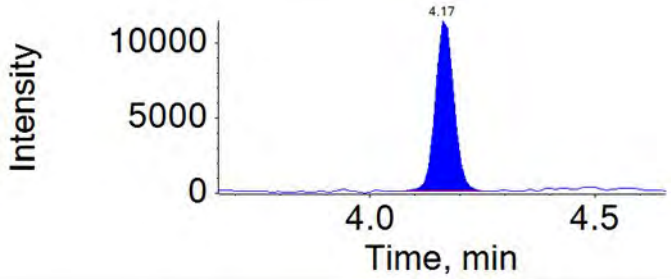


APPROVED
By MCD at 5:01 pm, 11/28/18

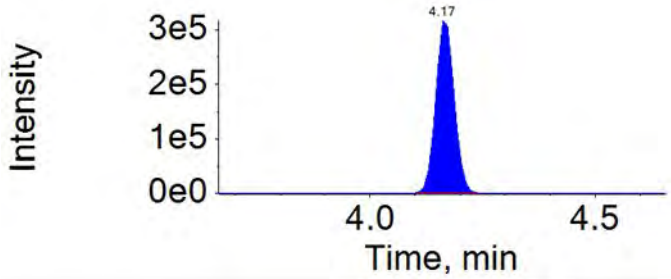
REVIEWED
By HMK at 12:22 pm, 11/29/18

ICAL Name: 18NOV28DCAL **Result Table:** 18NOV28DCAL 11/28/2018 4:47:11 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

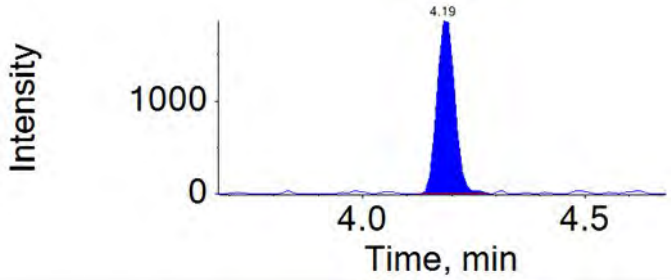
Analyte: PFHxA
313.0 / 269.0



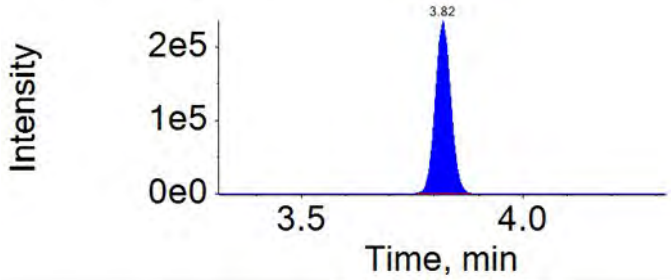
Extraction Standard: 13C5-PFHxA
318.0 / 273.0



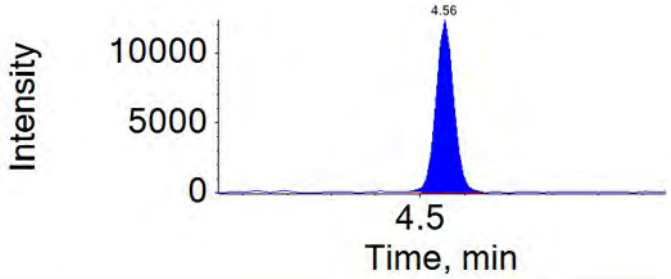
Analyte: PFPeS
349.0 / 80.0



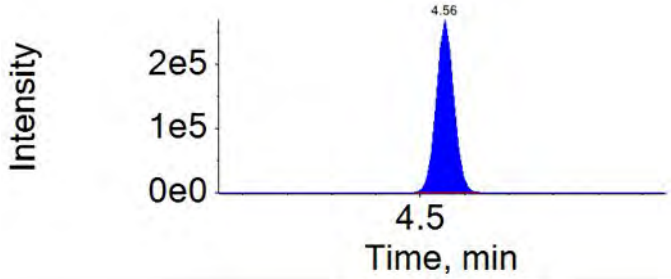
Extraction Standard: 13C3-PFBS
302.0 / 80.0



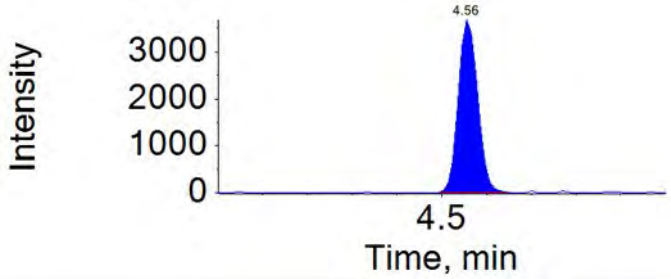
Analyte: PFHpA
363.0 / 319.0



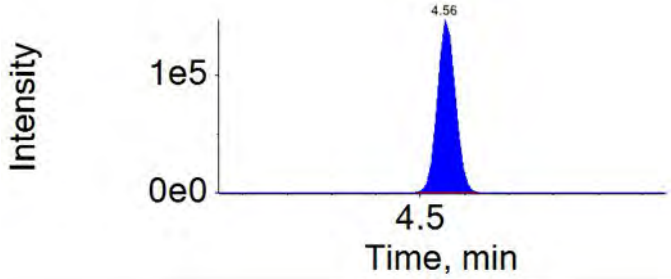
Extraction Standard: 13C4-PFHpA
367.0 / 322.0



Analyte: PFHxS
399.0 / 80.0



Extraction Standard: 13C3-PFHxS
402.0 / 80.0

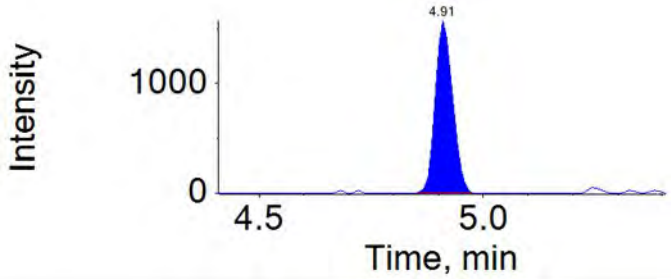


APPROVED
By MCD at 5:01 pm, 11/28/18

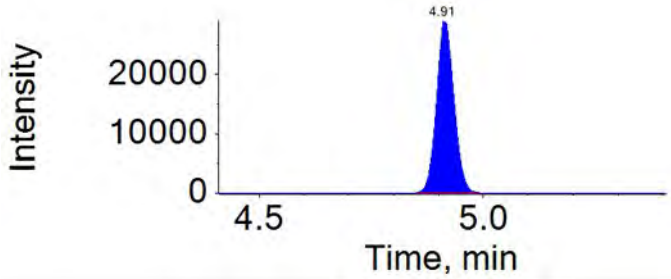
REVIEWED
By HMK at 12:22 pm, 11/29/18

ICAL Name: 18NOV28DCAL **Result Table:** 18NOV28DCAL 11/28/2018 4:47:11 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

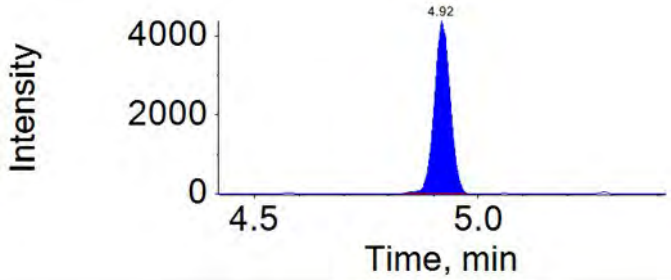
Analyte: 6:2-FTS
427.0 / 407.0



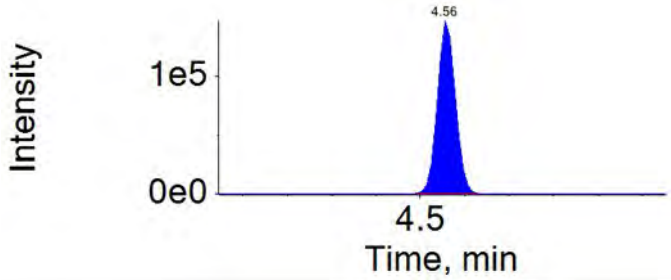
Extraction Standard: 13C2-6:2-FTS
429.0 / 81.0



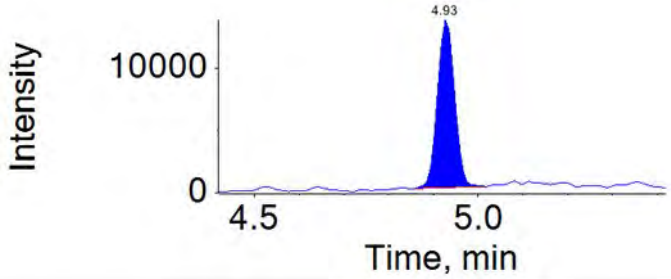
Analyte: PFHpS
449.0 / 80.0



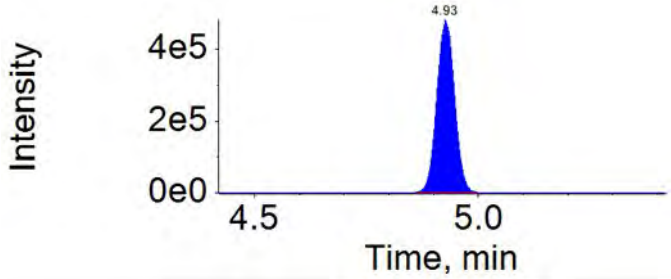
Extraction Standard: 13C3-PFHxS
402.0 / 80.0



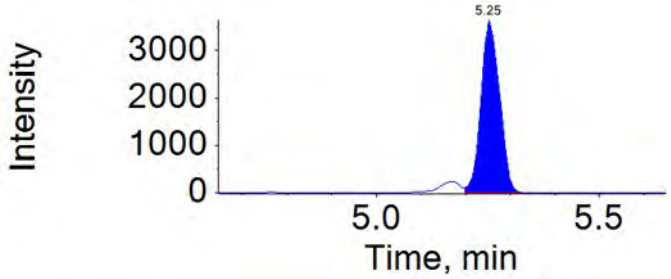
Analyte: PFOA
413.0 / 369.0



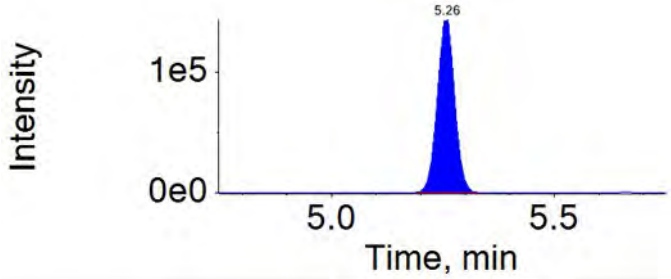
Extraction Standard: 13C8-PFOA
421.0 / 376.0



Analyte: PFOS
499.0 / 80.0



Extraction Standard: 13C8-PFOS
507.0 / 80.0

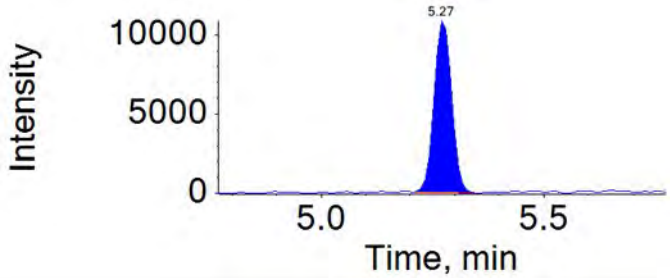


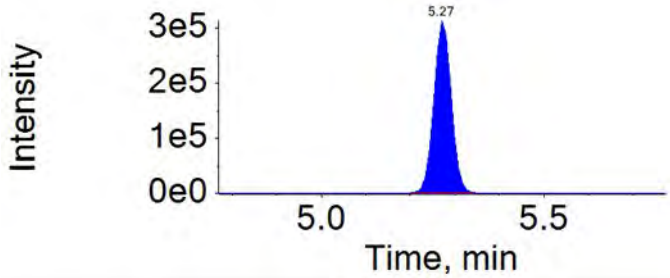
APPROVED
By MCD at 5:01 pm, 11/28/18

REVIEWED
By HMK at 12:22 pm, 11/29/18

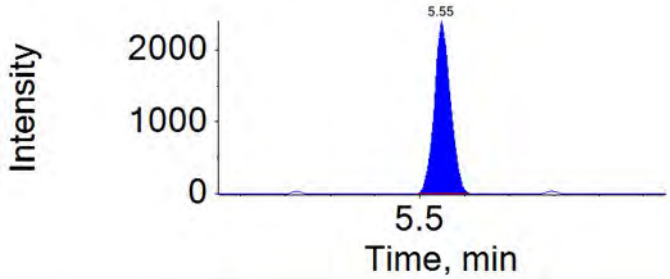
ICAL Name: 18NOV28DCAL **Result Table:** 18NOV28DCAL 11/28/2018 4:47:11 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

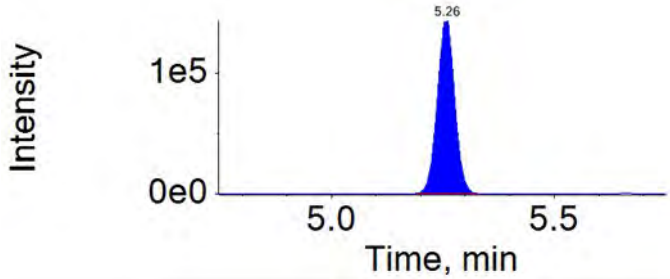
Analyte: PFNA	Extraction Standard: 13C9-PFNA
463.0 / 419.0	472.0 / 427.0



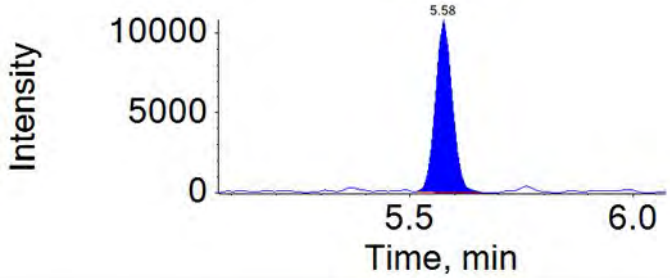


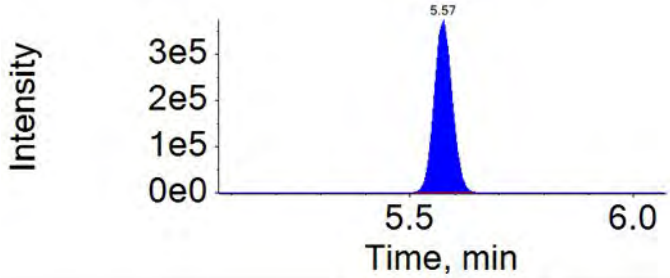
Analyte: PFNS	Extraction Standard: 13C8-PFOS
549.0 / 80.0	507.0 / 80.0



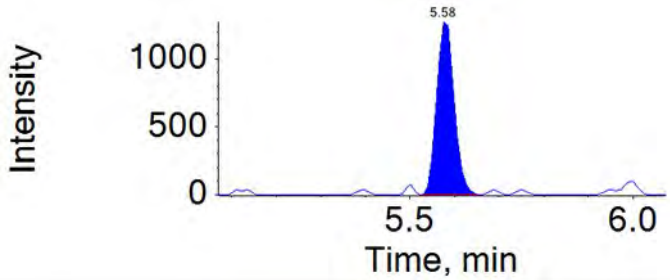


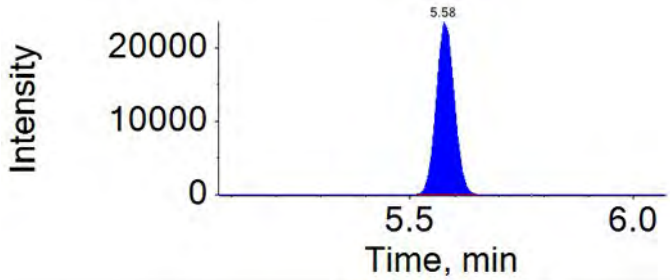
Analyte: PFDA	Extraction Standard: 13C6-PFDA
513.0 / 469.0	519.0 / 474.0





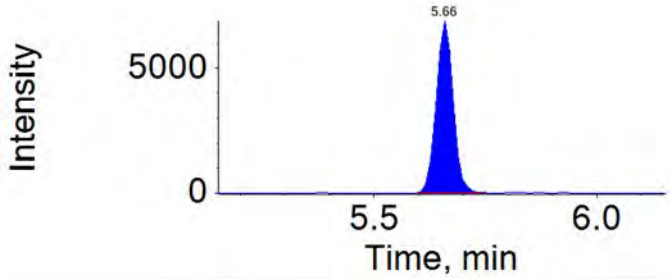
Analyte: 8:2-FTS	Extraction Standard: 13C2-8:2-FTS
527.0 / 507.0	529.0 / 81.0



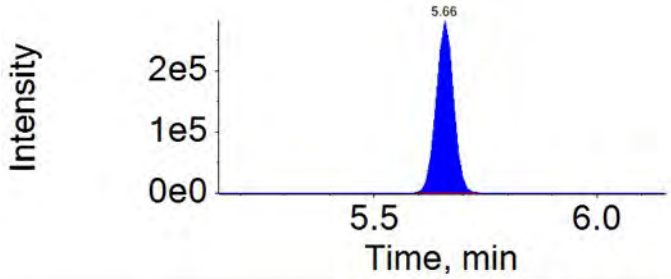


ICAL Name: 18NOV28DCAL **Result Table:** 18NOV28DCAL 11/28/2018 4:47:11 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

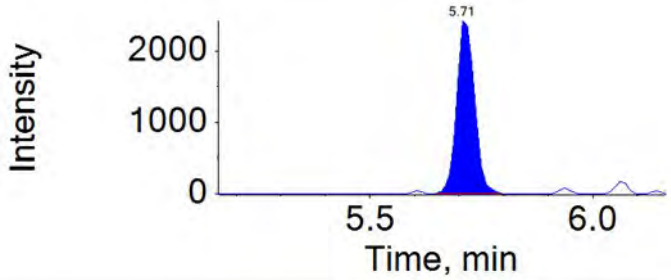
Analyte: PFOSA
498.0 / 78.0



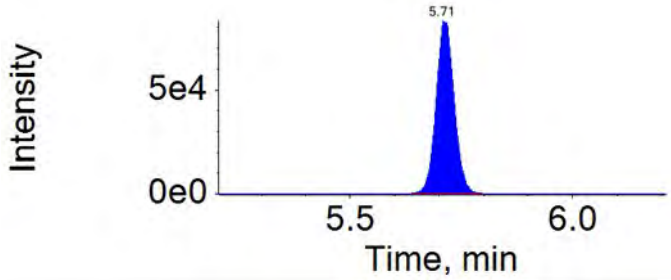
Extraction Standard: 13C8-PFOSA
506.0 / 78.0



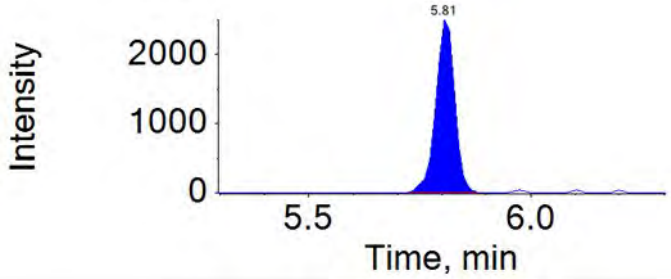
Analyte: NMeFOSAA
570.0 / 419.0



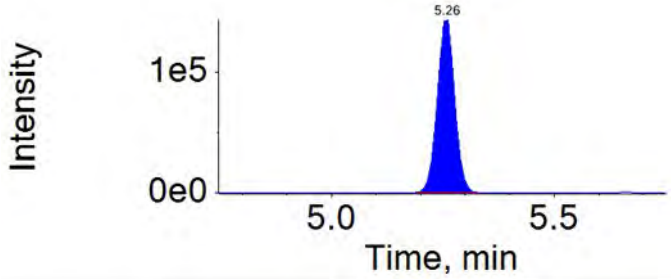
Extraction Standard: d3-NMeFOSAA
573.0 / 419.0



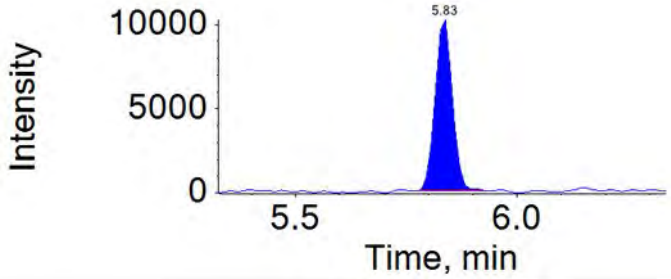
Analyte: PFDS
599.0 / 80.0



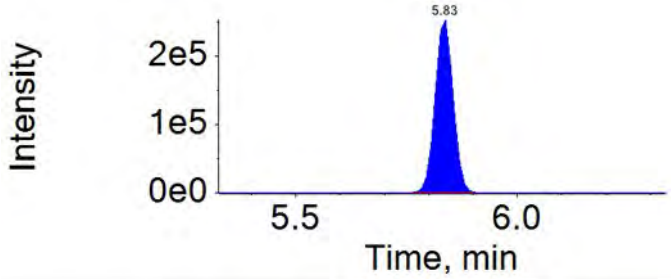
Extraction Standard: 13C8-PFOS
507.0 / 80.0



Analyte: PFUnDA
563.0 / 519.0



Extraction Standard: 13C7-PFUnDA
570.0 / 525.0

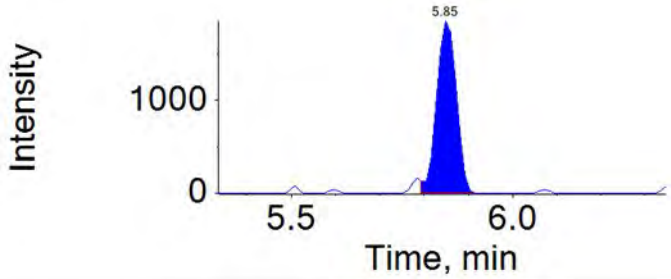


APPROVED
By MCD at 5:01 pm, 11/28/18

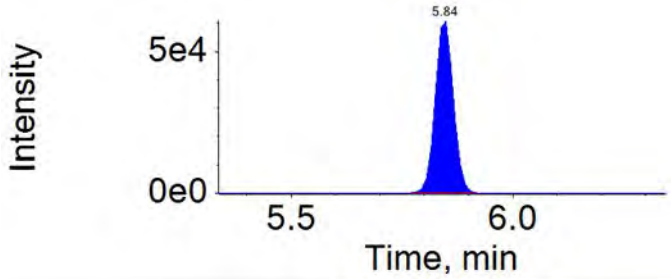
REVIEWED
By HMK at 12:22 pm, 11/29/18

ICAL Name: 18NOV28DCAL **Result Table:** 18NOV28DCAL 11/28/2018 4:47:11 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

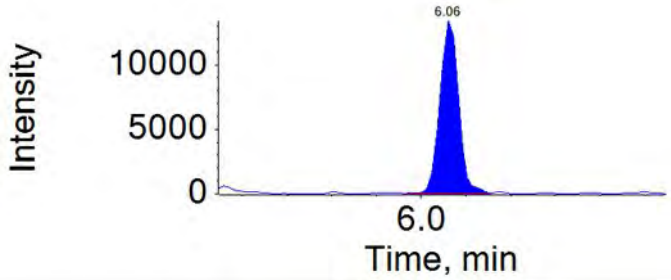
Analyte: NEtFOSAA
584.0 / 419.0



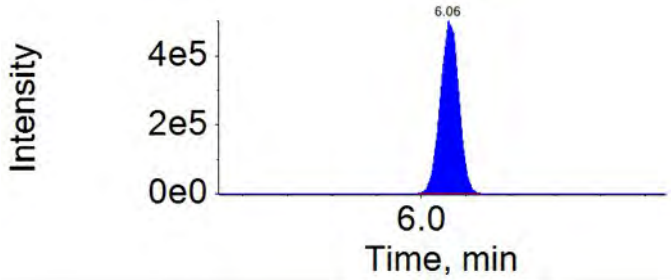
Extraction Standard: d5-NEtFOSAA
589.0 / 419.0



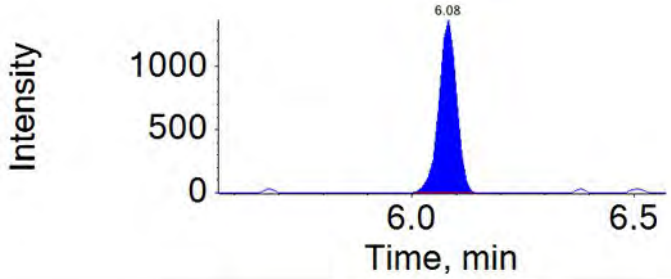
Analyte: PFDoDA
613.0 / 569.0



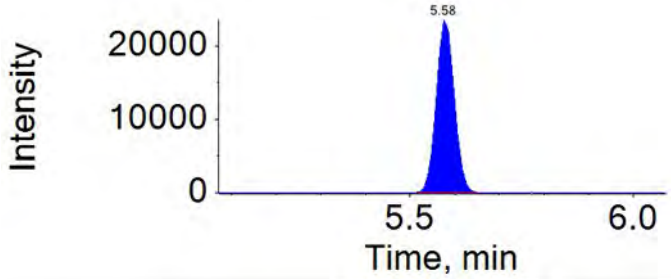
Extraction Standard: 13C2-PFDoDA
615.0 / 570.0



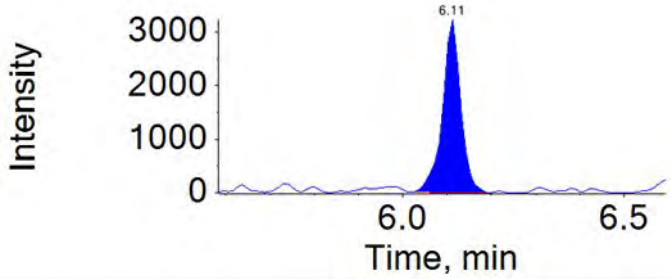
Analyte: 10:2-FTS
627.0 / 607.0



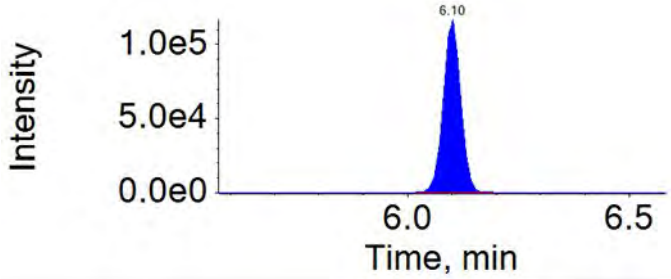
Extraction Standard: 13C2-8:2-FTS
529.0 / 81.0



Analyte: NMePFOSAE
616.0 / 59.0



Extraction Standard: d7-NMePFOSAE
623.0 / 59.0

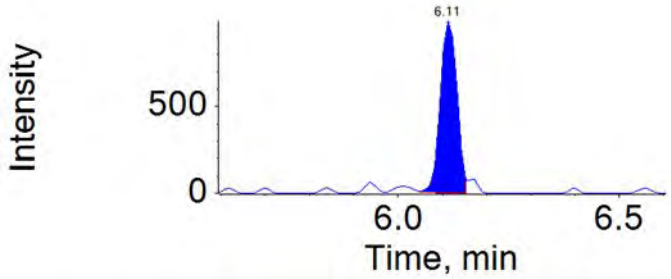


APPROVED
By MCD at 5:01 pm, 11/28/18

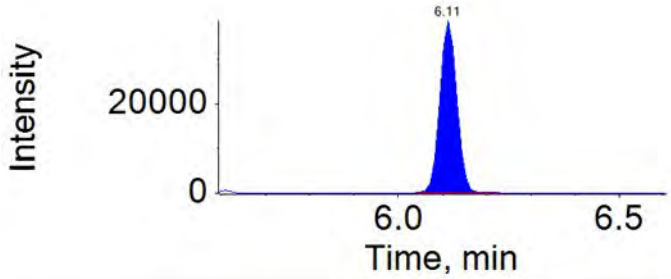
REVIEWED
By HMK at 12:22 pm, 11/29/18

ICAL Name: 18NOV28DCAL **Result Table:** 18NOV28DCAL 11/28/2018 4:47:11 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

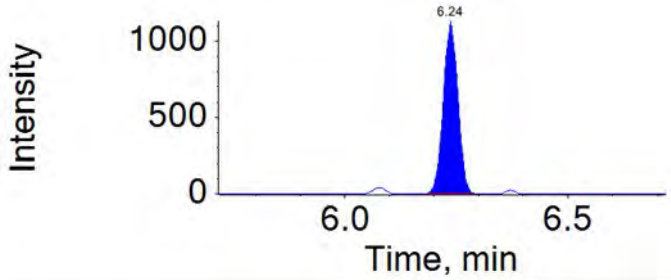
Analyte: NMePFOSA
512.0 / 169.0



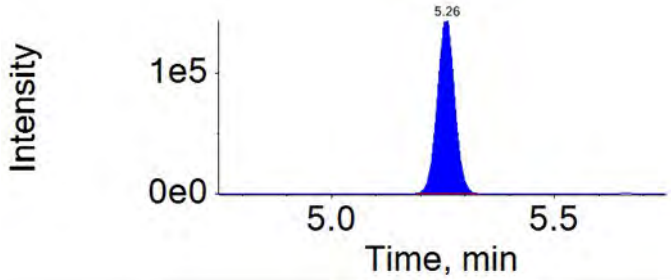
Extraction Standard: d3-NMePFOSA
515.0 / 169.0



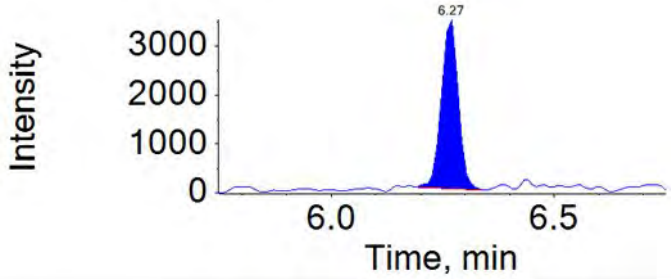
Analyte: PFDoS
699.0 / 80.0



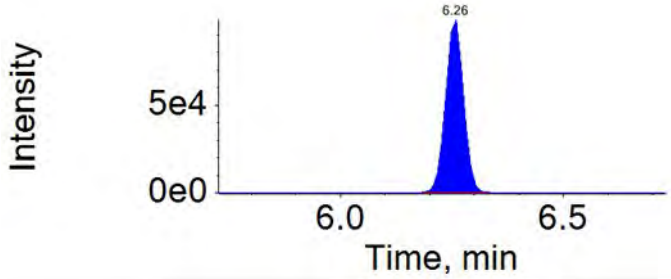
Extraction Standard: 13C8-PFOS
507.0 / 80.0



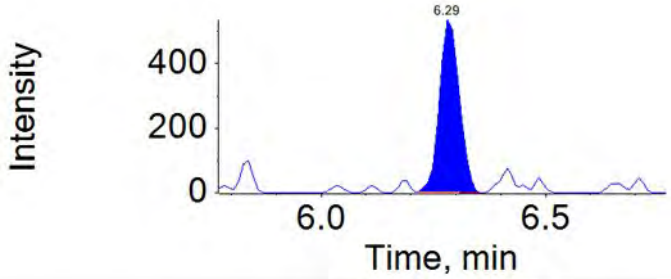
Analyte: NEtPFOSAE
630.0 / 59.0



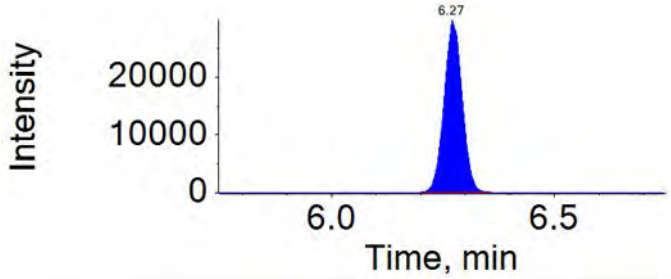
Extraction Standard: d9-NEtPFOSAE
639.0 / 59.0



Analyte: NEtPFOSA
526.0 / 169.0



Extraction Standard: d5-NEtPFOSA
531.0 / 169.0

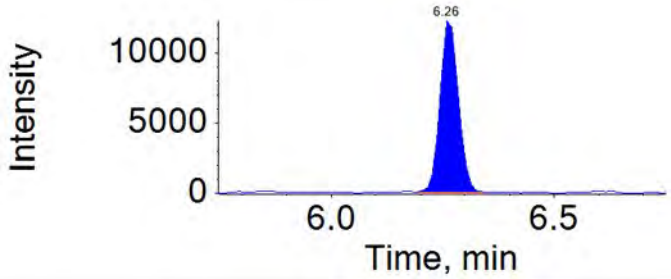


APPROVED
By MCD at 5:01 pm, 11/28/18

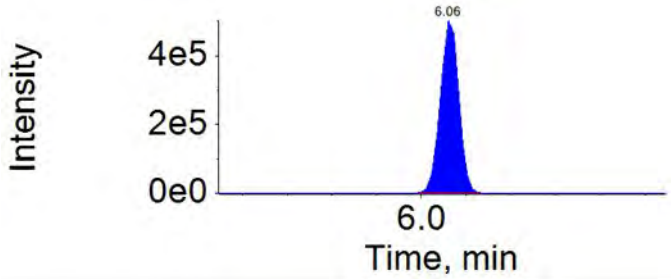
REVIEWED
By HMK at 12:22 pm, 11/29/18

ICAL Name: 18NOV28DCAL **Result Table:** 18NOV28DCAL 11/28/2018 4:47:11 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

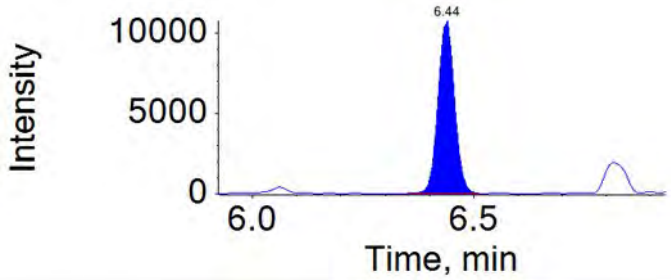
Analyte: PFTrDA
663.0 / 619.0



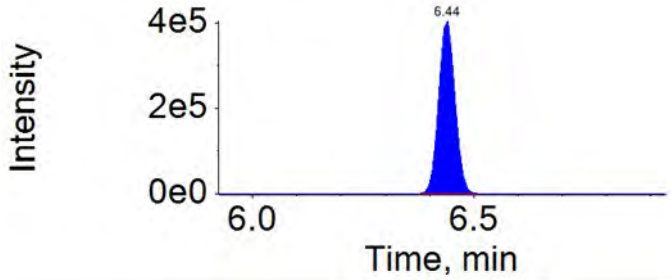
Extraction Standard: 13C2-PFDoDA
615.0 / 570.0



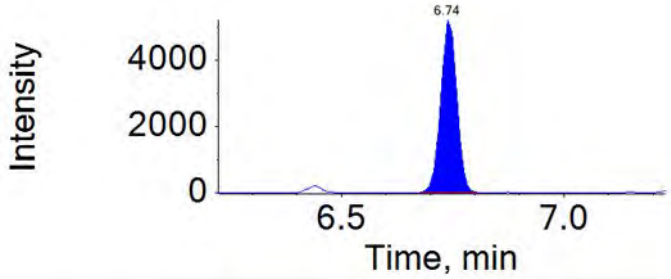
Analyte: PFTeDA
713.0 / 669.0



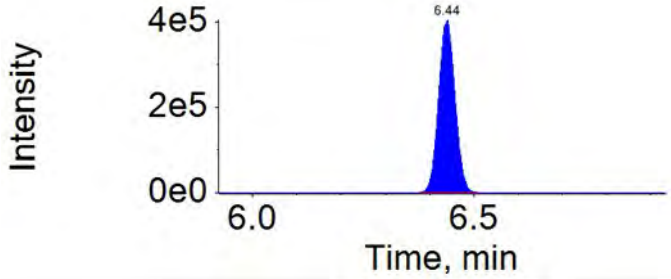
Extraction Standard: 13C2-PFTeDA
715.0 / 670.0



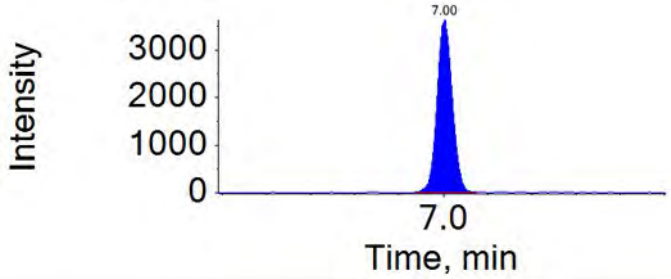
Analyte: PFHxDA
813.0 / 769.0



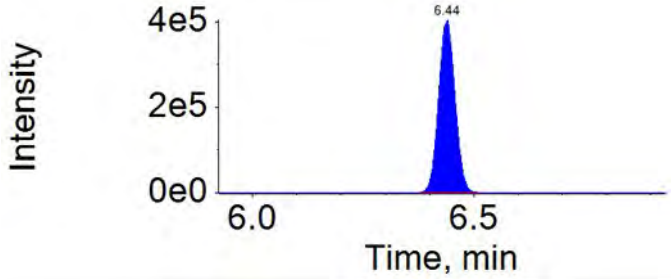
Extraction Standard: 13C2-PFTeDA
715.0 / 670.0



Analyte: PFODA
913.0 / 869.0



Extraction Standard: 13C2-PFTeDA
715.0 / 670.0



APPROVED
By MCD at 5:01 pm, 11/28/18

REVIEWED
By HMK at 12:22 pm, 11/29/18

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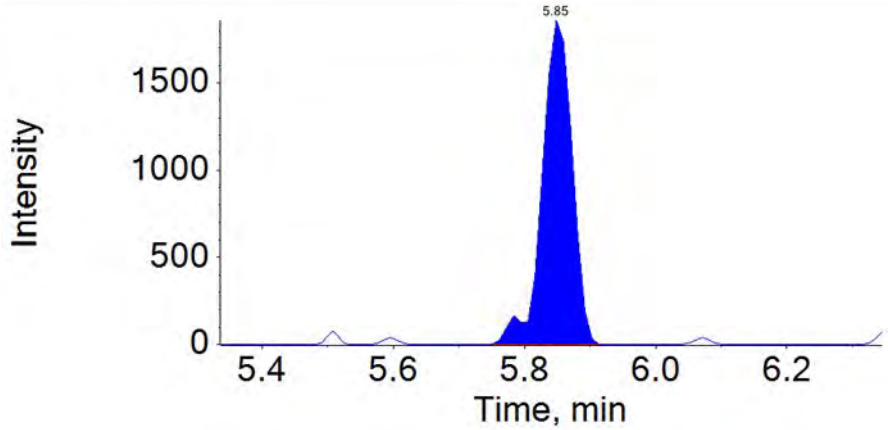
Auto Integrations prior to Manual Integration

Print Date: 11/28/2018 4:54 PM
Template: MQ-OrigInteg-16NOV21.docx

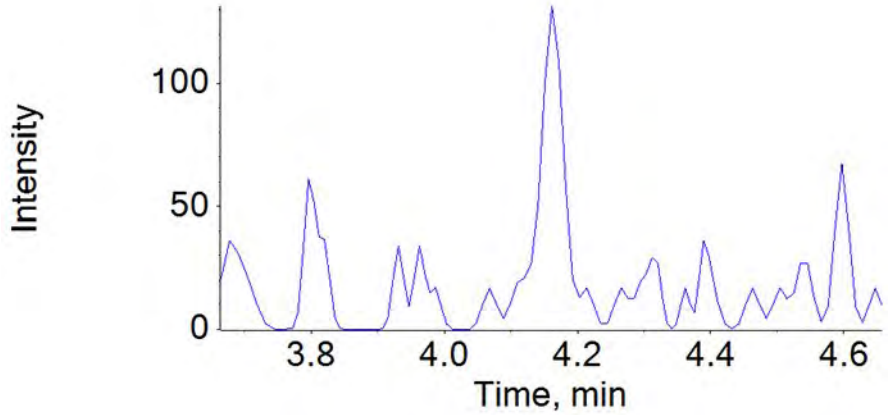
Results Table Name: 18NOV28DCAL
Results Table Date: 11/28/2018 4:52:53 PM
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

Component Name:
NEtFOSAA
RT (min.):
5.85
Peak Area:
5953.37
Mass Range:
584.0 / 419.0
File Name:
18NOV28DCAL-05.wiff
Sample Name:
MDL



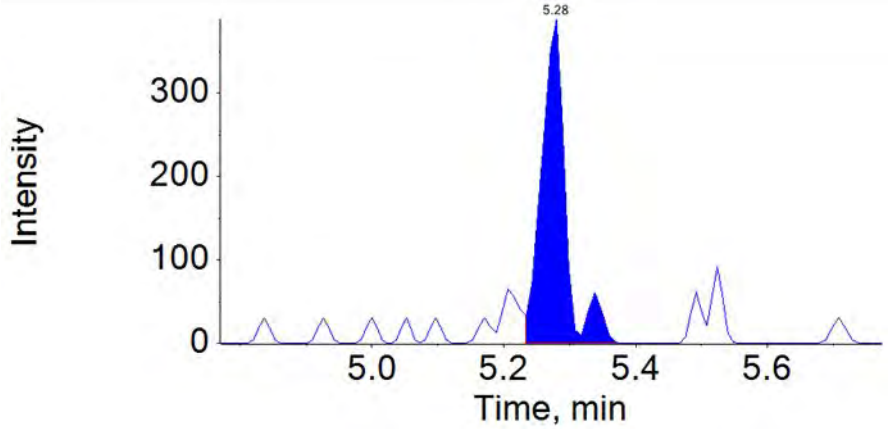
Integration Comment: incorrect integration

Component Name:
PFHxA_2
RT (min.):
N/A
Peak Area:
N/A
Mass Range:
313.0 / 119.0
File Name:
18NOV28DCAL-05.wiff
Sample Name:
MDL



Integration Comment: incorrect integration

Component Name:
PFNA_2
RT (min.):
5.28
Peak Area:
991.88
Mass Range:
463.0 / 169.0
File Name:
18NOV28DCAL-05.wiff
Sample Name:
MDL



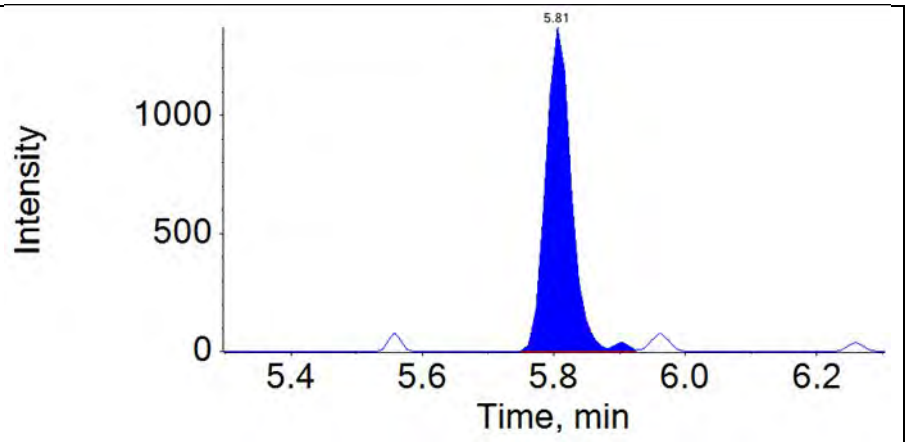
Integration Comment: incorrect integration

APPROVED
By MCD at 5:01 pm, 11/28/18

REVIEWED
By HMK at 12:22 pm, 11/29/18

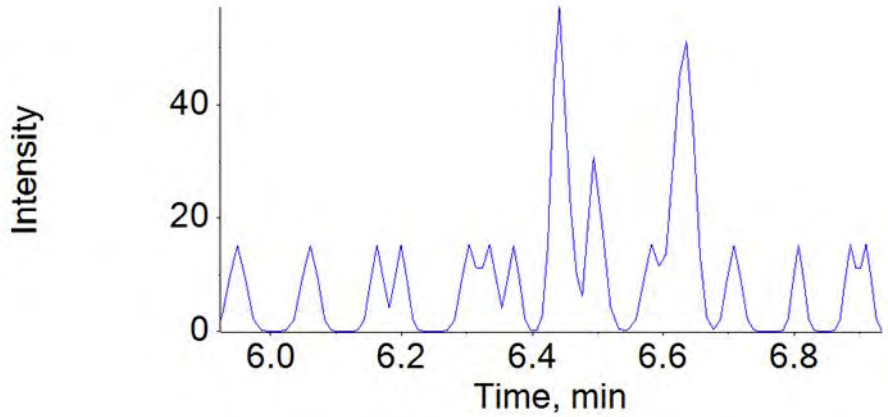
Results Table Name: 18NOV28DCAL
Results Table Date: 11/28/2018 4:52:53 PM
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

Component Name:
PFDS_2
RT (min.):
5.81
Peak Area:
3733.02
Mass Range:
599.0 / 99.0
File Name:
18NOV28DCAL-05.wiff
Sample Name:
MDL



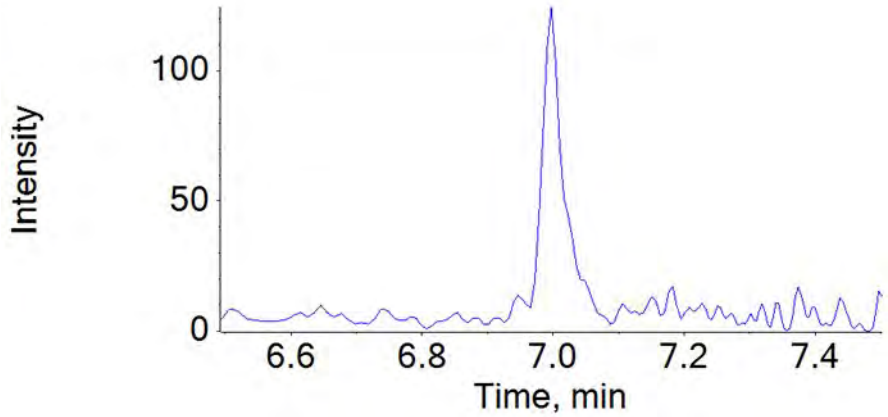
Integration Comment: incorrect integration

Component Name:
PFTeDA_2
RT (min.):
N/A
Peak Area:
N/A
Mass Range:
713.0 / 169.0
File Name:
18NOV28DCAL-05.wiff
Sample Name:
MDL



Integration Comment: incorrect integration

Component Name:
PFODA_2
RT (min.):
N/A
Peak Area:
N/A
Mass Range:
913.0 / 169.0
File Name:
18NOV28DCAL-05.wiff
Sample Name:
MDL



Integration Comment: incorrect integration

APPROVED
By MCD at 5:01 pm, 11/28/18

REVIEWED
By HMK at 12:22 pm, 11/29/18

Results Table Name: 18NOV28DCAL
Results Table Date: 11/28/2018 4:52:53 PM
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

APPROVED
By MCD at 5:01 pm, 11/28/18

REVIEWED
By HMK at 12:22 pm, 11/29/18

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LC-MS/MS Analysis Report

Printed: 11/28/2018 4:51:00 PM
Template: IonRatio18OCT10

Ion Ratio Report

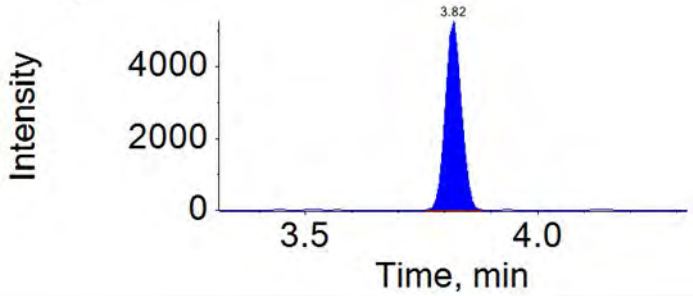
Sample Name: MDL **Instrument Name:** LM27631 **File Name:** 18NOV28DCAL-05.wiff

Component Name	RT	RRT	Analyte Area Response	Int Typ	Expected Ion Ratio	Ion Ratio	Ion Ratio % Diff	Ion Ratio Limit	Ion Ratio OOS
PFBS	3.82	1.00	12605.11	A	0.3655	0.3999			
PFBS_2	3.82	1.00	5040.50	A	0.3655	0.3999	9	50	
4:2-FTS	4.13	1.00	2928.74	A	0.6383	0.8346			
4:2-FTS_2	4.14	1.00	2444.20	A	0.6383	0.8346	31	50	
PFHxA	4.17	1.00	32436.10	A	0.0103	0.0108			
PFHxA_2	4.16	1.00	351.77	M	0.0103	0.0108	5	50	
PFPeS	4.19	1.10	5200.81	A	0.4976	0.5489			
PFPeS_2	4.18	1.10	2854.76	A	0.4976	0.5489	10	50	
PFHpA	4.56	1.00	34134.49	A	0.0557	0.0423			
PFHpA_2	4.56	1.00	1443.47	A	0.0557	0.0423	-24	50	
PFHxS	4.56	1.00	11072.62	A	0.3693	0.3363			
PFHxS_2	4.56	1.00	3723.62	A	0.3693	0.3363	-9	50	
6:2-FTS	4.91	1.00	4195.71	A	0.6625	0.7204			
6:2-FTS_2	4.92	1.00	3022.50	A	0.6625	0.7204	9	50	
PFHpS	4.92	1.08	10674.87	A	0.3915	0.3919			
PFHpS_2	4.92	1.08	4183.13	A	0.3915	0.3919	0	50	
PFOA	4.93	1.00	35831.52	A	0.0573	0.0601			
PFOA_2	4.93	1.00	2154.33	A	0.0573	0.0601	5	50	
PFOS	5.25	1.00	10490.26	A	0.2960	0.3261			
PFOS_2	5.26	1.00	3420.70	A	0.2960	0.3261	10	50	
PFNA	5.27	1.00	29535.31	A	0.0201	0.0303			
PFNA_2	5.28	1.00	895.63	M	0.0201	0.0303	51	50	OOS
PFNS	5.55	1.06	5896.87	A	0.4794	0.3569			
PFNS_2	5.55	1.06	2104.41	A	0.4794	0.3569	-26	50	
PFDA	5.58	1.00	28044.30	A	0.0075	0.0083			
PFDA_2	5.59	1.00	233.51	A	0.0075	0.0083	11	50	
8:2-FTS	5.58	1.00	3464.55	A	0.5380	0.6552			
8:2-FTS_2	5.58	1.00	2270.14	A	0.5380	0.6552	22	50	
NMeFOSAA	5.71	1.00	6753.67	A	0.2305	0.2846			
NMeFOSAA_2	5.71	1.00	1921.86	A	0.2305	0.2846	23	50	
PFDS	5.81	1.10	7418.03	A	0.5356	0.4947			
PFDS_2	5.81	1.10	3669.44	M	0.5356	0.4947	-8	50	
PFUnDA	5.83	1.00	27644.34	A	0.0038	0.0094			
PFUnDA_2	5.84	1.00	259.49	A	0.0038	0.0094	147	50	OOS
NEtFOSAA	5.85	1.00	5734.33	M	0.7356	0.4625			
NEtFOSAA_2	5.85	1.00	2652.07	A	0.7356	0.4625	-37	50	
PFDoDA	6.06	1.00	38884.24	A	0.0130	0.0152			
PFDoDA_2	6.06	1.00	589.76	A	0.0130	0.0152	16	50	
10:2-FTS	6.08	1.09	3761.82	A	0.6989	0.6514			
10:2-FTS_2	6.08	1.09	2450.53	A	0.6989	0.6514	-7	50	
PFTrDA	6.26	1.03	35013.33	A	0.0090	0.0082			
PFTrDA_2	6.26	1.03	286.20	A	0.0090	0.0082	-9	50	
PFTeDA	6.44	1.00	27817.63	A	0.0056	0.0036			
PFTeDA_2	6.44	1.00	100.27	M	0.0056	0.0036	-36	50	
PFHxDA	6.74	1.05	13033.35	A	0.0646	0.0669			
PFHxDA_2	6.74	1.05	872.25	A	0.0646	0.0669	4	50	
PFODA	7.00	1.09	8671.11	A	0.0264	0.0329			
PFODA_2	7.00	1.09	285.12	M	0.0264	0.0329	24	50	

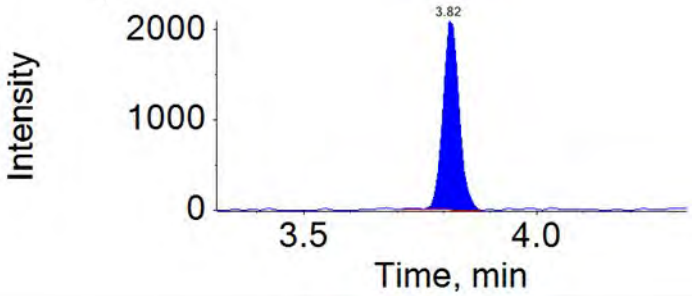
APPROVED
By MCD at 5:01 pm, 11/28/18

REVIEWED
By HMK at 12:22 pm, 11/29/18

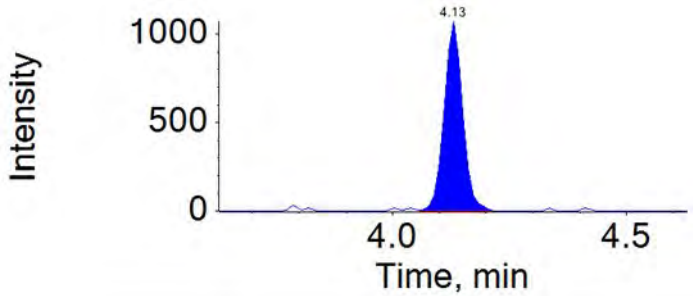
Component: PFBS
Primary Mass: 299.0 / 80.0



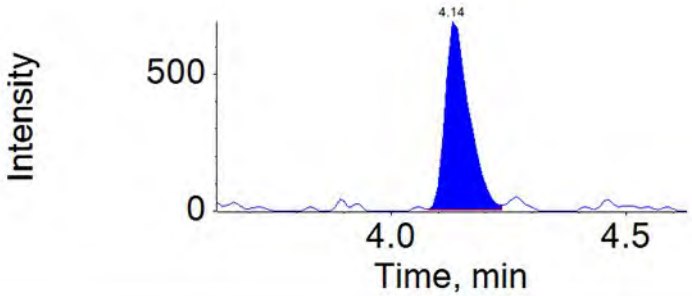
Component: PFBS_2
Secondary Mass: 299.0 / 99.0



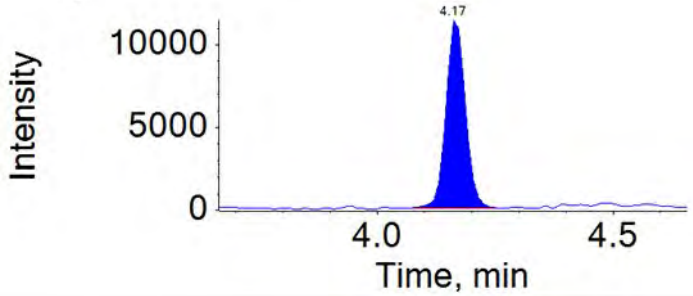
Component: 4:2-FTS
Primary Mass: 327.0 / 307.0



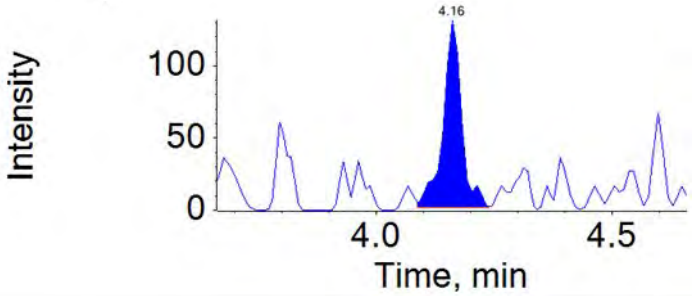
Component: 4:2-FTS_2
Secondary Mass: 327.0 / 81.0



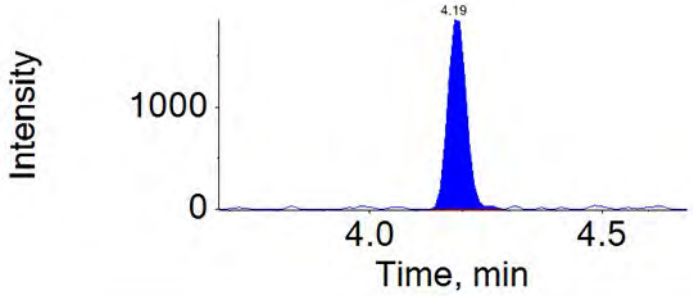
Component: PFHxA
Primary Mass: 313.0 / 269.0



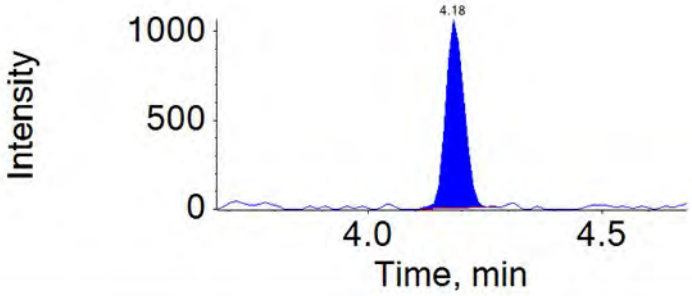
Component: PFHxA_2
Secondary Mass: 313.0 / 119.0



Component: PFPeS
Primary Mass: 349.0 / 80.0



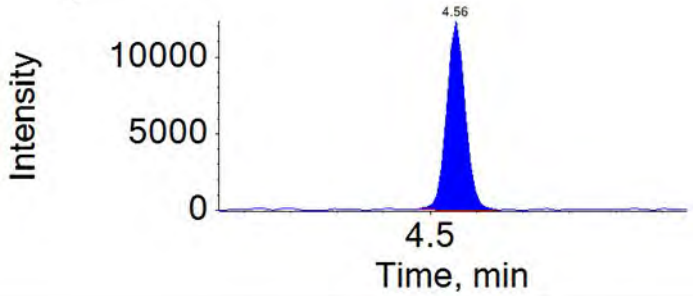
Component: PFPeS_2
Secondary Mass: 349.0 / 99.0



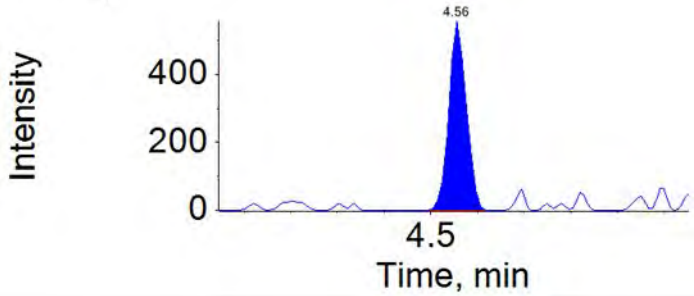
APPROVED
By MCD at 5:01 pm, 11/28/18

REVIEWED
By HMK at 12:22 pm, 11/29/18

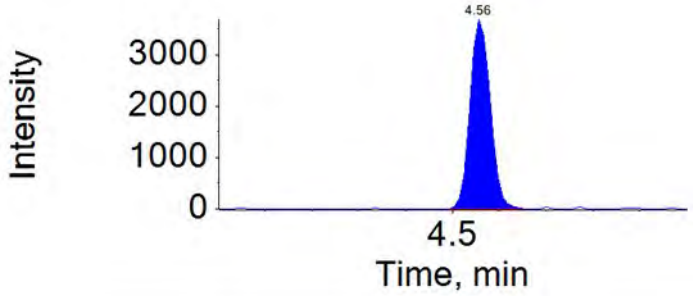
Component: PFHpA
Primary Mass: 363.0 / 319.0



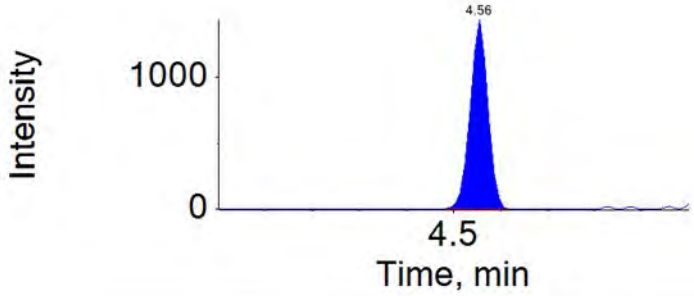
Component: PFHpA_2
Secondary Mass: 363.0 / 169.0



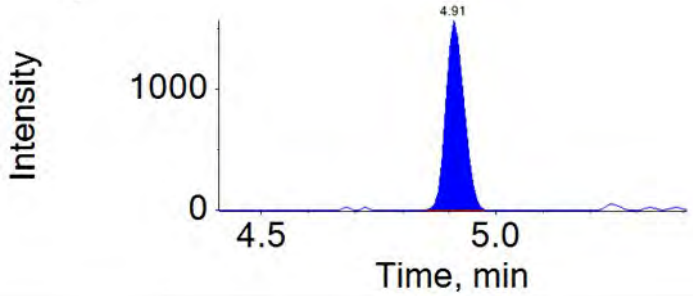
Component: PFHxS
Primary Mass: 399.0 / 80.0



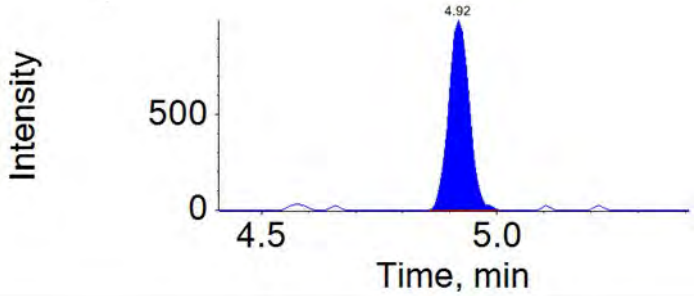
Component: PFHxS_2
Secondary Mass: 399.0 / 99.0



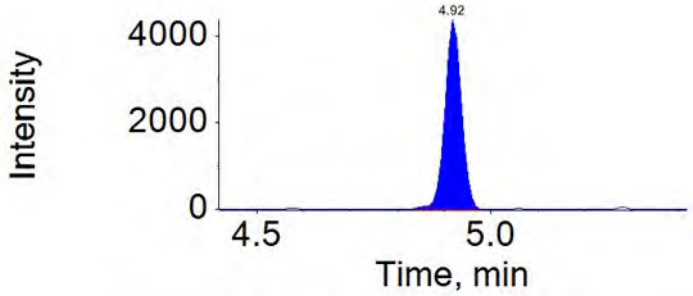
Component: 6:2-FTS
Primary Mass: 427.0 / 407.0



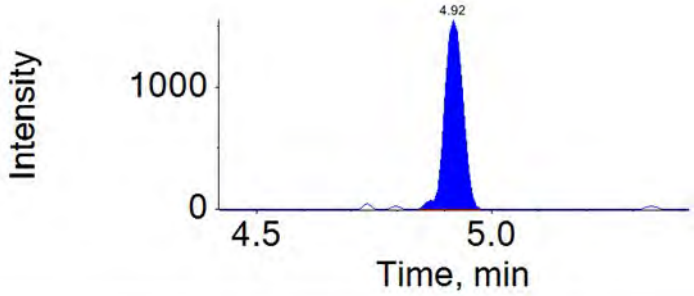
Component: 6:2-FTS_2
Secondary Mass: 427.0 / 81.0



Component: PFHpS
Primary Mass: 449.0 / 80.0



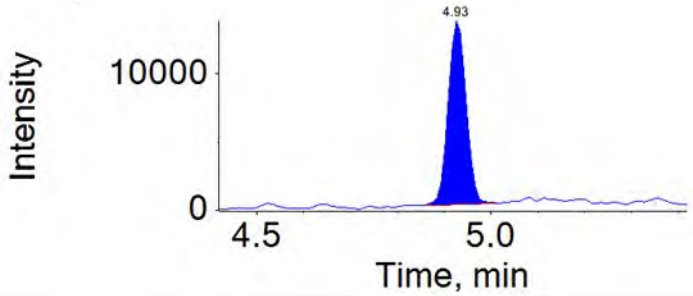
Component: PFHpS_2
Secondary Mass: 449.0 / 99.0



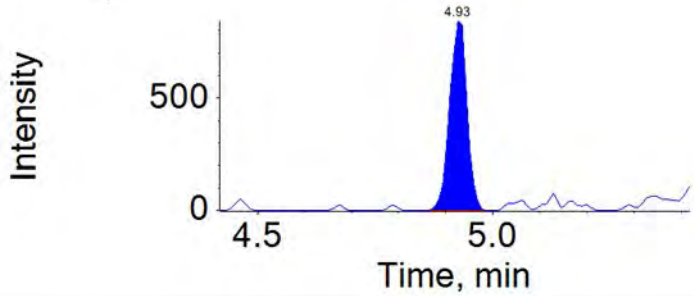
APPROVED
By MCD at 5:01 pm, 11/28/18

REVIEWED
By HMK at 12:22 pm, 11/29/18

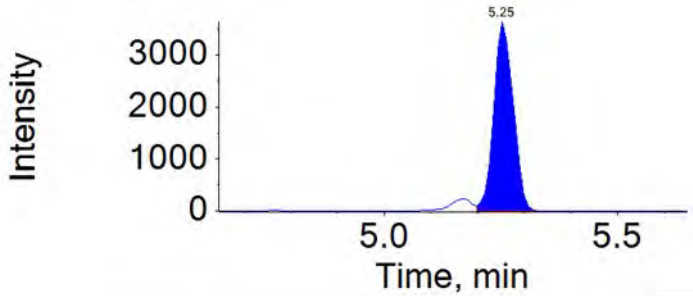
Component: PFOA
Primary Mass: 413.0 / 369.0



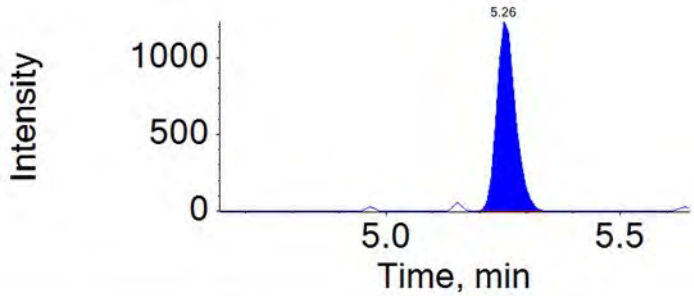
Component: PFOA_2
Secondary Mass: 413.0 / 169.0



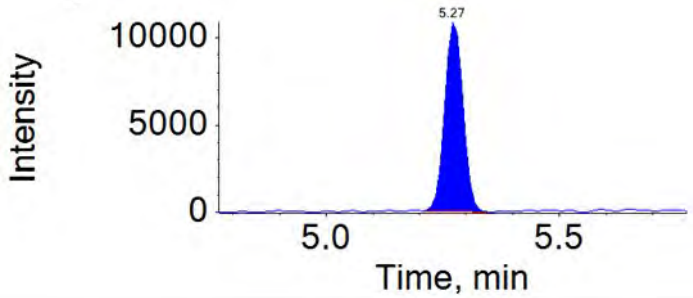
Component: PFOS
Primary Mass: 499.0 / 80.0



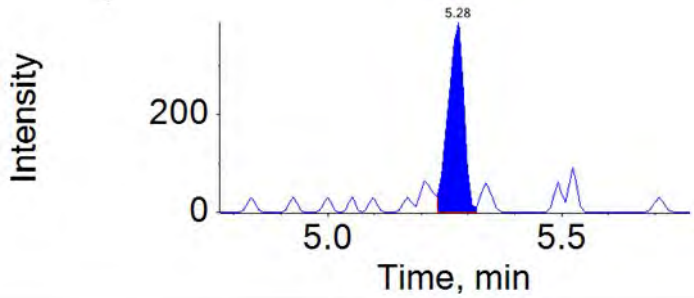
Component: PFOS_2
Secondary Mass: 499.0 / 99.0



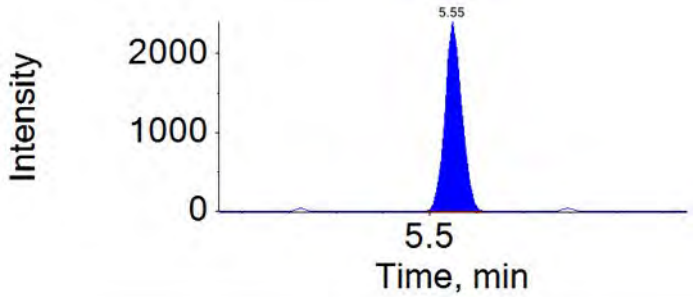
Component: PFNA
Primary Mass: 463.0 / 419.0



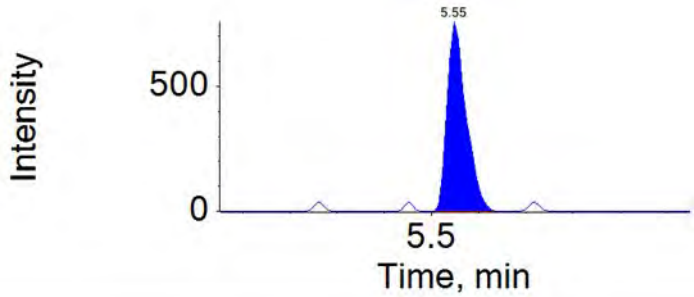
Component: PFNA_2
Secondary Mass: 463.0 / 169.0



Component: PFNS
Primary Mass: 549.0 / 80.0



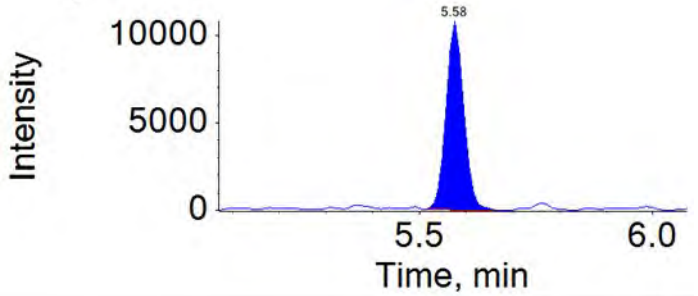
Component: PFNS_2
Secondary Mass: 549.0 / 99.0



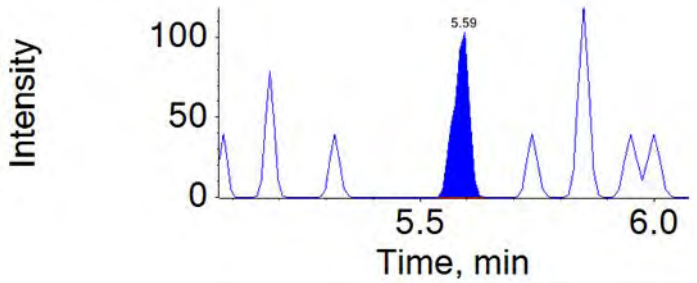
APPROVED
By MCD at 5:01 pm, 11/28/18

REVIEWED
By HMK at 12:22 pm, 11/29/18

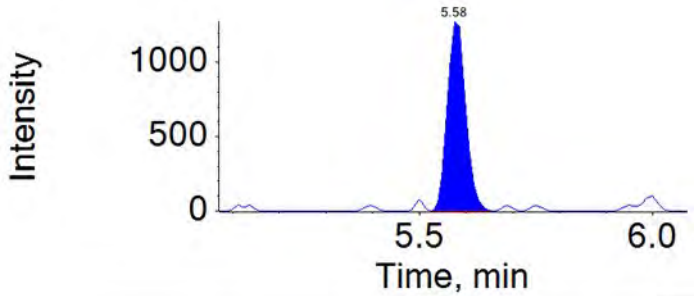
Component: PFDA
Primary Mass: 513.0 / 469.0



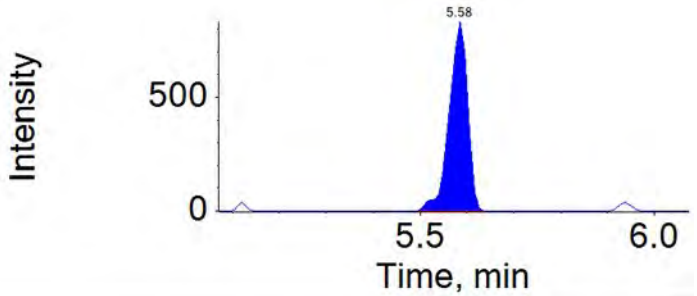
Component: PFDA_2
Secondary Mass: 513.0 / 169.0



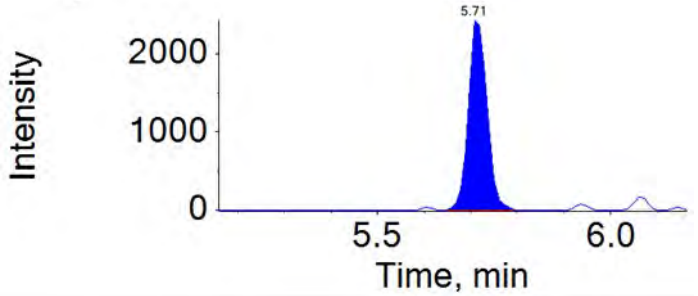
Component: 8:2-FTS
Primary Mass: 527.0 / 507.0



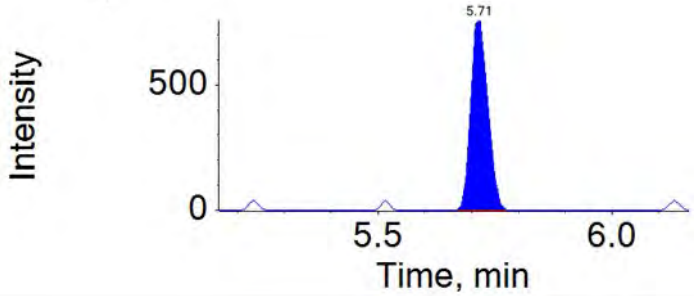
Component: 8:2-FTS_2
Secondary Mass: 527.0 / 81.0



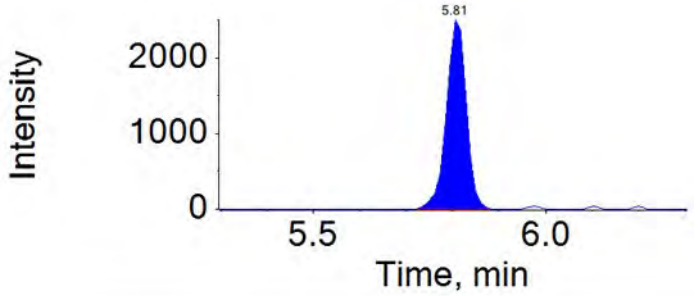
Component: NMeFOSAA
Primary Mass: 570.0 / 419.0



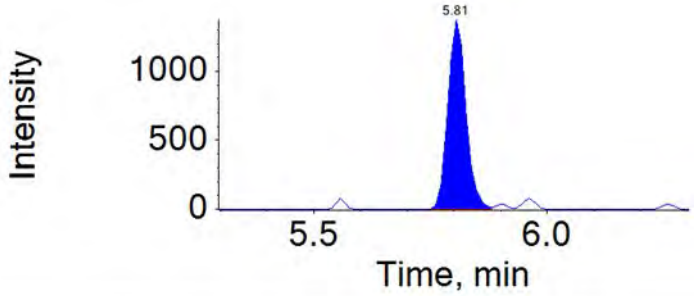
Component: NMeFOSAA_2
Secondary Mass: 570.0 / 483.0



Component: PFDS
Primary Mass: 599.0 / 80.0



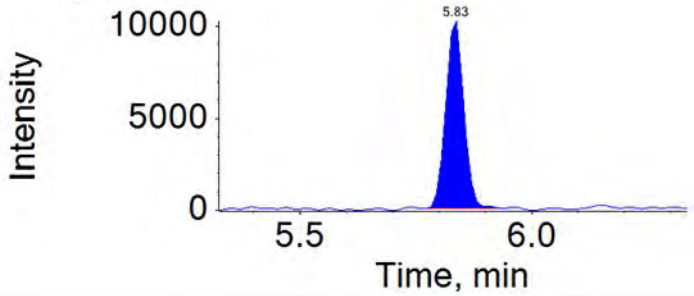
Component: PFDS_2
Secondary Mass: 599.0 / 99.0



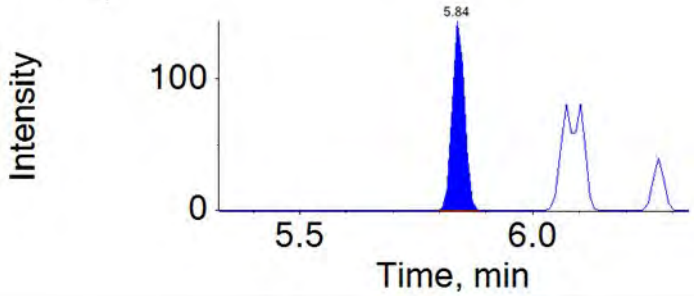
APPROVED
By MCD at 5:01 pm, 11/28/18

REVIEWED
By HMK at 12:22 pm, 11/29/18

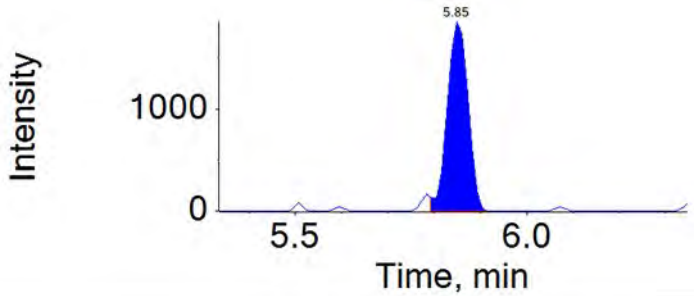
Component: PFUnDA
Primary Mass: 563.0 / 519.0



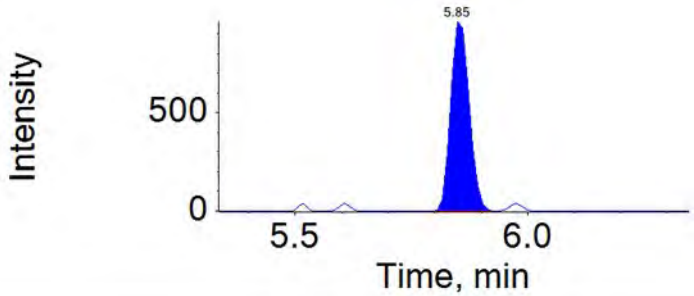
Component: PFUnDA_2
Secondary Mass: 563.0 / 169.0



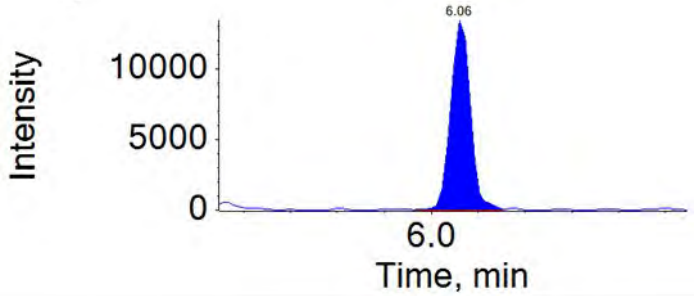
Component: NEtFOSAA
Primary Mass: 584.0 / 419.0



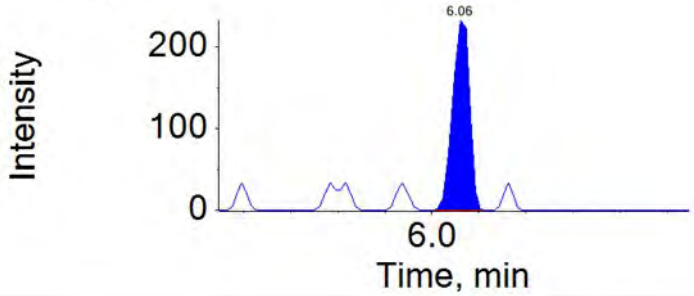
Component: NEtFOSAA_2
Secondary Mass: 584.0 / 526.0



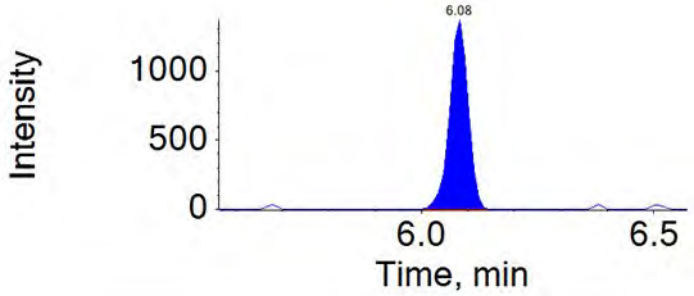
Component: PFDoDA
Primary Mass: 613.0 / 569.0



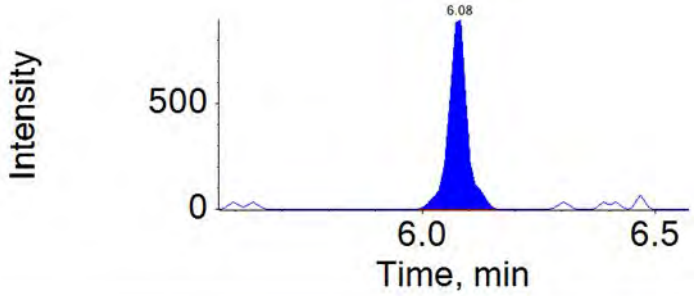
Component: PFDoDA_2
Secondary Mass: 613.0 / 169.0



Component: 10:2-FTS
Primary Mass: 627.0 / 607.0



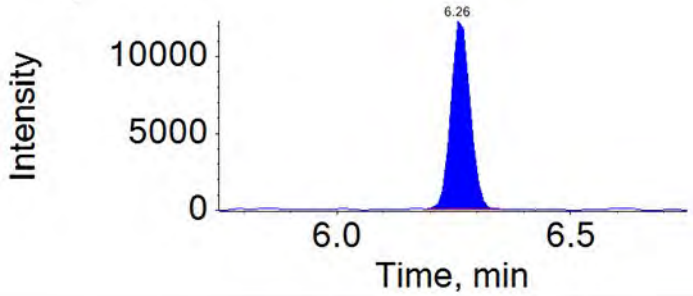
Component: 10:2-FTS_2
Secondary Mass: 627.0 / 81.0



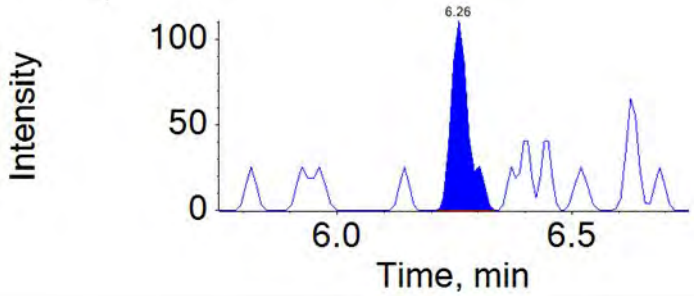
APPROVED
By MCD at 5:01 pm, 11/28/18

REVIEWED
By HMK at 12:22 pm, 11/29/18

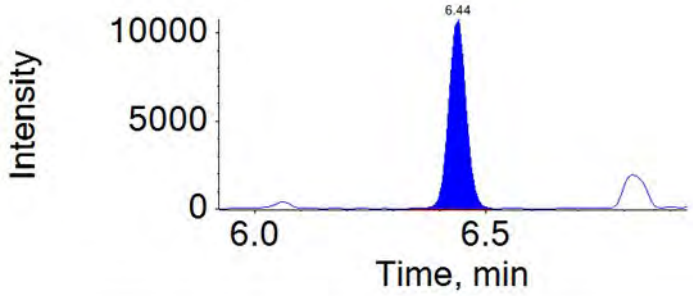
Component: PFTrDA
Primary Mass: 663.0 / 619.0



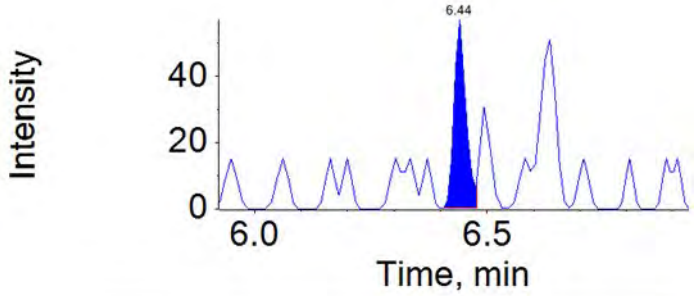
Component: PFTrDA_2
Secondary Mass: 663.0 / 169.0



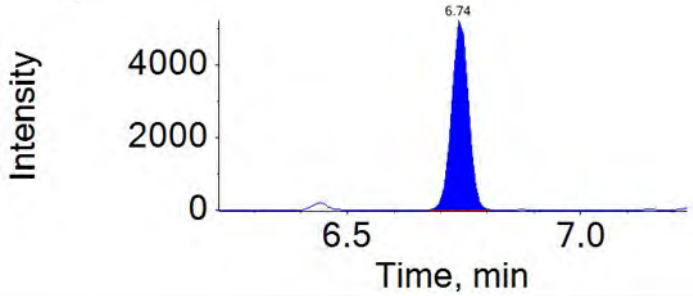
Component: PFTeDA
Primary Mass: 713.0 / 669.0



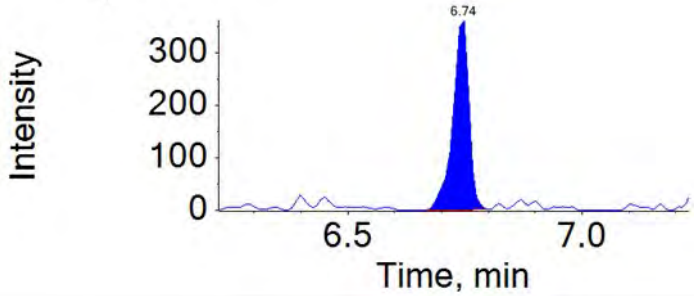
Component: PFTeDA_2
Secondary Mass: 713.0 / 169.0



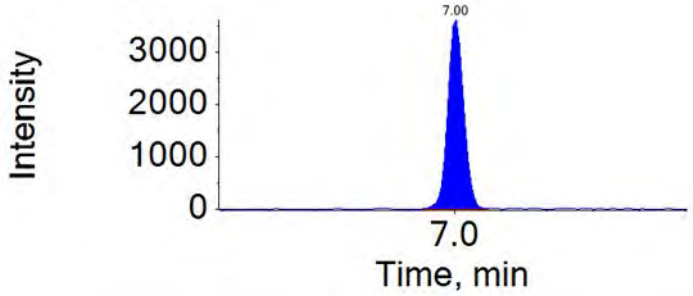
Component: PFHxDA
Primary Mass: 813.0 / 769.0



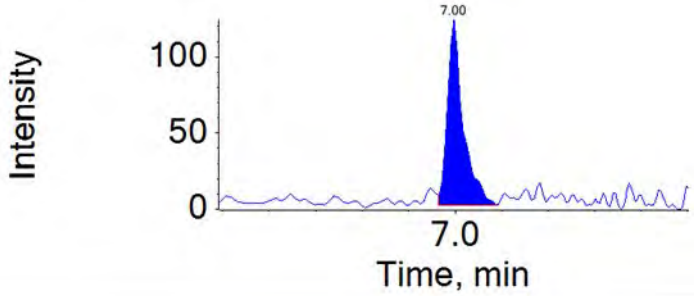
Component: PFHxDA_2
Secondary Mass: 813.0 / 169.0



Component: PFODA
Primary Mass: 913.0 / 869.0



Component: PFODA_2
Secondary Mass: 913.0 / 169.0



APPROVED
By MCD at 5:01 pm, 11/28/18

REVIEWED
By HMK at 12:22 pm, 11/29/18

ICAL Name: 18NOV28DCAL
QMethod Name: 18AUG20QM
Result Table: 18NOV28DCAL 11/28/2018 4:47:11 PM
Acquisition Method: 18AUG13_3uL.dam

Sample Name:	ICV			**Data File:**		18NOV28DCAL-14.wiff
Sample ID:	ICVMODX1833G			**Acquis Date:**		2018-11-28T14:54:22
Sample Type:	Quality Control			**Instrument:**		LM27631
Vial Position:	10			**Acquis Method:**		18AUG13_3uL.dam
Injection Vol:	3.00			**Result Table:**		18NOV28DCAL
QMethod File:	18AUG20QM			**ICAL Name:**		18NOV28DCAL
Batch Number:	N/A			**Operator:**		MCD7824
Sample Wt.:	1.00000			**Dilution Factor:**		1.00
Sample Vol.:	1.000			**Prep Factor:**		1.000

Injection Standard Peak Table

Injection Standard Area Reference File: 18NOV28DCAL-08

Injection Standard Name	Inj Std Conc	Injection Std Peak Area	Rreference Injection Standard Area	Injection Std %Diff	Injection Std %Diff Limit	Injection Std %Diff OOS
13C3-PFBA	5.0	909586.4	887248.9	3	50	
13C2-PFOA	5.0	531347.1	498501.6	7	50	
13C4-PFOS	4.8	296756.3	283214.2	5	50	
13C2-PFDA	5.0	468972.3	441790.6	6	50	

Extraction Standard Peak Table

Extraction Standard Name	Ext Std Area	Inj Std Name	Inj Std Area	Area Ratio	Ext Std Conc	Ext Std Result	Ext Std %REC	Ext Std %REC Limit	Ext Std OOS
E13C4-PFBA	992615.8	13C3-PFBA	909586.4	1.091	5.000	4.869	97	70-130	
E13C5-PFPeA	975580.9	13C3-PFBA	909586.4	1.073	5.000	5.008	100	70-130	
E13C3-PFBS	446011.0	13C3-PFBA	909586.4	0.490	4.650	4.678	101	70-130	
E13C2-4:2-FTS	68184.3	13C2-PFOA	531347.1	0.128	4.670	4.422	95	70-130	
E13C5-PFHxA	699371.3	13C2-PFOA	531347.1	1.316	5.000	4.834	97	70-130	
E13C3-PFHxS	317109.0	13C2-PFOA	531347.1	0.597	4.730	4.678	99	70-130	
E13C4-PFHpA	556403.1	13C2-PFOA	531347.1	1.047	5.000	4.812	96	70-130	
E13C2-6:2-FTS	63350.5	13C2-PFOA	531347.1	0.119	4.750	4.991	105	70-130	
E13C8-PFOA	1001731.4	13C2-PFOA	531347.1	1.885	5.000	5.189	104	70-130	
E13C8-PFOS	316117.1	13C4-PFOS	296756.3	1.065	4.780	4.809	101	70-130	
E13C9-PFNA	647064.1	13C4-PFOS	296756.3	2.180	5.000	4.789	96	70-130	
E13C6-PFDA	857032.9	13C2-PFDA	468972.3	1.827	5.000	5.153	103	70-130	
E13C2-8:2-FTS	51912.9	13C2-PFDA	468972.3	0.111	4.790	4.758	99	70-130	
E13C8-PFOSA	637370.7	13C2-PFDA	468972.3	1.359	5.000	4.987	100	70-130	
Ed3-NMeFOSAA	183040.0	13C2-PFDA	468972.3	0.390	5.000	4.956	99	70-130	
E13C7-PFUnDA	559327.4	13C2-PFDA	468972.3	1.193	5.000	5.041	101	70-130	
Ed5-NEtFOSAA	140840.0	13C2-PFDA	468972.3	0.300	5.000	5.350	107	70-130	
E13C2-PFDoDA	1134142.1	13C2-PFDA	468972.3	2.418	5.000	5.081	102	70-130	
Ed7-NMePFOSAE	262732.2	13C2-PFDA	468972.3	0.560	5.000	4.842	97	70-130	
Ed3-NMePFOSA	81059.5	13C2-PFDA	468972.3	0.173	5.000	4.678	94	70-130	
Ed9-NEtPFOSAE	227167.7	13C2-PFDA	468972.3	0.484	5.000	4.911	98	70-130	
Ed5-NEtPFOSA	67297.9	13C2-PFDA	468972.3	0.144	5.000	4.986	100	70-130	
E13C2-PFTeDA	820071.7	13C2-PFDA	468972.3	1.749	5.000	4.839	97	70-130	

APPROVED
By MCD at 5:01 pm, 11/28/18

REVIEWED
By HMK at 12:22 pm, 11/29/18

ICAL Name: 18NOV28DCAL **Result Table:** 18NOV28DCAL 11/28/2018 4:47:11 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

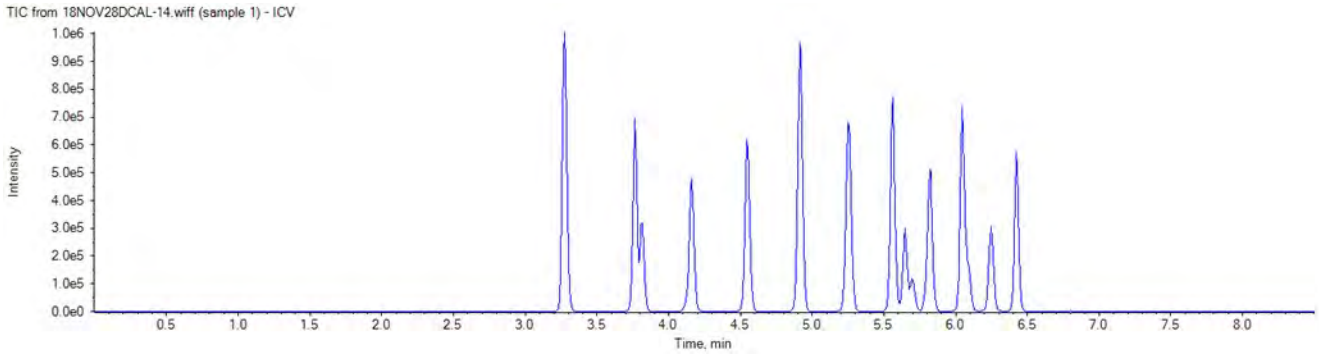
Analyte Quantitation Peak Table

Sample Name: ICV **Instrument Name:** LM27631 **File Name:** 18NOV28DCAL-14.wiff

Sample Wt	Sample Vol	Dilution Factor	PrepFactor
1.00000	1.000	1.00	1.000

Analyte Name	RT	RRT	Analyte Area Response	E	Int Typ	ES Name	ES RT	ES Area Response	Area Ratio	Sample Result (ng/g)
PFBA	3.27	1.000	387187.0		A	13C4-PFBA	3.27	992615.8	0.390	2.138
PFPeA	3.77	1.000	377961.6		A	13C5-PFPeA	3.77	975580.9	0.387	1.901
PFBS	3.81	1.000	159425.0		A	13C3-PFBS	3.82	446011.0	0.357	1.735
4:2-FTS	N/A	N/A	N/A		A	13C2-4:2-FTS	4.13	68184.3	N/A	
PFHxA	4.16	1.000	369137.1		A	13C5-PFHxA	4.16	699371.3	0.528	2.119
PFPeS	N/A	N/A	N/A		A	13C3-PFBS	3.82	446011.0	N/A	
PFHpA	4.55	1.000	373590.8		A	13C4-PFHpA	4.55	556403.1	0.671	2.072
PFHxS	4.55	1.000	125085.3		A	13C3-PFHxS	4.55	317109.0	0.394	1.847
6:2-FTS	N/A	N/A	N/A		A	13C2-6:2-FTS	4.90	63350.5	N/A	
PFHpS	4.91	1.080	131043.1		A	13C3-PFHxS	4.55	317109.0	0.413	2.062
PFOA	4.92	1.000	404358.9		A	13C8-PFOA	4.92	1001731.4	0.404	2.086
PFOS	5.25	1.000	122334.6		A	13C8-PFOS	5.25	316117.1	0.387	1.623
PFNA	5.26	1.000	351872.0		A	13C9-PFNA	5.26	647064.1	0.544	2.084
PFNS	N/A	N/A	N/A		A	13C8-PFOS	5.25	316117.1	N/A	
PFDA	5.56	1.000	325191.9		A	13C6-PFDA	5.56	857032.9	0.379	2.148
8:2-FTS	N/A	N/A	N/A		A	13C2-8:2-FTS	5.57	51912.9	N/A	
PFOSA	N/A	N/A	N/A		A	13C8-PFOSA	5.65	637370.7	N/A	
NMeFOSAA	5.70	1.000	74168.8		A	d3-NMeFOSAA	5.70	183040.0	0.405	2.585
PFDS	5.79	1.100	72374.3		A	13C8-PFOS	5.25	316117.1	0.229	1.815
PFUnDA	5.82	1.000	354099.8		A	13C7-PFUnDA	5.82	559327.4	0.633	2.263
NEtFOSAA	5.83	1.000	57368.0		A	d5-NEtFOSAA	5.83	140840.0	0.407	1.984
PFDoDA	6.05	1.000	427818.9		A	13C2-PFDoDA	6.05	1134142.1	0.377	2.066
10:2-FTS	N/A	N/A	N/A		A	13C2-8:2-FTS	5.57	51912.9	N/A	
NMePFOSAE	N/A	N/A	N/A		A	d7-NMePFOSAE	6.09	262732.2	N/A	
NMePFOSA	N/A	N/A	N/A		A	d3-NMePFOSA	6.10	81059.5	N/A	
PFDoS	N/A	N/A	N/A		A	13C8-PFOS	5.25	316117.1	N/A	
NEtPFOSAE	N/A	N/A	N/A		A	d9-NEtPFOSAE	6.24	227167.7	N/A	
NEtPFOSA	N/A	N/A	N/A		A	d5-NEtPFOSA	6.26	67297.9	N/A	
PFTrDA	6.25	1.030	416758.4		A	13C2-PFDoDA	6.05	1134142.1	0.367	2.215
PFTeDA	6.42	1.000	312632.1		A	13C2-PFTeDA	6.42	820071.7	0.381	2.160
PFHxDA	N/A	N/A	N/A		A	13C2-PFTeDA	6.42	820071.7	N/A	
PFODA	N/A	N/A	N/A		A	13C2-PFTeDA	6.42	820071.7	N/A	

Total Ion Chromatogram

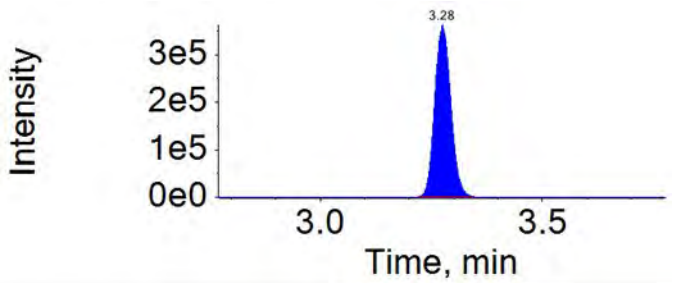


APPROVED
By MCD at 5:01 pm, 11/28/18

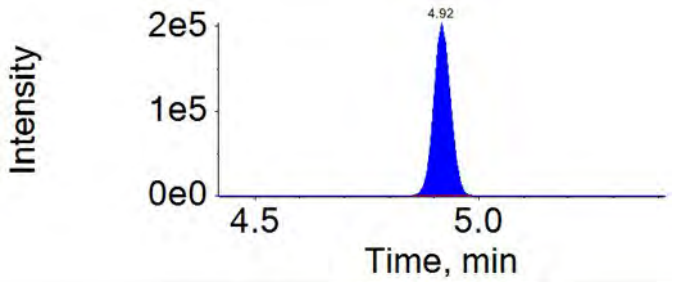
REVIEWED
By HMK at 12:22 pm, 11/29/18

ICAL Name: 18NOV28DCAL **Result Table:** 18NOV28DCAL 11/28/2018 4:47:11 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

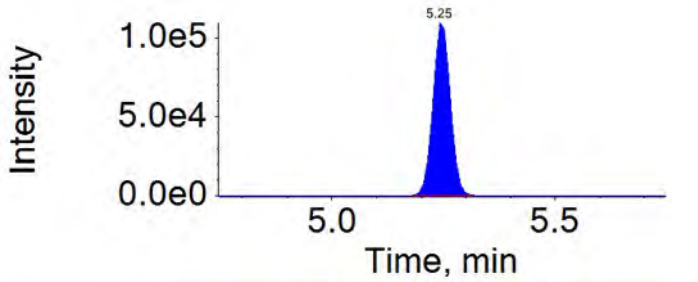
Injection Standard: 13C3-PFBA
216.0 / 172.0



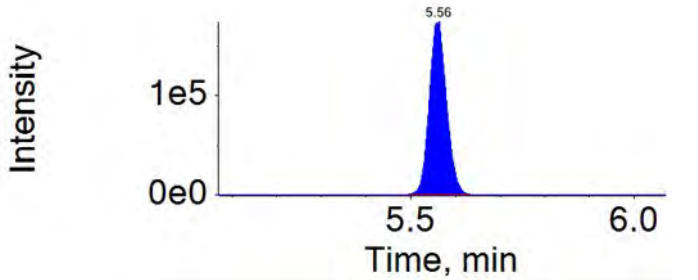
Injection Standard: 13C2-PFOA
415.0 / 370.0



Injection Standard: 13C4-PFOS
503.0 / 80.0

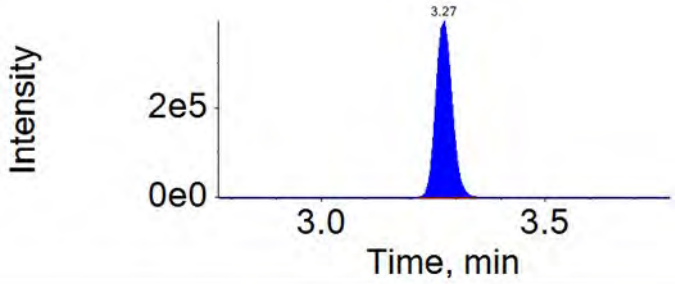


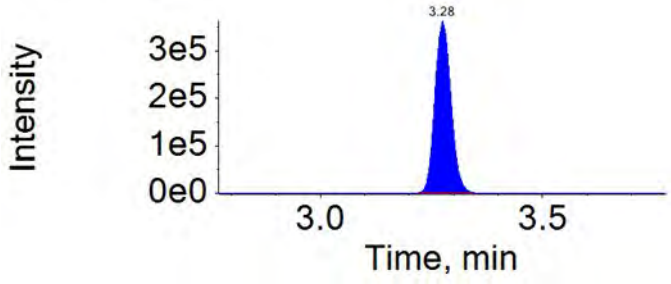
Injection Standard: 13C2-PFDA
515.0 / 470.0



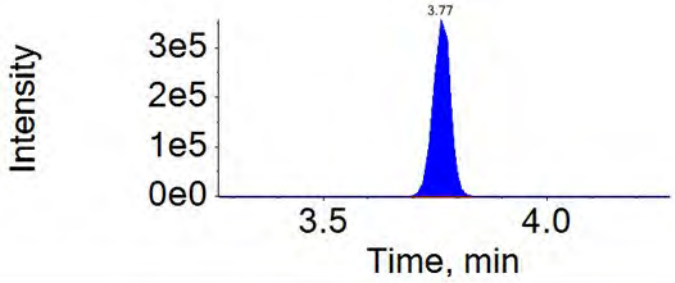
ICAL Name: 18NOV28DCAL **Result Table:** 18NOV28DCAL 11/28/2018 4:47:11 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

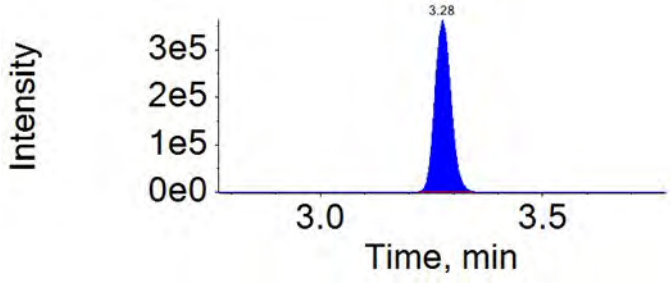
Extraction Standard: E13C4-PFBA	Injection Standard: 13C3-PFBA
217.0 / 172.0	216.0 / 172.0



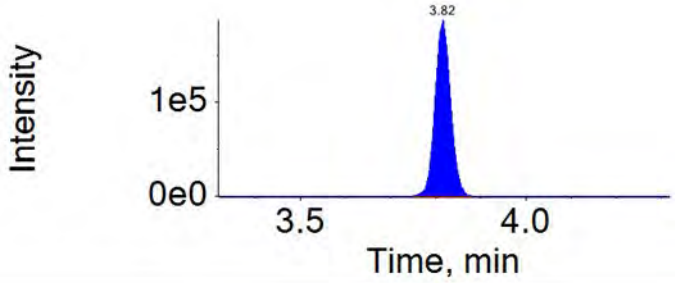


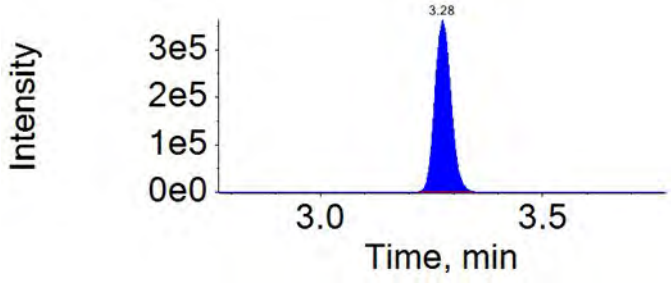
Extraction Standard: E13C5-PFPeA	Injection Standard: 13C3-PFBA
268.0 / 223.0	216.0 / 172.0



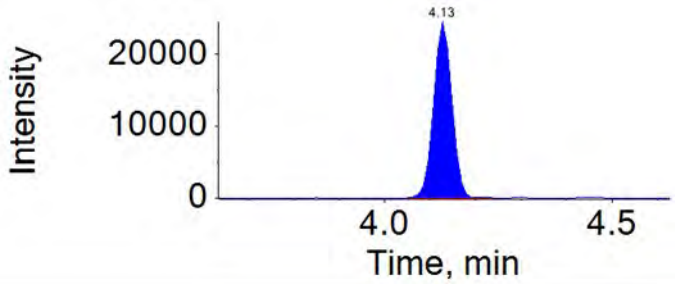


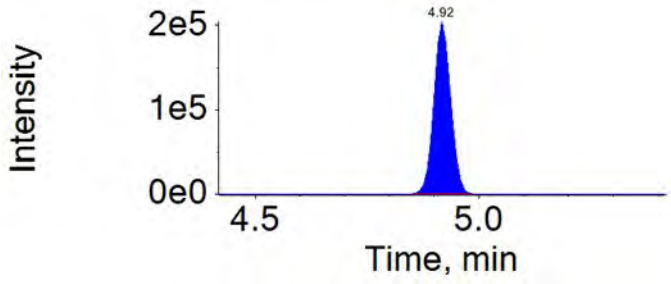
Extraction Standard: E13C3-PFBS	Injection Standard: 13C3-PFBA
302.0 / 80.0	216.0 / 172.0





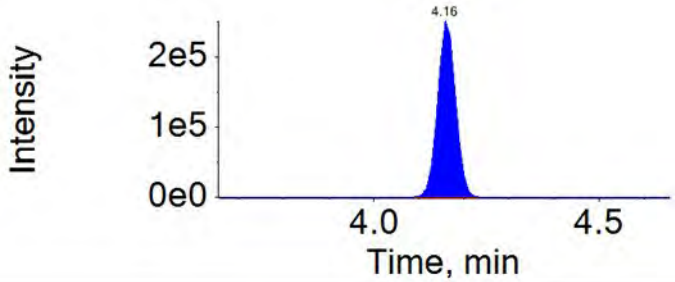
Extraction Standard: E13C2-4:2-FTS	Injection Standard: 13C2-PFOA
329.0 / 81.0	415.0 / 370.0

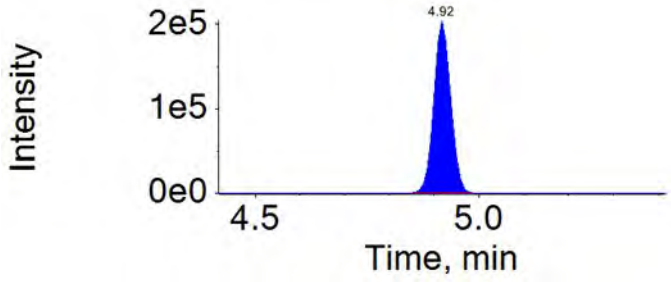




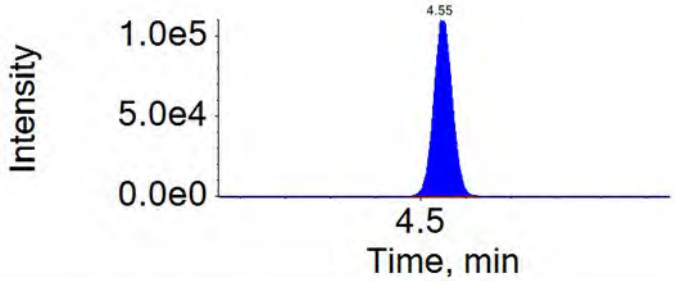
ICAL Name: 18NOV28DCAL **Result Table:** 18NOV28DCAL 11/28/2018 4:47:11 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

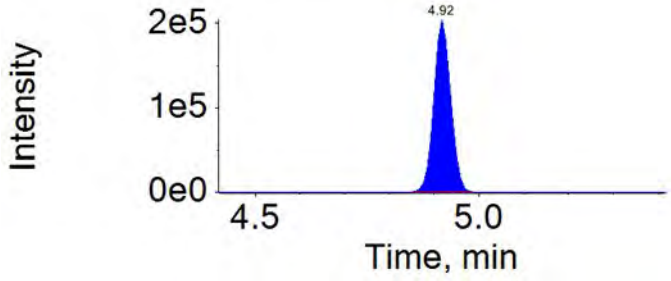
Extraction Standard: E13C5-PFHxA	Injection Standard: 13C2-PFOA
318.0 / 273.0	415.0 / 370.0



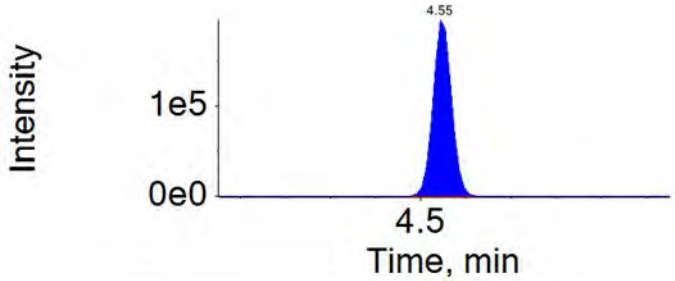


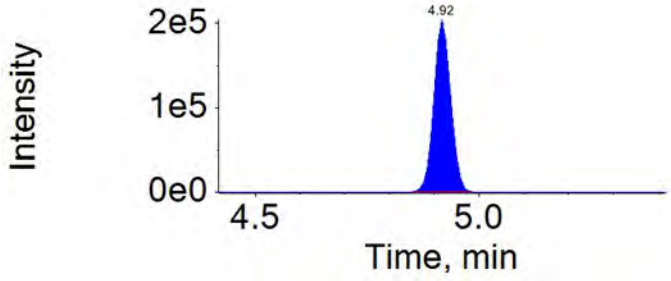
Extraction Standard: E13C3-PFHxS	Injection Standard: 13C2-PFOA
402.0 / 80.0	415.0 / 370.0



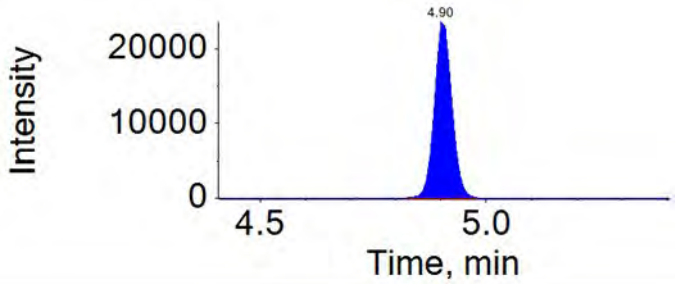


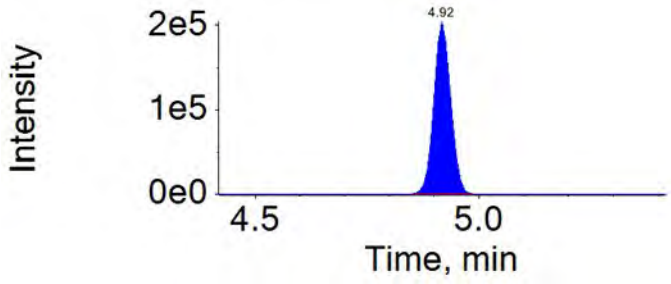
Extraction Standard: E13C4-PFHpA	Injection Standard: 13C2-PFOA
367.0 / 322.0	415.0 / 370.0





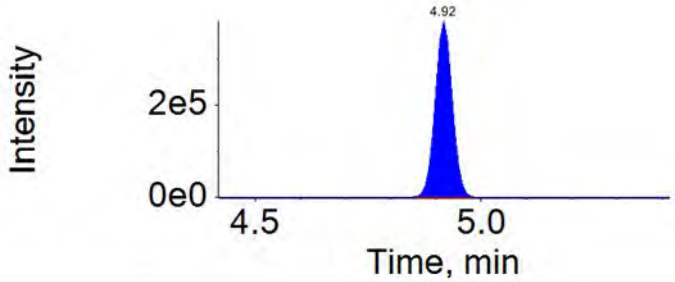
Extraction Standard: E13C2-6:2-FTS	Injection Standard: 13C2-PFOA
429.0 / 81.0	415.0 / 370.0

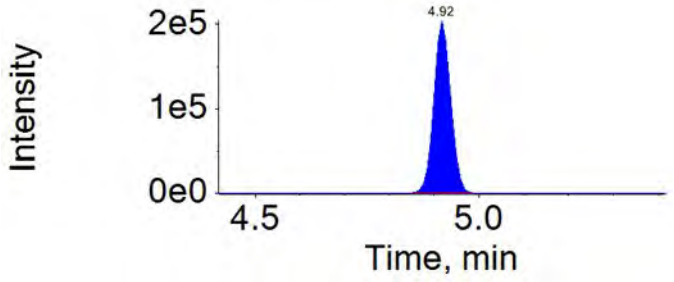




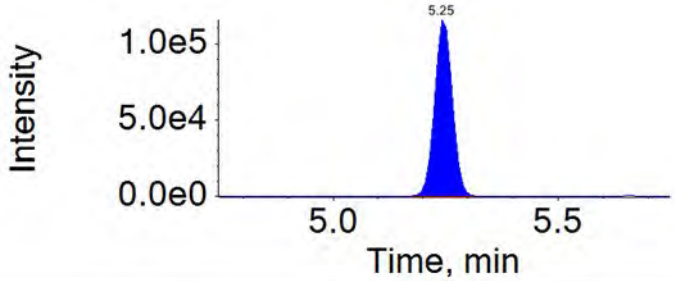
ICAL Name: 18NOV28DCAL **Result Table:** 18NOV28DCAL 11/28/2018 4:47:11 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

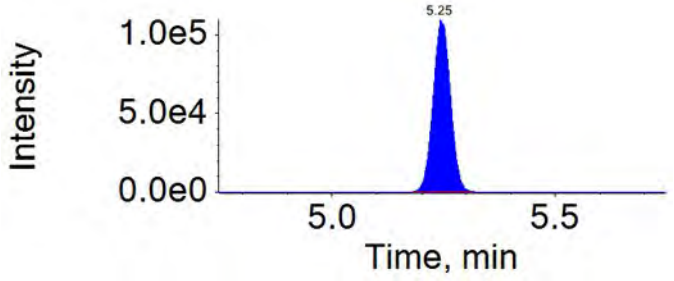
Extraction Standard: E13C8-PFOA	Injection Standard: 13C2-PFOA
421.0 / 376.0	415.0 / 370.0



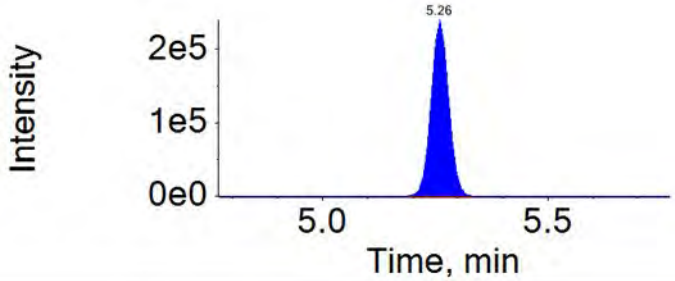


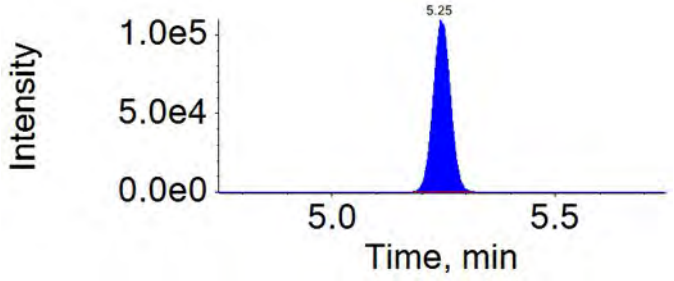
Extraction Standard: E13C8-PFOS	Injection Standard: 13C4-PFOS
507.0 / 80.0	503.0 / 80.0



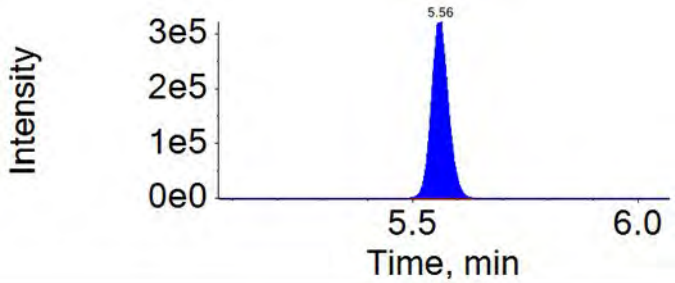


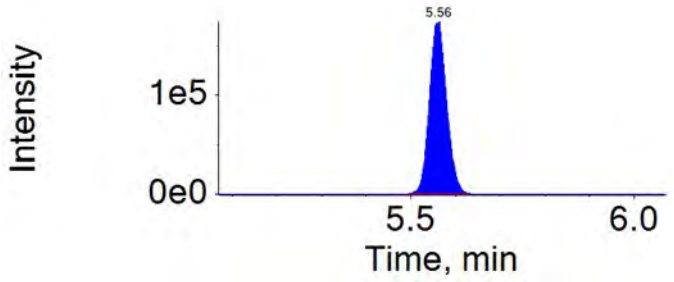
Extraction Standard: E13C9-PFNA	Injection Standard: 13C4-PFOS
472.0 / 427.0	503.0 / 80.0





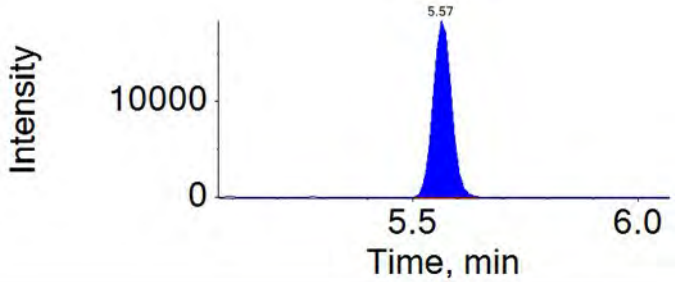
Extraction Standard: E13C6-PFDA	Injection Standard: 13C2-PFDA
519.0 / 474.0	515.0 / 470.0

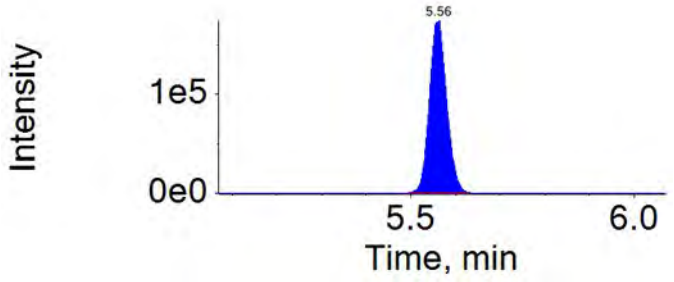




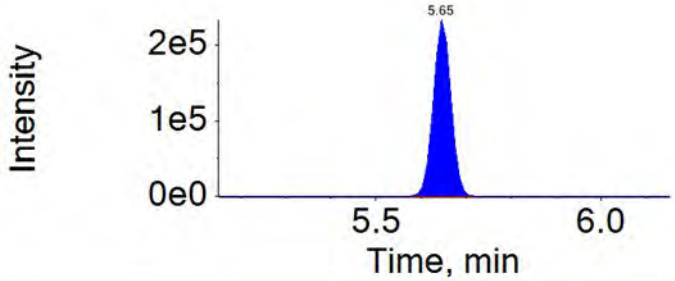
ICAL Name: 18NOV28DCAL **Result Table:** 18NOV28DCAL 11/28/2018 4:47:11 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

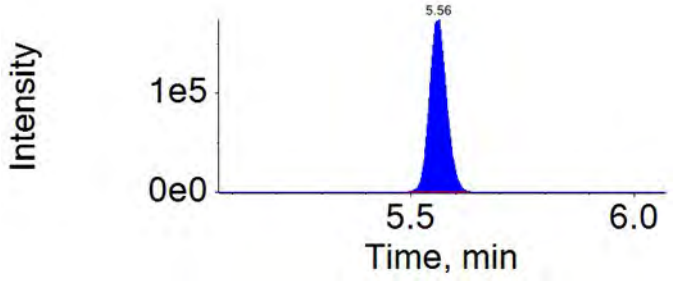
Extraction Standard: E13C2-8:2-FTS	Injection Standard: 13C2-PFDA
529.0 / 81.0	515.0 / 470.0



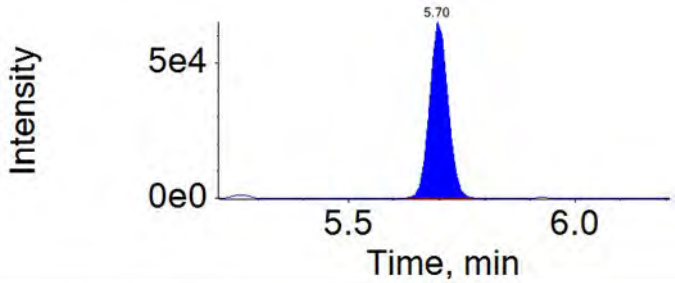


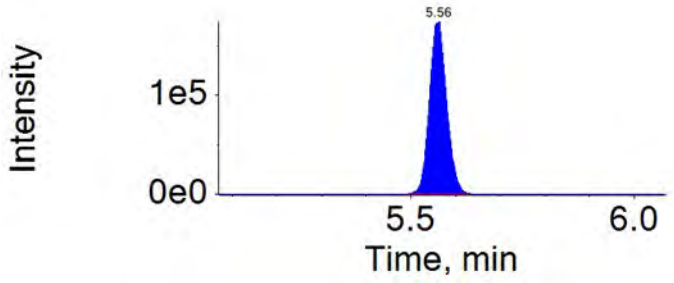
Extraction Standard: E13C8-PFOSA	Injection Standard: 13C2-PFDA
506.0 / 78.0	515.0 / 470.0



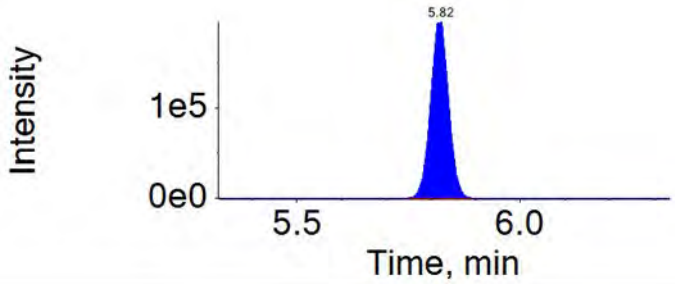


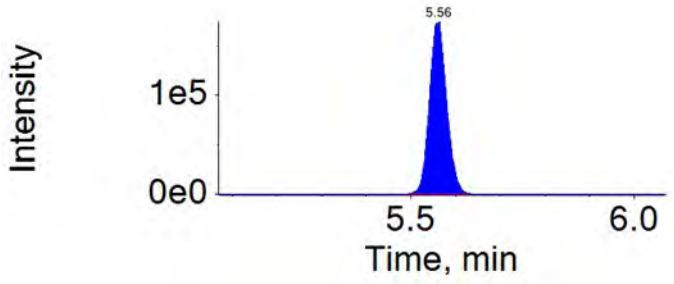
Extraction Standard: Ed3-NMeFOSAA	Injection Standard: 13C2-PFDA
573.0 / 419.0	515.0 / 470.0





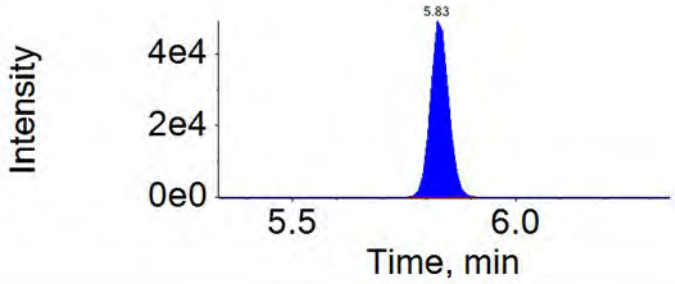
Extraction Standard: E13C7-PFUnDA	Injection Standard: 13C2-PFDA
570.0 / 525.0	515.0 / 470.0

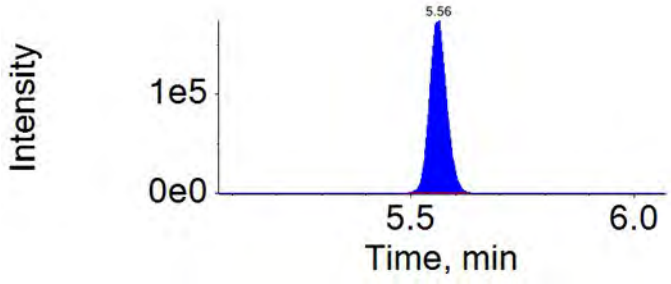




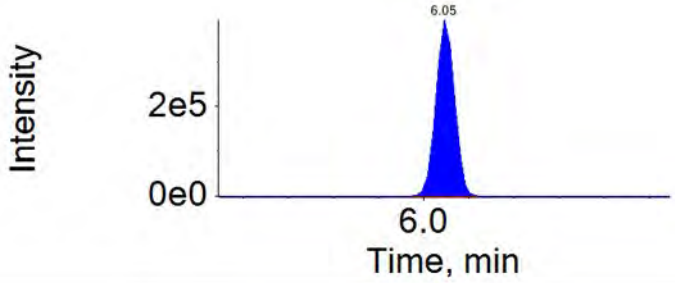
ICAL Name: 18NOV28DCAL **Result Table:** 18NOV28DCAL 11/28/2018 4:47:11 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

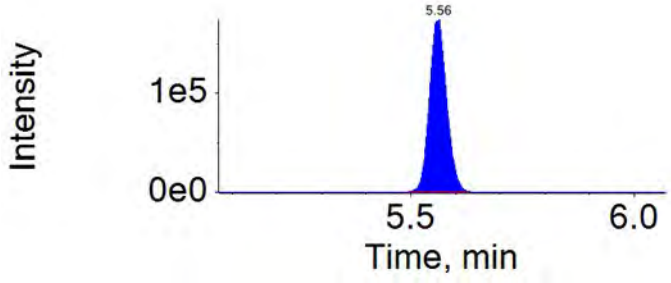
Extraction Standard: Ed5-NEtFOSAA	Injection Standard: 13C2-PFDA
589.0 / 419.0	515.0 / 470.0



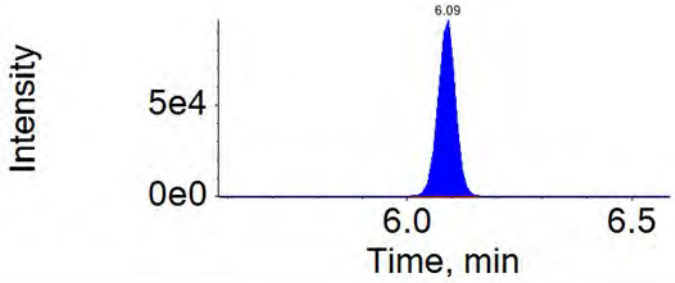


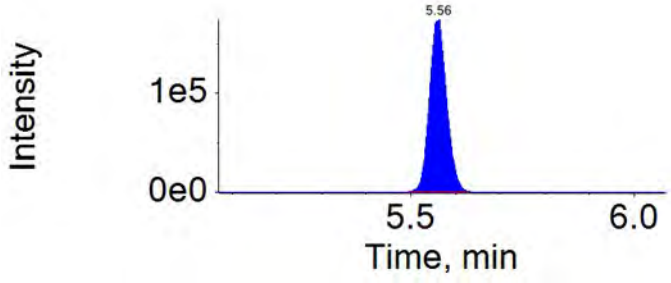
Extraction Standard: E13C2-PFDoDA	Injection Standard: 13C2-PFDA
615.0 / 570.0	515.0 / 470.0



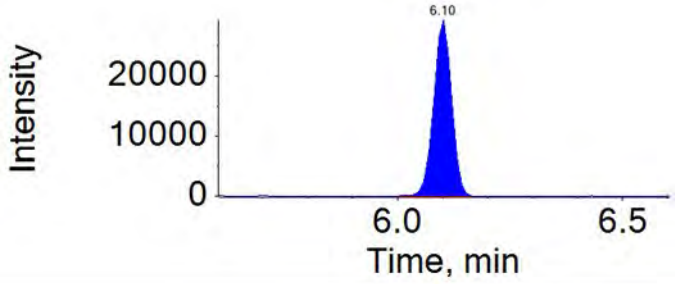


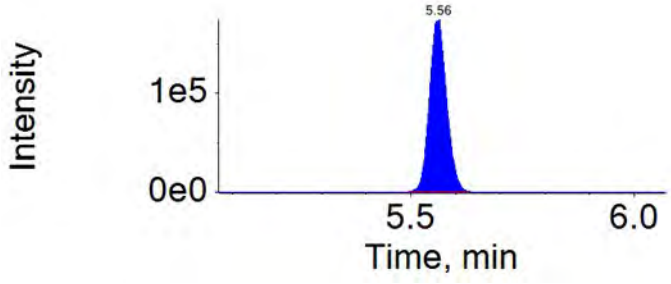
Extraction Standard: Ed7-NMePFOSAE	Injection Standard: 13C2-PFDA
623.0 / 59.0	515.0 / 470.0





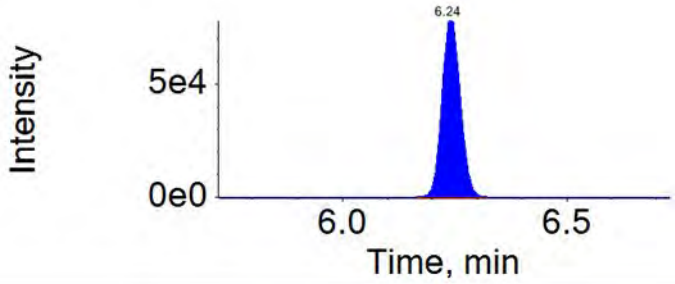
Extraction Standard: Ed3-NMePFOSA	Injection Standard: 13C2-PFDA
515.0 / 169.0	515.0 / 470.0

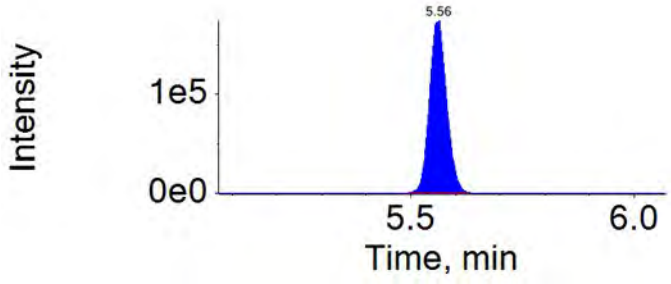




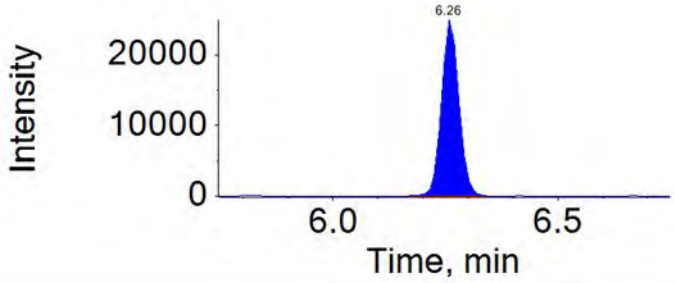
ICAL Name: 18NOV28DCAL **Result Table:** 18NOV28DCAL 11/28/2018 4:47:11 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

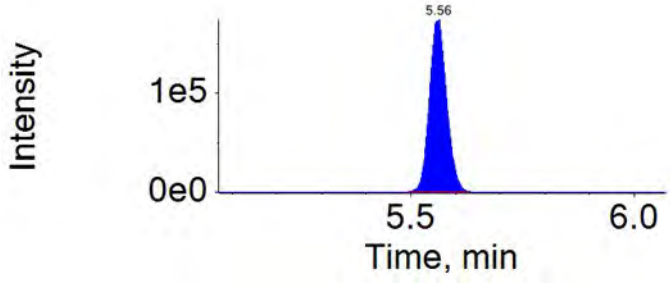
Extraction Standard: Ed9-NEtPFOSAE	Injection Standard: 13C2-PFDA
639.0 / 59.0	515.0 / 470.0



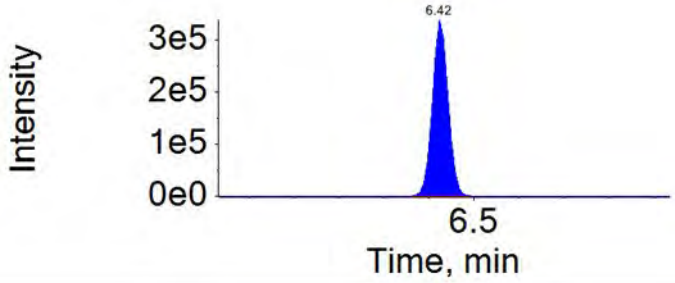


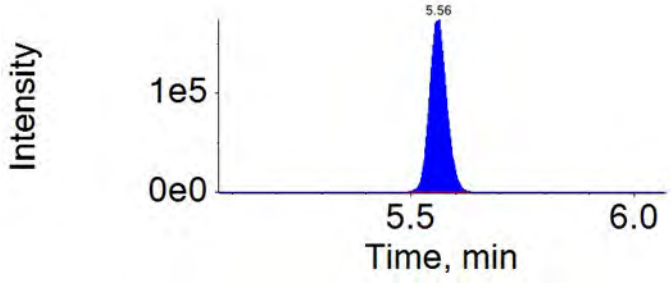
Extraction Standard: Ed5-NEtPFOSA	Injection Standard: 13C2-PFDA
531.0 / 169.0	515.0 / 470.0





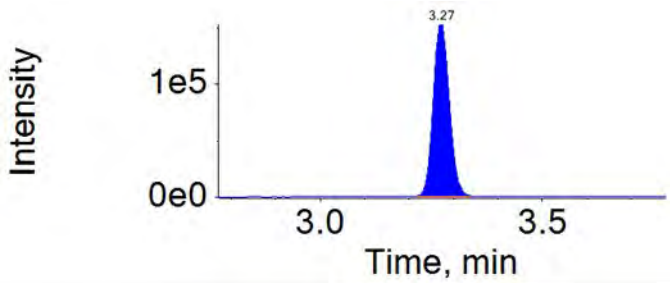
Extraction Standard: E13C2-PFTeDA	Injection Standard: 13C2-PFDA
715.0 / 670.0	515.0 / 470.0



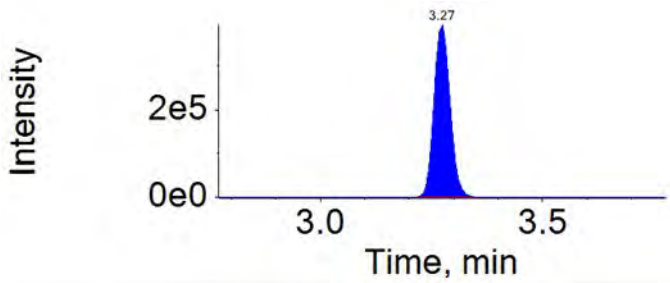


ICAL Name: 18NOV28DCAL **Result Table:** 18NOV28DCAL 11/28/2018 4:47:11 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

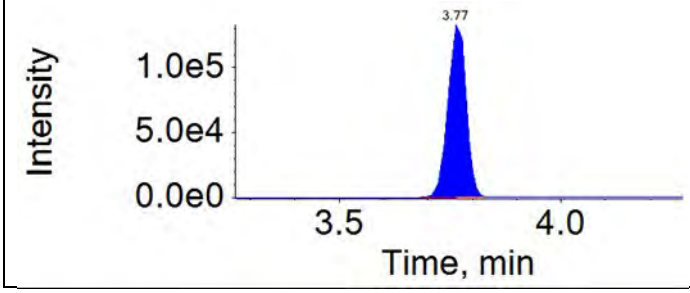
Analyte: PFBA
213.0 / 169.0



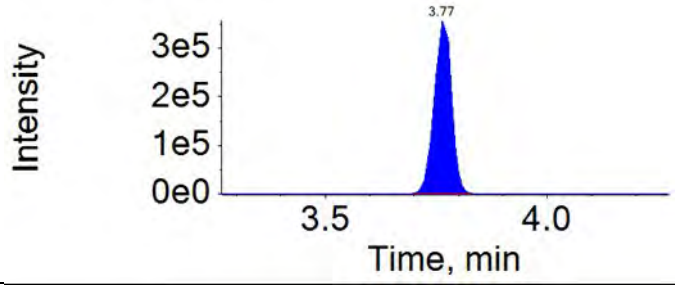
Extraction Standard: 13C4-PFBA
217.0 / 172.0



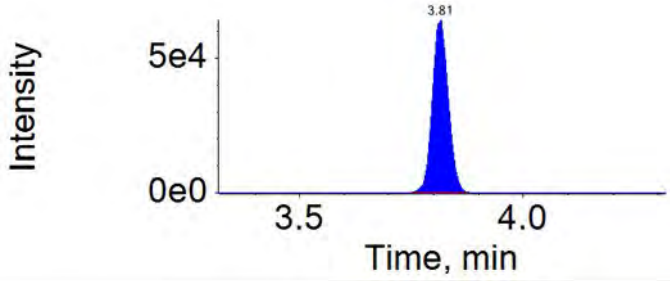
Analyte: PFPeA
263.0 / 219.0



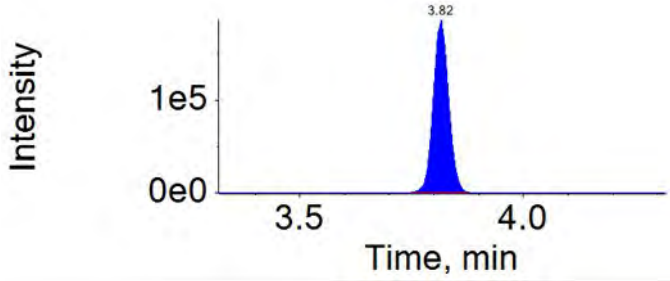
Extraction Standard: 13C5-PFPeA
268.0 / 223.0



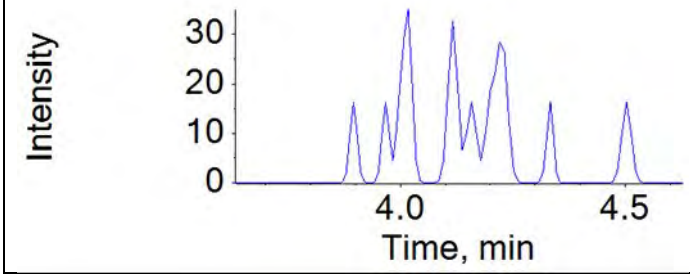
Analyte: PFBS
299.0 / 80.0



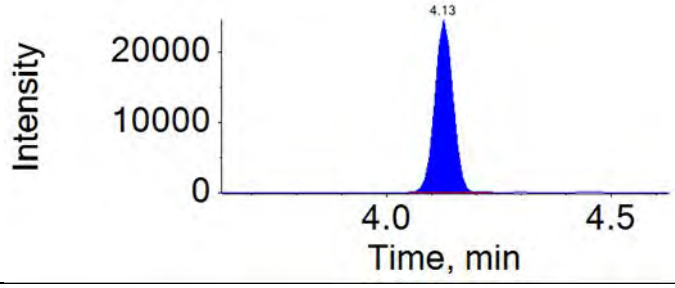
Extraction Standard: 13C3-PFBS
302.0 / 80.0



Analyte: 4:2-FTS
327.0 / 307.0



Extraction Standard: 13C2-4:2-FTS
329.0 / 81.0

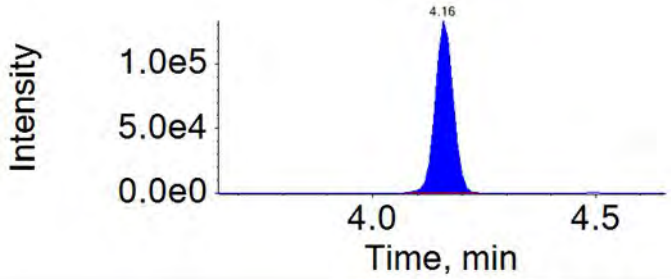


APPROVED
By MCD at 5:01 pm, 11/28/18

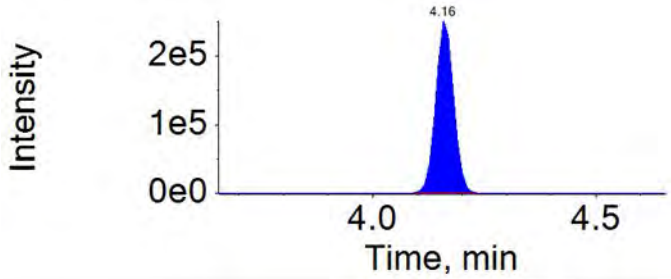
REVIEWED
By HMK at 12:22 pm, 11/29/18

ICAL Name: 18NOV28DCAL **Result Table:** 18NOV28DCAL 11/28/2018 4:47:11 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

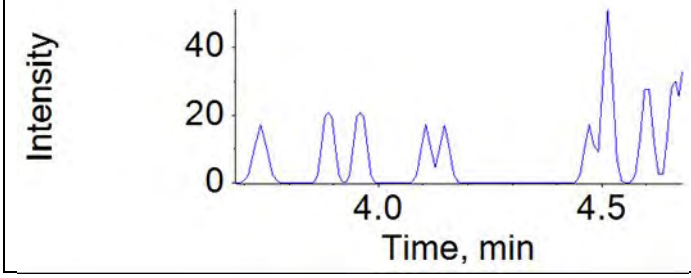
Analyte: PFHxA
313.0 / 269.0



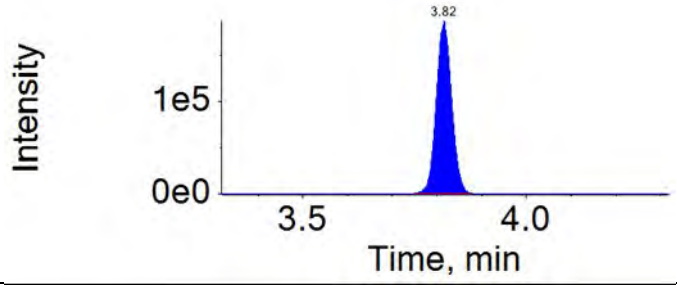
Extraction Standard: 13C5-PFHxA
318.0 / 273.0



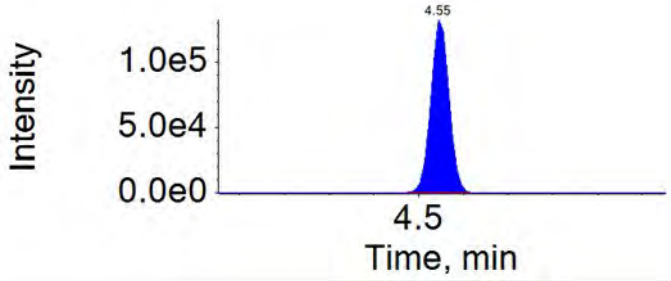
Analyte: PFPeS
349.0 / 80.0



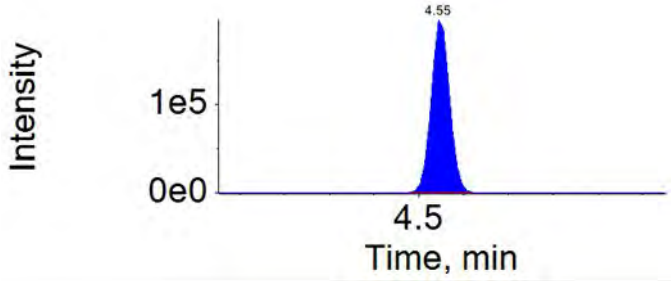
Extraction Standard: 13C3-PFBS
302.0 / 80.0



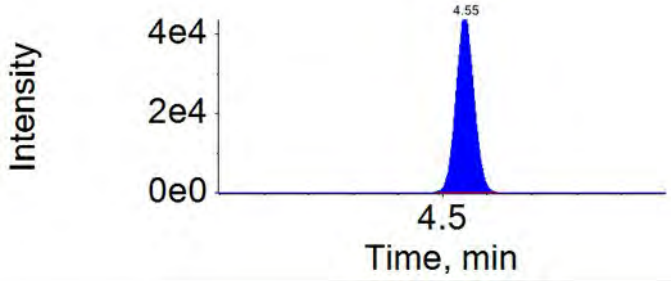
Analyte: PFHpA
363.0 / 319.0



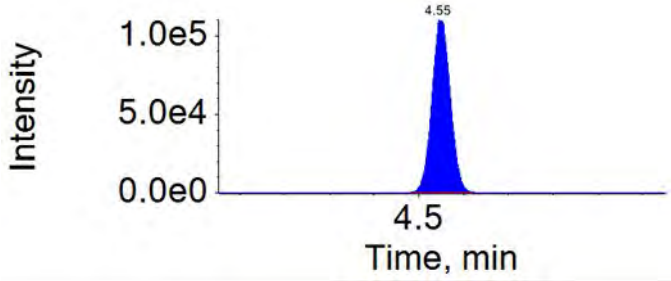
Extraction Standard: 13C4-PFHpA
367.0 / 322.0



Analyte: PFHxS
399.0 / 80.0



Extraction Standard: 13C3-PFHxS
402.0 / 80.0

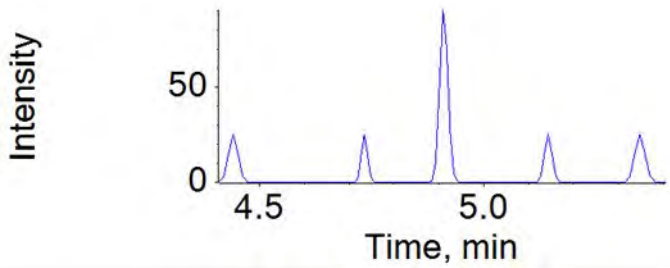


APPROVED
By MCD at 5:01 pm, 11/28/18

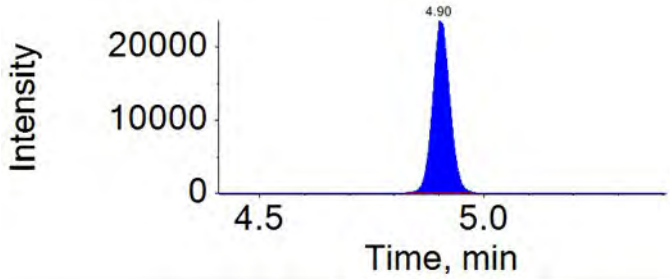
REVIEWED
By HMK at 12:22 pm, 11/29/18

ICAL Name: 18NOV28DCAL **Result Table:** 18NOV28DCAL 11/28/2018 4:47:11 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

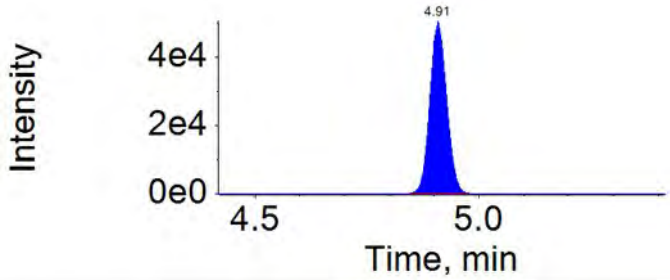
Analyte: 6:2-FTS
427.0 / 407.0



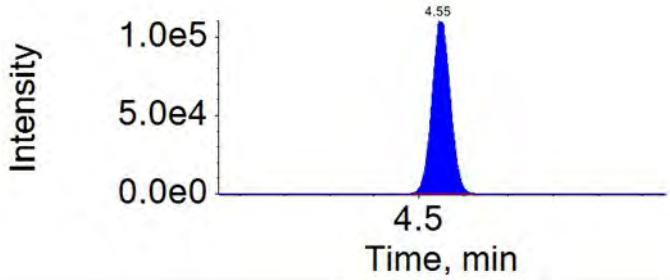
Extraction Standard: 13C2-6:2-FTS
429.0 / 81.0



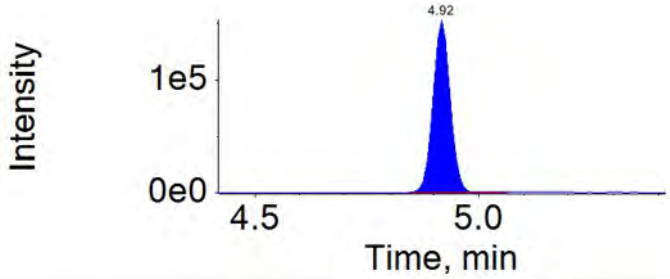
Analyte: PFHpS
449.0 / 80.0



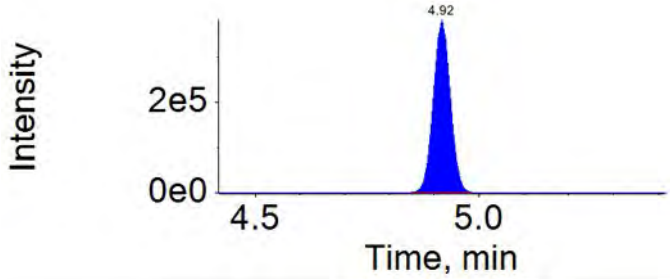
Extraction Standard: 13C3-PFHxS
402.0 / 80.0



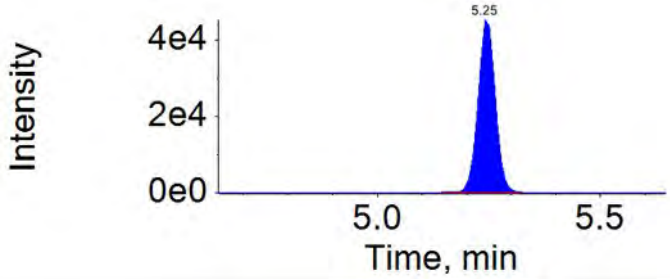
Analyte: PFOA
413.0 / 369.0



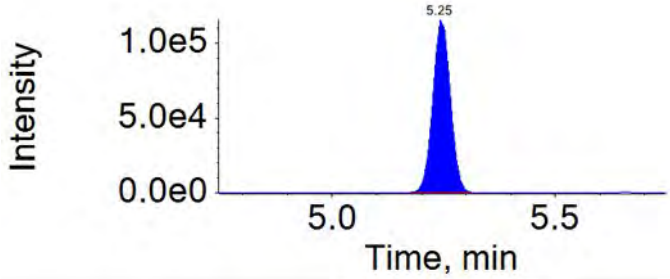
Extraction Standard: 13C8-PFOA
421.0 / 376.0



Analyte: PFOS
499.0 / 80.0



Extraction Standard: 13C8-PFOS
507.0 / 80.0

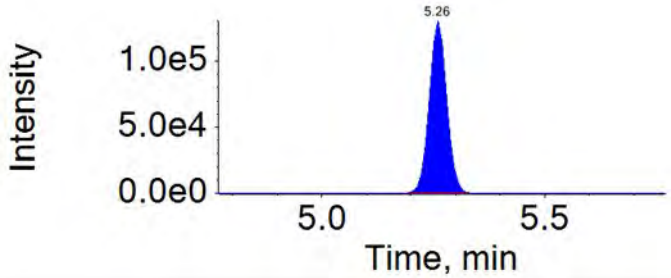


APPROVED
By MCD at 5:01 pm, 11/28/18

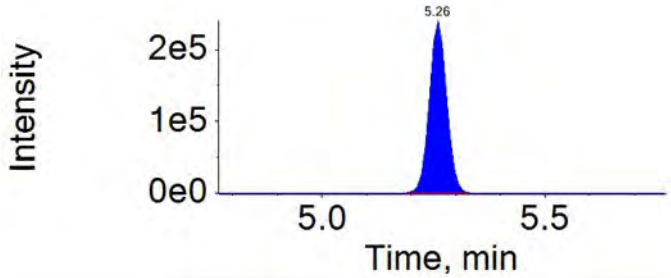
REVIEWED
By HMK at 12:22 pm, 11/29/18

ICAL Name: 18NOV28DCAL **Result Table:** 18NOV28DCAL 11/28/2018 4:47:11 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

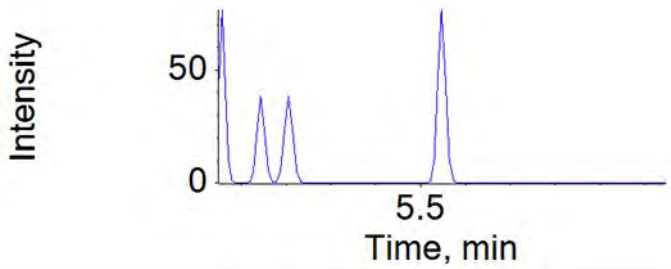
Analyte: PFNA
463.0 / 419.0



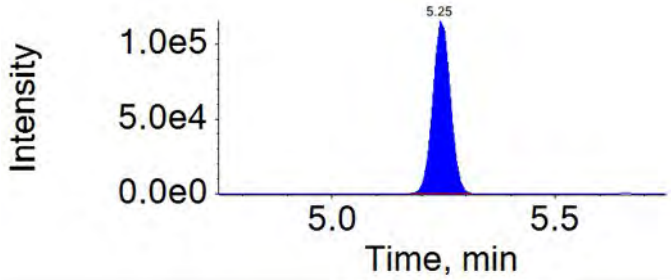
Extraction Standard: 13C9-PFNA
472.0 / 427.0



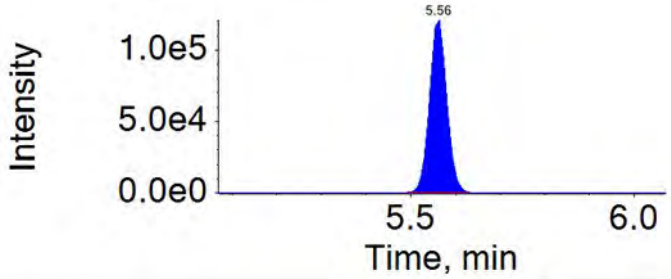
Analyte: PFNS
549.0 / 80.0



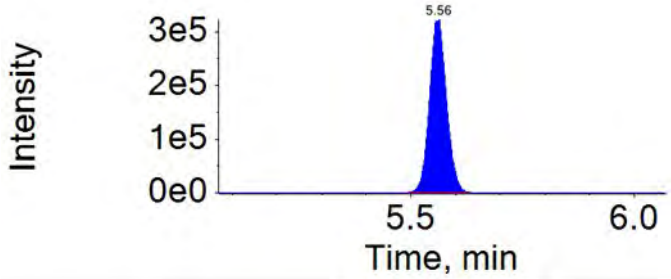
Extraction Standard: 13C8-PFOS
507.0 / 80.0



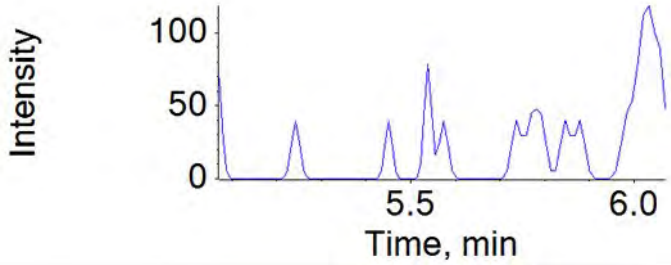
Analyte: PFDA
513.0 / 469.0



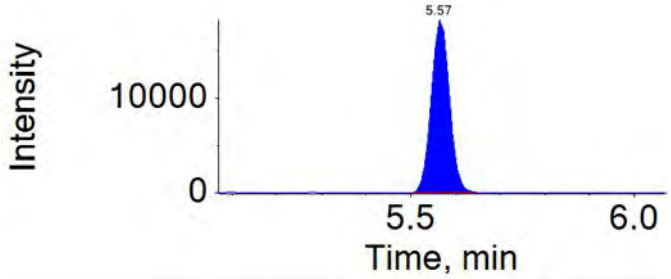
Extraction Standard: 13C6-PFDA
519.0 / 474.0



Analyte: 8:2-FTS
527.0 / 507.0



Extraction Standard: 13C2-8:2-FTS
529.0 / 81.0

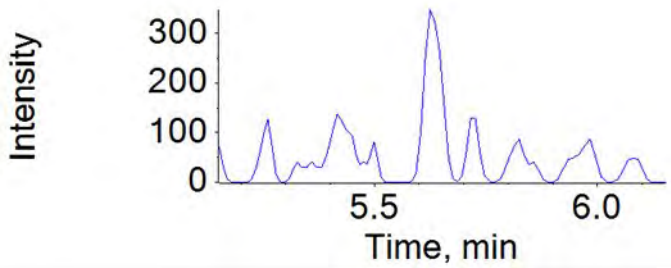


APPROVED
By MCD at 5:01 pm, 11/28/18

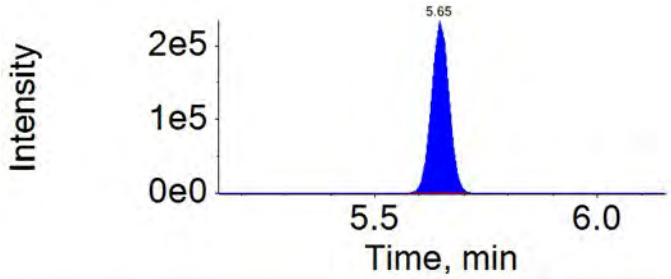
REVIEWED
By HMK at 12:22 pm, 11/29/18

ICAL Name: 18NOV28DCAL **Result Table:** 18NOV28DCAL 11/28/2018 4:47:11 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

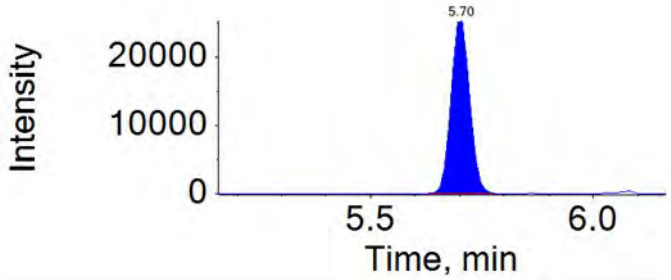
Analyte: PFOSA
498.0 / 78.0



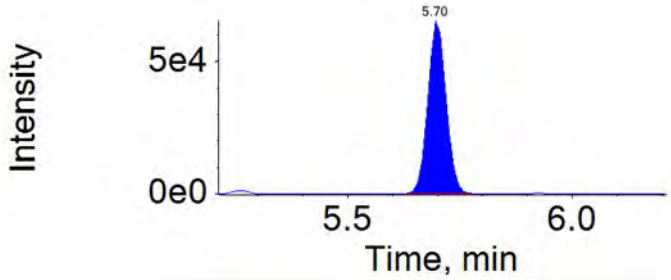
Extraction Standard: 13C8-PFOSA
506.0 / 78.0



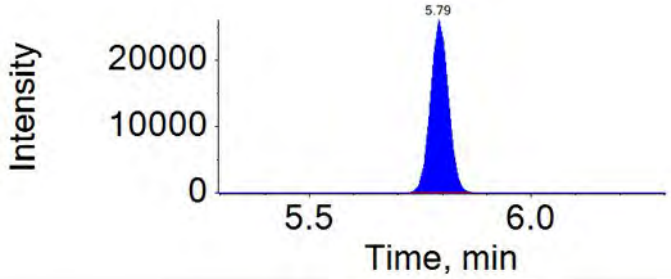
Analyte: NMeFOSAA
570.0 / 419.0



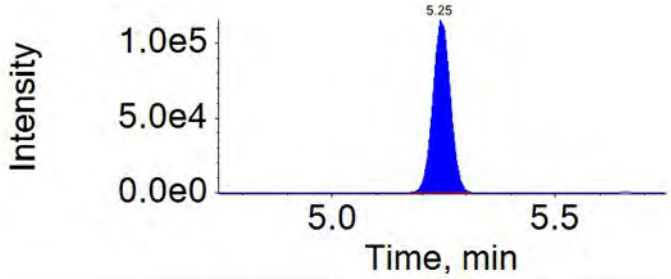
Extraction Standard: d3-NMeFOSAA
573.0 / 419.0



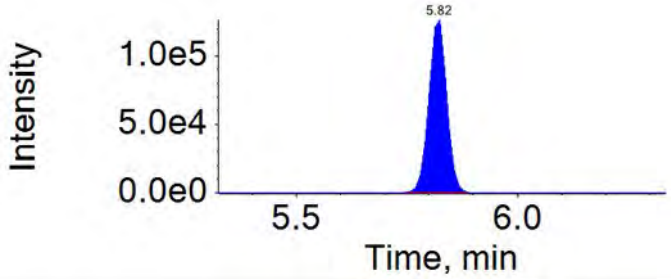
Analyte: PFDS
599.0 / 80.0



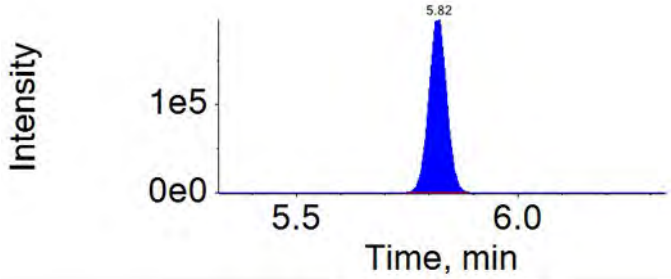
Extraction Standard: 13C8-PFOS
507.0 / 80.0



Analyte: PFUnDA
563.0 / 519.0



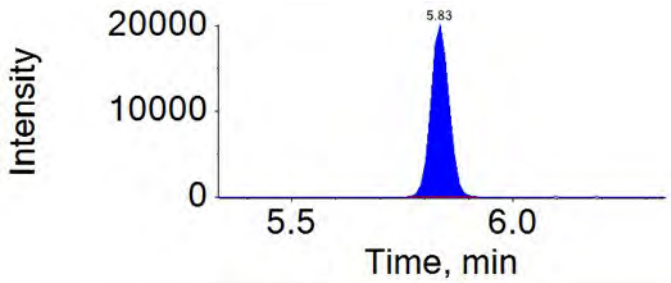
Extraction Standard: 13C7-PFUnDA
570.0 / 525.0



ICAL Name: 18NOV28DCAL **Result Table:** 18NOV28DCAL 11/28/2018 4:47:11 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

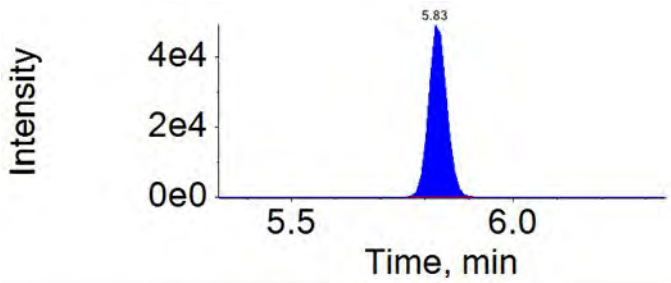
Analyte: NEtFOSAA

584.0 / 419.0



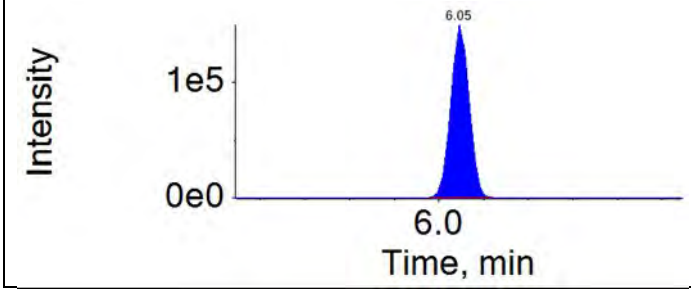
Extraction Standard: d5-NEtFOSAA

589.0 / 419.0



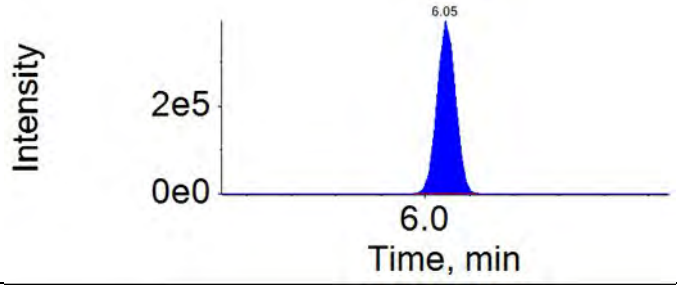
Analyte: PFDoDA

613.0 / 569.0



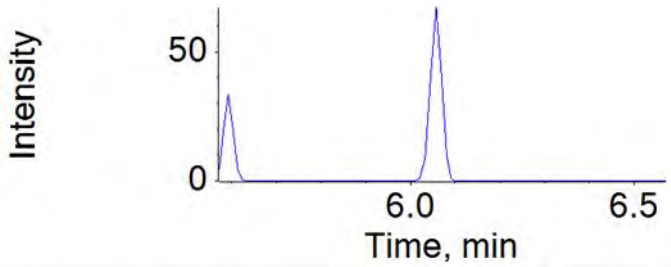
Extraction Standard: 13C2-PFDoDA

615.0 / 570.0



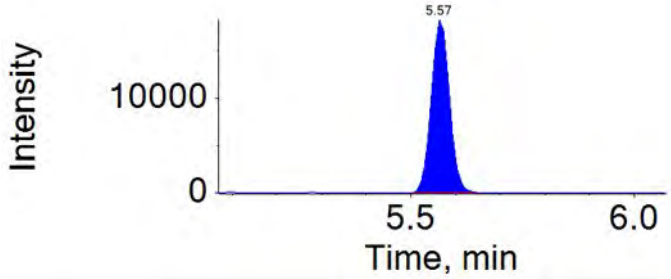
Analyte: 10:2-FTS

627.0 / 607.0



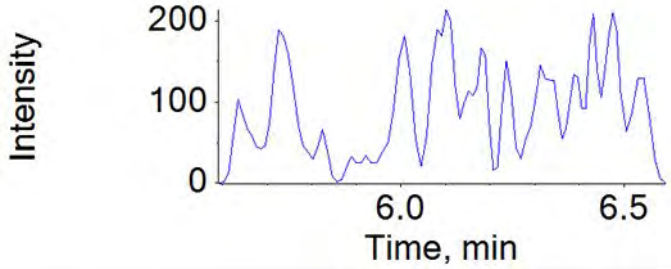
Extraction Standard: 13C2-8:2-FTS

529.0 / 81.0



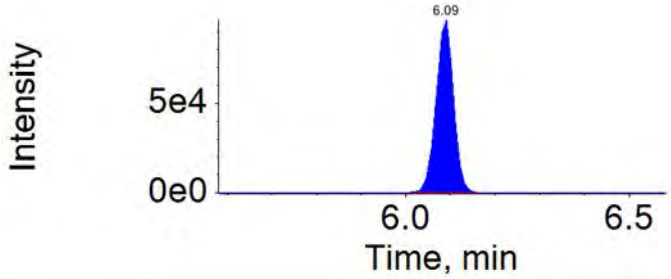
Analyte: NMePFOSAE

616.0 / 59.0



Extraction Standard: d7-NMePFOSAE

623.0 / 59.0

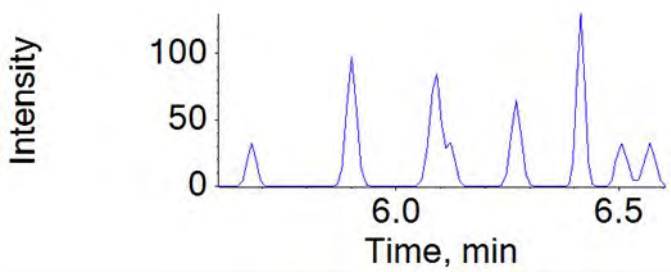


APPROVED
By MCD at 5:01 pm, 11/28/18

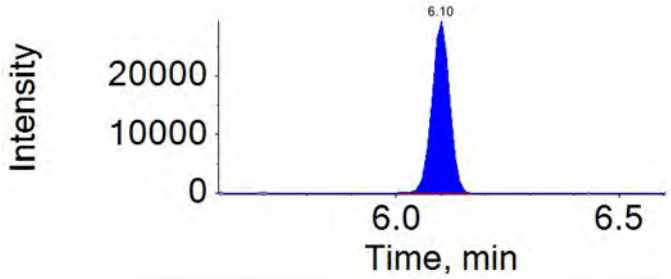
REVIEWED
By HMK at 12:22 pm, 11/29/18

ICAL Name: 18NOV28DCAL **Result Table:** 18NOV28DCAL 11/28/2018 4:47:11 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

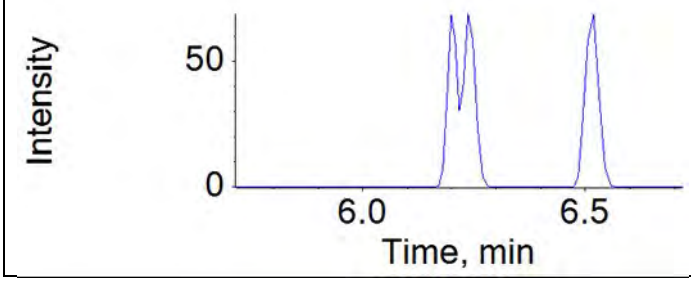
Analyte: NMePFOSA
512.0 / 169.0



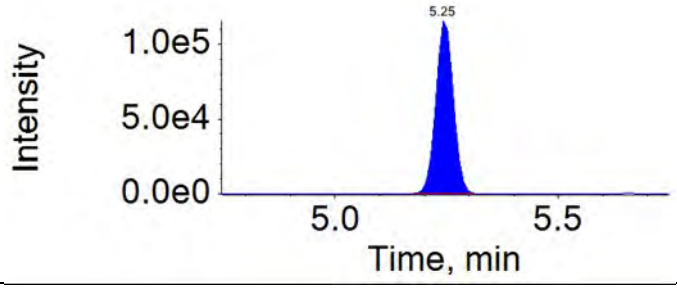
Extraction Standard: d3-NMePFOSA
515.0 / 169.0



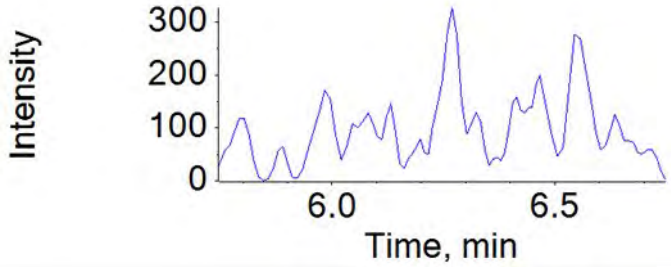
Analyte: PFDoS
699.0 / 80.0



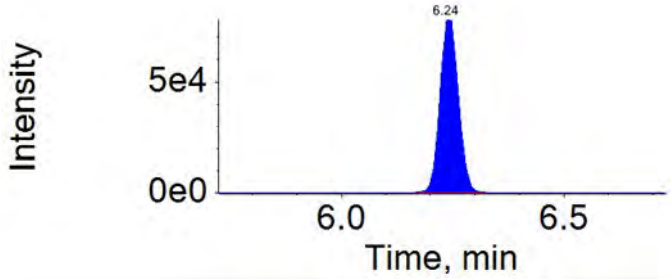
Extraction Standard: 13C8-PFOS
507.0 / 80.0



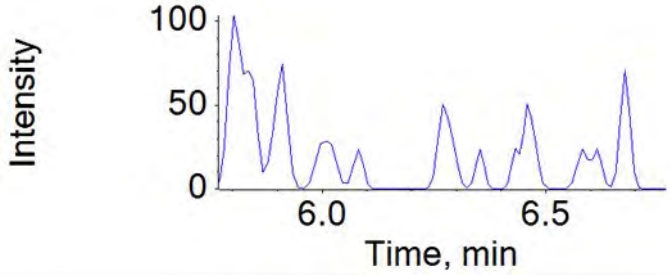
Analyte: NEtPFOSAE
630.0 / 59.0



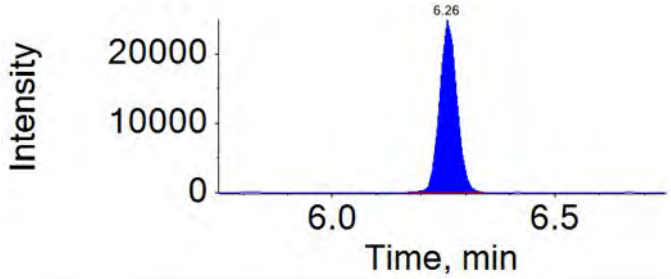
Extraction Standard: d9-NEtPFOSAE
639.0 / 59.0



Analyte: NEtPFOSA
526.0 / 169.0



Extraction Standard: d5-NEtPFOSA
531.0 / 169.0

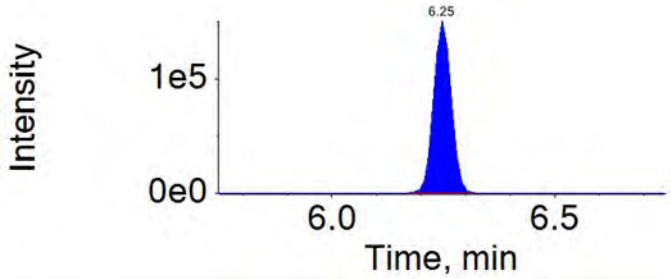


APPROVED
By MCD at 5:01 pm, 11/28/18

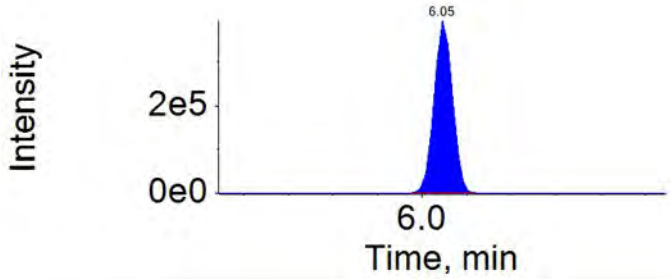
REVIEWED
By HMK at 12:22 pm, 11/29/18

ICAL Name: 18NOV28DCAL **Result Table:** 18NOV28DCAL 11/28/2018 4:47:11 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

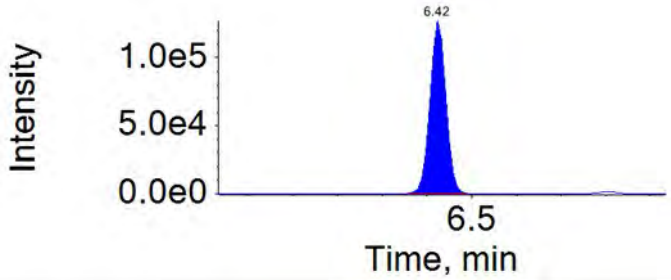
Analyte: PFTrDA
663.0 / 619.0



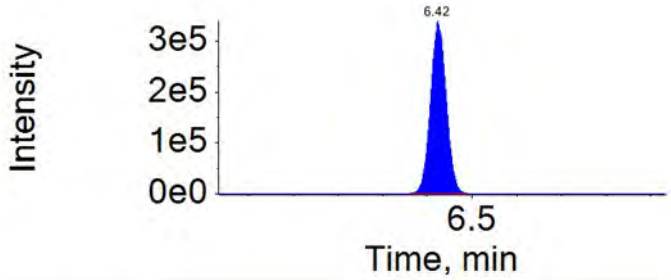
Extraction Standard: 13C2-PFDoDA
615.0 / 570.0



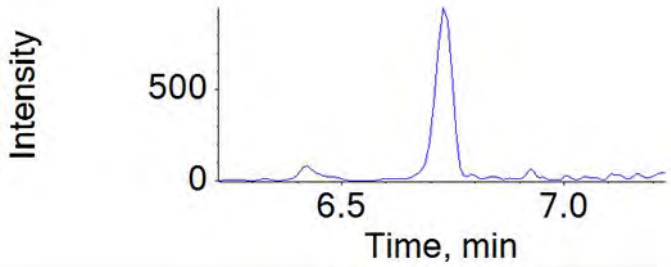
Analyte: PFTeDA
713.0 / 669.0



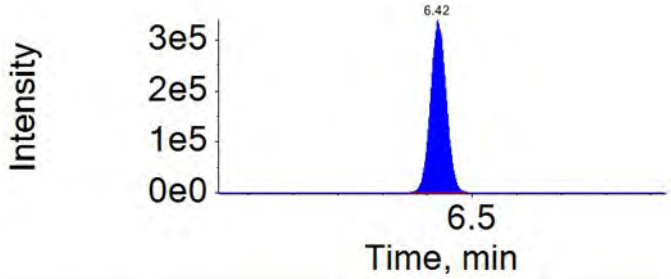
Extraction Standard: 13C2-PFTeDA
715.0 / 670.0



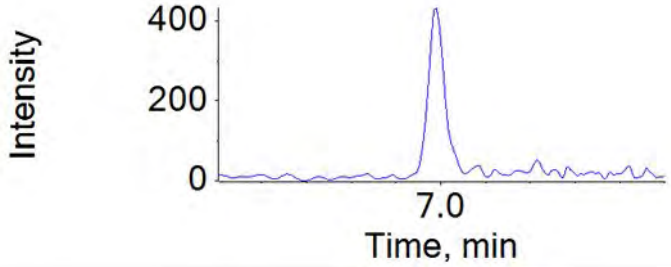
Analyte: PFHxDA
813.0 / 769.0



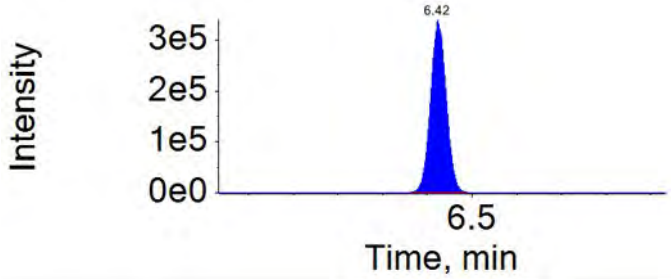
Extraction Standard: 13C2-PFTeDA
715.0 / 670.0



Analyte: PFODA
913.0 / 869.0



Extraction Standard: 13C2-PFTeDA
715.0 / 670.0



APPROVED
By MCD at 5:01 pm, 11/28/18

REVIEWED
By HMK at 12:22 pm, 11/29/18

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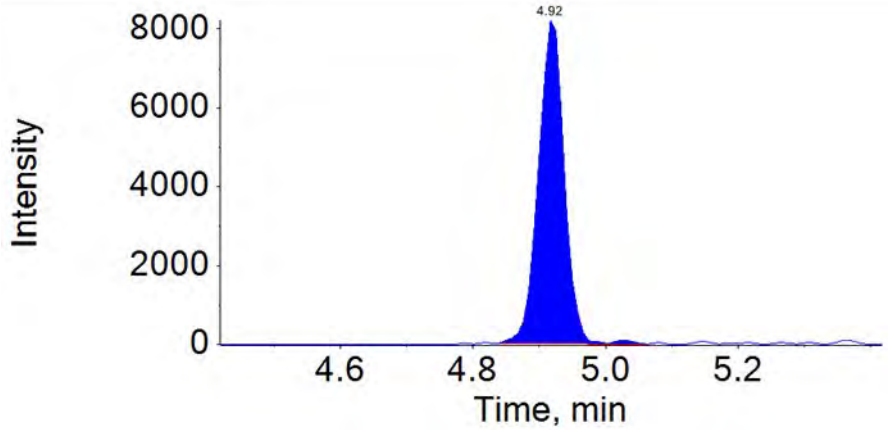
Auto Integrations prior to Manual Integration

Print Date: 11/28/2018 4:55 PM
Template: MQ-OrigInteg-16NOV21.docx

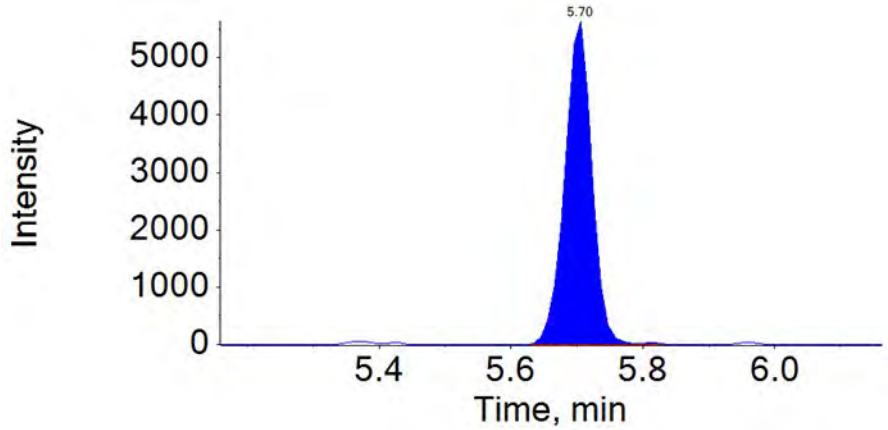
Results Table Name: 18NOV28DCAL
Results Table Date: 11/28/2018 4:52:53 PM
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

Component Name:
PFOA_2
RT (min.):
4.92
Peak Area:
22382.92
Mass Range:
413.0 / 169.0
File Name:
18NOV28DCAL-14.wiff
Sample Name:
ICV



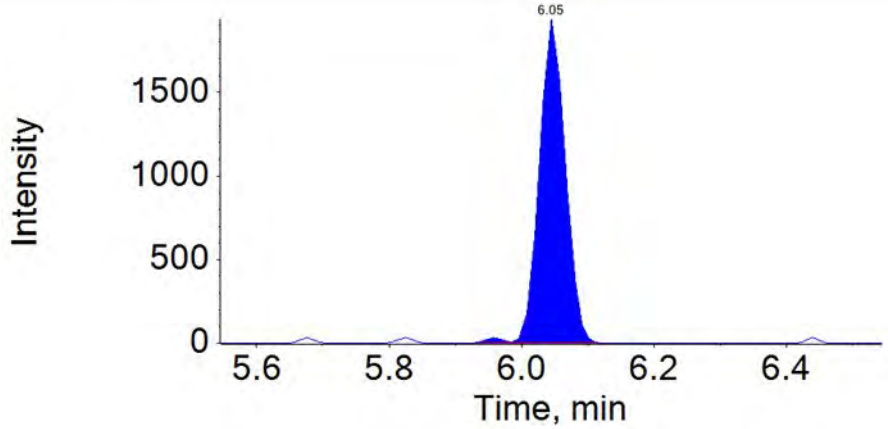
Integration Comment: incorrect integration

Component Name:
NMeFOSAA_2
RT (min.):
5.70
Peak Area:
16150.62
Mass Range:
570.0 / 483.0
File Name:
18NOV28DCAL-14.wiff
Sample Name:
ICV



Integration Comment: incorrect integration

Component Name:
PFDoDA_2
RT (min.):
6.05
Peak Area:
5326.50
Mass Range:
613.0 / 169.0
File Name:
18NOV28DCAL-14.wiff
Sample Name:
ICV



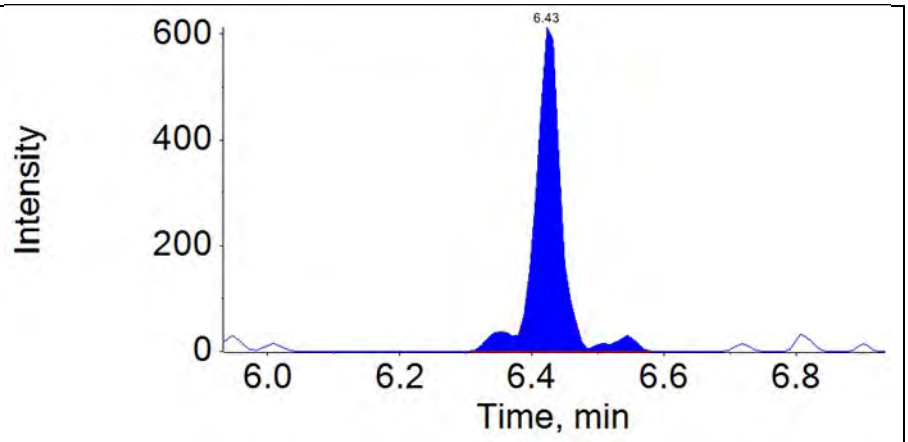
Integration Comment: incorrect integration

APPROVED
By MCD at 5:01 pm, 11/28/18

REVIEWED
By HMK at 12:22 pm, 11/29/18

Results Table Name: 18NOV28DCAL
Results Table Date: 11/28/2018 4:52:53 PM
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

Component Name:
PFTeDA_2
RT (min.):
6.43
Peak Area:
1717.33
Mass Range:
713.0 / 169.0
File Name:
18NOV28DCAL-14.wiff
Sample Name:
ICV



Integration Comment: incorrect integration

APPROVED
By MCD at 5:01 pm, 11/28/18

REVIEWED
By HMK at 12:22 pm, 11/29/18

Results Table Name: 18NOV28DCAL
Results Table Date: 11/28/2018 4:52:53 PM
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

APPROVED
By MCD at 5:01 pm, 11/28/18

REVIEWED
By HMK at 12:22 pm, 11/29/18

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LC-MS/MS Analysis Report

Printed: 11/28/2018 4:52:00 PM
Template: IonRatio18OCT10

Ion Ratio Report

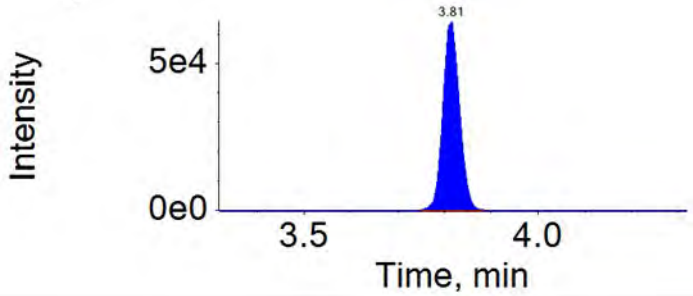
Sample Name: ICV **Instrument Name:** LM27631 **File Name:** 18NOV28DCAL-14.wiff

Component Name	RT	RRT	Analyte Area Response	Int Typ	Expected Ion Ratio	Ion Ratio	Ion Ratio % Diff	Ion Ratio Limit	Ion Ratio OOS
PFBS	3.81	1.00	159425.00	A	0.3655	0.3680			
PFBS_2	3.81	1.00	58661.72	A	0.3655	0.3680	1	50	
4:2-FTS	N/A	N/A	N/A	A	0.6383	N/A			
4:2-FTS_2	N/A	N/A	N/A	A	0.6383	N/A		50	
PFHxA	4.16	1.00	369137.13	A	0.0103	0.0099			
PFHxA_2	4.16	1.00	3663.34	A	0.0103	0.0099	-4	50	
PFPeS	N/A	N/A	N/A	A	0.4976	N/A			
PFPeS_2	N/A	N/A	N/A	A	0.4976	N/A		50	
PFHpA	4.55	1.00	373590.76	A	0.0557	0.0494			
PFHpA_2	4.55	1.00	18441.26	A	0.0557	0.0494	-11	50	
PFHxS	4.55	1.00	125085.30	A	0.3693	0.3301			
PFHxS_2	4.55	1.00	41284.52	A	0.3693	0.3301	-11	50	
6:2-FTS	N/A	N/A	N/A	A	0.6625	N/A			
6:2-FTS_2	N/A	N/A	N/A	A	0.6625	N/A		50	
PFHpS	4.91	1.08	131043.06	A	0.3915	0.4021			
PFHpS_2	4.91	1.08	52690.55	A	0.3915	0.4021	3	50	
PFOA	4.92	1.00	404358.94	A	0.0573	0.0549			
PFOA_2	4.92	1.00	22197.92	M	0.0573	0.0549	-4	50	
PFOS	5.25	1.00	122334.56	A	0.2960	0.3345			
PFOS_2	5.24	1.00	40919.91	A	0.2960	0.3345	13	50	
PFNA	5.26	1.00	351872.00	A	0.0201	0.0188			
PFNA_2	5.26	1.00	6604.00	A	0.0201	0.0188	-7	50	
PFNS	N/A	N/A	N/A	A	0.4794	N/A			
PFNS_2	N/A	N/A	N/A	A	0.4794	N/A		50	
PFDA	5.56	1.00	325191.94	A	0.0075	0.0060			
PFDA_2	5.56	1.00	1956.43	A	0.0075	0.0060	-20	50	
8:2-FTS	N/A	N/A	N/A	A	0.5380	N/A			
8:2-FTS_2	N/A	N/A	N/A	A	0.5380	N/A		50	
NMeFOSAA	5.70	1.00	74168.76	A	0.2305	0.2169			
NMeFOSAA_2	5.70	1.00	16085.31	M	0.2305	0.2169	-6	50	
PFDS	5.79	1.10	72374.27	A	0.5356	0.5380			
PFDS_2	5.79	1.10	38937.76	A	0.5356	0.5380	0	50	
PFUnDA	5.82	1.00	354099.76	A	0.0038	0.0057			
PFUnDA_2	5.82	1.00	2015.46	A	0.0038	0.0057	50	50	
NEtFOSAA	5.83	1.00	57367.95	A	0.7356	0.5930			
NEtFOSAA_2	5.83	1.00	34017.14	A	0.7356	0.5930	-19	50	
PFDoDA	6.05	1.00	427818.87	A	0.0130	0.0123			
PFDoDA_2	6.05	1.00	5265.10	M	0.0130	0.0123	-6	50	
10:2-FTS	N/A	N/A	N/A	A	0.6989	N/A			
10:2-FTS_2	N/A	N/A	N/A	A	0.6989	N/A		50	
PFTrDA	6.25	1.03	416758.36	A	0.0090	0.0086			
PFTrDA_2	6.25	1.03	3581.21	A	0.0090	0.0086	-5	50	
PFTeDA	6.42	1.00	312632.12	A	0.0056	0.0049			
PFTeDA_2	6.43	1.00	1543.65	M	0.0056	0.0049	-12	50	
PFHxDA	N/A	N/A	N/A	A	0.0646	N/A			
PFHxDA_2	N/A	N/A	N/A	A	0.0646	N/A		50	
PFODA	N/A	N/A	N/A	A	0.0264	N/A			
PFODA_2	N/A	N/A	N/A	A	0.0264	N/A		50	

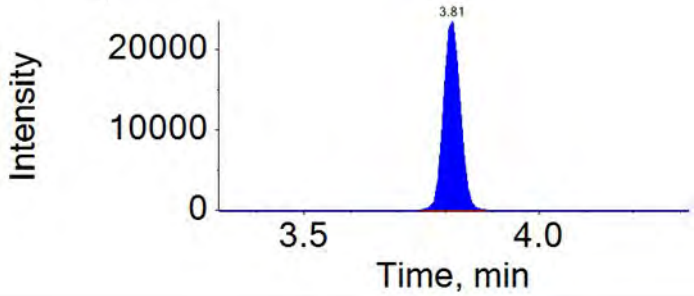
APPROVED
By MCD at 5:01 pm, 11/28/18

REVIEWED
By HMK at 12:22 pm, 11/29/18

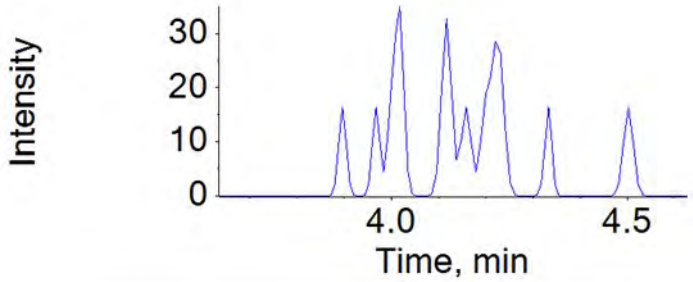
Component: PFBS
Primary Mass: 299.0 / 80.0



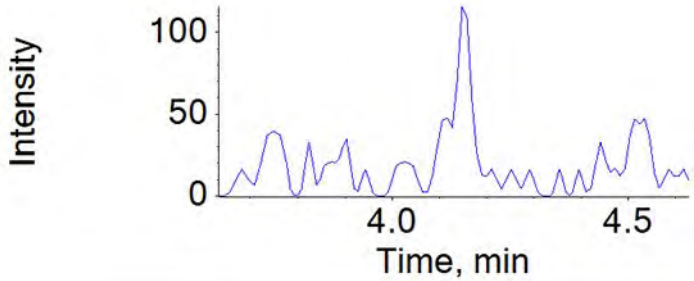
Component: PFBS_2
Secondary Mass: 299.0 / 99.0



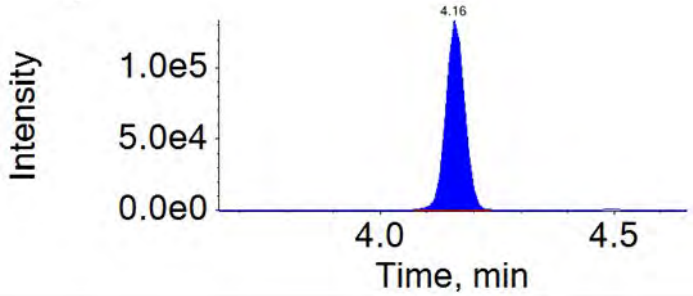
Component: 4:2-FTS
Primary Mass: 327.0 / 307.0



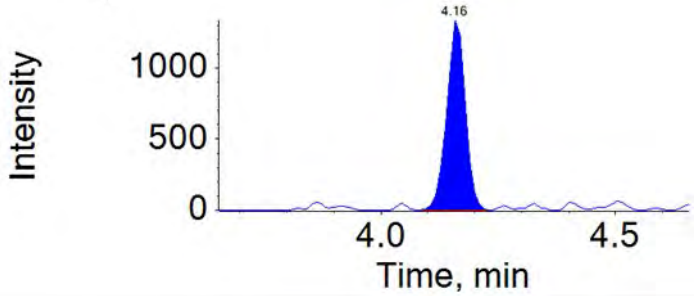
Component: 4:2-FTS_2
Secondary Mass: 327.0 / 81.0



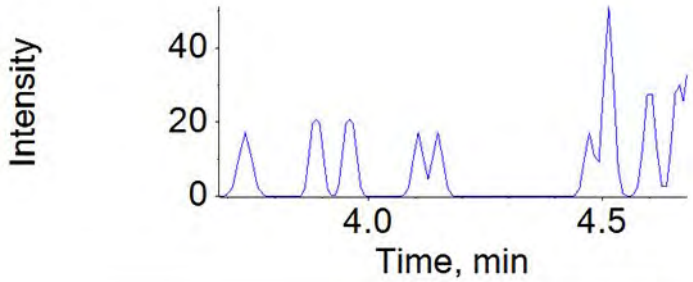
Component: PFHxA
Primary Mass: 313.0 / 269.0



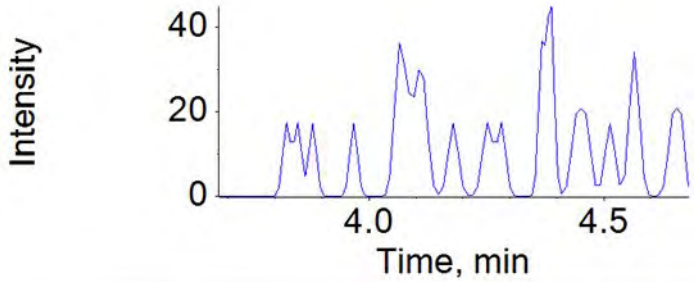
Component: PFHxA_2
Secondary Mass: 313.0 / 119.0



Component: PFPeS
Primary Mass: 349.0 / 80.0



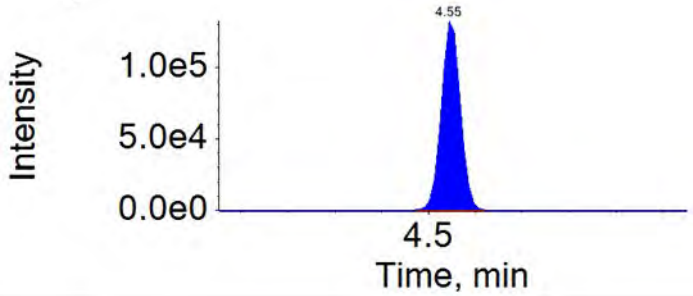
Component: PFPeS_2
Secondary Mass: 349.0 / 99.0



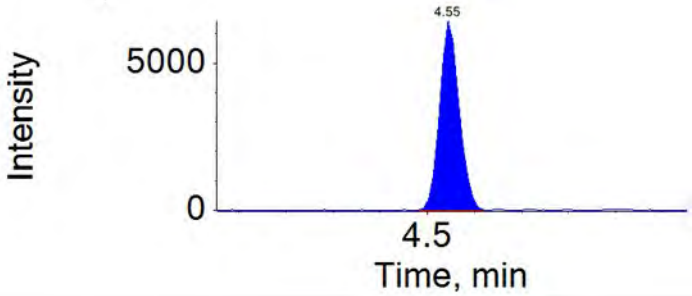
APPROVED
By MCD at 5:01 pm, 11/28/18

REVIEWED
By HMK at 12:22 pm, 11/29/18

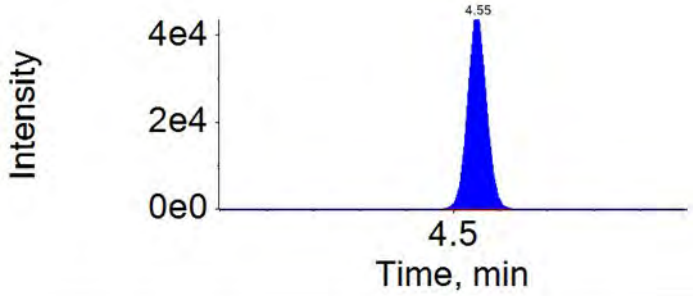
Component: PFHpA
Primary Mass: 363.0 / 319.0



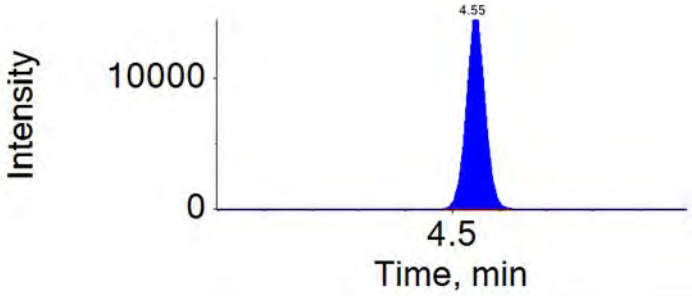
Component: PFHpA_2
Secondary Mass: 363.0 / 169.0



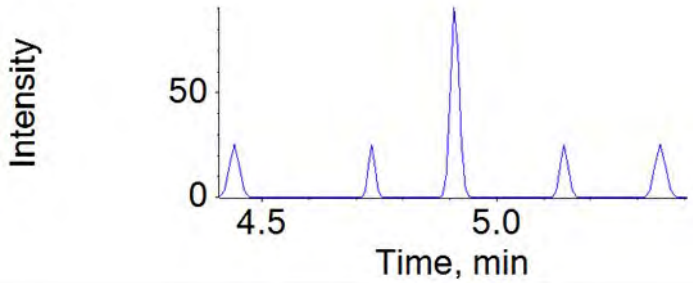
Component: PFHxS
Primary Mass: 399.0 / 80.0



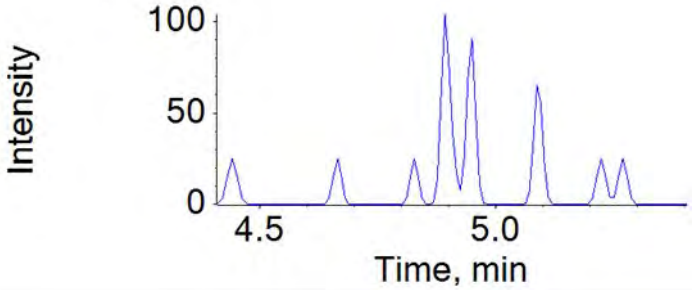
Component: PFHxS_2
Secondary Mass: 399.0 / 99.0



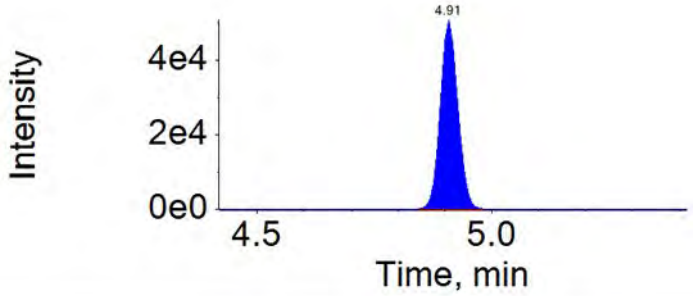
Component: 6:2-FTS
Primary Mass: 427.0 / 407.0



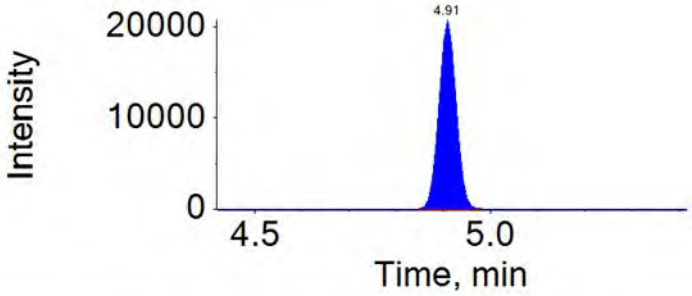
Component: 6:2-FTS_2
Secondary Mass: 427.0 / 81.0



Component: PFHpS
Primary Mass: 449.0 / 80.0



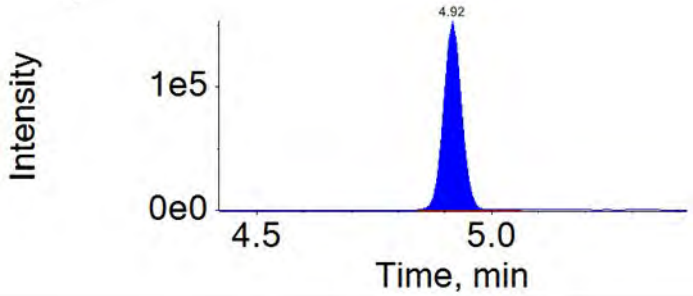
Component: PFHpS_2
Secondary Mass: 449.0 / 99.0



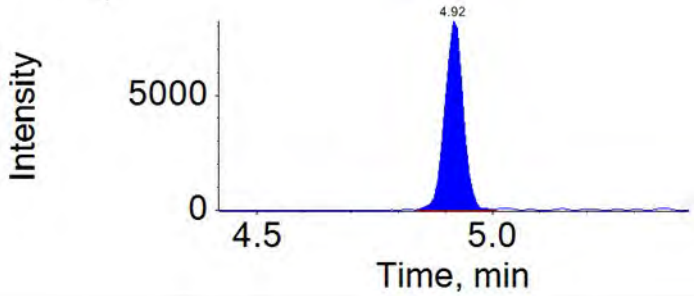
APPROVED
By MCD at 5:01 pm, 11/28/18

REVIEWED
By HMK at 12:22 pm, 11/29/18

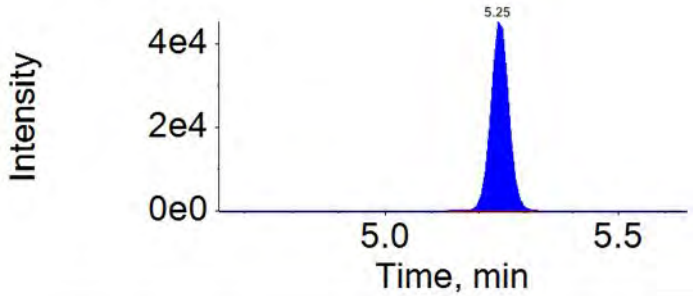
Component: PFOA
Primary Mass: 413.0 / 369.0



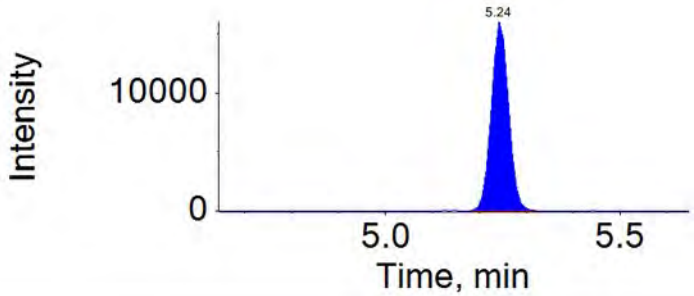
Component: PFOA_2
Secondary Mass: 413.0 / 169.0



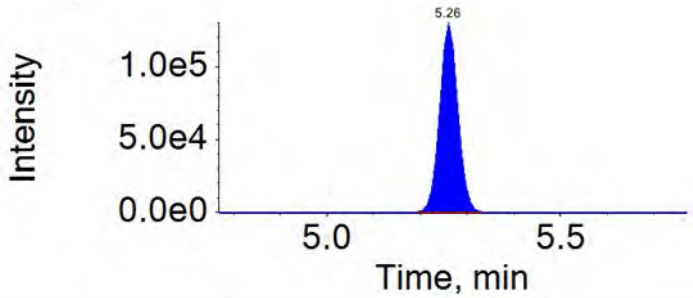
Component: PFOS
Primary Mass: 499.0 / 80.0



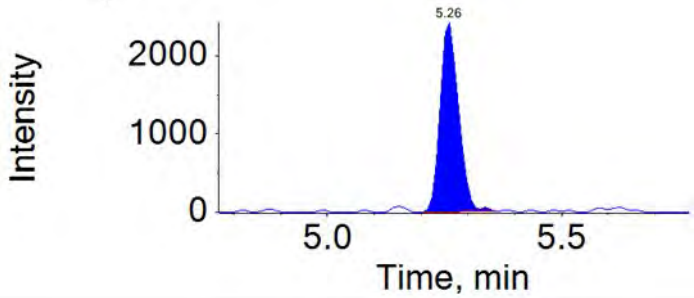
Component: PFOS_2
Secondary Mass: 499.0 / 99.0



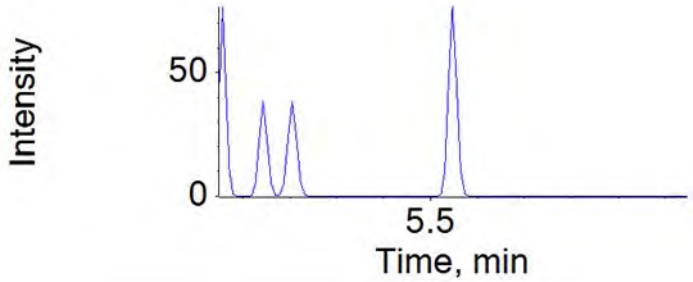
Component: PFNA
Primary Mass: 463.0 / 419.0



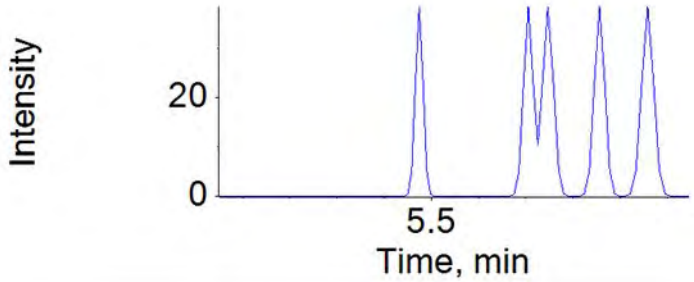
Component: PFNA_2
Secondary Mass: 463.0 / 169.0



Component: PFNS
Primary Mass: 549.0 / 80.0



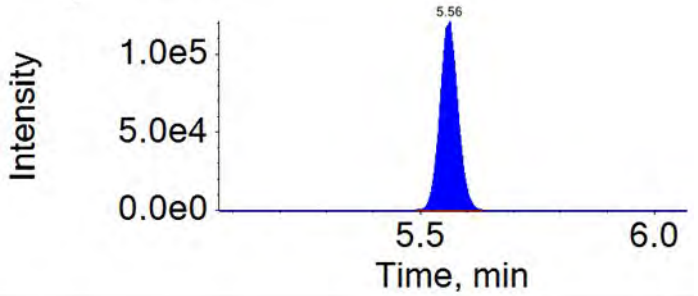
Component: PFNS_2
Secondary Mass: 549.0 / 99.0



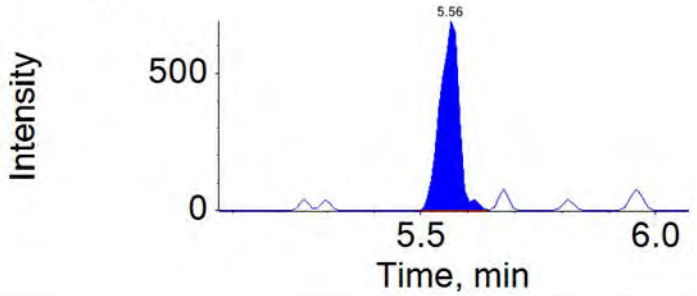
APPROVED
By MCD at 5:01 pm, 11/28/18

REVIEWED
By HMK at 12:22 pm, 11/29/18

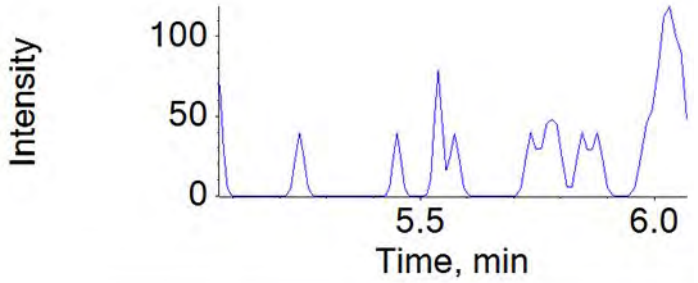
Component: PFDA
Primary Mass: 513.0 / 469.0



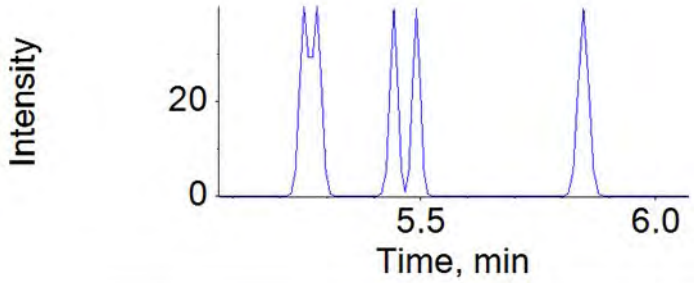
Component: PFDA_2
Secondary Mass: 513.0 / 169.0



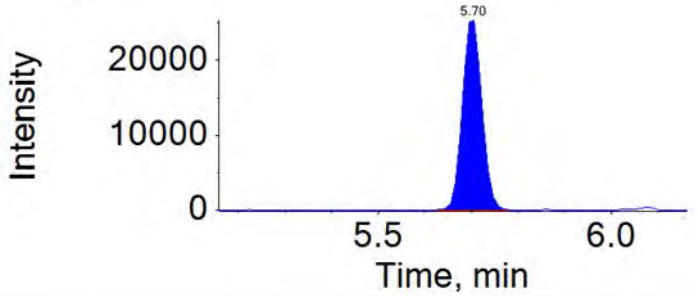
Component: 8:2-FTS
Primary Mass: 527.0 / 507.0



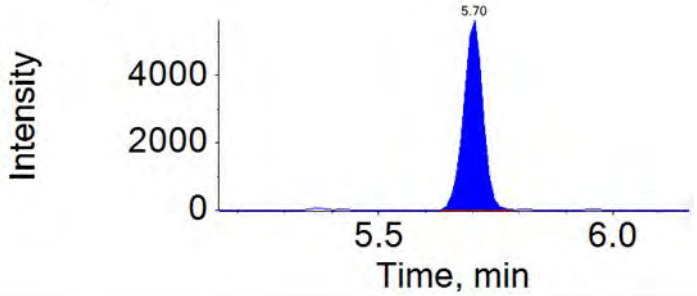
Component: 8:2-FTS_2
Secondary Mass: 527.0 / 81.0



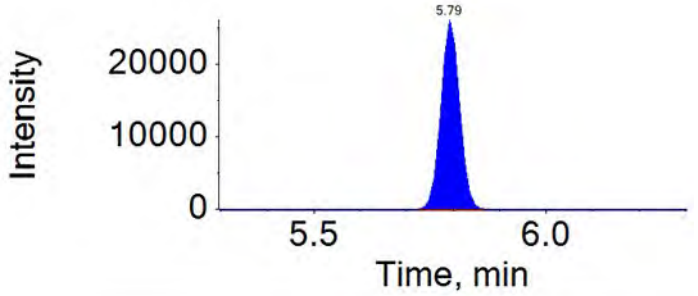
Component: NMeFOSAA
Primary Mass: 570.0 / 419.0



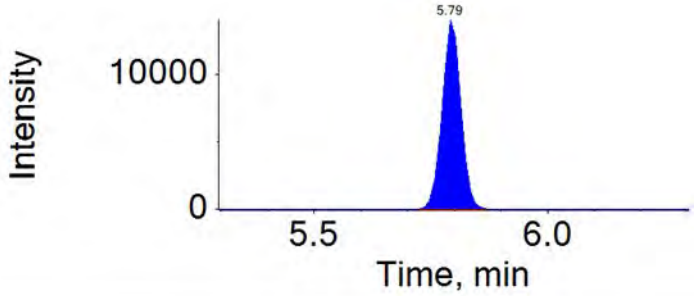
Component: NMeFOSAA_2
Secondary Mass: 570.0 / 483.0



Component: PFDS
Primary Mass: 599.0 / 80.0



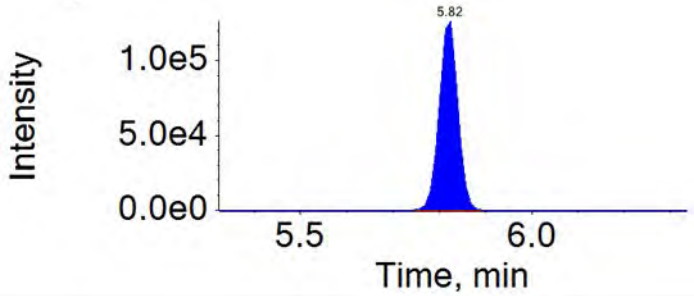
Component: PFDS_2
Secondary Mass: 599.0 / 99.0



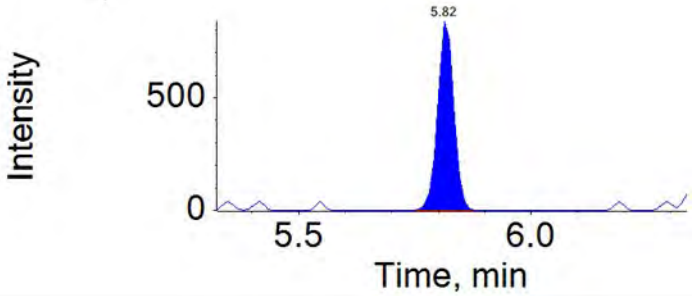
APPROVED
By MCD at 5:01 pm, 11/28/18

REVIEWED
By HMK at 12:22 pm, 11/29/18

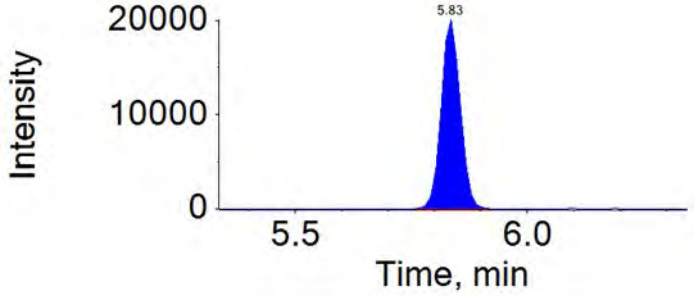
Component: PFUnDA
Primary Mass: 563.0 / 519.0



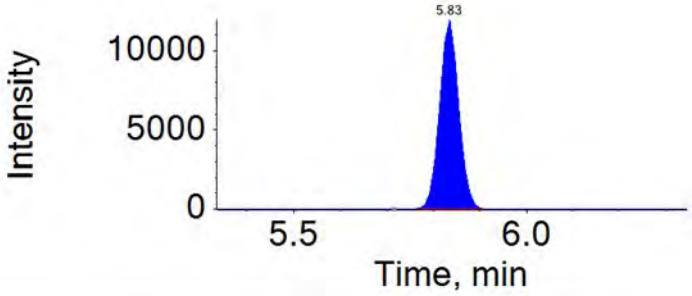
Component: PFUnDA_2
Secondary Mass: 563.0 / 169.0



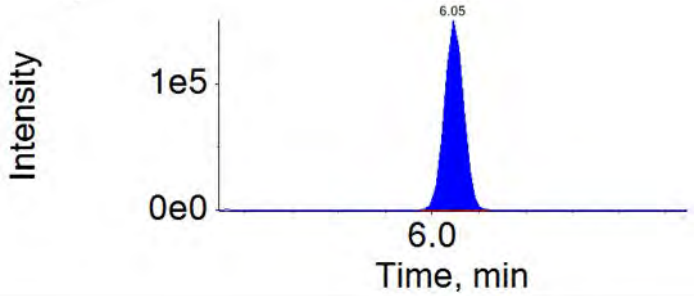
Component: NEtFOSAA
Primary Mass: 584.0 / 419.0



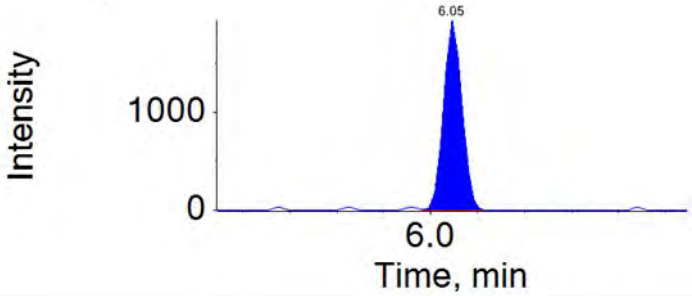
Component: NEtFOSAA_2
Secondary Mass: 584.0 / 526.0



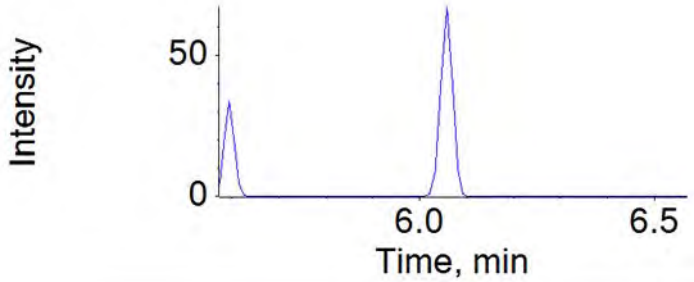
Component: PFDoDA
Primary Mass: 613.0 / 569.0



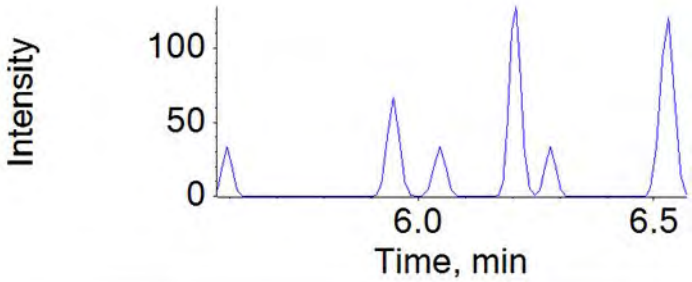
Component: PFDoDA_2
Secondary Mass: 613.0 / 169.0



Component: 10:2-FTS
Primary Mass: 627.0 / 607.0



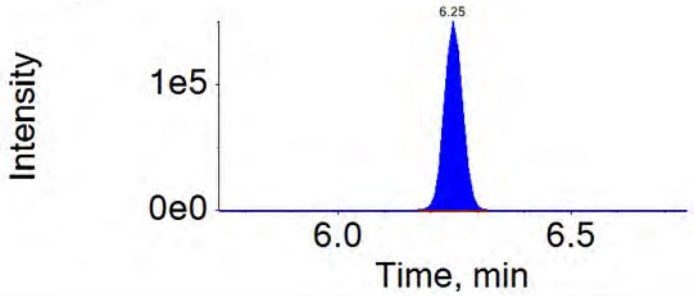
Component: 10:2-FTS_2
Secondary Mass: 627.0 / 81.0



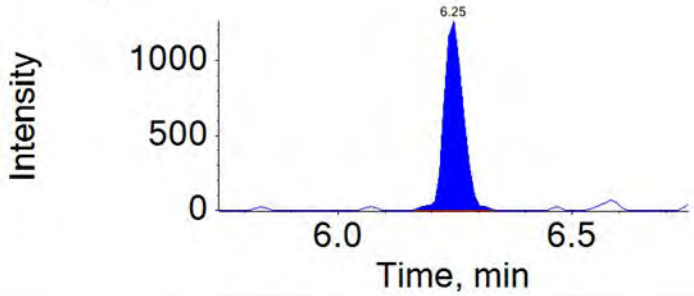
APPROVED
By MCD at 5:01 pm, 11/28/18

REVIEWED
By HMK at 12:22 pm, 11/29/18

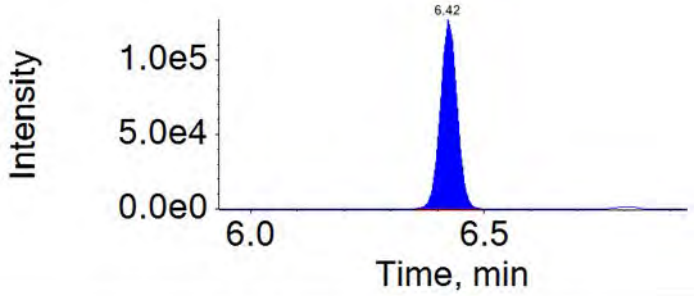
Component: PFTrDA
Primary Mass: 663.0 / 619.0



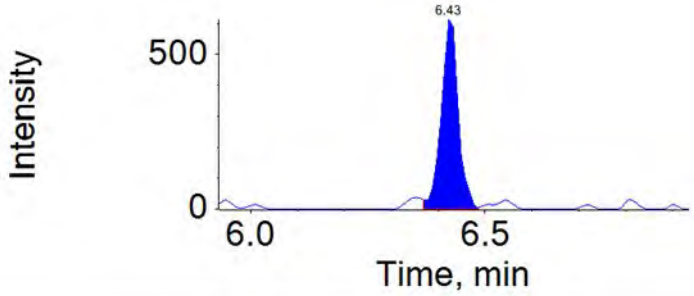
Component: PFTrDA_2
Secondary Mass: 663.0 / 169.0



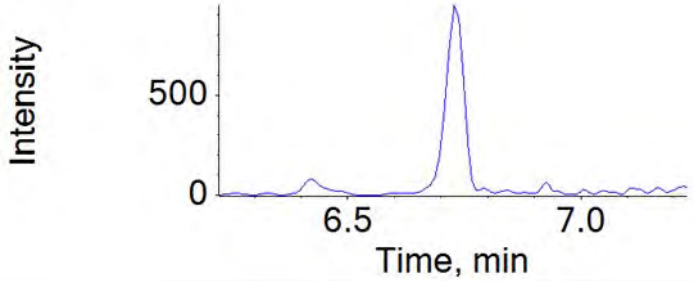
Component: PFTeDA
Primary Mass: 713.0 / 669.0



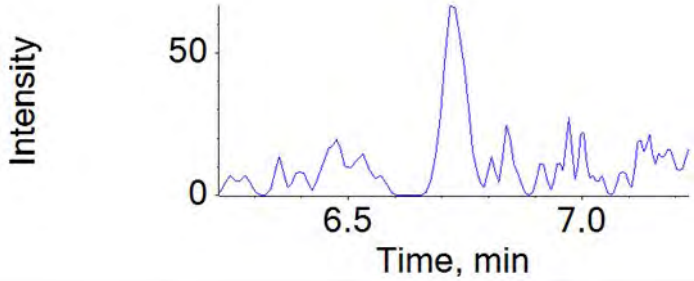
Component: PFTeDA_2
Secondary Mass: 713.0 / 169.0



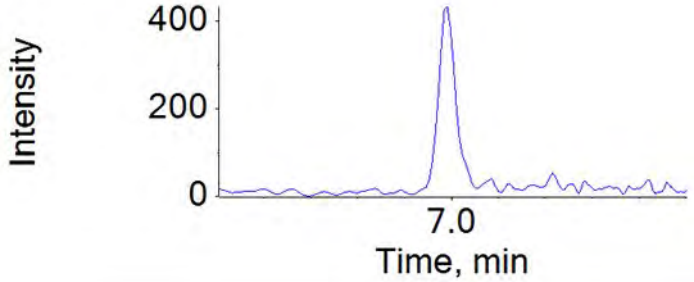
Component: PFHxDA
Primary Mass: 813.0 / 769.0



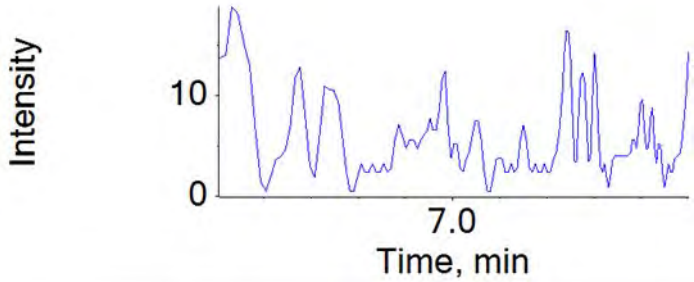
Component: PFHxDA_2
Secondary Mass: 813.0 / 169.0



Component: PFODA
Primary Mass: 913.0 / 869.0



Component: PFODA_2
Secondary Mass: 913.0 / 169.0



APPROVED
By MCD at 5:01 pm, 11/28/18

REVIEWED
By HMK at 12:22 pm, 11/29/18

ICAL Name: 18NOV28DCAL
QMethod Name: 18AUG20QM
Result Table: 18NOV28DCAL 11/28/2018 4:47:11 PM
Acquisition Method: 18AUG13_3uL.dam

Sample Name:	L+B CAL3			**Data File:**		18NOV28DCAL-15.wiff
Sample ID:	LBMODX1833D			**Acquis Date:**		2018-11-28T15:03:22
Sample Type:	Unknown			**Instrument:**		LM27631
Vial Position:	11			**Acquis Method:**		18AUG13_3uL.dam
Injection Vol:	3.00			**Result Table:**		18NOV28DCAL
QMethod File:	18AUG20QM			**ICAL Name:**		18NOV28DCAL
Batch Number:	N/A			**Operator:**		MCD7824
Sample Wt.:	1.00000			**Dilution Factor:**		1.00
Sample Vol.:	1.000			**Prep Factor:**		1.000

Injection Standard Peak Table

Injection Standard Area Reference File: 18NOV28DCAL-08

Injection Standard Name	Inj Std Conc	Injection Std Peak Area	Rreference Injection Standard Area	Injection Std %Diff	Injection Std %Diff Limit	Injection Std %Diff OOS
13C3-PFBA	5.0	930482.9	887248.9	5	50	
13C2-PFOA	5.0	516348.2	498501.6	4	50	
13C4-PFOS	4.8	310677.0	283214.2	10	50	
13C2-PFDA	5.0	460288.7	441790.6	4	50	

Extraction Standard Peak Table

Extraction Standard Name	Ext Std Area	Inj Std Name	Inj Std Area	Area Ratio	Ext Std Conc	Ext Std Result	Ext Std %REC	Ext Std %REC Limit	Ext Std OOS
E13C4-PFBA	996867.5	13C3-PFBA	930482.9	1.071	5.000	4.780	96	70-130	
E13C5-PFPeA	927870.7	13C3-PFBA	930482.9	0.997	5.000	4.656	93	70-130	
E13C3-PFBS	427409.8	13C3-PFBA	930482.9	0.459	4.650	4.382	94	70-130	
E13C2-4:2-FTS	73743.1	13C2-PFOA	516348.2	0.143	4.670	4.922	105	70-130	
E13C5-PFHxA	699105.0	13C2-PFOA	516348.2	1.354	5.000	4.973	99	70-130	
E13C3-PFHxS	324075.2	13C2-PFOA	516348.2	0.628	4.730	4.919	104	70-130	
E13C4-PFHpA	547668.0	13C2-PFOA	516348.2	1.061	5.000	4.874	97	70-130	
E13C2-6:2-FTS	63429.0	13C2-PFOA	516348.2	0.123	4.750	5.142	108	70-130	
E13C8-PFOA	997292.2	13C2-PFOA	516348.2	1.931	5.000	5.316	106	70-130	
E13C8-PFOS	308064.9	13C4-PFOS	310677.0	0.992	4.780	4.476	94	70-130	
E13C9-PFNA	770381.1	13C4-PFOS	310677.0	2.480	5.000	5.446	109	70-130	
E13C6-PFDA	853597.3	13C2-PFDA	460288.7	1.854	5.000	5.229	105	70-130	
E13C2-8:2-FTS	52606.6	13C2-PFDA	460288.7	0.114	4.790	4.912	103	70-130	
E13C8-PFOSA	636488.8	13C2-PFDA	460288.7	1.383	5.000	5.074	101	70-130	
Ed3-NMeFOSAA	186039.9	13C2-PFDA	460288.7	0.404	5.000	5.132	103	70-130	
E13C7-PFUnDA	573935.8	13C2-PFDA	460288.7	1.247	5.000	5.270	105	70-130	
Ed5-NEtFOSAA	145277.9	13C2-PFDA	460288.7	0.316	5.000	5.623	112	70-130	
E13C2-PFDoDA	1114419.1	13C2-PFDA	460288.7	2.421	5.000	5.087	102	70-130	
Ed7-NMePFOSAE	278546.0	13C2-PFDA	460288.7	0.605	5.000	5.230	105	70-130	
Ed3-NMePFOSA	90664.8	13C2-PFDA	460288.7	0.197	5.000	5.331	107	70-130	
Ed9-NEtPFOSAE	233109.2	13C2-PFDA	460288.7	0.506	5.000	5.134	103	70-130	
Ed5-NEtPFOSA	69689.3	13C2-PFDA	460288.7	0.151	5.000	5.261	105	70-130	
E13C2-PFTeDA	859635.9	13C2-PFDA	460288.7	1.868	5.000	5.168	103	70-130	

APPROVED
By MCD at 5:01 pm, 11/28/18

REVIEWED
By HMK at 12:22 pm, 11/29/18

ICAL Name: 18NOV28DCAL **Result Table:** 18NOV28DCAL 11/28/2018 4:47:11 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

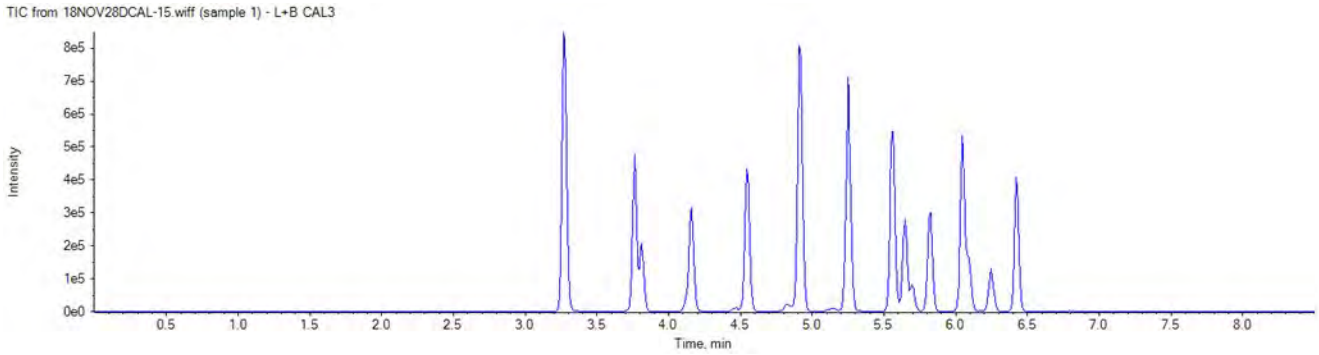
Analyte Quantitation Peak Table

Sample Name: L+B CAL3 **Instrument Name:** LM27631 **File Name:** 18NOV28DCAL-15.wiff

Sample Wt	Sample Vol	Dilution Factor	PrepFactor
1.00000	1.000	1.00	1.000

Analyte Name	RT	RRT	Analyte Area Response	E	Int Typ	ES Name	ES RT	ES Area Response	Area Ratio	Sample Result (ng/g)
PFBA	N/A	N/A	N/A		A	13C4-PFBA	3.27	996867.5	N/A	
PFPeA	N/A	N/A	N/A		A	13C5-PFPeA	3.76	927870.7	N/A	
PFBS	N/A	N/A	N/A		A	13C3-PFBS	3.81	427409.8	N/A	
4:2-FTS	N/A	N/A	N/A		A	13C2-4:2-FTS	4.12	73743.1	N/A	
PFHxA	N/A	N/A	N/A		A	13C5-PFHxA	4.16	699105.0	N/A	
PFPeS	N/A	N/A	N/A		A	13C3-PFBS	3.81	427409.8	N/A	
PFHpA	N/A	N/A	N/A		A	13C4-PFHpA	4.55	547668.0	N/A	
PFHxS	4.55	1.000	130205.7		M	13C3-PFHxS	4.55	324075.2	0.402	1.881
6:2-FTS	N/A	N/A	N/A		A	13C2-6:2-FTS	4.90	63429.0	N/A	
PFHpS	N/A	N/A	N/A		A	13C3-PFHxS	4.55	324075.2	N/A	
PFOA	4.92	1.000	363985.2		M	13C8-PFOA	4.91	997292.2	0.365	1.886
PFOS	5.25	1.000	124397.3		M	13C8-PFOS	5.24	308064.9	0.404	1.694
PFNA	N/A	N/A	N/A		A	13C9-PFNA	5.26	770381.1	N/A	
PFNS	N/A	N/A	N/A		A	13C8-PFOS	5.24	308064.9	N/A	
PFDA	N/A	N/A	N/A		A	13C6-PFDA	5.56	853597.3	N/A	
8:2-FTS	N/A	N/A	N/A		A	13C2-8:2-FTS	5.56	52606.6	N/A	
PFOSA	N/A	N/A	N/A		A	13C8-PFOSA	5.65	636488.8	N/A	
NMeFOSAA	N/A	N/A	N/A		A	d3-NMeFOSAA	5.70	186039.9	N/A	
PFDS	N/A	N/A	N/A		A	13C8-PFOS	5.24	308064.9	N/A	
PFUnDA	N/A	N/A	N/A		A	13C7-PFUnDA	5.82	573935.8	N/A	
NEtFOSAA	N/A	N/A	N/A		A	d5-NEtFOSAA	5.83	145277.9	N/A	
PFDoDA	N/A	N/A	N/A		A	13C2-PFDoDA	6.05	1114419.1	N/A	
10:2-FTS	N/A	N/A	N/A		A	13C2-8:2-FTS	5.56	52606.6	N/A	
NMePFOSAE	N/A	N/A	N/A		A	d7-NMePFOSAE	6.09	278546.0	N/A	
NMePFOSA	N/A	N/A	N/A		A	d3-NMePFOSA	6.10	90664.8	N/A	
PFDoS	N/A	N/A	N/A		A	13C8-PFOS	5.24	308064.9	N/A	
NEtPFOSAE	N/A	N/A	N/A		A	d9-NEtPFOSAE	6.24	233109.2	N/A	
NEtPFOSA	N/A	N/A	N/A		A	d5-NEtPFOSA	6.26	69689.3	N/A	
PFTrDA	N/A	N/A	N/A		A	13C2-PFDoDA	6.05	1114419.1	N/A	
PFTeDA	N/A	N/A	N/A		A	13C2-PFTeDA	6.43	859635.9	N/A	
PFHxDA	N/A	N/A	N/A		A	13C2-PFTeDA	6.43	859635.9	N/A	
PFODA	N/A	N/A	N/A		A	13C2-PFTeDA	6.43	859635.9	N/A	

Total Ion Chromatogram

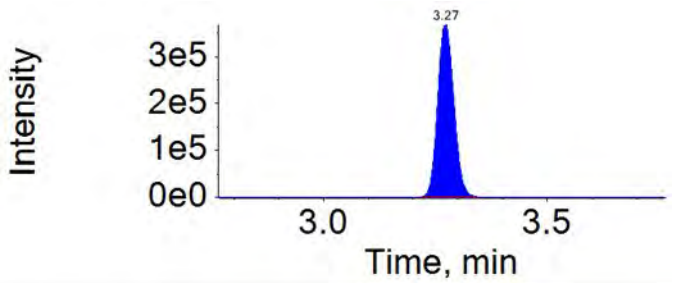


APPROVED
By MCD at 5:01 pm, 11/28/18

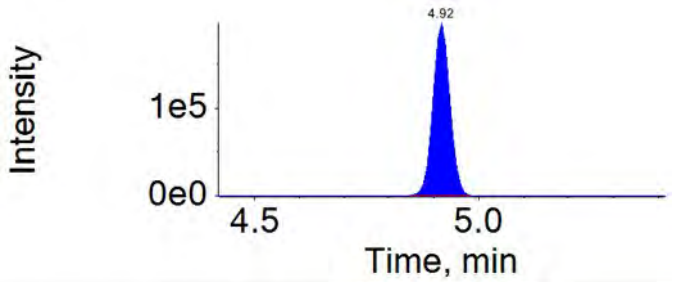
REVIEWED
By HMK at 12:22 pm, 11/29/18

ICAL Name: 18NOV28DCAL **Result Table:** 18NOV28DCAL 11/28/2018 4:47:11 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

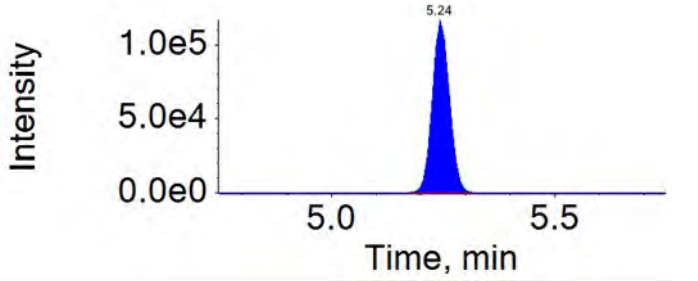
Injection Standard: 13C3-PFBA
216.0 / 172.0



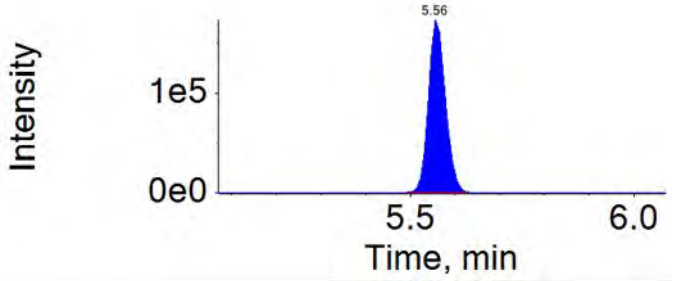
Injection Standard: 13C2-PFOA
415.0 / 370.0



Injection Standard: 13C4-PFOS
503.0 / 80.0

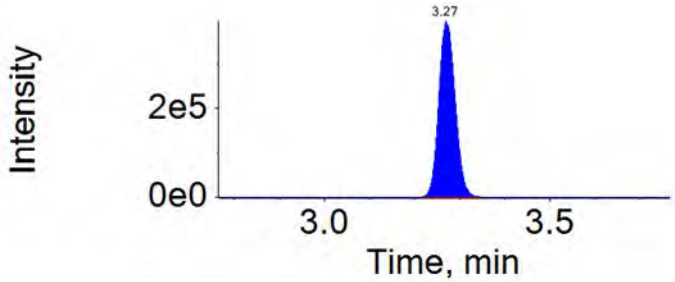


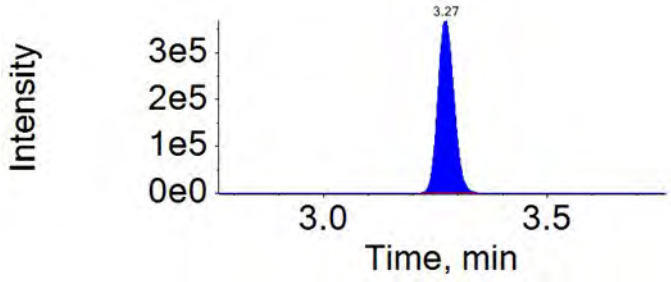
Injection Standard: 13C2-PFDA
515.0 / 470.0



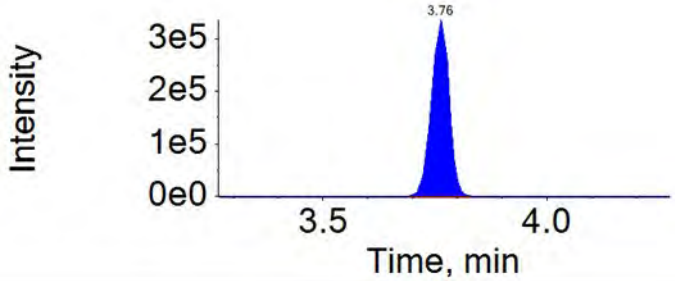
ICAL Name: 18NOV28DCAL **Result Table:** 18NOV28DCAL 11/28/2018 4:47:11 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

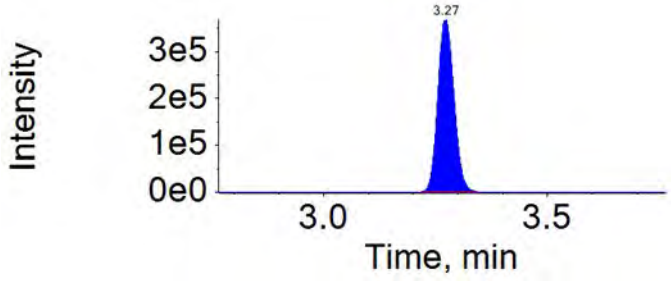
Extraction Standard: E13C4-PFBA	Injection Standard: 13C3-PFBA
217.0 / 172.0	216.0 / 172.0



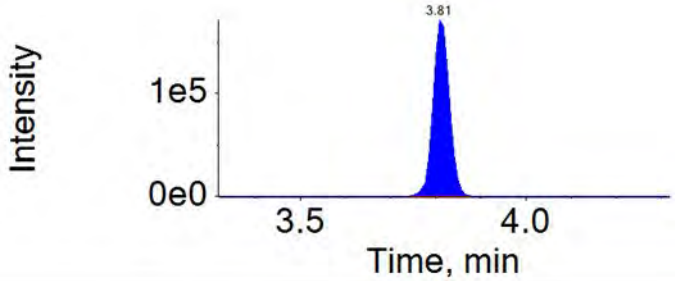


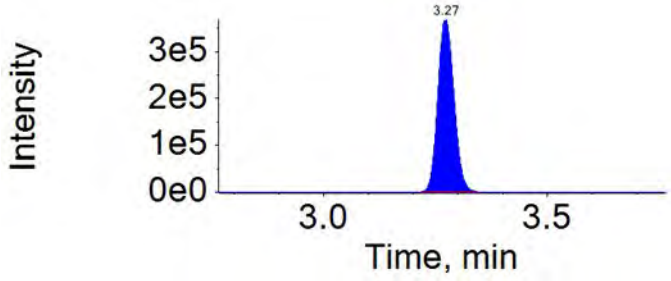
Extraction Standard: E13C5-PFPeA	Injection Standard: 13C3-PFBA
268.0 / 223.0	216.0 / 172.0



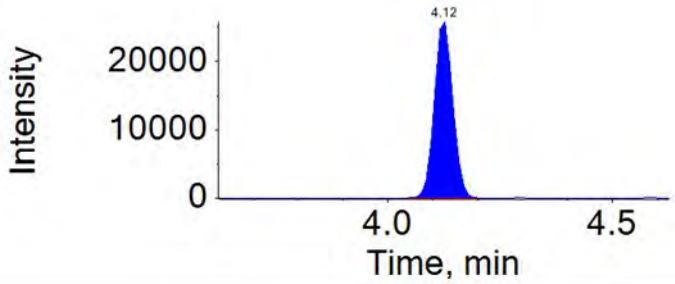


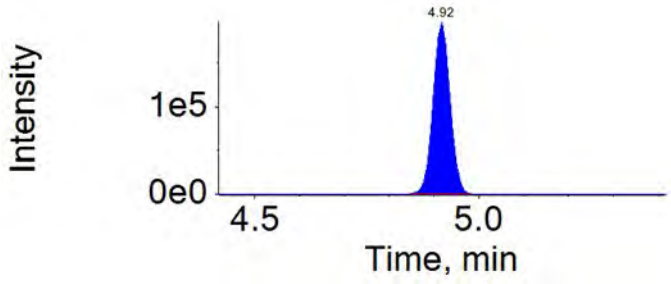
Extraction Standard: E13C3-PFBS	Injection Standard: 13C3-PFBA
302.0 / 80.0	216.0 / 172.0





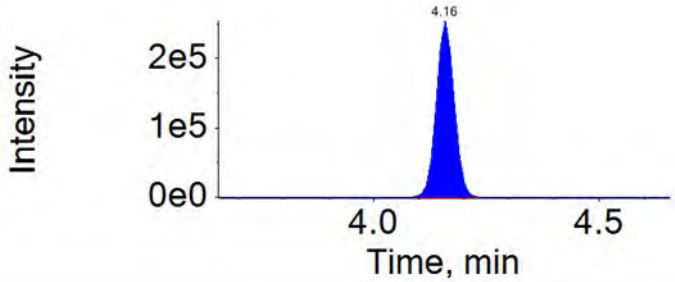
Extraction Standard: E13C2-4:2-FTS	Injection Standard: 13C2-PFOA
329.0 / 81.0	415.0 / 370.0

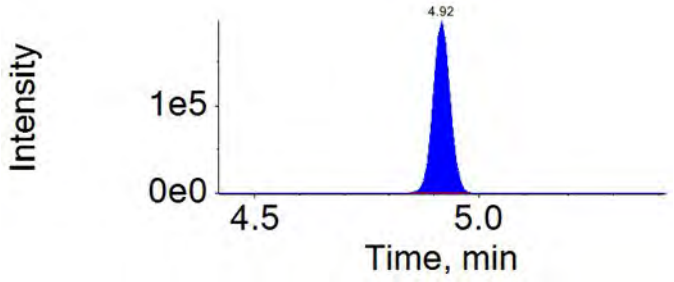




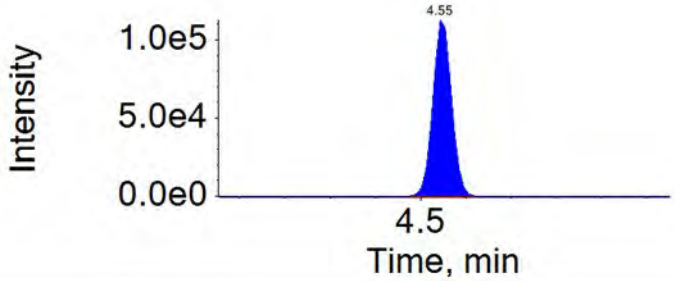
ICAL Name: 18NOV28DCAL **Result Table:** 18NOV28DCAL 11/28/2018 4:47:11 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

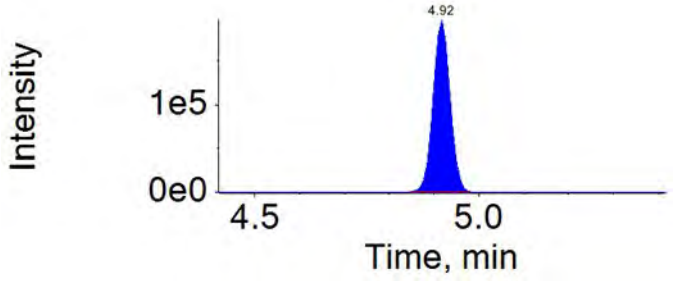
Extraction Standard: E13C5-PFHxA	Injection Standard: 13C2-PFOA
318.0 / 273.0	415.0 / 370.0



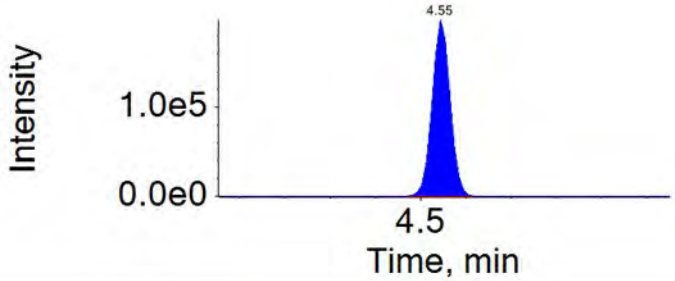


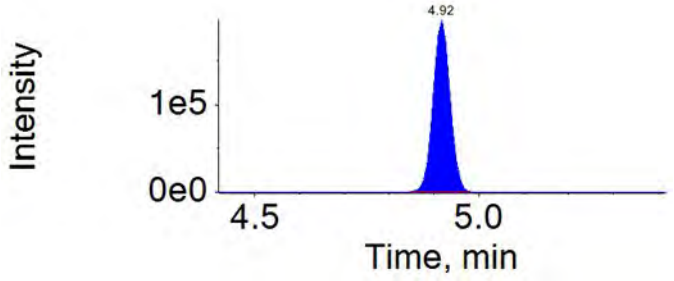
Extraction Standard: E13C3-PFHxS	Injection Standard: 13C2-PFOA
402.0 / 80.0	415.0 / 370.0



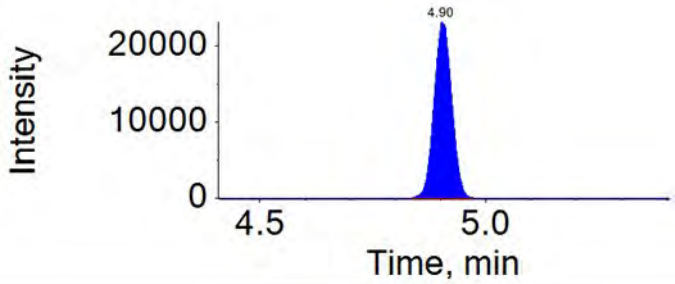


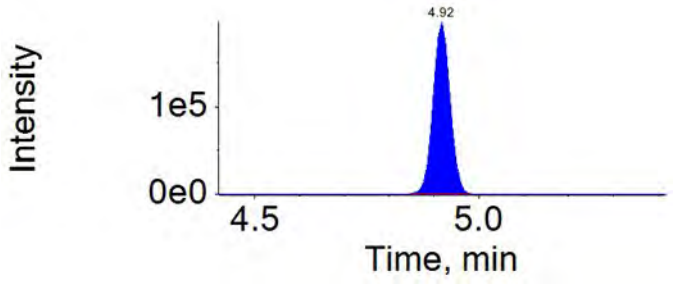
Extraction Standard: E13C4-PFHpA	Injection Standard: 13C2-PFOA
367.0 / 322.0	415.0 / 370.0





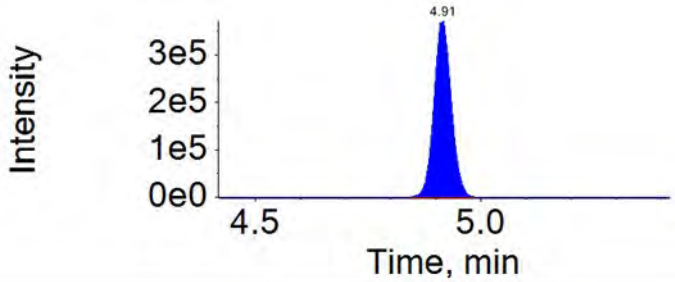
Extraction Standard: E13C2-6:2-FTS	Injection Standard: 13C2-PFOA
429.0 / 81.0	415.0 / 370.0

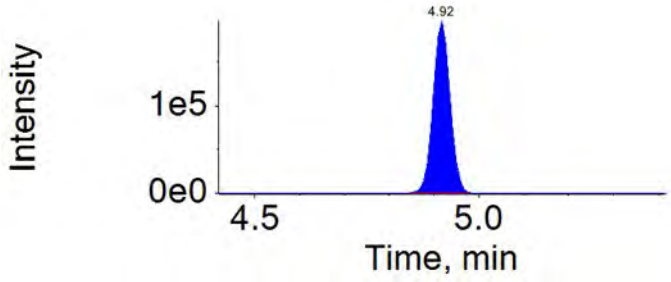




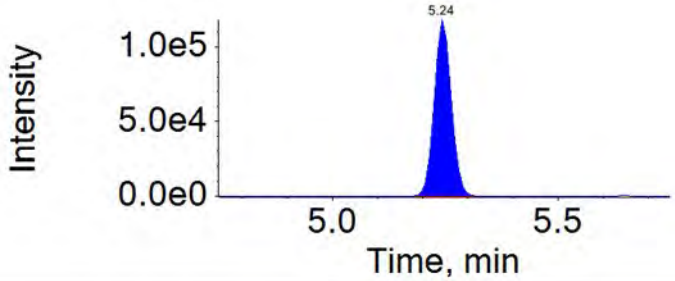
ICAL Name: 18NOV28DCAL **Result Table:** 18NOV28DCAL 11/28/2018 4:47:11 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

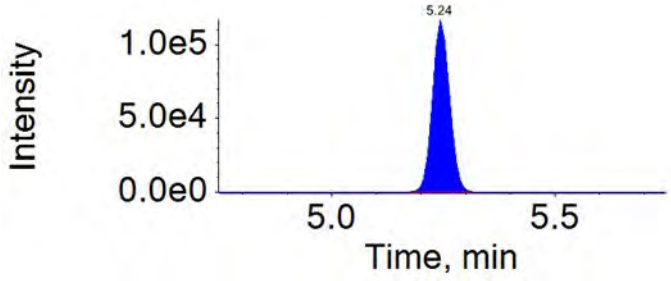
Extraction Standard: E13C8-PFOA	Injection Standard: 13C2-PFOA
421.0 / 376.0	415.0 / 370.0



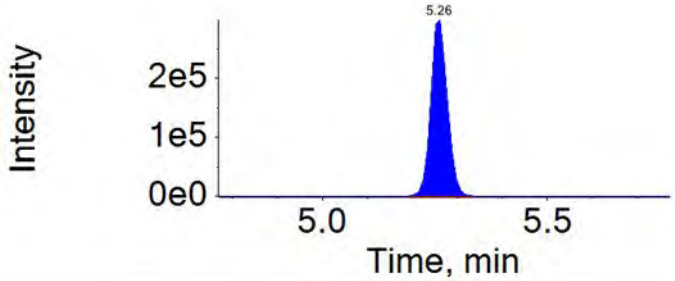


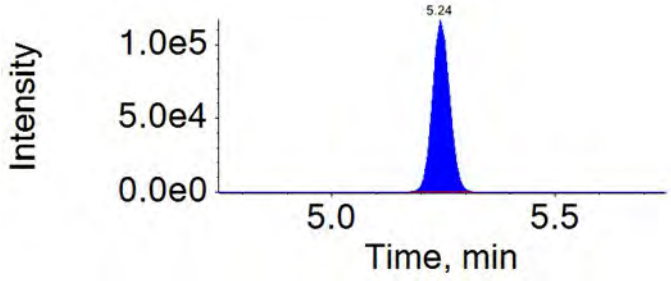
Extraction Standard: E13C8-PFOS	Injection Standard: 13C4-PFOS
507.0 / 80.0	503.0 / 80.0



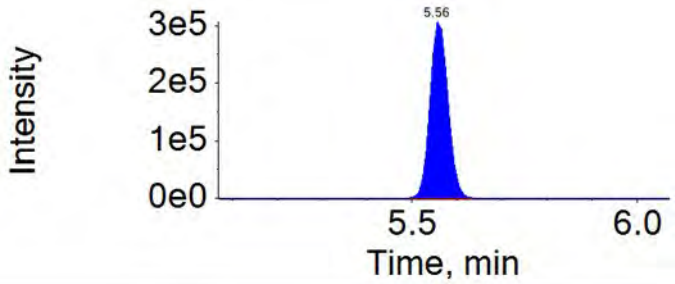


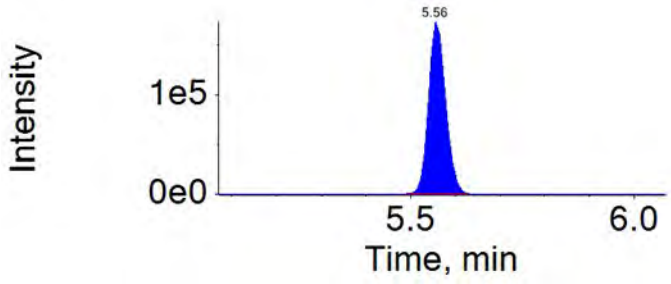
Extraction Standard: E13C9-PFNA	Injection Standard: 13C4-PFOS
472.0 / 427.0	503.0 / 80.0





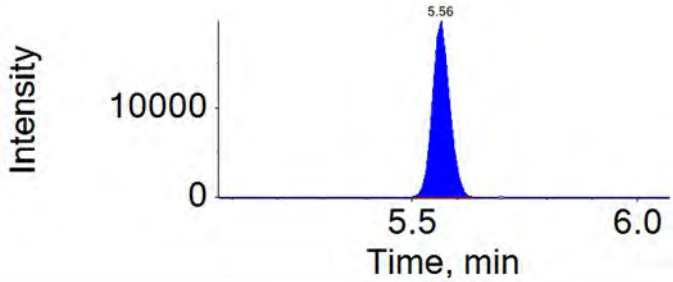
Extraction Standard: E13C6-PFDA	Injection Standard: 13C2-PFDA
519.0 / 474.0	515.0 / 470.0

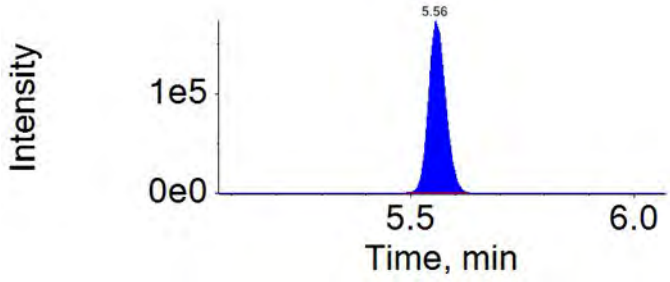




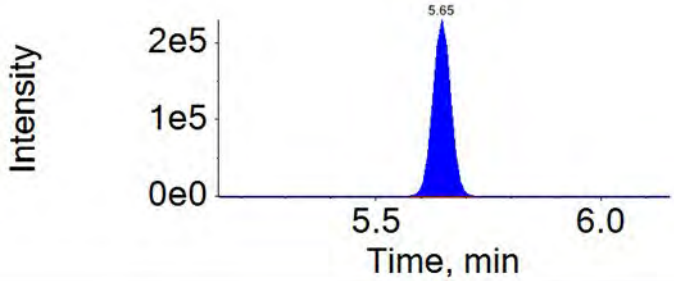
ICAL Name: 18NOV28DCAL **Result Table:** 18NOV28DCAL 11/28/2018 4:47:11 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

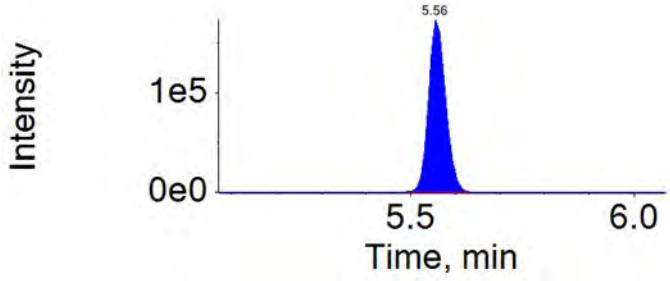
Extraction Standard: E13C2-8:2-FTS	Injection Standard: 13C2-PFDA
529.0 / 81.0	515.0 / 470.0



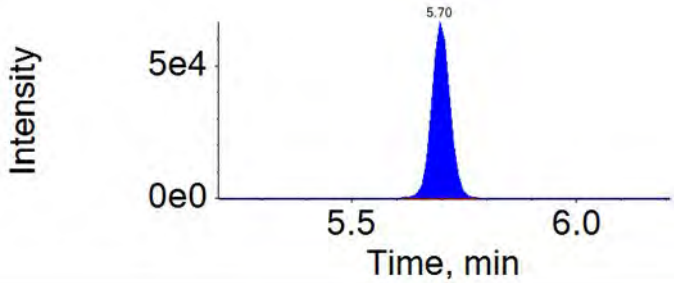


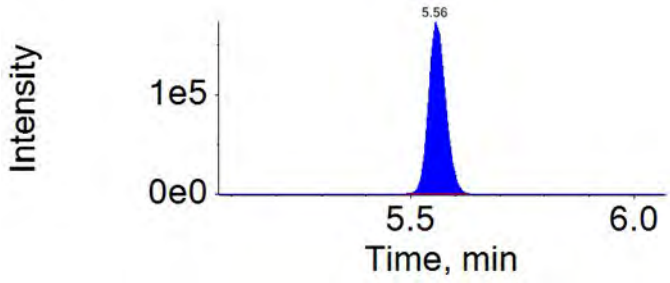
Extraction Standard: E13C8-PFOSA	Injection Standard: 13C2-PFDA
506.0 / 78.0	515.0 / 470.0



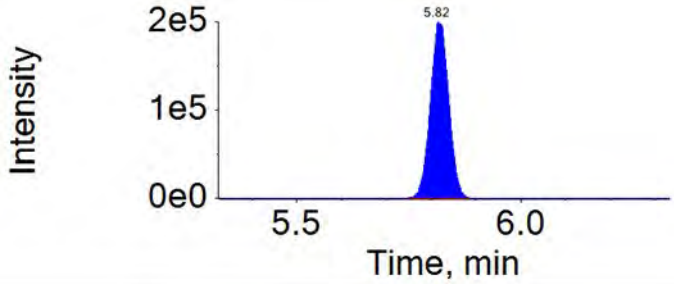


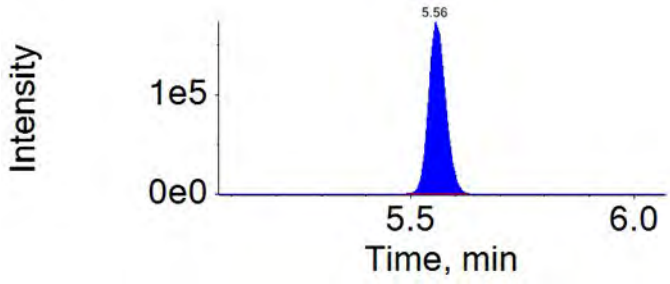
Extraction Standard: Ed3-NMeFOSAA	Injection Standard: 13C2-PFDA
573.0 / 419.0	515.0 / 470.0





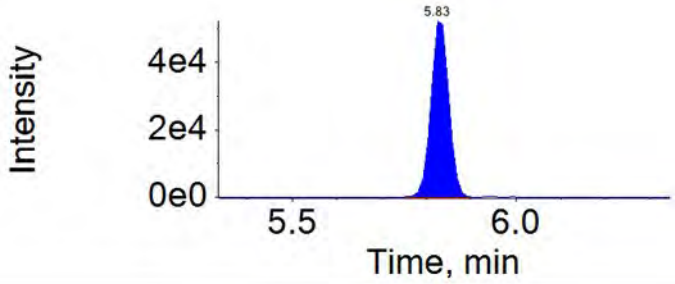
Extraction Standard: E13C7-PFUnDA	Injection Standard: 13C2-PFDA
570.0 / 525.0	515.0 / 470.0

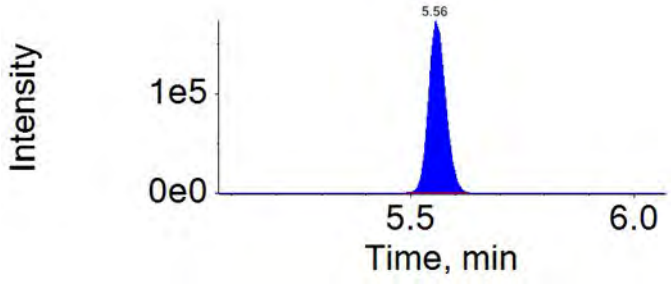




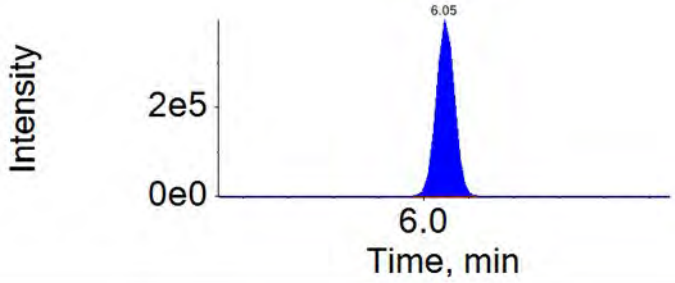
ICAL Name: 18NOV28DCAL **Result Table:** 18NOV28DCAL 11/28/2018 4:47:11 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

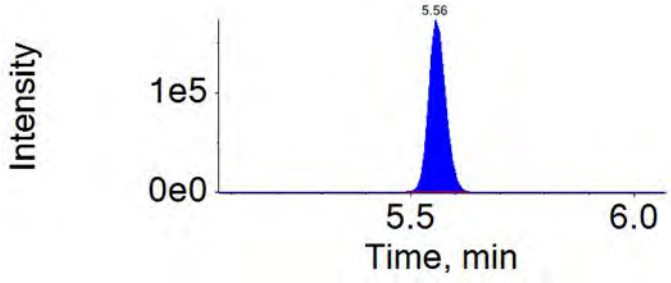
Extraction Standard: Ed5-NEtFOSAA	Injection Standard: 13C2-PFDA
589.0 / 419.0	515.0 / 470.0



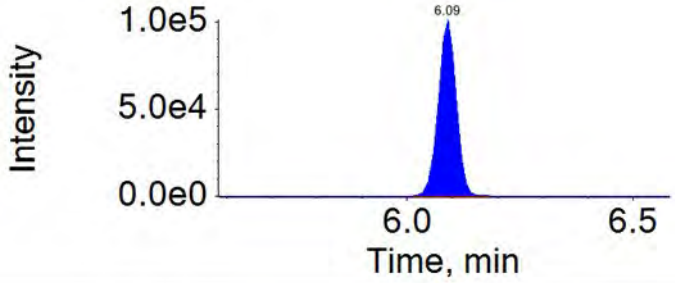


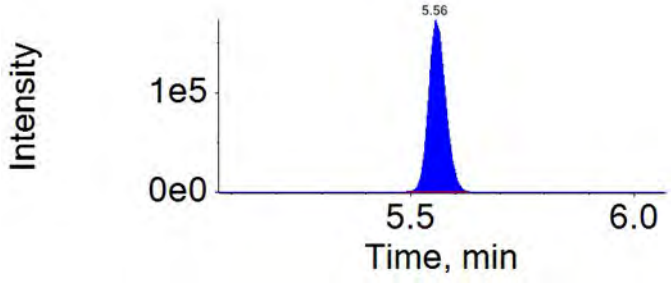
Extraction Standard: E13C2-PFDoDA	Injection Standard: 13C2-PFDA
615.0 / 570.0	515.0 / 470.0



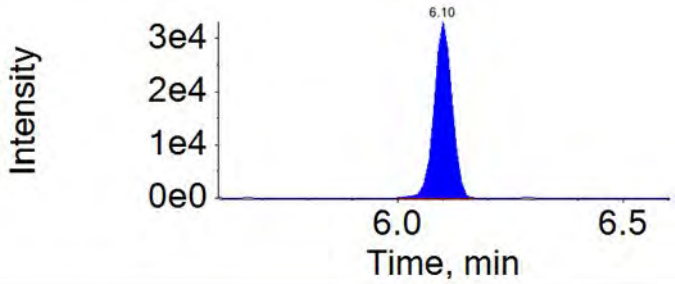


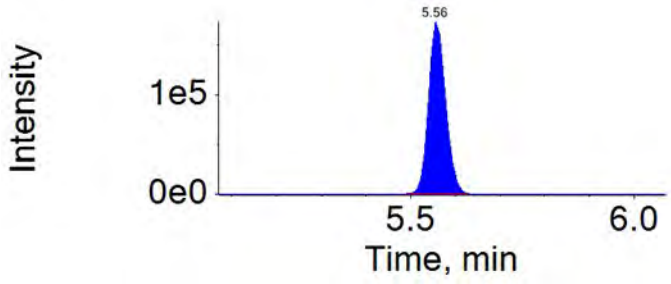
Extraction Standard: Ed7-NMePFOSAE	Injection Standard: 13C2-PFDA
623.0 / 59.0	515.0 / 470.0





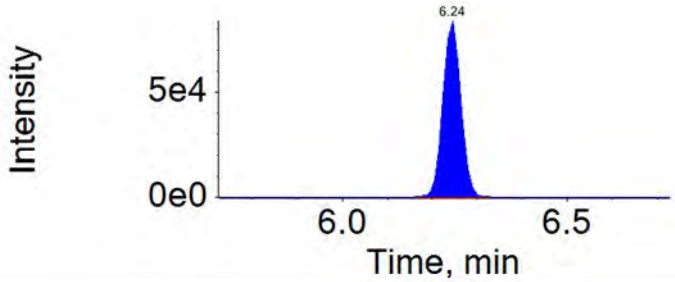
Extraction Standard: Ed3-NMePFOSA	Injection Standard: 13C2-PFDA
515.0 / 169.0	515.0 / 470.0

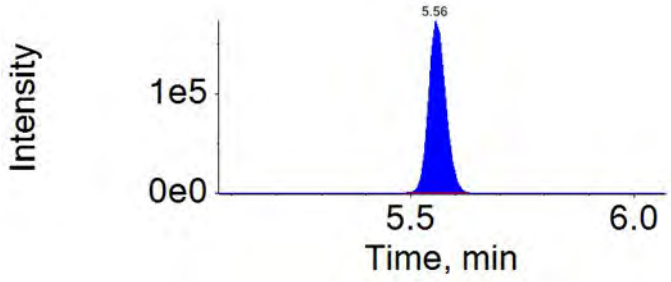




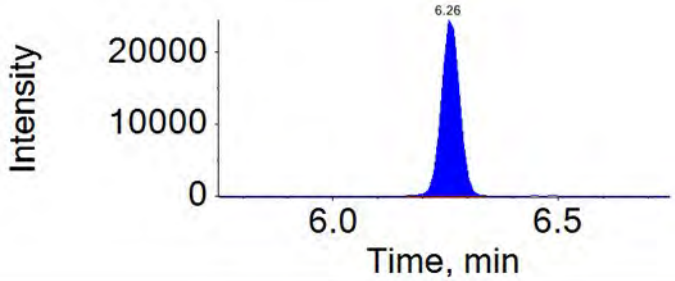
ICAL Name: 18NOV28DCAL **Result Table:** 18NOV28DCAL 11/28/2018 4:47:11 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

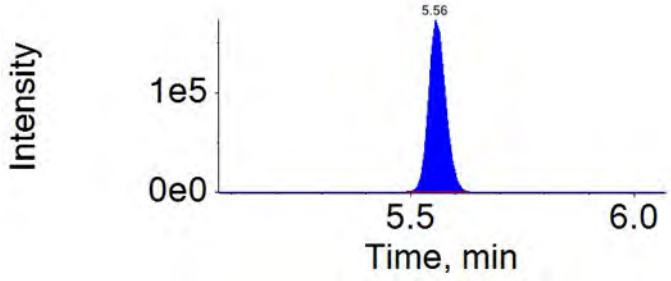
Extraction Standard: Ed9-NEtPFOSAE	Injection Standard: 13C2-PFDA
639.0 / 59.0	515.0 / 470.0



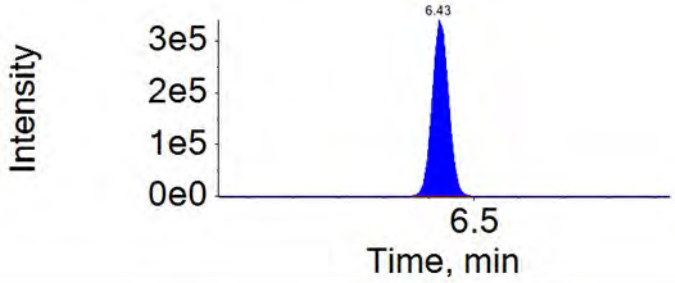


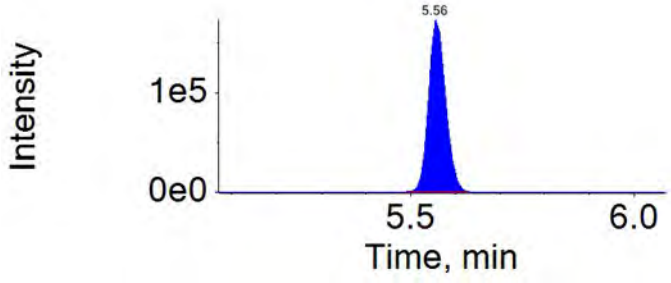
Extraction Standard: Ed5-NEtPFOSA	Injection Standard: 13C2-PFDA
531.0 / 169.0	515.0 / 470.0





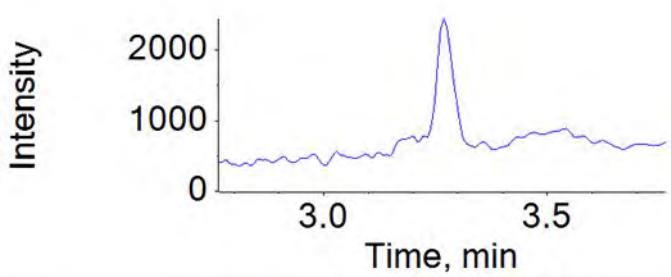
Extraction Standard: E13C2-PFTeDA	Injection Standard: 13C2-PFDA
715.0 / 670.0	515.0 / 470.0



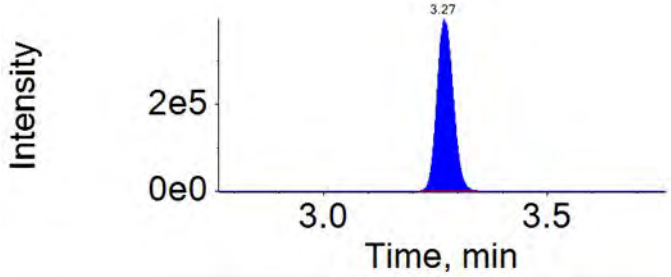


ICAL Name: 18NOV28DCAL **Result Table:** 18NOV28DCAL 11/28/2018 4:47:11 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

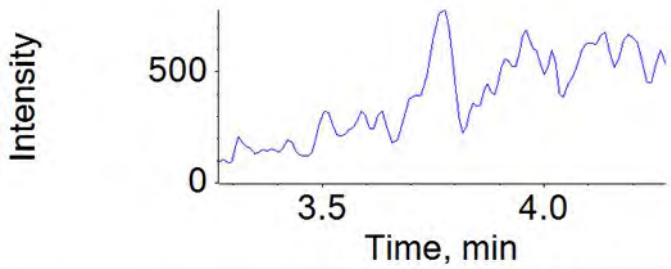
Analyte: PFBA
213.0 / 169.0



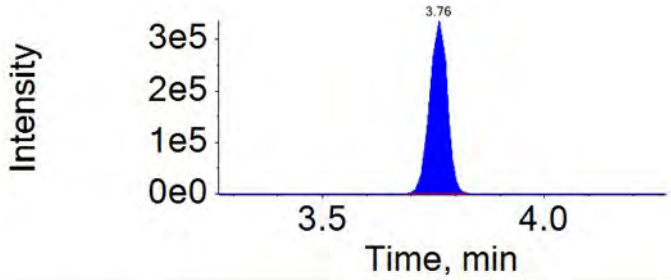
Extraction Standard: 13C4-PFBA
217.0 / 172.0



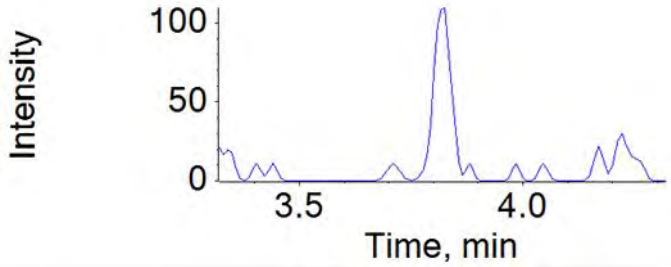
Analyte: PFPeA
263.0 / 219.0



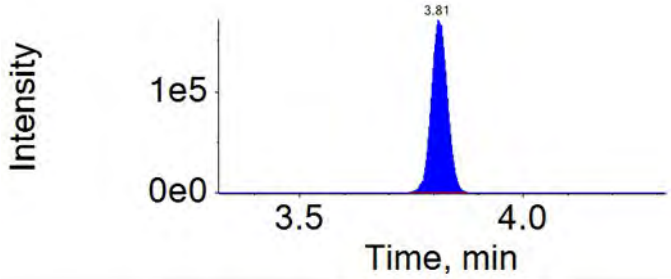
Extraction Standard: 13C5-PFPeA
268.0 / 223.0



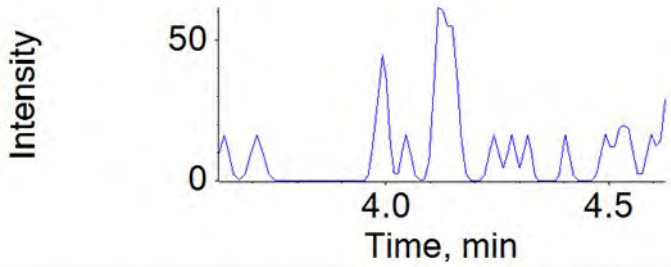
Analyte: PFBS
299.0 / 80.0



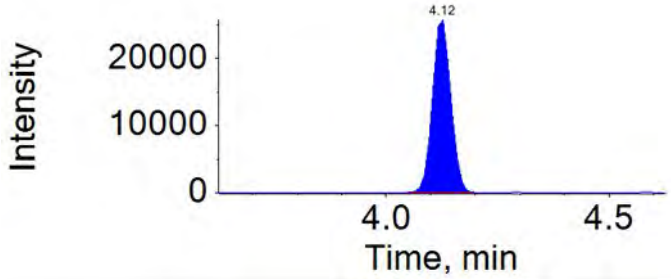
Extraction Standard: 13C3-PFBS
302.0 / 80.0



Analyte: 4:2-FTS
327.0 / 307.0



Extraction Standard: 13C2-4:2-FTS
329.0 / 81.0

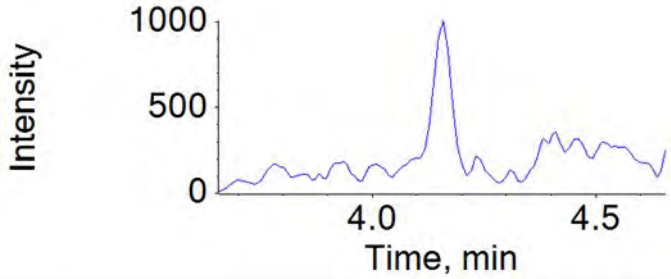


APPROVED
By MCD at 5:01 pm, 11/28/18

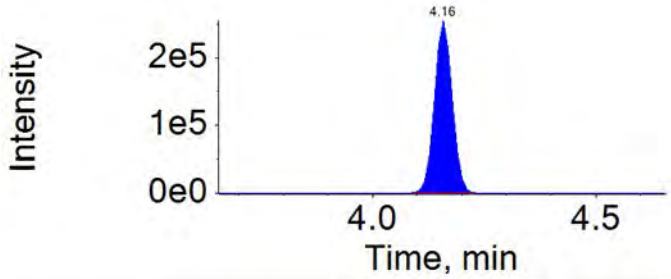
REVIEWED
By HMK at 12:22 pm, 11/29/18

ICAL Name: 18NOV28DCAL **Result Table:** 18NOV28DCAL 11/28/2018 4:47:11 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

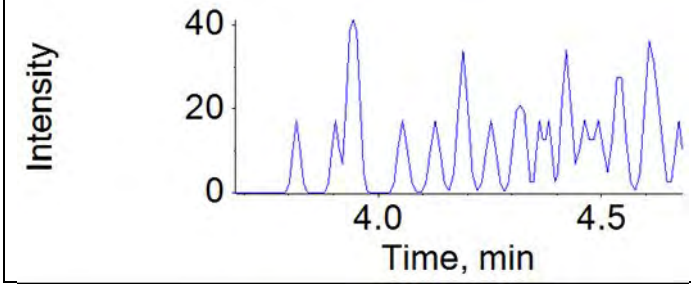
Analyte: PFHxA
313.0 / 269.0



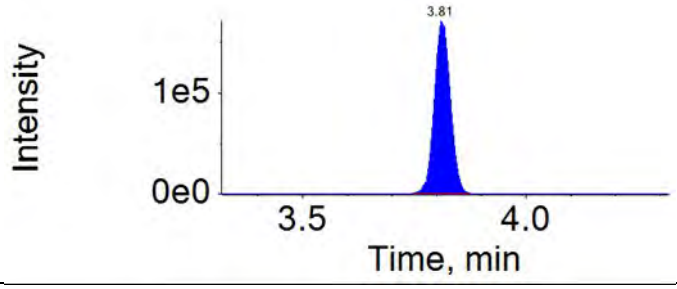
Extraction Standard: 13C5-PFHxA
318.0 / 273.0



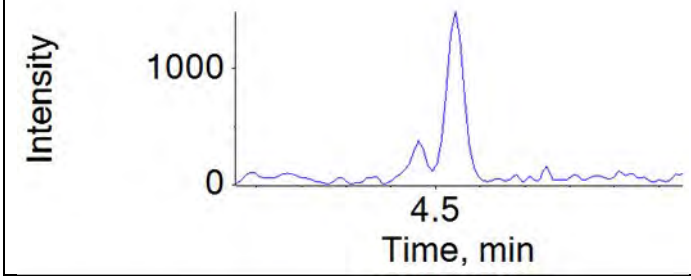
Analyte: PFPeS
349.0 / 80.0



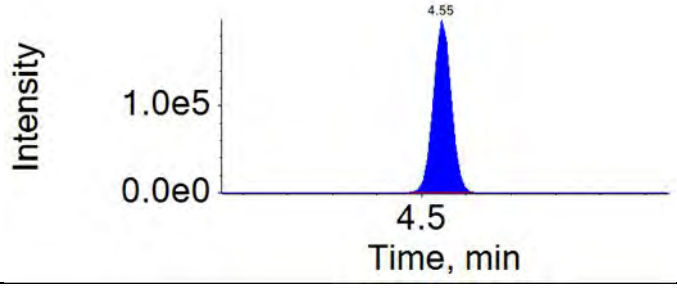
Extraction Standard: 13C3-PFBS
302.0 / 80.0



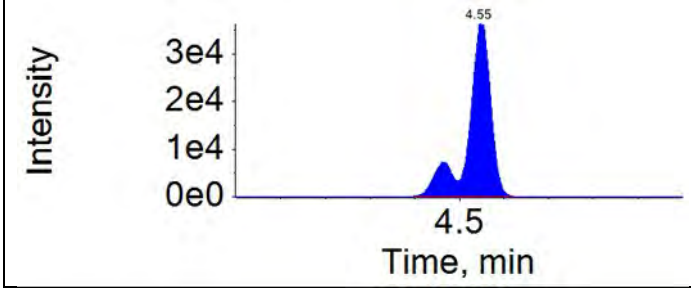
Analyte: PFHpA
363.0 / 319.0



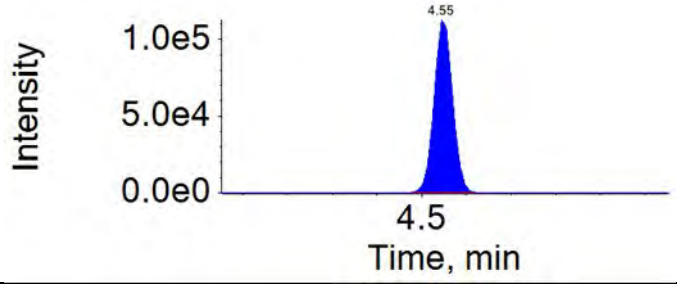
Extraction Standard: 13C4-PFHpA
367.0 / 322.0



Analyte: PFHxS
399.0 / 80.0



Extraction Standard: 13C3-PFHxS
402.0 / 80.0

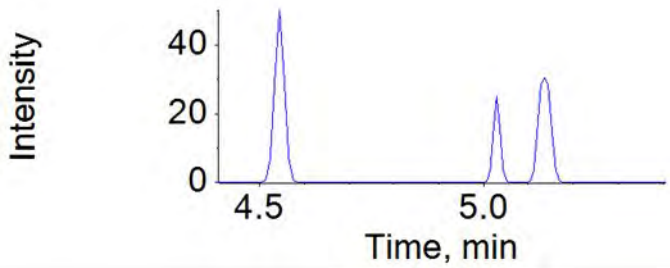


APPROVED
By MCD at 5:01 pm, 11/28/18

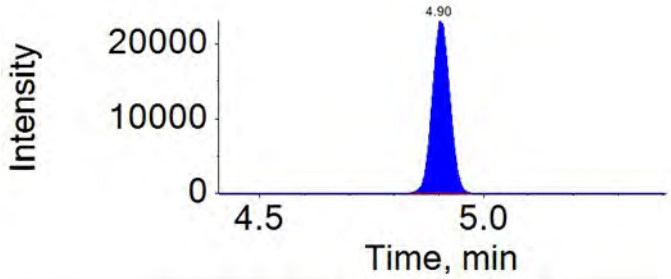
REVIEWED
By HMK at 12:22 pm, 11/29/18

ICAL Name: 18NOV28DCAL **Result Table:** 18NOV28DCAL 11/28/2018 4:47:11 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

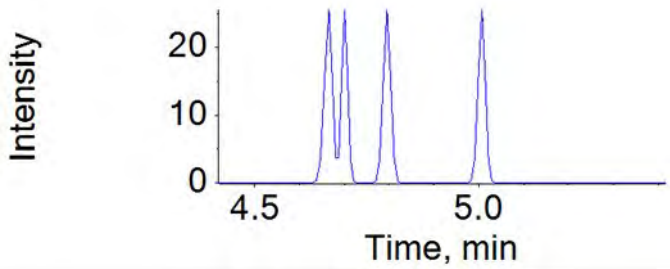
Analyte: 6:2-FTS
427.0 / 407.0



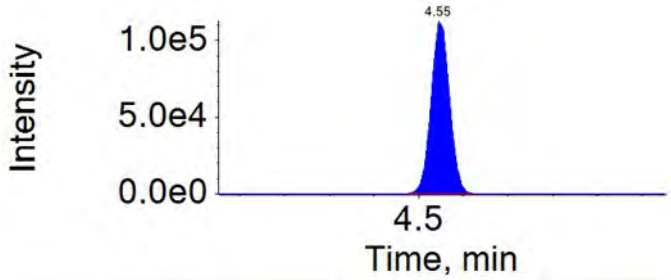
Extraction Standard: 13C2-6:2-FTS
429.0 / 81.0



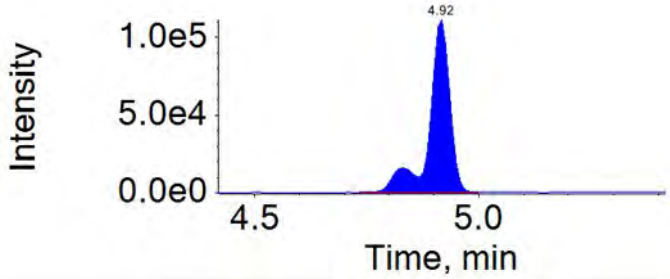
Analyte: PFHpS
449.0 / 80.0



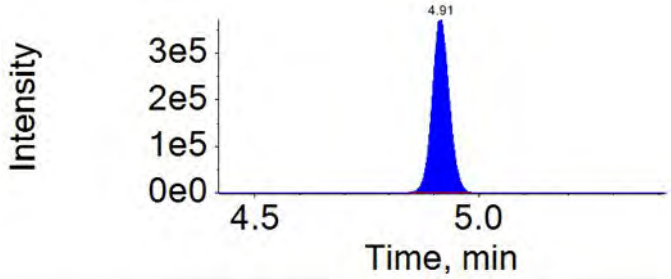
Extraction Standard: 13C3-PFHxS
402.0 / 80.0



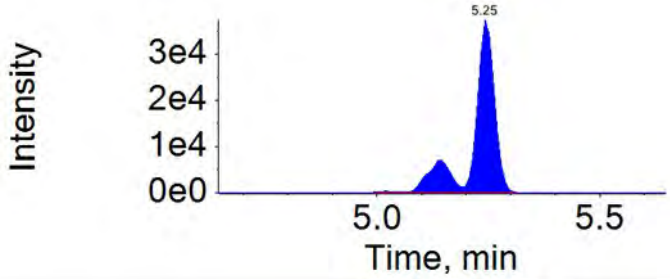
Analyte: PFOA
413.0 / 369.0



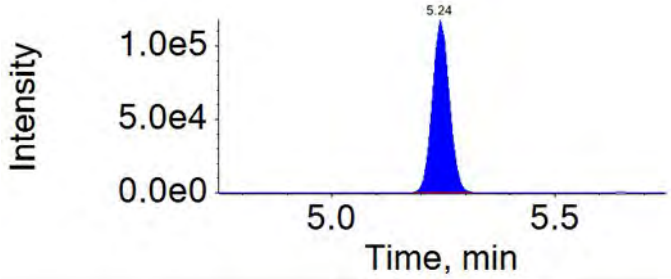
Extraction Standard: 13C8-PFOA
421.0 / 376.0



Analyte: PFOS
499.0 / 80.0



Extraction Standard: 13C8-PFOS
507.0 / 80.0

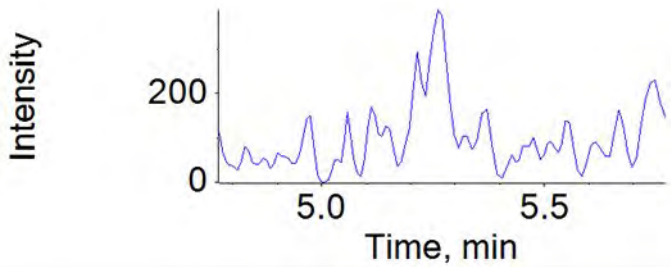


APPROVED
By MCD at 5:01 pm, 11/28/18

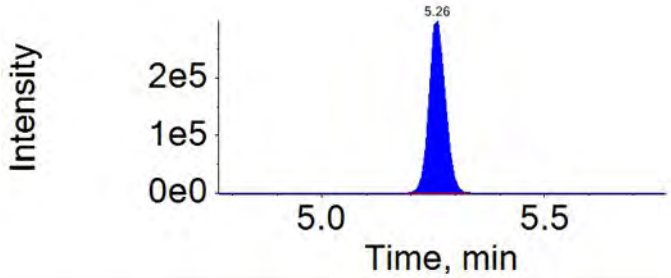
REVIEWED
By HMK at 12:22 pm, 11/29/18

ICAL Name: 18NOV28DCAL **Result Table:** 18NOV28DCAL 11/28/2018 4:47:11 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

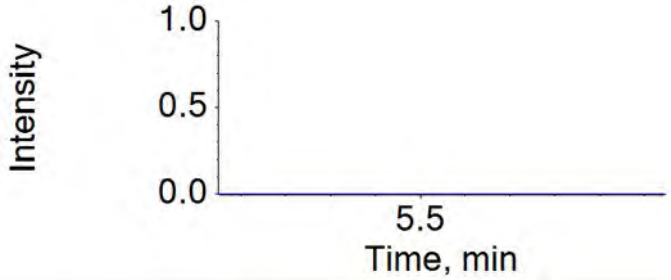
Analyte: PFNA
463.0 / 419.0



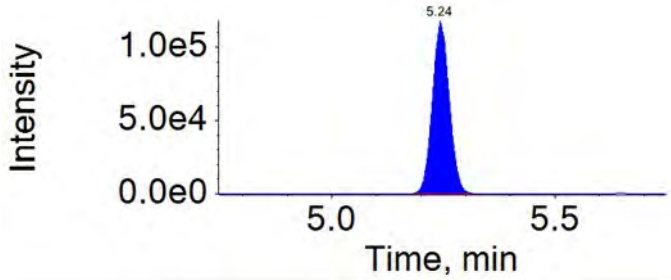
Extraction Standard: 13C9-PFNA
472.0 / 427.0



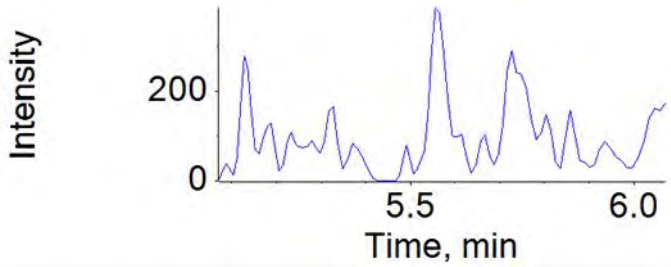
Analyte: PFNS
549.0 / 80.0



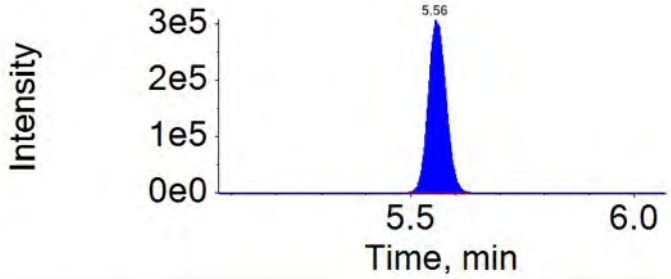
Extraction Standard: 13C8-PFOS
507.0 / 80.0



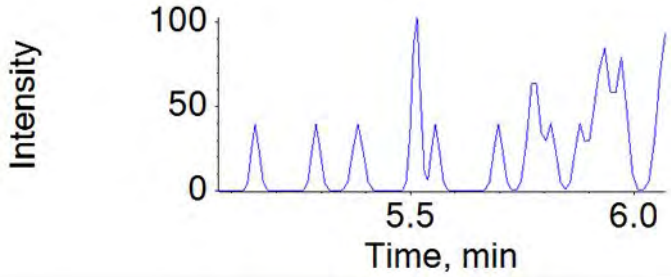
Analyte: PFDA
513.0 / 469.0



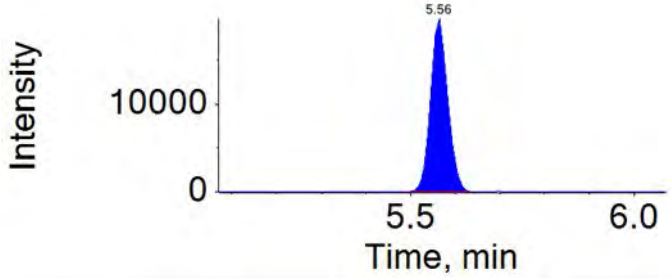
Extraction Standard: 13C6-PFDA
519.0 / 474.0



Analyte: 8:2-FTS
527.0 / 507.0



Extraction Standard: 13C2-8:2-FTS
529.0 / 81.0

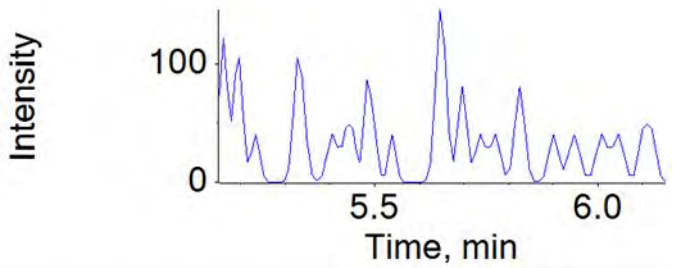


APPROVED
By MCD at 5:01 pm, 11/28/18

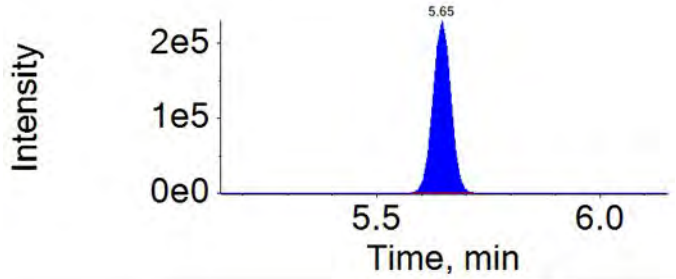
REVIEWED
By HMK at 12:22 pm, 11/29/18

ICAL Name: 18NOV28DCAL **Result Table:** 18NOV28DCAL 11/28/2018 4:47:11 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

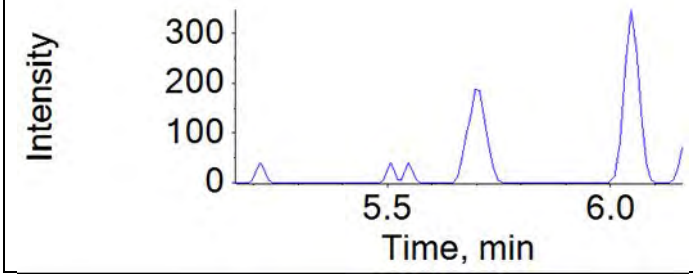
Analyte: PFOSA
498.0 / 78.0



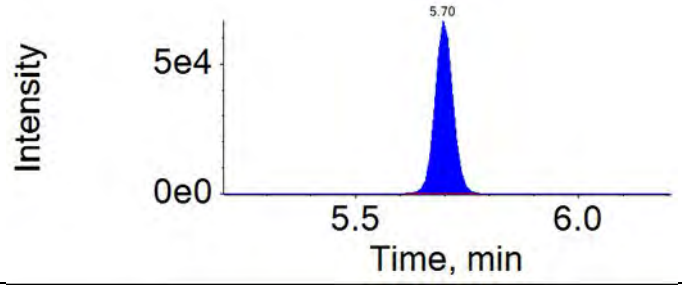
Extraction Standard: 13C8-PFOSA
506.0 / 78.0



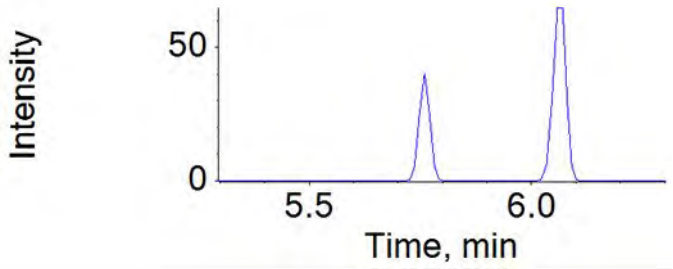
Analyte: NMeFOSAA
570.0 / 419.0



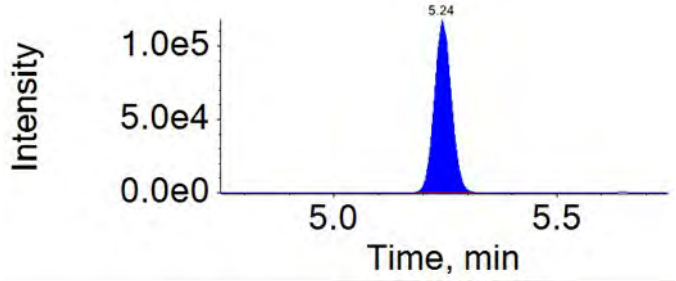
Extraction Standard: d3-NMeFOSAA
573.0 / 419.0



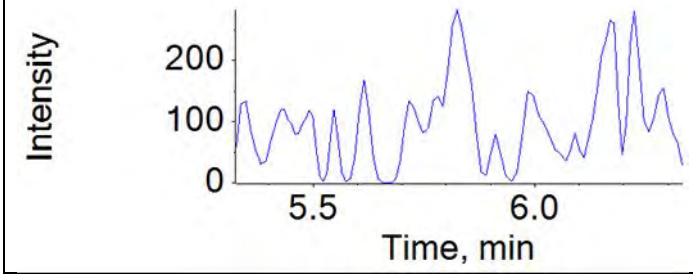
Analyte: PFDS
599.0 / 80.0



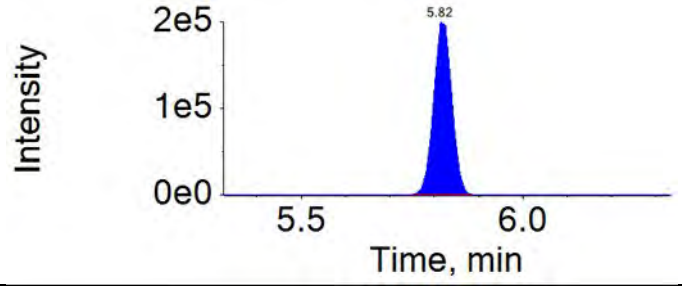
Extraction Standard: 13C8-PFOS
507.0 / 80.0



Analyte: PFUnDA
563.0 / 519.0



Extraction Standard: 13C7-PFUnDA
570.0 / 525.0

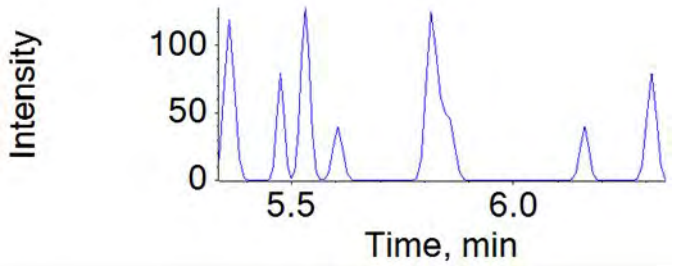


APPROVED
By MCD at 5:01 pm, 11/28/18

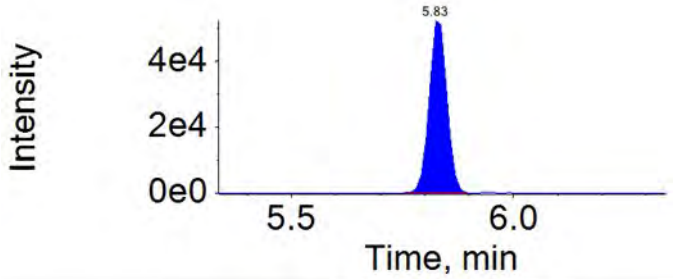
REVIEWED
By HMK at 12:22 pm, 11/29/18

ICAL Name: 18NOV28DCAL **Result Table:** 18NOV28DCAL 11/28/2018 4:47:11 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

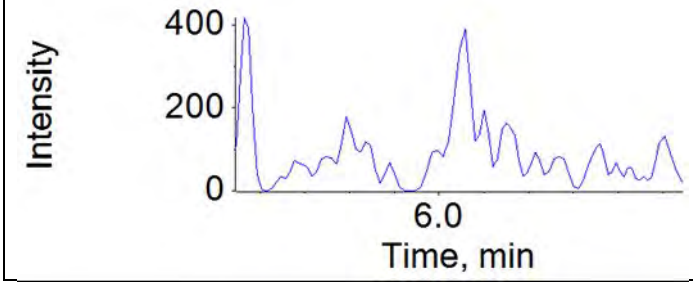
Analyte: NEtFOSAA
584.0 / 419.0



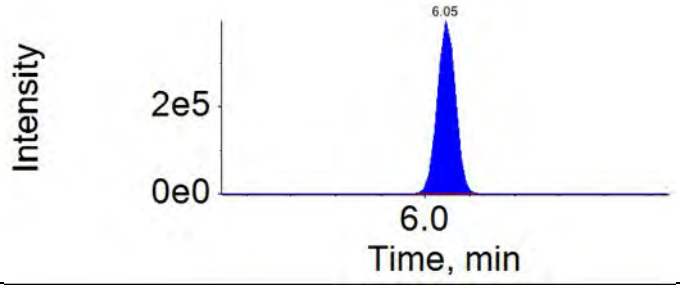
Extraction Standard: d5-NEtFOSAA
589.0 / 419.0



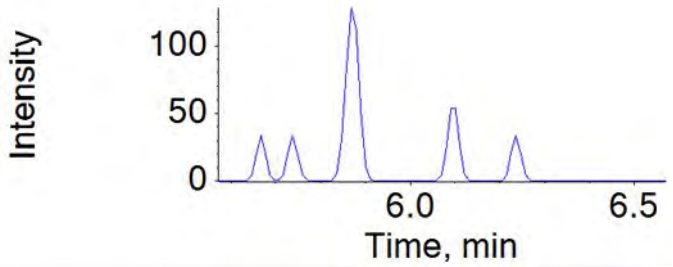
Analyte: PFDoDA
613.0 / 569.0



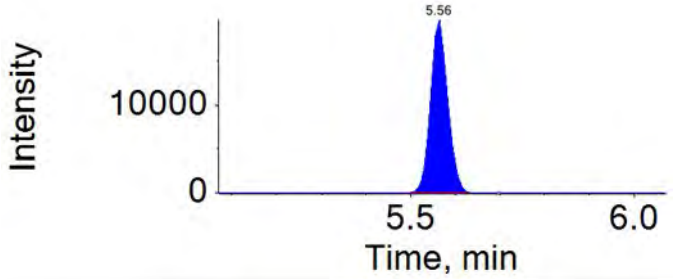
Extraction Standard: 13C2-PFDoDA
615.0 / 570.0



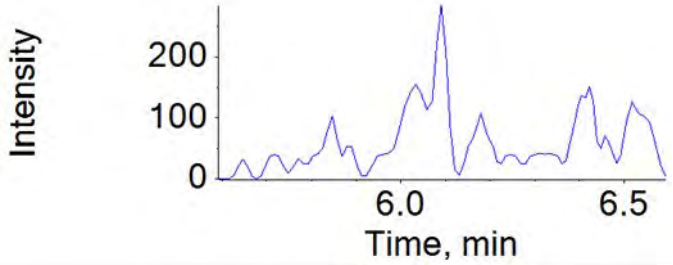
Analyte: 10:2-FTS
627.0 / 607.0



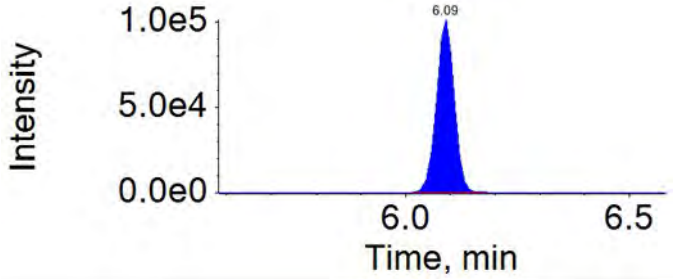
Extraction Standard: 13C2-8:2-FTS
529.0 / 81.0



Analyte: NMePFOSAE
616.0 / 59.0



Extraction Standard: d7-NMePFOSAE
623.0 / 59.0

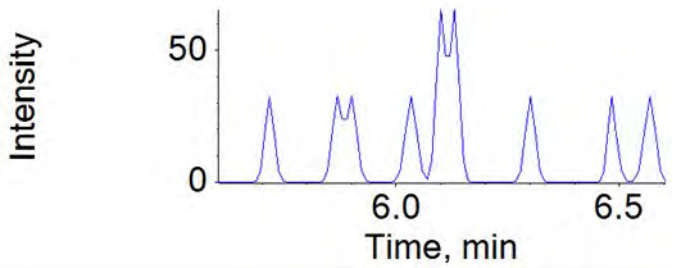


APPROVED
By MCD at 5:01 pm, 11/28/18

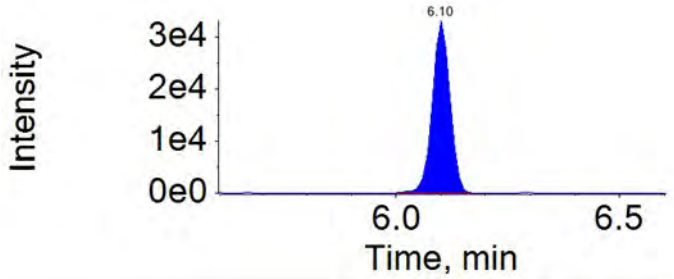
REVIEWED
By HMK at 12:22 pm, 11/29/18

ICAL Name: 18NOV28DCAL **Result Table:** 18NOV28DCAL 11/28/2018 4:47:11 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

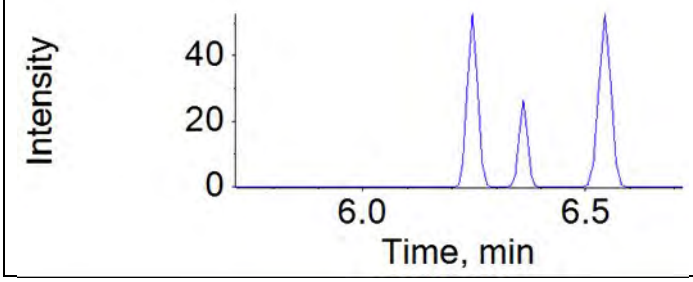
Analyte: NMePFOSA
512.0 / 169.0



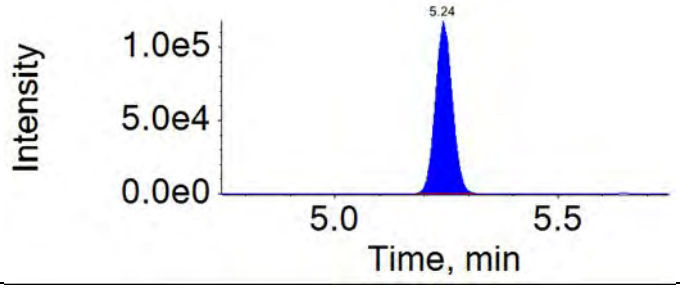
Extraction Standard: d3-NMePFOSA
515.0 / 169.0



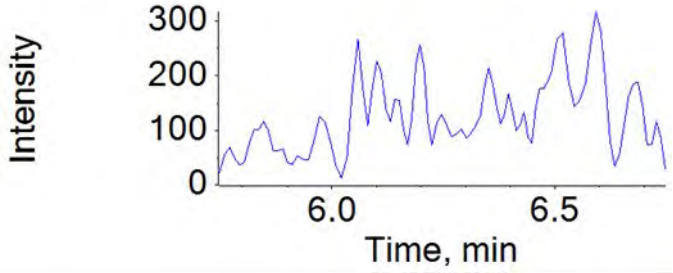
Analyte: PFDoS
699.0 / 80.0



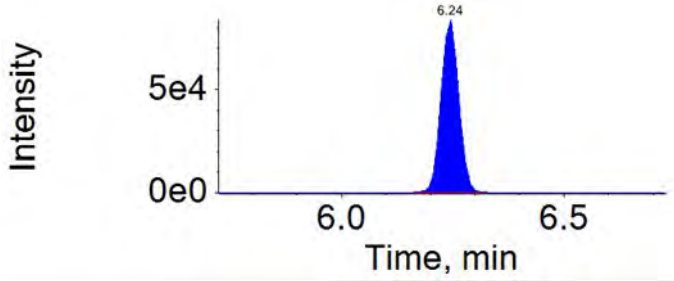
Extraction Standard: 13C8-PFOS
507.0 / 80.0



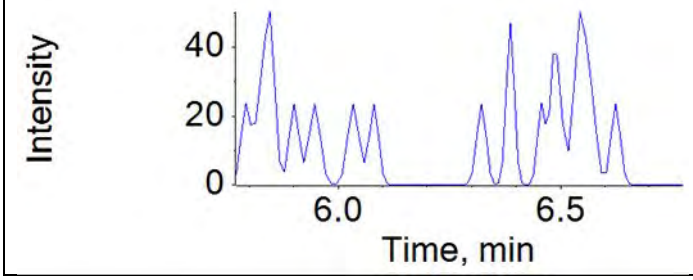
Analyte: NEtPFOSAE
630.0 / 59.0



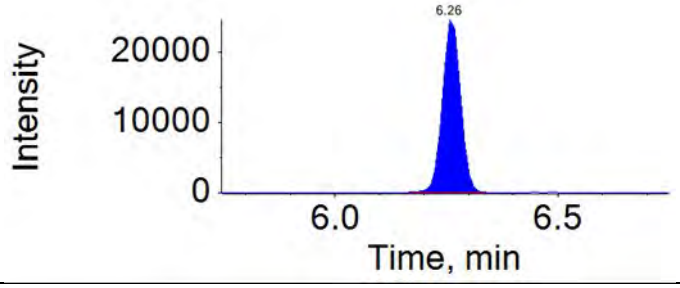
Extraction Standard: d9-NEtPFOSAE
639.0 / 59.0



Analyte: NEtPFOSA
526.0 / 169.0



Extraction Standard: d5-NEtPFOSA
531.0 / 169.0

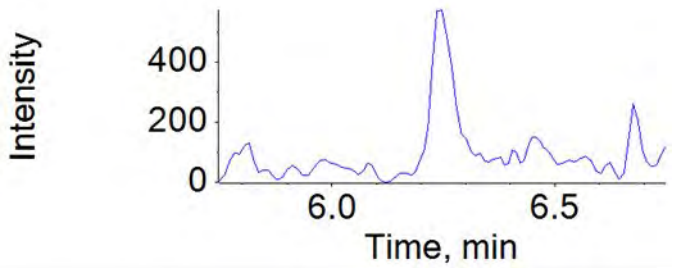


APPROVED
By MCD at 5:01 pm, 11/28/18

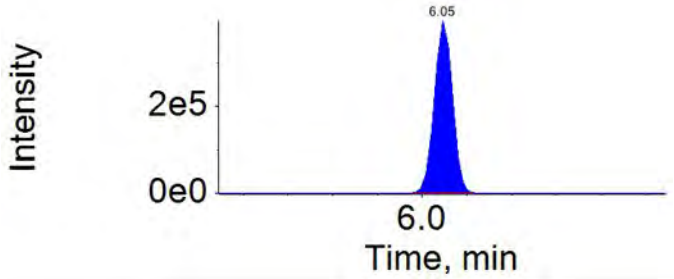
REVIEWED
By HMK at 12:22 pm, 11/29/18

ICAL Name: 18NOV28DCAL **Result Table:** 18NOV28DCAL 11/28/2018 4:47:11 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

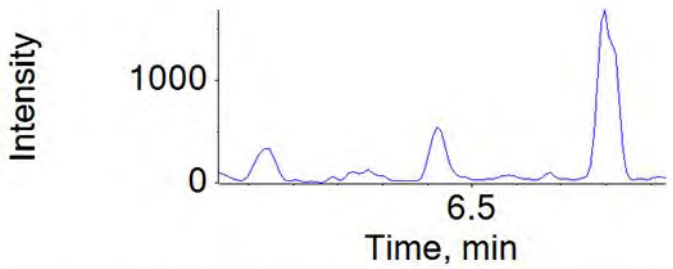
Analyte: PFTrDA
663.0 / 619.0



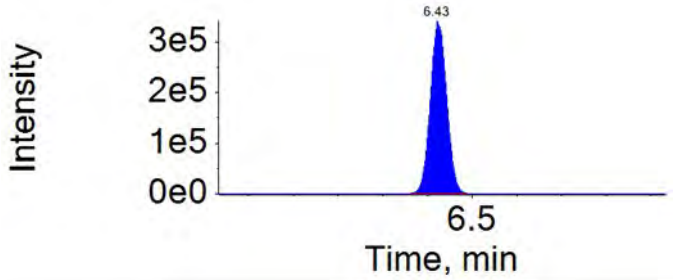
Extraction Standard: 13C2-PFDoDA
615.0 / 570.0



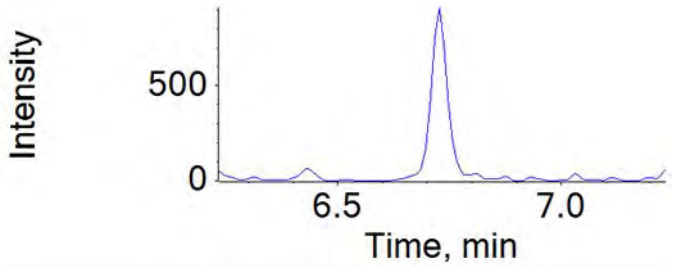
Analyte: PFTeDA
713.0 / 669.0



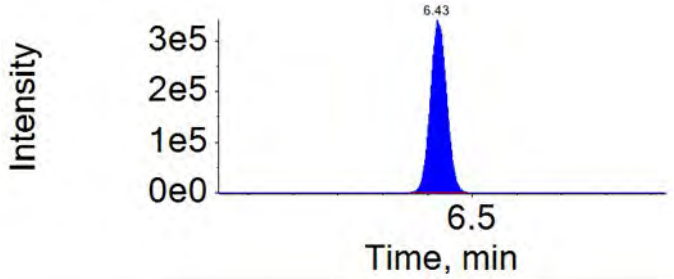
Extraction Standard: 13C2-PFTeDA
715.0 / 670.0



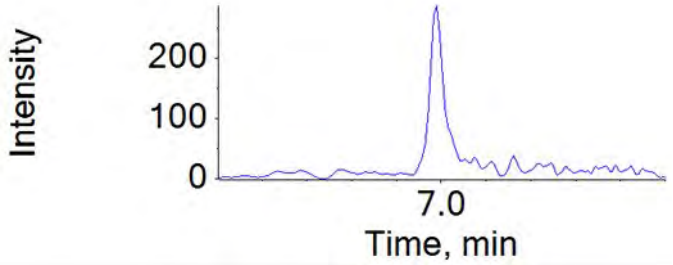
Analyte: PFHxDA
813.0 / 769.0



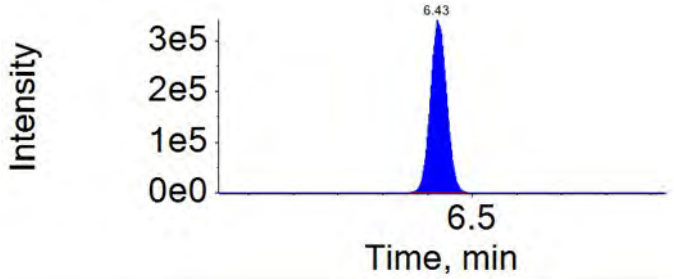
Extraction Standard: 13C2-PFTeDA
715.0 / 670.0



Analyte: PFODA
913.0 / 869.0



Extraction Standard: 13C2-PFTeDA
715.0 / 670.0



APPROVED
By MCD at 5:01 pm, 11/28/18

REVIEWED
By HMK at 12:22 pm, 11/29/18

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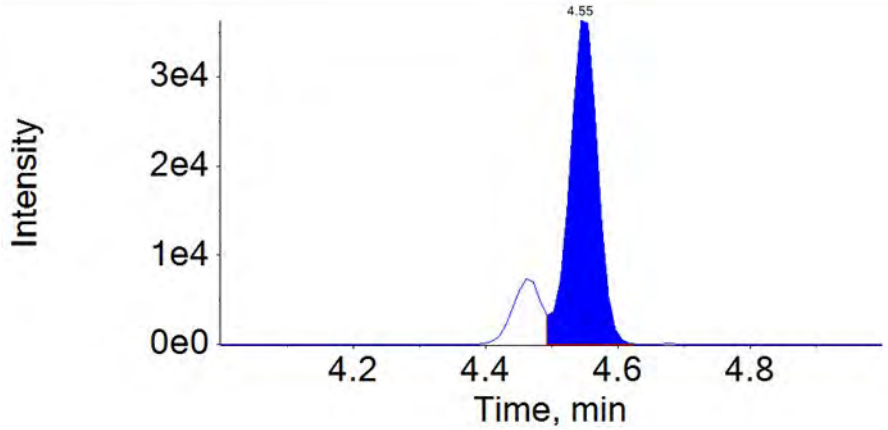
Auto Integrations prior to Manual Integration

Print Date: 11/28/2018 4:55 PM
Template: MQ-OrigInteg-16NOV21.docx

Results Table Name: 18NOV28DCAL
Results Table Date: 11/28/2018 4:52:53 PM

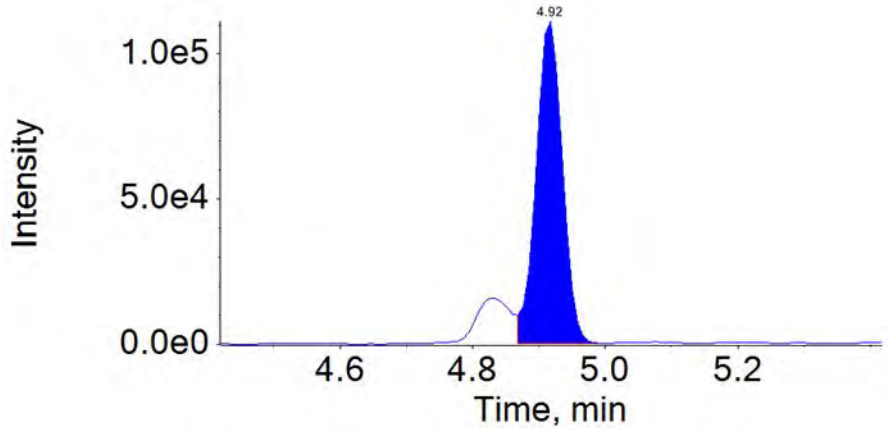
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

Component Name:
PFHxS
RT (min.):
4.55
Peak Area:
108728.54
Mass Range:
399.0 / 80.0
File Name:
18NOV28DCAL-15.wiff
Sample Name:
L+B CAL3



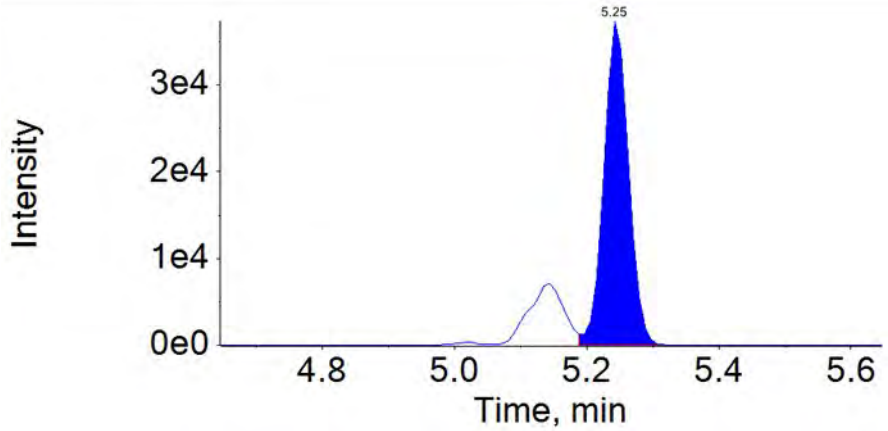
Integration Comment: incorrect integration

Component Name:
PFOA
RT (min.):
4.92
Peak Area:
305201.60
Mass Range:
413.0 / 369.0
File Name:
18NOV28DCAL-15.wiff
Sample Name:
L+B CAL3



Integration Comment: incorrect integration

Component Name:
PFOS
RT (min.):
5.25
Peak Area:
97091.30
Mass Range:
499.0 / 80.0
File Name:
18NOV28DCAL-15.wiff
Sample Name:
L+B CAL3



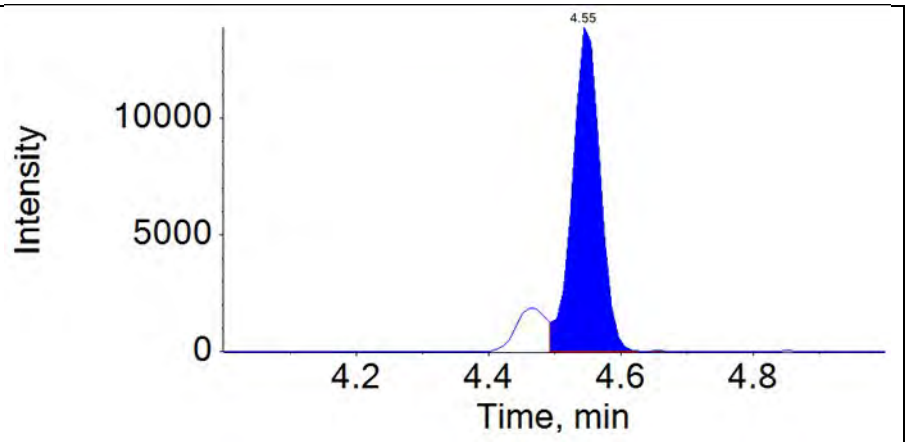
Integration Comment: incorrect integration

APPROVED
By MCD at 5:01 pm, 11/28/18

REVIEWED
By HMK at 12:22 pm, 11/29/18

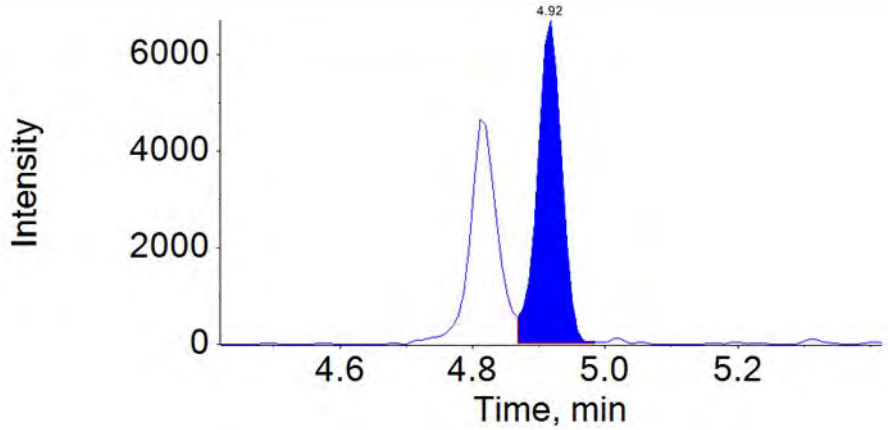
Results Table Name: 18NOV28DCAL
Results Table Date: 11/28/2018 4:52:53 PM
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

Component Name:
PFHxS_2
RT (min.):
4.55
Peak Area:
40449.59
Mass Range:
399.0 / 99.0
File Name:
18NOV28DCAL-15.wiff
Sample Name:
L+B CAL3



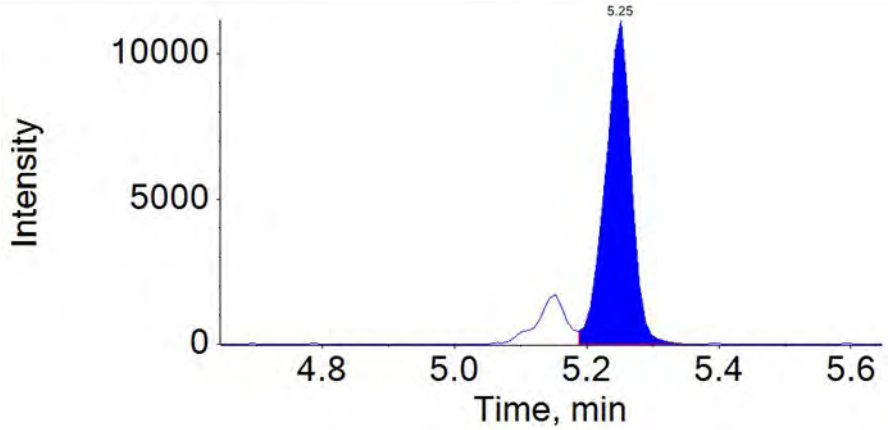
Integration Comment: incorrect integration

Component Name:
PFOA_2
RT (min.):
4.92
Peak Area:
17021.00
Mass Range:
413.0 / 169.0
File Name:
18NOV28DCAL-15.wiff
Sample Name:
L+B CAL3



Integration Comment: incorrect integration

Component Name:
PFOS_2
RT (min.):
5.25
Peak Area:
30448.32
Mass Range:
499.0 / 99.0
File Name:
18NOV28DCAL-15.wiff
Sample Name:
L+B CAL3



Integration Comment: incorrect integration

APPROVED
By MCD at 5:01 pm, 11/28/18

REVIEWED
By HMK at 12:22 pm, 11/29/18

Results Table Name: 18NOV28DCAL
Results Table Date: 11/28/2018 4:52:53 PM
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

APPROVED
By MCD at 5:01 pm, 11/28/18

REVIEWED
By HMK at 12:22 pm, 11/29/18

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LC-MS/MS Analysis Report

Printed: 11/28/2018 4:52:00 PM
Template: IonRatio18OCT10

Ion Ratio Report

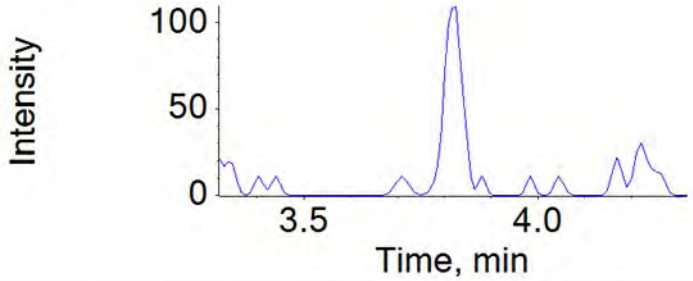
Sample Name: L+B CAL3 **Instrument Name:** LM27631 **File Name:** 18NOV28DCAL-15.wiff

Component Name	RT	RRT	Analyte Area Response	Int Typ	Expected Ion Ratio	Ion Ratio	Ion Ratio % Diff	Ion Ratio Limit	Ion Ratio OOS
PFBS	N/A	N/A	N/A	A	0.3655	N/A			
PFBS_2	N/A	N/A	N/A	A	0.3655	N/A		50	
4:2-FTS	N/A	N/A	N/A	A	0.6383	N/A			
4:2-FTS_2	N/A	N/A	N/A	A	0.6383	N/A		50	
PFHxA	N/A	N/A	N/A	A	0.0103	N/A			
PFHxA_2	N/A	N/A	N/A	A	0.0103	N/A		50	
PFPeS	N/A	N/A	N/A	A	0.4976	N/A			
PFPeS_2	N/A	N/A	N/A	A	0.4976	N/A		50	
PFHpA	N/A	N/A	N/A	A	0.0557	N/A			
PFHpA_2	N/A	N/A	N/A	A	0.0557	N/A		50	
PFHxS	4.55	1.00	130205.74	M	0.3693	0.3547			
PFHxS_2	4.55	1.00	46180.22	M	0.3693	0.3547	-4	50	
6:2-FTS	N/A	N/A	N/A	A	0.6625	N/A			
6:2-FTS_2	N/A	N/A	N/A	A	0.6625	N/A		50	
PFHpS	N/A	N/A	N/A	A	0.3915	N/A			
PFHpS_2	N/A	N/A	N/A	A	0.3915	N/A		50	
PFOA	4.92	1.00	363985.16	M	0.0573	0.0845			
PFOA_2	4.89	1.00	30759.31	M	0.0573	0.0845	48	50	
PFOS	5.25	1.00	124397.26	M	0.2960	0.2871			
PFOS_2	5.25	1.00	35708.41	M	0.2960	0.2871	-3	50	
PFNA	N/A	N/A	N/A	A	0.0201	N/A			
PFNA_2	N/A	N/A	N/A	A	0.0201	N/A		50	
PFNS	N/A	N/A	N/A	A	0.4794	N/A			
PFNS_2	N/A	N/A	N/A	A	0.4794	N/A		50	
PFDA	N/A	N/A	N/A	A	0.0075	N/A			
PFDA_2	N/A	N/A	N/A	A	0.0075	N/A		50	
8:2-FTS	N/A	N/A	N/A	A	0.5380	N/A			
8:2-FTS_2	N/A	N/A	N/A	A	0.5380	N/A		50	
NMeFOSAA	N/A	N/A	N/A	A	0.2305	N/A			
NMeFOSAA_2	N/A	N/A	N/A	A	0.2305	N/A		50	
PFDS	N/A	N/A	N/A	A	0.5356	N/A			
PFDS_2	N/A	N/A	N/A	A	0.5356	N/A		50	
PFUnDA	N/A	N/A	N/A	A	0.0038	N/A			
PFUnDA_2	N/A	N/A	N/A	A	0.0038	N/A		50	
NEtFOSAA	N/A	N/A	N/A	A	0.7356	N/A			
NEtFOSAA_2	N/A	N/A	N/A	A	0.7356	N/A		50	
PFDoDA	N/A	N/A	N/A	A	0.0130	N/A			
PFDoDA_2	N/A	N/A	N/A	A	0.0130	N/A		50	
10:2-FTS	N/A	N/A	N/A	A	0.6989	N/A			
10:2-FTS_2	N/A	N/A	N/A	A	0.6989	N/A		50	
PFTrDA	N/A	N/A	N/A	A	0.0090	N/A			
PFTrDA_2	N/A	N/A	N/A	A	0.0090	N/A		50	
PFTeDA	N/A	N/A	N/A	A	0.0056	N/A			
PFTeDA_2	N/A	N/A	N/A	A	0.0056	N/A		50	
PFHxDA	N/A	N/A	N/A	A	0.0646	N/A			
PFHxDA_2	N/A	N/A	N/A	A	0.0646	N/A		50	
PFODA	N/A	N/A	N/A	A	0.0264	N/A			
PFODA_2	N/A	N/A	N/A	A	0.0264	N/A		50	

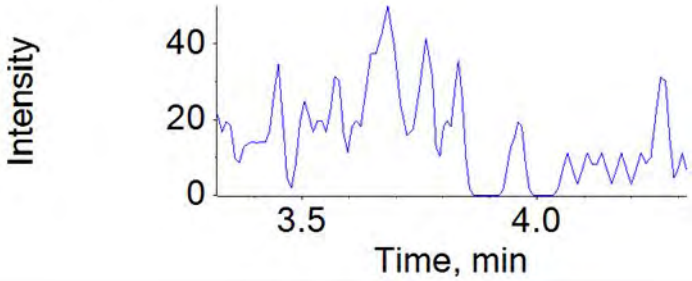
APPROVED
By MCD at 5:01 pm, 11/28/18

REVIEWED
By HMK at 12:22 pm, 11/29/18

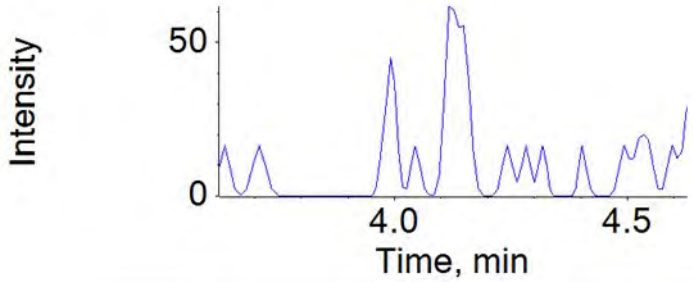
Component: PFBS
Primary Mass: 299.0 / 80.0



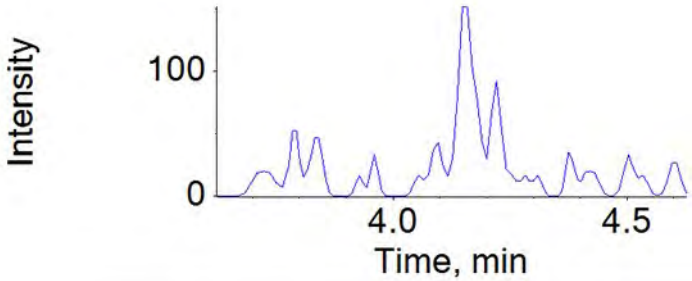
Component: PFBS_2
Secondary Mass: 299.0 / 99.0



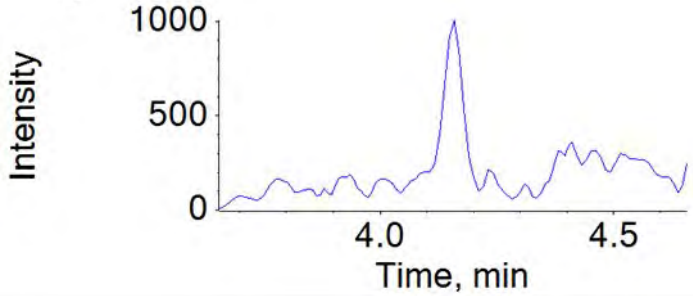
Component: 4:2-FTS
Primary Mass: 327.0 / 307.0



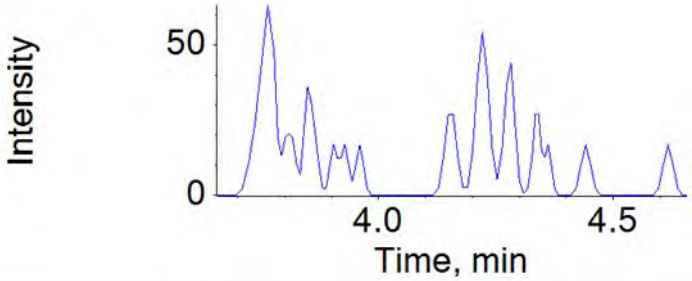
Component: 4:2-FTS_2
Secondary Mass: 327.0 / 81.0



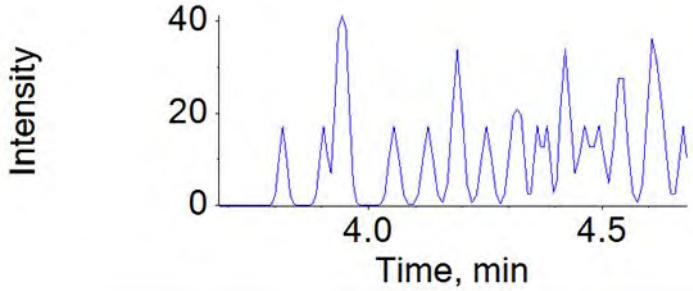
Component: PFHxA
Primary Mass: 313.0 / 269.0



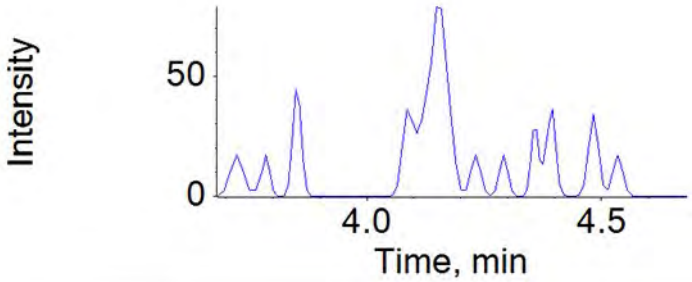
Component: PFHxA_2
Secondary Mass: 313.0 / 119.0



Component: PFPeS
Primary Mass: 349.0 / 80.0



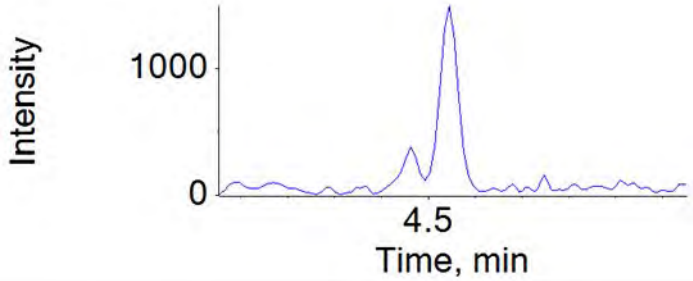
Component: PFPeS_2
Secondary Mass: 349.0 / 99.0



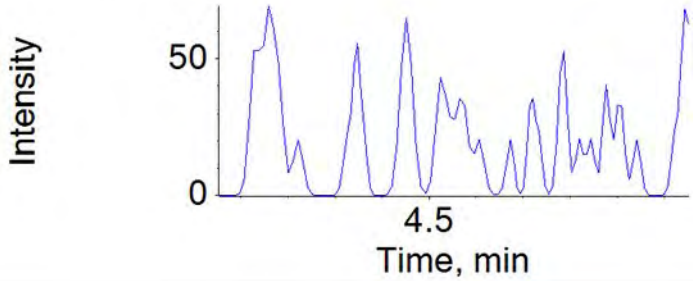
APPROVED
By MCD at 5:01 pm, 11/28/18

REVIEWED
By HMK at 12:22 pm, 11/29/18

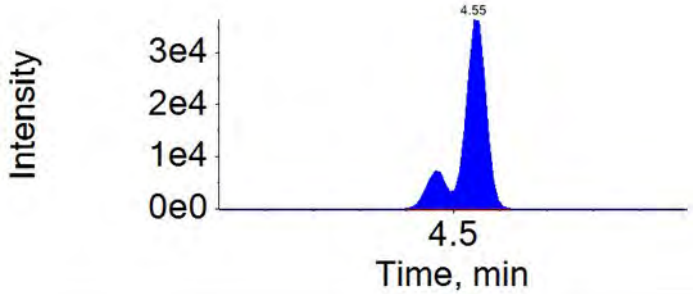
Component: PFHpA
Primary Mass: 363.0 / 319.0



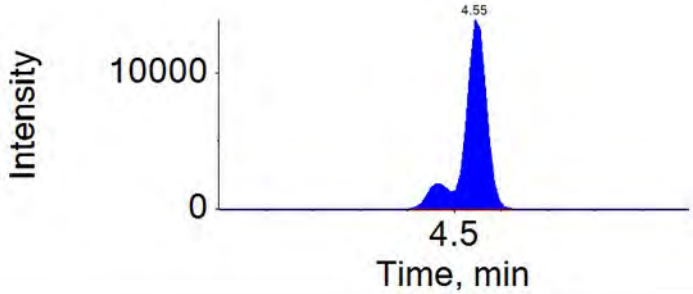
Component: PFHpA_2
Secondary Mass: 363.0 / 169.0



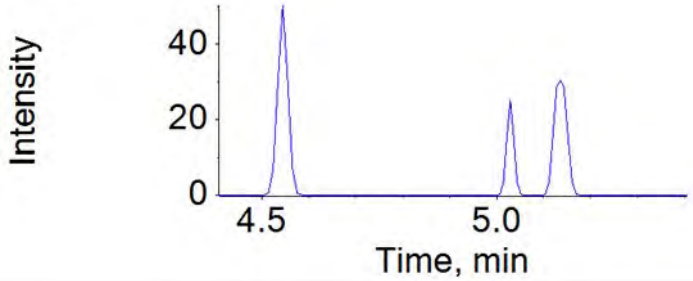
Component: PFHxS
Primary Mass: 399.0 / 80.0



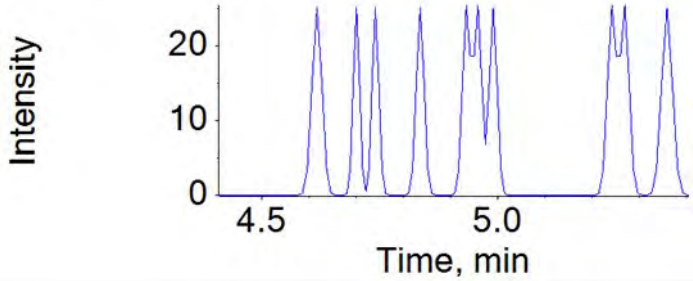
Component: PFHxS_2
Secondary Mass: 399.0 / 99.0



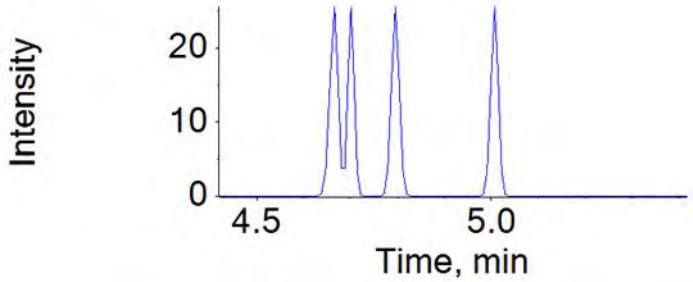
Component: 6:2-FTS
Primary Mass: 427.0 / 407.0



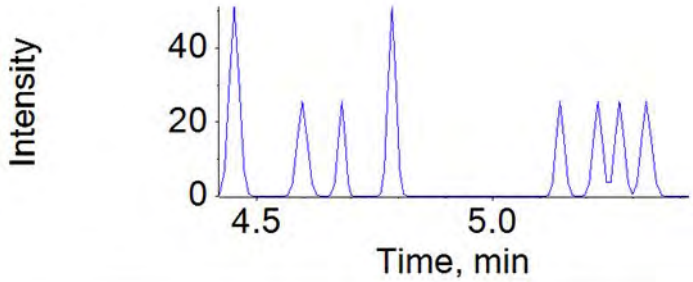
Component: 6:2-FTS_2
Secondary Mass: 427.0 / 81.0



Component: PFHpS
Primary Mass: 449.0 / 80.0



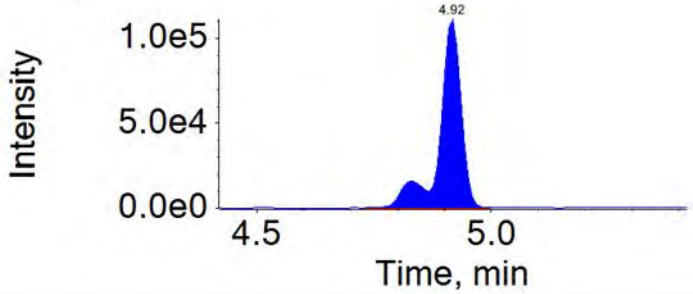
Component: PFHpS_2
Secondary Mass: 449.0 / 99.0



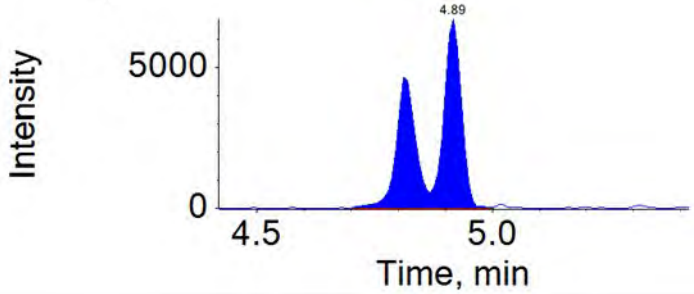
APPROVED
By MCD at 5:01 pm, 11/28/18

REVIEWED
By HMK at 12:22 pm, 11/29/18

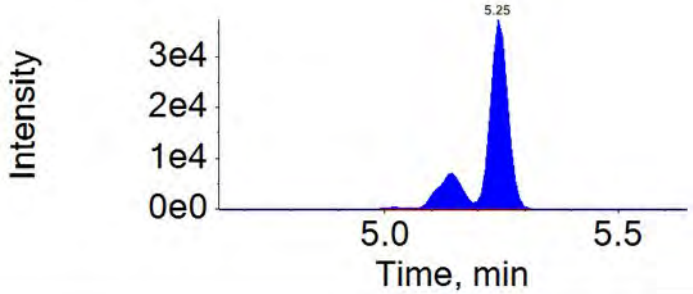
Component: PFOA
Primary Mass: 413.0 / 369.0



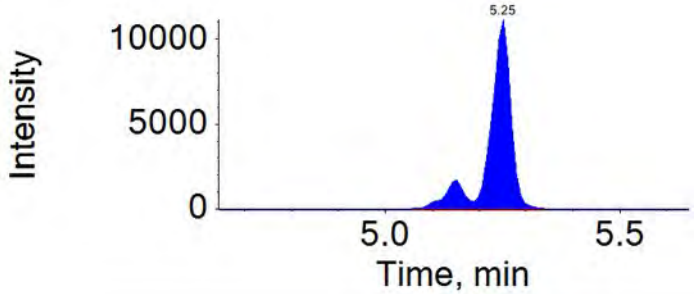
Component: PFOA_2
Secondary Mass: 413.0 / 169.0



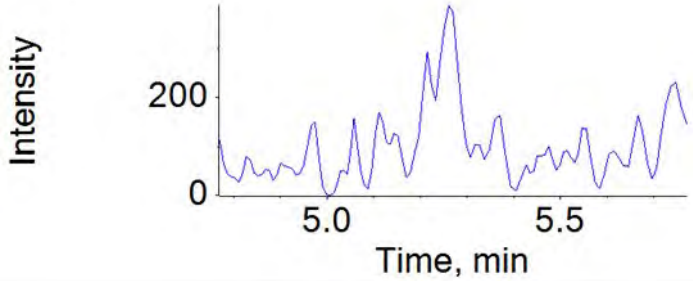
Component: PFOS
Primary Mass: 499.0 / 80.0



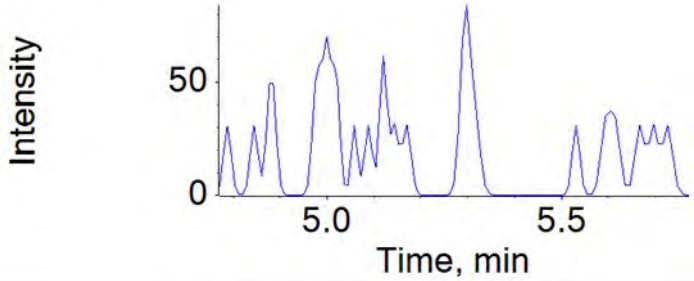
Component: PFOS_2
Secondary Mass: 499.0 / 99.0



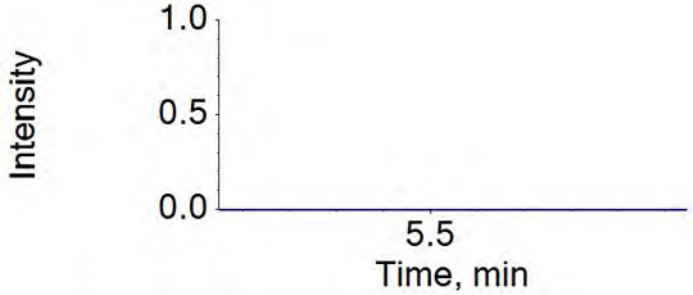
Component: PFNA
Primary Mass: 463.0 / 419.0



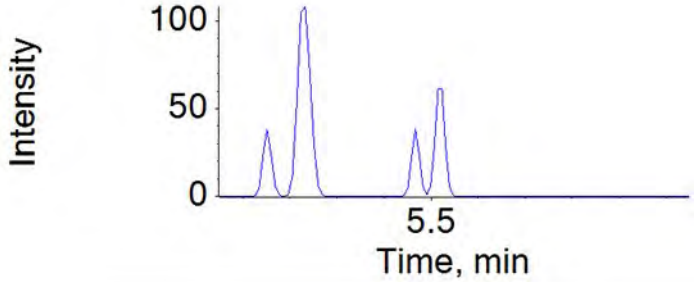
Component: PFNA_2
Secondary Mass: 463.0 / 169.0



Component: PFNS
Primary Mass: 549.0 / 80.0



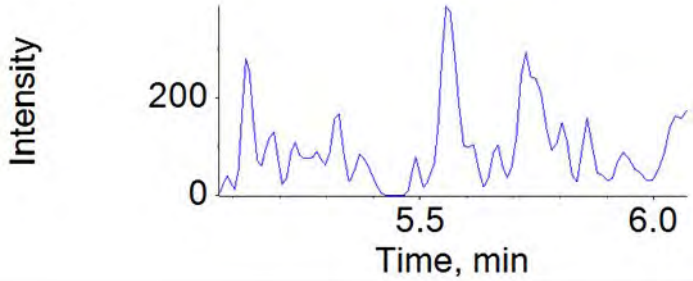
Component: PFNS_2
Secondary Mass: 549.0 / 99.0



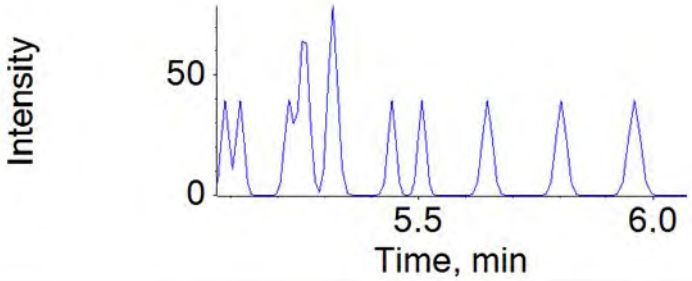
APPROVED
By MCD at 5:01 pm, 11/28/18

REVIEWED
By HMK at 12:22 pm, 11/29/18

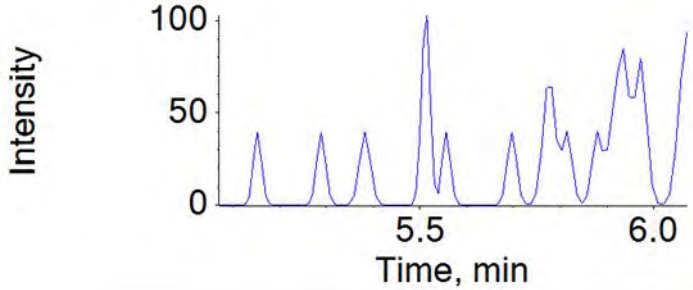
Component: PFDA
Primary Mass: 513.0 / 469.0



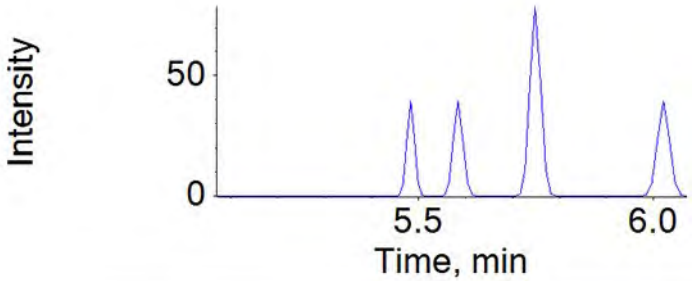
Component: PFDA_2
Secondary Mass: 513.0 / 169.0



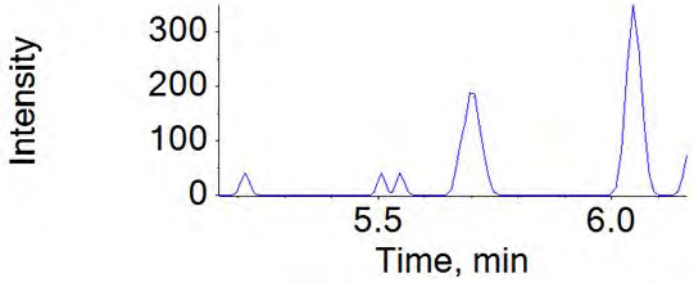
Component: 8:2-FTS
Primary Mass: 527.0 / 507.0



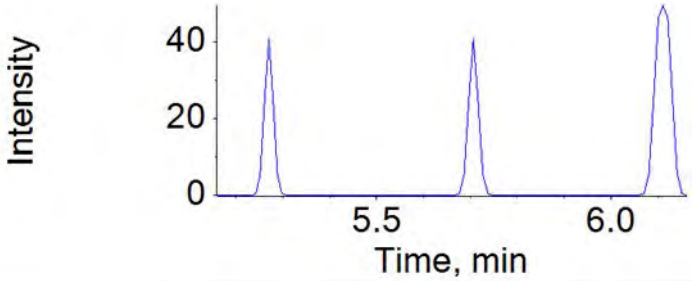
Component: 8:2-FTS_2
Secondary Mass: 527.0 / 81.0



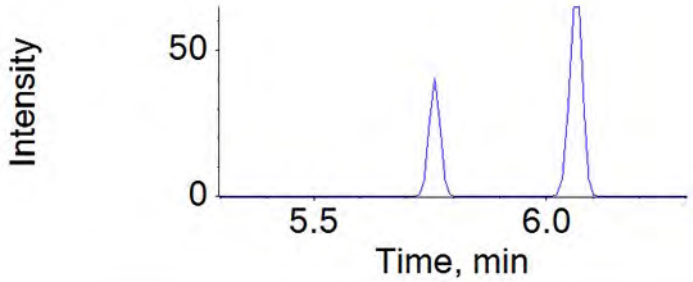
Component: NMeFOSAA
Primary Mass: 570.0 / 419.0



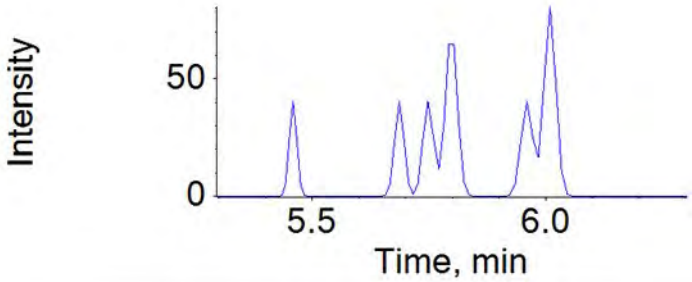
Component: NMeFOSAA_2
Secondary Mass: 570.0 / 483.0



Component: PFDS
Primary Mass: 599.0 / 80.0



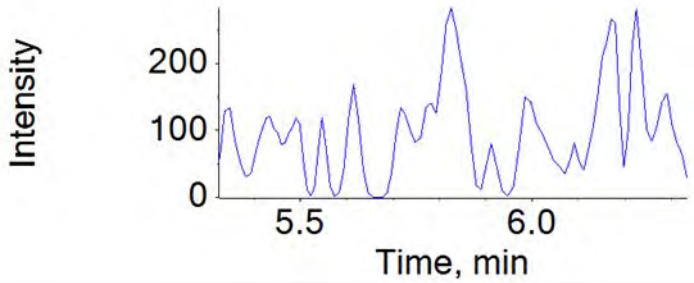
Component: PFDS_2
Secondary Mass: 599.0 / 99.0



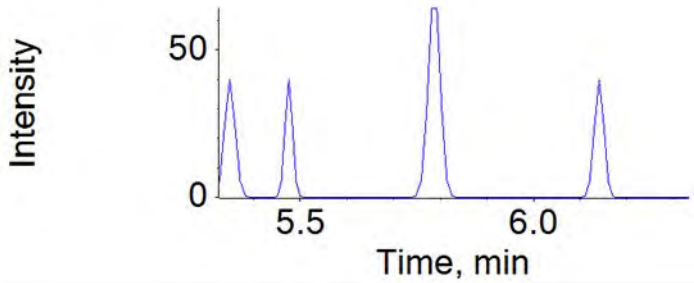
APPROVED
By MCD at 5:01 pm, 11/28/18

REVIEWED
By HMK at 12:22 pm, 11/29/18

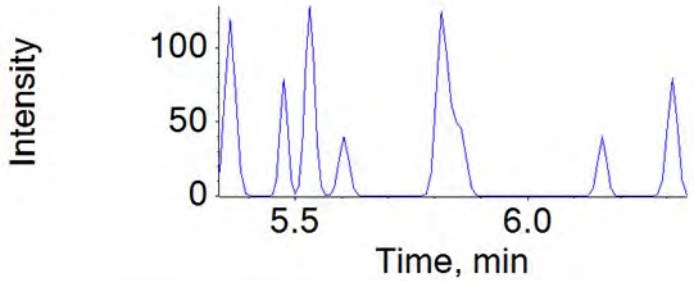
Component: PFUnDA
Primary Mass: 563.0 / 519.0



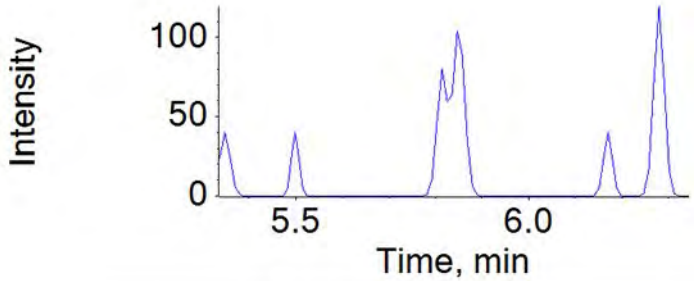
Component: PFUnDA_2
Secondary Mass: 563.0 / 169.0



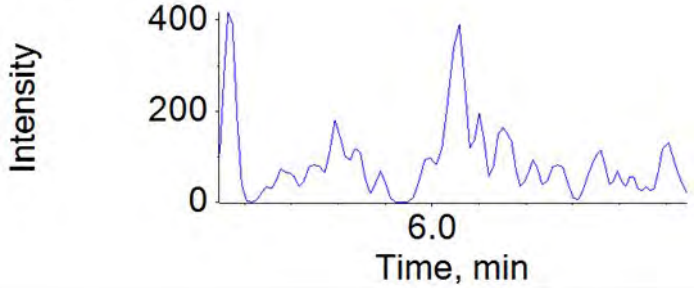
Component: NEtFOSAA
Primary Mass: 584.0 / 419.0



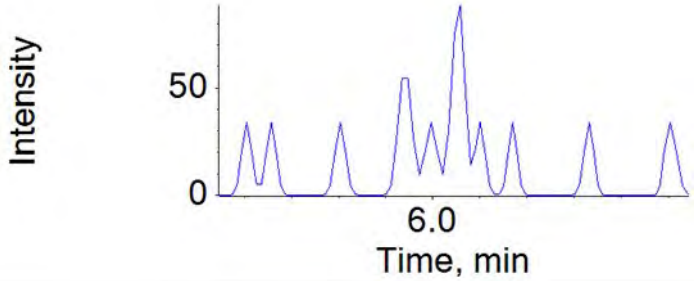
Component: NEtFOSAA_2
Secondary Mass: 584.0 / 526.0



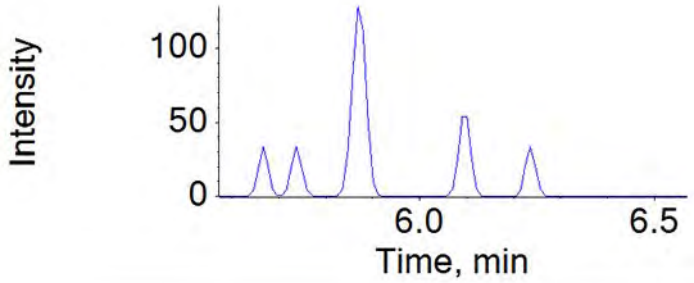
Component: PFDoDA
Primary Mass: 613.0 / 569.0



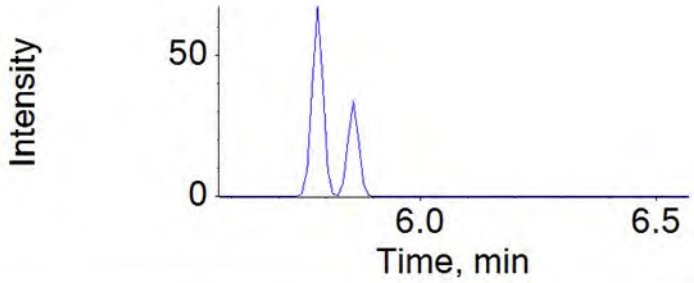
Component: PFDoDA_2
Secondary Mass: 613.0 / 169.0



Component: 10:2-FTS
Primary Mass: 627.0 / 607.0



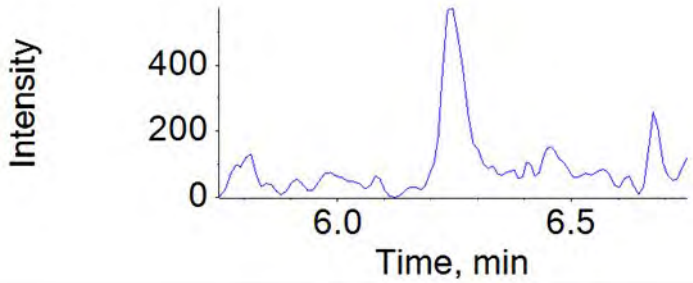
Component: 10:2-FTS_2
Secondary Mass: 627.0 / 81.0



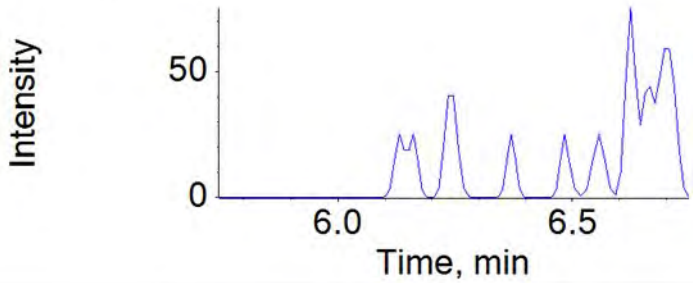
APPROVED
By MCD at 5:01 pm, 11/28/18

REVIEWED
By HMK at 12:22 pm, 11/29/18

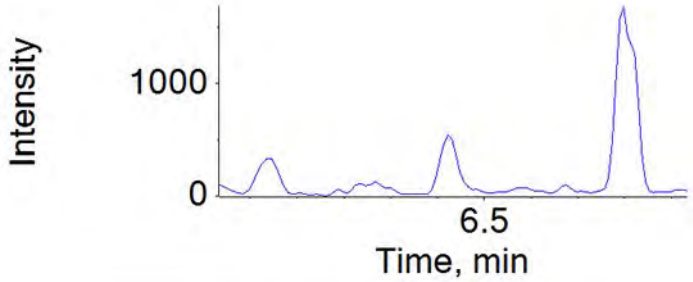
Component: PFTrDA
Primary Mass: 663.0 / 619.0



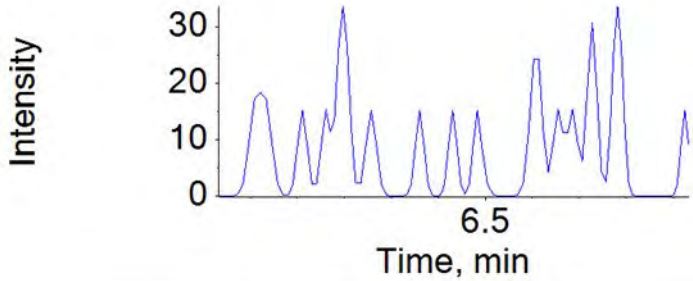
Component: PFTrDA_2
Secondary Mass: 663.0 / 169.0



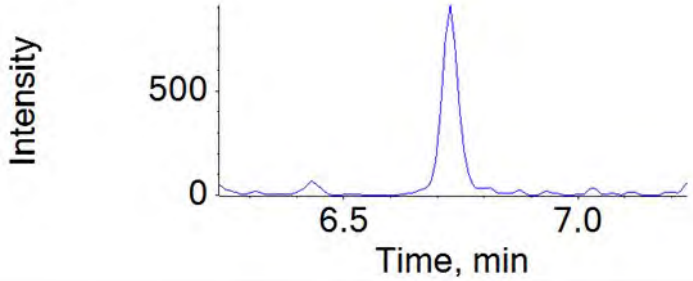
Component: PFTeDA
Primary Mass: 713.0 / 669.0



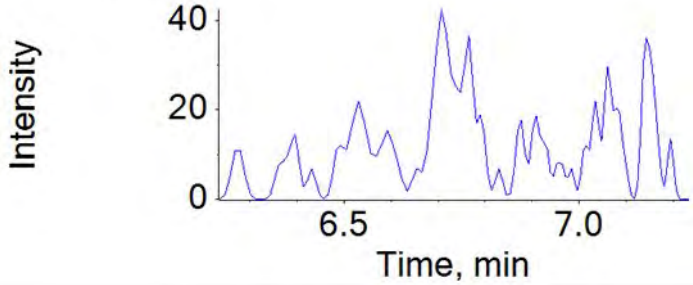
Component: PFTeDA_2
Secondary Mass: 713.0 / 169.0



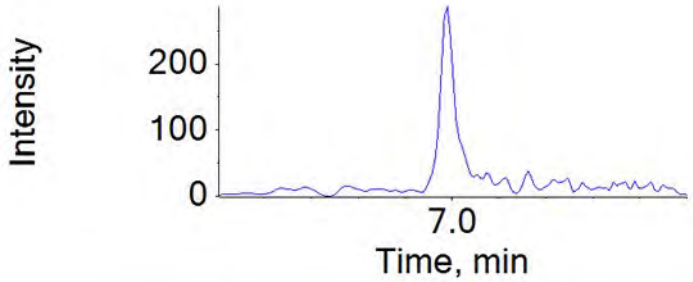
Component: PFHxDA
Primary Mass: 813.0 / 769.0



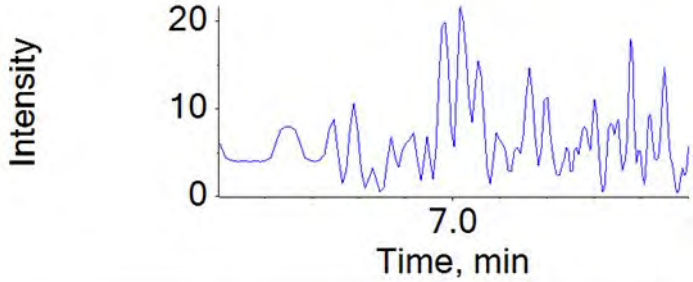
Component: PFHxDA_2
Secondary Mass: 813.0 / 169.0



Component: PFODA
Primary Mass: 913.0 / 869.0



Component: PFODA_2
Secondary Mass: 913.0 / 169.0



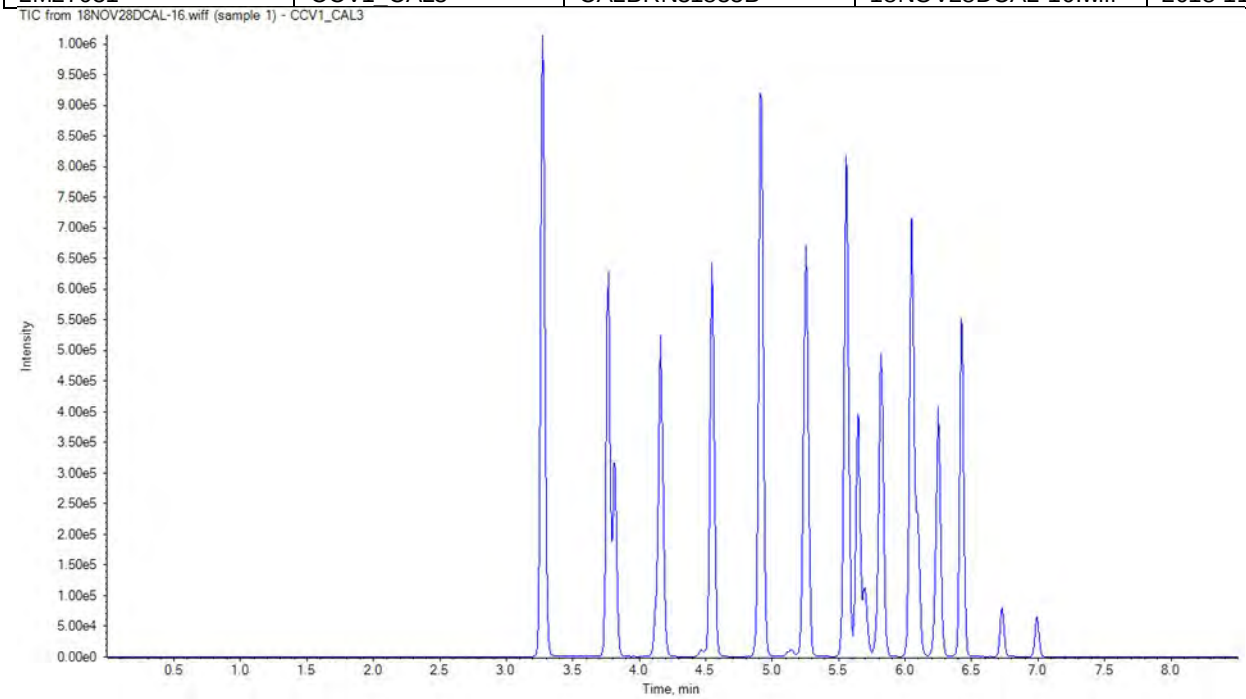
APPROVED
By MCD at 5:01 pm, 11/28/18

REVIEWED
By HMK at 12:22 pm, 11/29/18

Continuing Calibration Verfication

ICAL Name: 18NOV28DCAL **Result Table:** 18NOV28DCAL 11/28/2018 4:47:11 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Instrument Name:	Sample Name:	Sample ID:	Sample File:	Acquisition Date:
LM27631	CCV1_CAL3	CALBRN31833B	18NOV28DCAL-16.wiff	2018-11-28T15:12:25



Injection Standard Area Reference File: 18NOV28DCAL-08

Injection Standard Name	Inj Std Conc	Injection Std Peak Area	Reference Injection Standard Area	Injection Std %Diff	Injection Std %Diff Limit	Injection Std %Diff OOS
13C3-PFBA	5.0	892121.8	887248.9	1	50	
13C2-PFOA	5.0	497344.6	498501.6	0	50	
13C4-PFOS	4.8	284800.9	283214.2	1	50	
13C2-PFDA	5.0	454750.4	441790.6	3	50	

APPROVED
By MCD at 5:01 pm, 11/28/18

REVIEWED
By HMK at 12:22 pm, 11/29/18

Continuing Calibration Verfication

ICAL Name: 18NOV28DCAL **Result Table:** 18NOV28DCAL 11/28/2018 4:47:11 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Instrument Name:	Sample Name:	Sample ID:	Sample File:	Acquisition Date:
LM27631	CCV1_CAL3	CALBRN31833B	18NOV28DCAL-16.wiff	2018-11-28T15:12:25

Analyte Name	Analyte Area	Sc /pk	Ext Std Name	Ext Std Area	Ext Std con	Area Ratio	RT (min)	RRT	Spec Amt	Calc Amt	% Diff	% Diff Lim	% Diff OOS
PFBA	414227.9	10	13C4-PFBA	991560.8	5.0	0.418	3.27	1.000	2.000	2.290	15	30	
PFPeA	406639.4	11	13C5-PFPeA	929799.0	5.0	0.437	3.77	1.000	2.000	2.146	7	30	
PFBS	166250.1	10	13C3-PFBS	423837.8	4.7	0.392	3.82	1.000	1.770	1.904	8	30	
4:2-FTS	56074.3	12	13C2-4:2-FTS	71502.2	4.7	0.784	4.13	1.000	1.870	2.099	12	30	
PFHxA	390006.3	12	13C5-PFHxA	673646.8	5.0	0.579	4.16	1.000	2.000	2.324	16	30	
PFPeS	88012.7	11	13C3-PFBS	423837.8	4.7	0.208	4.18	1.100	1.880	2.100	12	30	
PFHpA	393155.9	12	13C4-PFHpA	569502.8	5.0	0.690	4.55	1.000	2.000	2.131	7	30	
PFHxS	124485.3	18	13C3-PFHxS	316482.8	4.7	0.393	4.55	1.000	1.820	1.842	1	30	
6:2-FTS	55151.1	11	13C2-6:2-FTS	61242.4	4.8	0.901	4.90	1.000	1.900	2.350	24	30	
PFHpS	131029.4	11	13C3-PFHxS	316482.8	4.7	0.414	4.91	1.080	1.900	2.066	9	30	
PFOA	408992.7	11	13C8-PFOA	983417.9	5.0	0.416	4.92	1.000	2.000	2.149	7	30	
PFOS	137181.4	22	13C8-PFOS	303782.8	4.8	0.452	5.24	1.000	1.850	1.894	2	30	
PFNA	376585.8	11	13C9-PFNA	609889.2	5.0	0.617	5.26	1.000	2.000	2.366	18	30	
PFNS	94448.6	11	13C8-PFOS	303782.8	4.8	0.311	5.54	1.060	1.920	1.963	2	30	
PFDA	356261.0	11	13C6-PFDA	847665.4	5.0	0.420	5.56	1.000	2.000	2.379	19	30	
8:2-FTS	52676.1	12	13C2-8:2-FTS	53005.7	4.8	0.994	5.56	1.000	1.920	1.874	-2	30	
PFOSA	260574.1	12	13C8-PFOSA	629466.4	5.0	0.414	5.65	1.000	2.000	2.097	5	30	
NMeFOSAA	60912.6	18	d3-NMeFOSAA	187136.0	5.0	0.325	5.70	1.000	2.000	2.076	4	30	
PFDS	79486.5	12	13C8-PFOS	303782.8	4.8	0.262	5.79	1.100	1.930	2.075	7	30	
PFUnDA	368116.8	11	13C7-PFUnDA	549493.3	5.0	0.670	5.82	1.000	2.000	2.395	20	30	
NEtFOSAA	56175.4	22	d5-NEtFOSAA	144117.8	5.0	0.390	5.83	1.000	2.000	1.898	-5	30	
PFDoDA	480438.7	11	13C2-PFDoDA	1057435.2	5.0	0.454	6.05	1.000	2.000	2.489	24	30	
10:2-FTS	53244.1	12	13C2-8:2-FTS	53005.7	4.8	1.004	6.06	1.090	1.930	2.215	15	30	
NMePFOSAE	131874.4	12	d7-NMePFOSAE	263888.3	5.0	0.500	6.10	1.000	2.000	2.103	5	30	
NMePFOSA	35042.2	11	d3-NMePFOSA	87880.7	5.0	0.399	6.11	1.000	2.000	2.114	6	30	
PFDoS	41532.8	11	13C8-PFOS	303782.8	4.8	0.137	6.22	1.190	1.940	1.963	1	30	
NEtPFOSAE	145278.6	11	d9-NEtPFOSAE	227340.4	5.0	0.639	6.26	1.000	2.000	2.299	15	30	
NEtPFOSA	31416.5	11	d5-NEtPFOSA	63430.0	5.0	0.495	6.27	1.000	2.000	2.220	11	30	
PFTrDA	453601.4	11	13C2-PFDoDA	1057435.2	5.0	0.429	6.25	1.030	2.000	2.586	29	30	
PFTeDA	333159.1	11	13C2-PFTeDA	823659.2	5.0	0.404	6.43	1.000	2.000	2.292	15	30	
PFHxDA	160272.7	11	13C2-PFTeDA	823659.2	5.0	0.195	6.73	1.050	2.000	2.224	11	30	
PFODA	137372.8	10	13C2-PFTeDA	823659.2	5.0	0.167	6.99	1.090	2.000	2.222	11	30	

APPROVED
By MCD at 5:01 pm, 11/28/18

REVIEWED
By HMK at 12:22 pm, 11/29/18

Continuing Calibration Verfication

ICAL Name: 18NOV28DCAL **Result Table:** 18NOV28DCAL 11/28/2018 4:47:11 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

APPROVED
By MCD at 5:01 pm, 11/28/18

REVIEWED
By HMK at 12:22 pm, 11/29/18

ICAL Name: 18NOV28DCAL
QMethod Name: 18AUG20QM
Result Table: 18NOV28DCAL 11/28/2018 4:47:11 PM
Acquisition Method: 18AUG13_3uL.dam

Sample Name:	CCV1_CAL3			**Data File:**		18NOV28DCAL-16.wiff
Sample ID:	CALBRN31833B			**Acquis Date:**		2018-11-28T15:12:25
Sample Type:	Quality Control			**Instrument:**		LM27631
Vial Position:	5			**Acquis Method:**		18AUG13_3uL.dam
Injection Vol:	3.00			**Result Table:**		18NOV28DCAL
QMethod File:	18AUG20QM			**ICAL Name:**		18NOV28DCAL
Batch Number:	N/A			**Operator:**		MCD7824
Sample Wt.:	1.00000			**Dilution Factor:**		1.00
Sample Vol.:	1.000			**Prep Factor:**		1.000

Injection Standard Peak Table

Injection Standard Area Reference File: 18NOV28DCAL-08

Injection Standard Name	Inj Std Conc	Injection Std Peak Area	Rreference Injection Standard Area	Injection Std %Diff	Injection Std %Diff Limit	Injection Std %Diff OOS
13C3-PFBA	5.0	892121.8	887248.9	1	50	
13C2-PFOA	5.0	497344.6	498501.6	0	50	
13C4-PFOS	4.8	284800.9	283214.2	1	50	
13C2-PFDA	5.0	454750.4	441790.6	3	50	

Extraction Standard Peak Table

Extraction Standard Name	Ext Std Area	Inj Std Name	Inj Std Area	Area Ratio	Ext Std Conc	Ext Std Result	Ext Std %REC	Ext Std %REC Limit	Ext Std OOS
E13C4-PFBA	991560.8	13C3-PFBA	892121.8	1.111	5.000	4.959	99	70-130	
E13C5-PFPeA	929799.0	13C3-PFBA	892121.8	1.042	5.000	4.867	97	70-130	
E13C3-PFBS	423837.8	13C3-PFBA	892121.8	0.475	4.650	4.533	97	70-130	
E13C2-4:2-FTS	71502.2	13C2-PFOA	497344.6	0.144	4.670	4.955	106	70-130	
E13C5-PFHxA	673646.8	13C2-PFOA	497344.6	1.354	5.000	4.975	100	70-130	
E13C3-PFHxS	316482.8	13C2-PFOA	497344.6	0.636	4.730	4.988	105	70-130	
E13C4-PFHpA	569502.8	13C2-PFOA	497344.6	1.145	5.000	5.262	105	70-130	
E13C2-6:2-FTS	61242.4	13C2-PFOA	497344.6	0.123	4.750	5.155	109	70-130	
E13C8-PFOA	983417.9	13C2-PFOA	497344.6	1.977	5.000	5.443	109	70-130	
E13C8-PFOS	303782.8	13C4-PFOS	284800.9	1.067	4.780	4.815	101	70-130	
E13C9-PFNA	609889.2	13C4-PFOS	284800.9	2.141	5.000	4.703	94	70-130	
E13C6-PFDA	847665.4	13C2-PFDA	454750.4	1.864	5.000	5.256	105	70-130	
E13C2-8:2-FTS	53005.7	13C2-PFDA	454750.4	0.117	4.790	5.010	105	70-130	
E13C8-PFOSA	629466.4	13C2-PFDA	454750.4	1.384	5.000	5.079	102	70-130	
Ed3-NMeFOSAA	187136.0	13C2-PFDA	454750.4	0.412	5.000	5.225	104	70-130	
E13C7-PFUnDA	549493.3	13C2-PFDA	454750.4	1.208	5.000	5.107	102	70-130	
Ed5-NEtFOSAA	144117.8	13C2-PFDA	454750.4	0.317	5.000	5.646	113	70-130	
E13C2-PFDoDA	1057435.2	13C2-PFDA	454750.4	2.325	5.000	4.886	98	70-130	
Ed7-NMePFOSAE	263888.3	13C2-PFDA	454750.4	0.580	5.000	5.015	100	70-130	
Ed3-NMePFOSA	87880.7	13C2-PFDA	454750.4	0.193	5.000	5.230	105	70-130	
Ed9-NEtPFOSAE	227340.4	13C2-PFDA	454750.4	0.500	5.000	5.068	101	70-130	
Ed5-NEtPFOSA	63430.0	13C2-PFDA	454750.4	0.139	5.000	4.847	97	70-130	
E13C2-PFTeDA	823659.2	13C2-PFDA	454750.4	1.811	5.000	5.012	100	70-130	

APPROVED
By MCD at 5:01 pm, 11/28/18

REVIEWED
By HMK at 12:22 pm, 11/29/18

ICAL Name: 18NOV28DCAL **Result Table:** 18NOV28DCAL 11/28/2018 4:47:11 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

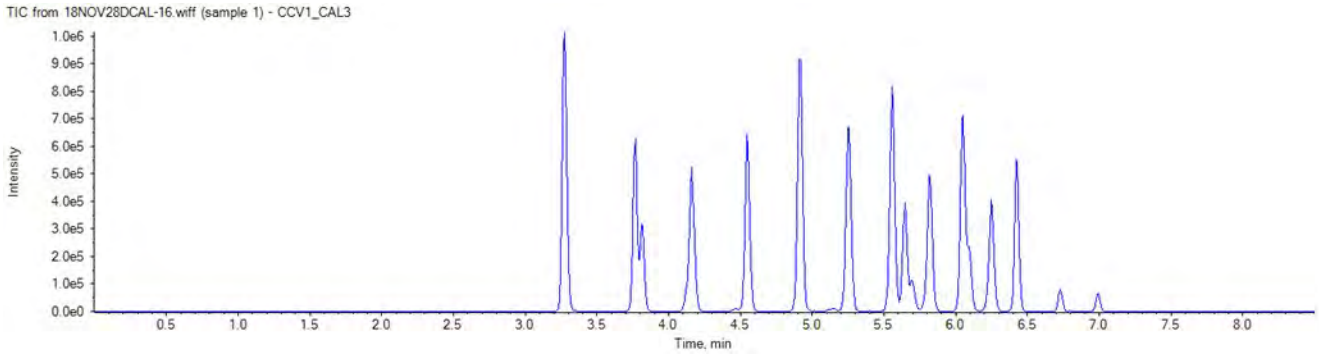
Analyte Quantitation Peak Table

Sample Name: CCV1_CAL3 **Instrument Name:** LM27631 **File Name:** 18NOV28DCAL-16.wiff

Sample Wt	Sample Vol	Dilution Factor	PrepFactor
1.00000	1.000	1.00	1.000

Analyte Name	RT	RRT	Analyte Area Response	E	Int Typ	ES Name	ES RT	ES Area Response	Area Ratio	Sample Result (ng/g)
PFBA	3.27	1.000	414227.9		A	13C4-PFBA	3.27	991560.8	0.418	2.290
PFPeA	3.77	1.000	406639.4		A	13C5-PFPeA	3.77	929799.0	0.437	2.146
PFBS	3.82	1.000	166250.1		A	13C3-PFBS	3.82	423837.8	0.392	1.904
4:2-FTS	4.13	1.000	56074.3		A	13C2-4:2-FTS	4.13	71502.2	0.784	2.099
PFHxA	4.16	1.000	390006.3		A	13C5-PFHxA	4.16	673646.8	0.579	2.324
PFPeS	4.18	1.100	88012.7		A	13C3-PFBS	3.82	423837.8	0.208	2.100
PFHpA	4.55	1.000	393155.9		A	13C4-PFHpA	4.55	569502.8	0.690	2.131
PFHxS	4.55	1.000	124485.3		M	13C3-PFHxS	4.55	316482.8	0.393	1.842
6:2-FTS	4.90	1.000	55151.1		A	13C2-6:2-FTS	4.91	61242.4	0.901	2.350
PFHpS	4.91	1.080	131029.4		A	13C3-PFHxS	4.55	316482.8	0.414	2.066
PFOA	4.92	1.000	408992.7		A	13C8-PFOA	4.92	983417.9	0.416	2.149
PFOS	5.24	1.000	137181.4		M	13C8-PFOS	5.24	303782.8	0.452	1.894
PFNA	5.26	1.000	376585.8		A	13C9-PFNA	5.26	609889.2	0.617	2.366
PFNS	5.54	1.060	94448.6		A	13C8-PFOS	5.24	303782.8	0.311	1.963
PFDA	5.56	1.000	356261.0		A	13C6-PFDA	5.56	847665.4	0.420	2.379
8:2-FTS	5.56	1.000	52676.1		A	13C2-8:2-FTS	5.56	53005.7	0.994	1.874
PFOSA	5.65	1.000	260574.1		A	13C8-PFOSA	5.65	629466.4	0.414	2.097
NMeFOSAA	5.70	1.000	60912.6		M	d3-NMeFOSAA	5.70	187136.0	0.325	2.076
PFDS	5.79	1.100	79486.5		A	13C8-PFOS	5.24	303782.8	0.262	2.075
PFUnDA	5.82	1.000	368116.8		A	13C7-PFUnDA	5.82	549493.3	0.670	2.395
NEtFOSAA	5.83	1.000	56175.4		M	d5-NEtFOSAA	5.83	144117.8	0.390	1.898
PFDoDA	6.05	1.000	480438.7		A	13C2-PFDoDA	6.05	1057435.2	0.454	2.489
10:2-FTS	6.06	1.090	53244.1		A	13C2-8:2-FTS	5.56	53005.7	1.004	2.215
NMePFOSAE	6.10	1.000	131874.4		A	d7-NMePFOSAE	6.09	263888.3	0.500	2.103
NMePFOSA	6.11	1.000	35042.2		A	d3-NMePFOSA	6.10	87880.7	0.399	2.114
PFDoS	6.22	1.190	41532.8		A	13C8-PFOS	5.24	303782.8	0.137	1.963
NEtPFOSAE	6.26	1.000	145278.6		A	d9-NEtPFOSAE	6.24	227340.4	0.639	2.299
NEtPFOSA	6.27	1.000	31416.5		A	d5-NEtPFOSA	6.26	63430.0	0.495	2.220
PFTrDA	6.25	1.030	453601.4		A	13C2-PFDoDA	6.05	1057435.2	0.429	2.586
PFTeDA	6.43	1.000	333159.1		A	13C2-PFTeDA	6.43	823659.2	0.404	2.292
PFHxDA	6.73	1.050	160272.7		A	13C2-PFTeDA	6.43	823659.2	0.195	2.224
PFODA	6.99	1.090	137372.8		A	13C2-PFTeDA	6.43	823659.2	0.167	2.222

Total Ion Chromatogram

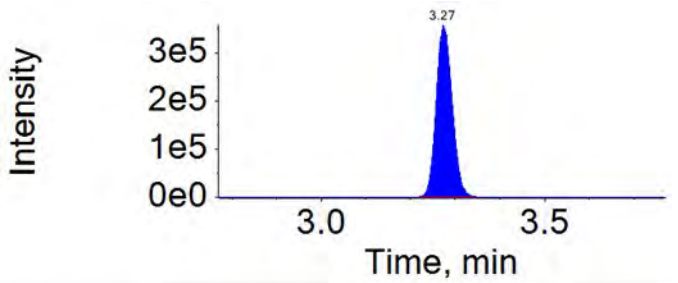


APPROVED
By MCD at 5:01 pm, 11/28/18

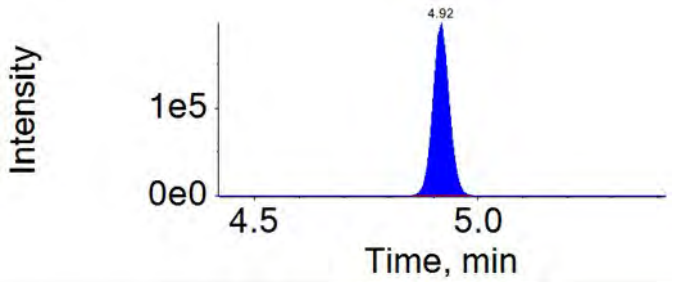
REVIEWED
By HMK at 12:22 pm, 11/29/18

ICAL Name: 18NOV28DCAL **Result Table:** 18NOV28DCAL 11/28/2018 4:47:11 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

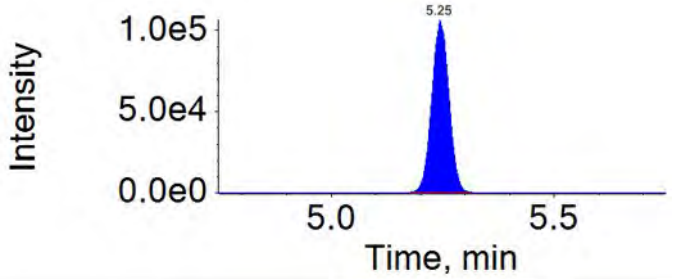
Injection Standard: 13C3-PFBA
216.0 / 172.0



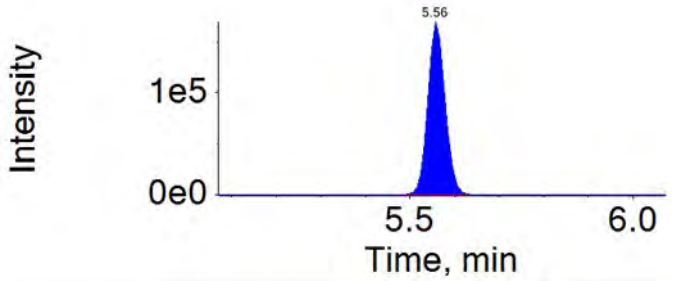
Injection Standard: 13C2-PFOA
415.0 / 370.0



Injection Standard: 13C4-PFOS
503.0 / 80.0



Injection Standard: 13C2-PFDA
515.0 / 470.0

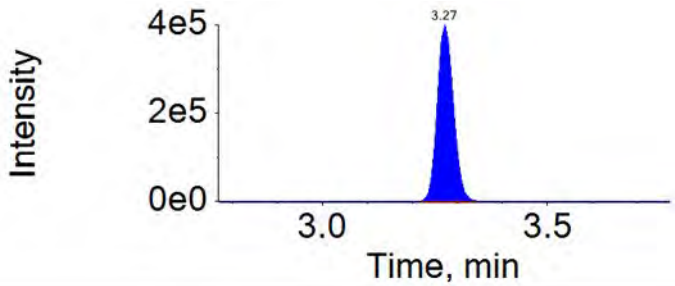


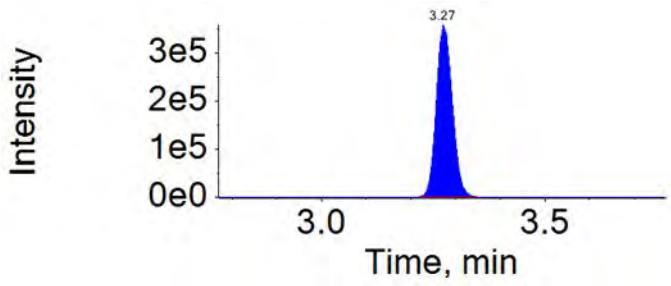
APPROVED
By MCD at 5:01 pm, 11/28/18

REVIEWED
By HMK at 12:22 pm, 11/29/18

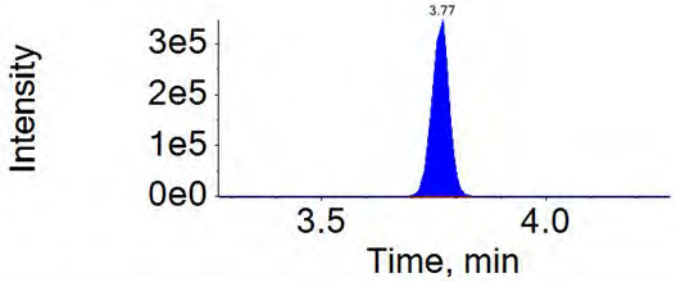
ICAL Name: 18NOV28DCAL **Result Table:** 18NOV28DCAL 11/28/2018 4:47:11 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

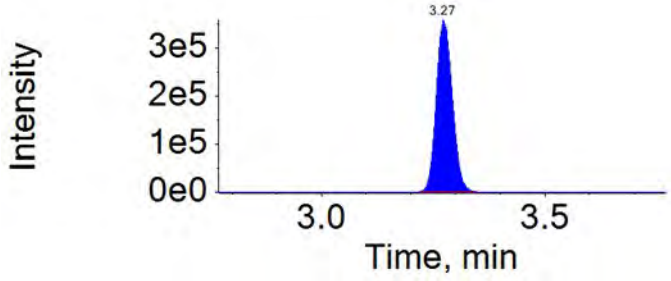
Extraction Standard: E13C4-PFBA	Injection Standard: 13C3-PFBA
217.0 / 172.0	216.0 / 172.0



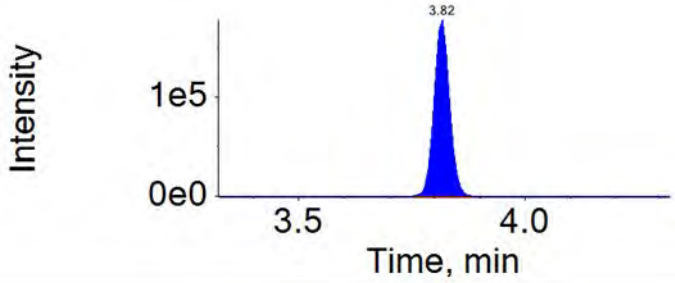


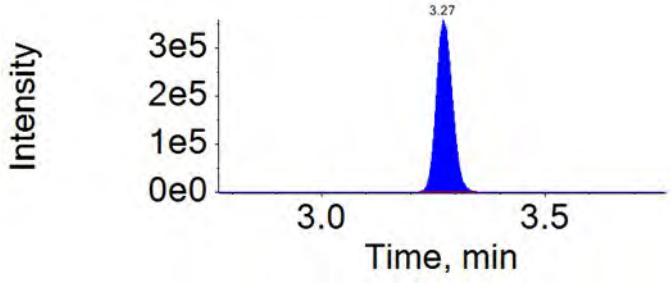
Extraction Standard: E13C5-PFPeA	Injection Standard: 13C3-PFBA
268.0 / 223.0	216.0 / 172.0



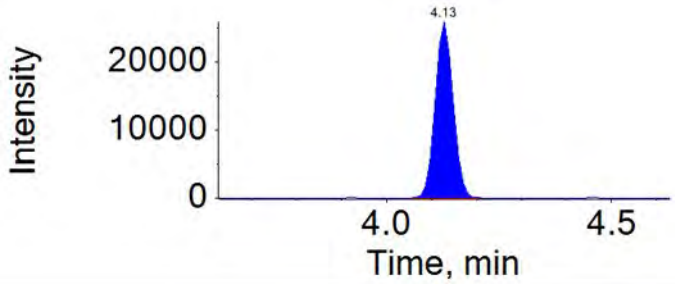


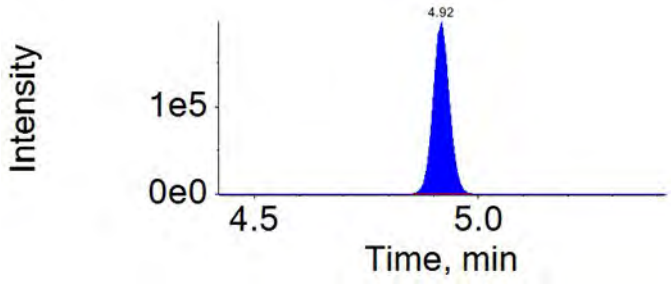
Extraction Standard: E13C3-PFBS	Injection Standard: 13C3-PFBA
302.0 / 80.0	216.0 / 172.0





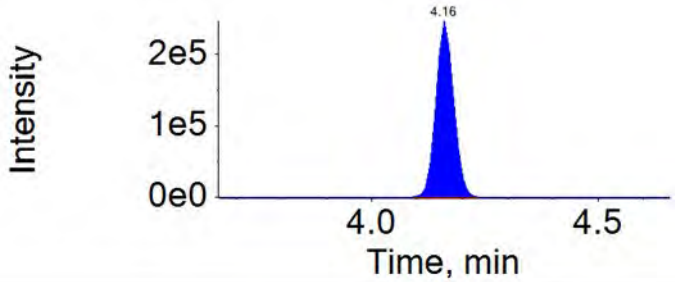
Extraction Standard: E13C2-4:2-FTS	Injection Standard: 13C2-PFOA
329.0 / 81.0	415.0 / 370.0

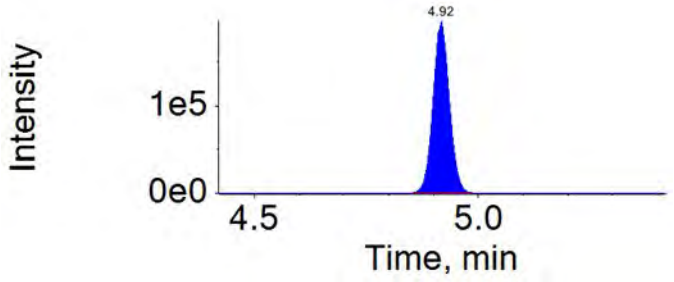




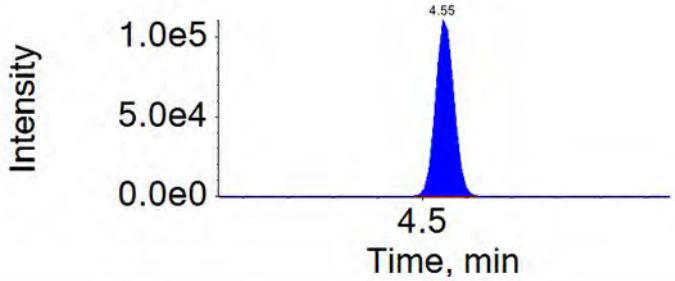
ICAL Name: 18NOV28DCAL **Result Table:** 18NOV28DCAL 11/28/2018 4:47:11 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

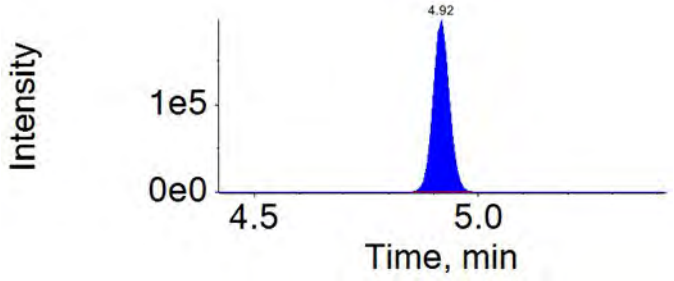
Extraction Standard: E13C5-PFHxA	Injection Standard: 13C2-PFOA
318.0 / 273.0	415.0 / 370.0



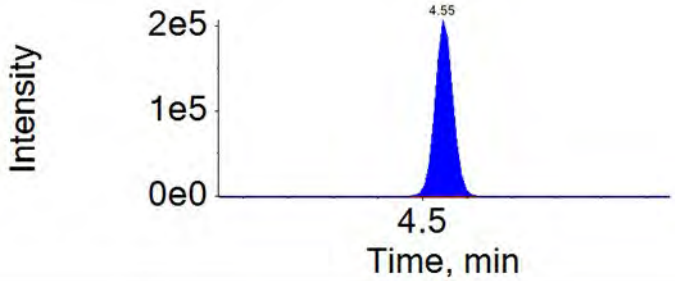


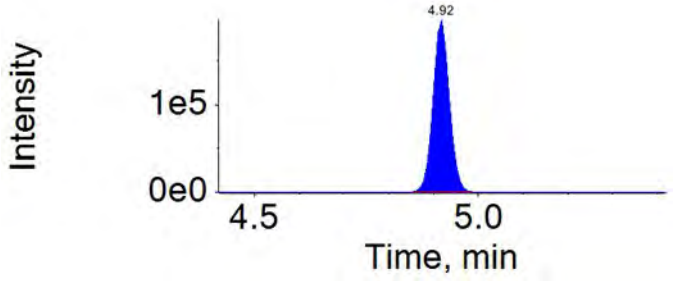
Extraction Standard: E13C3-PFHxS	Injection Standard: 13C2-PFOA
402.0 / 80.0	415.0 / 370.0



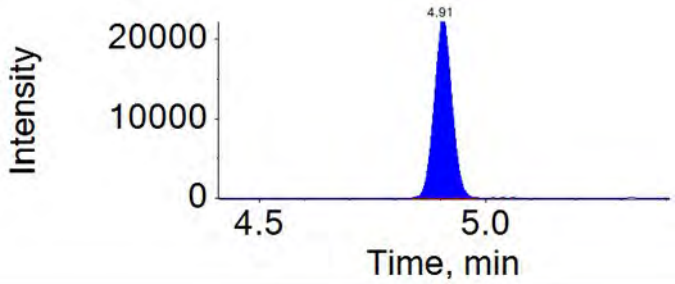


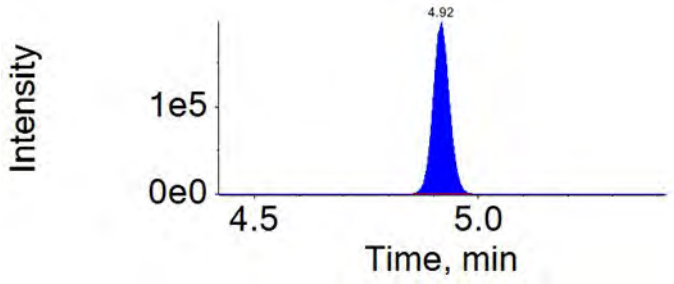
Extraction Standard: E13C4-PFHpA	Injection Standard: 13C2-PFOA
367.0 / 322.0	415.0 / 370.0





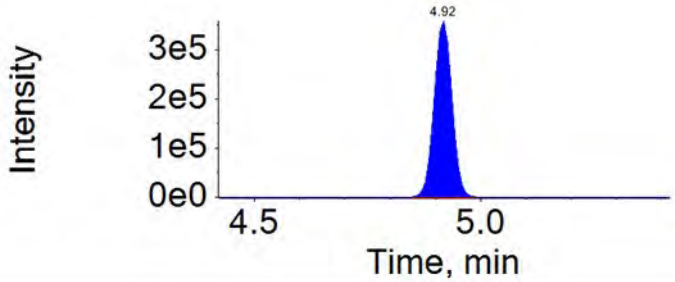
Extraction Standard: E13C2-6:2-FTS	Injection Standard: 13C2-PFOA
429.0 / 81.0	415.0 / 370.0

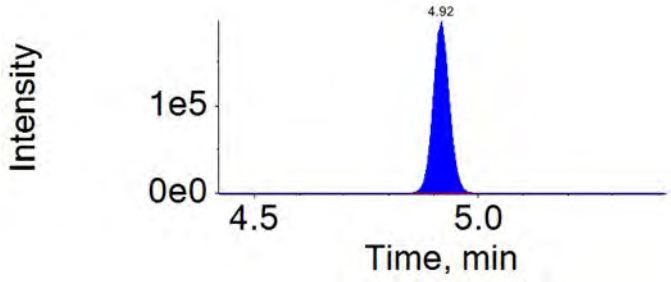




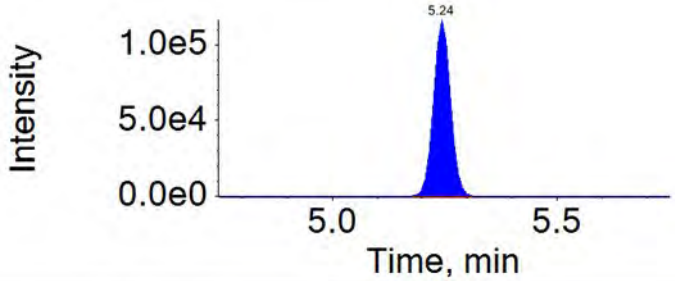
ICAL Name: 18NOV28DCAL **Result Table:** 18NOV28DCAL 11/28/2018 4:47:11 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

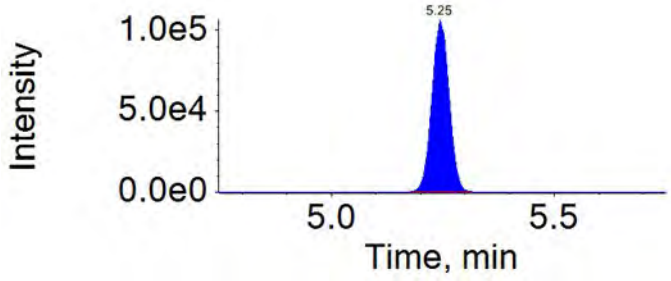
Extraction Standard: E13C8-PFOA	Injection Standard: 13C2-PFOA
421.0 / 376.0	415.0 / 370.0



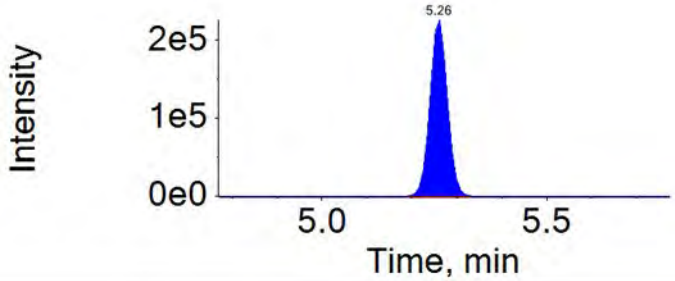


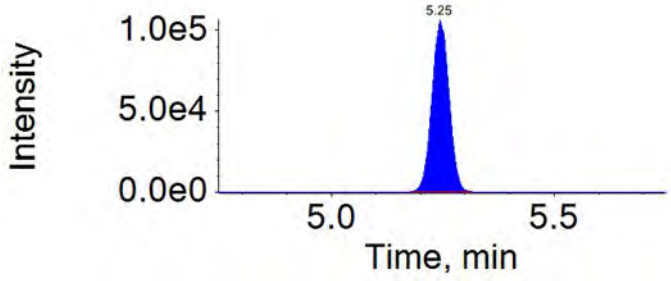
Extraction Standard: E13C8-PFOS	Injection Standard: 13C4-PFOS
507.0 / 80.0	503.0 / 80.0



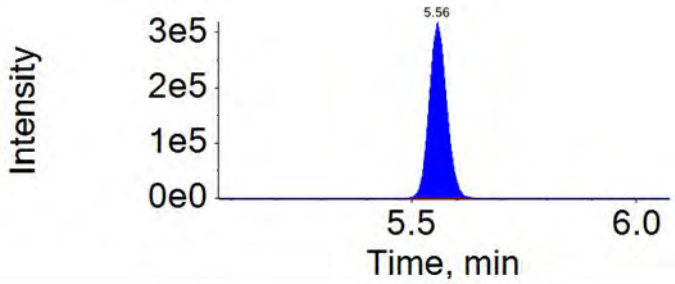


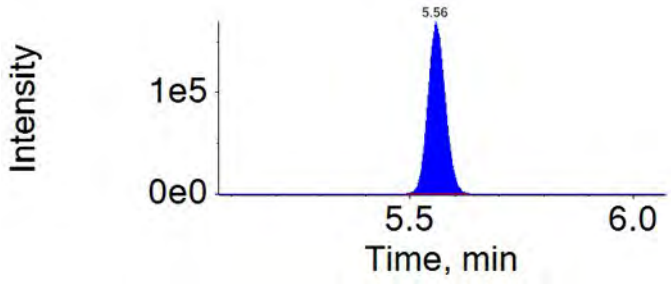
Extraction Standard: E13C9-PFNA	Injection Standard: 13C4-PFOS
472.0 / 427.0	503.0 / 80.0





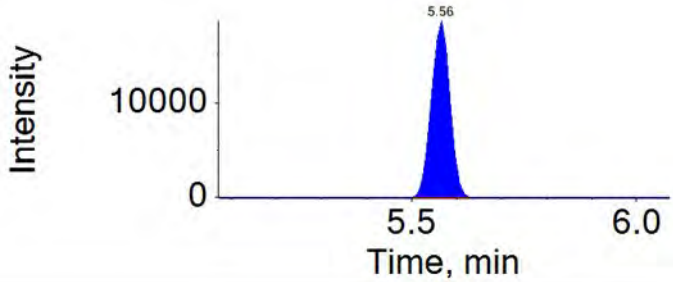
Extraction Standard: E13C6-PFDA	Injection Standard: 13C2-PFDA
519.0 / 474.0	515.0 / 470.0

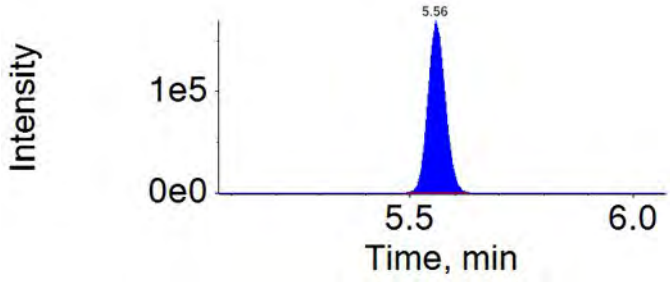




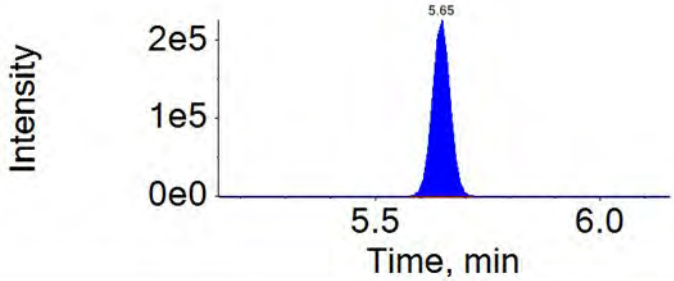
ICAL Name: 18NOV28DCAL **Result Table:** 18NOV28DCAL 11/28/2018 4:47:11 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

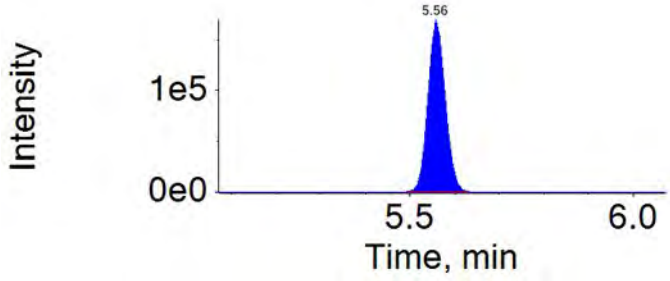
Extraction Standard: E13C2-8:2-FTS	Injection Standard: 13C2-PFDA
529.0 / 81.0	515.0 / 470.0



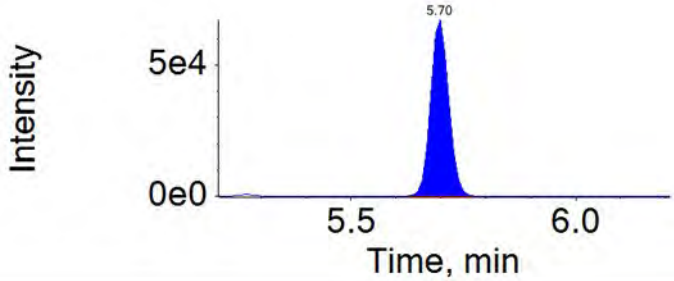


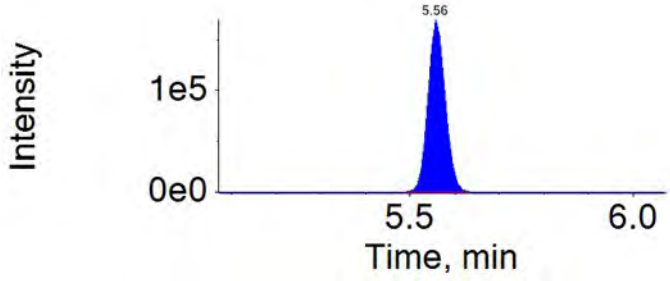
Extraction Standard: E13C8-PFOSA	Injection Standard: 13C2-PFDA
506.0 / 78.0	515.0 / 470.0



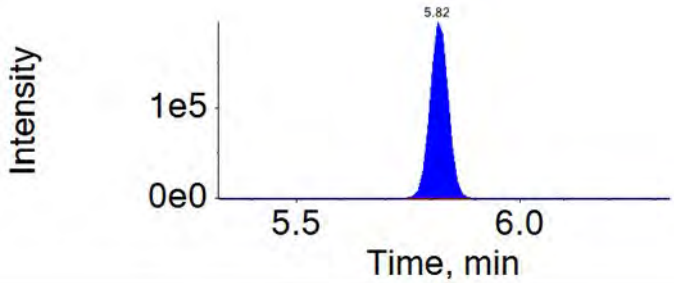


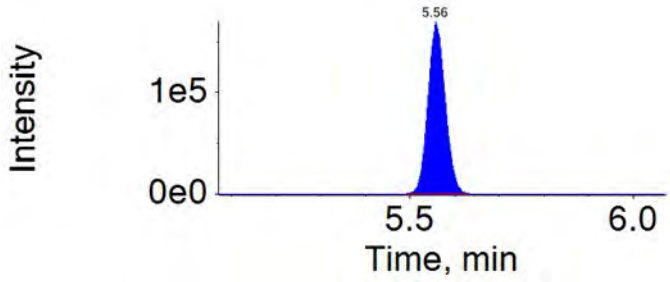
Extraction Standard: Ed3-NMeFOSAA	Injection Standard: 13C2-PFDA
573.0 / 419.0	515.0 / 470.0





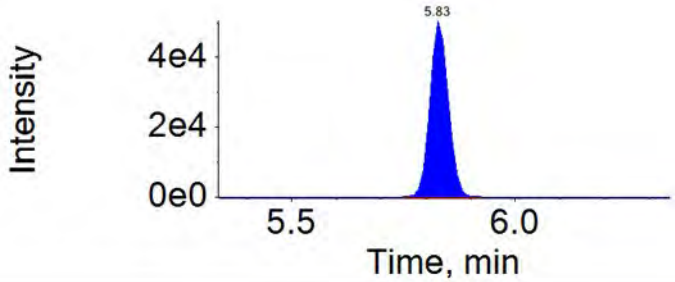
Extraction Standard: E13C7-PFUnDA	Injection Standard: 13C2-PFDA
570.0 / 525.0	515.0 / 470.0

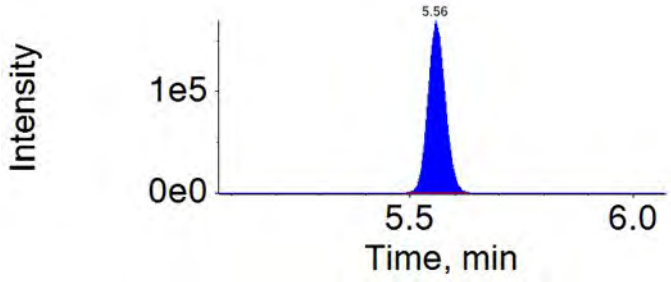




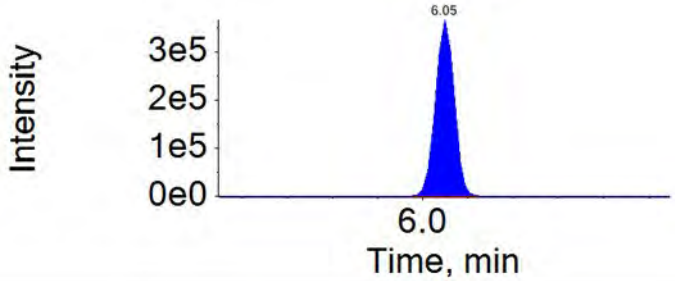
ICAL Name: 18NOV28DCAL **Result Table:** 18NOV28DCAL 11/28/2018 4:47:11 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

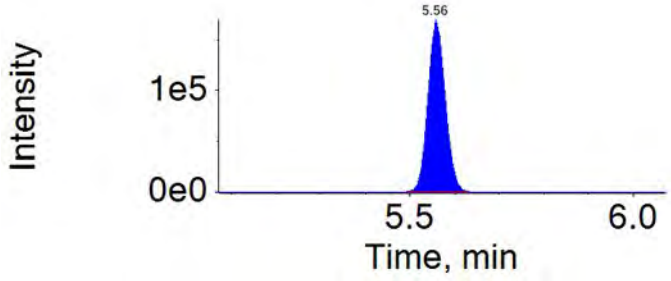
Extraction Standard: Ed5-NEtFOSAA	Injection Standard: 13C2-PFDA
589.0 / 419.0	515.0 / 470.0



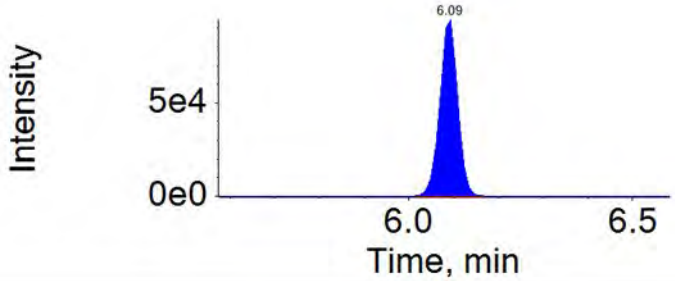


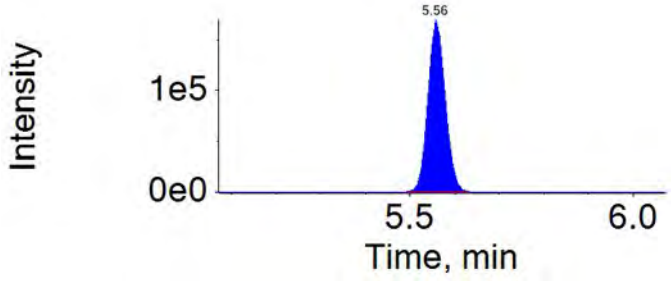
Extraction Standard: E13C2-PFDoDA	Injection Standard: 13C2-PFDA
615.0 / 570.0	515.0 / 470.0



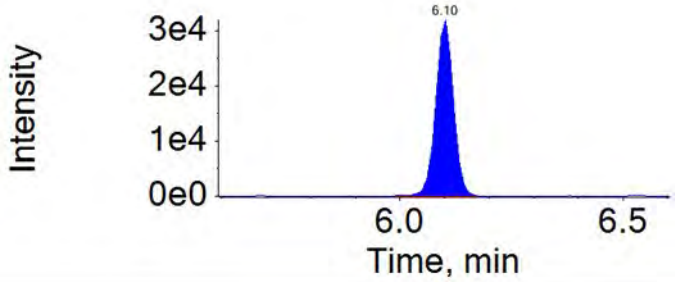


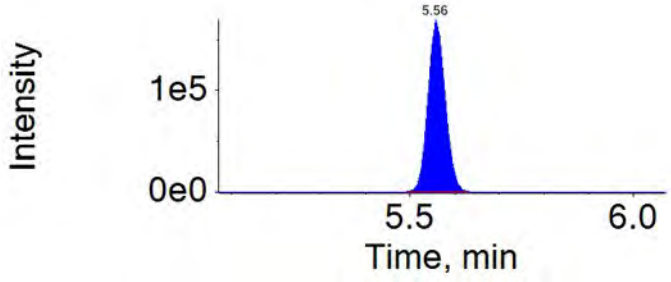
Extraction Standard: Ed7-NMePFOSAE	Injection Standard: 13C2-PFDA
623.0 / 59.0	515.0 / 470.0





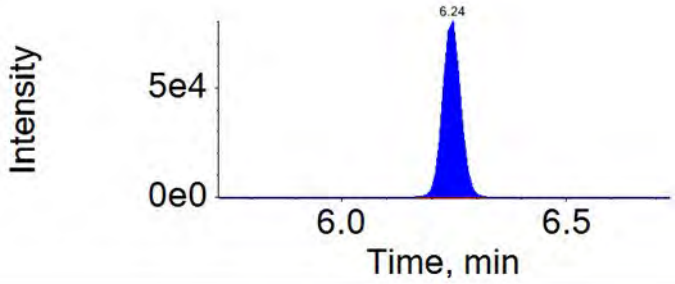
Extraction Standard: Ed3-NMePFOSA	Injection Standard: 13C2-PFDA
515.0 / 169.0	515.0 / 470.0

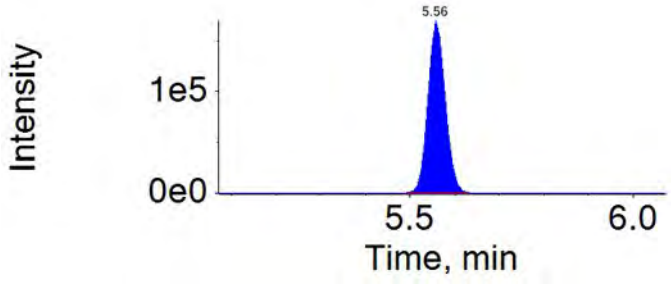




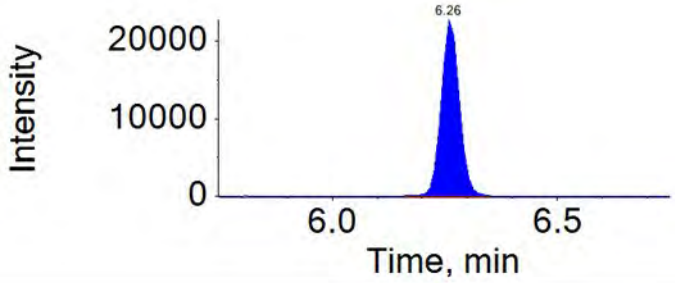
ICAL Name: 18NOV28DCAL **Result Table:** 18NOV28DCAL 11/28/2018 4:47:11 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

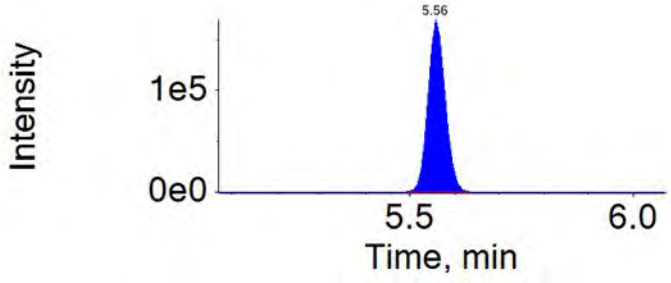
Extraction Standard: Ed9-NEtPFOSAE	Injection Standard: 13C2-PFDA
639.0 / 59.0	515.0 / 470.0



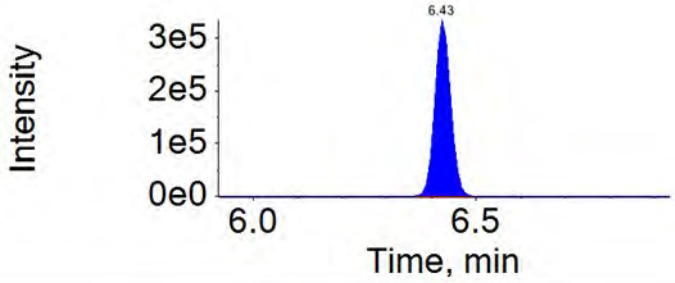


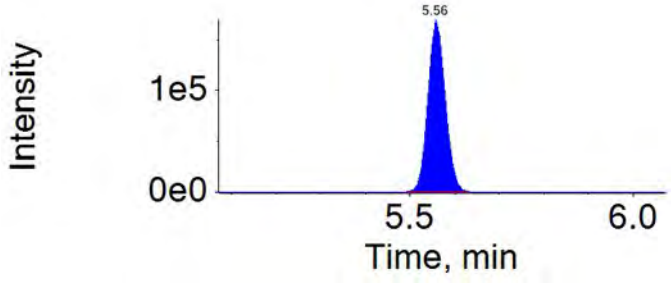
Extraction Standard: Ed5-NEtPFOSA	Injection Standard: 13C2-PFDA
531.0 / 169.0	515.0 / 470.0





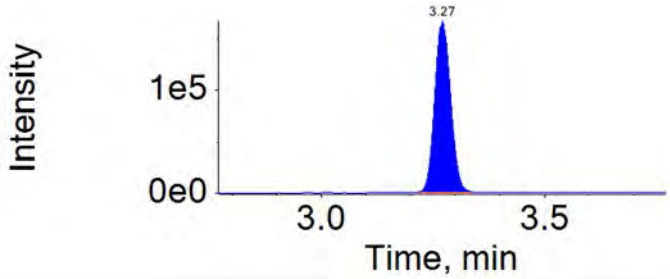
Extraction Standard: E13C2-PFTeDA	Injection Standard: 13C2-PFDA
715.0 / 670.0	515.0 / 470.0



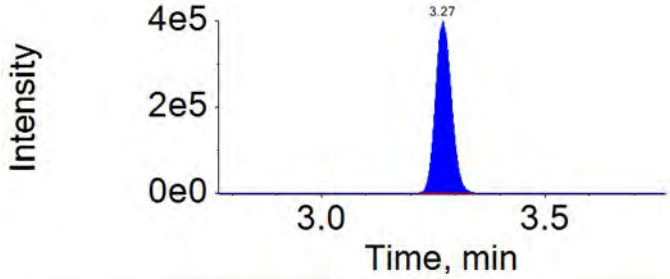


ICAL Name: 18NOV28DCAL **Result Table:** 18NOV28DCAL 11/28/2018 4:47:11 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

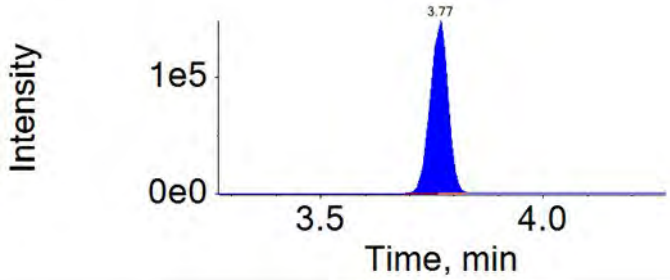
Analyte: PFBA
213.0 / 169.0



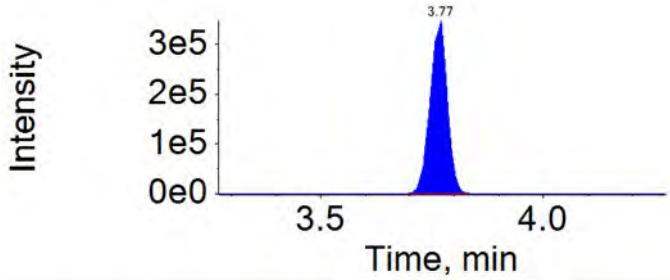
Extraction Standard: 13C4-PFBA
217.0 / 172.0



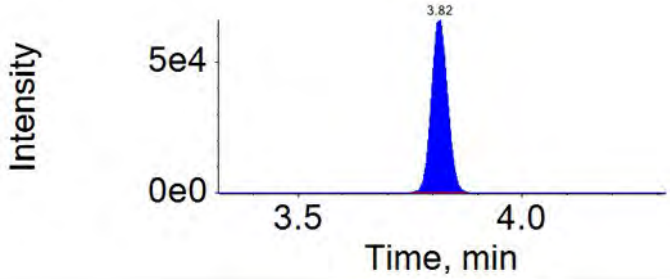
Analyte: PFPeA
263.0 / 219.0



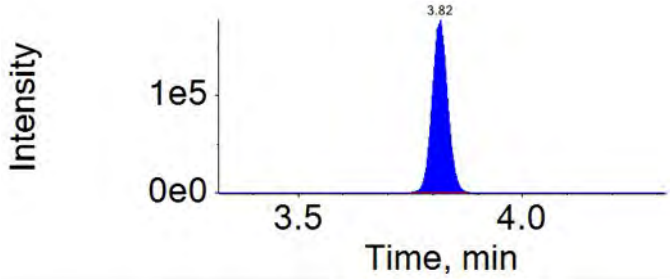
Extraction Standard: 13C5-PFPeA
268.0 / 223.0



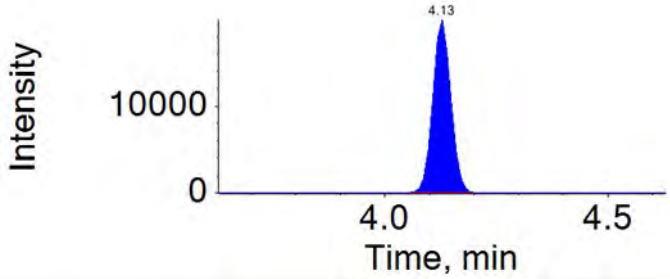
Analyte: PFBS
299.0 / 80.0



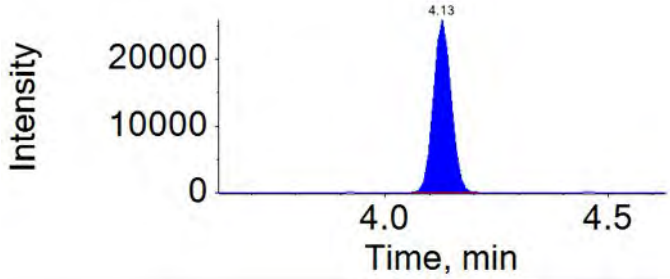
Extraction Standard: 13C3-PFBS
302.0 / 80.0



Analyte: 4:2-FTS
327.0 / 307.0



Extraction Standard: 13C2-4:2-FTS
329.0 / 81.0

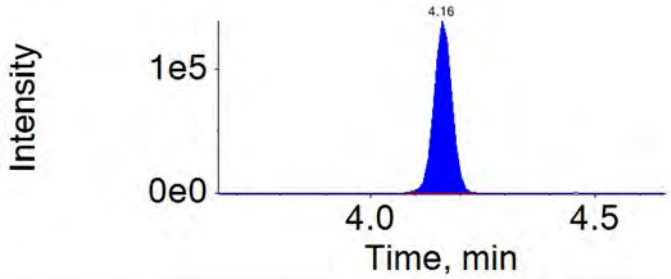


APPROVED
By MCD at 5:01 pm, 11/28/18

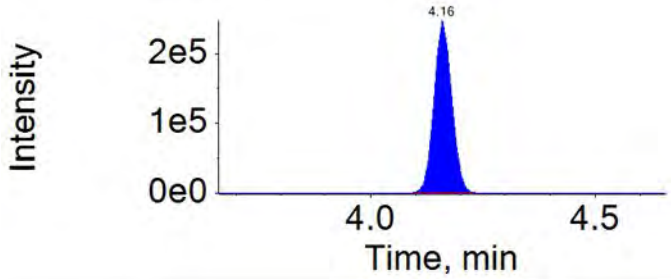
REVIEWED
By HMK at 12:22 pm, 11/29/18

ICAL Name: 18NOV28DCAL **Result Table:** 18NOV28DCAL 11/28/2018 4:47:11 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

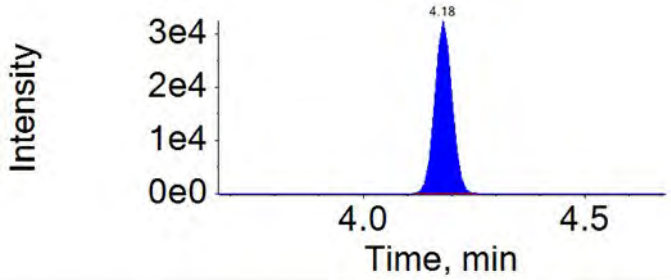
Analyte: PFHxA
313.0 / 269.0



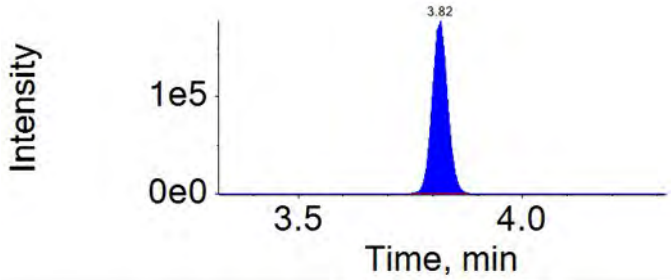
Extraction Standard: 13C5-PFHxA
318.0 / 273.0



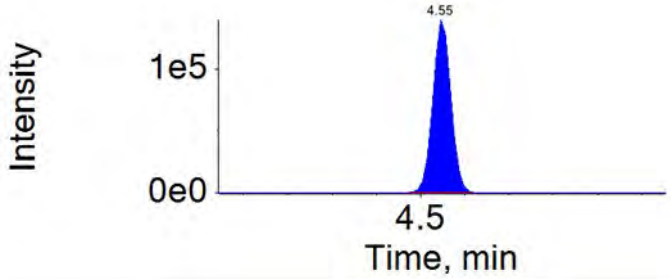
Analyte: PFPeS
349.0 / 80.0



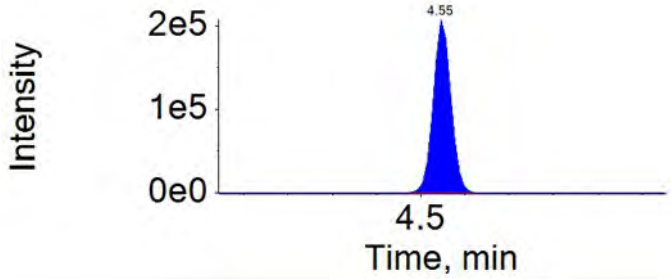
Extraction Standard: 13C3-PFBS
302.0 / 80.0



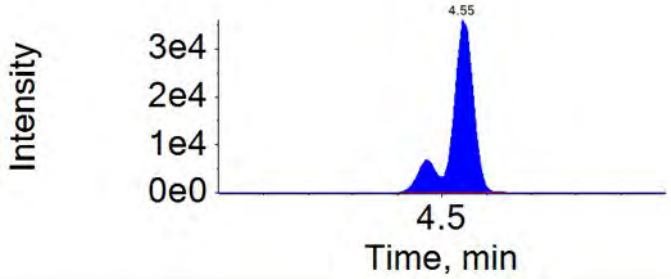
Analyte: PFHpA
363.0 / 319.0



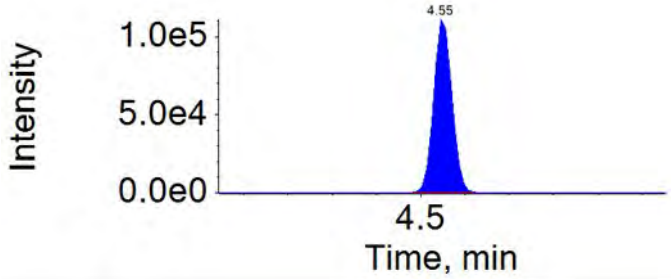
Extraction Standard: 13C4-PFHpA
367.0 / 322.0



Analyte: PFHxS
399.0 / 80.0



Extraction Standard: 13C3-PFHxS
402.0 / 80.0

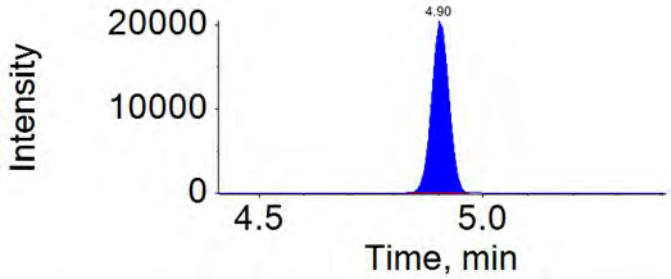


APPROVED
By MCD at 5:01 pm, 11/28/18

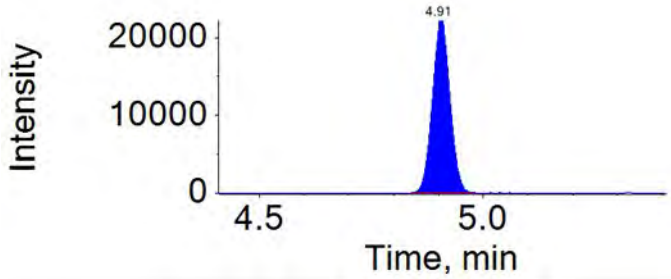
REVIEWED
By HMK at 12:22 pm, 11/29/18

ICAL Name: 18NOV28DCAL **Result Table:** 18NOV28DCAL 11/28/2018 4:47:11 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

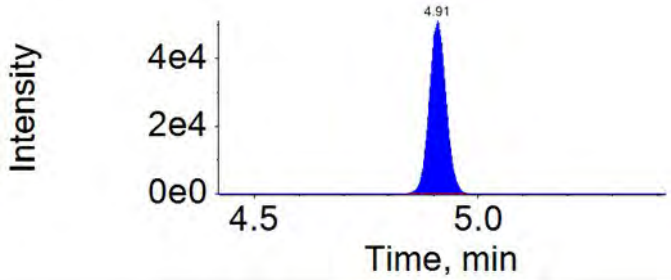
Analyte: 6:2-FTS
427.0 / 407.0



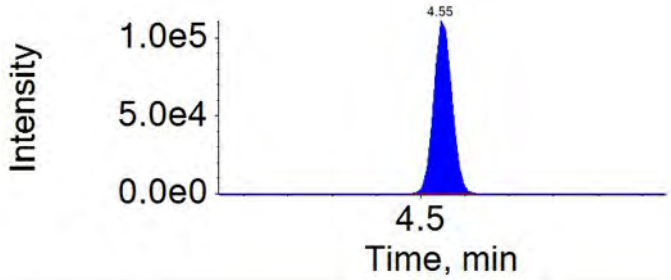
Extraction Standard: 13C2-6:2-FTS
429.0 / 81.0



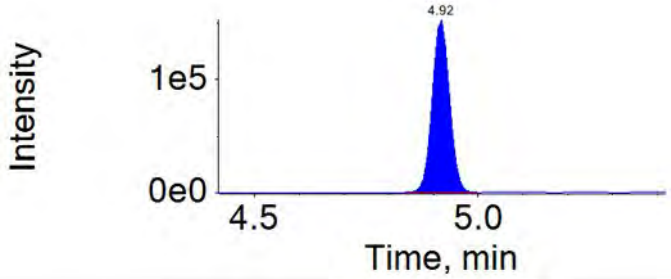
Analyte: PFHpS
449.0 / 80.0



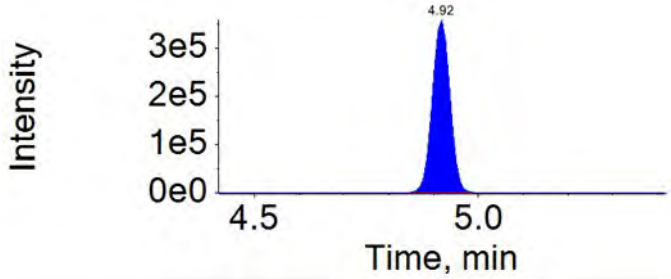
Extraction Standard: 13C3-PFHxS
402.0 / 80.0



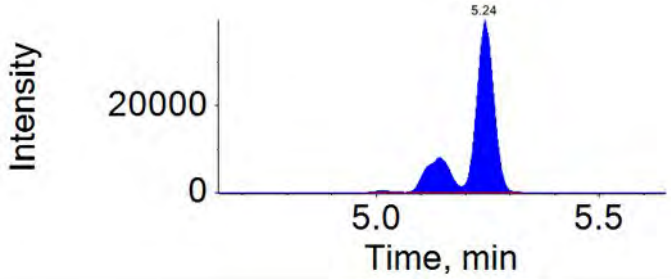
Analyte: PFOA
413.0 / 369.0



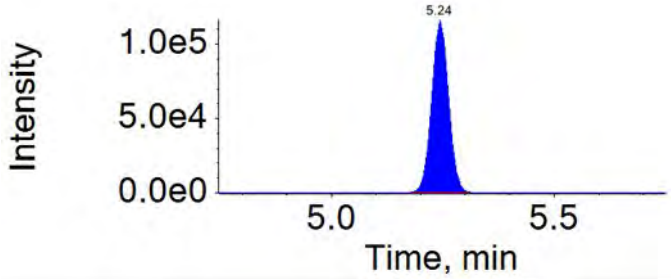
Extraction Standard: 13C8-PFOA
421.0 / 376.0



Analyte: PFOS
499.0 / 80.0



Extraction Standard: 13C8-PFOS
507.0 / 80.0

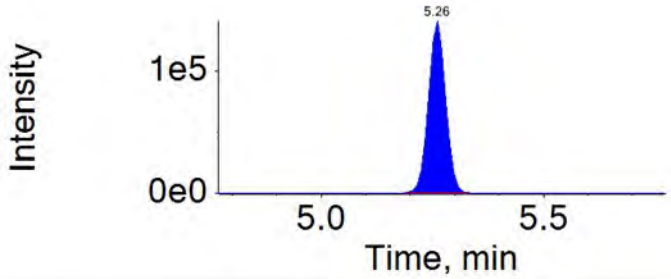


APPROVED
By MCD at 5:01 pm, 11/28/18

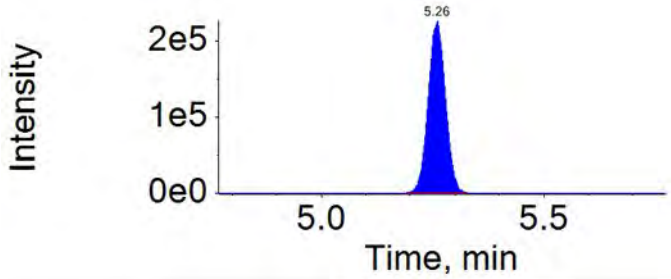
REVIEWED
By HMK at 12:22 pm, 11/29/18

ICAL Name: 18NOV28DCAL **Result Table:** 18NOV28DCAL 11/28/2018 4:47:11 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

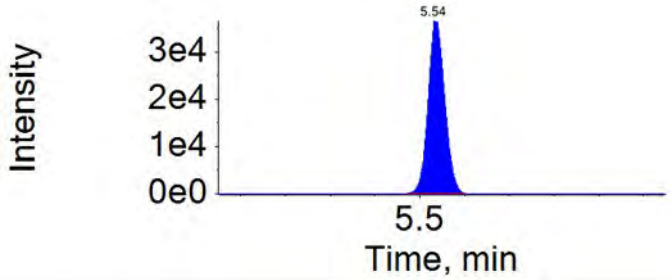
Analyte: PFNA
463.0 / 419.0



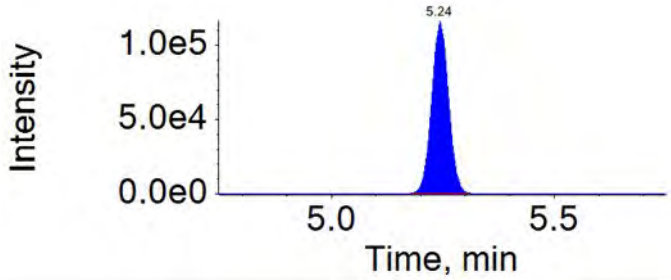
Extraction Standard: 13C9-PFNA
472.0 / 427.0



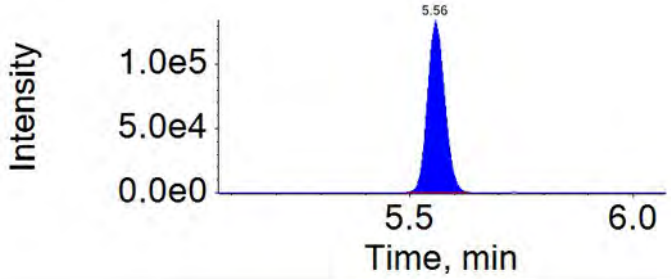
Analyte: PFNS
549.0 / 80.0



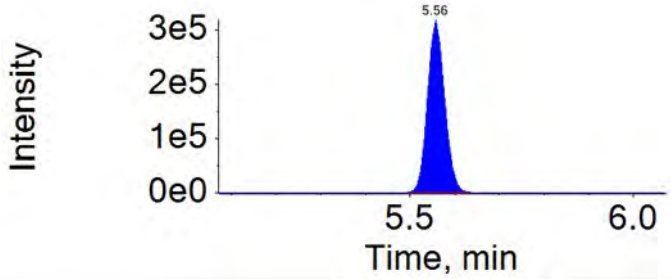
Extraction Standard: 13C8-PFOS
507.0 / 80.0



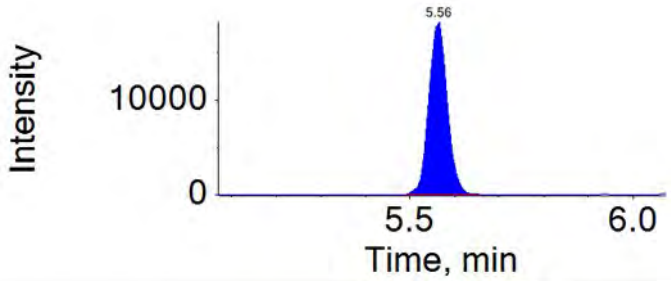
Analyte: PFDA
513.0 / 469.0



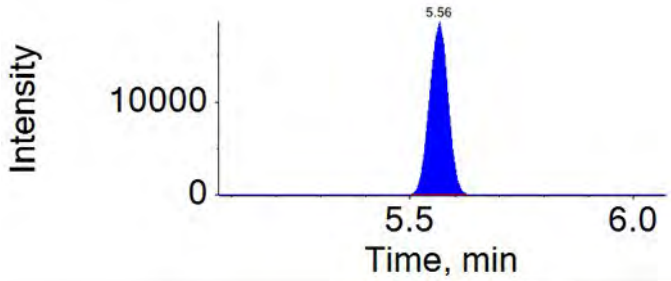
Extraction Standard: 13C6-PFDA
519.0 / 474.0



Analyte: 8:2-FTS
527.0 / 507.0



Extraction Standard: 13C2-8:2-FTS
529.0 / 81.0

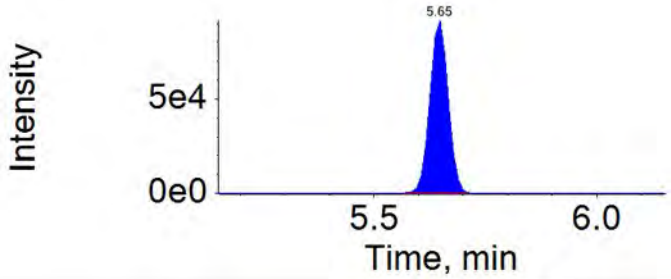


APPROVED
By MCD at 5:01 pm, 11/28/18

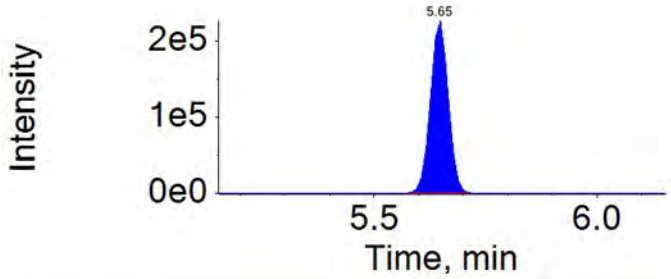
REVIEWED
By HMK at 12:22 pm, 11/29/18

ICAL Name: 18NOV28DCAL **Result Table:** 18NOV28DCAL 11/28/2018 4:47:11 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

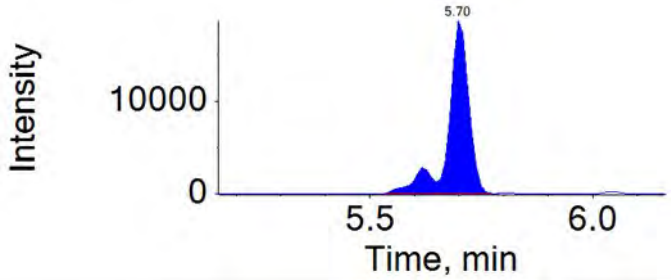
Analyte: PFOSA
498.0 / 78.0



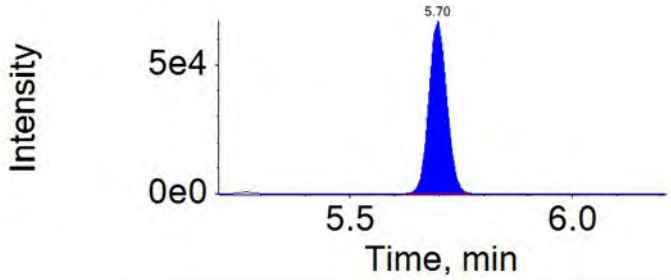
Extraction Standard: 13C8-PFOSA
506.0 / 78.0



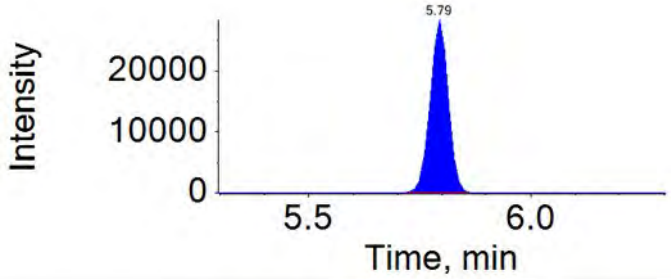
Analyte: NMeFOSAA
570.0 / 419.0



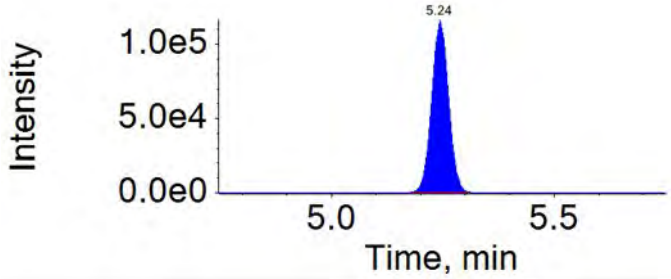
Extraction Standard: d3-NMeFOSAA
573.0 / 419.0



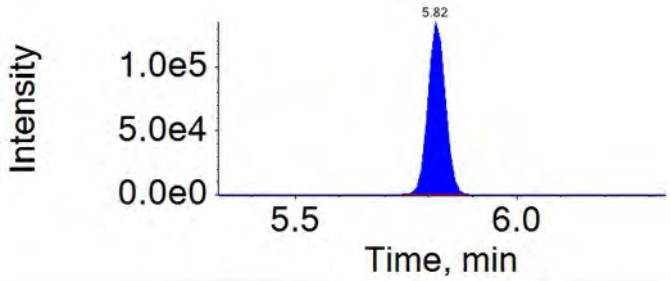
Analyte: PFDS
599.0 / 80.0



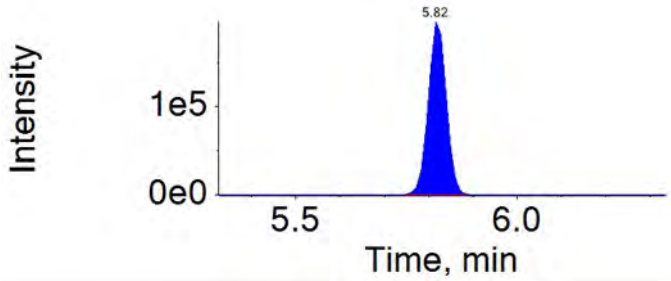
Extraction Standard: 13C8-PFOS
507.0 / 80.0



Analyte: PFUnDA
563.0 / 519.0



Extraction Standard: 13C7-PFUnDA
570.0 / 525.0

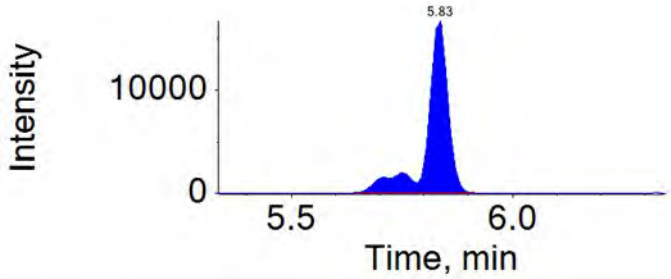


APPROVED
By MCD at 5:01 pm, 11/28/18

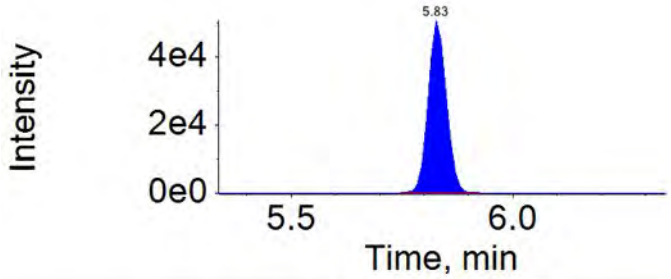
REVIEWED
By HMK at 12:22 pm, 11/29/18

ICAL Name: 18NOV28DCAL **Result Table:** 18NOV28DCAL 11/28/2018 4:47:11 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

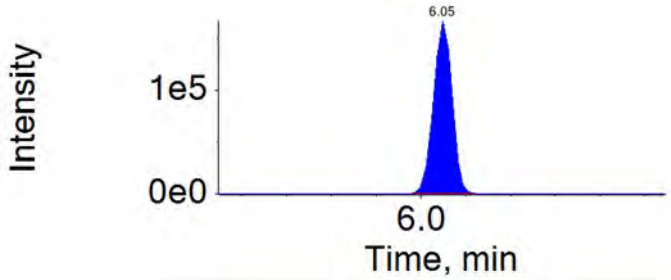
Analyte: NEtFOSAA
584.0 / 419.0



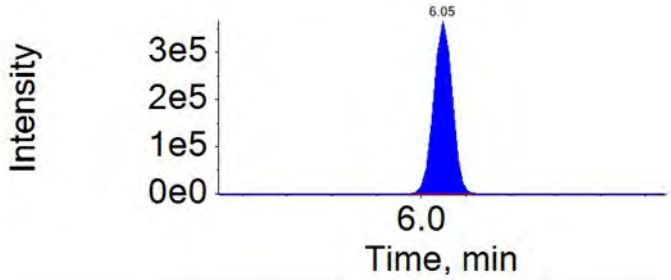
Extraction Standard: d5-NEtFOSAA
589.0 / 419.0



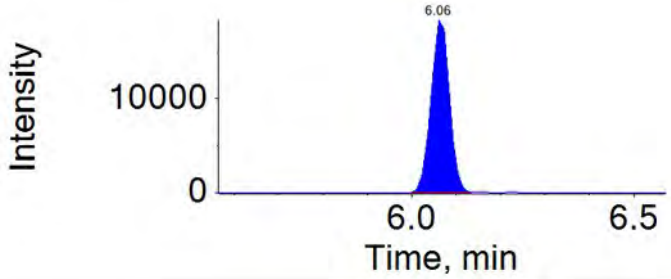
Analyte: PFDoDA
613.0 / 569.0



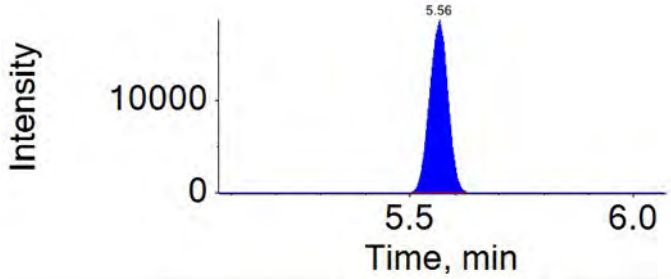
Extraction Standard: 13C2-PFDoDA
615.0 / 570.0



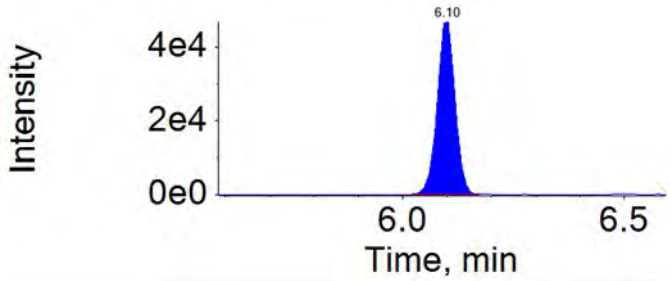
Analyte: 10:2-FTS
627.0 / 607.0



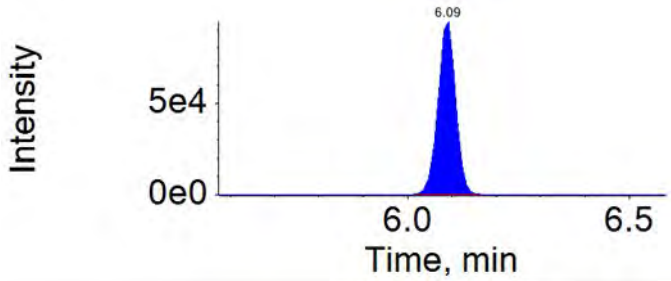
Extraction Standard: 13C2-8:2-FTS
529.0 / 81.0



Analyte: NMePFOSAE
616.0 / 59.0



Extraction Standard: d7-NMePFOSAE
623.0 / 59.0

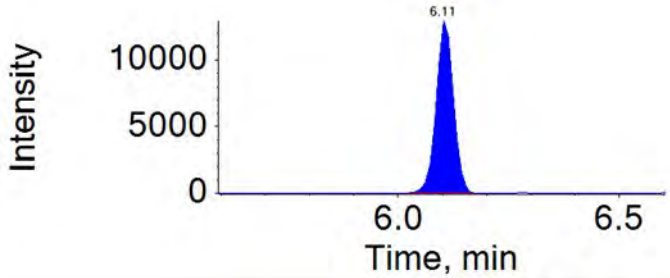


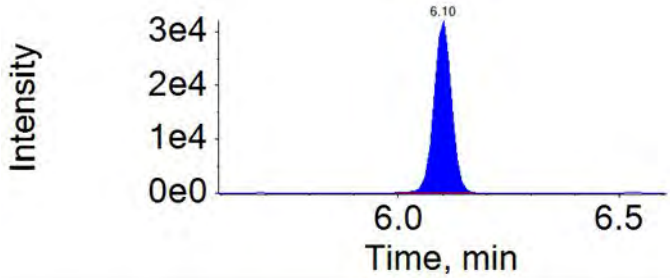
APPROVED
By MCD at 5:01 pm, 11/28/18

REVIEWED
By HMK at 12:22 pm, 11/29/18

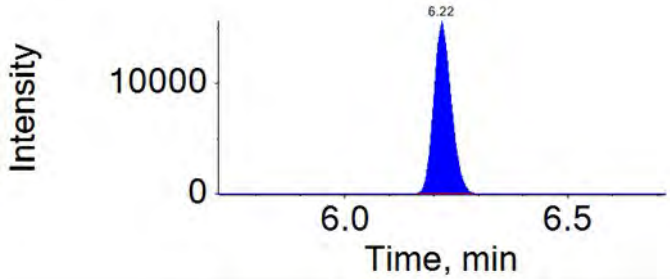
ICAL Name: 18NOV28DCAL **Result Table:** 18NOV28DCAL 11/28/2018 4:47:11 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

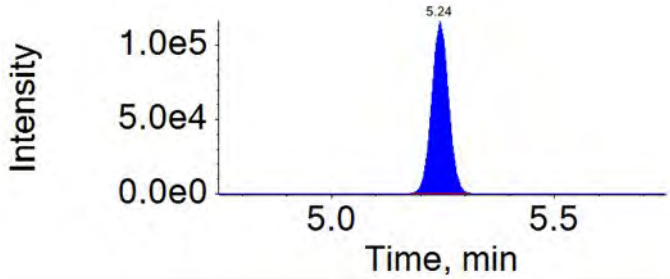
Analyte: NMePFOSA	Extraction Standard: d3-NMePFOSA
512.0 / 169.0	515.0 / 169.0



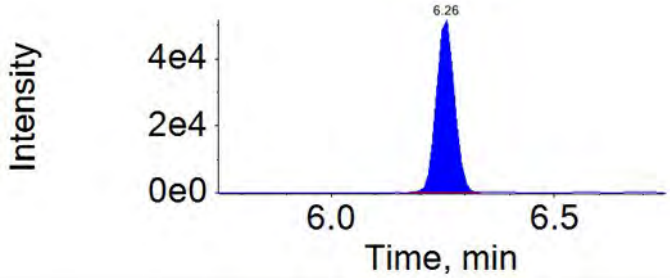


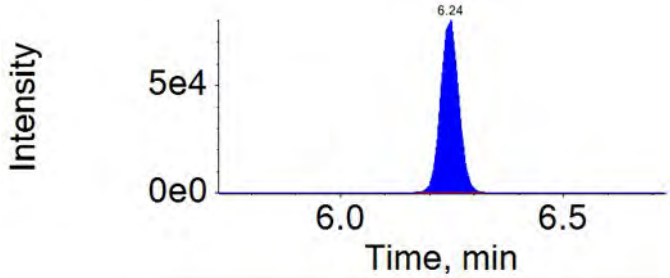
Analyte: PFDoS	Extraction Standard: 13C8-PFOS
699.0 / 80.0	507.0 / 80.0



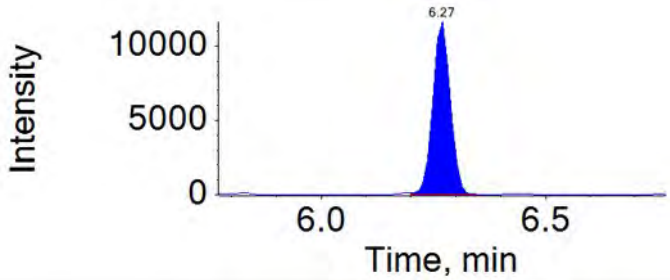


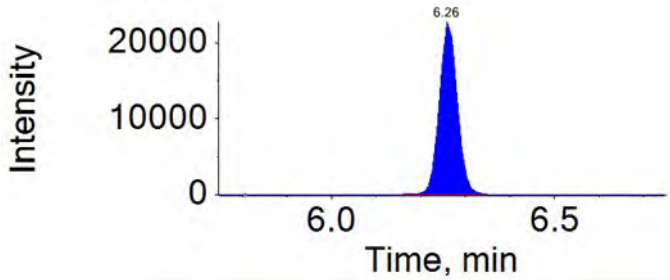
Analyte: NEtPFOSAE	Extraction Standard: d9-NEtPFOSAE
630.0 / 59.0	639.0 / 59.0





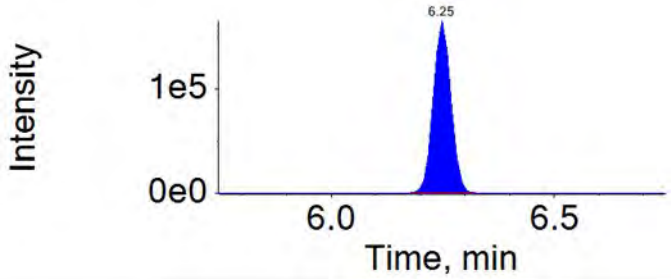
Analyte: NEtPFOSA	Extraction Standard: d5-NEtPFOSA
526.0 / 169.0	531.0 / 169.0



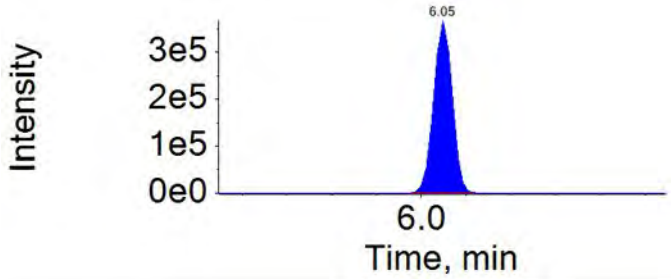


ICAL Name: 18NOV28DCAL **Result Table:** 18NOV28DCAL 11/28/2018 4:47:11 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

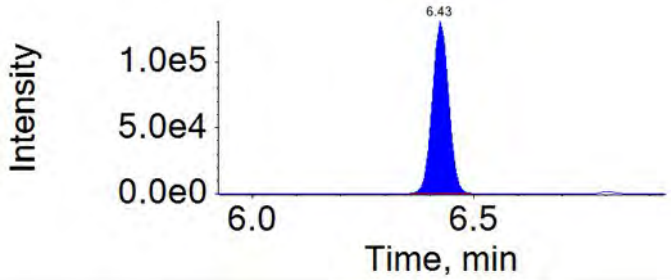
Analyte: PFTrDA
663.0 / 619.0



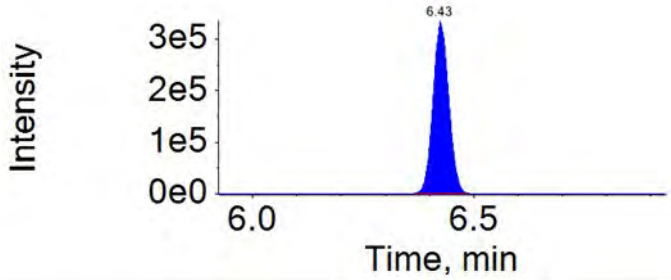
Extraction Standard: 13C2-PFDoDA
615.0 / 570.0



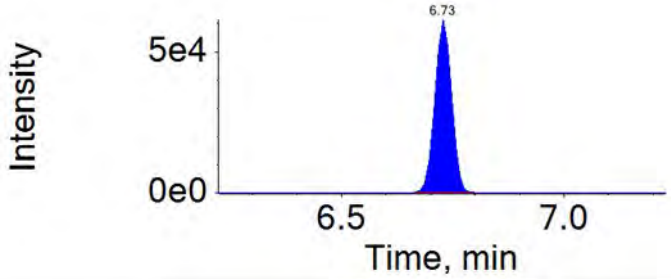
Analyte: PFTeDA
713.0 / 669.0



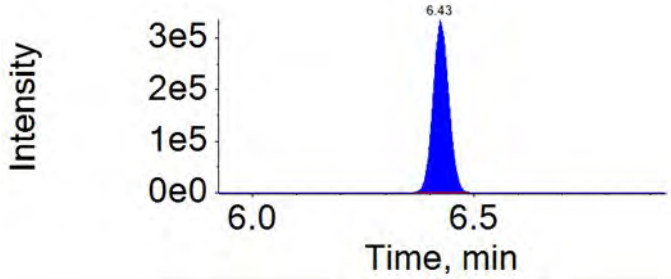
Extraction Standard: 13C2-PFTeDA
715.0 / 670.0



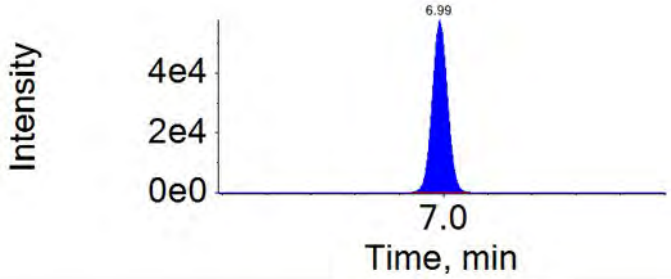
Analyte: PFHxDA
813.0 / 769.0



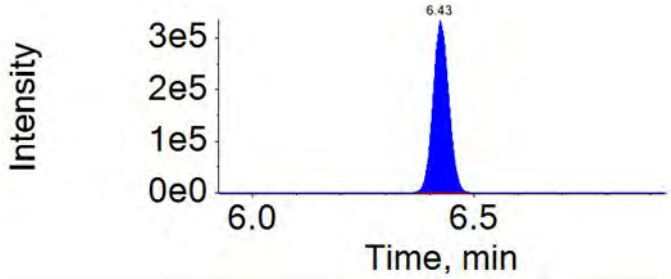
Extraction Standard: 13C2-PFTeDA
715.0 / 670.0



Analyte: PFODA
913.0 / 869.0



Extraction Standard: 13C2-PFTeDA
715.0 / 670.0



APPROVED
By MCD at 5:01 pm, 11/28/18

REVIEWED
By HMK at 12:22 pm, 11/29/18

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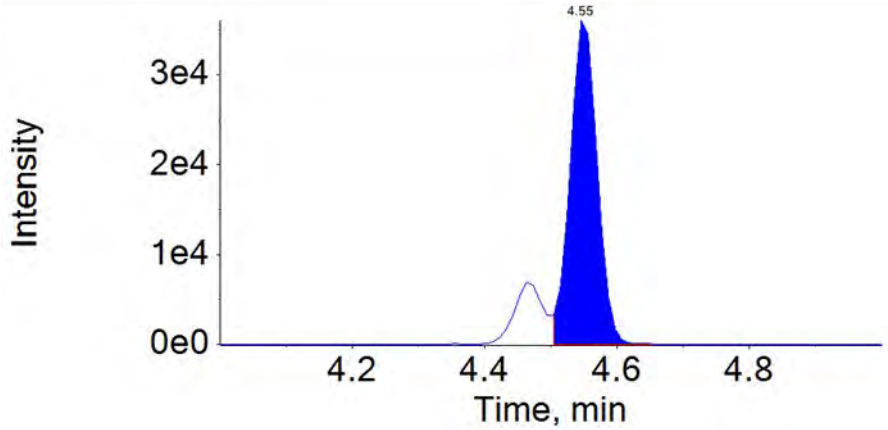
Auto Integrations prior to Manual Integration

Print Date: 11/28/2018 4:55 PM
Template: MQ-OrigInteg-16NOV21.docx

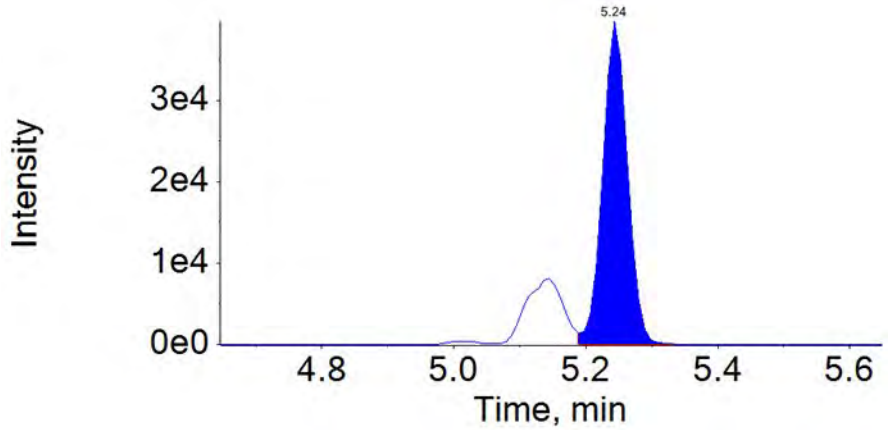
Results Table Name: 18NOV28DCAL
Results Table Date: 11/28/2018 4:52:53 PM
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

Component Name:
PFHxS
RT (min.):
4.55
Peak Area:
103015.29
Mass Range:
399.0 / 80.0
File Name:
18NOV28DCAL-16.wiff
Sample Name:
CCV1_CAL3



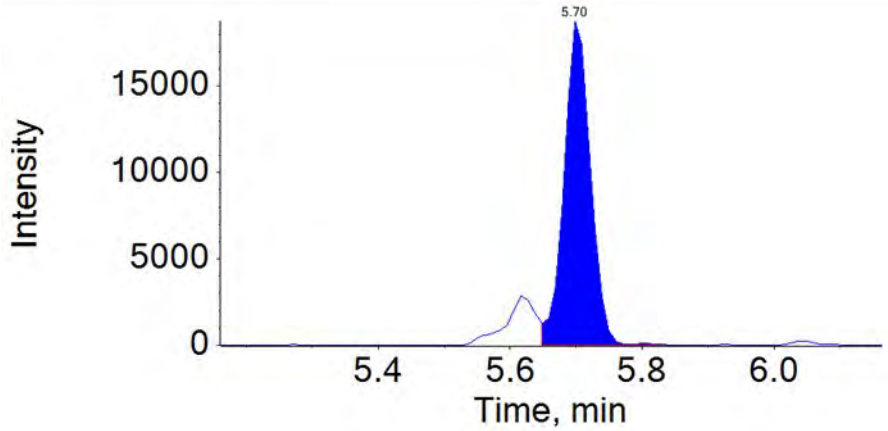
Integration Comment: incorrect integration

Component Name:
PFOS
RT (min.):
5.24
Peak Area:
103980.06
Mass Range:
499.0 / 80.0
File Name:
18NOV28DCAL-16.wiff
Sample Name:
CCV1_CAL3



Integration Comment: incorrect integration

Component Name:
NMeFOSAA
RT (min.):
5.70
Peak Area:
52224.93
Mass Range:
570.0 / 419.0
File Name:
18NOV28DCAL-16.wiff
Sample Name:
CCV1_CAL3



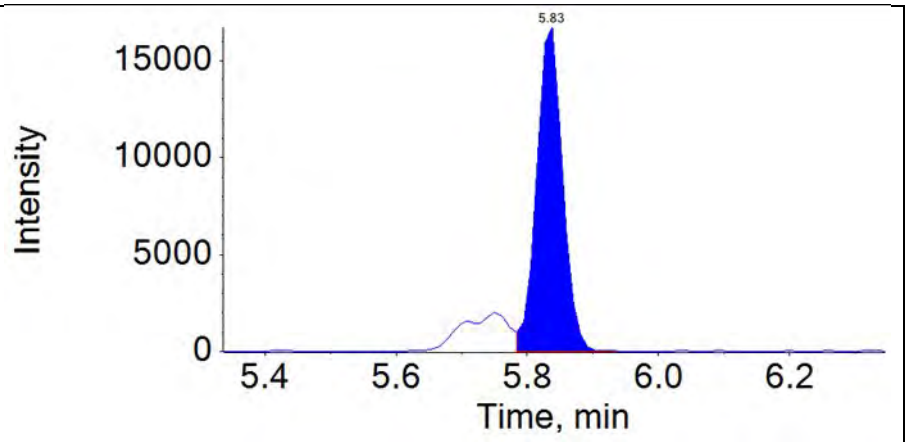
Integration Comment: incorrect integration

APPROVED
By MCD at 5:01 pm, 11/28/18

REVIEWED
By HMK at 12:22 pm, 11/29/18

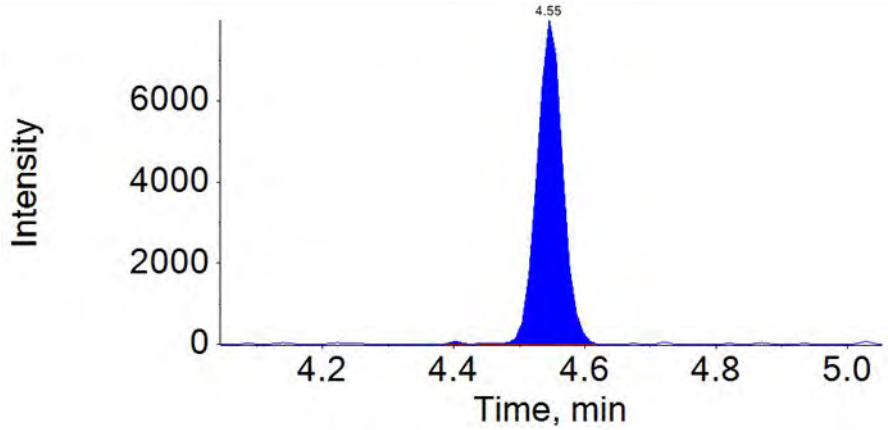
Results Table Name: 18NOV28DCAL
Results Table Date: 11/28/2018 4:52:53 PM
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

Component Name:
NEtFOSAA
RT (min.):
5.83
Peak Area:
46203.64
Mass Range:
584.0 / 419.0
File Name:
18NOV28DCAL-16.wiff
Sample Name:
CCV1_CAL3



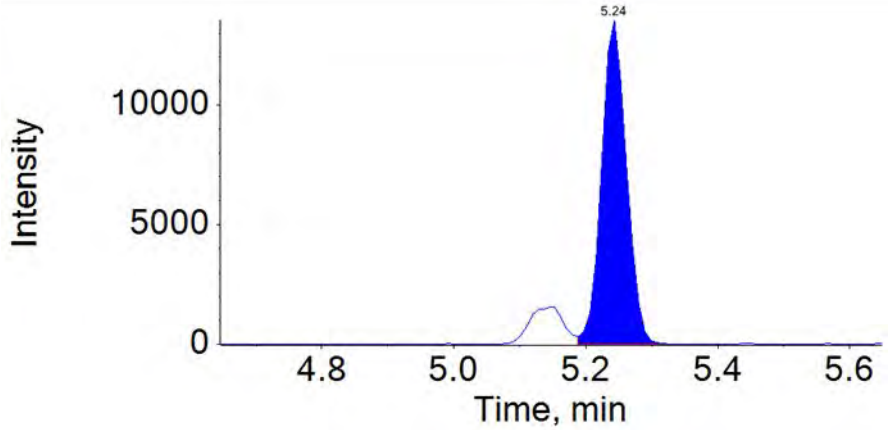
Integration Comment: incorrect integration

Component Name:
PFHpA_2
RT (min.):
4.55
Peak Area:
21948.97
Mass Range:
363.0 / 169.0
File Name:
18NOV28DCAL-16.wiff
Sample Name:
CCV1_CAL3



Integration Comment: incorrect integration

Component Name:
PFOS_2
RT (min.):
5.24
Peak Area:
35538.74
Mass Range:
499.0 / 99.0
File Name:
18NOV28DCAL-16.wiff
Sample Name:
CCV1_CAL3



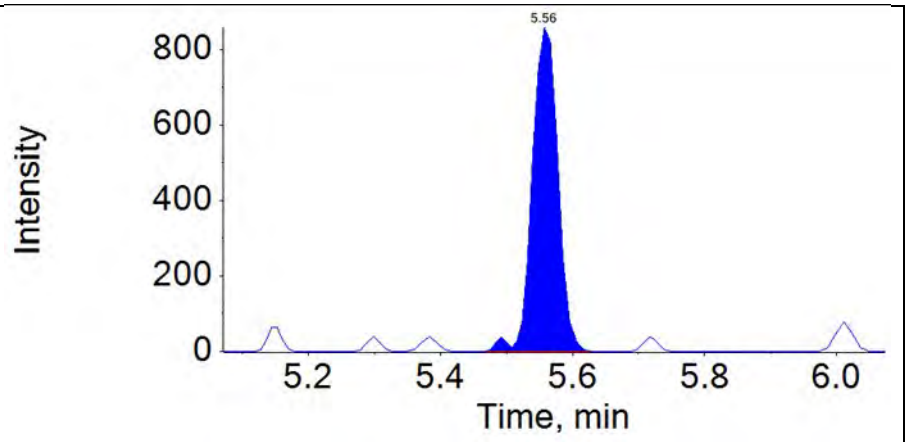
Integration Comment: incorrect integration

APPROVED
By MCD at 5:01 pm, 11/28/18

REVIEWED
By HMK at 12:22 pm, 11/29/18

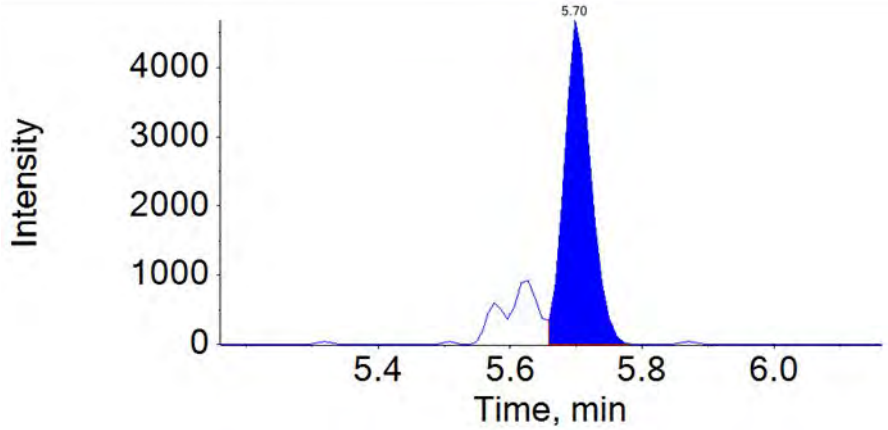
Results Table Name: 18NOV28DCAL
Results Table Date: 11/28/2018 4:52:53 PM
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

Component Name:
PFDA_2
RT (min.):
5.56
Peak Area:
2325.21
Mass Range:
513.0 / 169.0
File Name:
18NOV28DCAL-16.wiff
Sample Name:
CCV1_CAL3



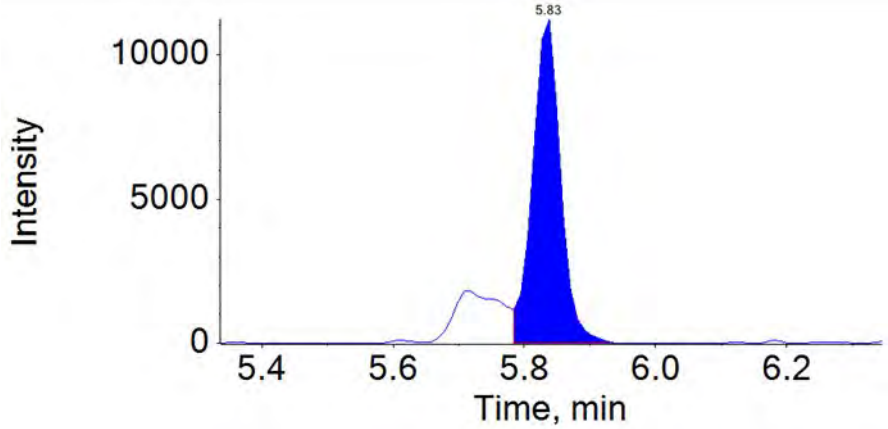
Integration Comment: incorrect integration

Component Name:
NMeFOSAA_2
RT (min.):
5.70
Peak Area:
13049.28
Mass Range:
570.0 / 483.0
File Name:
18NOV28DCAL-16.wiff
Sample Name:
CCV1_CAL3



Integration Comment: incorrect integration

Component Name:
NEtFOSAA_2
RT (min.):
5.83
Peak Area:
33290.95
Mass Range:
584.0 / 526.0
File Name:
18NOV28DCAL-16.wiff
Sample Name:
CCV1_CAL3



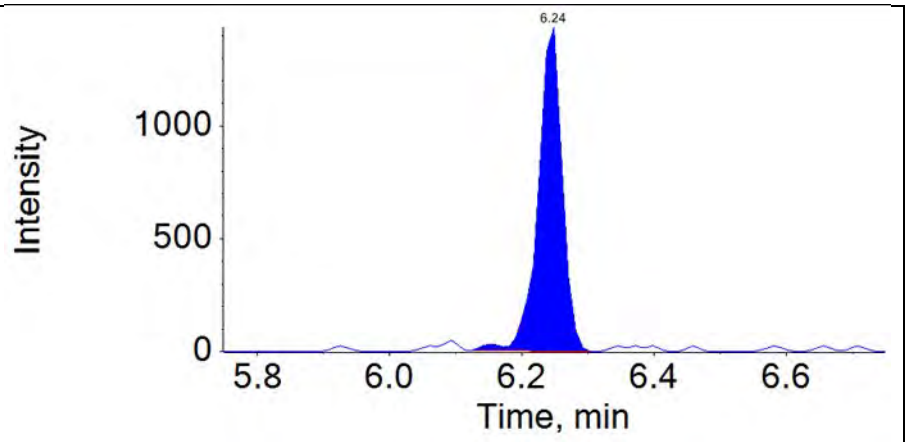
Integration Comment: incorrect integration

APPROVED
By MCD at 5:01 pm, 11/28/18

REVIEWED
By HMK at 12:22 pm, 11/29/18

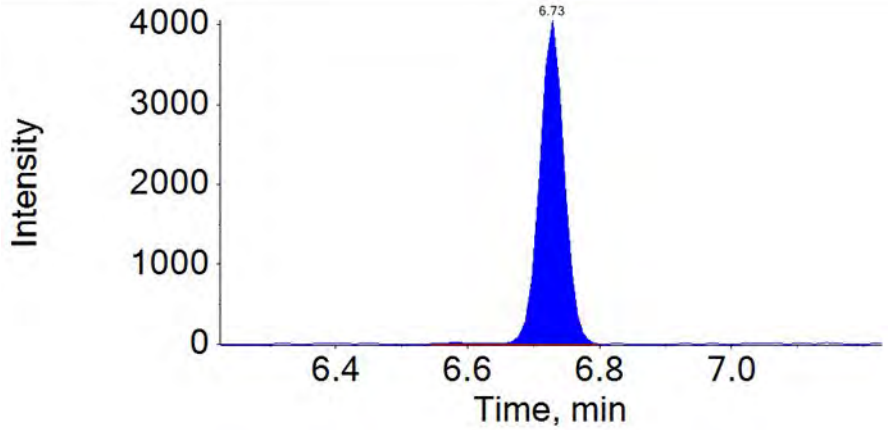
Results Table Name: 18NOV28DCAL
Results Table Date: 11/28/2018 4:52:53 PM
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

Component Name:
PFTrDA_2
RT (min.):
6.24
Peak Area:
3652.89
Mass Range:
663.0 / 169.0
File Name:
18NOV28DCAL-16.wiff
Sample Name:
CCV1_CAL3



Integration Comment: incorrect integration

Component Name:
PFHxDA_2
RT (min.):
6.73
Peak Area:
10506.81
Mass Range:
813.0 / 169.0
File Name:
18NOV28DCAL-16.wiff
Sample Name:
CCV1_CAL3



Integration Comment: incorrect integration

APPROVED
By MCD at 5:01 pm, 11/28/18

REVIEWED
By HMK at 12:22 pm, 11/29/18

Results Table Name: 18NOV28DCAL
Results Table Date: 11/28/2018 4:52:53 PM
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

APPROVED
By MCD at 5:01 pm, 11/28/18

REVIEWED
By HMK at 12:22 pm, 11/29/18

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LC-MS/MS Analysis Report

Printed: 11/28/2018 4:52:00 PM
Template: IonRatio18OCT10

Ion Ratio Report

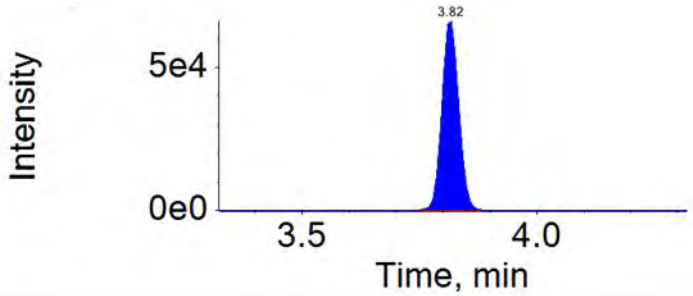
Sample Name: CCV1_CAL3 **Instrument Name:** LM27631 **File Name:** 18NOV28DCAL-16.wiff

Component Name	RT	RRT	Analyte Area Response	Int Typ	Expected Ion Ratio	Ion Ratio	Ion Ratio % Diff	Ion Ratio Limit	Ion Ratio OOS
PFBS	3.82	1.00	166250.13	A	0.3655	0.3695			
PFBS_2	3.81	1.00	61434.35	A	0.3655	0.3695	1	50	
4:2-FTS	4.13	1.00	56074.30	A	0.6383	0.6136			
4:2-FTS_2	4.13	1.00	34408.16	A	0.6383	0.6136	-4	50	
PFHxA	4.16	1.00	390006.26	A	0.0103	0.0099			
PFHxA_2	4.16	1.00	3854.81	A	0.0103	0.0099	-4	50	
PFPeS	4.18	1.10	88012.70	A	0.4976	0.4974			
PFPeS_2	4.18	1.10	43775.32	A	0.4976	0.4974	0	50	
PFHpA	4.55	1.00	393155.85	A	0.0557	0.0555			
PFHpA_2	4.55	1.00	21824.16	M	0.0557	0.0555	0	50	
PFHxS	4.55	1.00	124485.31	M	0.3693	0.3510			
PFHxS_2	4.55	1.00	43693.97	A	0.3693	0.3510	-5	50	
6:2-FTS	4.90	1.00	55151.09	A	0.6625	0.6544			
6:2-FTS_2	4.91	1.00	36092.41	A	0.6625	0.6544	-1	50	
PFHpS	4.91	1.08	131029.41	A	0.3915	0.4044			
PFHpS_2	4.91	1.08	52990.65	A	0.3915	0.4044	3	50	
PFOA	4.92	1.00	408992.65	A	0.0573	0.0570			
PFOA_2	4.92	1.00	23307.23	A	0.0573	0.0570	-1	50	
PFOS	5.24	1.00	137181.43	M	0.2960	0.3006			
PFOS_2	5.24	1.00	41235.40	M	0.2960	0.3006	2	50	
PFNA	5.26	1.00	376585.83	A	0.0201	0.0177			
PFNA_2	5.26	1.00	6676.44	A	0.0201	0.0177	-12	50	
PFNS	5.54	1.06	94448.57	A	0.4794	0.4627			
PFNS_2	5.54	1.06	43699.58	A	0.4794	0.4627	-3	50	
PFDA	5.56	1.00	356261.03	A	0.0075	0.0064			
PFDA_2	5.56	1.00	2278.50	M	0.0075	0.0064	-15	50	
8:2-FTS	5.56	1.00	52676.08	A	0.5380	0.6399			
8:2-FTS_2	5.56	1.00	33705.68	A	0.5380	0.6399	19	50	
NMeFOSAA	5.70	1.00	60912.55	M	0.2305	0.2716			
NMeFOSAA_2	5.70	1.00	16546.59	M	0.2305	0.2716	18	50	
PFDS	5.79	1.10	79486.48	A	0.5356	0.5145			
PFDS_2	5.79	1.10	40894.63	A	0.5356	0.5145	-4	50	
PFUnDA	5.82	1.00	368116.78	A	0.0038	0.0042			
PFUnDA_2	5.81	1.00	1560.66	A	0.0038	0.0042	11	50	
NEtFOSAA	5.83	1.00	56175.38	M	0.7356	0.7568			
NEtFOSAA_2	5.83	1.00	42516.13	M	0.7356	0.7568	3	50	
PFDoDA	6.05	1.00	480438.66	A	0.0130	0.0114			
PFDoDA_2	6.05	1.00	5496.89	A	0.0130	0.0114	-12	50	
10:2-FTS	6.06	1.09	53244.09	A	0.6989	0.8103			
10:2-FTS_2	6.06	1.09	43141.45	A	0.6989	0.8103	16	50	
PFTrDA	6.25	1.03	453601.44	A	0.0090	0.0080			
PFTrDA_2	6.24	1.03	3606.85	M	0.0090	0.0080	-12	50	
PFTeDA	6.43	1.00	333159.05	A	0.0056	0.0056			
PFTeDA_2	6.43	1.00	1878.34	A	0.0056	0.0056	1	50	
PFHxDA	6.73	1.05	160272.72	A	0.0646	0.0649			
PFHxDA_2	6.73	1.05	10399.04	M	0.0646	0.0649	0	50	
PFODA	6.99	1.09	137372.78	A	0.0264	0.0264			
PFODA_2	6.99	1.09	3621.96	A	0.0264	0.0264	0	50	

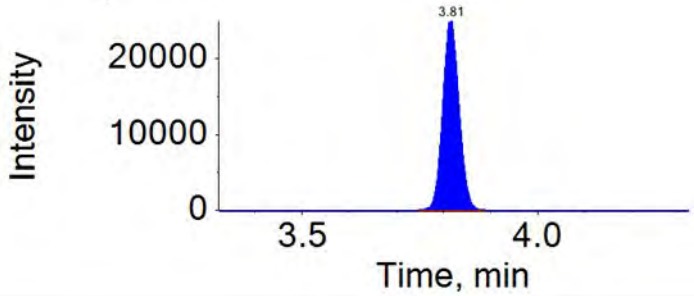
APPROVED
By MCD at 5:01 pm, 11/28/18

REVIEWED
By HMK at 12:22 pm, 11/29/18

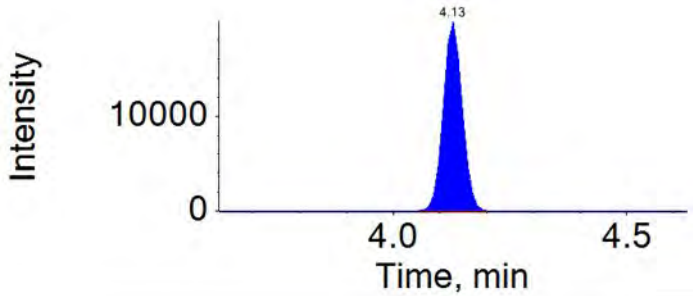
Component: PFBS
Primary Mass: 299.0 / 80.0



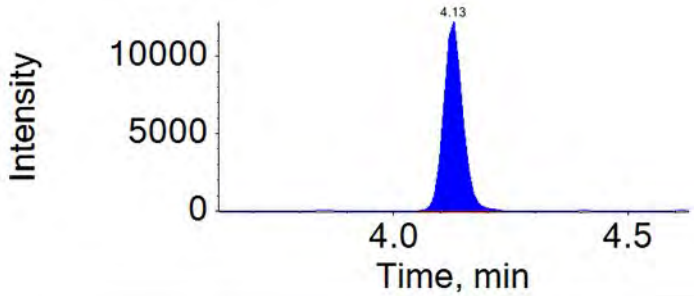
Component: PFBS_2
Secondary Mass: 299.0 / 99.0



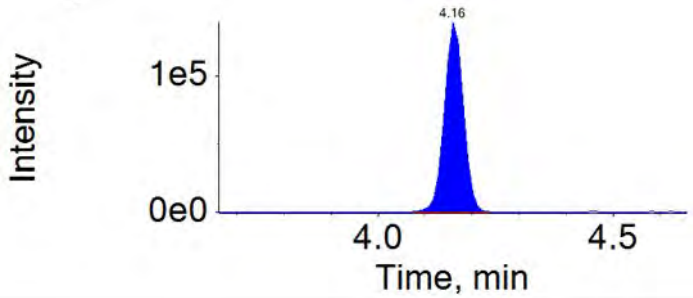
Component: 4:2-FTS
Primary Mass: 327.0 / 307.0



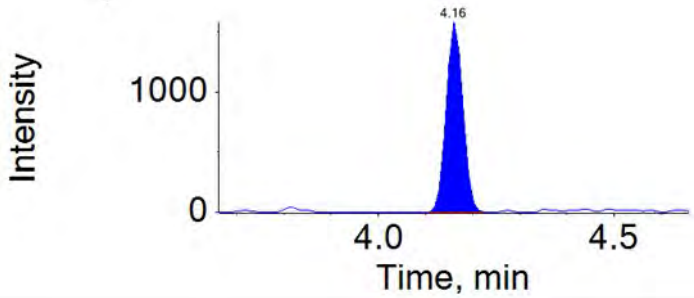
Component: 4:2-FTS_2
Secondary Mass: 327.0 / 81.0



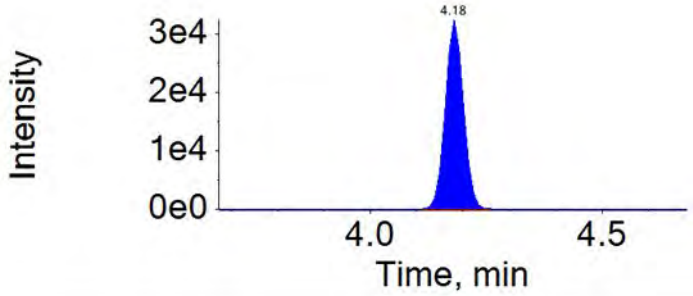
Component: PFHxA
Primary Mass: 313.0 / 269.0



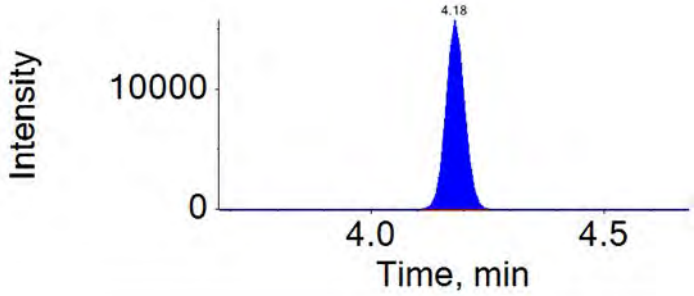
Component: PFHxA_2
Secondary Mass: 313.0 / 119.0



Component: PFPeS
Primary Mass: 349.0 / 80.0



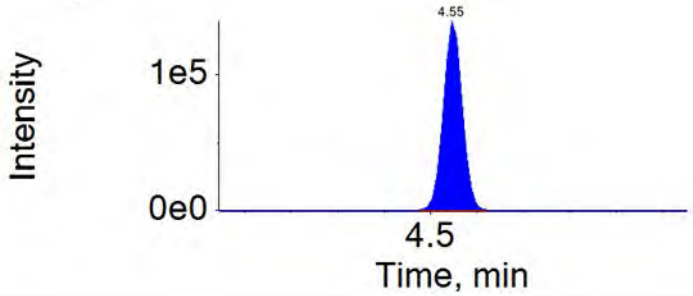
Component: PFPeS_2
Secondary Mass: 349.0 / 99.0



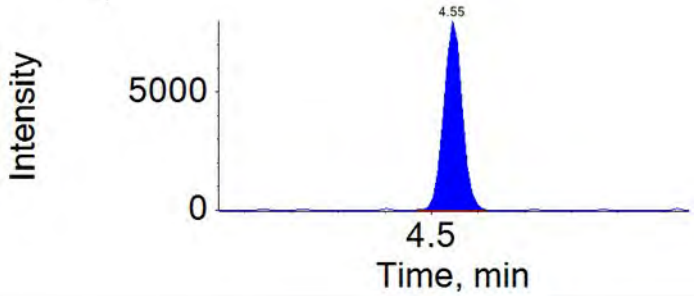
APPROVED
By MCD at 5:01 pm, 11/28/18

REVIEWED
By HMK at 12:22 pm, 11/29/18

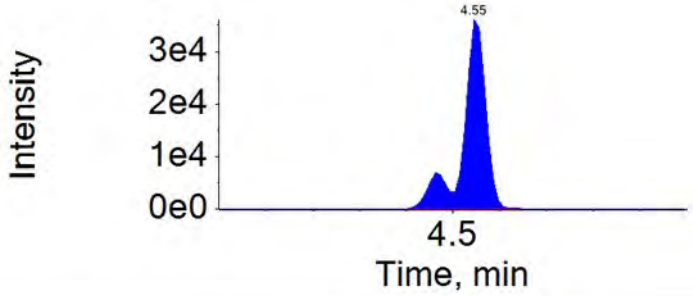
Component: PFHpA
Primary Mass: 363.0 / 319.0



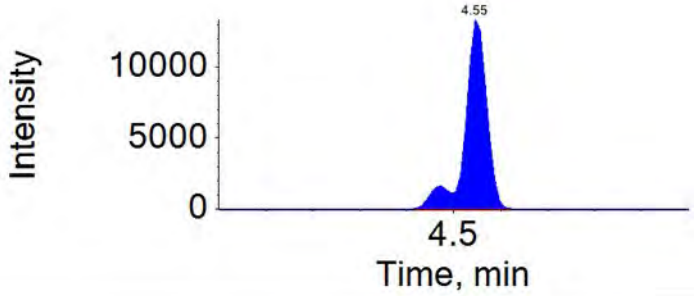
Component: PFHpA_2
Secondary Mass: 363.0 / 169.0



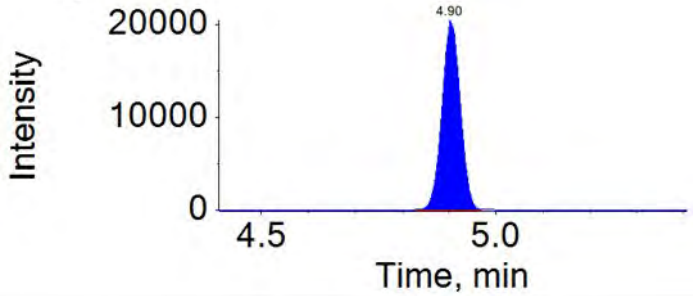
Component: PFHxS
Primary Mass: 399.0 / 80.0



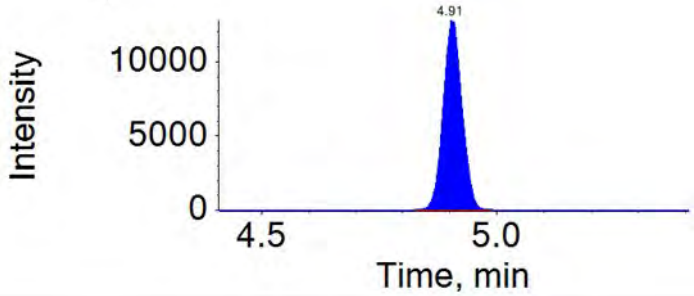
Component: PFHxS_2
Secondary Mass: 399.0 / 99.0



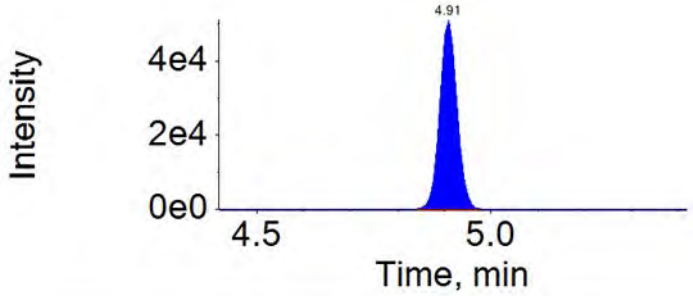
Component: 6:2-FTS
Primary Mass: 427.0 / 407.0



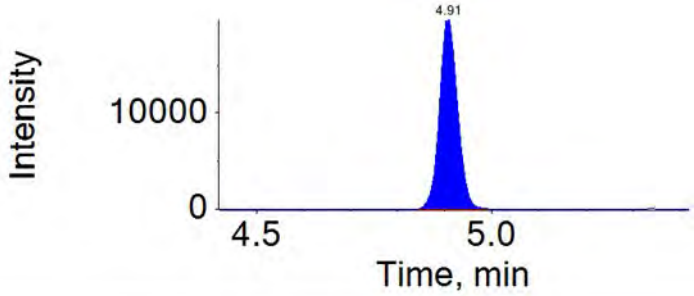
Component: 6:2-FTS_2
Secondary Mass: 427.0 / 81.0



Component: PFHpS
Primary Mass: 449.0 / 80.0



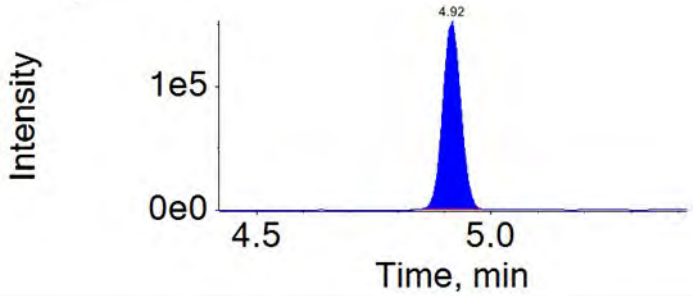
Component: PFHpS_2
Secondary Mass: 449.0 / 99.0



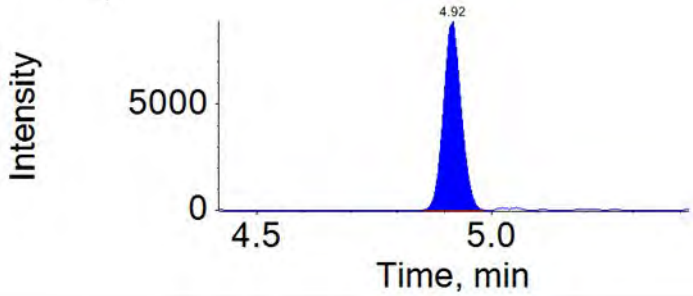
APPROVED
By MCD at 5:01 pm, 11/28/18

REVIEWED
By HMK at 12:22 pm, 11/29/18

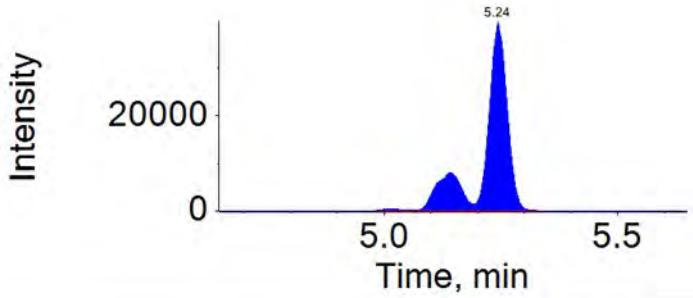
Component: PFOA
Primary Mass: 413.0 / 369.0



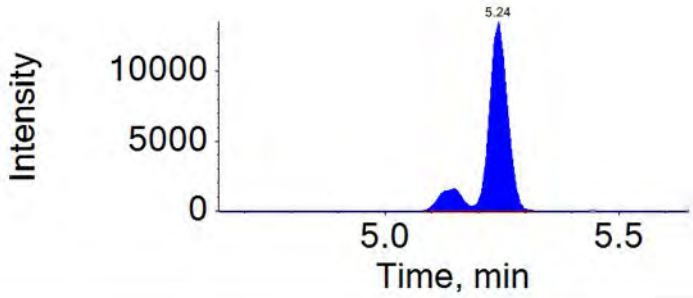
Component: PFOA_2
Secondary Mass: 413.0 / 169.0



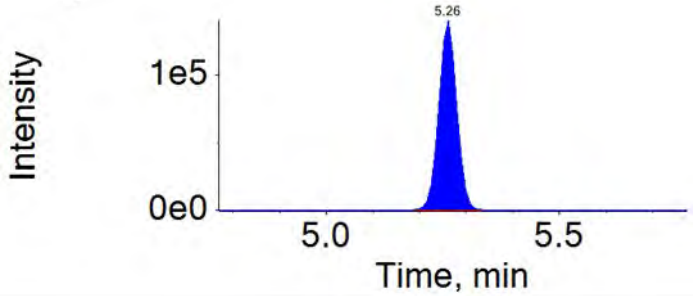
Component: PFOS
Primary Mass: 499.0 / 80.0



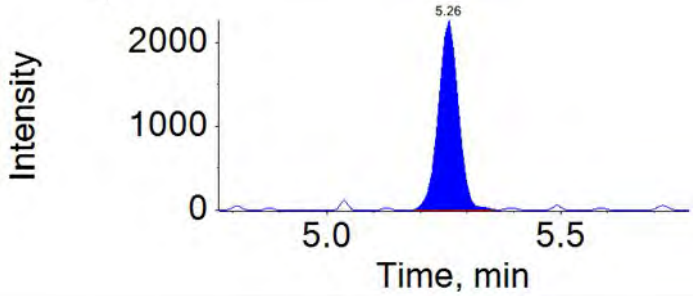
Component: PFOS_2
Secondary Mass: 499.0 / 99.0



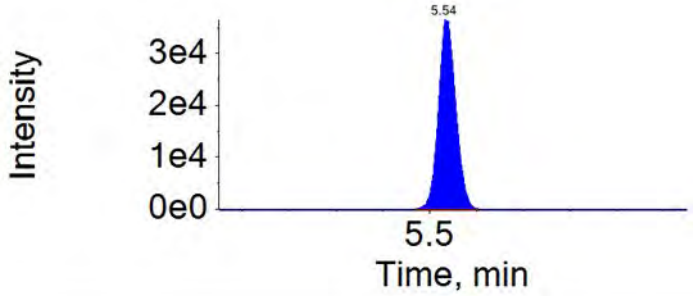
Component: PFNA
Primary Mass: 463.0 / 419.0



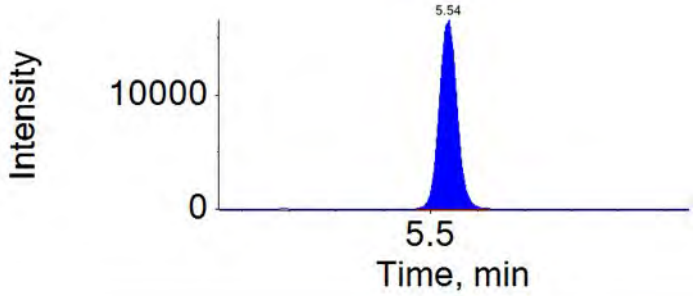
Component: PFNA_2
Secondary Mass: 463.0 / 169.0



Component: PFNS
Primary Mass: 549.0 / 80.0



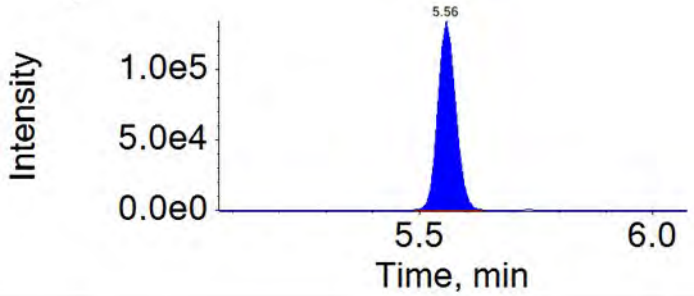
Component: PFNS_2
Secondary Mass: 549.0 / 99.0



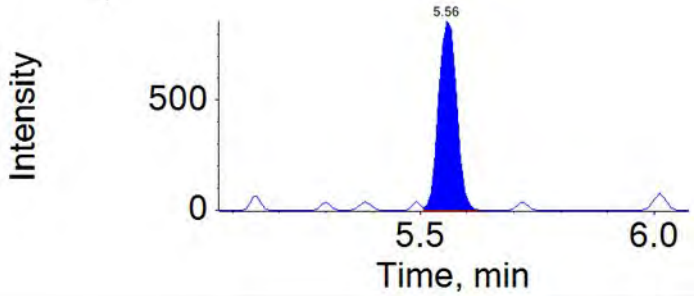
APPROVED
By MCD at 5:01 pm, 11/28/18

REVIEWED
By HMK at 12:22 pm, 11/29/18

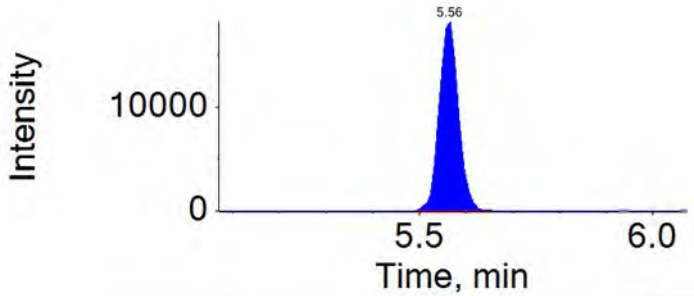
Component: PFDA
Primary Mass: 513.0 / 469.0



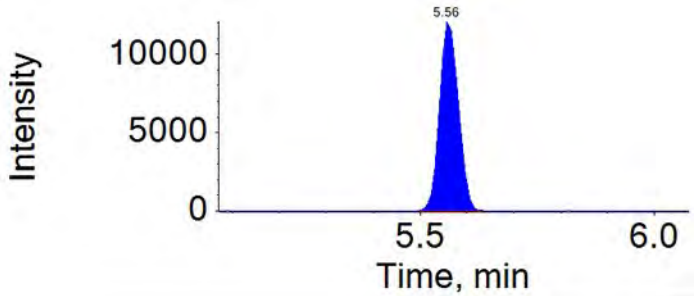
Component: PFDA_2
Secondary Mass: 513.0 / 169.0



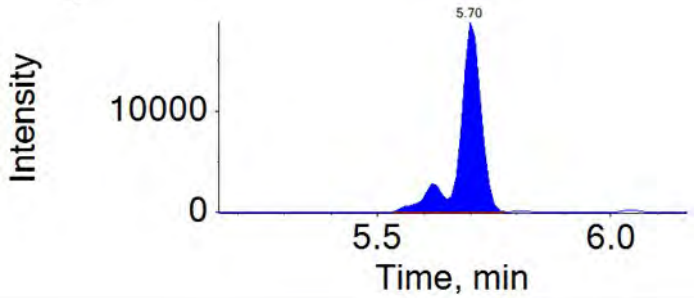
Component: 8:2-FTS
Primary Mass: 527.0 / 507.0



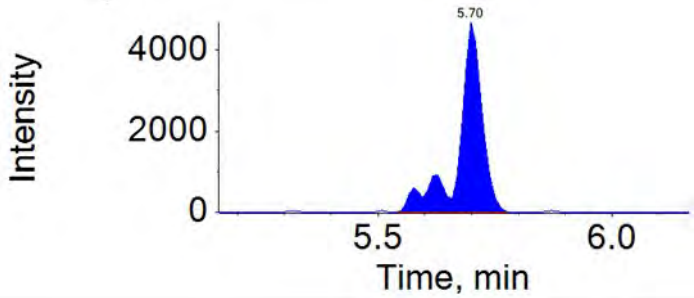
Component: 8:2-FTS_2
Secondary Mass: 527.0 / 81.0



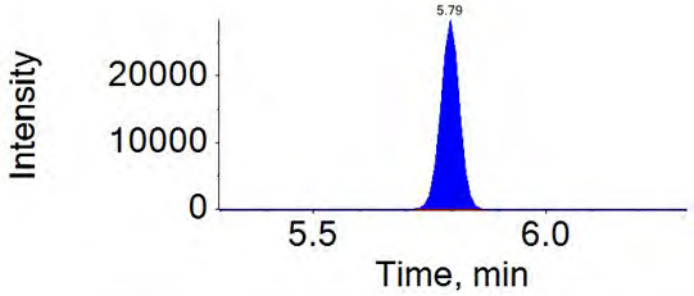
Component: NMeFOSAA
Primary Mass: 570.0 / 419.0



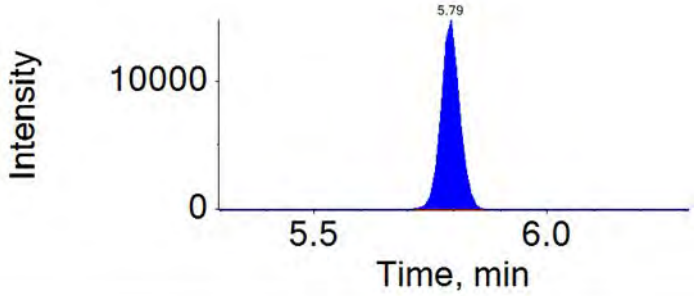
Component: NMeFOSAA_2
Secondary Mass: 570.0 / 483.0



Component: PFDS
Primary Mass: 599.0 / 80.0



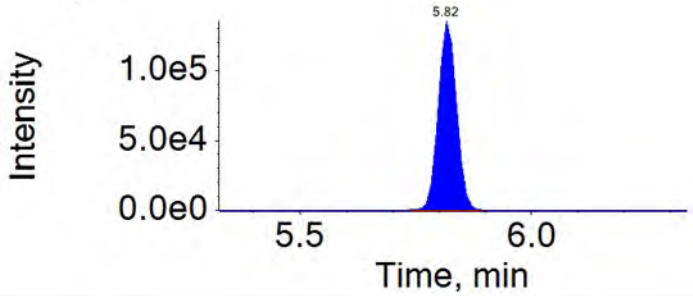
Component: PFDS_2
Secondary Mass: 599.0 / 99.0



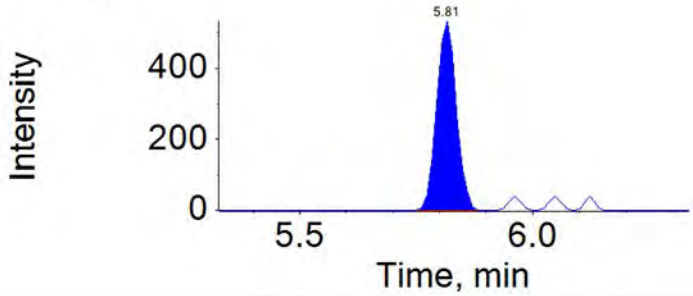
APPROVED
By MCD at 5:01 pm, 11/28/18

REVIEWED
By HMK at 12:22 pm, 11/29/18

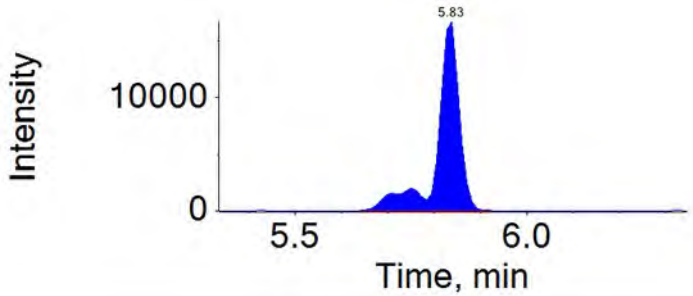
Component: PFUnDA
Primary Mass: 563.0 / 519.0



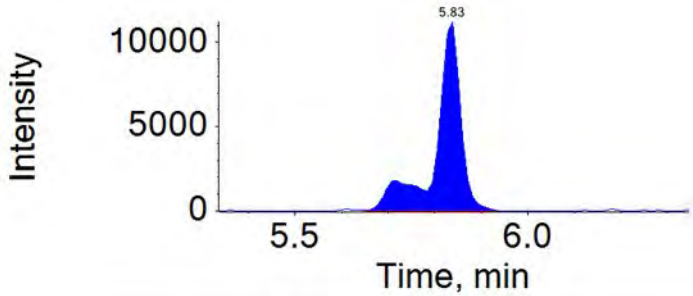
Component: PFUnDA_2
Secondary Mass: 563.0 / 169.0



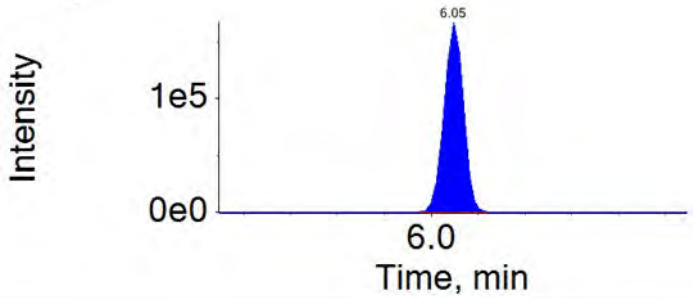
Component: NEtFOSAA
Primary Mass: 584.0 / 419.0



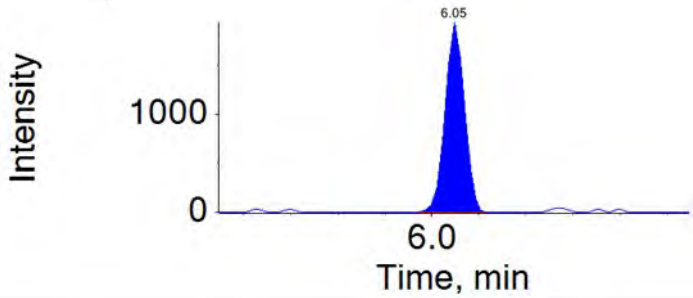
Component: NEtFOSAA_2
Secondary Mass: 584.0 / 526.0



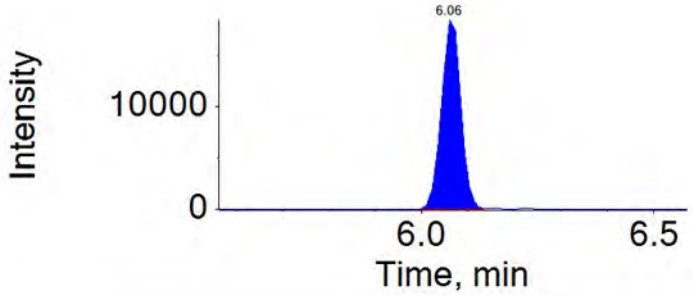
Component: PFDoDA
Primary Mass: 613.0 / 569.0



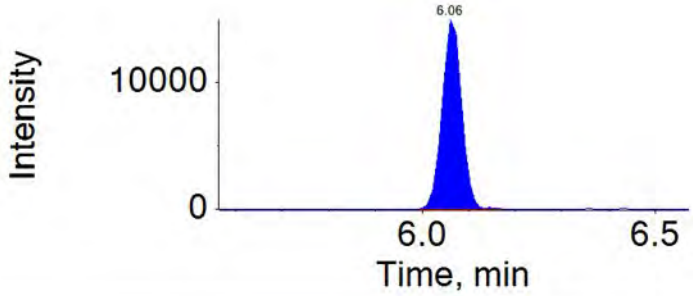
Component: PFDoDA_2
Secondary Mass: 613.0 / 169.0



Component: 10:2-FTS
Primary Mass: 627.0 / 607.0



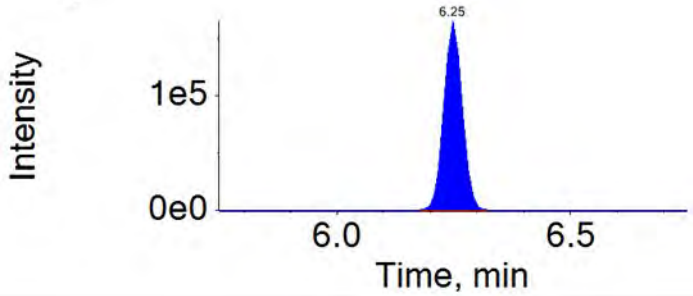
Component: 10:2-FTS_2
Secondary Mass: 627.0 / 81.0



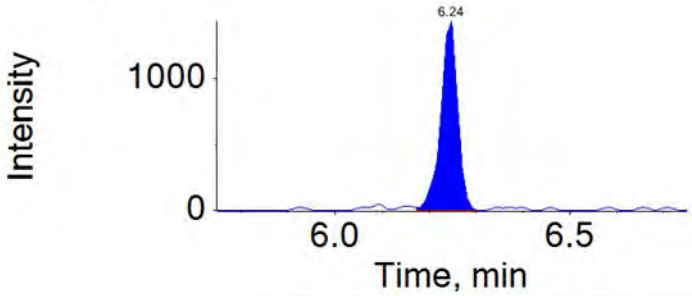
APPROVED
By MCD at 5:01 pm, 11/28/18

REVIEWED
By HMK at 12:22 pm, 11/29/18

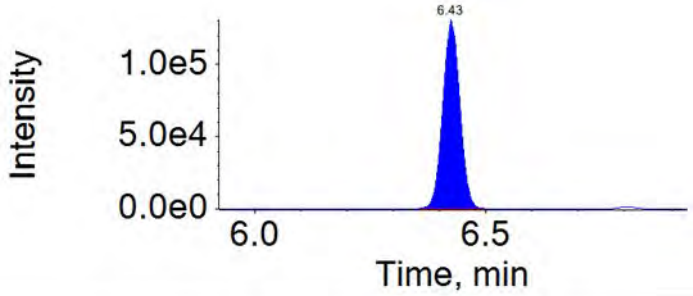
Component: PFTrDA
Primary Mass: 663.0 / 619.0



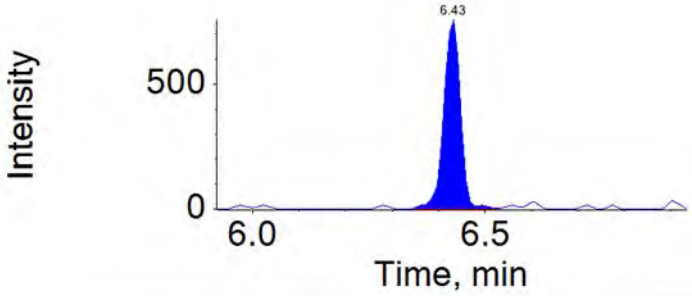
Component: PFTrDA_2
Secondary Mass: 663.0 / 169.0



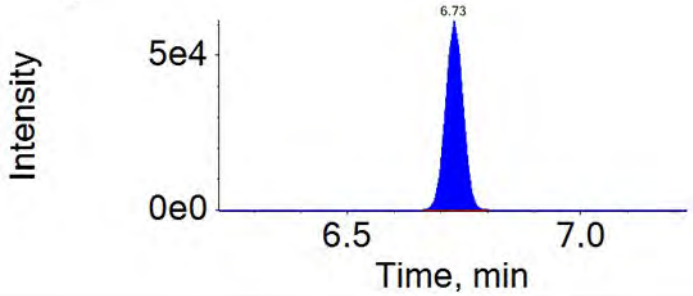
Component: PFTeDA
Primary Mass: 713.0 / 669.0



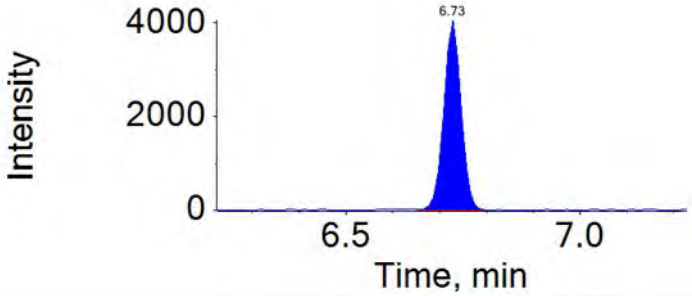
Component: PFTeDA_2
Secondary Mass: 713.0 / 169.0



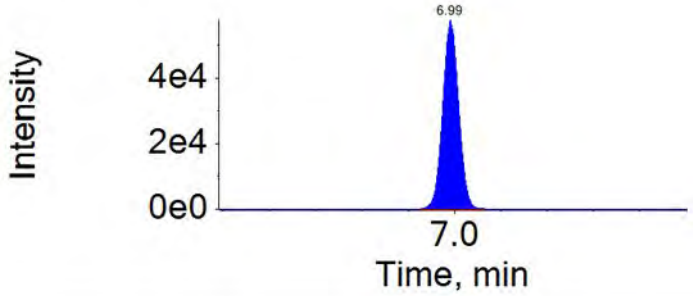
Component: PFHxDA
Primary Mass: 813.0 / 769.0



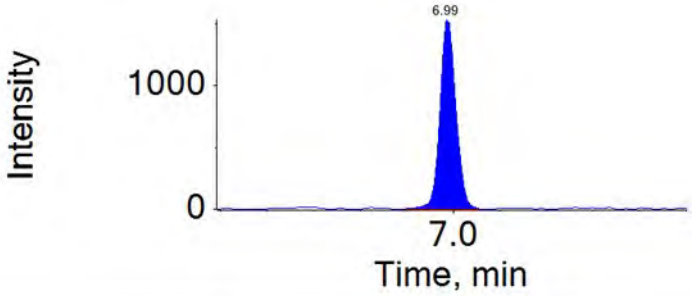
Component: PFHxDA_2
Secondary Mass: 813.0 / 169.0



Component: PFODA
Primary Mass: 913.0 / 869.0



Component: PFODA_2
Secondary Mass: 913.0 / 169.0



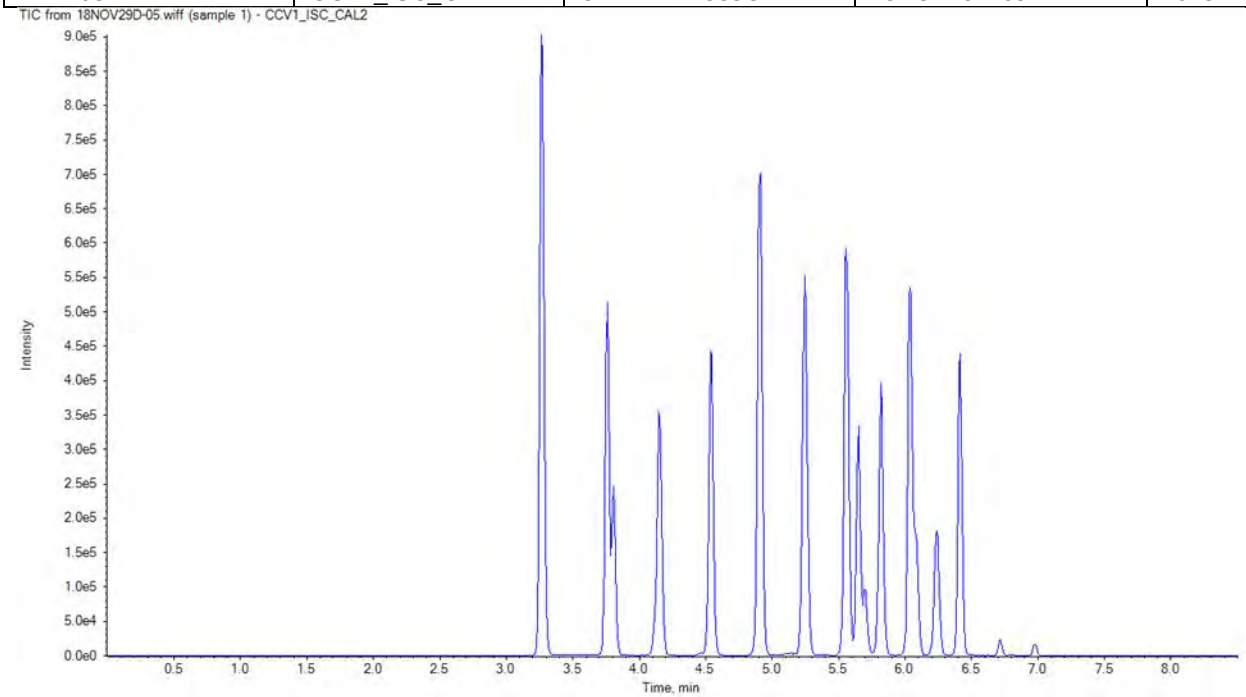
APPROVED
By MCD at 5:01 pm, 11/28/18

REVIEWED
By HMK at 12:22 pm, 11/29/18

Instrument Sensitivity Check/ Continuing Calibration Verfication

ICAL Name: 18NOV28DCAL **Result Table:** 18NOV29DCCV1-5 11/29/2018 7:56:19 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Instrument Name:	Sample Name:	Sample ID:	Sample File:	Acquisition Date:
LM27631	CCV1_ISC_CAL2	CALBRN21833C	18NOV29D-05.wiff	2018-11-29T10:33:38



Injection Standard Area Reference File: 18NOV28DCAL-08

Injection Standard Name	Inj Std Conc	Injection Std Peak Area	Reference Injection Standard Area	Injection Std %Diff	Injection Std %Diff Limit	Injection Std %Diff OOS
13C3-PFBA	5.0	906425.4	887248.9	2	50	
13C2-PFOA	5.0	495984.0	498501.6	-1	50	
13C4-PFOS	4.8	296261.8	283214.2	5	50	
13C2-PFDA	5.0	451203.0	441790.6	2	50	

APPROVED
By MCD at 8:06 pm, 11/29/18

REVIEWED
By HMK at 9:40 am, 12/5/18

Instrument Sensitivity Check/ Continuing Calibration Verfication

ICAL Name: 18NOV28DCAL **Result Table:** 18NOV29DCCV1-5 11/29/2018 7:56:19 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Instrument Name:	Sample Name:	Sample ID:	Sample File:	Acquisition Date:
LM27631	CCV1_ISC_CAL2	CALBRN21833C	18NOV29D-05.wiff	2018-11-29T10:33:38

Analyte Name	Analyte Area	Sc /pk	Ext Std Name	Ext Std Area	Ext Std con	Area Ratio	RT (min)	RRT	Spec Amt	Calc Amt	% Diff	% Diff Lim	% Diff OOS
PFBA	110816.1	10	13C4-PFBA	1032944.8	5.0	0.107	3.26	1.000	0.600	0.588	-2	30	
PFPeA	102438.9	11	13C5-PFPeA	975653.2	5.0	0.105	3.76	1.000	0.600	0.515	-14	30	
PFBS	43167.2	11	13C3-PFBS	442664.0	4.7	0.098	3.81	1.000	0.531	0.473	-11	30	
4:2-FTS	12514.2	11	13C2-4:2-FTS	69056.9	4.7	0.181	4.12	1.000	0.560	0.485	-13	30	
PFHxA	100978.6	11	13C5-PFHxA	694772.3	5.0	0.145	4.15	1.000	0.600	0.583	-3	30	
PFPeS	24883.7	11	13C3-PFBS	442664.0	4.7	0.056	4.17	1.100	0.563	0.569	1	30	
PFHpA	99917.2	12	13C4-PFHpA	548364.3	5.0	0.182	4.54	1.000	0.600	0.562	-6	30	
PFHxS	34610.4	18	13C3-PFHxS	337158.7	4.7	0.103	4.54	1.000	0.547	0.481	-12	30	
6:2-FTS	14994.7	10	13C2-6:2-FTS	61226.3	4.8	0.245	4.90	1.000	0.569	0.639	12	30	
PFHpS	32932.0	11	13C3-PFHxS	337158.7	4.7	0.098	4.90	1.080	0.571	0.487	-15	30	
PFOA	107677.1	11	13C8-PFOA	1050891.3	5.0	0.102	4.91	1.000	0.600	0.529	-12	30	
PFOS	39254.5	21	13C8-PFOS	325457.1	4.8	0.121	5.24	1.000	0.555	0.506	-9	30	
PFNA	93355.4	12	13C9-PFNA	645112.4	5.0	0.145	5.25	1.000	0.600	0.555	-8	30	
PFNS	23416.1	11	13C8-PFOS	325457.1	4.8	0.072	5.54	1.060	0.576	0.454	-21	30	
PFDA	83849.1	11	13C6-PFDA	824275.9	5.0	0.102	5.56	1.000	0.600	0.576	-4	30	
8:2-FTS	15129.8	10	13C2-8:2-FTS	56119.6	4.8	0.270	5.56	1.000	0.575	0.508	-12	30	
PFOSA	69416.0	11	13C8-PFOSA	658157.0	5.0	0.105	5.65	1.000	0.600	0.534	-11	30	
NMeFOSAA	16285.3	17	d3-NMeFOSAA	192349.4	5.0	0.085	5.70	1.000	0.600	0.540	-10	30	
PFDS	22930.4	11	13C8-PFOS	325457.1	4.8	0.070	5.79	1.110	0.578	0.559	-3	30	
PFUnDA	94649.2	11	13C7-PFUnDA	586091.6	5.0	0.161	5.82	1.000	0.600	0.577	-4	30	
NEtFOSAA	15976.2	22	d5-NEtFOSAA	148667.1	5.0	0.107	5.83	1.000	0.600	0.523	-13	30	
PFDoDA	124243.3	12	13C2-PFDoDA	1129756.8	5.0	0.110	6.04	1.000	0.600	0.602	0	30	
10:2-FTS	14919.7	12	13C2-8:2-FTS	56119.6	4.8	0.266	6.05	1.090	0.578	0.586	1	30	
NMePFOSAE	36174.1	11	d7-NMePFOSAE	257961.3	5.0	0.140	6.09	1.000	0.600	0.590	-2	30	
NMePFOSA	8301.9	12	d3-NMePFOSA	85320.8	5.0	0.097	6.10	1.000	0.600	0.516	-14	30	
PFDoS	11172.3	11	13C8-PFOS	325457.1	4.8	0.034	6.20	1.180	0.581	0.493	-15	30	
NEtPFOSAE	36969.5	11	d9-NEtPFOSAE	229198.1	5.0	0.161	6.25	1.000	0.600	0.580	-3	30	
NEtPFOSA	7677.3	12	d5-NEtPFOSA	69372.1	5.0	0.111	6.26	1.000	0.600	0.496	-17	30	
PFTrDA	122778.8	11	13C2-PFDoDA	1129756.8	5.0	0.109	6.23	1.030	0.600	0.655	9	30	
PFTeDA	89123.1	10	13C2-PFTeDA	840112.8	5.0	0.106	6.41	1.000	0.600	0.601	0	30	
PFHxDA	45160.5	11	13C2-PFTeDA	840112.8	5.0	0.054	6.71	1.050	0.600	0.615	2	30	
PFODA	35571.7	10	13C2-PFTeDA	840112.8	5.0	0.042	6.98	1.090	0.600	0.564	-6	30	

APPROVED
By MCD at 8:06 pm, 11/29/18

REVIEWED
By HMK at 9:40 am, 12/5/18

Instrument Sensitivity Check/
Continuing Calibration Verfication

ICAL Name: 18NOV28DCAL **Result Table:** 18NOV29DCCV1-5 11/29/2018 7:56:19 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

APPROVED
By MCD at 8:06 pm, 11/29/18

REVIEWED
By HMK at 9:40 am, 12/5/18

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LC-MS/MS
DOD Analysis Report

Printed: 11/29/2018 7:59:00 PM
Template: DOD-Sample-18JUN22.docx

ICAL Name: 18NOV28DCAL
QMethod Name: 18AUG20QM
Result Table: 18NOV29DCCV1-5 11/29/2018 7:58:55 PM
Acquisition Method: 18AUG13_3uL.dam

Sample Name:	CCV1_ISC_CAL2			**Data File:**		18NOV29D-05.wiff
Sample ID:	CALBRN21833C			**Acquis Date:**		2018-11-29T10:33:38
Sample Type:	Quality Control			**Instrument:**		LM27631
Vial Position:	4			**Acquis Method:**		18AUG13_3uL.dam
Injection Vol:	3.00			**Result Table:**		18NOV29DCCV1-5
QMethod File:	18AUG20QM			**ICAL Name:**		18NOV28DCAL
Batch Number:	N/A			**Operator:**		MCD7824
Sample Wt.:	1.00000			**Dilution Factor:**		1.00
Sample Vol.:	1.000			**Prep Factor:**		1.000

Injection Standard Peak Table

Injection Standard Area Reference File: 18NOV28DCAL-08

Injection Standard Name	Inj Std Conc	Injection Std Peak Area	Rreference Injection Standard Area	Injection Std %Diff	Injection Std %Diff Limit	Injection Std %Diff OOS
13C3-PFBA	5.0	906425.4	887248.9	2	50	
13C2-PFOA	5.0	495984.0	498501.6	-1	50	
13C4-PFOS	4.8	296261.8	283214.2	5	50	
13C2-PFDA	5.0	451203.0	441790.6	2	50	

Extraction Standard Peak Table

Extraction Standard Name	Ext Std Area	Inj Std Name	Inj Std Area	Area Ratio	Ext Std Conc	Ext Std Result	Ext Std %REC	Ext Std %REC Limit	Ext Std OOS
E13C4-PFBA	1032944.8	13C3-PFBA	906425.4	1.140	5.000	5.084	102	70-130	
E13C5-PFPeA	975653.2	13C3-PFBA	906425.4	1.076	5.000	5.026	101	70-130	
E13C3-PFBS	442664.0	13C3-PFBA	906425.4	0.488	4.650	4.659	100	70-130	
E13C2-4:2-FTS	69056.9	13C2-PFOA	495984.0	0.139	4.670	4.798	103	70-130	
E13C5-PFHxA	694772.3	13C2-PFOA	495984.0	1.401	5.000	5.145	103	70-130	
E13C3-PFHxS	337158.7	13C2-PFOA	495984.0	0.680	4.730	5.328	113	70-130	
E13C4-PFHpA	548364.3	13C2-PFOA	495984.0	1.106	5.000	5.080	102	70-130	
E13C2-6:2-FTS	61226.3	13C2-PFOA	495984.0	0.123	4.750	5.167	109	70-130	
E13C8-PFOA	1050891.3	13C2-PFOA	495984.0	2.119	5.000	5.832	117	70-130	
E13C8-PFOS	325457.1	13C4-PFOS	296261.8	1.099	4.780	4.959	104	70-130	
E13C9-PFNA	645112.4	13C4-PFOS	296261.8	2.178	5.000	4.783	96	70-130	
E13C6-PFDA	824275.9	13C2-PFDA	451203.0	1.827	5.000	5.151	103	70-130	
E13C2-8:2-FTS	56119.6	13C2-PFDA	451203.0	0.124	4.790	5.346	112	70-130	
E13C8-PFOSA	658157.0	13C2-PFDA	451203.0	1.459	5.000	5.352	107	70-130	
Ed3-NMeFOSAA	192349.4	13C2-PFDA	451203.0	0.426	5.000	5.413	108	70-130	
E13C7-PFUnDA	586091.6	13C2-PFDA	451203.0	1.299	5.000	5.490	110	70-130	
Ed5-NEtFOSAA	148667.1	13C2-PFDA	451203.0	0.329	5.000	5.870	117	70-130	
E13C2-PFDoDA	1129756.8	13C2-PFDA	451203.0	2.504	5.000	5.261	105	70-130	
Ed7-NMePFOSAE	257961.3	13C2-PFDA	451203.0	0.572	5.000	4.941	99	70-130	
Ed3-NMePFOSA	85320.8	13C2-PFDA	451203.0	0.189	5.000	5.118	102	70-130	
Ed9-NEtPFOSAE	229198.1	13C2-PFDA	451203.0	0.508	5.000	5.150	103	70-130	
Ed5-NEtPFOSA	69372.1	13C2-PFDA	451203.0	0.154	5.000	5.342	107	70-130	
E13C2-PFTeDA	840112.8	13C2-PFDA	451203.0	1.862	5.000	5.152	103	70-130	

APPROVED
By MCD at 8:06 pm, 11/29/18

REVIEWED
By HMK at 9:40 am, 12/5/18

ICAL Name: 18NOV28DCAL **Result Table:** 18NOV29DCCV1-5 11/29/2018 7:58:55 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

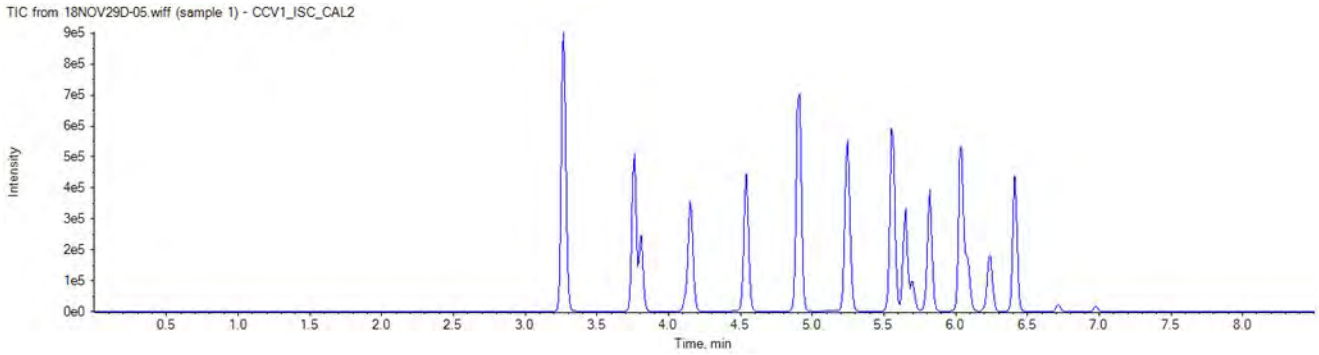
Analyte Quantitation Peak Table

Sample Name: CCV1_ISC_CAL2 **Instrument Name:** LM27631 **File Name:** 18NOV29D-05.wiff

Sample Wt	Sample Vol	Dilution Factor	PrepFactor
1.00000	1.000	1.00	1.000

Analyte Name	RT	RRT	Analyte Area Response	E	Int Typ	ES Name	ES RT	ES Area Response	Area Ratio	Sample Result (ng/g)
PFBA	3.26	1.000	110816.1		A	13C4-PFBA	3.27	1032944.8	0.107	0.588
PFPeA	3.76	1.000	102438.9		A	13C5-PFPeA	3.76	975653.2	0.105	0.515
PFBS	3.81	1.000	43167.2		A	13C3-PFBS	3.81	442664.0	0.098	0.473
4:2-FTS	4.12	1.000	12514.2		A	13C2-4:2-FTS	4.12	69056.9	0.181	0.485
PFHxA	4.15	1.000	100978.6		A	13C5-PFHxA	4.15	694772.3	0.145	0.583
PFPeS	4.17	1.100	24883.7		A	13C3-PFBS	3.81	442664.0	0.056	0.569
PFHpA	4.54	1.000	99917.2		A	13C4-PFHpA	4.54	548364.3	0.182	0.562
PFHxS	4.54	1.000	34610.4		M	13C3-PFHxS	4.54	337158.7	0.103	0.481
6:2-FTS	4.90	1.000	14994.7		A	13C2-6:2-FTS	4.90	61226.3	0.245	0.639
PFHpS	4.90	1.080	32932.0		A	13C3-PFHxS	4.54	337158.7	0.098	0.487
PFOA	4.91	1.000	107677.1		A	13C8-PFOA	4.91	1050891.3	0.102	0.529
PFOS	5.24	1.000	39254.5		M	13C8-PFOS	5.24	325457.1	0.121	0.506
PFNA	5.25	1.000	93355.4		A	13C9-PFNA	5.25	645112.4	0.145	0.555
PFNS	5.54	1.060	23416.1		A	13C8-PFOS	5.24	325457.1	0.072	0.454
PFDA	5.56	1.000	83849.1		A	13C6-PFDA	5.56	824275.9	0.102	0.576
8:2-FTS	5.56	1.000	15129.8		A	13C2-8:2-FTS	5.56	56119.6	0.270	0.508
PFOSA	5.65	1.000	69416.0		A	13C8-PFOSA	5.65	658157.0	0.105	0.534
NMeFOSAA	5.70	1.000	16285.3		M	d3-NMeFOSAA	5.70	192349.4	0.085	0.540
PFDS	5.79	1.110	22930.4		A	13C8-PFOS	5.24	325457.1	0.070	0.559
PFUnDA	5.82	1.000	94649.2		A	13C7-PFUnDA	5.82	586091.6	0.161	0.577
NEtFOSAA	5.83	1.000	15976.2		M	d5-NEtFOSAA	5.83	148667.1	0.107	0.523
PFDoDA	6.04	1.000	124243.3		A	13C2-PFDoDA	6.04	1129756.8	0.110	0.602
10:2-FTS	6.05	1.090	14919.7		A	13C2-8:2-FTS	5.56	56119.6	0.266	0.586
NMePFOSAE	6.09	1.000	36174.1		A	d7-NMePFOSAE	6.08	257961.3	0.140	0.590
NMePFOSA	6.10	1.000	8301.9		A	d3-NMePFOSA	6.09	85320.8	0.097	0.516
PFDoS	6.20	1.180	11172.3		A	13C8-PFOS	5.24	325457.1	0.034	0.493
NEtPFOSAE	6.25	1.000	36969.5		A	d9-NEtPFOSAE	6.23	229198.1	0.161	0.580
NEtPFOSA	6.26	1.000	7677.3		A	d5-NEtPFOSA	6.25	69372.1	0.111	0.496
PFTrDA	6.23	1.030	122778.8		A	13C2-PFDoDA	6.04	1129756.8	0.109	0.655
PFTeDA	6.41	1.000	89123.1		A	13C2-PFTeDA	6.41	840112.8	0.106	0.601
PFHxDA	6.71	1.050	45160.5		A	13C2-PFTeDA	6.41	840112.8	0.054	0.615
PFODA	6.98	1.090	35571.7		A	13C2-PFTeDA	6.41	840112.8	0.042	0.564

Total Ion Chromatogram

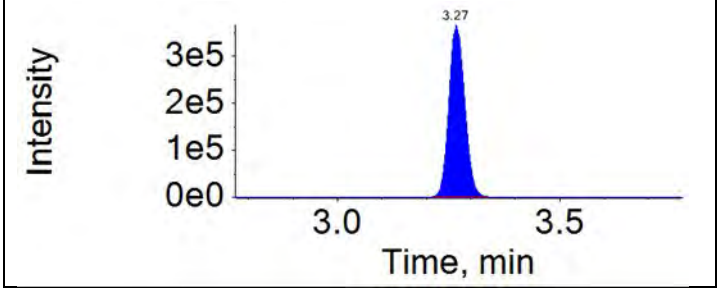


APPROVED
By MCD at 8:06 pm, 11/29/18

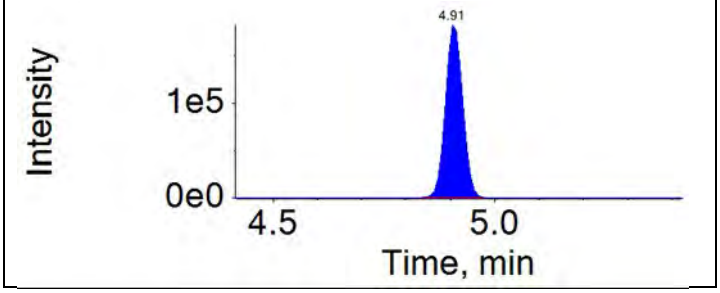
REVIEWED
By HMK at 9:40 am, 12/5/18

ICAL Name: 18NOV28DCAL **Result Table:** 18NOV29DCCV1-5 11/29/2018 7:58:55 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

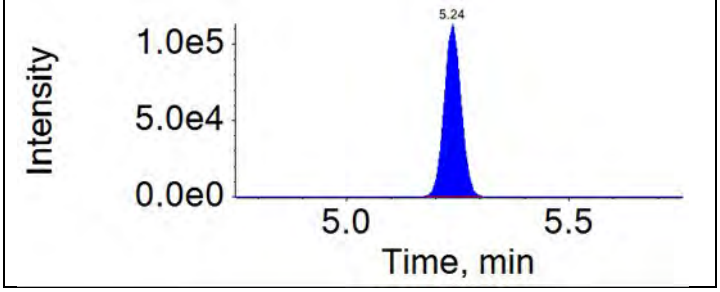
Injection Standard: 13C3-PFBA
216.0 / 172.0



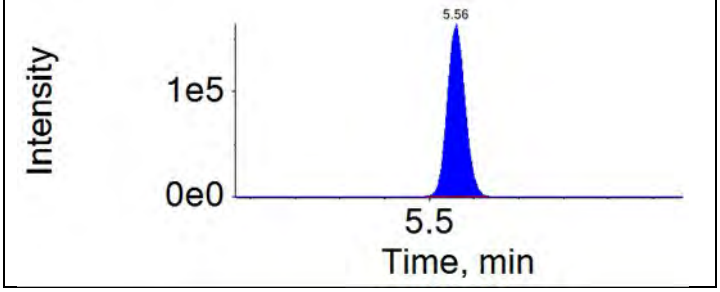
Injection Standard: 13C2-PFOA
415.0 / 370.0



Injection Standard: 13C4-PFOS
503.0 / 80.0



Injection Standard: 13C2-PFDA
515.0 / 470.0

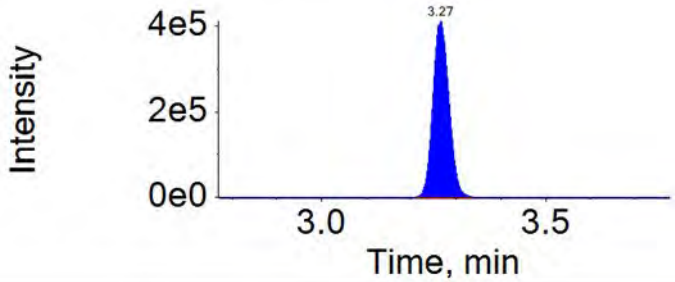


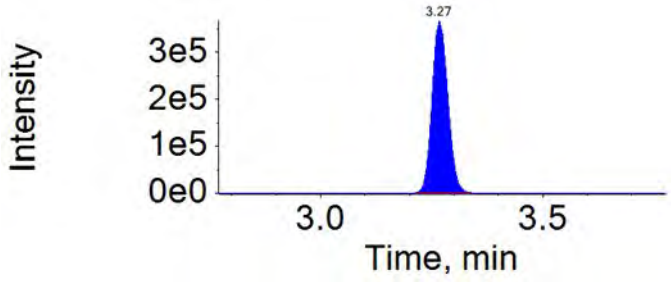
APPROVED
By MCD at 8:06 pm, 11/29/18

REVIEWED
By HMK at 9:40 am, 12/5/18

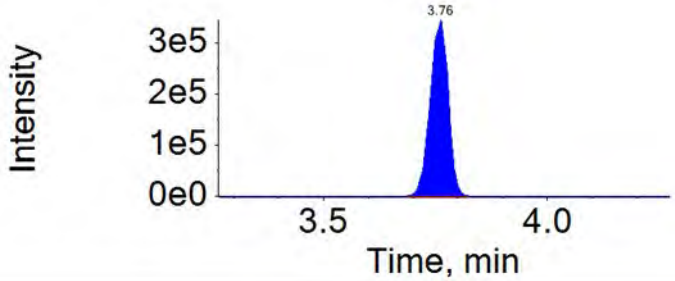
ICAL Name: 18NOV28DCAL **Result Table:** 18NOV29DCCV1-5 11/29/2018 7:58:55 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

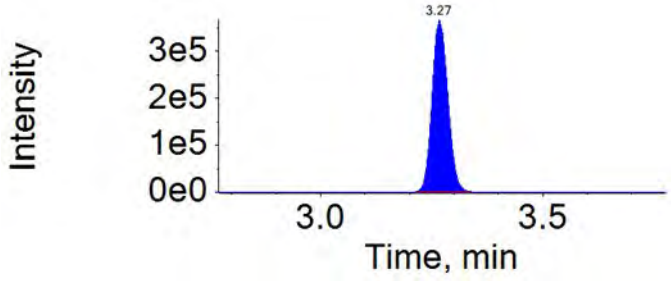
Extraction Standard: E13C4-PFBA	Injection Standard: 13C3-PFBA
217.0 / 172.0	216.0 / 172.0



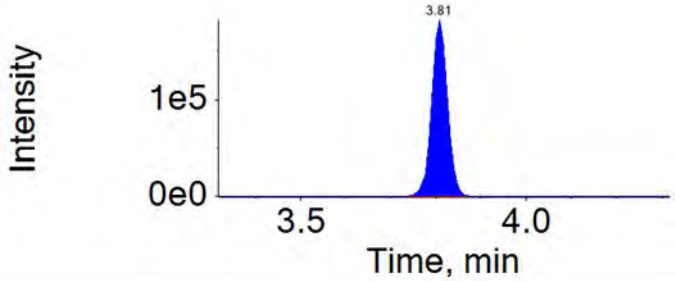


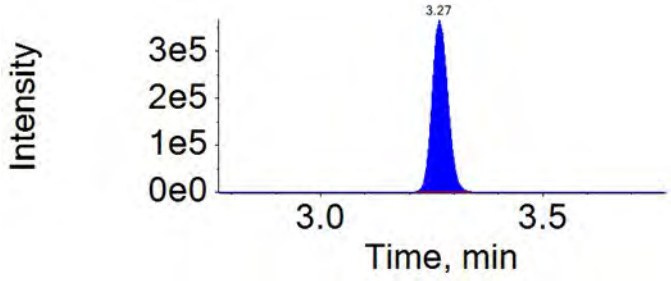
Extraction Standard: E13C5-PFPeA	Injection Standard: 13C3-PFBA
268.0 / 223.0	216.0 / 172.0



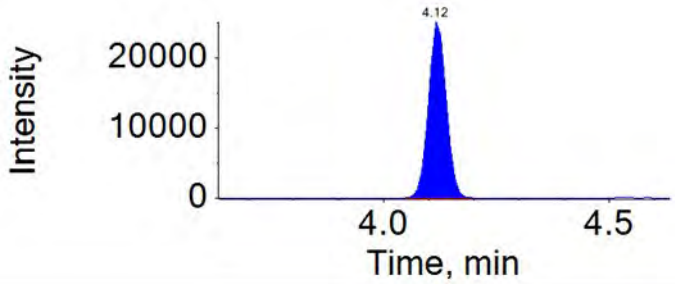


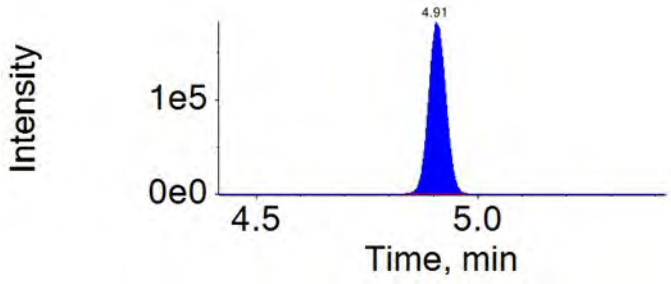
Extraction Standard: E13C3-PFBS	Injection Standard: 13C3-PFBA
302.0 / 80.0	216.0 / 172.0





Extraction Standard: E13C2-4:2-FTS	Injection Standard: 13C2-PFOA
329.0 / 81.0	415.0 / 370.0



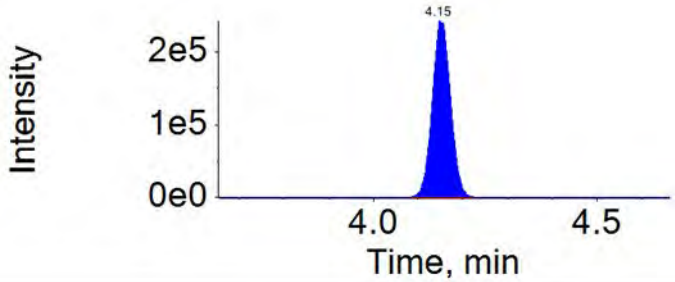


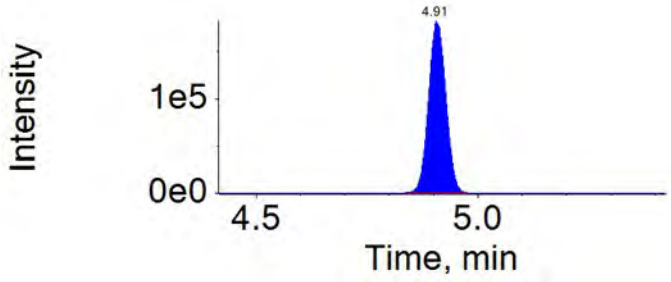
APPROVED
By MCD at 8:06 pm, 11/29/18

REVIEWED
By HMK at 9:40 am, 12/5/18

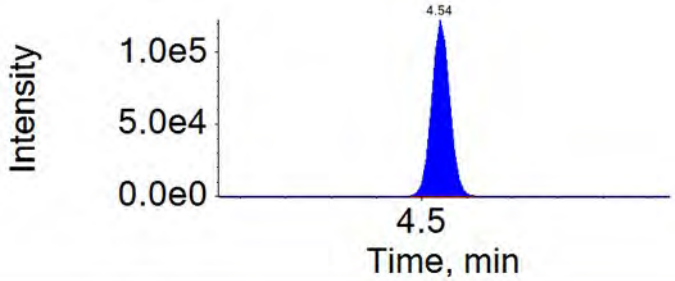
ICAL Name: 18NOV28DCAL **Result Table:** 18NOV29DCCV1-5 11/29/2018 7:58:55 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

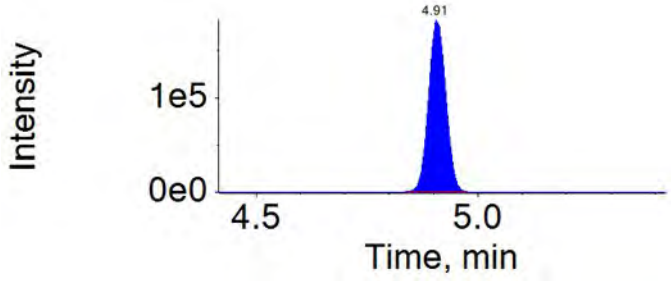
Extraction Standard: E13C5-PFHxA	Injection Standard: 13C2-PFOA
318.0 / 273.0	415.0 / 370.0



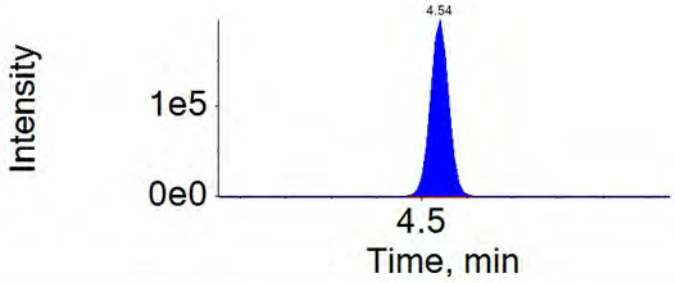


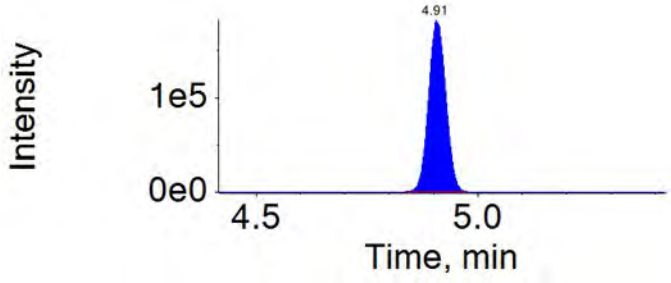
Extraction Standard: E13C3-PFHxS	Injection Standard: 13C2-PFOA
402.0 / 80.0	415.0 / 370.0



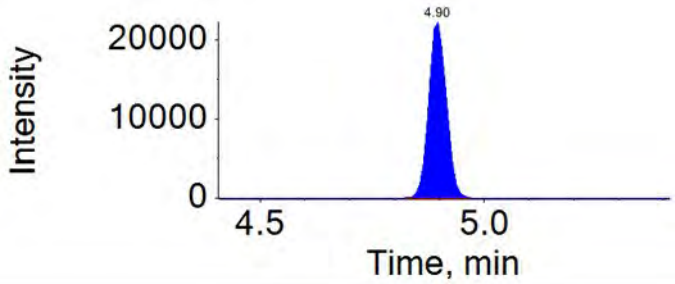


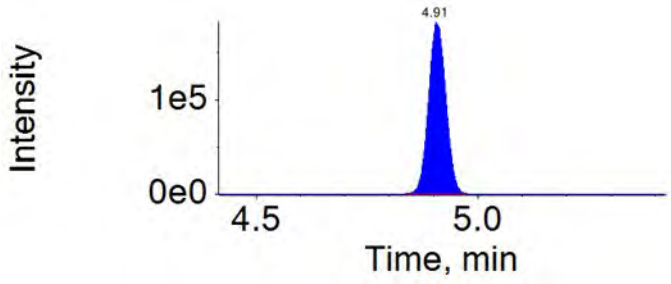
Extraction Standard: E13C4-PFHpA	Injection Standard: 13C2-PFOA
367.0 / 322.0	415.0 / 370.0





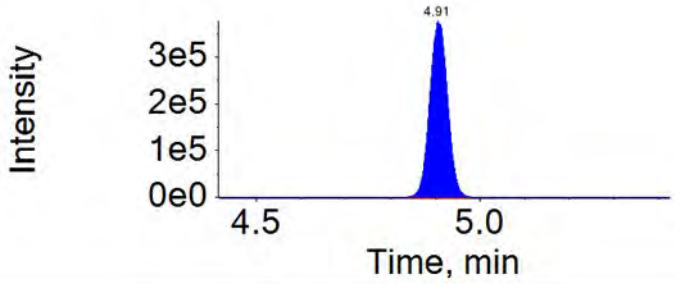
Extraction Standard: E13C2-6:2-FTS	Injection Standard: 13C2-PFOA
429.0 / 81.0	415.0 / 370.0

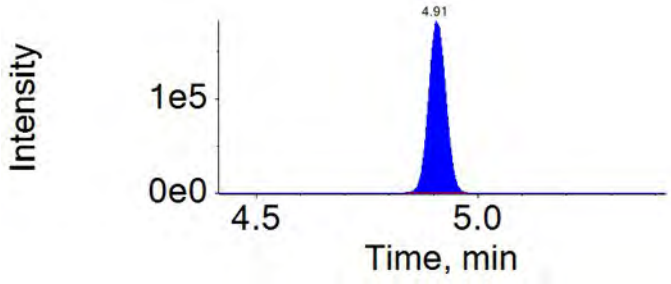




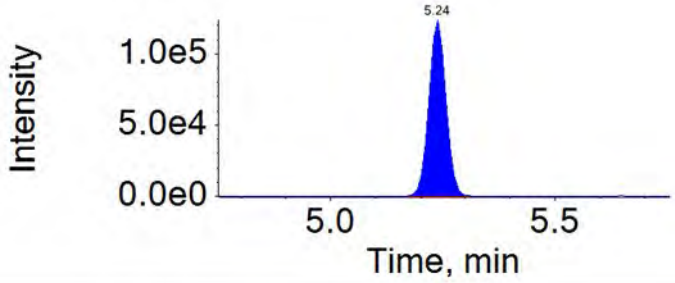
ICAL Name: 18NOV28DCAL **Result Table:** 18NOV29DCCV1-5 11/29/2018 7:58:55 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

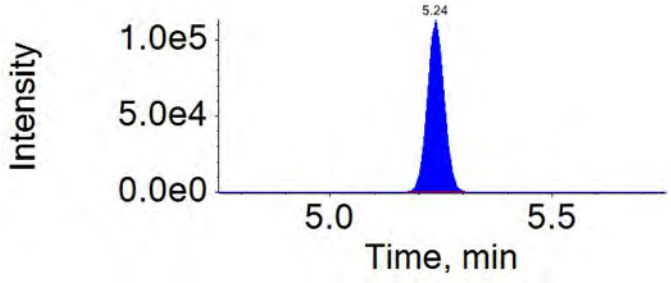
Extraction Standard: E13C8-PFOA	Injection Standard: 13C2-PFOA
421.0 / 376.0	415.0 / 370.0



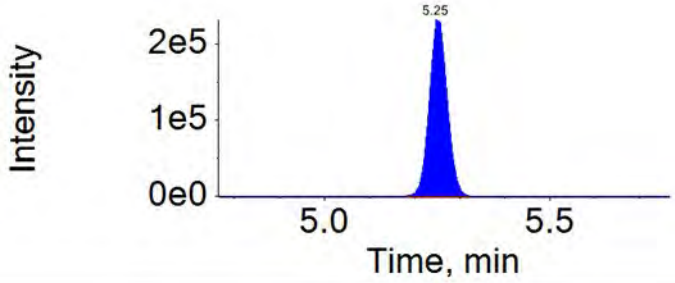


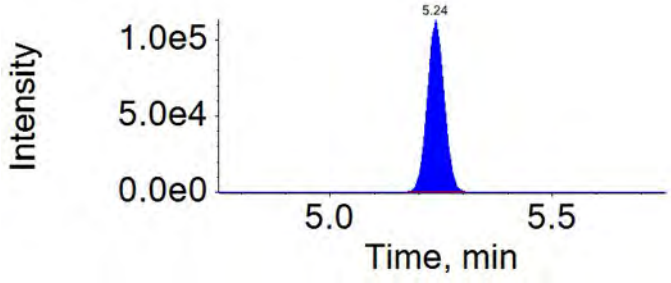
Extraction Standard: E13C8-PFOS	Injection Standard: 13C4-PFOS
507.0 / 80.0	503.0 / 80.0



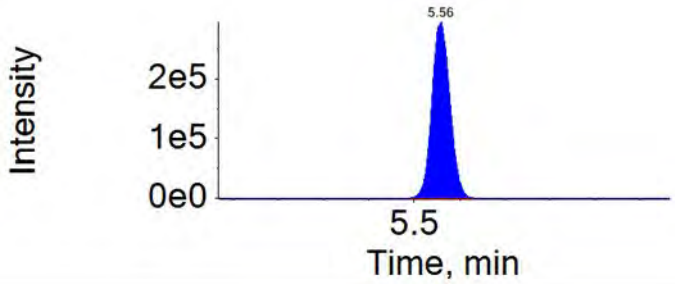


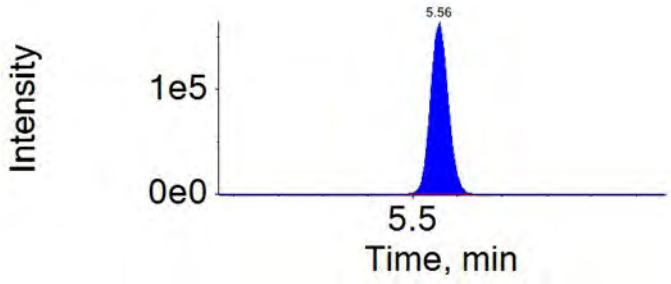
Extraction Standard: E13C9-PFNA	Injection Standard: 13C4-PFOS
472.0 / 427.0	503.0 / 80.0





Extraction Standard: E13C6-PFDA	Injection Standard: 13C2-PFDA
519.0 / 474.0	515.0 / 470.0

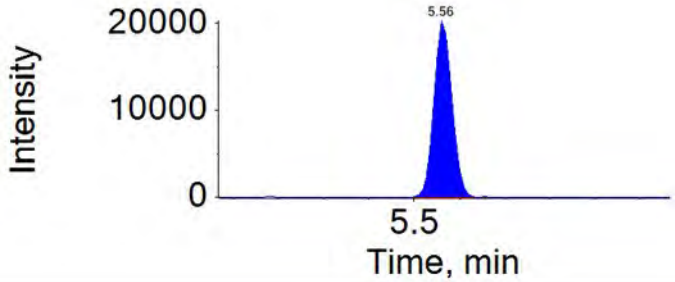




ICAL Name: 18NOV28DCAL **Result Table:** 18NOV29DCCV1-5 11/29/2018 7:58:55 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

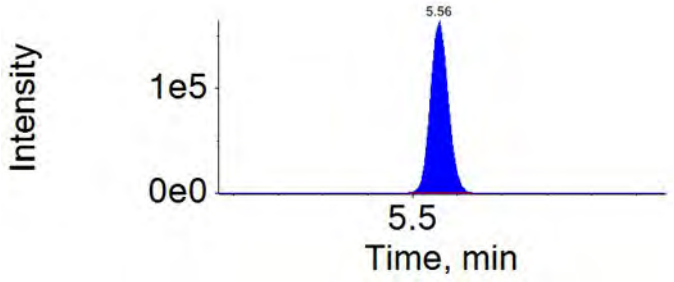
Extraction Standard: E13C2-8:2-FTS

529.0 / 81.0



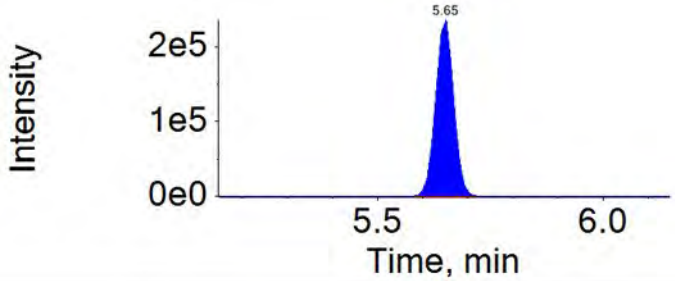
Injection Standard: 13C2-PFDA

515.0 / 470.0



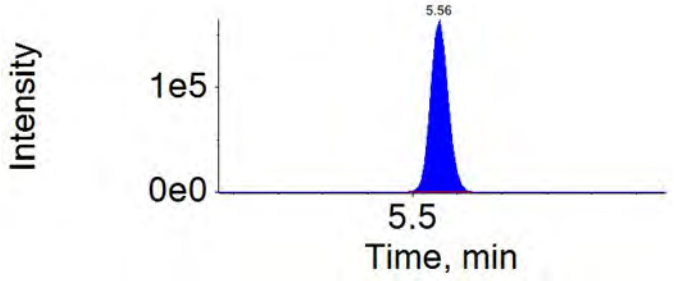
Extraction Standard: E13C8-PFOSA

506.0 / 78.0



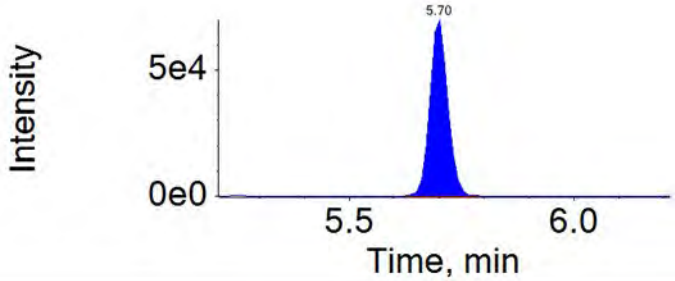
Injection Standard: 13C2-PFDA

515.0 / 470.0



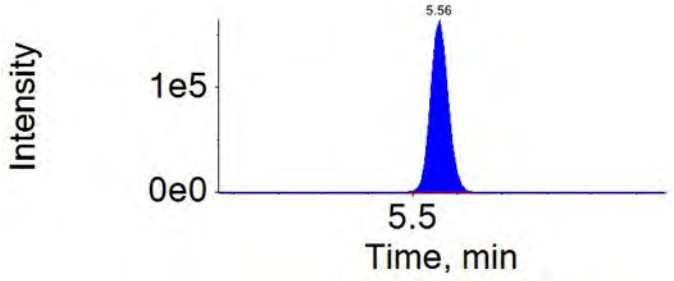
Extraction Standard: Ed3-NMeFOSAA

573.0 / 419.0



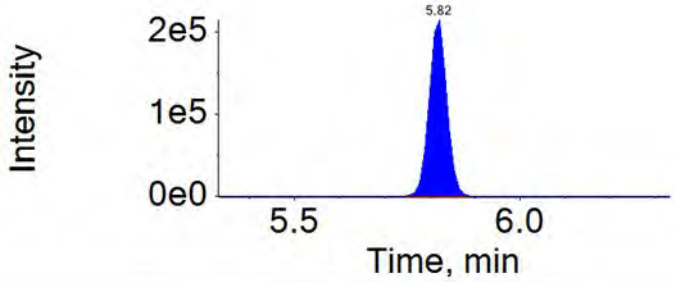
Injection Standard: 13C2-PFDA

515.0 / 470.0



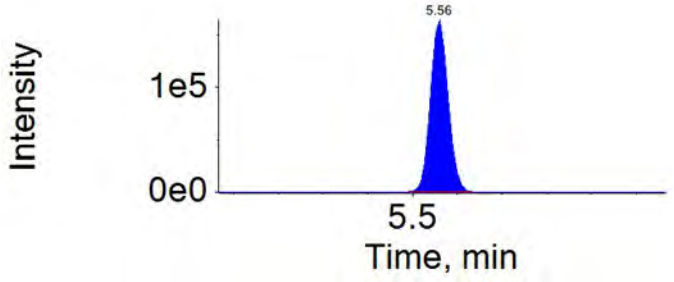
Extraction Standard: E13C7-PFUnDA

570.0 / 525.0



Injection Standard: 13C2-PFDA

515.0 / 470.0

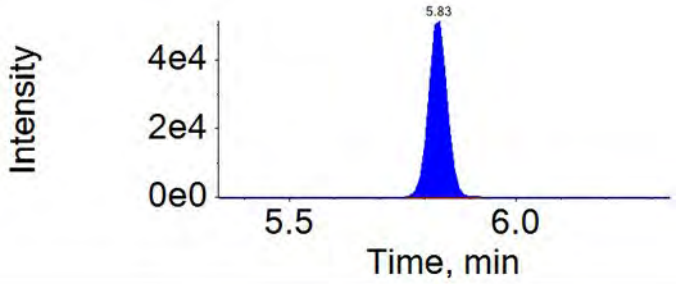


APPROVED
By MCD at 8:06 pm, 11/29/18

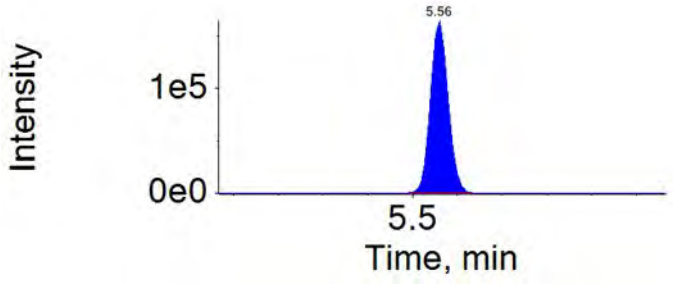
REVIEWED
By HMK at 9:40 am, 12/5/18

ICAL Name: 18NOV28DCAL **Result Table:** 18NOV29DCCV1-5 11/29/2018 7:58:55 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

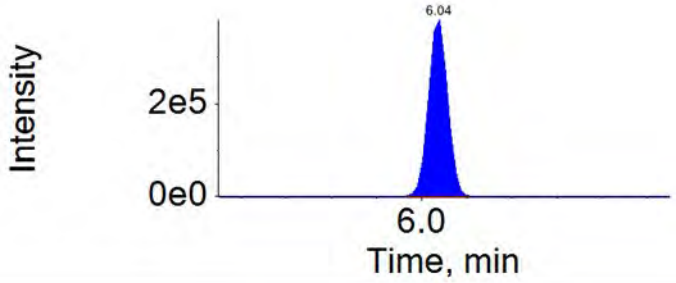
Extraction Standard: Ed5-NEtFOSAA
589.0 / 419.0



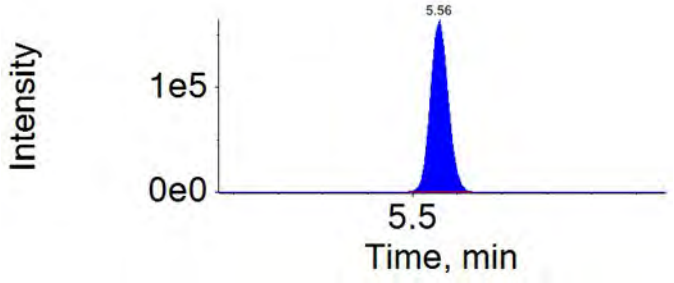
Injection Standard: 13C2-PFDA
515.0 / 470.0



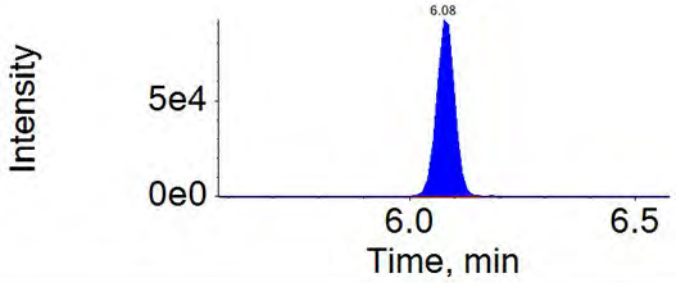
Extraction Standard: E13C2-PFDoDA
615.0 / 570.0



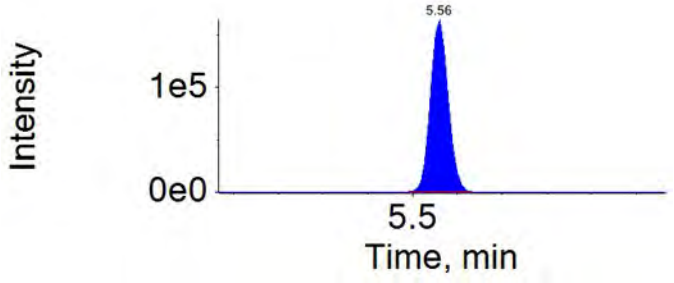
Injection Standard: 13C2-PFDA
515.0 / 470.0



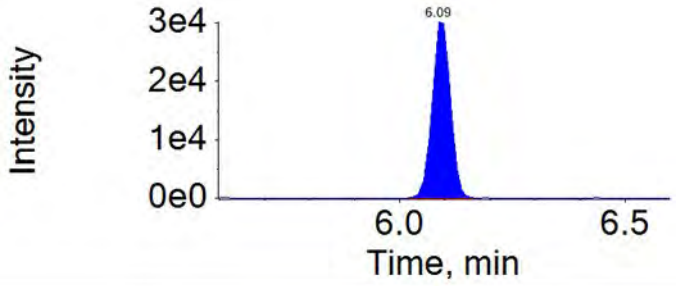
Extraction Standard: Ed7-NMePFOSAE
623.0 / 59.0



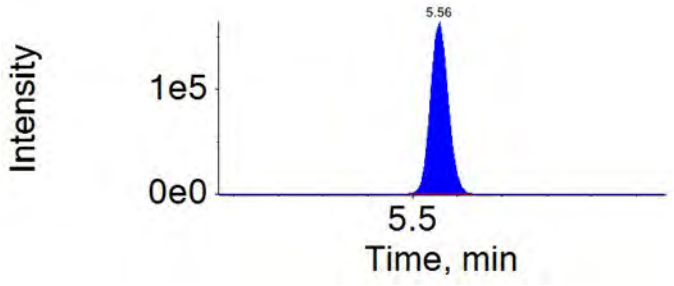
Injection Standard: 13C2-PFDA
515.0 / 470.0



Extraction Standard: Ed3-NMePFOSA
515.0 / 169.0

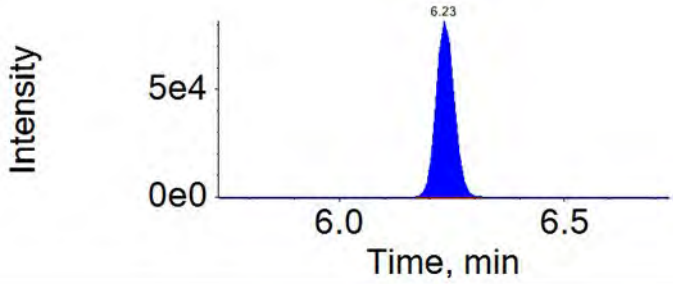


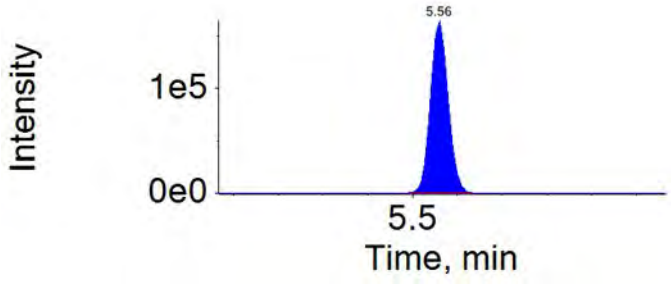
Injection Standard: 13C2-PFDA
515.0 / 470.0



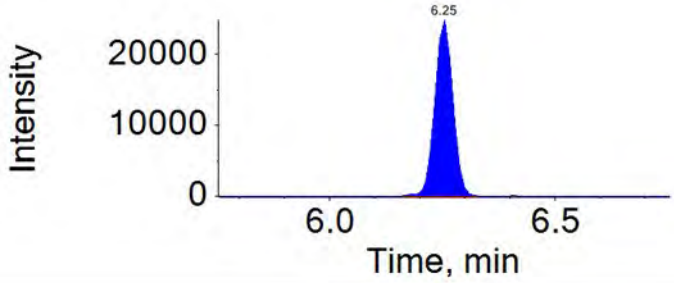
ICAL Name: 18NOV28DCAL **Result Table:** 18NOV29DCCV1-5 11/29/2018 7:58:55 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

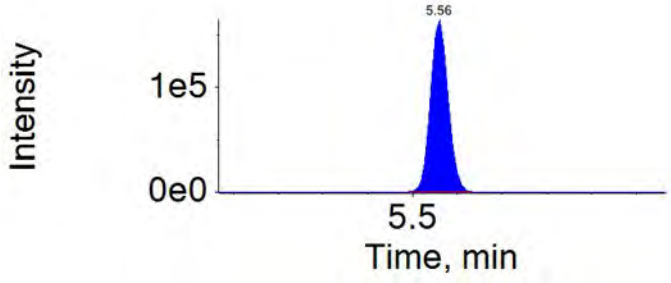
Extraction Standard: Ed9-NEtPFOSAE	Injection Standard: 13C2-PFDA
639.0 / 59.0	515.0 / 470.0



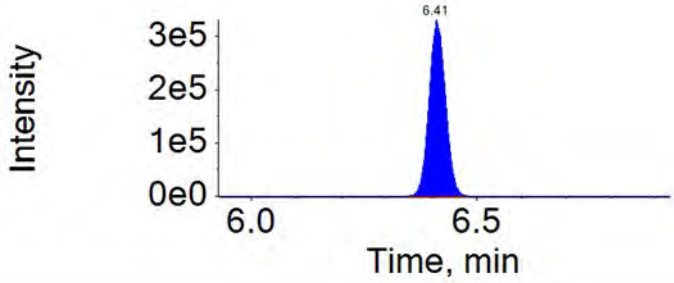


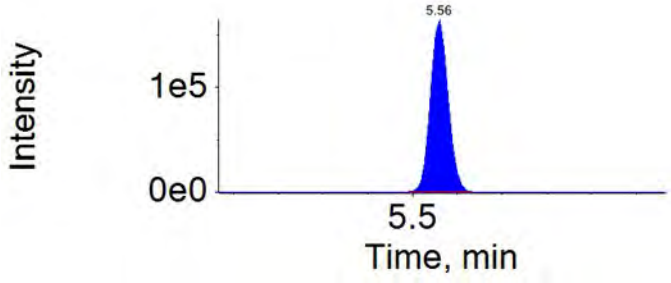
Extraction Standard: Ed5-NEtPFOSA	Injection Standard: 13C2-PFDA
531.0 / 169.0	515.0 / 470.0





Extraction Standard: E13C2-PFTeDA	Injection Standard: 13C2-PFDA
715.0 / 670.0	515.0 / 470.0



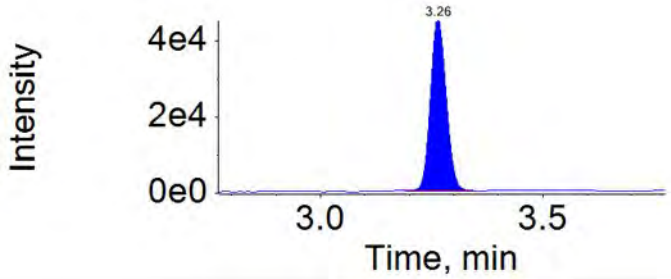


APPROVED
By MCD at 8:06 pm, 11/29/18

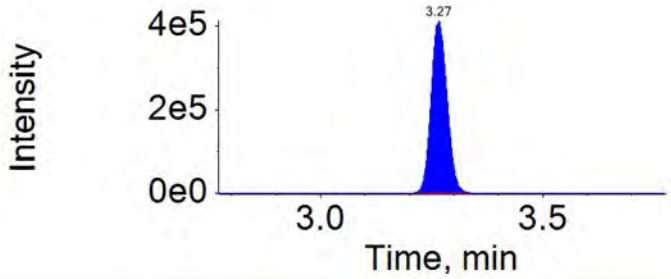
REVIEWED
By HMK at 9:40 am, 12/5/18

ICAL Name: 18NOV28DCAL **Result Table:** 18NOV29DCCV1-5 11/29/2018 7:58:55 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

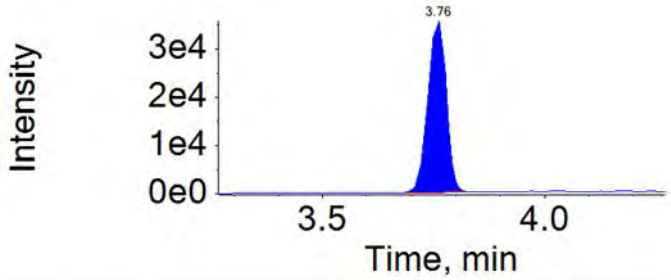
Analyte: PFBA
213.0 / 169.0



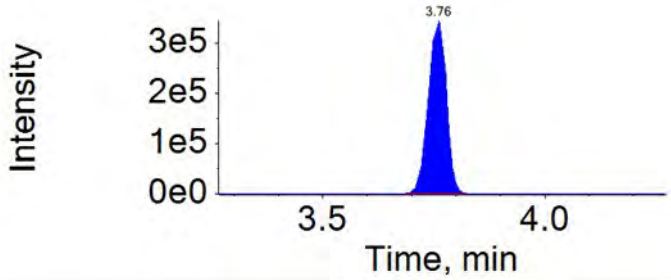
Extraction Standard: 13C4-PFBA
217.0 / 172.0



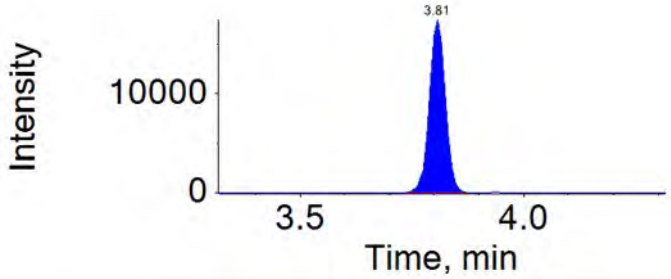
Analyte: PFPeA
263.0 / 219.0



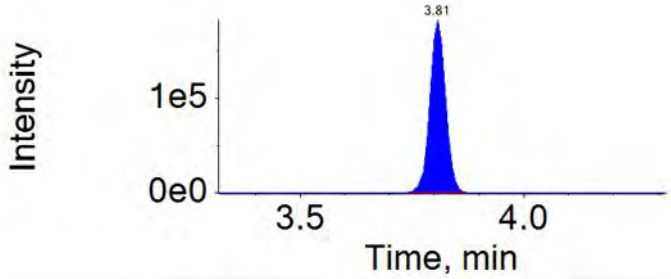
Extraction Standard: 13C5-PFPeA
268.0 / 223.0



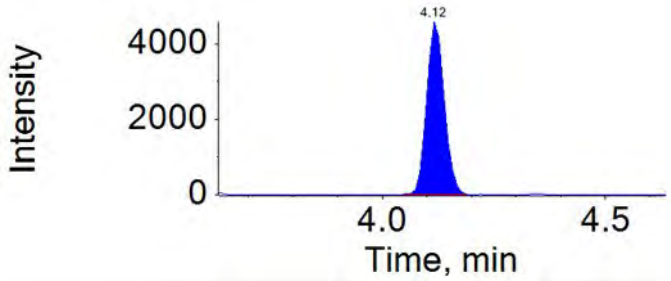
Analyte: PFBS
299.0 / 80.0



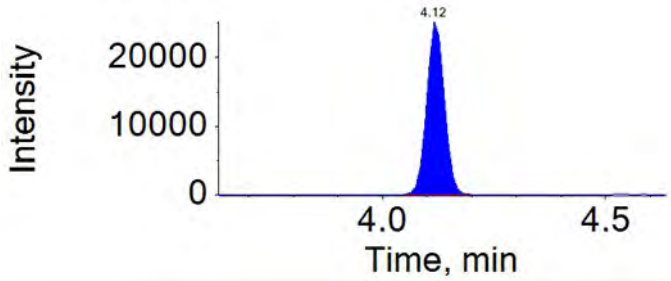
Extraction Standard: 13C3-PFBS
302.0 / 80.0



Analyte: 4:2-FTS
327.0 / 307.0



Extraction Standard: 13C2-4:2-FTS
329.0 / 81.0

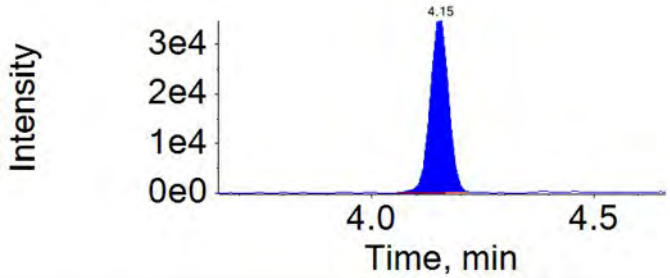


APPROVED
By MCD at 8:06 pm, 11/29/18

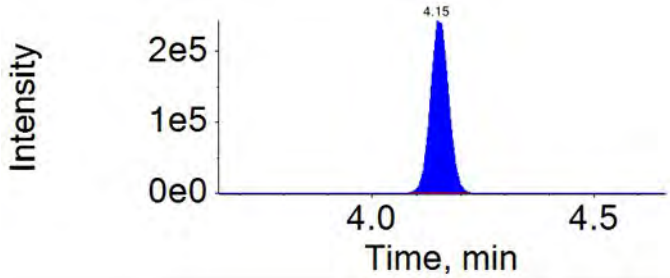
REVIEWED
By HMK at 9:40 am, 12/5/18

ICAL Name: 18NOV28DCAL **Result Table:** 18NOV29DCCV1-5 11/29/2018 7:58:55 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

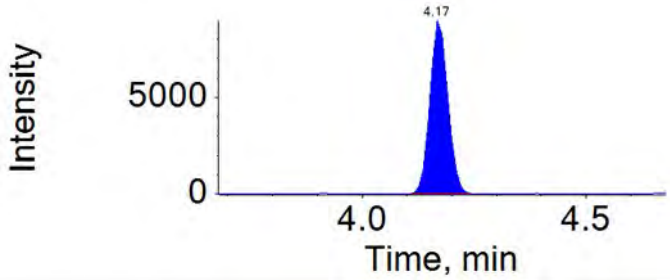
Analyte: PFHxA
313.0 / 269.0



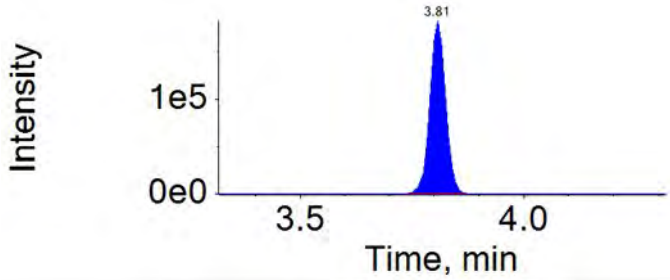
Extraction Standard: 13C5-PFHxA
318.0 / 273.0



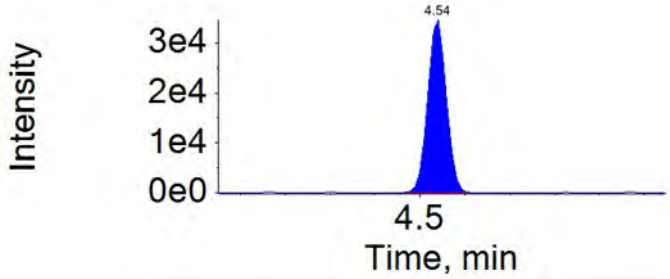
Analyte: PFPeS
349.0 / 80.0



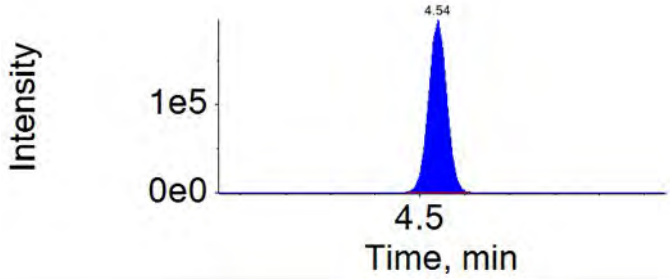
Extraction Standard: 13C3-PFBS
302.0 / 80.0



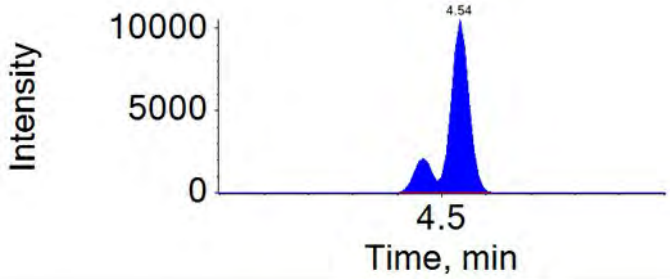
Analyte: PFHpA
363.0 / 319.0



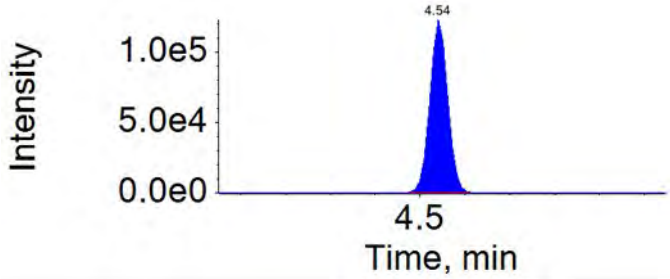
Extraction Standard: 13C4-PFHpA
367.0 / 322.0



Analyte: PFHxS
399.0 / 80.0



Extraction Standard: 13C3-PFHxS
402.0 / 80.0

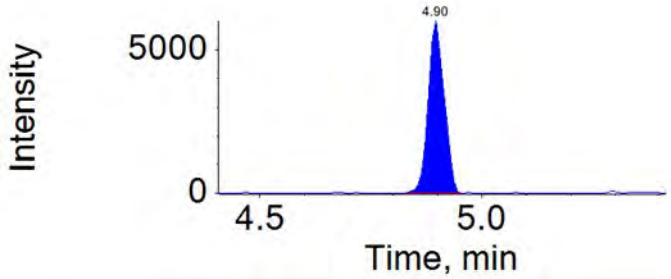


APPROVED
By MCD at 8:06 pm, 11/29/18

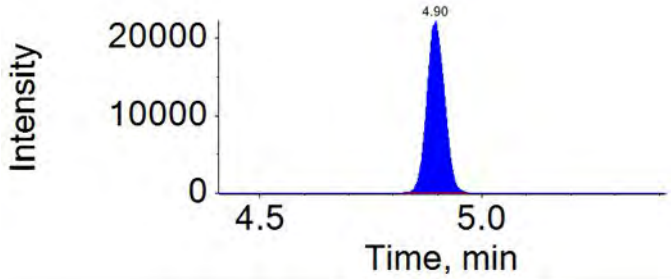
REVIEWED
By HMK at 9:40 am, 12/5/18

ICAL Name: 18NOV28DCAL **Result Table:** 18NOV29DCCV1-5 11/29/2018 7:58:55 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

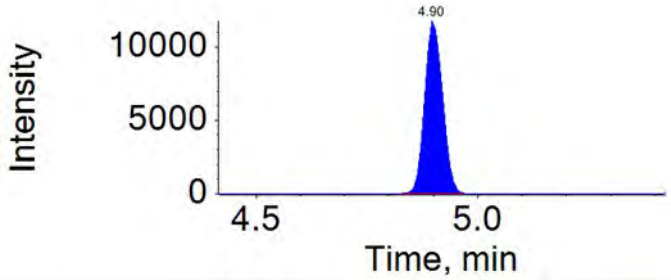
Analyte: 6:2-FTS
427.0 / 407.0



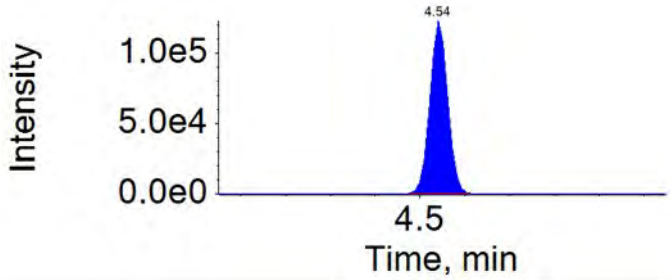
Extraction Standard: 13C2-6:2-FTS
429.0 / 81.0



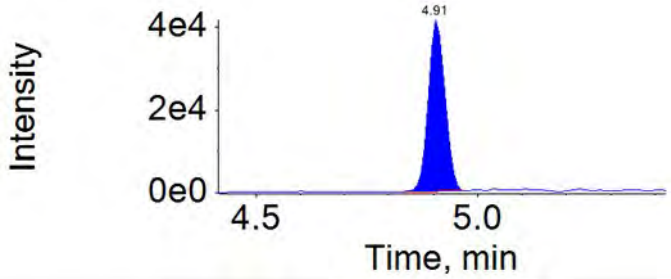
Analyte: PFHpS
449.0 / 80.0



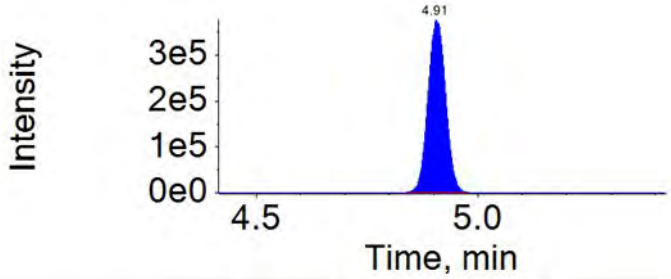
Extraction Standard: 13C3-PFHxS
402.0 / 80.0



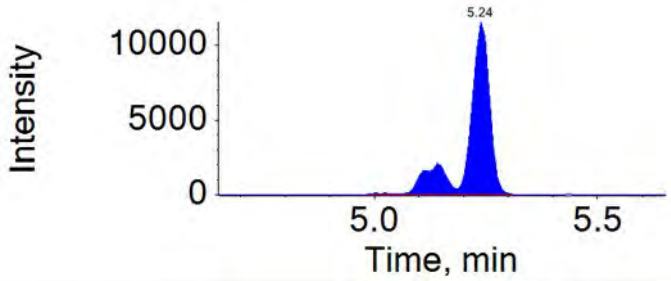
Analyte: PFOA
413.0 / 369.0



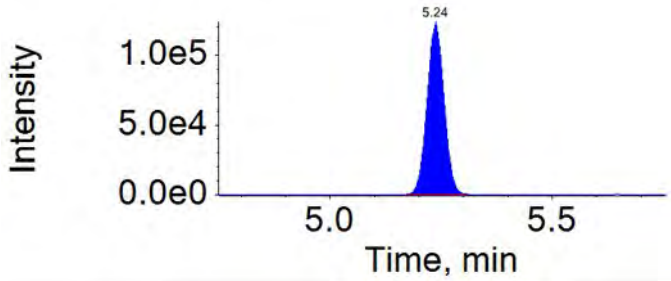
Extraction Standard: 13C8-PFOA
421.0 / 376.0



Analyte: PFOS
499.0 / 80.0



Extraction Standard: 13C8-PFOS
507.0 / 80.0

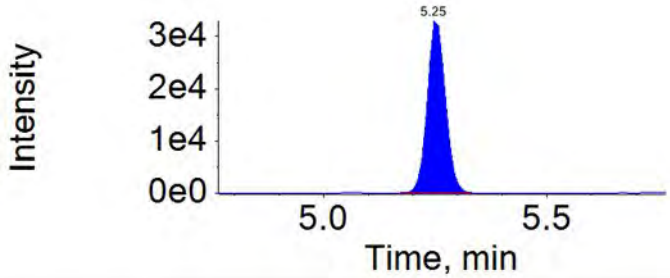


APPROVED
By MCD at 8:06 pm, 11/29/18

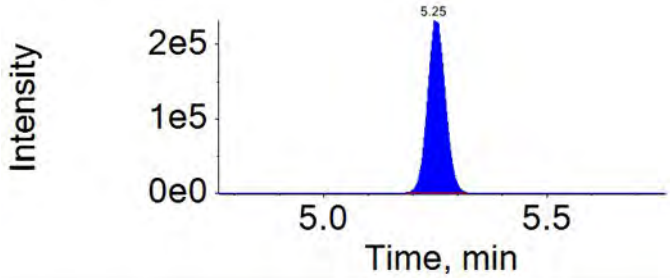
REVIEWED
By HMK at 9:40 am, 12/5/18

ICAL Name: 18NOV28DCAL **Result Table:** 18NOV29DCCV1-5 11/29/2018 7:58:55 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

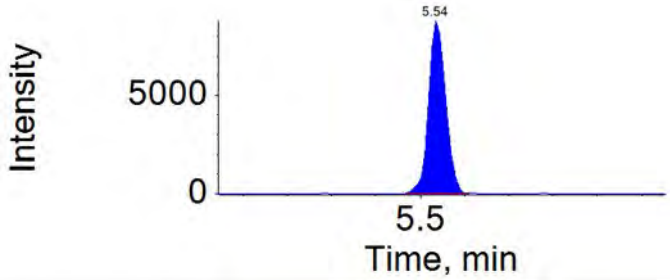
Analyte: PFNA
463.0 / 419.0



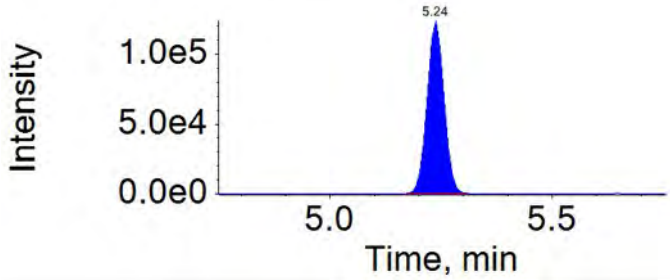
Extraction Standard: 13C9-PFNA
472.0 / 427.0



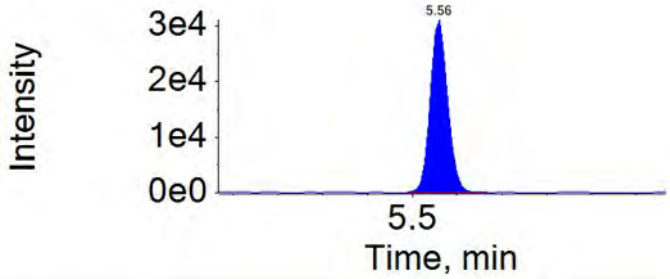
Analyte: PFNS
549.0 / 80.0



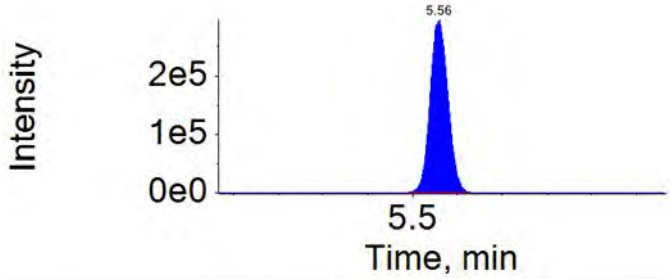
Extraction Standard: 13C8-PFOS
507.0 / 80.0



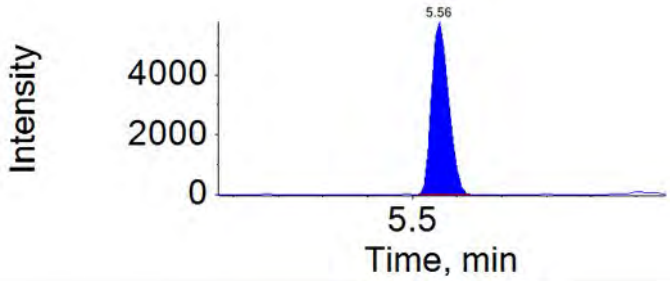
Analyte: PFDA
513.0 / 469.0



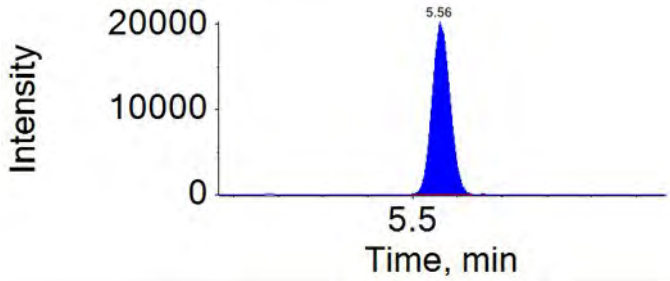
Extraction Standard: 13C6-PFDA
519.0 / 474.0



Analyte: 8:2-FTS
527.0 / 507.0



Extraction Standard: 13C2-8:2-FTS
529.0 / 81.0

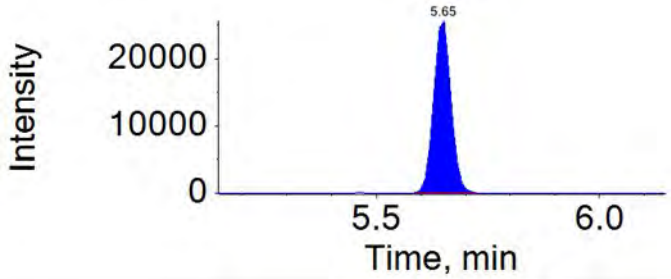


APPROVED
By MCD at 8:06 pm, 11/29/18

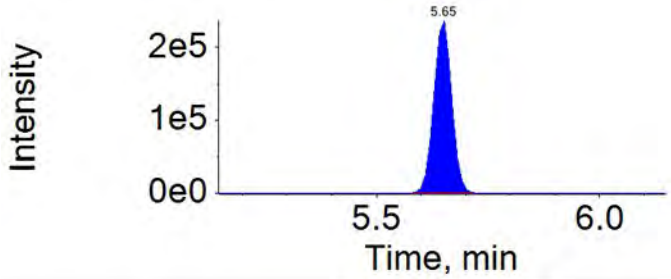
REVIEWED
By HMK at 9:40 am, 12/5/18

ICAL Name: 18NOV28DCAL **Result Table:** 18NOV29DCCV1-5 11/29/2018 7:58:55 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

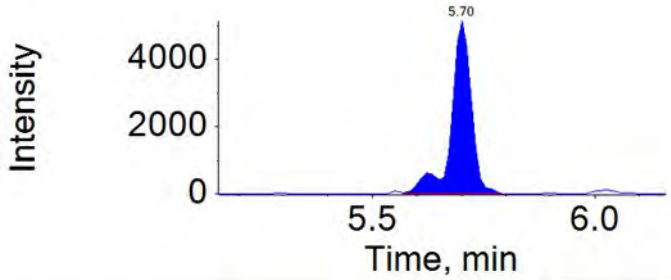
Analyte: PFOSA
498.0 / 78.0



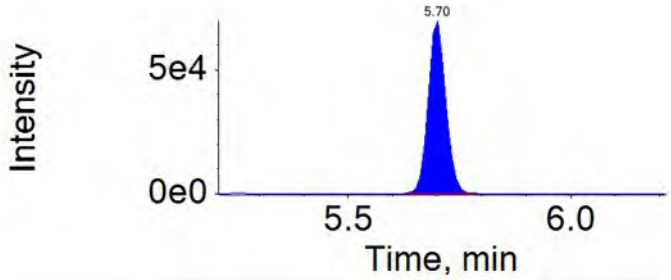
Extraction Standard: 13C8-PFOSA
506.0 / 78.0



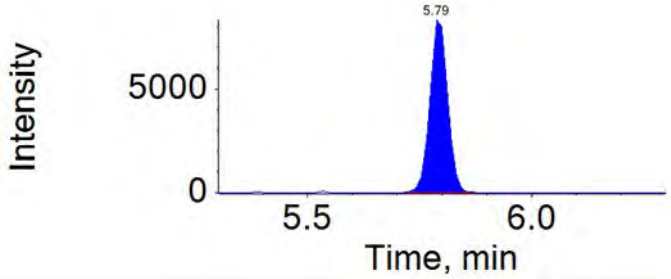
Analyte: NMeFOSAA
570.0 / 419.0



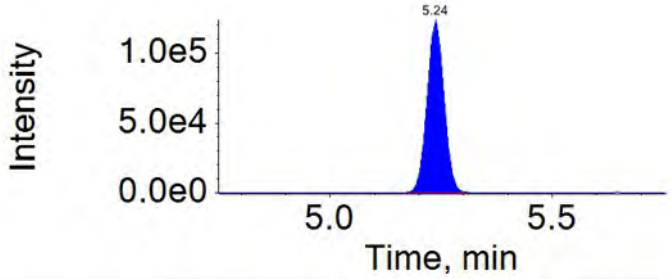
Extraction Standard: d3-NMeFOSAA
573.0 / 419.0



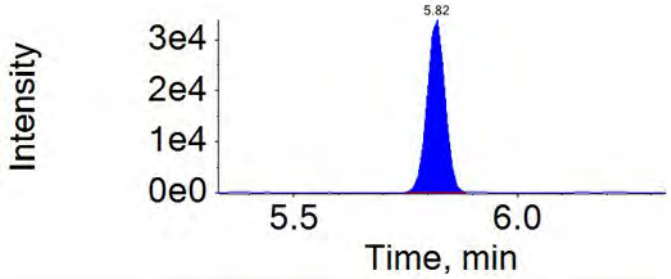
Analyte: PFDS
599.0 / 80.0



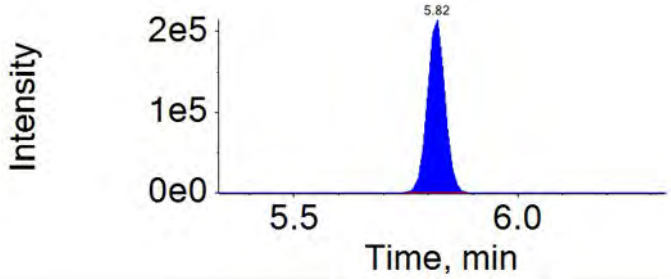
Extraction Standard: 13C8-PFOS
507.0 / 80.0



Analyte: PFUnDA
563.0 / 519.0



Extraction Standard: 13C7-PFUnDA
570.0 / 525.0

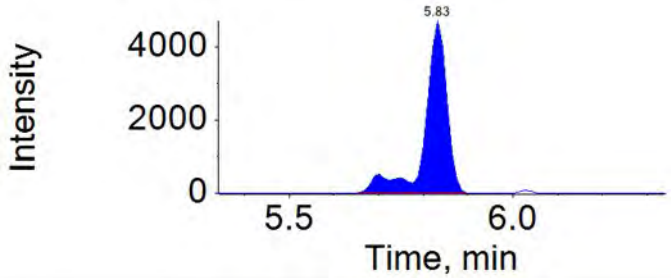


APPROVED
By MCD at 8:06 pm, 11/29/18

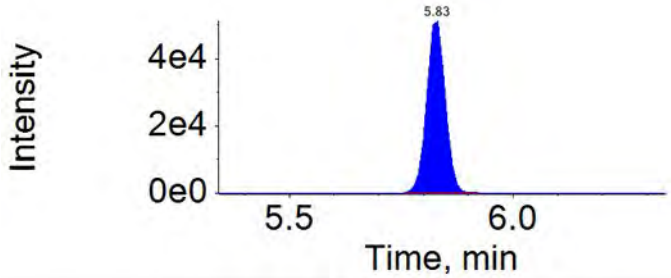
REVIEWED
By HMK at 9:40 am, 12/5/18

ICAL Name: 18NOV28DCAL **Result Table:** 18NOV29DCCV1-5 11/29/2018 7:58:55 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

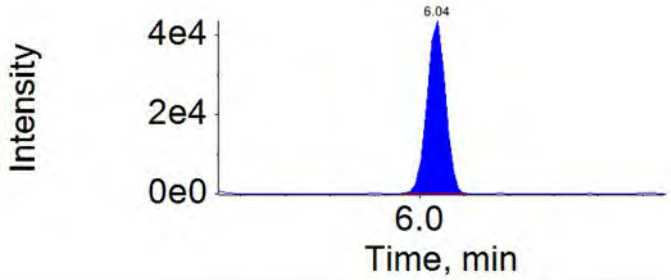
Analyte: NEtFOSAA
584.0 / 419.0



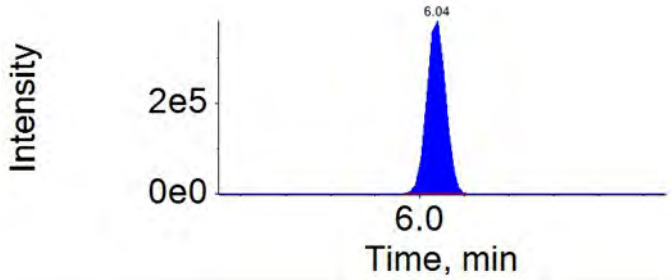
Extraction Standard: d5-NEtFOSAA
589.0 / 419.0



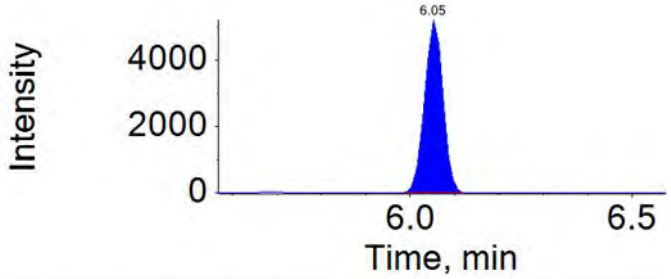
Analyte: PFDoDA
613.0 / 569.0



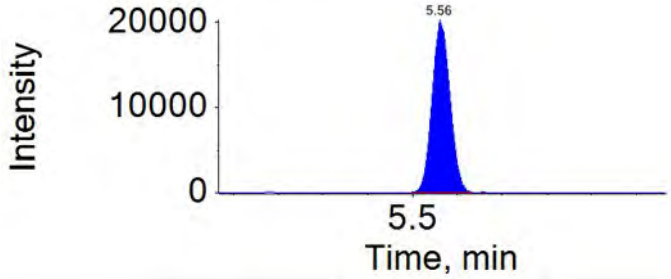
Extraction Standard: 13C2-PFDoDA
615.0 / 570.0



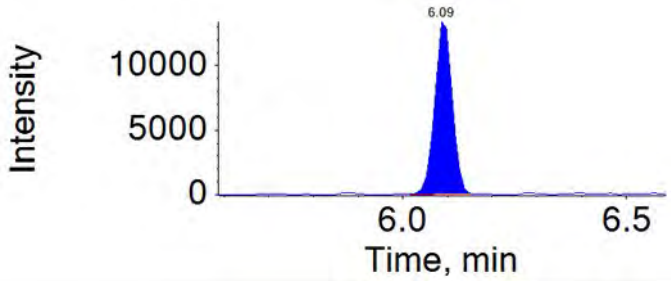
Analyte: 10:2-FTS
627.0 / 607.0



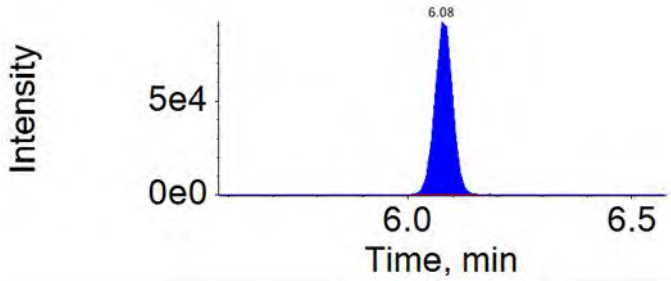
Extraction Standard: 13C2-8:2-FTS
529.0 / 81.0



Analyte: NMePFOSAE
616.0 / 59.0



Extraction Standard: d7-NMePFOSAE
623.0 / 59.0

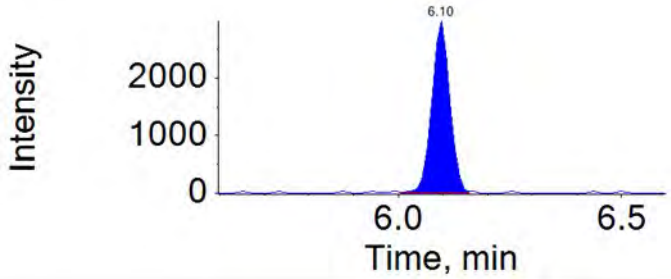


APPROVED
By MCD at 8:06 pm, 11/29/18

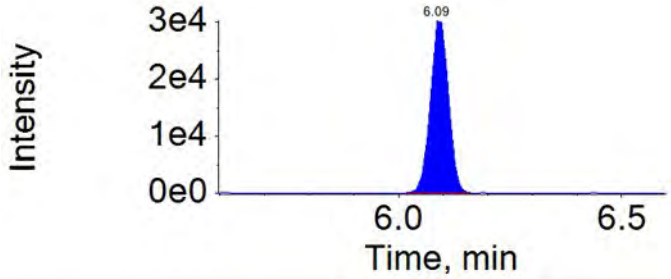
REVIEWED
By HMK at 9:40 am, 12/5/18

ICAL Name: 18NOV28DCAL **Result Table:** 18NOV29DCCV1-5 11/29/2018 7:58:55 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

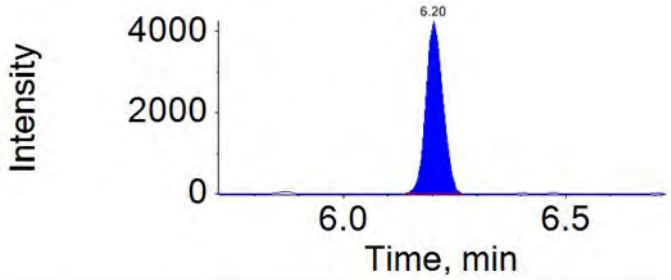
Analyte: NMePFOSA
512.0 / 169.0



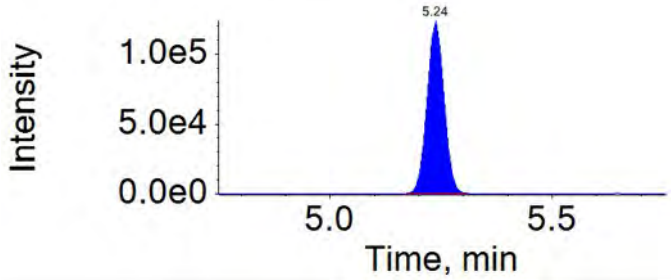
Extraction Standard: d3-NMePFOSA
515.0 / 169.0



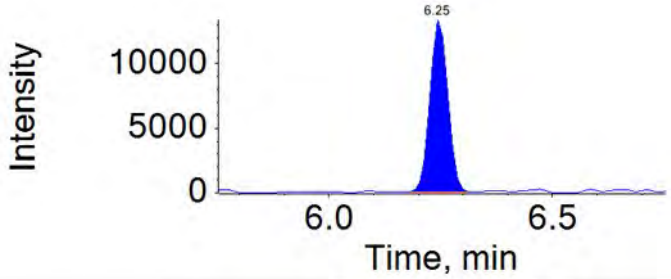
Analyte: PFDoS
699.0 / 80.0



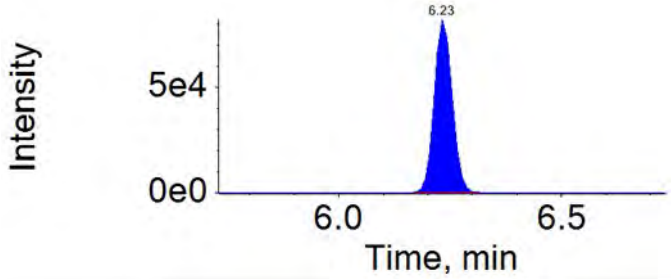
Extraction Standard: 13C8-PFOS
507.0 / 80.0



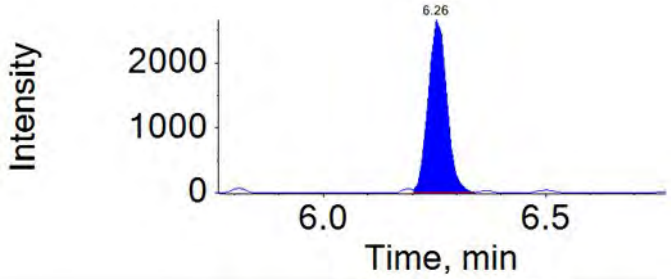
Analyte: NEtPFOSAE
630.0 / 59.0



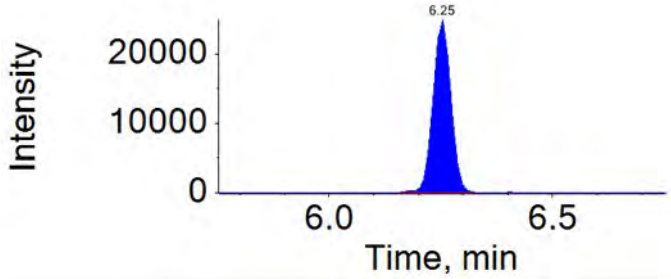
Extraction Standard: d9-NEtPFOSAE
639.0 / 59.0



Analyte: NEtPFOSA
526.0 / 169.0



Extraction Standard: d5-NEtPFOSA
531.0 / 169.0

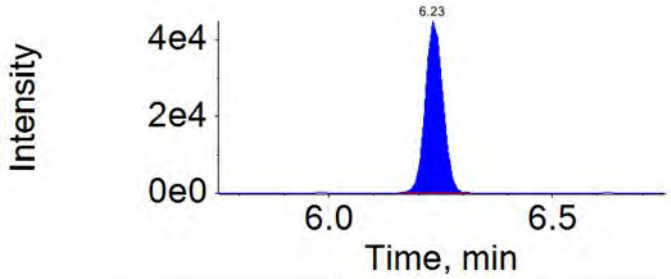


APPROVED
By MCD at 8:06 pm, 11/29/18

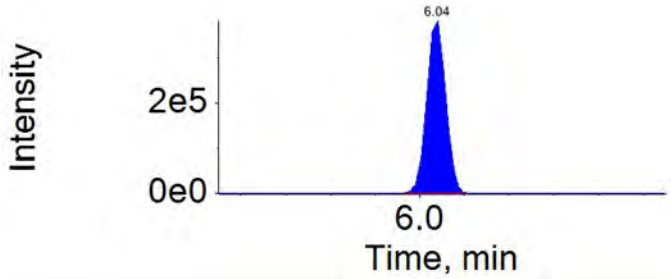
REVIEWED
By HMK at 9:40 am, 12/5/18

ICAL Name: 18NOV28DCAL **Result Table:** 18NOV29DCCV1-5 11/29/2018 7:58:55 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

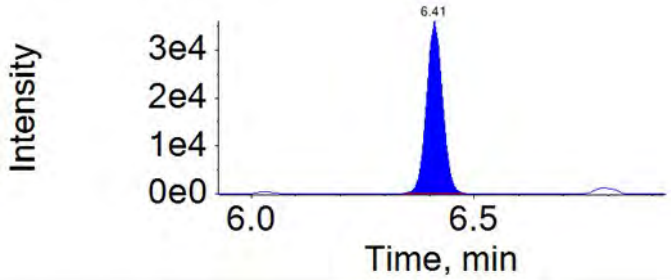
Analyte: PFTrDA
663.0 / 619.0



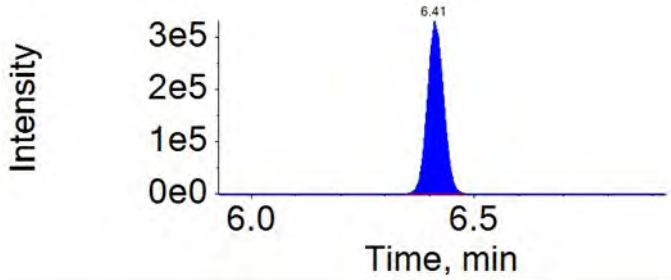
Extraction Standard: 13C2-PFDoDA
615.0 / 570.0



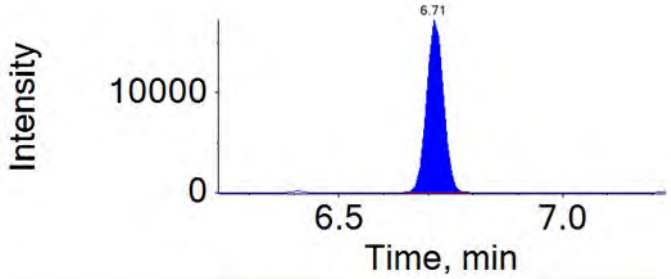
Analyte: PFTeDA
713.0 / 669.0



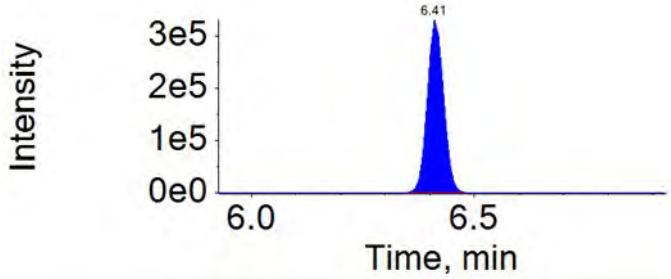
Extraction Standard: 13C2-PFTeDA
715.0 / 670.0



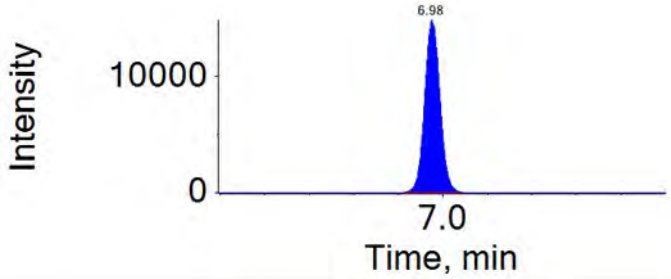
Analyte: PFHxDA
813.0 / 769.0



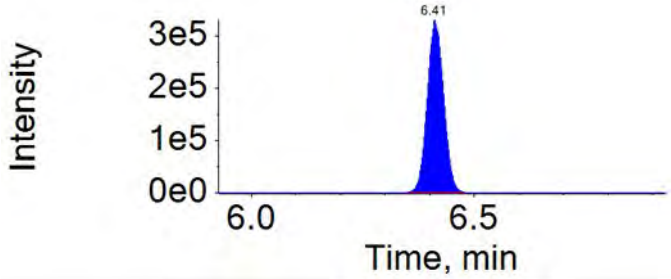
Extraction Standard: 13C2-PFTeDA
715.0 / 670.0



Analyte: PFODA
913.0 / 869.0



Extraction Standard: 13C2-PFTeDA
715.0 / 670.0



APPROVED
By MCD at 8:06 pm, 11/29/18

REVIEWED
By HMK at 9:40 am, 12/5/18

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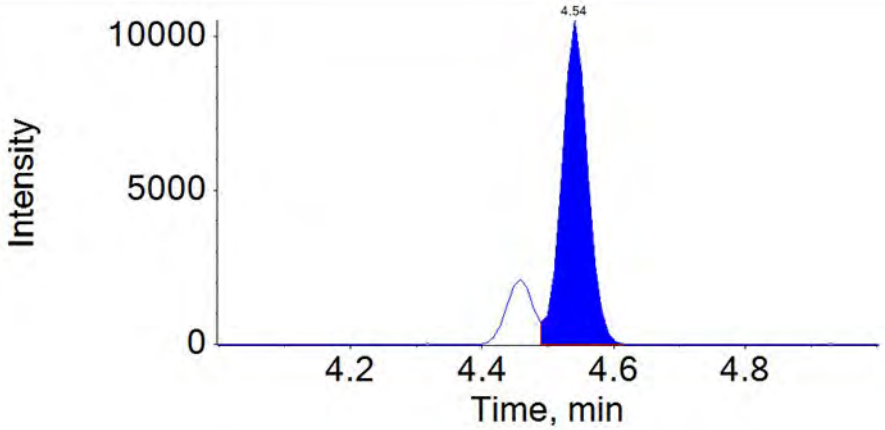
Auto Integrations prior to Manual Integration

Print Date: 11/29/2018 8:02 PM
Template: MQ-OrigInteg-16NOV21.docx

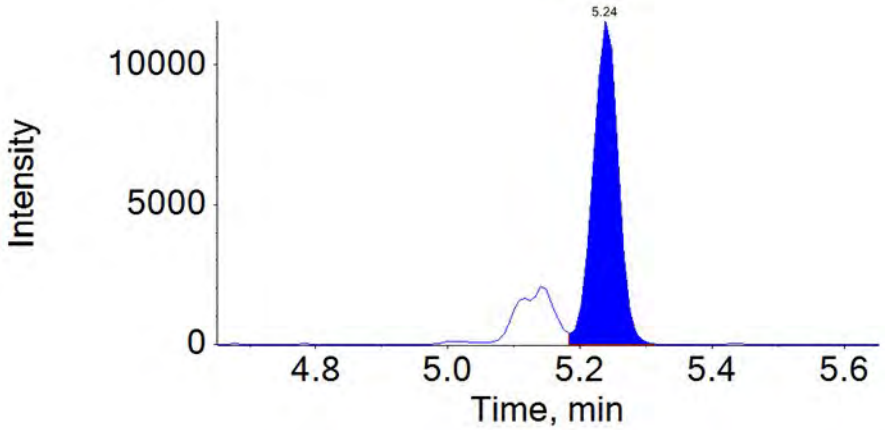
Results Table Name: 18NOV29DCCV1-5
Results Table Date: 11/29/2018 7:58:55 PM
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

Component Name:
PFHxS
RT (min.):
4.54
Peak Area:
28783.5
Mass Range:
399.0 / 80.0
File Name:
18NOV29D-05.wiff
Sample Name:
CCV1_ISC_CAL2



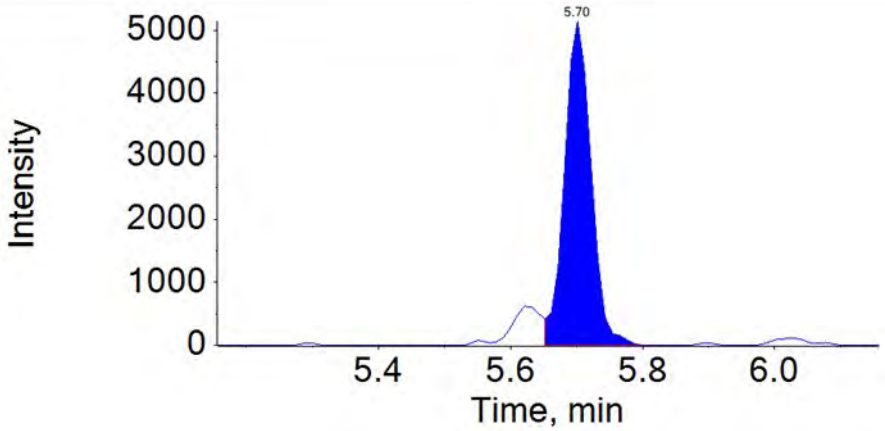
Integration Comment: incorrect integration

Component Name:
PFOS
RT (min.):
5.24
Peak Area:
30774.9
Mass Range:
499.0 / 80.0
File Name:
18NOV29D-05.wiff
Sample Name:
CCV1_ISC_CAL2



Integration Comment: incorrect integration

Component Name:
NMeFOSAA
RT (min.):
5.70
Peak Area:
14468.0
Mass Range:
570.0 / 419.0
File Name:
18NOV29D-05.wiff
Sample Name:
CCV1_ISC_CAL2



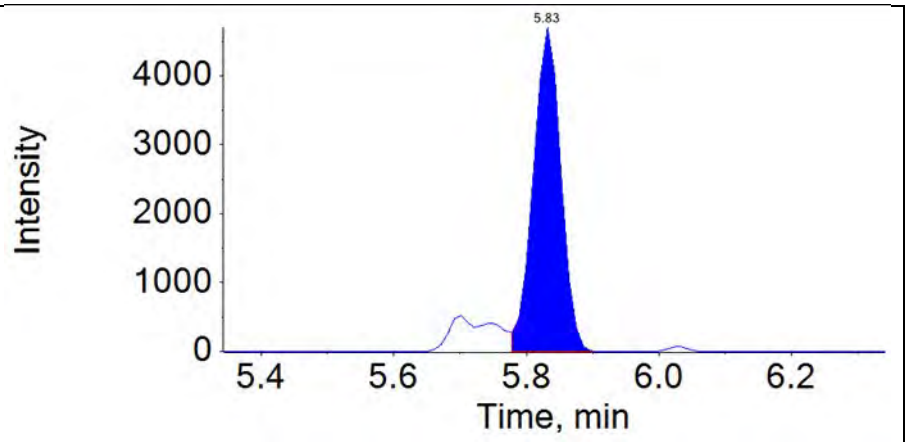
Integration Comment: incorrect integration

APPROVED
By MCD at 8:06 pm, 11/29/18

REVIEWED
By HMK at 9:40 am, 12/5/18

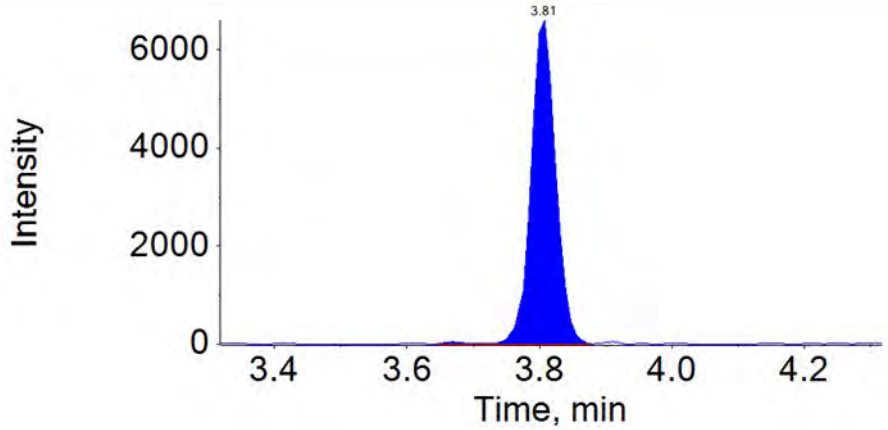
Results Table Name: 18NOV29DCCV1-5
Results Table Date: 11/29/2018 7:58:55 PM
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

Component Name:
NEtFOSAA
RT (min.):
5.83
Peak Area:
13564.4
Mass Range:
584.0 / 419.0
File Name:
18NOV29D-05.wiff
Sample Name:
CCV1_ISC_CAL2



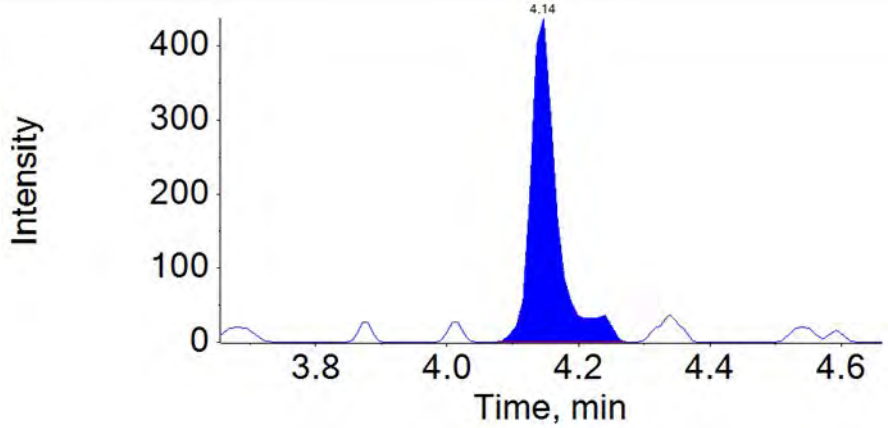
Integration Comment: incorrect integration

Component Name:
PFBS_2
RT (min.):
3.81
Peak Area:
17159.7
Mass Range:
299.0 / 99.0
File Name:
18NOV29D-05.wiff
Sample Name:
CCV1_ISC_CAL2



Integration Comment: incorrect integration

Component Name:
PFHxA_2
RT (min.):
4.14
Peak Area:
1214.8
Mass Range:
313.0 / 119.0
File Name:
18NOV29D-05.wiff
Sample Name:
CCV1_ISC_CAL2



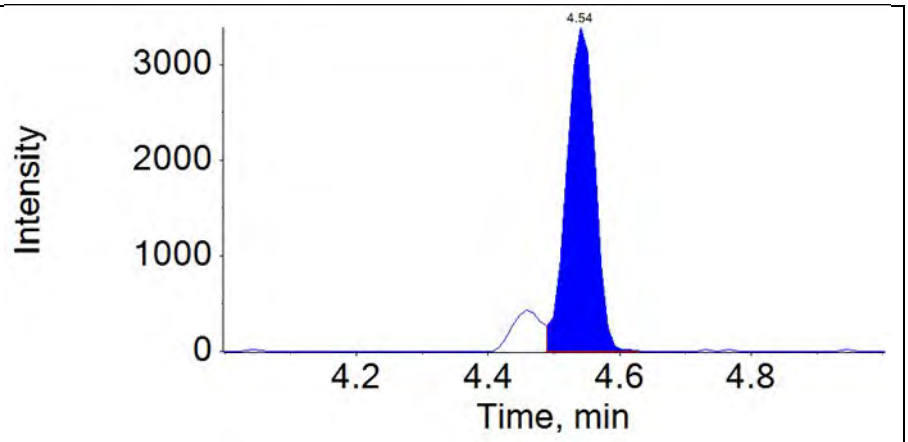
Integration Comment: incorrect integration

APPROVED
By MCD at 8:06 pm, 11/29/18

REVIEWED
By HMK at 9:40 am, 12/5/18

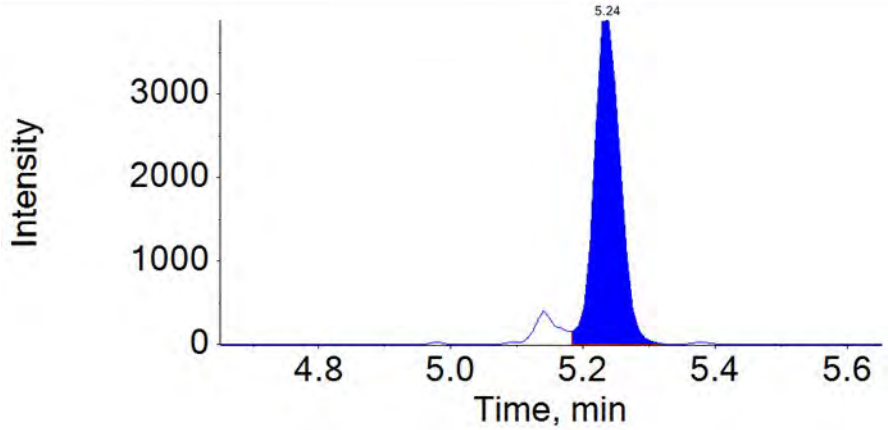
Results Table Name: 18NOV29DCCV1-5
Results Table Date: 11/29/2018 7:58:55 PM
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

Component Name:
PFHxS_2
RT (min.):
4.54
Peak Area:
10090.1
Mass Range:
399.0 / 99.0
File Name:
18NOV29D-05.wiff
Sample Name:
CCV1_ISC_CAL2



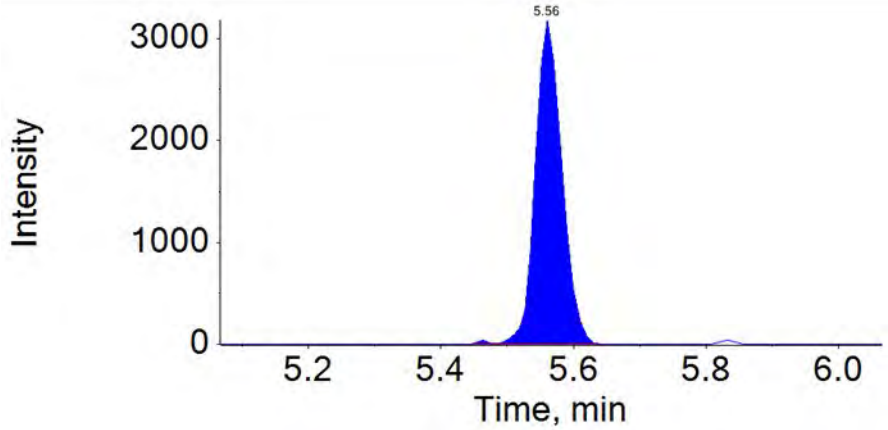
Integration Comment: incorrect integration

Component Name:
PFOS_2
RT (min.):
5.24
Peak Area:
10719.2
Mass Range:
499.0 / 99.0
File Name:
18NOV29D-05.wiff
Sample Name:
CCV1_ISC_CAL2



Integration Comment: incorrect integration

Component Name:
8:2-FTS_2
RT (min.):
5.56
Peak Area:
8908.1
Mass Range:
527.0 / 81.0
File Name:
18NOV29D-05.wiff
Sample Name:
CCV1_ISC_CAL2



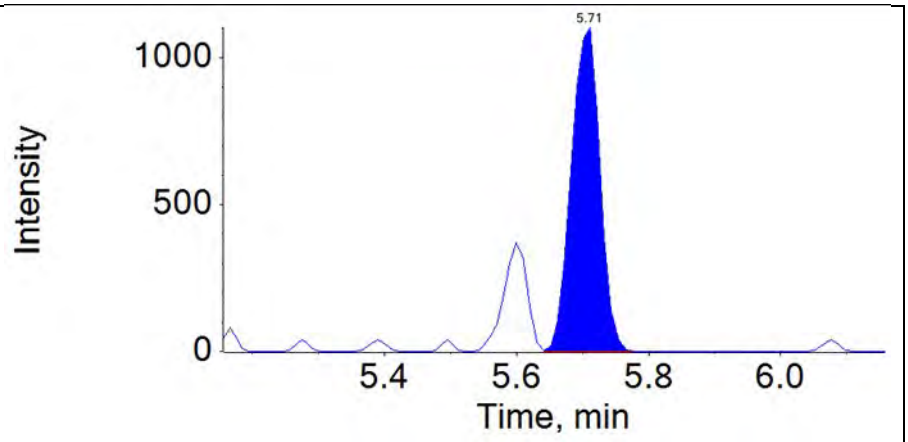
Integration Comment: incorrect integration

APPROVED
By MCD at 8:06 pm, 11/29/18

REVIEWED
By HMK at 9:40 am, 12/5/18

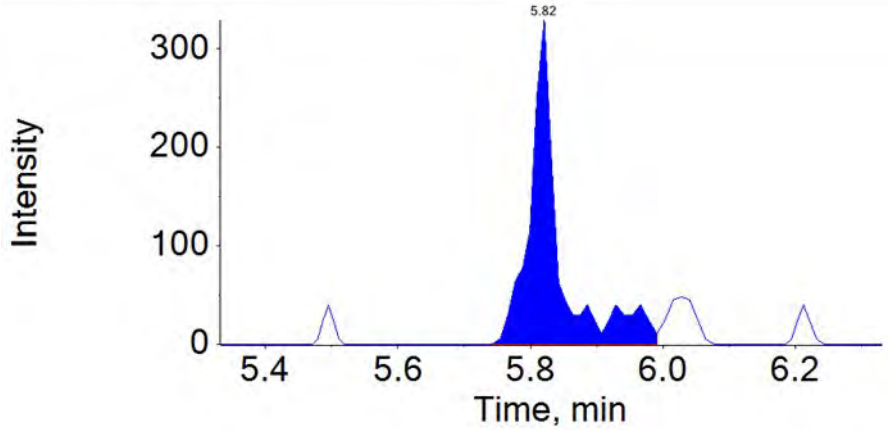
Results Table Name: 18NOV29DCCV1-5
Results Table Date: 11/29/2018 7:58:55 PM
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

Component Name:
NMeFOSAA_2
RT (min.):
5.71
Peak Area:
3325.7
Mass Range:
570.0 / 483.0
File Name:
18NOV29D-05.wiff
Sample Name:
CCV1_ISC_CAL2



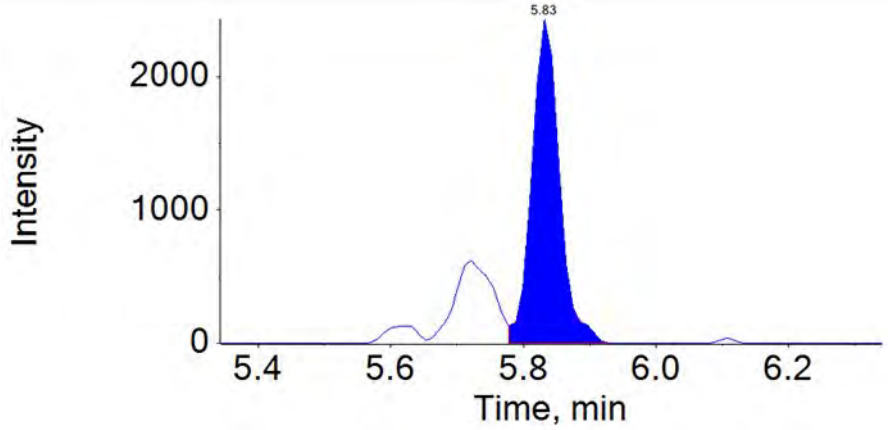
Integration Comment: incorrect integration

Component Name:
PFUnDA_2
RT (min.):
5.82
Peak Area:
991.3
Mass Range:
563.0 / 169.0
File Name:
18NOV29D-05.wiff
Sample Name:
CCV1_ISC_CAL2



Integration Comment: incorrect integration

Component Name:
NEtFOSAA_2
RT (min.):
5.83
Peak Area:
7057.3
Mass Range:
584.0 / 526.0
File Name:
18NOV29D-05.wiff
Sample Name:
CCV1_ISC_CAL2



Integration Comment: incorrect integration

APPROVED
By MCD at 8:06 pm, 11/29/18

REVIEWED
By HMK at 9:40 am, 12/5/18

Results Table Name: 18NOV29DCCV1-5
Results Table Date: 11/29/2018 7:58:55 PM
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

APPROVED
By MCD at 8:06 pm, 11/29/18

REVIEWED
By HMK at 9:40 am, 12/5/18

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LC-MS/MS Analysis Report

Printed: 11/29/2018 8:00:00 PM
Template: IonRatio18OCT10

Ion Ratio Report

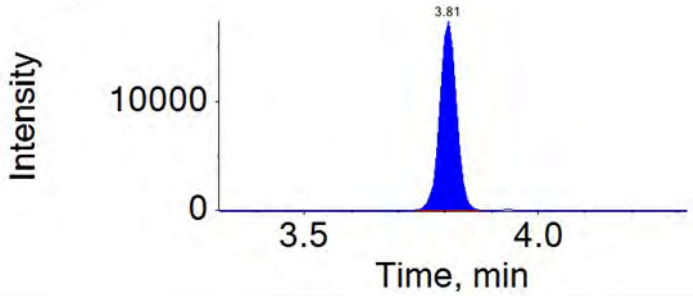
Sample Name: CCV1_ISC_CAL2 **Instrument Name:** LM27631 **File Name:** 18NOV29D-05.wiff

Component Name	RT	RRT	Analyte Area Response	Int Typ	Expected Ion Ratio	Ion Ratio	Ion Ratio % Diff	Ion Ratio Limit	Ion Ratio OOS
PFBS	3.81	1.00	43167.2	A	N/A	0.3951			
PFBS_2	3.81	1.00	17055.1	M	N/A	0.3951	8	50	
4:2-FTS	4.12	1.00	12514.2	A	N/A	0.6079			
4:2-FTS_2	4.12	1.00	7607.9	A	N/A	0.6079	-5	50	
PFHxA	4.15	1.00	100978.6	A	N/A	0.0112			
PFHxA_2	4.14	1.00	1134.2	M	N/A	0.0112	9	50	
PFPeS	4.17	1.10	24883.7	A	N/A	0.4838			
PFPeS_2	4.17	1.10	12039.0	A	N/A	0.4838	-3	50	
PFHpA	4.54	1.00	99917.2	A	N/A	0.0612			
PFHpA_2	4.54	1.00	6111.0	A	N/A	0.0612	10	50	
PFHxS	4.54	1.00	34610.4	M	N/A	0.3297			
PFHxS_2	4.54	1.00	11410.8	M	N/A	0.3297	-11	50	
6:2-FTS	4.90	1.00	14994.7	A	N/A	0.5391			
6:2-FTS_2	4.89	1.00	8084.1	A	N/A	0.5391	-19	50	
PFHpS	4.90	1.08	32932.0	A	N/A	0.4237			
PFHpS_2	4.90	1.08	13952.3	A	N/A	0.4237	8	50	
PFOA	4.91	1.00	107677.1	A	N/A	0.0617			
PFOA_2	4.91	1.00	6647.5	A	N/A	0.0617	8	50	
PFOS	5.24	1.00	39254.5	M	N/A	0.2989			
PFOS_2	5.24	1.00	11733.5	M	N/A	0.2989	1	50	
PFNA	5.25	1.00	93355.4	A	N/A	0.0139			
PFNA_2	5.25	1.00	1298.8	A	N/A	0.0139	-31	50	
PFNS	5.54	1.06	23416.1	A	N/A	0.5500			
PFNS_2	5.54	1.06	12879.8	A	N/A	0.5500	15	50	
PFDA	5.56	1.00	83849.1	A	N/A	0.0057			
PFDA_2	5.57	1.00	480.8	A	N/A	0.0057	-23	50	
8:2-FTS	5.56	1.00	15129.8	A	N/A	0.5856			
8:2-FTS_2	5.56	1.00	8859.9	M	N/A	0.5856	9	50	
NMeFOSAA	5.70	1.00	16285.3	M	N/A	0.2608			
NMeFOSAA_2	5.71	1.00	4247.6	M	N/A	0.2608	13	50	
PFDS	5.79	1.11	22930.4	A	N/A	0.3845			
PFDS_2	5.79	1.11	8816.6	A	N/A	0.3845	-28	50	
PFUnDA	5.82	1.00	94649.2	A	N/A	0.0084			
PFUnDA_2	5.82	1.00	791.7	M	N/A	0.0084	120	50	OOS
NEtFOSAA	5.83	1.00	15976.2	M	N/A	0.6268			
NEtFOSAA_2	5.83	1.00	10013.4	M	N/A	0.6268	-15	50	
PFDoDA	6.04	1.00	124243.3	A	N/A	0.0095			
PFDoDA_2	6.04	1.00	1178.3	A	N/A	0.0095	-27	50	
10:2-FTS	6.05	1.09	14919.7	A	N/A	0.6728			
10:2-FTS_2	6.05	1.09	10038.3	A	N/A	0.6728	-4	50	
PFTrDA	6.23	1.03	122778.8	A	N/A	0.0057			
PFTrDA_2	6.24	1.03	698.1	A	N/A	0.0057	-37	50	
PFTeDA	6.41	1.00	89123.1	A	N/A	0.0041			
PFTeDA_2	6.42	1.00	367.7	A	N/A	0.0041	-26	50	
PFHxDA	6.71	1.05	45160.5	A	N/A	0.0596			
PFHxDA_2	6.71	1.05	2692.3	A	N/A	0.0596	-8	50	
PFODA	6.98	1.09	35571.7	A	N/A	0.0222			
PFODA_2	6.97	1.09	790.0	A	N/A	0.0222	-16	50	

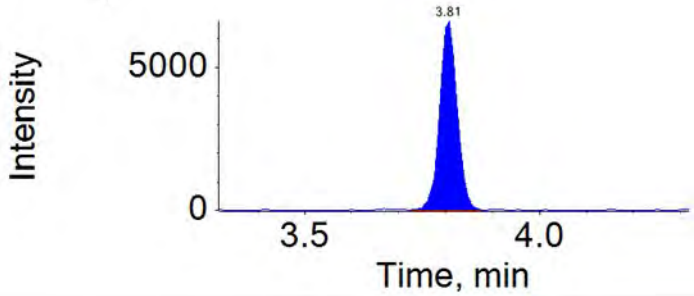
APPROVED
By MCD at 8:06 pm, 11/29/18

REVIEWED
By HMK at 9:40 am, 12/5/18

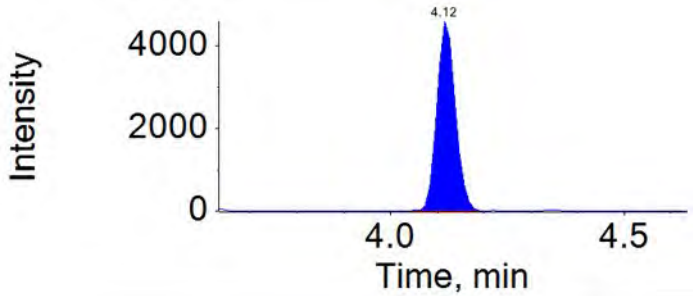
Component: PFBS
Primary Mass: 299.0 / 80.0



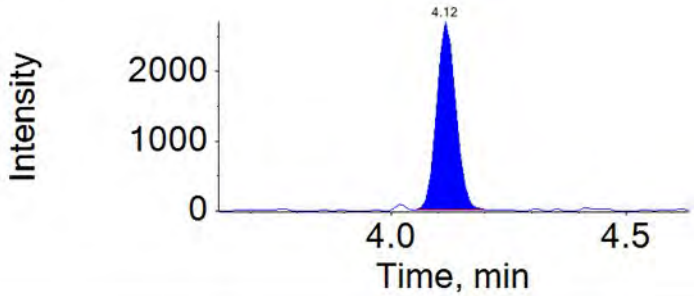
Component: PFBS_2
Secondary Mass: 299.0 / 99.0



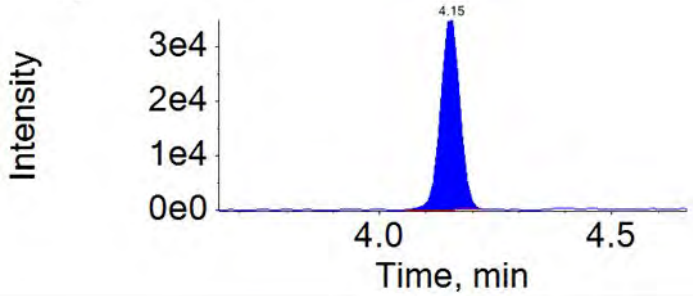
Component: 4:2-FTS
Primary Mass: 327.0 / 307.0



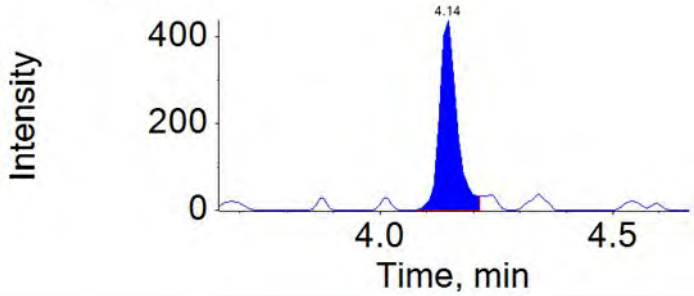
Component: 4:2-FTS_2
Secondary Mass: 327.0 / 81.0



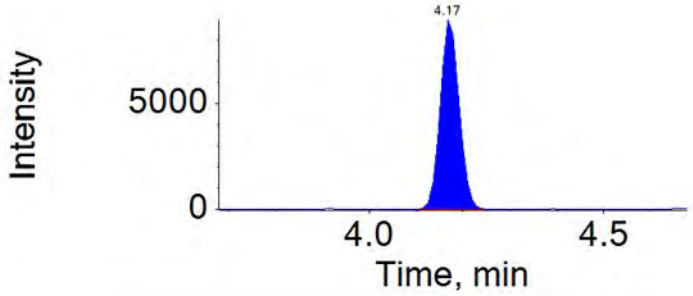
Component: PFHxA
Primary Mass: 313.0 / 269.0



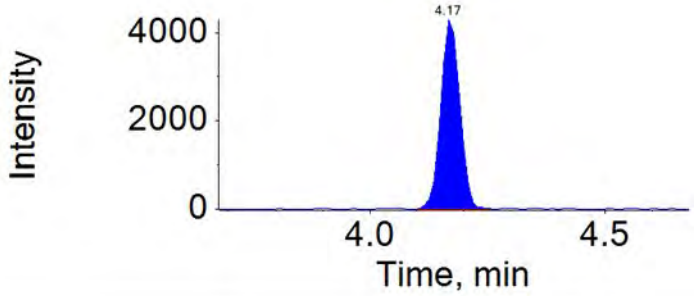
Component: PFHxA_2
Secondary Mass: 313.0 / 119.0



Component: PFPeS
Primary Mass: 349.0 / 80.0



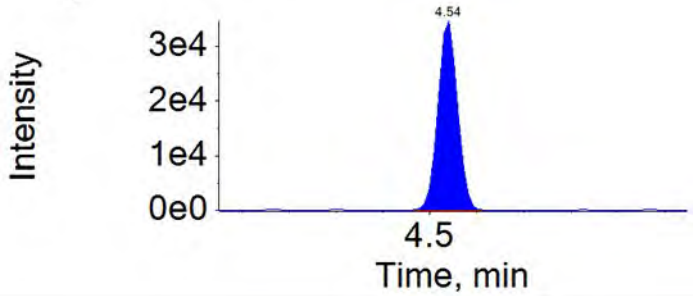
Component: PFPeS_2
Secondary Mass: 349.0 / 99.0



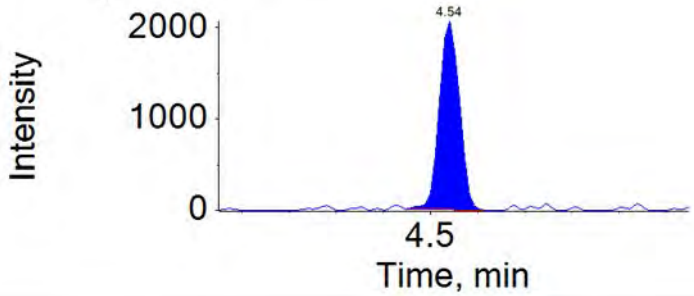
APPROVED
By MCD at 8:06 pm, 11/29/18

REVIEWED
By HMK at 9:40 am, 12/5/18

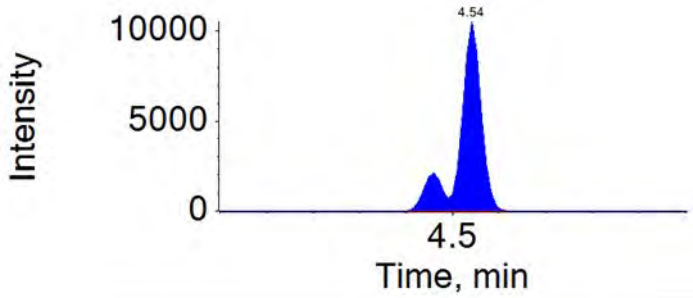
Component: PFHpA
Primary Mass: 363.0 / 319.0



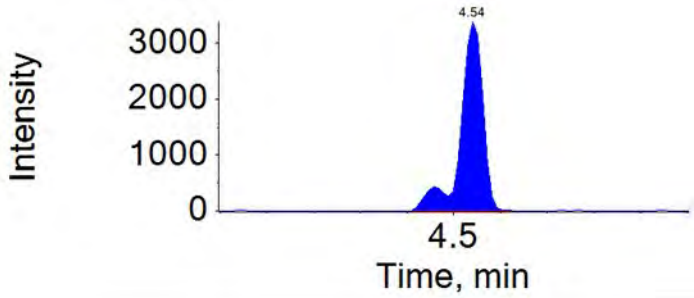
Component: PFHpA_2
Secondary Mass: 363.0 / 169.0



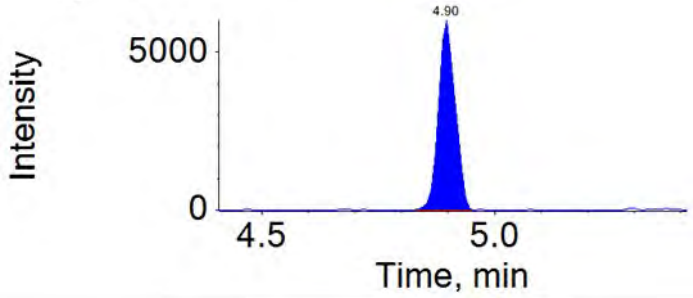
Component: PFHxS
Primary Mass: 399.0 / 80.0



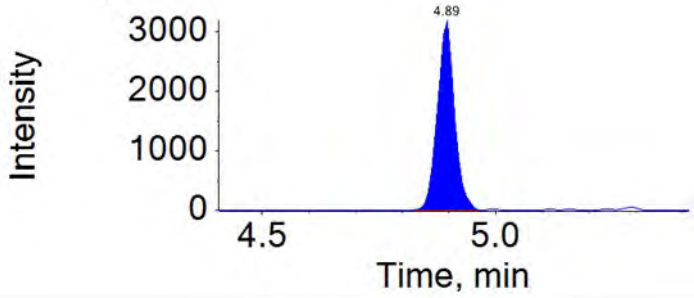
Component: PFHxS_2
Secondary Mass: 399.0 / 99.0



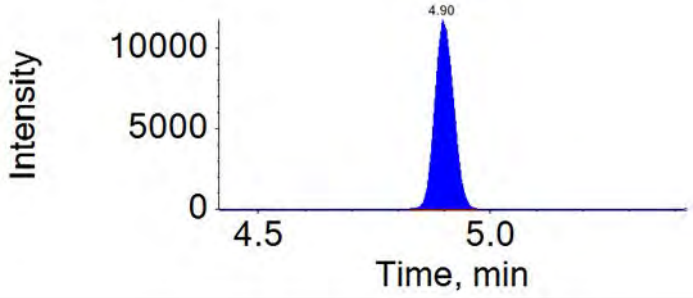
Component: 6:2-FTS
Primary Mass: 427.0 / 407.0



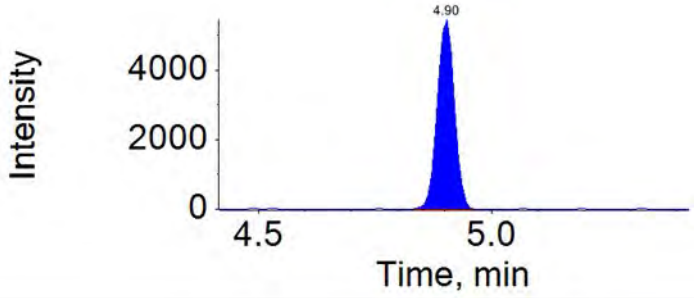
Component: 6:2-FTS_2
Secondary Mass: 427.0 / 81.0



Component: PFHpS
Primary Mass: 449.0 / 80.0



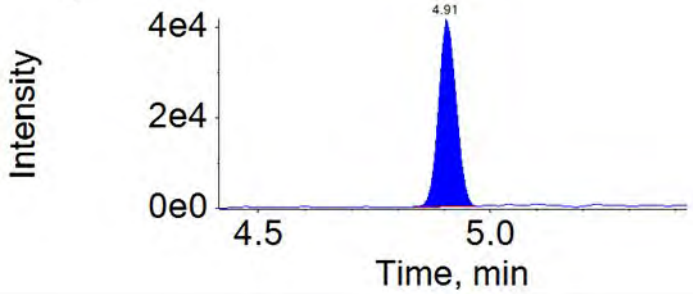
Component: PFHpS_2
Secondary Mass: 449.0 / 99.0



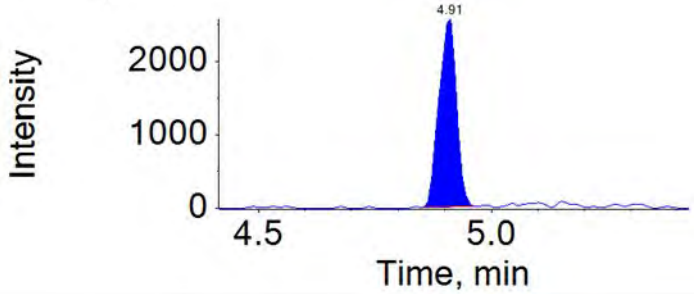
APPROVED
By MCD at 8:06 pm, 11/29/18

REVIEWED
By HMK at 9:40 am, 12/5/18

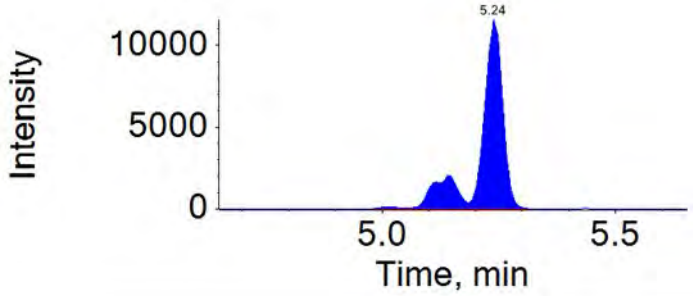
Component: PFOA
Primary Mass: 413.0 / 369.0



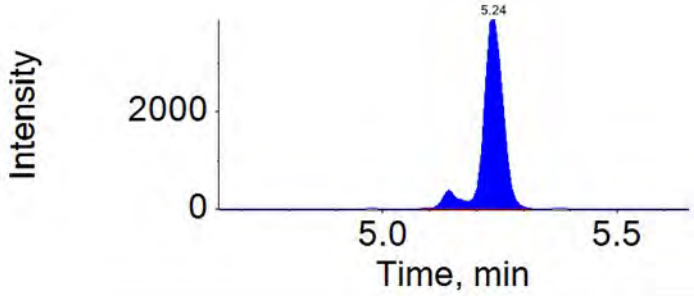
Component: PFOA_2
Secondary Mass: 413.0 / 169.0



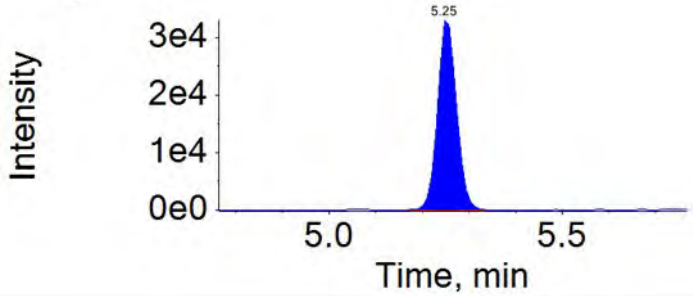
Component: PFOS
Primary Mass: 499.0 / 80.0



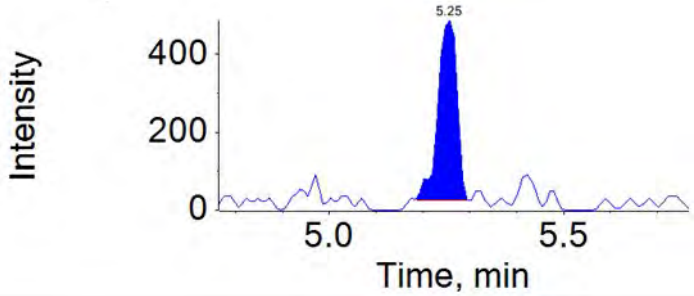
Component: PFOS_2
Secondary Mass: 499.0 / 99.0



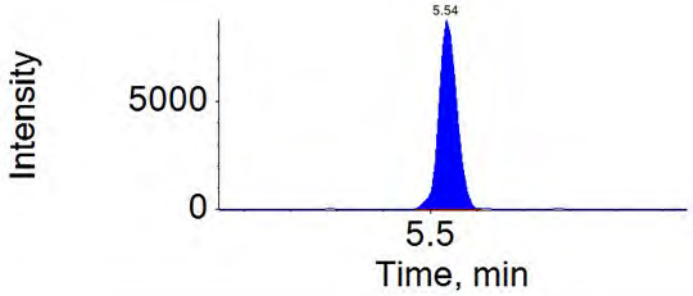
Component: PFNA
Primary Mass: 463.0 / 419.0



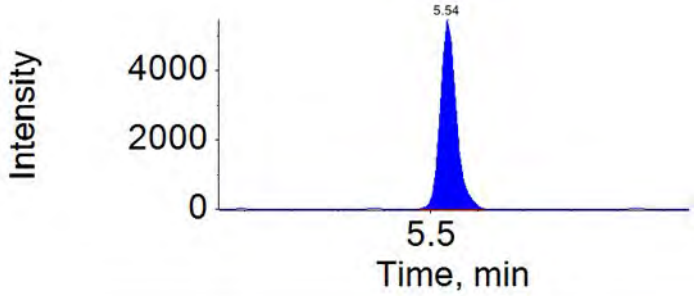
Component: PFNA_2
Secondary Mass: 463.0 / 169.0



Component: PFNS
Primary Mass: 549.0 / 80.0



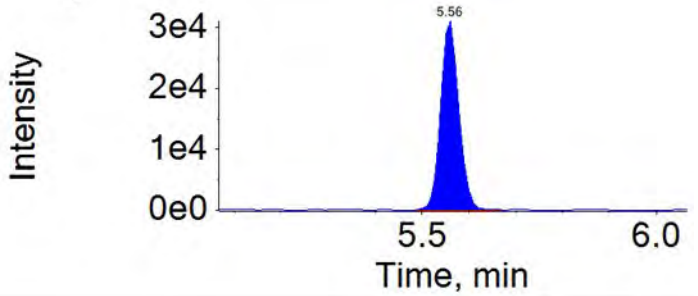
Component: PFNS_2
Secondary Mass: 549.0 / 99.0



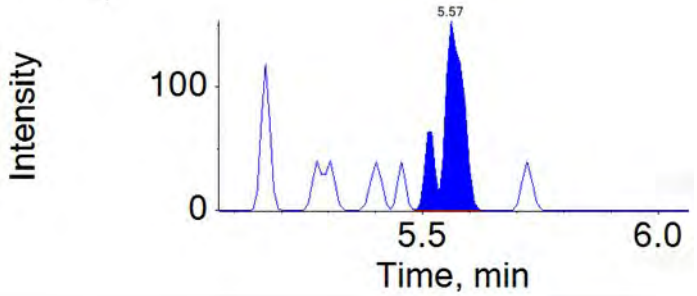
APPROVED
By MCD at 8:06 pm, 11/29/18

REVIEWED
By HMK at 9:40 am, 12/5/18

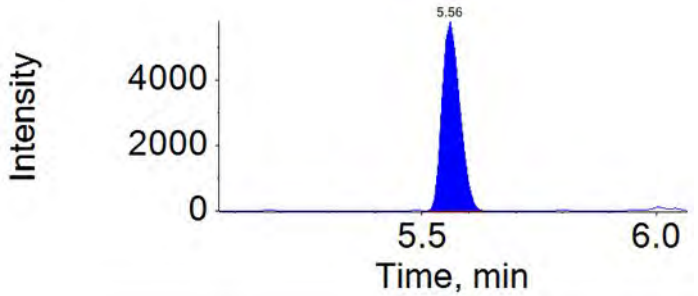
Component: PFDA
Primary Mass: 513.0 / 469.0



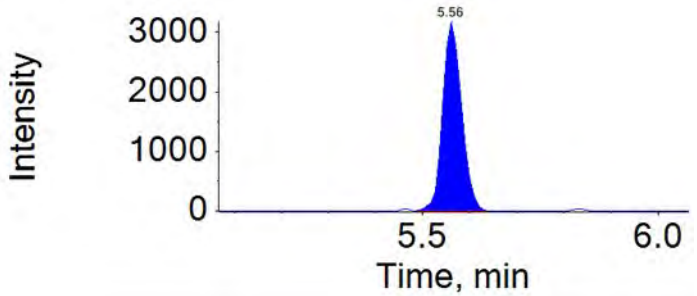
Component: PFDA_2
Secondary Mass: 513.0 / 169.0



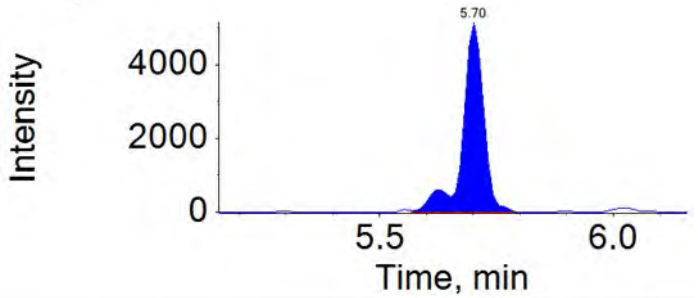
Component: 8:2-FTS
Primary Mass: 527.0 / 507.0



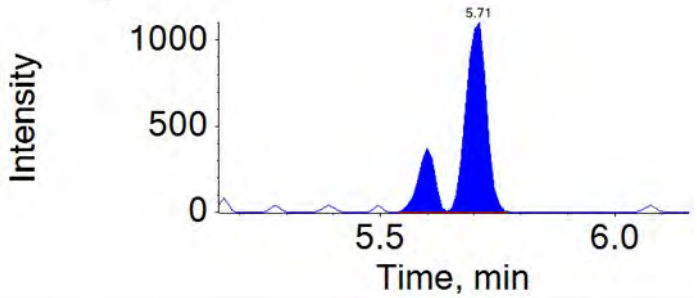
Component: 8:2-FTS_2
Secondary Mass: 527.0 / 81.0



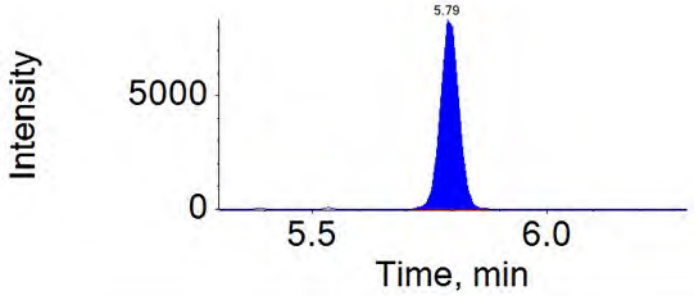
Component: NMeFOSAA
Primary Mass: 570.0 / 419.0



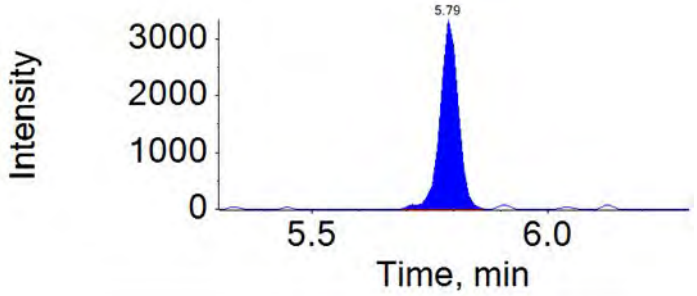
Component: NMeFOSAA_2
Secondary Mass: 570.0 / 483.0



Component: PFDS
Primary Mass: 599.0 / 80.0



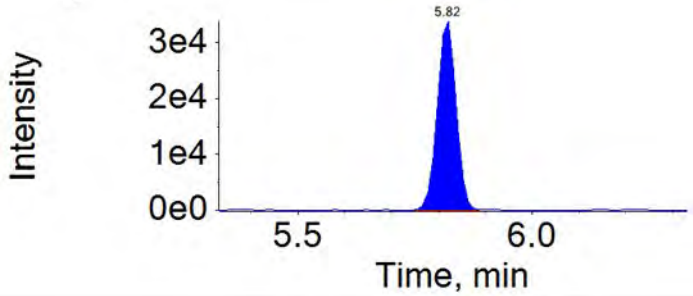
Component: PFDS_2
Secondary Mass: 599.0 / 99.0



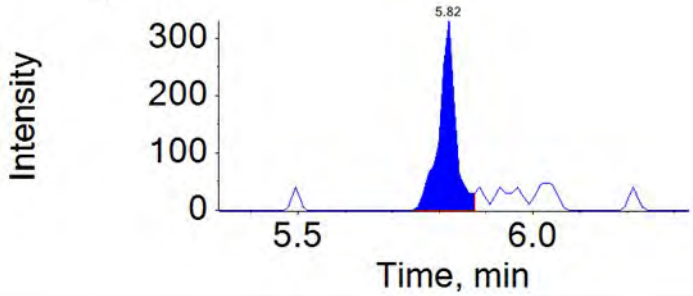
APPROVED
By MCD at 8:06 pm, 11/29/18

REVIEWED
By HMK at 9:40 am, 12/5/18

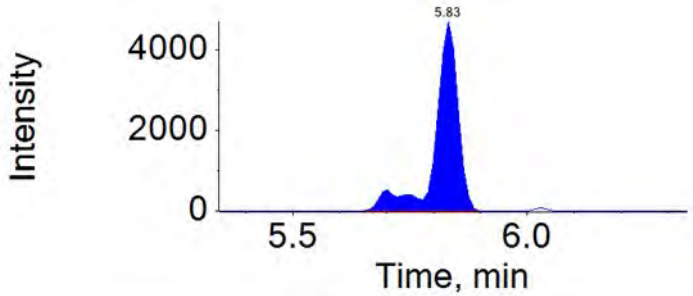
Component: PFUnDA
Primary Mass: 563.0 / 519.0



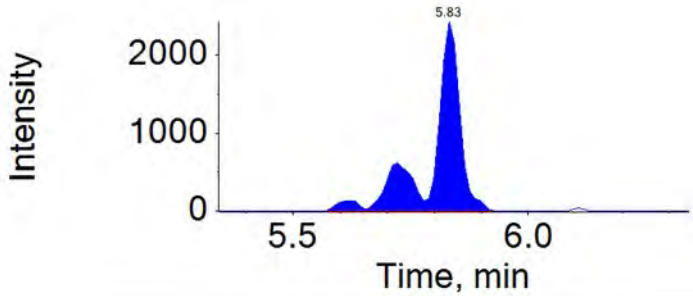
Component: PFUnDA_2
Secondary Mass: 563.0 / 169.0



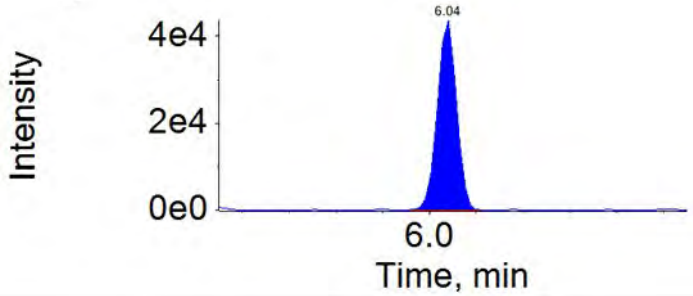
Component: NEtFOSAA
Primary Mass: 584.0 / 419.0



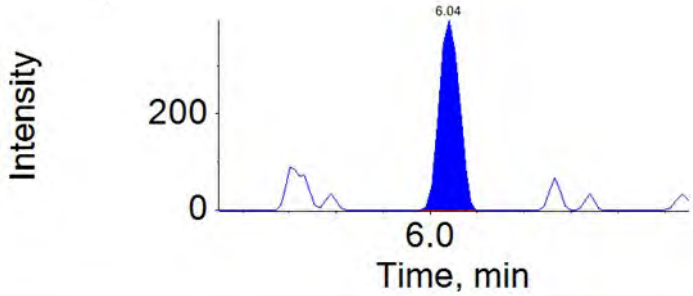
Component: NEtFOSAA_2
Secondary Mass: 584.0 / 526.0



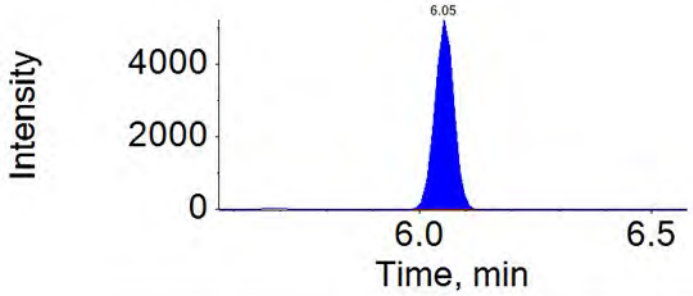
Component: PFDoDA
Primary Mass: 613.0 / 569.0



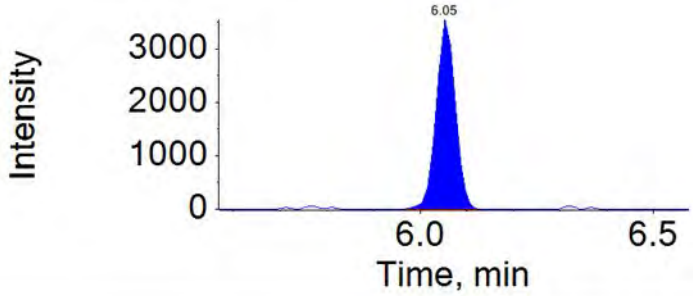
Component: PFDoDA_2
Secondary Mass: 613.0 / 169.0



Component: 10:2-FTS
Primary Mass: 627.0 / 607.0



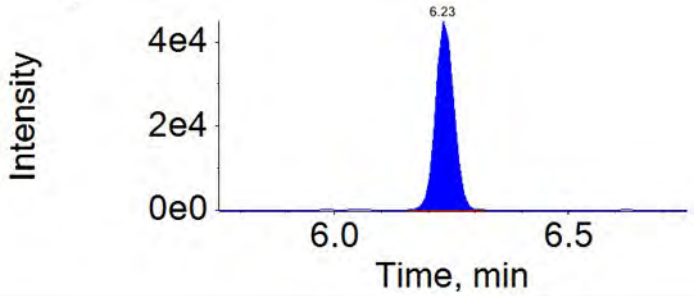
Component: 10:2-FTS_2
Secondary Mass: 627.0 / 81.0



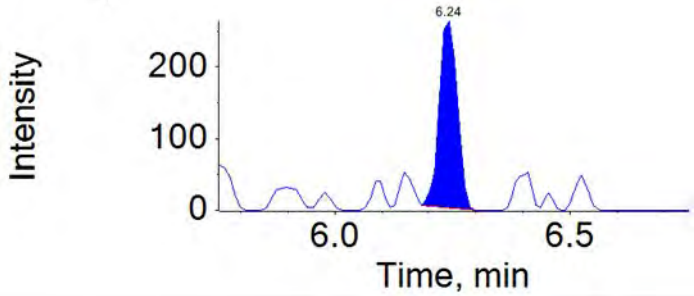
APPROVED
By MCD at 8:06 pm, 11/29/18

REVIEWED
By HMK at 9:40 am, 12/5/18

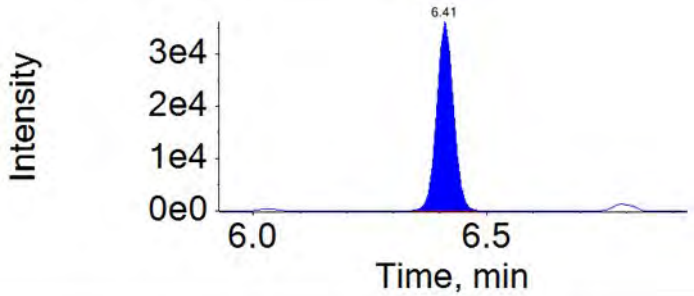
Component: PFTrDA
Primary Mass: 663.0 / 619.0



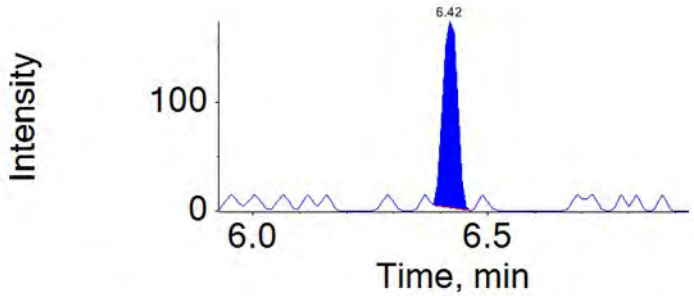
Component: PFTrDA_2
Secondary Mass: 663.0 / 169.0



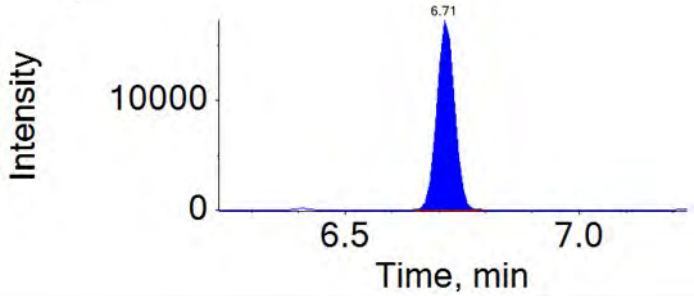
Component: PFTeDA
Primary Mass: 713.0 / 669.0



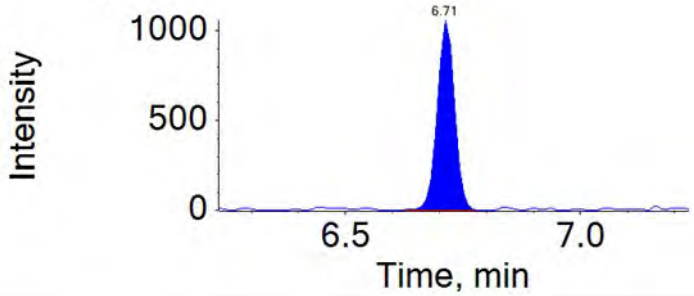
Component: PFTeDA_2
Secondary Mass: 713.0 / 169.0



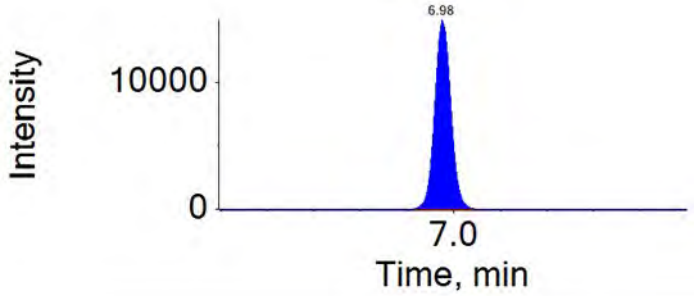
Component: PFHxDA
Primary Mass: 813.0 / 769.0



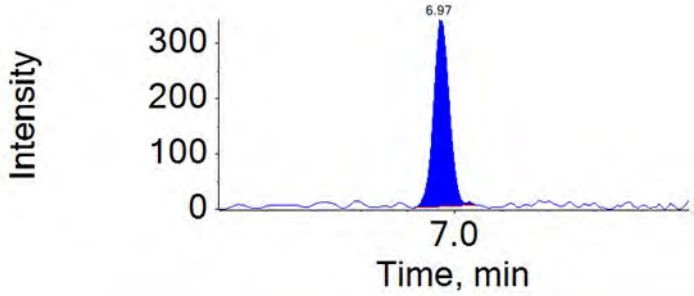
Component: PFHxDA_2
Secondary Mass: 813.0 / 169.0



Component: PFODA
Primary Mass: 913.0 / 869.0



Component: PFODA_2
Secondary Mass: 913.0 / 169.0



APPROVED
By MCD at 8:06 pm, 11/29/18

REVIEWED
By HMK at 9:40 am, 12/5/18

ICAL Name: 18NOV28DCAL
QMethod Name: 18AUG20QM

Result Table: 18NOV29DCCV1-5 11/29/2018 7:58:55 PM
Acquisition Method: 18AUG13_3uL.dam

Sample Name:	Instrument Blank			**Data File:**		18NOV29D-06.wiff
Sample ID:	methanol+labels			**Acquis Date:**		2018-11-29T10:42:38
Sample Type:	Unknown			**Instrument:**		LM27631
Vial Position:	1			**Acquis Method:**		18AUG13_3uL.dam
Injection Vol:	3.00			**Result Table:**		18NOV29DCCV1-5
QMethod File:	18AUG20QM			**ICAL Name:**		18NOV28DCAL
Batch Number:	N/A			**Operator:**		MCD7824
Sample Wt.:	1.00000			**Dilution Factor:**		1.00
Sample Vol.:	1.000			**Prep Factor:**		1.000

Injection Standard Peak Table

Injection Standard Area Reference File: 18NOV29D-05

Injection Standard Name	Inj Std Conc	Injection Std Peak Area	Rreference Injection Standard Area	Injection Std %Diff	Injection Std %Diff Limit	Injection Std %Diff OOS
13C3-PFBA	5.0	1062005.8	906425.4	17	50	
13C2-PFOA	5.0	590090.2	495984.0	19	50	
13C4-PFOS	4.8	349343.8	296261.8	18	50	
13C2-PFDA	5.0	572455.9	451203.0	27	50	

Extraction Standard Peak Table

Extraction Standard Name	Ext Std Area	Inj Std Name	Inj Std Area	Area Ratio	Ext Std Conc	Ext Std Result	Ext Std %REC	Ext Std %REC Limit	Ext Std OOS
E13C4-PFBA	1132653.7	13C3-PFBA	1062005.8	1.067	5.000	4.758	95	70-130	
E13C5-PFPeA	1128083.1	13C3-PFBA	1062005.8	1.062	5.000	4.960	99	70-130	
E13C3-PFBS	476370.7	13C3-PFBA	1062005.8	0.449	4.650	4.279	92	70-130	
E13C2-4:2-FTS	78954.9	13C2-PFOA	590090.2	0.134	4.670	4.611	99	70-130	
E13C5-PFHxA	755459.8	13C2-PFOA	590090.2	1.280	5.000	4.702	94	70-130	
E13C3-PFHxS	367272.1	13C2-PFOA	590090.2	0.622	4.730	4.878	103	70-130	
E13C4-PFHpA	595459.5	13C2-PFOA	590090.2	1.009	5.000	4.637	93	70-130	
E13C2-6:2-FTS	74720.2	13C2-PFOA	590090.2	0.127	4.750	5.301	112	70-130	
E13C8-PFOA	1117311.6	13C2-PFOA	590090.2	1.893	5.000	5.212	104	70-130	
E13C8-PFOS	362141.8	13C4-PFOS	349343.8	1.037	4.780	4.680	98	70-130	
E13C9-PFNA	736579.7	13C4-PFOS	349343.8	2.108	5.000	4.631	93	70-130	
E13C6-PFDA	971727.0	13C2-PFDA	572455.9	1.697	5.000	4.786	96	70-130	
E13C2-8:2-FTS	64213.8	13C2-PFDA	572455.9	0.112	4.790	4.821	101	70-130	
E13C8-PFOSA	703815.0	13C2-PFDA	572455.9	1.229	5.000	4.511	90	70-130	
Ed3-NMeFOSAA	270439.1	13C2-PFDA	572455.9	0.472	5.000	5.998	120	70-130	
E13C7-PFUnDA	658462.5	13C2-PFDA	572455.9	1.150	5.000	4.861	97	70-130	
Ed5-NEtFOSAA	166412.1	13C2-PFDA	572455.9	0.291	5.000	5.179	104	70-130	
E13C2-PFDoDA	1273913.7	13C2-PFDA	572455.9	2.225	5.000	4.676	94	70-130	
Ed7-NMePFOSAE	305138.6	13C2-PFDA	572455.9	0.533	5.000	4.607	92	70-130	
Ed3-NMePFOSA	98756.0	13C2-PFDA	572455.9	0.173	5.000	4.669	93	70-130	
Ed9-NEtPFOSAE	275015.1	13C2-PFDA	572455.9	0.480	5.000	4.871	97	70-130	
Ed5-NEtPFOSA	83472.3	13C2-PFDA	572455.9	0.146	5.000	5.067	101	70-130	
E13C2-PFTeDA	926470.4	13C2-PFDA	572455.9	1.618	5.000	4.478	90	70-130	

APPROVED
By MCD at 8:06 pm, 11/29/18

REVIEWED
By HMK at 9:40 am, 12/5/18

ICAL Name: 18NOV28DCAL **Result Table:** 18NOV29DCCV1-5 11/29/2018 7:58:55 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

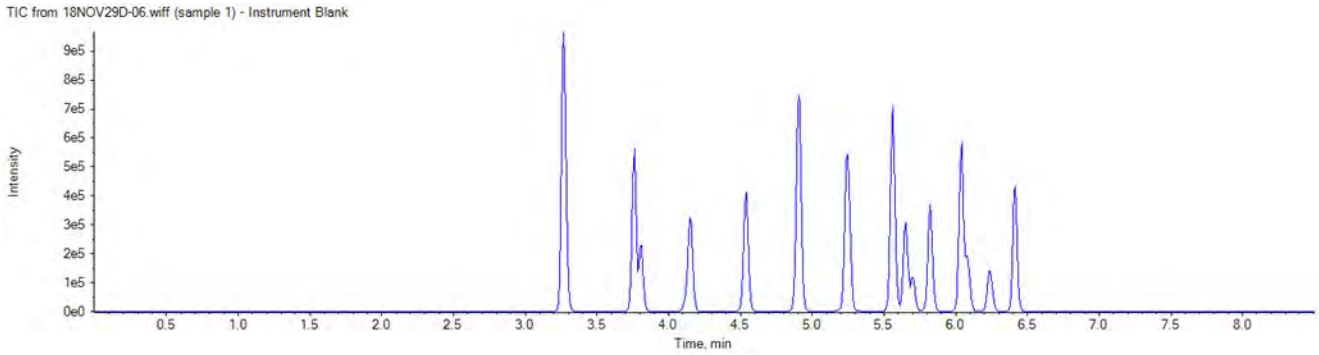
Analyte Quantitation Peak Table

Sample Name: Instrument Blank **Instrument Name:** LM27631 **File Name:** 18NOV29D-06.wiff

Sample Wt	Sample Vol	Dilution Factor	PrepFactor
1.00000	1.000	1.00	1.000

Analyte Name	RT	RRT	Analyte Area Response	E	Int Typ	ES Name	ES RT	ES Area Response	Area Ratio	Sample Result (ng/g)
PFBA	N/A	N/A	N/A		A	13C4-PFBA	3.27	1132653.7	N/A	
PFPeA	N/A	N/A	N/A		A	13C5-PFPeA	3.76	1128083.1	N/A	
PFBS	N/A	N/A	N/A		A	13C3-PFBS	3.81	476370.7	N/A	
4:2-FTS	N/A	N/A	N/A		A	13C2-4:2-FTS	4.12	78954.9	N/A	
PFHxA	N/A	N/A	N/A		A	13C5-PFHxA	4.15	755459.8	N/A	
PFPeS	N/A	N/A	N/A		A	13C3-PFBS	3.81	476370.7	N/A	
PFHpA	N/A	N/A	N/A		A	13C4-PFHpA	4.54	595459.5	N/A	
PFHxS	N/A	N/A	N/A		A	13C3-PFHxS	4.54	367272.1	N/A	
6:2-FTS	N/A	N/A	N/A		A	13C2-6:2-FTS	4.90	74720.2	N/A	
PFHpS	N/A	N/A	N/A		A	13C3-PFHxS	4.54	367272.1	N/A	
PFOA	N/A	N/A	N/A		A	13C8-PFOA	4.91	1117311.6	N/A	
PFOS	N/A	N/A	N/A		A	13C8-PFOS	5.24	362141.8	N/A	
PFNA	N/A	N/A	N/A		A	13C9-PFNA	5.25	736579.7	N/A	
PFNS	N/A	N/A	N/A		A	13C8-PFOS	5.24	362141.8	N/A	
PFDA	N/A	N/A	N/A		A	13C6-PFDA	5.56	971727.0	N/A	
8:2-FTS	N/A	N/A	N/A		A	13C2-8:2-FTS	5.57	64213.8	N/A	
PFOSA	N/A	N/A	N/A		A	13C8-PFOSA	5.65	703815.0	N/A	
NMeFOSAA	N/A	N/A	N/A		A	d3-NMeFOSAA	5.70	270439.1	N/A	
PFDS	N/A	N/A	N/A		A	13C8-PFOS	5.24	362141.8	N/A	
PFUnDA	N/A	N/A	N/A		A	13C7-PFUnDA	5.82	658462.5	N/A	
NEtFOSAA	N/A	N/A	N/A		A	d5-NEtFOSAA	5.83	166412.1	N/A	
PFDoDA	N/A	N/A	N/A		A	13C2-PFDoDA	6.04	1273913.7	N/A	
10:2-FTS	N/A	N/A	N/A		A	13C2-8:2-FTS	5.57	64213.8	N/A	
NMePFOSAE	N/A	N/A	N/A		A	d7-NMePFOSAE	6.08	305138.6	N/A	
NMePFOSA	N/A	N/A	N/A		A	d3-NMePFOSA	6.09	98756.0	N/A	
PFDoS	N/A	N/A	N/A		A	13C8-PFOS	5.24	362141.8	N/A	
NEtPFOSAE	N/A	N/A	N/A		A	d9-NEtPFOSAE	6.23	275015.1	N/A	
NEtPFOSA	N/A	N/A	N/A		A	d5-NEtPFOSA	6.25	83472.3	N/A	
PFTrDA	N/A	N/A	N/A		A	13C2-PFDoDA	6.04	1273913.7	N/A	
PFTeDA	N/A	N/A	N/A		A	13C2-PFTeDA	6.41	926470.4	N/A	
PFHxDA	N/A	N/A	N/A		A	13C2-PFTeDA	6.41	926470.4	N/A	
PFODA	N/A	N/A	N/A		A	13C2-PFTeDA	6.41	926470.4	N/A	

Total Ion Chromatogram

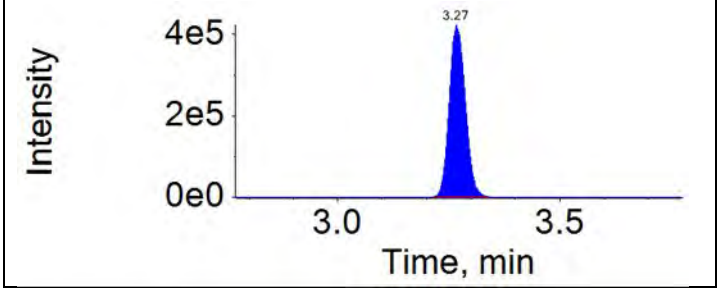


APPROVED
By MCD at 8:06 pm, 11/29/18

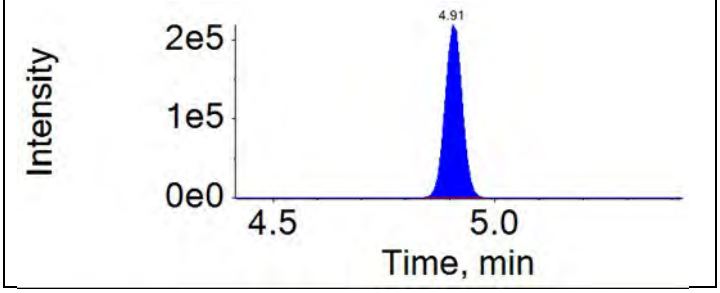
REVIEWED
By HMK at 9:40 am, 12/5/18

ICAL Name: 18NOV28DCAL **Result Table:** 18NOV29DCCV1-5 11/29/2018 7:58:55 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

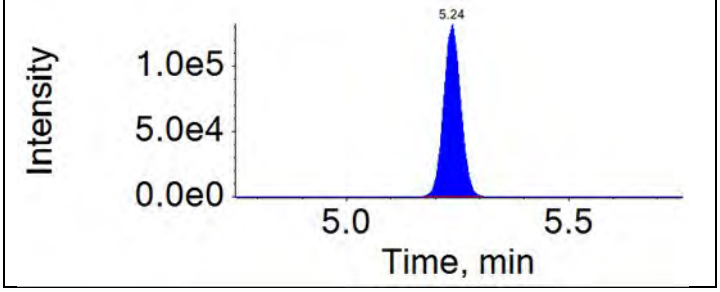
Injection Standard: 13C3-PFBA
216.0 / 172.0



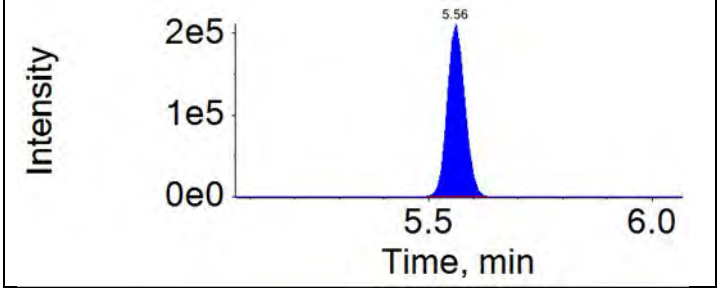
Injection Standard: 13C2-PFOA
415.0 / 370.0



Injection Standard: 13C4-PFOS
503.0 / 80.0

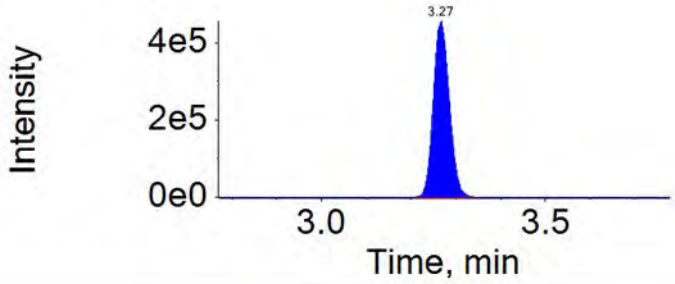


Injection Standard: 13C2-PFDA
515.0 / 470.0

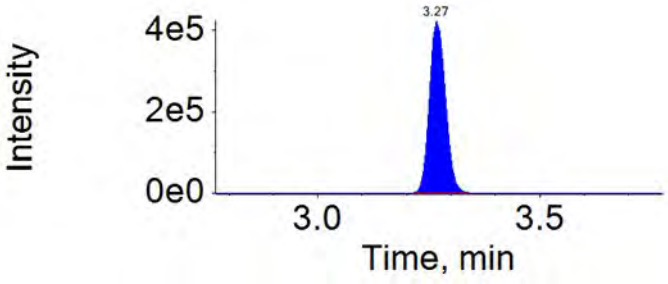


ICAL Name: 18NOV28DCAL **Result Table:** 18NOV29DCCV1-5 11/29/2018 7:58:55 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

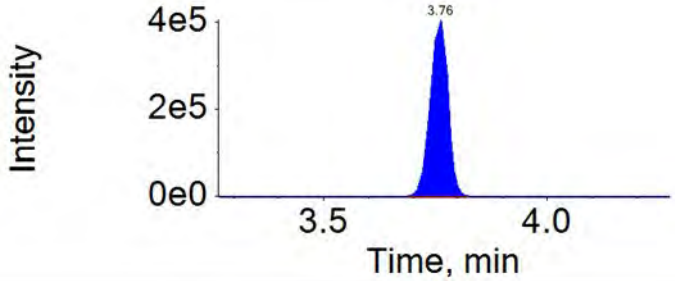
Extraction Standard: E13C4-PFBA
217.0 / 172.0



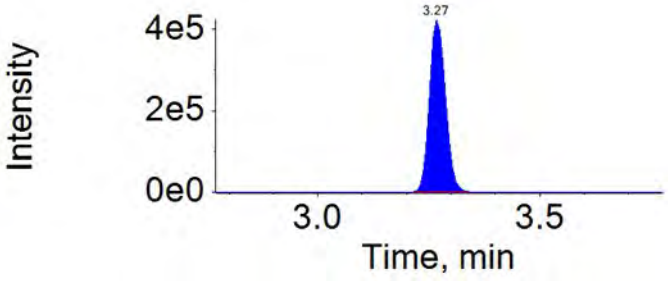
Injection Standard: 13C3-PFBA
216.0 / 172.0



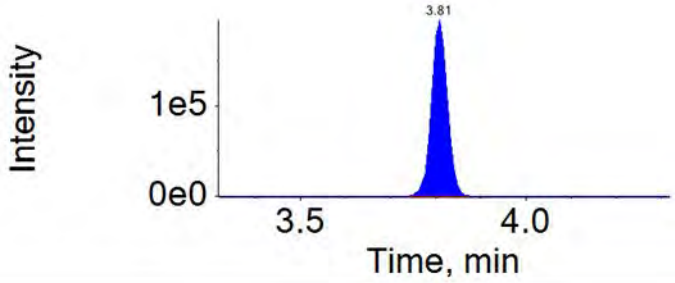
Extraction Standard: E13C5-PFPeA
268.0 / 223.0



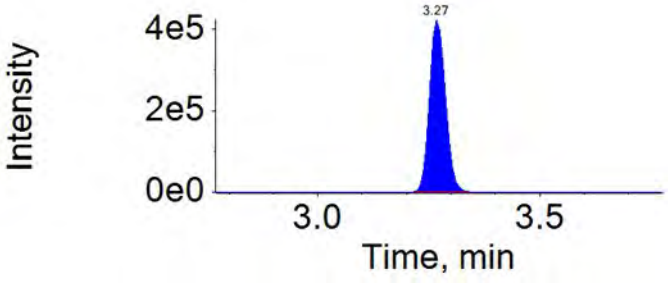
Injection Standard: 13C3-PFBA
216.0 / 172.0



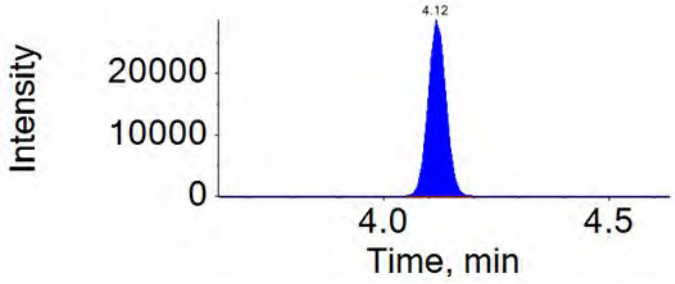
Extraction Standard: E13C3-PFBS
302.0 / 80.0



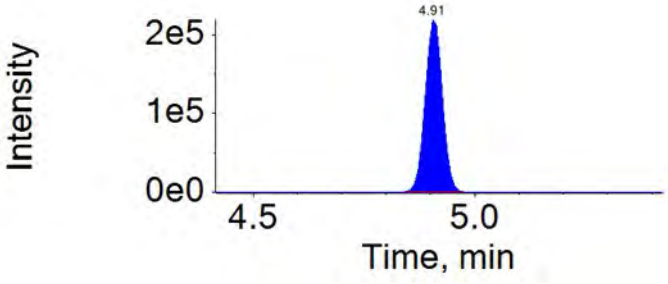
Injection Standard: 13C3-PFBA
216.0 / 172.0



Extraction Standard: E13C2-4:2-FTS
329.0 / 81.0



Injection Standard: 13C2-PFOA
415.0 / 370.0

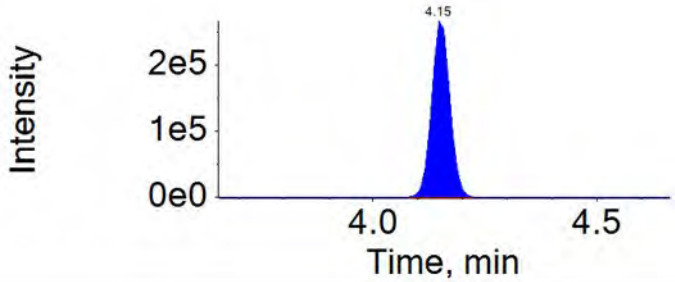


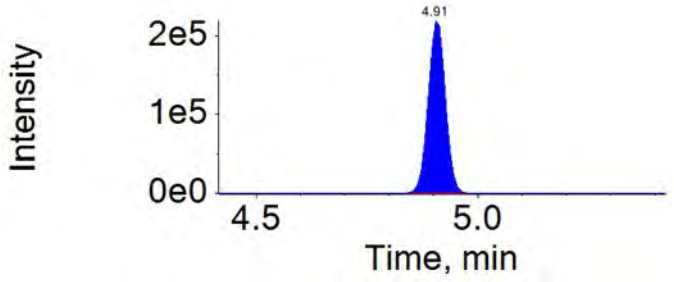
APPROVED
By MCD at 8:06 pm, 11/29/18

REVIEWED
By HMK at 9:40 am, 12/5/18

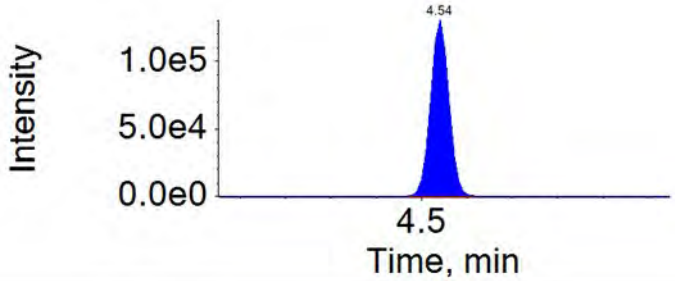
ICAL Name: 18NOV28DCAL **Result Table:** 18NOV29DCCV1-5 11/29/2018 7:58:55 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

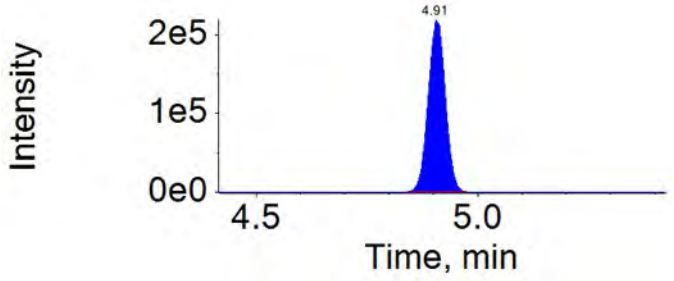
Extraction Standard: E13C5-PFHxA	Injection Standard: 13C2-PFOA
318.0 / 273.0	415.0 / 370.0



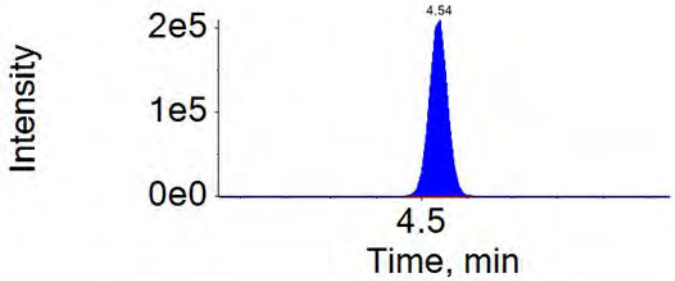


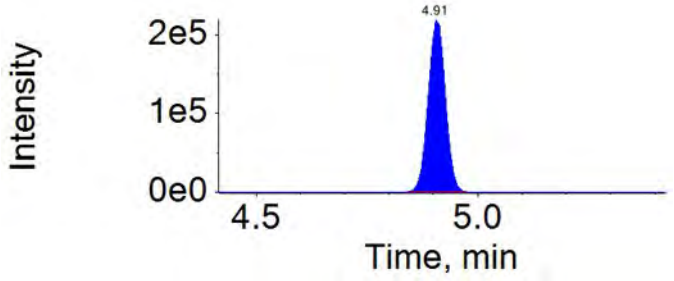
Extraction Standard: E13C3-PFHxS	Injection Standard: 13C2-PFOA
402.0 / 80.0	415.0 / 370.0



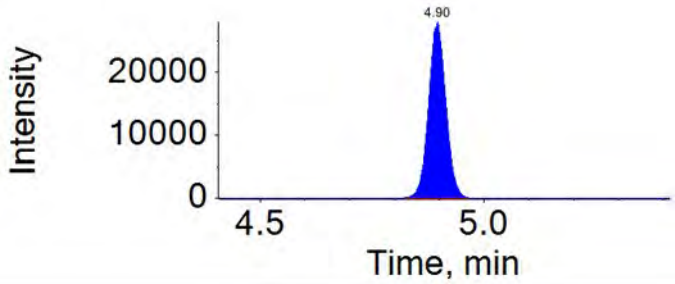


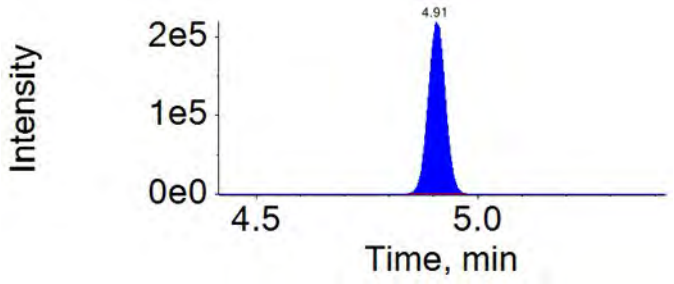
Extraction Standard: E13C4-PFHpA	Injection Standard: 13C2-PFOA
367.0 / 322.0	415.0 / 370.0





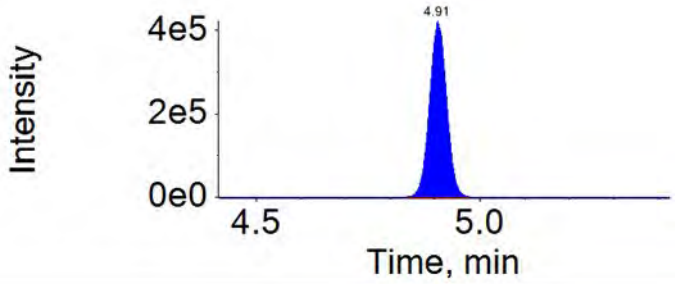
Extraction Standard: E13C2-6:2-FTS	Injection Standard: 13C2-PFOA
429.0 / 81.0	415.0 / 370.0



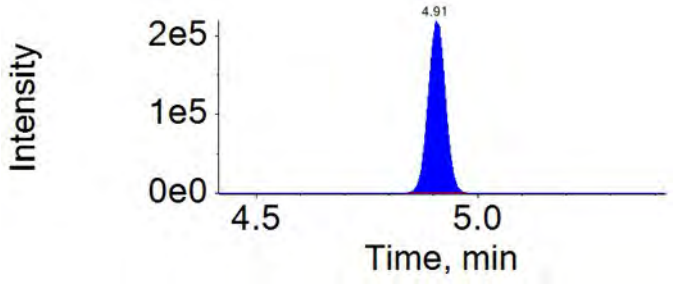


ICAL Name: 18NOV28DCAL **Result Table:** 18NOV29DCCV1-5 11/29/2018 7:58:55 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

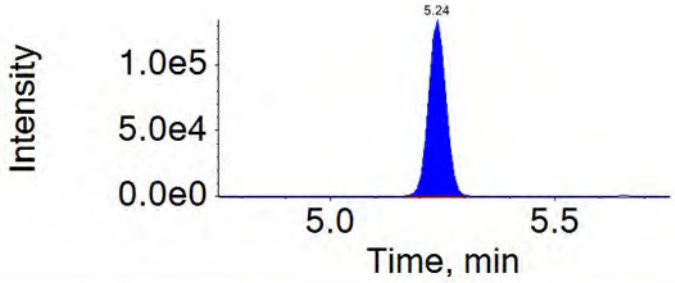
Extraction Standard: E13C8-PFOA
421.0 / 376.0



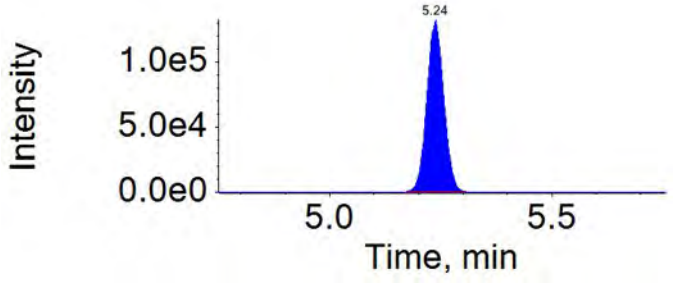
Injection Standard: 13C2-PFOA
415.0 / 370.0



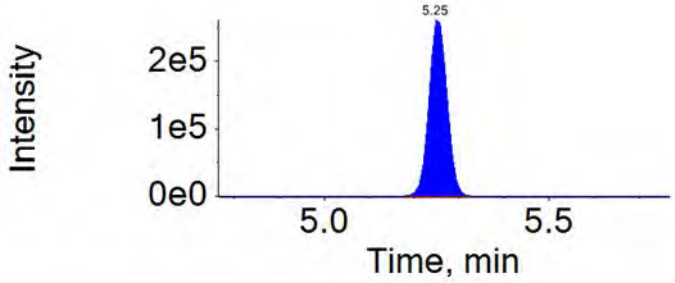
Extraction Standard: E13C8-PFOS
507.0 / 80.0



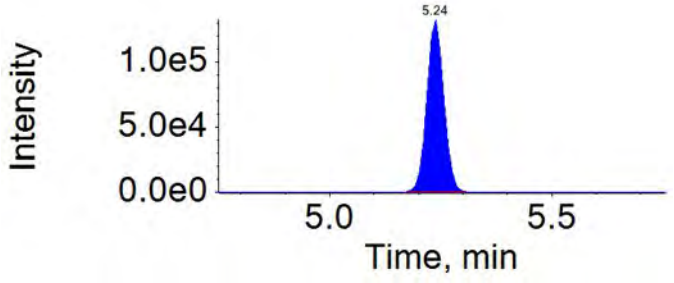
Injection Standard: 13C4-PFOS
503.0 / 80.0



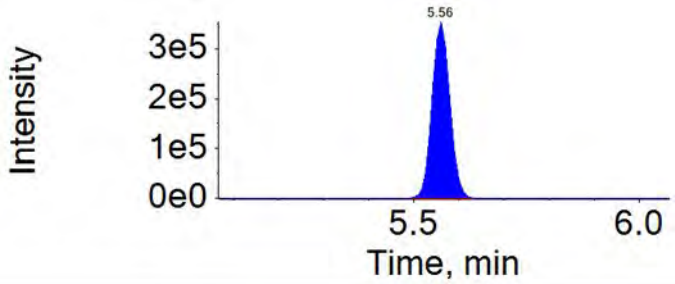
Extraction Standard: E13C9-PFNA
472.0 / 427.0



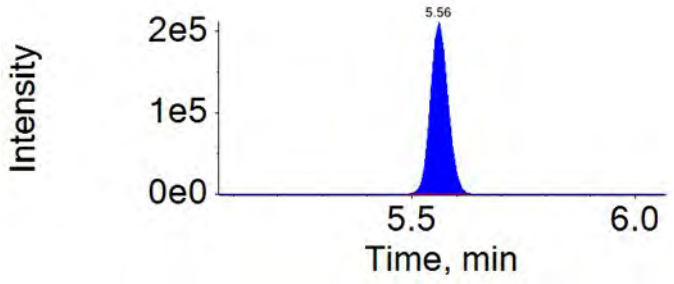
Injection Standard: 13C4-PFOS
503.0 / 80.0



Extraction Standard: E13C6-PFDA
519.0 / 474.0



Injection Standard: 13C2-PFDA
515.0 / 470.0

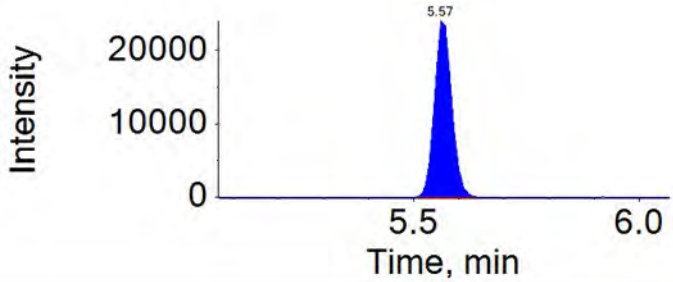


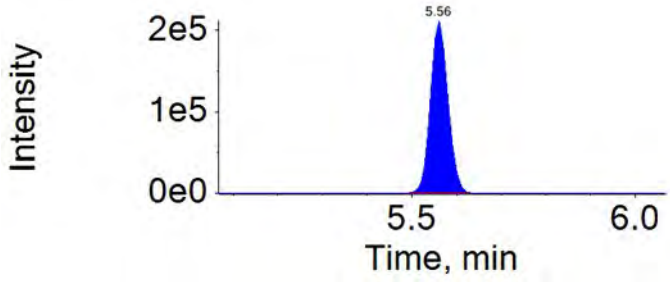
APPROVED
By MCD at 8:06 pm, 11/29/18

REVIEWED
By HMK at 9:40 am, 12/5/18

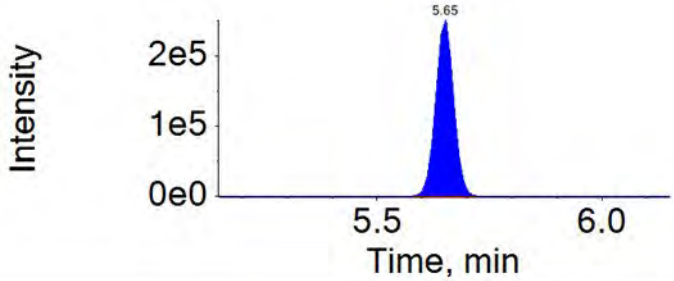
ICAL Name: 18NOV28DCAL **Result Table:** 18NOV29DCCV1-5 11/29/2018 7:58:55 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

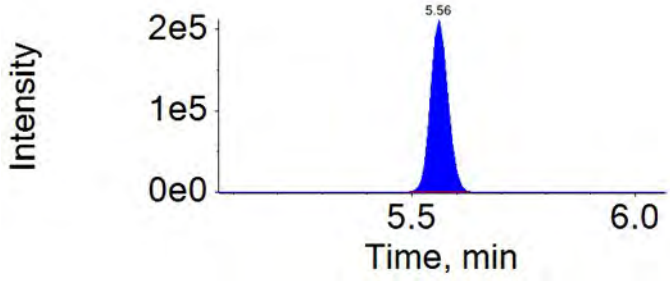
Extraction Standard: E13C2-8:2-FTS	Injection Standard: 13C2-PFDA
529.0 / 81.0	515.0 / 470.0



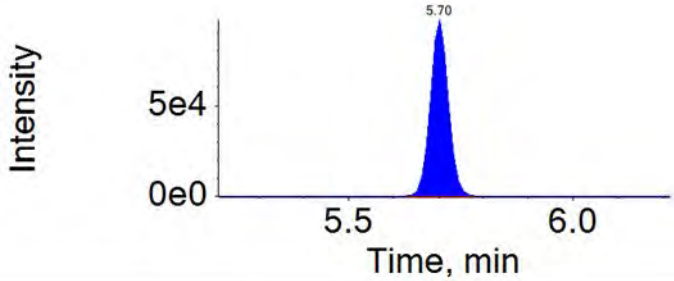


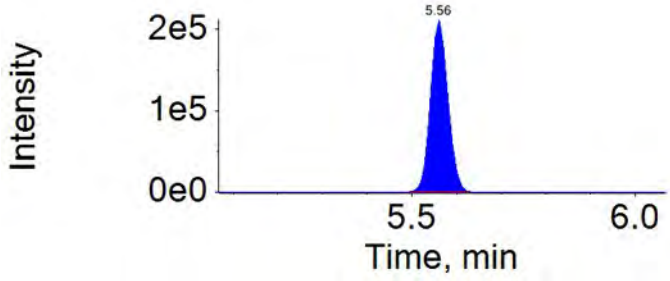
Extraction Standard: E13C8-PFOSA	Injection Standard: 13C2-PFDA
506.0 / 78.0	515.0 / 470.0



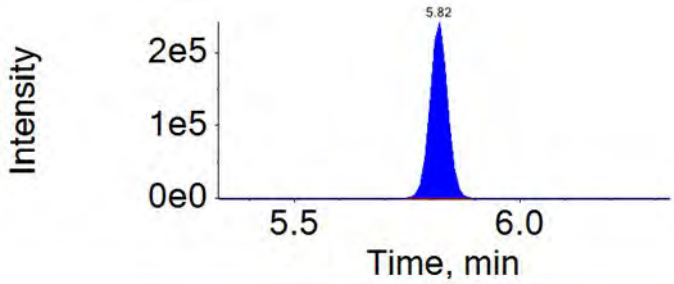


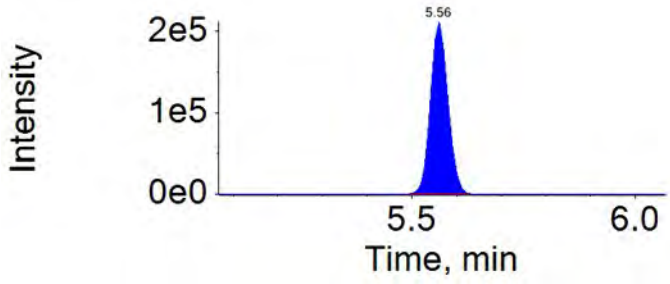
Extraction Standard: Ed3-NMeFOSAA	Injection Standard: 13C2-PFDA
573.0 / 419.0	515.0 / 470.0





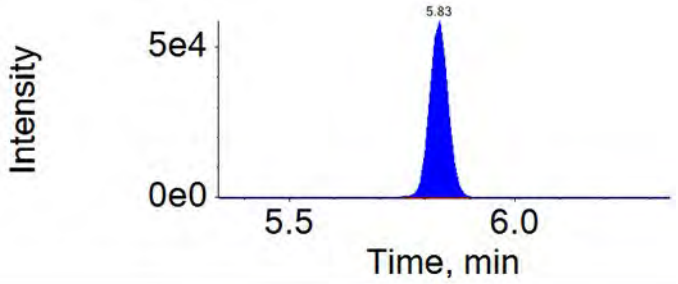
Extraction Standard: E13C7-PFUnDA	Injection Standard: 13C2-PFDA
570.0 / 525.0	515.0 / 470.0



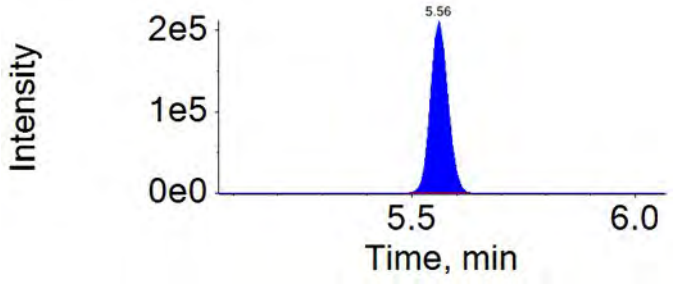


ICAL Name: 18NOV28DCAL **Result Table:** 18NOV29DCCV1-5 11/29/2018 7:58:55 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

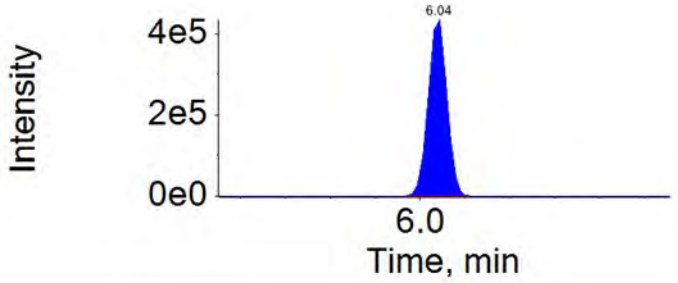
Extraction Standard: Ed5-NEtFOSAA
589.0 / 419.0



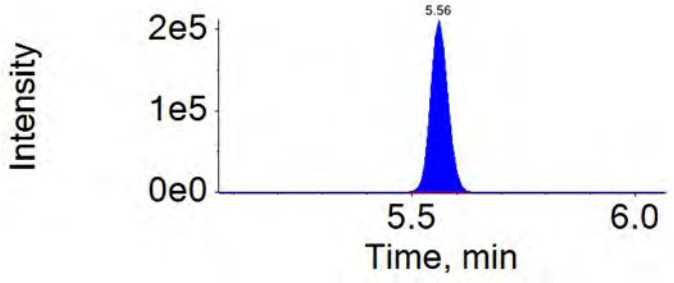
Injection Standard: 13C2-PFDA
515.0 / 470.0



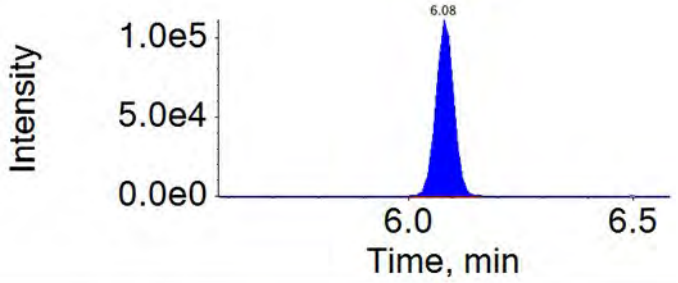
Extraction Standard: E13C2-PFDoDA
615.0 / 570.0



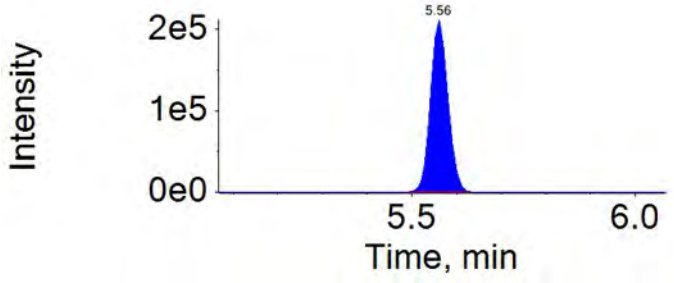
Injection Standard: 13C2-PFDA
515.0 / 470.0



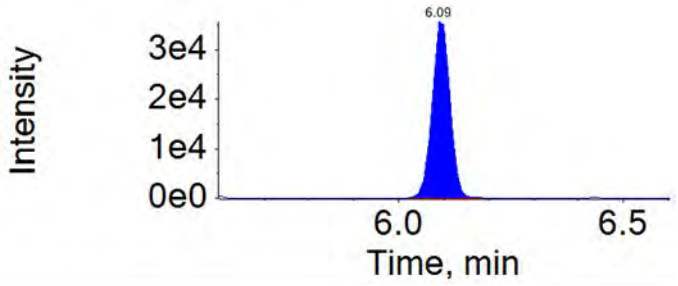
Extraction Standard: Ed7-NMePFOSAE
623.0 / 59.0



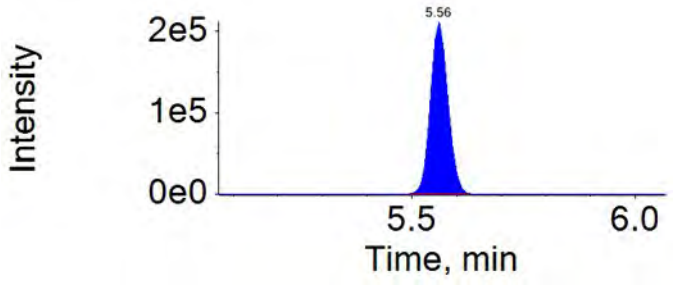
Injection Standard: 13C2-PFDA
515.0 / 470.0



Extraction Standard: Ed3-NMePFOSA
515.0 / 169.0

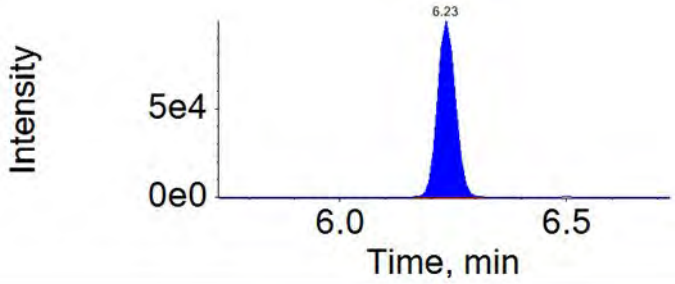


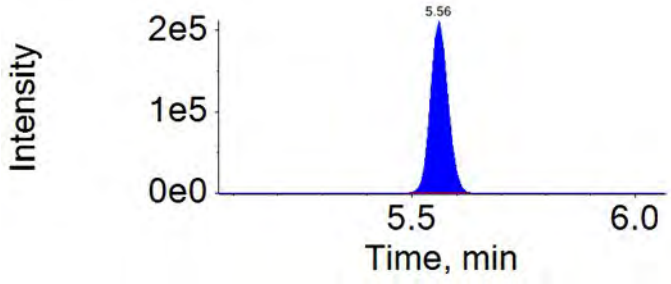
Injection Standard: 13C2-PFDA
515.0 / 470.0



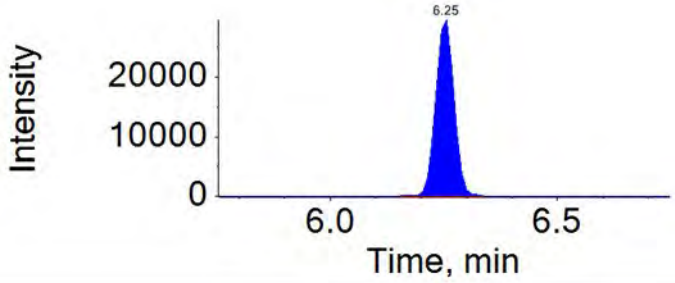
ICAL Name: 18NOV28DCAL **Result Table:** 18NOV29DCCV1-5 11/29/2018 7:58:55 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

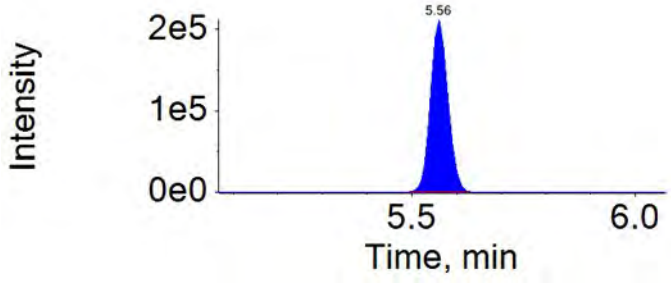
Extraction Standard: Ed9-NEtPFOSAE	Injection Standard: 13C2-PFDA
639.0 / 59.0	515.0 / 470.0



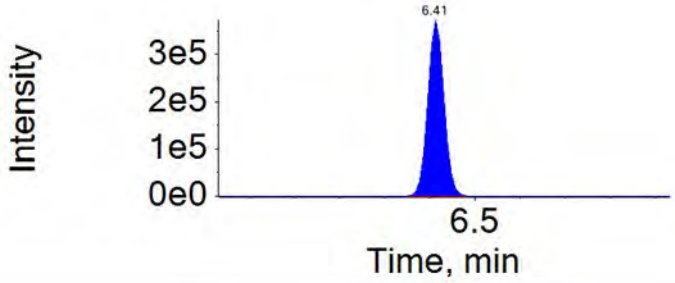


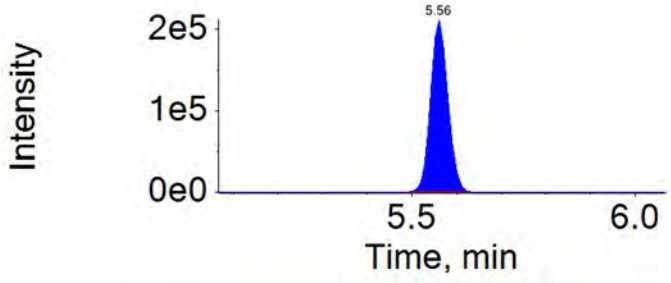
Extraction Standard: Ed5-NEtPFOSA	Injection Standard: 13C2-PFDA
531.0 / 169.0	515.0 / 470.0





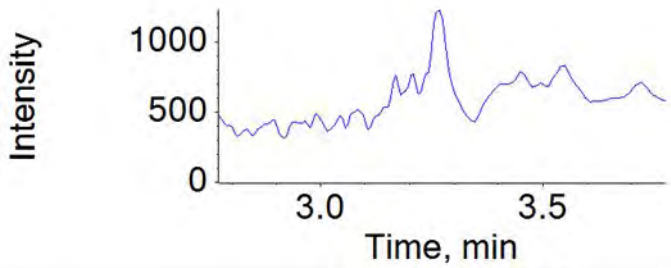
Extraction Standard: E13C2-PFTeDA	Injection Standard: 13C2-PFDA
715.0 / 670.0	515.0 / 470.0



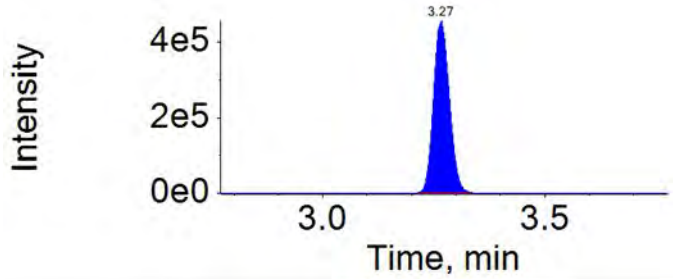


ICAL Name: 18NOV28DCAL **Result Table:** 18NOV29DCCV1-5 11/29/2018 7:58:55 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

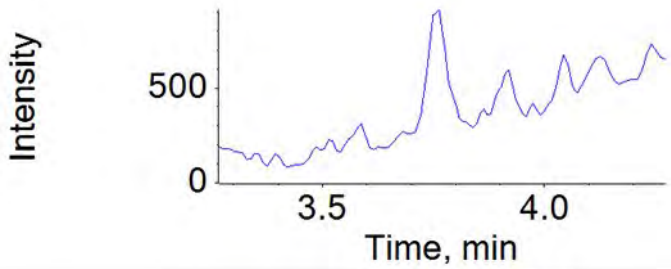
Analyte: PFBA
213.0 / 169.0



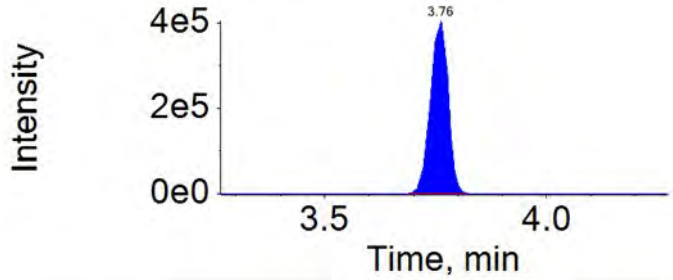
Extraction Standard: 13C4-PFBA
217.0 / 172.0



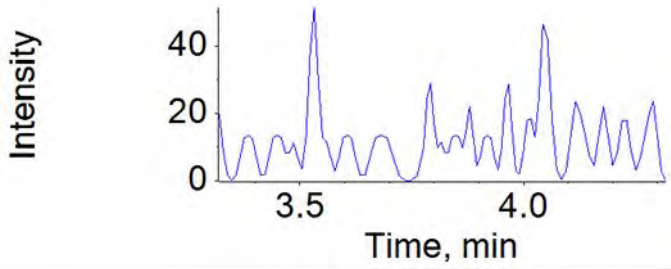
Analyte: PFPeA
263.0 / 219.0



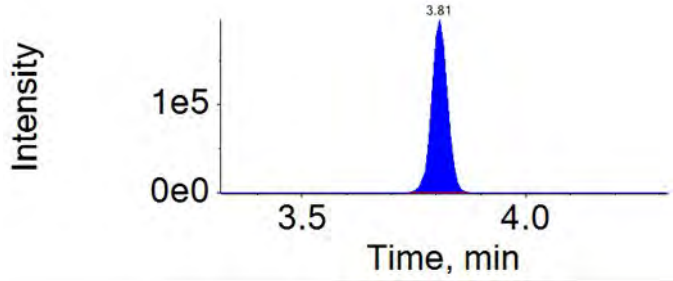
Extraction Standard: 13C5-PFPeA
268.0 / 223.0



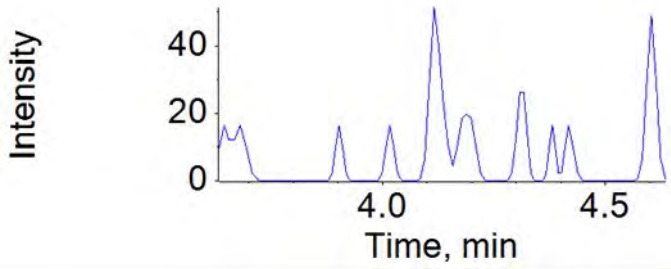
Analyte: PFBS
299.0 / 80.0



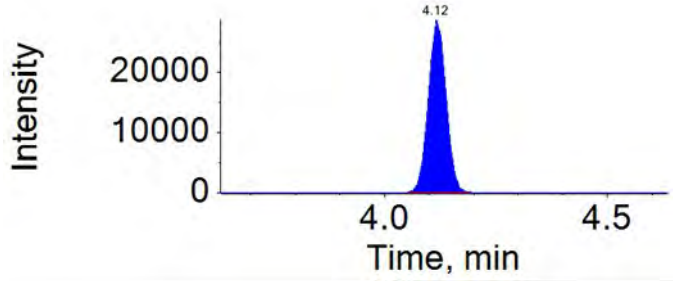
Extraction Standard: 13C3-PFBS
302.0 / 80.0



Analyte: 4:2-FTS
327.0 / 307.0



Extraction Standard: 13C2-4:2-FTS
329.0 / 81.0

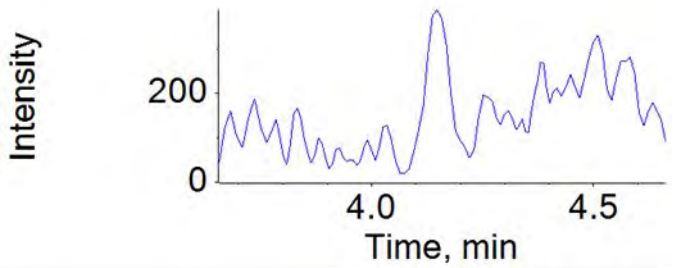


APPROVED
By MCD at 8:06 pm, 11/29/18

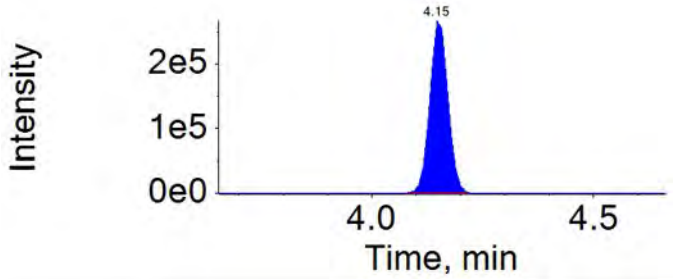
REVIEWED
By HMK at 9:40 am, 12/5/18

ICAL Name: 18NOV28DCAL **Result Table:** 18NOV29DCCV1-5 11/29/2018 7:58:55 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

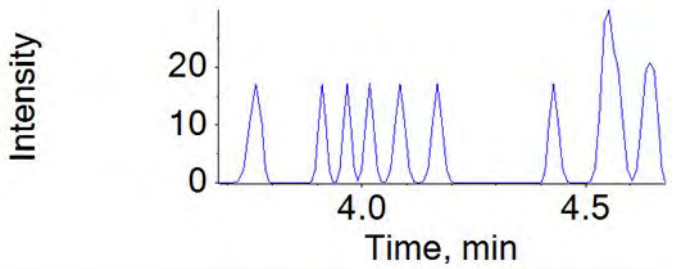
Analyte: PFHxA
313.0 / 269.0



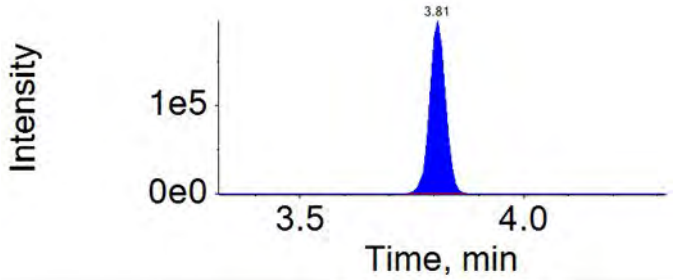
Extraction Standard: 13C5-PFHxA
318.0 / 273.0



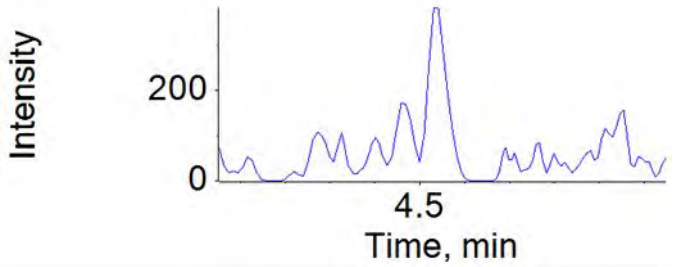
Analyte: PFPeS
349.0 / 80.0



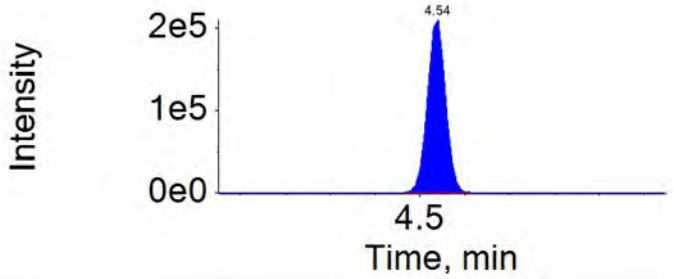
Extraction Standard: 13C3-PFBS
302.0 / 80.0



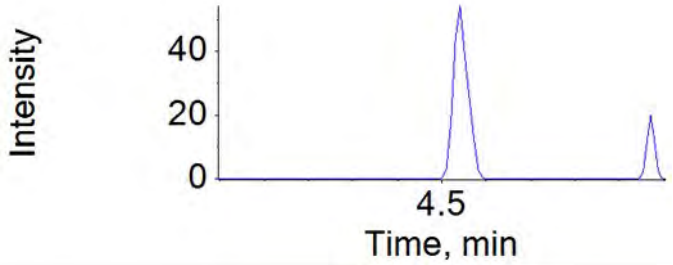
Analyte: PFHpA
363.0 / 319.0



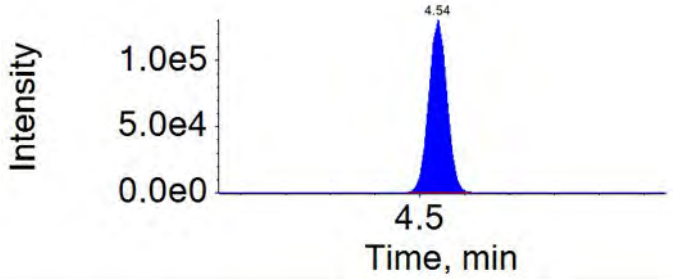
Extraction Standard: 13C4-PFHpA
367.0 / 322.0



Analyte: PFHxS
399.0 / 80.0



Extraction Standard: 13C3-PFHxS
402.0 / 80.0

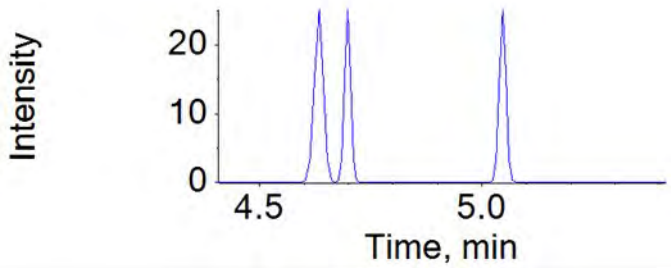


APPROVED
By MCD at 8:06 pm, 11/29/18

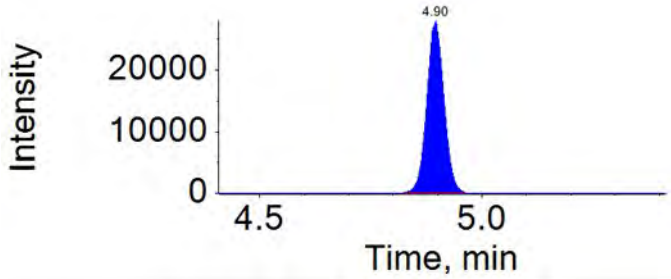
REVIEWED
By HMK at 9:40 am, 12/5/18

ICAL Name: 18NOV28DCAL **Result Table:** 18NOV29DCCV1-5 11/29/2018 7:58:55 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

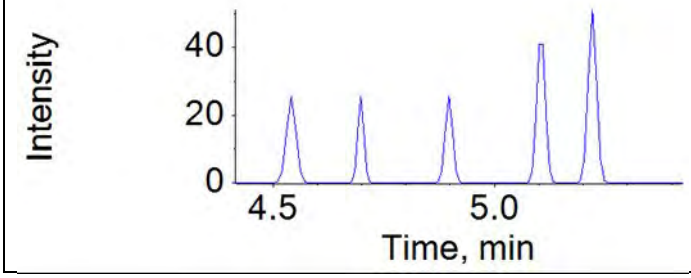
Analyte: 6:2-FTS
427.0 / 407.0



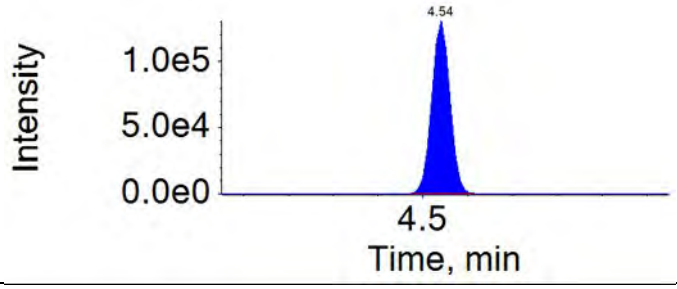
Extraction Standard: 13C2-6:2-FTS
429.0 / 81.0



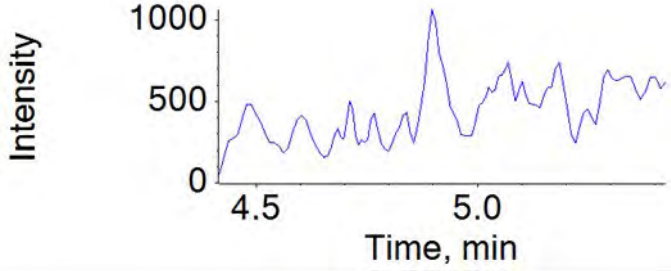
Analyte: PFHpS
449.0 / 80.0



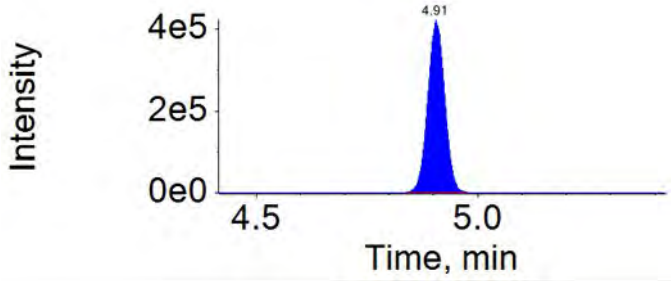
Extraction Standard: 13C3-PFHxS
402.0 / 80.0



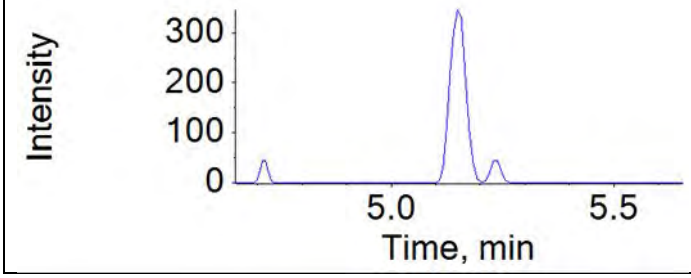
Analyte: PFOA
413.0 / 369.0



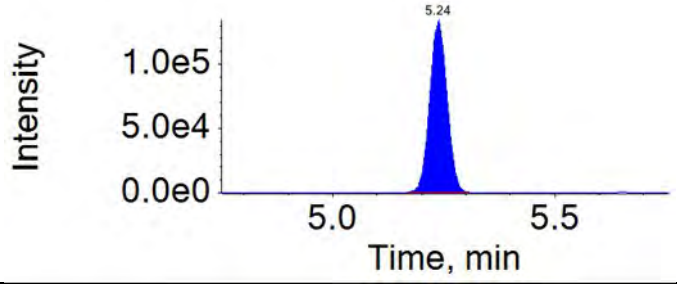
Extraction Standard: 13C8-PFOA
421.0 / 376.0



Analyte: PFOS
499.0 / 80.0



Extraction Standard: 13C8-PFOS
507.0 / 80.0

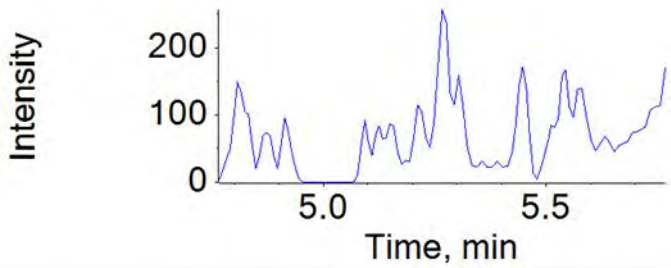


APPROVED
By MCD at 8:06 pm, 11/29/18

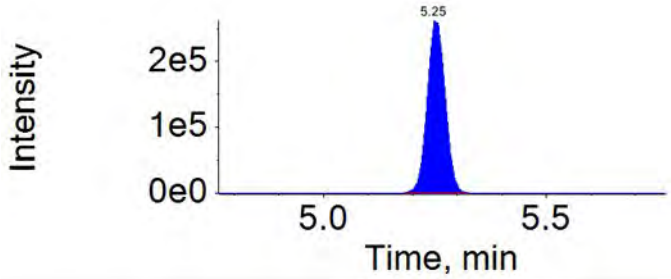
REVIEWED
By HMK at 9:40 am, 12/5/18

ICAL Name: 18NOV28DCAL **Result Table:** 18NOV29DCCV1-5 11/29/2018 7:58:55 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

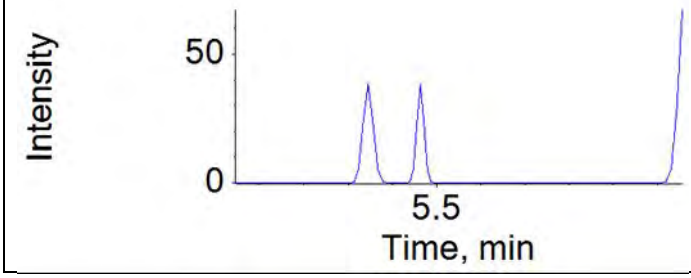
Analyte: PFNA
463.0 / 419.0



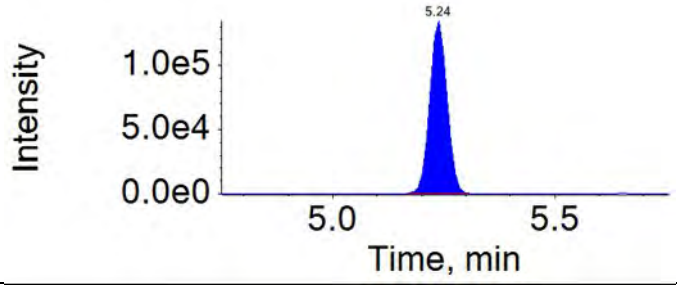
Extraction Standard: 13C9-PFNA
472.0 / 427.0



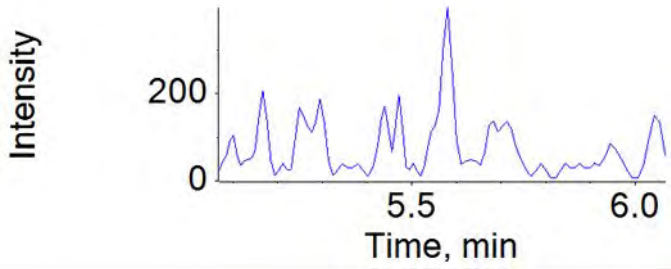
Analyte: PFNS
549.0 / 80.0



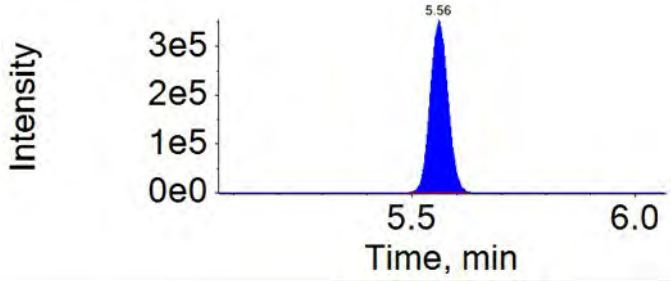
Extraction Standard: 13C8-PFOS
507.0 / 80.0



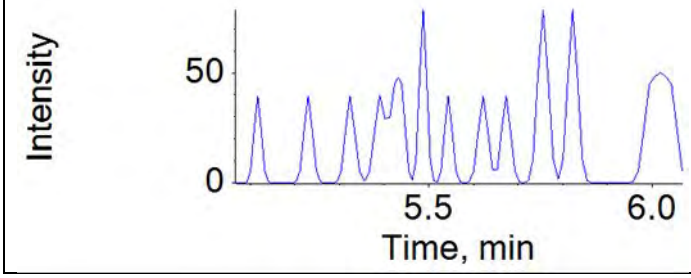
Analyte: PFDA
513.0 / 469.0



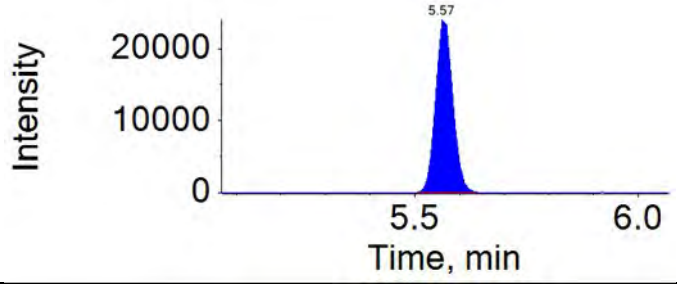
Extraction Standard: 13C6-PFDA
519.0 / 474.0



Analyte: 8:2-FTS
527.0 / 507.0



Extraction Standard: 13C2-8:2-FTS
529.0 / 81.0

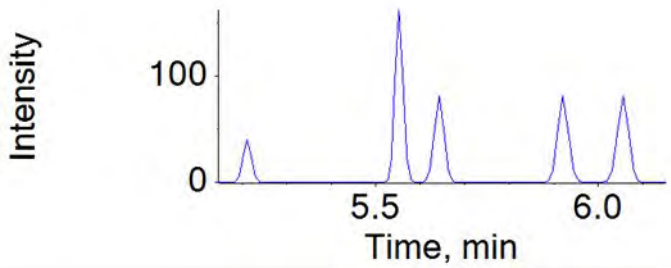


APPROVED
By MCD at 8:06 pm, 11/29/18

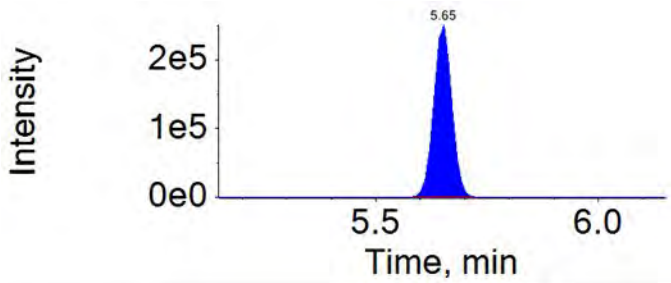
REVIEWED
By HMK at 9:40 am, 12/5/18

ICAL Name: 18NOV28DCAL **Result Table:** 18NOV29DCCV1-5 11/29/2018 7:58:55 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

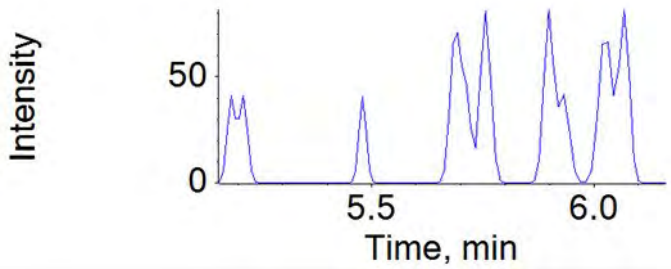
Analyte: PFOSA
498.0 / 78.0



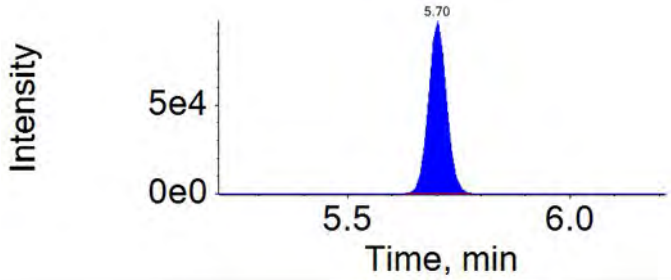
Extraction Standard: 13C8-PFOSA
506.0 / 78.0



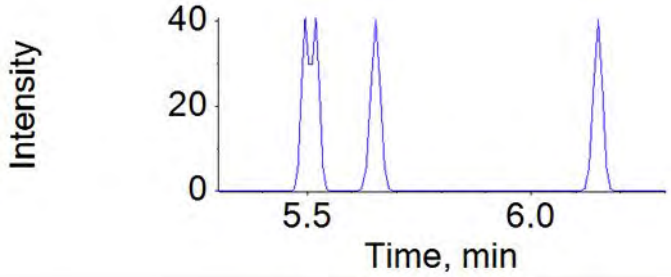
Analyte: NMeFOSAA
570.0 / 419.0



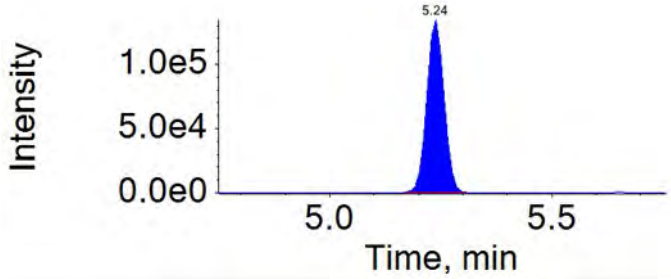
Extraction Standard: d3-NMeFOSAA
573.0 / 419.0



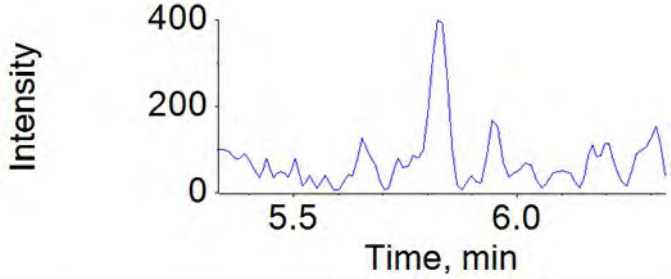
Analyte: PFDS
599.0 / 80.0



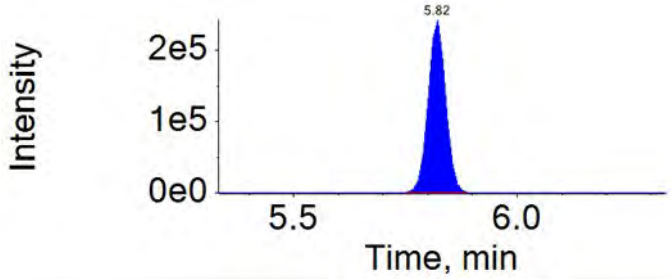
Extraction Standard: 13C8-PFOS
507.0 / 80.0



Analyte: PFUnDA
563.0 / 519.0



Extraction Standard: 13C7-PFUnDA
570.0 / 525.0

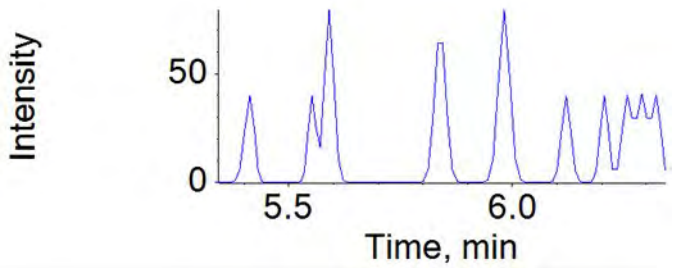


APPROVED
By MCD at 8:06 pm, 11/29/18

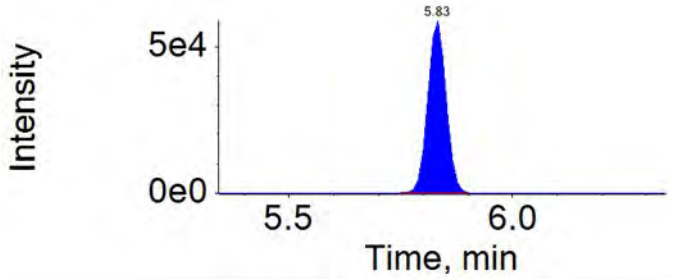
REVIEWED
By HMK at 9:40 am, 12/5/18

ICAL Name: 18NOV28DCAL **Result Table:** 18NOV29DCCV1-5 11/29/2018 7:58:55 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

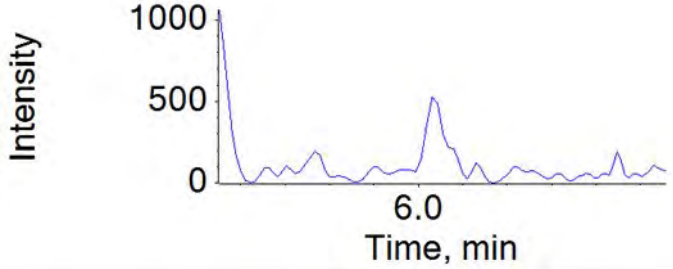
Analyte: NEtFOSAA
584.0 / 419.0



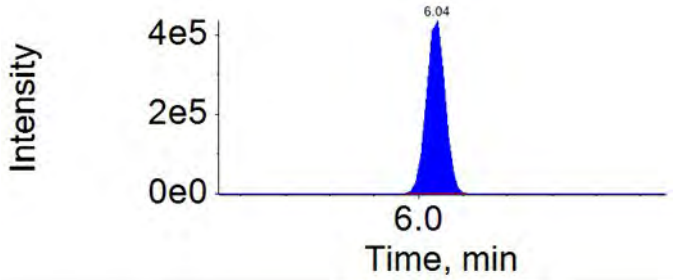
Extraction Standard: d5-NEtFOSAA
589.0 / 419.0



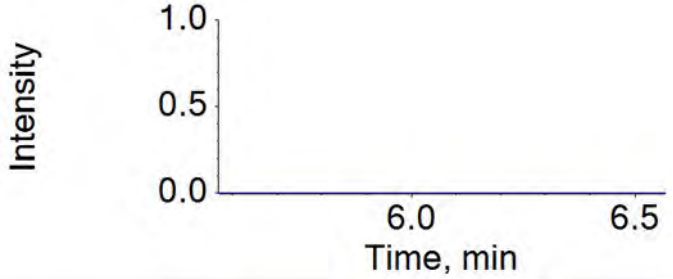
Analyte: PFDoDA
613.0 / 569.0



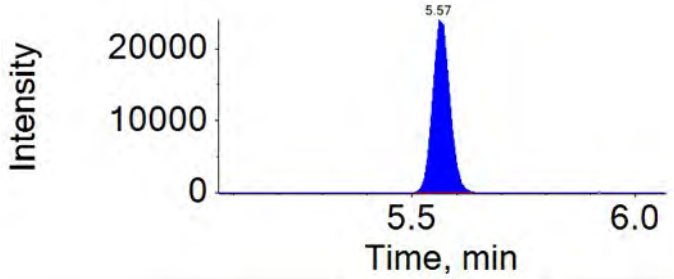
Extraction Standard: 13C2-PFDoDA
615.0 / 570.0



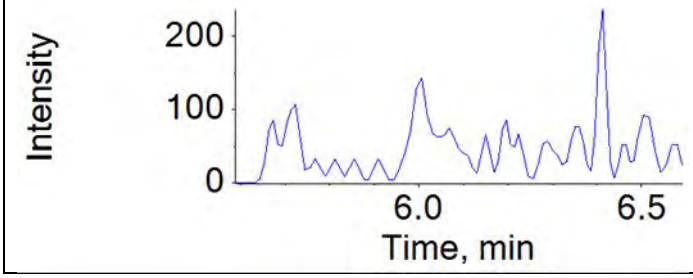
Analyte: 10:2-FTS
627.0 / 607.0



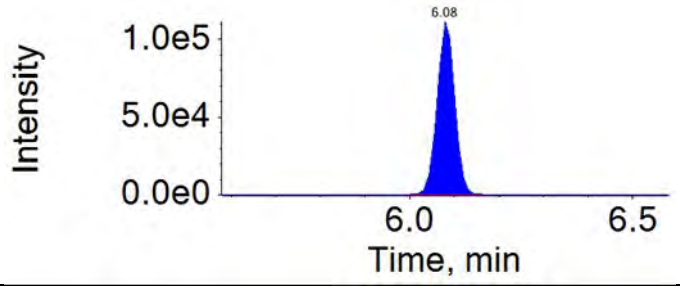
Extraction Standard: 13C2-8:2-FTS
529.0 / 81.0



Analyte: NMePFOSAE
616.0 / 59.0



Extraction Standard: d7-NMePFOSAE
623.0 / 59.0

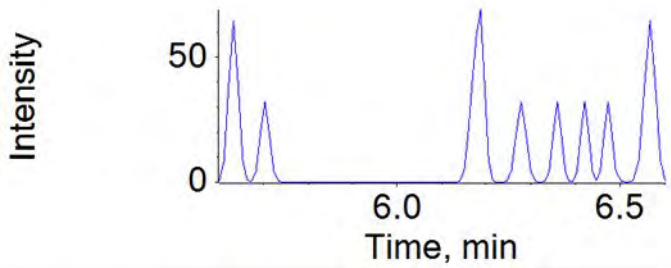


APPROVED
By MCD at 8:06 pm, 11/29/18

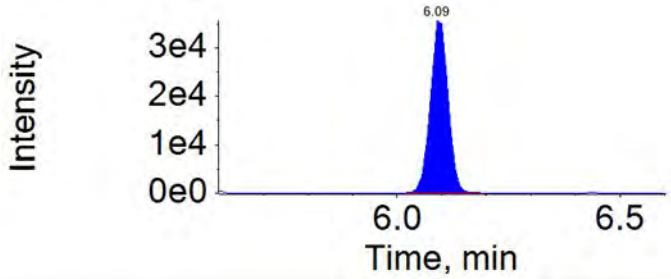
REVIEWED
By HMK at 9:40 am, 12/5/18

ICAL Name: 18NOV28DCAL **Result Table:** 18NOV29DCCV1-5 11/29/2018 7:58:55 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

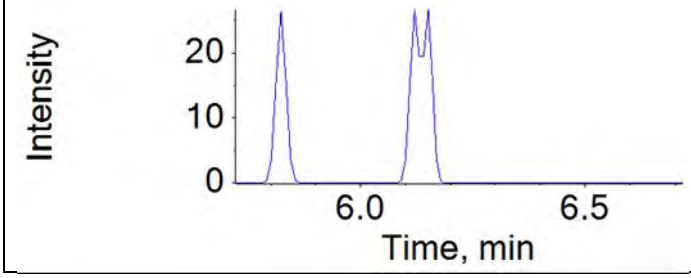
Analyte: NMePFOSA
512.0 / 169.0



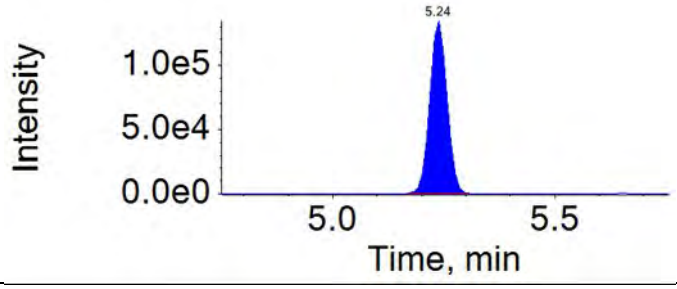
Extraction Standard: d3-NMePFOSA
515.0 / 169.0



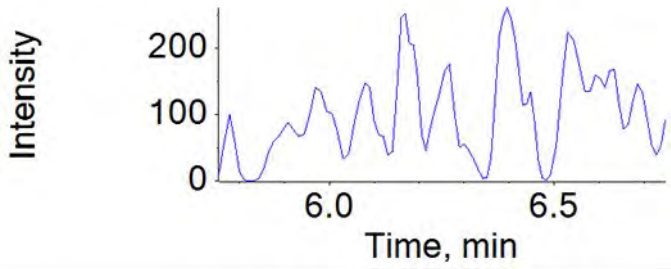
Analyte: PFDoS
699.0 / 80.0



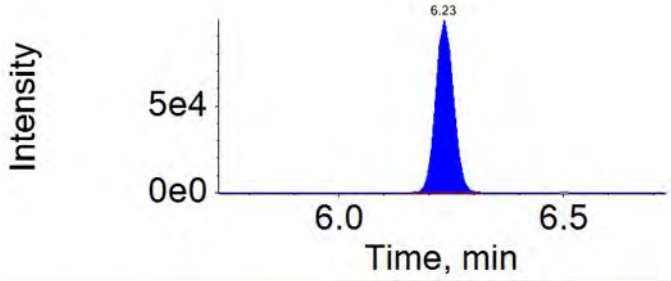
Extraction Standard: 13C8-PFOS
507.0 / 80.0



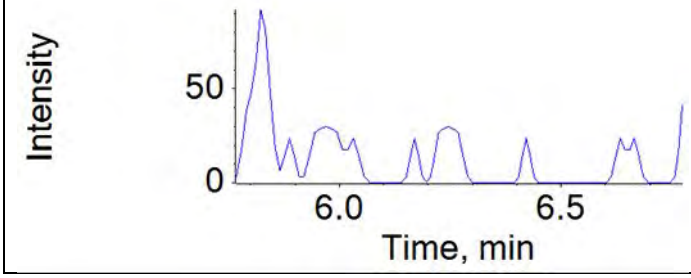
Analyte: NEtPFOSAE
630.0 / 59.0



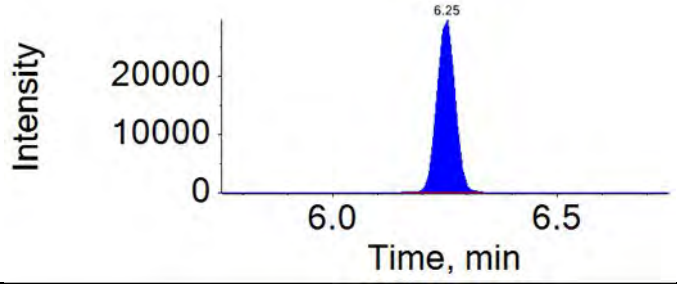
Extraction Standard: d9-NEtPFOSAE
639.0 / 59.0



Analyte: NEtPFOSA
526.0 / 169.0



Extraction Standard: d5-NEtPFOSA
531.0 / 169.0

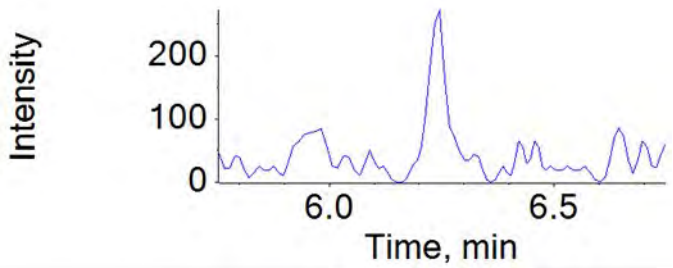


APPROVED
By MCD at 8:06 pm, 11/29/18

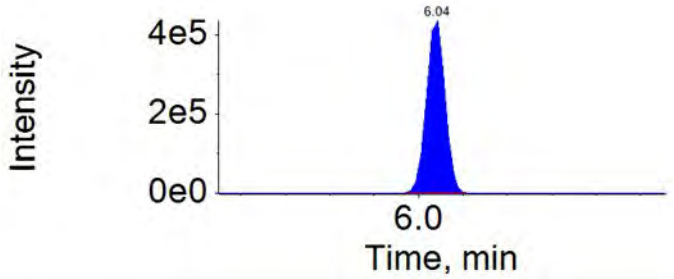
REVIEWED
By HMK at 9:40 am, 12/5/18

ICAL Name: 18NOV28DCAL **Result Table:** 18NOV29DCCV1-5 11/29/2018 7:58:55 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

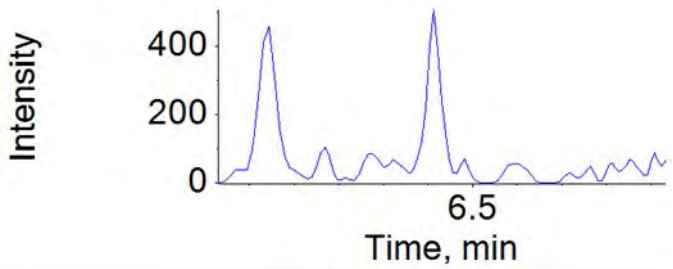
Analyte: PFTrDA
663.0 / 619.0



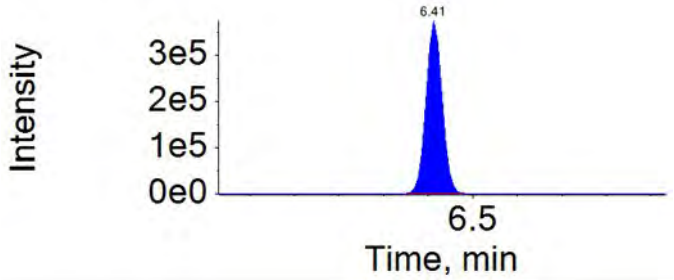
Extraction Standard: 13C2-PFDoDA
615.0 / 570.0



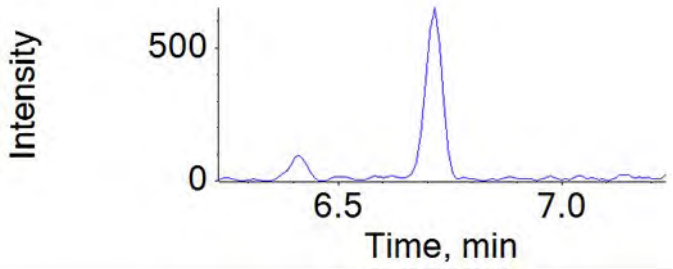
Analyte: PFTeDA
713.0 / 669.0



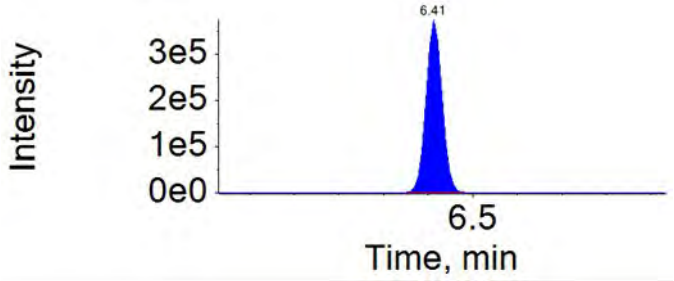
Extraction Standard: 13C2-PFTeDA
715.0 / 670.0



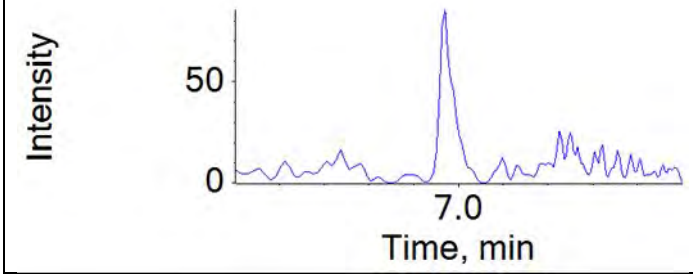
Analyte: PFHxDA
813.0 / 769.0



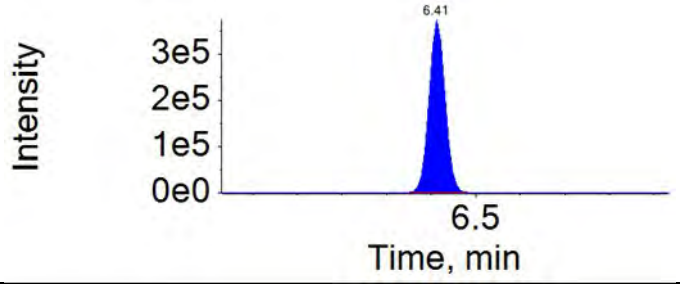
Extraction Standard: 13C2-PFTeDA
715.0 / 670.0



Analyte: PFODA
913.0 / 869.0



Extraction Standard: 13C2-PFTeDA
715.0 / 670.0



APPROVED
By MCD at 8:06 pm, 11/29/18

REVIEWED
By HMK at 9:40 am, 12/5/18

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LC-MS/MS Analysis Report

Printed: 11/29/2018 8:00:00 PM
Template: IonRatio18OCT10

Ion Ratio Report

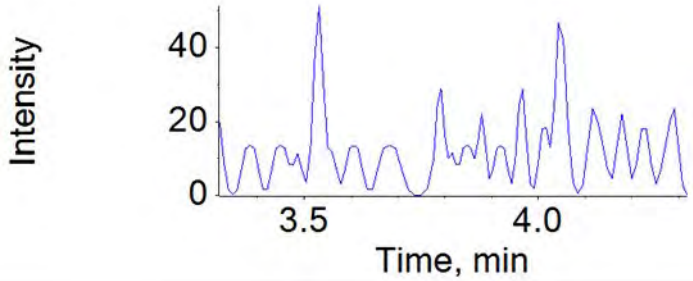
Sample Name: Instrument Blank **Instrument Name:** LM27631 **File Name:** 18NOV29D-06.wiff

Component Name	RT	RRT	Analyte Area Response	Int Typ	Expected Ion Ratio	Ion Ratio	Ion Ratio % Diff	Ion Ratio Limit	Ion Ratio OOS
PFBS	N/A	N/A	N/A	A	N/A	N/A			
PFBS_2	N/A	N/A	N/A	A	N/A	N/A		50	
4:2-FTS	N/A	N/A	N/A	A	N/A	N/A			
4:2-FTS_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFHxA	N/A	N/A	N/A	A	N/A	N/A			
PFHxA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFPeS	N/A	N/A	N/A	A	N/A	N/A			
PFPeS_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFHpA	N/A	N/A	N/A	A	N/A	N/A			
PFHpA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFHxS	N/A	N/A	N/A	A	N/A	N/A			
PFHxS_2	N/A	N/A	N/A	A	N/A	N/A		50	
6:2-FTS	N/A	N/A	N/A	A	N/A	N/A			
6:2-FTS_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFHpS	N/A	N/A	N/A	A	N/A	N/A			
PFHpS_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFOA	N/A	N/A	N/A	A	N/A	N/A			
PFOA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFOS	N/A	N/A	N/A	A	N/A	N/A			
PFOS_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFNA	N/A	N/A	N/A	A	N/A	N/A			
PFNA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFNS	N/A	N/A	N/A	A	N/A	N/A			
PFNS_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFDA	N/A	N/A	N/A	A	N/A	N/A			
PFDA_2	N/A	N/A	N/A	A	N/A	N/A		50	
8:2-FTS	N/A	N/A	N/A	A	N/A	N/A			
8:2-FTS_2	N/A	N/A	N/A	A	N/A	N/A		50	
NMeFOSAA	N/A	N/A	N/A	A	N/A	N/A			
NMeFOSAA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFDS	N/A	N/A	N/A	A	N/A	N/A			
PFDS_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFUnDA	N/A	N/A	N/A	A	N/A	N/A			
PFUnDA_2	N/A	N/A	N/A	A	N/A	N/A		50	
NEtFOSAA	N/A	N/A	N/A	A	N/A	N/A			
NEtFOSAA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFDoDA	N/A	N/A	N/A	A	N/A	N/A			
PFDoDA_2	N/A	N/A	N/A	A	N/A	N/A		50	
10:2-FTS	N/A	N/A	N/A	A	N/A	N/A			
10:2-FTS_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFTrDA	N/A	N/A	N/A	A	N/A	N/A			
PFTrDA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFTeDA	N/A	N/A	N/A	A	N/A	N/A			
PFTeDA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFHxDA	N/A	N/A	N/A	A	N/A	N/A			
PFHxDA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFODA	N/A	N/A	N/A	A	N/A	N/A			
PFODA_2	N/A	N/A	N/A	A	N/A	N/A		50	

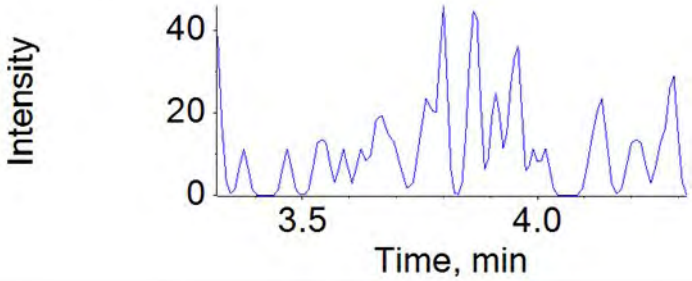
APPROVED
By MCD at 8:06 pm, 11/29/18

REVIEWED
By HMK at 9:40 am, 12/5/18

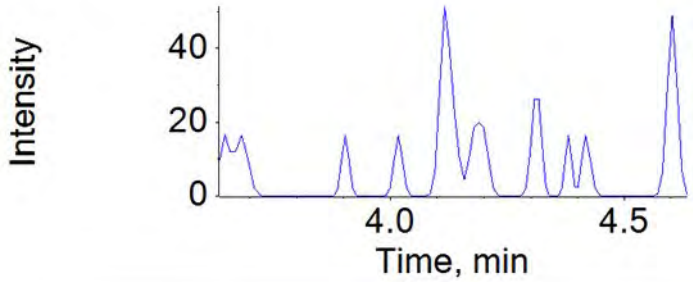
Component: PFBS
Primary Mass: 299.0 / 80.0



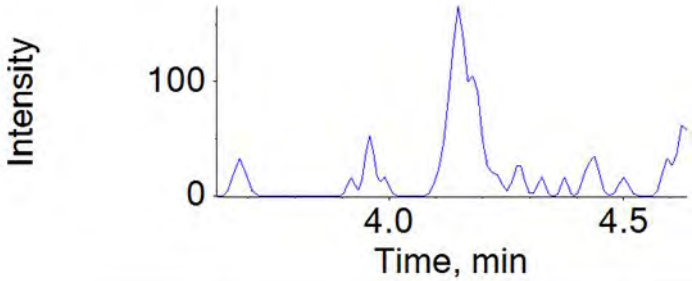
Component: PFBS_2
Secondary Mass: 299.0 / 99.0



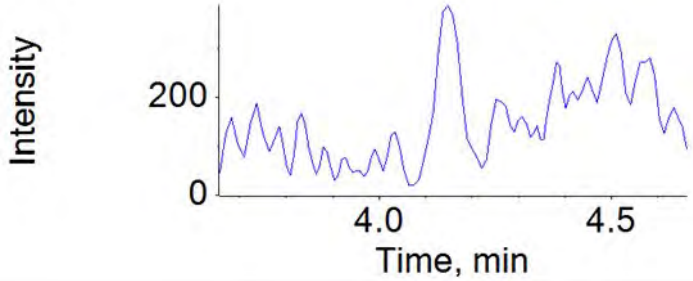
Component: 4:2-FTS
Primary Mass: 327.0 / 307.0



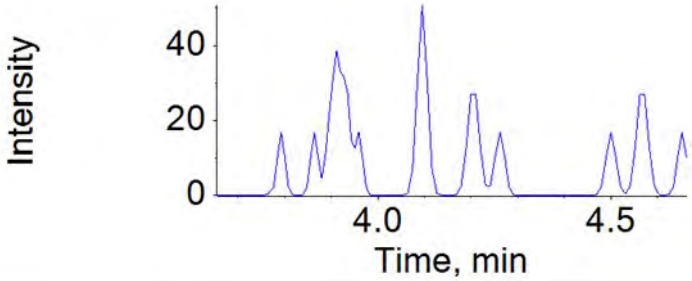
Component: 4:2-FTS_2
Secondary Mass: 327.0 / 81.0



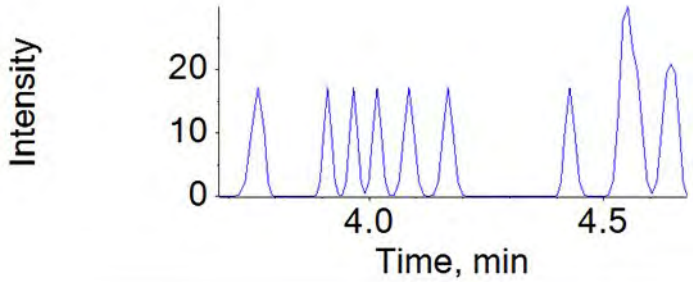
Component: PFHxA
Primary Mass: 313.0 / 269.0



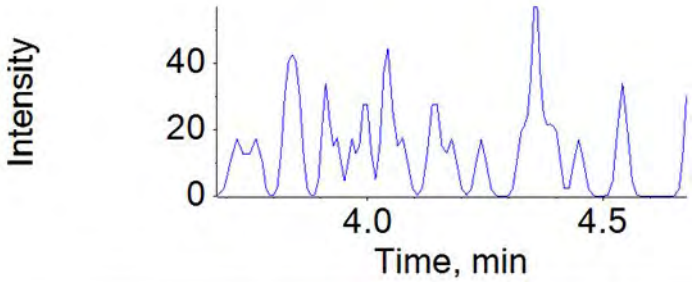
Component: PFHxA_2
Secondary Mass: 313.0 / 119.0



Component: PFPeS
Primary Mass: 349.0 / 80.0



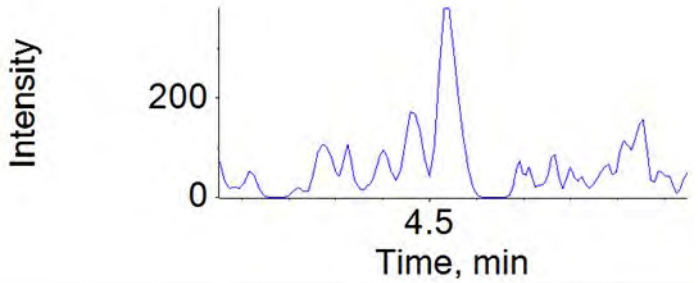
Component: PFPeS_2
Secondary Mass: 349.0 / 99.0



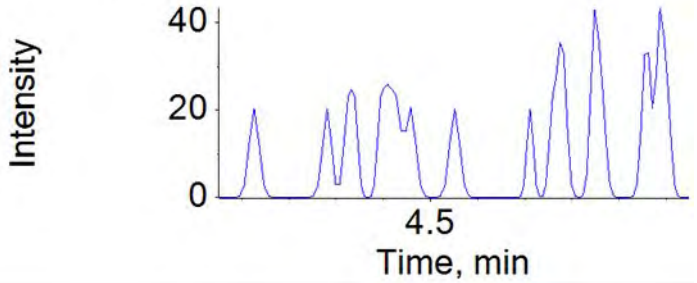
APPROVED
By MCD at 8:06 pm, 11/29/18

REVIEWED
By HMK at 9:40 am, 12/5/18

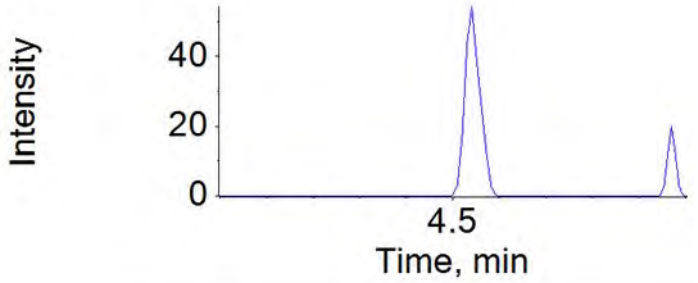
Component: PFHpA
Primary Mass: 363.0 / 319.0



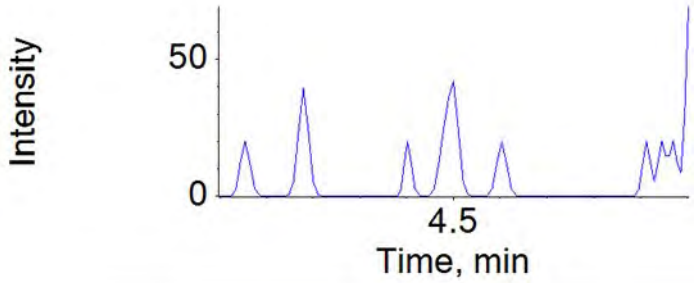
Component: PFHpA_2
Secondary Mass: 363.0 / 169.0



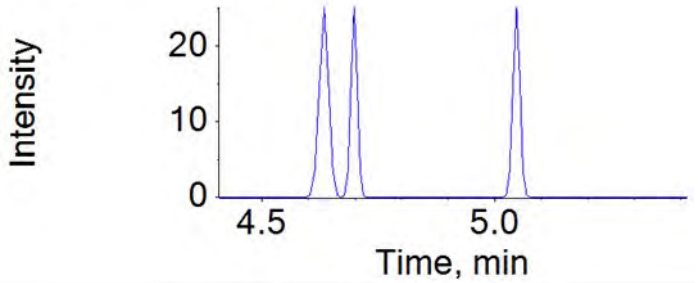
Component: PFHxS
Primary Mass: 399.0 / 80.0



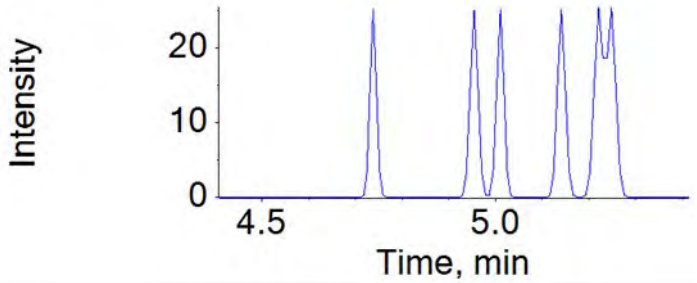
Component: PFHxS_2
Secondary Mass: 399.0 / 99.0



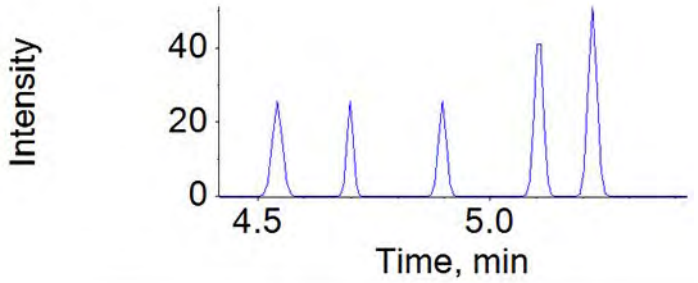
Component: 6:2-FTS
Primary Mass: 427.0 / 407.0



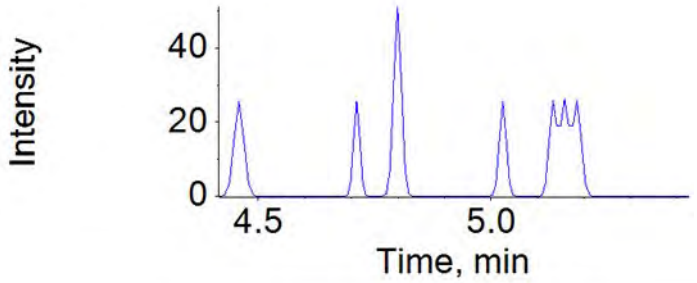
Component: 6:2-FTS_2
Secondary Mass: 427.0 / 81.0



Component: PFHpS
Primary Mass: 449.0 / 80.0



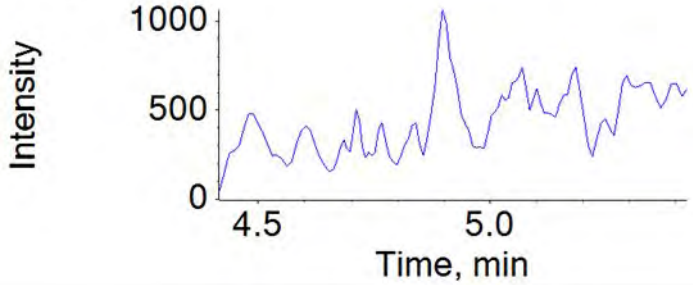
Component: PFHpS_2
Secondary Mass: 449.0 / 99.0



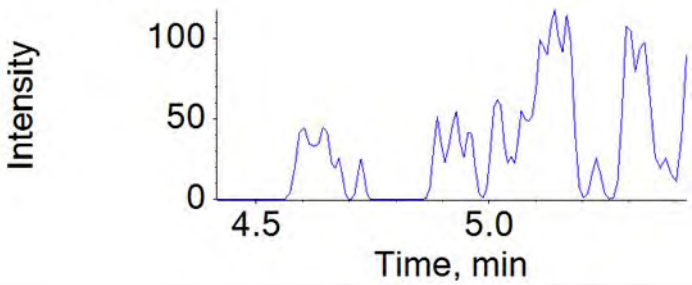
APPROVED
By MCD at 8:06 pm, 11/29/18

REVIEWED
By HMK at 9:40 am, 12/5/18

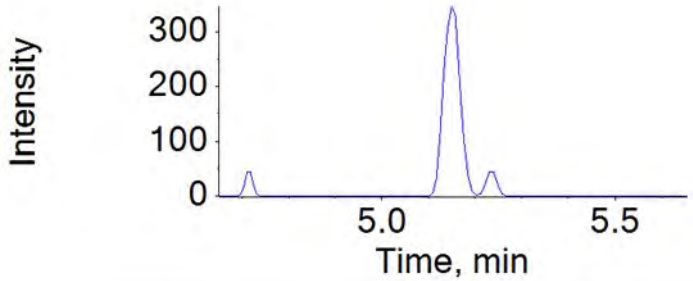
Component: PFOA
Primary Mass: 413.0 / 369.0



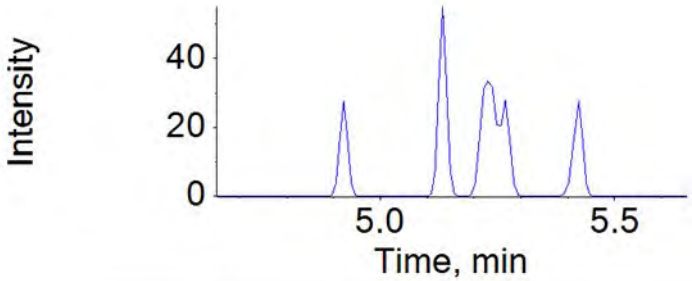
Component: PFOA_2
Secondary Mass: 413.0 / 169.0



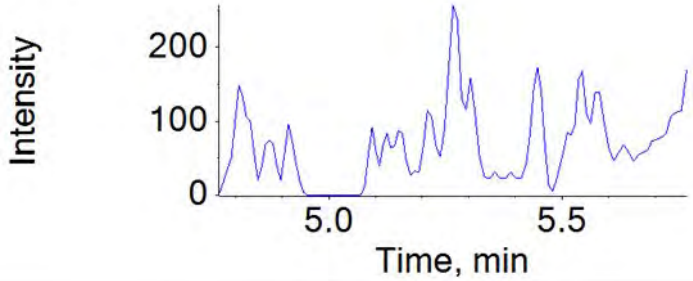
Component: PFOS
Primary Mass: 499.0 / 80.0



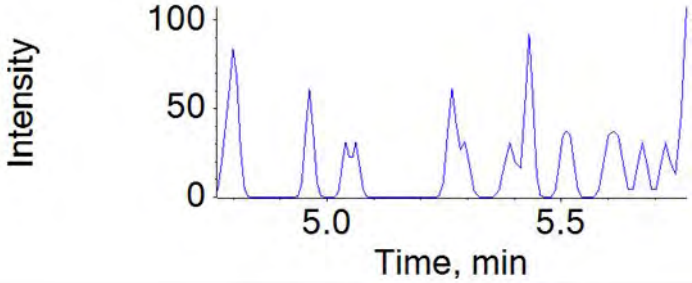
Component: PFOS_2
Secondary Mass: 499.0 / 99.0



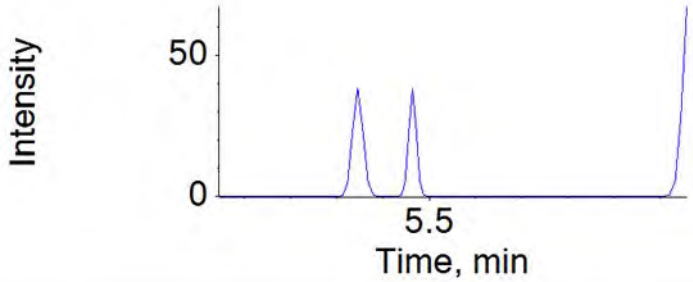
Component: PFNA
Primary Mass: 463.0 / 419.0



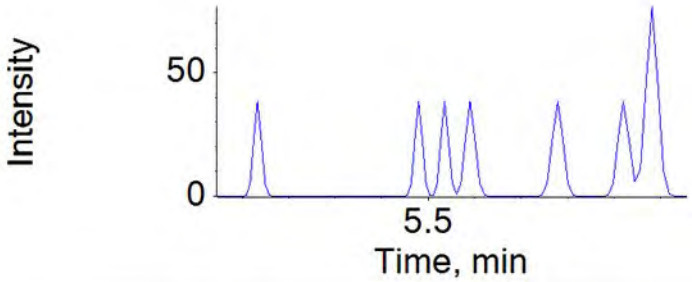
Component: PFNA_2
Secondary Mass: 463.0 / 169.0



Component: PFNS
Primary Mass: 549.0 / 80.0



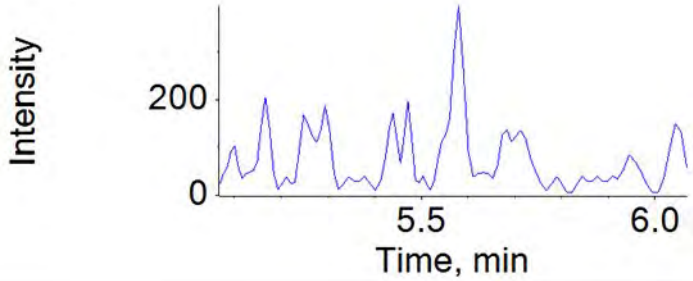
Component: PFNS_2
Secondary Mass: 549.0 / 99.0



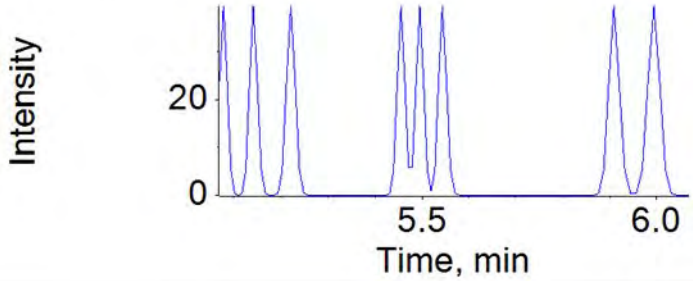
APPROVED
By MCD at 8:06 pm, 11/29/18

REVIEWED
By HMK at 9:40 am, 12/5/18

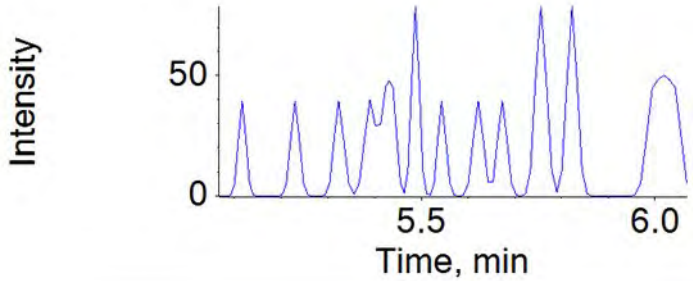
Component: PFDA
Primary Mass: 513.0 / 469.0



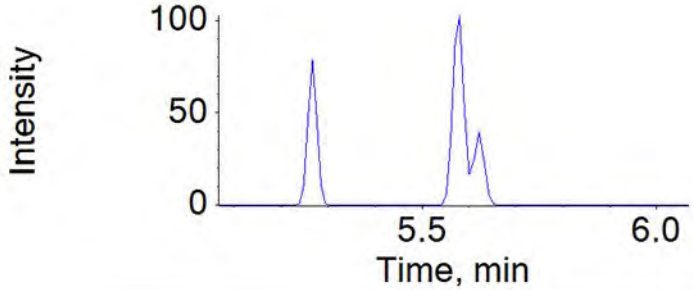
Component: PFDA_2
Secondary Mass: 513.0 / 169.0



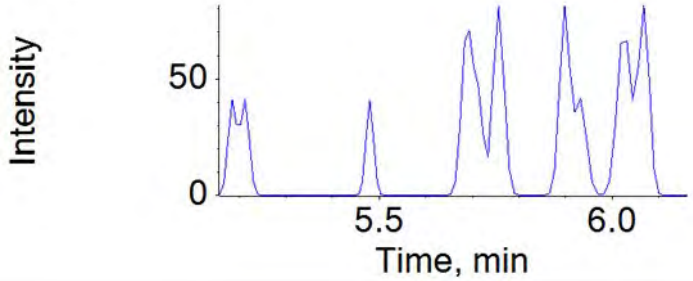
Component: 8:2-FTS
Primary Mass: 527.0 / 507.0



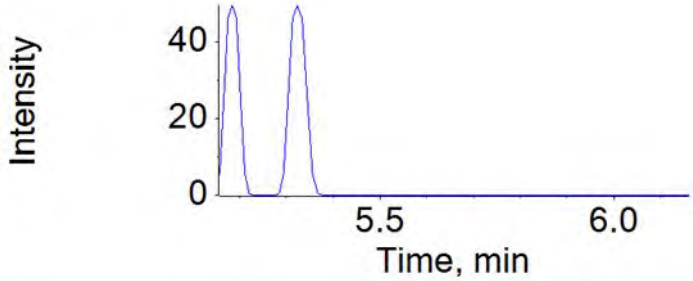
Component: 8:2-FTS_2
Secondary Mass: 527.0 / 81.0



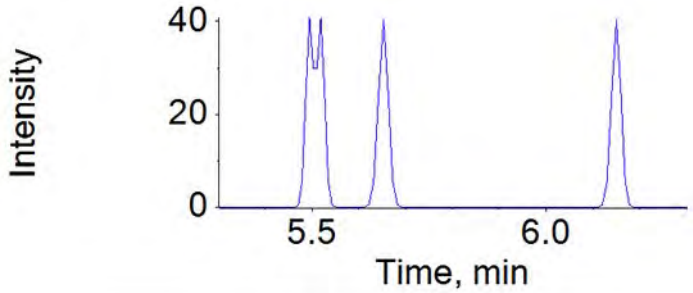
Component: NMeFOSAA
Primary Mass: 570.0 / 419.0



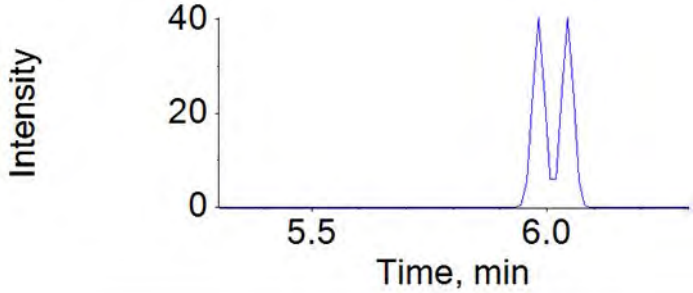
Component: NMeFOSAA_2
Secondary Mass: 570.0 / 483.0



Component: PFDS
Primary Mass: 599.0 / 80.0



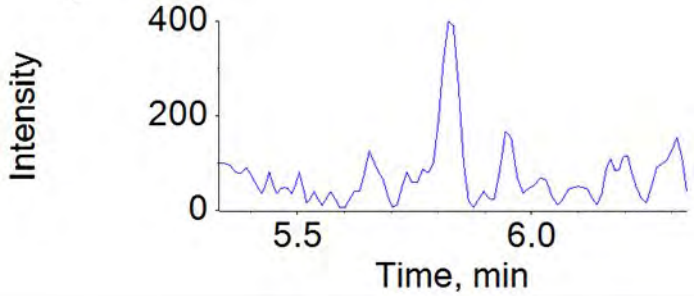
Component: PFDS_2
Secondary Mass: 599.0 / 99.0



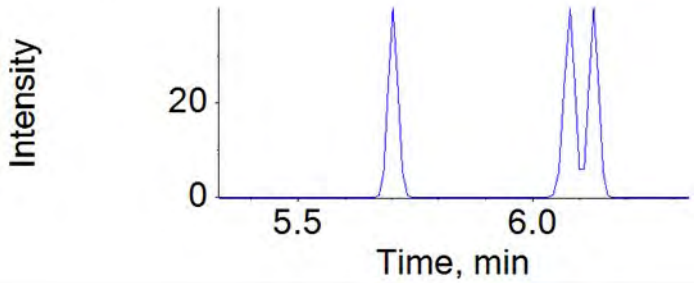
APPROVED
By MCD at 8:06 pm, 11/29/18

REVIEWED
By HMK at 9:40 am, 12/5/18

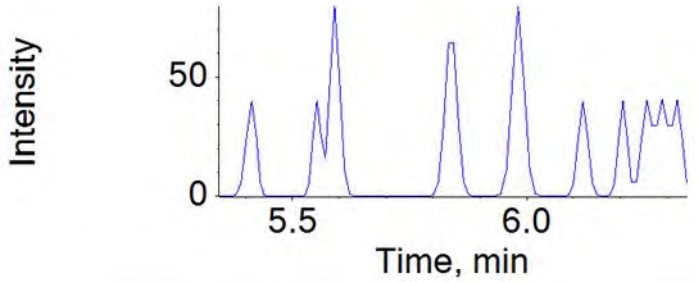
Component: PFUnDA
Primary Mass: 563.0 / 519.0



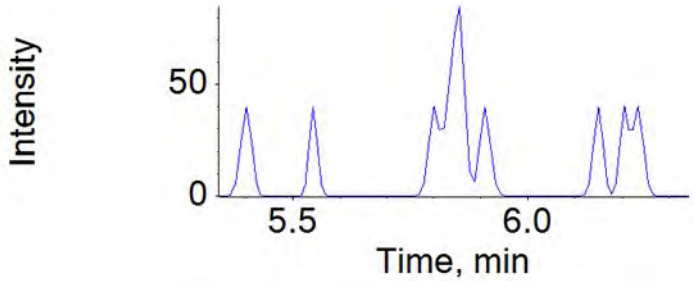
Component: PFUnDA_2
Secondary Mass: 563.0 / 169.0



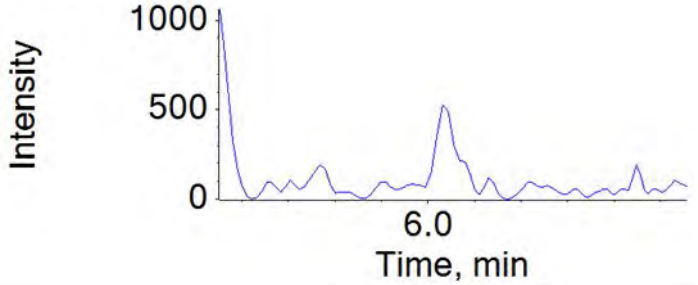
Component: NEtFOSAA
Primary Mass: 584.0 / 419.0



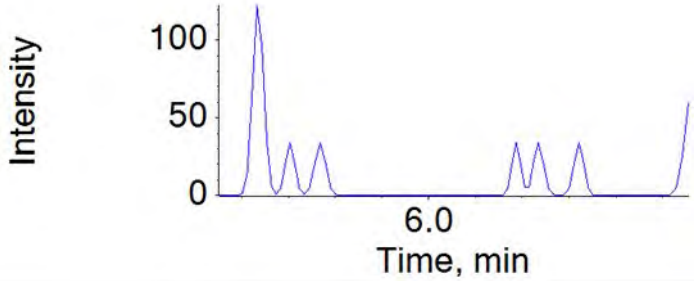
Component: NEtFOSAA_2
Secondary Mass: 584.0 / 526.0



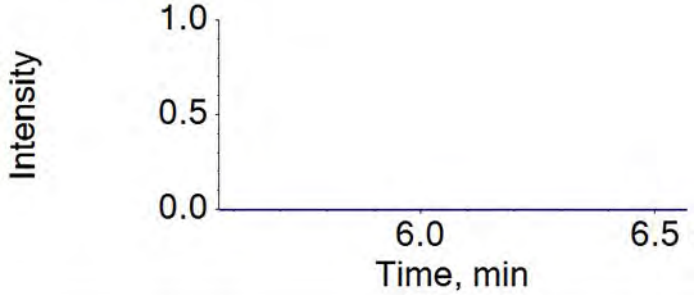
Component: PFDoDA
Primary Mass: 613.0 / 569.0



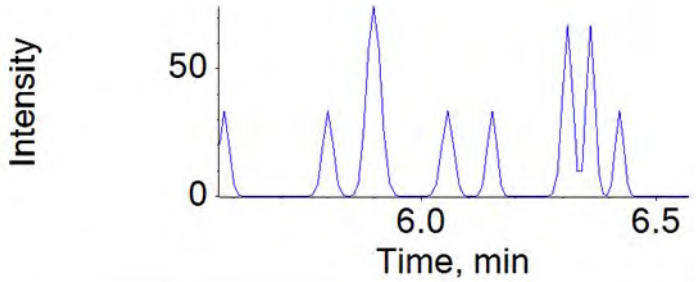
Component: PFDoDA_2
Secondary Mass: 613.0 / 169.0



Component: 10:2-FTS
Primary Mass: 627.0 / 607.0



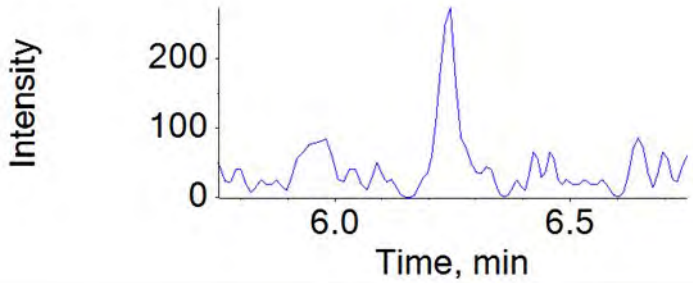
Component: 10:2-FTS_2
Secondary Mass: 627.0 / 81.0



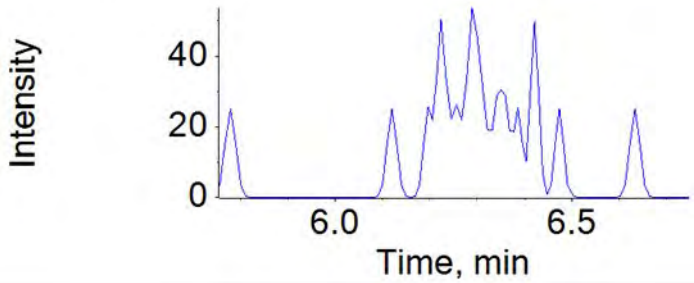
APPROVED
By MCD at 8:06 pm, 11/29/18

REVIEWED
By HMK at 9:40 am, 12/5/18

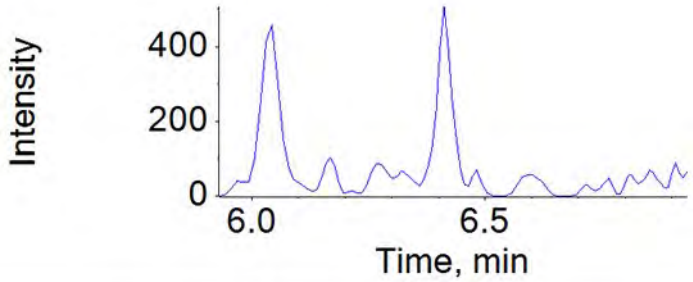
Component: PFTrDA
Primary Mass: 663.0 / 619.0



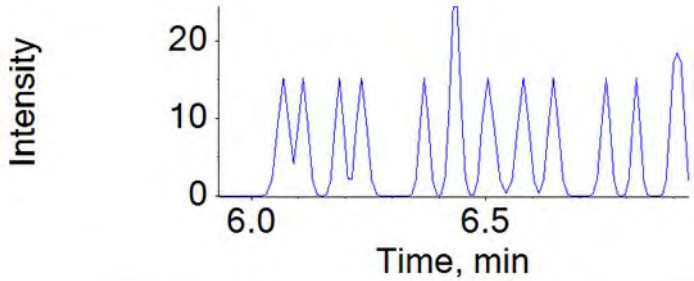
Component: PFTrDA_2
Secondary Mass: 663.0 / 169.0



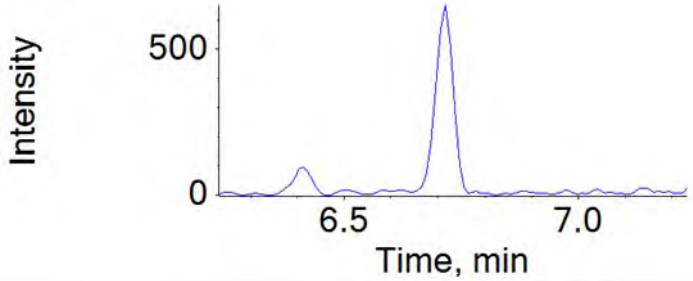
Component: PFTeDA
Primary Mass: 713.0 / 669.0



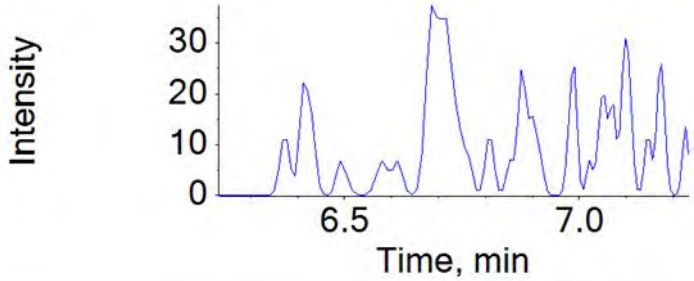
Component: PFTeDA_2
Secondary Mass: 713.0 / 169.0



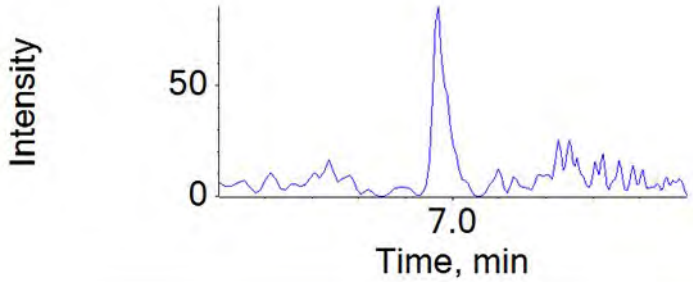
Component: PFHxDA
Primary Mass: 813.0 / 769.0



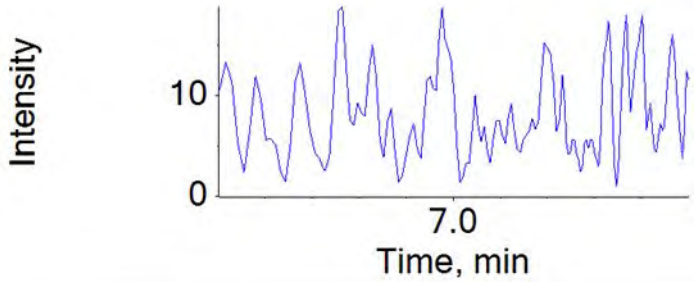
Component: PFHxDA_2
Secondary Mass: 813.0 / 169.0



Component: PFODA
Primary Mass: 913.0 / 869.0



Component: PFODA_2
Secondary Mass: 913.0 / 169.0



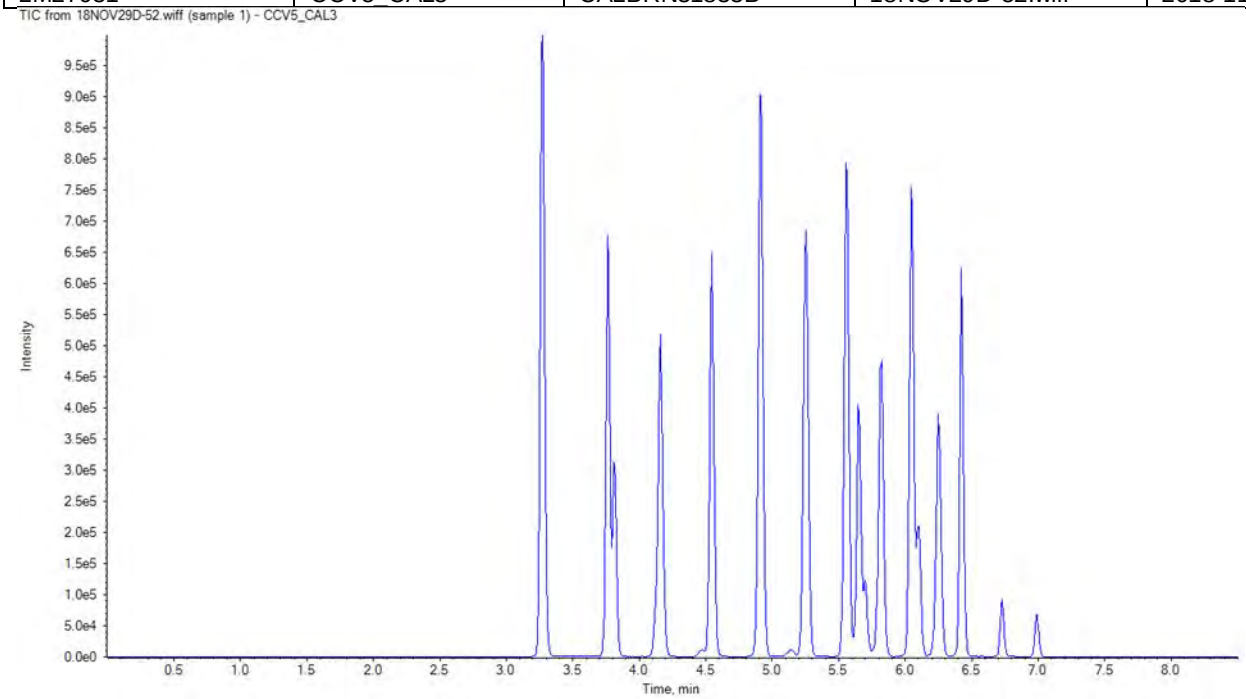
APPROVED
By MCD at 8:06 pm, 11/29/18

REVIEWED
By HMK at 9:40 am, 12/5/18

Continuing Calibration Verfication

ICAL Name: 18NOV28DCAL **Result Table:** 18NOV29DCCV1-5 11/29/2018 7:56:19 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Instrument Name:	Sample Name:	Sample ID:	Sample File:	Acquisition Date:
LM27631	CCV5_CAL3	CALBRN31833B	18NOV29D-52.wiff	2018-11-29T17:37:36



Injection Standard Area Reference File: 18NOV29D-05

Injection Standard Name	Inj Std Conc	Injection Std Peak Area	Reference Injection Standard Area	Injection Std %Diff	Injection Std %Diff Limit	Injection Std %Diff OOS
13C3-PFBA	5.0	888103.1	906425.4	-2	50	
13C2-PFOA	5.0	482099.7	495984.0	-3	50	
13C4-PFOS	4.8	299552.8	296261.8	1	50	
13C2-PFDA	5.0	454503.3	451203.0	1	50	

APPROVED
By MCD at 8:06 pm, 11/29/18

REVIEWED
By HMK at 9:40 am, 12/5/18

Continuing Calibration Verfication

ICAL Name: 18NOV28DCAL **Result Table:** 18NOV29DCCV1-5 11/29/2018 7:56:19 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Instrument Name:	Sample Name:	Sample ID:	Sample File:	Acquisition Date:
LM27631	CCV5_CAL3	CALBRN31833B	18NOV29D-52.wiff	2018-11-29T17:37:36

Analyte Name	Analyte Area	Sc /pk	Ext Std Name	Ext Std Area	Ext Std con	Area Ratio	RT (min)	RRT	Spec Amt	Calc Amt	% Diff	% Diff Lim	% Diff OOS
PFBA	410376.9	10	13C4-PFBA	1003538.1	5.0	0.409	3.27	1.000	2.000	2.242	12	30	
PFPeA	400188.5	11	13C5-PFPeA	935080.6	5.0	0.428	3.77	1.000	2.000	2.100	5	30	
PFBS	172355.2	10	13C3-PFBS	424594.0	4.7	0.406	3.81	1.000	1.770	1.970	11	30	
4:2-FTS	52632.4	12	13C2-4:2-FTS	66022.9	4.7	0.797	4.12	1.000	1.870	2.134	14	30	
PFHxA	392712.5	11	13C5-PFHxA	665817.1	5.0	0.590	4.16	1.000	2.000	2.368	18	30	
PFPeS	89389.0	11	13C3-PFBS	424594.0	4.7	0.211	4.18	1.100	1.880	2.129	13	30	
PFHpA	396806.2	11	13C4-PFHpA	547436.1	5.0	0.725	4.54	1.000	2.000	2.237	12	30	
PFHxS	127006.9	19	13C3-PFHxS	327068.8	4.7	0.388	4.55	1.000	1.820	1.818	0	30	
6:2-FTS	51799.6	11	13C2-6:2-FTS	58432.7	4.8	0.886	4.90	1.000	1.900	2.313	22	30	
PFHpS	129025.9	11	13C3-PFHxS	327068.8	4.7	0.394	4.91	1.080	1.900	1.969	4	30	
PFOA	407078.9	11	13C8-PFOA	958420.1	5.0	0.425	4.91	1.000	2.000	2.195	10	30	
PFOS	138995.5	21	13C8-PFOS	336404.9	4.8	0.413	5.24	1.000	1.850	1.733	-6	30	
PFNA	382168.0	11	13C9-PFNA	639090.1	5.0	0.598	5.26	1.000	2.000	2.292	15	30	
PFNS	98297.2	11	13C8-PFOS	336404.9	4.8	0.292	5.54	1.060	1.920	1.845	-4	30	
PFDA	343068.9	11	13C6-PFDA	857518.7	5.0	0.400	5.56	1.000	2.000	2.265	13	30	
8:2-FTS	54309.5	11	13C2-8:2-FTS	55836.5	4.8	0.973	5.56	1.000	1.920	1.834	-4	30	
PFOSA	268924.0	12	13C8-PFOSA	644731.6	5.0	0.417	5.65	1.000	2.000	2.113	6	30	
NMeFOSAA	64182.7	18	d3-NMeFOSAA	182307.0	5.0	0.352	5.70	1.000	2.000	2.246	12	30	
PFDS	79891.7	12	13C8-PFOS	336404.9	4.8	0.237	5.79	1.100	1.930	1.883	-2	30	
PFUnDA	355883.8	11	13C7-PFUnDA	567707.2	5.0	0.627	5.82	1.000	2.000	2.241	12	30	
NEtFOSAA	64211.1	22	d5-NEtFOSAA	138062.3	5.0	0.465	5.83	1.000	2.000	2.265	13	30	
PFDoDA	467324.6	12	13C2-PFDoDA	1144067.1	5.0	0.408	6.05	1.000	2.000	2.238	12	30	
10:2-FTS	54230.7	12	13C2-8:2-FTS	55836.5	4.8	0.971	6.07	1.090	1.930	2.142	11	30	
NMePFOSAE	136711.2	11	d7-NMePFOSAE	257051.1	5.0	0.532	6.10	1.000	2.000	2.238	12	30	
NMePFOSA	35299.2	11	d3-NMePFOSA	82258.4	5.0	0.429	6.11	1.000	2.000	2.275	14	30	
PFDoS	43145.4	11	13C8-PFOS	336404.9	4.8	0.128	6.22	1.190	1.940	1.842	-5	30	
NEtPFOSAE	152658.0	11	d9-NEtPFOSAE	225911.1	5.0	0.676	6.26	1.000	2.000	2.431	22	30	
NEtPFOSA	32593.5	11	d5-NEtPFOSA	68497.7	5.0	0.476	6.27	1.000	2.000	2.133	7	30	
PFTrDA	477187.4	11	13C2-PFDoDA	1144067.1	5.0	0.417	6.25	1.030	2.000	2.514	26	30	
PFTeDA	345082.9	10	13C2-PFTeDA	853856.6	5.0	0.404	6.42	1.000	2.000	2.290	14	30	
PFHxDA	172538.3	11	13C2-PFTeDA	853856.6	5.0	0.202	6.73	1.050	2.000	2.310	16	30	
PFODA	141132.9	10	13C2-PFTeDA	853856.6	5.0	0.165	6.99	1.090	2.000	2.202	10	30	

APPROVED
By MCD at 8:06 pm, 11/29/18

REVIEWED
By HMK at 9:40 am, 12/5/18

Continuing Calibration Verfication

ICAL Name: 18NOV28DCAL **Result Table:** 18NOV29DCCV1-5 11/29/2018 7:56:19 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

APPROVED
By MCD at 8:06 pm, 11/29/18

REVIEWED
By HMK at 9:40 am, 12/5/18

ICAL Name: 18NOV28DCAL
QMethod Name: 18AUG20QM

Result Table: 18NOV29DCCV1-5 11/29/2018 7:58:55 PM
Acquisition Method: 18AUG13_3uL.dam

Sample Name:	CCV5_CAL3			**Data File:**		18NOV29D-52.wiff
Sample ID:	CALBRN31833B			**Acquis Date:**		2018-11-29T17:37:36
Sample Type:	Quality Control			**Instrument:**		LM27631
Vial Position:	5			**Acquis Method:**		18AUG13_3uL.dam
Injection Vol:	3.00			**Result Table:**		18NOV29DCCV1-5
QMethod File:	18AUG20QM			**ICAL Name:**		18NOV28DCAL
Batch Number:	N/A			**Operator:**		MCD7824
Sample Wt.:	1.00000			**Dilution Factor:**		1.00
Sample Vol.:	1.000			**Prep Factor:**		1.000

Injection Standard Peak Table

Injection Standard Area Reference File: 18NOV29D-05

Injection Standard Name	Inj Std Conc	Injection Std Peak Area	Rreference Injection Standard Area	Injection Std %Diff	Injection Std %Diff Limit	Injection Std %Diff OOS
13C3-PFBA	5.0	888103.1	906425.4	-2	50	
13C2-PFOA	5.0	482099.7	495984.0	-3	50	
13C4-PFOS	4.8	299552.8	296261.8	1	50	
13C2-PFDA	5.0	454503.3	451203.0	1	50	

Extraction Standard Peak Table

Extraction Standard Name	Ext Std Area	Inj Std Name	Inj Std Area	Area Ratio	Ext Std Conc	Ext Std Result	Ext Std %REC	Ext Std %REC Limit	Ext Std OOS
E13C4-PFBA	1003538.1	13C3-PFBA	888103.1	1.130	5.000	5.041	101	70-130	
E13C5-PFPeA	935080.6	13C3-PFBA	888103.1	1.053	5.000	4.917	98	70-130	
E13C3-PFBS	424594.0	13C3-PFBA	888103.1	0.478	4.650	4.561	98	70-130	
E13C2-4:2-FTS	66022.9	13C2-PFOA	482099.7	0.137	4.670	4.720	101	70-130	
E13C5-PFHxA	665817.1	13C2-PFOA	482099.7	1.381	5.000	5.073	101	70-130	
E13C3-PFHxS	327068.8	13C2-PFOA	482099.7	0.678	4.730	5.317	112	70-130	
E13C4-PFHpA	547436.1	13C2-PFOA	482099.7	1.136	5.000	5.218	104	70-130	
E13C2-6:2-FTS	58432.7	13C2-PFOA	482099.7	0.121	4.750	5.074	107	70-130	
E13C8-PFOA	958420.1	13C2-PFOA	482099.7	1.988	5.000	5.472	109	70-130	
E13C8-PFOS	336404.9	13C4-PFOS	299552.8	1.123	4.780	5.070	106	70-130	
E13C9-PFNA	639090.1	13C4-PFOS	299552.8	2.133	5.000	4.686	94	70-130	
E13C6-PFDA	857518.7	13C2-PFDA	454503.3	1.887	5.000	5.320	106	70-130	
E13C2-8:2-FTS	55836.5	13C2-PFDA	454503.3	0.123	4.790	5.280	110	70-130	
E13C8-PFOSA	644731.6	13C2-PFDA	454503.3	1.419	5.000	5.205	104	70-130	
Ed3-NMeFOSAA	182307.0	13C2-PFDA	454503.3	0.401	5.000	5.093	102	70-130	
E13C7-PFUnDA	567707.2	13C2-PFDA	454503.3	1.249	5.000	5.279	106	70-130	
Ed5-NEtFOSAA	138062.3	13C2-PFDA	454503.3	0.304	5.000	5.412	108	70-130	
E13C2-PFDoDA	1144067.1	13C2-PFDA	454503.3	2.517	5.000	5.289	106	70-130	
Ed7-NMePFOSAE	257051.1	13C2-PFDA	454503.3	0.566	5.000	4.888	98	70-130	
Ed3-NMePFOSA	82258.4	13C2-PFDA	454503.3	0.181	5.000	4.898	98	70-130	
Ed9-NEtPFOSAE	225911.1	13C2-PFDA	454503.3	0.497	5.000	5.039	101	70-130	
Ed5-NEtPFOSA	68497.7	13C2-PFDA	454503.3	0.151	5.000	5.237	105	70-130	
E13C2-PFTeDA	853856.6	13C2-PFDA	454503.3	1.879	5.000	5.198	104	70-130	

APPROVED
By MCD at 8:06 pm, 11/29/18

REVIEWED
By HMK at 9:40 am, 12/5/18

ICAL Name: 18NOV28DCAL **Result Table:** 18NOV29DCCV1-5 11/29/2018 7:58:55 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

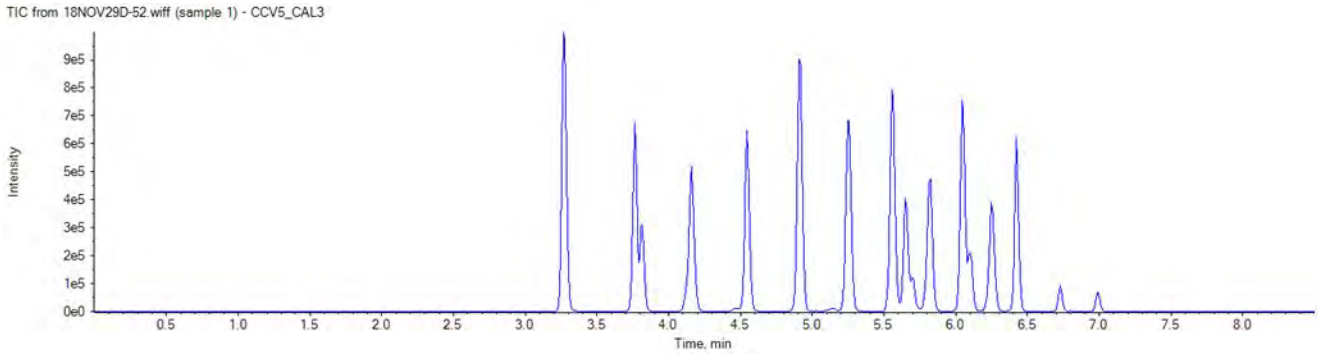
Analyte Quantitation Peak Table

Sample Name: CCV5_CAL3 **Instrument Name:** LM27631 **File Name:** 18NOV29D-52.wiff

Sample Wt	Sample Vol	Dilution Factor	PrepFactor
1.00000	1.000	1.00	1.000

Analyte Name	RT	RRT	Analyte Area Response	E	Int Typ	ES Name	ES RT	ES Area Response	Area Ratio	Sample Result (ng/g)
PFBA	3.27	1.000	410376.9		A	13C4-PFBA	3.27	1003538.1	0.409	2.242
PFPeA	3.77	1.000	400188.5		A	13C5-PFPeA	3.76	935080.6	0.428	2.100
PFBS	3.81	1.000	172355.2		A	13C3-PFBS	3.81	424594.0	0.406	1.970
4:2-FTS	4.12	1.000	52632.4		A	13C2-4:2-FTS	4.13	66022.9	0.797	2.134
PFHxA	4.16	1.000	392712.5		A	13C5-PFHxA	4.16	665817.1	0.590	2.368
PFPeS	4.18	1.100	89389.0		A	13C3-PFBS	3.81	424594.0	0.211	2.129
PFHpA	4.54	1.000	396806.2		A	13C4-PFHpA	4.54	547436.1	0.725	2.237
PFHxS	4.55	1.000	127006.9		M	13C3-PFHxS	4.55	327068.8	0.388	1.818
6:2-FTS	4.90	1.000	51799.6		A	13C2-6:2-FTS	4.90	58432.7	0.886	2.313
PFHpS	4.91	1.080	129025.9		A	13C3-PFHxS	4.55	327068.8	0.394	1.969
PFOA	4.91	1.000	407078.9		A	13C8-PFOA	4.91	958420.1	0.425	2.195
PFOS	5.24	1.000	138995.5		M	13C8-PFOS	5.24	336404.9	0.413	1.733
PFNA	5.26	1.000	382168.0		A	13C9-PFNA	5.26	639090.1	0.598	2.292
PFNS	5.54	1.060	98297.2		A	13C8-PFOS	5.24	336404.9	0.292	1.845
PFDA	5.56	1.000	343068.9		A	13C6-PFDA	5.56	857518.7	0.400	2.265
8:2-FTS	5.56	1.000	54309.5		A	13C2-8:2-FTS	5.56	55836.5	0.973	1.834
PFOSA	5.65	1.000	268924.0		A	13C8-PFOSA	5.65	644731.6	0.417	2.113
NMeFOSAA	5.70	1.000	64182.7		A	d3-NMeFOSAA	5.70	182307.0	0.352	2.246
PFDS	5.79	1.100	79891.7		A	13C8-PFOS	5.24	336404.9	0.237	1.883
PFUnDA	5.82	1.000	355883.8		A	13C7-PFUnDA	5.82	567707.2	0.627	2.241
NEtFOSAA	5.83	1.000	64211.1		M	d5-NEtFOSAA	5.83	138062.3	0.465	2.265
PFDoDA	6.05	1.000	467324.6		A	13C2-PFDoDA	6.05	1144067.1	0.408	2.238
10:2-FTS	6.07	1.090	54230.7		A	13C2-8:2-FTS	5.56	55836.5	0.971	2.142
NMePFOSAE	6.10	1.000	136711.2		A	d7-NMePFOSAE	6.10	257051.1	0.532	2.238
NMePFOSA	6.11	1.000	35299.2		A	d3-NMePFOSA	6.11	82258.4	0.429	2.275
PFDoS	6.22	1.190	43145.4		A	13C8-PFOS	5.24	336404.9	0.128	1.842
NEtPFOSAE	6.26	1.000	152658.0		A	d9-NEtPFOSAE	6.25	225911.1	0.676	2.431
NEtPFOSA	6.27	1.000	32593.5		A	d5-NEtPFOSA	6.27	68497.7	0.476	2.133
PFTrDA	6.25	1.030	477187.4		A	13C2-PFDoDA	6.05	1144067.1	0.417	2.514
PFTeDA	6.42	1.000	345082.9		A	13C2-PFTeDA	6.42	853856.6	0.404	2.290
PFHxDA	6.73	1.050	172538.3		A	13C2-PFTeDA	6.42	853856.6	0.202	2.310
PFODA	6.99	1.090	141132.9		A	13C2-PFTeDA	6.42	853856.6	0.165	2.202

Total Ion Chromatogram

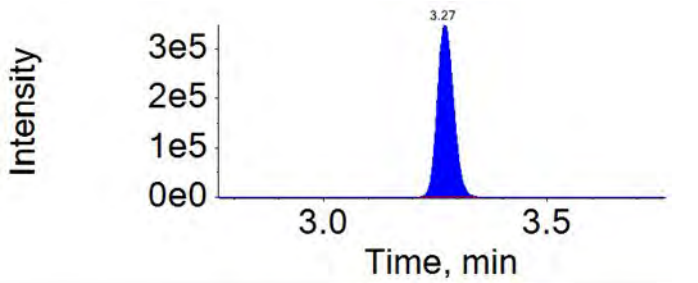


APPROVED
By MCD at 8:06 pm, 11/29/18

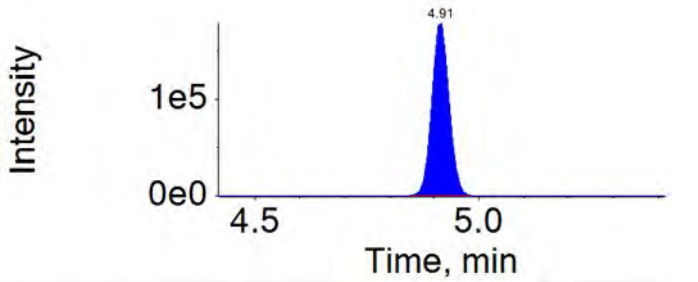
REVIEWED
By HMK at 9:40 am, 12/5/18

ICAL Name: 18NOV28DCAL **Result Table:** 18NOV29DCCV1-5 11/29/2018 7:58:55 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

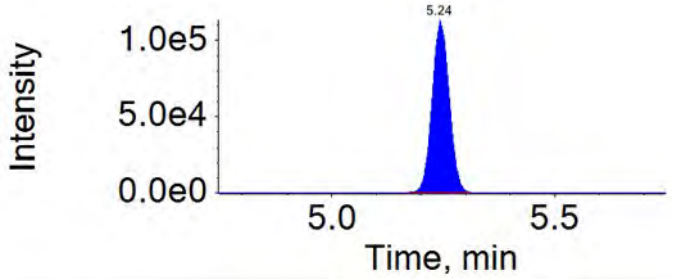
Injection Standard: 13C3-PFBA
216.0 / 172.0



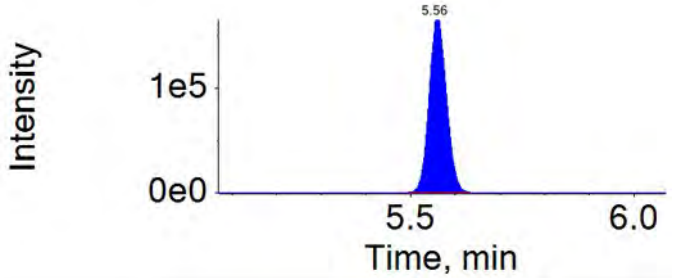
Injection Standard: 13C2-PFOA
415.0 / 370.0



Injection Standard: 13C4-PFOS
503.0 / 80.0



Injection Standard: 13C2-PFDA
515.0 / 470.0



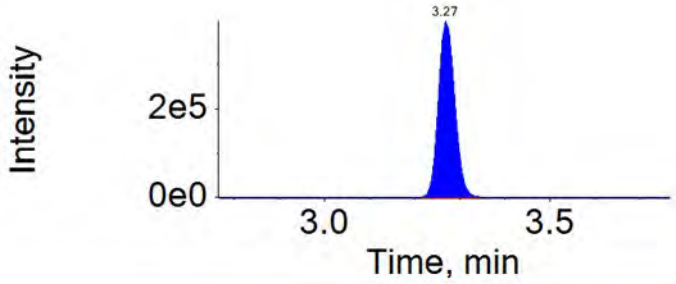
APPROVED
By MCD at 8:06 pm, 11/29/18

REVIEWED
By HMK at 9:40 am, 12/5/18

ICAL Name: 18NOV28DCAL **Result Table:** 18NOV29DCCV1-5 11/29/2018 7:58:55 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

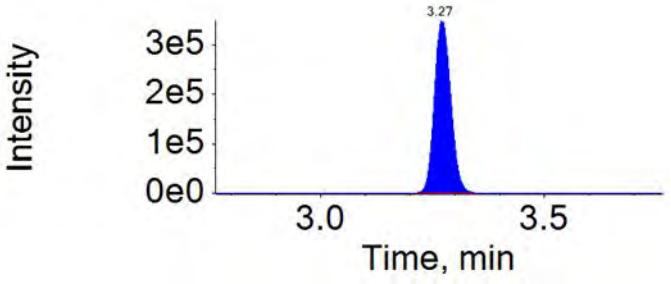
Extraction Standard: E13C4-PFBA

217.0 / 172.0



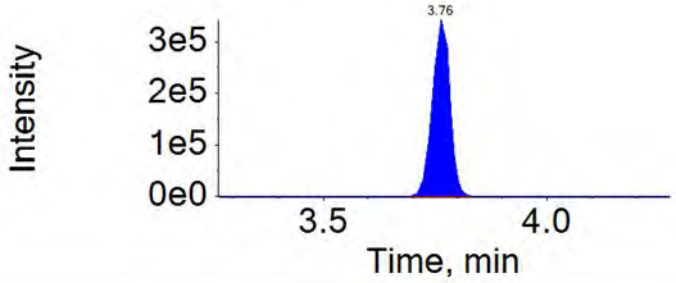
Injection Standard: 13C3-PFBA

216.0 / 172.0



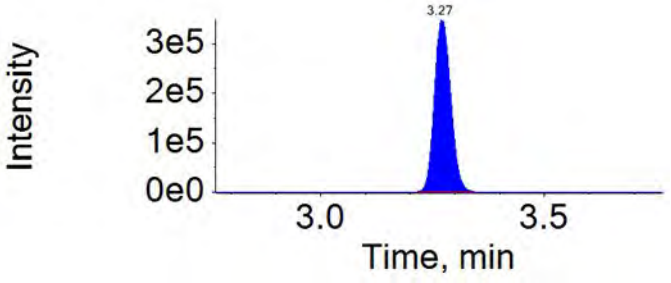
Extraction Standard: E13C5-PFPeA

268.0 / 223.0



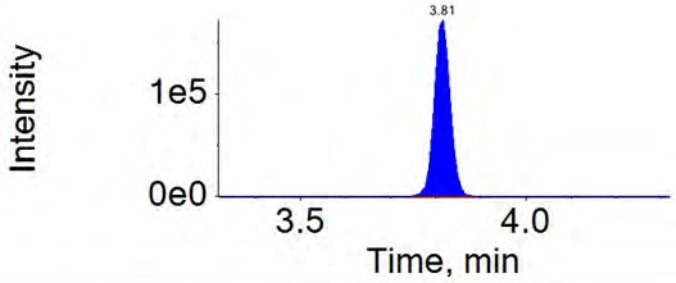
Injection Standard: 13C3-PFBA

216.0 / 172.0



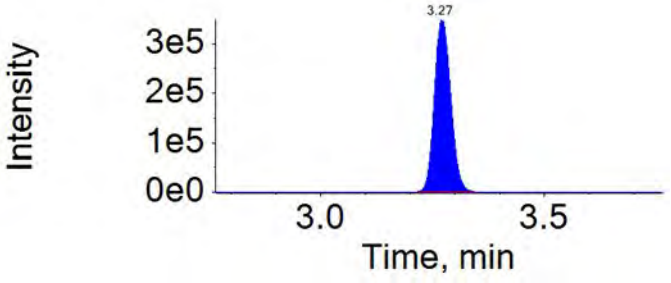
Extraction Standard: E13C3-PFBS

302.0 / 80.0



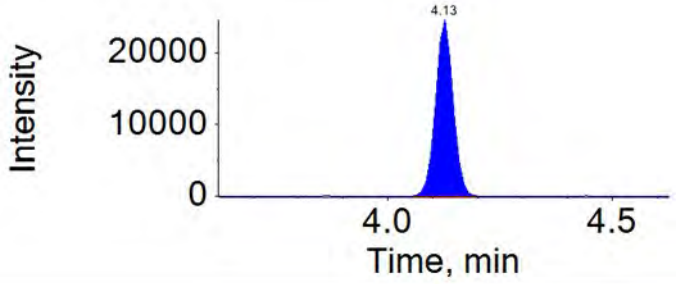
Injection Standard: 13C3-PFBA

216.0 / 172.0



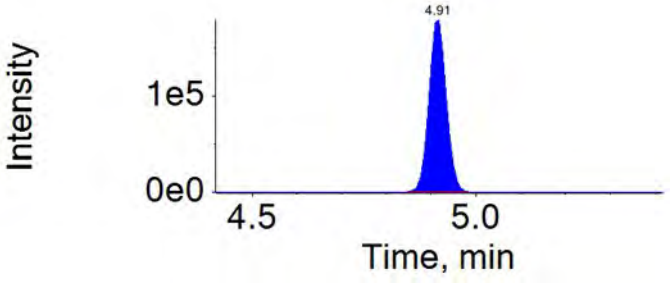
Extraction Standard: E13C2-4:2-FTS

329.0 / 81.0



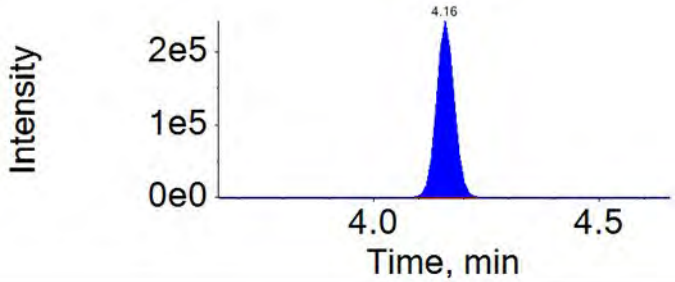
Injection Standard: 13C2-PFOA

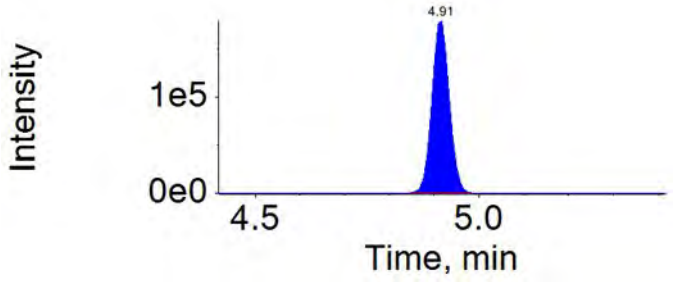
415.0 / 370.0



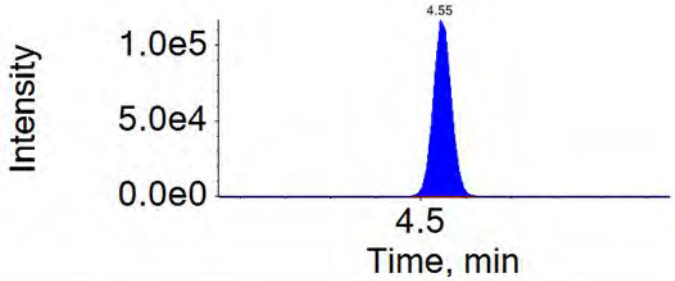
ICAL Name: 18NOV28DCAL **Result Table:** 18NOV29DCCV1-5 11/29/2018 7:58:55 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

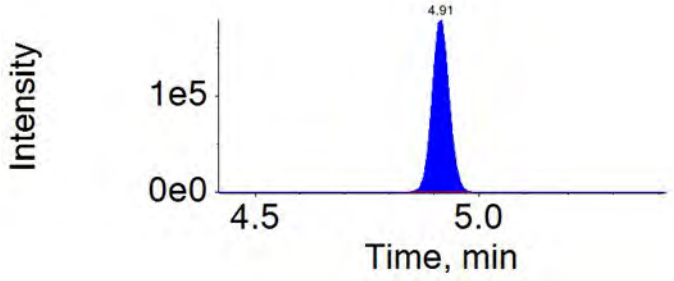
Extraction Standard: E13C5-PFHxA	Injection Standard: 13C2-PFOA
318.0 / 273.0	415.0 / 370.0



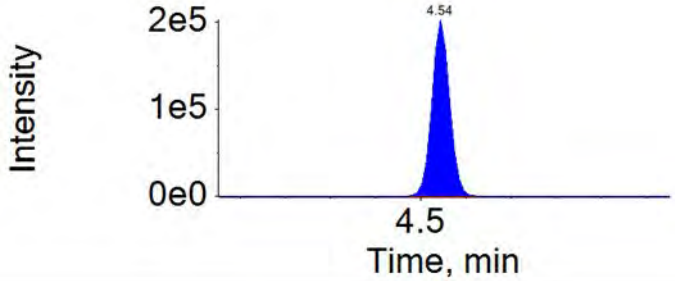


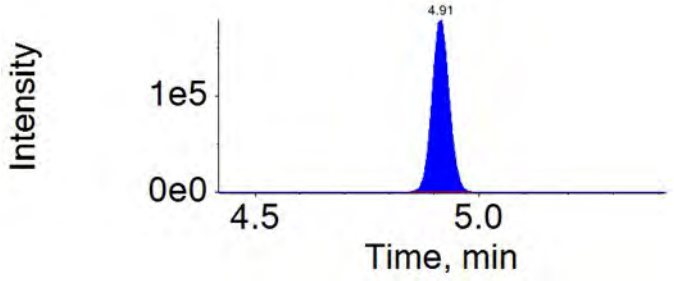
Extraction Standard: E13C3-PFHxS	Injection Standard: 13C2-PFOA
402.0 / 80.0	415.0 / 370.0



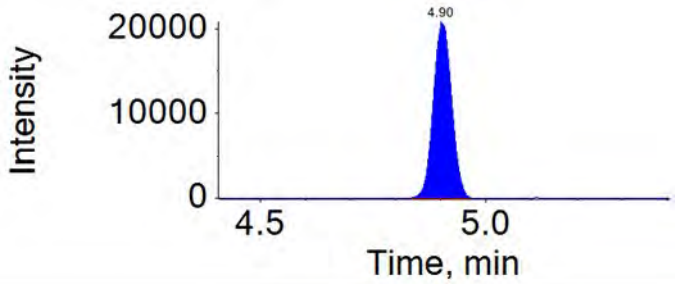


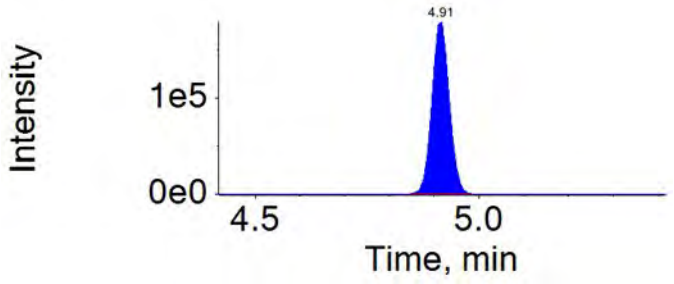
Extraction Standard: E13C4-PFHpA	Injection Standard: 13C2-PFOA
367.0 / 322.0	415.0 / 370.0





Extraction Standard: E13C2-6:2-FTS	Injection Standard: 13C2-PFOA
429.0 / 81.0	415.0 / 370.0

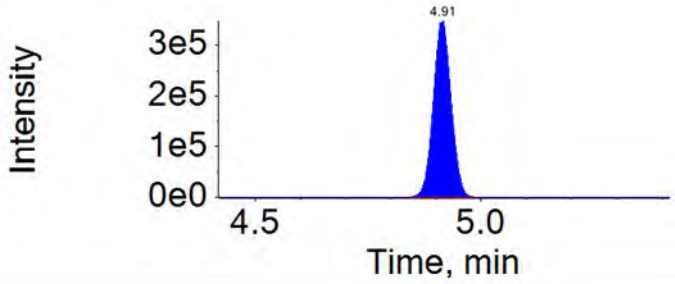




ICAL Name: 18NOV28DCAL **Result Table:** 18NOV29DCCV1-5 11/29/2018 7:58:55 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

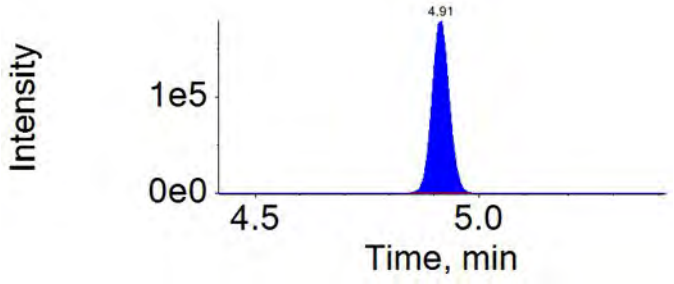
Extraction Standard: E13C8-PFOA

421.0 / 376.0



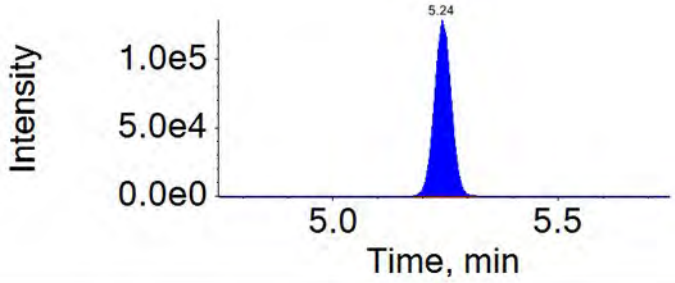
Injection Standard: 13C2-PFOA

415.0 / 370.0



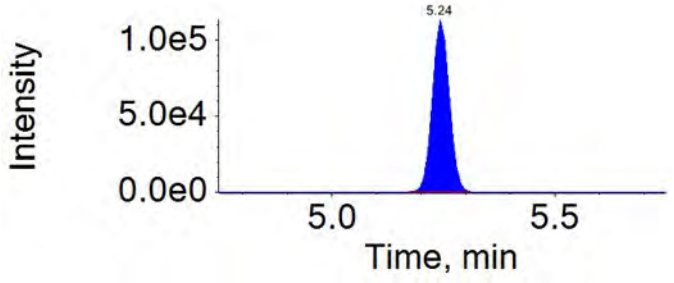
Extraction Standard: E13C8-PFOS

507.0 / 80.0



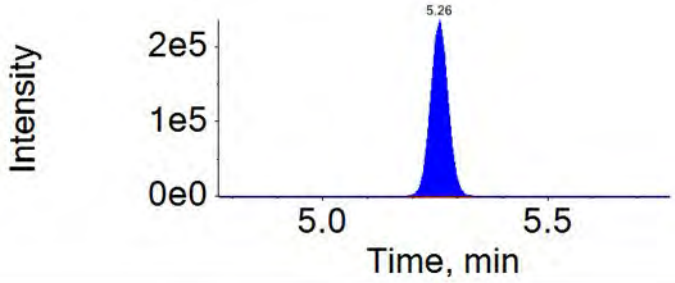
Injection Standard: 13C4-PFOS

503.0 / 80.0



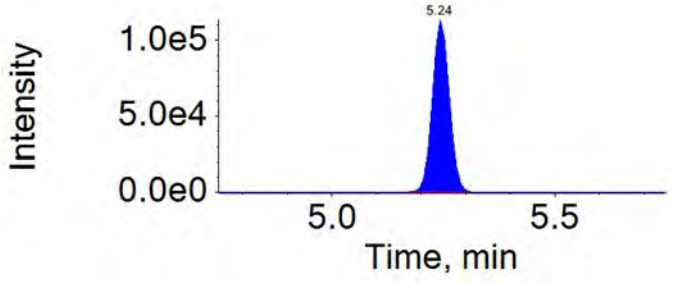
Extraction Standard: E13C9-PFNA

472.0 / 427.0



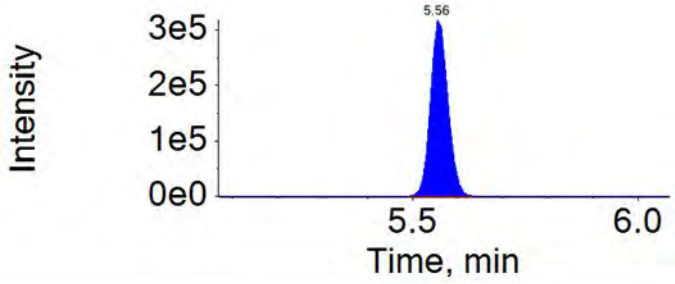
Injection Standard: 13C4-PFOS

503.0 / 80.0



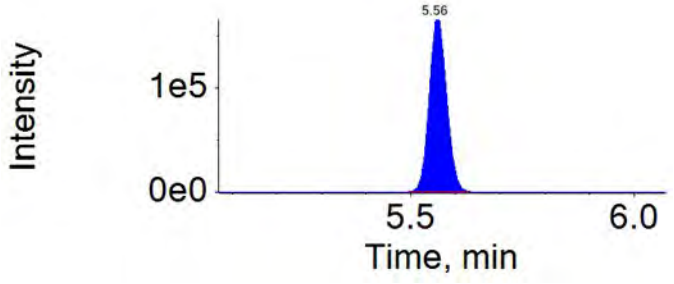
Extraction Standard: E13C6-PFDA

519.0 / 474.0



Injection Standard: 13C2-PFDA

515.0 / 470.0

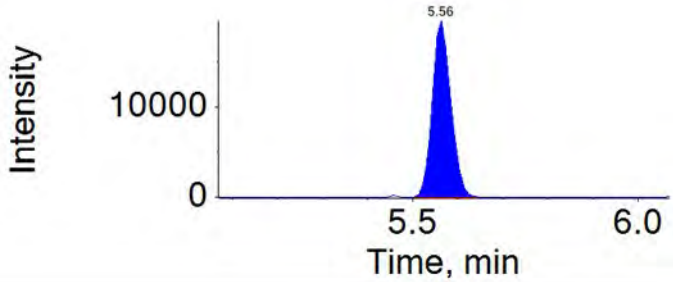


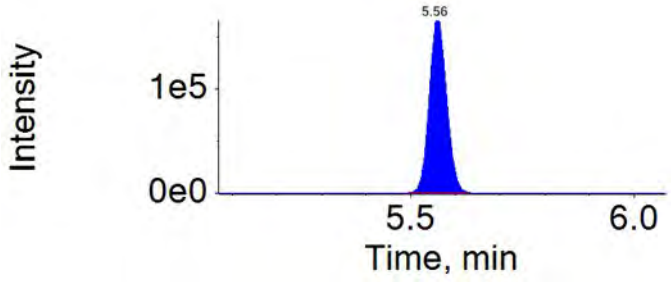
APPROVED
By MCD at 8:06 pm, 11/29/18

REVIEWED
By HMK at 9:40 am, 12/5/18

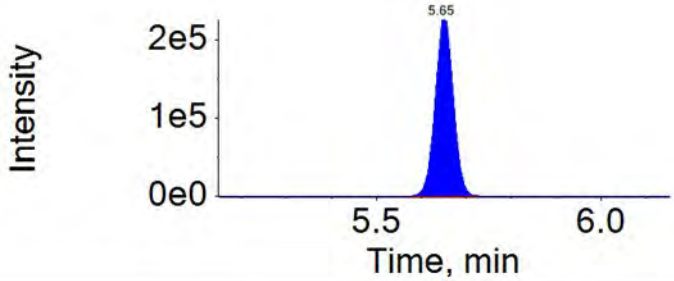
ICAL Name: 18NOV28DCAL **Result Table:** 18NOV29DCCV1-5 11/29/2018 7:58:55 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

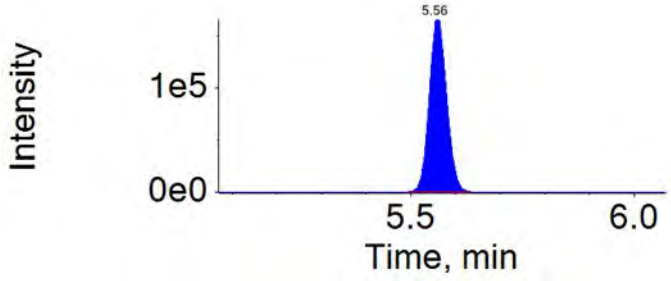
Extraction Standard: E13C2-8:2-FTS	Injection Standard: 13C2-PFDA
529.0 / 81.0	515.0 / 470.0



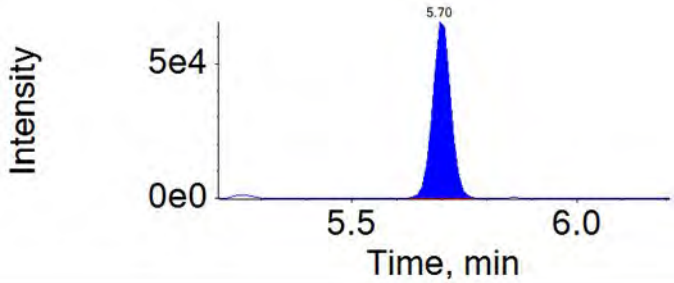


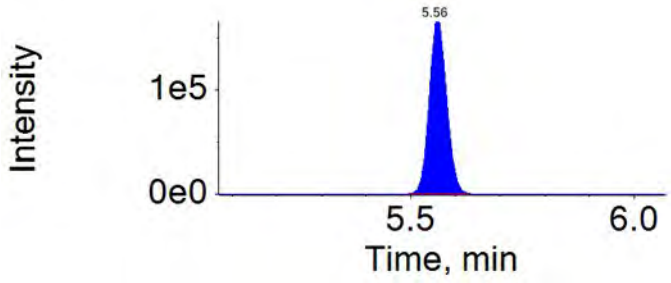
Extraction Standard: E13C8-PFOSA	Injection Standard: 13C2-PFDA
506.0 / 78.0	515.0 / 470.0



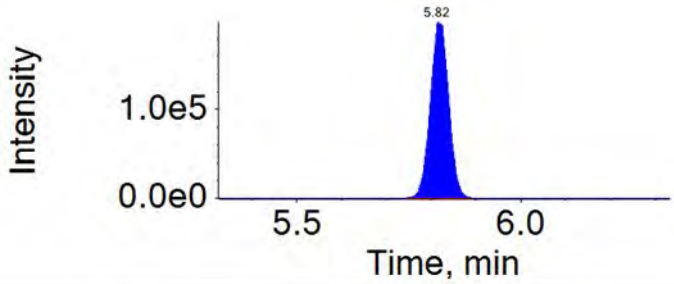


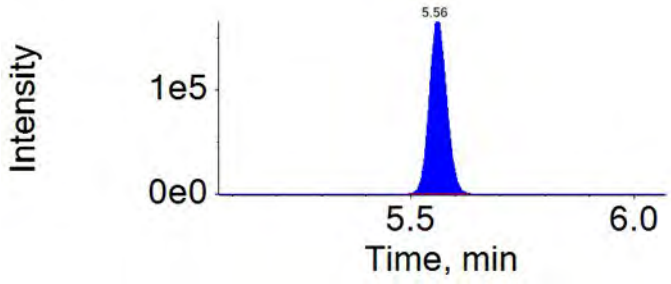
Extraction Standard: Ed3-NMeFOSAA	Injection Standard: 13C2-PFDA
573.0 / 419.0	515.0 / 470.0





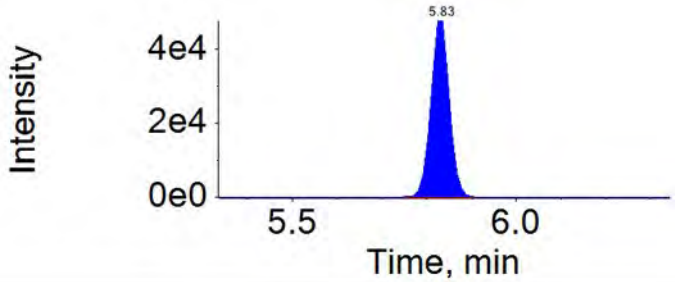
Extraction Standard: E13C7-PFUnDA	Injection Standard: 13C2-PFDA
570.0 / 525.0	515.0 / 470.0

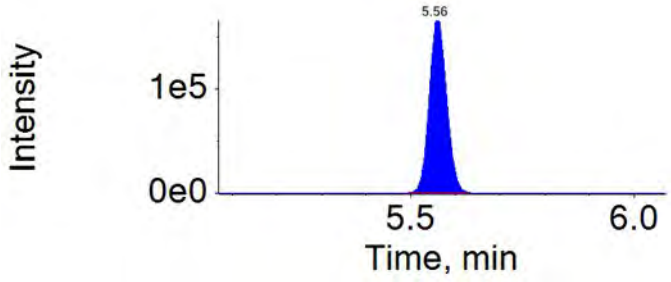




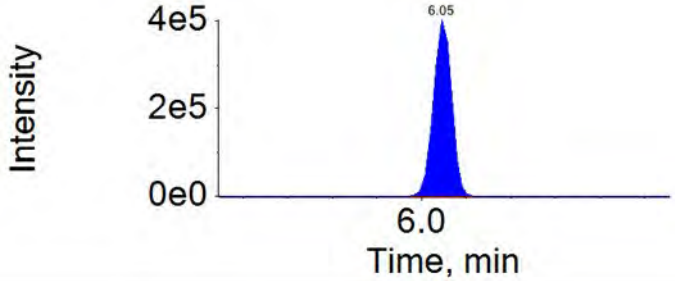
ICAL Name: 18NOV28DCAL **Result Table:** 18NOV29DCCV1-5 11/29/2018 7:58:55 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

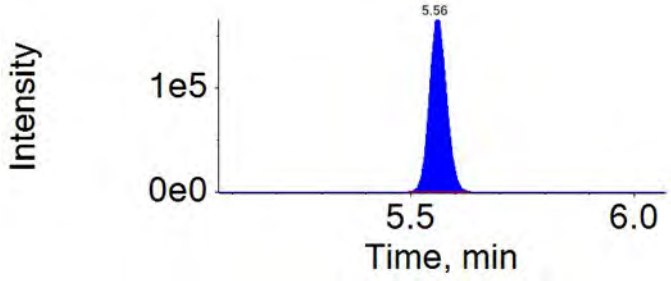
Extraction Standard: Ed5-NEtFOSAA	Injection Standard: 13C2-PFDA
589.0 / 419.0	515.0 / 470.0



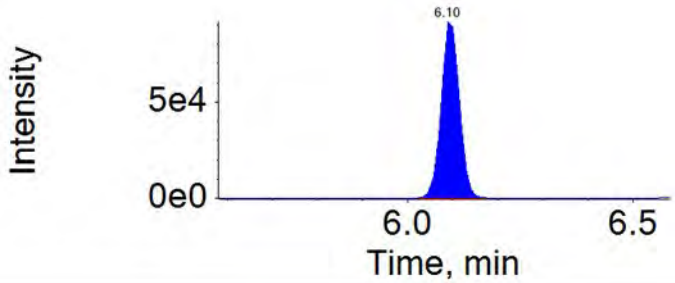


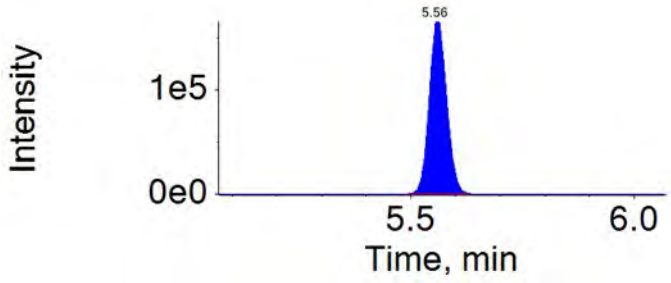
Extraction Standard: E13C2-PFDoDA	Injection Standard: 13C2-PFDA
615.0 / 570.0	515.0 / 470.0



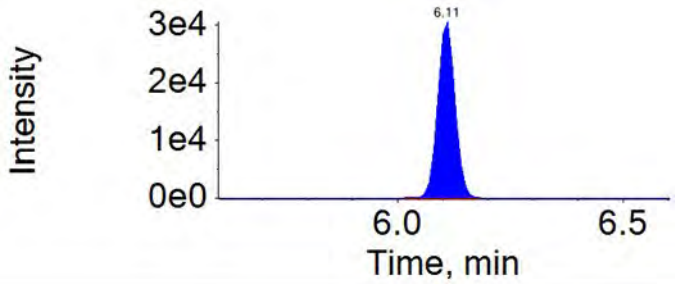


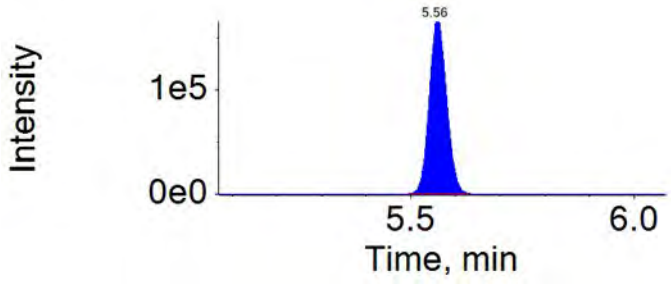
Extraction Standard: Ed7-NMePFOSAE	Injection Standard: 13C2-PFDA
623.0 / 59.0	515.0 / 470.0





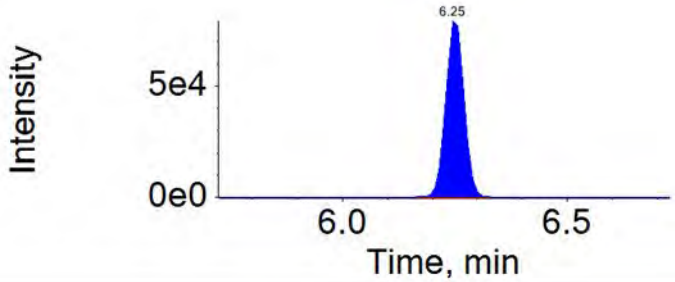
Extraction Standard: Ed3-NMePFOSA	Injection Standard: 13C2-PFDA
515.0 / 169.0	515.0 / 470.0

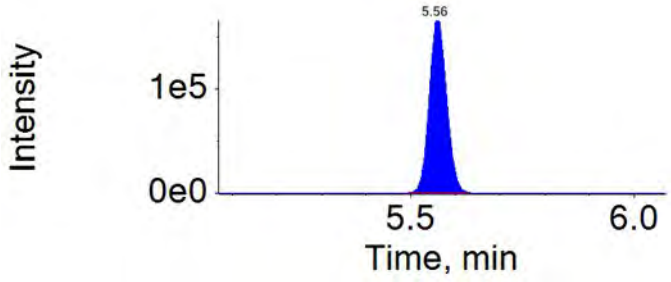




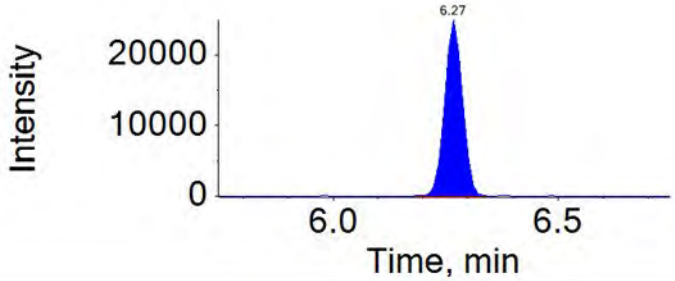
ICAL Name: 18NOV28DCAL **Result Table:** 18NOV29DCCV1-5 11/29/2018 7:58:55 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

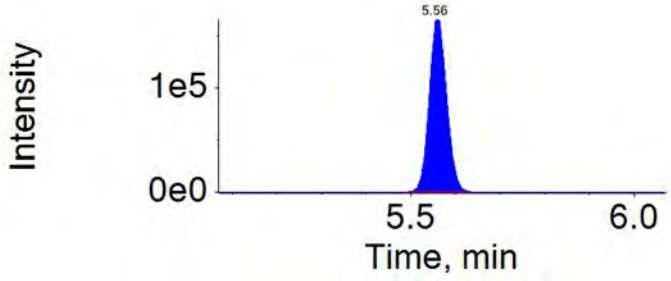
Extraction Standard: Ed9-NEtPFOSAE	Injection Standard: 13C2-PFDA
639.0 / 59.0	515.0 / 470.0



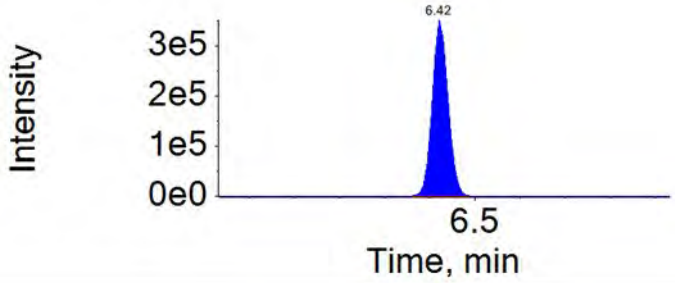


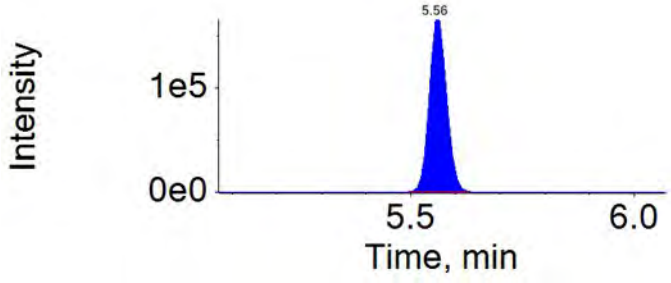
Extraction Standard: Ed5-NEtPFOSA	Injection Standard: 13C2-PFDA
531.0 / 169.0	515.0 / 470.0





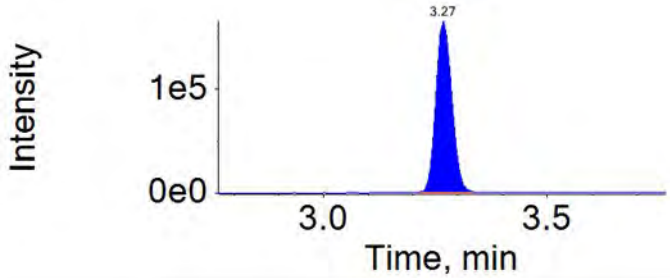
Extraction Standard: E13C2-PFTeDA	Injection Standard: 13C2-PFDA
715.0 / 670.0	515.0 / 470.0



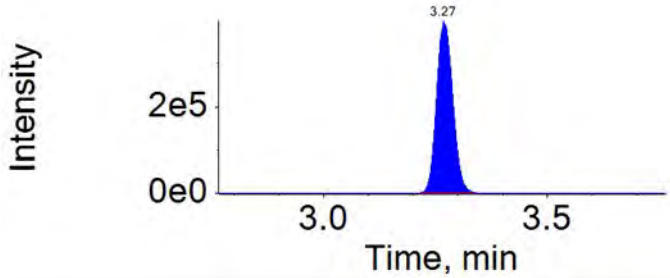


ICAL Name: 18NOV28DCAL **Result Table:** 18NOV29DCCV1-5 11/29/2018 7:58:55 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

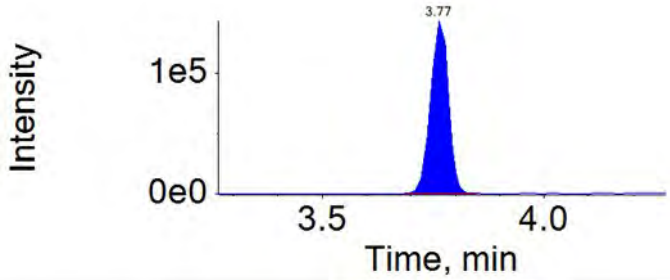
Analyte: PFBA
213.0 / 169.0



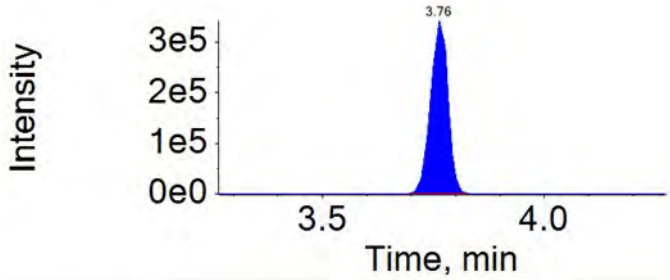
Extraction Standard: 13C4-PFBA
217.0 / 172.0



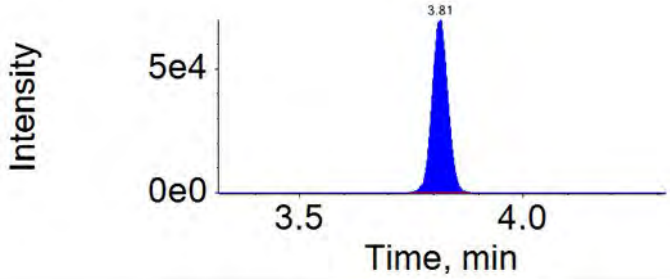
Analyte: PFPeA
263.0 / 219.0



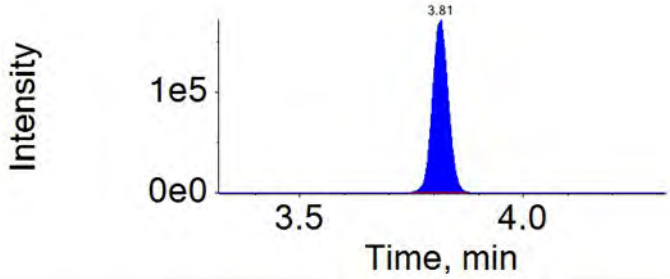
Extraction Standard: 13C5-PFPeA
268.0 / 223.0



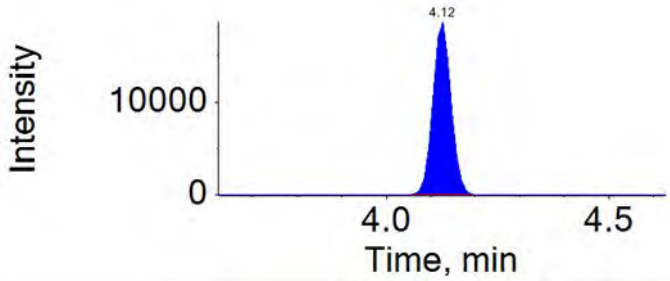
Analyte: PFBS
299.0 / 80.0



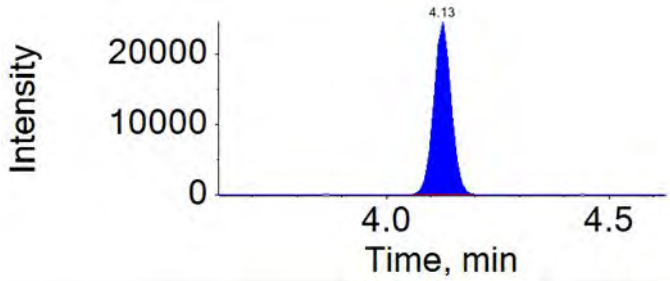
Extraction Standard: 13C3-PFBS
302.0 / 80.0



Analyte: 4:2-FTS
327.0 / 307.0



Extraction Standard: 13C2-4:2-FTS
329.0 / 81.0

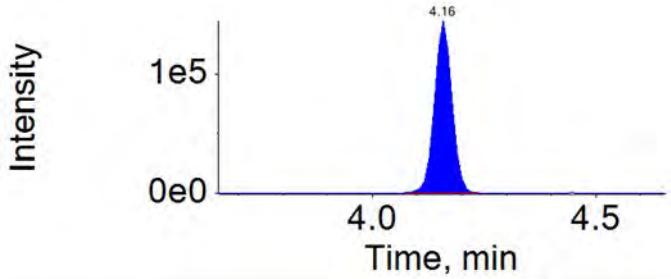


APPROVED
By MCD at 8:06 pm, 11/29/18

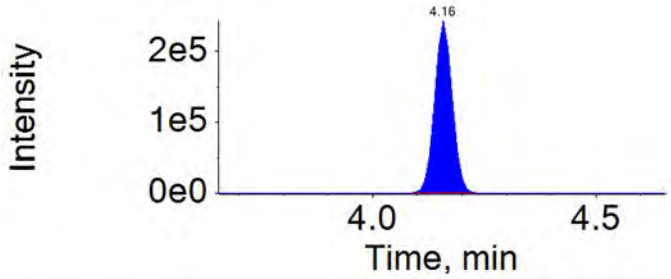
REVIEWED
By HMK at 9:40 am, 12/5/18

ICAL Name: 18NOV28DCAL **Result Table:** 18NOV29DCCV1-5 11/29/2018 7:58:55 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

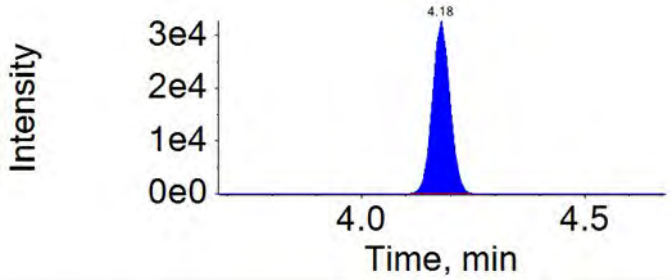
Analyte: PFHxA
313.0 / 269.0



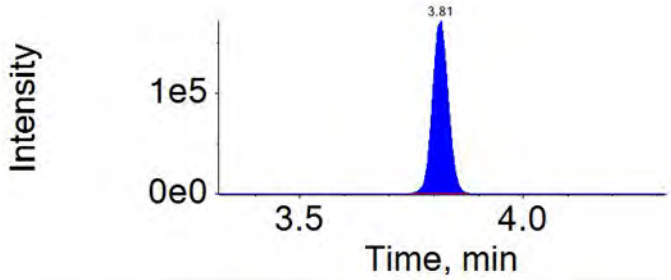
Extraction Standard: 13C5-PFHxA
318.0 / 273.0



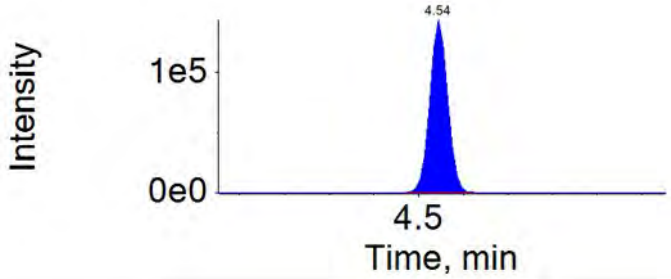
Analyte: PFPeS
349.0 / 80.0



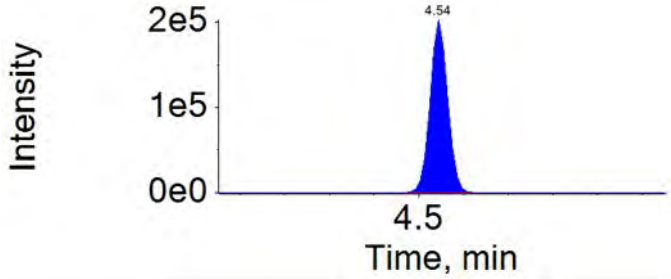
Extraction Standard: 13C3-PFBS
302.0 / 80.0



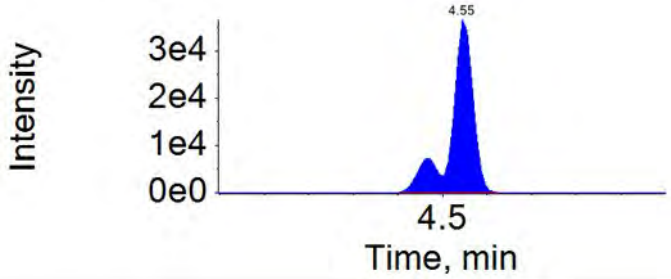
Analyte: PFHpA
363.0 / 319.0



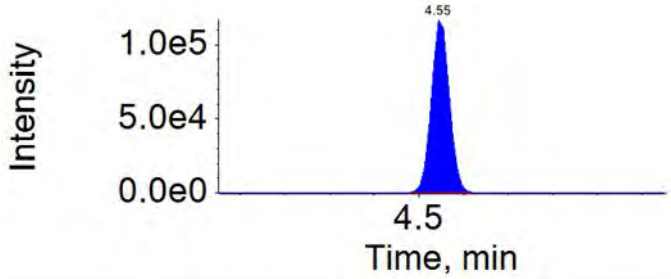
Extraction Standard: 13C4-PFHpA
367.0 / 322.0



Analyte: PFHxS
399.0 / 80.0



Extraction Standard: 13C3-PFHxS
402.0 / 80.0

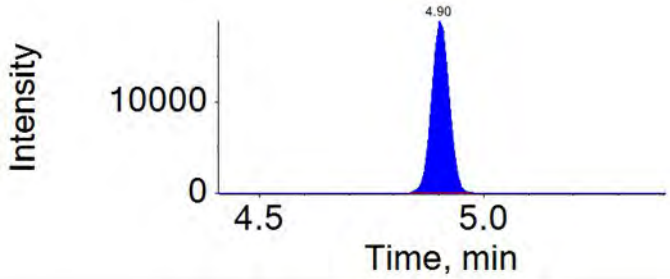


APPROVED
By MCD at 8:06 pm, 11/29/18

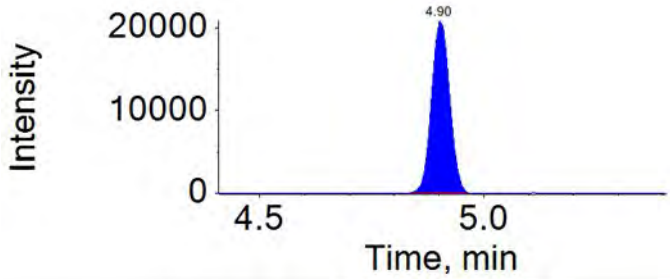
REVIEWED
By HMK at 9:40 am, 12/5/18

ICAL Name: 18NOV28DCAL **Result Table:** 18NOV29DCCV1-5 11/29/2018 7:58:55 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

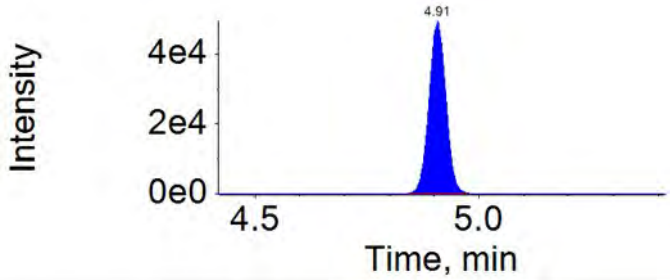
Analyte: 6:2-FTS
427.0 / 407.0



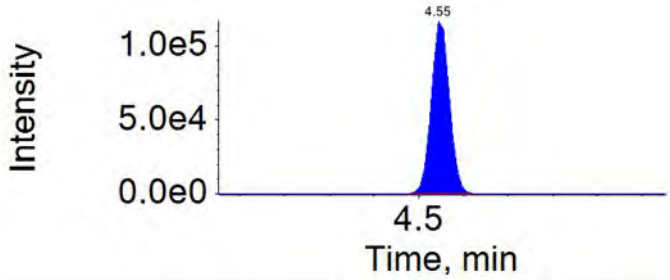
Extraction Standard: 13C2-6:2-FTS
429.0 / 81.0



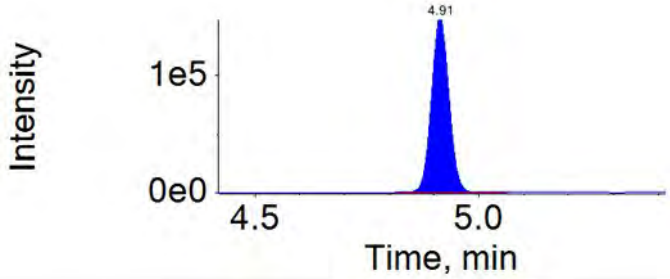
Analyte: PFHpS
449.0 / 80.0



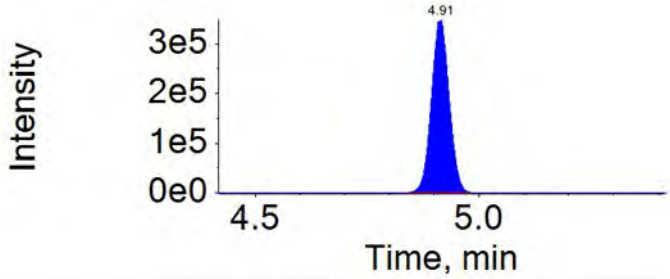
Extraction Standard: 13C3-PFHxS
402.0 / 80.0



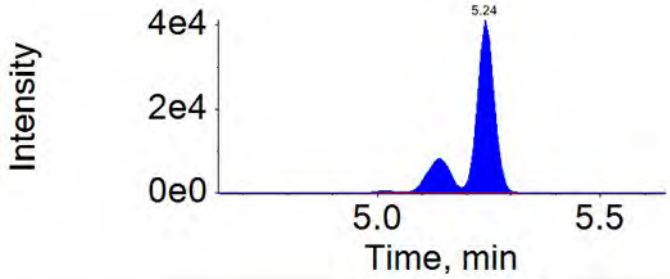
Analyte: PFOA
413.0 / 369.0



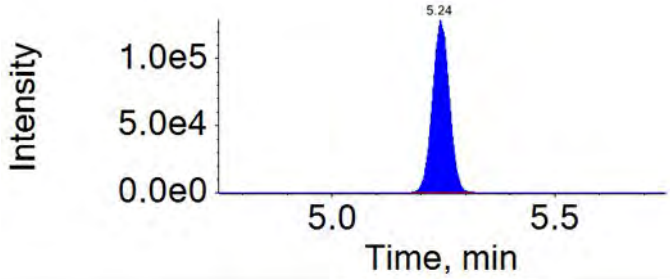
Extraction Standard: 13C8-PFOA
421.0 / 376.0



Analyte: PFOS
499.0 / 80.0



Extraction Standard: 13C8-PFOS
507.0 / 80.0

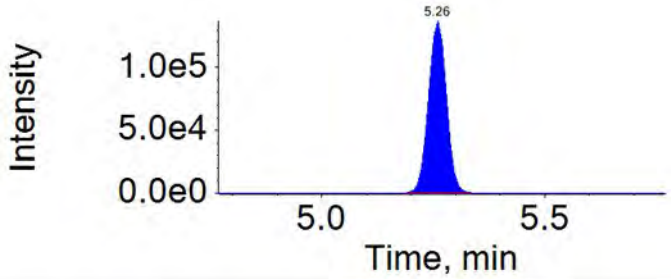


APPROVED
By MCD at 8:06 pm, 11/29/18

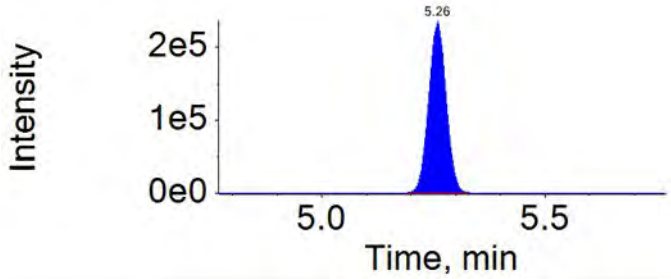
REVIEWED
By HMK at 9:40 am, 12/5/18

ICAL Name: 18NOV28DCAL **Result Table:** 18NOV29DCCV1-5 11/29/2018 7:58:55 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

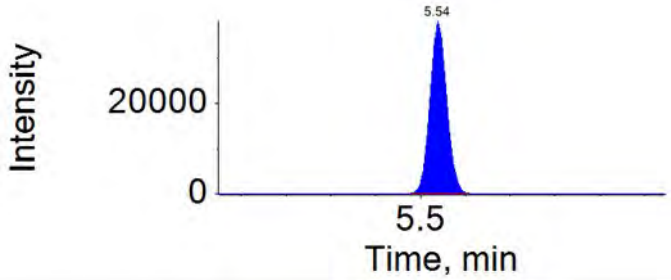
Analyte: PFNA
463.0 / 419.0



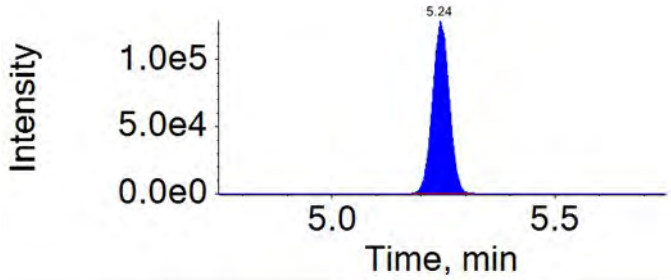
Extraction Standard: 13C9-PFNA
472.0 / 427.0



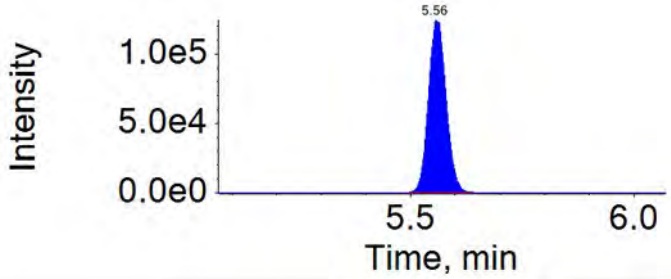
Analyte: PFNS
549.0 / 80.0



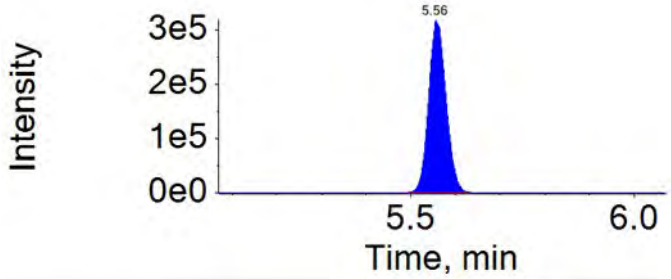
Extraction Standard: 13C8-PFOS
507.0 / 80.0



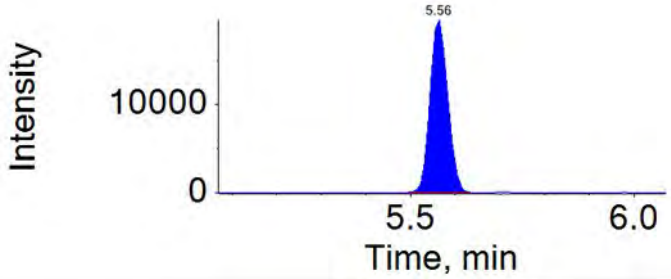
Analyte: PFDA
513.0 / 469.0



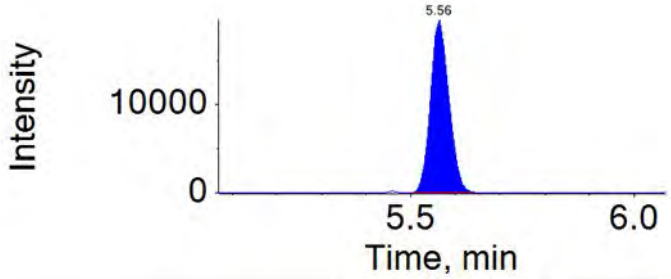
Extraction Standard: 13C6-PFDA
519.0 / 474.0



Analyte: 8:2-FTS
527.0 / 507.0



Extraction Standard: 13C2-8:2-FTS
529.0 / 81.0

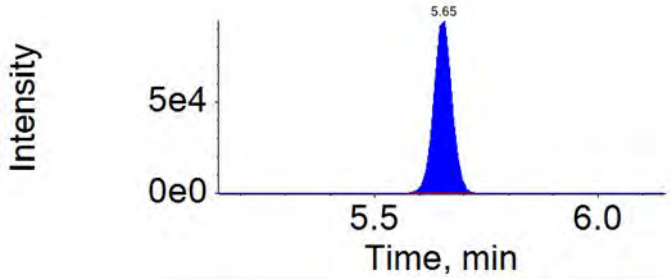


APPROVED
By MCD at 8:06 pm, 11/29/18

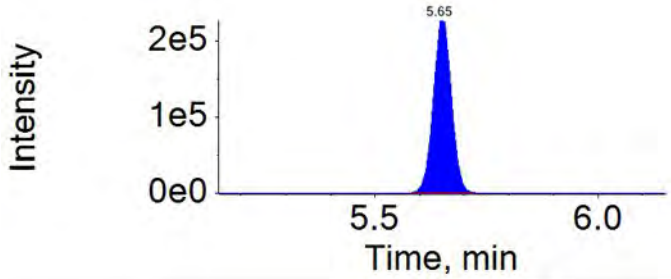
REVIEWED
By HMK at 9:40 am, 12/5/18

ICAL Name: 18NOV28DCAL **Result Table:** 18NOV29DCCV1-5 11/29/2018 7:58:55 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

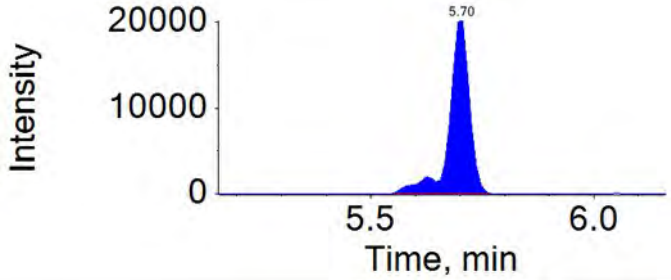
Analyte: PFOSA
498.0 / 78.0



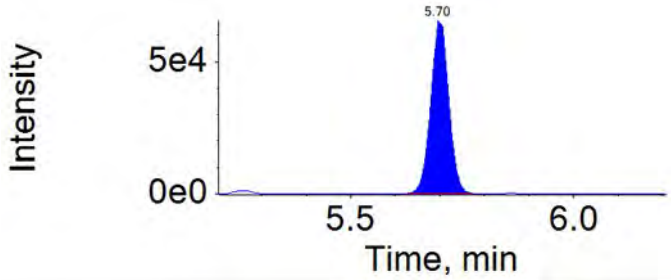
Extraction Standard: 13C8-PFOSA
506.0 / 78.0



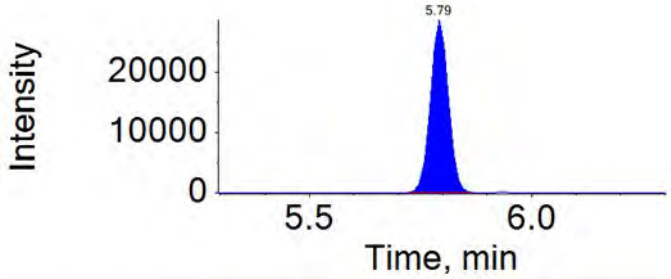
Analyte: NMeFOSAA
570.0 / 419.0



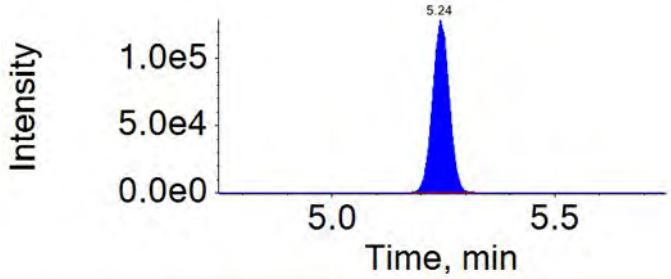
Extraction Standard: d3-NMeFOSAA
573.0 / 419.0



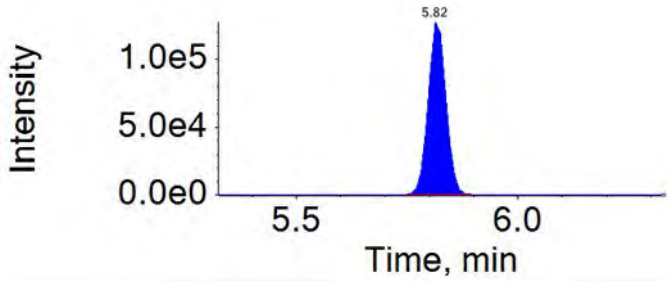
Analyte: PFDS
599.0 / 80.0



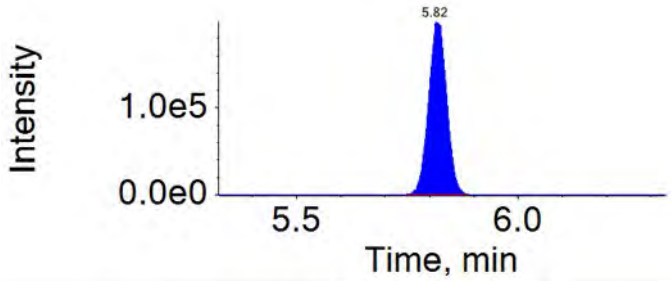
Extraction Standard: 13C8-PFOS
507.0 / 80.0



Analyte: PFUnDA
563.0 / 519.0



Extraction Standard: 13C7-PFUnDA
570.0 / 525.0

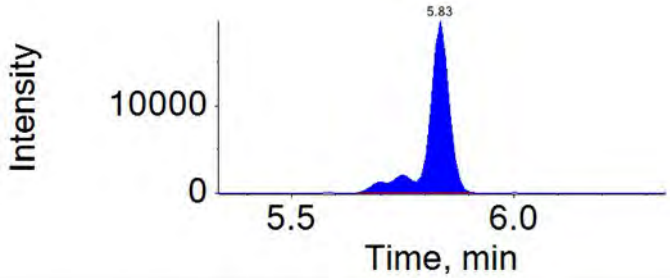


APPROVED
By MCD at 8:06 pm, 11/29/18

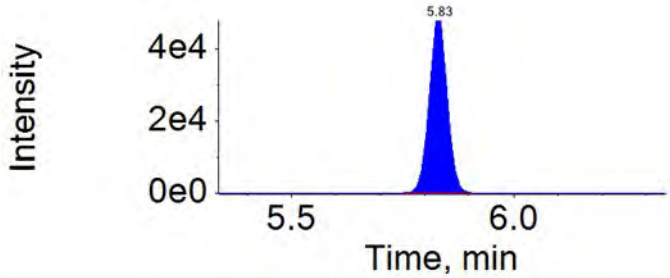
REVIEWED
By HMK at 9:40 am, 12/5/18

ICAL Name: 18NOV28DCAL **Result Table:** 18NOV29DCCV1-5 11/29/2018 7:58:55 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

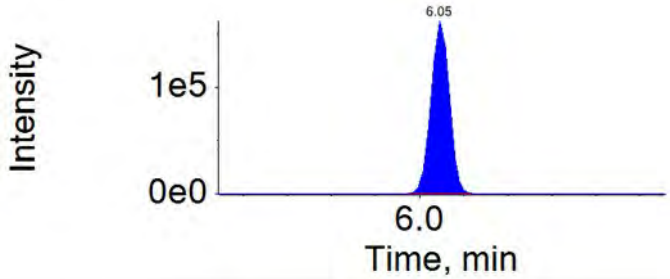
Analyte: NEtFOSAA
584.0 / 419.0



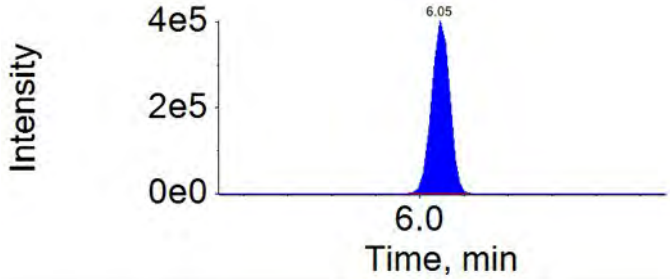
Extraction Standard: d5-NEtFOSAA
589.0 / 419.0



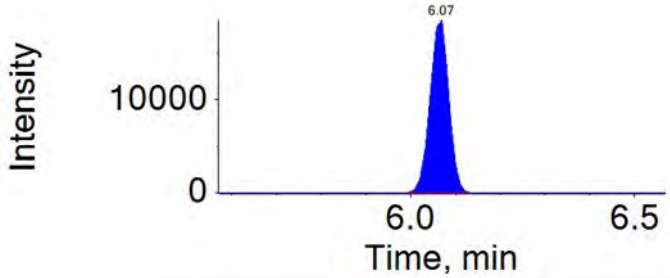
Analyte: PFDoDA
613.0 / 569.0



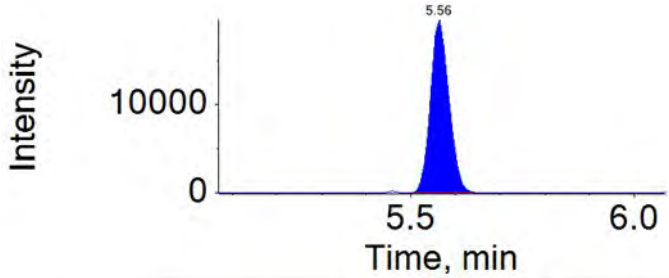
Extraction Standard: 13C2-PFDoDA
615.0 / 570.0



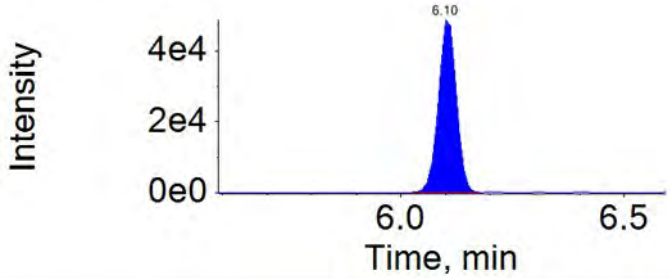
Analyte: 10:2-FTS
627.0 / 607.0



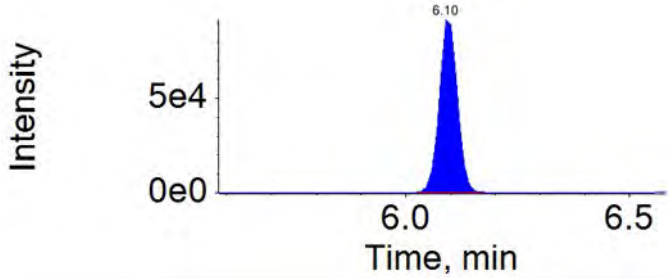
Extraction Standard: 13C2-8:2-FTS
529.0 / 81.0



Analyte: NMePFOSAE
616.0 / 59.0



Extraction Standard: d7-NMePFOSAE
623.0 / 59.0

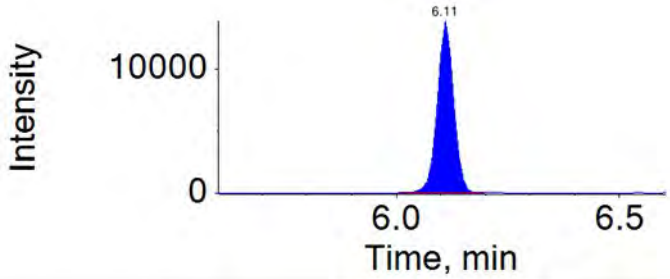


APPROVED
By MCD at 8:06 pm, 11/29/18

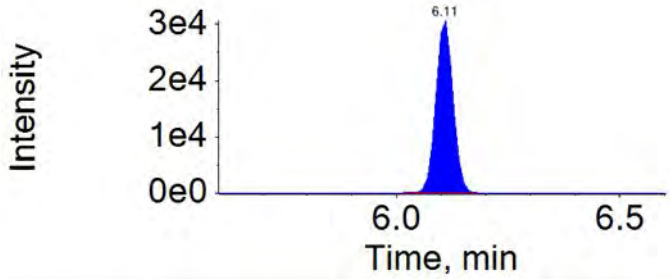
REVIEWED
By HMK at 9:40 am, 12/5/18

ICAL Name: 18NOV28DCAL **Result Table:** 18NOV29DCCV1-5 11/29/2018 7:58:55 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

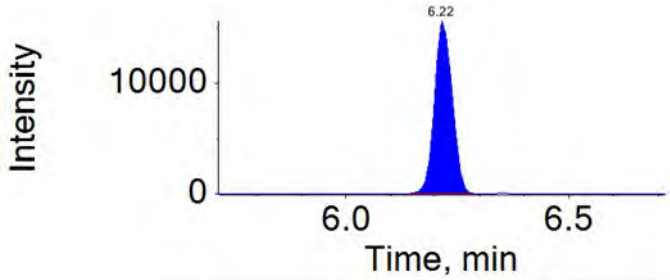
Analyte: NMePFOSA
512.0 / 169.0



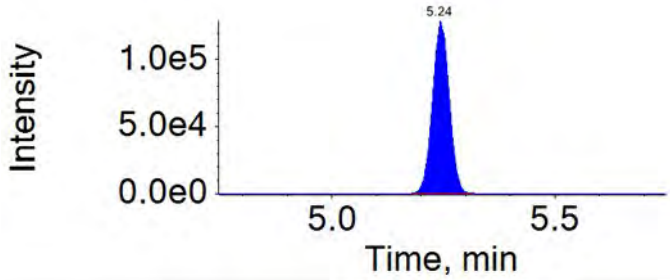
Extraction Standard: d3-NMePFOSA
515.0 / 169.0



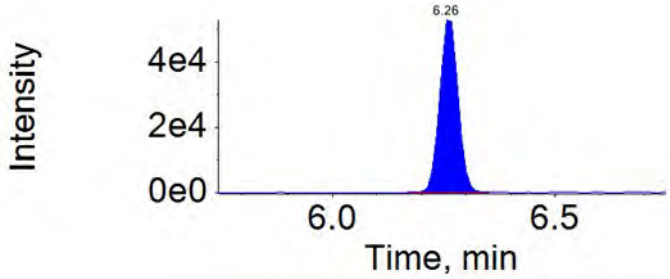
Analyte: PFDoS
699.0 / 80.0



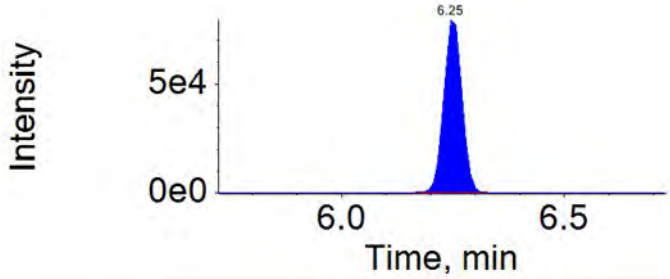
Extraction Standard: 13C8-PFOS
507.0 / 80.0



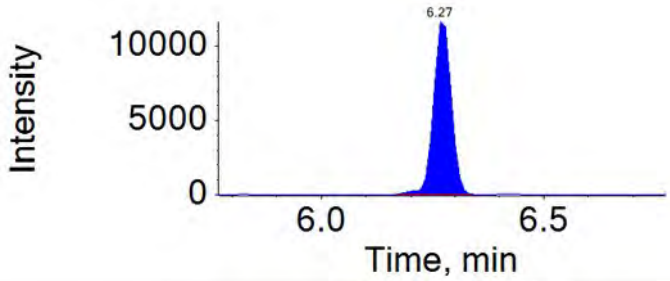
Analyte: NEtPFOSAE
630.0 / 59.0



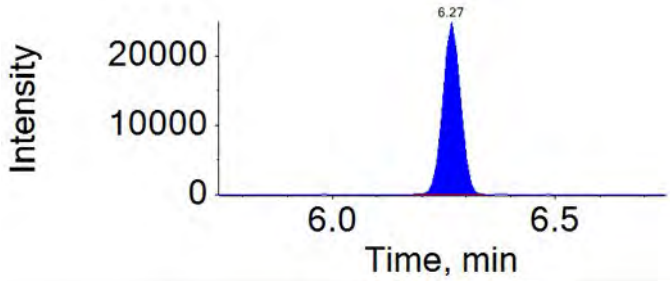
Extraction Standard: d9-NEtPFOSAE
639.0 / 59.0



Analyte: NEtPFOSA
526.0 / 169.0



Extraction Standard: d5-NEtPFOSA
531.0 / 169.0

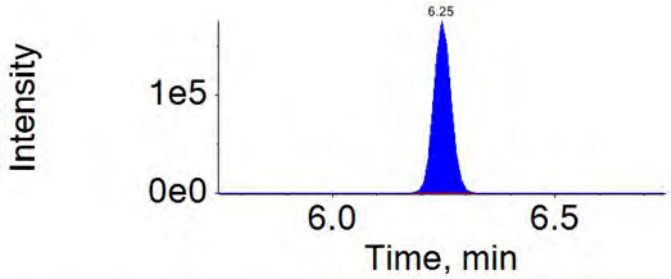


APPROVED
By MCD at 8:06 pm, 11/29/18

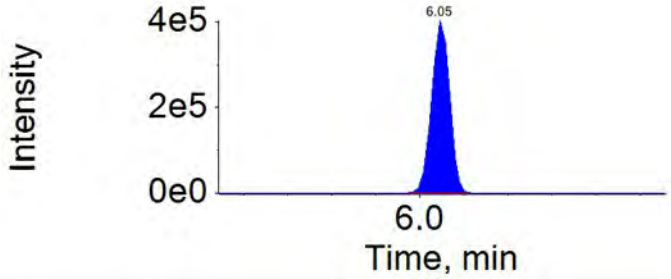
REVIEWED
By HMK at 9:40 am, 12/5/18

ICAL Name: 18NOV28DCAL **Result Table:** 18NOV29DCCV1-5 11/29/2018 7:58:55 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

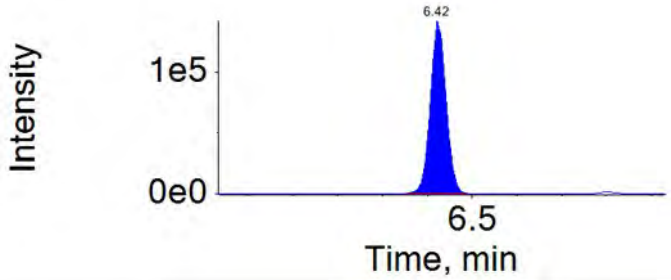
Analyte: PFTrDA
663.0 / 619.0



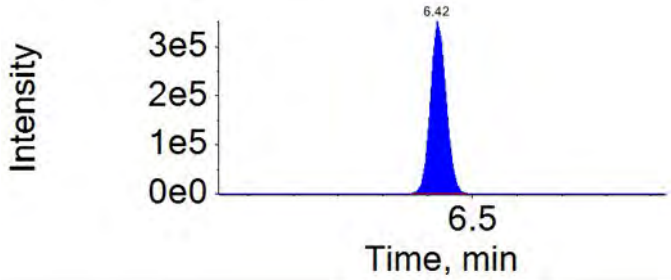
Extraction Standard: 13C2-PFDoDA
615.0 / 570.0



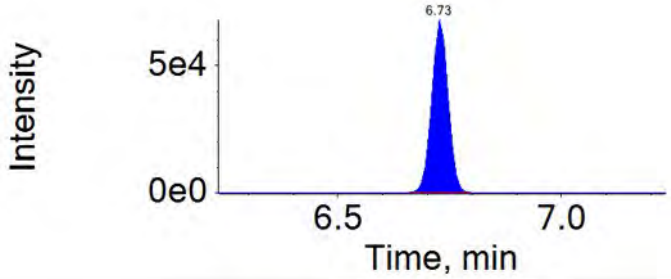
Analyte: PFTeDA
713.0 / 669.0



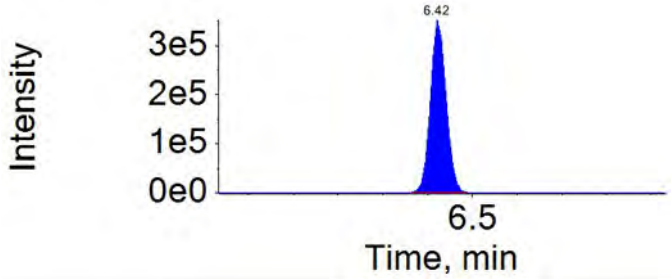
Extraction Standard: 13C2-PFTeDA
715.0 / 670.0



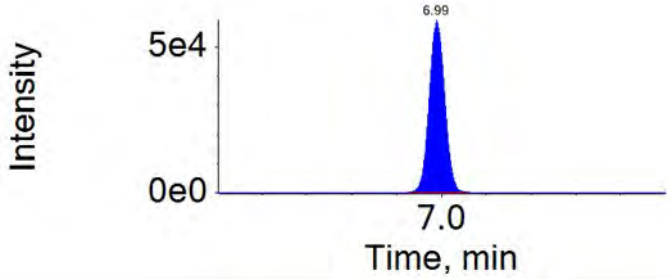
Analyte: PFHxDA
813.0 / 769.0



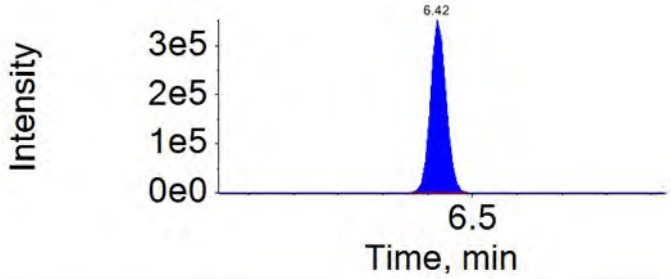
Extraction Standard: 13C2-PFTeDA
715.0 / 670.0



Analyte: PFODA
913.0 / 869.0



Extraction Standard: 13C2-PFTeDA
715.0 / 670.0



APPROVED
By MCD at 8:06 pm, 11/29/18

REVIEWED
By HMK at 9:40 am, 12/5/18

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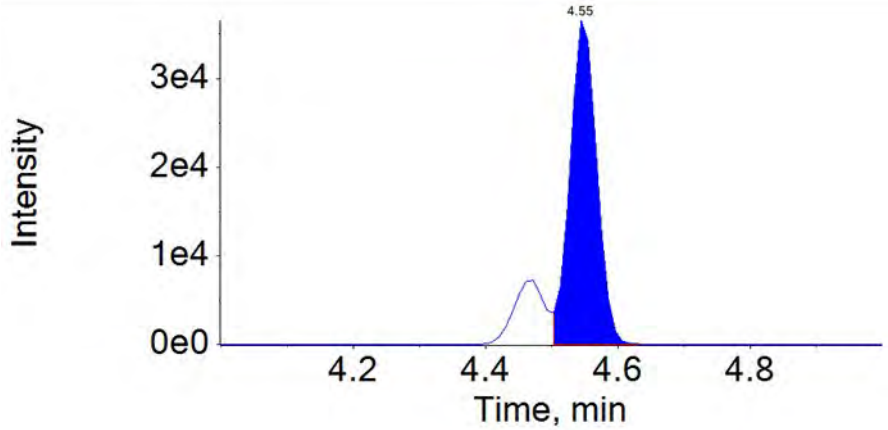
Auto Integrations prior to Manual Integration

Print Date: 11/29/2018 8:02 PM
Template: MQ-OrigInteg-16NOV21.docx

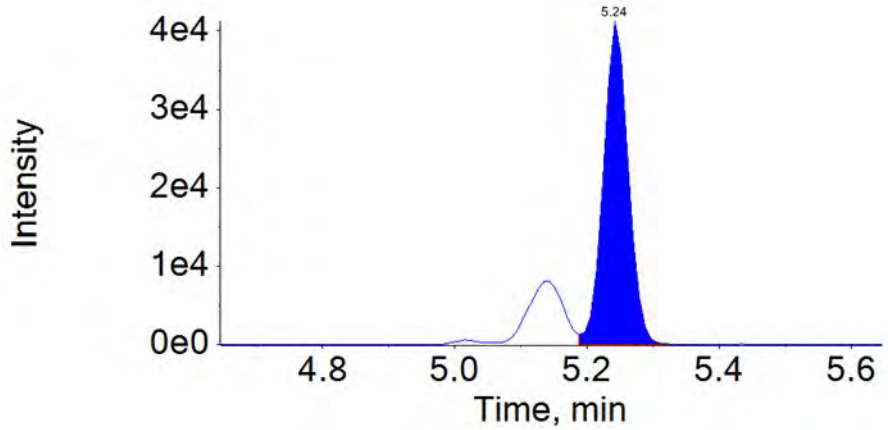
Results Table Name: 18NOV29DCCV1-5
Results Table Date: 11/29/2018 7:58:55 PM
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

Component Name:
PFHxS
RT (min.):
4.55
Peak Area:
103048.0
Mass Range:
399.0 / 80.0
File Name:
18NOV29D-52.wiff
Sample Name:
CCV5_CAL3



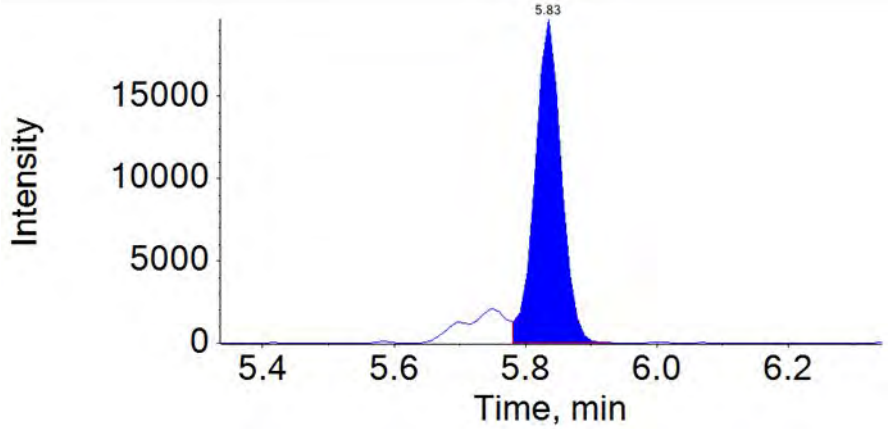
Integration Comment: incorrect integration

Component Name:
PFOS
RT (min.):
5.24
Peak Area:
107440.5
Mass Range:
499.0 / 80.0
File Name:
18NOV29D-52.wiff
Sample Name:
CCV5_CAL3



Integration Comment: incorrect integration

Component Name:
NEtFOSAA
RT (min.):
5.83
Peak Area:
54491.9
Mass Range:
584.0 / 419.0
File Name:
18NOV29D-52.wiff
Sample Name:
CCV5_CAL3



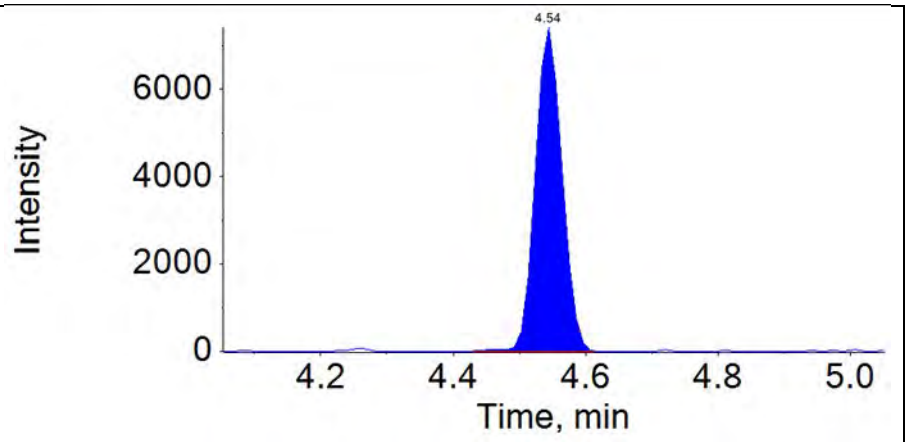
Integration Comment: incorrect integration

APPROVED
By MCD at 8:06 pm, 11/29/18

REVIEWED
By HMK at 9:40 am, 12/5/18

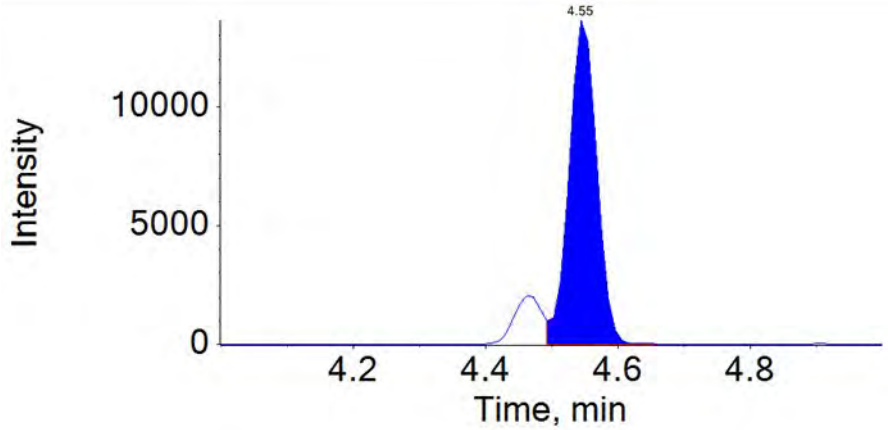
Results Table Name: 18NOV29DCCV1-5
Results Table Date: 11/29/2018 7:58:55 PM
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

Component Name:
PFHpA_2
RT (min.):
4.54
Peak Area:
20844.3
Mass Range:
363.0 / 169.0
File Name:
18NOV29D-52.wiff
Sample Name:
CCV5_CAL3



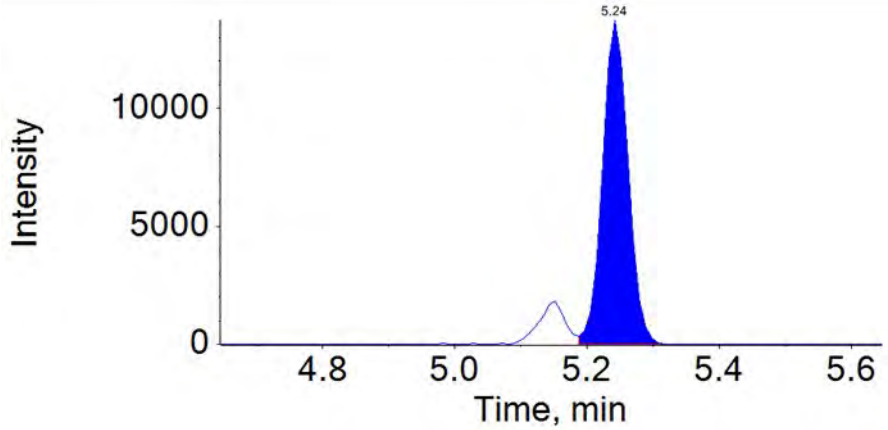
Integration Comment: incorrect integration

Component Name:
PFHxS_2
RT (min.):
4.55
Peak Area:
39908.0
Mass Range:
399.0 / 99.0
File Name:
18NOV29D-52.wiff
Sample Name:
CCV5_CAL3



Integration Comment: incorrect integration

Component Name:
PFOS_2
RT (min.):
5.24
Peak Area:
36914.5
Mass Range:
499.0 / 99.0
File Name:
18NOV29D-52.wiff
Sample Name:
CCV5_CAL3



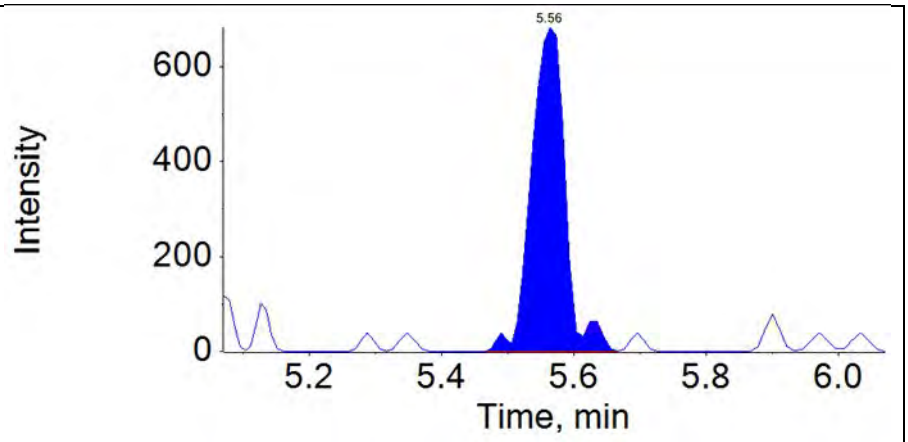
Integration Comment: incorrect integration

APPROVED
By MCD at 8:06 pm, 11/29/18

REVIEWED
By HMK at 9:40 am, 12/5/18

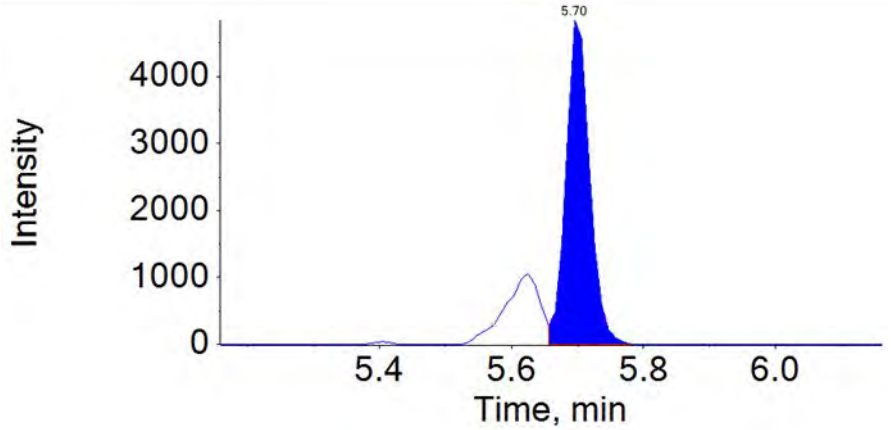
Results Table Name: 18NOV29DCCV1-5
Results Table Date: 11/29/2018 7:58:55 PM
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

Component Name:
PFDA_2
RT (min.):
5.56
Peak Area:
2438.8
Mass Range:
513.0 / 169.0
File Name:
18NOV29D-52.wiff
Sample Name:
CCV5_CAL3



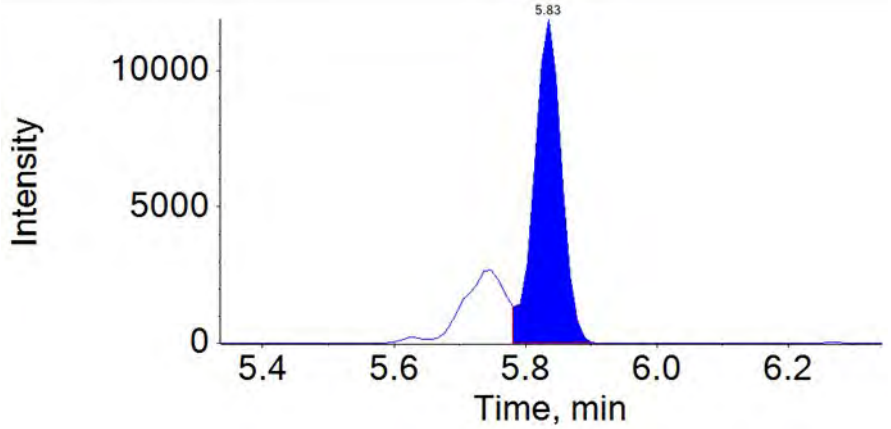
Integration Comment: incorrect integration

Component Name:
NMeFOSAA_2
RT (min.):
5.70
Peak Area:
12072.2
Mass Range:
570.0 / 483.0
File Name:
18NOV29D-52.wiff
Sample Name:
CCV5_CAL3



Integration Comment: incorrect integration

Component Name:
NEtFOSAA_2
RT (min.):
5.83
Peak Area:
34118.1
Mass Range:
584.0 / 526.0
File Name:
18NOV29D-52.wiff
Sample Name:
CCV5_CAL3



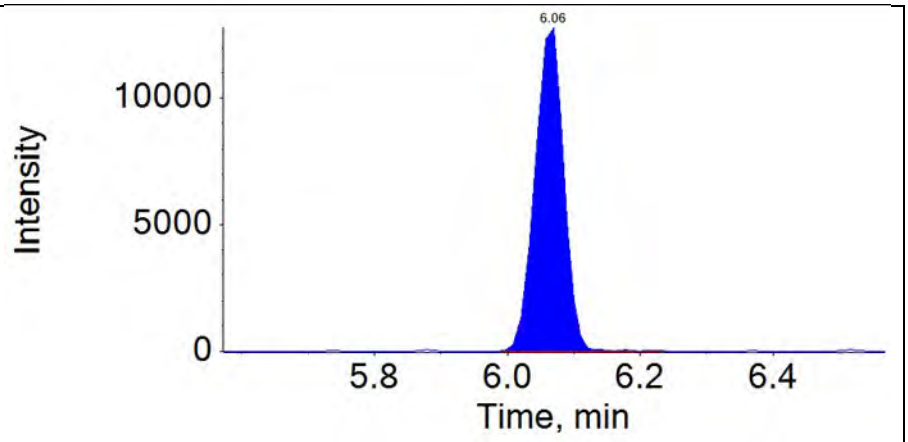
Integration Comment: incorrect integration

APPROVED
By MCD at 8:06 pm, 11/29/18

REVIEWED
By HMK at 9:40 am, 12/5/18

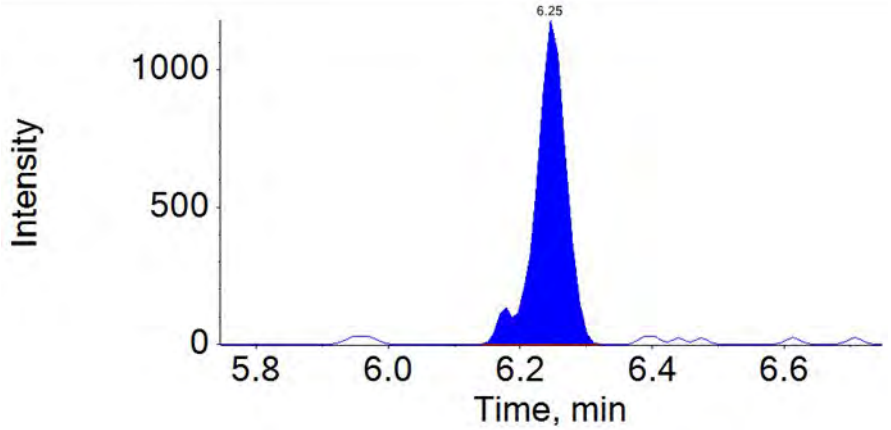
Results Table Name: 18NOV29DCCV1-5
Results Table Date: 11/29/2018 7:58:55 PM
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

Component Name:
10:2-FTS_2
RT (min.):
6.06
Peak Area:
38871.1
Mass Range:
627.0 / 81.0
File Name:
18NOV29D-52.wiff
Sample Name:
CCV5_CAL3



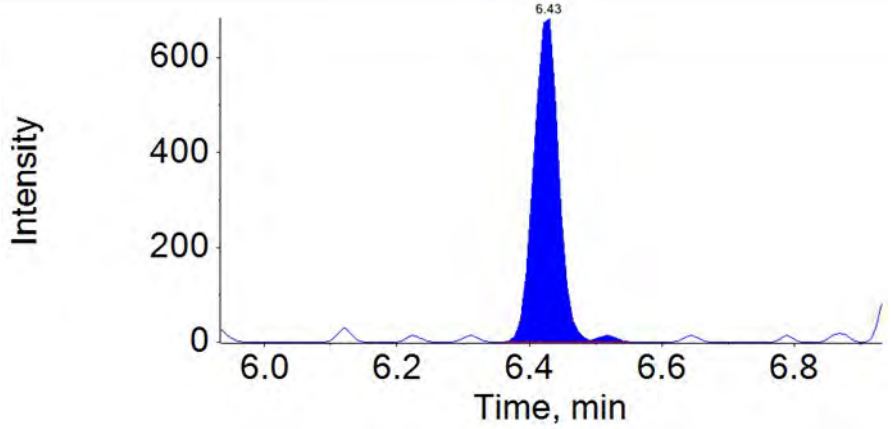
Integration Comment: incorrect integration

Component Name:
PFTrDA_2
RT (min.):
6.25
Peak Area:
3806.2
Mass Range:
663.0 / 169.0
File Name:
18NOV29D-52.wiff
Sample Name:
CCV5_CAL3



Integration Comment: incorrect integration

Component Name:
PFTeDA_2
RT (min.):
6.43
Peak Area:
1816.4
Mass Range:
713.0 / 169.0
File Name:
18NOV29D-52.wiff
Sample Name:
CCV5_CAL3



Integration Comment: incorrect integration

APPROVED
By MCD at 8:06 pm, 11/29/18

REVIEWED
By HMK at 9:40 am, 12/5/18

Results Table Name: 18NOV29DCCV1-5
Results Table Date: 11/29/2018 7:58:55 PM
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

APPROVED
By MCD at 8:06 pm, 11/29/18

REVIEWED
By HMK at 9:40 am, 12/5/18

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LC-MS/MS Analysis Report

Printed: 11/29/2018 8:00:00 PM
Template: IonRatio18OCT10

Ion Ratio Report

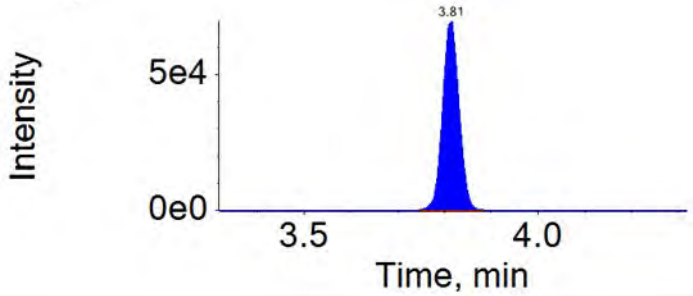
Sample Name: CCV5_CAL3 **Instrument Name:** LM27631 **File Name:** 18NOV29D-52.wiff

Component Name	RT	RRT	Analyte Area Response	Int Typ	Expected Ion Ratio	Ion Ratio	Ion Ratio % Diff	Ion Ratio Limit	Ion Ratio OOS
PFBS	3.81	1.00	172355.2	A	N/A	0.3496			
PFBS_2	3.81	1.00	60254.5	A	N/A	0.3496	-4	50	
4:2-FTS	4.12	1.00	52632.4	A	N/A	0.6128			
4:2-FTS_2	4.12	1.00	32253.6	A	N/A	0.6128	-4	50	
PFHxA	4.16	1.00	392712.5	A	N/A	0.0095			
PFHxA_2	4.16	1.00	3748.1	A	N/A	0.0095	-8	50	
PFPeS	4.18	1.10	89389.0	A	N/A	0.5510			
PFPeS_2	4.18	1.10	49253.8	A	N/A	0.5510	11	50	
PFHpA	4.54	1.00	396806.2	A	N/A	0.0523			
PFHpA_2	4.54	1.00	20756.9	M	N/A	0.0523	-6	50	
PFHxS	4.55	1.00	127006.9	M	N/A	0.3604			
PFHxS_2	4.55	1.00	45767.4	M	N/A	0.3604	-2	50	
6:2-FTS	4.90	1.00	51799.6	A	N/A	0.5825			
6:2-FTS_2	4.90	1.00	30171.4	A	N/A	0.5825	-12	50	
PFHpS	4.91	1.08	129025.9	A	N/A	0.3916			
PFHpS_2	4.91	1.08	50522.7	A	N/A	0.3916	0	50	
PFOA	4.91	1.00	407078.9	A	N/A	0.0597			
PFOA_2	4.92	1.00	24289.8	A	N/A	0.0597	4	50	
PFOS	5.24	1.00	138995.5	M	N/A	0.3024			
PFOS_2	5.24	1.00	42028.6	M	N/A	0.3024	2	50	
PFNA	5.26	1.00	382168.0	A	N/A	0.0151			
PFNA_2	5.26	1.00	5752.1	A	N/A	0.0151	-25	50	
PFNS	5.54	1.06	98297.2	A	N/A	0.4813			
PFNS_2	5.54	1.06	47307.0	A	N/A	0.4813	0	50	
PFDA	5.56	1.00	343068.9	A	N/A	0.0067			
PFDA_2	5.56	1.00	2285.7	M	N/A	0.0067	-11	50	
8:2-FTS	5.56	1.00	54309.5	A	N/A	0.6811			
8:2-FTS_2	5.56	1.00	36991.3	A	N/A	0.6811	27	50	
NMeFOSAA	5.70	1.00	64182.7	A	N/A	0.2484			
NMeFOSAA_2	5.70	1.00	15945.6	M	N/A	0.2484	8	50	
PFDS	5.79	1.10	79891.7	A	N/A	0.4226			
PFDS_2	5.79	1.10	33761.0	A	N/A	0.4226	-21	50	
PFUnDA	5.82	1.00	355883.8	A	N/A	0.0042			
PFUnDA_2	5.82	1.00	1497.1	A	N/A	0.0042	11	50	
NEtFOSAA	5.83	1.00	64211.1	M	N/A	0.7219			
NEtFOSAA_2	5.83	1.00	46352.7	M	N/A	0.7219	-2	50	
PFDoDA	6.05	1.00	467324.6	A	N/A	0.0131			
PFDoDA_2	6.05	1.00	6130.3	A	N/A	0.0131	1	50	
10:2-FTS	6.07	1.09	54230.7	A	N/A	0.7133			
10:2-FTS_2	6.06	1.09	38681.2	M	N/A	0.7133	2	50	
PFTrDA	6.25	1.03	477187.4	A	N/A	0.0076			
PFTrDA_2	6.25	1.03	3624.2	M	N/A	0.0076	-16	50	
PFTeDA	6.42	1.00	345082.9	A	N/A	0.0052			
PFTeDA_2	6.43	1.00	1787.5	M	N/A	0.0052	-8	50	
PFHxDA	6.73	1.05	172538.3	A	N/A	0.0603			
PFHxDA_2	6.73	1.05	10401.9	A	N/A	0.0603	-7	50	
PFODA	6.99	1.09	141132.9	A	N/A	0.0256			
PFODA_2	6.99	1.09	3617.6	A	N/A	0.0256	-3	50	

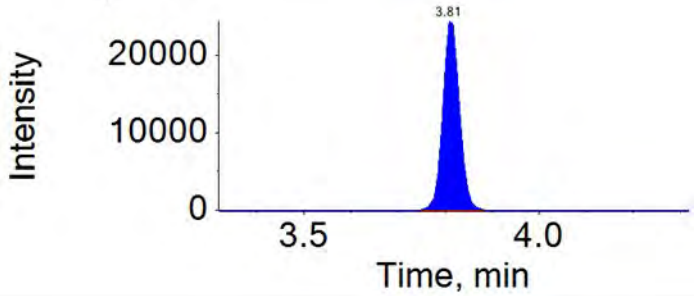
APPROVED
By MCD at 8:06 pm, 11/29/18

REVIEWED
By HMK at 9:40 am, 12/5/18

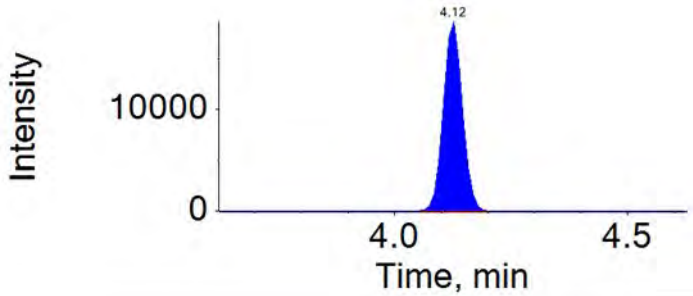
Component: PFBS
Primary Mass: 299.0 / 80.0



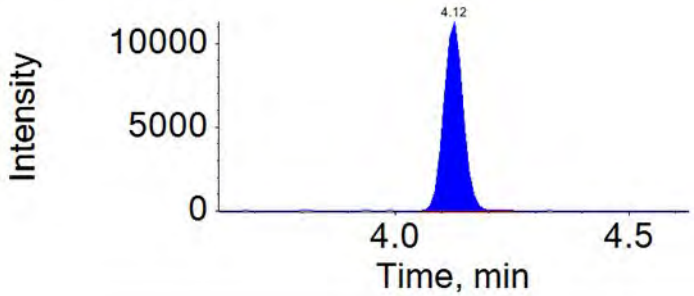
Component: PFBS_2
Secondary Mass: 299.0 / 99.0



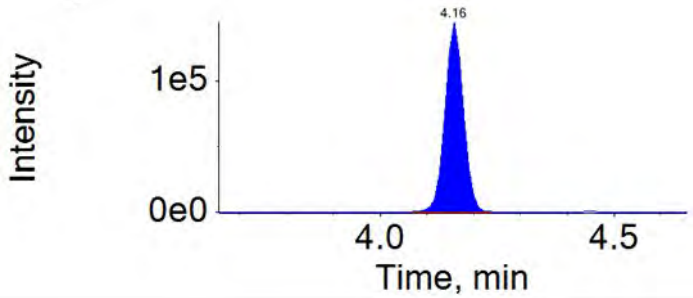
Component: 4:2-FTS
Primary Mass: 327.0 / 307.0



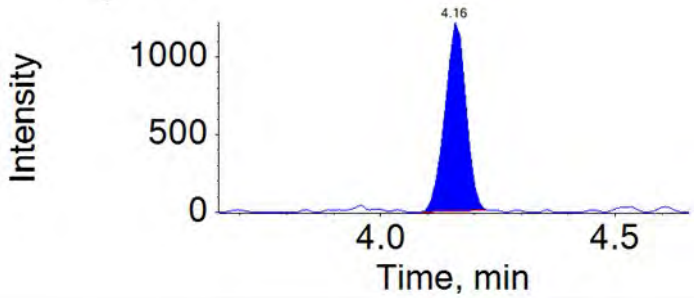
Component: 4:2-FTS_2
Secondary Mass: 327.0 / 81.0



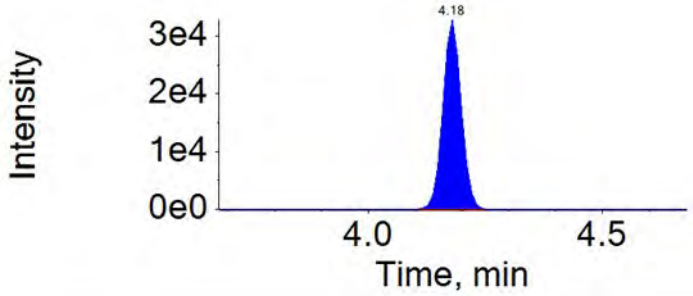
Component: PFHxA
Primary Mass: 313.0 / 269.0



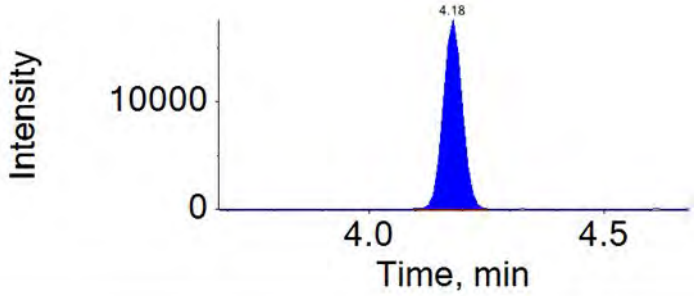
Component: PFHxA_2
Secondary Mass: 313.0 / 119.0



Component: PFPeS
Primary Mass: 349.0 / 80.0



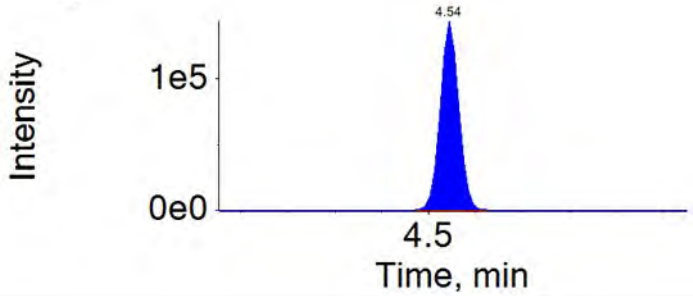
Component: PFPeS_2
Secondary Mass: 349.0 / 99.0



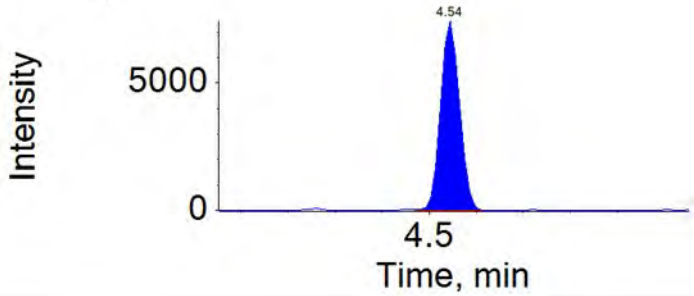
APPROVED
By MCD at 8:06 pm, 11/29/18

REVIEWED
By HMK at 9:40 am, 12/5/18

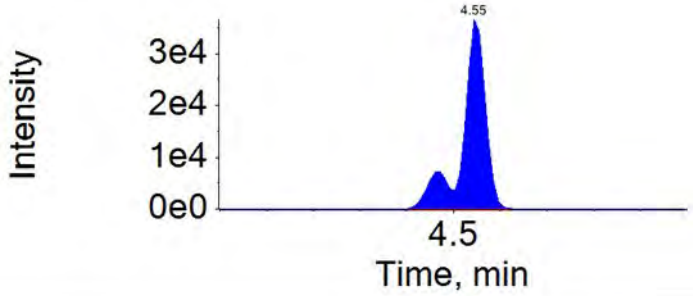
Component: PFHpA
Primary Mass: 363.0 / 319.0



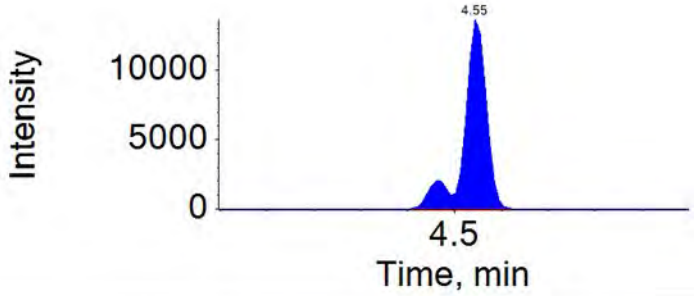
Component: PFHpA_2
Secondary Mass: 363.0 / 169.0



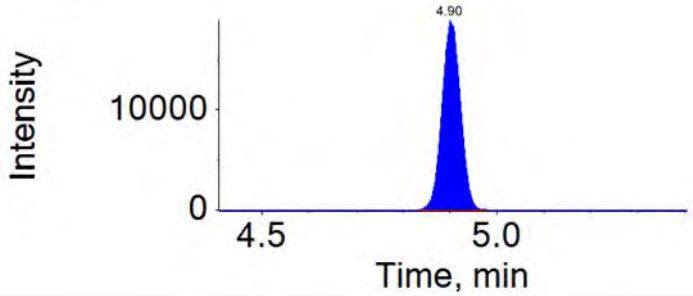
Component: PFHxS
Primary Mass: 399.0 / 80.0



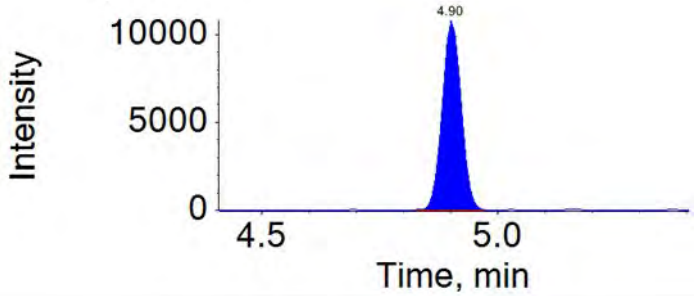
Component: PFHxS_2
Secondary Mass: 399.0 / 99.0



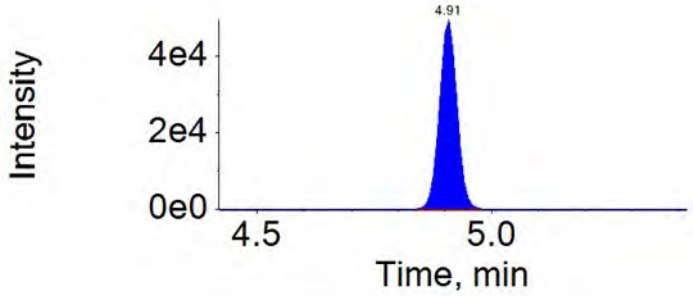
Component: 6:2-FTS
Primary Mass: 427.0 / 407.0



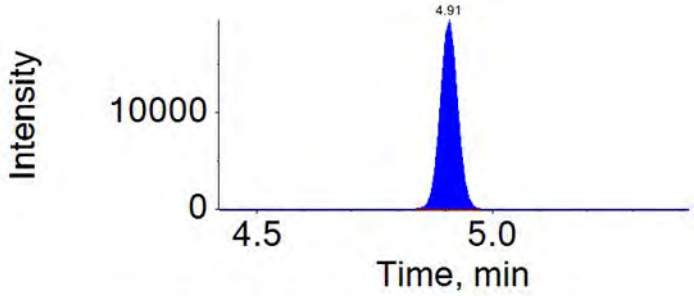
Component: 6:2-FTS_2
Secondary Mass: 427.0 / 81.0



Component: PFHpS
Primary Mass: 449.0 / 80.0



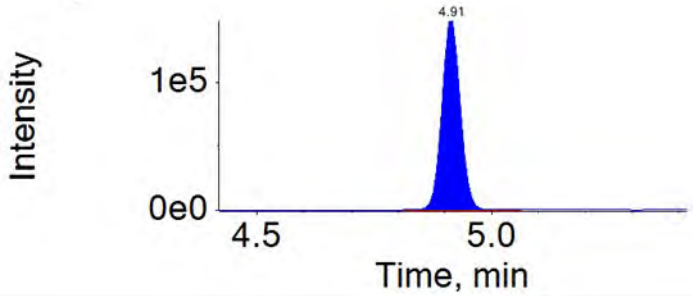
Component: PFHpS_2
Secondary Mass: 449.0 / 99.0



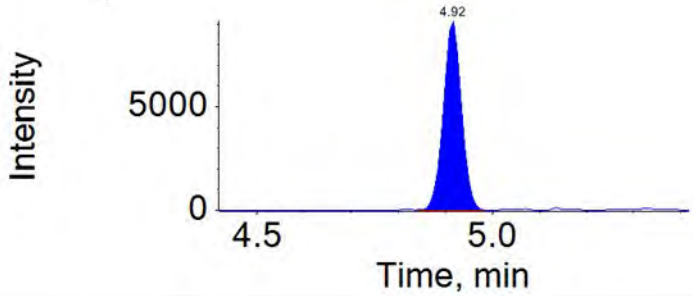
APPROVED
By MCD at 8:06 pm, 11/29/18

REVIEWED
By HMK at 9:40 am, 12/5/18

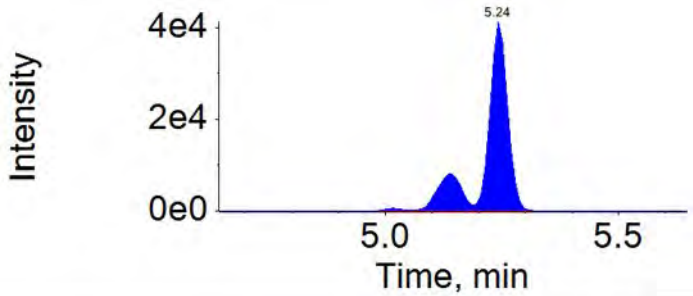
Component: PFOA
Primary Mass: 413.0 / 369.0



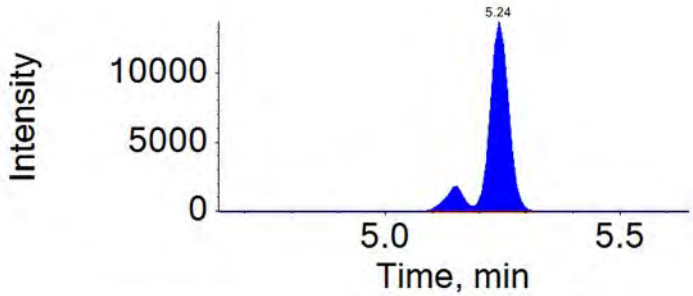
Component: PFOA_2
Secondary Mass: 413.0 / 169.0



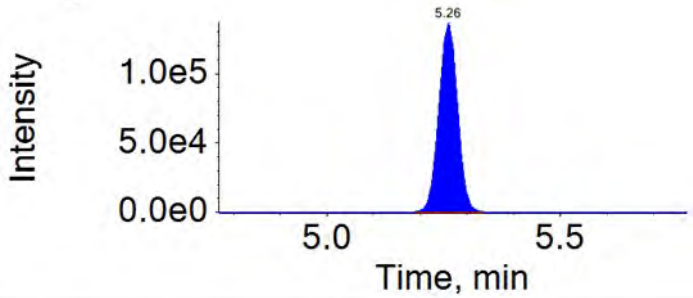
Component: PFOS
Primary Mass: 499.0 / 80.0



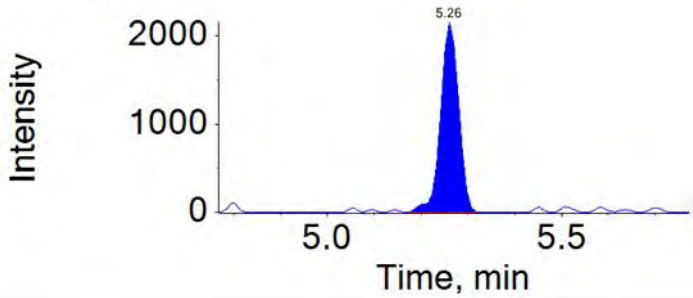
Component: PFOS_2
Secondary Mass: 499.0 / 99.0



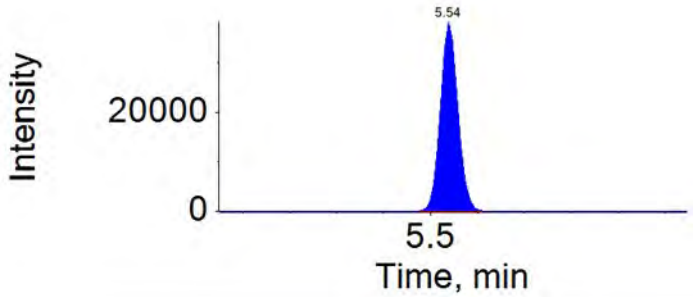
Component: PFNA
Primary Mass: 463.0 / 419.0



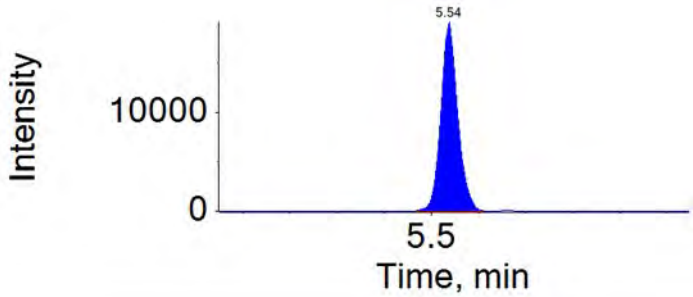
Component: PFNA_2
Secondary Mass: 463.0 / 169.0



Component: PFNS
Primary Mass: 549.0 / 80.0



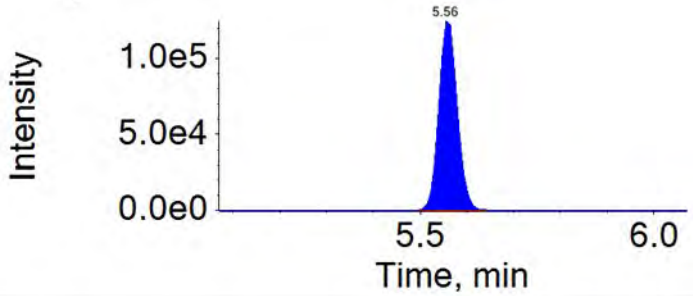
Component: PFNS_2
Secondary Mass: 549.0 / 99.0



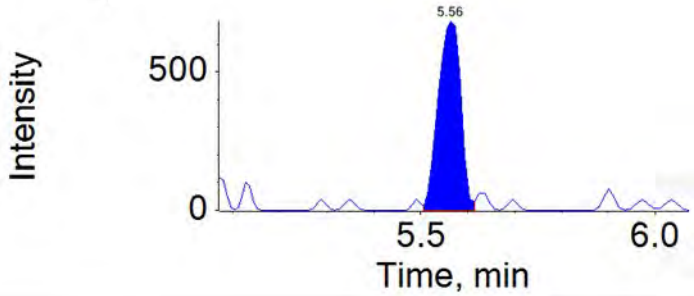
APPROVED
By MCD at 8:06 pm, 11/29/18

REVIEWED
By HMK at 9:40 am, 12/5/18

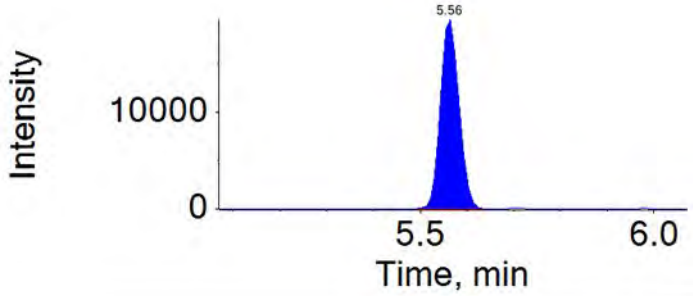
Component: PFDA
Primary Mass: 513.0 / 469.0



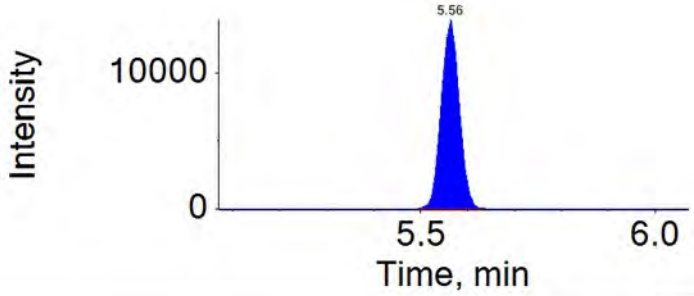
Component: PFDA_2
Secondary Mass: 513.0 / 169.0



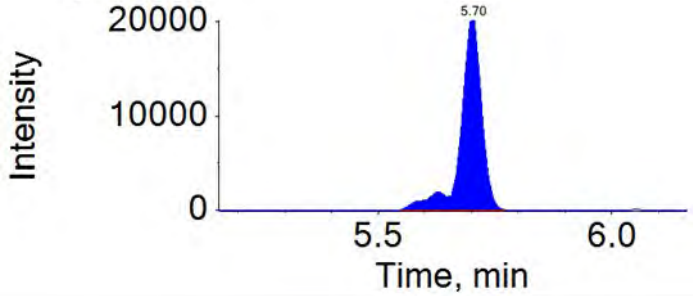
Component: 8:2-FTS
Primary Mass: 527.0 / 507.0



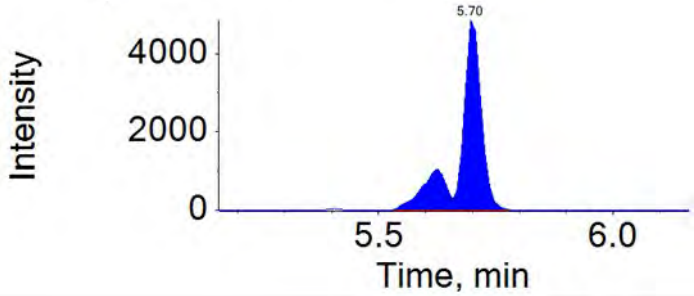
Component: 8:2-FTS_2
Secondary Mass: 527.0 / 81.0



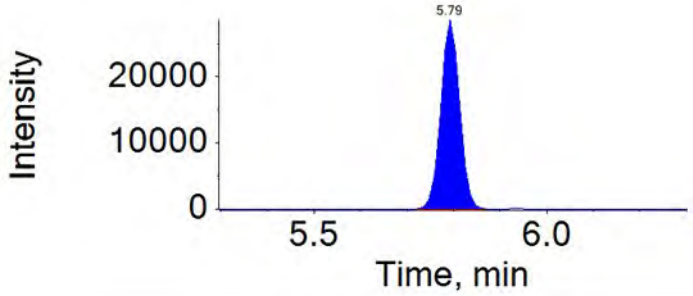
Component: NMeFOSAA
Primary Mass: 570.0 / 419.0



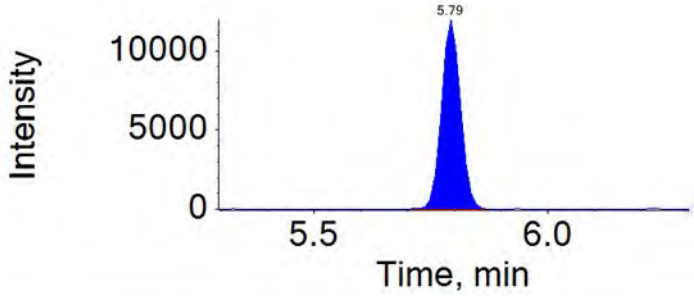
Component: NMeFOSAA_2
Secondary Mass: 570.0 / 483.0



Component: PFDS
Primary Mass: 599.0 / 80.0



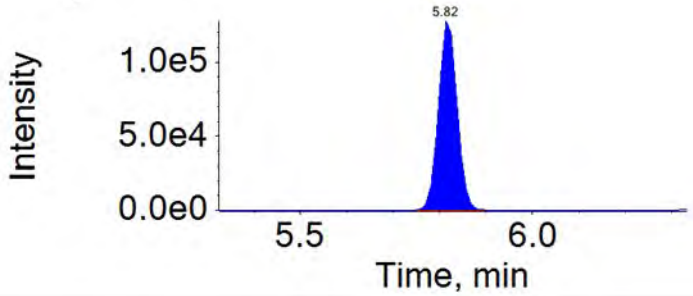
Component: PFDS_2
Secondary Mass: 599.0 / 99.0



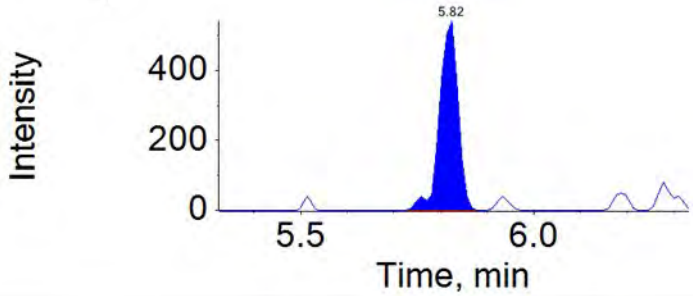
APPROVED
By MCD at 8:06 pm, 11/29/18

REVIEWED
By HMK at 9:40 am, 12/5/18

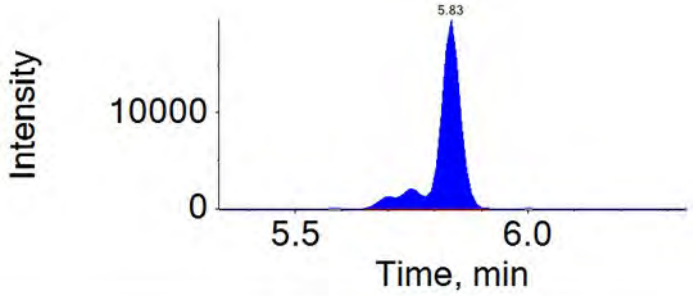
Component: PFUnDA
Primary Mass: 563.0 / 519.0



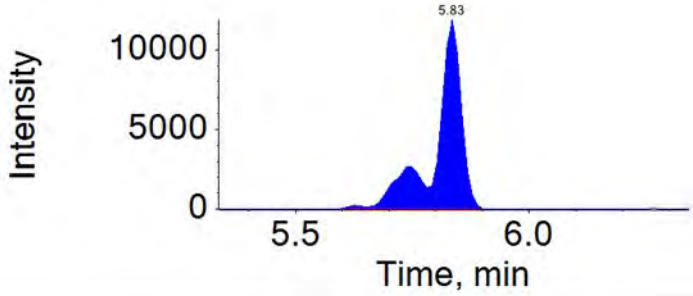
Component: PFUnDA_2
Secondary Mass: 563.0 / 169.0



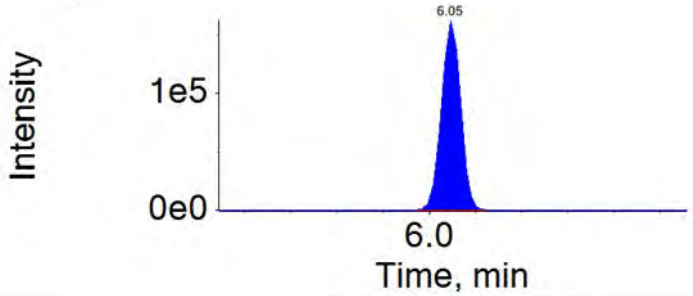
Component: NEtFOSAA
Primary Mass: 584.0 / 419.0



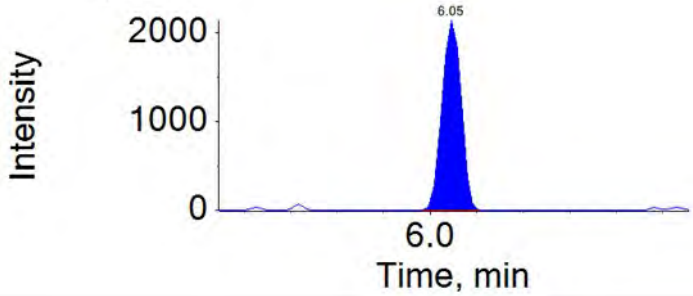
Component: NEtFOSAA_2
Secondary Mass: 584.0 / 526.0



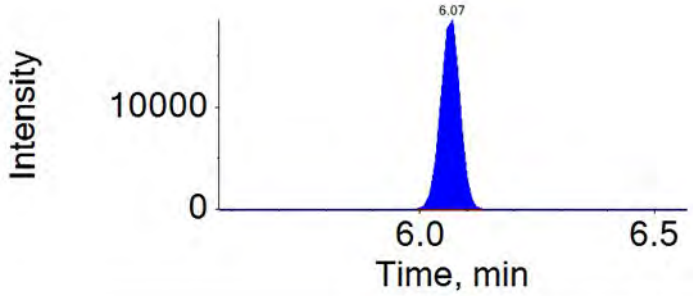
Component: PFDoDA
Primary Mass: 613.0 / 569.0



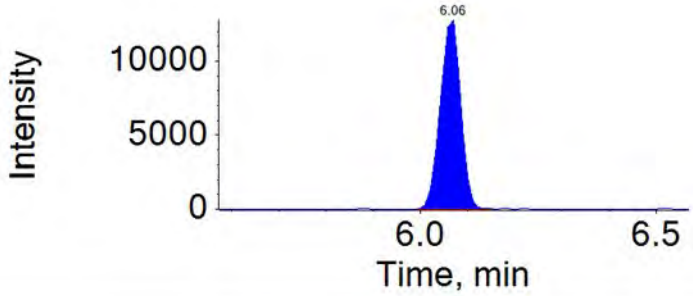
Component: PFDoDA_2
Secondary Mass: 613.0 / 169.0



Component: 10:2-FTS
Primary Mass: 627.0 / 607.0



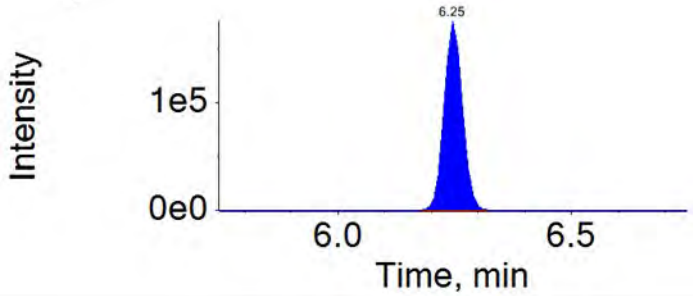
Component: 10:2-FTS_2
Secondary Mass: 627.0 / 81.0



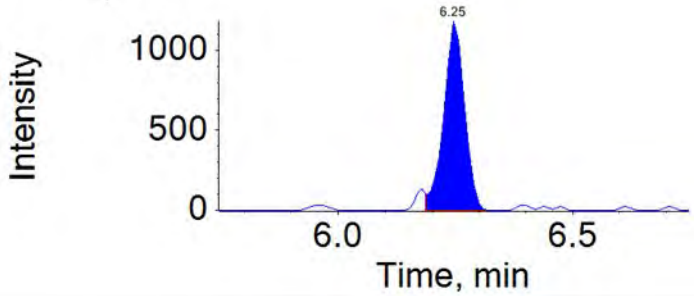
APPROVED
By MCD at 8:06 pm, 11/29/18

REVIEWED
By HMK at 9:40 am, 12/5/18

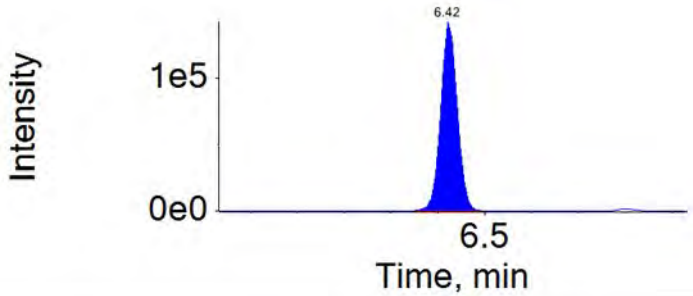
Component: PFTrDA
Primary Mass: 663.0 / 619.0



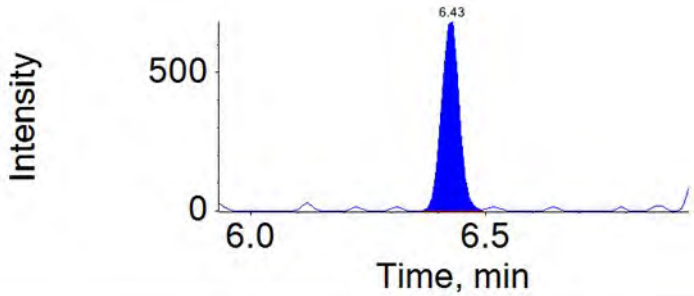
Component: PFTrDA_2
Secondary Mass: 663.0 / 169.0



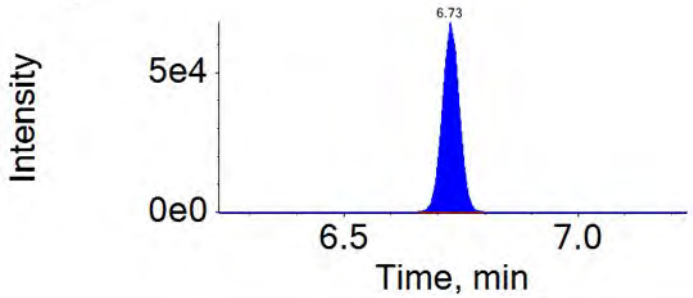
Component: PFTeDA
Primary Mass: 713.0 / 669.0



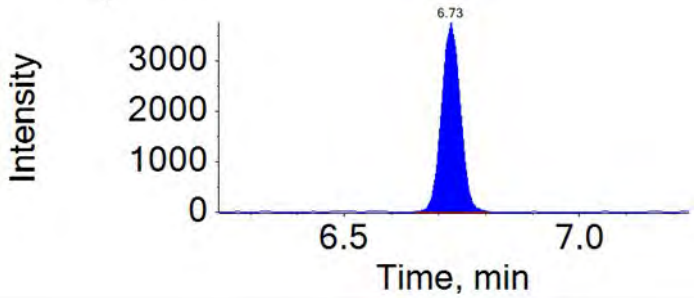
Component: PFTeDA_2
Secondary Mass: 713.0 / 169.0



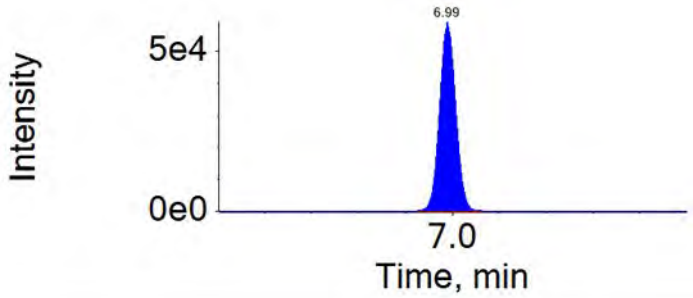
Component: PFHxDA
Primary Mass: 813.0 / 769.0



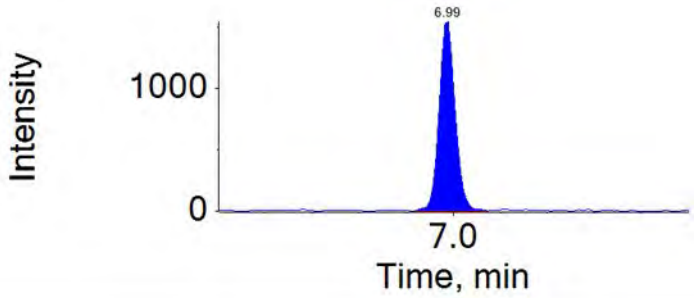
Component: PFHxDA_2
Secondary Mass: 813.0 / 169.0



Component: PFODA
Primary Mass: 913.0 / 869.0



Component: PFODA_2
Secondary Mass: 913.0 / 169.0



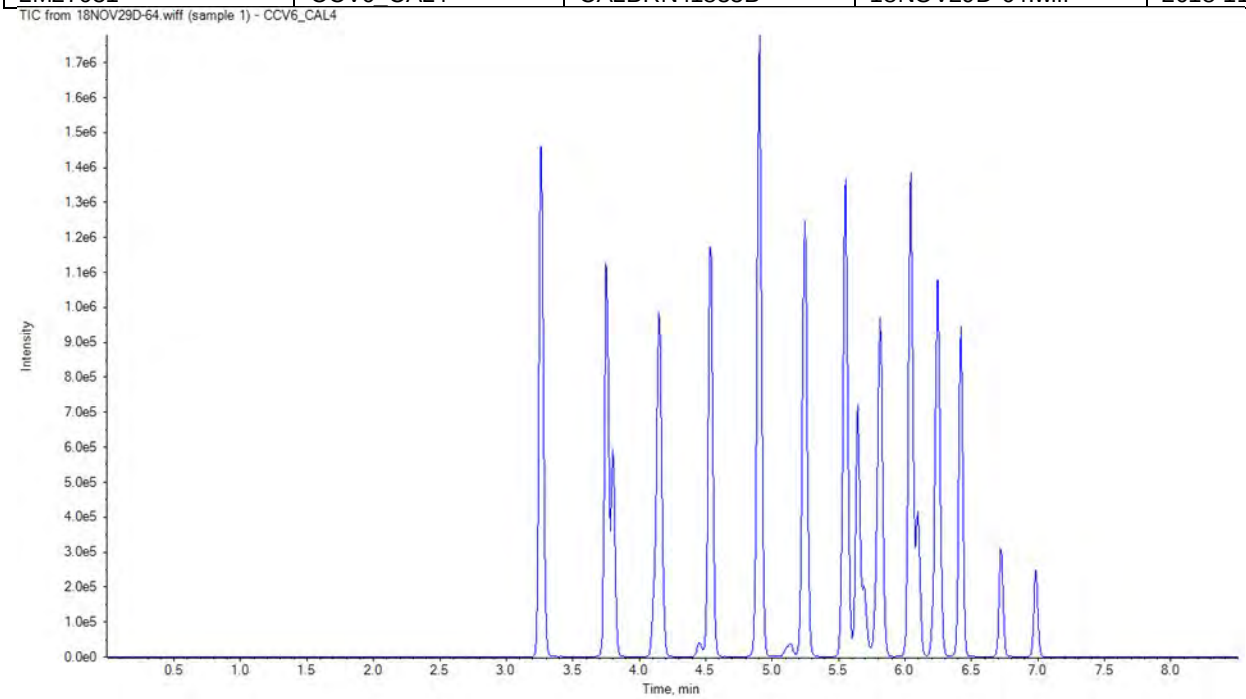
APPROVED
By MCD at 8:06 pm, 11/29/18

REVIEWED
By HMK at 9:40 am, 12/5/18

Continuing Calibration Verfication

ICAL Name: 18NOV28DCAL **Result Table:** 18NOV29DCCV6-9 11/30/2018 3:19:02 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Instrument Name:	Sample Name:	Sample ID:	Sample File:	Acquisition Date:
LM27631	CCV6_CAL4	CALBRN41833B	18NOV29D-64.wiff	2018-11-29T19:25:48



Injection Standard Area Reference File: 18NOV29D-05

Injection Standard Name	Inj Std Conc	Injection Std Peak Area	Reference Injection Standard Area	Injection Std %Diff	Injection Std %Diff Limit	Injection Std %Diff OOS
13C3-PFBA	5.0	913849.2	906425.4	1	50	
13C2-PFOA	5.0	518876.3	495984.0	5	50	
13C4-PFOS	4.8	303797.0	296261.8	3	50	
13C2-PFDA	5.0	442721.5	451203.0	-2	50	

APPROVED
By MCD at 3:26 pm, 11/30/18

REVIEWED
By HMK at 1:40 pm, 12/6/18

Continuing Calibration Verfication

ICAL Name: 18NOV28DCAL **Result Table:** 18NOV29DCCV6-9 11/30/2018 3:19:02 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Instrument Name:	Sample Name:	Sample ID:	Sample File:	Acquisition Date:
LM27631	CCV6_CAL4	CALBRN41833B	18NOV29D-64.wiff	2018-11-29T19:25:48

Analyte Name	Analyte Area	Sc /pk	Ext Std Name	Ext Std Area	Ext Std con	Area Ratio	RT (min)	RRT	Spec Amt	Calc Amt	% Diff	% Diff Lim	% Diff OOS
PFBA	1469628.0	10	13C4-PFBA	986963.3	5.0	1.489	3.26	1.000	8.000	8.163	2	30	
PFPeA	1427748.0	11	13C5-PFPeA	984821.1	5.0	1.450	3.75	1.000	8.000	7.114	-11	30	
PFBS	609993.7	11	13C3-PFBS	418734.6	4.7	1.457	3.80	1.000	7.080	7.071	0	30	
4:2-FTS	184688.7	11	13C2-4:2-FTS	67546.9	4.7	2.734	4.11	1.000	7.470	7.319	-2	30	
PFHxA	1387308.0	12	13C5-PFHxA	682741.9	5.0	2.032	4.15	1.000	8.000	8.156	2	30	
PFPeS	321453.2	11	13C3-PFBS	418734.6	4.7	0.768	4.17	1.100	7.500	7.765	4	30	
PFHpA	1397029.6	11	13C4-PFHpA	552888.5	5.0	2.527	4.54	1.000	8.000	7.798	-3	30	
PFHxS	466399.5	19	13C3-PFHxS	322045.5	4.7	1.448	4.54	1.000	7.300	6.781	-7	30	
6:2-FTS	179952.5	11	13C2-6:2-FTS	58279.4	4.8	3.088	4.89	1.000	7.580	8.057	6	30	
PFHpS	482601.2	11	13C3-PFHxS	322045.5	4.7	1.499	4.90	1.080	7.610	7.479	-2	30	
PFOA	1506521.1	11	13C8-PFOA	956359.3	5.0	1.575	4.90	1.000	8.000	8.140	2	30	
PFOS	507772.2	22	13C8-PFOS	318797.0	4.8	1.593	5.23	1.000	7.400	6.681	-10	30	
PFNA	1378868.3	11	13C9-PFNA	666957.5	5.0	2.067	5.25	1.000	8.000	7.923	-1	30	
PFNS	359004.1	11	13C8-PFOS	318797.0	4.8	1.126	5.53	1.060	7.680	7.110	-7	30	
PFDA	1238904.3	11	13C6-PFDA	789100.3	5.0	1.570	5.55	1.000	8.000	8.887	11	30	
8:2-FTS	195089.6	12	13C2-8:2-FTS	49965.8	4.8	3.904	5.56	1.000	7.660	7.363	-4	30	
PFOSA	965121.8	11	13C8-PFOSA	616213.8	5.0	1.566	5.64	1.000	8.000	7.934	-1	30	
NMeFOSAA	222950.9	18	d3-NMeFOSAA	183128.3	5.0	1.217	5.70	1.000	8.000	7.766	-3	30	
PFDS	286894.2	11	13C8-PFOS	318797.0	4.8	0.900	5.79	1.110	7.700	7.135	-7	30	
PFUnDA	1252226.8	12	13C7-PFUnDA	556651.0	5.0	2.250	5.81	1.000	8.000	8.041	1	30	
NEtFOSAA	239375.0	21	d5-NEtFOSAA	151553.0	5.0	1.579	5.83	1.000	8.000	7.693	-4	30	
PFDoDA	1726918.5	11	13C2-PFDoDA	1111170.4	5.0	1.554	6.04	1.000	8.000	8.513	6	30	
10:2-FTS	185245.7	12	13C2-8:2-FTS	49965.8	4.8	3.707	6.06	1.090	7.710	8.175	6	30	
NMePFOSAE	489183.9	11	d7-NMePFOSAE	257155.9	5.0	1.902	6.10	1.000	8.000	8.005	0	30	
NMePFOSA	128158.0	11	d3-NMePFOSA	84180.7	5.0	1.522	6.10	1.000	8.000	8.071	1	30	
PFDoS	162130.7	11	13C8-PFOS	318797.0	4.8	0.509	6.21	1.190	7.740	7.304	-6	30	
NEtPFOSAE	532496.8	11	d9-NEtPFOSAE	224480.4	5.0	2.372	6.26	1.000	8.000	8.533	7	30	
NEtPFOSA	113302.3	11	d5-NEtPFOSA	67601.1	5.0	1.676	6.27	1.000	8.000	7.512	-6	30	
PFTrDA	1695782.7	11	13C2-PFDoDA	1111170.4	5.0	1.526	6.24	1.030	8.000	9.199	15	30	
PFTeDA	1214917.2	10	13C2-PFTeDA	822251.9	5.0	1.478	6.42	1.000	8.000	8.372	5	30	
PFHxDA	634623.0	11	13C2-PFTeDA	822251.9	5.0	0.772	6.72	1.050	8.000	8.823	10	30	
PFODA	509959.1	10	13C2-PFTeDA	822251.9	5.0	0.620	6.98	1.090	8.000	8.262	3	30	

APPROVED
By MCD at 3:26 pm, 11/30/18

REVIEWED
By HMK at 1:40 pm, 12/6/18

Continuing Calibration Verfication

ICAL Name: 18NOV28DCAL **Result Table:** 18NOV29DCCV6-9 11/30/2018 3:19:02 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

APPROVED
By MCD at 3:26 pm, 11/30/18

REVIEWED
By HMK at 1:40 pm, 12/6/18

ICAL Name: 18NOV28DCAL **Result Table:** 18NOV29DCCV6-9 11/30/2018 3:21:11 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Sample Name:	CCV6_CAL4			**Data File:**		18NOV29D-64.wiff
Sample ID:	CALBRN41833B			**Acquis Date:**		2018-11-29T19:25:48
Sample Type:	Quality Control			**Instrument:**		LM27631
Vial Position:	6			**Acquis Method:**		18AUG13_3uL.dam
Injection Vol:	3.00			**Result Table:**		18NOV29DCCV6-9
QMethod File:	18AUG20QM			**ICAL Name:**		18NOV28DCAL
Batch Number:	N/A			**Operator:**		MCD7824
Sample Wt.:	1.00000			**Dilution Factor:**		1.00
Sample Vol.:	1.000			**Prep Factor:**		1.000

Injection Standard Peak Table

Injection Standard Area Reference File: 18NOV29D-05

Injection Standard Name	Inj Std Conc	Injection Std Peak Area	Rreference Injection Standard Area	Injection Std %Diff	Injection Std %Diff Limit	Injection Std %Diff OOS
13C3-PFBA	5.0	913849.2	906425.4	1	50	
13C2-PFOA	5.0	518876.3	495984.0	5	50	
13C4-PFOS	4.8	303797.0	296261.8	3	50	
13C2-PFDA	5.0	442721.5	451203.0	-2	50	

Extraction Standard Peak Table

Extraction Standard Name	Ext Std Area	Inj Std Name	Inj Std Area	Area Ratio	Ext Std Conc	Ext Std Result	Ext Std %REC	Ext Std %REC Limit	Ext Std OOS
E13C4-PFBA	986963.3	13C3-PFBA	913849.2	1.080	5.000	4.819	96	70-130	
E13C5-PFPeA	984821.1	13C3-PFBA	913849.2	1.078	5.000	5.032	101	70-130	
E13C3-PFBS	418734.6	13C3-PFBA	913849.2	0.458	4.650	4.371	94	70-130	
E13C2-4:2-FTS	67546.9	13C2-PFOA	518876.3	0.130	4.670	4.486	96	70-130	
E13C5-PFHxA	682741.9	13C2-PFOA	518876.3	1.316	5.000	4.833	97	70-130	
E13C3-PFHxS	322045.5	13C2-PFOA	518876.3	0.621	4.730	4.865	103	70-130	
E13C4-PFHpA	552888.5	13C2-PFOA	518876.3	1.066	5.000	4.896	98	70-130	
E13C2-6:2-FTS	58279.4	13C2-PFOA	518876.3	0.112	4.750	4.702	99	70-130	
E13C8-PFOA	956359.3	13C2-PFOA	518876.3	1.843	5.000	5.073	101	70-130	
E13C8-PFOS	318797.0	13C4-PFOS	303797.0	1.049	4.780	4.737	99	70-130	
E13C9-PFNA	666957.5	13C4-PFOS	303797.0	2.195	5.000	4.822	96	70-130	
E13C6-PFDA	789100.3	13C2-PFDA	442721.5	1.782	5.000	5.025	101	70-130	
E13C2-8:2-FTS	49965.8	13C2-PFDA	442721.5	0.113	4.790	4.851	101	70-130	
E13C8-PFOSA	616213.8	13C2-PFDA	442721.5	1.392	5.000	5.107	102	70-130	
Ed3-NMeFOSAA	183128.3	13C2-PFDA	442721.5	0.414	5.000	5.252	105	70-130	
E13C7-PFUnDA	556651.0	13C2-PFDA	442721.5	1.257	5.000	5.314	106	70-130	
Ed5-NEtFOSAA	151553.0	13C2-PFDA	442721.5	0.342	5.000	6.099	122	70-130	
E13C2-PFDoDA	1111170.4	13C2-PFDA	442721.5	2.510	5.000	5.273	105	70-130	
Ed7-NMePFOSAE	257155.9	13C2-PFDA	442721.5	0.581	5.000	5.020	100	70-130	
Ed3-NMePFOSA	84180.7	13C2-PFDA	442721.5	0.190	5.000	5.146	103	70-130	
Ed9-NEtPFOSAE	224480.4	13C2-PFDA	442721.5	0.507	5.000	5.141	103	70-130	
Ed5-NEtPFOSA	67601.1	13C2-PFDA	442721.5	0.153	5.000	5.306	106	70-130	
E13C2-PFTeDA	822251.9	13C2-PFDA	442721.5	1.857	5.000	5.139	103	70-130	

APPROVED
By MCD at 3:26 pm, 11/30/18

REVIEWED
By HMK at 1:40 pm, 12/6/18

ICAL Name: 18NOV28DCAL **Result Table:** 18NOV29DCCV6-9 11/30/2018 3:21:11 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

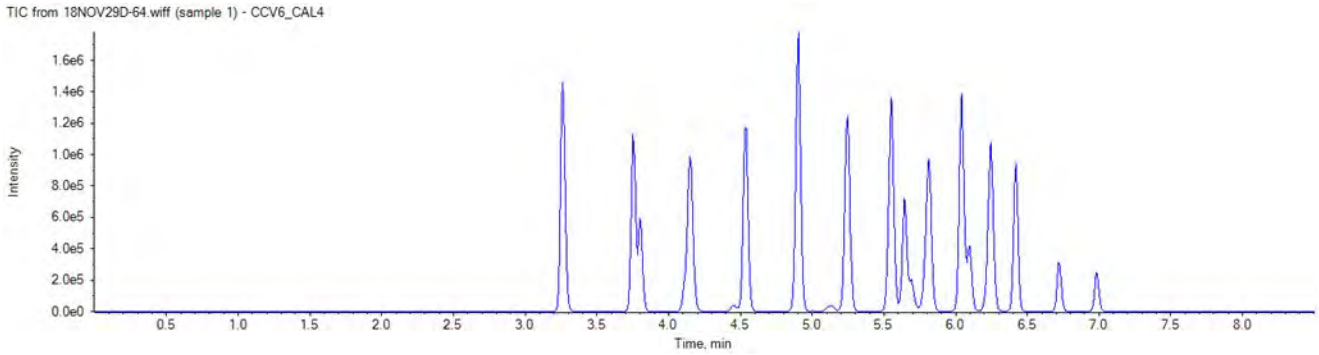
Analyte Quantitation Peak Table

Sample Name: CCV6_CAL4 **Instrument Name:** LM27631 **File Name:** 18NOV29D-64.wiff

Sample Wt	Sample Vol	Dilution Factor	PrepFactor
1.00000	1.000	1.00	1.000

Analyte Name	RT	RRT	Analyte Area Response	E	Int Typ	ES Name	ES RT	ES Area Response	Area Ratio	Sample Result (ng/g)
PFBA	3.26	1.000	1469628.0		A	13C4-PFBA	3.26	986963.3	1.489	8.163
PFPeA	3.75	1.000	1427748.0		A	13C5-PFPeA	3.76	984821.1	1.450	7.114
PFBS	3.80	1.000	609993.7		A	13C3-PFBS	3.80	418734.6	1.457	7.071
4:2-FTS	4.11	1.000	184688.7		A	13C2-4:2-FTS	4.11	67546.9	2.734	7.319
PFHxA	4.15	1.000	1387308.0		A	13C5-PFHxA	4.15	682741.9	2.032	8.156
PFPeS	4.17	1.100	321453.2		A	13C3-PFBS	3.80	418734.6	0.768	7.765
PFHpA	4.54	1.000	1397029.6		A	13C4-PFHpA	4.54	552888.5	2.527	7.798
PFHxS	4.54	1.000	466399.5		M	13C3-PFHxS	4.54	322045.5	1.448	6.781
6:2-FTS	4.89	1.000	179952.5		A	13C2-6:2-FTS	4.89	58279.4	3.088	8.057
PFHpS	4.90	1.080	482601.2		A	13C3-PFHxS	4.54	322045.5	1.499	7.479
PFOA	4.90	1.000	1506521.1		A	13C8-PFOA	4.91	956359.3	1.575	8.140
PFOS	5.23	1.000	507772.2		M	13C8-PFOS	5.24	318797.0	1.593	6.681
PFNA	5.25	1.000	1378868.3		A	13C9-PFNA	5.25	666957.5	2.067	7.923
PFNS	5.53	1.060	359004.1		A	13C8-PFOS	5.24	318797.0	1.126	7.110
PFDA	5.55	1.000	1238904.3		A	13C6-PFDA	5.55	789100.3	1.570	8.887
8:2-FTS	5.56	1.000	195089.6		A	13C2-8:2-FTS	5.56	49965.8	3.904	7.363
PFOSA	5.64	1.000	965121.8		A	13C8-PFOSA	5.65	616213.8	1.566	7.934
NMeFOSAA	5.70	1.000	222950.9		M	d3-NMeFOSAA	5.69	183128.3	1.217	7.766
PFDS	5.79	1.110	286894.2		A	13C8-PFOS	5.24	318797.0	0.900	7.135
PFUnDA	5.81	1.000	1252226.8		A	13C7-PFUnDA	5.81	556651.0	2.250	8.041
NEtFOSAA	5.83	1.000	239375.0		M	d5-NEtFOSAA	5.82	151553.0	1.579	7.693
PFDoDA	6.04	1.000	1726918.5		A	13C2-PFDoDA	6.04	1111170.4	1.554	8.513
10:2-FTS	6.06	1.090	185245.7		A	13C2-8:2-FTS	5.56	49965.8	3.707	8.175
NMePFOSAE	6.10	1.000	489183.9		A	d7-NMePFOSAE	6.09	257155.9	1.902	8.005
NMePFOSA	6.10	1.000	128158.0		A	d3-NMePFOSA	6.10	84180.7	1.522	8.071
PFDoS	6.21	1.190	162130.7		A	13C8-PFOS	5.24	318797.0	0.509	7.304
NEtPFOSAE	6.26	1.000	532496.8		A	d9-NEtPFOSAE	6.24	224480.4	2.372	8.533
NEtPFOSA	6.27	1.000	113302.3		A	d5-NEtPFOSA	6.26	67601.1	1.676	7.512
PFTrDA	6.24	1.030	1695782.7		A	13C2-PFDoDA	6.04	1111170.4	1.526	9.199
PFTeDA	6.42	1.000	1214917.2		A	13C2-PFTeDA	6.42	822251.9	1.478	8.372
PFHxDA	6.72	1.050	634623.0		A	13C2-PFTeDA	6.42	822251.9	0.772	8.823
PFODA	6.98	1.090	509959.1		A	13C2-PFTeDA	6.42	822251.9	0.620	8.262

Total Ion Chromatogram

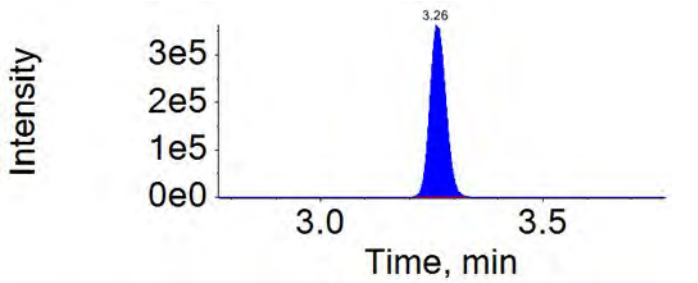


APPROVED
By MCD at 3:26 pm, 11/30/18

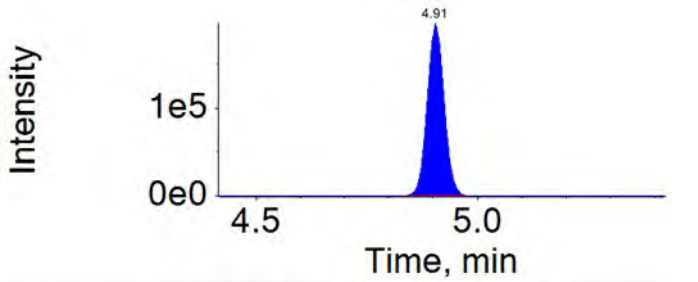
REVIEWED
By HMK at 1:40 pm, 12/6/18

ICAL Name: 18NOV28DCAL **Result Table:** 18NOV29DCCV6-9 11/30/2018 3:21:11 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

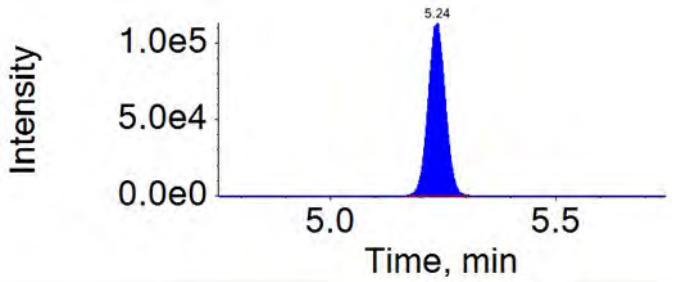
Injection Standard: 13C3-PFBA
216.0 / 172.0



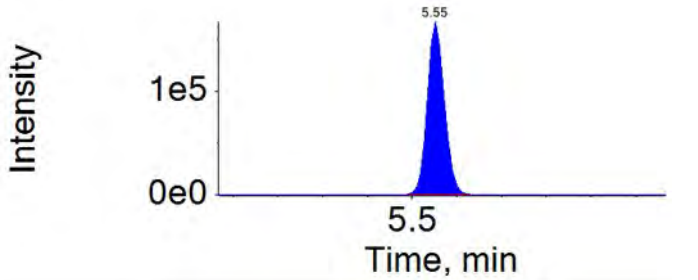
Injection Standard: 13C2-PFOA
415.0 / 370.0



Injection Standard: 13C4-PFOS
503.0 / 80.0



Injection Standard: 13C2-PFDA
515.0 / 470.0



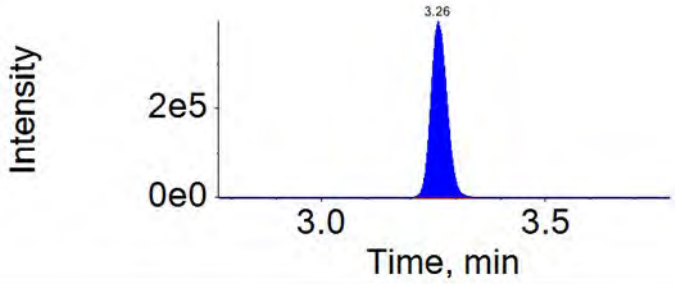
APPROVED
By MCD at 3:26 pm, 11/30/18

REVIEWED
By HMK at 1:40 pm, 12/6/18

ICAL Name: 18NOV28DCAL **Result Table:** 18NOV29DCCV6-9 11/30/2018 3:21:11 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

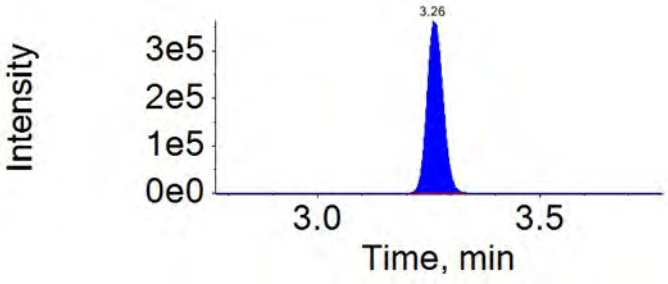
Extraction Standard: E13C4-PFBA

217.0 / 172.0



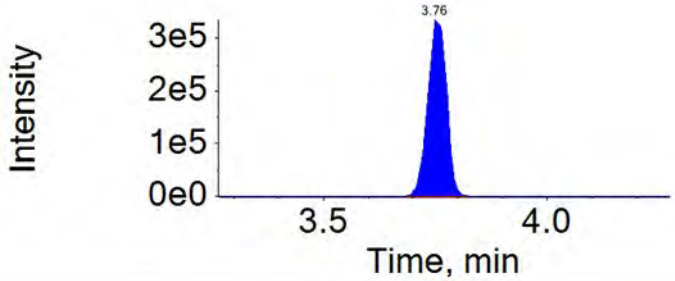
Injection Standard: 13C3-PFBA

216.0 / 172.0



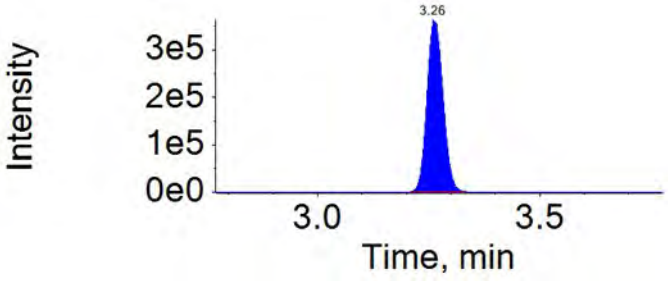
Extraction Standard: E13C5-PFPeA

268.0 / 223.0



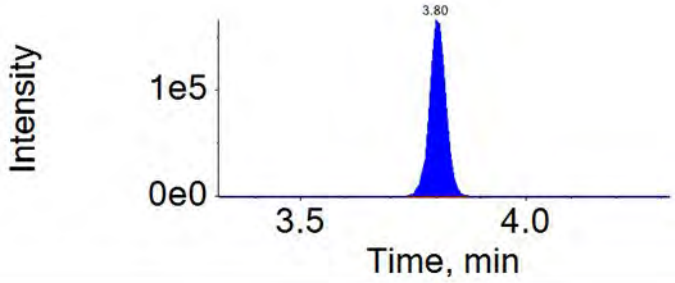
Injection Standard: 13C3-PFBA

216.0 / 172.0



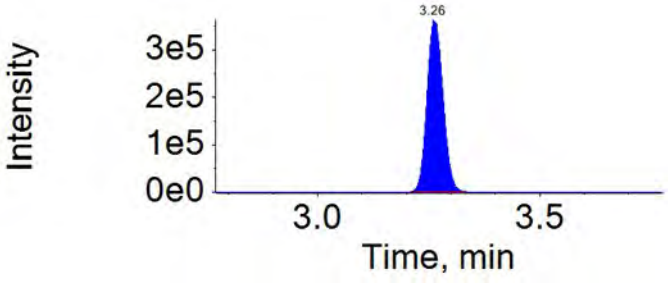
Extraction Standard: E13C3-PFBS

302.0 / 80.0



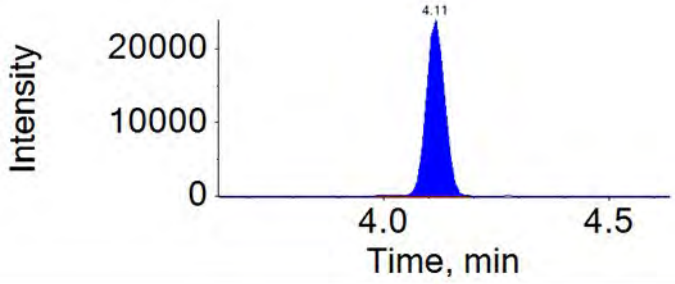
Injection Standard: 13C3-PFBA

216.0 / 172.0



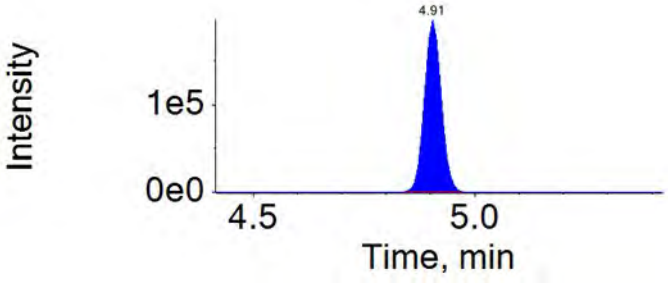
Extraction Standard: E13C2-4:2-FTS

329.0 / 81.0



Injection Standard: 13C2-PFOA

415.0 / 370.0

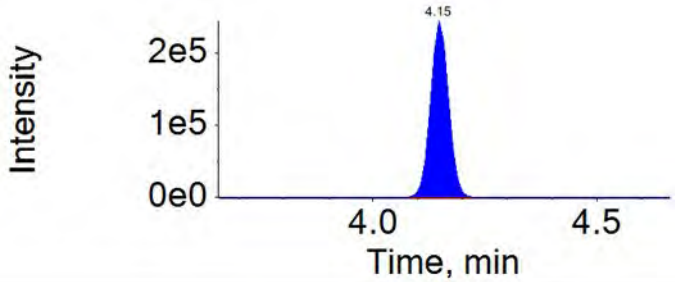


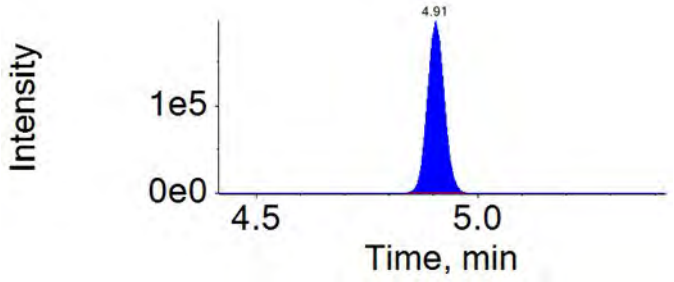
APPROVED
By MCD at 3:26 pm, 11/30/18

REVIEWED
By HMK at 1:40 pm, 12/6/18

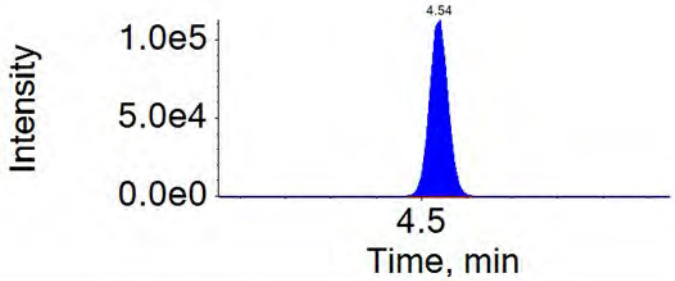
ICAL Name: 18NOV28DCAL **Result Table:** 18NOV29DCCV6-9 11/30/2018 3:21:11 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

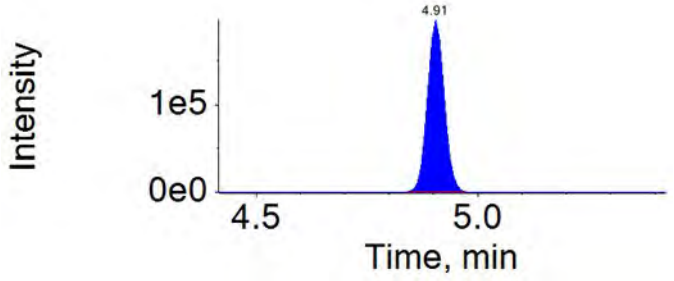
Extraction Standard: E13C5-PFHxA	Injection Standard: 13C2-PFOA
318.0 / 273.0	415.0 / 370.0



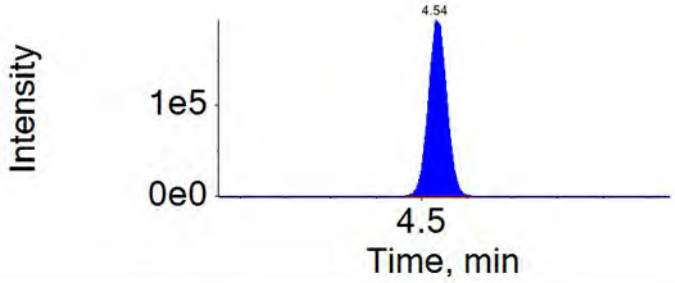


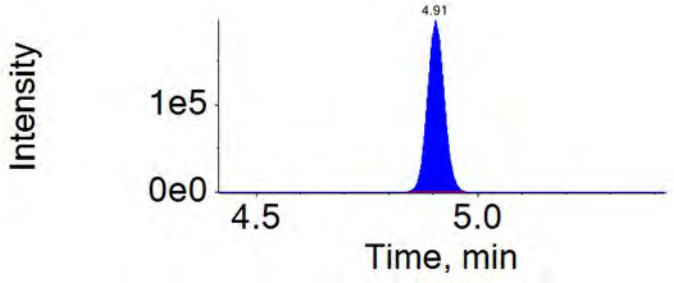
Extraction Standard: E13C3-PFHxS	Injection Standard: 13C2-PFOA
402.0 / 80.0	415.0 / 370.0



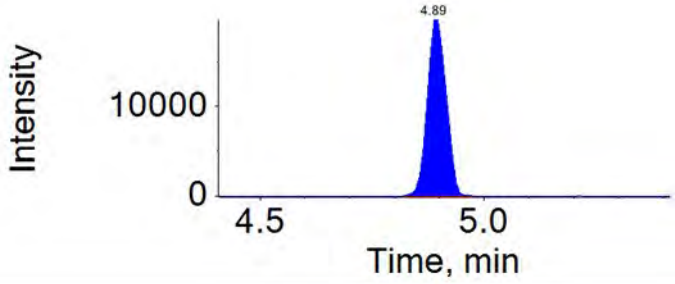


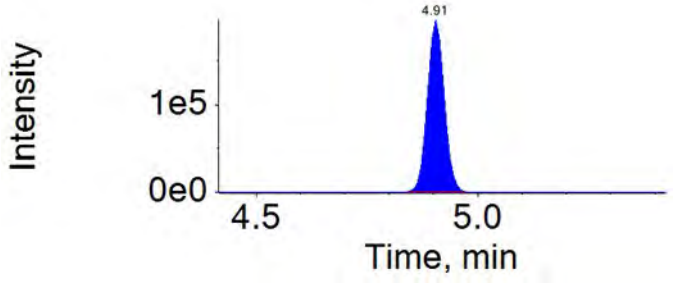
Extraction Standard: E13C4-PFHpA	Injection Standard: 13C2-PFOA
367.0 / 322.0	415.0 / 370.0





Extraction Standard: E13C2-6:2-FTS	Injection Standard: 13C2-PFOA
429.0 / 81.0	415.0 / 370.0

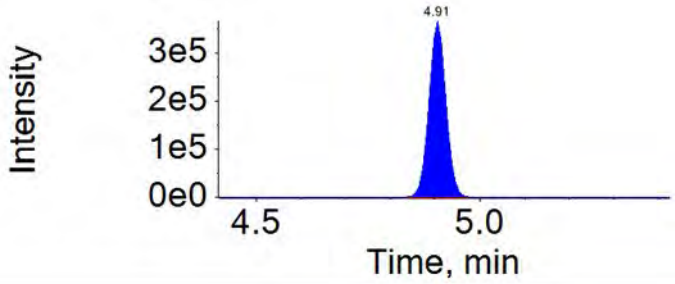




ICAL Name: 18NOV28DCAL **Result Table:** 18NOV29DCCV6-9 11/30/2018 3:21:11 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

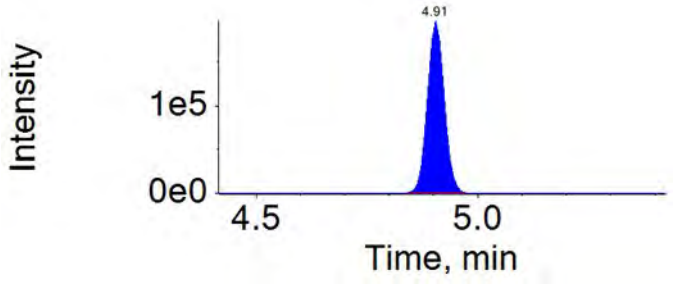
Extraction Standard: E13C8-PFOA

421.0 / 376.0



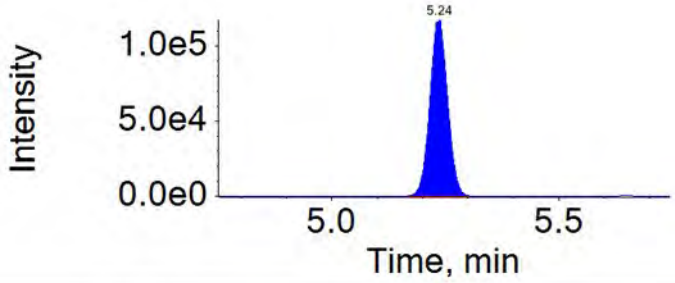
Injection Standard: 13C2-PFOA

415.0 / 370.0



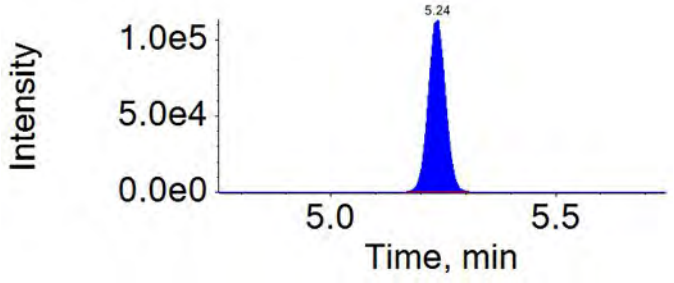
Extraction Standard: E13C8-PFOS

507.0 / 80.0



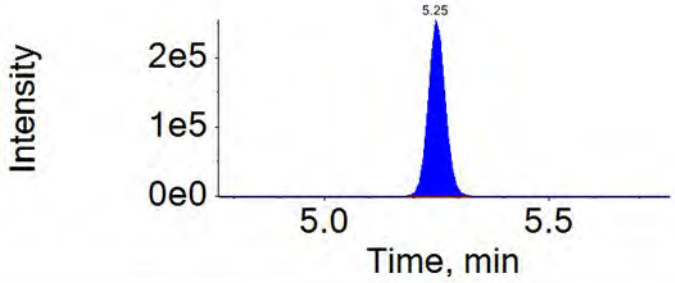
Injection Standard: 13C4-PFOS

503.0 / 80.0



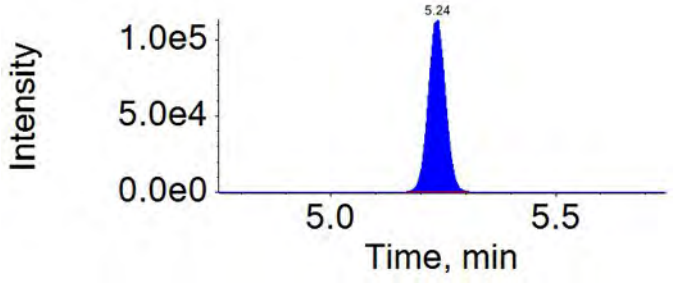
Extraction Standard: E13C9-PFNA

472.0 / 427.0



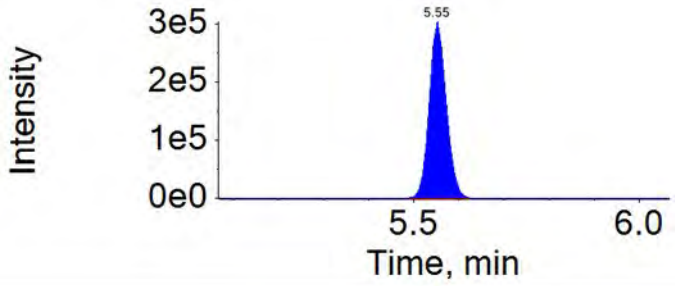
Injection Standard: 13C4-PFOS

503.0 / 80.0



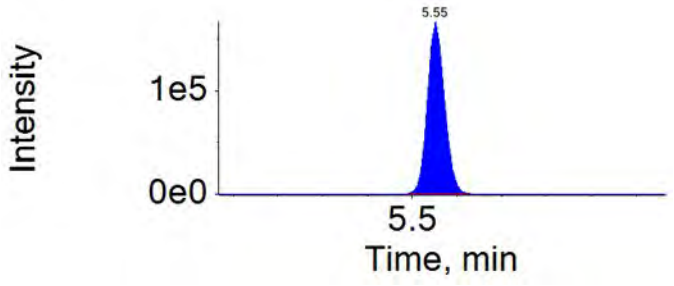
Extraction Standard: E13C6-PFDA

519.0 / 474.0



Injection Standard: 13C2-PFDA

515.0 / 470.0



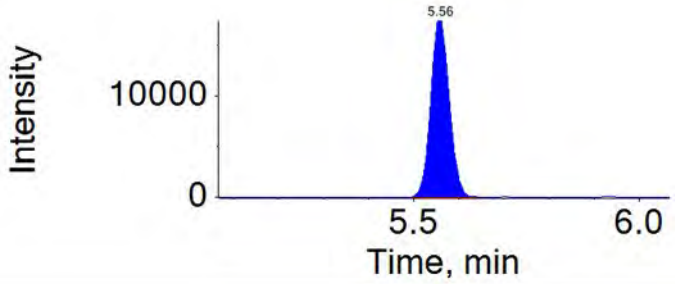
APPROVED
By MCD at 3:26 pm, 11/30/18

REVIEWED
By HMK at 1:40 pm, 12/6/18

ICAL Name: 18NOV28DCAL **Result Table:** 18NOV29DCCV6-9 11/30/2018 3:21:11 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

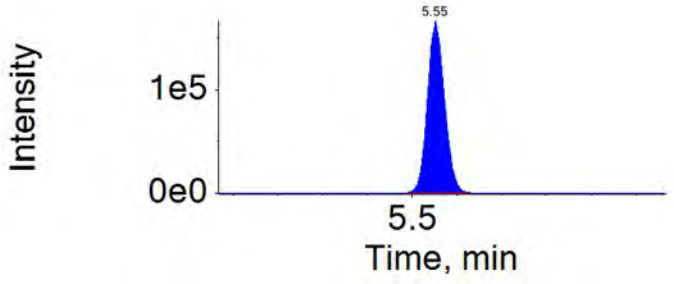
Extraction Standard: E13C2-8:2-FTS

529.0 / 81.0



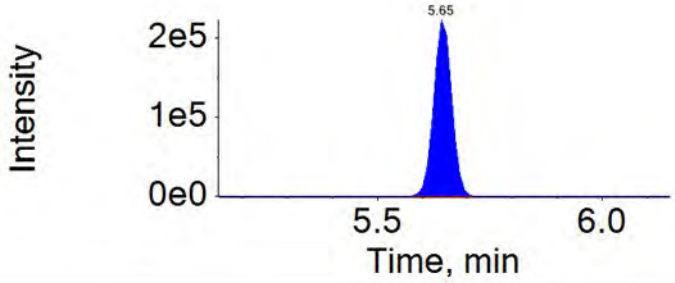
Injection Standard: 13C2-PFDA

515.0 / 470.0



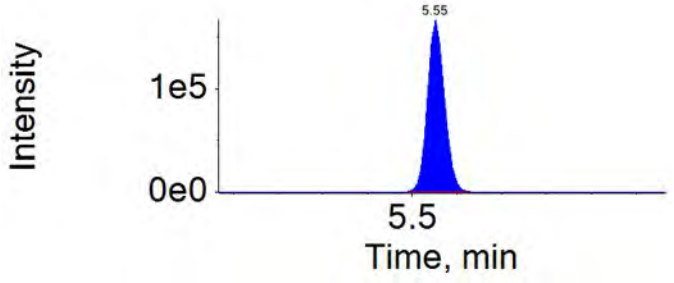
Extraction Standard: E13C8-PFOSA

506.0 / 78.0



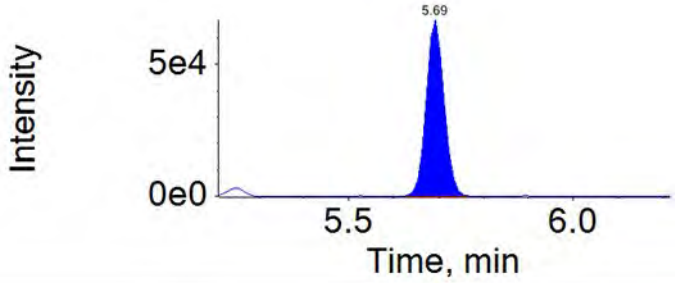
Injection Standard: 13C2-PFDA

515.0 / 470.0



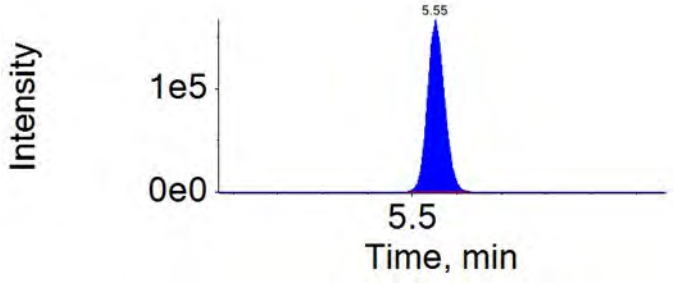
Extraction Standard: Ed3-NMeFOSAA

573.0 / 419.0



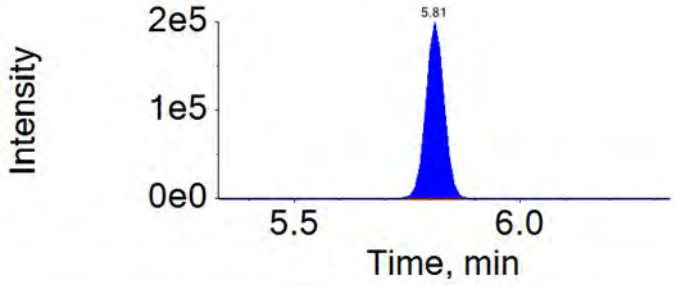
Injection Standard: 13C2-PFDA

515.0 / 470.0



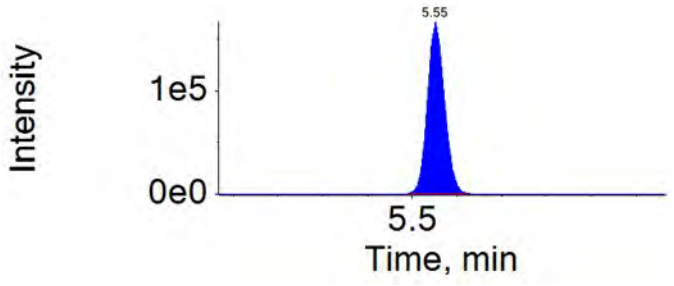
Extraction Standard: E13C7-PFUnDA

570.0 / 525.0



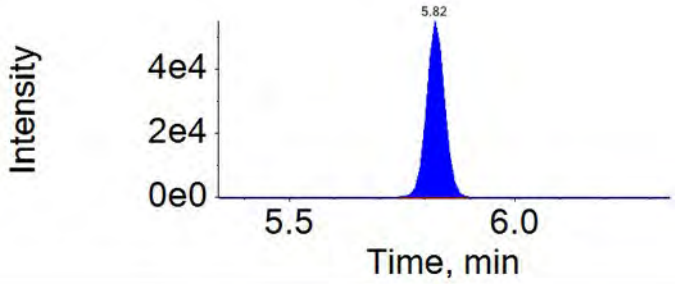
Injection Standard: 13C2-PFDA

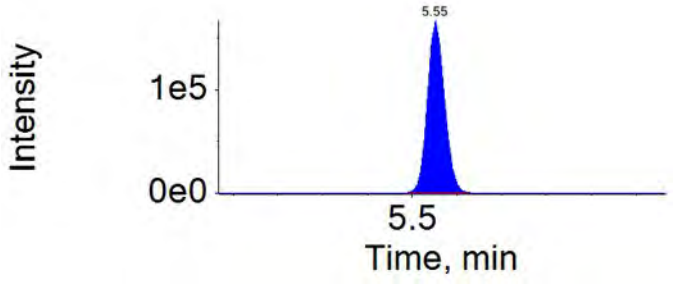
515.0 / 470.0



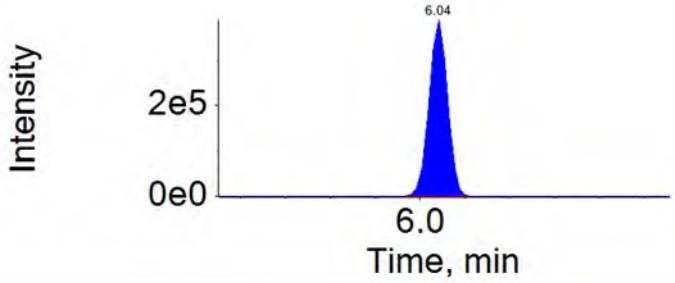
ICAL Name: 18NOV28DCAL **Result Table:** 18NOV29DCCV6-9 11/30/2018 3:21:11 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

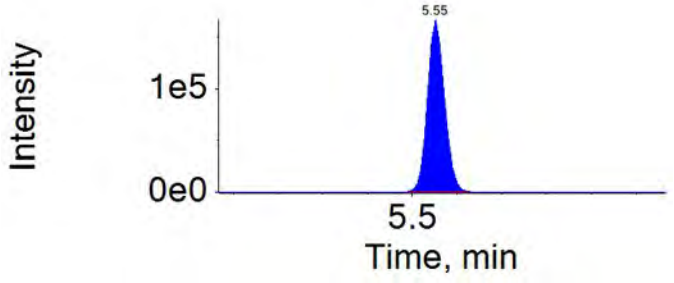
Extraction Standard: Ed5-NEtFOSAA	Injection Standard: 13C2-PFDA
589.0 / 419.0	515.0 / 470.0



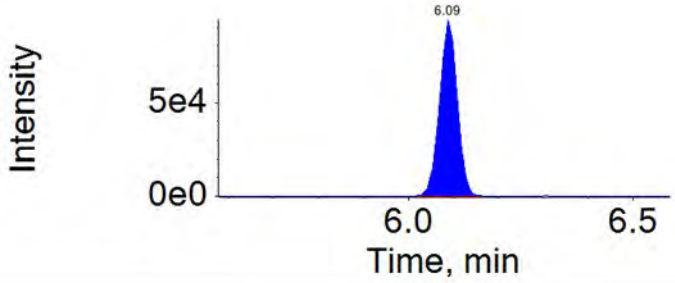


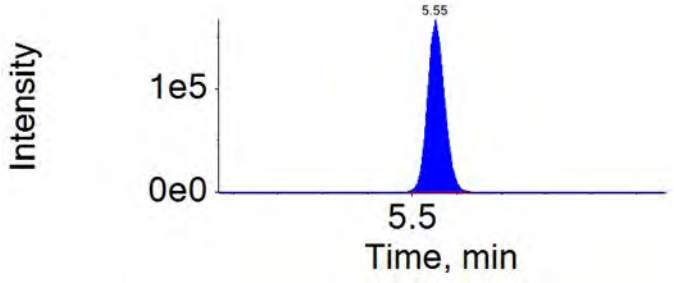
Extraction Standard: E13C2-PFDoDA	Injection Standard: 13C2-PFDA
615.0 / 570.0	515.0 / 470.0



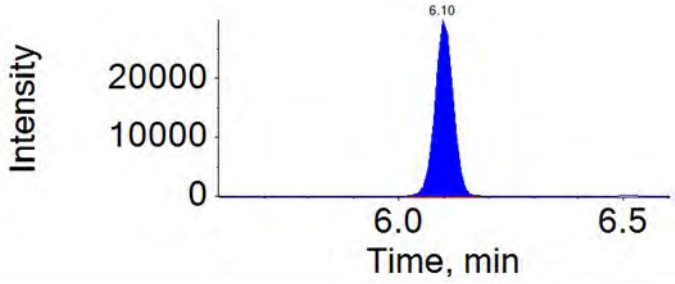


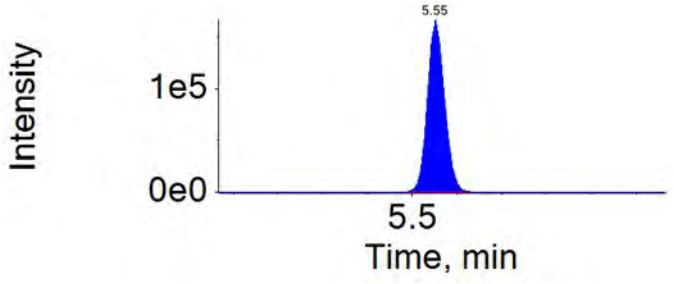
Extraction Standard: Ed7-NMePFOSAE	Injection Standard: 13C2-PFDA
623.0 / 59.0	515.0 / 470.0





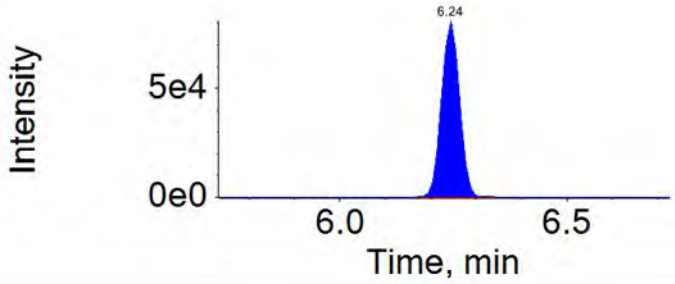
Extraction Standard: Ed3-NMePFOSA	Injection Standard: 13C2-PFDA
515.0 / 169.0	515.0 / 470.0

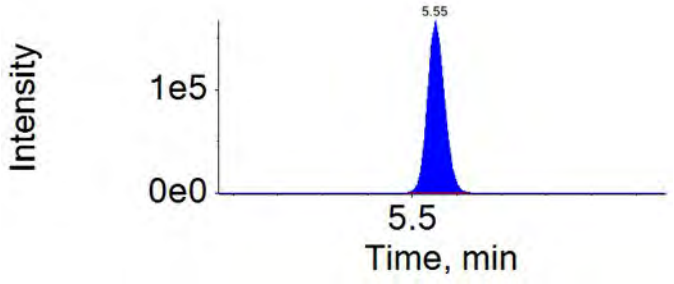




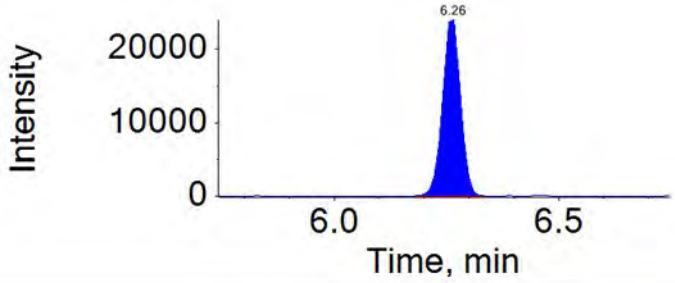
ICAL Name: 18NOV28DCAL **Result Table:** 18NOV29DCCV6-9 11/30/2018 3:21:11 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

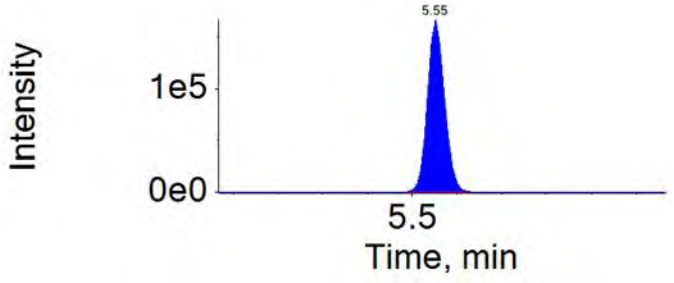
Extraction Standard: Ed9-NEtPFOSAE	Injection Standard: 13C2-PFDA
639.0 / 59.0	515.0 / 470.0



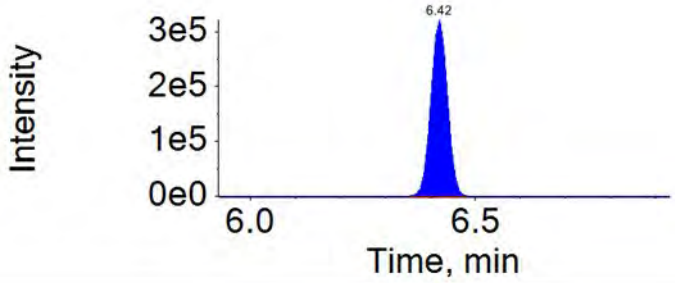


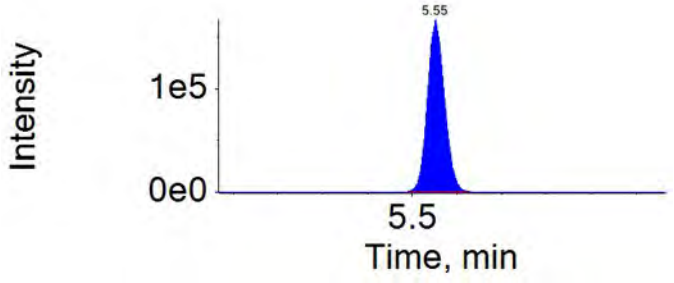
Extraction Standard: Ed5-NEtPFOSA	Injection Standard: 13C2-PFDA
531.0 / 169.0	515.0 / 470.0





Extraction Standard: E13C2-PFTeDA	Injection Standard: 13C2-PFDA
715.0 / 670.0	515.0 / 470.0



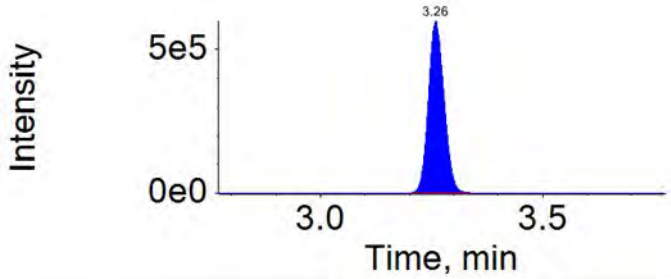


APPROVED
By MCD at 3:26 pm, 11/30/18

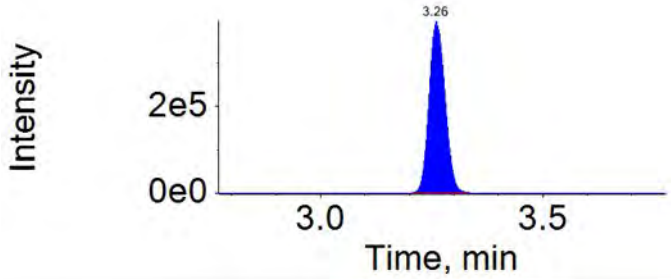
REVIEWED
By HMK at 1:40 pm, 12/6/18

ICAL Name: 18NOV28DCAL **Result Table:** 18NOV29DCCV6-9 11/30/2018 3:21:11 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

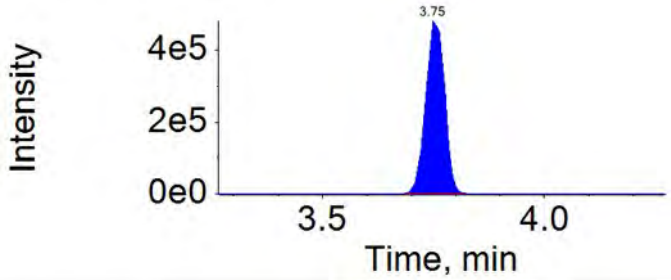
Analyte: PFBA
213.0 / 169.0



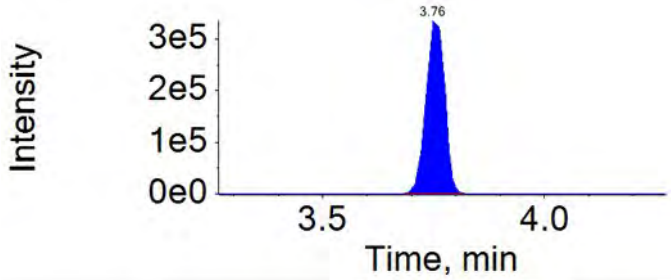
Extraction Standard: 13C4-PFBA
217.0 / 172.0



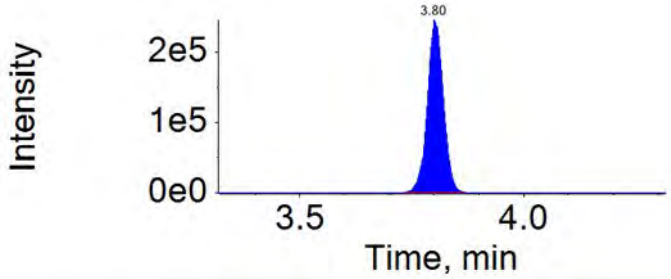
Analyte: PFPeA
263.0 / 219.0



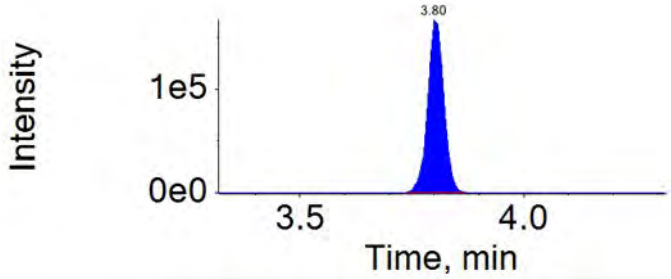
Extraction Standard: 13C5-PFPeA
268.0 / 223.0



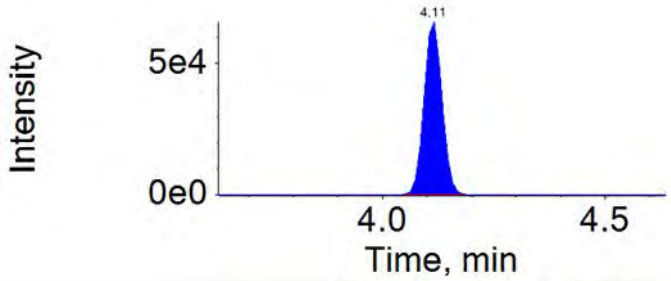
Analyte: PFBS
299.0 / 80.0



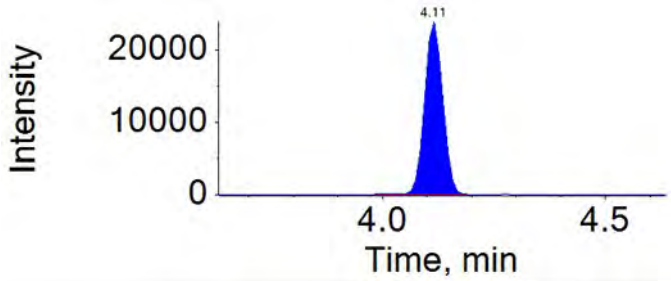
Extraction Standard: 13C3-PFBS
302.0 / 80.0



Analyte: 4:2-FTS
327.0 / 307.0



Extraction Standard: 13C2-4:2-FTS
329.0 / 81.0

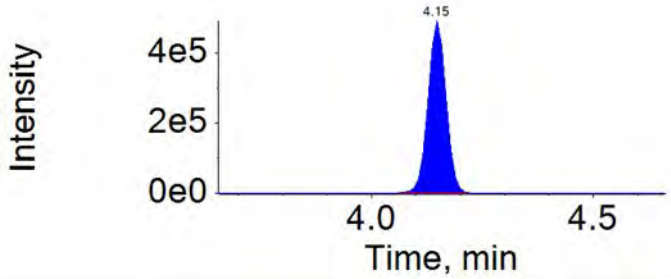


APPROVED
By MCD at 3:26 pm, 11/30/18

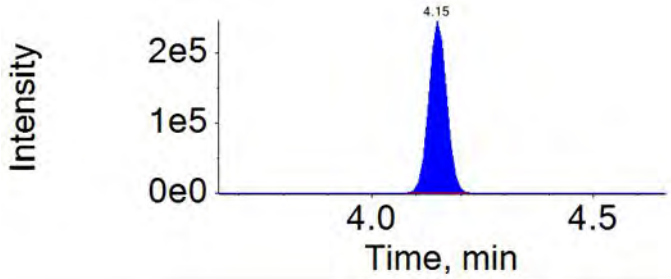
REVIEWED
By HMK at 1:40 pm, 12/6/18

ICAL Name: 18NOV28DCAL **Result Table:** 18NOV29DCCV6-9 11/30/2018 3:21:11 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

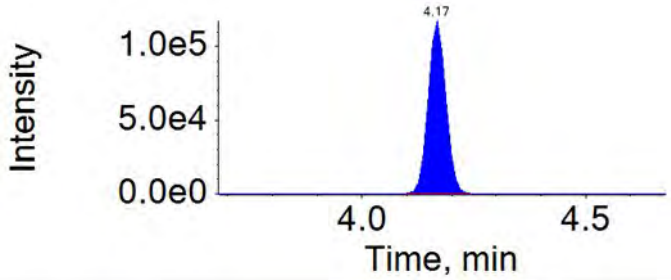
Analyte: PFHxA
313.0 / 269.0



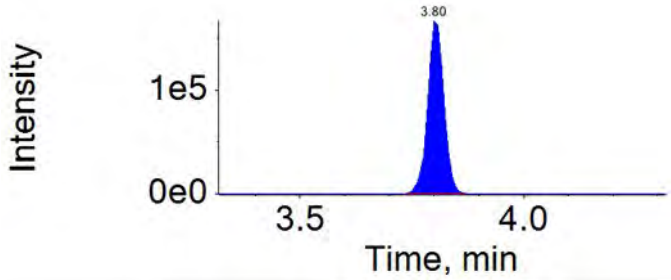
Extraction Standard: 13C5-PFHxA
318.0 / 273.0



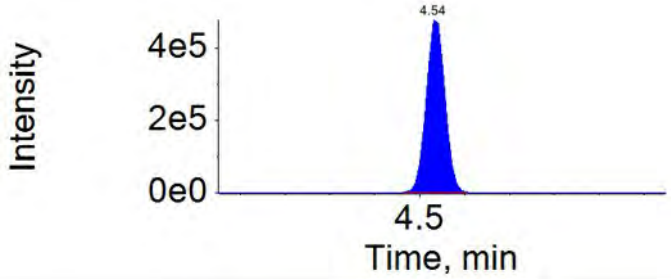
Analyte: PFPeS
349.0 / 80.0



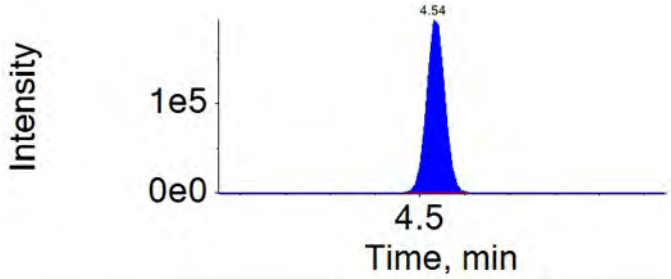
Extraction Standard: 13C3-PFBS
302.0 / 80.0



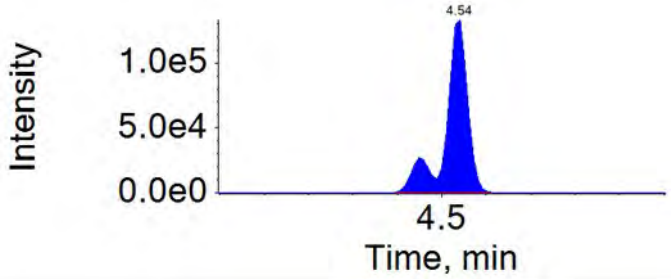
Analyte: PFHpA
363.0 / 319.0



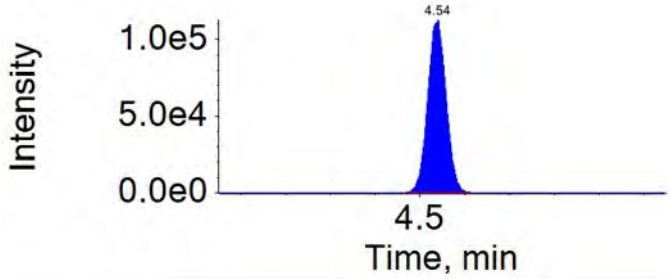
Extraction Standard: 13C4-PFHpA
367.0 / 322.0



Analyte: PFHxS
399.0 / 80.0



Extraction Standard: 13C3-PFHxS
402.0 / 80.0

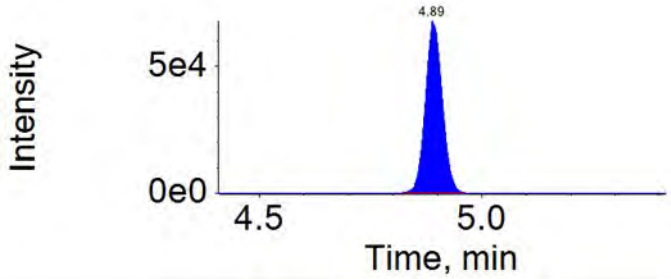


APPROVED
By MCD at 3:26 pm, 11/30/18

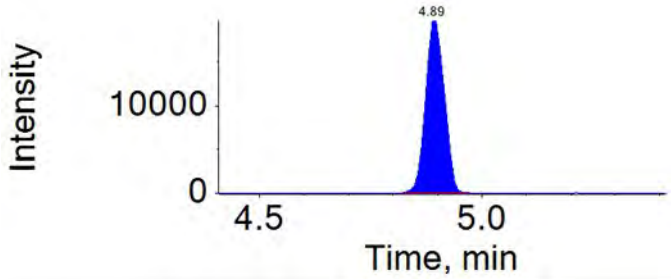
REVIEWED
By HMK at 1:40 pm, 12/6/18

ICAL Name: 18NOV28DCAL **Result Table:** 18NOV29DCCV6-9 11/30/2018 3:21:11 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

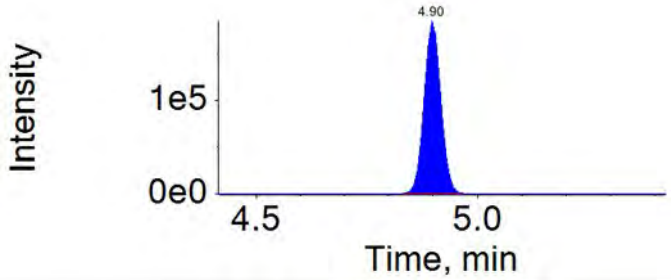
Analyte: 6:2-FTS
427.0 / 407.0



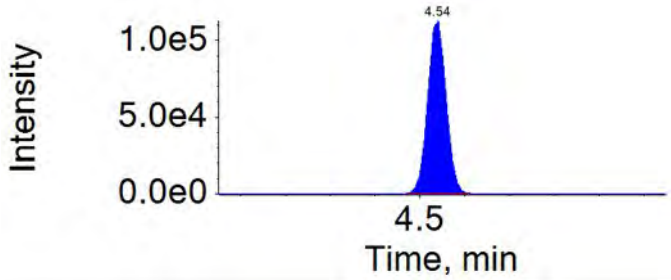
Extraction Standard: 13C2-6:2-FTS
429.0 / 81.0



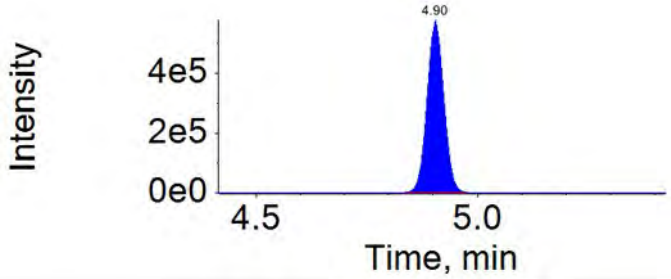
Analyte: PFHpS
449.0 / 80.0



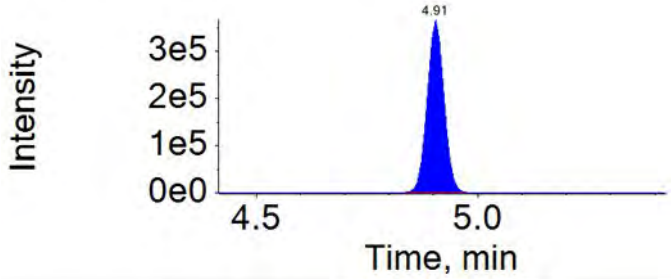
Extraction Standard: 13C3-PFHxS
402.0 / 80.0



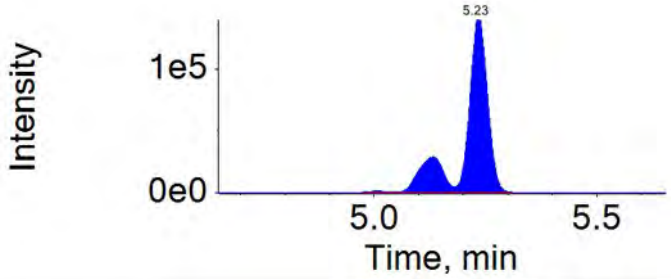
Analyte: PFOA
413.0 / 369.0



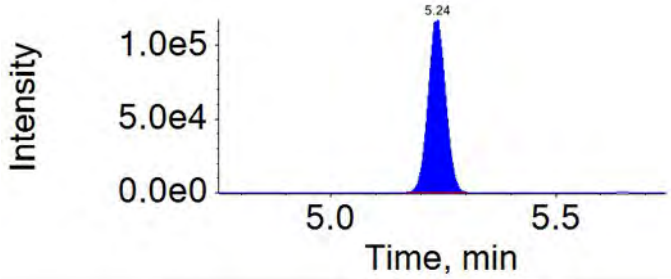
Extraction Standard: 13C8-PFOA
421.0 / 376.0



Analyte: PFOS
499.0 / 80.0



Extraction Standard: 13C8-PFOS
507.0 / 80.0

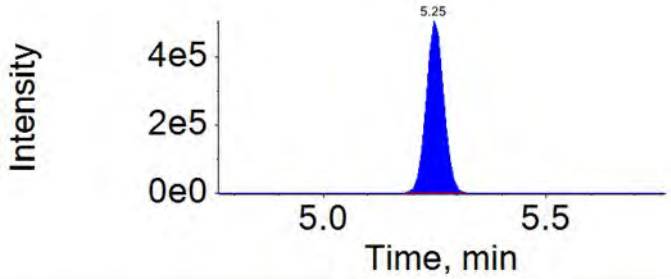


APPROVED
By MCD at 3:26 pm, 11/30/18

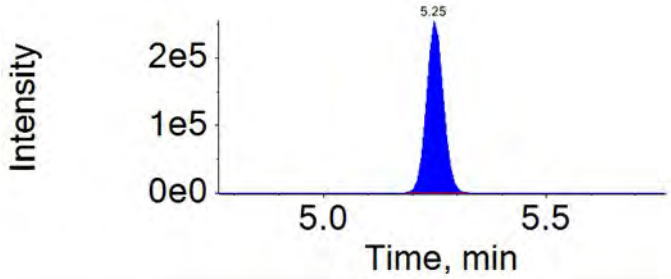
REVIEWED
By HMK at 1:40 pm, 12/6/18

ICAL Name: 18NOV28DCAL **Result Table:** 18NOV29DCCV6-9 11/30/2018 3:21:11 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

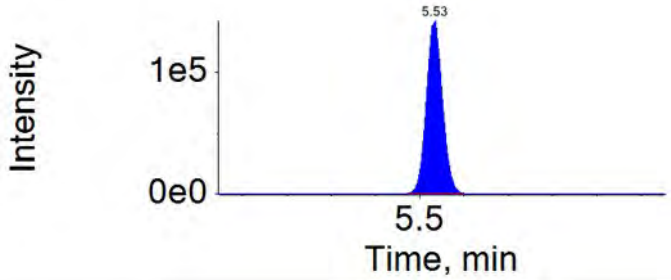
Analyte: PFNA
463.0 / 419.0



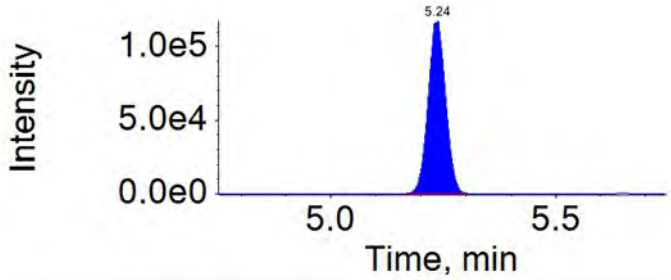
Extraction Standard: 13C9-PFNA
472.0 / 427.0



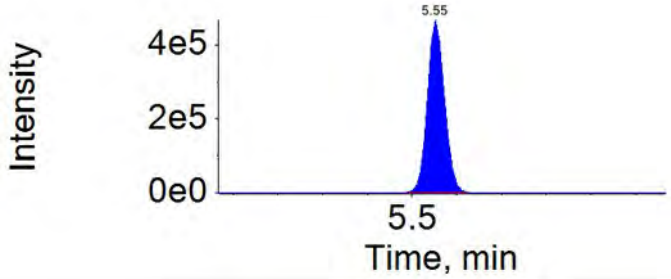
Analyte: PFNS
549.0 / 80.0



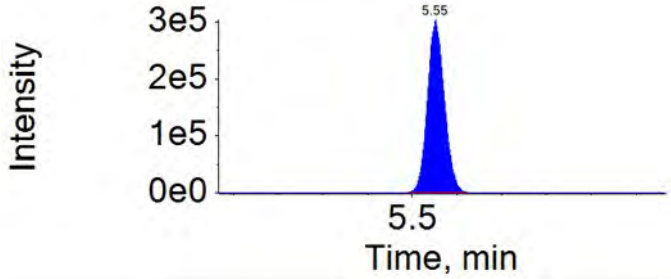
Extraction Standard: 13C8-PFOS
507.0 / 80.0



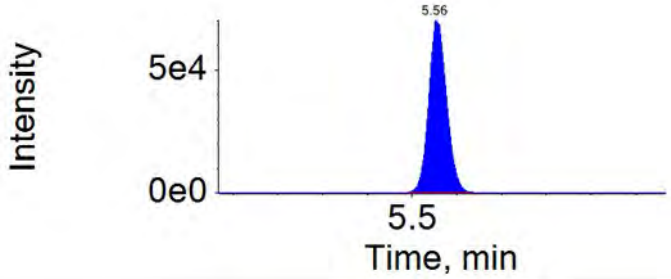
Analyte: PFDA
513.0 / 469.0



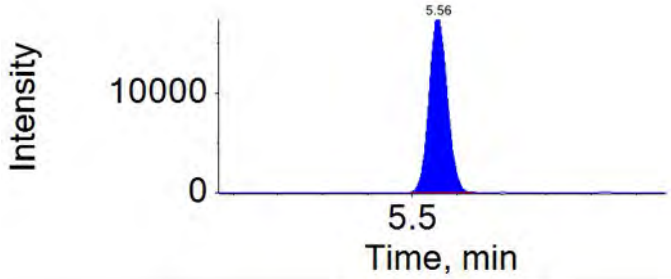
Extraction Standard: 13C6-PFDA
519.0 / 474.0



Analyte: 8:2-FTS
527.0 / 507.0



Extraction Standard: 13C2-8:2-FTS
529.0 / 81.0

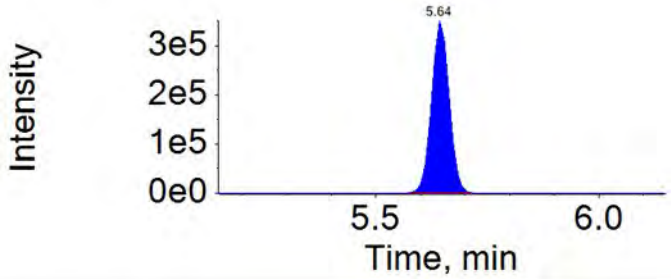


APPROVED
By MCD at 3:26 pm, 11/30/18

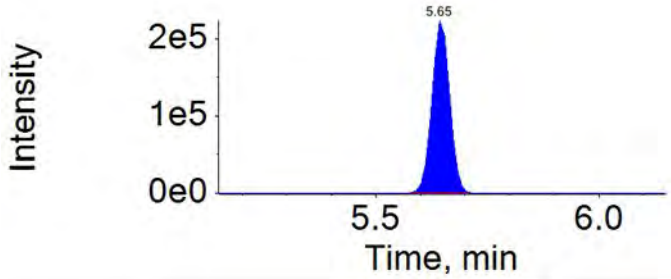
REVIEWED
By HMK at 1:40 pm, 12/6/18

ICAL Name: 18NOV28DCAL **Result Table:** 18NOV29DCCV6-9 11/30/2018 3:21:11 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

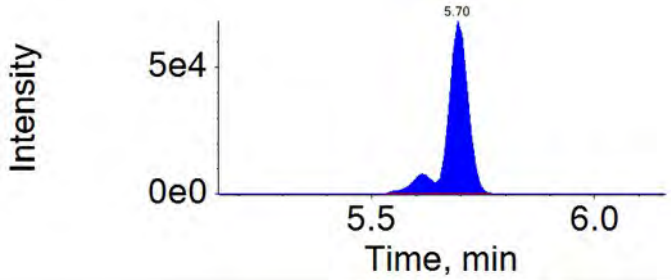
Analyte: PFOSA
498.0 / 78.0



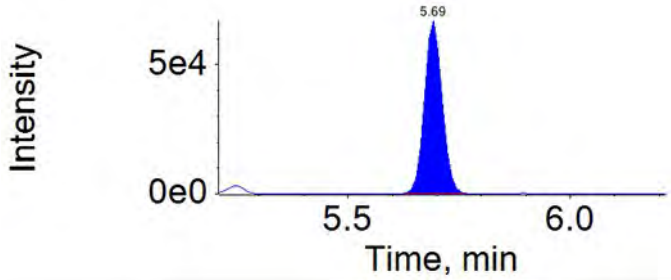
Extraction Standard: 13C8-PFOSA
506.0 / 78.0



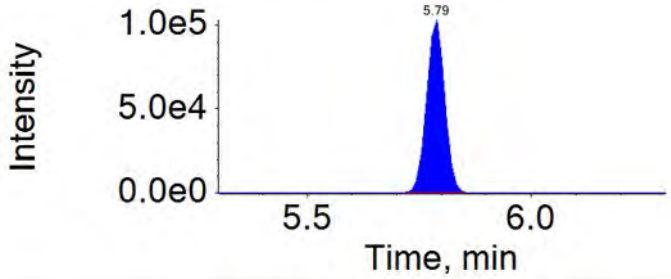
Analyte: NMeFOSAA
570.0 / 419.0



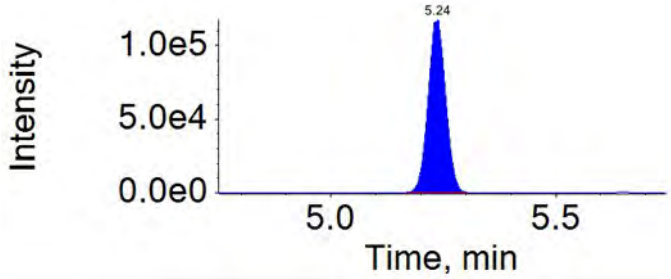
Extraction Standard: d3-NMeFOSAA
573.0 / 419.0



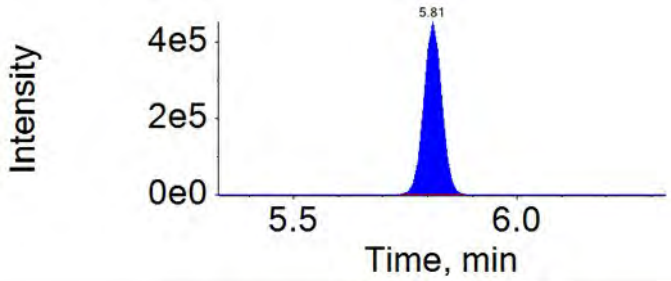
Analyte: PFDS
599.0 / 80.0



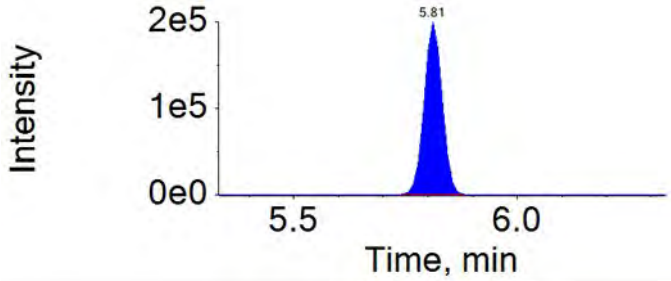
Extraction Standard: 13C8-PFOS
507.0 / 80.0



Analyte: PFUnDA
563.0 / 519.0

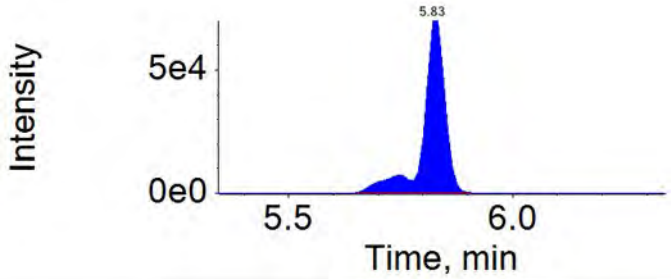


Extraction Standard: 13C7-PFUnDA
570.0 / 525.0

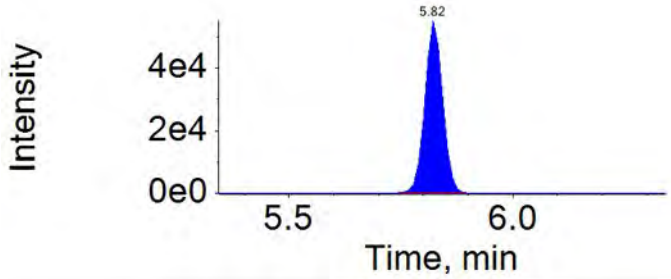


ICAL Name: 18NOV28DCAL **Result Table:** 18NOV29DCCV6-9 11/30/2018 3:21:11 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

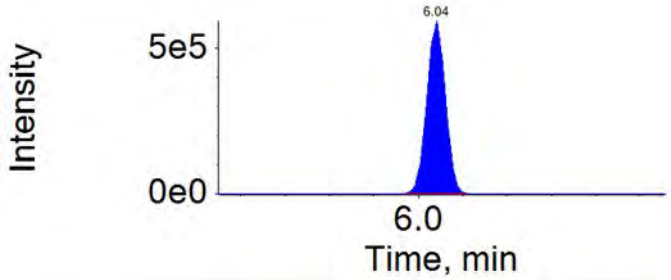
Analyte: NEtFOSAA
584.0 / 419.0



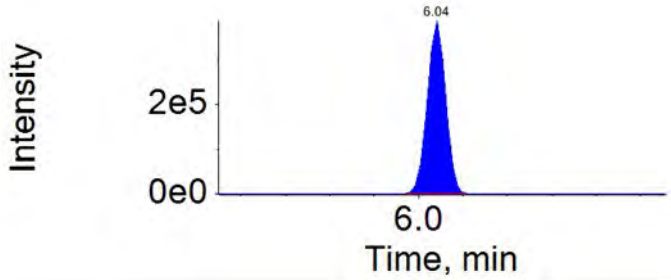
Extraction Standard: d5-NEtFOSAA
589.0 / 419.0



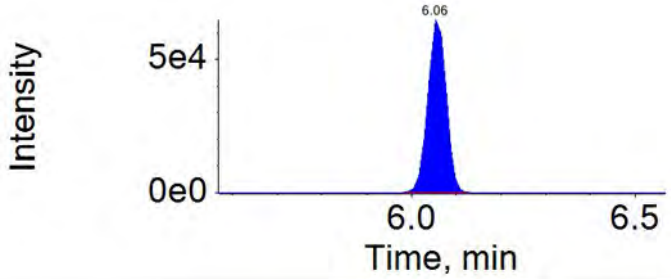
Analyte: PFDoDA
613.0 / 569.0



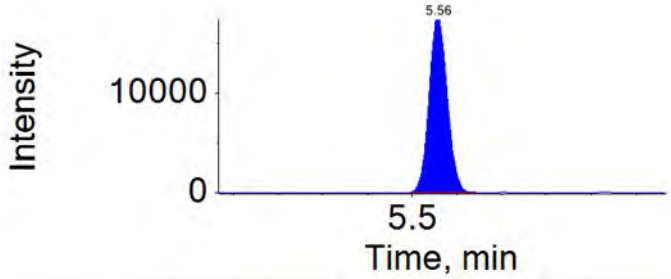
Extraction Standard: 13C2-PFDoDA
615.0 / 570.0



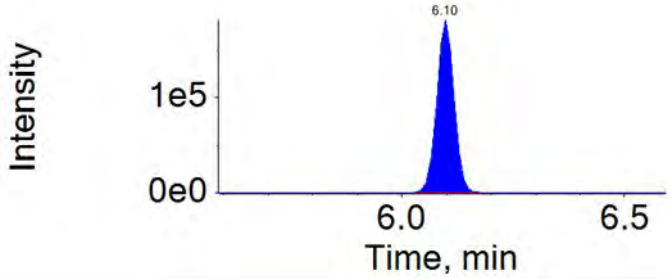
Analyte: 10:2-FTS
627.0 / 607.0



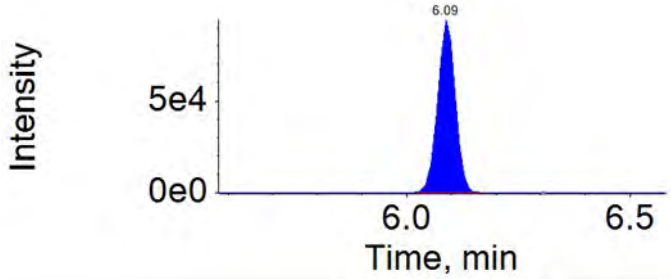
Extraction Standard: 13C2-8:2-FTS
529.0 / 81.0



Analyte: NMePFOSAE
616.0 / 59.0



Extraction Standard: d7-NMePFOSAE
623.0 / 59.0

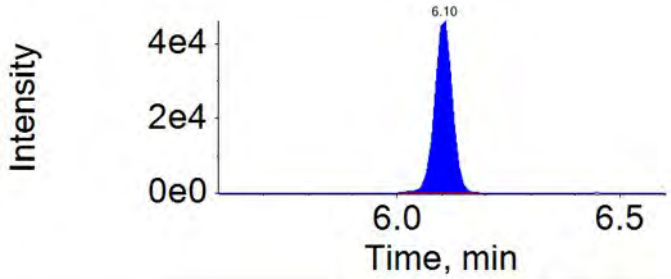


APPROVED
By MCD at 3:27 pm, 11/30/18

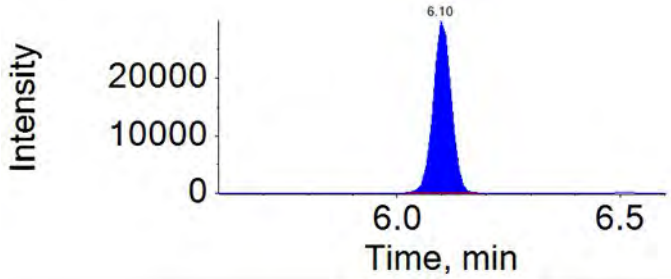
REVIEWED
By HMK at 1:40 pm, 12/6/18

ICAL Name: 18NOV28DCAL **Result Table:** 18NOV29DCCV6-9 11/30/2018 3:21:11 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

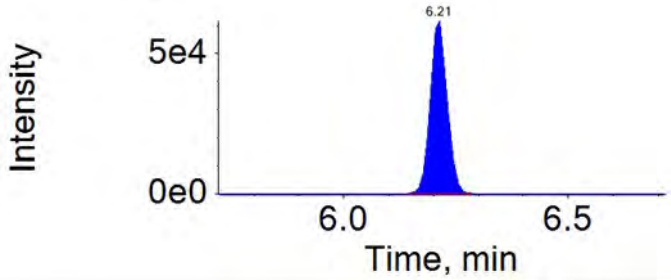
Analyte: NMePFOSA
512.0 / 169.0



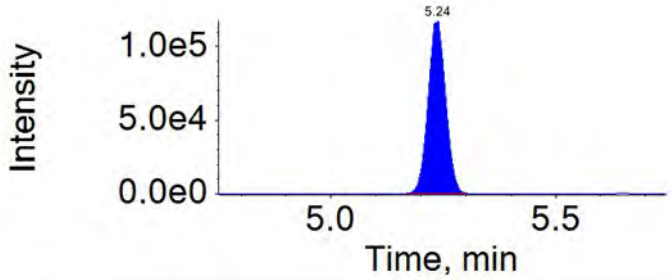
Extraction Standard: d3-NMePFOSA
515.0 / 169.0



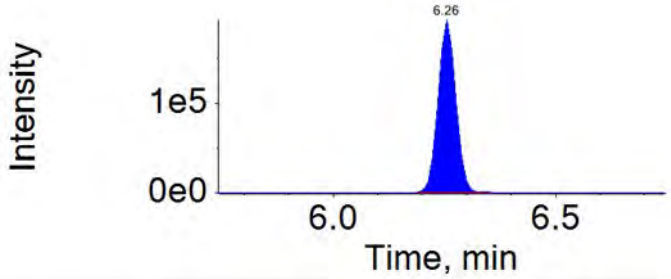
Analyte: PFDoS
699.0 / 80.0



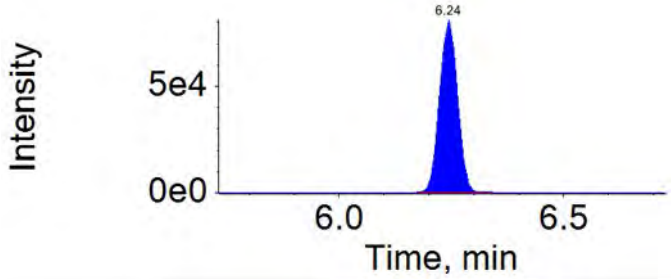
Extraction Standard: 13C8-PFOS
507.0 / 80.0



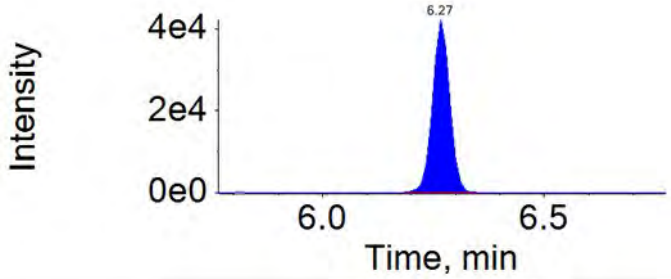
Analyte: NEtPFOSAE
630.0 / 59.0



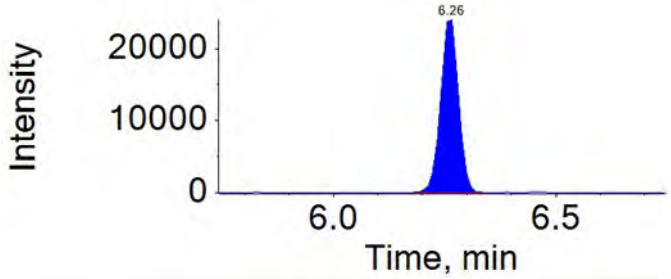
Extraction Standard: d9-NEtPFOSAE
639.0 / 59.0



Analyte: NEtPFOSA
526.0 / 169.0



Extraction Standard: d5-NEtPFOSA
531.0 / 169.0

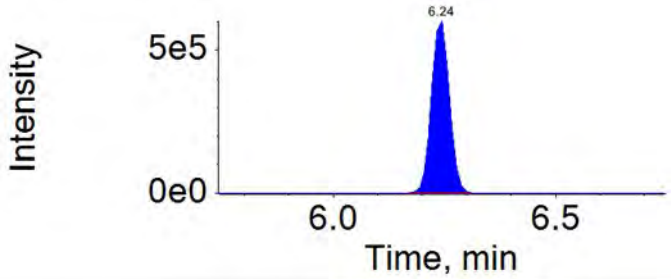


APPROVED
By MCD at 3:27 pm, 11/30/18

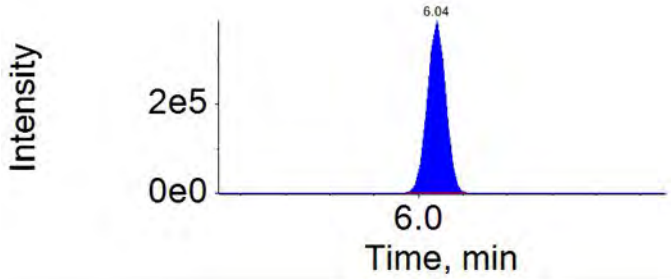
REVIEWED
By HMK at 1:40 pm, 12/6/18

ICAL Name: 18NOV28DCAL **Result Table:** 18NOV29DCCV6-9 11/30/2018 3:21:11 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

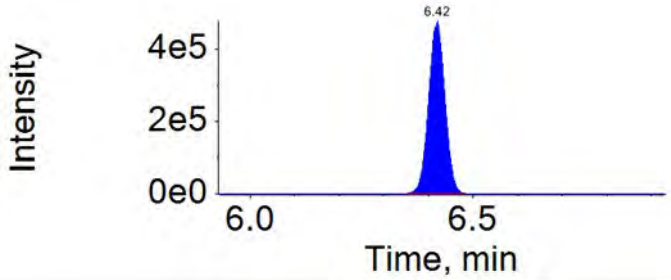
Analyte: PFTrDA
663.0 / 619.0



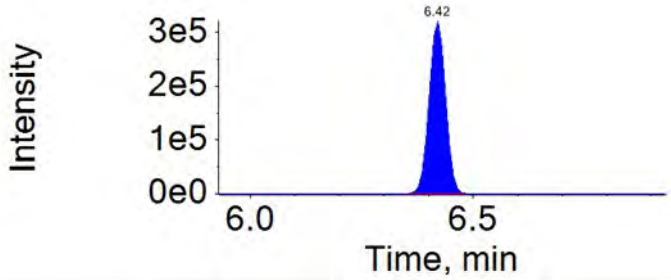
Extraction Standard: 13C2-PFDoDA
615.0 / 570.0



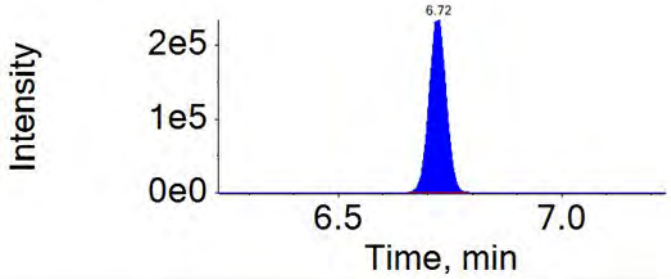
Analyte: PFTeDA
713.0 / 669.0



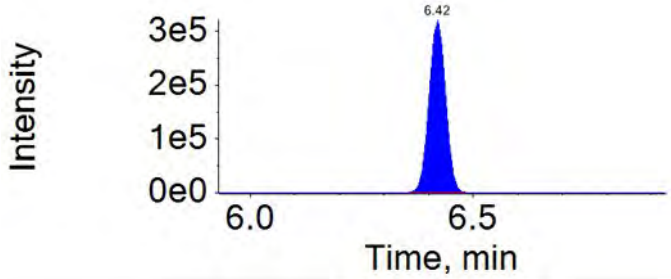
Extraction Standard: 13C2-PFTeDA
715.0 / 670.0



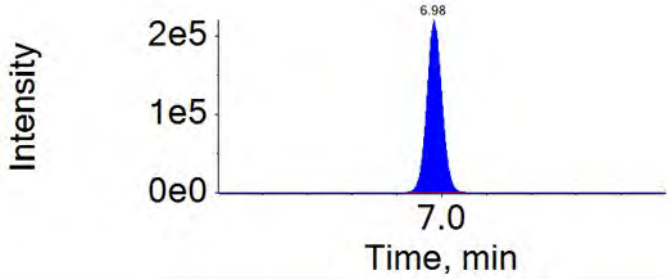
Analyte: PFHxDA
813.0 / 769.0



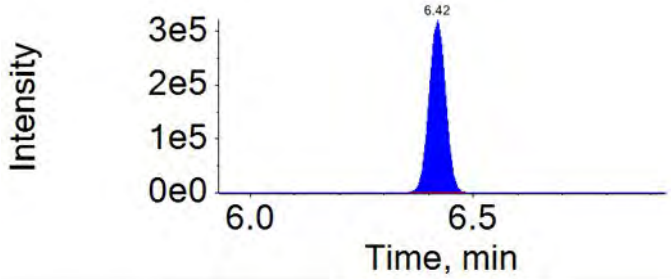
Extraction Standard: 13C2-PFTeDA
715.0 / 670.0



Analyte: PFODA
913.0 / 869.0



Extraction Standard: 13C2-PFTeDA
715.0 / 670.0



APPROVED
By MCD at 3:27 pm, 11/30/18

REVIEWED
By HMK at 1:40 pm, 12/6/18

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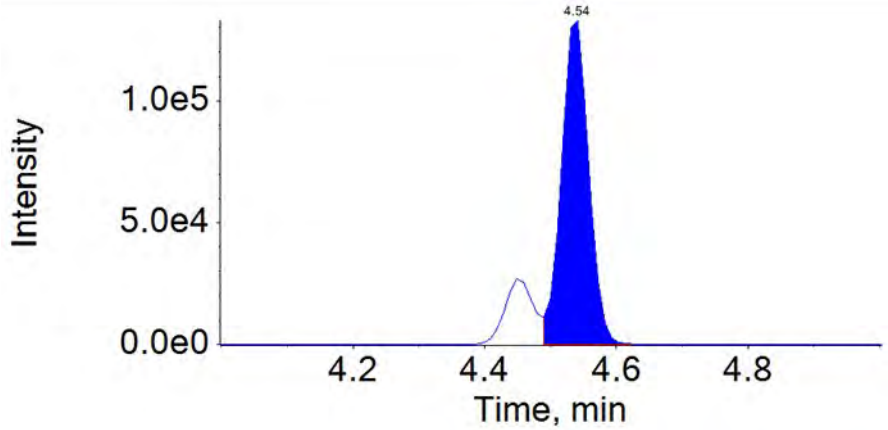
Auto Integrations prior to Manual Integration

Print Date: 11/30/2018 3:24 PM
Template: MQ-OrigInteg-16NOV21.docx

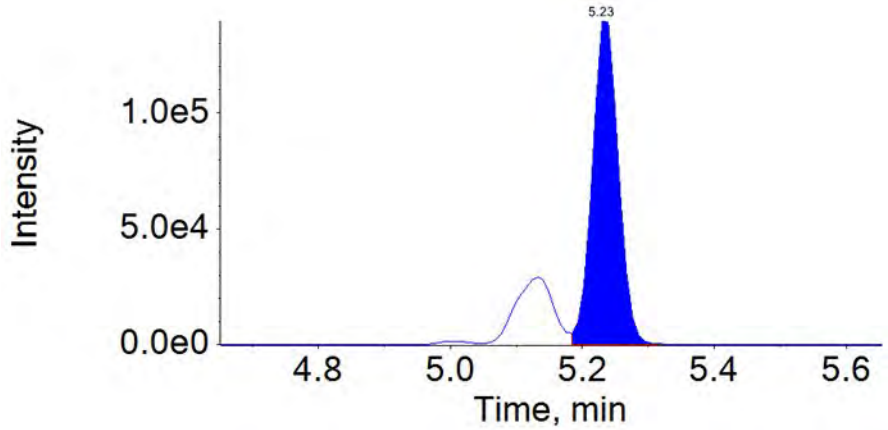
Results Table Name: 18NOV29DCCV6-9
Results Table Date: 11/30/2018 3:21:11 PM
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

Component Name:
PFHxS
RT (min.):
4.54
Peak Area:
384345.6
Mass Range:
399.0 / 80.0
File Name:
18NOV29D-64.wiff
Sample Name:
CCV6_CAL4



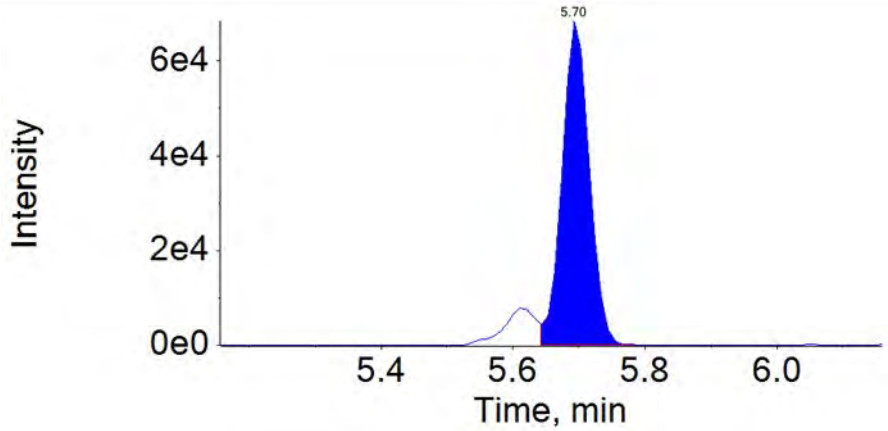
Integration Comment: incorrect integration

Component Name:
PFOS
RT (min.):
5.23
Peak Area:
386727.1
Mass Range:
499.0 / 80.0
File Name:
18NOV29D-64.wiff
Sample Name:
CCV6_CAL4



Integration Comment: incorrect integration

Component Name:
NMeFOSAA
RT (min.):
5.70
Peak Area:
196666.7
Mass Range:
570.0 / 419.0
File Name:
18NOV29D-64.wiff
Sample Name:
CCV6_CAL4



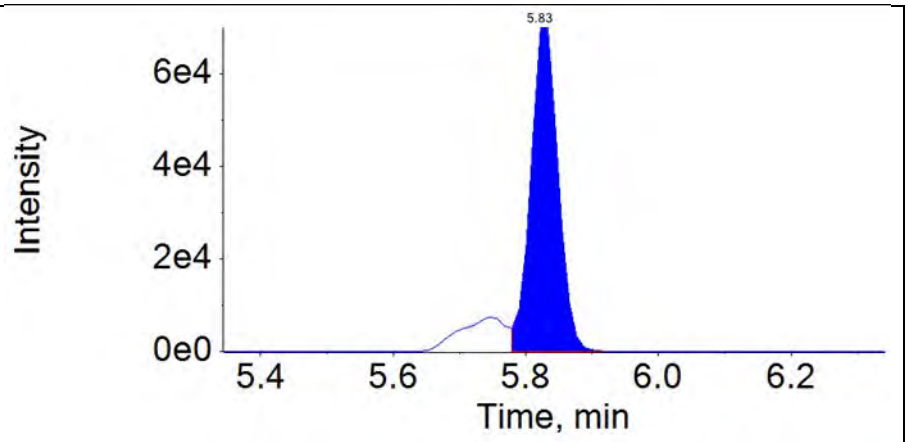
Integration Comment: incorrect integration

APPROVED
By MCD at 3:27 pm, 11/30/18

REVIEWED
By HMK at 1:40 pm, 12/6/18

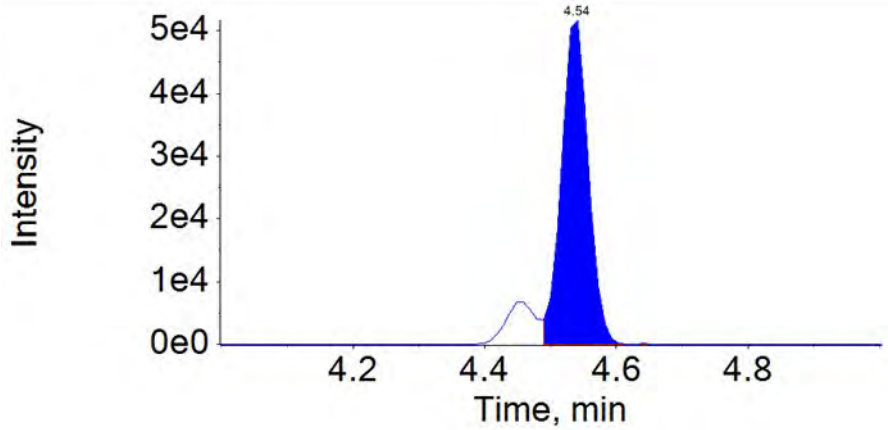
Results Table Name: 18NOV29DCCV6-9
Results Table Date: 11/30/2018 3:21:11 PM
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

Component Name:
NEtFOSAA
RT (min.):
5.83
Peak Area:
203534.1
Mass Range:
584.0 / 419.0
File Name:
18NOV29D-64.wiff
Sample Name:
CCV6_CAL4



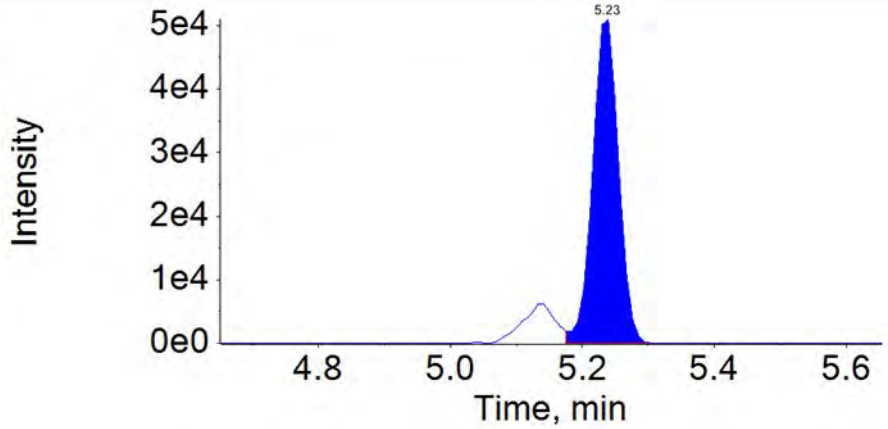
Integration Comment: incorrect integration

Component Name:
PFHxS_2
RT (min.):
4.54
Peak Area:
147603.4
Mass Range:
399.0 / 99.0
File Name:
18NOV29D-64.wiff
Sample Name:
CCV6_CAL4



Integration Comment: incorrect integration

Component Name:
PFOS_2
RT (min.):
5.23
Peak Area:
139568.4
Mass Range:
499.0 / 99.0
File Name:
18NOV29D-64.wiff
Sample Name:
CCV6_CAL4



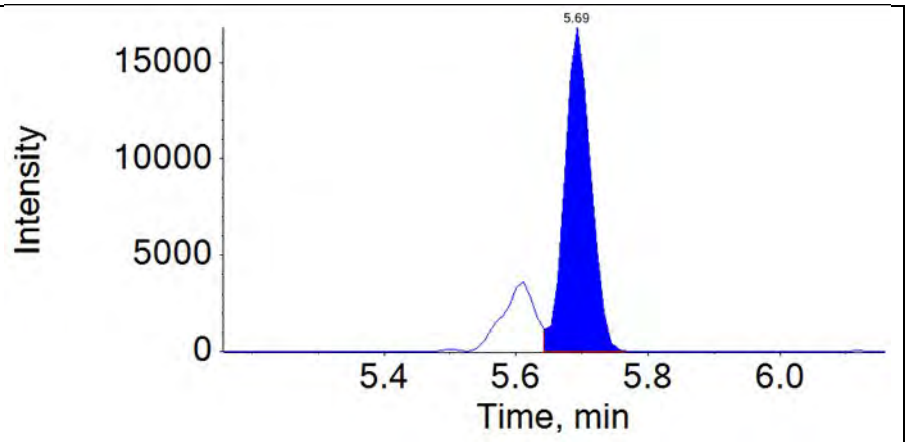
Integration Comment: incorrect integration

APPROVED
By MCD at 3:27 pm, 11/30/18

REVIEWED
By HMK at 1:40 pm, 12/6/18

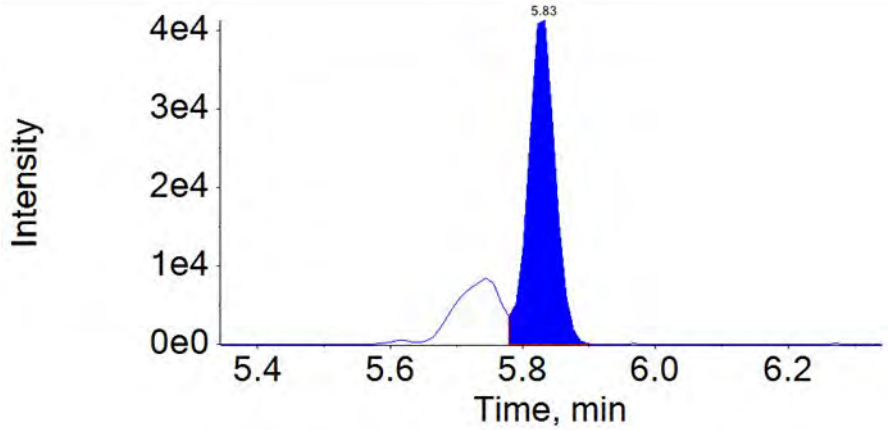
Results Table Name: 18NOV29DCCV6-9
Results Table Date: 11/30/2018 3:21:11 PM
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

Component Name:
NMeFOSAA_2
RT (min.):
5.69
Peak Area:
46000.9
Mass Range:
570.0 / 483.0
File Name:
18NOV29D-64.wiff
Sample Name:
CCV6_CAL4



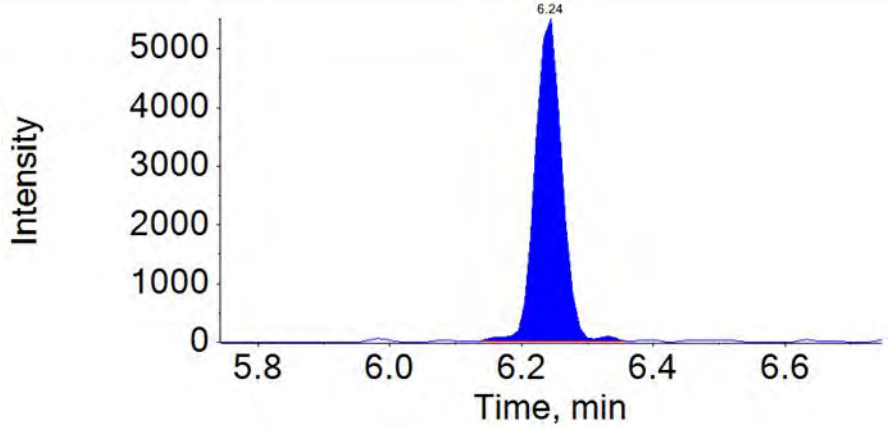
Integration Comment: incorrect integration

Component Name:
NEtFOSAA_2
RT (min.):
5.83
Peak Area:
117480.7
Mass Range:
584.0 / 526.0
File Name:
18NOV29D-64.wiff
Sample Name:
CCV6_CAL4



Integration Comment: incorrect integration

Component Name:
PFTrDA_2
RT (min.):
6.24
Peak Area:
15556.4
Mass Range:
663.0 / 169.0
File Name:
18NOV29D-64.wiff
Sample Name:
CCV6_CAL4



Integration Comment: incorrect integration

Results Table Name: 18NOV29DCCV6-9
Results Table Date: 11/30/2018 3:21:11 PM
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

APPROVED
By MCD at 3:27 pm, 11/30/18

REVIEWED
By HMK at 1:40 pm, 12/6/18

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LC-MS/MS Analysis Report

Printed: 11/30/2018 3:22:00 PM
Template: IonRatio18OCT10

Ion Ratio Report

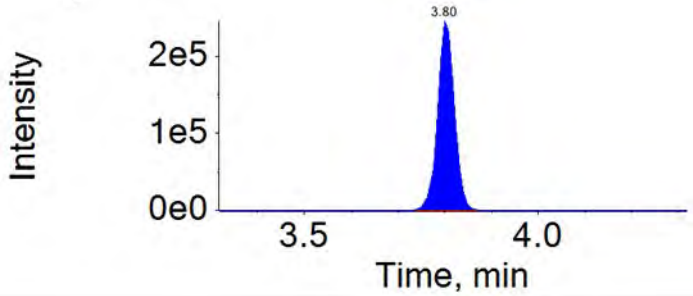
Sample Name: CCV6_CAL4 **Instrument Name:** LM27631 **File Name:** 18NOV29D-64.wiff

Component Name	RT	RRT	Analyte Area Response	Int Typ	Expected Ion Ratio	Ion Ratio	Ion Ratio % Diff	Ion Ratio Limit	Ion Ratio OOS
PFBS	3.80	1.00	609993.7	A	N/A	0.3626			
PFBS_2	3.80	1.00	221209.7	A	N/A	0.3626	-1	50	
4:2-FTS	4.11	1.00	184688.7	A	N/A	0.6561			
4:2-FTS_2	4.11	1.00	121173.6	A	N/A	0.6561	3	50	
PFHxA	4.15	1.00	1387308.0	A	N/A	0.0113			
PFHxA_2	4.15	1.00	15638.7	A	N/A	0.0113	9	50	
PFPeS	4.17	1.10	321453.2	A	N/A	0.5199			
PFPeS_2	4.17	1.10	167128.9	A	N/A	0.5199	4	50	
PFHpA	4.54	1.00	1397029.6	A	N/A	0.0526			
PFHpA_2	4.53	1.00	73436.8	A	N/A	0.0526	-6	50	
PFHxS	4.54	1.00	466399.5	M	N/A	0.3627			
PFHxS_2	4.54	1.00	169164.2	M	N/A	0.3627	-2	50	
6:2-FTS	4.89	1.00	179952.5	A	N/A	0.6838			
6:2-FTS_2	4.89	1.00	123058.7	A	N/A	0.6838	3	50	
PFHpS	4.90	1.08	482601.2	A	N/A	0.4096			
PFHpS_2	4.90	1.08	197662.9	A	N/A	0.4096	5	50	
PFOA	4.90	1.00	1506521.1	A	N/A	0.0575			
PFOA_2	4.90	1.00	86578.8	A	N/A	0.0575	0	50	
PFOS	5.23	1.00	507772.2	M	N/A	0.3179			
PFOS_2	5.23	1.00	161429.0	M	N/A	0.3179	7	50	
PFNA	5.25	1.00	1378868.3	A	N/A	0.0223			
PFNA_2	5.25	1.00	30701.9	A	N/A	0.0223	11	50	
PFNS	5.53	1.06	359004.1	A	N/A	0.4601			
PFNS_2	5.53	1.06	165180.5	A	N/A	0.4601	-4	50	
PFDA	5.55	1.00	1238904.3	A	N/A	0.0070			
PFDA_2	5.55	1.00	8647.5	A	N/A	0.0070	-7	50	
8:2-FTS	5.56	1.00	195089.6	A	N/A	0.6131			
8:2-FTS_2	5.56	1.00	119606.5	A	N/A	0.6131	14	50	
NMeFOSAA	5.70	1.00	222950.9	M	N/A	0.2609			
NMeFOSAA_2	5.69	1.00	58156.9	M	N/A	0.2609	13	50	
PFDS	5.79	1.11	286894.2	A	N/A	0.5379			
PFDS_2	5.79	1.11	154307.8	A	N/A	0.5379	0	50	
PFUnDA	5.81	1.00	1252226.8	A	N/A	0.0046			
PFUnDA_2	5.82	1.00	5734.5	A	N/A	0.0046	20	50	
NEtFOSAA	5.83	1.00	239375.0	M	N/A	0.6558			
NEtFOSAA_2	5.83	1.00	156975.3	M	N/A	0.6558	-11	50	
PFDoDA	6.04	1.00	1726918.5	A	N/A	0.0120			
PFDoDA_2	6.04	1.00	20744.6	A	N/A	0.0120	-8	50	
10:2-FTS	6.06	1.09	185245.7	A	N/A	0.7610			
10:2-FTS_2	6.06	1.09	140966.2	A	N/A	0.7610	9	50	
PFTrDA	6.24	1.03	1695782.7	A	N/A	0.0091			
PFTrDA_2	6.24	1.03	15412.4	M	N/A	0.0091	1	50	
PFTeDA	6.42	1.00	1214917.2	A	N/A	0.0059			
PFTeDA_2	6.42	1.00	7159.2	A	N/A	0.0059	5	50	
PFHxDA	6.72	1.05	634623.0	A	N/A	0.0599			
PFHxDA_2	6.72	1.05	38033.4	A	N/A	0.0599	-7	50	
PFODA	6.98	1.09	509959.1	A	N/A	0.0255			
PFODA_2	6.98	1.09	12993.9	A	N/A	0.0255	-4	50	

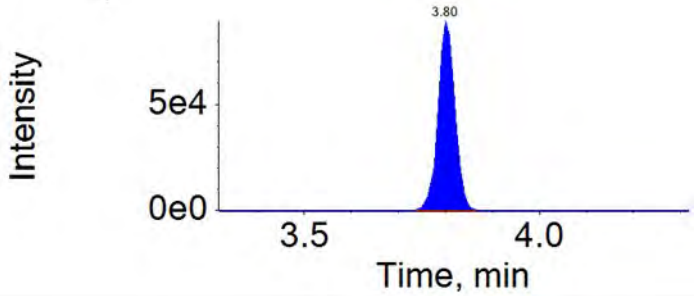
APPROVED
By MCD at 3:27 pm, 11/30/18

REVIEWED
By HMK at 1:40 pm, 12/6/18

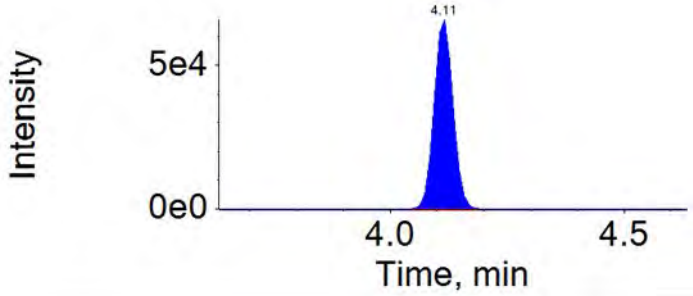
Component: PFBS
Primary Mass: 299.0 / 80.0



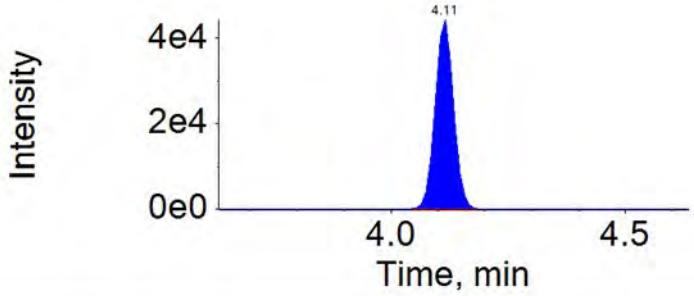
Component: PFBS_2
Secondary Mass: 299.0 / 99.0



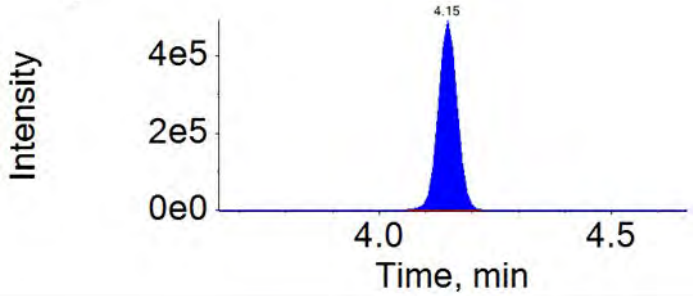
Component: 4:2-FTS
Primary Mass: 327.0 / 307.0



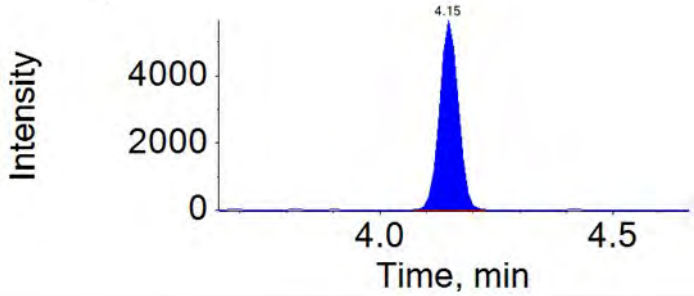
Component: 4:2-FTS_2
Secondary Mass: 327.0 / 81.0



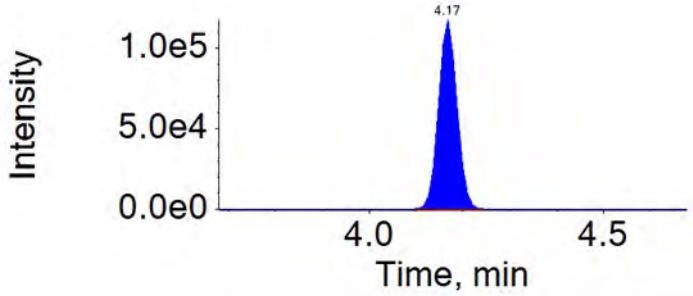
Component: PFHxA
Primary Mass: 313.0 / 269.0



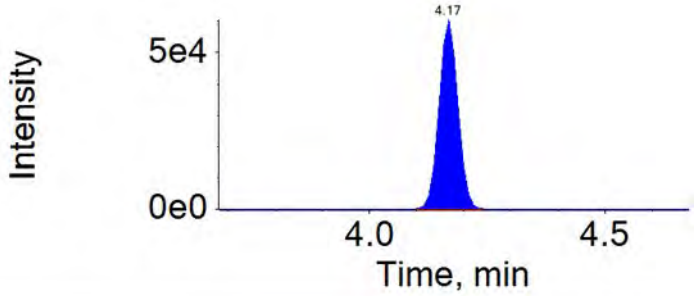
Component: PFHxA_2
Secondary Mass: 313.0 / 119.0



Component: PFPeS
Primary Mass: 349.0 / 80.0



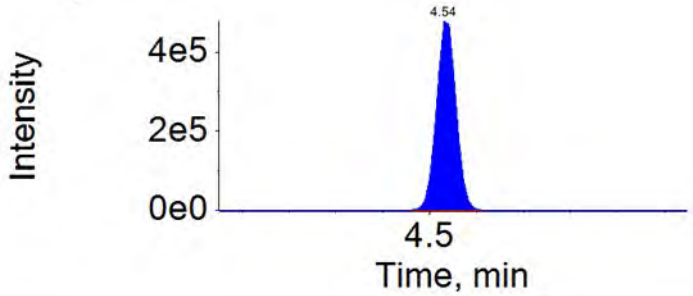
Component: PFPeS_2
Secondary Mass: 349.0 / 99.0



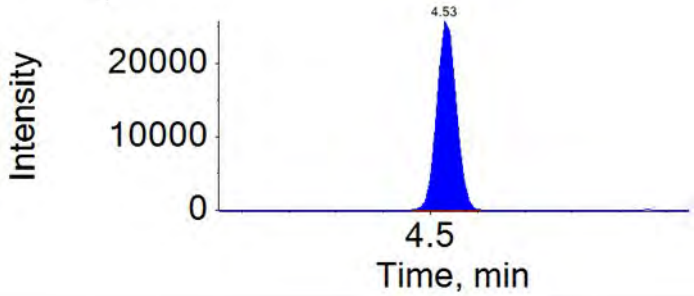
APPROVED
By MCD at 3:27 pm, 11/30/18

REVIEWED
By HMK at 1:40 pm, 12/6/18

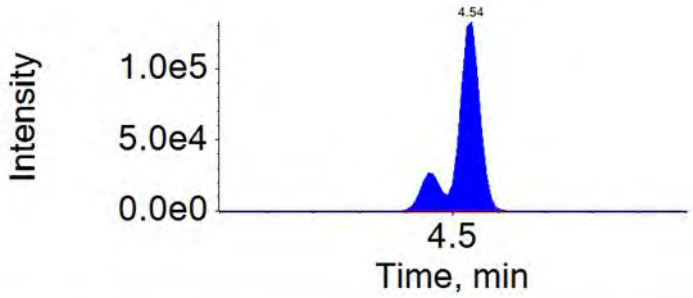
Component: PFHpA
Primary Mass: 363.0 / 319.0



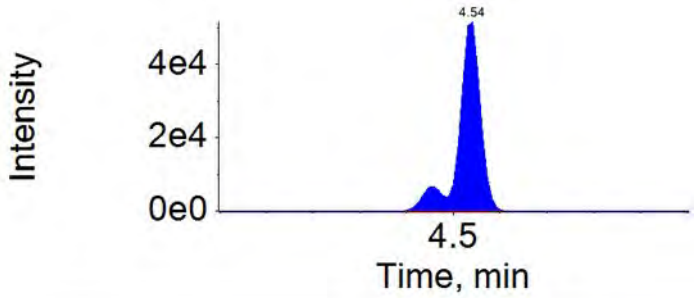
Component: PFHpA_2
Secondary Mass: 363.0 / 169.0



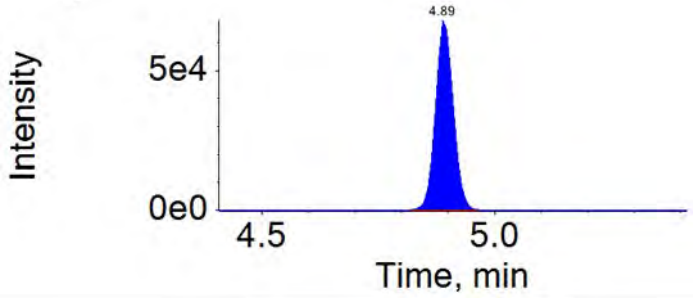
Component: PFHxS
Primary Mass: 399.0 / 80.0



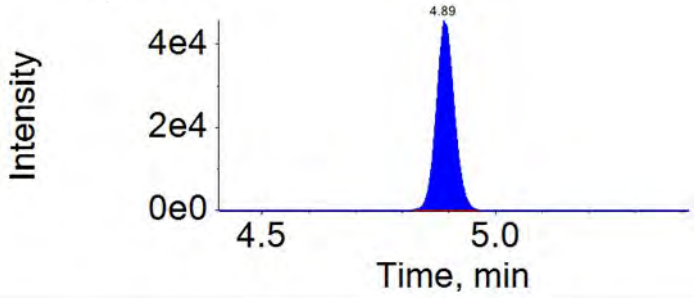
Component: PFHxS_2
Secondary Mass: 399.0 / 99.0



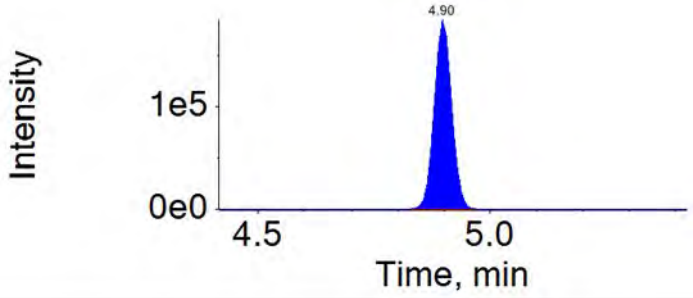
Component: 6:2-FTS
Primary Mass: 427.0 / 407.0



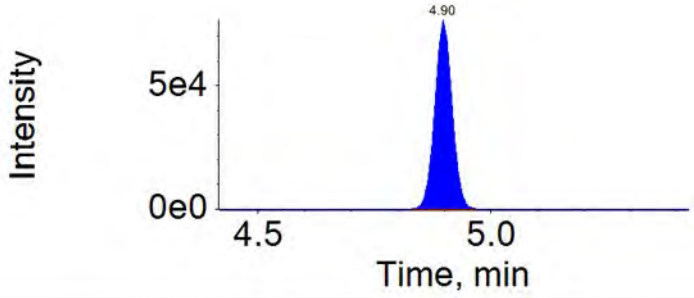
Component: 6:2-FTS_2
Secondary Mass: 427.0 / 81.0



Component: PFHpS
Primary Mass: 449.0 / 80.0



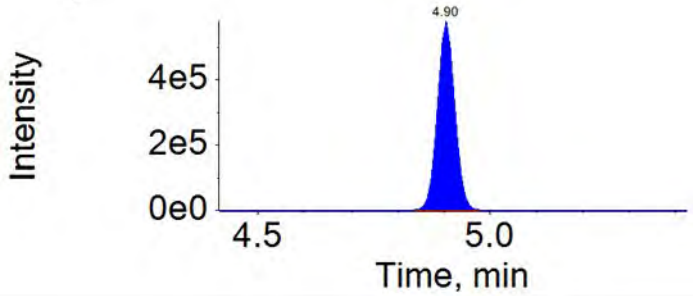
Component: PFHpS_2
Secondary Mass: 449.0 / 99.0



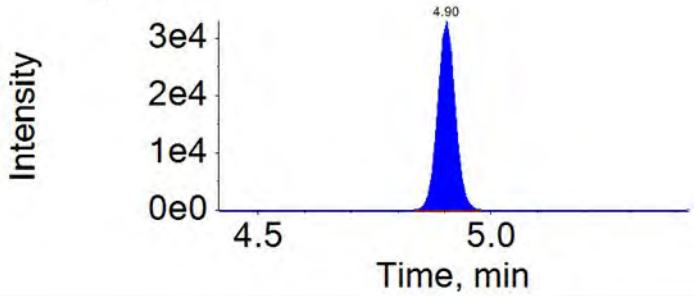
APPROVED
By MCD at 3:27 pm, 11/30/18

REVIEWED
By HMK at 1:40 pm, 12/6/18

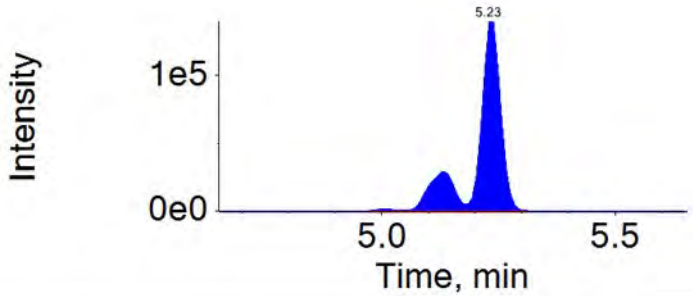
Component: PFOA
Primary Mass: 413.0 / 369.0



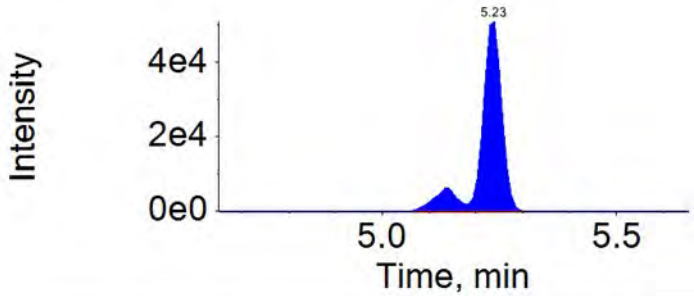
Component: PFOA_2
Secondary Mass: 413.0 / 169.0



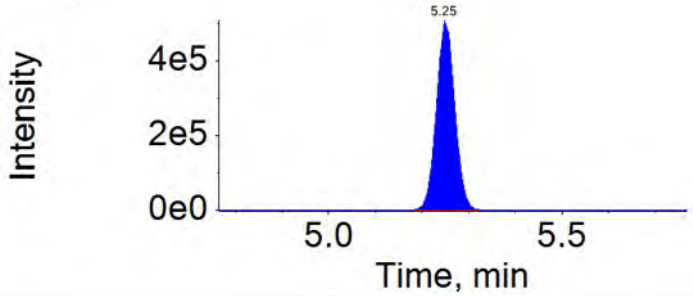
Component: PFOS
Primary Mass: 499.0 / 80.0



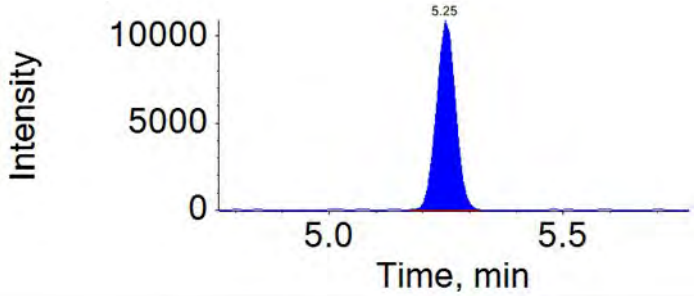
Component: PFOS_2
Secondary Mass: 499.0 / 99.0



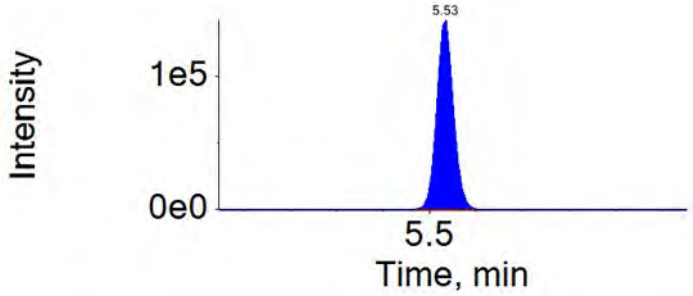
Component: PFNA
Primary Mass: 463.0 / 419.0



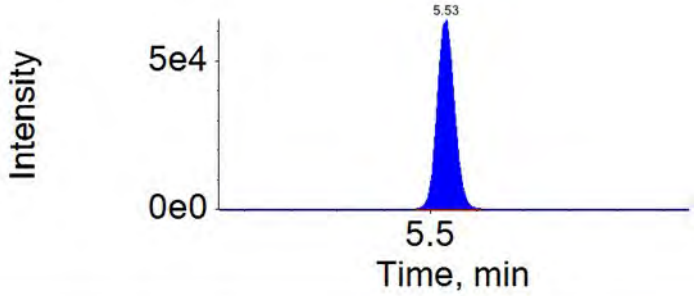
Component: PFNA_2
Secondary Mass: 463.0 / 169.0



Component: PFNS
Primary Mass: 549.0 / 80.0



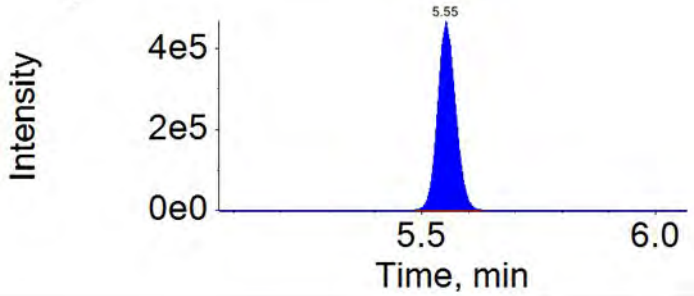
Component: PFNS_2
Secondary Mass: 549.0 / 99.0



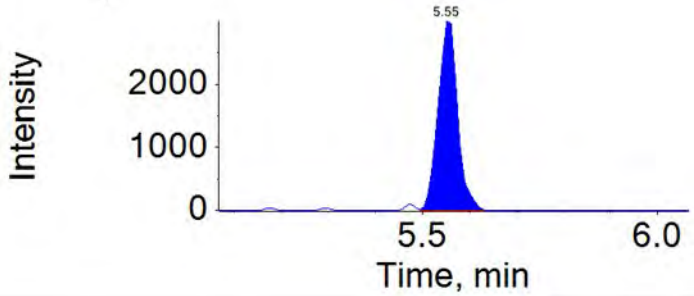
APPROVED
By MCD at 3:27 pm, 11/30/18

REVIEWED
By HMK at 1:40 pm, 12/6/18

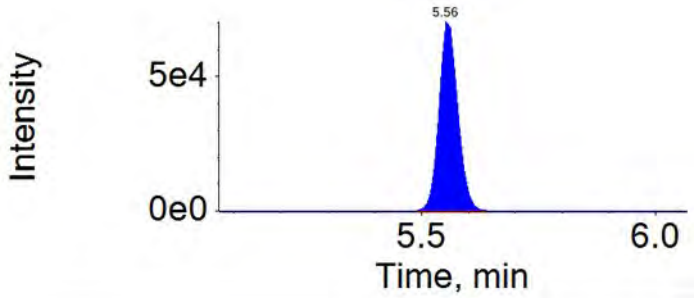
Component: PFDA
Primary Mass: 513.0 / 469.0



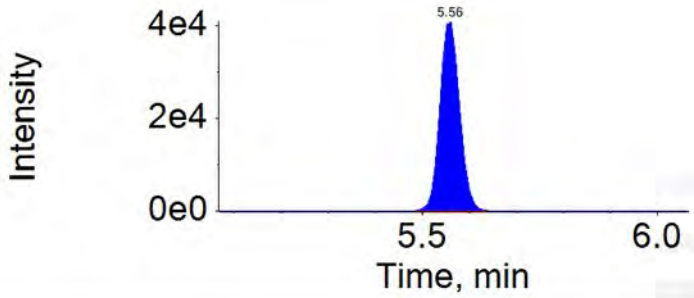
Component: PFDA_2
Secondary Mass: 513.0 / 169.0



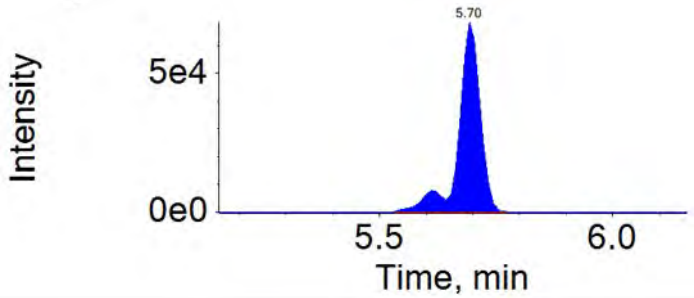
Component: 8:2-FTS
Primary Mass: 527.0 / 507.0



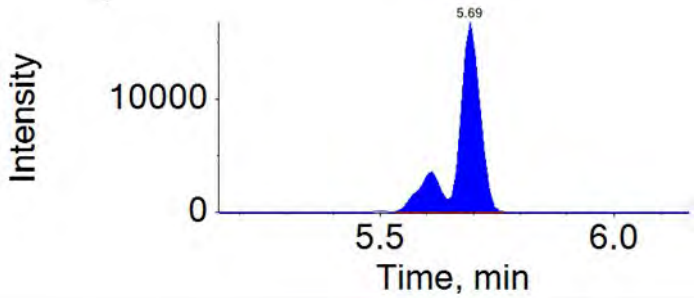
Component: 8:2-FTS_2
Secondary Mass: 527.0 / 81.0



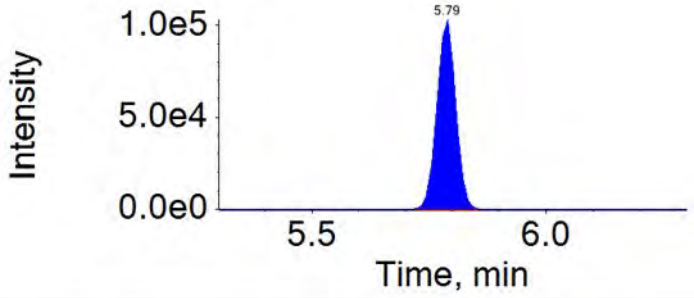
Component: NMeFOSAA
Primary Mass: 570.0 / 419.0



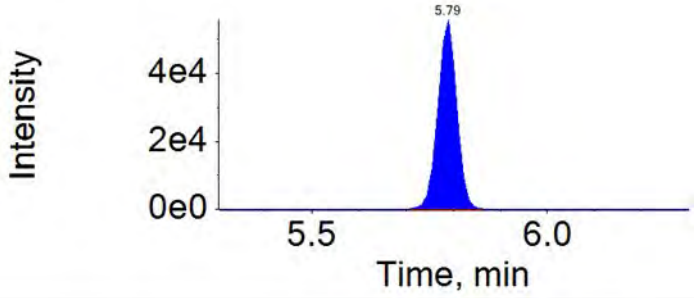
Component: NMeFOSAA_2
Secondary Mass: 570.0 / 483.0



Component: PFDS
Primary Mass: 599.0 / 80.0



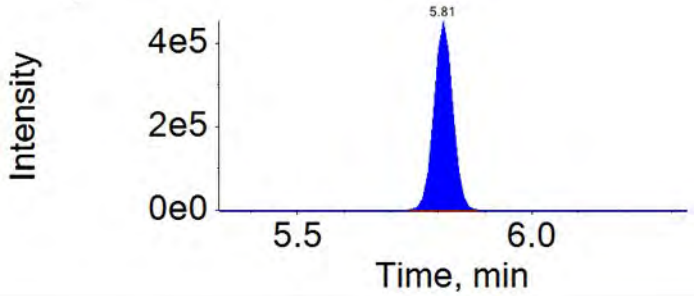
Component: PFDS_2
Secondary Mass: 599.0 / 99.0



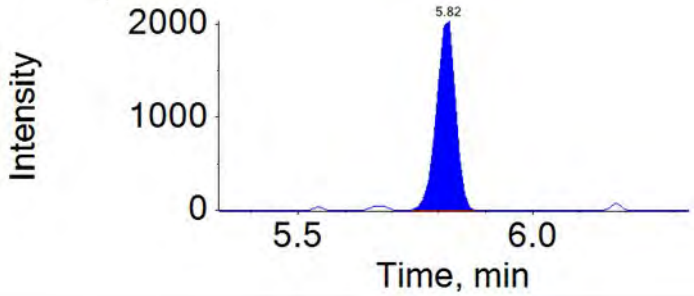
APPROVED
By MCD at 3:27 pm, 11/30/18

REVIEWED
By HMK at 1:40 pm, 12/6/18

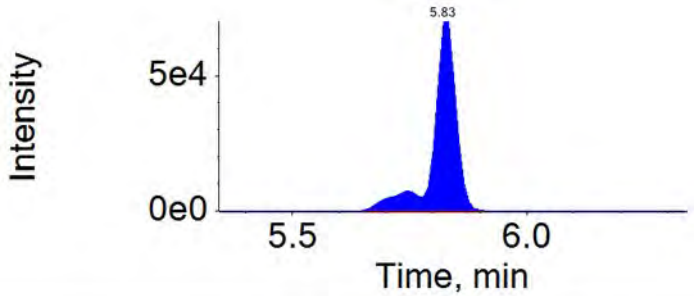
Component: PFUnDA
Primary Mass: 563.0 / 519.0



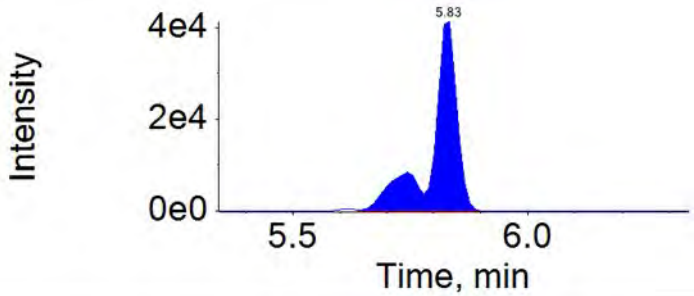
Component: PFUnDA_2
Secondary Mass: 563.0 / 169.0



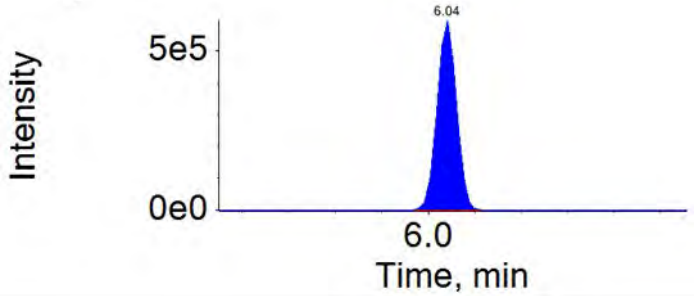
Component: NEtFOSAA
Primary Mass: 584.0 / 419.0



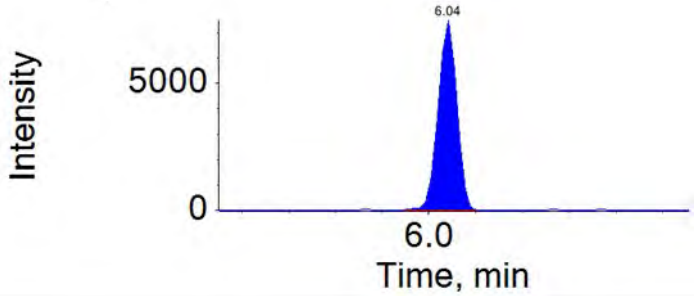
Component: NEtFOSAA_2
Secondary Mass: 584.0 / 526.0



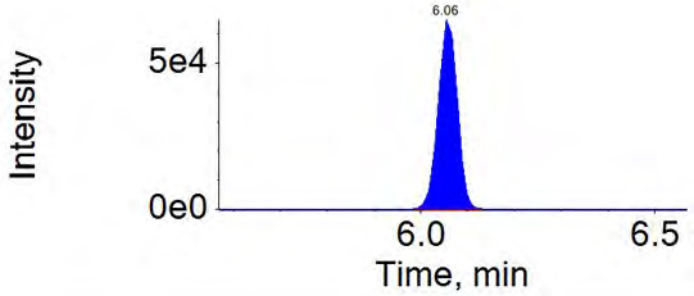
Component: PFDoDA
Primary Mass: 613.0 / 569.0



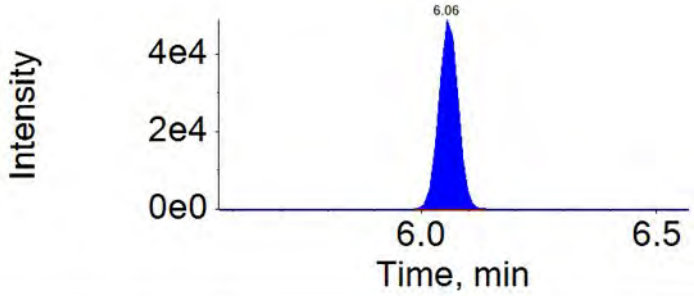
Component: PFDoDA_2
Secondary Mass: 613.0 / 169.0



Component: 10:2-FTS
Primary Mass: 627.0 / 607.0



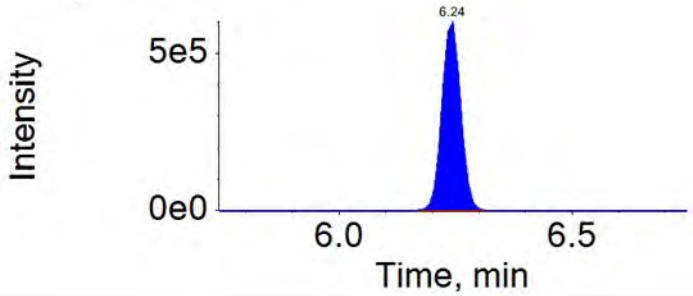
Component: 10:2-FTS_2
Secondary Mass: 627.0 / 81.0



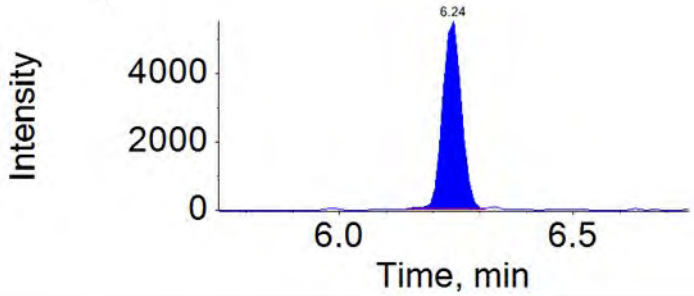
APPROVED
By MCD at 3:27 pm, 11/30/18

REVIEWED
By HMK at 1:40 pm, 12/6/18

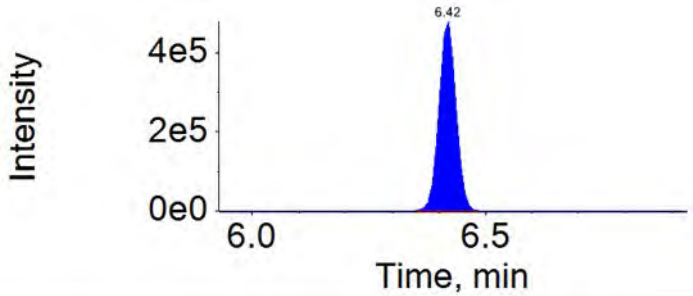
Component: PFTrDA
Primary Mass: 663.0 / 619.0



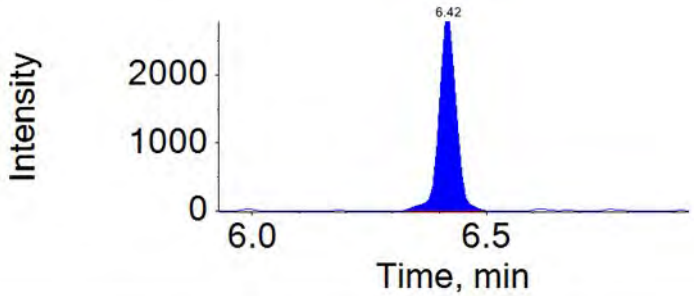
Component: PFTrDA_2
Secondary Mass: 663.0 / 169.0



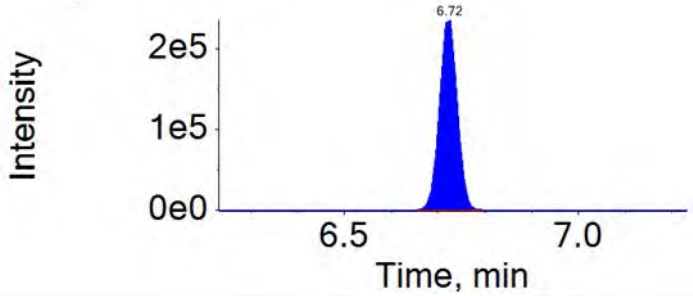
Component: PFTeDA
Primary Mass: 713.0 / 669.0



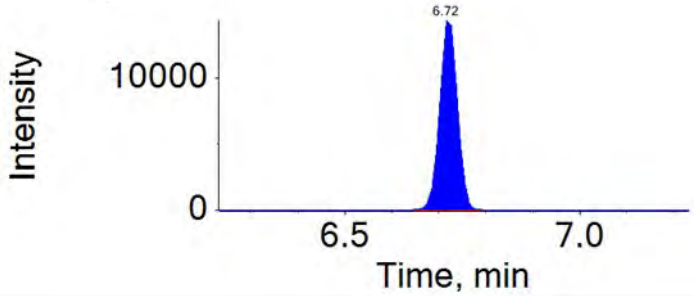
Component: PFTeDA_2
Secondary Mass: 713.0 / 169.0



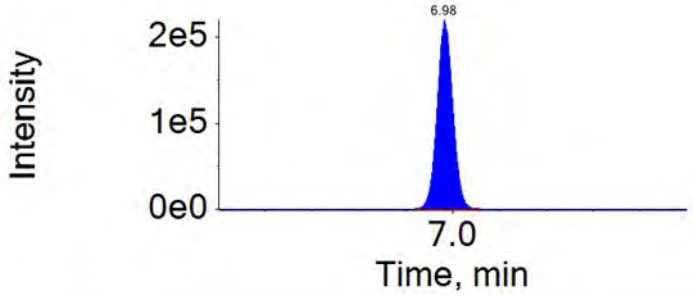
Component: PFHxDA
Primary Mass: 813.0 / 769.0



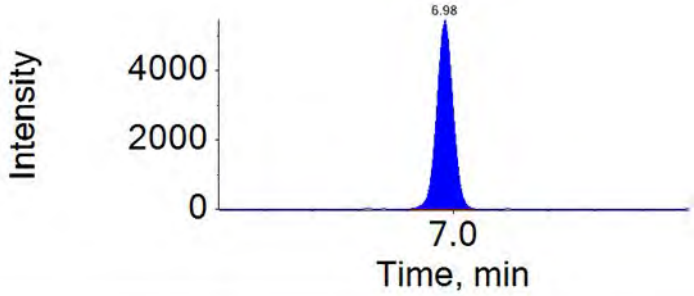
Component: PFHxDA_2
Secondary Mass: 813.0 / 169.0



Component: PFODA
Primary Mass: 913.0 / 869.0



Component: PFODA_2
Secondary Mass: 913.0 / 169.0



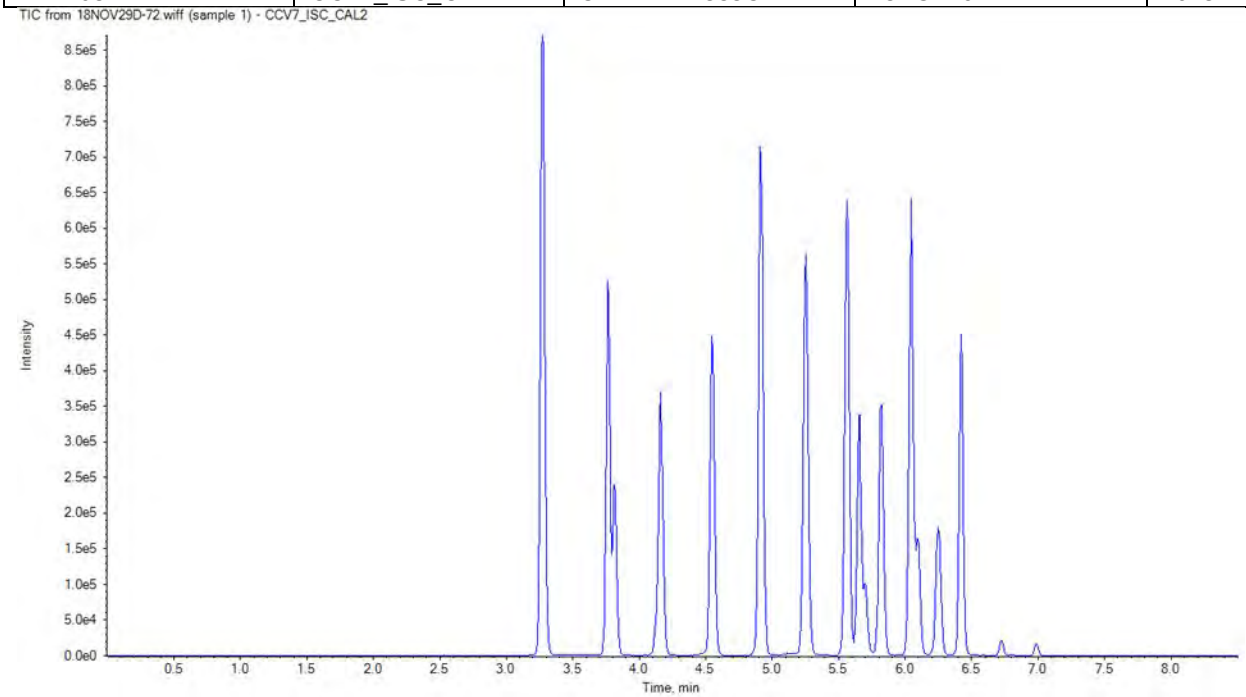
APPROVED
By MCD at 3:27 pm, 11/30/18

REVIEWED
By HMK at 1:40 pm, 12/6/18

Instrument Sensitivity Check/ Continuing Calibration Verfication

ICAL Name: 18NOV28DCAL **Result Table:** 18NOV29DCCV6-9 11/30/2018 3:19:02 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Instrument Name:	Sample Name:	Sample ID:	Sample File:	Acquisition Date:
LM27631	CCV7_ISC_CAL2	CALBRN21833C	18NOV29D-72.wiff	2018-11-29T20:38:03



Injection Standard Area Reference File: 18NOV29D-05

Injection Standard Name	Inj Std Conc	Injection Std Peak Area	Reference Injection Standard Area	Injection Std %Diff	Injection Std %Diff Limit	Injection Std %Diff OOS
13C3-PFBA	5.0	898536.5	906425.4	-1	50	
13C2-PFOA	5.0	471690.2	495984.0	-5	50	
13C4-PFOS	4.8	309413.3	296261.8	4	50	
13C2-PFDA	5.0	465698.3	451203.0	3	50	

APPROVED
By MCD at 3:27 pm, 11/30/18

REVIEWED
By umar at 12:38 pm, 12/4/18

Instrument Sensitivity Check/ Continuing Calibration Verfication

ICAL Name: 18NOV28DCAL **Result Table:** 18NOV29DCCV6-9 11/30/2018 3:19:02 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Instrument Name:	Sample Name:	Sample ID:	Sample File:	Acquisition Date:
LM27631	CCV7_ISC_CAL2	CALBRN21833C	18NOV29D-72.wiff	2018-11-29T20:38:03

Analyte Name	Analyte Area	Sc /pk	Ext Std Name	Ext Std Area	Ext Std con	Area Ratio	RT (min)	RRT	Spec Amt	Calc Amt	% Diff	% Diff Lim	% Diff OOS
PFBA	107474.9	10	13C4-PFBA	1020064.9	5.0	0.105	3.27	1.000	0.600	0.578	-4	30	
PFPeA	102994.2	12	13C5-PFPeA	959635.9	5.0	0.107	3.77	1.000	0.600	0.527	-12	30	
PFBS	43546.1	10	13C3-PFBS	447017.8	4.7	0.097	3.82	1.000	0.531	0.473	-11	30	
4:2-FTS	13618.8	11	13C2-4:2-FTS	67161.7	4.7	0.203	4.13	1.000	0.560	0.543	-3	30	
PFHxA	98812.0	11	13C5-PFHxA	684377.8	5.0	0.144	4.16	1.000	0.600	0.580	-3	30	
PFPeS	22438.2	11	13C3-PFBS	447017.8	4.7	0.050	4.18	1.100	0.563	0.508	-10	30	
PFHpA	108630.6	11	13C4-PFHpA	570216.2	5.0	0.191	4.55	1.000	0.600	0.588	-2	30	
PFHxS	31005.8	19	13C3-PFHxS	336153.1	4.7	0.092	4.55	1.000	0.547	0.432	-21	30	
6:2-FTS	14871.4	11	13C2-6:2-FTS	58955.2	4.8	0.252	4.90	1.000	0.569	0.658	16	30	
PFHpS	34425.5	11	13C3-PFHxS	336153.1	4.7	0.102	4.91	1.080	0.571	0.511	-10	30	
PFOA	108379.5	11	13C8-PFOA	1000465.3	5.0	0.108	4.92	1.000	0.600	0.560	-7	30	
PFOS	36641.4	21	13C8-PFOS	327075.2	4.8	0.112	5.25	1.000	0.555	0.470	-15	30	
PFNA	105821.4	11	13C9-PFNA	663622.3	5.0	0.159	5.26	1.000	0.600	0.611	2	30	
PFNS	26569.2	11	13C8-PFOS	327075.2	4.8	0.081	5.54	1.060	0.576	0.513	-11	30	
PFDA	91975.5	11	13C6-PFDA	883928.1	5.0	0.104	5.56	1.000	0.600	0.589	-2	30	
8:2-FTS	13276.2	12	13C2-8:2-FTS	57238.1	4.8	0.232	5.56	1.000	0.575	0.437	-24	30	
PFOSA	68087.5	12	13C8-PFOSA	661254.4	5.0	0.103	5.65	1.000	0.600	0.522	-13	30	
NMeFOSAA	18118.1	17	d3-NMeFOSAA	191150.0	5.0	0.095	5.70	1.000	0.600	0.605	1	30	
PFDS	21049.9	12	13C8-PFOS	327075.2	4.8	0.064	5.79	1.100	0.578	0.510	-12	30	
PFUnDA	94365.1	11	13C7-PFUnDA	590137.5	5.0	0.160	5.82	1.000	0.600	0.572	-5	30	
NEtFOSAA	16845.3	22	d5-NEtFOSAA	154469.4	5.0	0.109	5.84	1.000	0.600	0.531	-11	30	
PFDoDA	120450.1	11	13C2-PFDoDA	1195589.2	5.0	0.101	6.04	1.000	0.600	0.552	-8	30	
10:2-FTS	13124.4	12	13C2-8:2-FTS	57238.1	4.8	0.229	6.06	1.090	0.578	0.506	-13	30	
NMePFOSAE	34280.1	11	d7-NMePFOSAE	270731.7	5.0	0.127	6.10	1.000	0.600	0.533	-11	30	
NMePFOSA	8960.3	12	d3-NMePFOSA	86905.7	5.0	0.103	6.11	1.000	0.600	0.547	-9	30	
PFDoS	11540.5	11	13C8-PFOS	327075.2	4.8	0.035	6.21	1.180	0.581	0.507	-13	30	
NEtPFOSAE	40355.4	11	d9-NEtPFOSAE	229696.2	5.0	0.176	6.26	1.000	0.600	0.632	5	30	
NEtPFOSA	8304.0	12	d5-NEtPFOSA	73267.1	5.0	0.113	6.27	1.000	0.600	0.508	-15	30	
PFTrDA	124162.6	11	13C2-PFDoDA	1195589.2	5.0	0.104	6.24	1.030	0.600	0.626	4	30	
PFTeDA	88469.7	10	13C2-PFTeDA	847108.8	5.0	0.104	6.42	1.000	0.600	0.592	-1	30	
PFHxDA	44728.9	11	13C2-PFTeDA	847108.8	5.0	0.053	6.72	1.050	0.600	0.604	1	30	
PFODA	35501.9	10	13C2-PFTeDA	847108.8	5.0	0.042	6.99	1.090	0.600	0.558	-7	30	

APPROVED
By MCD at 3:27 pm, 11/30/18

REVIEWED
By umar at 12:38 pm, 12/4/18

Instrument Sensitivity Check/ Continuing Calibration Verfication

ICAL Name: 18NOV28DCAL **Result Table:** 18NOV29DCCV6-9 11/30/2018 3:19:02 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

APPROVED
By MCD at 3:27 pm, 11/30/18

REVIEWED
By umar at 12:38 pm, 12/4/18

ICAL Name: 18NOV28DCAL **Result Table:** 18NOV29DCCV6-9 11/30/2018 3:21:11 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Sample Name:	CCV7_ISC_CAL2			**Data File:**		18NOV29D-72.wiff
Sample ID:	CALBRN21833C			**Acquis Date:**		2018-11-29T20:38:03
Sample Type:	Quality Control			**Instrument:**		LM27631
Vial Position:	4			**Acquis Method:**		18AUG13_3uL.dam
Injection Vol:	3.00			**Result Table:**		18NOV29DCCV6-9
QMethod File:	18AUG20QM			**ICAL Name:**		18NOV28DCAL
Batch Number:	N/A			**Operator:**		MCD7824
Sample Wt.:	1.00000			**Dilution Factor:**		1.00
Sample Vol.:	1.000			**Prep Factor:**		1.000

Injection Standard Peak Table

Injection Standard Area Reference File: 18NOV29D-05

Injection Standard Name	Inj Std Conc	Injection Std Peak Area	Rreference Injection Standard Area	Injection Std %Diff	Injection Std %Diff Limit	Injection Std %Diff OOS
13C3-PFBA	5.0	898536.5	906425.4	-1	50	
13C2-PFOA	5.0	471690.2	495984.0	-5	50	
13C4-PFOS	4.8	309413.3	296261.8	4	50	
13C2-PFDA	5.0	465698.3	451203.0	3	50	

Extraction Standard Peak Table

Extraction Standard Name	Ext Std Area	Inj Std Name	Inj Std Area	Area Ratio	Ext Std Conc	Ext Std Result	Ext Std %REC	Ext Std %REC Limit	Ext Std OOS
E13C4-PFBA	1020064.9	13C3-PFBA	898536.5	1.135	5.000	5.065	101	70-130	
E13C5-PFPeA	959635.9	13C3-PFBA	898536.5	1.068	5.000	4.987	100	70-130	
E13C3-PFBS	447017.8	13C3-PFBA	898536.5	0.497	4.650	4.746	102	70-130	
E13C2-4:2-FTS	67161.7	13C2-PFOA	471690.2	0.142	4.670	4.907	105	70-130	
E13C5-PFHxA	684377.8	13C2-PFOA	471690.2	1.451	5.000	5.329	107	70-130	
E13C3-PFHxS	336153.1	13C2-PFOA	471690.2	0.713	4.730	5.586	118	70-130	
E13C4-PFHpA	570216.2	13C2-PFOA	471690.2	1.209	5.000	5.555	111	70-130	
E13C2-6:2-FTS	58955.2	13C2-PFOA	471690.2	0.125	4.750	5.232	110	70-130	
E13C8-PFOA	1000465.2	13C2-PFOA	471690.2	2.121	5.000	5.838	117	70-130	
E13C8-PFOS	327075.2	13C4-PFOS	309413.3	1.057	4.780	4.772	100	70-130	
E13C9-PFNA	663622.3	13C4-PFOS	309413.3	2.145	5.000	4.711	94	70-130	
E13C6-PFDA	883928.1	13C2-PFDA	465698.3	1.898	5.000	5.352	107	70-130	
E13C2-8:2-FTS	57238.1	13C2-PFDA	465698.3	0.123	4.790	5.283	110	70-130	
E13C8-PFOSA	661254.4	13C2-PFDA	465698.3	1.420	5.000	5.210	104	70-130	
Ed3-NMeFOSAA	191150.0	13C2-PFDA	465698.3	0.410	5.000	5.211	104	70-130	
E13C7-PFUnDA	590137.5	13C2-PFDA	465698.3	1.267	5.000	5.356	107	70-130	
Ed5-NEtFOSAA	154469.4	13C2-PFDA	465698.3	0.332	5.000	5.909	118	70-130	
E13C2-PFDoDA	1195589.2	13C2-PFDA	465698.3	2.567	5.000	5.394	108	70-130	
Ed7-NMePFOSAE	270731.7	13C2-PFDA	465698.3	0.581	5.000	5.024	100	70-130	
Ed3-NMePFOSA	86905.7	13C2-PFDA	465698.3	0.187	5.000	5.051	101	70-130	
Ed9-NEtPFOSAE	229696.2	13C2-PFDA	465698.3	0.493	5.000	5.000	100	70-130	
Ed5-NEtPFOSA	73267.1	13C2-PFDA	465698.3	0.157	5.000	5.467	109	70-130	
E13C2-PFTeDA	847108.8	13C2-PFDA	465698.3	1.819	5.000	5.033	101	70-130	

APPROVED
By MCD at 3:27 pm, 11/30/18

REVIEWED
By umar at 12:38 pm, 12/4/18

ICAL Name: 18NOV28DCAL **Result Table:** 18NOV29DCCV6-9 11/30/2018 3:21:11 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

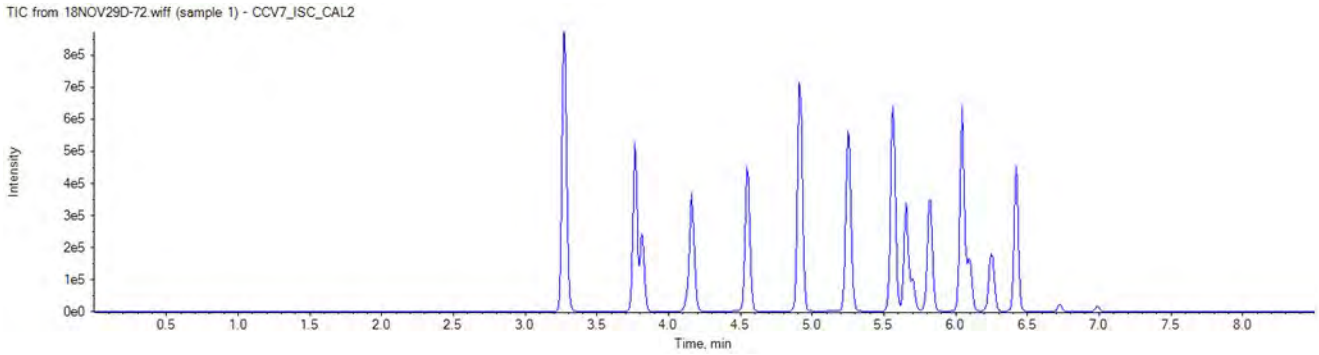
Analyte Quantitation Peak Table

Sample Name: CCV7_ISC_CAL2 **Instrument Name:** LM27631 **File Name:** 18NOV29D-72.wiff

Sample Wt	Sample Vol	Dilution Factor	PrepFactor
1.00000	1.000	1.00	1.000

Analyte Name	RT	RRT	Analyte Area Response	E	Int Typ	ES Name	ES RT	ES Area Response	Area Ratio	Sample Result (ng/g)
PFBA	3.27	1.000	107474.9		A	13C4-PFBA	3.27	1020064.9	0.105	0.578
PFPeA	3.77	1.000	102994.2		A	13C5-PFPeA	3.77	959635.9	0.107	0.527
PFBS	3.82	1.000	43546.1		A	13C3-PFBS	3.82	447017.8	0.097	0.473
4:2-FTS	4.13	1.000	13618.8		A	13C2-4:2-FTS	4.13	67161.7	0.203	0.543
PFHxA	4.16	1.000	98812.0		A	13C5-PFHxA	4.16	684377.8	0.144	0.580
PFPeS	4.18	1.100	22438.2		A	13C3-PFBS	3.82	447017.8	0.050	0.508
PFHpA	4.55	1.000	108630.6		A	13C4-PFHpA	4.55	570216.2	0.191	0.588
PFHxS	4.55	1.000	31005.8		M	13C3-PFHxS	4.55	336153.1	0.092	0.432
6:2-FTS	4.90	1.000	14871.4		A	13C2-6:2-FTS	4.91	58955.2	0.252	0.658
PFHpS	4.91	1.080	34425.5		A	13C3-PFHxS	4.55	336153.1	0.102	0.511
PFOA	4.92	1.000	108379.5		A	13C8-PFOA	4.91	1000465.3	0.108	0.560
PFOS	5.25	1.000	36641.4		M	13C8-PFOS	5.24	327075.2	0.112	0.470
PFNA	5.26	1.000	105821.4		A	13C9-PFNA	5.26	663622.3	0.159	0.611
PFNS	5.54	1.060	26569.2		A	13C8-PFOS	5.24	327075.2	0.081	0.513
PFDA	5.56	1.000	91975.5		A	13C6-PFDA	5.56	883928.1	0.104	0.589
8:2-FTS	5.56	1.000	13276.2		A	13C2-8:2-FTS	5.57	57238.1	0.232	0.437
PFOSA	5.65	1.000	68087.5		A	13C8-PFOSA	5.65	661254.4	0.103	0.522
NMeFOSAA	5.70	1.000	18118.1		A	d3-NMeFOSAA	5.70	191150.0	0.095	0.605
PFDS	5.79	1.100	21049.9		A	13C8-PFOS	5.24	327075.2	0.064	0.510
PFUnDA	5.82	1.000	94365.1		A	13C7-PFUnDA	5.82	590137.5	0.160	0.572
NEtFOSAA	5.84	1.000	16845.3		M	d5-NEtFOSAA	5.83	154469.4	0.109	0.531
PFDoDA	6.04	1.000	120450.1		A	13C2-PFDoDA	6.04	1195589.2	0.101	0.552
10:2-FTS	6.06	1.090	13124.4		A	13C2-8:2-FTS	5.57	57238.1	0.229	0.506
NMePFOSAE	6.10	1.000	34280.1		A	d7-NMePFOSAE	6.09	270731.7	0.127	0.533
NMePFOSA	6.11	1.000	8960.3		A	d3-NMePFOSA	6.11	86905.7	0.103	0.547
PFDoS	6.21	1.180	11540.5		A	13C8-PFOS	5.24	327075.2	0.035	0.507
NEtPFOSAE	6.26	1.000	40355.4		A	d9-NEtPFOSAE	6.25	229696.2	0.176	0.632
NEtPFOSA	6.27	1.000	8304.0		A	d5-NEtPFOSA	6.27	73267.1	0.113	0.508
PFTrDA	6.24	1.030	124162.6		A	13C2-PFDoDA	6.04	1195589.2	0.104	0.626
PFTeDA	6.42	1.000	88469.7		A	13C2-PFTeDA	6.42	847108.8	0.104	0.592
PFHxDA	6.72	1.050	44728.9		A	13C2-PFTeDA	6.42	847108.8	0.053	0.604
PFODA	6.99	1.090	35501.9		A	13C2-PFTeDA	6.42	847108.8	0.042	0.558

Total Ion Chromatogram

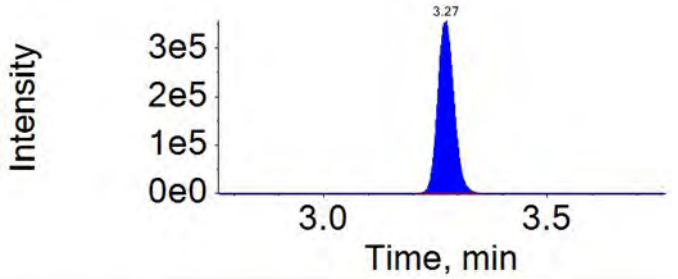


APPROVED
By MCD at 3:27 pm, 11/30/18

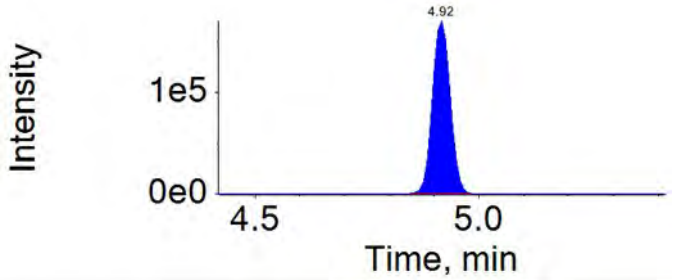
REVIEWED
By umar at 12:38 pm, 12/4/18

ICAL Name: 18NOV28DCAL **Result Table:** 18NOV29DCCV6-9 11/30/2018 3:21:11 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

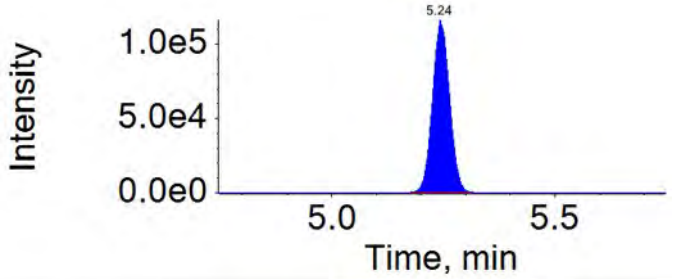
Injection Standard: 13C3-PFBA
216.0 / 172.0



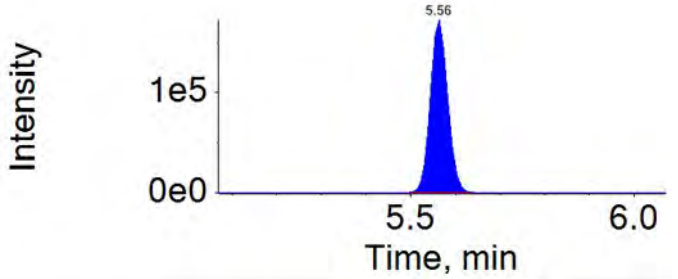
Injection Standard: 13C2-PFOA
415.0 / 370.0



Injection Standard: 13C4-PFOS
503.0 / 80.0

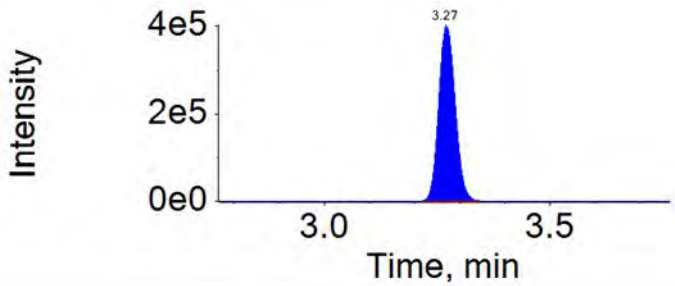


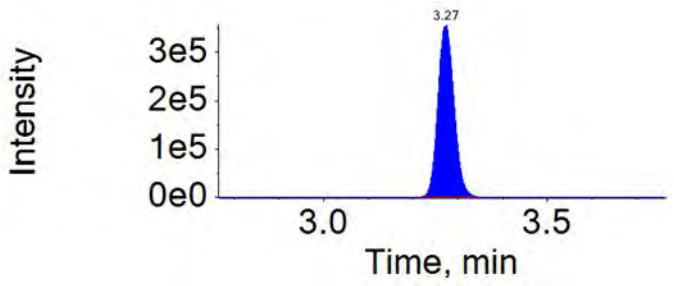
Injection Standard: 13C2-PFDA
515.0 / 470.0



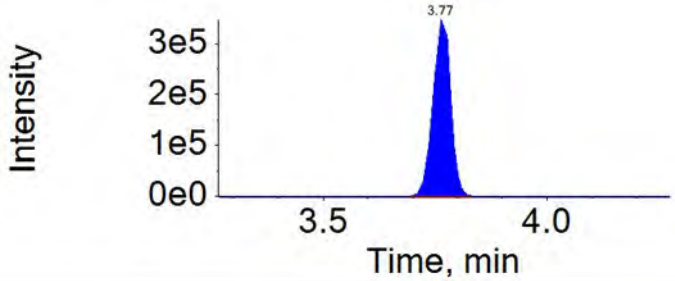
ICAL Name: 18NOV28DCAL **Result Table:** 18NOV29DCCV6-9 11/30/2018 3:21:11 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

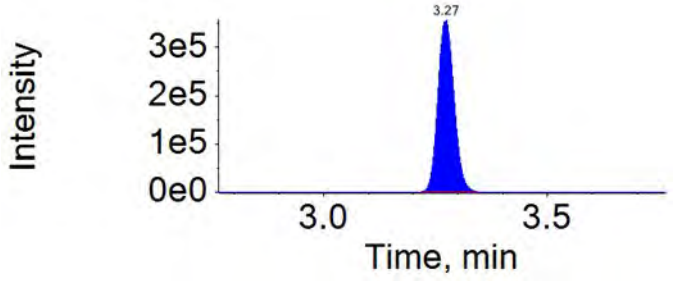
Extraction Standard: E13C4-PFBA	Injection Standard: 13C3-PFBA
217.0 / 172.0	216.0 / 172.0



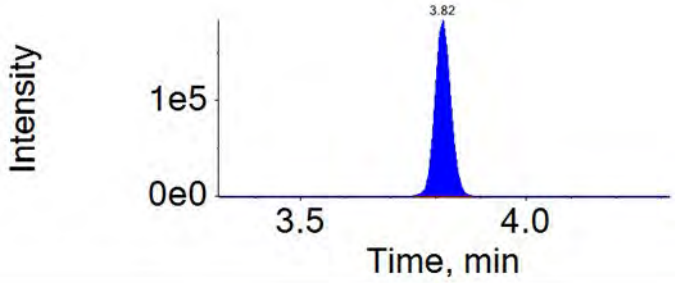


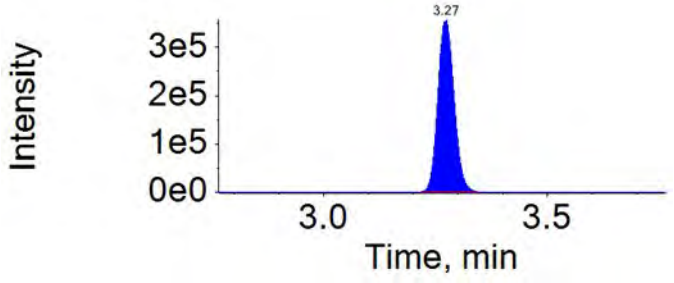
Extraction Standard: E13C5-PFPeA	Injection Standard: 13C3-PFBA
268.0 / 223.0	216.0 / 172.0



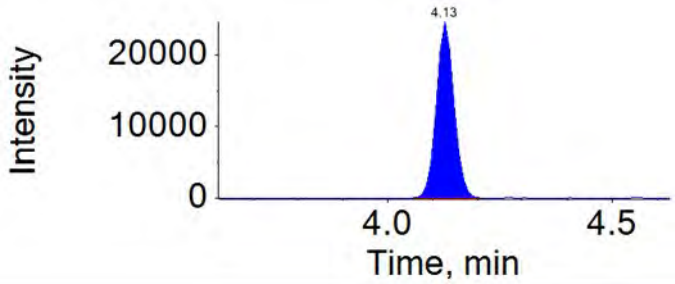


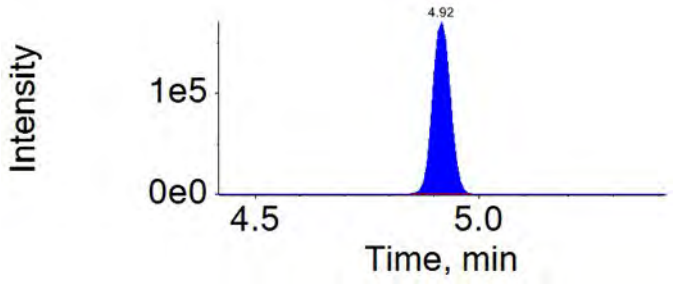
Extraction Standard: E13C3-PFBS	Injection Standard: 13C3-PFBA
302.0 / 80.0	216.0 / 172.0





Extraction Standard: E13C2-4:2-FTS	Injection Standard: 13C2-PFOA
329.0 / 81.0	415.0 / 370.0



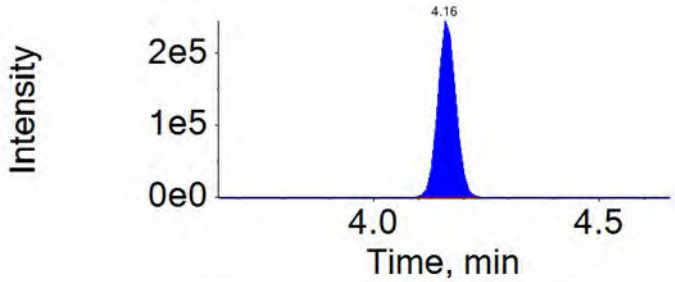


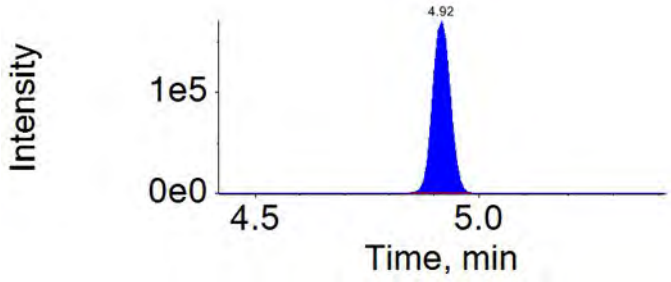
APPROVED
By MCD at 3:27 pm, 11/30/18

REVIEWED
By umar at 12:38 pm, 12/4/18

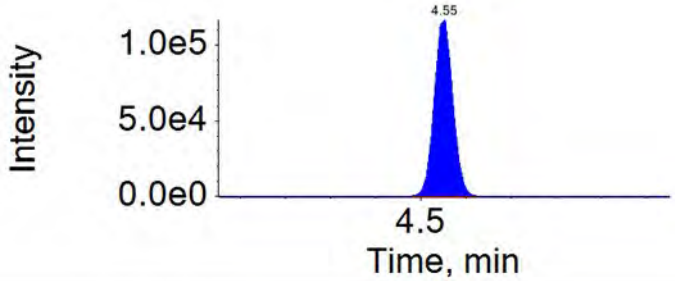
ICAL Name: 18NOV28DCAL **Result Table:** 18NOV29DCCV6-9 11/30/2018 3:21:11 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

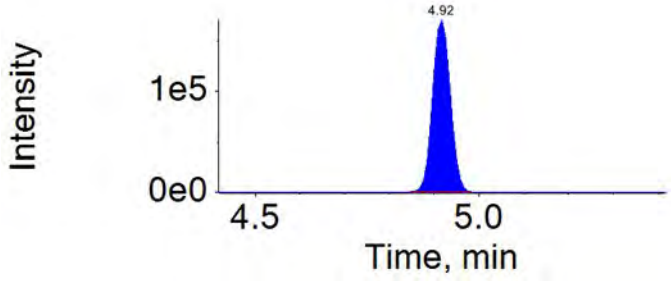
Extraction Standard: E13C5-PFHxA	Injection Standard: 13C2-PFOA
318.0 / 273.0	415.0 / 370.0



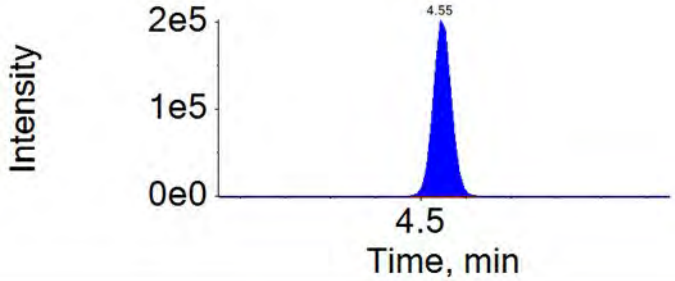


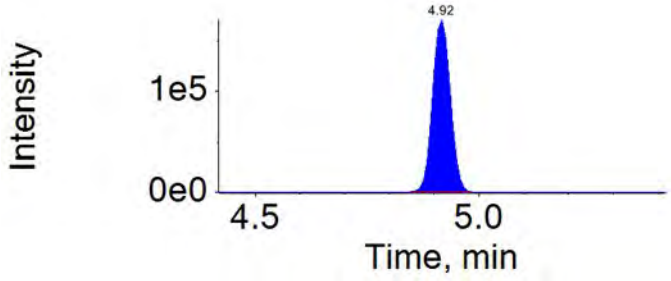
Extraction Standard: E13C3-PFHxS	Injection Standard: 13C2-PFOA
402.0 / 80.0	415.0 / 370.0



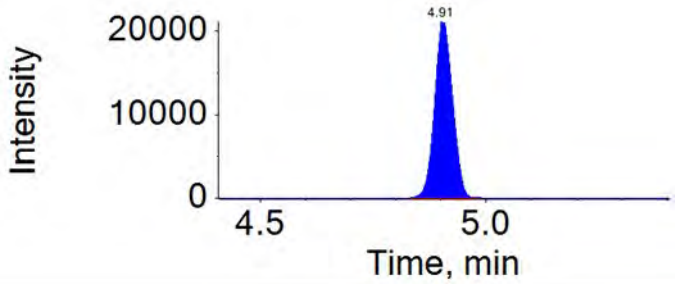


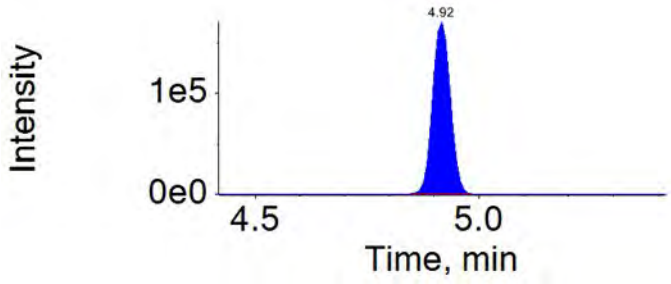
Extraction Standard: E13C4-PFHpA	Injection Standard: 13C2-PFOA
367.0 / 322.0	415.0 / 370.0





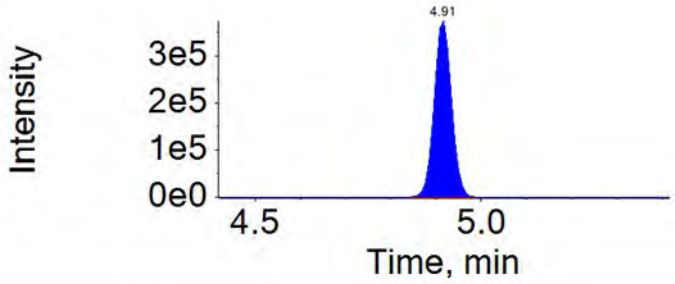
Extraction Standard: E13C2-6:2-FTS	Injection Standard: 13C2-PFOA
429.0 / 81.0	415.0 / 370.0



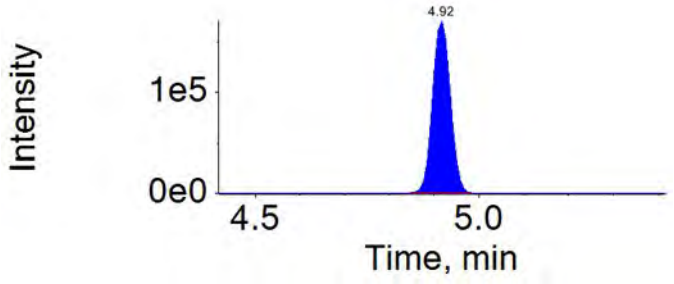


ICAL Name: 18NOV28DCAL **Result Table:** 18NOV29DCCV6-9 11/30/2018 3:21:11 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

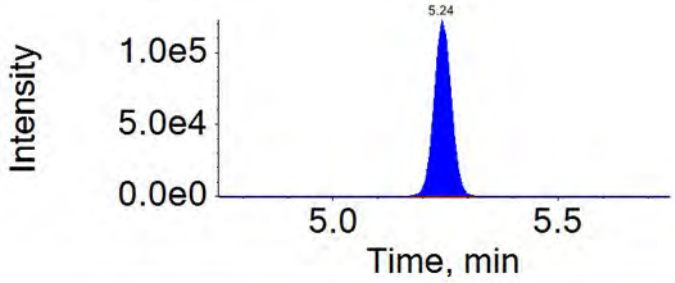
Extraction Standard: E13C8-PFOA
421.0 / 376.0



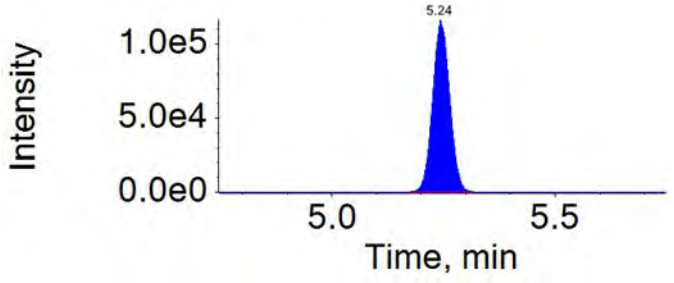
Injection Standard: 13C2-PFOA
415.0 / 370.0



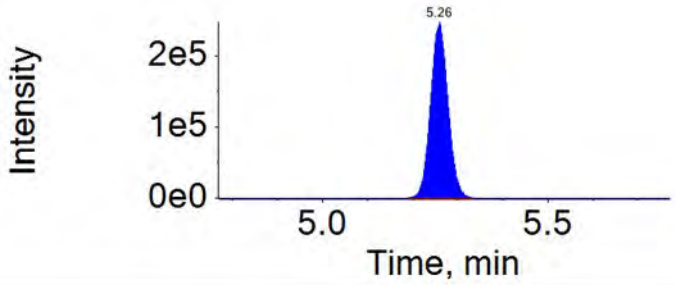
Extraction Standard: E13C8-PFOS
507.0 / 80.0



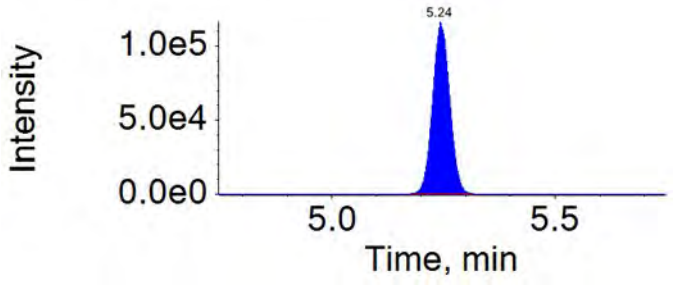
Injection Standard: 13C4-PFOS
503.0 / 80.0



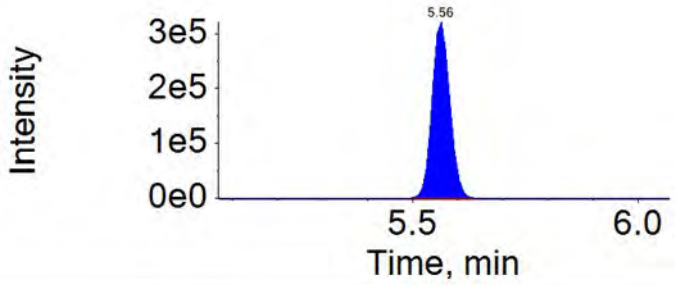
Extraction Standard: E13C9-PFNA
472.0 / 427.0



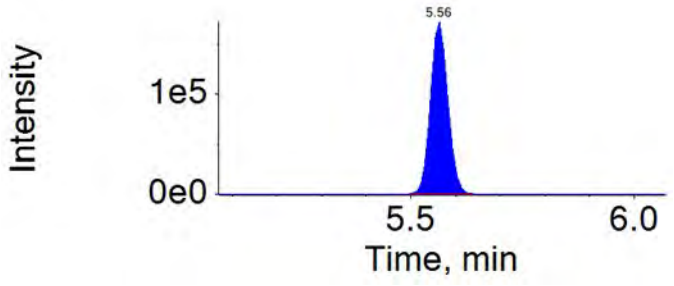
Injection Standard: 13C4-PFOS
503.0 / 80.0



Extraction Standard: E13C6-PFDA
519.0 / 474.0



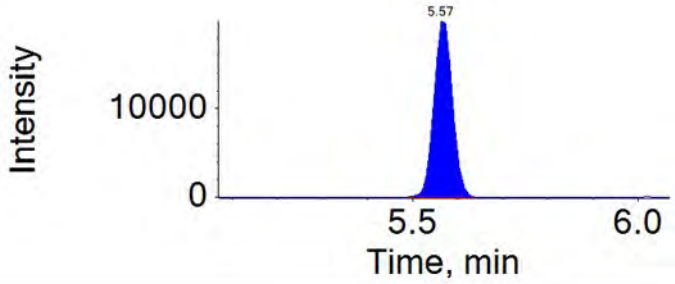
Injection Standard: 13C2-PFDA
515.0 / 470.0



ICAL Name: 18NOV28DCAL **Result Table:** 18NOV29DCCV6-9 11/30/2018 3:21:11 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

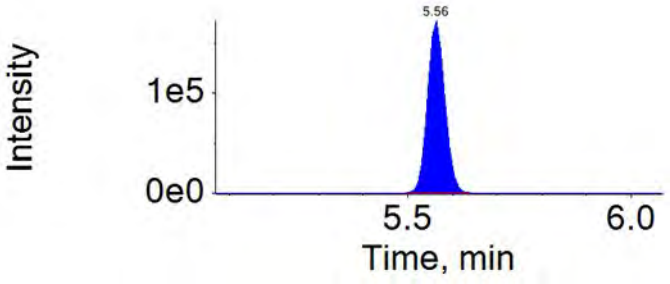
Extraction Standard: E13C2-8:2-FTS

529.0 / 81.0



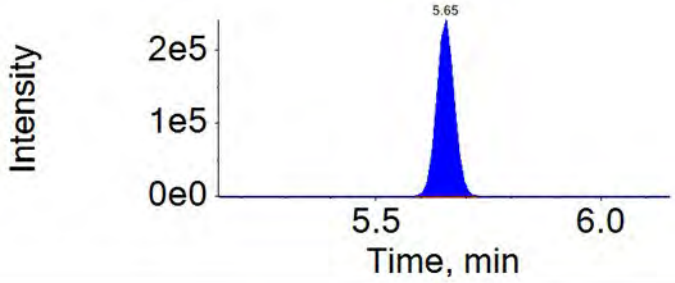
Injection Standard: 13C2-PFDA

515.0 / 470.0



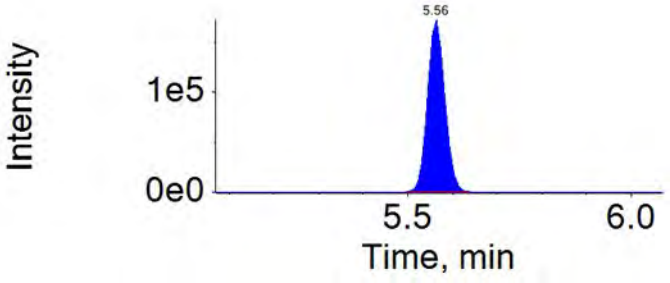
Extraction Standard: E13C8-PFOSA

506.0 / 78.0



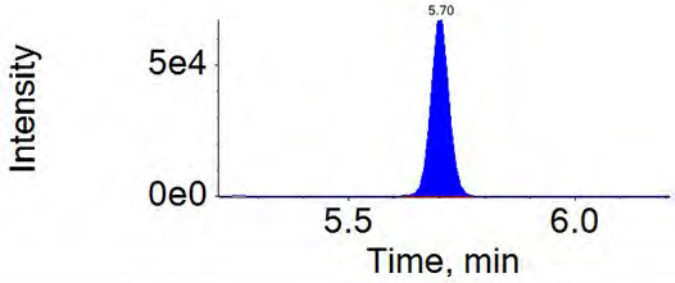
Injection Standard: 13C2-PFDA

515.0 / 470.0



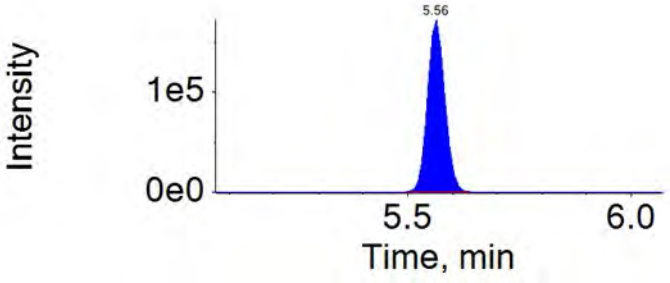
Extraction Standard: Ed3-NMeFOSAA

573.0 / 419.0



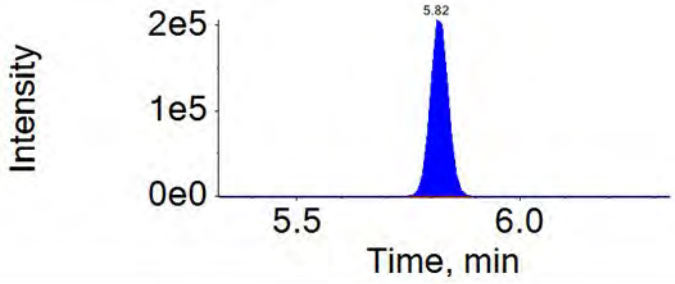
Injection Standard: 13C2-PFDA

515.0 / 470.0



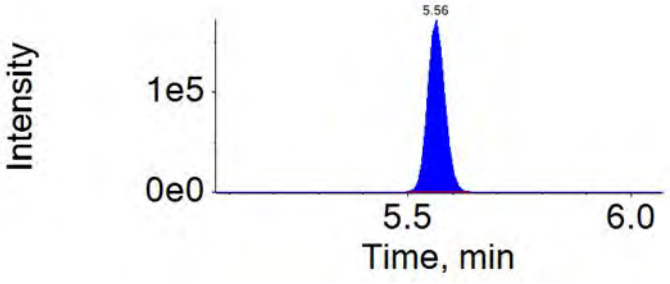
Extraction Standard: E13C7-PFUnDA

570.0 / 525.0



Injection Standard: 13C2-PFDA

515.0 / 470.0

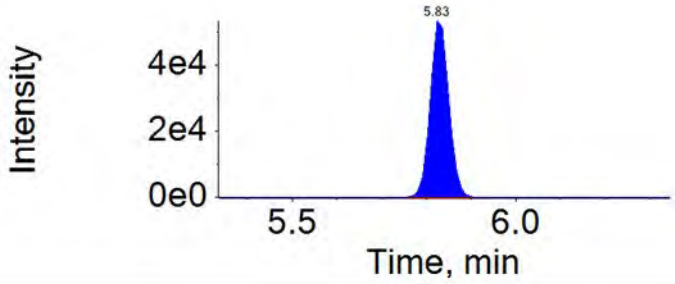


APPROVED
By MCD at 3:27 pm, 11/30/18

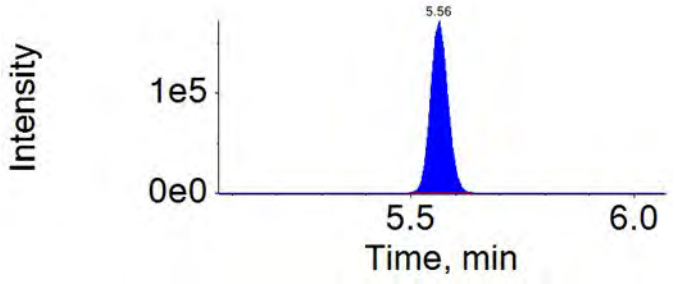
REVIEWED
By umar at 12:38 pm, 12/4/18

ICAL Name: 18NOV28DCAL **Result Table:** 18NOV29DCCV6-9 11/30/2018 3:21:11 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

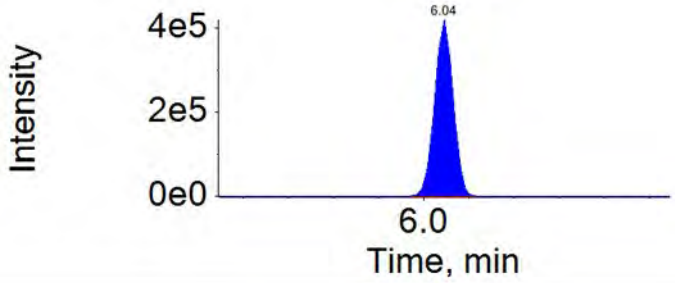
Extraction Standard: Ed5-NEtFOSAA
589.0 / 419.0



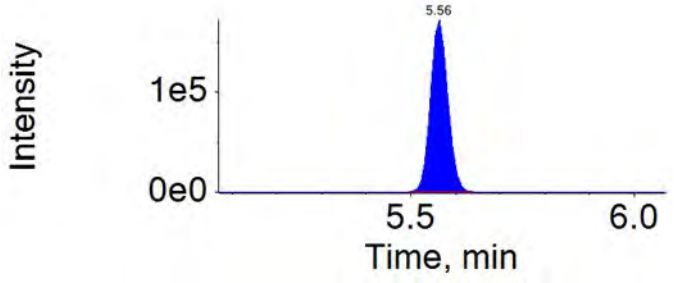
Injection Standard: 13C2-PFDA
515.0 / 470.0



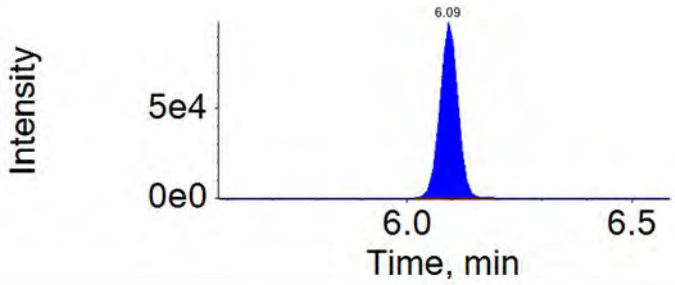
Extraction Standard: E13C2-PFDoDA
615.0 / 570.0



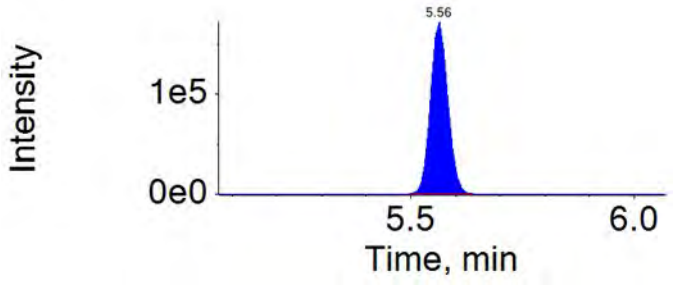
Injection Standard: 13C2-PFDA
515.0 / 470.0



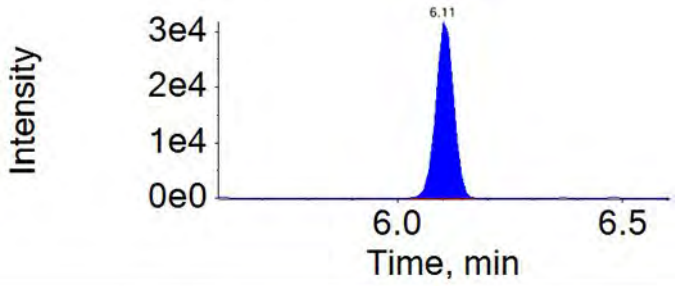
Extraction Standard: Ed7-NMePFOSAE
623.0 / 59.0



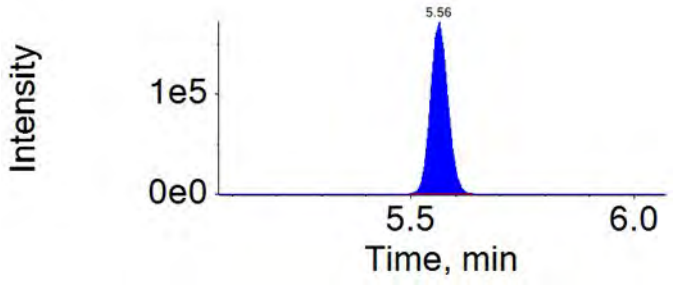
Injection Standard: 13C2-PFDA
515.0 / 470.0



Extraction Standard: Ed3-NMePFOSA
515.0 / 169.0

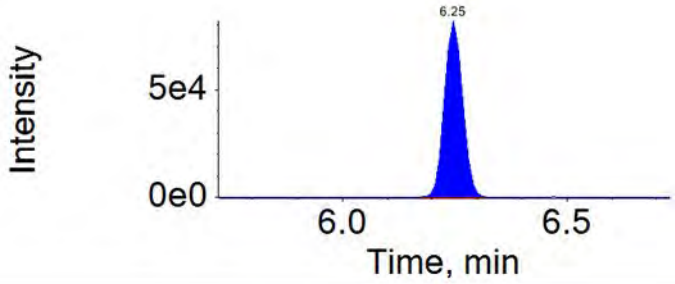


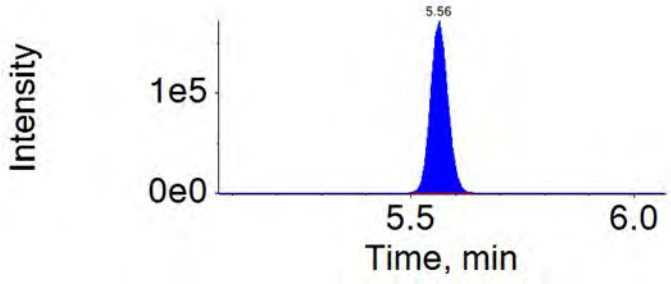
Injection Standard: 13C2-PFDA
515.0 / 470.0



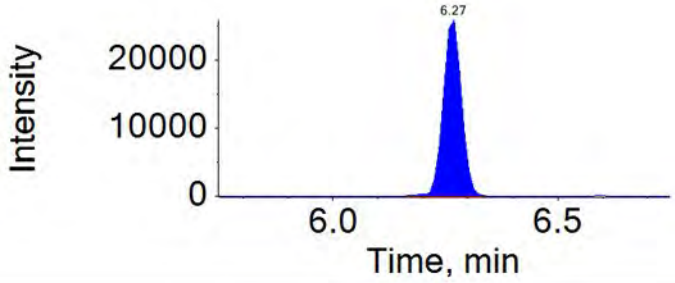
ICAL Name: 18NOV28DCAL **Result Table:** 18NOV29DCCV6-9 11/30/2018 3:21:11 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

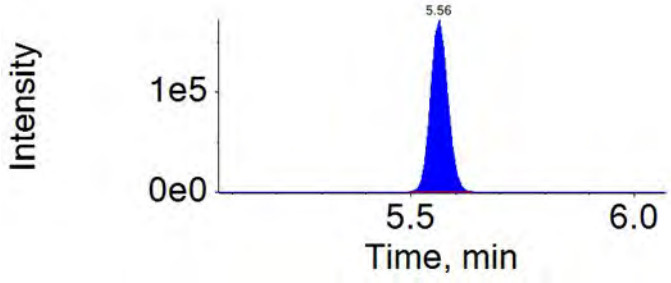
Extraction Standard: Ed9-NEtPFOSAE	Injection Standard: 13C2-PFDA
639.0 / 59.0	515.0 / 470.0



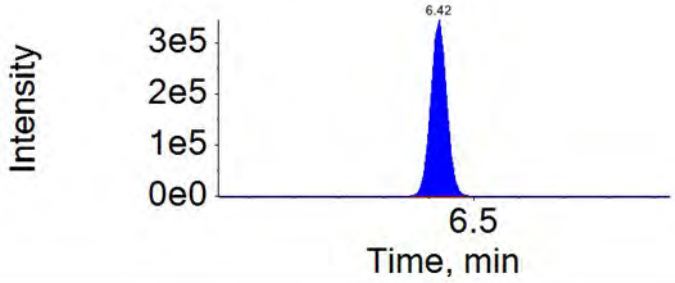


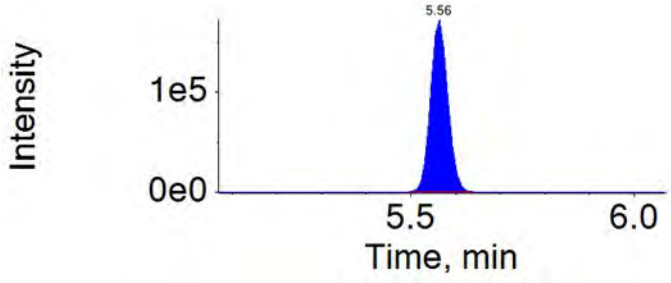
Extraction Standard: Ed5-NEtPFOSA	Injection Standard: 13C2-PFDA
531.0 / 169.0	515.0 / 470.0





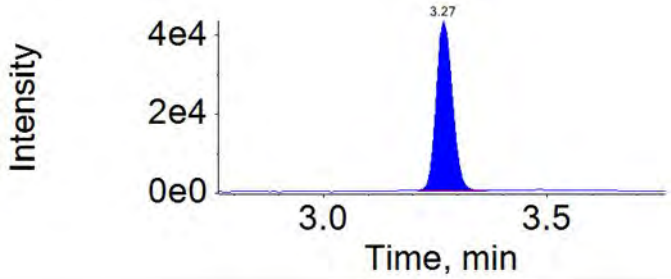
Extraction Standard: E13C2-PFTeDA	Injection Standard: 13C2-PFDA
715.0 / 670.0	515.0 / 470.0



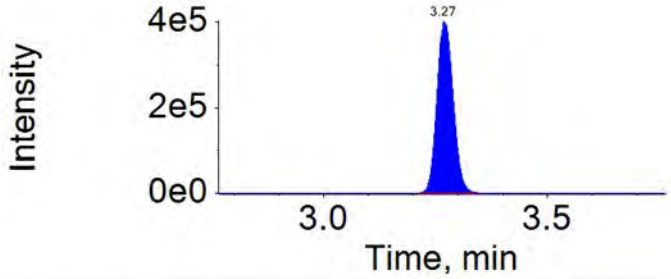


ICAL Name: 18NOV28DCAL **Result Table:** 18NOV29DCCV6-9 11/30/2018 3:21:11 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

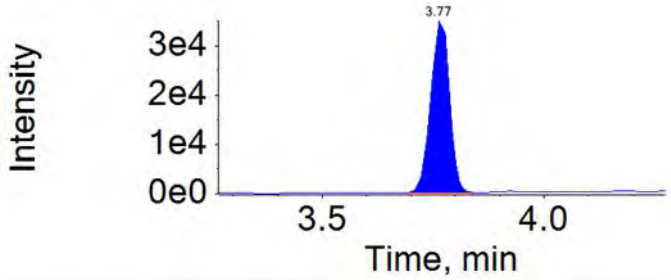
Analyte: PFBA
213.0 / 169.0



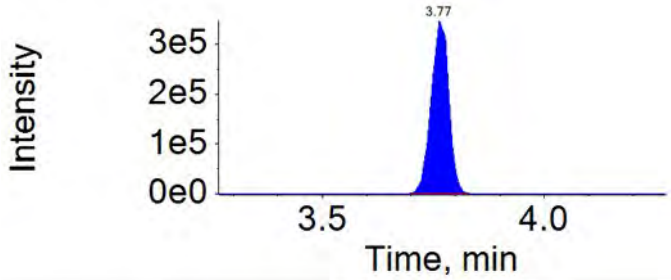
Extraction Standard: 13C4-PFBA
217.0 / 172.0



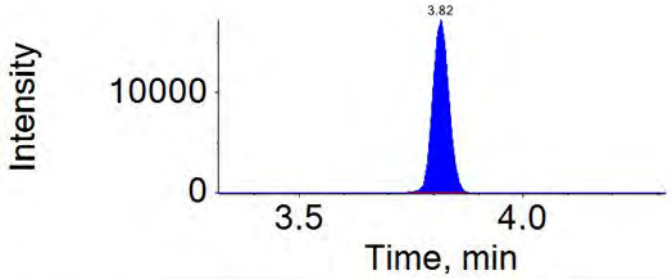
Analyte: PFPeA
263.0 / 219.0



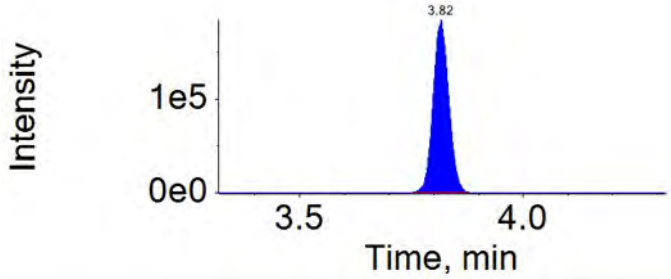
Extraction Standard: 13C5-PFPeA
268.0 / 223.0



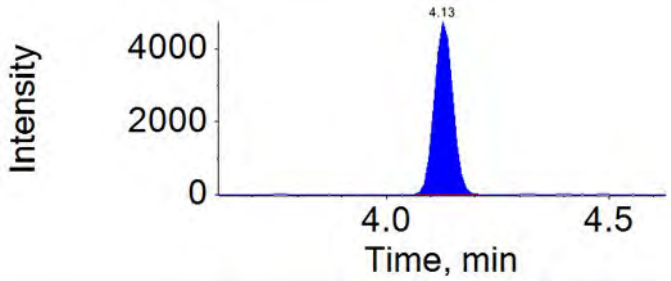
Analyte: PFBS
299.0 / 80.0



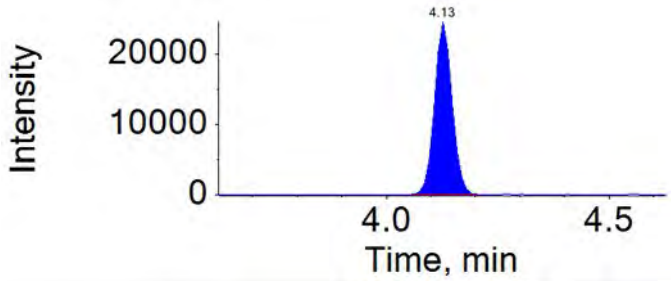
Extraction Standard: 13C3-PFBS
302.0 / 80.0



Analyte: 4:2-FTS
327.0 / 307.0



Extraction Standard: 13C2-4:2-FTS
329.0 / 81.0

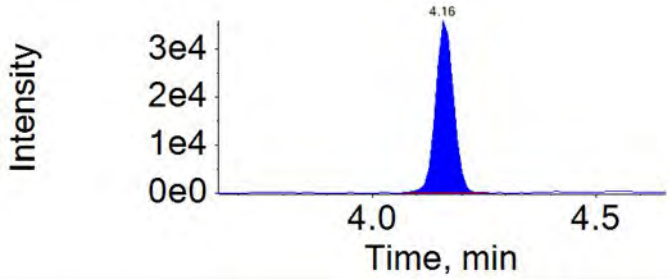


APPROVED
By MCD at 3:27 pm, 11/30/18

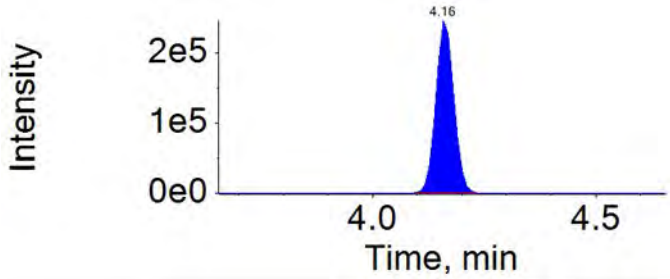
REVIEWED
By umar at 12:38 pm, 12/4/18

ICAL Name: 18NOV28DCAL **Result Table:** 18NOV29DCCV6-9 11/30/2018 3:21:11 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

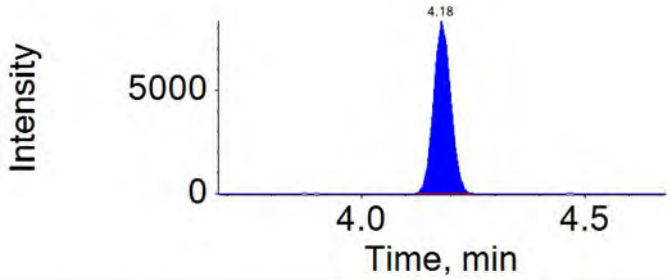
Analyte: PFHxA
313.0 / 269.0



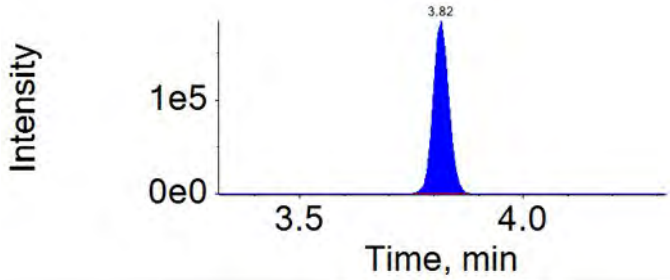
Extraction Standard: 13C5-PFHxA
318.0 / 273.0



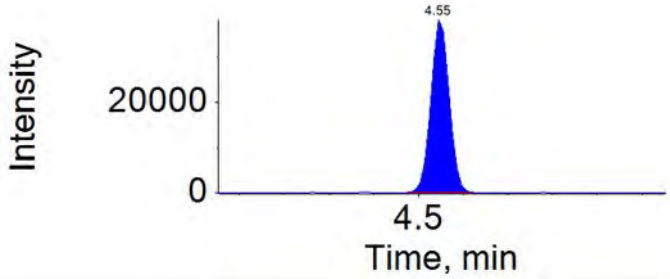
Analyte: PFPeS
349.0 / 80.0



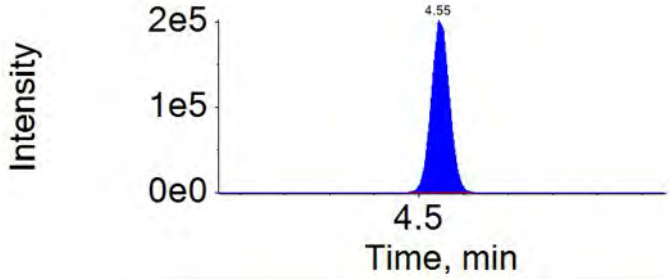
Extraction Standard: 13C3-PFBS
302.0 / 80.0



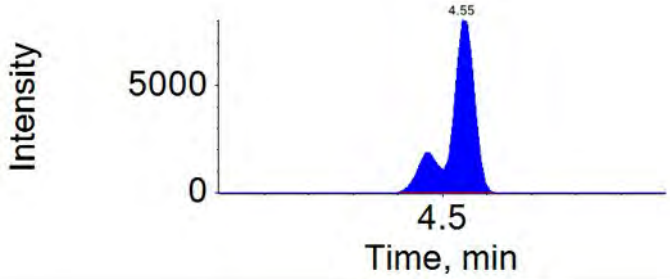
Analyte: PFHpA
363.0 / 319.0



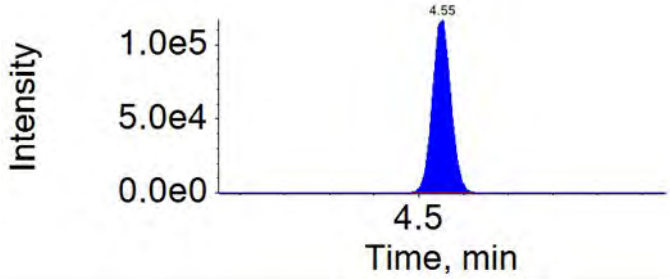
Extraction Standard: 13C4-PFHpA
367.0 / 322.0



Analyte: PFHxS
399.0 / 80.0

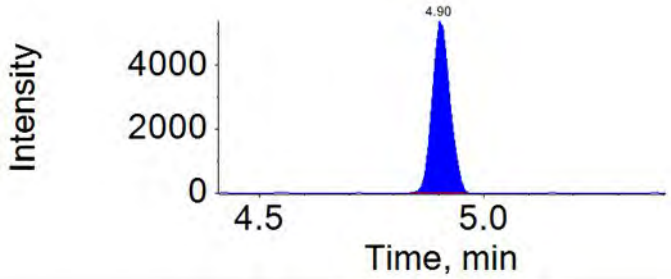


Extraction Standard: 13C3-PFHxS
402.0 / 80.0

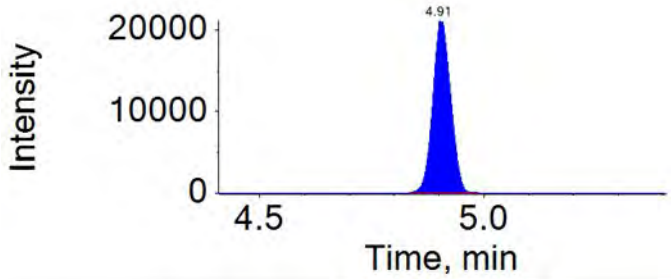


ICAL Name: 18NOV28DCAL **Result Table:** 18NOV29DCCV6-9 11/30/2018 3:21:11 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

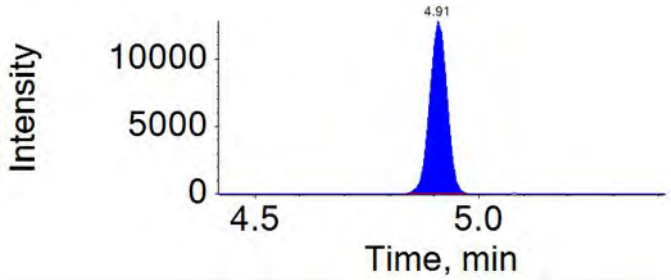
Analyte: 6:2-FTS
427.0 / 407.0



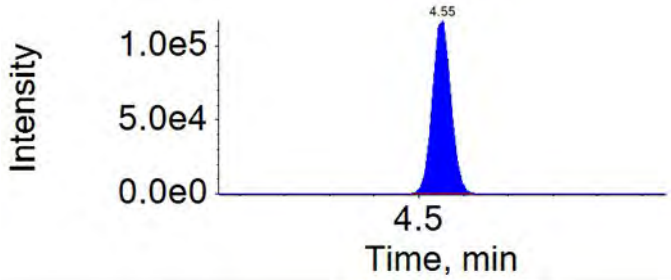
Extraction Standard: 13C2-6:2-FTS
429.0 / 81.0



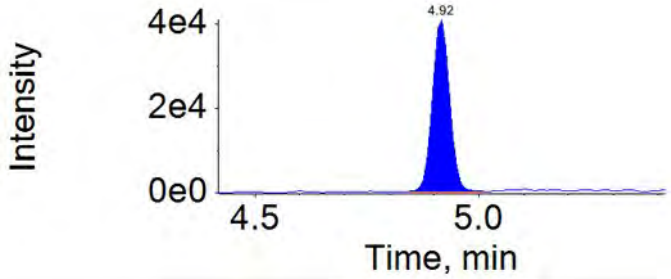
Analyte: PFHpS
449.0 / 80.0



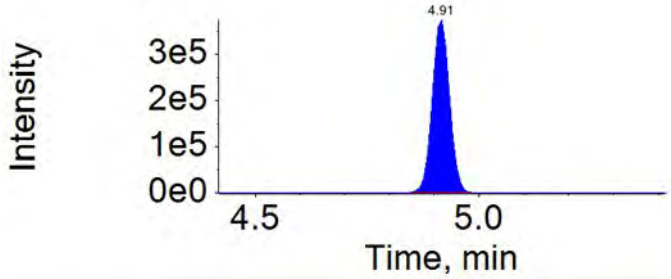
Extraction Standard: 13C3-PFHxS
402.0 / 80.0



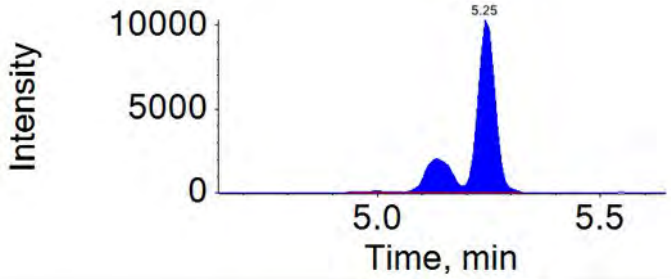
Analyte: PFOA
413.0 / 369.0



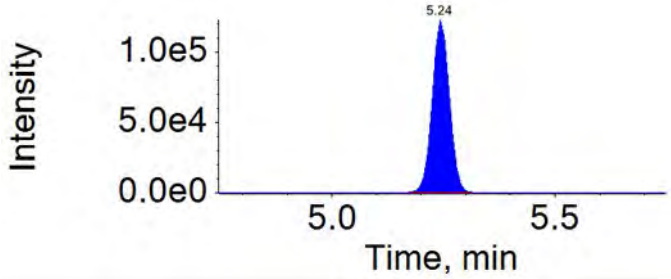
Extraction Standard: 13C8-PFOA
421.0 / 376.0



Analyte: PFOS
499.0 / 80.0

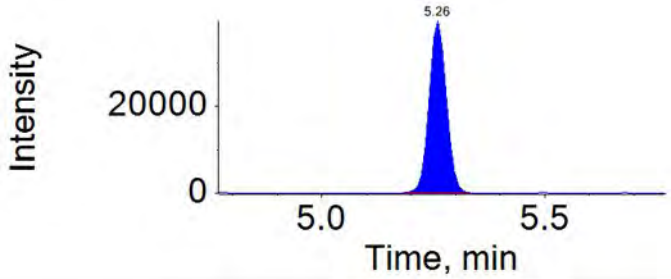


Extraction Standard: 13C8-PFOS
507.0 / 80.0

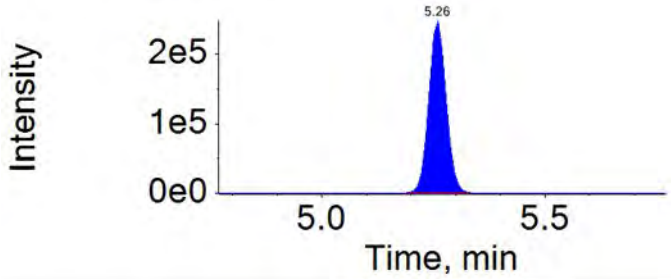


ICAL Name: 18NOV28DCAL **Result Table:** 18NOV29DCCV6-9 11/30/2018 3:21:11 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

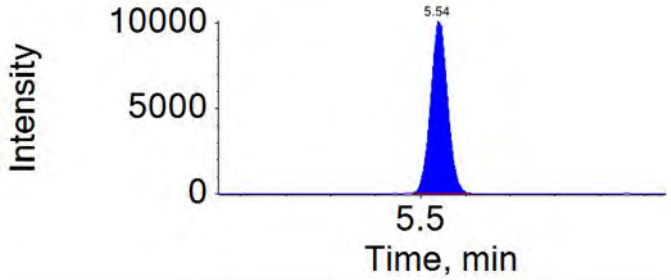
Analyte: PFNA
463.0 / 419.0



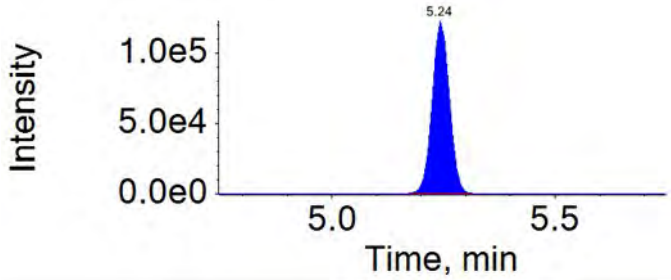
Extraction Standard: 13C9-PFNA
472.0 / 427.0



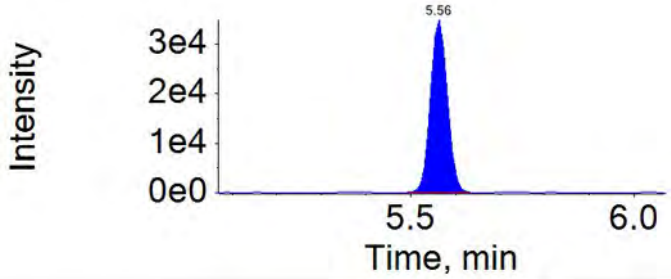
Analyte: PFNS
549.0 / 80.0



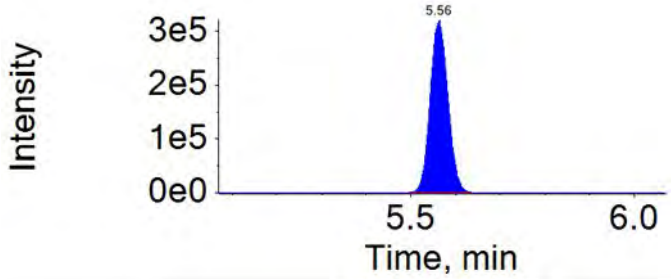
Extraction Standard: 13C8-PFOS
507.0 / 80.0



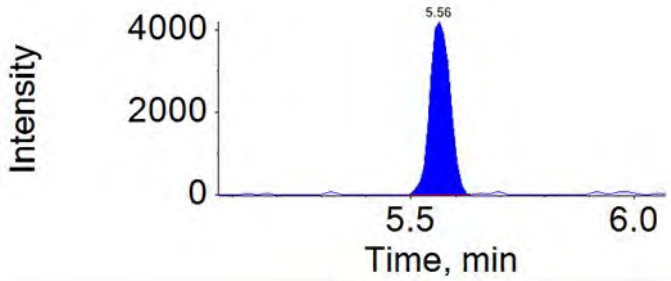
Analyte: PFDA
513.0 / 469.0



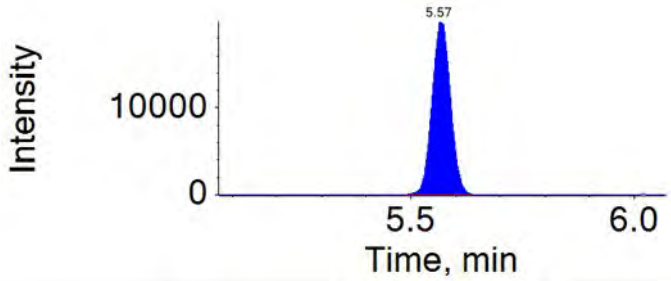
Extraction Standard: 13C6-PFDA
519.0 / 474.0



Analyte: 8:2-FTS
527.0 / 507.0



Extraction Standard: 13C2-8:2-FTS
529.0 / 81.0

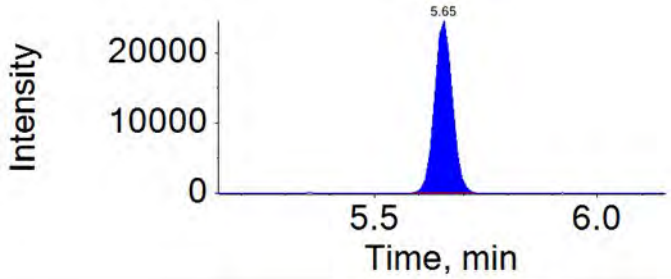


APPROVED
By MCD at 3:27 pm, 11/30/18

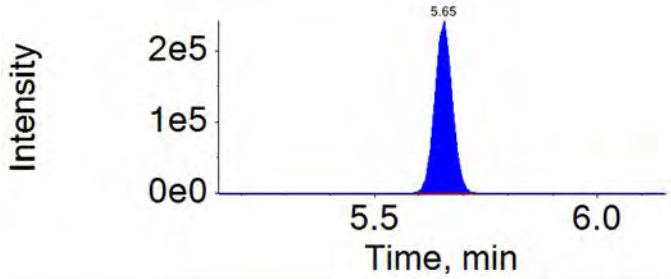
REVIEWED
By umar at 12:38 pm, 12/4/18

ICAL Name: 18NOV28DCAL **Result Table:** 18NOV29DCCV6-9 11/30/2018 3:21:11 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

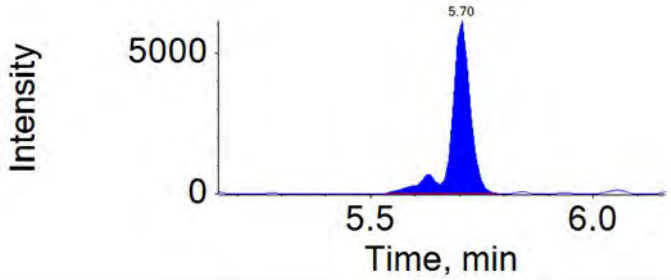
Analyte: PFOSA
498.0 / 78.0



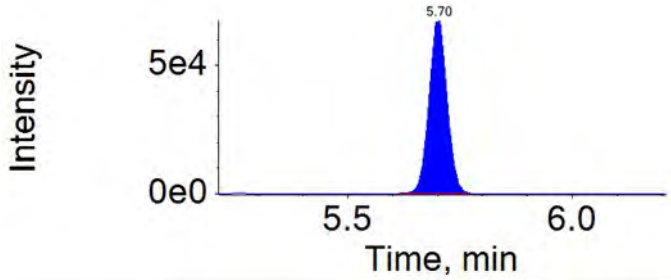
Extraction Standard: 13C8-PFOSA
506.0 / 78.0



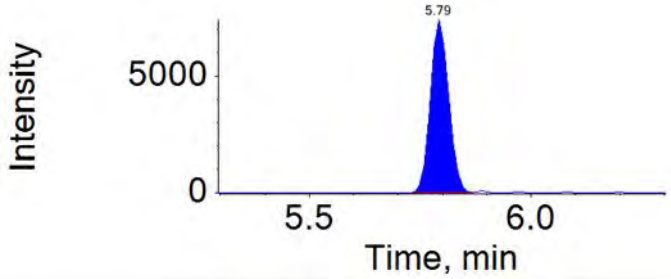
Analyte: NMeFOSAA
570.0 / 419.0



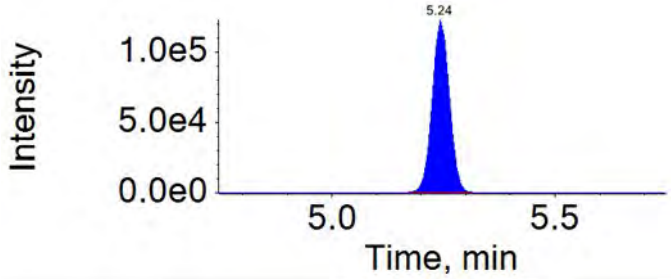
Extraction Standard: d3-NMeFOSAA
573.0 / 419.0



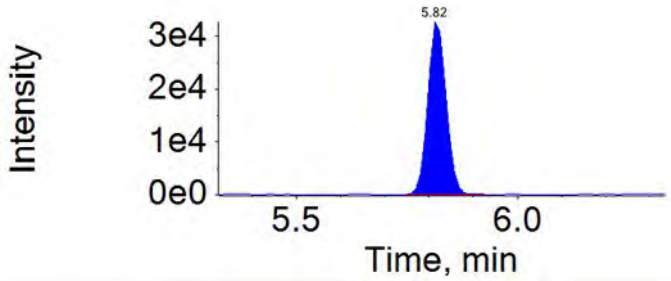
Analyte: PFDS
599.0 / 80.0



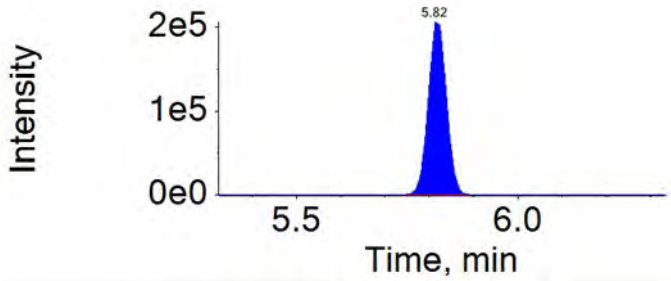
Extraction Standard: 13C8-PFOS
507.0 / 80.0



Analyte: PFUnDA
563.0 / 519.0

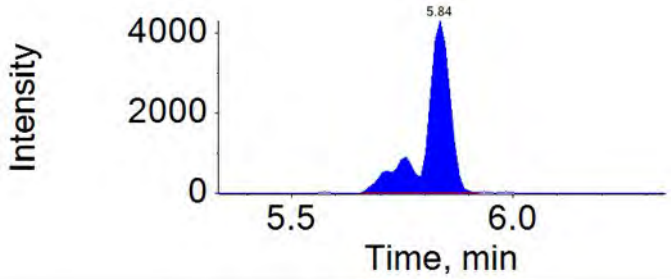


Extraction Standard: 13C7-PFUnDA
570.0 / 525.0

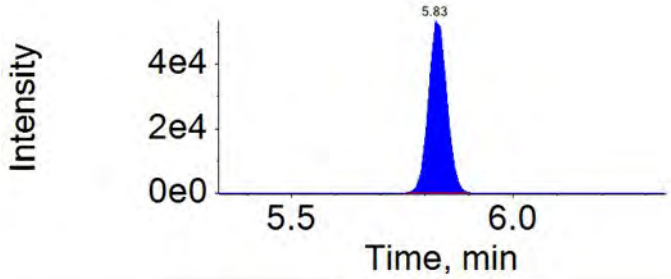


ICAL Name: 18NOV28DCAL **Result Table:** 18NOV29DCCV6-9 11/30/2018 3:21:11 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

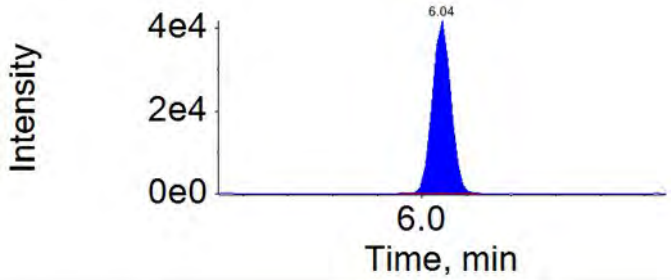
Analyte: NEtFOSAA
584.0 / 419.0



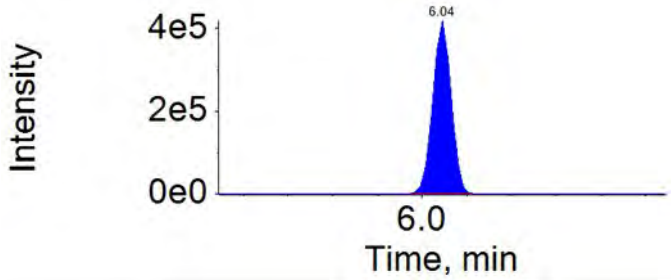
Extraction Standard: d5-NEtFOSAA
589.0 / 419.0



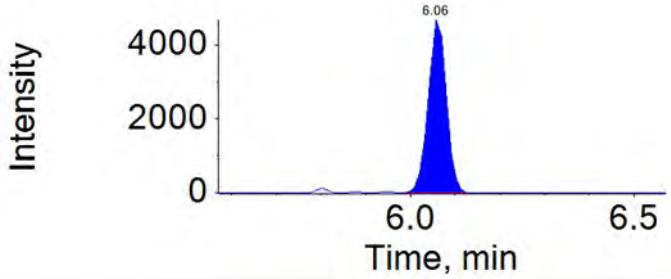
Analyte: PFDoDA
613.0 / 569.0



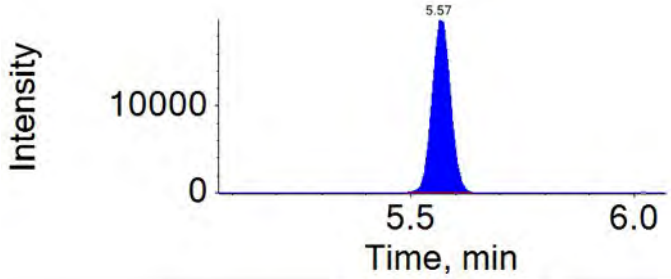
Extraction Standard: 13C2-PFDoDA
615.0 / 570.0



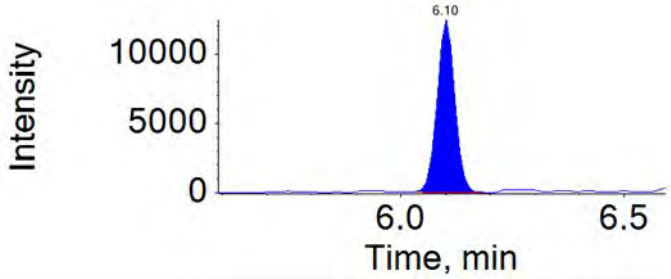
Analyte: 10:2-FTS
627.0 / 607.0



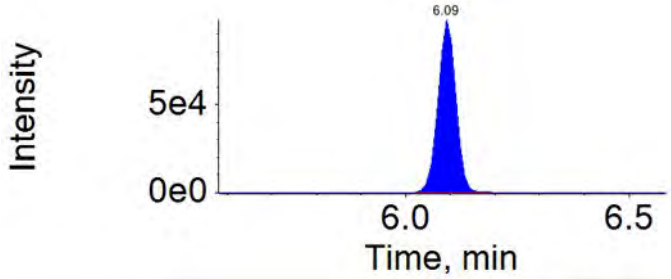
Extraction Standard: 13C2-8:2-FTS
529.0 / 81.0



Analyte: NMePFOSAE
616.0 / 59.0

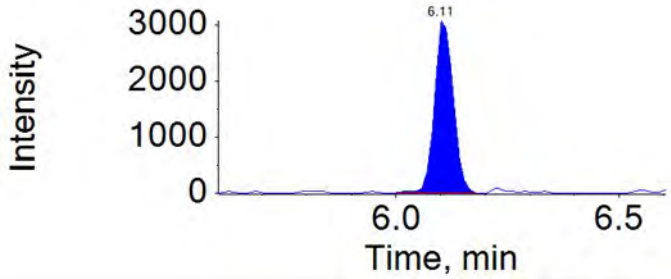


Extraction Standard: d7-NMePFOSAE
623.0 / 59.0

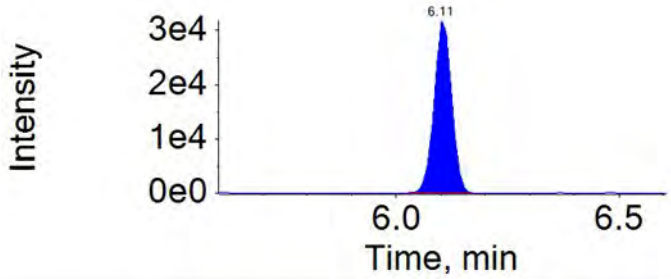


ICAL Name: 18NOV28DCAL **Result Table:** 18NOV29DCCV6-9 11/30/2018 3:21:11 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

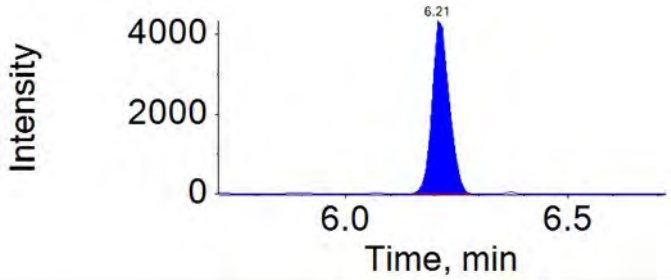
Analyte: NMePFOSA
512.0 / 169.0



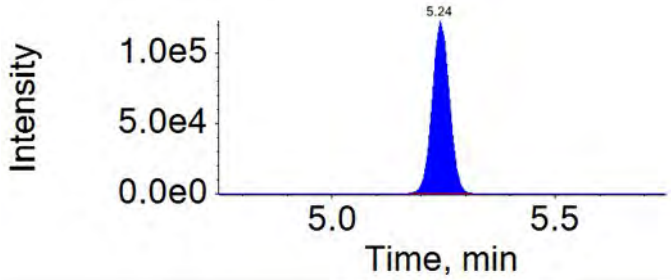
Extraction Standard: d3-NMePFOSA
515.0 / 169.0



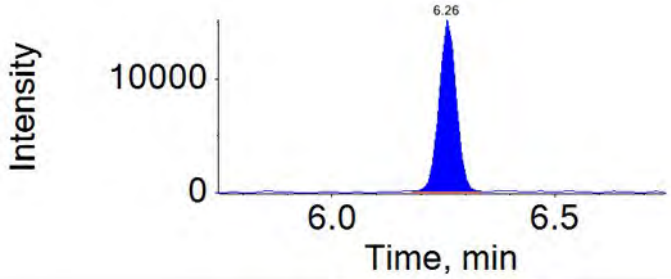
Analyte: PFDoS
699.0 / 80.0



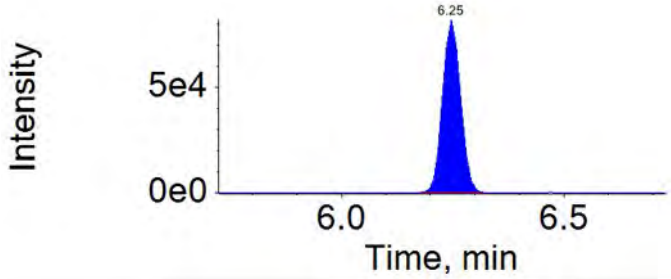
Extraction Standard: 13C8-PFOS
507.0 / 80.0



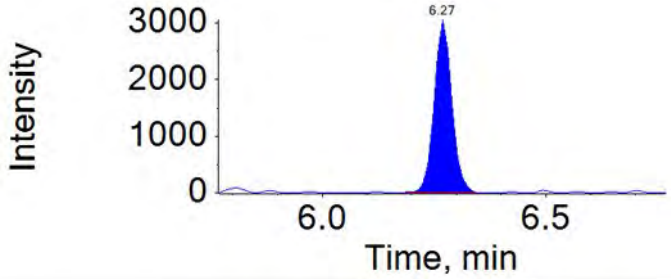
Analyte: NEtPFOSAE
630.0 / 59.0



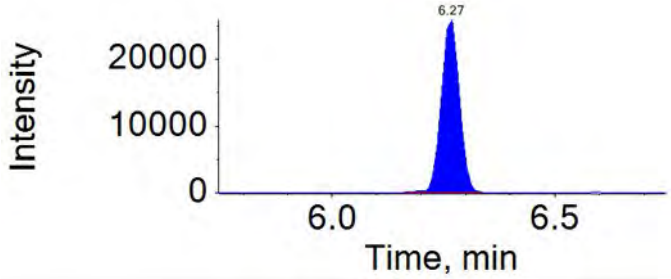
Extraction Standard: d9-NEtPFOSAE
639.0 / 59.0



Analyte: NEtPFOSA
526.0 / 169.0



Extraction Standard: d5-NEtPFOSA
531.0 / 169.0

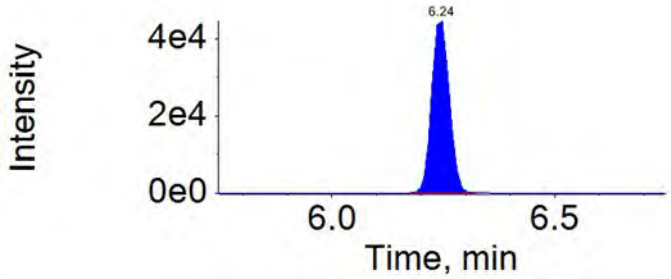


APPROVED
By MCD at 3:27 pm, 11/30/18

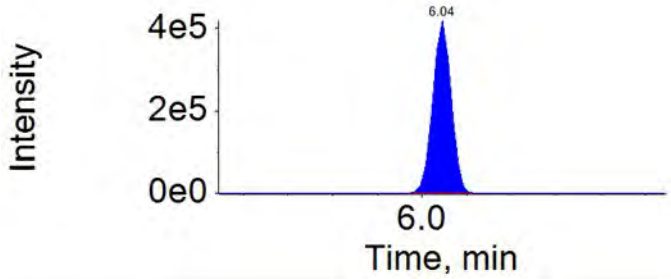
REVIEWED
By umar at 12:38 pm, 12/4/18

ICAL Name: 18NOV28DCAL **Result Table:** 18NOV29DCCV6-9 11/30/2018 3:21:11 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

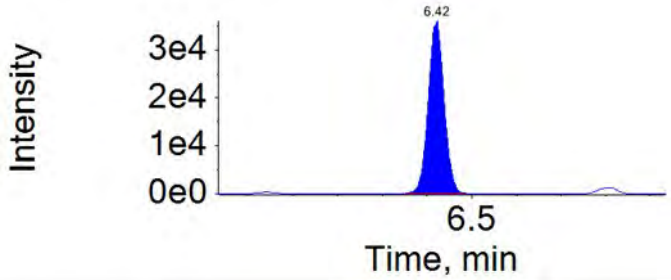
Analyte: PFTrDA
663.0 / 619.0



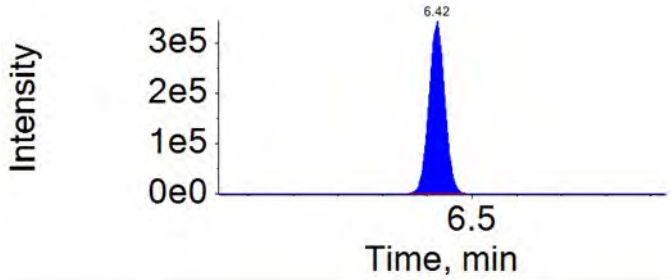
Extraction Standard: 13C2-PFDoDA
615.0 / 570.0



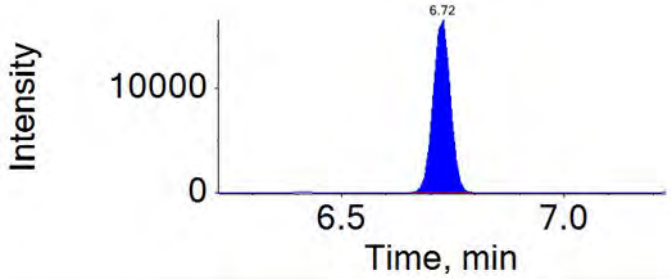
Analyte: PFTeDA
713.0 / 669.0



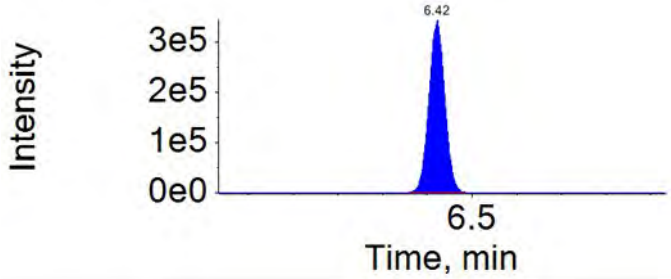
Extraction Standard: 13C2-PFTeDA
715.0 / 670.0



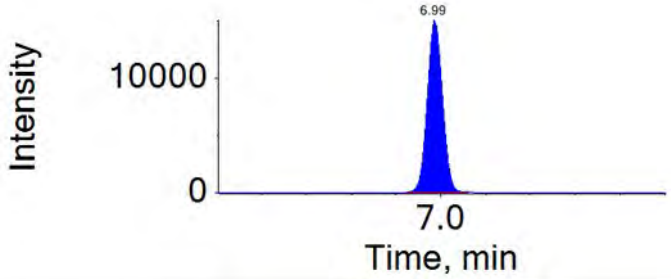
Analyte: PFHxDA
813.0 / 769.0



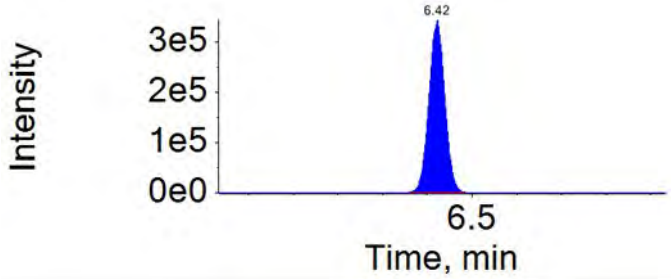
Extraction Standard: 13C2-PFTeDA
715.0 / 670.0



Analyte: PFODA
913.0 / 869.0



Extraction Standard: 13C2-PFTeDA
715.0 / 670.0



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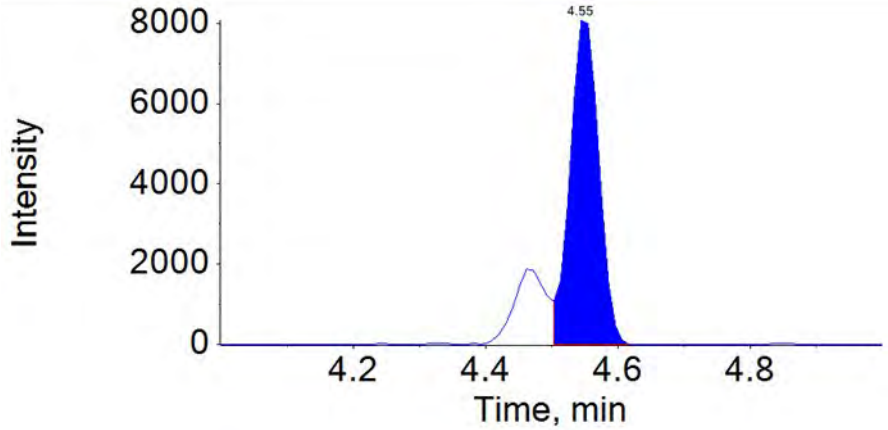
Auto Integrations prior to Manual Integration

Print Date: 11/30/2018 3:24 PM
Template: MQ-OrigInteg-16NOV21.docx

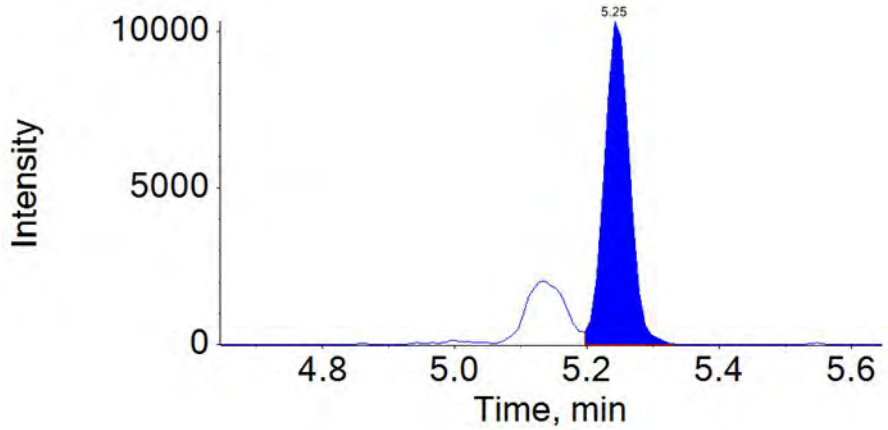
Results Table Name: 18NOV29DCCV6-9
Results Table Date: 11/30/2018 3:21:11 PM
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

Component Name:
PFHxS
RT (min.):
4.55
Peak Area:
24612.5
Mass Range:
399.0 / 80.0
File Name:
18NOV29D-72.wiff
Sample Name:
CCV7_ISC_CAL2



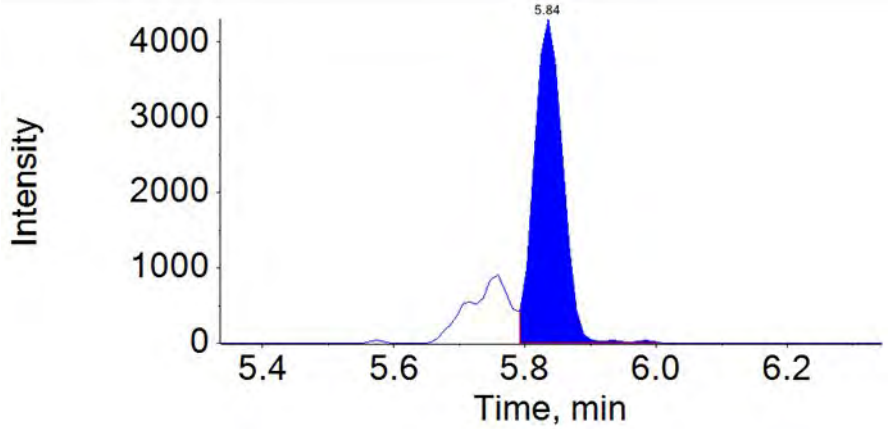
Integration Comment: incorrect integration

Component Name:
PFOS
RT (min.):
5.25
Peak Area:
27561.1
Mass Range:
499.0 / 80.0
File Name:
18NOV29D-72.wiff
Sample Name:
CCV7_ISC_CAL2



Integration Comment: incorrect integration

Component Name:
NEtFOSAA
RT (min.):
5.84
Peak Area:
13046.5
Mass Range:
584.0 / 419.0
File Name:
18NOV29D-72.wiff
Sample Name:
CCV7_ISC_CAL2



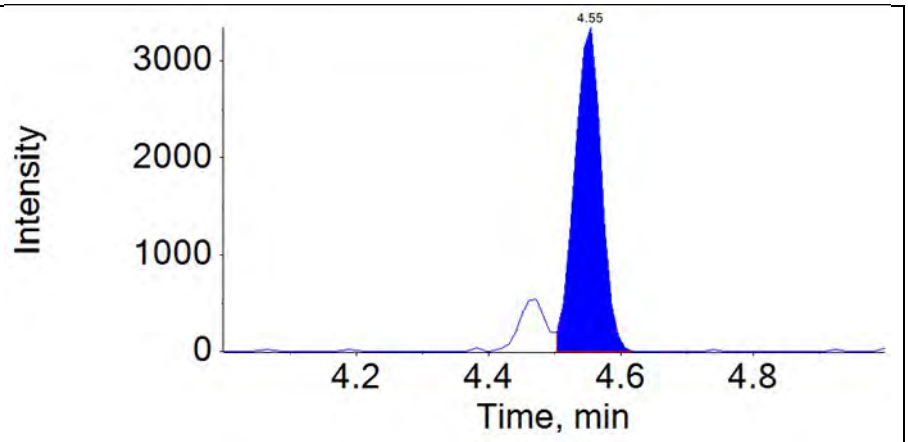
Integration Comment: incorrect integration

APPROVED
By MCD at 3:27 pm, 11/30/18

REVIEWED
By umar at 12:38 pm, 12/4/18

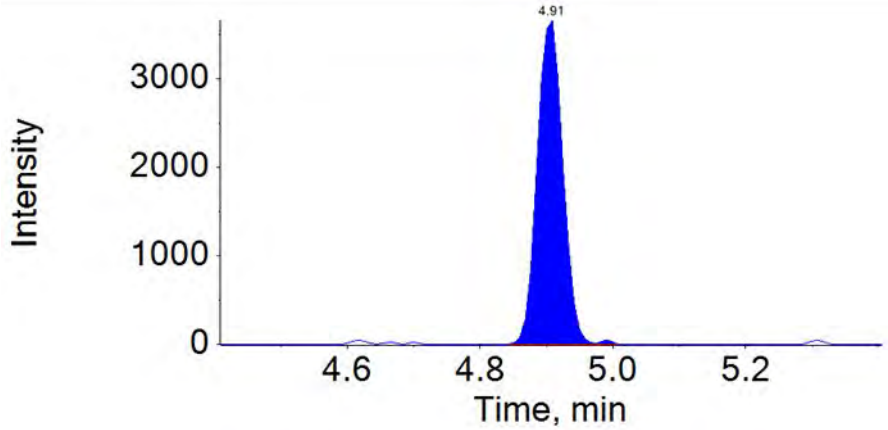
Results Table Name: 18NOV29DCCV6-9
Results Table Date: 11/30/2018 3:21:11 PM
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

Component Name:
PFHxS_2
RT (min.):
4.55
Peak Area:
9386.3
Mass Range:
399.0 / 99.0
File Name:
18NOV29D-72.wiff
Sample Name:
CCV7_ISC_CAL2



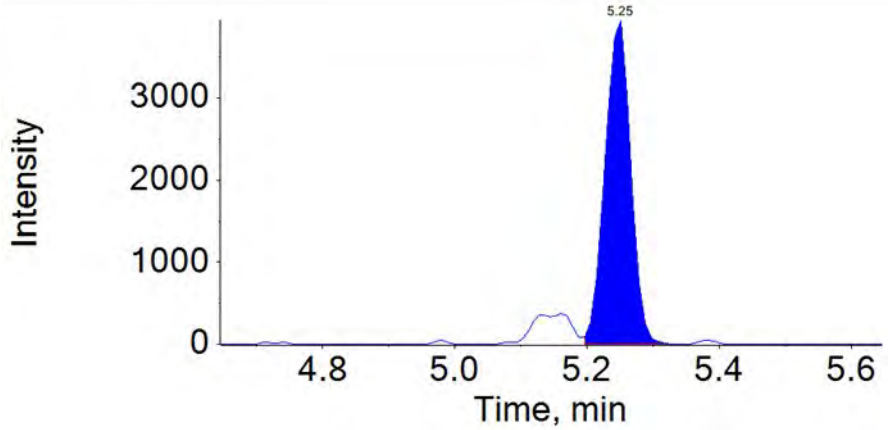
Integration Comment: incorrect integration

Component Name:
6:2-FTS_2
RT (min.):
4.91
Peak Area:
9903.4
Mass Range:
427.0 / 81.0
File Name:
18NOV29D-72.wiff
Sample Name:
CCV7_ISC_CAL2



Integration Comment: incorrect integration

Component Name:
PFOS_2
RT (min.):
5.25
Peak Area:
10671.6
Mass Range:
499.0 / 99.0
File Name:
18NOV29D-72.wiff
Sample Name:
CCV7_ISC_CAL2



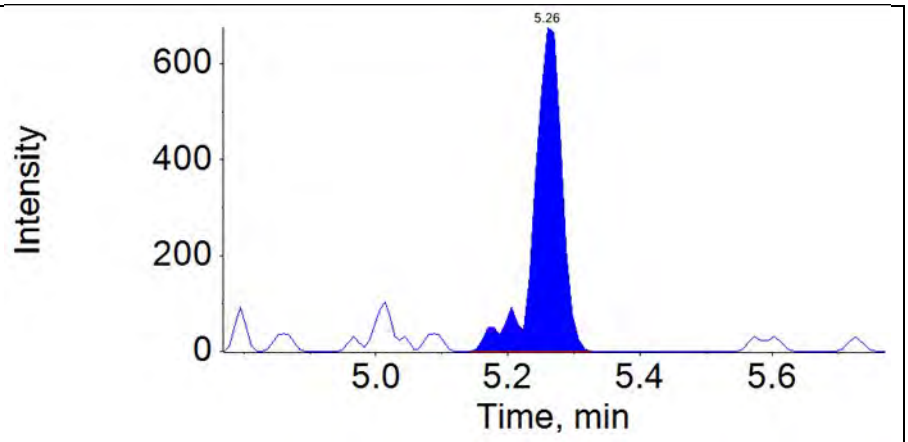
Integration Comment: incorrect integration

APPROVED
By MCD at 3:27 pm, 11/30/18

REVIEWED
By umar at 12:38 pm, 12/4/18

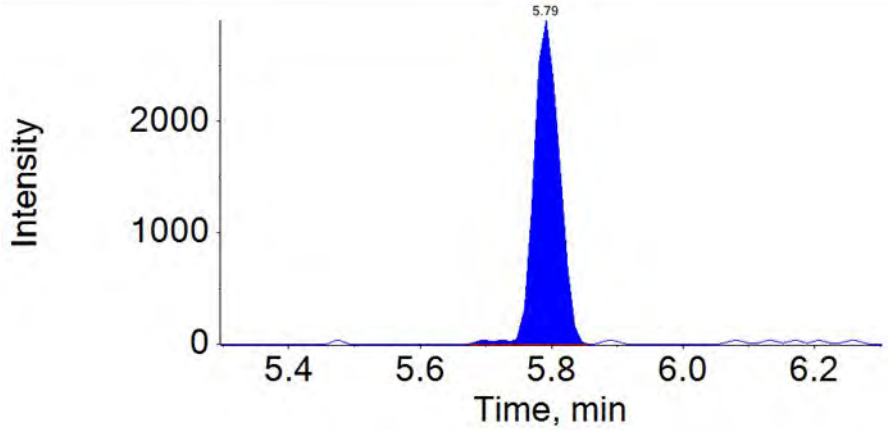
Results Table Name: 18NOV29DCCV6-9
Results Table Date: 11/30/2018 3:21:11 PM
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

Component Name:
PFNA_2
RT (min.):
5.26
Peak Area:
1986.5
Mass Range:
463.0 / 169.0
File Name:
18NOV29D-72.wiff
Sample Name:
CCV7_ISC_CAL2



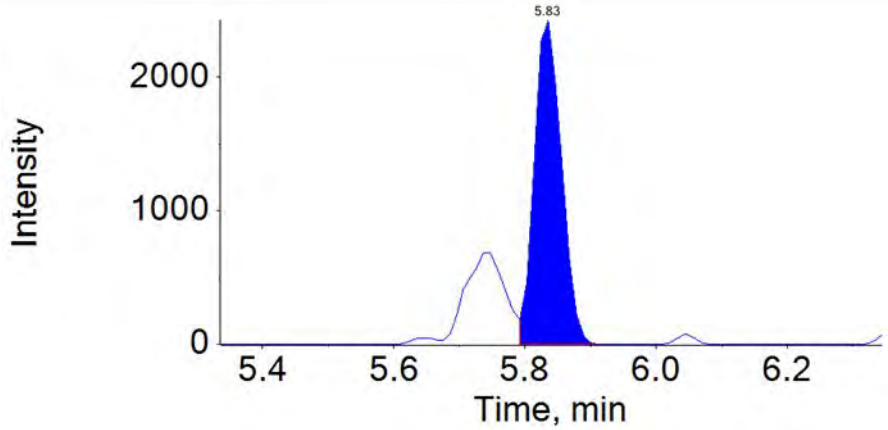
Integration Comment: incorrect integration

Component Name:
PFDS_2
RT (min.):
5.79
Peak Area:
7803.0
Mass Range:
599.0 / 99.0
File Name:
18NOV29D-72.wiff
Sample Name:
CCV7_ISC_CAL2



Integration Comment: incorrect integration

Component Name:
NEtFOSAA_2
RT (min.):
5.83
Peak Area:
6992.8
Mass Range:
584.0 / 526.0
File Name:
18NOV29D-72.wiff
Sample Name:
CCV7_ISC_CAL2



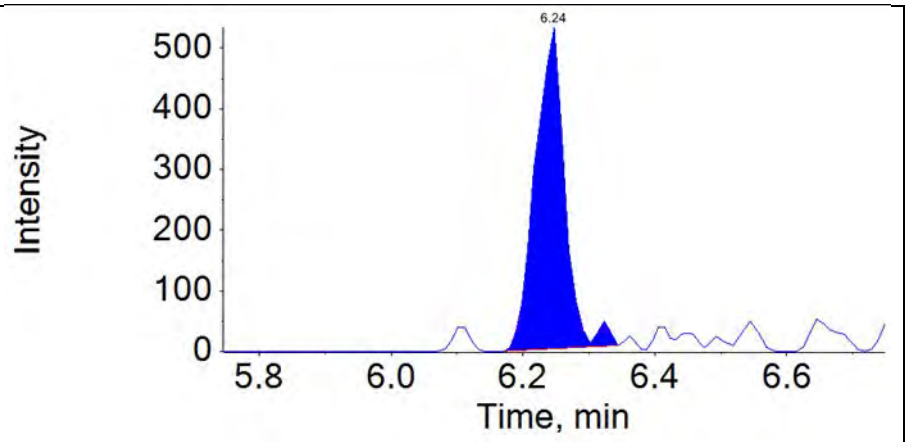
Integration Comment: incorrect integration

APPROVED
By MCD at 3:27 pm, 11/30/18

REVIEWED
By umar at 12:38 pm, 12/4/18

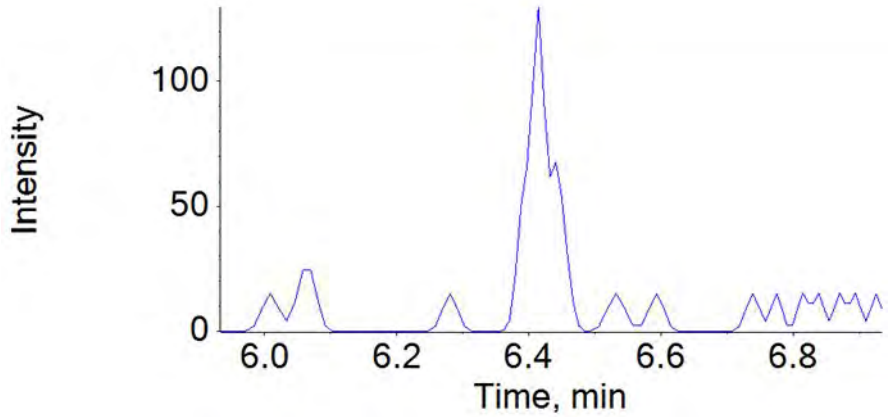
Results Table Name: 18NOV29DCCV6-9
Results Table Date: 11/30/2018 3:21:11 PM
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

Component Name:
PFTrDA_2
RT (min.):
6.24
Peak Area:
1661.7
Mass Range:
663.0 / 169.0
File Name:
18NOV29D-72.wiff
Sample Name:
CCV7_ISC_CAL2



Integration Comment: incorrect integration

Component Name:
PFTeDA_2
RT (min.):
N/A
Peak Area:
N/A
Mass Range:
713.0 / 169.0
File Name:
18NOV29D-72.wiff
Sample Name:
CCV7_ISC_CAL2



Integration Comment: incorrect integration

APPROVED
By MCD at 3:27 pm, 11/30/18

REVIEWED
By umar at 12:38 pm, 12/4/18

Results Table Name: 18NOV29DCCV6-9
Results Table Date: 11/30/2018 3:21:11 PM
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

APPROVED
By MCD at 3:27 pm, 11/30/18

REVIEWED
By umar at 12:38 pm, 12/4/18

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LC-MS/MS Analysis Report

Printed: 11/30/2018 3:22:00 PM
Template: IonRatio18OCT10

Ion Ratio Report

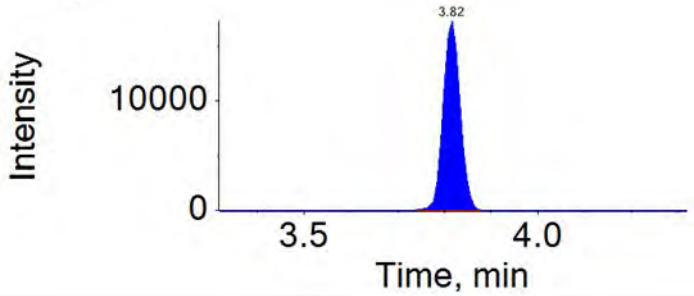
Sample Name: CCV7_ISC_CAL2 **Instrument Name:** LM27631 **File Name:** 18NOV29D-72.wiff

Component Name	RT	RRT	Analyte Area Response	Int Typ	Expected Ion Ratio	Ion Ratio	Ion Ratio % Diff	Ion Ratio Limit	Ion Ratio OOS
PFBS	3.82	1.00	43546.1	A	N/A	0.3531			
PFBS_2	3.81	1.00	15374.0	A	N/A	0.3531	-3	50	
4:2-FTS	4.13	1.00	13618.8	A	N/A	0.5741			
4:2-FTS_2	4.13	1.00	7819.0	A	N/A	0.5741	-10	50	
PFHxA	4.16	1.00	98812.0	A	N/A	0.0083			
PFHxA_2	4.16	1.00	819.4	A	N/A	0.0083	-20	50	
PFPeS	4.18	1.10	22438.2	A	N/A	0.4999			
PFPeS_2	4.18	1.10	11216.6	A	N/A	0.4999	0	50	
PFHpA	4.55	1.00	108630.6	A	N/A	0.0517			
PFHpA_2	4.55	1.00	5616.4	A	N/A	0.0517	-7	50	
PFHxS	4.55	1.00	31005.8	M	N/A	0.3523			
PFHxS_2	4.55	1.00	10923.7	M	N/A	0.3523	-5	50	
6:2-FTS	4.90	1.00	14871.4	A	N/A	0.6620			
6:2-FTS_2	4.91	1.00	9844.3	M	N/A	0.6620	0	50	
PFHpS	4.91	1.08	34425.5	A	N/A	0.3726			
PFHpS_2	4.91	1.08	12825.2	A	N/A	0.3726	-5	50	
PFOA	4.92	1.00	108379.5	A	N/A	0.0499			
PFOA_2	4.91	1.00	5409.2	A	N/A	0.0499	-13	50	
PFOS	5.25	1.00	36641.4	M	N/A	0.3335			
PFOS_2	5.25	1.00	12218.3	M	N/A	0.3335	13	50	
PFNA	5.26	1.00	105821.4	A	N/A	0.0168			
PFNA_2	5.26	1.00	1772.5	M	N/A	0.0168	-17	50	
PFNS	5.54	1.06	26569.2	A	N/A	0.5079			
PFNS_2	5.54	1.06	13495.5	A	N/A	0.5079	6	50	
PFDA	5.56	1.00	91975.5	A	N/A	0.0047			
PFDA_2	5.56	1.00	428.3	A	N/A	0.0047	-38	50	
8:2-FTS	5.56	1.00	13276.2	A	N/A	0.7117			
8:2-FTS_2	5.57	1.00	9448.0	A	N/A	0.7117	32	50	
NMeFOSAA	5.70	1.00	18118.1	A	N/A	0.2752			
NMeFOSAA_2	5.70	1.00	4986.6	A	N/A	0.2752	19	50	
PFDS	5.79	1.10	21049.9	A	N/A	0.3654			
PFDS_2	5.79	1.10	7692.6	M	N/A	0.3654	-32	50	
PFUnDA	5.82	1.00	94365.1	A	N/A	0.0028			
PFUnDA_2	5.80	1.00	259.7	A	N/A	0.0028	-28	50	
NEtFOSAA	5.84	1.00	16845.3	M	N/A	0.5862			
NEtFOSAA_2	5.83	1.00	9875.0	M	N/A	0.5862	-20	50	
PFDoDA	6.04	1.00	120450.1	A	N/A	0.0159			
PFDoDA_2	6.05	1.00	1919.7	A	N/A	0.0159	22	50	
10:2-FTS	6.06	1.09	13124.4	A	N/A	0.8343			
10:2-FTS_2	6.06	1.09	10949.2	A	N/A	0.8343	19	50	
PFTrDA	6.24	1.03	124162.6	A	N/A	0.0132			
PFTrDA_2	6.24	1.03	1641.9	M	N/A	0.0132	47	50	
PFTeDA	6.42	1.00	88469.7	A	N/A	0.0041			
PFTeDA_2	6.41	1.00	361.6	M	N/A	0.0041	-27	50	
PFHxDA	6.72	1.05	44728.9	A	N/A	0.0648			
PFHxDA_2	6.73	1.05	2897.0	A	N/A	0.0648	0	50	
PFODA	6.99	1.09	35501.9	A	N/A	0.0275			
PFODA_2	6.98	1.09	977.9	A	N/A	0.0275	4	50	

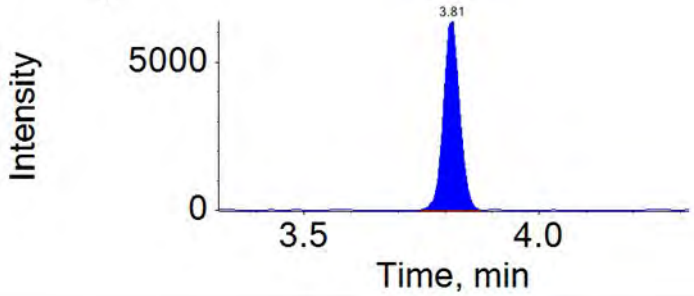
APPROVED
By MCD at 3:27 pm, 11/30/18

REVIEWED
By umar at 12:38 pm, 12/4/18

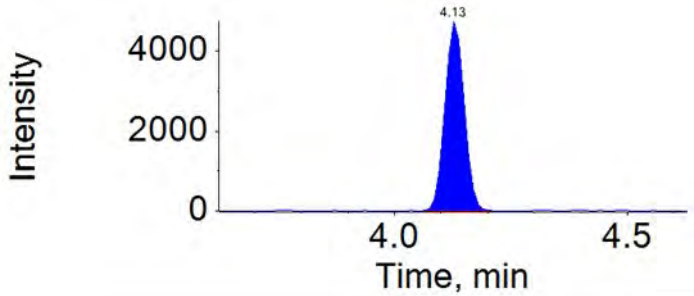
Component: PFBS
Primary Mass: 299.0 / 80.0



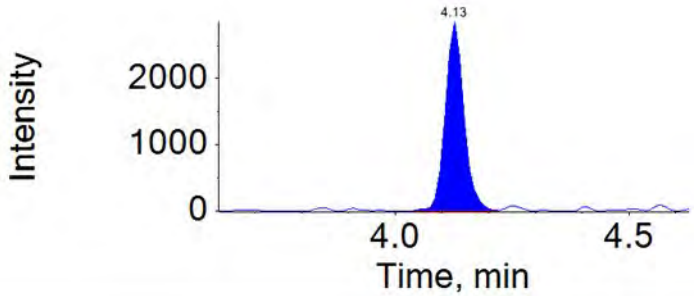
Component: PFBS_2
Secondary Mass: 299.0 / 99.0



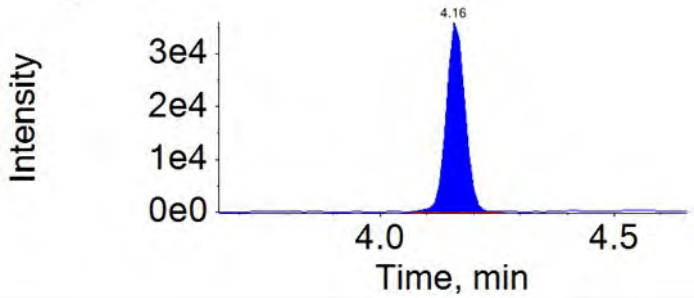
Component: 4:2-FTS
Primary Mass: 327.0 / 307.0



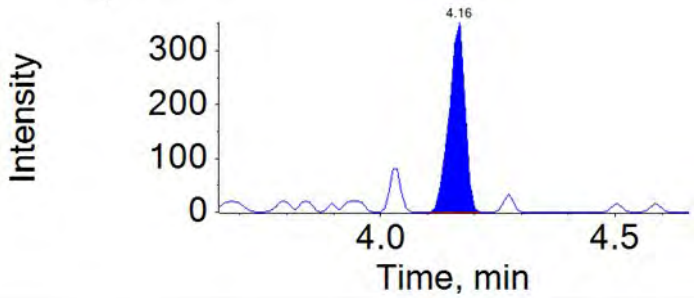
Component: 4:2-FTS_2
Secondary Mass: 327.0 / 81.0



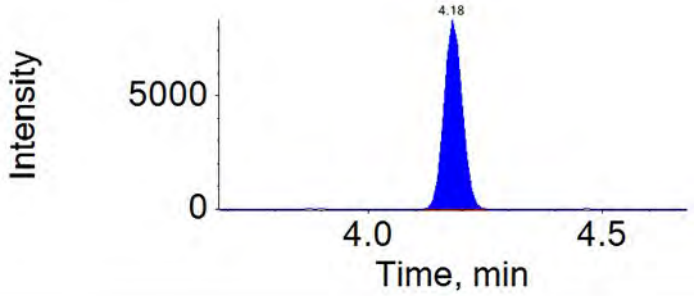
Component: PFHxA
Primary Mass: 313.0 / 269.0



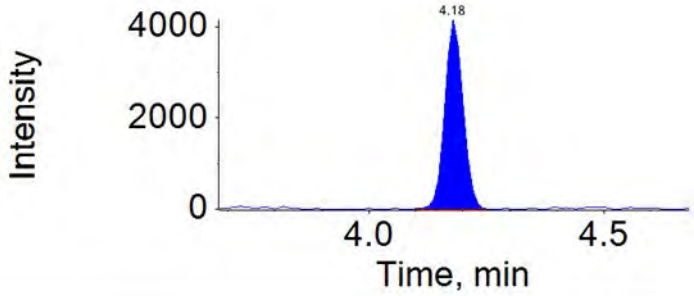
Component: PFHxA_2
Secondary Mass: 313.0 / 119.0



Component: PFPeS
Primary Mass: 349.0 / 80.0



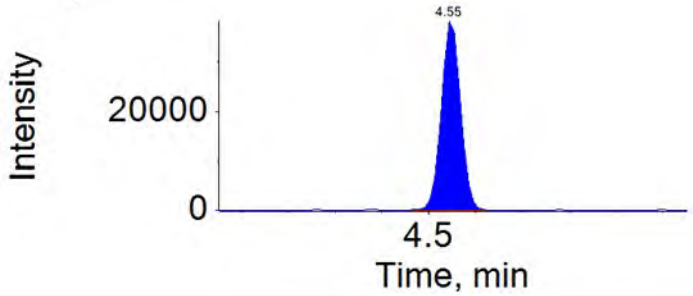
Component: PFPeS_2
Secondary Mass: 349.0 / 99.0



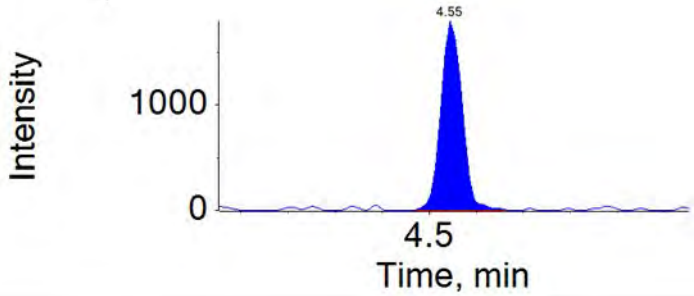
APPROVED
By MCD at 3:27 pm, 11/30/18

REVIEWED
By umar at 12:38 pm, 12/4/18

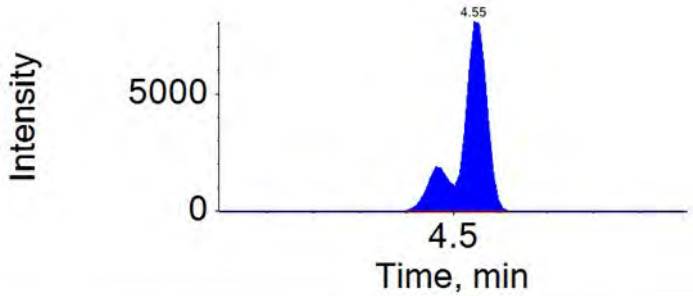
Component: PFHpA
Primary Mass: 363.0 / 319.0



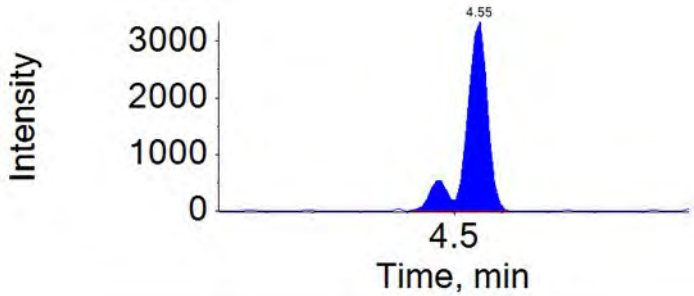
Component: PFHpA_2
Secondary Mass: 363.0 / 169.0



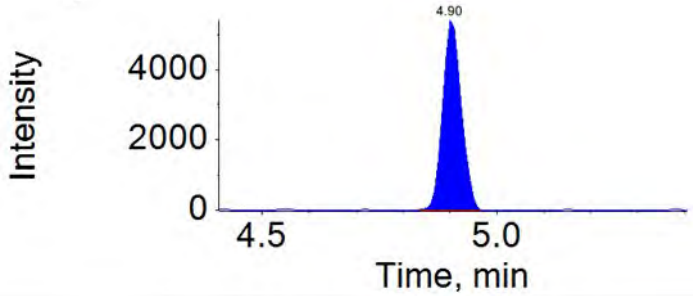
Component: PFHxS
Primary Mass: 399.0 / 80.0



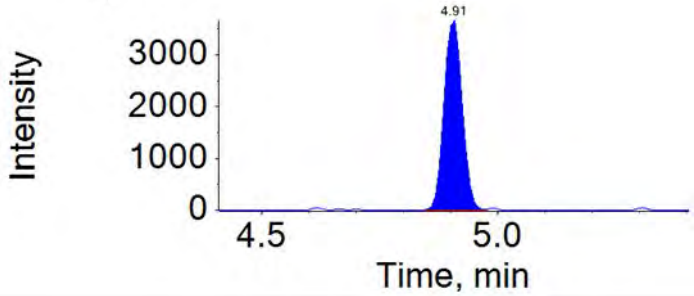
Component: PFHxS_2
Secondary Mass: 399.0 / 99.0



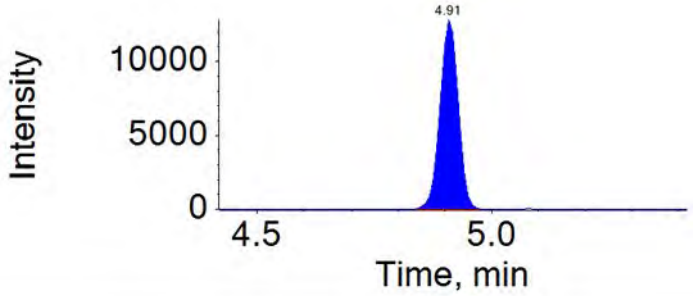
Component: 6:2-FTS
Primary Mass: 427.0 / 407.0



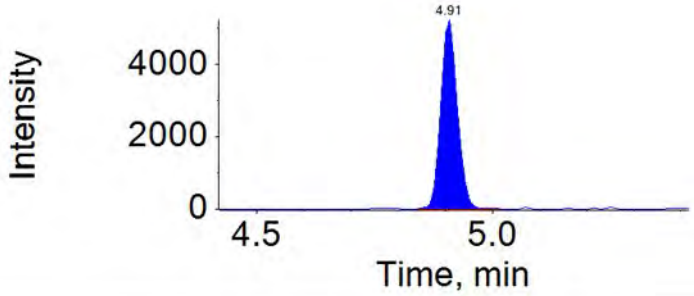
Component: 6:2-FTS_2
Secondary Mass: 427.0 / 81.0



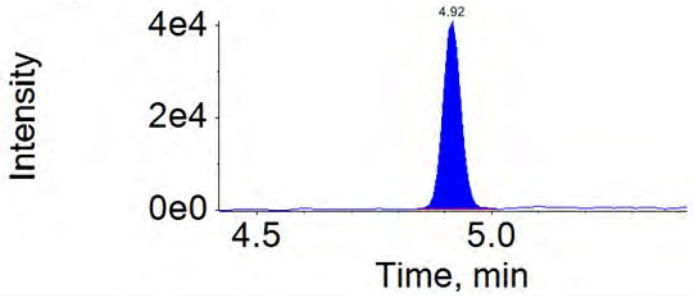
Component: PFHpS
Primary Mass: 449.0 / 80.0



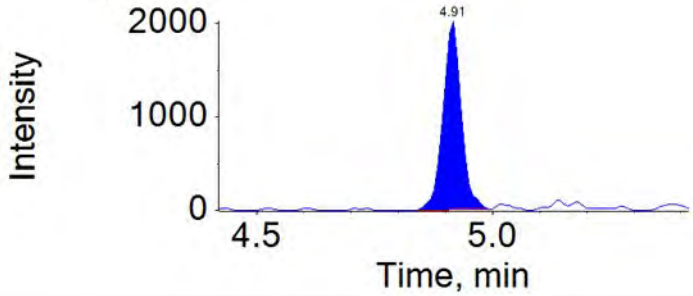
Component: PFHpS_2
Secondary Mass: 449.0 / 99.0



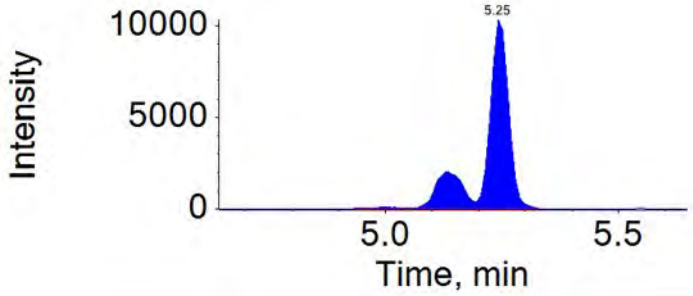
Component: PFOA
Primary Mass: 413.0 / 369.0



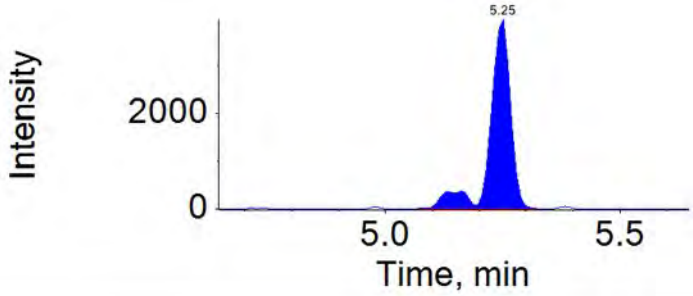
Component: PFOA_2
Secondary Mass: 413.0 / 169.0



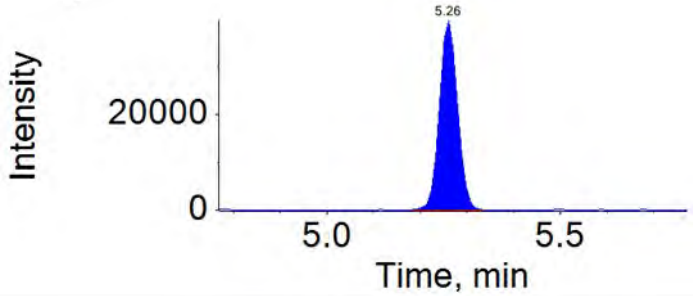
Component: PFOS
Primary Mass: 499.0 / 80.0



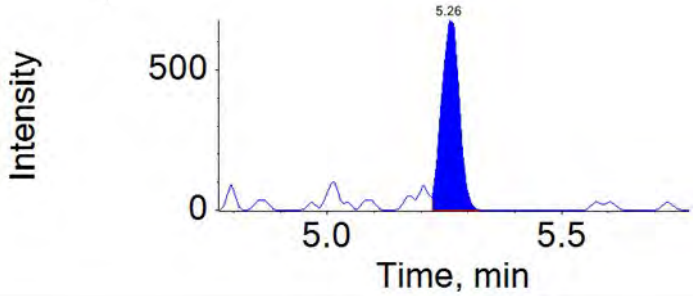
Component: PFOS_2
Secondary Mass: 499.0 / 99.0



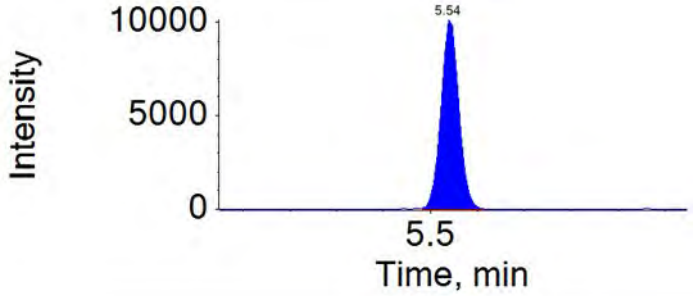
Component: PFNA
Primary Mass: 463.0 / 419.0



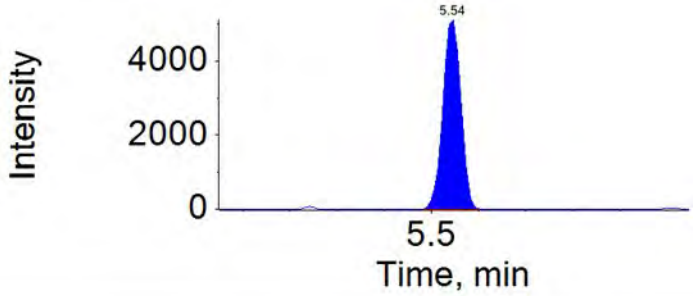
Component: PFNA_2
Secondary Mass: 463.0 / 169.0



Component: PFNS
Primary Mass: 549.0 / 80.0



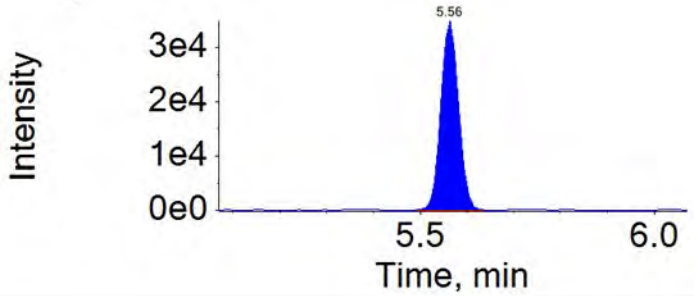
Component: PFNS_2
Secondary Mass: 549.0 / 99.0



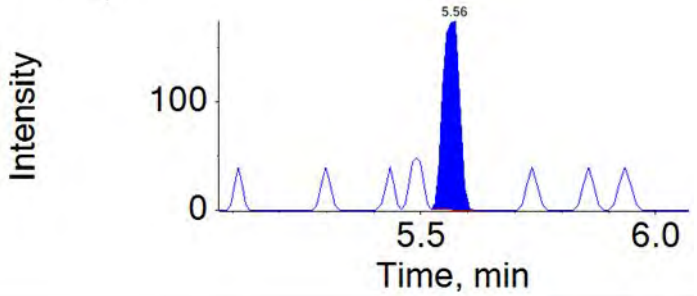
APPROVED
By MCD at 3:27 pm, 11/30/18

REVIEWED
By umar at 12:38 pm, 12/4/18

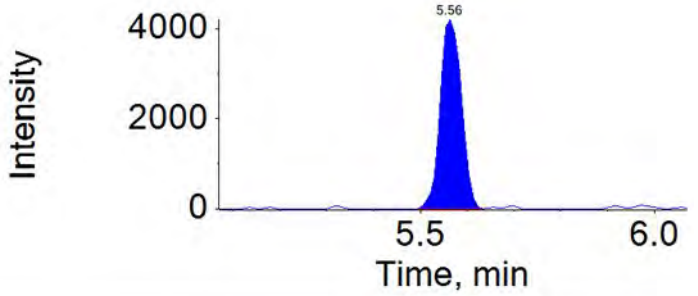
Component: PFDA
Primary Mass: 513.0 / 469.0



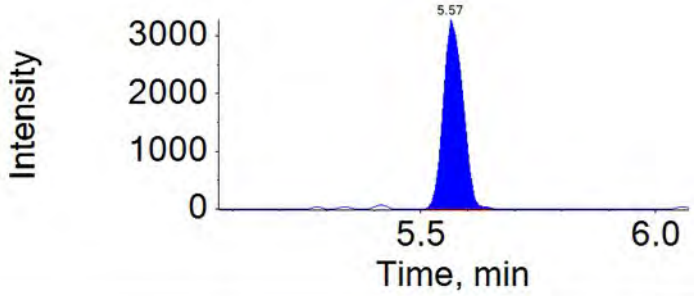
Component: PFDA_2
Secondary Mass: 513.0 / 169.0



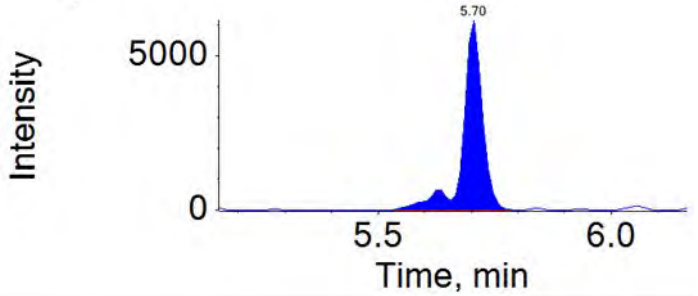
Component: 8:2-FTS
Primary Mass: 527.0 / 507.0



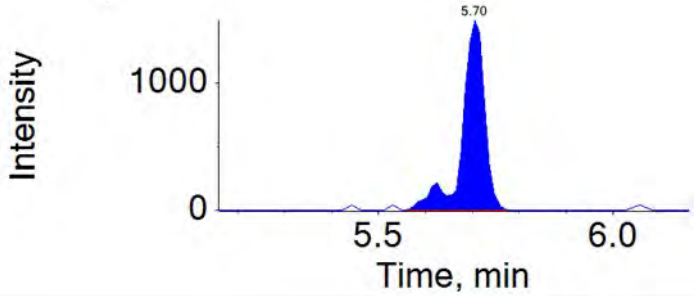
Component: 8:2-FTS_2
Secondary Mass: 527.0 / 81.0



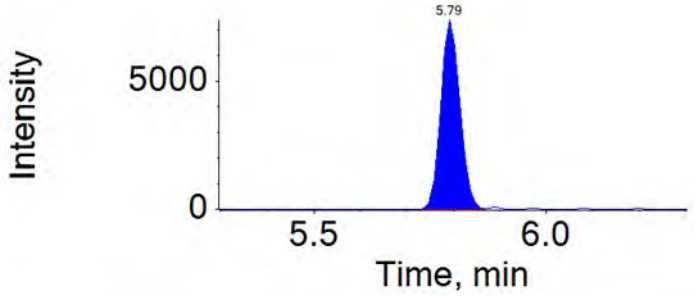
Component: NMeFOSAA
Primary Mass: 570.0 / 419.0



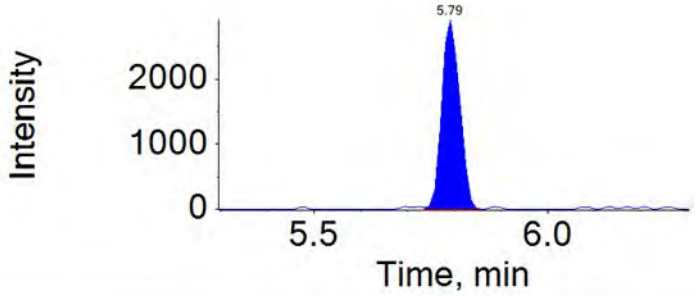
Component: NMeFOSAA_2
Secondary Mass: 570.0 / 483.0



Component: PFDS
Primary Mass: 599.0 / 80.0



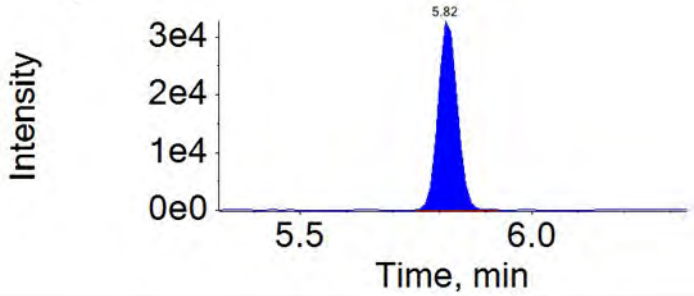
Component: PFDS_2
Secondary Mass: 599.0 / 99.0



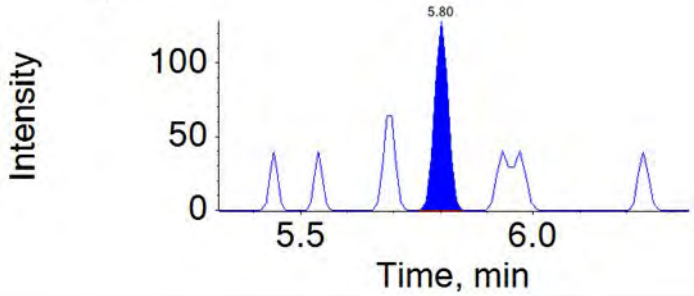
APPROVED
By MCD at 3:27 pm, 11/30/18

REVIEWED
By umar at 12:38 pm, 12/4/18

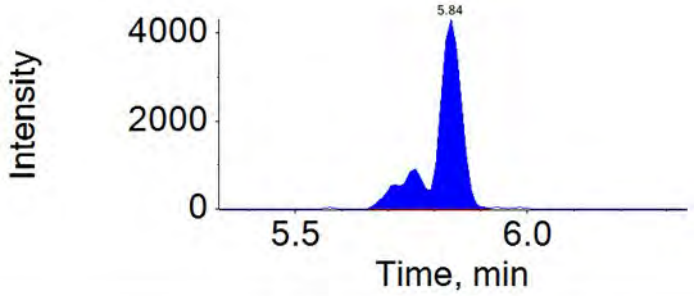
Component: PFUnDA
Primary Mass: 563.0 / 519.0



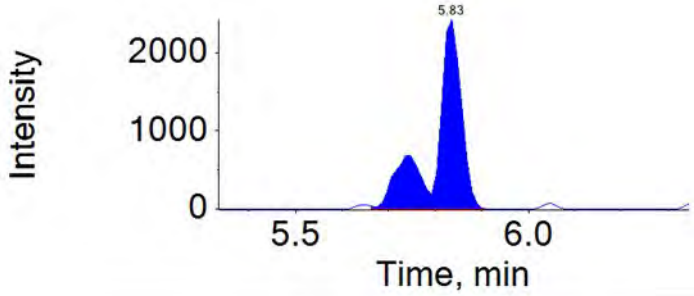
Component: PFUnDA_2
Secondary Mass: 563.0 / 169.0



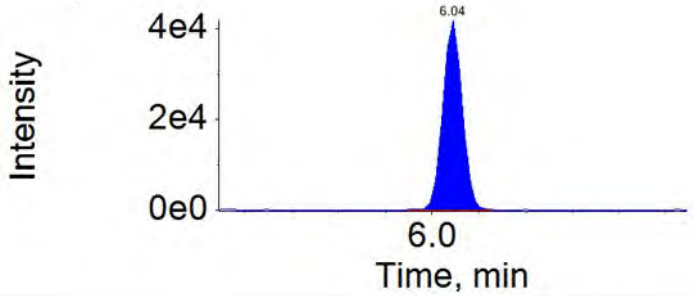
Component: NEtFOSAA
Primary Mass: 584.0 / 419.0



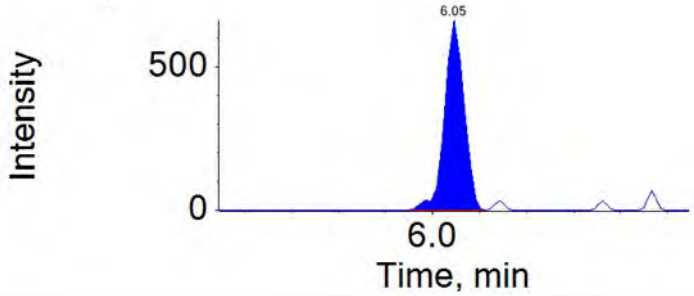
Component: NEtFOSAA_2
Secondary Mass: 584.0 / 526.0



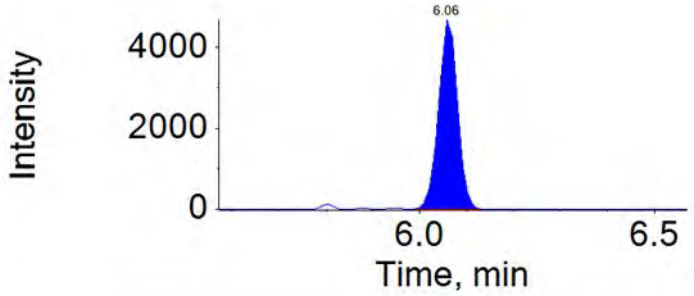
Component: PFDoDA
Primary Mass: 613.0 / 569.0



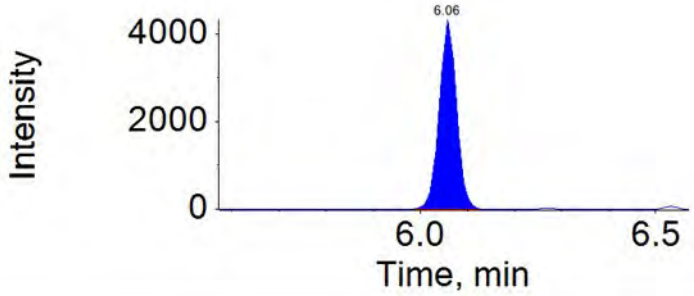
Component: PFDoDA_2
Secondary Mass: 613.0 / 169.0



Component: 10:2-FTS
Primary Mass: 627.0 / 607.0



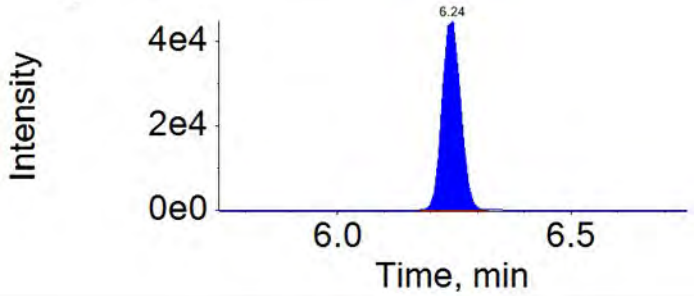
Component: 10:2-FTS_2
Secondary Mass: 627.0 / 81.0



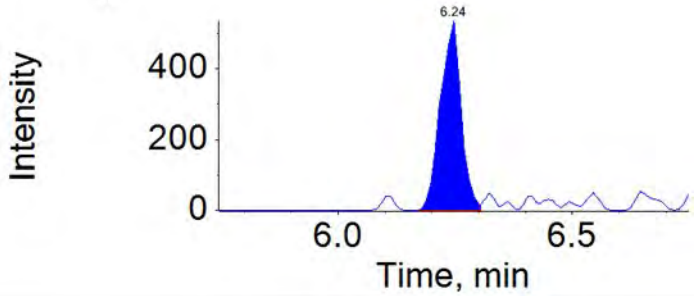
APPROVED
By MCD at 3:27 pm, 11/30/18

REVIEWED
By umar at 12:38 pm, 12/4/18

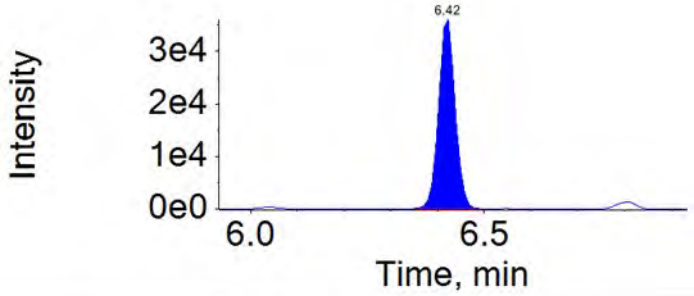
Component: PFTrDA
Primary Mass: 663.0 / 619.0



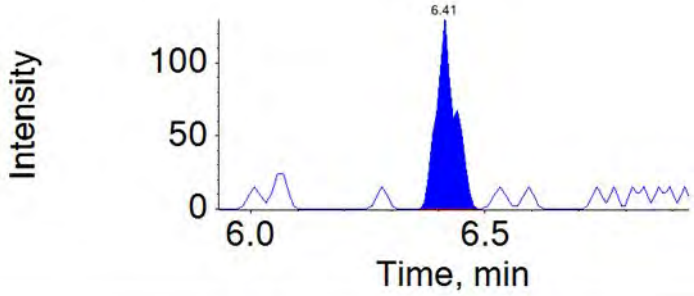
Component: PFTrDA_2
Secondary Mass: 663.0 / 169.0



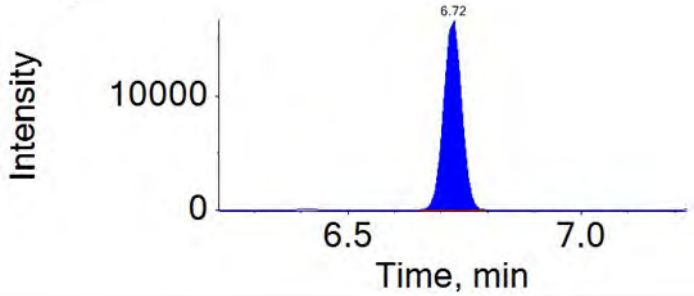
Component: PFTeDA
Primary Mass: 713.0 / 669.0



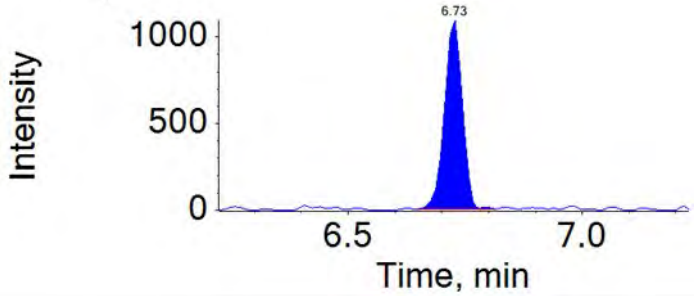
Component: PFTeDA_2
Secondary Mass: 713.0 / 169.0



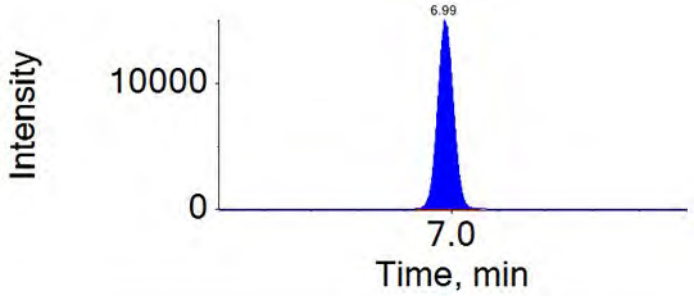
Component: PFHxDA
Primary Mass: 813.0 / 769.0



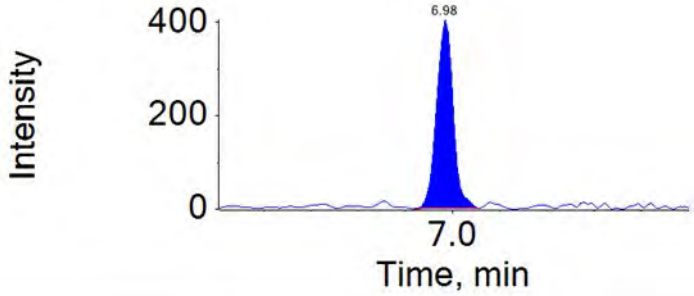
Component: PFHxDA_2
Secondary Mass: 813.0 / 169.0



Component: PFODA
Primary Mass: 913.0 / 869.0



Component: PFODA_2
Secondary Mass: 913.0 / 169.0



APPROVED
By MCD at 3:27 pm, 11/30/18

REVIEWED
By umar at 12:38 pm, 12/4/18

ICAL Name: 18NOV28DCAL **Result Table:** 18NOV29DCCV6-9 11/30/2018 3:21:11 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Sample Name:	Instrument Blank			**Data File:**		18NOV29D-73.wiff
Sample ID:	methanol+labels			**Acquis Date:**		2018-11-29T20:47:06
Sample Type:	Unknown			**Instrument:**		LM27631
Vial Position:	1			**Acquis Method:**		18AUG13_3uL.dam
Injection Vol:	3.00			**Result Table:**		18NOV29DCCV6-9
QMethod File:	18AUG20QM			**ICAL Name:**		18NOV28DCAL
Batch Number:	N/A			**Operator:**		MCD7824
Sample Wt.:	1.00000			**Dilution Factor:**		1.00
Sample Vol.:	1.000			**Prep Factor:**		1.000

Injection Standard Peak Table

Injection Standard Area Reference File: 18NOV29D-05

Injection Standard Name	Inj Std Conc	Injection Std Peak Area	Rreference Injection Standard Area	Injection Std %Diff	Injection Std %Diff Limit	Injection Std %Diff OOS
13C3-PFBA	5.0	1072007.1	906425.4	18	50	
13C2-PFOA	5.0	580377.1	495984.0	17	50	
13C4-PFOS	4.8	356069.8	296261.8	20	50	
13C2-PFDA	5.0	542154.6	451203.0	20	50	

Extraction Standard Peak Table

Extraction Standard Name	Ext Std Area	Inj Std Name	Inj Std Area	Area Ratio	Ext Std Conc	Ext Std Result	Ext Std %REC	Ext Std %REC Limit	Ext Std OOS
E13C4-PFBA	1146787.6	13C3-PFBA	1072007.1	1.070	5.000	4.773	95	70-130	
E13C5-PFPeA	1080213.5	13C3-PFBA	1072007.1	1.008	5.000	4.705	94	70-130	
E13C3-PFBS	467354.0	13C3-PFBA	1072007.1	0.436	4.650	4.159	89	70-130	
E13C2-4:2-FTS	83228.5	13C2-PFOA	580377.1	0.143	4.670	4.942	106	70-130	
E13C5-PFHxA	761353.7	13C2-PFOA	580377.1	1.312	5.000	4.818	96	70-130	
E13C3-PFHxS	380641.1	13C2-PFOA	580377.1	0.656	4.730	5.140	109	70-130	
E13C4-PFHpA	608352.9	13C2-PFOA	580377.1	1.048	5.000	4.816	96	70-130	
E13C2-6:2-FTS	76246.9	13C2-PFOA	580377.1	0.131	4.750	5.499	116	70-130	
E13C8-PFOA	1060868.3	13C2-PFOA	580377.1	1.828	5.000	5.031	101	70-130	
E13C8-PFOS	358159.4	13C4-PFOS	356069.8	1.006	4.780	4.541	95	70-130	
E13C9-PFNA	747835.1	13C4-PFOS	356069.8	2.100	5.000	4.613	92	70-130	
E13C6-PFDA	951251.3	13C2-PFDA	542154.6	1.755	5.000	4.947	99	70-130	
E13C2-8:2-FTS	62758.6	13C2-PFDA	542154.6	0.116	4.790	4.975	104	70-130	
E13C8-PFOSA	726331.4	13C2-PFDA	542154.6	1.340	5.000	4.916	98	70-130	
Ed3-NMeFOSAA	279222.6	13C2-PFDA	542154.6	0.515	5.000	6.539	131	70-130	OOS
E13C7-PFUnDA	639126.9	13C2-PFDA	542154.6	1.179	5.000	4.982	100	70-130	
Ed5-NEtFOSAA	158699.3	13C2-PFDA	542154.6	0.293	5.000	5.215	104	70-130	
E13C2-PFDoDA	1215903.7	13C2-PFDA	542154.6	2.243	5.000	4.712	94	70-130	
Ed7-NMePFOSAE	302120.4	13C2-PFDA	542154.6	0.557	5.000	4.816	96	70-130	
Ed3-NMePFOSA	101225.5	13C2-PFDA	542154.6	0.187	5.000	5.053	101	70-130	
Ed9-NEtPFOSAE	250994.9	13C2-PFDA	542154.6	0.463	5.000	4.694	94	70-130	
Ed5-NEtPFOSA	78115.7	13C2-PFDA	542154.6	0.144	5.000	5.007	100	70-130	
E13C2-PFTeDA	927532.4	13C2-PFDA	542154.6	1.711	5.000	4.734	95	70-130	

ICAL Name: 18NOV28DCAL **Result Table:** 18NOV29DCCV6-9 11/30/2018 3:21:11 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

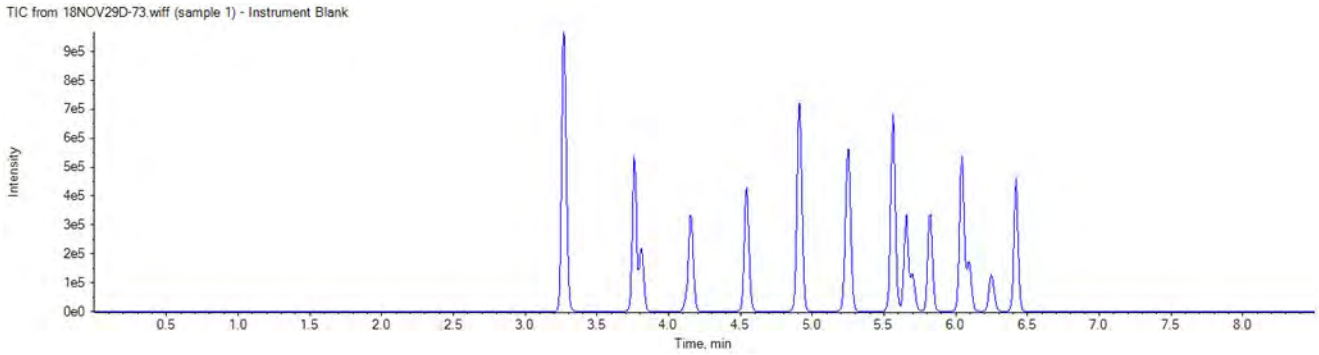
Analyte Quantitation Peak Table

Sample Name: Instrument Blank **Instrument Name:** LM27631 **File Name:** 18NOV29D-73.wiff

Sample Wt	Sample Vol	Dilution Factor	PrepFactor
1.00000	1.000	1.00	1.000

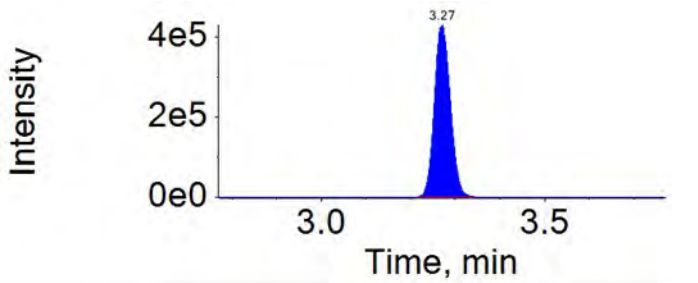
Analyte Name	RT	RRT	Analyte Area Response	E	Int Typ	ES Name	ES RT	ES Area Response	Area Ratio	Sample Result (ng/g)
PFBA	N/A	N/A	N/A		A	13C4-PFBA	3.27	1146787.6	N/A	
PFPeA	N/A	N/A	N/A		A	13C5-PFPeA	3.76	1080213.5	N/A	
PFBS	N/A	N/A	N/A		A	13C3-PFBS	3.81	467354.0	N/A	
4:2-FTS	N/A	N/A	N/A		A	13C2-4:2-FTS	4.12	83228.5	N/A	
PFHxA	N/A	N/A	N/A		A	13C5-PFHxA	4.15	761353.7	N/A	
PFPeS	N/A	N/A	N/A		A	13C3-PFBS	3.81	467354.0	N/A	
PFHpA	N/A	N/A	N/A		A	13C4-PFHpA	4.54	608352.9	N/A	
PFHxS	N/A	N/A	N/A		A	13C3-PFHxS	4.54	380641.1	N/A	
6:2-FTS	N/A	N/A	N/A		A	13C2-6:2-FTS	4.90	76246.9	N/A	
PFHpS	N/A	N/A	N/A		A	13C3-PFHxS	4.54	380641.1	N/A	
PFOA	N/A	N/A	N/A		A	13C8-PFOA	4.91	1060868.3	N/A	
PFOS	N/A	N/A	N/A		A	13C8-PFOS	5.24	358159.4	N/A	
PFNA	N/A	N/A	N/A		A	13C9-PFNA	5.26	747835.1	N/A	
PFNS	N/A	N/A	N/A		A	13C8-PFOS	5.24	358159.4	N/A	
PFDA	N/A	N/A	N/A		A	13C6-PFDA	5.56	951251.3	N/A	
8:2-FTS	N/A	N/A	N/A		A	13C2-8:2-FTS	5.57	62758.6	N/A	
PFOSA	N/A	N/A	N/A		A	13C8-PFOSA	5.65	726331.4	N/A	
NMeFOSAA	N/A	N/A	N/A		A	d3-NMeFOSAA	5.70	279222.6	N/A	
PFDS	N/A	N/A	N/A		A	13C8-PFOS	5.24	358159.4	N/A	
PFUnDA	N/A	N/A	N/A		A	13C7-PFUnDA	5.82	639126.9	N/A	
NEtFOSAA	N/A	N/A	N/A		A	d5-NEtFOSAA	5.83	158699.3	N/A	
PFDoDA	N/A	N/A	N/A		A	13C2-PFDoDA	6.04	1215903.7	N/A	
10:2-FTS	N/A	N/A	N/A		A	13C2-8:2-FTS	5.57	62758.6	N/A	
NMePFOSAE	N/A	N/A	N/A		A	d7-NMePFOSAE	6.09	302120.4	N/A	
NMePFOSA	N/A	N/A	N/A		A	d3-NMePFOSA	6.10	101225.5	N/A	
PFDoS	N/A	N/A	N/A		A	13C8-PFOS	5.24	358159.4	N/A	
NEtPFOSAE	N/A	N/A	N/A		A	d9-NEtPFOSAE	6.25	250994.9	N/A	
NEtPFOSA	N/A	N/A	N/A		A	d5-NEtPFOSA	6.26	78115.7	N/A	
PFTrDA	N/A	N/A	N/A		A	13C2-PFDoDA	6.04	1215903.7	N/A	
PFTeDA	N/A	N/A	N/A		A	13C2-PFTeDA	6.42	927532.4	N/A	
PFHxDA	N/A	N/A	N/A		A	13C2-PFTeDA	6.42	927532.4	N/A	
PFODA	N/A	N/A	N/A		A	13C2-PFTeDA	6.42	927532.4	N/A	

Total Ion Chromatogram

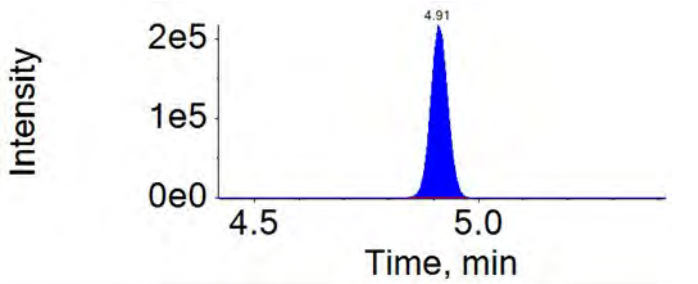


ICAL Name: 18NOV28DCAL **Result Table:** 18NOV29DCCV6-9 11/30/2018 3:21:11 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

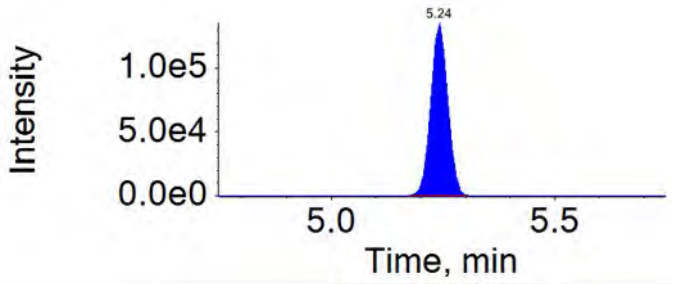
Injection Standard: 13C3-PFBA
216.0 / 172.0



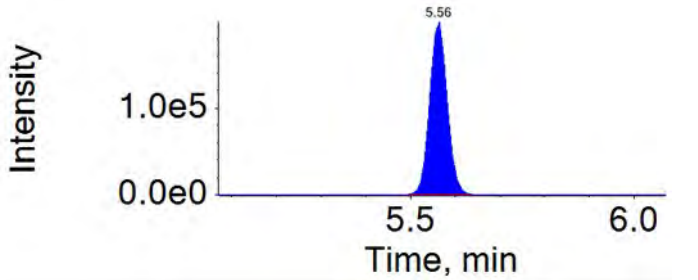
Injection Standard: 13C2-PFOA
415.0 / 370.0



Injection Standard: 13C4-PFOS
503.0 / 80.0

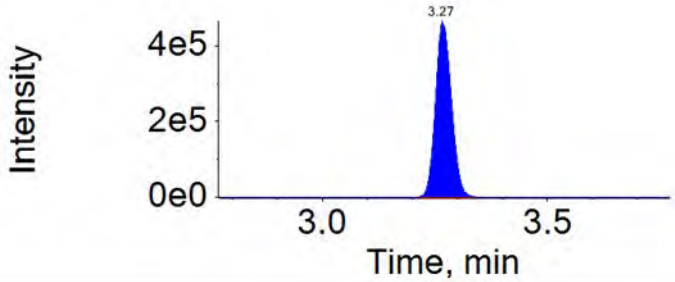


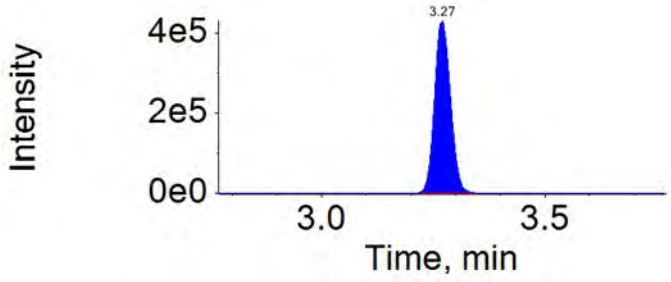
Injection Standard: 13C2-PFDA
515.0 / 470.0



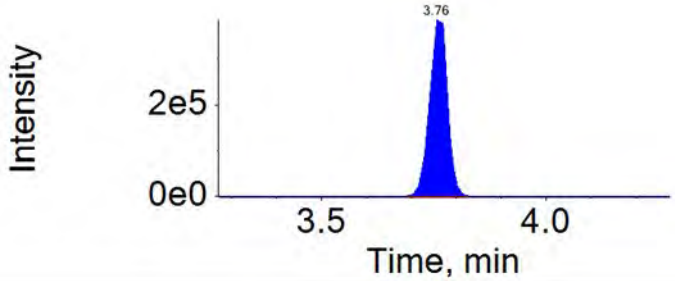
ICAL Name: 18NOV28DCAL **Result Table:** 18NOV29DCCV6-9 11/30/2018 3:21:11 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

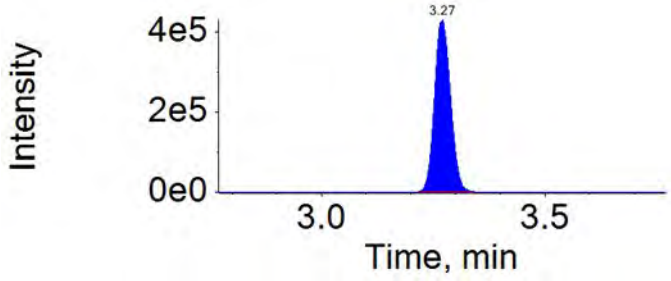
Extraction Standard: E13C4-PFBA	Injection Standard: 13C3-PFBA
217.0 / 172.0	216.0 / 172.0



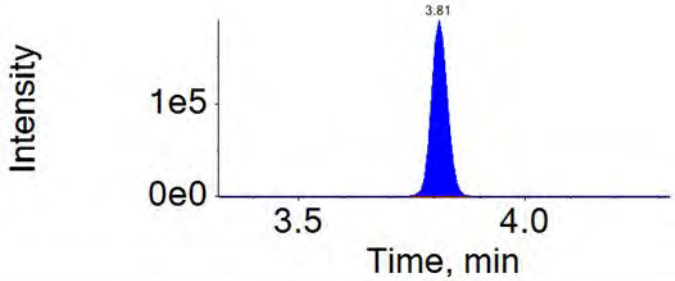


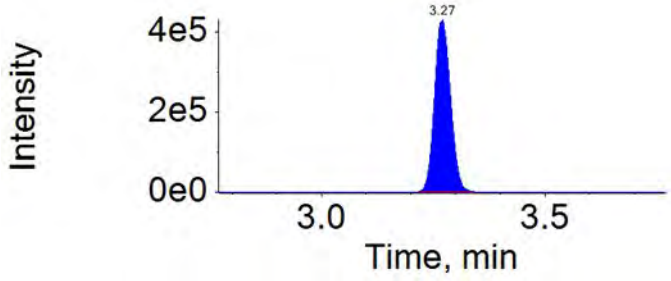
Extraction Standard: E13C5-PFPeA	Injection Standard: 13C3-PFBA
268.0 / 223.0	216.0 / 172.0



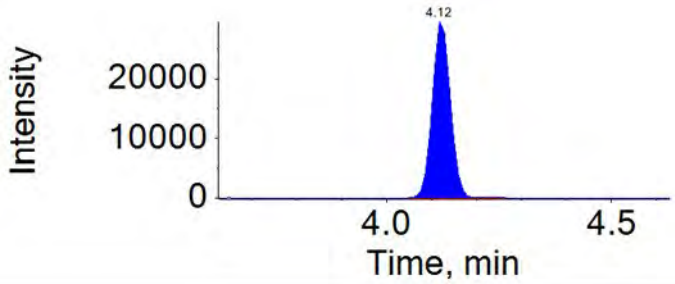


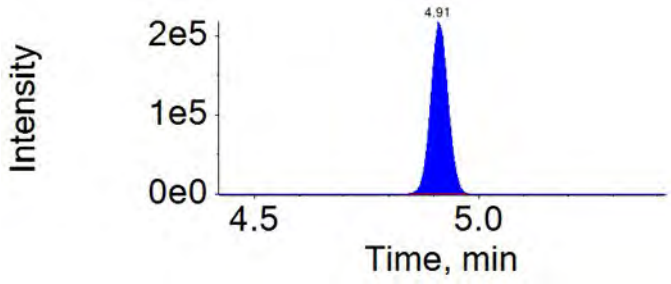
Extraction Standard: E13C3-PFBS	Injection Standard: 13C3-PFBA
302.0 / 80.0	216.0 / 172.0





Extraction Standard: E13C2-4:2-FTS	Injection Standard: 13C2-PFOA
329.0 / 81.0	415.0 / 370.0

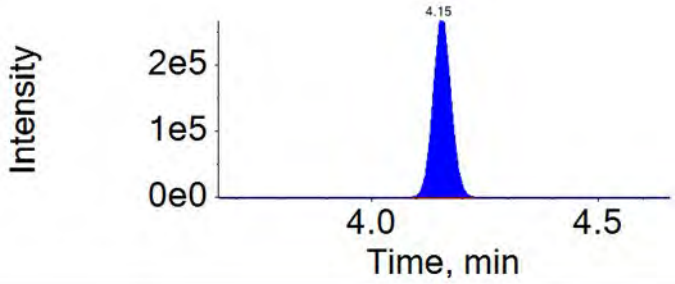




ICAL Name: 18NOV28DCAL **Result Table:** 18NOV29DCCV6-9 11/30/2018 3:21:11 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

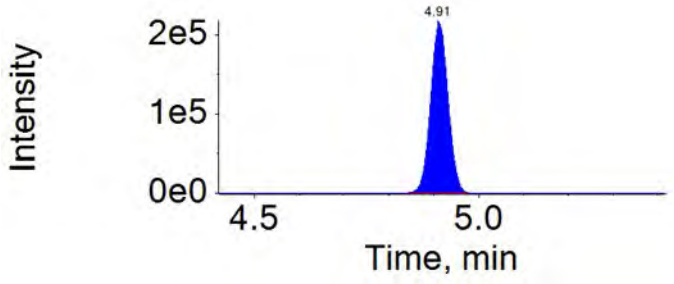
Extraction Standard: E13C5-PFHxA

318.0 / 273.0



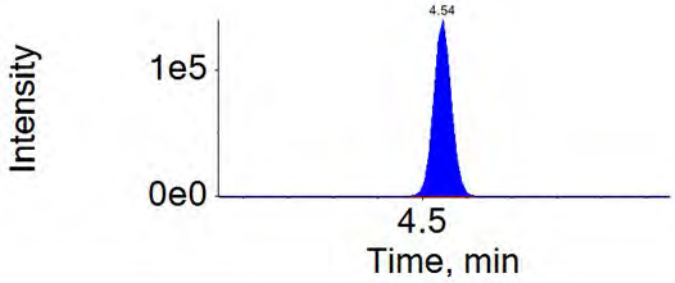
Injection Standard: 13C2-PFOA

415.0 / 370.0



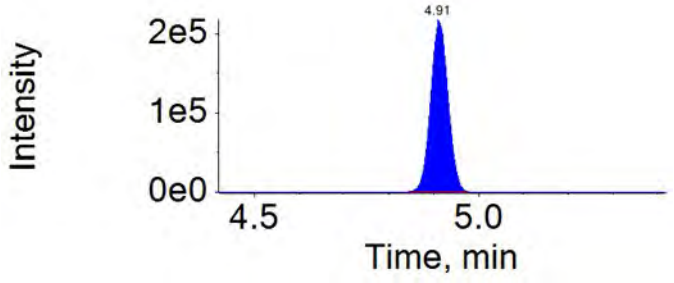
Extraction Standard: E13C3-PFHxS

402.0 / 80.0



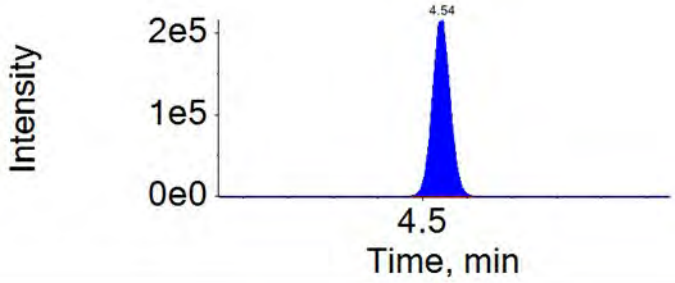
Injection Standard: 13C2-PFOA

415.0 / 370.0



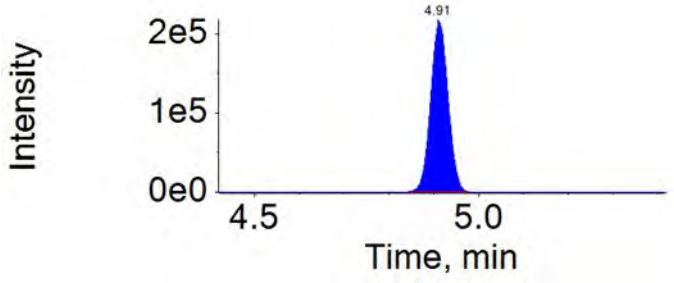
Extraction Standard: E13C4-PFHpA

367.0 / 322.0



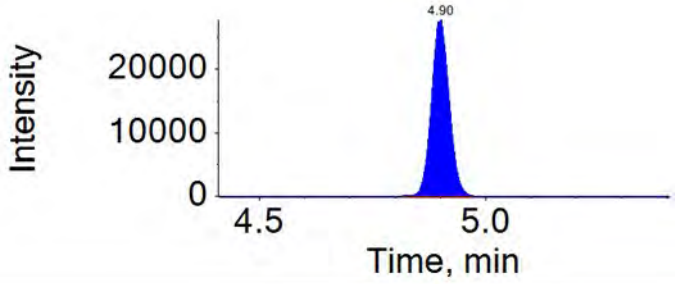
Injection Standard: 13C2-PFOA

415.0 / 370.0



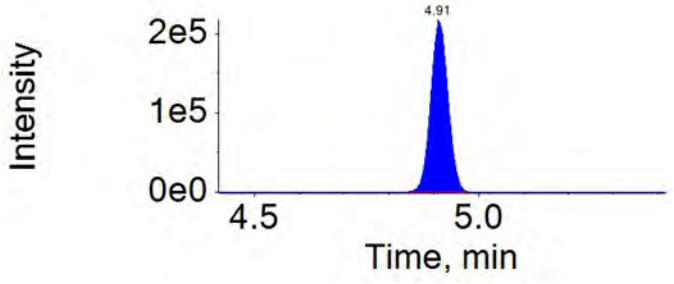
Extraction Standard: E13C2-6:2-FTS

429.0 / 81.0



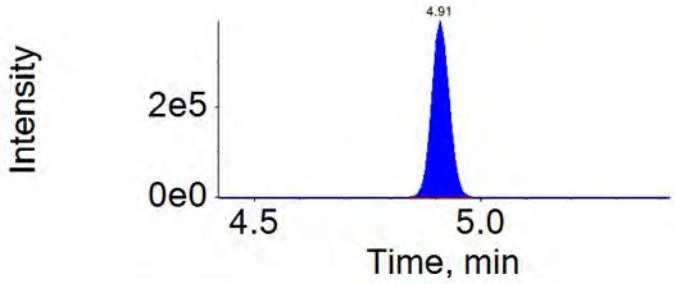
Injection Standard: 13C2-PFOA

415.0 / 370.0

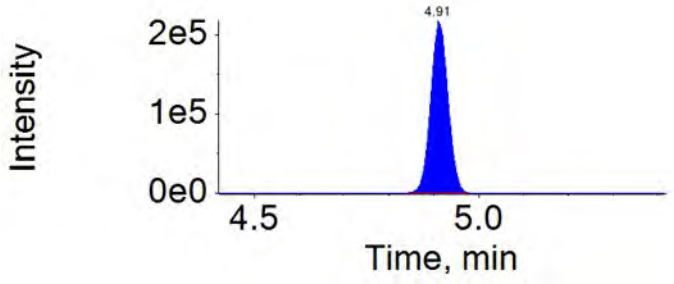


ICAL Name: 18NOV28DCAL **Result Table:** 18NOV29DCCV6-9 11/30/2018 3:21:11 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

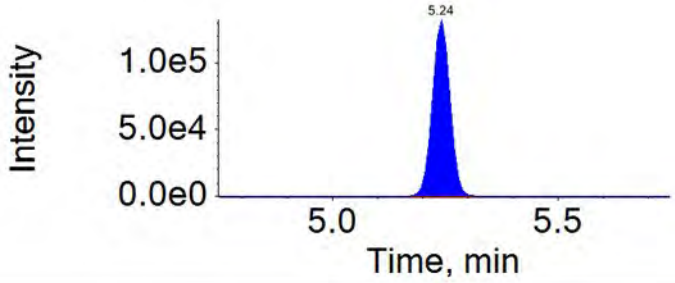
Extraction Standard: E13C8-PFOA
421.0 / 376.0



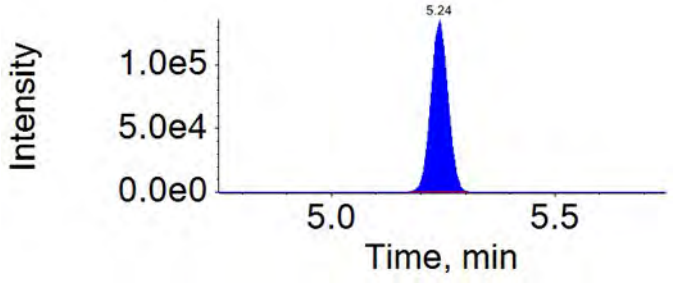
Injection Standard: 13C2-PFOA
415.0 / 370.0



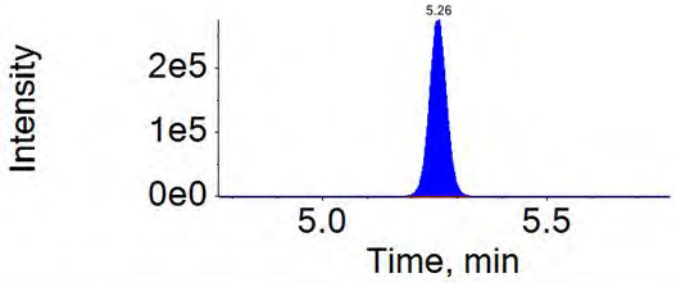
Extraction Standard: E13C8-PFOS
507.0 / 80.0



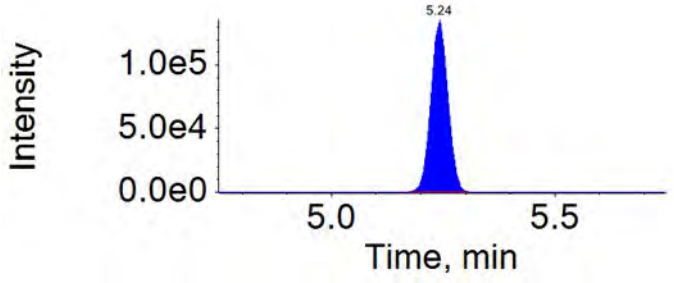
Injection Standard: 13C4-PFOS
503.0 / 80.0



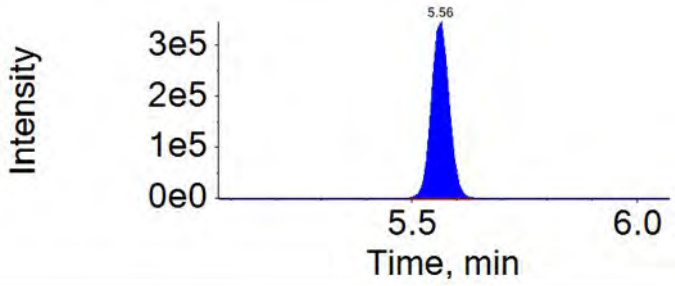
Extraction Standard: E13C9-PFNA
472.0 / 427.0



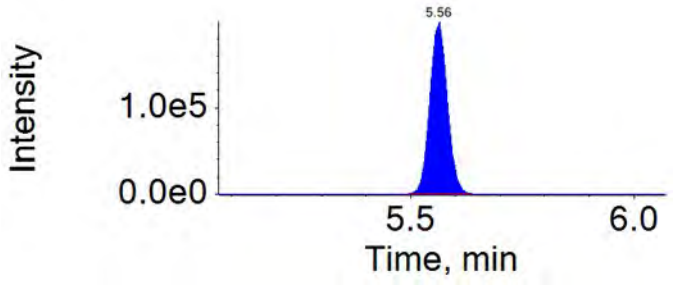
Injection Standard: 13C4-PFOS
503.0 / 80.0



Extraction Standard: E13C6-PFDA
519.0 / 474.0

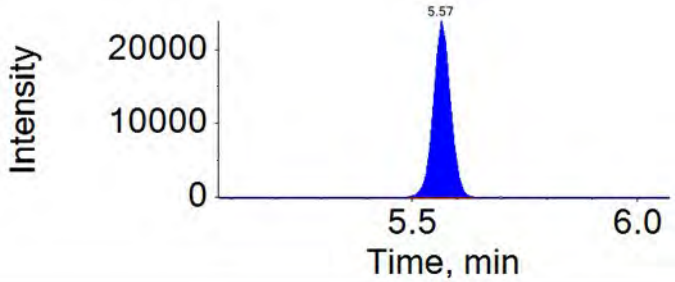


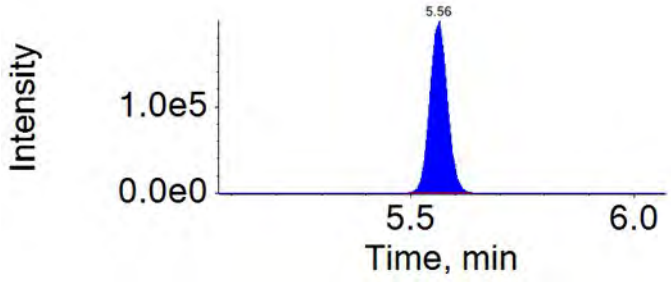
Injection Standard: 13C2-PFDA
515.0 / 470.0



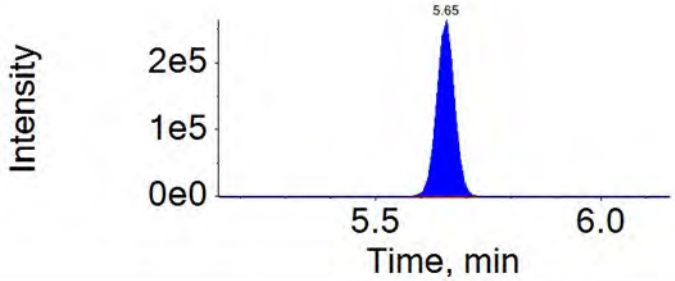
ICAL Name: 18NOV28DCAL **Result Table:** 18NOV29DCCV6-9 11/30/2018 3:21:11 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

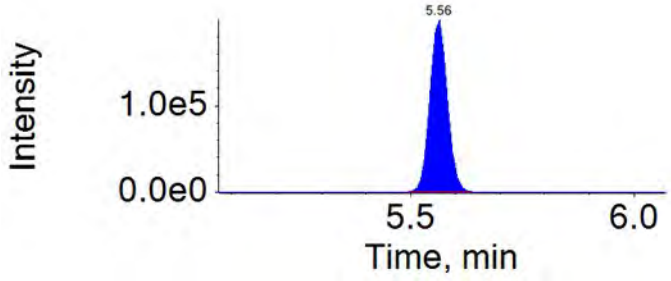
Extraction Standard: E13C2-8:2-FTS	Injection Standard: 13C2-PFDA
529.0 / 81.0	515.0 / 470.0



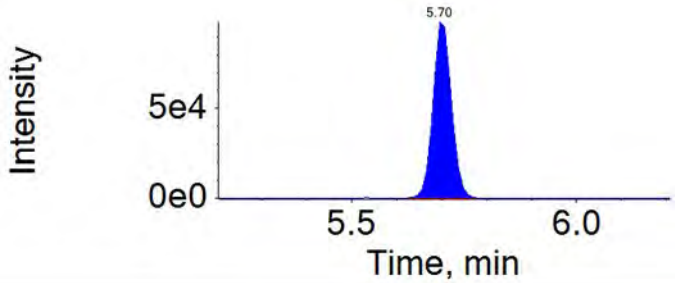


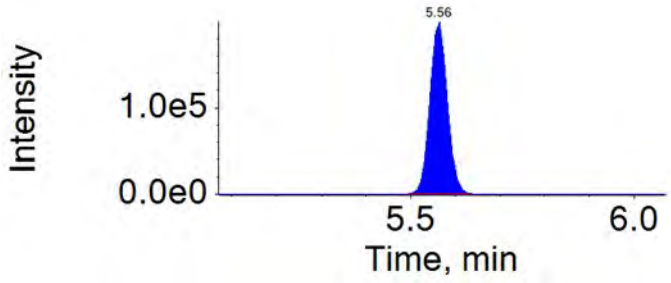
Extraction Standard: E13C8-PFOSA	Injection Standard: 13C2-PFDA
506.0 / 78.0	515.0 / 470.0



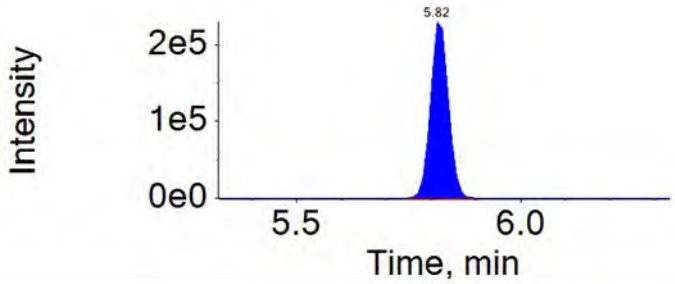


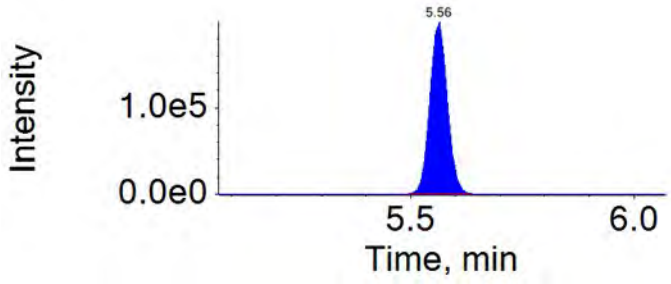
Extraction Standard: Ed3-NMeFOSAA	Injection Standard: 13C2-PFDA
573.0 / 419.0	515.0 / 470.0





Extraction Standard: E13C7-PFUnDA	Injection Standard: 13C2-PFDA
570.0 / 525.0	515.0 / 470.0



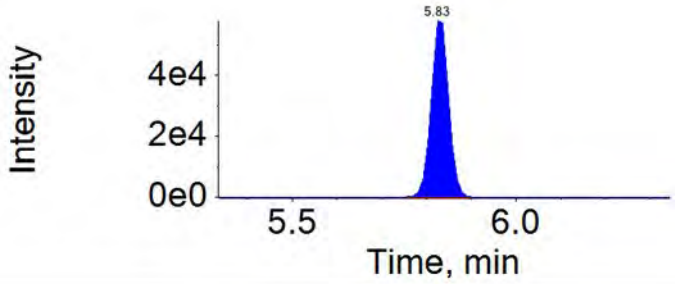


APPROVED
By MCD at 3:27 pm, 11/30/18

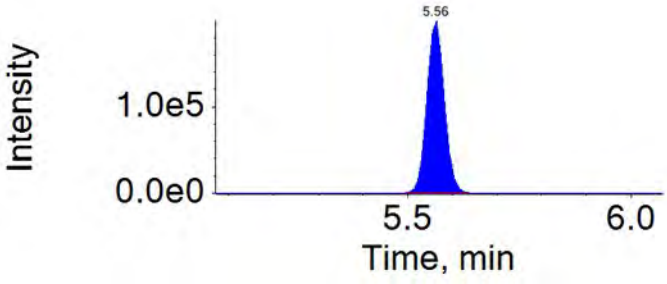
REVIEWED
By UMJS at 3:33 pm, 12/11/18

ICAL Name: 18NOV28DCAL **Result Table:** 18NOV29DCCV6-9 11/30/2018 3:21:11 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

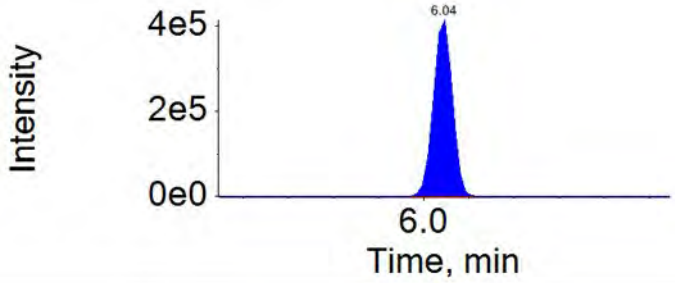
Extraction Standard: Ed5-NEtFOSAA
589.0 / 419.0



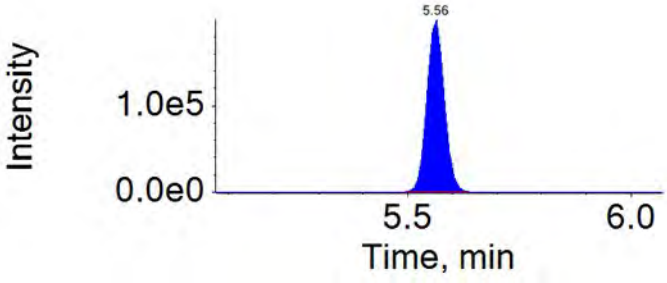
Injection Standard: 13C2-PFDA
515.0 / 470.0



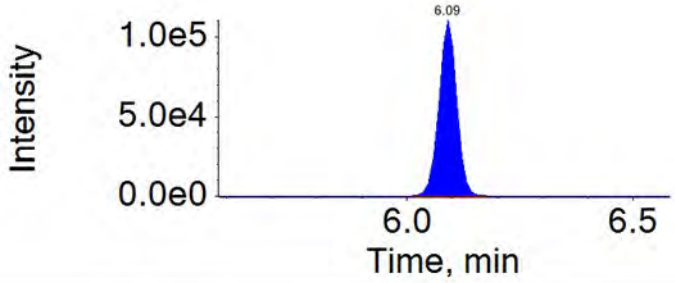
Extraction Standard: E13C2-PFDoDA
615.0 / 570.0



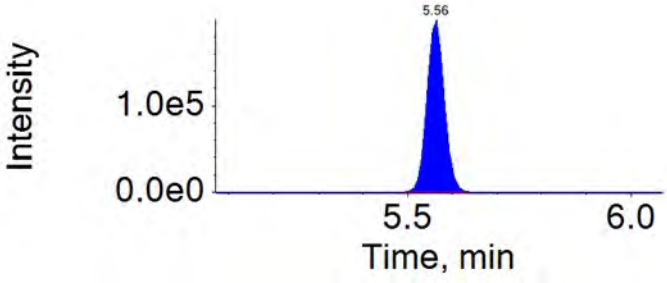
Injection Standard: 13C2-PFDA
515.0 / 470.0



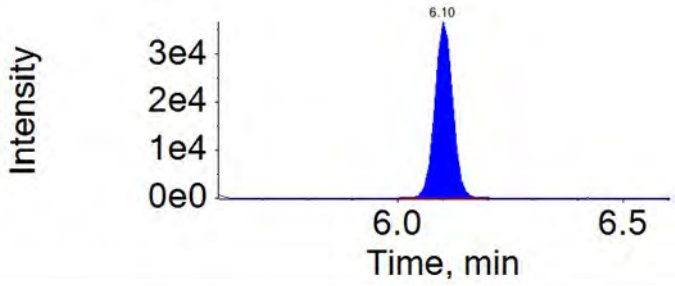
Extraction Standard: Ed7-NMePFOSAE
623.0 / 59.0



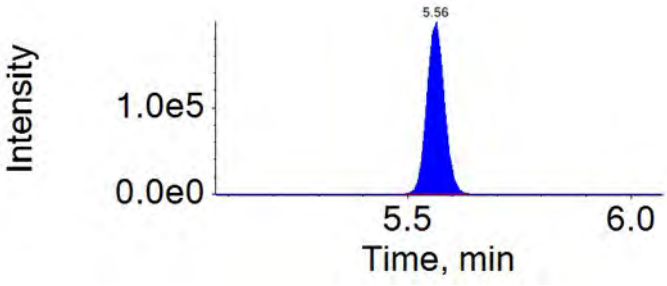
Injection Standard: 13C2-PFDA
515.0 / 470.0



Extraction Standard: Ed3-NMePFOSA
515.0 / 169.0

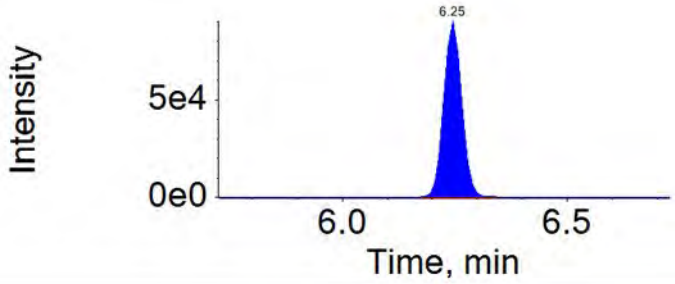


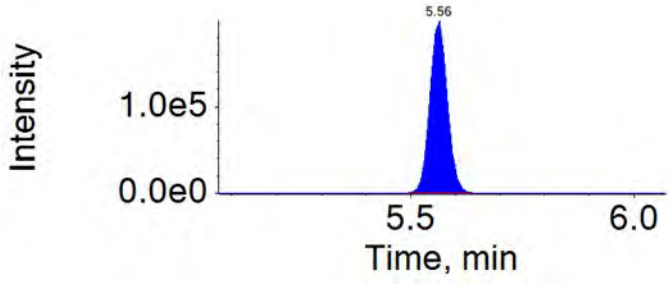
Injection Standard: 13C2-PFDA
515.0 / 470.0



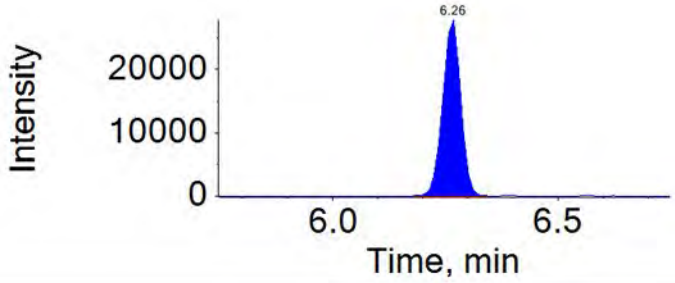
ICAL Name: 18NOV28DCAL **Result Table:** 18NOV29DCCV6-9 11/30/2018 3:21:11 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

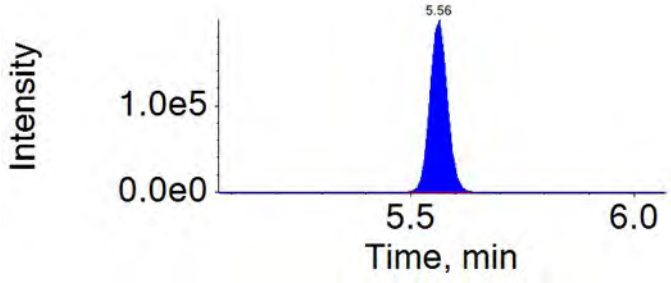
Extraction Standard: Ed9-NEtPFOSAE	Injection Standard: 13C2-PFDA
639.0 / 59.0	515.0 / 470.0



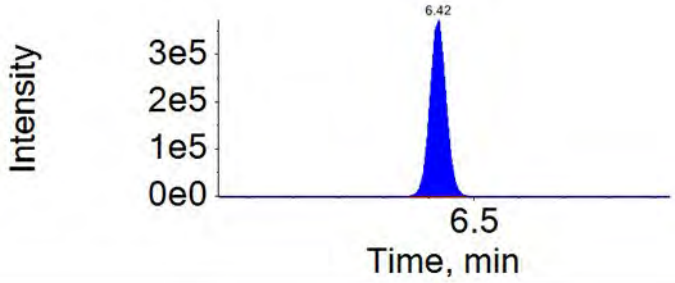


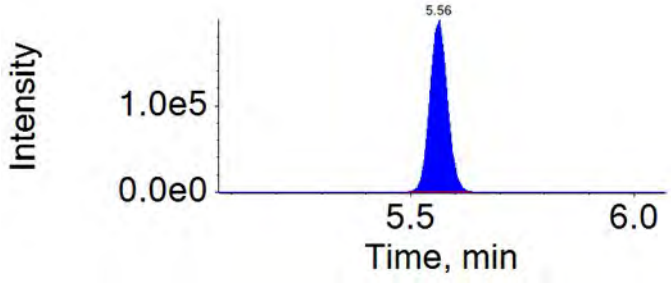
Extraction Standard: Ed5-NEtPFOSA	Injection Standard: 13C2-PFDA
531.0 / 169.0	515.0 / 470.0





Extraction Standard: E13C2-PFTeDA	Injection Standard: 13C2-PFDA
715.0 / 670.0	515.0 / 470.0



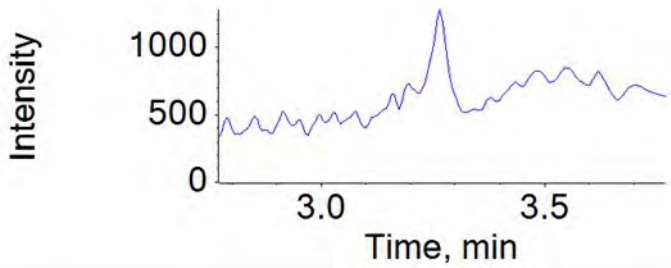


APPROVED
By MCD at 3:27 pm, 11/30/18

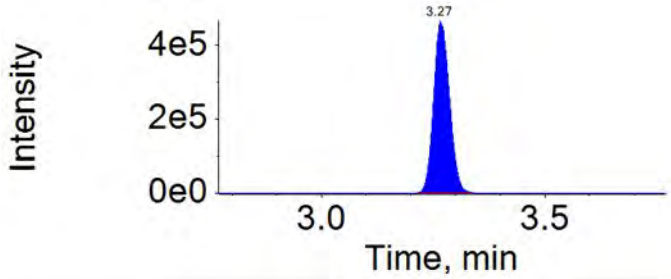
REVIEWED
By UMJS at 3:33 pm, 12/11/18

ICAL Name: 18NOV28DCAL **Result Table:** 18NOV29DCCV6-9 11/30/2018 3:21:11 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

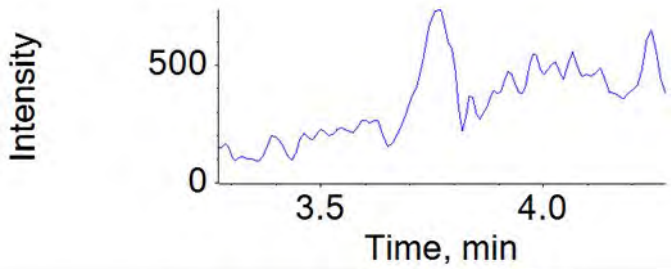
Analyte: PFBA
213.0 / 169.0



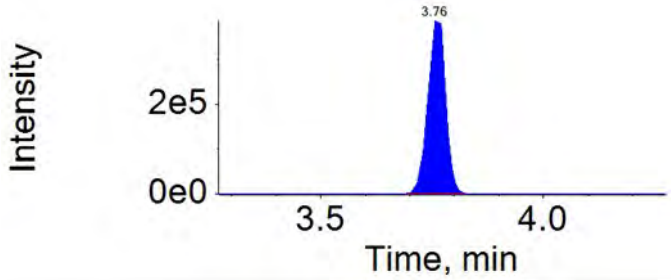
Extraction Standard: 13C4-PFBA
217.0 / 172.0



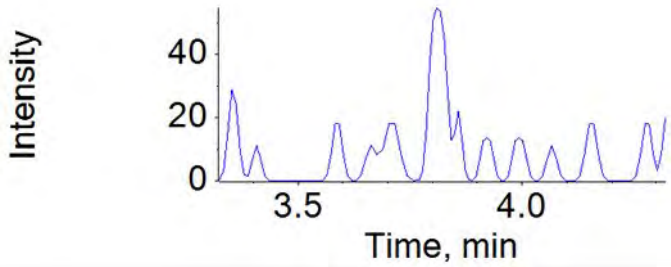
Analyte: PFPeA
263.0 / 219.0



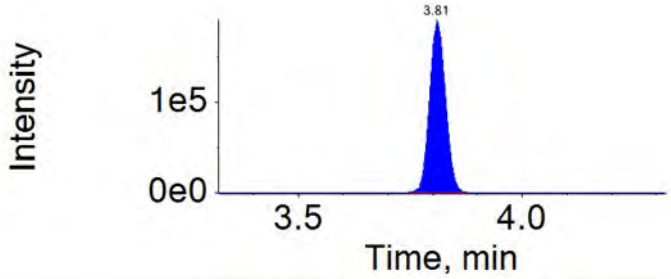
Extraction Standard: 13C5-PFPeA
268.0 / 223.0



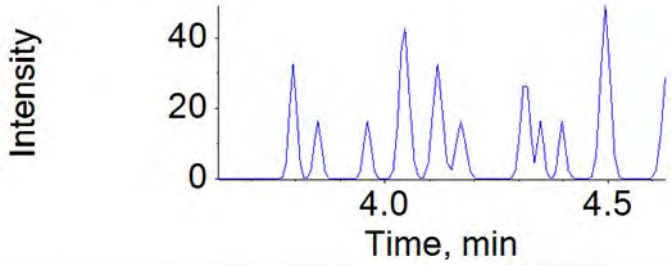
Analyte: PFBS
299.0 / 80.0



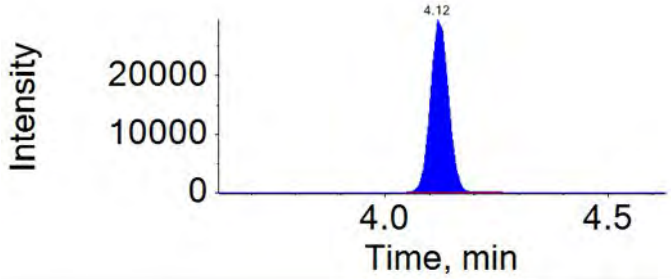
Extraction Standard: 13C3-PFBS
302.0 / 80.0



Analyte: 4:2-FTS
327.0 / 307.0

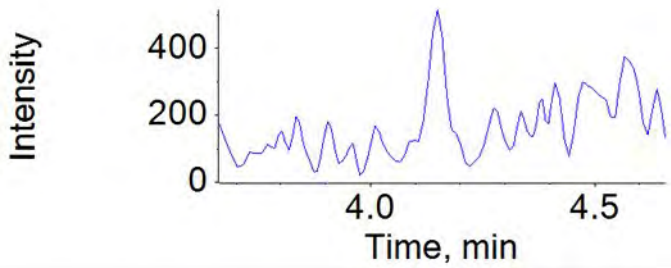


Extraction Standard: 13C2-4:2-FTS
329.0 / 81.0

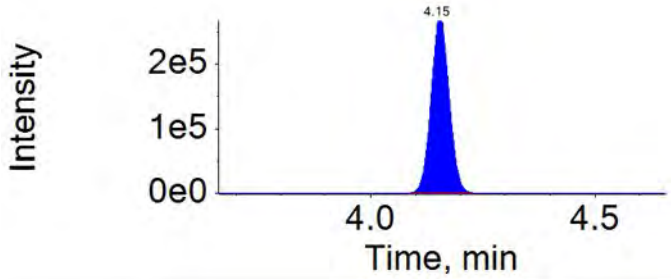


ICAL Name: 18NOV28DCAL **Result Table:** 18NOV29DCCV6-9 11/30/2018 3:21:11 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

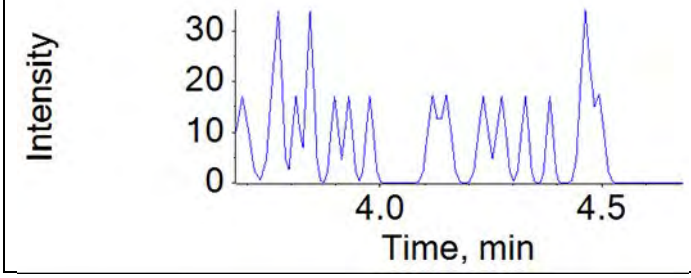
Analyte: PFHxA
313.0 / 269.0



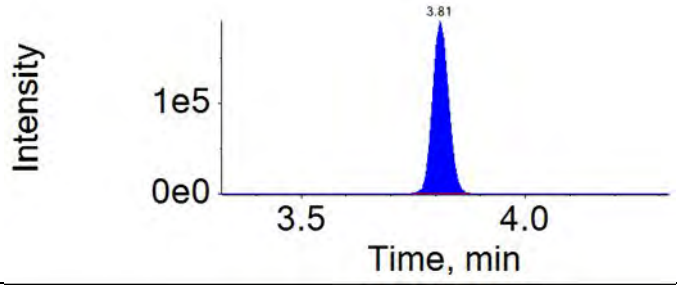
Extraction Standard: 13C5-PFHxA
318.0 / 273.0



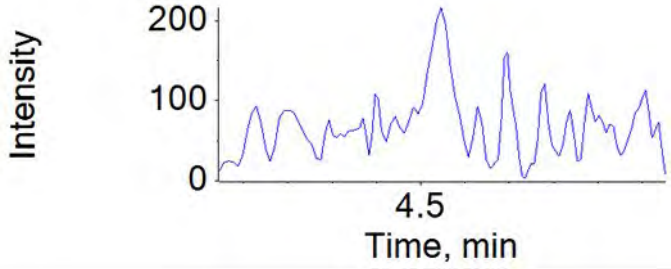
Analyte: PFPeS
349.0 / 80.0



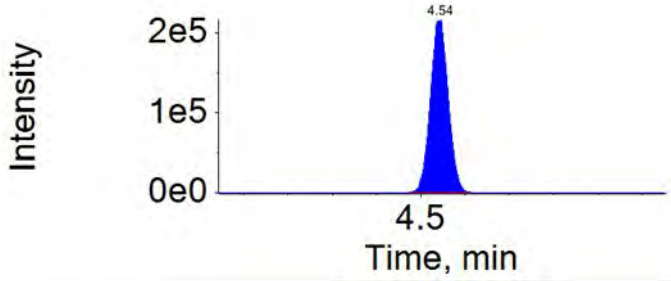
Extraction Standard: 13C3-PFBS
302.0 / 80.0



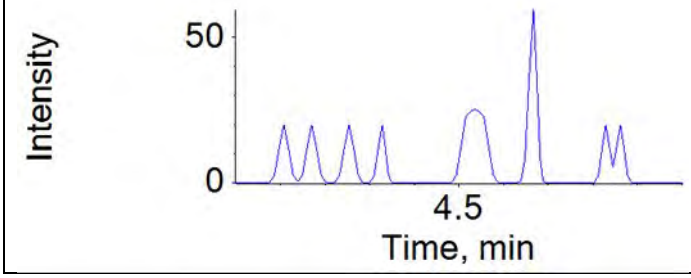
Analyte: PFHpA
363.0 / 319.0



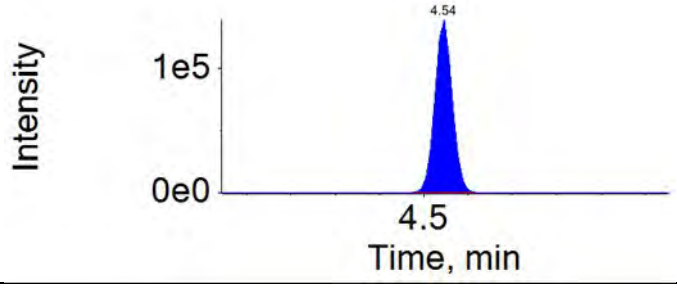
Extraction Standard: 13C4-PFHpA
367.0 / 322.0



Analyte: PFHxS
399.0 / 80.0

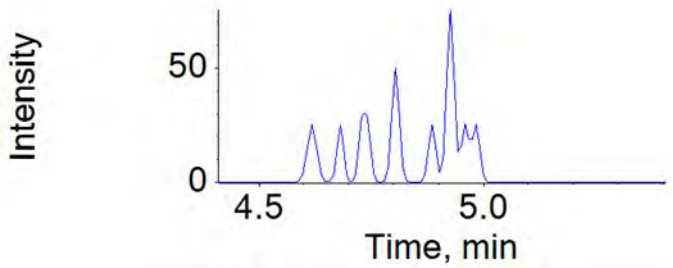


Extraction Standard: 13C3-PFHxS
402.0 / 80.0

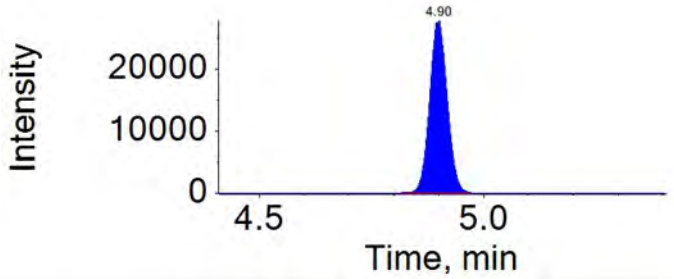


ICAL Name: 18NOV28DCAL **Result Table:** 18NOV29DCCV6-9 11/30/2018 3:21:11 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

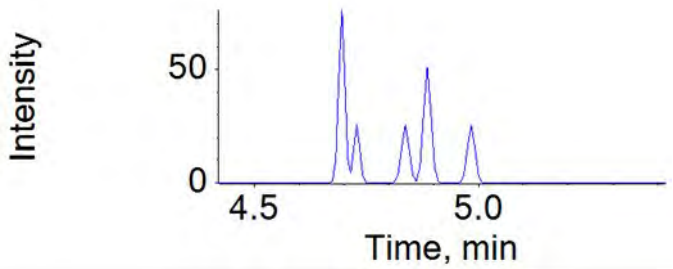
Analyte: 6:2-FTS
427.0 / 407.0



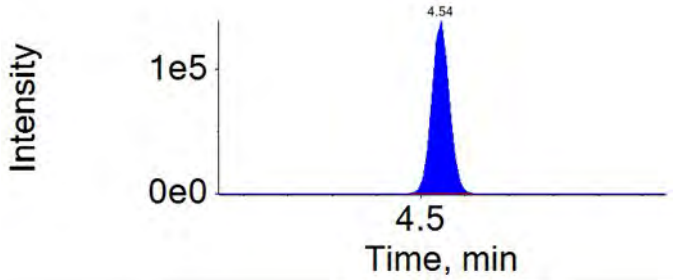
Extraction Standard: 13C2-6:2-FTS
429.0 / 81.0



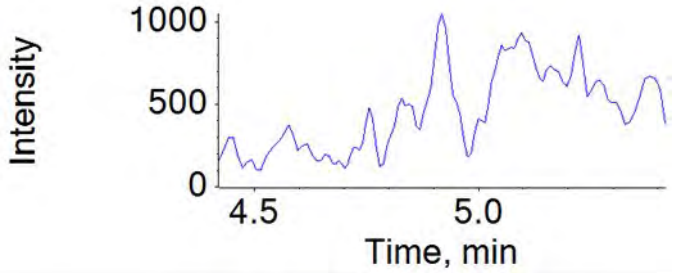
Analyte: PFHpS
449.0 / 80.0



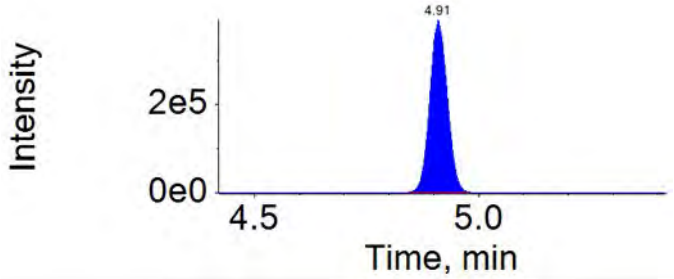
Extraction Standard: 13C3-PFHxS
402.0 / 80.0



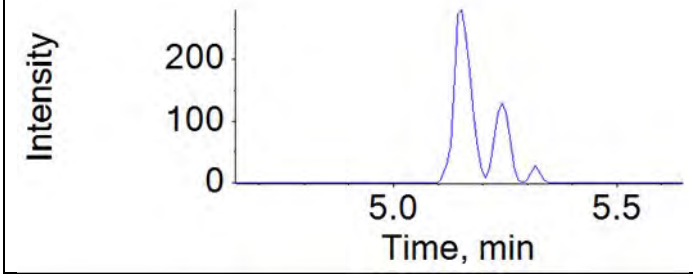
Analyte: PFOA
413.0 / 369.0



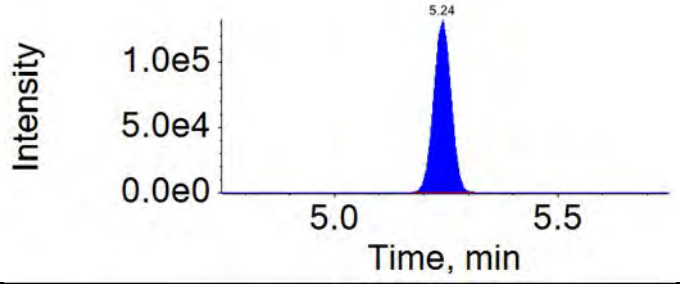
Extraction Standard: 13C8-PFOA
421.0 / 376.0



Analyte: PFOS
499.0 / 80.0

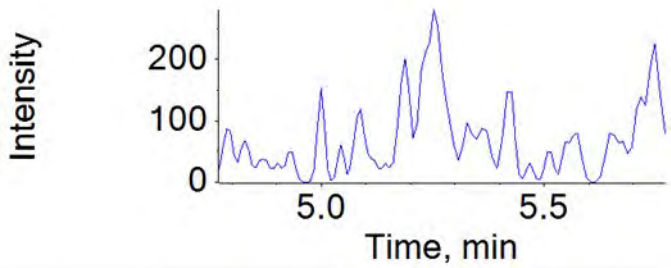


Extraction Standard: 13C8-PFOS
507.0 / 80.0

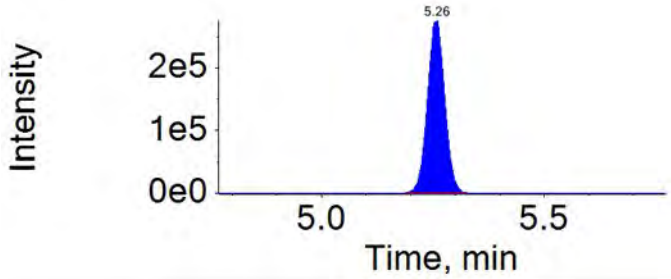


ICAL Name: 18NOV28DCAL **Result Table:** 18NOV29DCCV6-9 11/30/2018 3:21:11 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

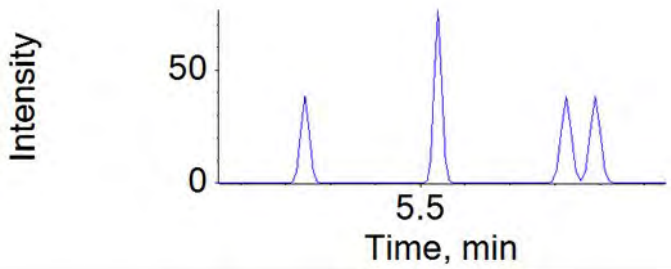
Analyte: PFNA
463.0 / 419.0



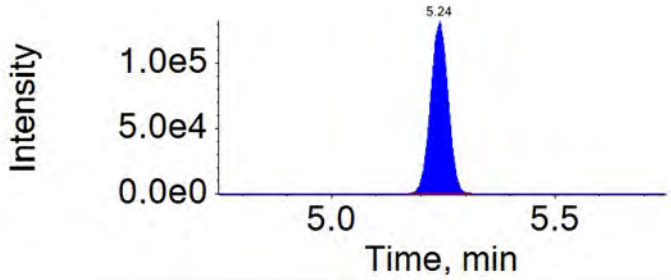
Extraction Standard: 13C9-PFNA
472.0 / 427.0



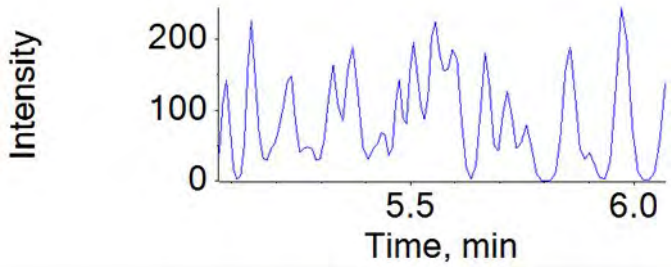
Analyte: PFNS
549.0 / 80.0



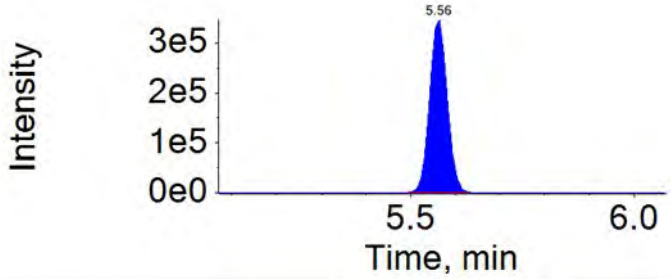
Extraction Standard: 13C8-PFOS
507.0 / 80.0



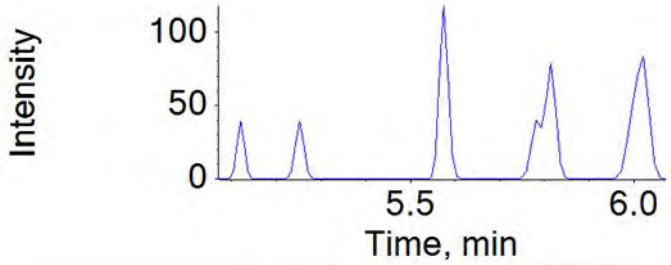
Analyte: PFDA
513.0 / 469.0



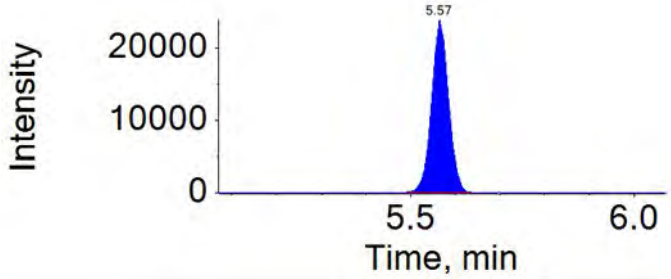
Extraction Standard: 13C6-PFDA
519.0 / 474.0



Analyte: 8:2-FTS
527.0 / 507.0

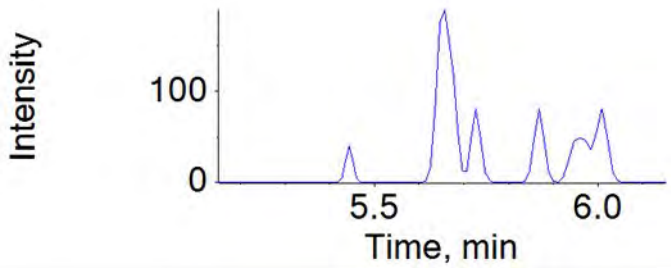


Extraction Standard: 13C2-8:2-FTS
529.0 / 81.0

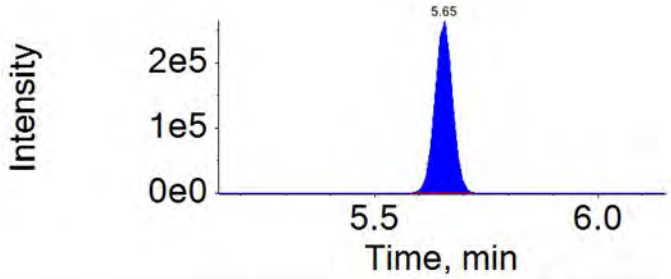


ICAL Name: 18NOV28DCAL **Result Table:** 18NOV29DCCV6-9 11/30/2018 3:21:11 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

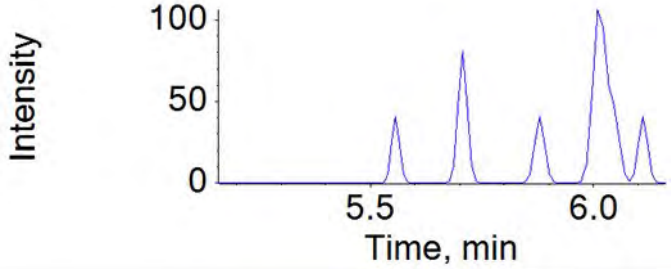
Analyte: PFOSA
498.0 / 78.0



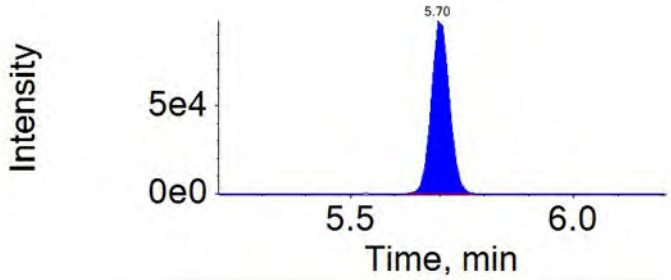
Extraction Standard: 13C8-PFOSA
506.0 / 78.0



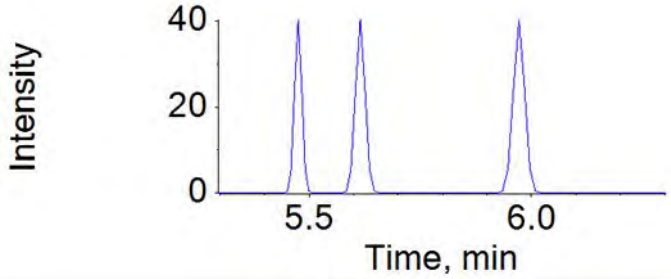
Analyte: NMeFOSAA
570.0 / 419.0



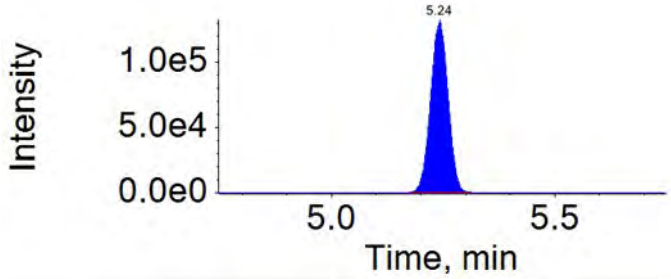
Extraction Standard: d3-NMeFOSAA
573.0 / 419.0



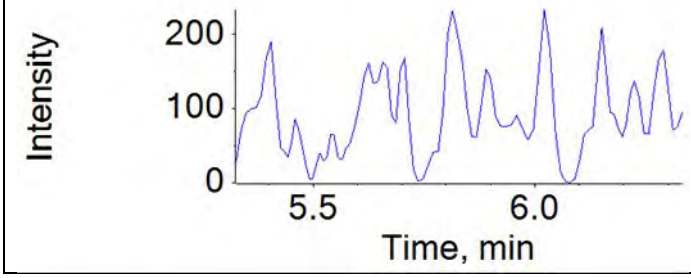
Analyte: PFDS
599.0 / 80.0



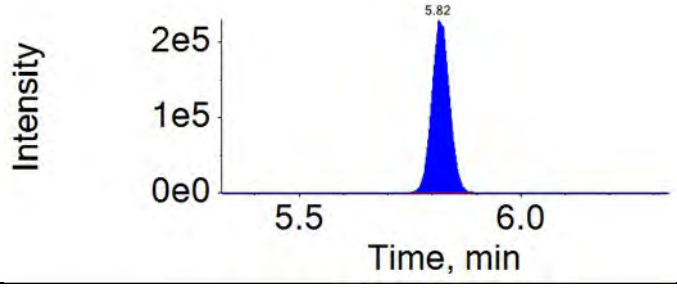
Extraction Standard: 13C8-PFOS
507.0 / 80.0



Analyte: PFUnDA
563.0 / 519.0

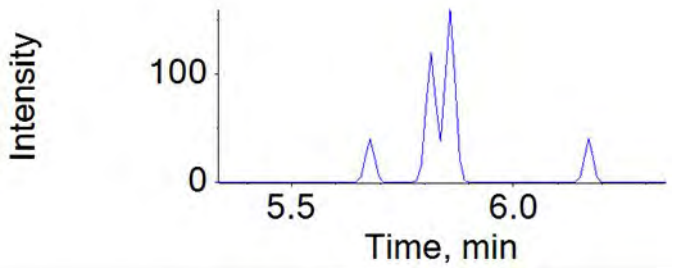


Extraction Standard: 13C7-PFUnDA
570.0 / 525.0

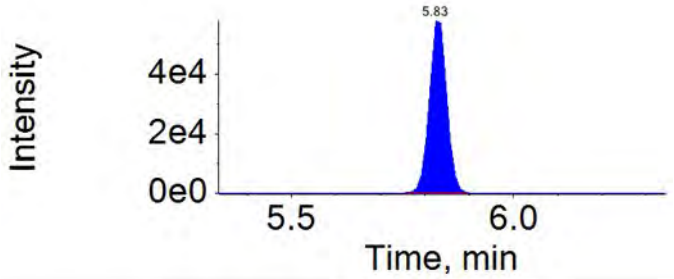


ICAL Name: 18NOV28DCAL **Result Table:** 18NOV29DCCV6-9 11/30/2018 3:21:11 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

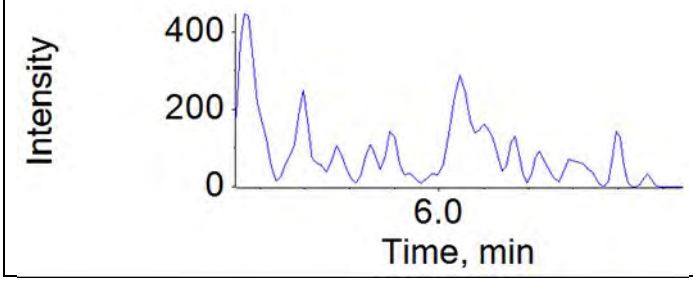
Analyte: NEtFOSAA
584.0 / 419.0



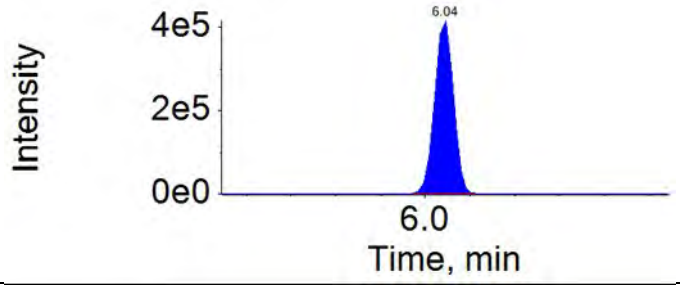
Extraction Standard: d5-NEtFOSAA
589.0 / 419.0



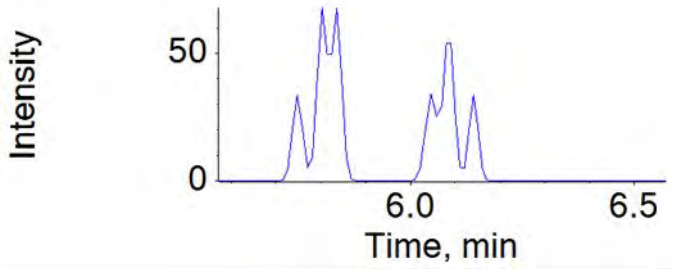
Analyte: PFDoDA
613.0 / 569.0



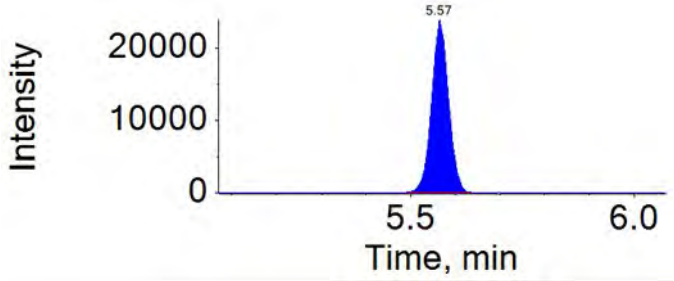
Extraction Standard: 13C2-PFDoDA
615.0 / 570.0



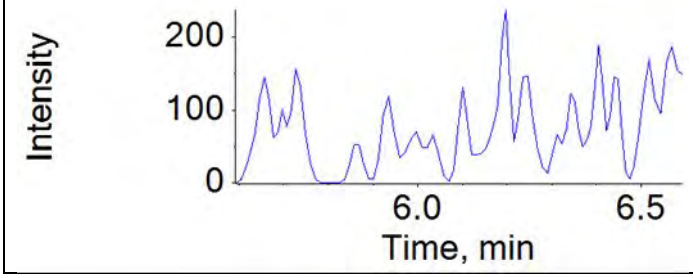
Analyte: 10:2-FTS
627.0 / 607.0



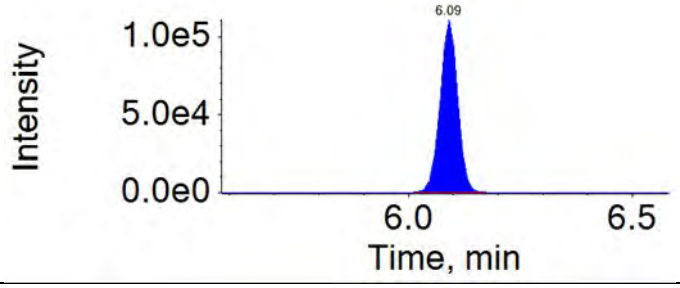
Extraction Standard: 13C2-8:2-FTS
529.0 / 81.0



Analyte: NMePFOSAE
616.0 / 59.0

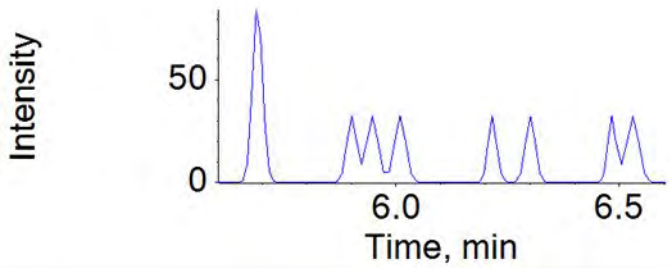


Extraction Standard: d7-NMePFOSAE
623.0 / 59.0

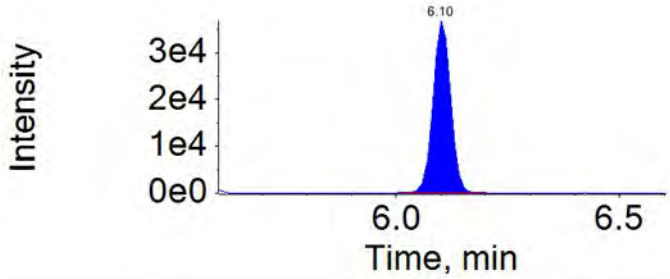


ICAL Name: 18NOV28DCAL **Result Table:** 18NOV29DCCV6-9 11/30/2018 3:21:11 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

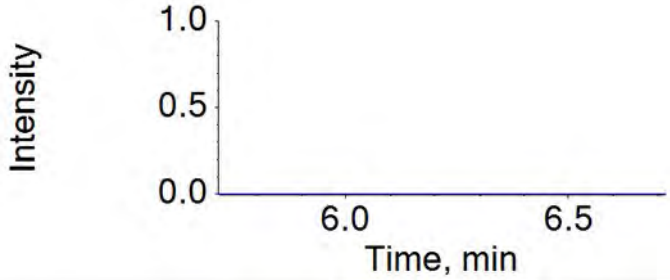
Analyte: NMePFOSA
512.0 / 169.0



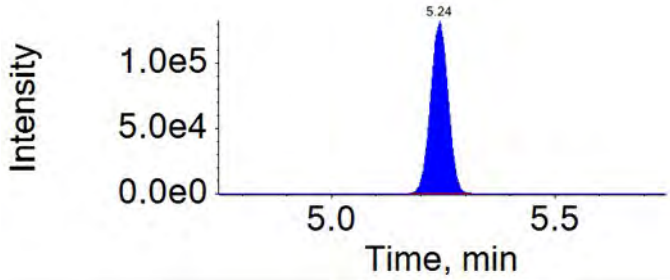
Extraction Standard: d3-NMePFOSA
515.0 / 169.0



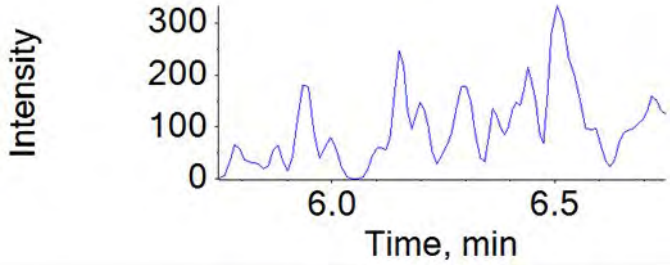
Analyte: PFDoS
699.0 / 80.0



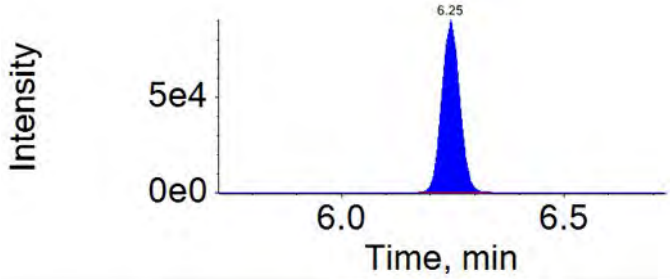
Extraction Standard: 13C8-PFOS
507.0 / 80.0



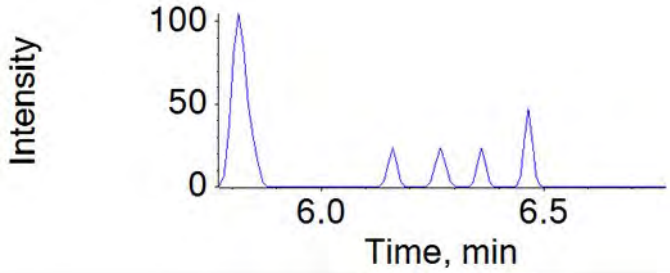
Analyte: NEtPFOSAE
630.0 / 59.0



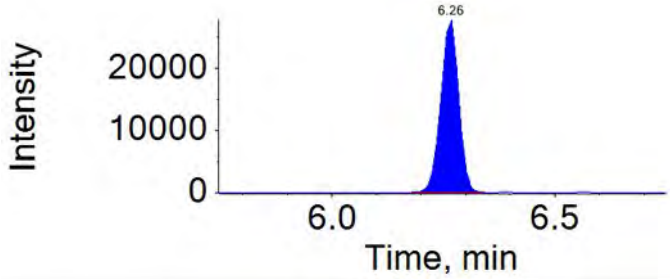
Extraction Standard: d9-NEtPFOSAE
639.0 / 59.0



Analyte: NEtPFOSA
526.0 / 169.0

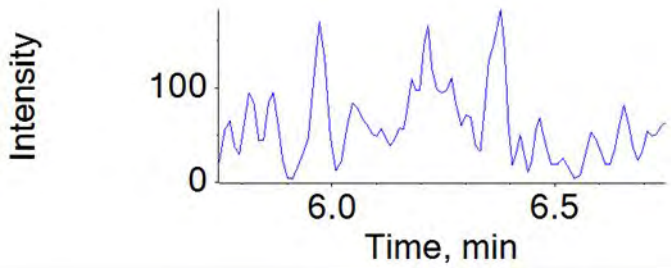


Extraction Standard: d5-NEtPFOSA
531.0 / 169.0

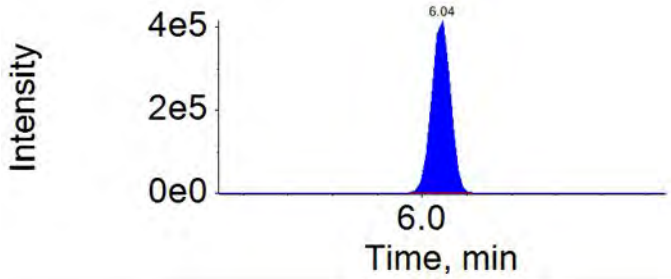


ICAL Name: 18NOV28DCAL **Result Table:** 18NOV29DCCV6-9 11/30/2018 3:21:11 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

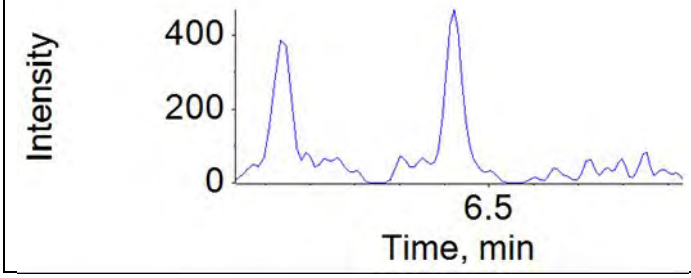
Analyte: PFTrDA
663.0 / 619.0



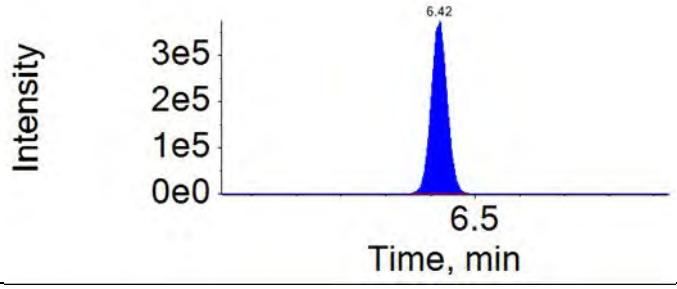
Extraction Standard: 13C2-PFDoDA
615.0 / 570.0



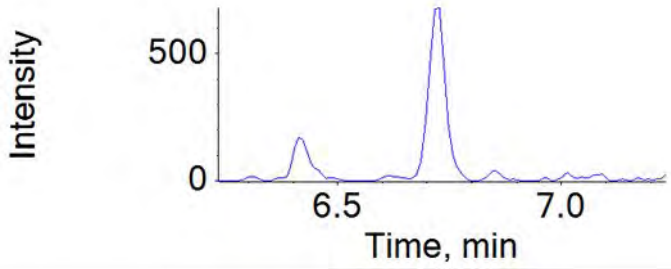
Analyte: PFTeDA
713.0 / 669.0



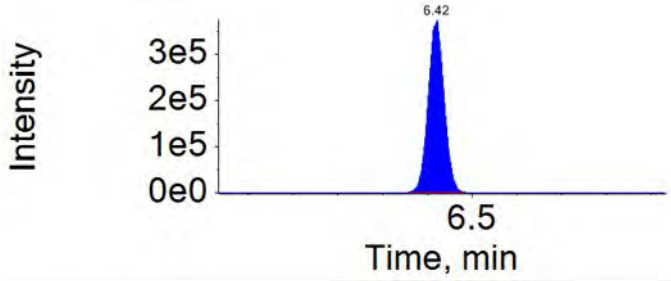
Extraction Standard: 13C2-PFTeDA
715.0 / 670.0



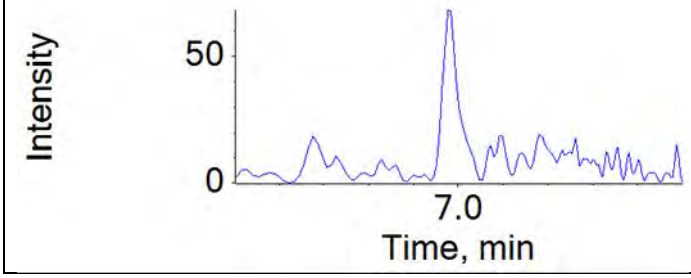
Analyte: PFHxDA
813.0 / 769.0



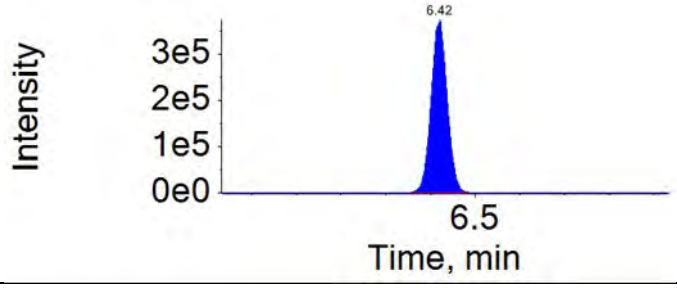
Extraction Standard: 13C2-PFTeDA
715.0 / 670.0



Analyte: PFODA
913.0 / 869.0



Extraction Standard: 13C2-PFTeDA
715.0 / 670.0



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LC-MS/MS Analysis Report

Printed: 11/30/2018 3:22:00 PM
Template: IonRatio18OCT10

Ion Ratio Report

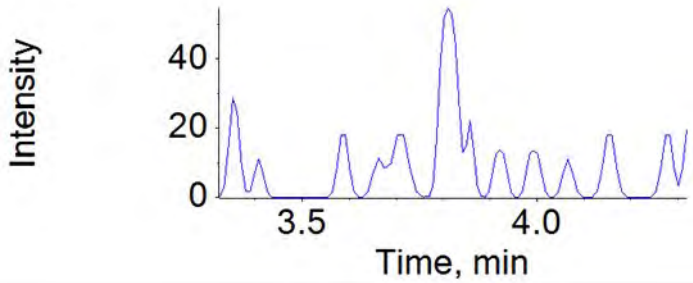
Sample Name: Instrument Blank **Instrument Name:** LM27631 **File Name:** 18NOV29D-73.wiff

Component Name	RT	RRT	Analyte Area Response	Int Typ	Expected Ion Ratio	Ion Ratio	Ion Ratio % Diff	Ion Ratio Limit	Ion Ratio OOS
PFBS	N/A	N/A	N/A	A	N/A	N/A			
PFBS_2	N/A	N/A	N/A	A	N/A	N/A		50	
4:2-FTS	N/A	N/A	N/A	A	N/A	N/A			
4:2-FTS_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFHxA	N/A	N/A	N/A	A	N/A	N/A			
PFHxA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFPeS	N/A	N/A	N/A	A	N/A	N/A			
PFPeS_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFHpA	N/A	N/A	N/A	A	N/A	N/A			
PFHpA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFHxS	N/A	N/A	N/A	A	N/A	N/A			
PFHxS_2	N/A	N/A	N/A	A	N/A	N/A		50	
6:2-FTS	N/A	N/A	N/A	A	N/A	N/A			
6:2-FTS_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFHpS	N/A	N/A	N/A	A	N/A	N/A			
PFHpS_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFOA	N/A	N/A	N/A	A	N/A	N/A			
PFOA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFOS	N/A	N/A	N/A	A	N/A	N/A			
PFOS_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFNA	N/A	N/A	N/A	A	N/A	N/A			
PFNA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFNS	N/A	N/A	N/A	A	N/A	N/A			
PFNS_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFDA	N/A	N/A	N/A	A	N/A	N/A			
PFDA_2	N/A	N/A	N/A	A	N/A	N/A		50	
8:2-FTS	N/A	N/A	N/A	A	N/A	N/A			
8:2-FTS_2	N/A	N/A	N/A	A	N/A	N/A		50	
NMeFOSAA	N/A	N/A	N/A	A	N/A	N/A			
NMeFOSAA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFDS	N/A	N/A	N/A	A	N/A	N/A			
PFDS_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFUnDA	N/A	N/A	N/A	A	N/A	N/A			
PFUnDA_2	N/A	N/A	N/A	A	N/A	N/A		50	
NEtFOSAA	N/A	N/A	N/A	A	N/A	N/A			
NEtFOSAA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFDoDA	N/A	N/A	N/A	A	N/A	N/A			
PFDoDA_2	N/A	N/A	N/A	A	N/A	N/A		50	
10:2-FTS	N/A	N/A	N/A	A	N/A	N/A			
10:2-FTS_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFTrDA	N/A	N/A	N/A	A	N/A	N/A			
PFTrDA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFTeDA	N/A	N/A	N/A	A	N/A	N/A			
PFTeDA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFHxDA	N/A	N/A	N/A	A	N/A	N/A			
PFHxDA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFODA	N/A	N/A	N/A	A	N/A	N/A			
PFODA_2	N/A	N/A	N/A	A	N/A	N/A		50	

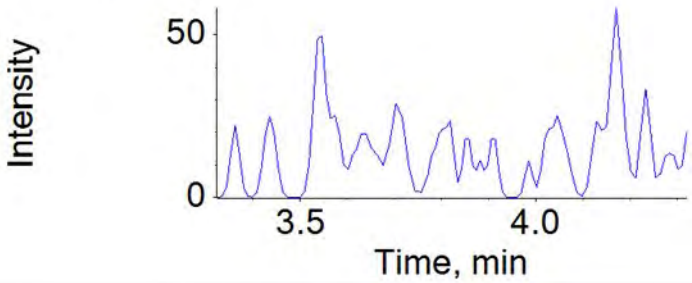
APPROVED
By MCD at 3:27 pm, 11/30/18

REVIEWED
By UMJS at 3:33 pm, 12/11/18

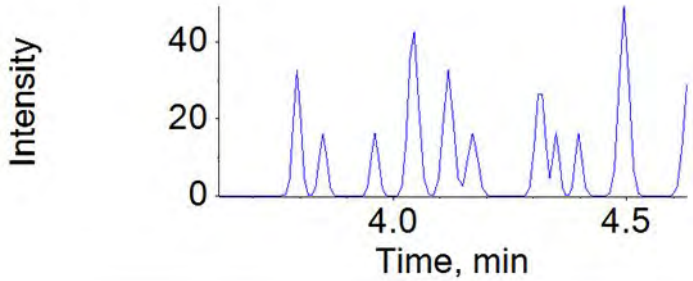
Component: PFBS
Primary Mass: 299.0 / 80.0



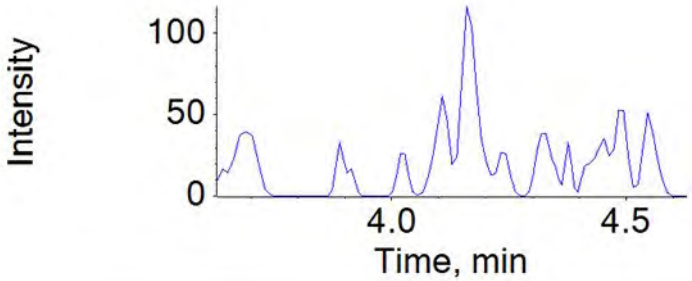
Component: PFBS_2
Secondary Mass: 299.0 / 99.0



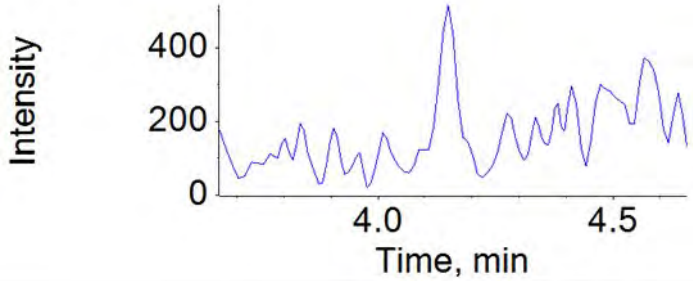
Component: 4:2-FTS
Primary Mass: 327.0 / 307.0



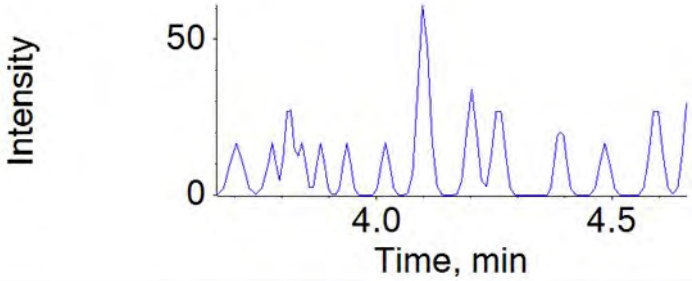
Component: 4:2-FTS_2
Secondary Mass: 327.0 / 81.0



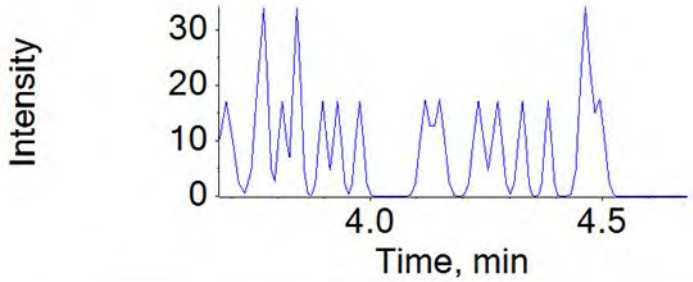
Component: PFHxA
Primary Mass: 313.0 / 269.0



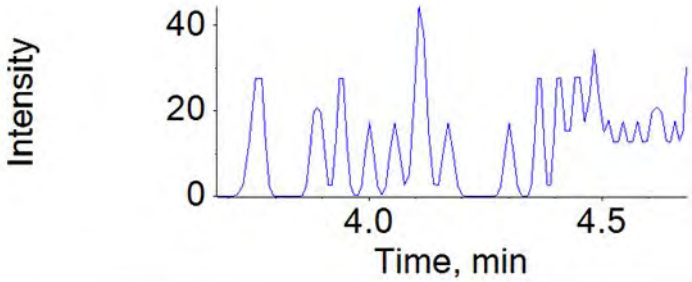
Component: PFHxA_2
Secondary Mass: 313.0 / 119.0



Component: PFPeS
Primary Mass: 349.0 / 80.0



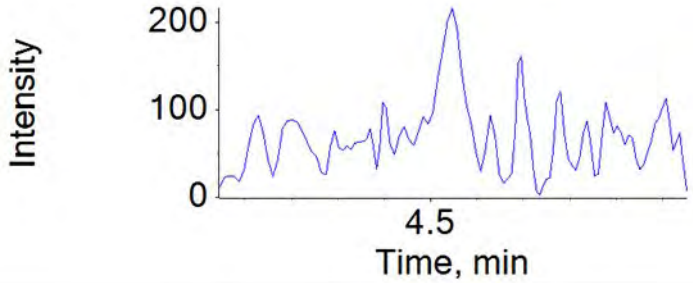
Component: PFPeS_2
Secondary Mass: 349.0 / 99.0



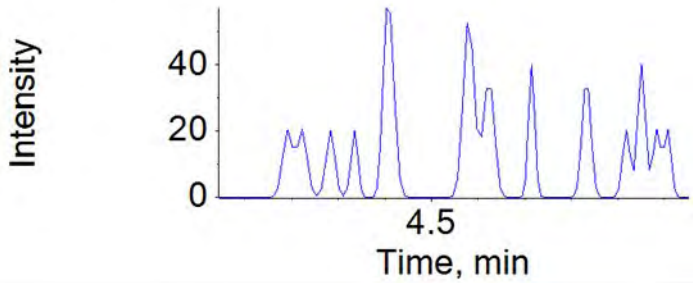
APPROVED
By MCD at 3:27 pm, 11/30/18

REVIEWED
By UMJS at 3:33 pm, 12/11/18

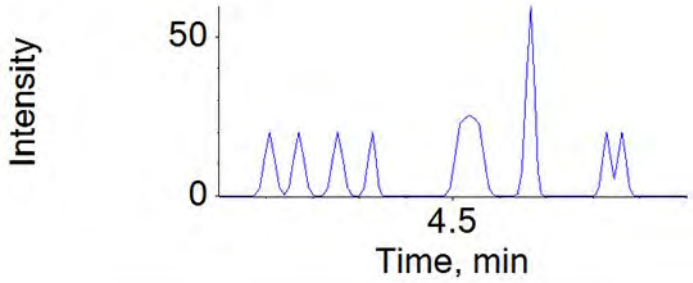
Component: PFHpA
Primary Mass: 363.0 / 319.0



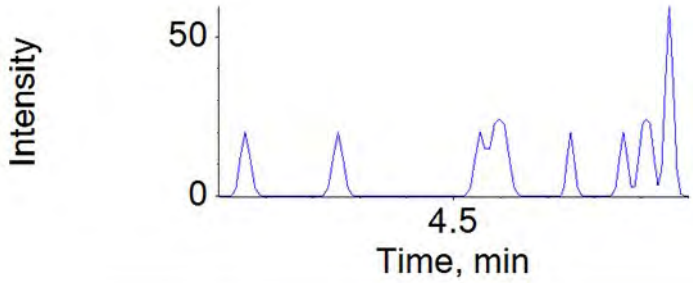
Component: PFHpA_2
Secondary Mass: 363.0 / 169.0



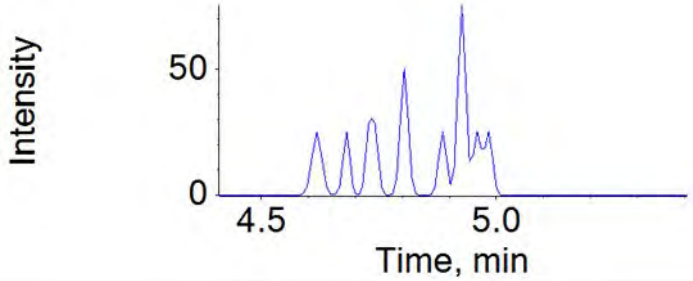
Component: PFHxS
Primary Mass: 399.0 / 80.0



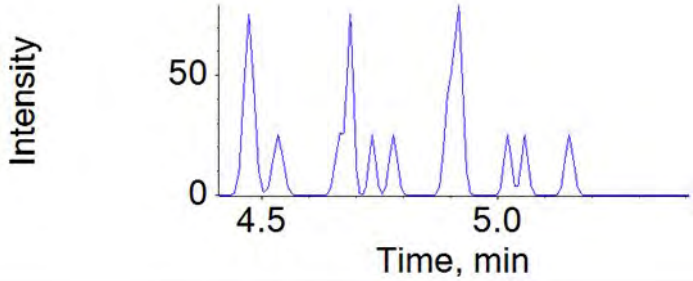
Component: PFHxS_2
Secondary Mass: 399.0 / 99.0



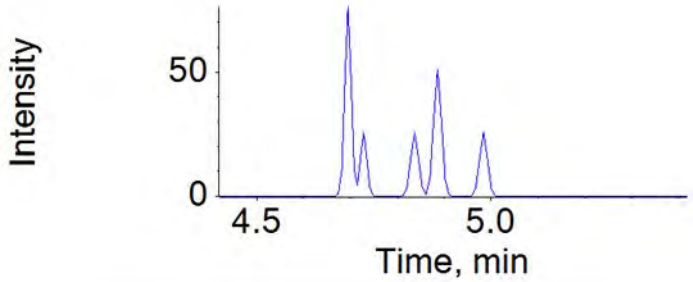
Component: 6:2-FTS
Primary Mass: 427.0 / 407.0



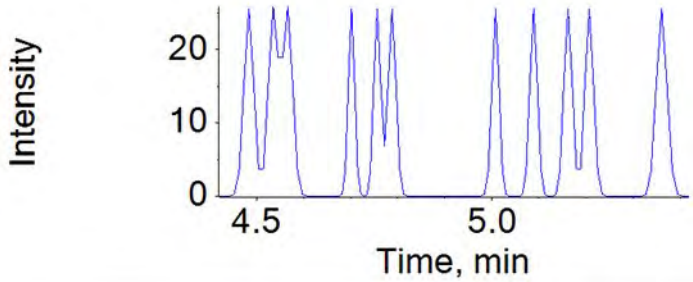
Component: 6:2-FTS_2
Secondary Mass: 427.0 / 81.0



Component: PFHpS
Primary Mass: 449.0 / 80.0



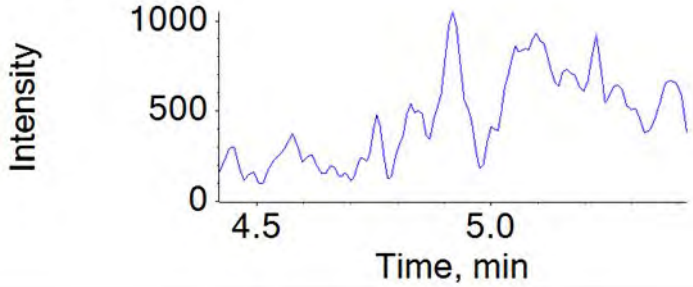
Component: PFHpS_2
Secondary Mass: 449.0 / 99.0



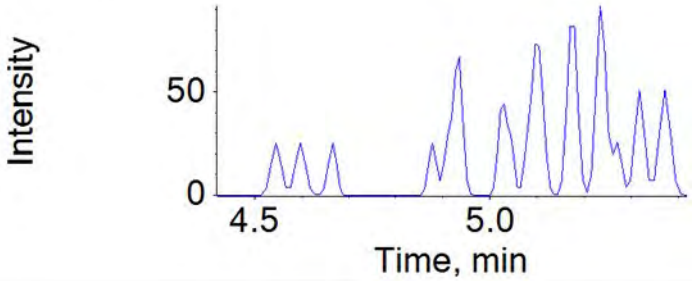
APPROVED
By MCD at 3:27 pm, 11/30/18

REVIEWED
By UMJS at 3:33 pm, 12/11/18

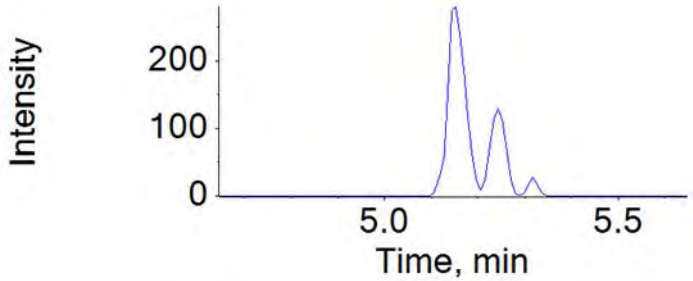
Component: PFOA
Primary Mass: 413.0 / 369.0



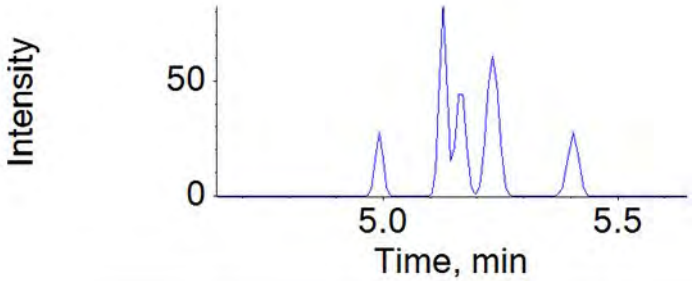
Component: PFOA_2
Secondary Mass: 413.0 / 169.0



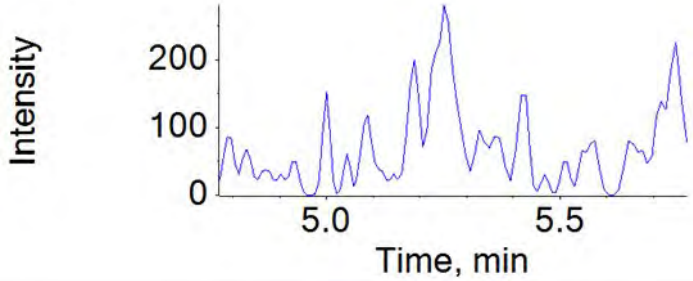
Component: PFOS
Primary Mass: 499.0 / 80.0



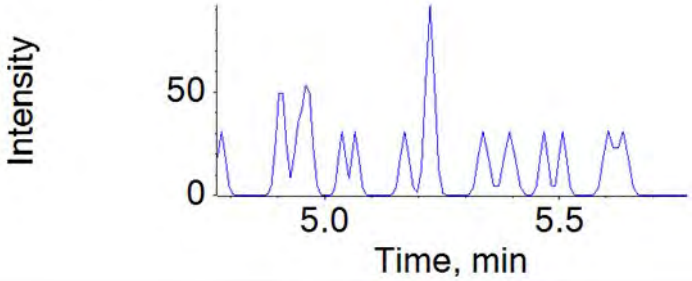
Component: PFOS_2
Secondary Mass: 499.0 / 99.0



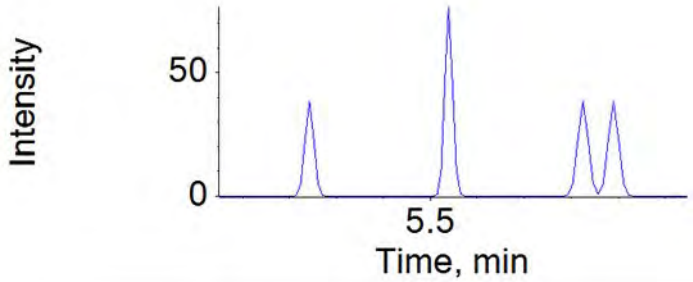
Component: PFNA
Primary Mass: 463.0 / 419.0



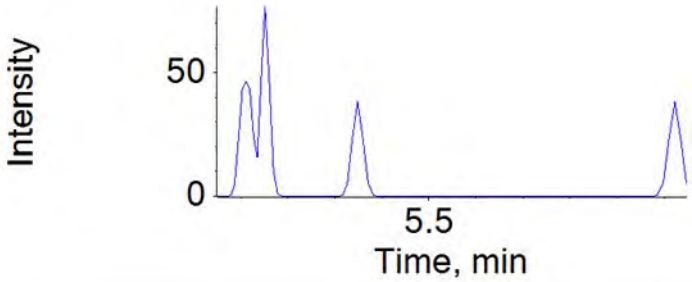
Component: PFNA_2
Secondary Mass: 463.0 / 169.0



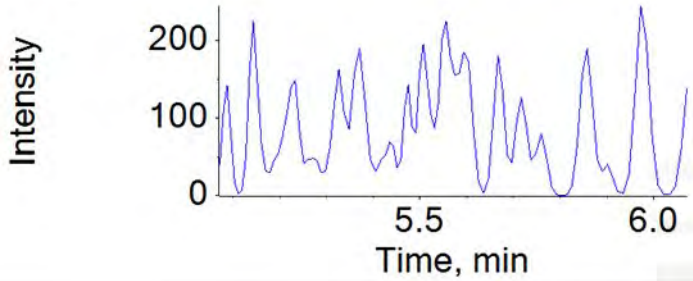
Component: PFNS
Primary Mass: 549.0 / 80.0



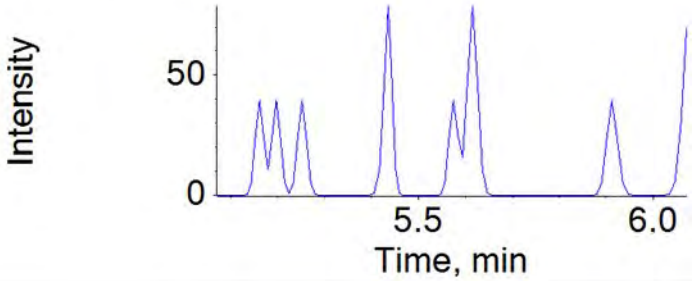
Component: PFNS_2
Secondary Mass: 549.0 / 99.0



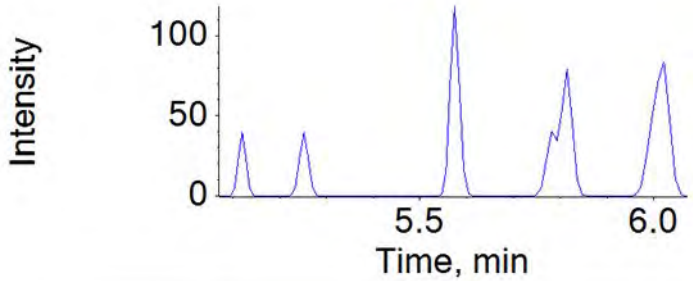
Component: PFDA
Primary Mass: 513.0 / 469.0



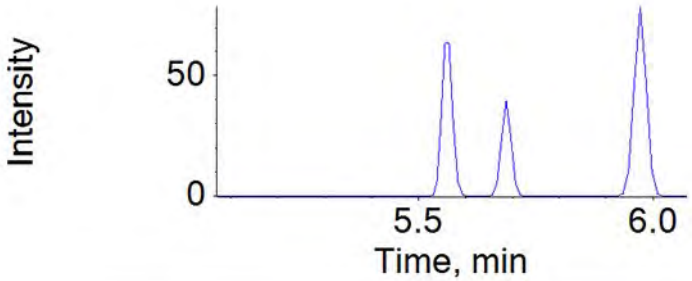
Component: PFDA_2
Secondary Mass: 513.0 / 169.0



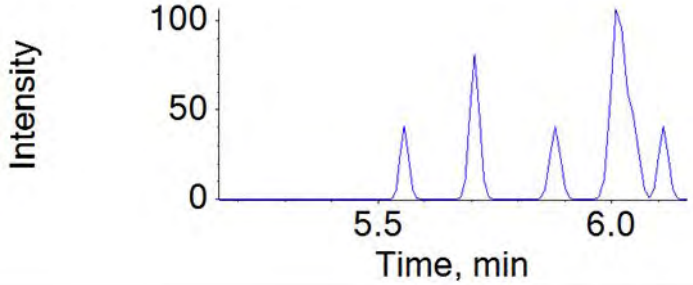
Component: 8:2-FTS
Primary Mass: 527.0 / 507.0



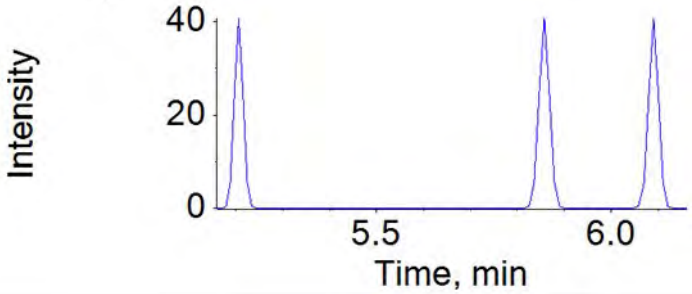
Component: 8:2-FTS_2
Secondary Mass: 527.0 / 81.0



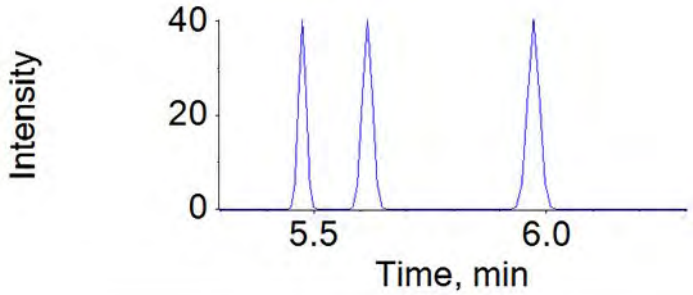
Component: NMeFOSAA
Primary Mass: 570.0 / 419.0



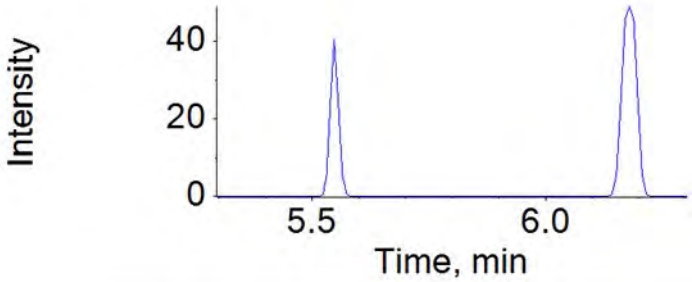
Component: NMeFOSAA_2
Secondary Mass: 570.0 / 483.0



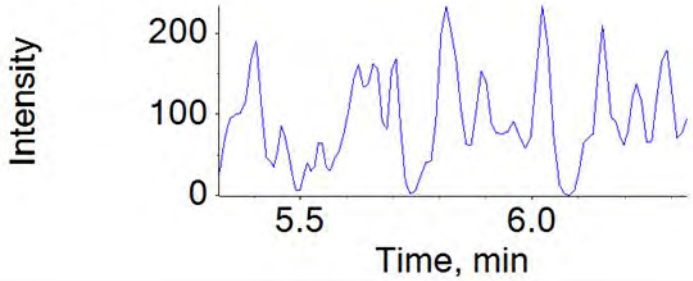
Component: PFDS
Primary Mass: 599.0 / 80.0



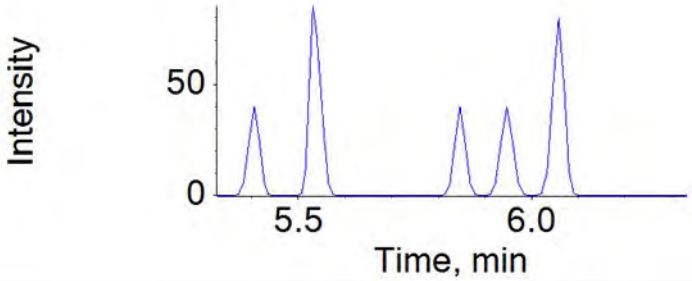
Component: PFDS_2
Secondary Mass: 599.0 / 99.0



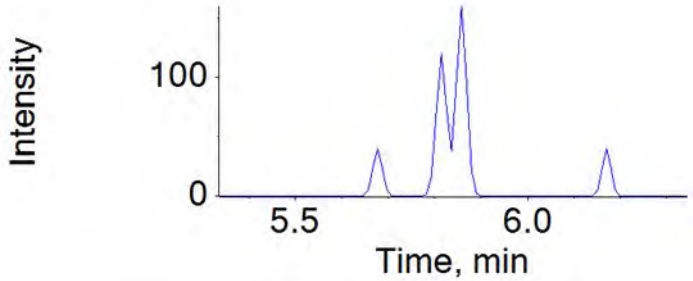
Component: PFUnDA
Primary Mass: 563.0 / 519.0



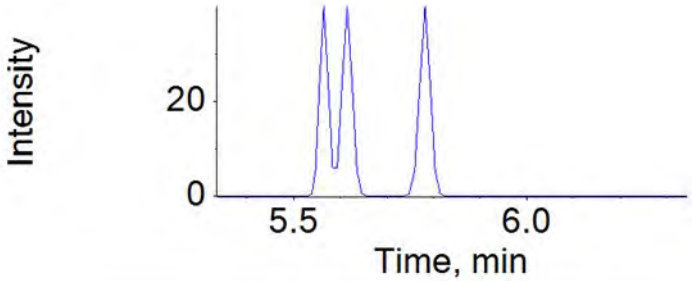
Component: PFUnDA_2
Secondary Mass: 563.0 / 169.0



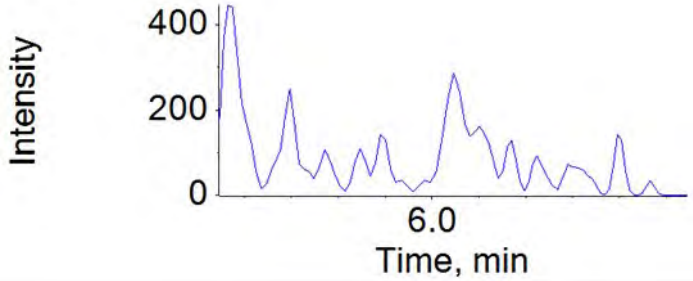
Component: NEtFOSAA
Primary Mass: 584.0 / 419.0



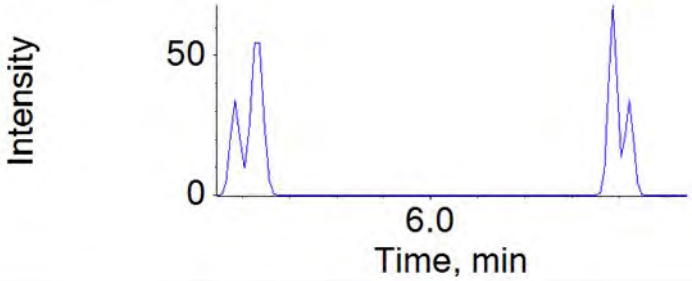
Component: NEtFOSAA_2
Secondary Mass: 584.0 / 526.0



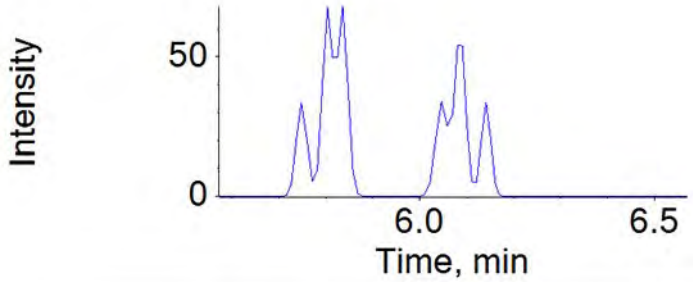
Component: PFDoDA
Primary Mass: 613.0 / 569.0



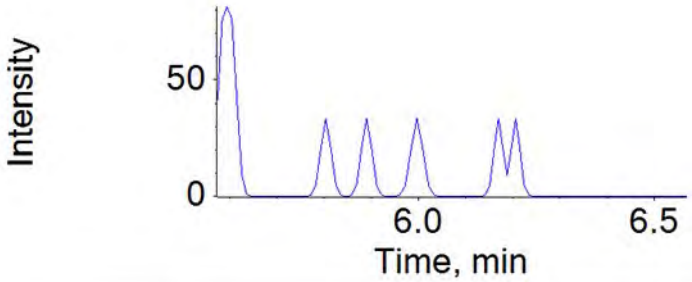
Component: PFDoDA_2
Secondary Mass: 613.0 / 169.0



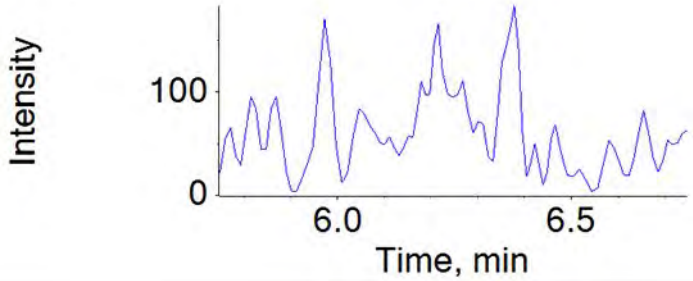
Component: 10:2-FTS
Primary Mass: 627.0 / 607.0



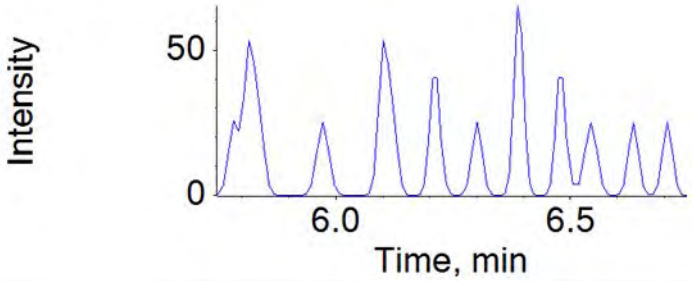
Component: 10:2-FTS_2
Secondary Mass: 627.0 / 81.0



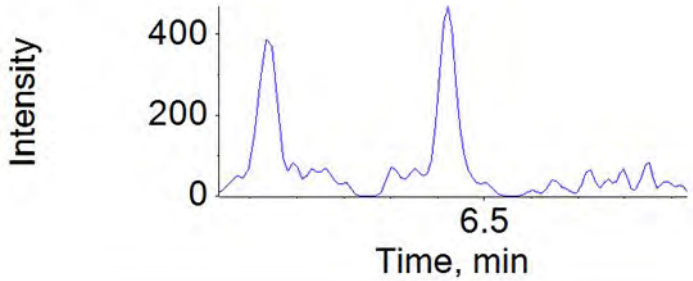
Component: PFTrDA
Primary Mass: 663.0 / 619.0



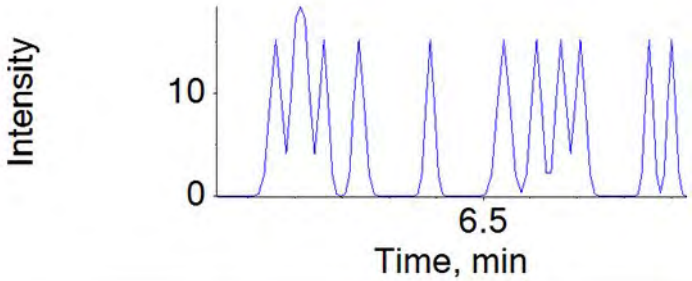
Component: PFTrDA_2
Secondary Mass: 663.0 / 169.0



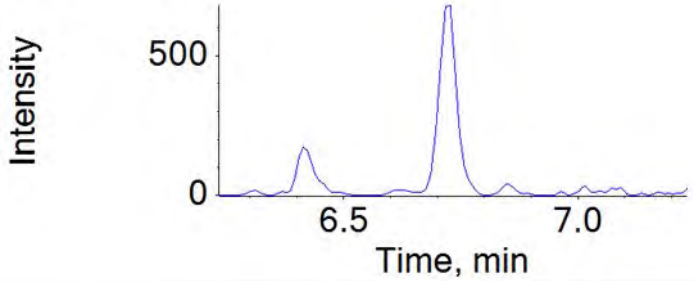
Component: PFTeDA
Primary Mass: 713.0 / 669.0



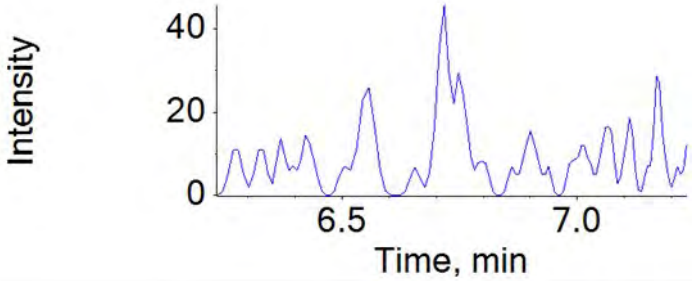
Component: PFTeDA_2
Secondary Mass: 713.0 / 169.0



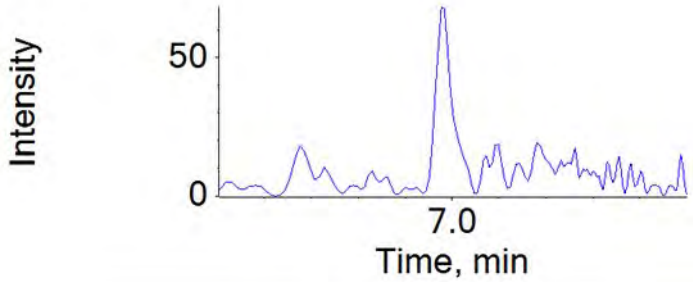
Component: PFHxDA
Primary Mass: 813.0 / 769.0



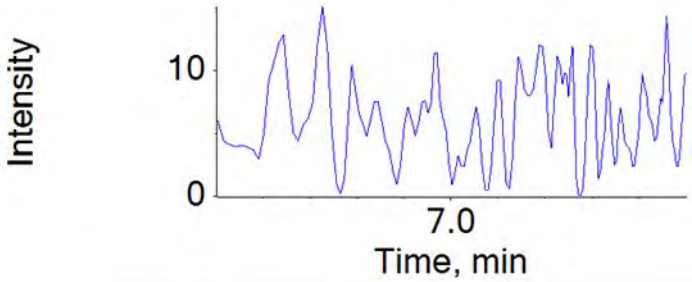
Component: PFHxDA_2
Secondary Mass: 813.0 / 169.0



Component: PFODA
Primary Mass: 913.0 / 869.0



Component: PFODA_2
Secondary Mass: 913.0 / 169.0



APPROVED
By MCD at 3:27 pm, 11/30/18

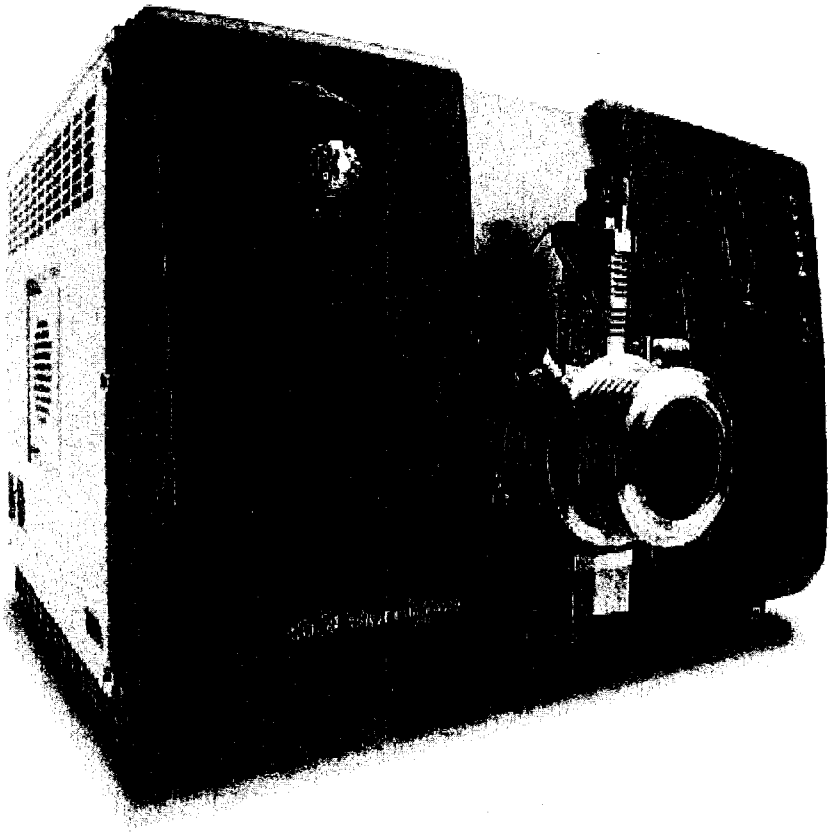
REVIEWED
By UMJS at 3:33 pm, 12/11/18

LM 27631

SCIEX

Triple Quad™ 4500 and Triple Quad™ 4500MD Systems

Installation Checklist and Data Log



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October 2016

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Contents

Chapter 1 Installation Preparation 4
Customer Information 4
System Information 4

Chapter 2 Installation Checklist 6
Unpacking and Inspection 6
Hardware Installation 7
Acquisition Computer Installation 8
Initialization and Verification 9
Wrap-up 9

Chapter 3 Data Log 11

Chapter 4 Signoff 21
Comments and Exceptions 21

Revision History 22

Installation Preparation 1

Note: For regulatory and safety information for the mass spectrometer, refer to the *System User Guide*.

Note: Before starting the installation, verify that the customer has completed the checklist in the *Site Planning Guide*.

Customer Information

Organization	Eurofins		
Address	2425 New Holland Pike Lancaster, PA 17601		
Telephone	717-556-7231	Fax	N/A
Contact name	Charles Neslund		
E-mail address	CharlesNeslund@eurofinsUS.com		

System Information

Table 1-1 Mass Spectrometer Information

Mass spectrometer location	A-223
Mass Spectrometer model name	4500QQQ
Mass spectrometer serial number	EB220251804
Firmware version	PIL1801
Roughing pump serial number	31001702300

Table 1-2 Acquisition Computer Information

Model	XE2	Service tag	5L3QLN2
OS version	Win7-64bit	OS service pack	SP1
Analyst® or Analyst® MD software version	1.7.0	Analyst® or Analyst® MD software hotfix	HF2
Cliquid® MD software version (4500MD systems only)	N/A		
MultiQuant™ or MultiQuant™ MD software version	3.0.3		

Table 1-3 Ion Source Information

Component	Serial Number
Turbo V™ ion source • TurboIonSpray® probe • APCI probe (if applicable)	2001171218 20380180321 20252180221
NanoSpray® ion source (if applicable, non-MD systems only)	N/A
DuoSpray™ ion source (if applicable, non-MD systems only) • TurboIonSpray® probe • APCI probe (if applicable)	N/A N/A N/A
Other/Third-party ion source (if applicable, non-MD systems only)	N/A

Table 1-4 System Components and Peripherals

Component	Serial Number
N/A	N/A
N/A	N/A
N/A	N/A
N/A	N/A

Installation Checklist 2

The Field Service Employee (FSE) must complete this checklist to make sure that every step in the installation procedure is completed. The checklist also contains an installation acceptance form for the customer representative and the FSE to sign when the work is complete. Refer to Signoff on page 21.

Unpacking and Inspection

Task	Complete	N/A
Inspect the packaging: • Inspect all tip and shock indicators for signs of excessive shock or tilting. • Inspect the boxes for exterior damage.	☑	
Unpack and inspect all of the components.	☑	
(Optional) Unpack, inspect, and install the bench. 1. Inspect the packaging for exterior damage. 2. Unpack the bench and then inspect for damage. 3. Install the bench.	◉	◉

BSI15 Page 1683 of 1956

Hardware Installation

Task	Complete	N/A
Install the mass spectrometer on the bench.	☑	
Affix the name plate on the front cover of the mass spectrometer (only applies to mass spectrometer with the prefix 'CJ' in the serial number).	☑	
Verify that the mains supply outlets for the roughing pump and the mass spectrometer deliver stable output voltages that meet the specified electrical requirements.	☑	
(Optional) Install the SCIEX-supplied UPS.	◉	◉
Install the roughing pump, connecting it to the mass spectrometer and the vent. Make sure that the roughing pump contains sufficient oil.	☑	
(Optional) Install the SCIEX-supplied gas generator.	◉	◉
Connect the gas lines.	☑	
Install and connect the drain bottle.	☑	
Install the Turbo V™ ion source. Refer to the *Turbo V™ Ion Source Operator Guide*. For 4500MD systems, refer to the *System User Guide*. For other systems, refer to the *Turbo V™ Ion Source Operator Guide*.	☑	
Adjust the stopper on the integrated syringe pump.	☑	
WARNING! Electrical Shock Hazard. Make sure that the system can be disconnected from the mains supply outlet in an emergency. Do not block the mains supply outlet. Plug in and turn on the roughing pump, and then plug in and turn on the mass spectrometer.	☑	

Acquisition Computer Installation

Task	Complete	N/A
Install the computer and monitor on the computer table.	☑	
Connect the Ethernet cable from the computer to the mass spectrometer.	☑	
Turn on the computer.	☑	
Configure IP addresses for communication with the mass spectrometer.	☑	
(Optional) Connect the computer to the customer network.	◉	◉
Install the Analyst® or Analyst® MD software.	☑	
Install any applicable Analyst® or Analyst® MD software hotfixes.	◉	◉
(4500MD systems) Install the Cliquid® MD software.	◉	◉
Install the MultiQuant™ or MultiQuant™ MD software.	☑	
(If applicable, not for use with 4500MD systems) Install the StatusScope® agent on the acquisition computer, and then perform these tasks: • Discuss warranty coverage for the StatusScope® software. • If the customer wants the StatusScope® software installed, then complete the StatusScope® user access form. • If the customer does not want theStatusScope® software installed, then remove the StatusScope® software.	◉	◉
(Optional) Install and license any add-on software purchased and shipped with the system. • (Non-MD systems) If applicable, Cliquid® software has been installed. • Other Analyst® or Analyst® MD compatible add-on software shipped with the system has been installed.	◉	◉

Task	Complete	N/A
Verify and update the firmware and configuration files.	☑	
Install the factory files.	☑	

Initialization and Verification

Note: Perform these tasks after the mass spectrometer reaches operating vacuum.

Task	Complete	N/A
Perform the high pressure source and blocked exhaust flow tests.		
Measure and tune the Q1, Q3, and QJet® coil boxes.	◉	◉
Perform all installation tests, print out the test results, and complete the Data Log.	☑	

Wrap-up

Task	Complete	N/A
Delete unnecessary files from the computers.	☑	
Back up the computer file systems, including the Analyst Data folder.	☑	
Create a computer image using the image utility.	☑	
Apply the biohazard labels included in the install kit. Apply one label to the ion source, and the other to the waste bottle. Find a vacant space that is clearly visible to affix the labels.	☑	

Task	Complete	N/A
Complete all of the sections in the *Customer Familiarization Checklist*. Make a copy of the completed checklist and then give the original to the customer.	✓	
Inform the customer about the continuous improvement telephone surveys, and then advise the customer that a third party will call to obtain feedback.	✓	
Complete the *Installation Checklist and Data Log*: • Obtain customer acceptance. • Make a copy of the form and the test results. • Provide the customer with the originals. • (For MD systems only) E-mail this completed document and the test result files to servicedata@sciex.com.	✓	

BSI15 Page 1687 of 1956

Data Log

3

Use this log to record the test data obtained during performance of the system verification tests during installation.

Note: Perform all procedures with the Turbo V™ ion source, unless otherwise specified.

Pre-test Pressure Verification is Complete	☑

Perform this test with the Analyst® or Analyst® MD software.

Test	Specification	Result
Vacuum chamber pressure with CAD gas off	0.4×10^{-5} torr $\leq P_{CAD\ 0} \leq 1.1 \times 10^{-5}$ torr	0.7 x 10e-5 torr
Vacuum chamber pressure with CAD gas set to Full	1.8×10^{-5} torr $\leq (P_{CAD\ 12} - P_{CAD\ 0}) \leq 2.8 \times 10^{-5}$ torr	2.1 x 10e-5 torr

BSI15 Page 1688 of 1956

Q1 Positive PPGs Test is Complete: Intensity and Peak Width (Scan Rate=10 Da/s, Cycles=10) ✓

- **Test solution:** POS PPG, 2e-6 M
- **Flow rate:** 5 µL/min
- **MCA:** On
- **Printouts required:** Spectra for masses 59.050, 175.133, 500.380, 616.464, 906.673, 1254.925, 1545.134, 1952.427, with peak intensities, peak width, and mass shift results, complete with method file information.

Mass (Da)	Intensity (cps)		Peak width (Da)	
	Specification	Result	Specification	Result
175.133	$\geq 8.0 \times 10^6$	1.6298e7	0.6 to 0.8	0.7105
500.380	$\geq 8.0 \times 10^6$	2.4240e7	0.6 to 0.8	0.6995
906.673	$\geq 2.0 \times 10^7$	3.2349e7	0.6 to 0.8	0.7151
1952.427	$\geq 8.8 \times 10^5$	4.8122e6	0.6 to 0.8	0.7423

Q1 Positive PPGs Test is Complete: Peak Width for Identified Masses ✓

Mass (Da)	Scan Rate (Da/s)	Cycles	Specification (Da)	Result (Passed)
59.050, 175.133, 500.380, 616.464, 906.673, 1254.925, 1545.134, 1952.427	10	10	0.6 to 0.8	✓
	200	50	0.6 to 0.8	
	1000	50	0.6 to 0.8	
	2000	100	0.6 to 0.8	

Q3 Positive PPGs Test is Complete: Intensity and Peak Width (Scan Rate=10 Da/s, Cycles=10) ☑

- **Test solution:** POS PPG, 2e-6 M
- **Flow rate:** 5 µL/min
- **MCA:** On
- **Printouts required:** Spectra for masses 59.050, 175.133, 500.380, 616.464, 906.673, 1254.925, 1545.134, 1952.427, with peak intensities, peak width, and mass shift results, complete with method file information.

Mass (Da)	Intensity (cps)		Peak width (Da)	
	Specification	Result	Specification	Result
175.133	$\geq 8.0 \times 10^6$	1.9501e7	0.6 to 0.8	0.6916
500.380	$\geq 8.0 \times 10^6$	1.9253e7	0.6 to 0.8	0.7278
906.673	$\geq 2.0 \times 10^7$	3.1634e7	0.6 to 0.8	0.7403
1952.427	$\geq 8.8 \times 10^5$	2.4968e6	0.6 to 0.8	0.7828

Q3 Positive PPGs Test is Complete: Peak Width for Identified Masses ☑

Mass (Da)	Scan Rate (Da/s)	Cycles	Specification (Da)	Result (Passed)
59.050, 175.133, 500.380, 616.464, 906.673, 1254.925, 1545.134, 1952.427	10	10	0.6 to 0.8	☑
	200	50	0.6 to 0.8	
	1000	50	0.6 to 0.8	
	2000	100	0.6 to 0.8	

Q1 Negative PPGs Test is Complete ☑

- **Test solution:** NEG PPG, 3e-4 M
- **Flow rate:** 10 µL/min
- **MCA:** On
- **Printouts required:** Spectra for masses 44.998, 411.259, 585.385, 933.636, 1223.845, 1572.097, 1863.306, 1979.389, with peak intensities, peak width, and mass shift results, complete with method file information.

Table 3-1 Verification: Intensity and Peak Width (Scan Rate=10 Da/s, Cycles=10) for the Q1 Negative PPGs Tests

Mass (Da)	Intensity (cps)		Peak width (Da)	
	Specification	Result	Specification	Result
933.636	$\geq 1.8 \times 10^7$	2.2378e7	0.6 to 0.8	0.6638
1863.306	$\geq 1.4 \times 10^6$	2.1046e6	0.6 to 0.8	0.7369

Table 3-2 Verification: Peak Width for Identified Masses for the Q1 Negative PPGs Tests

Mass (Da)	Scan Rate (Da/s)	Cycles	Specification (Da)	Result (Passed)
44.998, 411.259, 585.385, 933.636 1223.845, 1572.097, 1863.306, 1979.389	10	10	0.6 to 0.8	☑
	200	50	0.6 to 0.8	
	1000	50	0.6 to 0.8	
	2000	100	0.6 to 0.8	

Q3 Negative PPGs Test is Complete ☑

- **Test solution:** NEG PPG, 3e-4 M
- **Flow rate:** 10 µL/min
- **MCA:** On
- **Printouts required:** Spectra for masses 44.998, 411.259, 585.385, 933.636, 1223.845, 1572.097, 1863.306, 1979.389, with peak intensities, peak width, and mass shift results, complete with method file information.

Table 3-3 Verification: Intensity and Peak Width (Scan Rate=10 Da/s, Cycles=10) for the Q3 Negative PPGs Tests

Mass (Da)	Intensity (cps)		Peak width (Da)	
	Specification	Result	Specification	Result
933.636	$\geq 1.8 \times 10^7$	2.6621e7 [redacted]	0.6 to 0.8	0.7288 [redacted]
1863.306	$\geq 2.0 \times 10^6$	3.5734e6 [redacted]	0.6 to 0.8	0.7033 [redacted]

Table 3-4 Verification: Peak Width for Identified Masses for the Q3 Negative PPGs Tests

Mass (Da)	Scan Rate (Da/s)	Cycles	Specification (Da)	Result (Passed)
44.998, 411.259, 585.385, 933.636 1223.845, 1572.097, 1863.306 1979.389	10	10	0.6 to 0.8	☑
	200	50	0.6 to 0.8	
	1000	50	0.6 to 0.8	
	2000	100	0.6 to 0.8	

Reserpine MS/MS Test is Complete ✓

- **Test solution:** Reserpine solution 0.167 pmol/µL
- **Flow rate:** 5 µL/min
- **Scan rate:** 10 Da/s (both MS and MS/MS)
- **Scan mode:** Product Ion (MS2)
- **Product Of:** 609.3 (or as calibrated)
- **Product Ion:** 195.1
- **Cycles:** 10
- **MCA:** On
- **Printouts required:** Spectra for masses 609.3 and 195.1, with peak intensities, peak width, and mass shift results, complete with method file information.

Table 3-5 Verification for the Reserpine MS/MS Test

Specification	Result
Transmission efficiency $\frac{Intensity\ for\ ion\ at\ m/z\ 195.1}{Intensity\ for\ ion\ at\ m/z\ 609.2\ (or\ as\ calibrated)} \times 100 \geq 10\%$	10%

Turbo V™ Ion Source Acceptance Test is Complete	☑

Table 3-6 Verification for the Turbo V™ Ion Source Acceptance Test

Probe	Test	Specification	Result (Passed)
TurboIonSpray®	Set the temperature parameter to 500 °C.	The Analyst® or Analyst® MD software reports that the temperature is reached.	☑
APCI	Set the temperature parameter to 400 °C.	The Analyst® or Analyst® MD software reports that the temperature is reached.	☑

Post-test Pressure Verification is Complete	✓

Perform this test with the Analyst® or Analyst® MD software.

Test	Specification	Result
Vacuum chamber pressure with CAD gas off	0.4×10^{-5} torr $\leq P_{CAD\ 0} \leq 1.1 \times 10^{-5}$ torr	0.74x10e-5 torr
Vacuum chamber pressure with CAD gas set to Full	1.8×10^{-5} torr $\leq (P_{CAD\ 12} - P_{CAD\ 0}) \leq 2.8 \times 10^{-5}$ torr	2.11x10e-5 torr

Signoff

4

Organization	Eurofins [redacted]		
Customer contact name	[redacted]	Date (yyyy-mm-dd)	[redacted]
Customer contact signature*			
FSE name	Michael F Pennell [redacted]	Date (yyyy-mm-dd)	2018-05-29 [redacted]
FSE signature			

* Signature required on hard copy only.

Comments and Exceptions

MQ will be installed on the processing PC.

Revision History

Revision	Reason for Change	Date
A	First release of the combined *SCIEX Triple Quad™ 4500 and 4500MD System Installation Checklist and Data Log.* Replaces D5028556 E.	May 2014
B	Updated the installation test data.	December 2014
C	• Applied new template. • Updated the System Information, Acquisition Computer Installation, and Data Log sections.	October 2016

State Parameter Editor

Ion Source: Turbo Spray
Ion Source Temperature Reached
Curtain Gas (CUR): 10.0
IonSpray Voltage (IS): 5500.0
Temperature (TEM): 0.0
Ion Source Gas 1 (GS1): 17.0
Ion Source Gas 2 (GS2): 0.0

Entrance Potential (EP): 10.0

Q1 Resolution: Unit
Ion Energy 1 (IE1): 1.2

CEM (CEM): 1800.0

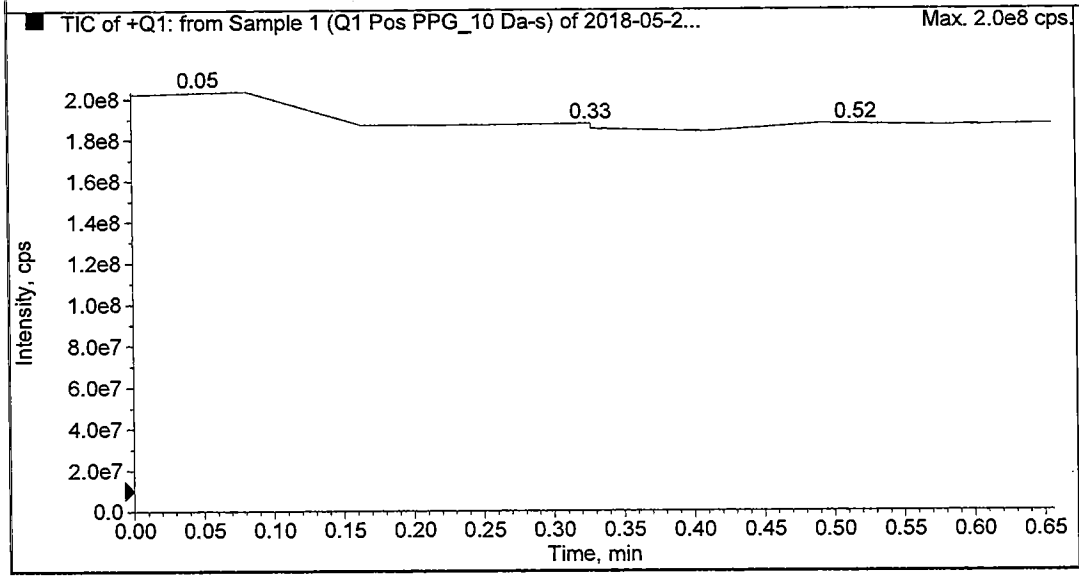
Mass Spectrometer Method Properties

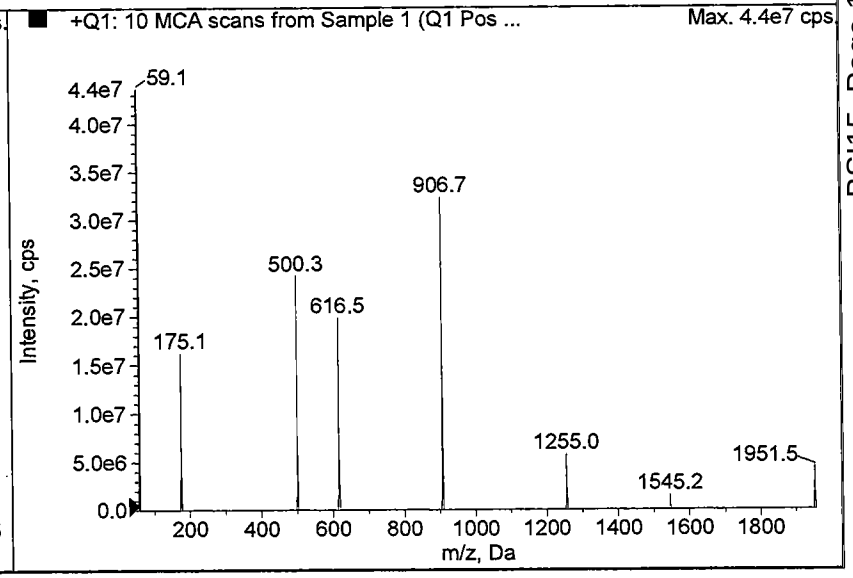
Period 1:

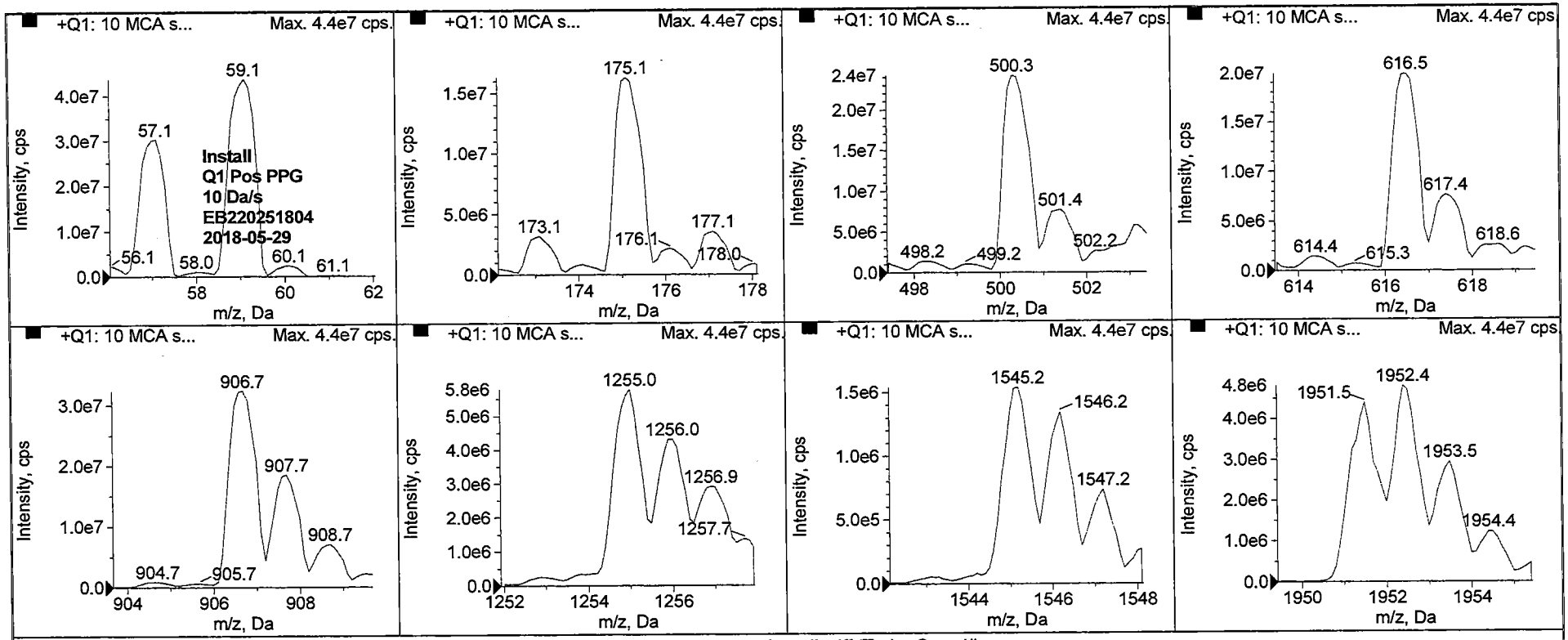
Scans in Period: 10
Relative Start Time: 0.00 msec
Scheduled Ionization: Off
Experiments in Period: 1

Period 1 Experiment 1:

Scan Type: Q1 MS (Q1)
Polarity: Positive
Scan Mode: Profile
Ion Source: Turbo Spray
Scans to Sum: 1
Resolution Q1: Unit







Peak List for " +Q1: 10 MCA scans from Sample 1 (Q1 Pos PPG_10 Da-s) of 2018-05-29_Install.wiff (Turbo Spray)"

	Target Mass (Da)	Found At (Da)	Intensity (cps)	Width (Da)	Mass Shift (Da)
1	59.0500	59.0559	4.3682e7	0.6931	-5.8810e-3
2	175.1330	175.1423	1.6298e7	0.7105	-9.3008e-3
3	500.3800	500.3732	2.4240e7	0.6995	6.8010e-3
4	616.4640	616.4825	1.9901e7	0.6890	-0.0185
5	906.6730	906.6804	3.2349e7	0.7151	-7.3891e-3
6	1254.9250	1254.9327	5.7895e6	0.7632	-7.6510e-3
7	1545.1340	1545.1665	1.5381e6	0.7694	-0.0325
8	1952.4270	1952.4521	4.8122e6	0.7423	-0.0251

State Parameter Editor

Ion Source: Turbo Spray
Ion Source Temperature Reached
Curtain Gas (CUR): 10.0
IonSpray Voltage (IS): 5500.0
Temperature (TEM): 0.0
Ion Source Gas 1 (GS1): 17.0
Ion Source Gas 2 (GS2): 0.0

Entrance Potential (EP): 10.0

Q1 Resolution: Unit
Ion Energy 1 (IE1): 1.2

CEM (CEM): 1800.0

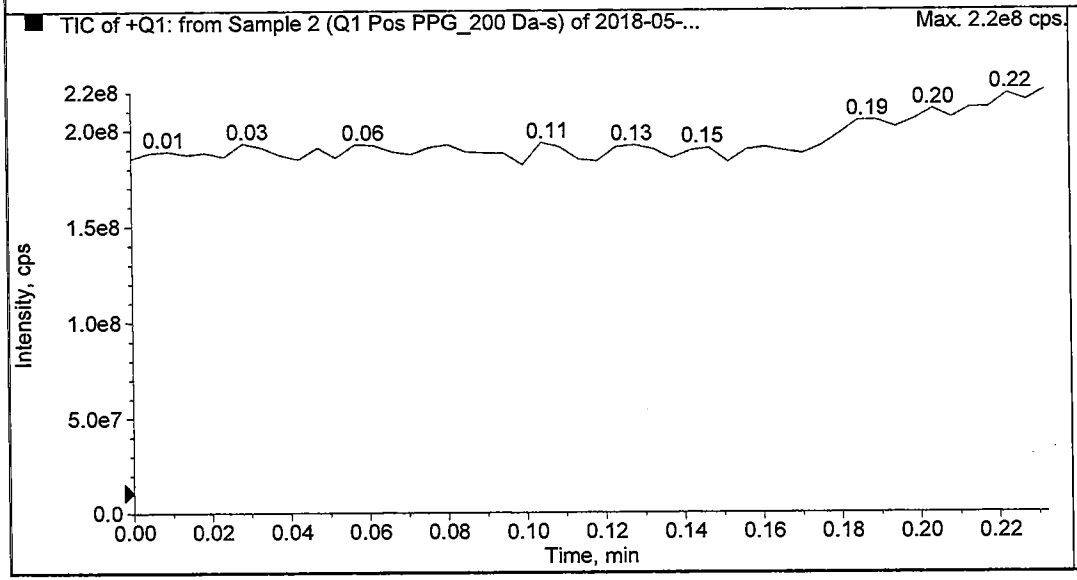
Mass Spectrometer Method Properties

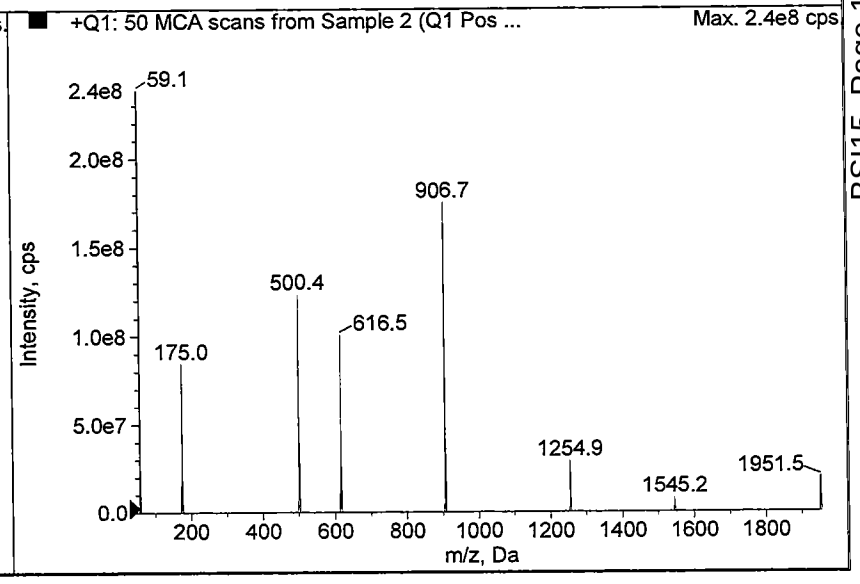
Period 1:

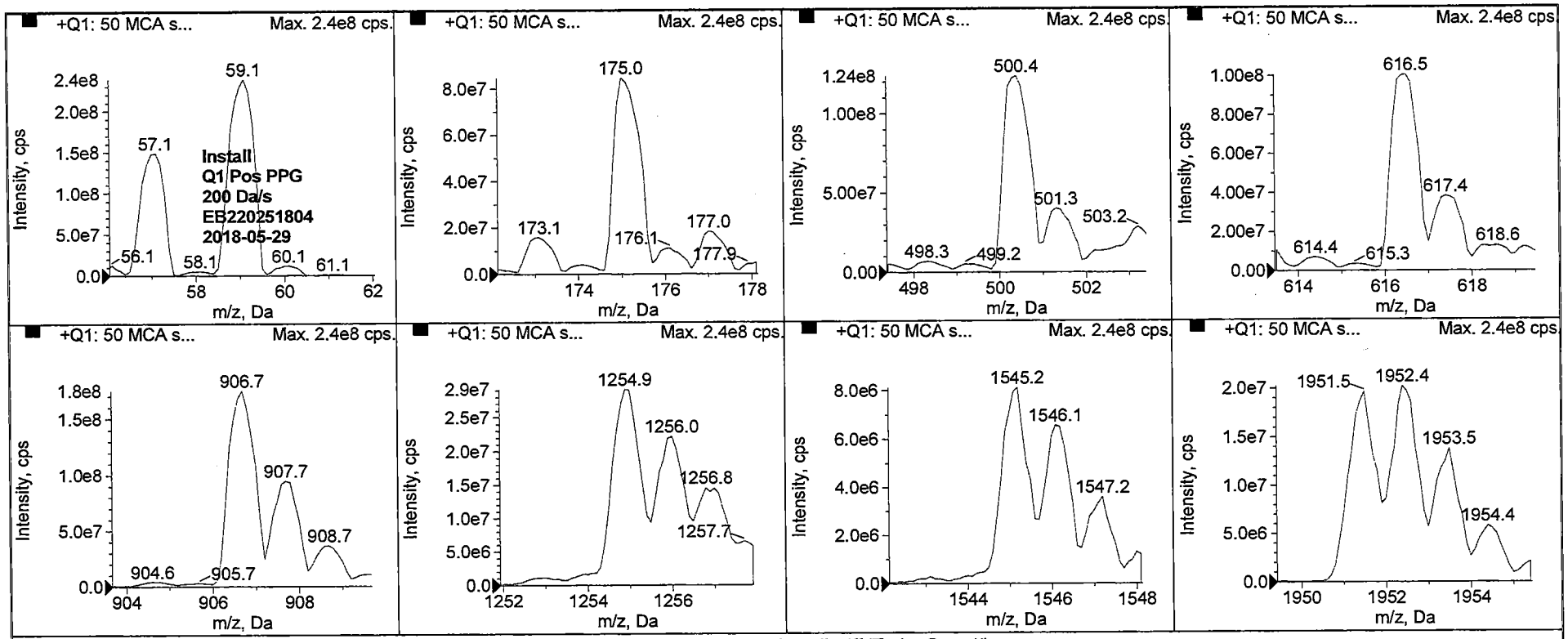
Scans in Period: 50
Relative Start Time: 0.00 msec
Scheduled Ionization: Off
Experiments in Period: 1

Period 1 Experiment 1:

Scan Type: Q1 MS (Q1)
Polarity: Positive
Scan Mode: Profile
Ion Source: Turbo Spray
Scans to Sum: 1
Resolution Q1: Unit







Peak List for " +Q1: 50 MCA scans from Sample 2 (Q1 Pos PPG_200 Da-s) of 2018-05-29_Install.wiff (Turbo Spray)"

	Target Mass (Da)	Found At (Da)	Intensity (cps)	Width (Da)	Mass Shift (Da)
1	59.0500	59.0570	2.3875e8	0.6632	-6.9868e-3
2	175.1330	175.1204	8.4656e7	0.7253	0.0126
3	500.3800	500.3915	1.2366e8	0.7160	-0.0115
4	616.4640	616.4631	1.0058e8	0.7191	9.0862e-4
5	906.6730	906.6801	1.7505e8	0.7187	-7.0740e-3
6	1254.9250	1254.9211	2.9174e7	0.7662	3.8790e-3
7	1545.1340	1545.1254	8.1140e6	0.7324	8.6264e-3
8	1952.4270	1952.4458	2.0214e7	0.7760	-0.0188

State Parameter Editor

Ion Source: Turbo Spray
Ion Source Temperature Reached
Curtain Gas (CUR): 10.0
IonSpray Voltage (IS): 5500.0
Temperature (TEM): 0.0
Ion Source Gas 1 (GS1): 17.0
Ion Source Gas 2 (GS2): 0.0

Entrance Potential (EP): 10.0

Q1 Resolution: Unit
Ion Energy 1 (IE1): 1.2

CEM (CEM): 1800.0

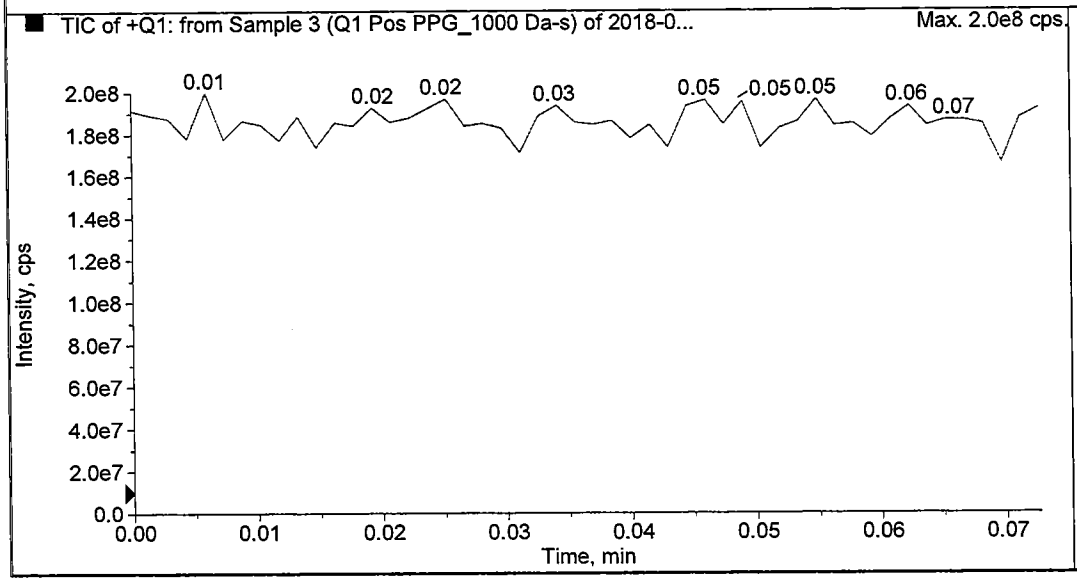
Mass Spectrometer Method Properties

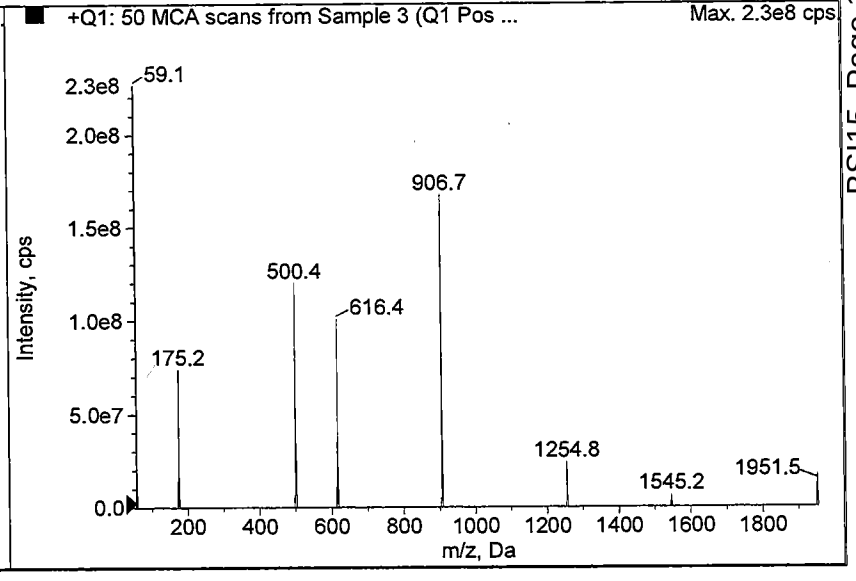
Period 1:

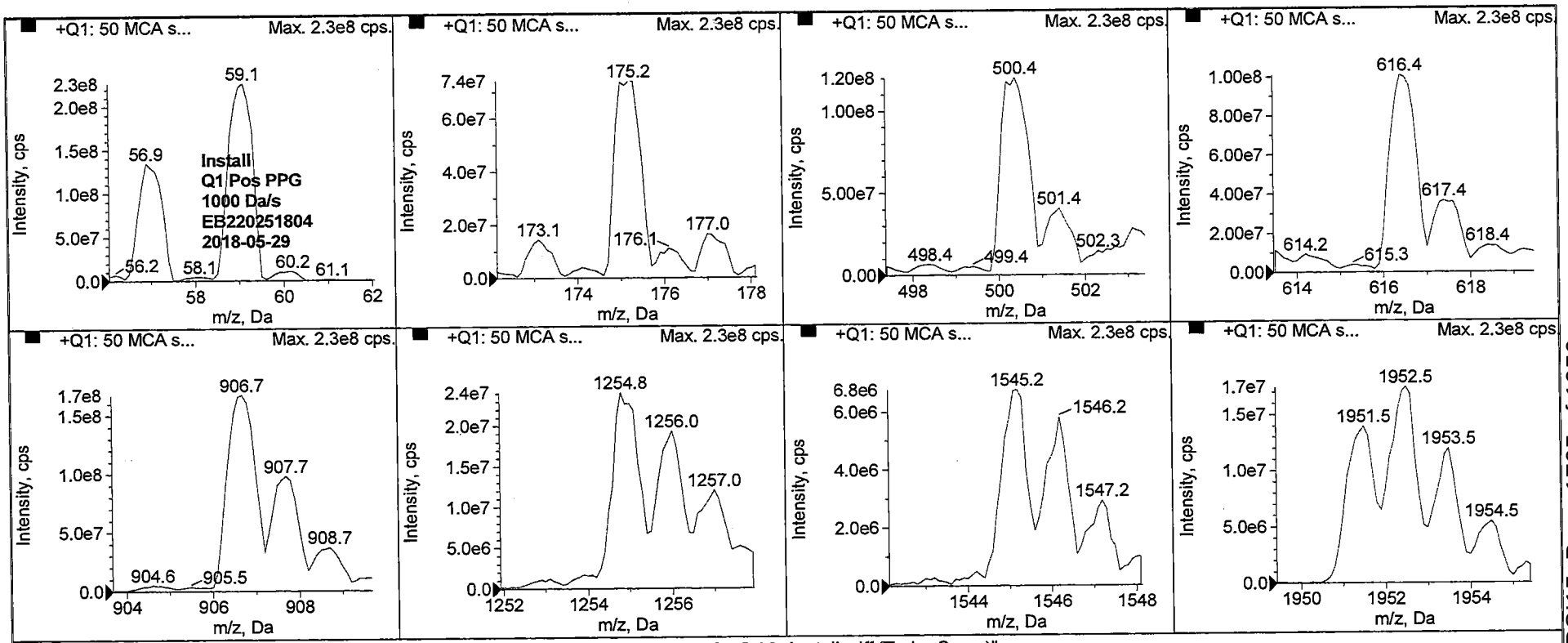
Scans in Period: 50
Relative Start Time: 0.00 msec
Scheduled Ionization: Off
Experiments in Period: 1

Period 1 Experiment 1:

Scan Type: Q1 MS (Q1)
Polarity: Positive
Scan Mode: Profile
Ion Source: Turbo Spray
Scans to Sum: 1
Resolution Q1: Unit







Peak List for " +Q1: 50 MCA scans from Sample 3 (Q1 Pos PPG_1000 Da-s) of 2018-05-29_Install.wiff (Turbo Spray)"

	Target Mass (Da)	Found At (Da)	Intensity (cps)	Width (Da)	Mass Shift (Da)
1	59.0500	59.0540	2.2668e8	0.6411	-4.0020e-3
2	175.1330	175.1630	7.4160e7	0.7037	-0.0300
3	500.3800	500.3767	1.2013e8	0.7536	3.3425e-3
4	616.4640	616.4720	1.0080e8	0.7224	-8.0022e-3
5	906.6730	906.6738	1.6743e8	0.7638	-8.2831e-4
6	1254.9250	1254.9160	2.4100e7	0.7104	9.0009e-3
7	1545.1340	1545.1314	6.7600e6	0.6758	2.5866e-3
8	1952.4270	1952.4259	1.7440e7	0.7572	1.0770e-3

State Parameter Editor

Ion Source: Turbo Spray
Ion Source Temperature Reached
Curtain Gas (CUR): 10.0
IonSpray Voltage (IS): 5500.0
Temperature (TEM): 0.0
Ion Source Gas 1 (GS1): 17.0
Ion Source Gas 2 (GS2): 0.0

Entrance Potential (EP): 10.0

Q1 Resolution: Unit
Ion Energy 1 (IE1): 1.2

CEM (CEM): 1800.0

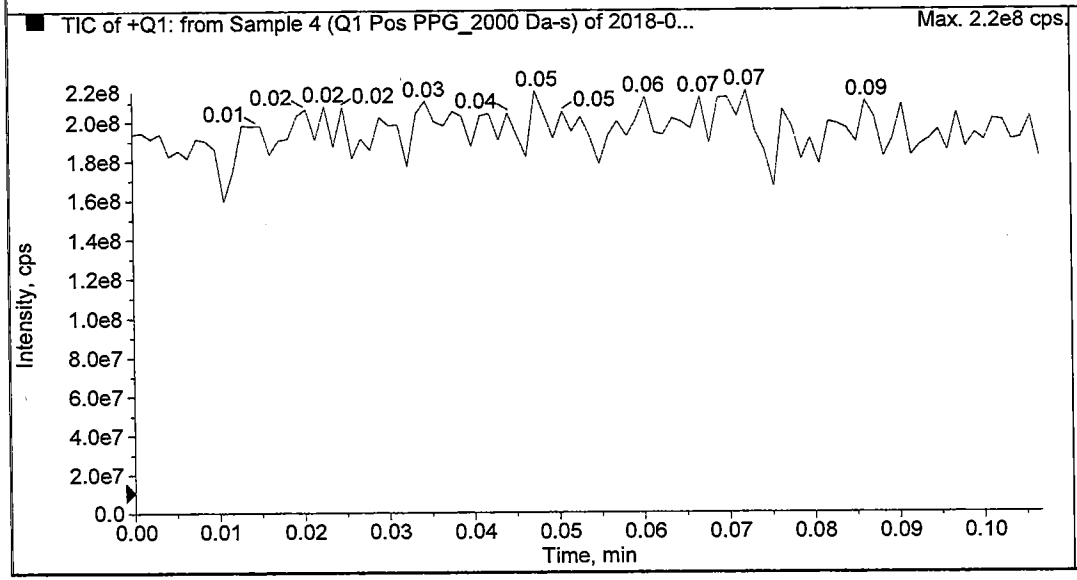
Mass Spectrometer Method Properties

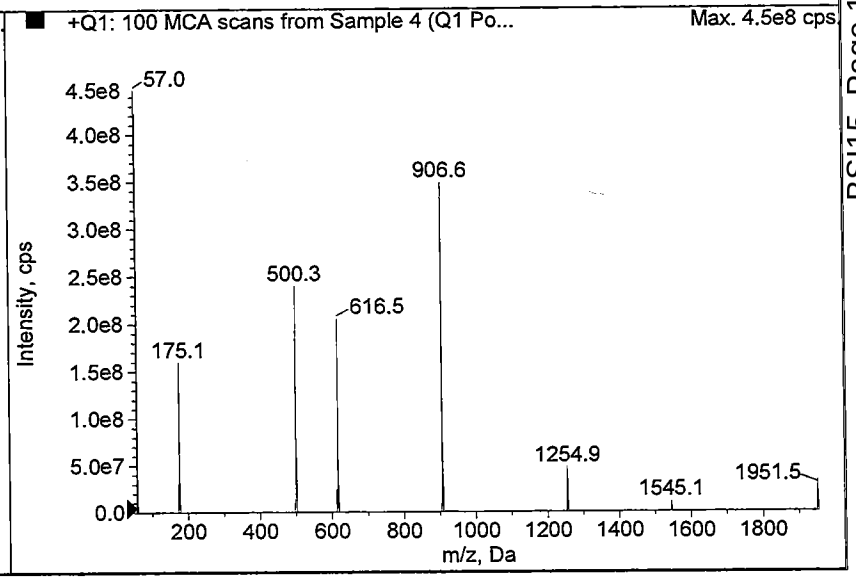
Period 1:

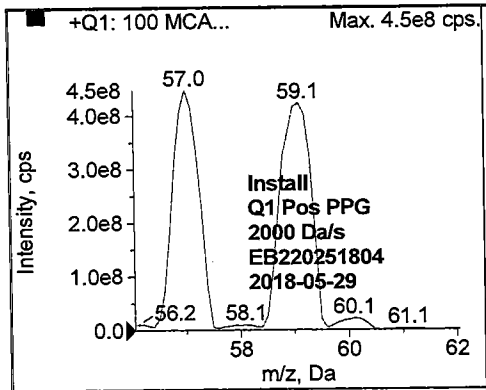
Scans in Period: 100
Relative Start Time: 0.00 msec
Scheduled Ionization: Off
Experiments in Period: 1

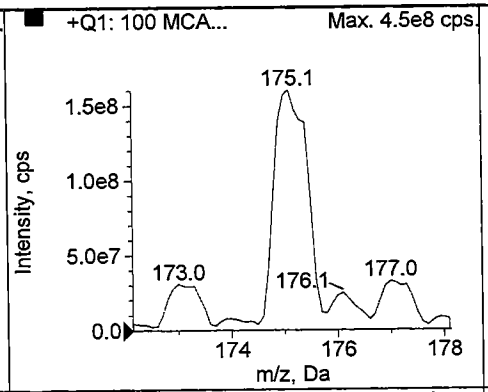
Period 1 Experiment 1:

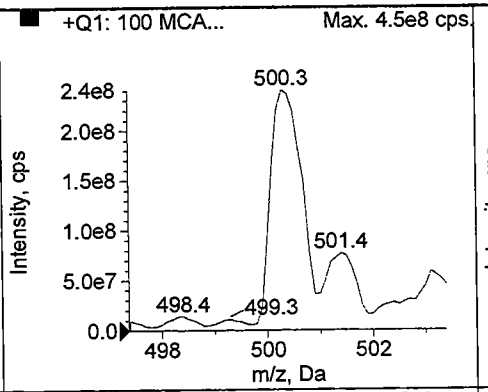
Scan Type: Q1 MS (Q1)
Polarity: Positive
Scan Mode: Profile
Ion Source: Turbo Spray
Scans to Sum: 1
Resolution Q1: Unit

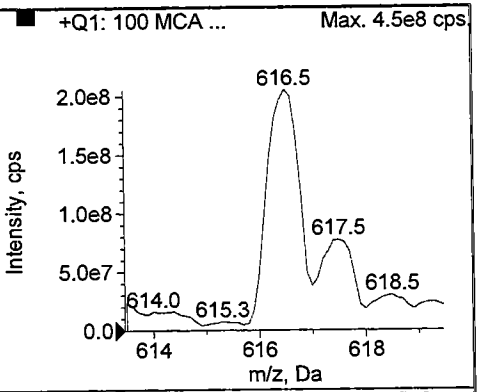


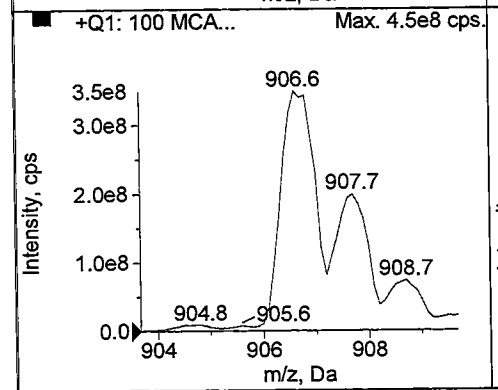


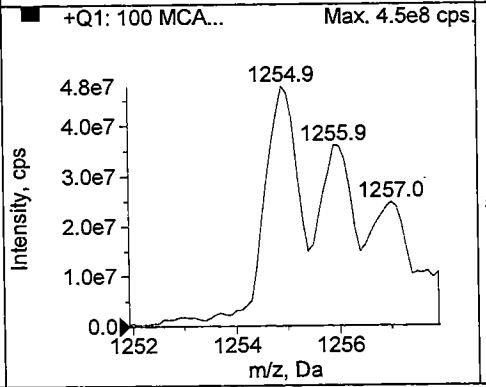


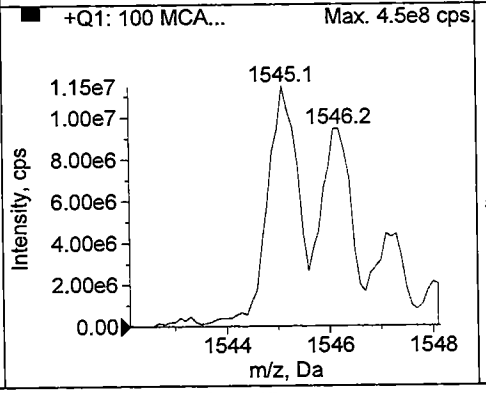


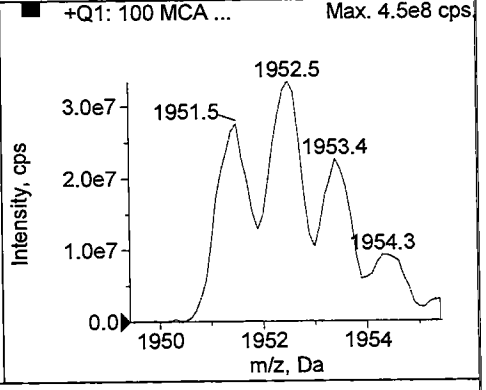












Peak List for " +Q1: 100 MCA scans from Sample 4 (Q1 Pos PPG_2000 Da-s) of 2018-05-29_Install.wiff (Turbo Spray)"

	Target Mass (Da)	Found At (Da)	Intensity (cps)	Width (Da)	Mass Shift (Da)
1	59.0500	59.0541	4.2264e8	0.6747	-4.1197e-3
2	175.1330	175.1367	1.6034e8	0.7378	-3.7421e-3
3	500.3800	500.3744	2.4052e8	0.6995	5.5649e-3
4	616.4640	616.4767	2.0538e8	0.7070	-0.0127
5	906.6730	906.6844	3.4888e8	0.7414	-0.0114
6	1254.9250	1254.9130	4.7800e7	0.7332	0.0120
7	1545.1340	1545.1396	1.1460e7	0.6649	-5.5517e-3
8	1952.4270	1952.4475	3.3400e7	0.7743	-0.0205

State Parameter Editor

Ion Source: Turbo Spray
Ion Source Temperature Reached
Curtain Gas (CUR): 10.0
IonSpray Voltage (IS): 5500.0
Temperature (TEM): 0.0
Ion Source Gas 1 (GS1): 17.0
Ion Source Gas 2 (GS2): 0.0

Entrance Potential (EP): 10.0

Q3 Resolution: Unit
Ion Energy 3 (IE3): 1.1

CEM (CEM): 1800.0

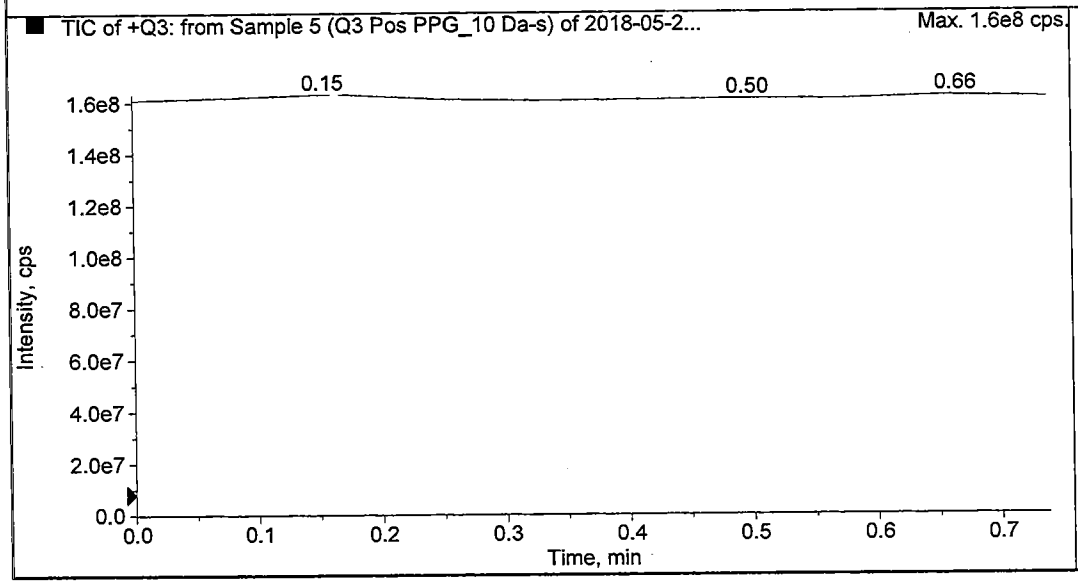
Mass Spectrometer Method Properties

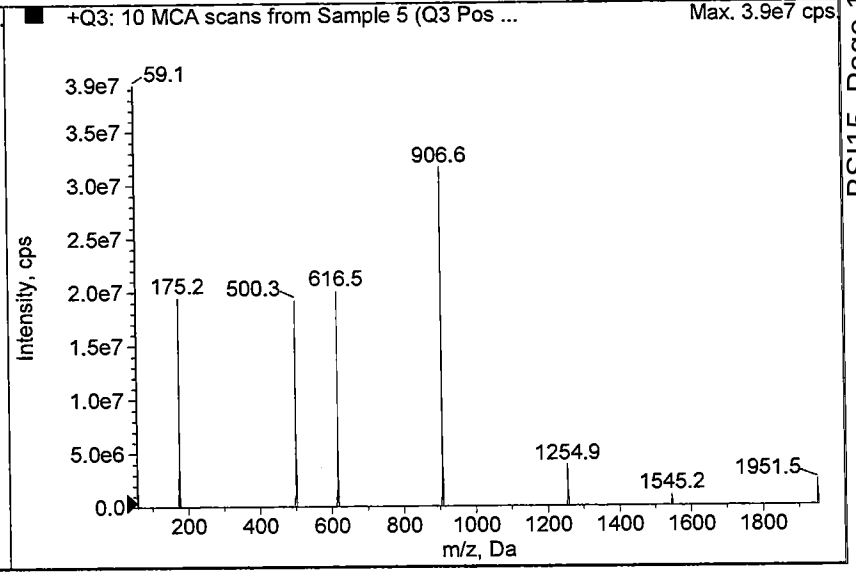
Period 1:

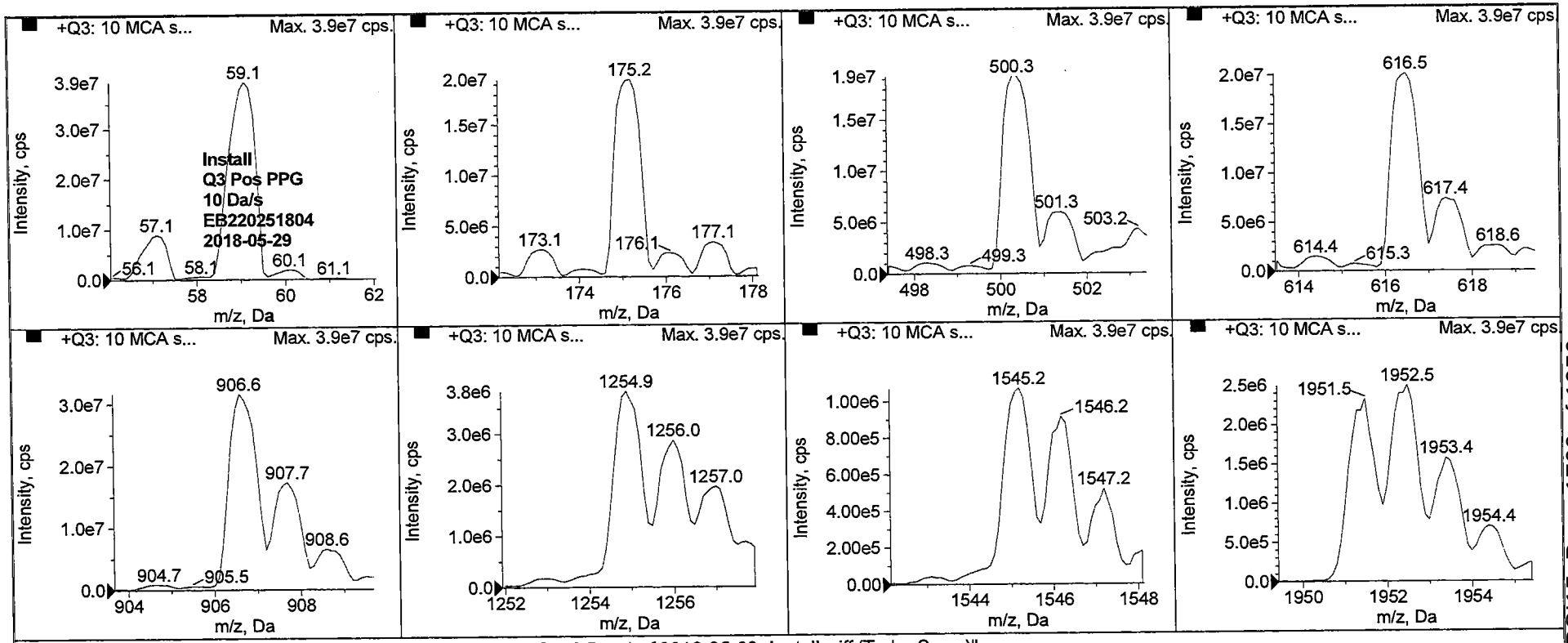
Scans in Period: 10
Relative Start Time: 0.00 msec
Scheduled Ionization: Off
Experiments in Period: 1

Period 1 Experiment 1:

Scan Type: Q3 MS (Q3)
Polarity: Positive
Scan Mode: Profile
Ion Source: Turbo Spray
Scans to Sum: 1
Resolution Q3: Unit







Peak List for " +Q3: 10 MCA scans from Sample 5 (Q3 Pos PPG_10 Da-s) of 2018-05-29_Install.wiff (Turbo Spray)"

	Target Mass (Da)	Found At (Da)	Intensity (cps)	Width (Da)	Mass Shift (Da)
1	59.0500	59.0600	3.9407e7	0.7175	-9.9728e-3
2	175.1330	175.1331	1.9501e7	0.6916	-1.2286e-4
3	500.3800	500.3823	1.9253e7	0.7278	-2.2612e-3
4	616.4640	616.4685	2.0128e7	0.7214	-4.5095e-3
5	906.6730	906.6736	3.1634e7	0.7403	-6.1273e-4
6	1254.9250	1254.9230	3.8338e6	0.7464	2.0449e-3
7	1545.1340	1545.1599	1.0717e6	0.7475	-0.0259
8	1952.4270	1952.4105	2.4968e6	0.7828	0.0165

State Parameter Editor

Ion Source: Turbo Spray
Ion Source Temperature Reached
Curtain Gas (CUR): 10.0
IonSpray Voltage (IS): 5500.0
Temperature (TEM): 0.0
Ion Source Gas 1 (GS1): 17.0
Ion Source Gas 2 (GS2): 0.0

Entrance Potential (EP): 10.0

Q3 Resolution: Unit
Ion Energy 3 (IE3): 1.0

CEM (CEM): 1800.0

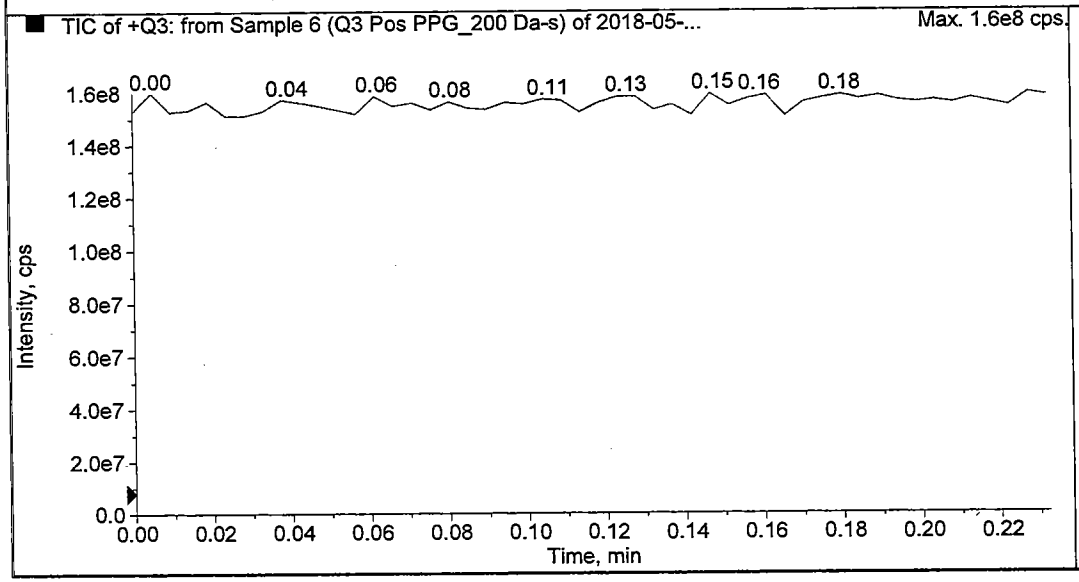
Mass Spectrometer Method Properties

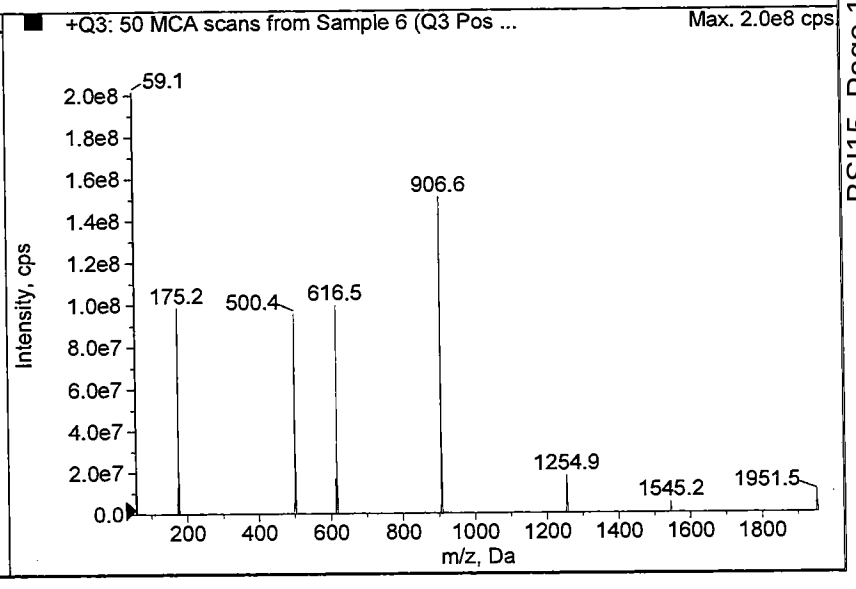
Period 1:

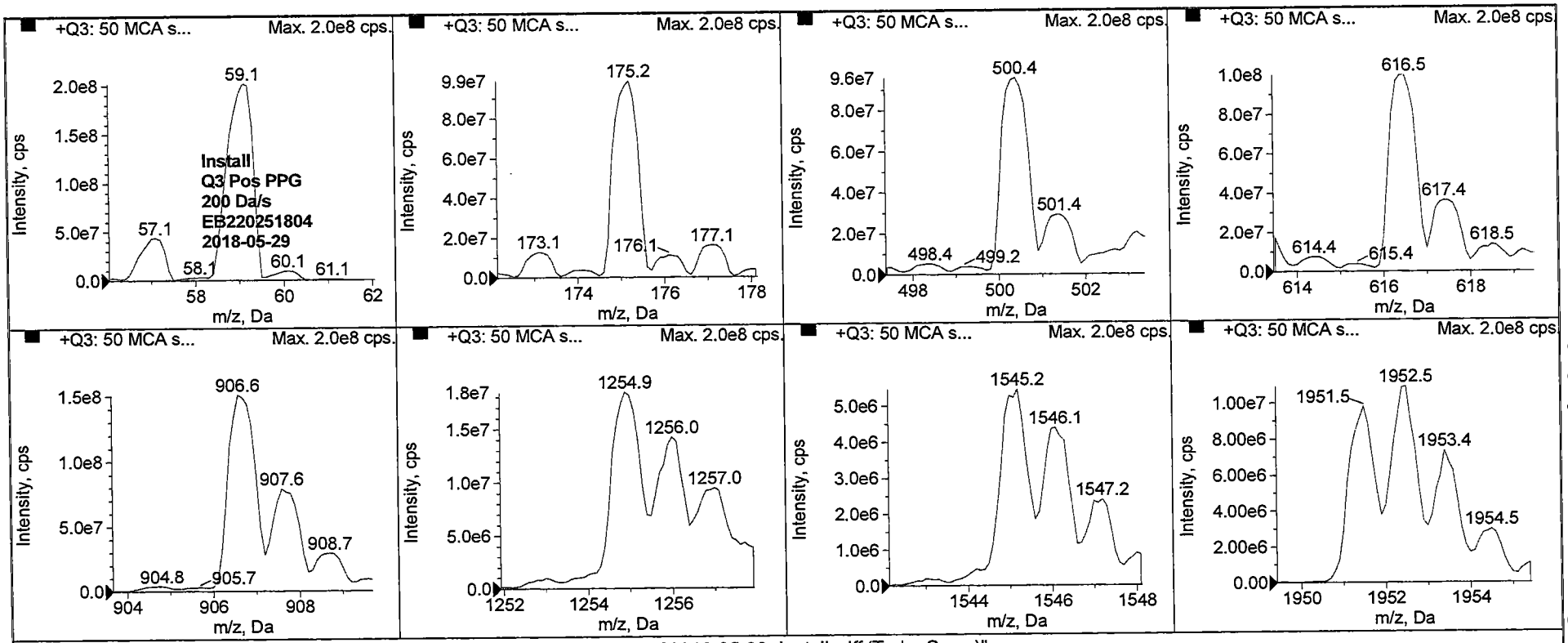
Scans in Period: 50
Relative Start Time: 0.00 msec
Scheduled Ionization: Off
Experiments in Period: 1

Period 1 Experiment 1:

Scan Type: Q3 MS (Q3)
Polarity: Positive
Scan Mode: Profile
Ion Source: Turbo Spray
Scans to Sum: 1
Resolution Q3: Unit







Peak List for " +Q3: 50 MCA scans from Sample 6 (Q3 Pos PPG_200 Da-s) of 2018-05-29_Install.wiff (Turbo Spray)"

	Target Mass (Da)	Found At (Da)	Intensity (cps)	Width (Da)	Mass Shift (Da)
1	59.0500	59.0535	2.0159e8	0.6898	-3.5186e-3
2	175.1330	175.1234	9.8734e7	0.6779	9.5931e-3
3	500.3800	500.3781	9.5670e7	0.7134	1.9254e-3
4	616.4640	616.4537	9.9852e7	0.7073	0.0103
5	906.6730	906.6796	1.5094e8	0.7211	-6.5779e-3
6	1254.9250	1254.9165	1.8432e7	0.7818	8.4504e-3
7	1545.1340	1545.1060	5.4540e6	0.7324	0.0280
8	1952.4270	1952.4363	1.0900e7	0.7220	-9.3366e-3

State Parameter Editor

Ion Source:	Turbo Spray
Ion Source Temperature Reached	
Curtain Gas (CUR):	10.0
IonSpray Voltage (IS):	5500.0
Temperature (TEM):	0.0
Ion Source Gas 1 (GS1):	17.0
Ion Source Gas 2 (GS2):	0.0
Entrance Potential (EP):	10.0
Q3 Resolution:	Unit
Ion Energy 3 (IE3):	1.0
CEM (CEM):	1800.0

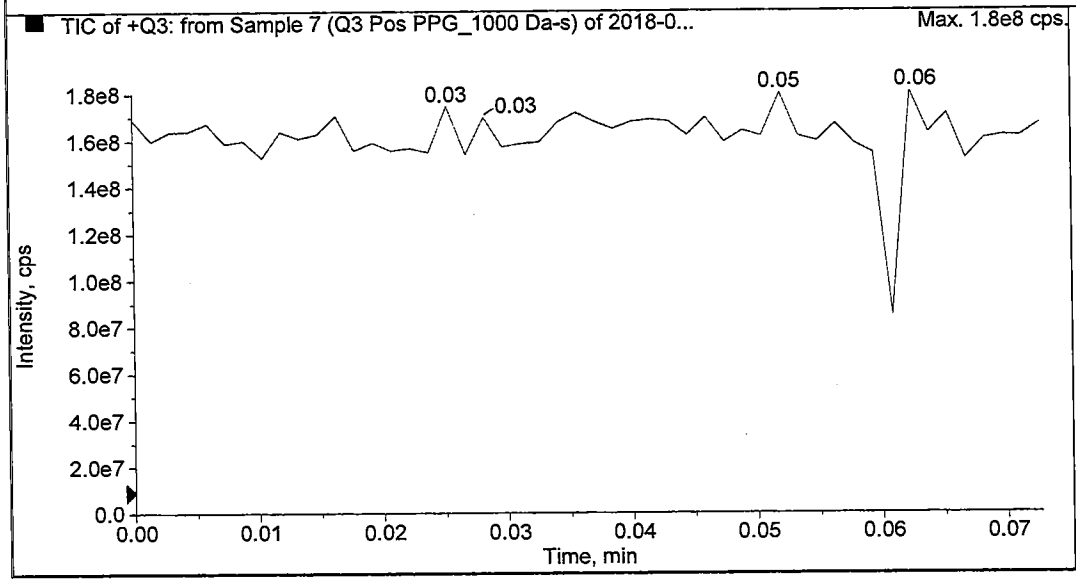
Mass Spectrometer Method Properties

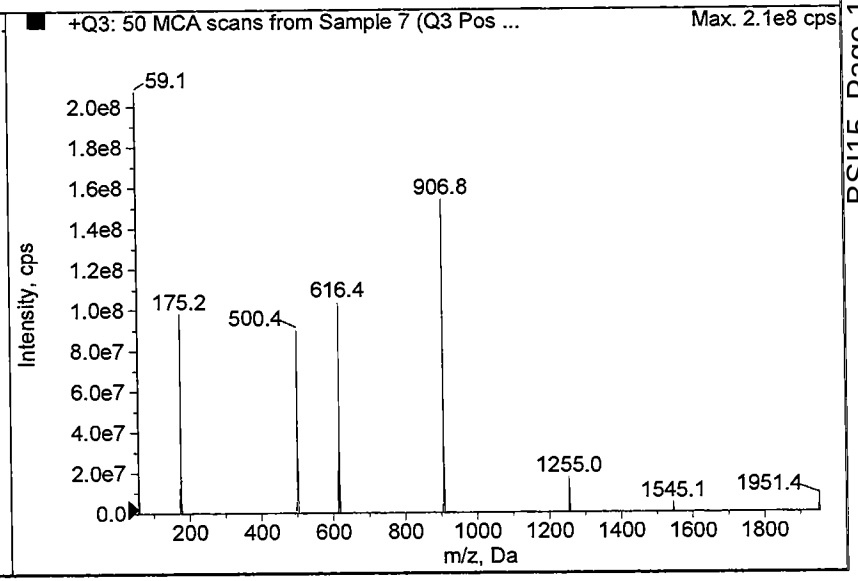
Period 1:

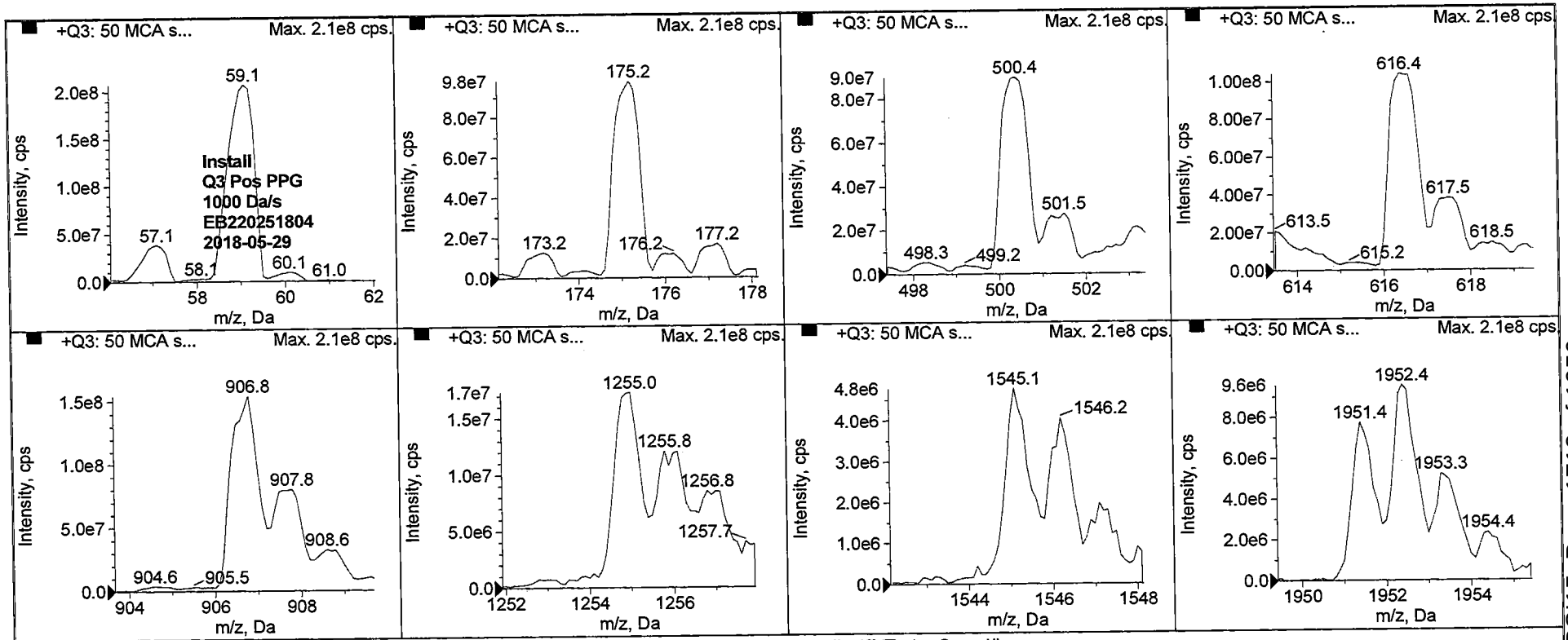
Scans in Period:	50
Relative Start Time:	0.00 msec
Scheduled Ionization:	Off
Experiments in Period:	1

Period 1 Experiment 1:

Scan Type:	Q3 MS (Q3)
Polarity:	Positive
Scan Mode:	Profile
Ion Source:	Turbo Spray
# Scans to Sum:	1
Resolution Q3:	Unit







Peak List for " +Q3: 50 MCA scans from Sample 7 (Q3 Pos PPG_1000 Da-s) of 2018-05-29_Install.wiff (Turbo Spray)"

	Target Mass (Da)	Found At (Da)	Intensity (cps)	Width (Da)	Mass Shift (Da)
1	59.0500	59.0525	2.0725e8	0.7070	-2.4950e-3
2	175.1330	175.1317	9.8190e7	0.6991	1.2969e-3
3	500.3800	500.3731	8.9990e7	0.7222	6.9400e-3
4	616.4640	616.4761	1.0393e8	0.7599	-0.0121
5	906.6730	906.6936	1.5407e8	0.7541	-0.0206
6	1254.9250	1254.9120	1.7310e7	0.7068	0.0130
7	1545.1340	1545.1453	4.7800e6	0.6227	-0.0113
8	1952.4270	1952.4249	9.5700e6	0.6631	2.0854e-3

State Parameter Editor

Ion Source: Turbo Spray
Ion Source Temperature Reached
Curtain Gas (CUR): 10.0
IonSpray Voltage (IS): 5500.0
Temperature (TEM): 0.0
Ion Source Gas 1 (GS1): 17.0
Ion Source Gas 2 (GS2): 0.0

Entrance Potential (EP): 10.0

Q3 Resolution: Unit
Ion Energy 3 (IE3): 1.2

CEM (CEM): 1800.0

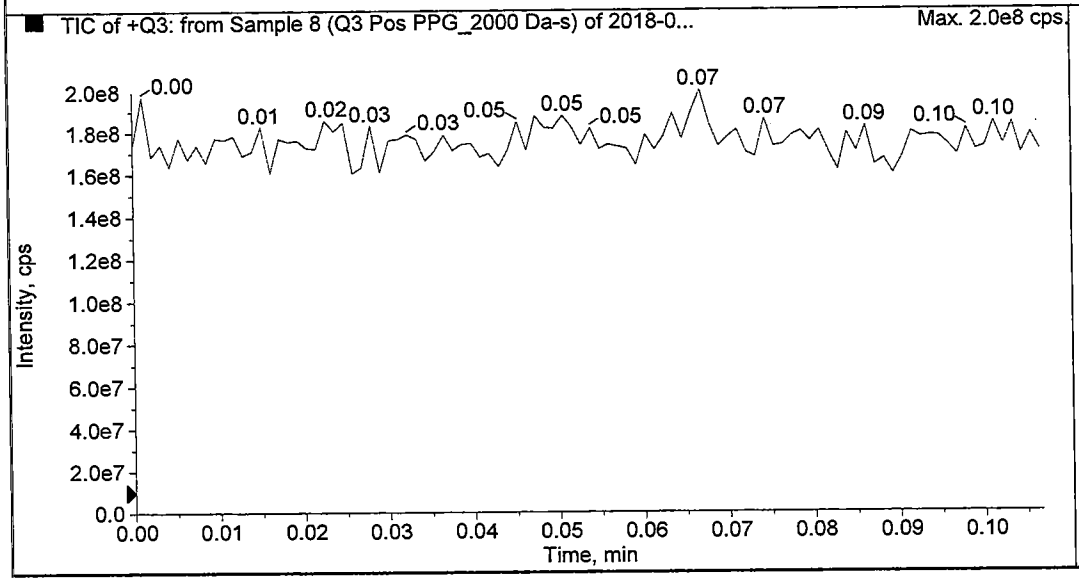
Mass Spectrometer Method Properties

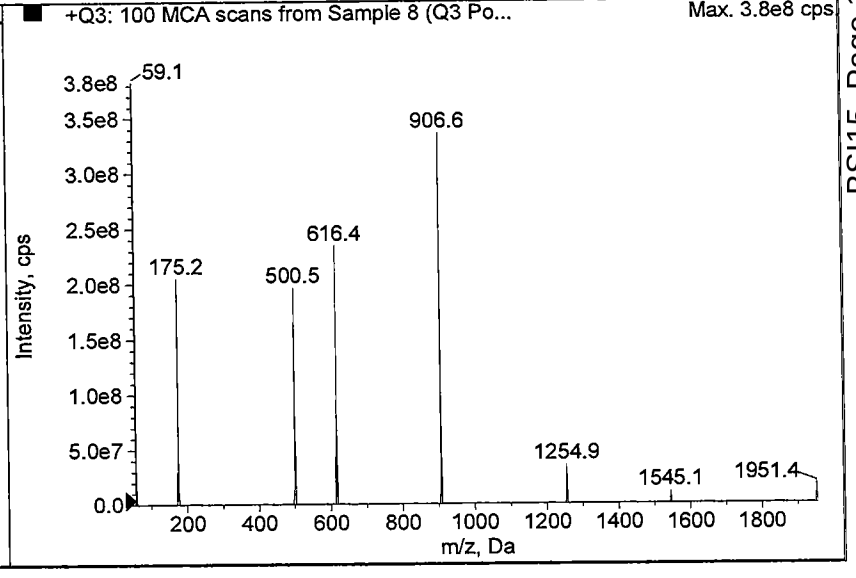
Period 1:

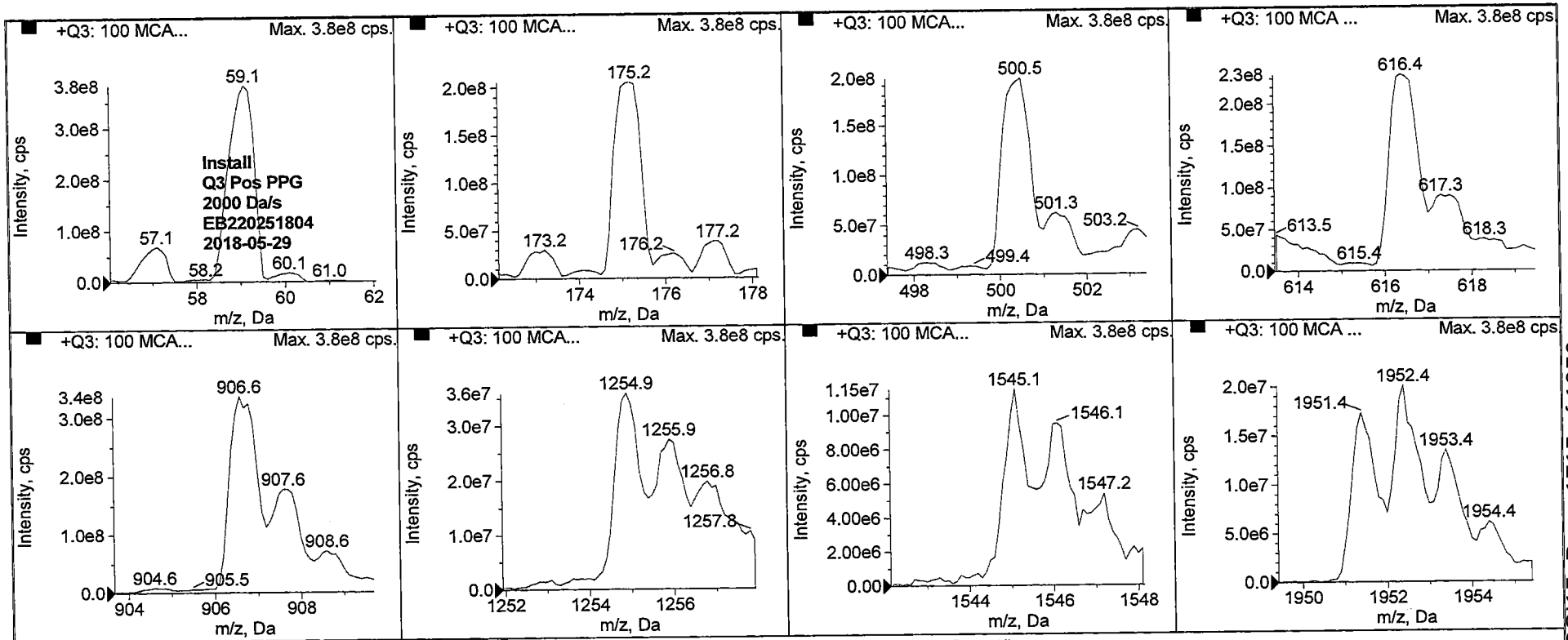
Scans in Period: 100
Relative Start Time: 0.00 msec
Scheduled Ionization: Off
Experiments in Period: 1

Period 1 Experiment 1:

Scan Type: Q3 MS (Q3)
Polarity: Positive
Scan Mode: Profile
Ion Source: Turbo Spray
Scans to Sum: 1
Resolution Q3: Unit







Peak List for " +Q3: 100 MCA scans from Sample 8 (Q3 Pos PPG_2000 Da-s) of 2018-05-29_Install.wiff (Turbo Spray)"

	Target Mass (Da)	Found At (Da)	Intensity (cps)	Width (Da)	Mass Shift (Da)
1	59.0500	59.0613	3.8304e8	0.6857	-0.0113
2	175.1330	175.1384	2.0544e8	0.7196	-5.4303e-3
3	500.3800	500.3896	1.9692e8	0.7603	-9.6113e-3
4	616.4640	616.4545	2.3484e8	0.7563	9.5275e-3
5	906.6730	906.6804	3.3638e8	0.7428	-7.4202e-3
6	1254.9250	1254.9055	3.5980e7	0.7182	0.0195
7	1545.1340	1545.0988	1.1500e7	0.6834	0.0352
8	1952.4270	1952.4546	2.0100e7	0.7640	-0.0276

State Parameter Editor

Ion Source: Turbo Spray
Ion Source Temperature Reached
Curtain Gas (CUR): 10.0
IonSpray Voltage (IS): -4500.0
Temperature (TEM): 0.0
Ion Source Gas 1 (GS1): 17.0
Ion Source Gas 2 (GS2): 0.0

Entrance Potential (EP): -10.0

Q1 Resolution: Unit
Ion Energy 1 (IE1): -1.0

CEM (CEM): 1900.0

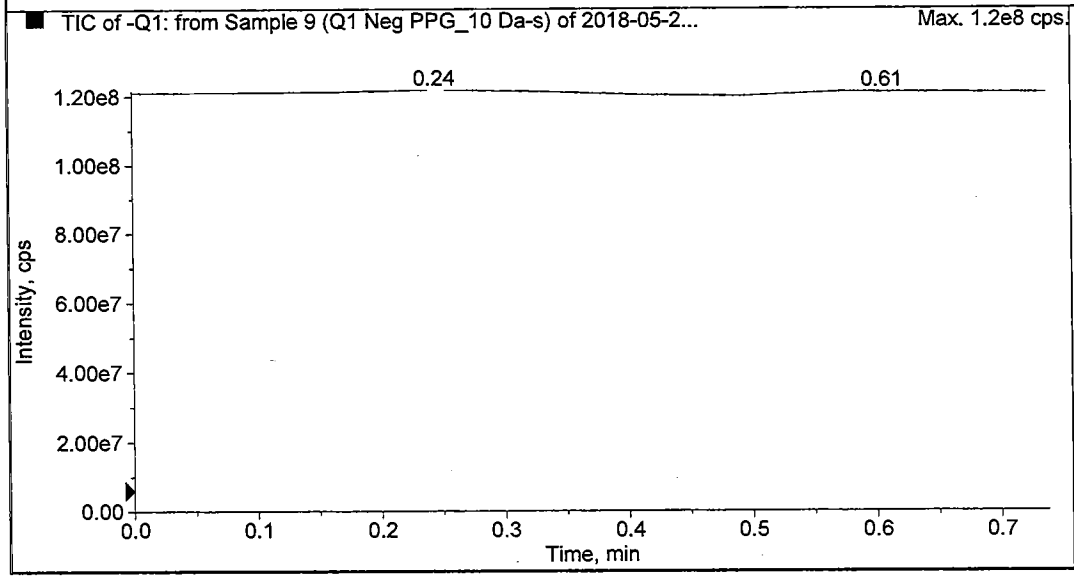
Mass Spectrometer Method Properties

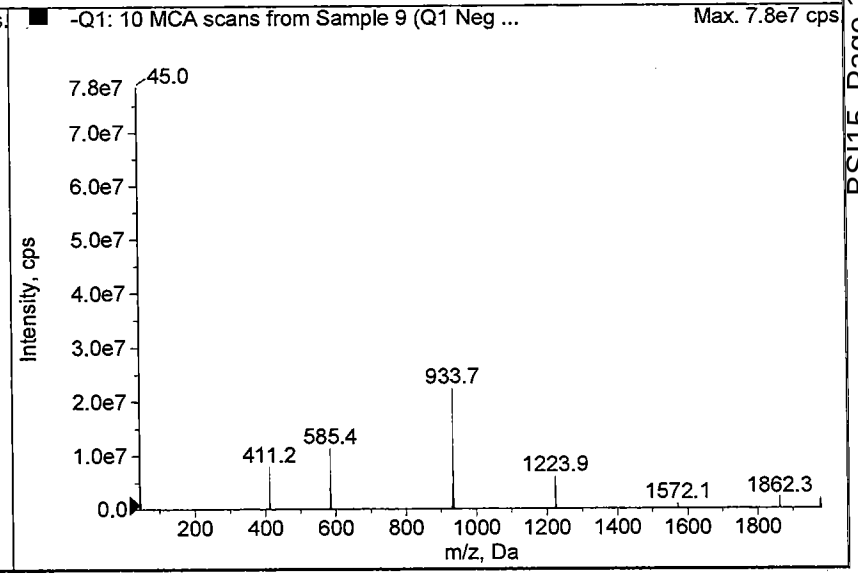
Period 1:

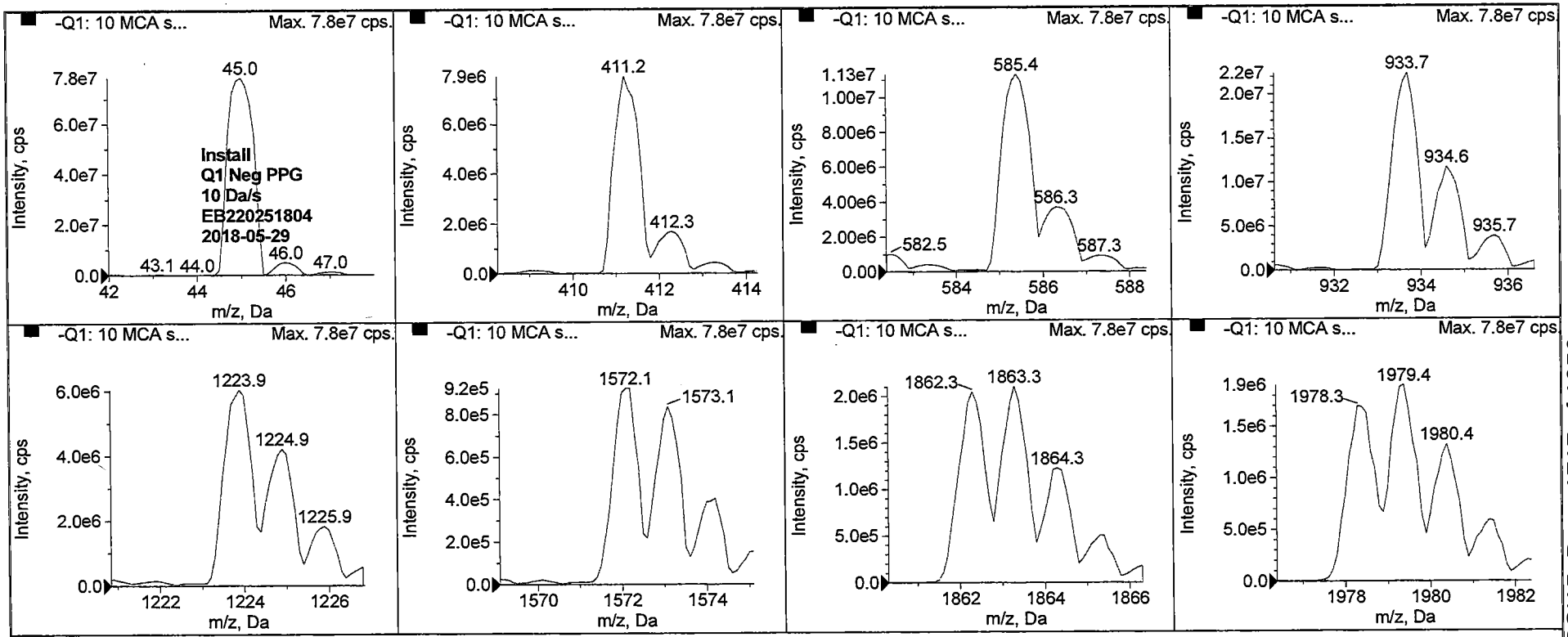
Scans in Period: 10
Relative Start Time: 0.00 msec
Scheduled Ionization: Off
Experiments in Period: 1

Period 1 Experiment 1:

Scan Type: Q1 MS (Q1)
Polarity: Negative
Scan Mode: Profile
Ion Source: Turbo Spray
Scans to Sum: 1
Resolution Q1: Unit







Peak List for " -Q1: 10 MCA scans from Sample 9 (Q1 Neg PPG_10 Da-s) of 2018-05-29_Install.wiff (Turbo Spray)"

	Target Mass (Da)	Found At (Da)	Intensity (cps)	Width (Da)	Mass Shift (Da)
1	44.9980	44.9947	7.8484e7	0.6977	3.3302e-3
2	411.2590	411.2640	7.9184e6	0.7009	-4.9843e-3
3	585.3850	585.3944	1.1318e7	0.7674	-9.3834e-3
4	933.6360	933.6513	2.2378e7	0.6638	-0.0153
5	1223.8450	1223.8605	6.0413e6	0.7621	-0.0155
6	1572.0970	1572.0967	9.2320e5	0.6727	2.8078e-4
7	1863.3060	1863.2949	2.1046e6	0.7369	0.0111
8	1979.3890	1979.3655	1.8985e6	0.7323	0.0235

State Parameter Editor

Ion Source: Turbo Spray
Ion Source Temperature Reached
Curtain Gas (CUR): 10.0
IonSpray Voltage (IS): -4500.0
Temperature (TEM): 0.0
Ion Source Gas 1 (GS1): 17.0
Ion Source Gas 2 (GS2): 0.0

Entrance Potential (EP): -10.0

Q1 Resolution: Unit
Ion Energy 1 (IE1): -1.0

CEM (CEM): 1900.0

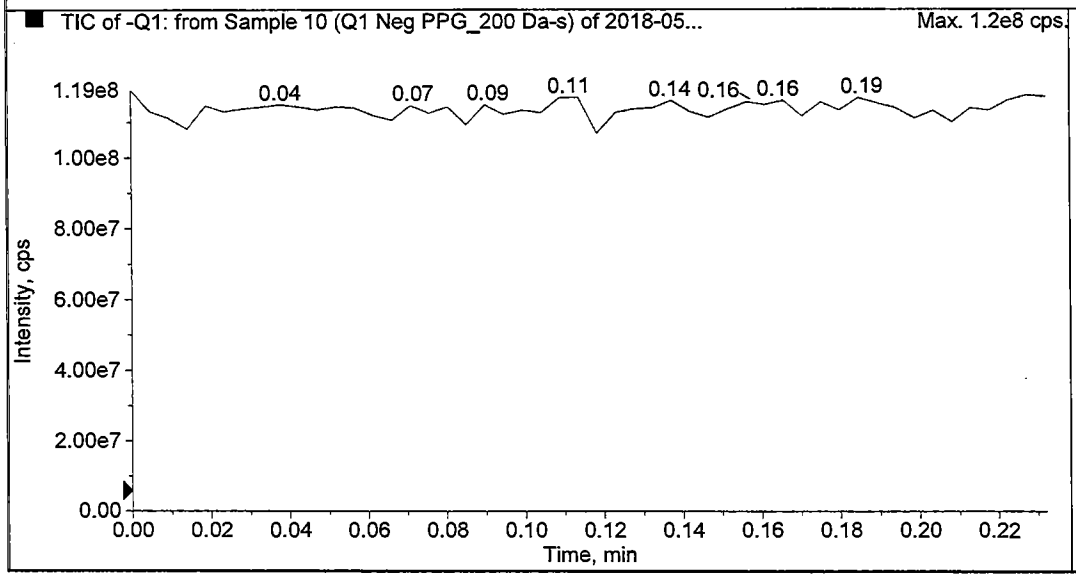
Mass Spectrometer Method Properties

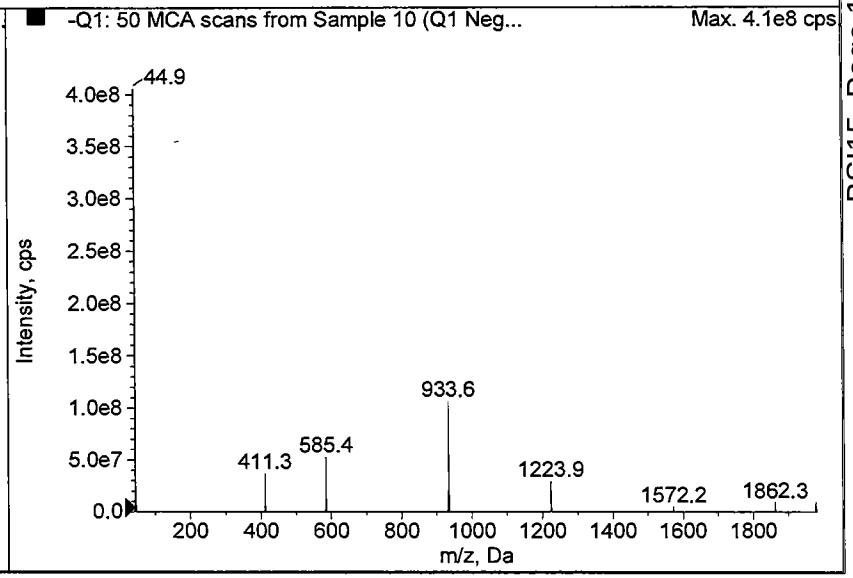
Period 1:

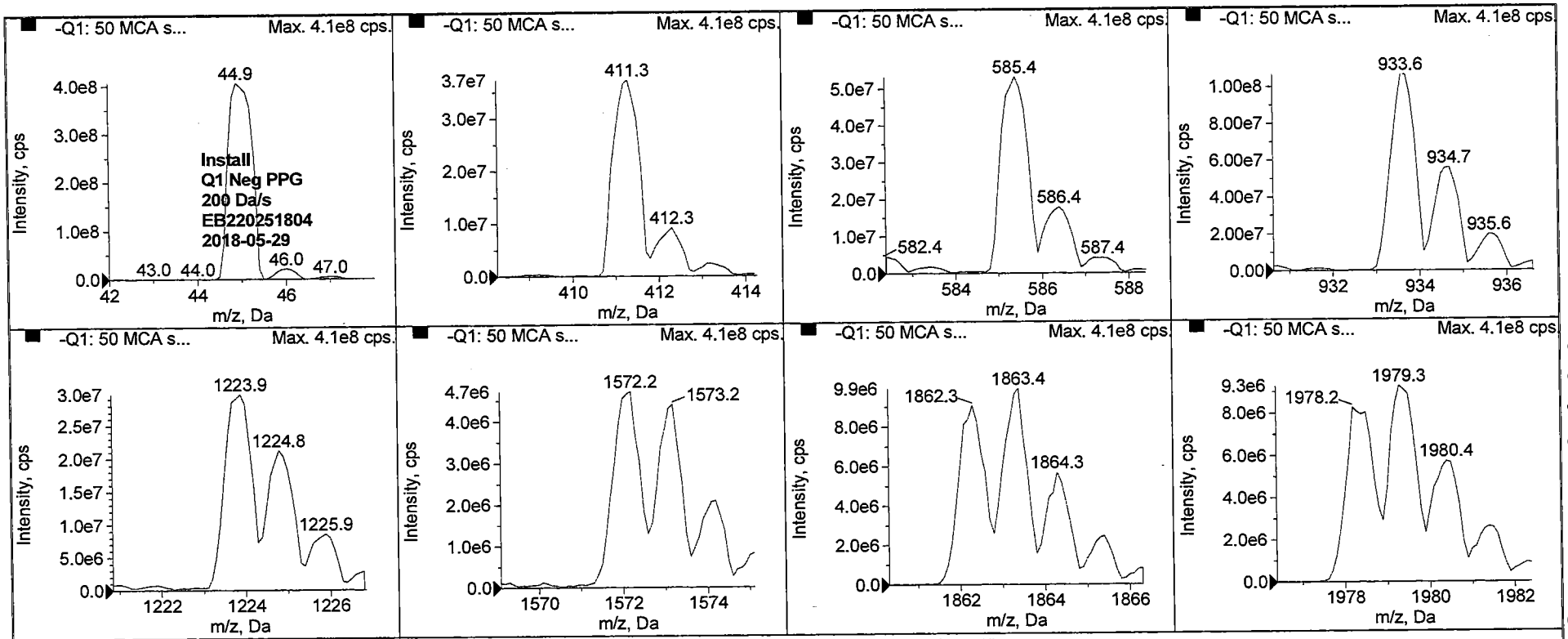
Scans in Period: 50
Relative Start Time: 0.00 msec
Scheduled Ionization: Off
Experiments in Period: 1

Period 1 Experiment 1:

Scan Type: Q1 MS (Q1)
Polarity: Negative
Scan Mode: Profile
Ion Source: Turbo Spray
Scans to Sum: 1
Resolution Q1: Unit







Peak List for " -Q1: 50 MCA scans from Sample 10 (Q1 Neg PPG_200 Da-s) of 2018-05-29_Install.wiff (Turbo Spray)"

	Target Mass (Da)	Found At (Da)	Intensity (cps)	Width (Da)	Mass Shift (Da)
1	44.9980	44.9900	4.0582e8	0.6493	8.0001e-3
2	411.2590	411.2621	3.7274e7	0.7276	-3.1008e-3
3	585.3850	585.3787	5.3084e7	0.7168	6.3372e-3
4	933.6360	933.6551	1.0649e8	0.6450	-0.0191
5	1223.8450	1223.8398	2.9712e7	0.7456	5.1659e-3
6	1572.0970	1572.1026	4.7160e6	0.7330	-5.5764e-3
7	1863.3060	1863.3085	9.9060e6	0.6832	-2.5396e-3
8	1979.3890	1979.3715	9.2680e6	0.7385	0.0175

State Parameter Editor

Ion Source: Turbo Spray
Ion Source Temperature Reached
Curtain Gas (CUR): 10.0
IonSpray Voltage (IS): -4500.0
Temperature (TEM): 0.0
Ion Source Gas 1 (GS1): 17.0
Ion Source Gas 2 (GS2): 0.0

Entrance Potential (EP): -10.0

Q1 Resolution: Unit
Ion Energy 1 (IE1): -1.0

CEM (CEM): 1900.0

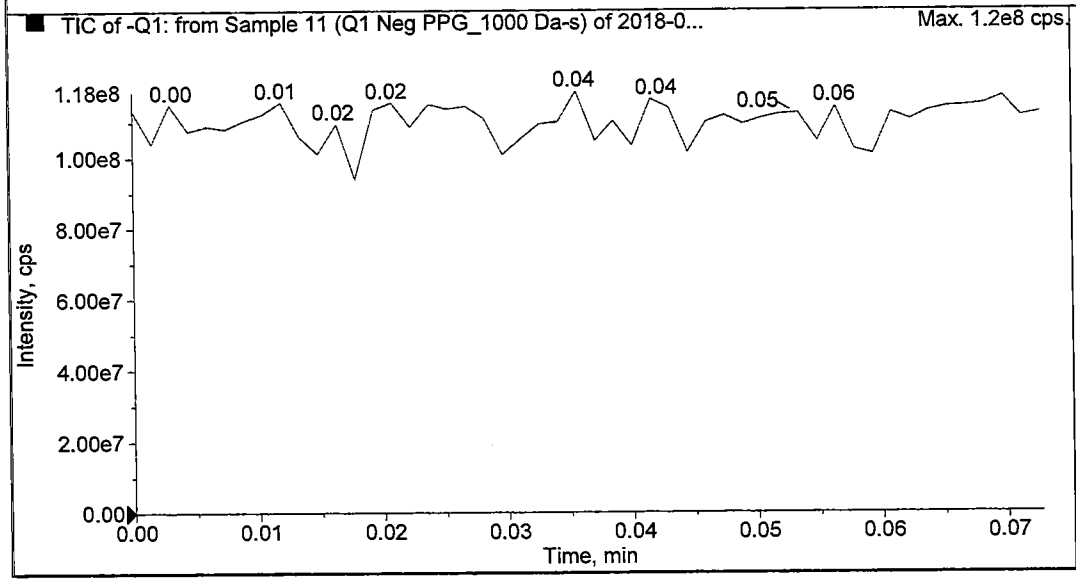
Mass Spectrometer Method Properties

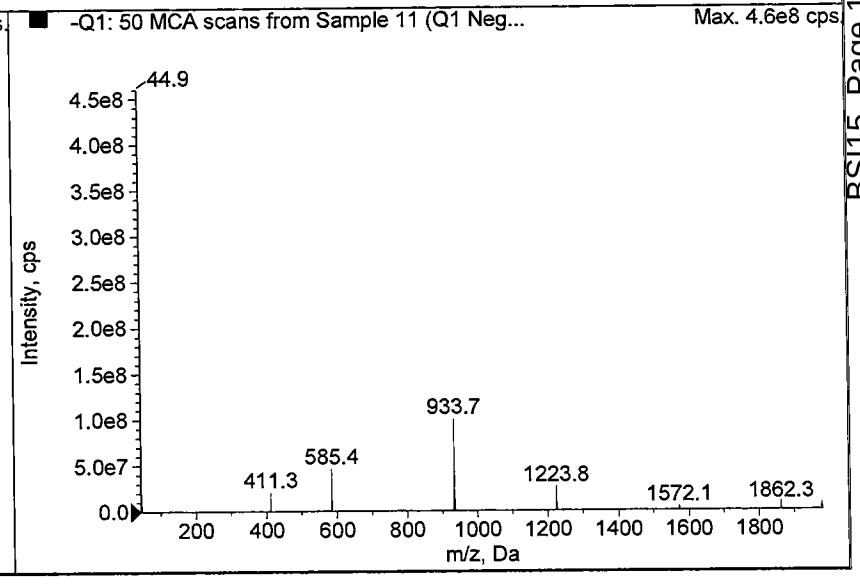
Period 1:

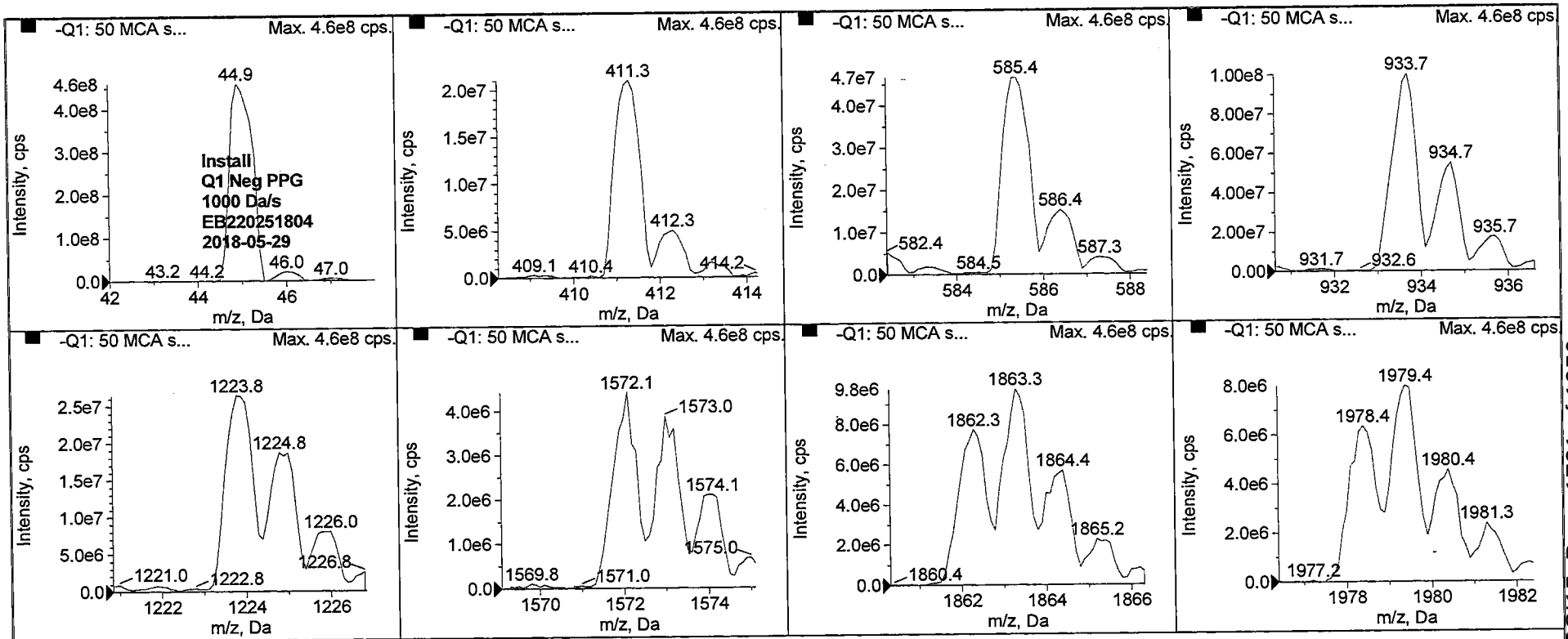
Scans in Period: 50
Relative Start Time: 0.00 msec
Scheduled Ionization: Off
Experiments in Period: 1

Period 1 Experiment 1:

Scan Type: Q1 MS (Q1)
Polarity: Negative
Scan Mode: Profile
Ion Source: Turbo Spray
Scans to Sum: 1
Resolution Q1: Unit







Peak List for " -Q1: 50 MCA scans from Sample 11 (Q1 Neg PPG_1000 Da-s) of 2018-05-29_Install.wiff (Turbo Spray)"

	Target Mass (Da)	Found At (Da)	Intensity (cps)	Width (Da)	Mass Shift (Da)
1	44.9980	45.0048	4.6001e8	0.6178	-6.8036e-3
2	411.2590	411.2622	2.1000e7	0.6966	-3.2270e-3
3	585.3850	585.3835	4.6680e7	0.7152	1.4984e-3
4	933.6360	933.6542	1.0040e8	0.6380	-0.0182
5	1223.8450	1223.8506	2.6440e7	0.7474	-5.6084e-3
6	1572.0970	1572.0547	4.4200e6	0.6569	0.0423
7	1863.3060	1863.3097	9.7600e6	0.7294	-3.6879e-3
8	1979.3890	1979.3736	7.9900e6	0.7077	0.0154

State Parameter Editor

Ion Source: Turbo Spray
Ion Source Temperature Reached
Curtain Gas (CUR): 10.0
IonSpray Voltage (IS): -4500.0
Temperature (TEM): 0.0
Ion Source Gas 1 (GS1): 17.0
Ion Source Gas 2 (GS2): 0.0

Entrance Potential (EP): -10.0

Q1 Resolution: Unit
Ion Energy 1 (IE1): -1.0

CEM (CEM): 1900.0

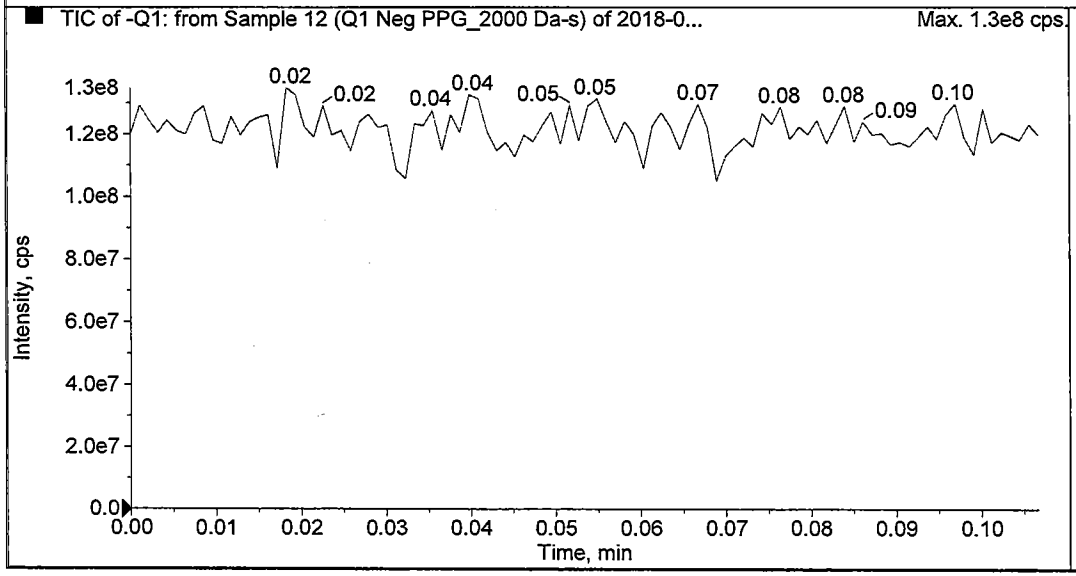
Mass Spectrometer Method Properties

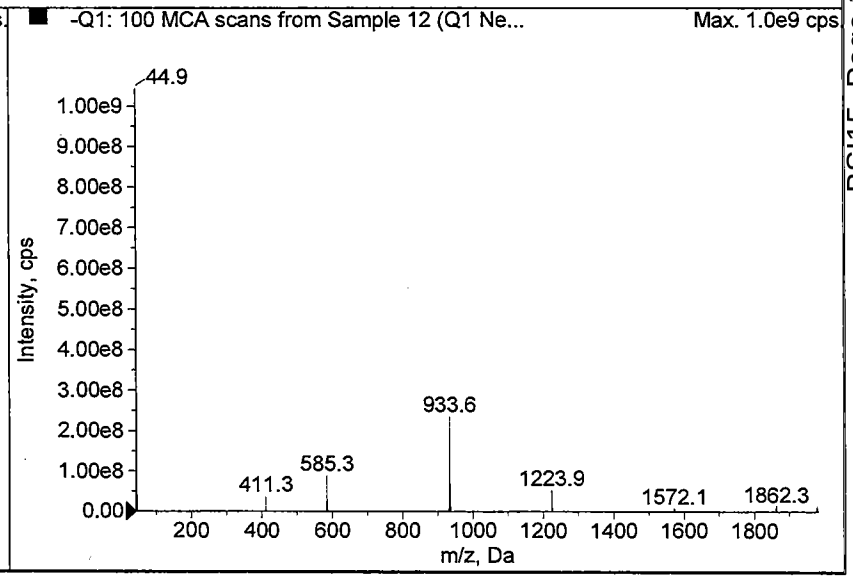
Period 1:

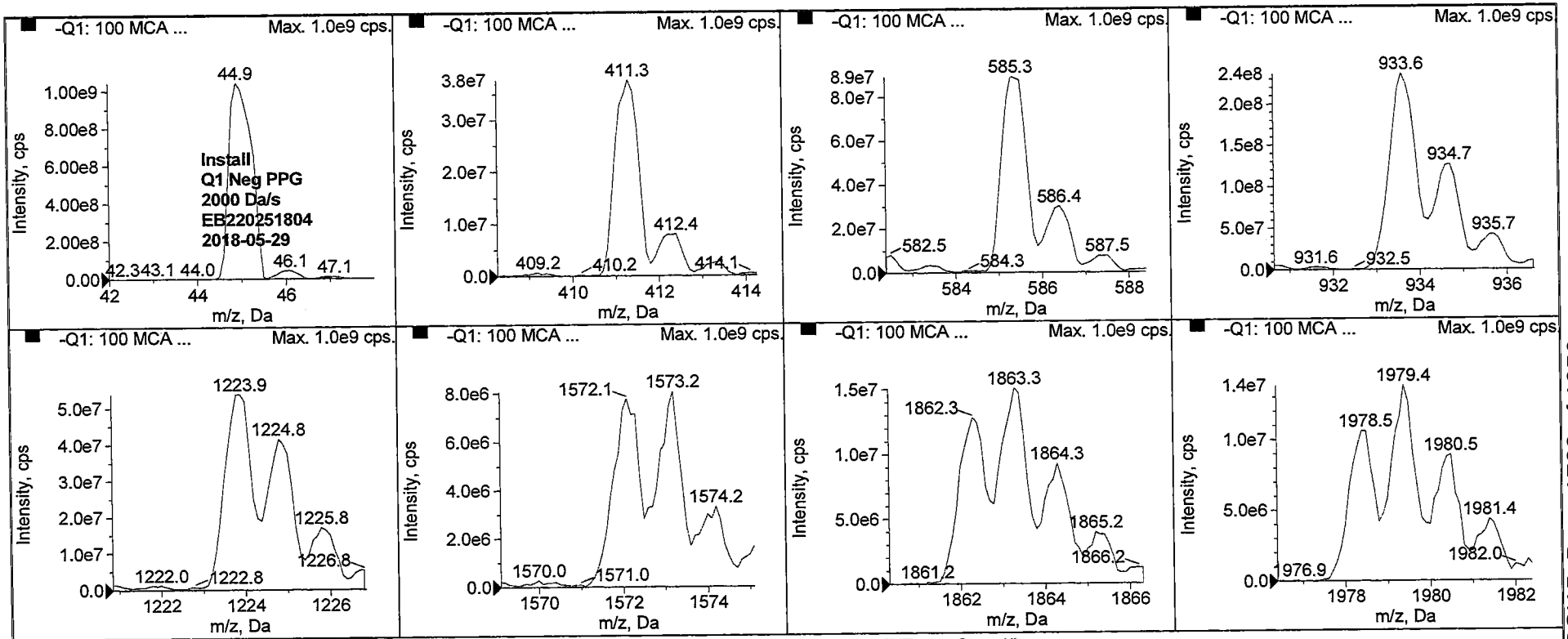
Scans in Period: 100
Relative Start Time: 0.00 msec
Scheduled Ionization: Off
Experiments in Period: 1

Period 1 Experiment 1:

Scan Type: Q1 MS (Q1)
Polarity: Negative
Scan Mode: Profile
Ion Source: Turbo Spray
Scans to Sum: 1
Resolution Q1: Unit







Peak List for "-Q1: 100 MCA scans from Sample 12 (Q1 Neg PPG_2000 Da-s) of 2018-05-29_Install.wiff (Turbo Spray)"

	Target Mass (Da)	Found At (Da)	Intensity (cps)	Width (Da)	Mass Shift (Da)
1	44.9980	44.9988	1.0432e9	0.6290	-7.8776e-4
2	411.2590	411.2681	3.7700e7	0.6335	-9.0706e-3
3	585.3850	585.3670	8.9260e7	0.6465	0.0180
4	933.6360	933.6310	2.3632e8	0.6639	4.9633e-3
5	1223.8450	1223.8469	5.3740e7	0.7138	-1.8551e-3
6	1572.0970	1572.1139	7.7800e6	0.7223	-0.0169
7	1863.3060	1863.2638	1.5060e7	0.7553	0.0422
8	1979.3890	1979.3750	1.3800e7	0.6556	0.0140

State Parameter Editor

Ion Source: Turbo Spray
Ion Source Temperature Reached
Curtain Gas (CUR): 10.0
IonSpray Voltage (IS): -4500.0
Temperature (TEM): 0.0
Ion Source Gas 1 (GS1): 17.0
Ion Source Gas 2 (GS2): 0.0

Entrance Potential (EP): -10.0

Q3 Resolution: Unit
Ion Energy 3 (IE3): -1.5

CEM (CEM): 1900.0

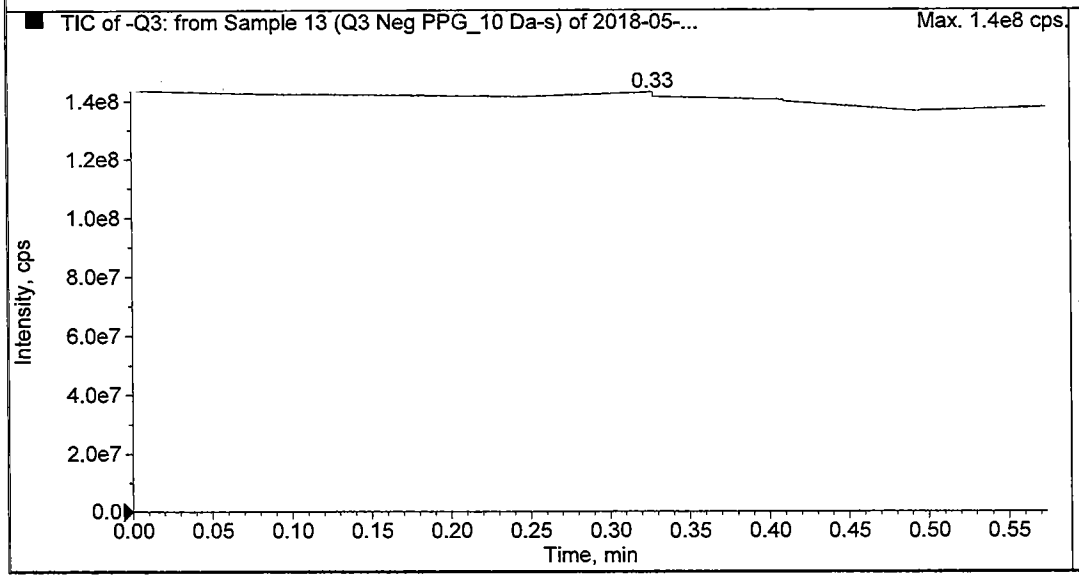
Mass Spectrometer Method Properties

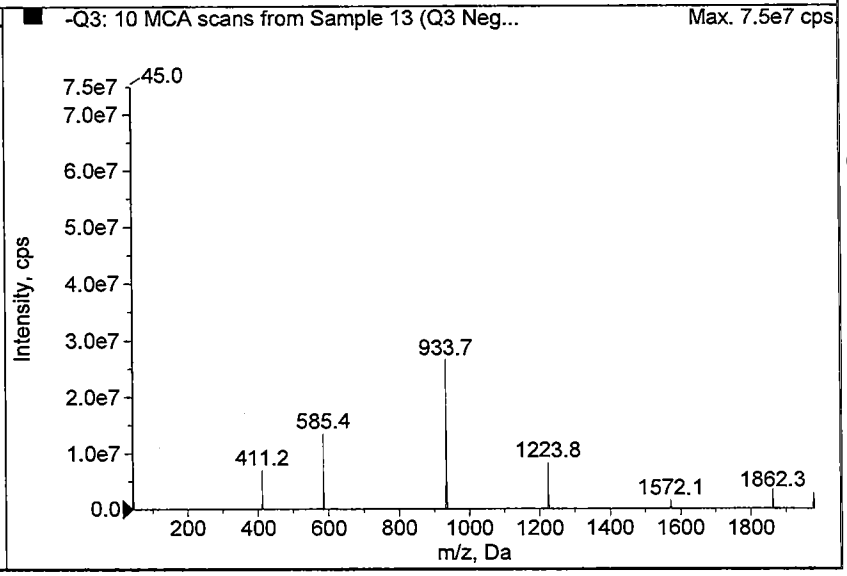
Period 1:

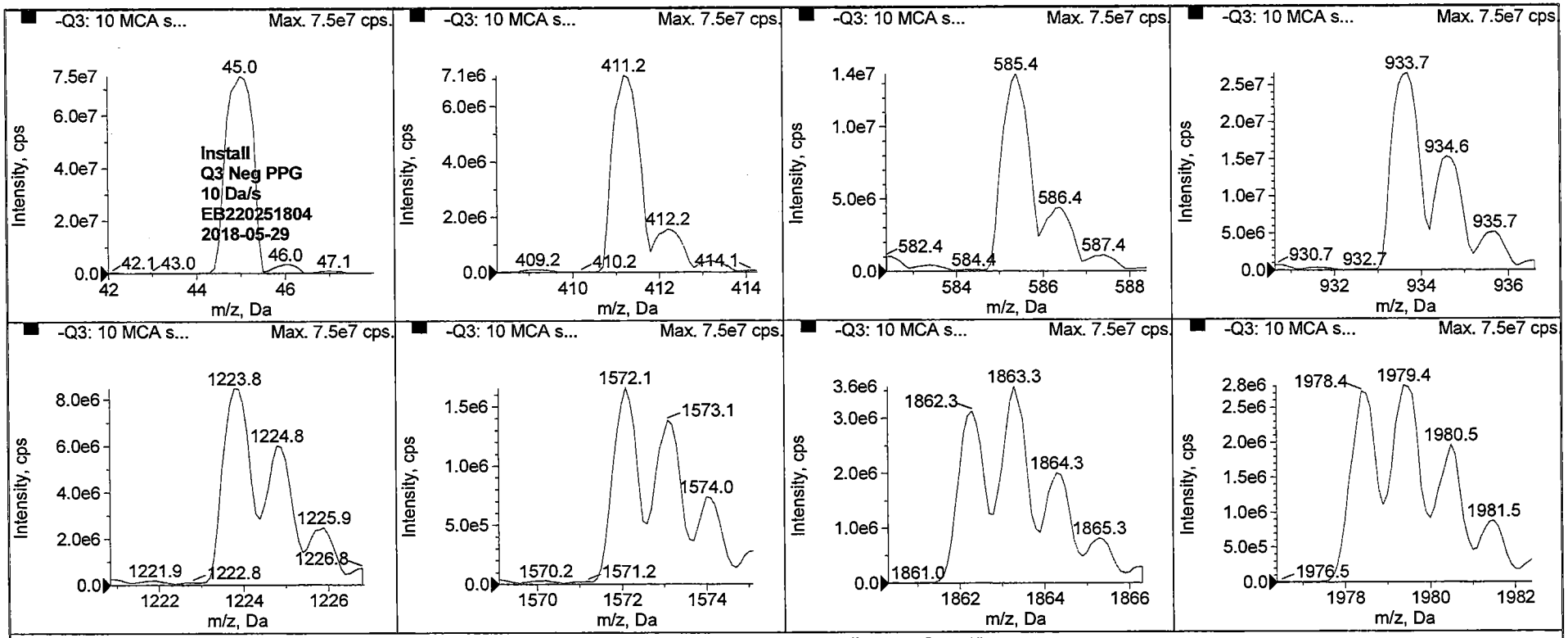
Scans in Period: 10
Relative Start Time: 0.00 msec
Scheduled Ionization: Off
Experiments in Period: 1

Period 1 Experiment 1:

Scan Type: Q3 MS (Q3)
Polarity: Negative
Scan Mode: Profile
Ion Source: Turbo Spray
Scans to Sum: 1
Resolution Q3: Unit







Peak List for " -Q3: 10 MCA scans from Sample 13 (Q3 Neg PPG_10 Da-s) of 2018-05-29_Install.wiff (Turbo Spray)"

	Target Mass (Da)	Found At (Da)	Intensity (cps)	Width (Da)	Mass Shift (Da)
1	44.9980	44.9972	7.5007e7	0.7320	7.7711e-4
2	411.2590	411.2344	7.1361e6	0.7370	0.0246
3	585.3850	585.3868	1.3657e7	0.7362	-1.8161e-3
4	933.6360	933.6384	2.6621e7	0.7288	-2.4244e-3
5	1223.8450	1223.8430	8.4746e6	0.7528	1.9856e-3
6	1572.0970	1572.0927	1.6606e6	0.6651	4.2840e-3
7	1863.3060	1863.3066	3.5734e6	0.7033	-6.4400e-4
8	1979.3890	1979.4384	2.8091e6	0.7513	-0.0494

State Parameter Editor

Ion Source: Turbo Spray
Ion Source Temperature Reached
Curtain Gas (CUR): 10.0
IonSpray Voltage (IS): -4500.0
Temperature (TEM): 0.0
Ion Source Gas 1 (GS1): 17.0
Ion Source Gas 2 (GS2): 0.0

Entrance Potential (EP): -10.0

Q3 Resolution: Unit
Ion Energy 3 (IE3): -1.5

CEM (CEM): 1900.0

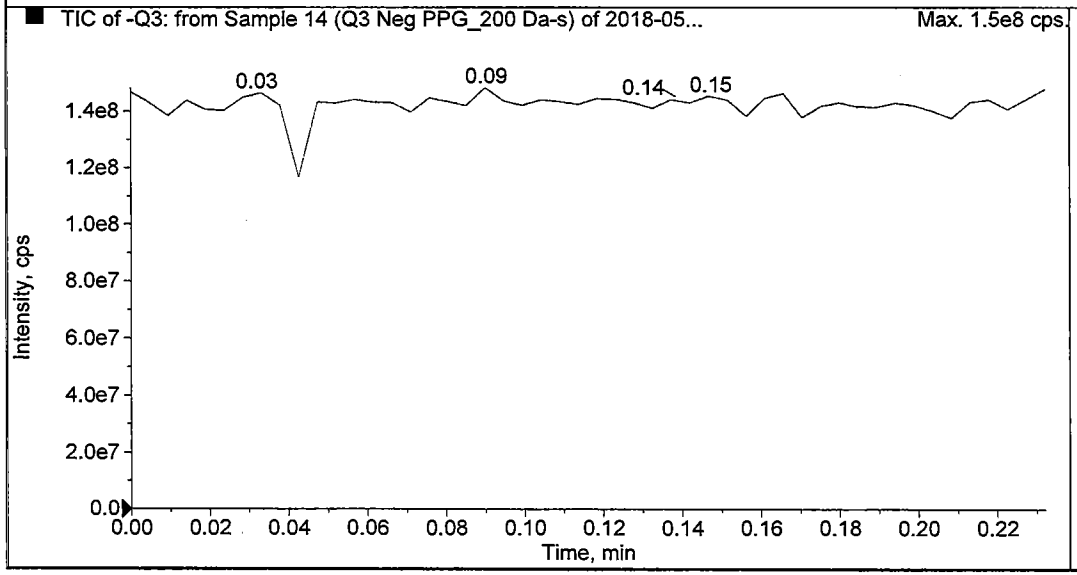
Mass Spectrometer Method Properties

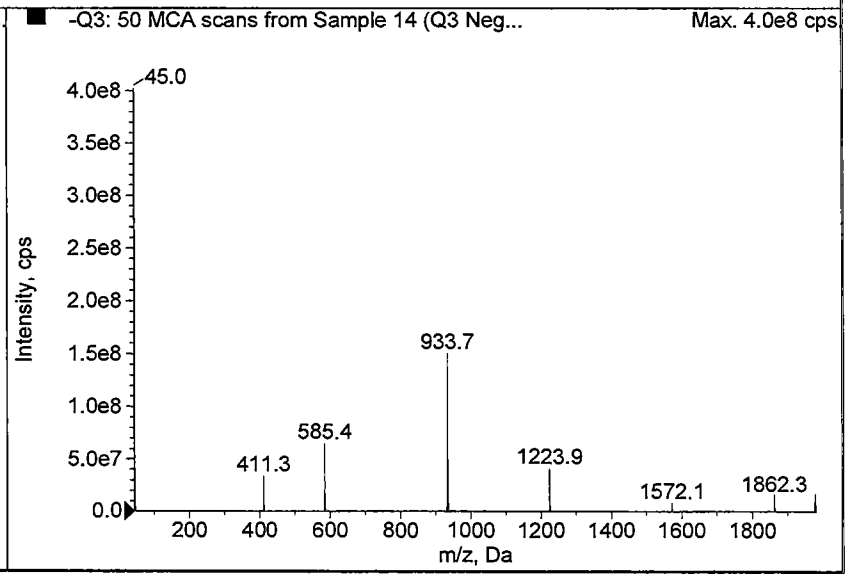
Period 1:

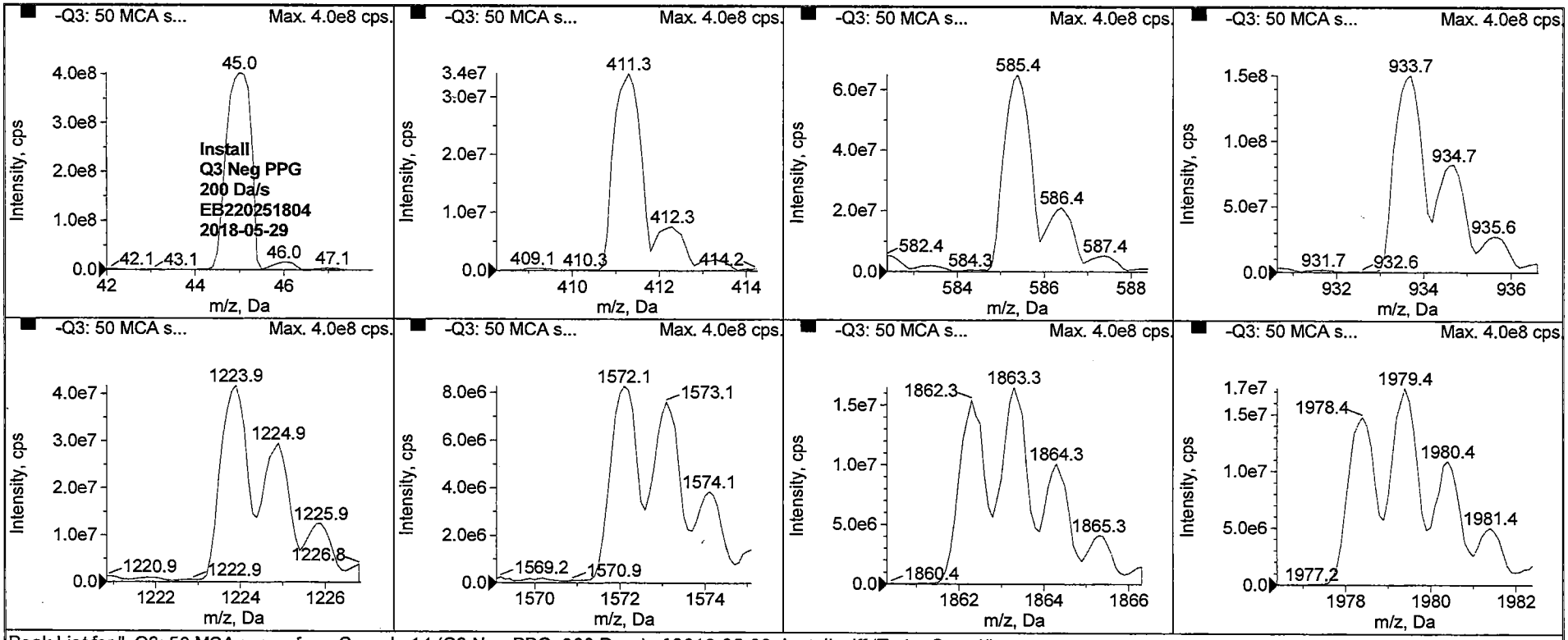
Scans in Period: 50
Relative Start Time: 0.00 msec
Scheduled Ionization: Off
Experiments in Period: 1

Period 1 Experiment 1:

Scan Type: Q3 MS (Q3)
Polarity: Negative
Scan Mode: Profile
Ion Source: Turbo Spray
Scans to Sum: 1
Resolution Q3: Unit







Peak List for " -Q3: 50 MCA scans from Sample 14 (Q3 Neg PPG_200 Da-s) of 2018-05-29_Install.wiff (Turbo Spray)"

	Target Mass (Da)	Found At (Da)	Intensity (cps)	Width (Da)	Mass Shift (Da)
1	44.9980	44.9962	4.0241e8	0.6638	1.8369e-3
2	411.2590	411.2556	3.4052e7	0.7417	3.4492e-3
3	585.3850	585.3842	6.5036e7	0.7136	7.7195e-4
4	933.6360	933.6363	1.5056e8	0.7374	-3.0811e-4
5	1223.8450	1223.8530	4.1810e7	0.7279	-7.9656e-3
6	1572.0970	1572.1021	8.2680e6	0.7241	-5.0694e-3
7	1863.3060	1863.3199	1.6482e7	0.6755	-0.0139
8	1979.3890	1979.3879	1.7328e7	0.7116	1.1118e-3

State Parameter Editor

Ion Source: Turbo Spray
Ion Source Temperature Reached
Curtain Gas (CUR): 10.0
IonSpray Voltage (IS): -4500.0
Temperature (TEM): 0.0
Ion Source Gas 1 (GS1): 17.0
Ion Source Gas 2 (GS2): 0.0

Entrance Potential (EP): -10.0

Q3 Resolution: Unit
Ion Energy 3 (IE3): -1.5

CEM (CEM): 1900.0

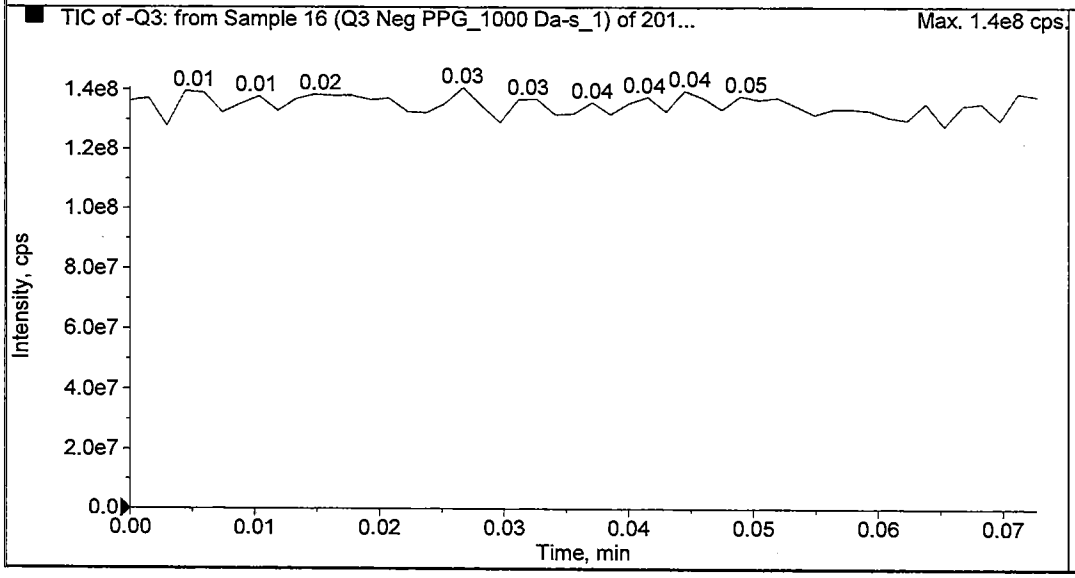
Mass Spectrometer Method Properties

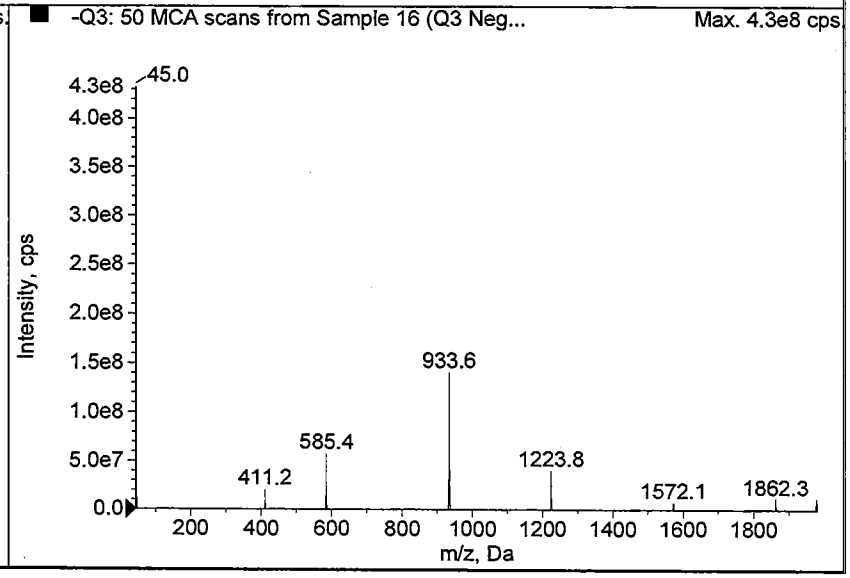
Period 1:

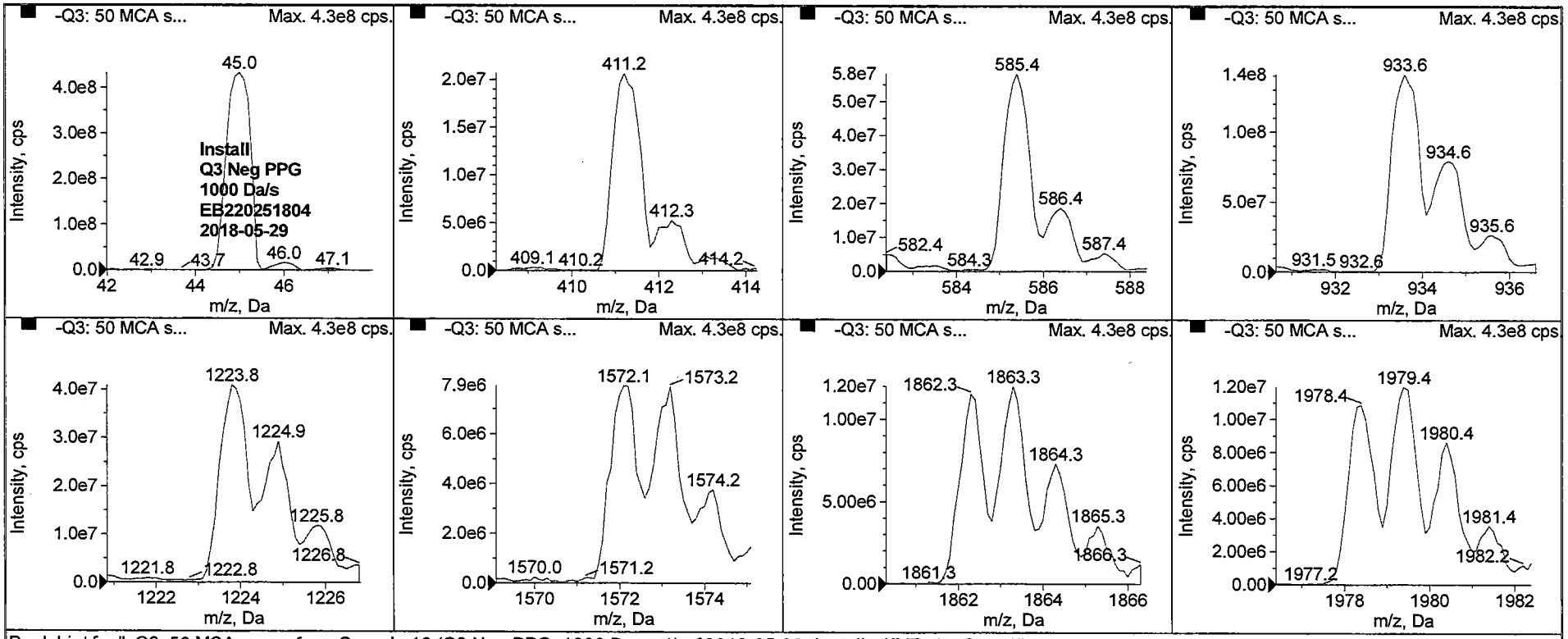
Scans in Period: 50
Relative Start Time: 0.00 msec
Scheduled Ionization: Off
Experiments in Period: 1

Period 1 Experiment 1:

Scan Type: Q3 MS (Q3)
Polarity: Negative
Scan Mode: Profile
Ion Source: Turbo Spray
Scans to Sum: 1
Resolution Q3: Unit







Peak List for "-Q3: 50 MCA scans from Sample 16 (Q3 Neg PPG_1000 Da-s_1) of 2018-05-29_Install.wiff (Turbo Spray)"

	Target Mass (Da)	Found At (Da)	Intensity (cps)	Width (Da)	Mass Shift (Da)
1	44.9980	44.9825	4.3310e8	0.6384	0.0155
2	411.2590	411.2576	2.0660e7	0.7352	1.4357e-3
3	585.3850	585.3827	5.8190e7	0.6719	2.2702e-3
4	933.6360	933.6150	1.4107e8	0.7226	0.0210
5	1223.8450	1223.8394	4.0960e7	0.7336	5.6019e-3
6	1572.0970	1572.1001	7.9400e6	0.7950	-3.0523e-3
7	1863.3060	1863.2902	1.2010e7	0.6806	0.0158
8	1979.3890	1979.4012	1.1960e7	0.7138	-0.0122

State Parameter Editor

Ion Source: Turbo Spray
Ion Source Temperature Reached
Curtain Gas (CUR): 10.0
IonSpray Voltage (IS): -4500.0
Temperature (TEM): 0.0
Ion Source Gas 1 (GS1): 17.0
Ion Source Gas 2 (GS2): 0.0

Entrance Potential (EP): -10.0

Q3 Resolution: Unit
Ion Energy 3 (IE3): -1.5

CEM (CEM): 1900.0

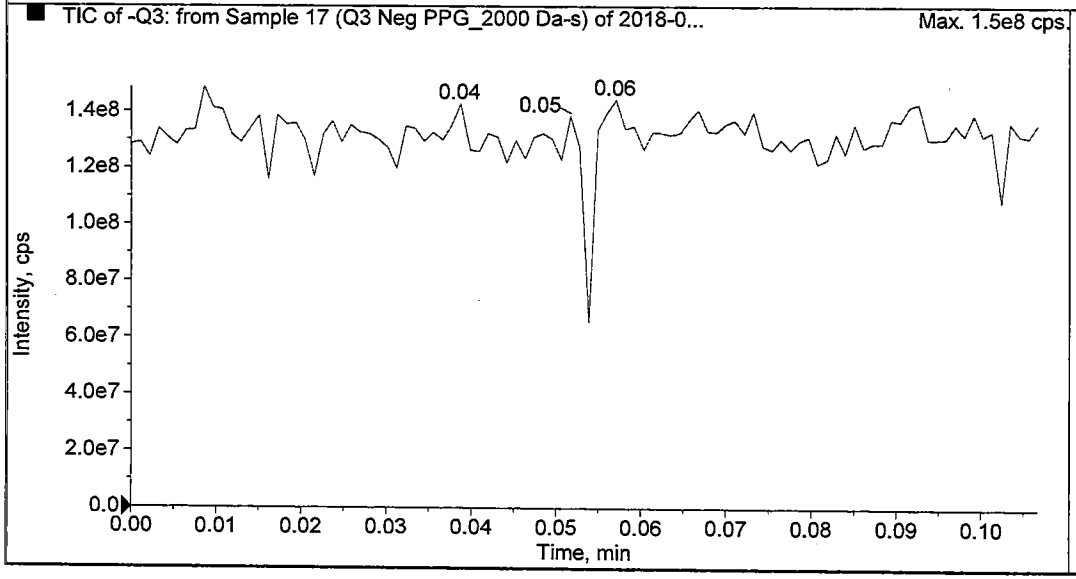
Mass Spectrometer Method Properties

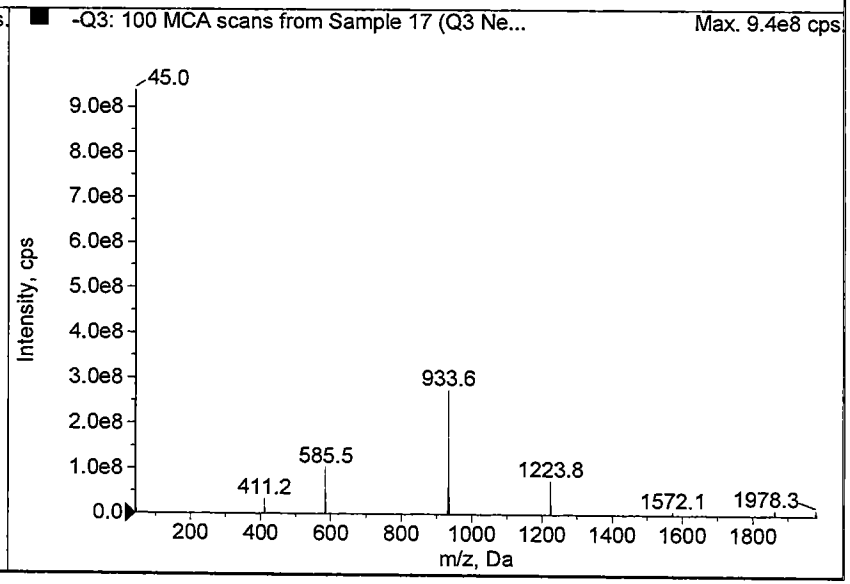
Period 1:

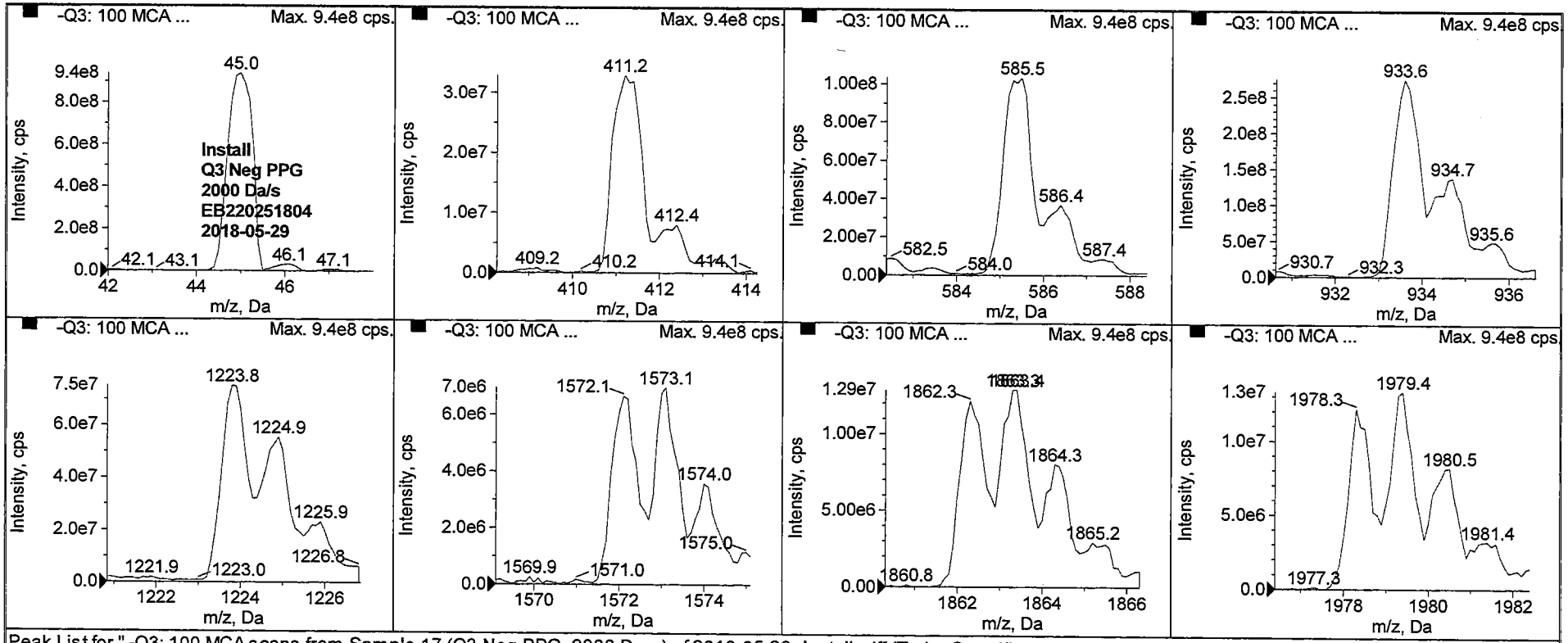
Scans in Period: 100
Relative Start Time: 0.00 msec
Scheduled Ionization: Off
Experiments in Period: 1

Period 1 Experiment 1:

Scan Type: Q3 MS (Q3)
Polarity: Negative
Scan Mode: Profile
Ion Source: Turbo Spray
Scans to Sum: 1
Resolution Q3: Unit







Peak List for " -Q3: 100 MCA scans from Sample 17 (Q3 Neg PPG_2000 Da-s) of 2018-05-29_Install.wiff (Turbo Spray)"

	Target Mass (Da)	Found At (Da)	Intensity (cps)	Width (Da)	Mass Shift (Da)
1	44.9980	44.9950	9.3786e8	0.6643	2.9882e-3
2	411.2590	411.2370	3.2920e7	0.7732	0.0220
3	585.3850	585.3850	1.0332e8	0.6994	-4.8105e-6
4	933.6360	933.6288	2.7486e8	0.7105	7.2155e-3
5	1223.8450	1223.8546	7.5140e7	0.6946	-9.5568e-3
6	1572.0970	1572.1115	6.6600e6	0.6890	-0.0145
7	1863.3060	1863.3250	1.2880e7	0.7704	-0.0190
8	1979.3890	1979.3741	1.3320e7	0.6259	0.0149

State Parameter Editor

Ion Source: Turbo Spray
Ion Source Temperature Reached
Curtain Gas (CUR): 28.0
IonSpray Voltage (IS): 5500.0
Temperature (TEM): 0.0
Ion Source Gas 1 (GS1): 17.0
Ion Source Gas 2 (GS2): 0.0

Declustering Potential (DP): 135.0
Entrance Potential (EP): 10.0

Q1 Resolution: Unit
Ion Energy 1 (IE1): 1.2

CEM (CEM): 1800.0

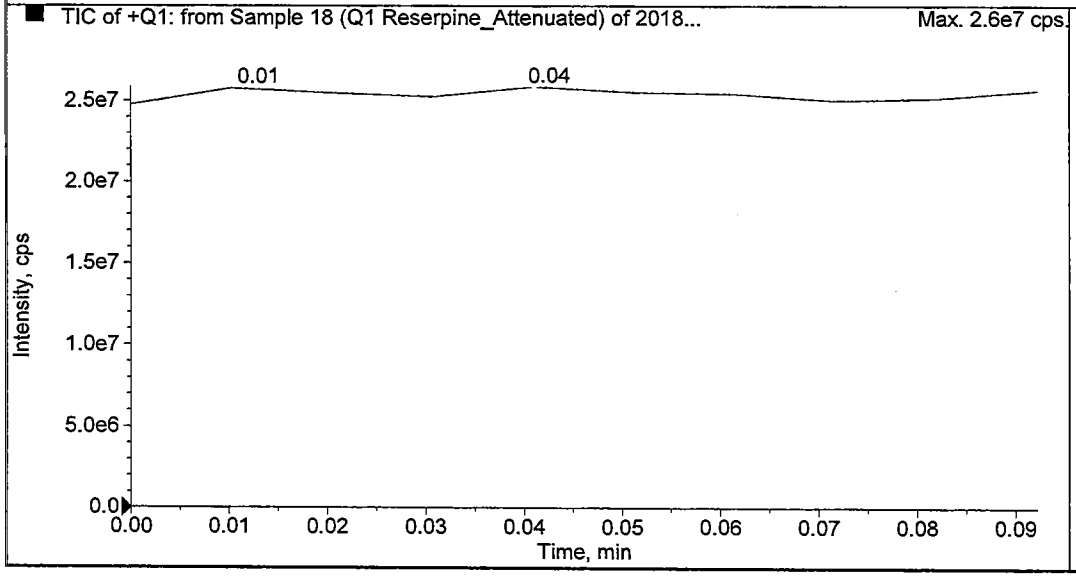
Mass Spectrometer Method Properties

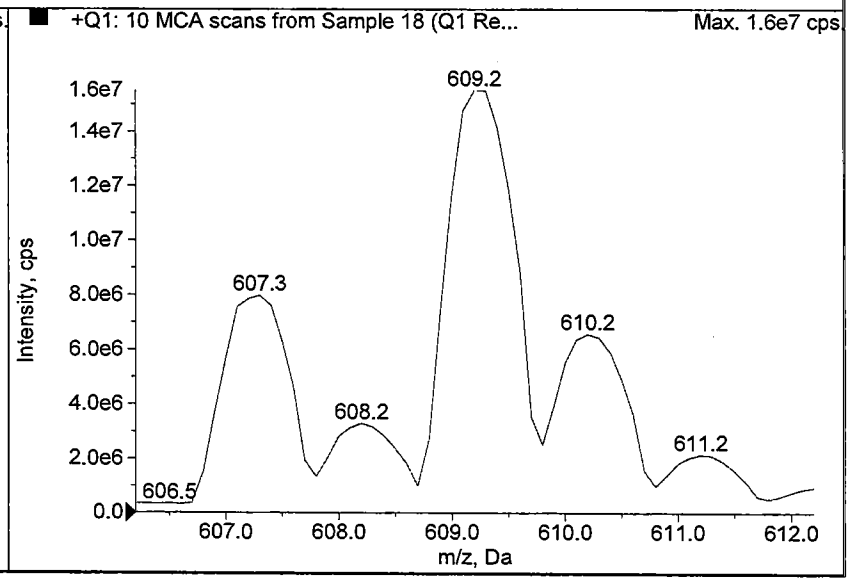
Period 1:

Scans in Period: 10
Relative Start Time: 0.00 msec
Scheduled Ionization: Off
Experiments in Period: 1

Period 1 Experiment 1:

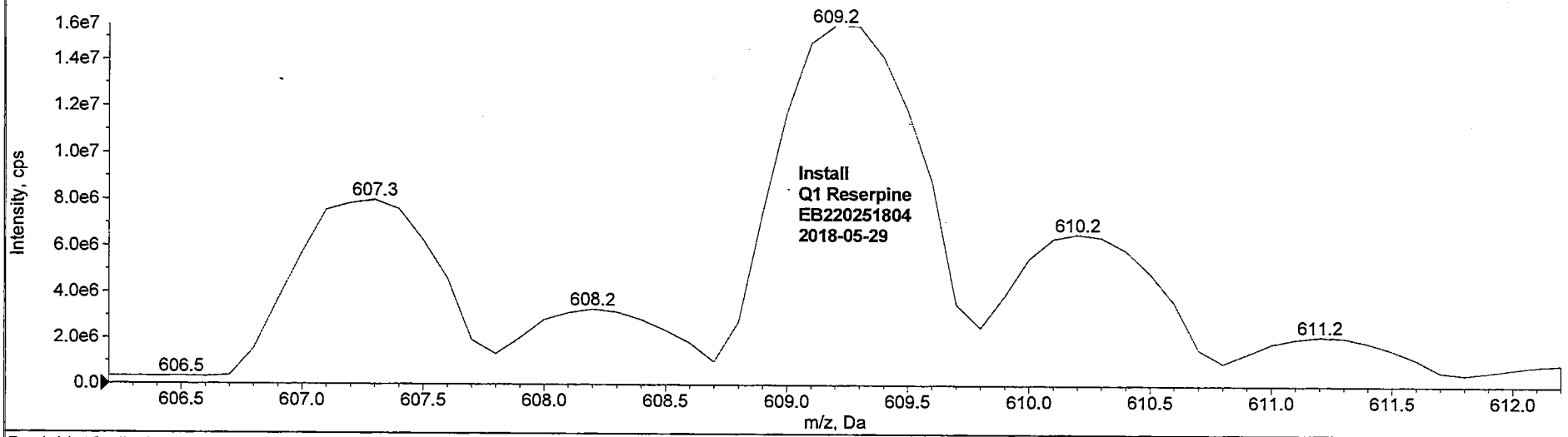
Scan Type: Q1 MS (Q1)
Polarity: Positive
Scan Mode: Profile
Ion Source: Turbo Spray
Scans to Sum: 1
Resolution Q1: Unit





+Q1: 10 MCA scans from Sample 18 (Q1 Reserpine_Attenuated) of 2018-05-29_Install.wiff (Turbo Spray)

Max. 1.6e7 cps



Peak List for " +Q1: 10 MCA scans from Sample 18 (Q1 Reserpine_Attenuated) of 2018-05-29_Install.wiff (Turbo Spray)"

	Target Mass (Da)	Found At (Da)	Intensity (cps)	Width (Da)	Mass Shift (Da)
1	195.1000	n/a	n/a	n/a	n/a
2	609.2810	609.2580	1.5520e7	0.7138	0.0230

State Parameter Editor

Ion Source: Turbo Spray
Ion Source Temperature Reached
Curtain Gas (CUR): 28.0
Collision Gas (CAD): 9
IonSpray Voltage (IS): 5500.0
Temperature (TEM): 0.0
Ion Source Gas 1 (GS1): 17.0
Ion Source Gas 2 (GS2): 0.0

Declustering Potential (DP): 135.0
Entrance Potential (EP): 10.0
Collision Energy (CE): 44.5
Collision Cell Exit Potential (CXP): 6.2

Q1 Resolution: Unit Q3 Resolution: Unit
Ion Energy 1 (IE1): 1.2

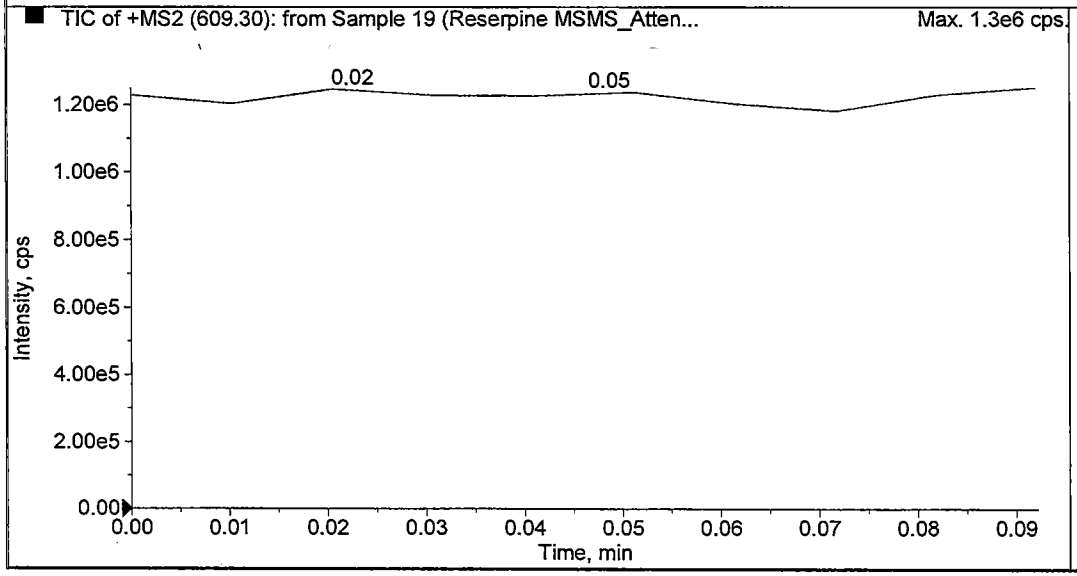
Mass Spectrometer Method Properties

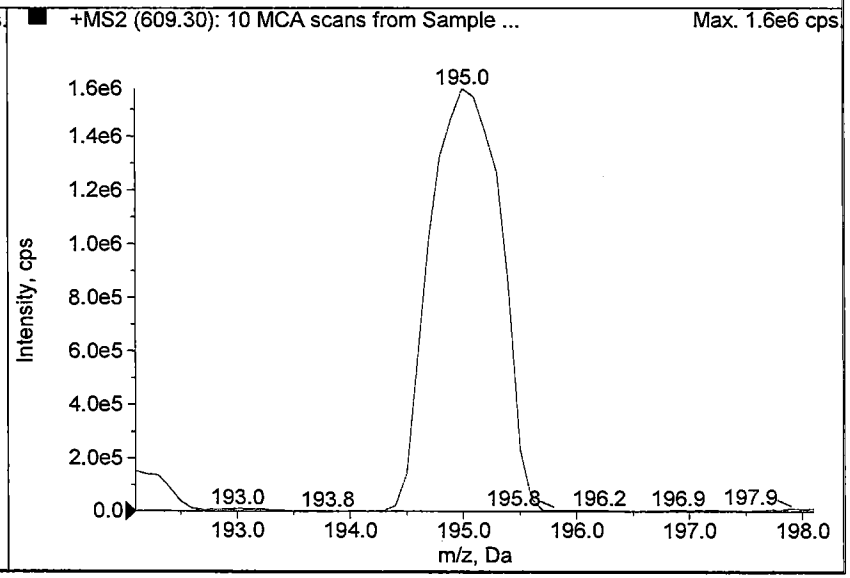
Period 1:

Scans in Period: 10
Relative Start Time: 0.00 msec
Scheduled Ionization: Off
Experiments in Period: 1

Period 1 Experiment 1:

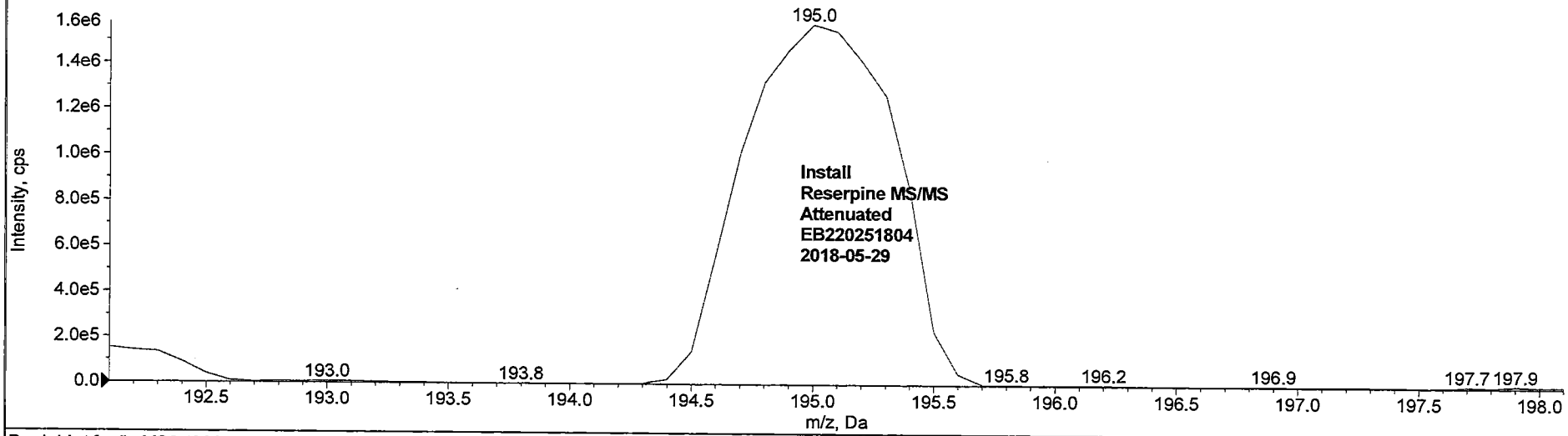
Scan Type: Product Ion (MS2)
Polarity: Positive
Scan Mode: Profile
Ion Source: Turbo Spray
Scans to Sum: 1
Product Of: 609.30 Da





+MS2 (609.30): 10 MCA scans from Sample 19 (Reserpine MSMS_Attenuated) of 2018-05-29_Install.wiff (Turbo Spray)

Max. 1.6e6 cps.



Peak List for " +MS2 (609.30): 10 MCA scans from Sample 19 (Reserpine MSMS_Attenuated) of 2018-05-29_Install.wiff (Turbo Spray)"

	Target Mass (Da)	Found At (Da)	Intensity (cps)	Width (Da)	Mass Shift (Da)
1	195.1000	195.0306	1.5772e6	0.7615	0.0694
2	609.2810	n/a	n/a	n/a	n/a

Raw QC Data

PFAS by LC/MS/MS

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LC-MS/MS
DOD Analysis Report

Printed: 11/14/2018 4:25:00 PM
Template: DOD-Sample-18JUN22.docx

ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM
Result Table: 18316011 11/14/2018 4:24:36 PM
Acquisition Method: 18AUG13_3uL.dam

Sample Name:	BLK316011			**Data File:**		18NOV13D-49.wiff
Sample ID:	EPA 537 mod QSM 5.1 table B-15 18316011			**Acquis Date:**		2018-11-13T16:56:29
Sample Type:	Unknown			**Instrument:**		LM27631
Vial Position:	47			**Acquis Method:**		18AUG13_3uL.dam
Injection Vol:	3.00			**Result Table:**		18316011
QMethod File:	18AUG20QM			**ICAL Name:**		18NOV12DCAL
Batch Number:	18316011			**Operator:**		MCD7824
Sample Wt.:	1.00000			**Dilution Factor:**		1.00
Sample Vol.:	1.000			**Prep Factor:**		2.000

Injection Standard Peak Table

Injection Standard Area Reference File: 18NOV13D-05

Injection Standard Name	Inj Std Conc	Injection Std Peak Area	Rreference Injection Standard Area	Injection Std %Diff	Injection Std %Diff Limit	Injection Std %Diff OOS
13C3-PFBA	5.0	750418.0	661126.9	14	50	
13C2-PFOA	5.0	523346.1	466902.6	12	50	
13C4-PFOS	4.8	279165.7	247446.9	13	50	
13C2-PFDA	5.0	319900.9	295381.6	8	50	

Extraction Standard Peak Table

Extraction Standard Name	Ext Std Area	Inj Std Name	Inj Std Area	Area Ratio	Ext Std Conc	Ext Std Result	Ext Std %REC	Ext Std %REC Limit	Ext Std OOS
E13C4-PFBA	585730.6	13C3-PFBA	750418.0	0.781	10.000	6.999	70	50-150	
E13C5-PFPeA	576099.4	13C3-PFBA	750418.0	0.768	10.000	6.887	69	50-150	
E13C3-PFBS	325907.7	13C3-PFBA	750418.0	0.434	9.300	6.132	66	50-150	
E13C2-4:2-FTS	36725.8	13C2-PFOA	523346.1	0.070	9.340	6.251	67	50-150	
E13C5-PFHxA	503637.2	13C2-PFOA	523346.1	0.962	10.000	6.953	70	50-150	
E13C3-PFHxS	251215.7	13C2-PFOA	523346.1	0.480	9.460	6.588	70	50-150	
E13C4-PFHpA	405827.0	13C2-PFOA	523346.1	0.775	10.000	6.987	70	50-150	
E13C2-6:2-FTS	27958.6	13C2-PFOA	523346.1	0.053	9.500	7.149	75	50-150	
E13C8-PFOA	697933.9	13C2-PFOA	523346.1	1.334	10.000	7.348	73	50-150	
E13C8-PFOS	213856.0	13C4-PFOS	279165.7	0.766	9.560	6.789	71	50-150	
E13C9-PFNA	370432.1	13C4-PFOS	279165.7	1.327	10.000	7.399	74	50-150	
E13C6-PFDA	492806.6	13C2-PFDA	319900.9	1.540	10.000	7.190	72	50-150	
E13C2-8:2-FTS	21048.0	13C2-PFDA	319900.9	0.066	9.580	6.563	69	50-150	
E13C8-PFOSA	525622.4	13C2-PFDA	319900.9	1.643	10.000	7.285	73	50-150	
Ed3-NMeFOSAA	62073.0	13C2-PFDA	319900.9	0.194	10.000	7.005	70	50-150	
E13C7-PFUnDA	205374.4	13C2-PFDA	319900.9	0.642	10.000	7.455	75	50-150	
Ed5-NEtFOSAA	47747.8	13C2-PFDA	319900.9	0.149	10.000	6.316	63	50-150	
E13C2-PFDoDA	430591.1	13C2-PFDA	319900.9	1.346	10.000	6.989	70	50-150	
Ed7-NMePFOSAE	259882.8	13C2-PFDA	319900.9	0.812	10.000	7.031	70	50-150	
Ed3-NMePFOSA	58678.7	13C2-PFDA	319900.9	0.183	10.000	6.665	67	50-150	
Ed9-NEtPFOSAE	212201.6	13C2-PFDA	319900.9	0.663	10.000	6.900	69	50-150	
Ed5-NEtPFOSA	45311.1	13C2-PFDA	319900.9	0.142	10.000	6.645	66	50-150	
E13C2-PFTeDA	288143.9	13C2-PFDA	319900.9	0.901	10.000	6.324	63	50-150	

APPROVED
By MCD at 4:51 pm, 11/14/18

REVIEWED
By HMK at 12:22 pm, 11/15/18

ICAL Name: 18NOV12DCAL **Result Table:** 18316011 11/14/2018 4:24:36 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

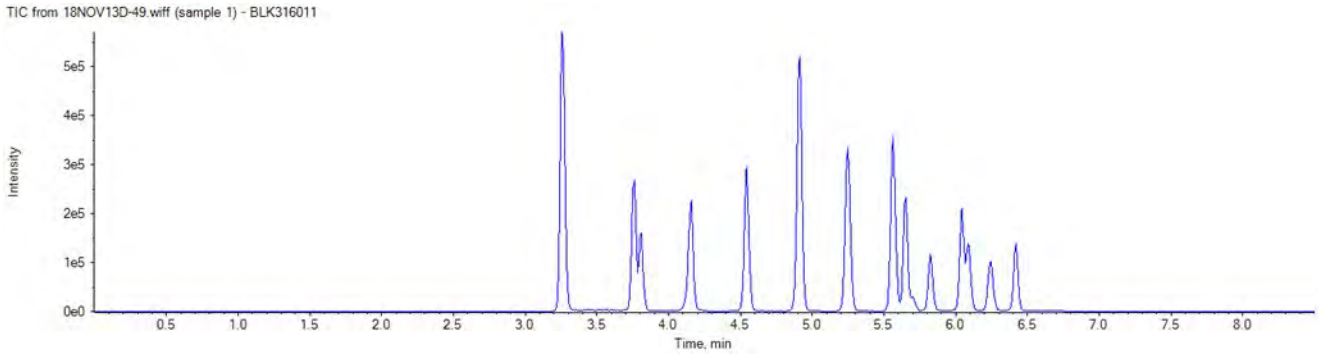
Analyte Quantitation Peak Table

Sample Name: BLK316011 **Instrument Name:** LM27631 **File Name:** 18NOV13D-49.wiff

Sample Wt	Sample Vol	Dilution Factor	PrepFactor
1.00000	1.000	1.00	2.000

Analyte Name	RT	RRT	Analyte Area Response	E	Int Typ	ES Name	ES RT	ES Area Response	Area Ratio	Sample Result (ng/g)
PFBA	N/A	N/A	N/A		A	13C4-PFBA	3.26	585730.6	N/A	
PFPeA	N/A	N/A	N/A		A	13C5-PFPeA	3.76	576099.4	N/A	
PFBS	N/A	N/A	N/A		A	13C3-PFBS	3.81	325907.7	N/A	
4:2-FTS	N/A	N/A	N/A		A	13C2-4:2-FTS	4.12	36725.8	N/A	
PFHxA	N/A	N/A	N/A		A	13C5-PFHxA	4.15	503637.2	N/A	
PFPeS	N/A	N/A	N/A		A	13C3-PFBS	3.81	325907.7	N/A	
PFHpA	N/A	N/A	N/A		A	13C4-PFHpA	4.54	405827.0	N/A	
PFHxS	N/A	N/A	N/A		A	13C3-PFHxS	4.54	251215.7	N/A	
6:2-FTS	N/A	N/A	N/A		A	13C2-6:2-FTS	4.90	27958.6	N/A	
PFHpS	N/A	N/A	N/A		A	13C3-PFHxS	4.54	251215.7	N/A	
PFOA	N/A	N/A	N/A		A	13C8-PFOA	4.91	697933.9	N/A	
PFOS	N/A	N/A	N/A		A	13C8-PFOS	5.24	213856.0	N/A	
PFNA	N/A	N/A	N/A		A	13C9-PFNA	5.26	370432.1	N/A	
PFNS	N/A	N/A	N/A		A	13C8-PFOS	5.24	213856.0	N/A	
PFDA	N/A	N/A	N/A		A	13C6-PFDA	5.56	492806.6	N/A	
8:2-FTS	N/A	N/A	N/A		A	13C2-8:2-FTS	5.56	21048.0	N/A	
PFOSA	N/A	N/A	N/A		A	13C8-PFOSA	5.65	525622.4	N/A	
NMeFOSAA	N/A	N/A	N/A		A	d3-NMeFOSAA	5.70	62073.0	N/A	
PFDS	N/A	N/A	N/A		A	13C8-PFOS	5.24	213856.0	N/A	
PFUnDA	N/A	N/A	N/A		A	13C7-PFUnDA	5.82	205374.4	N/A	
NEtFOSAA	N/A	N/A	N/A		A	d5-NEtFOSAA	5.83	47747.8	N/A	
PFDoDA	N/A	N/A	N/A		A	13C2-PFDoDA	6.04	430591.1	N/A	
10:2-FTS	N/A	N/A	N/A		A	13C2-8:2-FTS	5.56	21048.0	N/A	
NMePFOSAE	N/A	N/A	N/A		A	d7-NMePFOSAE	6.09	259882.8	N/A	
NMePFOSA	N/A	N/A	N/A		A	d3-NMePFOSA	6.10	58678.7	N/A	
PFDoS	N/A	N/A	N/A		A	13C8-PFOS	5.24	213856.0	N/A	
NEtPFOSAE	N/A	N/A	N/A		A	d9-NEtPFOSAE	6.24	212201.6	N/A	
NEtPFOSA	N/A	N/A	N/A		A	d5-NEtPFOSA	6.26	45311.1	N/A	
PFTrDA	N/A	N/A	N/A		A	13C2-PFDoDA	6.04	430591.1	N/A	
PFTeDA	N/A	N/A	N/A		A	13C2-PFTeDA	6.42	288143.9	N/A	
PFHxDA	N/A	N/A	N/A		A	13C2-PFTeDA	6.42	288143.9	N/A	
PFODA	N/A	N/A	N/A		A	13C2-PFTeDA	6.42	288143.9	N/A	

Total Ion Chromatogram

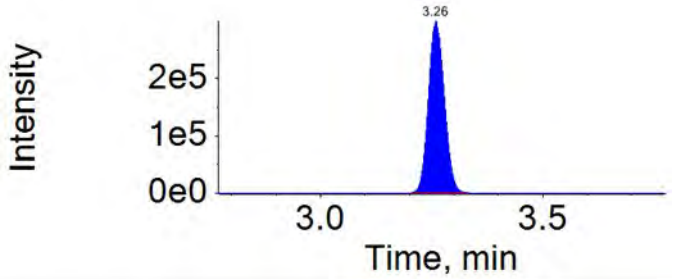


APPROVED
By MCD at 4:51 pm, 11/14/18

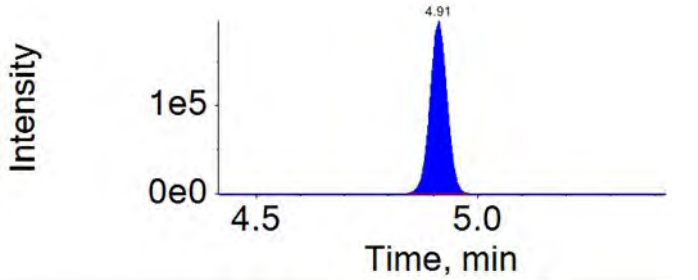
REVIEWED
By HMK at 12:22 pm, 11/15/18

ICAL Name: 18NOV12DCAL **Result Table:** 18316011 11/14/2018 4:24:36 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

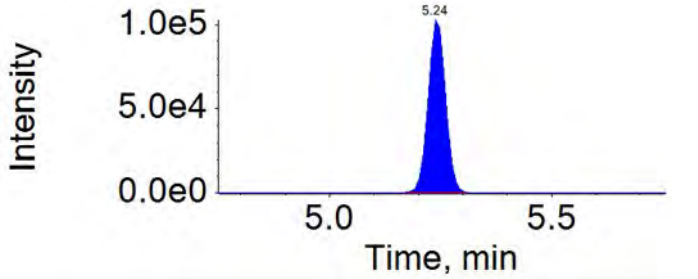
Injection Standard: 13C3-PFBA
216.0 / 172.0



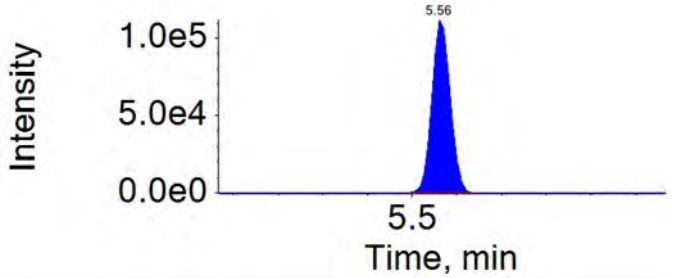
Injection Standard: 13C2-PFOA
415.0 / 370.0



Injection Standard: 13C4-PFOS
503.0 / 80.0

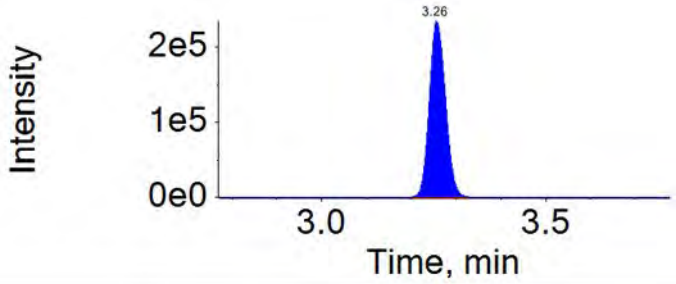


Injection Standard: 13C2-PFDA
515.0 / 470.0

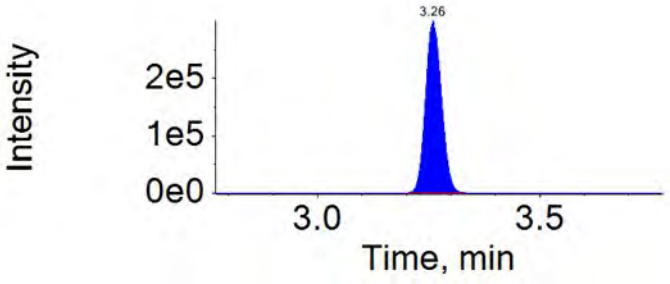


ICAL Name: 18NOV12DCAL **Result Table:** 18316011 11/14/2018 4:24:36 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

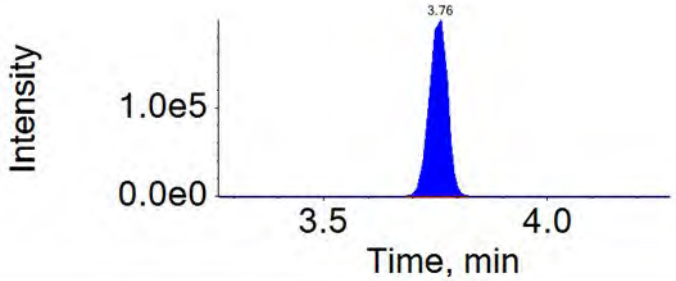
Extraction Standard: E13C4-PFBA
217.0 / 172.0



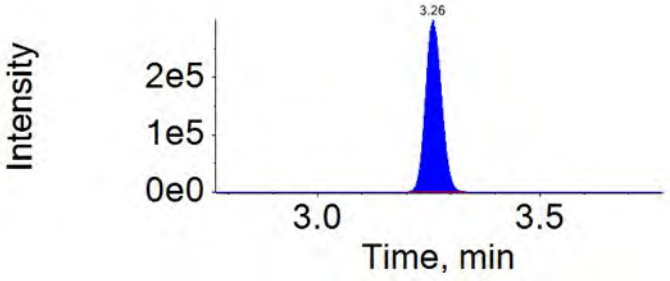
Injection Standard: 13C3-PFBA
216.0 / 172.0



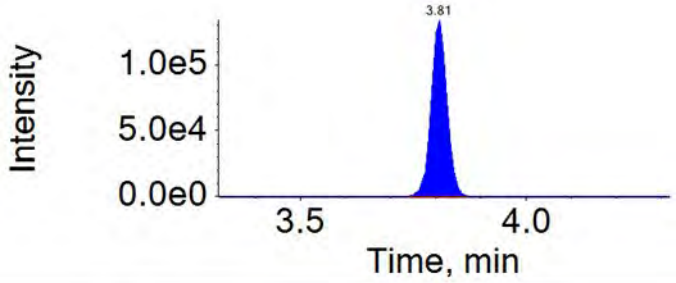
Extraction Standard: E13C5-PFPeA
268.0 / 223.0



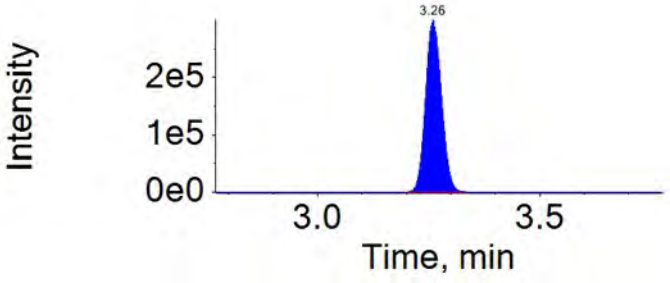
Injection Standard: 13C3-PFBA
216.0 / 172.0



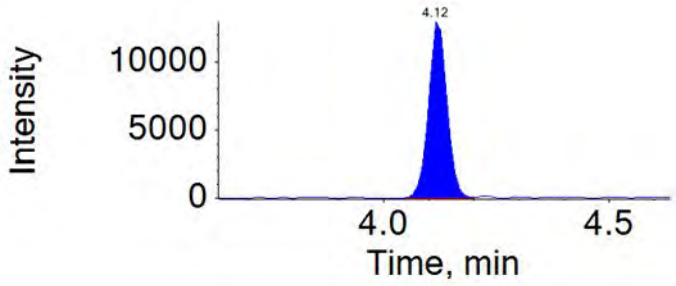
Extraction Standard: E13C3-PFBS
302.0 / 80.0



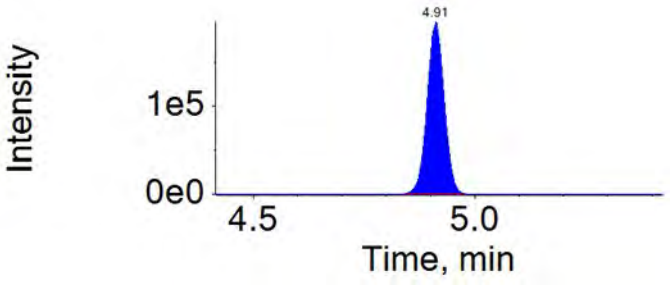
Injection Standard: 13C3-PFBA
216.0 / 172.0



Extraction Standard: E13C2-4:2-FTS
329.0 / 81.0

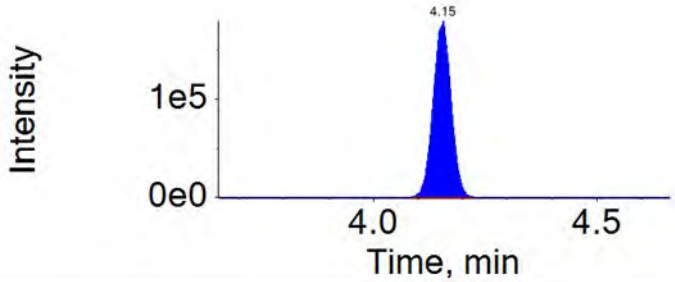


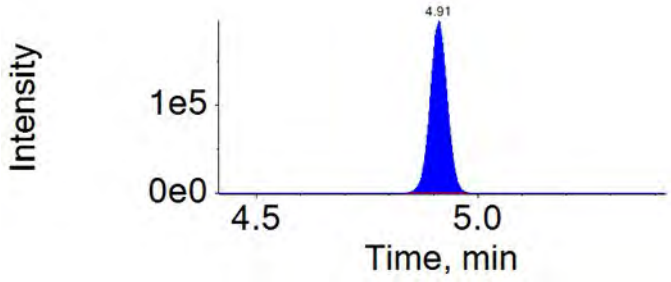
Injection Standard: 13C2-PFOA
415.0 / 370.0



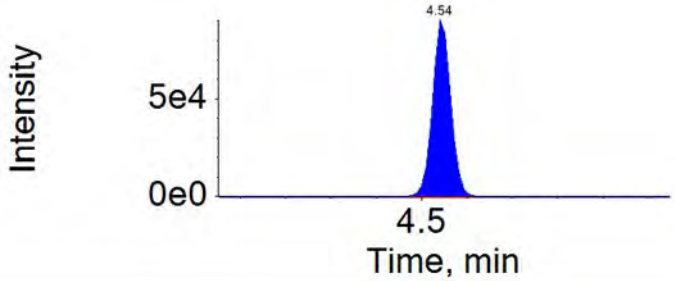
ICAL Name: 18NOV12DCAL **Result Table:** 18316011 11/14/2018 4:24:36 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

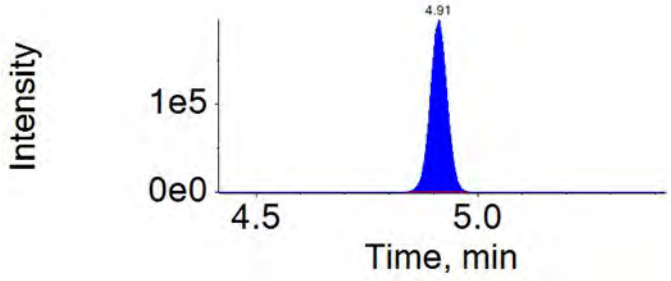
Extraction Standard: E13C5-PFHxA	Injection Standard: 13C2-PFOA
318.0 / 273.0	415.0 / 370.0



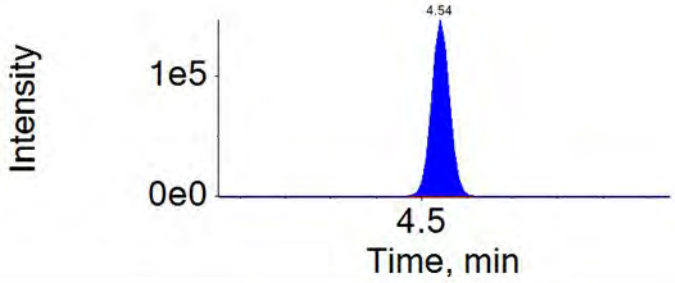


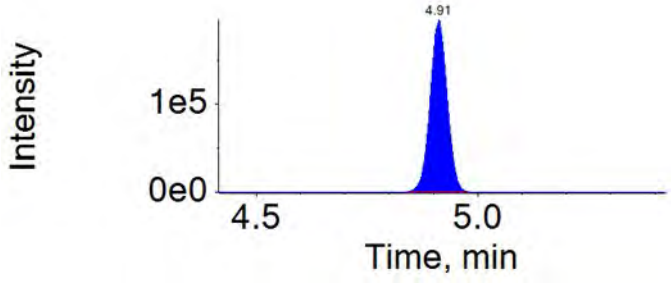
Extraction Standard: E13C3-PFHxS	Injection Standard: 13C2-PFOA
402.0 / 80.0	415.0 / 370.0



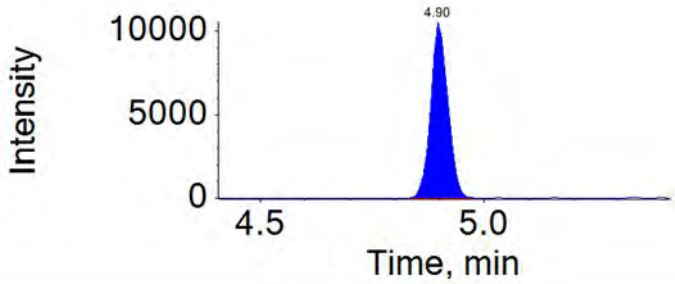


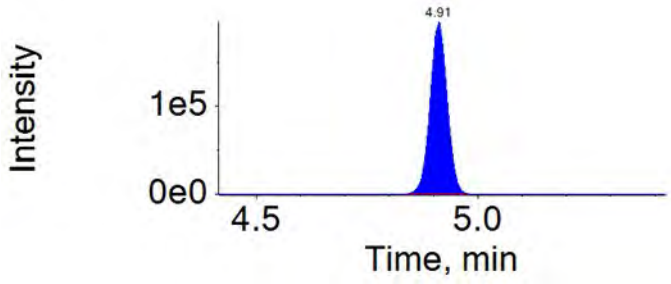
Extraction Standard: E13C4-PFHpA	Injection Standard: 13C2-PFOA
367.0 / 322.0	415.0 / 370.0





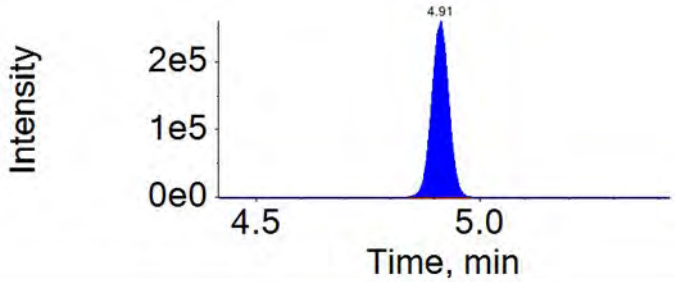
Extraction Standard: E13C2-6:2-FTS	Injection Standard: 13C2-PFOA
429.0 / 81.0	415.0 / 370.0

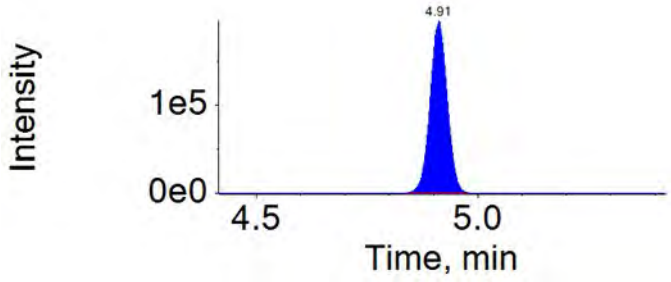




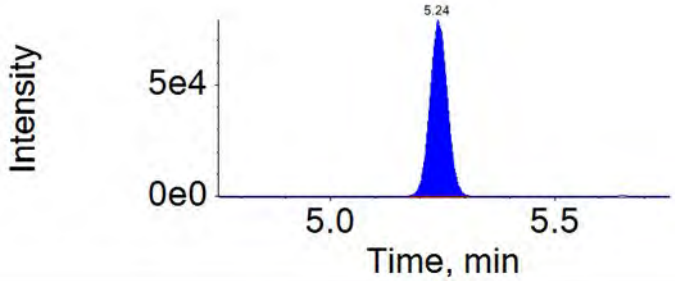
ICAL Name: 18NOV12DCAL **Result Table:** 18316011 11/14/2018 4:24:36 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

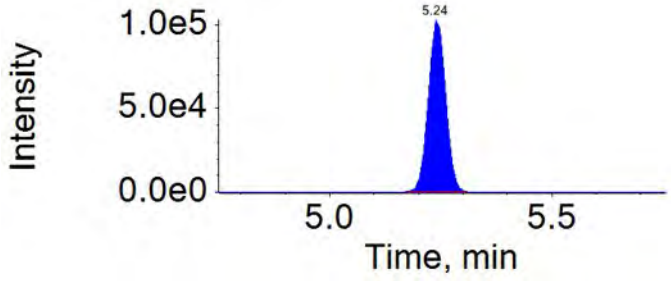
Extraction Standard: E13C8-PFOA	Injection Standard: 13C2-PFOA
421.0 / 376.0	415.0 / 370.0



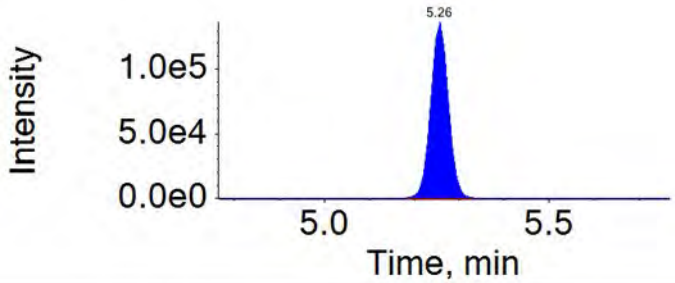


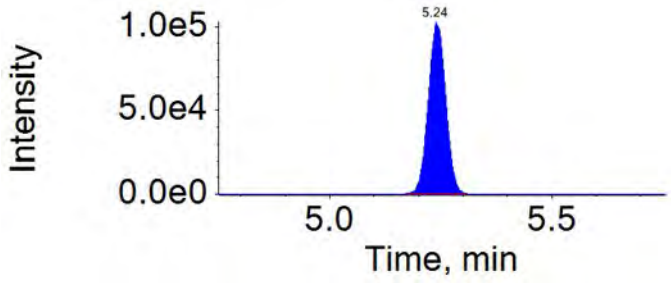
Extraction Standard: E13C8-PFOS	Injection Standard: 13C4-PFOS
507.0 / 80.0	503.0 / 80.0



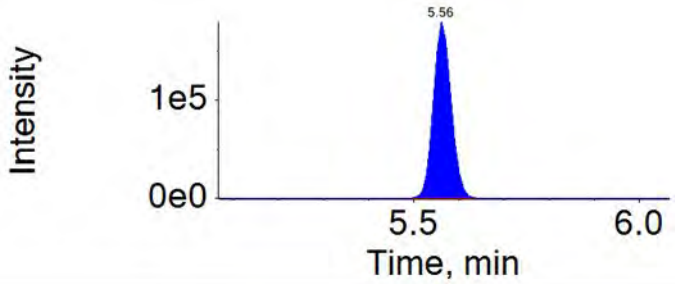


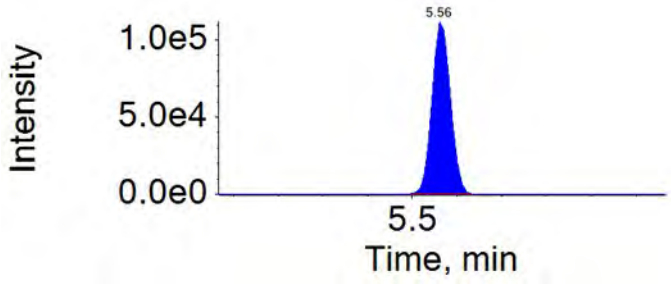
Extraction Standard: E13C9-PFNA	Injection Standard: 13C4-PFOS
472.0 / 427.0	503.0 / 80.0





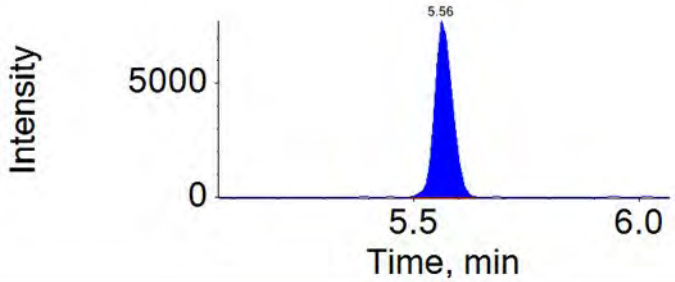
Extraction Standard: E13C6-PFDA	Injection Standard: 13C2-PFDA
519.0 / 474.0	515.0 / 470.0

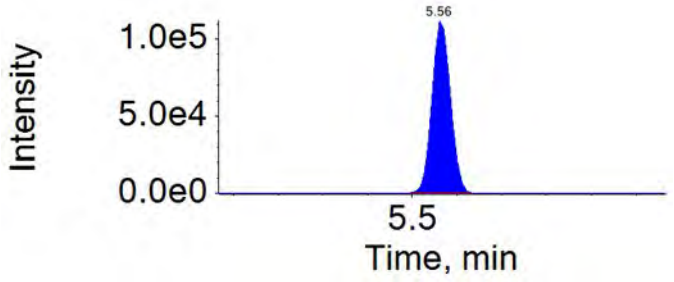




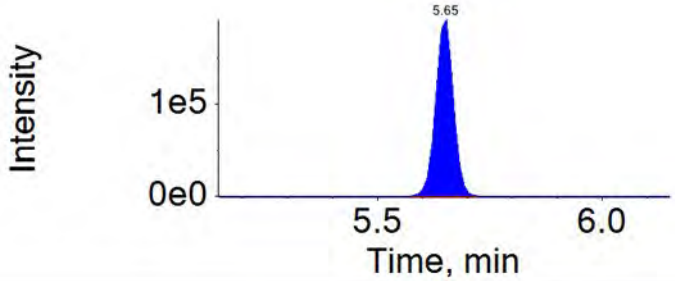
ICAL Name: 18NOV12DCAL **Result Table:** 18316011 11/14/2018 4:24:36 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

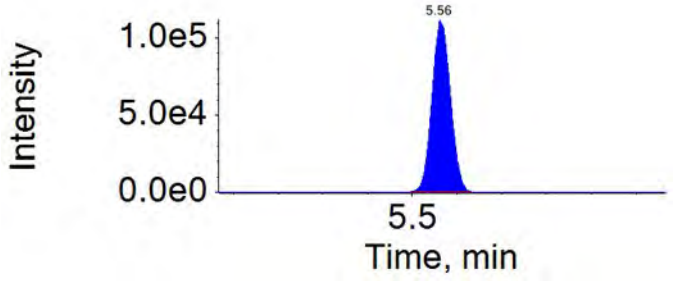
Extraction Standard: E13C2-8:2-FTS	Injection Standard: 13C2-PFDA
529.0 / 81.0	515.0 / 470.0



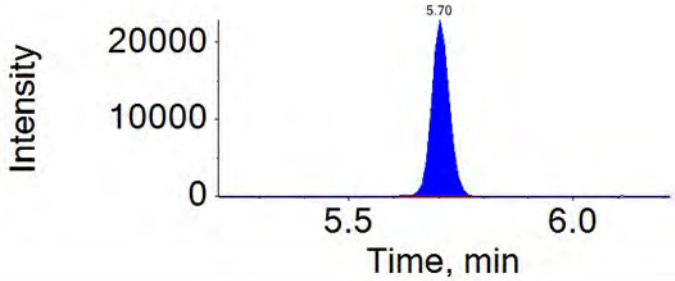


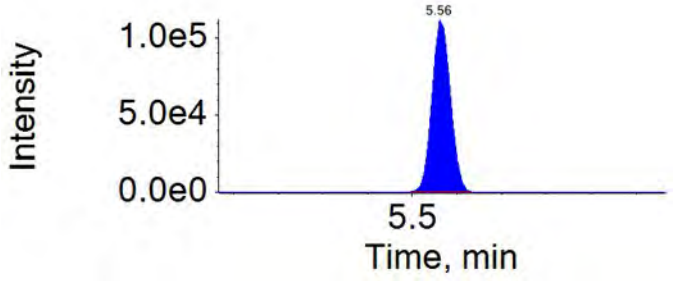
Extraction Standard: E13C8-PFOSA	Injection Standard: 13C2-PFDA
506.0 / 78.0	515.0 / 470.0



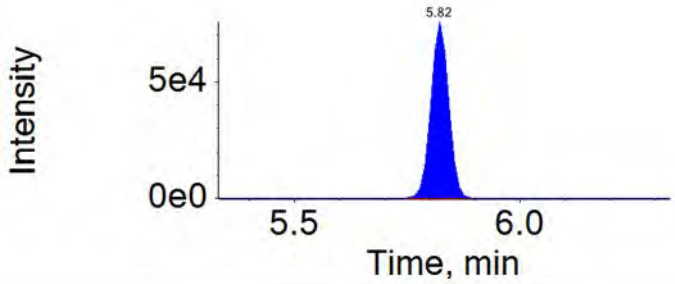


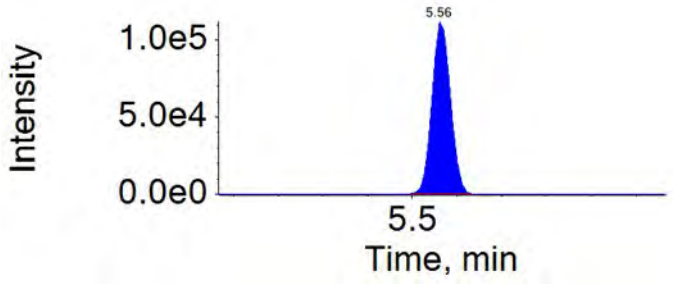
Extraction Standard: Ed3-NMeFOSAA	Injection Standard: 13C2-PFDA
573.0 / 419.0	515.0 / 470.0





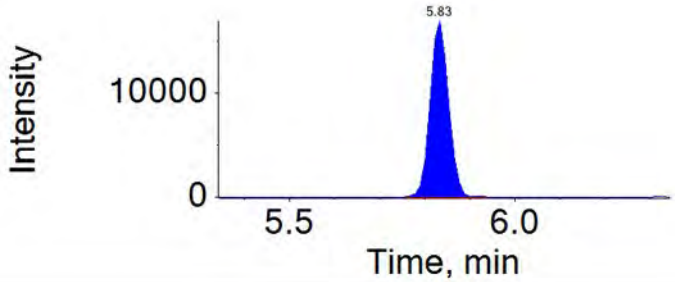
Extraction Standard: E13C7-PFUnDA	Injection Standard: 13C2-PFDA
570.0 / 525.0	515.0 / 470.0

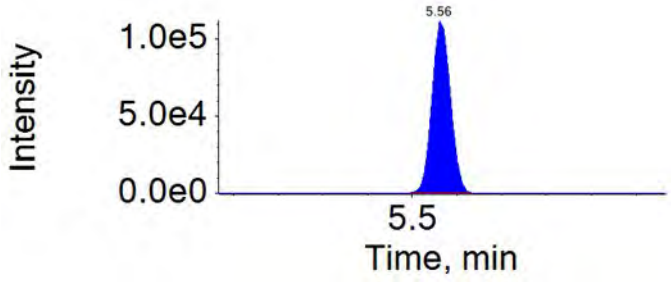




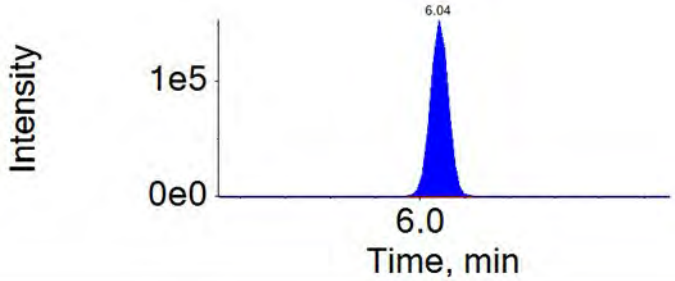
ICAL Name: 18NOV12DCAL **Result Table:** 18316011 11/14/2018 4:24:36 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

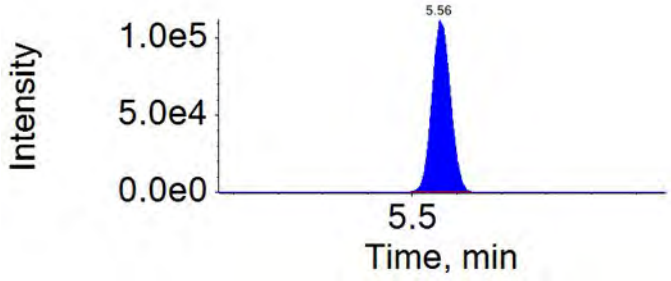
Extraction Standard: Ed5-NEtFOSAA	Injection Standard: 13C2-PFDA
589.0 / 419.0	515.0 / 470.0



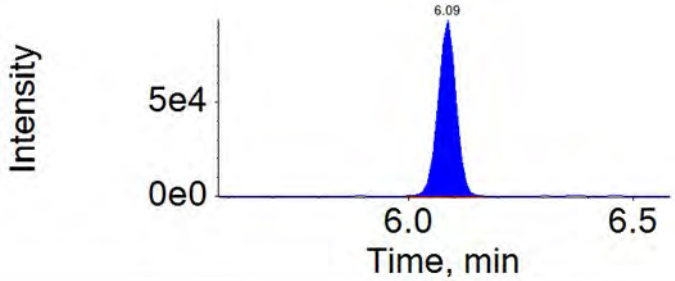


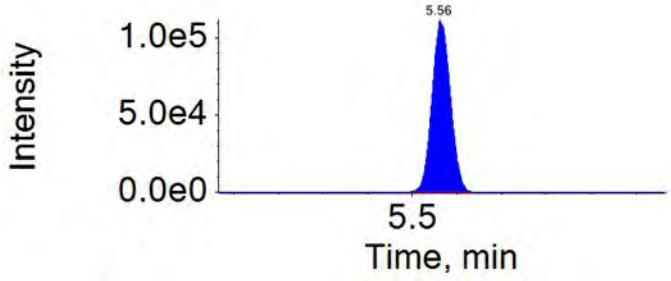
Extraction Standard: E13C2-PFDoDA	Injection Standard: 13C2-PFDA
615.0 / 570.0	515.0 / 470.0



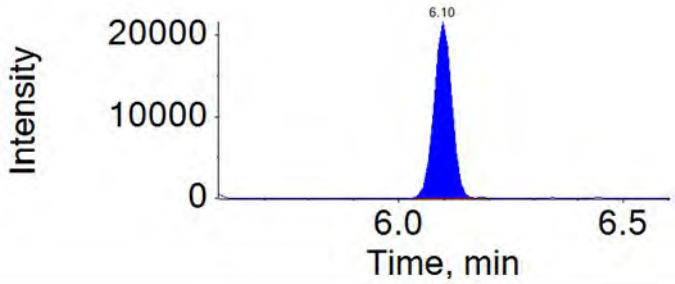


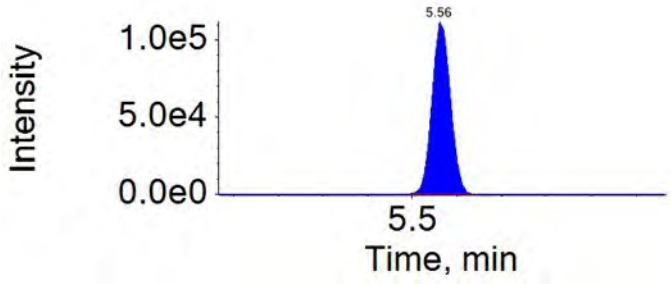
Extraction Standard: Ed7-NMePFOSAE	Injection Standard: 13C2-PFDA
623.0 / 59.0	515.0 / 470.0





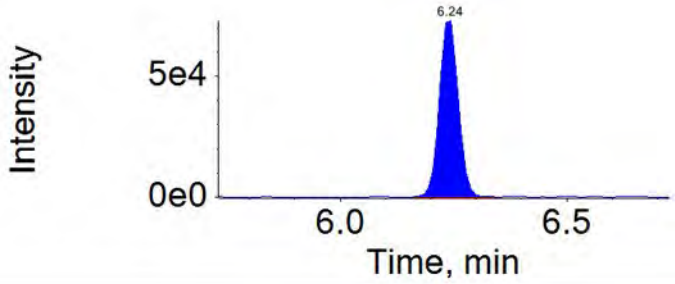
Extraction Standard: Ed3-NMePFOSA	Injection Standard: 13C2-PFDA
515.0 / 169.0	515.0 / 470.0

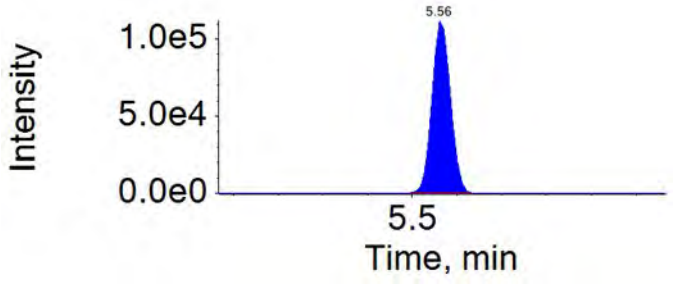




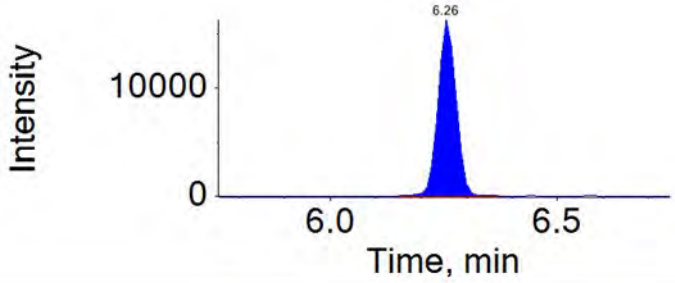
ICAL Name: 18NOV12DCAL **Result Table:** 18316011 11/14/2018 4:24:36 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

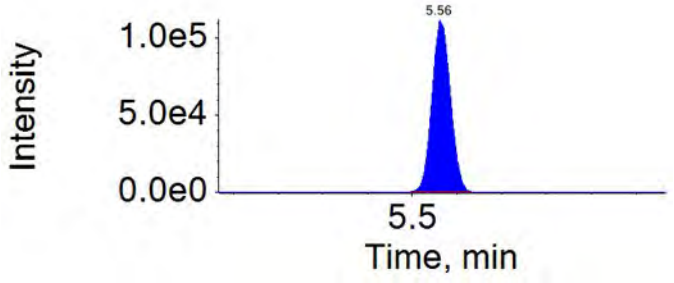
Extraction Standard: Ed9-NEtPFOSAE	Injection Standard: 13C2-PFDA
639.0 / 59.0	515.0 / 470.0



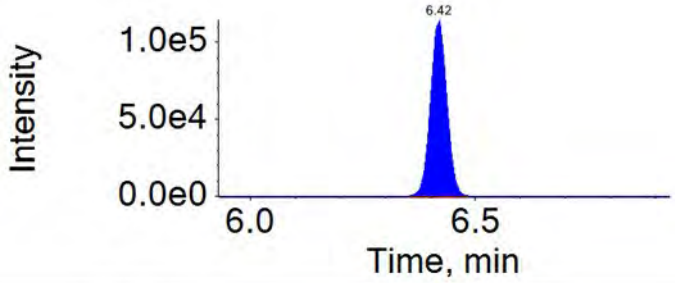


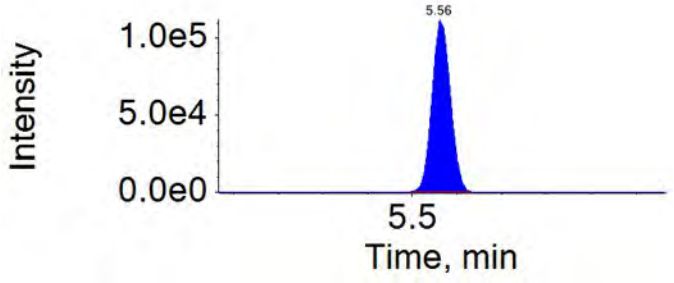
Extraction Standard: Ed5-NEtPFOSA	Injection Standard: 13C2-PFDA
531.0 / 169.0	515.0 / 470.0





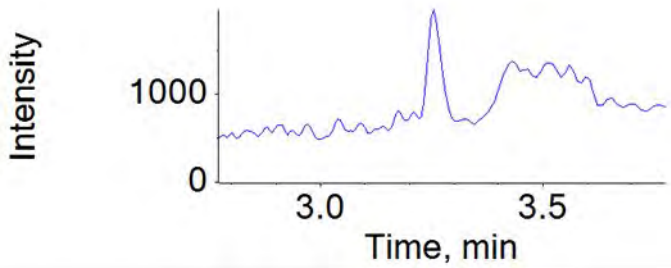
Extraction Standard: E13C2-PFTeDA	Injection Standard: 13C2-PFDA
715.0 / 670.0	515.0 / 470.0



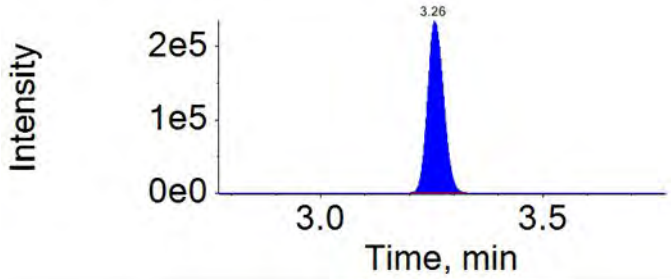


ICAL Name: 18NOV12DCAL **Result Table:** 18316011 11/14/2018 4:24:36 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

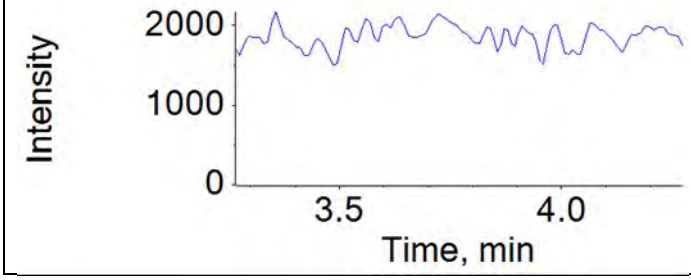
Analyte: PFBA
213.0 / 169.0



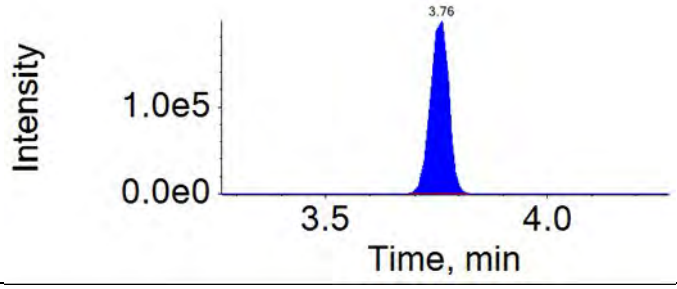
Extraction Standard: 13C4-PFBA
217.0 / 172.0



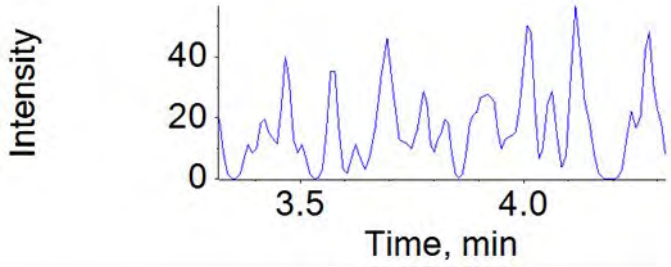
Analyte: PFPeA
263.0 / 219.0



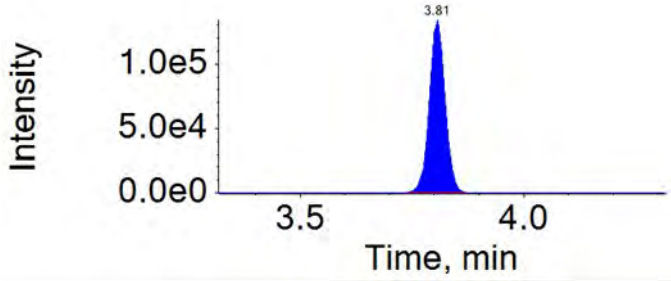
Extraction Standard: 13C5-PFPeA
268.0 / 223.0



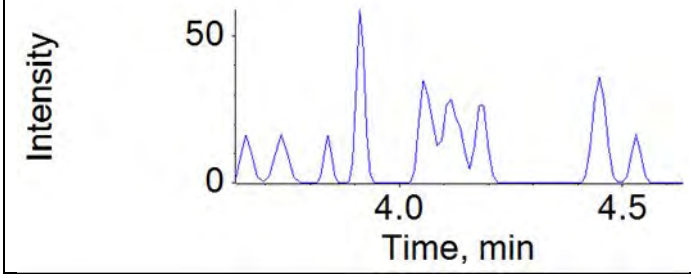
Analyte: PFBS
299.0 / 80.0



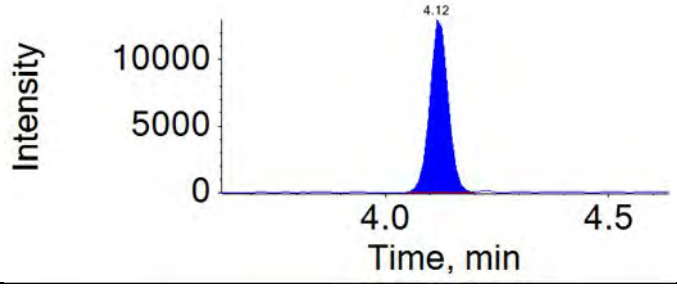
Extraction Standard: 13C3-PFBS
302.0 / 80.0



Analyte: 4:2-FTS
327.0 / 307.0



Extraction Standard: 13C2-4:2-FTS
329.0 / 81.0

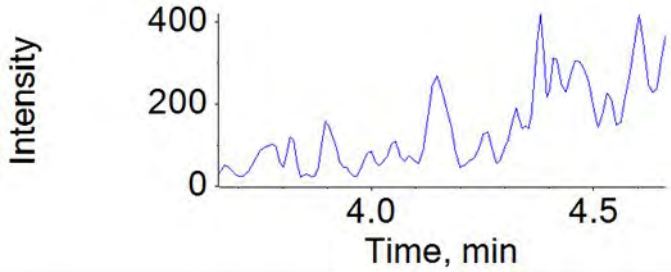


APPROVED
By MCD at 4:51 pm, 11/14/18

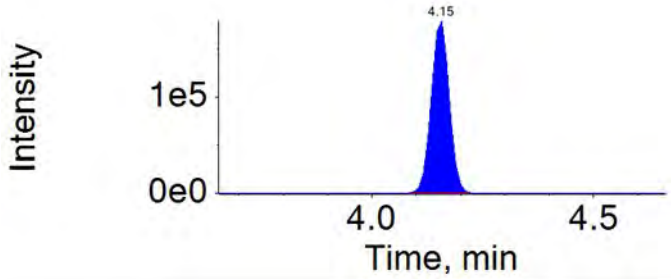
REVIEWED
By HMK at 12:22 pm, 11/15/18

ICAL Name: 18NOV12DCAL **Result Table:** 18316011 11/14/2018 4:24:36 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

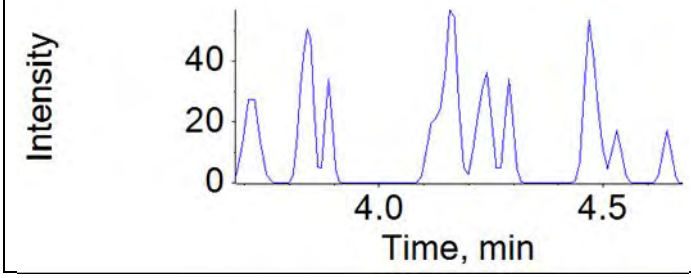
Analyte: PFHxA
313.0 / 269.0



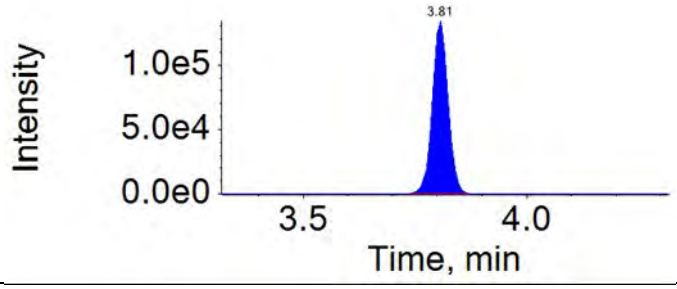
Extraction Standard: 13C5-PFHxA
318.0 / 273.0



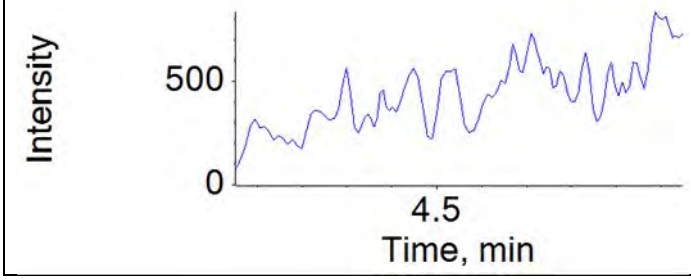
Analyte: PFPeS
349.0 / 80.0



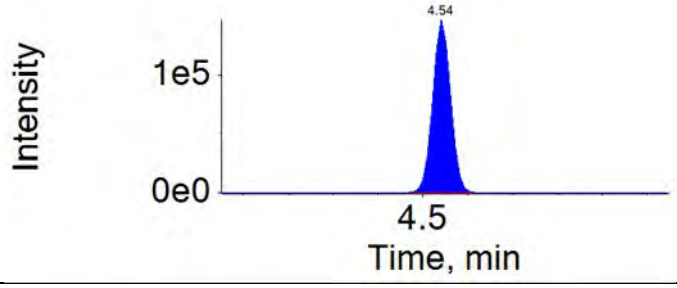
Extraction Standard: 13C3-PFBS
302.0 / 80.0



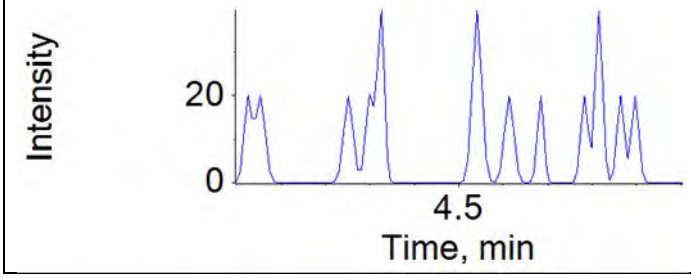
Analyte: PFHpA
363.0 / 319.0



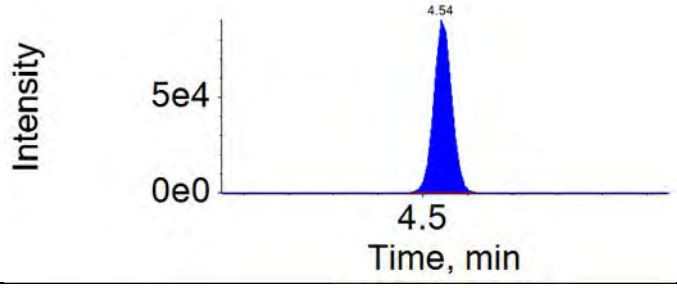
Extraction Standard: 13C4-PFHpA
367.0 / 322.0



Analyte: PFHxS
399.0 / 80.0



Extraction Standard: 13C3-PFHxS
402.0 / 80.0

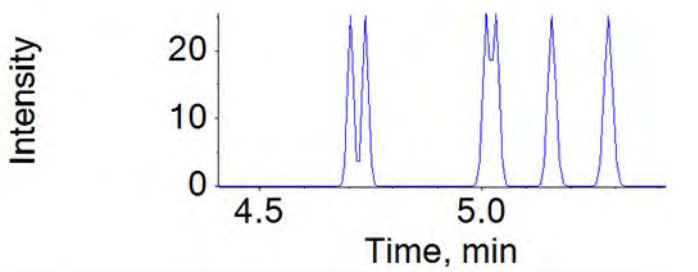


APPROVED
By MCD at 4:51 pm, 11/14/18

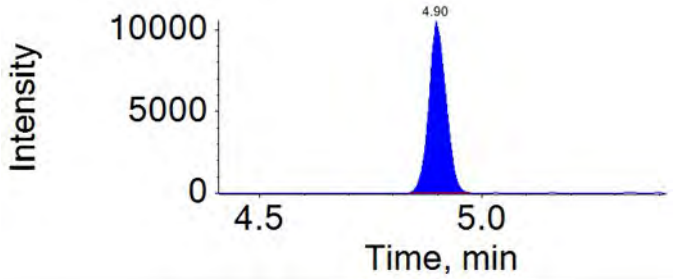
REVIEWED
By HMK at 12:22 pm, 11/15/18

ICAL Name: 18NOV12DCAL **Result Table:** 18316011 11/14/2018 4:24:36 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

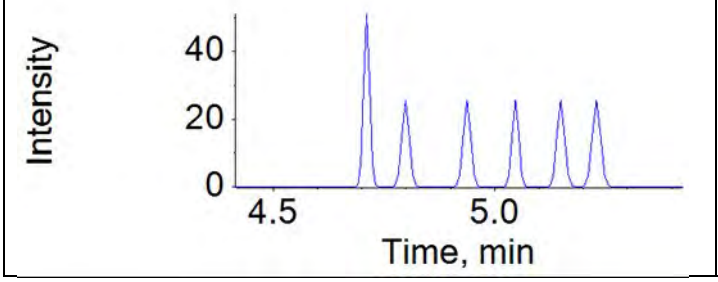
Analyte: 6:2-FTS
427.0 / 407.0



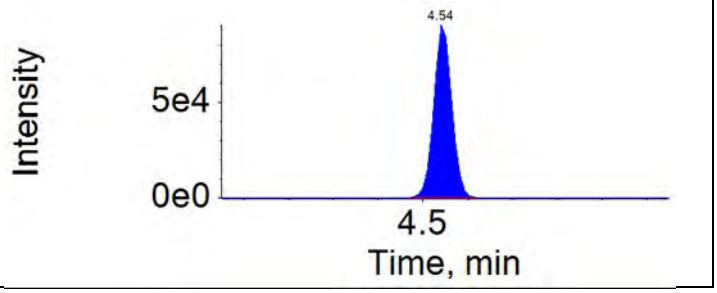
Extraction Standard: 13C2-6:2-FTS
429.0 / 81.0



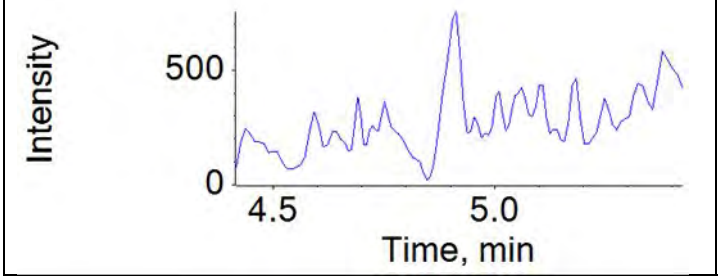
Analyte: PFHpS
449.0 / 80.0



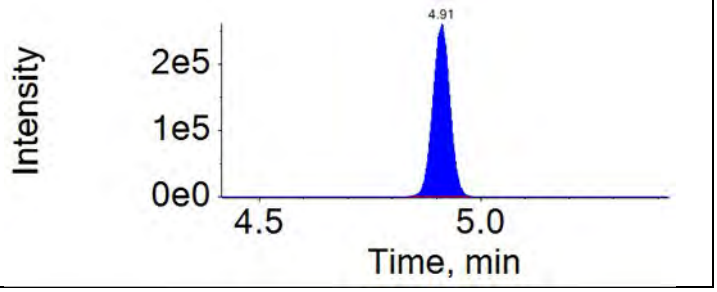
Extraction Standard: 13C3-PFHxS
402.0 / 80.0



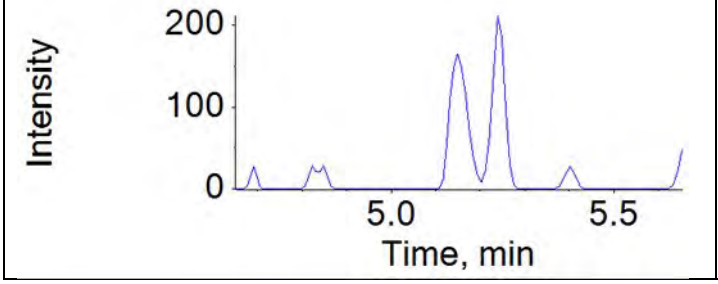
Analyte: PFOA
413.0 / 369.0



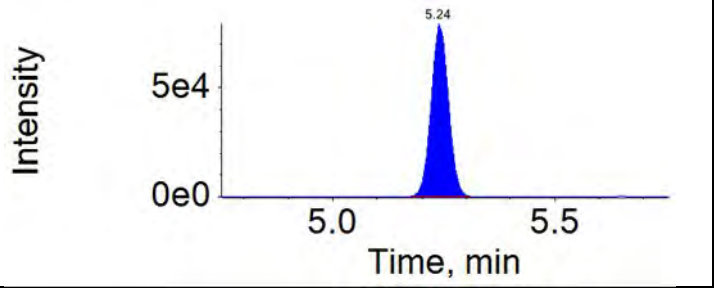
Extraction Standard: 13C8-PFOA
421.0 / 376.0



Analyte: PFOS
499.0 / 80.0



Extraction Standard: 13C8-PFOS
507.0 / 80.0

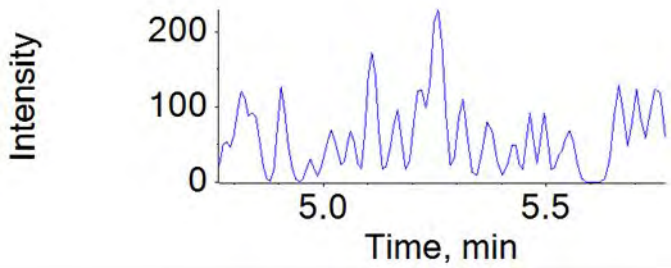


APPROVED
By MCD at 4:51 pm, 11/14/18

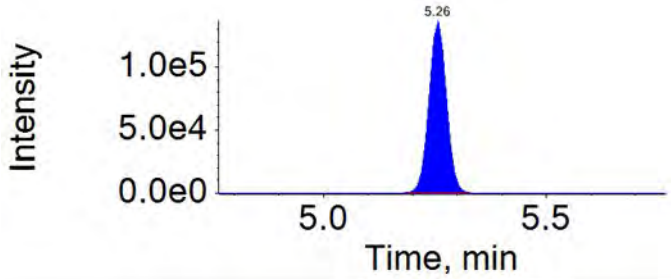
REVIEWED
By HMK at 12:22 pm, 11/15/18

ICAL Name: 18NOV12DCAL **Result Table:** 18316011 11/14/2018 4:24:36 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

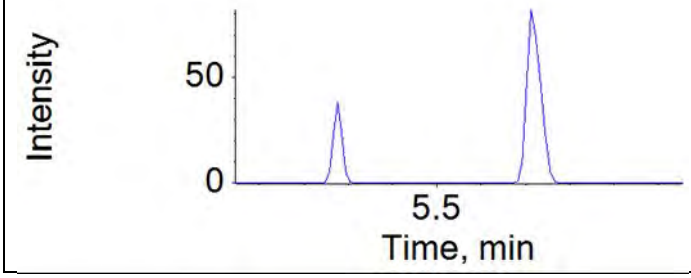
Analyte: PFNA
463.0 / 419.0



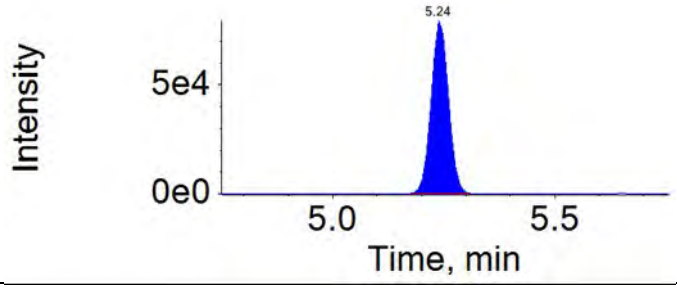
Extraction Standard: 13C9-PFNA
472.0 / 427.0



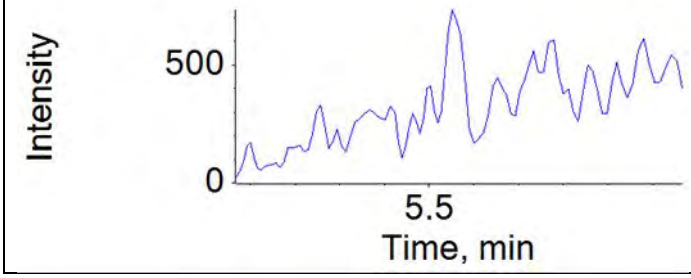
Analyte: PFNS
549.0 / 80.0



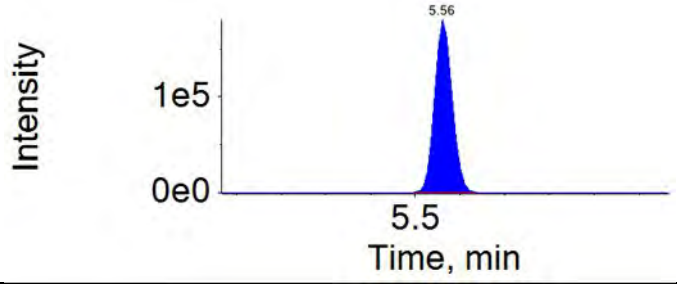
Extraction Standard: 13C8-PFOS
507.0 / 80.0



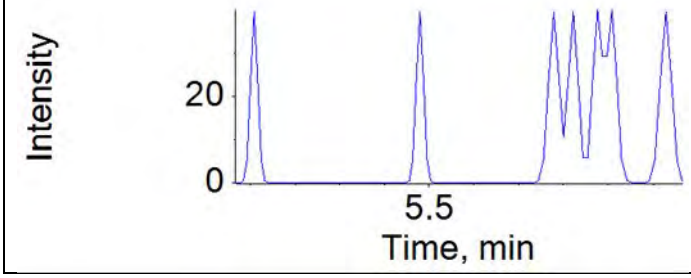
Analyte: PFDA
513.0 / 469.0



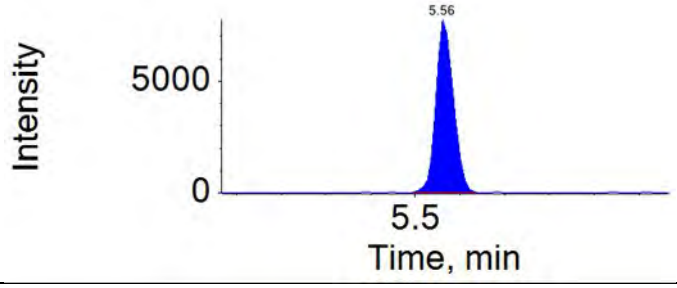
Extraction Standard: 13C6-PFDA
519.0 / 474.0



Analyte: 8:2-FTS
527.0 / 507.0



Extraction Standard: 13C2-8:2-FTS
529.0 / 81.0

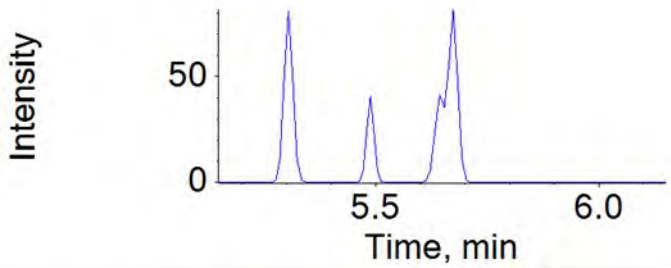


APPROVED
By MCD at 4:51 pm, 11/14/18

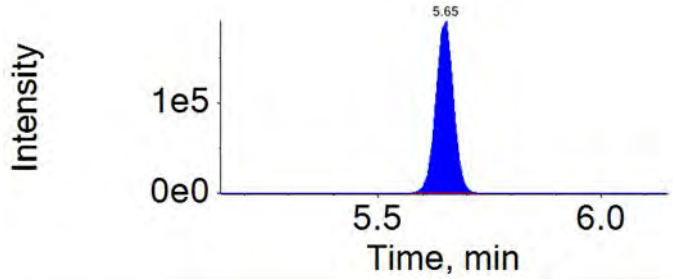
REVIEWED
By HMK at 12:22 pm, 11/15/18

ICAL Name: 18NOV12DCAL **Result Table:** 18316011 11/14/2018 4:24:36 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

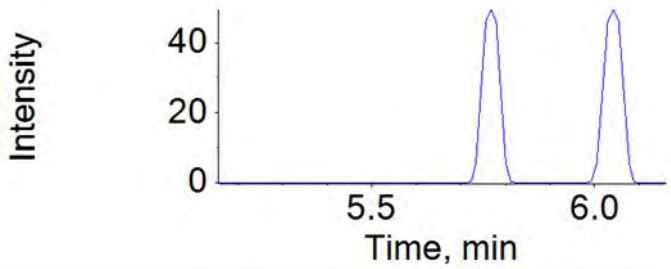
Analyte: PFOSA
498.0 / 78.0



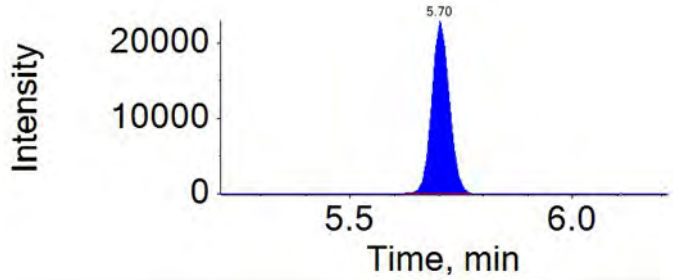
Extraction Standard: 13C8-PFOSA
506.0 / 78.0



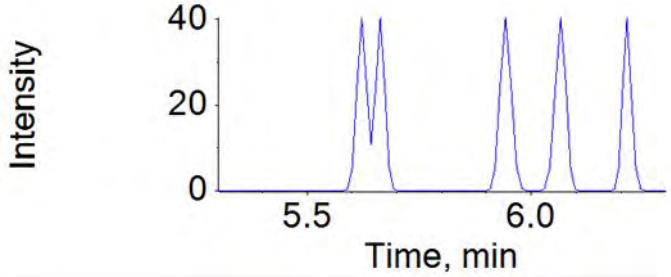
Analyte: NMeFOSAA
570.0 / 419.0



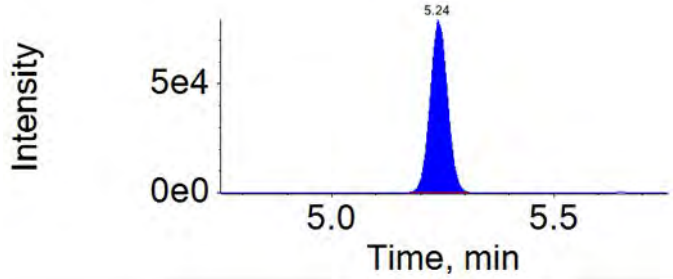
Extraction Standard: d3-NMeFOSAA
573.0 / 419.0



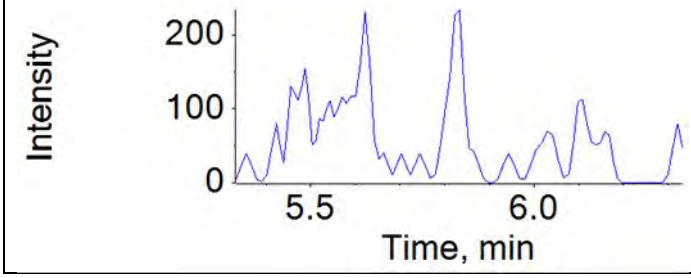
Analyte: PFDS
599.0 / 80.0



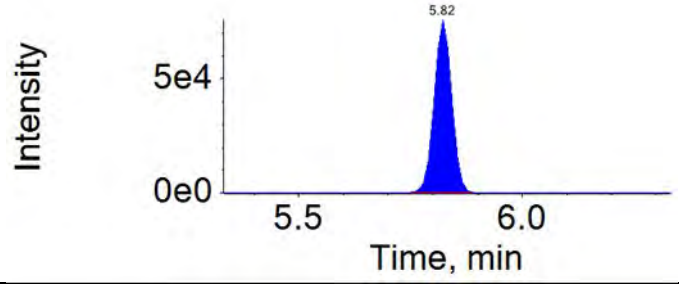
Extraction Standard: 13C8-PFOS
507.0 / 80.0



Analyte: PFUnDA
563.0 / 519.0



Extraction Standard: 13C7-PFUnDA
570.0 / 525.0

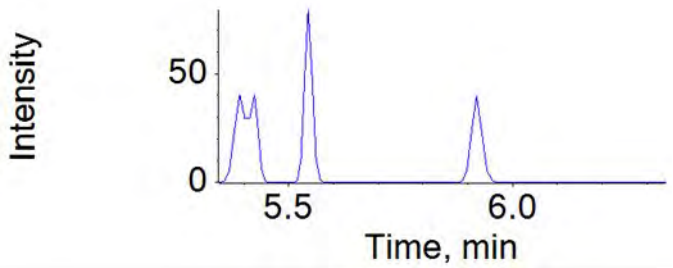


APPROVED
By MCD at 4:51 pm, 11/14/18

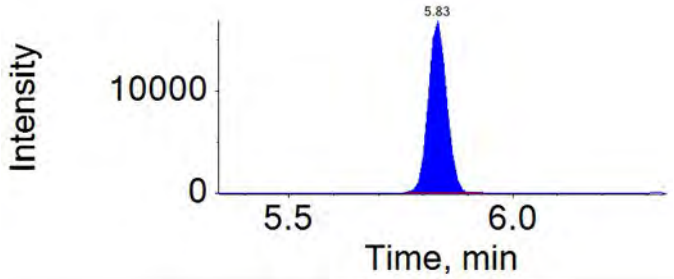
REVIEWED
By HMK at 12:22 pm, 11/15/18

ICAL Name: 18NOV12DCAL **Result Table:** 18316011 11/14/2018 4:24:36 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

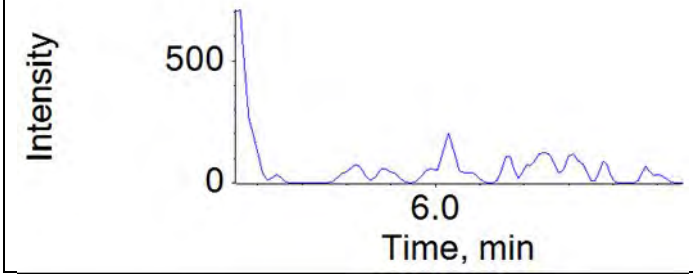
Analyte: NEtFOSAA
584.0 / 419.0



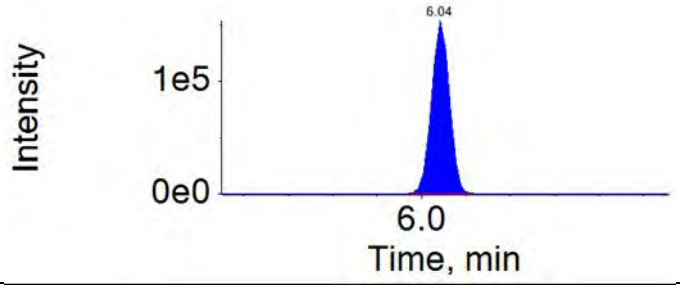
Extraction Standard: d5-NEtFOSAA
589.0 / 419.0



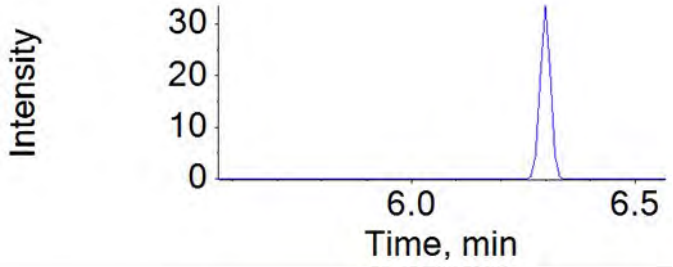
Analyte: PFDoDA
613.0 / 569.0



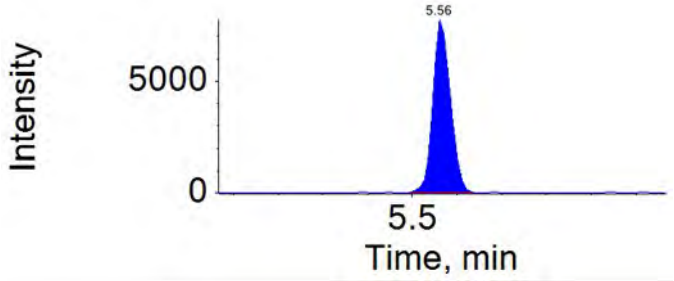
Extraction Standard: 13C2-PFDoDA
615.0 / 570.0



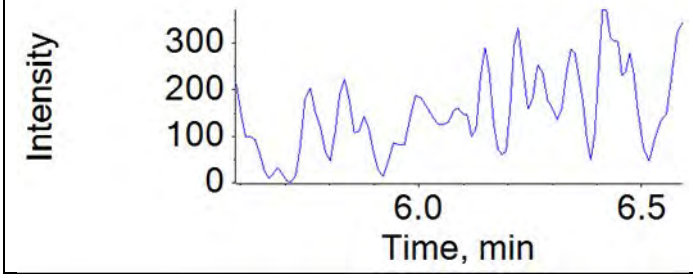
Analyte: 10:2-FTS
627.0 / 607.0



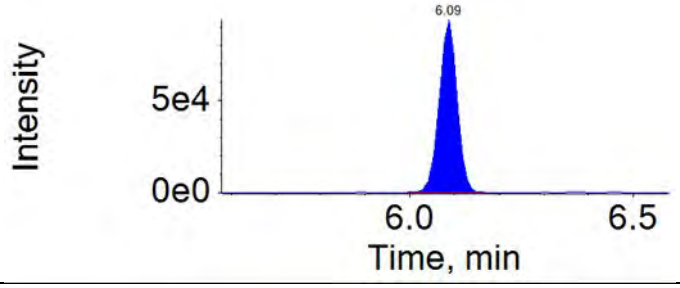
Extraction Standard: 13C2-8:2-FTS
529.0 / 81.0



Analyte: NMePFOSAE
616.0 / 59.0



Extraction Standard: d7-NMePFOSAE
623.0 / 59.0

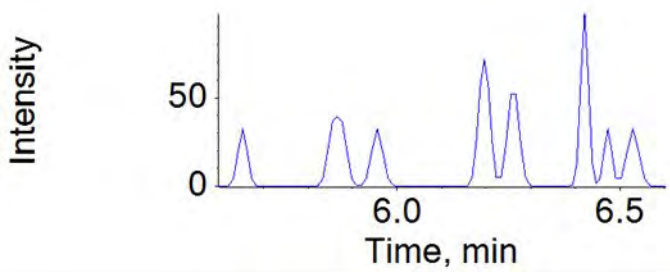


APPROVED
By MCD at 4:51 pm, 11/14/18

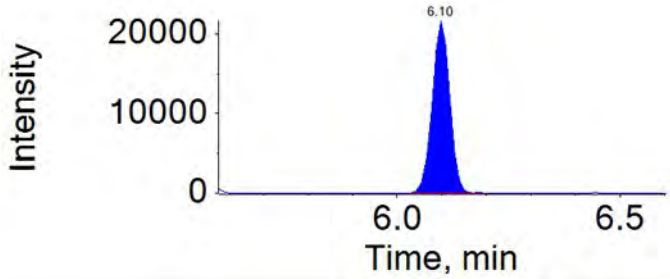
REVIEWED
By HMK at 12:22 pm, 11/15/18

ICAL Name: 18NOV12DCAL **Result Table:** 18316011 11/14/2018 4:24:36 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

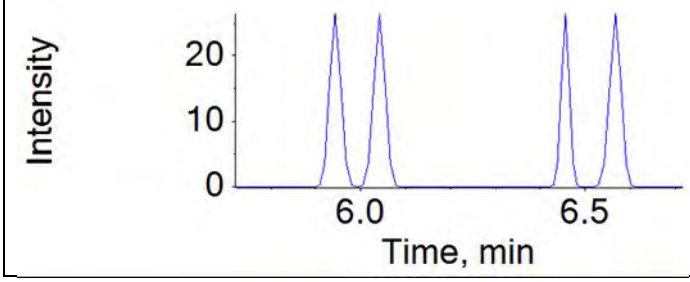
Analyte: NMePFOSA
512.0 / 169.0



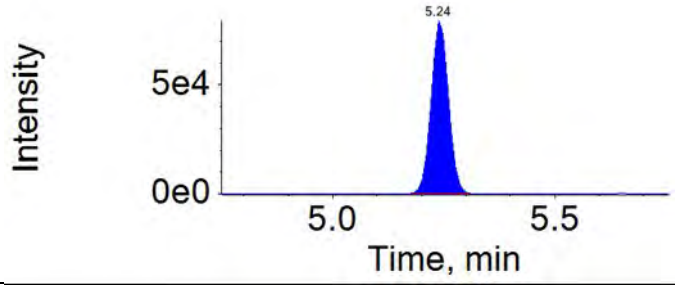
Extraction Standard: d3-NMePFOSA
515.0 / 169.0



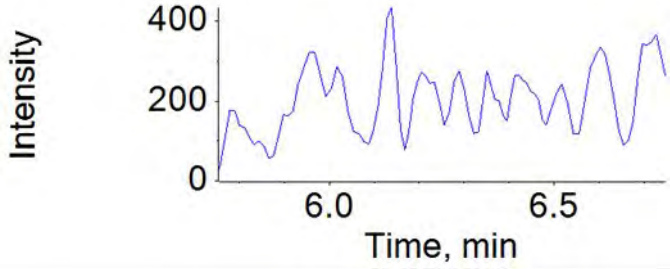
Analyte: PFDoS
699.0 / 80.0



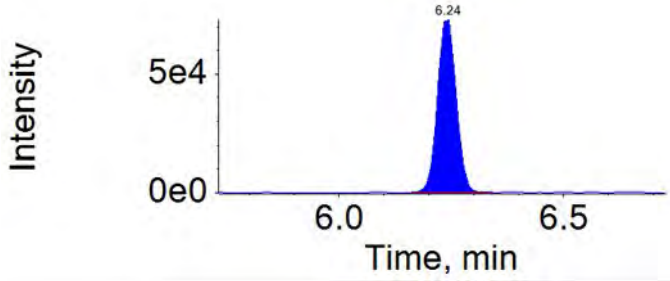
Extraction Standard: 13C8-PFOS
507.0 / 80.0



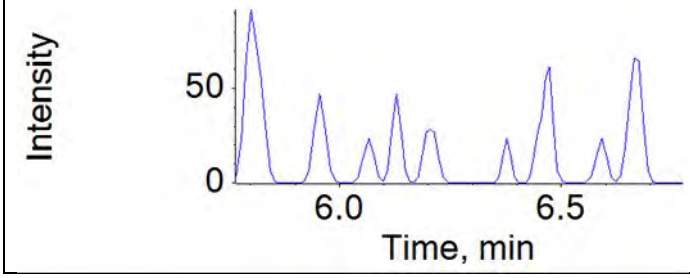
Analyte: NEtPFOSAE
630.0 / 59.0



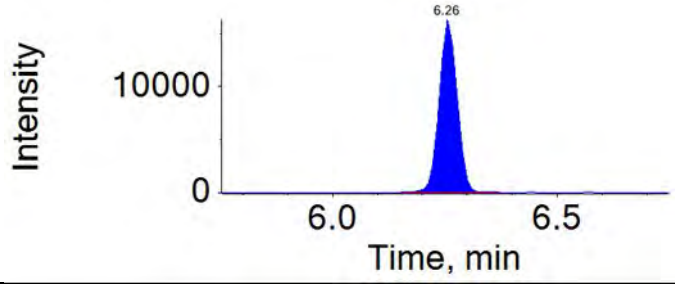
Extraction Standard: d9-NEtPFOSAE
639.0 / 59.0



Analyte: NEtPFOSA
526.0 / 169.0



Extraction Standard: d5-NEtPFOSA
531.0 / 169.0

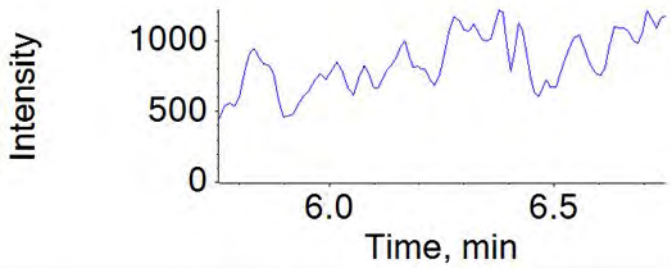


APPROVED
By MCD at 4:51 pm, 11/14/18

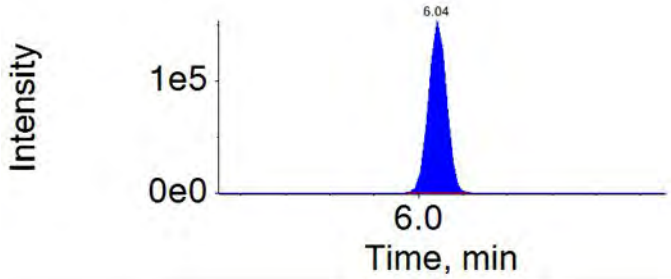
REVIEWED
By HMK at 12:22 pm, 11/15/18

ICAL Name: 18NOV12DCAL **Result Table:** 18316011 11/14/2018 4:24:36 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

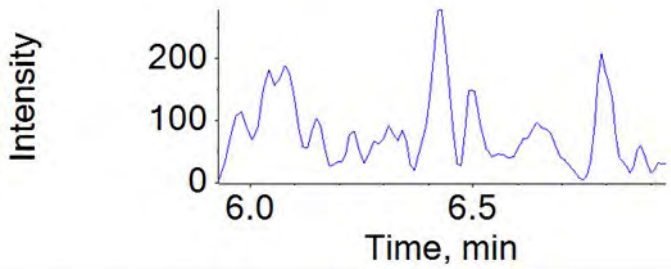
Analyte: PFTrDA
663.0 / 619.0



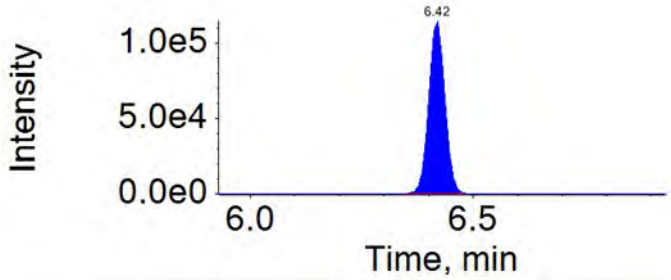
Extraction Standard: 13C2-PFDoDA
615.0 / 570.0



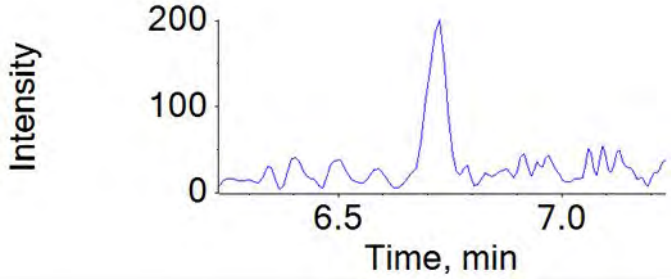
Analyte: PFTeDA
713.0 / 669.0



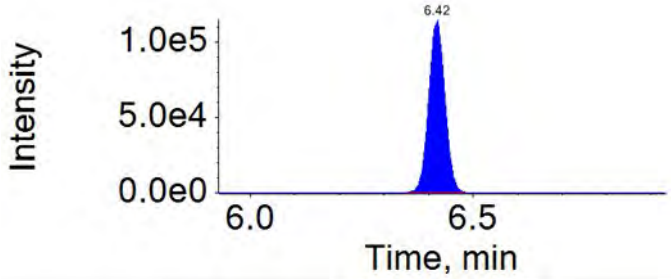
Extraction Standard: 13C2-PFTeDA
715.0 / 670.0



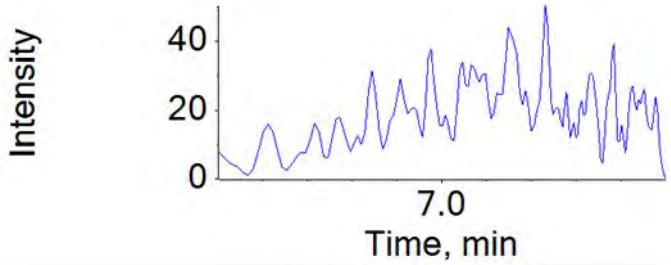
Analyte: PFHxDA
813.0 / 769.0



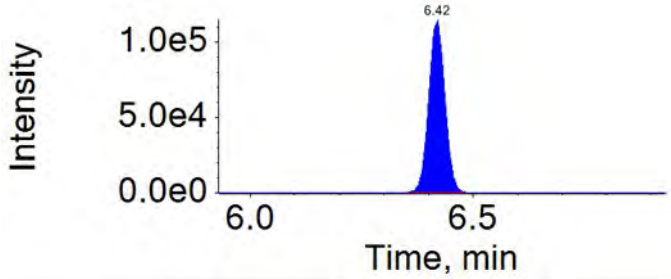
Extraction Standard: 13C2-PFTeDA
715.0 / 670.0



Analyte: PFODA
913.0 / 869.0



Extraction Standard: 13C2-PFTeDA
715.0 / 670.0



APPROVED
By MCD at 4:51 pm, 11/14/18

REVIEWED
By HMK at 12:22 pm, 11/15/18

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LC-MS/MS Analysis Report

Printed: 11/14/2018 4:28:00 PM
Template: IonRatio18OCT10

Ion Ratio Report

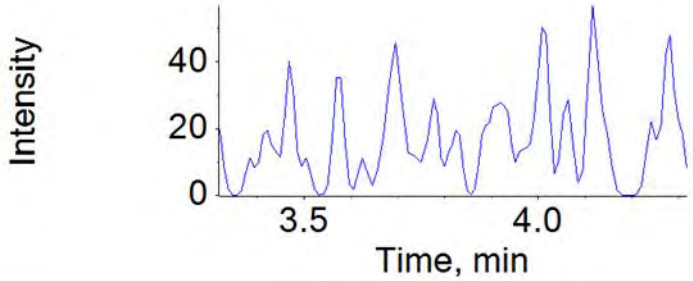
Sample Name: BLK316011 **Instrument Name:** LM27631 **File Name:** 18NOV13D-49.wiff

Component Name	RT	RRT	Analyte Area Response	Int Typ	Expected Ion Ratio	Ion Ratio	Ion Ratio % Diff	Ion Ratio Limit	Ion Ratio OOS
PFBS	N/A	N/A	N/A	A	N/A	N/A			
PFBS_2	N/A	N/A	N/A	A	N/A	N/A		50	
4:2-FTS	N/A	N/A	N/A	A	N/A	N/A			
4:2 FTS_2	N/A	N/A	N/A	A	N/A	N/A		#NA!	
PFHxA	N/A	N/A	N/A	A	N/A	N/A			
PFHxA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFPeS	N/A	N/A	N/A	A	N/A	N/A			
PFPeS_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFHpA	N/A	N/A	N/A	A	N/A	N/A			
PFHpA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFHxS	N/A	N/A	N/A	A	N/A	N/A			
PFHxS_2	N/A	N/A	N/A	A	N/A	N/A		50	
6:2-FTS	N/A	N/A	N/A	A	N/A	N/A			
6:2 FTS_2	N/A	N/A	N/A	A	N/A	N/A		#NA!	
PFHpS	N/A	N/A	N/A	A	N/A	N/A			
PFHpS_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFOA	N/A	N/A	N/A	A	N/A	N/A			
PFOA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFOS	N/A	N/A	N/A	A	N/A	N/A			
PFOS_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFNA	N/A	N/A	N/A	A	N/A	N/A			
PFNA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFNS	N/A	N/A	N/A	A	N/A	N/A			
PFNS_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFDA	N/A	N/A	N/A	A	N/A	N/A			
PFDA_2	N/A	N/A	N/A	A	N/A	N/A		50	
8:2-FTS	N/A	N/A	N/A	A	N/A	N/A			
8:2 FTS_2	N/A	N/A	N/A	A	N/A	N/A		#NA!	
NMeFOSAA	N/A	N/A	N/A	A	N/A	N/A			
NMeFOSAA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFDS	N/A	N/A	N/A	A	N/A	N/A			
PFDS_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFUnDA	N/A	N/A	N/A	A	N/A	N/A			
PFUnDA_2	N/A	N/A	N/A	A	N/A	N/A		50	
NEtFOSAA	N/A	N/A	N/A	A	N/A	N/A			
NEtFOSAA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFDoDA	N/A	N/A	N/A	A	N/A	N/A			
PFDoDA_2	N/A	N/A	N/A	A	N/A	N/A		50	
10:2-FTS	N/A	N/A	N/A	A	N/A	N/A			
10:2 FTS_2	N/A	N/A	N/A	A	N/A	N/A		#NA!	
PFTrDA	N/A	N/A	N/A	A	N/A	N/A			
PFTrDA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFTeDA	N/A	N/A	N/A	A	N/A	N/A			
PFTeDA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFHxDA	N/A	N/A	N/A	A	N/A	N/A			
PFHxDA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFODA	N/A	N/A	N/A	A	N/A	N/A			
PFODA_2	N/A	N/A	N/A	A	N/A	N/A		50	

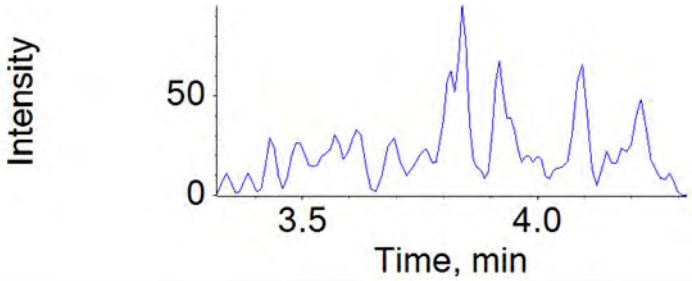
APPROVED
By MCD at 4:51 pm, 11/14/18

REVIEWED
By HMK at 12:22 pm, 11/15/18

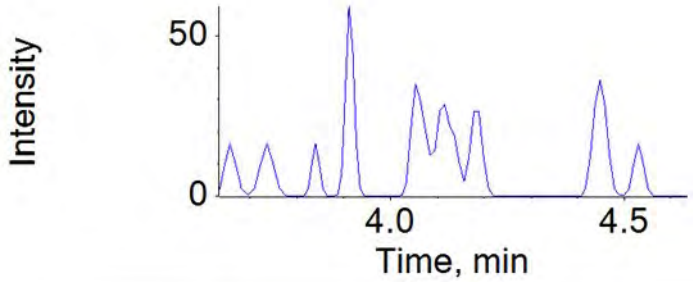
Component: PFBS
Primary Mass: 299.0 / 80.0



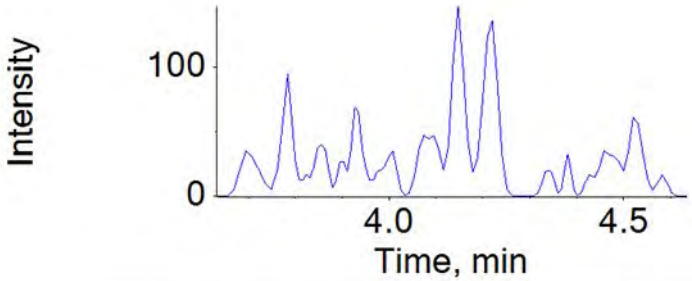
Component: PFBS_2
Secondary Mass: 299.0 / 99.0



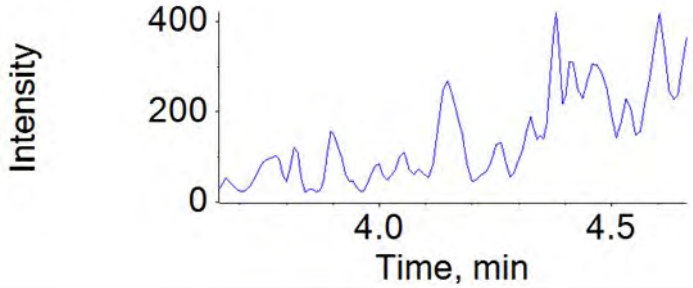
Component: 4:2-FTS
Primary Mass: 327.0 / 307.0



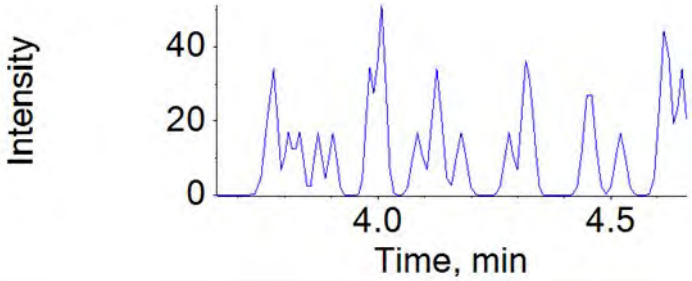
Component: 4:2 FTS_2
Secondary Mass: 327.0 / 81.0



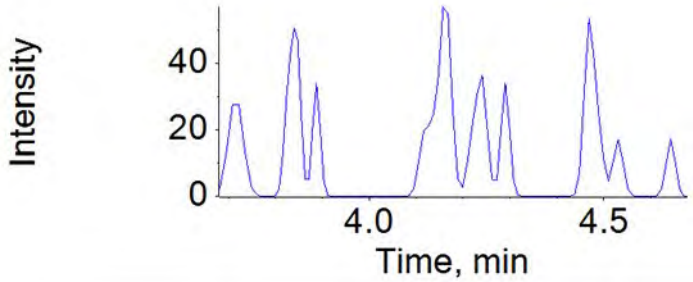
Component: PFHxA
Primary Mass: 313.0 / 269.0



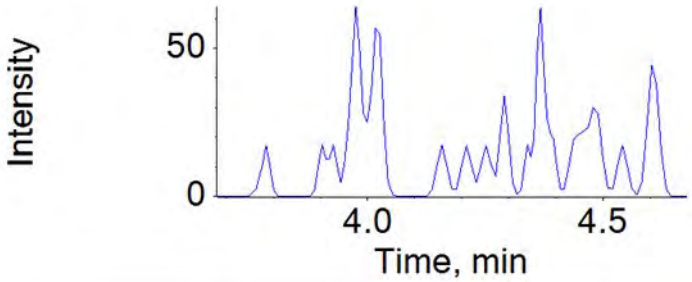
Component: PFHxA_2
Secondary Mass: 313.0 / 119.0



Component: PFPeS
Primary Mass: 349.0 / 80.0



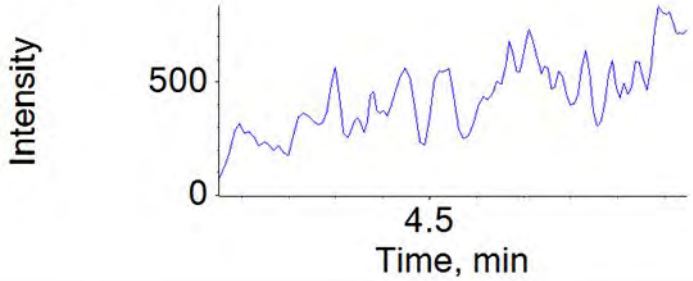
Component: PFPeS_2
Secondary Mass: 349.0 / 99.0



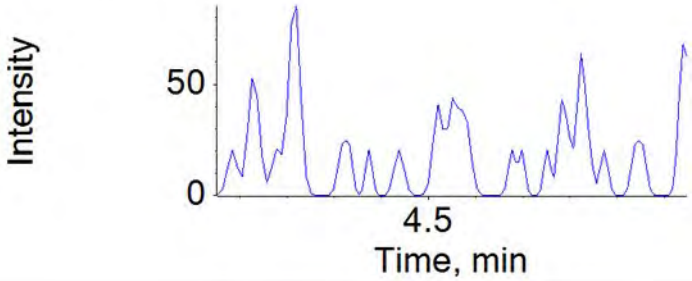
APPROVED
By MCD at 4:51 pm, 11/14/18

REVIEWED
By HMK at 12:22 pm, 11/15/18

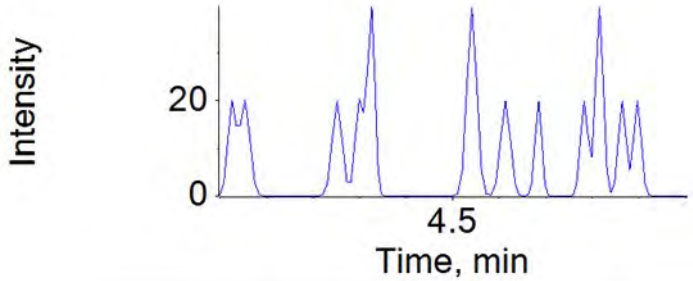
Component: PFHpA
Primary Mass: 363.0 / 319.0



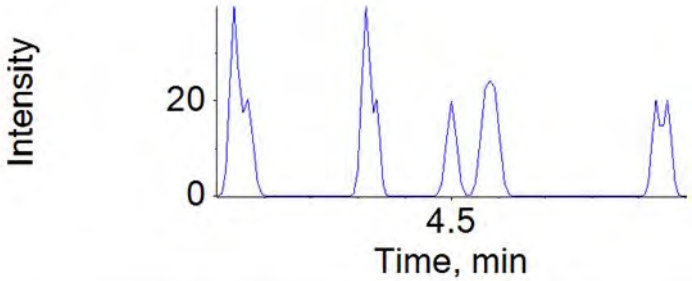
Component: PFHpA_2
Secondary Mass: 363.0 / 169.0



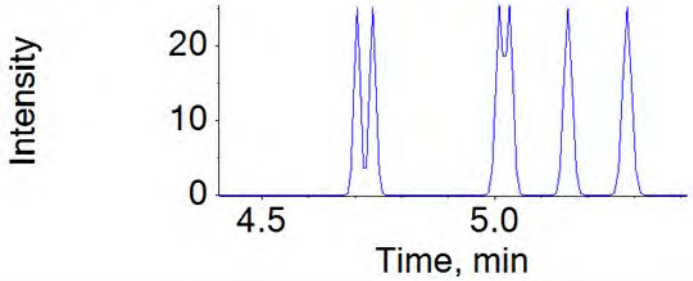
Component: PFHxS
Primary Mass: 399.0 / 80.0



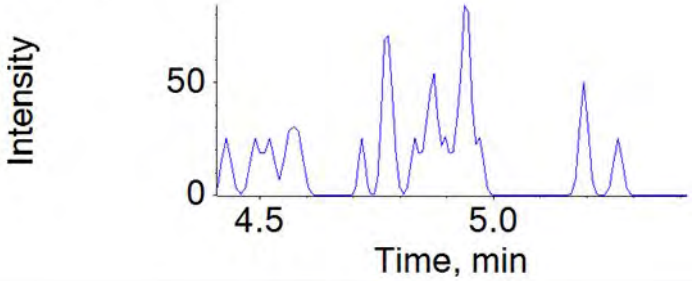
Component: PFHxS_2
Secondary Mass: 399.0 / 99.0



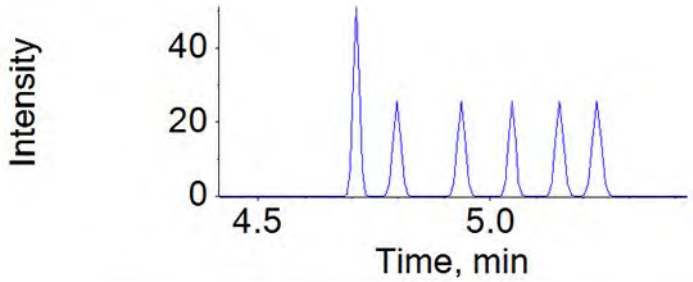
Component: 6:2-FTS
Primary Mass: 427.0 / 407.0



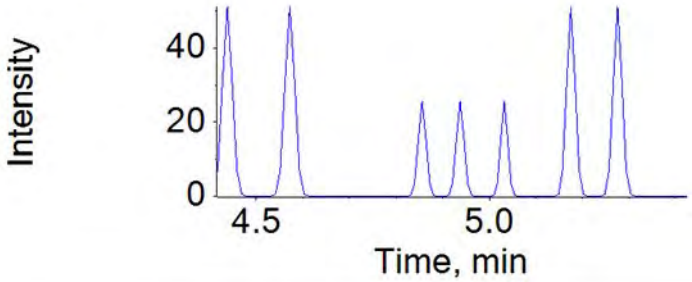
Component: 6:2 FTS_2
Secondary Mass: 427.0 / 81.0



Component: PFHpS
Primary Mass: 449.0 / 80.0



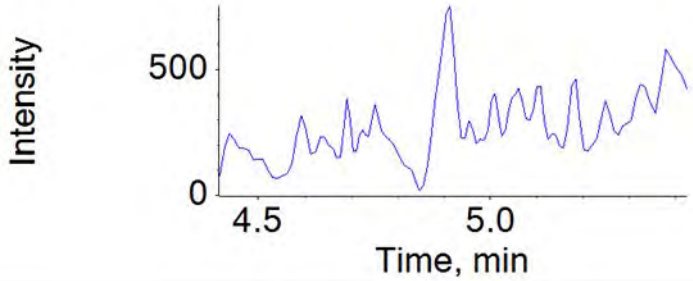
Component: PFHpS_2
Secondary Mass: 449.0 / 99.0



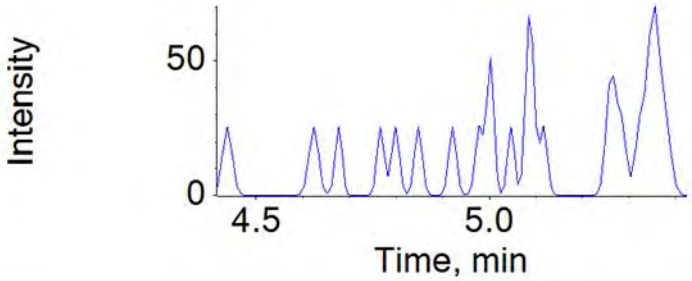
APPROVED
By MCD at 4:51 pm, 11/14/18

REVIEWED
By HMK at 12:22 pm, 11/15/18

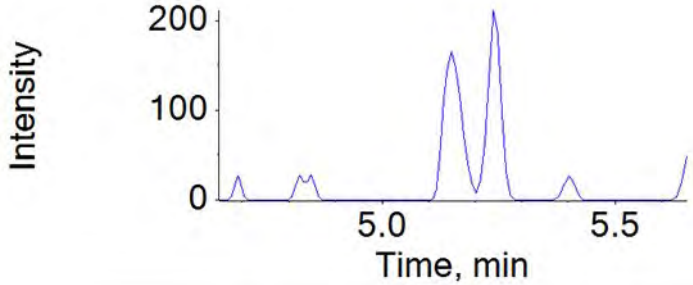
Component: PFOA
Primary Mass: 413.0 / 369.0



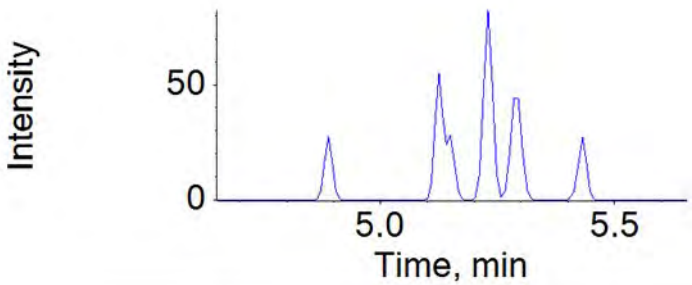
Component: PFOA_2
Secondary Mass: 413.0 / 169.0



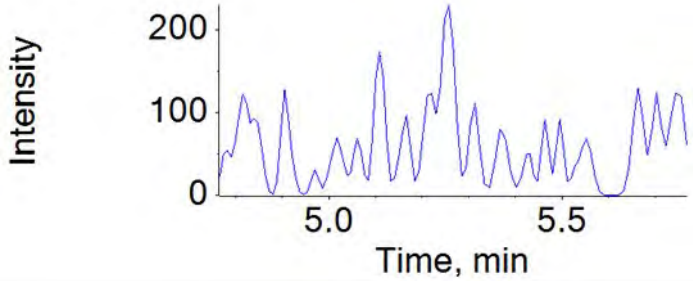
Component: PFOS
Primary Mass: 499.0 / 80.0



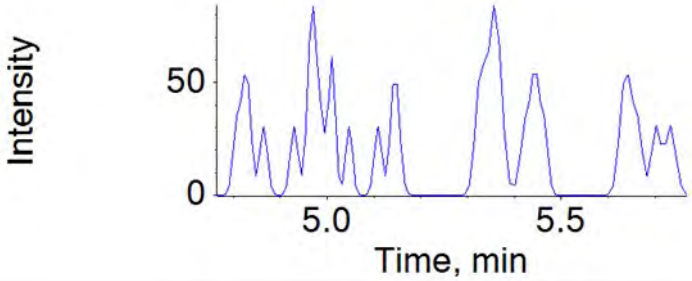
Component: PFOS_2
Secondary Mass: 499.0 / 99.0



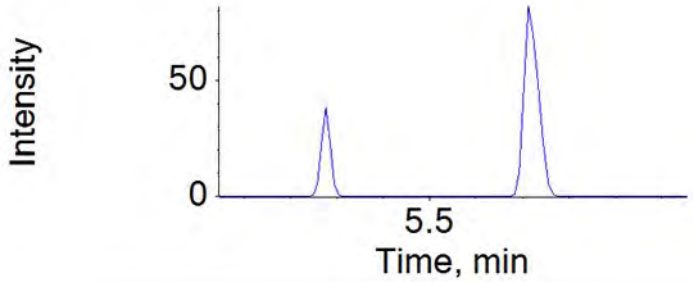
Component: PFNA
Primary Mass: 463.0 / 419.0



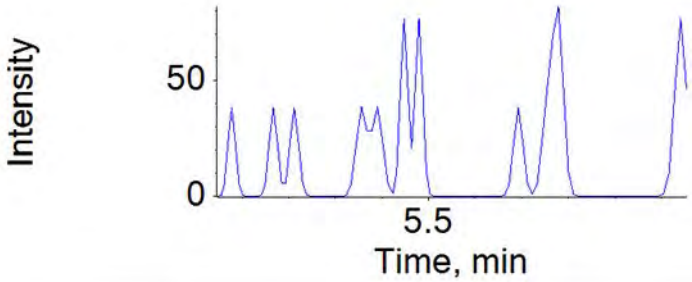
Component: PFNA_2
Secondary Mass: 463.0 / 169.0



Component: PFNS
Primary Mass: 549.0 / 80.0



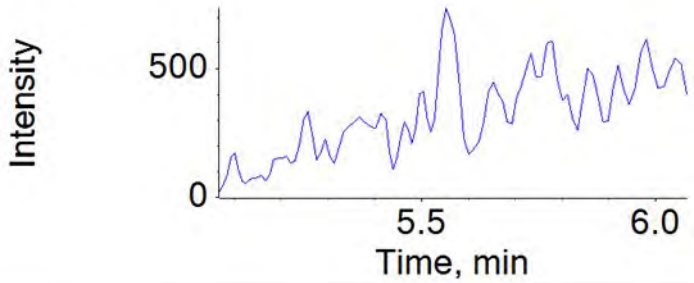
Component: PFNS_2
Secondary Mass: 549.0 / 99.0



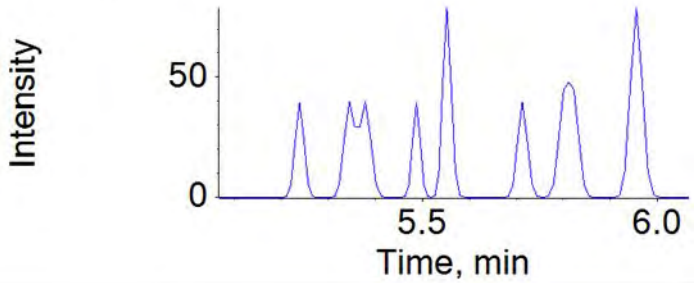
APPROVED
By MCD at 4:51 pm, 11/14/18

REVIEWED
By HMK at 12:22 pm, 11/15/18

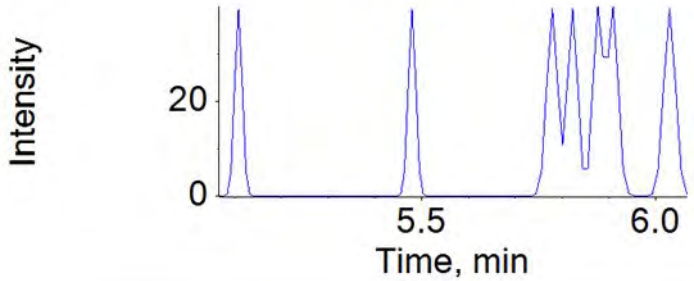
Component: PFDA
Primary Mass: 513.0 / 469.0



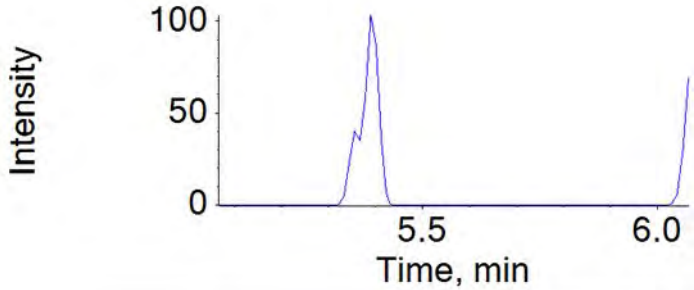
Component: PFDA_2
Secondary Mass: 513.0 / 169.0



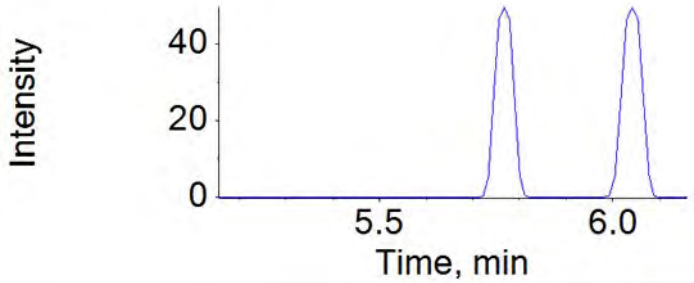
Component: 8:2-FTS
Primary Mass: 527.0 / 507.0



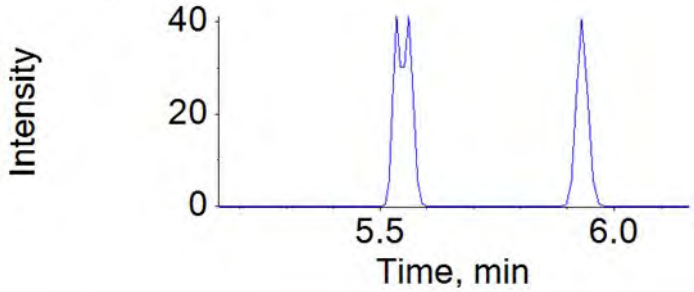
Component: 8:2 FTS_2
Secondary Mass: 527.0 / 81.0



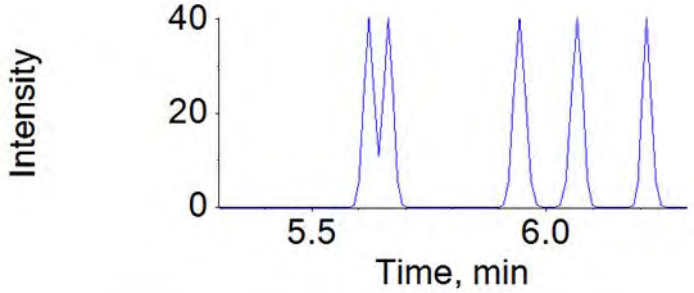
Component: NMeFOSAA
Primary Mass: 570.0 / 419.0



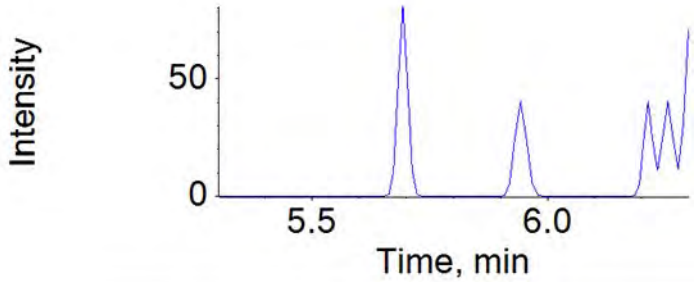
Component: NMeFOSAA_2
Secondary Mass: 570.0 / 483.0



Component: PFDS
Primary Mass: 599.0 / 80.0



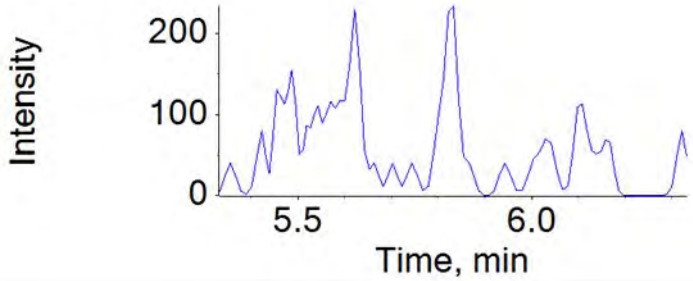
Component: PFDS_2
Secondary Mass: 599.0 / 99.0



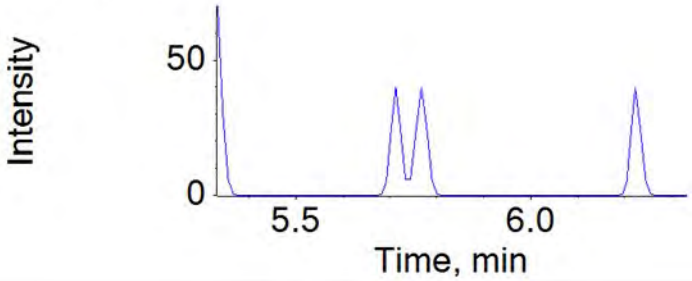
APPROVED
By MCD at 4:51 pm, 11/14/18

REVIEWED
By HMK at 12:22 pm, 11/15/18

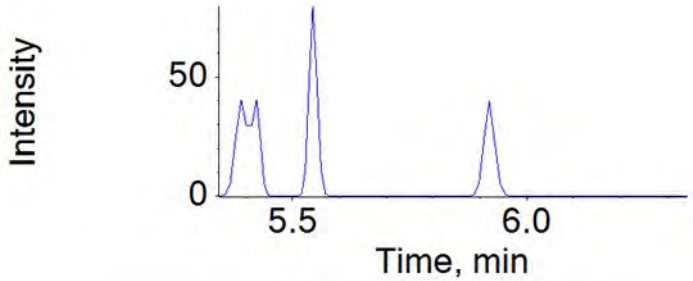
Component: PFUnDA
Primary Mass: 563.0 / 519.0



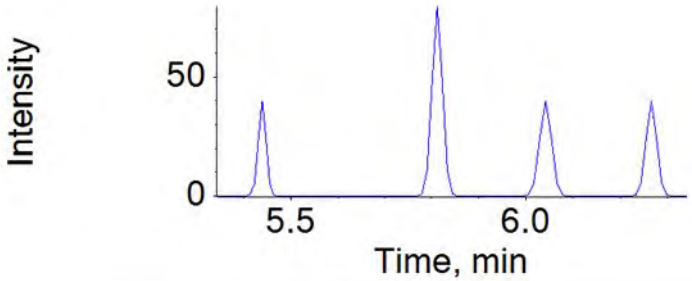
Component: PFUnDA_2
Secondary Mass: 563.0 / 169.0



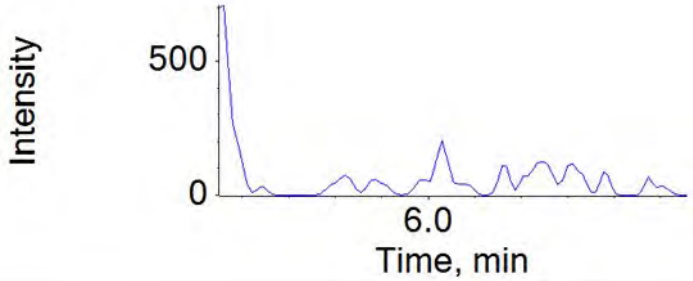
Component: NEtFOSAA
Primary Mass: 584.0 / 419.0



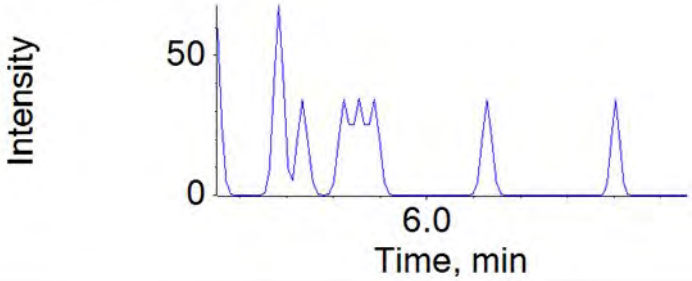
Component: NEtFOSAA_2
Secondary Mass: 584.0 / 526.0



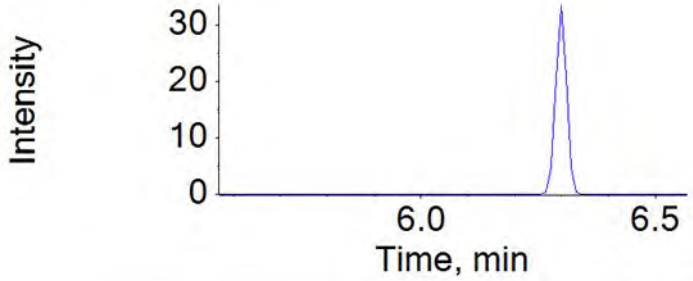
Component: PFDoDA
Primary Mass: 613.0 / 569.0



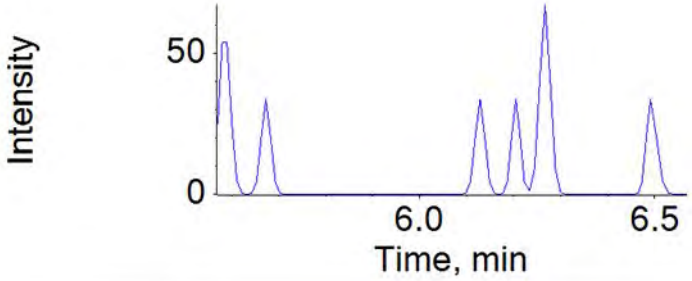
Component: PFDoDA_2
Secondary Mass: 613.0 / 169.0



Component: 10:2-FTS
Primary Mass: 627.0 / 607.0



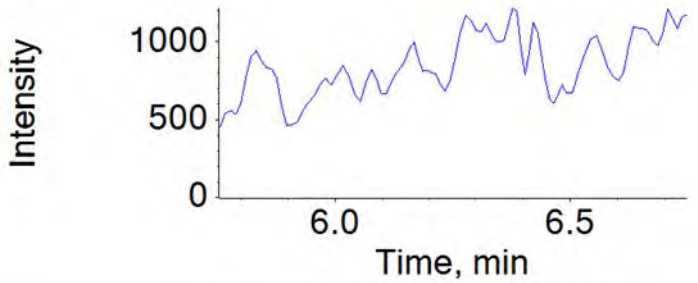
Component: 10:2 FTS_2
Secondary Mass: 627.0 / 81.0



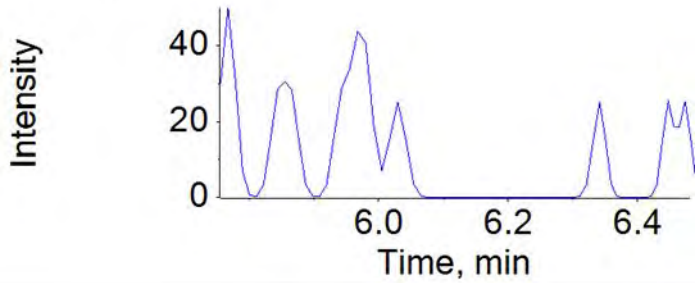
APPROVED
By MCD at 4:51 pm, 11/14/18

REVIEWED
By HMK at 12:22 pm, 11/15/18

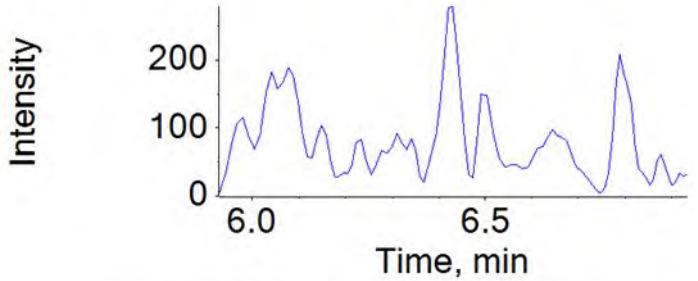
Component: PFTrDA
Primary Mass: 663.0 / 619.0



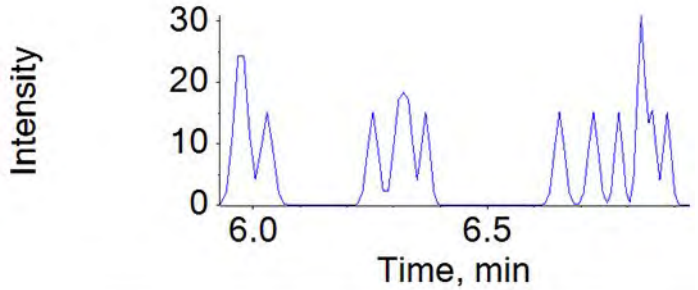
Component: PFTrDA_2
Secondary Mass: 663.0 / 169.0



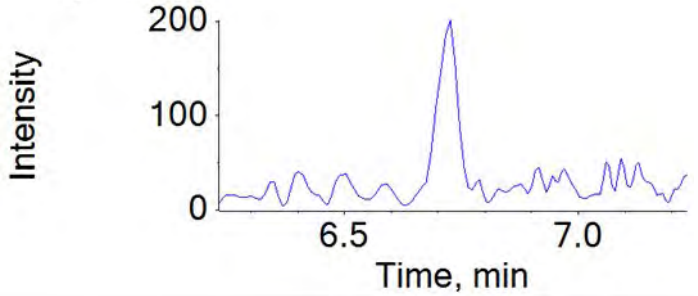
Component: PFTeDA
Primary Mass: 713.0 / 669.0



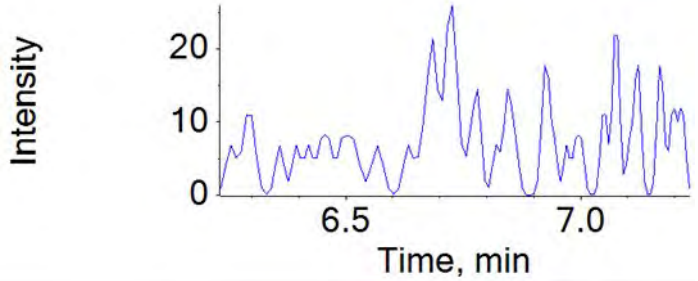
Component: PFTeDA_2
Secondary Mass: 713.0 / 169.0



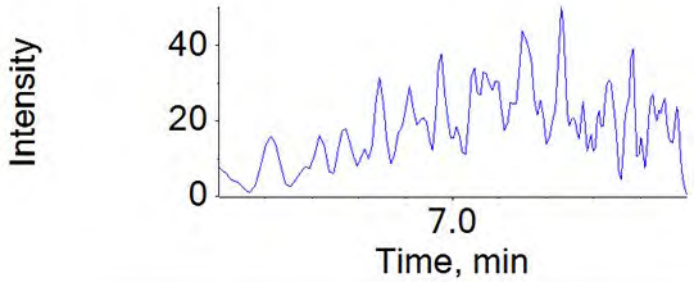
Component: PFHxDA
Primary Mass: 813.0 / 769.0



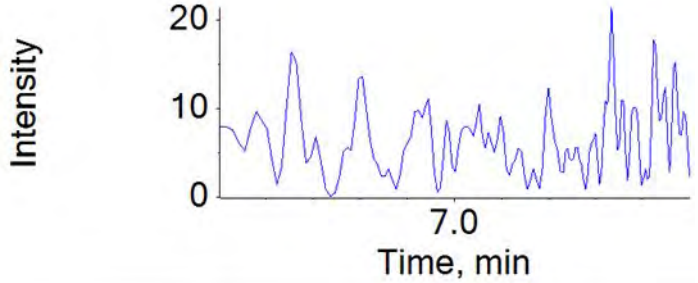
Component: PFHxDA_2
Secondary Mass: 813.0 / 169.0



Component: PFODA
Primary Mass: 913.0 / 869.0



Component: PFODA_2
Secondary Mass: 913.0 / 169.0



APPROVED
By MCD at 4:51 pm, 11/14/18

REVIEWED
By HMK at 12:22 pm, 11/15/18

ICAL Name: 18NOV12DCAL **Result Table:** 18316029 11/14/2018 6:48:04 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Sample Name:	BLK316029			**Data File:**		18NOV13D-90.wiff
Sample ID:	EPA 537 mod QSM 5.1 table B-15 18316029			**Acquis Date:**		2018-11-13T23:06:02
Sample Type:	Unknown			**Instrument:**		LM27631
Vial Position:	84			**Acquis Method:**		18AUG13_3uL.dam
Injection Vol:	3.00			**Result Table:**		18316029
QMethod File:	18AUG20QM			**ICAL Name:**		18NOV12DCAL
Batch Number:	18316029			**Operator:**		MCD7824
Sample Wt.:	1.00000			**Dilution Factor:**		1.00
Sample Vol.:	1.000			**Prep Factor:**		2.000

Injection Standard Peak Table

Injection Standard Area Reference File: 18NOV13D-05

Injection Standard Name	Inj Std Conc	Injection Std Peak Area	Rreference Injection Standard Area	Injection Std %Diff	Injection Std %Diff Limit	Injection Std %Diff OOS
13C3-PFBA	5.0	737180.2	661126.9	12	50	
13C2-PFOA	5.0	517902.6	466902.6	11	50	
13C4-PFOS	4.8	276058.5	247446.9	12	50	
13C2-PFDA	5.0	335561.1	295381.6	14	50	

Extraction Standard Peak Table

Extraction Standard Name	Ext Std Area	Inj Std Name	Inj Std Area	Area Ratio	Ext Std Conc	Ext Std Result	Ext Std %REC	Ext Std %REC Limit	Ext Std OOS
E13C4-PFBA	754985.8	13C3-PFBA	737180.2	1.024	10.000	9.183	92	50-150	
E13C5-PFPeA	741891.1	13C3-PFBA	737180.2	1.006	10.000	9.028	90	50-150	
E13C3-PFBS	421217.4	13C3-PFBA	737180.2	0.571	9.300	8.067	87	50-150	
E13C2-4:2-FTS	54071.3	13C2-PFOA	517902.6	0.104	9.340	9.300	100	50-150	
E13C5-PFHxA	665660.6	13C2-PFOA	517902.6	1.285	10.000	9.286	93	50-150	
E13C3-PFHxS	324763.2	13C2-PFOA	517902.6	0.627	9.460	8.606	91	50-150	
E13C4-PFHpA	537989.1	13C2-PFOA	517902.6	1.039	10.000	9.360	94	50-150	
E13C2-6:2-FTS	35759.2	13C2-PFOA	517902.6	0.069	9.500	9.239	97	50-150	
E13C8-PFOA	908223.7	13C2-PFOA	517902.6	1.754	10.000	9.663	97	50-150	
E13C8-PFOS	277365.0	13C4-PFOS	276058.5	1.005	9.560	8.904	93	50-150	
E13C9-PFNA	486627.0	13C4-PFOS	276058.5	1.763	10.000	9.830	98	50-150	
E13C6-PFDA	639102.5	13C2-PFDA	335561.1	1.905	10.000	8.889	89	50-150	
E13C2-8:2-FTS	24158.5	13C2-PFDA	335561.1	0.072	9.580	7.181	75	50-150	
E13C8-PFOSA	662199.6	13C2-PFDA	335561.1	1.973	10.000	8.750	88	50-150	
Ed3-NMeFOSAA	78540.6	13C2-PFDA	335561.1	0.234	10.000	8.450	84	50-150	
E13C7-PFUnDA	257474.8	13C2-PFDA	335561.1	0.767	10.000	8.910	89	50-150	
Ed5-NEtFOSAA	62590.1	13C2-PFDA	335561.1	0.187	10.000	7.892	79	50-150	
E13C2-PFDoDA	557864.6	13C2-PFDA	335561.1	1.662	10.000	8.633	86	50-150	
Ed7-NMePFOSAE	335466.9	13C2-PFDA	335561.1	1.000	10.000	8.652	87	50-150	
Ed3-NMePFOSA	77628.2	13C2-PFDA	335561.1	0.231	10.000	8.406	84	50-150	
Ed9-NEtPFOSAE	286394.9	13C2-PFDA	335561.1	0.853	10.000	8.878	89	50-150	
Ed5-NEtPFOSA	60630.5	13C2-PFDA	335561.1	0.181	10.000	8.477	85	50-150	
E13C2-PFTeDA	386845.4	13C2-PFDA	335561.1	1.153	10.000	8.094	81	50-150	

APPROVED
By MCD at 6:55 pm, 11/14/18

REVIEWED
By HMK at 11:03 am, 11/15/18

ICAL Name: 18NOV12DCAL **Result Table:** 18316029 11/14/2018 6:48:04 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

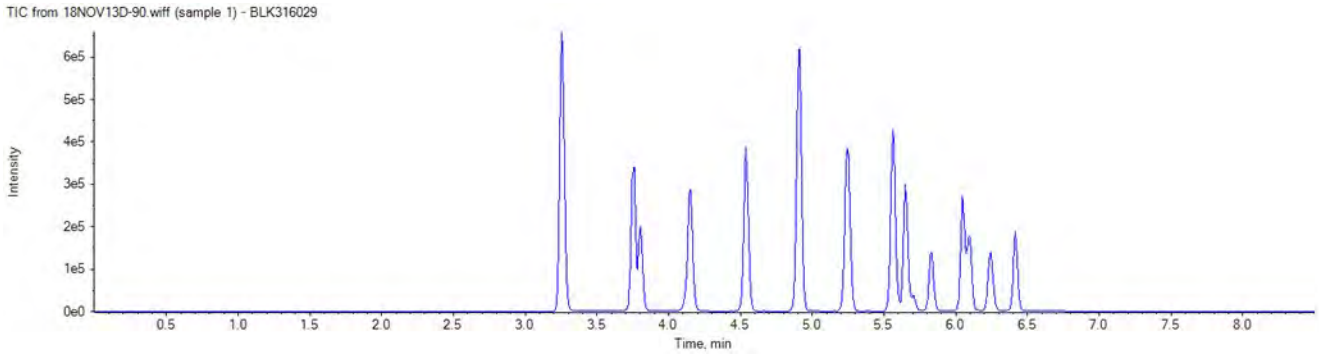
Analyte Quantitation Peak Table

Sample Name: BLK316029 **Instrument Name:** LM27631 **File Name:** 18NOV13D-90.wiff

Sample Wt	Sample Vol	Dilution Factor	PrepFactor
1.00000	1.000	1.00	2.000

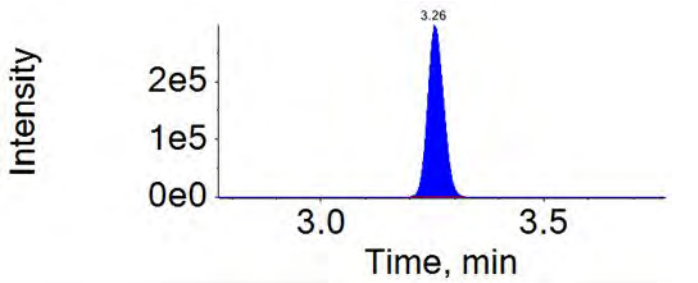
Analyte Name	RT	RRT	Analyte Area Response	E	Int Typ	ES Name	ES RT	ES Area Response	Area Ratio	Sample Result (ng/g)
PFBA	N/A	N/A	N/A		A	13C4-PFBA	3.25	754985.8	N/A	
PFPeA	N/A	N/A	N/A		A	13C5-PFPeA	3.75	741891.1	N/A	
PFBS	N/A	N/A	N/A		A	13C3-PFBS	3.80	421217.4	N/A	
4:2-FTS	N/A	N/A	N/A		A	13C2-4:2-FTS	4.12	54071.3	N/A	
PFHxA	N/A	N/A	N/A		A	13C5-PFHxA	4.15	665660.6	N/A	
PFPeS	N/A	N/A	N/A		A	13C3-PFBS	3.80	421217.4	N/A	
PFHpA	N/A	N/A	N/A		A	13C4-PFHpA	4.54	537989.1	N/A	
PFHxS	N/A	N/A	N/A		A	13C3-PFHxS	4.54	324763.2	N/A	
6:2-FTS	N/A	N/A	N/A		A	13C2-6:2-FTS	4.90	35759.2	N/A	
PFHpS	N/A	N/A	N/A		A	13C3-PFHxS	4.54	324763.2	N/A	
PFOA	N/A	N/A	N/A		A	13C8-PFOA	4.91	908223.7	N/A	
PFOS	N/A	N/A	N/A		A	13C8-PFOS	5.24	277365.0	N/A	
PFNA	N/A	N/A	N/A		A	13C9-PFNA	5.25	486627.0	N/A	
PFNS	N/A	N/A	N/A		A	13C8-PFOS	5.24	277365.0	N/A	
PFDA	N/A	N/A	N/A		A	13C6-PFDA	5.56	639102.5	N/A	
8:2-FTS	N/A	N/A	N/A		A	13C2-8:2-FTS	5.57	24158.5	N/A	
PFOSA	N/A	N/A	N/A		A	13C8-PFOSA	5.65	662199.6	N/A	
NMeFOSAA	N/A	N/A	N/A		A	d3-NMeFOSAA	5.70	78540.6	N/A	
PFDS	N/A	N/A	N/A		A	13C8-PFOS	5.24	277365.0	N/A	
PFUnDA	N/A	N/A	N/A		A	13C7-PFUnDA	5.83	257474.8	N/A	
NEtFOSAA	N/A	N/A	N/A		A	d5-NEtFOSAA	5.84	62590.1	N/A	
PFDoDA	N/A	N/A	N/A		A	13C2-PFDoDA	6.05	557864.6	N/A	
10:2-FTS	N/A	N/A	N/A		A	13C2-8:2-FTS	5.57	24158.5	N/A	
NMePFOSAE	N/A	N/A	N/A		A	d7-NMePFOSAE	6.09	335466.9	N/A	
NMePFOSA	N/A	N/A	N/A		A	d3-NMePFOSA	6.10	77628.2	N/A	
PFDoS	N/A	N/A	N/A		A	13C8-PFOS	5.24	277365.0	N/A	
NEtPFOSAE	N/A	N/A	N/A		A	d9-NEtPFOSAE	6.24	286394.9	N/A	
NEtPFOSA	N/A	N/A	N/A		A	d5-NEtPFOSA	6.26	60630.5	N/A	
PFTrDA	N/A	N/A	N/A		A	13C2-PFDoDA	6.05	557864.6	N/A	
PFTeDA	N/A	N/A	N/A		A	13C2-PFTeDA	6.42	386845.4	N/A	
PFHxDA	N/A	N/A	N/A		A	13C2-PFTeDA	6.42	386845.4	N/A	
PFODA	N/A	N/A	N/A		A	13C2-PFTeDA	6.42	386845.4	N/A	

Total Ion Chromatogram

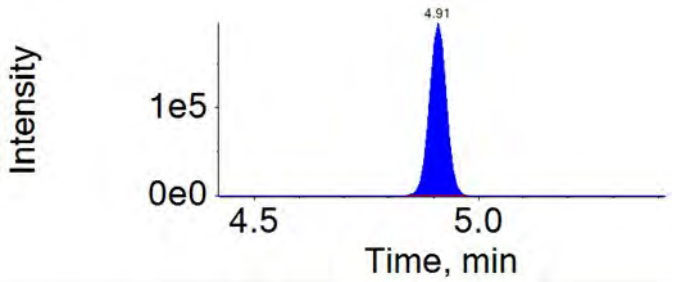


ICAL Name: 18NOV12DCAL **Result Table:** 18316029 11/14/2018 6:48:04 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

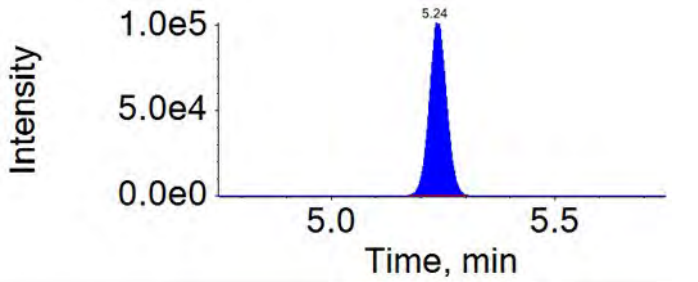
Injection Standard: 13C3-PFBA
216.0 / 172.0



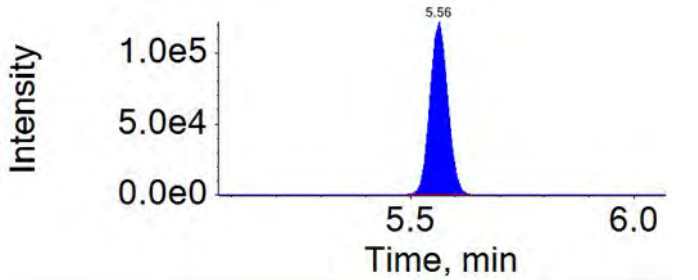
Injection Standard: 13C2-PFOA
415.0 / 370.0



Injection Standard: 13C4-PFOS
503.0 / 80.0

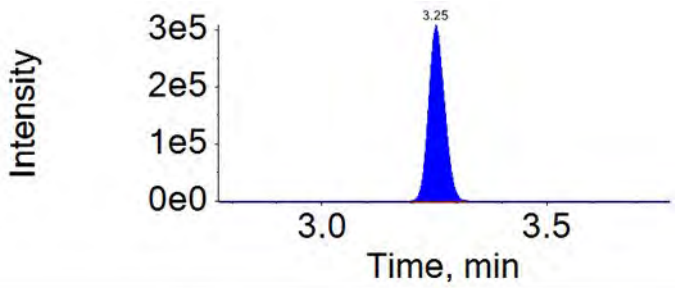


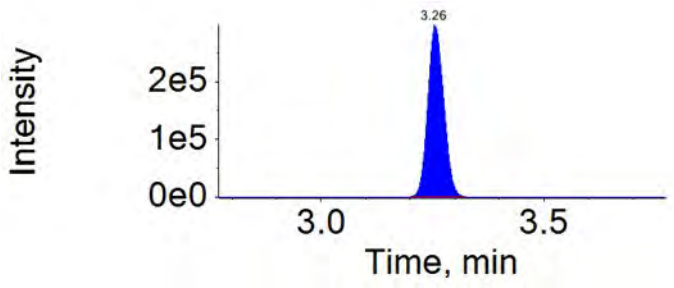
Injection Standard: 13C2-PFDA
515.0 / 470.0



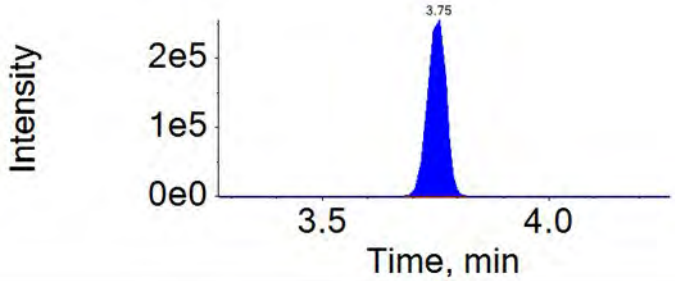
ICAL Name: 18NOV12DCAL **Result Table:** 18316029 11/14/2018 6:48:04 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

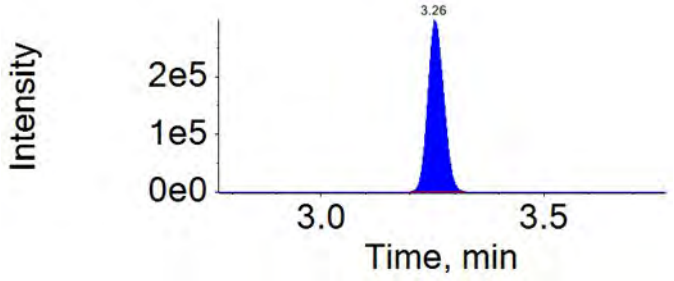
Extraction Standard: E13C4-PFBA	Injection Standard: 13C3-PFBA
217.0 / 172.0	216.0 / 172.0



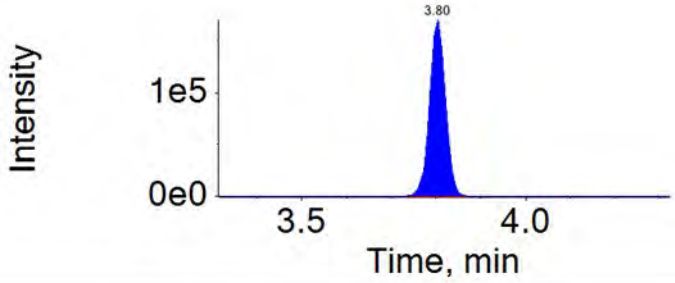


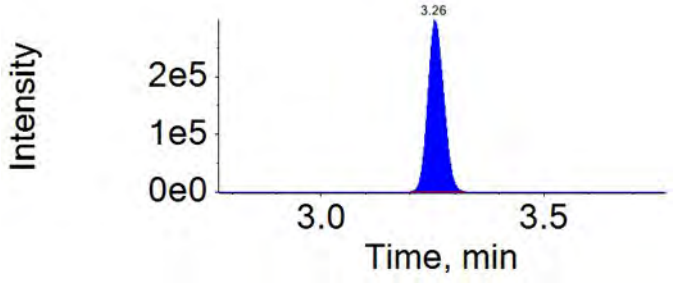
Extraction Standard: E13C5-PFPeA	Injection Standard: 13C3-PFBA
268.0 / 223.0	216.0 / 172.0



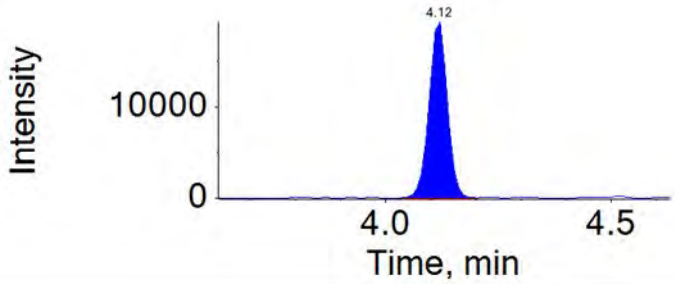


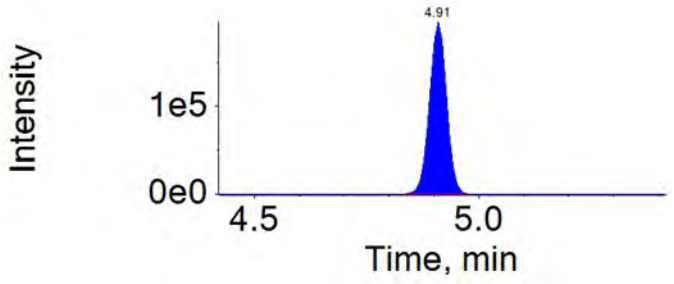
Extraction Standard: E13C3-PFBS	Injection Standard: 13C3-PFBA
302.0 / 80.0	216.0 / 172.0





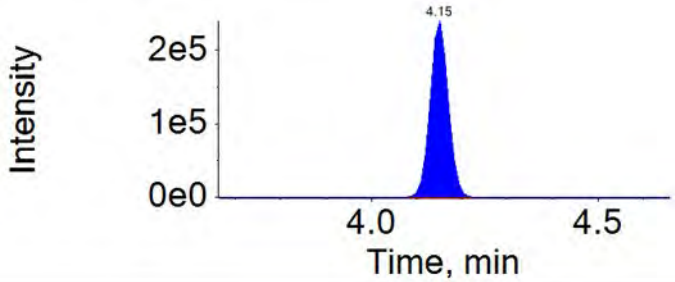
Extraction Standard: E13C2-4:2-FTS	Injection Standard: 13C2-PFOA
329.0 / 81.0	415.0 / 370.0

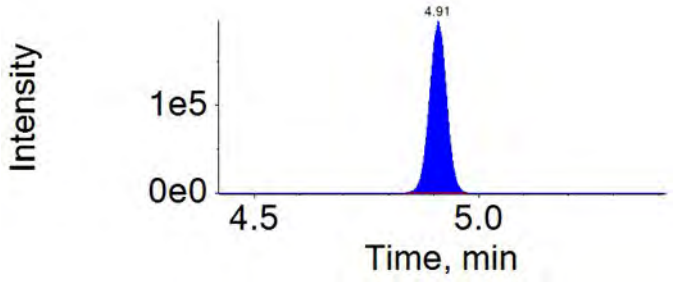




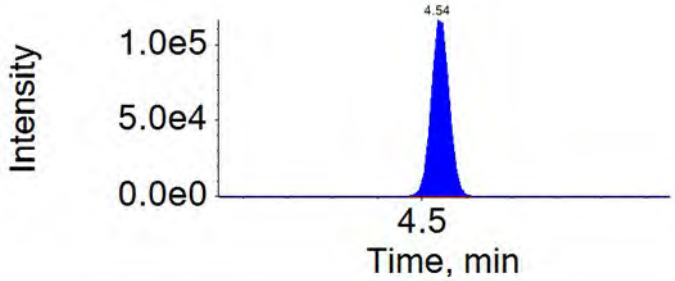
ICAL Name: 18NOV12DCAL **Result Table:** 18316029 11/14/2018 6:48:04 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

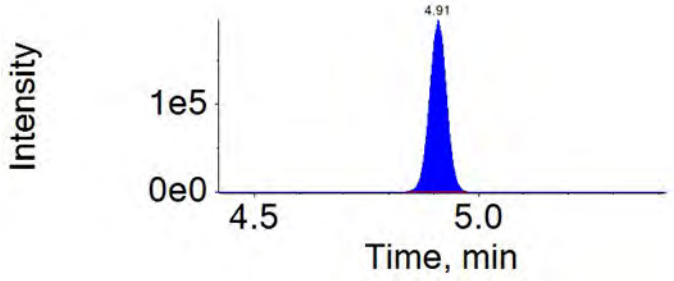
Extraction Standard: E13C5-PFHxA	Injection Standard: 13C2-PFOA
318.0 / 273.0	415.0 / 370.0



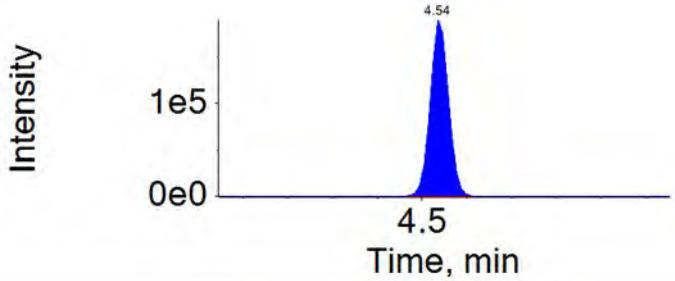


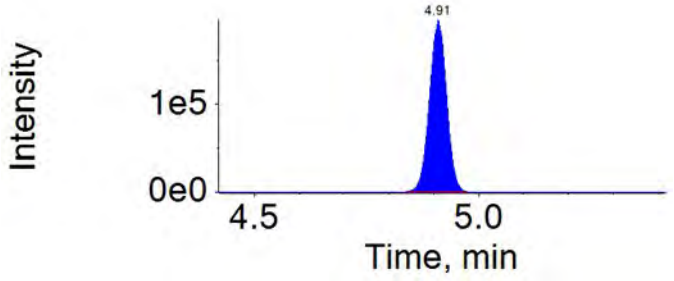
Extraction Standard: E13C3-PFHxS	Injection Standard: 13C2-PFOA
402.0 / 80.0	415.0 / 370.0



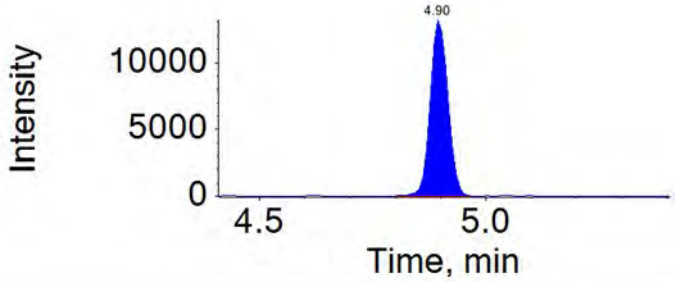


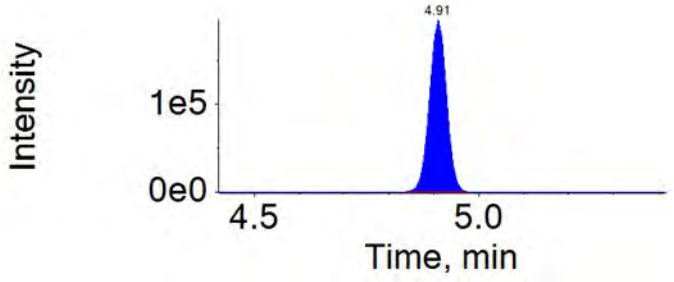
Extraction Standard: E13C4-PFHpA	Injection Standard: 13C2-PFOA
367.0 / 322.0	415.0 / 370.0





Extraction Standard: E13C2-6:2-FTS	Injection Standard: 13C2-PFOA
429.0 / 81.0	415.0 / 370.0

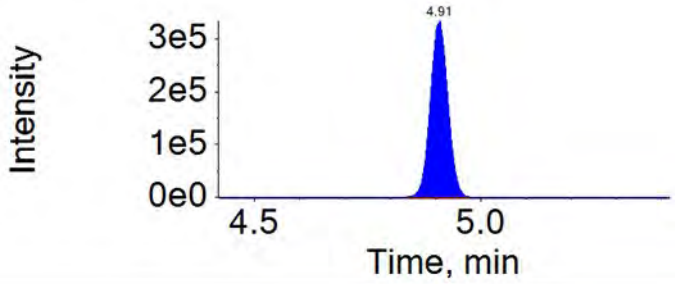




ICAL Name: 18NOV12DCAL **Result Table:** 18316029 11/14/2018 6:48:04 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

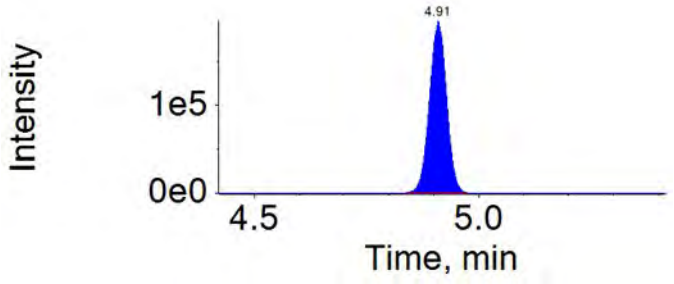
Extraction Standard: E13C8-PFOA

421.0 / 376.0



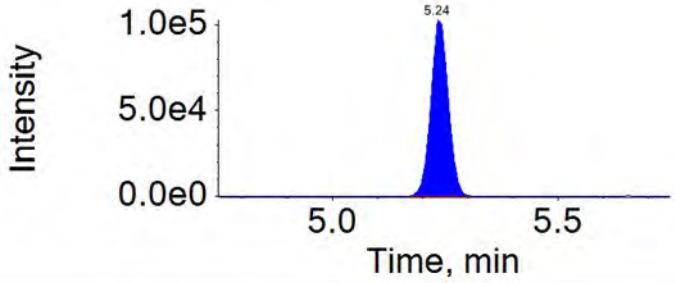
Injection Standard: 13C2-PFOA

415.0 / 370.0



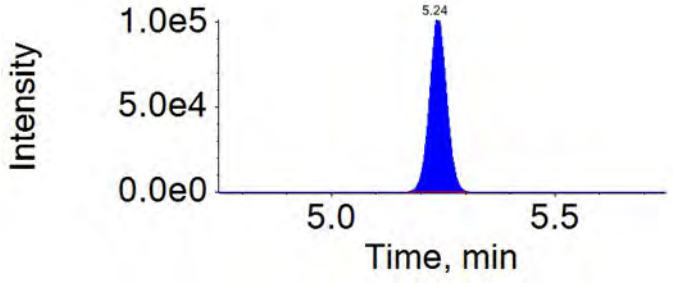
Extraction Standard: E13C8-PFOS

507.0 / 80.0



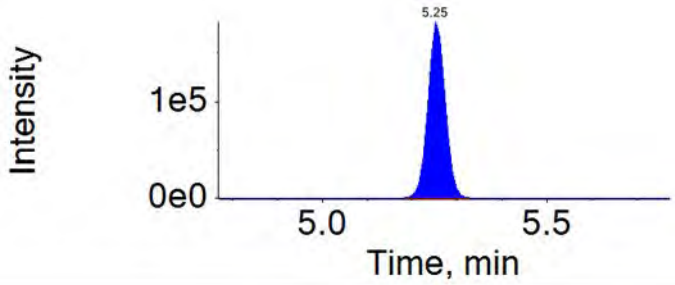
Injection Standard: 13C4-PFOS

503.0 / 80.0



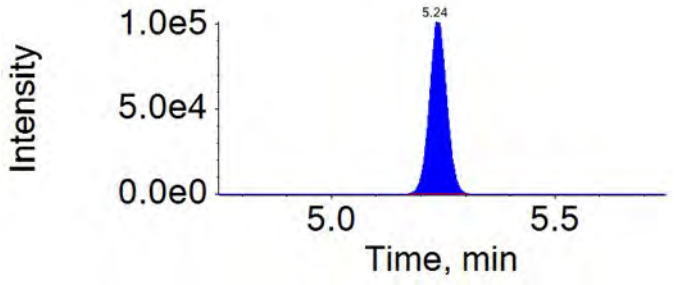
Extraction Standard: E13C9-PFNA

472.0 / 427.0



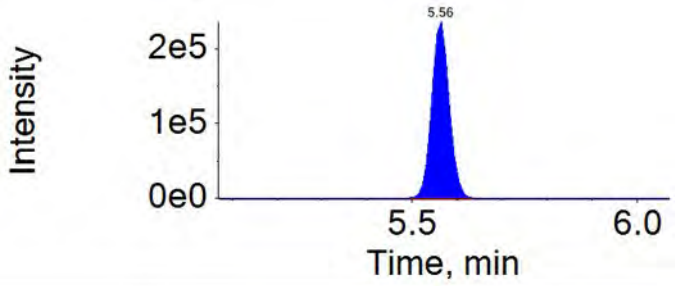
Injection Standard: 13C4-PFOS

503.0 / 80.0



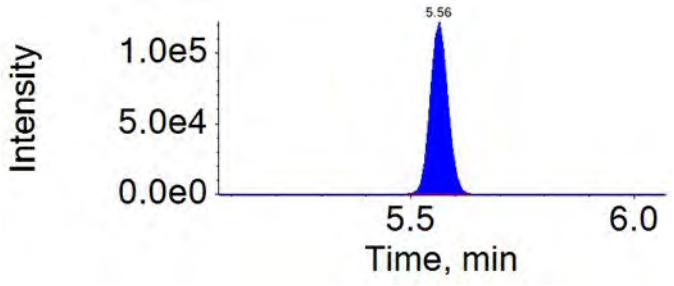
Extraction Standard: E13C6-PFDA

519.0 / 474.0



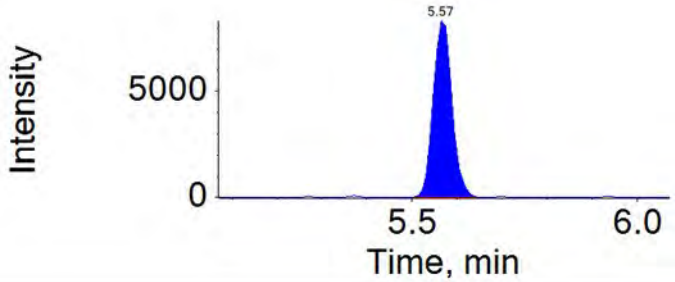
Injection Standard: 13C2-PFDA

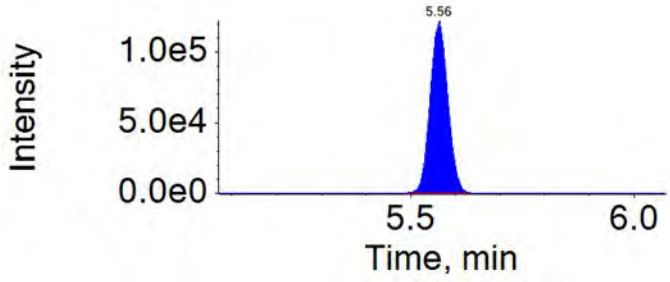
515.0 / 470.0



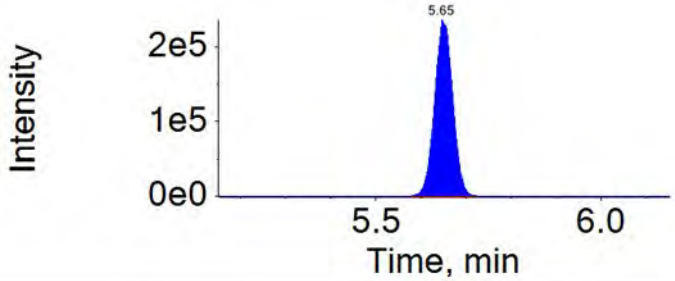
ICAL Name: 18NOV12DCAL **Result Table:** 18316029 11/14/2018 6:48:04 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

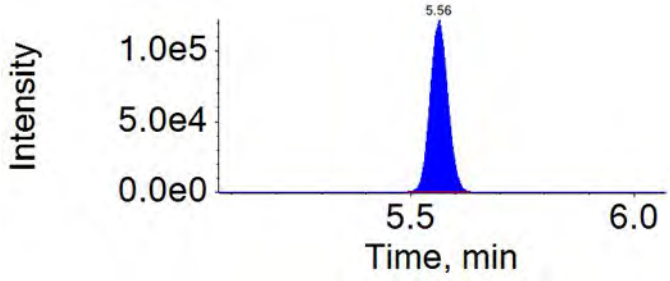
Extraction Standard: E13C2-8:2-FTS	Injection Standard: 13C2-PFDA
529.0 / 81.0	515.0 / 470.0



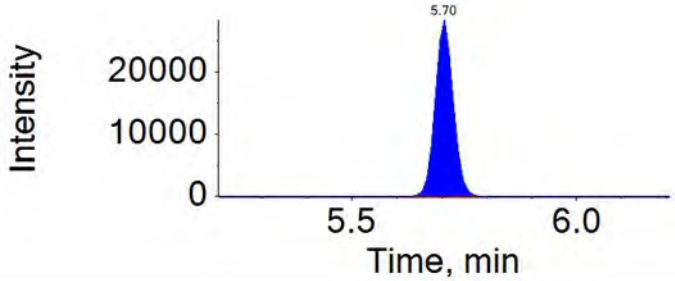


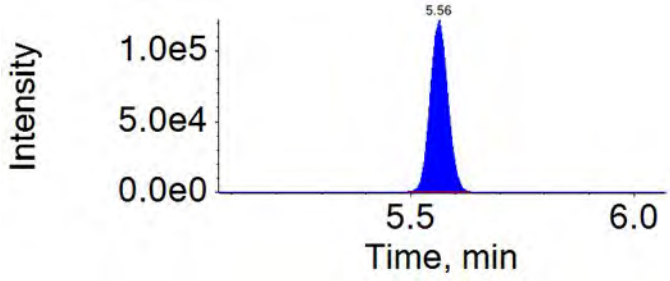
Extraction Standard: E13C8-PFOSA	Injection Standard: 13C2-PFDA
506.0 / 78.0	515.0 / 470.0



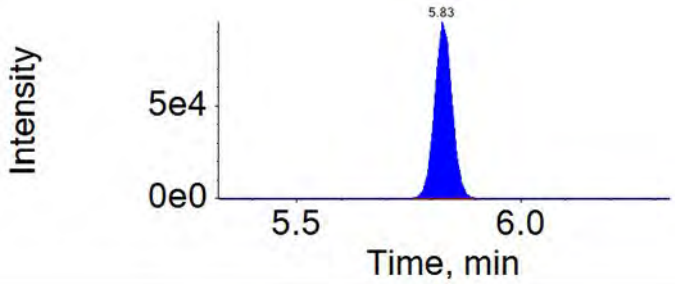


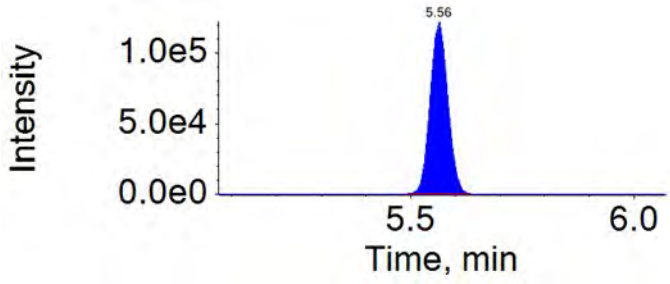
Extraction Standard: Ed3-NMeFOSAA	Injection Standard: 13C2-PFDA
573.0 / 419.0	515.0 / 470.0





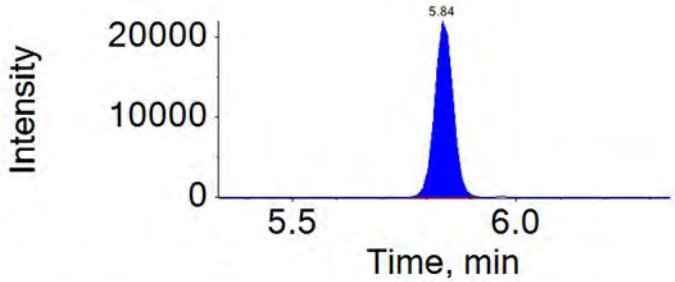
Extraction Standard: E13C7-PFUnDA	Injection Standard: 13C2-PFDA
570.0 / 525.0	515.0 / 470.0

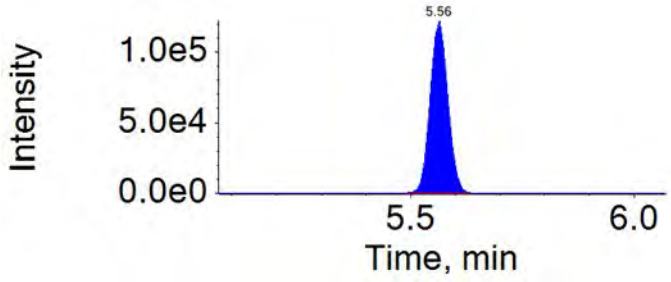




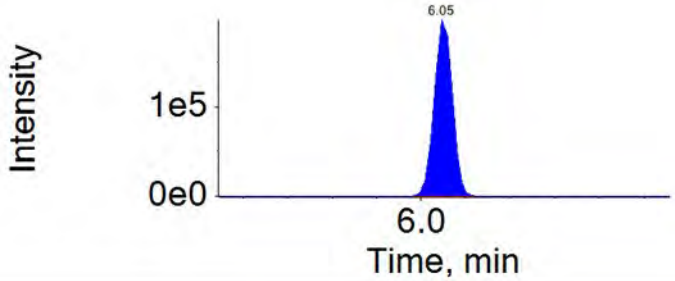
ICAL Name: 18NOV12DCAL **Result Table:** 18316029 11/14/2018 6:48:04 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

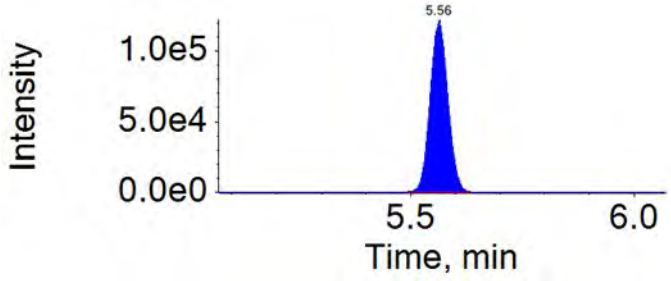
Extraction Standard: Ed5-NEtFOSAA	Injection Standard: 13C2-PFDA
589.0 / 419.0	515.0 / 470.0



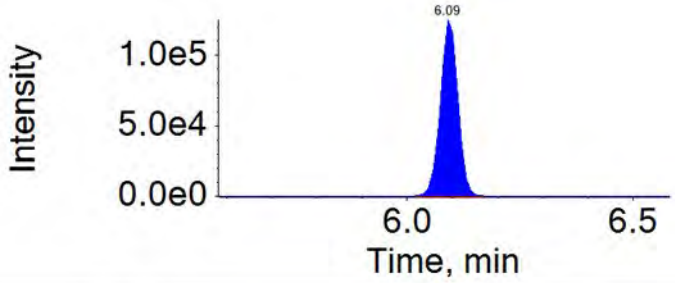


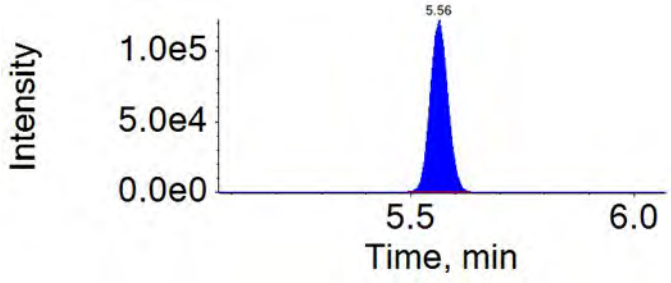
Extraction Standard: E13C2-PFDoDA	Injection Standard: 13C2-PFDA
615.0 / 570.0	515.0 / 470.0



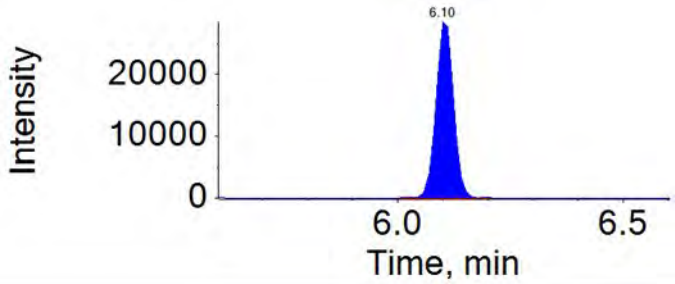


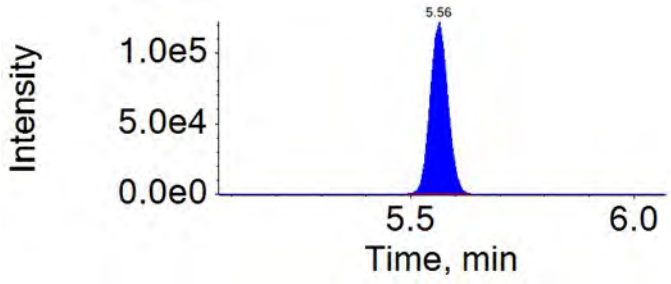
Extraction Standard: Ed7-NMePFOSAE	Injection Standard: 13C2-PFDA
623.0 / 59.0	515.0 / 470.0





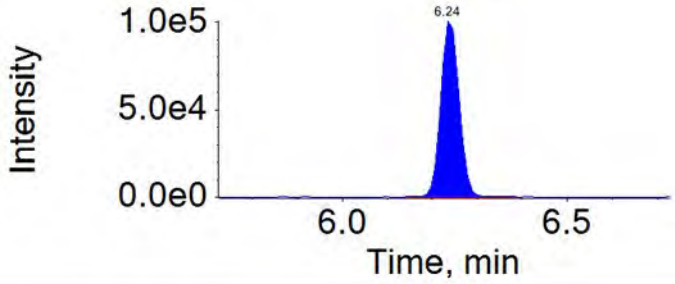
Extraction Standard: Ed3-NMePFOSA	Injection Standard: 13C2-PFDA
515.0 / 169.0	515.0 / 470.0

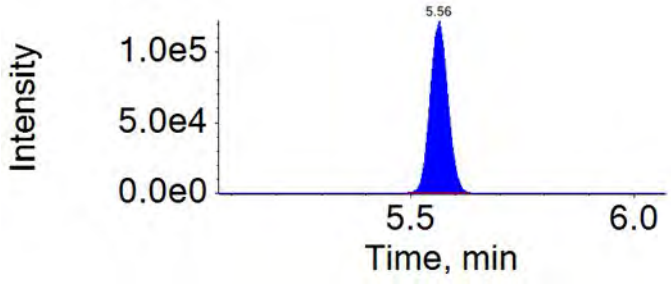




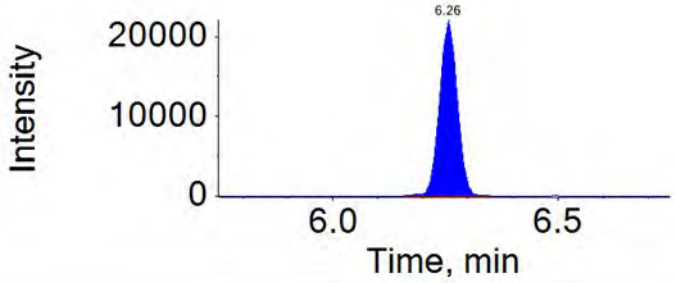
ICAL Name: 18NOV12DCAL **Result Table:** 18316029 11/14/2018 6:48:04 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

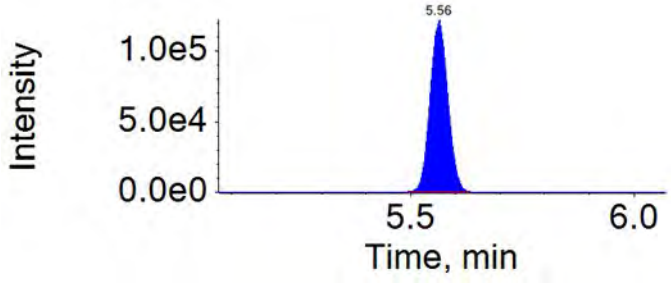
Extraction Standard: Ed9-NEtPFOSAE	Injection Standard: 13C2-PFDA
639.0 / 59.0	515.0 / 470.0



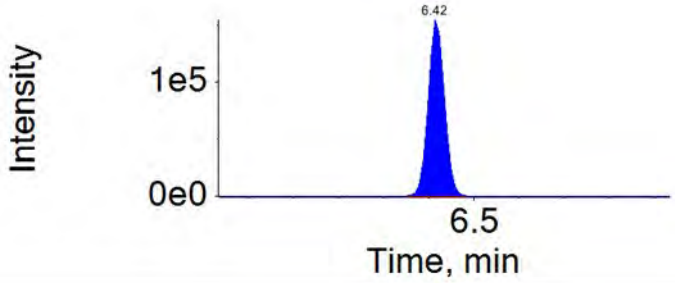


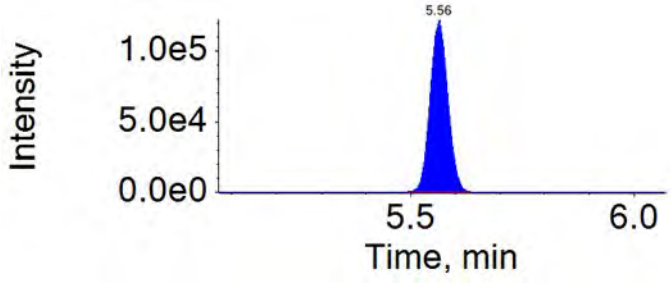
Extraction Standard: Ed5-NEtPFOSA	Injection Standard: 13C2-PFDA
531.0 / 169.0	515.0 / 470.0





Extraction Standard: E13C2-PFTeDA	Injection Standard: 13C2-PFDA
715.0 / 670.0	515.0 / 470.0



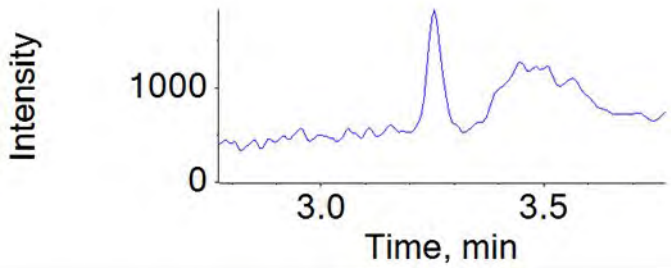


APPROVED
By MCD at 6:55 pm, 11/14/18

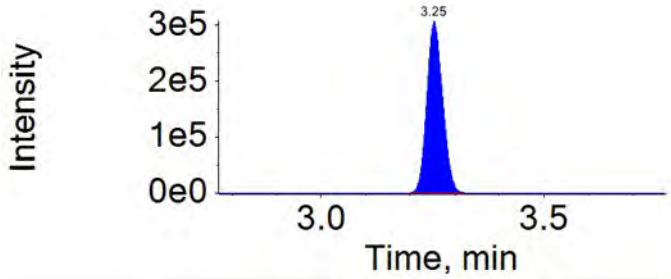
REVIEWED
By HMK at 11:03 am, 11/15/18

ICAL Name: 18NOV12DCAL **Result Table:** 18316029 11/14/2018 6:48:04 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

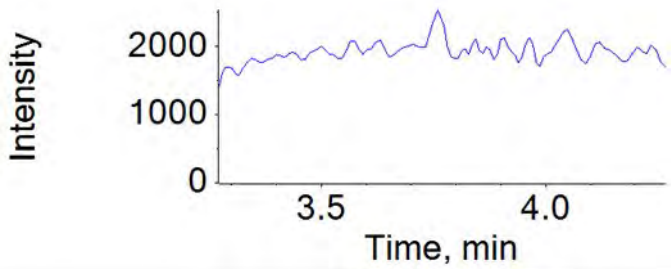
Analyte: PFBA
213.0 / 169.0



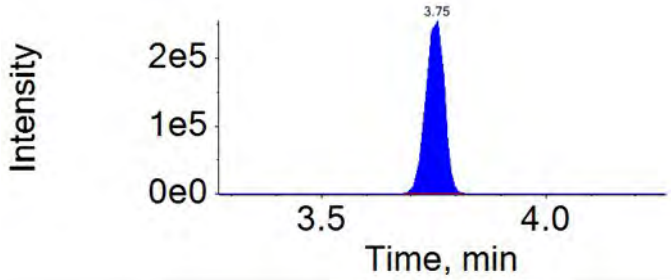
Extraction Standard: 13C4-PFBA
217.0 / 172.0



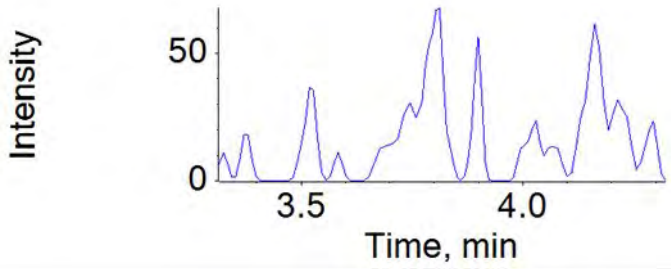
Analyte: PFPeA
263.0 / 219.0



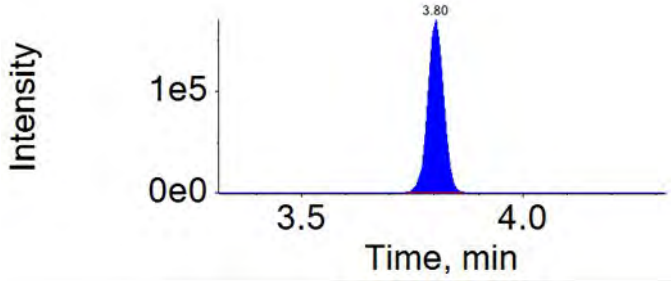
Extraction Standard: 13C5-PFPeA
268.0 / 223.0



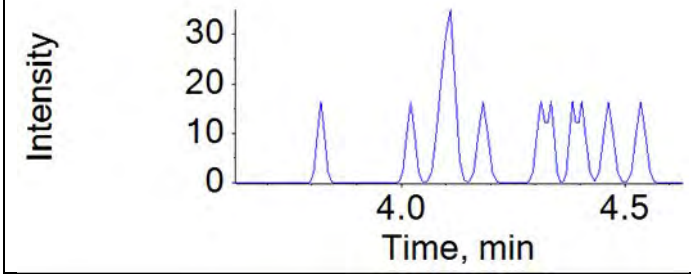
Analyte: PFBS
299.0 / 80.0



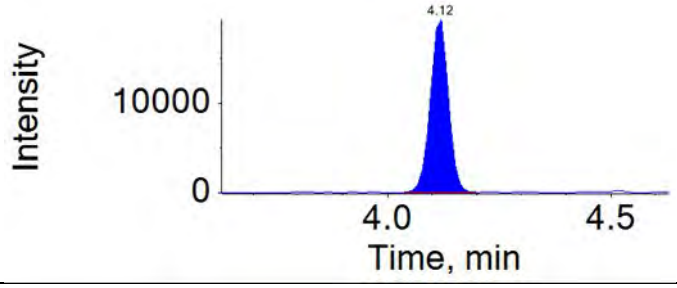
Extraction Standard: 13C3-PFBS
302.0 / 80.0



Analyte: 4:2-FTS
327.0 / 307.0



Extraction Standard: 13C2-4:2-FTS
329.0 / 81.0

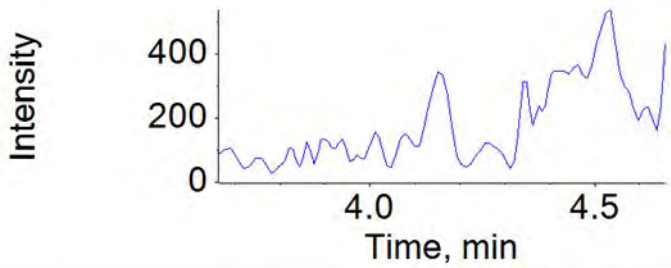


APPROVED
By MCD at 6:55 pm, 11/14/18

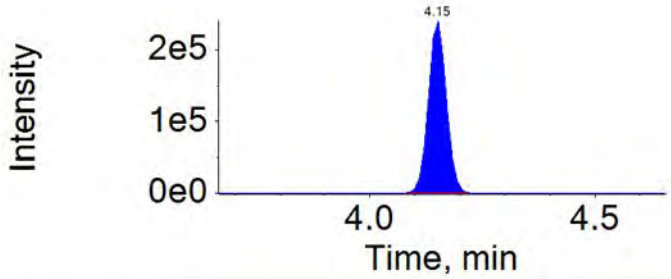
REVIEWED
By HMK at 11:03 am, 11/15/18

ICAL Name: 18NOV12DCAL **Result Table:** 18316029 11/14/2018 6:48:04 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

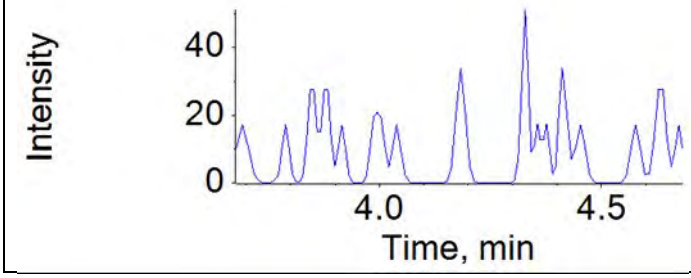
Analyte: PFHxA
313.0 / 269.0



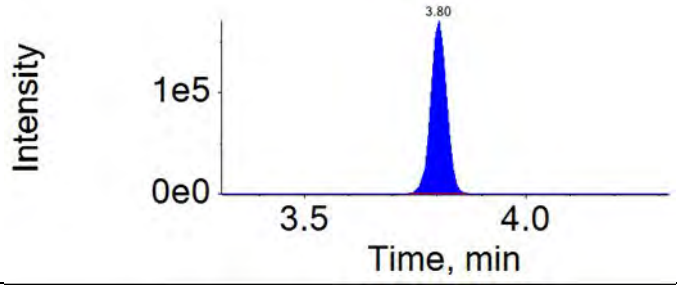
Extraction Standard: 13C5-PFHxA
318.0 / 273.0



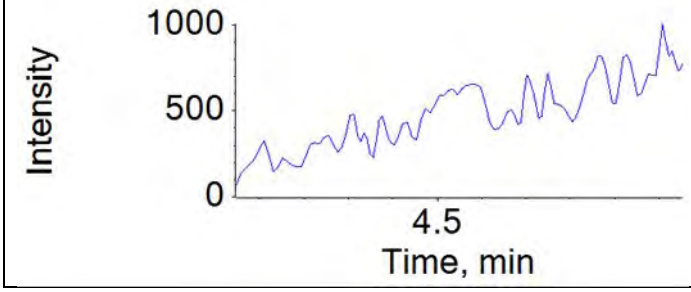
Analyte: PFPeS
349.0 / 80.0



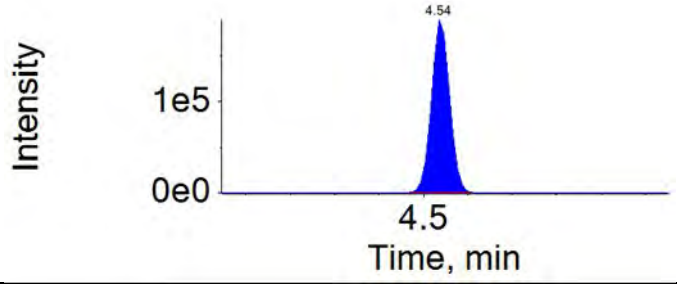
Extraction Standard: 13C3-PFBS
302.0 / 80.0



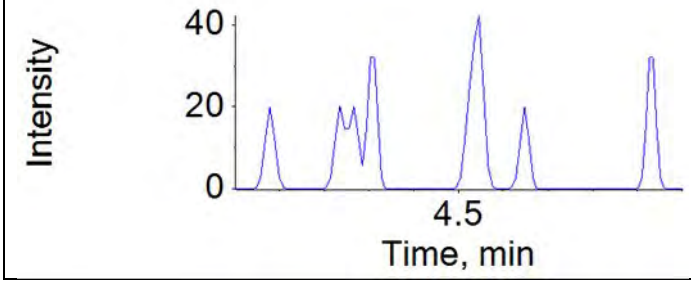
Analyte: PFHpA
363.0 / 319.0



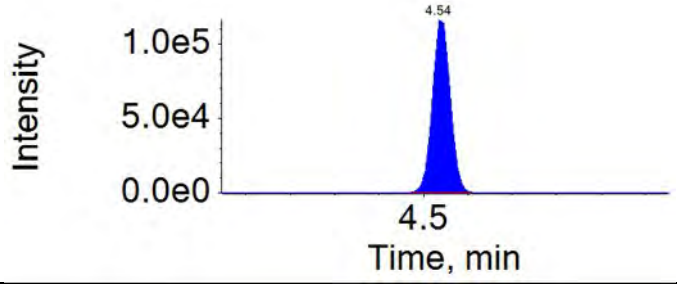
Extraction Standard: 13C4-PFHpA
367.0 / 322.0



Analyte: PFHxS
399.0 / 80.0



Extraction Standard: 13C3-PFHxS
402.0 / 80.0

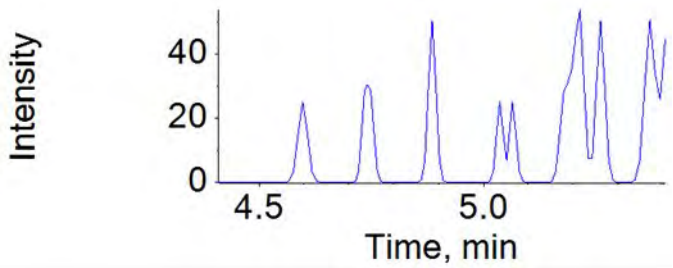


APPROVED
By MCD at 6:55 pm, 11/14/18

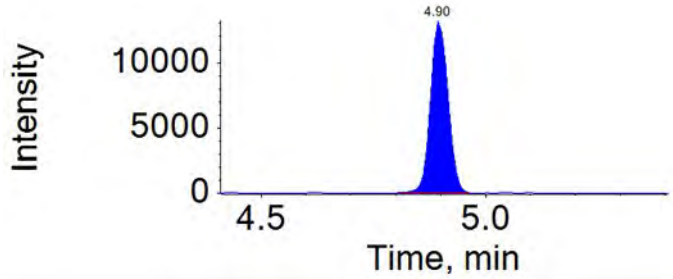
REVIEWED
By HMK at 11:03 am, 11/15/18

ICAL Name: 18NOV12DCAL **Result Table:** 18316029 11/14/2018 6:48:04 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

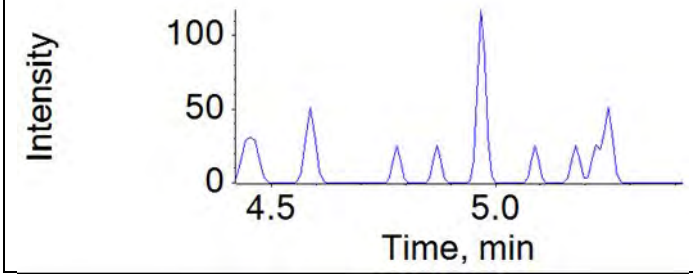
Analyte: 6:2-FTS
427.0 / 407.0



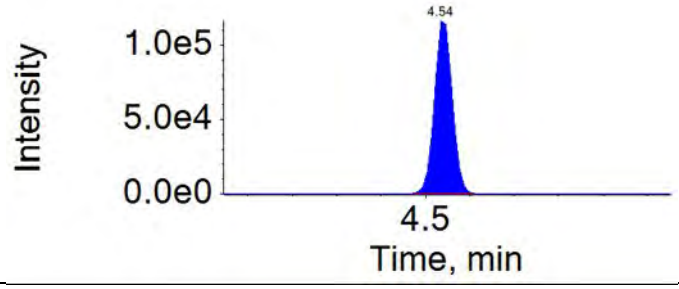
Extraction Standard: 13C2-6:2-FTS
429.0 / 81.0



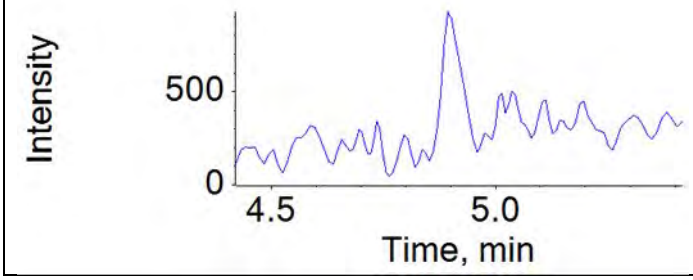
Analyte: PFHpS
449.0 / 80.0



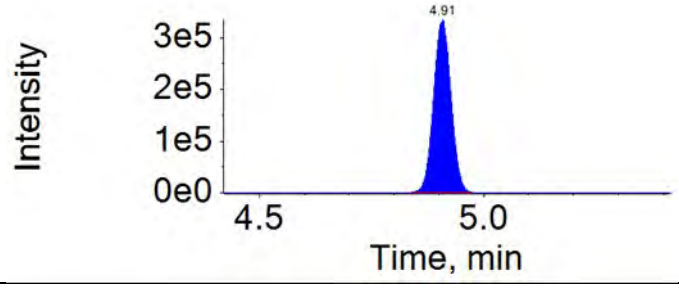
Extraction Standard: 13C3-PFHxS
402.0 / 80.0



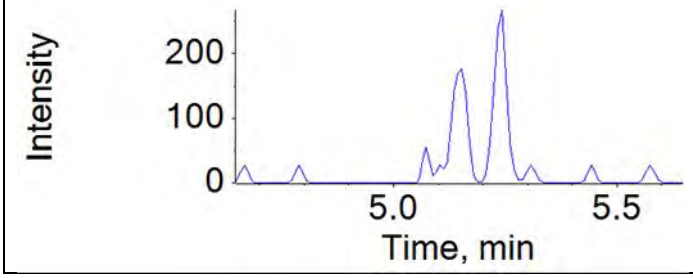
Analyte: PFOA
413.0 / 369.0



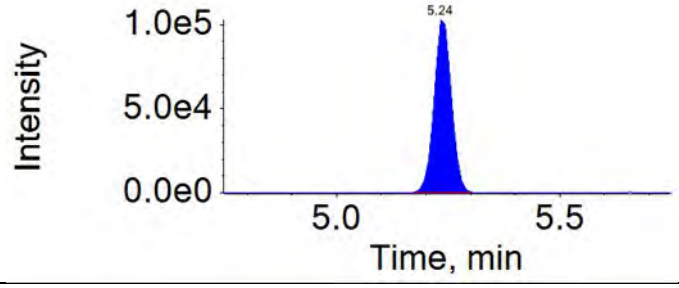
Extraction Standard: 13C8-PFOA
421.0 / 376.0



Analyte: PFOS
499.0 / 80.0



Extraction Standard: 13C8-PFOS
507.0 / 80.0



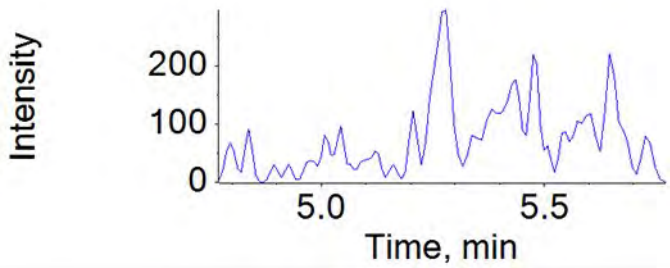
APPROVED
By MCD at 6:55 pm, 11/14/18

REVIEWED
By HMK at 11:03 am, 11/15/18

ICAL Name: 18NOV12DCAL **Result Table:** 18316029 11/14/2018 6:48:04 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

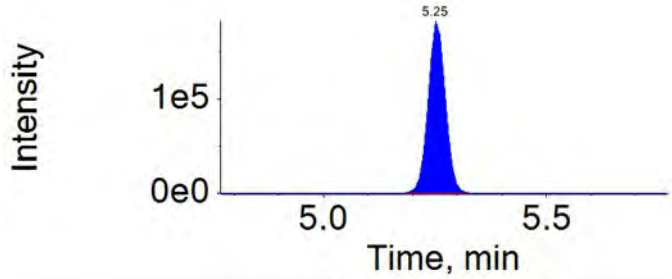
Analyte: PFNA

463.0 / 419.0



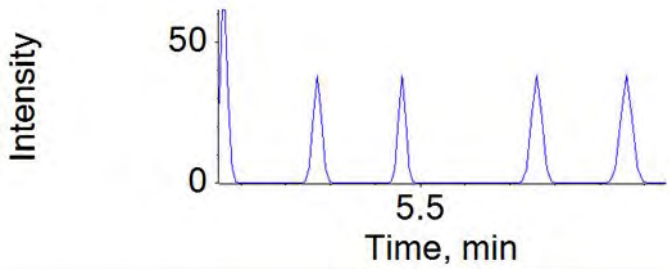
Extraction Standard: 13C9-PFNA

472.0 / 427.0



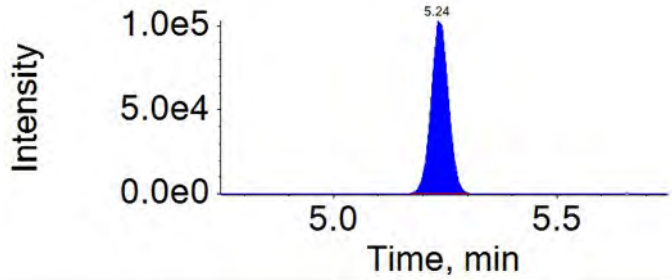
Analyte: PFNS

549.0 / 80.0



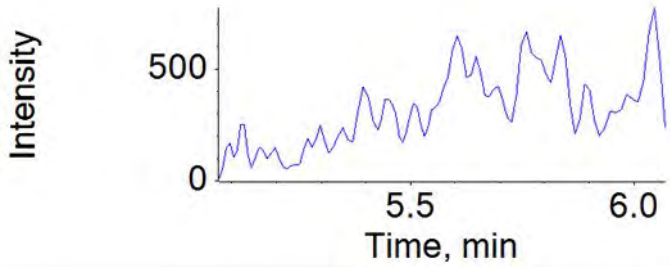
Extraction Standard: 13C8-PFOS

507.0 / 80.0



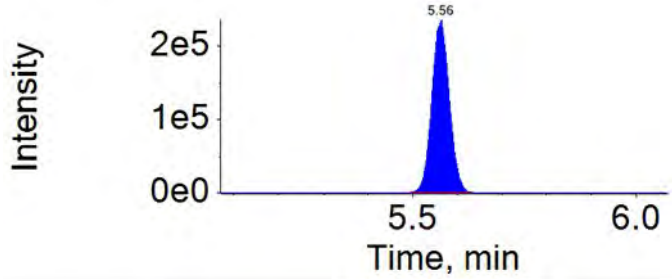
Analyte: PFDA

513.0 / 469.0



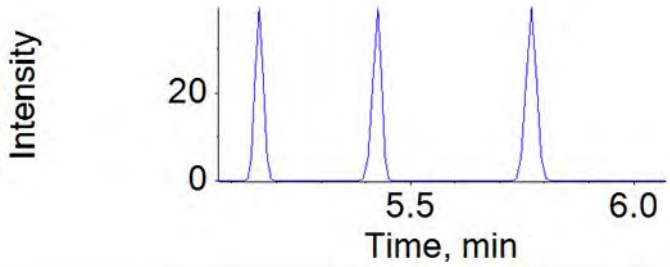
Extraction Standard: 13C6-PFDA

519.0 / 474.0



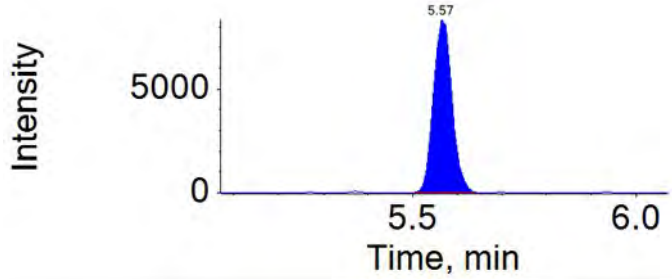
Analyte: 8:2-FTS

527.0 / 507.0



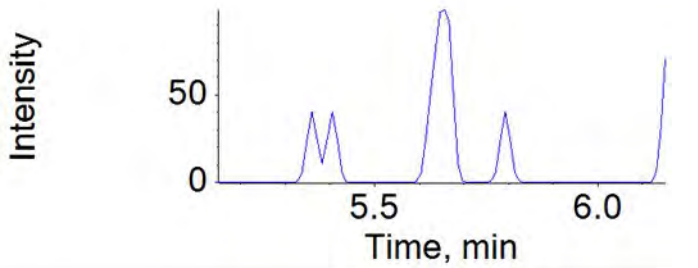
Extraction Standard: 13C2-8:2-FTS

529.0 / 81.0

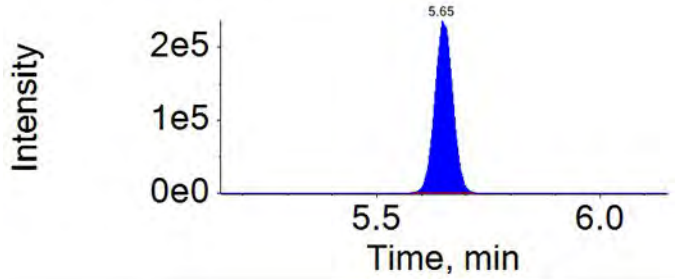


ICAL Name: 18NOV12DCAL **Result Table:** 18316029 11/14/2018 6:48:04 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

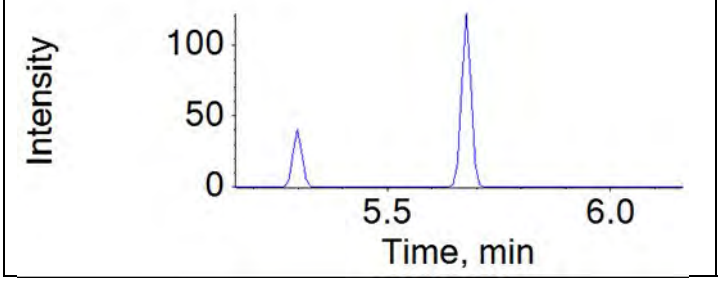
Analyte: PFOSA
498.0 / 78.0



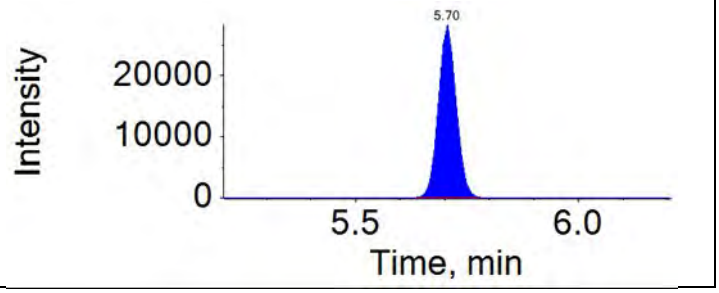
Extraction Standard: 13C8-PFOSA
506.0 / 78.0



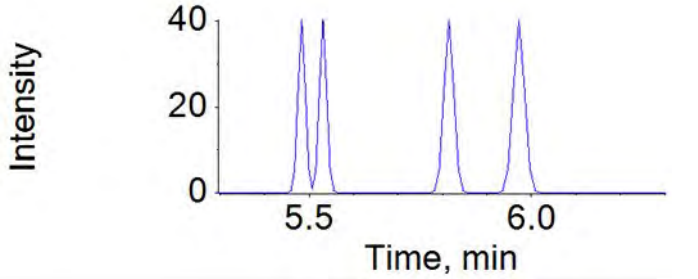
Analyte: NMeFOSAA
570.0 / 419.0



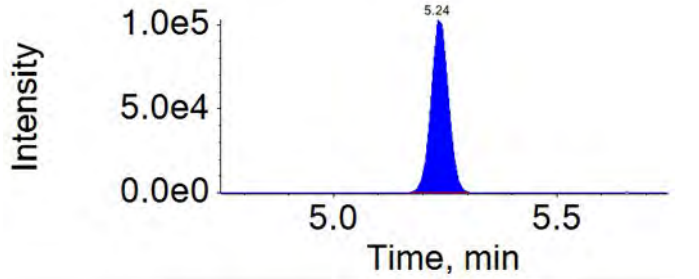
Extraction Standard: d3-NMeFOSAA
573.0 / 419.0



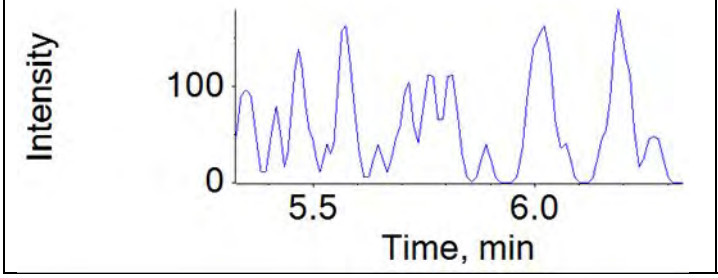
Analyte: PFDS
599.0 / 80.0



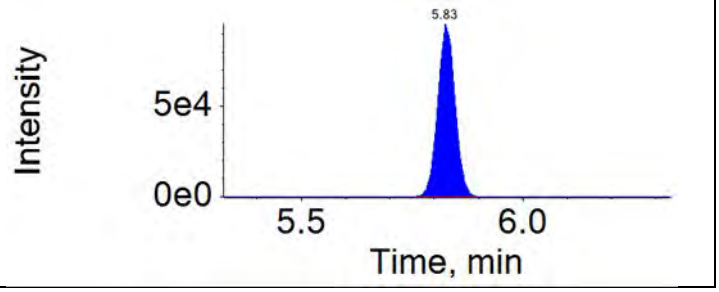
Extraction Standard: 13C8-PFOS
507.0 / 80.0



Analyte: PFUnDA
563.0 / 519.0



Extraction Standard: 13C7-PFUnDA
570.0 / 525.0

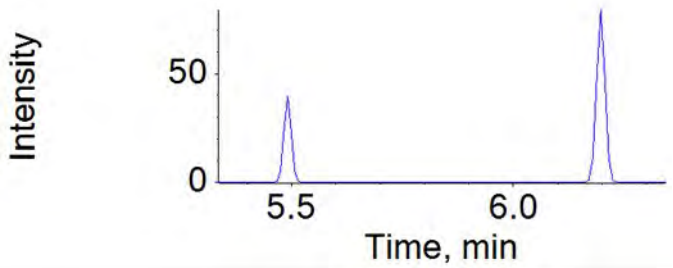


APPROVED
By MCD at 6:55 pm, 11/14/18

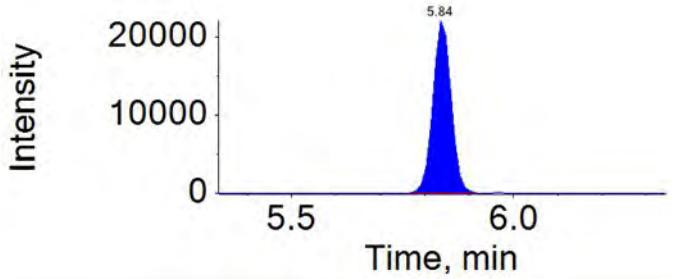
REVIEWED
By HMK at 11:03 am, 11/15/18

ICAL Name: 18NOV12DCAL **Result Table:** 18316029 11/14/2018 6:48:04 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

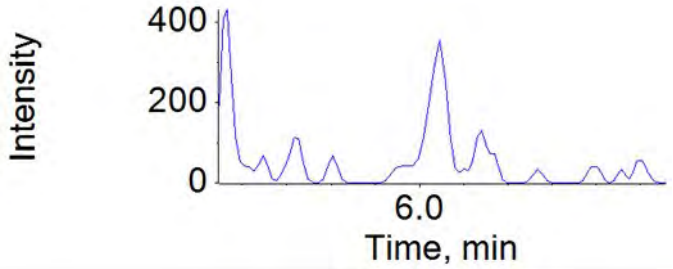
Analyte: NEtFOSAA
584.0 / 419.0



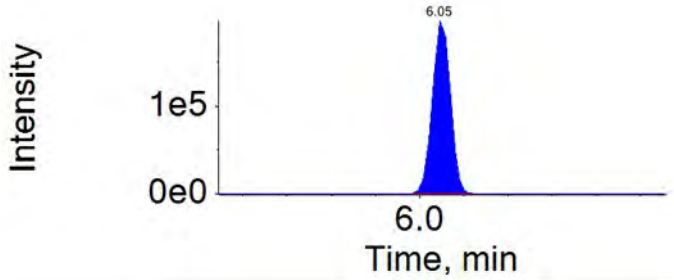
Extraction Standard: d5-NEtFOSAA
589.0 / 419.0



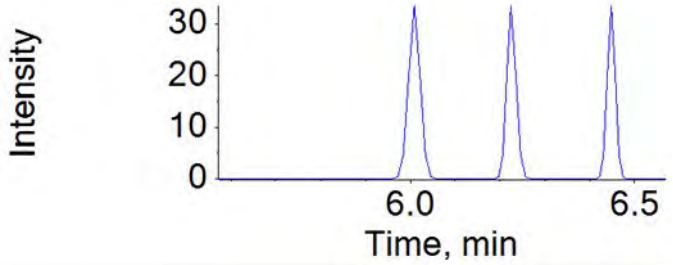
Analyte: PFDoDA
613.0 / 569.0



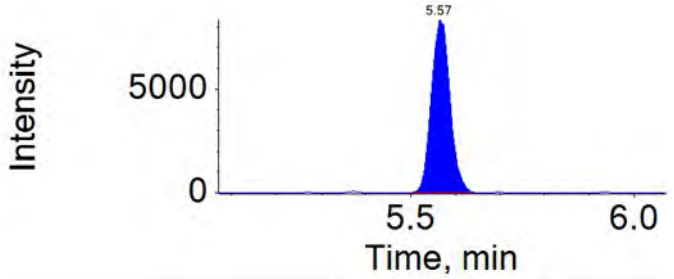
Extraction Standard: 13C2-PFDoDA
615.0 / 570.0



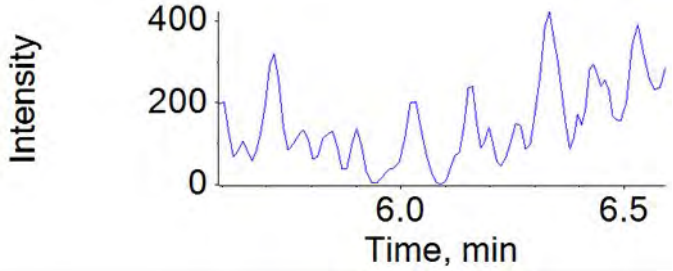
Analyte: 10:2-FTS
627.0 / 607.0



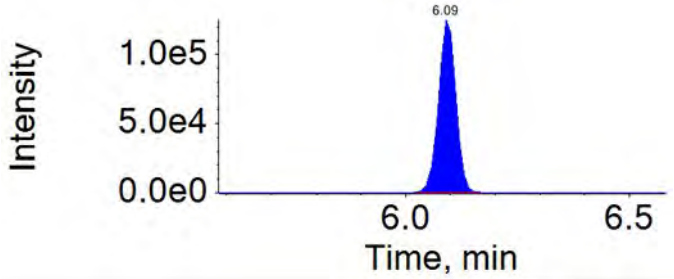
Extraction Standard: 13C2-8:2-FTS
529.0 / 81.0



Analyte: NMePFOSAE
616.0 / 59.0



Extraction Standard: d7-NMePFOSAE
623.0 / 59.0

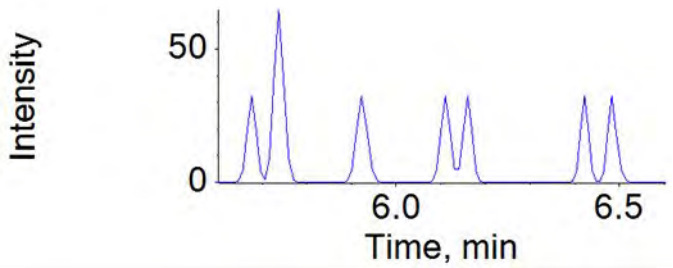


APPROVED
By MCD at 6:55 pm, 11/14/18

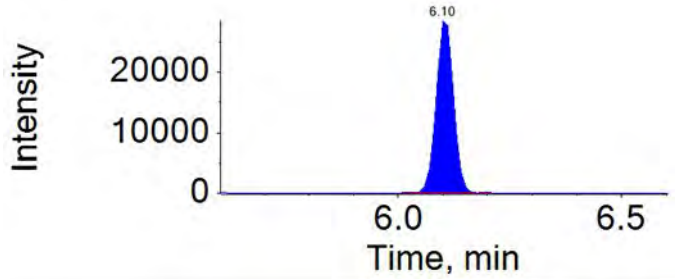
REVIEWED
By HMK at 11:03 am, 11/15/18

ICAL Name: 18NOV12DCAL **Result Table:** 18316029 11/14/2018 6:48:04 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

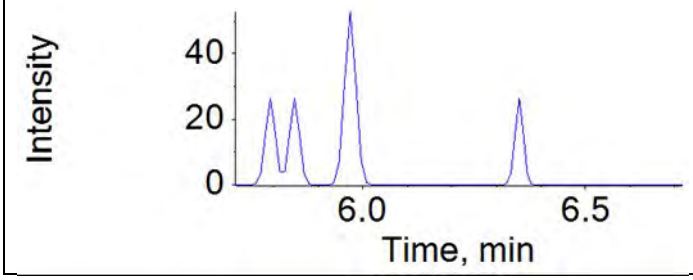
Analyte: NMePFOSA
512.0 / 169.0



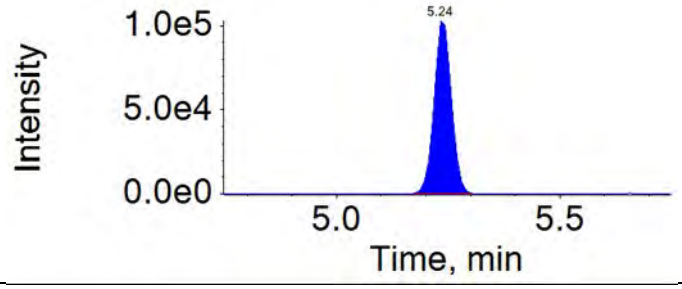
Extraction Standard: d3-NMePFOSA
515.0 / 169.0



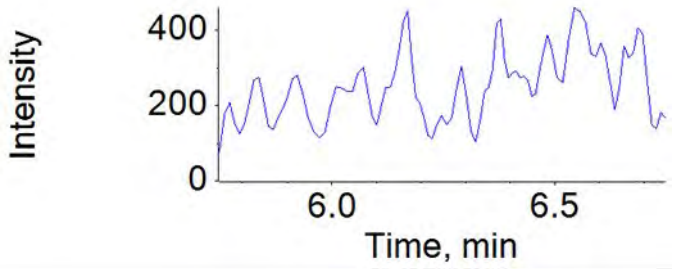
Analyte: PFDoS
699.0 / 80.0



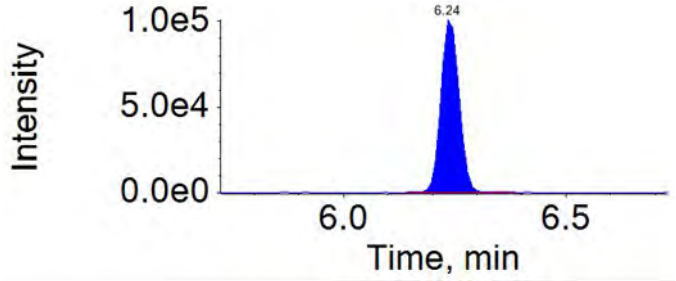
Extraction Standard: 13C8-PFOS
507.0 / 80.0



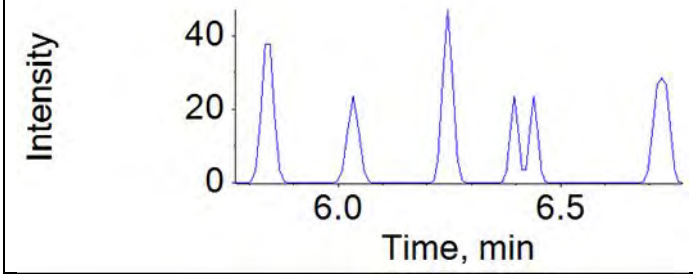
Analyte: NEtPFOSAE
630.0 / 59.0



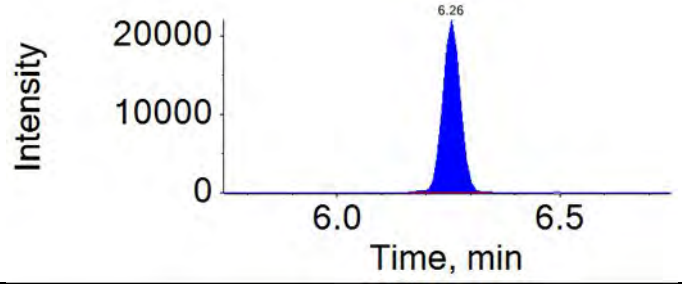
Extraction Standard: d9-NEtPFOSAE
639.0 / 59.0



Analyte: NEtPFOSA
526.0 / 169.0

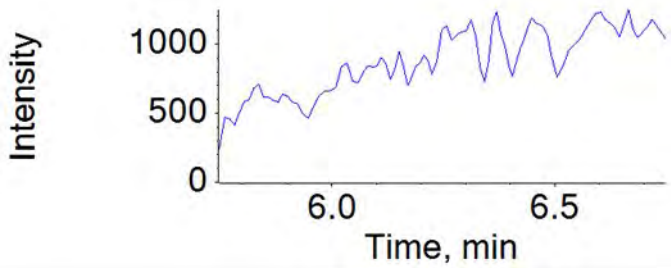


Extraction Standard: d5-NEtPFOSA
531.0 / 169.0

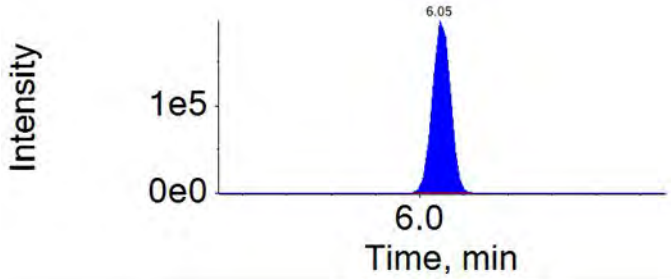


ICAL Name: 18NOV12DCAL **Result Table:** 18316029 11/14/2018 6:48:04 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

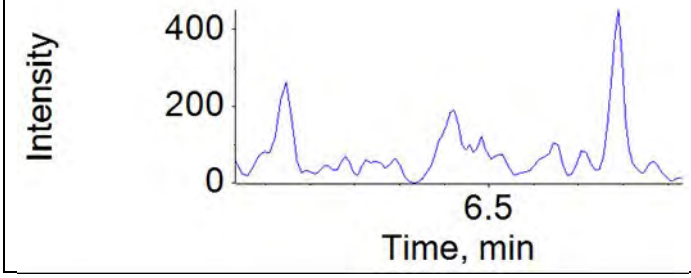
Analyte: PFTrDA
663.0 / 619.0



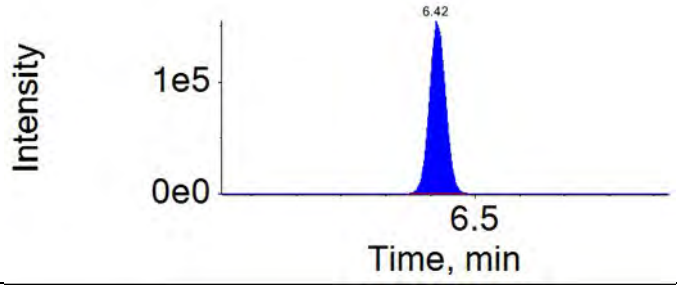
Extraction Standard: 13C2-PFDoDA
615.0 / 570.0



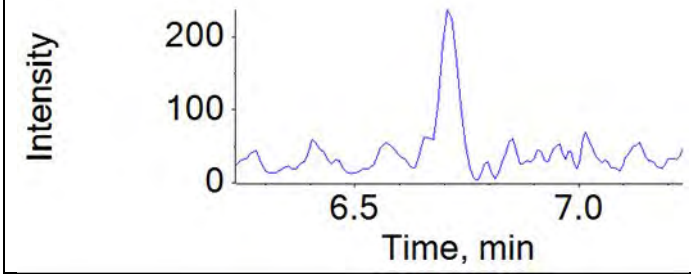
Analyte: PFTeDA
713.0 / 669.0



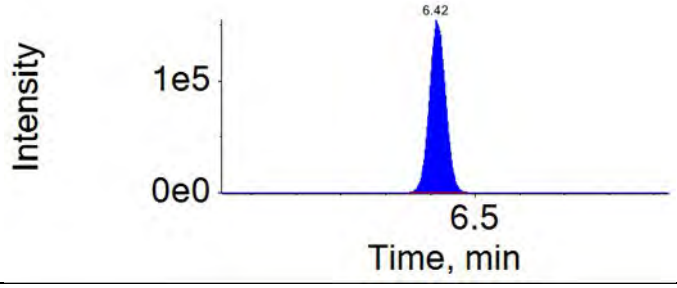
Extraction Standard: 13C2-PFTeDA
715.0 / 670.0



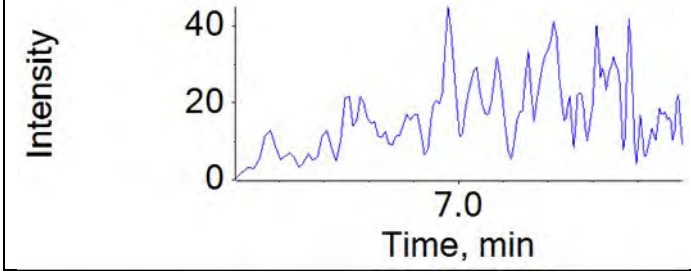
Analyte: PFHxDA
813.0 / 769.0



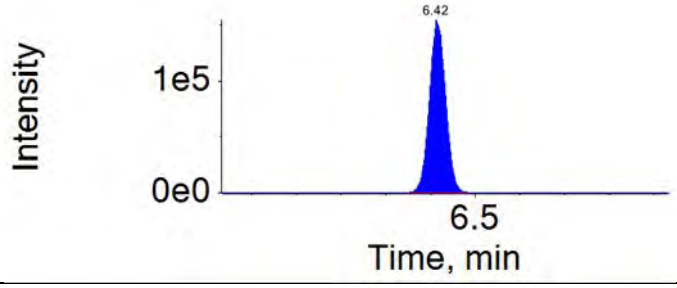
Extraction Standard: 13C2-PFTeDA
715.0 / 670.0



Analyte: PFODA
913.0 / 869.0



Extraction Standard: 13C2-PFTeDA
715.0 / 670.0



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LC-MS/MS Analysis Report

Printed: 11/14/2018 6:49:00 PM
Template: IonRatio18OCT10

Ion Ratio Report

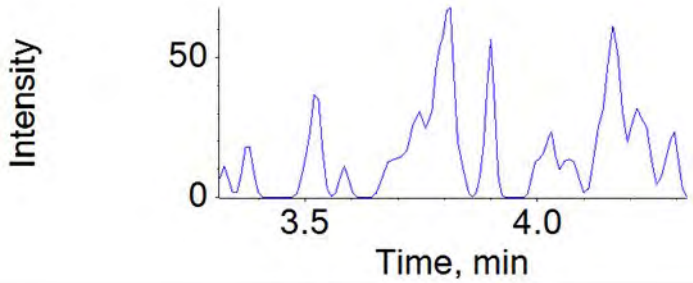
Sample Name: BLK316029 **Instrument Name:** LM27631 **File Name:** 18NOV13D-90.wiff

Component Name	RT	RRT	Analyte Area Response	Int Typ	Expected Ion Ratio	Ion Ratio	Ion Ratio % Diff	Ion Ratio Limit	Ion Ratio OOS
PFBS	N/A	N/A	N/A	A	N/A	N/A			
PFBS_2	N/A	N/A	N/A	A	N/A	N/A		50	
4:2-FTS	N/A	N/A	N/A	A	N/A	N/A			
4:2 FTS_2	N/A	N/A	N/A	A	N/A	N/A		#NA!	
PFHxA	N/A	N/A	N/A	A	N/A	N/A			
PFHxA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFPeS	N/A	N/A	N/A	A	N/A	N/A			
PFPeS_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFHpA	N/A	N/A	N/A	A	N/A	N/A			
PFHpA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFHxS	N/A	N/A	N/A	A	N/A	N/A			
PFHxS_2	N/A	N/A	N/A	A	N/A	N/A		50	
6:2-FTS	N/A	N/A	N/A	A	N/A	N/A			
6:2 FTS_2	N/A	N/A	N/A	A	N/A	N/A		#NA!	
PFHpS	N/A	N/A	N/A	A	N/A	N/A			
PFHpS_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFOA	N/A	N/A	N/A	A	N/A	N/A			
PFOA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFOS	N/A	N/A	N/A	A	N/A	N/A			
PFOS_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFNA	N/A	N/A	N/A	A	N/A	N/A			
PFNA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFNS	N/A	N/A	N/A	A	N/A	N/A			
PFNS_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFDA	N/A	N/A	N/A	A	N/A	N/A			
PFDA_2	N/A	N/A	N/A	A	N/A	N/A		50	
8:2-FTS	N/A	N/A	N/A	A	N/A	N/A			
8:2 FTS_2	N/A	N/A	N/A	A	N/A	N/A		#NA!	
NMeFOSAA	N/A	N/A	N/A	A	N/A	N/A			
NMeFOSAA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFDS	N/A	N/A	N/A	A	N/A	N/A			
PFDS_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFUnDA	N/A	N/A	N/A	A	N/A	N/A			
PFUnDA_2	N/A	N/A	N/A	A	N/A	N/A		50	
NEtFOSAA	N/A	N/A	N/A	A	N/A	N/A			
NEtFOSAA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFDoDA	N/A	N/A	N/A	A	N/A	N/A			
PFDoDA_2	N/A	N/A	N/A	A	N/A	N/A		50	
10:2-FTS	N/A	N/A	N/A	A	N/A	N/A			
10:2 FTS_2	N/A	N/A	N/A	A	N/A	N/A		#NA!	
PFTrDA	N/A	N/A	N/A	A	N/A	N/A			
PFTrDA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFTeDA	N/A	N/A	N/A	A	N/A	N/A			
PFTeDA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFHxDA	N/A	N/A	N/A	A	N/A	N/A			
PFHxDA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFODA	N/A	N/A	N/A	A	N/A	N/A			
PFODA_2	N/A	N/A	N/A	A	N/A	N/A		50	

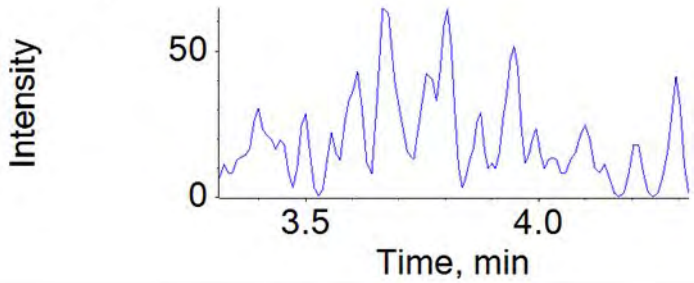
APPROVED
By MCD at 6:55 pm, 11/14/18

REVIEWED
By HMK at 11:03 am, 11/15/18

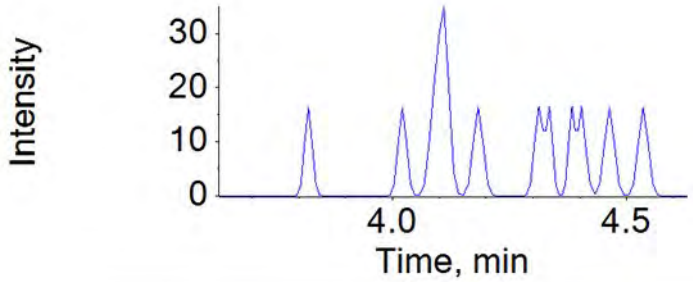
Component: PFBS
Primary Mass: 299.0 / 80.0



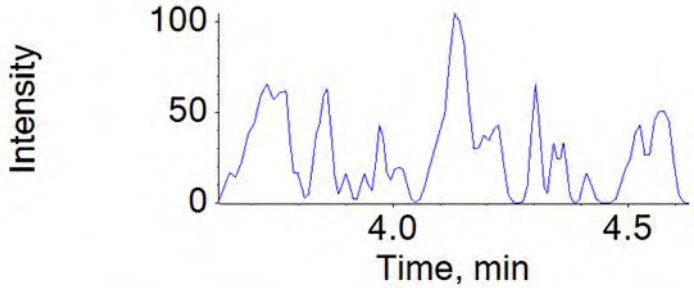
Component: PFBS_2
Secondary Mass: 299.0 / 99.0



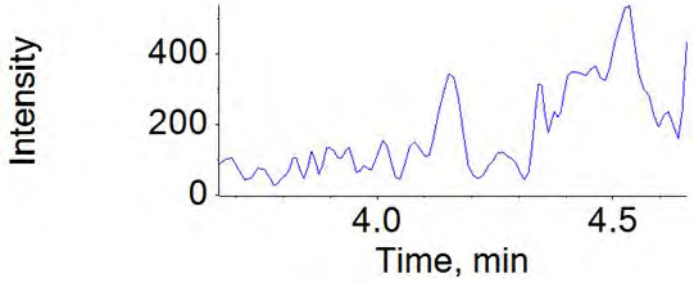
Component: 4:2-FTS
Primary Mass: 327.0 / 307.0



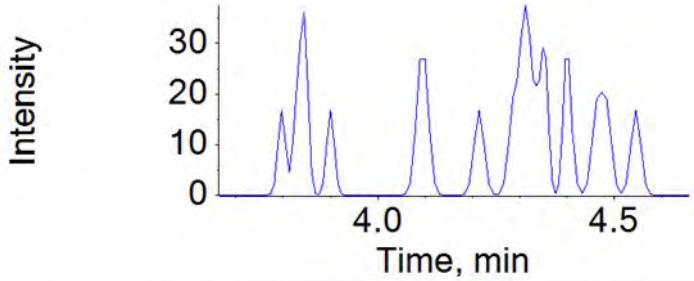
Component: 4:2 FTS_2
Secondary Mass: 327.0 / 81.0



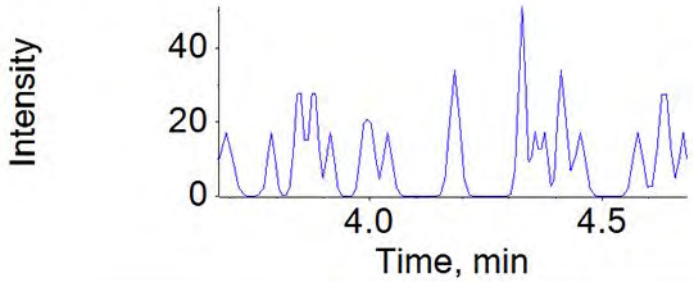
Component: PFHxA
Primary Mass: 313.0 / 269.0



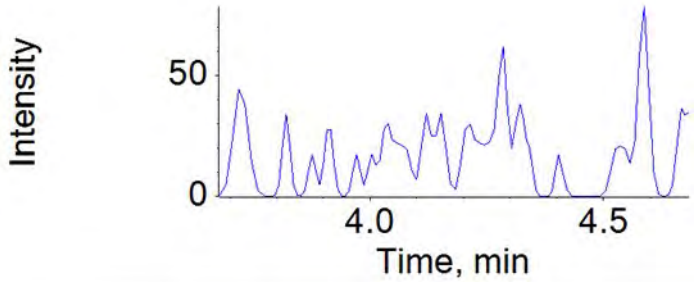
Component: PFHxA_2
Secondary Mass: 313.0 / 119.0



Component: PFPeS
Primary Mass: 349.0 / 80.0



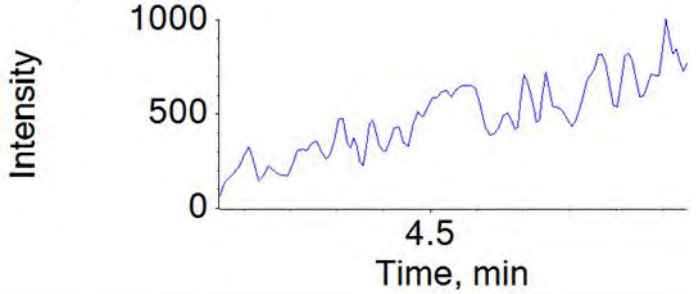
Component: PFPeS_2
Secondary Mass: 349.0 / 99.0



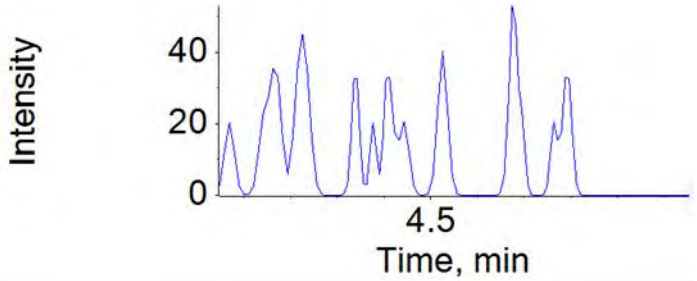
APPROVED
By MCD at 6:55 pm, 11/14/18

REVIEWED
By HMK at 11:03 am, 11/15/18

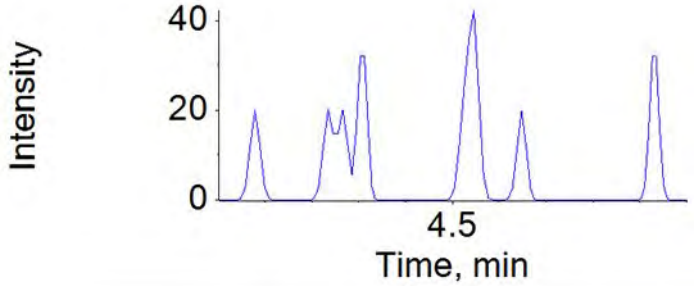
Component: PFHpA
Primary Mass: 363.0 / 319.0



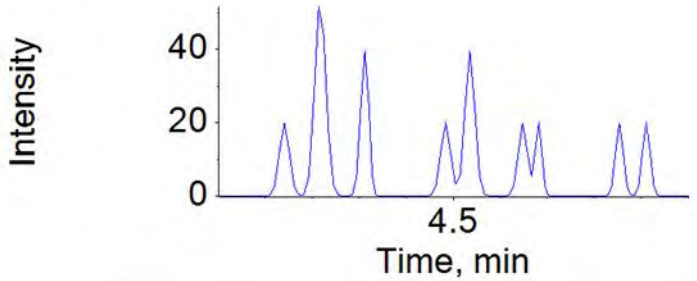
Component: PFHpA_2
Secondary Mass: 363.0 / 169.0



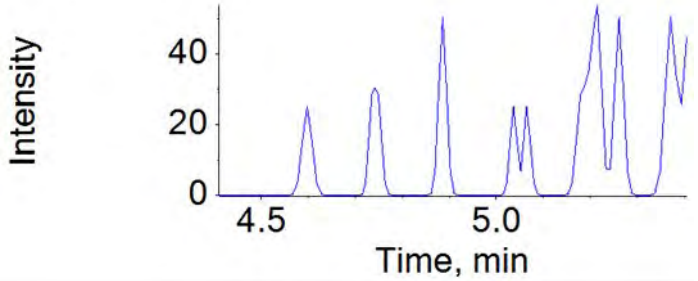
Component: PFHxS
Primary Mass: 399.0 / 80.0



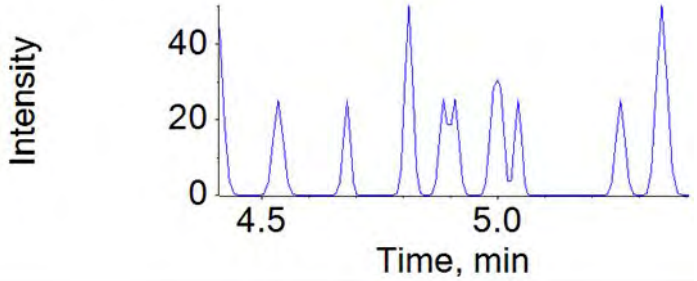
Component: PFHxS_2
Secondary Mass: 399.0 / 99.0



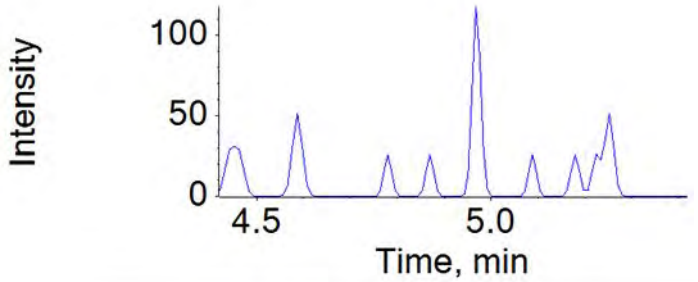
Component: 6:2-FTS
Primary Mass: 427.0 / 407.0



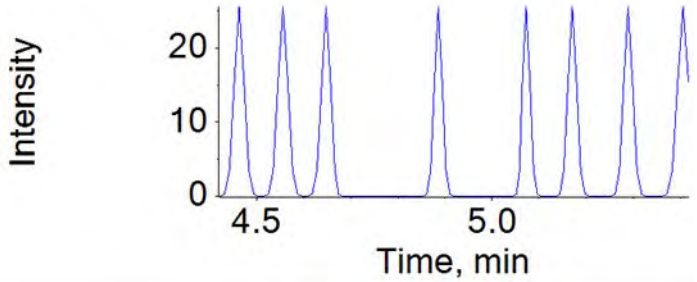
Component: 6:2 FTS_2
Secondary Mass: 427.0 / 81.0



Component: PFHpS
Primary Mass: 449.0 / 80.0



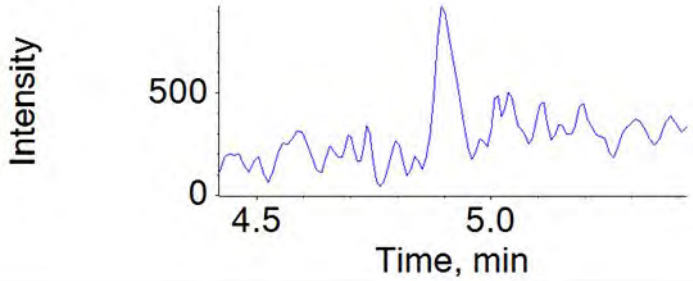
Component: PFHpS_2
Secondary Mass: 449.0 / 99.0



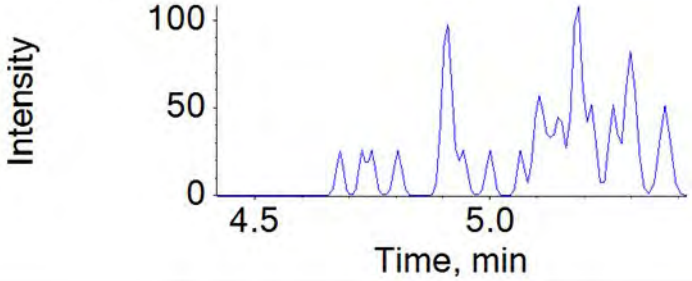
APPROVED
By MCD at 6:55 pm, 11/14/18

REVIEWED
By HMK at 11:03 am, 11/15/18

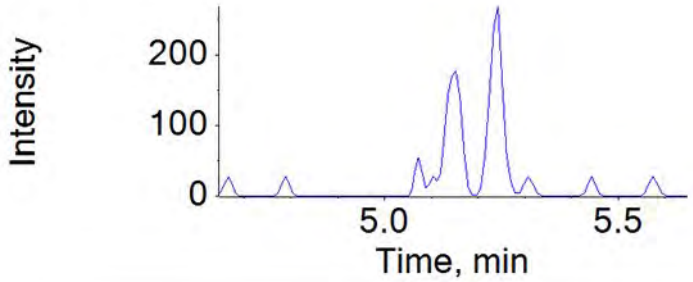
Component: PFOA
Primary Mass: 413.0 / 369.0



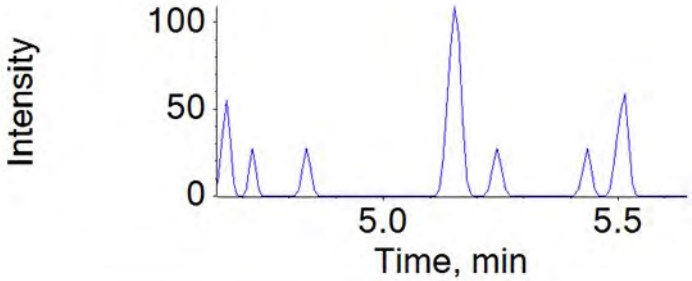
Component: PFOA_2
Secondary Mass: 413.0 / 169.0



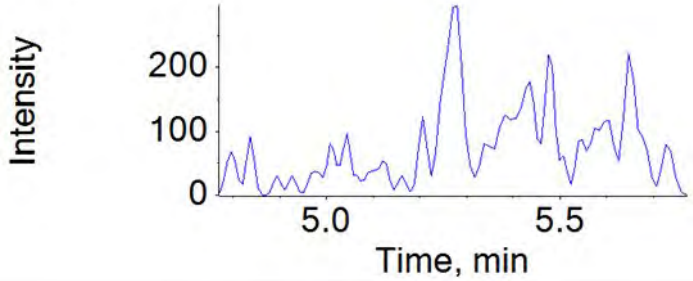
Component: PFOS
Primary Mass: 499.0 / 80.0



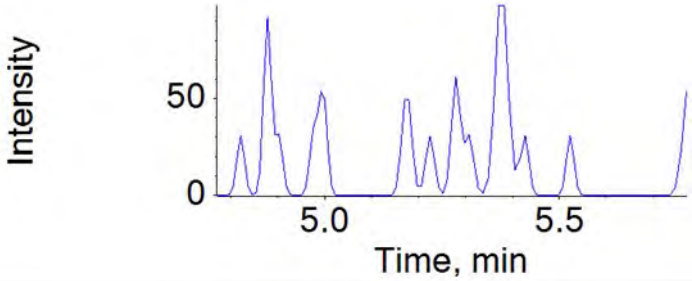
Component: PFOS_2
Secondary Mass: 499.0 / 99.0



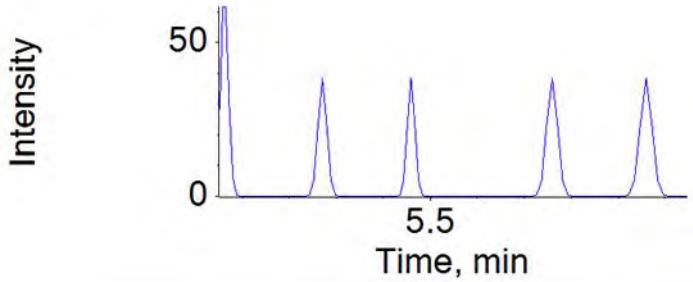
Component: PFNA
Primary Mass: 463.0 / 419.0



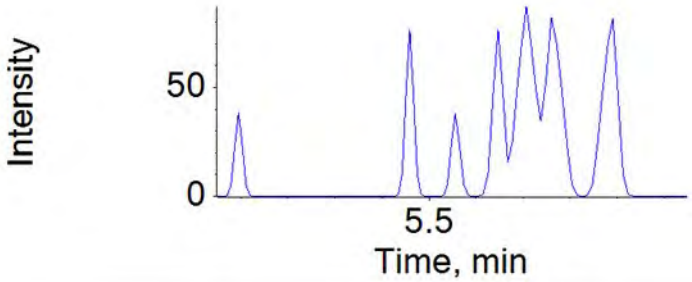
Component: PFNA_2
Secondary Mass: 463.0 / 169.0



Component: PFNS
Primary Mass: 549.0 / 80.0



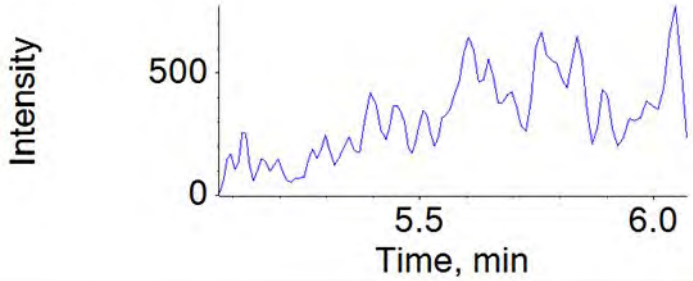
Component: PFNS_2
Secondary Mass: 549.0 / 99.0



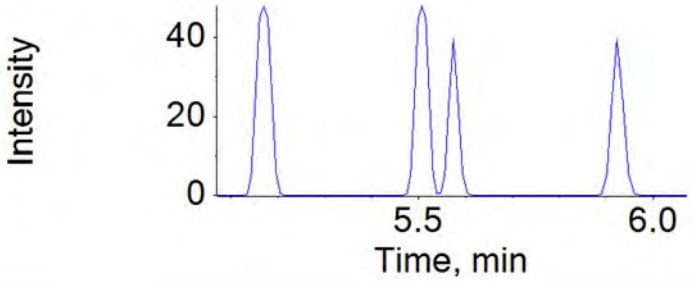
APPROVED
By MCD at 6:55 pm, 11/14/18

REVIEWED
By HMK at 11:03 am, 11/15/18

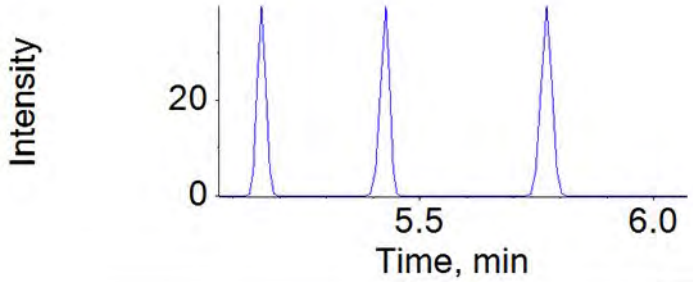
Component: PFDA
Primary Mass: 513.0 / 469.0



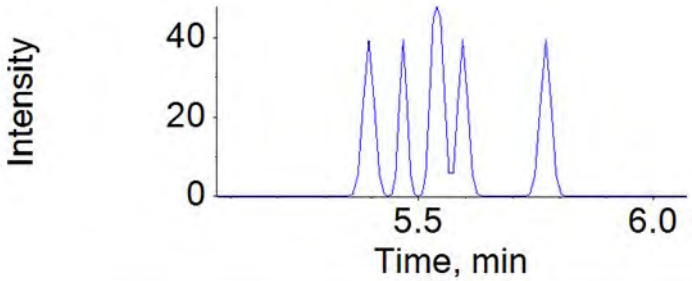
Component: PFDA_2
Secondary Mass: 513.0 / 169.0



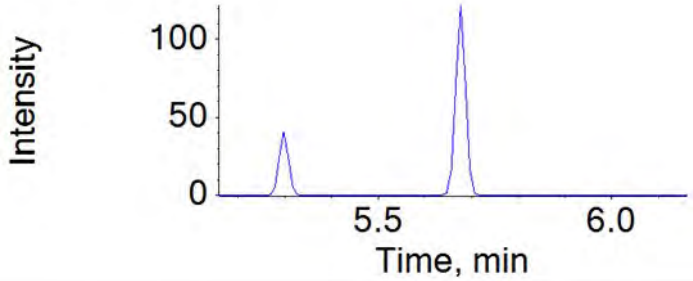
Component: 8:2-FTS
Primary Mass: 527.0 / 507.0



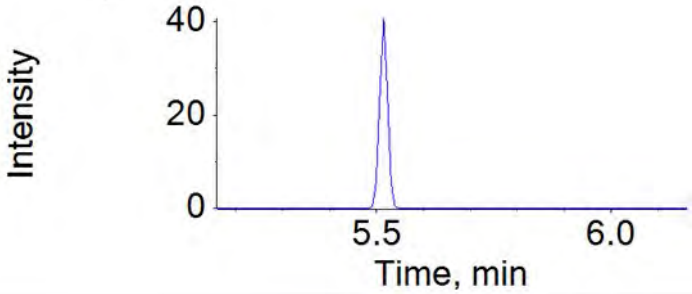
Component: 8:2 FTS_2
Secondary Mass: 527.0 / 81.0



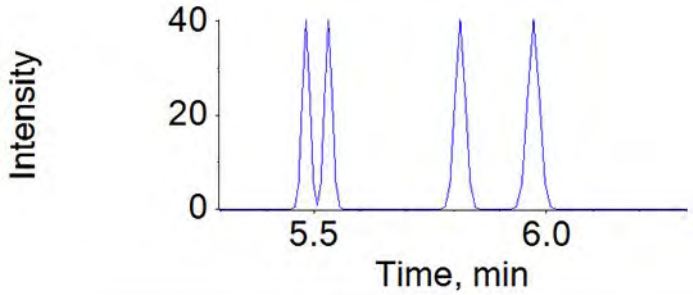
Component: NMeFOSAA
Primary Mass: 570.0 / 419.0



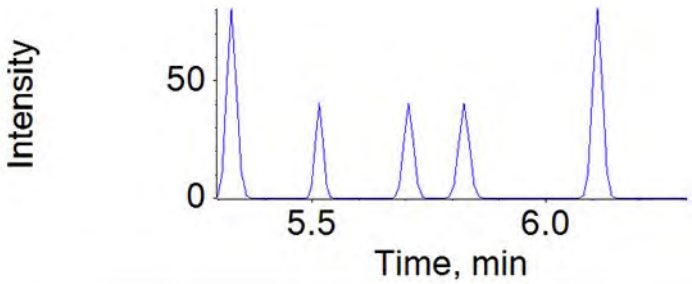
Component: NMeFOSAA_2
Secondary Mass: 570.0 / 483.0



Component: PFDS
Primary Mass: 599.0 / 80.0



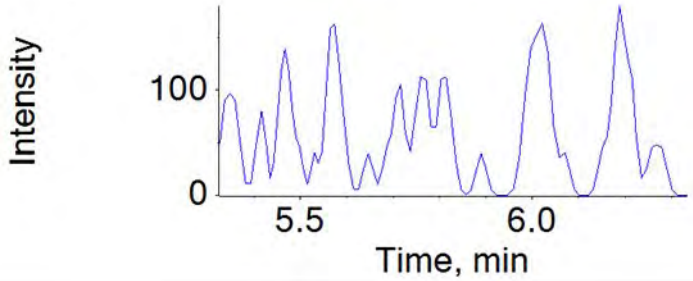
Component: PFDS_2
Secondary Mass: 599.0 / 99.0



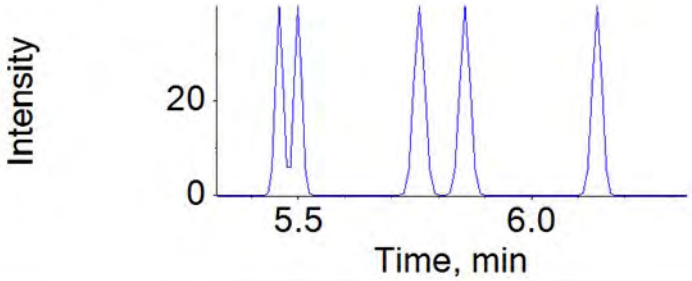
APPROVED
By MCD at 6:55 pm, 11/14/18

REVIEWED
By HMK at 11:03 am, 11/15/18

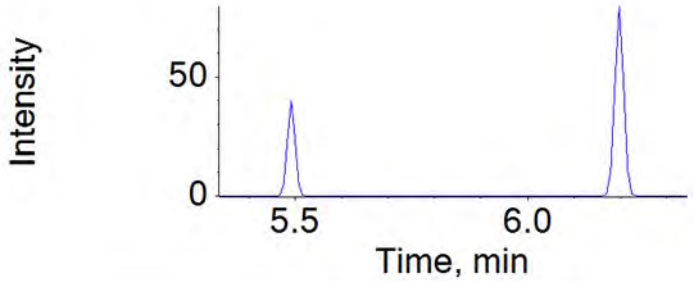
Component: PFUnDA
Primary Mass: 563.0 / 519.0



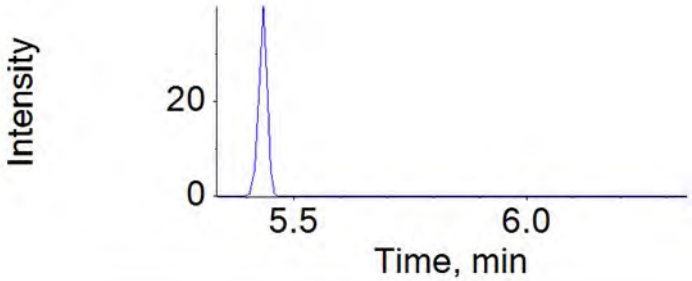
Component: PFUnDA_2
Secondary Mass: 563.0 / 169.0



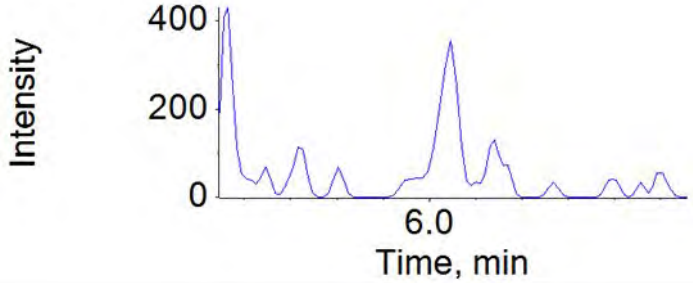
Component: NEtFOSAA
Primary Mass: 584.0 / 419.0



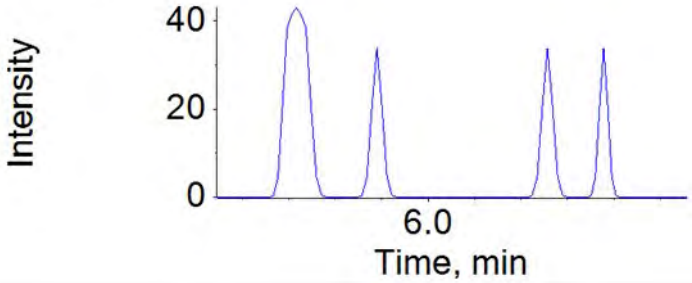
Component: NEtFOSAA_2
Secondary Mass: 584.0 / 526.0



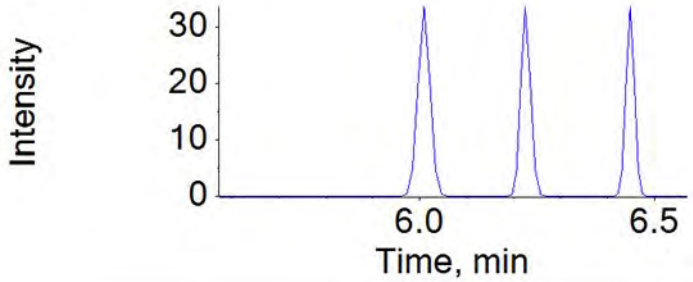
Component: PFDoDA
Primary Mass: 613.0 / 569.0



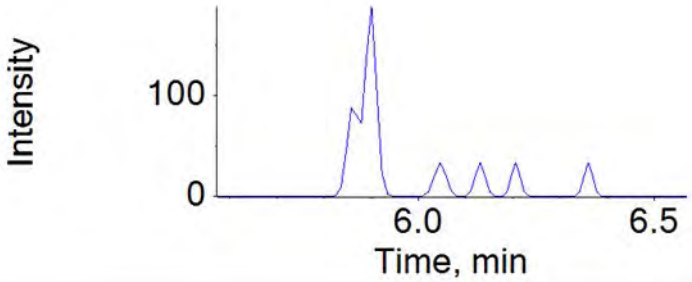
Component: PFDoDA_2
Secondary Mass: 613.0 / 169.0



Component: 10:2-FTS
Primary Mass: 627.0 / 607.0



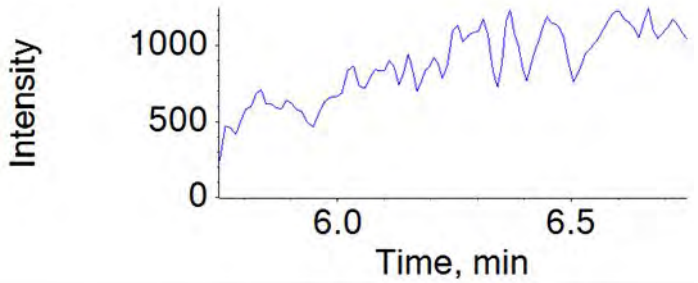
Component: 10:2 FTS_2
Secondary Mass: 627.0 / 81.0



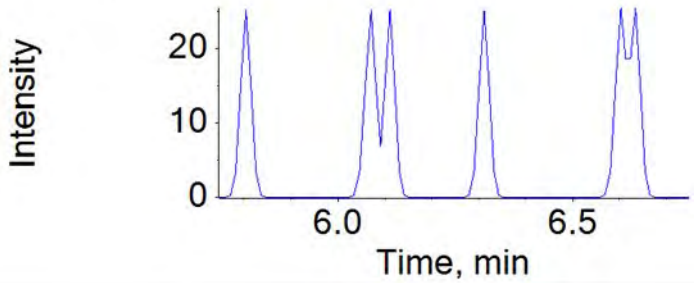
APPROVED
By MCD at 6:55 pm, 11/14/18

REVIEWED
By HMK at 11:03 am, 11/15/18

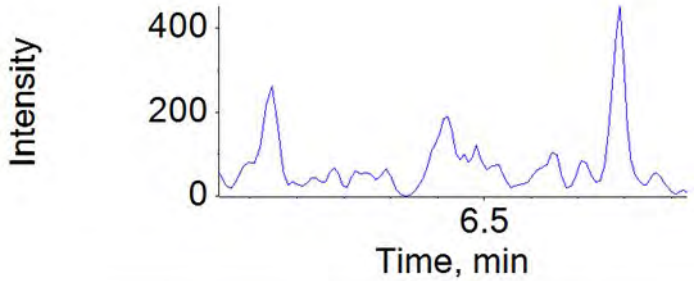
Component: PFTrDA
Primary Mass: 663.0 / 619.0



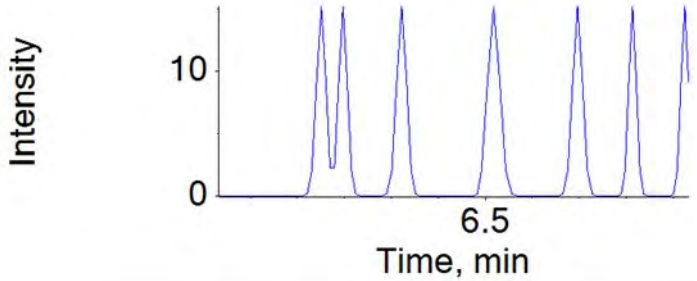
Component: PFTrDA_2
Secondary Mass: 663.0 / 169.0



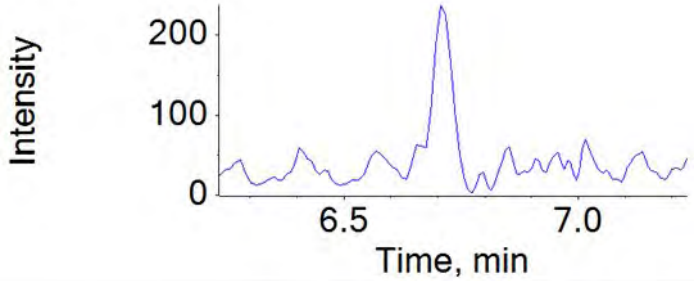
Component: PFTeDA
Primary Mass: 713.0 / 669.0



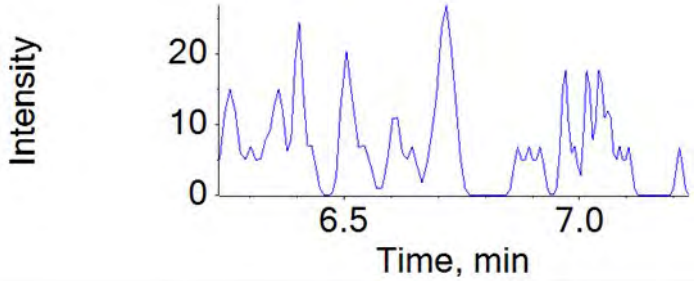
Component: PFTeDA_2
Secondary Mass: 713.0 / 169.0



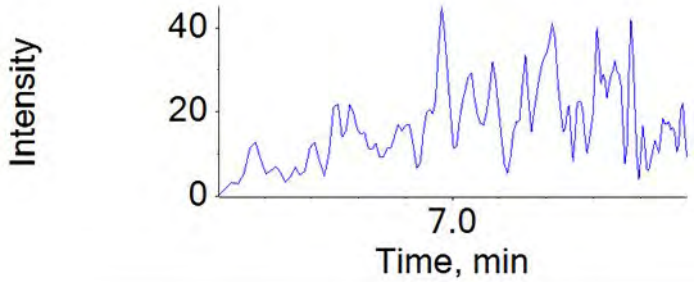
Component: PFHxDA
Primary Mass: 813.0 / 769.0



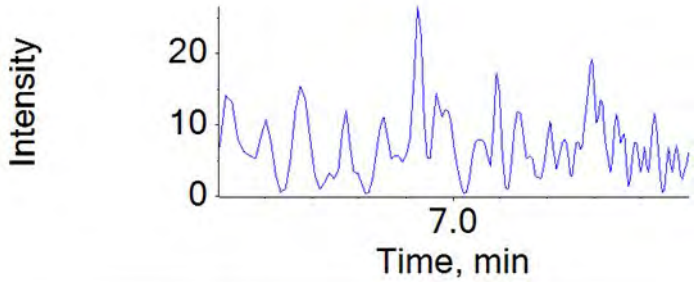
Component: PFHxDA_2
Secondary Mass: 813.0 / 169.0



Component: PFODA
Primary Mass: 913.0 / 869.0



Component: PFODA_2
Secondary Mass: 913.0 / 169.0



APPROVED
By MCD at 6:55 pm, 11/14/18

REVIEWED
By HMK at 11:03 am, 11/15/18

ICAL Name: 18NOV28DCAL **Result Table:** 18332003 11/30/2018 9:58:40 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Sample Name:	BLK332003			**Data File:**		18NOV29D-55.wiff
Sample ID:	EPA 537 mod QSM 5.1 table B-15 18332003			**Acquis Date:**		2018-11-29T18:04:39
Sample Type:	Unknown			**Instrument:**		LM27631
Vial Position:	35			**Acquis Method:**		18AUG13_3uL.dam
Injection Vol:	3.00			**Result Table:**		18332003
QMethod File:	18AUG20QM			**ICAL Name:**		18NOV28DCAL
Batch Number:	18332003			**Operator:**		MCD7824
Sample Wt.:	1.00000			**Dilution Factor:**		1.00
Sample Vol.:	1.000			**Prep Factor:**		2.000

Injection Standard Peak Table

Injection Standard Area Reference File: 18NOV29D-05

Injection Standard Name	Inj Std Conc	Injection Std Peak Area	Rreference Injection Standard Area	Injection Std %Diff	Injection Std %Diff Limit	Injection Std %Diff OOS
13C3-PFBA	5.0	1052098.8	906425.4	16	50	
13C2-PFOA	5.0	583595.2	495984.0	18	50	
13C4-PFOS	4.8	370221.3	296261.8	25	50	
13C2-PFDA	5.0	538785.8	451203.0	19	50	

Extraction Standard Peak Table

Extraction Standard Name	Ext Std Area	Inj Std Name	Inj Std Area	Area Ratio	Ext Std Conc	Ext Std Result	Ext Std %REC	Ext Std %REC Limit	Ext Std OOS
E13C4-PFBA	1166068.6	13C3-PFBA	1052098.8	1.108	10.000	9.890	99	50-150	
E13C5-PFPeA	1140810.2	13C3-PFBA	1052098.8	1.084	10.000	10.127	101	50-150	
E13C3-PFBS	483273.6	13C3-PFBA	1052098.8	0.459	9.300	8.765	94	50-150	
E13C2-4:2-FTS	88299.6	13C2-PFOA	583595.2	0.151	9.340	10.428	112	50-150	
E13C5-PFHxA	810532.0	13C2-PFOA	583595.2	1.389	10.000	10.203	102	50-150	
E13C3-PFHxS	390556.7	13C2-PFOA	583595.2	0.669	9.460	10.490	111	50-150	
E13C4-PFHpA	638162.6	13C2-PFOA	583595.2	1.094	10.000	10.049	100	50-150	
E13C2-6:2-FTS	85768.5	13C2-PFOA	583595.2	0.147	9.500	12.304	130	50-150	
E13C8-PFOA	1115290.8	13C2-PFOA	583595.2	1.911	10.000	10.520	105	50-150	
E13C8-PFOS	380904.6	13C4-PFOS	370221.3	1.029	9.560	9.289	97	50-150	
E13C9-PFNA	767466.6	13C4-PFOS	370221.3	2.073	10.000	9.106	91	50-150	
E13C6-PFDA	985084.0	13C2-PFDA	538785.8	1.828	10.000	10.310	103	50-150	
E13C2-8:2-FTS	68023.4	13C2-PFDA	538785.8	0.126	9.580	10.853	113	50-150	
E13C8-PFOSA	779450.6	13C2-PFDA	538785.8	1.447	10.000	10.617	106	50-150	
Ed3-NMeFOSAA	278947.3	13C2-PFDA	538785.8	0.518	10.000	13.147	131	50-150	
E13C7-PFUnDA	661426.3	13C2-PFDA	538785.8	1.228	10.000	10.377	104	50-150	
Ed5-NEtFOSAA	157048.2	13C2-PFDA	538785.8	0.291	10.000	10.386	104	50-150	
E13C2-PFDoDA	1314480.9	13C2-PFDA	538785.8	2.440	10.000	10.252	103	50-150	
Ed7-NMePFOSAE	315785.5	13C2-PFDA	538785.8	0.586	10.000	10.131	101	50-150	
Ed3-NMePFOSA	100147.5	13C2-PFDA	538785.8	0.186	10.000	10.061	101	50-150	
Ed9-NEtPFOSAE	274958.1	13C2-PFDA	538785.8	0.510	10.000	10.348	103	50-150	
Ed5-NEtPFOSA	88626.3	13C2-PFDA	538785.8	0.164	10.000	11.431	114	50-150	
E13C2-PFTeDA	925597.8	13C2-PFDA	538785.8	1.718	10.000	9.507	95	50-150	

APPROVED
By MCD at 10:13 pm, 11/30/18

REVIEWED
By HMK at 2:27 pm, 12/6/18

ICAL Name: 18NOV28DCAL **Result Table:** 18332003 11/30/2018 9:58:40 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

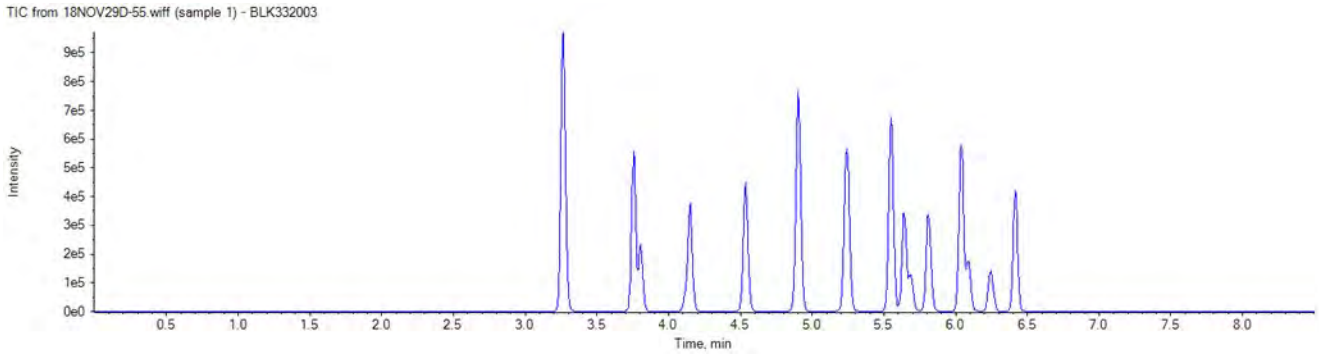
Analyte Quantitation Peak Table

Sample Name: BLK332003 **Instrument Name:** LM27631 **File Name:** 18NOV29D-55.wiff

Sample Wt	Sample Vol	Dilution Factor	PrepFactor
1.00000	1.000	1.00	2.000

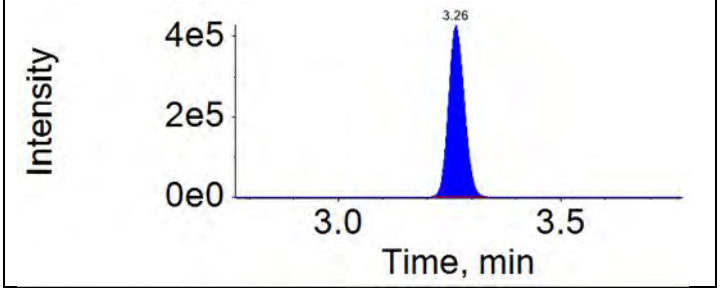
Analyte Name	RT	RRT	Analyte Area Response	E	Int Typ	ES Name	ES RT	ES Area Response	Area Ratio	Sample Result (ng/g)
PFBA	N/A	N/A	N/A		A	13C4-PFBA	3.26	1166068.6	N/A	
PFPeA	N/A	N/A	N/A		A	13C5-PFPeA	3.76	1140810.2	N/A	
PFBS	N/A	N/A	N/A		A	13C3-PFBS	3.80	483273.6	N/A	
4:2-FTS	N/A	N/A	N/A		A	13C2-4:2-FTS	4.11	88299.6	N/A	
PFHxA	N/A	N/A	N/A		A	13C5-PFHxA	4.15	810532.0	N/A	
PFPeS	N/A	N/A	N/A		A	13C3-PFBS	3.80	483273.6	N/A	
PFHpA	N/A	N/A	N/A		A	13C4-PFHpA	4.53	638162.6	N/A	
PFHxS	N/A	N/A	N/A		A	13C3-PFHxS	4.54	390556.7	N/A	
6:2-FTS	N/A	N/A	N/A		A	13C2-6:2-FTS	4.89	85768.5	N/A	
PFHpS	N/A	N/A	N/A		A	13C3-PFHxS	4.54	390556.7	N/A	
PFOA	N/A	N/A	N/A		A	13C8-PFOA	4.90	1115290.8	N/A	
PFOS	N/A	N/A	N/A		A	13C8-PFOS	5.23	380904.6	N/A	
PFNA	N/A	N/A	N/A		A	13C9-PFNA	5.25	767466.6	N/A	
PFNS	N/A	N/A	N/A		A	13C8-PFOS	5.23	380904.6	N/A	
PFDA	N/A	N/A	N/A		A	13C6-PFDA	5.55	985084.0	N/A	
8:2-FTS	N/A	N/A	N/A		A	13C2-8:2-FTS	5.55	68023.4	N/A	
PFOSA	N/A	N/A	N/A		A	13C8-PFOSA	5.64	779450.6	N/A	
NMeFOSAA	N/A	N/A	N/A		A	d3-NMeFOSAA	5.69	278947.3	N/A	
PFDS	N/A	N/A	N/A		A	13C8-PFOS	5.23	380904.6	N/A	
PFUnDA	N/A	N/A	N/A		A	13C7-PFUnDA	5.81	661426.3	N/A	
NEtFOSAA	N/A	N/A	N/A		A	d5-NEtFOSAA	5.82	157048.2	N/A	
PFDoDA	N/A	N/A	N/A		A	13C2-PFDoDA	6.04	1314480.9	N/A	
10:2-FTS	N/A	N/A	N/A		A	13C2-8:2-FTS	5.55	68023.4	N/A	
NMePFOSAE	N/A	N/A	N/A		A	d7-NMePFOSAE	6.09	315785.5	N/A	
NMePFOSA	N/A	N/A	N/A		A	d3-NMePFOSA	6.10	100147.5	N/A	
PFDoS	N/A	N/A	N/A		A	13C8-PFOS	5.23	380904.6	N/A	
NEtPFOSAE	N/A	N/A	N/A		A	d9-NEtPFOSAE	6.24	274958.1	N/A	
NEtPFOSA	N/A	N/A	N/A		A	d5-NEtPFOSA	6.26	88626.3	N/A	
PFTrDA	N/A	N/A	N/A		A	13C2-PFDoDA	6.04	1314480.9	N/A	
PFTeDA	N/A	N/A	N/A		A	13C2-PFTeDA	6.42	925597.8	N/A	
PFHxDA	N/A	N/A	N/A		A	13C2-PFTeDA	6.42	925597.8	N/A	
PFODA	N/A	N/A	N/A		A	13C2-PFTeDA	6.42	925597.8	N/A	

Total Ion Chromatogram

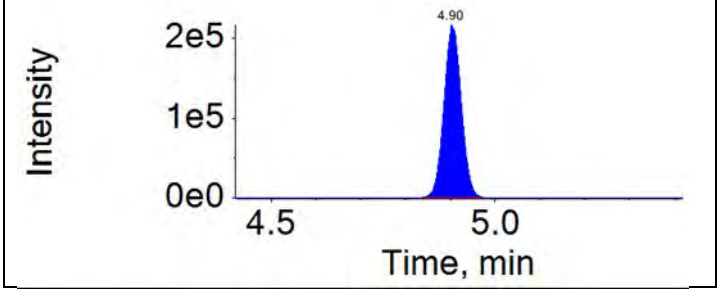


ICAL Name: 18NOV28DCAL **Result Table:** 18332003 11/30/2018 9:58:40 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

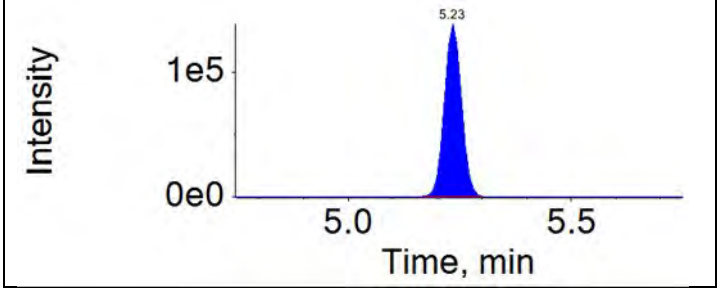
Injection Standard: 13C3-PFBA
216.0 / 172.0



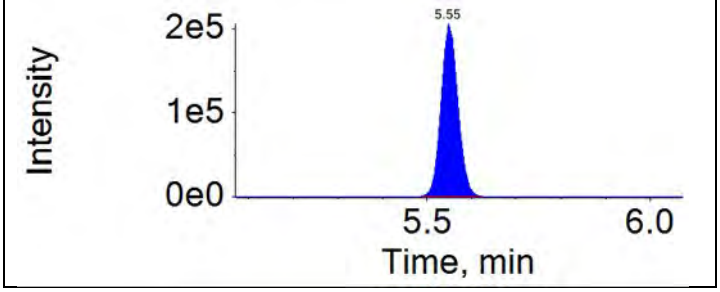
Injection Standard: 13C2-PFOA
415.0 / 370.0



Injection Standard: 13C4-PFOS
503.0 / 80.0



Injection Standard: 13C2-PFDA
515.0 / 470.0

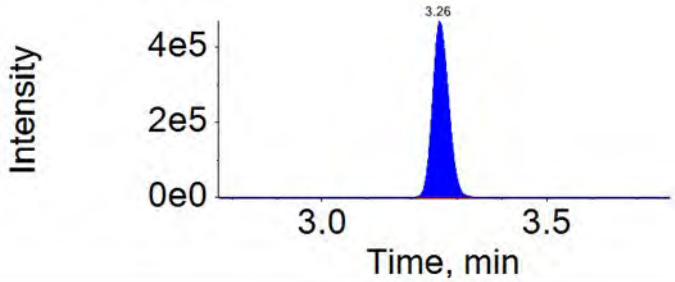


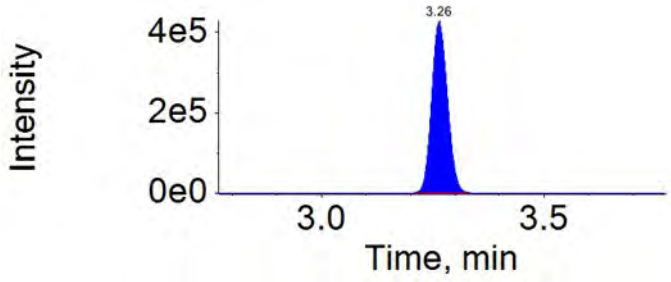
APPROVED
By MCD at 10:13 pm, 11/30/18

REVIEWED
By HMK at 2:27 pm, 12/6/18

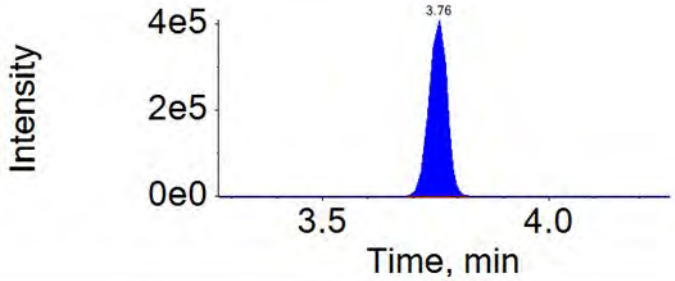
ICAL Name: 18NOV28DCAL **Result Table:** 18332003 11/30/2018 9:58:40 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

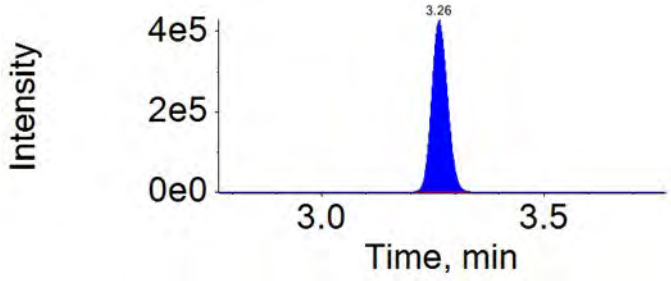
Extraction Standard: E13C4-PFBA	Injection Standard: 13C3-PFBA
217.0 / 172.0	216.0 / 172.0



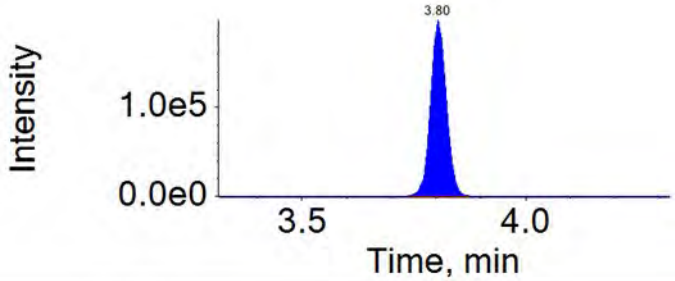


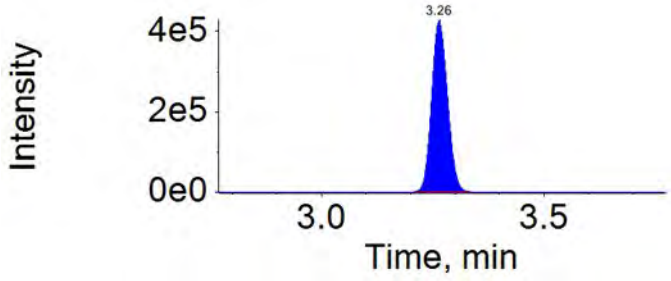
Extraction Standard: E13C5-PFPeA	Injection Standard: 13C3-PFBA
268.0 / 223.0	216.0 / 172.0



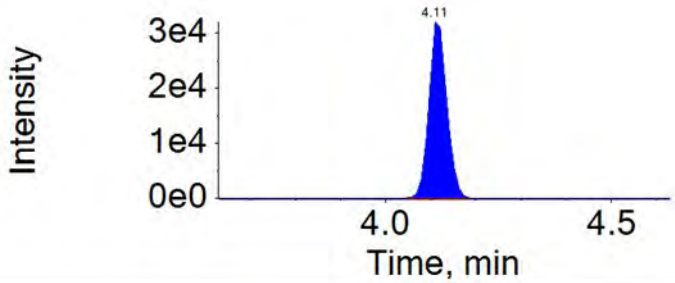


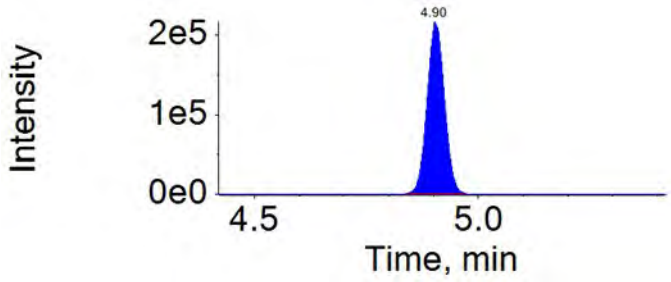
Extraction Standard: E13C3-PFBS	Injection Standard: 13C3-PFBA
302.0 / 80.0	216.0 / 172.0





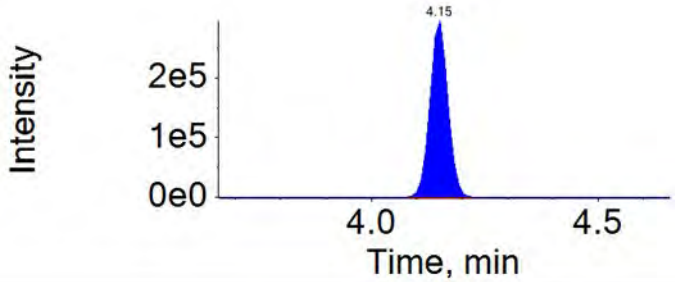
Extraction Standard: E13C2-4:2-FTS	Injection Standard: 13C2-PFOA
329.0 / 81.0	415.0 / 370.0

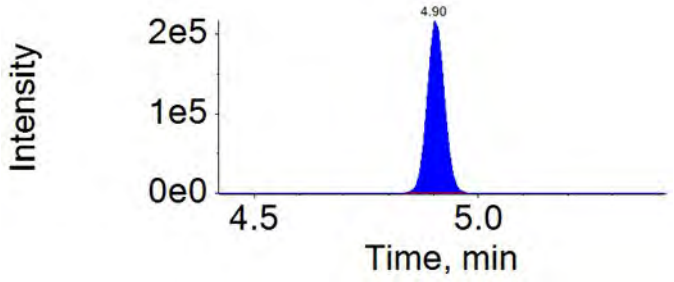




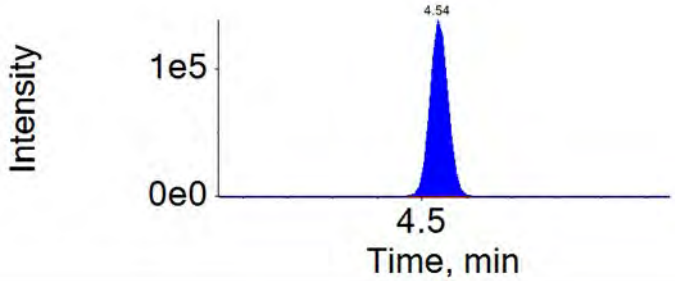
ICAL Name: 18NOV28DCAL **Result Table:** 18332003 11/30/2018 9:58:40 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

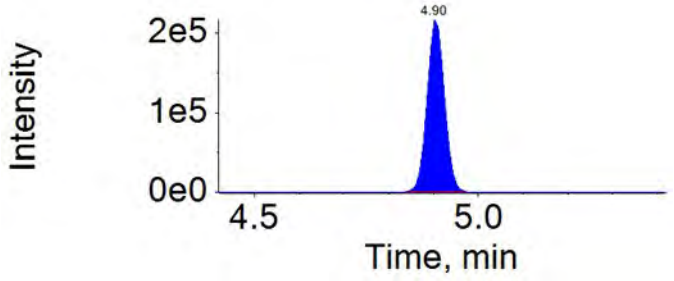
Extraction Standard: E13C5-PFHxA	Injection Standard: 13C2-PFOA
318.0 / 273.0	415.0 / 370.0



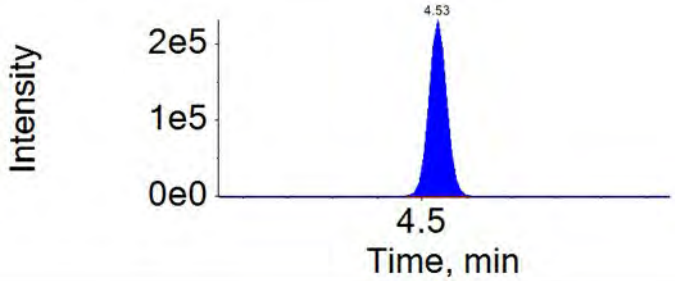


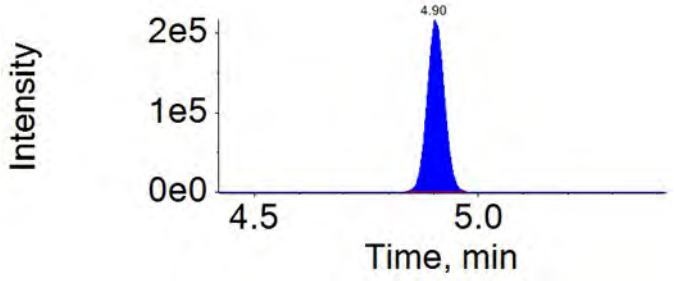
Extraction Standard: E13C3-PFHxS	Injection Standard: 13C2-PFOA
402.0 / 80.0	415.0 / 370.0



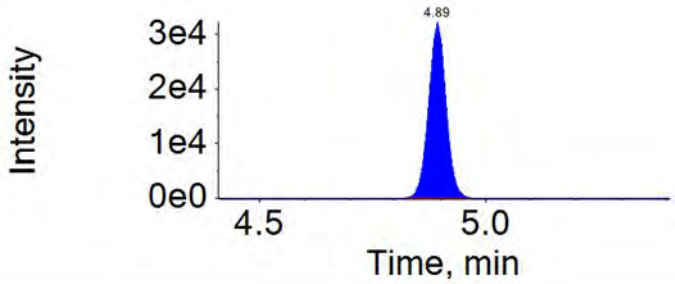


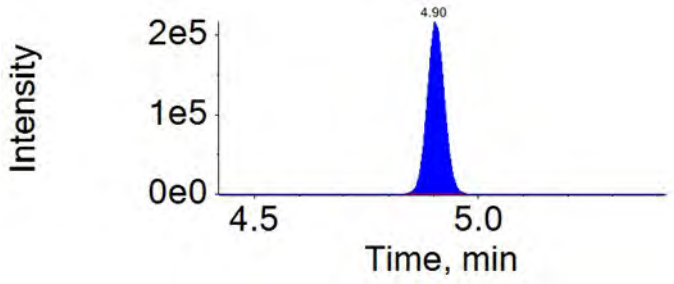
Extraction Standard: E13C4-PFHpA	Injection Standard: 13C2-PFOA
367.0 / 322.0	415.0 / 370.0





Extraction Standard: E13C2-6:2-FTS	Injection Standard: 13C2-PFOA
429.0 / 81.0	415.0 / 370.0

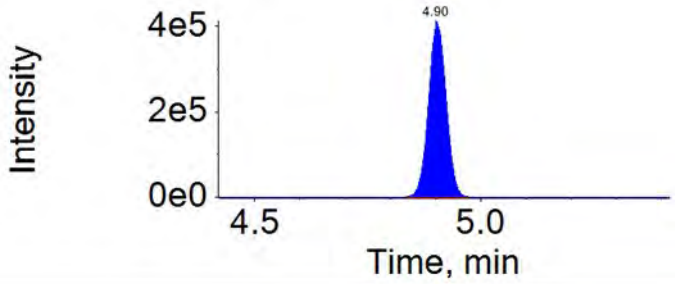




ICAL Name: 18NOV28DCAL **Result Table:** 18332003 11/30/2018 9:58:40 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

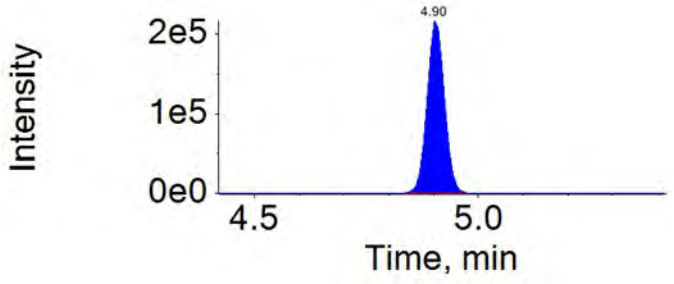
Extraction Standard: E13C8-PFOA

421.0 / 376.0



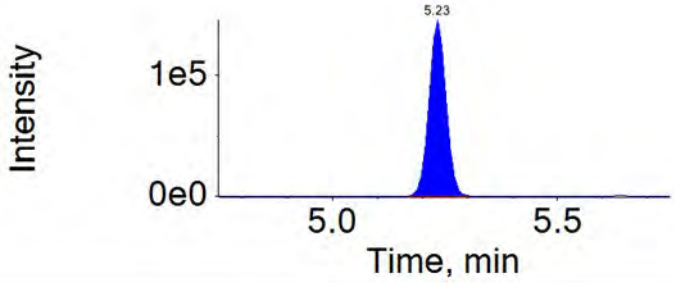
Injection Standard: 13C2-PFOA

415.0 / 370.0



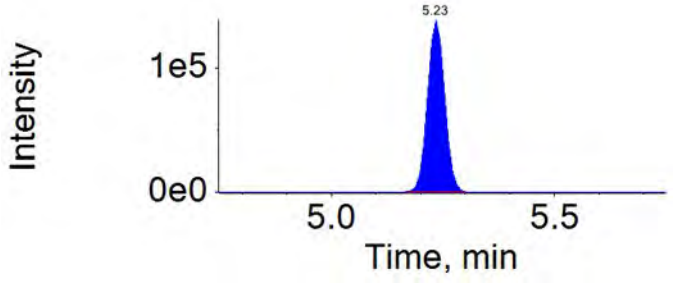
Extraction Standard: E13C8-PFOS

507.0 / 80.0



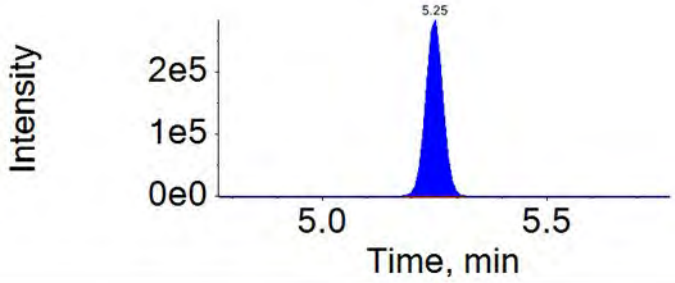
Injection Standard: 13C4-PFOS

503.0 / 80.0



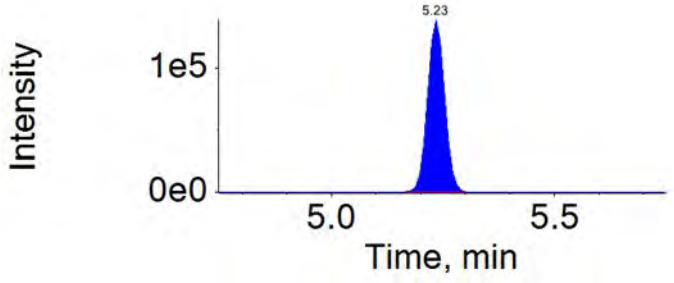
Extraction Standard: E13C9-PFNA

472.0 / 427.0



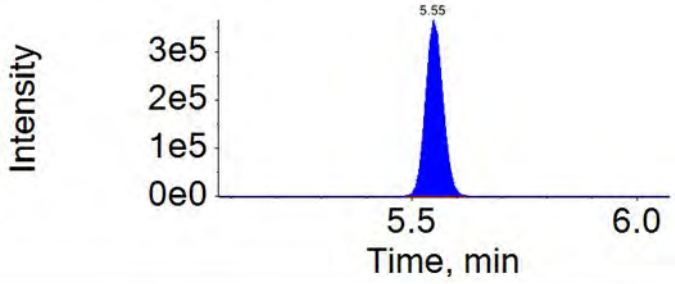
Injection Standard: 13C4-PFOS

503.0 / 80.0



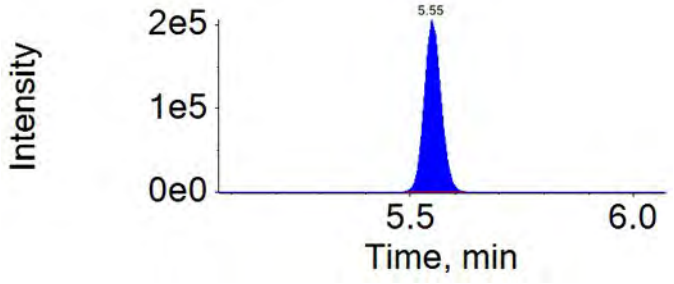
Extraction Standard: E13C6-PFDA

519.0 / 474.0



Injection Standard: 13C2-PFDA

515.0 / 470.0

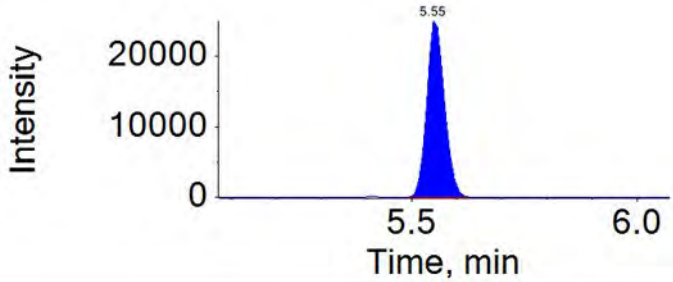


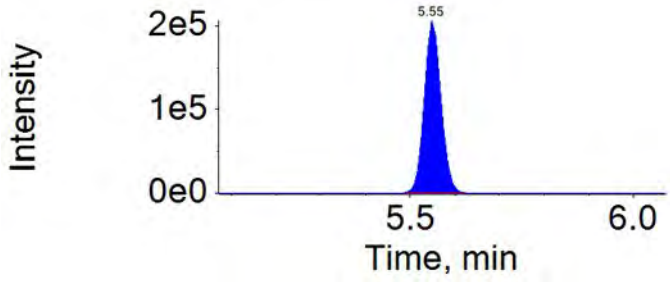
APPROVED
By MCD at 10:13 pm, 11/30/18

REVIEWED
By HMK at 2:27 pm, 12/6/18

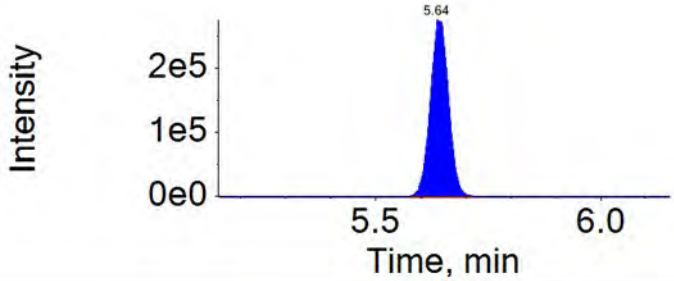
ICAL Name: 18NOV28DCAL **Result Table:** 18332003 11/30/2018 9:58:40 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

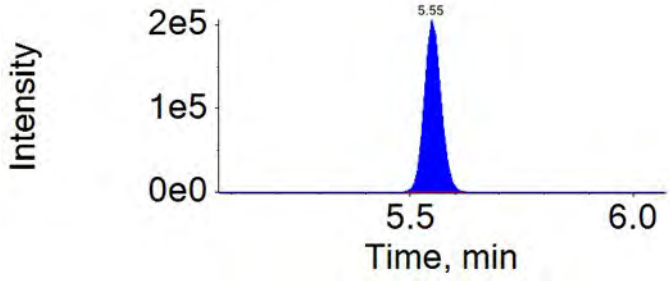
Extraction Standard: E13C2-8:2-FTS	Injection Standard: 13C2-PFDA
529.0 / 81.0	515.0 / 470.0



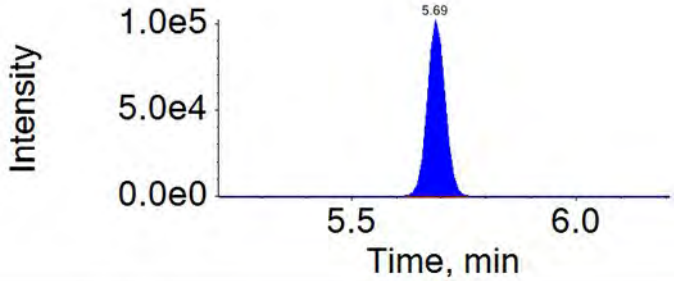


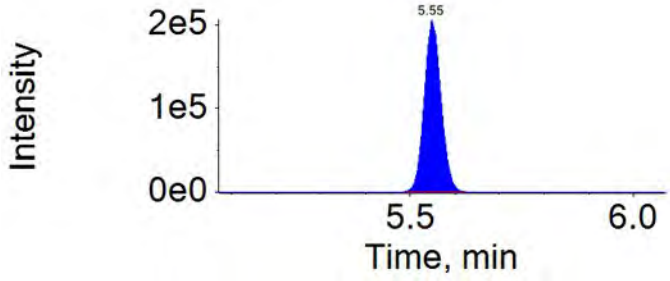
Extraction Standard: E13C8-PFOSA	Injection Standard: 13C2-PFDA
506.0 / 78.0	515.0 / 470.0



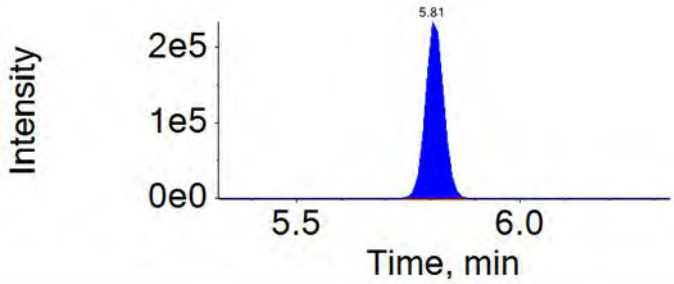


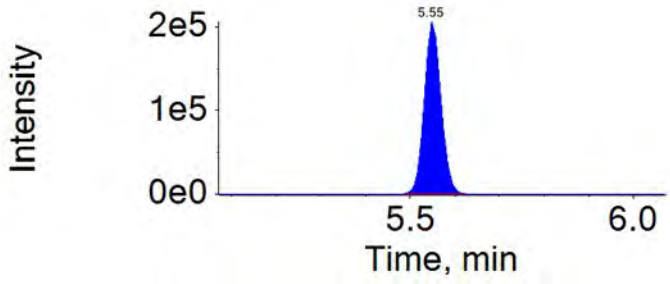
Extraction Standard: Ed3-NMeFOSAA	Injection Standard: 13C2-PFDA
573.0 / 419.0	515.0 / 470.0





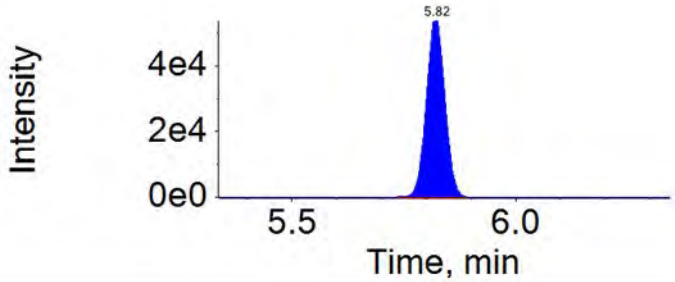
Extraction Standard: E13C7-PFUnDA	Injection Standard: 13C2-PFDA
570.0 / 525.0	515.0 / 470.0

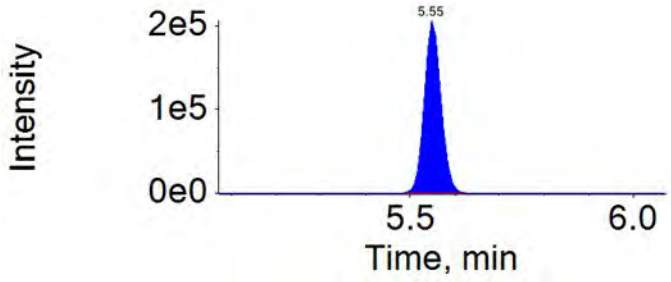




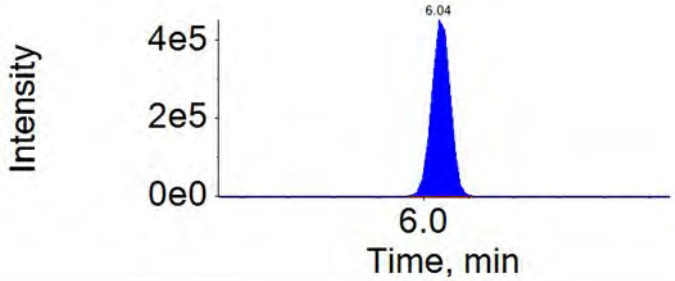
ICAL Name: 18NOV28DCAL **Result Table:** 18332003 11/30/2018 9:58:40 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

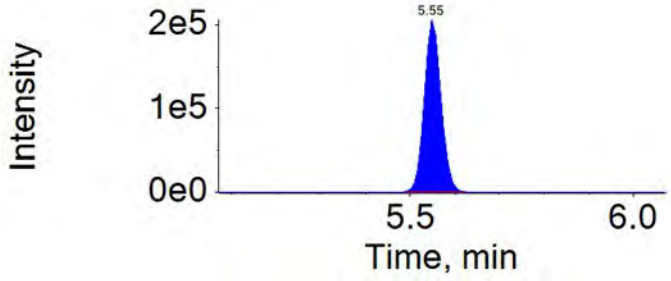
Extraction Standard: Ed5-NEtFOSAA	Injection Standard: 13C2-PFDA
589.0 / 419.0	515.0 / 470.0



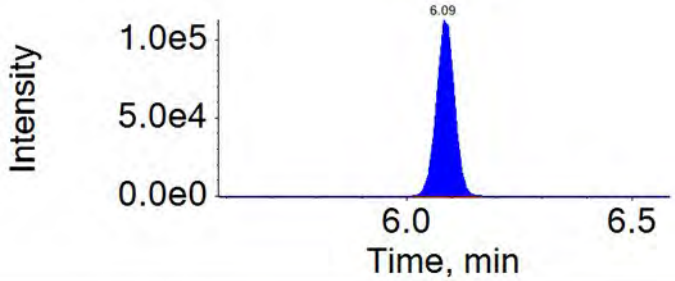


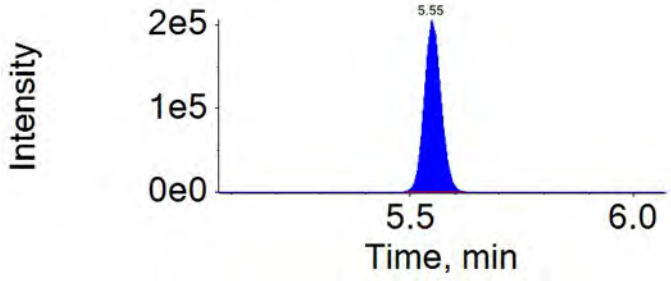
Extraction Standard: E13C2-PFDoDA	Injection Standard: 13C2-PFDA
615.0 / 570.0	515.0 / 470.0



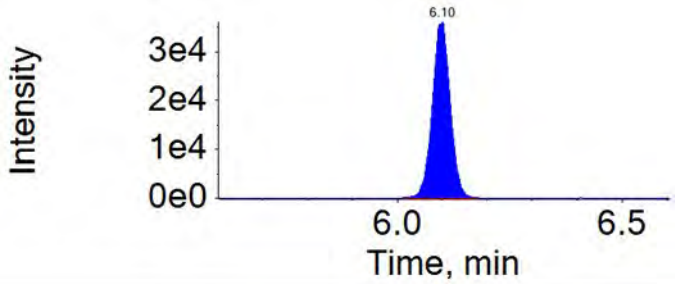


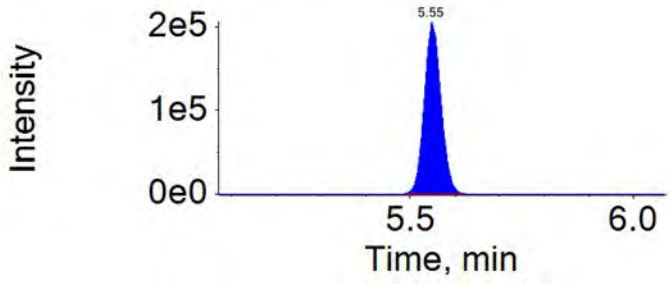
Extraction Standard: Ed7-NMePFOSAE	Injection Standard: 13C2-PFDA
623.0 / 59.0	515.0 / 470.0





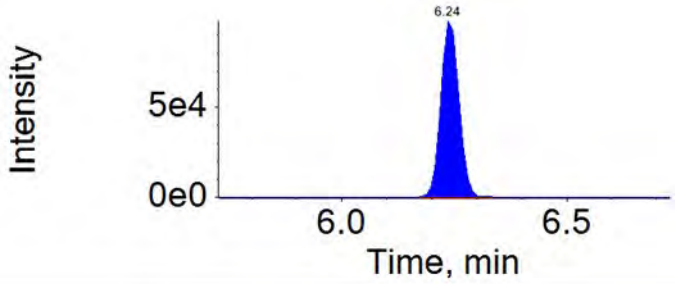
Extraction Standard: Ed3-NMePFOSA	Injection Standard: 13C2-PFDA
515.0 / 169.0	515.0 / 470.0

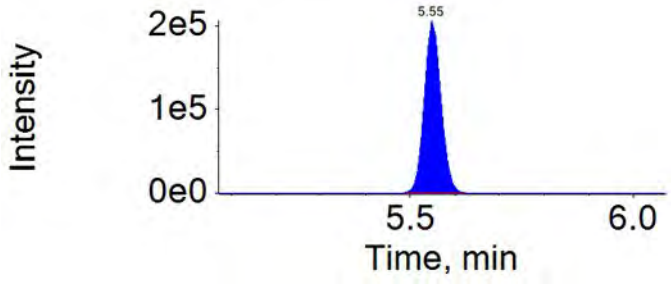




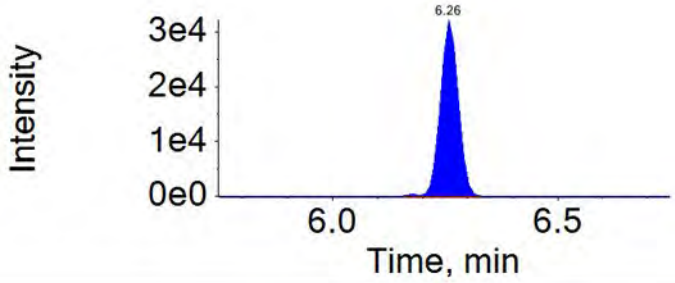
ICAL Name: 18NOV28DCAL **Result Table:** 18332003 11/30/2018 9:58:40 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

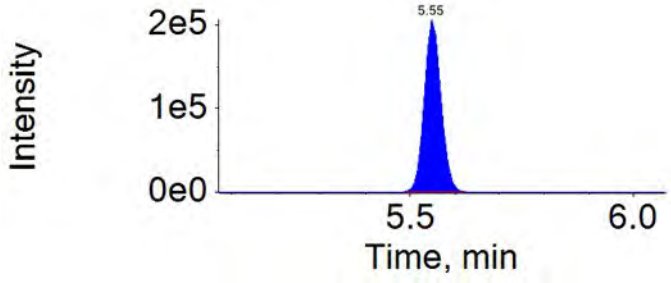
Extraction Standard: Ed9-NEtPFOSAE	Injection Standard: 13C2-PFDA
639.0 / 59.0	515.0 / 470.0



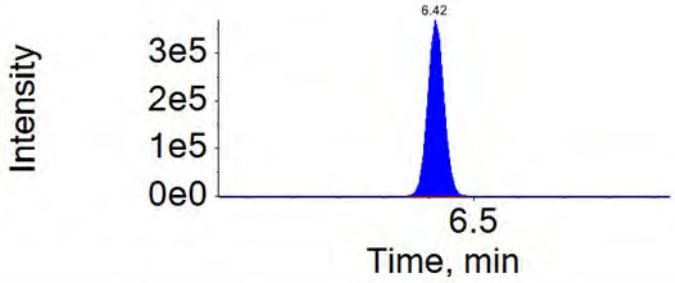


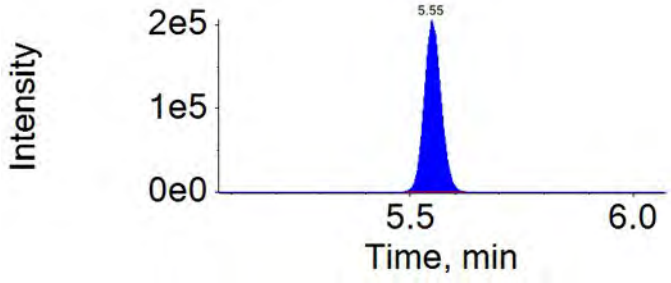
Extraction Standard: Ed5-NEtPFOSA	Injection Standard: 13C2-PFDA
531.0 / 169.0	515.0 / 470.0





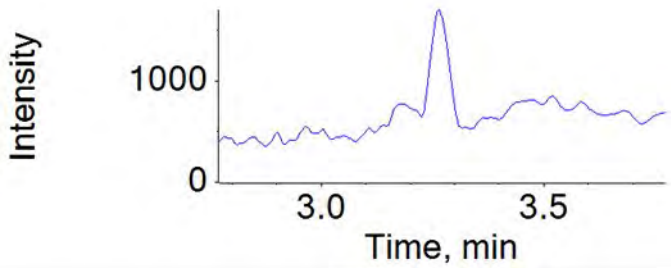
Extraction Standard: E13C2-PFTeDA	Injection Standard: 13C2-PFDA
715.0 / 670.0	515.0 / 470.0



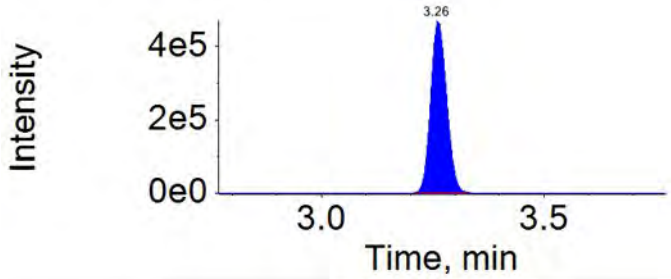


ICAL Name: 18NOV28DCAL **Result Table:** 18332003 11/30/2018 9:58:40 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

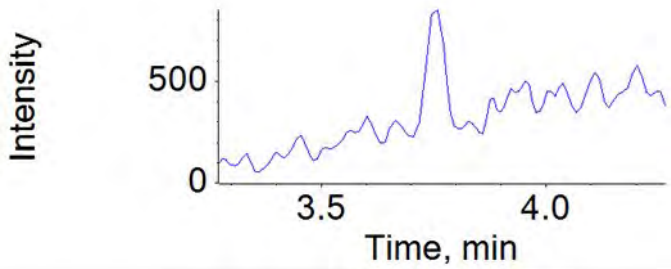
Analyte: PFBA
213.0 / 169.0



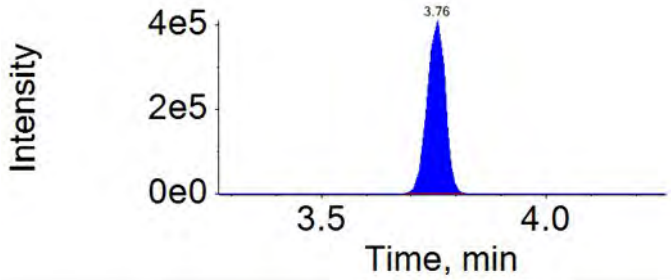
Extraction Standard: 13C4-PFBA
217.0 / 172.0



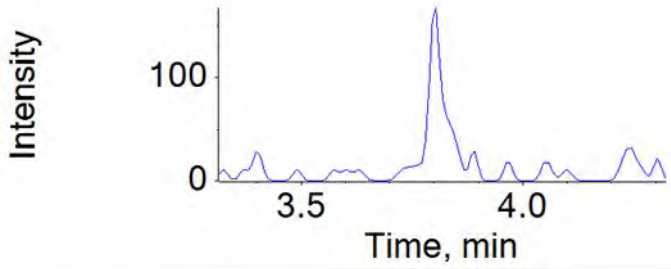
Analyte: PFPeA
263.0 / 219.0



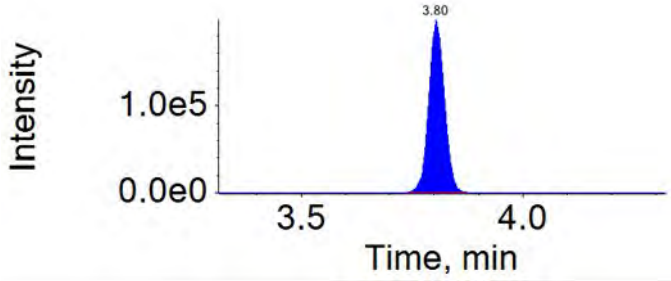
Extraction Standard: 13C5-PFPeA
268.0 / 223.0



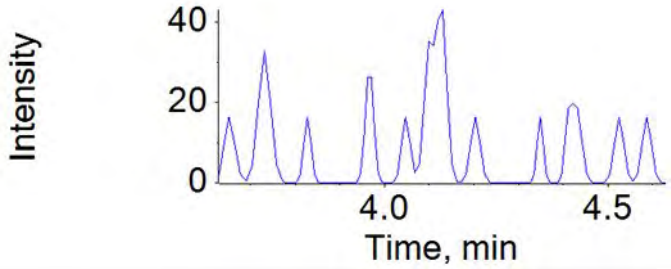
Analyte: PFBS
299.0 / 80.0



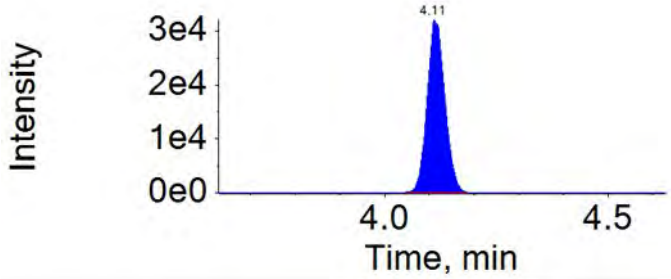
Extraction Standard: 13C3-PFBS
302.0 / 80.0



Analyte: 4:2-FTS
327.0 / 307.0



Extraction Standard: 13C2-4:2-FTS
329.0 / 81.0

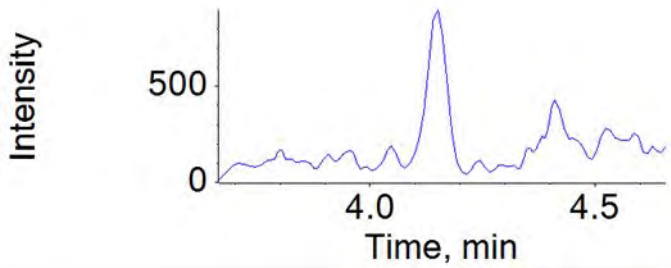


APPROVED
By MCD at 10:13 pm, 11/30/18

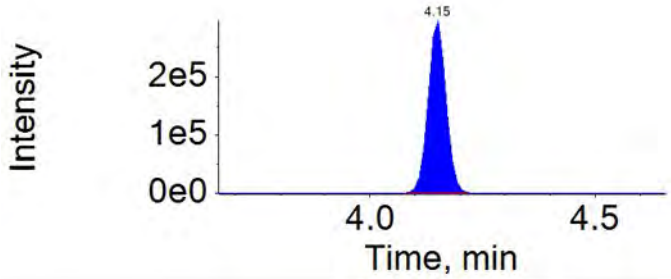
REVIEWED
By HMK at 2:27 pm, 12/6/18

ICAL Name: 18NOV28DCAL **Result Table:** 18332003 11/30/2018 9:58:40 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

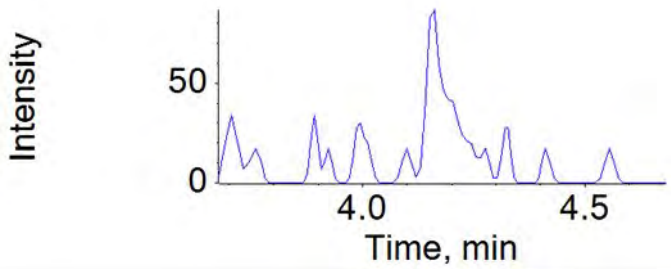
Analyte: PFHxA
313.0 / 269.0



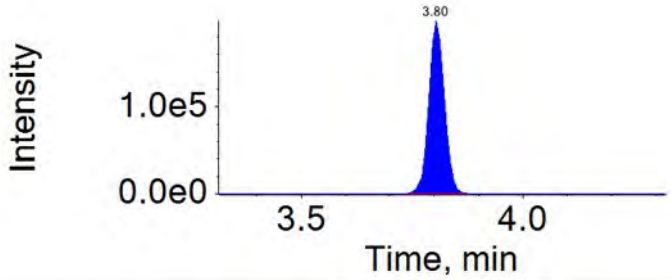
Extraction Standard: 13C5-PFHxA
318.0 / 273.0



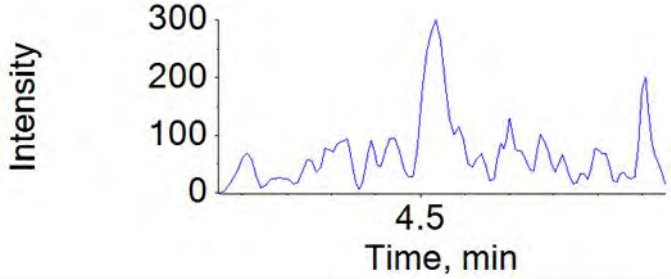
Analyte: PFPeS
349.0 / 80.0



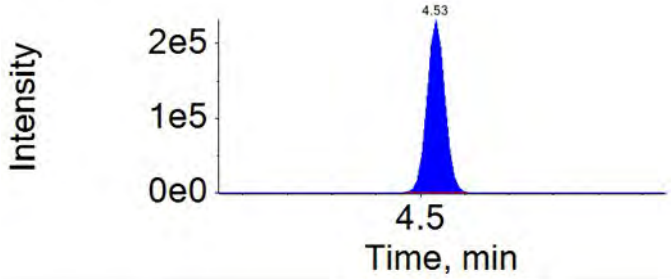
Extraction Standard: 13C3-PFBS
302.0 / 80.0



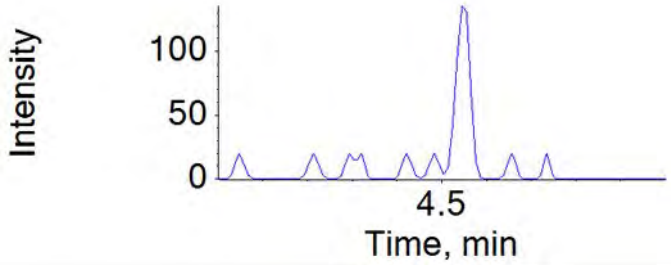
Analyte: PFHpA
363.0 / 319.0



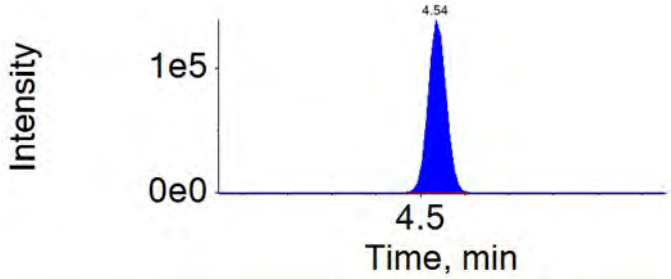
Extraction Standard: 13C4-PFHpA
367.0 / 322.0



Analyte: PFHxS
399.0 / 80.0

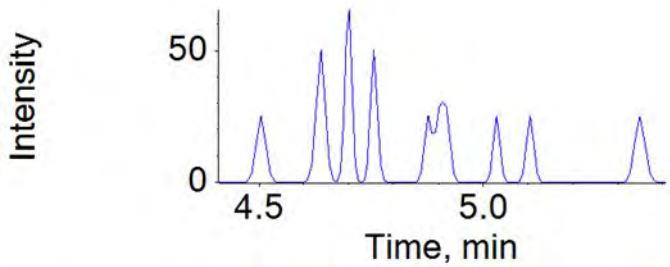


Extraction Standard: 13C3-PFHxS
402.0 / 80.0

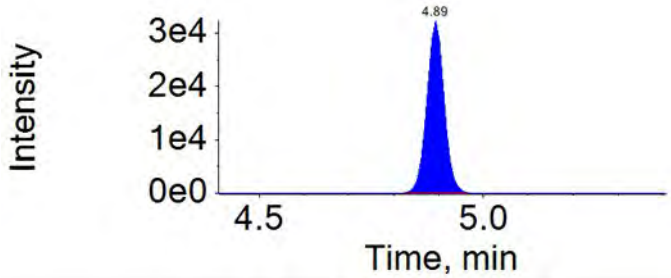


ICAL Name: 18NOV28DCAL **Result Table:** 18332003 11/30/2018 9:58:40 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

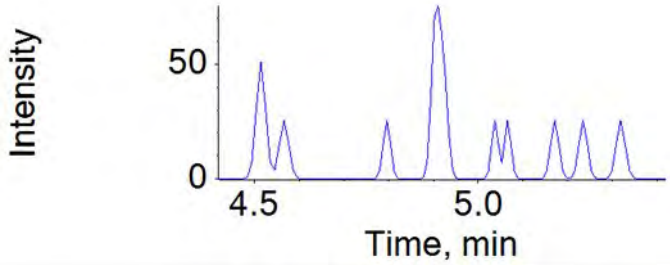
Analyte: 6:2-FTS
427.0 / 407.0



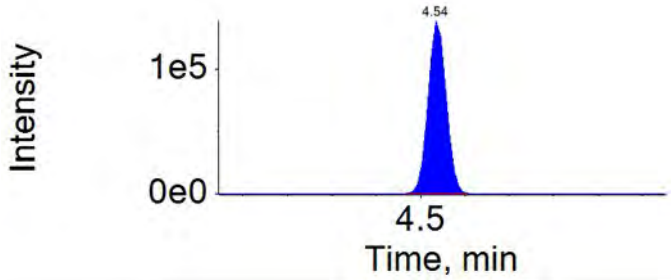
Extraction Standard: 13C2-6:2-FTS
429.0 / 81.0



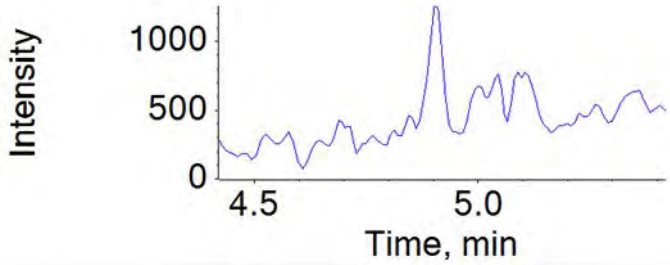
Analyte: PFHpS
449.0 / 80.0



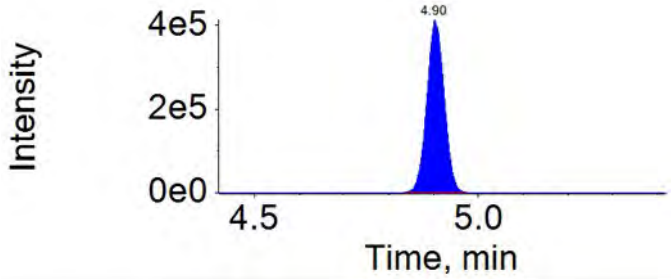
Extraction Standard: 13C3-PFHxS
402.0 / 80.0



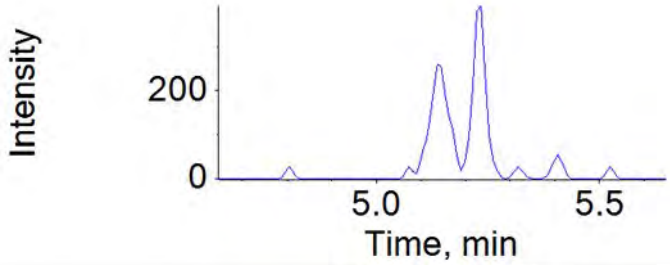
Analyte: PFOA
413.0 / 369.0



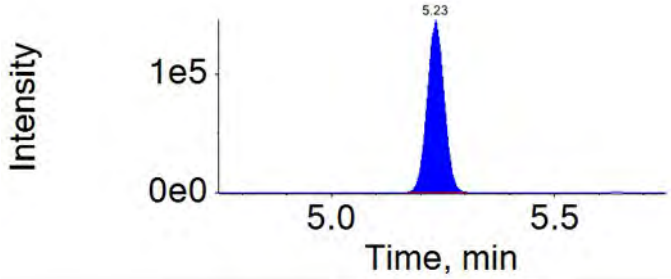
Extraction Standard: 13C8-PFOA
421.0 / 376.0



Analyte: PFOS
499.0 / 80.0



Extraction Standard: 13C8-PFOS
507.0 / 80.0

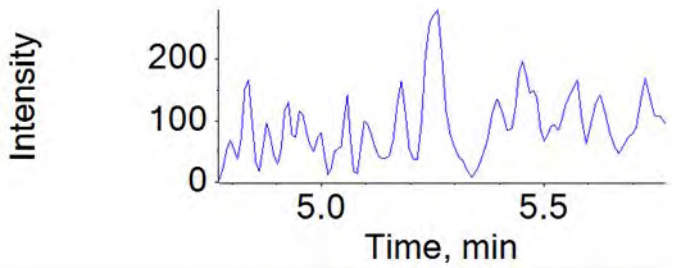


APPROVED
By MCD at 10:13 pm, 11/30/18

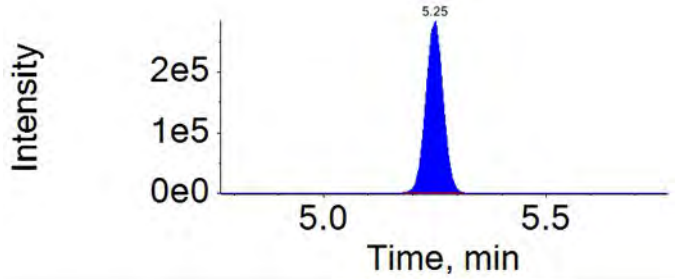
REVIEWED
By HMK at 2:27 pm, 12/6/18

ICAL Name: 18NOV28DCAL **Result Table:** 18332003 11/30/2018 9:58:40 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

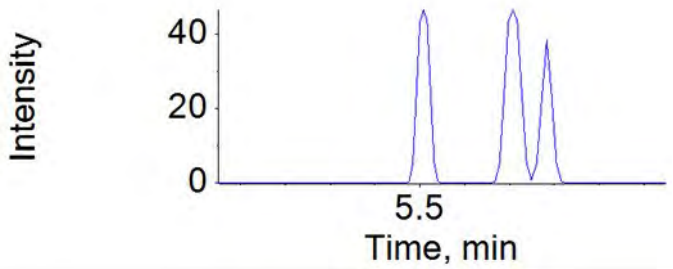
Analyte: PFNA
463.0 / 419.0



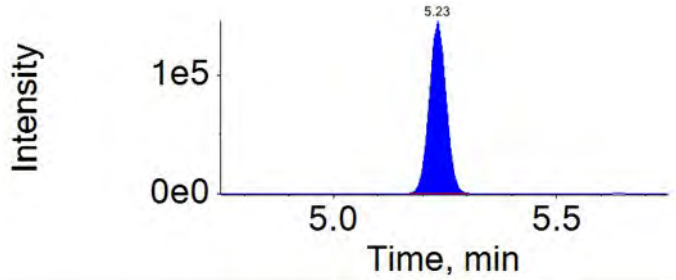
Extraction Standard: 13C9-PFNA
472.0 / 427.0



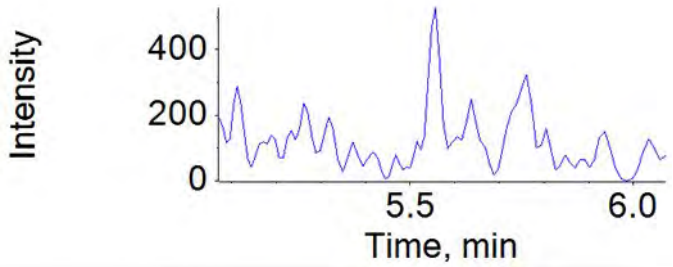
Analyte: PFNS
549.0 / 80.0



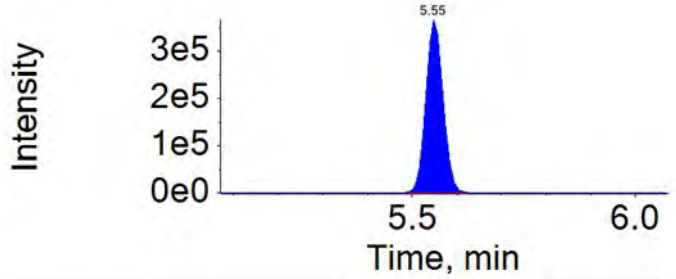
Extraction Standard: 13C8-PFOS
507.0 / 80.0



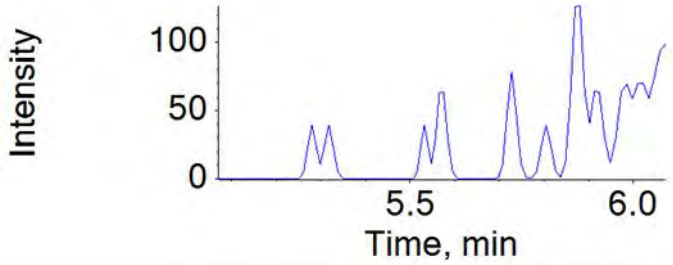
Analyte: PFDA
513.0 / 469.0



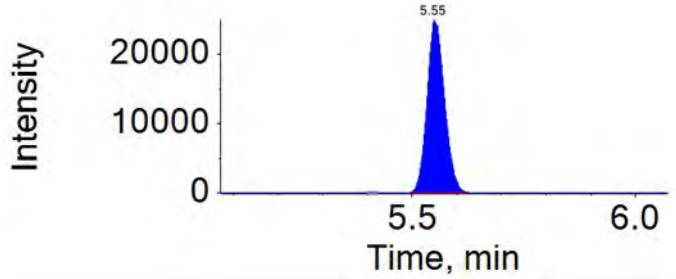
Extraction Standard: 13C6-PFDA
519.0 / 474.0



Analyte: 8:2-FTS
527.0 / 507.0



Extraction Standard: 13C2-8:2-FTS
529.0 / 81.0

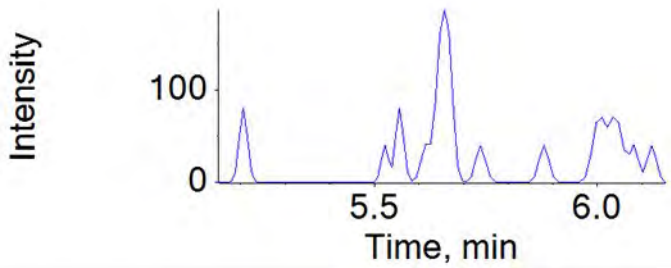


APPROVED
By MCD at 10:13 pm, 11/30/18

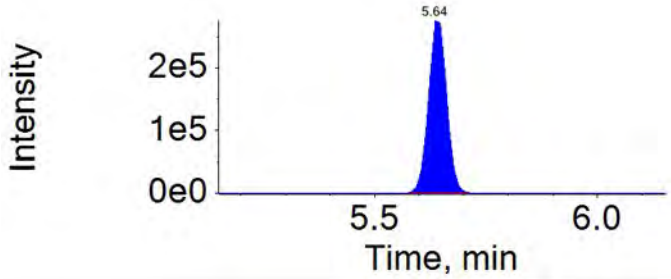
REVIEWED
By HMK at 2:27 pm, 12/6/18

ICAL Name: 18NOV28DCAL **Result Table:** 18332003 11/30/2018 9:58:40 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

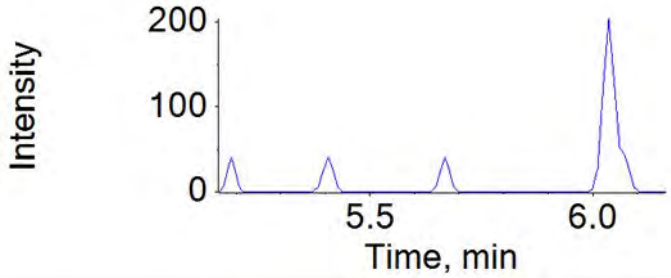
Analyte: PFOSA
498.0 / 78.0



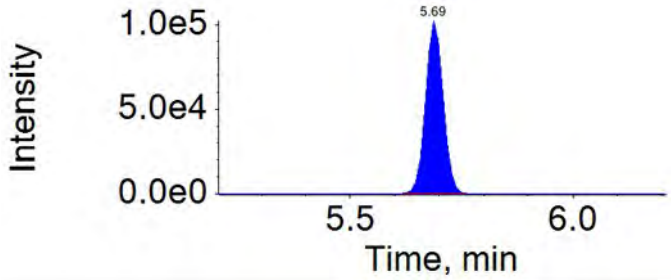
Extraction Standard: 13C8-PFOSA
506.0 / 78.0



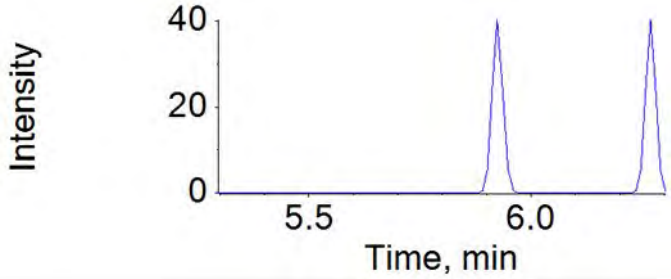
Analyte: NMeFOSAA
570.0 / 419.0



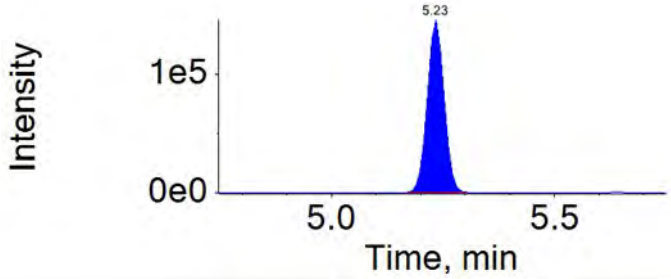
Extraction Standard: d3-NMeFOSAA
573.0 / 419.0



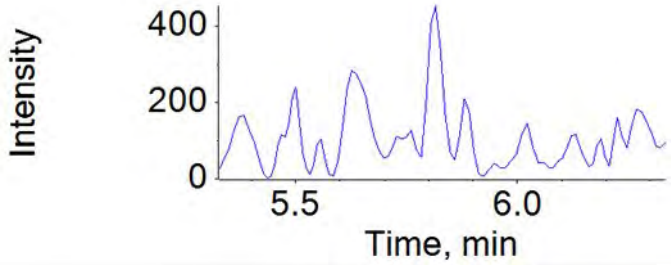
Analyte: PFDS
599.0 / 80.0



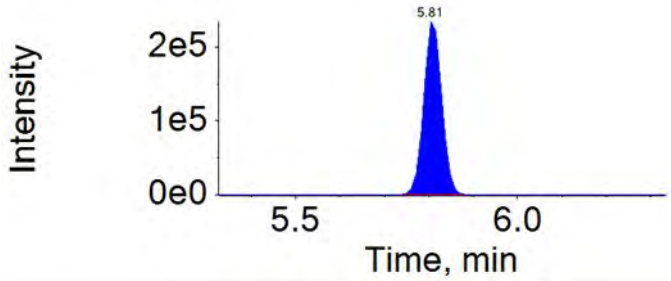
Extraction Standard: 13C8-PFOS
507.0 / 80.0



Analyte: PFUnDA
563.0 / 519.0



Extraction Standard: 13C7-PFUnDA
570.0 / 525.0

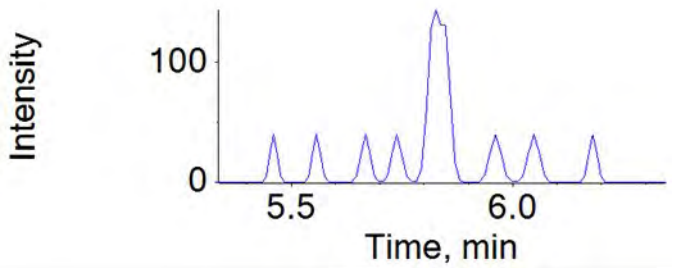


APPROVED
By MCD at 10:13 pm, 11/30/18

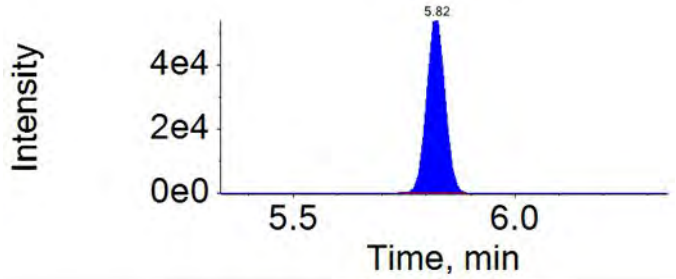
REVIEWED
By HMK at 2:27 pm, 12/6/18

ICAL Name: 18NOV28DCAL **Result Table:** 18332003 11/30/2018 9:58:40 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

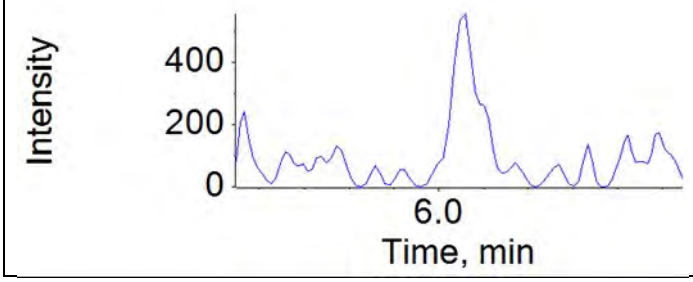
Analyte: NEtFOSAA
584.0 / 419.0



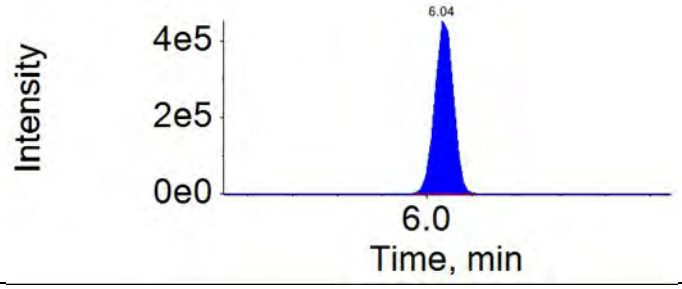
Extraction Standard: d5-NEtFOSAA
589.0 / 419.0



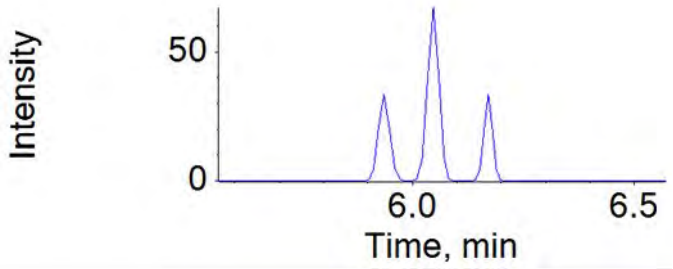
Analyte: PFDoDA
613.0 / 569.0



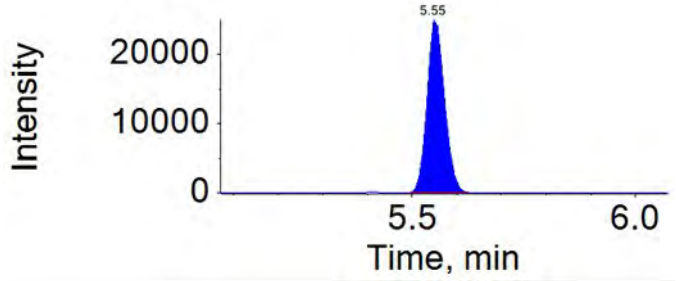
Extraction Standard: 13C2-PFDoDA
615.0 / 570.0



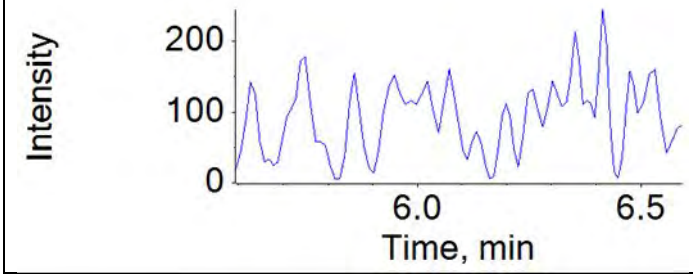
Analyte: 10:2-FTS
627.0 / 607.0



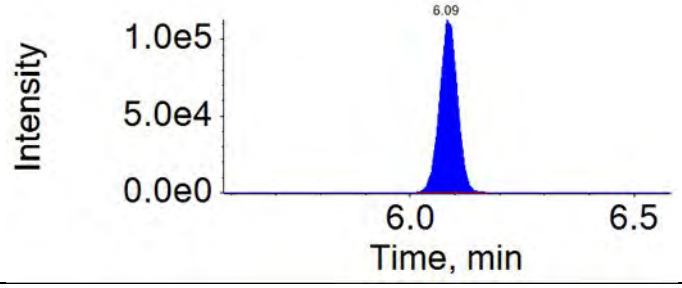
Extraction Standard: 13C2-8:2-FTS
529.0 / 81.0



Analyte: NMePFOSAE
616.0 / 59.0



Extraction Standard: d7-NMePFOSAE
623.0 / 59.0

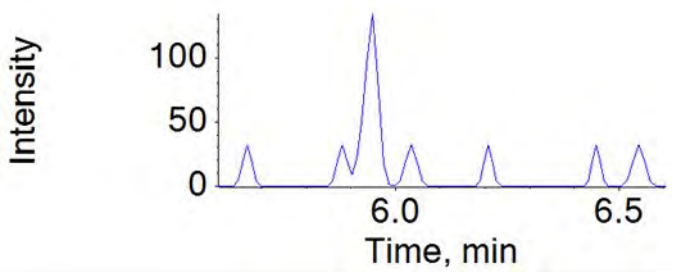


APPROVED
By MCD at 10:13 pm, 11/30/18

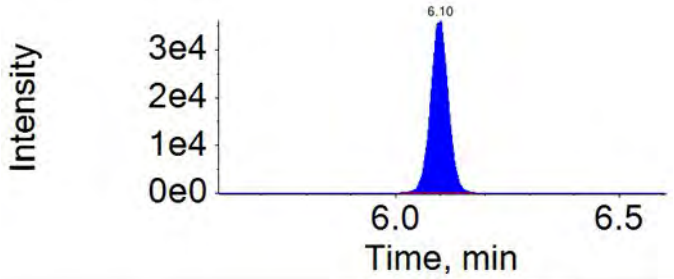
REVIEWED
By HMK at 2:27 pm, 12/6/18

ICAL Name: 18NOV28DCAL **Result Table:** 18332003 11/30/2018 9:58:40 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

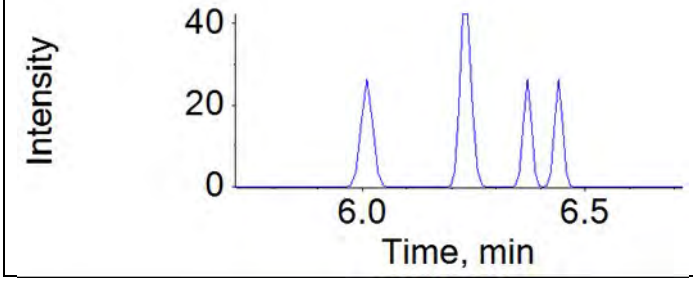
Analyte: NMePFOSA
512.0 / 169.0



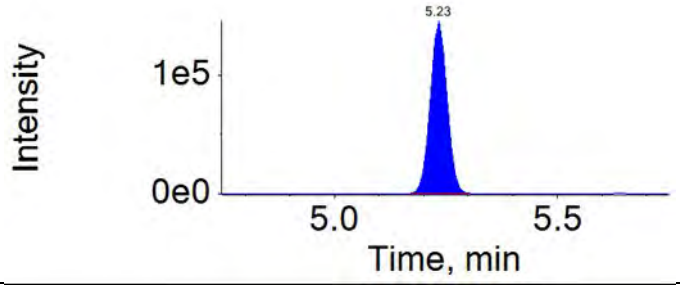
Extraction Standard: d3-NMePFOSA
515.0 / 169.0



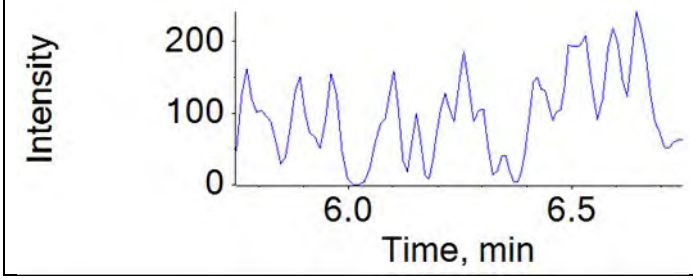
Analyte: PFDoS
699.0 / 80.0



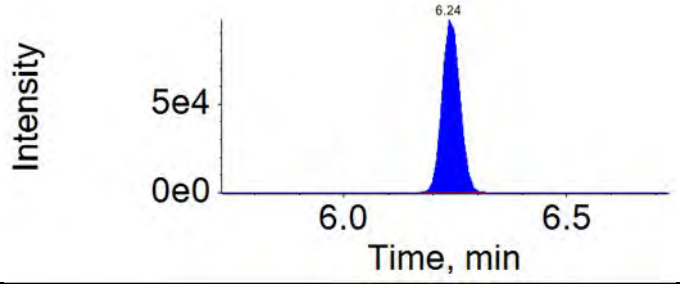
Extraction Standard: 13C8-PFOS
507.0 / 80.0



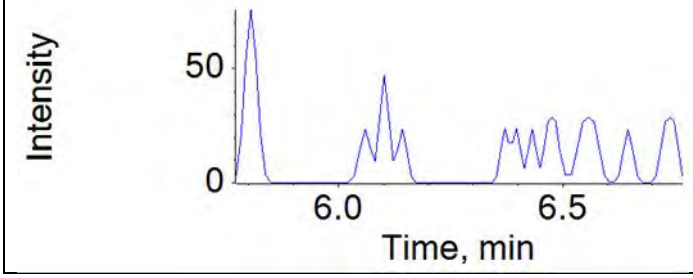
Analyte: NEtPFOSAE
630.0 / 59.0



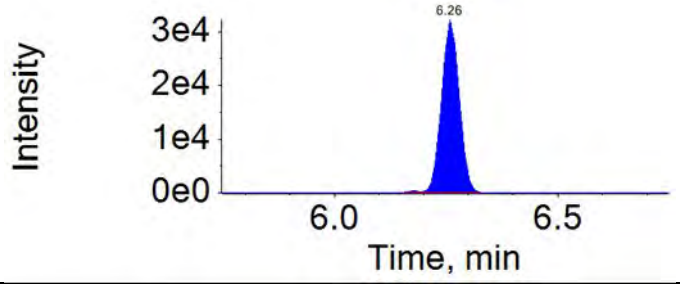
Extraction Standard: d9-NEtPFOSAE
639.0 / 59.0



Analyte: NEtPFOSA
526.0 / 169.0



Extraction Standard: d5-NEtPFOSA
531.0 / 169.0

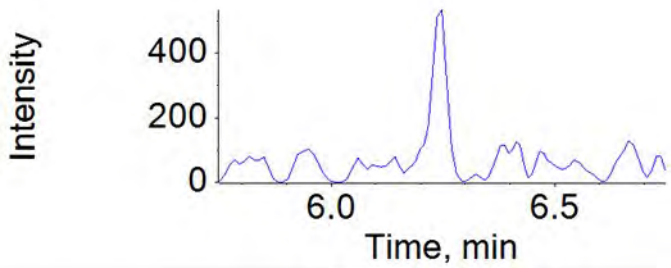


APPROVED
By MCD at 10:13 pm, 11/30/18

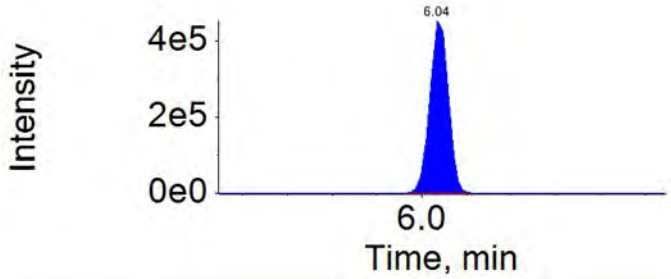
REVIEWED
By HMK at 2:27 pm, 12/6/18

ICAL Name: 18NOV28DCAL **Result Table:** 18332003 11/30/2018 9:58:40 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

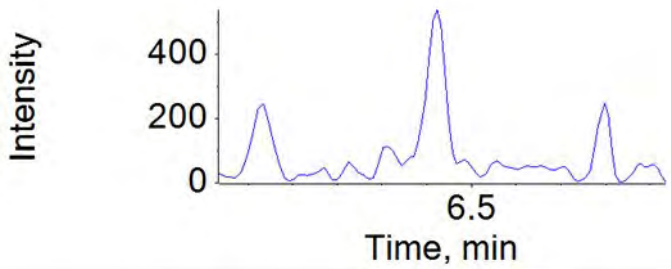
Analyte: PFTrDA
663.0 / 619.0



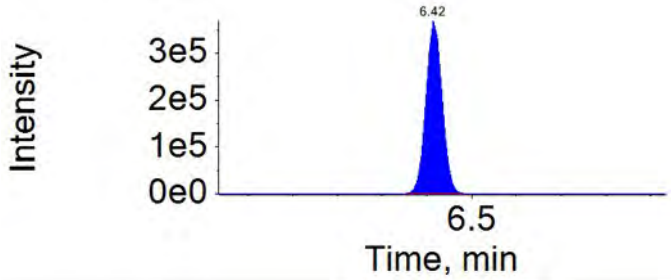
Extraction Standard: 13C2-PFDoDA
615.0 / 570.0



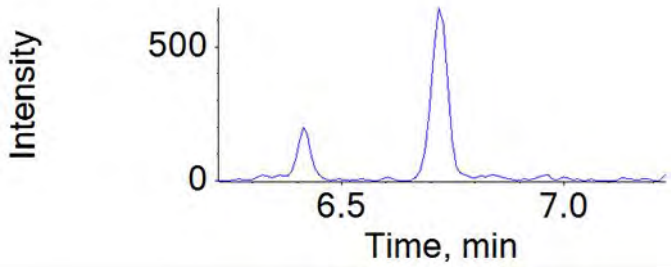
Analyte: PFTeDA
713.0 / 669.0



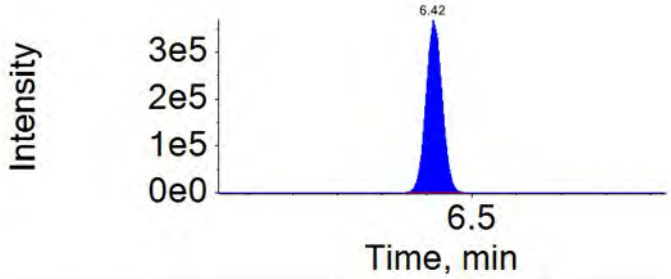
Extraction Standard: 13C2-PFTeDA
715.0 / 670.0



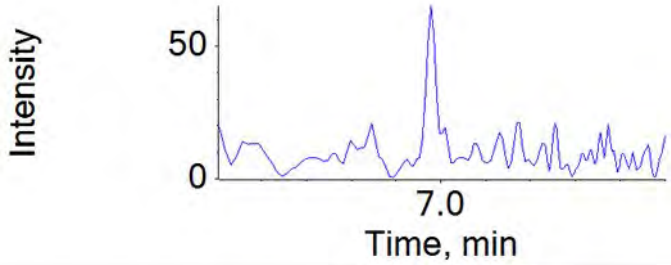
Analyte: PFHxDA
813.0 / 769.0



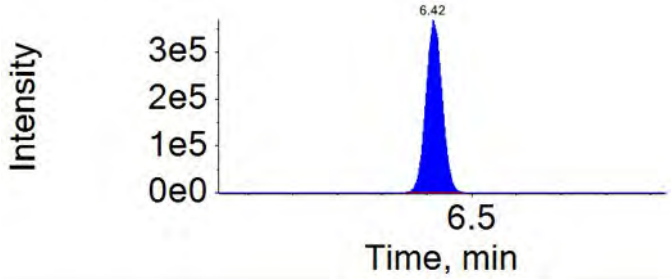
Extraction Standard: 13C2-PFTeDA
715.0 / 670.0



Analyte: PFODA
913.0 / 869.0



Extraction Standard: 13C2-PFTeDA
715.0 / 670.0



APPROVED
By MCD at 10:13 pm, 11/30/18

REVIEWED
By HMK at 2:27 pm, 12/6/18

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LC-MS/MS Analysis Report

Printed: 11/30/2018 10:02:00 PM
Template: IonRatio18OCT10

Ion Ratio Report

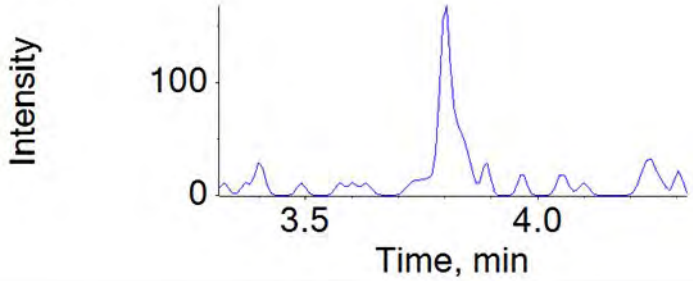
Sample Name: BLK332003 **Instrument Name:** LM27631 **File Name:** 18NOV29D-55.wiff

Component Name	RT	RRT	Analyte Area Response	Int Typ	Expected Ion Ratio	Ion Ratio	Ion Ratio % Diff	Ion Ratio Limit	Ion Ratio OOS
PFBS	N/A	N/A	N/A	A	N/A	N/A			
PFBS_2	N/A	N/A	N/A	A	N/A	N/A		50	
4:2-FTS	N/A	N/A	N/A	A	N/A	N/A			
4:2-FTS_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFHxA	N/A	N/A	N/A	A	N/A	N/A			
PFHxA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFPeS	N/A	N/A	N/A	A	N/A	N/A			
PFPeS_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFHpA	N/A	N/A	N/A	A	N/A	N/A			
PFHpA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFHxS	N/A	N/A	N/A	A	N/A	N/A			
PFHxS_2	N/A	N/A	N/A	A	N/A	N/A		50	
6:2-FTS	N/A	N/A	N/A	A	N/A	N/A			
6:2-FTS_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFHpS	N/A	N/A	N/A	A	N/A	N/A			
PFHpS_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFOA	N/A	N/A	N/A	A	N/A	N/A			
PFOA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFOS	N/A	N/A	N/A	A	N/A	N/A			
PFOS_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFNA	N/A	N/A	N/A	A	N/A	N/A			
PFNA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFNS	N/A	N/A	N/A	A	N/A	N/A			
PFNS_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFDA	N/A	N/A	N/A	A	N/A	N/A			
PFDA_2	N/A	N/A	N/A	A	N/A	N/A		50	
8:2-FTS	N/A	N/A	N/A	A	N/A	N/A			
8:2-FTS_2	N/A	N/A	N/A	A	N/A	N/A		50	
NMeFOSAA	N/A	N/A	N/A	A	N/A	N/A			
NMeFOSAA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFDS	N/A	N/A	N/A	A	N/A	N/A			
PFDS_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFUnDA	N/A	N/A	N/A	A	N/A	N/A			
PFUnDA_2	N/A	N/A	N/A	A	N/A	N/A		50	
NEtFOSAA	N/A	N/A	N/A	A	N/A	N/A			
NEtFOSAA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFDoDA	N/A	N/A	N/A	A	N/A	N/A			
PFDoDA_2	N/A	N/A	N/A	A	N/A	N/A		50	
10:2-FTS	N/A	N/A	N/A	A	N/A	N/A			
10:2-FTS_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFTrDA	N/A	N/A	N/A	A	N/A	N/A			
PFTrDA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFTeDA	N/A	N/A	N/A	A	N/A	N/A			
PFTeDA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFHxDA	N/A	N/A	N/A	A	N/A	N/A			
PFHxDA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFODA	N/A	N/A	N/A	A	N/A	N/A			
PFODA_2	N/A	N/A	N/A	A	N/A	N/A		50	

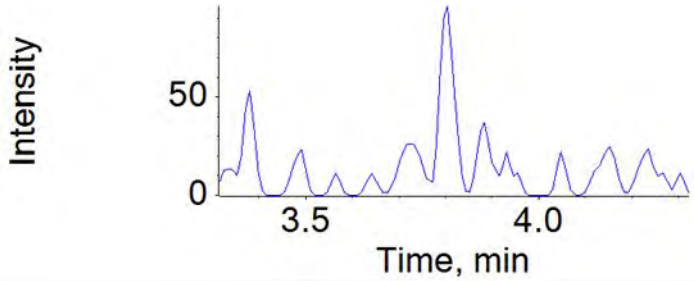
APPROVED
By MCD at 10:13 pm, 11/30/18

REVIEWED
By HMK at 2:27 pm, 12/6/18

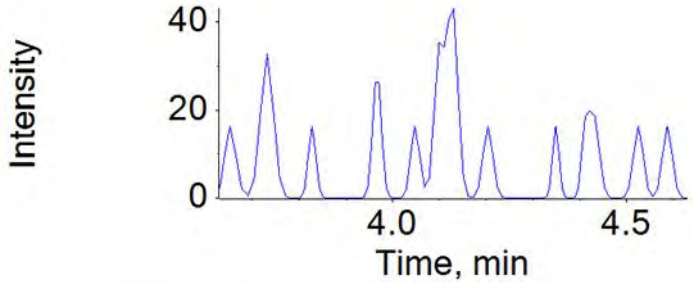
Component: PFBS
Primary Mass: 299.0 / 80.0



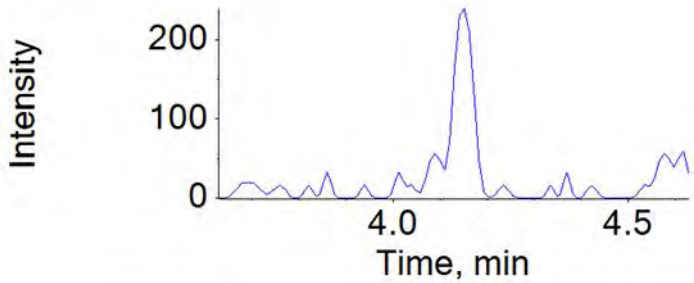
Component: PFBS_2
Secondary Mass: 299.0 / 99.0



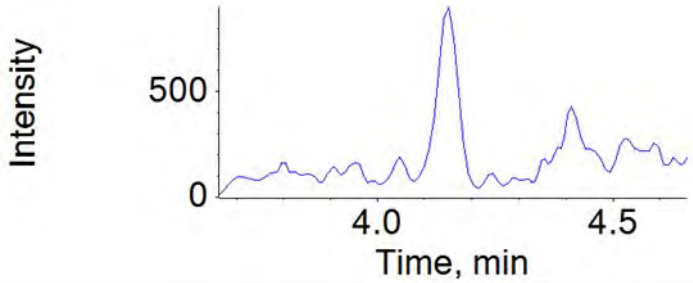
Component: 4:2-FTS
Primary Mass: 327.0 / 307.0



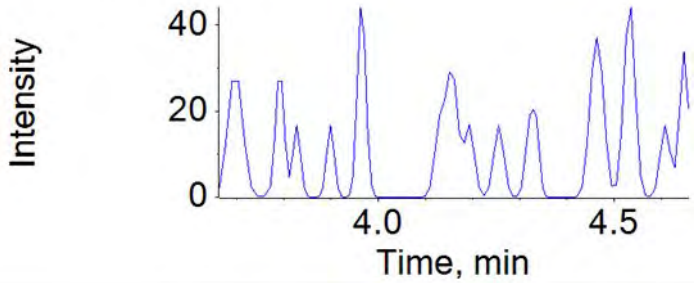
Component: 4:2-FTS_2
Secondary Mass: 327.0 / 81.0



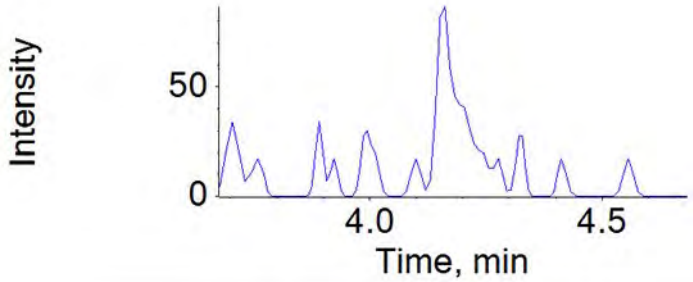
Component: PFHxA
Primary Mass: 313.0 / 269.0



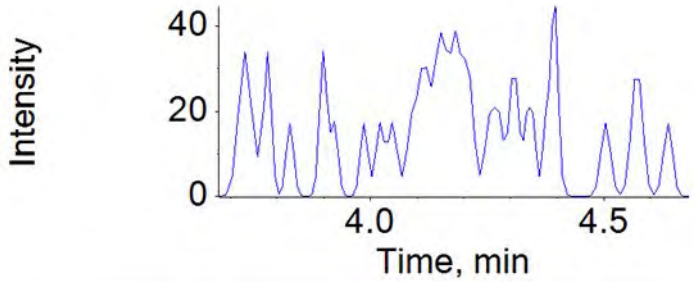
Component: PFHxA_2
Secondary Mass: 313.0 / 119.0



Component: PFPeS
Primary Mass: 349.0 / 80.0



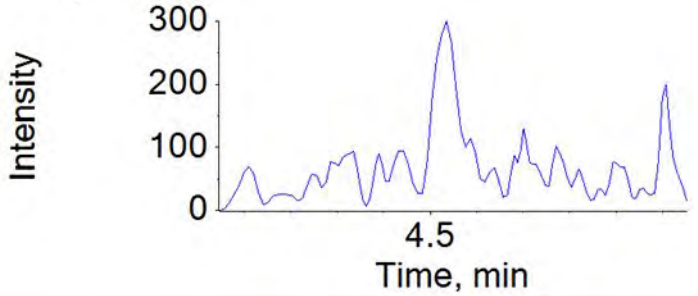
Component: PFPeS_2
Secondary Mass: 349.0 / 99.0



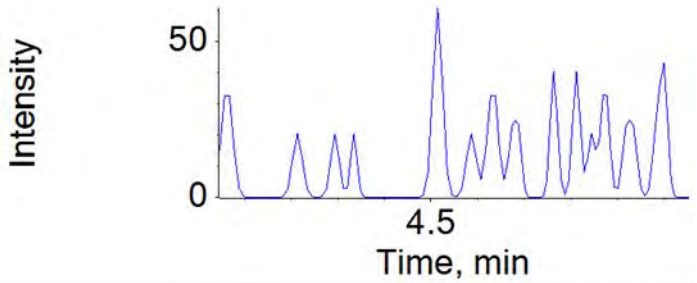
APPROVED
By MCD at 10:13 pm, 11/30/18

REVIEWED
By HMK at 2:27 pm, 12/6/18

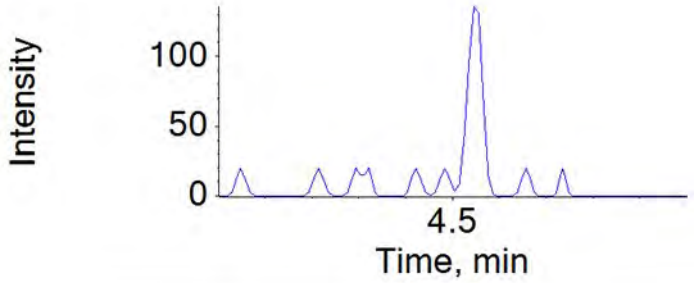
Component: PFHpA
Primary Mass: 363.0 / 319.0



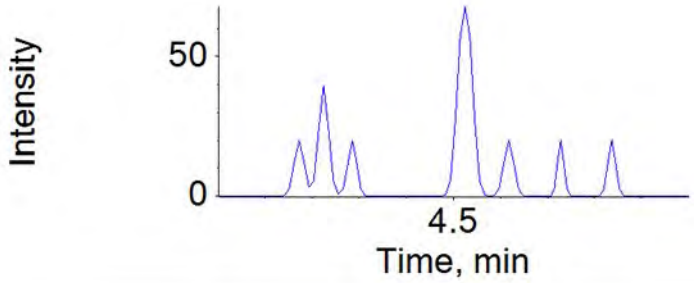
Component: PFHpA_2
Secondary Mass: 363.0 / 169.0



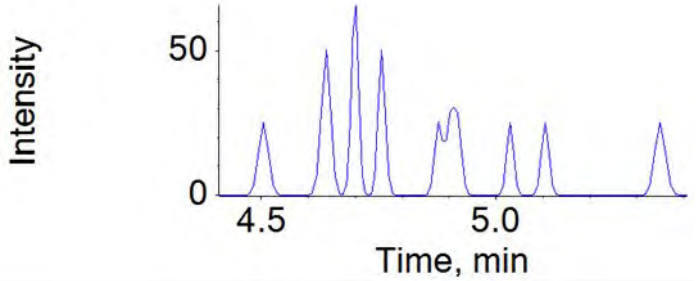
Component: PFHxS
Primary Mass: 399.0 / 80.0



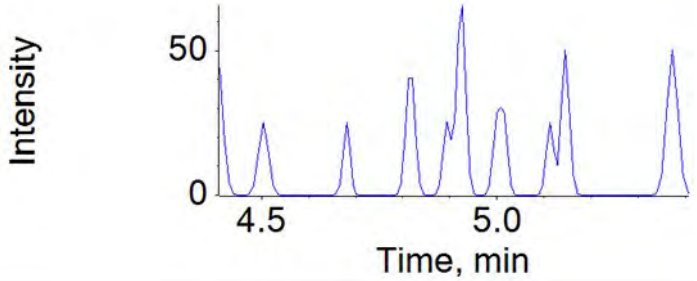
Component: PFHxS_2
Secondary Mass: 399.0 / 99.0



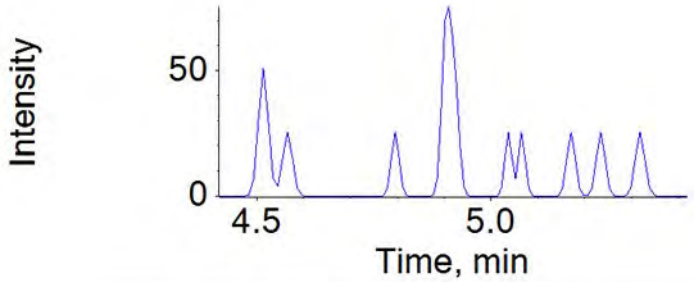
Component: 6:2-FTS
Primary Mass: 427.0 / 407.0



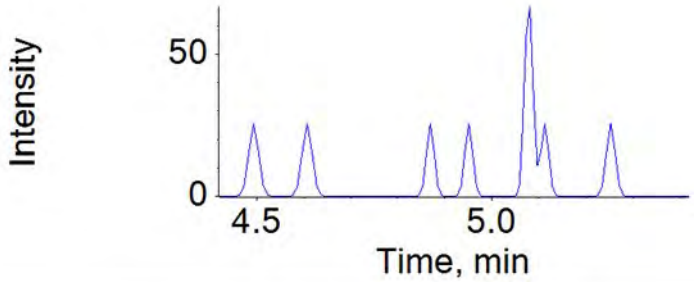
Component: 6:2-FTS_2
Secondary Mass: 427.0 / 81.0



Component: PFHpS
Primary Mass: 449.0 / 80.0



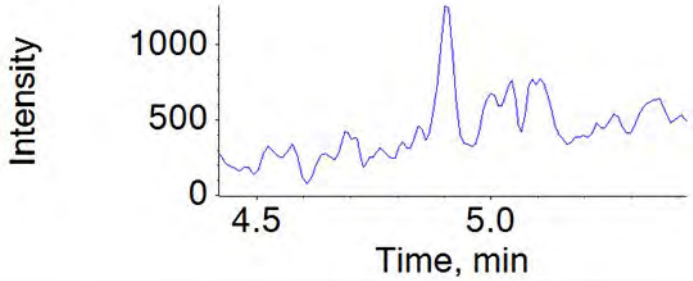
Component: PFHpS_2
Secondary Mass: 449.0 / 99.0



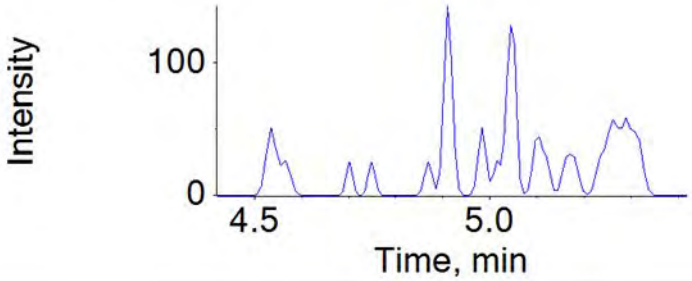
APPROVED
By MCD at 10:13 pm, 11/30/18

REVIEWED
By HMK at 2:27 pm, 12/6/18

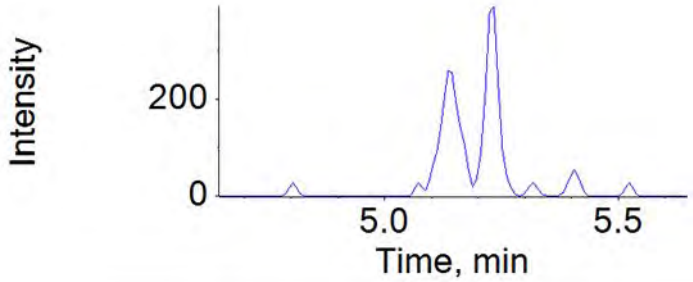
Component: PFOA
Primary Mass: 413.0 / 369.0



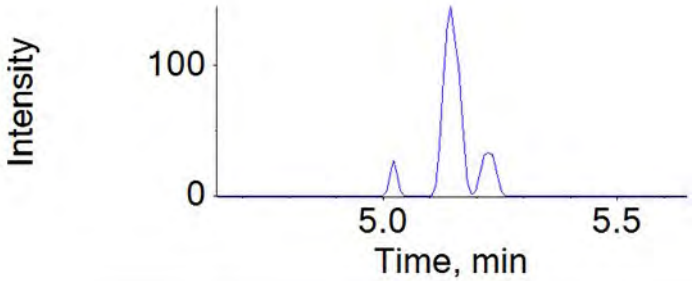
Component: PFOA_2
Secondary Mass: 413.0 / 169.0



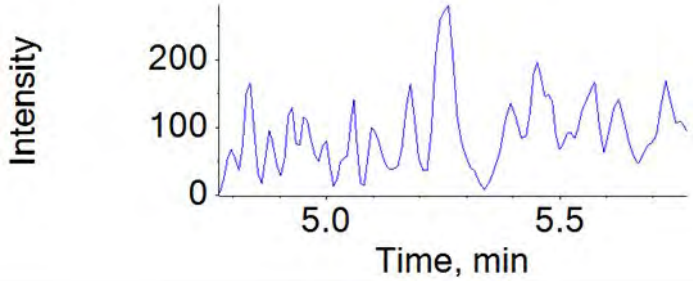
Component: PFOS
Primary Mass: 499.0 / 80.0



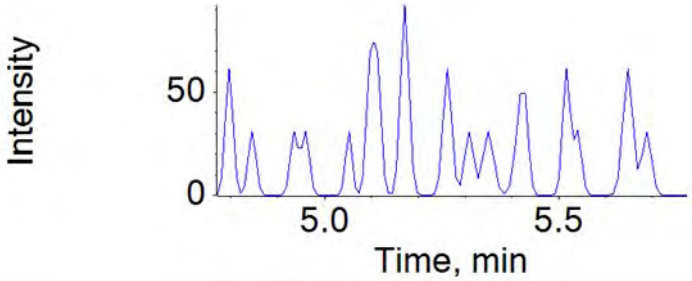
Component: PFOS_2
Secondary Mass: 499.0 / 99.0



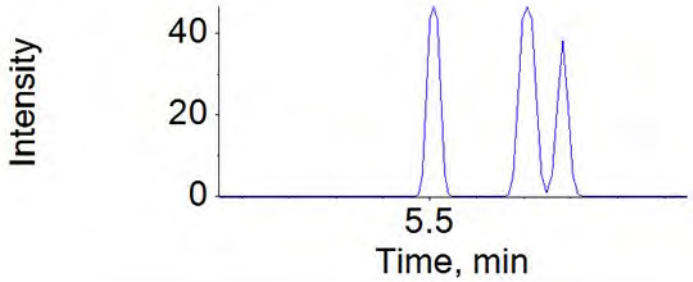
Component: PFNA
Primary Mass: 463.0 / 419.0



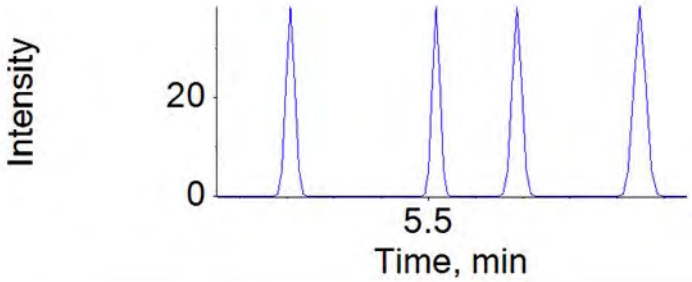
Component: PFNA_2
Secondary Mass: 463.0 / 169.0



Component: PFNS
Primary Mass: 549.0 / 80.0



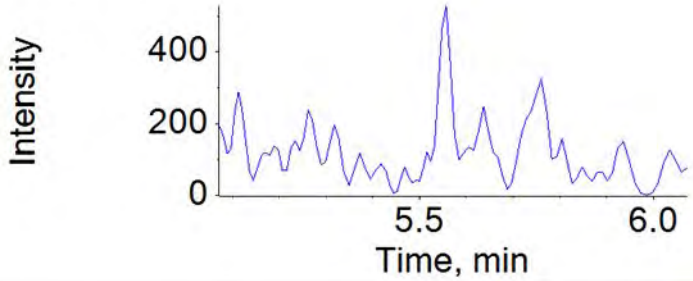
Component: PFNS_2
Secondary Mass: 549.0 / 99.0



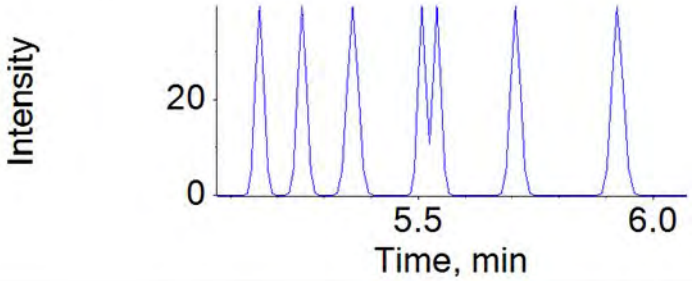
APPROVED
By MCD at 10:13 pm, 11/30/18

REVIEWED
By HMK at 2:27 pm, 12/6/18

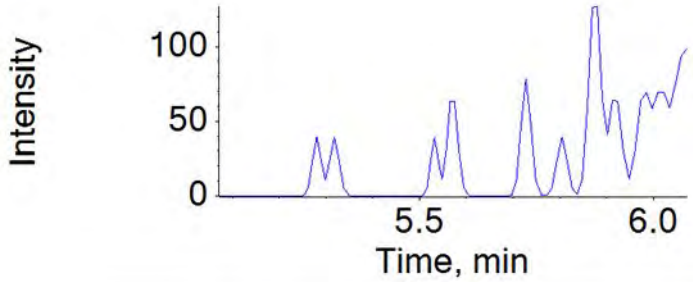
Component: PFDA
Primary Mass: 513.0 / 469.0



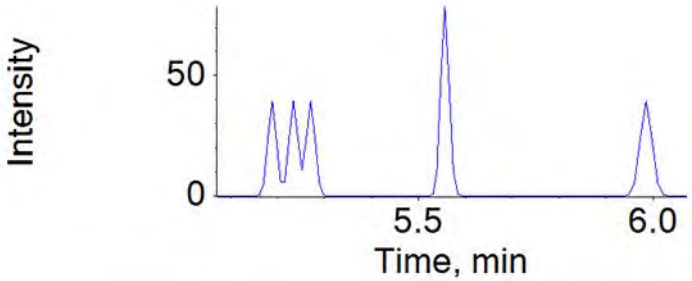
Component: PFDA_2
Secondary Mass: 513.0 / 169.0



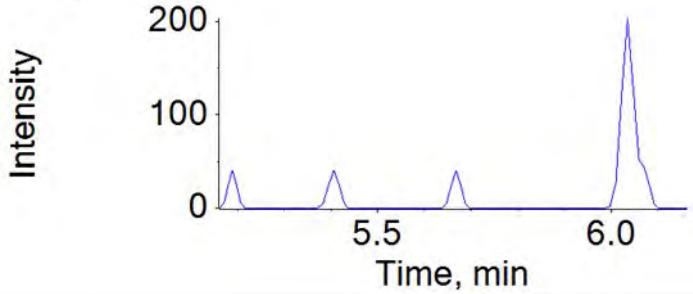
Component: 8:2-FTS
Primary Mass: 527.0 / 507.0



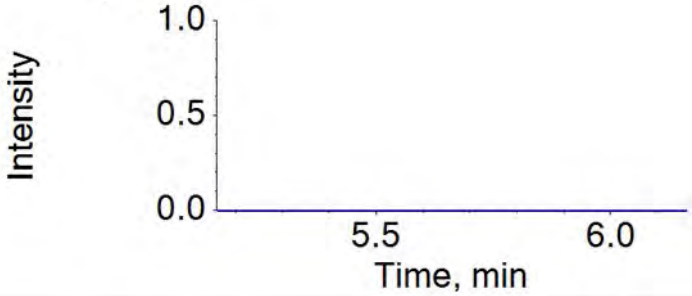
Component: 8:2-FTS_2
Secondary Mass: 527.0 / 81.0



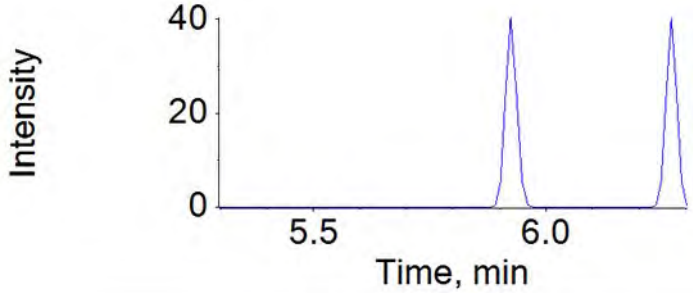
Component: NMeFOSAA
Primary Mass: 570.0 / 419.0



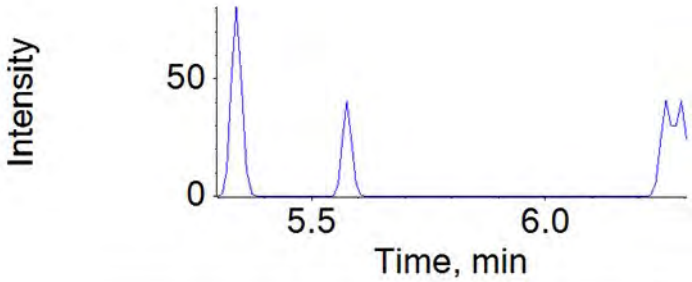
Component: NMeFOSAA_2
Secondary Mass: 570.0 / 483.0



Component: PFDS
Primary Mass: 599.0 / 80.0



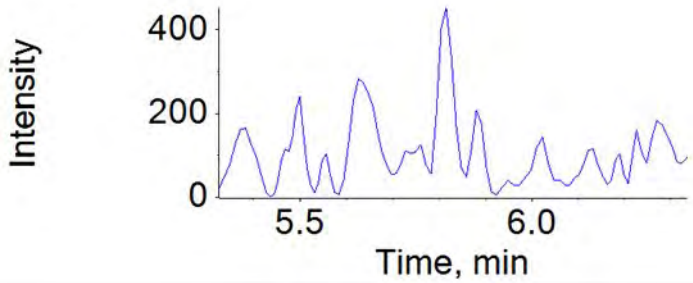
Component: PFDS_2
Secondary Mass: 599.0 / 99.0



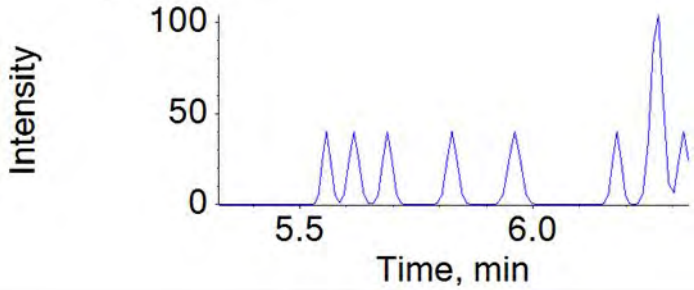
APPROVED
By MCD at 10:13 pm, 11/30/18

REVIEWED
By HMK at 2:27 pm, 12/6/18

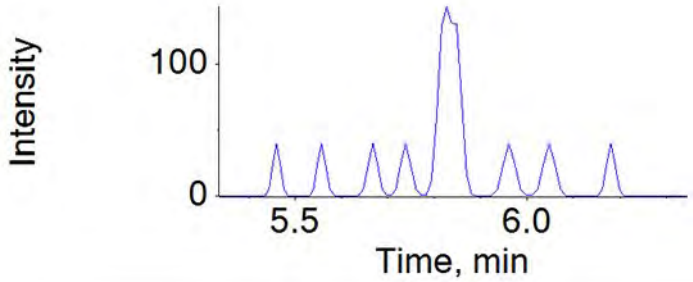
Component: PFUnDA
Primary Mass: 563.0 / 519.0



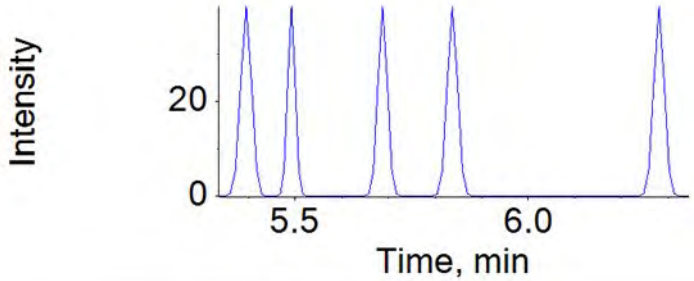
Component: PFUnDA_2
Secondary Mass: 563.0 / 169.0



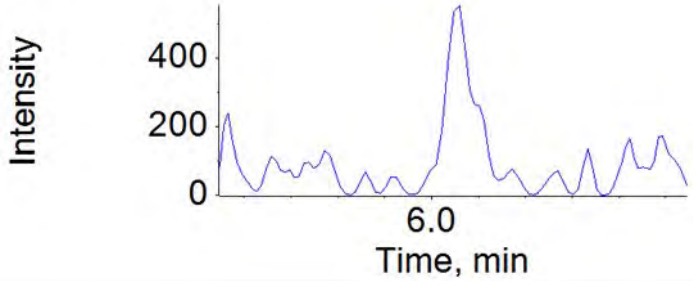
Component: NEtFOSAA
Primary Mass: 584.0 / 419.0



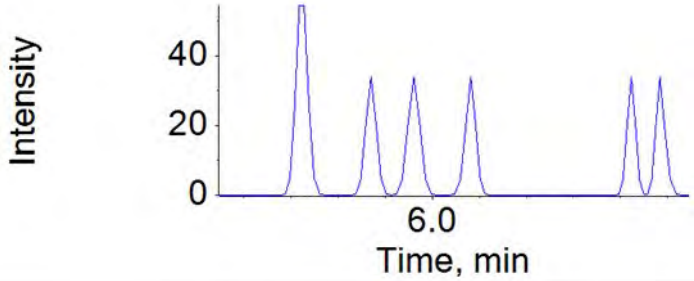
Component: NEtFOSAA_2
Secondary Mass: 584.0 / 526.0



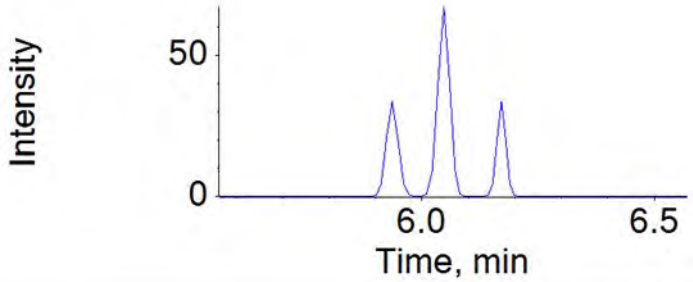
Component: PFDoDA
Primary Mass: 613.0 / 569.0



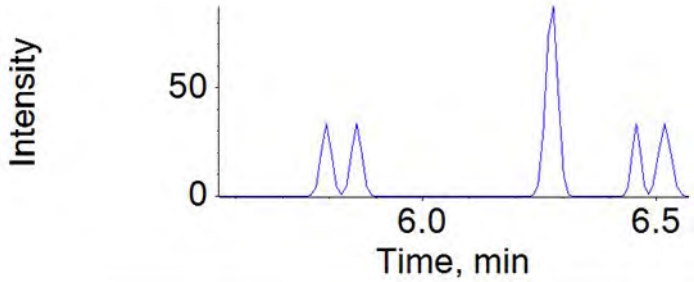
Component: PFDoDA_2
Secondary Mass: 613.0 / 169.0



Component: 10:2-FTS
Primary Mass: 627.0 / 607.0



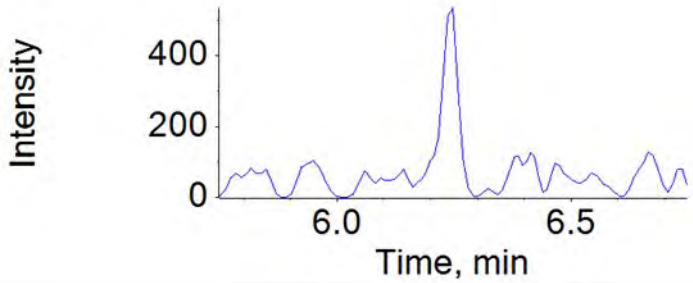
Component: 10:2-FTS_2
Secondary Mass: 627.0 / 81.0



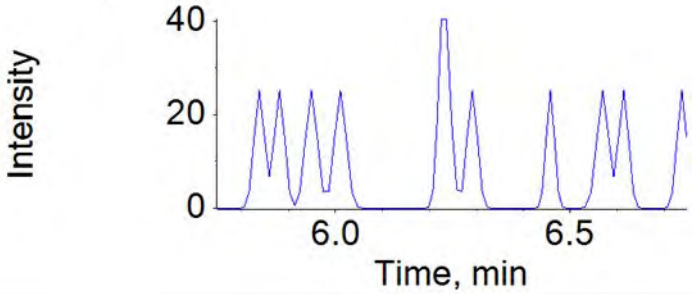
APPROVED
By MCD at 10:13 pm, 11/30/18

REVIEWED
By HMK at 2:27 pm, 12/6/18

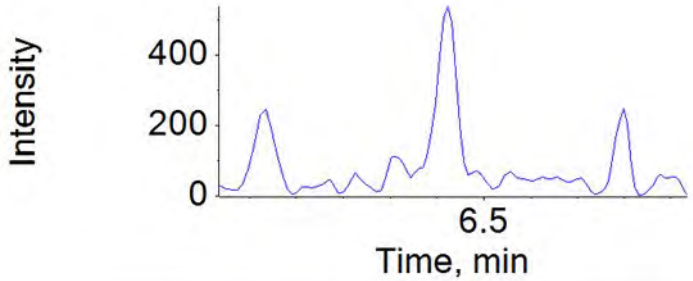
Component: PFTrDA
Primary Mass: 663.0 / 619.0



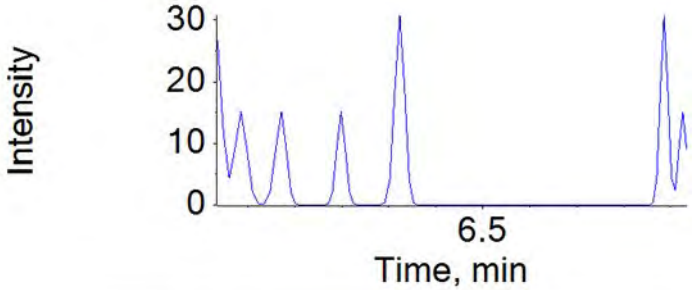
Component: PFTrDA_2
Secondary Mass: 663.0 / 169.0



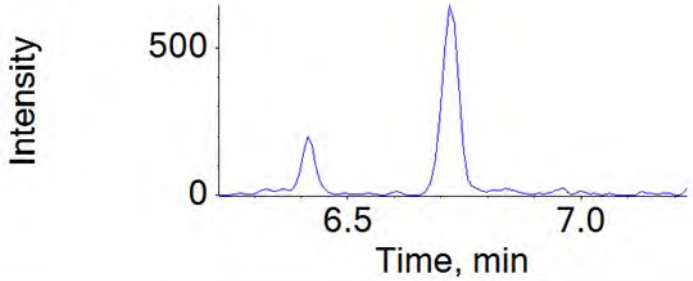
Component: PFTeDA
Primary Mass: 713.0 / 669.0



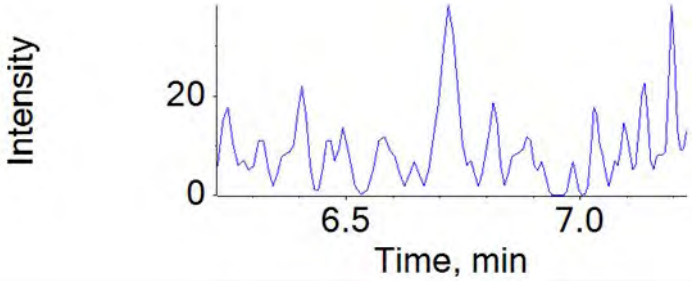
Component: PFTeDA_2
Secondary Mass: 713.0 / 169.0



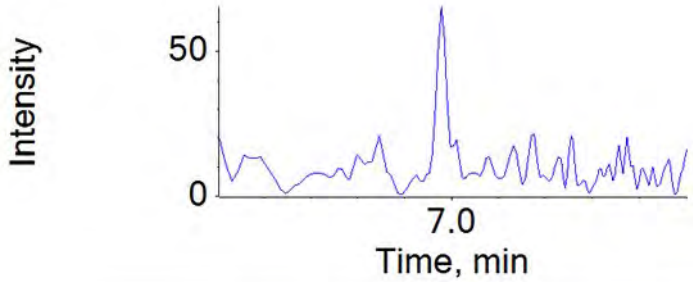
Component: PFHxDA
Primary Mass: 813.0 / 769.0



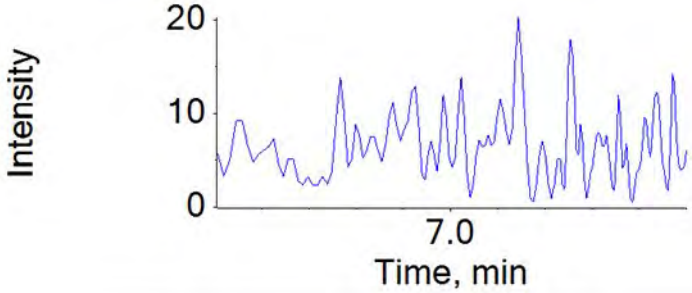
Component: PFHxDA_2
Secondary Mass: 813.0 / 169.0



Component: PFODA
Primary Mass: 913.0 / 869.0



Component: PFODA_2
Secondary Mass: 913.0 / 169.0



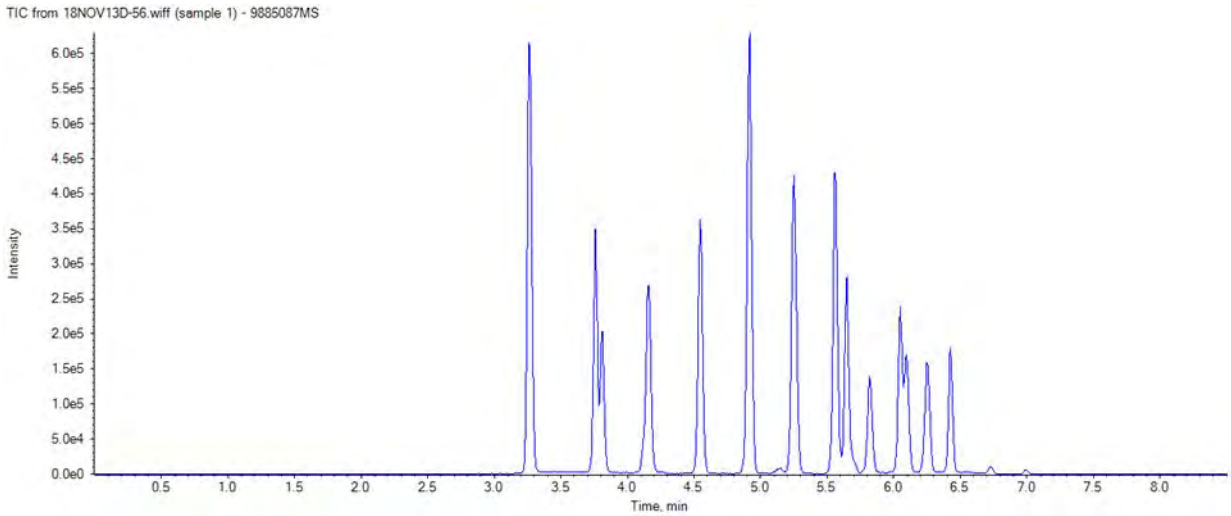
APPROVED
By MCD at 10:13 pm, 11/30/18

REVIEWED
By HMK at 2:27 pm, 12/6/18

Matrix Spike Recovery

ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM
Result Table: 18316011 11/14/2018 4:22:26 PM
Acquisition Method: 18AUG13_3uL.dam

Instrument Name:	Sample Name:	Sample ID:	Sample File:	Acquisition Date:
LM27631	9885087MS	EPA 537 mod QSM 5.1 table B-15 18316011 OU1-Bldg27-S-01-03 MS Grab Soil	18NOV13D-56.wiff	2018-11-13T17:59:32



Injection Standard Area Reference File**:** 18NOV13D-05

Injection Standard Name	Inj Std Conc	Injection Std Peak Area	Reference Injection Standard Area	Injection Std %Diff	Injection Std %Diff Limit	Injection Std %Diff OOS
13C3-PFBA	5.00	732530.1	661126.9	11	50	
13C2-PFOA	5.00	528432.1	466902.6	13	50	
13C4-PFOS	4.78	275958.8	247446.9	12	50	
13C2-PFDA	5.00	327487.3	295381.6	11	50	

APPROVED
By MCD at 4:51 pm, 11/14/18

REVIEWED
By HMK at 12:21 pm, 11/15/18

Matrix Spike Recovery

ICAL Name: 18NOV12DCAL **Result Table:** 18316011 11/14/2018 4:22:26 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Instrument Name:	Sample Name:	Sample ID:	Sample File:	Acquisition Date:
LM27631	9885087MS	EPA 537 mod QSM 5.1 table B-15 18316011 OU1-Bldg27-S-01-03 MS Grab Soil	18NOV13D-56.wiff	2018-11-13T17:59:32

Analyte Name	Analyte Area	Ext Std Area	Area Ratio	Adj Actual Conc	Sample Result	%REC	% REC Limit	%REC OOS
PFBS	45672.4	344120.6	0.133	1.105	1.158	105	70-130	
PFHxA	101223.7	517287.5	0.196	1.248	1.499	120	70-130	
PFHpA	108544.7	428178.1	0.254	1.248	1.542	124	70-130	
PFHxS	36986.7	257399.0	0.144	1.180	1.278	108	70-130	
PFOA	107588.3	706924.6	0.152	1.248	1.491	120	70-130	
PFOS	133269.9	220720.5	0.604	1.193	4.845	406	70-130	OOS
PFNA	90852.6	365272.5	0.249	1.248	1.646	132	70-130	OOS
PFDA	78024.6	521266.2	0.150	1.248	1.456	117	70-130	
NMeFOSAA	4601.9	33798.3	0.136	1.248	1.412	113	70-130	
PFUnDA	60570.6	213571.6	0.284	1.248	1.360	109	70-130	
NEtFOSAA	4593.7	33836.2	0.136	1.248	1.306	105	70-130	
PFDoDA	63144.7	436467.5	0.145	1.248	1.352	108	70-130	
PFTrDA	54730.6	436467.5	0.125	1.248	1.452	116	70-130	
PFTeDA	43113.9	325309.1	0.133	1.248	1.363	109	70-130	

APPROVED
By MCD at 4:51 pm, 11/14/18

REVIEWED
By HMK at 12:21 pm, 11/15/18

Matrix Spike Recovery

ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM
Result Table: 18316011 11/14/2018 4:22:26 PM
Acquisition Method: 18AUG13_3uL.dam

APPROVED
By MCD at 4:51 pm, 11/14/18

REVIEWED
By HMK at 12:21 pm, 11/15/18

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LC-MS/MS
DOD Analysis Report

Printed: 11/14/2018 4:26:00 PM
Template: DOD-Sample-18JUN22.docx

ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM
Result Table: 18316011 11/14/2018 4:24:36 PM
Acquisition Method: 18AUG13_3uL.dam

Sample Name:	9885087MS			**Data File:**		18NOV13D-56.wiff
Sample ID:	EPA 537 mod QSM 5.1 table B-15 18316011 OU1-Bldg27-S-01-03 MS Grab Soil			**Acquis Date:**		2018-11-13T17:59:32
Sample Type:	Quality Control			**Instrument:**		LM27631
Vial Position:	54			**Acquis Method:**		18AUG13_3uL.dam
Injection Vol:	3.00			**Result Table:**		18316011
QMethod File:	18AUG20QM			**ICAL Name:**		18NOV12DCAL
Batch Number:	18316011			**Operator:**		MCD7824
Sample Wt.:	1.09000			**Dilution Factor:**		1.00
Sample Vol.:	1.000			**Prep Factor:**		2.000

Injection Standard Peak Table

Injection Standard Area Reference File: 18NOV13D-05

Injection Standard Name	Inj Std Conc	Injection Std Peak Area	Rreference Injection Standard Area	Injection Std %Diff	Injection Std %Diff Limit	Injection Std %Diff OOS
13C3-PFBA	5.0	732530.1	661126.9	11	50	
13C2-PFOA	5.0	528432.1	466902.6	13	50	
13C4-PFOS	4.8	275958.8	247446.9	12	50	
13C2-PFDA	5.0	327487.3	295381.6	11	50	

Extraction Standard Peak Table

Extraction Standard Name	Ext Std Area	Inj Std Name	Inj Std Area	Area Ratio	Ext Std Conc	Ext Std Result	Ext Std %REC	Ext Std %REC Limit	Ext Std OOS
E13C3-PFBS	344120.6	13C3-PFBA	732530.1	0.470	8.532	6.085	71	50-150	
E13C5-PFHxA	517287.5	13C2-PFOA	528432.1	0.979	9.174	6.488	71	50-150	
E13C3-PFHxS	257399.0	13C2-PFOA	528432.1	0.487	8.679	6.133	71	50-150	
E13C4-PFHpA	428178.1	13C2-PFOA	528432.1	0.810	9.174	6.698	73	50-150	
E13C8-PFOA	706924.6	13C2-PFOA	528432.1	1.338	9.174	6.763	74	50-150	
E13C8-PFOS	220720.5	13C4-PFOS	275958.8	0.800	8.771	6.503	74	50-150	
E13C9-PFNA	365272.5	13C4-PFOS	275958.8	1.324	9.174	6.772	74	50-150	
E13C6-PFDA	521266.2	13C2-PFDA	327487.4	1.592	9.174	6.815	74	50-150	
Ed3-NMeFOSAA	33798.3	13C2-PFDA	327487.4	0.103	9.174	3.418	37	50-150	OOS
E13C7-PFUnDA	213571.6	13C2-PFDA	327487.4	0.652	9.174	6.947	76	50-150	
Ed5-NEtFOSAA	33836.2	13C2-PFDA	327487.4	0.103	9.174	4.011	44	50-150	OOS
E13C2-PFDoDA	436467.5	13C2-PFDA	327487.4	1.333	9.174	6.349	69	50-150	
E13C2-PFTeDA	325309.1	13C2-PFDA	327487.4	0.993	9.174	6.399	70	50-150	

APPROVED
By MCD at 4:51 pm, 11/14/18

REVIEWED
By HMK at 12:21 pm, 11/15/18

ICAL Name: 18NOV12DCAL **Result Table:** 18316011 11/14/2018 4:24:36 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

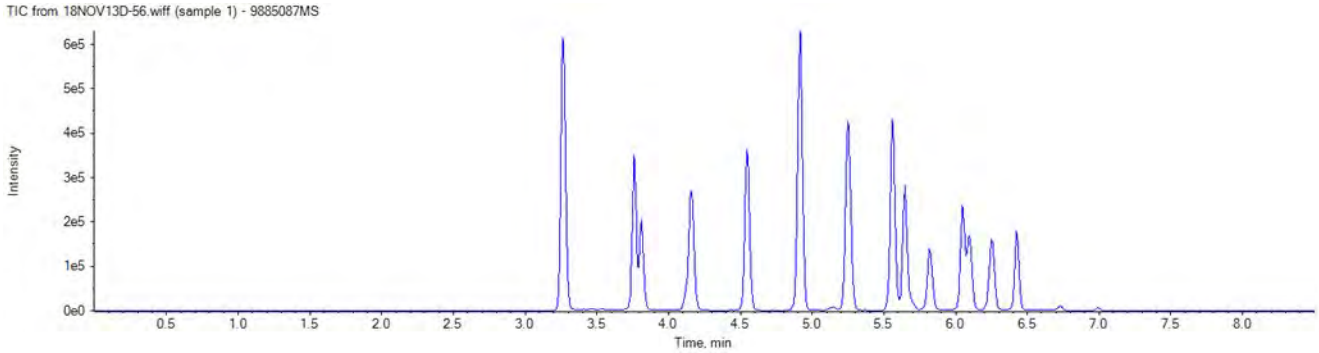
Analyte Quantitation Peak Table

Sample Name: 9885087MS **Instrument Name:** LM27631 **File Name:** 18NOV13D-56.wiff

Sample Wt	Sample Vol	Dilution Factor	PrepFactor
1.09000	1.000	1.00	2.000

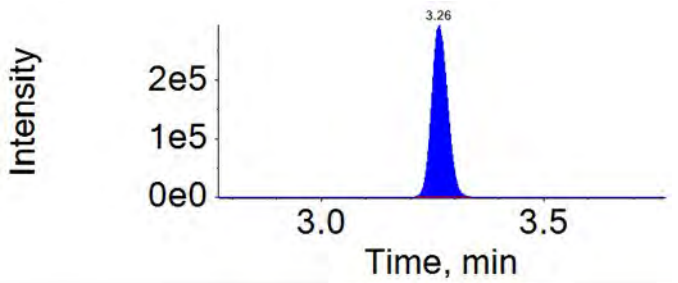
Analyte Name	RT	RRT	Analyte Area Response	E	Int Typ	ES Name	ES RT	ES Area Response	Area Ratio	Sample Result (ng/g)
PFBS	3.81	1.000	45672.4		A	13C3-PFBS	3.81	344120.6	0.133	1.158
PFHxA	4.16	1.000	101223.7		A	13C5-PFHxA	4.16	517287.5	0.196	1.499
PFHpA	4.55	1.000	108544.7		A	13C4-PFHpA	4.55	428178.1	0.254	1.542
PFHxS	4.55	1.000	36986.7		A	13C3-PFHxS	4.55	257399.0	0.144	1.278
PFOA	4.91	1.000	107588.3		A	13C8-PFOA	4.92	706924.6	0.152	1.491
PFOS	5.24	1.000	133269.9		M	13C8-PFOS	5.25	220720.5	0.604	4.845
PFNA	5.26	1.000	90852.6		A	13C9-PFNA	5.26	365272.5	0.249	1.646
PFDA	5.56	1.000	78024.6		A	13C6-PFDA	5.56	521266.2	0.150	1.456
NMeFOSAA	5.71	1.000	4601.9		A	d3-NMeFOSAA	5.70	33798.3	0.136	1.412
PFUnDA	5.82	1.000	60570.6		A	13C7-PFUnDA	5.82	213571.6	0.284	1.360
NEtFOSAA	5.84	1.000	4593.7		A	d5-NEtFOSAA	5.83	33836.2	0.136	1.306
PFDoDA	6.05	1.000	63144.7		A	13C2-PFDoDA	6.05	436467.5	0.145	1.352
PFTrDA	6.25	1.030	54730.6		A	13C2-PFDoDA	6.05	436467.5	0.125	1.452
PFTeDA	6.43	1.000	43113.9		M	13C2-PFTeDA	6.43	325309.1	0.133	1.363

Total Ion Chromatogram

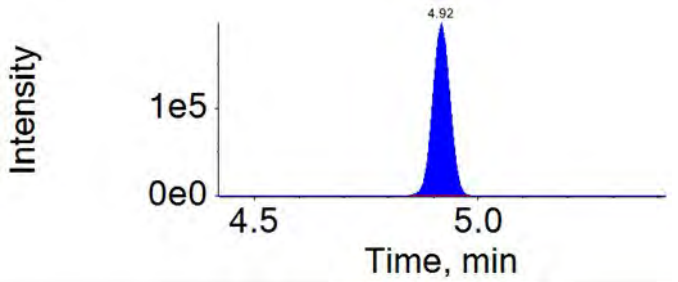


ICAL Name: 18NOV12DCAL **Result Table:** 18316011 11/14/2018 4:24:36 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

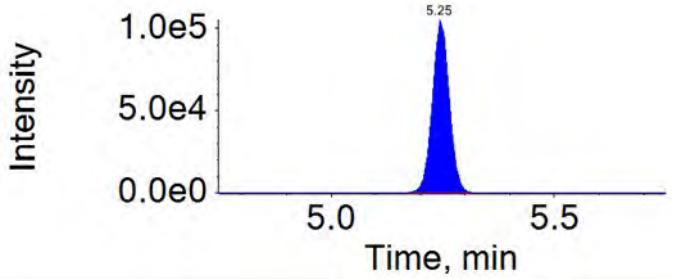
Injection Standard: 13C3-PFBA
216.0 / 172.0



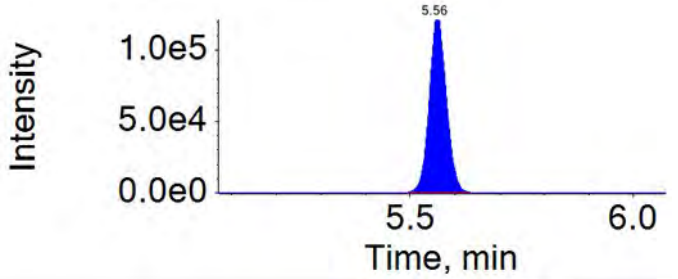
Injection Standard: 13C2-PFOA
415.0 / 370.0



Injection Standard: 13C4-PFOS
503.0 / 80.0

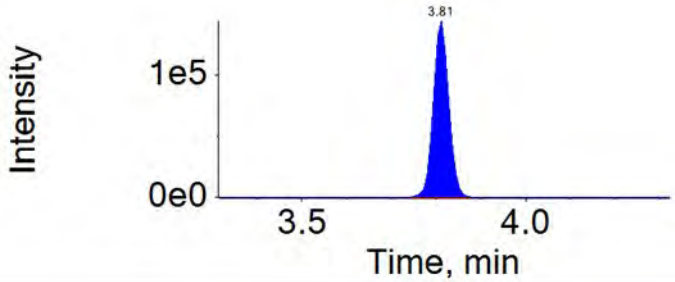


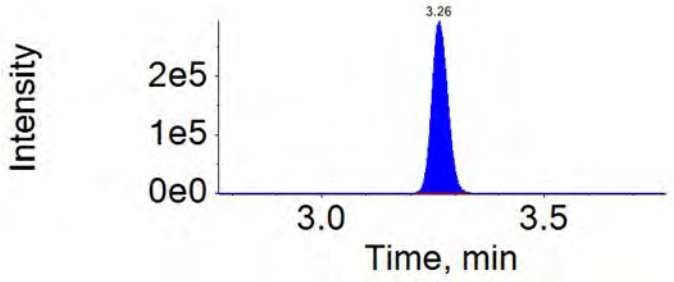
Injection Standard: 13C2-PFDA
515.0 / 470.0



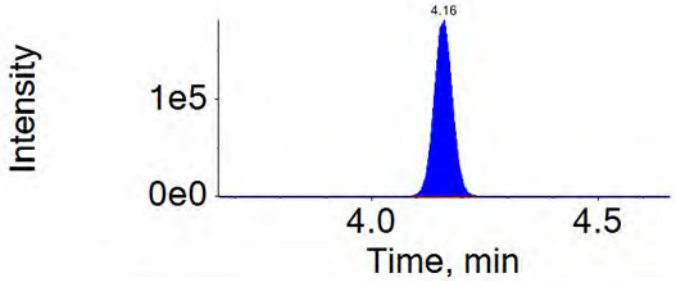
ICAL Name: 18NOV12DCAL **Result Table:** 18316011 11/14/2018 4:24:36 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

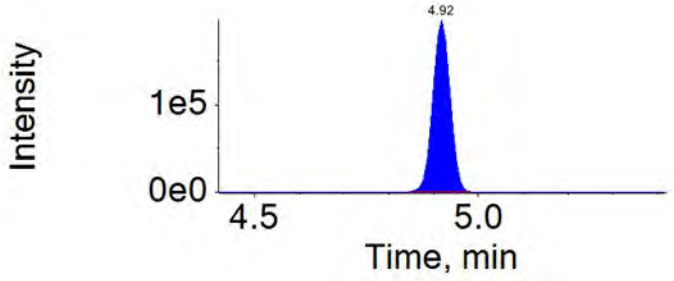
Extraction Standard: E13C3-PFBS	Injection Standard: 13C3-PFBA
302.0 / 80.0	216.0 / 172.0



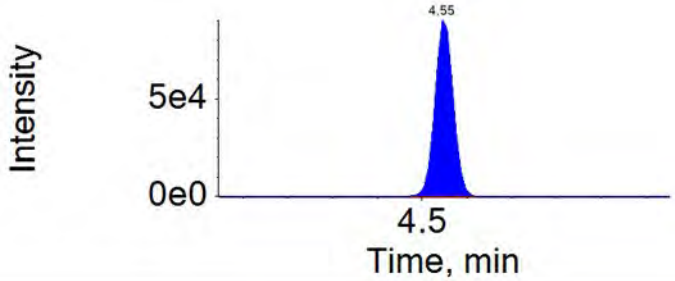


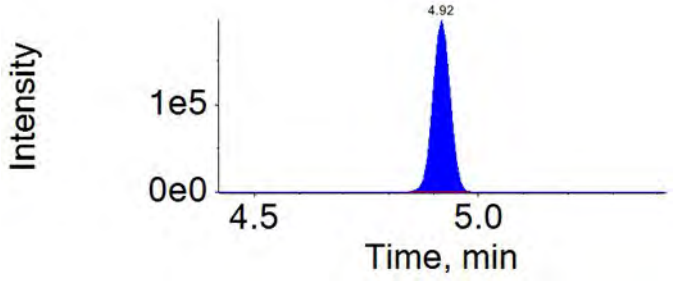
Extraction Standard: E13C5-PFHxA	Injection Standard: 13C2-PFOA
318.0 / 273.0	415.0 / 370.0



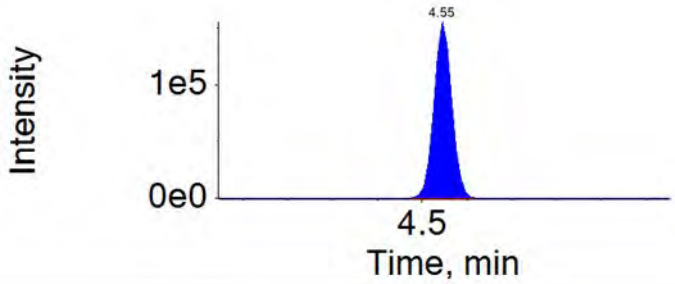


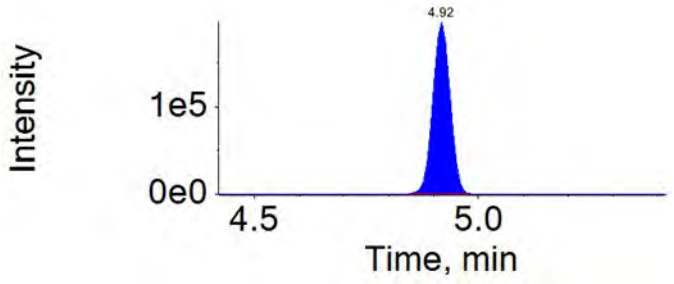
Extraction Standard: E13C3-PFHxS	Injection Standard: 13C2-PFOA
402.0 / 80.0	415.0 / 370.0





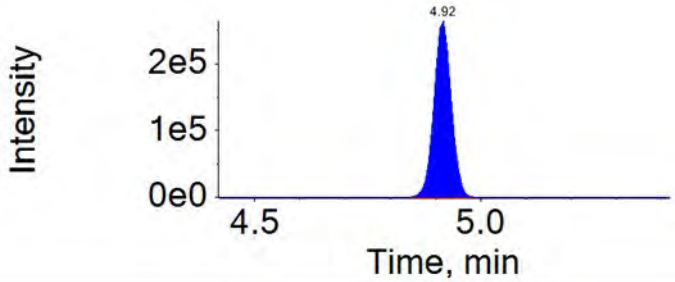
Extraction Standard: E13C4-PFHpA	Injection Standard: 13C2-PFOA
367.0 / 322.0	415.0 / 370.0

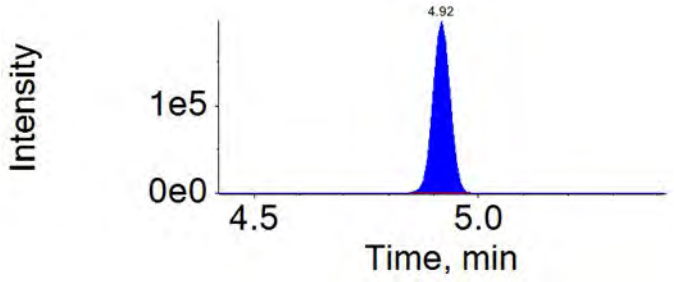




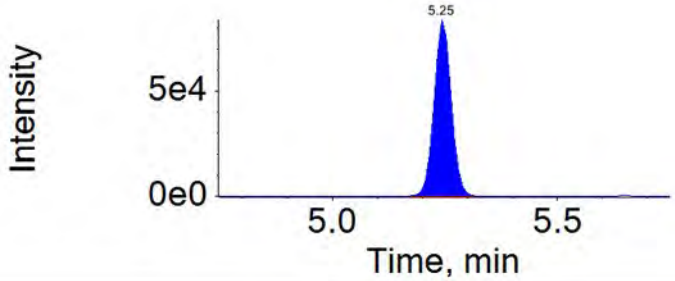
ICAL Name: 18NOV12DCAL **Result Table:** 18316011 11/14/2018 4:24:36 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

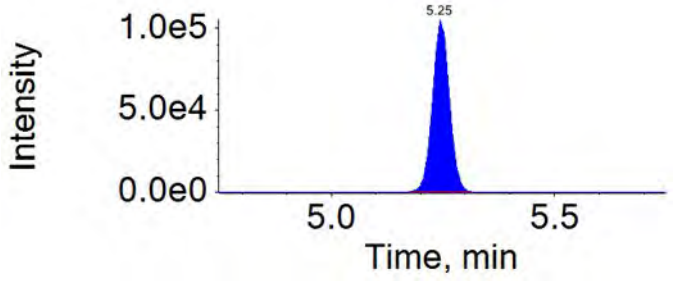
Extraction Standard: E13C8-PFOA	Injection Standard: 13C2-PFOA
421.0 / 376.0	415.0 / 370.0



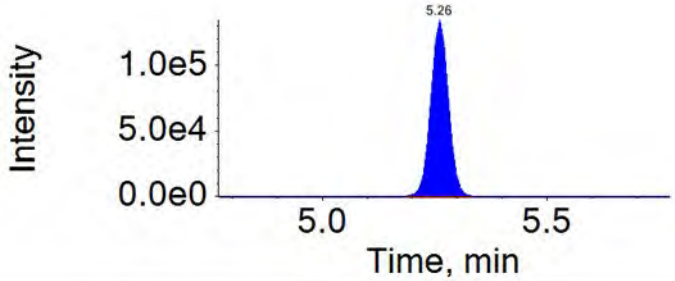


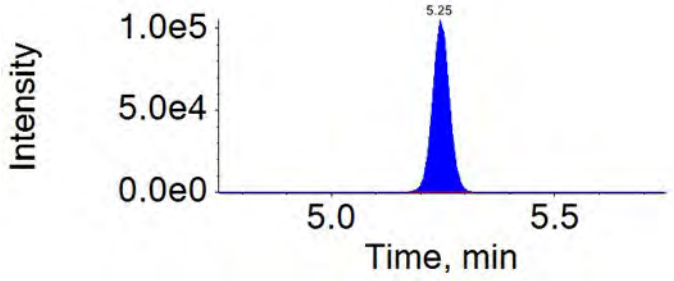
Extraction Standard: E13C8-PFOS	Injection Standard: 13C4-PFOS
507.0 / 80.0	503.0 / 80.0



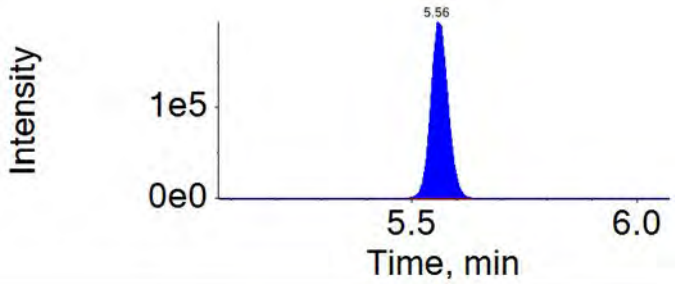


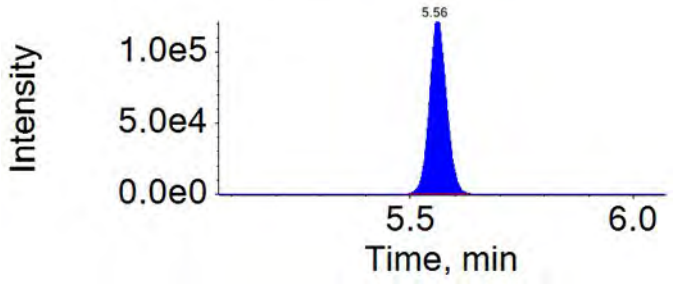
Extraction Standard: E13C9-PFNA	Injection Standard: 13C4-PFOS
472.0 / 427.0	503.0 / 80.0





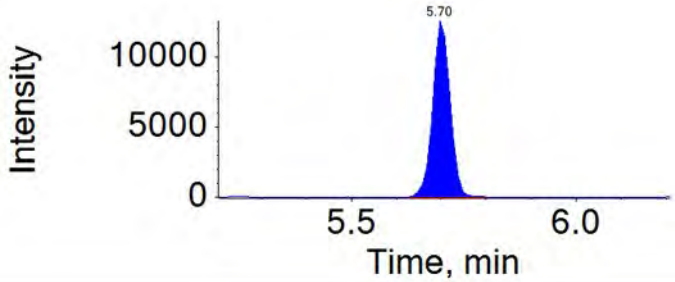
Extraction Standard: E13C6-PFDA	Injection Standard: 13C2-PFDA
519.0 / 474.0	515.0 / 470.0

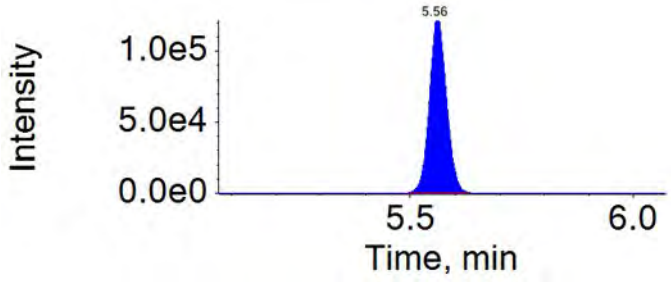




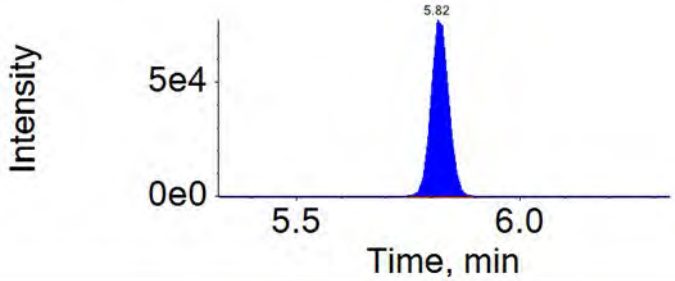
ICAL Name: 18NOV12DCAL **Result Table:** 18316011 11/14/2018 4:24:36 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

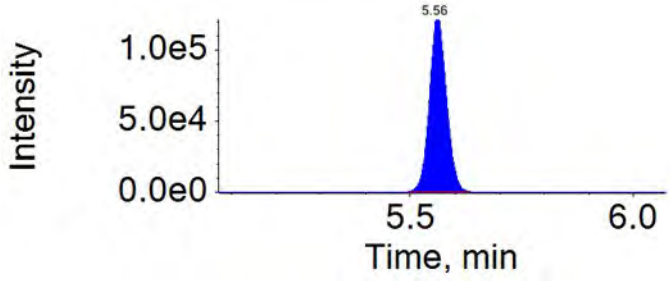
Extraction Standard: Ed3-NMeFOSAA	Injection Standard: 13C2-PFDA
573.0 / 419.0	515.0 / 470.0



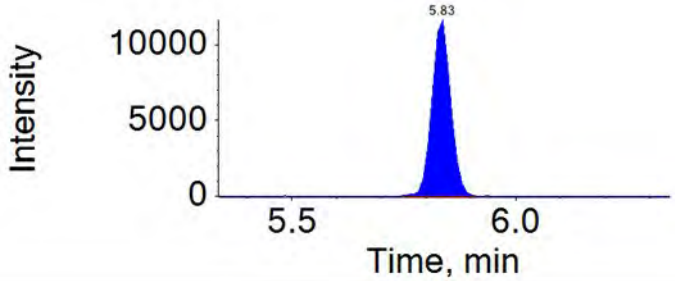


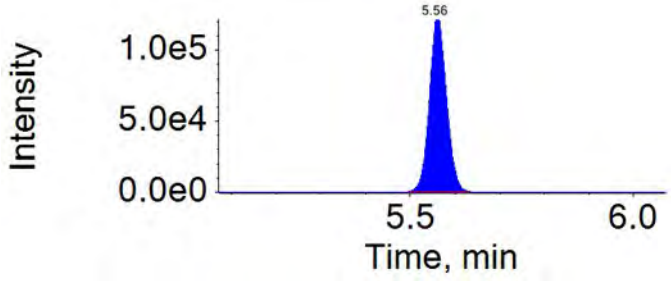
Extraction Standard: E13C7-PFUnDA	Injection Standard: 13C2-PFDA
570.0 / 525.0	515.0 / 470.0



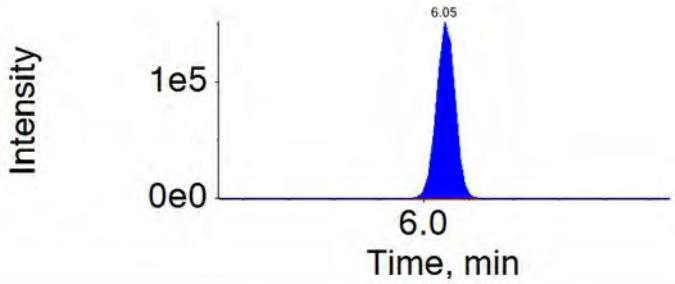


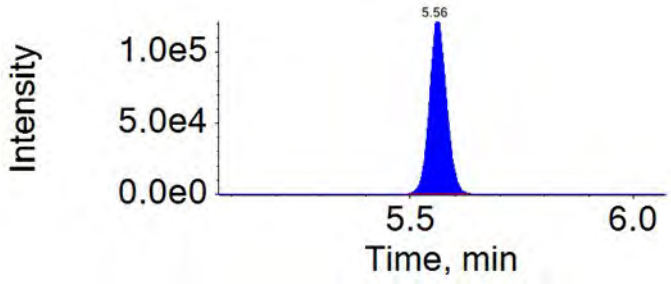
Extraction Standard: Ed5-NEtFOSAA	Injection Standard: 13C2-PFDA
589.0 / 419.0	515.0 / 470.0





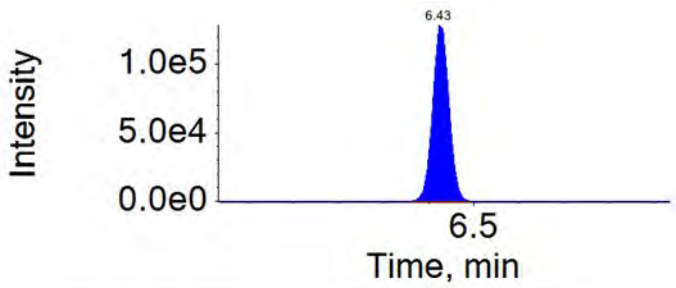
Extraction Standard: E13C2-PFDoDA	Injection Standard: 13C2-PFDA
615.0 / 570.0	515.0 / 470.0

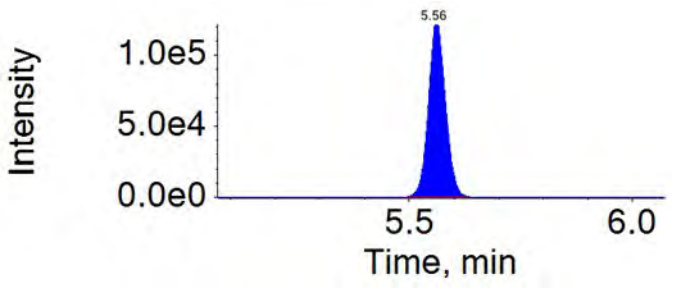




ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM
Result Table: 18316011 11/14/2018 4:24:36 PM
Acquisition Method: 18AUG13_3uL.dam

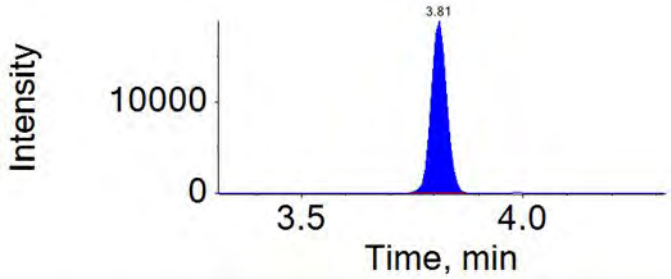
Extraction Standard: E13C2-PFTeDA	Injection Standard: 13C2-PFDA
715.0 / 670.0	515.0 / 470.0



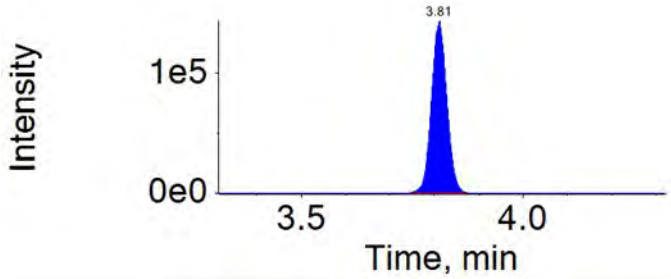


ICAL Name: 18NOV12DCAL **Result Table:** 18316011 11/14/2018 4:24:36 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

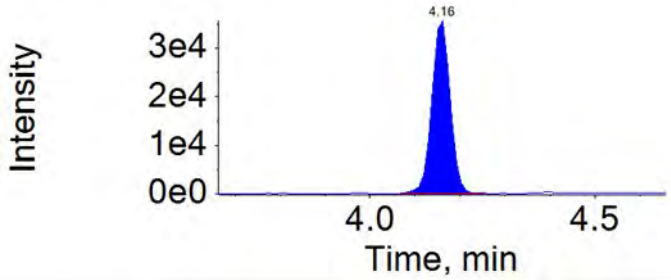
Analyte: PFBS
299.0 / 80.0



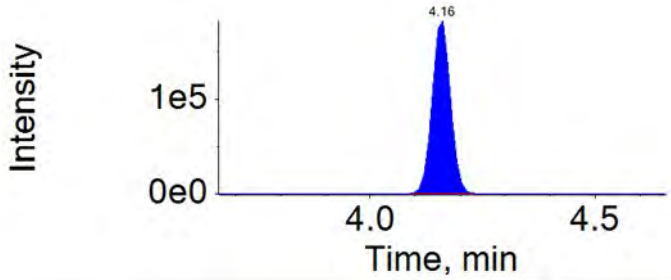
Extraction Standard: 13C3-PFBS
302.0 / 80.0



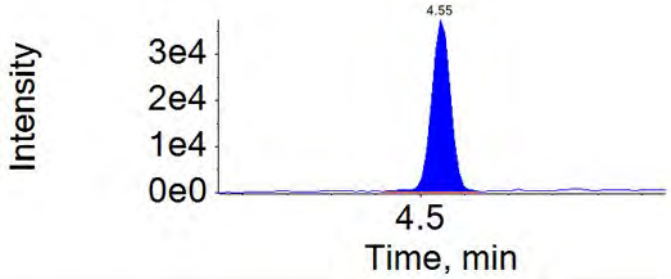
Analyte: PFHxA
313.0 / 269.0



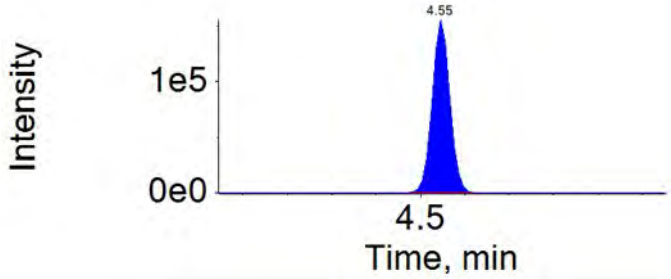
Extraction Standard: 13C5-PFHxA
318.0 / 273.0



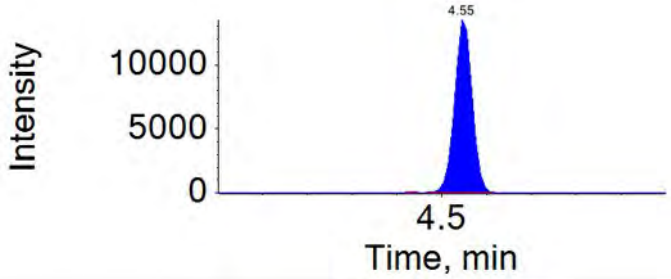
Analyte: PFHpA
363.0 / 319.0



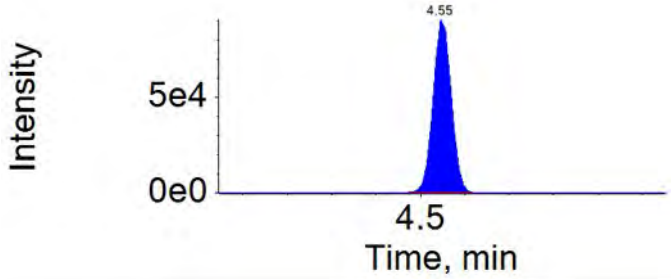
Extraction Standard: 13C4-PFHpA
367.0 / 322.0



Analyte: PFHxS
399.0 / 80.0



Extraction Standard: 13C3-PFHxS
402.0 / 80.0

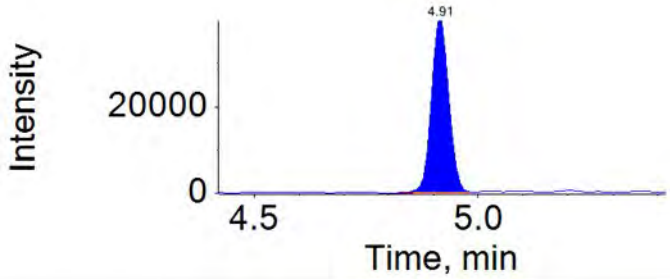


APPROVED
By MCD at 4:51 pm, 11/14/18

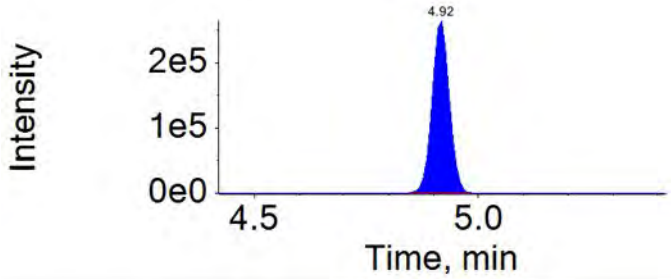
REVIEWED
By HMK at 12:21 pm, 11/15/18

ICAL Name: 18NOV12DCAL **Result Table:** 18316011 11/14/2018 4:24:36 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

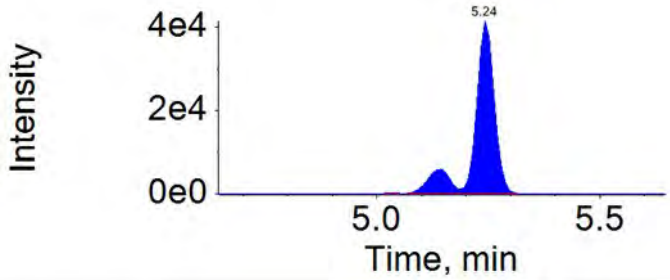
Analyte: PFOA
413.0 / 369.0



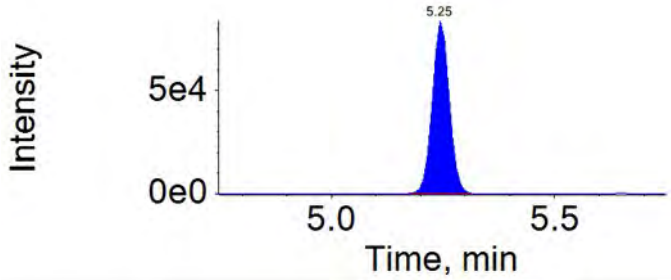
Extraction Standard: 13C8-PFOA
421.0 / 376.0



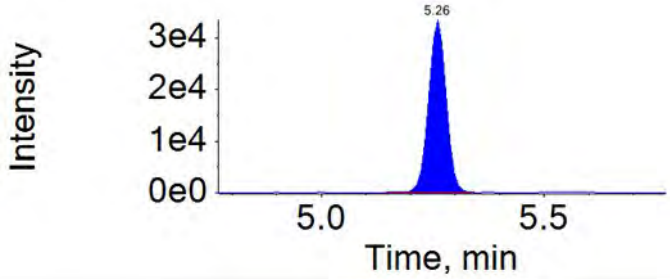
Analyte: PFOS
499.0 / 80.0



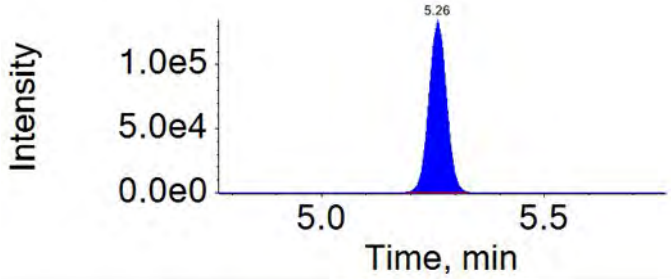
Extraction Standard: 13C8-PFOS
507.0 / 80.0



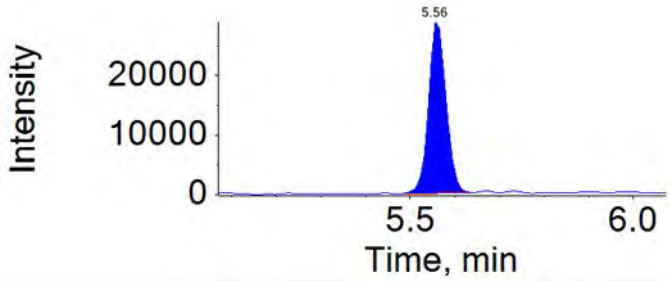
Analyte: PFNA
463.0 / 419.0



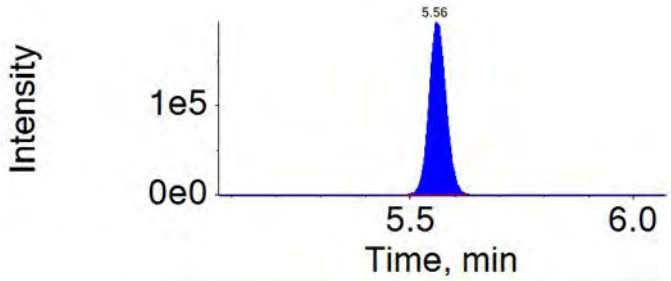
Extraction Standard: 13C9-PFNA
472.0 / 427.0



Analyte: PFDA
513.0 / 469.0



Extraction Standard: 13C6-PFDA
519.0 / 474.0

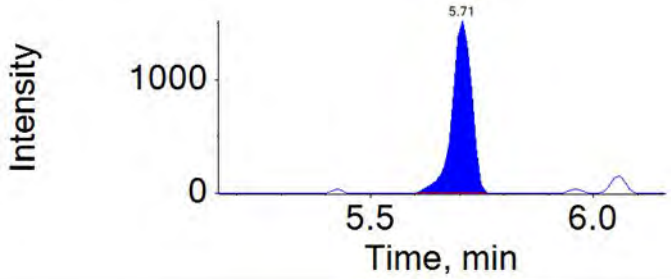


APPROVED
By MCD at 4:51 pm, 11/14/18

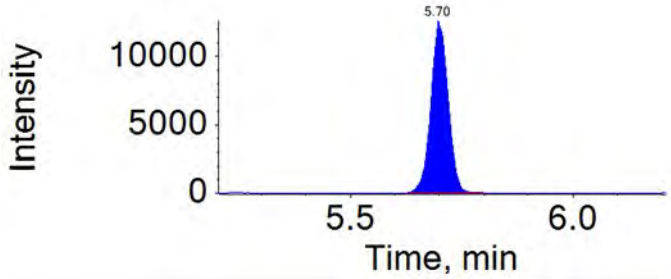
REVIEWED
By HMK at 12:21 pm, 11/15/18

ICAL Name: 18NOV12DCAL **Result Table:** 18316011 11/14/2018 4:24:36 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

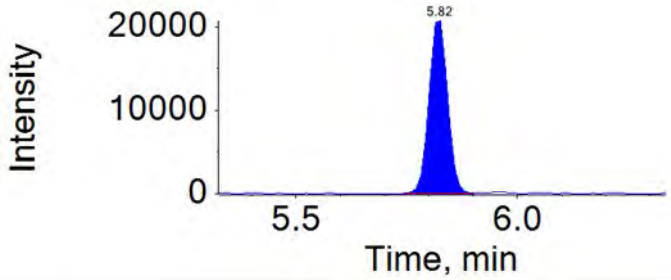
Analyte: NMeFOSAA
570.0 / 419.0



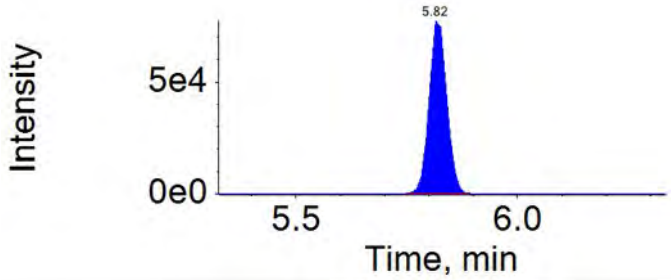
Extraction Standard: d3-NMeFOSAA
573.0 / 419.0



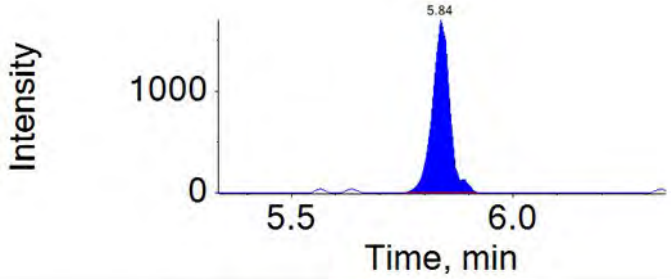
Analyte: PFUnDA
563.0 / 519.0



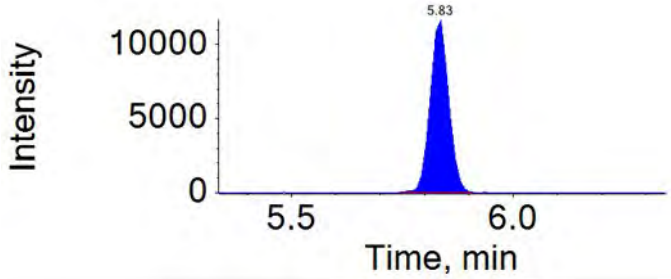
Extraction Standard: 13C7-PFUnDA
570.0 / 525.0



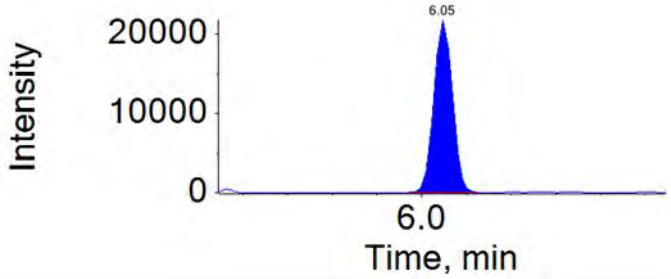
Analyte: NEtFOSAA
584.0 / 419.0



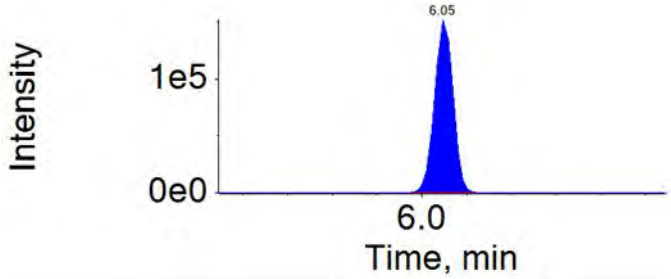
Extraction Standard: d5-NEtFOSAA
589.0 / 419.0



Analyte: PFDoDA
613.0 / 569.0

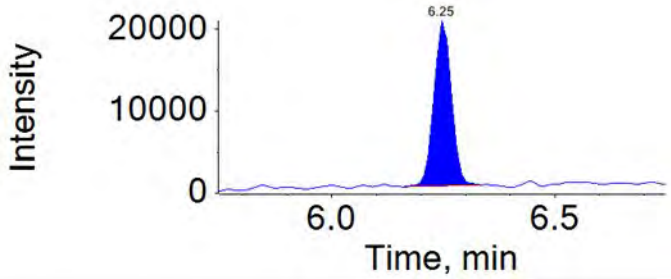


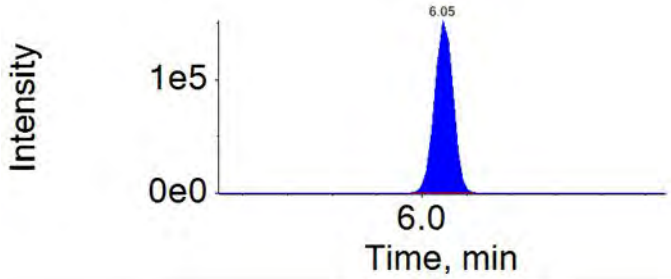
Extraction Standard: 13C2-PFDoDA
615.0 / 570.0



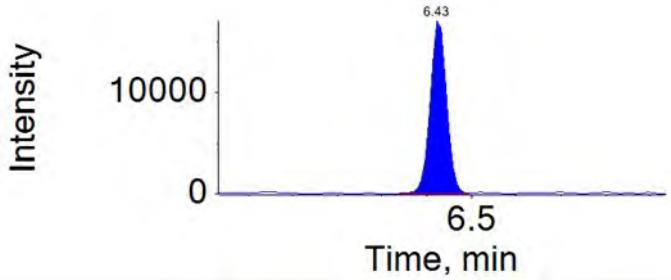
ICAL Name: 18NOV12DCAL **Result Table:** 18316011 11/14/2018 4:24:36 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

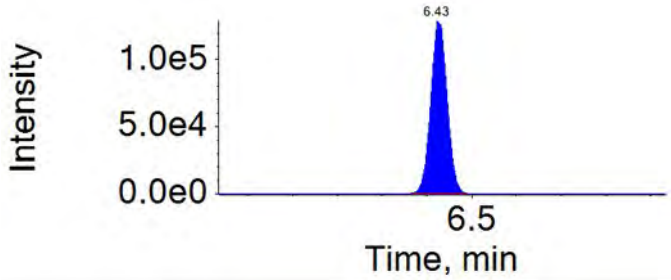
Analyte: PFTrDA	Extraction Standard: 13C2-PFDoDA
663.0 / 619.0	615.0 / 570.0





Analyte: PFTeDA	Extraction Standard: 13C2-PFTeDA
713.0 / 669.0	715.0 / 670.0





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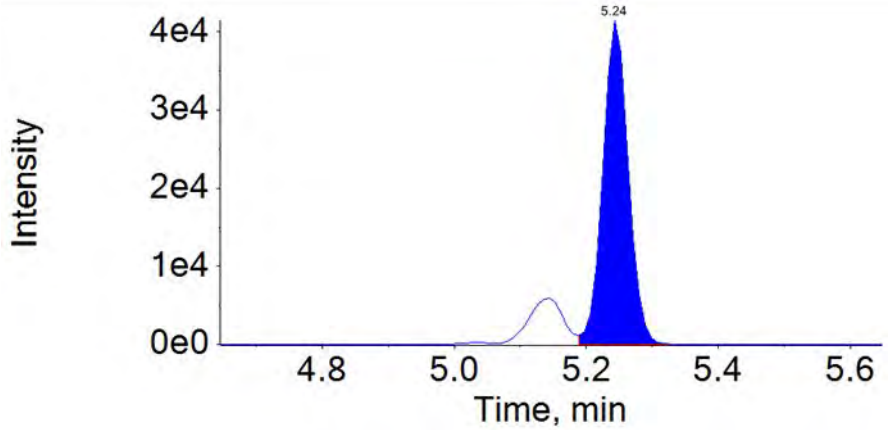
Auto Integrations prior to Manual Integration

Print Date: 11/14/2018 4:31 PM
Template: MQ-OrigInteg-16NOV21.docx

Results Table Name: 18316011
Results Table Date: 11/14/2018 4:24:36 PM

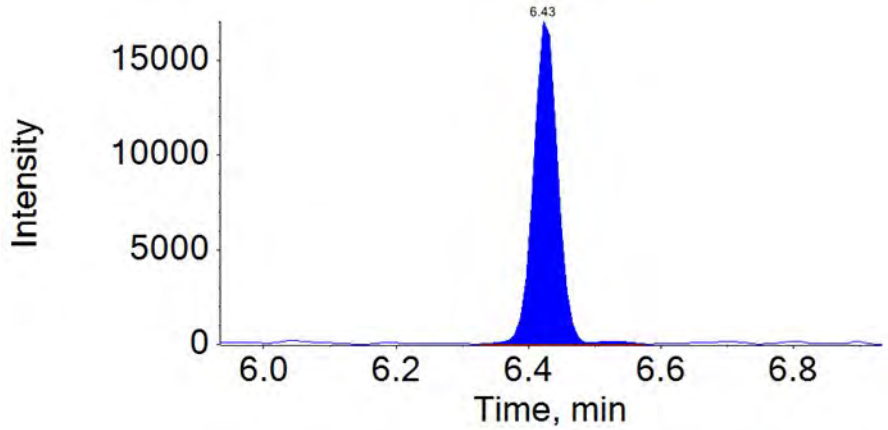
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

Component Name:
PFOS
RT (min.):
5.24
Peak Area:
110857.5
Mass Range:
499.0 / 80.0
File Name:
18NOV13D-56.wiff
Sample Name:
9885087MS



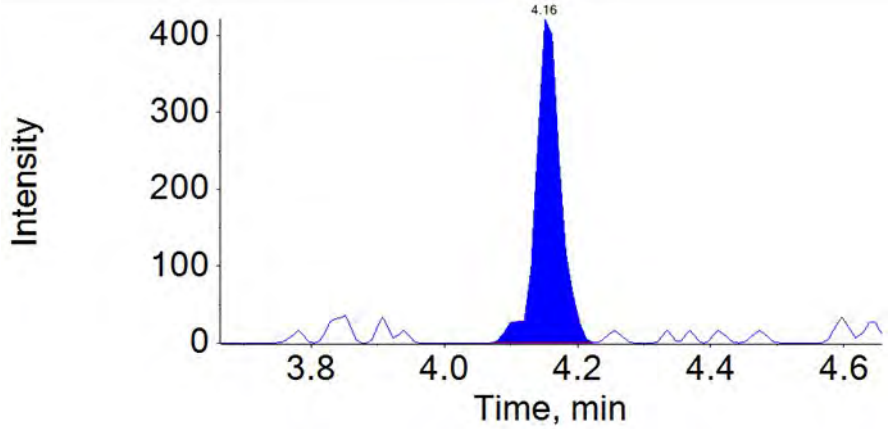
Integration Comment: incorrect integration

Component Name:
PFTeDA
RT (min.):
6.43
Peak Area:
43613.0
Mass Range:
713.0 / 669.0
File Name:
18NOV13D-56.wiff
Sample Name:
9885087MS



Integration Comment: incorrect integration

Component Name:
PFHxA_2
RT (min.):
4.16
Peak Area:
1080.6
Mass Range:
313.0 / 119.0
File Name:
18NOV13D-56.wiff
Sample Name:
9885087MS



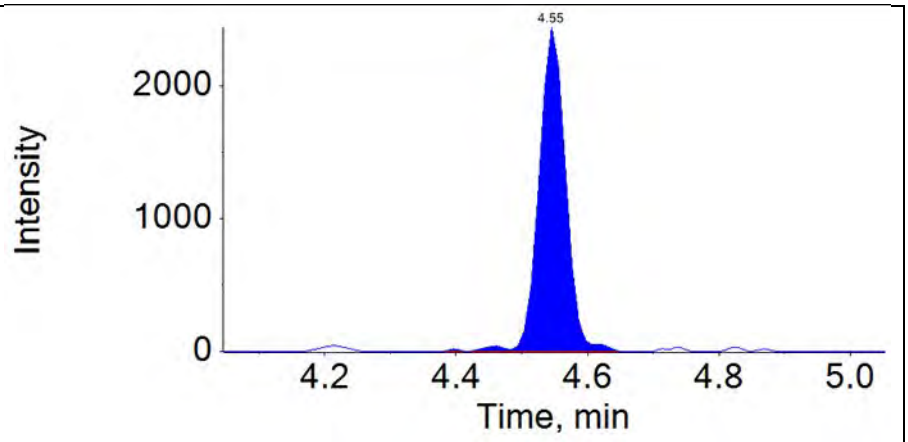
Integration Comment: incorrect integration

APPROVED
By MCD at 4:51 pm, 11/14/18

REVIEWED
By HMK at 12:21 pm, 11/15/18

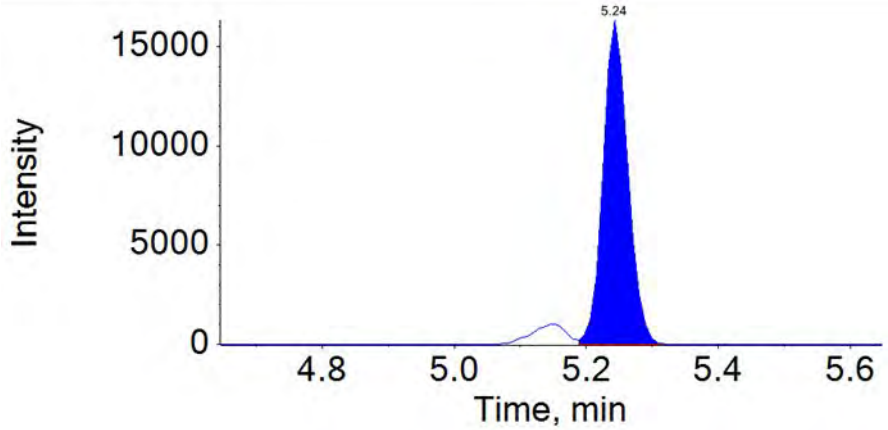
Results Table Name: 18316011
Results Table Date: 11/14/2018 4:24:36 PM
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

Component Name:
PFHpA_2
RT (min.):
4.55
Peak Area:
6927.9
Mass Range:
363.0 / 169.0
File Name:
18NOV13D-56.wiff
Sample Name:
9885087MS



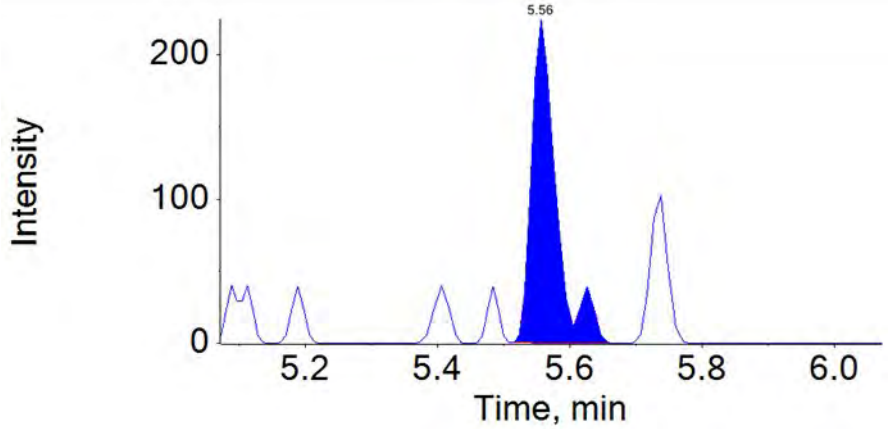
Integration Comment: incorrect integration

Component Name:
PFOS_2
RT (min.):
5.24
Peak Area:
42420.4
Mass Range:
499.0 / 99.0
File Name:
18NOV13D-56.wiff
Sample Name:
9885087MS



Integration Comment: incorrect integration

Component Name:
PFDA_2
RT (min.):
5.56
Peak Area:
587.7
Mass Range:
513.0 / 169.0
File Name:
18NOV13D-56.wiff
Sample Name:
9885087MS



Integration Comment: incorrect integration

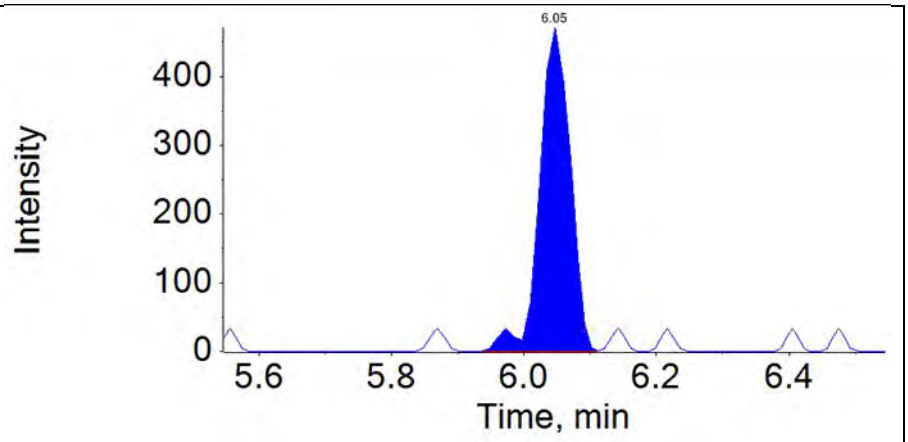
APPROVED
By MCD at 4:51 pm, 11/14/18

REVIEWED
By HMK at 12:21 pm, 11/15/18

Results Table Name: 18316011
Results Table Date: 11/14/2018 4:24:36 PM

Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

Component Name:
PFDoDA_2
RT (min.):
6.05
Peak Area:
1518.8
Mass Range:
613.0 / 169.0
File Name:
18NOV13D-56.wiff
Sample Name:
9885087MS



Integration Comment: incorrect integration

APPROVED
By MCD at 4:51 pm, 11/14/18

REVIEWED
By HMK at 12:21 pm, 11/15/18

Results Table Name: 18316011
Results Table Date: 11/14/2018 4:24:36 PM

Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

APPROVED
By MCD at 4:51 pm, 11/14/18

REVIEWED
By HMK at 12:21 pm, 11/15/18

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LC-MS/MS Analysis Report

Printed: 11/14/2018 4:28:00 PM
Template: IonRatio18OCT10

Ion Ratio Report

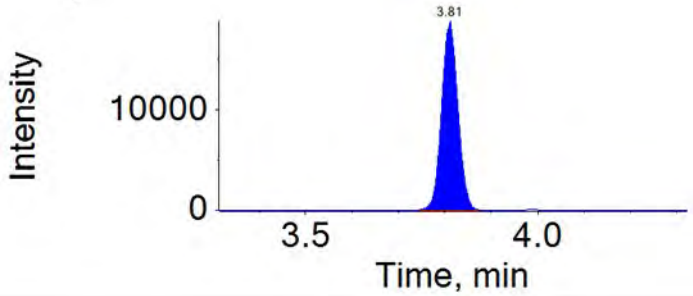
Sample Name: 9885087MS **Instrument Name:** LM27631 **File Name:** 18NOV13D-56.wiff

Component Name	RT	RRT	Analyte Area Response	Int Typ	Expected Ion Ratio	Ion Ratio	Ion Ratio % Diff	Ion Ratio Limit	Ion Ratio OOS
PFBS	3.81	1.00	45672.4	A	N/A	0.3970			
PFBS_2	3.81	1.00	18130.9	A	N/A	0.3970	10	50	
PFHxA	4.16	1.00	101223.7	A	N/A	0.0102			
PFHxA_2	4.16	1.00	1032.4	M	N/A	0.0102	-13	50	
PFHpA	4.55	1.00	108544.7	A	N/A	0.0628			
PFHpA_2	4.55	1.00	6812.5	M	N/A	0.0628	11	50	
PFHxS	4.55	1.00	36986.7	A	N/A	0.3867			
PFHxS_2	4.55	1.00	14303.0	A	N/A	0.3867	13	50	
PFOA	4.91	1.00	107588.3	A	N/A	0.0572			
PFOA_2	4.92	1.00	6149.2	A	N/A	0.0572	2	50	
PFOS	5.24	1.00	133269.9	M	N/A	0.3462			
PFOS_2	5.24	1.00	46141.7	M	N/A	0.3462	17	50	
PFNA	5.26	1.00	90852.6	A	N/A	0.0173			
PFNA_2	5.26	1.00	1567.4	A	N/A	0.0173	-25	50	
PFDA	5.56	1.00	78024.6	A	N/A	0.0068			
PFDA_2	5.56	1.00	527.0	M	N/A	0.0068	-16	50	
NMeFOSAA	5.71	1.00	4601.9	A	N/A	0.1599			
NMeFOSAA_2	5.71	1.00	735.6	A	N/A	0.1599	-38	50	
PFUnDA	5.82	1.00	60570.6	A	N/A	0.0011			
PFUnDA_2	5.80	1.00	64.9	A	N/A	0.0011	-82	50	OOS
NEtFOSAA	5.84	1.00	4593.7	A	N/A	0.4507			
NEtFOSAA_2	5.84	1.00	2070.6	A	N/A	0.4507	-38	50	
PFDoDA	6.05	1.00	63144.7	A	N/A	0.0230			
PFDoDA_2	6.05	1.00	1455.3	M	N/A	0.0230	47	50	
PFTrDA	6.25	1.03	54730.6	A	N/A	0.0151			
PFTrDA_2	6.26	1.03	824.6	A	N/A	0.0151	76	50	OOS
PFTeDA	6.43	1.00	43113.9	M	N/A	0.0084			
PFTeDA_2	6.42	1.00	361.6	A	N/A	0.0084	34	50	

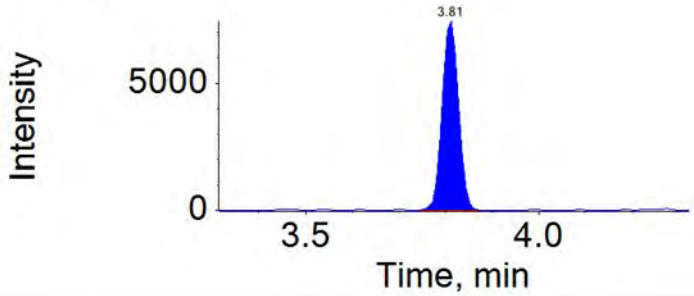
APPROVED
By MCD at 4:51 pm, 11/14/18

REVIEWED
By HMK at 12:21 pm, 11/15/18

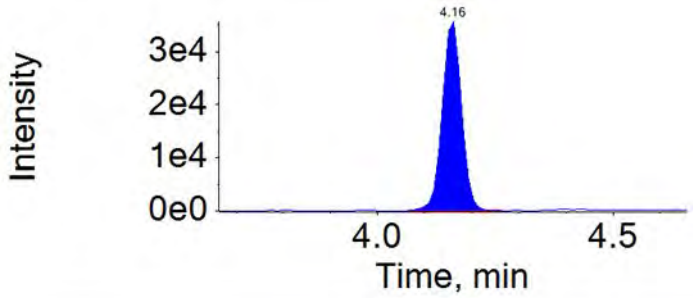
Component: PFBS
Primary Mass: 299.0 / 80.0



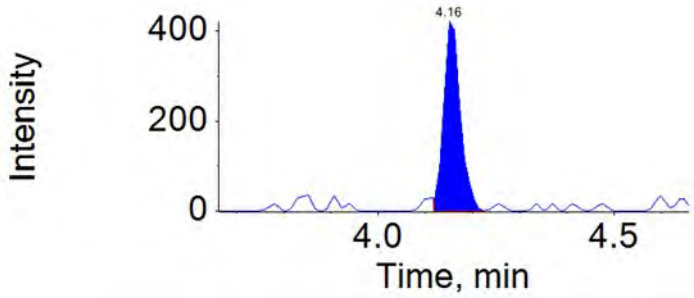
Component: PFBS_2
Secondary Mass: 299.0 / 99.0



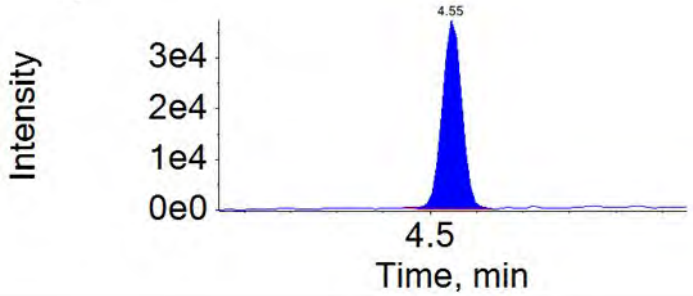
Component: PFHxA
Primary Mass: 313.0 / 269.0



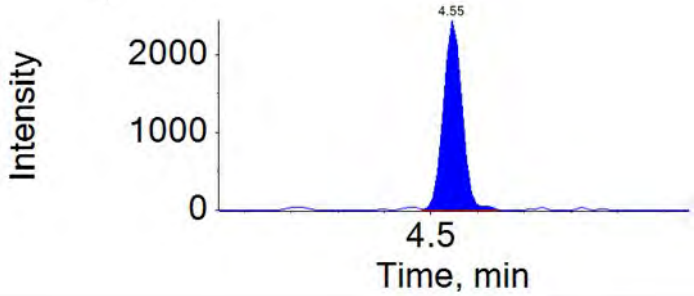
Component: PFHxA_2
Secondary Mass: 313.0 / 119.0



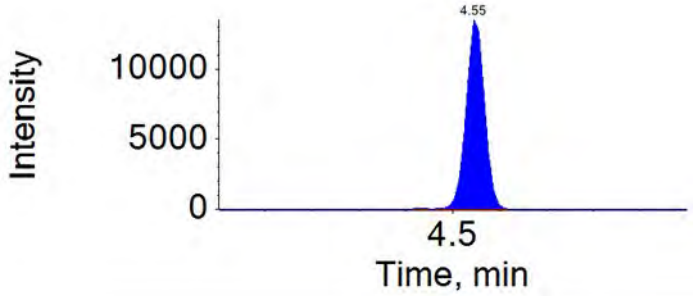
Component: PFHpA
Primary Mass: 363.0 / 319.0



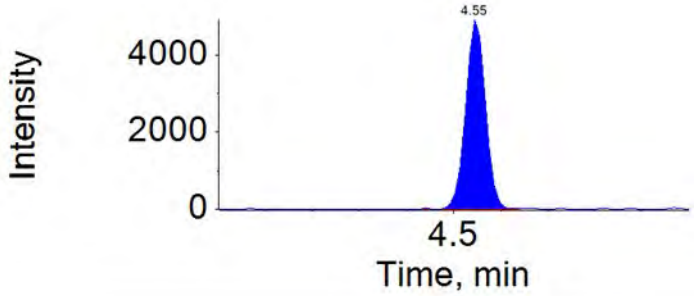
Component: PFHpA_2
Secondary Mass: 363.0 / 169.0



Component: PFHxS
Primary Mass: 399.0 / 80.0



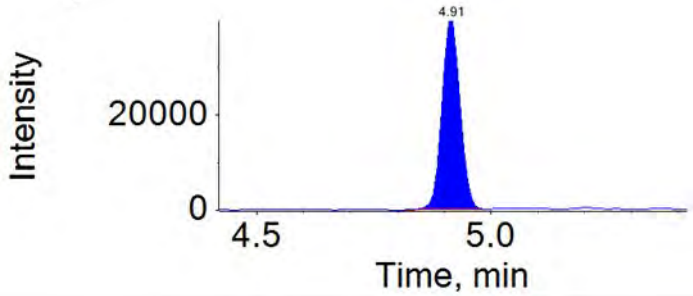
Component: PFHxS_2
Secondary Mass: 399.0 / 99.0



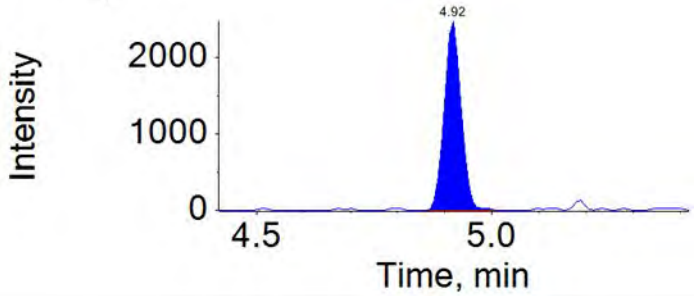
APPROVED
By MCD at 4:51 pm, 11/14/18

REVIEWED
By HMK at 12:21 pm, 11/15/18

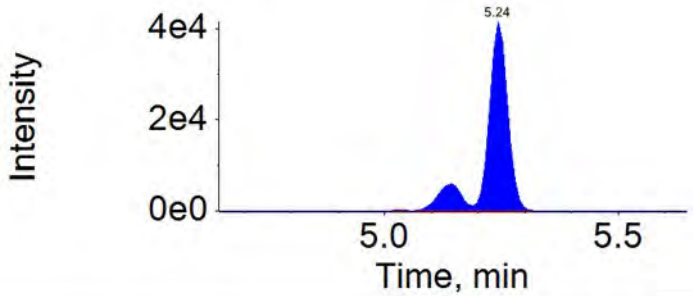
Component: PFOA
Primary Mass: 413.0 / 369.0



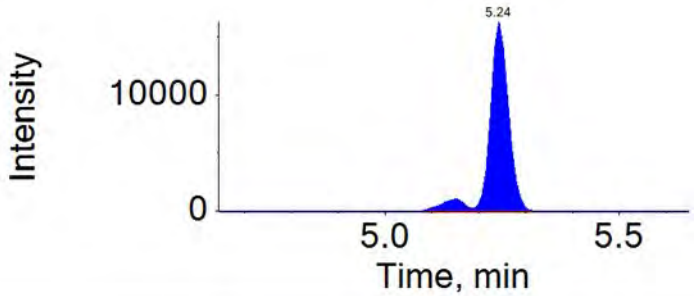
Component: PFOA_2
Secondary Mass: 413.0 / 169.0



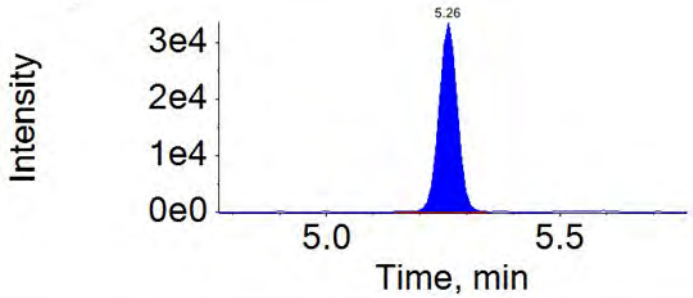
Component: PFOS
Primary Mass: 499.0 / 80.0



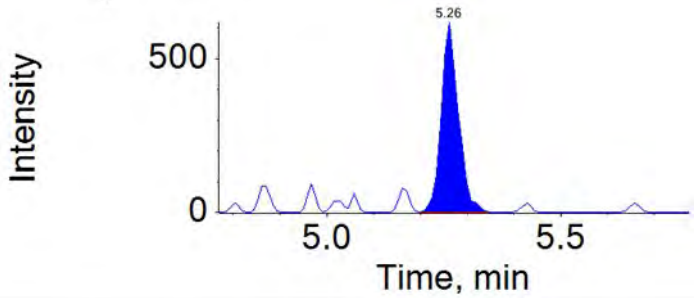
Component: PFOS_2
Secondary Mass: 499.0 / 99.0



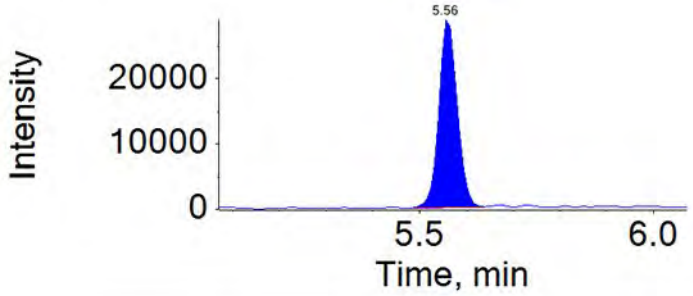
Component: PFNA
Primary Mass: 463.0 / 419.0



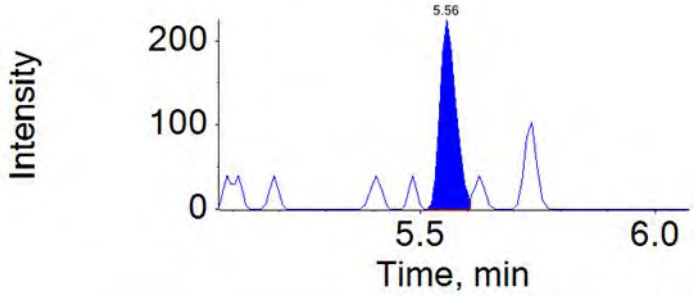
Component: PFNA_2
Secondary Mass: 463.0 / 169.0



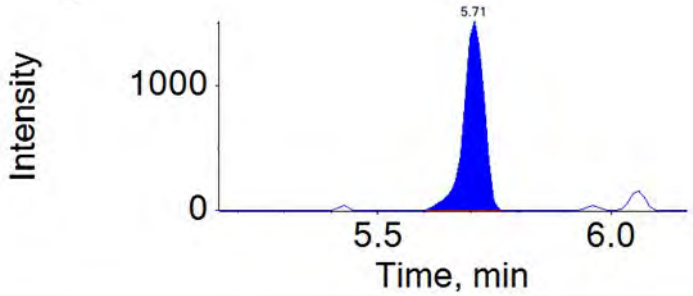
Component: PFDA
Primary Mass: 513.0 / 469.0



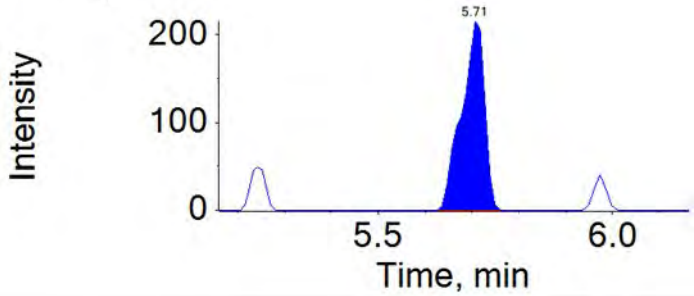
Component: PFDA_2
Secondary Mass: 513.0 / 169.0



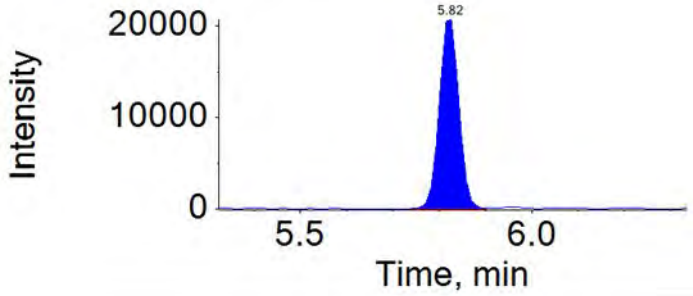
Component: NMeFOSAA
Primary Mass: 570.0 / 419.0



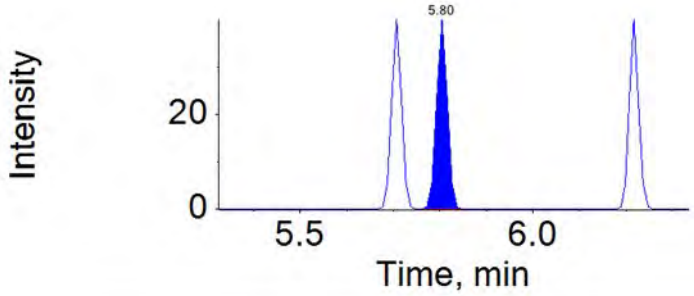
Component: NMeFOSAA_2
Secondary Mass: 570.0 / 483.0



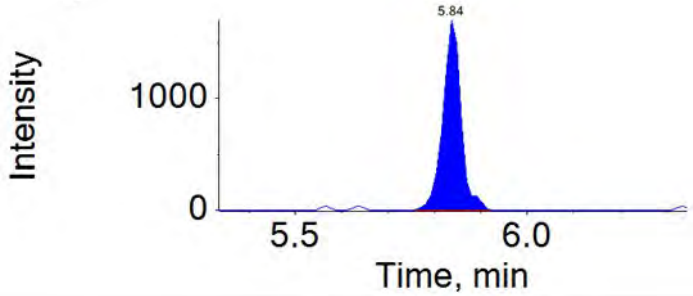
Component: PFUnDA
Primary Mass: 563.0 / 519.0



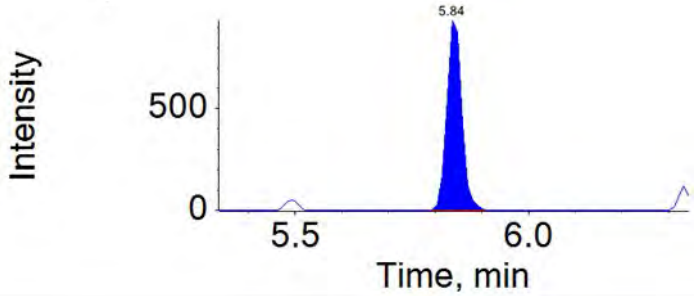
Component: PFUnDA_2
Secondary Mass: 563.0 / 169.0



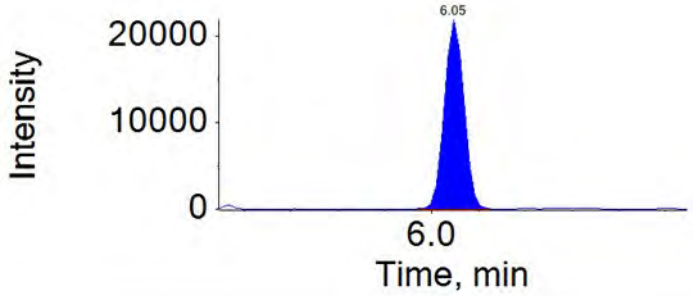
Component: NEtFOSAA
Primary Mass: 584.0 / 419.0



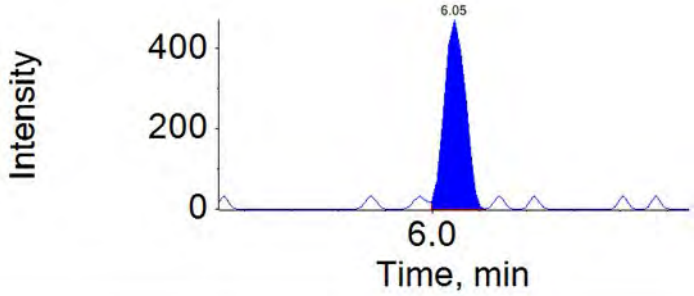
Component: NEtFOSAA_2
Secondary Mass: 584.0 / 526.0



Component: PFDoDA
Primary Mass: 613.0 / 569.0



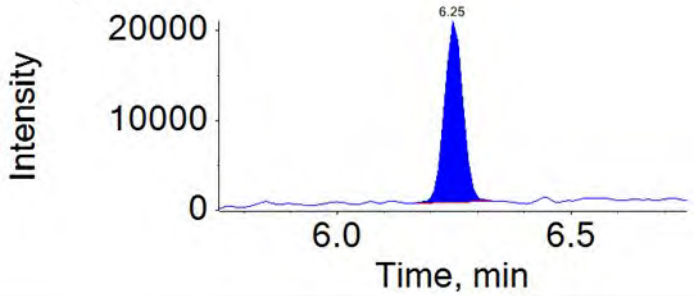
Component: PFDoDA_2
Secondary Mass: 613.0 / 169.0



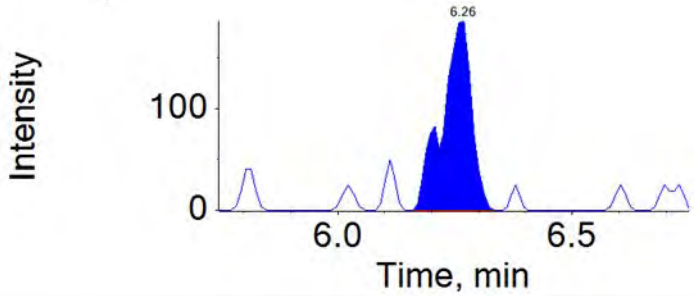
APPROVED
By MCD at 4:51 pm, 11/14/18

REVIEWED
By HMK at 12:21 pm, 11/15/18

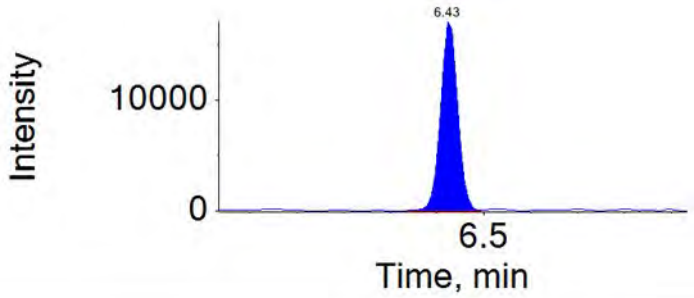
Component: PFTrDA
Primary Mass: 663.0 / 619.0



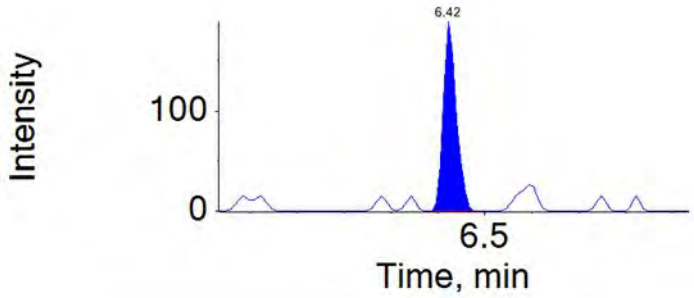
Component: PFTrDA_2
Secondary Mass: 663.0 / 169.0



Component: PFTeDA
Primary Mass: 713.0 / 669.0



Component: PFTeDA_2
Secondary Mass: 713.0 / 169.0



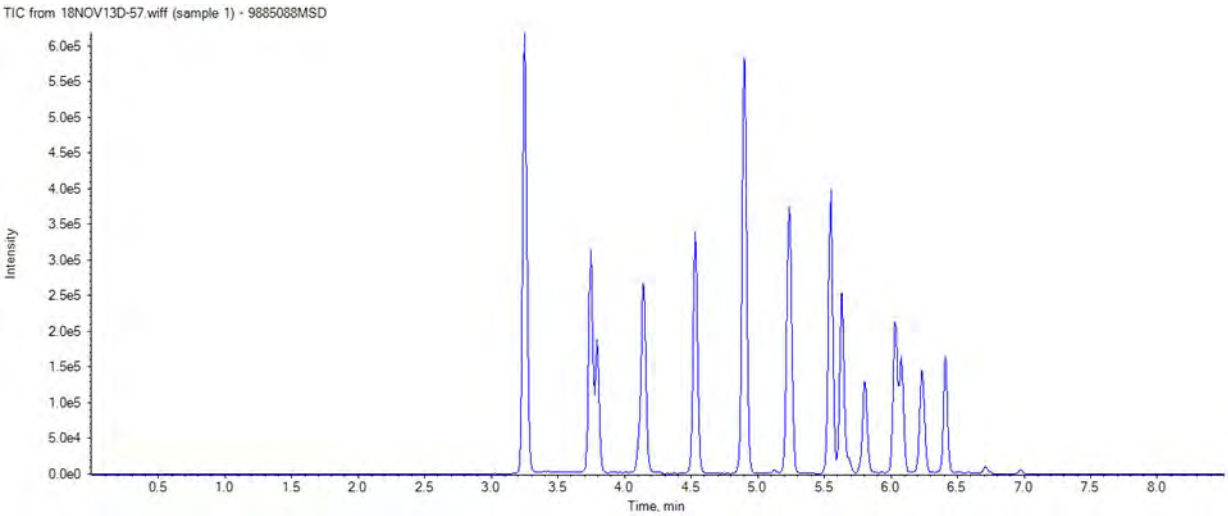
APPROVED
By MCD at 4:51 pm, 11/14/18

REVIEWED
By HMK at 12:21 pm, 11/15/18

Matrix Spike Recovery

ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM
Result Table: 18316011 11/14/2018 4:22:26 PM
Acquisition Method: 18AUG13_3uL.dam

Instrument Name:	Sample Name:	Sample ID:	Sample File:	Acquisition Date:
LM27631	9885088MSD	EPA 537 mod QSM 5.1 table B-15 18316011 OU1-Bldg27-S-01-03 MSD Grab Soil	18NOV13D-57.wiff	2018-11-13T18:08:35



Injection Standard Area Reference File**:** 18NOV13D-05

Injection Standard Name	Inj Std Conc	Injection Std Peak Area	Reference Injection Standard Area	Injection Std %Diff	Injection Std %Diff Limit	Injection Std %Diff OOS
13C3-PFBA	5.00	724610.9	661126.9	10	50	
13C2-PFOA	5.00	504925.0	466902.6	8	50	
13C4-PFOS	4.78	272509.2	247446.9	10	50	
13C2-PFDA	5.00	315877.7	295381.6	7	50	

APPROVED
By MCD at 4:51 pm, 11/14/18

REVIEWED
By HMK at 12:21 pm, 11/15/18

Matrix Spike Recovery

ICAL Name: 18NOV12DCAL **Result Table:** 18316011 11/14/2018 4:22:26 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Instrument Name:	Sample Name:	Sample ID:	Sample File:	Acquisition Date:
LM27631	9885088MSD	EPA 537 mod QSM 5.1 table B-15 18316011 OU1-Bldg27-S-01-03 MSD Grab Soil	18NOV13D-57.wiff	2018-11-13T18:08:35

Analyte Name	Analyte Area	Ext Std Area	Area Ratio	Adj Actual Conc	Sample Result	%REC	% REC Limit	%REC OOS
PFBS	43255.8	334529.1	0.129	1.169	1.194	102	70-130	
PFHxA	92272.2	516595.4	0.179	1.320	1.448	110	70-130	
PFHpA	94172.3	387933.5	0.243	1.320	1.562	118	70-130	
PFHxS	32829.0	245012.6	0.134	1.249	1.262	101	70-130	
PFOA	102131.9	691030.1	0.148	1.320	1.533	116	70-130	
PFOS	69446.0	209249.1	0.332	1.262	2.818	223	70-130	OOS
PFNA	77494.2	360287.0	0.215	1.320	1.506	114	70-130	
PFDA	63492.0	478566.1	0.133	1.320	1.366	103	70-130	
NMeFOSAA	3458.3	37277.8	0.093	1.320	1.018	77	70-130	
PFUnDA	53272.0	199459.9	0.267	1.320	1.356	103	70-130	
NEtFOSAA	5305.2	35109.2	0.151	1.320	1.538	116	70-130	
PFDoDA	58069.6	415931.6	0.140	1.320	1.380	105	70-130	
PFTrDA	54011.2	415931.6	0.130	1.320	1.591	121	70-130	
PFTeDA	39297.5	301359.7	0.130	1.320	1.419	107	70-130	

APPROVED
By MCD at 4:51 pm, 11/14/18

REVIEWED
By HMK at 12:21 pm, 11/15/18

Matrix Spike Recovery

ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM
Result Table: 18316011 11/14/2018 4:22:26 PM
Acquisition Method: 18AUG13_3uL.dam

APPROVED
By MCD at 4:51 pm, 11/14/18

REVIEWED
By HMK at 12:21 pm, 11/15/18

ICAL Name: 18NOV12DCAL **Result Table:** 18316011 11/14/2018 4:24:36 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Sample Name:	9885088MSD			**Data File:**		18NOV13D-57.wiff
Sample ID:	EPA 537 mod QSM 5.1 table B-15 18316011 OU1-Bldg27-S-01-03 MSD Grab Soil			**Acquis Date:**		2018-11-13T18:08:35
Sample Type:	Quality Control			**Instrument:**		LM27631
Vial Position:	55			**Acquis Method:**		18AUG13_3uL.dam
Injection Vol:	3.00			**Result Table:**		18316011
QMethod File:	18AUG20QM			**ICAL Name:**		18NOV12DCAL
Batch Number:	18316011			**Operator:**		MCD7824
Sample Wt.:	1.03000			**Dilution Factor:**		1.00
Sample Vol.:	1.000			**Prep Factor:**		2.000

Injection Standard Peak Table

Injection Standard Area Reference File: 18NOV13D-05

Injection Standard Name	Inj Std Conc	Injection Std Peak Area	Rreference Injection Standard Area	Injection Std %Diff	Injection Std %Diff Limit	Injection Std %Diff OOS
13C3-PFBA	5.0	724610.9	661126.9	10	50	
13C2-PFOA	5.0	504925.0	466902.6	8	50	
13C4-PFOS	4.8	272509.2	247446.9	10	50	
13C2-PFDA	5.0	315877.7	295381.6	7	50	

Extraction Standard Peak Table

Extraction Standard Name	Ext Std Area	Inj Std Name	Inj Std Area	Area Ratio	Ext Std Conc	Ext Std Result	Ext Std %REC	Ext Std %REC Limit	Ext Std OOS
E13C3-PFBS	334529.1	13C3-PFBA	724610.9	0.462	9.029	6.328	70	50-150	
E13C5-PFHxA	516595.4	13C2-PFOA	504925.0	1.023	9.709	7.176	74	50-150	
E13C3-PFHxS	245012.6	13C2-PFOA	504925.0	0.485	9.184	6.465	70	50-150	
E13C4-PFHpA	387933.5	13C2-PFOA	504925.0	0.768	9.709	6.721	69	50-150	
E13C8-PFOA	691030.1	13C2-PFOA	504925.0	1.369	9.709	7.322	75	50-150	
E13C8-PFOS	209249.1	13C4-PFOS	272509.2	0.768	9.282	6.606	71	50-150	
E13C9-PFNA	360287.0	13C4-PFOS	272509.2	1.322	9.709	7.158	74	50-150	
E13C6-PFDA	478566.1	13C2-PFDA	315877.7	1.515	9.709	6.865	71	50-150	
Ed3-NMeFOSAA	37277.8	13C2-PFDA	315877.7	0.118	9.709	4.136	43	50-150	OOS
E13C7-PFUnDA	199459.9	13C2-PFDA	315877.7	0.631	9.709	7.119	73	50-150	
Ed5-NEtFOSAA	35109.2	13C2-PFDA	315877.7	0.111	9.709	4.566	47	50-150	OOS
E13C2-PFDoDA	415931.6	13C2-PFDA	315877.7	1.317	9.709	6.638	68	50-150	
E13C2-PFTeDA	301359.7	13C2-PFDA	315877.7	0.954	9.709	6.504	67	50-150	

APPROVED
By MCD at 4:51 pm, 11/14/18

REVIEWED
By HMK at 12:21 pm, 11/15/18

ICAL Name: 18NOV12DCAL **Result Table:** 18316011 11/14/2018 4:24:36 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

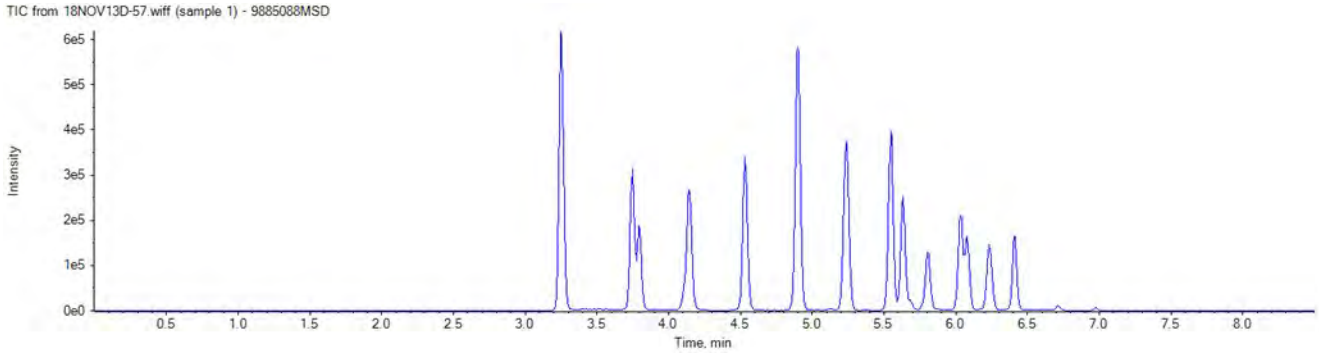
Analyte Quantitation Peak Table

Sample Name: 9885088MSD **Instrument Name:** LM27631 **File Name:** 18NOV13D-57.wiff

Sample Wt	Sample Vol	Dilution Factor	PrepFactor
1.03000	1.000	1.00	2.000

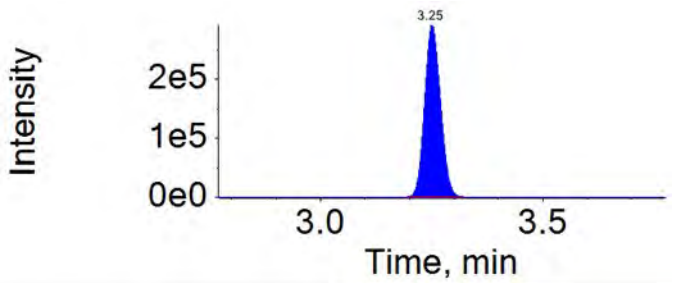
Analyte Name	RT	RRT	Analyte Area Response	E	Int Typ	ES Name	ES RT	ES Area Response	Area Ratio	Sample Result (ng/g)
PFBS	3.79	1.000	43255.8		A	13C3-PFBS	3.80	334529.1	0.129	1.194
PFHxA	4.14	1.000	92272.2		A	13C5-PFHxA	4.14	516595.4	0.179	1.448
PFHpA	4.53	1.000	94172.3		A	13C4-PFHpA	4.53	387933.5	0.243	1.562
PFHxS	4.53	1.000	32829.0		A	13C3-PFHxS	4.53	245012.6	0.134	1.262
PFOA	4.90	1.000	102131.9		A	13C8-PFOA	4.90	691030.1	0.148	1.533
PFOS	5.23	1.000	69446.0		M	13C8-PFOS	5.23	209249.1	0.332	2.818
PFNA	5.25	1.000	77494.2		A	13C9-PFNA	5.24	360287.0	0.215	1.506
PFDA	5.55	1.000	63492.0		A	13C6-PFDA	5.55	478566.1	0.133	1.366
NMeFOSAA	5.68	1.000	3458.3		A	d3-NMeFOSAA	5.68	37277.8	0.093	1.018
PFUnDA	5.80	1.000	53272.0		A	13C7-PFUnDA	5.80	199459.9	0.267	1.356
NEtFOSAA	5.82	1.000	5305.2		A	d5-NEtFOSAA	5.81	35109.2	0.151	1.538
PFDoDA	6.03	1.000	58069.6		A	13C2-PFDoDA	6.03	415931.6	0.140	1.380
PFTrDA	6.23	1.030	54011.2		M	13C2-PFDoDA	6.03	415931.6	0.130	1.591
PFTeDA	6.41	1.000	39297.5		A	13C2-PFTeDA	6.41	301359.7	0.130	1.419

Total Ion Chromatogram

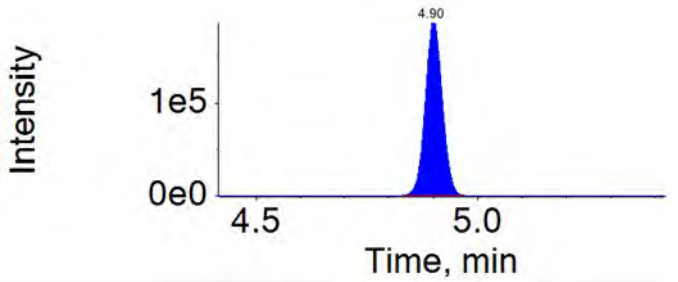


ICAL Name: 18NOV12DCAL **Result Table:** 18316011 11/14/2018 4:24:36 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

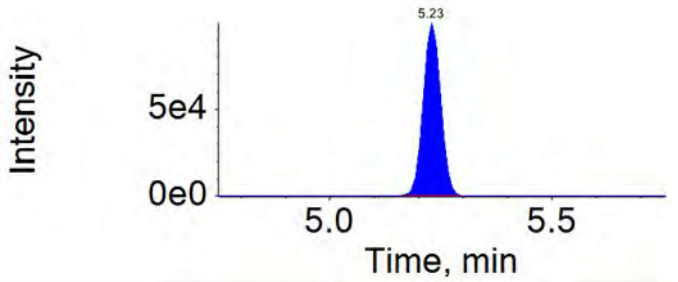
Injection Standard: 13C3-PFBA
216.0 / 172.0



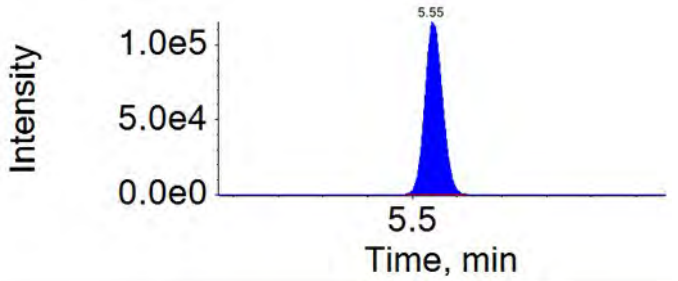
Injection Standard: 13C2-PFOA
415.0 / 370.0



Injection Standard: 13C4-PFOS
503.0 / 80.0

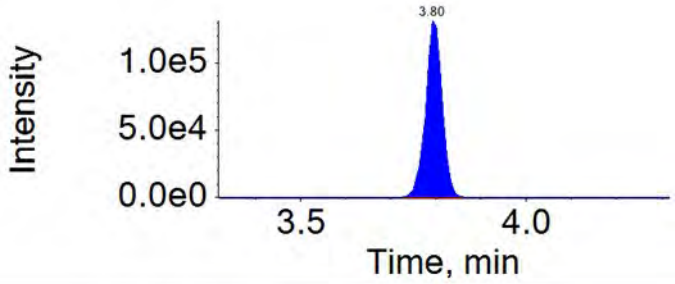


Injection Standard: 13C2-PFDA
515.0 / 470.0

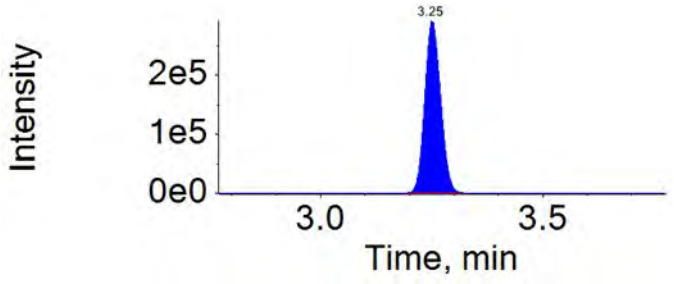


ICAL Name: 18NOV12DCAL **Result Table:** 18316011 11/14/2018 4:24:36 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

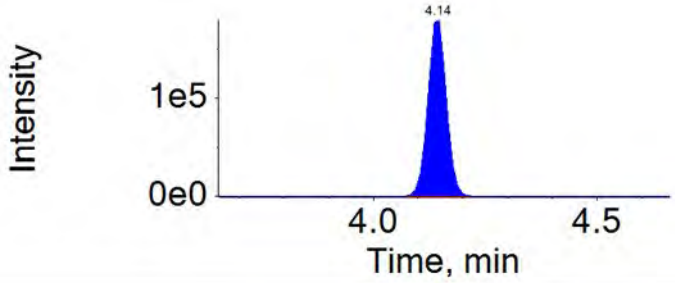
Extraction Standard: E13C3-PFBS
302.0 / 80.0



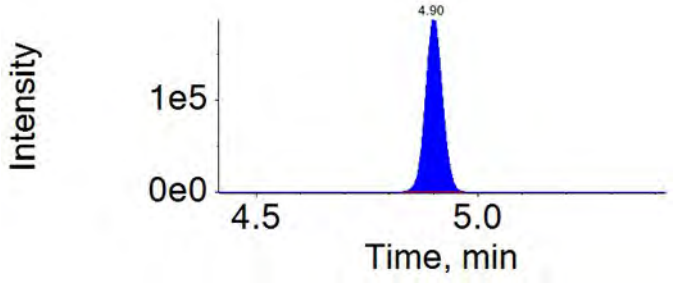
Injection Standard: 13C3-PFBA
216.0 / 172.0



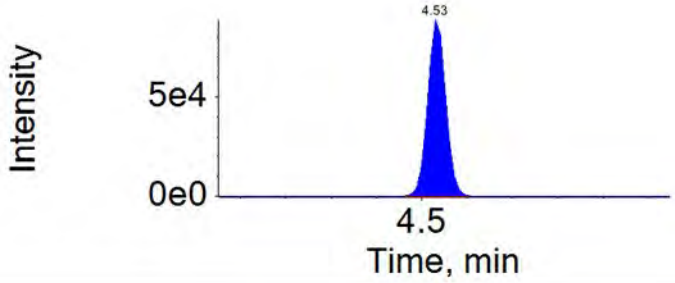
Extraction Standard: E13C5-PFHxA
318.0 / 273.0



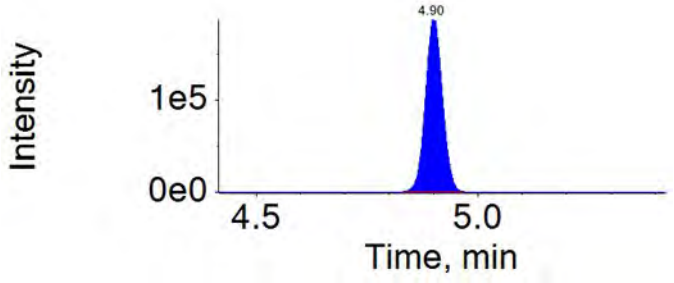
Injection Standard: 13C2-PFOA
415.0 / 370.0



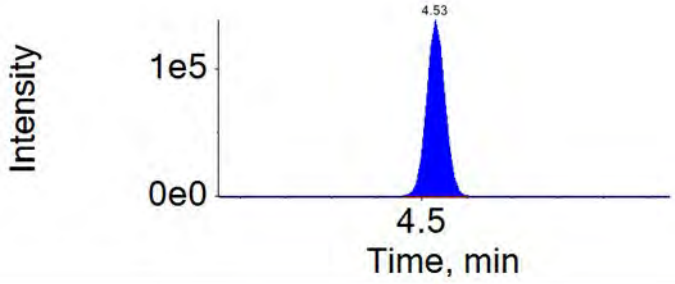
Extraction Standard: E13C3-PFHxS
402.0 / 80.0



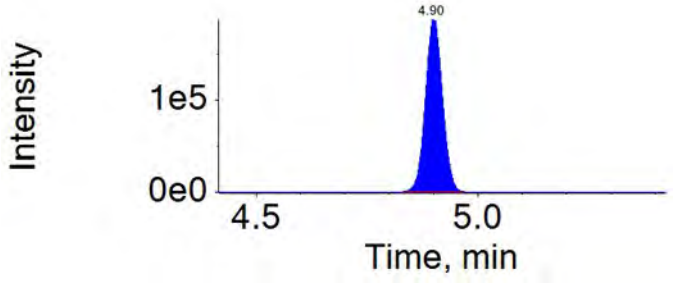
Injection Standard: 13C2-PFOA
415.0 / 370.0



Extraction Standard: E13C4-PFHpA
367.0 / 322.0



Injection Standard: 13C2-PFOA
415.0 / 370.0

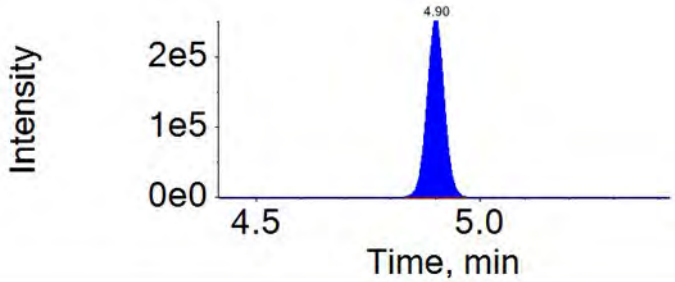


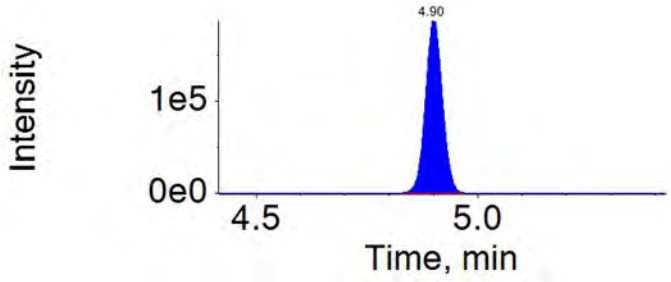
APPROVED
By MCD at 4:51 pm, 11/14/18

REVIEWED
By HMK at 12:21 pm, 11/15/18

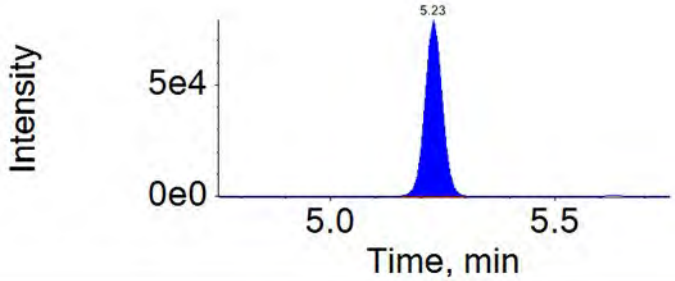
ICAL Name: 18NOV12DCAL **Result Table:** 18316011 11/14/2018 4:24:36 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

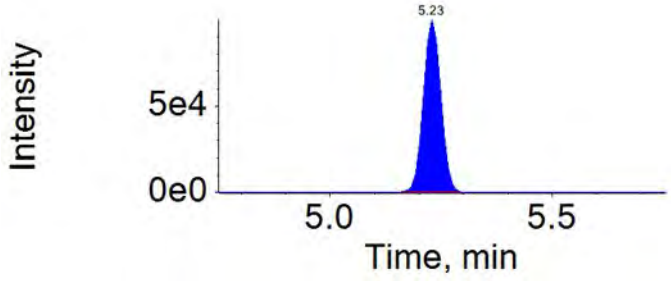
Extraction Standard: E13C8-PFOA	Injection Standard: 13C2-PFOA
421.0 / 376.0	415.0 / 370.0



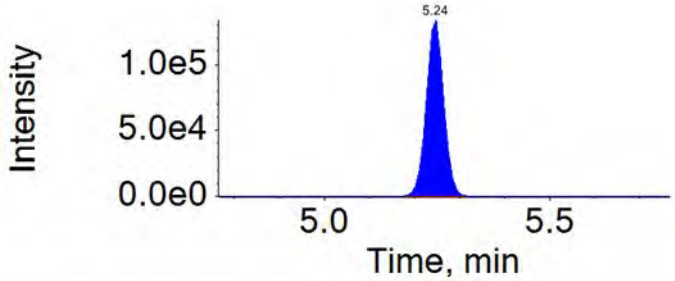


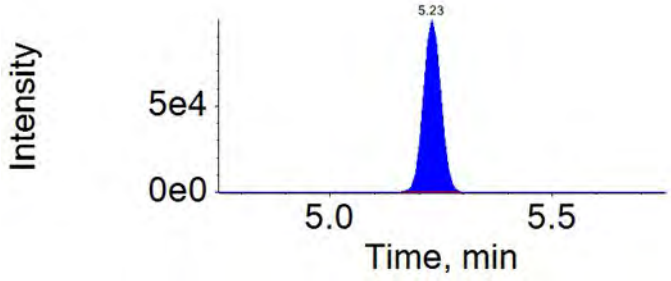
Extraction Standard: E13C8-PFOS	Injection Standard: 13C4-PFOS
507.0 / 80.0	503.0 / 80.0



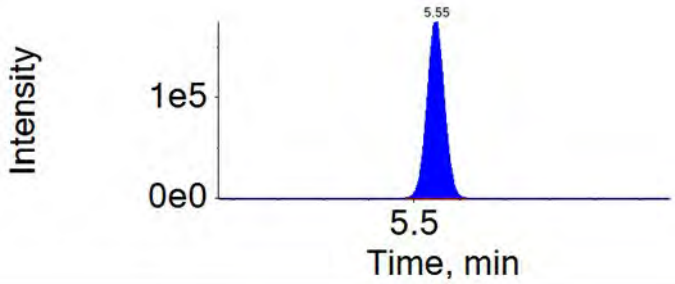


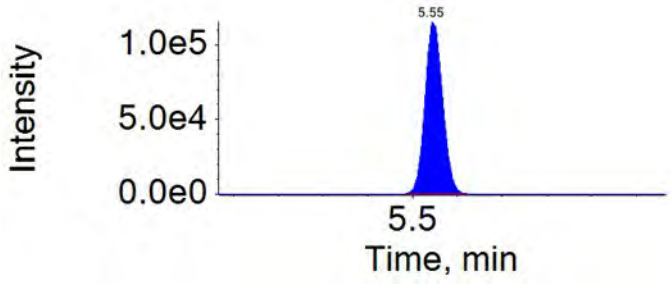
Extraction Standard: E13C9-PFNA	Injection Standard: 13C4-PFOS
472.0 / 427.0	503.0 / 80.0





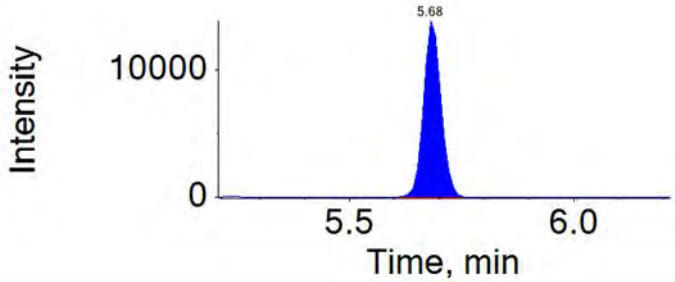
Extraction Standard: E13C6-PFDA	Injection Standard: 13C2-PFDA
519.0 / 474.0	515.0 / 470.0

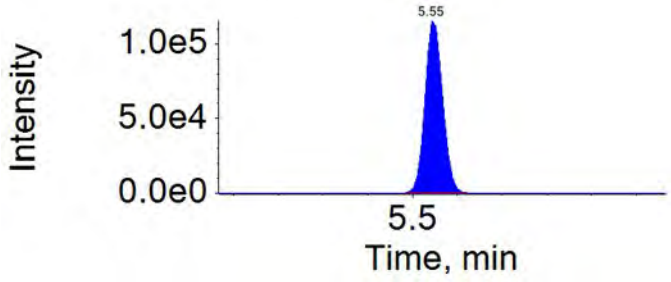




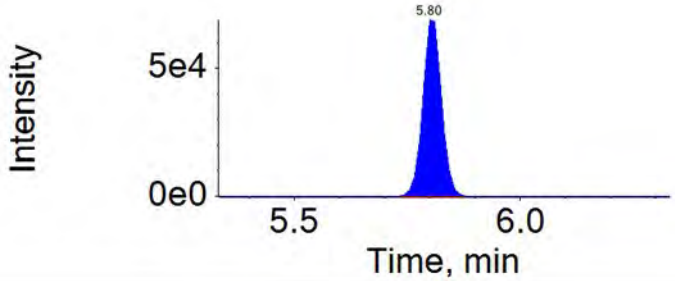
ICAL Name: 18NOV12DCAL **Result Table:** 18316011 11/14/2018 4:24:36 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

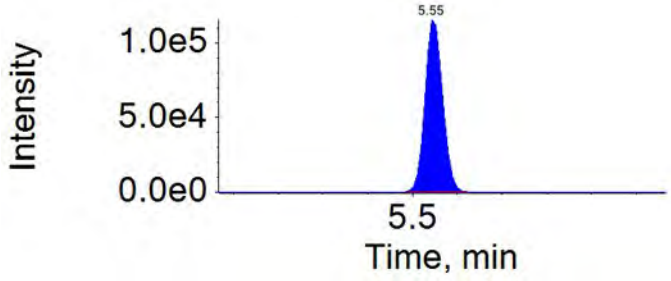
Extraction Standard: Ed3-NMeFOSAA	Injection Standard: 13C2-PFDA
573.0 / 419.0	515.0 / 470.0



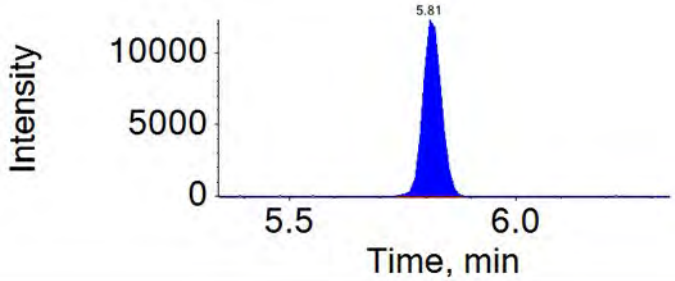


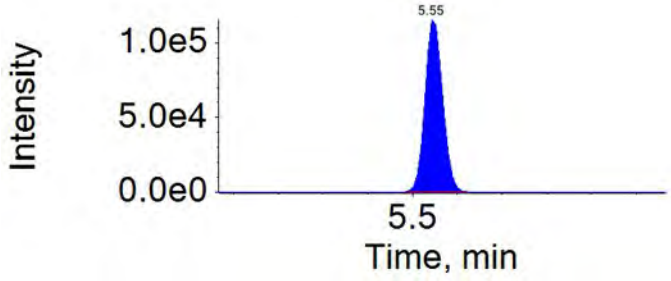
Extraction Standard: E13C7-PFUnDA	Injection Standard: 13C2-PFDA
570.0 / 525.0	515.0 / 470.0



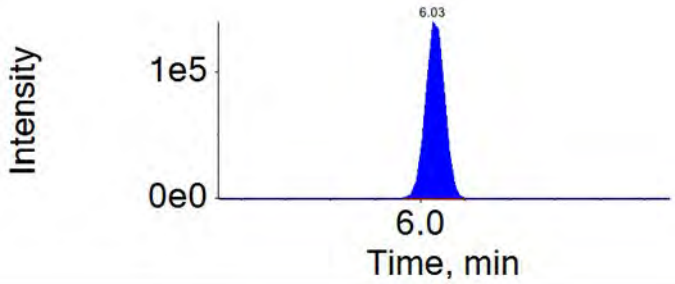


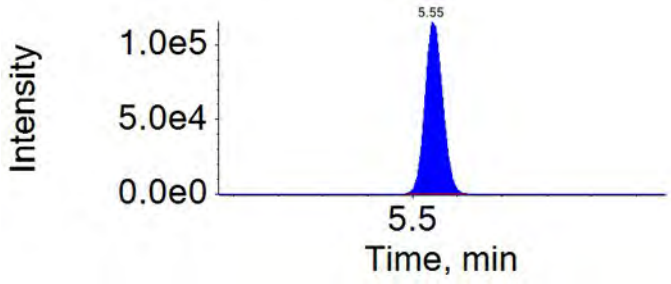
Extraction Standard: Ed5-NEtFOSAA	Injection Standard: 13C2-PFDA
589.0 / 419.0	515.0 / 470.0



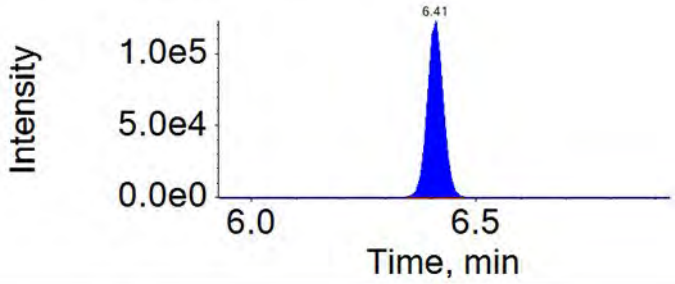
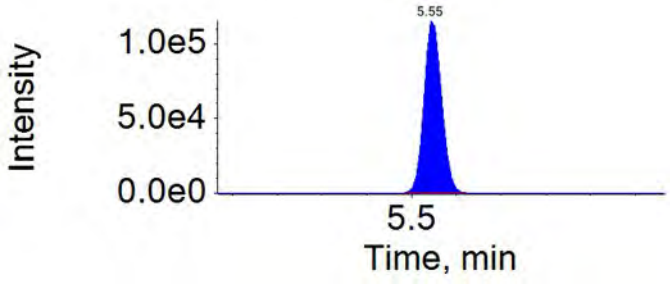


Extraction Standard: E13C2-PFDoDA	Injection Standard: 13C2-PFDA
615.0 / 570.0	515.0 / 470.0



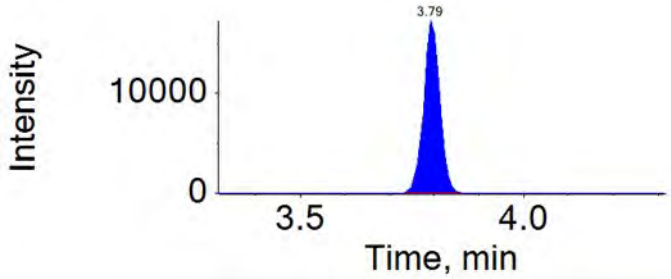


ICAL Name: 18NOV12DCAL **Result Table:** 18316011 11/14/2018 4:24:36 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

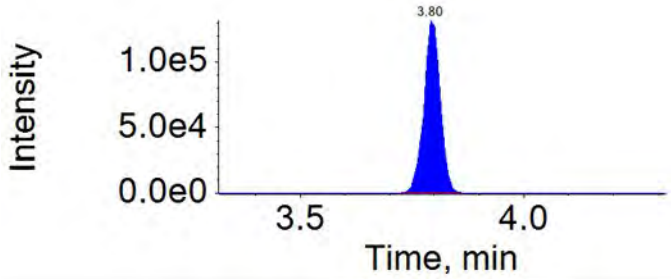
Extraction Standard: E13C2-PFTeDA	Injection Standard: 13C2-PFDA
715.0 / 670.0 	515.0 / 470.0 

ICAL Name: 18NOV12DCAL **Result Table:** 18316011 11/14/2018 4:24:36 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

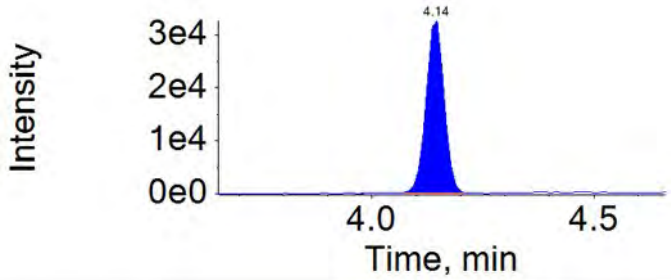
Analyte: PFBS
299.0 / 80.0



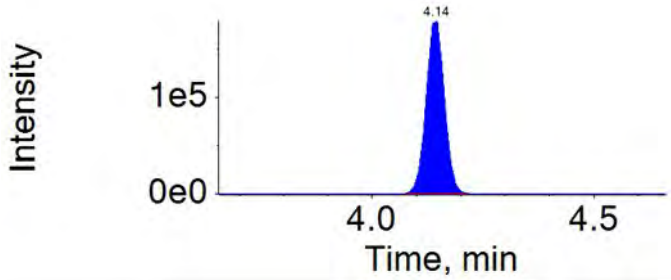
Extraction Standard: 13C3-PFBS
302.0 / 80.0



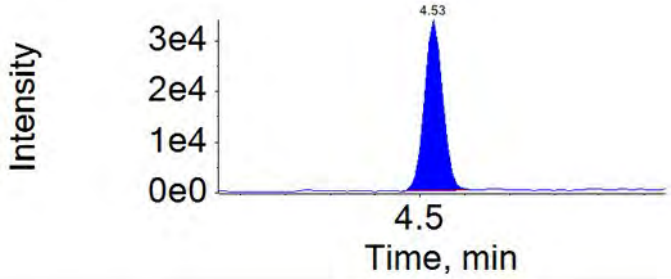
Analyte: PFHxA
313.0 / 269.0



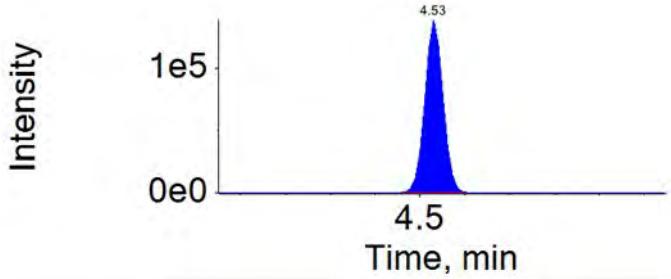
Extraction Standard: 13C5-PFHxA
318.0 / 273.0



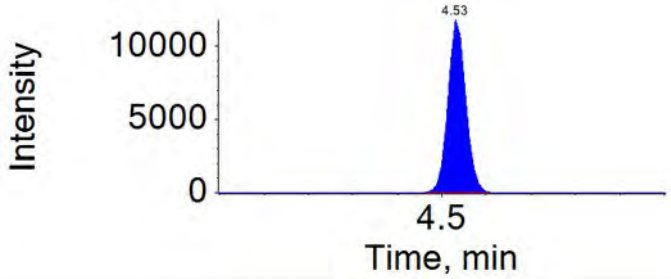
Analyte: PFHpA
363.0 / 319.0



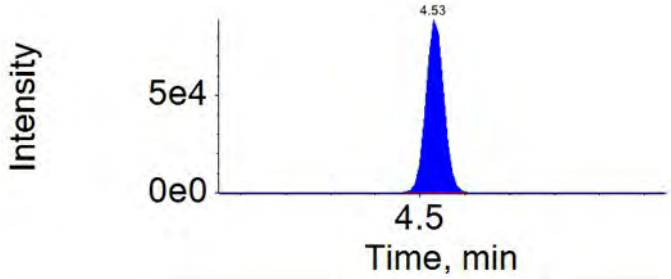
Extraction Standard: 13C4-PFHpA
367.0 / 322.0



Analyte: PFHxS
399.0 / 80.0

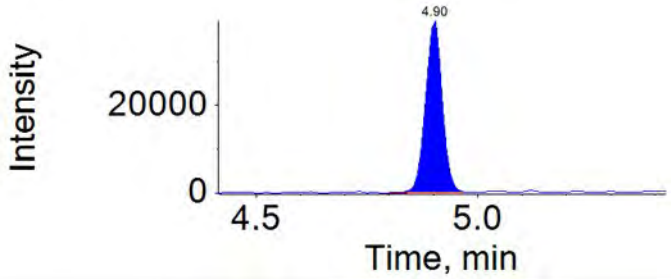


Extraction Standard: 13C3-PFHxS
402.0 / 80.0

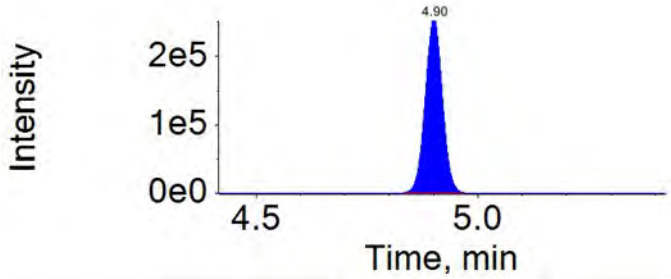


ICAL Name: 18NOV12DCAL **Result Table:** 18316011 11/14/2018 4:24:36 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

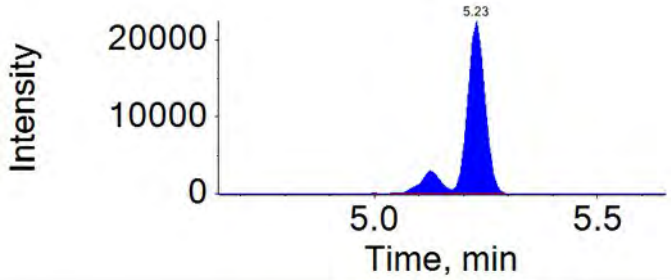
Analyte: PFOA
413.0 / 369.0



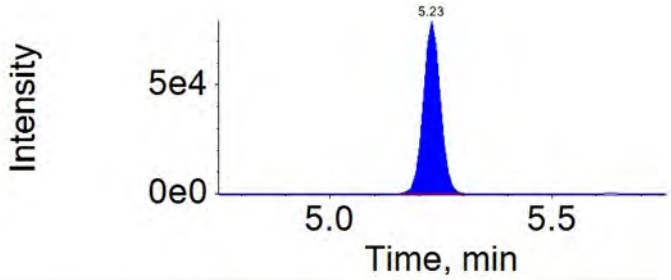
Extraction Standard: 13C8-PFOA
421.0 / 376.0



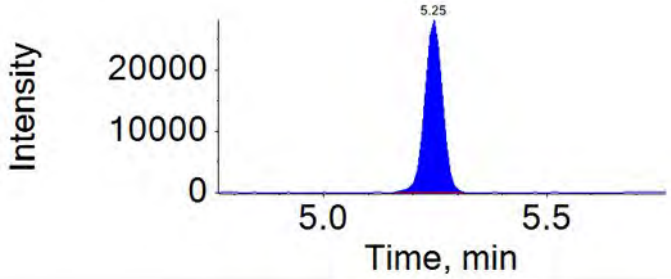
Analyte: PFOS
499.0 / 80.0



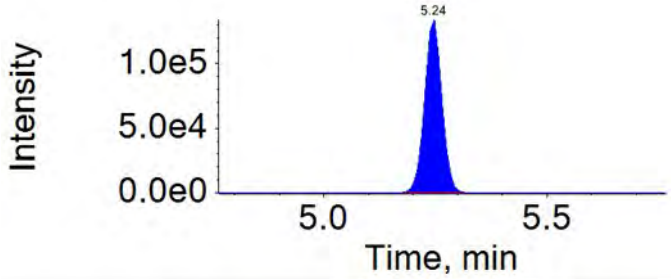
Extraction Standard: 13C8-PFOS
507.0 / 80.0



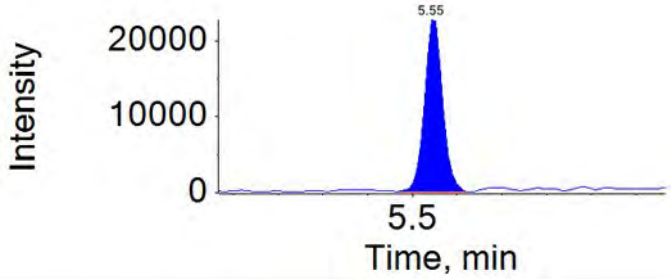
Analyte: PFNA
463.0 / 419.0



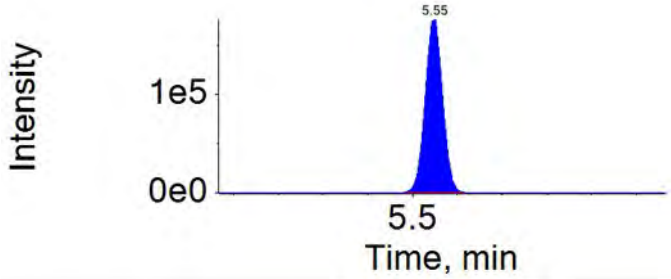
Extraction Standard: 13C9-PFNA
472.0 / 427.0



Analyte: PFDA
513.0 / 469.0

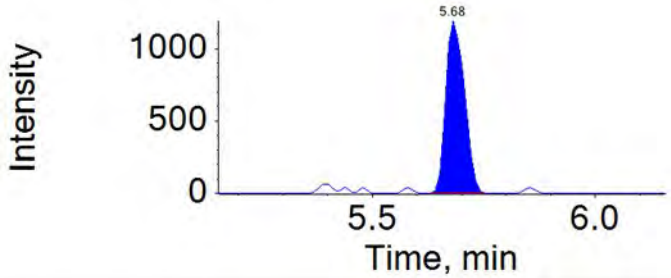


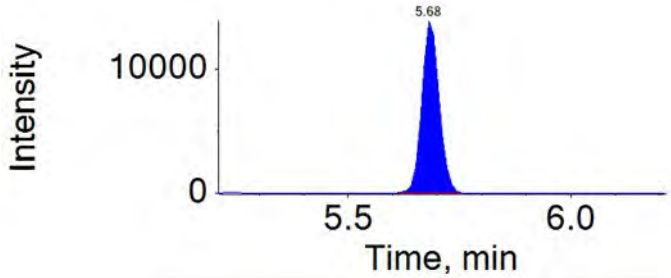
Extraction Standard: 13C6-PFDA
519.0 / 474.0



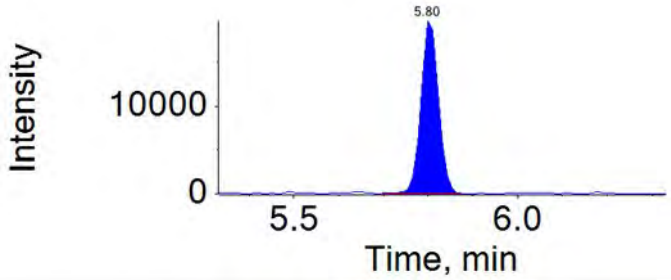
ICAL Name: 18NOV12DCAL **Result Table:** 18316011 11/14/2018 4:24:36 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

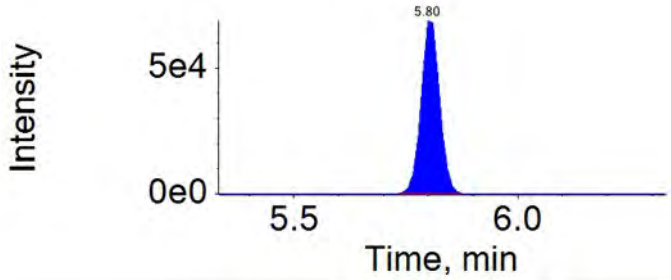
Analyte: NMeFOSAA	Extraction Standard: d3-NMeFOSAA
570.0 / 419.0	573.0 / 419.0



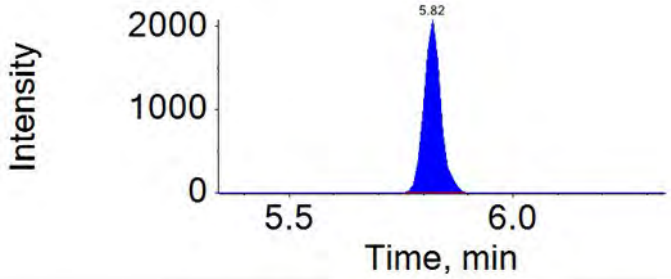


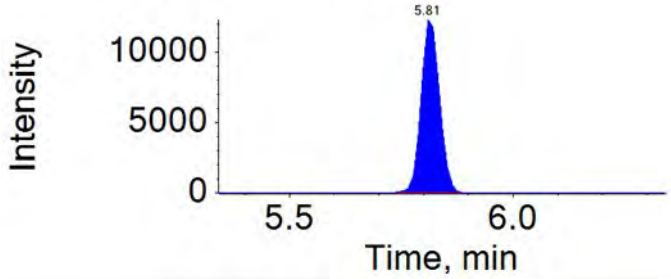
Analyte: PFUnDA	Extraction Standard: 13C7-PFUnDA
563.0 / 519.0	570.0 / 525.0



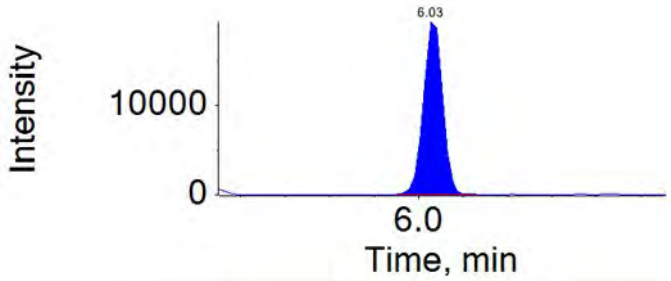


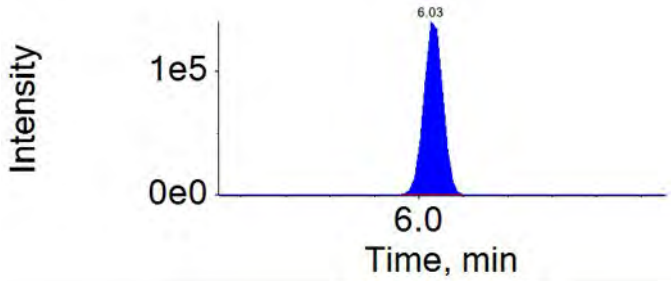
Analyte: NEtFOSAA	Extraction Standard: d5-NEtFOSAA
584.0 / 419.0	589.0 / 419.0





Analyte: PFDoDA	Extraction Standard: 13C2-PFDoDA
613.0 / 569.0	615.0 / 570.0



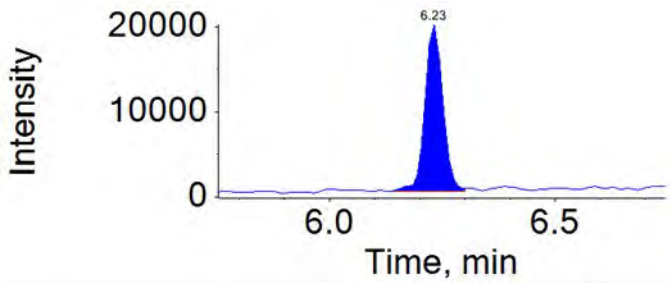


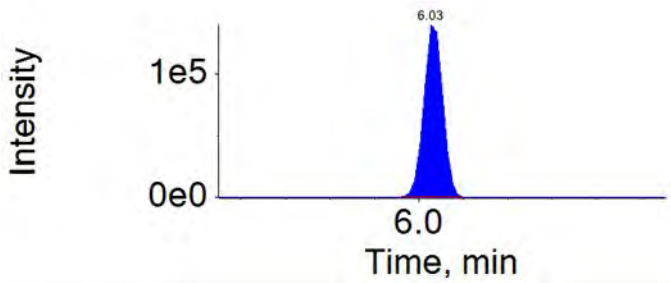
APPROVED
By MCD at 4:51 pm, 11/14/18

REVIEWED
By HMK at 12:21 pm, 11/15/18

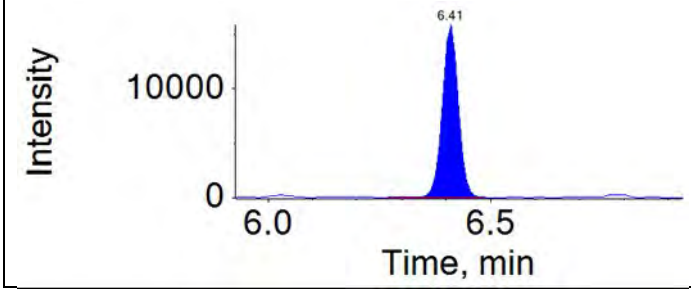
ICAL Name: 18NOV12DCAL **Result Table:** 18316011 11/14/2018 4:24:36 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

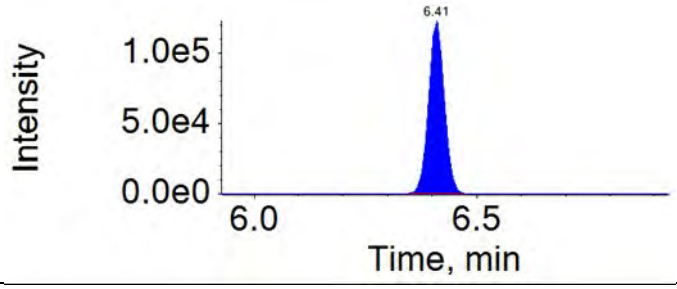
Analyte: PFTrDA	Extraction Standard: 13C2-PFDoDA
663.0 / 619.0	615.0 / 570.0





Analyte: PFTeDA	Extraction Standard: 13C2-PFTeDA
713.0 / 669.0	715.0 / 670.0





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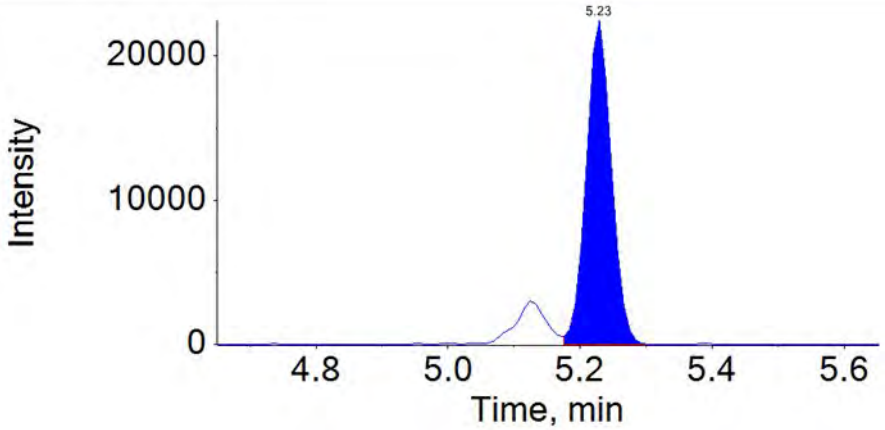
Auto Integrations prior to Manual Integration

Print Date: 11/14/2018 4:31 PM
Template: MQ-OrigInteg-16NOV21.docx

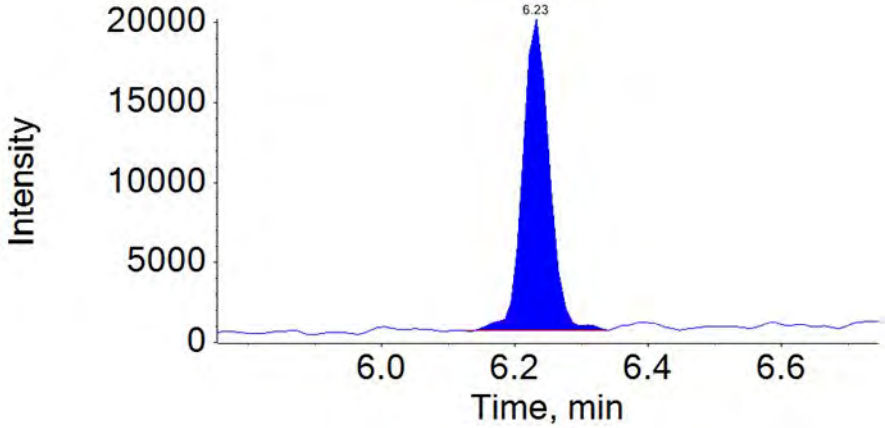
Results Table Name: 18316011
Results Table Date: 11/14/2018 4:24:36 PM
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

Component Name:
PFOS
RT (min.):
5.23
Peak Area:
59381.9
Mass Range:
499.0 / 80.0
File Name:
18NOV13D-57.wiff
Sample Name:
9885088MSD



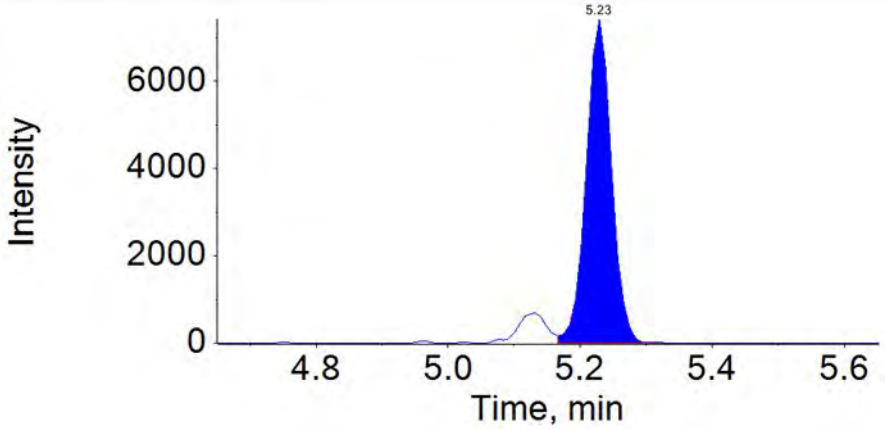
Integration Comment: incorrect integration

Component Name:
PFTrDA
RT (min.):
6.23
Peak Area:
54219.2
Mass Range:
663.0 / 619.0
File Name:
18NOV13D-57.wiff
Sample Name:
9885088MSD



Integration Comment: incorrect integration

Component Name:
PFOS_2
RT (min.):
5.23
Peak Area:
19842.0
Mass Range:
499.0 / 99.0
File Name:
18NOV13D-57.wiff
Sample Name:
9885088MSD



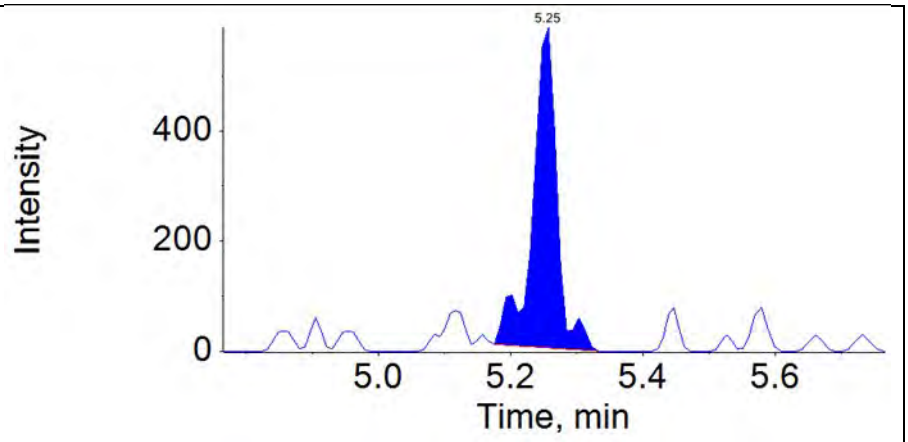
Integration Comment: incorrect integration

APPROVED
By MCD at 4:51 pm, 11/14/18

REVIEWED
By HMK at 12:21 pm, 11/15/18

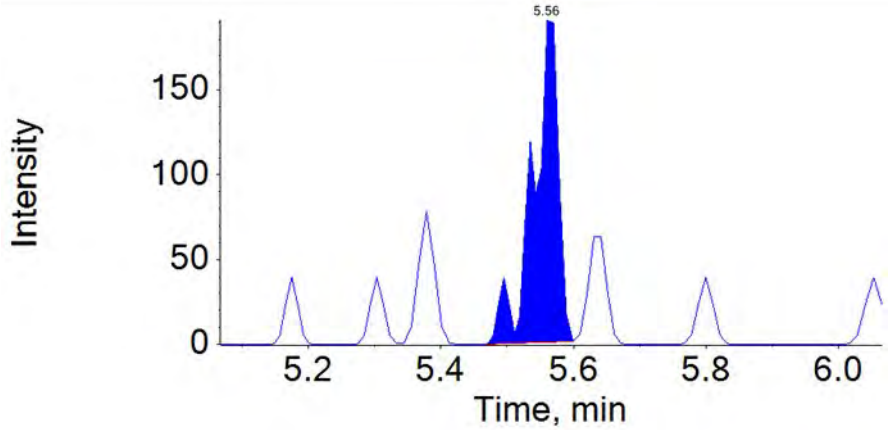
Results Table Name: 18316011
Results Table Date: 11/14/2018 4:24:36 PM
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

Component Name:
PFNA_2
RT (min.):
5.25
Peak Area:
1498.8
Mass Range:
463.0 / 169.0
File Name:
18NOV13D-57.wiff
Sample Name:
9885088MSD



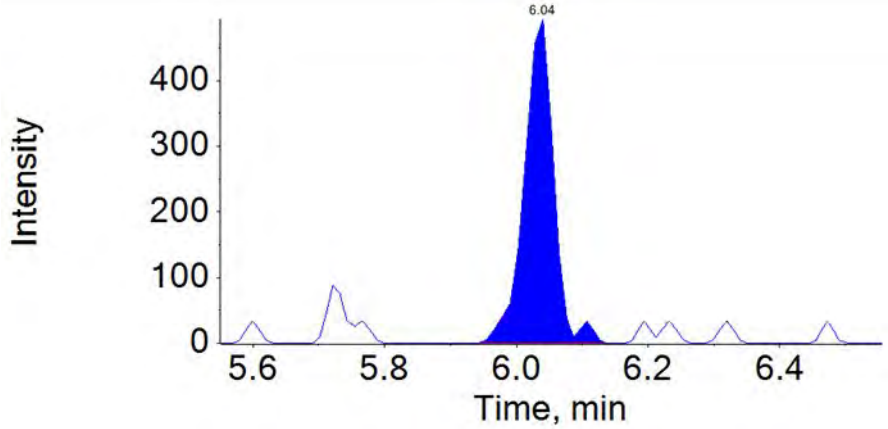
Integration Comment: incorrect integration

Component Name:
PFDA_2
RT (min.):
5.56
Peak Area:
514.3
Mass Range:
513.0 / 169.0
File Name:
18NOV13D-57.wiff
Sample Name:
9885088MSD



Integration Comment: incorrect integration

Component Name:
PFDoDA_2
RT (min.):
6.04
Peak Area:
1551.9
Mass Range:
613.0 / 169.0
File Name:
18NOV13D-57.wiff
Sample Name:
9885088MSD



Integration Comment: incorrect integration

APPROVED
By MCD at 4:51 pm, 11/14/18

REVIEWED
By HMK at 12:21 pm, 11/15/18

Results Table Name: 18316011
Results Table Date: 11/14/2018 4:24:36 PM

Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

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By MCD at 4:51 pm, 11/14/18

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By HMK at 12:21 pm, 11/15/18

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LC-MS/MS Analysis Report

Printed: 11/14/2018 4:28:00 PM
Template: IonRatio18OCT10

Ion Ratio Report

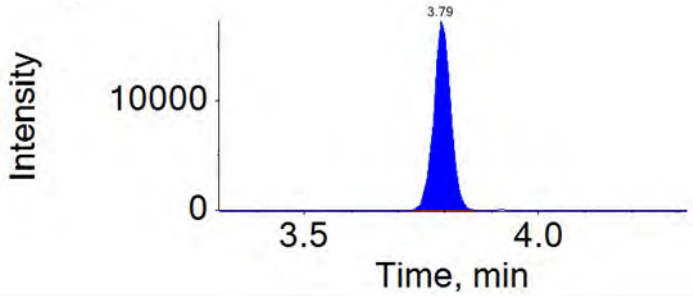
Sample Name: 9885088MSD **Instrument Name:** LM27631 **File Name:** 18NOV13D-57.wiff

Component Name	RT	RRT	Analyte Area Response	Int Typ	Expected Ion Ratio	Ion Ratio	Ion Ratio % Diff	Ion Ratio Limit	Ion Ratio OOS
PFBS	3.79	1.00	43255.8	A	N/A	0.3827			
PFBS_2	3.79	1.00	16554.5	A	N/A	0.3827	6	50	
PFHxA	4.14	1.00	92272.2	A	N/A	0.0103			
PFHxA_2	4.14	1.00	952.6	A	N/A	0.0103	-11	50	
PFHpA	4.53	1.00	94172.3	A	N/A	0.0634			
PFHpA_2	4.53	1.00	5973.7	A	N/A	0.0634	13	50	
PFHxS	4.53	1.00	32829.0	A	N/A	0.3738			
PFHxS_2	4.53	1.00	12272.2	A	N/A	0.3738	9	50	
PFOA	4.90	1.00	102131.9	A	N/A	0.0528			
PFOA_2	4.90	1.00	5394.2	A	N/A	0.0528	-6	50	
PFOS	5.23	1.00	69446.0	M	N/A	0.3164			
PFOS_2	5.23	1.00	21969.6	M	N/A	0.3164	7	50	
PFNA	5.25	1.00	77494.2	A	N/A	0.0171			
PFNA_2	5.25	1.00	1328.8	M	N/A	0.0171	-25	50	
PFDA	5.55	1.00	63492.0	A	N/A	0.0075			
PFDA_2	5.56	1.00	476.0	M	N/A	0.0075	-7	50	
NMeFOSAA	5.68	1.00	3458.3	A	N/A	0.4382			
NMeFOSAA_2	5.69	1.00	1515.5	A	N/A	0.4382	71	50	OOS
PFUnDA	5.80	1.00	53272.0	A	N/A	0.0024			
PFUnDA_2	5.81	1.00	129.8	A	N/A	0.0024	-58	50	OOS
NEtFOSAA	5.82	1.00	5305.2	A	N/A	0.5979			
NEtFOSAA_2	5.82	1.00	3172.1	A	N/A	0.5979	-18	50	
PFDoDA	6.03	1.00	58069.6	A	N/A	0.0259			
PFDoDA_2	6.04	1.00	1502.0	M	N/A	0.0259	65	50	OOS
PFTrDA	6.23	1.03	54011.2	M	N/A	0.0064			
PFTrDA_2	6.23	1.03	347.3	A	N/A	0.0064	-25	50	
PFTeDA	6.41	1.00	39297.5	A	N/A	0.0041			
PFTeDA_2	6.41	1.00	160.3	A	N/A	0.0041	-35	50	

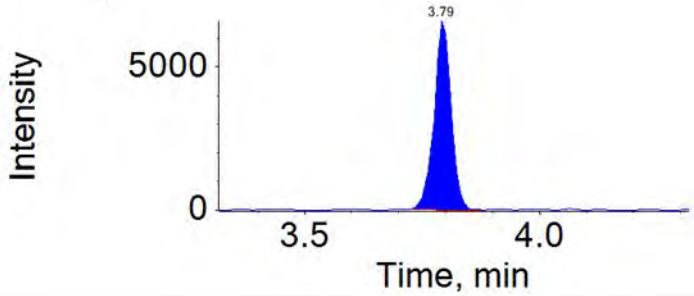
APPROVED
By MCD at 4:51 pm, 11/14/18

REVIEWED
By HMK at 12:21 pm, 11/15/18

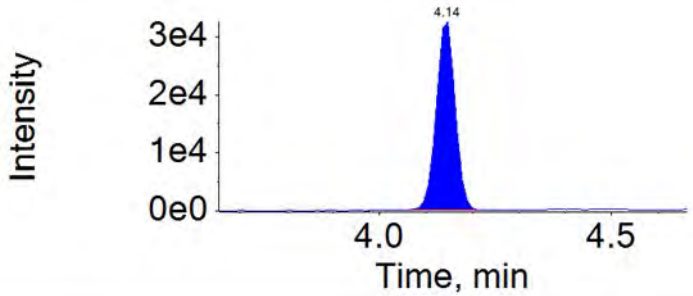
Component: PFBS
Primary Mass: 299.0 / 80.0



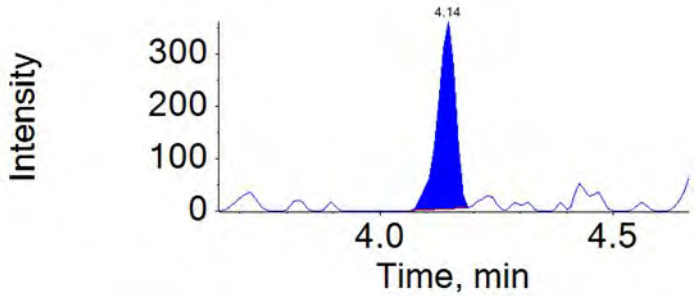
Component: PFBS_2
Secondary Mass: 299.0 / 99.0



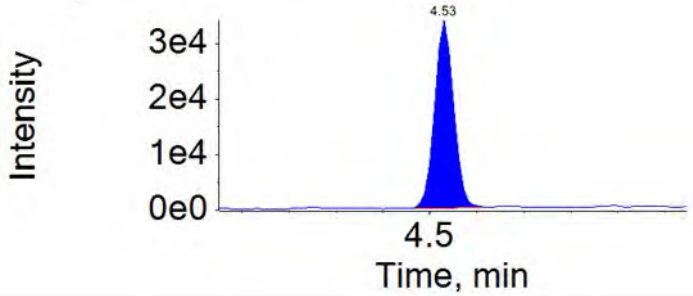
Component: PFHxA
Primary Mass: 313.0 / 269.0



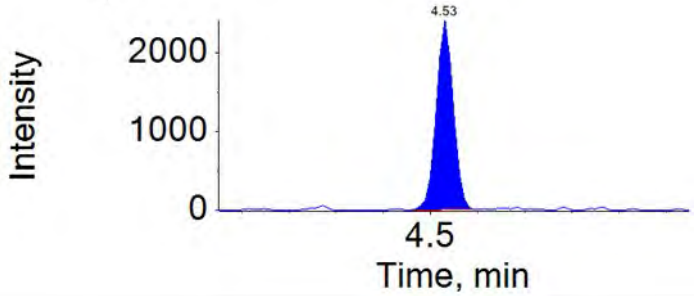
Component: PFHxA_2
Secondary Mass: 313.0 / 119.0



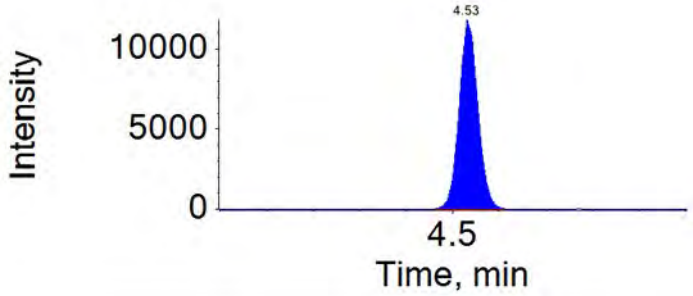
Component: PFHpA
Primary Mass: 363.0 / 319.0



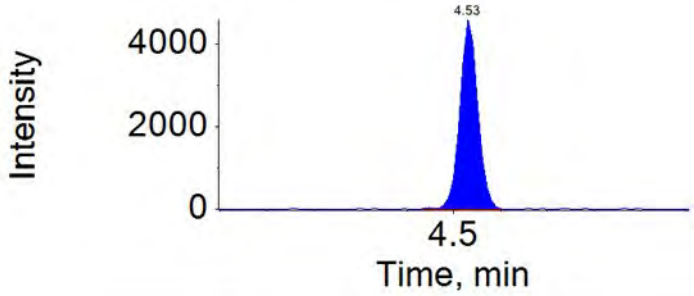
Component: PFHpA_2
Secondary Mass: 363.0 / 169.0



Component: PFHxS
Primary Mass: 399.0 / 80.0



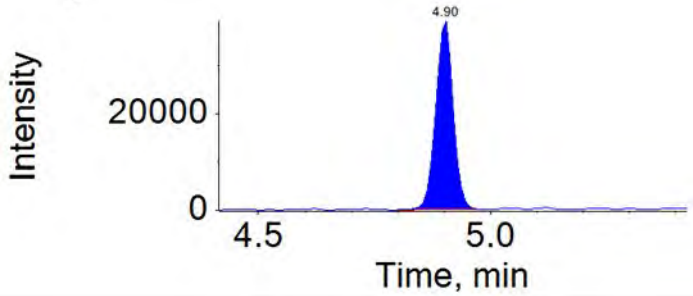
Component: PFHxS_2
Secondary Mass: 399.0 / 99.0



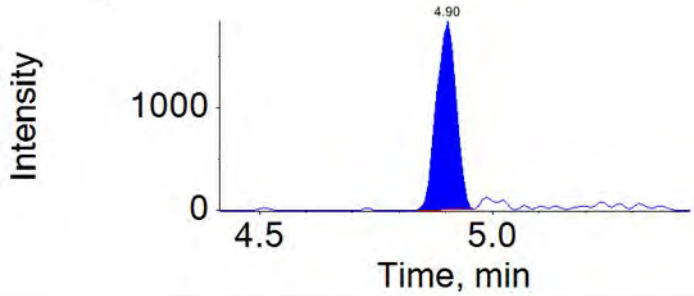
APPROVED
By MCD at 4:51 pm, 11/14/18

REVIEWED
By HMK at 12:21 pm, 11/15/18

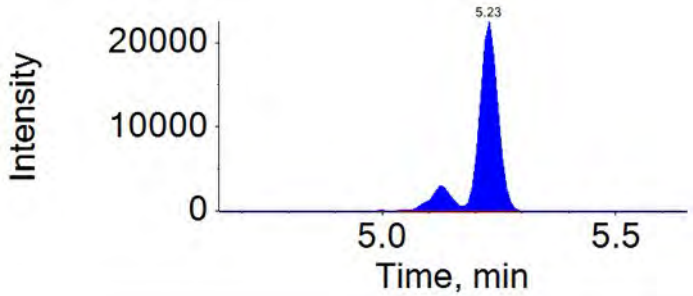
Component: PFOA
Primary Mass: 413.0 / 369.0



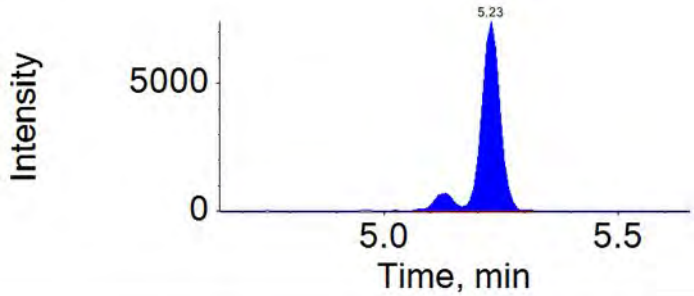
Component: PFOA_2
Secondary Mass: 413.0 / 169.0



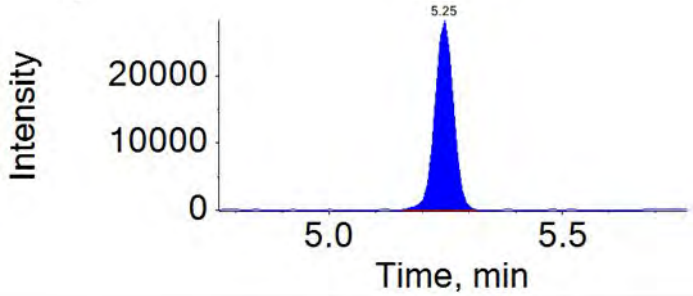
Component: PFOS
Primary Mass: 499.0 / 80.0



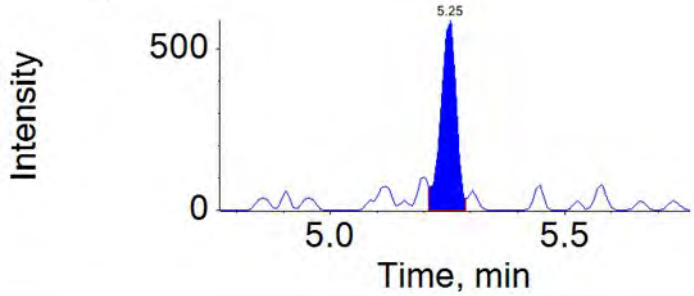
Component: PFOS_2
Secondary Mass: 499.0 / 99.0



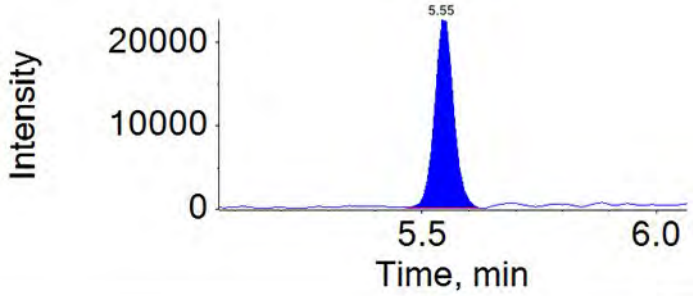
Component: PFNA
Primary Mass: 463.0 / 419.0



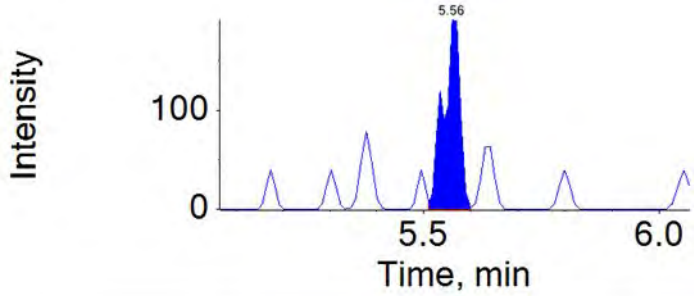
Component: PFNA_2
Secondary Mass: 463.0 / 169.0



Component: PFDA
Primary Mass: 513.0 / 469.0



Component: PFDA_2
Secondary Mass: 513.0 / 169.0



APPROVED
By MCD at 4:51 pm, 11/14/18

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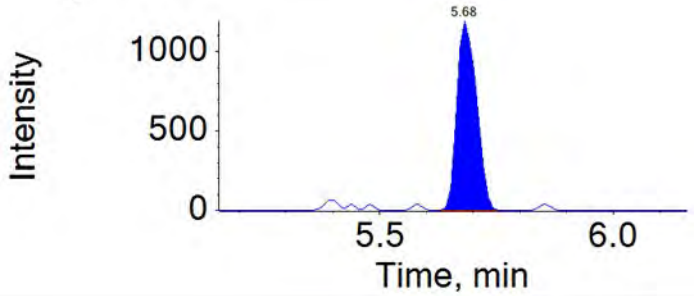
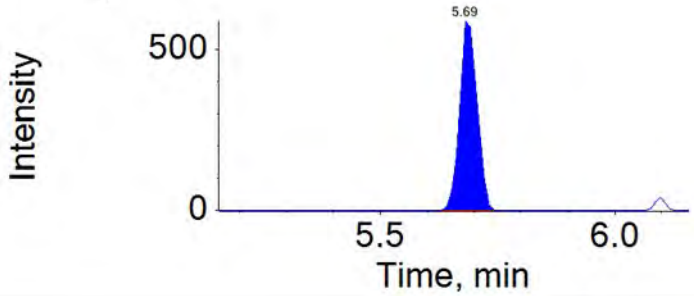
By HMK at 12:21 pm, 11/15/18

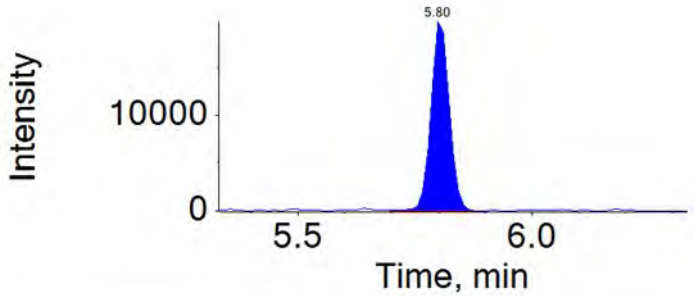
Component: NMeFOSAA
Primary Mass: 570.0 / 419.0



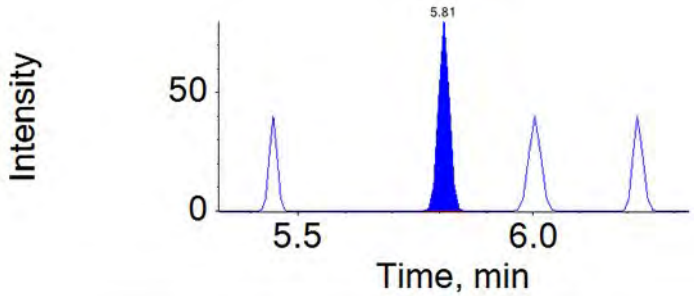
Component: NMeFOSAA_2
Secondary Mass: 570.0 / 483.0



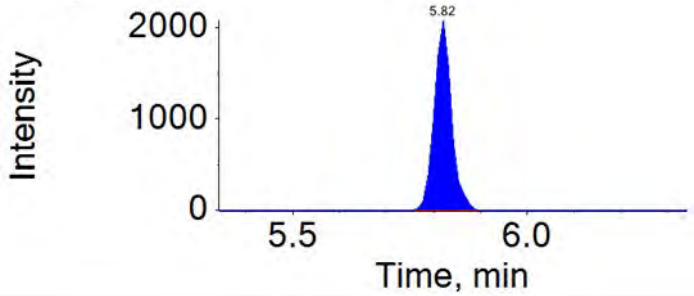
Component: PFUnDA
Primary Mass: 563.0 / 519.0



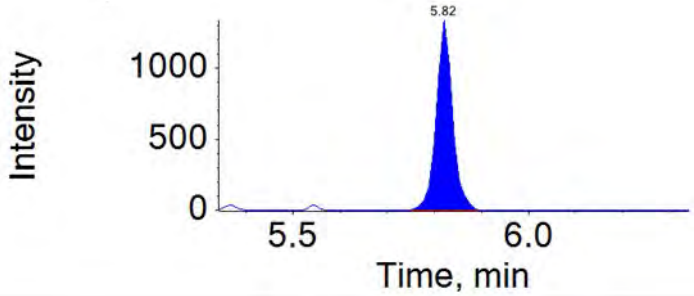
Component: PFUnDA_2
Secondary Mass: 563.0 / 169.0



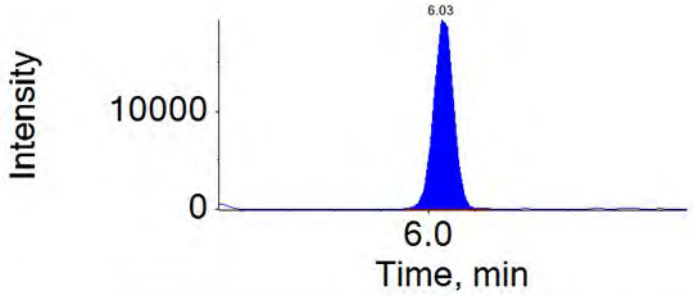
Component: NEtFOSAA
Primary Mass: 584.0 / 419.0



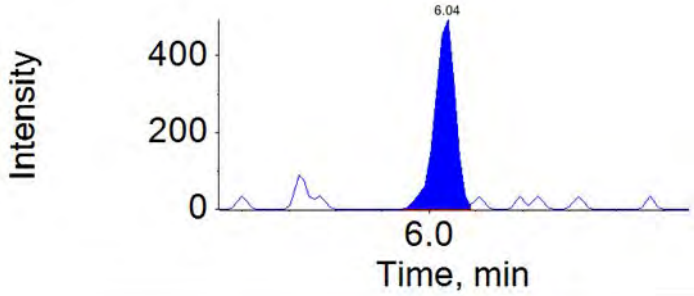
Component: NEtFOSAA_2
Secondary Mass: 584.0 / 526.0



Component: PFDoDA
Primary Mass: 613.0 / 569.0



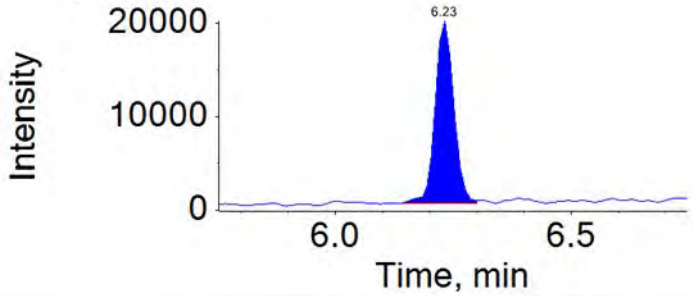
Component: PFDoDA_2
Secondary Mass: 613.0 / 169.0



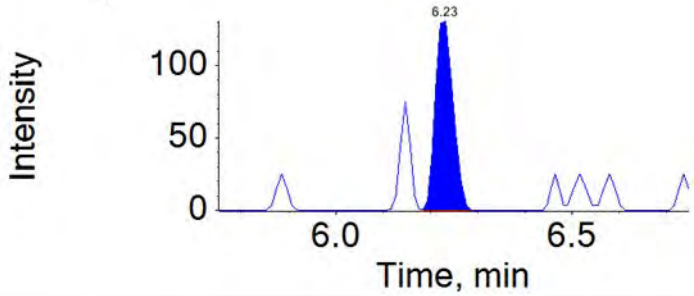
APPROVED
By MCD at 4:51 pm, 11/14/18

REVIEWED
By HMK at 12:21 pm, 11/15/18

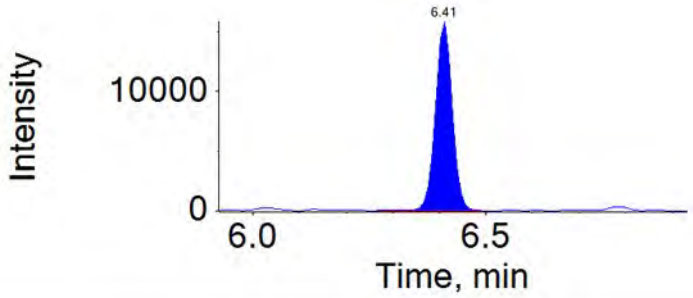
Component: PFTrDA
Primary Mass: 663.0 / 619.0



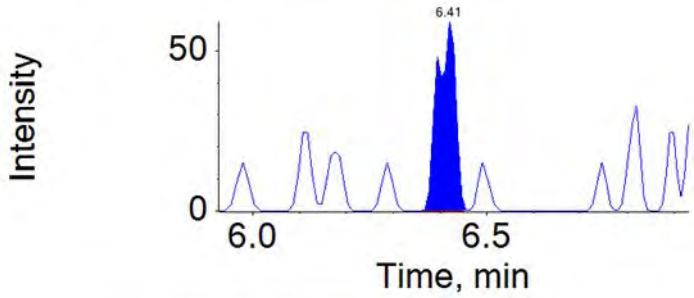
Component: PFTrDA_2
Secondary Mass: 663.0 / 169.0



Component: PFTeDA
Primary Mass: 713.0 / 669.0



Component: PFTeDA_2
Secondary Mass: 713.0 / 169.0



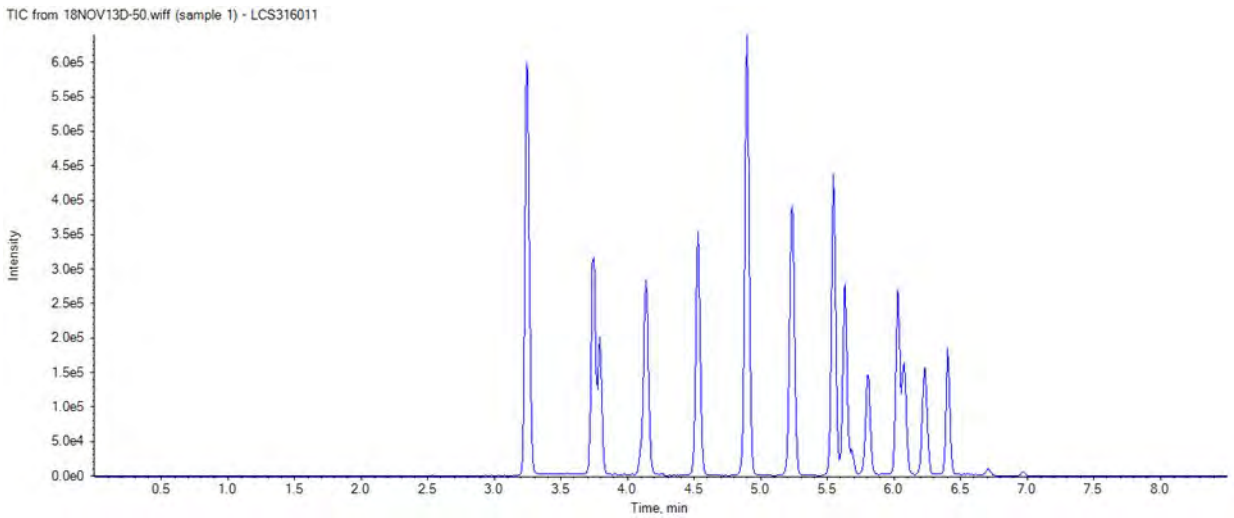
APPROVED
By MCD at 4:51 pm, 11/14/18

REVIEWED
By HMK at 12:21 pm, 11/15/18

Lab Control Sample Recovery

ICAL Name: 18NOV12DCAL **Result Table:** 18316011 11/14/2018 4:22:26 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Instrument Name:	Sample Name:	Sample ID:	Sample File:	Acquisition Date:
LM27631	LCS316011	EPA 537 mod QSM 5.1 table B-15 18316011	18NOV13D-50.wiff	2018-11-13T17:05:29



Injection Standard Area Reference File**:** 18NOV13D-05

Injection Standard Name	Inj Std Conc	Injection Std Peak Area	Reference Injection Standard Area	Injection Std %Diff	Injection Std %Diff Limit	Injection Std %Diff OOS
13C3-PFBA	5.00	712565.2	661126.9	8	50	
13C2-PFOA	5.00	506242.6	466902.6	8	50	
13C4-PFOS	4.78	269393.7	247446.9	9	50	
13C2-PFDA	5.00	327789.1	295381.6	11	50	

APPROVED
By MCD at 4:51 pm, 11/14/18

REVIEWED
By HMK at 12:22 pm, 11/15/18

Lab Control Sample Recovery

ICAL Name: 18NOV12DCAL **Result Table:** 18316011 11/14/2018 4:22:26 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Instrument Name:	Sample Name:	Sample ID:	Sample File:	Acquisition Date:
LM27631	LCS316011	EPA 537 mod QSM 5.1 table B-15 18316011	18NOV13D-50.wiff	2018-11-13T17:05:29

Analyte Name	Analyte Area	Ext Std Area	Area Ratio	Adj Actual Conc	Sample Result	%REC	% REC Limit	%REC OOS
PFBA	79856.4	601174.2	0.133	1.360	1.472	108	70-130	
PFPeA	82557.6	639917.0	0.129	1.360	1.494	110	70-130	
PFBS	44459.9	360782.3	0.123	1.204	1.172	97	70-130	
4:2-FTS	25692.9	37715.3	0.681	3.736	3.699	99	70-130	
PFHxA	97616.4	540884.9	0.180	1.360	1.507	111	70-130	
PFPeS	22641.9	360782.3	0.063	1.276	1.219	95	70-130	
PFHpA	96030.7	406338.4	0.236	1.360	1.567	115	70-130	
PFHxS	33226.6	268448.8	0.124	1.286	1.200	93	70-130	
6:2-FTS	22116.6	27773.9	0.796	3.792	3.854	102	70-130	
PFHpS	32856.0	268448.8	0.122	1.294	1.289	100	70-130	
PFOA	101181.5	740235.7	0.137	1.360	1.460	107	70-130	
PFOS	26030.2	232772.8	0.112	1.300	0.978	75	70-130	
PFNA	82610.8	399655.4	0.207	1.360	1.491	110	70-130	
PFNS	17156.0	232772.8	0.074	1.306	1.031	79	70-130	
PFDA	65605.2	521885.9	0.126	1.360	1.333	98	70-130	
8:2-FTS	17909.5	21034.8	0.851	3.832	3.970	104	70-130	
PFOSA	71339.6	542687.1	0.131	1.360	1.284	94	70-130	
NMeFOSAA	7050.1	65127.0	0.108	1.360	1.224	90	70-130	
PFDS	16592.0	232772.8	0.071	1.310	1.292	99	70-130	
PFUnDA	57012.9	223233.6	0.255	1.360	1.335	98	70-130	
NEtFOSAA	6188.8	51198.1	0.121	1.360	1.267	93	70-130	
PFDoDA	60776.2	490842.9	0.124	1.360	1.261	93	70-130	
10:2-FTS	11237.1	21034.8	0.534	3.856	3.559	92	70-130	
NMePFOSAE	41492.7	264425.0	0.157	1.360	1.306	96	70-130	
NMePFOSA	8784.1	69464.9	0.126	1.360	1.248	92	70-130	
PFDoS	6319.8	232772.8	0.027	1.316	0.951	72	70-130	
NEtPFOSAE	50694.5	227082.7	0.223	1.360	1.432	105	70-130	
NEtPFOSA	7556.1	53035.0	0.142	1.360	1.309	96	70-130	
PFTrDA	57959.2	490842.9	0.118	1.360	1.491	110	70-130	
PFTeDA	41782.5	322039.7	0.130	1.360	1.455	107	70-130	
PFHxDA	17968.3	322039.7	0.056	1.360	1.329	98	70-130	
PFODA	11942.1	322039.7	0.037	1.360	1.033	76	70-130	

APPROVED
By MCD at 4:51 pm, 11/14/18

REVIEWED
By HMK at 12:22 pm, 11/15/18

Lab Control Sample Recovery

ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM
Result Table: 18316011 11/14/2018 4:22:26 PM
Acquisition Method: 18AUG13_3uL.dam

APPROVED
By MCD at 4:51 pm, 11/14/18

REVIEWED
By HMK at 12:22 pm, 11/15/18

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LC-MS/MS
DOD Analysis Report

Printed: 11/14/2018 4:25:00 PM
Template: DOD-Sample-18JUN22.docx

ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM
Result Table: 18316011 11/14/2018 4:24:36 PM
Acquisition Method: 18AUG13_3uL.dam

Sample Name:	LCS316011			**Data File:**		18NOV13D-50.wiff
Sample ID:	EPA 537 mod QSM 5.1 table B-15 18316011			**Acquis Date:**		2018-11-13T17:05:29
Sample Type:	Quality Control			**Instrument:**		LM27631
Vial Position:	48			**Acquis Method:**		18AUG13_3uL.dam
Injection Vol:	3.00			**Result Table:**		18316011
QMethod File:	18AUG20QM			**ICAL Name:**		18NOV12DCAL
Batch Number:	18316011			**Operator:**		MCD7824
Sample Wt.:	1.00000			**Dilution Factor:**		1.00
Sample Vol.:	1.000			**Prep Factor:**		2.000

Injection Standard Peak Table

Injection Standard Area Reference File: 18NOV13D-05

Injection Standard Name	Inj Std Conc	Injection Std Peak Area	Rreference Injection Standard Area	Injection Std %Diff	Injection Std %Diff Limit	Injection Std %Diff OOS
13C3-PFBA	5.0	712565.2	661126.9	8	50	
13C2-PFOA	5.0	506242.6	466902.6	8	50	
13C4-PFOS	4.8	269393.7	247446.9	9	50	
13C2-PFDA	5.0	327789.1	295381.6	11	50	

Extraction Standard Peak Table

Extraction Standard Name	Ext Std Area	Inj Std Name	Inj Std Area	Area Ratio	Ext Std Conc	Ext Std Result	Ext Std %REC	Ext Std %REC Limit	Ext Std OOS
E13C4-PFBA	601174.2	13C3-PFBA	712565.2	0.844	10.000	7.565	76	50-150	
E13C5-PFPeA	639917.0	13C3-PFBA	712565.2	0.898	10.000	8.056	81	50-150	
E13C3-PFBS	360782.3	13C3-PFBA	712565.2	0.506	9.300	7.148	77	50-150	
E13C2-4:2-FTS	37715.3	13C2-PFOA	506242.6	0.075	9.340	6.636	71	50-150	
E13C5-PFHxA	540884.9	13C2-PFOA	506242.6	1.068	10.000	7.719	77	50-150	
E13C3-PFHxS	268448.8	13C2-PFOA	506242.6	0.530	9.460	7.277	77	50-150	
E13C4-PFHpA	406338.4	13C2-PFOA	506242.6	0.803	10.000	7.232	72	50-150	
E13C2-6:2-FTS	27773.9	13C2-PFOA	506242.6	0.055	9.500	7.341	77	50-150	
E13C8-PFOA	740235.7	13C2-PFOA	506242.6	1.462	10.000	8.057	81	50-150	
E13C8-PFOS	232772.8	13C4-PFOS	269393.7	0.864	9.560	7.657	80	50-150	
E13C9-PFNA	399655.4	13C4-PFOS	269393.7	1.484	10.000	8.273	83	50-150	
E13C6-PFDA	521885.9	13C2-PFDA	327789.1	1.592	10.000	7.431	74	50-150	
E13C2-8:2-FTS	21034.8	13C2-PFDA	327789.1	0.064	9.580	6.401	67	50-150	
E13C8-PFOSA	542687.1	13C2-PFDA	327789.1	1.656	10.000	7.341	73	50-150	
Ed3-NMeFOSAA	65127.0	13C2-PFDA	327789.1	0.199	10.000	7.173	72	50-150	
E13C7-PFUnDA	223233.6	13C2-PFDA	327789.1	0.681	10.000	7.908	79	50-150	
Ed5-NEtFOSAA	51198.1	13C2-PFDA	327789.1	0.156	10.000	6.609	66	50-150	
E13C2-PFDoDA	490842.9	13C2-PFDA	327789.1	1.497	10.000	7.776	78	50-150	
Ed7-NMePFOSAE	264425.0	13C2-PFDA	327789.1	0.807	10.000	6.982	70	50-150	
Ed3-NMePFOSA	69464.9	13C2-PFDA	327789.1	0.212	10.000	7.701	77	50-150	
Ed9-NEtPFOSAE	227082.7	13C2-PFDA	327789.1	0.693	10.000	7.206	72	50-150	
Ed5-NEtPFOSA	53035.0	13C2-PFDA	327789.1	0.162	10.000	7.591	76	50-150	
E13C2-PFTeDA	322039.7	13C2-PFDA	327789.1	0.982	10.000	6.898	69	50-150	

APPROVED
By MCD at 4:51 pm, 11/14/18

REVIEWED
By HMK at 12:22 pm, 11/15/18

ICAL Name: 18NOV12DCAL **Result Table:** 18316011 11/14/2018 4:24:36 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

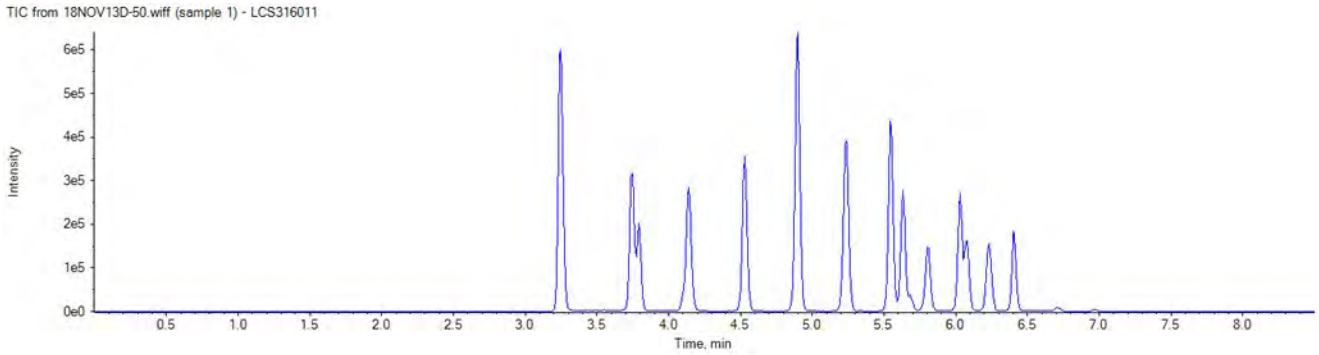
Analyte Quantitation Peak Table

Sample Name: LCS316011 **Instrument Name:** LM27631 **File Name:** 18NOV13D-50.wiff

Sample Wt	Sample Vol	Dilution Factor	PrepFactor
1.00000	1.000	1.00	2.000

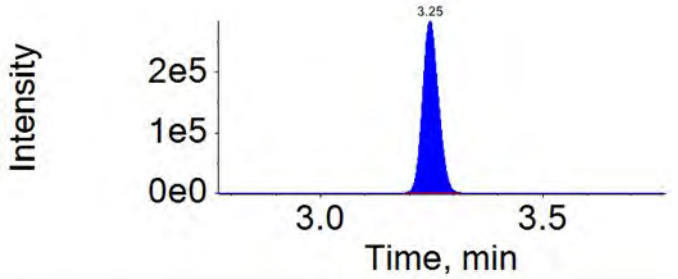
Analyte Name	RT	RRT	Analyte Area Response	E	Int Typ	ES Name	ES RT	ES Area Response	Area Ratio	Sample Result (ng/g)
PFBA	3.24	1.000	79856.4		A	13C4-PFBA	3.24	601174.2	0.133	1.472
PFPeA	3.74	1.000	82557.6		A	13C5-PFPeA	3.74	639917.0	0.129	1.494
PFBS	3.79	1.000	44459.9		A	13C3-PFBS	3.79	360782.3	0.123	1.172
4:2-FTS	4.11	1.000	25692.9		A	13C2-4:2-FTS	4.10	37715.3	0.681	3.699
PFHxA	4.14	1.000	97616.4		A	13C5-PFHxA	4.14	540884.9	0.180	1.507
PFPeS	4.16	1.100	22641.9		A	13C3-PFBS	3.79	360782.3	0.063	1.219
PFHpA	4.53	1.000	96030.7		A	13C4-PFHpA	4.53	406338.4	0.236	1.567
PFHxS	4.53	1.000	33226.6		A	13C3-PFHxS	4.53	268448.8	0.124	1.200
6:2-FTS	4.89	1.000	22116.6		A	13C2-6:2-FTS	4.89	27773.9	0.796	3.854
PFHpS	4.89	1.080	32856.0		A	13C3-PFHxS	4.53	268448.8	0.122	1.289
PFOA	4.90	1.000	101181.5		A	13C8-PFOA	4.90	740235.7	0.137	1.460
PFOS	5.23	1.000	26030.2		M	13C8-PFOS	5.23	232772.8	0.112	0.978
PFNA	5.24	1.000	82610.8		A	13C9-PFNA	5.24	399655.4	0.207	1.491
PFNS	5.53	1.060	17156.0		A	13C8-PFOS	5.23	232772.8	0.074	1.031
PFDA	5.55	1.000	65605.2		A	13C6-PFDA	5.55	521885.9	0.126	1.333
8:2-FTS	5.55	1.000	17909.5		A	13C2-8:2-FTS	5.55	21034.8	0.851	3.970
PFOSA	5.63	1.000	71339.6		A	13C8-PFOSA	5.63	542687.1	0.131	1.284
NMeFOSAA	5.69	1.000	7050.1		A	d3-NMeFOSAA	5.69	65127.0	0.108	1.224
PFDS	5.78	1.110	16592.0		A	13C8-PFOS	5.23	232772.8	0.071	1.292
PFUnDA	5.80	1.000	57012.9		A	13C7-PFUnDA	5.80	223233.6	0.255	1.335
NEtFOSAA	5.82	1.000	6188.8		M	d5-NEtFOSAA	5.82	51198.1	0.121	1.267
PFDoDA	6.03	1.000	60776.2		A	13C2-PFDoDA	6.03	490842.9	0.124	1.261
10:2-FTS	6.05	1.090	11237.1		A	13C2-8:2-FTS	5.55	21034.8	0.534	3.559
NMePFOSAE	6.08	1.000	41492.7		A	d7-NMePFOSAE	6.07	264425.0	0.157	1.306
NMePFOSA	6.09	1.000	8784.1		A	d3-NMePFOSA	6.09	69464.9	0.126	1.248
PFDoS	6.20	1.190	6319.8		A	13C8-PFOS	5.23	232772.8	0.027	0.951
NEtPFOSAE	6.24	1.000	50694.5		A	d9-NEtPFOSAE	6.23	227082.7	0.223	1.432
NEtPFOSA	6.25	1.000	7556.1		A	d5-NEtPFOSA	6.25	53035.0	0.142	1.309
PFTrDA	6.23	1.030	57959.2		A	13C2-PFDoDA	6.03	490842.9	0.118	1.491
PFTeDA	6.40	1.000	41782.5		A	13C2-PFTeDA	6.41	322039.7	0.130	1.455
PFHxDA	6.71	1.050	17968.3		A	13C2-PFTeDA	6.41	322039.7	0.056	1.329
PFODA	6.97	1.090	11942.1		A	13C2-PFTeDA	6.41	322039.7	0.037	1.033

Total Ion Chromatogram

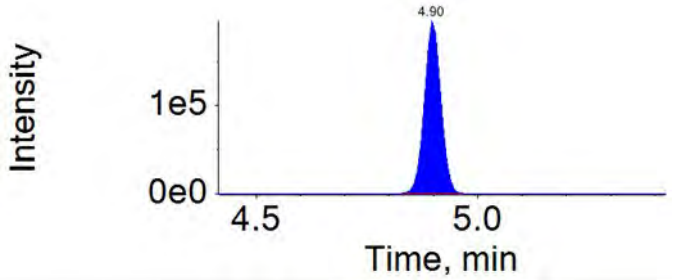


ICAL Name: 18NOV12DCAL **Result Table:** 18316011 11/14/2018 4:24:36 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

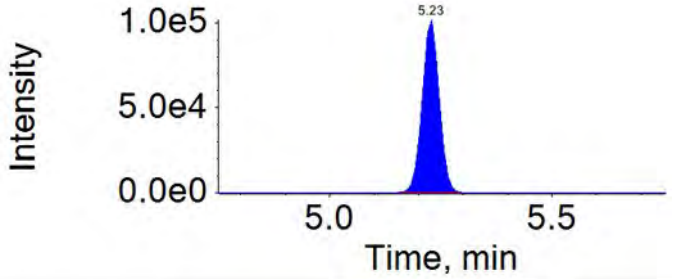
Injection Standard: 13C3-PFBA
216.0 / 172.0



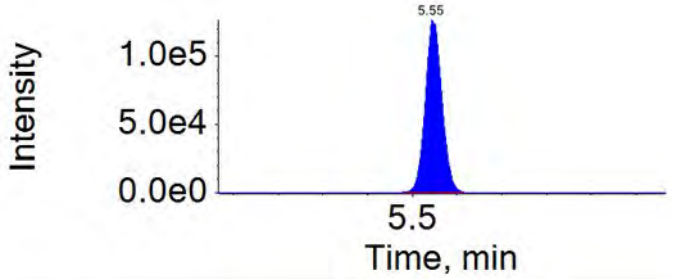
Injection Standard: 13C2-PFOA
415.0 / 370.0



Injection Standard: 13C4-PFOS
503.0 / 80.0

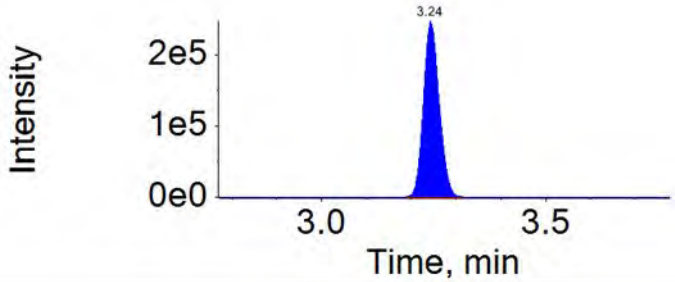


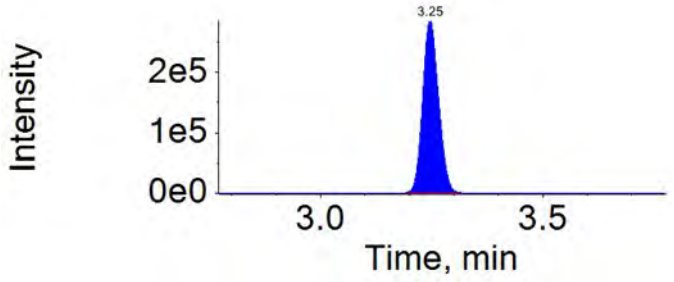
Injection Standard: 13C2-PFDA
515.0 / 470.0



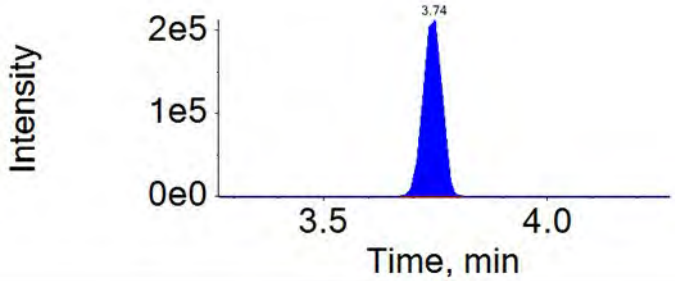
ICAL Name: 18NOV12DCAL **Result Table:** 18316011 11/14/2018 4:24:36 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

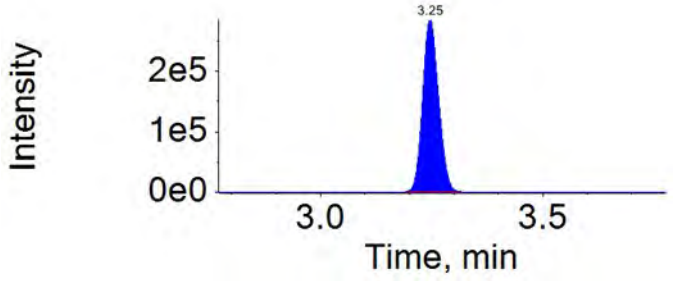
Extraction Standard: E13C4-PFBA	Injection Standard: 13C3-PFBA
217.0 / 172.0	216.0 / 172.0



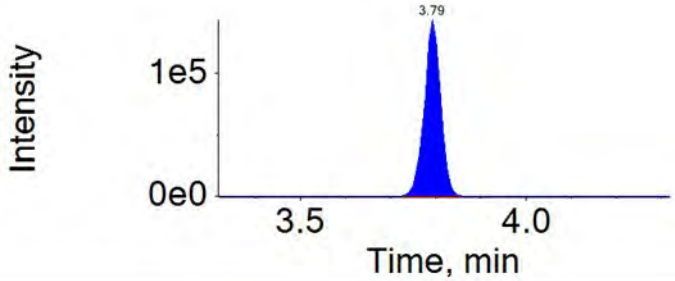


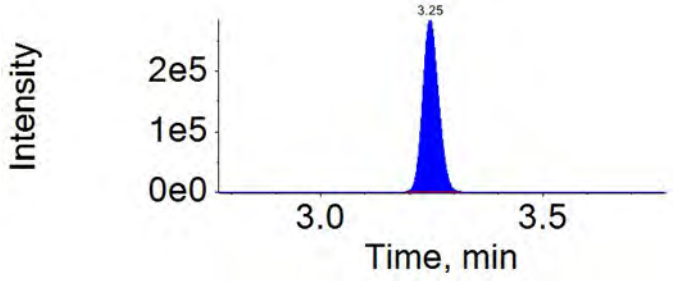
Extraction Standard: E13C5-PFPeA	Injection Standard: 13C3-PFBA
268.0 / 223.0	216.0 / 172.0



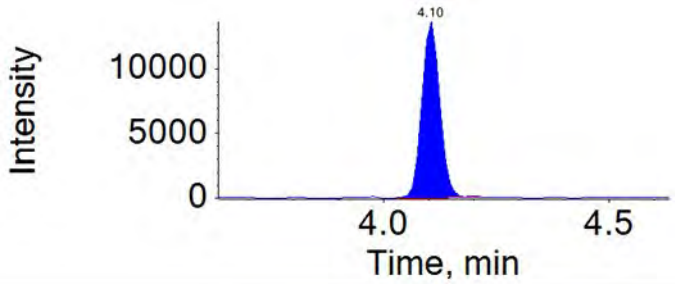


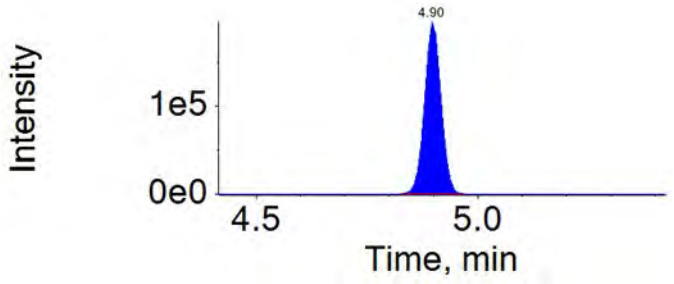
Extraction Standard: E13C3-PFBS	Injection Standard: 13C3-PFBA
302.0 / 80.0	216.0 / 172.0





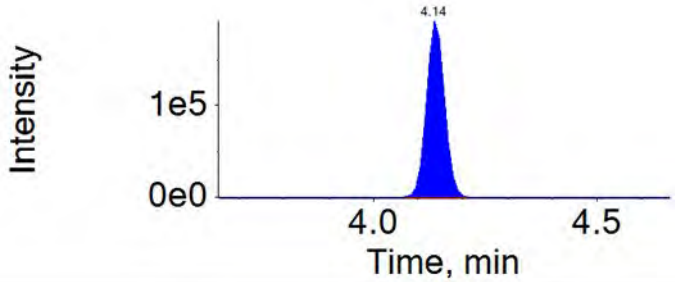
Extraction Standard: E13C2-4:2-FTS	Injection Standard: 13C2-PFOA
329.0 / 81.0	415.0 / 370.0

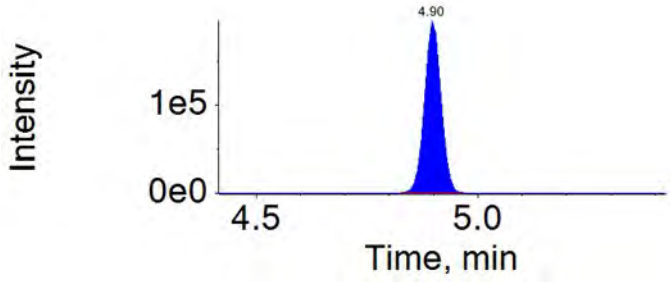




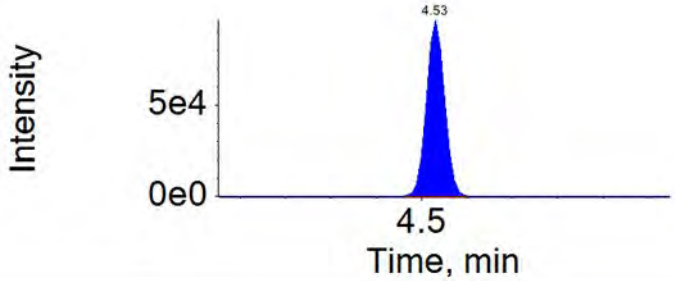
ICAL Name: 18NOV12DCAL **Result Table:** 18316011 11/14/2018 4:24:36 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

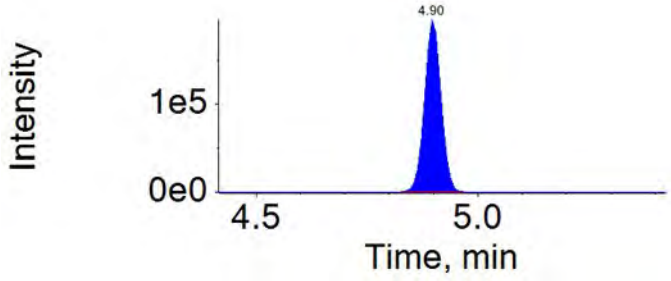
Extraction Standard: E13C5-PFHxA	Injection Standard: 13C2-PFOA
318.0 / 273.0	415.0 / 370.0



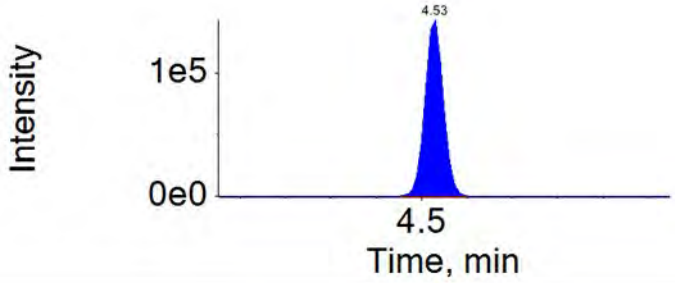


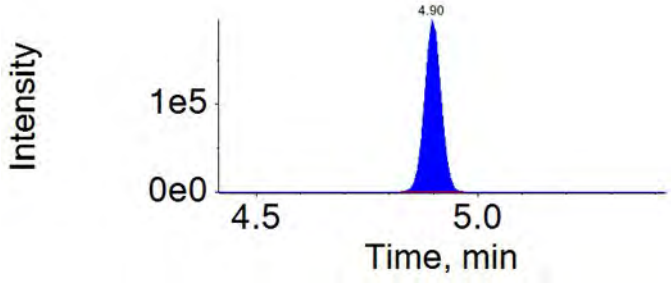
Extraction Standard: E13C3-PFHxS	Injection Standard: 13C2-PFOA
402.0 / 80.0	415.0 / 370.0



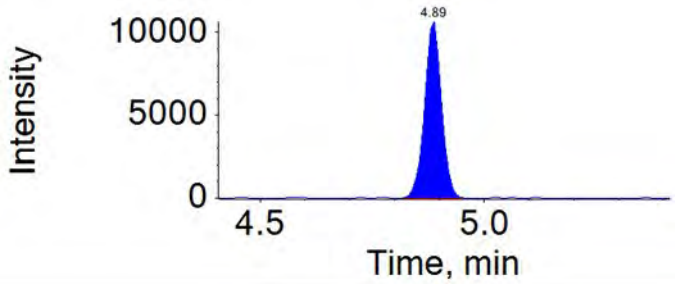


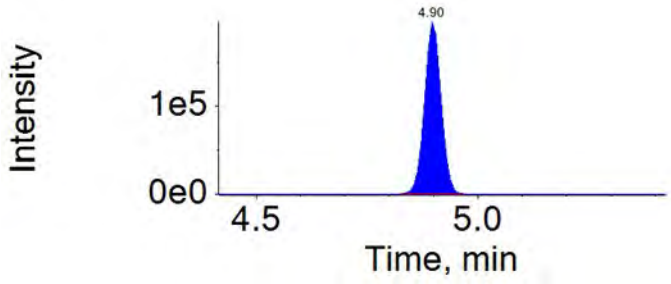
Extraction Standard: E13C4-PFHpA	Injection Standard: 13C2-PFOA
367.0 / 322.0	415.0 / 370.0





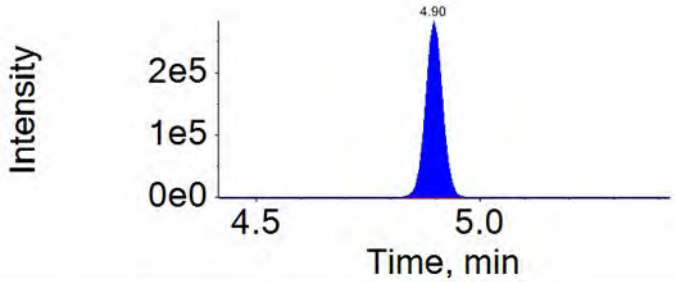
Extraction Standard: E13C2-6:2-FTS	Injection Standard: 13C2-PFOA
429.0 / 81.0	415.0 / 370.0

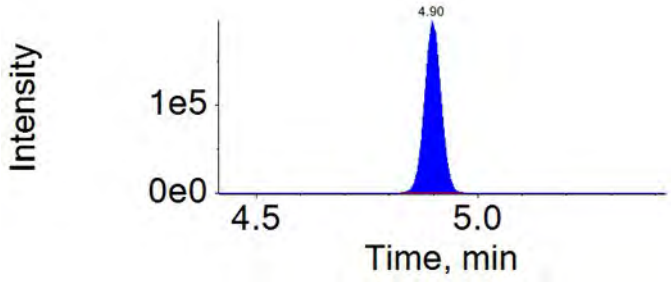




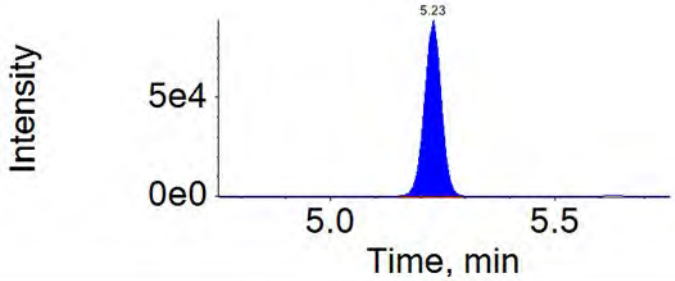
ICAL Name: 18NOV12DCAL **Result Table:** 18316011 11/14/2018 4:24:36 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

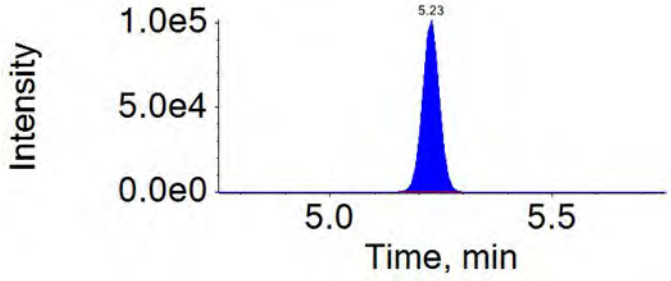
Extraction Standard: E13C8-PFOA	Injection Standard: 13C2-PFOA
421.0 / 376.0	415.0 / 370.0



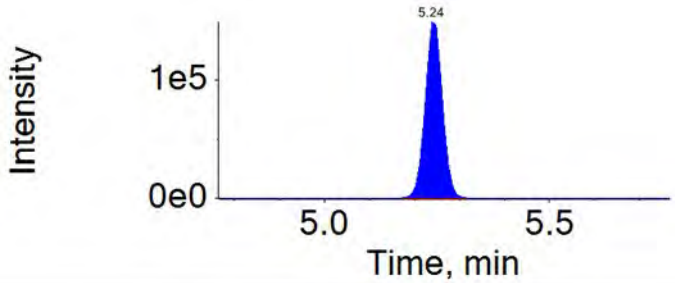


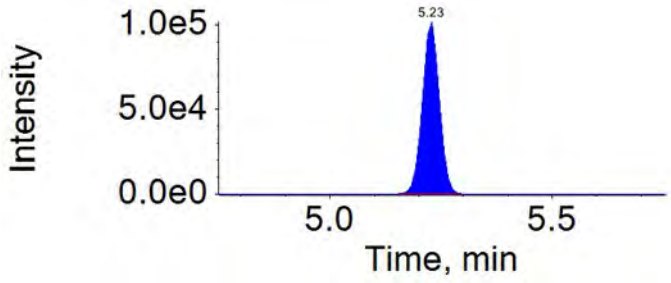
Extraction Standard: E13C8-PFOS	Injection Standard: 13C4-PFOS
507.0 / 80.0	503.0 / 80.0



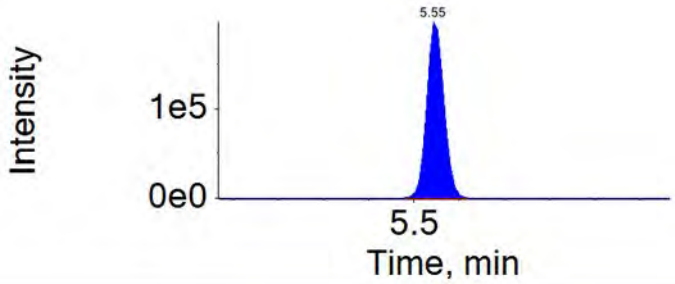


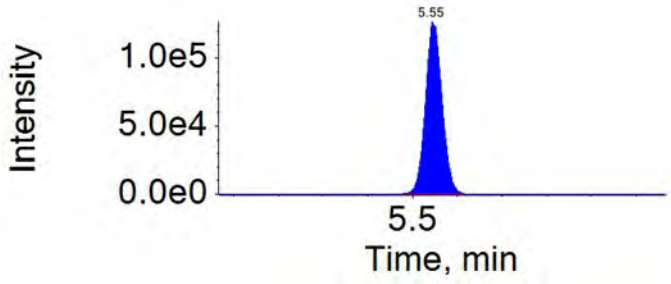
Extraction Standard: E13C9-PFNA	Injection Standard: 13C4-PFOS
472.0 / 427.0	503.0 / 80.0





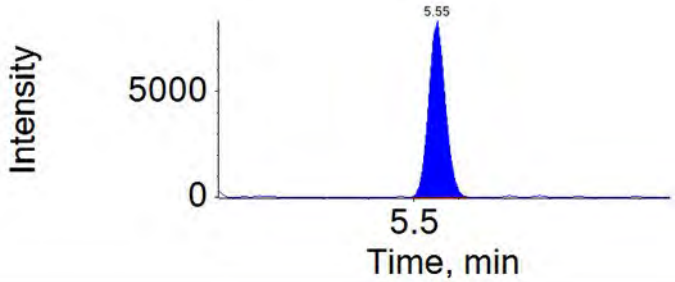
Extraction Standard: E13C6-PFDA	Injection Standard: 13C2-PFDA
519.0 / 474.0	515.0 / 470.0

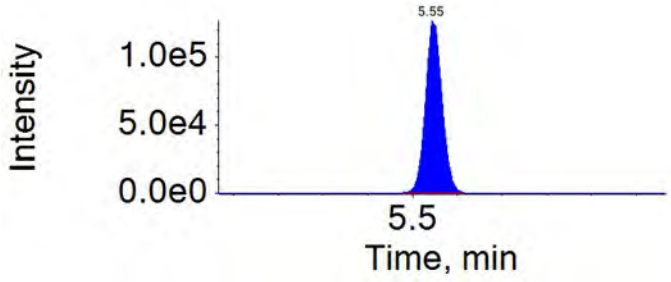




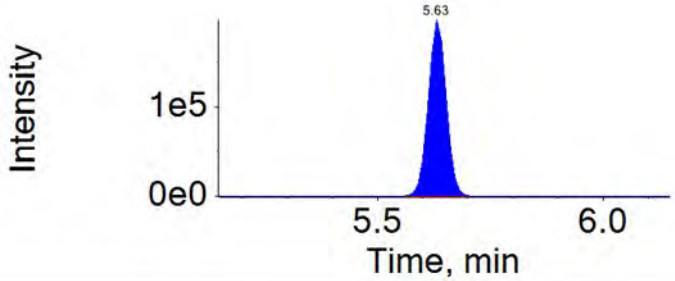
ICAL Name: 18NOV12DCAL **Result Table:** 18316011 11/14/2018 4:24:36 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

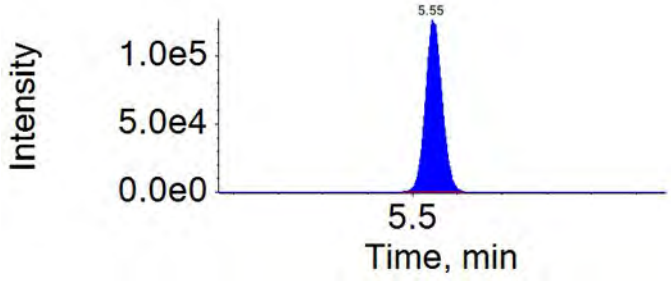
Extraction Standard: E13C2-8:2-FTS	Injection Standard: 13C2-PFDA
529.0 / 81.0	515.0 / 470.0



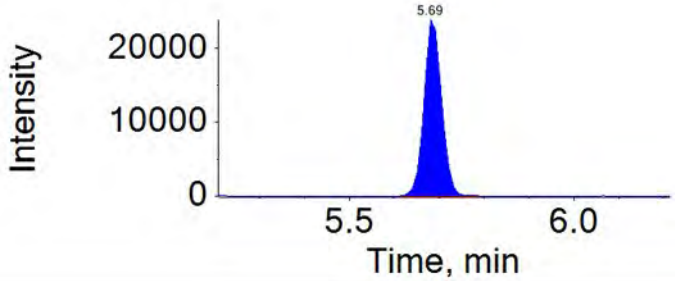


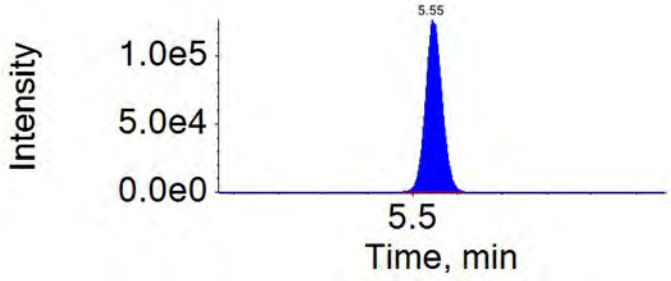
Extraction Standard: E13C8-PFOSA	Injection Standard: 13C2-PFDA
506.0 / 78.0	515.0 / 470.0



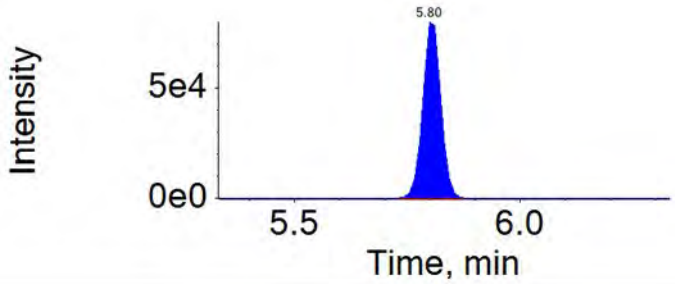


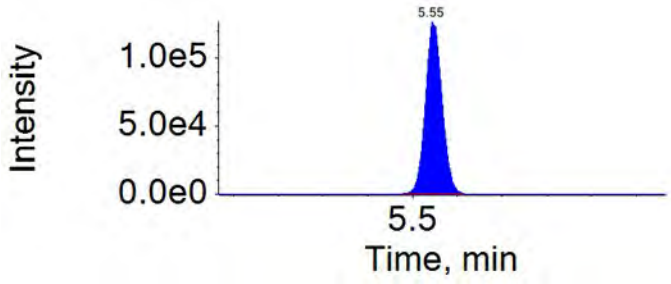
Extraction Standard: Ed3-NMeFOSAA	Injection Standard: 13C2-PFDA
573.0 / 419.0	515.0 / 470.0





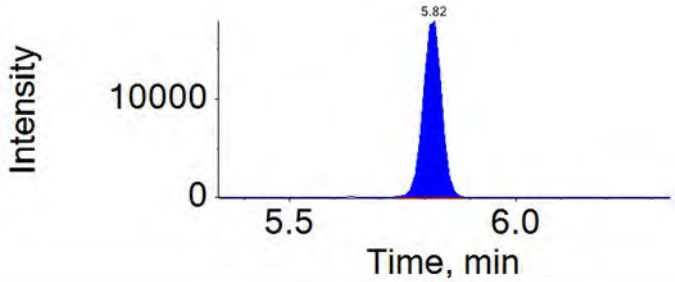
Extraction Standard: E13C7-PFUnDA	Injection Standard: 13C2-PFDA
570.0 / 525.0	515.0 / 470.0

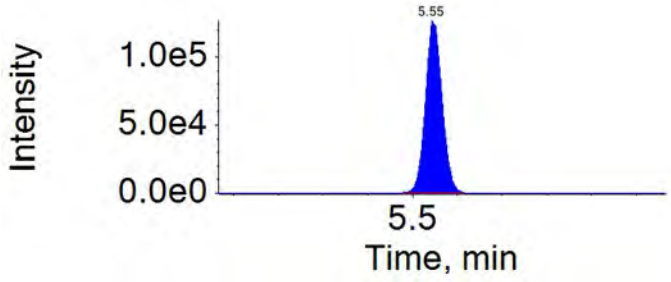




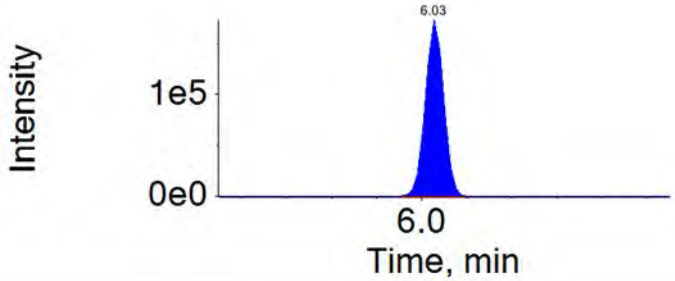
ICAL Name: 18NOV12DCAL **Result Table:** 18316011 11/14/2018 4:24:36 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

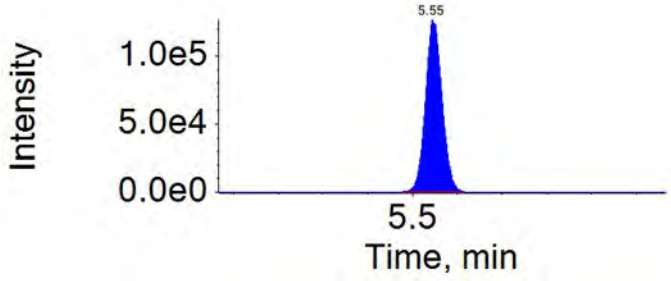
Extraction Standard: Ed5-NEtFOSAA	Injection Standard: 13C2-PFDA
589.0 / 419.0	515.0 / 470.0



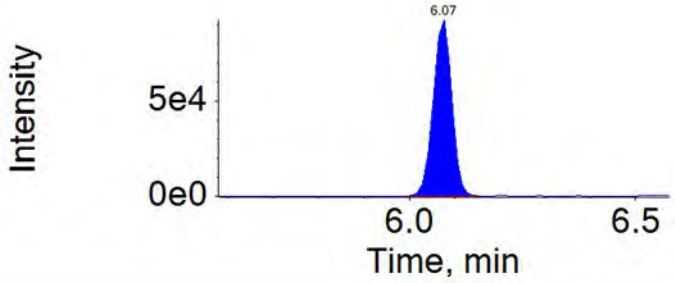


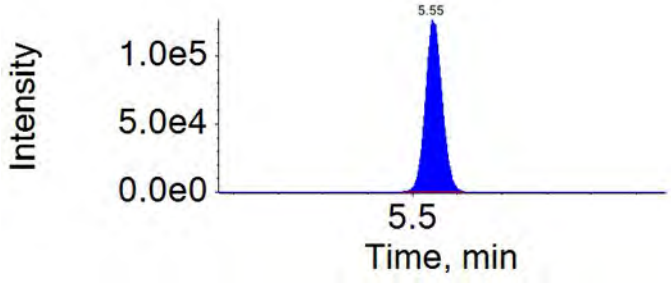
Extraction Standard: E13C2-PFDoDA	Injection Standard: 13C2-PFDA
615.0 / 570.0	515.0 / 470.0



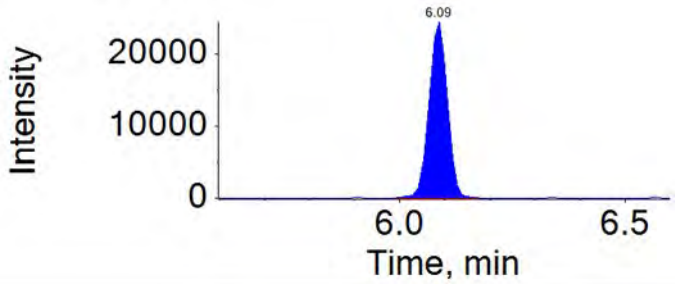


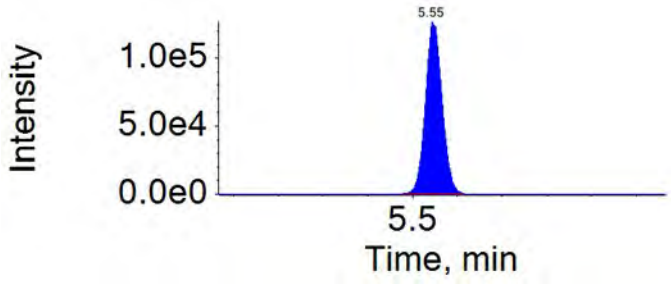
Extraction Standard: Ed7-NMePFOSAE	Injection Standard: 13C2-PFDA
623.0 / 59.0	515.0 / 470.0





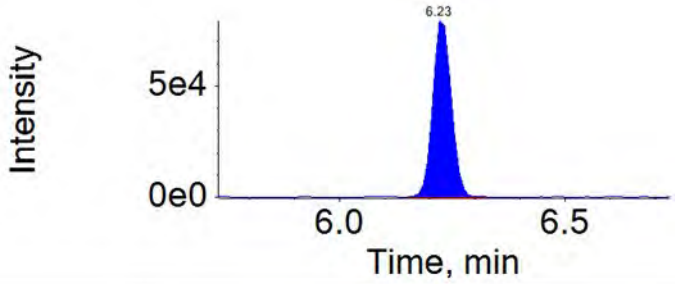
Extraction Standard: Ed3-NMePFOSA	Injection Standard: 13C2-PFDA
515.0 / 169.0	515.0 / 470.0

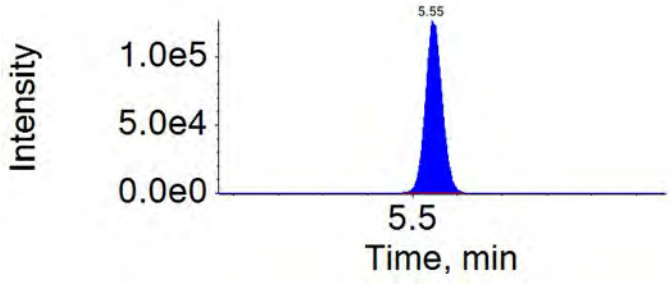




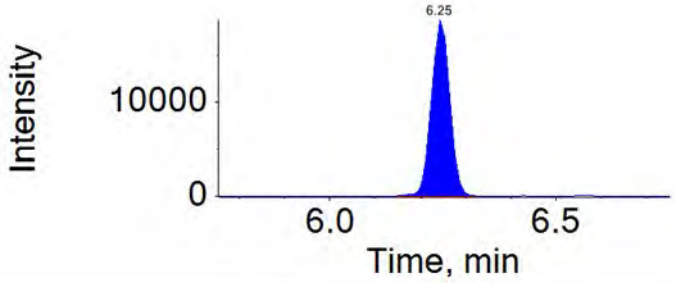
ICAL Name: 18NOV12DCAL **Result Table:** 18316011 11/14/2018 4:24:36 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

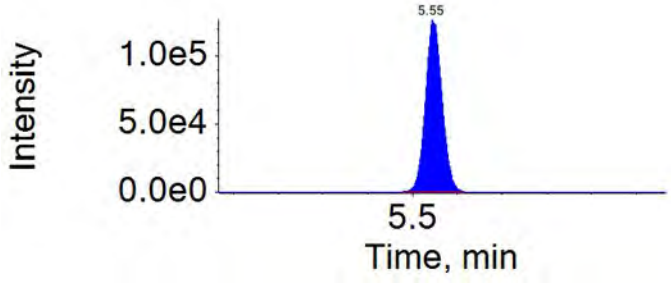
Extraction Standard: Ed9-NEtPFOSAE	Injection Standard: 13C2-PFDA
639.0 / 59.0	515.0 / 470.0



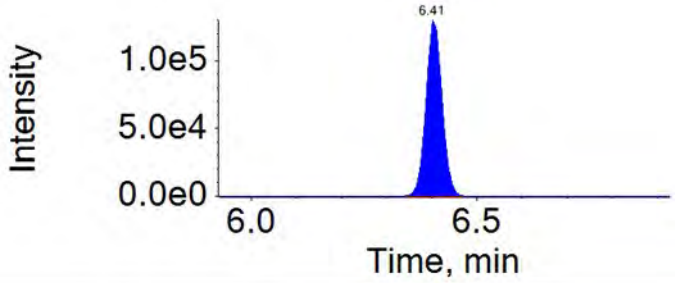


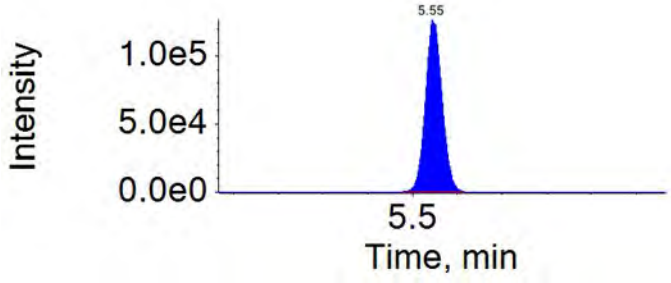
Extraction Standard: Ed5-NEtPFOSA	Injection Standard: 13C2-PFDA
531.0 / 169.0	515.0 / 470.0





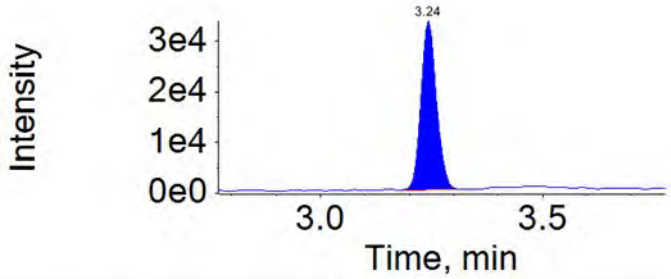
Extraction Standard: E13C2-PFTeDA	Injection Standard: 13C2-PFDA
715.0 / 670.0	515.0 / 470.0



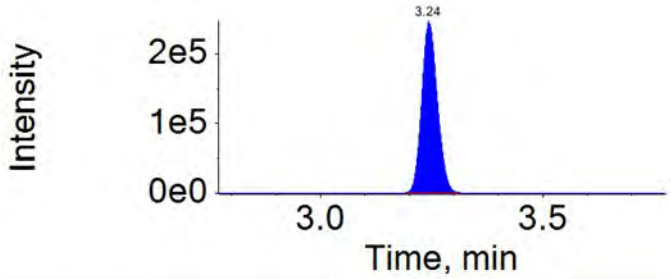


ICAL Name: 18NOV12DCAL **Result Table:** 18316011 11/14/2018 4:24:36 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

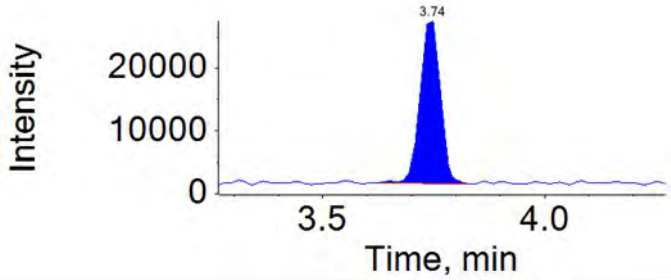
Analyte: PFBA
213.0 / 169.0



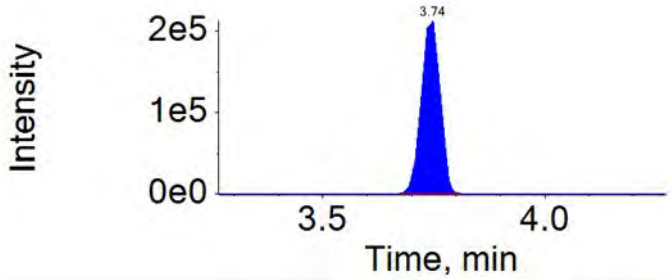
Extraction Standard: 13C4-PFBA
217.0 / 172.0



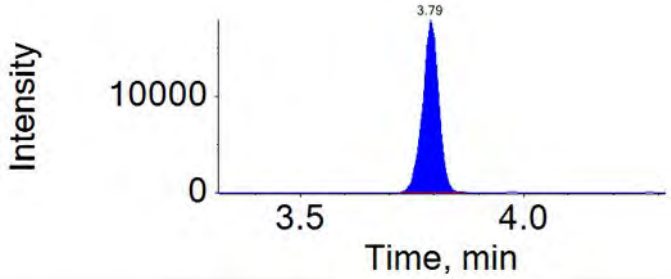
Analyte: PFPeA
263.0 / 219.0



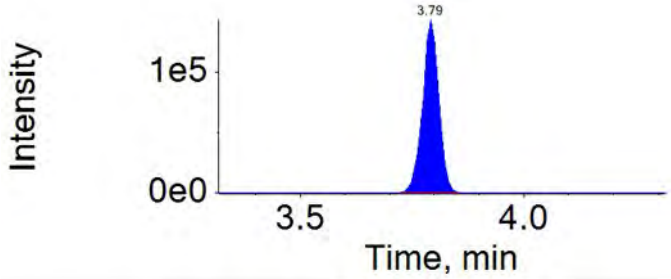
Extraction Standard: 13C5-PFPeA
268.0 / 223.0



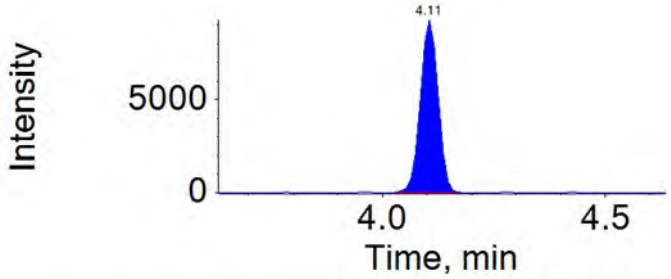
Analyte: PFBS
299.0 / 80.0



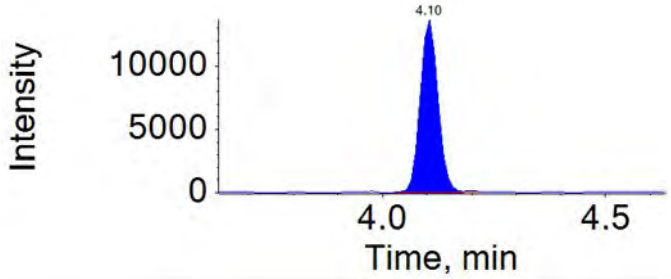
Extraction Standard: 13C3-PFBS
302.0 / 80.0



Analyte: 4:2-FTS
327.0 / 307.0



Extraction Standard: 13C2-4:2-FTS
329.0 / 81.0

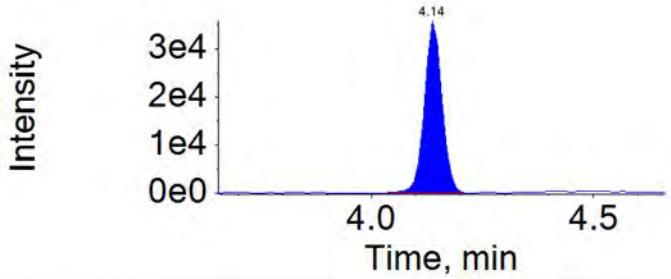


APPROVED
By MCD at 4:51 pm, 11/14/18

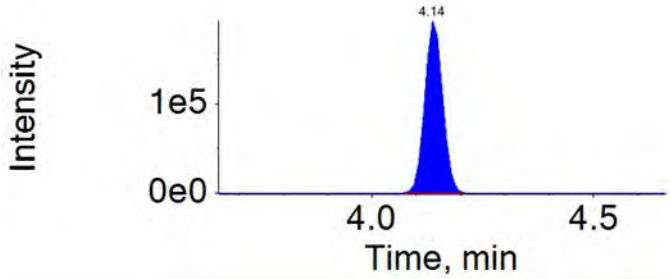
REVIEWED
By HMK at 12:22 pm, 11/15/18

ICAL Name: 18NOV12DCAL **Result Table:** 18316011 11/14/2018 4:24:36 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

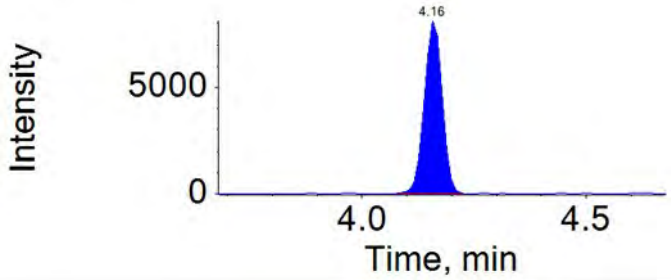
Analyte: PFHxA
313.0 / 269.0



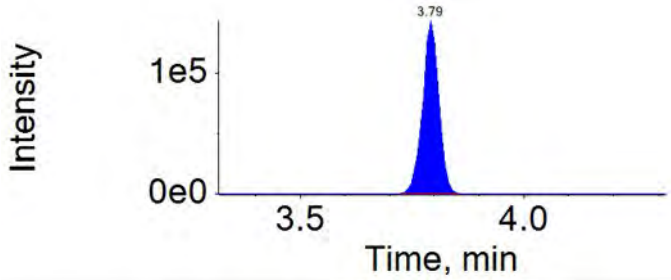
Extraction Standard: 13C5-PFHxA
318.0 / 273.0



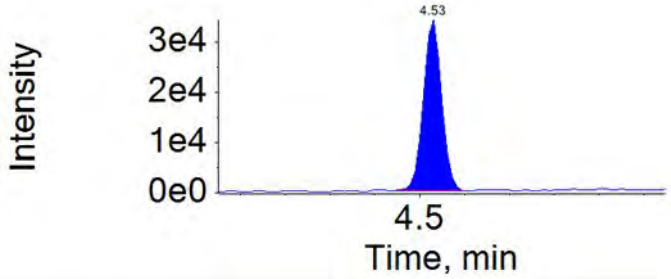
Analyte: PFPeS
349.0 / 80.0



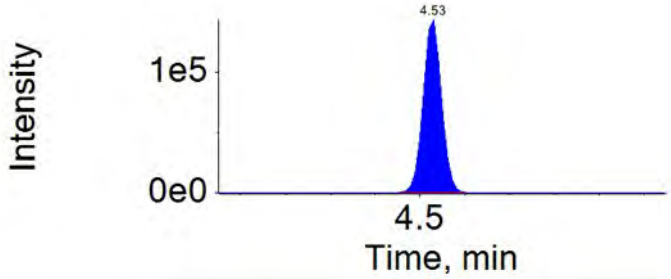
Extraction Standard: 13C3-PFBS
302.0 / 80.0



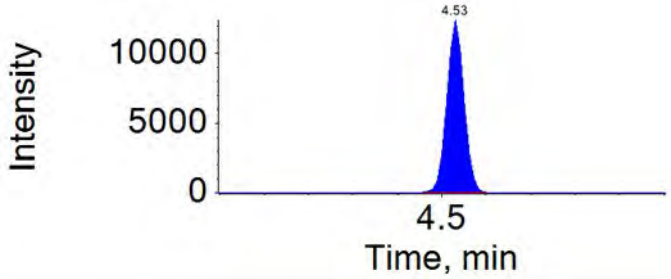
Analyte: PFHpA
363.0 / 319.0



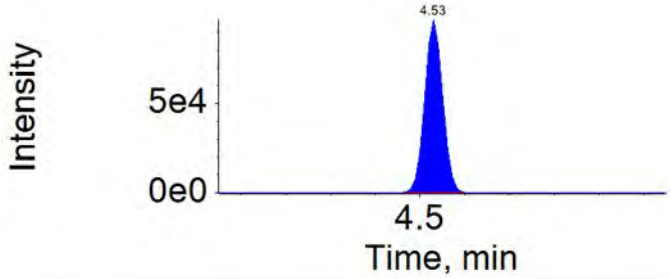
Extraction Standard: 13C4-PFHpA
367.0 / 322.0



Analyte: PFHxS
399.0 / 80.0



Extraction Standard: 13C3-PFHxS
402.0 / 80.0

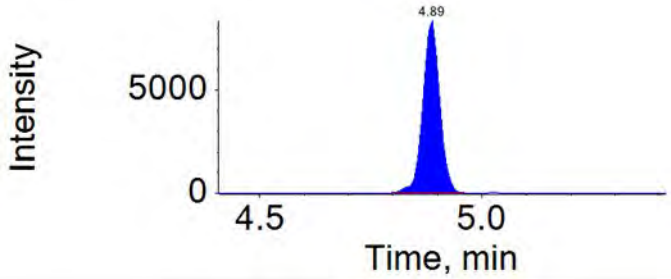


APPROVED
By MCD at 4:51 pm, 11/14/18

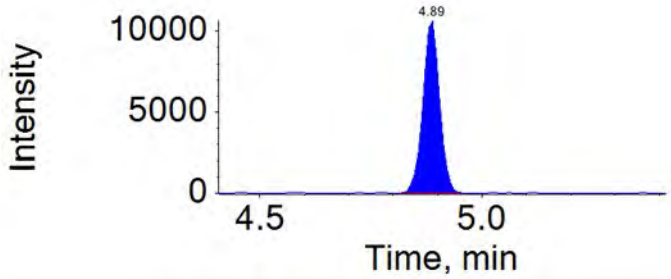
REVIEWED
By HMK at 12:22 pm, 11/15/18

ICAL Name: 18NOV12DCAL **Result Table:** 18316011 11/14/2018 4:24:36 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

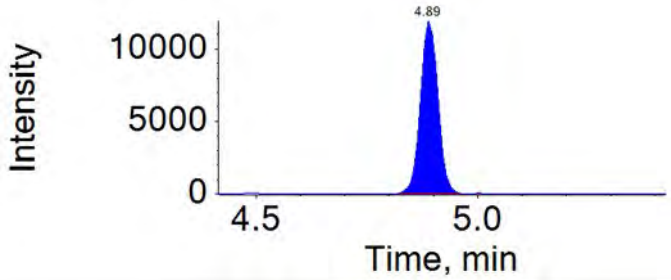
Analyte: 6:2-FTS
427.0 / 407.0



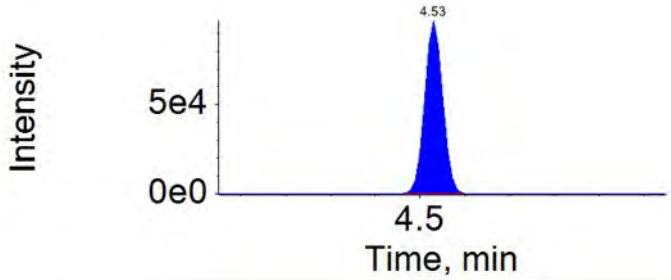
Extraction Standard: 13C2-6:2-FTS
429.0 / 81.0



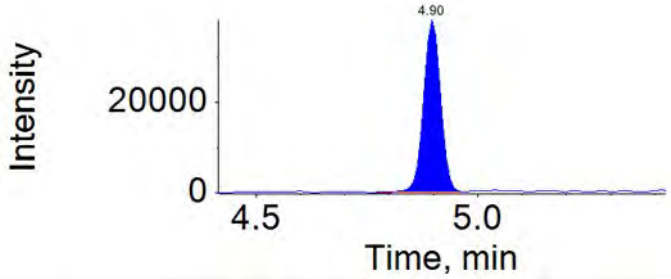
Analyte: PFHpS
449.0 / 80.0



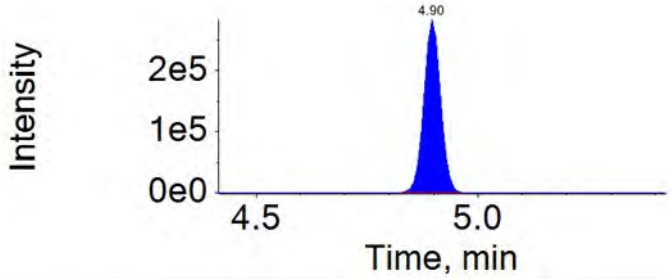
Extraction Standard: 13C3-PFHxS
402.0 / 80.0



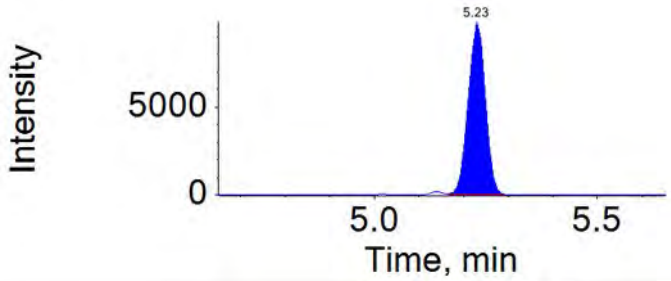
Analyte: PFOA
413.0 / 369.0



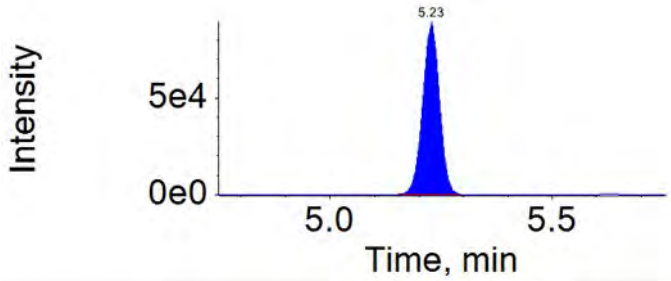
Extraction Standard: 13C8-PFOA
421.0 / 376.0



Analyte: PFOS
499.0 / 80.0

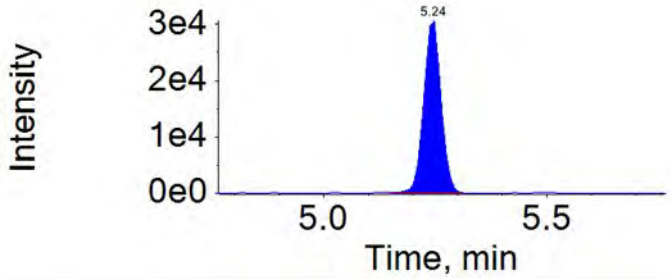


Extraction Standard: 13C8-PFOS
507.0 / 80.0

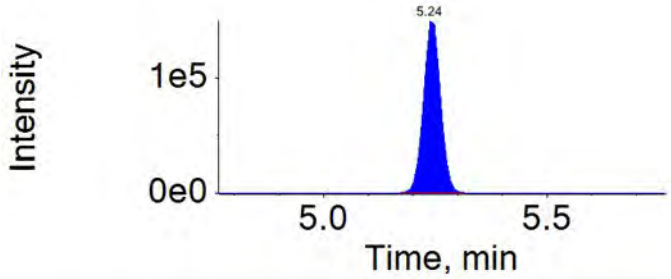


ICAL Name: 18NOV12DCAL **Result Table:** 18316011 11/14/2018 4:24:36 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

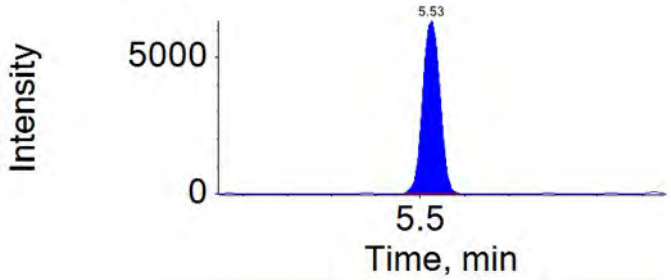
Analyte: PFNA
463.0 / 419.0



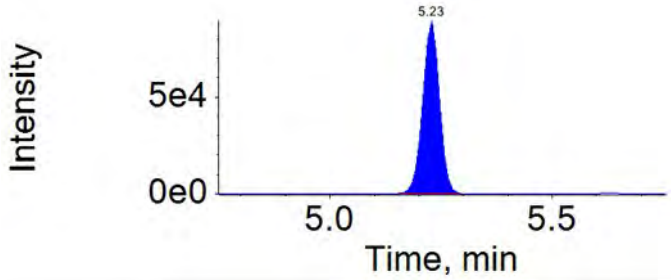
Extraction Standard: 13C9-PFNA
472.0 / 427.0



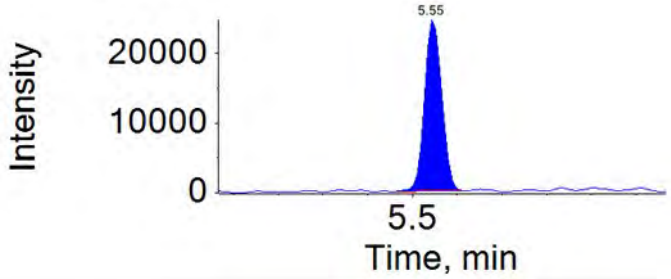
Analyte: PFNS
549.0 / 80.0



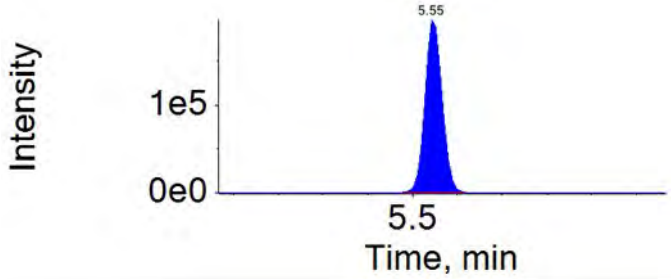
Extraction Standard: 13C8-PFOS
507.0 / 80.0



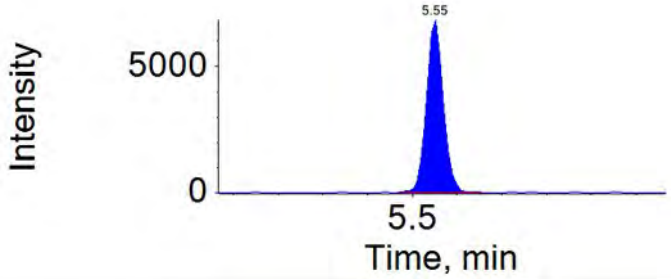
Analyte: PFDA
513.0 / 469.0



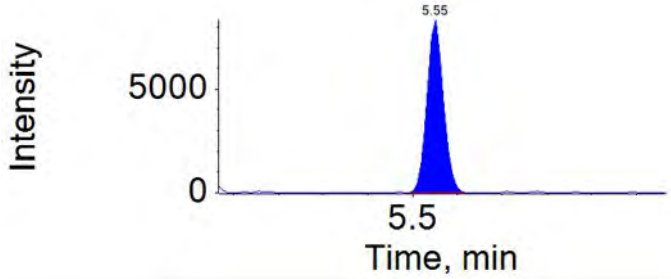
Extraction Standard: 13C6-PFDA
519.0 / 474.0



Analyte: 8:2-FTS
527.0 / 507.0

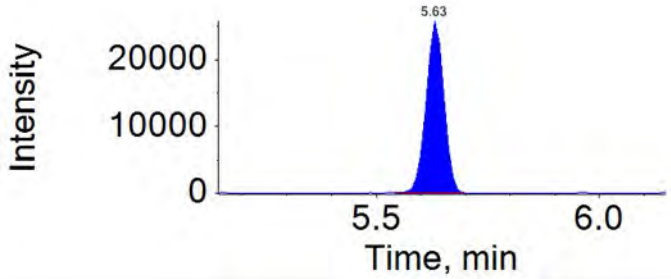


Extraction Standard: 13C2-8:2-FTS
529.0 / 81.0

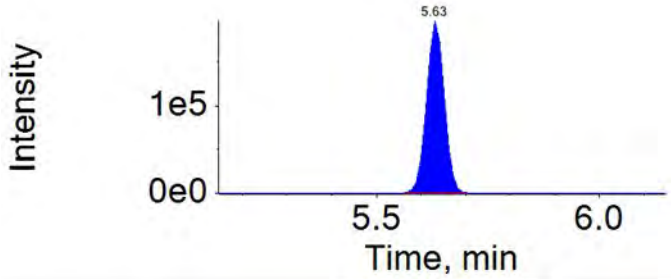


ICAL Name: 18NOV12DCAL **Result Table:** 18316011 11/14/2018 4:24:36 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

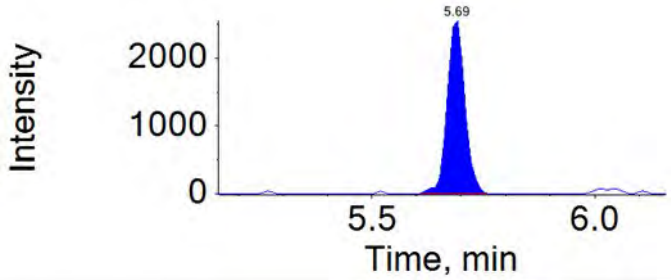
Analyte: PFOSA
498.0 / 78.0



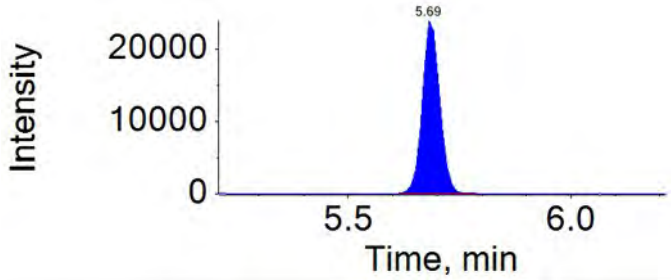
Extraction Standard: 13C8-PFOSA
506.0 / 78.0



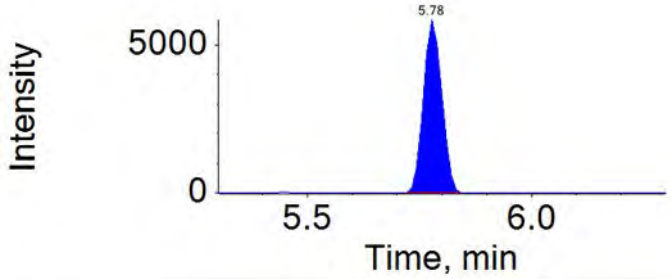
Analyte: NMeFOSAA
570.0 / 419.0



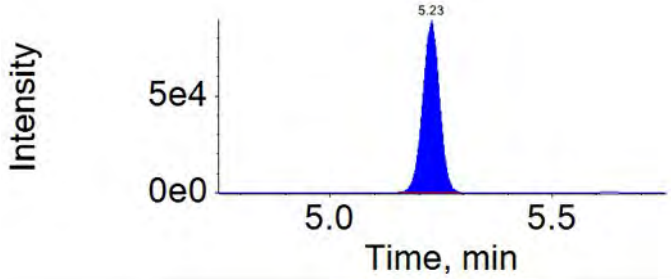
Extraction Standard: d3-NMeFOSAA
573.0 / 419.0



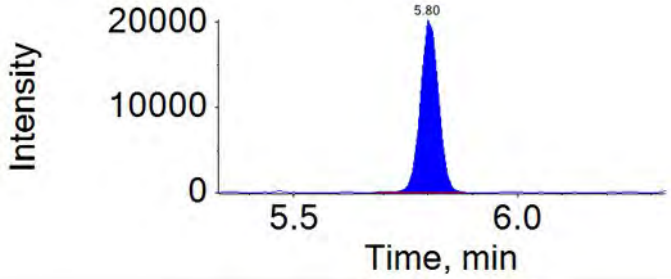
Analyte: PFDS
599.0 / 80.0



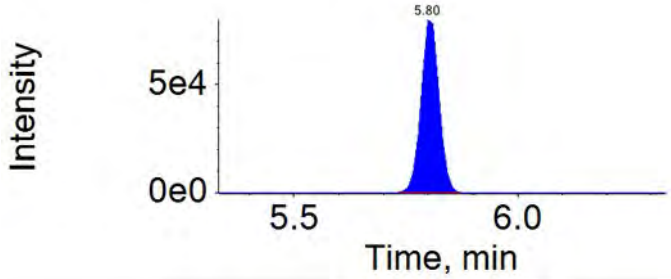
Extraction Standard: 13C8-PFOS
507.0 / 80.0



Analyte: PFUnDA
563.0 / 519.0



Extraction Standard: 13C7-PFUnDA
570.0 / 525.0

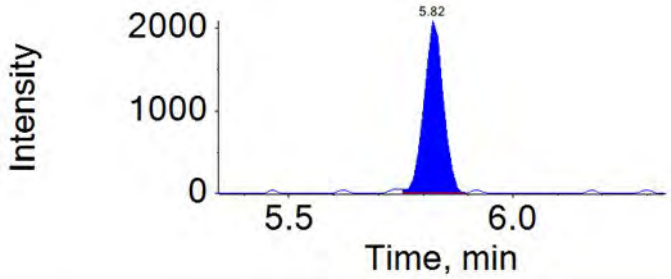


APPROVED
By MCD at 4:51 pm, 11/14/18

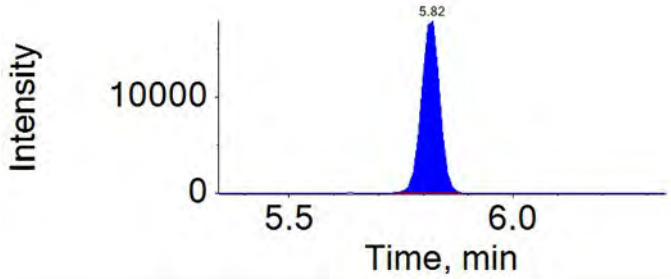
REVIEWED
By HMK at 12:22 pm, 11/15/18

ICAL Name: 18NOV12DCAL **Result Table:** 18316011 11/14/2018 4:24:36 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

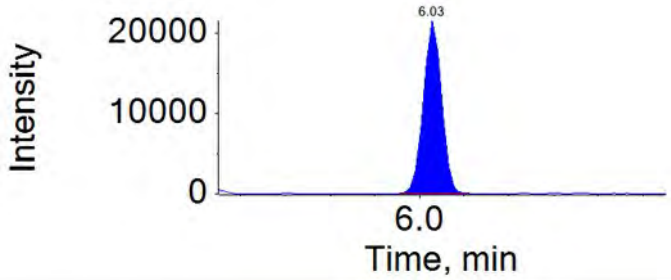
Analyte: NEtFOSAA
584.0 / 419.0



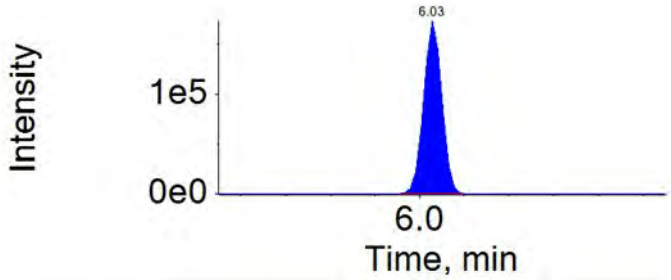
Extraction Standard: d5-NEtFOSAA
589.0 / 419.0



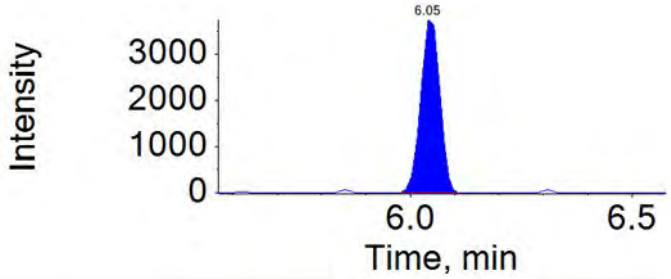
Analyte: PFDoDA
613.0 / 569.0



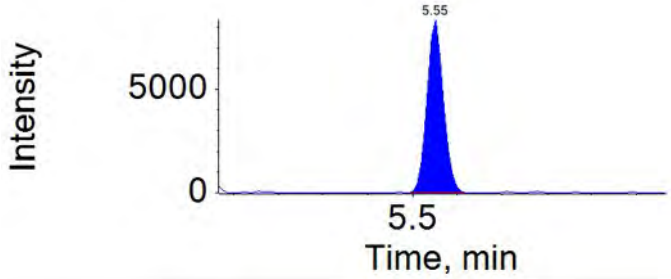
Extraction Standard: 13C2-PFDoDA
615.0 / 570.0



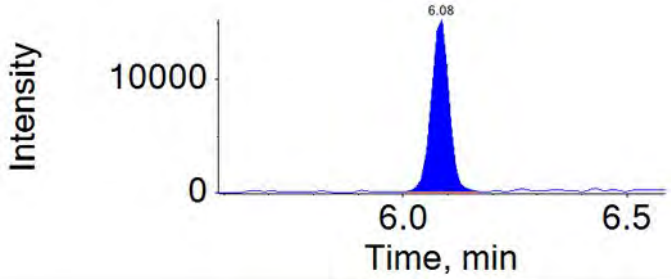
Analyte: 10:2-FTS
627.0 / 607.0



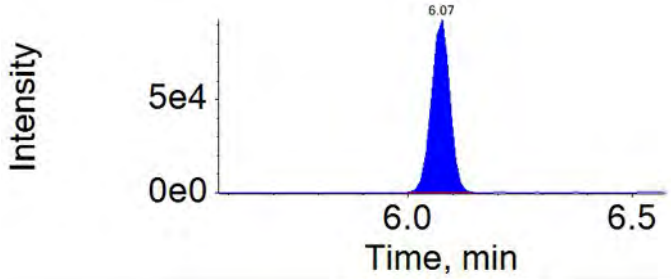
Extraction Standard: 13C2-8:2-FTS
529.0 / 81.0



Analyte: NMePFOSAE
616.0 / 59.0



Extraction Standard: d7-NMePFOSAE
623.0 / 59.0

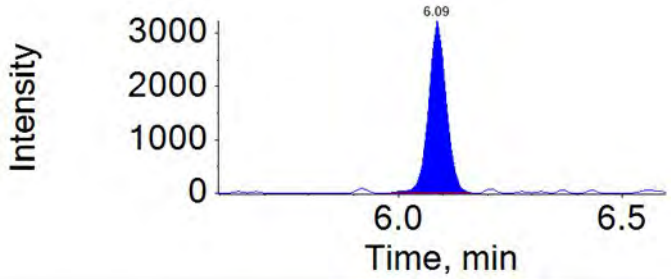


APPROVED
By MCD at 4:51 pm, 11/14/18

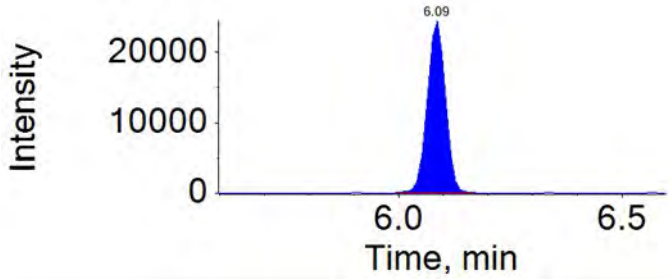
REVIEWED
By HMK at 12:22 pm, 11/15/18

ICAL Name: 18NOV12DCAL **Result Table:** 18316011 11/14/2018 4:24:36 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

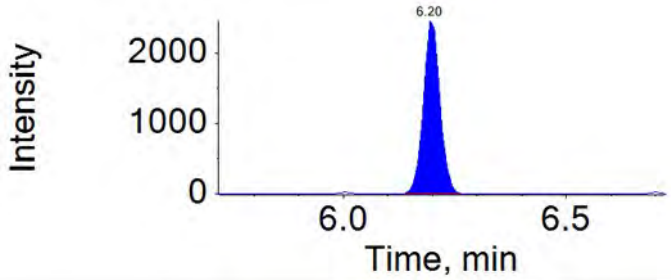
Analyte: NMePFOSA
512.0 / 169.0



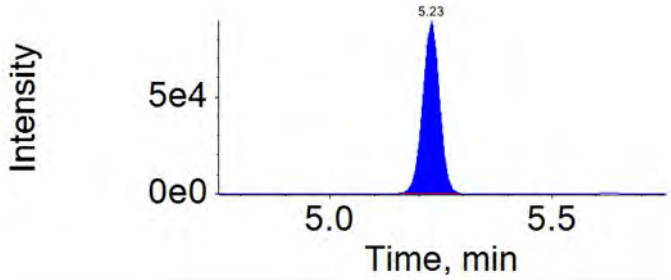
Extraction Standard: d3-NMePFOSA
515.0 / 169.0



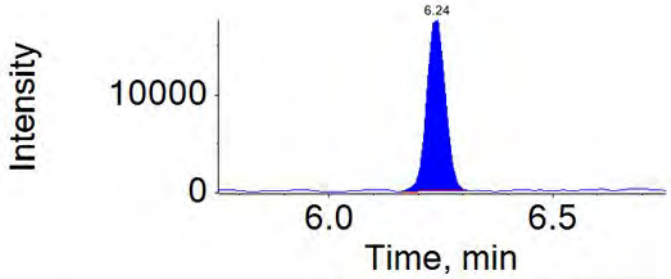
Analyte: PFDoS
699.0 / 80.0



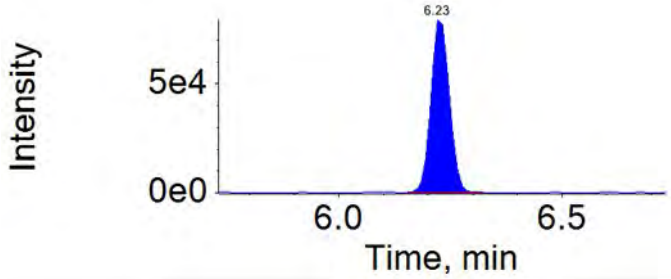
Extraction Standard: 13C8-PFOS
507.0 / 80.0



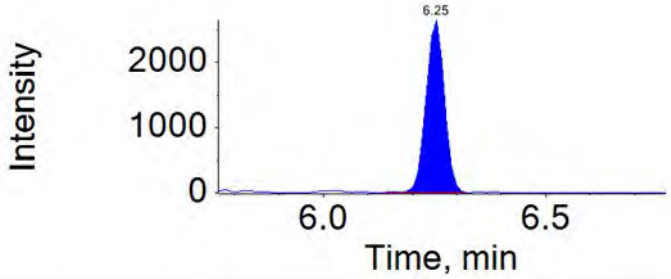
Analyte: NEtPFOSAE
630.0 / 59.0



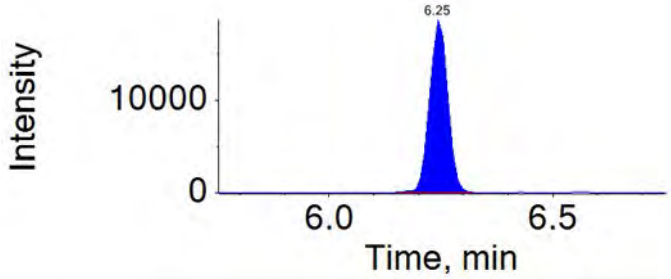
Extraction Standard: d9-NEtPFOSAE
639.0 / 59.0



Analyte: NEtPFOSA
526.0 / 169.0

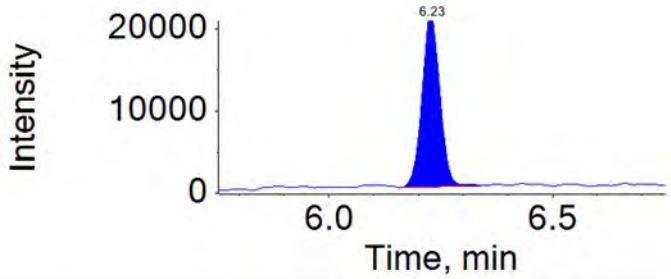


Extraction Standard: d5-NEtPFOSA
531.0 / 169.0

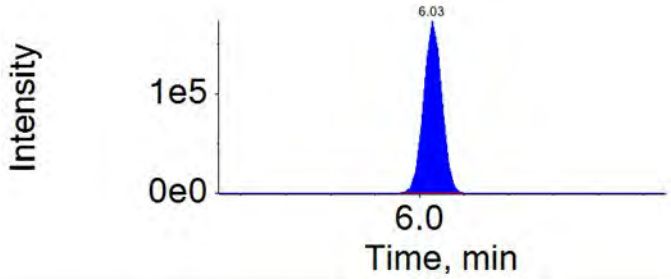


ICAL Name: 18NOV12DCAL **Result Table:** 18316011 11/14/2018 4:24:36 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

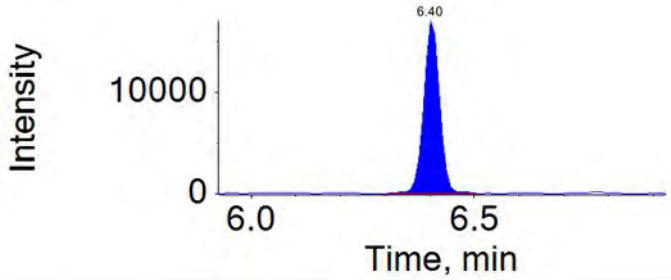
Analyte: PFTrDA
663.0 / 619.0



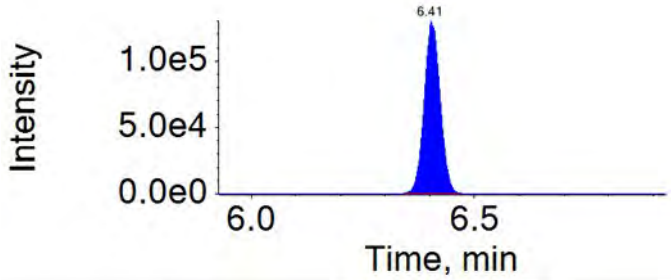
Extraction Standard: 13C2-PFDoDA
615.0 / 570.0



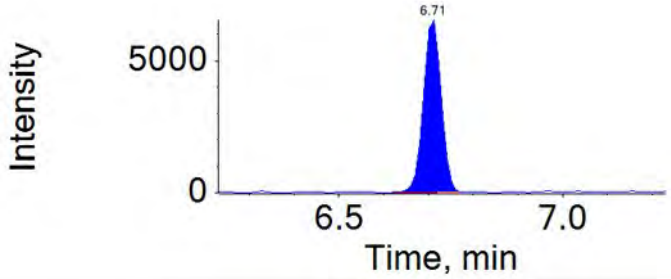
Analyte: PFTeDA
713.0 / 669.0



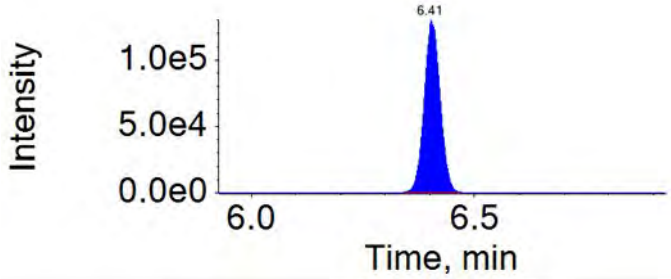
Extraction Standard: 13C2-PFTeDA
715.0 / 670.0



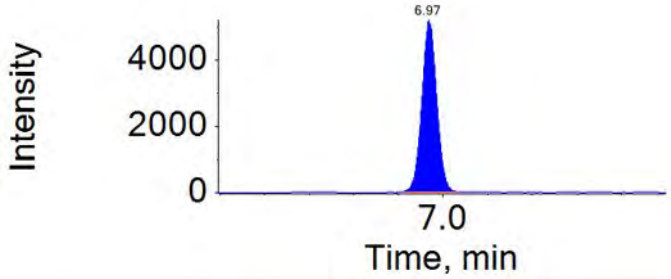
Analyte: PFHxDA
813.0 / 769.0



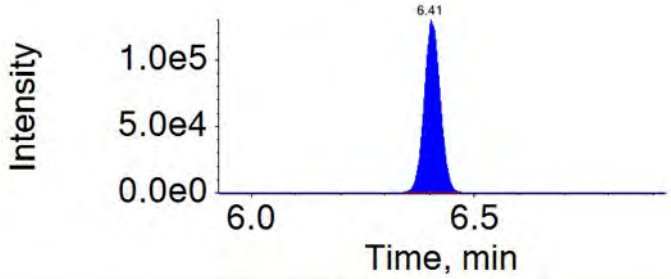
Extraction Standard: 13C2-PFTeDA
715.0 / 670.0



Analyte: PFODA
913.0 / 869.0



Extraction Standard: 13C2-PFTeDA
715.0 / 670.0



APPROVED
By MCD at 4:51 pm, 11/14/18

REVIEWED
By HMK at 12:22 pm, 11/15/18

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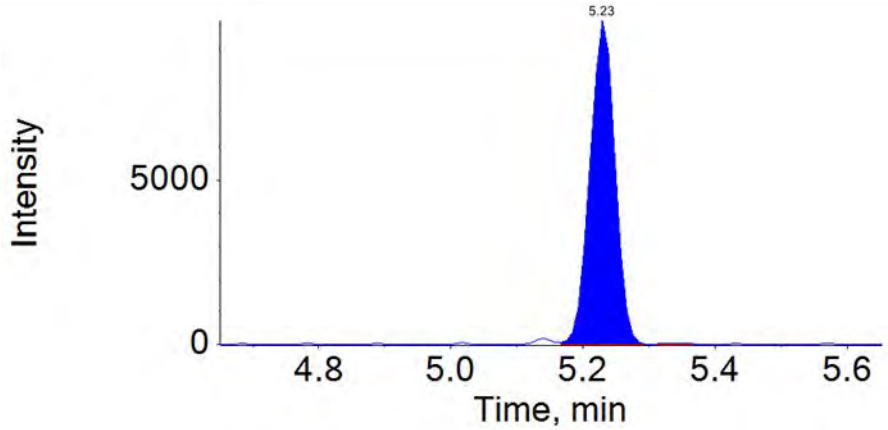
Auto Integrations prior to Manual Integration

Print Date: 11/14/2018 4:31 PM
Template: MQ-OrigInteg-16NOV21.docx

Results Table Name: 18316011
Results Table Date: 11/14/2018 4:24:36 PM

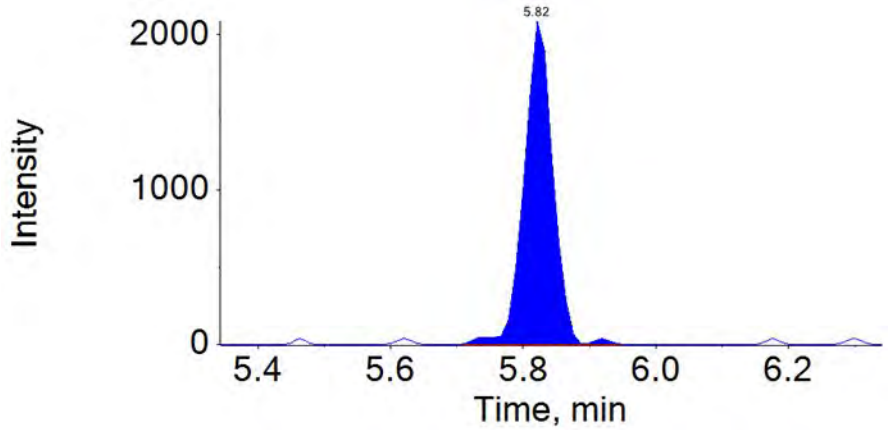
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

Component Name:
PFOS
RT (min.):
5.23
Peak Area:
26114.1
Mass Range:
499.0 / 80.0
File Name:
18NOV13D-50.wiff
Sample Name:
LCS316011



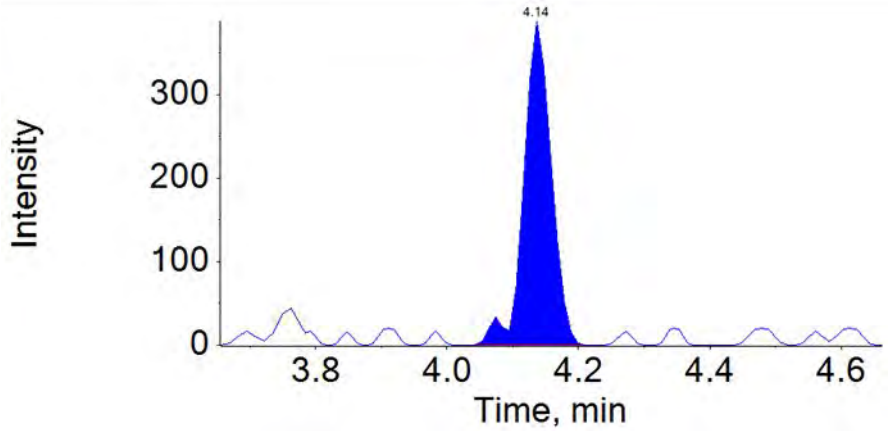
Integration Comment: incorrect integration

Component Name:
NEtFOSAA
RT (min.):
5.82
Peak Area:
6350.5
Mass Range:
584.0 / 419.0
File Name:
18NOV13D-50.wiff
Sample Name:
LCS316011



Integration Comment: incorrect integration

Component Name:
PFHxA_2
RT (min.):
4.14
Peak Area:
1136.2
Mass Range:
313.0 / 119.0
File Name:
18NOV13D-50.wiff
Sample Name:
LCS316011



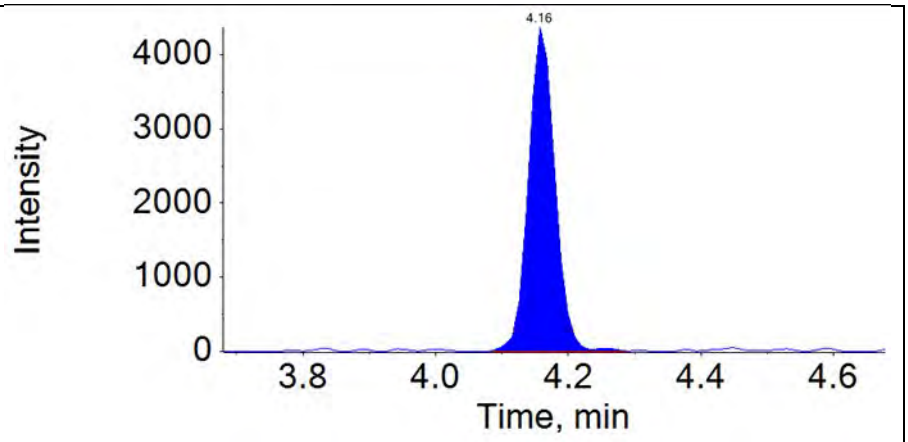
Integration Comment: incorrect integration

APPROVED
By MCD at 4:51 pm, 11/14/18

REVIEWED
By HMK at 12:22 pm, 11/15/18

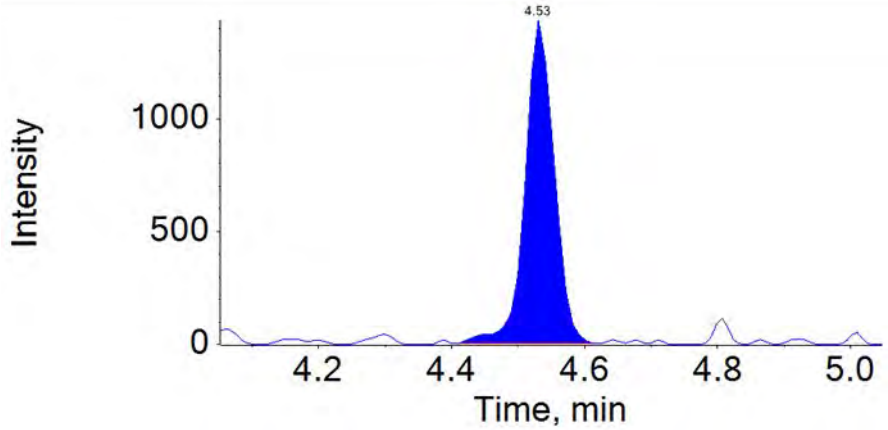
Results Table Name: 18316011
Results Table Date: 11/14/2018 4:24:36 PM
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

Component Name:
PFPeS_2
RT (min.):
4.16
Peak Area:
12101.2
Mass Range:
349.0 / 99.0
File Name:
18NOV13D-50.wiff
Sample Name:
LCS316011



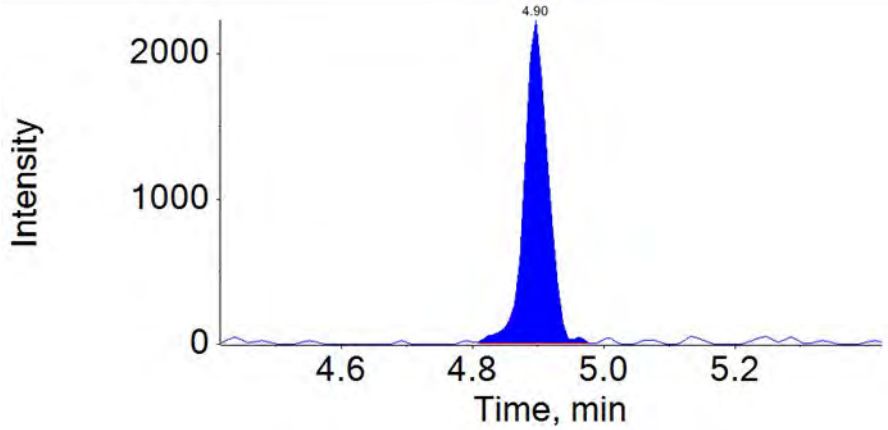
Integration Comment: incorrect integration

Component Name:
PFHpA_2
RT (min.):
4.53
Peak Area:
4386.3
Mass Range:
363.0 / 169.0
File Name:
18NOV13D-50.wiff
Sample Name:
LCS316011



Integration Comment: incorrect integration

Component Name:
PFOA_2
RT (min.):
4.90
Peak Area:
5570.7
Mass Range:
413.0 / 169.0
File Name:
18NOV13D-50.wiff
Sample Name:
LCS316011



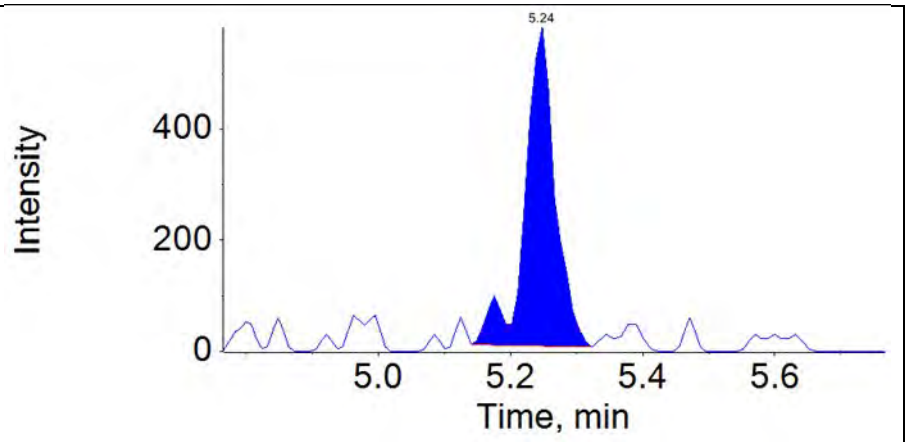
Integration Comment: incorrect integration

APPROVED
By MCD at 4:51 pm, 11/14/18

REVIEWED
By HMK at 12:22 pm, 11/15/18

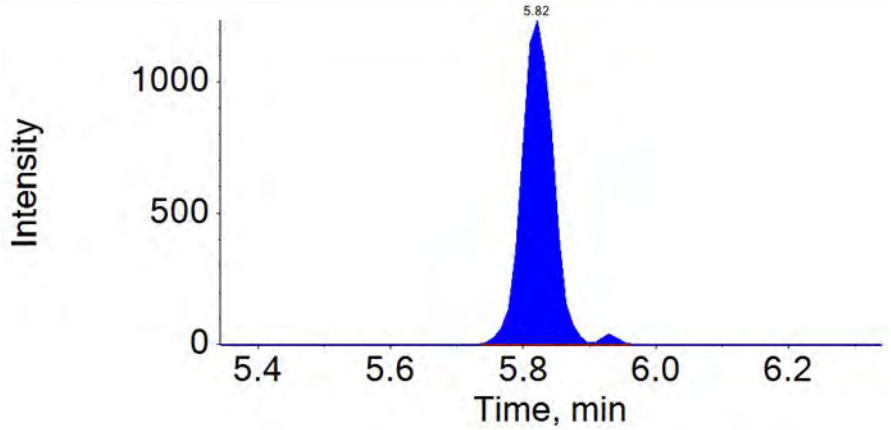
Results Table Name: 18316011
Results Table Date: 11/14/2018 4:24:36 PM
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

Component Name:
PFNA_2
RT (min.):
5.24
Peak Area:
1830.1
Mass Range:
463.0 / 169.0
File Name:
18NOV13D-50.wiff
Sample Name:
LCS316011



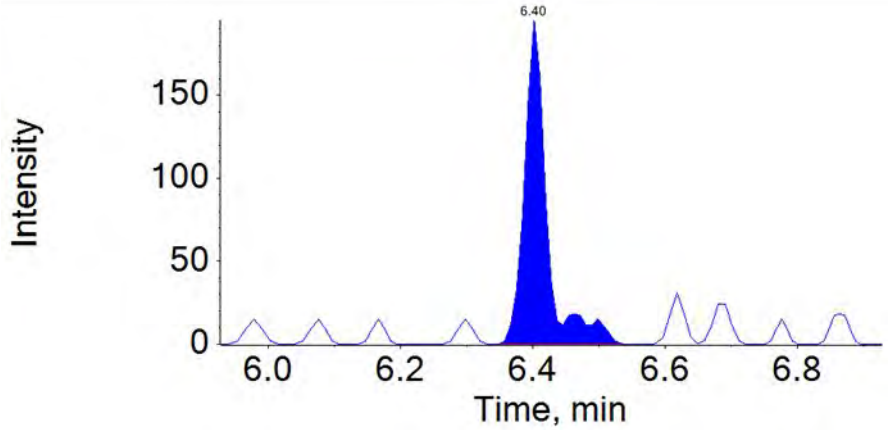
Integration Comment: incorrect integration

Component Name:
NEtFOSAA_2
RT (min.):
5.82
Peak Area:
4153.0
Mass Range:
584.0 / 526.0
File Name:
18NOV13D-50.wiff
Sample Name:
LCS316011



Integration Comment: incorrect integration

Component Name:
PFTeDA_2
RT (min.):
6.40
Peak Area:
465.8
Mass Range:
713.0 / 169.0
File Name:
18NOV13D-50.wiff
Sample Name:
LCS316011



Integration Comment: incorrect integration

Results Table Name: 18316011
Results Table Date: 11/14/2018 4:24:36 PM

Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

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By MCD at 4:51 pm, 11/14/18

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By HMK at 12:22 pm, 11/15/18

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LC-MS/MS Analysis Report

Printed: 11/14/2018 4:28:00 PM
Template: IonRatio18OCT10

Ion Ratio Report

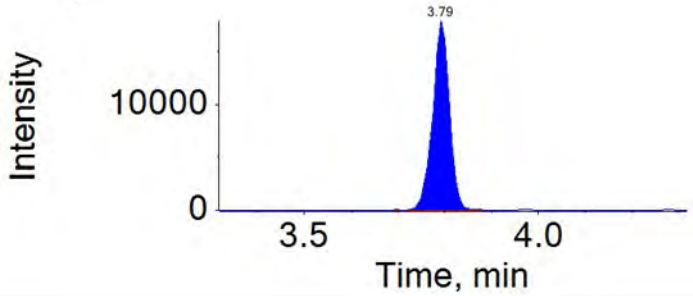
Sample Name: LCS316011 **Instrument Name:** LM27631 **File Name:** 18NOV13D-50.wiff

Component Name	RT	RRT	Analyte Area Response	Int Typ	Expected Ion Ratio	Ion Ratio	Ion Ratio % Diff	Ion Ratio Limit	Ion Ratio OOS
PFBS	3.79	1.00	44459.9	A	N/A	0.3872			
PFBS_2	3.79	1.00	17215.6	A	N/A	0.3872	7	50	
4:2-FTS	4.11	1.00	25692.9	A	N/A	0.6485			
4:2 FTS_2	4.10	1.00	16660.7	A	N/A	0.6485		#NA!	
PFHxA	4.14	1.00	97616.4	A	N/A	0.0111			
PFHxA_2	4.14	1.00	1082.5	M	N/A	0.0111	-5	50	
PFPeS	4.16	1.10	22641.9	A	N/A	0.5320			
PFPeS_2	4.16	1.10	12045.7	M	N/A	0.5320	2	50	
PFHpA	4.53	1.00	96030.7	A	N/A	0.0449			
PFHpA_2	4.53	1.00	4315.4	M	N/A	0.0449	-20	50	
PFHxS	4.53	1.00	33226.6	A	N/A	0.3796			
PFHxS_2	4.53	1.00	12614.4	A	N/A	0.3796	11	50	
6:2-FTS	4.89	1.00	22116.6	A	N/A	0.6383			
6:2 FTS_2	4.89	1.00	14116.8	A	N/A	0.6383		#NA!	
PFHpS	4.89	1.08	32856.0	A	N/A	0.4217			
PFHpS_2	4.89	1.08	13856.2	A	N/A	0.4217	4	50	
PFOA	4.90	1.00	101181.5	A	N/A	0.0547			
PFOA_2	4.90	1.00	5534.5	M	N/A	0.0547	-3	50	
PFOS	5.23	1.00	26030.2	M	N/A	0.4150			
PFOS_2	5.23	1.00	10803.6	A	N/A	0.4150	40	50	
PFNA	5.24	1.00	82610.8	A	N/A	0.0205			
PFNA_2	5.24	1.00	1690.5	M	N/A	0.0205	-11	50	
PFNS	5.53	1.06	17156.0	A	N/A	0.5041			
PFNS_2	5.52	1.06	8649.0	A	N/A	0.5041	4	50	
PFDA	5.55	1.00	65605.2	A	N/A	0.0116			
PFDA_2	5.53	1.00	763.7	A	N/A	0.0116	44	50	
8:2-FTS	5.55	1.00	17909.5	A	N/A	0.6034			
8:2 FTS_2	5.55	1.00	10807.0	A	N/A	0.6034		#NA!	
NMeFOSAA	5.69	1.00	7050.1	A	N/A	0.1981			
NMeFOSAA_2	5.69	1.00	1397.0	A	N/A	0.1981	-23	50	
PFDS	5.78	1.11	16592.0	A	N/A	0.4374			
PFDS_2	5.78	1.11	7257.6	A	N/A	0.4374	-15	50	
PFUnDA	5.80	1.00	57012.9	A	N/A	0.0081			
PFUnDA_2	5.79	1.00	461.9	A	N/A	0.0081	39	50	
NEtFOSAA	5.82	1.00	6188.8	M	N/A	0.6601			
NEtFOSAA_2	5.82	1.00	4085.0	M	N/A	0.6601	-9	50	
PFDoDA	6.03	1.00	60776.2	A	N/A	0.0123			
PFDoDA_2	6.04	1.00	750.1	A	N/A	0.0123	-21	50	
10:2-FTS	6.05	1.09	11237.1	A	N/A	0.7742			
10:2 FTS_2	6.05	1.09	8699.9	A	N/A	0.7742		#NA!	
PFTrDA	6.23	1.03	57959.2	A	N/A	0.0094			
PFTrDA_2	6.23	1.03	545.2	A	N/A	0.0094	10	50	
PFTeDA	6.40	1.00	41782.5	A	N/A	0.0097			
PFTeDA_2	6.40	1.00	404.5	M	N/A	0.0097	55	50	OOS
PFHxDA	6.71	1.05	17968.3	A	N/A	0.0626			
PFHxDA_2	6.71	1.05	1124.6	A	N/A	0.0626	-8	50	
PFODA	6.97	1.09	11942.1	A	N/A	0.0298			
PFODA_2	6.97	1.09	356.2	A	N/A	0.0298	8	50	

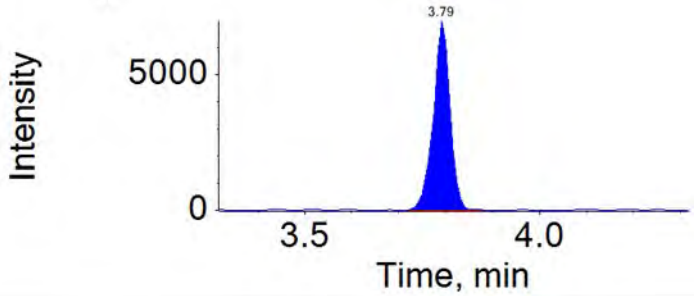
APPROVED
By MCD at 4:51 pm, 11/14/18

REVIEWED
By HMK at 12:22 pm, 11/15/18

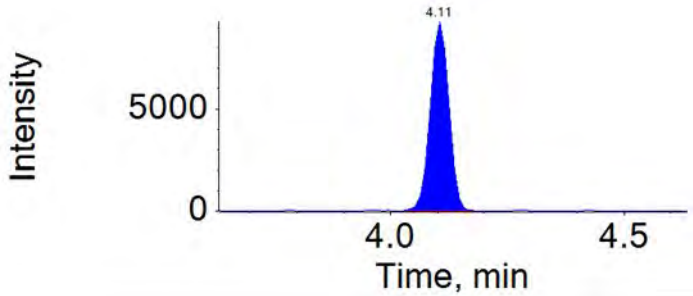
Component: PFBS
Primary Mass: 299.0 / 80.0



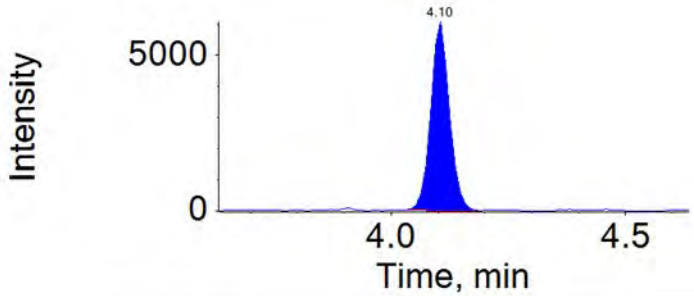
Component: PFBS_2
Secondary Mass: 299.0 / 99.0



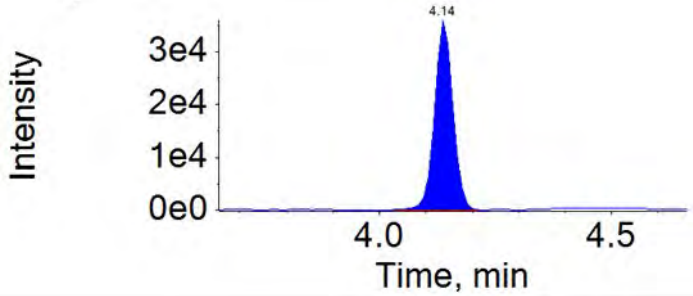
Component: 4:2-FTS
Primary Mass: 327.0 / 307.0



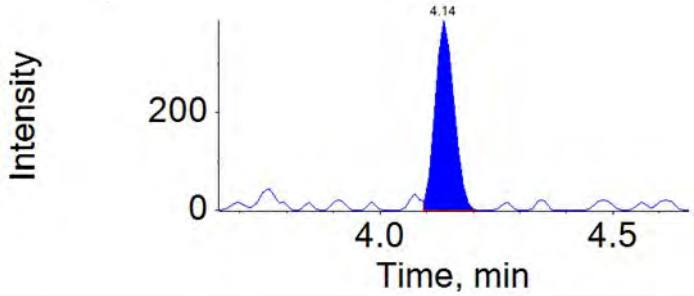
Component: 4:2 FTS_2
Secondary Mass: 327.0 / 81.0



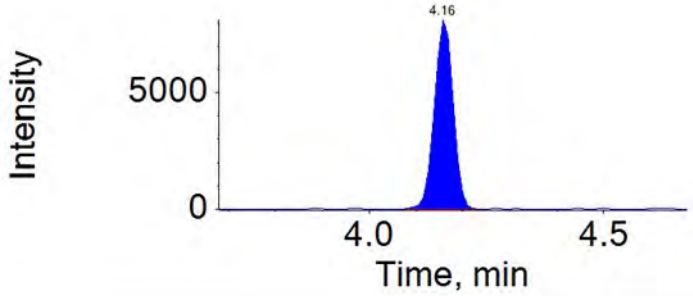
Component: PFHxA
Primary Mass: 313.0 / 269.0



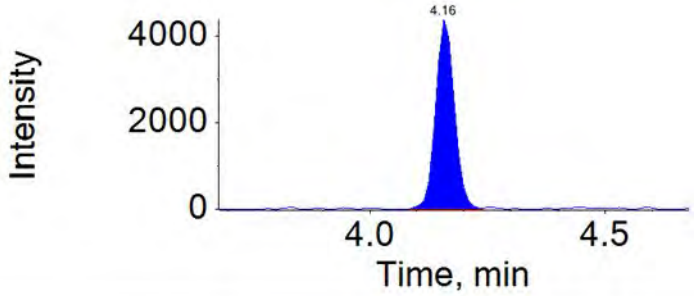
Component: PFHxA_2
Secondary Mass: 313.0 / 119.0



Component: PFPeS
Primary Mass: 349.0 / 80.0



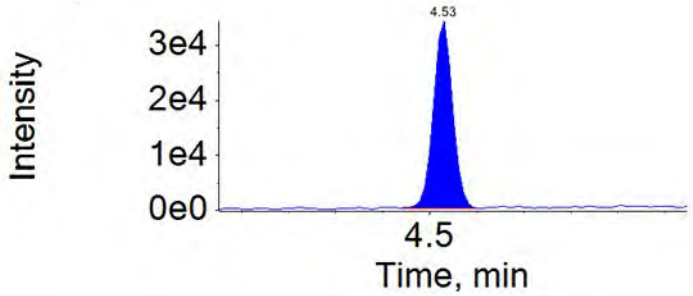
Component: PFPeS_2
Secondary Mass: 349.0 / 99.0



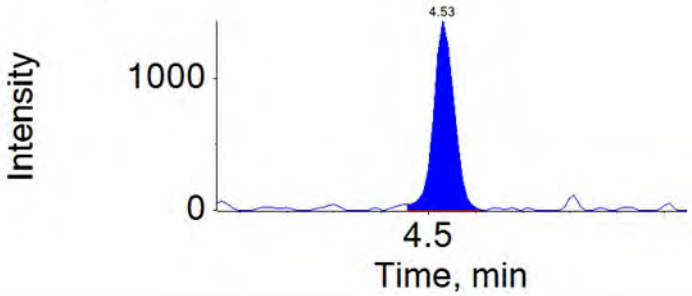
APPROVED
By MCD at 4:51 pm, 11/14/18

REVIEWED
By HMK at 12:22 pm, 11/15/18

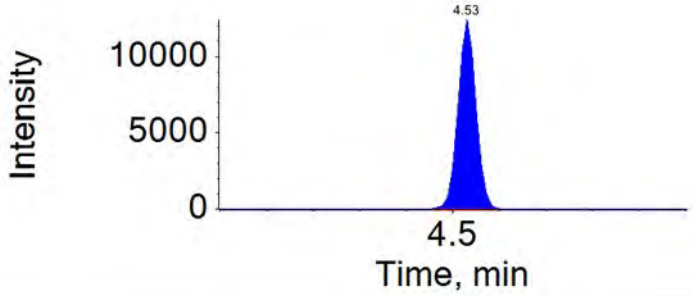
Component: PFHpA
Primary Mass: 363.0 / 319.0



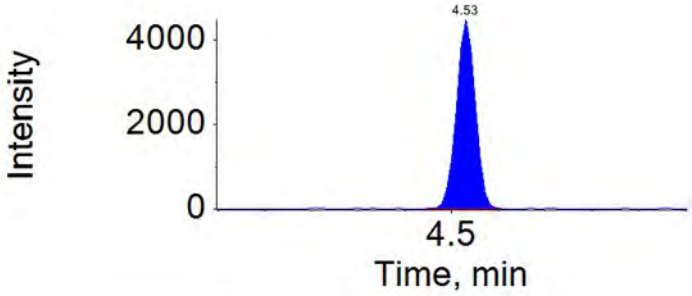
Component: PFHpA_2
Secondary Mass: 363.0 / 169.0



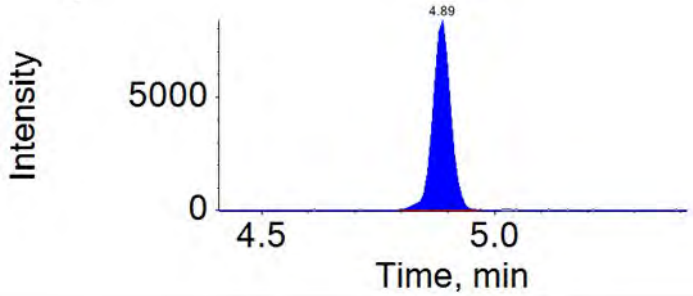
Component: PFHxS
Primary Mass: 399.0 / 80.0



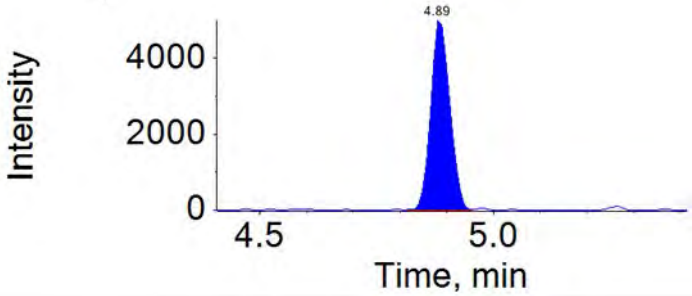
Component: PFHxS_2
Secondary Mass: 399.0 / 99.0



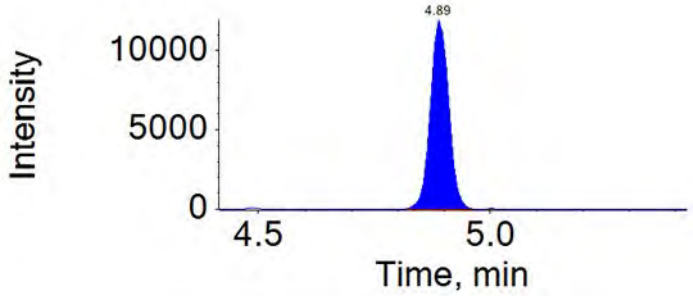
Component: 6:2-FTS
Primary Mass: 427.0 / 407.0



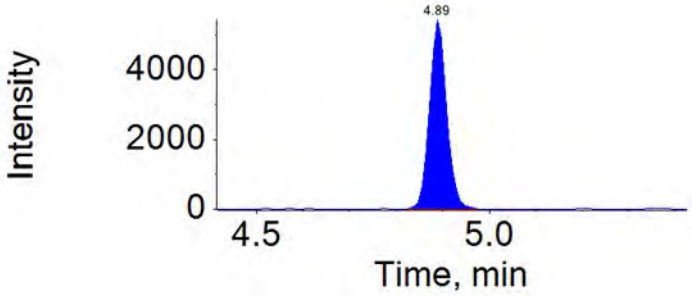
Component: 6:2 FTS_2
Secondary Mass: 427.0 / 81.0



Component: PFHpS
Primary Mass: 449.0 / 80.0



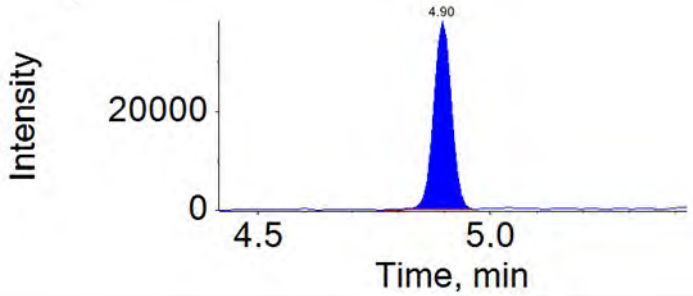
Component: PFHpS_2
Secondary Mass: 449.0 / 99.0



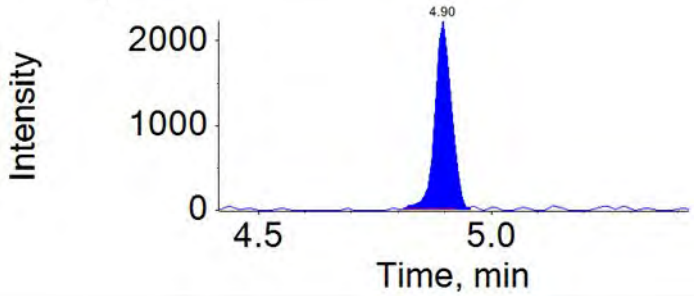
APPROVED
By MCD at 4:51 pm, 11/14/18

REVIEWED
By HMK at 12:22 pm, 11/15/18

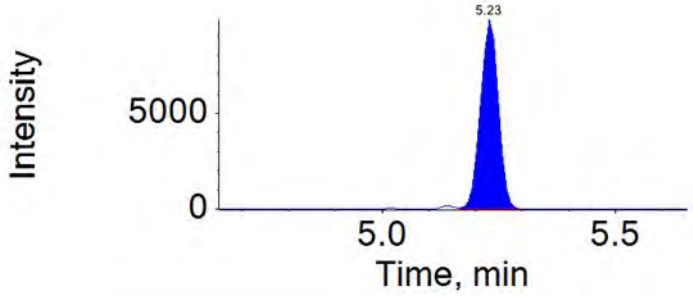
Component: PFOA
Primary Mass: 413.0 / 369.0



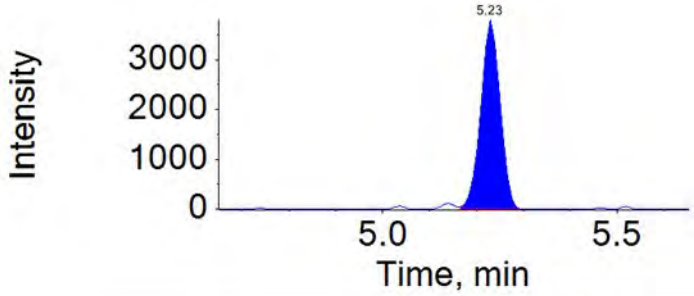
Component: PFOA_2
Secondary Mass: 413.0 / 169.0



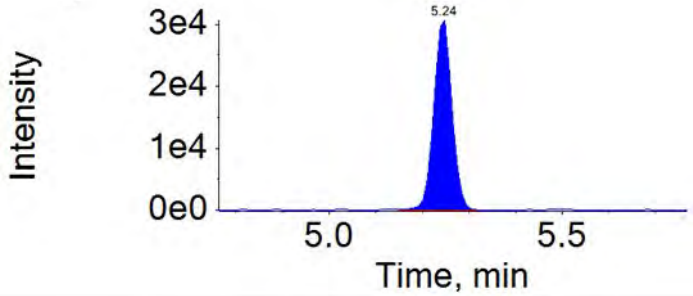
Component: PFOS
Primary Mass: 499.0 / 80.0



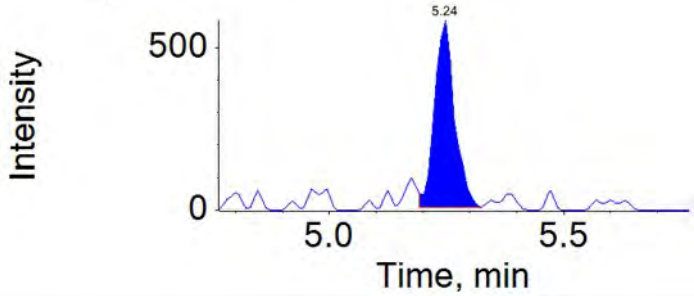
Component: PFOS_2
Secondary Mass: 499.0 / 99.0



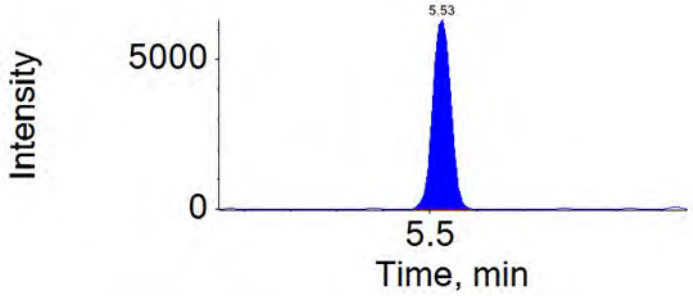
Component: PFNA
Primary Mass: 463.0 / 419.0



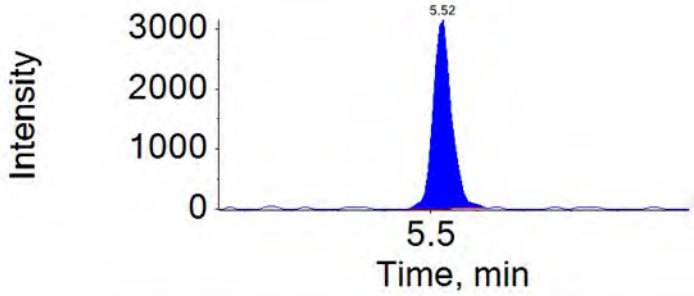
Component: PFNA_2
Secondary Mass: 463.0 / 169.0



Component: PFNS
Primary Mass: 549.0 / 80.0



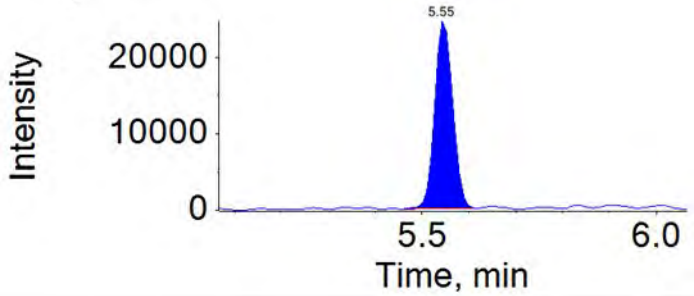
Component: PFNS_2
Secondary Mass: 549.0 / 99.0



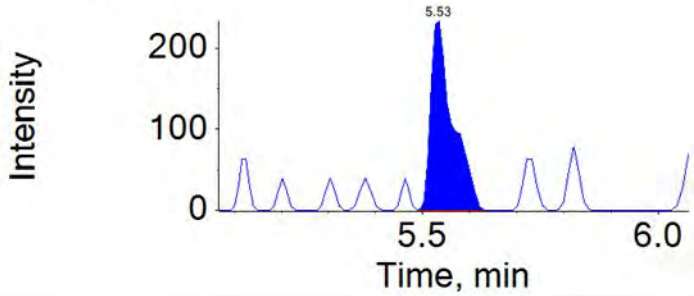
APPROVED
By MCD at 4:51 pm, 11/14/18

REVIEWED
By HMK at 12:22 pm, 11/15/18

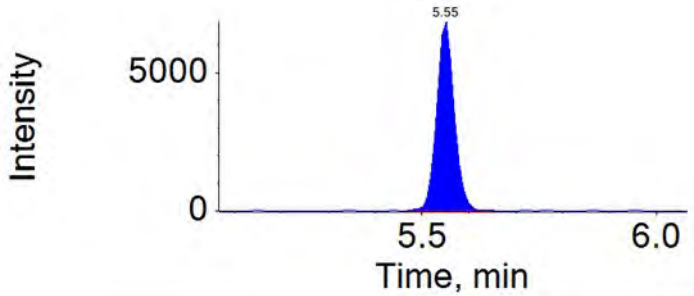
Component: PFDA
Primary Mass: 513.0 / 469.0



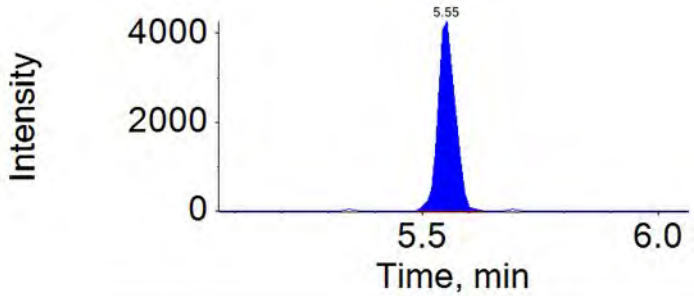
Component: PFDA_2
Secondary Mass: 513.0 / 169.0



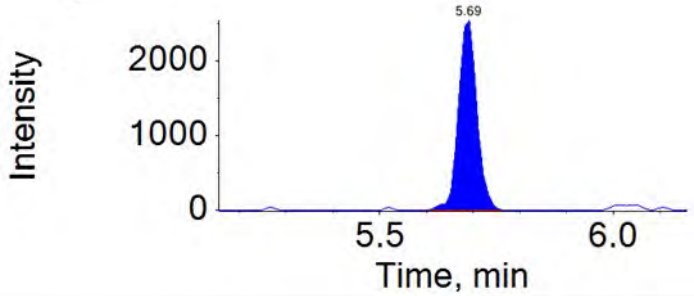
Component: 8:2-FTS
Primary Mass: 527.0 / 507.0



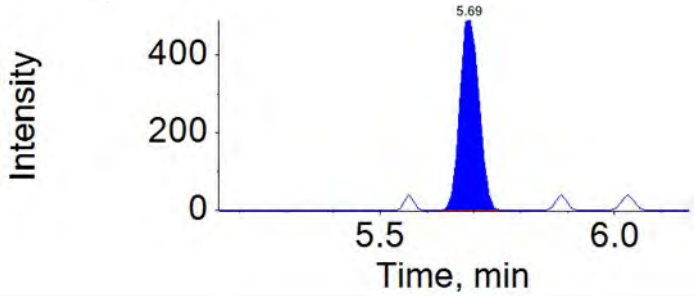
Component: 8:2 FTS_2
Secondary Mass: 527.0 / 81.0



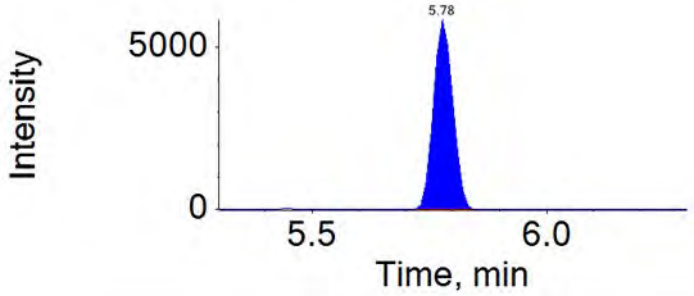
Component: NMeFOSAA
Primary Mass: 570.0 / 419.0



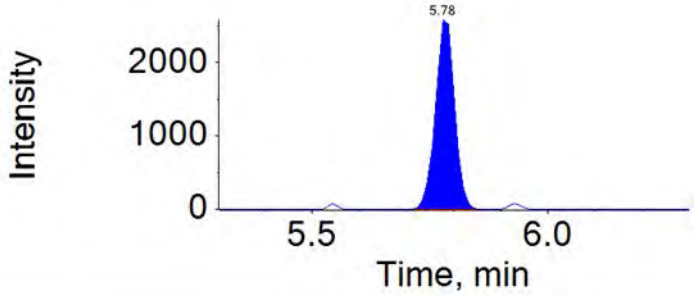
Component: NMeFOSAA_2
Secondary Mass: 570.0 / 483.0



Component: PFDS
Primary Mass: 599.0 / 80.0



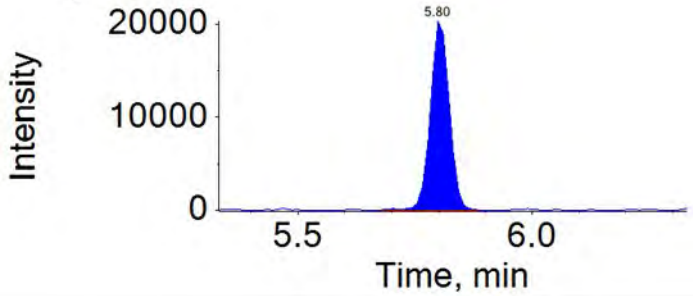
Component: PFDS_2
Secondary Mass: 599.0 / 99.0



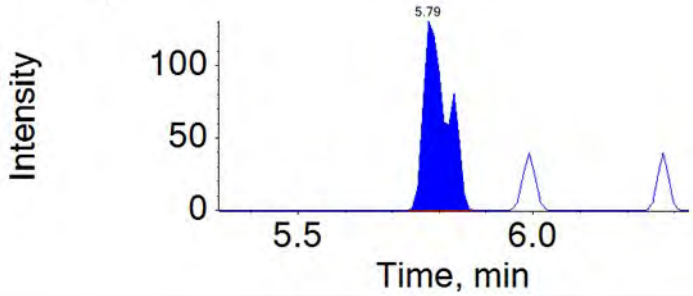
APPROVED
By MCD at 4:51 pm, 11/14/18

REVIEWED
By HMK at 12:22 pm, 11/15/18

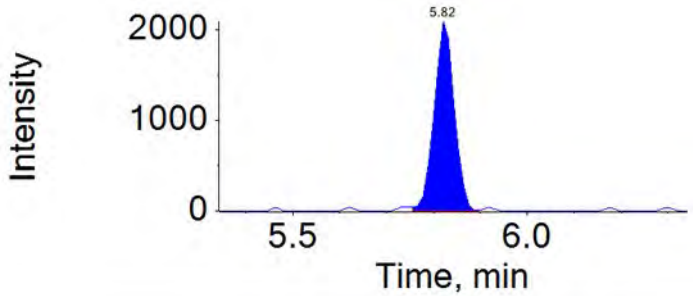
Component: PFUnDA
Primary Mass: 563.0 / 519.0



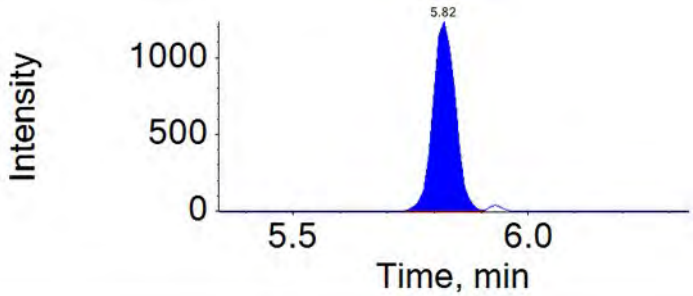
Component: PFUnDA_2
Secondary Mass: 563.0 / 169.0



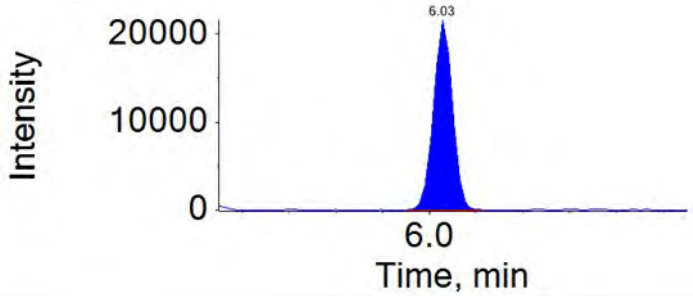
Component: NEtFOSAA
Primary Mass: 584.0 / 419.0



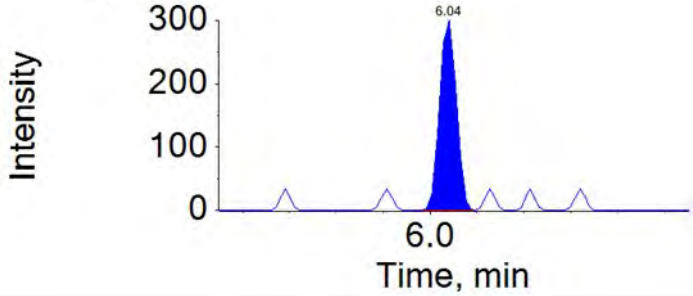
Component: NEtFOSAA_2
Secondary Mass: 584.0 / 526.0



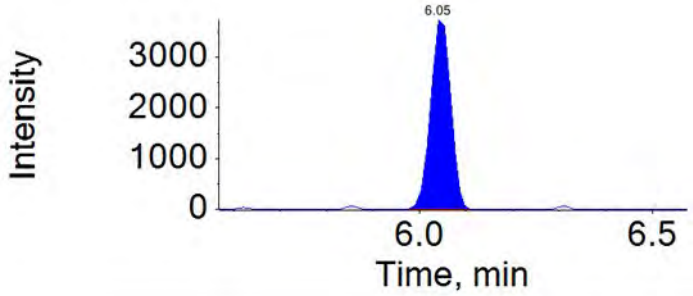
Component: PFDoDA
Primary Mass: 613.0 / 569.0



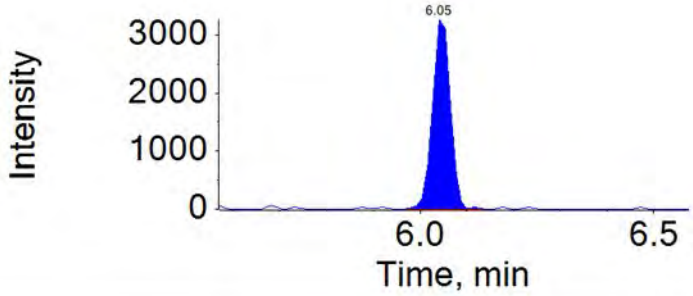
Component: PFDoDA_2
Secondary Mass: 613.0 / 169.0



Component: 10:2-FTS
Primary Mass: 627.0 / 607.0



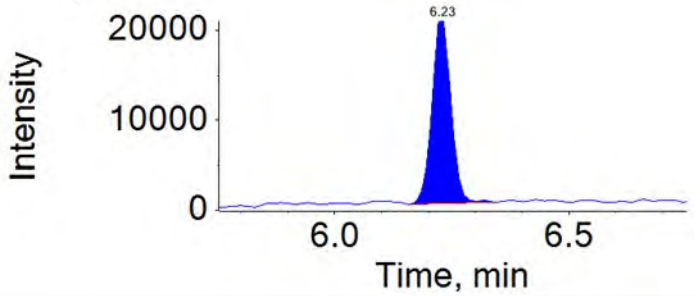
Component: 10:2 FTS_2
Secondary Mass: 627.0 / 81.0



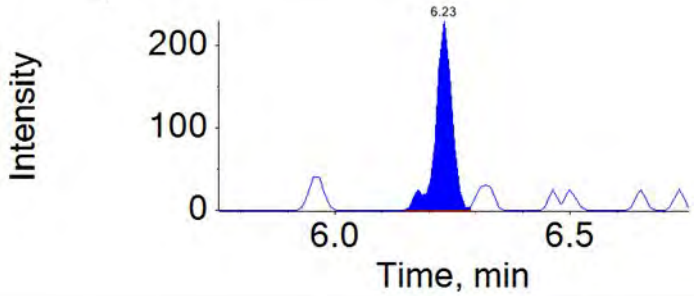
APPROVED
By MCD at 4:51 pm, 11/14/18

REVIEWED
By HMK at 12:22 pm, 11/15/18

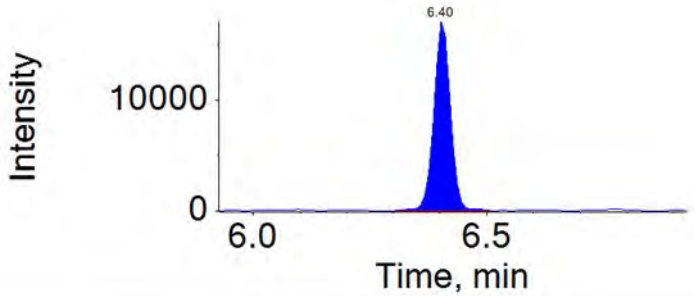
Component: PFTrDA
Primary Mass: 663.0 / 619.0



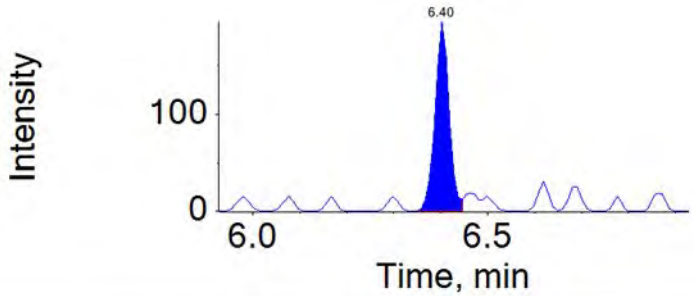
Component: PFTrDA_2
Secondary Mass: 663.0 / 169.0



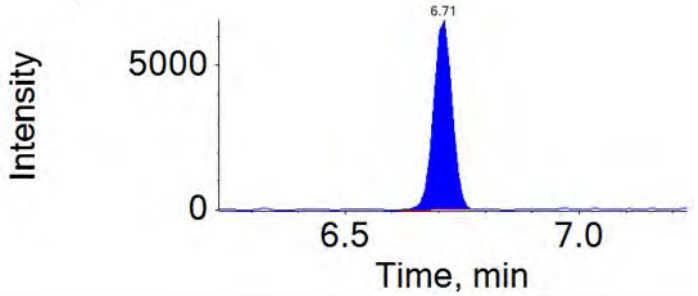
Component: PFTeDA
Primary Mass: 713.0 / 669.0



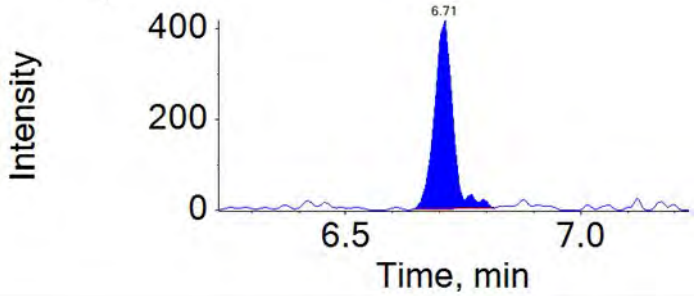
Component: PFTeDA_2
Secondary Mass: 713.0 / 169.0



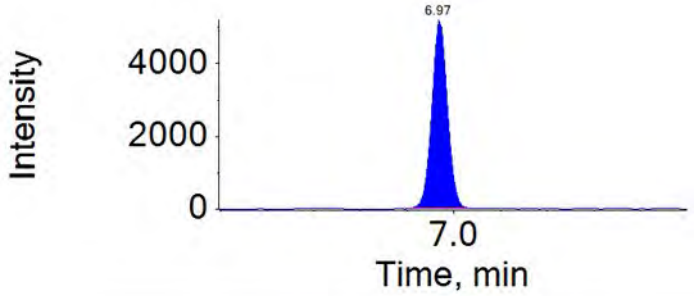
Component: PFHxDA
Primary Mass: 813.0 / 769.0



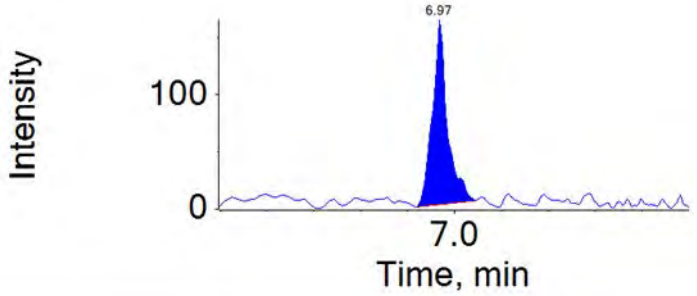
Component: PFHxDA_2
Secondary Mass: 813.0 / 169.0



Component: PFODA
Primary Mass: 913.0 / 869.0



Component: PFODA_2
Secondary Mass: 913.0 / 169.0



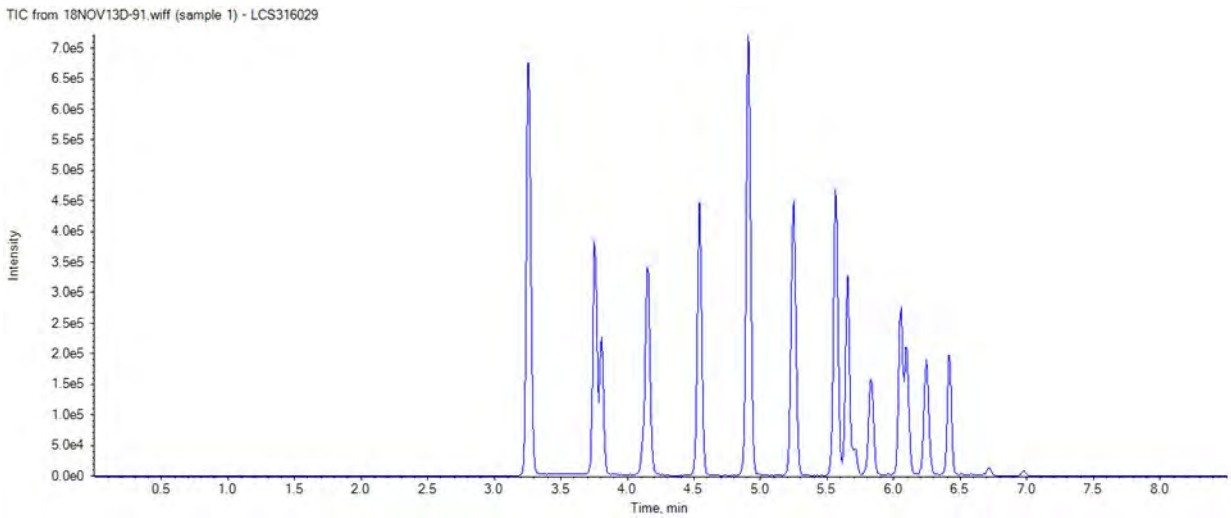
APPROVED
By MCD at 4:51 pm, 11/14/18

REVIEWED
By HMK at 12:22 pm, 11/15/18

Lab Control Sample Recovery

ICAL Name: 18NOV12DCAL **Result Table:** 18316029 11/14/2018 6:46:19 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Instrument Name:	Sample Name:	Sample ID:	Sample File:	Acquisition Date:
LM27631	LCS316029	EPA 537 mod QSM 5.1 table B-15 18316029	18NOV13D-91.wiff	2018-11-13T23:15:01



Injection Standard Area Reference File**:** 18NOV13D-05

Injection Standard Name	Inj Std Conc	Injection Std Peak Area	Reference Injection Standard Area	Injection Std %Diff	Injection Std %Diff Limit	Injection Std %Diff OOS
13C3-PFBA	5.00	741384.7	661126.9	12	50	
13C2-PFOA	5.00	535274.1	466902.6	15	50	
13C4-PFOS	4.78	279158.3	247446.9	13	50	
13C2-PFDA	5.00	317118.7	295381.6	7	50	

APPROVED
By MCD at 6:55 pm, 11/14/18

REVIEWED
By HMK at 11:03 am, 11/15/18

Lab Control Sample Recovery

ICAL Name: 18NOV12DCAL **Result Table:** 18316029 11/14/2018 6:46:19 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Instrument Name:	Sample Name:	Sample ID:	Sample File:	Acquisition Date:
LM27631	LCS316029	EPA 537 mod QSM 5.1 table B-15 18316029	18NOV13D-91.wiff	2018-11-13T23:15:01

Analyte Name	Analyte Area	Ext Std Area	Area Ratio	Adj Actual Conc	Sample Result	%REC	% REC Limit	%REC OOS
PFBA	99005.0	751567.3	0.132	1.360	1.460	107	70-130	
PFPeA	96183.5	729719.9	0.132	1.360	1.526	112	70-130	
PFBS	53845.3	405718.5	0.133	1.204	1.263	105	70-130	
4:2-FTS	33275.5	46441.9	0.716	3.736	3.891	104	70-130	
PFHxA	115414.5	652049.0	0.177	1.360	1.478	109	70-130	
PFPeS	28647.1	405718.5	0.071	1.276	1.371	107	70-130	
PFHpA	123898.9	517994.0	0.239	1.360	1.586	117	70-130	
PFHxS	42557.0	314140.7	0.135	1.286	1.314	102	70-130	
6:2-FTS	28232.7	36203.7	0.780	3.792	3.774	100	70-130	
PFHpS	38176.5	314140.7	0.122	1.294	1.279	99	70-130	
PFOA	124052.0	901123.2	0.138	1.360	1.470	108	70-130	
PFOS	38309.0	273558.5	0.140	1.300	1.225	94	70-130	
PFNA	94427.4	452925.5	0.208	1.360	1.504	111	70-130	
PFNS	25185.5	273558.5	0.092	1.306	1.288	99	70-130	
PFDA	84660.3	603575.9	0.140	1.360	1.487	109	70-130	
8:2-FTS	24271.6	30440.1	0.797	3.832	3.718	97	70-130	
PFOSA	89683.2	634198.6	0.141	1.360	1.381	102	70-130	
NMeFOSAA	10601.5	89391.7	0.119	1.360	1.341	99	70-130	
PFDS	19024.3	273558.5	0.070	1.310	1.260	96	70-130	
PFUnDA	68104.2	236956.1	0.287	1.360	1.503	110	70-130	
NEtFOSAA	10025.8	65841.8	0.152	1.360	1.596	117	70-130	
PFDoDA	75960.8	515120.5	0.147	1.360	1.502	110	70-130	
10:2-FTS	14233.4	30440.1	0.468	3.856	3.115	81	70-130	
NMePFOSAE	52198.8	336727.0	0.155	1.360	1.290	95	70-130	
NMePFOSA	9632.1	74527.0	0.129	1.360	1.275	94	70-130	
PFDoS	9144.3	273558.5	0.033	1.316	1.171	89	70-130	
NEtPFOSAE	61980.2	277947.1	0.223	1.360	1.431	105	70-130	
NEtPFOSA	6921.3	57897.5	0.120	1.360	1.098	81	70-130	
PFTrDA	63557.4	515120.5	0.123	1.360	1.557	115	70-130	
PFTeDA	50391.6	376622.1	0.134	1.360	1.500	110	70-130	
PFHxDA	23452.8	376622.1	0.062	1.360	1.484	109	70-130	
PFODA	18360.8	376622.1	0.049	1.360	1.358	100	70-130	

APPROVED
By MCD at 6:55 pm, 11/14/18

REVIEWED
By HMK at 11:03 am, 11/15/18

Lab Control Sample Recovery

ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM
Result Table: 18316029 11/14/2018 6:46:19 PM
Acquisition Method: 18AUG13_3uL.dam

APPROVED
By MCD at 6:55 pm, 11/14/18

REVIEWED
By HMK at 11:03 am, 11/15/18

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LC-MS/MS
DOD Analysis Report

Printed: 11/14/2018 6:48:00 PM
Template: DOD-Sample-18JUN22.docx

ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM
Result Table: 18316029 11/14/2018 6:48:04 PM
Acquisition Method: 18AUG13_3uL.dam

Sample Name:	LCS316029			**Data File:**		18NOV13D-91.wiff
Sample ID:	EPA 537 mod QSM 5.1 table B-15 18316029			**Acquis Date:**		2018-11-13T23:15:01
Sample Type:	Quality Control			**Instrument:**		LM27631
Vial Position:	85			**Acquis Method:**		18AUG13_3uL.dam
Injection Vol:	3.00			**Result Table:**		18316029
QMethod File:	18AUG20QM			**ICAL Name:**		18NOV12DCAL
Batch Number:	18316029			**Operator:**		MCD7824
Sample Wt.:	1.00000			**Dilution Factor:**		1.00
Sample Vol.:	1.000			**Prep Factor:**		2.000

Injection Standard Peak Table

Injection Standard Area Reference File: 18NOV13D-05

Injection Standard Name	Inj Std Conc	Injection Std Peak Area	Rreference Injection Standard Area	Injection Std %Diff	Injection Std %Diff Limit	Injection Std %Diff OOS
13C3-PFBA	5.0	741384.7	661126.9	12	50	
13C2-PFOA	5.0	535274.1	466902.6	15	50	
13C4-PFOS	4.8	279158.3	247446.9	13	50	
13C2-PFDA	5.0	317118.7	295381.6	7	50	

Extraction Standard Peak Table

Extraction Standard Name	Ext Std Area	Inj Std Name	Inj Std Area	Area Ratio	Ext Std Conc	Ext Std Result	Ext Std %REC	Ext Std %REC Limit	Ext Std OOS
E13C4-PFBA	751567.3	13C3-PFBA	741384.7	1.014	10.000	9.090	91	50-150	
E13C5-PFPeA	729719.9	13C3-PFBA	741384.7	0.984	10.000	8.829	88	50-150	
E13C3-PFBS	405718.5	13C3-PFBA	741384.7	0.547	9.300	7.726	83	50-150	
E13C2-4:2-FTS	46441.9	13C2-PFOA	535274.1	0.087	9.340	7.729	83	50-150	
E13C5-PFHxA	652049.0	13C2-PFOA	535274.1	1.218	10.000	8.801	88	50-150	
E13C3-PFHxS	314140.7	13C2-PFOA	535274.1	0.587	9.460	8.054	85	50-150	
E13C4-PFHpA	517994.0	13C2-PFOA	535274.1	0.968	10.000	8.719	87	50-150	
E13C2-6:2-FTS	36203.7	13C2-PFOA	535274.1	0.068	9.500	9.050	95	50-150	
E13C8-PFOA	901123.2	13C2-PFOA	535274.1	1.683	10.000	9.276	93	50-150	
E13C8-PFOS	273558.5	13C4-PFOS	279158.3	0.980	9.560	8.684	91	50-150	
E13C9-PFNA	452925.5	13C4-PFOS	279158.3	1.622	10.000	9.047	90	50-150	
E13C6-PFDA	603575.9	13C2-PFDA	317118.7	1.903	10.000	8.883	89	50-150	
E13C2-8:2-FTS	30440.1	13C2-PFDA	317118.7	0.096	9.580	9.574	100	50-150	
E13C8-PFOSA	634198.6	13C2-PFDA	317118.7	2.000	10.000	8.867	89	50-150	
Ed3-NMeFOSAA	89391.7	13C2-PFDA	317118.7	0.282	10.000	10.176	102	50-150	
E13C7-PFUnDA	236956.1	13C2-PFDA	317118.7	0.747	10.000	8.677	87	50-150	
Ed5-NEtFOSAA	65841.8	13C2-PFDA	317118.7	0.208	10.000	8.785	88	50-150	
E13C2-PFDoDA	515120.5	13C2-PFDA	317118.7	1.624	10.000	8.435	84	50-150	
Ed7-NMePFOSAE	336727.0	13C2-PFDA	317118.7	1.062	10.000	9.190	92	50-150	
Ed3-NMePFOSA	74527.0	13C2-PFDA	317118.7	0.235	10.000	8.540	85	50-150	
Ed9-NEtPFOSAE	277947.1	13C2-PFDA	317118.7	0.876	10.000	9.117	91	50-150	
Ed5-NEtPFOSA	57897.5	13C2-PFDA	317118.7	0.183	10.000	8.566	86	50-150	
E13C2-PFTeDA	376622.1	13C2-PFDA	317118.7	1.188	10.000	8.339	83	50-150	

APPROVED
By MCD at 6:55 pm, 11/14/18

REVIEWED
By HMK at 11:03 am, 11/15/18

ICAL Name: 18NOV12DCAL **Result Table:** 18316029 11/14/2018 6:48:04 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

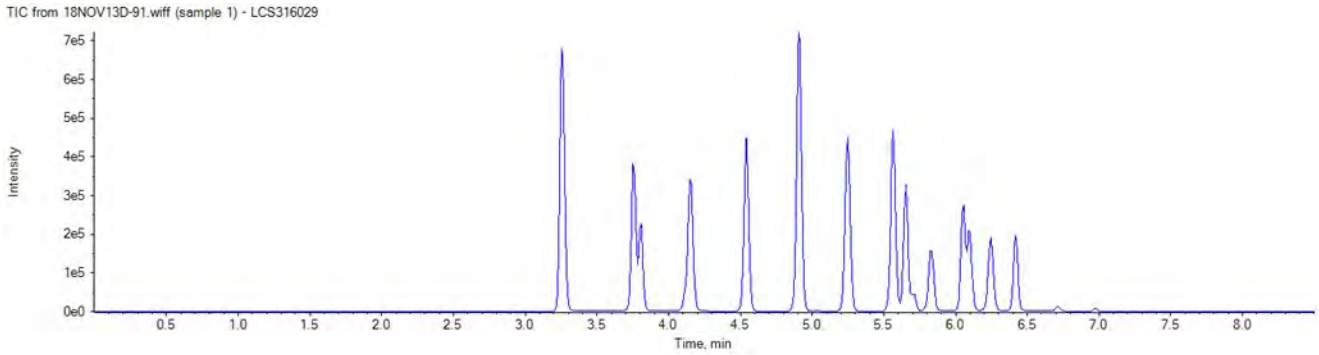
Analyte Quantitation Peak Table

Sample Name: LCS316029 **Instrument Name:** LM27631 **File Name:** 18NOV13D-91.wiff

Sample Wt	Sample Vol	Dilution Factor	PrepFactor
1.00000	1.000	1.00	2.000

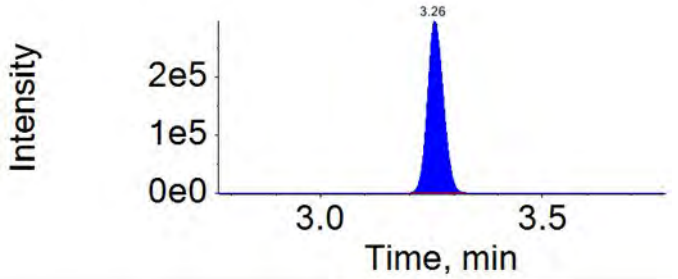
Analyte Name	RT	RRT	Analyte Area Response	E	Int Typ	ES Name	ES RT	ES Area Response	Area Ratio	Sample Result (ng/g)
PFBA	3.25	1.000	99005.0		A	13C4-PFBA	3.26	751567.3	0.132	1.460
PFPeA	3.76	1.000	96183.5		A	13C5-PFPeA	3.76	729719.9	0.132	1.526
PFBS	3.80	1.000	53845.3		A	13C3-PFBS	3.81	405718.5	0.133	1.263
4:2-FTS	4.12	1.000	33275.5		A	13C2-4:2-FTS	4.12	46441.9	0.716	3.891
PFHxA	4.15	1.000	115414.5		A	13C5-PFHxA	4.15	652049.0	0.177	1.478
PFPeS	4.17	1.100	28647.1		A	13C3-PFBS	3.81	405718.5	0.071	1.371
PFHpA	4.54	1.000	123898.9		A	13C4-PFHpA	4.54	517994.0	0.239	1.586
PFHxS	4.54	1.000	42557.0		A	13C3-PFHxS	4.54	314140.7	0.135	1.314
6:2-FTS	4.90	1.000	28232.7		A	13C2-6:2-FTS	4.90	36203.7	0.780	3.774
PFHpS	4.90	1.080	38176.5		A	13C3-PFHxS	4.54	314140.7	0.122	1.279
PFOA	4.91	1.000	124052.0		A	13C8-PFOA	4.91	901123.2	0.138	1.470
PFOS	5.24	1.000	38309.0		A	13C8-PFOS	5.24	273558.5	0.140	1.225
PFNA	5.26	1.000	94427.4		A	13C9-PFNA	5.25	452925.5	0.208	1.504
PFNS	5.54	1.060	25185.5		A	13C8-PFOS	5.24	273558.5	0.092	1.288
PFDA	5.56	1.000	84660.3		M	13C6-PFDA	5.56	603575.9	0.140	1.487
8:2-FTS	5.57	1.000	24271.6		A	13C2-8:2-FTS	5.57	30440.1	0.797	3.718
PFOSA	5.65	1.000	89683.2		A	13C8-PFOSA	5.65	634198.6	0.141	1.381
NMeFOSAA	5.71	1.000	10601.5		A	d3-NMeFOSAA	5.71	89391.7	0.119	1.341
PFDS	5.80	1.110	19024.3		A	13C8-PFOS	5.24	273558.5	0.070	1.260
PFUnDA	5.83	1.000	68104.2		A	13C7-PFUnDA	5.83	236956.1	0.287	1.503
NEtFOSAA	5.85	1.000	10025.8		M	d5-NEtFOSAA	5.84	65841.8	0.152	1.596
PFDoDA	6.05	1.000	75960.8		A	13C2-PFDoDA	6.05	515120.5	0.147	1.502
10:2-FTS	6.07	1.090	14233.4		M	13C2-8:2-FTS	5.57	30440.1	0.468	3.115
NMePFOSAE	6.11	1.000	52198.8		A	d7-NMePFOSAE	6.09	336727.0	0.155	1.290
NMePFOSA	6.11	1.000	9632.1		A	d3-NMePFOSA	6.11	74527.0	0.129	1.275
PFDoS	6.21	1.190	9144.3		A	13C8-PFOS	5.24	273558.5	0.033	1.171
NEtPFOSAE	6.25	1.000	61980.2		M	d9-NEtPFOSAE	6.24	277947.1	0.223	1.431
NEtPFOSA	6.27	1.000	6921.3		A	d5-NEtPFOSA	6.26	57897.5	0.120	1.098
PFTrDA	6.24	1.030	63557.4		A	13C2-PFDoDA	6.05	515120.5	0.123	1.557
PFTeDA	6.42	1.000	50391.6		A	13C2-PFTeDA	6.42	376622.1	0.134	1.500
PFHxDA	6.71	1.050	23452.8		A	13C2-PFTeDA	6.42	376622.1	0.062	1.484
PFODA	6.98	1.090	18360.8		A	13C2-PFTeDA	6.42	376622.1	0.049	1.358

Total Ion Chromatogram

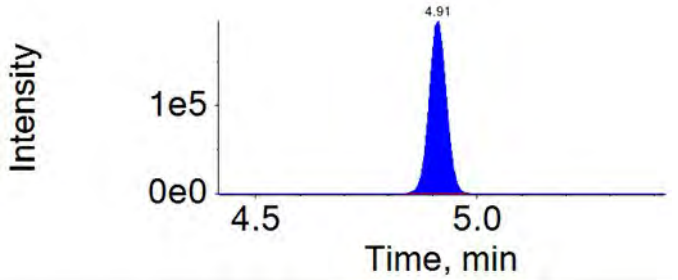


ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM
Result Table: 18316029 11/14/2018 6:48:04 PM
Acquisition Method: 18AUG13_3uL.dam

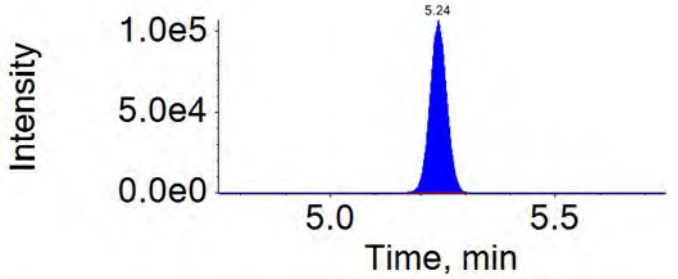
Injection Standard: 13C3-PFBA
216.0 / 172.0



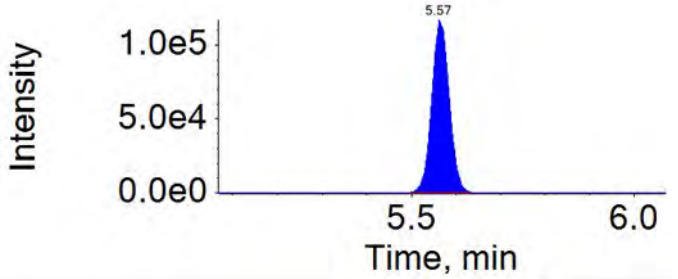
Injection Standard: 13C2-PFOA
415.0 / 370.0



Injection Standard: 13C4-PFOS
503.0 / 80.0



Injection Standard: 13C2-PFDA
515.0 / 470.0

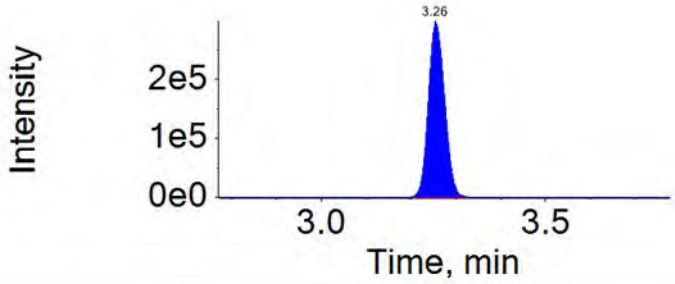


APPROVED
By MCD at 6:55 pm, 11/14/18

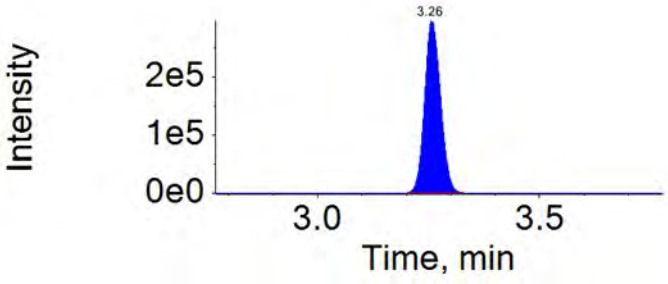
REVIEWED
By HMK at 11:03 am, 11/15/18

ICAL Name: 18NOV12DCAL **Result Table:** 18316029 11/14/2018 6:48:04 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

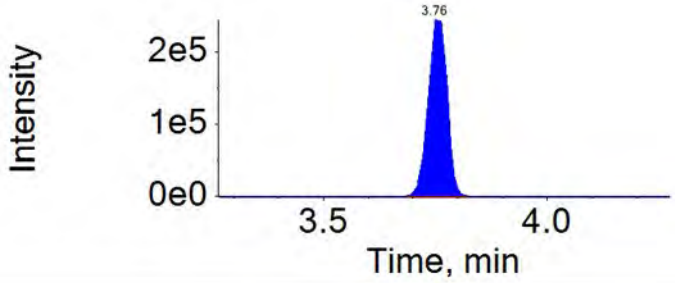
Extraction Standard: E13C4-PFBA
217.0 / 172.0



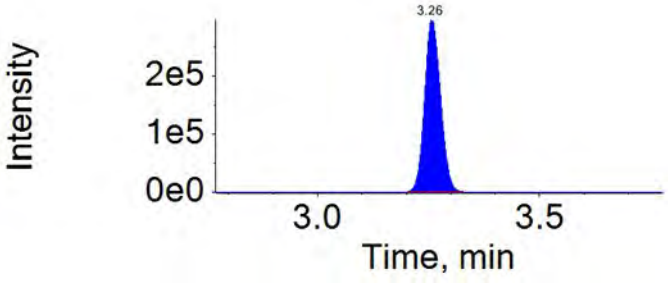
Injection Standard: 13C3-PFBA
216.0 / 172.0



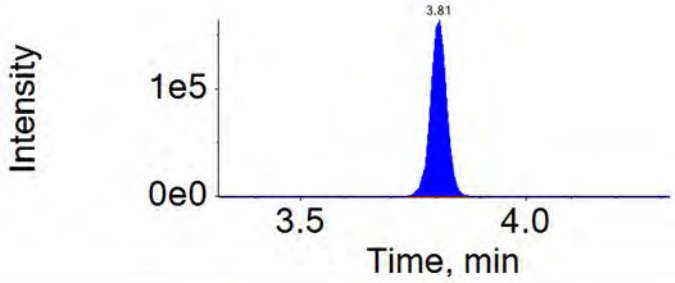
Extraction Standard: E13C5-PFPeA
268.0 / 223.0



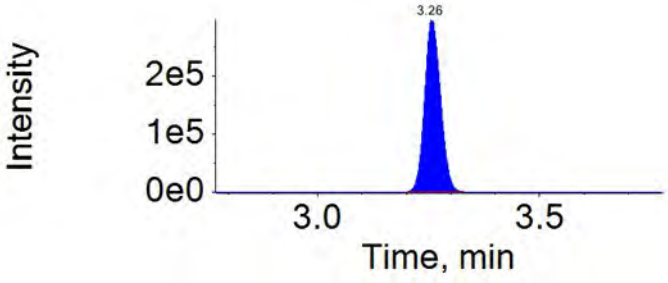
Injection Standard: 13C3-PFBA
216.0 / 172.0



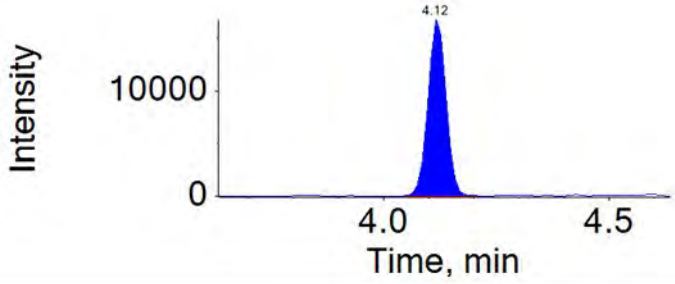
Extraction Standard: E13C3-PFBS
302.0 / 80.0



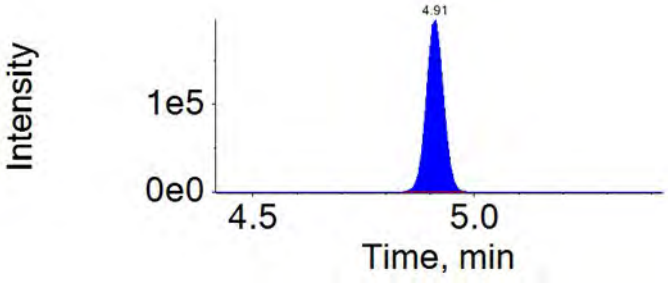
Injection Standard: 13C3-PFBA
216.0 / 172.0



Extraction Standard: E13C2-4:2-FTS
329.0 / 81.0



Injection Standard: 13C2-PFOA
415.0 / 370.0

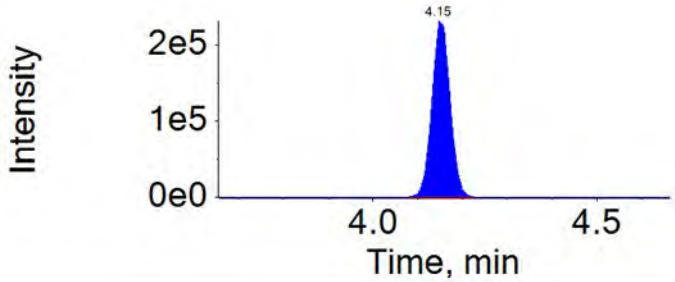


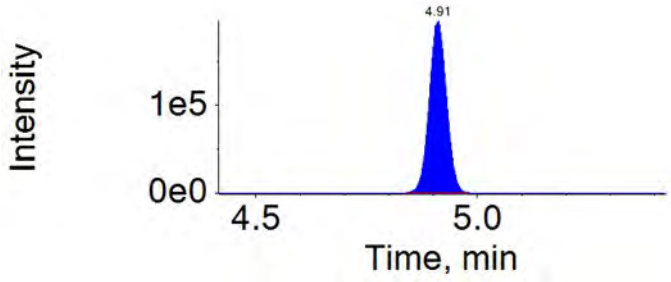
APPROVED
By MCD at 6:55 pm, 11/14/18

REVIEWED
By HMK at 11:03 am, 11/15/18

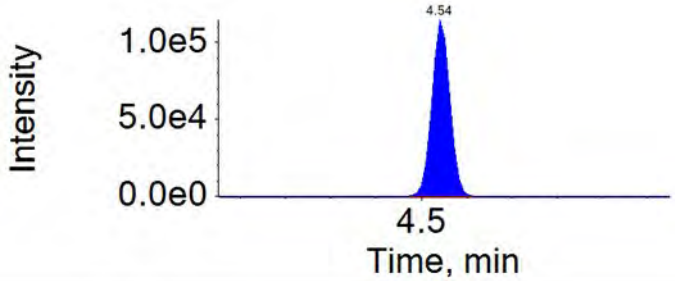
ICAL Name: 18NOV12DCAL **Result Table:** 18316029 11/14/2018 6:48:04 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

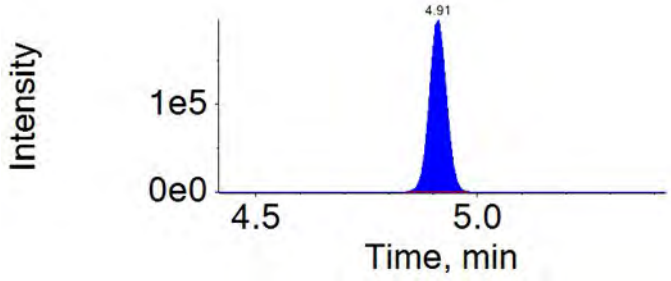
Extraction Standard: E13C5-PFHxA	Injection Standard: 13C2-PFOA
318.0 / 273.0	415.0 / 370.0



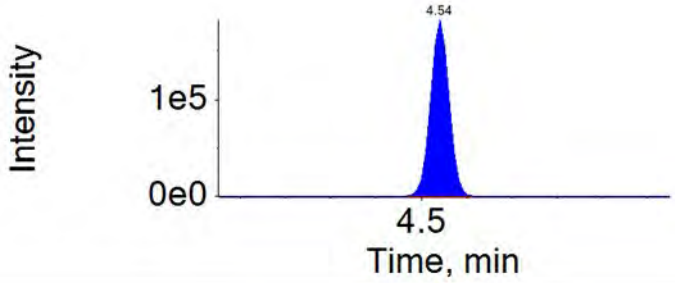


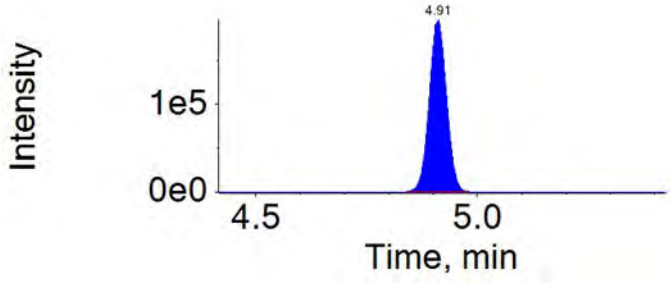
Extraction Standard: E13C3-PFHxS	Injection Standard: 13C2-PFOA
402.0 / 80.0	415.0 / 370.0



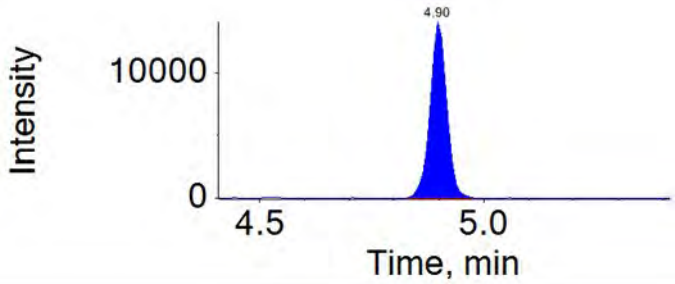


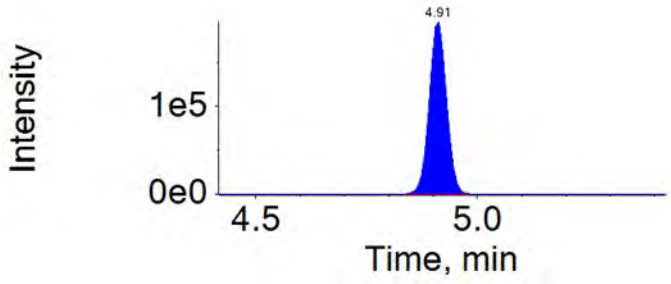
Extraction Standard: E13C4-PFHpA	Injection Standard: 13C2-PFOA
367.0 / 322.0	415.0 / 370.0





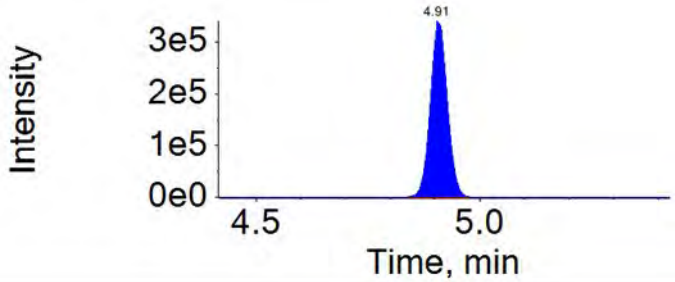
Extraction Standard: E13C2-6:2-FTS	Injection Standard: 13C2-PFOA
429.0 / 81.0	415.0 / 370.0

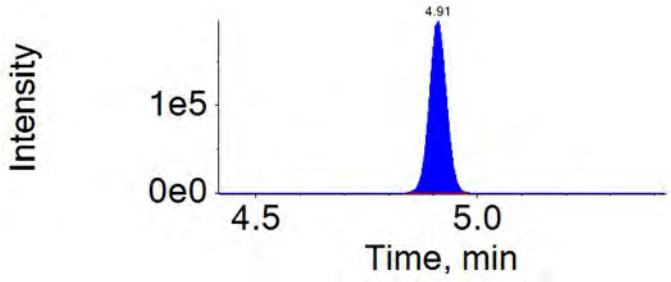




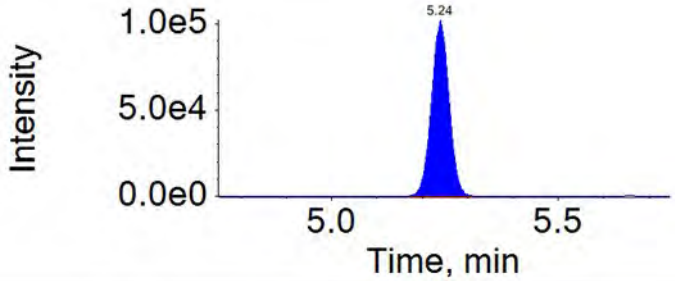
ICAL Name: 18NOV12DCAL **Result Table:** 18316029 11/14/2018 6:48:04 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

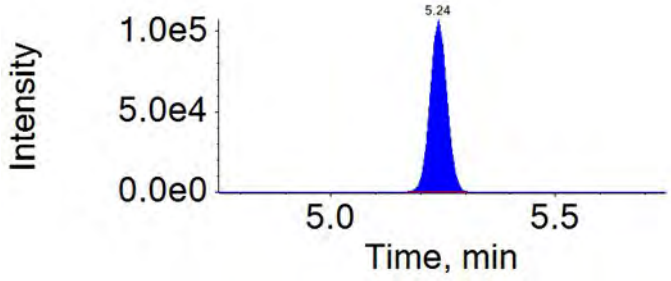
Extraction Standard: E13C8-PFOA	Injection Standard: 13C2-PFOA
421.0 / 376.0	415.0 / 370.0



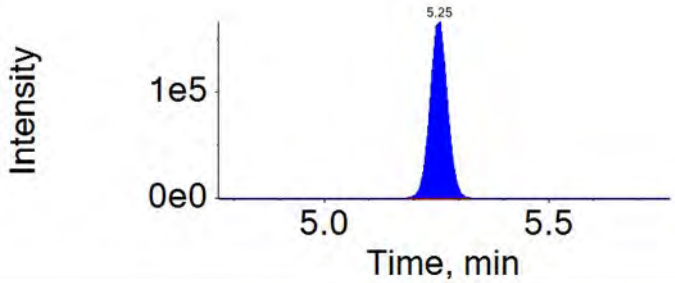


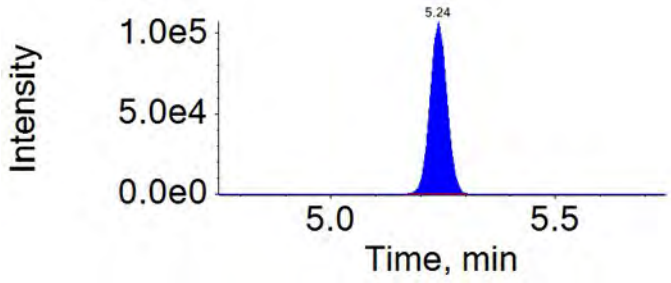
Extraction Standard: E13C8-PFOS	Injection Standard: 13C4-PFOS
507.0 / 80.0	503.0 / 80.0



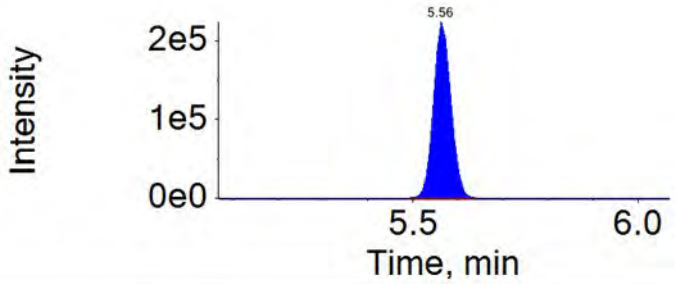


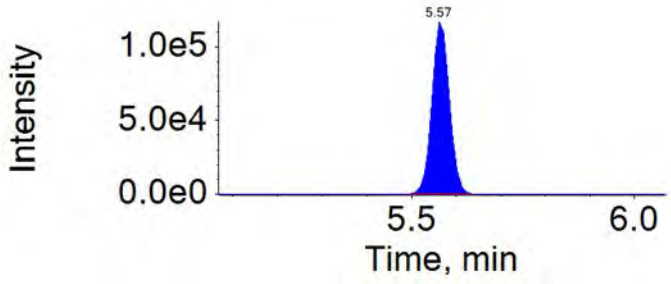
Extraction Standard: E13C9-PFNA	Injection Standard: 13C4-PFOS
472.0 / 427.0	503.0 / 80.0





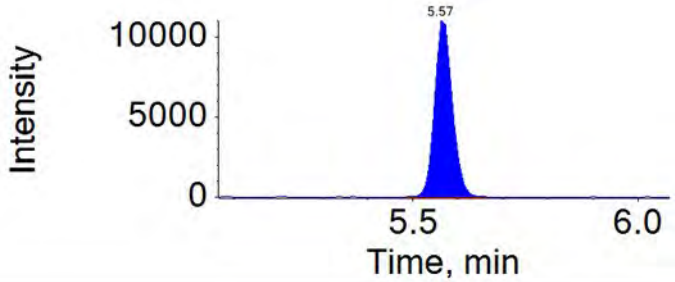
Extraction Standard: E13C6-PFDA	Injection Standard: 13C2-PFDA
519.0 / 474.0	515.0 / 470.0

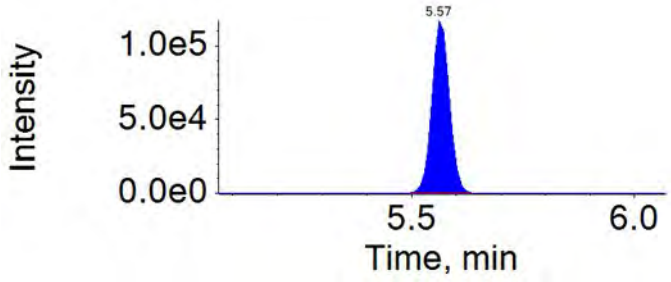




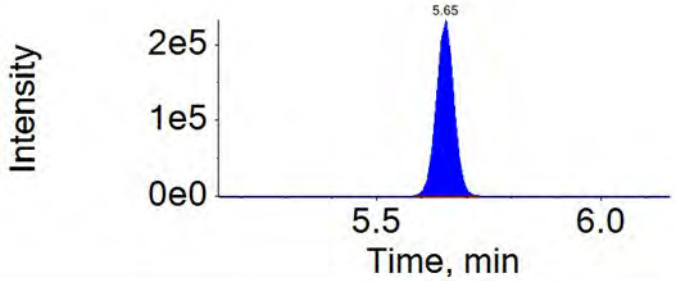
ICAL Name: 18NOV12DCAL **Result Table:** 18316029 11/14/2018 6:48:04 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

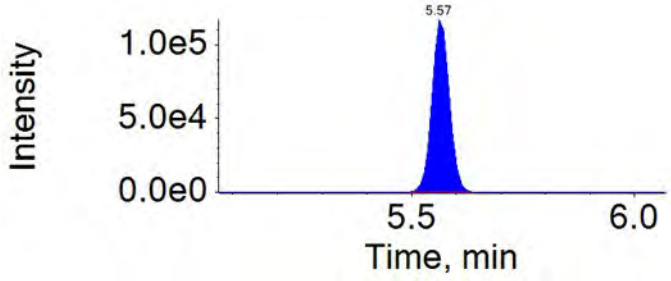
Extraction Standard: E13C2-8:2-FTS	Injection Standard: 13C2-PFDA
529.0 / 81.0	515.0 / 470.0



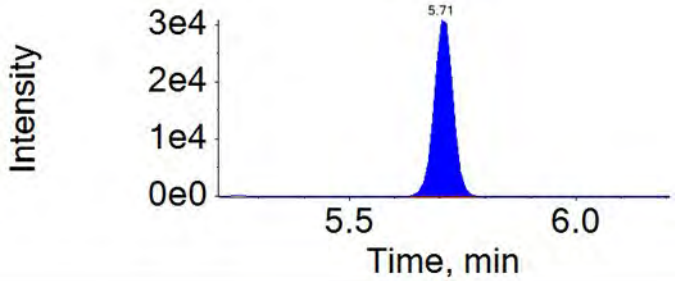


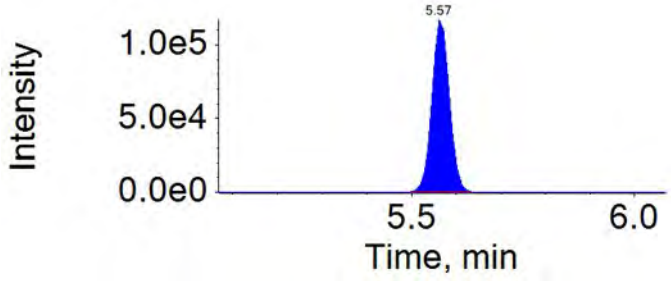
Extraction Standard: E13C8-PFOSA	Injection Standard: 13C2-PFDA
506.0 / 78.0	515.0 / 470.0



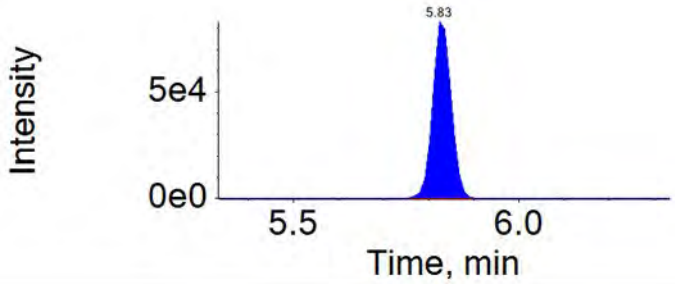


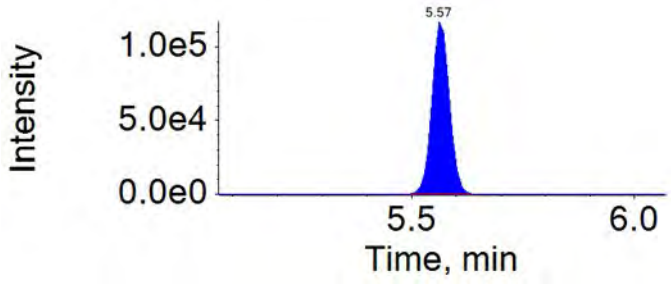
Extraction Standard: Ed3-NMeFOSAA	Injection Standard: 13C2-PFDA
573.0 / 419.0	515.0 / 470.0





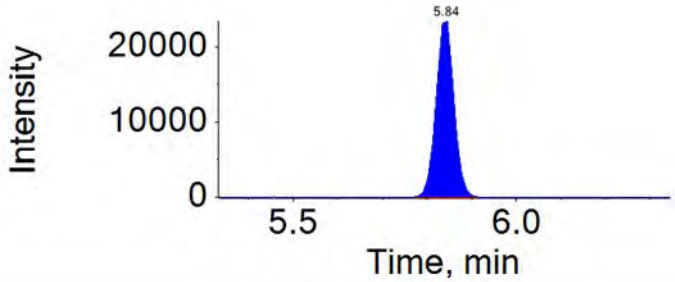
Extraction Standard: E13C7-PFUnDA	Injection Standard: 13C2-PFDA
570.0 / 525.0	515.0 / 470.0

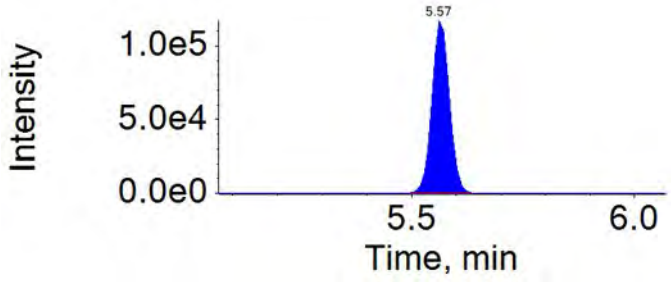




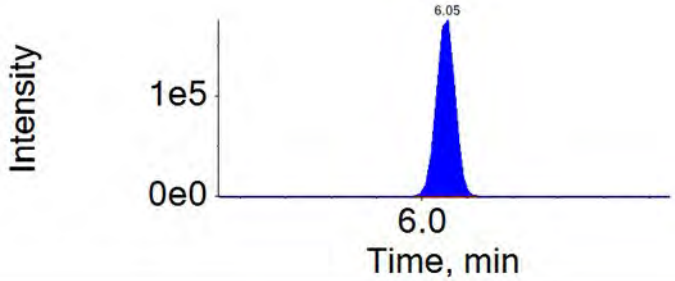
ICAL Name: 18NOV12DCAL **Result Table:** 18316029 11/14/2018 6:48:04 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

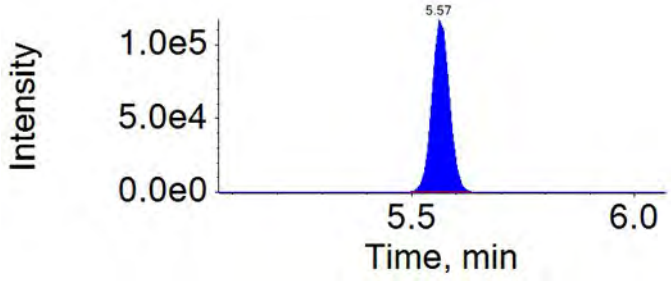
Extraction Standard: Ed5-NEtFOSAA	Injection Standard: 13C2-PFDA
589.0 / 419.0	515.0 / 470.0



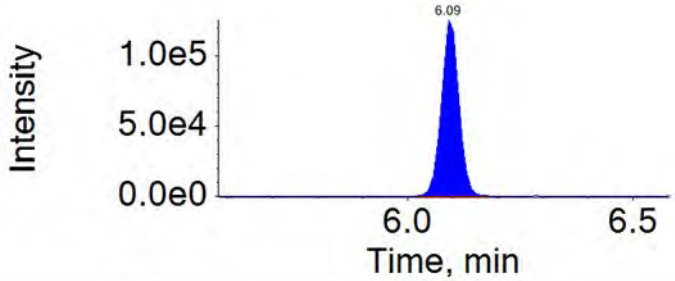


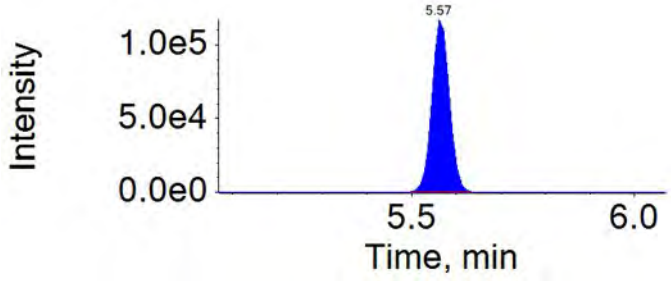
Extraction Standard: E13C2-PFDoDA	Injection Standard: 13C2-PFDA
615.0 / 570.0	515.0 / 470.0



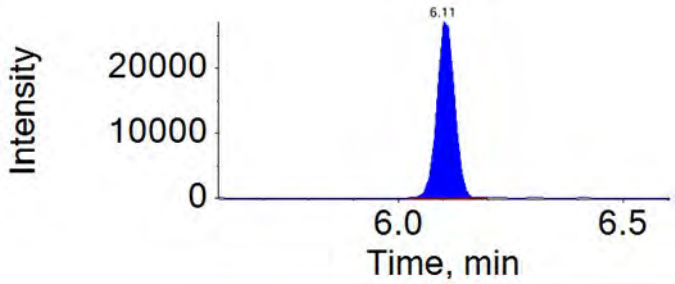


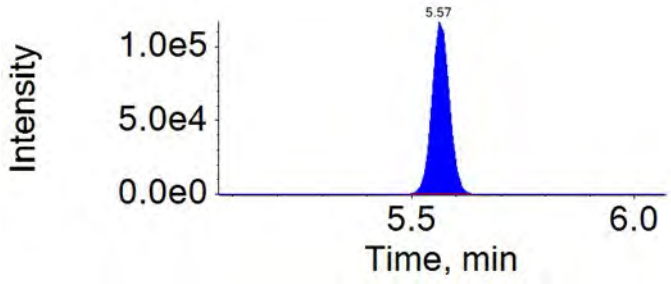
Extraction Standard: Ed7-NMePFOSAE	Injection Standard: 13C2-PFDA
623.0 / 59.0	515.0 / 470.0





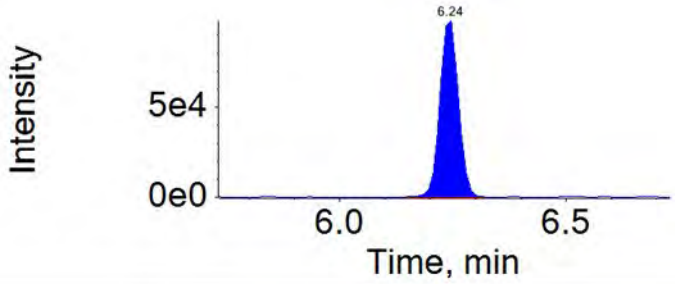
Extraction Standard: Ed3-NMePFOSA	Injection Standard: 13C2-PFDA
515.0 / 169.0	515.0 / 470.0

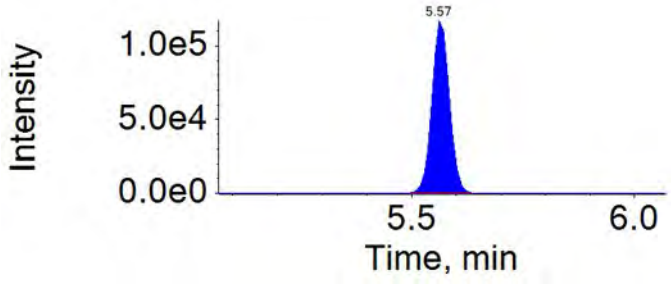




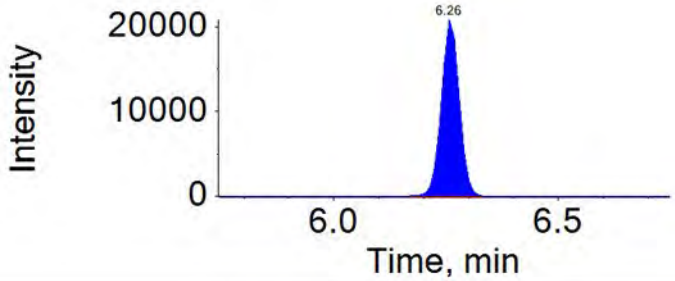
ICAL Name: 18NOV12DCAL **Result Table:** 18316029 11/14/2018 6:48:04 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

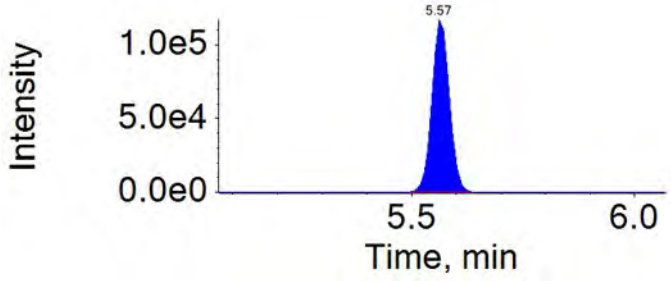
Extraction Standard: Ed9-NEtPFOSAE	Injection Standard: 13C2-PFDA
639.0 / 59.0	515.0 / 470.0



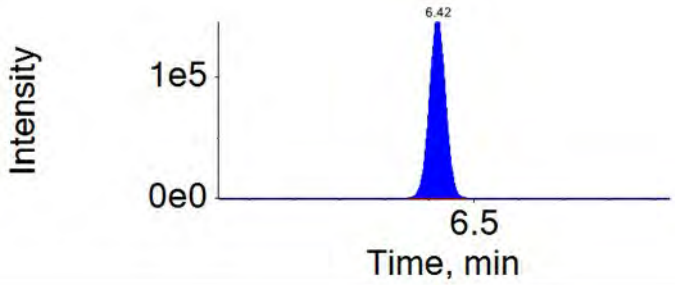


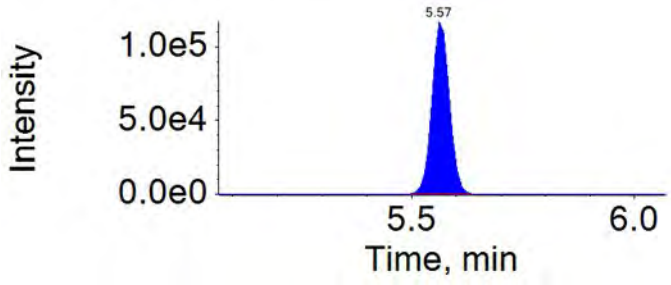
Extraction Standard: Ed5-NEtPFOSA	Injection Standard: 13C2-PFDA
531.0 / 169.0	515.0 / 470.0





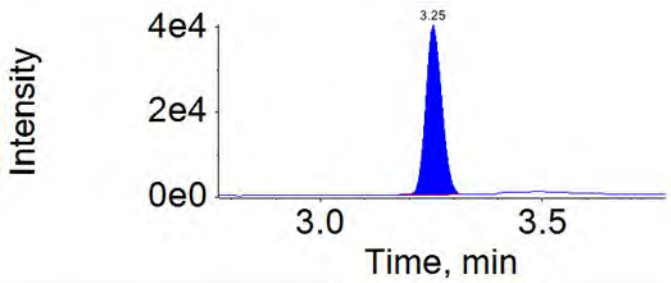
Extraction Standard: E13C2-PFTeDA	Injection Standard: 13C2-PFDA
715.0 / 670.0	515.0 / 470.0



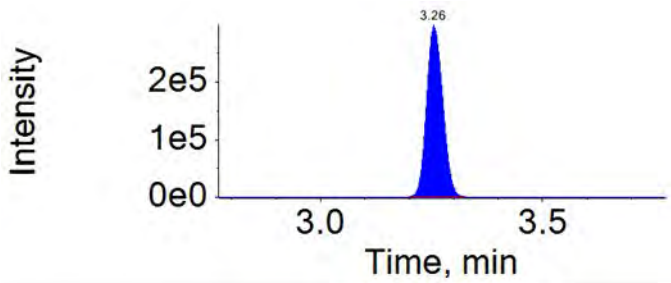


ICAL Name: 18NOV12DCAL **Result Table:** 18316029 11/14/2018 6:48:04 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

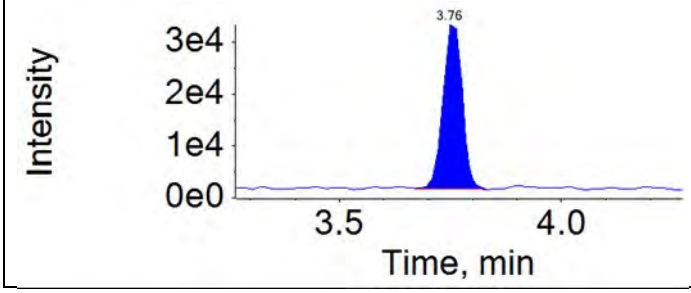
Analyte: PFBA
213.0 / 169.0



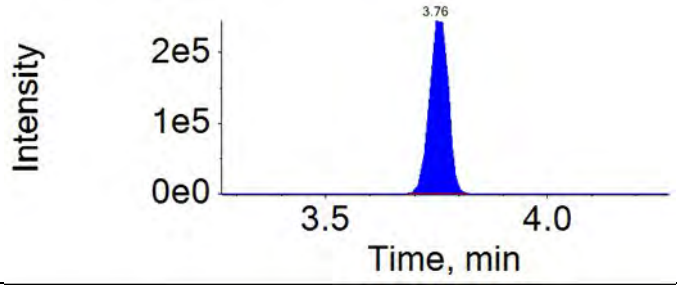
Extraction Standard: 13C4-PFBA
217.0 / 172.0



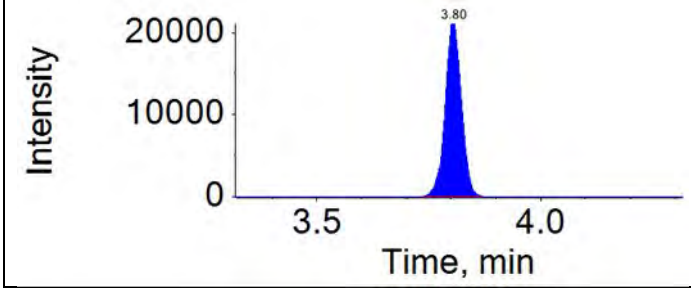
Analyte: PFPeA
263.0 / 219.0



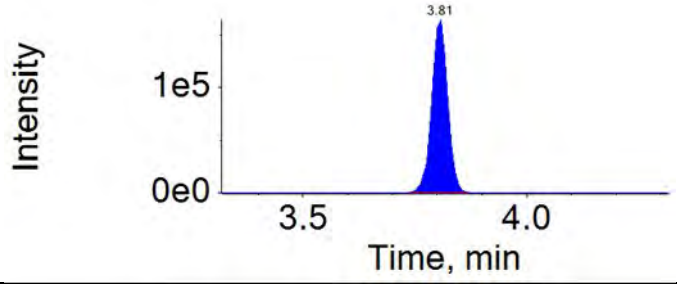
Extraction Standard: 13C5-PFPeA
268.0 / 223.0



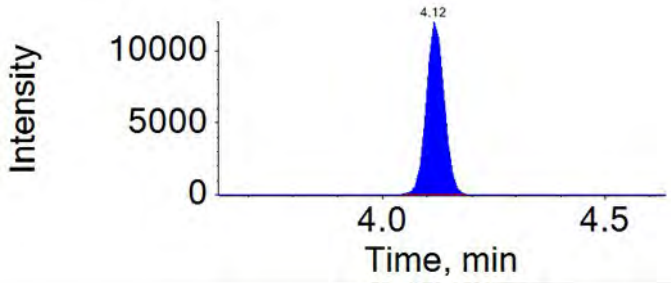
Analyte: PFBS
299.0 / 80.0



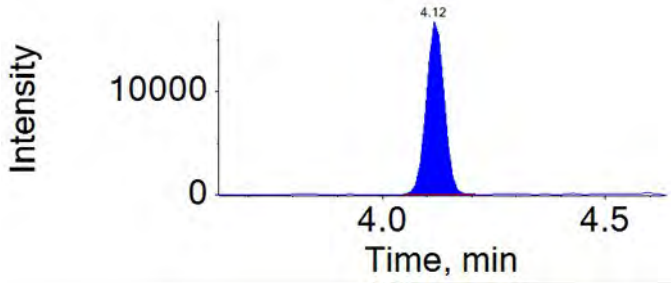
Extraction Standard: 13C3-PFBS
302.0 / 80.0



Analyte: 4:2-FTS
327.0 / 307.0



Extraction Standard: 13C2-4:2-FTS
329.0 / 81.0

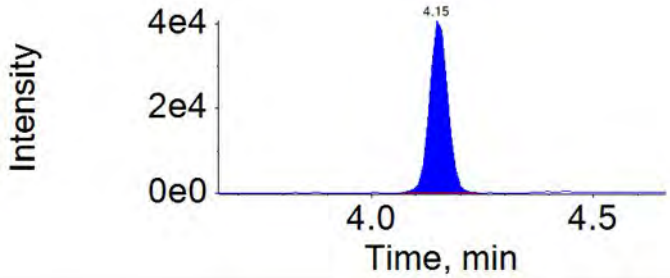


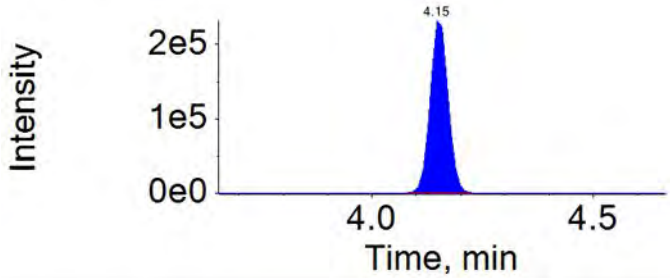
APPROVED
By MCD at 6:55 pm, 11/14/18

REVIEWED
By HMK at 11:03 am, 11/15/18

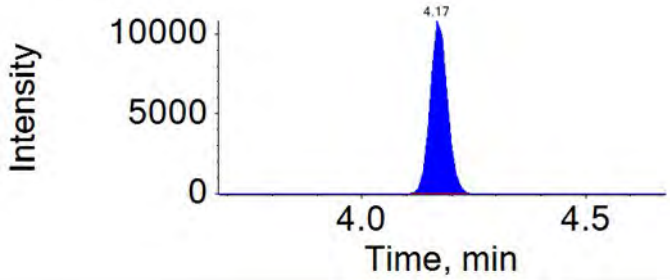
ICAL Name: 18NOV12DCAL **Result Table:** 18316029 11/14/2018 6:48:04 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

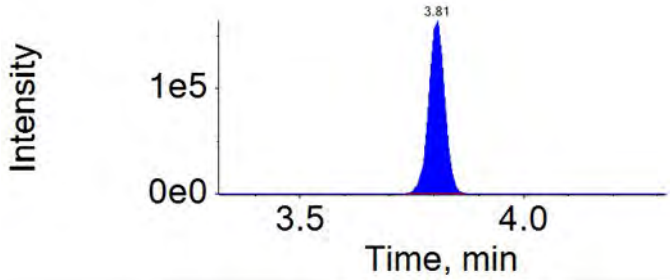
Analyte: PFHxA	Extraction Standard: 13C5-PFHxA
313.0 / 269.0	318.0 / 273.0



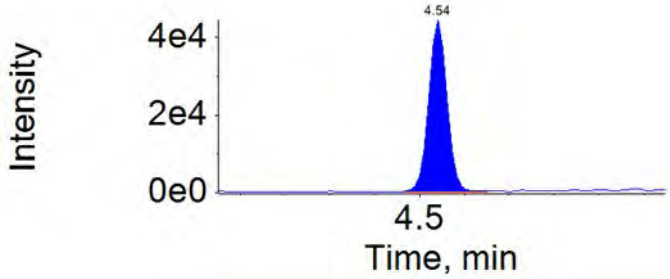


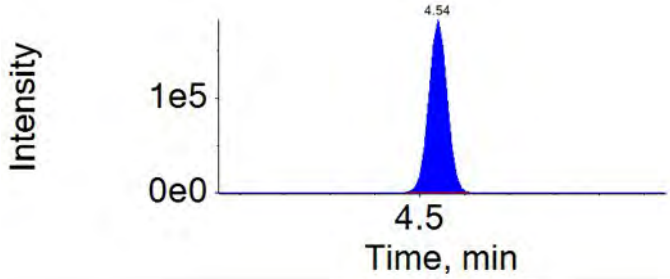
Analyte: PFPeS	Extraction Standard: 13C3-PFBS
349.0 / 80.0	302.0 / 80.0



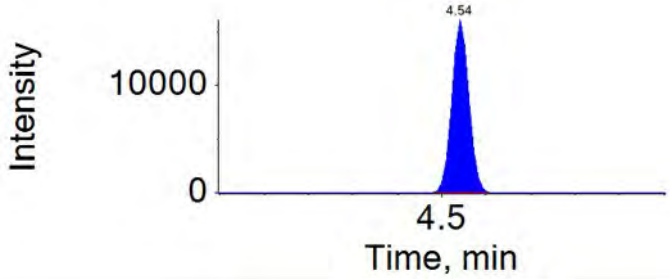


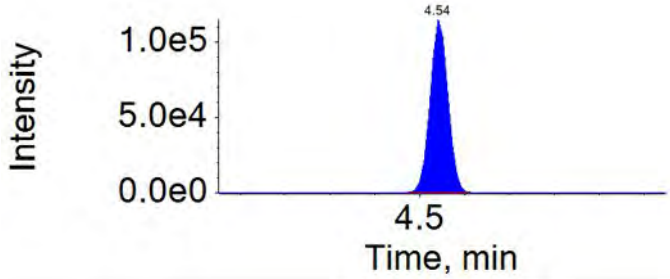
Analyte: PFHpA	Extraction Standard: 13C4-PFHpA
363.0 / 319.0	367.0 / 322.0





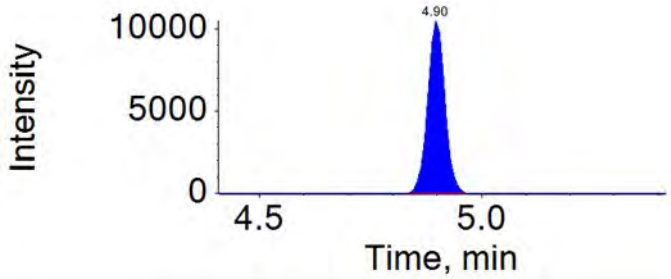
Analyte: PFHxS	Extraction Standard: 13C3-PFHxS
399.0 / 80.0	402.0 / 80.0



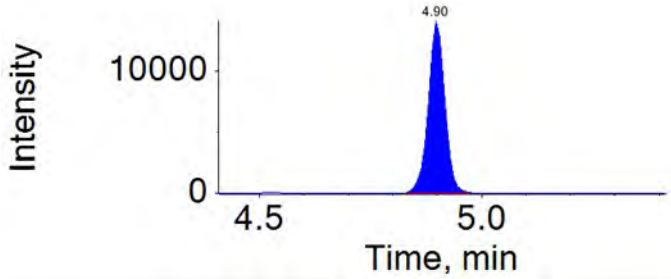


ICAL Name: 18NOV12DCAL **Result Table:** 18316029 11/14/2018 6:48:04 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

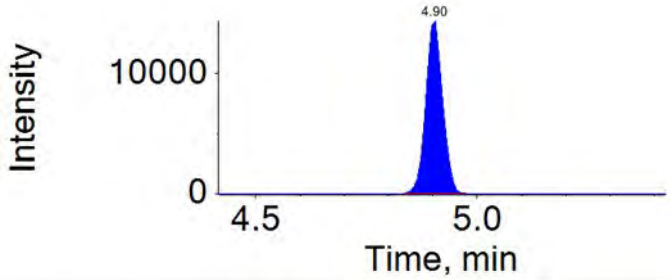
Analyte: 6:2-FTS
427.0 / 407.0



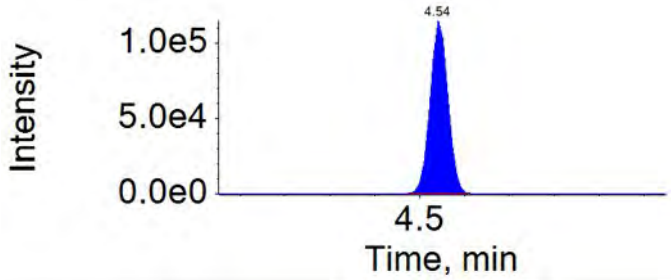
Extraction Standard: 13C2-6:2-FTS
429.0 / 81.0



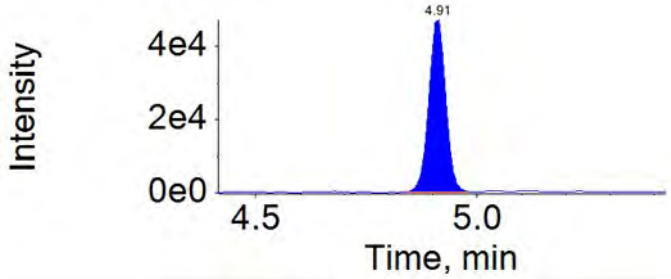
Analyte: PFHpS
449.0 / 80.0



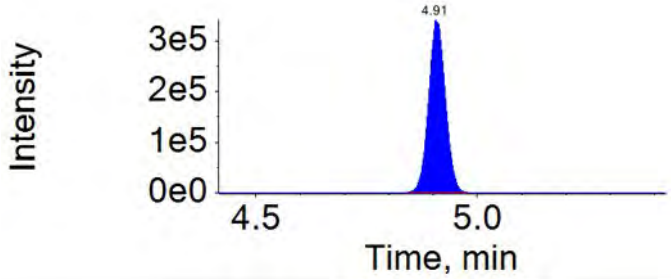
Extraction Standard: 13C3-PFHxS
402.0 / 80.0



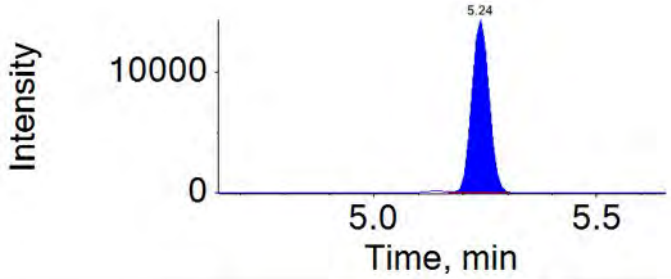
Analyte: PFOA
413.0 / 369.0



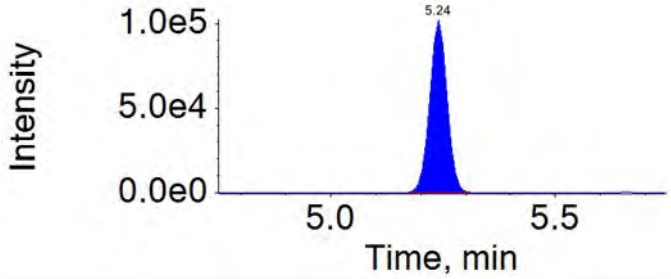
Extraction Standard: 13C8-PFOA
421.0 / 376.0



Analyte: PFOS
499.0 / 80.0



Extraction Standard: 13C8-PFOS
507.0 / 80.0

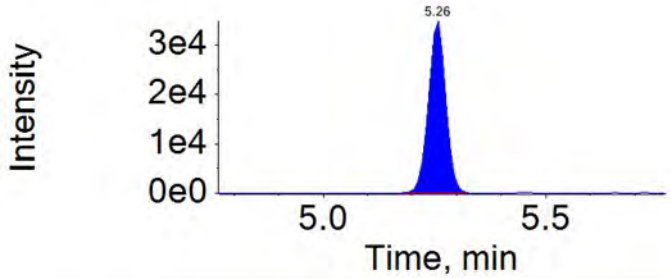


APPROVED
By MCD at 6:55 pm, 11/14/18

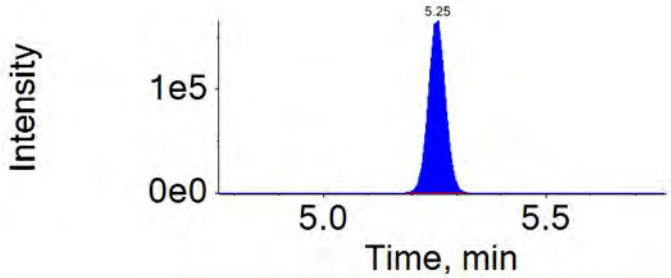
REVIEWED
By HMK at 11:03 am, 11/15/18

ICAL Name: 18NOV12DCAL **Result Table:** 18316029 11/14/2018 6:48:04 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

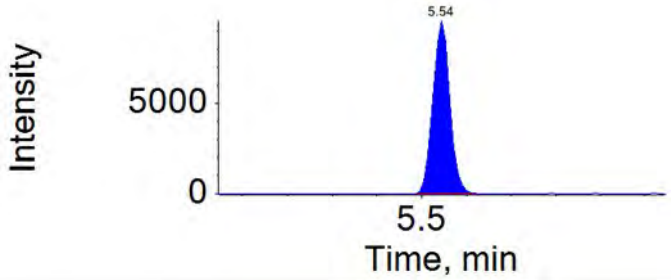
Analyte: PFNA
463.0 / 419.0



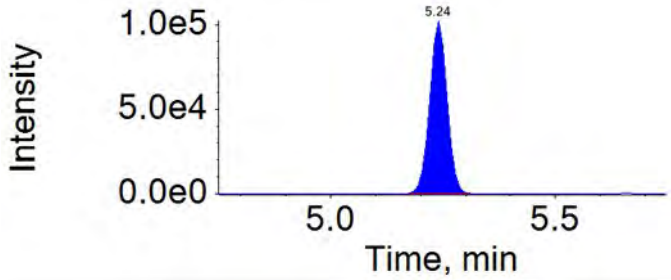
Extraction Standard: 13C9-PFNA
472.0 / 427.0



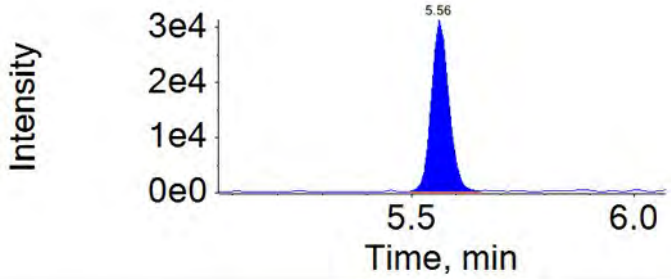
Analyte: PFNS
549.0 / 80.0



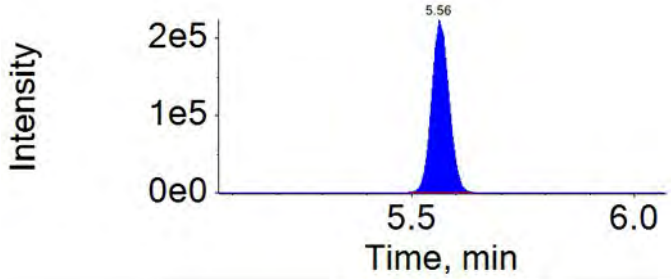
Extraction Standard: 13C8-PFOS
507.0 / 80.0



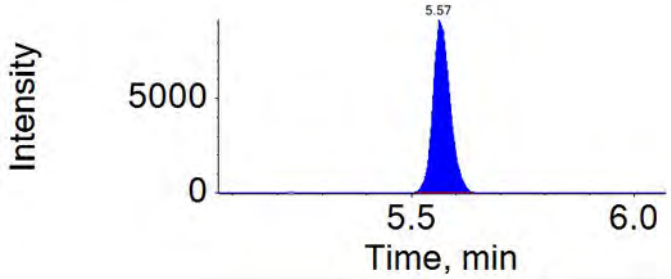
Analyte: PFDA
513.0 / 469.0



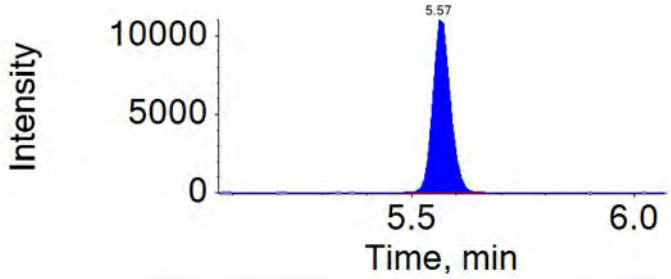
Extraction Standard: 13C6-PFDA
519.0 / 474.0



Analyte: 8:2-FTS
527.0 / 507.0



Extraction Standard: 13C2-8:2-FTS
529.0 / 81.0

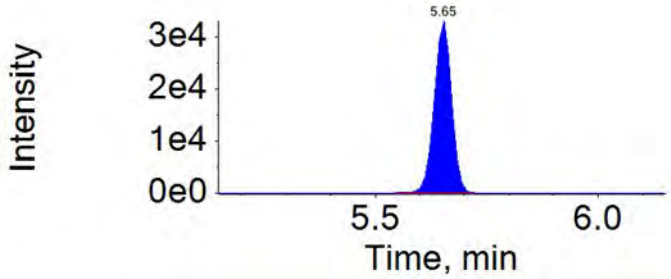


APPROVED
By MCD at 6:55 pm, 11/14/18

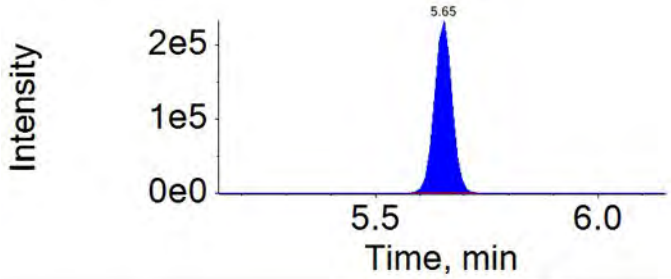
REVIEWED
By HMK at 11:03 am, 11/15/18

ICAL Name: 18NOV12DCAL **Result Table:** 18316029 11/14/2018 6:48:04 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

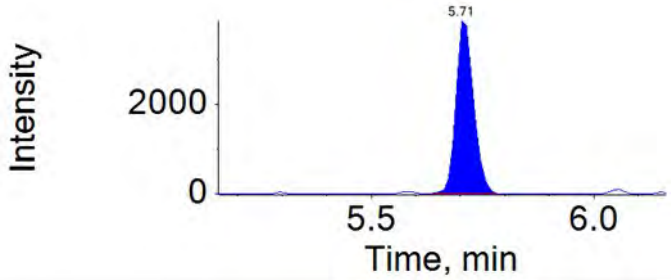
Analyte: PFOSA
498.0 / 78.0



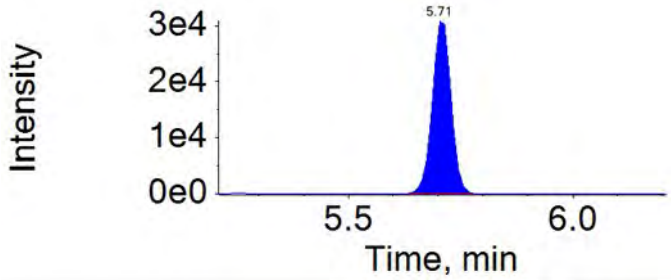
Extraction Standard: 13C8-PFOSA
506.0 / 78.0



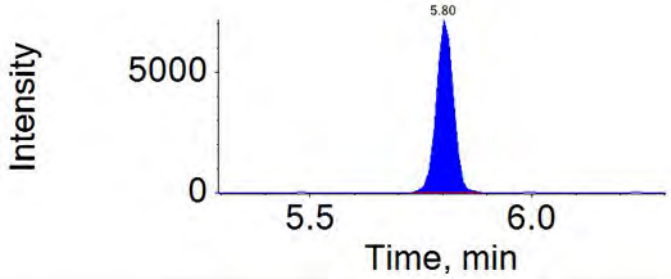
Analyte: NMeFOSAA
570.0 / 419.0



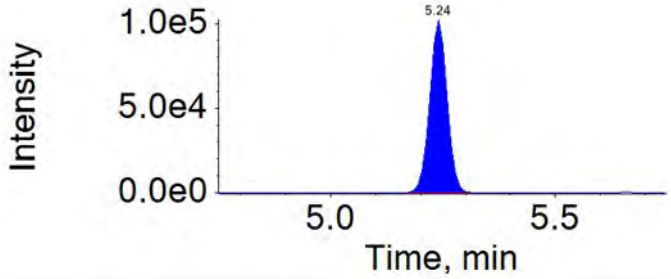
Extraction Standard: d3-NMeFOSAA
573.0 / 419.0



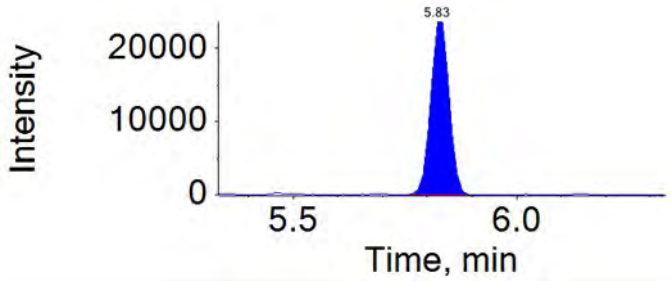
Analyte: PFDS
599.0 / 80.0



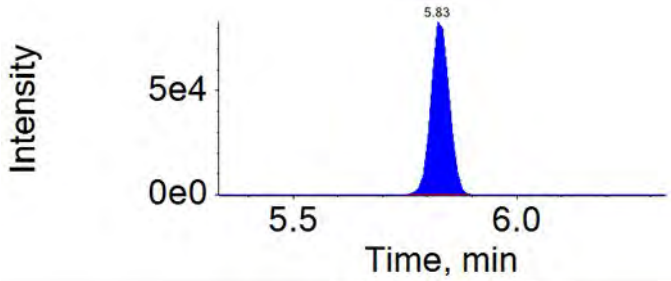
Extraction Standard: 13C8-PFOS
507.0 / 80.0



Analyte: PFUnDA
563.0 / 519.0



Extraction Standard: 13C7-PFUnDA
570.0 / 525.0

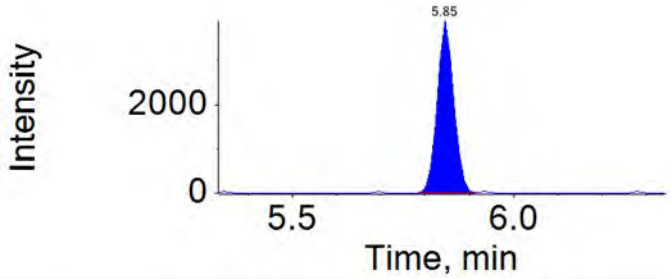


APPROVED
By MCD at 6:55 pm, 11/14/18

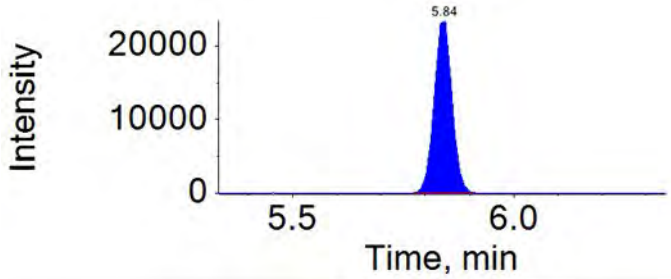
REVIEWED
By HMK at 11:03 am, 11/15/18

ICAL Name: 18NOV12DCAL **Result Table:** 18316029 11/14/2018 6:48:04 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

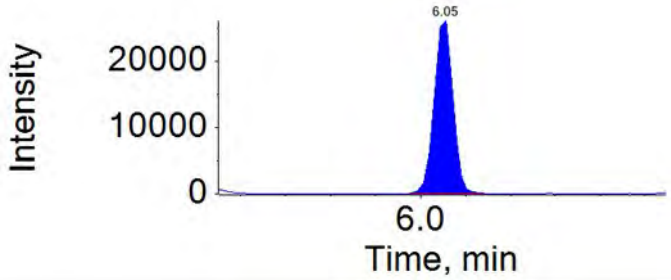
Analyte: NEtFOSAA
584.0 / 419.0



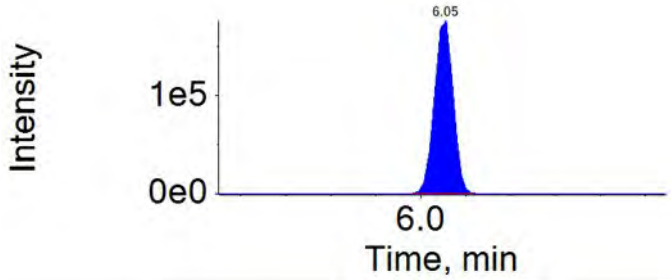
Extraction Standard: d5-NEtFOSAA
589.0 / 419.0



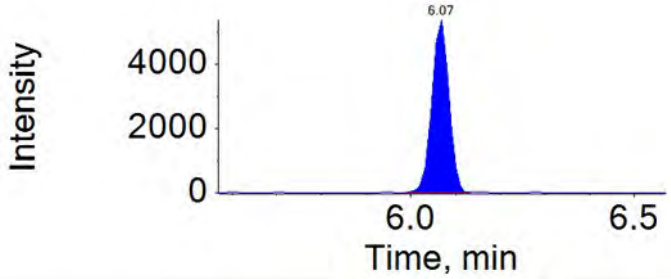
Analyte: PFDoDA
613.0 / 569.0



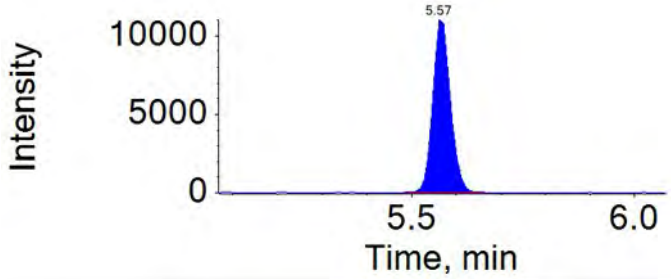
Extraction Standard: 13C2-PFDoDA
615.0 / 570.0



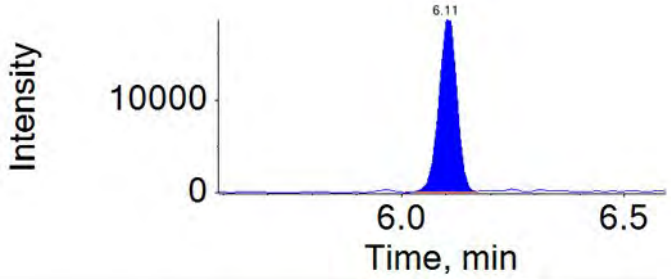
Analyte: 10:2-FTS
627.0 / 607.0



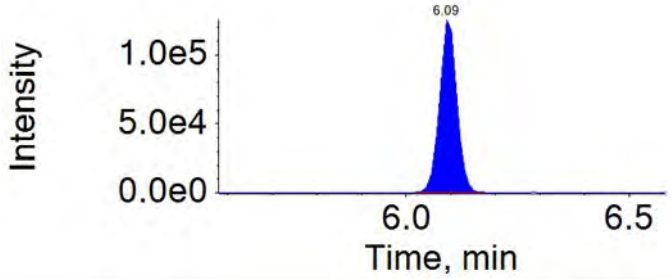
Extraction Standard: 13C2-8:2-FTS
529.0 / 81.0



Analyte: NMePFOSAE
616.0 / 59.0



Extraction Standard: d7-NMePFOSAE
623.0 / 59.0

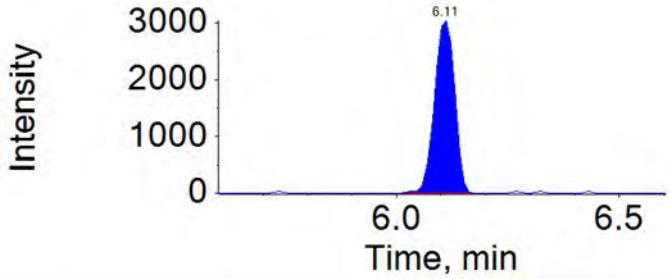


APPROVED
By MCD at 6:55 pm, 11/14/18

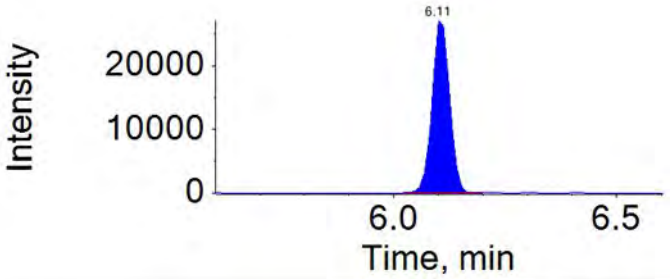
REVIEWED
By HMK at 11:03 am, 11/15/18

ICAL Name: 18NOV12DCAL **Result Table:** 18316029 11/14/2018 6:48:04 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

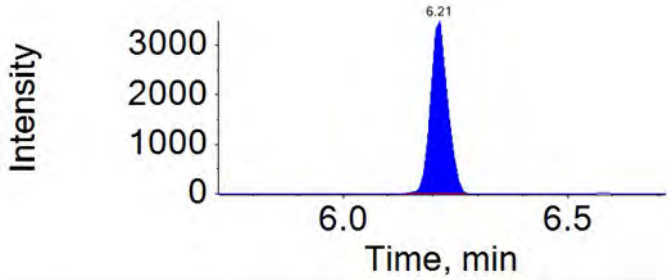
Analyte: NMePFOSA
512.0 / 169.0



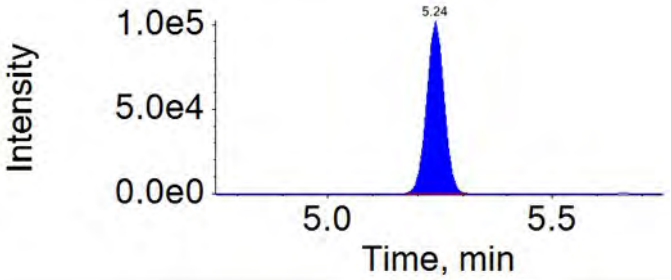
Extraction Standard: d3-NMePFOSA
515.0 / 169.0



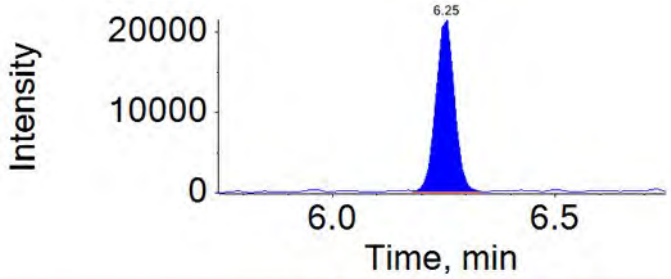
Analyte: PFDoS
699.0 / 80.0



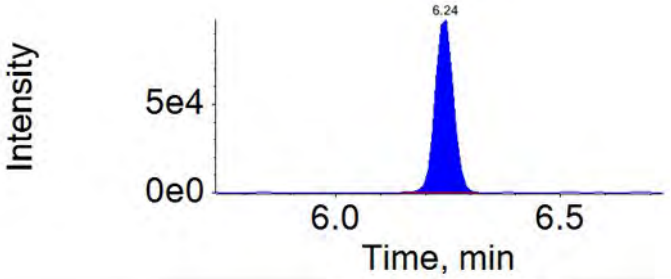
Extraction Standard: 13C8-PFOS
507.0 / 80.0



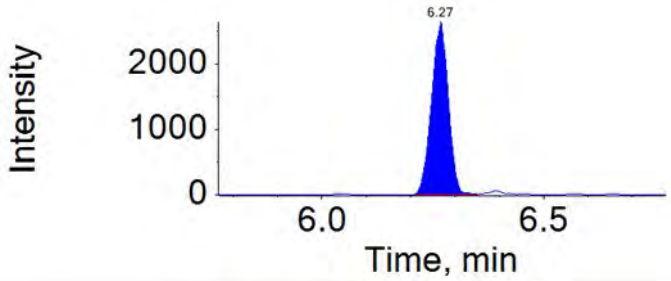
Analyte: NEtPFOSAE
630.0 / 59.0



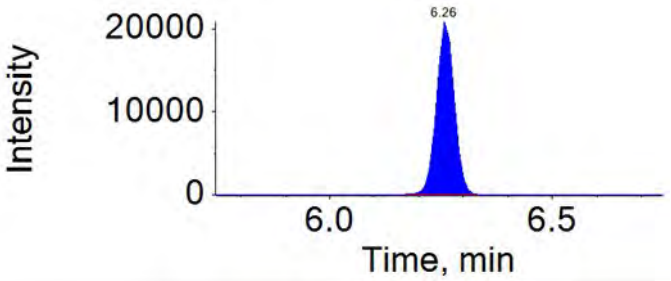
Extraction Standard: d9-NEtPFOSAE
639.0 / 59.0



Analyte: NEtPFOSA
526.0 / 169.0



Extraction Standard: d5-NEtPFOSA
531.0 / 169.0

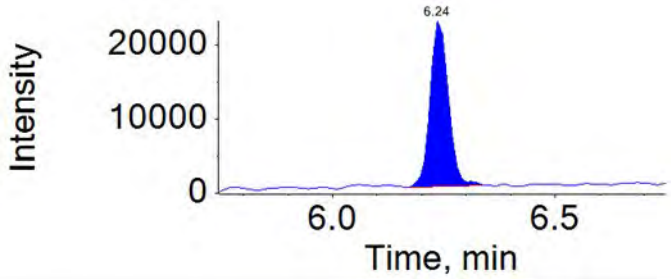


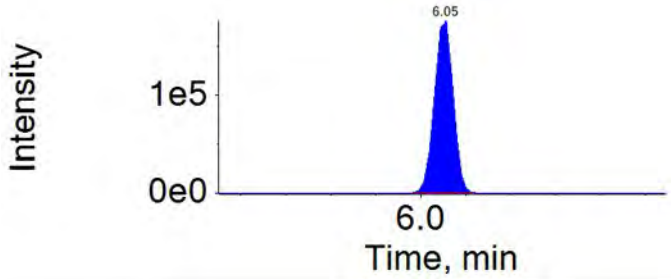
APPROVED
By MCD at 6:55 pm, 11/14/18

REVIEWED
By HMK at 11:03 am, 11/15/18

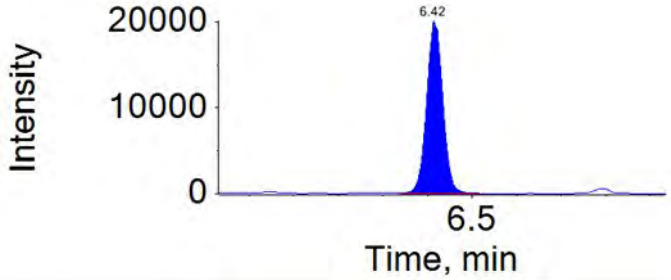
ICAL Name: 18NOV12DCAL **Result Table:** 18316029 11/14/2018 6:48:04 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

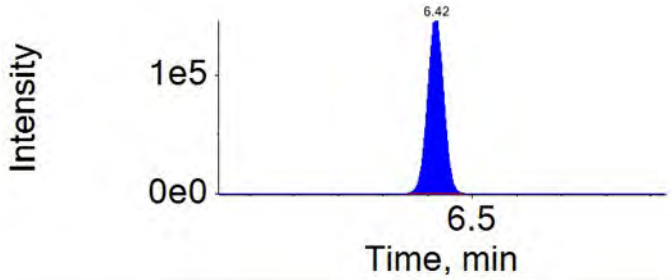
Analyte: PFTrDA	Extraction Standard: 13C2-PFDoDA
663.0 / 619.0	615.0 / 570.0



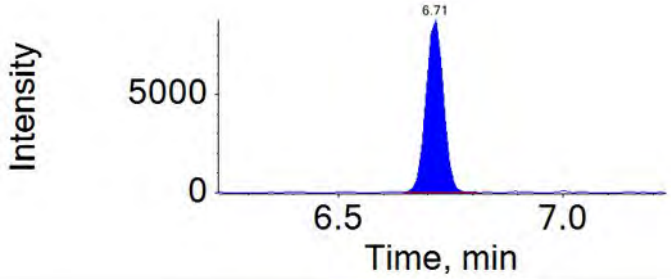


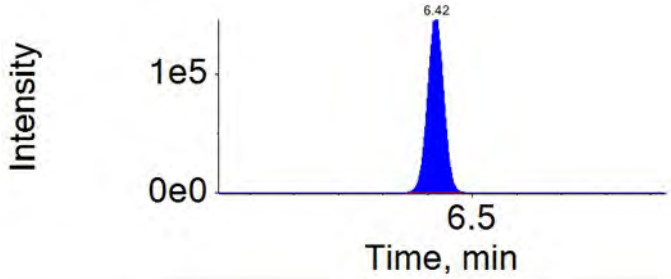
Analyte: PFTeDA	Extraction Standard: 13C2-PFTeDA
713.0 / 669.0	715.0 / 670.0



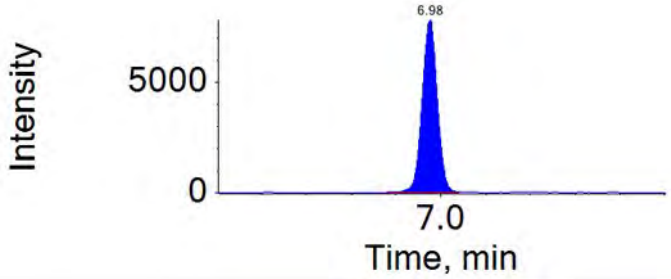


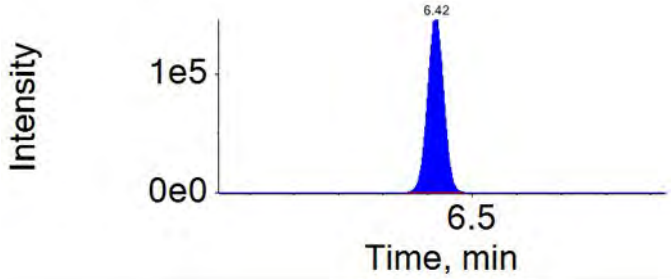
Analyte: PFHxDA	Extraction Standard: 13C2-PFTeDA
813.0 / 769.0	715.0 / 670.0





Analyte: PFODA	Extraction Standard: 13C2-PFTeDA
913.0 / 869.0	715.0 / 670.0





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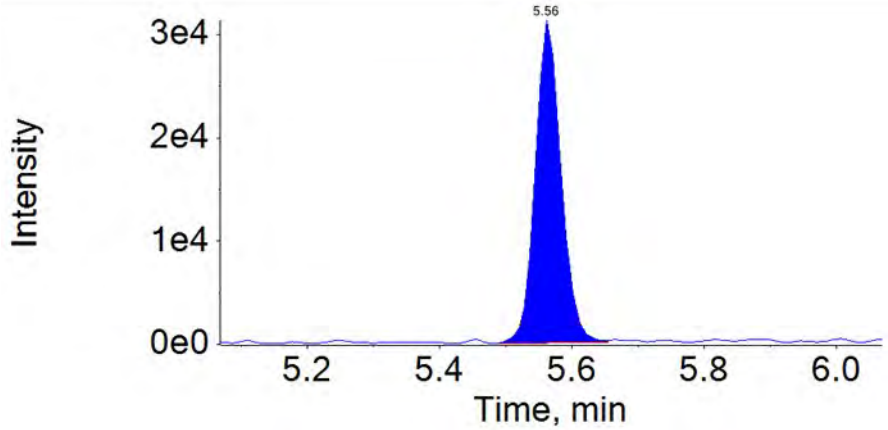
Auto Integrations prior to Manual Integration

Print Date: 11/14/2018 6:51 PM
Template: MQ-OrigInteg-16NOV21.docx

Results Table Name: 18316029
Results Table Date: 11/14/2018 6:48:04 PM

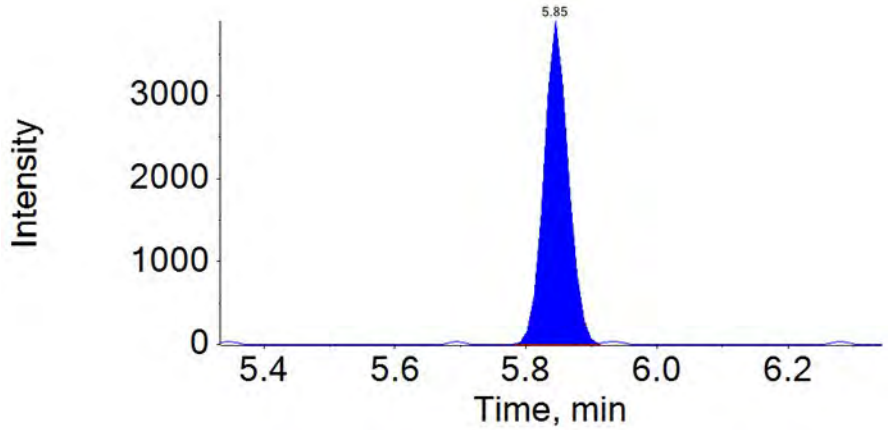
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

Component Name:
PFDA
RT (min.):
5.56
Peak Area:
84660.3
Mass Range:
513.0 / 469.0
File Name:
18NOV13D-91.wiff
Sample Name:
LCS316029



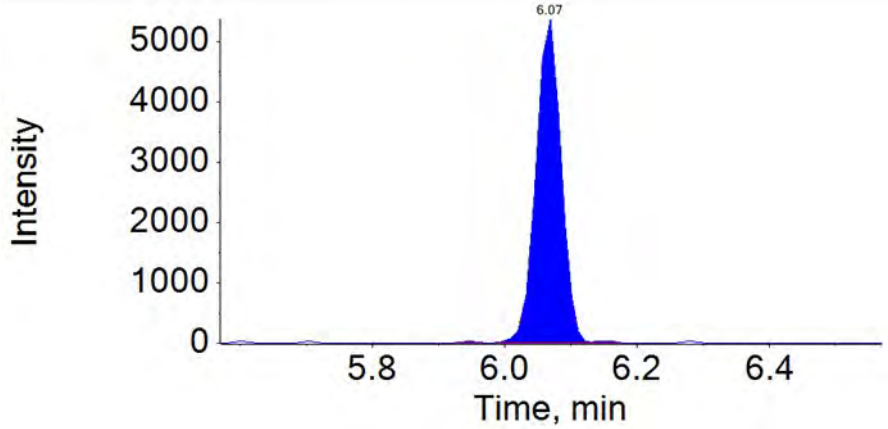
Integration Comment: incorrect integration

Component Name:
NEtFOSAA
RT (min.):
5.85
Peak Area:
10025.8
Mass Range:
584.0 / 419.0
File Name:
18NOV13D-91.wiff
Sample Name:
LCS316029



Integration Comment: incorrect integration

Component Name:
10:2-FTS
RT (min.):
6.07
Peak Area:
14382.8
Mass Range:
627.0 / 607.0
File Name:
18NOV13D-91.wiff
Sample Name:
LCS316029



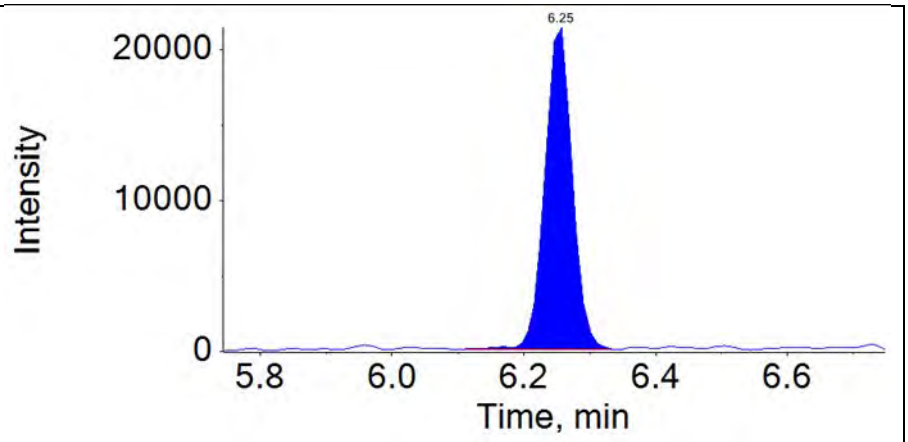
Integration Comment: incorrect integration

APPROVED
By MCD at 6:55 pm, 11/14/18

REVIEWED
By HMK at 11:03 am, 11/15/18

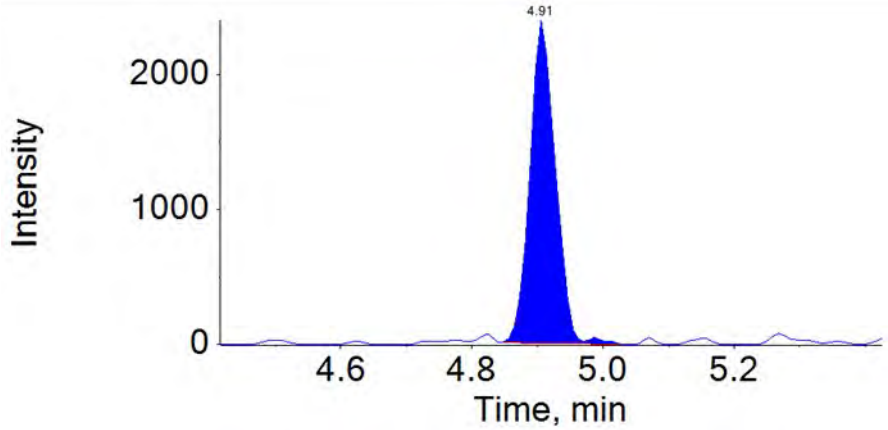
Results Table Name: 18316029
Results Table Date: 11/14/2018 6:48:04 PM
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

Component Name:
NEtPFOSAE
RT (min.):
6.25
Peak Area:
62374.2
Mass Range:
630.0 / 59.0
File Name:
18NOV13D-91.wiff
Sample Name:
LCS316029



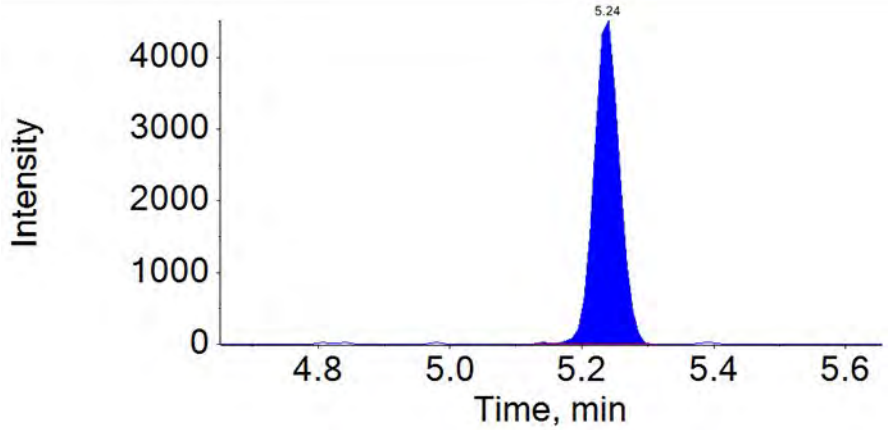
Integration Comment: incorrect integration

Component Name:
PFOA_2
RT (min.):
4.91
Peak Area:
6473.6
Mass Range:
413.0 / 169.0
File Name:
18NOV13D-91.wiff
Sample Name:
LCS316029



Integration Comment: incorrect integration

Component Name:
PFOS_2
RT (min.):
5.24
Peak Area:
12165.0
Mass Range:
499.0 / 99.0
File Name:
18NOV13D-91.wiff
Sample Name:
LCS316029



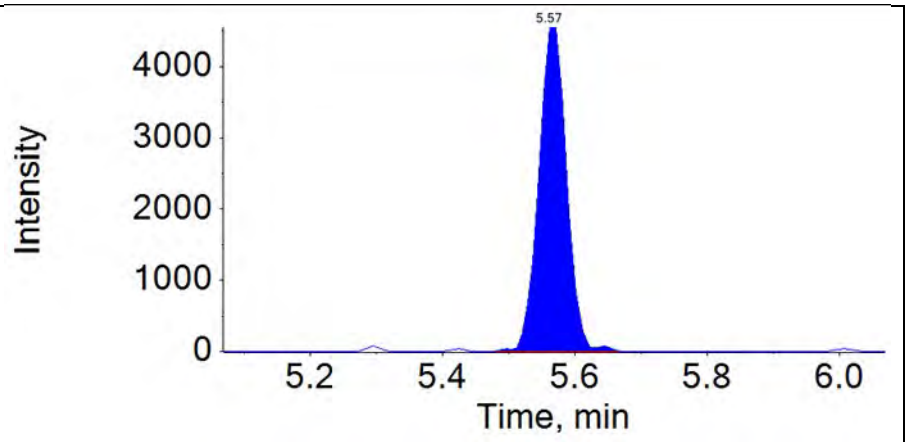
Integration Comment: incorrect integration

APPROVED
By MCD at 6:55 pm, 11/14/18

REVIEWED
By HMK at 11:03 am, 11/15/18

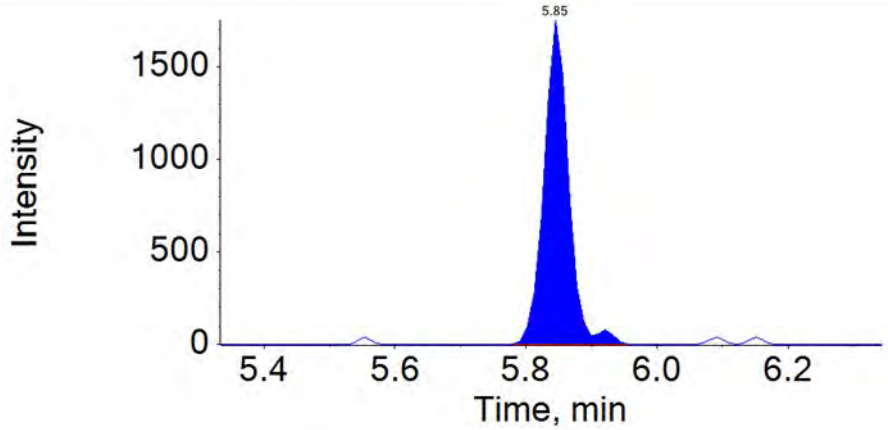
Results Table Name: 18316029
Results Table Date: 11/14/2018 6:48:04 PM
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

Component Name:
8:2 FTS_2
RT (min.):
5.57
Peak Area:
13401.9
Mass Range:
527.0 / 81.0
File Name:
18NOV13D-91.wiff
Sample Name:
LCS316029



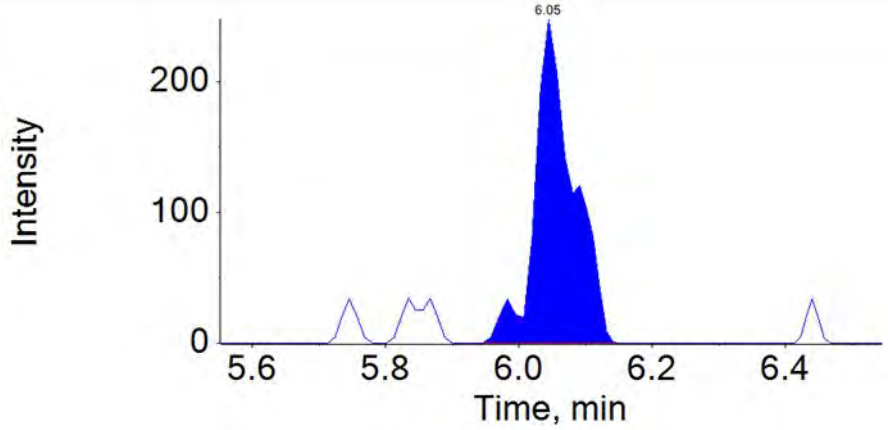
Integration Comment: incorrect integration

Component Name:
NEtFOSAA_2
RT (min.):
5.85
Peak Area:
4601.1
Mass Range:
584.0 / 526.0
File Name:
18NOV13D-91.wiff
Sample Name:
LCS316029



Integration Comment: incorrect integration

Component Name:
PFDoDA_2
RT (min.):
6.05
Peak Area:
1006.7
Mass Range:
613.0 / 169.0
File Name:
18NOV13D-91.wiff
Sample Name:
LCS316029



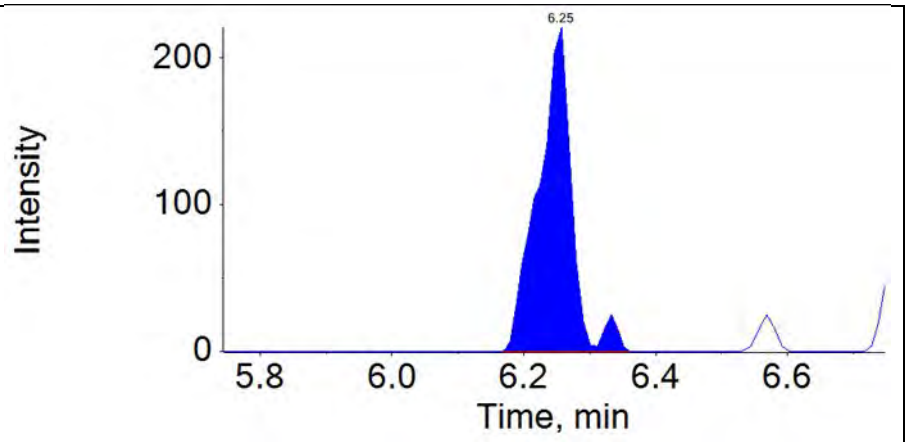
Integration Comment: incorrect integration

APPROVED
By MCD at 6:55 pm, 11/14/18

REVIEWED
By HMK at 11:03 am, 11/15/18

Results Table Name: 18316029
Results Table Date: 11/14/2018 6:48:04 PM
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

Component Name:
PFTrDA_2
RT (min.):
6.25
Peak Area:
782.1
Mass Range:
663.0 / 169.0
File Name:
18NOV13D-91.wiff
Sample Name:
LCS316029



Integration Comment: incorrect integration

APPROVED
By MCD at 6:55 pm, 11/14/18

REVIEWED
By HMK at 11:03 am, 11/15/18

Results Table Name: 18316029
Results Table Date: 11/14/2018 6:48:04 PM
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

APPROVED
By MCD at 6:55 pm, 11/14/18

REVIEWED
By HMK at 11:03 am, 11/15/18

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LC-MS/MS Analysis Report

Printed: 11/14/2018 6:49:00 PM
Template: IonRatio18OCT10

Ion Ratio Report

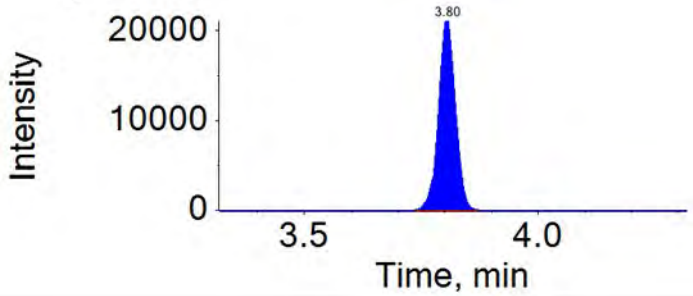
Sample Name: LCS316029 **Instrument Name:** LM27631 **File Name:** 18NOV13D-91.wiff

Component Name	RT	RRT	Analyte Area Response	Int Typ	Expected Ion Ratio	Ion Ratio	Ion Ratio % Diff	Ion Ratio Limit	Ion Ratio OOS
PFBS	3.80	1.00	53845.3	A	N/A	0.3422			
PFBS_2	3.80	1.00	18427.0	A	N/A	0.3422	-5	50	
4:2-FTS	4.12	1.00	33275.5	A	N/A	0.6661			
4:2 FTS_2	4.12	1.00	22164.2	A	N/A	0.6661		#NA!	
PFHxA	4.15	1.00	115414.5	A	N/A	0.0151			
PFHxA_2	4.15	1.00	1742.3	A	N/A	0.0151	30	50	
PFPeS	4.17	1.10	28647.1	A	N/A	0.4700			
PFPeS_2	4.17	1.10	13463.6	A	N/A	0.4700	-9	50	
PFHpA	4.54	1.00	123898.9	A	N/A	0.0540			
PFHpA_2	4.54	1.00	6693.3	A	N/A	0.0540	-4	50	
PFHxS	4.54	1.00	42557.0	A	N/A	0.3647			
PFHxS_2	4.54	1.00	15521.1	A	N/A	0.3647	6	50	
6:2-FTS	4.90	1.00	28232.7	A	N/A	0.6305			
6:2 FTS_2	4.90	1.00	17801.5	A	N/A	0.6305		#NA!	
PFHpS	4.90	1.08	38176.5	A	N/A	0.3801			
PFHpS_2	4.90	1.08	14510.2	A	N/A	0.3801	-7	50	
PFOA	4.91	1.00	124052.0	A	N/A	0.0515			
PFOA_2	4.91	1.00	6390.4	M	N/A	0.0515	-8	50	
PFOS	5.24	1.00	38309.0	A	N/A	0.3166			
PFOS_2	5.24	1.00	12130.4	M	N/A	0.3166	7	50	
PFNA	5.26	1.00	94427.4	A	N/A	0.0205			
PFNA_2	5.25	1.00	1933.9	A	N/A	0.0205	-10	50	
PFNS	5.54	1.06	25185.5	A	N/A	0.4915			
PFNS_2	5.54	1.06	12377.8	A	N/A	0.4915	2	50	
PFDA	5.56	1.00	84660.3	M	N/A	0.0052			
PFDA_2	5.57	1.00	439.8	A	N/A	0.0052	-36	50	
8:2-FTS	5.57	1.00	24271.6	A	N/A	0.5464			
8:2 FTS_2	5.57	1.00	13262.4	M	N/A	0.5464		#NA!	
NMeFOSAA	5.71	1.00	10601.5	A	N/A	0.1280			
NMeFOSAA_2	5.71	1.00	1356.8	A	N/A	0.1280	-50	50	
PFDS	5.80	1.11	19024.3	A	N/A	0.5432			
PFDS_2	5.81	1.11	10334.4	A	N/A	0.5432	6	50	
PFUnDA	5.83	1.00	68104.2	A	N/A	0.0029			
PFUnDA_2	5.83	1.00	194.7	A	N/A	0.0029	-51	50	OOS
NEtFOSAA	5.85	1.00	10025.8	M	N/A	0.4447			
NEtFOSAA_2	5.85	1.00	4458.5	M	N/A	0.4447	-39	50	
PFDoDA	6.05	1.00	75960.8	A	N/A	0.0124			
PFDoDA_2	6.05	1.00	940.0	M	N/A	0.0124	-21	50	
10:2-FTS	6.07	1.09	14233.4	M	N/A	0.7726			
10:2 FTS_2	6.07	1.09	10996.1	A	N/A	0.7726		#NA!	
PFTrDA	6.24	1.03	63557.4	A	N/A	0.0117			
PFTrDA_2	6.25	1.03	745.6	M	N/A	0.0117	37	50	
PFTeDA	6.42	1.00	50391.6	A	N/A	0.0052			
PFTeDA_2	6.41	1.00	260.8	A	N/A	0.0052	-17	50	
PFHxDA	6.71	1.05	23452.8	A	N/A	0.0694			
PFHxDA_2	6.71	1.05	1627.4	A	N/A	0.0694	2	50	
PFODA	6.98	1.09	18360.8	A	N/A	0.0273			
PFODA_2	6.97	1.09	500.6	A	N/A	0.0273	-2	50	

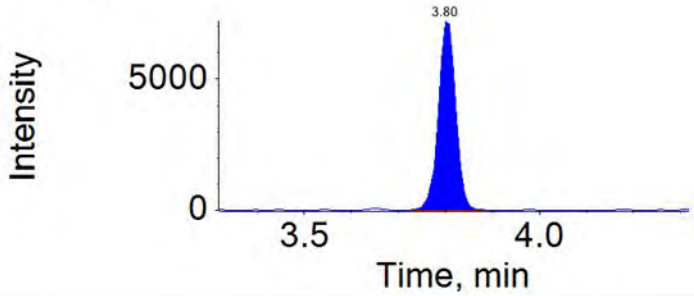
APPROVED
By MCD at 6:55 pm, 11/14/18

REVIEWED
By HMK at 11:03 am, 11/15/18

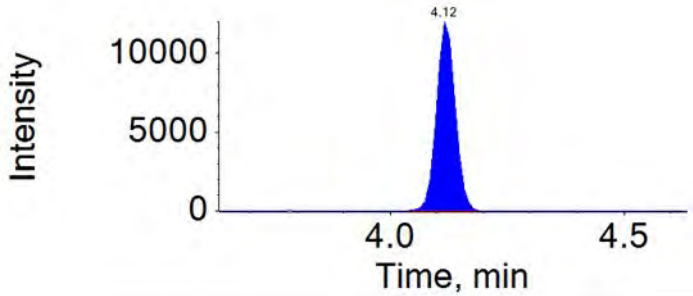
Component: PFBS
Primary Mass: 299.0 / 80.0



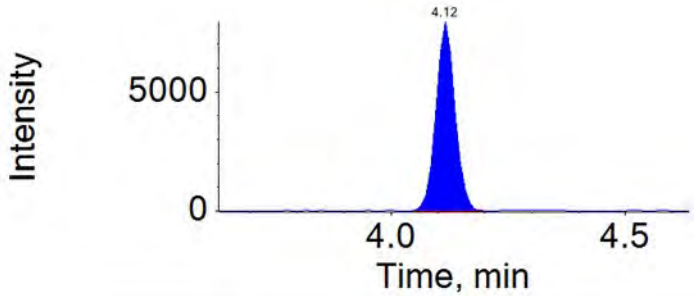
Component: PFBS_2
Secondary Mass: 299.0 / 99.0



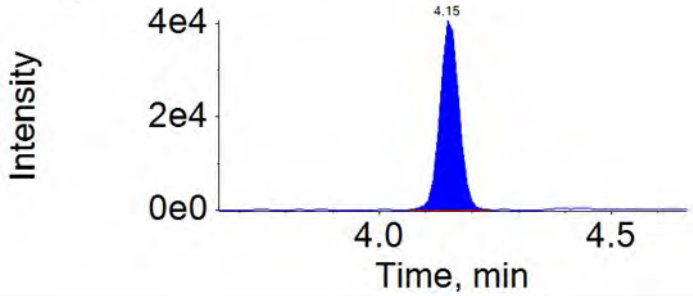
Component: 4:2-FTS
Primary Mass: 327.0 / 307.0



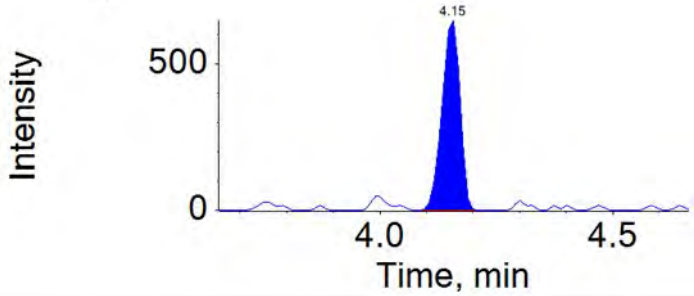
Component: 4:2 FTS_2
Secondary Mass: 327.0 / 81.0



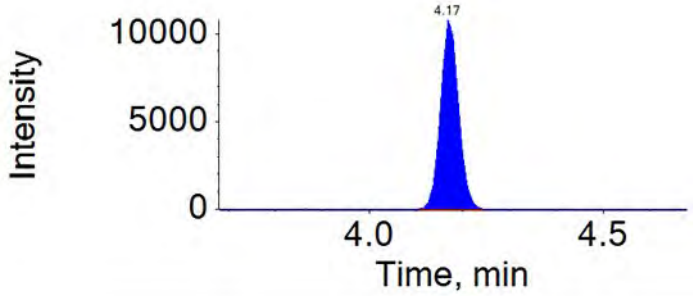
Component: PFHxA
Primary Mass: 313.0 / 269.0



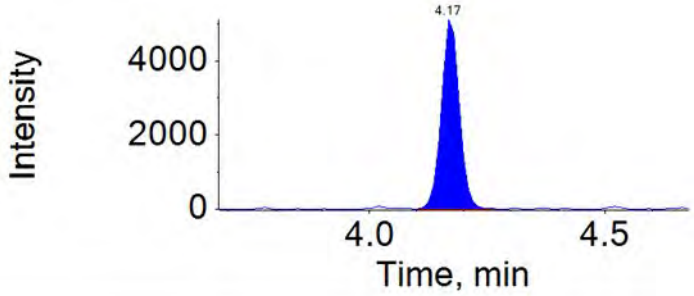
Component: PFHxA_2
Secondary Mass: 313.0 / 119.0



Component: PFPeS
Primary Mass: 349.0 / 80.0



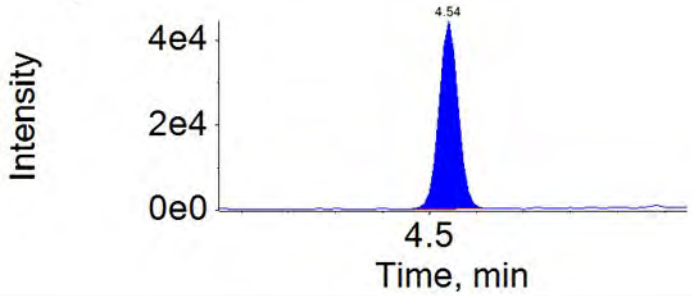
Component: PFPeS_2
Secondary Mass: 349.0 / 99.0



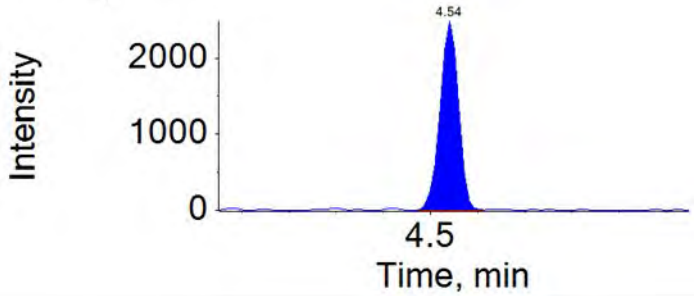
APPROVED
By MCD at 6:55 pm, 11/14/18

REVIEWED
By HMK at 11:03 am, 11/15/18

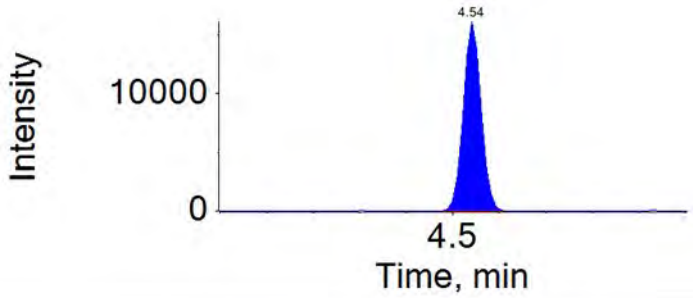
Component: PFHpA
Primary Mass: 363.0 / 319.0



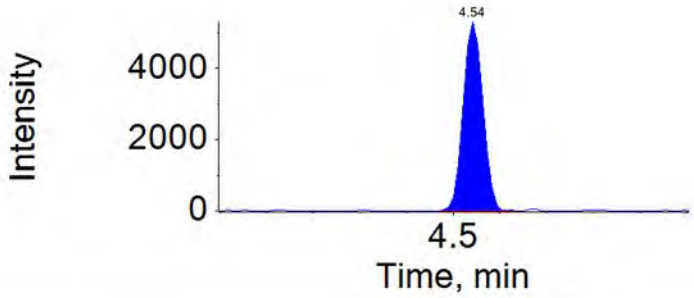
Component: PFHpA_2
Secondary Mass: 363.0 / 169.0



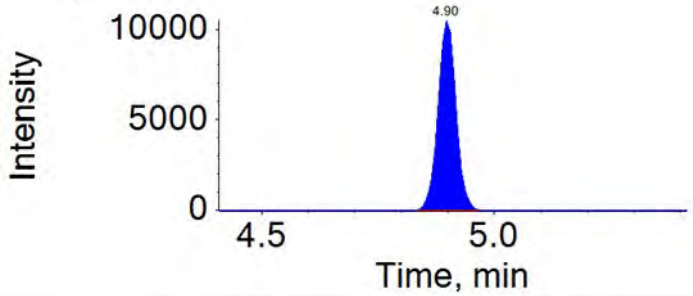
Component: PFHxS
Primary Mass: 399.0 / 80.0



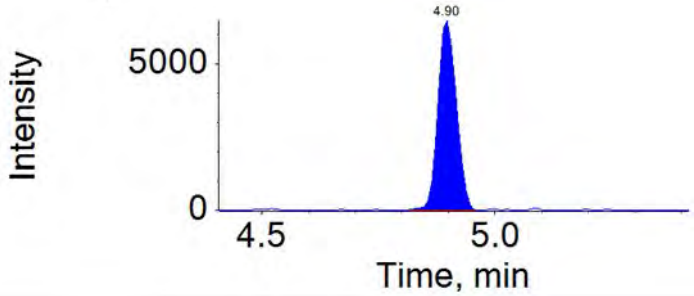
Component: PFHxS_2
Secondary Mass: 399.0 / 99.0



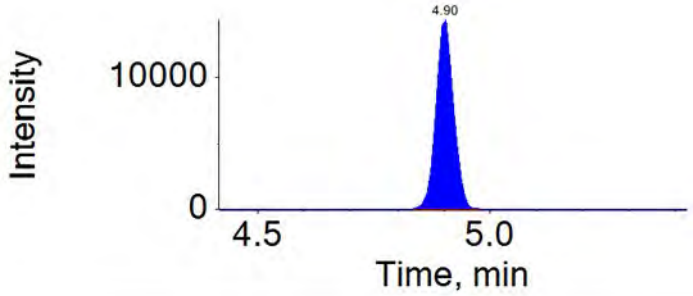
Component: 6:2-FTS
Primary Mass: 427.0 / 407.0



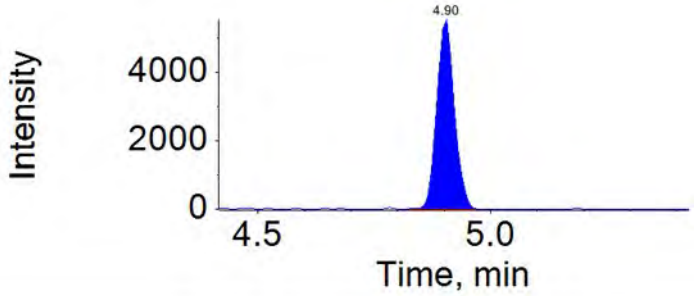
Component: 6:2 FTS_2
Secondary Mass: 427.0 / 81.0



Component: PFHpS
Primary Mass: 449.0 / 80.0



Component: PFHpS_2
Secondary Mass: 449.0 / 99.0



APPROVED
By MCD at 6:55 pm, 11/14/18

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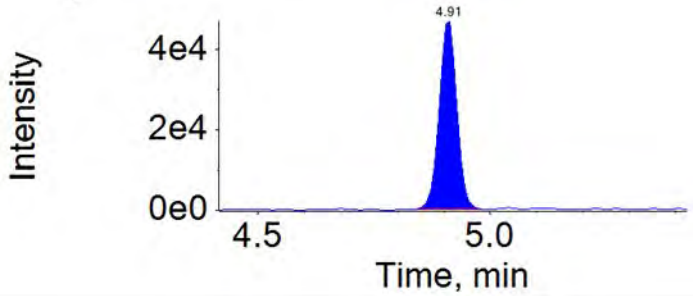
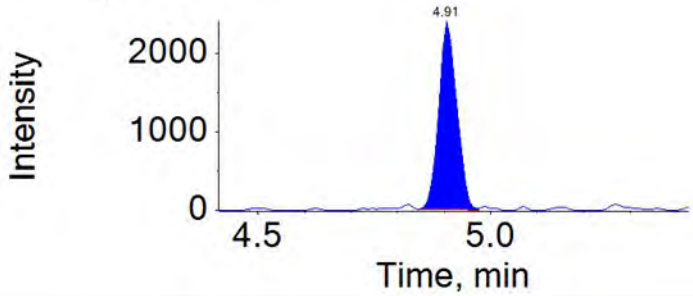
By HMK at 11:03 am, 11/15/18

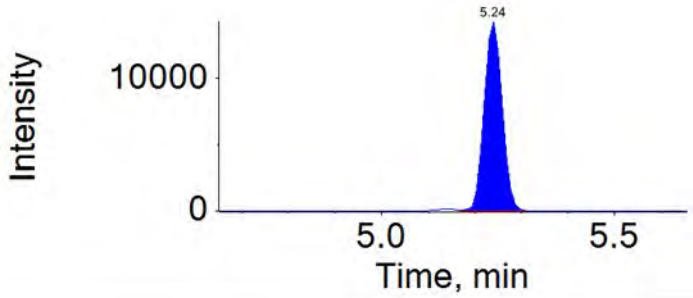
Component: PFOA
Primary Mass: 413.0 / 369.0



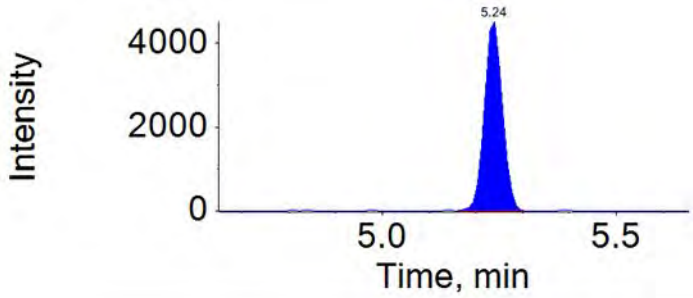
Component: PFOA_2
Secondary Mass: 413.0 / 169.0



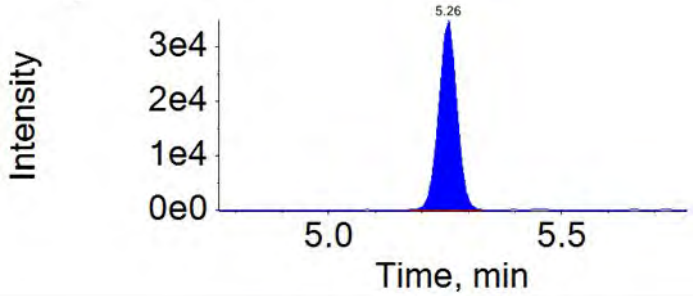
Component: PFOS
Primary Mass: 499.0 / 80.0



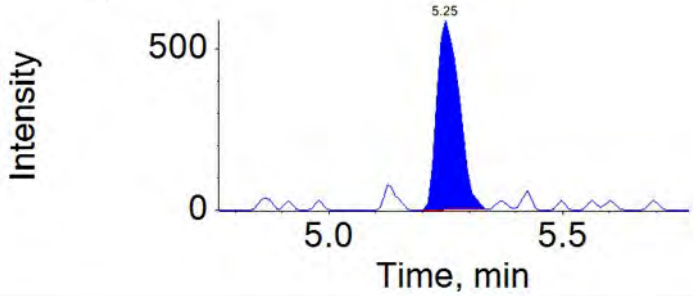
Component: PFOS_2
Secondary Mass: 499.0 / 99.0



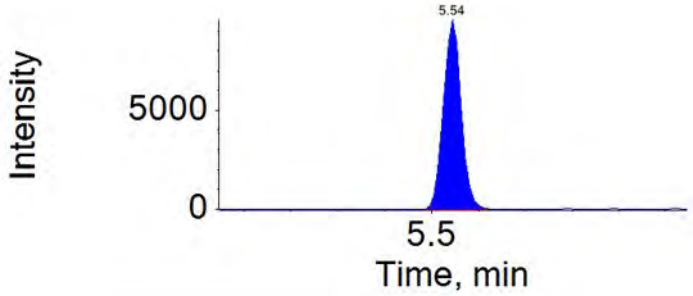
Component: PFNA
Primary Mass: 463.0 / 419.0



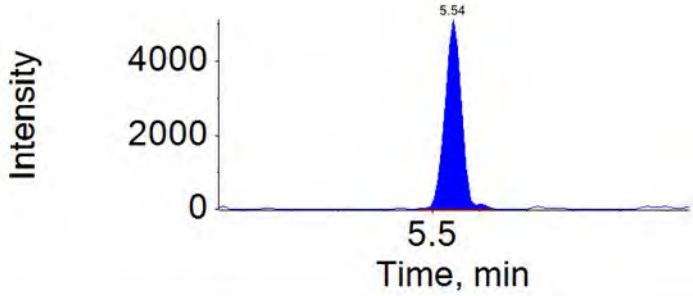
Component: PFNA_2
Secondary Mass: 463.0 / 169.0



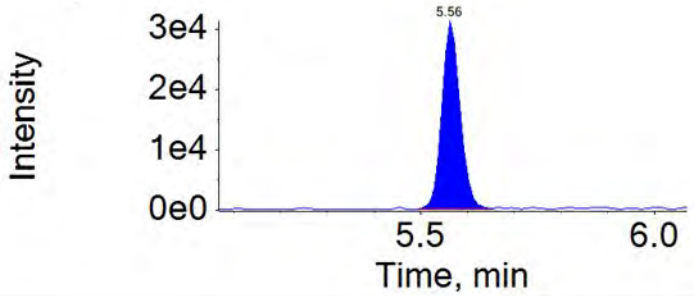
Component: PFNS
Primary Mass: 549.0 / 80.0



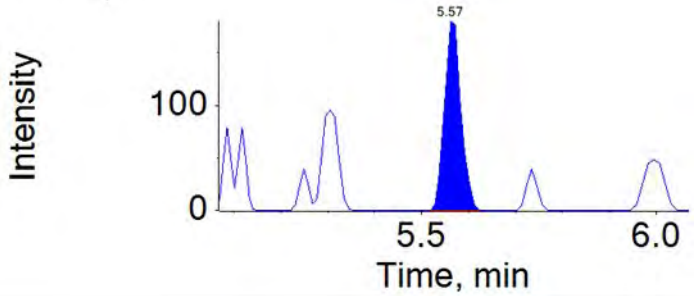
Component: PFNS_2
Secondary Mass: 549.0 / 99.0



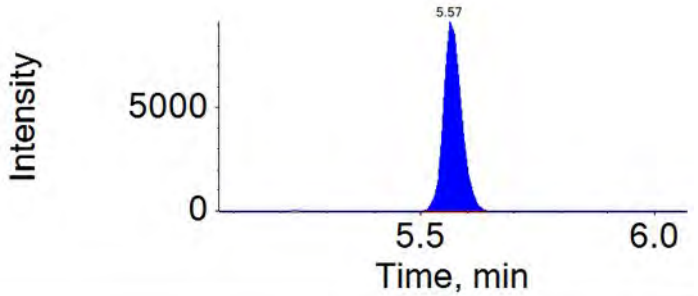
Component: PFDA
Primary Mass: 513.0 / 469.0



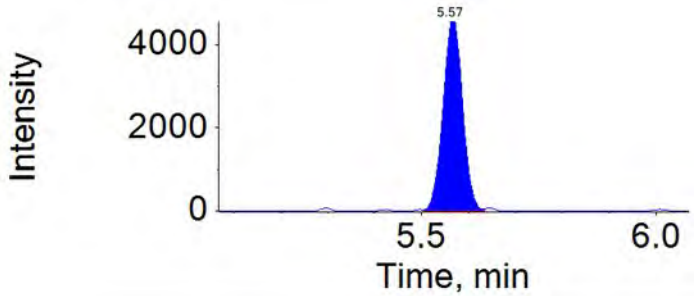
Component: PFDA_2
Secondary Mass: 513.0 / 169.0



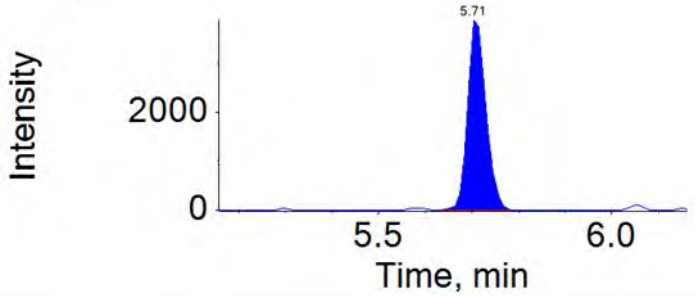
Component: 8:2-FTS
Primary Mass: 527.0 / 507.0



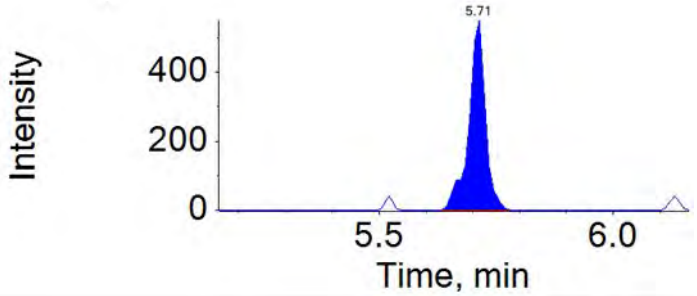
Component: 8:2 FTS_2
Secondary Mass: 527.0 / 81.0



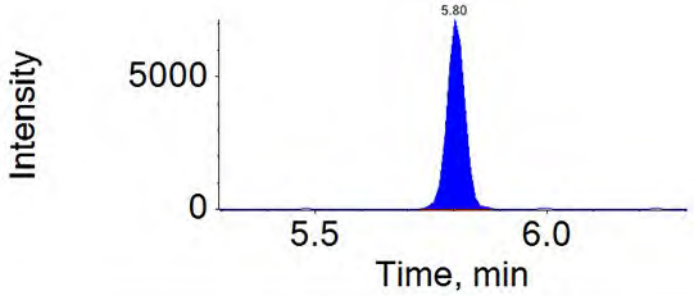
Component: NMeFOSAA
Primary Mass: 570.0 / 419.0



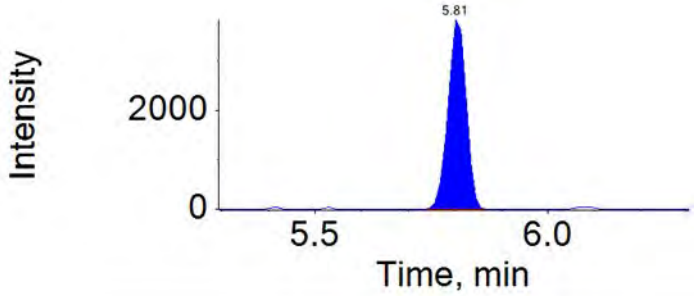
Component: NMeFOSAA_2
Secondary Mass: 570.0 / 483.0



Component: PFDS
Primary Mass: 599.0 / 80.0



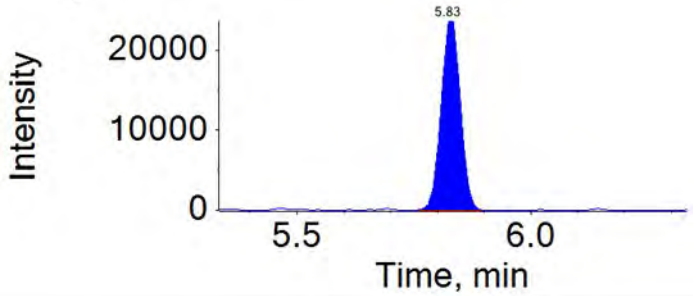
Component: PFDS_2
Secondary Mass: 599.0 / 99.0



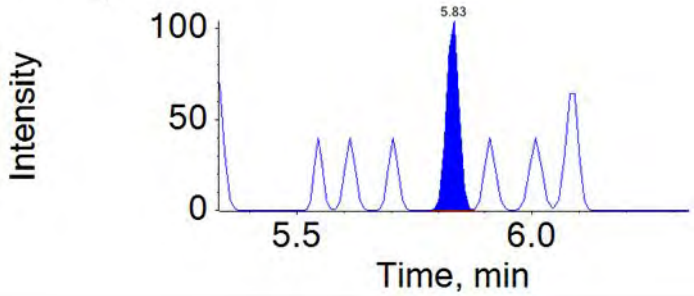
APPROVED
By MCD at 6:55 pm, 11/14/18

REVIEWED
By HMK at 11:03 am, 11/15/18

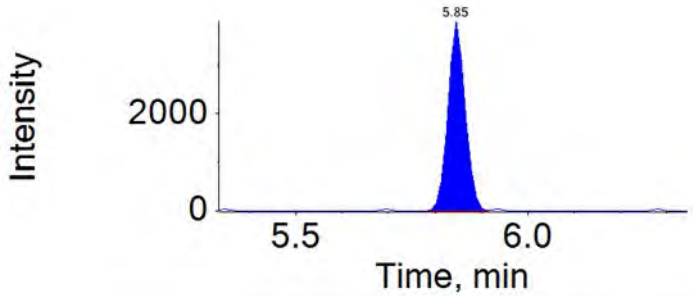
Component: PFUnDA
Primary Mass: 563.0 / 519.0



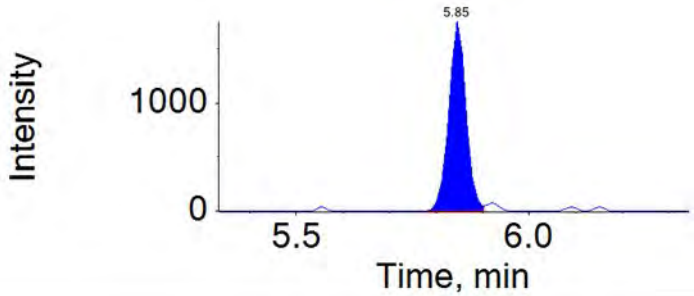
Component: PFUnDA_2
Secondary Mass: 563.0 / 169.0



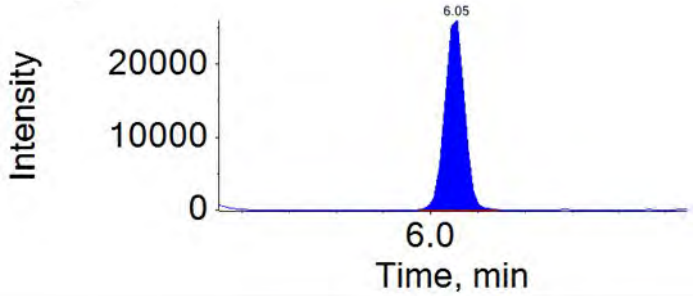
Component: NEtFOSAA
Primary Mass: 584.0 / 419.0



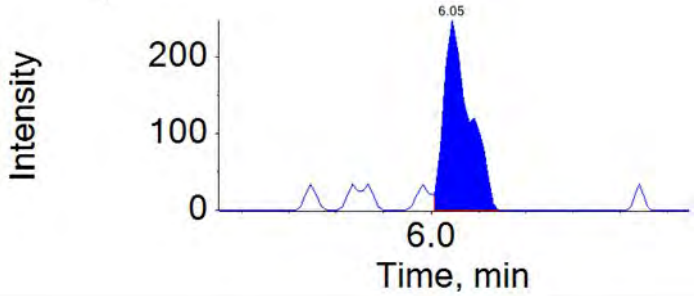
Component: NEtFOSAA_2
Secondary Mass: 584.0 / 526.0



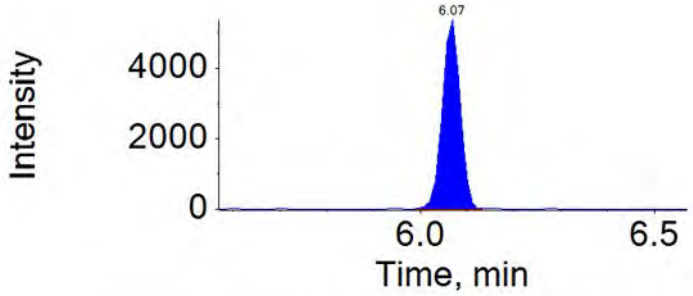
Component: PFDoDA
Primary Mass: 613.0 / 569.0



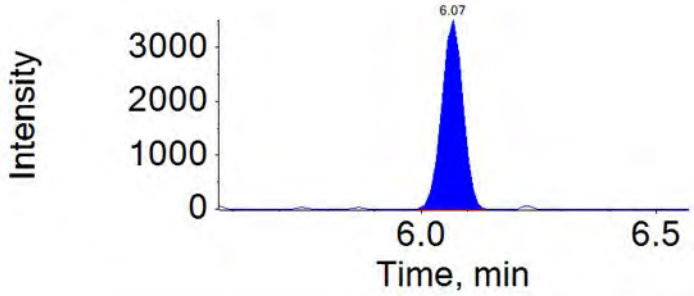
Component: PFDoDA_2
Secondary Mass: 613.0 / 169.0



Component: 10:2-FTS
Primary Mass: 627.0 / 607.0



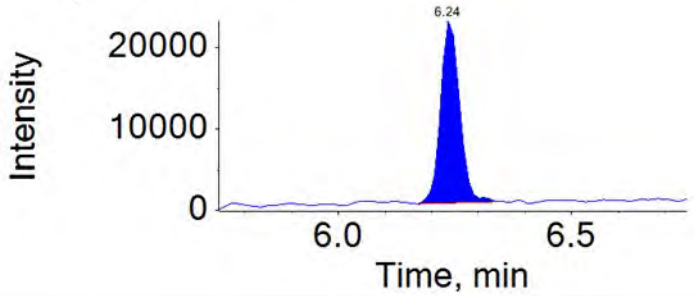
Component: 10:2 FTS_2
Secondary Mass: 627.0 / 81.0



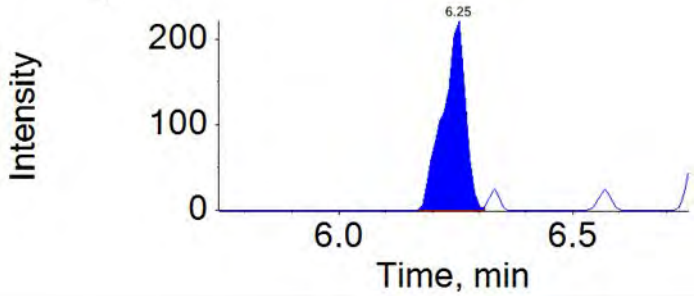
APPROVED
By MCD at 6:55 pm, 11/14/18

REVIEWED
By HMK at 11:03 am, 11/15/18

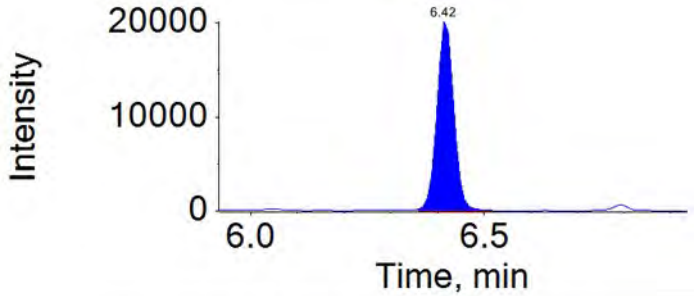
Component: PFTrDA
Primary Mass: 663.0 / 619.0



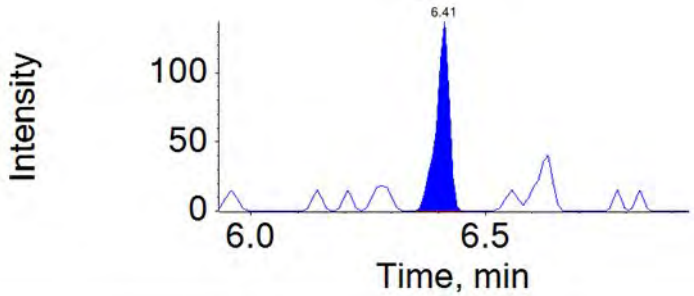
Component: PFTrDA_2
Secondary Mass: 663.0 / 169.0



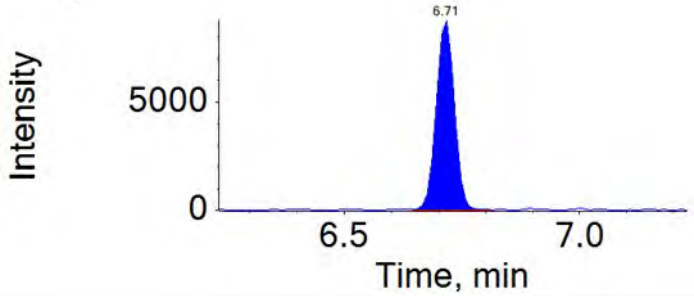
Component: PFTeDA
Primary Mass: 713.0 / 669.0



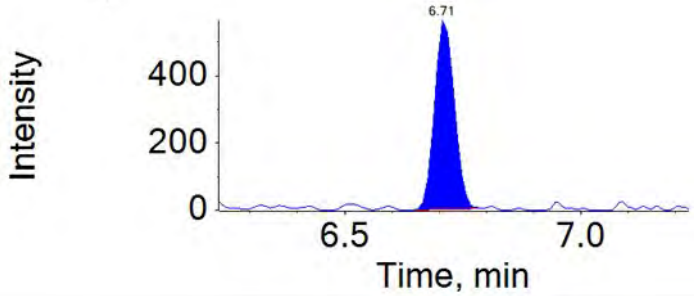
Component: PFTeDA_2
Secondary Mass: 713.0 / 169.0



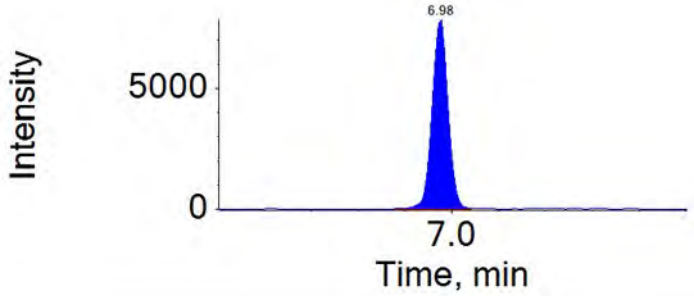
Component: PFHxDA
Primary Mass: 813.0 / 769.0



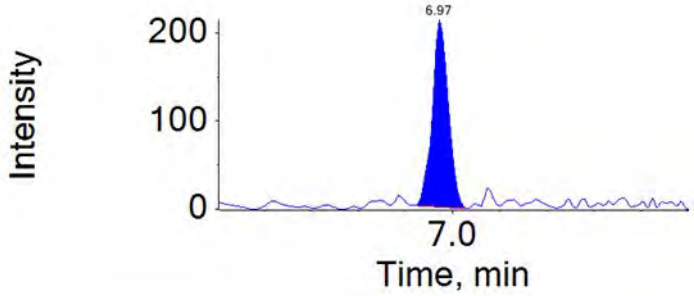
Component: PFHxDA_2
Secondary Mass: 813.0 / 169.0



Component: PFODA
Primary Mass: 913.0 / 869.0



Component: PFODA_2
Secondary Mass: 913.0 / 169.0



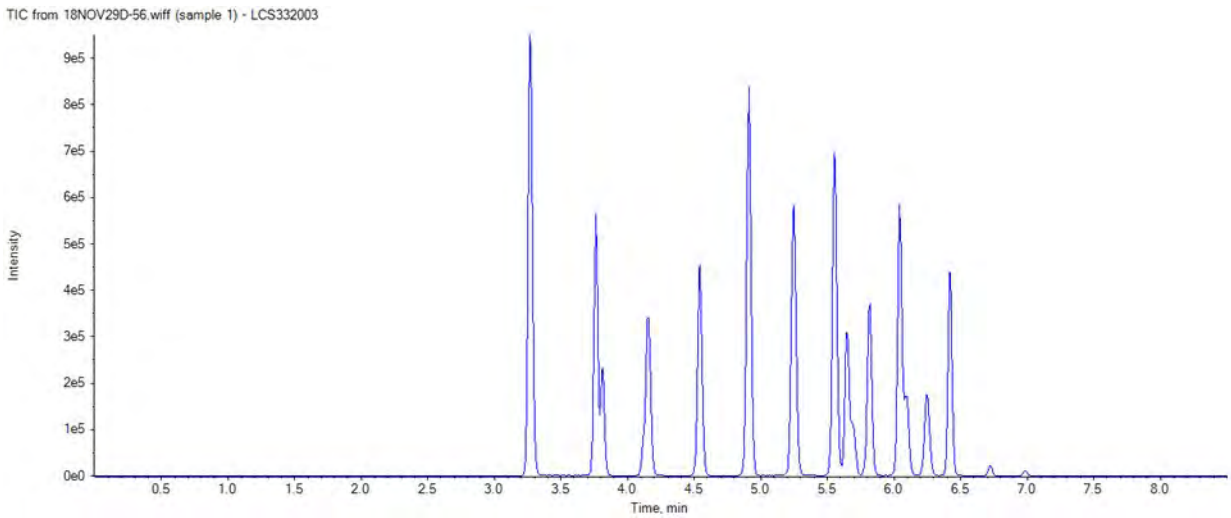
APPROVED
By MCD at 6:55 pm, 11/14/18

REVIEWED
By HMK at 11:03 am, 11/15/18

Lab Control Sample Recovery

ICAL Name: 18NOV28DCAL **Result Table:** 18332003 11/30/2018 9:52:39 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Instrument Name:	Sample Name:	Sample ID:	Sample File:	Acquisition Date:
LM27631	LCS332003	EPA 537 mod QSM 5.1 table B-15 18332003	18NOV29D-56.wiff	2018-11-29T18:13:39



Injection Standard Area Reference File**:** 18NOV29D-05

Injection Standard Name	Inj Std Conc	Injection Std Peak Area	Reference Injection Standard Area	Injection Std %Diff	Injection Std %Diff Limit	Injection Std %Diff OOS
13C3-PFBA	5.00	1066376.9	906425.4	18	50	
13C2-PFOA	5.00	600874.3	495984.0	21	50	
13C4-PFOS	4.78	371548.8	296261.8	25	50	
13C2-PFDA	5.00	557509.7	451203.0	24	50	

APPROVED
By MCD at 10:13 pm, 11/30/18

REVIEWED
By HMK at 2:27 pm, 12/6/18

Lab Control Sample Recovery

ICAL Name: 18NOV28DCAL **Result Table:** 18332003 11/30/2018 9:52:39 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Instrument Name:	Sample Name:	Sample ID:	Sample File:	Acquisition Date:
LM27631	LCS332003	EPA 537 mod QSM 5.1 table B-15 18332003	18NOV29D-56.wiff	2018-11-29T18:13:39

Analyte Name	Analyte Area	Ext Std Area	Area Ratio	Adj Actual Conc	Sample Result	%REC	% REC Limit	%REC OOS
PFBA	115213.7	1010092.5	0.114	1.360	1.251	92	70-130	
PFPeA	108769.2	993629.3	0.109	1.360	1.074	79	70-130	
PFBS	47400.8	411158.2	0.115	1.204	1.119	93	70-130	
4:2-FTS	44925.4	83476.3	0.538	3.736	2.881	77	70-130	
PFHxA	108517.0	673048.2	0.161	1.360	1.294	95	70-130	
PFPeS	25275.2	411158.2	0.061	1.276	1.244	97	70-130	
PFHpA	111132.4	537048.3	0.207	1.360	1.277	94	70-130	
PFHxS	38520.3	340075.1	0.113	1.286	1.061	82	70-130	
6:2-FTS	43250.5	75006.8	0.577	3.792	3.009	79	70-130	
PFHpS	39014.5	340075.1	0.115	1.294	1.145	88	70-130	
PFOA	111412.0	997849.3	0.112	1.360	1.154	85	70-130	
PFOS	36350.5	335227.0	0.108	1.300	0.910	70	70-130	
PFNA	107498.4	627256.0	0.171	1.360	1.314	97	70-130	
PFNS	25510.1	335227.0	0.076	1.306	0.961	74	70-130	
PFDA	91367.7	841987.6	0.109	1.360	1.228	90	70-130	
8:2-FTS	47406.4	58620.1	0.809	3.832	3.050	80	70-130	
PFOSA	71087.0	662825.4	0.107	1.360	1.087	80	70-130	
NMeFOSAA	20635.0	232183.4	0.089	1.360	1.134	83	70-130	
PFDS	22691.0	335227.0	0.068	1.310	1.073	82	70-130	
PFUnDA	109727.5	579460.2	0.189	1.360	1.354	100	70-130	
NEtFOSAA	18556.9	146322.6	0.127	1.360	1.235	91	70-130	
PFDoDA	127385.4	1116373.7	0.114	1.360	1.250	92	70-130	
10:2-FTS	43892.0	58620.1	0.749	3.856	3.302	86	70-130	
NMePFOSAE	37415.4	275450.0	0.136	1.360	1.143	84	70-130	
NMePFOSA	9167.5	93937.0	0.098	1.360	1.035	76	70-130	
PFDoS	12671.5	335227.0	0.038	1.316	1.086	83	70-130	
NEtPFOSAE	38059.3	218517.0	0.174	1.360	1.253	92	70-130	
NEtPFOSA	8729.3	72668.5	0.120	1.360	1.077	79	70-130	
PFTrDA	125876.8	1116373.7	0.113	1.360	1.359	100	70-130	
PFTeDA	91923.0	824972.6	0.111	1.360	1.263	93	70-130	
PFHxDA	44242.6	824972.6	0.054	1.360	1.226	90	70-130	
PFODA	24810.3	824972.6	0.030	1.360	0.801	59	70-130	OOS

APPROVED
By MCD at 10:13 pm, 11/30/18

REVIEWED
By HMK at 2:27 pm, 12/6/18

Lab Control Sample Recovery

ICAL Name: 18NOV28DCAL
QMethod Name: 18AUG20QM
Result Table: 18332003 11/30/2018 9:52:39 PM
Acquisition Method: 18AUG13_3uL.dam

APPROVED
By MCD at 10:13 pm, 11/30/18

REVIEWED
By HMK at 2:27 pm, 12/6/18

ICAL Name: 18NOV28DCAL **Result Table:** 18332003 11/30/2018 9:58:40 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Sample Name:	LCS332003			**Data File:**		18NOV29D-56.wiff
Sample ID:	EPA 537 mod QSM 5.1 table B-15 18332003			**Acquis Date:**		2018-11-29T18:13:39
Sample Type:	Quality Control			**Instrument:**		LM27631
Vial Position:	36			**Acquis Method:**		18AUG13_3uL.dam
Injection Vol:	3.00			**Result Table:**		18332003
QMethod File:	18AUG20QM			**ICAL Name:**		18NOV28DCAL
Batch Number:	18332003			**Operator:**		MCD7824
Sample Wt.:	1.00000			**Dilution Factor:**		1.00
Sample Vol.:	1.000			**Prep Factor:**		2.000

Injection Standard Peak Table

Injection Standard Area Reference File: 18NOV29D-05

Injection Standard Name	Inj Std Conc	Injection Std Peak Area	Rreference Injection Standard Area	Injection Std %Diff	Injection Std %Diff Limit	Injection Std %Diff OOS
13C3-PFBA	5.0	1066376.9	906425.4	18	50	
13C2-PFOA	5.0	600874.3	495984.0	21	50	
13C4-PFOS	4.8	371548.8	296261.8	25	50	
13C2-PFDA	5.0	557509.7	451203.0	24	50	

Extraction Standard Peak Table

Extraction Standard Name	Ext Std Area	Inj Std Name	Inj Std Area	Area Ratio	Ext Std Conc	Ext Std Result	Ext Std %REC	Ext Std %REC Limit	Ext Std OOS
E13C4-PFBA	1010092.5	13C3-PFBA	1066376.9	0.947	10.000	8.452	85	50-150	
E13C5-PFPeA	993629.3	13C3-PFBA	1066376.9	0.932	10.000	8.702	87	50-150	
E13C3-PFBS	411158.2	13C3-PFBA	1066376.9	0.386	9.300	7.357	79	50-150	
E13C2-4:2-FTS	83476.3	13C2-PFOA	600874.3	0.139	9.340	9.575	103	50-150	
E13C5-PFHxA	673048.2	13C2-PFOA	600874.3	1.120	10.000	8.228	82	50-150	
E13C3-PFHxS	340075.1	13C2-PFOA	600874.3	0.566	9.460	8.872	94	50-150	
E13C4-PFHpA	537048.3	13C2-PFOA	600874.3	0.894	10.000	8.214	82	50-150	
E13C2-6:2-FTS	75006.8	13C2-PFOA	600874.3	0.125	9.500	10.451	110	50-150	
E13C8-PFOA	997849.3	13C2-PFOA	600874.3	1.661	10.000	9.142	91	50-150	
E13C8-PFOS	335227.0	13C4-PFOS	371548.8	0.902	9.560	8.146	85	50-150	
E13C9-PFNA	627256.0	13C4-PFOS	371548.8	1.688	10.000	7.416	74	50-150	
E13C6-PFDA	841987.6	13C2-PFDA	557509.7	1.510	10.000	8.516	85	50-150	
E13C2-8:2-FTS	58620.1	13C2-PFDA	557509.7	0.105	9.580	9.038	94	50-150	
E13C8-PFOSA	662825.4	13C2-PFDA	557509.7	1.189	10.000	8.725	87	50-150	
Ed3-NMeFOSAA	232183.4	13C2-PFDA	557509.7	0.416	10.000	10.575	106	50-150	
E13C7-PFUnDA	579460.2	13C2-PFDA	557509.7	1.039	10.000	8.786	88	50-150	
Ed5-NEtFOSAA	146322.6	13C2-PFDA	557509.7	0.262	10.000	9.352	94	50-150	
E13C2-PFDoDA	1116373.7	13C2-PFDA	557509.7	2.002	10.000	8.414	84	50-150	
Ed7-NMePFOSAE	275450.0	13C2-PFDA	557509.7	0.494	10.000	8.540	85	50-150	
Ed3-NMePFOSA	93937.0	13C2-PFDA	557509.7	0.168	10.000	9.120	91	50-150	
Ed9-NEtPFOSAE	218517.0	13C2-PFDA	557509.7	0.392	10.000	7.947	79	50-150	
Ed5-NEtPFOSA	72668.5	13C2-PFDA	557509.7	0.130	10.000	9.058	91	50-150	
E13C2-PFTeDA	824972.6	13C2-PFDA	557509.7	1.480	10.000	8.189	82	50-150	

APPROVED
By MCD at 10:13 pm, 11/30/18

REVIEWED
By HMK at 2:27 pm, 12/6/18

ICAL Name: 18NOV28DCAL **Result Table:** 18332003 11/30/2018 9:58:40 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

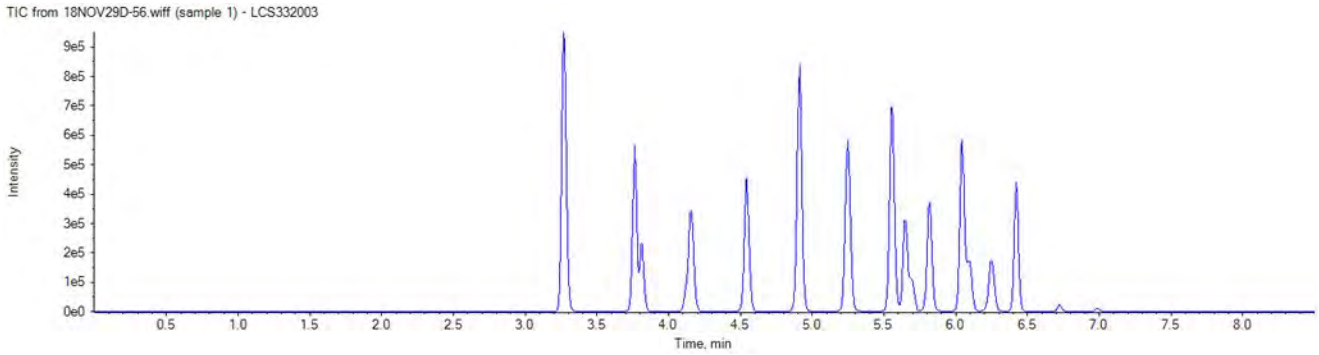
Analyte Quantitation Peak Table

Sample Name: LCS332003 **Instrument Name:** LM27631 **File Name:** 18NOV29D-56.wiff

Sample Wt	Sample Vol	Dilution Factor	PrepFactor
1.00000	1.000	1.00	2.000

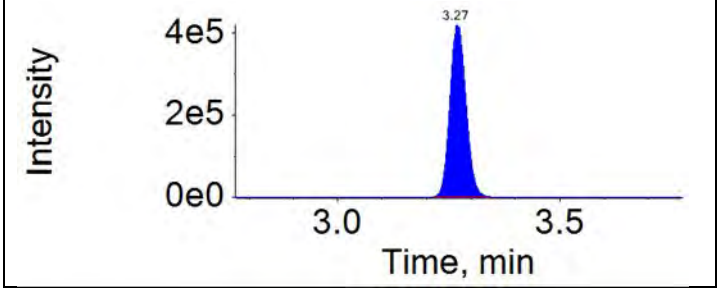
Analyte Name	RT	RRT	Analyte Area Response	E	Int Typ	ES Name	ES RT	ES Area Response	Area Ratio	Sample Result (ng/g)
PFBA	3.27	1.000	115213.7		A	13C4-PFBA	3.27	1010092.5	0.114	1.251
PFPeA	3.76	1.000	108769.2		A	13C5-PFPeA	3.76	993629.3	0.109	1.074
PFBS	3.81	1.000	47400.8		A	13C3-PFBS	3.81	411158.2	0.115	1.119
4:2-FTS	4.12	1.000	44925.4		A	13C2-4:2-FTS	4.12	83476.3	0.538	2.881
PFHxA	4.15	1.000	108517.0		A	13C5-PFHxA	4.16	673048.2	0.161	1.294
PFPeS	4.18	1.100	25275.2		A	13C3-PFBS	3.81	411158.2	0.061	1.244
PFHpA	4.54	1.000	111132.4		A	13C4-PFHpA	4.54	537048.3	0.207	1.277
PFHxS	4.54	1.000	38520.3		A	13C3-PFHxS	4.55	340075.1	0.113	1.061
6:2-FTS	4.90	1.000	43250.5		A	13C2-6:2-FTS	4.90	75006.8	0.577	3.009
PFHpS	4.91	1.080	39014.5		A	13C3-PFHxS	4.55	340075.1	0.115	1.145
PFOA	4.91	1.000	111412.0		A	13C8-PFOA	4.91	997849.3	0.112	1.154
PFOS	5.24	1.000	36350.5		M	13C8-PFOS	5.24	335227.0	0.108	0.910
PFNA	5.26	1.000	107498.4		A	13C9-PFNA	5.25	627256.0	0.171	1.314
PFNS	5.53	1.060	25510.1		A	13C8-PFOS	5.24	335227.0	0.076	0.961
PFDA	5.56	1.000	91367.7		A	13C6-PFDA	5.55	841987.6	0.109	1.228
8:2-FTS	5.56	1.000	47406.4		A	13C2-8:2-FTS	5.56	58620.1	0.809	3.050
PFOSA	5.65	1.000	71087.0		A	13C8-PFOSA	5.65	662825.4	0.107	1.087
NMeFOSAA	5.70	1.000	20635.0		M	d3-NMeFOSAA	5.69	232183.4	0.089	1.134
PFDS	5.79	1.100	22691.0		A	13C8-PFOS	5.24	335227.0	0.068	1.073
PFUnDA	5.81	1.000	109727.5		A	13C7-PFUnDA	5.82	579460.2	0.189	1.354
NEtFOSAA	5.83	1.000	18556.9		A	d5-NEtFOSAA	5.83	146322.6	0.127	1.235
PFDoDA	6.04	1.000	127385.4		A	13C2-PFDoDA	6.04	1116373.7	0.114	1.250
10:2-FTS	6.06	1.090	43892.0		A	13C2-8:2-FTS	5.56	58620.1	0.749	3.302
NMePFOSAE	6.10	1.000	37415.4		A	d7-NMePFOSAE	6.09	275450.0	0.136	1.143
NMePFOSA	6.11	1.000	9167.5		A	d3-NMePFOSA	6.10	93937.0	0.098	1.035
PFDoS	6.21	1.190	12671.5		A	13C8-PFOS	5.24	335227.0	0.038	1.086
NEtPFOSAE	6.26	1.000	38059.3		A	d9-NEtPFOSAE	6.25	218517.0	0.174	1.253
NEtPFOSA	6.27	1.000	8729.3		A	d5-NEtPFOSA	6.27	72668.5	0.120	1.077
PFTrDA	6.24	1.030	125876.8		A	13C2-PFDoDA	6.04	1116373.7	0.113	1.359
PFTeDA	6.42	1.000	91923.0		A	13C2-PFTeDA	6.42	824972.6	0.111	1.263
PFHxDA	6.72	1.050	44242.6		A	13C2-PFTeDA	6.42	824972.6	0.054	1.226
PFODA	6.99	1.090	24810.3		A	13C2-PFTeDA	6.42	824972.6	0.030	0.801

Total Ion Chromatogram

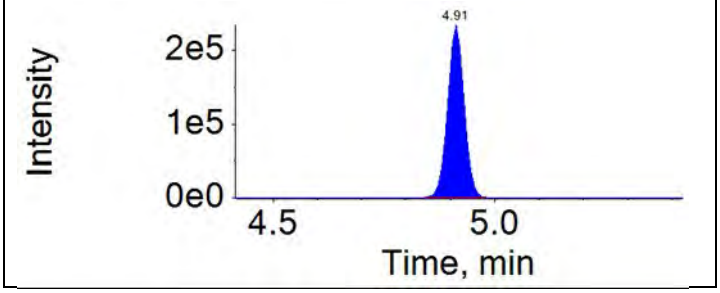


ICAL Name: 18NOV28DCAL **Result Table:** 18332003 11/30/2018 9:58:40 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

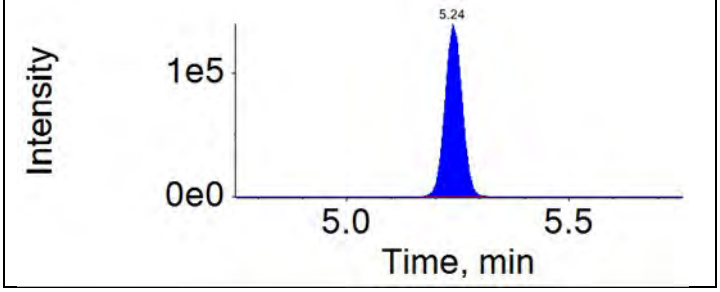
Injection Standard: 13C3-PFBA
216.0 / 172.0



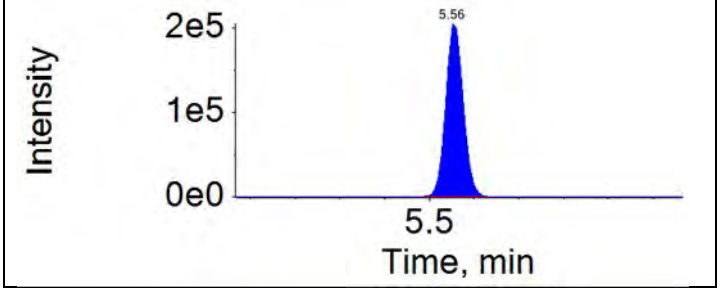
Injection Standard: 13C2-PFOA
415.0 / 370.0



Injection Standard: 13C4-PFOS
503.0 / 80.0

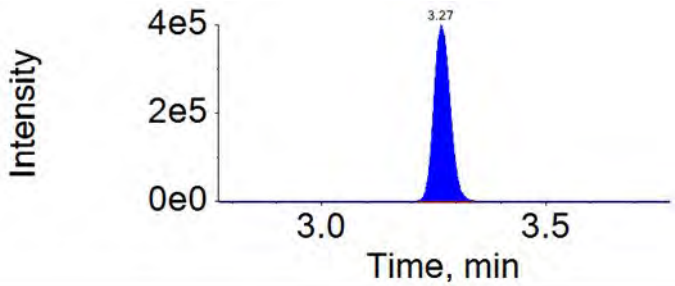


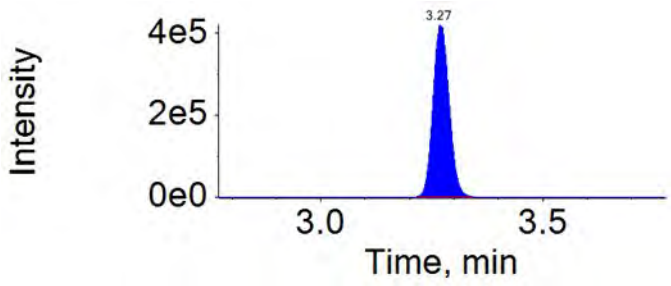
Injection Standard: 13C2-PFDA
515.0 / 470.0



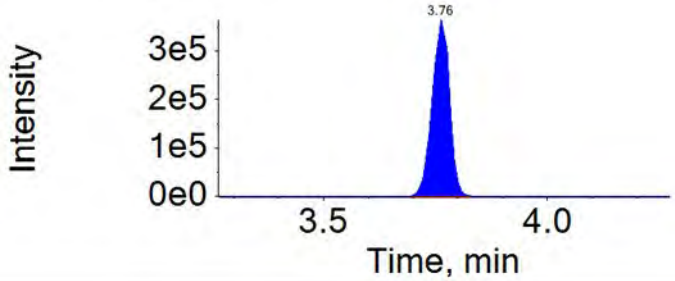
ICAL Name: 18NOV28DCAL **Result Table:** 18332003 11/30/2018 9:58:40 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

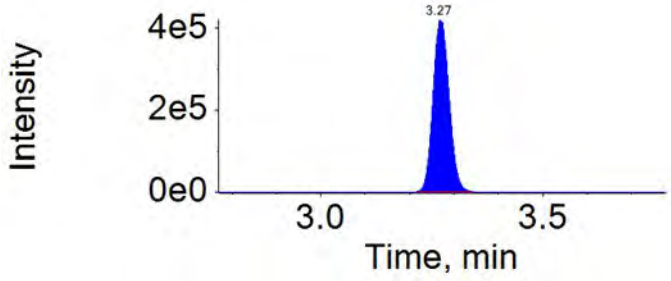
Extraction Standard: E13C4-PFBA	Injection Standard: 13C3-PFBA
217.0 / 172.0	216.0 / 172.0



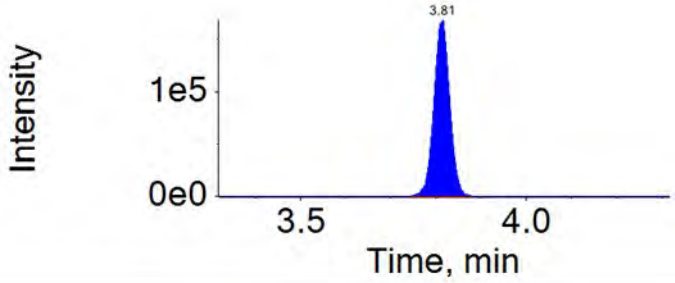


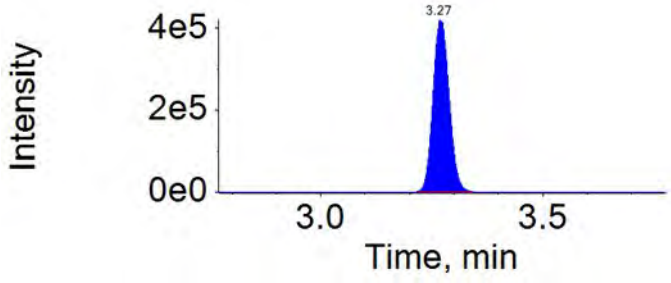
Extraction Standard: E13C5-PFPeA	Injection Standard: 13C3-PFBA
268.0 / 223.0	216.0 / 172.0



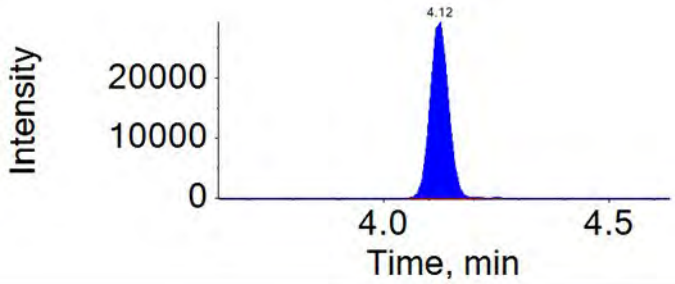


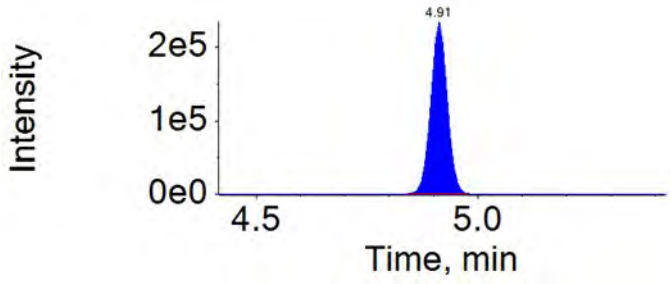
Extraction Standard: E13C3-PFBS	Injection Standard: 13C3-PFBA
302.0 / 80.0	216.0 / 172.0





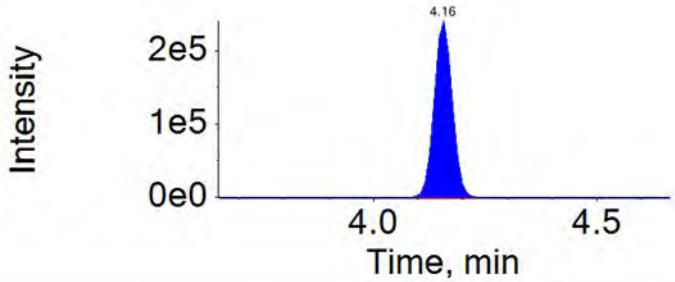
Extraction Standard: E13C2-4:2-FTS	Injection Standard: 13C2-PFOA
329.0 / 81.0	415.0 / 370.0

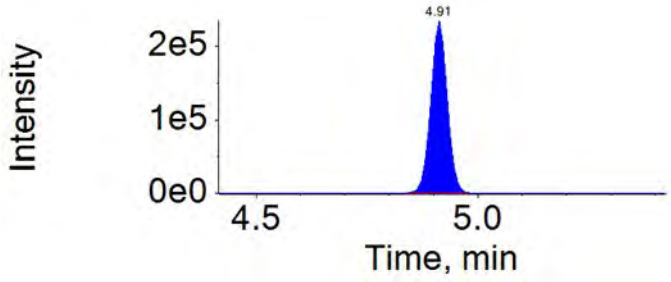




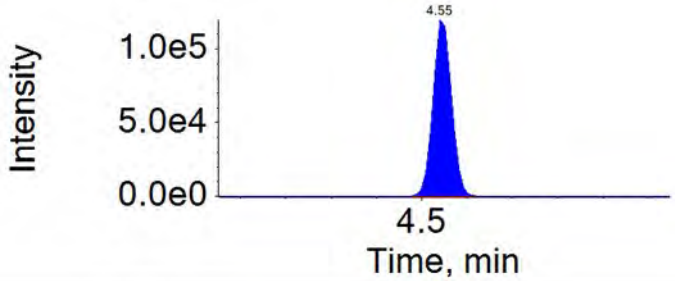
ICAL Name: 18NOV28DCAL **Result Table:** 18332003 11/30/2018 9:58:40 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

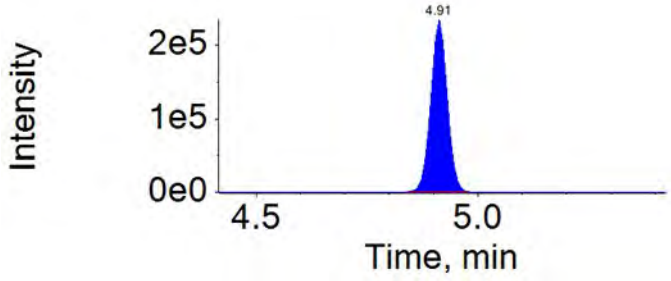
Extraction Standard: E13C5-PFHxA	Injection Standard: 13C2-PFOA
318.0 / 273.0	415.0 / 370.0



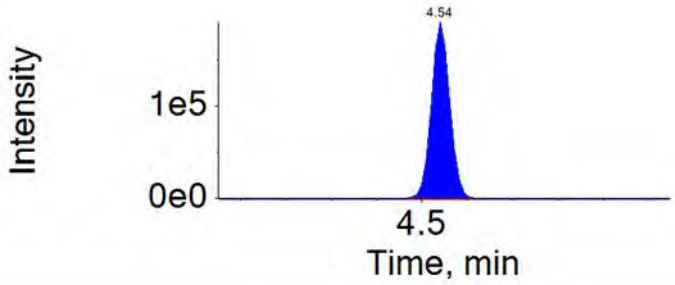


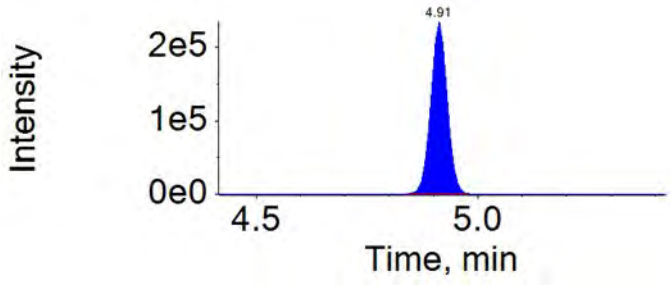
Extraction Standard: E13C3-PFHxS	Injection Standard: 13C2-PFOA
402.0 / 80.0	415.0 / 370.0



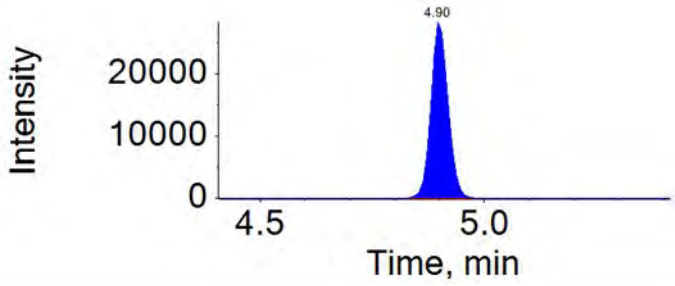


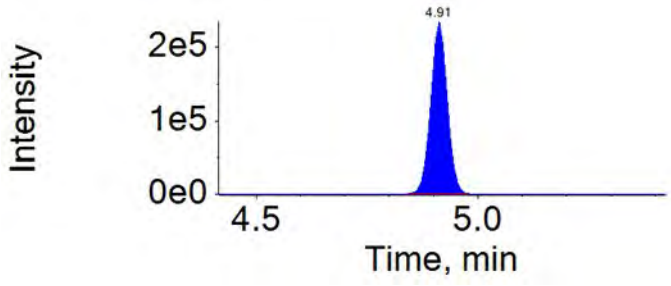
Extraction Standard: E13C4-PFHpA	Injection Standard: 13C2-PFOA
367.0 / 322.0	415.0 / 370.0





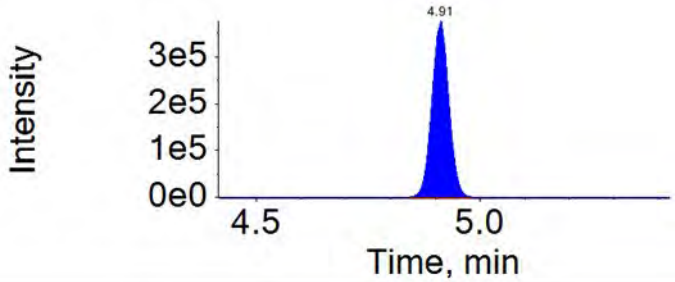
Extraction Standard: E13C2-6:2-FTS	Injection Standard: 13C2-PFOA
429.0 / 81.0	415.0 / 370.0

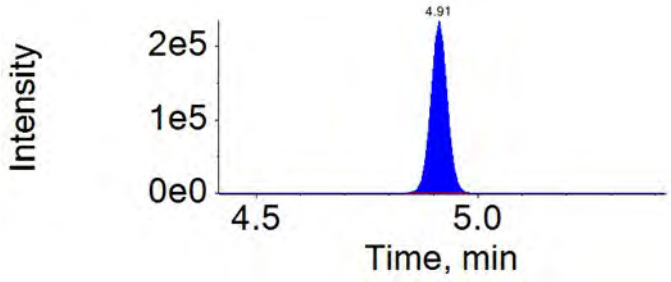




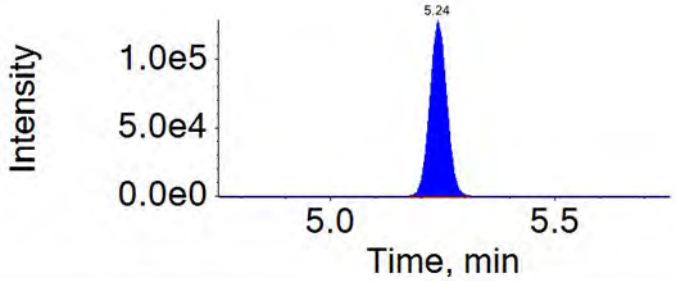
ICAL Name: 18NOV28DCAL **Result Table:** 18332003 11/30/2018 9:58:40 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

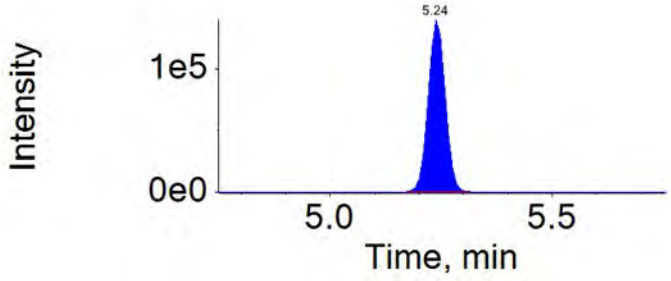
Extraction Standard: E13C8-PFOA	Injection Standard: 13C2-PFOA
421.0 / 376.0	415.0 / 370.0



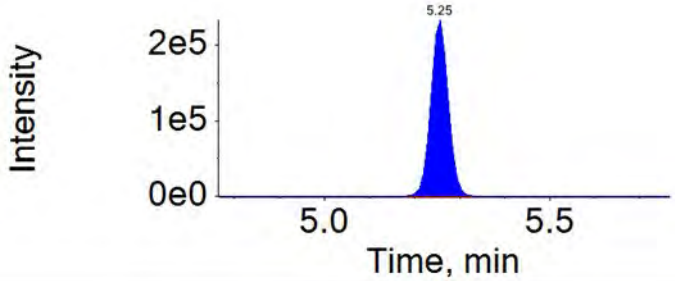


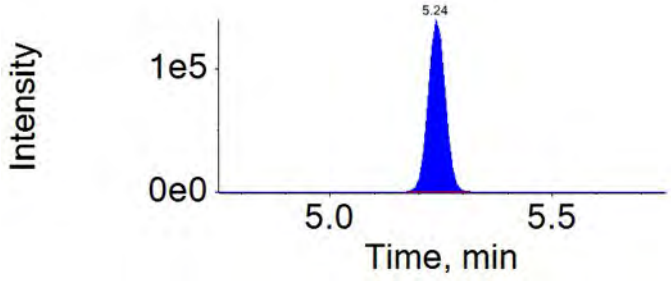
Extraction Standard: E13C8-PFOS	Injection Standard: 13C4-PFOS
507.0 / 80.0	503.0 / 80.0



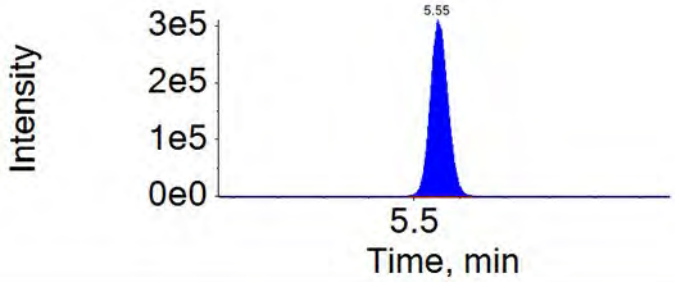


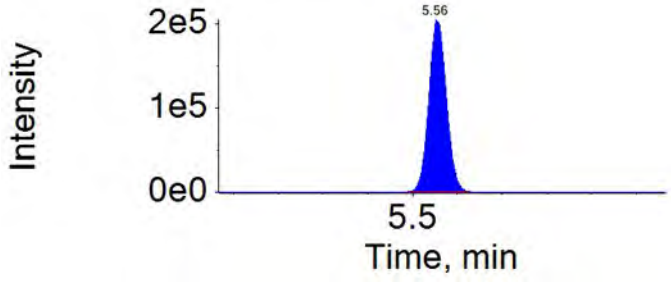
Extraction Standard: E13C9-PFNA	Injection Standard: 13C4-PFOS
472.0 / 427.0	503.0 / 80.0





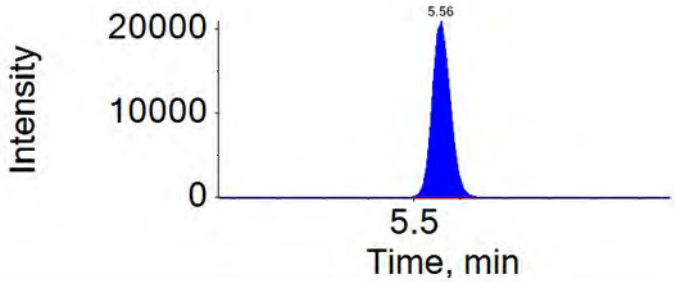
Extraction Standard: E13C6-PFDA	Injection Standard: 13C2-PFDA
519.0 / 474.0	515.0 / 470.0

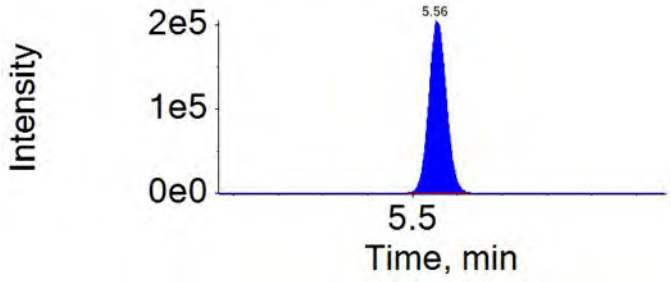




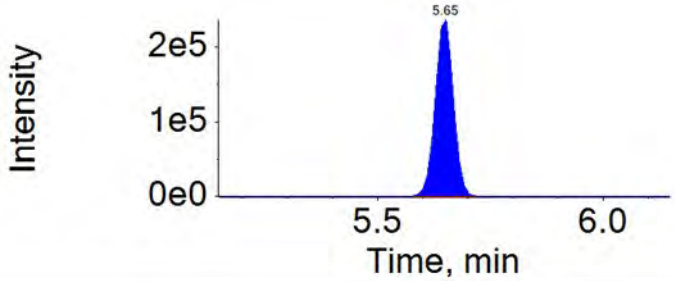
ICAL Name: 18NOV28DCAL **Result Table:** 18332003 11/30/2018 9:58:40 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

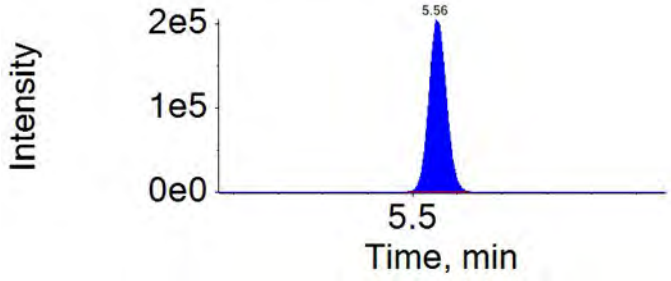
Extraction Standard: E13C2-8:2-FTS	Injection Standard: 13C2-PFDA
529.0 / 81.0	515.0 / 470.0



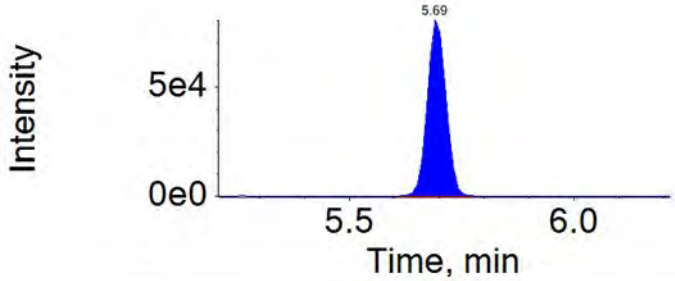


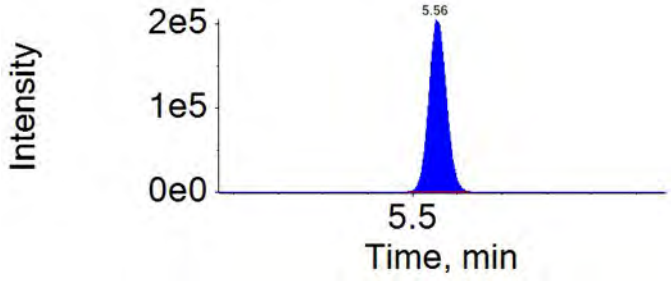
Extraction Standard: E13C8-PFOSA	Injection Standard: 13C2-PFDA
506.0 / 78.0	515.0 / 470.0



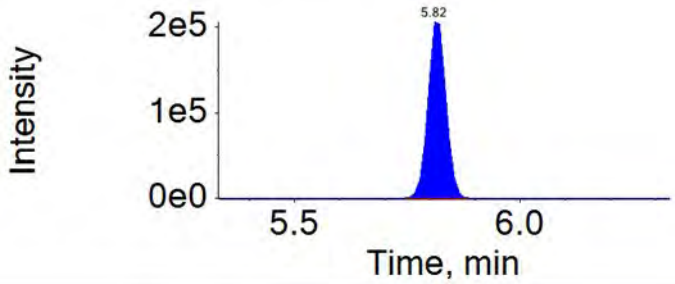


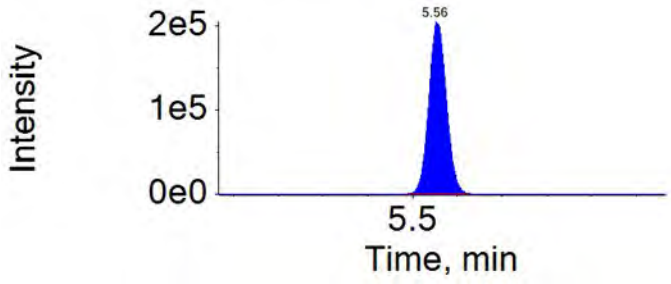
Extraction Standard: Ed3-NMeFOSAA	Injection Standard: 13C2-PFDA
573.0 / 419.0	515.0 / 470.0





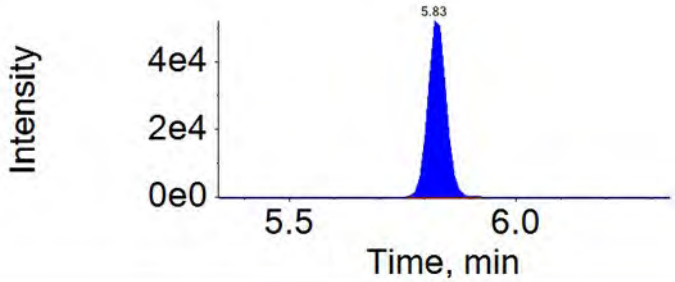
Extraction Standard: E13C7-PFUnDA	Injection Standard: 13C2-PFDA
570.0 / 525.0	515.0 / 470.0

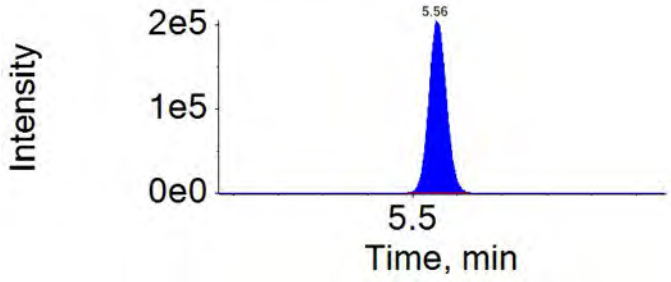




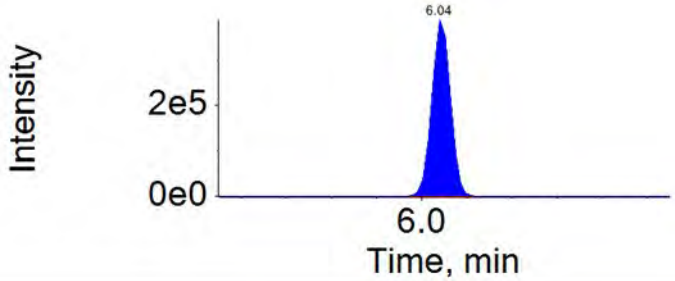
ICAL Name: 18NOV28DCAL **Result Table:** 18332003 11/30/2018 9:58:40 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

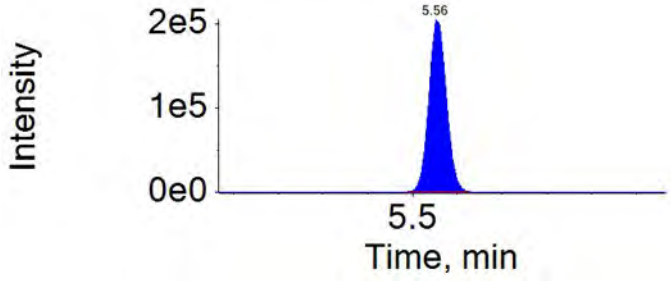
Extraction Standard: Ed5-NEtFOSAA	Injection Standard: 13C2-PFDA
589.0 / 419.0	515.0 / 470.0



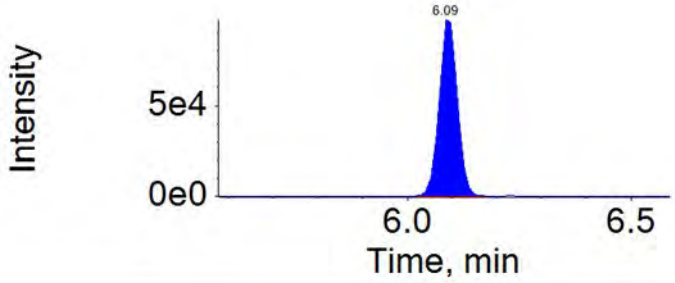


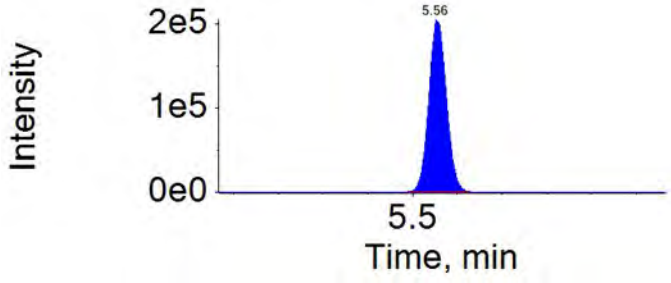
Extraction Standard: E13C2-PFDoDA	Injection Standard: 13C2-PFDA
615.0 / 570.0	515.0 / 470.0



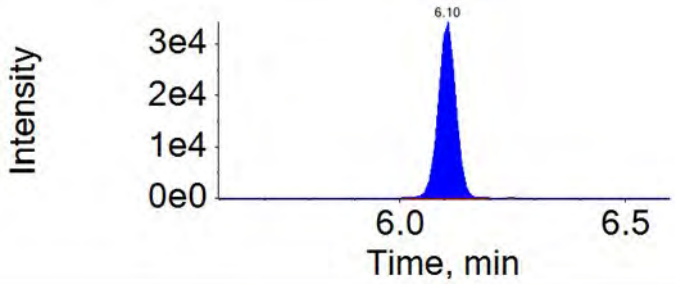


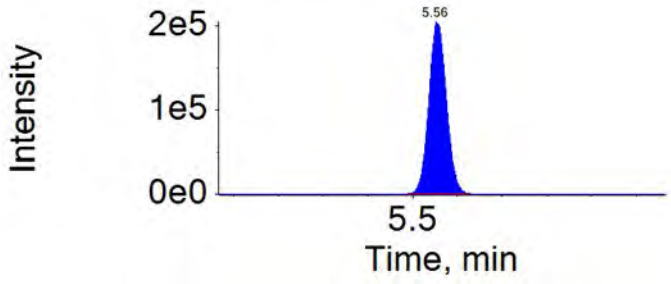
Extraction Standard: Ed7-NMePFOSAE	Injection Standard: 13C2-PFDA
623.0 / 59.0	515.0 / 470.0





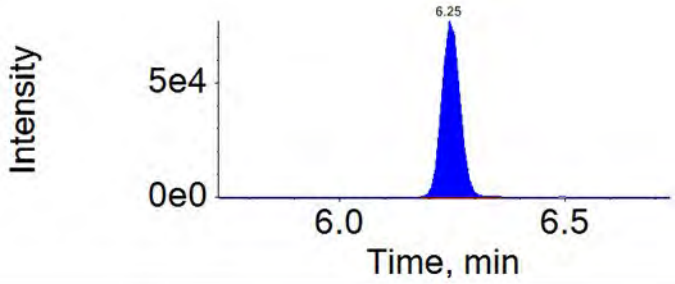
Extraction Standard: Ed3-NMePFOSA	Injection Standard: 13C2-PFDA
515.0 / 169.0	515.0 / 470.0

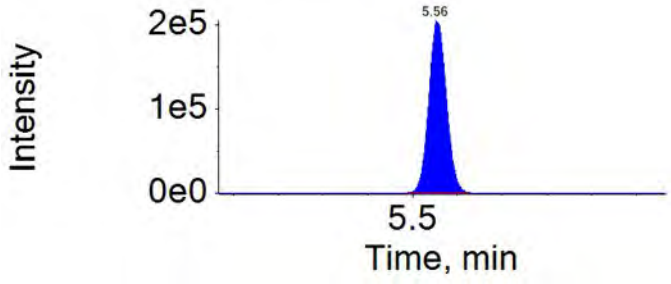




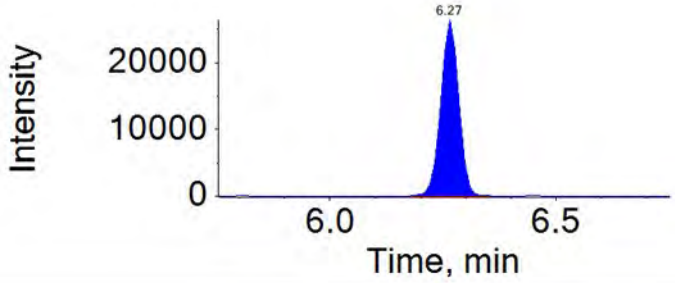
ICAL Name: 18NOV28DCAL **Result Table:** 18332003 11/30/2018 9:58:40 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

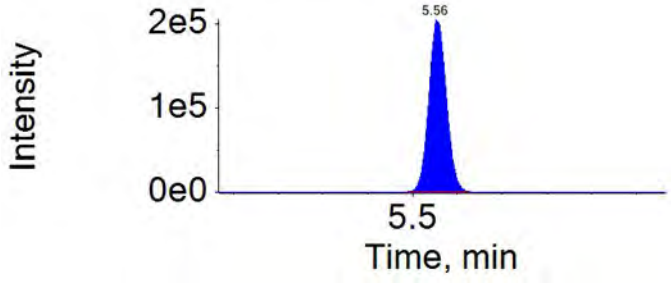
Extraction Standard: Ed9-NEtPFOSAE	Injection Standard: 13C2-PFDA
639.0 / 59.0	515.0 / 470.0



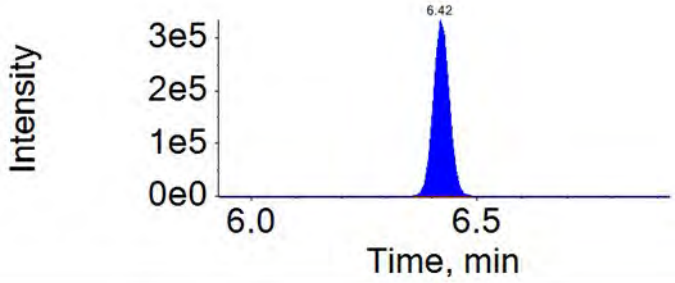


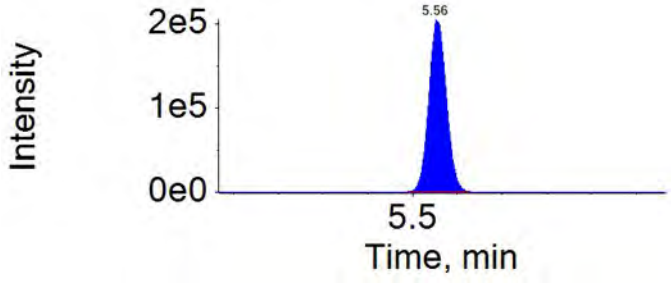
Extraction Standard: Ed5-NEtPFOSA	Injection Standard: 13C2-PFDA
531.0 / 169.0	515.0 / 470.0





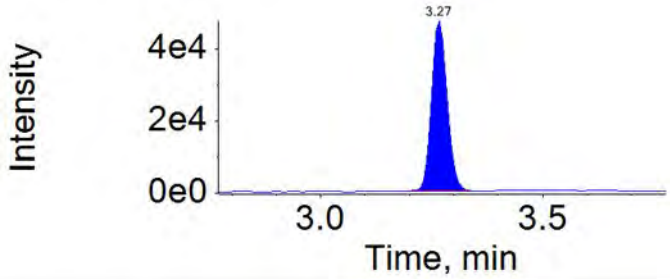
Extraction Standard: E13C2-PFTeDA	Injection Standard: 13C2-PFDA
715.0 / 670.0	515.0 / 470.0



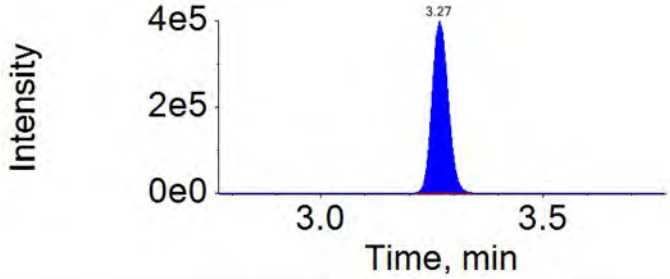


ICAL Name: 18NOV28DCAL **Result Table:** 18332003 11/30/2018 9:58:40 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

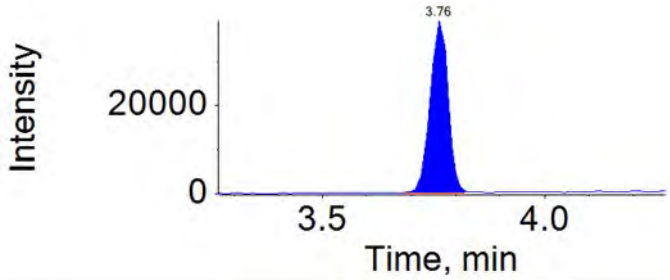
Analyte: PFBA
213.0 / 169.0



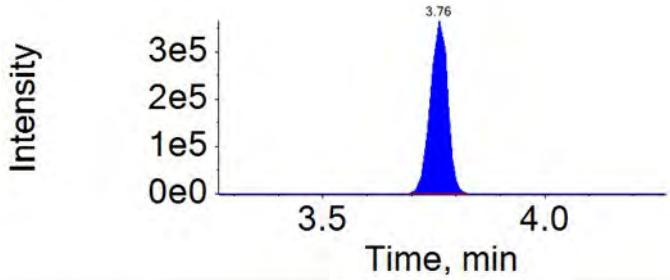
Extraction Standard: 13C4-PFBA
217.0 / 172.0



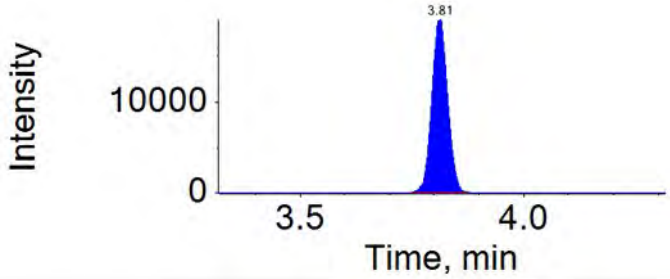
Analyte: PFPeA
263.0 / 219.0



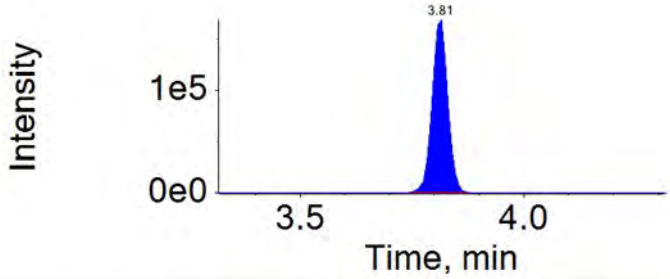
Extraction Standard: 13C5-PFPeA
268.0 / 223.0



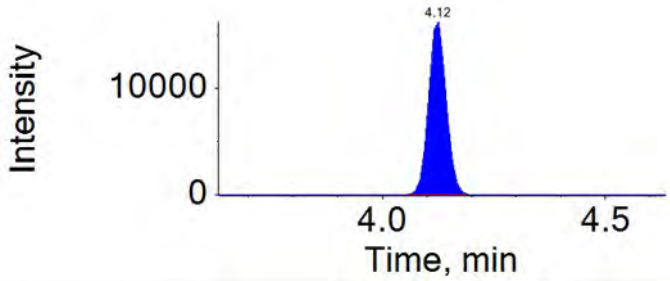
Analyte: PFBS
299.0 / 80.0



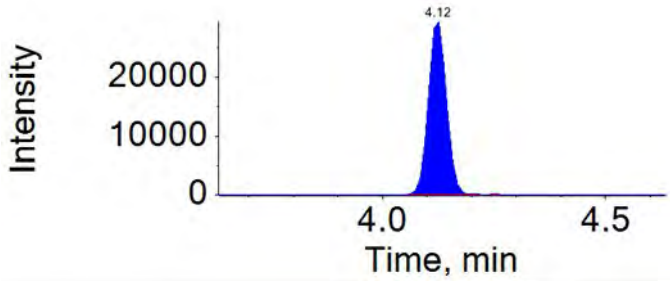
Extraction Standard: 13C3-PFBS
302.0 / 80.0



Analyte: 4:2-FTS
327.0 / 307.0



Extraction Standard: 13C2-4:2-FTS
329.0 / 81.0

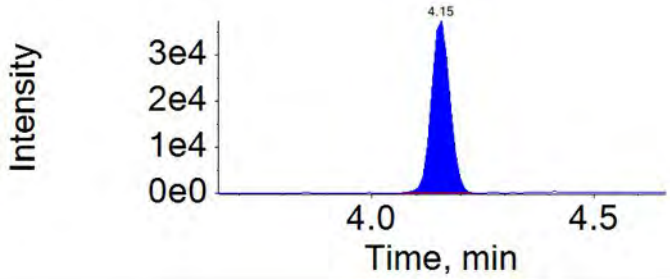


APPROVED
By MCD at 10:13 pm, 11/30/18

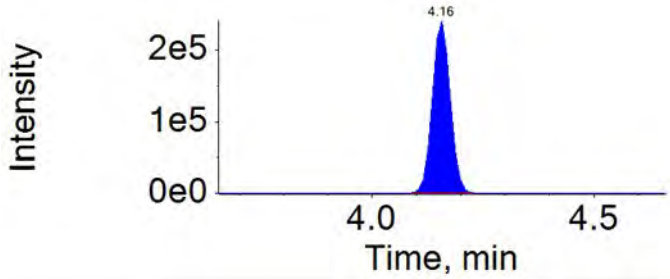
REVIEWED
By HMK at 2:27 pm, 12/6/18

ICAL Name: 18NOV28DCAL **Result Table:** 18332003 11/30/2018 9:58:40 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

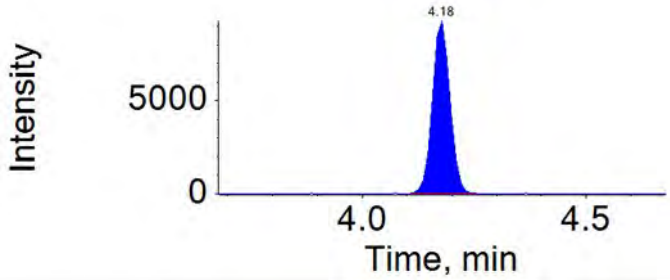
Analyte: PFHxA
313.0 / 269.0



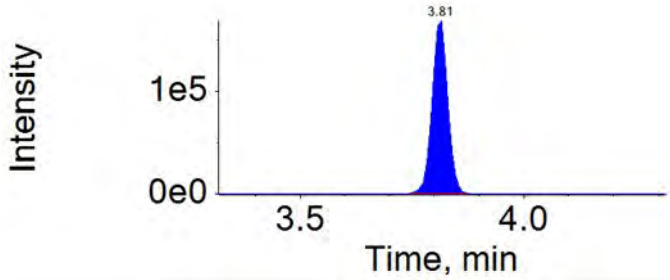
Extraction Standard: 13C5-PFHxA
318.0 / 273.0



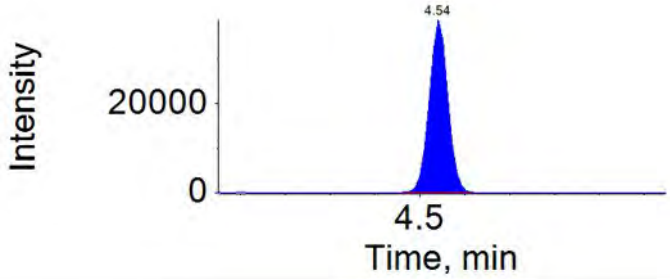
Analyte: PFPeS
349.0 / 80.0



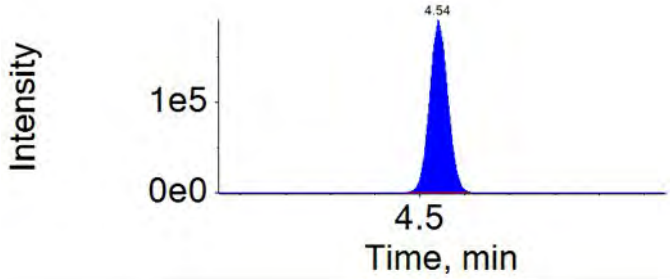
Extraction Standard: 13C3-PFBS
302.0 / 80.0



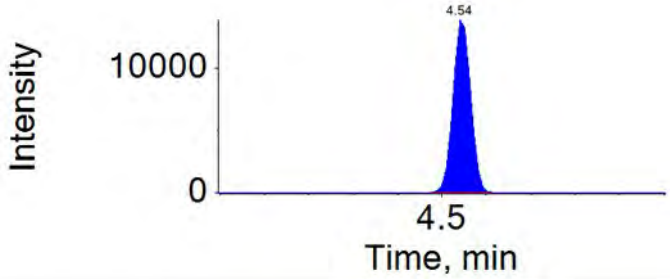
Analyte: PFHpA
363.0 / 319.0



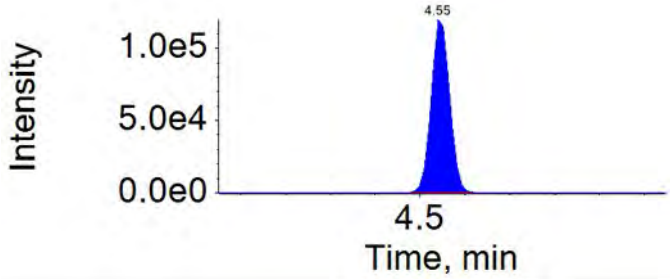
Extraction Standard: 13C4-PFHpA
367.0 / 322.0



Analyte: PFHxS
399.0 / 80.0



Extraction Standard: 13C3-PFHxS
402.0 / 80.0

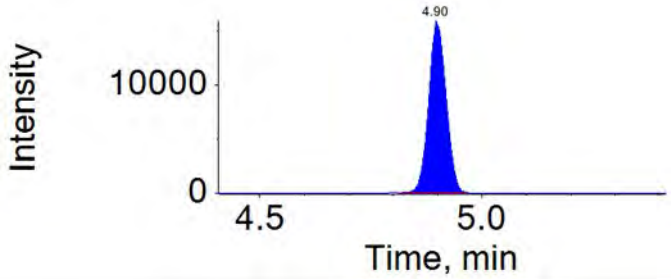


APPROVED
By MCD at 10:13 pm, 11/30/18

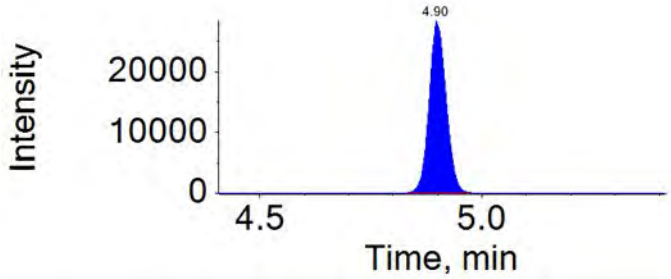
REVIEWED
By HMK at 2:27 pm, 12/6/18

ICAL Name: 18NOV28DCAL **Result Table:** 18332003 11/30/2018 9:58:40 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

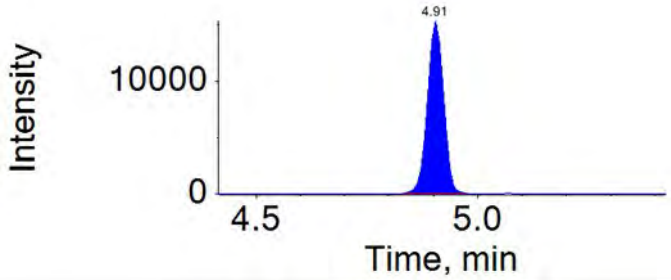
Analyte: 6:2-FTS
427.0 / 407.0



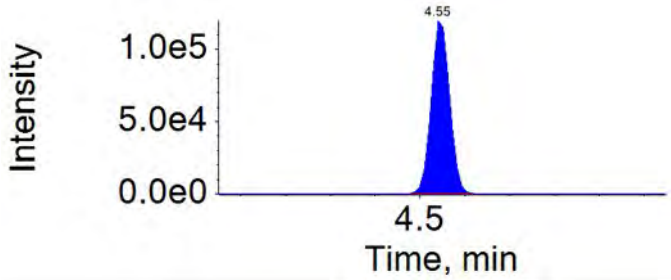
Extraction Standard: 13C2-6:2-FTS
429.0 / 81.0



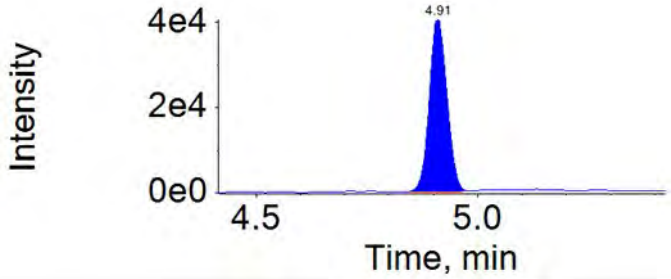
Analyte: PFHpS
449.0 / 80.0



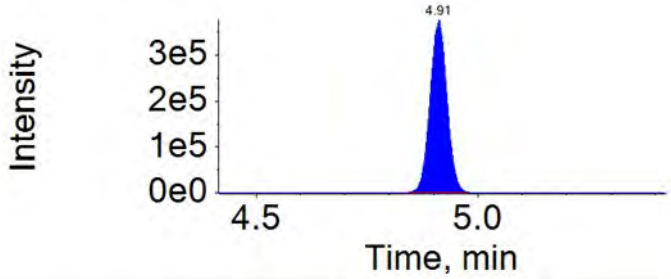
Extraction Standard: 13C3-PFHxS
402.0 / 80.0



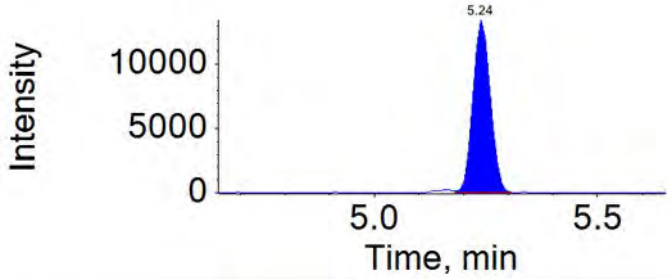
Analyte: PFOA
413.0 / 369.0



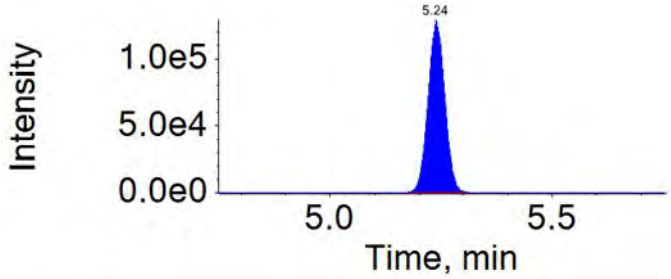
Extraction Standard: 13C8-PFOA
421.0 / 376.0



Analyte: PFOS
499.0 / 80.0



Extraction Standard: 13C8-PFOS
507.0 / 80.0

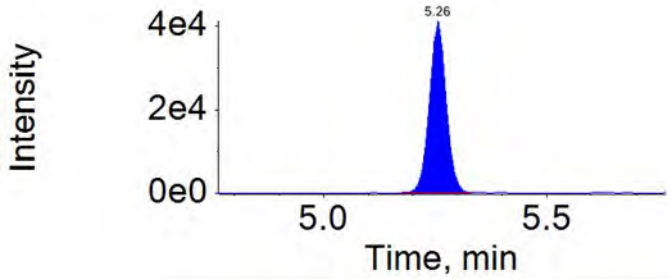


APPROVED
By MCD at 10:13 pm, 11/30/18

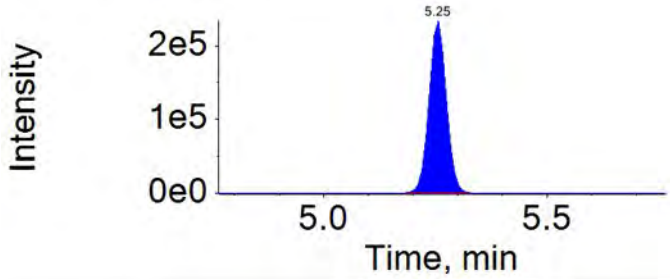
REVIEWED
By HMK at 2:27 pm, 12/6/18

ICAL Name: 18NOV28DCAL **Result Table:** 18332003 11/30/2018 9:58:40 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

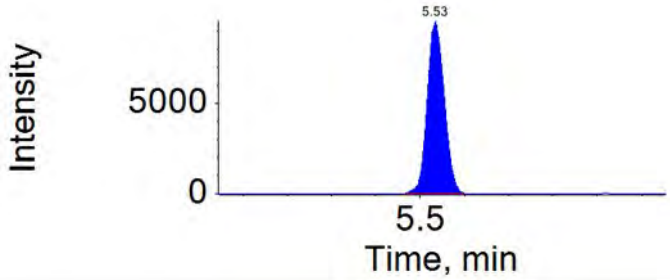
Analyte: PFNA
463.0 / 419.0



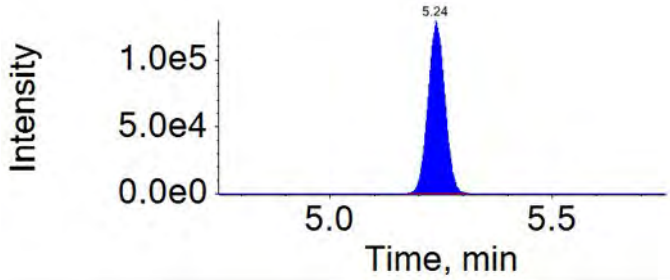
Extraction Standard: 13C9-PFNA
472.0 / 427.0



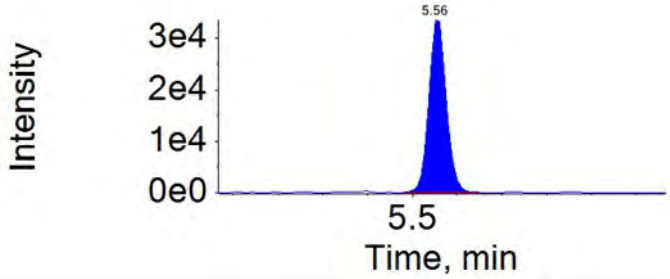
Analyte: PFNS
549.0 / 80.0



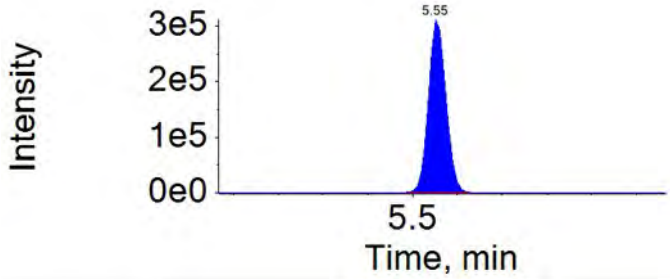
Extraction Standard: 13C8-PFOS
507.0 / 80.0



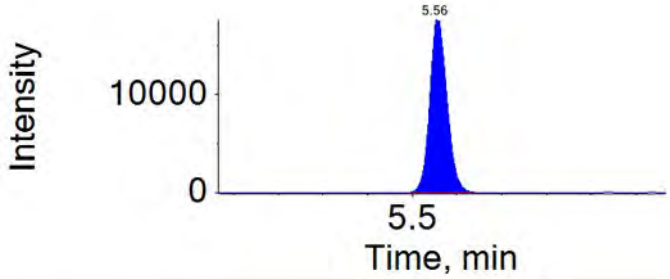
Analyte: PFDA
513.0 / 469.0



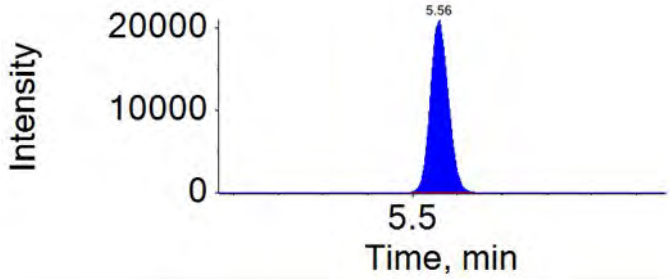
Extraction Standard: 13C6-PFDA
519.0 / 474.0



Analyte: 8:2-FTS
527.0 / 507.0

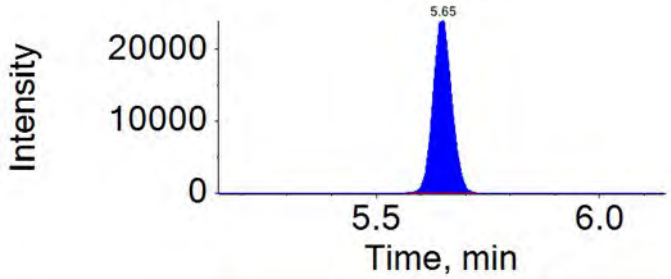


Extraction Standard: 13C2-8:2-FTS
529.0 / 81.0

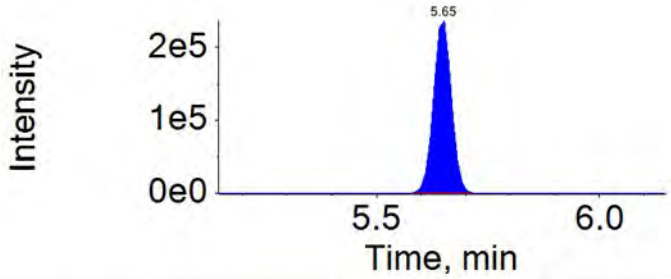


ICAL Name: 18NOV28DCAL **Result Table:** 18332003 11/30/2018 9:58:40 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

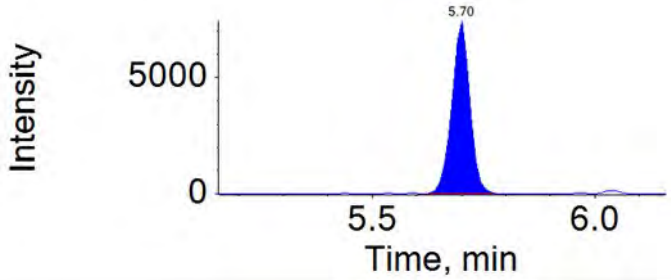
Analyte: PFOSA
498.0 / 78.0



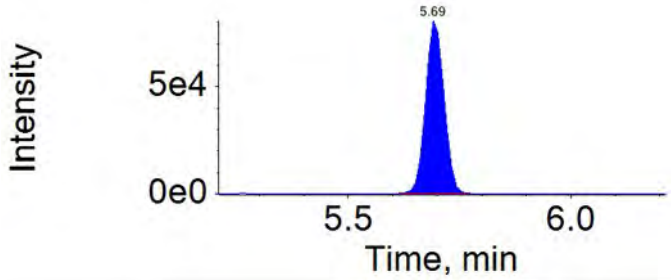
Extraction Standard: 13C8-PFOSA
506.0 / 78.0



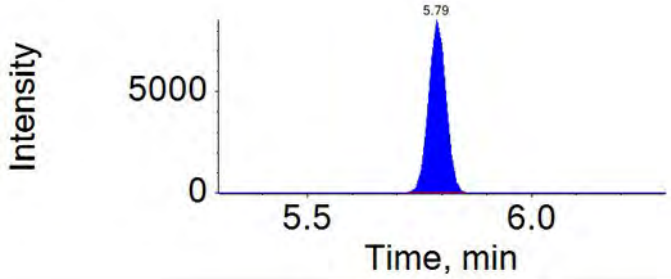
Analyte: NMeFOSAA
570.0 / 419.0



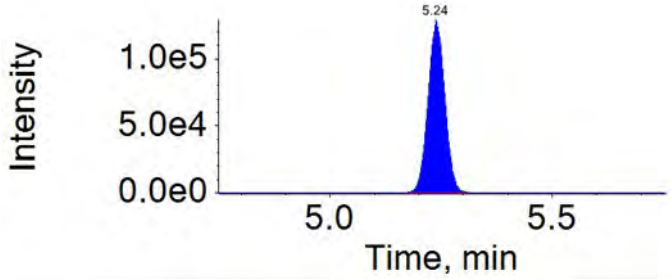
Extraction Standard: d3-NMeFOSAA
573.0 / 419.0



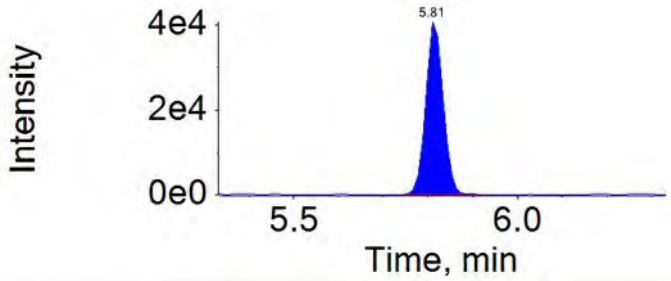
Analyte: PFDS
599.0 / 80.0



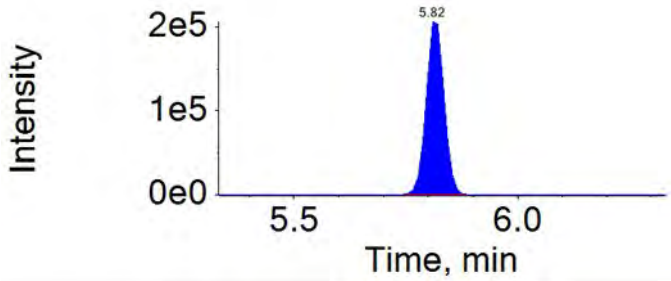
Extraction Standard: 13C8-PFOS
507.0 / 80.0



Analyte: PFUnDA
563.0 / 519.0



Extraction Standard: 13C7-PFUnDA
570.0 / 525.0

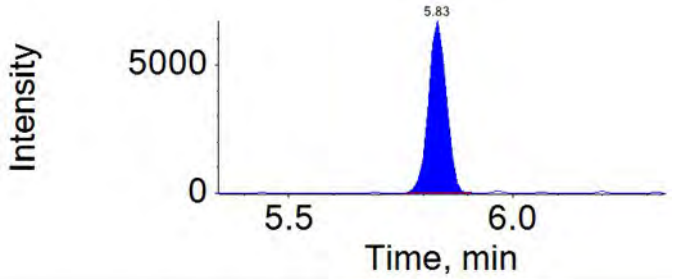


APPROVED
By MCD at 10:13 pm, 11/30/18

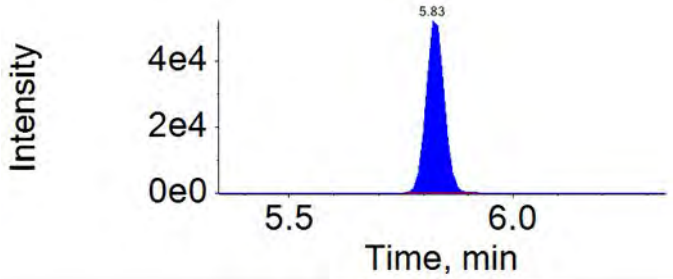
REVIEWED
By HMK at 2:27 pm, 12/6/18

ICAL Name: 18NOV28DCAL **Result Table:** 18332003 11/30/2018 9:58:40 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

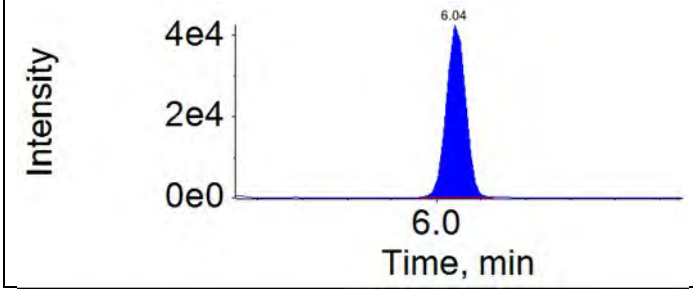
Analyte: NEtFOSAA
584.0 / 419.0



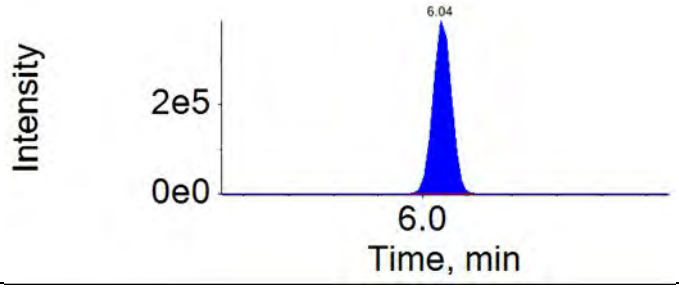
Extraction Standard: d5-NEtFOSAA
589.0 / 419.0



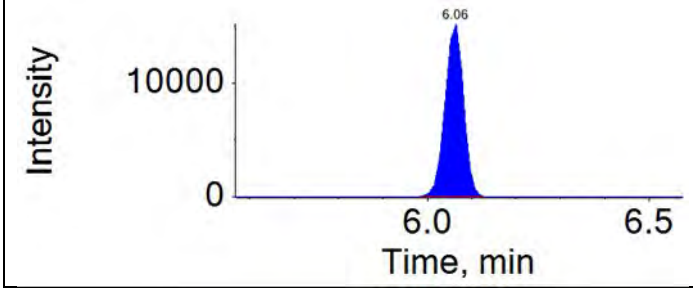
Analyte: PFDoDA
613.0 / 569.0



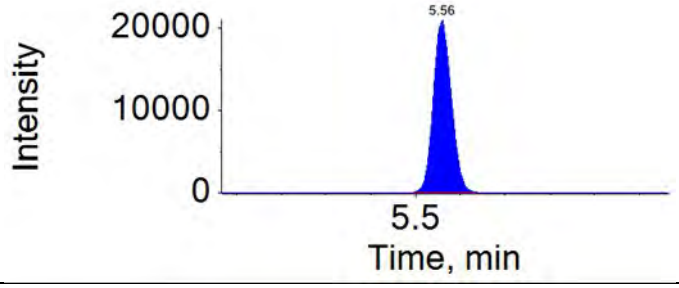
Extraction Standard: 13C2-PFDoDA
615.0 / 570.0



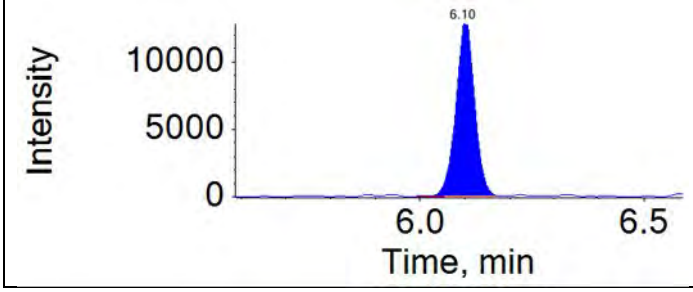
Analyte: 10:2-FTS
627.0 / 607.0



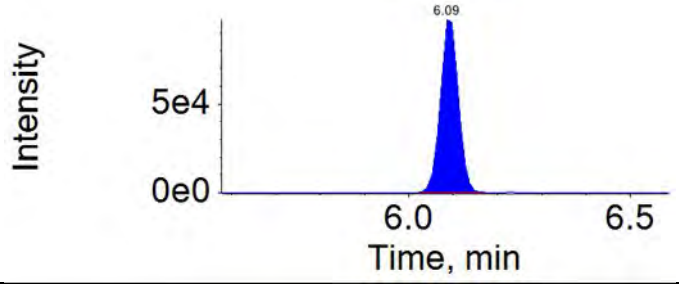
Extraction Standard: 13C2-8:2-FTS
529.0 / 81.0



Analyte: NMePFOSAE
616.0 / 59.0



Extraction Standard: d7-NMePFOSAE
623.0 / 59.0

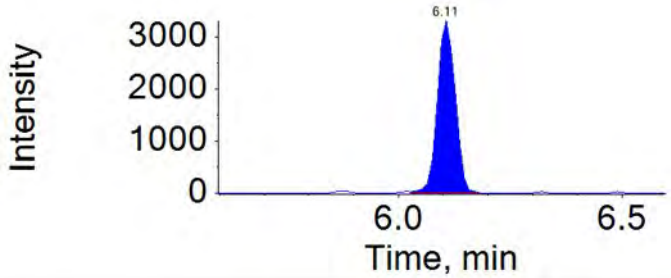


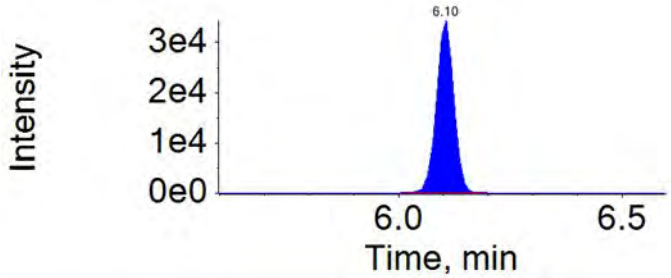
APPROVED
By MCD at 10:13 pm, 11/30/18

REVIEWED
By HMK at 2:27 pm, 12/6/18

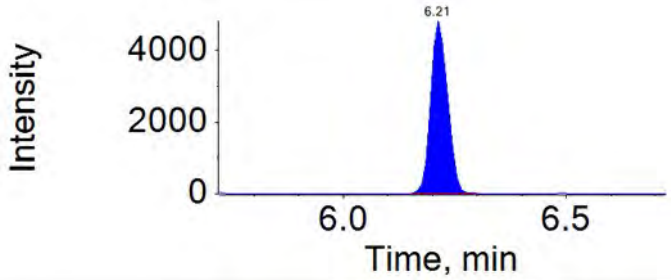
ICAL Name: 18NOV28DCAL **Result Table:** 18332003 11/30/2018 9:58:40 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

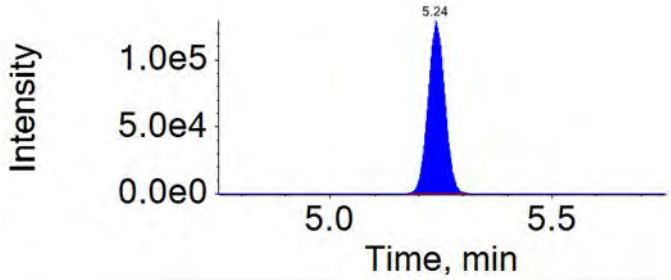
Analyte: NMePFOSA	Extraction Standard: d3-NMePFOSA
512.0 / 169.0	515.0 / 169.0



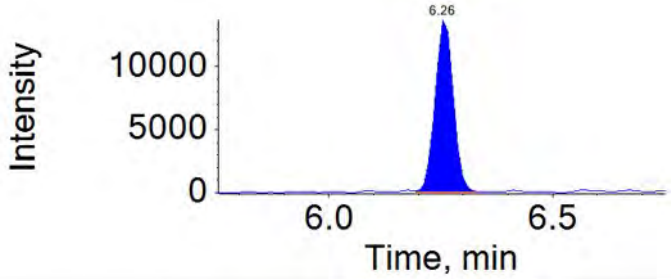


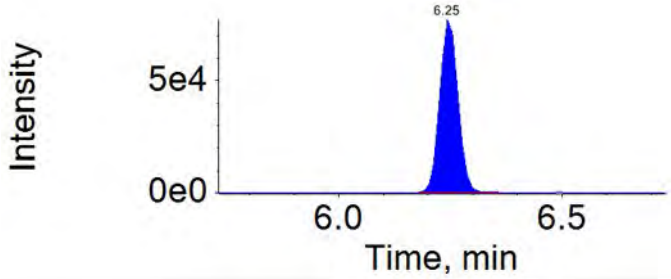
Analyte: PFDoS	Extraction Standard: 13C8-PFOS
699.0 / 80.0	507.0 / 80.0



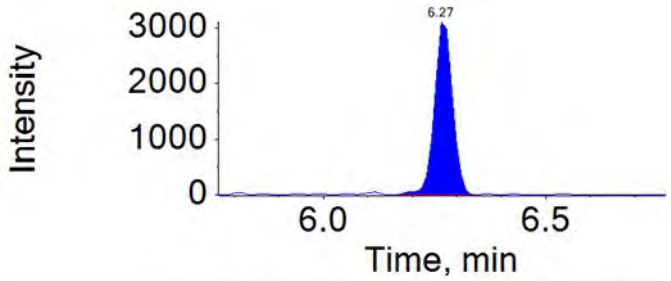


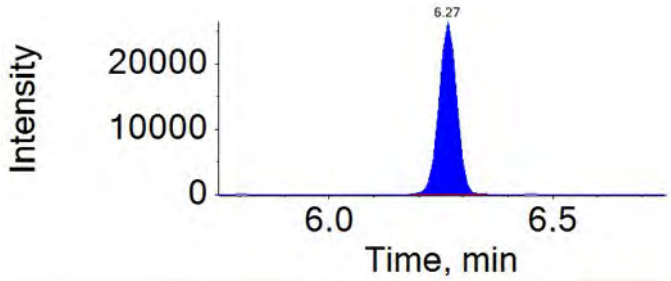
Analyte: NEtPFOSAE	Extraction Standard: d9-NEtPFOSAE
630.0 / 59.0	639.0 / 59.0





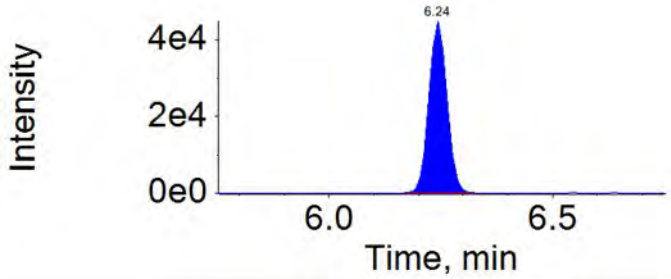
Analyte: NEtPFOSA	Extraction Standard: d5-NEtPFOSA
526.0 / 169.0	531.0 / 169.0



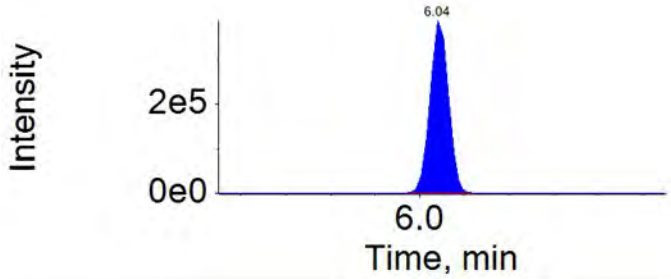


ICAL Name: 18NOV28DCAL **Result Table:** 18332003 11/30/2018 9:58:40 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

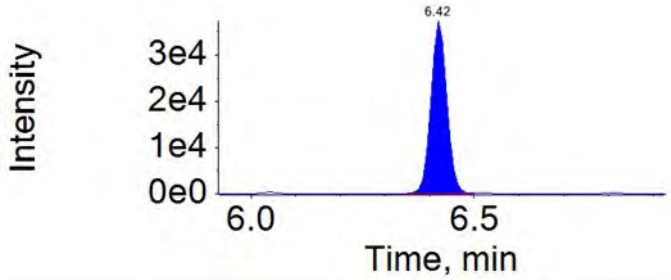
Analyte: PFTrDA
663.0 / 619.0



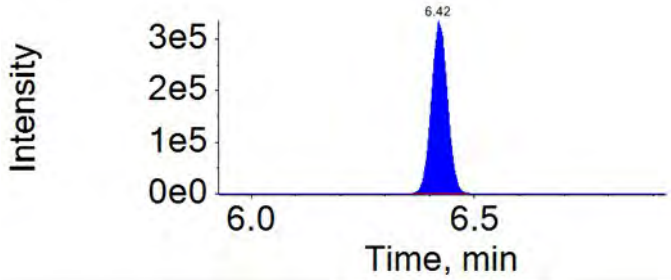
Extraction Standard: 13C2-PFDoDA
615.0 / 570.0



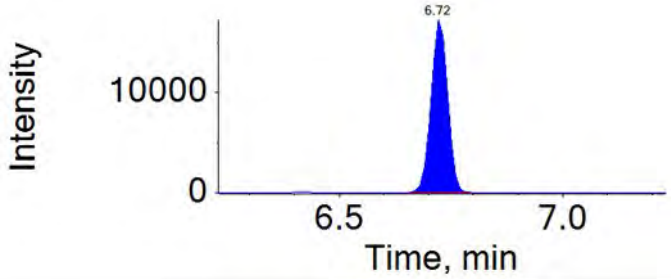
Analyte: PFTeDA
713.0 / 669.0



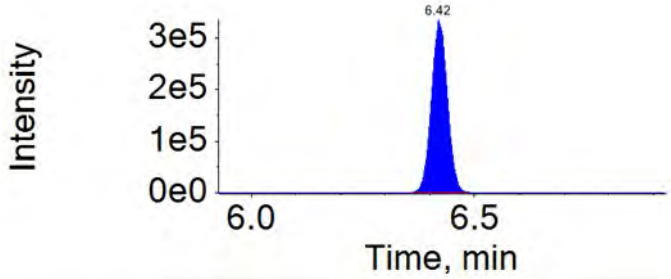
Extraction Standard: 13C2-PFTeDA
715.0 / 670.0



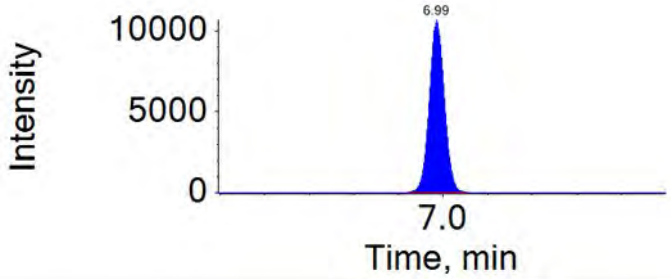
Analyte: PFHxDA
813.0 / 769.0



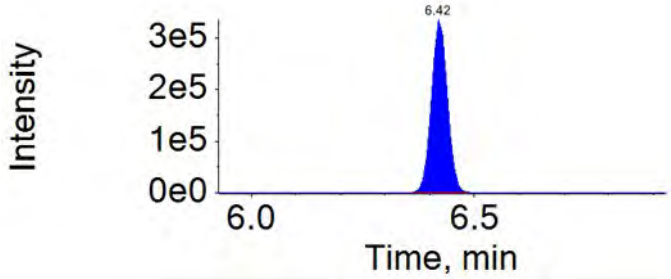
Extraction Standard: 13C2-PFTeDA
715.0 / 670.0



Analyte: PFODA
913.0 / 869.0



Extraction Standard: 13C2-PFTeDA
715.0 / 670.0



APPROVED
By MCD at 10:13 pm, 11/30/18

REVIEWED
By HMK at 2:27 pm, 12/6/18

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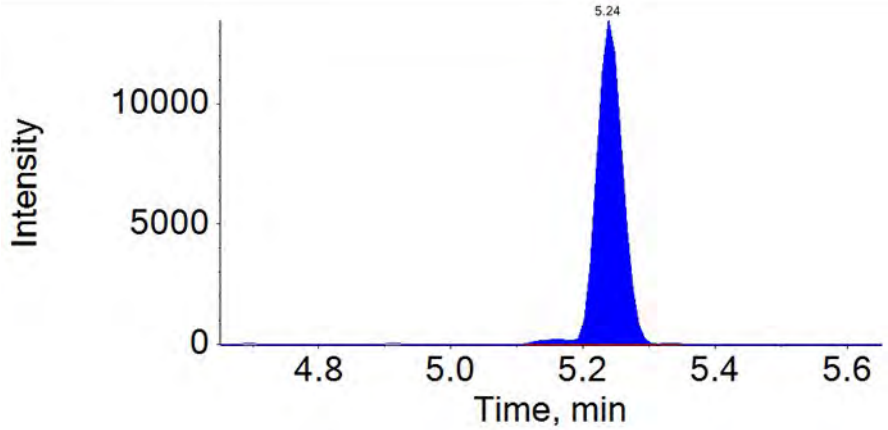
Auto Integrations prior to Manual Integration

Print Date: 11/30/2018 10:05 PM
Template: MQ-OrigInteg-16NOV21.docx

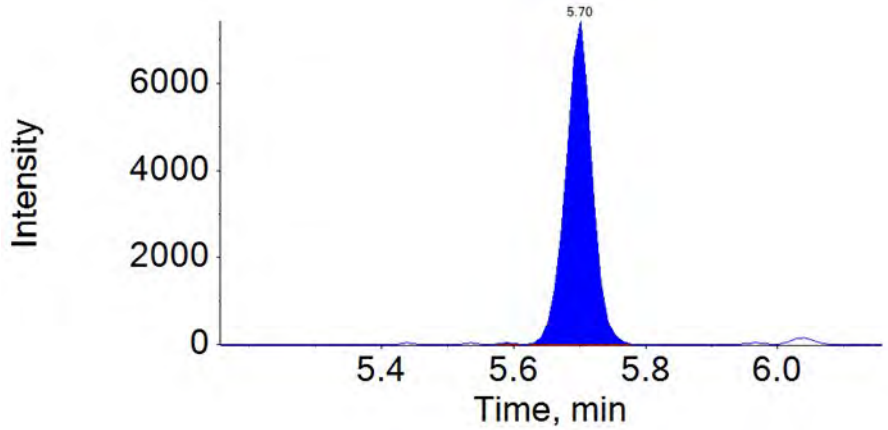
Results Table Name: 18332003
Results Table Date: 11/30/2018 9:58:40 PM
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

Component Name:
PFOS
RT (min.):
5.24
Peak Area:
37087.7
Mass Range:
499.0 / 80.0
File Name:
18NOV29D-56.wiff
Sample Name:
LCS332003



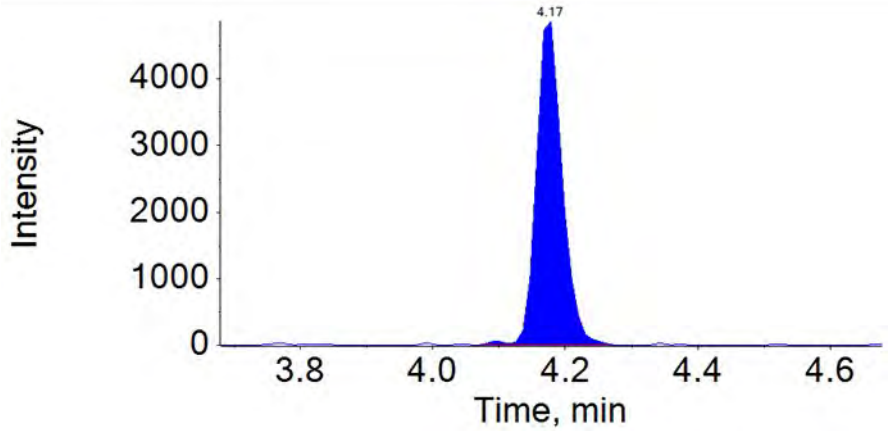
Integration Comment: incorrect integration

Component Name:
NMeFOSAA
RT (min.):
5.70
Peak Area:
20685.4
Mass Range:
570.0 / 419.0
File Name:
18NOV29D-56.wiff
Sample Name:
LCS332003



Integration Comment: incorrect integration

Component Name:
PFPeS_2
RT (min.):
4.17
Peak Area:
13270.2
Mass Range:
349.0 / 99.0
File Name:
18NOV29D-56.wiff
Sample Name:
LCS332003



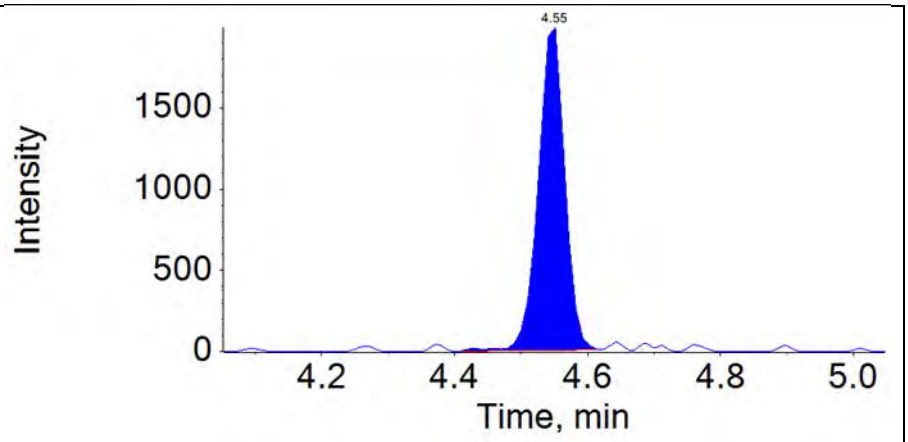
Integration Comment: incorrect integration

APPROVED
By MCD at 10:13 pm, 11/30/18

REVIEWED
By HMK at 2:27 pm, 12/6/18

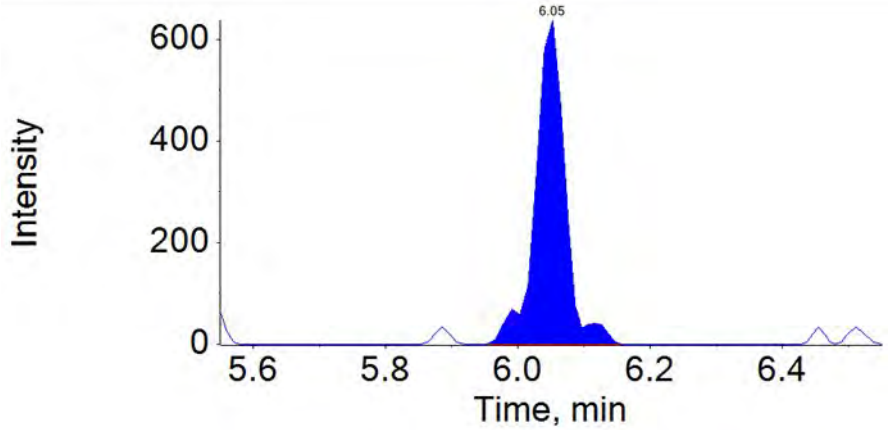
Results Table Name: 18332003
Results Table Date: 11/30/2018 9:58:40 PM
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

Component Name:
PFHpA_2
RT (min.):
4.55
Peak Area:
5542.7
Mass Range:
363.0 / 169.0
File Name:
18NOV29D-56.wiff
Sample Name:
LCS332003



Integration Comment: incorrect integration

Component Name:
PFDoDA_2
RT (min.):
6.05
Peak Area:
2003.3
Mass Range:
613.0 / 169.0
File Name:
18NOV29D-56.wiff
Sample Name:
LCS332003



Integration Comment: incorrect integration

Results Table Name: 18332003
Results Table Date: 11/30/2018 9:58:40 PM

Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

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By MCD at 10:13 pm, 11/30/18

REVIEWED
By HMK at 2:27 pm, 12/6/18

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LC-MS/MS Analysis Report

Printed: 11/30/2018 10:02:00 PM
Template: IonRatio18OCT10

Ion Ratio Report

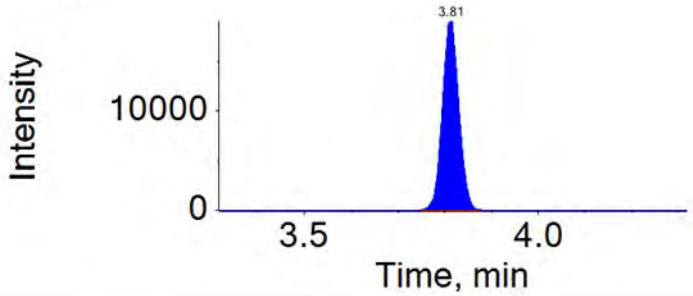
Sample Name: LCS332003 **Instrument Name:** LM27631 **File Name:** 18NOV29D-56.wiff

Component Name	RT	RRT	Analyte Area Response	Int Typ	Expected Ion Ratio	Ion Ratio	Ion Ratio % Diff	Ion Ratio Limit	Ion Ratio OOS
PFBS	3.81	1.00	47400.8	A	N/A	0.3586			
PFBS_2	3.81	1.00	16997.3	A	N/A	0.3586	-2	50	
4:2-FTS	4.12	1.00	44925.4	A	N/A	0.6447			
4:2-FTS_2	4.12	1.00	28964.9	A	N/A	0.6447	1	50	
PFHxA	4.15	1.00	108517.0	A	N/A	0.0183			
PFHxA_2	4.16	1.00	1982.3	A	N/A	0.0183	77	50	OOS
PFPeS	4.18	1.10	25275.2	A	N/A	0.5216			
PFPeS_2	4.17	1.10	13184.7	M	N/A	0.5216	5	50	
PFHpA	4.54	1.00	111132.4	A	N/A	0.0494			
PFHpA_2	4.55	1.00	5494.8	M	N/A	0.0494	-11	50	
PFHxS	4.54	1.00	38520.3	A	N/A	0.3690			
PFHxS_2	4.55	1.00	14213.1	A	N/A	0.3690	0	50	
6:2-FTS	4.90	1.00	43250.5	A	N/A	0.6442			
6:2-FTS_2	4.90	1.00	27861.0	A	N/A	0.6442	-3	50	
PFHpS	4.91	1.08	39014.5	A	N/A	0.3626			
PFHpS_2	4.90	1.08	14147.9	A	N/A	0.3626	-7	50	
PFOA	4.91	1.00	111412.0	A	N/A	0.0686			
PFOA_2	4.91	1.00	7643.3	A	N/A	0.0686	20	50	
PFOS	5.24	1.00	36350.5	M	N/A	0.3412			
PFOS_2	5.24	1.00	12401.6	A	N/A	0.3412	15	50	
PFNA	5.26	1.00	107498.4	A	N/A	0.0199			
PFNA_2	5.26	1.00	2137.9	A	N/A	0.0199	-1	50	
PFNS	5.53	1.06	25510.1	A	N/A	0.3980			
PFNS_2	5.54	1.06	10154.2	A	N/A	0.3980	-17	50	
PFDA	5.56	1.00	91367.7	A	N/A	0.0045			
PFDA_2	5.55	1.00	409.3	A	N/A	0.0045	-40	50	
8:2-FTS	5.56	1.00	47406.4	A	N/A	0.5834			
8:2-FTS_2	5.56	1.00	27658.0	A	N/A	0.5834	8	50	
NMeFOSAA	5.70	1.00	20635.0	M	N/A	0.2227			
NMeFOSAA_2	5.70	1.00	4596.1	A	N/A	0.2227	-3	50	
PFDS	5.79	1.10	22691.0	A	N/A	0.4089			
PFDS_2	5.79	1.10	9278.1	A	N/A	0.4089	-24	50	
PFUnDA	5.81	1.00	109727.5	A	N/A	0.0036			
PFUnDA_2	5.82	1.00	389.8	A	N/A	0.0036	-7	50	
NEtFOSAA	5.83	1.00	18556.9	A	N/A	0.5890			
NEtFOSAA_2	5.83	1.00	10930.7	A	N/A	0.5890	-20	50	
PFDoDA	6.04	1.00	127385.4	A	N/A	0.0150			
PFDoDA_2	6.05	1.00	1913.0	M	N/A	0.0150	15	50	
10:2-FTS	6.06	1.09	43892.0	A	N/A	0.7222			
10:2-FTS_2	6.06	1.09	31697.5	A	N/A	0.7222	3	50	
PFTrDA	6.24	1.03	125876.8	A	N/A	0.0108			
PFTrDA_2	6.25	1.03	1361.5	A	N/A	0.0108	20	50	
PFTeDA	6.42	1.00	91923.0	A	N/A	0.0066			
PFTeDA_2	6.41	1.00	603.6	A	N/A	0.0066	17	50	
PFHxDA	6.72	1.05	44242.6	A	N/A	0.0632			
PFHxDA_2	6.72	1.05	2795.6	A	N/A	0.0632	-2	50	
PFODA	6.99	1.09	24810.3	A	N/A	0.0237			
PFODA_2	6.98	1.09	588.6	A	N/A	0.0237	-10	50	

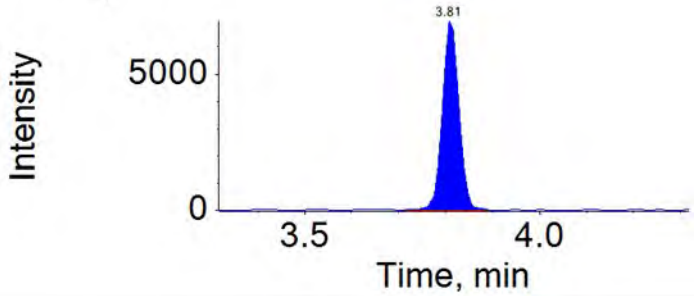
APPROVED
By MCD at 10:13 pm, 11/30/18

REVIEWED
By HMK at 2:27 pm, 12/6/18

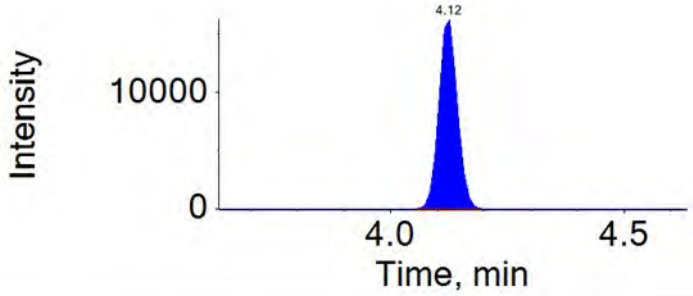
Component: PFBS
Primary Mass: 299.0 / 80.0



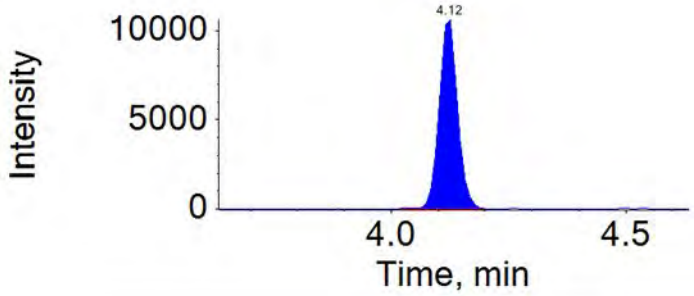
Component: PFBS_2
Secondary Mass: 299.0 / 99.0



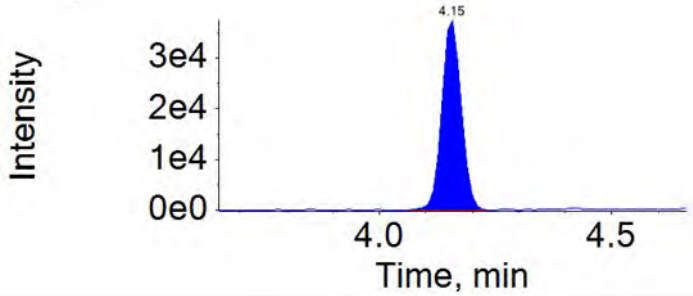
Component: 4:2-FTS
Primary Mass: 327.0 / 307.0



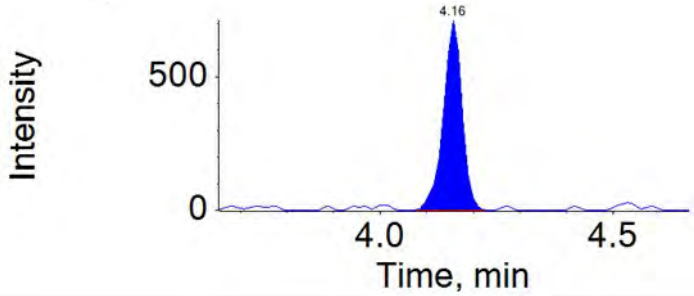
Component: 4:2-FTS_2
Secondary Mass: 327.0 / 81.0



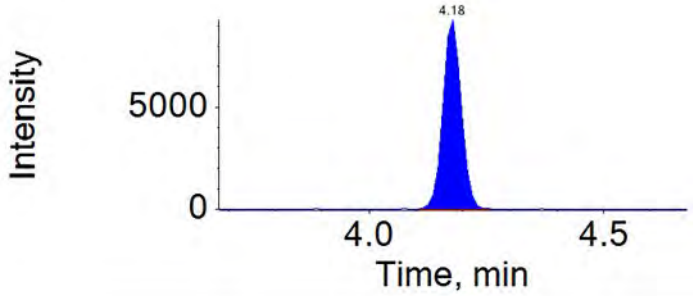
Component: PFHxA
Primary Mass: 313.0 / 269.0



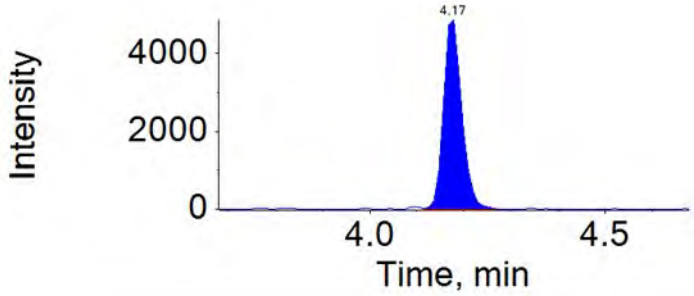
Component: PFHxA_2
Secondary Mass: 313.0 / 119.0



Component: PFPeS
Primary Mass: 349.0 / 80.0



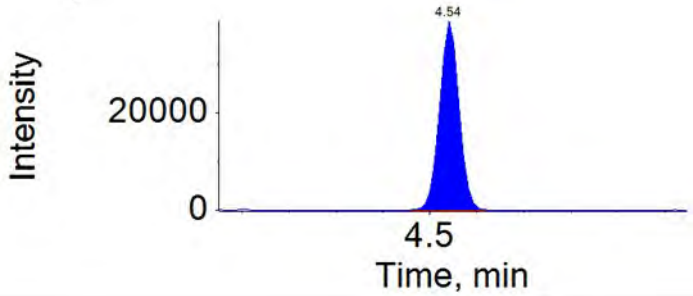
Component: PFPeS_2
Secondary Mass: 349.0 / 99.0



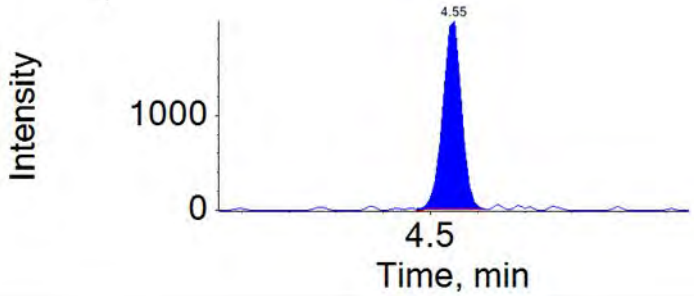
APPROVED
By MCD at 10:13 pm, 11/30/18

REVIEWED
By HMK at 2:27 pm, 12/6/18

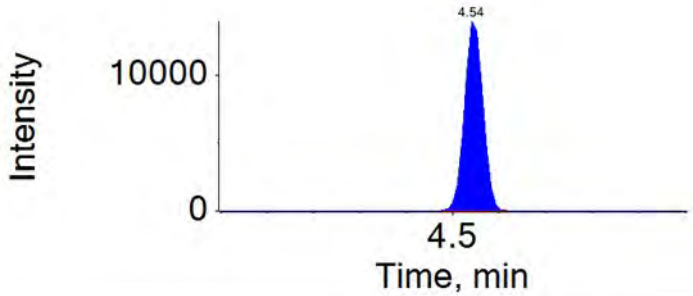
Component: PFHpA
Primary Mass: 363.0 / 319.0



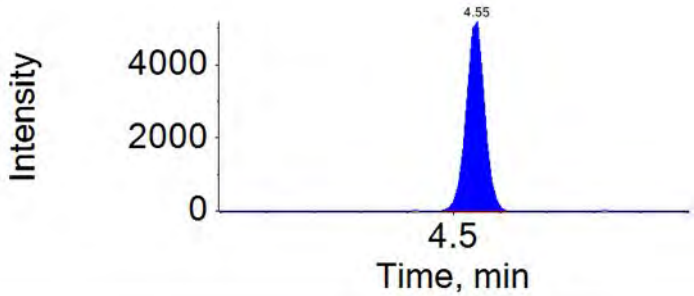
Component: PFHpA_2
Secondary Mass: 363.0 / 169.0



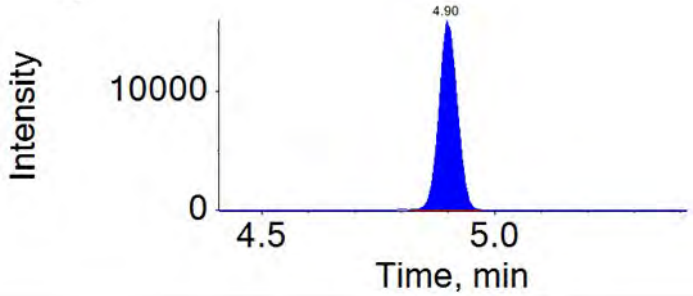
Component: PFHxS
Primary Mass: 399.0 / 80.0



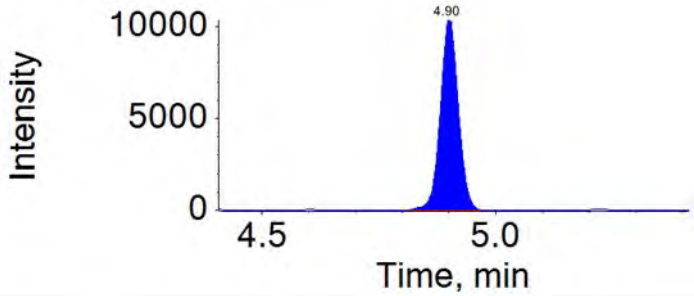
Component: PFHxS_2
Secondary Mass: 399.0 / 99.0



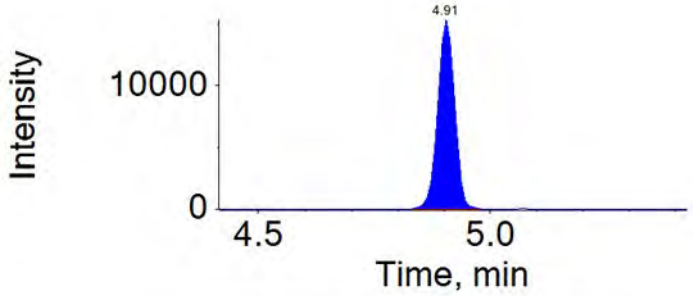
Component: 6:2-FTS
Primary Mass: 427.0 / 407.0



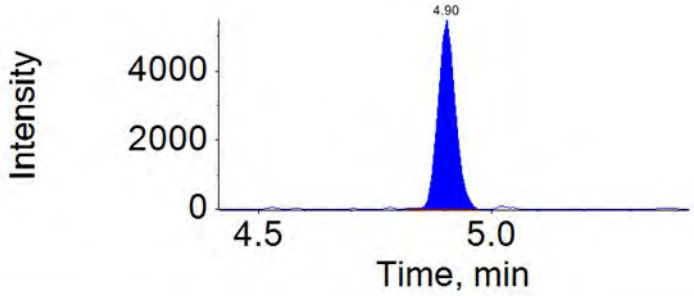
Component: 6:2-FTS_2
Secondary Mass: 427.0 / 81.0



Component: PFHpS
Primary Mass: 449.0 / 80.0



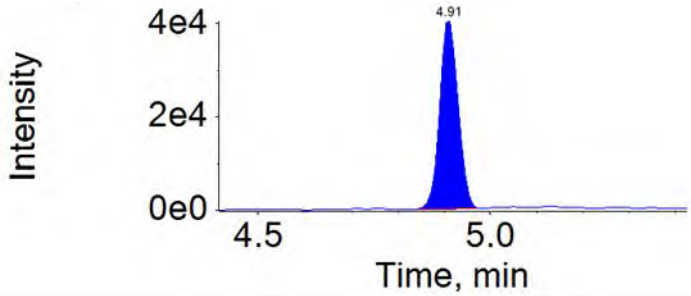
Component: PFHpS_2
Secondary Mass: 449.0 / 99.0



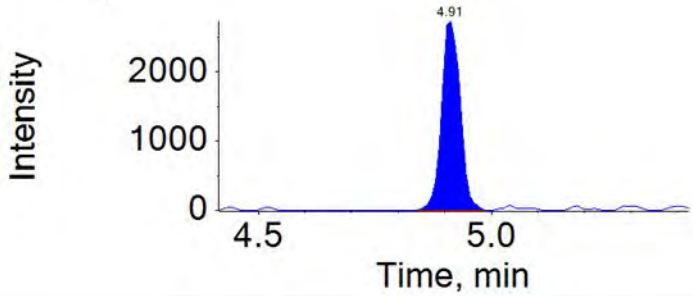
APPROVED
By MCD at 10:13 pm, 11/30/18

REVIEWED
By HMK at 2:27 pm, 12/6/18

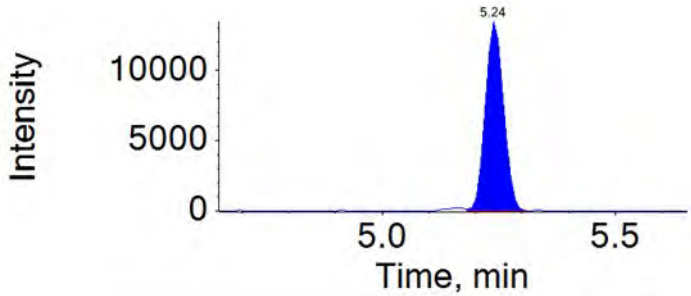
Component: PFOA
Primary Mass: 413.0 / 369.0



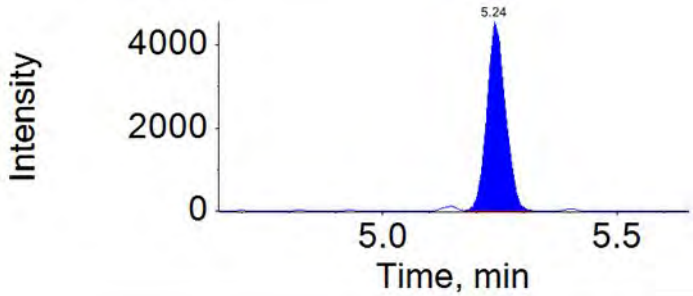
Component: PFOA_2
Secondary Mass: 413.0 / 169.0



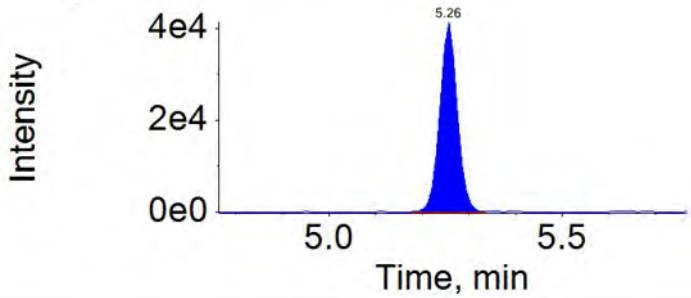
Component: PFOS
Primary Mass: 499.0 / 80.0



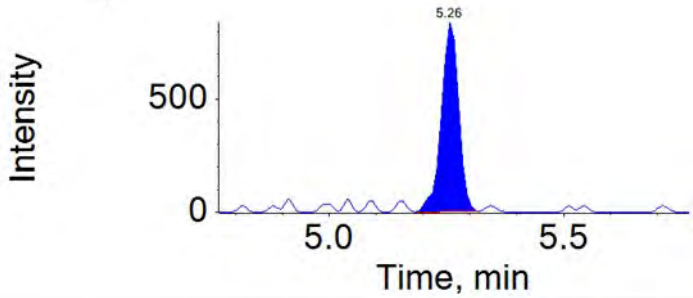
Component: PFOS_2
Secondary Mass: 499.0 / 99.0



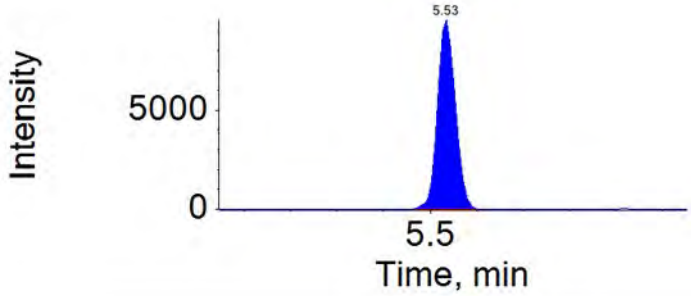
Component: PFNA
Primary Mass: 463.0 / 419.0



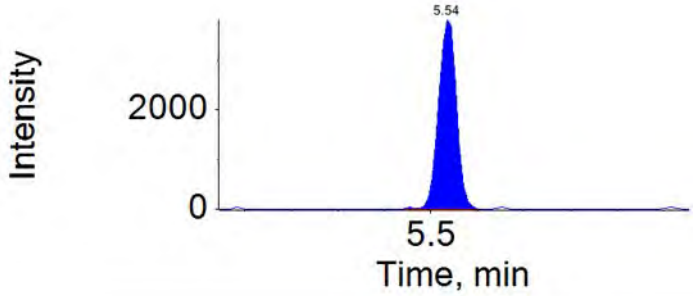
Component: PFNA_2
Secondary Mass: 463.0 / 169.0



Component: PFNS
Primary Mass: 549.0 / 80.0



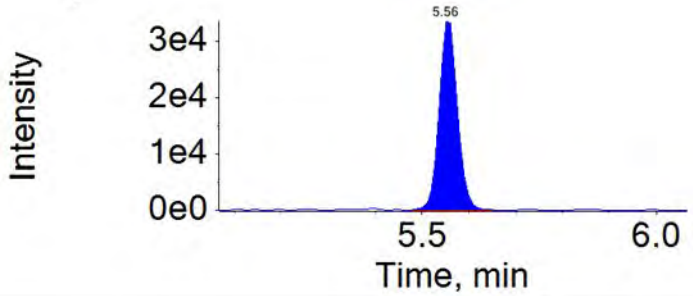
Component: PFNS_2
Secondary Mass: 549.0 / 99.0



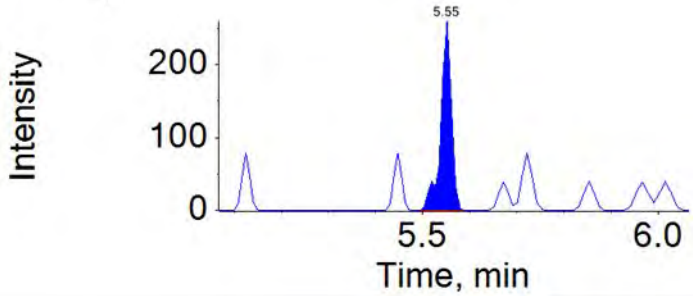
APPROVED
By MCD at 10:13 pm, 11/30/18

REVIEWED
By HMK at 2:27 pm, 12/6/18

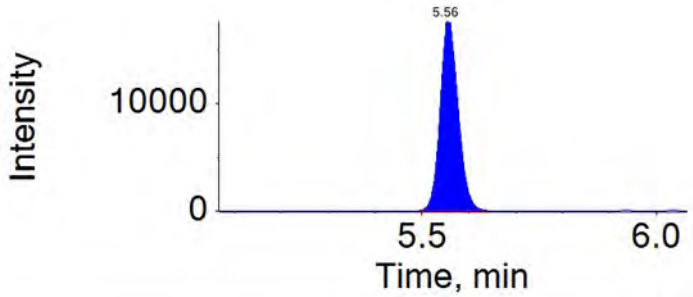
Component: PFDA
Primary Mass: 513.0 / 469.0



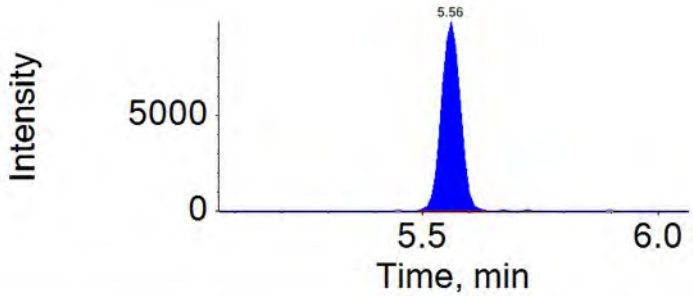
Component: PFDA_2
Secondary Mass: 513.0 / 169.0



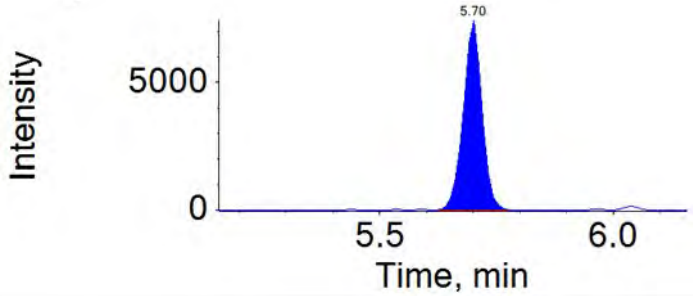
Component: 8:2-FTS
Primary Mass: 527.0 / 507.0



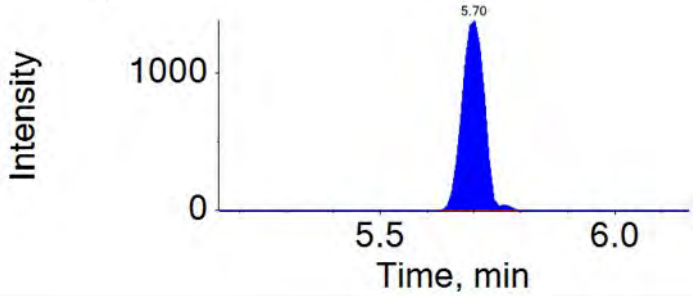
Component: 8:2-FTS_2
Secondary Mass: 527.0 / 81.0



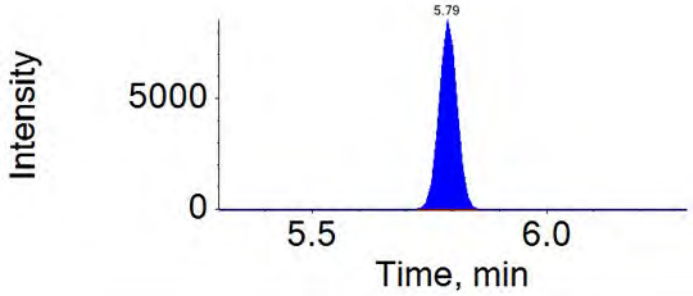
Component: NMeFOSAA
Primary Mass: 570.0 / 419.0



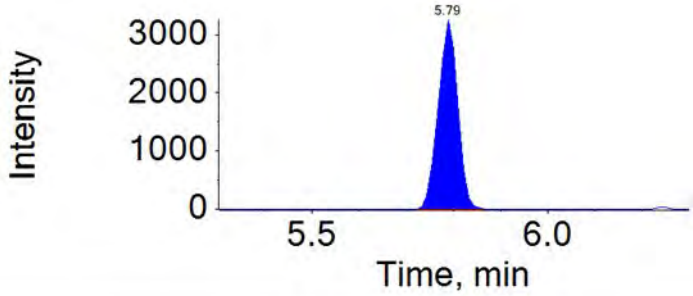
Component: NMeFOSAA_2
Secondary Mass: 570.0 / 483.0



Component: PFDS
Primary Mass: 599.0 / 80.0



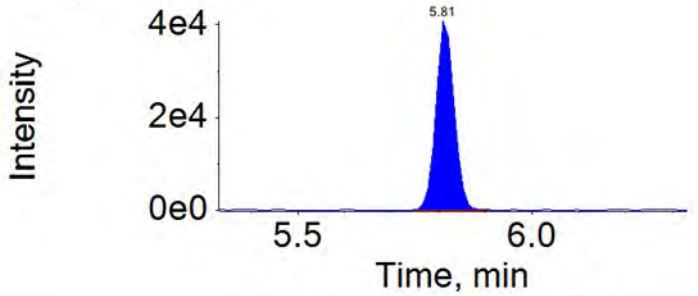
Component: PFDS_2
Secondary Mass: 599.0 / 99.0



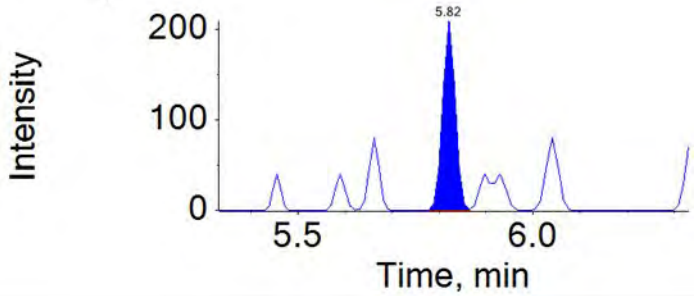
APPROVED
By MCD at 10:13 pm, 11/30/18

REVIEWED
By HMK at 2:27 pm, 12/6/18

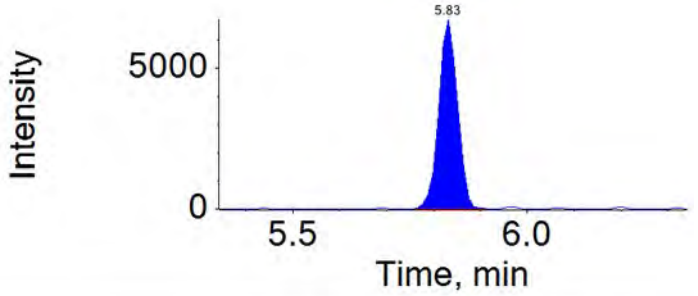
Component: PFUnDA
Primary Mass: 563.0 / 519.0



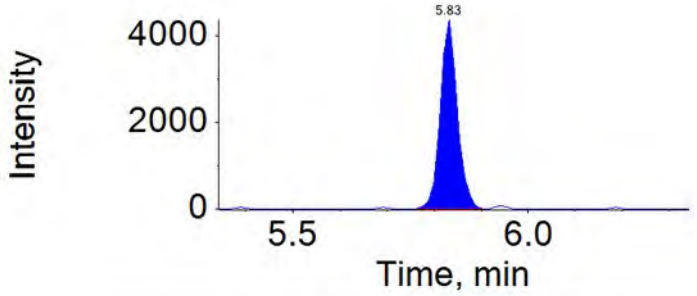
Component: PFUnDA_2
Secondary Mass: 563.0 / 169.0



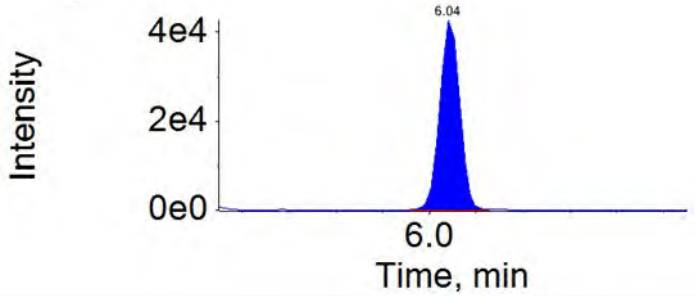
Component: NEtFOSAA
Primary Mass: 584.0 / 419.0



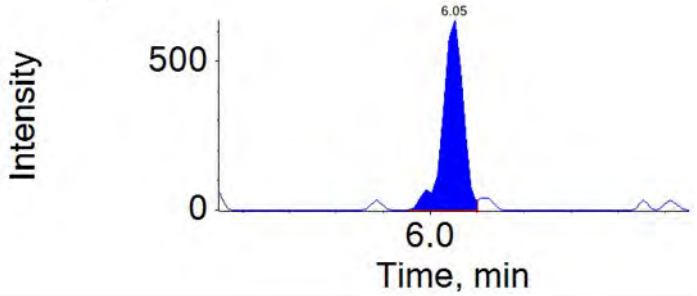
Component: NEtFOSAA_2
Secondary Mass: 584.0 / 526.0



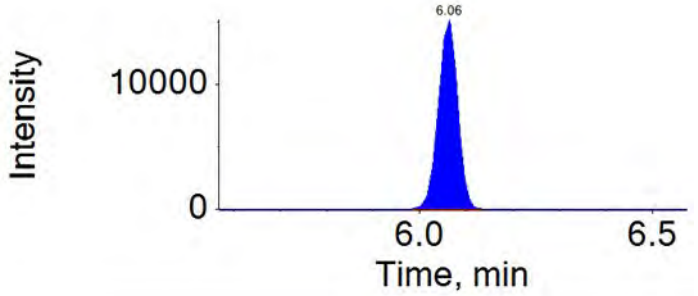
Component: PFDoDA
Primary Mass: 613.0 / 569.0



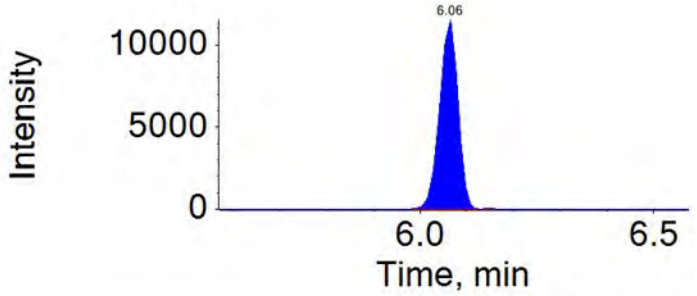
Component: PFDoDA_2
Secondary Mass: 613.0 / 169.0



Component: 10:2-FTS
Primary Mass: 627.0 / 607.0



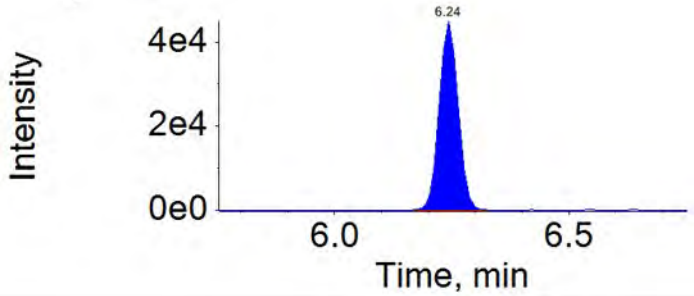
Component: 10:2-FTS_2
Secondary Mass: 627.0 / 81.0



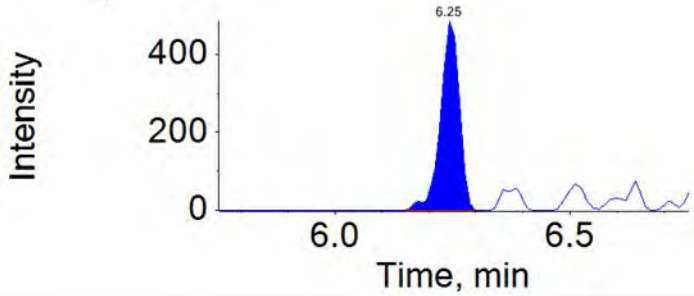
APPROVED
By MCD at 10:13 pm, 11/30/18

REVIEWED
By HMK at 2:27 pm, 12/6/18

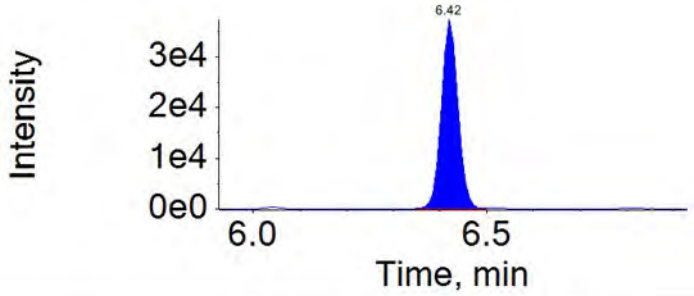
Component: PFTrDA
Primary Mass: 663.0 / 619.0



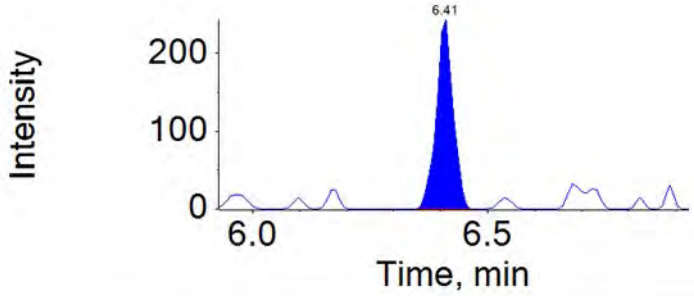
Component: PFTrDA_2
Secondary Mass: 663.0 / 169.0



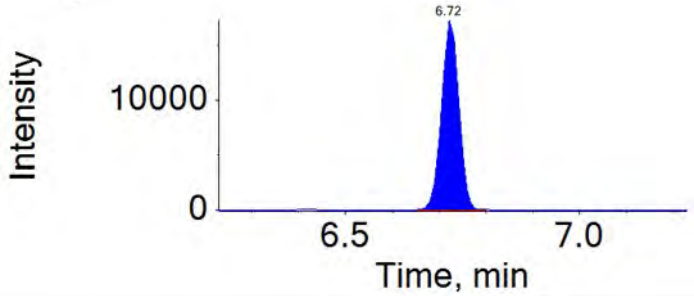
Component: PFTeDA
Primary Mass: 713.0 / 669.0



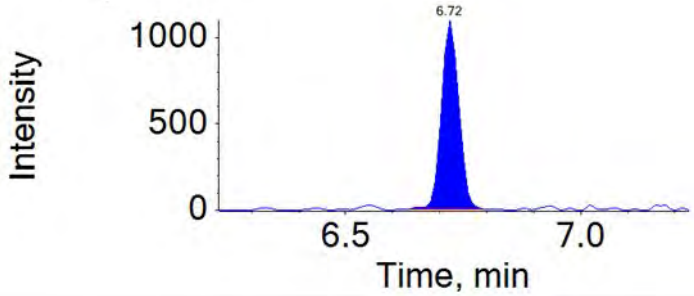
Component: PFTeDA_2
Secondary Mass: 713.0 / 169.0



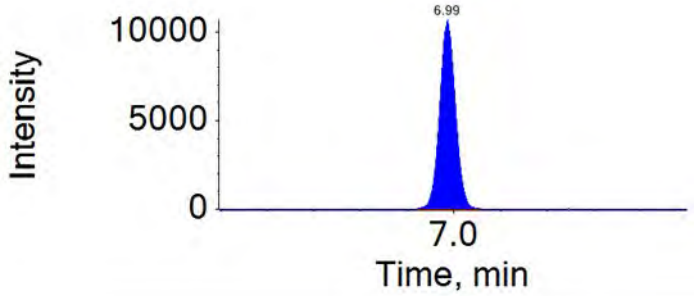
Component: PFHxDA
Primary Mass: 813.0 / 769.0



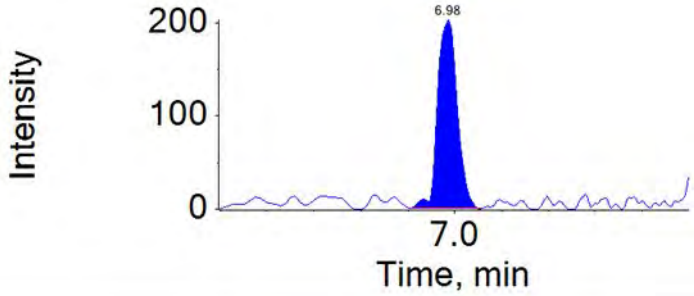
Component: PFHxDA_2
Secondary Mass: 813.0 / 169.0



Component: PFODA
Primary Mass: 913.0 / 869.0



Component: PFODA_2
Secondary Mass: 913.0 / 169.0



APPROVED
By MCD at 10:13 pm, 11/30/18

REVIEWED
By HMK at 2:27 pm, 12/6/18

Preparation Logs

PFAS by LC/MS/MS

Organic Extraction Batchlog Assigned to: 12698 Courtney Fatta Reviewed by: MCD 78291 Start Date: 11/12/18 Start time: 9:50

18316011 Tech 1: CF12698 Tech 2: —

Analyses on Batch: PFAS in Soil by LC/MS/MS-DoD

mL CF12698 11/12/18

Dept: 33 Prep Analysis: 14510 PFAS Solid Prep - DoD

Port #	QC	Sample Code	Amt (g)	SS/IS Sol.	Amt (mL)	MS Sol.	Amt (mL)	FV ~~(uL)~~ (3)	IS Amt (uL)	BC	Comments
	9885087MS	82212	1.09	SSMODX1833CA	.05	MSMODX1833AQ	.04	1.0	20	170A	
	9885088MSD	82212	1.03	SSMODX1833CA	.05	MSMODX1833AQ	.04	1.0		170A	
	BLANKA	BLK316011	1.0	SSMODX1833CA	.05	N/A	N/A	1.0		Z	
	LCSA	LCS316011	1.0	SSMODX1833CA	.05	MSMODX1833AQ	.04	1.0			

Spike Solutions: Witness: PJR9213 Instrument: LM27631

MSMODX1833AQ PFAS 537 Native Spike

SSMODX1833CA PFAS 537 Modified Extraction/Surrogate Spik Sequence: 18NOV12D00/ 18NOV13D

(3) mL

Port#		Sample #	Sample Code	Amt (g)	SS/IS Sol.	Amt (mL)	FV ~~(uL)~~	IS Amt (uL)	BC	Comments	Analyses	Due	Pri
	1	9885080 R	82206	1.05	SSMODX1833CA	.05	1.0	20	170a		14478	11/15/2018	N
	2	9885081 R	82207	1.08	SSMODX1833CA	.05	1.0		170a		14478	11/15/2018	N
	3	9885082 R	82208	1.04	SSMODX1833CA	.05	1.0		170a		14478	11/15/2018	N
	4	9885085 R	82211	1.01	SSMODX1833CA	.05	1.0		170a		14478	11/15/2018	N
	5	9885086 R	BKG 82212	1.06	SSMODX1833CA	.05	1.0		170a		14478	11/15/2018	N
	6	9885089 R	82213	1.06	SSMODX1833CA	.05	1.0		170a		14478	11/15/2018	N
	7	9885090 R	82214	1.06	SSMODX1833CA	.05	1.0		170a		14478	11/15/2018	N
	8	9885092 R	82216	1.04	SSMODX1833CA	.05	1.0		170a		14478	11/15/2018	N
	9	9885093 R	82217	1.09	SSMODX1833CA	.05	1.0		170a		14478	11/15/2018	N
	10	9885094 R	82218	1.06	SSMODX1833CA	.05	1.0		170a		14478	11/15/2018	N
	11	9885095 R	82219	1.08	SSMODX1833CA	.05	1.0		170a		14478	11/15/2018	N
	12	9885098 R	82222	1.06	SSMODX1833CA	.05	1.0		170a		14478	11/15/2018	N
	13	9885099 R	82223	1.07	SSMODX1833CA	.05	1.0		170a		14478	11/15/2018	N
	14	9885100 R	82224	1.10	SSMODX1833CA	.05	1.0		170a		14478	11/15/2018	N
	15	9885101 R	82225	1.07	SSMODX1833CA	.05	1.0		170a		14478	11/15/2018	N
	16	9885104 R	82228	1.05	SSMODX1833CA	.05	1.0		170a		14478	11/15/2018	N

18316011

Organic Extraction Batchlog **18316011**

Port#		Sample #	Sample Code	Amt (g)	SS/IS Sol.	Amt (mL)	FV ~~(uL)~~ (3) mL	IS Amt (uL)	BC	Comments	Analyses	Due	Pri
7	17	9885105 R	82229	1.03	SSMODX1833CA	.05	1.0	20	170a		14478	11/15/2018	N
	18	9885106 R	82230	1.03	SSMODX1833CA	.05	1.0	↓	170a		14478	11/15/2018	N
	19	9885118 R	82259	1.04	SSMODX1833CA	.05	1.0		170a		14478	11/15/2018	N
	20	9885119 R	82260	1.04	SSMODX1833CA	.05	1.0	↓	170a		14478	11/15/2018	N

Reagents used During Extraction

Reagent/Material/Equip	Lot No./ID No.
1:1 ACN:MEOH	176098111218 33A
Auto-pipette (dilutions)	—
Auto-pipette (extract vialin	P1000-1
Envi-Carb	107563
Internal Standard	IS1831133A
Methanol	DV013-US
Sand	MKBW7349V
Syringe (IS)	PFAS 11
Syringe (MS)	PFAS 10
Syringe (SS)	PFAS 13

NA MCD7824 11/14/18

Balance #	B629764122	Sonic Bath ID	3800A	N-evap	A	24°C	SPE Manifold	N/A

18316011

DF = Dilution Factor FV = Final Volume

Documented temps are NIST corrected.

NA MCD7824 11/14/18

Batch: 18316011 Page: 2 Date: 11/14/2018 1:49:05 PM

Organic Extraction Batchlog Assigned to: 26543 Anthony Polaski Reviewed by: MCD7824 Start Date: 11/12/18 Start time: 16:00

18316029 Tech 1: ACP26543 Tech 2: —

Analyses on Batch: PFAS in Soil by LC/MS/MS-DoD

Dept: 33 Prep Analysis: 14510 PFAS Solid Prep - DoD (3) ml. ACP26543 11/12/18

Port #	QC	Sample Code	Amt (g)	SS/IS Sol.	Amt (mL)	MS Sol.	Amt (mL)	FV (3) ~~(uL)~~	IS Amt (uL)	BC	Comments
	9885162MS	22224	1.06	SSMODX1833CA	.05	MSMODX1833AQ	.04	1ml.	20	170a	
	9885163MSD	22224	1.03	SSMODX1833CA	.05	MSMODX1833AQ	.04	1ml.	↓	170a	
	BLANKA	BLK316029	1.00	SSMODX1833CA	.05	N/A	N/A	1ml.	↓		
	LCSA	LCS316029	↓	SSMODX1833CA	.05	MSMODX1833AQ	.04	1ml.	↓		

Spike Solutions: Witness: DOM25478 Instrument: LM27631

MSMODX1833AQ PFAS 537 Native Spike

SSMODX1833CA PFAS 537 Modified Extraction/Surrogate Spik Sequence: 18NOV12DOD/18NOV13D

Port#		Sample #	Sample Code	Amt (g)	SS/IS Sol.	Amt (mL)	FV (3) ~~(uL)~~	IS Amt (uL)	BC	Comments	Analyses	Due	Pri
	1	9885078 R	82204	1.02	SSMODX1833CA	.05	1ml.	20	170a		14478	11/15/2018	N
	2	9885160 R	22223	1.10	SSMODX1833CA	.05	1ml.	↓	170a		14478	11/15/2018	N
	3	9885161 R	BKG 22224	1.09	SSMODX1833CA	.05	1ml.	↓	170a		14478	11/15/2018	N
	4	9885164 R	22227	1.02	SSMODX1833CA	.05	1ml.	↓	170a		14478	11/15/2018	N
	5	9885165 R	22228	1.03	SSMODX1833CA	.05	1ml.	↓	170a		14478	11/15/2018	N

BS 5 | Page 1950 of 1956

NA MCD7824 11/14/18

18316029

Organic Extraction Batchlog **18316029**

Port#	Sample #	Sample Code	Amt ( )	SS/IS Sol.	Amt (mL)	FV (uL)	IS Amt (uL)	BC	Comments	Analyses	Due	Pri

Reagents used During Extraction

Reagent/Material/Equip	Lot No./ID No.
1:1 ACN:MEOH	375111 21833B
Auto-pipette (dilutions)	—
Auto-pipette (extract vialin	P1000-1
Envi-Carb	97224
Internal Standard	IS18311 33A
Methanol	DV013-05
Sand	MKBW7349V
Syringe (IS)	PFAS 11
Syringe (MS)	PFAS 10
Syringe (SS)	PFAS 13

NA MCD7824 11/4/18

ACP26543 11/12/18

Balance #	B629764122	Sonic Bath ID	3800 A	N-evap A	33C	SPE Manifold	NA

18316029

DF = Dilution Factor FV = Final Volume

Documented temps are NIST corrected.

NA MCD 7824 11/4/18

Page 1951 of 1956

Organic Extraction Batchlog

18332003

Assigned to: 12698 Courtney Fatta

Reviewed by: MCD7824

Start Date: 11/28/18

Start time: 9:45

Tech 1: CF12698

Tech 2: —

Analyses on Batch: PFAS in Soil by LC/MS/MS-DoD

mL CF12698 11/28/18

Dept: 33 Prep Analysis: 14510 PFAS Solid Prep - DoD

Port #	QC	Sample Code	Amt (g)	SS/IS Sol.	Amt (mL)	MS Sol.	Amt (mL)	FV ~~(uL)~~ (3)	IS Amt (uL)	BC	Comments
	9883383MS	SI113	1.10	SSMODX1833CE	.05	MSMODX1833AU	.04	1.0	20	170A	pebbles
	9883384MSD	SI113	1.07	SSMODX1833CE	.05	MSMODX1833AU	.04	1.0		170A	pebbles
	BLANKA	BLK332003	1.0	SSMODX1833CE	.05	N/A	N/A	1.0		Z	
	LCSA	LCS332003	1.0	SSMODX1833CE	.05	MSMODX1833AU	.04	1.0			

Spike Solutions: Witness: PJR9213 Instrument: LM27631

MSMODX1833AU PFAS 537 Native Spike Sequence: 18NOV28DOD/18NOV29D

SSMODX1833CE PFAS 537 Modified Extraction/Surrogate Spik (3) mL

Port#		Sample #	Sample Code	Amt (g)	SS/IS Sol.	Amt (mL)	FV ~~(uL)~~	IS Amt (uL)	BC	Comments	Analyses	Due	Pri
	1	9881542	MCLB7	1.02	SSMODX1833CE	.05	1.0	20	170a		14478	12/06/2018	N
	2	9881543	MCLB8	1.04	SSMODX1833CE	.05	1.0		170a		14478	12/06/2018	N
	3	9883382	BKG SI113	1.05	SSMODX1833CE	.05	1.0		170a	pebbles	14478	12/06/2018	N
	4	9883385	SI114	1.01	SSMODX1833CE	.05	1.0		170a	pebbles	14478	12/06/2018	N
	5	9883396	I1115	1.05	SSMODX1833CE	.05	1.0		170a		14478	12/06/2018	N
	6	9883397	I1116	1.08	SSMODX1833CE	.05	1.0		170a		14478	12/06/2018	N
	7	9885076	22050	1.07	SSMODX1833CE	.05	1.0		170a	Sand	14478	12/06/2018	N
	8	9885077	22051	1.07	SSMODX1833CE	.05	1.0		170a	Sand	14478	12/06/2018	N
	9	9885091	82215	1.10	SSMODX1833CE	.05	1.0		170a		14478	12/06/2018	N
	10	9885133	82274	1.04	SSMODX1833CE	.05	1.0		170a	Sand	14478	12/06/2018	N
	11	9885134	82275	1.02	SSMODX1833CE	.05	1.0		170a	Sand	14478	12/06/2018	N
	12	9885151	82292	1.03	SSMODX1833CE	.05	1.0		170a		14478	12/06/2018	N

MA MCD7824 11/30/18

18332003

BSI-05 Page 1952 of 1956

O anic Extraction Batchlog **18332003**

Port#	Sample #	Sample Code	Amt ( )	SS/IS Sol.	Amt (mL)	FV (uL)	IS Amt (uL)	BC	Comments	Analyses	Due	Pri

Reagents used During Extraction

Reagent/Material/Equip	Lot No./ID No.
1:1 ACN:MEOH	172698 112718 33A
Auto-pipette (dilutions)	—
Auto-pipette (extract vialin	P1000-3
Envi-Carb	107563
Internal Standard	IS18331337A
Methanol	DV136-US
Sand	MKBW7349V
Syringe (IS)	PFAS 11
Syringe (MS)	PFAS 10
Syringe (SS)	PFAS 13

NA MCD7824 11/30/18

Balance #	B629764122	Sonic Bath ID	3800 A	N-evap	A	30°C	SPE Manifold	N/A

CF12698 11/28/18

18332003

= Dilution Factor FV = Final Volume

Documented temps are NIST corrected.

NA MCD7824 11/30/18

Moisture Data

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CLIENT: **Gutierrez Canales Engineering**
SDG: BSI15

MOISTURE

SAMPLE NUMBERS:

Sample #	Sample Code
9885078	82204
9885080	82206
9885081	82207
9885082	82208
9885085	82211
9885086	82212BKG
9885087	82212MS
9885088	82212MSD
9885089	82213
9885090	82214
9885091	82215
9885092	82216
9885093	82217
9885094	82218
9885095	82219
9885098	82222
9885099	82223
9885100	82224
9885101	82225
9885104	82228
9885105	82229
9885106	82230

COMMENTS:

Method defined actions are taken for any failed matrix QC.

Laboratory Compliance Quality Control

Analysis Name	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Batch number: 18313820006A	Sample number(s): 9885078, 9885080-9885082, 9885085-9885090, 9885092-9885095				
Moisture	100		99-101		
Moisture	100		99-101		
Moisture Duplicate	100		99-101		
Batch number: 18313820006B	Sample number(s): 9885098-9885101, 9885104-9885106				
Moisture	100		99-101		
Batch number: 18337820002B	Sample number(s): 9885091				
Moisture	100		99-101		

eurofins | Lancaster Laboratories Environmental

CLIENT: Gutierrez Canales Engineering
SDG: BSI15

MOISTURE

Sample Matrix Quality Control

Analysis Name	BKG Conc	DUP Conc	RPD	RPD Max
Batch number: 18313820006A	Sample number(s):	9885078, 9885080-9885082, 9885085-9885090, 9885092-9885095		
Moisture	4.9	5.1	5	5
Moisture	4.9	5.1	5	5
Moisture Duplicate	4.9	5.1	5	5
Batch number: 18313820006B	Sample number(s):	9885098-9885101, 9885104-9885106		
Moisture	17.8	17.1	4	5
Batch number: 18337820002B	Sample number(s):	9885091		
Moisture	0.77	0.74	3 (1)	5

* - Outside of specification
(1) - The result for one or both determinations was less than five times the LOQ.

Moisture Data Report

Batch #: 18313820006

Sample ID	Batch ID	Analysis#	Tare Wt	Sample Wt	Dry Wt	%Moisture	Analysis Date (Emp#)	Verified Date (Emp#)
9885078	A	00111	1.0823	5.7351	6.6238	3.38	11/ 9/18 (835/LEB)	11/12/18 (236/CW)
9885080	A	00111	1.0943	5.6333	6.5058	3.94	11/ 9/18 (835/LEB)	11/12/18 (236/CW)
9885081	A	00111	1.0961	5.6059	6.5443	2.81	11/ 9/18 (835/LEB)	11/12/18 (236/CW)
9885082	A	00111	1.0800	5.1809	6.0739	3.61	11/ 9/18 (835/LEB)	11/12/18 (236/CW)
9885085	A	00111	1.0708	5.3701	6.1678	5.09	11/ 9/18 (835/LEB)	11/12/18 (236/CW)
9885086BKG	A	00111	1.0688	5.2243	6.0383	4.88	11/ 9/18 (835/LEB)	11/12/18 (236/CW)
9885087MS	A	00118				4.88	11/ 9/18 (835/LEB)	11/12/18 (236/CW)
9885088MSD	A	00118				4.88	11/ 9/18 (835/LEB)	11/12/18 (236/CW)
9885088MSD	A	00121	1.0514	5.2643	6.0468	5.11	11/ 9/18 (835/LEB)	11/12/18 (236/CW)
9885089	A	00111	1.0677	5.7485	6.5014	5.48	11/ 9/18 (835/LEB)	11/12/18 (236/CW)
9885090	A	00111	1.0847	5.4471	6.2197	5.73	11/ 9/18 (835/LEB)	11/12/18 (236/CW)
9885092	A	00111	1.0735	5.4399	6.1894	5.96	11/ 9/18 (835/LEB)	11/12/18 (236/CW)
9885093	A	00111	1.0613	5.3272	6.2456	2.68	11/ 9/18 (835/LEB)	11/12/18 (236/CW)
9885094	A	00111	1.0697	5.8759	6.5970	5.93	11/ 9/18 (835/LEB)	11/12/18 (236/CW)
9885095	A	00111	1.0655	5.6501	6.5553	2.84	11/ 9/18 (835/LEB)	11/12/18 (236/CW)
9885098	B	00111	1.0758	5.8947	6.5951	6.37	11/ 9/18 (835/LEB)	11/12/18 (236/CW)
9885099	B	00111	1.0911	5.5039	6.4481	2.67	11/ 9/18 (835/LEB)	11/12/18 (236/CW)
9885100	B	00111	1.0760	5.4089	6.3797	1.94	11/ 9/18 (835/LEB)	11/12/18 (236/CW)
9885101	B	00111	1.0741	5.5633	6.2818	6.39	11/ 9/18 (835/LEB)	11/12/18 (236/CW)
9885104	B	00111	1.0857	5.3884	6.2248	4.63	11/ 9/18 (835/LEB)	11/12/18 (236/CW)
9885105	B	00111	1.0796	5.6227	6.4157	5.10	11/ 9/18 (835/LEB)	11/12/18 (236/CW)
9885106	B	00111	1.0793	5.3628	6.3412	1.88	11/ 9/18 (835/LEB)	11/12/18 (236/CW)
P888087BKG	B	00111	1.0764	1.6418	2.4266	17.76	11/ 9/18 (835/LEB)	11/12/18 (236/CW)
P888087DUP	B	00111	1.1630	1.5850	2.4777	17.05	11/ 9/18 (835/LEB)	11/12/18 (236/CW)
LCS 89.5% Std.		00111	1.0637	5.0149	1.5995	89.32	11/ 9/18 (835/LEB)	11/12/18 (236/CW)

Batch #: 18337820002

Sample ID	Batch ID	Analysis#	Tare Wt	Sample Wt	Dry Wt	%Moisture	Analysis Date (Emp#)	Verified Date (Emp#)
9885091	B	00111	1.0769	5.4835	6.1412	7.64	12/ 3/18 (835/LEB)	12/ 4/18 (236/CW)
P883382BKG	B	00111	1.0911	5.6597	6.7075	0.77	12/ 3/18 (835/LEB)	12/ 4/18 (236/CW)
P883382DUP	B	00111	1.0647	5.6624	6.6852	0.74	12/ 3/18 (835/LEB)	12/ 4/18 (236/CW)
LCS 89.5% Std.		00111	1.0740	5.0698	1.6127	89.37	12/ 3/18 (835/LEB)	12/ 4/18 (236/CW)

CONTRACT_ID DO_CTO_NUMBER PHASE INSTALLATION_ID SAMPLE_NAME
ANALYTICAL_METHOD LAB_NAME CONTRACTOR_NAME LEACHATE_METHOD
SAMPLE_BASIS EXTRACTION_METHOD RESULT_TYPE SAMPLE_MEDIUM CLEANUP_METHOD
QC_LEVEL LEACHATE_DATE LEACHATE_TIME EXTRACTION_DATE EXTRACTION_TIME
ANALYSIS_DATE ANALYSIS_TIME LAB_SAMPLE_ID LAB_REPORT_DATE LAB_REPORT_NUMBER
FILTER_SIZE DILUTION RUN_NUMBER PERCENT_MOISTURE PERCENT_LIPID
ANALYTE_ID ANALYTE_VALUE ORIGINAL_ANALYTE_VALUE RESULT_UNITS LAB_QUALIFIER
VALIDATOR_QUALIFIER FINAL_QUALIFIER DETECTED GC_COLUMN_TYPE
ANALYSIS_RESULT_TYPE RADIOLOGICAL_ERROR RESULT_NARRATIVE RETENTION_TIME
QC_CONTROL_LIMIT_CODE QC_ACCURACY_UPPER QC_ACCURACY_LOWER
CONTROL_LIMIT_DATE RELATIVE_PCT_DIFF QC_NARRATIVE MDL CDL IDL PQL
CRQL DETECTION_LIMIT VALIDATOR_DET_LIMIT VALIDATOR_MDL DL LOD LOQ SDG
LEACH_LOT METHOD_BATCH PREP_BATCH RUN_BATCH ANALYSIS_BATCH
VALIDATOR_NAME VALIDATION_QC VAL_DATE REPORTABLE_RESULT
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-Bldg2-S-01-08 Calculation
EUROFINS BRADY GCE II NONE Wet NONE 000 S UNK 20181109
10:40:00 9885078 20190118 2006158 0.00 1 1 3.4 -86 3.4 3.4 PCT Y
TRG 0.50 0.50 0.50 0.50 0.50
BSI15 18313820006A 18313820006A 18313820006A Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-Bldg2-S-01-08 537_MOD EUROFINS
BRADY GCE II NONE Dry METHOD 000 S UNK 20181112 16:00:00
20181113 23:24:00 9885078 20190118 2006158 0.00 1 1 3.4 335-67-1 0.69 0
NG_G U N TRG 0.20
0.20 0.20 0.69 0.81 BSI15 18316029 18316029 18316029 18316029
Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-Bldg2-S-01-08 537_MOD EUROFINS
BRADY GCE II NONE Dry METHOD 000 S UNK 20181112 16:00:00
20181113 23:24:00 9885078 20190118 2006158 0.00 1 1 3.4 375-95-1 0.69 0
NG_G U N TRG 0.20
0.20 0.20 0.69 0.81 BSI15 18316029 18316029 18316029 18316029
Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-Bldg2-S-01-08 537_MOD EUROFINS
BRADY GCE II NONE Dry METHOD 000 S UNK 20181112 16:00:00
20181113 23:24:00 9885078 20190118 2006158 0.00 1 1 3.4 335-76-2 0.69 0
NG_G U N TRG 0.30
0.30 0.30 0.69 1.0 BSI15 18316029 18316029 18316029 18316029
Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-Bldg2-S-01-08 537_MOD EUROFINS
BRADY GCE II NONE Dry METHOD 000 S UNK 20181112 16:00:00
20181113 23:24:00 9885078 20190118 2006158 0.00 1 1 3.4 2058-94-8 0.69 0
NG_G U N TRG 0.20
0.20 0.20 0.69 0.81 BSI15 18316029 18316029 18316029 18316029
Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-Bldg2-S-01-08 537_MOD EUROFINS
BRADY GCE II NONE Dry METHOD 000 S UNK 20181112 16:00:00
20181113 23:24:00 9885078 20190118 2006158 0.00 1 1 3.4 307-55-1 0.69 0
NG_G U N TRG 0.20
0.20 0.20 0.69 0.81 BSI15 18316029 18316029 18316029 18316029
Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-Bldg2-S-01-08 537_MOD EUROFINS
BRADY GCE II NONE Dry METHOD 000 S UNK 20181112 16:00:00
20181113 23:24:00 9885078 20190118 2006158 0.00 1 1 3.4 72629-94-8 0.69 0
NG_G U N TRG 0.20

0.20 0.20 0.69 0.81 BSI15 18316029 18316029 18316029 18316029
Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-Bldg2-S-01-08 537_MOD EUROFINS
BRADY GCE II NONE Dry METHOD 000 S UNK 20181112 16:00:00
20181113 23:24:00 9885078 20190118 2006158 0.00 1 1 3.4 376-06-7 0.69 0
NG_G U N TRG 0.20
0.20 0.20 0.69 0.81 BSI15 18316029 18316029 18316029 18316029
Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-Bldg2-S-01-08 537_MOD EUROFINS
BRADY GCE II NONE Dry METHOD 000 S UNK 20181112 16:00:00
20181113 23:24:00 9885078 20190118 2006158 0.00 1 1 3.4 307-24-4 0.69 0
NG_G U N TRG 0.20
0.20 0.20 0.69 0.81 BSI15 18316029 18316029 18316029 18316029
Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-Bldg2-S-01-08 537_MOD EUROFINS
BRADY GCE II NONE Dry METHOD 000 S UNK 20181112 16:00:00
20181113 23:24:00 9885078 20190118 2006158 0.00 1 1 3.4 375-85-9 0.69 0
NG_G U N TRG 0.20
0.20 0.20 0.69 0.81 BSI15 18316029 18316029 18316029 18316029
Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-Bldg2-S-01-08 537_MOD EUROFINS
BRADY GCE II NONE Dry METHOD 000 S UNK 20181112 16:00:00
20181113 23:24:00 9885078 20190118 2006158 0.00 1 1 3.4 375-73-5 0.61 0
NG_G U N TRG 0.20
0.20 0.20 0.61 0.81 BSI15 18316029 18316029 18316029 18316029
Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-Bldg2-S-01-08 537_MOD EUROFINS
BRADY GCE II NONE Dry METHOD 000 S UNK 20181112 16:00:00
20181113 23:24:00 9885078 20190118 2006158 0.00 1 1 3.4 355-46-4 0.65 0
NG_G U N TRG 0.20
0.20 0.20 0.65 0.81 BSI15 18316029 18316029 18316029 18316029
Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-Bldg2-S-01-08 537_MOD EUROFINS
BRADY GCE II NONE Dry METHOD 000 S UNK 20181112 16:00:00
20181113 23:24:00 9885078 20190118 2006158 0.00 1 1 3.4 1763-23-1 0.66 0
NG_G U N TRG 0.20
0.20 0.20 0.66 0.81 BSI15 18316029 18316029 18316029 18316029
Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-Bldg2-S-01-08 537_MOD EUROFINS
BRADY GCE II NONE Dry METHOD 000 S UNK 20181112 16:00:00
20181113 23:24:00 9885078 20190118 2006158 0.00 1 1 3.4 2991-50-6 2.0 0
NG_G U N TRG 0.51
0.51 0.51 2.0 3.0 BSI15 18316029 18316029 18316029 18316029
Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-Bldg2-S-01-08 537_MOD EUROFINS
BRADY GCE II NONE Dry METHOD 000 S UNK 20181112 16:00:00
20181113 23:24:00 9885078 20190118 2006158 0.00 1 1 3.4 2355-31-9 2.0 0
NG_G U N TRG 0.51
0.51 0.51 2.0 3.0 BSI15 18316029 18316029 18316029 18316029
Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-Bldg2-S-02-01 Calculation
EUROFINS BRADY GCE II NONE Wet NONE 000 S UNK 20181109
10:40:00 9885080 20190118 2006158 0.00 1 1 3.9 -86 3.9 3.9 PCT Y
TRG 0.50 0.50 0.50 0.50 0.50

BSI15 18313820006A 18313820006A 18313820006A Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-Bldg2-S-02-01 537_MOD EUROFINS
BRADY GCE II NONE Dry METHOD 000 S UNK 20181112 09:50:00
20181113 17:14:00 9885080 20190118 2006158 0.00 1 1 3.9 335-67-1 0.75 0.75
NG_G J Y TRG 0.20 0.20
0.20 0.67 0.79 BSI15 18316011 18316011 18316011 18316011 Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-Bldg2-S-02-01 537_MOD EUROFINS
BRADY GCE II NONE Dry METHOD 000 S UNK 20181112 09:50:00
20181113 17:14:00 9885080 20190118 2006158 0.00 1 1 3.9 375-95-1 0.67 0
NG_G U N TRG 0.20
0.20 0.20 0.67 0.79 BSI15 18316011 18316011 18316011 18316011
Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-Bldg2-S-02-01 537_MOD EUROFINS
BRADY GCE II NONE Dry METHOD 000 S UNK 20181112 09:50:00
20181113 17:14:00 9885080 20190118 2006158 0.00 1 1 3.9 335-76-2 0.67 0
NG_G U N TRG 0.30
0.30 0.30 0.67 0.99 BSI15 18316011 18316011 18316011 18316011
Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-Bldg2-S-02-01 537_MOD EUROFINS
BRADY GCE II NONE Dry METHOD 000 S UNK 20181112 09:50:00
20181113 17:14:00 9885080 20190118 2006158 0.00 1 1 3.9 2058-94-8 0.67 0
NG_G U N TRG 0.20
0.20 0.20 0.67 0.79 BSI15 18316011 18316011 18316011 18316011
Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-Bldg2-S-02-01 537_MOD EUROFINS
BRADY GCE II NONE Dry METHOD 000 S UNK 20181112 09:50:00
20181113 17:14:00 9885080 20190118 2006158 0.00 1 1 3.9 307-55-1 0.67 0
NG_G U N TRG 0.20
0.20 0.20 0.67 0.79 BSI15 18316011 18316011 18316011 18316011
Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-Bldg2-S-02-01 537_MOD EUROFINS
BRADY GCE II NONE Dry METHOD 000 S UNK 20181112 09:50:00
20181113 17:14:00 9885080 20190118 2006158 0.00 1 1 3.9 72629-94-8 0.67 0
NG_G U N TRG 0.20
0.20 0.20 0.67 0.79 BSI15 18316011 18316011 18316011 18316011
Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-Bldg2-S-02-01 537_MOD EUROFINS
BRADY GCE II NONE Dry METHOD 000 S UNK 20181112 09:50:00
20181113 17:14:00 9885080 20190118 2006158 0.00 1 1 3.9 376-06-7 0.67 0
NG_G U N TRG 0.20
0.20 0.20 0.67 0.79 BSI15 18316011 18316011 18316011 18316011
Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-Bldg2-S-02-01 537_MOD EUROFINS
BRADY GCE II NONE Dry METHOD 000 S UNK 20181112 09:50:00
20181113 17:14:00 9885080 20190118 2006158 0.00 1 1 3.9 307-24-4 0.67 0
NG_G U N TRG 0.20
0.20 0.20 0.67 0.79 BSI15 18316011 18316011 18316011 18316011
Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-Bldg2-S-02-01 537_MOD EUROFINS
BRADY GCE II NONE Dry METHOD 000 S UNK 20181112 09:50:00
20181113 17:14:00 9885080 20190118 2006158 0.00 1 1 3.9 375-85-9 0.67 0
NG_G U N TRG 0.20
0.20 0.20 0.67 0.79 BSI15 18316011 18316011 18316011 18316011
Y

N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-Bldg2-S-02-01 537_MOD EUROFINS
BRADY GCE II NONE Dry METHOD 000 S UNK 20181112 09:50:00
20181113 17:14:00 9885080 20190118 2006158 0.00 1 1 3.9 375-73-5 0.59 0
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Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-Bldg2-S-02-01 537_MOD EUROFINS
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NG_G U N TRG 0.20
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Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-Bldg2-S-02-01 537_MOD EUROFINS
BRADY GCE II NONE Dry METHOD 000 S UNK 20181112 09:50:00
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NG_G U N TRG 0.20
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Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-Bldg2-S-02-01 537_MOD EUROFINS
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N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-Bldg2-S-02-01 537_MOD EUROFINS
BRADY GCE II NONE Dry METHOD 000 S UNK 20181112 09:50:00
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NG_G U N TRG 0.50
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Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-Bldg2-S-02-03 Calculation
EUROFINS BRADY GCE II NONE Wet NONE 000 S UNK 20181109
10:40:00 9885081 20190118 2006158 0.00 1 1 2.8 -86 2.8 2.8 PCT Y
TRG 0.50 0.50 0.50 0.50 0.50
BSI15 18313820006A 18313820006A 18313820006A Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-Bldg2-S-02-03 537_MOD EUROFINS
BRADY GCE II NONE Dry METHOD 000 S UNK 20181112 09:50:00
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NG_G J Y TRG 0.19 0.19
0.19 0.65 0.76 BSI15 18316011 18316011 18316011 18316011 Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-Bldg2-S-02-03 537_MOD EUROFINS
BRADY GCE II NONE Dry METHOD 000 S UNK 20181112 09:50:00
20181113 17:23:00 9885081 20190118 2006158 0.00 1 1 2.8 375-95-1 0.65 0
NG_G U N TRG 0.19
0.19 0.19 0.65 0.76 BSI15 18316011 18316011 18316011 18316011
Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-Bldg2-S-02-03 537_MOD EUROFINS
BRADY GCE II NONE Dry METHOD 000 S UNK 20181112 09:50:00
20181113 17:23:00 9885081 20190118 2006158 0.00 1 1 2.8 335-76-2 0.65 0
NG_G U N TRG 0.29
0.29 0.29 0.65 0.95 BSI15 18316011 18316011 18316011 18316011
Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-Bldg2-S-02-03 537_MOD EUROFINS
BRADY GCE II NONE Dry METHOD 000 S UNK 20181112 09:50:00

20181113 17:23:00 9885081 20190118 2006158 0.00 1 1 2.8 2058-94-8 0.65 0
NG_G U N TRG 0.19
0.19 0.19 0.65 0.76 BSI15 18316011 18316011 18316011 18316011
Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-Bldg2-S-02-03 537_MOD EUROFINS
BRADY GCE II NONE Dry METHOD 000 S UNK 20181112 09:50:00
20181113 17:23:00 9885081 20190118 2006158 0.00 1 1 2.8 307-55-1 0.65 0
NG_G U N TRG 0.19
0.19 0.19 0.65 0.76 BSI15 18316011 18316011 18316011 18316011
Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-Bldg2-S-02-03 537_MOD EUROFINS
BRADY GCE II NONE Dry METHOD 000 S UNK 20181112 09:50:00
20181113 17:23:00 9885081 20190118 2006158 0.00 1 1 2.8 72629-94-8 0.65 0
NG_G U N TRG 0.19
0.19 0.19 0.65 0.76 BSI15 18316011 18316011 18316011 18316011
Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-Bldg2-S-02-03 537_MOD EUROFINS
BRADY GCE II NONE Dry METHOD 000 S UNK 20181112 09:50:00
20181113 17:23:00 9885081 20190118 2006158 0.00 1 1 2.8 376-06-7 0.65 0
NG_G U N TRG 0.19
0.19 0.19 0.65 0.76 BSI15 18316011 18316011 18316011 18316011
Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-Bldg2-S-02-03 537_MOD EUROFINS
BRADY GCE II NONE Dry METHOD 000 S UNK 20181112 09:50:00
20181113 17:23:00 9885081 20190118 2006158 0.00 1 1 2.8 307-24-4 0.65 0
NG_G U N TRG 0.19
0.19 0.19 0.65 0.76 BSI15 18316011 18316011 18316011 18316011
Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-Bldg2-S-02-03 537_MOD EUROFINS
BRADY GCE II NONE Dry METHOD 000 S UNK 20181112 09:50:00
20181113 17:23:00 9885081 20190118 2006158 0.00 1 1 2.8 375-85-9 0.65 0
NG_G U N TRG 0.19
0.19 0.19 0.65 0.76 BSI15 18316011 18316011 18316011 18316011
Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-Bldg2-S-02-03 537_MOD EUROFINS
BRADY GCE II NONE Dry METHOD 000 S UNK 20181112 09:50:00
20181113 17:23:00 9885081 20190118 2006158 0.00 1 1 2.8 375-73-5 0.57 0
NG_G U N TRG 0.19
0.19 0.19 0.57 0.76 BSI15 18316011 18316011 18316011 18316011
Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-Bldg2-S-02-03 537_MOD EUROFINS
BRADY GCE II NONE Dry METHOD 000 S UNK 20181112 09:50:00
20181113 17:23:00 9885081 20190118 2006158 0.00 1 1 2.8 355-46-4 0.61 0
NG_G U N TRG 0.19
0.19 0.19 0.61 0.76 BSI15 18316011 18316011 18316011 18316011
Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-Bldg2-S-02-03 537_MOD EUROFINS
BRADY GCE II NONE Dry METHOD 000 S UNK 20181112 09:50:00
20181113 17:23:00 9885081 20190118 2006158 0.00 1 1 2.8 1763-23-1 0.62 0
NG_G U N TRG 0.19
0.19 0.19 0.62 0.76 BSI15 18316011 18316011 18316011 18316011
Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-Bldg2-S-02-03 537_MOD EUROFINS
BRADY GCE II NONE Dry METHOD 000 S UNK 20181112 09:50:00

20181113 17:23:00 9885081 20190118 2006158 0.00 1 1 2.8 2991-50-6 1.9 0
NG_G U N TRG 0.48
0.48 0.48 1.9 2.9 BSI15 18316011 18316011 18316011 18316011
Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-Bldg2-S-02-03 537_MOD EUROFINS
BRADY GCE II NONE Dry METHOD 000 S UNK 20181112 09:50:00
20181113 17:23:00 9885081 20190118 2006158 0.00 1 1 2.8 2355-31-9 1.9 0
NG_G U N TRG 0.48
0.48 0.48 1.9 2.9 BSI15 18316011 18316011 18316011 18316011
Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-Bldg2-S-02-08 Calculation
EUROFINS BRADY GCE II NONE Wet NONE 000 S UNK 20181109
10:40:00 9885082 20190118 2006158 0.00 1 1 3.6 -86 3.6 3.6 PCT Y
TRG 0.50 0.50 0.50 0.50 0.50
BSI15 18313820006A 18313820006A 18313820006A Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-Bldg2-S-02-08 537_MOD EUROFINS
BRADY GCE II NONE Dry METHOD 000 S UNK 20181112 09:50:00
20181113 17:32:00 9885082 20190118 2006158 0.00 1 1 3.6 335-67-1 0.68 0
NG_G U N TRG 0.20
0.20 0.20 0.68 0.80 BSI15 18316011 18316011 18316011 18316011
Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-Bldg2-S-02-08 537_MOD EUROFINS
BRADY GCE II NONE Dry METHOD 000 S UNK 20181112 09:50:00
20181113 17:32:00 9885082 20190118 2006158 0.00 1 1 3.6 375-95-1 0.68 0
NG_G U N TRG 0.20
0.20 0.20 0.68 0.80 BSI15 18316011 18316011 18316011 18316011
Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-Bldg2-S-02-08 537_MOD EUROFINS
BRADY GCE II NONE Dry METHOD 000 S UNK 20181112 09:50:00
20181113 17:32:00 9885082 20190118 2006158 0.00 1 1 3.6 335-76-2 0.68 0
NG_G U N TRG 0.30
0.30 0.30 0.68 1.0 BSI15 18316011 18316011 18316011 18316011
Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-Bldg2-S-02-08 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181112
09:50:00 20181113 17:32:00 9885082 20190118 2006158 0.00 1 1 3.6 2058-94-8 0.68 0
NG_G U N TRG 0.20 0.20
0.20 0.68 0.80 BSI15 18316011 18316011 18316011 18316011 Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-Bldg2-S-02-08 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181112
09:50:00 20181113 17:32:00 9885082 20190118 2006158 0.00 1 1 3.6 307-55-1 0.68 0
NG_G U N TRG 0.20 0.20
0.20 0.68 0.80 BSI15 18316011 18316011 18316011 18316011 Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-Bldg2-S-02-08 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181112
09:50:00 20181113 17:32:00 9885082 20190118 2006158 0.00 1 1 3.6 72629-94-8 0.68 0
NG_G U N TRG 0.20 0.20
0.20 0.68 0.80 BSI15 18316011 18316011 18316011 18316011 Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-Bldg2-S-02-08 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181112
09:50:00 20181113 17:32:00 9885082 20190118 2006158 0.00 1 1 3.6 376-06-7 0.68 0
NG_G U N TRG 0.20 0.20
0.20 0.68 0.80 BSI15 18316011 18316011 18316011 18316011 Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-Bldg2-S-02-08 537_MOD

EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181112
09:50:00 20181113 17:32:00 9885082 20190118 2006158 0.00 1 1 3.6 307-24-4 0.68 0
NG_G U N TRG 0.20 0.20
0.20 0.68 0.80 BSI15 18316011 18316011 18316011 18316011 Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-Bldg2-S-02-08 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181112
09:50:00 20181113 17:32:00 9885082 20190118 2006158 0.00 1 1 3.6 375-85-9 0.68 0
NG_G U N TRG 0.20 0.20
0.20 0.68 0.80 BSI15 18316011 18316011 18316011 18316011 Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-Bldg2-S-02-08 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181112
09:50:00 20181113 17:32:00 9885082 20190118 2006158 0.00 1 1 3.6 375-73-5 0.60 0
NG_G U N TRG 0.20 0.20
0.20 0.60 0.80 BSI15 18316011 18316011 18316011 18316011 Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-Bldg2-S-02-08 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181112
09:50:00 20181113 17:32:00 9885082 20190118 2006158 0.00 1 1 3.6 355-46-4 0.64 0
NG_G U N TRG 0.20 0.20
0.20 0.64 0.80 BSI15 18316011 18316011 18316011 18316011 Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-Bldg2-S-02-08 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181112
09:50:00 20181113 17:32:00 9885082 20190118 2006158 0.00 1 1 3.6 1763-23-1 0.65 0
NG_G U N TRG 0.20 0.20
0.20 0.65 0.80 BSI15 18316011 18316011 18316011 18316011 Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-Bldg2-S-02-08 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181112
09:50:00 20181113 17:32:00 9885082 20190118 2006158 0.00 1 1 3.6 2991-50-6 2.0 0
NG_G U N TRG 0.50 0.50
0.50 2.0 3.0 BSI15 18316011 18316011 18316011 18316011 Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-Bldg2-S-02-08 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181112
09:50:00 20181113 17:32:00 9885082 20190118 2006158 0.00 1 1 3.6 2355-31-9 2.0 0
NG_G U N TRG 0.50 0.50
0.50 2.0 3.0 BSI15 18316011 18316011 18316011 18316011 Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-Bldg27-S-01-01 Calculation
EUROFINS BRADY GCE II NONE Wet NONE 000 S UNK 20181109
10:40:00 9885085 20190118 2006158 0.00 1 1 5.1 -86 5.1 5.1 PCT Y TRG
0.50 0.50 0.50 0.50 0.50 BSI15 18313820006A 18313820006A
18313820006A Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-Bldg27-S-01-01 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181112
09:50:00 20181113 17:41:00 9885085 20190118 2006158 0.00 1 1 5.1 335-67-1 0.71 0
NG_G U N TRG 0.21 0.21
0.21 0.71 0.83 BSI15 18316011 18316011 18316011 18316011 Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-Bldg27-S-01-01 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181112
09:50:00 20181113 17:41:00 9885085 20190118 2006158 0.00 1 1 5.1 375-95-1 0.71 0
NG_G U N TRG 0.21 0.21
0.21 0.71 0.83 BSI15 18316011 18316011 18316011 18316011 Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-Bldg27-S-01-01 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181112
09:50:00 20181113 17:41:00 9885085 20190118 2006158 0.00 1 1 5.1 335-76-2 0.71 0
NG_G U N TRG 0.31 0.31
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N62473-14-D-1405N6247317F4100 BARSTOW_MCLB OU1-Bldg27-S-01-01 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181112
09:50:00 20181113 17:41:00 9885085 20190118 2006158 0.00 1 1 5.1 2058-94-8 0.71 0
NG_G U N TRG 0.21 0.21
0.21 0.71 0.83 BSI15 18316011 18316011 18316011 18316011 Y
N62473-14-D-1405N6247317F4100 BARSTOW_MCLB OU1-Bldg27-S-01-01 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181112
09:50:00 20181113 17:41:00 9885085 20190118 2006158 0.00 1 1 5.1 307-55-1 0.71 0
NG_G U N TRG 0.21 0.21
0.21 0.71 0.83 BSI15 18316011 18316011 18316011 18316011 Y
N62473-14-D-1405N6247317F4100 BARSTOW_MCLB OU1-Bldg27-S-01-01 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181112
09:50:00 20181113 17:41:00 9885085 20190118 2006158 0.00 1 1 5.1 72629-94-8 0.71 0
NG_G U N TRG 0.21 0.21
0.21 0.71 0.83 BSI15 18316011 18316011 18316011 18316011 Y
N62473-14-D-1405N6247317F4100 BARSTOW_MCLB OU1-Bldg27-S-01-01 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181112
09:50:00 20181113 17:41:00 9885085 20190118 2006158 0.00 1 1 5.1 376-06-7 0.71 0
NG_G U N TRG 0.21 0.21
0.21 0.71 0.83 BSI15 18316011 18316011 18316011 18316011 Y
N62473-14-D-1405N6247317F4100 BARSTOW_MCLB OU1-Bldg27-S-01-01 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181112
09:50:00 20181113 17:41:00 9885085 20190118 2006158 0.00 1 1 5.1 307-24-4 0.71 0
NG_G U N TRG 0.21 0.21
0.21 0.71 0.83 BSI15 18316011 18316011 18316011 18316011 Y
N62473-14-D-1405N6247317F4100 BARSTOW_MCLB OU1-Bldg27-S-01-01 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181112
09:50:00 20181113 17:41:00 9885085 20190118 2006158 0.00 1 1 5.1 375-85-9 0.71 0
NG_G U N TRG 0.21 0.21
0.21 0.71 0.83 BSI15 18316011 18316011 18316011 18316011 Y
N62473-14-D-1405N6247317F4100 BARSTOW_MCLB OU1-Bldg27-S-01-01 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181112
09:50:00 20181113 17:41:00 9885085 20190118 2006158 0.00 1 1 5.1 375-73-5 0.63 0
NG_G U N TRG 0.21 0.21
0.21 0.63 0.83 BSI15 18316011 18316011 18316011 18316011 Y
N62473-14-D-1405N6247317F4100 BARSTOW_MCLB OU1-Bldg27-S-01-01 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181112
09:50:00 20181113 17:41:00 9885085 20190118 2006158 0.00 1 1 5.1 355-46-4 0.67 0
NG_G U N TRG 0.21 0.21
0.21 0.67 0.83 BSI15 18316011 18316011 18316011 18316011 Y
N62473-14-D-1405N6247317F4100 BARSTOW_MCLB OU1-Bldg27-S-01-01 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181112
09:50:00 20181113 17:41:00 9885085 20190118 2006158 0.00 1 1 5.1 1763-23-1 0.24 0.24
NG_G J Y TRG 0.21 0.21
0.21 0.68 0.83 BSI15 18316011 18316011 18316011 18316011 Y
N62473-14-D-1405N6247317F4100 BARSTOW_MCLB OU1-Bldg27-S-01-01 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181112
09:50:00 20181113 17:41:00 9885085 20190118 2006158 0.00 1 1 5.1 2991-50-6 2.1 0
NG_G U N TRG 0.52 0.52
0.52 2.1 3.1 BSI15 18316011 18316011 18316011 18316011 Y
N62473-14-D-1405N6247317F4100 BARSTOW_MCLB OU1-Bldg27-S-01-01 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181112
09:50:00 20181113 17:41:00 9885085 20190118 2006158 0.00 1 1 5.1 2355-31-9 2.1 0
NG_G U N TRG 0.52 0.52

0.52 2.1 3.1 BSI15 18316011 18316011 18316011 18316011 Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-Bldg27-S-01-03 Calculation
EUROFINS BRADY GCE II NONE Wet NONE 000 S UNK 20181109
10:40:00 9885086 20190118 2006158 0.00 1 1 4.9 -86 4.9 4.9 PCT Y TRG
0.50 0.50 0.50 0.50 0.50 BSI15 18313820006A 18313820006A
18313820006A Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-Bldg27-S-01-03 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181112
09:50:00 20181113 17:50:00 9885086 20190118 2006158 0.00 1 1 4.9 335-67-1 0.67 0
NG_G U N TRG 0.20 0.20
0.20 0.67 0.79 BSI15 18316011 18316011 18316011 18316011 Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-Bldg27-S-01-03 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181112
09:50:00 20181113 17:50:00 9885086 20190118 2006158 0.00 1 1 4.9 375-95-1 0.67 0
NG_G U N TRG 0.20 0.20
0.20 0.67 0.79 BSI15 18316011 18316011 18316011 18316011 Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-Bldg27-S-01-03 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181112
09:50:00 20181113 17:50:00 9885086 20190118 2006158 0.00 1 1 4.9 335-76-2 0.67 0
NG_G U N TRG 0.30 0.30
0.30 0.67 0.99 BSI15 18316011 18316011 18316011 18316011 Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-Bldg27-S-01-03 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181112
09:50:00 20181113 17:50:00 9885086 20190118 2006158 0.00 1 1 4.9 2058-94-8 0.67 0
NG_G U N TRG 0.20 0.20
0.20 0.67 0.79 BSI15 18316011 18316011 18316011 18316011 Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-Bldg27-S-01-03 537_MOD
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NG_G U N TRG 0.20 0.20
0.20 0.67 0.79 BSI15 18316011 18316011 18316011 18316011 Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-Bldg27-S-01-03 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181112
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NG_G U N TRG 0.20 0.20
0.20 0.67 0.79 BSI15 18316011 18316011 18316011 18316011 Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-Bldg27-S-01-03 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181112
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NG_G U N TRG 0.20 0.20
0.20 0.67 0.79 BSI15 18316011 18316011 18316011 18316011 Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-Bldg27-S-01-03 537_MOD
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NG_G U N TRG 0.20 0.20
0.20 0.67 0.79 BSI15 18316011 18316011 18316011 18316011 Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-Bldg27-S-01-03 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181112
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NG_G U N TRG 0.20 0.20
0.20 0.67 0.79 BSI15 18316011 18316011 18316011 18316011 Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-Bldg27-S-01-03 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181112
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NG_G U N TRG 0.20 0.20
0.20 0.60 0.79 BSI15 18316011 18316011 18316011 18316011 Y
N62473-14-D-1405N6247317F4100 BARSTOW_MCLB OU1-Bldg27-S-01-03 537_MOD
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NG_G U N TRG 0.20 0.20
0.20 0.63 0.79 BSI15 18316011 18316011 18316011 18316011 Y
N62473-14-D-1405N6247317F4100 BARSTOW_MCLB OU1-Bldg27-S-01-03 537_MOD
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NG_G Y TRG 0.20 0.20
0.20 0.64 0.79 BSI15 18316011 18316011 18316011 18316011 Y
N62473-14-D-1405N6247317F4100 BARSTOW_MCLB OU1-Bldg27-S-01-03 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181112
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NG_G U N TRG 0.50 0.50
0.50 2.0 3.0 BSI15 18316011 18316011 18316011 18316011 Y
N62473-14-D-1405N6247317F4100 BARSTOW_MCLB OU1-Bldg27-S-01-03 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181112
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NG_G U N TRG 0.50 0.50
0.50 2.0 3.0 BSI15 18316011 18316011 18316011 18316011 Y
N62473-14-D-1405N6247317F4100 BARSTOW_MCLB OU1-Bldg27-S-01-07 Calculation
EUROFINS BRADY GCE II NONE Wet NONE 000 S UNK 20181109
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0.50 0.50 0.50 0.50 0.50 BSI15 18313820006A 18313820006A
18313820006A Y
N62473-14-D-1405N6247317F4100 BARSTOW_MCLB OU1-Bldg27-S-01-07 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181112
09:50:00 20181113 18:17:00 9885089 20190118 2006158 0.00 1 1 5.5 335-67-1 0.68 0
NG_G U N TRG 0.20 0.20
0.20 0.68 0.80 BSI15 18316011 18316011 18316011 18316011 Y
N62473-14-D-1405N6247317F4100 BARSTOW_MCLB OU1-Bldg27-S-01-07 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181112
09:50:00 20181113 18:17:00 9885089 20190118 2006158 0.00 1 1 5.5 375-95-1 0.68 0
NG_G U N TRG 0.20 0.20
0.20 0.68 0.80 BSI15 18316011 18316011 18316011 18316011 Y
N62473-14-D-1405N6247317F4100 BARSTOW_MCLB OU1-Bldg27-S-01-07 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181112
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NG_G U N TRG 0.30 0.30
0.30 0.68 1.0 BSI15 18316011 18316011 18316011 18316011 Y
N62473-14-D-1405N6247317F4100 BARSTOW_MCLB OU1-Bldg27-S-01-07 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181112
09:50:00 20181113 18:17:00 9885089 20190118 2006158 0.00 1 1 5.5 2058-94-8 0.68 0
NG_G U N TRG 0.20 0.20
0.20 0.68 0.80 BSI15 18316011 18316011 18316011 18316011 Y
N62473-14-D-1405N6247317F4100 BARSTOW_MCLB OU1-Bldg27-S-01-07 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181112
09:50:00 20181113 18:17:00 9885089 20190118 2006158 0.00 1 1 5.5 307-55-1 0.68 0
NG_G U N TRG 0.20 0.20
0.20 0.68 0.80 BSI15 18316011 18316011 18316011 18316011 Y
N62473-14-D-1405N6247317F4100 BARSTOW_MCLB OU1-Bldg27-S-01-07 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181112

09:50:00 20181113 18:17:00 9885089 20190118 2006158 0.00 1 1 5.5 72629-94-8 0.68 0
NG_G U N TRG 0.20 0.20
0.20 0.68 0.80 BSI15 18316011 18316011 18316011 18316011 Y
N62473-14-D-1405N6247317F4100 BARSTOW_MCLB OU1-Bldg27-S-01-07 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181112
09:50:00 20181113 18:17:00 9885089 20190118 2006158 0.00 1 1 5.5 376-06-7 0.68 0
NG_G U N TRG 0.20 0.20
0.20 0.68 0.80 BSI15 18316011 18316011 18316011 18316011 Y
N62473-14-D-1405N6247317F4100 BARSTOW_MCLB OU1-Bldg27-S-01-07 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181112
09:50:00 20181113 18:17:00 9885089 20190118 2006158 0.00 1 1 5.5 307-24-4 0.68 0
NG_G U N TRG 0.20 0.20
0.20 0.68 0.80 BSI15 18316011 18316011 18316011 18316011 Y
N62473-14-D-1405N6247317F4100 BARSTOW_MCLB OU1-Bldg27-S-01-07 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181112
09:50:00 20181113 18:17:00 9885089 20190118 2006158 0.00 1 1 5.5 375-85-9 0.68 0
NG_G U N TRG 0.20 0.20
0.20 0.68 0.80 BSI15 18316011 18316011 18316011 18316011 Y
N62473-14-D-1405N6247317F4100 BARSTOW_MCLB OU1-Bldg27-S-01-07 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181112
09:50:00 20181113 18:17:00 9885089 20190118 2006158 0.00 1 1 5.5 375-73-5 0.60 0
NG_G U N TRG 0.20 0.20
0.20 0.60 0.80 BSI15 18316011 18316011 18316011 18316011 Y
N62473-14-D-1405N6247317F4100 BARSTOW_MCLB OU1-Bldg27-S-01-07 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181112
09:50:00 20181113 18:17:00 9885089 20190118 2006158 0.00 1 1 5.5 355-46-4 0.64 0
NG_G U N TRG 0.20 0.20
0.20 0.64 0.80 BSI15 18316011 18316011 18316011 18316011 Y
N62473-14-D-1405N6247317F4100 BARSTOW_MCLB OU1-Bldg27-S-01-07 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181112
09:50:00 20181113 18:17:00 9885089 20190118 2006158 0.00 1 1 5.5 1763-23-1 1.7 1.7
NG_G Y TRG 0.20 0.20
0.20 0.65 0.80 BSI15 18316011 18316011 18316011 18316011 Y
N62473-14-D-1405N6247317F4100 BARSTOW_MCLB OU1-Bldg27-S-01-07 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181112
09:50:00 20181113 18:17:00 9885089 20190118 2006158 0.00 1 1 5.5 2991-50-6 2.0 0
NG_G U N TRG 0.50 0.50
0.50 2.0 3.0 BSI15 18316011 18316011 18316011 18316011 Y
N62473-14-D-1405N6247317F4100 BARSTOW_MCLB OU1-Bldg27-S-01-07 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181112
09:50:00 20181113 18:17:00 9885089 20190118 2006158 0.00 1 1 5.5 2355-31-9 2.0 0
NG_G U N TRG 0.50 0.50
0.50 2.0 3.0 BSI15 18316011 18316011 18316011 18316011 Y
N62473-14-D-1405N6247317F4100 BARSTOW_MCLB OU1-Bldg27-S-01-11 Calculation
EUROFINS BRADY GCE II NONE Wet NONE 000 S UNK 20181109
10:40:00 9885090 20190118 2006158 0.00 1 1 5.7 -86 5.7 5.7 PCT Y TRG
0.50 0.50 0.50 0.50 0.50 BSI15 18313820006A 18313820006A
18313820006A Y
N62473-14-D-1405N6247317F4100 BARSTOW_MCLB OU1-Bldg27-S-01-11 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181112
09:50:00 20181113 18:35:00 9885090 20190118 2006158 0.00 1 1 5.7 335-67-1 0.68 0
NG_G U N TRG 0.20 0.20
0.20 0.68 0.80 BSI15 18316011 18316011 18316011 18316011 Y
N62473-14-D-1405N6247317F4100 BARSTOW_MCLB OU1-Bldg27-S-01-11 537_MOD

EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181112
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NG_G U N TRG 0.20 0.20
0.20 0.68 0.80 BSI15 18316011 18316011 18316011 18316011 Y
N62473-14-D-1405N6247317F4100 BARSTOW_MCLB OU1-Bldg27-S-01-11 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181112
09:50:00 20181113 18:35:00 9885090 20190118 2006158 0.00 1 1 5.7 335-76-2 0.68 0
NG_G U N TRG 0.30 0.30
0.30 0.68 1.0 BSI15 18316011 18316011 18316011 18316011 Y
N62473-14-D-1405N6247317F4100 BARSTOW_MCLB OU1-Bldg27-S-01-11 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181112
09:50:00 20181113 18:35:00 9885090 20190118 2006158 0.00 1 1 5.7 2058-94-8 0.68 0
NG_G U N TRG 0.20 0.20
0.20 0.68 0.80 BSI15 18316011 18316011 18316011 18316011 Y
N62473-14-D-1405N6247317F4100 BARSTOW_MCLB OU1-Bldg27-S-01-11 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181112
09:50:00 20181113 18:35:00 9885090 20190118 2006158 0.00 1 1 5.7 307-55-1 0.68 0
NG_G U N TRG 0.20 0.20
0.20 0.68 0.80 BSI15 18316011 18316011 18316011 18316011 Y
N62473-14-D-1405N6247317F4100 BARSTOW_MCLB OU1-Bldg27-S-01-11 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181112
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NG_G U N TRG 0.20 0.20
0.20 0.68 0.80 BSI15 18316011 18316011 18316011 18316011 Y
N62473-14-D-1405N6247317F4100 BARSTOW_MCLB OU1-Bldg27-S-01-11 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181112
09:50:00 20181113 18:35:00 9885090 20190118 2006158 0.00 1 1 5.7 376-06-7 0.68 0
NG_G U N TRG 0.20 0.20
0.20 0.68 0.80 BSI15 18316011 18316011 18316011 18316011 Y
N62473-14-D-1405N6247317F4100 BARSTOW_MCLB OU1-Bldg27-S-01-11 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181112
09:50:00 20181113 18:35:00 9885090 20190118 2006158 0.00 1 1 5.7 307-24-4 0.68 0
NG_G U N TRG 0.20 0.20
0.20 0.68 0.80 BSI15 18316011 18316011 18316011 18316011 Y
N62473-14-D-1405N6247317F4100 BARSTOW_MCLB OU1-Bldg27-S-01-11 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181112
09:50:00 20181113 18:35:00 9885090 20190118 2006158 0.00 1 1 5.7 375-85-9 0.68 0
NG_G U N TRG 0.20 0.20
0.20 0.68 0.80 BSI15 18316011 18316011 18316011 18316011 Y
N62473-14-D-1405N6247317F4100 BARSTOW_MCLB OU1-Bldg27-S-01-11 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181112
09:50:00 20181113 18:35:00 9885090 20190118 2006158 0.00 1 1 5.7 375-73-5 0.60 0
NG_G U N TRG 0.20 0.20
0.20 0.60 0.80 BSI15 18316011 18316011 18316011 18316011 Y
N62473-14-D-1405N6247317F4100 BARSTOW_MCLB OU1-Bldg27-S-01-11 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181112
09:50:00 20181113 18:35:00 9885090 20190118 2006158 0.00 1 1 5.7 355-46-4 0.64 0
NG_G U N TRG 0.20 0.20
0.20 0.64 0.80 BSI15 18316011 18316011 18316011 18316011 Y
N62473-14-D-1405N6247317F4100 BARSTOW_MCLB OU1-Bldg27-S-01-11 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181112
09:50:00 20181113 18:35:00 9885090 20190118 2006158 0.00 1 1 5.7 1763-23-1 0.55 0.55
NG_G J Y TRG 0.20 0.20
0.20 0.65 0.80 BSI15 18316011 18316011 18316011 18316011 Y

N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-Bldg27-S-01-11 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181112
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NG_G U N TRG 0.50 0.50
0.50 2.0 3.0 BSI15 18316011 18316011 18316011 18316011 Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-Bldg27-S-01-11 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181112
09:50:00 20181113 18:35:00 9885090 20190118 2006158 0.00 1 1 5.7 2355-31-9 2.0 0
NG_G U N TRG 0.50 0.50
0.50 2.0 3.0 BSI15 18316011 18316011 18316011 18316011 Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-Bldg27-S-01-12 Calculation
EUROFINS BRADY GCE II NONE Wet NONE 000 S UNK 20181203
10:37:00 9885091 20190118 2006158 0.00 1 1 7.6 -86 7.6 7.6 PCT Y TRG
0.50 0.50 0.50 0.50 0.50 BSI15 18337820002B 18337820002B
18337820002B Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-Bldg27-S-01-12 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181128
09:45:00 20181129 19:43:00 9885091 20190118 2006158 0.00 1 1 7.6 335-67-1 0.54 0.54
NG_G J Y TRG 0.20 0.20
0.20 0.67 0.79 BSI15 18332003 18332003 18332003 18332003 Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-Bldg27-S-01-12 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181128
09:45:00 20181129 19:43:00 9885091 20190118 2006158 0.00 1 1 7.6 375-95-1 0.67 0
NG_G U N TRG 0.20 0.20
0.20 0.67 0.79 BSI15 18332003 18332003 18332003 18332003 Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-Bldg27-S-01-12 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181128
09:45:00 20181129 19:43:00 9885091 20190118 2006158 0.00 1 1 7.6 335-76-2 0.67 0
NG_G U N TRG 0.30 0.30
0.30 0.67 0.98 BSI15 18332003 18332003 18332003 18332003 Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-Bldg27-S-01-12 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181128
09:45:00 20181129 19:43:00 9885091 20190118 2006158 0.00 1 1 7.6 2058-94-8 0.67 0
NG_G U N TRG 0.20 0.20
0.20 0.67 0.79 BSI15 18332003 18332003 18332003 18332003 Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-Bldg27-S-01-12 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181128
09:45:00 20181129 19:43:00 9885091 20190118 2006158 0.00 1 1 7.6 307-55-1 0.67 0
NG_G U N TRG 0.20 0.20
0.20 0.67 0.79 BSI15 18332003 18332003 18332003 18332003 Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-Bldg27-S-01-12 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181128
09:45:00 20181129 19:43:00 9885091 20190118 2006158 0.00 1 1 7.6 72629-94-8 0.67 0
NG_G U N TRG 0.20 0.20
0.20 0.67 0.79 BSI15 18332003 18332003 18332003 18332003 Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-Bldg27-S-01-12 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181128
09:45:00 20181129 19:43:00 9885091 20190118 2006158 0.00 1 1 7.6 376-06-7 0.67 0
NG_G U N TRG 0.20 0.20
0.20 0.67 0.79 BSI15 18332003 18332003 18332003 18332003 Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-Bldg27-S-01-12 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181128
09:45:00 20181129 19:43:00 9885091 20190118 2006158 0.00 1 1 7.6 307-24-4 0.67 0
NG_G U N TRG 0.20 0.20

0.20 0.67 0.79 BSI15 18332003 18332003 18332003 18332003 Y
N62473-14-D-1405N6247317F4100 BARSTOW_MCLB OU1-Bldg27-S-01-12 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181128
09:45:00 20181129 19:43:00 9885091 20190118 2006158 0.00 1 1 7.6 375-85-9 0.67 0
NG_G U N TRG 0.20 0.20
0.20 0.67 0.79 BSI15 18332003 18332003 18332003 18332003 Y
N62473-14-D-1405N6247317F4100 BARSTOW_MCLB OU1-Bldg27-S-01-12 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181128
09:45:00 20181129 19:43:00 9885091 20190118 2006158 0.00 1 1 7.6 375-73-5 0.59 0
NG_G U N TRG 0.20 0.20
0.20 0.59 0.79 BSI15 18332003 18332003 18332003 18332003 Y
N62473-14-D-1405N6247317F4100 BARSTOW_MCLB OU1-Bldg27-S-01-12 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181128
09:45:00 20181129 19:43:00 9885091 20190118 2006158 0.00 1 1 7.6 355-46-4 0.64 0.64
NG_G J Y TRG 0.20 0.20
0.20 0.63 0.79 BSI15 18332003 18332003 18332003 18332003 Y
N62473-14-D-1405N6247317F4100 BARSTOW_MCLB OU1-Bldg27-S-01-12 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181128
09:45:00 20181129 19:43:00 9885091 20190118 2006158 0.00 1 1 7.6 1763-23-1 1.2 1.2
NG_G Y TRG 0.20 0.20
0.20 0.64 0.79 BSI15 18332003 18332003 18332003 18332003 Y
N62473-14-D-1405N6247317F4100 BARSTOW_MCLB OU1-Bldg27-S-01-12 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181128
09:45:00 20181129 19:43:00 9885091 20190118 2006158 0.00 1 1 7.6 2991-50-6 2.0 0
NG_G U N TRG 0.49 0.49
0.49 2.0 3.0 BSI15 18332003 18332003 18332003 18332003 Y
N62473-14-D-1405N6247317F4100 BARSTOW_MCLB OU1-Bldg27-S-01-12 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181128
09:45:00 20181129 19:43:00 9885091 20190118 2006158 0.00 1 1 7.6 2355-31-9 2.0 0
NG_G U N TRG 0.49 0.49
0.49 2.0 3.0 BSI15 18332003 18332003 18332003 18332003 Y
N62473-14-D-1405N6247317F4100 BARSTOW_MCLB OU1-Bldg27-S-02-01 Calculation
EUROFINS BRADY GCE II NONE Wet NONE 000 S UNK 20181109
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0.50 0.50 0.50 0.50 0.50 BSI15 18313820006A 18313820006A
18313820006A Y
N62473-14-D-1405N6247317F4100 BARSTOW_MCLB OU1-Bldg27-S-02-01 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181112
09:50:00 20181113 18:44:00 9885092 20190118 2006158 0.00 1 1 6 335-67-1 0.70 0
NG_G U N TRG 0.20 0.20
0.20 0.70 0.82 BSI15 18316011 18316011 18316011 18316011 Y
N62473-14-D-1405N6247317F4100 BARSTOW_MCLB OU1-Bldg27-S-02-01 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181112
09:50:00 20181113 18:44:00 9885092 20190118 2006158 0.00 1 1 6 375-95-1 0.70 0
NG_G U N TRG 0.20 0.20
0.20 0.70 0.82 BSI15 18316011 18316011 18316011 18316011 Y
N62473-14-D-1405N6247317F4100 BARSTOW_MCLB OU1-Bldg27-S-02-01 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181112
09:50:00 20181113 18:44:00 9885092 20190118 2006158 0.00 1 1 6 335-76-2 0.70 0
NG_G U N TRG 0.31 0.31
0.31 0.70 1.0 BSI15 18316011 18316011 18316011 18316011 Y
N62473-14-D-1405N6247317F4100 BARSTOW_MCLB OU1-Bldg27-S-02-01 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181112
09:50:00 20181113 18:44:00 9885092 20190118 2006158 0.00 1 1 6 2058-94-8 0.70 0

NG_G U N TRG 0.20 0.20
0.20 0.70 0.82 BSI15 18316011 18316011 18316011 18316011 Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-Bldg27-S-02-01 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181112
09:50:00 20181113 18:44:00 9885092 20190118 2006158 0.00 1 1 6 307-55-1 0.70 0
NG_G U N TRG 0.20 0.20
0.20 0.70 0.82 BSI15 18316011 18316011 18316011 18316011 Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-Bldg27-S-02-01 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181112
09:50:00 20181113 18:44:00 9885092 20190118 2006158 0.00 1 1 6 72629-94-8 0.70 0
NG_G U N TRG 0.20 0.20
0.20 0.70 0.82 BSI15 18316011 18316011 18316011 18316011 Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-Bldg27-S-02-01 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181112
09:50:00 20181113 18:44:00 9885092 20190118 2006158 0.00 1 1 6 376-06-7 0.70 0
NG_G U N TRG 0.20 0.20
0.20 0.70 0.82 BSI15 18316011 18316011 18316011 18316011 Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-Bldg27-S-02-01 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181112
09:50:00 20181113 18:44:00 9885092 20190118 2006158 0.00 1 1 6 307-24-4 0.70 0
NG_G U N TRG 0.20 0.20
0.20 0.70 0.82 BSI15 18316011 18316011 18316011 18316011 Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-Bldg27-S-02-01 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181112
09:50:00 20181113 18:44:00 9885092 20190118 2006158 0.00 1 1 6 375-85-9 0.70 0
NG_G U N TRG 0.20 0.20
0.20 0.70 0.82 BSI15 18316011 18316011 18316011 18316011 Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-Bldg27-S-02-01 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181112
09:50:00 20181113 18:44:00 9885092 20190118 2006158 0.00 1 1 6 375-73-5 0.61 0
NG_G U N TRG 0.20 0.20
0.20 0.61 0.82 BSI15 18316011 18316011 18316011 18316011 Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-Bldg27-S-02-01 537_MOD EUROFINS
BRADY GCE II NONE Dry METHOD 000 S UNK 20181112 09:50:00
20181113 18:44:00 9885092 20190118 2006158 0.00 1 1 6 355-46-4 0.65 0
NG_G U N TRG 0.20
0.20 0.20 0.65 0.82 BSI15 18316011 18316011 18316011 18316011
Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-Bldg27-S-02-01 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181112
09:50:00 20181113 18:44:00 9885092 20190118 2006158 0.00 1 1 6 1763-23-1
0.36 0.36 NG_G J Y TRG 0.20
0.20 0.20 0.66 0.82 BSI15 18316011 18316011 18316011 18316011
Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-Bldg27-S-02-01 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181112
09:50:00 20181113 18:44:00 9885092 20190118 2006158 0.00 1 1 6 2991-50-6
2.0 0 NG_G U N TRG 0.51
0.51 0.51 2.0 3.1 BSI15 18316011 18316011 18316011 18316011
Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-Bldg27-S-02-01 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181112
09:50:00 20181113 18:44:00 9885092 20190118 2006158 0.00 1 1 6 2355-31-9
2.0 0 NG_G U N TRG 0.51

0.51 0.51 2.0 3.1 BSI15 18316011 18316011 18316011 18316011
Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-Bldg27-S-02-03 Calculation
EUROFINS BRADY GCE II NONE Wet NONE 000 S UNK 20181109
10:40:00 9885093 20190118 2006158 0.00 1 1 2.7 -86 2.7 2.7 PCT Y
TRG 0.50 0.50 0.50 0.50 0.50
BSI15 18313820006A 18313820006A 18313820006A Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-Bldg27-S-02-03 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181112
09:50:00 20181113 18:53:00 9885093 20190118 2006158 0.00 1 1 2.7 335-67-1
0.64 0 NG_G U N TRG 0.19
0.19 0.19 0.64 0.75 BSI15 18316011 18316011 18316011 18316011
Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-Bldg27-S-02-03 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181112
09:50:00 20181113 18:53:00 9885093 20190118 2006158 0.00 1 1 2.7 375-95-1 0.64 0
NG_G U N TRG 0.19 0.19
0.19 0.64 0.75 BSI15 18316011 18316011 18316011 18316011 Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-Bldg27-S-02-03 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181112
09:50:00 20181113 18:53:00 9885093 20190118 2006158 0.00 1 1 2.7 335-76-2 0.64 0
NG_G U N TRG 0.28 0.28
0.28 0.64 0.94 BSI15 18316011 18316011 18316011 18316011 Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-Bldg27-S-02-03 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181112
09:50:00 20181113 18:53:00 9885093 20190118 2006158 0.00 1 1 2.7 2058-94-8 0.64 0
NG_G U N TRG 0.19 0.19
0.19 0.64 0.75 BSI15 18316011 18316011 18316011 18316011 Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-Bldg27-S-02-03 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181112
09:50:00 20181113 18:53:00 9885093 20190118 2006158 0.00 1 1 2.7 307-55-1 0.64 0
NG_G U N TRG 0.19 0.19
0.19 0.64 0.75 BSI15 18316011 18316011 18316011 18316011 Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-Bldg27-S-02-03 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181112
09:50:00 20181113 18:53:00 9885093 20190118 2006158 0.00 1 1 2.7 72629-94-8 0.64 0
NG_G U N TRG 0.19 0.19
0.19 0.64 0.75 BSI15 18316011 18316011 18316011 18316011 Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-Bldg27-S-02-03 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181112
09:50:00 20181113 18:53:00 9885093 20190118 2006158 0.00 1 1 2.7 376-06-7 0.64 0
NG_G U N TRG 0.19 0.19
0.19 0.64 0.75 BSI15 18316011 18316011 18316011 18316011 Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-Bldg27-S-02-03 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181112
09:50:00 20181113 18:53:00 9885093 20190118 2006158 0.00 1 1 2.7 307-24-4 0.64 0
NG_G U N TRG 0.19 0.19
0.19 0.64 0.75 BSI15 18316011 18316011 18316011 18316011 Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-Bldg27-S-02-03 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181112
09:50:00 20181113 18:53:00 9885093 20190118 2006158 0.00 1 1 2.7 375-85-9 0.64 0
NG_G U N TRG 0.19 0.19
0.19 0.64 0.75 BSI15 18316011 18316011 18316011 18316011 Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-Bldg27-S-02-03 537_MOD

EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181112
09:50:00 20181113 18:53:00 9885093 20190118 2006158 0.00 1 1 2.7 375-73-5 0.57 0
NG_G U N TRG 0.19 0.19
0.19 0.57 0.75 BSI15 18316011 18316011 18316011 18316011 Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-Bldg27-S-02-03 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181112
09:50:00 20181113 18:53:00 9885093 20190118 2006158 0.00 1 1 2.7 355-46-4 0.60 0
NG_G U N TRG 0.19 0.19
0.19 0.60 0.75 BSI15 18316011 18316011 18316011 18316011 Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-Bldg27-S-02-03 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181112
09:50:00 20181113 18:53:00 9885093 20190118 2006158 0.00 1 1 2.7 1763-23-1 0.61 0
NG_G U N TRG 0.19 0.19
0.19 0.61 0.75 BSI15 18316011 18316011 18316011 18316011 Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-Bldg27-S-02-03 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181112
09:50:00 20181113 18:53:00 9885093 20190118 2006158 0.00 1 1 2.7 2991-50-6 1.9 0
NG_G U N TRG 0.47 0.47
0.47 1.9 2.8 BSI15 18316011 18316011 18316011 18316011 Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-Bldg27-S-02-03 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181112
09:50:00 20181113 18:53:00 9885093 20190118 2006158 0.00 1 1 2.7 2355-31-9 1.9 0
NG_G U N TRG 0.47 0.47
0.47 1.9 2.8 BSI15 18316011 18316011 18316011 18316011 Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-Bldg27-S-02-06 Calculation
EUROFINS BRADY GCE II NONE Wet NONE 000 S UNK 20181109
10:40:00 9885094 20190118 2006158 0.00 1 1 5.9 -86 5.9 5.9 PCT Y TRG
0.50 0.50 0.50 0.50 0.50 0.50 BSI15 18313820006A 18313820006A
18313820006A Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-Bldg27-S-02-06 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181112
09:50:00 20181113 19:02:00 9885094 20190118 2006158 0.00 1 1 5.9 335-67-1 0.68 0
NG_G U N TRG 0.20 0.20
0.20 0.68 0.80 BSI15 18316011 18316011 18316011 18316011 Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-Bldg27-S-02-06 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181112
09:50:00 20181113 19:02:00 9885094 20190118 2006158 0.00 1 1 5.9 375-95-1 0.68 0
NG_G U N TRG 0.20 0.20
0.20 0.68 0.80 BSI15 18316011 18316011 18316011 18316011 Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-Bldg27-S-02-06 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181112
09:50:00 20181113 19:02:00 9885094 20190118 2006158 0.00 1 1 5.9 335-76-2 0.68 0
NG_G U N TRG 0.30 0.30
0.30 0.68 1.0 BSI15 18316011 18316011 18316011 18316011 Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-Bldg27-S-02-06 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181112
09:50:00 20181113 19:02:00 9885094 20190118 2006158 0.00 1 1 5.9 2058-94-8 0.68 0
NG_G U N TRG 0.20 0.20
0.20 0.68 0.80 BSI15 18316011 18316011 18316011 18316011 Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-Bldg27-S-02-06 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181112
09:50:00 20181113 19:02:00 9885094 20190118 2006158 0.00 1 1 5.9 307-55-1 0.68 0
NG_G U N TRG 0.20 0.20
0.20 0.68 0.80 BSI15 18316011 18316011 18316011 18316011 Y

N62473-14-D-1405N6247317F4100 BARSTOW_MCLB OU1-Bldg27-S-02-06 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181112
09:50:00 20181113 19:02:00 9885094 20190118 2006158 0.00 1 1 5.9 72629-94-8 0.68 0
NG_G U N TRG 0.20 0.20
0.20 0.68 0.80 BSI15 18316011 18316011 18316011 18316011 Y
N62473-14-D-1405N6247317F4100 BARSTOW_MCLB OU1-Bldg27-S-02-06 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181112
09:50:00 20181113 19:02:00 9885094 20190118 2006158 0.00 1 1 5.9 376-06-7 0.68 0
NG_G U N TRG 0.20 0.20
0.20 0.68 0.80 BSI15 18316011 18316011 18316011 18316011 Y
N62473-14-D-1405N6247317F4100 BARSTOW_MCLB OU1-Bldg27-S-02-06 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181112
09:50:00 20181113 19:02:00 9885094 20190118 2006158 0.00 1 1 5.9 307-24-4 0.68 0
NG_G U N TRG 0.20 0.20
0.20 0.68 0.80 BSI15 18316011 18316011 18316011 18316011 Y
N62473-14-D-1405N6247317F4100 BARSTOW_MCLB OU1-Bldg27-S-02-06 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181112
09:50:00 20181113 19:02:00 9885094 20190118 2006158 0.00 1 1 5.9 375-85-9 0.68 0
NG_G U N TRG 0.20 0.20
0.20 0.68 0.80 BSI15 18316011 18316011 18316011 18316011 Y
N62473-14-D-1405N6247317F4100 BARSTOW_MCLB OU1-Bldg27-S-02-06 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181112
09:50:00 20181113 19:02:00 9885094 20190118 2006158 0.00 1 1 5.9 375-73-5 0.60 0
NG_G U N TRG 0.20 0.20
0.20 0.60 0.80 BSI15 18316011 18316011 18316011 18316011 Y
N62473-14-D-1405N6247317F4100 BARSTOW_MCLB OU1-Bldg27-S-02-06 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181112
09:50:00 20181113 19:02:00 9885094 20190118 2006158 0.00 1 1 5.9 355-46-4 0.64 0
NG_G U N TRG 0.20 0.20
0.20 0.64 0.80 BSI15 18316011 18316011 18316011 18316011 Y
N62473-14-D-1405N6247317F4100 BARSTOW_MCLB OU1-Bldg27-S-02-06 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181112
09:50:00 20181113 19:02:00 9885094 20190118 2006158 0.00 1 1 5.9 1763-23-1 0.65 0
NG_G U N TRG 0.20 0.20
0.20 0.65 0.80 BSI15 18316011 18316011 18316011 18316011 Y
N62473-14-D-1405N6247317F4100 BARSTOW_MCLB OU1-Bldg27-S-02-06 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181112
09:50:00 20181113 19:02:00 9885094 20190118 2006158 0.00 1 1 5.9 2991-50-6 2.0 0
NG_G U N TRG 0.50 0.50
0.50 2.0 3.0 BSI15 18316011 18316011 18316011 18316011 Y
N62473-14-D-1405N6247317F4100 BARSTOW_MCLB OU1-Bldg27-S-02-06 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181112
09:50:00 20181113 19:02:00 9885094 20190118 2006158 0.00 1 1 5.9 2355-31-9 2.0 0
NG_G U N TRG 0.50 0.50
0.50 2.0 3.0 BSI15 18316011 18316011 18316011 18316011 Y
N62473-14-D-1405N6247317F4100 BARSTOW_MCLB OU1-Bldg27-S-02-08 Calculation
EUROFINS BRADY GCE II NONE Wet NONE 000 S UNK 20181109
10:40:00 9885095 20190118 2006158 0.00 1 1 2.8 -86 2.8 2.8 PCT Y TRG
0.50 0.50 0.50 0.50 0.50 BSI15 18313820006A 18313820006A
18313820006A Y
N62473-14-D-1405N6247317F4100 BARSTOW_MCLB OU1-Bldg27-S-02-08 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181112
09:50:00 20181113 19:11:00 9885095 20190118 2006158 0.00 1 1 2.8 335-67-1 0.65 0
NG_G U N TRG 0.19 0.19

0.19 0.65 0.76 BSI15 18316011 18316011 18316011 18316011 Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-Bldg27-S-02-08 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181112
09:50:00 20181113 19:11:00 9885095 20190118 2006158 0.00 1 1 2.8 375-95-1 0.65 0
NG_G U N TRG 0.19 0.19
0.19 0.65 0.76 BSI15 18316011 18316011 18316011 18316011 Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-Bldg27-S-02-08 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181112
09:50:00 20181113 19:11:00 9885095 20190118 2006158 0.00 1 1 2.8 335-76-2 0.65 0
NG_G U N TRG 0.29 0.29
0.29 0.65 0.95 BSI15 18316011 18316011 18316011 18316011 Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-Bldg27-S-02-08 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181112
09:50:00 20181113 19:11:00 9885095 20190118 2006158 0.00 1 1 2.8 2058-94-8 0.65 0
NG_G U N TRG 0.19 0.19
0.19 0.65 0.76 BSI15 18316011 18316011 18316011 18316011 Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-Bldg27-S-02-08 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181112
09:50:00 20181113 19:11:00 9885095 20190118 2006158 0.00 1 1 2.8 307-55-1 0.65 0
NG_G U N TRG 0.19 0.19
0.19 0.65 0.76 BSI15 18316011 18316011 18316011 18316011 Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-Bldg27-S-02-08 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181112
09:50:00 20181113 19:11:00 9885095 20190118 2006158 0.00 1 1 2.8 72629-94-8 0.65 0
NG_G U N TRG 0.19 0.19
0.19 0.65 0.76 BSI15 18316011 18316011 18316011 18316011 Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-Bldg27-S-02-08 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181112
09:50:00 20181113 19:11:00 9885095 20190118 2006158 0.00 1 1 2.8 376-06-7 0.65 0
NG_G U N TRG 0.19 0.19
0.19 0.65 0.76 BSI15 18316011 18316011 18316011 18316011 Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-Bldg27-S-02-08 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181112
09:50:00 20181113 19:11:00 9885095 20190118 2006158 0.00 1 1 2.8 307-24-4 0.65 0
NG_G U N TRG 0.19 0.19
0.19 0.65 0.76 BSI15 18316011 18316011 18316011 18316011 Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-Bldg27-S-02-08 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181112
09:50:00 20181113 19:11:00 9885095 20190118 2006158 0.00 1 1 2.8 375-85-9 0.65 0
NG_G U N TRG 0.19 0.19
0.19 0.65 0.76 BSI15 18316011 18316011 18316011 18316011 Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-Bldg27-S-02-08 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181112
09:50:00 20181113 19:11:00 9885095 20190118 2006158 0.00 1 1 2.8 375-73-5 0.57 0
NG_G U N TRG 0.19 0.19
0.19 0.57 0.76 BSI15 18316011 18316011 18316011 18316011 Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-Bldg27-S-02-08 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181112
09:50:00 20181113 19:11:00 9885095 20190118 2006158 0.00 1 1 2.8 355-46-4 0.61 0
NG_G U N TRG 0.19 0.19
0.19 0.61 0.76 BSI15 18316011 18316011 18316011 18316011 Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-Bldg27-S-02-08 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181112
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NG_G U N TRG 0.19 0.19
0.19 0.62 0.76 BSI15 18316011 18316011 18316011 18316011 Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-Bldg27-S-02-08 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181112
09:50:00 20181113 19:11:00 9885095 20190118 2006158 0.00 1 1 2.8 2991-50-6 1.9 0
NG_G U N TRG 0.48 0.48
0.48 1.9 2.9 BSI15 18316011 18316011 18316011 18316011 Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-Bldg27-S-02-08 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181112
09:50:00 20181113 19:11:00 9885095 20190118 2006158 0.00 1 1 2.8 2355-31-9 1.9 0
NG_G U N TRG 0.48 0.48
0.48 1.9 2.9 BSI15 18316011 18316011 18316011 18316011 Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-Bldg50-S-01-01 Calculation
EUROFINS BRADY GCE II NONE Wet NONE 000 S UNK 20181109
10:40:00 9885098 20190118 2006158 0.00 1 1 6.4 -86 6.4 6.4 PCT Y TRG
0.50 0.50 0.50 0.50 0.50 BSI15 18313820006B 18313820006B
18313820006B Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-Bldg50-S-01-01 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181112
09:50:00 20181113 19:20:00 9885098 20190118 2006158 0.00 1 1 6.4 335-67-1 0.69 0
NG_G U N TRG 0.20 0.20
0.20 0.69 0.81 BSI15 18316011 18316011 18316011 18316011 Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-Bldg50-S-01-01 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181112
09:50:00 20181113 19:20:00 9885098 20190118 2006158 0.00 1 1 6.4 375-95-1 0.69 0
NG_G U N TRG 0.20 0.20
0.20 0.69 0.81 BSI15 18316011 18316011 18316011 18316011 Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-Bldg50-S-01-01 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181112
09:50:00 20181113 19:20:00 9885098 20190118 2006158 0.00 1 1 6.4 335-76-2 0.69 0
NG_G U N TRG 0.30 0.30
0.30 0.69 1.0 BSI15 18316011 18316011 18316011 18316011 Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-Bldg50-S-01-01 537_MOD
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NG_G U N TRG 0.20 0.20
0.20 0.69 0.81 BSI15 18316011 18316011 18316011 18316011 Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-Bldg50-S-01-01 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181112
09:50:00 20181113 19:20:00 9885098 20190118 2006158 0.00 1 1 6.4 307-55-1 0.69 0
NG_G U N TRG 0.20 0.20
0.20 0.69 0.81 BSI15 18316011 18316011 18316011 18316011 Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-Bldg50-S-01-01 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181112
09:50:00 20181113 19:20:00 9885098 20190118 2006158 0.00 1 1 6.4 72629-94-8 0.69 0
NG_G U N TRG 0.20 0.20
0.20 0.69 0.81 BSI15 18316011 18316011 18316011 18316011 Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-Bldg50-S-01-01 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181112
09:50:00 20181113 19:20:00 9885098 20190118 2006158 0.00 1 1 6.4 376-06-7 0.69 0
NG_G U N TRG 0.20 0.20
0.20 0.69 0.81 BSI15 18316011 18316011 18316011 18316011 Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-Bldg50-S-01-01 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181112

09:50:00 20181113 19:20:00 9885098 20190118 2006158 0.00 1 1 6.4 307-24-4 0.69 0
NG_G U N TRG 0.20 0.20
0.20 0.69 0.81 BSI15 18316011 18316011 18316011 18316011 Y
N62473-14-D-1405N6247317F4100 BARSTOW_MCLB OU1-Bldg50-S-01-01 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181112
09:50:00 20181113 19:20:00 9885098 20190118 2006158 0.00 1 1 6.4 375-85-9 0.69 0
NG_G U N TRG 0.20 0.20
0.20 0.69 0.81 BSI15 18316011 18316011 18316011 18316011 Y
N62473-14-D-1405N6247317F4100 BARSTOW_MCLB OU1-Bldg50-S-01-01 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181112
09:50:00 20181113 19:20:00 9885098 20190118 2006158 0.00 1 1 6.4 375-73-5 0.60 0
NG_G U N TRG 0.20 0.20
0.20 0.60 0.81 BSI15 18316011 18316011 18316011 18316011 Y
N62473-14-D-1405N6247317F4100 BARSTOW_MCLB OU1-Bldg50-S-01-01 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181112
09:50:00 20181113 19:20:00 9885098 20190118 2006158 0.00 1 1 6.4 355-46-4 0.65 0
NG_G U N TRG 0.20 0.20
0.20 0.65 0.81 BSI15 18316011 18316011 18316011 18316011 Y
N62473-14-D-1405N6247317F4100 BARSTOW_MCLB OU1-Bldg50-S-01-01 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181112
09:50:00 20181113 19:20:00 9885098 20190118 2006158 0.00 1 1 6.4 1763-23-1 0.66 0
NG_G U N TRG 0.20 0.20
0.20 0.66 0.81 BSI15 18316011 18316011 18316011 18316011 Y
N62473-14-D-1405N6247317F4100 BARSTOW_MCLB OU1-Bldg50-S-01-01 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181112
09:50:00 20181113 19:20:00 9885098 20190118 2006158 0.00 1 1 6.4 2991-50-6 2.0 0
NG_G U N TRG 0.50 0.50
0.50 2.0 3.0 BSI15 18316011 18316011 18316011 18316011 Y
N62473-14-D-1405N6247317F4100 BARSTOW_MCLB OU1-Bldg50-S-01-01 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181112
09:50:00 20181113 19:20:00 9885098 20190118 2006158 0.00 1 1 6.4 2355-31-9 2.0 0
NG_G U N TRG 0.50 0.50
0.50 2.0 3.0 BSI15 18316011 18316011 18316011 18316011 Y
N62473-14-D-1405N6247317F4100 BARSTOW_MCLB OU1-Bldg50-S-01-03 Calculation
EUROFINS BRADY GCE II NONE Wet NONE 000 S UNK 20181109
10:40:00 9885099 20190118 2006158 0.00 1 1 2.7 -86 2.7 2.7 PCT Y TRG
0.50 0.50 0.50 0.50 0.50 BSI15 18313820006B 18313820006B
18313820006B Y
N62473-14-D-1405N6247317F4100 BARSTOW_MCLB OU1-Bldg50-S-01-03 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181112
09:50:00 20181113 19:29:00 9885099 20190118 2006158 0.00 1 1 2.7 335-67-1 0.65 0
NG_G U N TRG 0.19 0.19
0.19 0.65 0.77 BSI15 18316011 18316011 18316011 18316011 Y
N62473-14-D-1405N6247317F4100 BARSTOW_MCLB OU1-Bldg50-S-01-03 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181112
09:50:00 20181113 19:29:00 9885099 20190118 2006158 0.00 1 1 2.7 375-95-1 0.65 0
NG_G U N TRG 0.19 0.19
0.19 0.65 0.77 BSI15 18316011 18316011 18316011 18316011 Y
N62473-14-D-1405N6247317F4100 BARSTOW_MCLB OU1-Bldg50-S-01-03 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181112
09:50:00 20181113 19:29:00 9885099 20190118 2006158 0.00 1 1 2.7 335-76-2 0.65 0
NG_G U N TRG 0.29 0.29
0.29 0.65 0.96 BSI15 18316011 18316011 18316011 18316011 Y
N62473-14-D-1405N6247317F4100 BARSTOW_MCLB OU1-Bldg50-S-01-03 537_MOD

EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181112
09:50:00 20181113 19:29:00 9885099 20190118 2006158 0.00 1 1 2.7 2058-94-8 0.65 0
NG_G U N TRG 0.19 0.19
0.19 0.65 0.77 BSI15 18316011 18316011 18316011 18316011 Y
N62473-14-D-1405N6247317F4100 BARSTOW_MCLB OU1-Bldg50-S-01-03 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181112
09:50:00 20181113 19:29:00 9885099 20190118 2006158 0.00 1 1 2.7 307-55-1 0.65 0
NG_G U N TRG 0.19 0.19
0.19 0.65 0.77 BSI15 18316011 18316011 18316011 18316011 Y
N62473-14-D-1405N6247317F4100 BARSTOW_MCLB OU1-Bldg50-S-01-03 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181112
09:50:00 20181113 19:29:00 9885099 20190118 2006158 0.00 1 1 2.7 72629-94-8 0.65 0
NG_G U N TRG 0.19 0.19
0.19 0.65 0.77 BSI15 18316011 18316011 18316011 18316011 Y
N62473-14-D-1405N6247317F4100 BARSTOW_MCLB OU1-Bldg50-S-01-03 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181112
09:50:00 20181113 19:29:00 9885099 20190118 2006158 0.00 1 1 2.7 376-06-7 0.65 0
NG_G U N TRG 0.19 0.19
0.19 0.65 0.77 BSI15 18316011 18316011 18316011 18316011 Y
N62473-14-D-1405N6247317F4100 BARSTOW_MCLB OU1-Bldg50-S-01-03 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181112
09:50:00 20181113 19:29:00 9885099 20190118 2006158 0.00 1 1 2.7 307-24-4 0.65 0
NG_G U N TRG 0.19 0.19
0.19 0.65 0.77 BSI15 18316011 18316011 18316011 18316011 Y
N62473-14-D-1405N6247317F4100 BARSTOW_MCLB OU1-Bldg50-S-01-03 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181112
09:50:00 20181113 19:29:00 9885099 20190118 2006158 0.00 1 1 2.7 375-85-9 0.65 0
NG_G U N TRG 0.19 0.19
0.19 0.65 0.77 BSI15 18316011 18316011 18316011 18316011 Y
N62473-14-D-1405N6247317F4100 BARSTOW_MCLB OU1-Bldg50-S-01-03 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181112
09:50:00 20181113 19:29:00 9885099 20190118 2006158 0.00 1 1 2.7 375-73-5 0.58 0
NG_G U N TRG 0.19 0.19
0.19 0.58 0.77 BSI15 18316011 18316011 18316011 18316011 Y
N62473-14-D-1405N6247317F4100 BARSTOW_MCLB OU1-Bldg50-S-01-03 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181112
09:50:00 20181113 19:29:00 9885099 20190118 2006158 0.00 1 1 2.7 355-46-4 0.61 0
NG_G U N TRG 0.19 0.19
0.19 0.61 0.77 BSI15 18316011 18316011 18316011 18316011 Y
N62473-14-D-1405N6247317F4100 BARSTOW_MCLB OU1-Bldg50-S-01-03 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181112
09:50:00 20181113 19:29:00 9885099 20190118 2006158 0.00 1 1 2.7 1763-23-1 0.62 0
NG_G U N TRG 0.19 0.19
0.19 0.62 0.77 BSI15 18316011 18316011 18316011 18316011 Y
N62473-14-D-1405N6247317F4100 BARSTOW_MCLB OU1-Bldg50-S-01-03 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181112
09:50:00 20181113 19:29:00 9885099 20190118 2006158 0.00 1 1 2.7 2991-50-6 1.9 0
NG_G U N TRG 0.48 0.48
0.48 1.9 2.9 BSI15 18316011 18316011 18316011 18316011 Y
N62473-14-D-1405N6247317F4100 BARSTOW_MCLB OU1-Bldg50-S-01-03 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181112
09:50:00 20181113 19:29:00 9885099 20190118 2006158 0.00 1 1 2.7 2355-31-9 1.9 0
NG_G U N TRG 0.48 0.48
0.48 1.9 2.9 BSI15 18316011 18316011 18316011 18316011 Y

N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-Bldg50-S-01-05 Calculation
EUROFINS BRADY GCE II NONE Wet NONE 000 S UNK 20181109
10:40:00 9885100 20190118 2006158 0.00 1 1 1.9 -86 1.9 1.9 PCT Y TRG
0.50 0.50 0.50 0.50 0.50 BSI15 18313820006B 18313820006B
18313820006B Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-Bldg50-S-01-05 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181112
09:50:00 20181113 19:38:00 9885100 20190118 2006158 0.00 1 1 1.9 335-67-1 0.63 0
NG_G U N TRG 0.19 0.19
0.19 0.63 0.74 BSI15 18316011 18316011 18316011 18316011 Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-Bldg50-S-01-05 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181112
09:50:00 20181113 19:38:00 9885100 20190118 2006158 0.00 1 1 1.9 375-95-1 0.63 0
NG_G U N TRG 0.19 0.19
0.19 0.63 0.74 BSI15 18316011 18316011 18316011 18316011 Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-Bldg50-S-01-05 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181112
09:50:00 20181113 19:38:00 9885100 20190118 2006158 0.00 1 1 1.9 335-76-2 0.63 0
NG_G U N TRG 0.28 0.28
0.28 0.63 0.93 BSI15 18316011 18316011 18316011 18316011 Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-Bldg50-S-01-05 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181112
09:50:00 20181113 19:38:00 9885100 20190118 2006158 0.00 1 1 1.9 2058-94-8 0.63 0
NG_G U N TRG 0.19 0.19
0.19 0.63 0.74 BSI15 18316011 18316011 18316011 18316011 Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-Bldg50-S-01-05 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181112
09:50:00 20181113 19:38:00 9885100 20190118 2006158 0.00 1 1 1.9 307-55-1 0.63 0
NG_G U N TRG 0.19 0.19
0.19 0.63 0.74 BSI15 18316011 18316011 18316011 18316011 Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-Bldg50-S-01-05 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181112
09:50:00 20181113 19:38:00 9885100 20190118 2006158 0.00 1 1 1.9 72629-94-8 0.63 0
NG_G U N TRG 0.19 0.19
0.19 0.63 0.74 BSI15 18316011 18316011 18316011 18316011 Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-Bldg50-S-01-05 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181112
09:50:00 20181113 19:38:00 9885100 20190118 2006158 0.00 1 1 1.9 376-06-7 0.63 0
NG_G U N TRG 0.19 0.19
0.19 0.63 0.74 BSI15 18316011 18316011 18316011 18316011 Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-Bldg50-S-01-05 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181112
09:50:00 20181113 19:38:00 9885100 20190118 2006158 0.00 1 1 1.9 307-24-4 0.63 0
NG_G U N TRG 0.19 0.19
0.19 0.63 0.74 BSI15 18316011 18316011 18316011 18316011 Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-Bldg50-S-01-05 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181112
09:50:00 20181113 19:38:00 9885100 20190118 2006158 0.00 1 1 1.9 375-85-9 0.63 0
NG_G U N TRG 0.19 0.19
0.19 0.63 0.74 BSI15 18316011 18316011 18316011 18316011 Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-Bldg50-S-01-05 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181112
09:50:00 20181113 19:38:00 9885100 20190118 2006158 0.00 1 1 1.9 375-73-5 0.56 0
NG_G U N TRG 0.19 0.19

0.19 0.56 0.74 BSI15 18316011 18316011 18316011 18316011 Y
N62473-14-D-1405N6247317F4100 BARSTOW_MCLB OU1-Bldg50-S-01-05 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181112
09:50:00 20181113 19:38:00 9885100 20190118 2006158 0.00 1 1 1.9 355-46-4 0.59 0
NG_G U N TRG 0.19 0.19
0.19 0.59 0.74 BSI15 18316011 18316011 18316011 18316011 Y
N62473-14-D-1405N6247317F4100 BARSTOW_MCLB OU1-Bldg50-S-01-05 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181112
09:50:00 20181113 19:38:00 9885100 20190118 2006158 0.00 1 1 1.9 1763-23-1 0.60 0
NG_G U N TRG 0.19 0.19
0.19 0.60 0.74 BSI15 18316011 18316011 18316011 18316011 Y
N62473-14-D-1405N6247317F4100 BARSTOW_MCLB OU1-Bldg50-S-01-05 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181112
09:50:00 20181113 19:38:00 9885100 20190118 2006158 0.00 1 1 1.9 2991-50-6 1.9 0
NG_G U N TRG 0.46 0.46
0.46 1.9 2.8 BSI15 18316011 18316011 18316011 18316011 Y
N62473-14-D-1405N6247317F4100 BARSTOW_MCLB OU1-Bldg50-S-01-05 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181112
09:50:00 20181113 19:38:00 9885100 20190118 2006158 0.00 1 1 1.9 2355-31-9 1.9 0
NG_G U N TRG 0.46 0.46
0.46 1.9 2.8 BSI15 18316011 18316011 18316011 18316011 Y
N62473-14-D-1405N6247317F4100 BARSTOW_MCLB OU1-Bldg50-S-01-08 Calculation
EUROFINS BRADY GCE II NONE Wet NONE 000 S UNK 20181109
10:40:00 9885101 20190118 2006158 0.00 1 1 6.4 -86 6.4 6.4 PCT Y TRG
0.50 0.50 0.50 0.50 0.50 BSI15 18313820006B 18313820006B
18313820006B Y
N62473-14-D-1405N6247317F4100 BARSTOW_MCLB OU1-Bldg50-S-01-08 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181112
09:50:00 20181113 19:47:00 9885101 20190118 2006158 0.00 1 1 6.4 335-67-1 0.68 0
NG_G U N TRG 0.20 0.20
0.20 0.68 0.80 BSI15 18316011 18316011 18316011 18316011 Y
N62473-14-D-1405N6247317F4100 BARSTOW_MCLB OU1-Bldg50-S-01-08 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181112
09:50:00 20181113 19:47:00 9885101 20190118 2006158 0.00 1 1 6.4 375-95-1 0.68 0
NG_G U N TRG 0.20 0.20
0.20 0.68 0.80 BSI15 18316011 18316011 18316011 18316011 Y
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EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181112
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0.20 0.68 0.80 BSI15 18316011 18316011 18316011 18316011 Y
N62473-14-D-1405N6247317F4100 BARSTOW_MCLB OU1-Bldg50-S-01-08 537_MOD
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NG_G U N TRG 0.20 0.20
0.20 0.68 0.80 BSI15 18316011 18316011 18316011 18316011 Y
N62473-14-D-1405N6247317F4100 BARSTOW_MCLB OU1-Bldg50-S-01-08 537_MOD
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NG_G U N TRG 0.20 0.20
0.20 0.68 0.80 BSI15 18316011 18316011 18316011 18316011 Y
N62473-14-D-1405N6247317F4100 BARSTOW_MCLB OU1-Bldg50-S-01-08 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181112
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NG_G U N TRG 0.20 0.20
0.20 0.68 0.80 BSI15 18316011 18316011 18316011 18316011 Y
N62473-14-D-1405N6247317F4100 BARSTOW_MCLB OU1-Bldg50-S-01-08 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181112
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NG_G U N TRG 0.20 0.20
0.20 0.68 0.80 BSI15 18316011 18316011 18316011 18316011 Y
N62473-14-D-1405N6247317F4100 BARSTOW_MCLB OU1-Bldg50-S-01-08 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181112
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NG_G U N TRG 0.20 0.20
0.20 0.68 0.80 BSI15 18316011 18316011 18316011 18316011 Y
N62473-14-D-1405N6247317F4100 BARSTOW_MCLB OU1-Bldg50-S-01-08 537_MOD
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NG_G U N TRG 0.20 0.20
0.20 0.60 0.80 BSI15 18316011 18316011 18316011 18316011 Y
N62473-14-D-1405N6247317F4100 BARSTOW_MCLB OU1-Bldg50-S-01-08 537_MOD
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NG_G U N TRG 0.20 0.20
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0.20 0.65 0.80 BSI15 18316011 18316011 18316011 18316011 Y
N62473-14-D-1405N6247317F4100 BARSTOW_MCLB OU1-Bldg50-S-01-08 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181112
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NG_G U N TRG 0.50 0.50
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EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181112
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NG_G U N TRG 0.50 0.50
0.50 2.0 3.0 BSI15 18316011 18316011 18316011 18316011 Y
N62473-14-D-1405N6247317F4100 BARSTOW_MCLB OU1-Bldg50-S-02-01 Calculation
EUROFINS BRADY GCE II NONE Wet NONE 000 S UNK 20181109
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18313820006B Y
N62473-14-D-1405N6247317F4100 BARSTOW_MCLB OU1-Bldg50-S-02-01 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181112
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NG_G U N TRG 0.20 0.20
0.20 0.68 0.80 BSI15 18316011 18316011 18316011 18316011 Y
N62473-14-D-1405N6247317F4100 BARSTOW_MCLB OU1-Bldg50-S-02-01 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181112

09:50:00 20181113 19:56:00 9885104 20190118 2006158 0.00 1 1 4.6 375-95-1 0.68 0
NG_G U N TRG 0.20 0.20
0.20 0.68 0.80 BSI15 18316011 18316011 18316011 18316011 Y
N62473-14-D-1405N6247317F4100 BARSTOW_MCLB OU1-Bldg50-S-02-01 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181112
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NG_G U N TRG 0.30 0.30
0.30 0.68 1.0 BSI15 18316011 18316011 18316011 18316011 Y
N62473-14-D-1405N6247317F4100 BARSTOW_MCLB OU1-Bldg50-S-02-01 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181112
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NG_G U N TRG 0.20 0.20
0.20 0.68 0.80 BSI15 18316011 18316011 18316011 18316011 Y
N62473-14-D-1405N6247317F4100 BARSTOW_MCLB OU1-Bldg50-S-02-01 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181112
09:50:00 20181113 19:56:00 9885104 20190118 2006158 0.00 1 1 4.6 307-55-1 0.68 0
NG_G U N TRG 0.20 0.20
0.20 0.68 0.80 BSI15 18316011 18316011 18316011 18316011 Y
N62473-14-D-1405N6247317F4100 BARSTOW_MCLB OU1-Bldg50-S-02-01 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181112
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NG_G U N TRG 0.20 0.20
0.20 0.68 0.80 BSI15 18316011 18316011 18316011 18316011 Y
N62473-14-D-1405N6247317F4100 BARSTOW_MCLB OU1-Bldg50-S-02-01 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181112
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NG_G U N TRG 0.20 0.20
0.20 0.68 0.80 BSI15 18316011 18316011 18316011 18316011 Y
N62473-14-D-1405N6247317F4100 BARSTOW_MCLB OU1-Bldg50-S-02-01 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181112
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NG_G U N TRG 0.20 0.20
0.20 0.68 0.80 BSI15 18316011 18316011 18316011 18316011 Y
N62473-14-D-1405N6247317F4100 BARSTOW_MCLB OU1-Bldg50-S-02-01 537_MOD
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NG_G U N TRG 0.20 0.20
0.20 0.68 0.80 BSI15 18316011 18316011 18316011 18316011 Y
N62473-14-D-1405N6247317F4100 BARSTOW_MCLB OU1-Bldg50-S-02-01 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181112
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NG_G U N TRG 0.20 0.20
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N62473-14-D-1405N6247317F4100 BARSTOW_MCLB OU1-Bldg50-S-02-01 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181112
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NG_G U N TRG 0.20 0.20
0.20 0.64 0.80 BSI15 18316011 18316011 18316011 18316011 Y
N62473-14-D-1405N6247317F4100 BARSTOW_MCLB OU1-Bldg50-S-02-01 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181112
09:50:00 20181113 19:56:00 9885104 20190118 2006158 0.00 1 1 4.6 1763-23-1 0.65 0
NG_G U N TRG 0.20 0.20
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N62473-14-D-1405N6247317F4100 BARSTOW_MCLB OU1-Bldg50-S-02-01 537_MOD

EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181112
09:50:00 20181113 19:56:00 9885104 20190118 2006158 0.00 1 1 4.6 2991-50-6 2.0 0
NG_G U N TRG 0.50 0.50
0.50 2.0 3.0 BSI15 18316011 18316011 18316011 18316011 Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-Bldg50-S-02-01 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181112
09:50:00 20181113 19:56:00 9885104 20190118 2006158 0.00 1 1 4.6 2355-31-9 2.0 0
NG_G U N TRG 0.50 0.50
0.50 2.0 3.0 BSI15 18316011 18316011 18316011 18316011 Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-Bldg50-S-02-03 Calculation
EUROFINS BRADY GCE II NONE Wet NONE 000 S UNK 20181109
10:40:00 9885105 20190118 2006158 0.00 1 1 5.1 -86 5.1 5.1 PCT Y TRG
0.50 0.50 0.50 0.50 0.50 BSI15 18313820006B 18313820006B
18313820006B Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-Bldg50-S-02-03 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181112
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NG_G U N TRG 0.20 0.20
0.20 0.70 0.82 BSI15 18316011 18316011 18316011 18316011 Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-Bldg50-S-02-03 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181112
09:50:00 20181113 20:14:00 9885105 20190118 2006158 0.00 1 1 5.1 375-95-1 0.70 0
NG_G U N TRG 0.20 0.20
0.20 0.70 0.82 BSI15 18316011 18316011 18316011 18316011 Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-Bldg50-S-02-03 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181112
09:50:00 20181113 20:14:00 9885105 20190118 2006158 0.00 1 1 5.1 335-76-2 0.70 0
NG_G U N TRG 0.31 0.31
0.31 0.70 1.0 BSI15 18316011 18316011 18316011 18316011 Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-Bldg50-S-02-03 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181112
09:50:00 20181113 20:14:00 9885105 20190118 2006158 0.00 1 1 5.1 2058-94-8 0.70 0
NG_G U N TRG 0.20 0.20
0.20 0.70 0.82 BSI15 18316011 18316011 18316011 18316011 Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-Bldg50-S-02-03 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181112
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NG_G U N TRG 0.20 0.20
0.20 0.70 0.82 BSI15 18316011 18316011 18316011 18316011 Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-Bldg50-S-02-03 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181112
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NG_G U N TRG 0.20 0.20
0.20 0.70 0.82 BSI15 18316011 18316011 18316011 18316011 Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-Bldg50-S-02-03 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181112
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NG_G U N TRG 0.20 0.20
0.20 0.70 0.82 BSI15 18316011 18316011 18316011 18316011 Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-Bldg50-S-02-03 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181112
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NG_G U N TRG 0.20 0.20
0.20 0.70 0.82 BSI15 18316011 18316011 18316011 18316011 Y

N62473-14-D-1405N6247317F4100 BARSTOW_MCLB OU1-Bldg50-S-02-03 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181112
09:50:00 20181113 20:14:00 9885105 20190118 2006158 0.00 1 1 5.1 375-85-9 0.70 0
NG_G U N TRG 0.20 0.20
0.20 0.70 0.82 BSI15 18316011 18316011 18316011 18316011 Y
N62473-14-D-1405N6247317F4100 BARSTOW_MCLB OU1-Bldg50-S-02-03 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181112
09:50:00 20181113 20:14:00 9885105 20190118 2006158 0.00 1 1 5.1 375-73-5 0.61 0
NG_G U N TRG 0.20 0.20
0.20 0.61 0.82 BSI15 18316011 18316011 18316011 18316011 Y
N62473-14-D-1405N6247317F4100 BARSTOW_MCLB OU1-Bldg50-S-02-03 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181112
09:50:00 20181113 20:14:00 9885105 20190118 2006158 0.00 1 1 5.1 355-46-4 0.65 0
NG_G U N TRG 0.20 0.20
0.20 0.65 0.82 BSI15 18316011 18316011 18316011 18316011 Y
N62473-14-D-1405N6247317F4100 BARSTOW_MCLB OU1-Bldg50-S-02-03 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181112
09:50:00 20181113 20:14:00 9885105 20190118 2006158 0.00 1 1 5.1 1763-23-1 0.66 0
NG_G U N TRG 0.20 0.20
0.20 0.66 0.82 BSI15 18316011 18316011 18316011 18316011 Y
N62473-14-D-1405N6247317F4100 BARSTOW_MCLB OU1-Bldg50-S-02-03 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181112
09:50:00 20181113 20:14:00 9885105 20190118 2006158 0.00 1 1 5.1 2991-50-6 2.0 0
NG_G U N TRG 0.51 0.51
0.51 2.0 3.1 BSI15 18316011 18316011 18316011 18316011 Y
N62473-14-D-1405N6247317F4100 BARSTOW_MCLB OU1-Bldg50-S-02-03 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181112
09:50:00 20181113 20:14:00 9885105 20190118 2006158 0.00 1 1 5.1 2355-31-9 2.0 0
NG_G U N TRG 0.51 0.51
0.51 2.0 3.1 BSI15 18316011 18316011 18316011 18316011 Y
N62473-14-D-1405N6247317F4100 BARSTOW_MCLB OU1-Bldg50-S-02-08 Calculation
EUROFINS BRADY GCE II NONE Wet NONE 000 S UNK 20181109
10:40:00 9885106 20190118 2006158 0.00 1 1 1.9 -86 1.9 1.9 PCT Y TRG
0.50 0.50 0.50 0.50 0.50 BSI15 18313820006B 18313820006B
18313820006B Y
N62473-14-D-1405N6247317F4100 BARSTOW_MCLB OU1-Bldg50-S-02-08 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181112
09:50:00 20181113 20:23:00 9885106 20190118 2006158 0.00 1 1 1.9 335-67-1 0.67 0
NG_G U N TRG 0.20 0.20
0.20 0.67 0.79 BSI15 18316011 18316011 18316011 18316011 Y
N62473-14-D-1405N6247317F4100 BARSTOW_MCLB OU1-Bldg50-S-02-08 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181112
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NG_G U N TRG 0.20 0.20
0.20 0.67 0.79 BSI15 18316011 18316011 18316011 18316011 Y
N62473-14-D-1405N6247317F4100 BARSTOW_MCLB OU1-Bldg50-S-02-08 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181112
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NG_G U N TRG 0.30 0.30
0.30 0.67 0.99 BSI15 18316011 18316011 18316011 18316011 Y
N62473-14-D-1405N6247317F4100 BARSTOW_MCLB OU1-Bldg50-S-02-08 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181112
09:50:00 20181113 20:23:00 9885106 20190118 2006158 0.00 1 1 1.9 2058-94-8 0.67 0
NG_G U N TRG 0.20 0.20

0.20 0.67 0.79 BSI15 18316011 18316011 18316011 18316011 Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-Bldg50-S-02-08 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181112
09:50:00 20181113 20:23:00 9885106 20190118 2006158 0.00 1 1 1.9 307-55-1 0.67 0
NG_G U N TRG 0.20 0.20
0.20 0.67 0.79 BSI15 18316011 18316011 18316011 18316011 Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-Bldg50-S-02-08 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181112
09:50:00 20181113 20:23:00 9885106 20190118 2006158 0.00 1 1 1.9 72629-94-8 0.67 0
NG_G U N TRG 0.20 0.20
0.20 0.67 0.79 BSI15 18316011 18316011 18316011 18316011 Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-Bldg50-S-02-08 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181112
09:50:00 20181113 20:23:00 9885106 20190118 2006158 0.00 1 1 1.9 376-06-7 0.67 0
NG_G U N TRG 0.20 0.20
0.20 0.67 0.79 BSI15 18316011 18316011 18316011 18316011 Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-Bldg50-S-02-08 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181112
09:50:00 20181113 20:23:00 9885106 20190118 2006158 0.00 1 1 1.9 307-24-4 0.67 0
NG_G U N TRG 0.20 0.20
0.20 0.67 0.79 BSI15 18316011 18316011 18316011 18316011 Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-Bldg50-S-02-08 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181112
09:50:00 20181113 20:23:00 9885106 20190118 2006158 0.00 1 1 1.9 375-85-9 0.67 0
NG_G U N TRG 0.20 0.20
0.20 0.67 0.79 BSI15 18316011 18316011 18316011 18316011 Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-Bldg50-S-02-08 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181112
09:50:00 20181113 20:23:00 9885106 20190118 2006158 0.00 1 1 1.9 375-73-5 0.59 0
NG_G U N TRG 0.20 0.20
0.20 0.59 0.79 BSI15 18316011 18316011 18316011 18316011 Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-Bldg50-S-02-08 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181112
09:50:00 20181113 20:23:00 9885106 20190118 2006158 0.00 1 1 1.9 355-46-4 0.63 0
NG_G U N TRG 0.20 0.20
0.20 0.63 0.79 BSI15 18316011 18316011 18316011 18316011 Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-Bldg50-S-02-08 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181112
09:50:00 20181113 20:23:00 9885106 20190118 2006158 0.00 1 1 1.9 1763-23-1 0.64 0
NG_G U N TRG 0.20 0.20
0.20 0.64 0.79 BSI15 18316011 18316011 18316011 18316011 Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-Bldg50-S-02-08 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181112
09:50:00 20181113 20:23:00 9885106 20190118 2006158 0.00 1 1 1.9 2991-50-6 2.0 0
NG_G U N TRG 0.49 0.49
0.49 2.0 3.0 BSI15 18316011 18316011 18316011 18316011 Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-Bldg50-S-02-08 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181112
09:50:00 20181113 20:23:00 9885106 20190118 2006158 0.00 1 1 1.9 2355-31-9 2.0 0
NG_G U N TRG 0.49 0.49
0.49 2.0 3.0 BSI15 18316011 18316011 18316011 18316011 Y
SAMPLE_NAME CONTRACT_ID DO_CTO_NUMBER PHASE INSTALLATION_ID SITE_NAME
LOCATION_NAME SPECIMEN_NAME BIOLOGICAL_CLASS SEX AGE_CLASS EXCAVATION_NAME
PARENT_SAMPLE_NAME SAMPLE_MATRIX SAMPLE_TYPE SAMPLING_EQUIPMENT

PROJECT_PHASE COMPOSITE WATER_COLUMN COLLECT_DATE COLLECT_TIME DATUM_ELEV ELEV_UNITSDATUM_MLLW DATUM_DESC START_DEPTH END_DEPTH DEPTH_UNITS REMOVED REMOVED_DATE AMBIENT_BLANK EQUIPMENT_BLANK SOURCE_BLANK TRIP_BLANK SAMPLE_NARRATIVE

OU1-Bldg2-S-01-08 N62473-14-D-1405N6247317F4100 BARSTOW_MCLB 00000 Bldg2-S-01-08 SO N N 20181101 14:15:00 08 FT

OU1-Bldg2-S-02-01 N62473-14-D-1405N6247317F4100 BARSTOW_MCLB 00000 Bldg2-S-02-01 SO N N 20181101 14:45:00 01 FT

OU1-Bldg2-S-02-03 N62473-14-D-1405N6247317F4100 BARSTOW_MCLB 00000 Bldg2-S-02-03 SO N N 20181101 14:57:00 03 FT

OU1-Bldg2-S-02-08 N62473-14-D-1405N6247317F4100 BARSTOW_MCLB 00000 Bldg2-S-02-08 SO N N 20181101 15:03:00 08 FT

OU1-Bldg27-S-01-01 N62473-14-D-1405N6247317F4100 BARSTOW_MCLB 00000 Bldg27-S-01-01 SO N N 20181101 15:40:00 01 FT

OU1-Bldg27-S-01-03 N62473-14-D-1405N6247317F4100 BARSTOW_MCLB 00000 Bldg27-S-01-03 SO N N 20181101 16:00:00 03 FT

OU1-Bldg27-S-01-03 MS N62473-14-D-1405N6247317F4100 BARSTOW_MCLB 00000 Bldg27-S-01-03 MS OU1-Bldg27-S-01-03 SO MS N 20181101 16:00:00 03 FT

OU1-Bldg27-S-01-03 MSD N62473-14-D-1405N6247317F4100 BARSTOW_MCLB 00000 Bldg27-S-01-03 MSD OU1-Bldg27-S-01-03 SO SD N 20181101 16:00:00 03 FT

OU1-Bldg27-S-01-07 N62473-14-D-1405N6247317F4100 BARSTOW_MCLB 00000 Bldg27-S-01-07 SO N N 20181101 16:05:00 07 FT

OU1-Bldg27-S-01-11 N62473-14-D-1405N6247317F4100 BARSTOW_MCLB 00000 Bldg27-S-01-11 SO N N 20181101 16:08:00 11 FT

OU1-Bldg27-S-01-12 N62473-14-D-1405N6247317F4100 BARSTOW_MCLB 00000 Bldg27-S-01-12 SO N N 20181101 16:10:00 12 FT

OU1-Bldg27-S-02-01 N62473-14-D-1405N6247317F4100 BARSTOW_MCLB 00000 Bldg27-S-02-01 SO N N 20181101 16:39:00 01 FT

OU1-Bldg27-S-02-03 N62473-14-D-1405N6247317F4100 BARSTOW_MCLB 00000 Bldg27-S-02-03 SO N N 20181101 17:00:00 03 FT

OU1-Bldg27-S-02-06 N62473-14-D-1405N6247317F4100 BARSTOW_MCLB 00000 Bldg27-S-02-06 SO N N 20181101 17:07:00 06 FT

OU1-Bldg27-S-02-08 N62473-14-D-1405N6247317F4100 BARSTOW_MCLB 00000 Bldg27-S-02-08 SO N N 20181101 17:11:00 08 FT

OU1-Bldg50-S-01-01 N62473-14-D-1405N6247317F4100 BARSTOW_MCLB 00000 Bldg50-S-01-01 SO N N 20181101 17:34:00 01 FT

OU1-Bldg50-S-01-03 N62473-14-D-1405N6247317F4100 BARSTOW_MCLB 00000 Bldg50-S-01-03 SO N N 20181101 17:38:00 03 FT

OU1-Bldg50-S-01-05 N62473-14-D-1405N6247317F4100 BARSTOW_MCLB 00000 Bldg50-S-01-05 SO N N 20181101 17:44:00 05 FT

OU1-Bldg50-S-01-08 N62473-14-D-1405N6247317F4100 BARSTOW_MCLB 00000 Bldg50-S-01-
08 SO N N 20181101 17:46:00 08
FT
OU1-Bldg50-S-02-01 N62473-14-D-1405N6247317F4100 BARSTOW_MCLB 00000 Bldg50-S-02-
01 SO N N 20181101 18:09:00 01
FT
OU1-Bldg50-S-02-03 N62473-14-D-1405N6247317F4100 BARSTOW_MCLB 00000 Bldg50-S-02-
03 SO N N 20181101 18:13:00 03
FT
OU1-Bldg50-S-02-08 N62473-14-D-1405N6247317F4100 BARSTOW_MCLB 00000 Bldg50-S-02-
08 SO N N 20181101 18:16:00 08
FT
LCS18313820006A N62473-14-D-1405N6247317F4100 BARSTOW_MCLB 00000
SO BS N
DUP18313820006A N62473-14-D-1405N6247317F4100 BARSTOW_MCLB 00000
SO LR N 20181101 16:00:00
LCS18313820006B N62473-14-D-1405N6247317F4100 BARSTOW_MCLB 00000
SO BS N
BLK18316011 N62473-14-D-1405N6247317F4100 BARSTOW_MCLB 00000
SO LB N
LCS18316011 N62473-14-D-1405N6247317F4100 BARSTOW_MCLB 00000
SO BS N
BLK18316029 N62473-14-D-1405N6247317F4100 BARSTOW_MCLB 00000
SO LB N
LCS18316029 N62473-14-D-1405N6247317F4100 BARSTOW_MCLB 00000
SO BS N
BLK18332003 N62473-14-D-1405N6247317F4100 BARSTOW_MCLB 00000
SO LB N
LCS18332003 N62473-14-D-1405N6247317F4100 BARSTOW_MCLB 00000
SO BS N
LCS18337820002B N62473-14-D-1405N6247317F4100 BARSTOW_MCLB 00000
SO BS N