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NAVFAC
Naval Facilities Engineering Command

Groundwater Sample Results, Level 4 Laboratory Report, Electronic Data Deliverable, SDG BSI13

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 11/02/18

SDG# BSI13

GROUP	SAMPLE NUMBERS
2006156	9885056-9885059, 9885062-9885065

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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Sample Reference List for SDG Number BSI13
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
9885056	OU1-WWTPW-S-02-01	11/02/2018 12:29	11/06/2018 10:35
9885057	OU1-WWTPW-S-02-03	11/02/2018 12:47	11/06/2018 10:35
9885058	OU1-WWTPW-S-02-05	11/02/2018 12:50	11/06/2018 10:35
9885059	OU1-WWTPW-S-02-08	11/02/2018 12:52	11/06/2018 10:35
9885062	OU1-GCI-S-01-01	11/02/2018 13:23	11/06/2018 10:35
9885063	OU1-GCI-S-01-01 MS	11/02/2018 13:23	11/06/2018 10:35
9885064	OU1-GCI-S-01-01 MSD	11/02/2018 13:23	11/06/2018 10:35
9885065	OU1-GCI-S-01-03	11/02/2018 13:31	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 14:21

Project: Barstow Site Inspection

Account #: 43806
Group Number: 2006156
SDG: BSI13
State of Sample Origin: CA

Electronic Copy To Gutierrez Canales Engineering Attn: Jesse MacNeill

Respectfully Submitted,

Lyssa M. Longenecker
Specialist

(717) 556-7321

To view our laboratory's current scopes of accreditation please go to https://www.eurofinsus.com/environment-testing/laboratories/eurofins-lancaster-laboratories-environmental/certifications-and-accreditations-eurofins-lancaster-laboratories-environmental/ . Historical copies may be requested through your project manager.

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SAMPLE INFORMATION

Client Sample Description	Sample Collection Date/Time	ELLE#
OU1-WWTPW-S-01-10 Grab Soil	11/02/2018 12:05	9885054
OU1-WWTPW-S-01-12 Grab Soil	11/02/2018 12:07	9885055
OU1-WWTPW-S-02-01 Grab Soil	11/02/2018 12:29	9885056
OU1-WWTPW-S-02-03 Grab Soil	11/02/2018 12:47	9885057
OU1-WWTPW-S-02-05 Grab Soil	11/02/2018 12:50	9885058
OU1-WWTPW-S-02-08 Grab Soil	11/02/2018 12:52	9885059
OU1-WWTPW-S-02-10 Grab Soil	11/02/2018 12:55	9885060
OU1-WWTPW-S-02-12 Grab Soil	11/02/2018 12:58	9885061
OU1-GCI-S-01-01 Grab Soil	11/02/2018 13:23	9885062
OU1-GCI-S-01-01 MS Grab Soil	11/02/2018 13:23	9885063
OU1-GCI-S-01-01 MSD Grab Soil	11/02/2018 13:23	9885064
OU1-GCI-S-01-03 Grab Soil	11/02/2018 13:31	9885065

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

Project Name: Barstow Site Inspection
ELLE Group #: 2006156

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: 9885063

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

Sample #s: 9885065

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

Sample #s: 9885062

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

Sample #s: 9885064

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

Sample #s: 9885056

The recovery for labeled compound used as extraction standard d5-NEtFOSSA is outside of QC acceptance limits as noted on the QC Summary. The following corrective action was taken:
This sample was re-extracted within the method holding time and the recovery for labeled compound used as extraction standard d5-NEtFOSSA is again outside of QC acceptance limits. Both sets

of data are included in the data package.

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

Batch #: 18311021 (Sample number(s): 9885056 UNSPK: 9885062)

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

The recovery(ies) for one or more surrogates were below the acceptance window for sample(s) 9885056

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

Project Name: **Barstow Site Inspection**

Submittal Date/Time: 11/06/2018 10:35
Collection Date/Time: 11/02/2018 12:05
SDG#: BSI13-01

Gutierrez Canales Engineering
ELLE Sample #: **SW 9885054**
ELLE Group #: **2006156**

Sample Comments

CA ELAP Lab Certification No. 2792

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

Project Name: **Barstow Site Inspection**

Submittal Date/Time: 11/06/2018 10:35
Collection Date/Time: 11/02/2018 12:07
SDG#: BSI13-02

Gutierrez Canales Engineering
ELLE Sample #: **SW 9885055**
ELLE Group #: **2006156**

Sample Comments

CA ELAP Lab Certification No. 2792

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

Project Name: **Barstow Site Inspection**

Submittal Date/Time: 11/06/2018 10:35
Collection Date/Time: 11/02/2018 12:29
SDG#: BSI13-03

Gutierrez Canales Engineering
ELLE Sample #: SW 9885056
ELLE Group #: 2006156
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	2.1 J	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	0.66	0.96	1
14478	Perfluorododecanoic acid	307-55-1	N.D.	0.19	0.66	0.77	1
14478	Perfluoroheptanoic acid	375-85-9	0.27 J	0.19	0.66	0.77	1
14478	Perfluorohexanesulfonate	355-46-4	N.D.	0.19	0.62	0.77	1
14478	Perfluorohexanoic acid	307-24-4	0.23 J	0.19	0.66	0.77	1
14478	Perfluorononanoic acid	375-95-1	N.D.	0.19	0.66	0.77	1
14478	Perfluoro-octanesulfonate	1763-23-1	2.9	0.19	0.63	0.77	1
14478	Perfluorooctanoic acid	335-67-1	2.3	0.19	0.66	0.77	1
14478	Perfluorotetradecanoic acid	376-06-7	N.D.	0.19	0.66	0.77	1
14478	Perfluorotridecanoic acid	72629-94-8	N.D.	0.19	0.66	0.77	1
14478	Perfluoroundecanoic acid	2058-94-8	N.D.	0.19	0.66	0.77	1

The recovery for labeled compound used as extraction standard d5-NEtFOSSA is outside of QC acceptance limits as noted on the QC Summary. The following corrective action was taken:
This sample was re-extracted within the method holding time and the recovery for labeled compound used as extraction standard d5-NEtFOSSA is again outside of QC acceptance limits. Both sets of data are included in the data package.

Wet Chemistry	**SM 2540 G-1997 %Moisture Calc**		**%**	**%**	**%**	**%**	
00111	Moisture	n.a.	2.2	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	18311021	11/16/2018 11:26	Joshua P Trost	1
14510	PFAS Solid Prep - DoD	EPA 537 mod QSM 5.1 table B-15	1	18311021	11/07/2018 16:00	Anthony C Polaski	1

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

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

Project Name: **Barstow Site Inspection**

Submittal Date/Time: 11/06/2018 10:35
Collection Date/Time: 11/02/2018 12:29
SDG#: BSI13-03

Gutierrez Canales Engineering
ELLE Sample #: SW 9885056
ELLE Group #: 2006156
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	18312820008A	11/08/2018 13:57	Larry E Bevins	1

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

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

Project Name: **Barstow Site Inspection**

Submittal Date/Time: 11/06/2018 10:35
Collection Date/Time: 11/02/2018 12:47
SDG#: BSI13-04

Gutierrez Canales Engineering
ELLE Sample #: SW 9885057
ELLE Group #: 2006156
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	0.69	1.0	1
14478	Perfluorododecanoic acid	307-55-1	N.D.	0.20	0.69	0.82	1
14478	Perfluoroheptanoic acid	375-85-9	N.D.	0.20	0.69	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	0.69	0.82	1
14478	Perfluorononanoic acid	375-95-1	N.D.	0.20	0.69	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	0.69	0.82	1
14478	Perfluorotetradecanoic acid	376-06-7	N.D.	0.20	0.69	0.82	1
14478	Perfluorotridecanoic acid	72629-94-8	N.D.	0.20	0.69	0.82	1
14478	Perfluoroundecanoic acid	2058-94-8	N.D.	0.20	0.69	0.82	1
Wet Chemistry	**SM 2540 G-1997 %Moisture Calc**		**%**	**%**	**%**	**%**	
00111	Moisture	n.a.	6.6	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	18319003	11/15/2018 13:24	Joshua P Trost	1
14510	PFAS Solid Prep - DoD	EPA 537 mod QSM 5.1 table B-15	3	18319003	11/15/2018 08:50	Courtney J Fatta	1
00111	Moisture	SM 2540 G-1997 %Moisture Calc	1	18312820008A	11/08/2018 13:57	Larry E Bevins	1

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

Sample Description: **OU1-WWTPW-S-02-05 Grab Soil**
MCLB Barstow

Project Name: **Barstow Site Inspection**

Submittal Date/Time: 11/06/2018 10:35
Collection Date/Time: 11/02/2018 12:50
SDG#: BSI13-05

Gutierrez Canales Engineering
ELLE Sample #: SW 9885058
ELLE Group #: 2006156
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.	0.53	2.1	3.2	1
	NEtFOSAA is the acronym for N-ethyl perfluorooctanesulfonamidoacetic Acid.						
14478	NMeFOSAA	2355-31-9	N.D.	0.53	2.1	3.2	1
	NMeFOSAA is the acronym for N-methyl perfluorooctanesulfonamidoacetic Acid.						
14478	Perfluorobutanesulfonate	375-73-5	N.D.	0.21	0.64	0.85	1
14478	Perfluorodecanoic acid	335-76-2	N.D.	0.32	0.72	1.1	1
14478	Perfluorododecanoic acid	307-55-1	N.D.	0.21	0.72	0.85	1
14478	Perfluoroheptanoic acid	375-85-9	N.D.	0.21	0.72	0.85	1
14478	Perfluorohexanesulfonate	355-46-4	N.D.	0.21	0.68	0.85	1
14478	Perfluorohexanoic acid	307-24-4	N.D.	0.21	0.72	0.85	1
14478	Perfluorononanoic acid	375-95-1	N.D.	0.21	0.72	0.85	1
14478	Perfluoro-octanesulfonate	1763-23-1	N.D.	0.21	0.69	0.85	1
14478	Perfluorooctanoic acid	335-67-1	N.D.	0.21	0.72	0.85	1
14478	Perfluorotetradecanoic acid	376-06-7	N.D.	0.21	0.72	0.85	1
14478	Perfluorotridecanoic acid	72629-94-8	N.D.	0.21	0.72	0.85	1
14478	Perfluoroundecanoic acid	2058-94-8	N.D.	0.21	0.72	0.85	1
Wet Chemistry	**SM 2540 G-1997 %Moisture Calc**		**%**	**%**	**%**	**%**	
00111	Moisture	n.a.	12.0	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	18319003	11/15/2018 13:33	Joshua P Trost	1
14510	PFAS Solid Prep - DoD	EPA 537 mod QSM 5.1 table B-15	3	18319003	11/15/2018 08:50	Courtney J Fatta	1
00111	Moisture	SM 2540 G-1997 %Moisture Calc	1	18312820008A	11/08/2018 13:57	Larry E Bevins	1

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

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

Project Name: **Barstow Site Inspection**

Submittal Date/Time: 11/06/2018 10:35
Collection Date/Time: 11/02/2018 12:52
SDG#: BSI13-06

Gutierrez Canales Engineering
ELLE Sample #: SW 9885059
ELLE Group #: 2006156
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.	0.54	2.2	3.2	1
	NEtFOSAA is the acronym for N-ethyl perfluorooctanesulfonamidoacetic Acid.						
14478	NMeFOSAA	2355-31-9	N.D.	0.54	2.2	3.2	1
	NMeFOSAA is the acronym for N-methyl perfluorooctanesulfonamidoacetic Acid.						
14478	Perfluorobutanesulfonate	375-73-5	N.D.	0.22	0.65	0.86	1
14478	Perfluorodecanoic acid	335-76-2	N.D.	0.32	0.73	1.1	1
14478	Perfluorododecanoic acid	307-55-1	N.D.	0.22	0.73	0.86	1
14478	Perfluoroheptanoic acid	375-85-9	N.D.	0.22	0.73	0.86	1
14478	Perfluorohexanesulfonate	355-46-4	N.D.	0.22	0.69	0.86	1
14478	Perfluorohexanoic acid	307-24-4	N.D.	0.22	0.73	0.86	1
14478	Perfluorononanoic acid	375-95-1	N.D.	0.22	0.73	0.86	1
14478	Perfluoro-octanesulfonate	1763-23-1	N.D.	0.22	0.70	0.86	1
14478	Perfluorooctanoic acid	335-67-1	N.D.	0.22	0.73	0.86	1
14478	Perfluorotetradecanoic acid	376-06-7	N.D.	0.22	0.73	0.86	1
14478	Perfluorotridecanoic acid	72629-94-8	N.D.	0.22	0.73	0.86	1
14478	Perfluoroundecanoic acid	2058-94-8	N.D.	0.22	0.73	0.86	1
Wet Chemistry	**SM 2540 G-1997 %Moisture Calc**		**%**	**%**	**%**	**%**	
00111	Moisture	n.a.	15.1	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	18319003	11/15/2018 13:42	Joshua P Trost	1
14510	PFAS Solid Prep - DoD	EPA 537 mod QSM 5.1 table B-15	3	18319003	11/15/2018 08:50	Courtney J Fatta	1
00111	Moisture	SM 2540 G-1997 %Moisture Calc	1	18312820008A	11/08/2018 13:57	Larry E Bevins	1

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

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

Project Name: **Barstow Site Inspection**

Submittal Date/Time: 11/06/2018 10:35
Collection Date/Time: 11/02/2018 12:55
SDG#: BSI13-07

Gutierrez Canales Engineering
ELLE Sample #: **SW 9885060**
ELLE Group #: **2006156**

Sample Comments

CA ELAP Lab Certification No. 2792

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

Project Name: **Barstow Site Inspection**

Submittal Date/Time: 11/06/2018 10:35
Collection Date/Time: 11/02/2018 12:58
SDG#: BSI13-08

Gutierrez Canales Engineering
ELLE Sample #: **SW 9885061**
ELLE Group #: **2006156**

Sample Comments

CA ELAP Lab Certification No. 2792

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

Project Name: **Barstow Site Inspection**

Submittal Date/Time: 11/06/2018 10:35
Collection Date/Time: 11/02/2018 13:23
SDG#: BSI13-09BKG

Gutierrez Canales Engineering
ELLE Sample #: SW 9885062
ELLE Group #: 2006156
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	0.84	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	0.84	1
14478	Perfluoroheptanoic acid	375-85-9	N.D.	0.21	0.71	0.84	1
14478	Perfluorohexanesulfonate	355-46-4	0.23 J	0.21	0.67	0.84	1
14478	Perfluorohexanoic acid	307-24-4	N.D.	0.21	0.71	0.84	1
14478	Perfluorononanoic acid	375-95-1	N.D.	0.21	0.71	0.84	1
14478	Perfluoro-octanesulfonate	1763-23-1	0.35 J	0.21	0.68	0.84	1
14478	Perfluorooctanoic acid	335-67-1	0.45 J	0.21	0.71	0.84	1
14478	Perfluorotetradecanoic acid	376-06-7	N.D.	0.21	0.71	0.84	1
14478	Perfluorotridecanoic acid	72629-94-8	N.D.	0.21	0.71	0.84	1
14478	Perfluoroundecanoic acid	2058-94-8	N.D.	0.21	0.71	0.84	1
Wet Chemistry	**SM 2540 G-1997 %Moisture Calc**		**%**	**%**	**%**	**%**	
00111	Moisture	n.a.	7.0	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	18319003	11/15/2018 13:51	Joshua P Trost	1
14510	PFAS Solid Prep - DoD	EPA 537 mod QSM 5.1 table B-15	3	18319003	11/15/2018 08:50	Courtney J Fatta	1
00111	Moisture	SM 2540 G-1997 %Moisture Calc	1	18312820008A	11/08/2018 13:57	Larry E Bevins	1

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

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

Project Name: **Barstow Site Inspection**

Submittal Date/Time: 11/06/2018 10:35
Collection Date/Time: 11/02/2018 13:23
SDG#: BSI13-09MS

Gutierrez Canales Engineering
ELLE Sample #: SW 9885063
ELLE Group #: 2006156
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	1.5 J	0.51	2.0	3.0	1
	NEtFOSAA is the acronym for N-ethyl perfluorooctanesulfonamidoacetic Acid.						
14478	NMeFOSAA	2355-31-9	1.2 J	0.51	2.0	3.0	1
	NMeFOSAA is the acronym for N-methyl perfluorooctanesulfonamidoacetic Acid.						
14478	Perfluorobutanesulfonate	375-73-5	1.3	0.20	0.61	0.81	1
14478	Perfluorodecanoic acid	335-76-2	1.5	0.30	0.69	1.0	1
14478	Perfluorododecanoic acid	307-55-1	1.3	0.20	0.69	0.81	1
14478	Perfluoroheptanoic acid	375-85-9	1.6	0.20	0.69	0.81	1
14478	Perfluorohexanesulfonate	355-46-4	1.5	0.20	0.65	0.81	1
14478	Perfluorohexanoic acid	307-24-4	1.6	0.20	0.69	0.81	1
14478	Perfluorononanoic acid	375-95-1	1.5	0.20	0.69	0.81	1
14478	Perfluoro-octanesulfonate	1763-23-1	1.7	0.20	0.66	0.81	1
14478	Perfluorooctanoic acid	335-67-1	1.9	0.20	0.69	0.81	1
14478	Perfluorotetradecanoic acid	376-06-7	1.4	0.20	0.69	0.81	1
14478	Perfluorotridecanoic acid	72629-94-8	1.4	0.20	0.69	0.81	1
14478	Perfluoroundecanoic acid	2058-94-8	1.4	0.20	0.69	0.81	1
Wet Chemistry	**SM 2540 G-1997 %Moisture Calc**		**%**	**%**	**%**	**%**	
00118	Moisture	n.a.	7.0	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	18319003	11/15/2018 14:00	Joshua P Trost	1
14510	PFAS Solid Prep - DoD	EPA 537 mod QSM 5.1 table B-15	3	18319003	11/15/2018 08:50	Courtney J Fatta	1
00118	Moisture	SM 2540 G-1997 %Moisture Calc	1	18312820008A	11/08/2018 13:57	Larry E Bevins	1

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

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

Project Name: **Barstow Site Inspection**

Submittal Date/Time: 11/06/2018 10:35
Collection Date/Time: 11/02/2018 13:23
SDG#: BSI13-09MSD

Gutierrez Canales Engineering
ELLE Sample #: SW 9885064
ELLE Group #: 2006156
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	1.2 J	0.50	2.0	3.0	1
	NEtFOSAA is the acronym for N-ethyl perfluorooctanesulfonamidoacetic Acid.						
14478	NMeFOSAA	2355-31-9	1.1 J	0.50	2.0	3.0	1
	NMeFOSAA is the acronym for N-methyl perfluorooctanesulfonamidoacetic Acid.						
14478	Perfluorobutanesulfonate	375-73-5	1.2	0.20	0.60	0.80	1
14478	Perfluorodecanoic acid	335-76-2	1.3	0.30	0.68	1.0	1
14478	Perfluorododecanoic acid	307-55-1	1.3	0.20	0.68	0.80	1
14478	Perfluoroheptanoic acid	375-85-9	1.6	0.20	0.68	0.80	1
14478	Perfluorohexanesulfonate	355-46-4	1.5	0.20	0.64	0.80	1
14478	Perfluorohexanoic acid	307-24-4	1.5	0.20	0.68	0.80	1
14478	Perfluorononanoic acid	375-95-1	1.4	0.20	0.68	0.80	1
14478	Perfluoro-octanesulfonate	1763-23-1	1.4	0.20	0.65	0.80	1
14478	Perfluorooctanoic acid	335-67-1	1.7	0.20	0.68	0.80	1
14478	Perfluorotetradecanoic acid	376-06-7	1.4	0.20	0.68	0.80	1
14478	Perfluorotridecanoic acid	72629-94-8	1.3	0.20	0.68	0.80	1
14478	Perfluoroundecanoic acid	2058-94-8	1.3	0.20	0.68	0.80	1
Wet Chemistry	**SM 2540 G-1997 %Moisture Calc**		**%**	**%**	**%**	**%**	
00118	Moisture	n.a.	7.0	0.50	0.50	0.50	1
00121	Moisture Duplicate	n.a.	7.2	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	18319003	11/15/2018 14:09	Joshua P Trost	1
14510	PFAS Solid Prep - DoD	EPA 537 mod QSM 5.1 table B-15	3	18319003	11/15/2018 08:50	Courtney J Fatta	1
00118	Moisture	SM 2540 G-1997 %Moisture Calc	1	18312820008A	11/08/2018 13:57	Larry E Bevins	1
00121	Moisture Duplicate	SM 2540 G-1997 %Moisture Calc	1	18312820008A	11/08/2018 13:57	Larry E Bevins	1

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

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

Project Name: **Barstow Site Inspection**

Submittal Date/Time: 11/06/2018 10:35
Collection Date/Time: 11/02/2018 13:31
SDG#: BSI13-10

Gutierrez Canales Engineering
ELLE Sample #: SW 9885065
ELLE Group #: 2006156
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	0.84	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	0.84	1
14478	Perfluoroheptanoic acid	375-85-9	N.D.	0.21	0.71	0.84	1
14478	Perfluorohexanesulfonate	355-46-4	N.D.	0.21	0.67	0.84	1
14478	Perfluorohexanoic acid	307-24-4	N.D.	0.21	0.71	0.84	1
14478	Perfluorononanoic acid	375-95-1	N.D.	0.21	0.71	0.84	1
14478	Perfluoro-octanesulfonate	1763-23-1	N.D.	0.21	0.68	0.84	1
14478	Perfluorooctanoic acid	335-67-1	N.D.	0.21	0.71	0.84	1
14478	Perfluorotetradecanoic acid	376-06-7	N.D.	0.21	0.71	0.84	1
14478	Perfluorotridecanoic acid	72629-94-8	N.D.	0.21	0.71	0.84	1
14478	Perfluoroundecanoic acid	2058-94-8	N.D.	0.21	0.71	0.84	1
Wet Chemistry	**SM 2540 G-1997 %Moisture Calc**		**%**	**%**	**%**	**%**	
00111	Moisture	n.a.	6.3	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	18319003	11/15/2018 14:18	Joshua P Trost	1
14510	PFAS Solid Prep - DoD	EPA 537 mod QSM 5.1 table B-15	3	18319003	11/15/2018 08:50	Courtney J Fatta	1
00111	Moisture	SM 2540 G-1997 %Moisture Calc	1	18312820008A	11/08/2018 13:57	Larry E Bevins	1

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

Quality Control Summary

Client Name: Gutierrez Canales Engineering Group Number: 2006156
Reported: 01/18/2019 14:21

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: 18311021	Sample number(s): 9885056			
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: 18319003	Sample number(s): 9885057-9885059,9885062-9885065			
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

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

*- 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 14:21

Group Number: 2006156

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: 18311021	Sample number(s): 9885056								
NEtFOSAA	1.36	1.53			112		70-130		
NMeFOSAA	1.36	1.43			105		70-130		
Perfluorobutanesulfonate	1.20	1.42			118		70-130		
Perfluorodecanoic acid	1.36	1.72			127		70-130		
Perfluorododecanoic acid	1.36	1.49			110		70-130		
Perfluoroheptanoic acid	1.36	1.59			117		70-130		
Perfluorohexanesulfonate	1.29	1.48			115		70-130		
Perfluorohexanoic acid	1.36	1.58			116		70-130		
Perfluorononanoic acid	1.36	1.56			115		70-130		
Perfluoro-octanesulfonate	1.30	1.30			100		70-130		
Perfluorooctanoic acid	1.36	1.58			116		70-130		
Perfluorotetradecanoic acid	1.36	1.62			119		70-130		
Perfluorotridecanoic acid	1.36	1.54			113		70-130		
Perfluoroundecanoic acid	1.36	1.48			109		70-130		
Batch number: 18319003	Sample number(s): 9885057-9885059,9885062-9885065								
NEtFOSAA	1.36	1.40			103		70-130		
NMeFOSAA	1.36	1.21			89		70-130		
Perfluorobutanesulfonate	1.20	1.24			103		70-130		
Perfluorodecanoic acid	1.36	1.48			109		70-130		
Perfluorododecanoic acid	1.36	1.27			94		70-130		
Perfluoroheptanoic acid	1.36	1.45			106		70-130		
Perfluorohexanesulfonate	1.29	1.24			97		70-130		
Perfluorohexanoic acid	1.36	1.42			104		70-130		
Perfluorononanoic acid	1.36	1.40			103		70-130		
Perfluoro-octanesulfonate	1.30	1.21			93		70-130		
Perfluorooctanoic acid	1.36	1.36			100		70-130		
Perfluorotetradecanoic acid	1.36	1.36			100		70-130		
Perfluorotridecanoic acid	1.36	1.28			94		70-130		
Perfluoroundecanoic acid	1.36	1.18			87		70-130		
	%	%	%	%					
Batch number: 18312820008A	Sample number(s): 9885056-9885059,9885062-9885065								
Moisture	89.5	89.37			100		99-101		
Moisture	89.5	89.37			100		99-101		
Moisture Duplicate	89.5	89.37			100		99-101		

MS/MSD

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

*- 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
Group Number: 2006156
Reported: 01/18/2019 14:21

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: 18311021	Sample number(s): 9885056 UNSPK: 9885062									
NEtFOSAA	N.D.	1.26	1.55	1.36	1.79	123	131*	70-130	14	30
NMeFOSAA	N.D.	1.26	1.20	1.36	1.56	96	114	70-130	25	30
Perfluorobutanesulfonate	N.D.	1.12	1.34	1.20	1.43	120	119	70-130	6	30
Perfluorodecanoic acid	N.D.	1.26	1.60	1.36	1.56	127	115	70-130	2	30
Perfluorododecanoic acid	N.D.	1.26	1.37	1.36	1.59	109	117	70-130	15	30
Perfluoroheptanoic acid	N.D.	1.26	1.65	1.36	1.73	131*	128	70-130	5	30
Perfluorohexanesulfonate	0.193	1.19	1.56	1.29	1.66	115	114	70-130	6	30
Perfluorohexanoic acid	N.D.	1.26	1.56	1.36	1.58	124	116	70-130	1	30
Perfluorononanoic acid	N.D.	1.26	1.54	1.36	1.69	122	124	70-130	9	30
Perfluoro-octanesulfonate	0.339	1.20	1.73	1.30	1.84	115	115	70-130	6	30
Perfluorooctanoic acid	0.415	1.26	1.92	1.36	1.84	120	105	70-130	4	30
Perfluorotetradecanoic acid	N.D.	1.26	1.47	1.36	1.58	117	116	70-130	7	30
Perfluorotridecanoic acid	N.D.	1.26	1.47	1.36	1.59	116	117	70-130	8	30
Perfluoroundecanoic acid	N.D.	1.26	1.33	1.36	1.58	106	116	70-130	17	30
Batch number: 18319003	Sample number(s): 9885057-9885059,9885062-9885065 UNSPK: 9885062									
NEtFOSAA	N.D.	1.28	1.41	1.26	1.10	110	87	70-130	25	30
NMeFOSAA	N.D.	1.28	1.08	1.26	0.992	84	79	70-130	8	30
Perfluorobutanesulfonate	N.D.	1.14	1.22	1.12	1.15	108	103	70-130	6	30
Perfluorodecanoic acid	N.D.	1.28	1.35	1.26	1.17	105	93	70-130	14	30
Perfluorododecanoic acid	N.D.	1.28	1.22	1.26	1.22	95	97	70-130	0	30
Perfluoroheptanoic acid	N.D.	1.28	1.48	1.26	1.44	116	115	70-130	3	30
Perfluorohexanesulfonate	0.214	1.21	1.44	1.19	1.37	101	97	70-130	5	30
Perfluorohexanoic acid	N.D.	1.28	1.48	1.26	1.42	115	113	70-130	4	30
Perfluorononanoic acid	N.D.	1.28	1.40	1.26	1.32	109	105	70-130	6	30
Perfluoro-octanesulfonate	0.324	1.23	1.57	1.20	1.29	102	80	70-130	19	30
Perfluorooctanoic acid	0.416	1.28	1.78	1.26	1.61	106	95	70-130	10	30
Perfluorotetradecanoic acid	N.D.	1.28	1.34	1.26	1.29	105	102	70-130	4	30
Perfluorotridecanoic acid	N.D.	1.28	1.26	1.26	1.23	98	98	70-130	2	30
Perfluoroundecanoic acid	N.D.	1.28	1.33	1.26	1.21	103	96	70-130	9	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: 18312820008A	Sample number(s): 9885056-9885059,9885062-9885065 BKG: 9885062			
Moisture	7.03	7.17	2	5

*- 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 14:21

Group Number: 2006156

Laboratory Duplicate (continued)

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

Analysis Name	BKG Conc %	DUP Conc %	DUP RPD	DUP RPD Max
Moisture	7.03	7.17	2	5
Moisture Duplicate	7.03	7.17	2	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: 18311021

	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)
9885056	86	0.57	92	0.38	88	0.57	92	0.57	93	0.57	93	0.85
Blank	69	1.2	82	0.80	74	1.2	82	1.2	80	1.2	78	1.8
LCS	74	1.2	78	0.80	68	1.2	78	1.2	79	1.2	82	1.8
MS	74	0.56	82	0.37	80	0.56	85	0.56	82	0.56	88	0.83
MSD	75	1.2	83	0.80	77	1.2	81	1.2	81	1.2	83	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)
9885056	101	0.38	91	0.57	50	0.85	97	0.57	40*	0.85	90	0.57
Blank	85	0.80	77	1.2	78	1.8	81	1.2	73	1.8	71	1.2
LCS	90	0.80	74	1.2	75	1.8	81	1.2	67	1.8	73	1.2
MS	88	0.37	77	0.56	66	0.83	82	0.56	56	0.83	76	0.56
MSD	91	0.80	74	1.2	67	1.8	77	1.2	56	1.8	71	1.2
Limits:	50-150		50-150		50-150		50-150		50-150		50-150	

	13C2-PFTeDA %Rec	LOD (ng/g)
9885056	88	0.57
Blank	68	1.2
LCS	67	1.2
MS	77	0.56
MSD	69	1.2

*- 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 14:21

Group Number: 2006156

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: 18311021

Limits: 50-150

Analysis Name: PFAS in Soil by LC/MS/MS-DoD
Batch number: 18319003

	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)
9885057	74	0.57	82	0.38	80	0.57	82	0.57	85	0.57	81	0.86
9885058	71	0.56	80	0.37	79	0.56	82	0.56	82	0.56	85	0.84
9885059	68	0.55	76	0.37	74	0.55	71	0.55	84	0.55	79	0.83
9885062	70	0.58	79	0.39	77	0.58	80	0.58	82	0.58	80	0.87
9885063	67	0.57	73	0.38	72	0.57	73	0.57	78	0.57	75	0.85
9885064	68	0.56	75	0.37	73	0.56	77	0.56	78	0.56	78	0.83
9885065	78	0.59	88	0.39	84	0.59	85	0.59	92	0.59	83	0.88
Blank	75	1.2	83	0.80	83	1.2	86	1.2	89	1.2	85	1.8
LCS	83	1.2	98	0.80	92	1.2	96	1.2	100	1.2	91	1.8
MS	67	0.57	73	0.38	72	0.57	73	0.57	78	0.57	75	0.85
MSD	68	0.56	75	0.37	73	0.56	77	0.56	78	0.56	78	0.83
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)
9885057	84	0.38	82	0.57	68	0.86	93	0.57	70	0.86	83	0.57
9885058	87	0.37	83	0.56	77	0.84	86	0.56	65	0.84	80	0.56
9885059	80	0.37	72	0.55	63	0.83	78	0.55	53	0.83	72	0.55
9885062	84	0.39	80	0.58	78	0.87	78	0.58	67	0.87	75	0.58
9885063	77	0.38	73	0.57	69	0.85	77	0.57	56	0.85	72	0.57
9885064	76	0.37	77	0.56	71	0.83	78	0.56	57	0.83	72	0.56
9885065	87	0.39	79	0.59	92	0.88	82	0.59	73	0.88	74	0.59
Blank	86	0.80	87	1.2	98	1.8	89	1.2	83	1.8	84	1.2
LCS	97	0.80	88	1.2	102	1.8	99	1.2	86	1.8	89	1.2
MS	77	0.38	73	0.57	69	0.85	77	0.57	56	0.85	72	0.57
MSD	76	0.37	77	0.56	71	0.83	78	0.56	57	0.83	72	0.56
Limits:	50-150		50-150		50-150		50-150		50-150		50-150	

	13C2-PFTeDA	
	%Rec	LOD (ng/g)
9885057	80	0.57

*- 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
Group Number: 2006156
Reported: 01/18/2019 14:21

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: 18319003

	13C2-PFTeDA %Rec	LOD (ng/g)
9885058	72	0.56
9885059	74	0.55
9885062	74	0.58
9885063	69	0.57
9885064	70	0.56
9885065	76	0.59
Blank	79	1.2
LCS	84	1.2
MS	69	0.57
MSD	70	0.56
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. # 438064 Group # 2006186 Sample # 9885054-105

COC # 568589

Client Information

Client: GCE	Acct. #:
Project Name/#: 14G-C719-006 Barstow Site Inspections	PWSID #:
Project Manager: Eric Rider	P.O. #:
Sampler: Brad Closson	Quote #:
State where samples were collected: CA	For Compliance: Yes ☐ No ☒

Matrix

Soil ☒ Sediment ☐ Tissue ☐ Water: Potable ☐ Ground ☐ Surface ☐ NPDES ☐ Other: ____

Analysis Requested

Preservation and Filtration Codes

PFAs (EPA 537 Mod)

Preservation Codes

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

For Lab Use Only

FSC: ____

SCR#: ____

Sample Identification	Collected Date	Collected Time	Grab	Composite	Soil/Sediment	Total # of Containers	PFAs (EPA 537 Mod)	Remarks
OU1-WWTPW-S-01-10	11/2/18	12:05	X		S	2	ARCHIVE	ARCHIVE
OU1-WWTPW-S-01-12	11/2/18	12:07	X		S	2	ARCHIVE	ARCHIVE
OU1-WWTPW-S-02-01	11/2/18	12:29	X		S	2	✓	
OU1-WWTPW-S-02-03	11/2/18	12:47	X		S	2	✓	
OU1-WWTPW-S-02-05	11/2/18	12:50	X		S	2	✓	
OU1-WWTPW-S-02-08	11/2/18	12:52	X		S	2	✓	
OU1-WWTPW-S-02-10	11/2/18	12:55	X		S	2	ARCHIVE	ARCHIVE
OU1-WWTPW-S-02-12	11/2/18	12:58	X		S	2	ARCHIVE	ARCHIVE
OU1-GC1-S-01-01	11/2/18	13:23	X		S	6	✓	MS/MSD
OU1-GC1-S-01-03	11/2/18	13:31	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
	11/5/18	1700			

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 0.9 °C

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Sample Administration Receipt Documentation Log

Doc Log ID: 232250

Group Number(s):

Client: GCE

20061856

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 17601-5994
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.

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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: BSI13

PFAS Group

Fraction: PFAS by LC/MS/MS

Sample #	Client ID	Matrix Liquid	Matrix Solid	DF	Comments
9885056	OU1-WWTPW-S-02-01		X	1	
9885057	OU1-WWTPW-S-02-03		X	1	
9885058	OU1-WWTPW-S-02-05		X	1	
9885059	OU1-WWTPW-S-02-08		X	1	
9885062	OU1-GCI-S-01-01		X	1	Unspiked
9885063	OU1-GCI-S-01-01 MS		X	1	Matrix Spike
9885064	OU1-GCI-S-01-01 MSD		X	1	Matrix Spike Duplicate
9885065	OU1-GCI-S-01-03		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.

CALIBRATION/STANDARDIZATION:

All criteria were met.

QUALITY CONTROL AND NONCONFORMANCE SUMMARY:

MS/MSD

Batch#: 18311021 (Sample number(s): 9885056, UNSPK: 9885062)
The recovery(ies) for the following analyte(s) in the MS exceeded the acceptance window indicating a positive bias: Perfluoroheptanoic acid
The recovery(ies) for the following analyte(s) in the MSD exceeded the acceptance window indicating a positive bias:NEtFOSAA

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Case Narrative/Conformance Summary

CLIENT: Gutierrez Canales Engineering
SDG: BSI13

PFAS Group

Fraction: PFAS by LC/MS/MS

Surrogate

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

Batch#: 18311021 (Sample number(s): 9885056, UNSPK: 9885062)
The recovery(ies) for the following surrogate(s) were below the acceptance window: d5-NEtFOSAA (9885056)

(Sample number(s): 9885056: Analysis: 14478)
The recovery for labeled compound used as extraction standard d5-NEtFOSSA is outside of QC acceptance limits as noted on the QC Summary. The following corrective action was taken:This sample was re-extracted within the method holding time and the recovery for labeled compound used as extraction standard d5-NEtFOSSA is again outside of QC acceptance limits. Both sets of data are included in the data package.

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: BSI13

Fraction: PFAS by LC/MS/MS

Analysis	Batch Number	Sample Number	Analysis Date
PFAS in Soil by LC/MS/MS-DoD	18311021	BLK311021B	11/16/2018 11:08
		LCS311021Q	11/16/2018 11:17
		9885056	11/16/2018 11:26
		9885062 UNSPK	11/16/2018 11:35
		9885063 MS	11/16/2018 11:44
		9885064 MSD	11/16/2018 11:53
PFAS in Soil by LC/MS/MS-DoD	18319003	BLK319003B	11/15/2018 12:57
		LCS319003Q	11/15/2018 13:06
		9885056	11/15/2018 13:15
		9885057	11/15/2018 13:24
		9885058	11/15/2018 13:33
		9885059	11/15/2018 13:42
		9885062 UNSPK	11/15/2018 13:51
		9885063 MS	11/15/2018 14:00
		9885064 MSD	11/15/2018 14:09
		9885065	11/15/2018 14:18

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Quality Control Summary
Method Blank
PFAS Group
SDG: BSI13
Matrix: SOLID

Fraction: PFAS by LC/MS/MS

18311021 / BLK311021B Analyte	Analysis Date	Blank Results	Units	DL	LOD	LOQ
Perfluorooctanoic acid	11/16/18	N.D.	ng/g	0.20	0.68	0.80
Perfluorononanoic acid	11/16/18	N.D.	ng/g	0.20	0.68	0.80
Perfluorodecanoic acid	11/16/18	N.D.	ng/g	0.30	0.68	1.0
Perfluoroundecanoic acid	11/16/18	N.D.	ng/g	0.20	0.68	0.80
Perfluorododecanoic acid	11/16/18	N.D.	ng/g	0.20	0.68	0.80
Perfluorotridecanoic acid	11/16/18	N.D.	ng/g	0.20	0.68	0.80
Perfluorotetradecanoic acid	11/16/18	N.D.	ng/g	0.20	0.68	0.80
Perfluorohexanoic acid	11/16/18	N.D.	ng/g	0.20	0.68	0.80
Perfluoroheptanoic acid	11/16/18	N.D.	ng/g	0.20	0.68	0.80
Perfluorobutanesulfonate	11/16/18	N.D.	ng/g	0.20	0.60	0.80
Perfluorohexanesulfonate	11/16/18	N.D.	ng/g	0.20	0.64	0.80
Perfluoro-octanesulfonate	11/16/18	N.D.	ng/g	0.20	0.65	0.80
NEtFOSAA	11/16/18	N.D.	ng/g	0.50	2.0	3.0
NMeFOSAA	11/16/18	N.D.	ng/g	0.50	2.0	3.0

18319003 / BLK319003B Analyte	Analysis Date	Blank Results	Units	DL	LOD	LOQ
Perfluorooctanoic acid	11/15/18	N.D.	ng/g	0.20	0.68	0.80
Perfluorononanoic acid	11/15/18	N.D.	ng/g	0.20	0.68	0.80
Perfluorodecanoic acid	11/15/18	N.D.	ng/g	0.30	0.68	1.0
Perfluoroundecanoic acid	11/15/18	N.D.	ng/g	0.20	0.68	0.80
Perfluorododecanoic acid	11/15/18	N.D.	ng/g	0.20	0.68	0.80
Perfluorotridecanoic acid	11/15/18	N.D.	ng/g	0.20	0.68	0.80
Perfluorotetradecanoic acid	11/15/18	N.D.	ng/g	0.20	0.68	0.80
Perfluorohexanoic acid	11/15/18	N.D.	ng/g	0.20	0.68	0.80
Perfluoroheptanoic acid	11/15/18	N.D.	ng/g	0.20	0.68	0.80
Perfluorobutanesulfonate	11/15/18	N.D.	ng/g	0.20	0.60	0.80
Perfluorohexanesulfonate	11/15/18	N.D.	ng/g	0.20	0.64	0.80
Perfluoro-octanesulfonate	11/15/18	N.D.	ng/g	0.20	0.65	0.80
NEtFOSAA	11/15/18	N.D.	ng/g	0.50	2.0	3.0
NMeFOSAA	11/15/18	N.D.	ng/g	0.50	2.0	3.0

FORM 02A
SURROGATES
LC/MS/MS

SDG No.: BSI13
Matrix: SOIL

18311021		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
BLK311021	11/16/18 11:08	71	68	69	74	82
LCS311021	11/16/18 11:17	73	67	74	68	78
9885056	11/16/18 11:26	90	88	86	88	92
9885062RE	11/16/18 11:35	80	76	81	84	88
9885063MSRE	11/16/18 11:44	76	77	74	80	85
9885064MSDRE	11/16/18 11:53	71	69	75	77	81

* Outside QC Limits

FORM 02A
SURROGATES
LC/MS/MS

SDG No.: BSI13
Matrix: SOIL

18319003		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
BLK319003	11/15/18 12:57	84	79	75	83	86
LCS319003	11/15/18 13:06	89	84	83	92	96
9885056RE	11/15/18 13:15	74	71	67	74	76
9885057	11/15/18 13:24	83	80	74	80	82
9885058	11/15/18 13:33	80	72	71	79	82
9885059	11/15/18 13:42	72	74	68	74	71
9885062	11/15/18 13:51	75	74	70	77	80
9885063MS	11/15/18 14:00	72	69	67	72	73
9885064MSD	11/15/18 14:09	72	70	68	73	77
9885065	11/15/18 14:18	74	76	78	84	85

* Outside QC Limits

FORM 02A
SURROGATES
LC/MS/MS

SDG No.: BSI13
Matrix: SOIL

18311021		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
BLK311021	11/16/18 11:08	82	77	81	80	78
LCS311021	11/16/18 11:17	78	74	81	79	82
9885056	11/16/18 11:26	92	91	97	93	93
9885062RE	11/16/18 11:35	85	84	88	91	83
9885063MSRE	11/16/18 11:44	82	77	82	82	88
9885064MSDRE	11/16/18 11:53	83	74	77	81	83

* Outside QC Limits

FORM 02A
SURROGATES
LC/MS/MS

SDG No.: BSI13
Matrix: SOIL

18319003		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
BLK319003	11/15/18 12:57	83	87	89	89	85
LCS319003	11/15/18 13:06	98	88	99	100	91
9885056RE	11/15/18 13:15	73	72	79	80	76
9885057	11/15/18 13:24	82	82	93	85	81
9885058	11/15/18 13:33	80	83	86	82	85
9885059	11/15/18 13:42	76	72	78	84	79
9885062	11/15/18 13:51	79	80	78	82	80
9885063MS	11/15/18 14:00	73	73	77	78	75
9885064MSD	11/15/18 14:09	75	77	78	78	78
9885065	11/15/18 14:18	88	79	82	92	83

* Outside QC Limits

FORM 02A
SURROGATES
LC/MS/MS

SDG No.: BSI13
Matrix: SOIL

18311021		13C9-PFNA	D3-NMEFOSAA	D5-NETFOSAA
	Limits	50-150	50-150	50-150
LAB SAMPLE ID	**DATE/TIME**	% Recovery	% Recovery	% Recovery
BLK311021	11/16/18 11:08	85	78	73
LCS311021	11/16/18 11:17	90	75	67
9885056	11/16/18 11:26	101	50	40 *
9885062RE	11/16/18 11:35	89	74	61
9885063MSRE	11/16/18 11:44	88	66	56
9885064MSDRE	11/16/18 11:53	91	67	56

* Outside QC Limits

FORM 02A
SURROGATES
LC/MS/MS

SDG No.: BSI13
Matrix: SOIL

18319003		13C9-PFNA	D3-NMEFOSAA	D5-NETFOSAA
	Limits	50-150	50-150	50-150
LAB SAMPLE ID	**DATE/TIME**	% Recovery	% Recovery	% Recovery
BLK319003	11/15/18 12:57	86	98	83
LCS319003	11/15/18 13:06	97	102	86
9885056RE	11/15/18 13:15	79	42 *	43 *
9885057	11/15/18 13:24	84	68	70
9885058	11/15/18 13:33	87	77	65
9885059	11/15/18 13:42	80	63	53
9885062	11/15/18 13:51	84	78	67
9885063MS	11/15/18 14:00	77	69	56
9885064MSD	11/15/18 14:09	76	71	57
9885065	11/15/18 14:18	87	92	73

* Outside QC Limits

PFAS Group

Fraction: PFAS by LC/MS/MS

UNSPK: 9885062 MS: 9885063 MSD: 9885064 **Analyte**	Batch: **18311021** (Sample number(s): 9885056, 9885062-9885064)								
	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	1.26 / 1.36	0.415 J	1.92	1.84	120	105	70-130	4	30
Perfluorononanoic acid	1.26 / 1.36	N.D.	1.54	1.69	122	124	70-130	9	30
Perfluorodecanoic acid	1.26 / 1.36	N.D.	1.60	1.56	127	115	70-130	2	30
Perfluoroundecanoic acid	1.26 / 1.36	N.D.	1.33	1.58	106	116	70-130	17	30
Perfluorododecanoic acid	1.26 / 1.36	N.D.	1.37	1.59	109	117	70-130	15	30
Perfluorotridecanoic acid	1.26 / 1.36	N.D.	1.47	1.59	116	117	70-130	8	30
Perfluorotetradecanoic acid	1.26 / 1.36	N.D.	1.47	1.58	117	116	70-130	7	30
Perfluorohexanoic acid	1.26 / 1.36	N.D.	1.56	1.58	124	116	70-130	1	30
Perfluoroheptanoic acid	1.26 / 1.36	N.D.	1.65	1.73	131 *	128	70-130	5	30
Perfluorobutanesulfonate	1.12 / 1.20	N.D.	1.34	1.43	120	119	70-130	6	30
Perfluorohexanesulfonate	1.19 / 1.29	0.193 J	1.56	1.66	115	114	70-130	6	30
Perfluoro-octanesulfonate	1.20 / 1.30	0.339 J	1.73	1.84	115	115	70-130	6	30
NEtFOSAA	1.26 / 1.36	N.D.	1.55 J	1.79 J	123	131 *	70-130	14	30
NMeFOSAA	1.26 / 1.36	N.D.	1.20 J	1.56 J	96	114	70-130	25	30

UNSPK: 9885062 MS: 9885063 MSD: 9885064 **Analyte**	Batch: **18319003** (Sample number(s): 9885056-9885059, 9885062-9885065)								
	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	1.28 / 1.26	0.416 J	1.78	1.61	106	95	70-130	10	30
Perfluorononanoic acid	1.28 / 1.26	N.D.	1.40	1.32	109	105	70-130	6	30
Perfluorodecanoic acid	1.28 / 1.26	N.D.	1.35	1.17	105	93	70-130	14	30
Perfluoroundecanoic acid	1.28 / 1.26	N.D.	1.33	1.21	103	96	70-130	9	30
Perfluorododecanoic acid	1.28 / 1.26	N.D.	1.22	1.22	95	97	70-130	0	30
Perfluorotridecanoic acid	1.28 / 1.26	N.D.	1.26	1.23	98	98	70-130	2	30
Perfluorotetradecanoic acid	1.28 / 1.26	N.D.	1.34	1.29	105	102	70-130	4	30
Perfluorohexanoic acid	1.28 / 1.26	N.D.	1.48	1.42	115	113	70-130	4	30
Perfluoroheptanoic acid	1.28 / 1.26	N.D.	1.48	1.44	116	115	70-130	3	30
Perfluorobutanesulfonate	1.14 / 1.12	N.D.	1.22	1.15	108	103	70-130	6	30
Perfluorohexanesulfonate	1.21 / 1.19	0.214 J	1.44	1.37	101	97	70-130	5	30
Perfluoro-octanesulfonate	1.23 / 1.20	0.324 J	1.57	1.29	102	80	70-130	19	30
NEtFOSAA	1.28 / 1.26	N.D.	1.41 J	1.10 J	110	87	70-130	25	30
NMeFOSAA	1.28 / 1.26	N.D.	1.08 J	0.992 J	84	79	70-130	8	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.

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

SDG: BSI13
Matrix: SOLID

PFAS Group
Fraction: PFAS by LC/MS/MS

LCS: LCS311021Q	Batch: **18311021** (Sample number(s): 9885056, 9885062-9885064)							
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	1.58	NA	116	NA	70-130	NA	NA
Perfluorononanoic acid	1.36	1.56	NA	115	NA	70-130	NA	NA
Perfluorodecanoic acid	1.36	1.72	NA	127	NA	70-130	NA	NA
Perfluoroundecanoic acid	1.36	1.48	NA	109	NA	70-130	NA	NA
Perfluorododecanoic acid	1.36	1.49	NA	110	NA	70-130	NA	NA
Perfluorotridecanoic acid	1.36	1.54	NA	113	NA	70-130	NA	NA
Perfluorotetradecanoic acid	1.36	1.62	NA	119	NA	70-130	NA	NA
Perfluorohexanoic acid	1.36	1.58	NA	116	NA	70-130	NA	NA
Perfluoroheptanoic acid	1.36	1.59	NA	117	NA	70-130	NA	NA
Perfluorobutanesulfonate	1.20	1.42	NA	118	NA	70-130	NA	NA
Perfluorohexanesulfonate	1.29	1.48	NA	115	NA	70-130	NA	NA
Perfluoro-octanesulfonate	1.30	1.30	NA	100	NA	70-130	NA	NA
NEtFOSAA	1.36	1.53 J	NA	112	NA	70-130	NA	NA
NMeFOSAA	1.36	1.43 J	NA	105	NA	70-130	NA	NA

LCS: LCS319003Q	Batch: **18319003** (Sample number(s): 9885056-9885059, 9885062-9885065)							
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	1.36	NA	100	NA	70-130	NA	NA
Perfluorononanoic acid	1.36	1.40	NA	103	NA	70-130	NA	NA
Perfluorodecanoic acid	1.36	1.48	NA	109	NA	70-130	NA	NA
Perfluoroundecanoic acid	1.36	1.18	NA	87	NA	70-130	NA	NA
Perfluorododecanoic acid	1.36	1.27	NA	94	NA	70-130	NA	NA
Perfluorotridecanoic acid	1.36	1.28	NA	94	NA	70-130	NA	NA
Perfluorotetradecanoic acid	1.36	1.36	NA	100	NA	70-130	NA	NA
Perfluorohexanoic acid	1.36	1.42	NA	104	NA	70-130	NA	NA
Perfluoroheptanoic acid	1.36	1.45	NA	106	NA	70-130	NA	NA
Perfluorobutanesulfonate	1.20	1.24	NA	103	NA	70-130	NA	NA
Perfluorohexanesulfonate	1.29	1.24	NA	97	NA	70-130	NA	NA
Perfluoro-octanesulfonate	1.30	1.21	NA	93	NA	70-130	NA	NA
NEtFOSAA	1.36	1.40 J	NA	103	NA	70-130	NA	NA
NMeFOSAA	1.36	1.21 J	NA	89	NA	70-130	NA	NA

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.: BSI13

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

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

SDG No.: BSI13

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

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

SDG No.: BSI13

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

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

SDG No.: BSI13

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

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

SDG No.: BSI13

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

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

SDG No.: BSI13

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

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

SDG No.: BSI13

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

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

SDG No.: BSI13

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

SDG No.: BSI13

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

FORM 07
CALIBRATION VERIFICATION SUMMARY
LC/MS/MS

SDG No.: BSI13

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.: BSI13

Instrument ID: 27631 Lab File ID: 18NOV15D-05.WIFF

Date/Time Analyzed: 11/15/2018 12:39 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	0.60	-0.40	±30
Perfluoropentanoic acid	0.60	0.60	0.11	±30
Perfluorobutanesulfonate	0.53	0.48	-10.30	±30
4:2 fluorotelomersulfonate	0.56	0.52	-6.91	±30
Perfluorohexanoic acid	0.60	0.58	-3.39	±30
Perfluoropentanesulfonate	0.56	0.52	-8.03	±30
Perfluoroheptanoic acid	0.60	0.62	2.92	±30
Perfluorohexanesulfonate	0.55	0.46	-15.51	±30
6:2 fluorotelomersulfonate	0.57	0.59	3.73	±30
Perfluoroheptanesulfonate	0.57	0.52	-8.47	±30
Perfluorooctanoic acid	0.60	0.58	-3.21	±30
Perfluoro-octanesulfonate	0.56	0.47	-15.27	±30
Perfluorononanoic acid	0.60	0.60	-0.18	±30
Perfluorononanesulfonate	0.58	0.51	-10.79	±30
Perfluorodecanoic acid	0.60	0.58	-2.79	±30
8:2 fluorotelomersulfonate	0.58	0.49	-14.07	±30
Perfluorooctanesulfonamide	0.60	0.58	-4.04	±30
NMeFOSAA	0.60	0.63	4.34	±30
Perfluorodecanesulfonate	0.58	0.49	-14.38	±30
Perfluoroundecanoic acid	0.60	0.56	-6.93	±30
NEtFOSAA	0.60	0.49	-18.21	±30
Perfluorododecanoic acid	0.60	0.58	-2.78	±30
10:2-fluorotelomersulfonate	0.58	0.54	-7.13	±30
NMePFOSAE	0.60	0.58	-2.86	±30
NMePFOSA	0.60	0.56	-6.38	±30
Perfluorododecanesulfonate	0.58	0.43	-26.17	±30
NEtPFOSAE	0.60	0.62	3.26	±30
NEtPFOSA	0.60	0.60	0.34	±30
Perfluorotridecanoic acid	0.60	0.57	-5.13	±30
Perfluorotetradecanoic acid	0.60	0.55	-7.91	±30
Perfluorohexadecanoic acid	0.60	0.55	-8.48	±30
Perfluorooctadecanoic acid	0.60	0.52	-13.87	±30

* Outside QC Limits.

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FORM 07
CALIBRATION VERIFICATION SUMMARY
LC/MS/MS

SDG No.: BSI13

Instrument ID: 27631 Lab File ID: 18NOV15D-17.WIFF

Date/Time Analyzed: 11/15/2018 14:27 Lab Sample ID: CCV2_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	13.57	±30
Perfluoropentanoic acid	2.00	2.27	13.26	±30
Perfluorobutanesulfonate	1.77	1.84	4.10	±30
4:2 fluorotelomersulfonate	1.87	1.94	3.57	±30
Perfluorohexanoic acid	2.00	1.98	-1.00	±30
Perfluoropentanesulfonate	1.88	2.04	8.27	±30
Perfluoroheptanoic acid	2.00	2.43	21.33	±30
Perfluorohexanesulfonate	1.82	1.94	6.52	±30
6:2 fluorotelomersulfonate	1.90	2.10	10.44	±30
Perfluoroheptanesulfonate	1.90	2.11	10.87	±30
Perfluorooctanoic acid	2.00	2.20	9.82	±30
Perfluoro-octanesulfonate	1.85	1.98	7.03	±30
Perfluorononanoic acid	2.00	2.33	16.35	±30
Perfluorononanesulfonate	1.92	2.08	8.57	±30
Perfluorodecanoic acid	2.00	2.02	1.07	±30
8:2 fluorotelomersulfonate	1.92	2.24	16.77	±30
Perfluorooctanesulfonamide	2.00	2.03	1.65	±30
NMeFOSAA	2.00	2.31	15.61	±30
Perfluorodecanesulfonate	1.93	2.01	4.12	±30
Perfluoroundecanoic acid	2.00	2.01	0.69	±30
NEtFOSAA	2.00	2.05	2.66	±30
Perfluorododecanoic acid	2.00	2.24	11.77	±30
10:2-fluorotelomersulfonate	1.93	2.40	24.33	±30
NMePFOSAE	2.00	2.30	14.81	±30
NMePFOSA	2.00	2.09	4.45	±30
Perfluorododecanesulfonate	1.94	1.98	2.11	±30
NEtPFOSAE	2.00	2.18	8.92	±30
NEtPFOSA	2.00	2.05	2.29	±30
Perfluorotridecanoic acid	2.00	2.28	14.08	±30
Perfluorotetradecanoic acid	2.00	2.25	12.55	±30
Perfluorohexadecanoic acid	2.00	2.09	4.50	±30
Perfluorooctadecanoic acid	2.00	2.03	1.45	±30

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FORM 07
CALIBRATION VERIFICATION SUMMARY
LC/MS/MS

SDG No.: BSI13

Instrument ID: 27631 Lab File ID: 18NOV16D-05.WIFF

Date/Time Analyzed: 11/16/2018 10:50 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	-3.24	±30
Perfluoropentanoic acid	0.60	0.63	5.63	±30
Perfluorobutanesulfonate	0.53	0.48	-9.80	±30
4:2 fluorotelomersulfonate	0.56	0.61	9.56	±30
Perfluorohexanoic acid	0.60	0.58	-2.51	±30
Perfluoropentanesulfonate	0.56	0.48	-14.58	±30
Perfluoroheptanoic acid	0.60	0.59	-1.03	±30
Perfluorohexanesulfonate	0.55	0.47	-13.57	±30
6:2 fluorotelomersulfonate	0.57	0.60	5.71	±30
Perfluoroheptanesulfonate	0.57	0.53	-6.41	±30
Perfluorooctanoic acid	0.60	0.57	-4.21	±30
Perfluoro-octanesulfonate	0.56	0.50	-9.77	±30
Perfluorononanoic acid	0.60	0.60	0.33	±30
Perfluorononanesulfonate	0.58	0.50	-13.61	±30
Perfluorodecanoic acid	0.60	0.58	-2.95	±30
8:2 fluorotelomersulfonate	0.58	0.63	9.39	±30
Perfluorooctanesulfonamide	0.60	0.54	-9.35	±30
NMeFOSAA	0.60	0.57	-5.64	±30
Perfluorodecanesulfonate	0.58	0.44	-24.63	±30
Perfluoroundecanoic acid	0.60	0.53	-11.89	±30
NEtFOSAA	0.60	0.54	-10.63	±30
Perfluorododecanoic acid	0.60	0.55	-7.73	±30
10:2-fluorotelomersulfonate	0.58	1.03	77.58 *	±30
NMePFOSAE	0.60	0.54	-9.31	±30
NMePFOSA	0.60	0.60	-0.66	±30
Perfluorododecanesulfonate	0.58	0.51	-11.97	±30
NEtPFOSAE	0.60	0.60	0.50	±30
NEtPFOSA	0.60	0.61	2.39	±30
Perfluorotridecanoic acid	0.60	0.52	-12.84	±30
Perfluorotetradecanoic acid	0.60	0.54	-9.22	±30
Perfluorohexadecanoic acid	0.60	0.49	-18.02	±30
Perfluorooctadecanoic acid	0.60	0.52	-13.75	±30

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FORM 07
CALIBRATION VERIFICATION SUMMARY
LC/MS/MS

SDG No.: BSI13

Instrument ID: 27631 Lab File ID: 18NOV16D-13.WIFF

Date/Time Analyzed: 11/16/2018 12:02 Lab Sample ID: CCV2_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	2.28	14.21	±30
Perfluoropentanoic acid	2.00	2.33	16.50	±30
Perfluorobutanesulfonate	1.77	1.89	6.64	±30
4:2 fluorotelomersulfonate	1.87	1.99	6.56	±30
Perfluorohexanoic acid	2.00	2.26	13.10	±30
Perfluoropentanesulfonate	1.88	1.93	2.81	±30
Perfluoroheptanoic acid	2.00	2.38	19.18	±30
Perfluorohexanesulfonate	1.82	1.84	0.88	±30
6:2 fluorotelomersulfonate	1.90	2.14	12.73	±30
Perfluoroheptanesulfonate	1.90	2.07	8.77	±30
Perfluorooctanoic acid	2.00	2.28	14.02	±30
Perfluoro-octanesulfonate	1.85	1.96	6.18	±30
Perfluorononanoic acid	2.00	2.25	12.75	±30
Perfluorononanesulfonate	1.92	1.97	2.74	±30
Perfluorodecanoic acid	2.00	2.19	9.50	±30
8:2 fluorotelomersulfonate	1.92	2.25	17.03	±30
Perfluorooctanesulfonamide	2.00	1.98	-1.06	±30
NMeFOSAA	2.00	2.28	14.08	±30
Perfluorodecanesulfonate	1.93	2.06	6.87	±30
Perfluoroundecanoic acid	2.00	2.29	14.57	±30
NEtFOSAA	2.00	2.14	6.92	±30
Perfluorododecanoic acid	2.00	2.24	11.94	±30
10:2-fluorotelomersulfonate	1.93	1.96	1.73	±30
NMePFOSAE	2.00	2.21	10.51	±30
NMePFOSA	2.00	2.27	13.40	±30
Perfluorododecanesulfonate	1.94	2.07	6.80	±30
NEtPFOSAE	2.00	2.22	11.05	±30
NEtPFOSA	2.00	2.02	0.97	±30
Perfluorotridecanoic acid	2.00	2.20	10.01	±30
Perfluorotetradecanoic acid	2.00	2.25	12.67	±30
Perfluorohexadecanoic acid	2.00	2.12	6.21	±30
Perfluorooctadecanoic acid	2.00	1.99	-0.64	±30

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FORM 08A DOD
INTERNAL STANDARDS
LC/MS/MS

SDG No.: BSI13
Matrix: SOIL

Batch: 18319003 File Name:18NOV15D-05.WIFF		13C2-PFDA Area	13C2-PFOA Area	13C3-PFBA Area	13C4-PFOS Area
CAL3 Area/ CCV Area		302310	479663	732179	269685
LOWER LIMIT		151155	239832	366090	134843
UPPER LIMIT		453465	719495	1098269	404528
LAB SAMPLE ID	**DATE ANALYZED**				
BLK319003	11/15/18 12:57	311632	510636	742585	281649
LCS319003	11/15/18 13:06	329903	502285	756224	282773
9885056RE	11/15/18 13:15	319626	500939	732967	270855
9885057	11/15/18 13:24	303011	488150	732429	272947
9885058	11/15/18 13:33	314971	508674	742490	257975
9885059	11/15/18 13:42	310420	491847	713562	258031
9885062	11/15/18 13:51	305535	490760	738882	267003
9885063MS	11/15/18 14:00	317476	508702	742486	280489
9885064MSD	11/15/18 14:09	316777	506159	743432	284449
9885065	11/15/18 14:18	336141	497124	746737	279681

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.: BSI13
Matrix: SOIL

Batch: 18311021 File Name:18NOV16D-05.WIFF		13C2-PFDA Area	13C2-PFOA Area	13C3-PFBA Area	13C4-PFOS Area
CAL3 Area/ CCV Area		302419	484265	707281	256987
LOWER LIMIT		151210	242133	353641	128494
UPPER LIMIT		453629	726398	1060922	385481
LAB SAMPLE ID	**DATE ANALYZED**				
BLK311021	11/16/18 11:08	333127	520510	757123	271489
LCS311021	11/16/18 11:17	336023	557638	751669	267938
9885056	11/16/18 11:26	324043	527920	751960	264606
9885062RE	11/16/18 11:35	333003	511645	735602	279899
9885063MSRE	11/16/18 11:44	345738	525365	758531	271792
9885064MSDRE	11/16/18 11:53	357681	540865	753909	270467

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

ICAL Name: 18NOV12DCAL **Result Table:** 18311021 11/19/2018 10:33:13 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Sample Name:	9885056			**Data File:**		18NOV16D-09.wiff
Sample ID:	EPA 537 mod QSM 5.1 table B-15 18311021 OU1-WWTPW-S-02-01 Grab Soil			**Acquis Date:**		11/16/2018 11:26:19 AM
Sample Type:	Unknown			**Instrument:**		LM27631
Vial Position:	41			**Acquis Method:**		18AUG13_3uL.dam
Injection Vol:	3.00			**Result Table:**		18311021
QMethod File:	18AUG20QM			**ICAL Name:**		18NOV12DCAL
Batch Number:	18311021			**Operator:**		JPT12262
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: 18NOV16D-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	751960.1	707280.6	6	50	
13C2-PFOA	5.0	527920.0	484265.4	9	50	
13C4-PFOS	4.8	264606.3	256987.3	3	50	
13C2-PFDA	5.0	324043.1	302418.6	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	424407.0	13C3-PFBA	751960.1	0.564	8.774	7.517	86	50-150	
E13C5-PFHxA	672439.1	13C2-PFOA	527920.0	1.274	9.434	8.682	92	50-150	
E13C3-PFHxS	318713.6	13C2-PFOA	527920.0	0.604	8.925	7.816	88	50-150	
E13C4-PFHpA	539749.4	13C2-PFOA	527920.0	1.022	9.434	8.691	92	50-150	
E13C8-PFOA	890184.6	13C2-PFOA	527920.0	1.686	9.434	8.766	93	50-150	
E13C8-PFOS	266835.0	13C4-PFOS	264606.3	1.008	9.019	8.430	93	50-150	
E13C9-PFNA	481160.5	13C4-PFOS	264606.3	1.818	9.434	9.566	101	50-150	
E13C6-PFDA	631988.6	13C2-PFDA	324043.1	1.950	9.434	8.587	91	50-150	
Ed3-NMeFOSAA	44868.2	13C2-PFDA	324043.1	0.138	9.434	4.716	50	50-150	
E13C7-PFUnDA	270131.6	13C2-PFDA	324043.1	0.834	9.434	9.132	97	50-150	
Ed5-NEtFOSAA	30269.1	13C2-PFDA	324043.1	0.093	9.434	3.729	40	50-150	OOS
E13C2-PFDoDA	559807.1	13C2-PFDA	324043.1	1.728	9.434	8.463	90	50-150	
E13C2-PFTeDA	404734.7	13C2-PFDA	324043.1	1.249	9.434	8.273	88	50-150	

APPROVED
By JPT at 10:38 am, 11/19/18

REVIEWED
By HMK at 11:49 am, 11/19/18

ICAL Name: 18NOV12DCAL **Result Table:** 18311021 11/19/2018 10:33:13 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

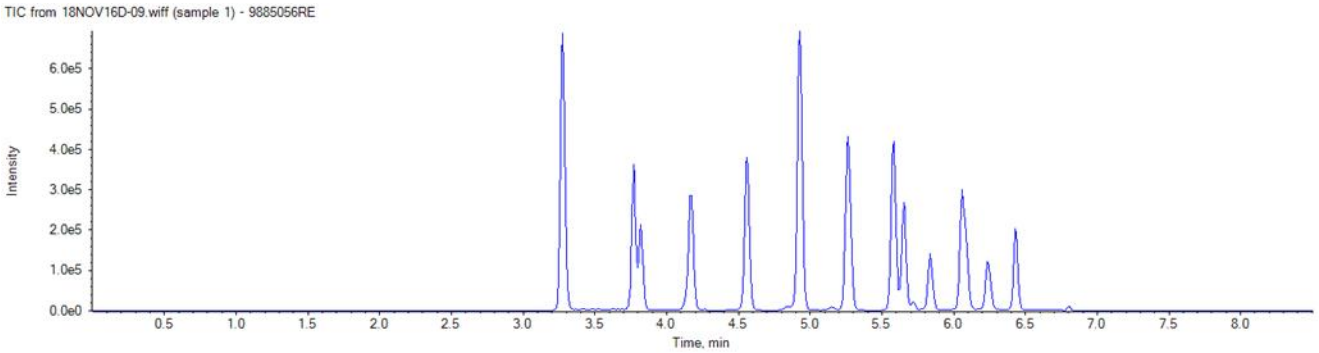
Analyte Quantitation Peak Table

Sample Name: 9885056 **Instrument Name:** LM27631 **File Name:** 18NOV16D-09.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	3.82	424407.0	N/A	
PFHxA	4.17	1.000	19301.2		A	13C5-PFHxA	4.17	672439.1	0.029	0.226
PFHpA	4.56	1.000	22674.9		A	13C4-PFHpA	4.56	539749.4	0.042	0.263
PFHxS	4.56	1.000	6371.9		M	13C3-PFHxS	4.56	318713.6	0.020	0.183
PFOA	4.93	1.000	200225.5		A	13C8-PFOA	4.93	890184.6	0.225	2.267
PFOS	5.26	1.000	92564.0		M	13C8-PFOS	5.26	266835.0	0.347	2.862
PFNA	5.27	1.000	10832.7		A	13C9-PFNA	5.27	481160.5	0.023	0.153
PFDA	5.58	1.000	7124.6		M	13C6-PFDA	5.58	631988.6	0.011	0.113
NMeFOSAA	5.73	1.000	1331.7		M	d3-NMeFOSAA	5.72	44868.2	0.030	0.316
PFUnDA	N/A	N/A	N/A		A	13C7-PFUnDA	5.84	270131.6	N/A	
NEtFOSAA	5.85	1.000	6203.4		A	d5-NEtFOSAA	5.85	30269.1	0.205	2.027
PFDoDA	N/A	N/A	N/A		A	13C2-PFDoDA	6.06	559807.1	N/A	
PFTrDA	N/A	N/A	N/A		A	13C2-PFDoDA	6.06	559807.1	N/A	
PFTeDA	N/A	N/A	N/A		A	13C2-PFTeDA	6.43	404734.7	N/A	

Total Ion Chromatogram

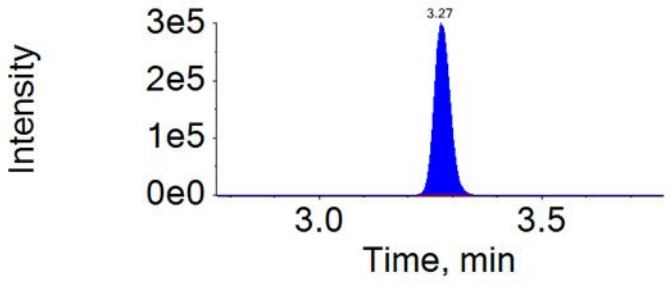


APPROVED
By JPT at 10:38 am, 11/19/18

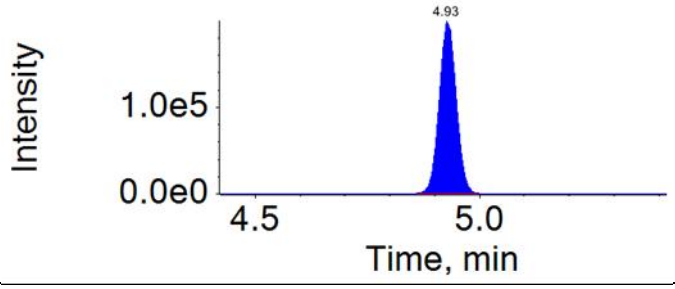
REVIEWED
By HMK at 11:49 am, 11/19/18

ICAL Name: 18NOV12DCAL **Result Table:** 18311021 11/19/2018 10:33:13 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

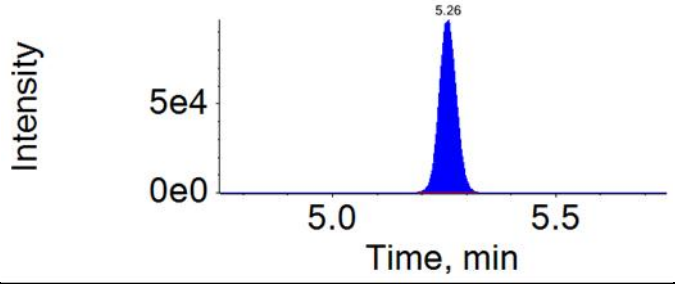
Injection Standard: 13C3-PFBA
216.0 / 172.0



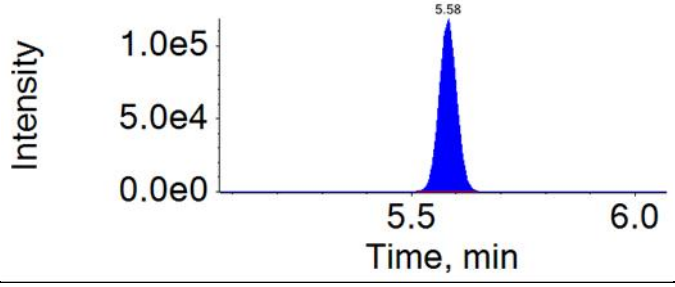
Injection Standard: 13C2-PFOA
415.0 / 370.0



Injection Standard: 13C4-PFOS
503.0 / 80.0



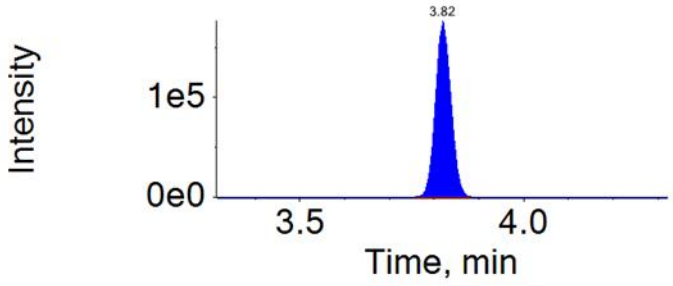
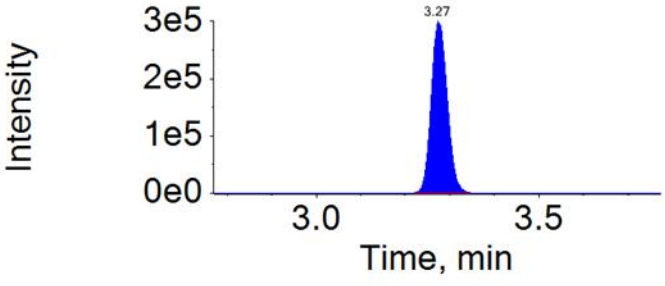
Injection Standard: 13C2-PFDA
515.0 / 470.0

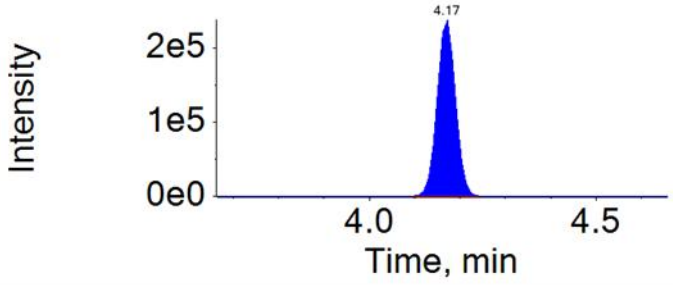
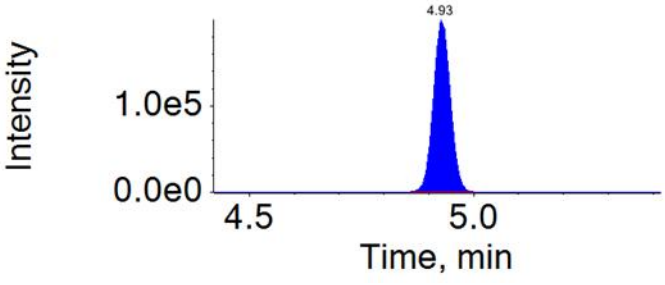


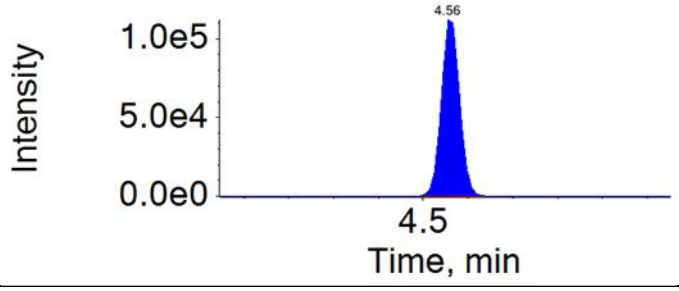
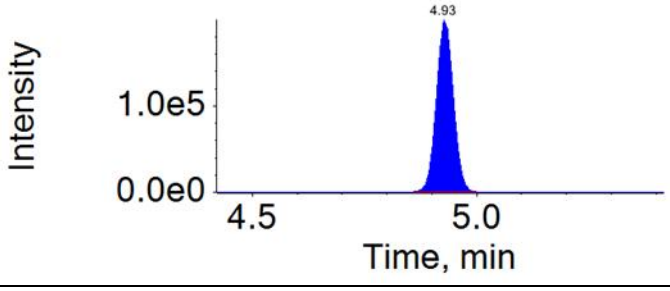
APPROVED
By JPT at 10:38 am, 11/19/18

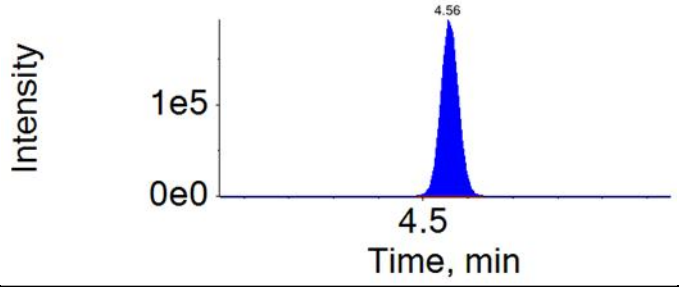
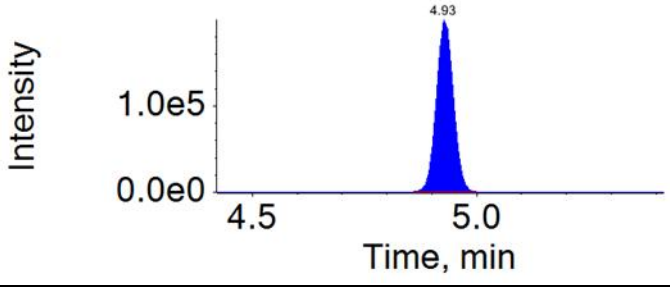
REVIEWED
By HMK at 11:49 am, 11/19/18

ICAL Name: 18NOV12DCAL **Result Table:** 18311021 11/19/2018 10:33:13 AM
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
	

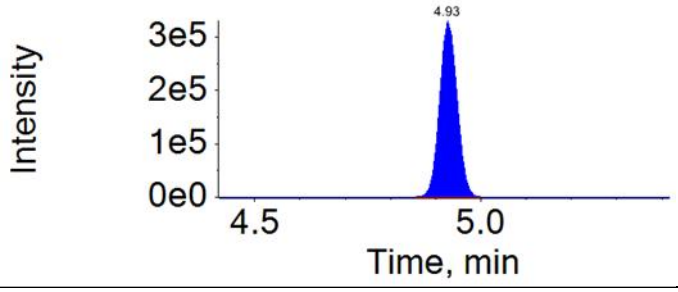
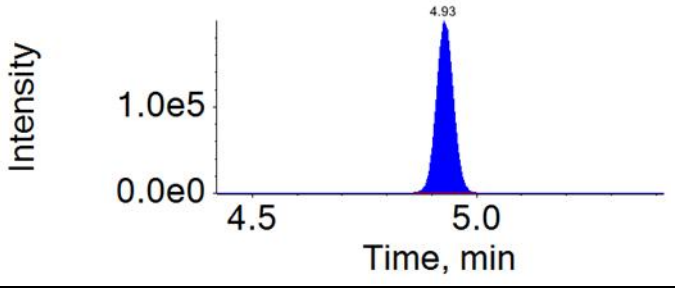
Extraction Standard: E13C3-PFHxS	Injection Standard: 13C2-PFOA
402.0 / 80.0	415.0 / 370.0
	

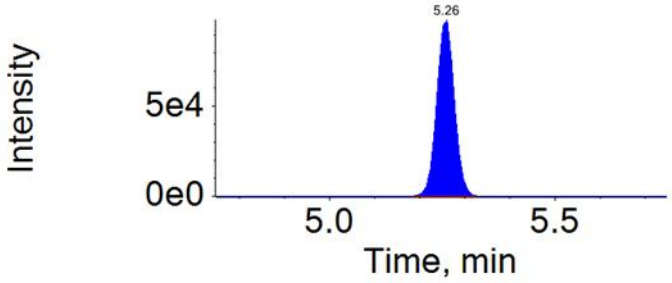
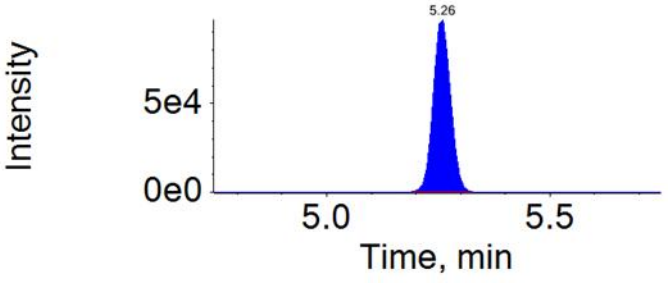
Extraction Standard: E13C4-PFHpA	Injection Standard: 13C2-PFOA
367.0 / 322.0	415.0 / 370.0
	

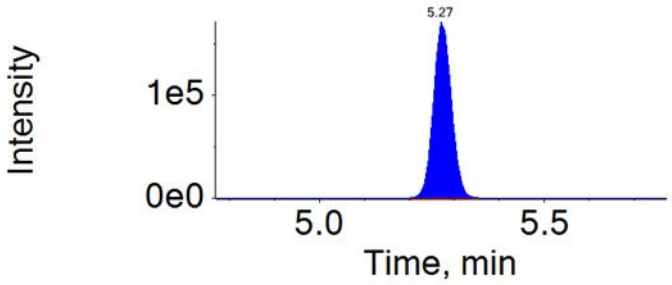
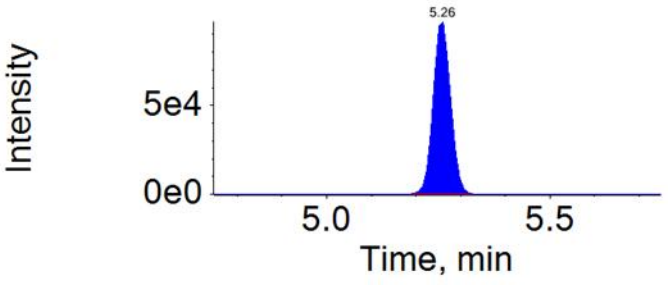
APPROVED
By JPT at 10:38 am, 11/19/18

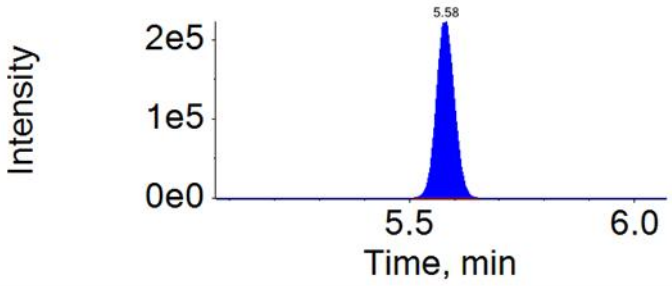
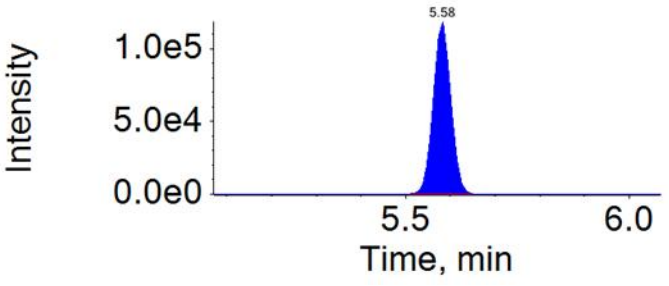
REVIEWED
By HMK at 11:49 am, 11/19/18

ICAL Name: 18NOV12DCAL **Result Table:** 18311021 11/19/2018 10:33:13 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
	

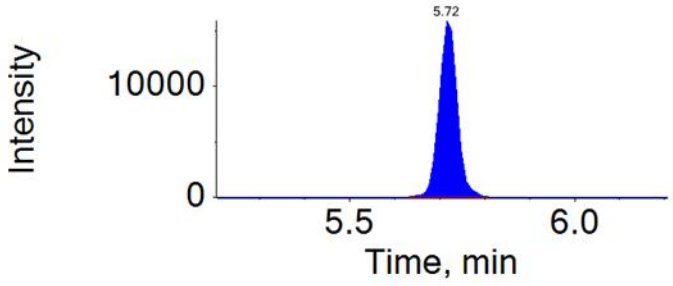
Extraction Standard: E13C6-PFDA	Injection Standard: 13C2-PFDA
519.0 / 474.0	515.0 / 470.0
	

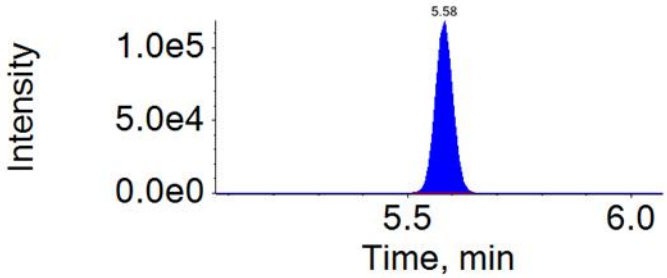
APPROVED
By JPT at 10:38 am, 11/19/18

REVIEWED
By HMK at 11:49 am, 11/19/18

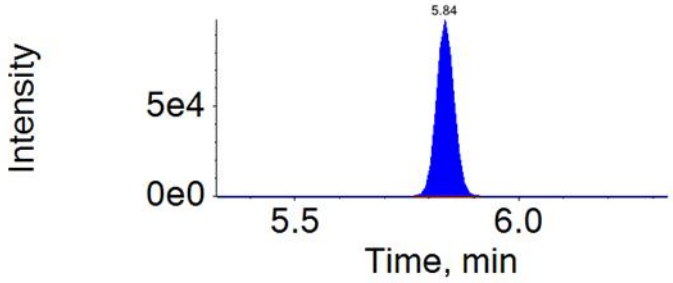
ICAL Name: 18NOV12DCAL **Result Table:** 18311021 11/19/2018 10:33:13 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

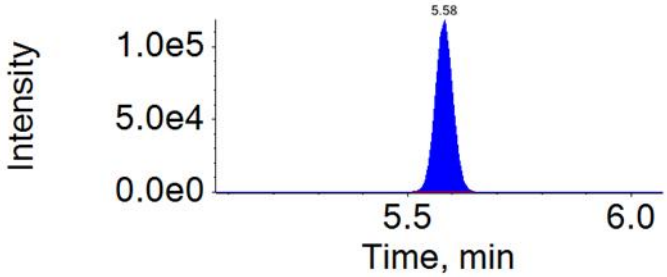
Extraction Standard: Ed3-NMeFOSAA	Injection Standard: 13C2-PFDA
573.0 / 419.0	515.0 / 470.0



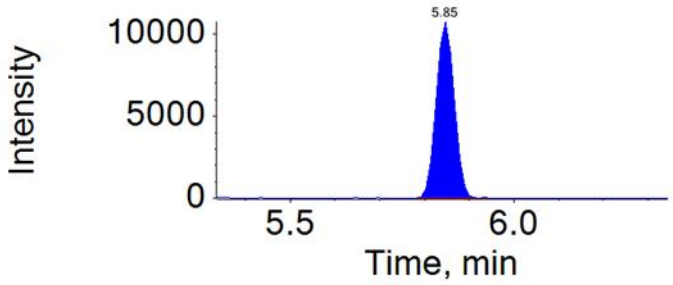


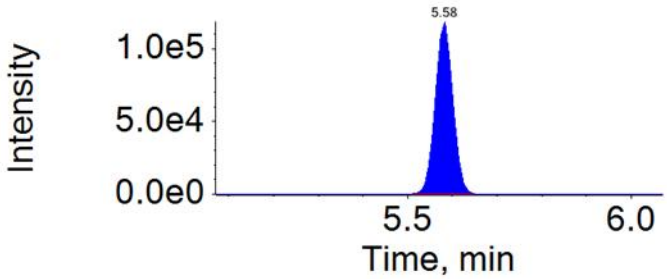
Extraction Standard: E13C7-PFUnDA	Injection Standard: 13C2-PFDA
570.0 / 525.0	515.0 / 470.0



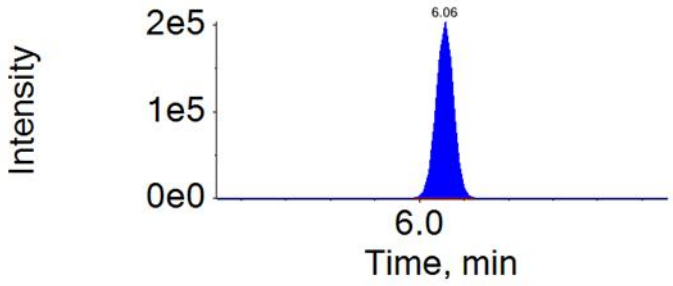


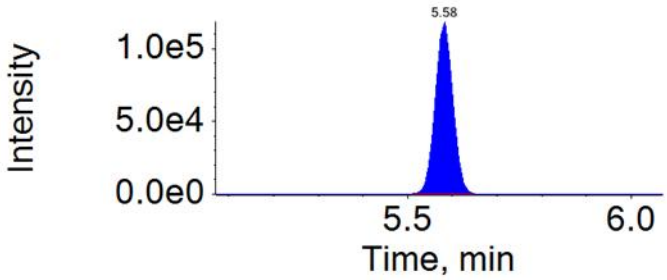
Extraction Standard: Ed5-NEtFOSAA	Injection Standard: 13C2-PFDA
589.0 / 419.0	515.0 / 470.0





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



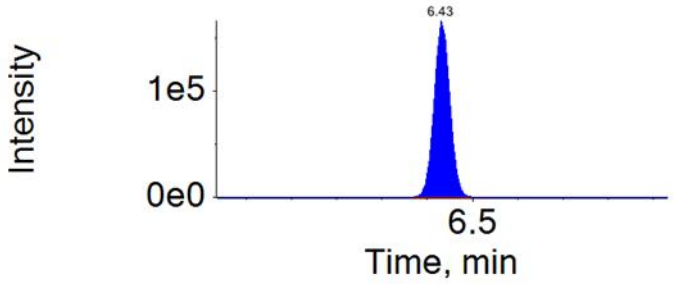


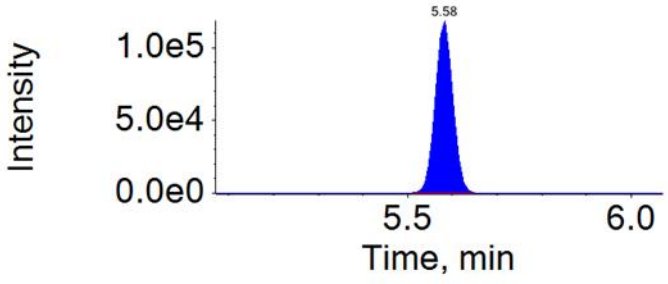
APPROVED
By JPT at 10:38 am, 11/19/18

REVIEWED
By HMK at 11:49 am, 11/19/18

ICAL Name: 18NOV12DCAL **Result Table:** 18311021 11/19/2018 10:33:13 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

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

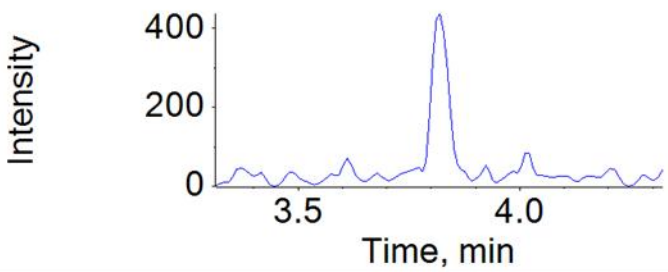
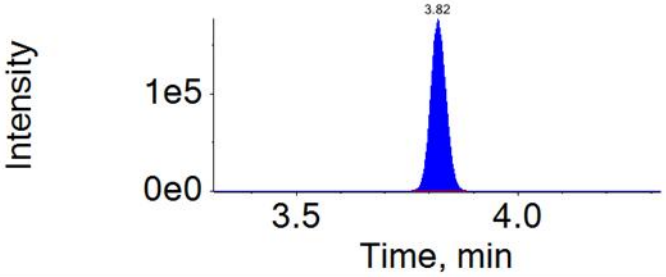


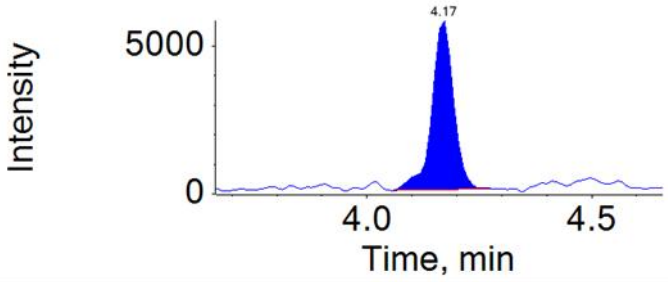
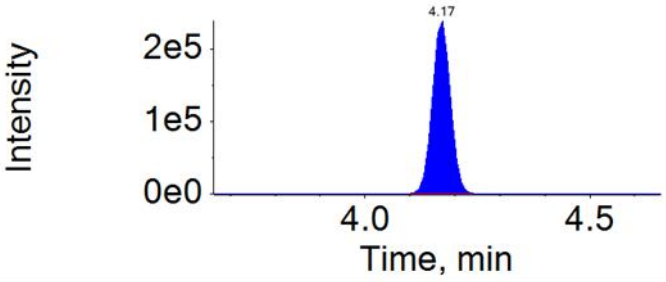


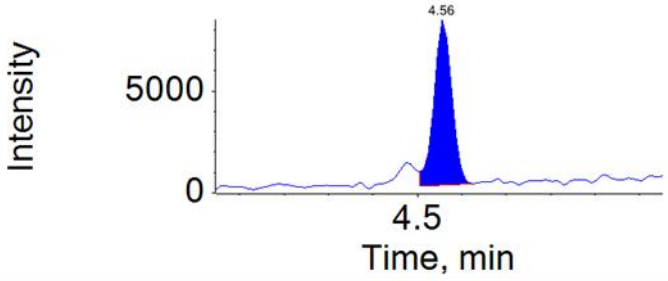
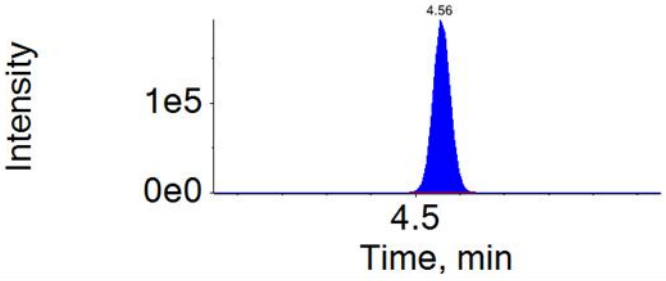
APPROVED
By JPT at 10:38 am, 11/19/18

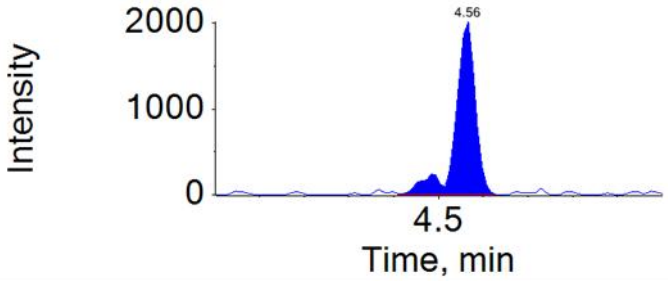
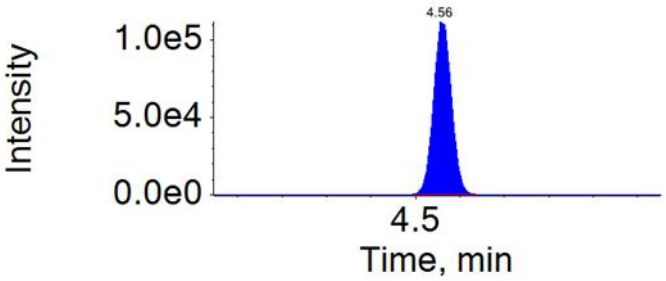
REVIEWED
By HMK at 11:49 am, 11/19/18

ICAL Name: 18NOV12DCAL **Result Table:** 18311021 11/19/2018 10:33:13 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Analyte: PFBS	Extraction Standard: 13C3-PFBS
299.0 / 80.0	302.0 / 80.0
	

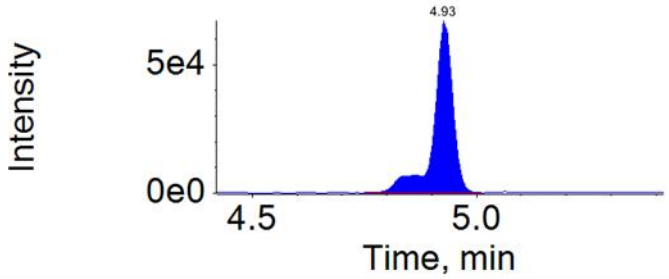
Analyte: PFHxA	Extraction Standard: 13C5-PFHxA
313.0 / 269.0	318.0 / 273.0
	

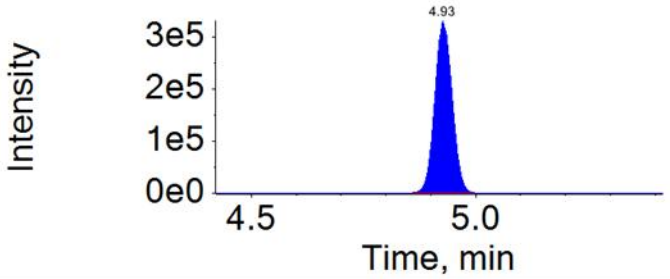
Analyte: PFHpA	Extraction Standard: 13C4-PFHpA
363.0 / 319.0	367.0 / 322.0
	

Analyte: PFHxS	Extraction Standard: 13C3-PFHxS
399.0 / 80.0	402.0 / 80.0
	

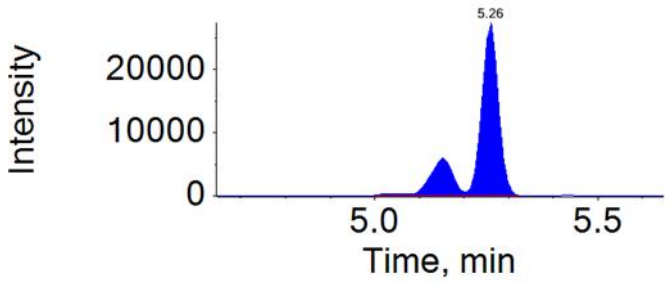
ICAL Name: 18NOV12DCAL **Result Table:** 18311021 11/19/2018 10:33:13 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

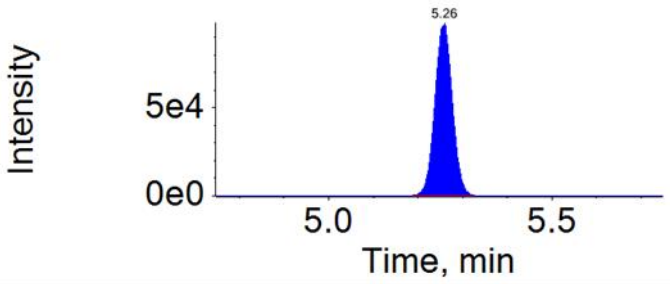
Analyte: PFOA	Extraction Standard: 13C8-PFOA
413.0 / 369.0	421.0 / 376.0



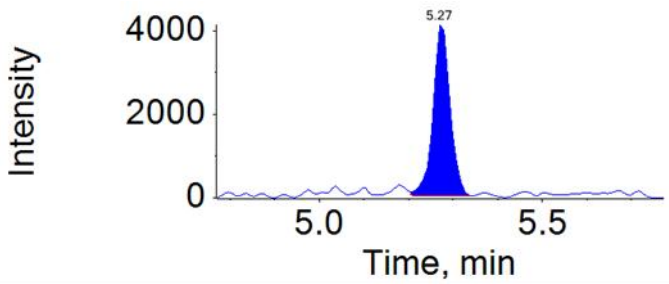


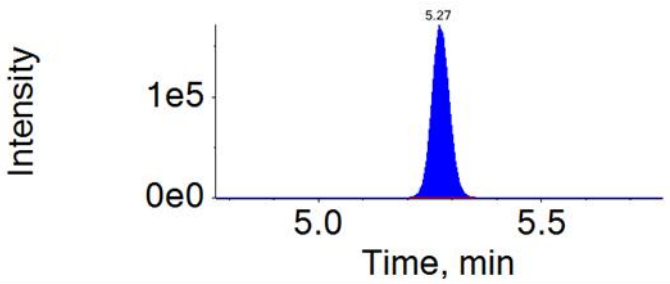
Analyte: PFOS	Extraction Standard: 13C8-PFOS
499.0 / 80.0	507.0 / 80.0



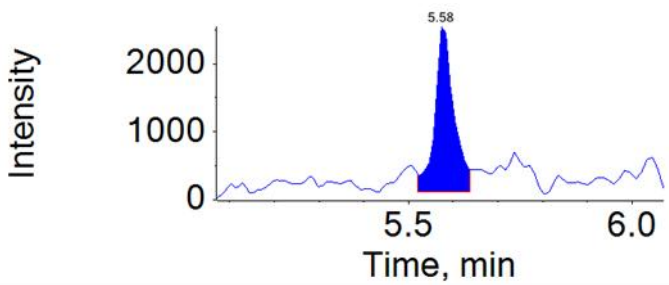


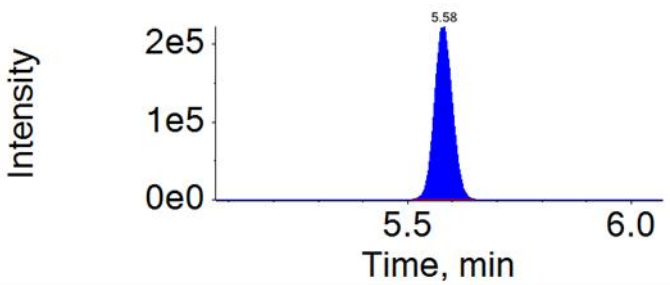
Analyte: PFNA	Extraction Standard: 13C9-PFNA
463.0 / 419.0	472.0 / 427.0





Analyte: PFDA	Extraction Standard: 13C6-PFDA
513.0 / 469.0	519.0 / 474.0



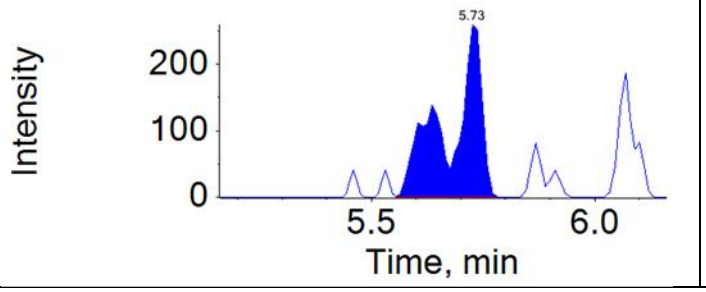


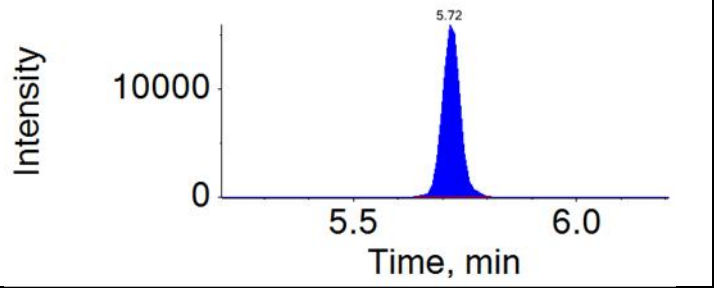
APPROVED
By JPT at 10:38 am, 11/19/18

REVIEWED
By HMK at 11:49 am, 11/19/18

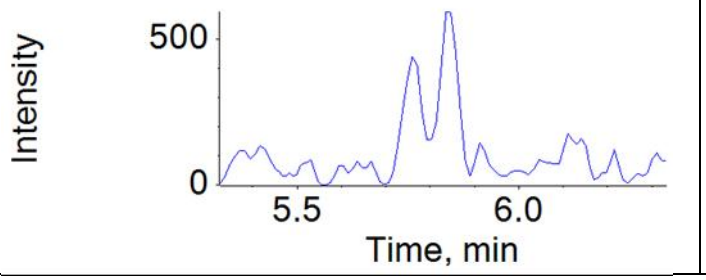
ICAL Name: 18NOV12DCAL **Result Table:** 18311021 11/19/2018 10:33:13 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

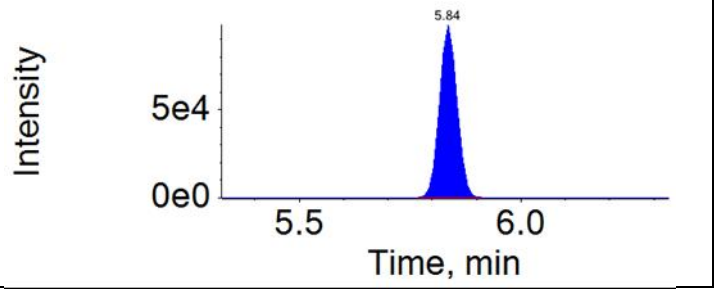
Analyte: NMeFOSAA	Extraction Standard: d3-NMeFOSAA
570.0 / 419.0	573.0 / 419.0



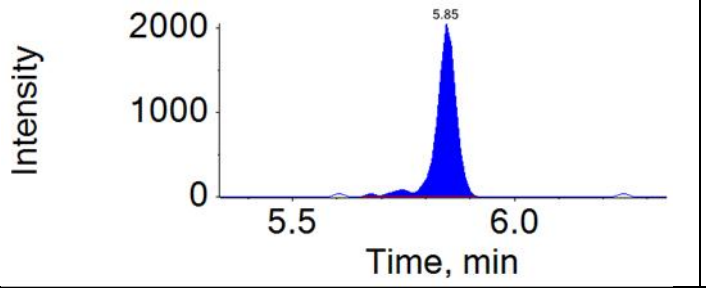


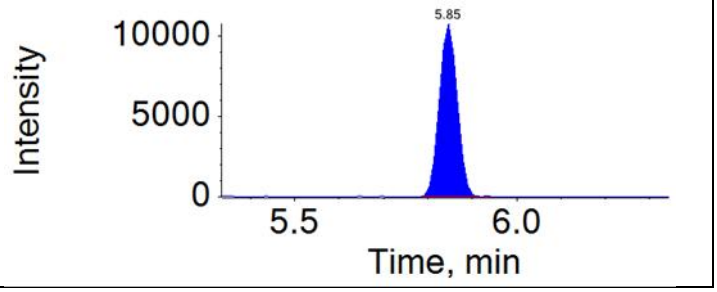
Analyte: PFUnDA	Extraction Standard: 13C7-PFUnDA
563.0 / 519.0	570.0 / 525.0



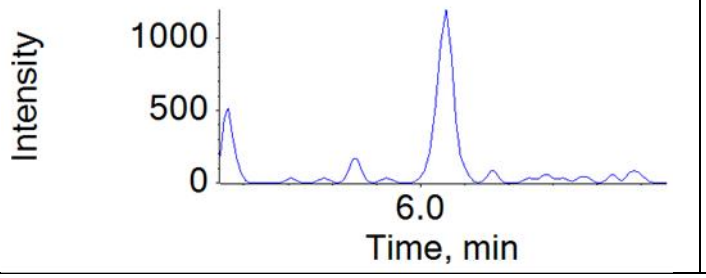


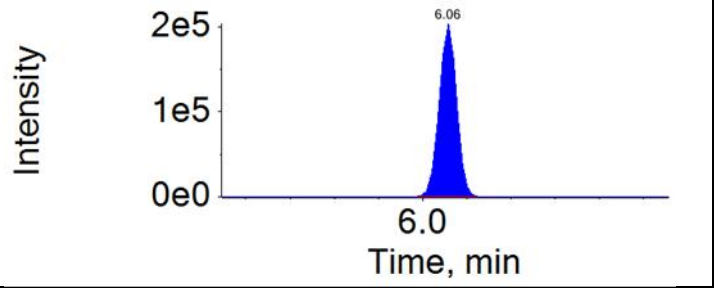
Analyte: NEtFOSAA	Extraction Standard: d5-NEtFOSAA
584.0 / 419.0	589.0 / 419.0





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



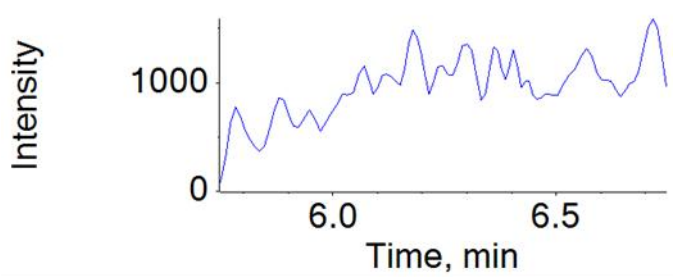


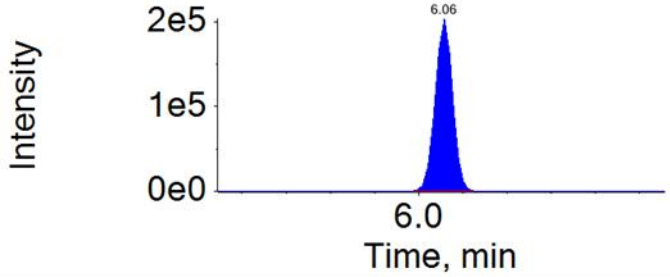
APPROVED
By JPT at 10:38 am, 11/19/18

REVIEWED
By HMK at 11:49 am, 11/19/18

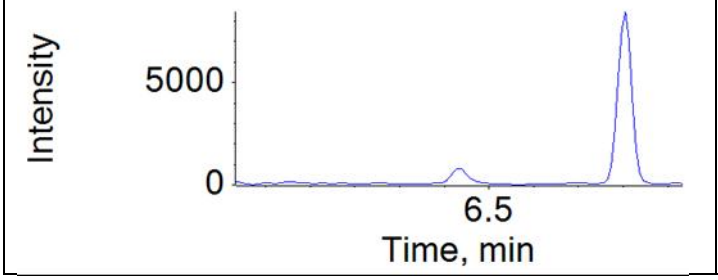
ICAL Name: 18NOV12DCAL **Result Table:** 18311021 11/19/2018 10:33:13 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

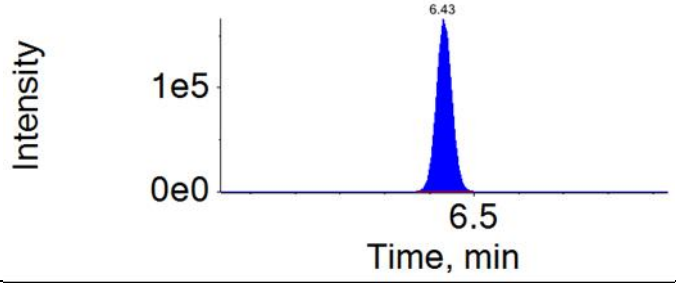
Analyte: PFTrDA	Extraction Standard: 13C2-PFDoDA
663.0 / 619.0	615.0 / 570.0





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



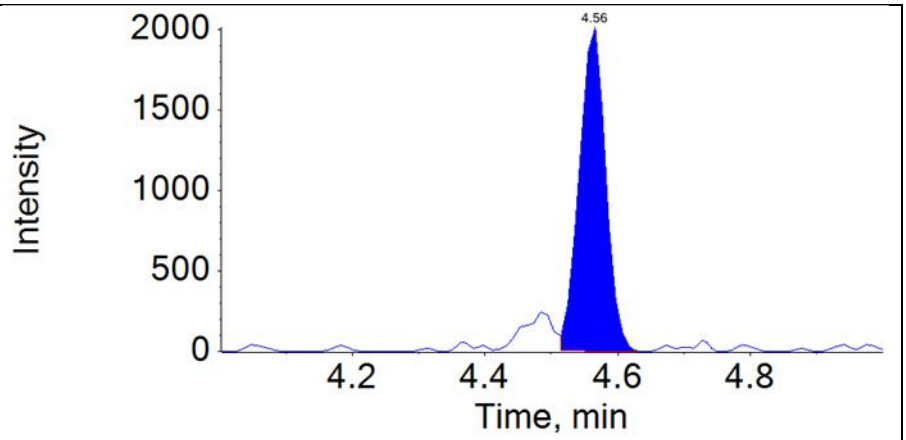


APPROVED
By JPT at 10:38 am, 11/19/18

REVIEWED
By HMK at 11:49 am, 11/19/18

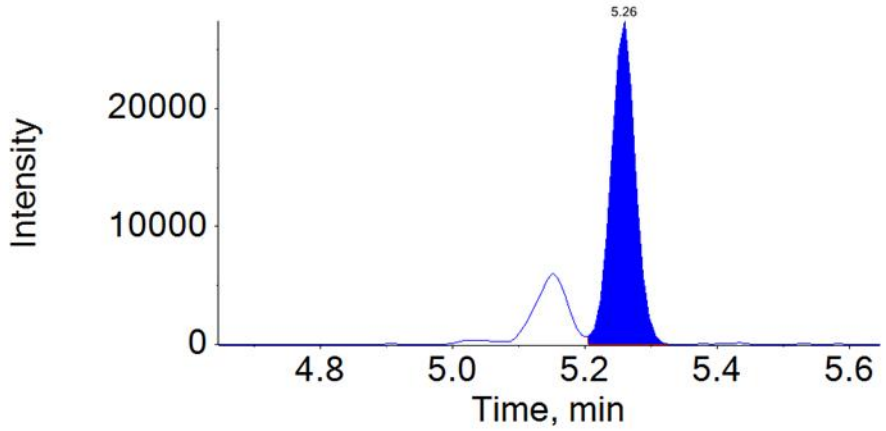
Results Table Name: 18311021
Results Table Date: 11/19/2018 10:33:13 AM
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

Component Name:
PFHxS
RT (min.):
4.56
Peak Area:
5567.5
Mass Range:
399.0 / 80.0
File Name:
18NOV16D-09.wiff
Sample Name:
9885056



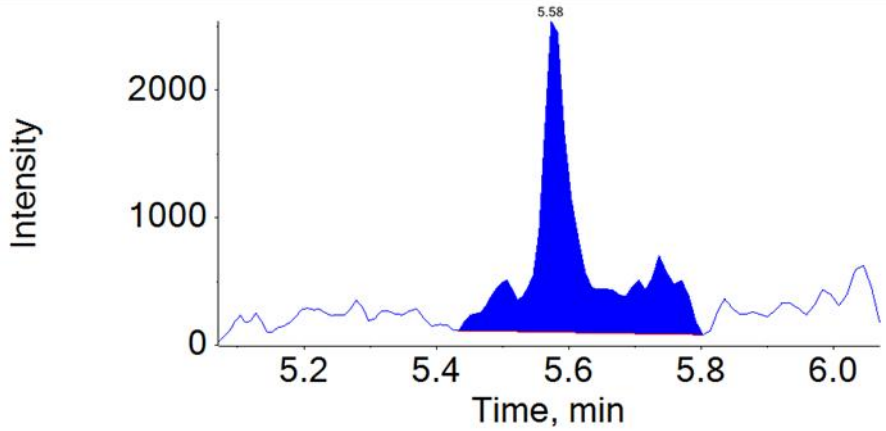
Integration Comment: incorrect integration

Component Name:
PFOS
RT (min.):
5.26
Peak Area:
70008.6
Mass Range:
499.0 / 80.0
File Name:
18NOV16D-09.wiff
Sample Name:
9885056



Integration Comment: incorrect integration

Component Name:
PFDA
RT (min.):
5.58
Peak Area:
11979.2
Mass Range:
513.0 / 469.0
File Name:
18NOV16D-09.wiff
Sample Name:
9885056



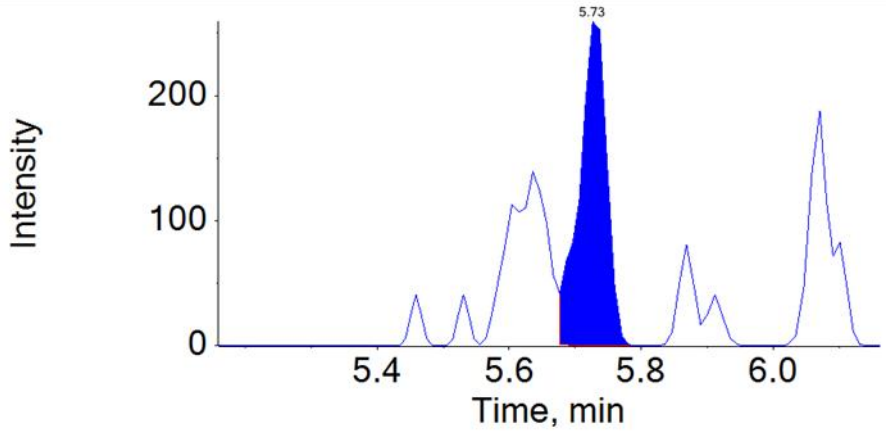
Integration Comment: incorrect integration

APPROVED
By JPT at 10:38 am, 11/19/18

REVIEWED
By HMK at 11:49 am, 11/19/18

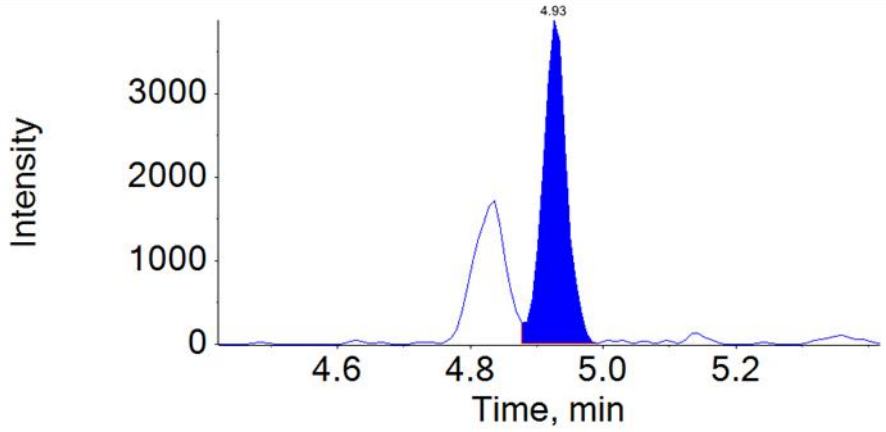
Results Table Name: 18311021
Results Table Date: 11/19/2018 10:33:13 AM
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

Component Name:
NMeFOSAA
RT (min.):
5.73
Peak Area:
752.3
Mass Range:
570.0 / 419.0
File Name:
18NOV16D-09.wiff
Sample Name:
9885056



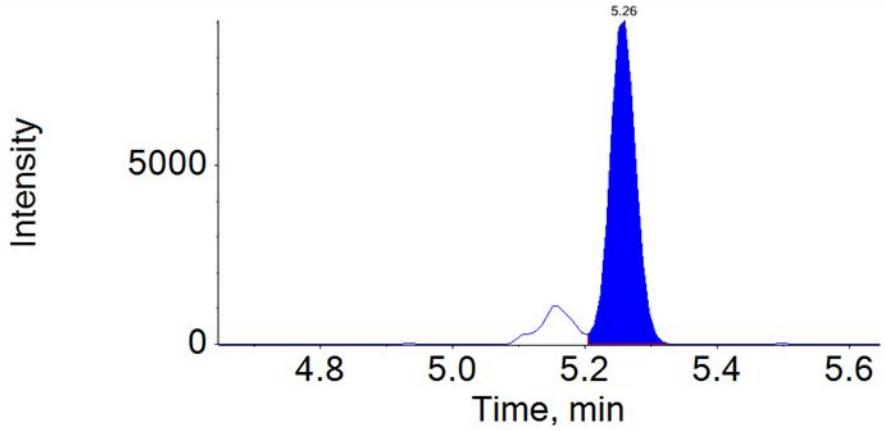
Integration Comment: incorrect integration

Component Name:
PFOA_2
RT (min.):
4.93
Peak Area:
9664.5
Mass Range:
413.0 / 169.0
File Name:
18NOV16D-09.wiff
Sample Name:
9885056



Integration Comment: incorrect integration

Component Name:
PFOS_2
RT (min.):
5.26
Peak Area:
24882.2
Mass Range:
499.0 / 99.0
File Name:
18NOV16D-09.wiff
Sample Name:
9885056

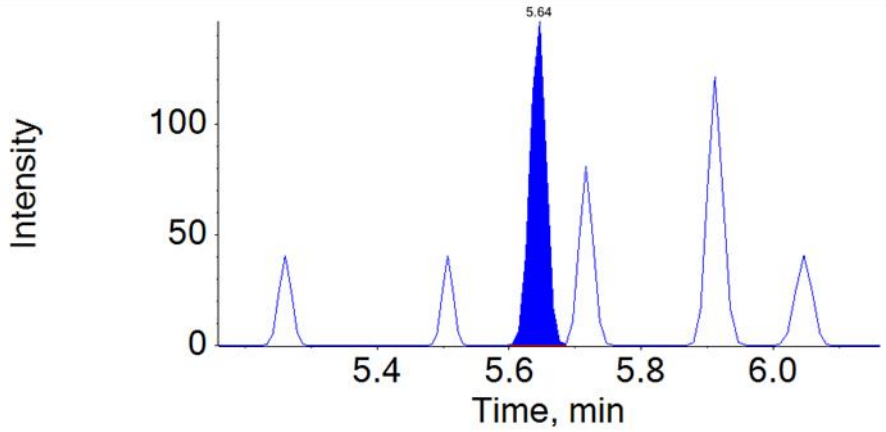


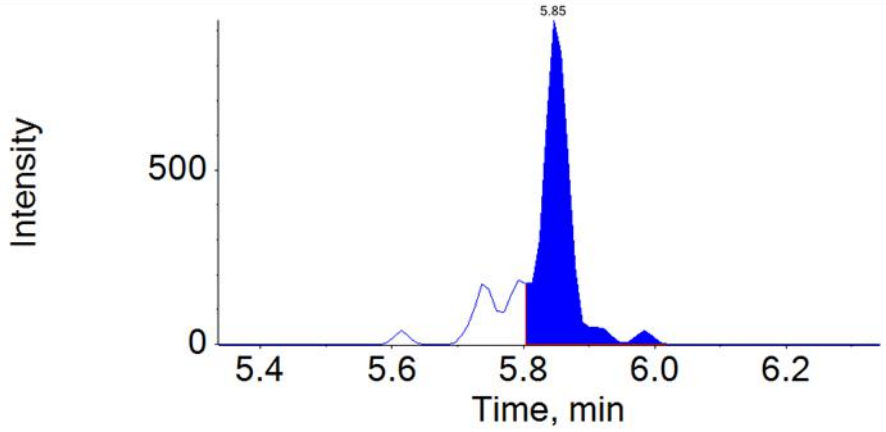
Integration Comment: incorrect integration

APPROVED
By JPT at 10:38 am, 11/19/18

REVIEWED
By HMK at 11:49 am, 11/19/18

Results Table Name: 18311021
Results Table Date: 11/19/2018 10:33:13 AM
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

Component Name: NMeFOSAA_2 **RT (min.):** 5.64 **Peak Area:** 255.4 **Mass Range:** 570.0 / 483.0 **File Name:** 18NOV16D-09.wiff **Sample Name:** 9885056	 **Integration Comment:** incorrect integration

Component Name: NEtFOSAA_2 **RT (min.):** 5.85 **Peak Area:** 2645.0 **Mass Range:** 584.0 / 526.0 **File Name:** 18NOV16D-09.wiff **Sample Name:** 9885056	 **Integration Comment:** incorrect integration

APPROVED
By JPT at 10:38 am, 11/19/18

REVIEWED
By HMK at 11:49 am, 11/19/18

Results Table Name: 18311021
Results Table Date: 11/19/2018 10:33:13 AM

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

APPROVED
By JPT at 10:38 am, 11/19/18

REVIEWED
By HMK at 11:49 am, 11/19/18

Ion Ratio Report

Sample Name: 9885056 **Instrument Name:** LM27631 **File Name:** 18NOV16D-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	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	4.17	1.00	19301.2	A	N/A	1.0000			
PFHxA_2	4.15	1.00	317.9	A	N/A	0.0165	40	50	
PFHpA	4.56	1.00	22674.9	A	N/A	1.0000			
PFHpA_2	4.56	1.00	1457.6	A	N/A	0.0643	14	50	
PFHxS	4.56	1.00	6371.9	M	N/A	1.0000			
PFHxS_2	4.56	1.00	2031.3	A	N/A	0.3188	-8	50	
PFOA	4.93	1.00	200225.5	A	N/A	1.0000			
PFOA_2	4.93	1.00	15642.9	M	N/A	0.0781	37	50	
PFOS	5.26	1.00	92564.0	M	N/A	1.0000			
PFOS_2	5.26	1.00	28685.8	M	N/A	0.3099	4	50	
PFNA	5.27	1.00	10832.7	A	N/A	1.0000			
PFNA_2	5.27	1.00	409.5	A	N/A	0.0378	67	50	OOS
PFDA	5.58	1.00	7124.6	M	N/A	1.0000			
PFDA_2	5.56	1.00	108.1	A	N/A	0.0152	91	50	OOS
NMeFOSAA	5.73	1.00	1331.7	M	N/A	1.0000			
NMeFOSAA_2	5.65	0.99	378.5	M	N/A	0.2842	10	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	5.85	1.00	6203.4	A	N/A	1.0000			
NEtFOSAA_2	5.85	1.00	3213.5	M	N/A	0.5180	-28	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	

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By JPT at 10:38 am, 11/19/18

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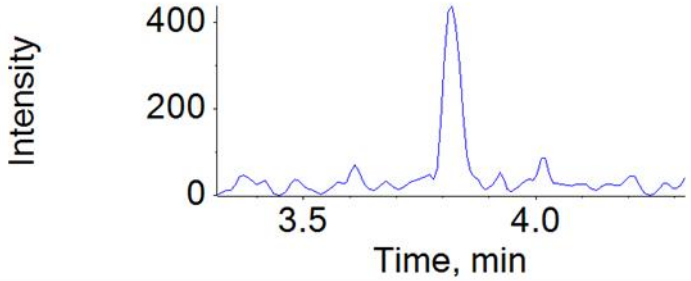
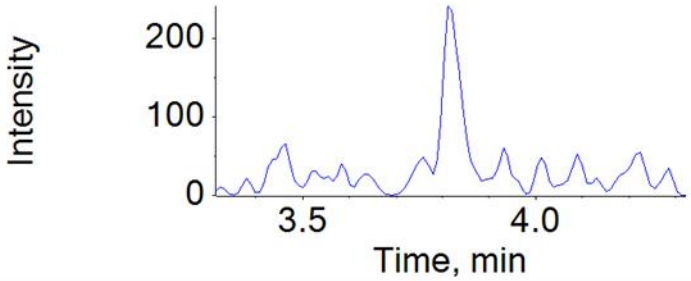
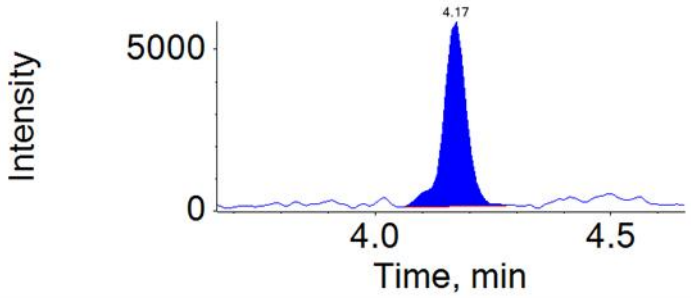
Component: PFBS
Primary Mass: 299.0 / 80.0



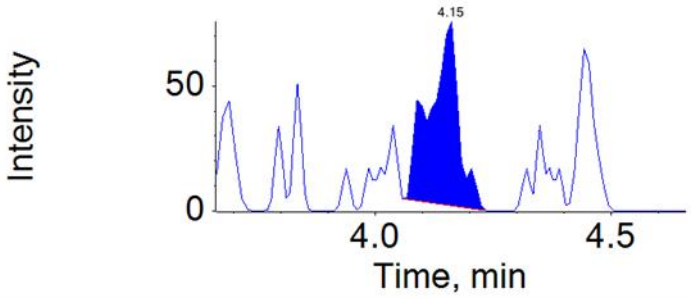
Component: PFBS_2
Secondary Mass: 299.0 / 99.0



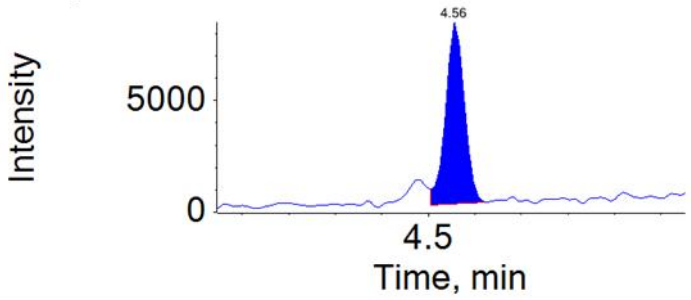
Component: PFHxA
Primary Mass: 313.0 / 269.0



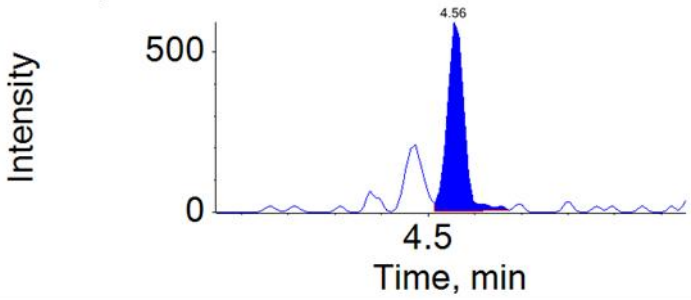
Component: PFHxA_2
Secondary Mass: 313.0 / 119.0



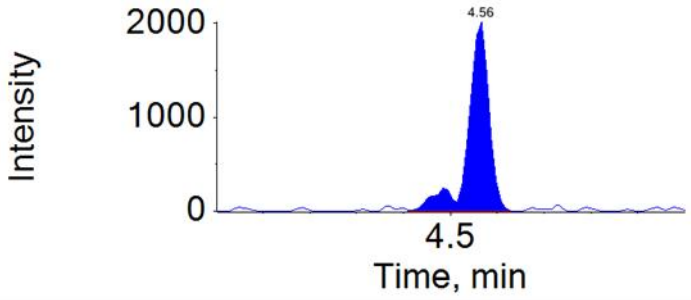
Component: PFHpA
Primary Mass: 363.0 / 319.0



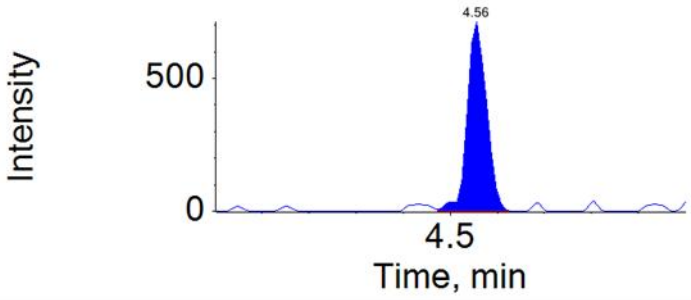
Component: PFHpA_2
Secondary Mass: 363.0 / 169.0



Component: PFHxS
Primary Mass: 399.0 / 80.0



Component: PFHxS_2
Secondary Mass: 399.0 / 99.0



APPROVED
By JPT at 10:38 am, 11/19/18

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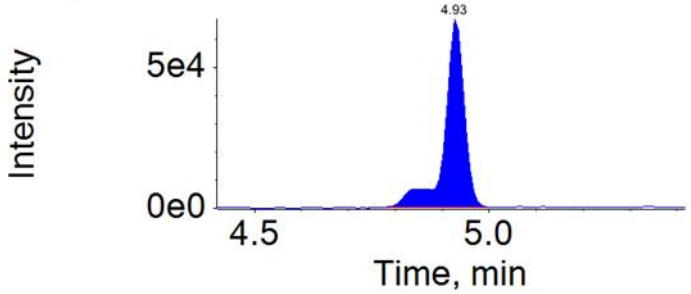
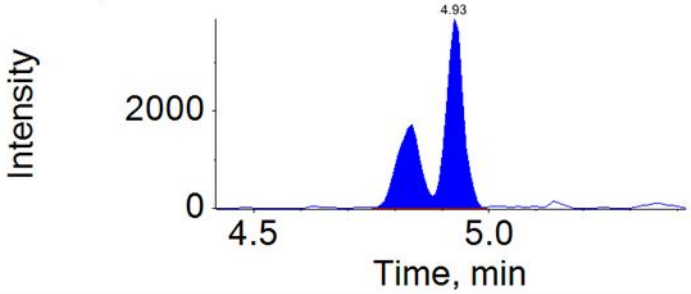
By HMK at 11:49 am, 11/19/18

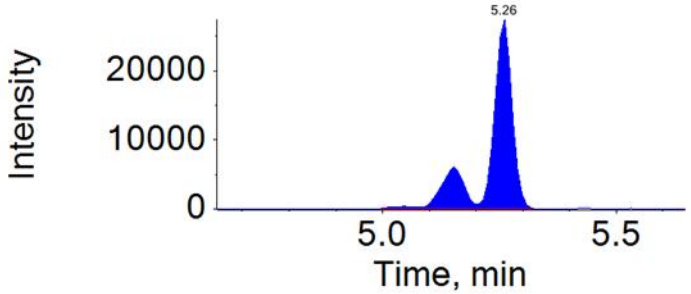
Component: PFOA
Primary Mass: 413.0 / 369.0



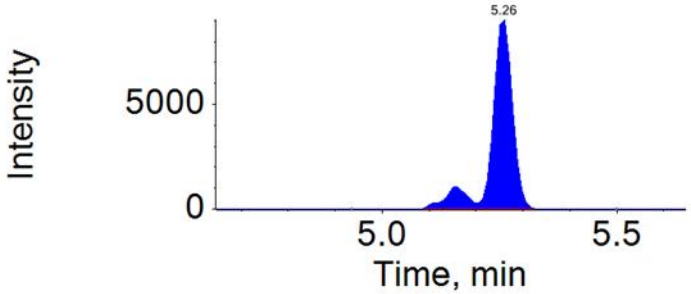
Component: PFOA_2
Secondary Mass: 413.0 / 169.0



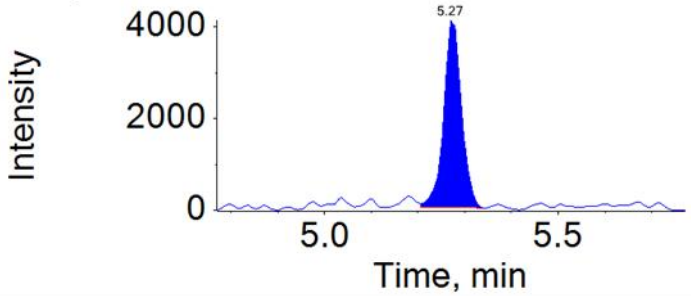
Component: PFOS
Primary Mass: 499.0 / 80.0



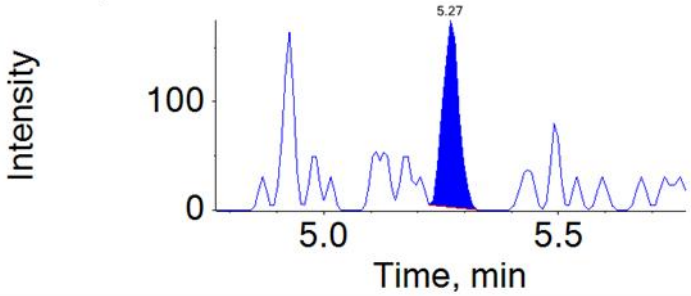
Component: PFOS_2
Secondary Mass: 499.0 / 99.0



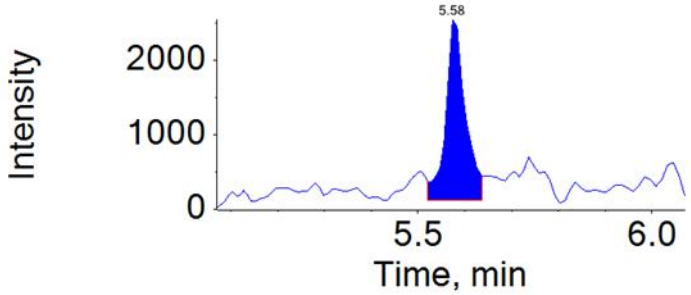
Component: PFNA
Primary Mass: 463.0 / 419.0



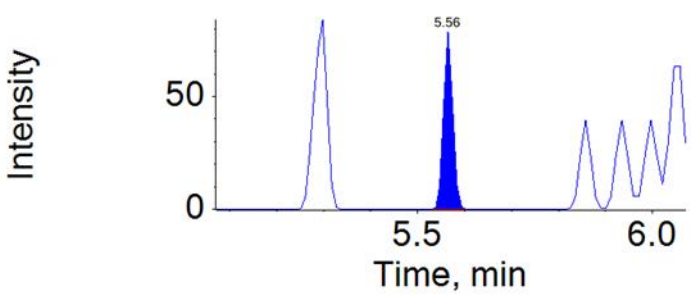
Component: PFNA_2
Secondary Mass: 463.0 / 169.0



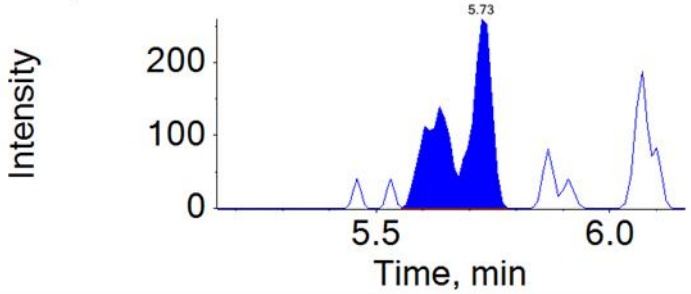
Component: PFDA
Primary Mass: 513.0 / 469.0



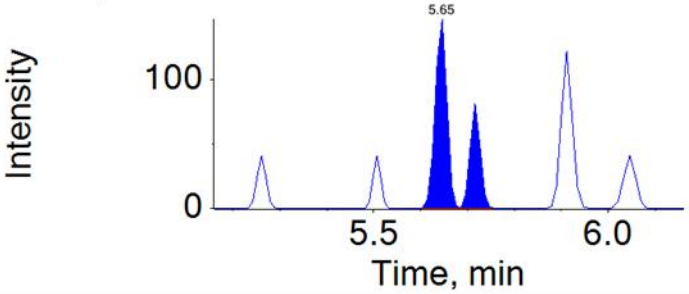
Component: PFDA_2
Secondary Mass: 513.0 / 169.0



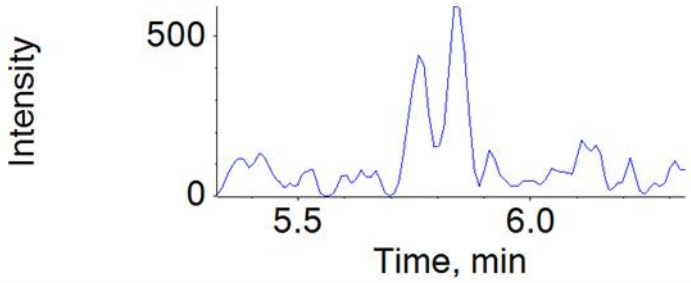
Component: NMeFOSAA
Primary Mass: 570.0 / 419.0



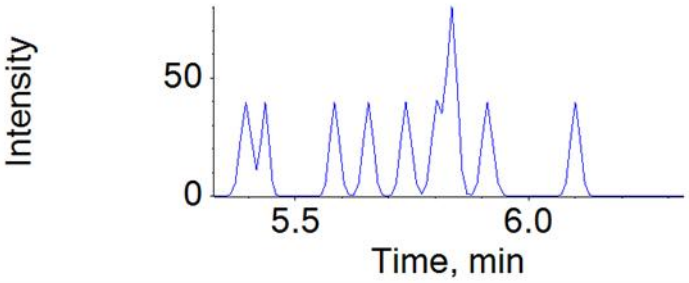
Component: NMeFOSAA_2
Secondary Mass: 570.0 / 483.0



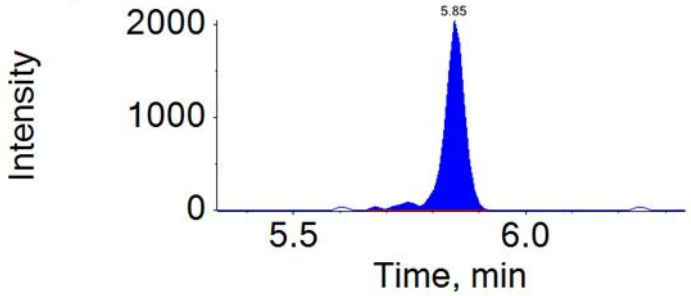
Component: PFUnDA
Primary Mass: 563.0 / 519.0



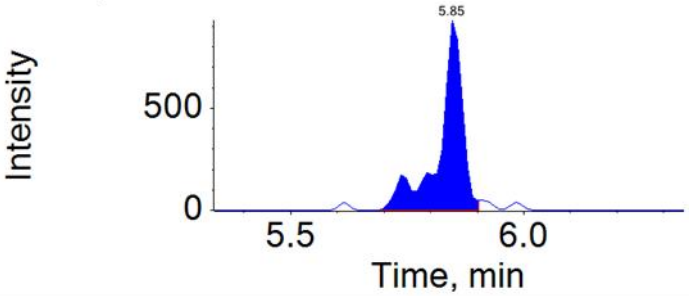
Component: PFUnDA_2
Secondary Mass: 563.0 / 169.0



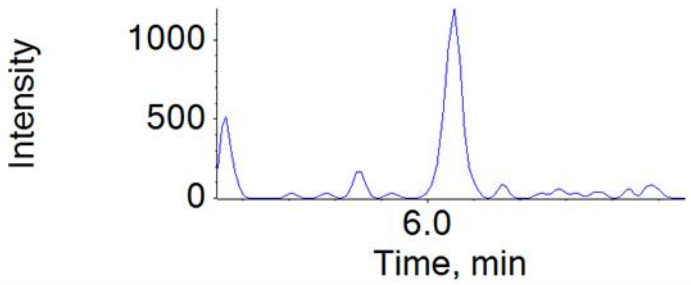
Component: NEtFOSAA
Primary Mass: 584.0 / 419.0



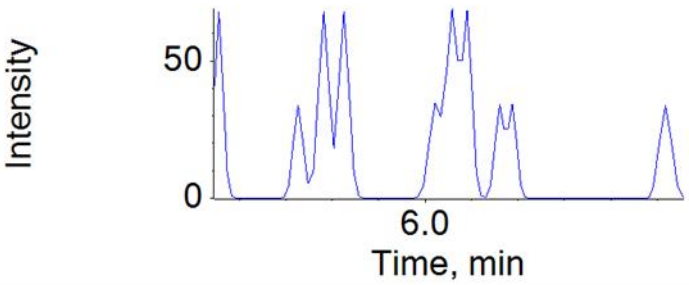
Component: NEtFOSAA_2
Secondary Mass: 584.0 / 526.0



Component: PFDoDA
Primary Mass: 613.0 / 569.0



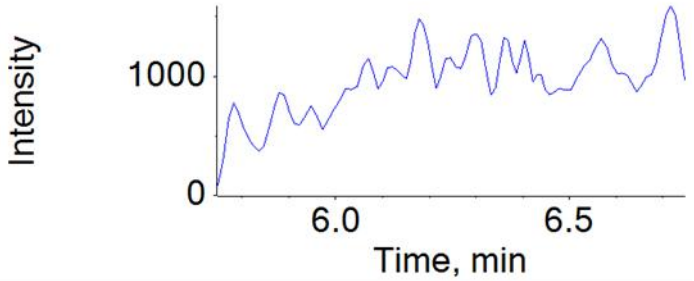
Component: PFDoDA_2
Secondary Mass: 613.0 / 169.0



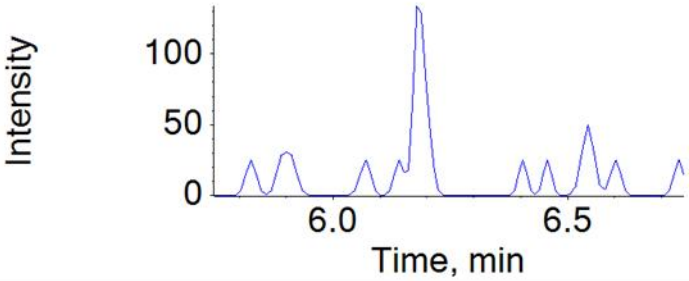
APPROVED
By JPT at 10:38 am, 11/19/18

REVIEWED
By HMK at 11:49 am, 11/19/18

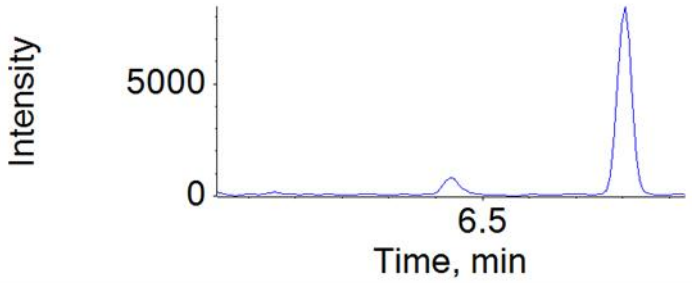
Component: PFTrDA
Primary Mass: 663.0 / 619.0



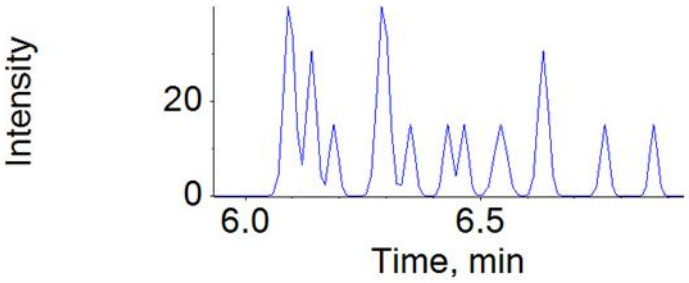
Component: PFTrDA_2
Secondary Mass: 663.0 / 169.0



Component: PFTeDA
Primary Mass: 713.0 / 669.0



Component: PFTeDA_2
Secondary Mass: 713.0 / 169.0



APPROVED
By JPT at 10:38 am, 11/19/18

REVIEWED
By HMK at 11:49 am, 11/19/18

ICAL Name: 18NOV12DCAL **Result Table:** 18319003 11/19/2018 10:28:58 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Sample Name:	9885056RE			**Data File:**		18NOV15D-09.wiff
Sample ID:	EPA 537 mod QSM 5.1 table B-15 18319003 OU1-WWTPW-S-02-01 Grab Soil			**Acquis Date:**		2018-11-15T13:15:14
Sample Type:	Unknown			**Instrument:**		LM27631
Vial Position:	27			**Acquis Method:**		18AUG13_3uL.dam
Injection Vol:	3.00			**Result Table:**		18319003
QMethod File:	18AUG20QM			**ICAL Name:**		18NOV12DCAL
Batch Number:	18319003			**Operator:**		JPT12262
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: 18NOV15D-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	732967.0	732179.1	0	50	
13C2-PFOA	5.0	500938.8	479663.2	4	50	
13C4-PFOS	4.8	270855.0	269685.3	0	50	
13C2-PFDA	5.0	319625.8	302309.9	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
E13C3-PFBS	325483.2	13C3-PFBA	732967.0	0.444	8.942	6.028	67	50-150	
E13C5-PFHxA	506371.6	13C2-PFOA	500938.8	1.011	9.615	7.022	73	50-150	
E13C3-PFHxS	256565.3	13C2-PFOA	500938.8	0.512	9.096	6.759	74	50-150	
E13C4-PFHpA	420016.3	13C2-PFOA	500938.8	0.838	9.615	7.264	76	50-150	
E13C8-PFOA	727916.9	13C2-PFOA	500938.8	1.453	9.615	7.699	80	50-150	
E13C8-PFOS	222183.2	13C4-PFOS	270855.0	0.820	9.192	6.990	76	50-150	
E13C9-PFNA	381417.3	13C4-PFOS	270855.0	1.408	9.615	7.550	79	50-150	
E13C6-PFDA	494363.4	13C2-PFDA	319625.8	1.547	9.615	6.941	72	50-150	
Ed3-NMeFOSAA	37227.8	13C2-PFDA	319625.8	0.116	9.615	4.043	42	50-150	OOS
E13C7-PFUnDA	216994.5	13C2-PFDA	319625.8	0.679	9.615	7.580	79	50-150	
Ed5-NEtFOSAA	32205.3	13C2-PFDA	319625.8	0.101	9.615	4.099	43	50-150	OOS
E13C2-PFDoDA	456997.8	13C2-PFDA	319625.8	1.430	9.615	7.139	74	50-150	
E13C2-PFTeDA	323630.6	13C2-PFDA	319625.8	1.013	9.615	6.836	71	50-150	

APPROVED
By JPT at 10:38 am, 11/19/18

REVIEWED
By HMK at 11:46 am, 11/19/18

ICAL Name: 18NOV12DCAL **Result Table:** 18319003 11/19/2018 10:28:58 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

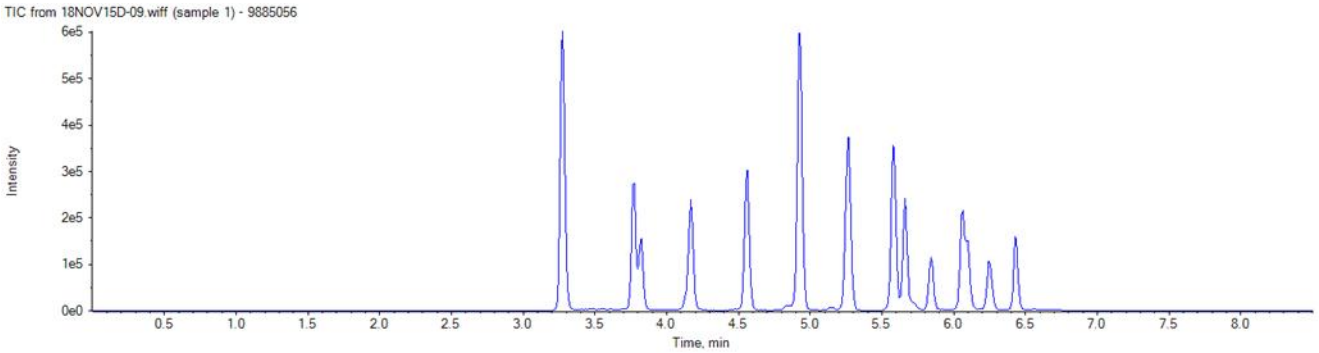
Analyte Quantitation Peak Table

Sample Name: 9885056RE **Instrument Name:** LM27631 **File Name:** 18NOV15D-09.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	3.82	325483.2	N/A	
PFHxA	4.17	1.000	18164.7		A	13C5-PFHxA	4.17	506371.6	0.036	0.288
PFHpA	4.56	1.000	23312.5		A	13C4-PFHpA	4.56	420016.3	0.056	0.354
PFHxS	4.56	1.000	5899.9		M	13C3-PFHxS	4.56	256565.3	0.023	0.214
PFOA	4.93	1.000	177548.3		M	13C8-PFOA	4.93	727916.9	0.244	2.505
PFOS	5.26	1.000	80629.0		M	13C8-PFOS	5.26	222183.2	0.363	3.052
PFNA	5.27	1.000	9213.6		M	13C9-PFNA	5.27	381417.3	0.024	0.168
PFDA	5.58	1.000	7257.0		M	13C6-PFDA	5.58	494363.4	0.015	0.150
NMeFOSAA	5.69	0.990	1556.5		M	d3-NMeFOSAA	5.72	37227.8	0.042	0.454
PFUnDA	N/A	N/A	N/A		A	13C7-PFUnDA	5.84	216994.5	N/A	
NEtFOSAA	5.85	1.000	6274.0		A	d5-NEtFOSAA	5.85	32205.3	0.195	1.964
PFDoDA	N/A	N/A	N/A		A	13C2-PFDoDA	6.06	456997.8	N/A	
PFTrDA	N/A	N/A	N/A		A	13C2-PFDoDA	6.06	456997.8	N/A	
PFTeDA	N/A	N/A	N/A		A	13C2-PFTeDA	6.43	323630.6	N/A	

Total Ion Chromatogram

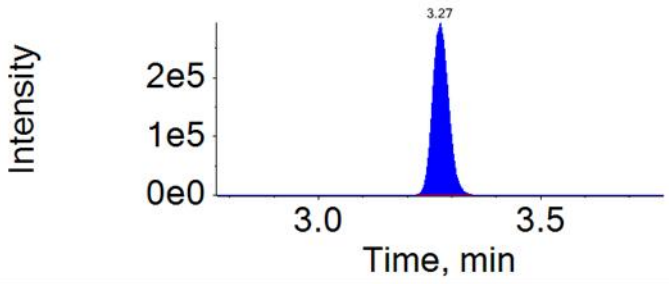


APPROVED
By JPT at 10:38 am, 11/19/18

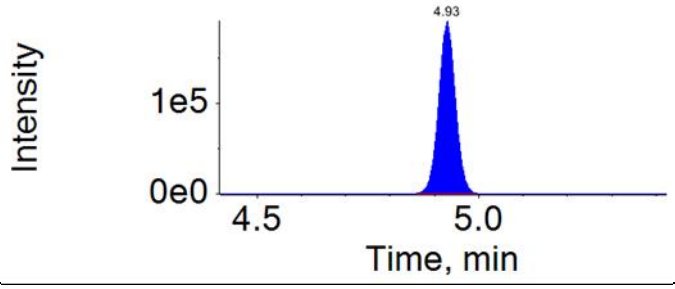
REVIEWED
By HMK at 11:46 am, 11/19/18

ICAL Name: 18NOV12DCAL **Result Table:** 18319003 11/19/2018 10:28:58 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

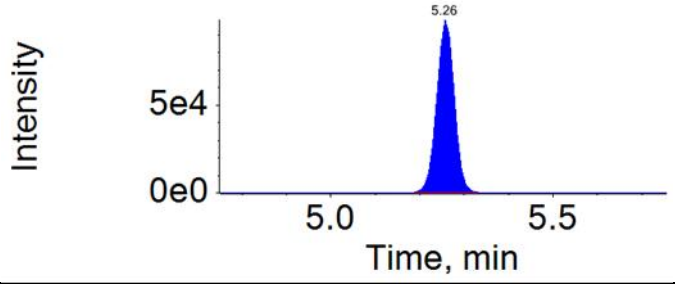
Injection Standard: 13C3-PFBA
216.0 / 172.0



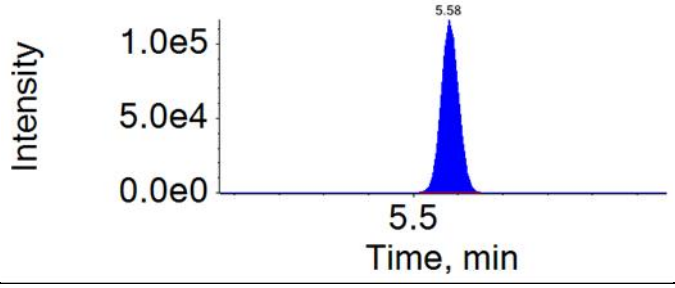
Injection Standard: 13C2-PFOA
415.0 / 370.0



Injection Standard: 13C4-PFOS
503.0 / 80.0



Injection Standard: 13C2-PFDA
515.0 / 470.0

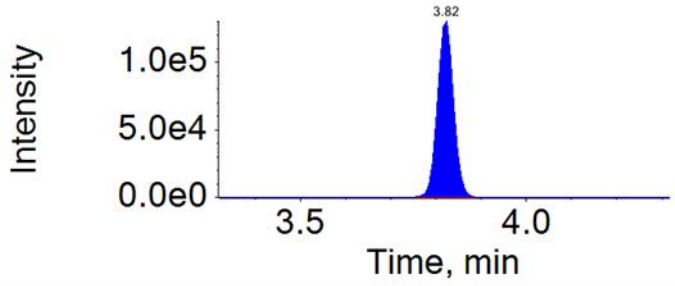


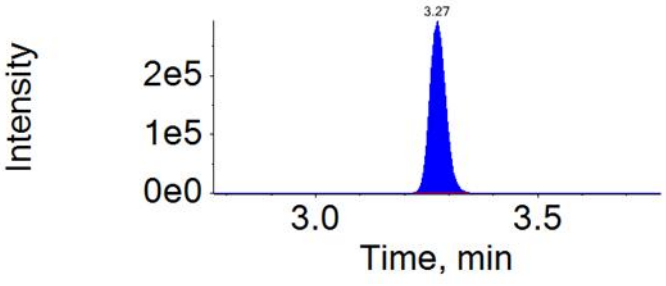
APPROVED
By JPT at 10:38 am, 11/19/18

REVIEWED
By HMK at 11:46 am, 11/19/18

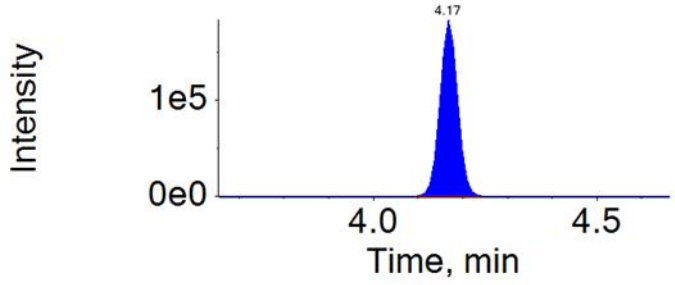
ICAL Name: 18NOV12DCAL **Result Table:** 18319003 11/19/2018 10:28:58 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

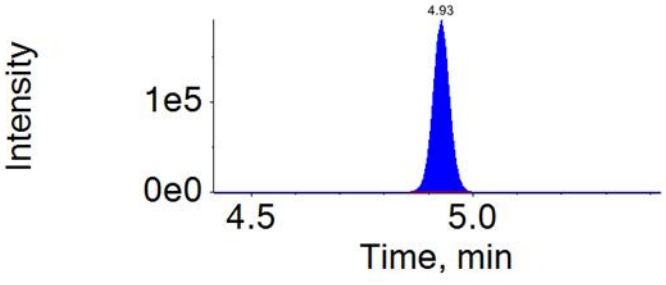
Extraction Standard: E13C3-PFBS	Injection Standard: 13C3-PFBA
302.0 / 80.0	216.0 / 172.0



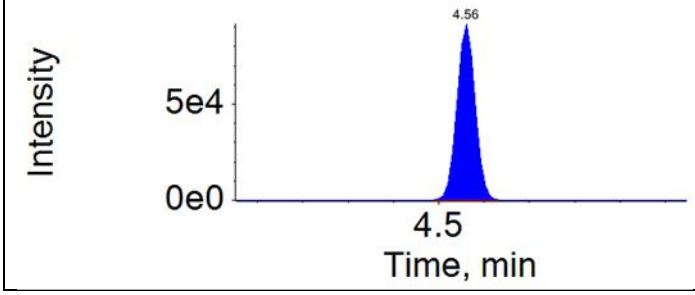


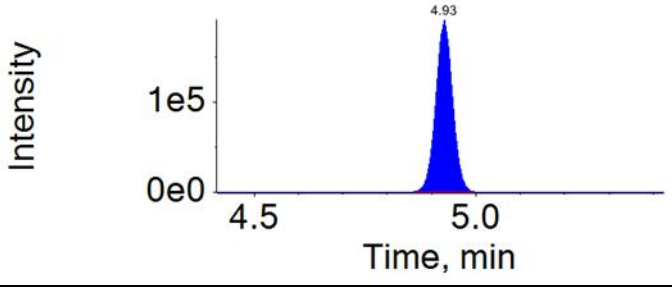
Extraction Standard: E13C5-PFHxA	Injection Standard: 13C2-PFOA
318.0 / 273.0	415.0 / 370.0



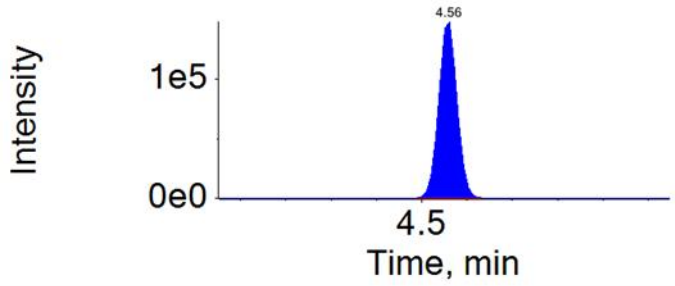


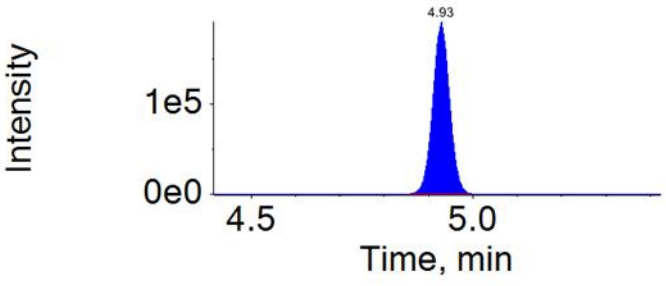
Extraction Standard: E13C3-PFHxS	Injection Standard: 13C2-PFOA
402.0 / 80.0	415.0 / 370.0





Extraction Standard: E13C4-PFHpA	Injection Standard: 13C2-PFOA
367.0 / 322.0	415.0 / 370.0



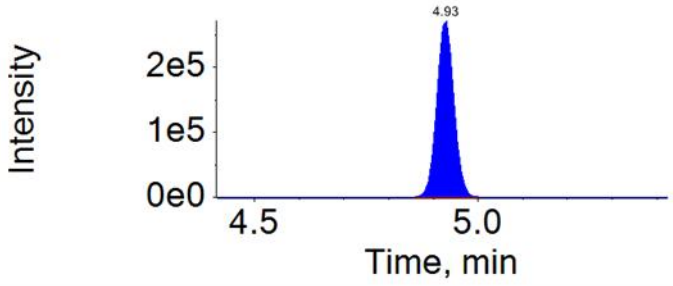


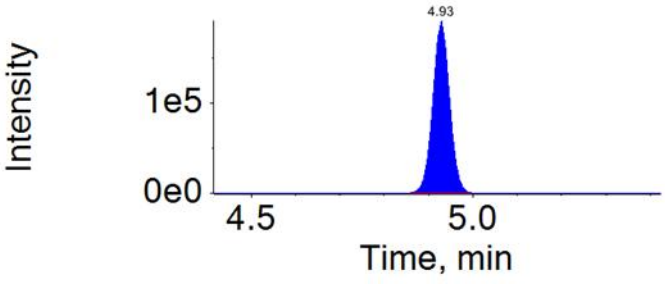
APPROVED
By JPT at 10:38 am, 11/19/18

REVIEWED
By HMK at 11:46 am, 11/19/18

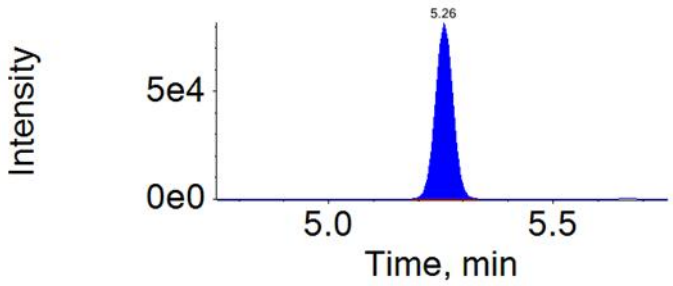
ICAL Name: 18NOV12DCAL **Result Table:** 18319003 11/19/2018 10:28:58 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

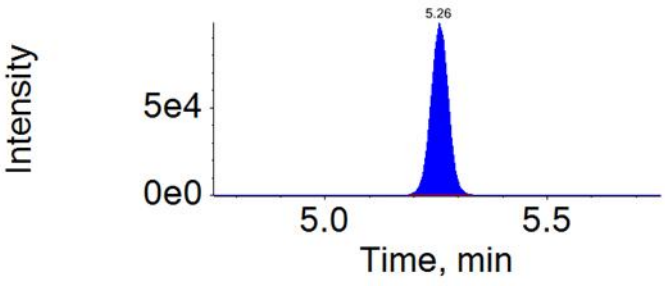
Extraction Standard: E13C8-PFOA	Injection Standard: 13C2-PFOA
421.0 / 376.0	415.0 / 370.0



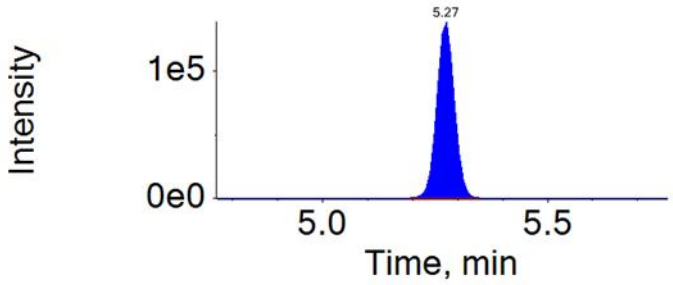


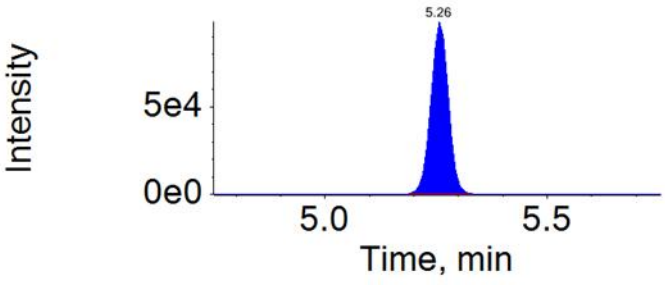
Extraction Standard: E13C8-PFOS	Injection Standard: 13C4-PFOS
507.0 / 80.0	503.0 / 80.0



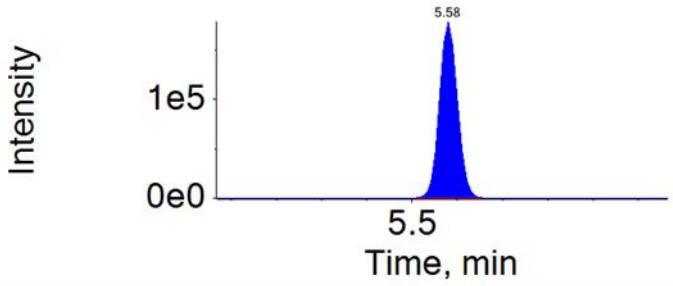


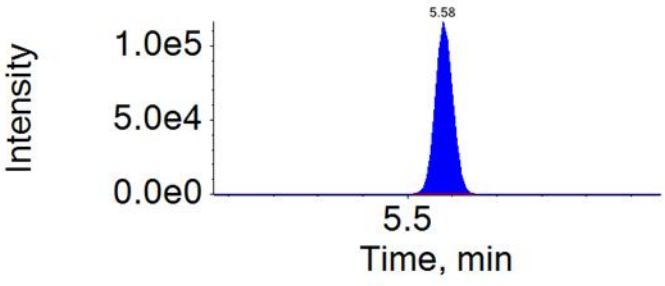
Extraction Standard: E13C9-PFNA	Injection Standard: 13C4-PFOS
472.0 / 427.0	503.0 / 80.0





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

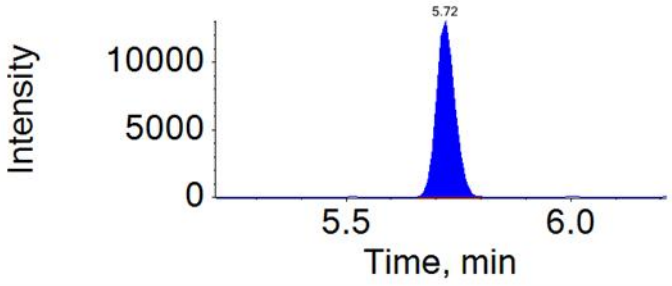
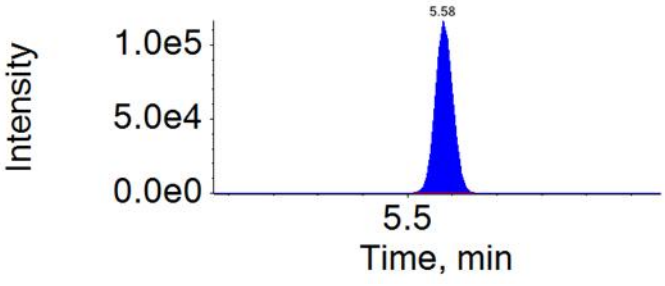


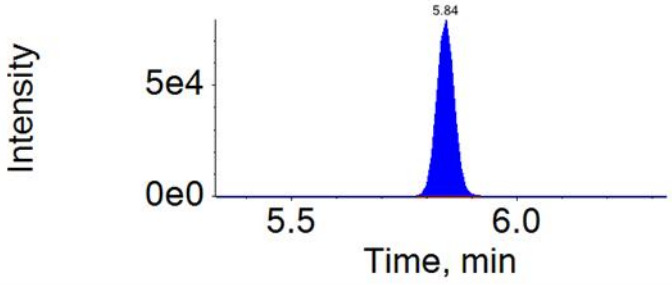
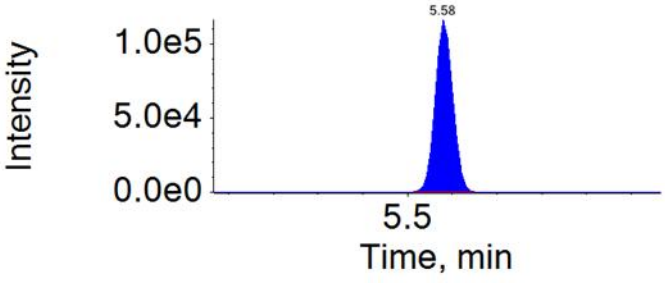


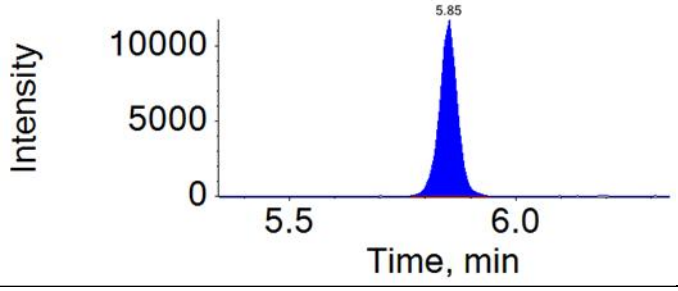
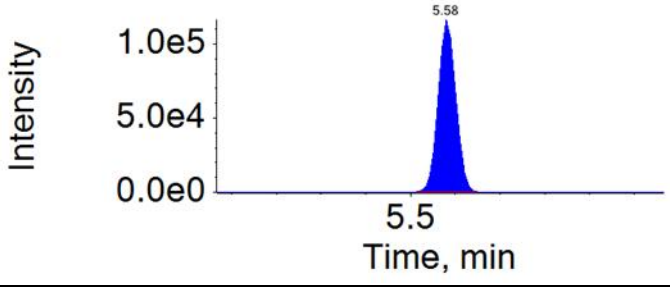
APPROVED
By JPT at 10:38 am, 11/19/18

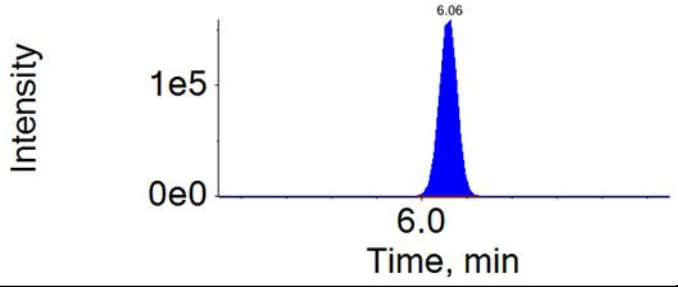
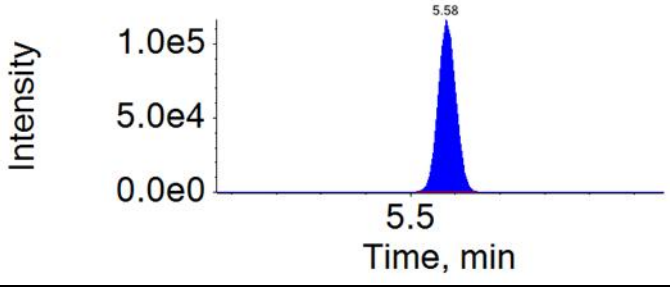
REVIEWED
By HMK at 11:46 am, 11/19/18

ICAL Name: 18NOV12DCAL **Result Table:** 18319003 11/19/2018 10:28:58 AM
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
	

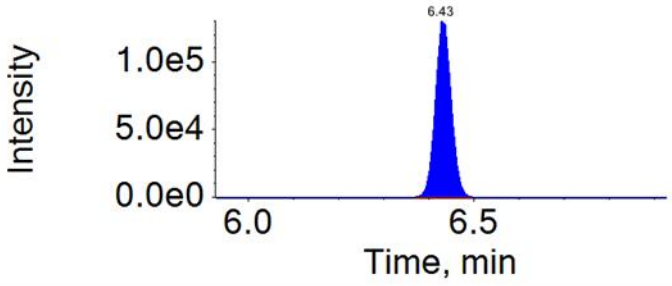
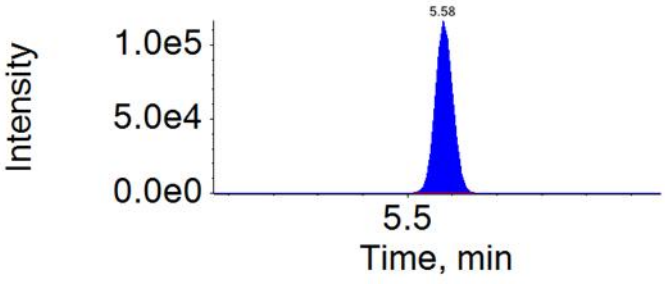
Extraction Standard: Ed5-NEtFOSAA	Injection Standard: 13C2-PFDA
589.0 / 419.0	515.0 / 470.0
	

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

APPROVED
By JPT at 10:38 am, 11/19/18

REVIEWED
By HMK at 11:46 am, 11/19/18

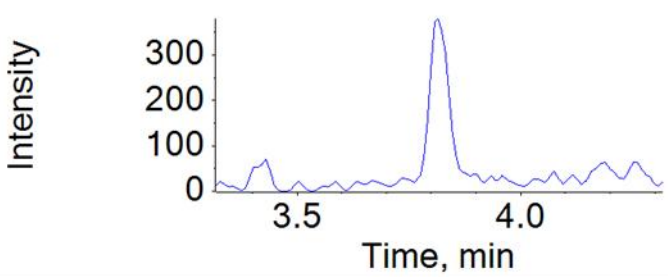
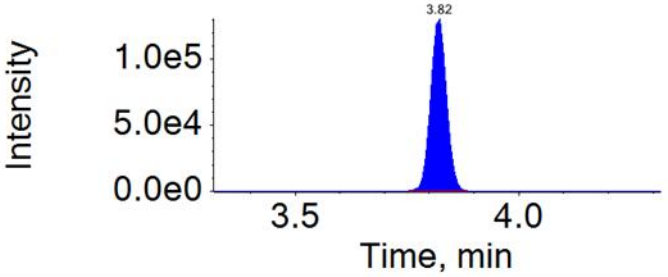
ICAL Name: 18NOV12DCAL **Result Table:** 18319003 11/19/2018 10:28:58 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

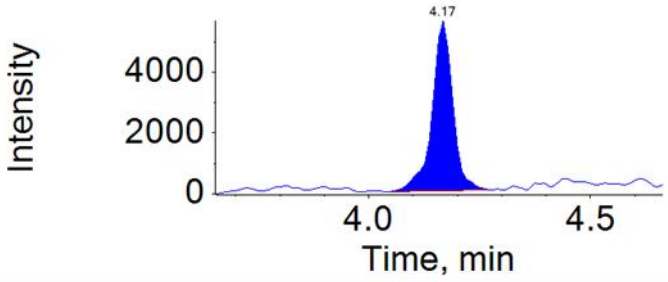
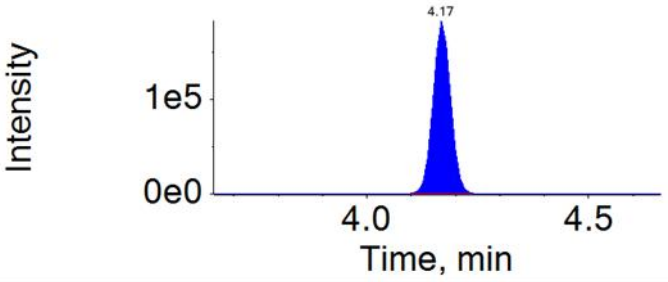
Extraction Standard: E13C2-PFTeDA	Injection Standard: 13C2-PFDA
715.0 / 670.0	515.0 / 470.0
	

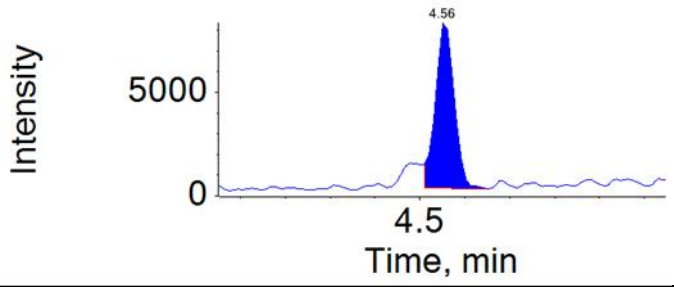
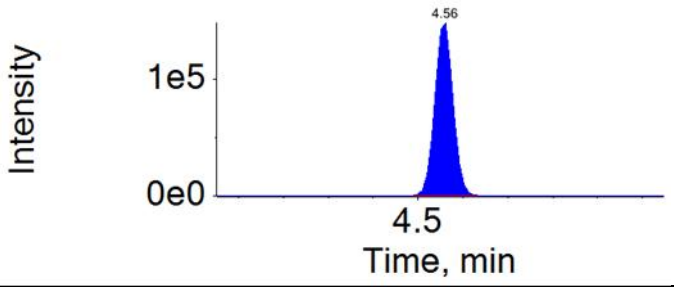
APPROVED
By JPT at 10:38 am, 11/19/18

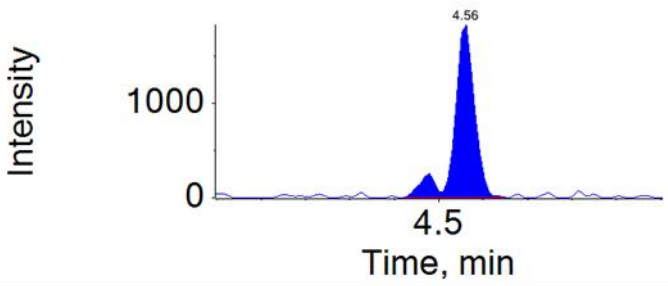
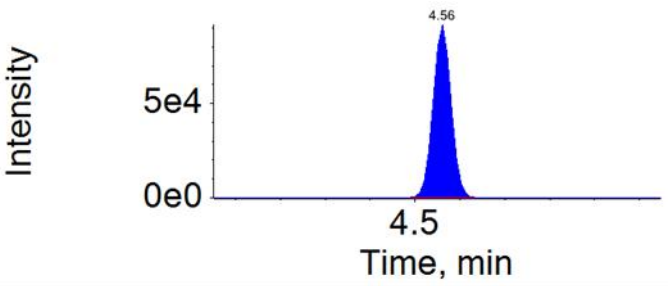
REVIEWED
By HMK at 11:46 am, 11/19/18

ICAL Name: 18NOV12DCAL **Result Table:** 18319003 11/19/2018 10:28:58 AM
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
	

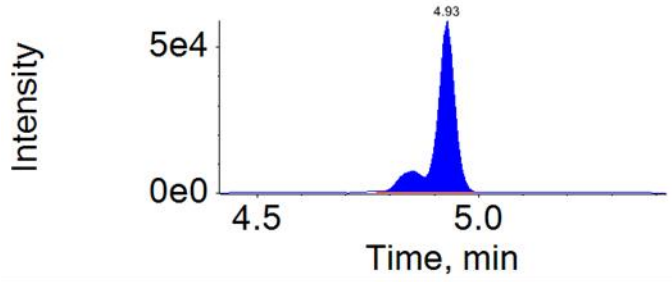
Analyte: PFHxS	Extraction Standard: 13C3-PFHxS
399.0 / 80.0	402.0 / 80.0
	

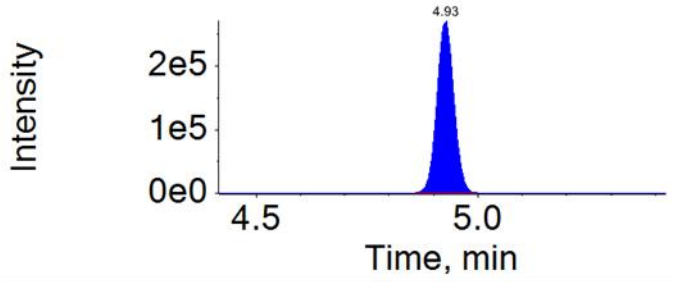
APPROVED
By JPT at 10:38 am, 11/19/18

REVIEWED
By HMK at 11:46 am, 11/19/18

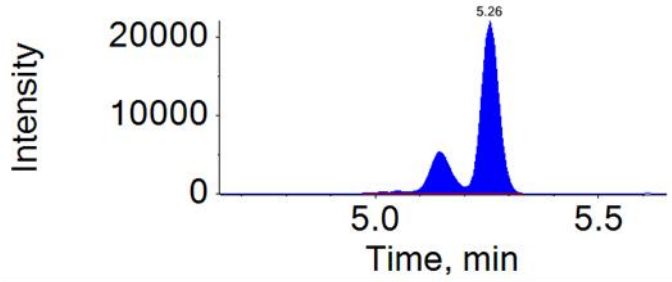
ICAL Name: 18NOV12DCAL **Result Table:** 18319003 11/19/2018 10:28:58 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

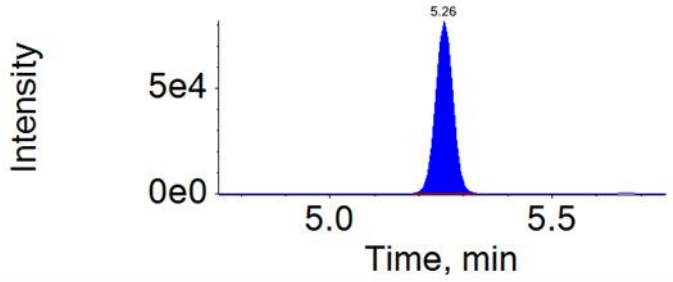
Analyte: PFOA	Extraction Standard: 13C8-PFOA
413.0 / 369.0	421.0 / 376.0



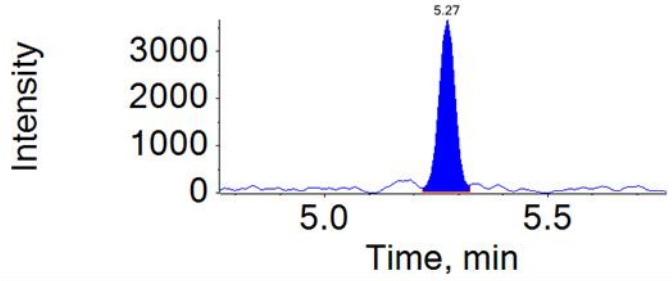


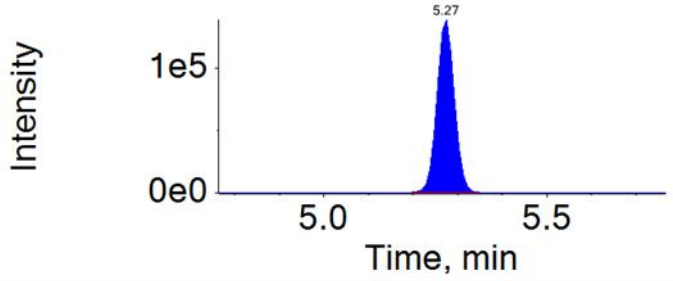
Analyte: PFOS	Extraction Standard: 13C8-PFOS
499.0 / 80.0	507.0 / 80.0



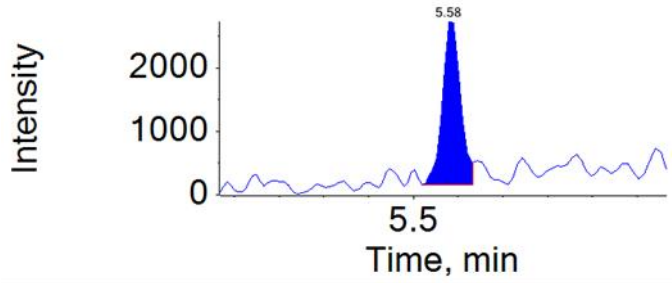


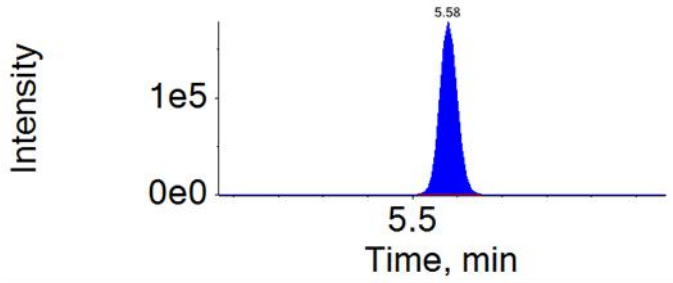
Analyte: PFNA	Extraction Standard: 13C9-PFNA
463.0 / 419.0	472.0 / 427.0





Analyte: PFDA	Extraction Standard: 13C6-PFDA
513.0 / 469.0	519.0 / 474.0



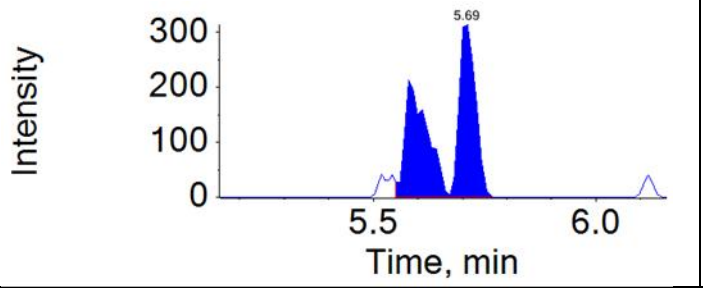


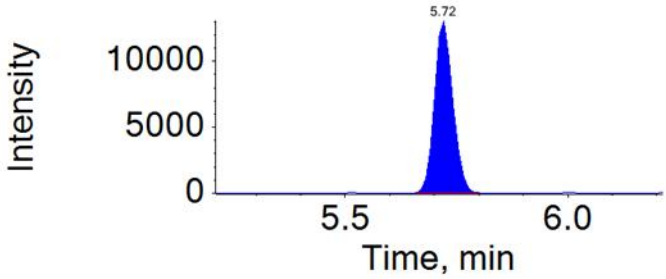
APPROVED
By JPT at 10:38 am, 11/19/18

REVIEWED
By HMK at 11:46 am, 11/19/18

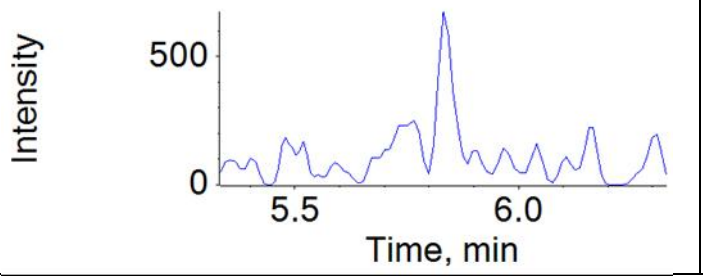
ICAL Name: 18NOV12DCAL **Result Table:** 18319003 11/19/2018 10:28:58 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

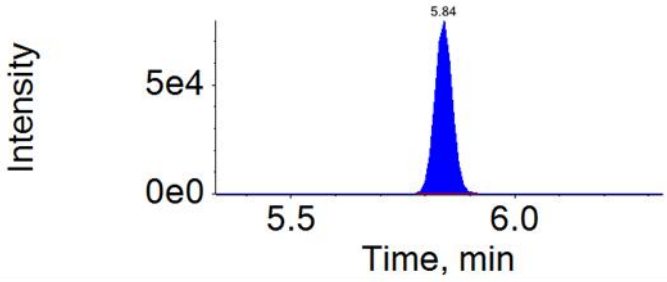
Analyte: NMeFOSAA	Extraction Standard: d3-NMeFOSAA
570.0 / 419.0	573.0 / 419.0



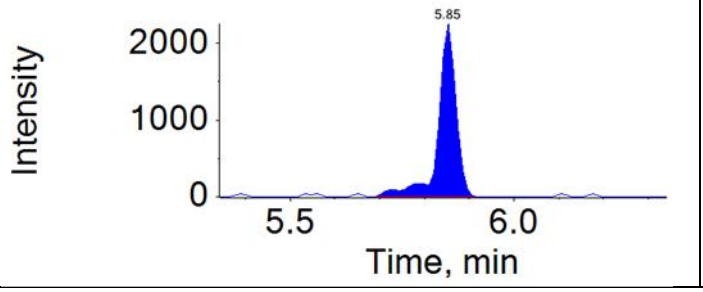


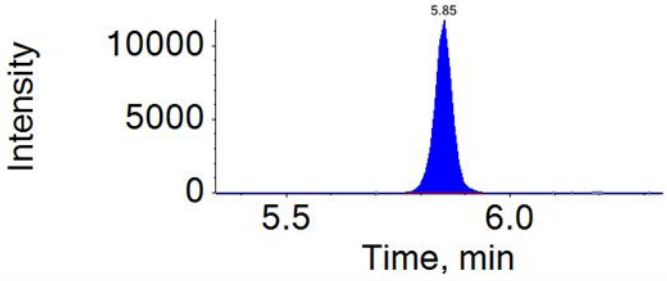
Analyte: PFUnDA	Extraction Standard: 13C7-PFUnDA
563.0 / 519.0	570.0 / 525.0



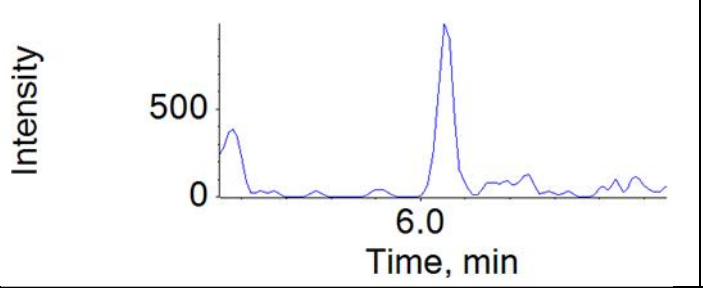


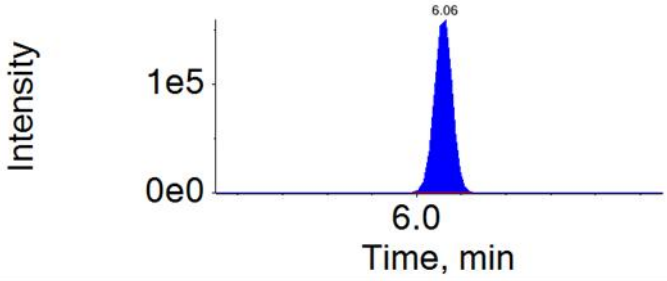
Analyte: NEtFOSAA	Extraction Standard: d5-NEtFOSAA
584.0 / 419.0	589.0 / 419.0





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



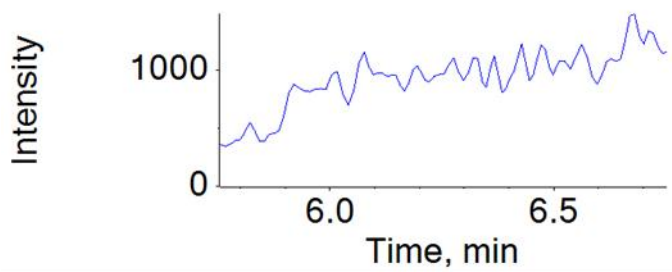


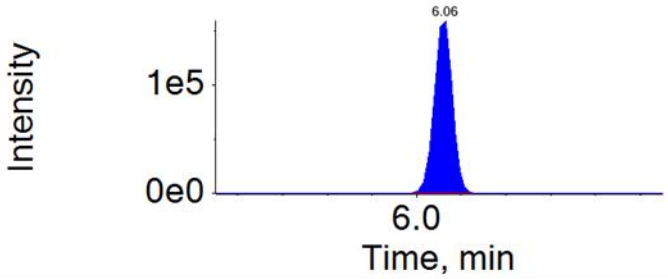
APPROVED
By JPT at 10:38 am, 11/19/18

REVIEWED
By HMK at 11:46 am, 11/19/18

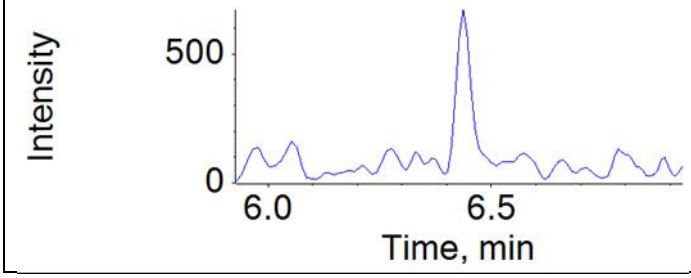
ICAL Name: 18NOV12DCAL **Result Table:** 18319003 11/19/2018 10:28:58 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

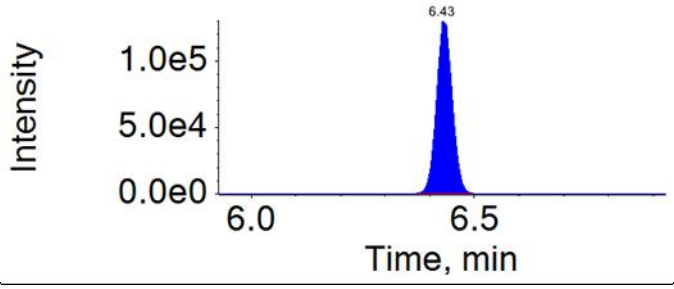
Analyte: PFTrDA	Extraction Standard: 13C2-PFDoDA
663.0 / 619.0	615.0 / 570.0





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

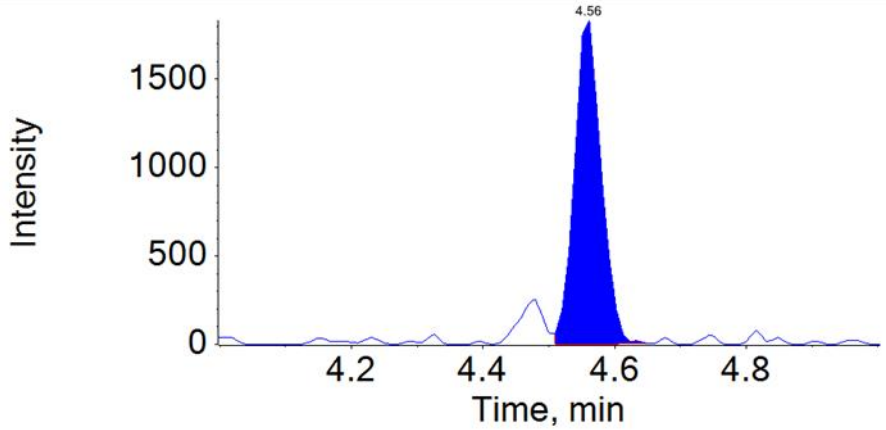


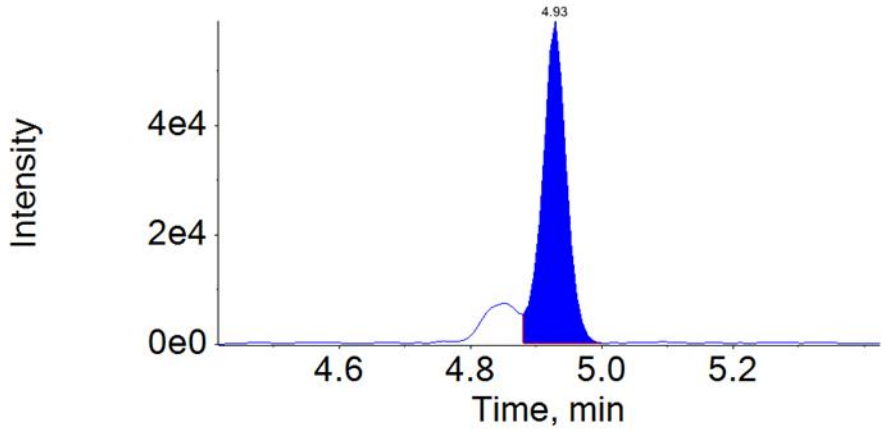


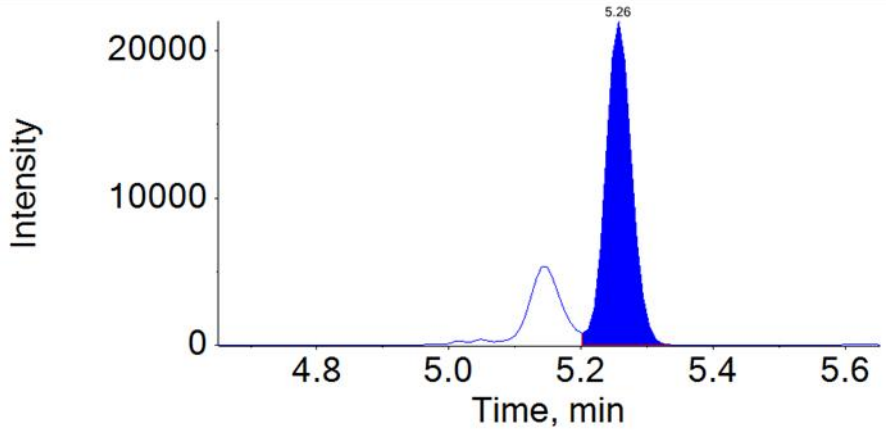
APPROVED
By JPT at 10:38 am, 11/19/18

REVIEWED
By HMK at 11:46 am, 11/19/18

Results Table Name: 18319003
Results Table Date: 11/19/2018 10:28:58 AM
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

Component Name: PFHxS **RT (min.):** 4.56 **Peak Area:** 5220.4 **Mass Range:** 399.0 / 80.0 **File Name:** 18NOV15D-09.wiff **Sample Name:** 9885056RE	 **Integration Comment:** incorrect integration

Component Name: PFOA **RT (min.):** 4.93 **Peak Area:** 149348.5 **Mass Range:** 413.0 / 369.0 **File Name:** 18NOV15D-09.wiff **Sample Name:** 9885056RE	 **Integration Comment:** incorrect integration

Component Name: PFOS **RT (min.):** 5.26 **Peak Area:** 60791.3 **Mass Range:** 499.0 / 80.0 **File Name:** 18NOV15D-09.wiff **Sample Name:** 9885056RE	 **Integration Comment:** incorrect integration

APPROVED
By JPT at 10:38 am, 11/19/18

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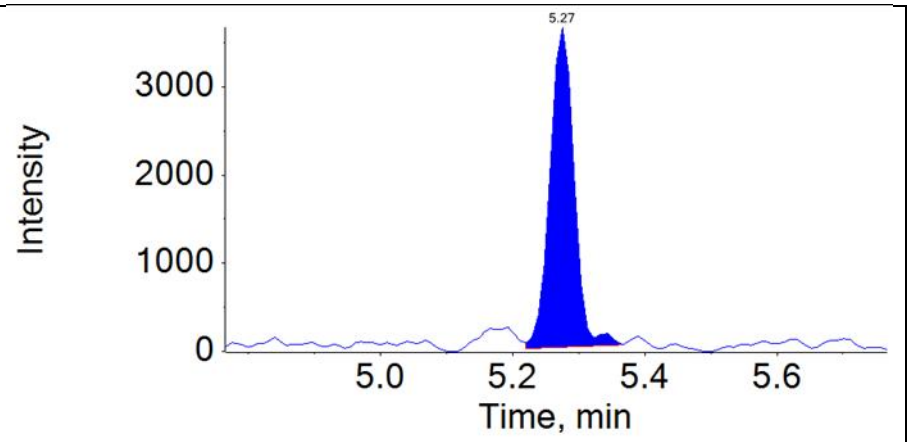
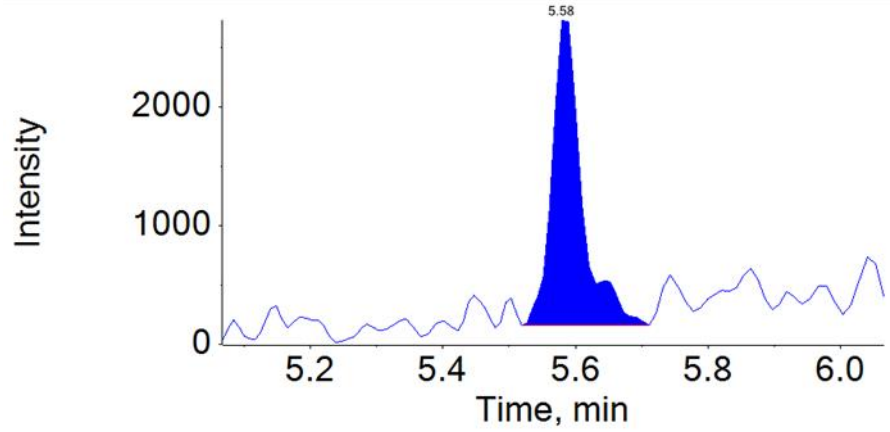
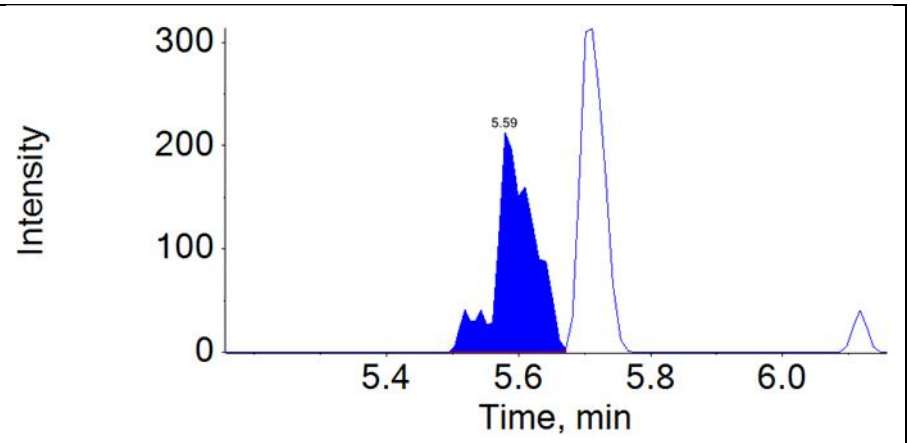
By HMK at 11:46 am, 11/19/18

Results Table Name: 18319003
Results Table Date: 11/19/2018 10:28:58 AM
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

Component Name: PFNA **RT (min.):** 5.27 **Peak Area:** 9232.9 **Mass Range:** 463.0 / 419.0 **File Name:** 18NOV15D-09.wiff **Sample Name:** 9885056RE	 **Integration Comment:** incorrect integration

Component Name: PFDA **RT (min.):** 5.58 **Peak Area:** 8100.6 **Mass Range:** 513.0 / 469.0 **File Name:** 18NOV15D-09.wiff **Sample Name:** 9885056RE	 **Integration Comment:** incorrect integration

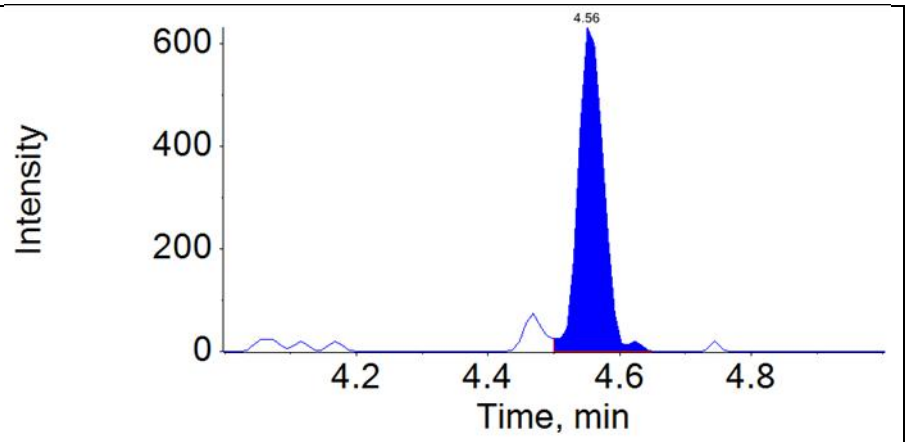
Component Name: NMeFOSAA **RT (min.):** 5.59 **Peak Area:** 840.5 **Mass Range:** 570.0 / 419.0 **File Name:** 18NOV15D-09.wiff **Sample Name:** 9885056RE	 **Integration Comment:** incorrect integration

APPROVED
By JPT at 10:38 am, 11/19/18

REVIEWED
By HMK at 11:46 am, 11/19/18

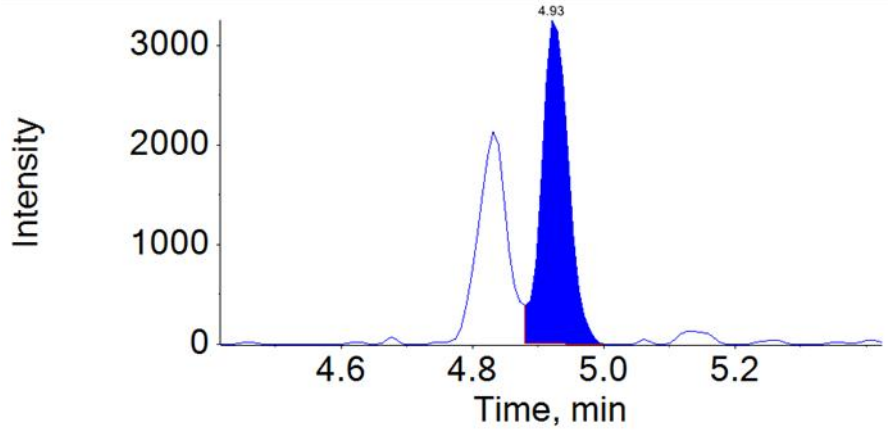
Results Table Name: 18319003
Results Table Date: 11/19/2018 10:28:58 AM
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

Component Name:
PFHxS_2
RT (min.):
4.56
Peak Area:
1692.3
Mass Range:
399.0 / 99.0
File Name:
18NOV15D-09.wiff
Sample Name:
9885056RE



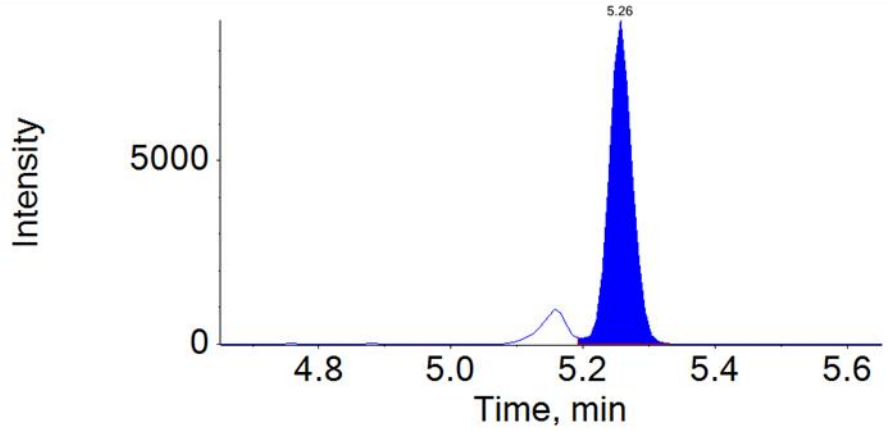
Integration Comment: incorrect integration

Component Name:
PFOA_2
RT (min.):
4.93
Peak Area:
9201.8
Mass Range:
413.0 / 169.0
File Name:
18NOV15D-09.wiff
Sample Name:
9885056RE



Integration Comment: incorrect integration

Component Name:
PFOS_2
RT (min.):
5.26
Peak Area:
21512.2
Mass Range:
499.0 / 99.0
File Name:
18NOV15D-09.wiff
Sample Name:
9885056RE

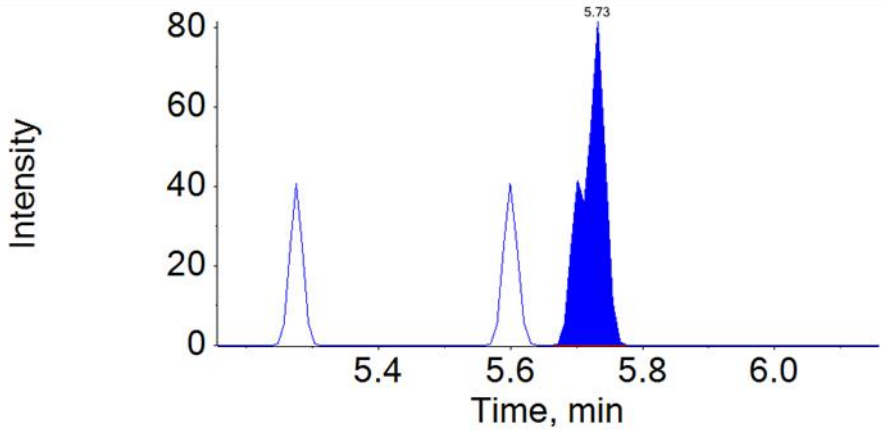


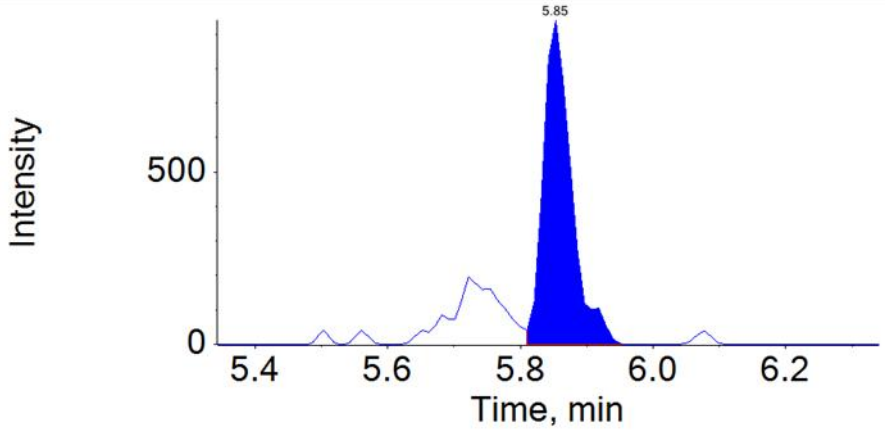
Integration Comment: incorrect integration

APPROVED
By JPT at 10:38 am, 11/19/18

REVIEWED
By HMK at 11:46 am, 11/19/18

Results Table Name: 18319003
Results Table Date: 11/19/2018 10:28:58 AM
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

Component Name: NMeFOSAA_2 **RT (min.):** 5.73 **Peak Area:** 191.6 **Mass Range:** 570.0 / 483.0 **File Name:** 18NOV15D-09.wiff **Sample Name:** 9885056RE	 **Integration Comment:** incorrect integration

Component Name: NEtFOSAA_2 **RT (min.):** 5.85 **Peak Area:** 2789.6 **Mass Range:** 584.0 / 526.0 **File Name:** 18NOV15D-09.wiff **Sample Name:** 9885056RE	 **Integration Comment:** incorrect integration

APPROVED
By JPT at 10:38 am, 11/19/18

REVIEWED
By HMK at 11:46 am, 11/19/18

Results Table Name: 18319003
Results Table Date: 11/19/2018 10:28:58 AM

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

APPROVED
By JPT at 10:38 am, 11/19/18

REVIEWED
By HMK at 11:46 am, 11/19/18

Ion Ratio Report

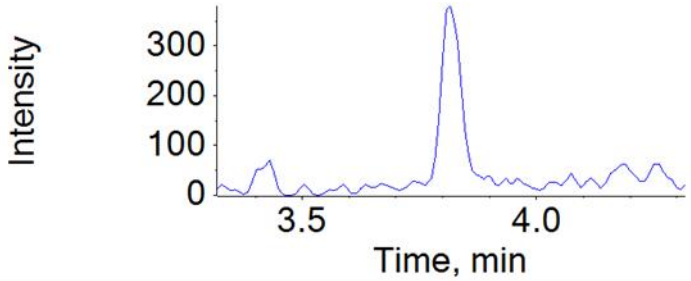
Sample Name: 9885056RE **Instrument Name:** LM27631 **File Name:** 18NOV15D-09.wiff

Component Name	RT	RRT	Analyte Area Response	Int Typ	Expected Ion Ratio	Ion Ratio	Ion Ratio % Diff	Ion Ratio Limit	Ion Ratio OOS
PFBS	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	4.17	1.00	18164.7	A	N/A	1.0000			
PFHxA_2	4.15	1.00	79.3	A	N/A	0.0044	-63	50	OOS
PFHpA	4.56	1.00	23312.5	A	N/A	1.0000			
PFHpA_2	4.56	1.00	1057.0	A	N/A	0.0453	-19	50	
PFHxS	4.56	1.00	5899.9	M	N/A	1.0000			
PFHxS_2	4.56	1.00	1827.8	M	N/A	0.3098	-10	50	
PFOA	4.93	1.00	177548.3	M	N/A	1.0000			
PFOA_2	4.91	1.00	15890.0	M	N/A	0.0895	57	50	OOS
PFOS	5.26	1.00	80629.0	M	N/A	1.0000			
PFOS_2	5.26	1.00	24194.4	M	N/A	0.3001	1	50	
PFNA	5.27	1.00	9213.6	M	N/A	1.0000			
PFNA_2	5.28	1.00	349.6	A	N/A	0.0379	68	50	OOS
PFDA	5.58	1.00	7257.0	M	N/A	1.0000			
PFDA_2	5.51	0.99	94.9	A	N/A	0.0131	65	50	OOS
NMeFOSAA	5.69	0.99	1556.5	M	N/A	1.0000			
NMeFOSAA_2	5.73	1.00	253.8	M	N/A	0.1630	-37	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	5.85	1.00	6274.0	A	N/A	1.0000			
NEtFOSAA_2	5.85	1.00	3757.0	M	N/A	0.5988	-17	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	

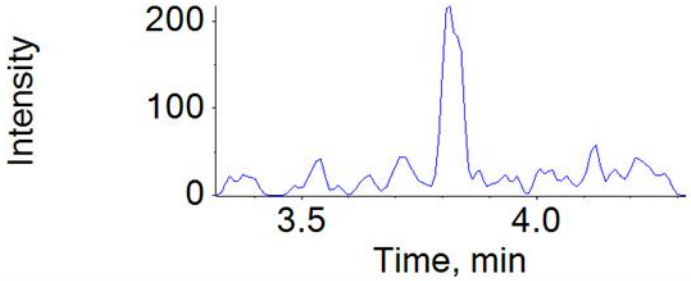
APPROVED
By JPT at 10:38 am, 11/19/18

REVIEWED
By HMK at 11:46 am, 11/19/18

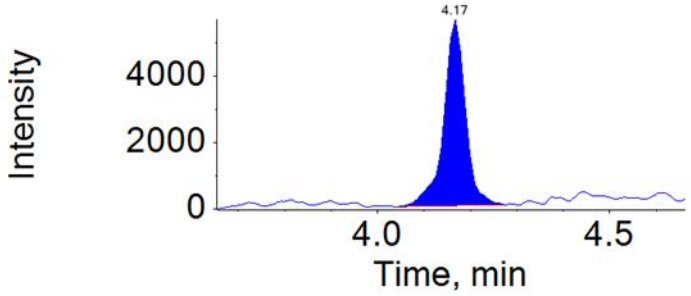
Component: PFBS
Primary Mass: 299.0 / 80.0



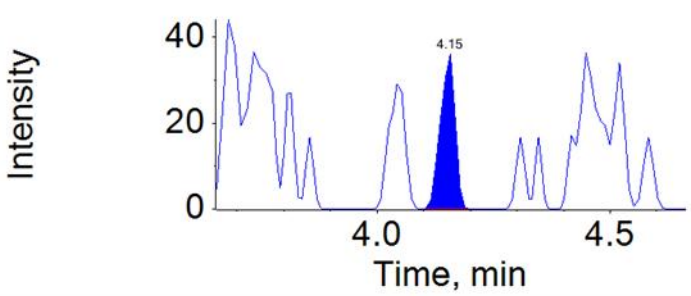
Component: PFBS_2
Secondary Mass: 299.0 / 99.0



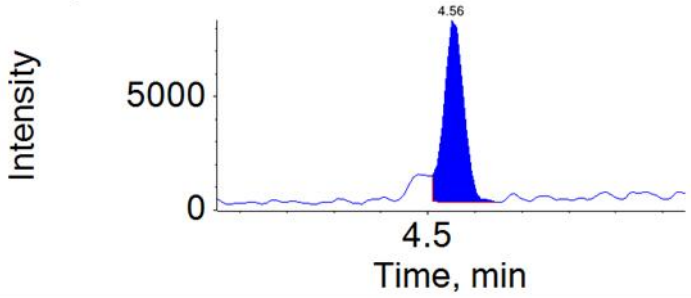
Component: PFHxA
Primary Mass: 313.0 / 269.0



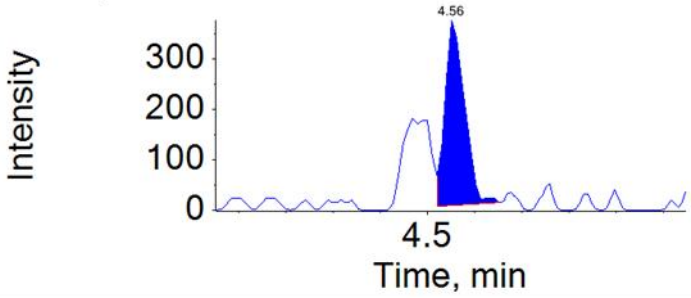
Component: PFHxA_2
Secondary Mass: 313.0 / 119.0



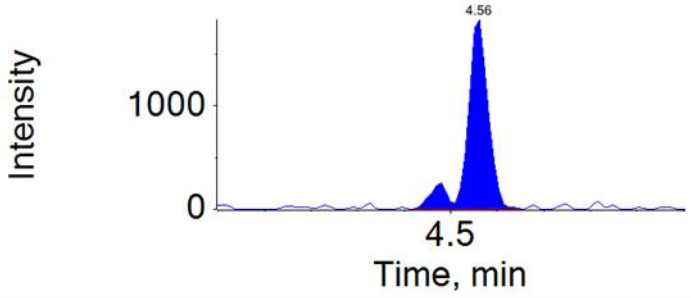
Component: PFHpA
Primary Mass: 363.0 / 319.0



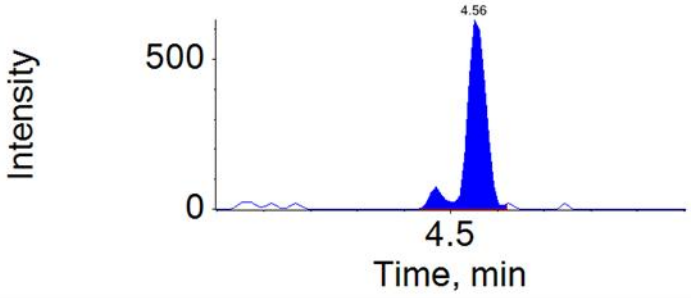
Component: PFHpA_2
Secondary Mass: 363.0 / 169.0



Component: PFHxS
Primary Mass: 399.0 / 80.0



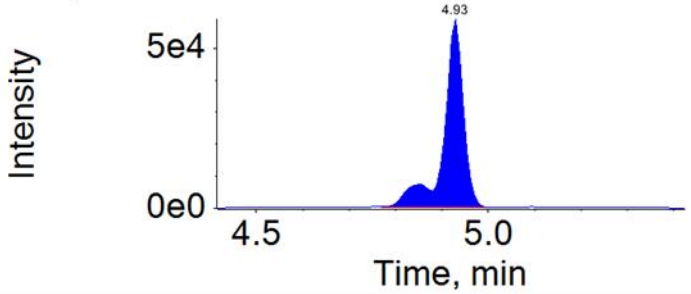
Component: PFHxS_2
Secondary Mass: 399.0 / 99.0



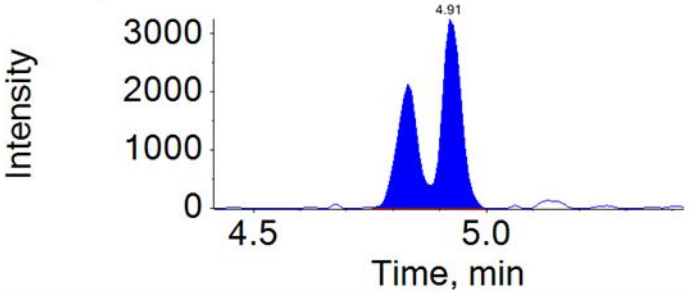
APPROVED
By JPT at 10:38 am, 11/19/18

REVIEWED
By HMK at 11:46 am, 11/19/18

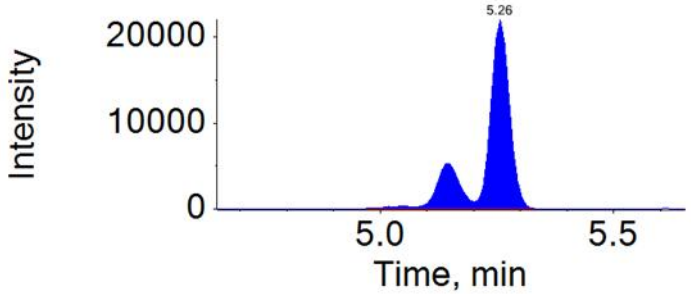
Component: PFOA
Primary Mass: 413.0 / 369.0



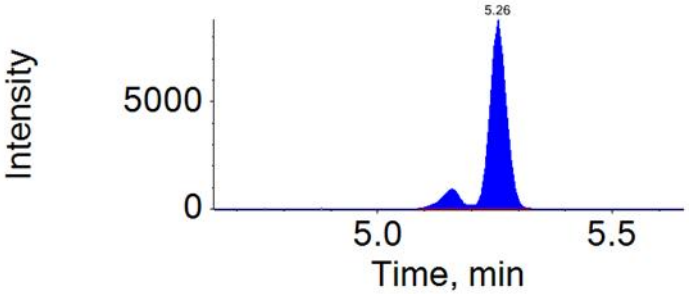
Component: PFOA_2
Secondary Mass: 413.0 / 169.0



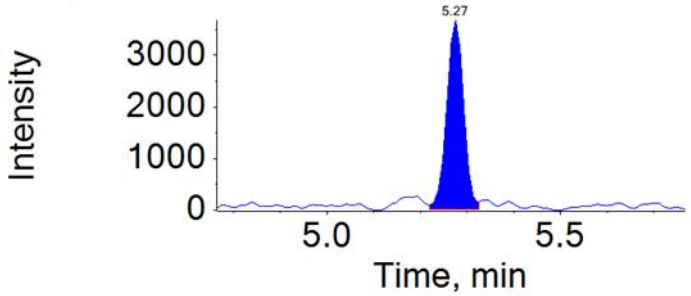
Component: PFOS
Primary Mass: 499.0 / 80.0



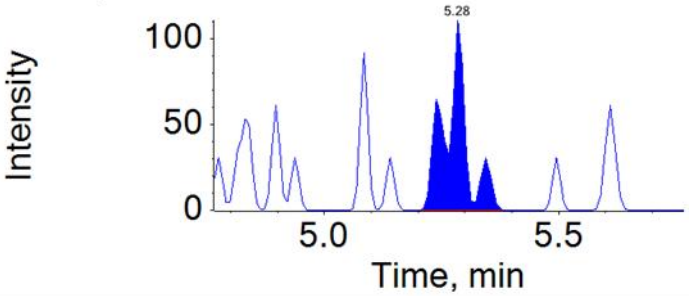
Component: PFOS_2
Secondary Mass: 499.0 / 99.0



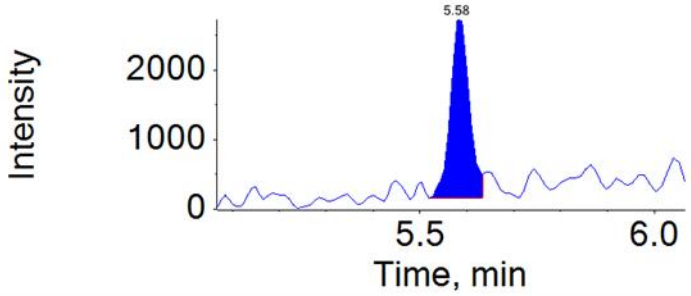
Component: PFNA
Primary Mass: 463.0 / 419.0



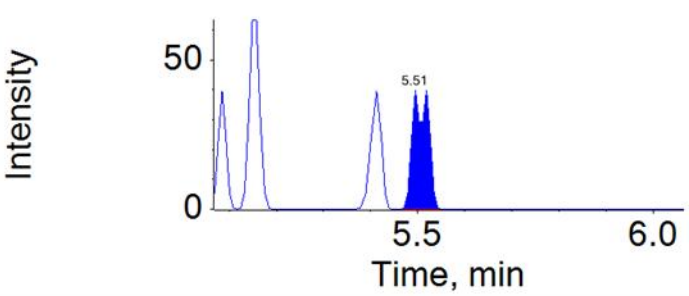
Component: PFNA_2
Secondary Mass: 463.0 / 169.0



Component: PFDA
Primary Mass: 513.0 / 469.0



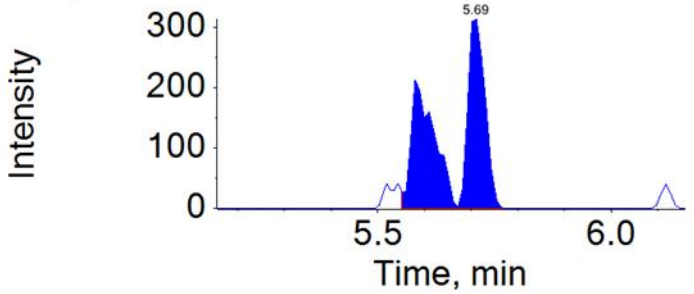
Component: PFDA_2
Secondary Mass: 513.0 / 169.0



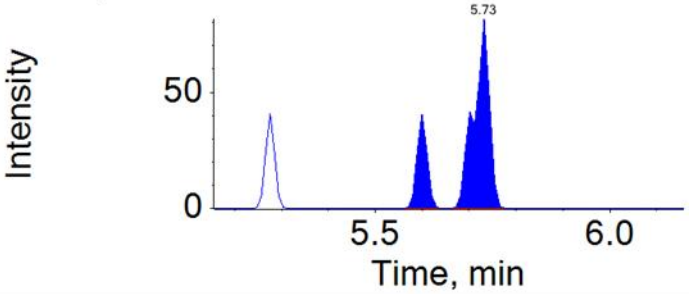
APPROVED
By JPT at 10:38 am, 11/19/18

REVIEWED
By HMK at 11:46 am, 11/19/18

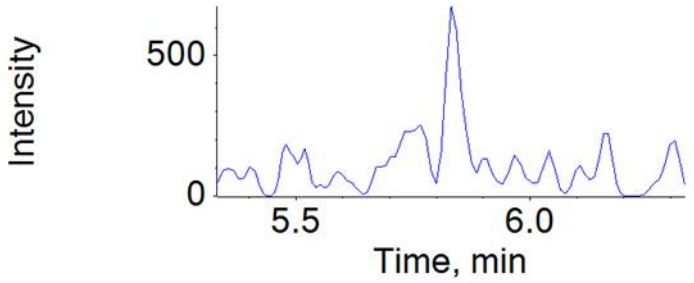
Component: NMeFOSAA
Primary Mass: 570.0 / 419.0



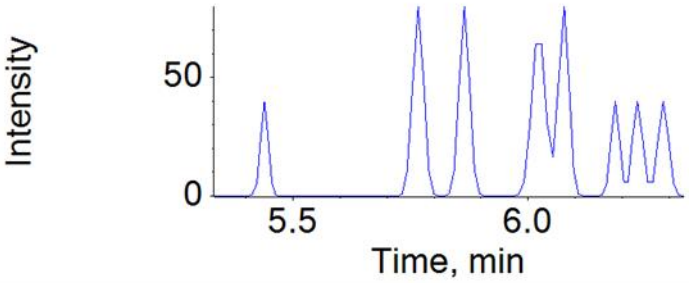
Component: NMeFOSAA_2
Secondary Mass: 570.0 / 483.0



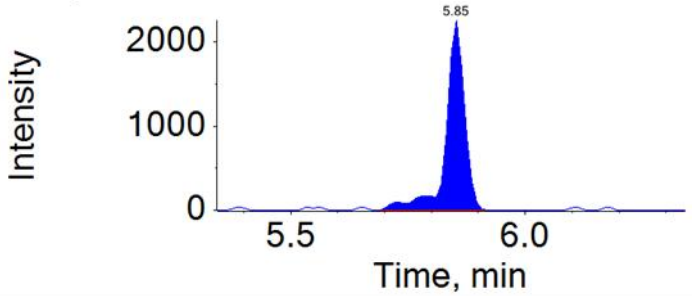
Component: PFUnDA
Primary Mass: 563.0 / 519.0



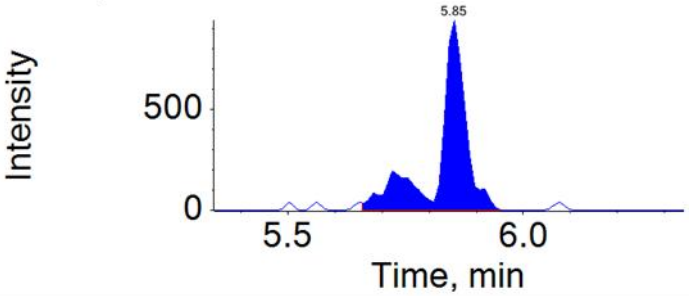
Component: PFUnDA_2
Secondary Mass: 563.0 / 169.0



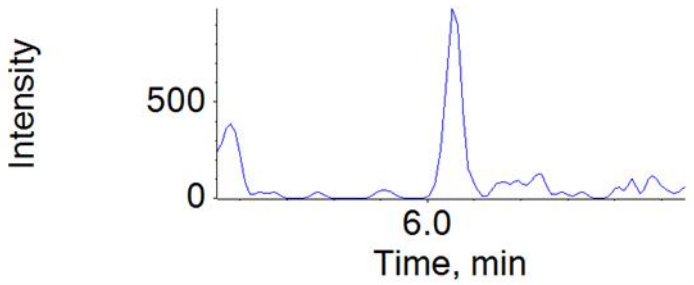
Component: NEtFOSAA
Primary Mass: 584.0 / 419.0



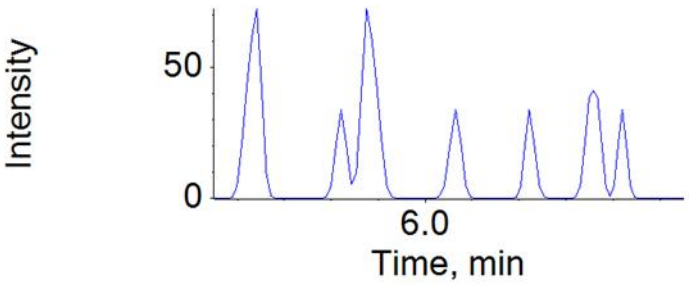
Component: NEtFOSAA_2
Secondary Mass: 584.0 / 526.0



Component: PFDoDA
Primary Mass: 613.0 / 569.0



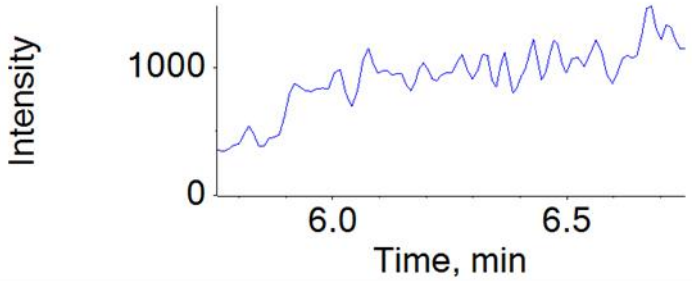
Component: PFDoDA_2
Secondary Mass: 613.0 / 169.0



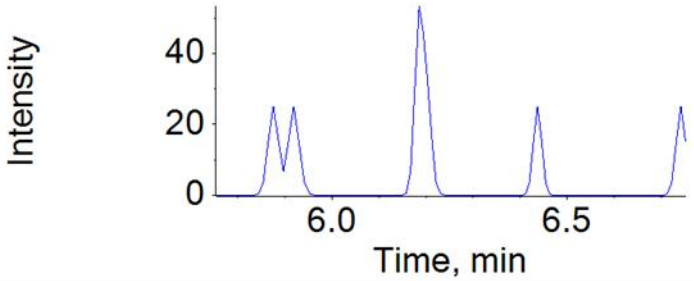
APPROVED
By JPT at 10:38 am, 11/19/18

REVIEWED
By HMK at 11:46 am, 11/19/18

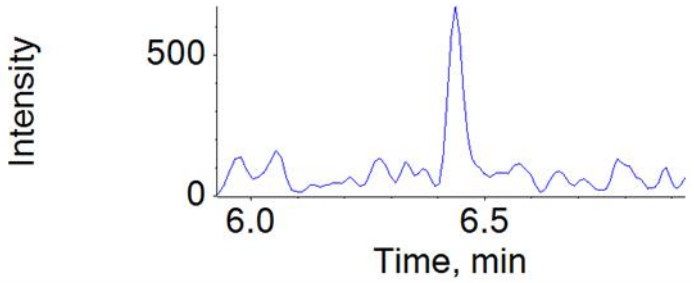
Component: PFTrDA
Primary Mass: 663.0 / 619.0



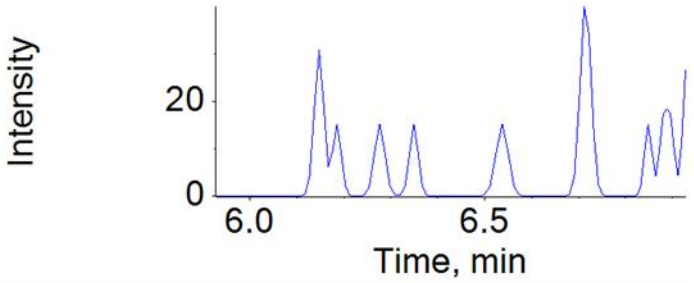
Component: PFTrDA_2
Secondary Mass: 663.0 / 169.0



Component: PFTeDA
Primary Mass: 713.0 / 669.0



Component: PFTeDA_2
Secondary Mass: 713.0 / 169.0



APPROVED
By JPT at 10:38 am, 11/19/18

REVIEWED
By HMK at 11:46 am, 11/19/18

ICAL Name: 18NOV12DCAL **Result Table:** 18319003 11/16/2018 11:16:11 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Sample Name:	9885057			**Data File:**		18NOV15D-10.wiff
Sample ID:	EPA 537 mod QSM 5.1 table B-15 18319003 OU1-WWTPW-S-02-03 Grab Soil			**Acquis Date:**		2018-11-15T13:24:18
Sample Type:	Unknown			**Instrument:**		LM27631
Vial Position:	28			**Acquis Method:**		18AUG13_3uL.dam
Injection Vol:	3.00			**Result Table:**		18319003
QMethod File:	18AUG20QM			**ICAL Name:**		18NOV12DCAL
Batch Number:	18319003			**Operator:**		JPT12262
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: 18NOV15D-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	732429.2	732179.1	0	50	
13C2-PFOA	5.0	488149.8	479663.2	2	50	
13C4-PFOS	4.8	272947.5	269685.3	1	50	
13C2-PFDA	5.0	303010.8	302309.9	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
E13C3-PFBS	357664.3	13C3-PFBA	732429.2	0.488	8.857	6.566	74	50-150	
E13C5-PFHxA	551431.2	13C2-PFOA	488149.8	1.130	9.524	7.773	82	50-150	
E13C3-PFHxS	270850.8	13C2-PFOA	488149.8	0.555	9.010	7.252	80	50-150	
E13C4-PFHpA	443461.3	13C2-PFOA	488149.8	0.908	9.524	7.796	82	50-150	
E13C8-PFOA	755318.0	13C2-PFOA	488149.8	1.547	9.524	8.120	85	50-150	
E13C8-PFOS	239673.0	13C4-PFOS	272947.5	0.878	9.105	7.411	81	50-150	
E13C9-PFNA	411499.3	13C4-PFOS	272947.5	1.508	9.524	8.007	84	50-150	
E13C6-PFDA	531754.3	13C2-PFDA	303010.8	1.755	9.524	7.800	82	50-150	
Ed3-NMeFOSAA	57244.9	13C2-PFDA	303010.8	0.189	9.524	6.495	68	50-150	
E13C7-PFUnDA	242220.7	13C2-PFDA	303010.8	0.799	9.524	8.840	93	50-150	
Ed5-NEtFOSAA	49983.7	13C2-PFDA	303010.8	0.165	9.524	6.647	70	50-150	
E13C2-PFDoDA	482761.3	13C2-PFDA	303010.8	1.593	9.524	7.879	83	50-150	
E13C2-PFTeDA	343375.4	13C2-PFDA	303010.8	1.133	9.524	7.578	80	50-150	

APPROVED
By JPT at 3:31 pm, 11/16/18

REVIEWED
By HMK at 9:04 am, 11/19/18

ICAL Name: 18NOV12DCAL **Result Table:** 18319003 11/16/2018 11:16:11 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

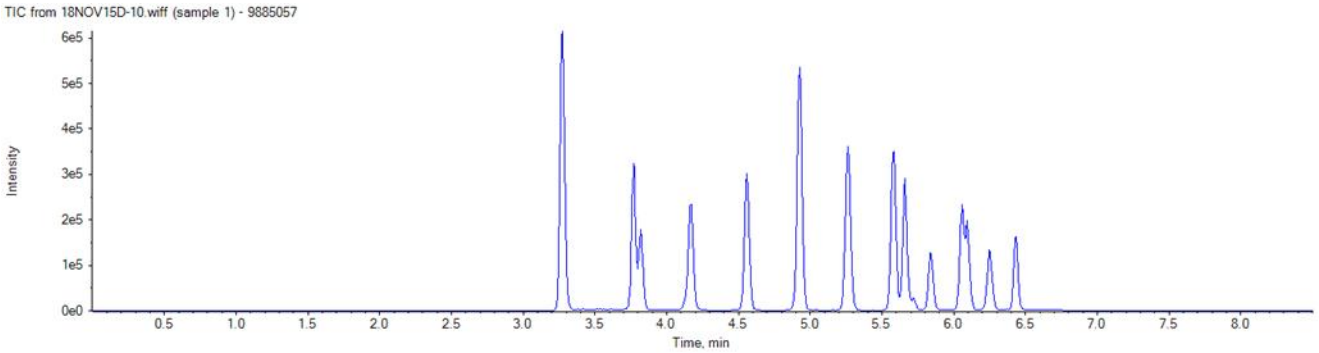
Analyte Quantitation Peak Table

Sample Name: 9885057 **Instrument Name:** LM27631 **File Name:** 18NOV15D-10.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	3.82	357664.3	N/A	
PFHxA	N/A	N/A	N/A		A	13C5-PFHxA	4.17	551431.2	N/A	
PFHpA	N/A	N/A	N/A		A	13C4-PFHpA	4.56	443461.3	N/A	
PFHxS	N/A	N/A	N/A		A	13C3-PFHxS	4.56	270850.8	N/A	
PFOA	N/A	N/A	N/A		A	13C8-PFOA	4.93	755318.0	N/A	
PFOS	N/A	N/A	N/A		A	13C8-PFOS	5.26	239673.0	N/A	
PFNA	N/A	N/A	N/A		A	13C9-PFNA	5.27	411499.3	N/A	
PFDA	N/A	N/A	N/A		A	13C6-PFDA	5.58	531754.3	N/A	
NMeFOSAA	N/A	N/A	N/A		A	d3-NMeFOSAA	5.72	57244.9	N/A	
PFUnDA	N/A	N/A	N/A		A	13C7-PFUnDA	5.84	242220.7	N/A	
NEtFOSAA	N/A	N/A	N/A		A	d5-NEtFOSAA	5.85	49983.7	N/A	
PFDoDA	N/A	N/A	N/A		A	13C2-PFDoDA	6.06	482761.3	N/A	
PFTrDA	N/A	N/A	N/A		A	13C2-PFDoDA	6.06	482761.3	N/A	
PFTeDA	N/A	N/A	N/A		A	13C2-PFTeDA	6.43	343375.4	N/A	

Total Ion Chromatogram

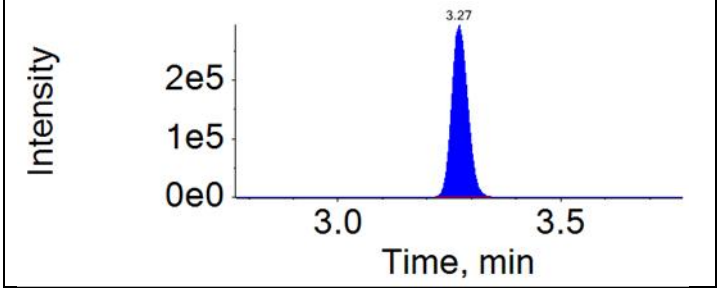


APPROVED
By JPT at 3:31 pm, 11/16/18

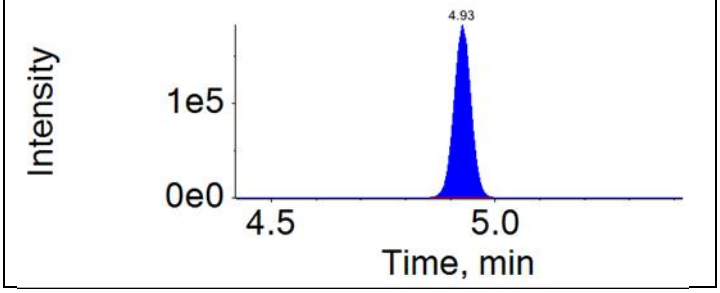
REVIEWED
By HMK at 9:04 am, 11/19/18

ICAL Name: 18NOV12DCAL **Result Table:** 18319003 11/16/2018 11:16:11 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

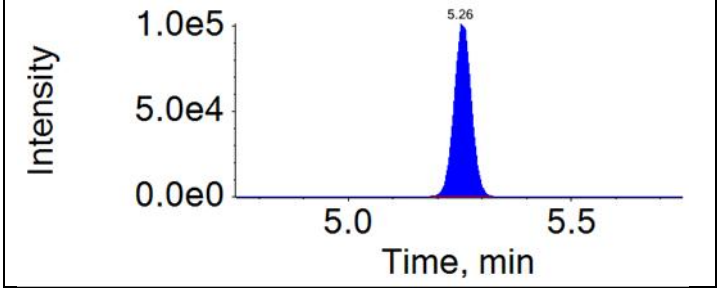
Injection Standard: 13C3-PFBA
216.0 / 172.0



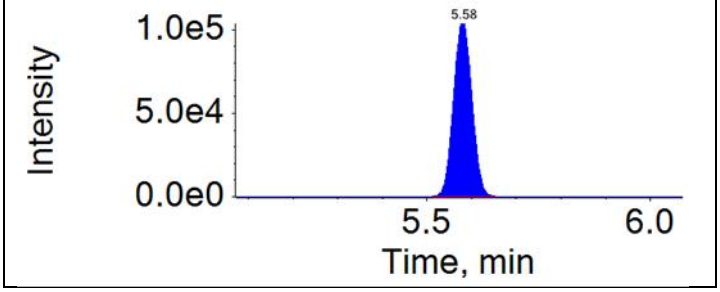
Injection Standard: 13C2-PFOA
415.0 / 370.0



Injection Standard: 13C4-PFOS
503.0 / 80.0



Injection Standard: 13C2-PFDA
515.0 / 470.0

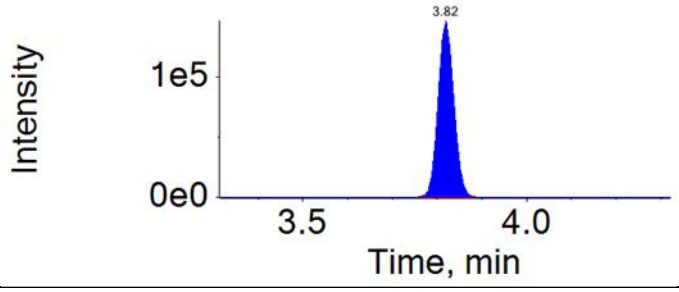


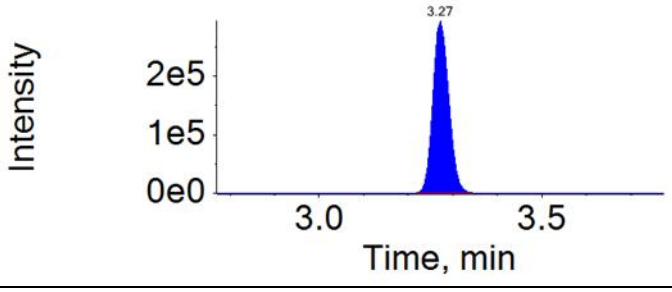
APPROVED
By JPT at 3:31 pm, 11/16/18

REVIEWED
By HMK at 9:04 am, 11/19/18

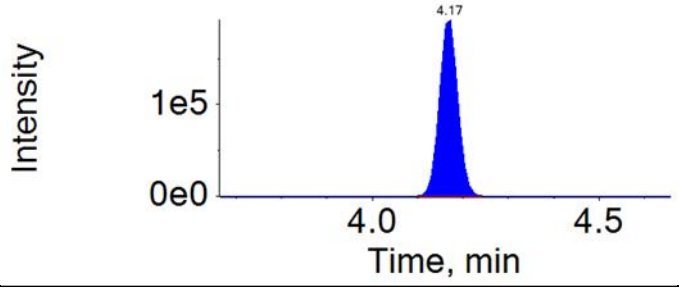
ICAL Name: 18NOV12DCAL **Result Table:** 18319003 11/16/2018 11:16:11 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

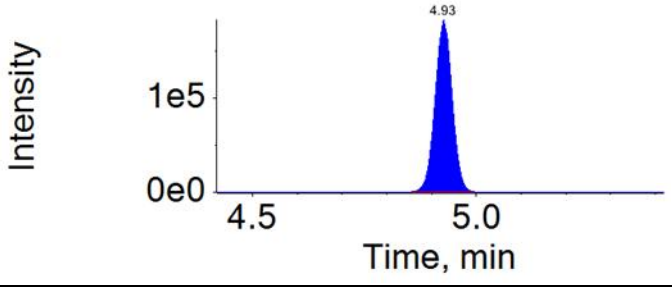
Extraction Standard: E13C3-PFBS	Injection Standard: 13C3-PFBA
302.0 / 80.0	216.0 / 172.0



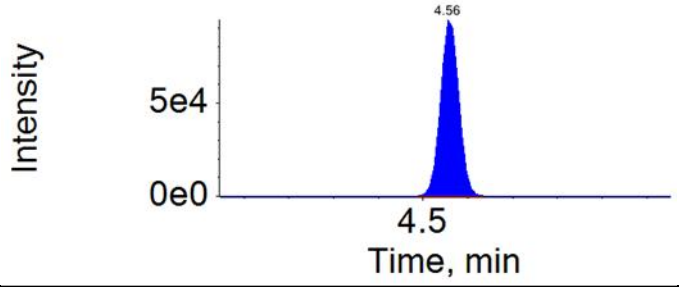


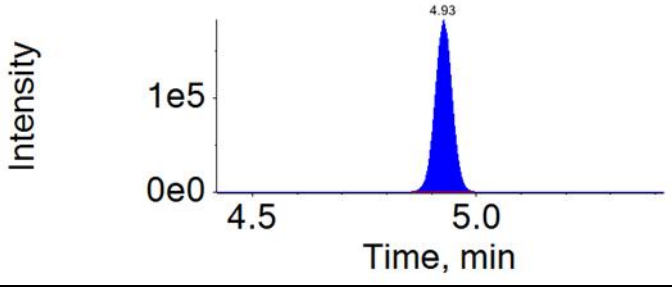
Extraction Standard: E13C5-PFHxA	Injection Standard: 13C2-PFOA
318.0 / 273.0	415.0 / 370.0



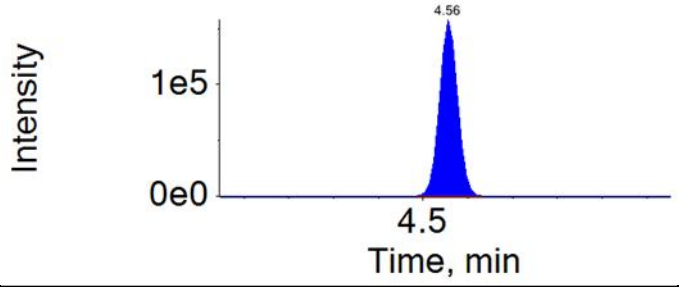


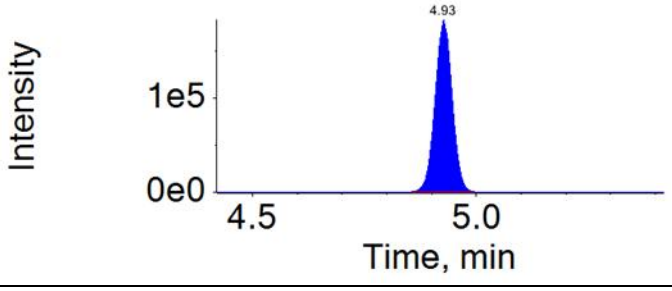
Extraction Standard: E13C3-PFHxS	Injection Standard: 13C2-PFOA
402.0 / 80.0	415.0 / 370.0





Extraction Standard: E13C4-PFHpA	Injection Standard: 13C2-PFOA
367.0 / 322.0	415.0 / 370.0



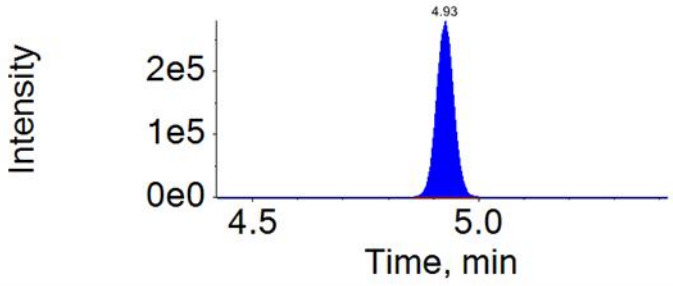


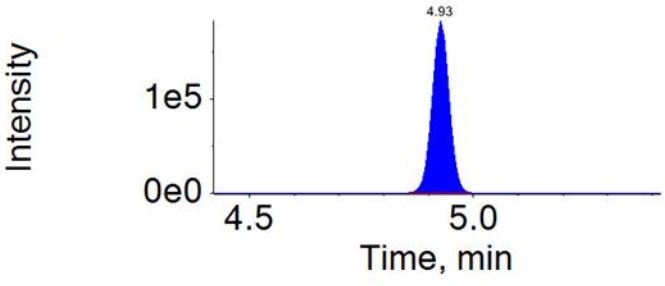
APPROVED
By JPT at 3:31 pm, 11/16/18

REVIEWED
By HMK at 9:04 am, 11/19/18

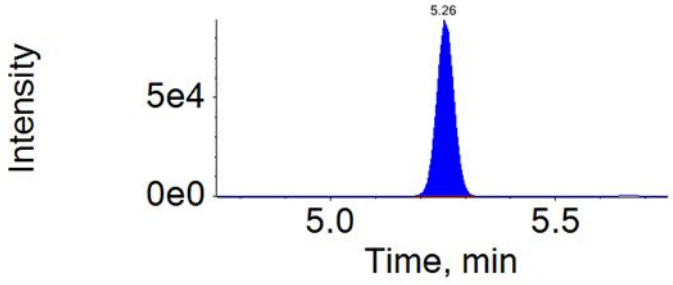
ICAL Name: 18NOV12DCAL **Result Table:** 18319003 11/16/2018 11:16:11 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

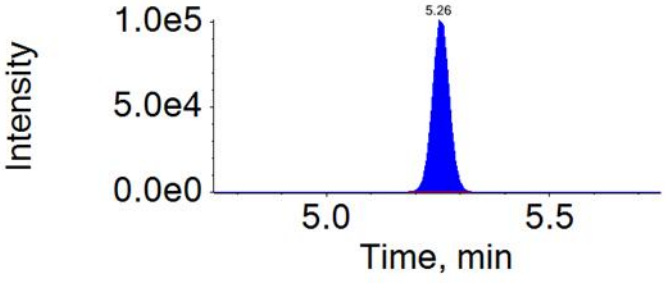
Extraction Standard: E13C8-PFOA	Injection Standard: 13C2-PFOA
421.0 / 376.0	415.0 / 370.0



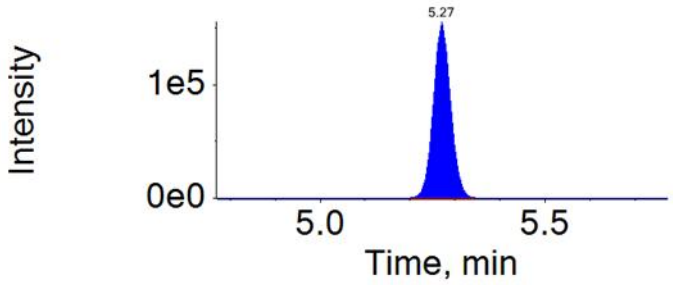


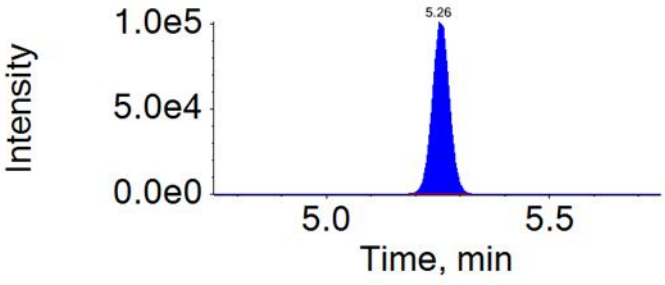
Extraction Standard: E13C8-PFOS	Injection Standard: 13C4-PFOS
507.0 / 80.0	503.0 / 80.0



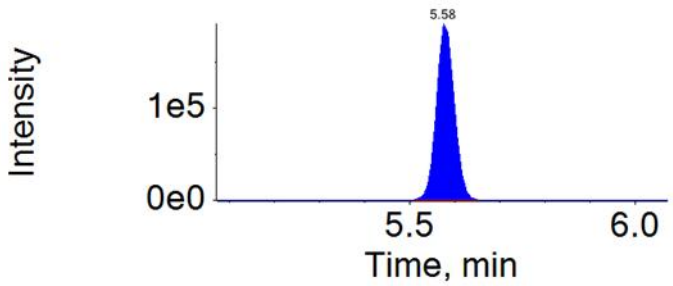


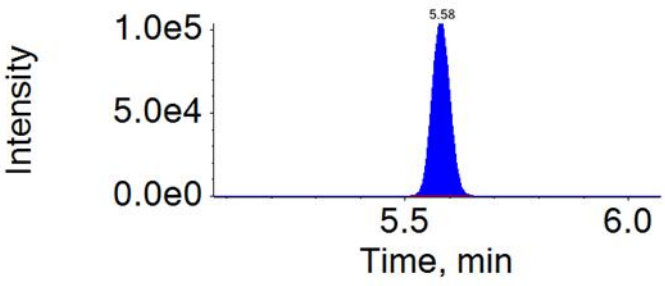
Extraction Standard: E13C9-PFNA	Injection Standard: 13C4-PFOS
472.0 / 427.0	503.0 / 80.0





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

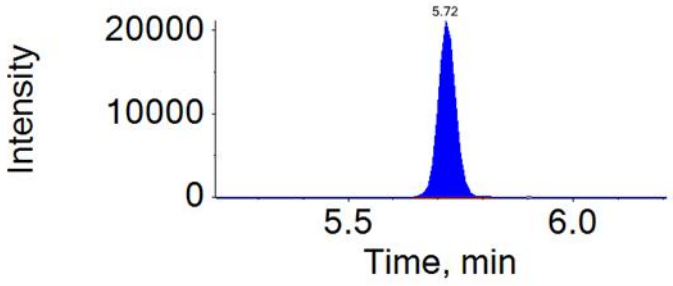
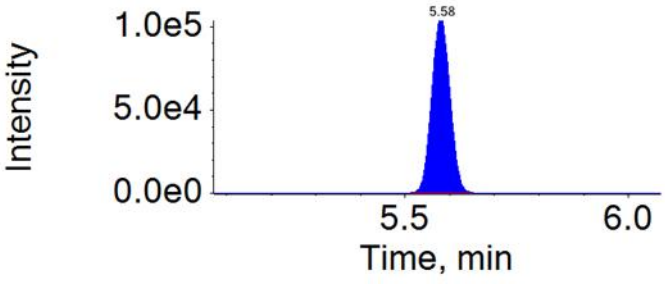


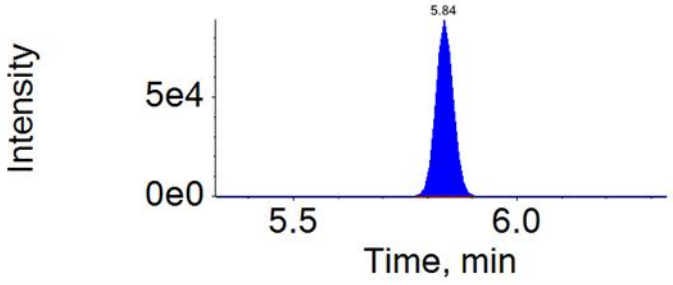
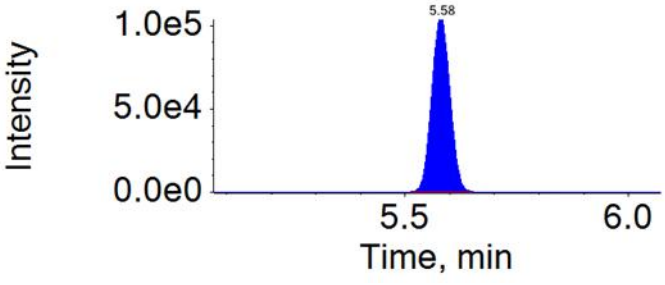


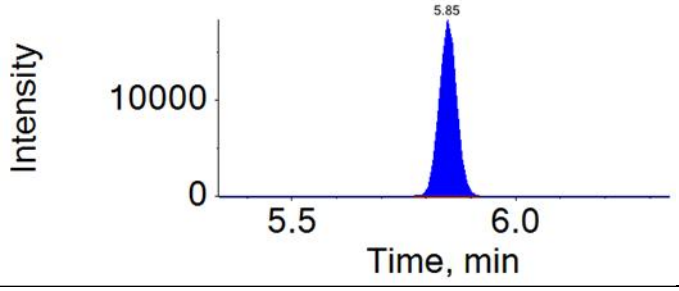
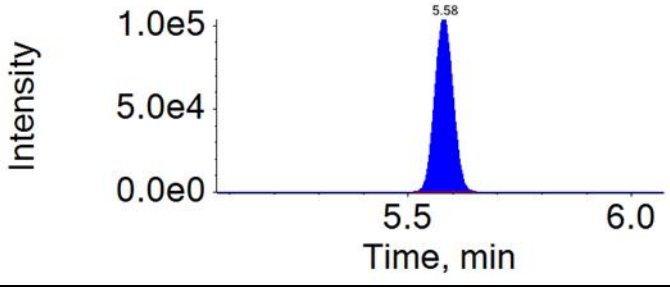
APPROVED
By JPT at 3:31 pm, 11/16/18

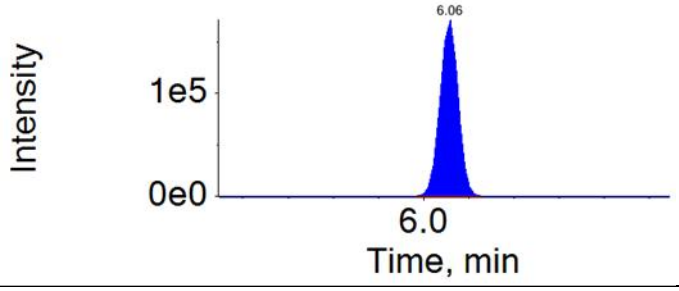
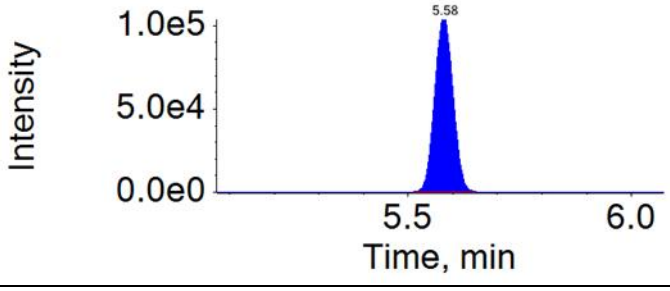
REVIEWED
By HMK at 9:04 am, 11/19/18

ICAL Name: 18NOV12DCAL **Result Table:** 18319003 11/16/2018 11:16:11 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

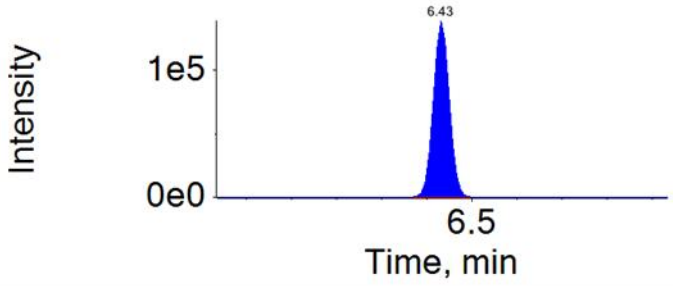
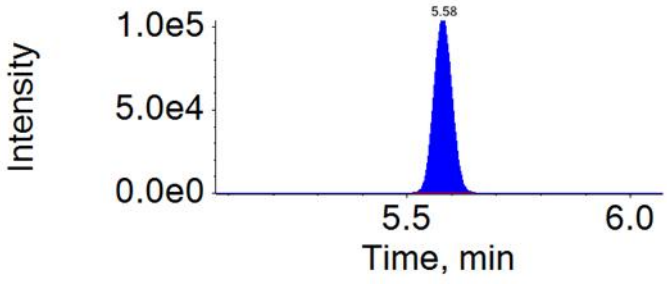
Extraction Standard: Ed3-NMeFOSAA	Injection Standard: 13C2-PFDA
573.0 / 419.0	515.0 / 470.0
	

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
	

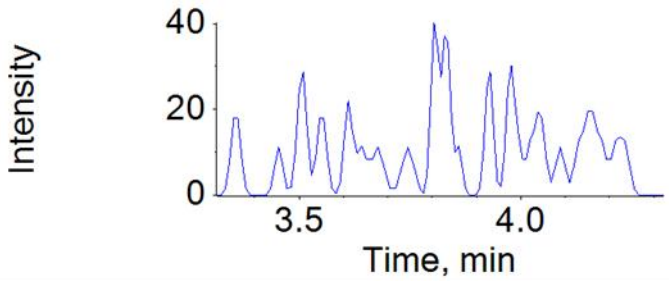
Extraction Standard: E13C2-PFDoDA	Injection Standard: 13C2-PFDA
615.0 / 570.0	515.0 / 470.0
	

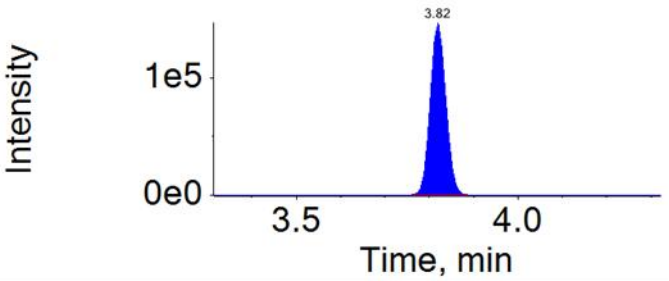
ICAL Name: 18NOV12DCAL **Result Table:** 18319003 11/16/2018 11:16:11 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

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

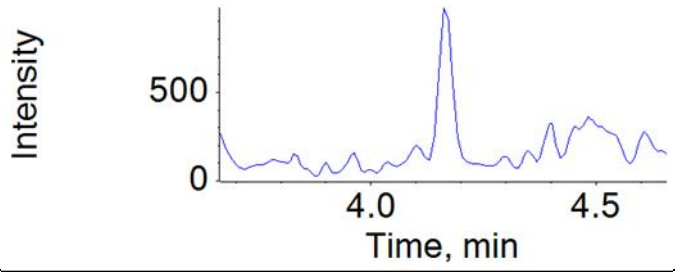
ICAL Name: 18NOV12DCAL **Result Table:** 18319003 11/16/2018 11:16:11 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

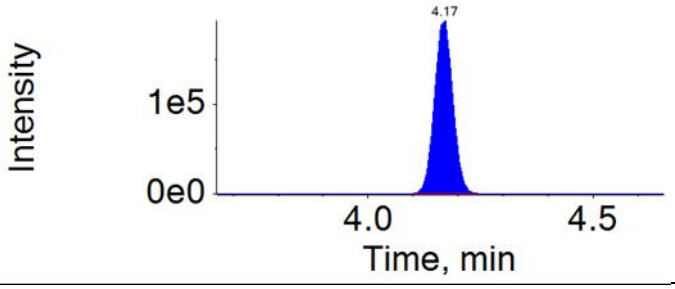
Analyte: PFBS	Extraction Standard: 13C3-PFBS
299.0 / 80.0	302.0 / 80.0



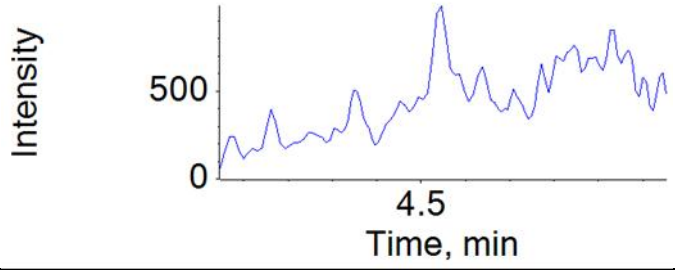


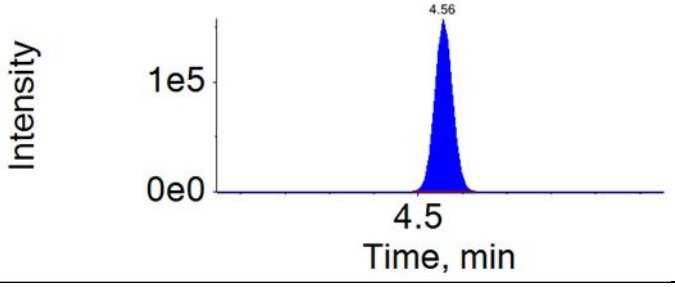
Analyte: PFHxA	Extraction Standard: 13C5-PFHxA
313.0 / 269.0	318.0 / 273.0



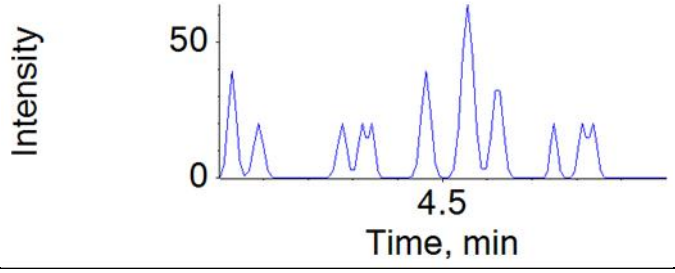


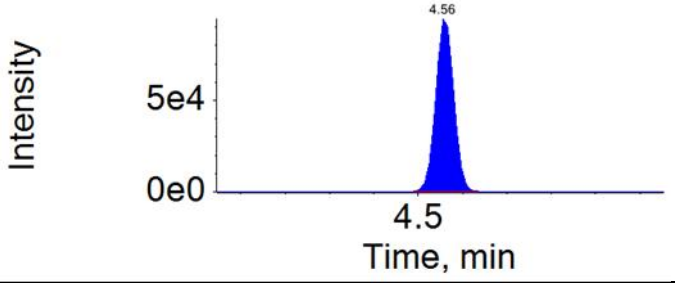
Analyte: PFHpA	Extraction Standard: 13C4-PFHpA
363.0 / 319.0	367.0 / 322.0





Analyte: PFHxS	Extraction Standard: 13C3-PFHxS
399.0 / 80.0	402.0 / 80.0



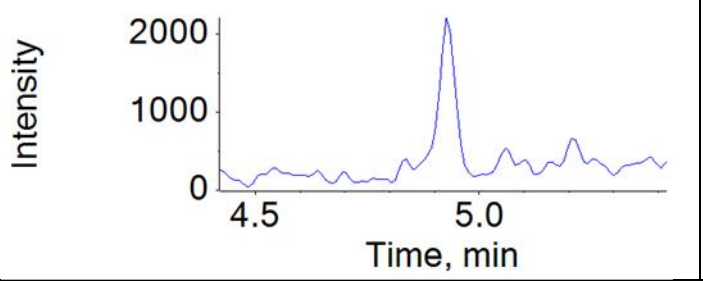


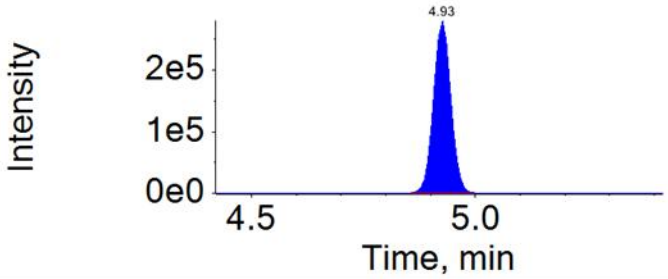
APPROVED
By JPT at 3:31 pm, 11/16/18

REVIEWED
By HMK at 9:04 am, 11/19/18

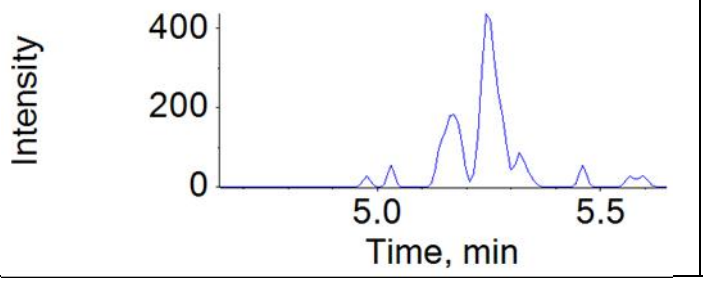
ICAL Name: 18NOV12DCAL **Result Table:** 18319003 11/16/2018 11:16:11 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

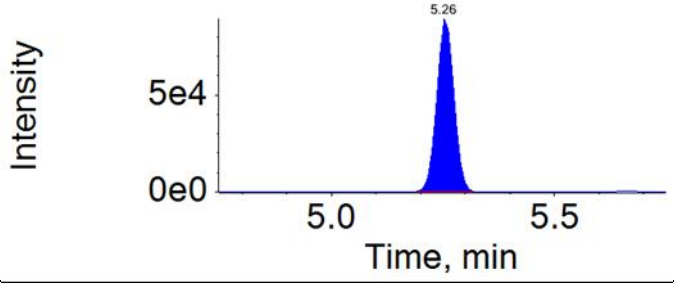
Analyte: PFOA	Extraction Standard: 13C8-PFOA
413.0 / 369.0	421.0 / 376.0



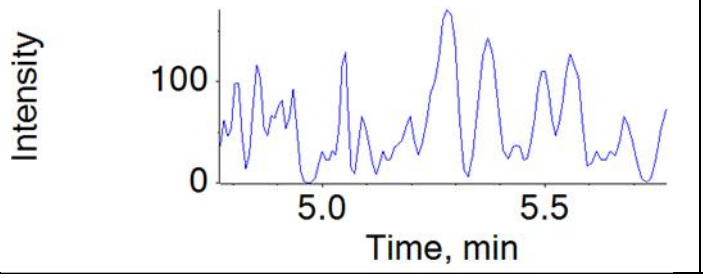


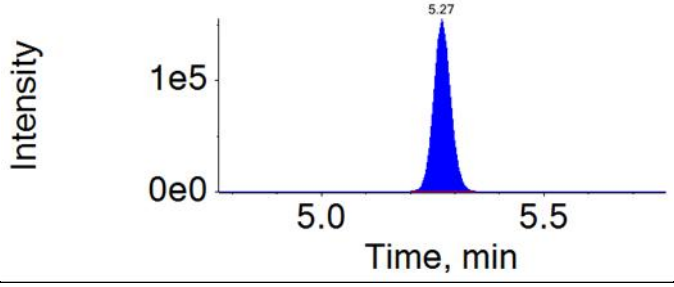
Analyte: PFOS	Extraction Standard: 13C8-PFOS
499.0 / 80.0	507.0 / 80.0



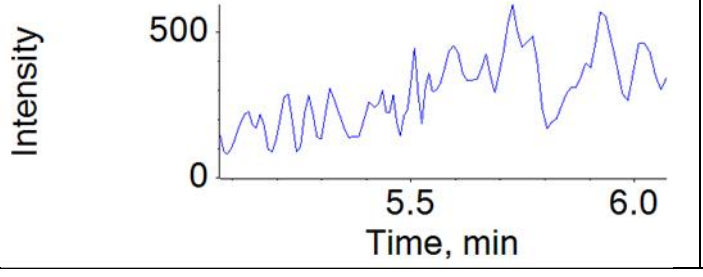


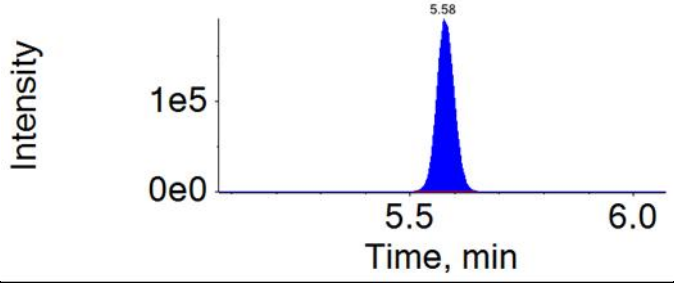
Analyte: PFNA	Extraction Standard: 13C9-PFNA
463.0 / 419.0	472.0 / 427.0





Analyte: PFDA	Extraction Standard: 13C6-PFDA
513.0 / 469.0	519.0 / 474.0



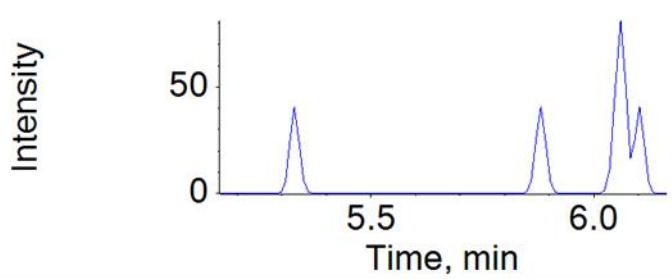


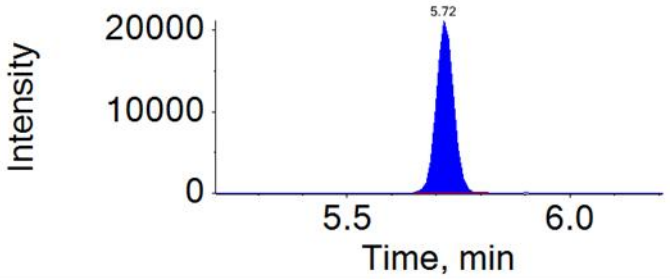
APPROVED
By JPT at 3:31 pm, 11/16/18

REVIEWED
By HMK at 9:04 am, 11/19/18

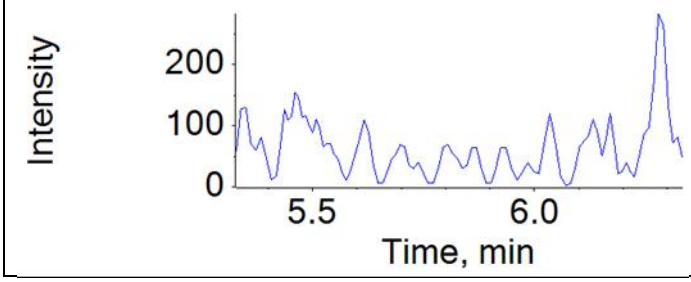
ICAL Name: 18NOV12DCAL **Result Table:** 18319003 11/16/2018 11:16:11 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

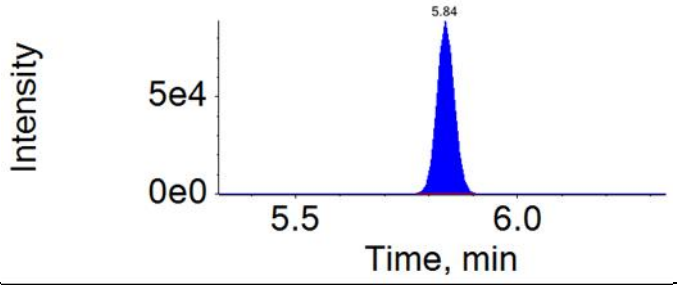
Analyte: NMeFOSAA	Extraction Standard: d3-NMeFOSAA
570.0 / 419.0	573.0 / 419.0



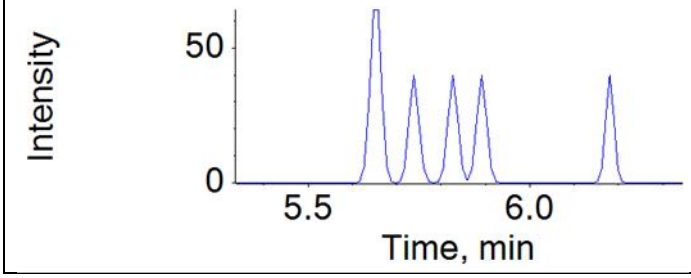


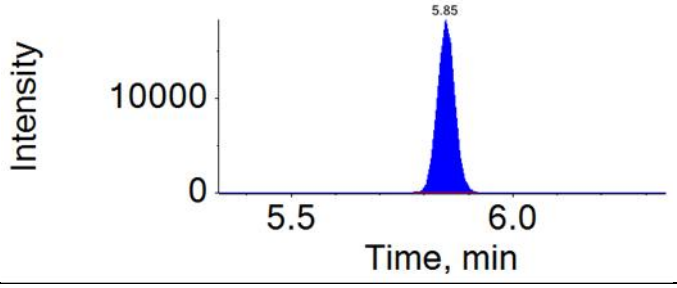
Analyte: PFUnDA	Extraction Standard: 13C7-PFUnDA
563.0 / 519.0	570.0 / 525.0



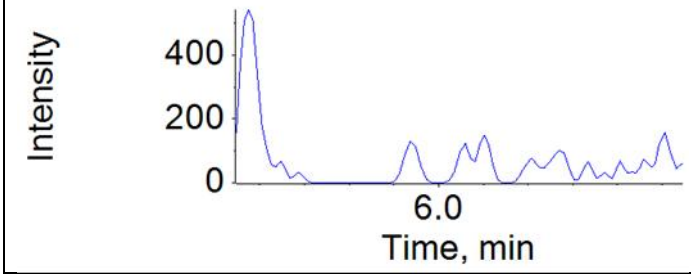


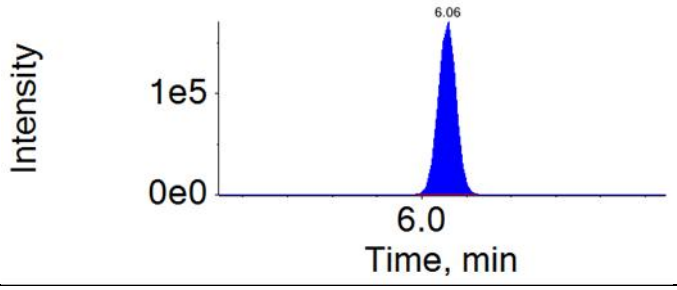
Analyte: NEtFOSAA	Extraction Standard: d5-NEtFOSAA
584.0 / 419.0	589.0 / 419.0





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



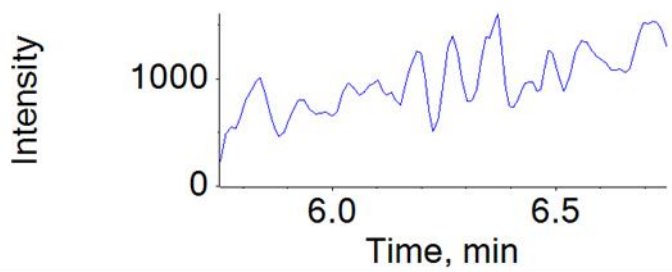


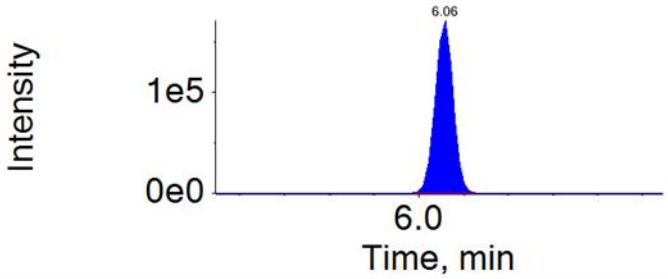
APPROVED
By JPT at 3:31 pm, 11/16/18

REVIEWED
By HMK at 9:04 am, 11/19/18

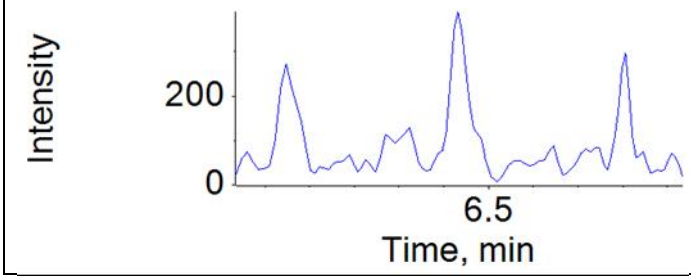
ICAL Name: 18NOV12DCAL **Result Table:** 18319003 11/16/2018 11:16:11 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

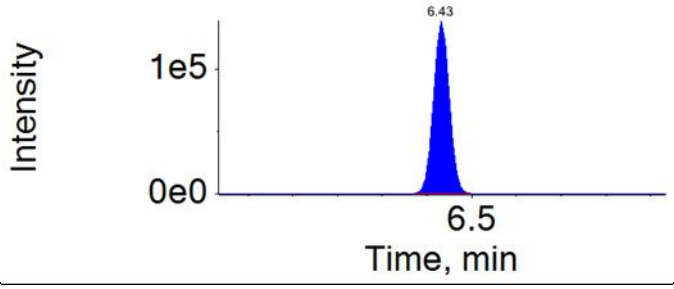
Analyte: PFTrDA	Extraction Standard: 13C2-PFDoDA
663.0 / 619.0	615.0 / 570.0





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





APPROVED
By JPT at 3:31 pm, 11/16/18

REVIEWED
By HMK at 9:04 am, 11/19/18

Ion Ratio Report

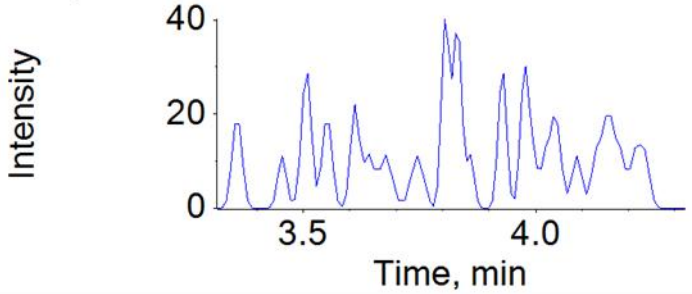
Sample Name: 9885057 **Instrument Name:** LM27631 **File Name:** 18NOV15D-10.wiff

Component Name	RT	RRT	Analyte Area Response	Int Typ	Expected Ion Ratio	Ion Ratio	Ion Ratio % Diff	Ion Ratio Limit	Ion Ratio OOS
PFBS	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	

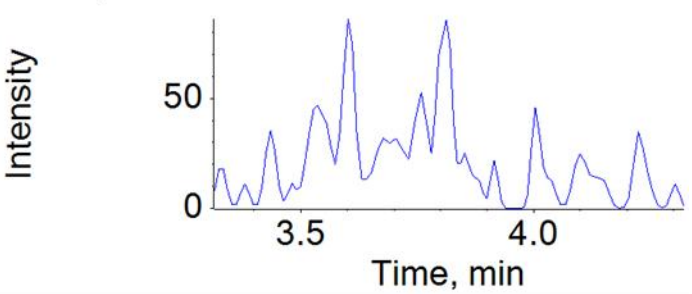
APPROVED
By JPT at 3:31 pm, 11/16/18

REVIEWED
By HMK at 9:04 am, 11/19/18

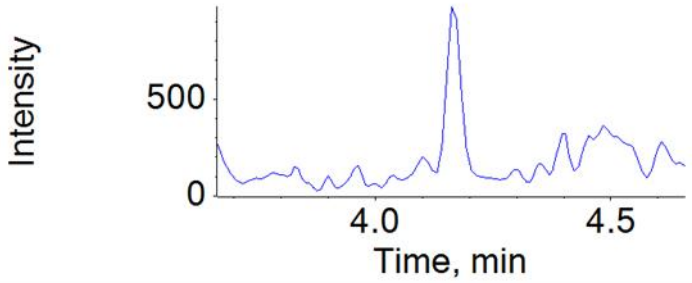
Component: PFBS
Primary Mass: 299.0 / 80.0



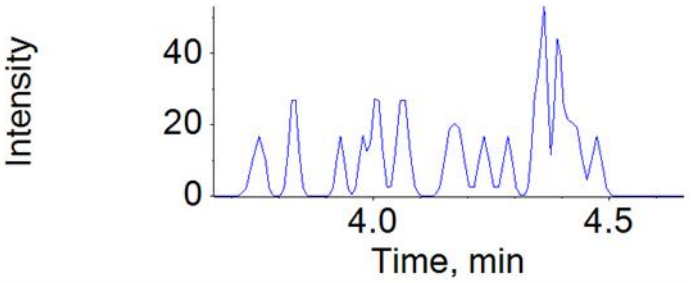
Component: PFBS_2
Secondary Mass: 299.0 / 99.0



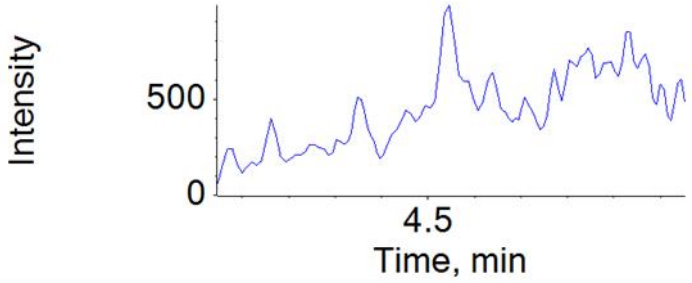
Component: PFHxA
Primary Mass: 313.0 / 269.0



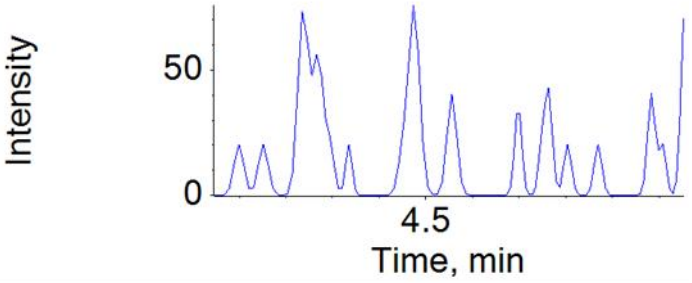
Component: PFHxA_2
Secondary Mass: 313.0 / 119.0



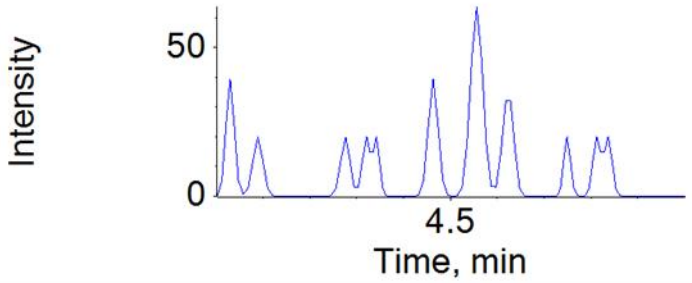
Component: PFHpA
Primary Mass: 363.0 / 319.0



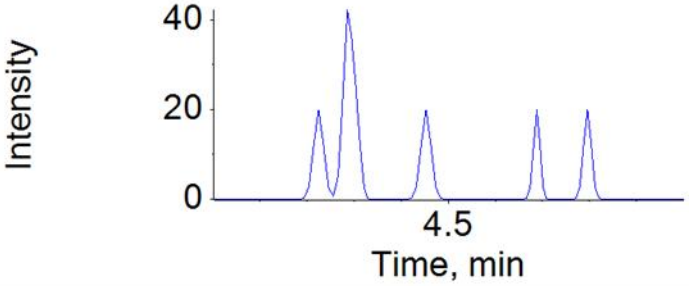
Component: PFHpA_2
Secondary Mass: 363.0 / 169.0



Component: PFHxS
Primary Mass: 399.0 / 80.0



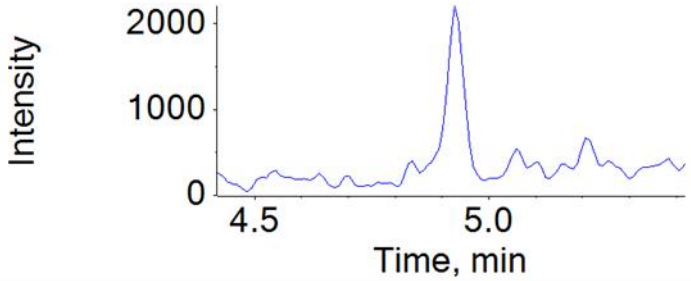
Component: PFHxS_2
Secondary Mass: 399.0 / 99.0



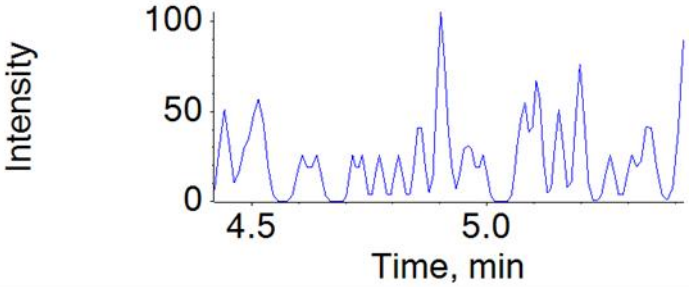
APPROVED
By JPT at 3:31 pm, 11/16/18

REVIEWED
By HMK at 9:04 am, 11/19/18

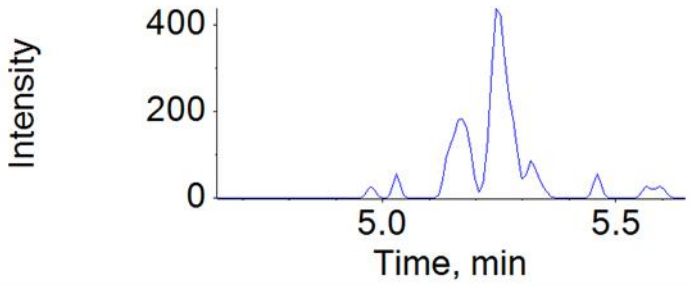
Component: PFOA
Primary Mass: 413.0 / 369.0



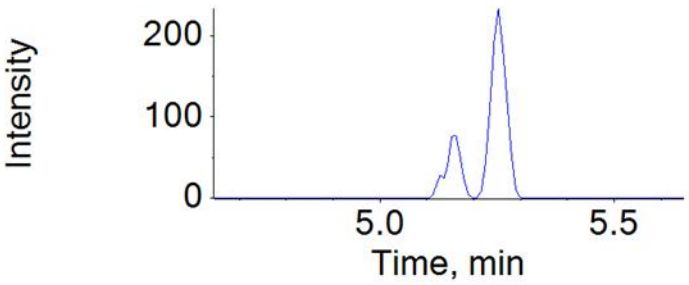
Component: PFOA_2
Secondary Mass: 413.0 / 169.0



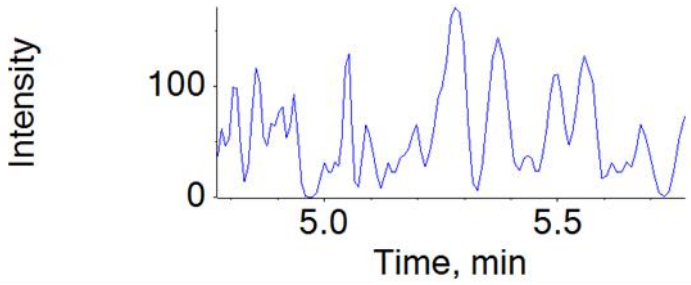
Component: PFOS
Primary Mass: 499.0 / 80.0



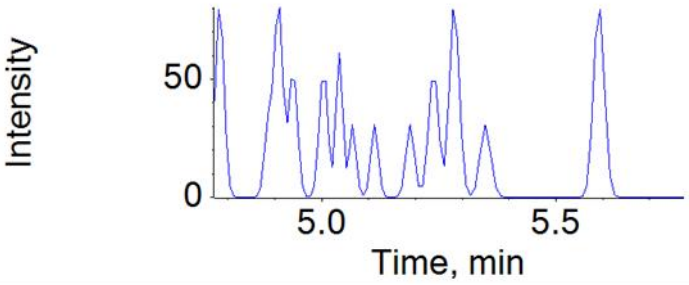
Component: PFOS_2
Secondary Mass: 499.0 / 99.0



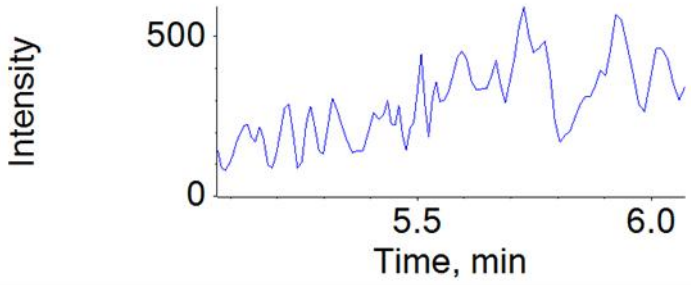
Component: PFNA
Primary Mass: 463.0 / 419.0



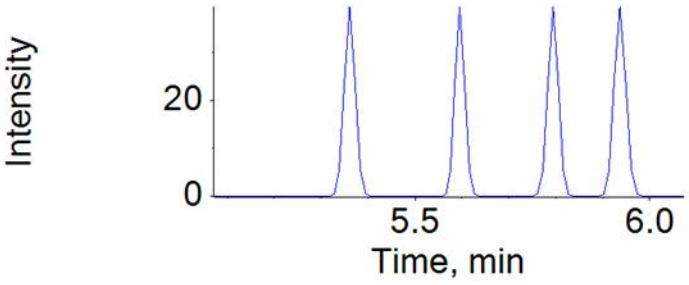
Component: PFNA_2
Secondary Mass: 463.0 / 169.0



Component: PFDA
Primary Mass: 513.0 / 469.0



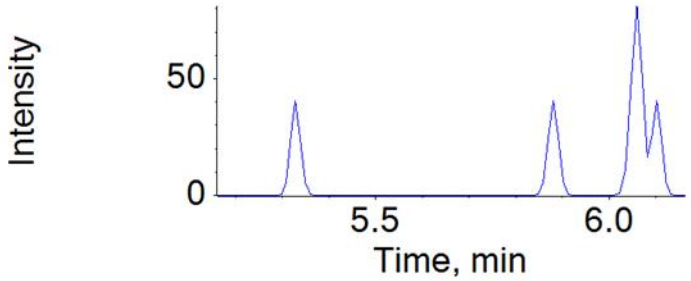
Component: PFDA_2
Secondary Mass: 513.0 / 169.0



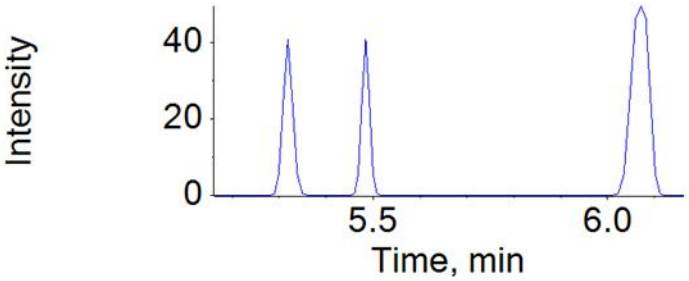
APPROVED
By JPT at 3:31 pm, 11/16/18

REVIEWED
By HMK at 9:04 am, 11/19/18

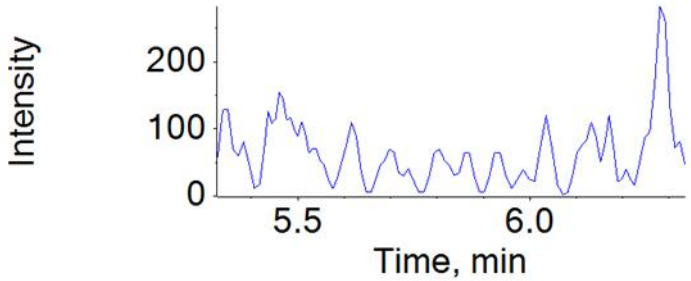
Component: NMeFOSAA
Primary Mass: 570.0 / 419.0



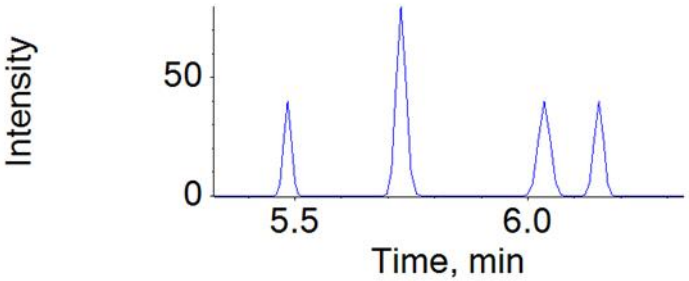
Component: NMeFOSAA_2
Secondary Mass: 570.0 / 483.0



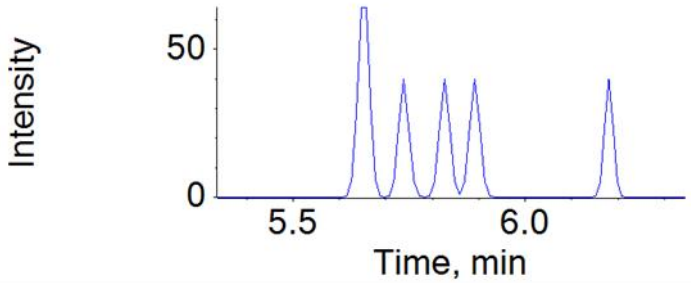
Component: PFUnDA
Primary Mass: 563.0 / 519.0



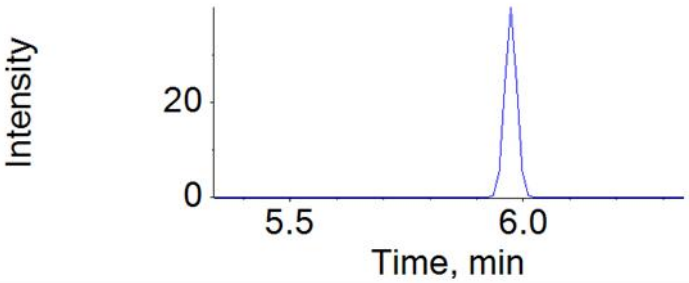
Component: PFUnDA_2
Secondary Mass: 563.0 / 169.0



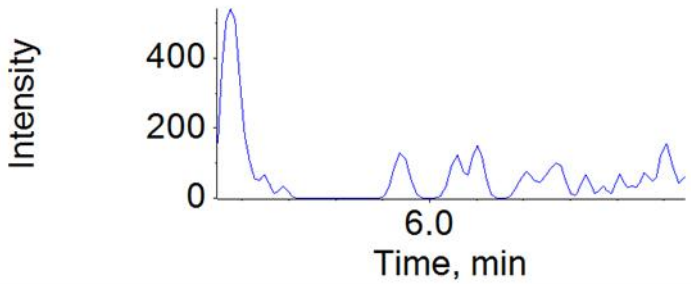
Component: NEtFOSAA
Primary Mass: 584.0 / 419.0



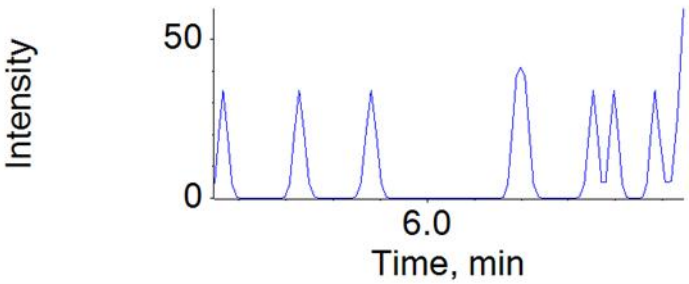
Component: NEtFOSAA_2
Secondary Mass: 584.0 / 526.0



Component: PFDoDA
Primary Mass: 613.0 / 569.0



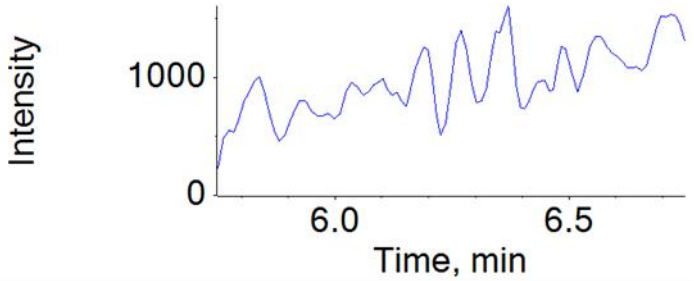
Component: PFDoDA_2
Secondary Mass: 613.0 / 169.0



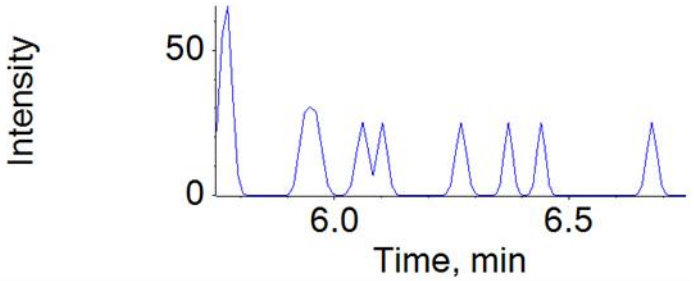
APPROVED
By JPT at 3:31 pm, 11/16/18

REVIEWED
By HMK at 9:04 am, 11/19/18

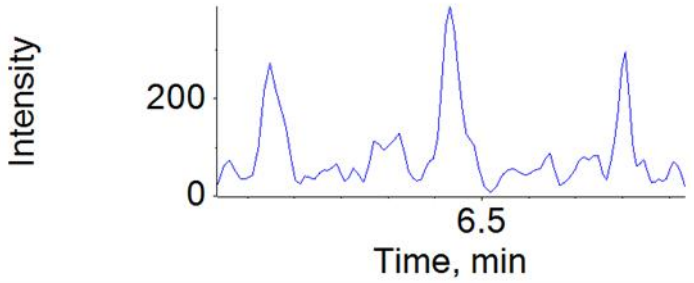
Component: PFTrDA
Primary Mass: 663.0 / 619.0



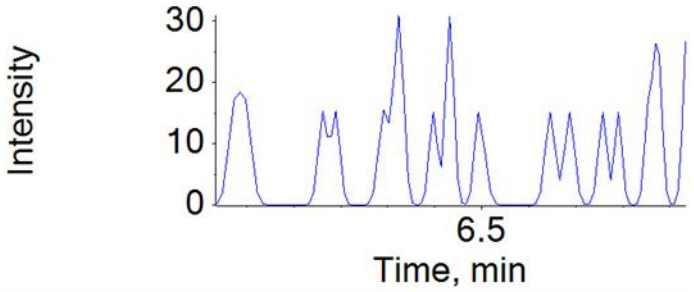
Component: PFTrDA_2
Secondary Mass: 663.0 / 169.0



Component: PFTeDA
Primary Mass: 713.0 / 669.0



Component: PFTeDA_2
Secondary Mass: 713.0 / 169.0



APPROVED
By JPT at 3:31 pm, 11/16/18

REVIEWED
By HMK at 9:04 am, 11/19/18

ICAL Name: 18NOV12DCAL **Result Table:** 18319003 11/16/2018 11:16:11 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Sample Name:	9885058			**Data File:**		18NOV15D-11.wiff
Sample ID:	EPA 537 mod QSM 5.1 table B-15 18319003 OU1-WWTPW-S-02-05 Grab Soil			**Acquis Date:**		2018-11-15T13:33:20
Sample Type:	Unknown			**Instrument:**		LM27631
Vial Position:	29			**Acquis Method:**		18AUG13_3uL.dam
Injection Vol:	3.00			**Result Table:**		18319003
QMethod File:	18AUG20QM			**ICAL Name:**		18NOV12DCAL
Batch Number:	18319003			**Operator:**		JPT12262
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: 18NOV15D-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	742489.7	732179.1	1	50	
13C2-PFOA	5.0	508673.5	479663.2	6	50	
13C4-PFOS	4.8	257975.2	269685.3	-4	50	
13C2-PFDA	5.0	314970.6	302309.9	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
E13C3-PFBS	348694.5	13C3-PFBA	742489.7	0.470	8.692	6.197	71	50-150	
E13C5-PFHxA	566277.3	13C2-PFOA	508673.5	1.113	9.346	7.517	80	50-150	
E13C3-PFHxS	275817.0	13C2-PFOA	508673.5	0.542	8.841	6.955	79	50-150	
E13C4-PFHpA	465131.4	13C2-PFOA	508673.5	0.914	9.346	7.700	82	50-150	
E13C8-PFOA	755628.3	13C2-PFOA	508673.5	1.485	9.346	7.650	82	50-150	
E13C8-PFOS	236291.1	13C4-PFOS	257975.2	0.916	8.935	7.586	85	50-150	
E13C9-PFNA	403021.0	13C4-PFOS	257975.2	1.562	9.346	8.142	87	50-150	
E13C6-PFDA	557750.4	13C2-PFDA	314970.6	1.771	9.346	7.724	83	50-150	
Ed3-NMeFOSAA	66859.1	13C2-PFDA	314970.6	0.212	9.346	7.162	77	50-150	
E13C7-PFUnDA	232867.9	13C2-PFDA	314970.6	0.739	9.346	8.023	86	50-150	
Ed5-NEtFOSAA	48750.1	13C2-PFDA	314970.6	0.155	9.346	6.121	65	50-150	
E13C2-PFDoDA	485591.1	13C2-PFDA	314970.6	1.542	9.346	7.482	80	50-150	
E13C2-PFTeDA	322636.8	13C2-PFDA	314970.6	1.024	9.346	6.722	72	50-150	

APPROVED
By JPT at 3:31 pm, 11/16/18

REVIEWED
By HMK at 9:04 am, 11/19/18

ICAL Name: 18NOV12DCAL **Result Table:** 18319003 11/16/2018 11:16:11 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

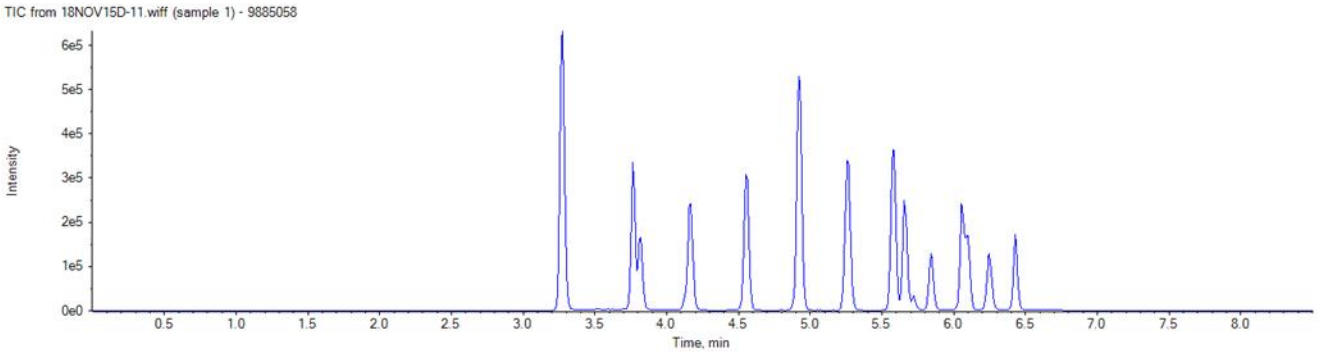
Analyte Quantitation Peak Table

Sample Name: 9885058 **Instrument Name:** LM27631 **File Name:** 18NOV15D-11.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	3.82	348694.5	N/A	
PFHxA	N/A	N/A	N/A		A	13C5-PFHxA	4.16	566277.3	N/A	
PFHpA	N/A	N/A	N/A		A	13C4-PFHpA	4.55	465131.4	N/A	
PFHxS	N/A	N/A	N/A		A	13C3-PFHxS	4.56	275817.0	N/A	
PFOA	N/A	N/A	N/A		A	13C8-PFOA	4.92	755628.3	N/A	
PFOS	N/A	N/A	N/A		A	13C8-PFOS	5.25	236291.1	N/A	
PFNA	N/A	N/A	N/A		A	13C9-PFNA	5.27	403021.0	N/A	
PFDA	N/A	N/A	N/A		A	13C6-PFDA	5.58	557750.4	N/A	
NMeFOSAA	N/A	N/A	N/A		A	d3-NMeFOSAA	5.72	66859.1	N/A	
PFUnDA	N/A	N/A	N/A		A	13C7-PFUnDA	5.84	232867.9	N/A	
NEtFOSAA	N/A	N/A	N/A		A	d5-NEtFOSAA	5.85	48750.1	N/A	
PFDoDA	N/A	N/A	N/A		A	13C2-PFDoDA	6.06	485591.1	N/A	
PFTrDA	N/A	N/A	N/A		A	13C2-PFDoDA	6.06	485591.1	N/A	
PFTeDA	N/A	N/A	N/A		A	13C2-PFTeDA	6.43	322636.8	N/A	

Total Ion Chromatogram

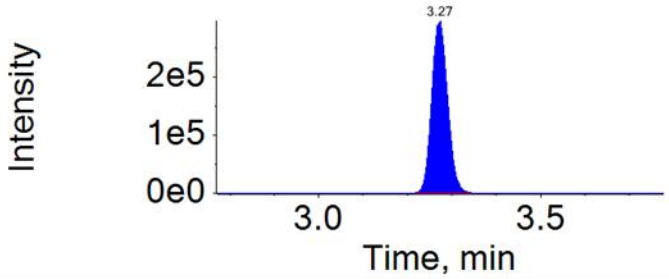


APPROVED
By JPT at 3:31 pm, 11/16/18

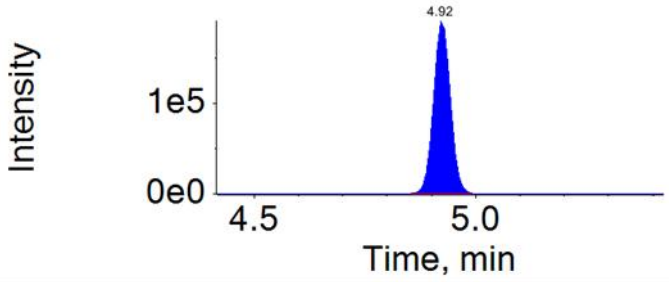
REVIEWED
By HMK at 9:04 am, 11/19/18

ICAL Name: 18NOV12DCAL **Result Table:** 18319003 11/16/2018 11:16:11 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

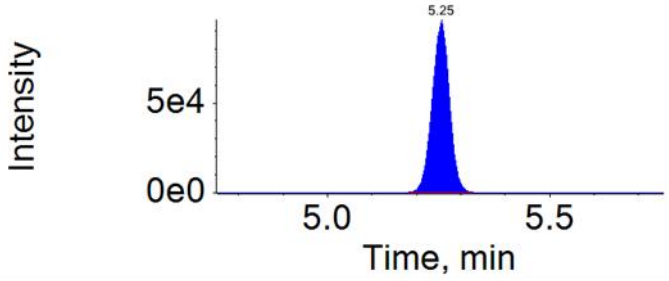
Injection Standard: 13C3-PFBA
216.0 / 172.0



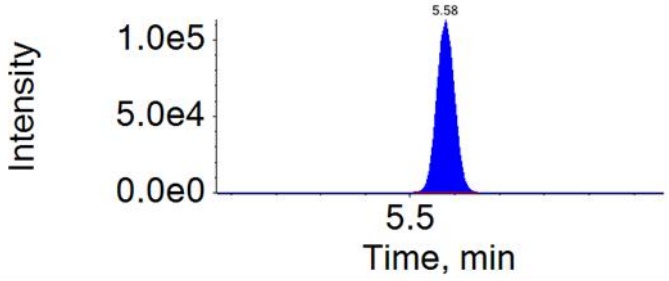
Injection Standard: 13C2-PFOA
415.0 / 370.0



Injection Standard: 13C4-PFOS
503.0 / 80.0



Injection Standard: 13C2-PFDA
515.0 / 470.0

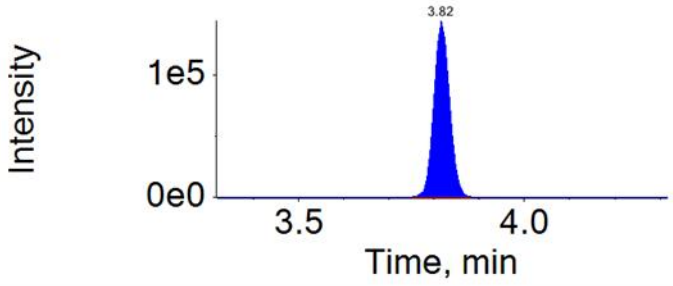


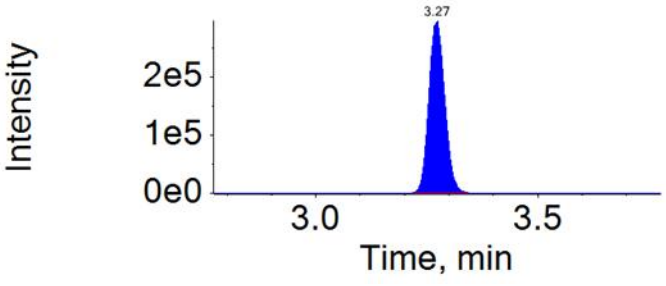
APPROVED
By JPT at 3:31 pm, 11/16/18

REVIEWED
By HMK at 9:04 am, 11/19/18

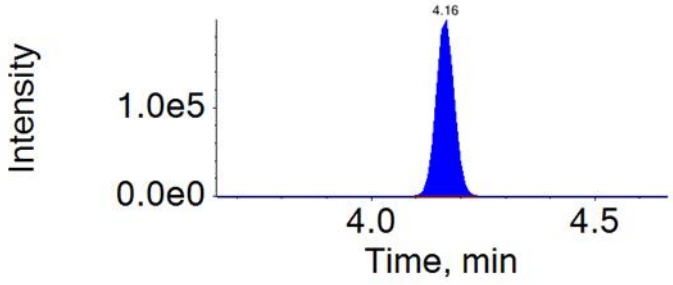
ICAL Name: 18NOV12DCAL **Result Table:** 18319003 11/16/2018 11:16:11 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

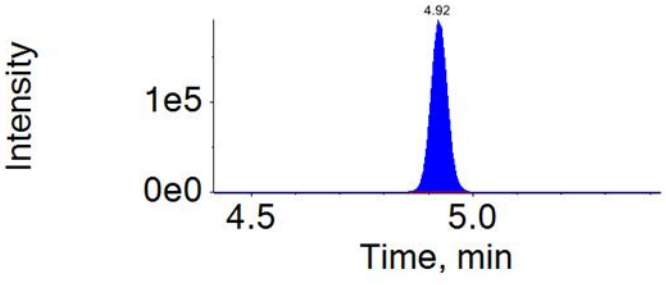
Extraction Standard: E13C3-PFBS	Injection Standard: 13C3-PFBA
302.0 / 80.0	216.0 / 172.0



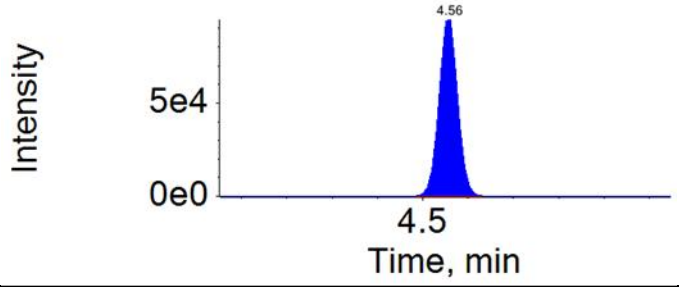


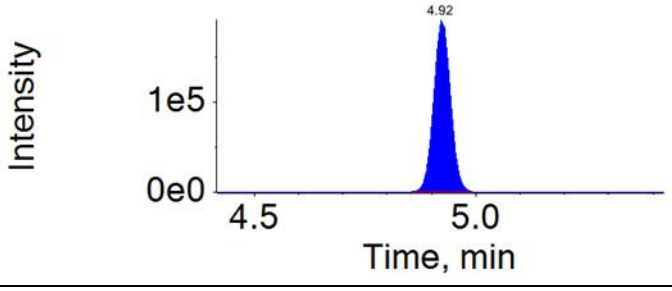
Extraction Standard: E13C5-PFHxA	Injection Standard: 13C2-PFOA
318.0 / 273.0	415.0 / 370.0



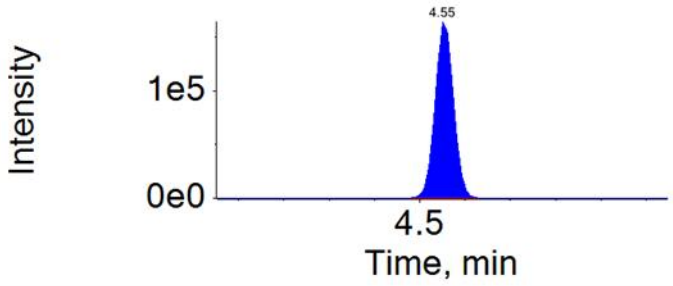


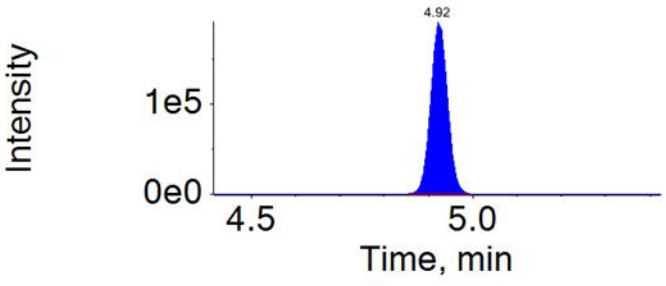
Extraction Standard: E13C3-PFHxS	Injection Standard: 13C2-PFOA
402.0 / 80.0	415.0 / 370.0





Extraction Standard: E13C4-PFHpA	Injection Standard: 13C2-PFOA
367.0 / 322.0	415.0 / 370.0



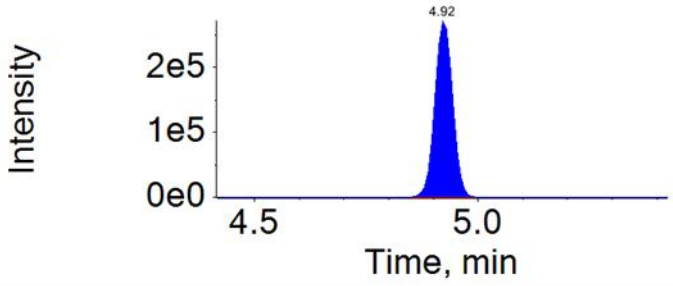


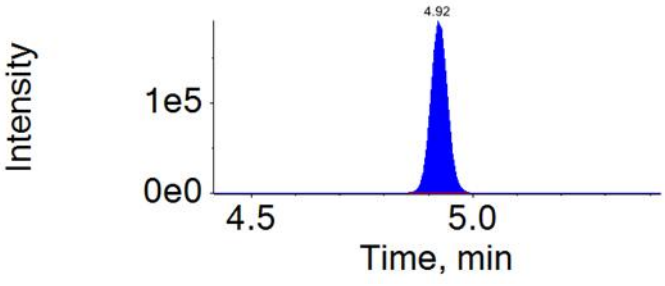
APPROVED
By JPT at 3:31 pm, 11/16/18

REVIEWED
By HMK at 9:04 am, 11/19/18

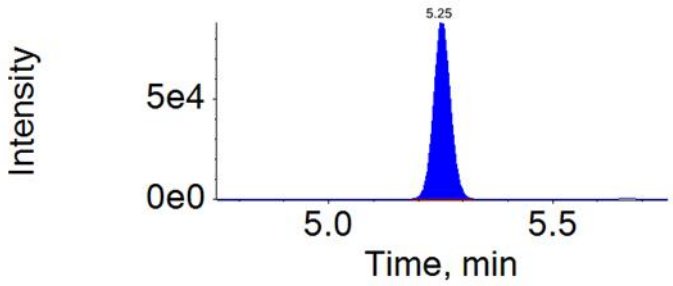
ICAL Name: 18NOV12DCAL **Result Table:** 18319003 11/16/2018 11:16:11 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

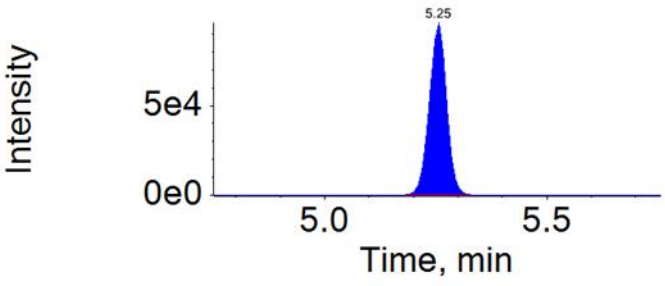
Extraction Standard: E13C8-PFOA	Injection Standard: 13C2-PFOA
421.0 / 376.0	415.0 / 370.0



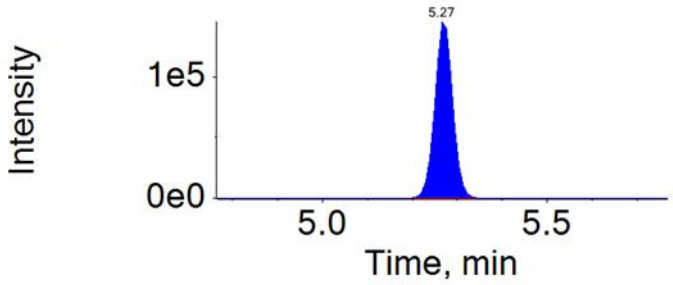


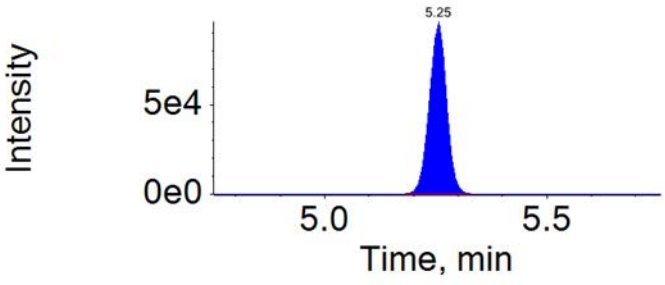
Extraction Standard: E13C8-PFOS	Injection Standard: 13C4-PFOS
507.0 / 80.0	503.0 / 80.0



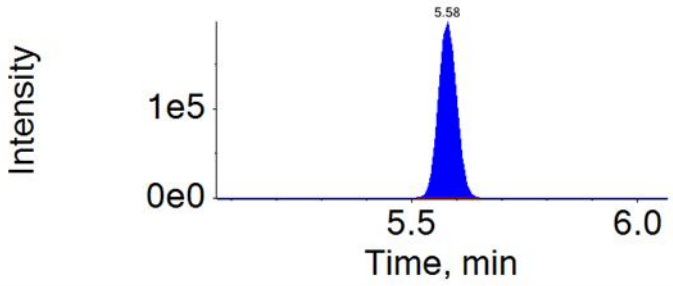


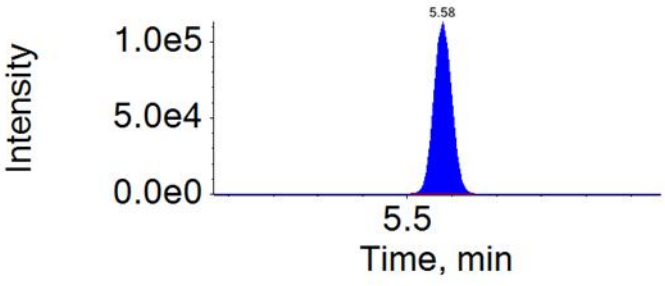
Extraction Standard: E13C9-PFNA	Injection Standard: 13C4-PFOS
472.0 / 427.0	503.0 / 80.0





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

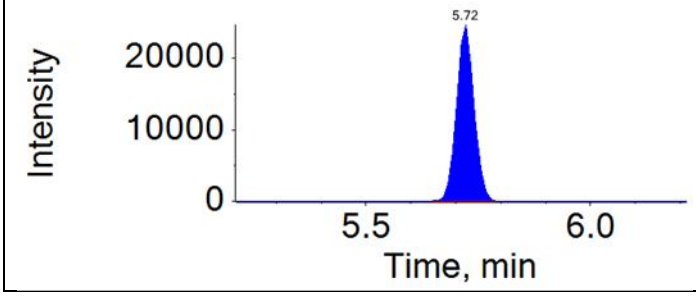
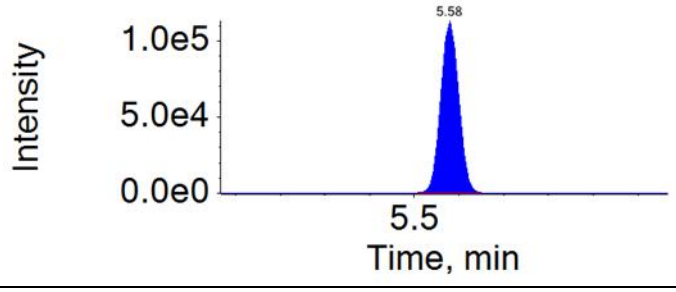


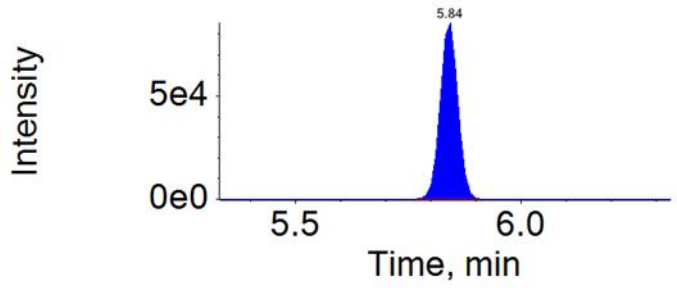
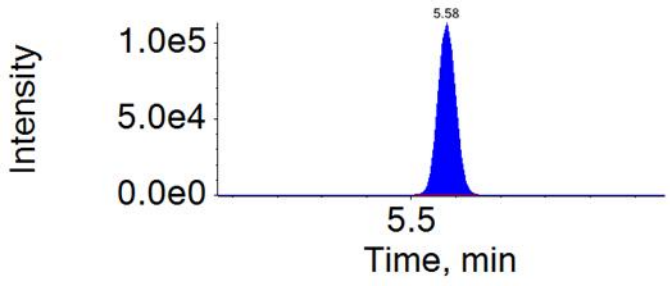


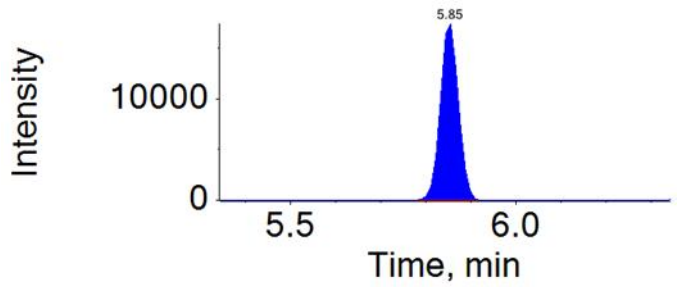
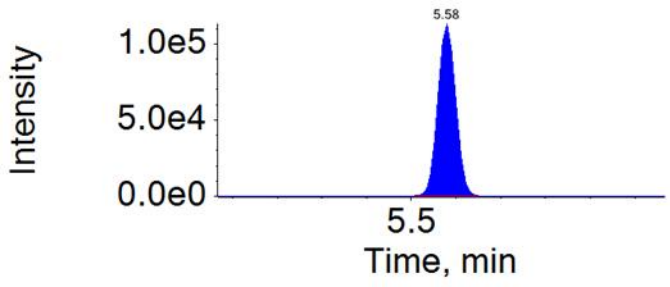
APPROVED
By JPT at 3:31 pm, 11/16/18

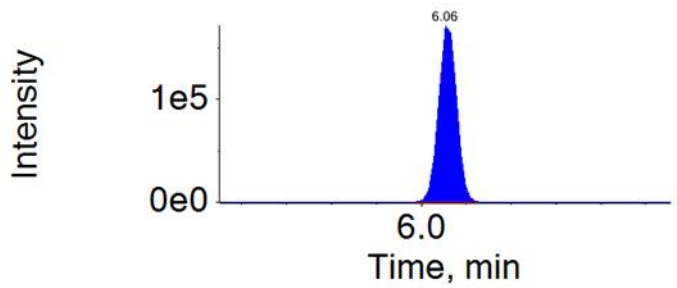
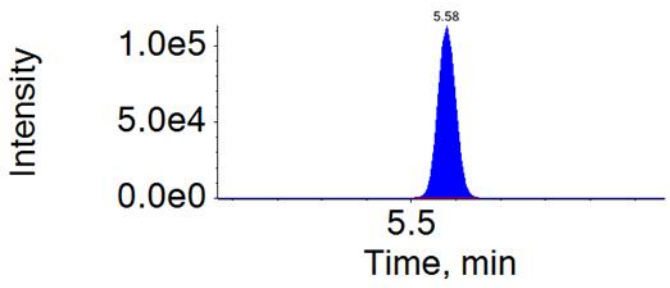
REVIEWED
By HMK at 9:04 am, 11/19/18

ICAL Name: 18NOV12DCAL **Result Table:** 18319003 11/16/2018 11:16:11 AM
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
	

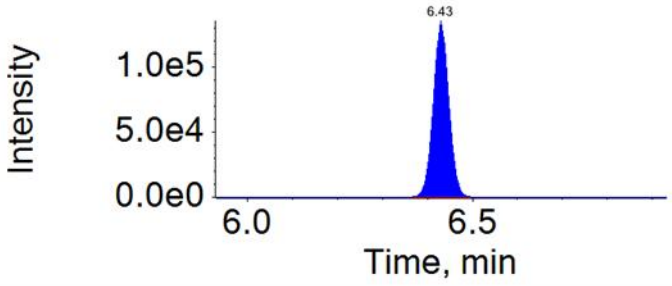
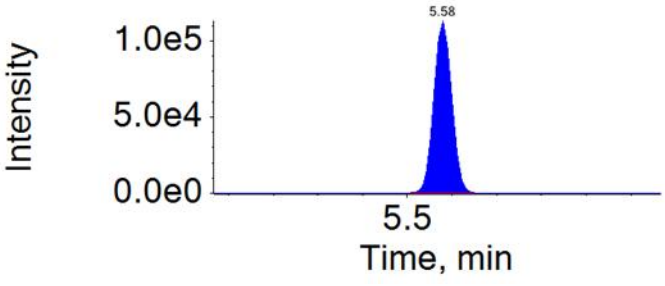
Extraction Standard: Ed5-NEtFOSAA	Injection Standard: 13C2-PFDA
589.0 / 419.0	515.0 / 470.0
	

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

APPROVED
By JPT at 3:31 pm, 11/16/18

REVIEWED
By HMK at 9:04 am, 11/19/18

ICAL Name: 18NOV12DCAL **Result Table:** 18319003 11/16/2018 11:16:11 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

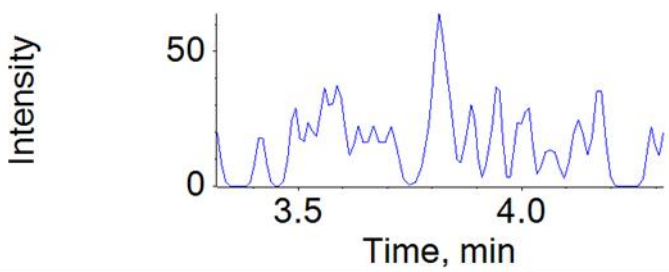
Extraction Standard: E13C2-PFTeDA	Injection Standard: 13C2-PFDA
715.0 / 670.0	515.0 / 470.0
	

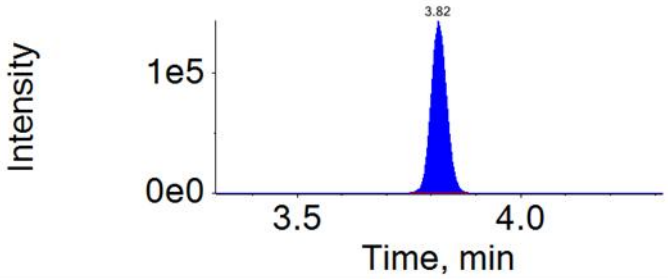
APPROVED
By JPT at 3:31 pm, 11/16/18

REVIEWED
By HMK at 9:04 am, 11/19/18

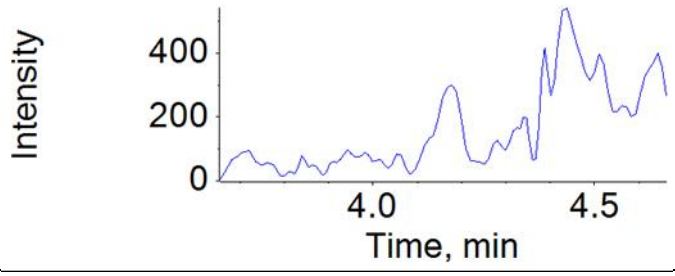
ICAL Name: 18NOV12DCAL **Result Table:** 18319003 11/16/2018 11:16:11 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

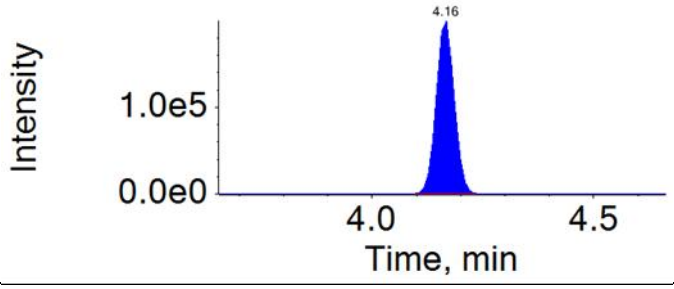
Analyte: PFBS	Extraction Standard: 13C3-PFBS
299.0 / 80.0	302.0 / 80.0



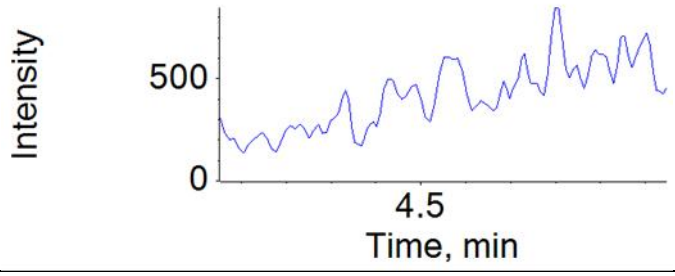


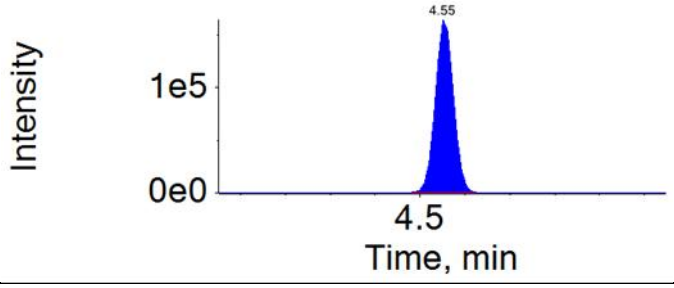
Analyte: PFHxA	Extraction Standard: 13C5-PFHxA
313.0 / 269.0	318.0 / 273.0



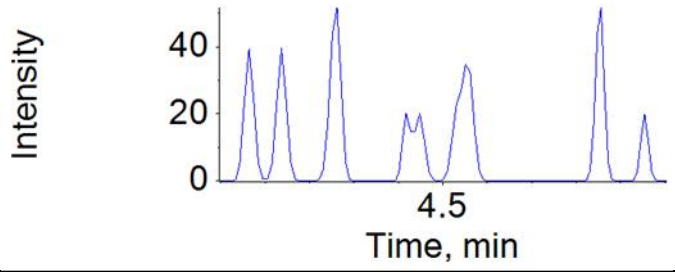


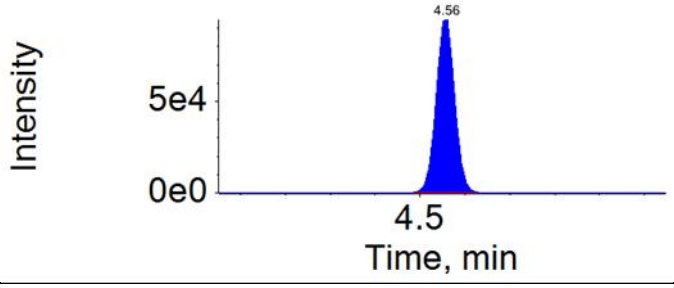
Analyte: PFHpA	Extraction Standard: 13C4-PFHpA
363.0 / 319.0	367.0 / 322.0





Analyte: PFHxS	Extraction Standard: 13C3-PFHxS
399.0 / 80.0	402.0 / 80.0



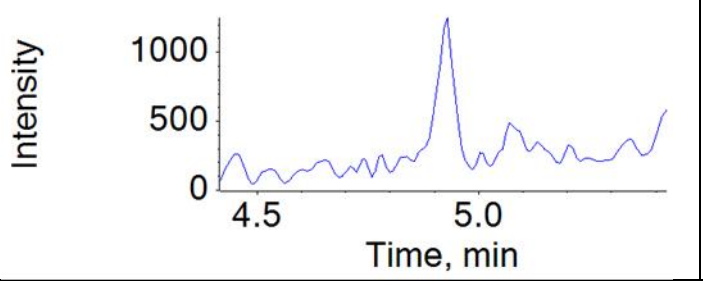


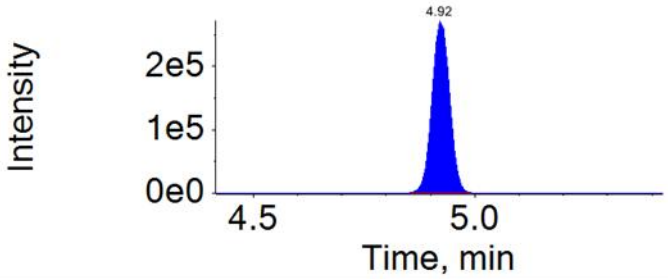
APPROVED
By JPT at 3:31 pm, 11/16/18

REVIEWED
By HMK at 9:04 am, 11/19/18

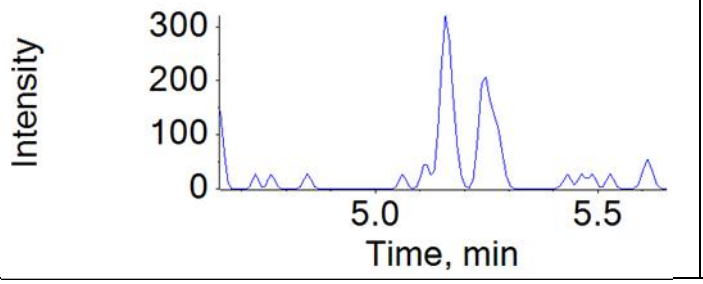
ICAL Name: 18NOV12DCAL **Result Table:** 18319003 11/16/2018 11:16:11 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

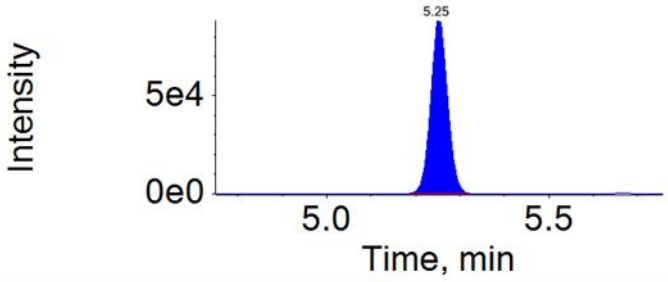
Analyte: PFOA	Extraction Standard: 13C8-PFOA
413.0 / 369.0	421.0 / 376.0



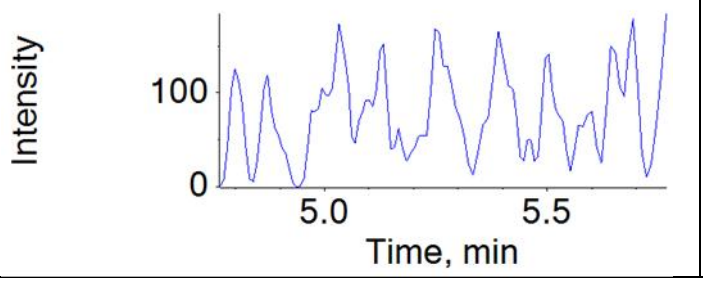


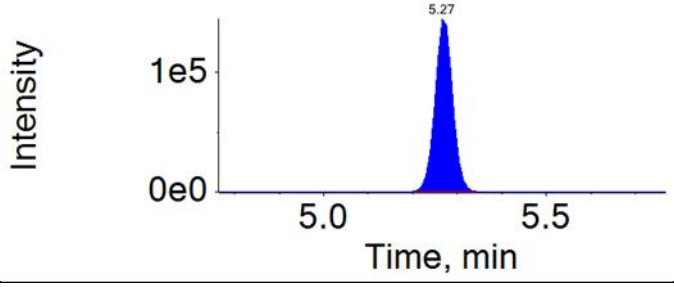
Analyte: PFOS	Extraction Standard: 13C8-PFOS
499.0 / 80.0	507.0 / 80.0



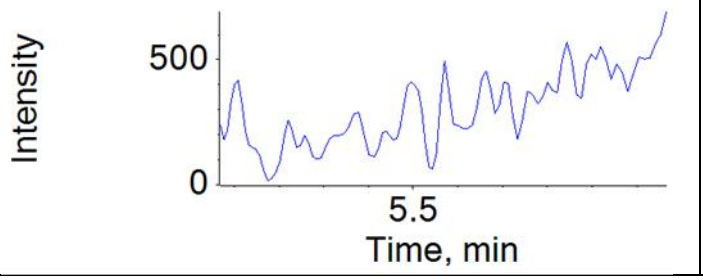


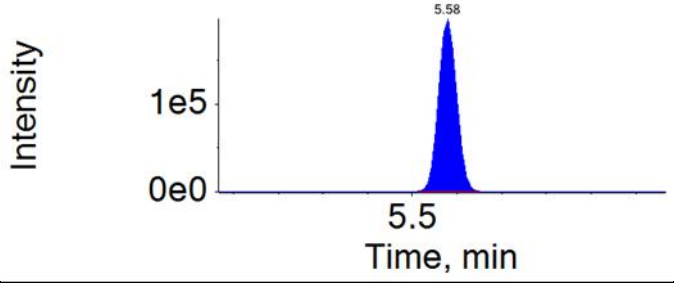
Analyte: PFNA	Extraction Standard: 13C9-PFNA
463.0 / 419.0	472.0 / 427.0





Analyte: PFDA	Extraction Standard: 13C6-PFDA
513.0 / 469.0	519.0 / 474.0



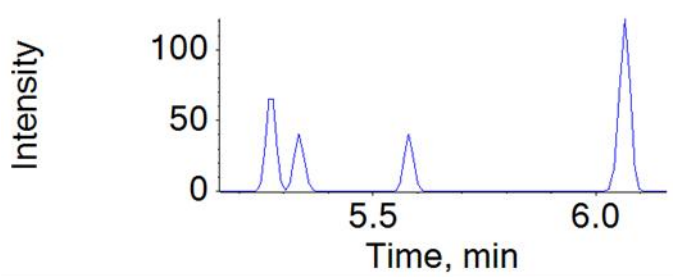


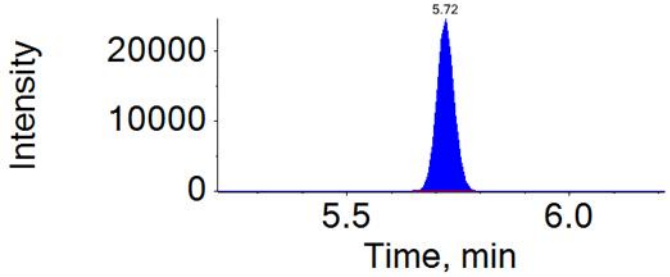
APPROVED
By JPT at 3:31 pm, 11/16/18

REVIEWED
By HMK at 9:04 am, 11/19/18

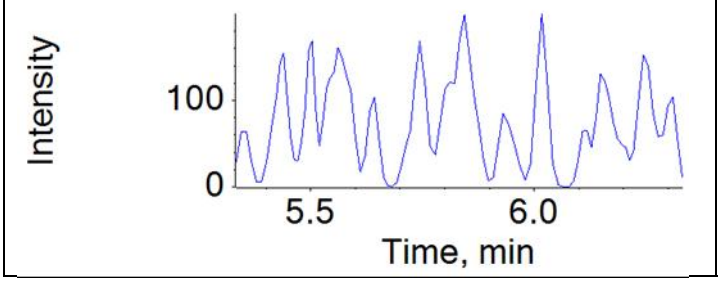
ICAL Name: 18NOV12DCAL **Result Table:** 18319003 11/16/2018 11:16:11 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

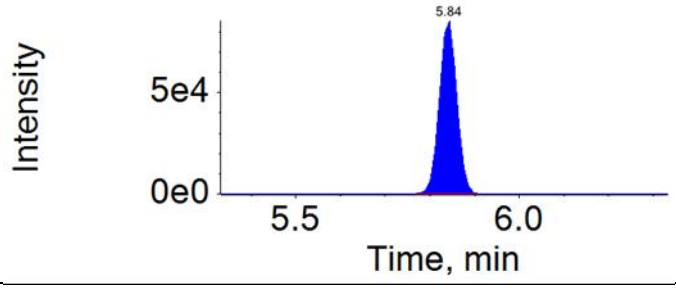
Analyte: NMeFOSAA	Extraction Standard: d3-NMeFOSAA
570.0 / 419.0	573.0 / 419.0



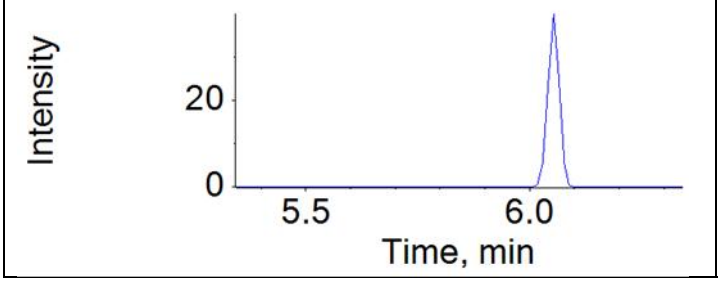


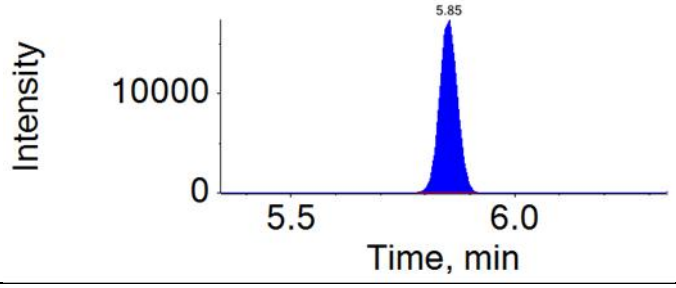
Analyte: PFUnDA	Extraction Standard: 13C7-PFUnDA
563.0 / 519.0	570.0 / 525.0



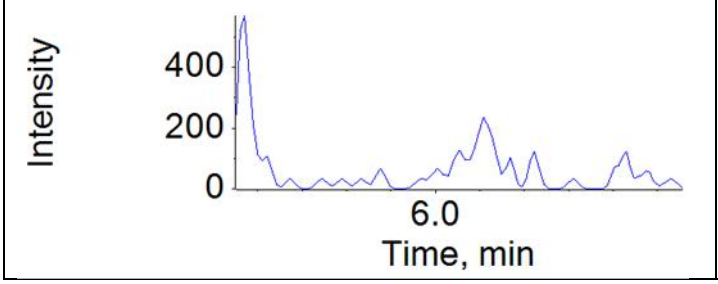


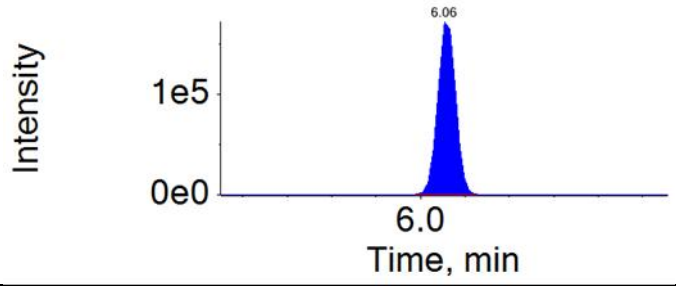
Analyte: NEtFOSAA	Extraction Standard: d5-NEtFOSAA
584.0 / 419.0	589.0 / 419.0





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



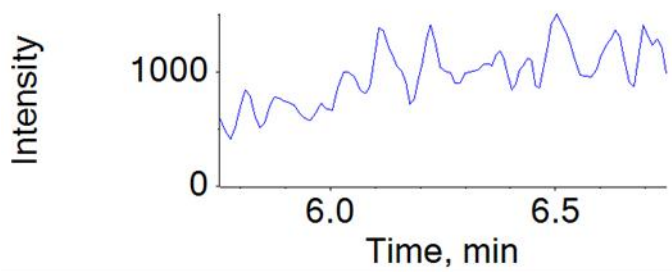


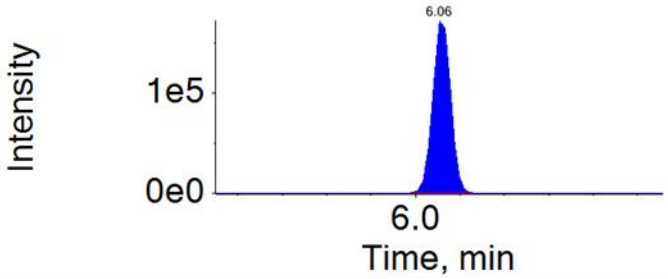
APPROVED
By JPT at 3:31 pm, 11/16/18

REVIEWED
By HMK at 9:04 am, 11/19/18

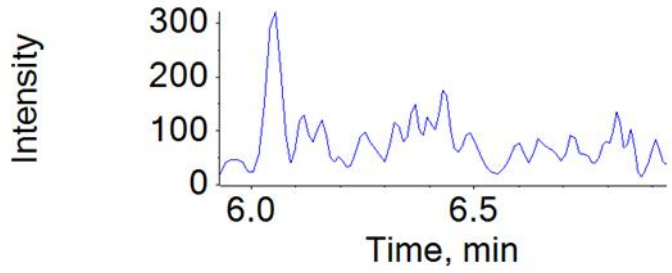
ICAL Name: 18NOV12DCAL **Result Table:** 18319003 11/16/2018 11:16:11 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

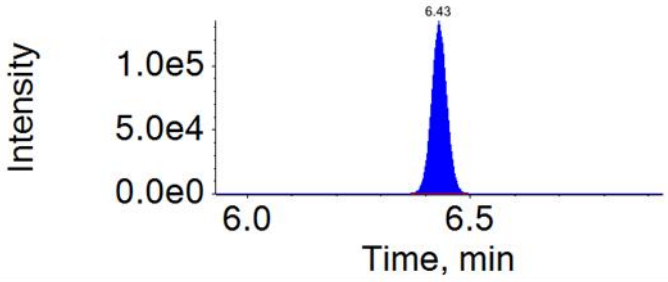
Analyte: PFTrDA	Extraction Standard: 13C2-PFDoDA
663.0 / 619.0	615.0 / 570.0





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





APPROVED
By JPT at 3:31 pm, 11/16/18

REVIEWED
By HMK at 9:04 am, 11/19/18

Ion Ratio Report

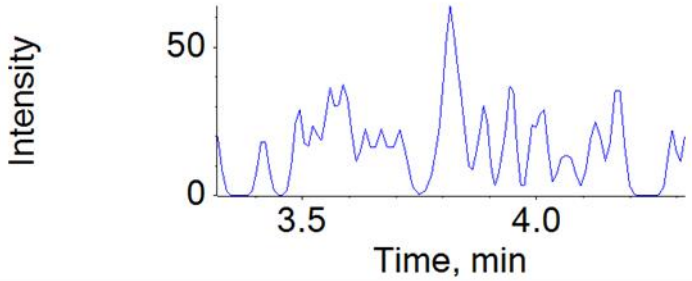
Sample Name: 9885058 **Instrument Name:** LM27631 **File Name:** 18NOV15D-11.wiff

Component Name	RT	RRT	Analyte Area Response	Int Typ	Expected Ion Ratio	Ion Ratio	Ion Ratio % Diff	Ion Ratio Limit	Ion Ratio OOS
PFBS	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	

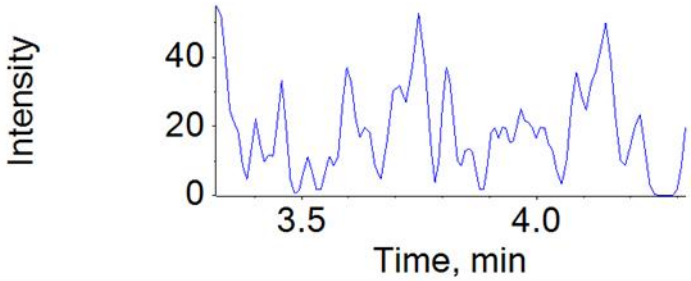
APPROVED
By JPT at 3:31 pm, 11/16/18

REVIEWED
By HMK at 9:04 am, 11/19/18

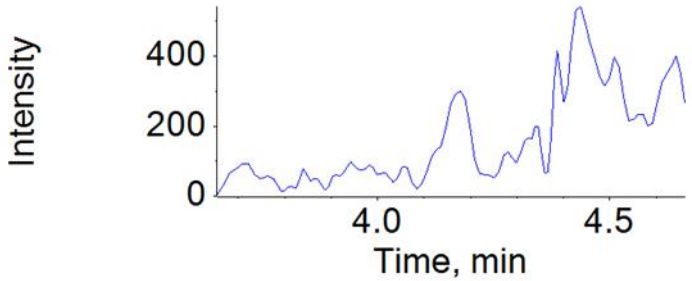
Component: PFBS
Primary Mass: 299.0 / 80.0



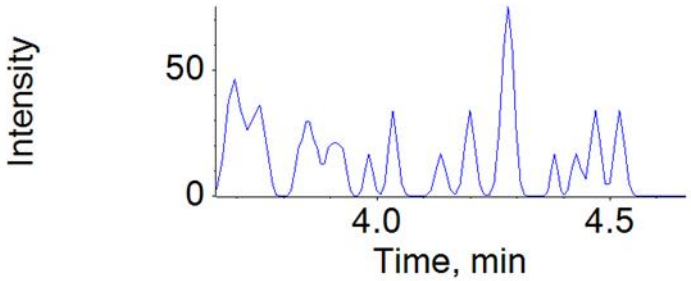
Component: PFBS_2
Secondary Mass: 299.0 / 99.0



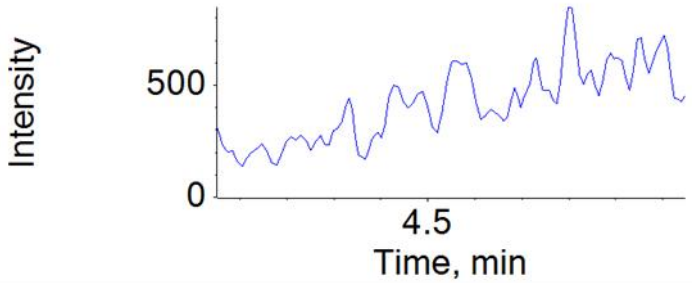
Component: PFHxA
Primary Mass: 313.0 / 269.0



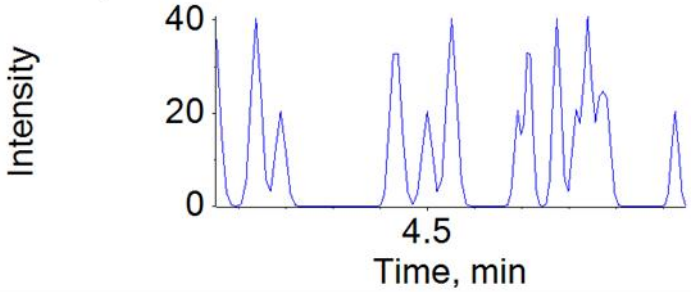
Component: PFHxA_2
Secondary Mass: 313.0 / 119.0



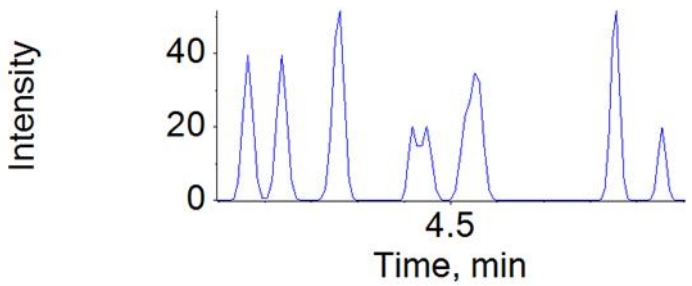
Component: PFHpA
Primary Mass: 363.0 / 319.0



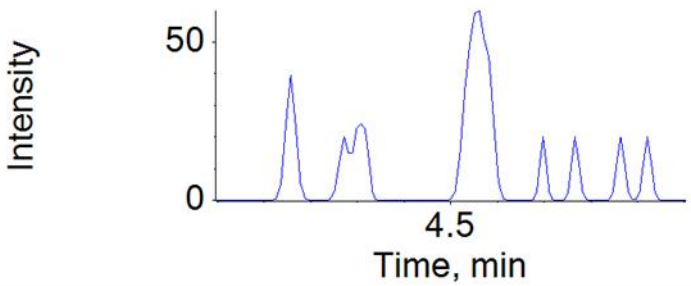
Component: PFHpA_2
Secondary Mass: 363.0 / 169.0



Component: PFHxS
Primary Mass: 399.0 / 80.0



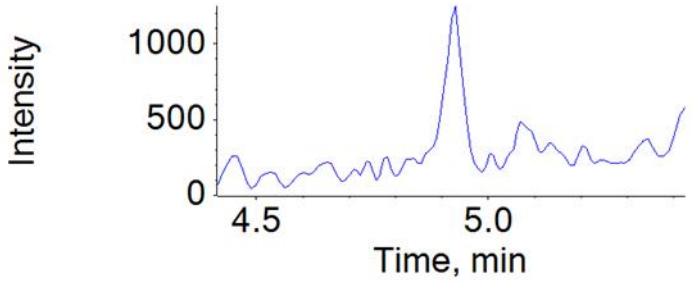
Component: PFHxS_2
Secondary Mass: 399.0 / 99.0



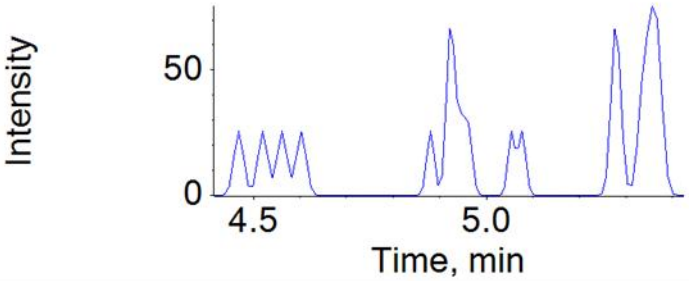
APPROVED
By JPT at 3:31 pm, 11/16/18

REVIEWED
By HMK at 9:04 am, 11/19/18

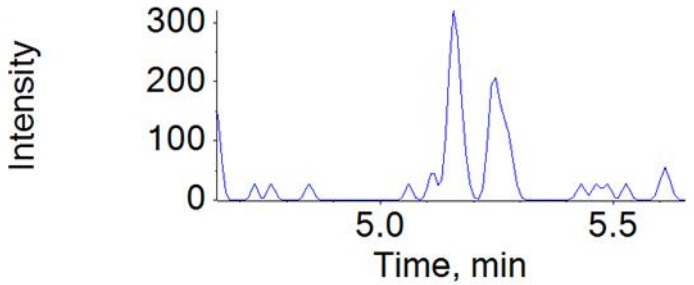
Component: PFOA
Primary Mass: 413.0 / 369.0



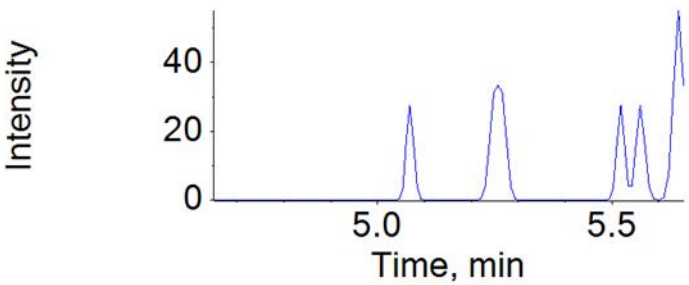
Component: PFOA_2
Secondary Mass: 413.0 / 169.0



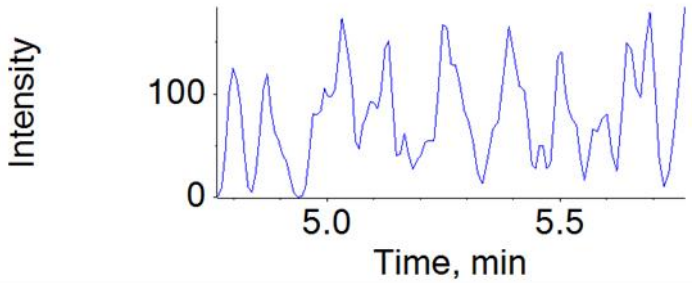
Component: PFOS
Primary Mass: 499.0 / 80.0



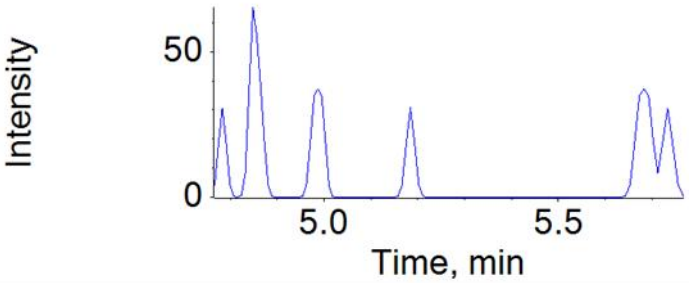
Component: PFOS_2
Secondary Mass: 499.0 / 99.0



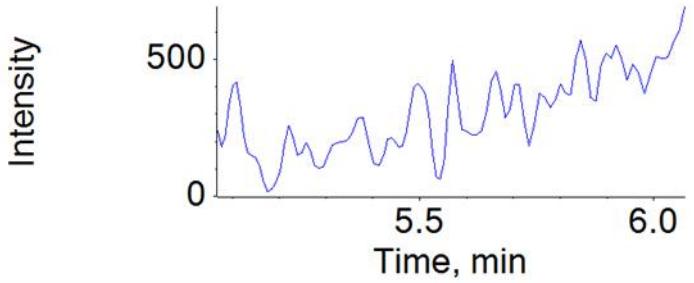
Component: PFNA
Primary Mass: 463.0 / 419.0



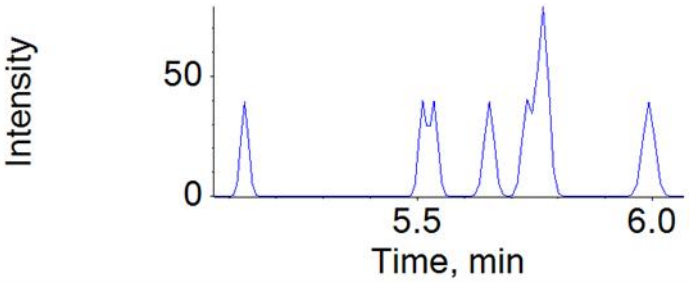
Component: PFNA_2
Secondary Mass: 463.0 / 169.0



Component: PFDA
Primary Mass: 513.0 / 469.0



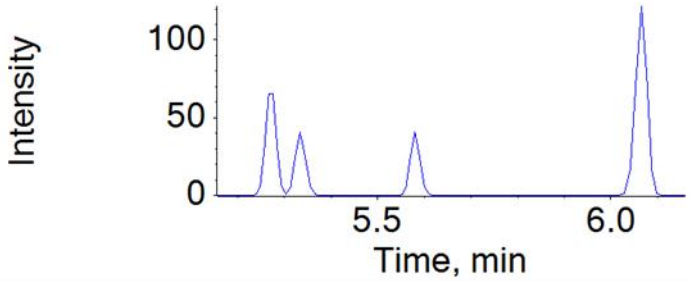
Component: PFDA_2
Secondary Mass: 513.0 / 169.0



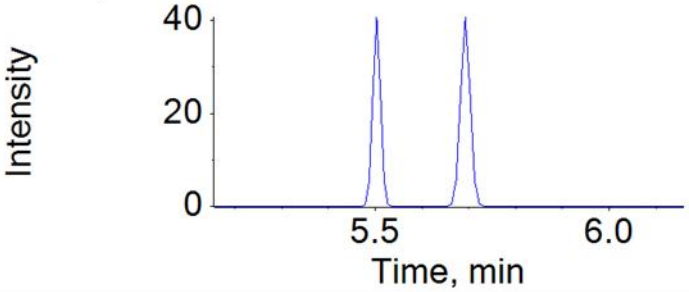
APPROVED
By JPT at 3:31 pm, 11/16/18

REVIEWED
By HMK at 9:04 am, 11/19/18

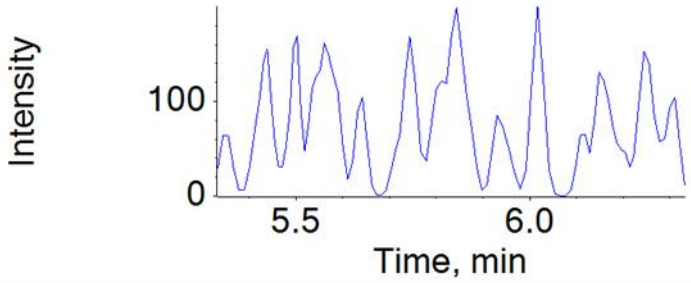
Component: NMeFOSAA
Primary Mass: 570.0 / 419.0



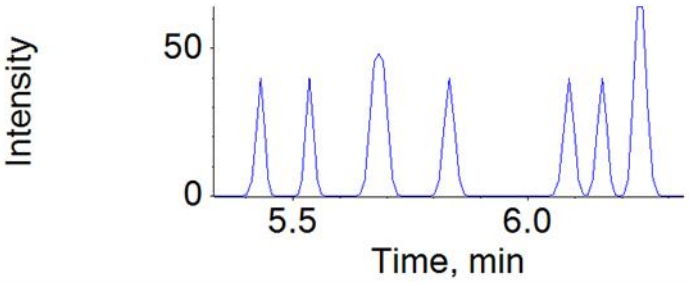
Component: NMeFOSAA_2
Secondary Mass: 570.0 / 483.0



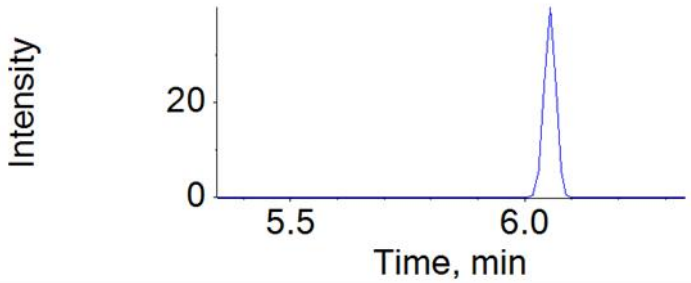
Component: PFUnDA
Primary Mass: 563.0 / 519.0



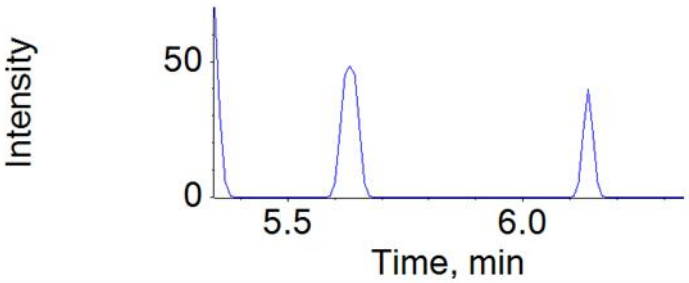
Component: PFUnDA_2
Secondary Mass: 563.0 / 169.0



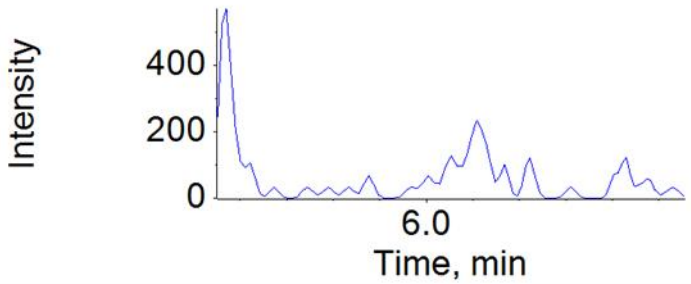
Component: NEtFOSAA
Primary Mass: 584.0 / 419.0



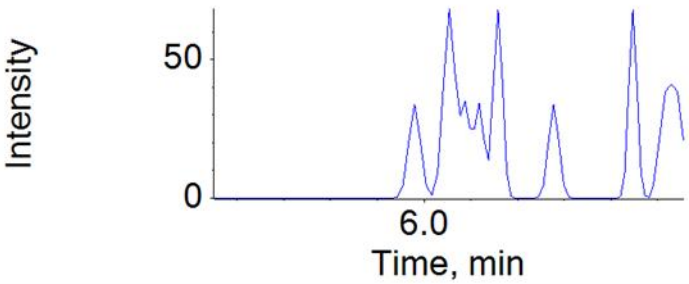
Component: NEtFOSAA_2
Secondary Mass: 584.0 / 526.0



Component: PFDoDA
Primary Mass: 613.0 / 569.0



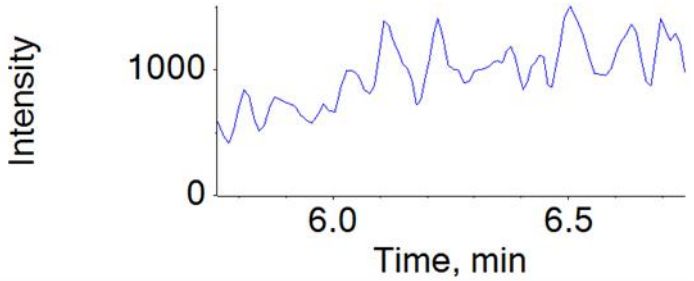
Component: PFDoDA_2
Secondary Mass: 613.0 / 169.0



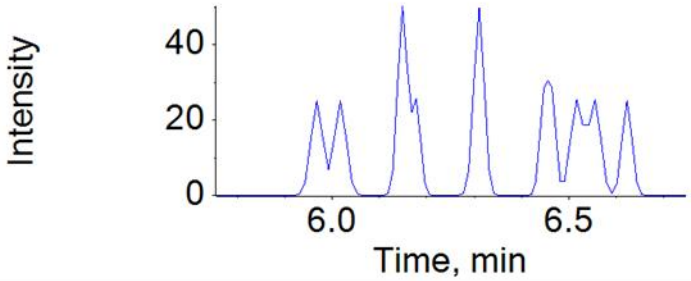
APPROVED
By JPT at 3:31 pm, 11/16/18

REVIEWED
By HMK at 9:04 am, 11/19/18

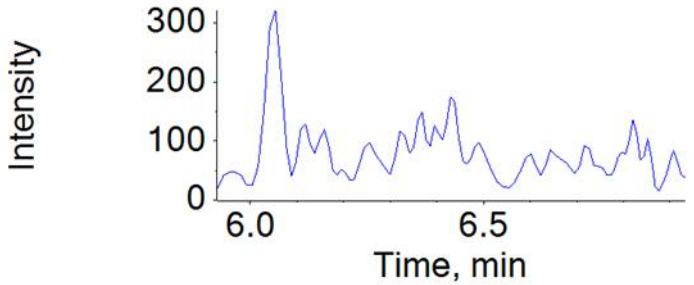
Component: PFTrDA
Primary Mass: 663.0 / 619.0



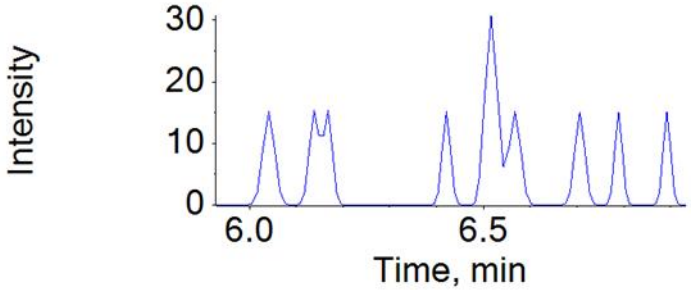
Component: PFTrDA_2
Secondary Mass: 663.0 / 169.0



Component: PFTeDA
Primary Mass: 713.0 / 669.0



Component: PFTeDA_2
Secondary Mass: 713.0 / 169.0



APPROVED
By JPT at 3:31 pm, 11/16/18

REVIEWED
By HMK at 9:04 am, 11/19/18

ICAL Name: 18NOV12DCAL **Result Table:** 18319003 11/16/2018 11:16:11 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Sample Name:	9885059			**Data File:**		18NOV15D-12.wiff
Sample ID:	EPA 537 mod QSM 5.1 table B-15 18319003 OU1-WWTPW-S-02-08 Grab Soil			**Acquis Date:**		2018-11-15T13:42:23
Sample Type:	Unknown			**Instrument:**		LM27631
Vial Position:	30			**Acquis Method:**		18AUG13_3uL.dam
Injection Vol:	3.00			**Result Table:**		18319003
QMethod File:	18AUG20QM			**ICAL Name:**		18NOV12DCAL
Batch Number:	18319003			**Operator:**		JPT12262
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: 18NOV15D-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	713561.9	732179.1	-3	50	
13C2-PFOA	5.0	491847.2	479663.2	3	50	
13C4-PFOS	4.8	258030.6	269685.3	-4	50	
13C2-PFDA	5.0	310419.9	302309.9	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
E13C3-PFBS	318238.3	13C3-PFBA	713561.9	0.446	8.532	5.777	68	50-150	
E13C5-PFHxA	515454.4	13C2-PFOA	491847.2	1.048	9.174	6.946	76	50-150	
E13C3-PFHxS	250845.5	13C2-PFOA	491847.2	0.510	8.679	6.421	74	50-150	
E13C4-PFHpA	387709.1	13C2-PFOA	491847.2	0.788	9.174	6.516	71	50-150	
E13C8-PFOA	749110.4	13C2-PFOA	491847.2	1.523	9.174	7.699	84	50-150	
E13C8-PFOS	218896.8	13C4-PFOS	258030.6	0.848	8.771	6.897	79	50-150	
E13C9-PFNA	367964.9	13C4-PFOS	258030.6	1.426	9.174	7.295	80	50-150	
E13C6-PFDA	480499.1	13C2-PFDA	310419.9	1.548	9.174	6.628	72	50-150	
Ed3-NMeFOSAA	53968.3	13C2-PFDA	310419.9	0.174	9.174	5.758	63	50-150	
E13C7-PFUnDA	208379.2	13C2-PFDA	310419.9	0.671	9.174	7.151	78	50-150	
Ed5-NEtFOSAA	38765.5	13C2-PFDA	310419.9	0.125	9.174	4.848	53	50-150	
E13C2-PFDoDA	429000.0	13C2-PFDA	310419.9	1.382	9.174	6.584	72	50-150	
E13C2-PFTeDA	326627.7	13C2-PFDA	310419.9	1.052	9.174	6.778	74	50-150	

APPROVED
By JPT at 3:31 pm, 11/16/18

REVIEWED
By HMK at 9:04 am, 11/19/18

ICAL Name: 18NOV12DCAL **Result Table:** 18319003 11/16/2018 11:16:11 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

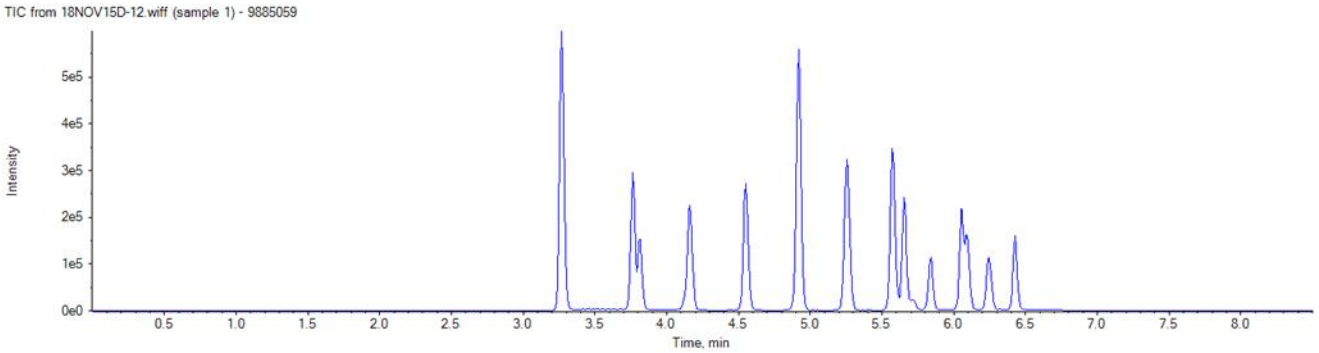
Analyte Quantitation Peak Table

Sample Name: 9885059 **Instrument Name:** LM27631 **File Name:** 18NOV15D-12.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	318238.3	N/A	
PFHxA	N/A	N/A	N/A		A	13C5-PFHxA	4.16	515454.4	N/A	
PFHpA	N/A	N/A	N/A		A	13C4-PFHpA	4.55	387709.1	N/A	
PFHxS	N/A	N/A	N/A		A	13C3-PFHxS	4.55	250845.5	N/A	
PFOA	N/A	N/A	N/A		A	13C8-PFOA	4.92	749110.4	N/A	
PFOS	N/A	N/A	N/A		A	13C8-PFOS	5.25	218896.8	N/A	
PFNA	N/A	N/A	N/A		A	13C9-PFNA	5.27	367964.9	N/A	
PFDA	N/A	N/A	N/A		A	13C6-PFDA	5.57	480499.1	N/A	
NMeFOSAA	N/A	N/A	N/A		A	d3-NMeFOSAA	5.72	53968.3	N/A	
PFUnDA	N/A	N/A	N/A		A	13C7-PFUnDA	5.84	208379.2	N/A	
NEtFOSAA	N/A	N/A	N/A		A	d5-NEtFOSAA	5.85	38765.5	N/A	
PFDoDA	N/A	N/A	N/A		A	13C2-PFDoDA	6.05	429000.1	N/A	
PFTrDA	N/A	N/A	N/A		A	13C2-PFDoDA	6.05	429000.1	N/A	
PFTeDA	N/A	N/A	N/A		A	13C2-PFTeDA	6.43	326627.7	N/A	

Total Ion Chromatogram

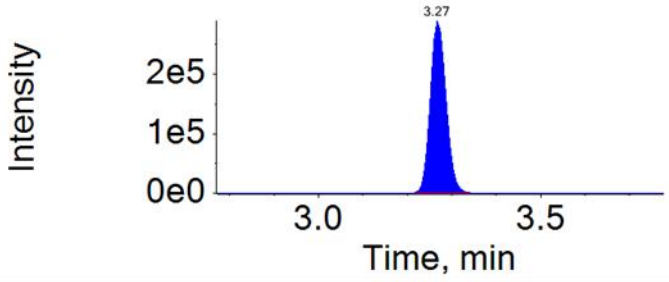


APPROVED
By JPT at 3:31 pm, 11/16/18

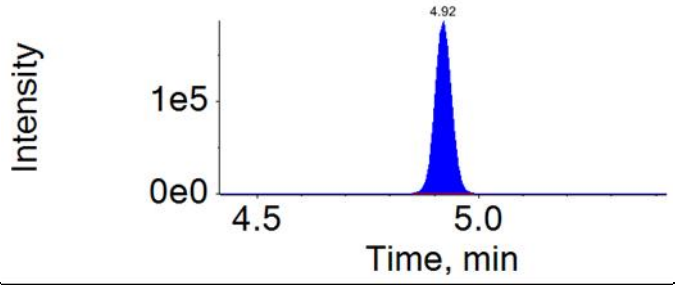
REVIEWED
By HMK at 9:04 am, 11/19/18

ICAL Name: 18NOV12DCAL **Result Table:** 18319003 11/16/2018 11:16:11 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

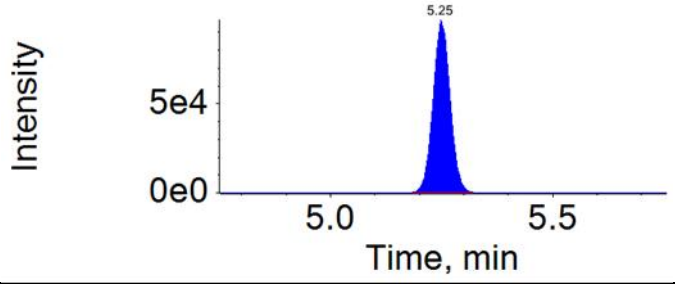
Injection Standard: 13C3-PFBA
216.0 / 172.0



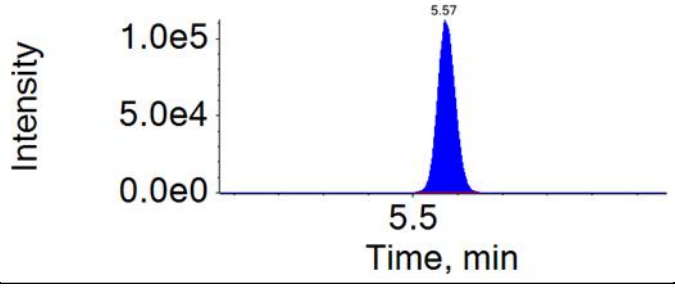
Injection Standard: 13C2-PFOA
415.0 / 370.0



Injection Standard: 13C4-PFOS
503.0 / 80.0



Injection Standard: 13C2-PFDA
515.0 / 470.0

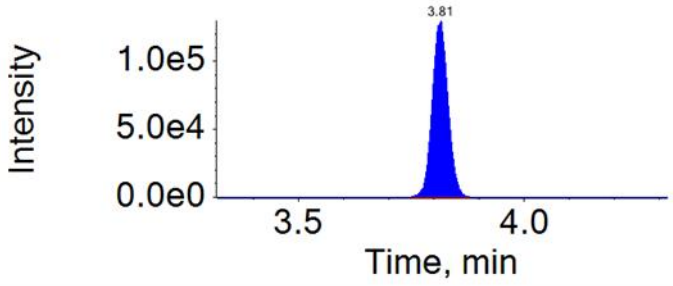


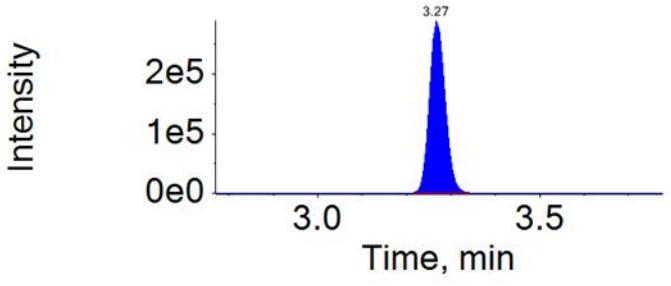
APPROVED
By JPT at 3:31 pm, 11/16/18

REVIEWED
By HMK at 9:04 am, 11/19/18

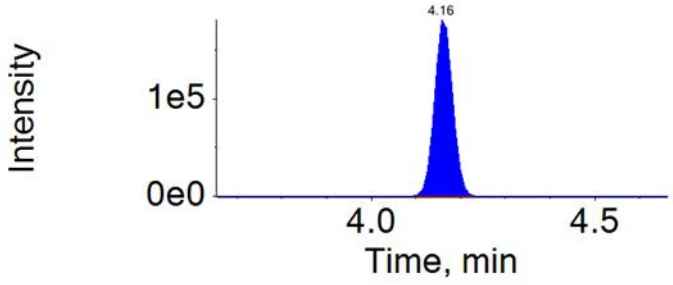
ICAL Name: 18NOV12DCAL **Result Table:** 18319003 11/16/2018 11:16:11 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

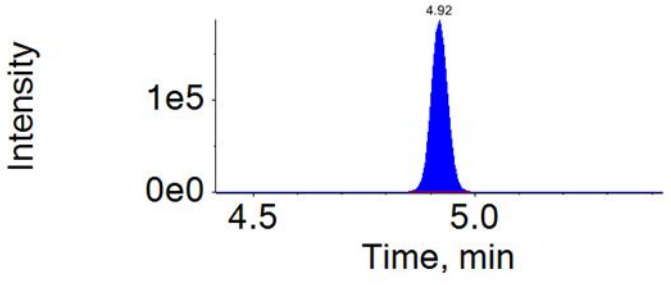
Extraction Standard: E13C3-PFBS	Injection Standard: 13C3-PFBA
302.0 / 80.0	216.0 / 172.0



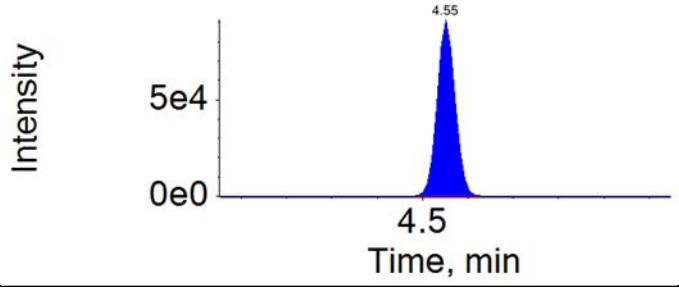


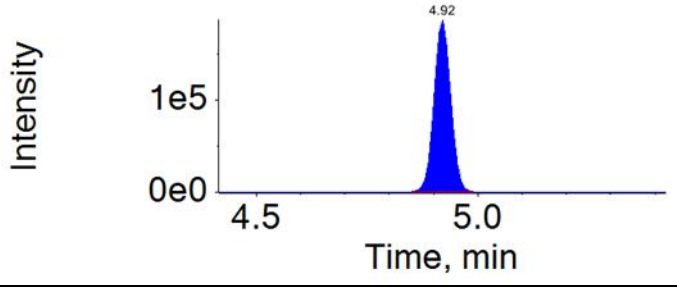
Extraction Standard: E13C5-PFHxA	Injection Standard: 13C2-PFOA
318.0 / 273.0	415.0 / 370.0



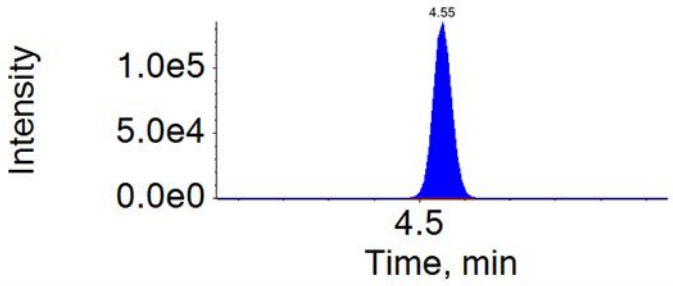


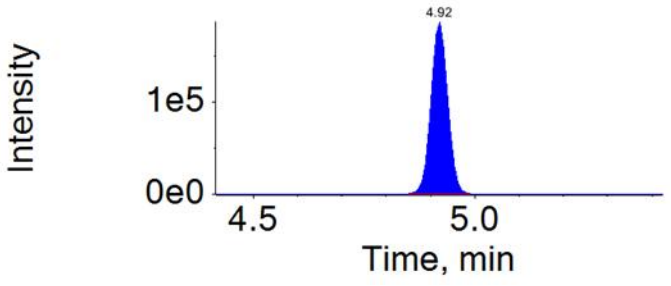
Extraction Standard: E13C3-PFHxS	Injection Standard: 13C2-PFOA
402.0 / 80.0	415.0 / 370.0





Extraction Standard: E13C4-PFHpA	Injection Standard: 13C2-PFOA
367.0 / 322.0	415.0 / 370.0



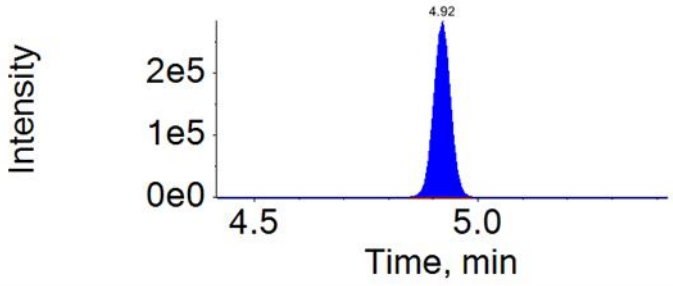


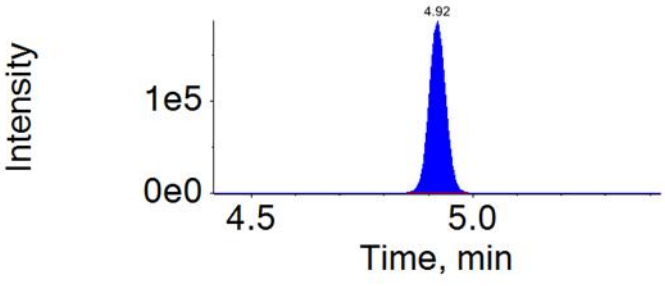
APPROVED
By JPT at 3:31 pm, 11/16/18

REVIEWED
By HMK at 9:04 am, 11/19/18

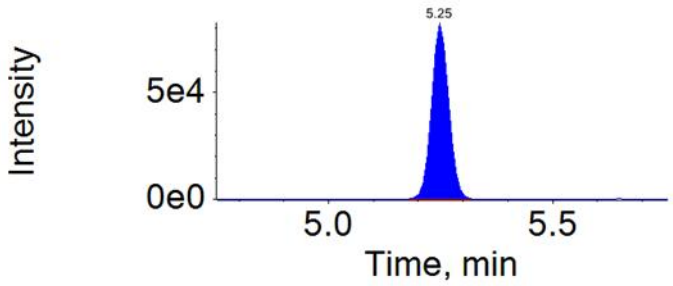
ICAL Name: 18NOV12DCAL **Result Table:** 18319003 11/16/2018 11:16:11 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

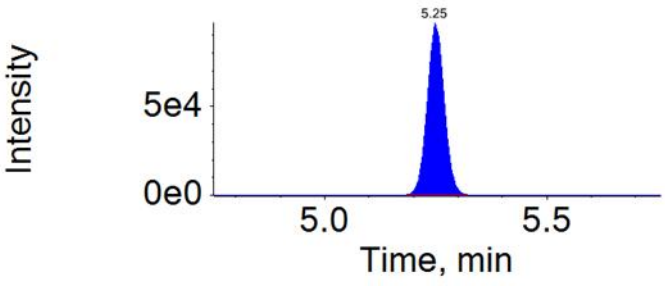
Extraction Standard: E13C8-PFOA	Injection Standard: 13C2-PFOA
421.0 / 376.0	415.0 / 370.0



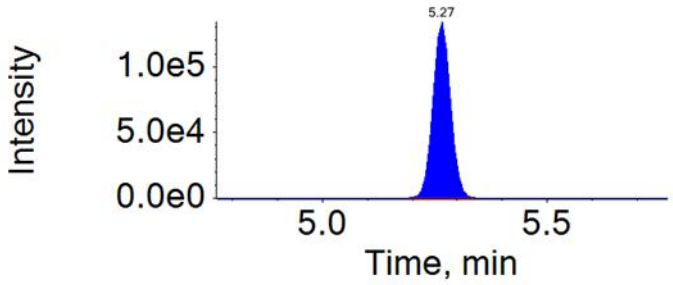


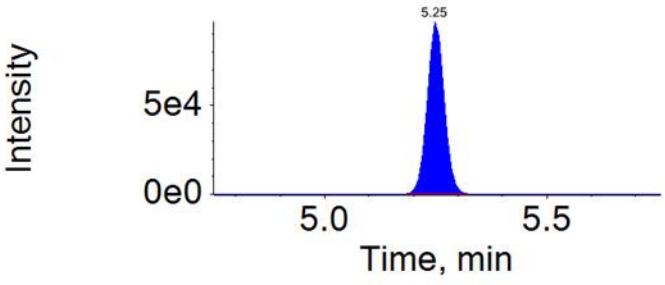
Extraction Standard: E13C8-PFOS	Injection Standard: 13C4-PFOS
507.0 / 80.0	503.0 / 80.0



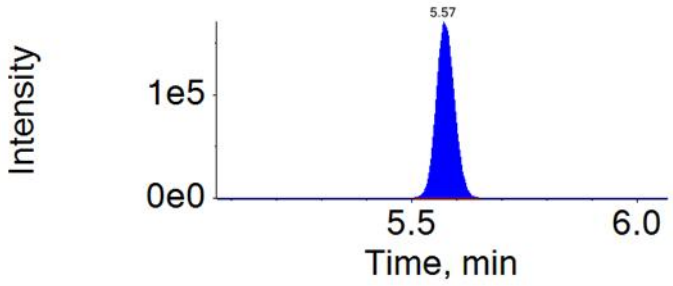


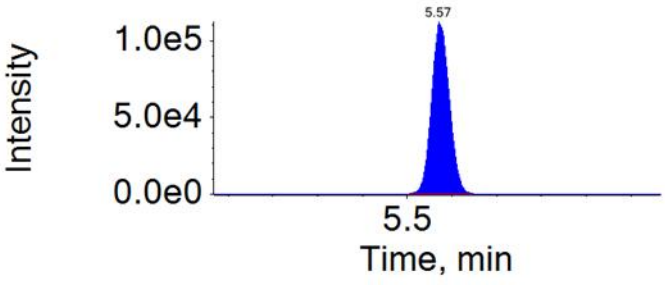
Extraction Standard: E13C9-PFNA	Injection Standard: 13C4-PFOS
472.0 / 427.0	503.0 / 80.0





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



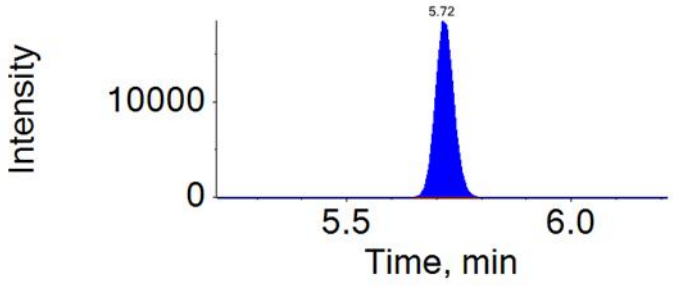


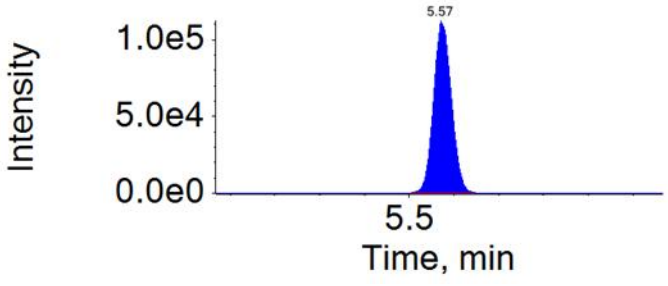
APPROVED
By JPT at 3:31 pm, 11/16/18

REVIEWED
By HMK at 9:04 am, 11/19/18

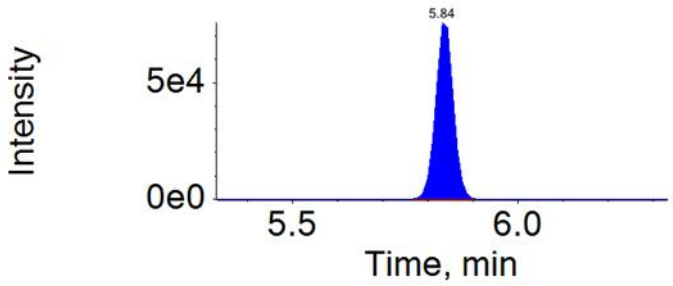
ICAL Name: 18NOV12DCAL **Result Table:** 18319003 11/16/2018 11:16:11 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

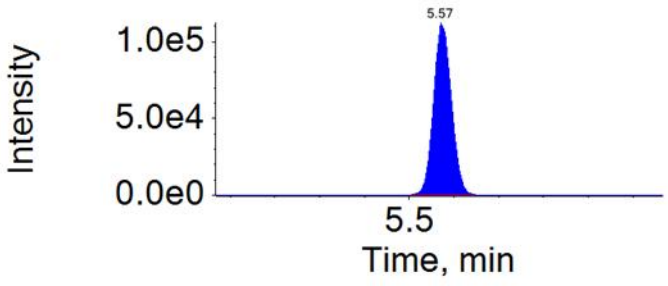
Extraction Standard: Ed3-NMeFOSAA	Injection Standard: 13C2-PFDA
573.0 / 419.0	515.0 / 470.0



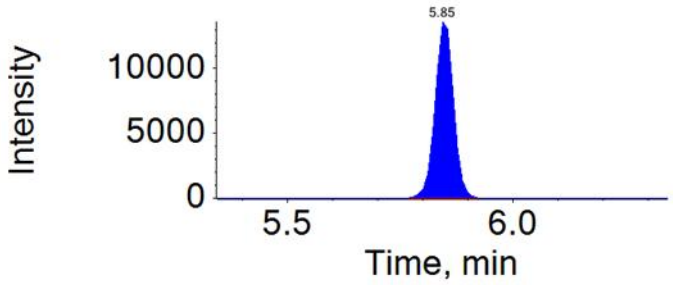


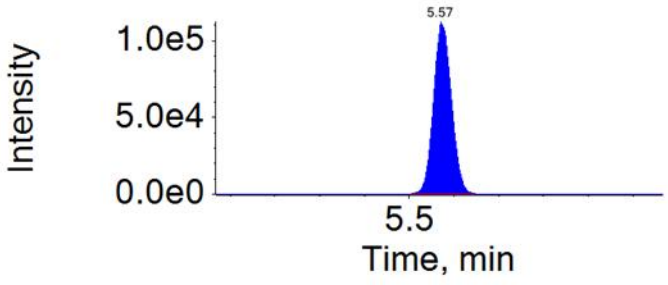
Extraction Standard: E13C7-PFUnDA	Injection Standard: 13C2-PFDA
570.0 / 525.0	515.0 / 470.0



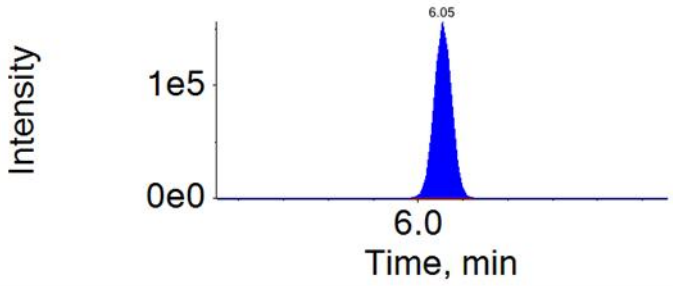


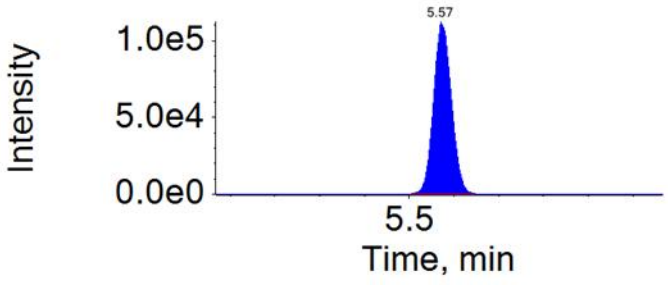
Extraction Standard: Ed5-NEtFOSAA	Injection Standard: 13C2-PFDA
589.0 / 419.0	515.0 / 470.0





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

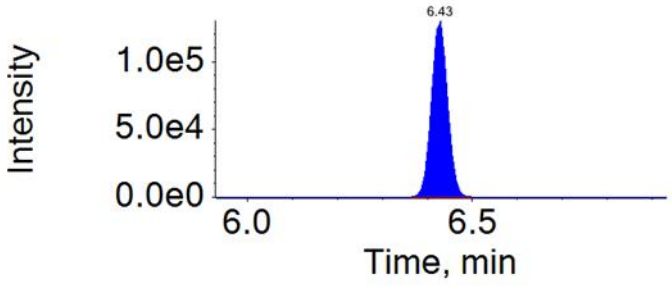
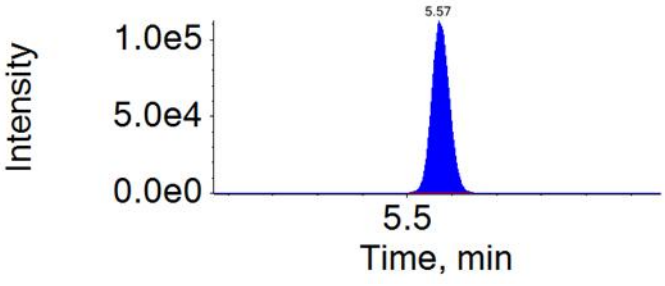




APPROVED
By JPT at 3:31 pm, 11/16/18

REVIEWED
By HMK at 9:04 am, 11/19/18

ICAL Name: 18NOV12DCAL **Result Table:** 18319003 11/16/2018 11:16:11 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

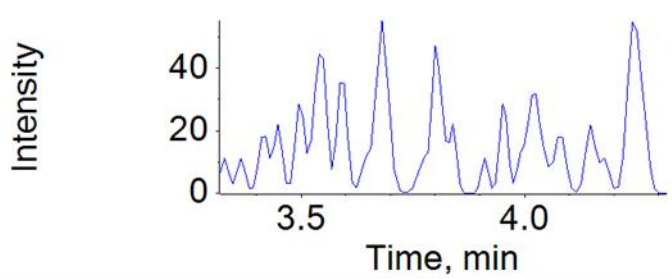
Extraction Standard: E13C2-PFTeDA	Injection Standard: 13C2-PFDA
715.0 / 670.0	515.0 / 470.0
	

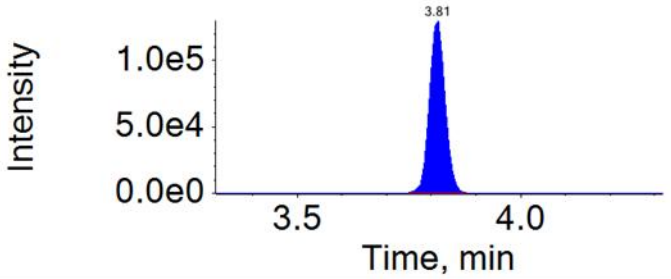
APPROVED
By JPT at 3:31 pm, 11/16/18

REVIEWED
By HMK at 9:04 am, 11/19/18

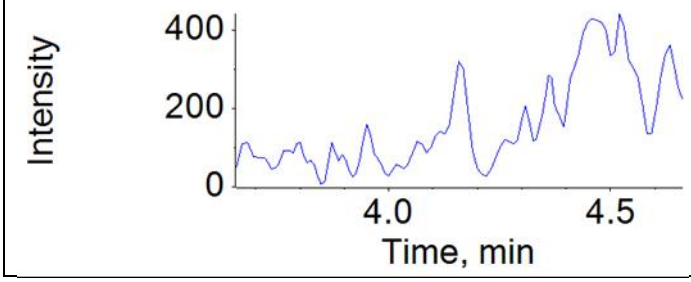
ICAL Name: 18NOV12DCAL **Result Table:** 18319003 11/16/2018 11:16:11 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

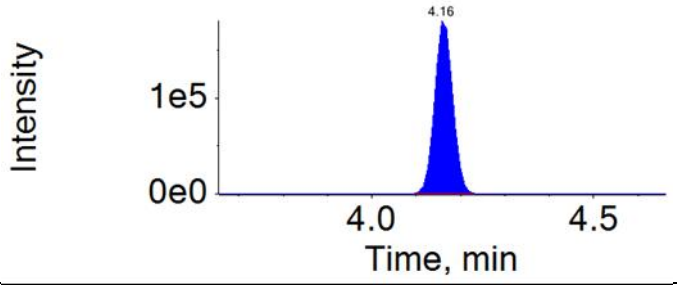
Analyte: PFBS	Extraction Standard: 13C3-PFBS
299.0 / 80.0	302.0 / 80.0



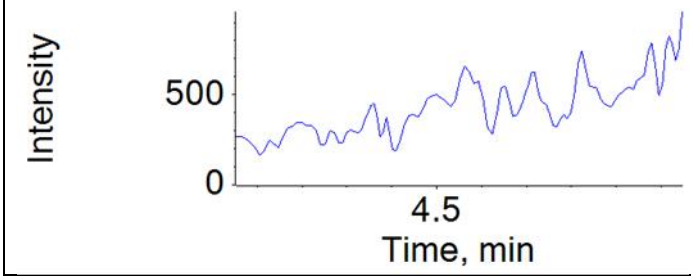


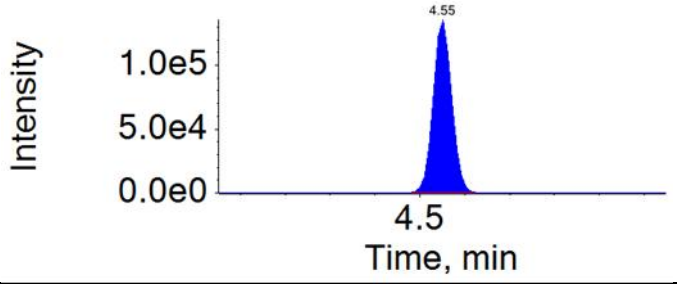
Analyte: PFHxA	Extraction Standard: 13C5-PFHxA
313.0 / 269.0	318.0 / 273.0



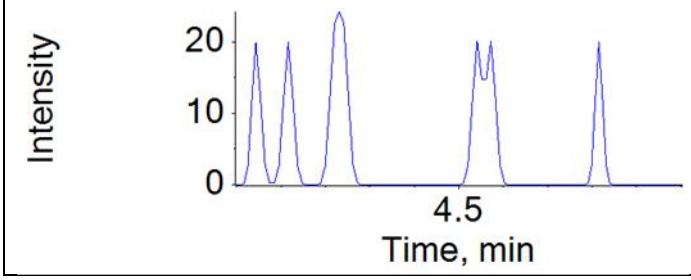


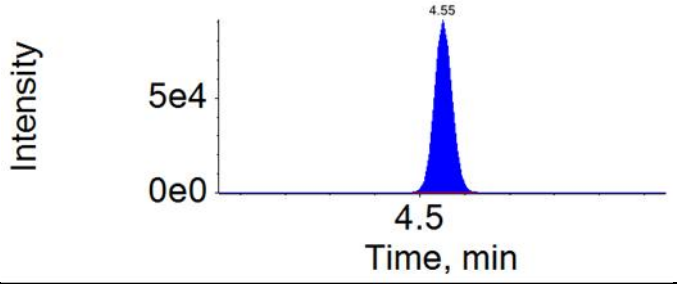
Analyte: PFHpA	Extraction Standard: 13C4-PFHpA
363.0 / 319.0	367.0 / 322.0





Analyte: PFHxS	Extraction Standard: 13C3-PFHxS
399.0 / 80.0	402.0 / 80.0



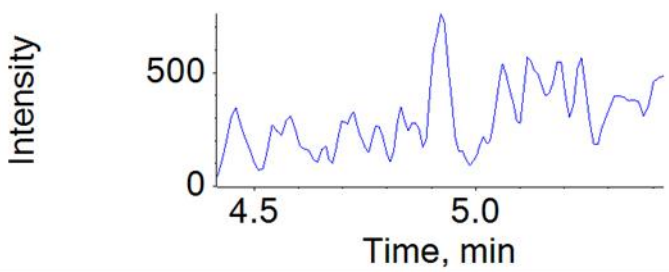


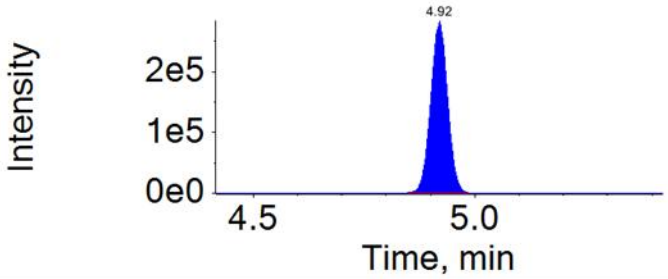
APPROVED
By JPT at 3:31 pm, 11/16/18

REVIEWED
By HMK at 9:04 am, 11/19/18

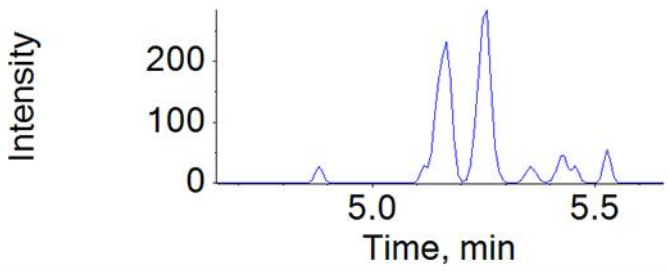
ICAL Name: 18NOV12DCAL **Result Table:** 18319003 11/16/2018 11:16:11 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

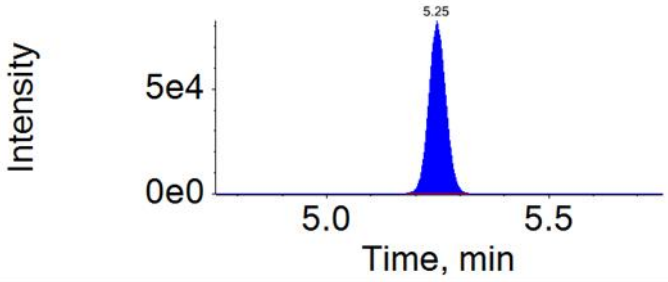
Analyte: PFOA	Extraction Standard: 13C8-PFOA
413.0 / 369.0	421.0 / 376.0



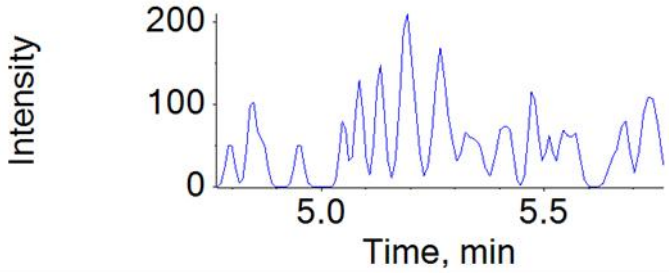


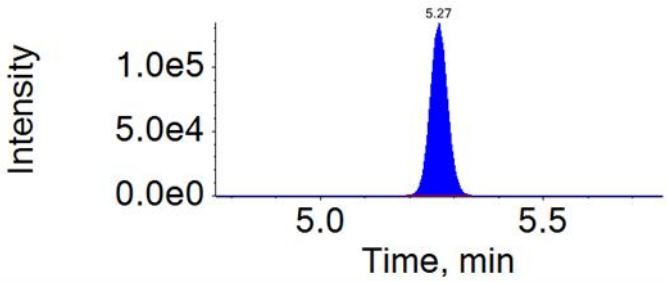
Analyte: PFOS	Extraction Standard: 13C8-PFOS
499.0 / 80.0	507.0 / 80.0



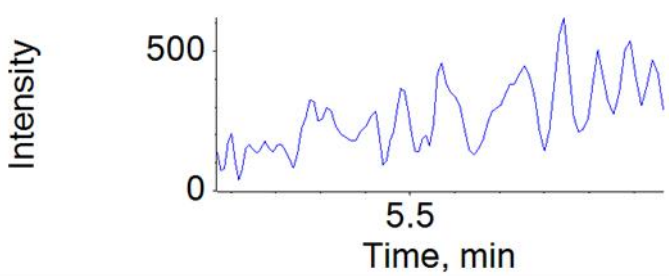


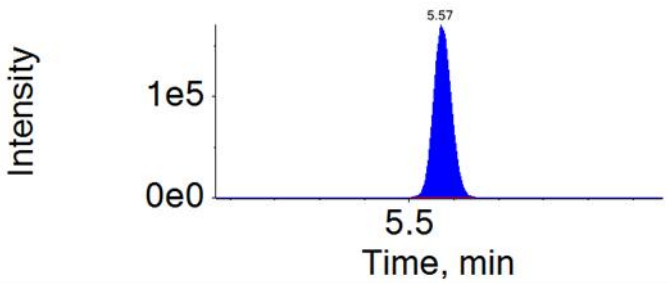
Analyte: PFNA	Extraction Standard: 13C9-PFNA
463.0 / 419.0	472.0 / 427.0





Analyte: PFDA	Extraction Standard: 13C6-PFDA
513.0 / 469.0	519.0 / 474.0



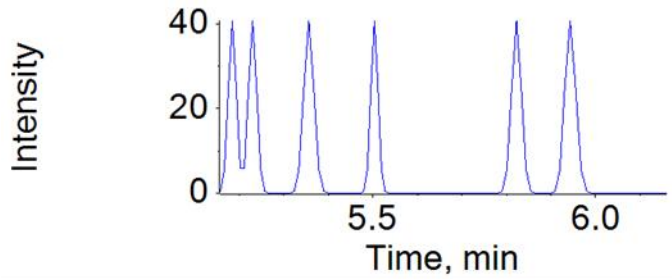


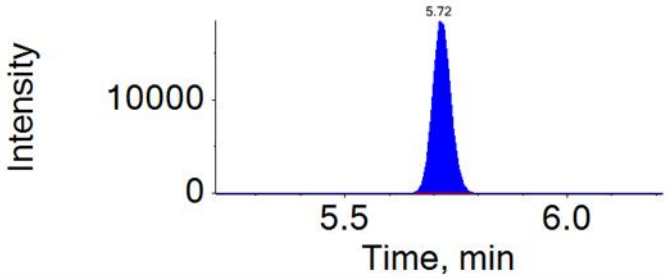
APPROVED
By JPT at 3:31 pm, 11/16/18

REVIEWED
By HMK at 9:04 am, 11/19/18

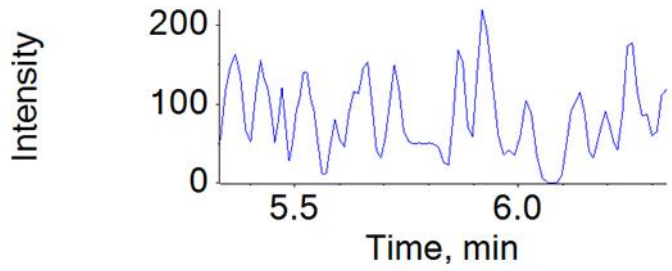
ICAL Name: 18NOV12DCAL **Result Table:** 18319003 11/16/2018 11:16:11 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

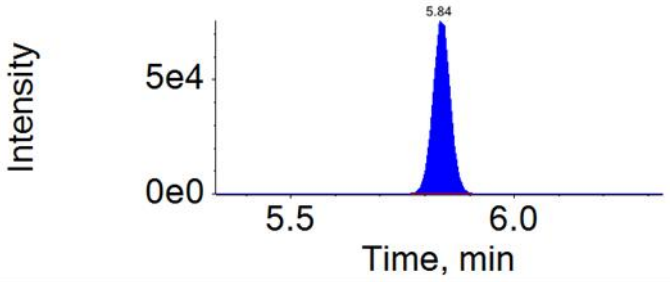
Analyte: NMeFOSAA	Extraction Standard: d3-NMeFOSAA
570.0 / 419.0	573.0 / 419.0



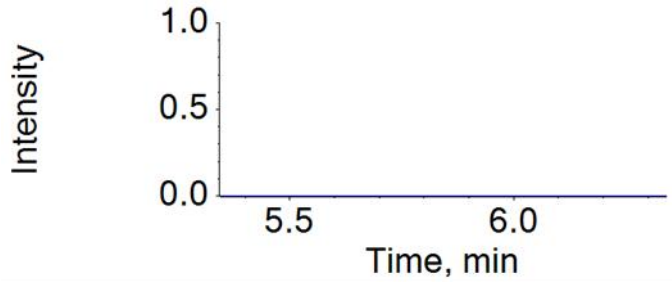


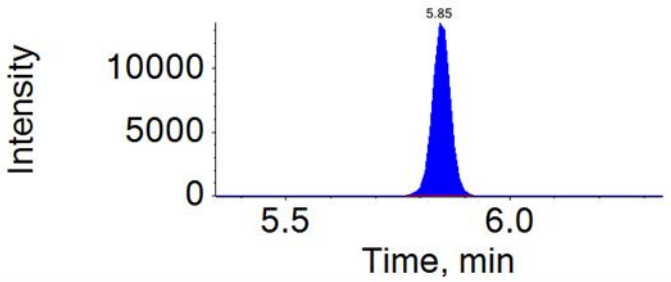
Analyte: PFUnDA	Extraction Standard: 13C7-PFUnDA
563.0 / 519.0	570.0 / 525.0



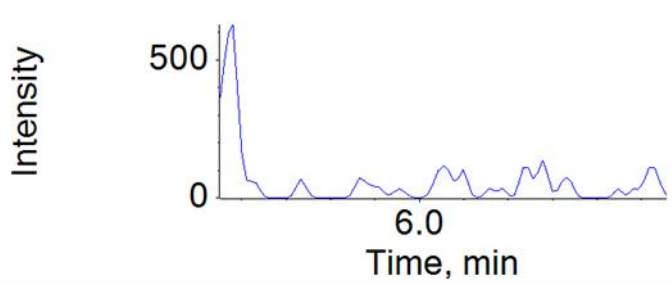


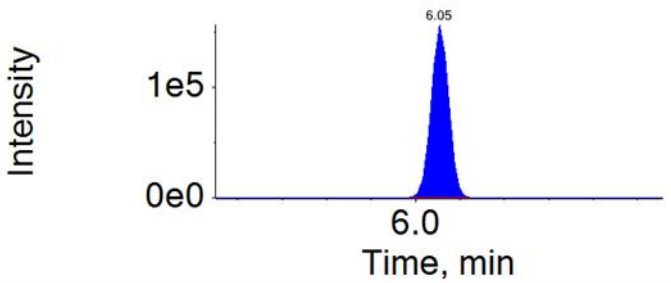
Analyte: NEtFOSAA	Extraction Standard: d5-NEtFOSAA
584.0 / 419.0	589.0 / 419.0





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



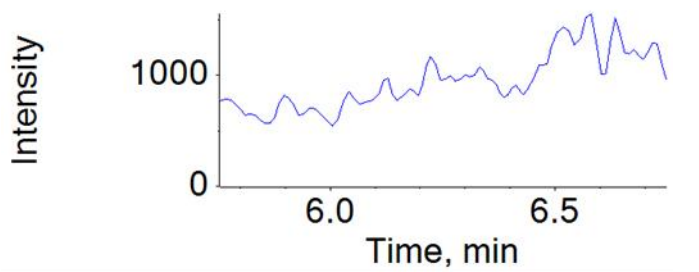


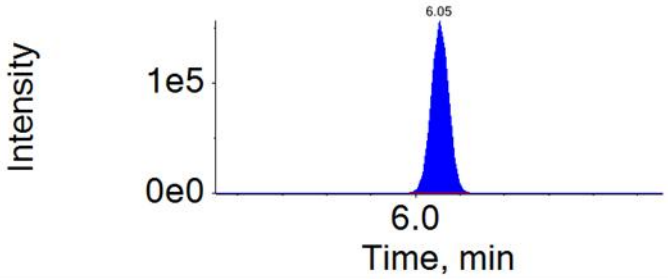
APPROVED
By JPT at 3:31 pm, 11/16/18

REVIEWED
By HMK at 9:04 am, 11/19/18

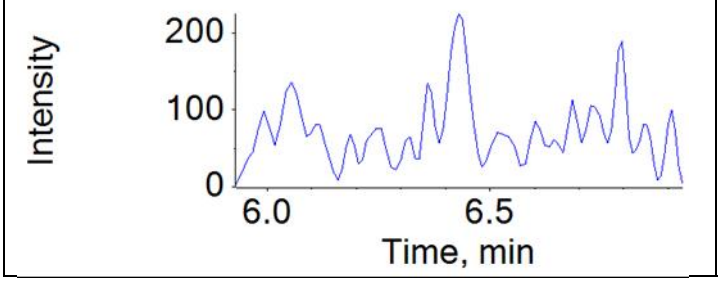
ICAL Name: 18NOV12DCAL **Result Table:** 18319003 11/16/2018 11:16:11 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

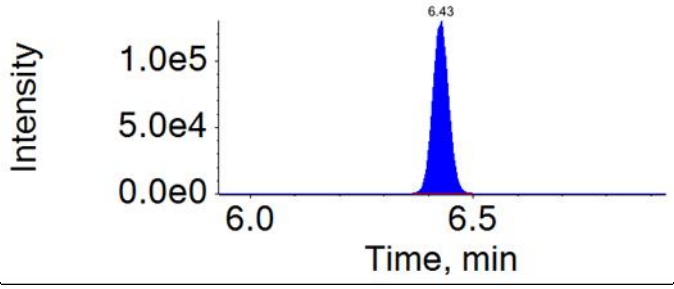
Analyte: PFTrDA	Extraction Standard: 13C2-PFDoDA
663.0 / 619.0	615.0 / 570.0





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





APPROVED
By JPT at 3:31 pm, 11/16/18

REVIEWED
By HMK at 9:04 am, 11/19/18

Ion Ratio Report

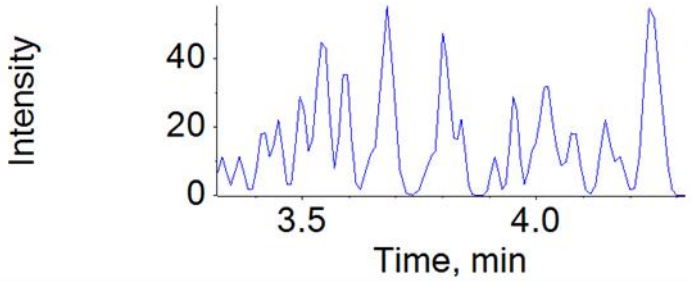
Sample Name: 9885059 **Instrument Name:** LM27631 **File Name:** 18NOV15D-12.wiff

Component Name	RT	RRT	Analyte Area Response	Int Typ	Expected Ion Ratio	Ion Ratio	Ion Ratio % Diff	Ion Ratio Limit	Ion Ratio OOS
PFBS	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	

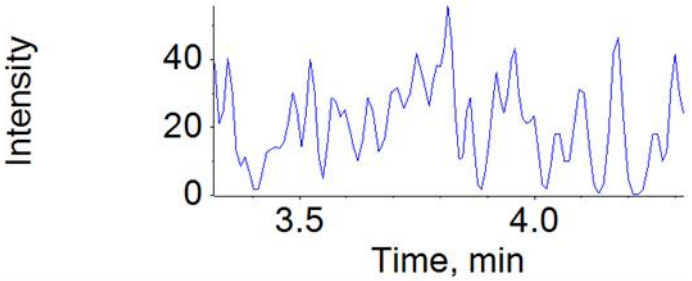
APPROVED
By JPT at 3:31 pm, 11/16/18

REVIEWED
By HMK at 9:04 am, 11/19/18

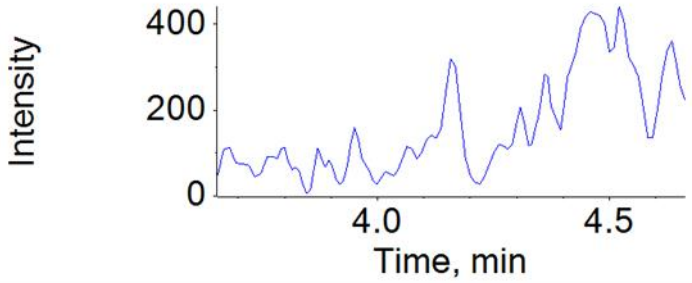
Component: PFBS
Primary Mass: 299.0 / 80.0



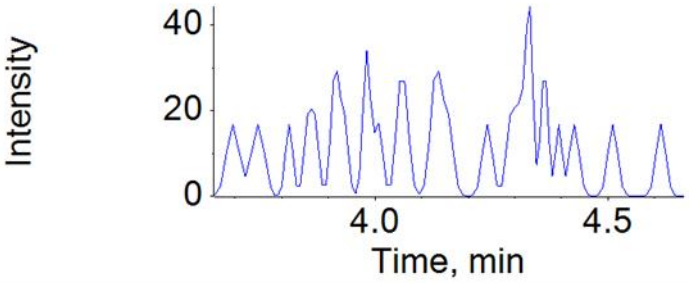
Component: PFBS_2
Secondary Mass: 299.0 / 99.0



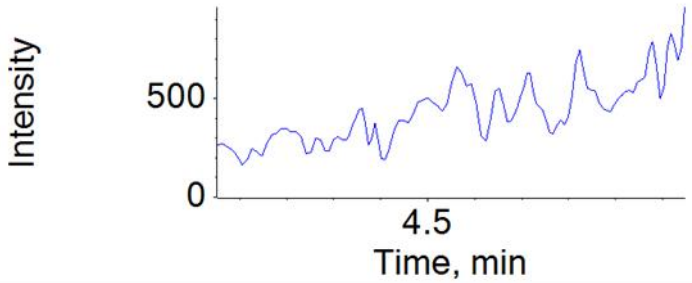
Component: PFHxA
Primary Mass: 313.0 / 269.0



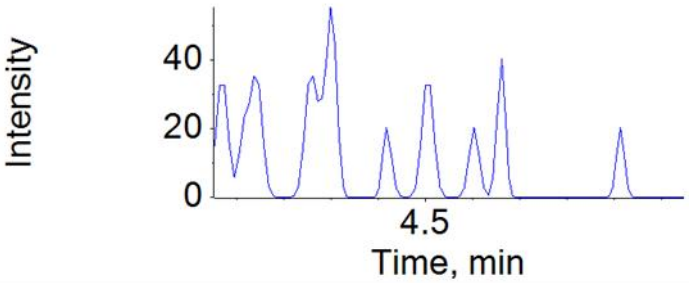
Component: PFHxA_2
Secondary Mass: 313.0 / 119.0



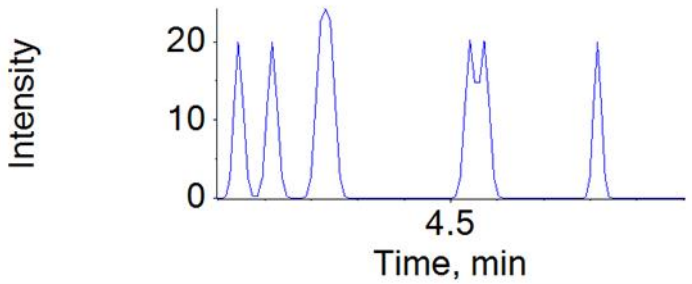
Component: PFHpA
Primary Mass: 363.0 / 319.0



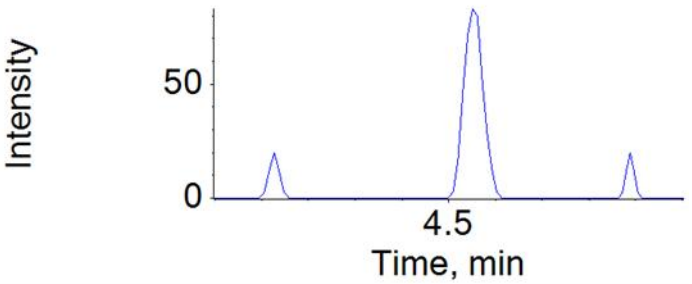
Component: PFHpA_2
Secondary Mass: 363.0 / 169.0



Component: PFHxS
Primary Mass: 399.0 / 80.0



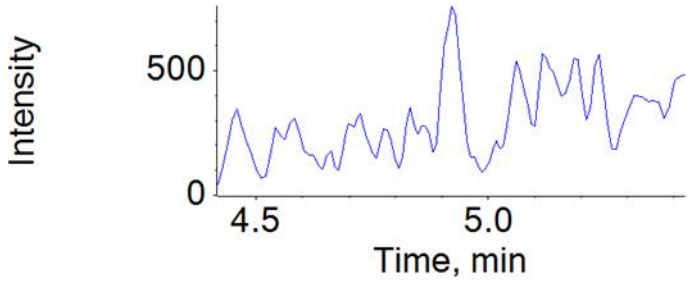
Component: PFHxS_2
Secondary Mass: 399.0 / 99.0



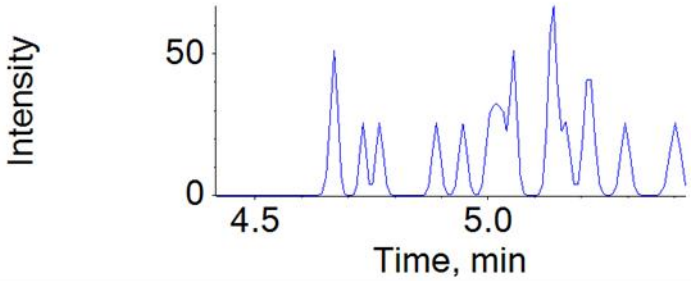
APPROVED
By JPT at 3:31 pm, 11/16/18

REVIEWED
By HMK at 9:04 am, 11/19/18

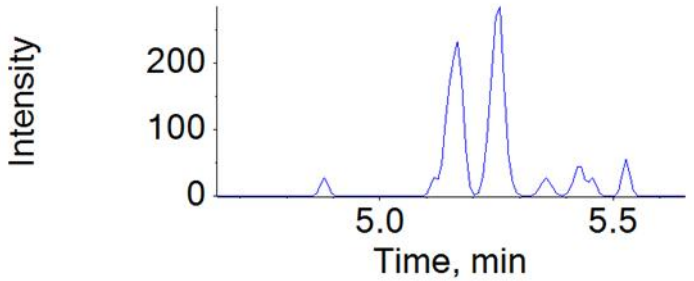
Component: PFOA
Primary Mass: 413.0 / 369.0



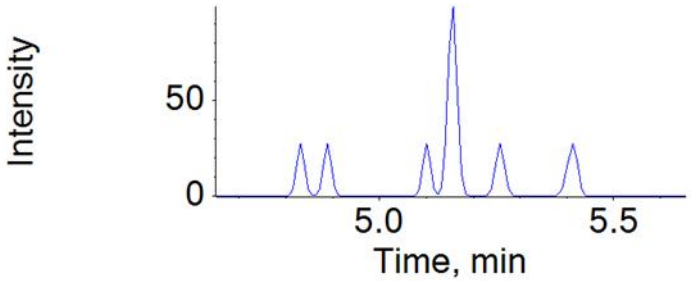
Component: PFOA_2
Secondary Mass: 413.0 / 169.0



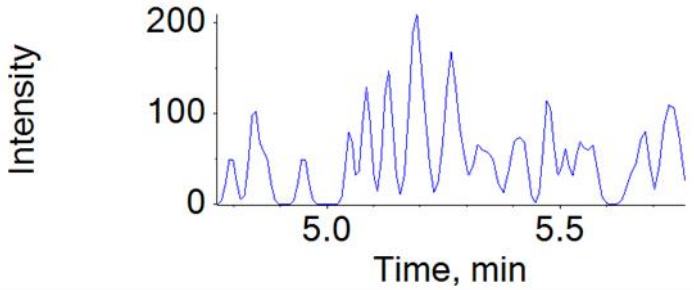
Component: PFOS
Primary Mass: 499.0 / 80.0



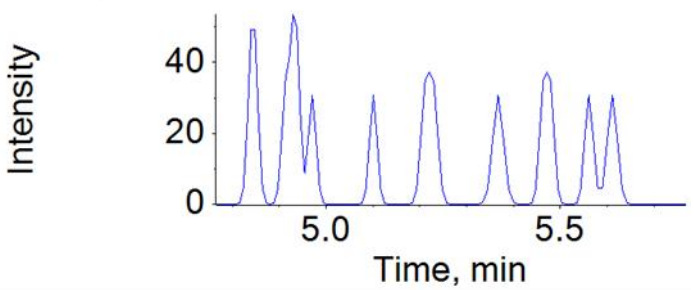
Component: PFOS_2
Secondary Mass: 499.0 / 99.0



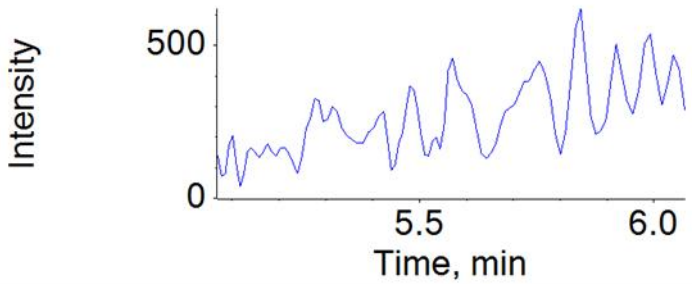
Component: PFNA
Primary Mass: 463.0 / 419.0



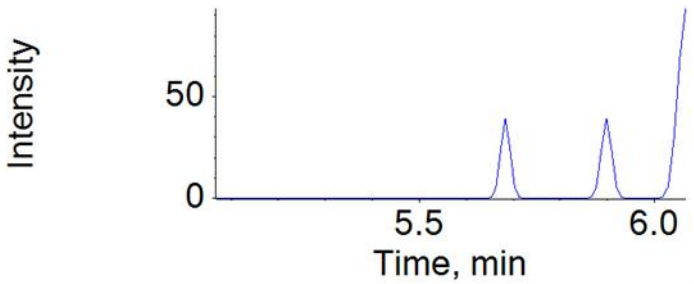
Component: PFNA_2
Secondary Mass: 463.0 / 169.0



Component: PFDA
Primary Mass: 513.0 / 469.0



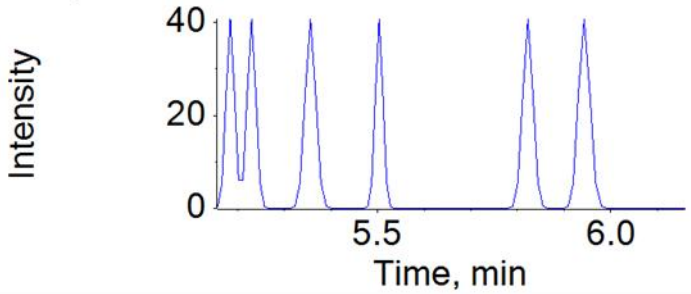
Component: PFDA_2
Secondary Mass: 513.0 / 169.0



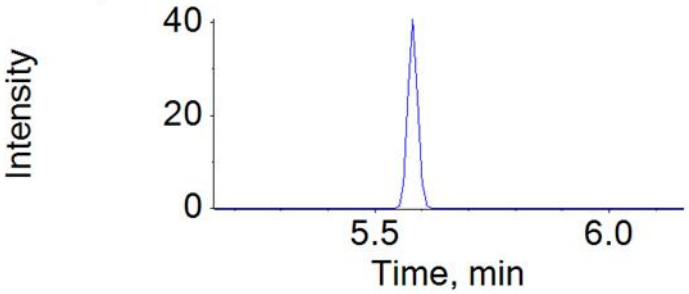
APPROVED
By JPT at 3:31 pm, 11/16/18

REVIEWED
By HMK at 9:04 am, 11/19/18

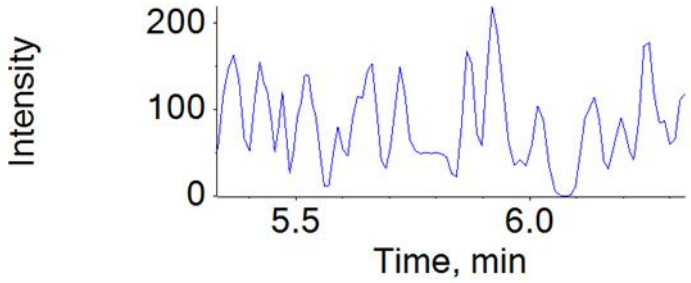
Component: NMeFOSAA
Primary Mass: 570.0 / 419.0



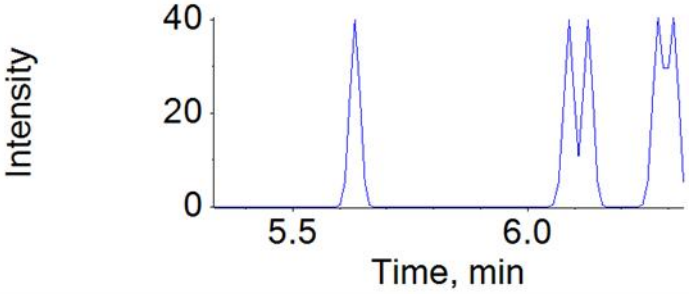
Component: NMeFOSAA_2
Secondary Mass: 570.0 / 483.0



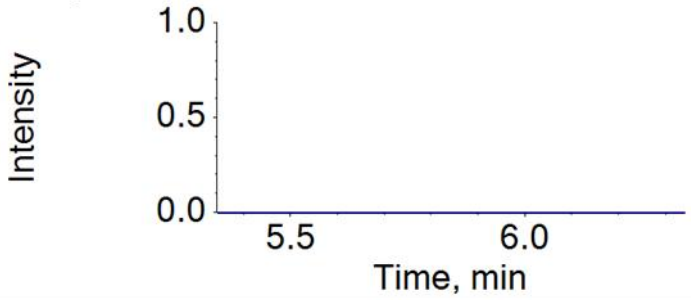
Component: PFUnDA
Primary Mass: 563.0 / 519.0



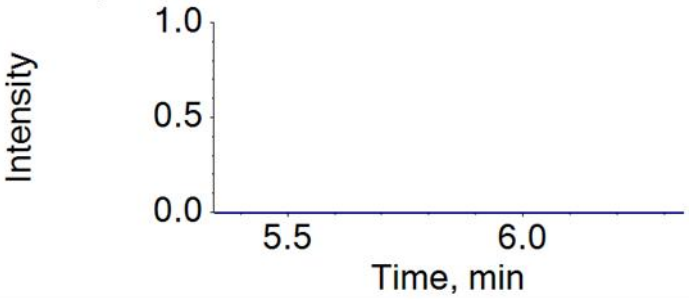
Component: PFUnDA_2
Secondary Mass: 563.0 / 169.0



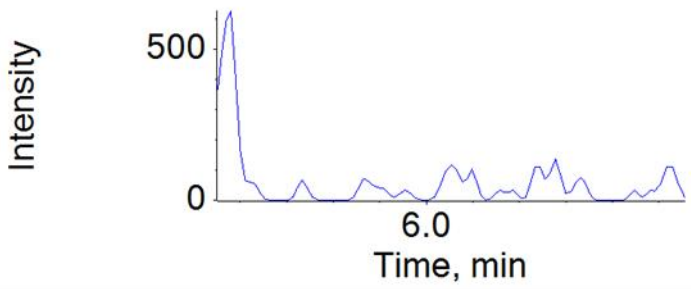
Component: NEtFOSAA
Primary Mass: 584.0 / 419.0



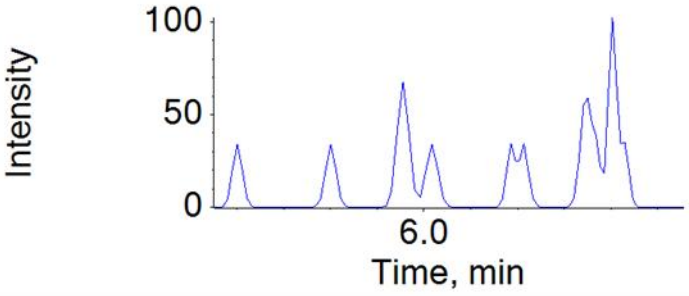
Component: NEtFOSAA_2
Secondary Mass: 584.0 / 526.0



Component: PFDoDA
Primary Mass: 613.0 / 569.0



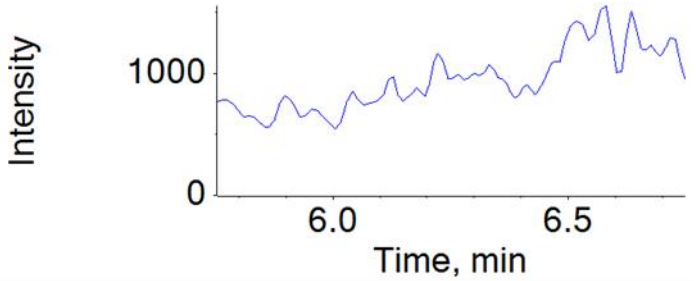
Component: PFDoDA_2
Secondary Mass: 613.0 / 169.0



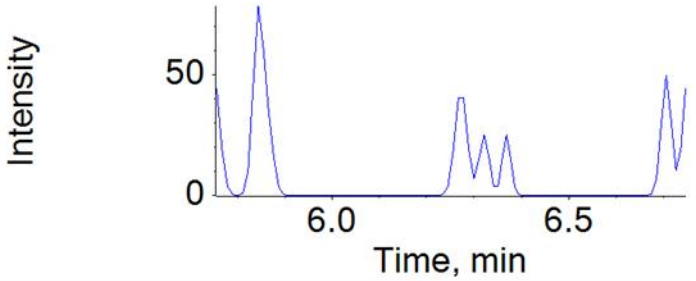
APPROVED
By JPT at 3:31 pm, 11/16/18

REVIEWED
By HMK at 9:04 am, 11/19/18

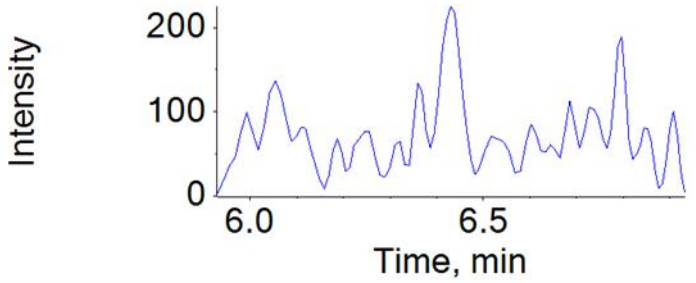
Component: PFTrDA
Primary Mass: 663.0 / 619.0



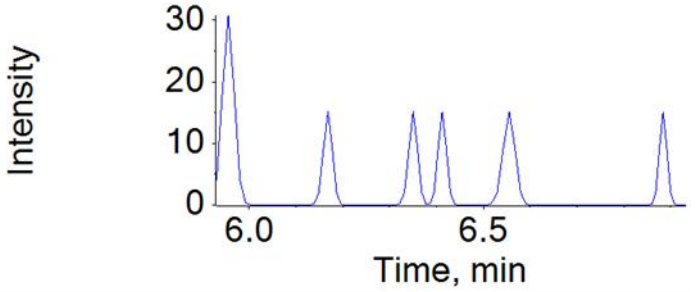
Component: PFTrDA_2
Secondary Mass: 663.0 / 169.0



Component: PFTeDA
Primary Mass: 713.0 / 669.0



Component: PFTeDA_2
Secondary Mass: 713.0 / 169.0



APPROVED
By JPT at 3:31 pm, 11/16/18

REVIEWED
By HMK at 9:04 am, 11/19/18

ICAL Name: 18NOV12DCAL **Result Table:** 18319003 11/16/2018 11:16:11 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Sample Name:	9885062BKG			**Data File:**		18NOV15D-13.wiff
Sample ID:	EPA 537 mod QSM 5.1 table B-15 18319003 OU1-GCI-S-01-01 Grab Soil			**Acquis Date:**		2018-11-15T13:51:27
Sample Type:	Unknown			**Instrument:**		LM27631
Vial Position:	31			**Acquis Method:**		18AUG13_3uL.dam
Injection Vol:	3.00			**Result Table:**		18319003
QMethod File:	18AUG20QM			**ICAL Name:**		18NOV12DCAL
Batch Number:	18319003			**Operator:**		JPT12262
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: 18NOV15D-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	738881.6	732179.1	1	50	
13C2-PFOA	5.0	490760.4	479663.2	2	50	
13C4-PFOS	4.8	267003.4	269685.3	-1	50	
13C2-PFDA	5.0	305535.3	302309.9	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
E13C3-PFBS	341644.0	13C3-PFBA	738881.6	0.462	9.029	6.338	70	50-150	
E13C5-PFHxA	535169.2	13C2-PFOA	490760.4	1.090	9.709	7.649	79	50-150	
E13C3-PFHxS	260854.7	13C2-PFOA	490760.4	0.532	9.184	7.082	77	50-150	
E13C4-PFHpA	433224.6	13C2-PFOA	490760.4	0.883	9.709	7.722	80	50-150	
E13C8-PFOA	733681.6	13C2-PFOA	490760.4	1.495	9.709	7.998	82	50-150	
E13C8-PFOS	231122.2	13C4-PFOS	267003.4	0.866	9.282	7.447	80	50-150	
E13C9-PFNA	401316.2	13C4-PFOS	267003.4	1.503	9.709	8.137	84	50-150	
E13C6-PFDA	526616.2	13C2-PFDA	305535.3	1.724	9.709	7.810	80	50-150	
Ed3-NMeFOSAA	65699.2	13C2-PFDA	305535.3	0.215	9.709	7.537	78	50-150	
E13C7-PFUnDA	204124.5	13C2-PFDA	305535.3	0.668	9.709	7.532	78	50-150	
Ed5-NEtFOSAA	48423.5	13C2-PFDA	305535.3	0.158	9.709	6.511	67	50-150	
E13C2-PFDoDA	440211.1	13C2-PFDA	305535.3	1.441	9.709	7.264	75	50-150	
E13C2-PFTeDA	323624.2	13C2-PFDA	305535.3	1.059	9.709	7.220	74	50-150	

APPROVED
By JPT at 3:31 pm, 11/16/18

REVIEWED
By HMK at 9:04 am, 11/19/18

ICAL Name: 18NOV12DCAL **Result Table:** 18319003 11/16/2018 11:16:11 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

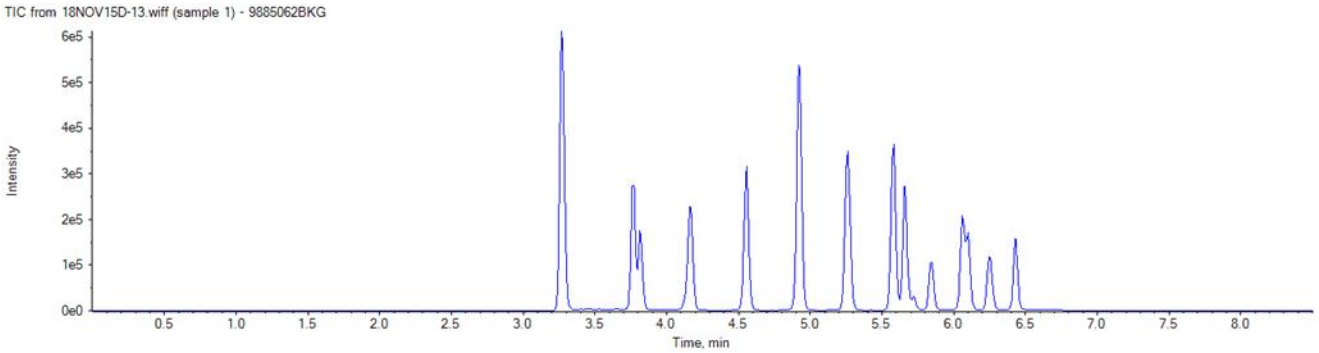
Analyte Quantitation Peak Table

Sample Name: 9885062BKG **Instrument Name:** LM27631 **File Name:** 18NOV15D-13.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	3.82	341644.0	N/A	
PFHxA	4.16	1.000	7673.3		A	13C5-PFHxA	4.16	535169.2	0.014	0.116
PFHpA	N/A	N/A	N/A		A	13C4-PFHpA	4.55	433224.6	N/A	
PFHxS	4.56	1.000	5939.7		M	13C3-PFHxS	4.56	260854.7	0.023	0.214
PFOA	4.92	1.000	29465.5		M	13C8-PFOA	4.92	733681.6	0.040	0.416
PFOS	5.25	1.000	8825.8		M	13C8-PFOS	5.25	231122.2	0.038	0.324
PFNA	N/A	N/A	N/A		A	13C9-PFNA	5.27	401316.2	N/A	
PFDA	N/A	N/A	N/A		A	13C6-PFDA	5.58	526616.2	N/A	
NMeFOSAA	N/A	N/A	N/A		A	d3-NMeFOSAA	5.72	65699.2	N/A	
PFUnDA	N/A	N/A	N/A		A	13C7-PFUnDA	5.84	204124.5	N/A	
NEtFOSAA	N/A	N/A	N/A		A	d5-NEtFOSAA	5.85	48423.5	N/A	
PFDoDA	N/A	N/A	N/A		A	13C2-PFDoDA	6.06	440211.1	N/A	
PFTrDA	N/A	N/A	N/A		A	13C2-PFDoDA	6.06	440211.1	N/A	
PFTeDA	N/A	N/A	N/A		A	13C2-PFTeDA	6.43	323624.2	N/A	

Total Ion Chromatogram

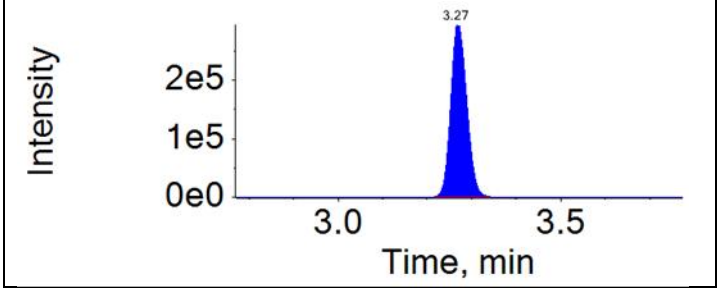


APPROVED
By JPT at 3:31 pm, 11/16/18

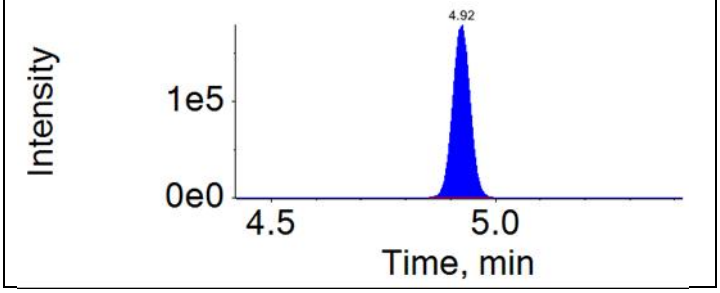
REVIEWED
By HMK at 9:04 am, 11/19/18

ICAL Name: 18NOV12DCAL **Result Table:** 18319003 11/16/2018 11:16:11 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

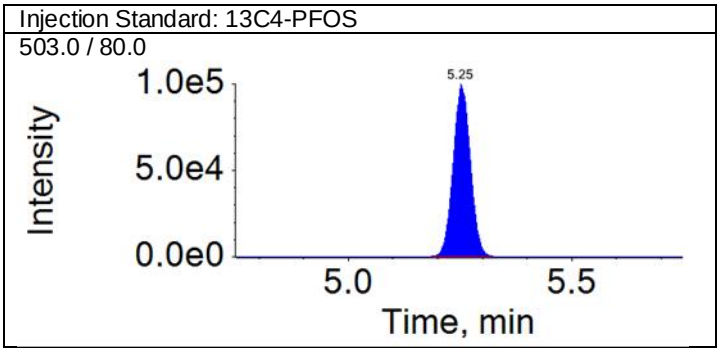
Injection Standard: 13C3-PFBA
216.0 / 172.0



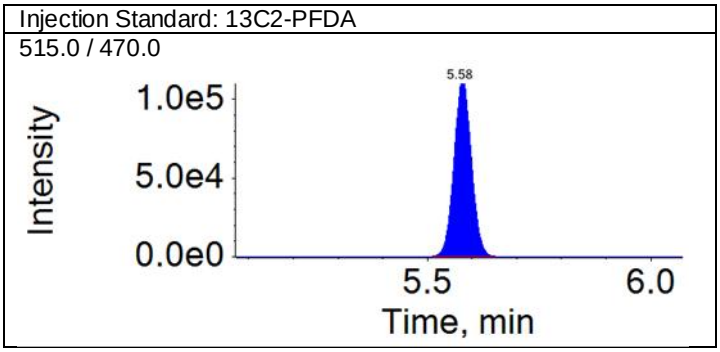
Injection Standard: 13C2-PFOA
415.0 / 370.0



Injection Standard: 13C4-PFOS
503.0 / 80.0



Injection Standard: 13C2-PFDA
515.0 / 470.0

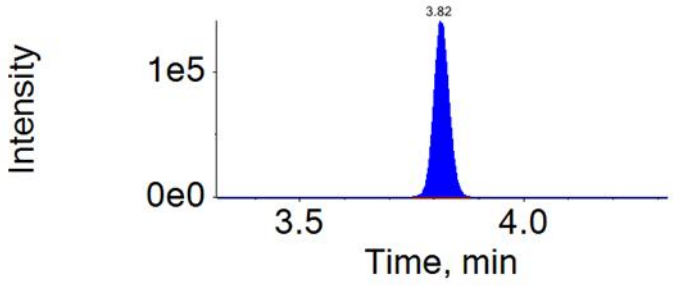


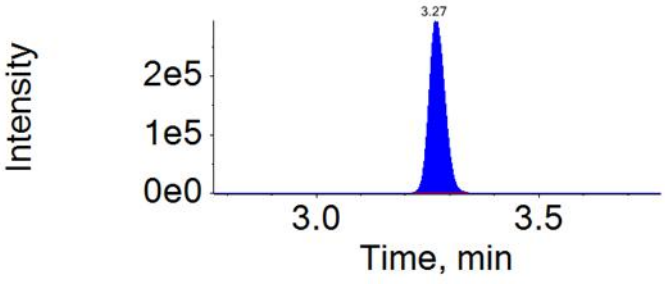
APPROVED
By JPT at 3:31 pm, 11/16/18

REVIEWED
By HMK at 9:04 am, 11/19/18

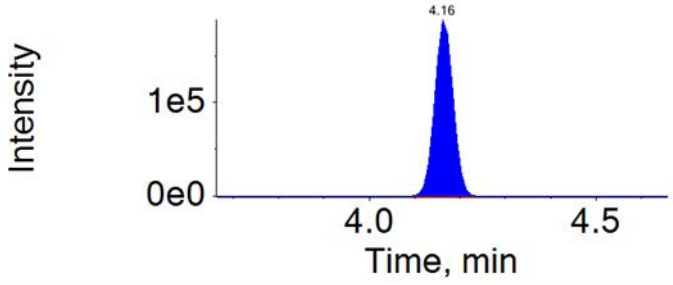
ICAL Name: 18NOV12DCAL **Result Table:** 18319003 11/16/2018 11:16:11 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

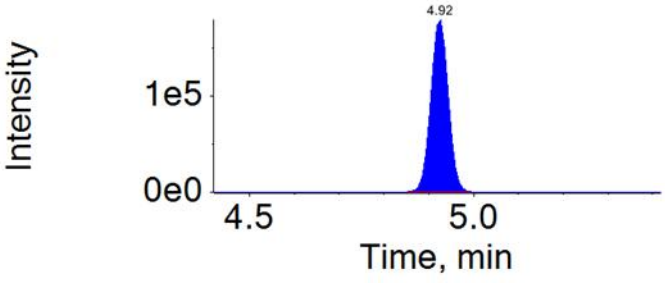
Extraction Standard: E13C3-PFBS	Injection Standard: 13C3-PFBA
302.0 / 80.0	216.0 / 172.0



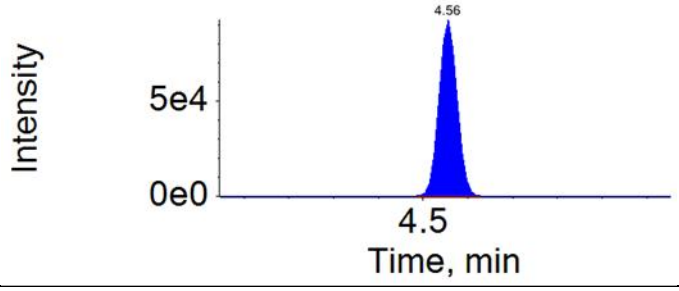


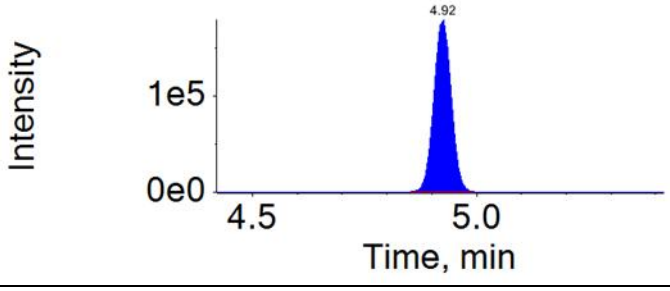
Extraction Standard: E13C5-PFHxA	Injection Standard: 13C2-PFOA
318.0 / 273.0	415.0 / 370.0



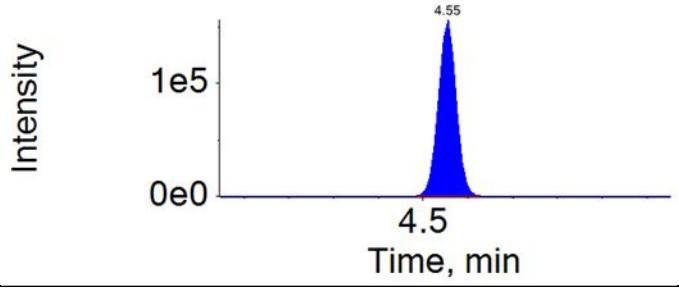


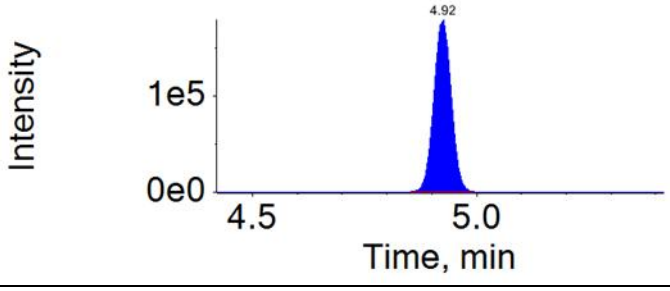
Extraction Standard: E13C3-PFHxS	Injection Standard: 13C2-PFOA
402.0 / 80.0	415.0 / 370.0





Extraction Standard: E13C4-PFHpA	Injection Standard: 13C2-PFOA
367.0 / 322.0	415.0 / 370.0



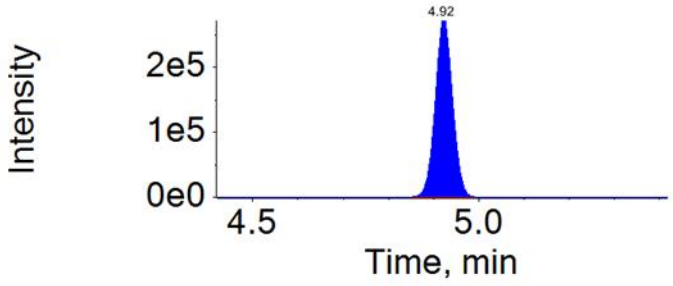


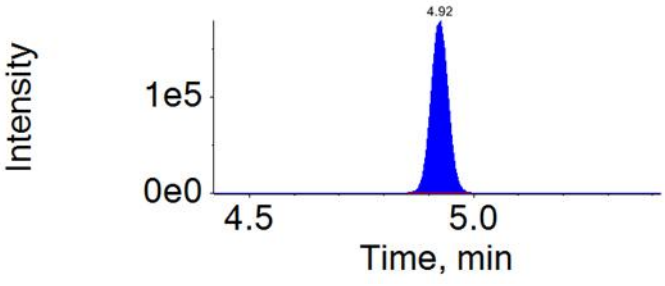
APPROVED
By JPT at 3:31 pm, 11/16/18

REVIEWED
By HMK at 9:04 am, 11/19/18

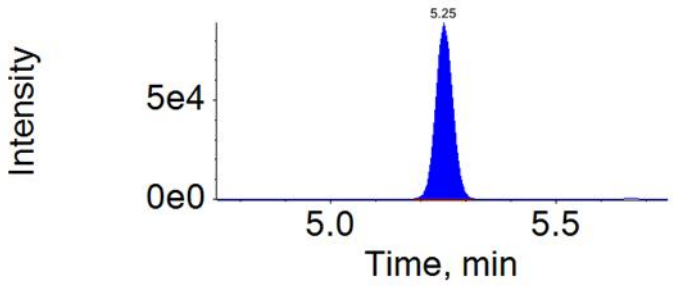
ICAL Name: 18NOV12DCAL **Result Table:** 18319003 11/16/2018 11:16:11 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

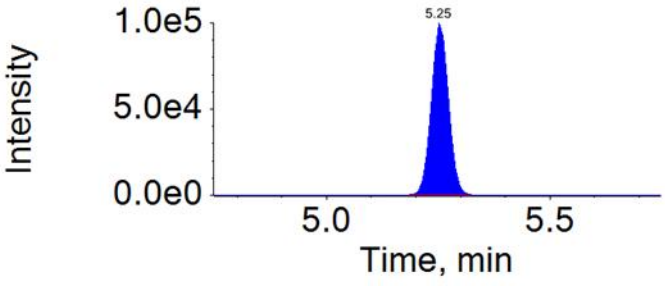
Extraction Standard: E13C8-PFOA	Injection Standard: 13C2-PFOA
421.0 / 376.0	415.0 / 370.0



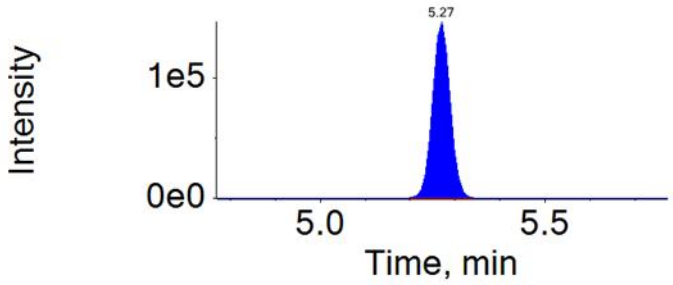


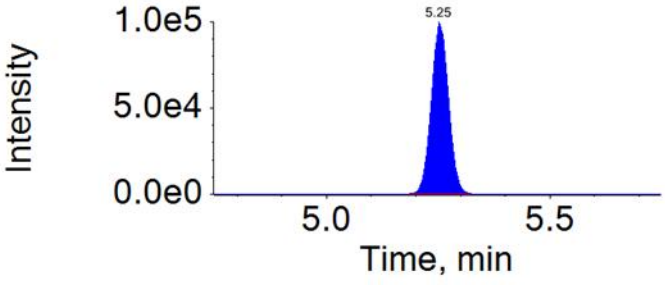
Extraction Standard: E13C8-PFOS	Injection Standard: 13C4-PFOS
507.0 / 80.0	503.0 / 80.0



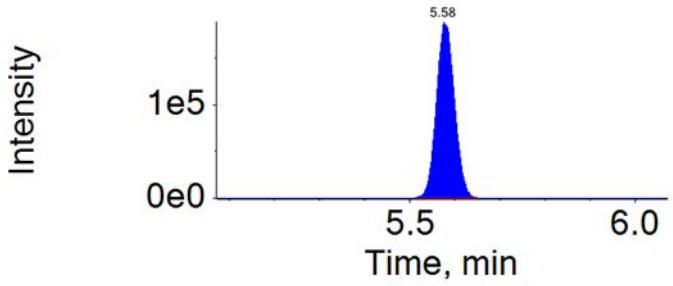


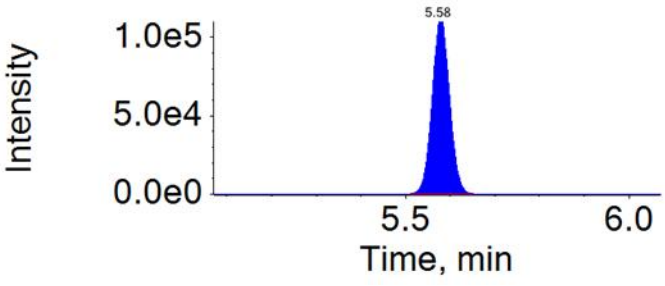
Extraction Standard: E13C9-PFNA	Injection Standard: 13C4-PFOS
472.0 / 427.0	503.0 / 80.0





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



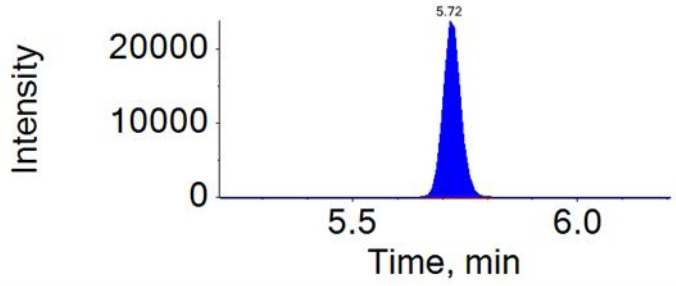


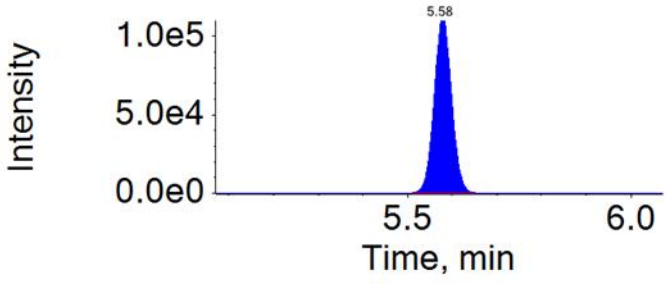
APPROVED
By JPT at 3:31 pm, 11/16/18

REVIEWED
By HMK at 9:04 am, 11/19/18

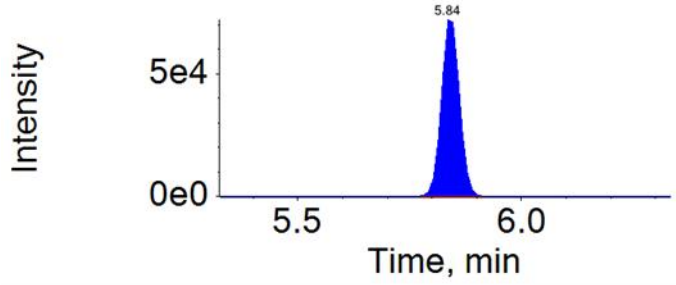
ICAL Name: 18NOV12DCAL **Result Table:** 18319003 11/16/2018 11:16:11 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

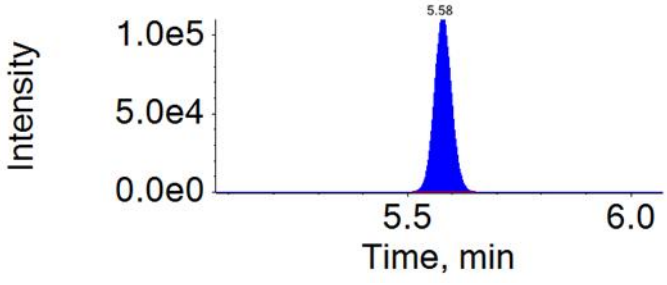
Extraction Standard: Ed3-NMeFOSAA	Injection Standard: 13C2-PFDA
573.0 / 419.0	515.0 / 470.0



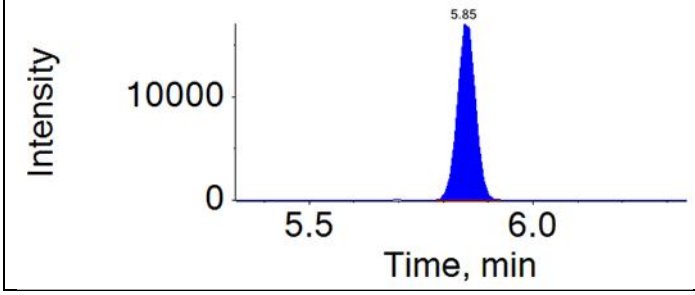


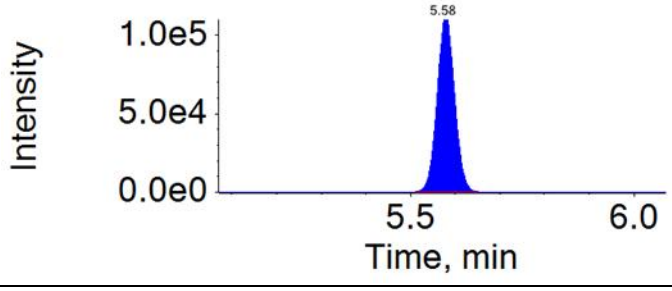
Extraction Standard: E13C7-PFUnDA	Injection Standard: 13C2-PFDA
570.0 / 525.0	515.0 / 470.0



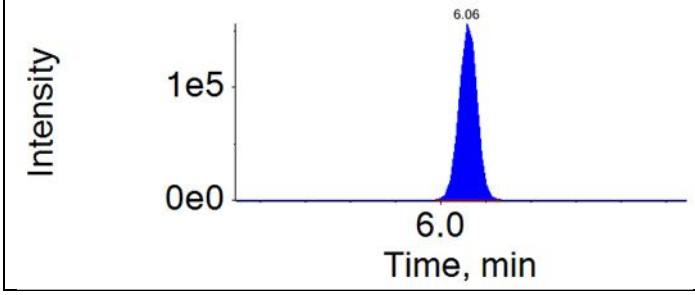


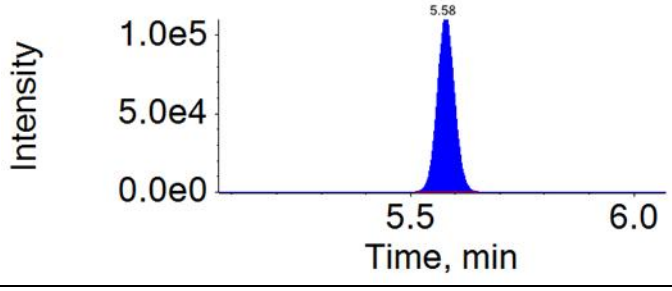
Extraction Standard: Ed5-NEtFOSAA	Injection Standard: 13C2-PFDA
589.0 / 419.0	515.0 / 470.0





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

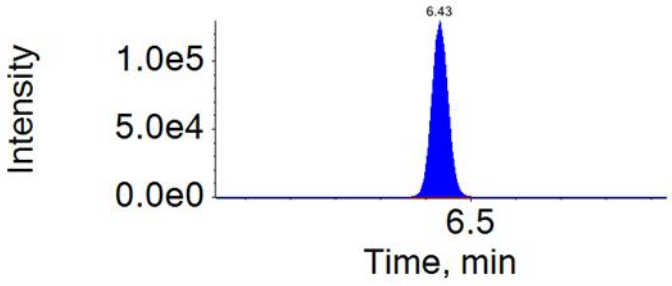
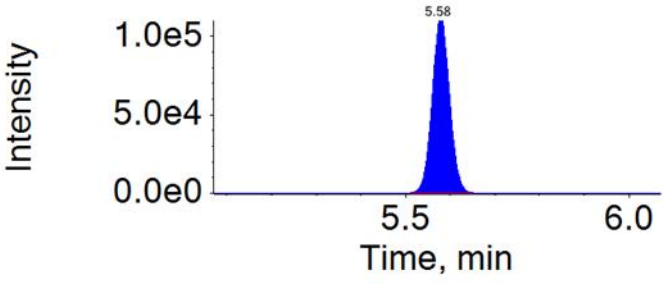




APPROVED
By JPT at 3:31 pm, 11/16/18

REVIEWED
By HMK at 9:04 am, 11/19/18

ICAL Name: 18NOV12DCAL **Result Table:** 18319003 11/16/2018 11:16:11 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

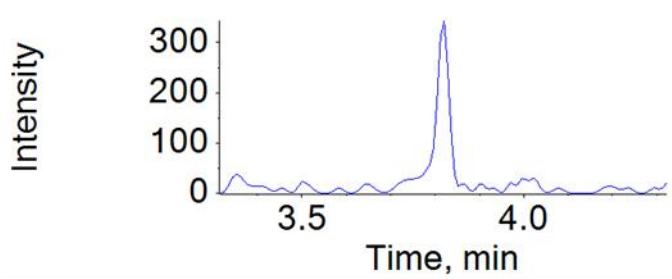
Extraction Standard: E13C2-PFTeDA	Injection Standard: 13C2-PFDA
715.0 / 670.0	515.0 / 470.0
	

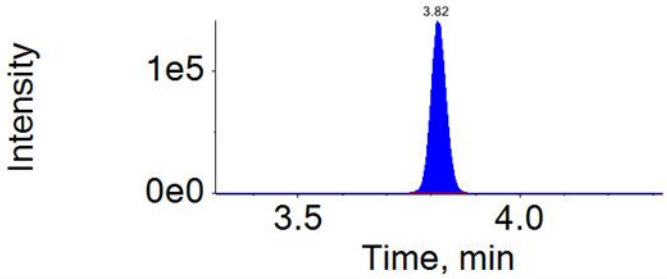
APPROVED
By JPT at 3:31 pm, 11/16/18

REVIEWED
By HMK at 9:04 am, 11/19/18

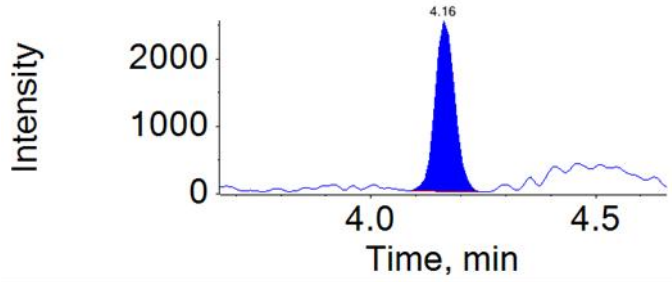
ICAL Name: 18NOV12DCAL **Result Table:** 18319003 11/16/2018 11:16:11 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

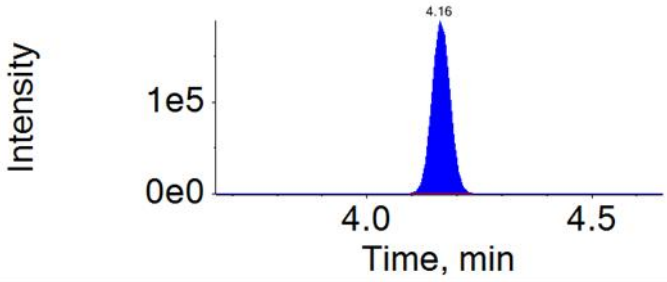
Analyte: PFBS	Extraction Standard: 13C3-PFBS
299.0 / 80.0	302.0 / 80.0



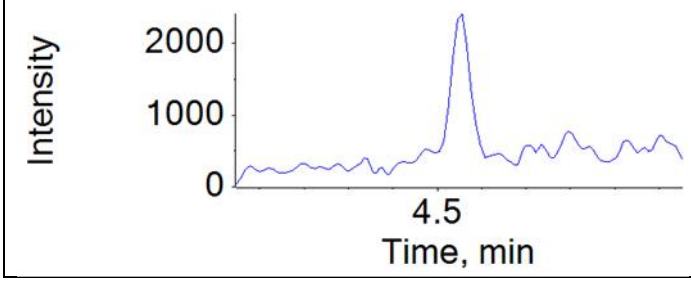


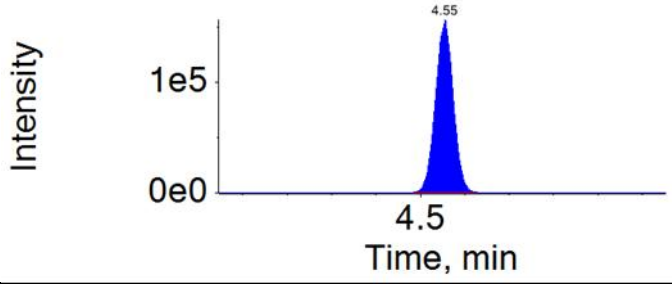
Analyte: PFHxA	Extraction Standard: 13C5-PFHxA
313.0 / 269.0	318.0 / 273.0



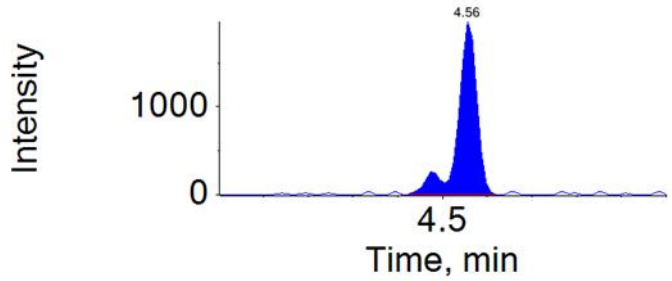


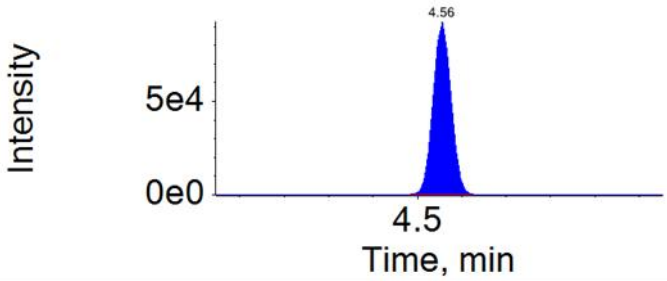
Analyte: PFHpA	Extraction Standard: 13C4-PFHpA
363.0 / 319.0	367.0 / 322.0





Analyte: PFHxS	Extraction Standard: 13C3-PFHxS
399.0 / 80.0	402.0 / 80.0



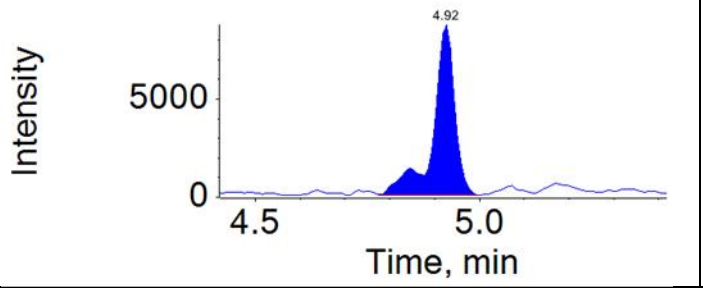


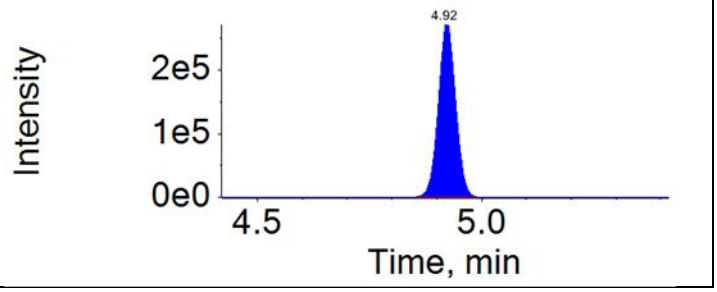
APPROVED
By JPT at 3:31 pm, 11/16/18

REVIEWED
By HMK at 9:04 am, 11/19/18

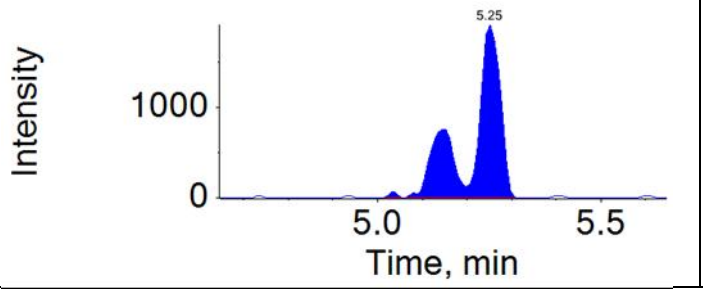
ICAL Name: 18NOV12DCAL **Result Table:** 18319003 11/16/2018 11:16:11 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

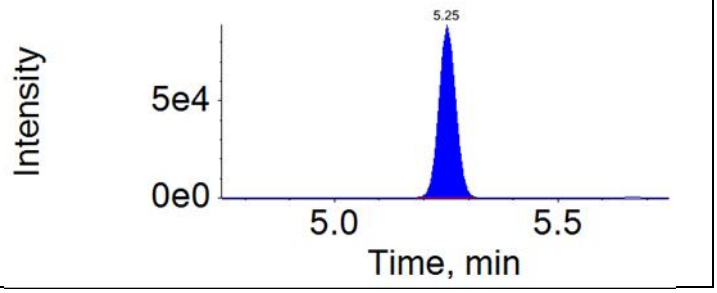
Analyte: PFOA	Extraction Standard: 13C8-PFOA
413.0 / 369.0	421.0 / 376.0



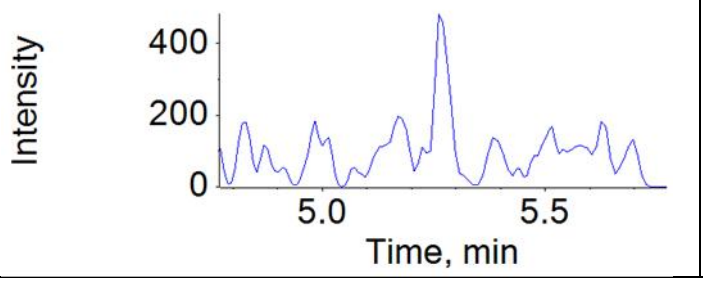


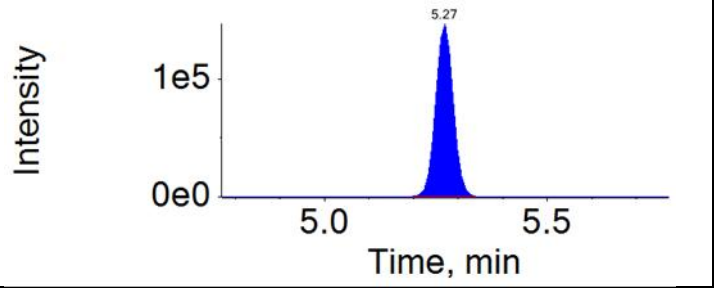
Analyte: PFOS	Extraction Standard: 13C8-PFOS
499.0 / 80.0	507.0 / 80.0



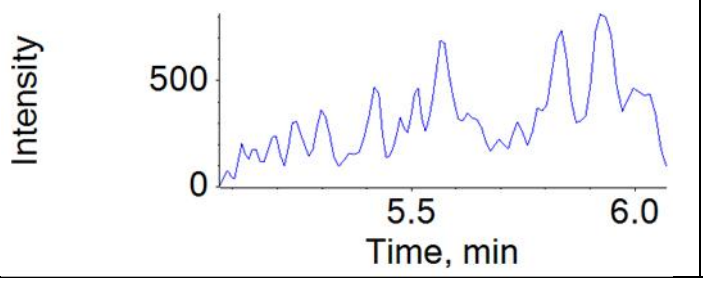


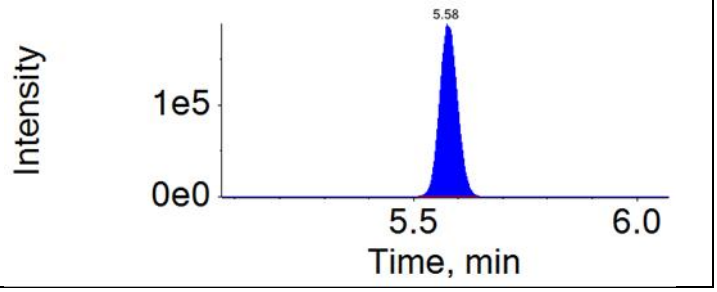
Analyte: PFNA	Extraction Standard: 13C9-PFNA
463.0 / 419.0	472.0 / 427.0





Analyte: PFDA	Extraction Standard: 13C6-PFDA
513.0 / 469.0	519.0 / 474.0



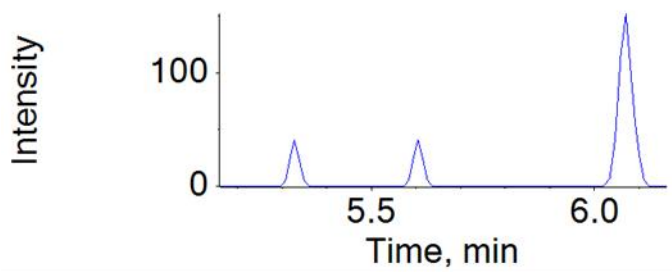


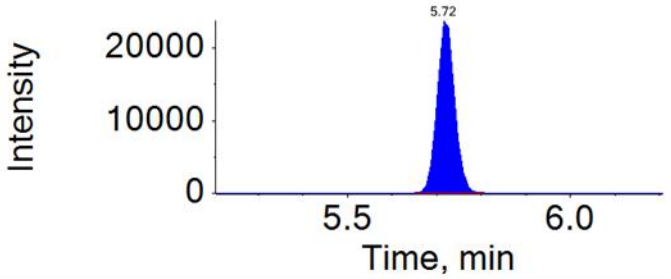
APPROVED
By JPT at 3:31 pm, 11/16/18

REVIEWED
By HMK at 9:04 am, 11/19/18

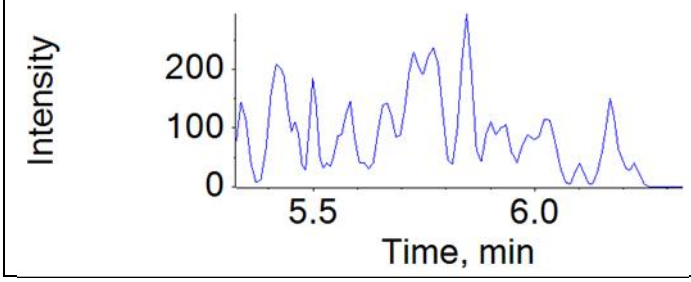
ICAL Name: 18NOV12DCAL **Result Table:** 18319003 11/16/2018 11:16:11 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

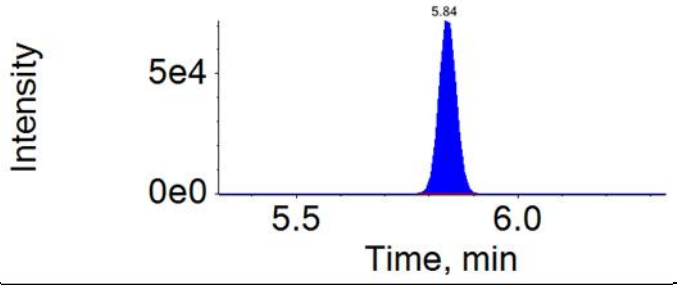
Analyte: NMeFOSAA	Extraction Standard: d3-NMeFOSAA
570.0 / 419.0	573.0 / 419.0



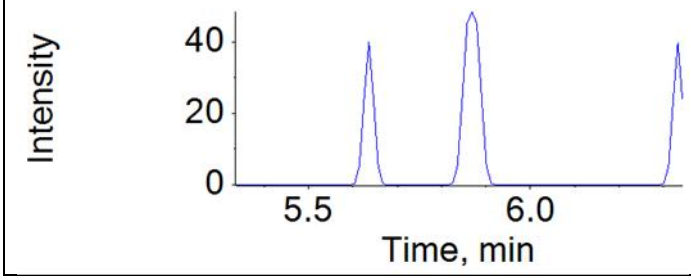


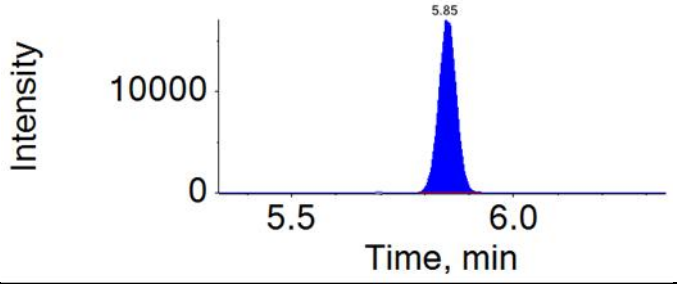
Analyte: PFUnDA	Extraction Standard: 13C7-PFUnDA
563.0 / 519.0	570.0 / 525.0



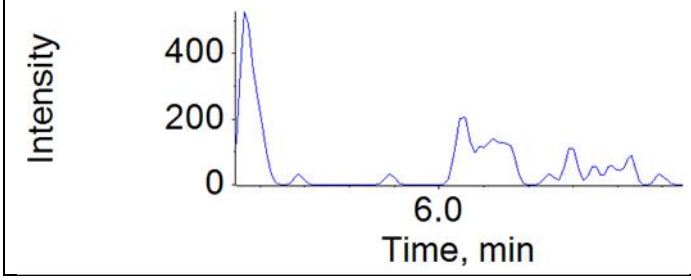


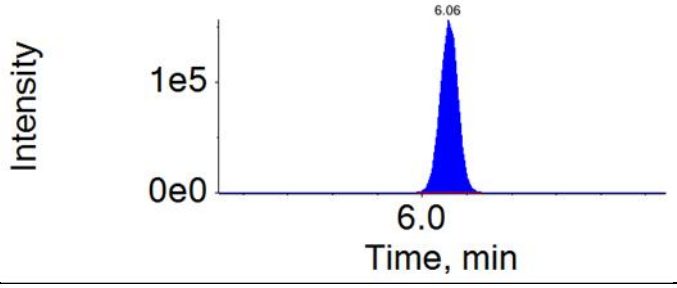
Analyte: NEtFOSAA	Extraction Standard: d5-NEtFOSAA
584.0 / 419.0	589.0 / 419.0





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



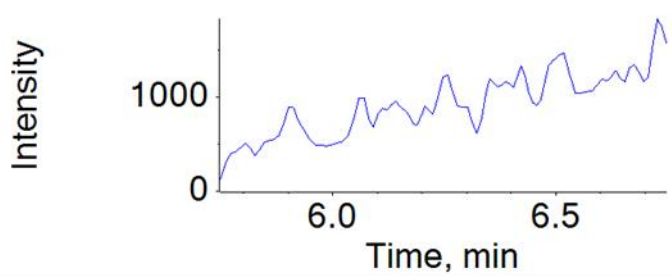


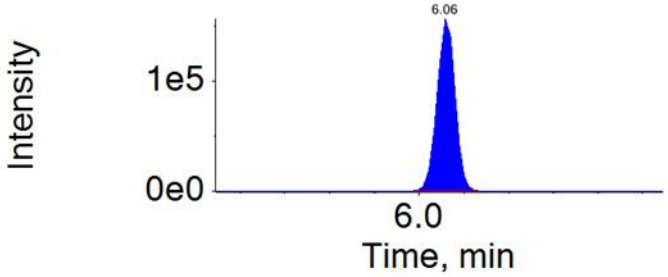
APPROVED
By JPT at 3:31 pm, 11/16/18

REVIEWED
By HMK at 9:04 am, 11/19/18

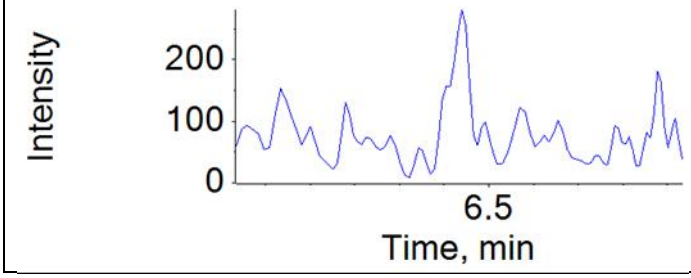
ICAL Name: 18NOV12DCAL **Result Table:** 18319003 11/16/2018 11:16:11 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

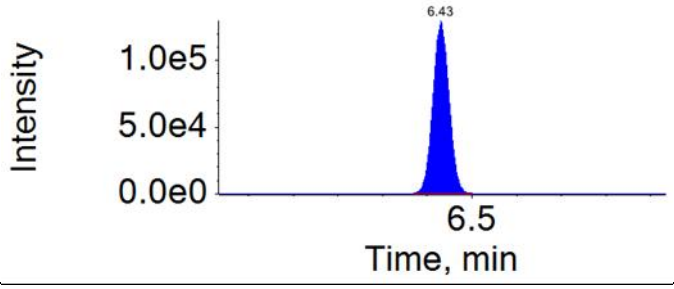
Analyte: PFTrDA	Extraction Standard: 13C2-PFDoDA
663.0 / 619.0	615.0 / 570.0





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



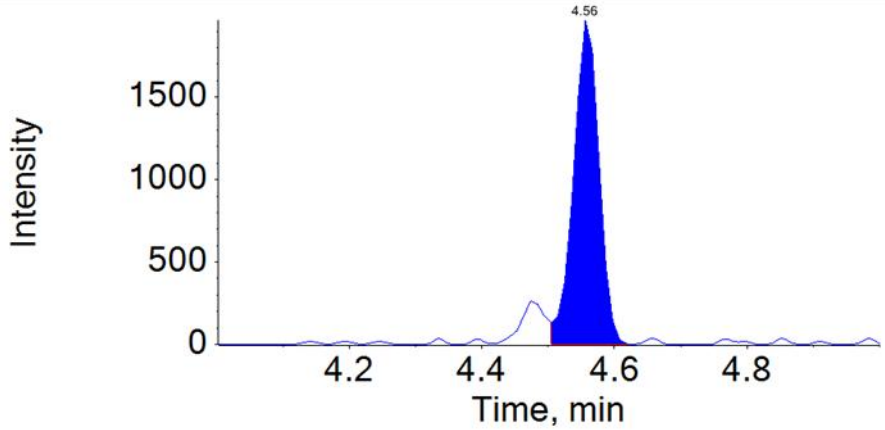


APPROVED
By JPT at 3:31 pm, 11/16/18

REVIEWED
By HMK at 9:04 am, 11/19/18

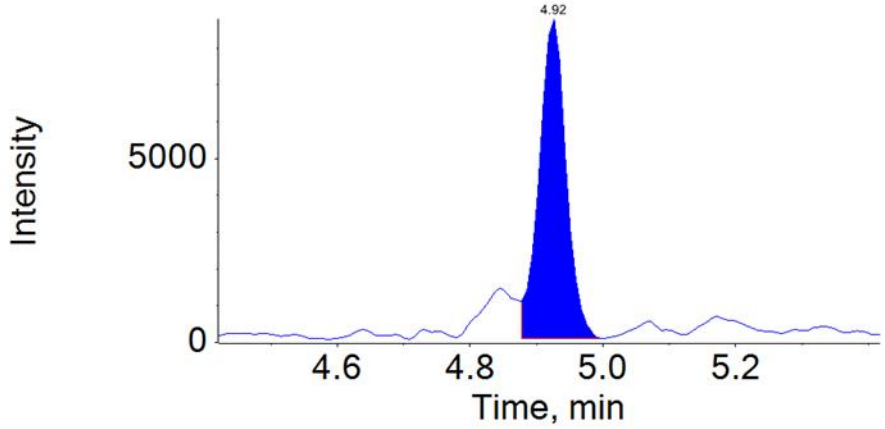
Results Table Name: 18319003
Results Table Date: 11/16/2018 3:25:03 PM
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

Component Name:
PFHxS
RT (min.):
4.56
Peak Area:
5256.4
Mass Range:
399.0 / 80.0
File Name:
18NOV15D-13.wiff
Sample Name:
9885062BKG



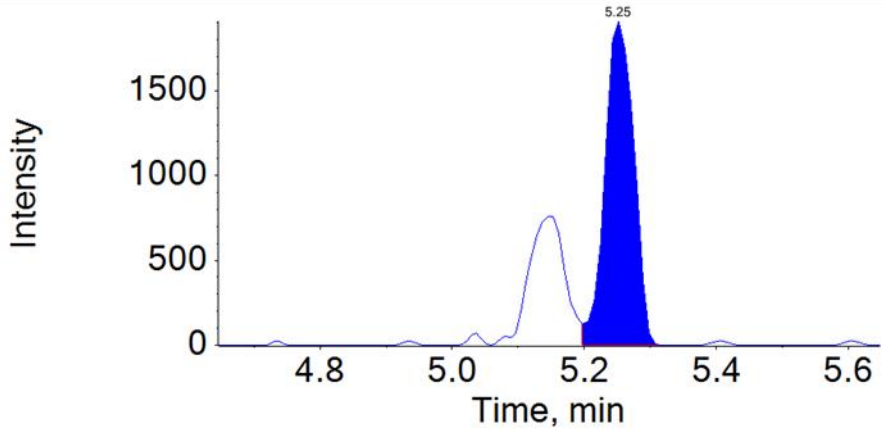
Integration Comment: incorrect integration

Component Name:
PFOA
RT (min.):
4.92
Peak Area:
24363.6
Mass Range:
413.0 / 369.0
File Name:
18NOV15D-13.wiff
Sample Name:
9885062BKG



Integration Comment: incorrect integration

Component Name:
PFOS
RT (min.):
5.25
Peak Area:
5830.2
Mass Range:
499.0 / 80.0
File Name:
18NOV15D-13.wiff
Sample Name:
9885062BKG



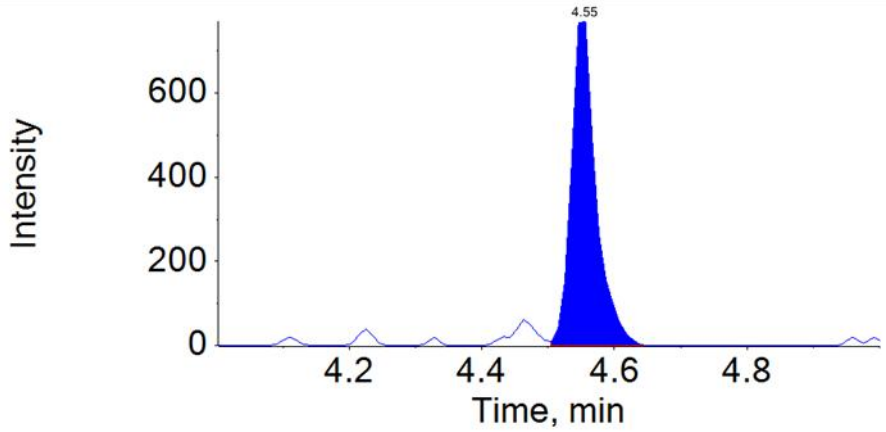
Integration Comment: incorrect integration

APPROVED
By JPT at 3:31 pm, 11/16/18

REVIEWED
By HMK at 9:04 am, 11/19/18

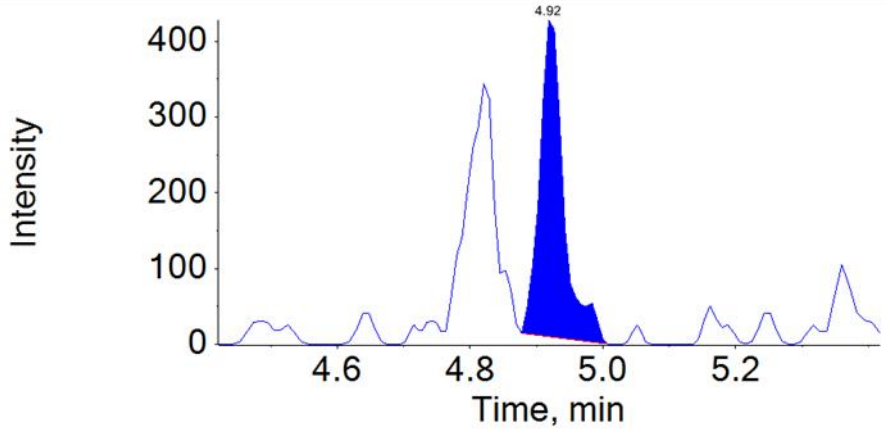
Results Table Name: 18319003
Results Table Date: 11/16/2018 3:25:03 PM
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

Component Name:
PFHxS_2
RT (min.):
4.55
Peak Area:
2030.0
Mass Range:
399.0 / 99.0
File Name:
18NOV15D-13.wiff
Sample Name:
9885062BKG



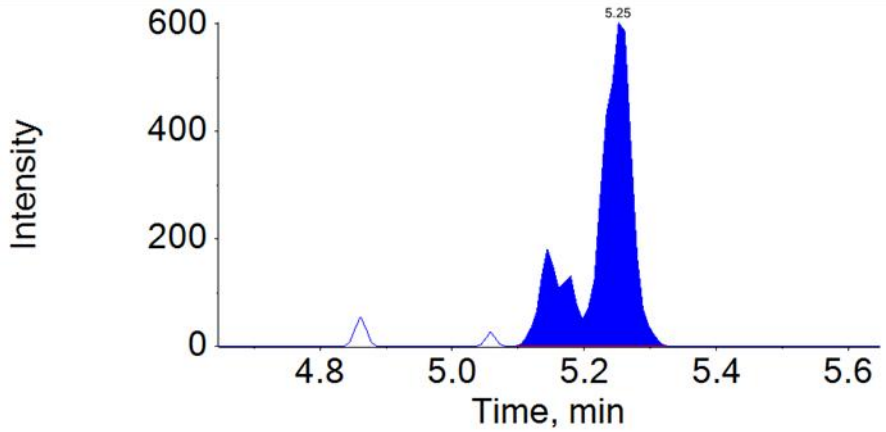
Integration Comment: incorrect integration

Component Name:
PFOA_2
RT (min.):
4.92
Peak Area:
1062.7
Mass Range:
413.0 / 169.0
File Name:
18NOV15D-13.wiff
Sample Name:
9885062BKG



Integration Comment: incorrect integration

Component Name:
PFOS_2
RT (min.):
5.25
Peak Area:
2349.5
Mass Range:
499.0 / 99.0
File Name:
18NOV15D-13.wiff
Sample Name:
9885062BKG



Integration Comment: incorrect integration

APPROVED
By JPT at 3:31 pm, 11/16/18

REVIEWED
By HMK at 9:04 am, 11/19/18

Results Table Name: 18319003
Results Table Date: 11/16/2018 3:25:03 PM

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

APPROVED
By JPT at 3:31 pm, 11/16/18

REVIEWED
By HMK at 9:04 am, 11/19/18

Ion Ratio Report

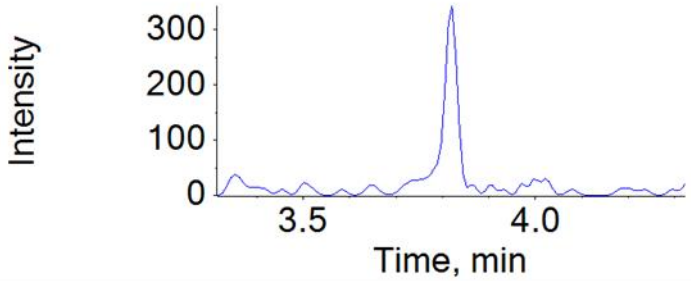
Sample Name: 9885062BKG **Instrument Name:** LM27631 **File Name:** 18NOV15D-13.wiff

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	
PFHxA	4.16	1.00	7673.3	A	N/A	1.0000			
PFHxA_2	4.16	1.00	156.9	A	N/A	0.0204	74	50	OOS
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	4.56	1.00	5939.7	M	N/A	1.0000			
PFHxS_2	4.55	1.00	2185.2	M	N/A	0.3679	7	50	
PFOA	4.92	1.00	29465.5	M	N/A	1.0000			
PFOA_2	4.88	0.99	2219.8	M	N/A	0.0753	32	50	
PFOS	5.25	1.00	8825.8	M	N/A	1.0000			
PFOS_2	5.25	1.00	2377.5	M	N/A	0.2694	-9	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	

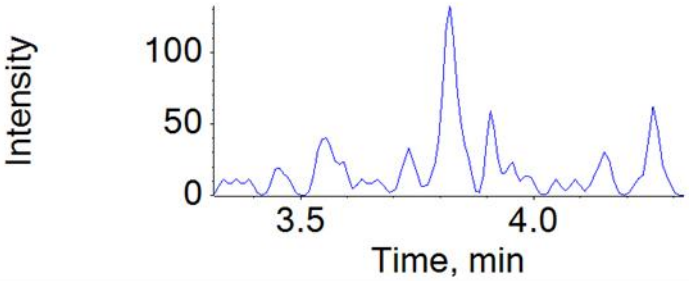
APPROVED
By JPT at 3:31 pm, 11/16/18

REVIEWED
By HMK at 9:04 am, 11/19/18

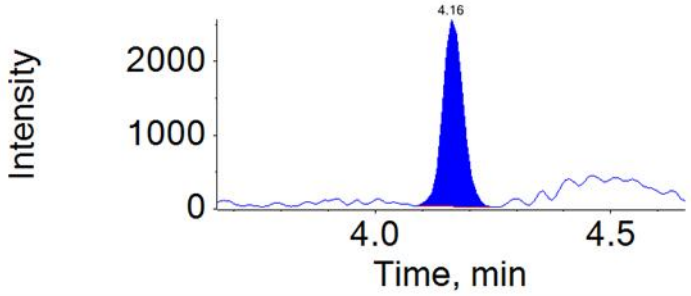
Component: PFBS
Primary Mass: 299.0 / 80.0



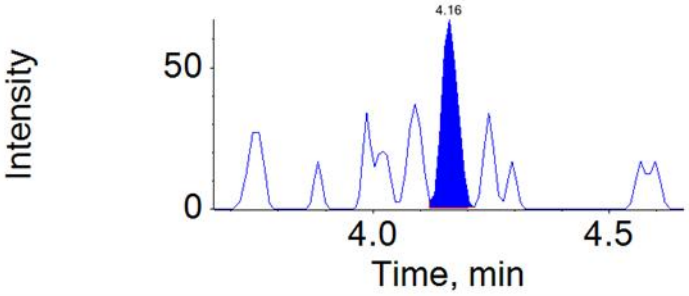
Component: PFBS_2
Secondary Mass: 299.0 / 99.0



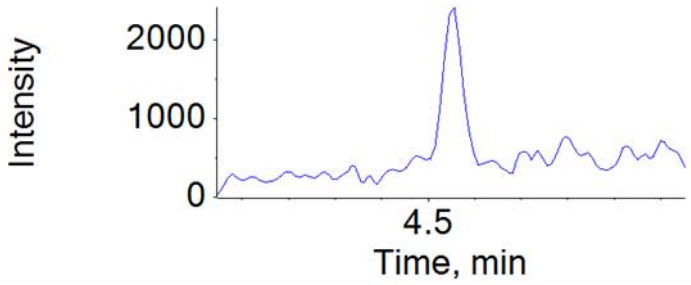
Component: PFHxA
Primary Mass: 313.0 / 269.0



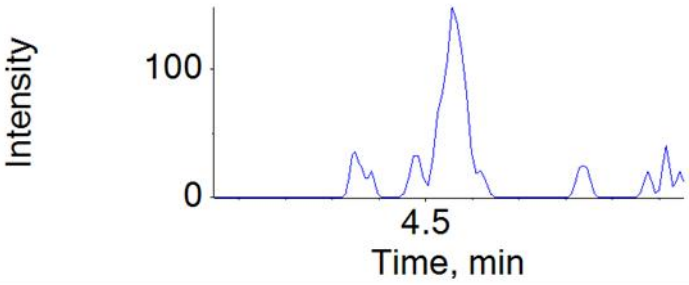
Component: PFHxA_2
Secondary Mass: 313.0 / 119.0



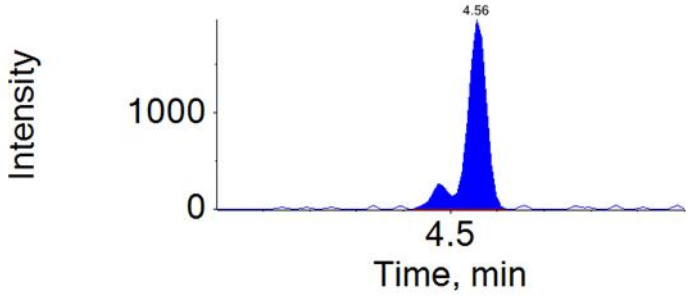
Component: PFHpA
Primary Mass: 363.0 / 319.0



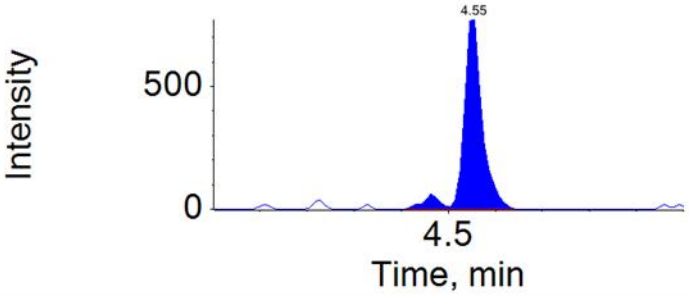
Component: PFHpA_2
Secondary Mass: 363.0 / 169.0



Component: PFHxS
Primary Mass: 399.0 / 80.0



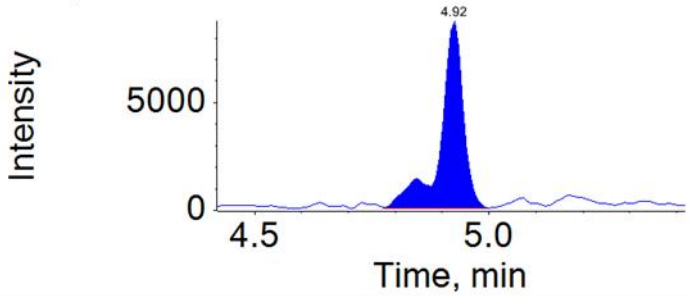
Component: PFHxS_2
Secondary Mass: 399.0 / 99.0



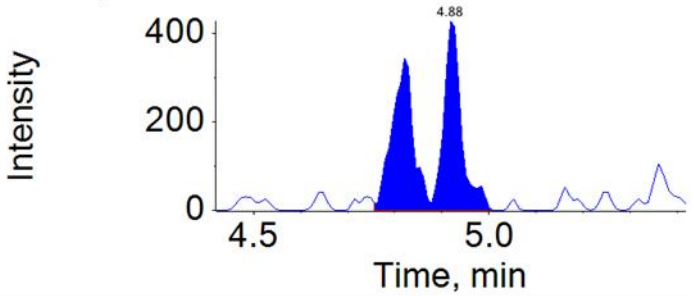
APPROVED
By JPT at 3:31 pm, 11/16/18

REVIEWED
By HMK at 9:04 am, 11/19/18

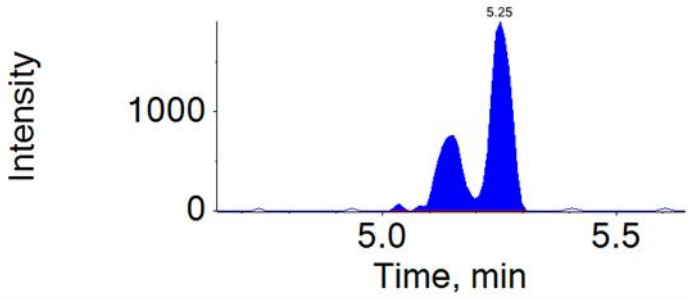
Component: PFOA
Primary Mass: 413.0 / 369.0



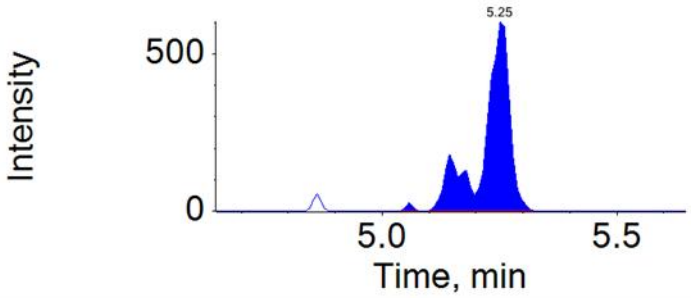
Component: PFOA_2
Secondary Mass: 413.0 / 169.0



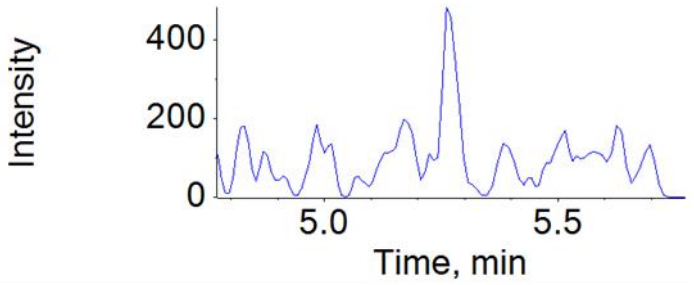
Component: PFOS
Primary Mass: 499.0 / 80.0



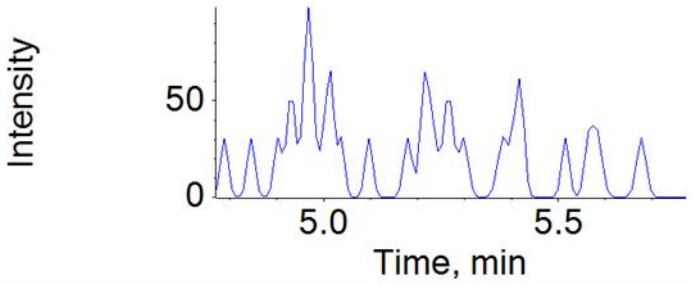
Component: PFOS_2
Secondary Mass: 499.0 / 99.0



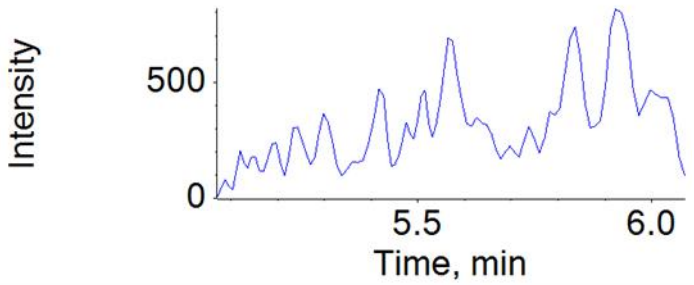
Component: PFNA
Primary Mass: 463.0 / 419.0



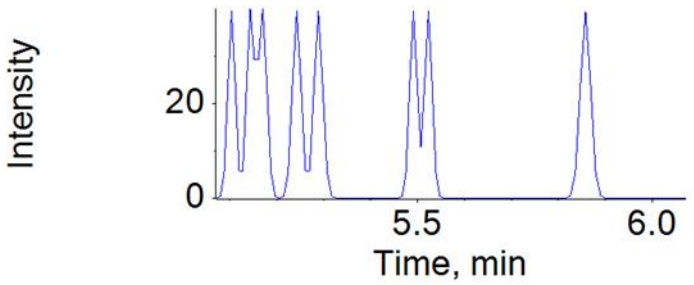
Component: PFNA_2
Secondary Mass: 463.0 / 169.0



Component: PFDA
Primary Mass: 513.0 / 469.0



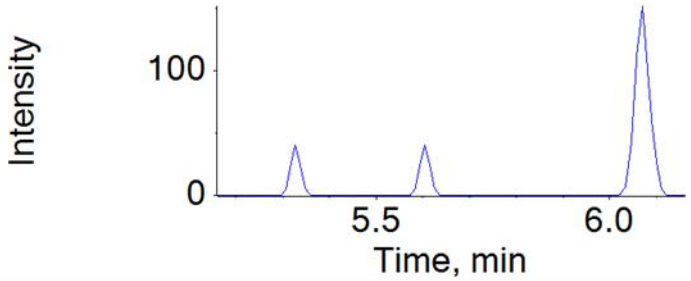
Component: PFDA_2
Secondary Mass: 513.0 / 169.0



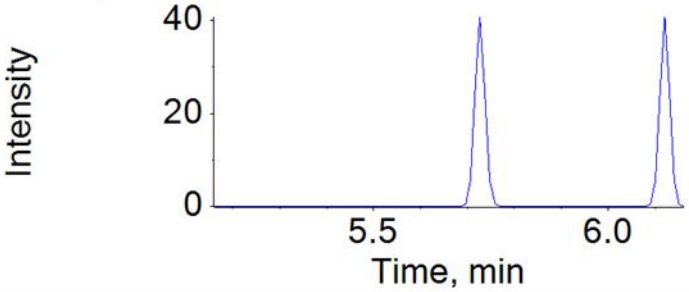
APPROVED
By JPT at 3:31 pm, 11/16/18

REVIEWED
By HMK at 9:04 am, 11/19/18

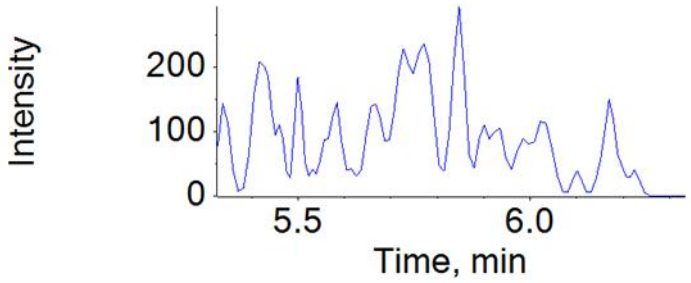
Component: NMeFOSAA
Primary Mass: 570.0 / 419.0



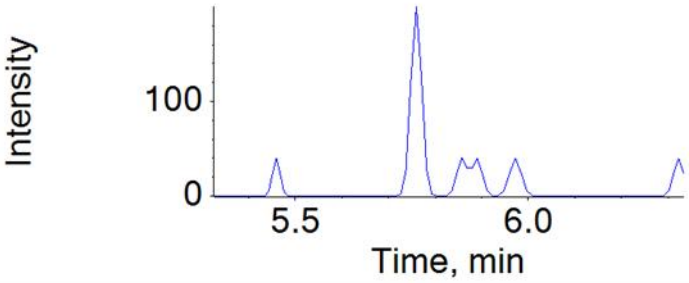
Component: NMeFOSAA_2
Secondary Mass: 570.0 / 483.0



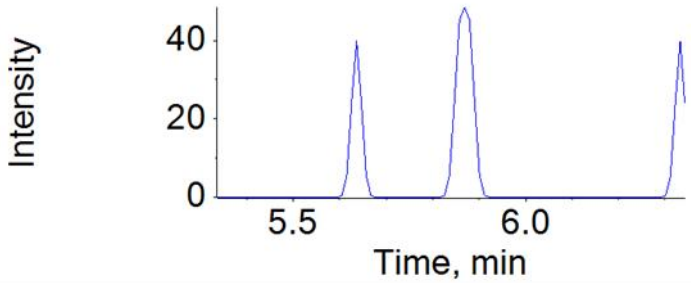
Component: PFUnDA
Primary Mass: 563.0 / 519.0



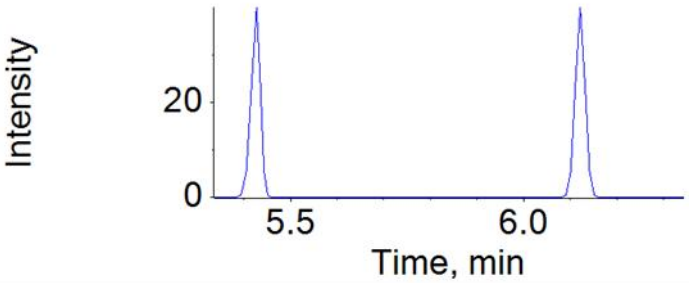
Component: PFUnDA_2
Secondary Mass: 563.0 / 169.0



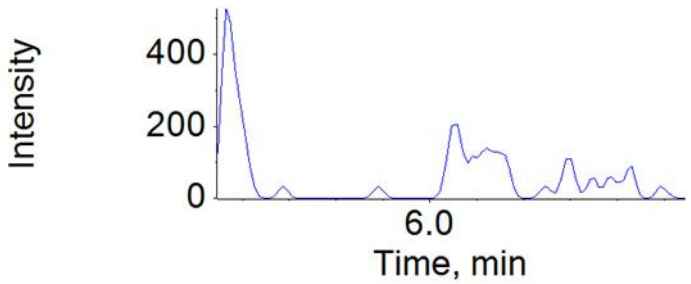
Component: NEtFOSAA
Primary Mass: 584.0 / 419.0



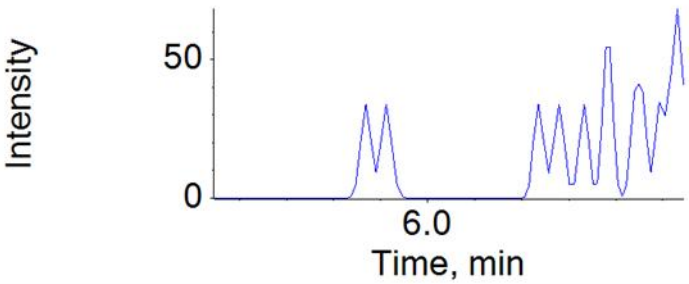
Component: NEtFOSAA_2
Secondary Mass: 584.0 / 526.0



Component: PFDoDA
Primary Mass: 613.0 / 569.0



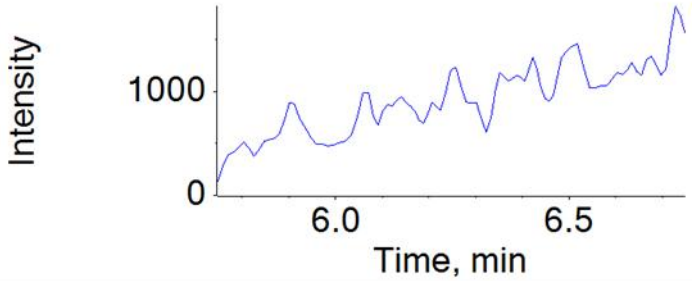
Component: PFDoDA_2
Secondary Mass: 613.0 / 169.0



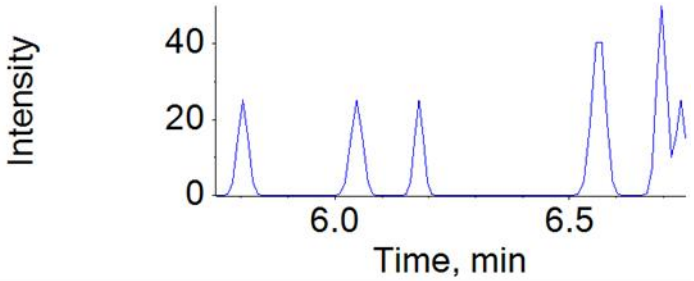
APPROVED
By JPT at 3:31 pm, 11/16/18

REVIEWED
By HMK at 9:04 am, 11/19/18

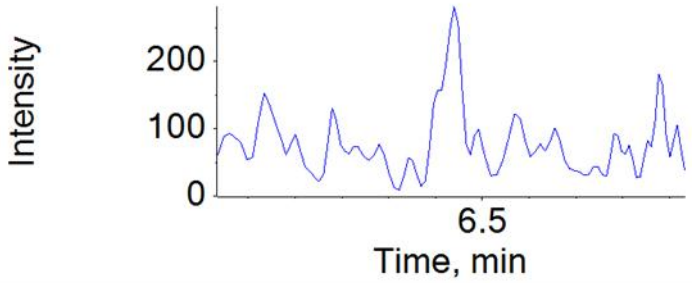
Component: PFTrDA
Primary Mass: 663.0 / 619.0



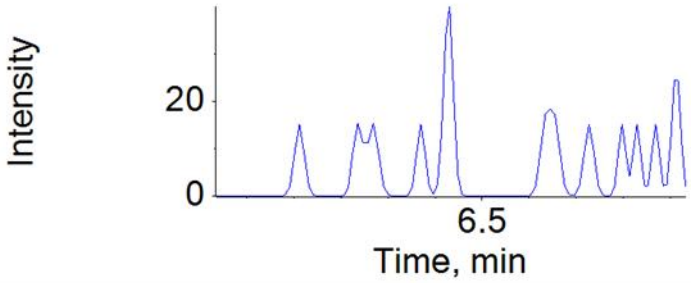
Component: PFTrDA_2
Secondary Mass: 663.0 / 169.0



Component: PFTeDA
Primary Mass: 713.0 / 669.0



Component: PFTeDA_2
Secondary Mass: 713.0 / 169.0



APPROVED
By JPT at 3:31 pm, 11/16/18

REVIEWED
By HMK at 9:04 am, 11/19/18

ICAL Name: 18NOV12DCAL **Result Table:** 18311021 11/16/2018 3:49:12 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Sample Name:	9885062BKGRE			**Data File:**		18NOV16D-10.wiff
Sample ID:	EPA 537 mod QSM 5.1 table B-15 18311021 OU1-GCI-S-01-01 Grab Soil			**Acquis Date:**		2018-11-16T11:35:19
Sample Type:	Unknown			**Instrument:**		LM27631
Vial Position:	42			**Acquis Method:**		18AUG13_3uL.dam
Injection Vol:	3.00			**Result Table:**		18311021
QMethod File:	18AUG20QM			**ICAL Name:**		18NOV12DCAL
Batch Number:	18311021			**Operator:**		JPT12262
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: 18NOV16D-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	735601.6	707280.6	4	50	
13C2-PFOA	5.0	511645.0	484265.4	6	50	
13C4-PFOS	4.8	279899.3	256987.3	9	50	
13C2-PFDA	5.0	333002.5	302418.6	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	391060.1	13C3-PFBA	735601.6	0.532	8.455	6.823	81	50-150	
E13C5-PFHxA	603474.5	13C2-PFOA	511645.0	1.179	9.091	7.747	85	50-150	
E13C3-PFHxS	297047.9	13C2-PFOA	511645.0	0.581	8.600	7.243	84	50-150	
E13C4-PFHpA	498657.1	13C2-PFOA	511645.0	0.975	9.091	7.983	88	50-150	
E13C8-PFOA	848075.1	13C2-PFOA	511645.0	1.658	9.091	8.303	91	50-150	
E13C8-PFOS	252108.5	13C4-PFOS	279899.3	0.901	8.691	7.256	83	50-150	
E13C9-PFNA	445100.6	13C4-PFOS	279899.3	1.590	9.091	8.061	89	50-150	
E13C6-PFDA	601641.7	13C2-PFDA	333002.5	1.807	9.091	7.666	84	50-150	
Ed3-NMeFOSAA	68417.8	13C2-PFDA	333002.5	0.205	9.091	6.743	74	50-150	
E13C7-PFUnDA	251870.7	13C2-PFDA	333002.5	0.756	9.091	7.984	88	50-150	
Ed5-NEtFOSAA	48048.6	13C2-PFDA	333002.5	0.144	9.091	5.550	61	50-150	
E13C2-PFDoDA	511152.9	13C2-PFDA	333002.5	1.535	9.091	7.246	80	50-150	
E13C2-PFTeDA	359619.6	13C2-PFDA	333002.5	1.080	9.091	6.893	76	50-150	

APPROVED
By JPT at 4:01 pm, 11/16/18

REVIEWED
By HMK at 9:07 am, 11/19/18

ICAL Name: 18NOV12DCAL **Result Table:** 18311021 11/16/2018 3:49:12 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

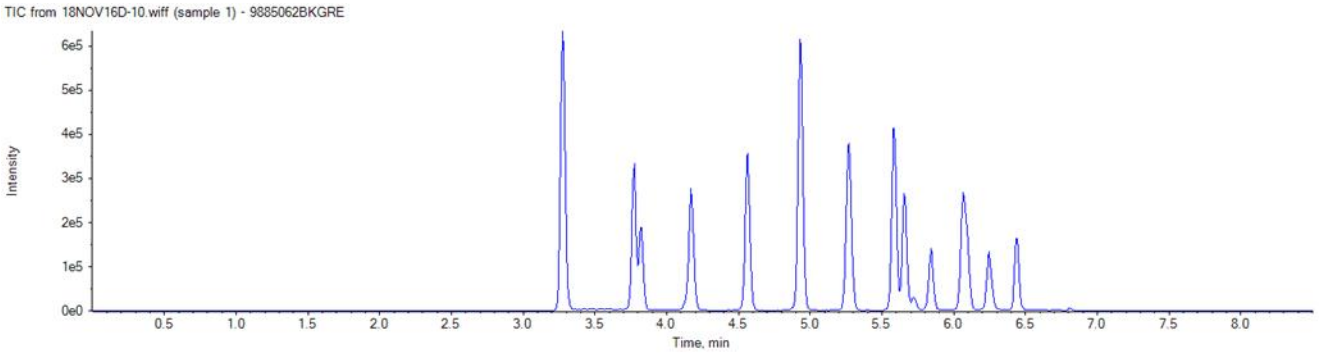
Analyte Quantitation Peak Table

Sample Name: 9885062BKGRE **Instrument Name:** LM27631 **File Name:** 18NOV16D-10.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	3.82	391060.1	N/A	
PFHxA	4.17	1.000	8672.1		A	13C5-PFHxA	4.17	603474.5	0.014	0.109
PFHpA	4.56	1.000	7926.2		M	13C4-PFHpA	4.56	498657.1	0.016	0.096
PFHxS	4.56	1.000	6492.5		M	13C3-PFHxS	4.56	297047.9	0.022	0.193
PFOA	4.93	1.000	36272.6		A	13C8-PFOA	4.93	848075.1	0.043	0.415
PFOS	5.26	1.000	10756.0		M	13C8-PFOS	5.26	252108.5	0.043	0.339
PFNA	N/A	N/A	N/A		A	13C9-PFNA	5.28	445100.6	N/A	
PFDA	N/A	N/A	N/A		A	13C6-PFDA	5.58	601641.7	N/A	
NMeFOSAA	N/A	N/A	N/A		A	d3-NMeFOSAA	5.72	68417.8	N/A	
PFUnDA	N/A	N/A	N/A		A	13C7-PFUnDA	5.84	251870.7	N/A	
NEtFOSAA	N/A	N/A	N/A		A	d5-NEtFOSAA	5.85	48048.6	N/A	
PFDoDA	N/A	N/A	N/A		A	13C2-PFDoDA	6.06	511152.9	N/A	
PFTrDA	N/A	N/A	N/A		A	13C2-PFDoDA	6.06	511152.9	N/A	
PFTeDA	N/A	N/A	N/A		A	13C2-PFTeDA	6.44	359619.6	N/A	

Total Ion Chromatogram

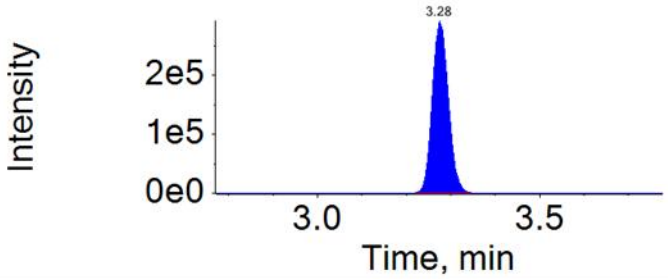


APPROVED
By JPT at 4:01 pm, 11/16/18

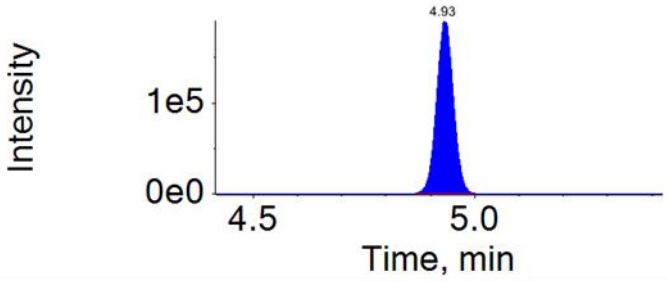
REVIEWED
By HMK at 9:07 am, 11/19/18

ICAL Name: 18NOV12DCAL **Result Table:** 18311021 11/16/2018 3:49:12 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

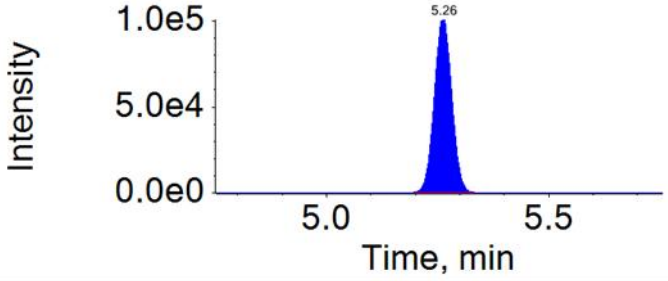
Injection Standard: 13C3-PFBA
216.0 / 172.0



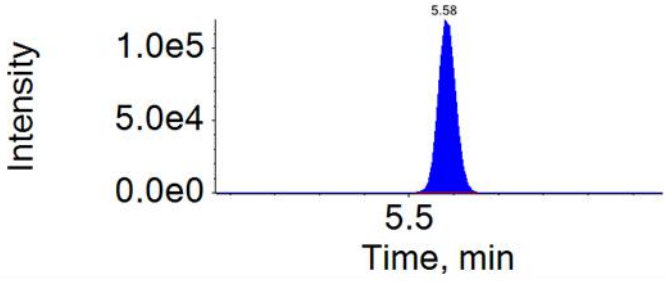
Injection Standard: 13C2-PFOA
415.0 / 370.0



Injection Standard: 13C4-PFOS
503.0 / 80.0



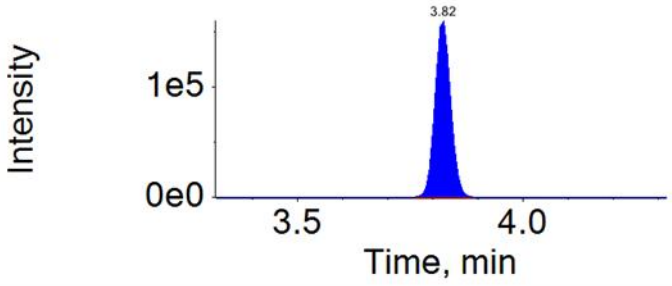
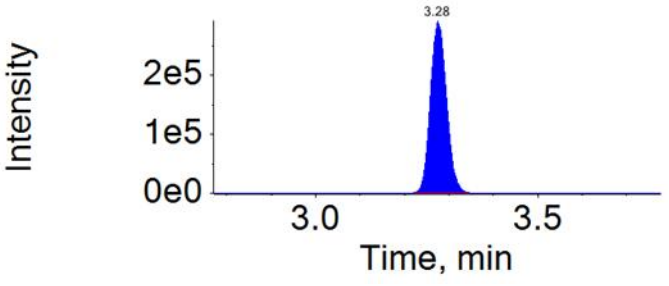
Injection Standard: 13C2-PFDA
515.0 / 470.0

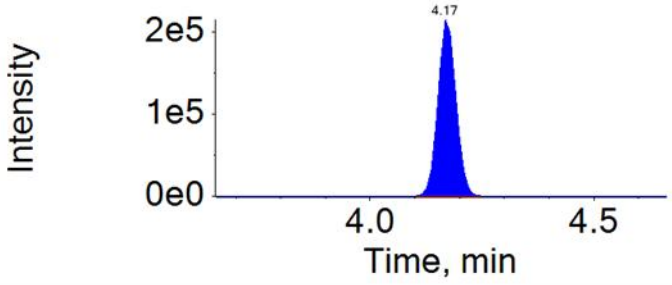
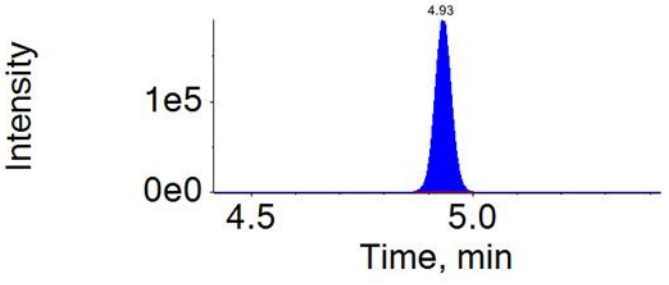


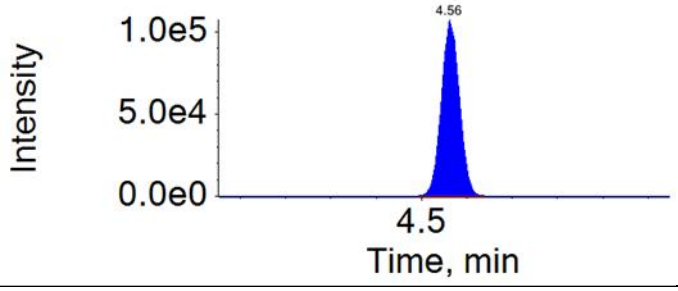
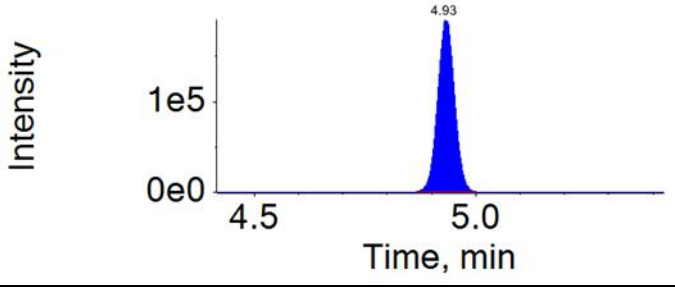
APPROVED
By JPT at 4:01 pm, 11/16/18

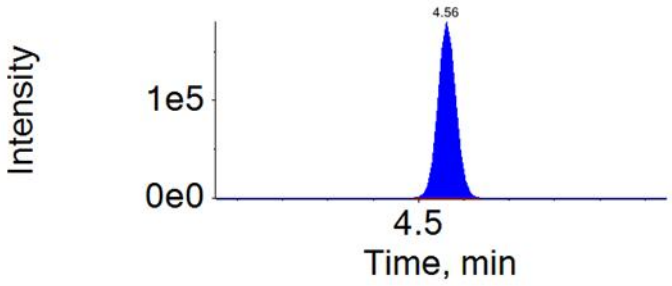
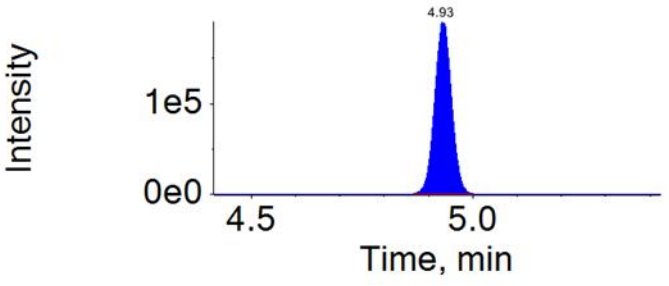
REVIEWED
By HMK at 9:07 am, 11/19/18

ICAL Name: 18NOV12DCAL **Result Table:** 18311021 11/16/2018 3:49:12 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
	

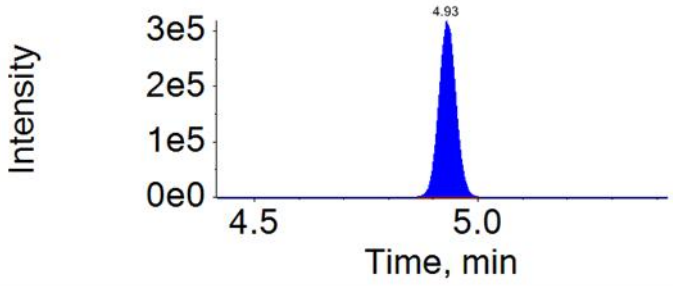
Extraction Standard: E13C4-PFHpA	Injection Standard: 13C2-PFOA
367.0 / 322.0	415.0 / 370.0
	

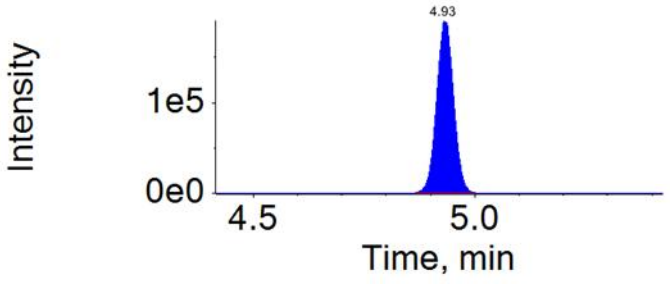
APPROVED
By JPT at 4:01 pm, 11/16/18

REVIEWED
By HMK at 9:07 am, 11/19/18

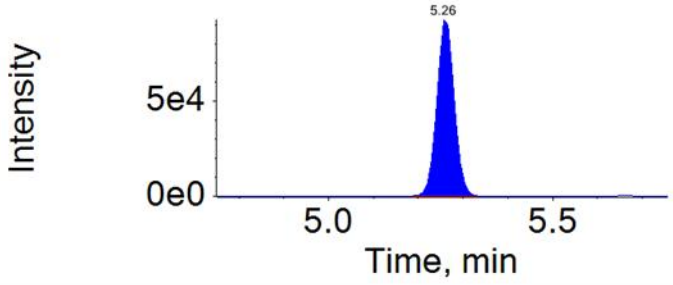
ICAL Name: 18NOV12DCAL **Result Table:** 18311021 11/16/2018 3:49:12 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

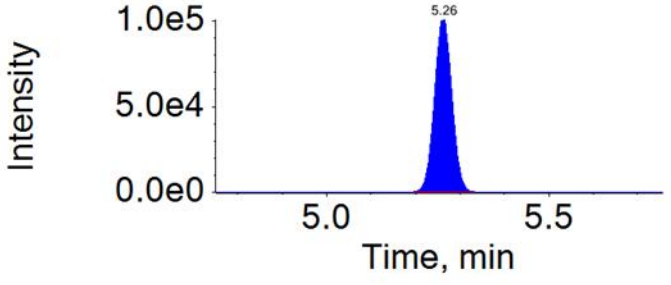
Extraction Standard: E13C8-PFOA	Injection Standard: 13C2-PFOA
421.0 / 376.0	415.0 / 370.0



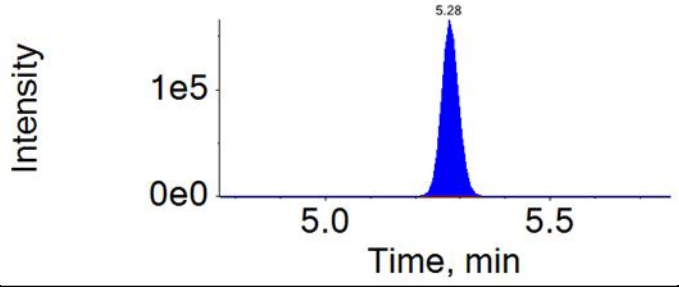


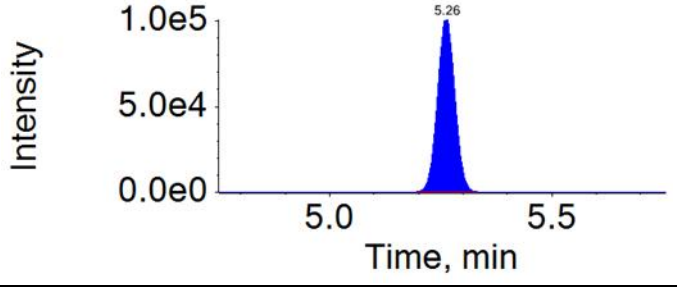
Extraction Standard: E13C8-PFOS	Injection Standard: 13C4-PFOS
507.0 / 80.0	503.0 / 80.0



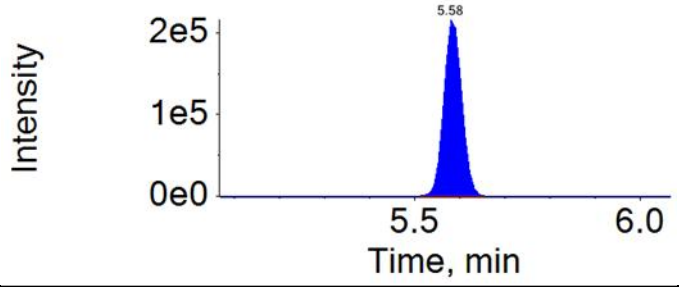


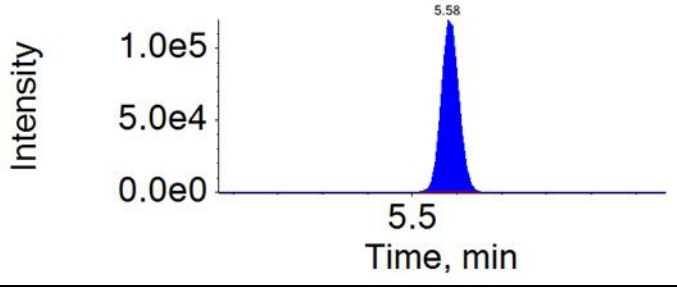
Extraction Standard: E13C9-PFNA	Injection Standard: 13C4-PFOS
472.0 / 427.0	503.0 / 80.0





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





APPROVED
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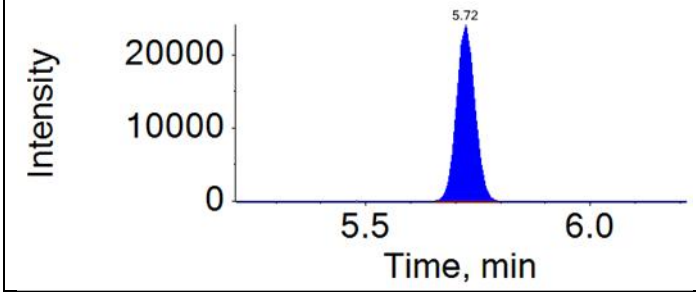
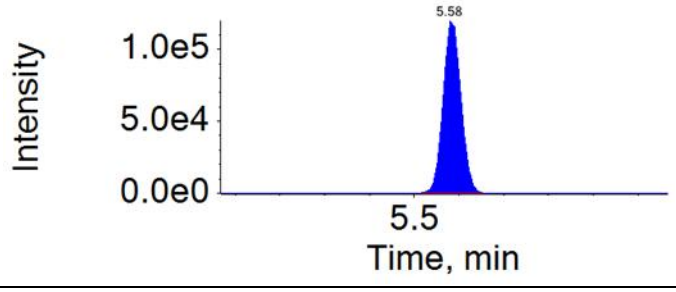
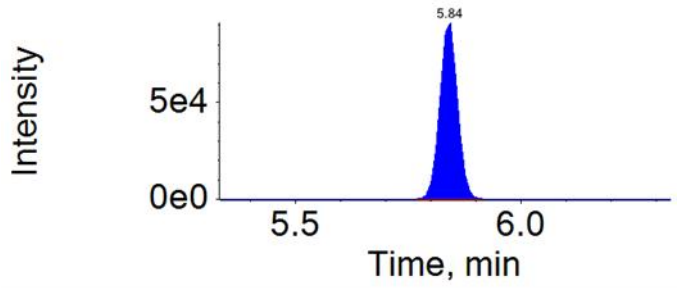
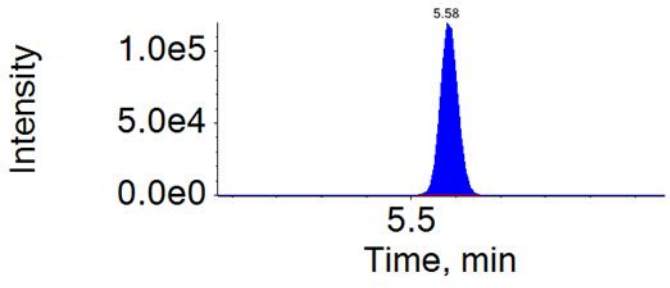
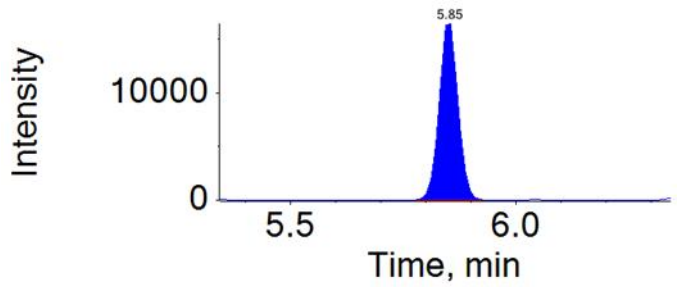
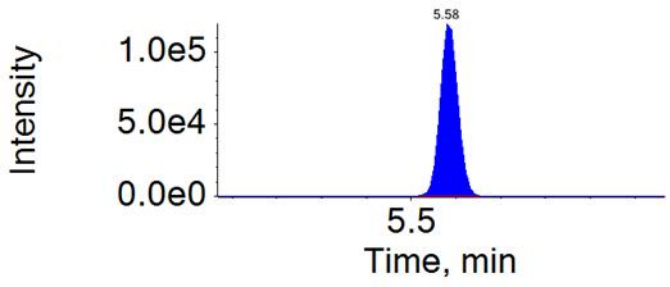
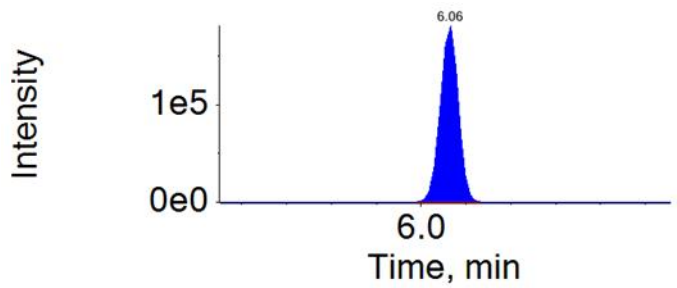
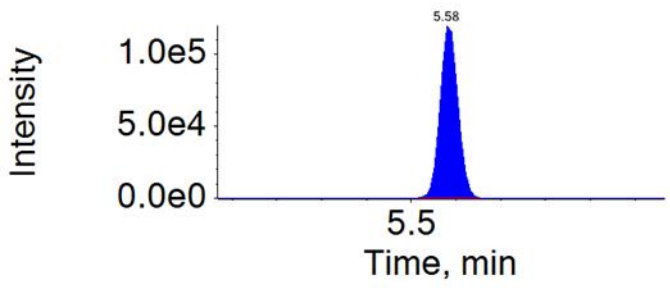
REVIEWED
By HMK at 9:07 am, 11/19/18

ICAL Name: 18NOV12DCAL **Result Table:** 18311021 11/16/2018 3:49:12 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
	

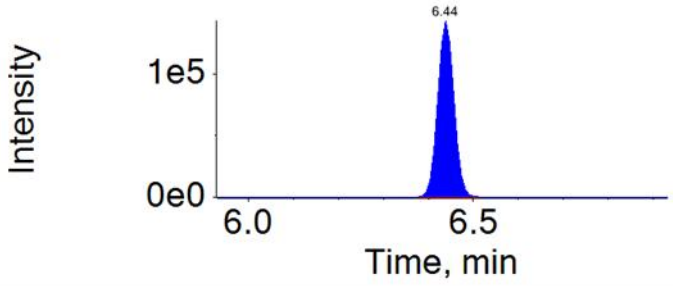
Extraction Standard: E13C2-PFDoDA	Injection Standard: 13C2-PFDA
615.0 / 570.0	515.0 / 470.0
	

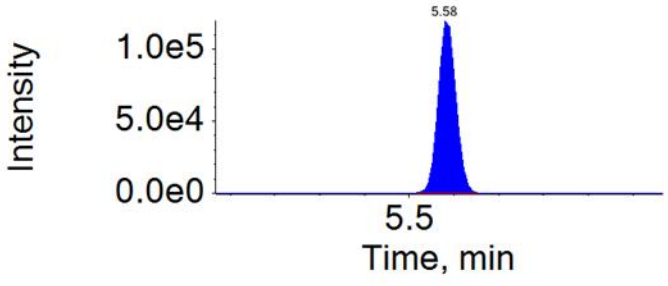
APPROVED
By JPT at 4:01 pm, 11/16/18

REVIEWED
By HMK at 9:07 am, 11/19/18

ICAL Name: 18NOV12DCAL **Result Table:** 18311021 11/16/2018 3:49:12 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



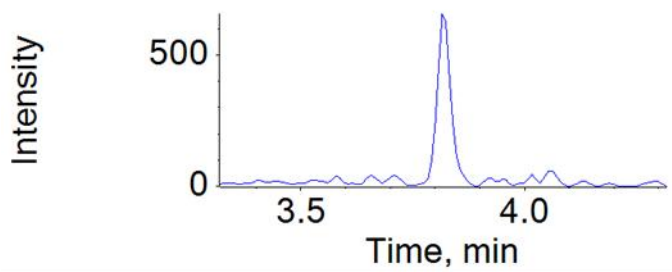


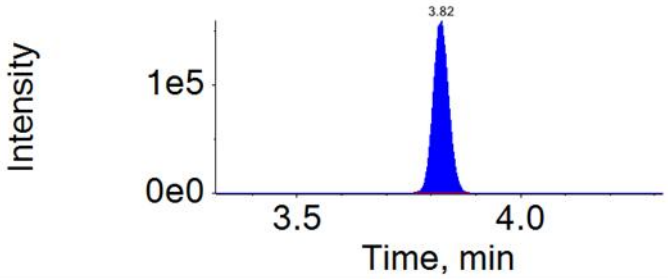
APPROVED
By JPT at 4:01 pm, 11/16/18

REVIEWED
By HMK at 9:07 am, 11/19/18

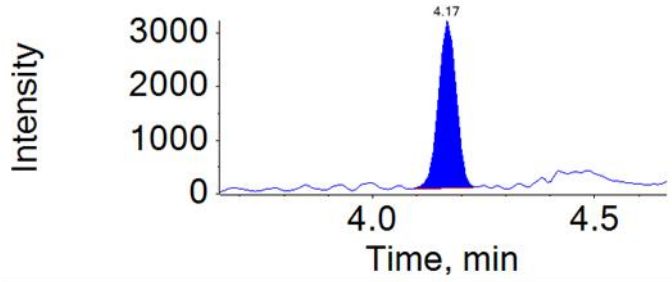
ICAL Name: 18NOV12DCAL **Result Table:** 18311021 11/16/2018 3:49:12 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

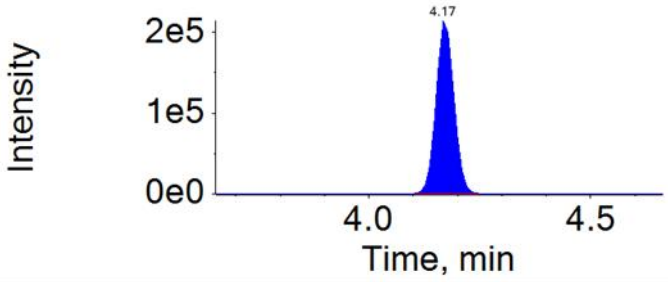
Analyte: PFBS	Extraction Standard: 13C3-PFBS
299.0 / 80.0	302.0 / 80.0



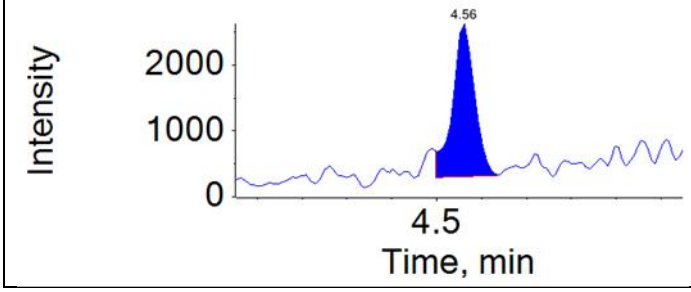


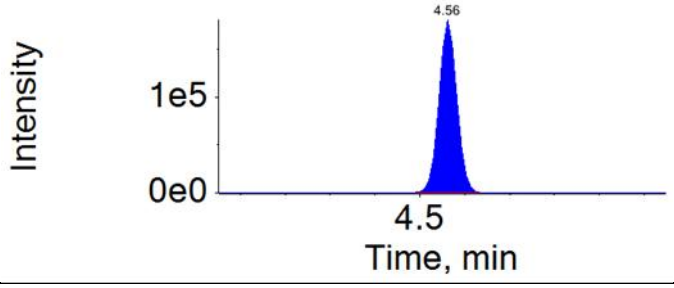
Analyte: PFHxA	Extraction Standard: 13C5-PFHxA
313.0 / 269.0	318.0 / 273.0



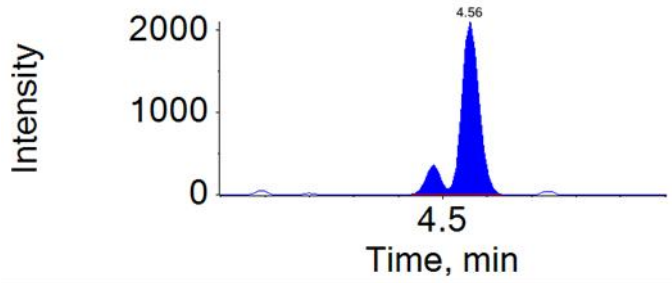


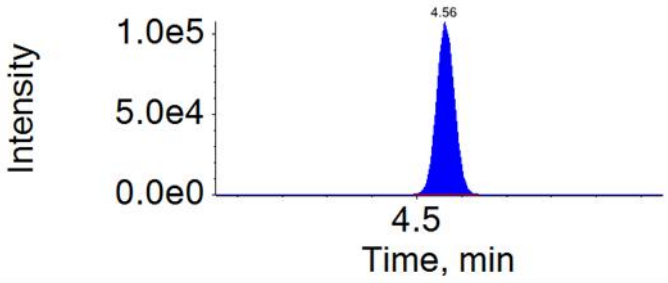
Analyte: PFHpA	Extraction Standard: 13C4-PFHpA
363.0 / 319.0	367.0 / 322.0





Analyte: PFHxS	Extraction Standard: 13C3-PFHxS
399.0 / 80.0	402.0 / 80.0



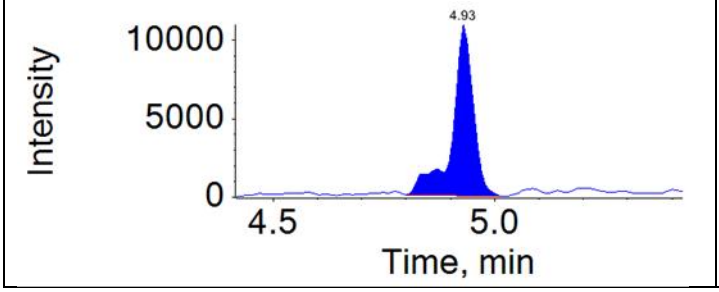


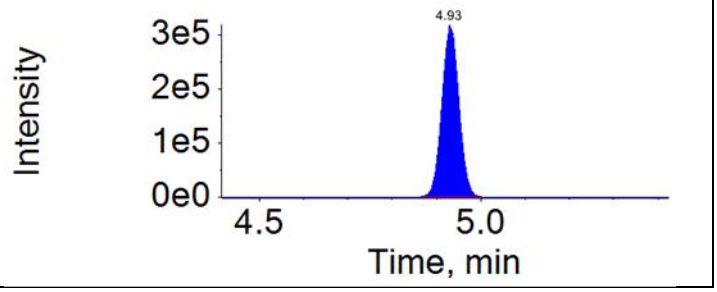
APPROVED
By JPT at 4:01 pm, 11/16/18

REVIEWED
By HMK at 9:07 am, 11/19/18

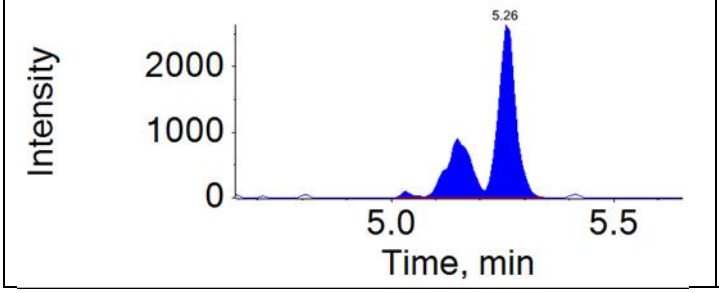
ICAL Name: 18NOV12DCAL **Result Table:** 18311021 11/16/2018 3:49:12 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

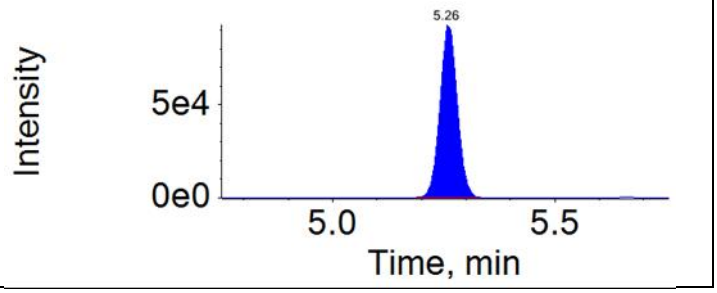
Analyte: PFOA	Extraction Standard: 13C8-PFOA
413.0 / 369.0	421.0 / 376.0



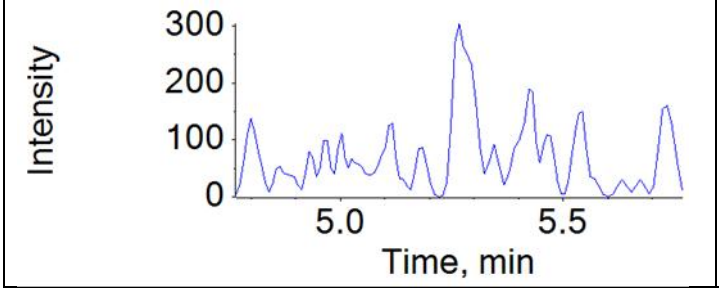


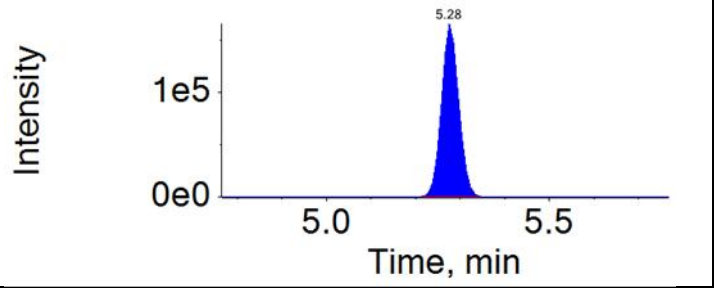
Analyte: PFOS	Extraction Standard: 13C8-PFOS
499.0 / 80.0	507.0 / 80.0



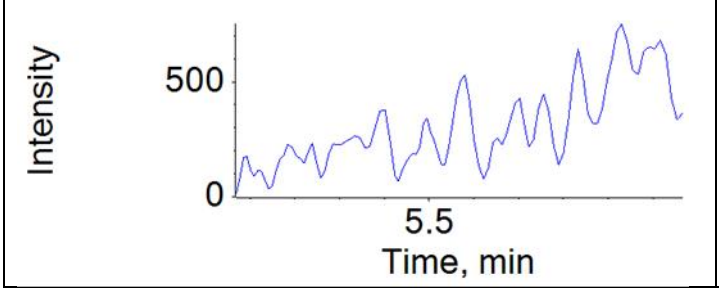


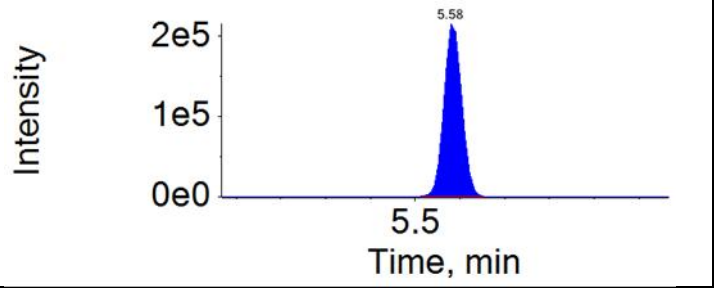
Analyte: PFNA	Extraction Standard: 13C9-PFNA
463.0 / 419.0	472.0 / 427.0





Analyte: PFDA	Extraction Standard: 13C6-PFDA
513.0 / 469.0	519.0 / 474.0



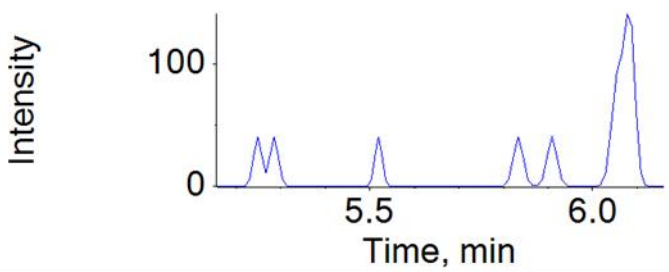


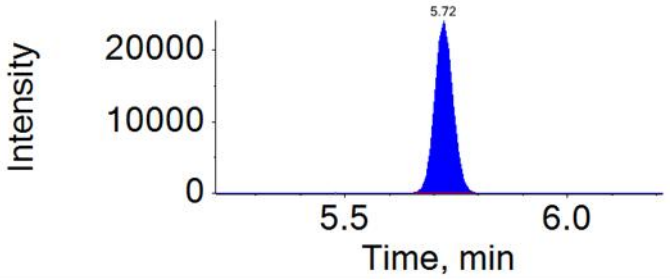
APPROVED
By JPT at 4:01 pm, 11/16/18

REVIEWED
By HMK at 9:07 am, 11/19/18

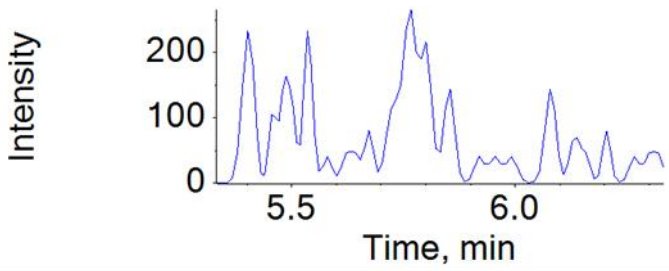
ICAL Name: 18NOV12DCAL **Result Table:** 18311021 11/16/2018 3:49:12 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

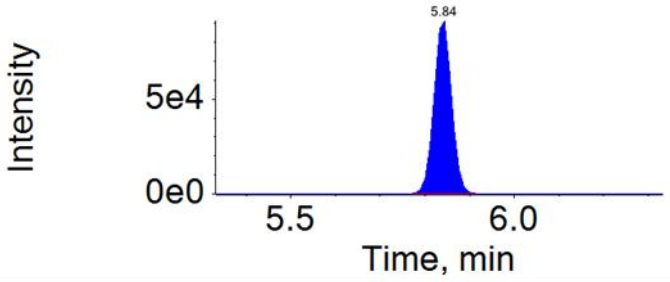
Analyte: NMeFOSAA	Extraction Standard: d3-NMeFOSAA
570.0 / 419.0	573.0 / 419.0



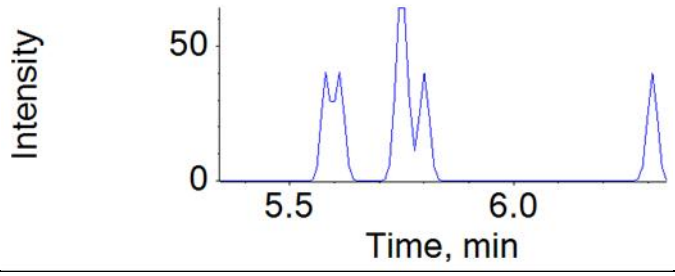


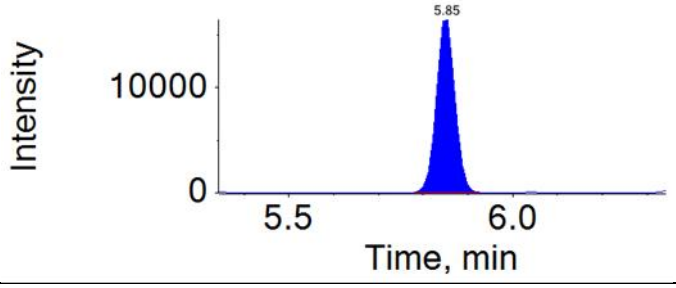
Analyte: PFUnDA	Extraction Standard: 13C7-PFUnDA
563.0 / 519.0	570.0 / 525.0



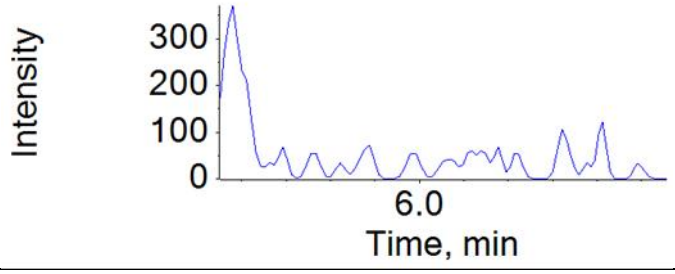


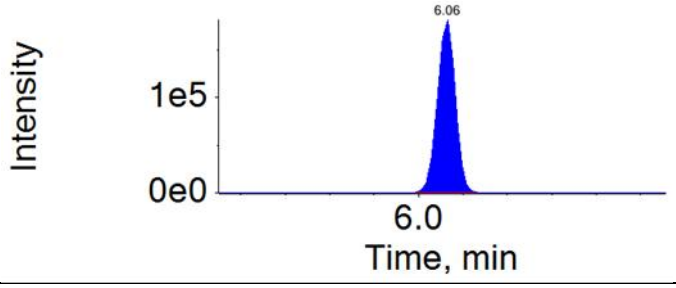
Analyte: NEtFOSAA	Extraction Standard: d5-NEtFOSAA
584.0 / 419.0	589.0 / 419.0





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

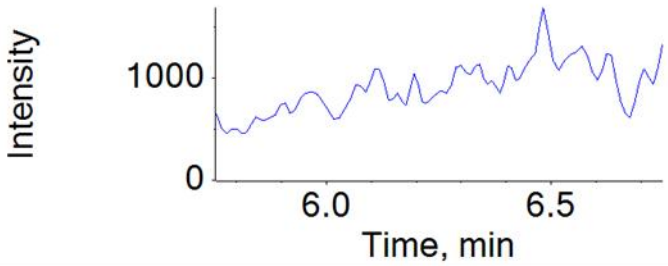
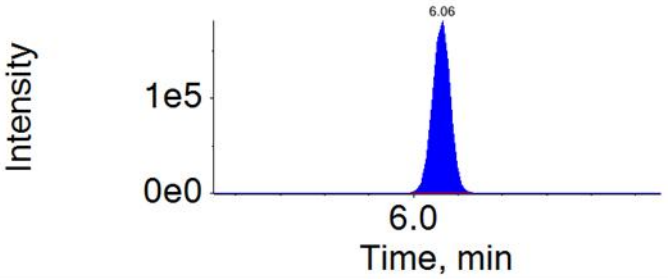


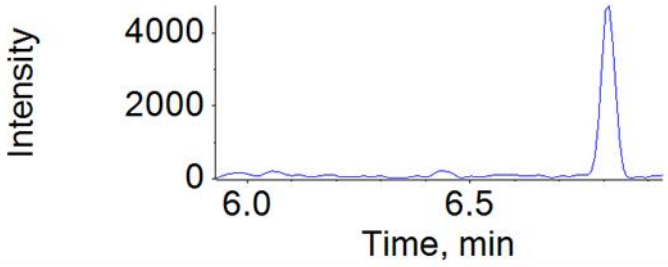
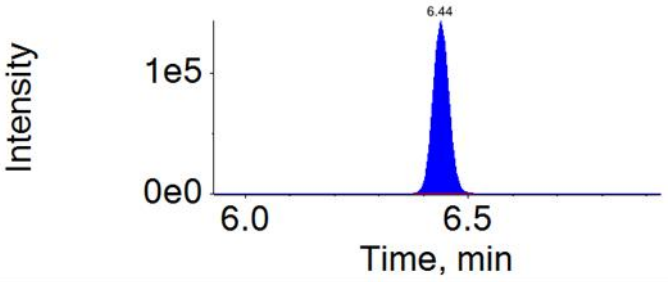


APPROVED
By JPT at 4:01 pm, 11/16/18

REVIEWED
By HMK at 9:07 am, 11/19/18

ICAL Name: 18NOV12DCAL **Result Table:** 18311021 11/16/2018 3:49:12 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

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

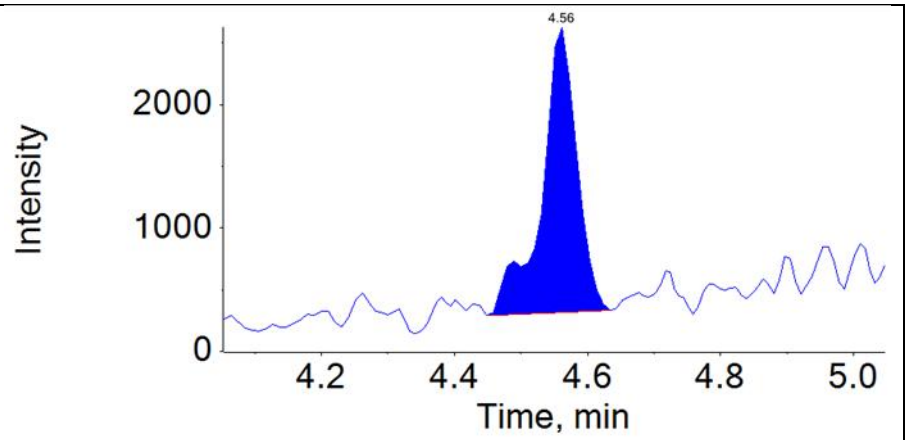
Analyte: PFTeDA	Extraction Standard: 13C2-PFTeDA
713.0 / 669.0	715.0 / 670.0
	

APPROVED
By JPT at 4:01 pm, 11/16/18

REVIEWED
By HMK at 9:07 am, 11/19/18

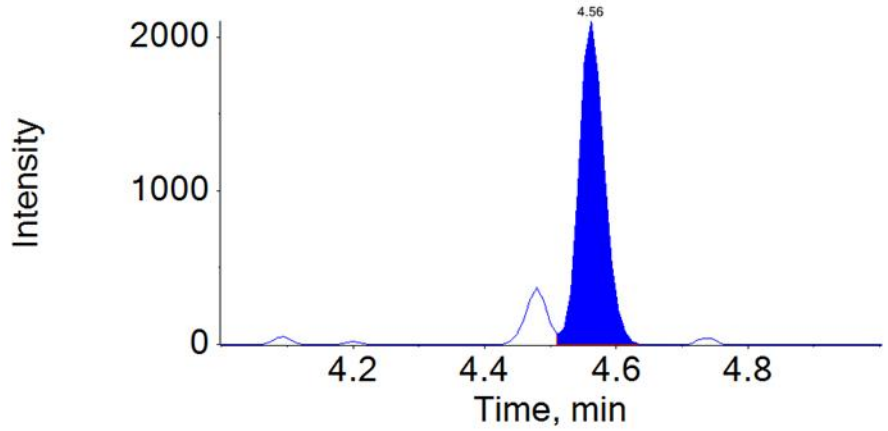
Results Table Name: 18311021
Results Table Date: 11/16/2018 3:49:12 PM
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

Component Name:
PFHpA
RT (min.):
4.56
Peak Area:
8571.6
Mass Range:
363.0 / 319.0
File Name:
18NOV16D-10.wiff
Sample Name:
9885062BKGRE



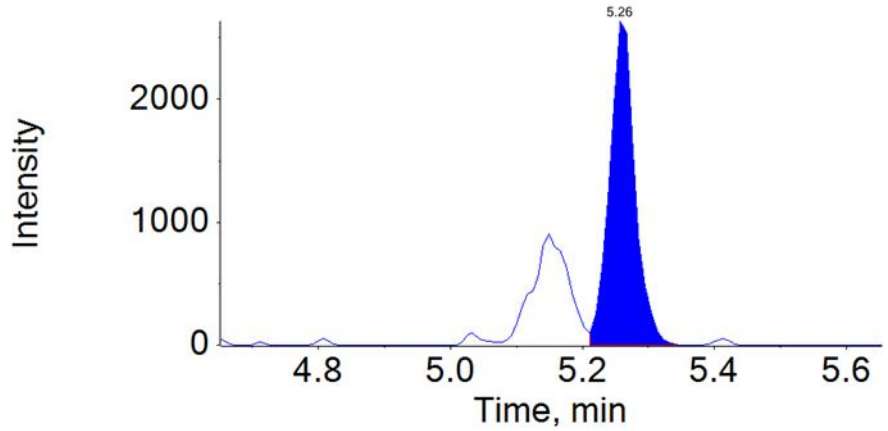
Integration Comment: incorrect integration

Component Name:
PFHxS
RT (min.):
4.56
Peak Area:
5653.2
Mass Range:
399.0 / 80.0
File Name:
18NOV16D-10.wiff
Sample Name:
9885062BKGRE



Integration Comment: incorrect integration

Component Name:
PFOS
RT (min.):
5.26
Peak Area:
7072.8
Mass Range:
499.0 / 80.0
File Name:
18NOV16D-10.wiff
Sample Name:
9885062BKGRE



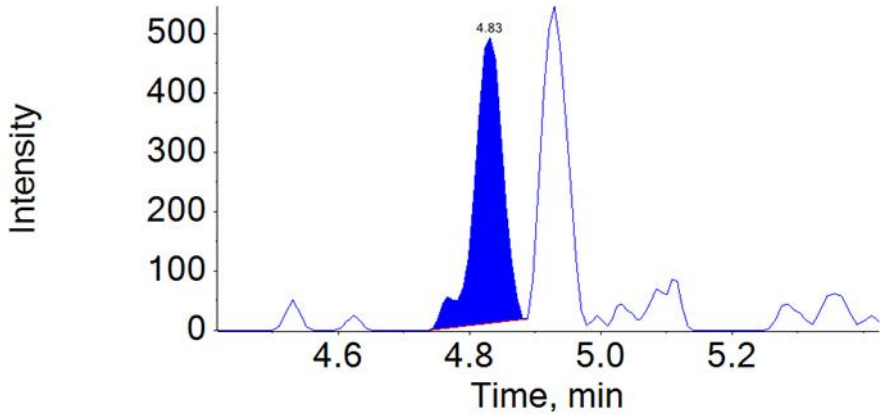
Integration Comment: incorrect integration

APPROVED
By JPT at 4:01 pm, 11/16/18

REVIEWED
By HMK at 9:07 am, 11/19/18

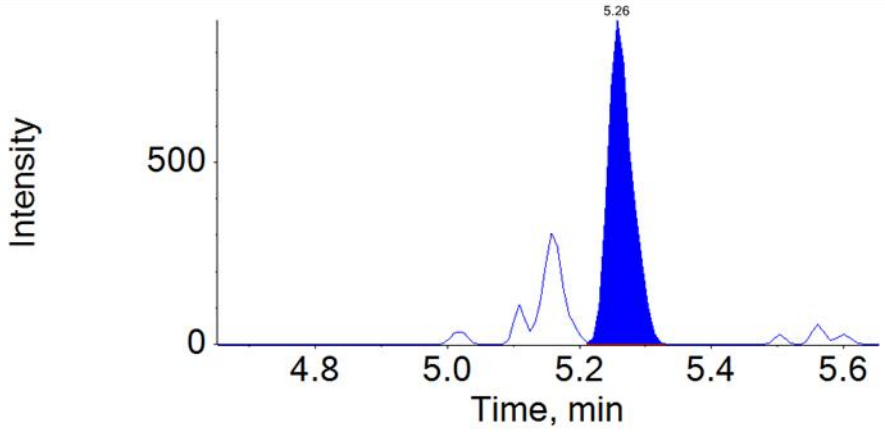
Results Table Name: 18311021
Results Table Date: 11/16/2018 3:49:12 PM
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

Component Name:
PFOA_2
RT (min.):
4.83
Peak Area:
1469.8
Mass Range:
413.0 / 169.0
File Name:
18NOV16D-10.wiff
Sample Name:
9885062BKGRE



Integration Comment: incorrect integration

Component Name:
PFOS_2
RT (min.):
5.26
Peak Area:
2284.3
Mass Range:
499.0 / 99.0
File Name:
18NOV16D-10.wiff
Sample Name:
9885062BKGRE



Integration Comment: incorrect integration

APPROVED
By JPT at 4:01 pm, 11/16/18

REVIEWED
By HMK at 9:07 am, 11/19/18

Results Table Name: 18311021
Results Table Date: 11/16/2018 3:49:12 PM

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

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By JPT at 4:01 pm, 11/16/18

REVIEWED
By HMK at 9:07 am, 11/19/18

Ion Ratio Report

Sample Name: 9885062BKGRE **Instrument Name:** LM27631 **File Name:** 18NOV16D-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	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	4.17	1.00	8672.1	A	N/A	1.0000			
PFHxA_2	4.17	1.00	289.7	A	N/A	0.0334	184	50	OOS
PFHpA	4.56	1.00	7926.2	M	N/A	1.0000			
PFHpA_2	4.55	1.00	550.1	A	N/A	0.0694	23	50	
PFHxS	4.56	1.00	6492.5	M	N/A	1.0000			
PFHxS_2	4.56	1.00	2921.1	A	N/A	0.4499	31	50	
PFOA	4.93	1.00	36272.6	A	N/A	1.0000			
PFOA_2	4.88	0.99	3050.6	M	N/A	0.0841	48	50	
PFOS	5.26	1.00	10756.0	M	N/A	1.0000			
PFOS_2	5.26	1.00	3149.5	M	N/A	0.2928	-1	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 JPT at 4:01 pm, 11/16/18

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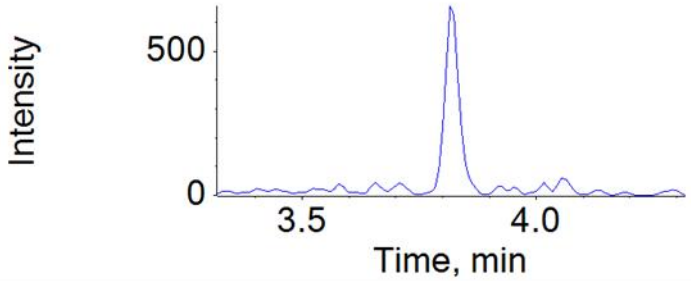
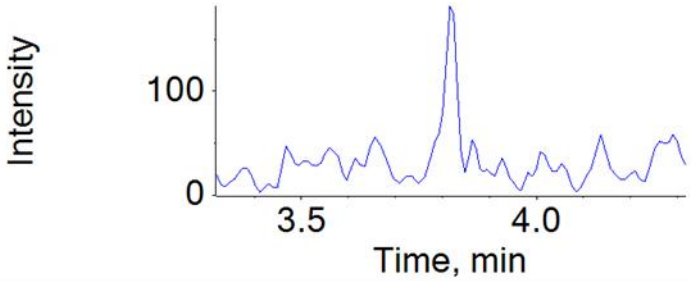
By HMK at 9:07 am, 11/19/18

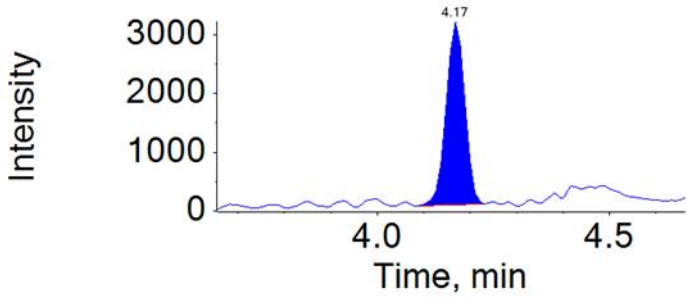
Component: PFBS
Primary Mass: 299.0 / 80.0



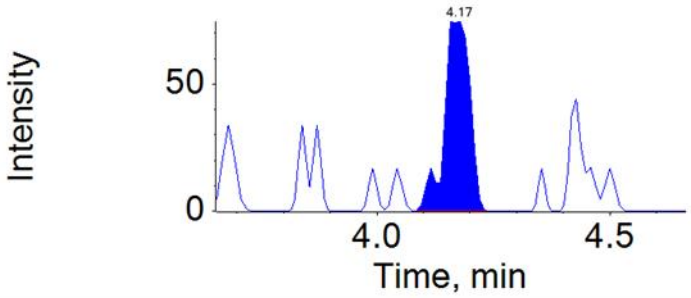
Component: PFBS_2
Secondary Mass: 299.0 / 99.0



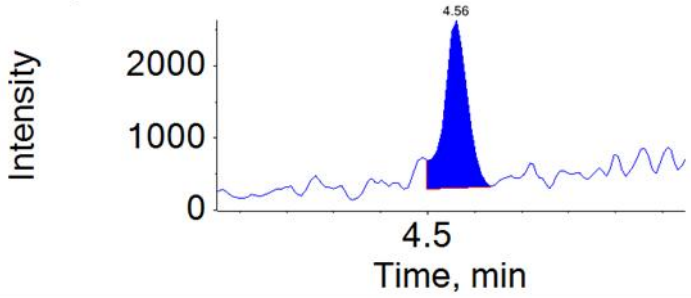
Component: PFHxA
Primary Mass: 313.0 / 269.0



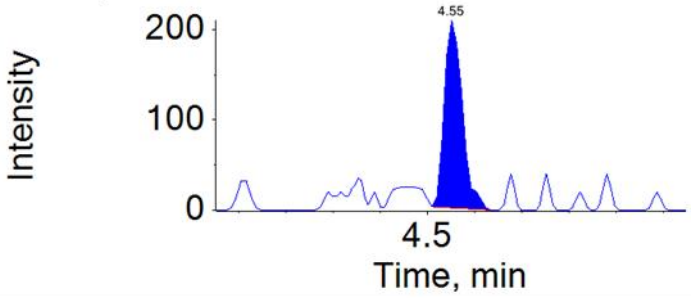
Component: PFHxA_2
Secondary Mass: 313.0 / 119.0



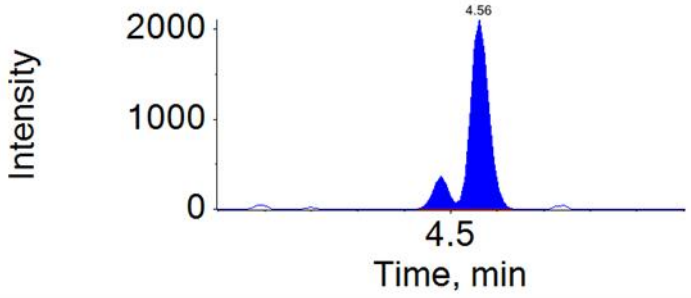
Component: PFHpA
Primary Mass: 363.0 / 319.0



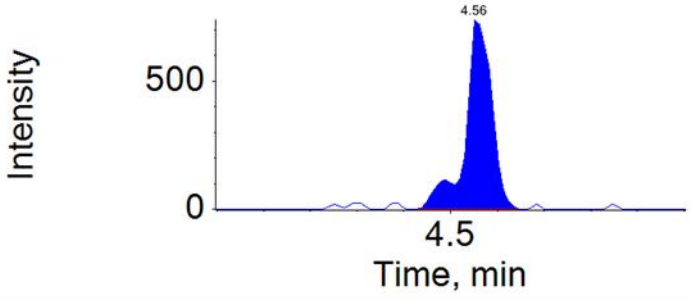
Component: PFHpA_2
Secondary Mass: 363.0 / 169.0



Component: PFHxS
Primary Mass: 399.0 / 80.0



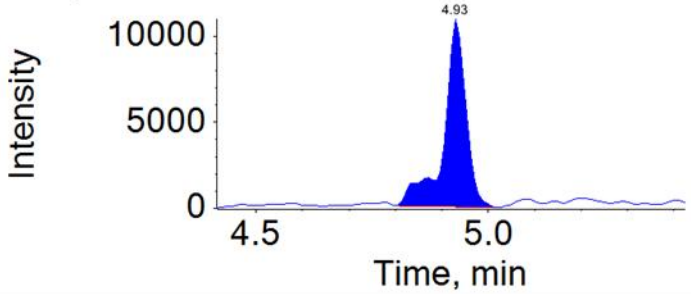
Component: PFHxS_2
Secondary Mass: 399.0 / 99.0



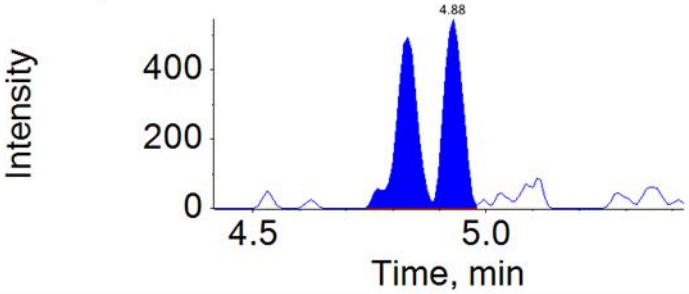
APPROVED
By JPT at 4:01 pm, 11/16/18

REVIEWED
By HMK at 9:07 am, 11/19/18

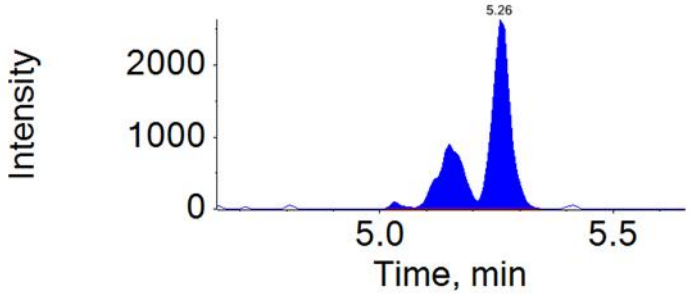
Component: PFOA
Primary Mass: 413.0 / 369.0



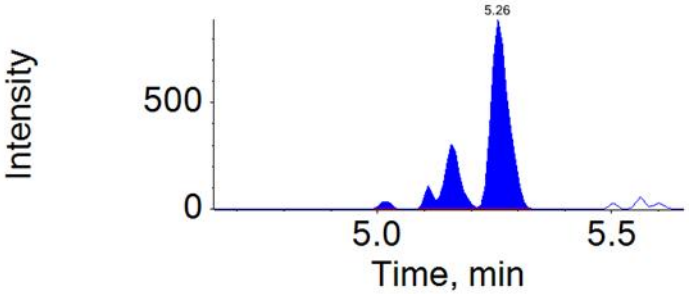
Component: PFOA_2
Secondary Mass: 413.0 / 169.0



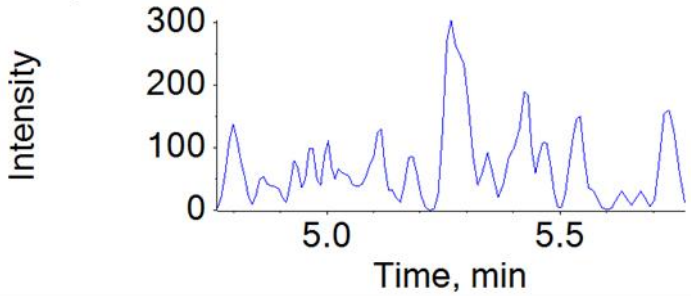
Component: PFOS
Primary Mass: 499.0 / 80.0



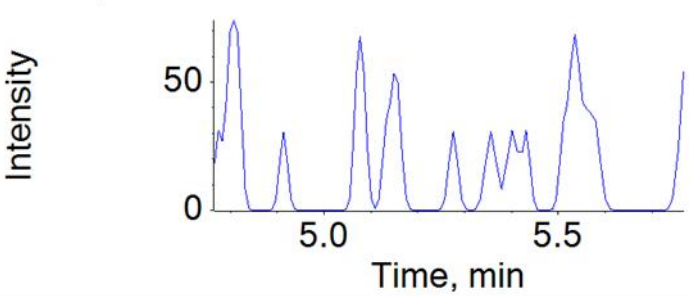
Component: PFOS_2
Secondary Mass: 499.0 / 99.0



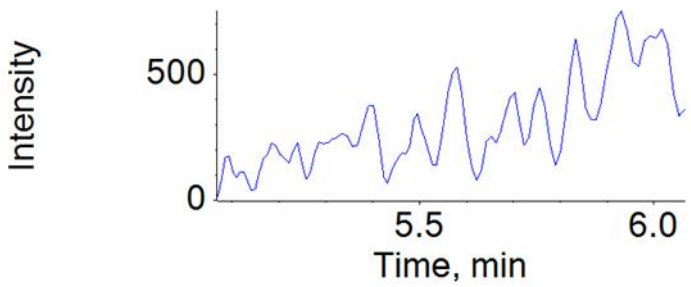
Component: PFNA
Primary Mass: 463.0 / 419.0



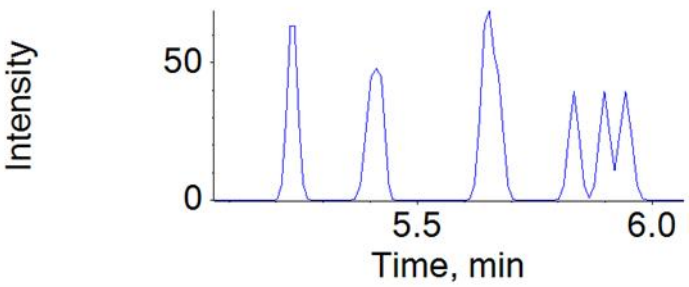
Component: PFNA_2
Secondary Mass: 463.0 / 169.0



Component: PFDA
Primary Mass: 513.0 / 469.0



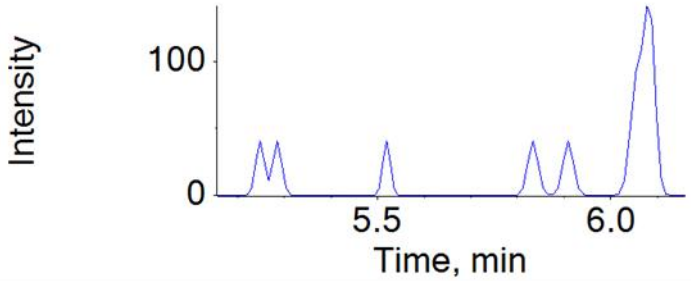
Component: PFDA_2
Secondary Mass: 513.0 / 169.0



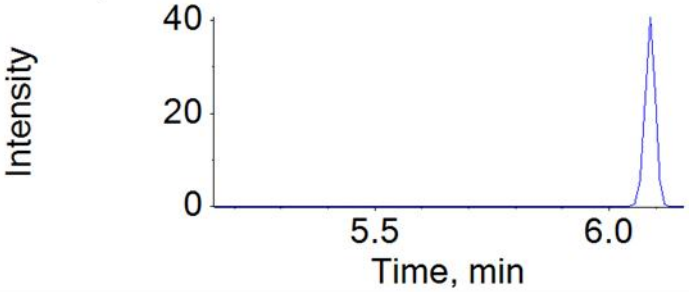
APPROVED
By JPT at 4:01 pm, 11/16/18

REVIEWED
By HMK at 9:07 am, 11/19/18

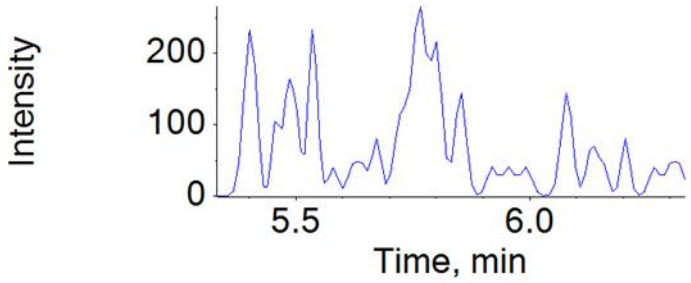
Component: NMeFOSAA
Primary Mass: 570.0 / 419.0



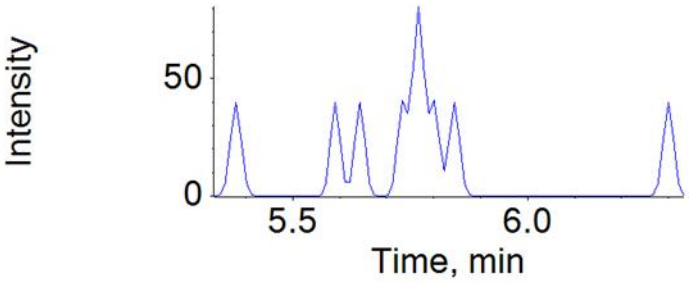
Component: NMeFOSAA_2
Secondary Mass: 570.0 / 483.0



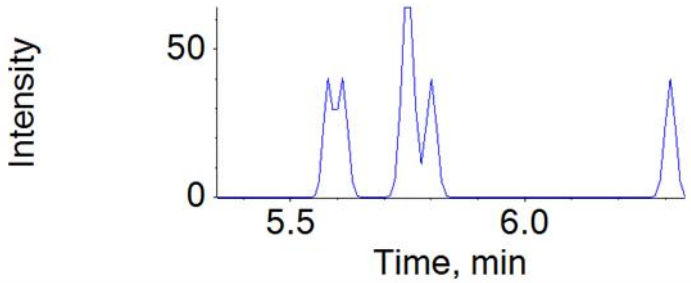
Component: PFUnDA
Primary Mass: 563.0 / 519.0



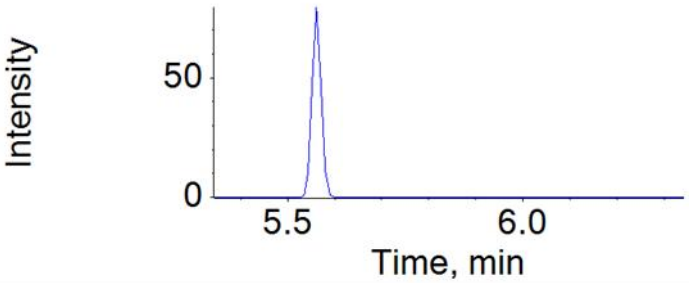
Component: PFUnDA_2
Secondary Mass: 563.0 / 169.0



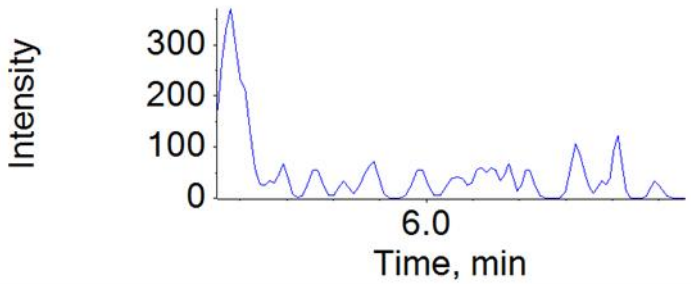
Component: NEtFOSAA
Primary Mass: 584.0 / 419.0



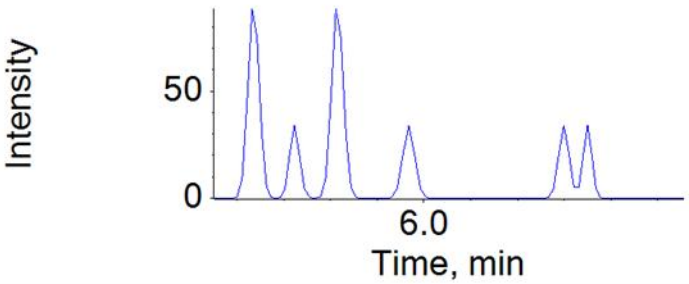
Component: NEtFOSAA_2
Secondary Mass: 584.0 / 526.0



Component: PFDoDA
Primary Mass: 613.0 / 569.0



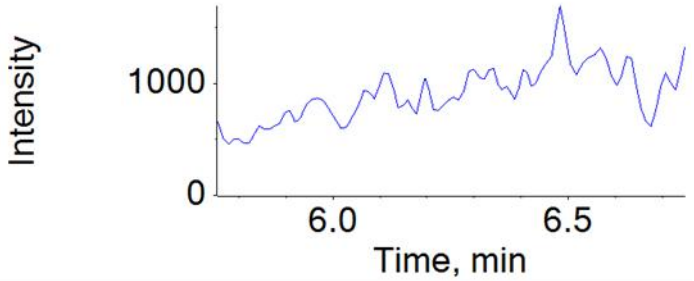
Component: PFDoDA_2
Secondary Mass: 613.0 / 169.0



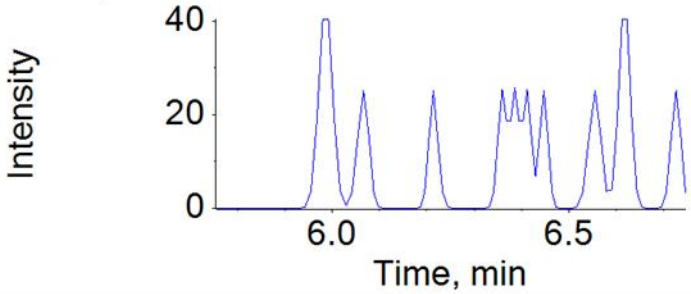
APPROVED
By JPT at 4:01 pm, 11/16/18

REVIEWED
By HMK at 9:07 am, 11/19/18

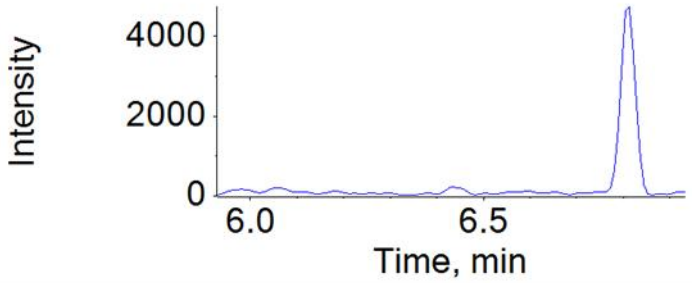
Component: PFTrDA
Primary Mass: 663.0 / 619.0



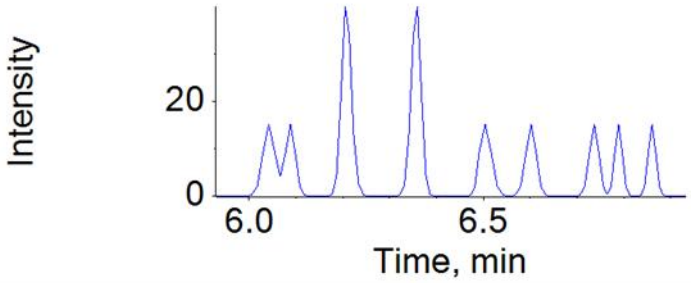
Component: PFTrDA_2
Secondary Mass: 663.0 / 169.0



Component: PFTeDA
Primary Mass: 713.0 / 669.0



Component: PFTeDA_2
Secondary Mass: 713.0 / 169.0



APPROVED
By JPT at 4:01 pm, 11/16/18

REVIEWED
By HMK at 9:07 am, 11/19/18

ICAL Name: 18NOV12DCAL **Result Table:** 18319003 11/16/2018 11:16:11 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Sample Name:	9885065			**Data File:**		18NOV15D-16.wiff
Sample ID:	EPA 537 mod QSM 5.1 table B-15 18319003 OU1-GCI-S-01-03 Grab Soil			**Acquis Date:**		2018-11-15T14:18:27
Sample Type:	Unknown			**Instrument:**		LM27631
Vial Position:	34			**Acquis Method:**		18AUG13_3uL.dam
Injection Vol:	3.00			**Result Table:**		18319003
QMethod File:	18AUG20QM			**ICAL Name:**		18NOV12DCAL
Batch Number:	18319003			**Operator:**		JPT12262
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: 18NOV15D-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	746737.0	732179.1	2	50	
13C2-PFOA	5.0	497124.3	479663.2	4	50	
13C4-PFOS	4.8	279680.6	269685.3	4	50	
13C2-PFDA	5.0	336141.3	302309.9	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	382784.1	13C3-PFBA	746737.0	0.513	9.118	7.095	78	50-150	
E13C5-PFHxA	602760.9	13C2-PFOA	497124.3	1.212	9.804	8.588	88	50-150	
E13C3-PFHxS	289002.4	13C2-PFOA	497124.3	0.581	9.275	7.822	84	50-150	
E13C4-PFHpA	468469.2	13C2-PFOA	497124.3	0.942	9.804	8.324	85	50-150	
E13C8-PFOA	831286.6	13C2-PFOA	497124.3	1.672	9.804	9.034	92	50-150	
E13C8-PFOS	251179.7	13C4-PFOS	279680.6	0.898	9.373	7.803	83	50-150	
E13C9-PFNA	434101.9	13C4-PFOS	279680.6	1.552	9.804	8.485	87	50-150	
E13C6-PFDA	566189.7	13C2-PFDA	336141.3	1.684	9.804	7.707	79	50-150	
Ed3-NMeFOSAA	85351.3	13C2-PFDA	336141.3	0.254	9.804	8.987	92	50-150	
E13C7-PFUnDA	236850.3	13C2-PFDA	336141.3	0.705	9.804	8.021	82	50-150	
Ed5-NEtFOSAA	58133.6	13C2-PFDA	336141.3	0.173	9.804	7.174	73	50-150	
E13C2-PFDoDA	481303.0	13C2-PFDA	336141.3	1.432	9.804	7.289	74	50-150	
E13C2-PFTeDA	363888.5	13C2-PFDA	336141.3	1.083	9.804	7.452	76	50-150	

APPROVED
By JPT at 3:31 pm, 11/16/18

REVIEWED
By HMK at 9:04 am, 11/19/18

ICAL Name: 18NOV12DCAL **Result Table:** 18319003 11/16/2018 11:16:11 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

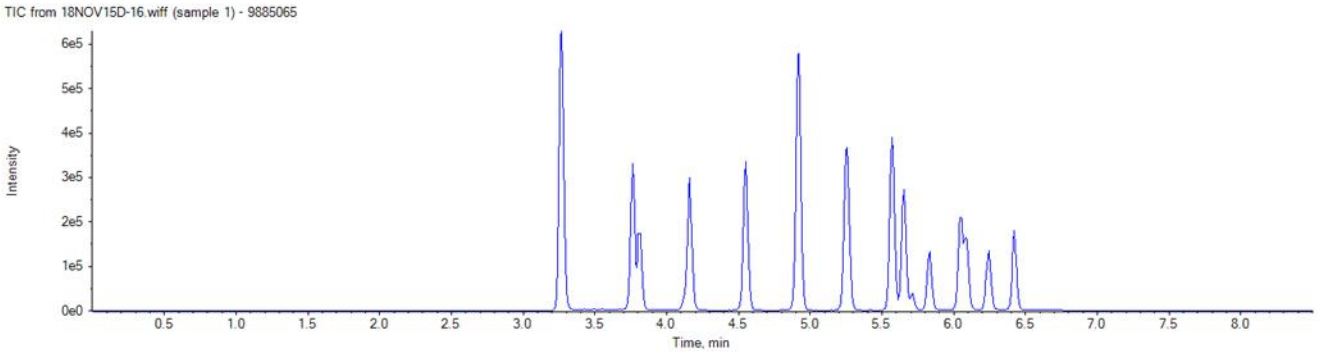
Analyte Quantitation Peak Table

Sample Name: 9885065 **Instrument Name:** LM27631 **File Name:** 18NOV15D-16.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	3.81	382784.1	N/A	
PFHxA	N/A	N/A	N/A		A	13C5-PFHxA	4.16	602760.9	N/A	
PFHpA	N/A	N/A	N/A		A	13C4-PFHpA	4.55	468469.2	N/A	
PFHxS	N/A	N/A	N/A		A	13C3-PFHxS	4.55	289002.4	N/A	
PFOA	N/A	N/A	N/A		A	13C8-PFOA	4.92	831286.6	N/A	
PFOS	5.25	1.000	3627.5		M	13C8-PFOS	5.25	251179.7	0.014	0.124
PFNA	N/A	N/A	N/A		A	13C9-PFNA	5.26	434101.9	N/A	
PFDA	N/A	N/A	N/A		A	13C6-PFDA	5.57	566189.7	N/A	
NMeFOSAA	N/A	N/A	N/A		A	d3-NMeFOSAA	5.71	85351.3	N/A	
PFUnDA	N/A	N/A	N/A		A	13C7-PFUnDA	5.83	236850.3	N/A	
NEtFOSAA	N/A	N/A	N/A		A	d5-NEtFOSAA	5.84	58133.6	N/A	
PFDoDA	N/A	N/A	N/A		A	13C2-PFDoDA	6.05	481303.0	N/A	
PFTrDA	N/A	N/A	N/A		A	13C2-PFDoDA	6.05	481303.0	N/A	
PFTeDA	N/A	N/A	N/A		A	13C2-PFTeDA	6.42	363888.5	N/A	

Total Ion Chromatogram

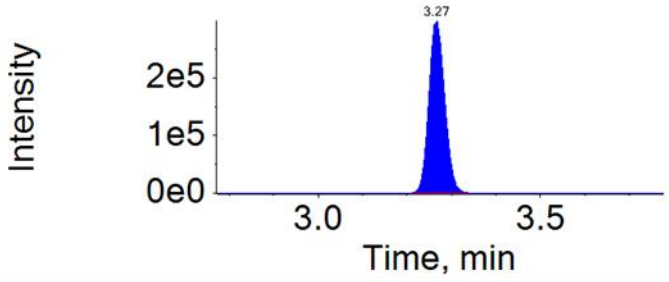


APPROVED
By JPT at 3:31 pm, 11/16/18

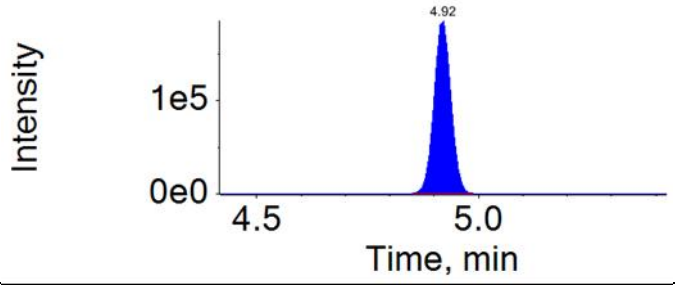
REVIEWED
By HMK at 9:04 am, 11/19/18

ICAL Name: 18NOV12DCAL **Result Table:** 18319003 11/16/2018 11:16:11 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

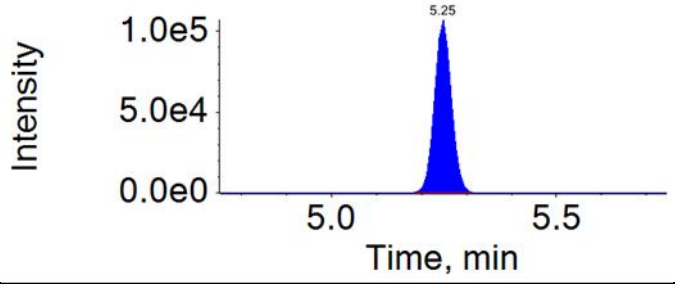
Injection Standard: 13C3-PFBA
216.0 / 172.0



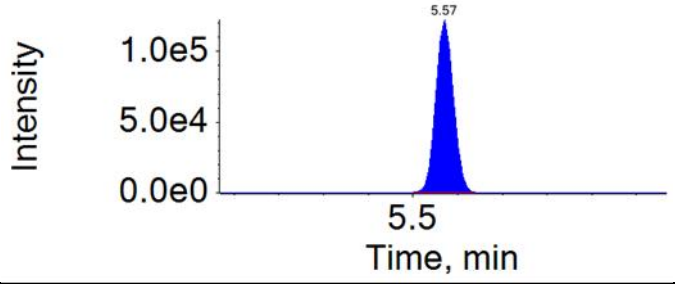
Injection Standard: 13C2-PFOA
415.0 / 370.0



Injection Standard: 13C4-PFOS
503.0 / 80.0



Injection Standard: 13C2-PFDA
515.0 / 470.0

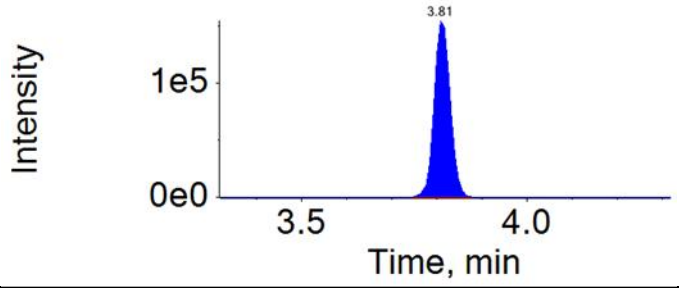


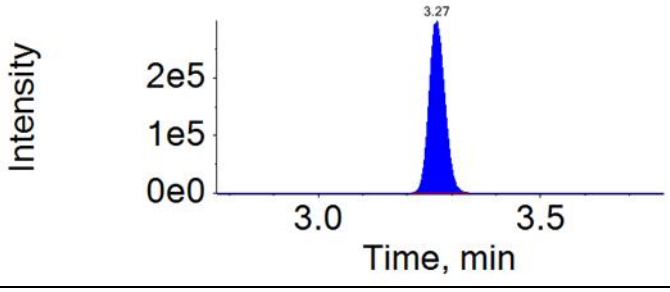
APPROVED
By JPT at 3:31 pm, 11/16/18

REVIEWED
By HMK at 9:04 am, 11/19/18

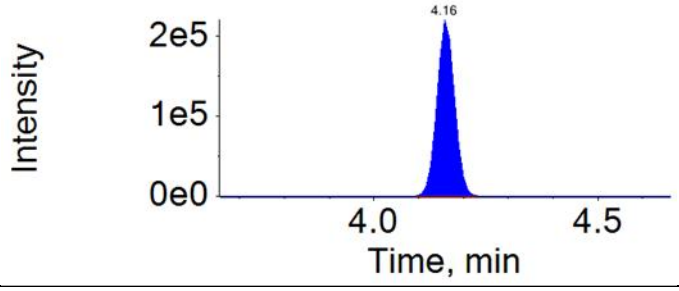
ICAL Name: 18NOV12DCAL **Result Table:** 18319003 11/16/2018 11:16:11 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

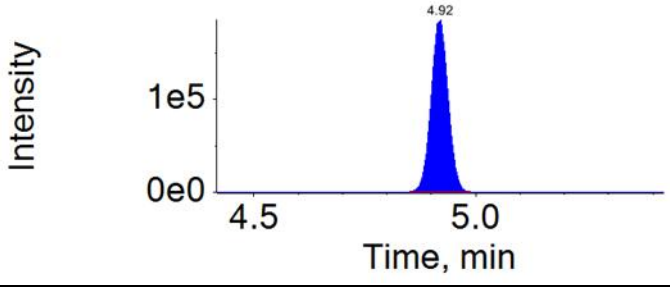
Extraction Standard: E13C3-PFBS	Injection Standard: 13C3-PFBA
302.0 / 80.0	216.0 / 172.0



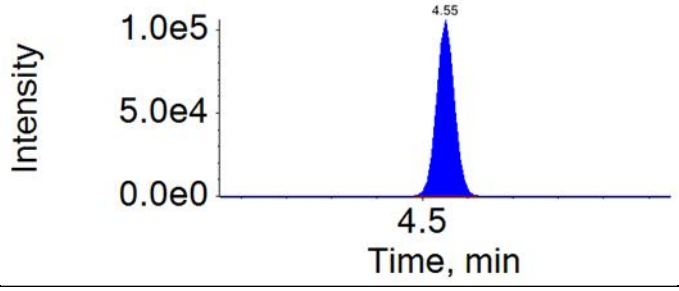


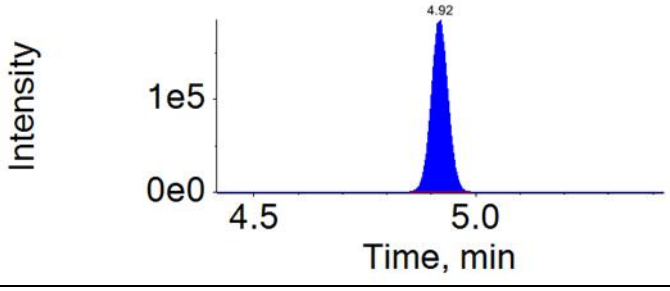
Extraction Standard: E13C5-PFHxA	Injection Standard: 13C2-PFOA
318.0 / 273.0	415.0 / 370.0



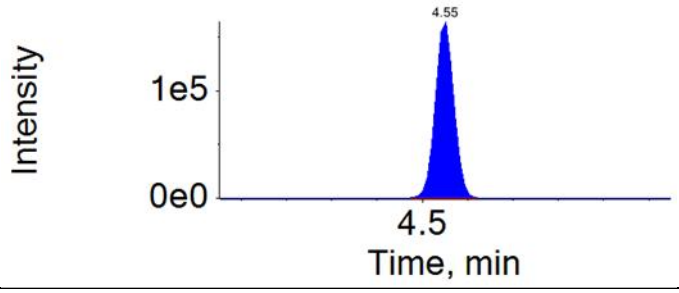


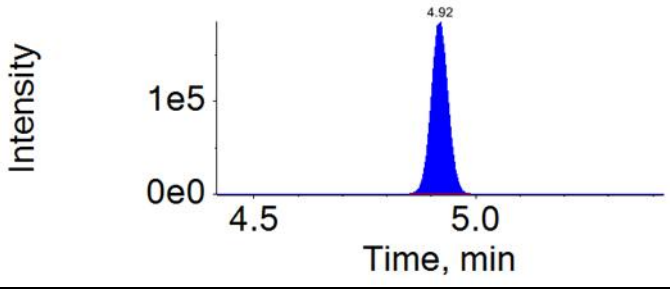
Extraction Standard: E13C3-PFHxS	Injection Standard: 13C2-PFOA
402.0 / 80.0	415.0 / 370.0





Extraction Standard: E13C4-PFHpA	Injection Standard: 13C2-PFOA
367.0 / 322.0	415.0 / 370.0

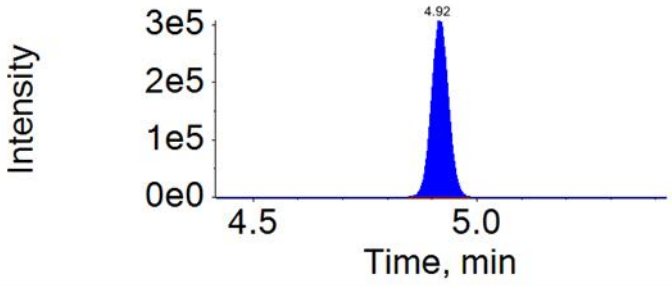
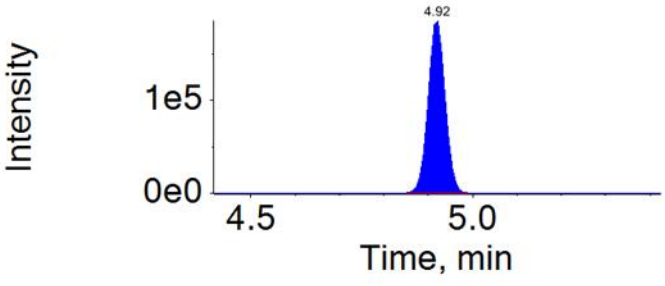


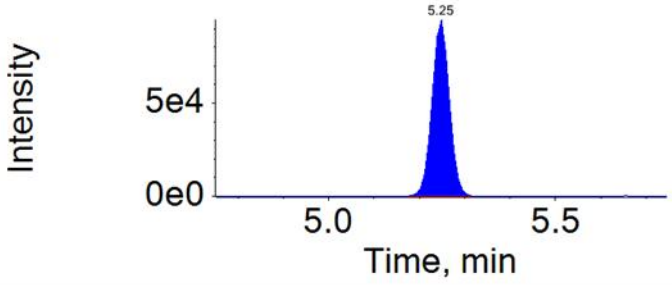
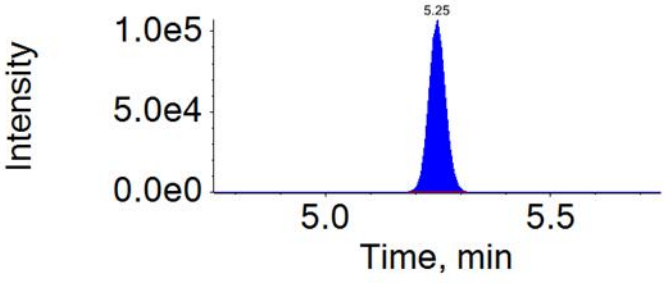


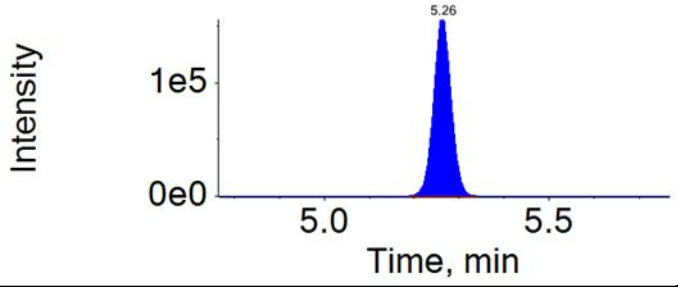
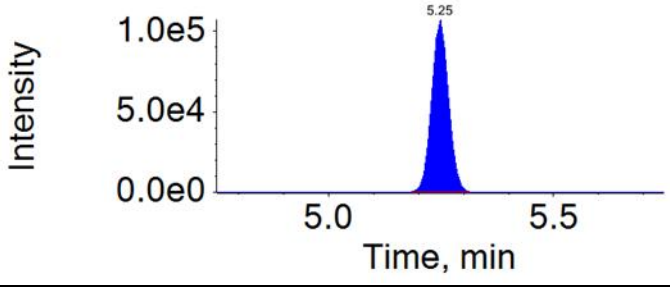
APPROVED
By JPT at 3:31 pm, 11/16/18

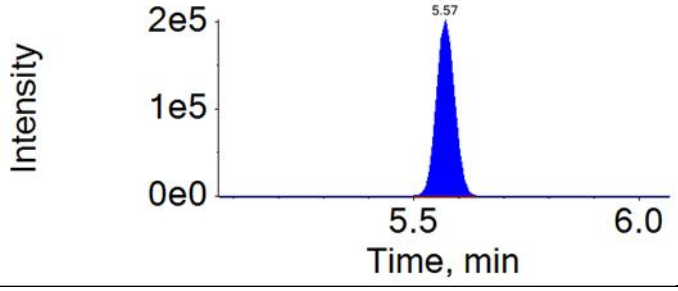
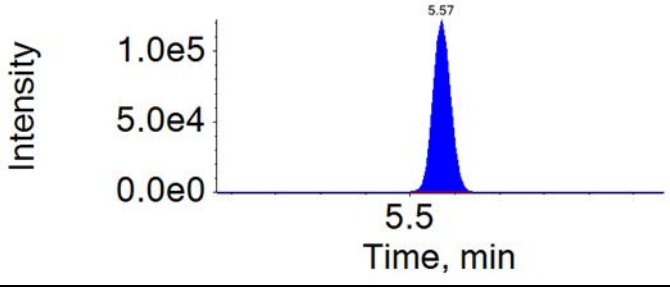
REVIEWED
By HMK at 9:04 am, 11/19/18

ICAL Name: 18NOV12DCAL **Result Table:** 18319003 11/16/2018 11:16:11 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
	

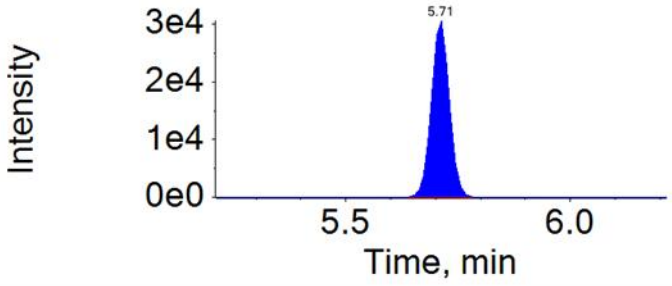
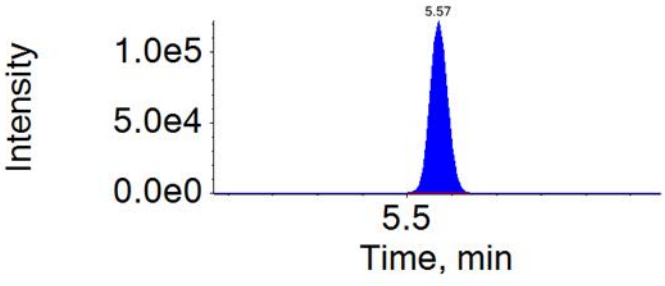
Extraction Standard: E13C9-PFNA	Injection Standard: 13C4-PFOS
472.0 / 427.0	503.0 / 80.0
	

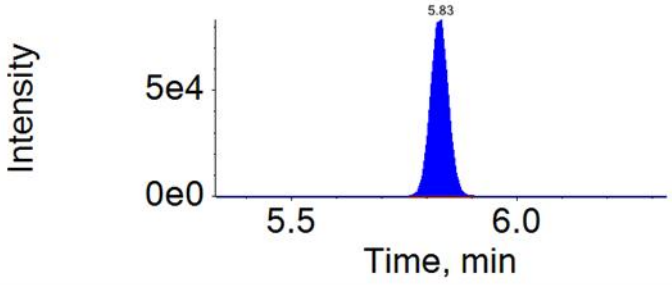
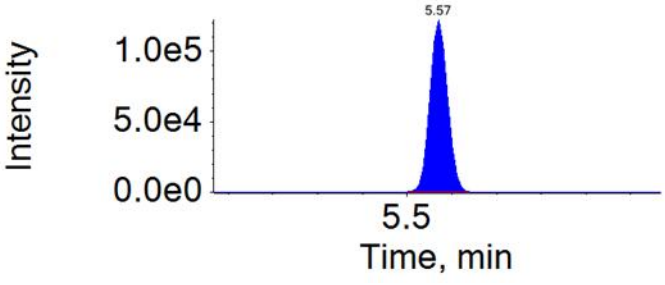
Extraction Standard: E13C6-PFDA	Injection Standard: 13C2-PFDA
519.0 / 474.0	515.0 / 470.0
	

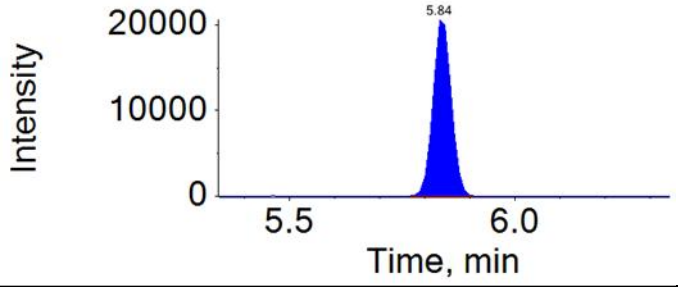
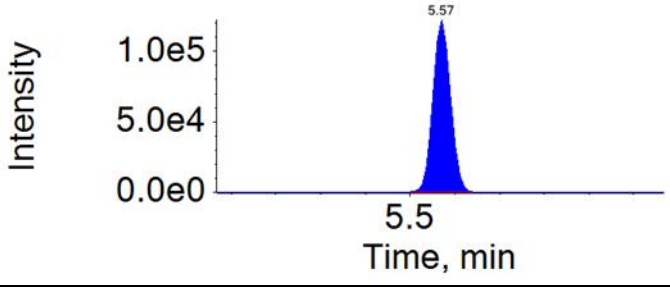
APPROVED
By JPT at 3:31 pm, 11/16/18

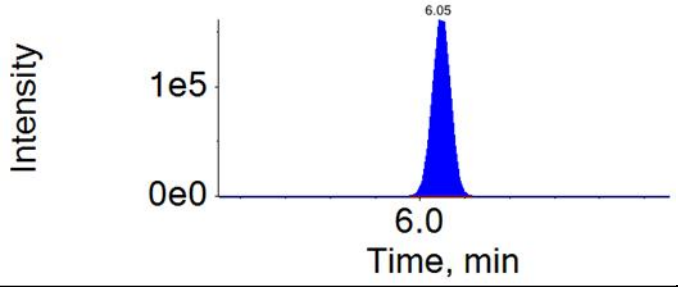
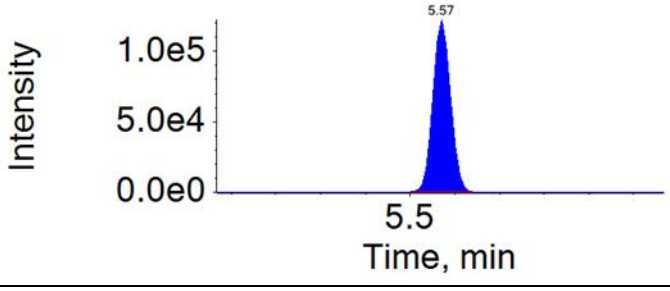
REVIEWED
By HMK at 9:04 am, 11/19/18

ICAL Name: 18NOV12DCAL **Result Table:** 18319003 11/16/2018 11:16:11 AM
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
	

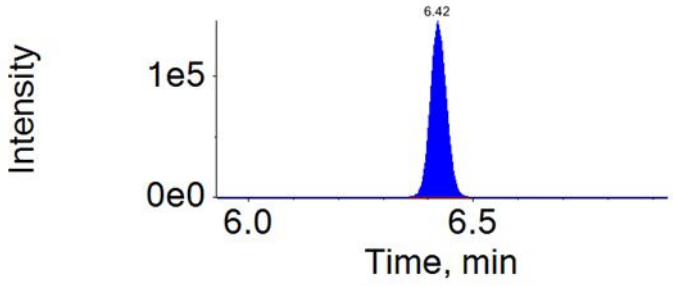
Extraction Standard: E13C2-PFDoDA	Injection Standard: 13C2-PFDA
615.0 / 570.0	515.0 / 470.0
	

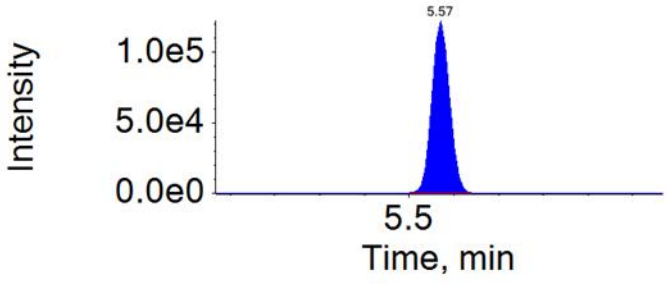
APPROVED
By JPT at 3:31 pm, 11/16/18

REVIEWED
By HMK at 9:04 am, 11/19/18

ICAL Name: 18NOV12DCAL **Result Table:** 18319003 11/16/2018 11:16:11 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

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



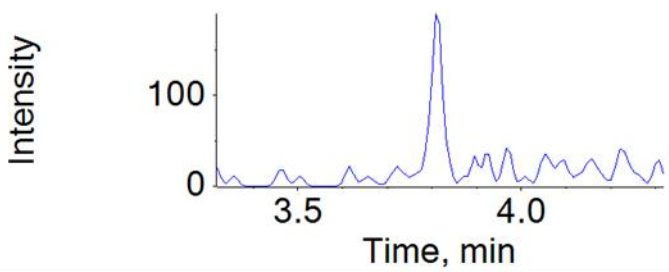


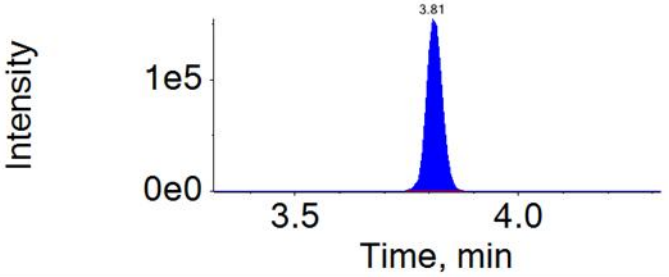
APPROVED
By JPT at 3:31 pm, 11/16/18

REVIEWED
By HMK at 9:04 am, 11/19/18

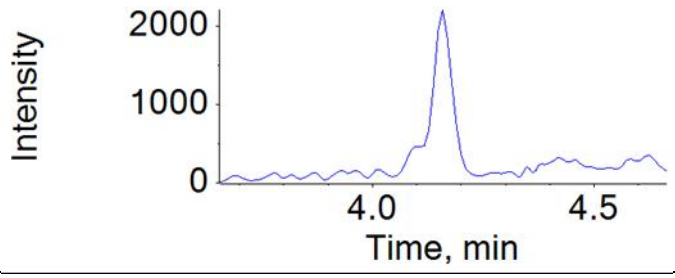
ICAL Name: 18NOV12DCAL **Result Table:** 18319003 11/16/2018 11:16:11 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

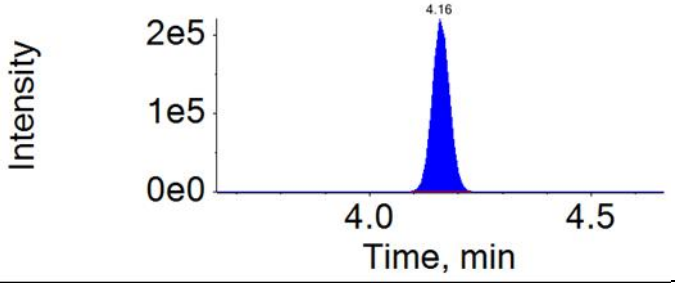
Analyte: PFBS	Extraction Standard: 13C3-PFBS
299.0 / 80.0	302.0 / 80.0



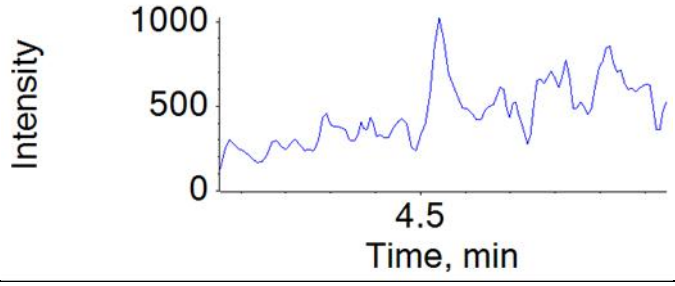


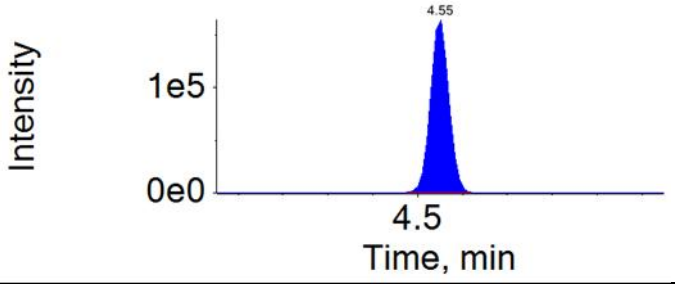
Analyte: PFHxA	Extraction Standard: 13C5-PFHxA
313.0 / 269.0	318.0 / 273.0



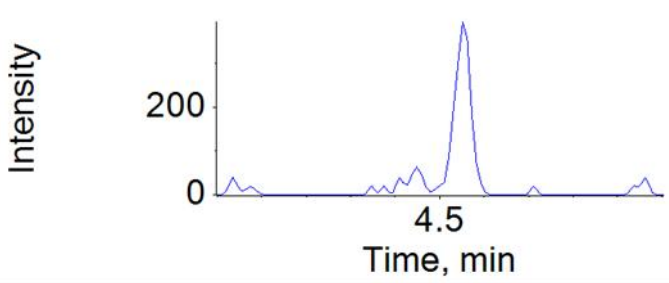


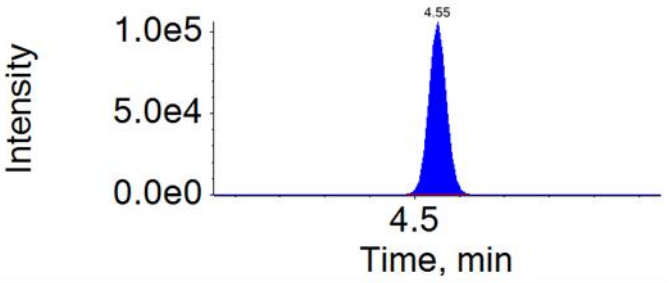
Analyte: PFHpA	Extraction Standard: 13C4-PFHpA
363.0 / 319.0	367.0 / 322.0





Analyte: PFHxS	Extraction Standard: 13C3-PFHxS
399.0 / 80.0	402.0 / 80.0



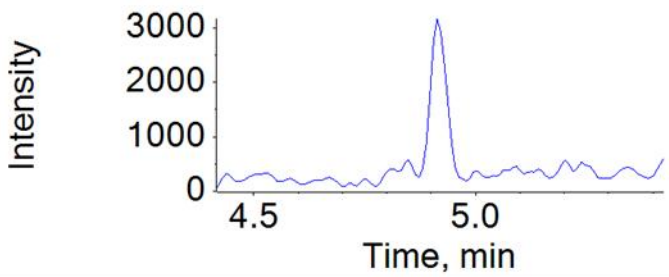


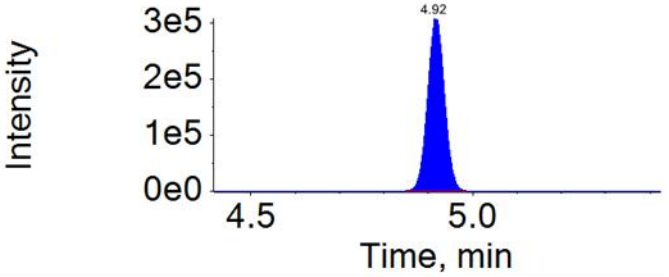
APPROVED
By JPT at 3:31 pm, 11/16/18

REVIEWED
By HMK at 9:04 am, 11/19/18

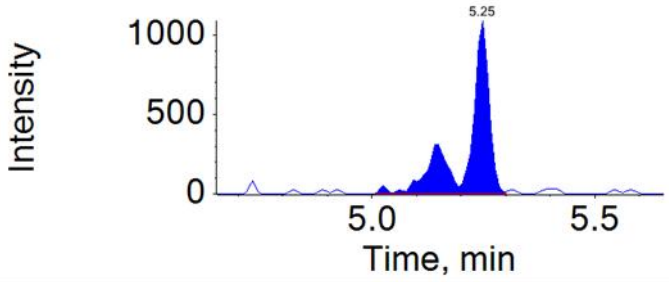
ICAL Name: 18NOV12DCAL **Result Table:** 18319003 11/16/2018 11:16:11 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

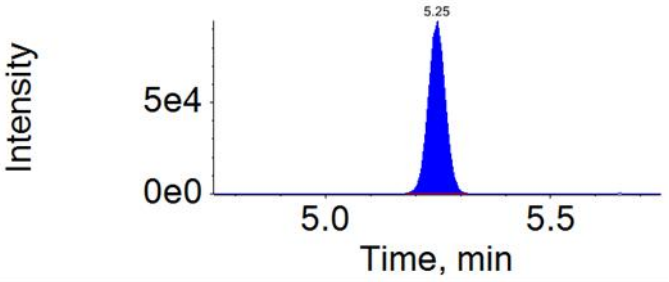
Analyte: PFOA	Extraction Standard: 13C8-PFOA
413.0 / 369.0	421.0 / 376.0



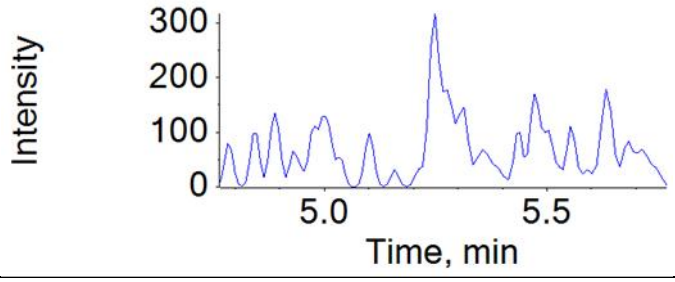


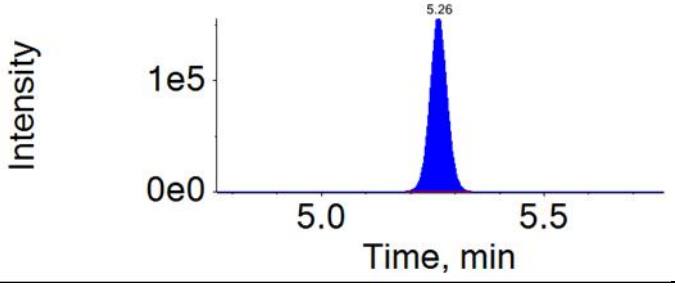
Analyte: PFOS	Extraction Standard: 13C8-PFOS
499.0 / 80.0	507.0 / 80.0



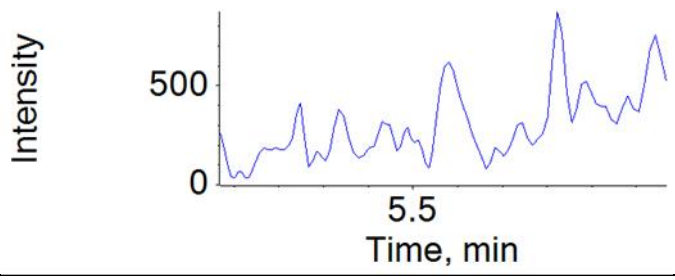


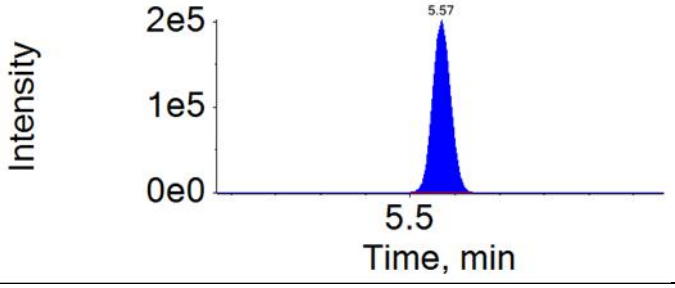
Analyte: PFNA	Extraction Standard: 13C9-PFNA
463.0 / 419.0	472.0 / 427.0





Analyte: PFDA	Extraction Standard: 13C6-PFDA
513.0 / 469.0	519.0 / 474.0



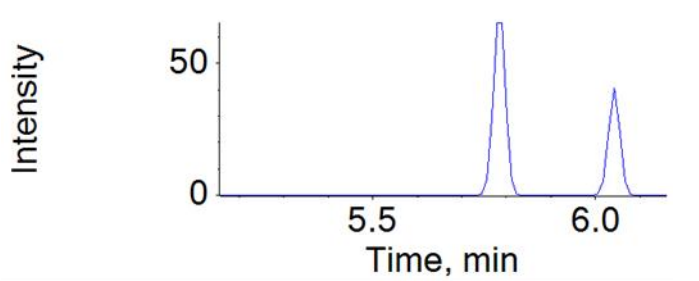


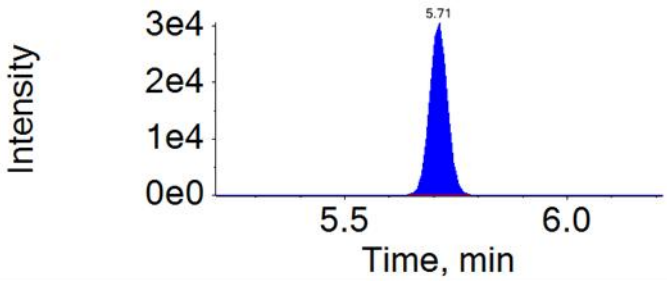
APPROVED
By JPT at 3:31 pm, 11/16/18

REVIEWED
By HMK at 9:04 am, 11/19/18

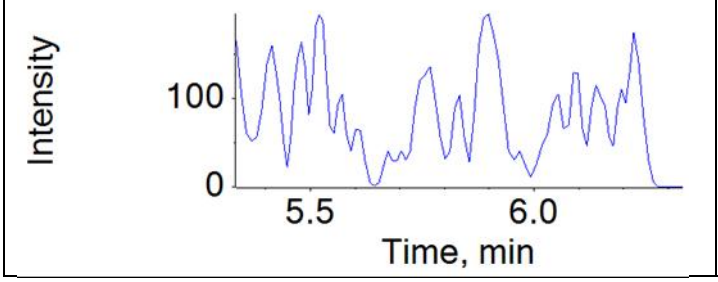
ICAL Name: 18NOV12DCAL **Result Table:** 18319003 11/16/2018 11:16:11 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

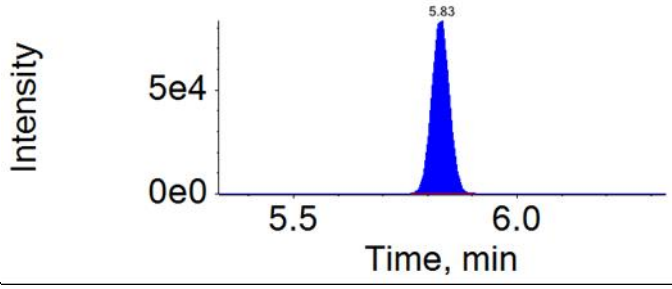
Analyte: NMeFOSAA	Extraction Standard: d3-NMeFOSAA
570.0 / 419.0	573.0 / 419.0



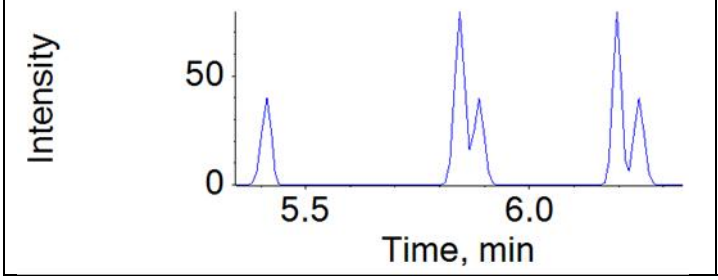


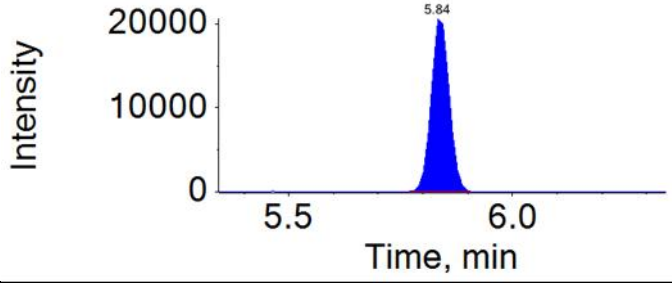
Analyte: PFUnDA	Extraction Standard: 13C7-PFUnDA
563.0 / 519.0	570.0 / 525.0



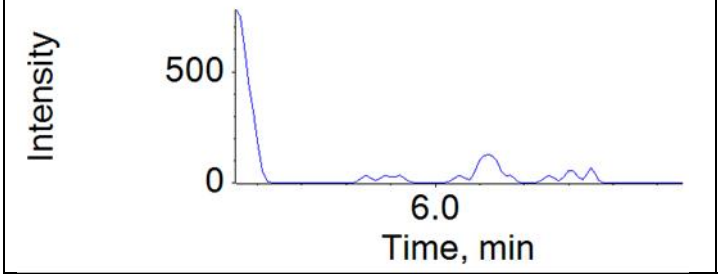


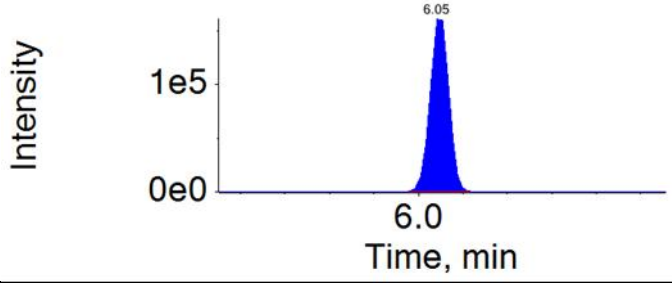
Analyte: NEtFOSAA	Extraction Standard: d5-NEtFOSAA
584.0 / 419.0	589.0 / 419.0





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



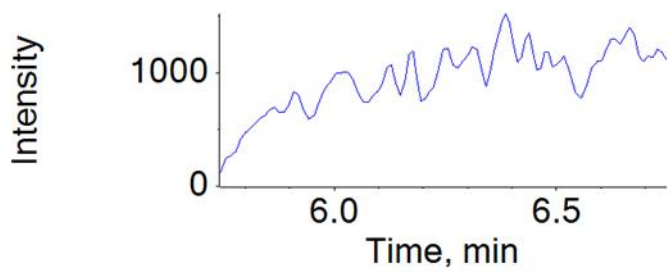


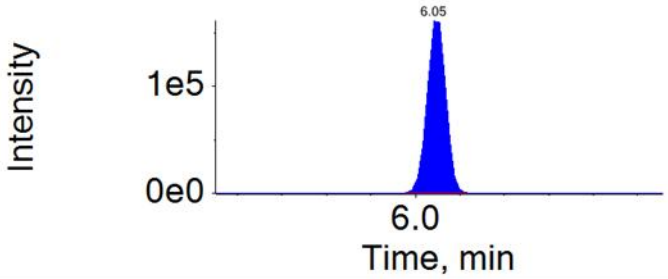
APPROVED
By JPT at 3:31 pm, 11/16/18

REVIEWED
By HMK at 9:04 am, 11/19/18

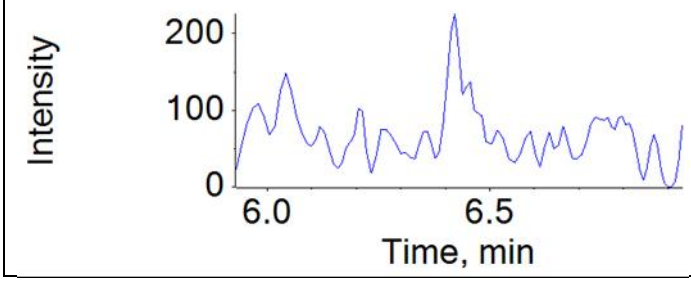
ICAL Name: 18NOV12DCAL **Result Table:** 18319003 11/16/2018 11:16:11 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

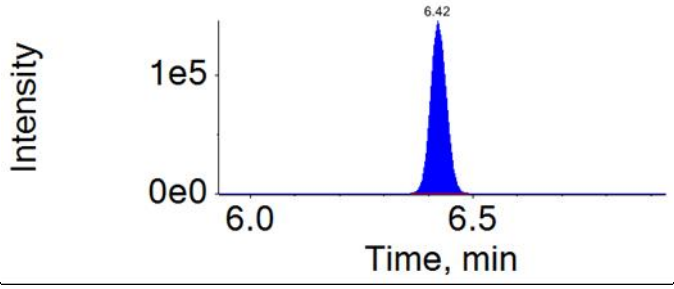
Analyte: PFTrDA	Extraction Standard: 13C2-PFDoDA
663.0 / 619.0	615.0 / 570.0





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





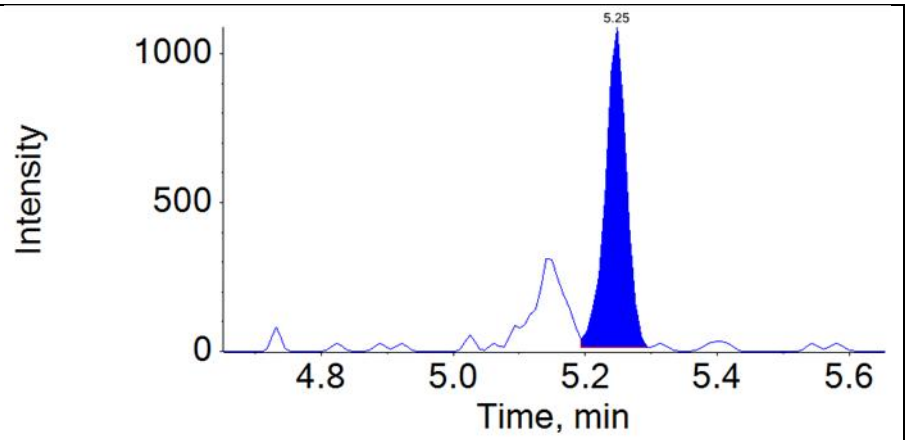
APPROVED
By JPT at 3:31 pm, 11/16/18

REVIEWED
By HMK at 9:04 am, 11/19/18

Results Table Name: 18319003
Results Table Date: 11/16/2018 3:25:03 PM

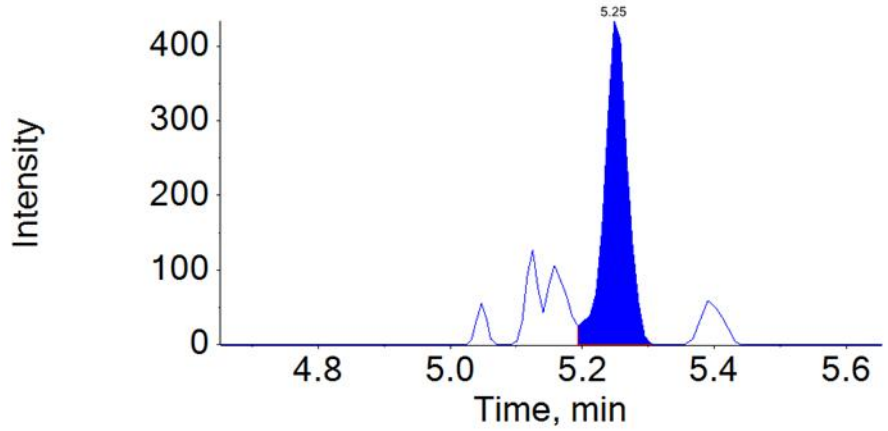
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

Component Name:
PFOS
RT (min.):
5.25
Peak Area:
2391.3
Mass Range:
499.0 / 80.0
File Name:
18NOV15D-16.wiff
Sample Name:
9885065



Integration Comment: incorrect integration

Component Name:
PFOS_2
RT (min.):
5.25
Peak Area:
1057.4
Mass Range:
499.0 / 99.0
File Name:
18NOV15D-16.wiff
Sample Name:
9885065



Integration Comment: incorrect integration

APPROVED
By JPT at 3:31 pm, 11/16/18

REVIEWED
By HMK at 9:04 am, 11/19/18

Results Table Name: 18319003
Results Table Date: 11/16/2018 3:25:03 PM

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

APPROVED
By JPT at 3:31 pm, 11/16/18

REVIEWED
By HMK at 9:04 am, 11/19/18

Ion Ratio Report

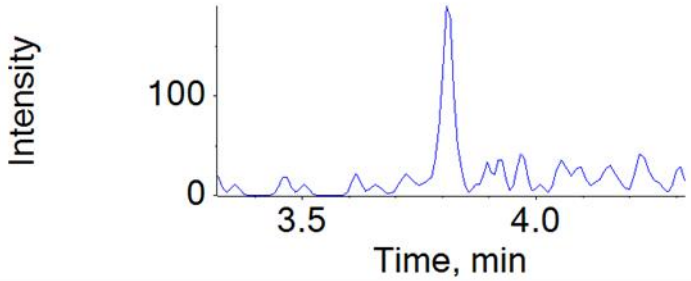
Sample Name: 9885065 **Instrument Name:** LM27631 **File Name:** 18NOV15D-16.wiff

Component Name	RT	RRT	Analyte Area Response	Int Typ	Expected Ion Ratio	Ion Ratio	Ion Ratio % Diff	Ion Ratio Limit	Ion Ratio OOS
PFBS	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	3627.5	M	N/A	1.0000			
PFOS_2	5.25	1.00	1503.3	M	N/A	0.4144	40	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	

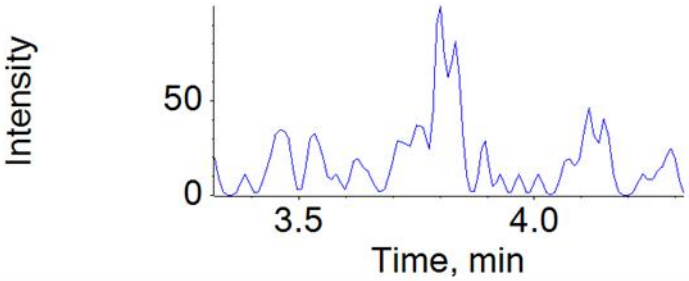
APPROVED
By JPT at 3:31 pm, 11/16/18

REVIEWED
By HMK at 9:04 am, 11/19/18

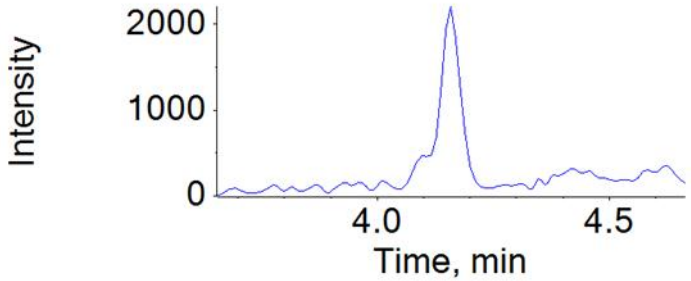
Component: PFBS
Primary Mass: 299.0 / 80.0



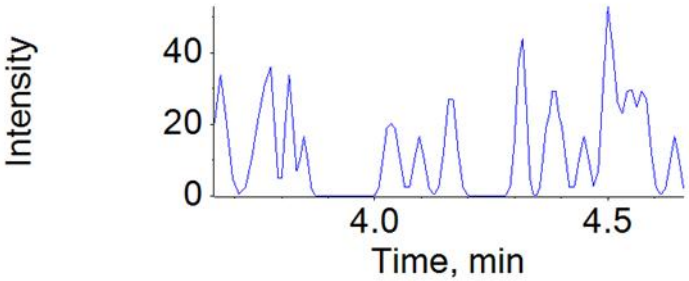
Component: PFBS_2
Secondary Mass: 299.0 / 99.0



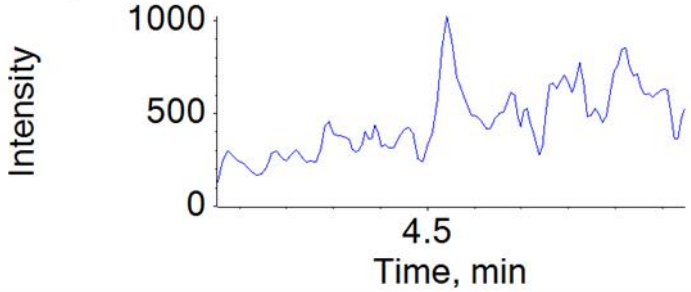
Component: PFHxA
Primary Mass: 313.0 / 269.0



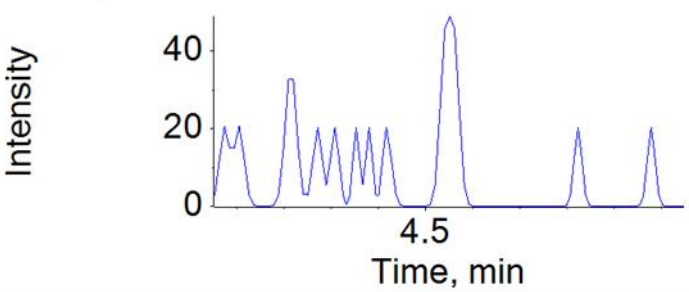
Component: PFHxA_2
Secondary Mass: 313.0 / 119.0



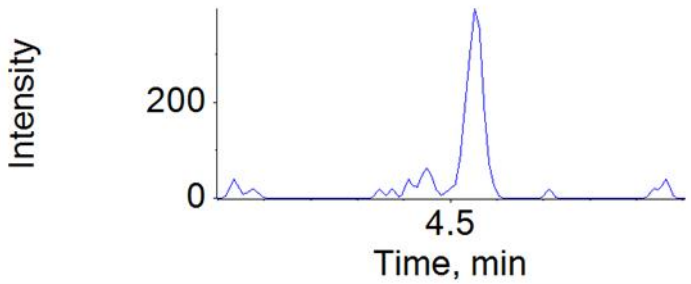
Component: PFHpA
Primary Mass: 363.0 / 319.0



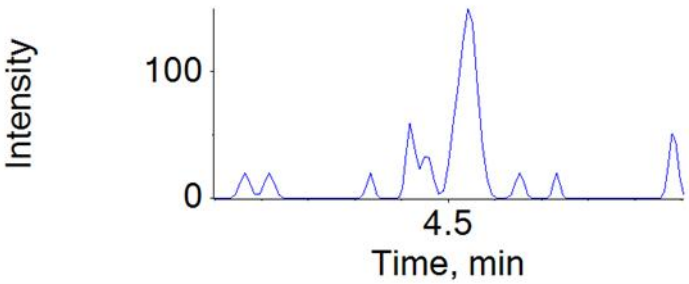
Component: PFHpA_2
Secondary Mass: 363.0 / 169.0



Component: PFHxS
Primary Mass: 399.0 / 80.0



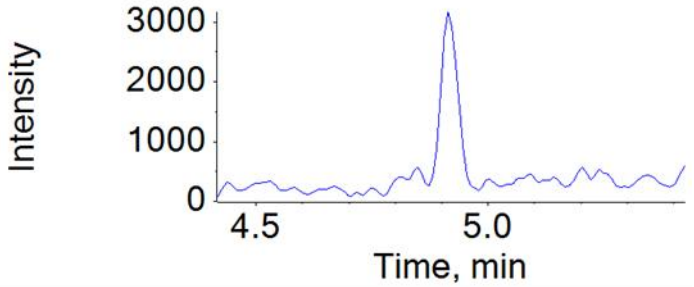
Component: PFHxS_2
Secondary Mass: 399.0 / 99.0



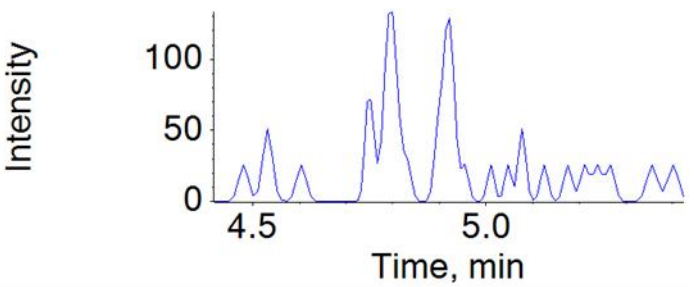
APPROVED
By JPT at 3:31 pm, 11/16/18

REVIEWED
By HMK at 9:04 am, 11/19/18

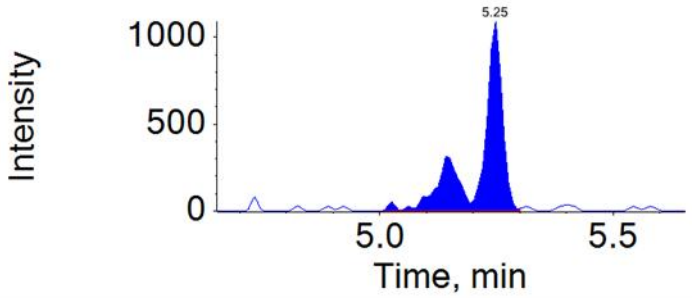
Component: PFOA
Primary Mass: 413.0 / 369.0



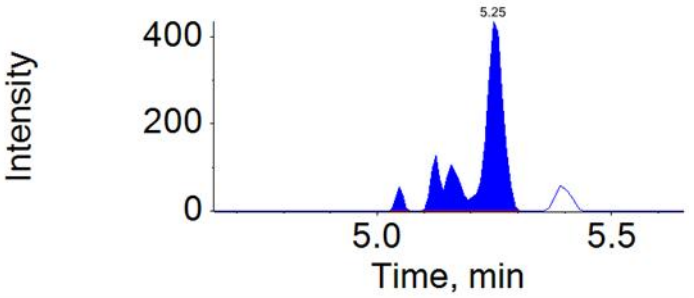
Component: PFOA_2
Secondary Mass: 413.0 / 169.0



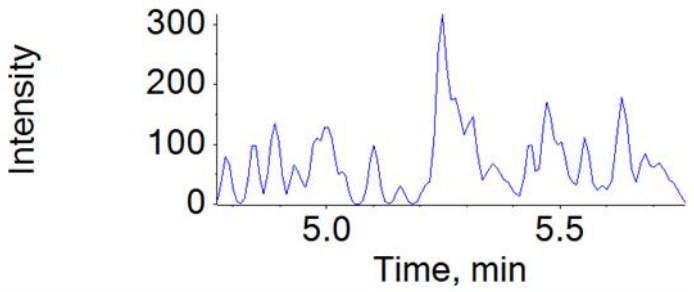
Component: PFOS
Primary Mass: 499.0 / 80.0



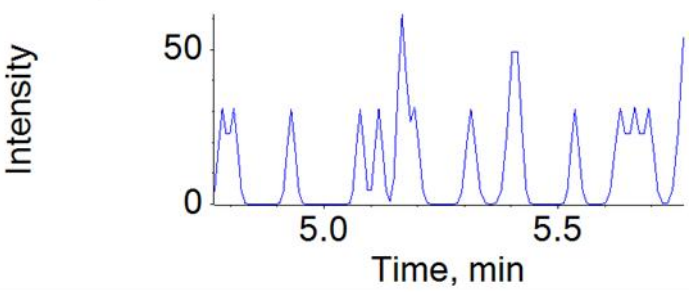
Component: PFOS_2
Secondary Mass: 499.0 / 99.0



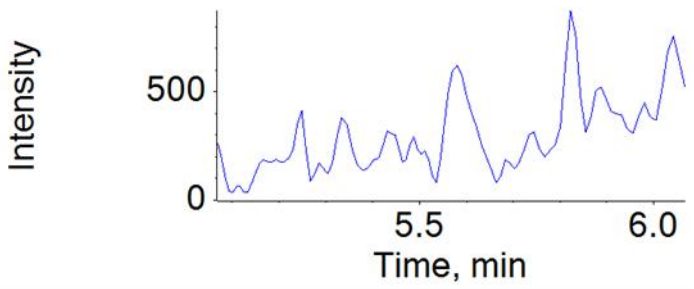
Component: PFNA
Primary Mass: 463.0 / 419.0



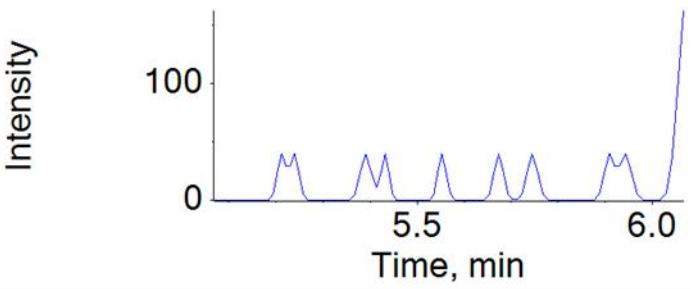
Component: PFNA_2
Secondary Mass: 463.0 / 169.0



Component: PFDA
Primary Mass: 513.0 / 469.0



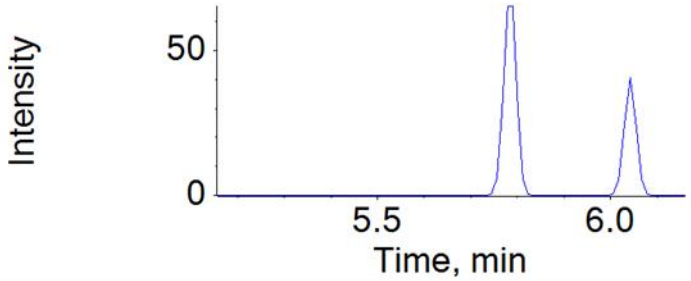
Component: PFDA_2
Secondary Mass: 513.0 / 169.0



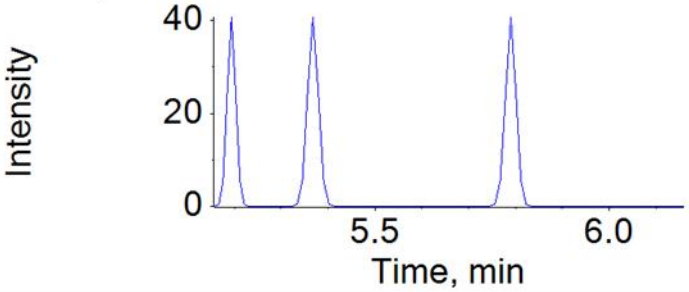
APPROVED
By JPT at 3:31 pm, 11/16/18

REVIEWED
By HMK at 9:04 am, 11/19/18

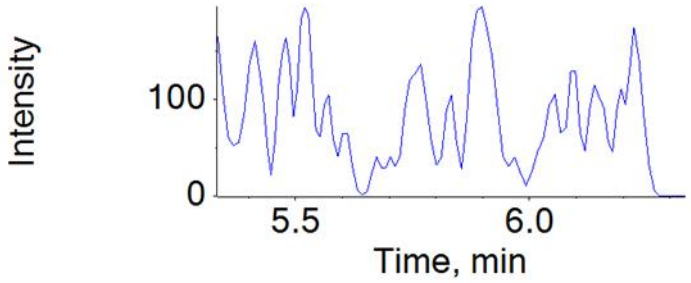
Component: NMeFOSAA
Primary Mass: 570.0 / 419.0



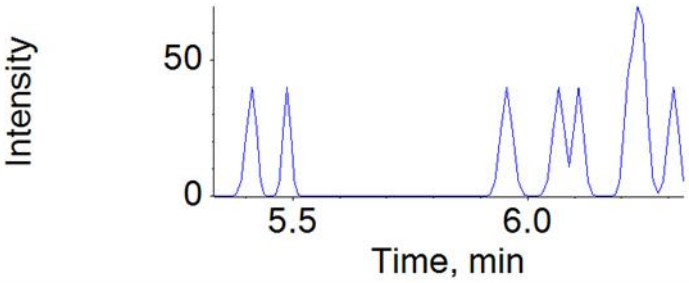
Component: NMeFOSAA_2
Secondary Mass: 570.0 / 483.0



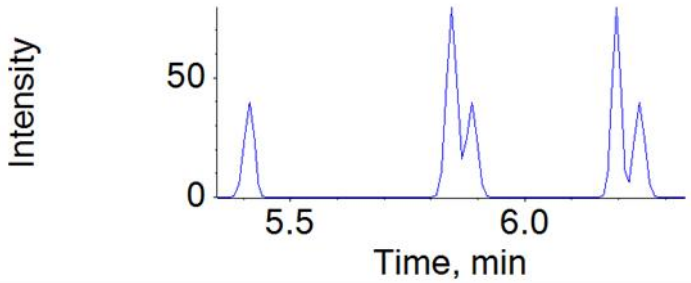
Component: PFUnDA
Primary Mass: 563.0 / 519.0



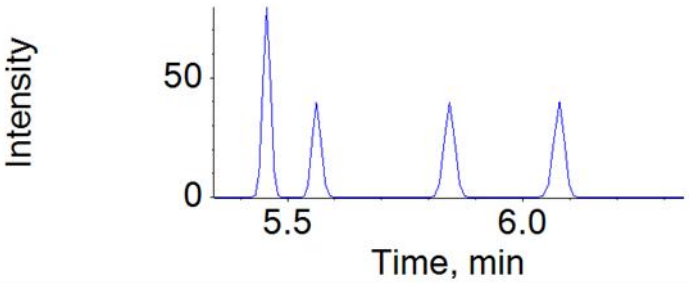
Component: PFUnDA_2
Secondary Mass: 563.0 / 169.0



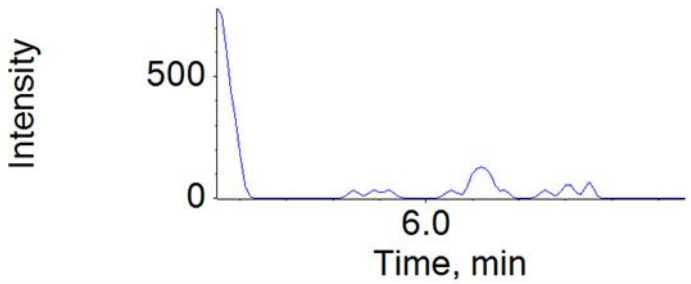
Component: NEtFOSAA
Primary Mass: 584.0 / 419.0



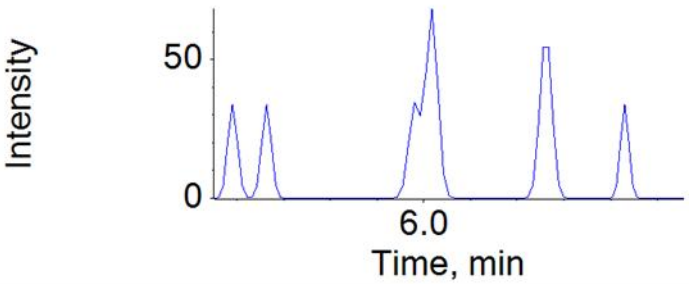
Component: NEtFOSAA_2
Secondary Mass: 584.0 / 526.0



Component: PFDoDA
Primary Mass: 613.0 / 569.0



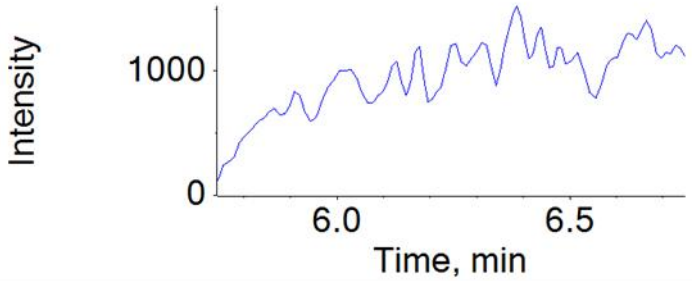
Component: PFDoDA_2
Secondary Mass: 613.0 / 169.0



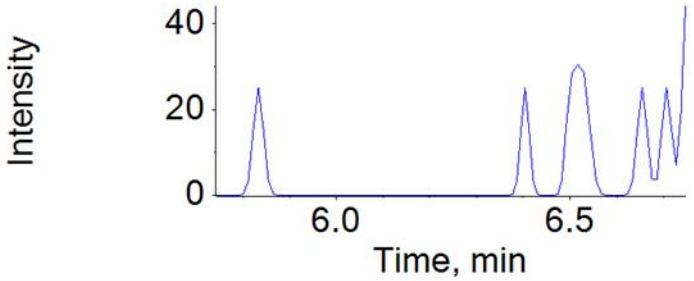
APPROVED
By JPT at 3:31 pm, 11/16/18

REVIEWED
By HMK at 9:04 am, 11/19/18

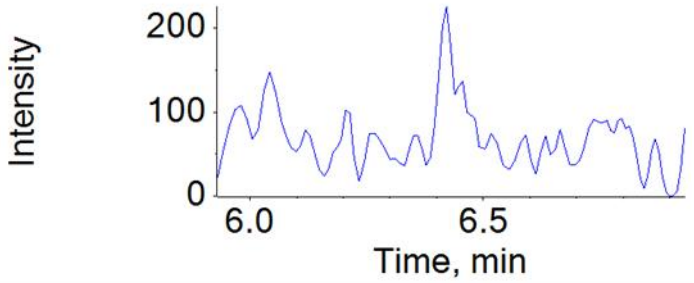
Component: PFTrDA
Primary Mass: 663.0 / 619.0



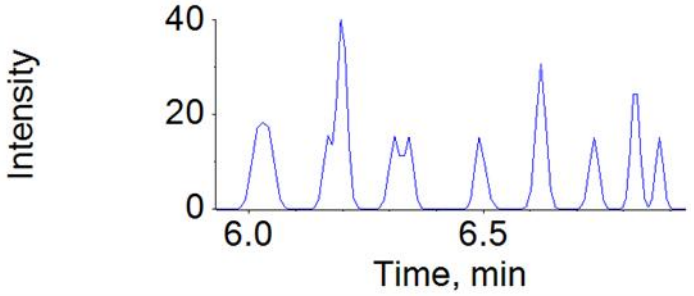
Component: PFTrDA_2
Secondary Mass: 663.0 / 169.0



Component: PFTeDA
Primary Mass: 713.0 / 669.0



Component: PFTeDA_2
Secondary Mass: 713.0 / 169.0



APPROVED
By JPT at 3:31 pm, 11/16/18

REVIEWED
By HMK at 9:04 am, 11/19/18

Standards Data

PFAS by LC/MS/MS

eurofins | Lancaster Laboratories

LC-MS/MS Sample Run Log

Printed: 11/16/2018 3:42:00 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
18NOV15D-01.wiff	solvent	N/A	11/15/2018 12:03:07 PM
18NOV15D-02.wiff	solvent	N/A	11/15/2018 12:12:09 PM
18NOV15D-03.wiff	solvent	N/A	11/15/2018 12:21:09 PM
18NOV15D-04.wiff	solvent	N/A	11/15/2018 12:30:08 PM
18NOV15D-05.wiff	CCV1_ISC_CAL2	N/A	11/15/2018 12:39:12 PM
18NOV15D-06.wiff	INBLK	N/A	11/15/2018 12:48:12 PM
18NOV15D-07.wiff	BLK319003	18319003	11/15/2018 12:57:12 PM
18NOV15D-08.wiff	LCS319003	18319003	11/15/2018 1:06:11 PM
18NOV15D-09.wiff	9885056	18319003	11/15/2018 1:15:14 PM
18NOV15D-10.wiff	9885057	18319003	11/15/2018 1:24:18 PM
18NOV15D-11.wiff	9885058	18319003	11/15/2018 1:33:20 PM
18NOV15D-12.wiff	9885059	18319003	11/15/2018 1:42:23 PM
18NOV15D-13.wiff	9885062BKG	18319003	11/15/2018 1:51:27 PM
18NOV15D-14.wiff	9885063MS	18319003	11/15/2018 2:00:26 PM
18NOV15D-15.wiff	9885064MSD	18319003	11/15/2018 2:09:27 PM
18NOV15D-16.wiff	9885065	18319003	11/15/2018 2:18:27 PM
18NOV15D-17.wiff	CCV2_CAL3	N/A	11/15/2018 2:27:27 PM
18NOV15D-18.wiff	9885075	18319003	11/15/2018 2:36:27 PM
18NOV15D-19.wiff	9885147RE	18319003	11/15/2018 2:45:27 PM
18NOV15D-20.wiff	9885152RE	18319003	11/15/2018 2:54:26 PM
18NOV15D-21.wiff	solvent	N/A	11/15/2018 3:03:26 PM
18NOV15D-22.wiff	BLK318004	18318004	11/15/2018 3:12:30 PM
18NOV15D-23.wiff	LCS318004	18318004	11/15/2018 3:21:29 PM
18NOV15D-24.wiff	9889418	18318004	11/15/2018 3:30:30 PM
18NOV15D-25.wiff	9889419	18318004	11/15/2018 3:39:30 PM
18NOV15D-26.wiff	9889420	18318004	11/15/2018 3:48:33 PM
18NOV15D-27.wiff	9889421	18318004	11/15/2018 3:57:33 PM
18NOV15D-28.wiff	9889422	18318004	11/15/2018 4:06:35 PM
18NOV15D-29.wiff	CCV3_CAL4	N/A	11/15/2018 4:15:35 PM
18NOV15D-30.wiff	9889423BKG	18318004	11/15/2018 4:24:35 PM
18NOV15D-31.wiff	9889424MS	18318004	11/15/2018 4:33:38 PM
18NOV15D-32.wiff	9889425MSD	18318004	11/15/2018 4:42:42 PM
18NOV15D-33.wiff	9889426	18318004	11/15/2018 4:51:42 PM
18NOV15D-34.wiff	9897207	18318004	11/15/2018 5:00:42 PM
18NOV15D-35.wiff	CCV4_ISC_CAL2	N/A	11/15/2018 5:09:41 PM
18NOV15D-36.wiff	solvent	N/A	11/15/2018 5:18:42 PM
18NOV15D-37.wiff	solvent	N/A	11/15/2018 5:27:45 PM

20 mM Ammonium Acetate in H2O: 782411091833A
20 mM Ammonium Acetate in 0.5% H2O\Methanol: 782411091833B

APPROVED
By MCD at 3:42 pm, 11/16/18

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
18NOV16D-01.wiff	solvent	N/A	11/16/2018 10:14:06 AM
18NOV16D-02.wiff	solvent	N/A	11/16/2018 10:23:07 AM
18NOV16D-03.wiff	solvent	N/A	11/16/2018 10:32:10 AM
18NOV16D-04.wiff	solvent	N/A	11/16/2018 10:41:13 AM
18NOV16D-05.wiff	CCV1_ISC_CAL2	N/A	11/16/2018 10:50:13 AM
18NOV16D-06.wiff	INBLK	N/A	11/16/2018 10:59:13 AM
18NOV16D-07.wiff	BLK311021	18311021	11/16/2018 11:08:13 AM
18NOV16D-08.wiff	LCS311021	18311021	11/16/2018 11:17:16 AM
18NOV16D-09.wiff	9885056RE	18311021	11/16/2018 11:26:19 AM
18NOV16D-10.wiff	9885062BKGRE	18311021	11/16/2018 11:35:19 AM
18NOV16D-11.wiff	9885063MSRE	18311021	11/16/2018 11:44:19 AM
18NOV16D-12.wiff	9885064MSDRE	18311021	11/16/2018 11:53:22 AM
18NOV16D-13.wiff	CCV2_CAL3	N/A	11/16/2018 12:02:26 PM
18NOV16D-14.wiff	solvent	N/A	11/16/2018 12:11:25 PM
18NOV16D-15.wiff	BLK318013	18318013	11/16/2018 12:20:28 PM
18NOV16D-16.wiff	LCS318013	18318013	11/16/2018 12:29:29 PM
18NOV16D-17.wiff	LCSDA	18318013	11/16/2018 12:38:28 PM
18NOV16D-18.wiff	9893176RE	18318013	11/16/2018 12:47:28 PM
18NOV16D-19.wiff	CCV3_CAL4	N/A	11/16/2018 12:56:29 PM
18NOV16D-20.wiff	solvent	N/A	11/16/2018 1:05:29 PM
18NOV16D-21.wiff	solvent	N\A	11/16/2018 10:52:22 PM
18NOV16D-22.wiff	solvent	N\A	11/16/2018 11:01:24 PM
18NOV16D-23.wiff	solvent	N\A	11/16/2018 11:10:24 PM
18NOV16D-24.wiff	solvent	N\A	11/16/2018 11:19:28 PM
18NOV16D-25.wiff	CCV4_ISC_CAL2	N/A	11/16/2018 11:28:28 PM
18NOV16D-26.wiff	Instrument Blank	N/A	11/16/2018 11:37:28 PM
18NOV16D-27.wiff	BLK320001	18320001	11/16/2018 11:46:28 PM
18NOV16D-28.wiff	LCS320001	18320001	11/16/2018 11:55:31 PM
18NOV16D-29.wiff	9899831	18320001	11/17/2018 12:04:30 AM
18NOV16D-30.wiff	9899832	18320001	11/17/2018 12:13:33 AM
18NOV16D-31.wiff	9901702	18320001	11/17/2018 12:22:34 AM
18NOV16D-32.wiff	9901703	18320001	11/17/2018 12:31:36 AM
18NOV16D-33.wiff	9901704	18320001	11/17/2018 12:40:39 AM
18NOV16D-34.wiff	9901705	18320001	11/17/2018 12:49:42 AM
18NOV16D-35.wiff	9901706	18320001	11/17/2018 12:58:42 AM
18NOV16D-36.wiff	9901707	18320001	11/17/2018 1:07:42 AM
18NOV16D-37.wiff	CCV5_CAL3	N/A	11/17/2018 1:16:42 AM
18NOV16D-38.wiff	9901708	18320001	11/17/2018 1:25:42 AM
18NOV16D-39.wiff	9901709BKG	18320001	11/17/2018 1:34:42 AM
18NOV16D-40.wiff	9901712	18320001	11/17/2018 1:43:45 AM
18NOV16D-41.wiff	9901713	18320001	11/17/2018 1:52:45 AM
18NOV16D-42.wiff	9901714	18320001	11/17/2018 2:01:45 AM
18NOV16D-43.wiff	9901710MS	18320001	11/17/2018 2:10:45 AM
18NOV16D-44.wiff	9901711MSD	18320001	11/17/2018 2:19:45 AM
18NOV16D-45.wiff	CCV6_CAL4	N/A	11/17/2018 2:28:48 AM

APPROVED
By MCD at 12:26 pm, 11/17/18

Instrument Name: LM27631

18NOV16D-46.wiff	solvent	N/A	11/17/2018 2:37:48 AM
18NOV16D-47.wiff	solvent	N/A	11/17/2018 2:46:51 AM

20 mM Ammonium Acetate in H2O: 782411091833A
20 mM Ammonium Acetate in 0.5% H2O\Methanol: 782411091833B

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

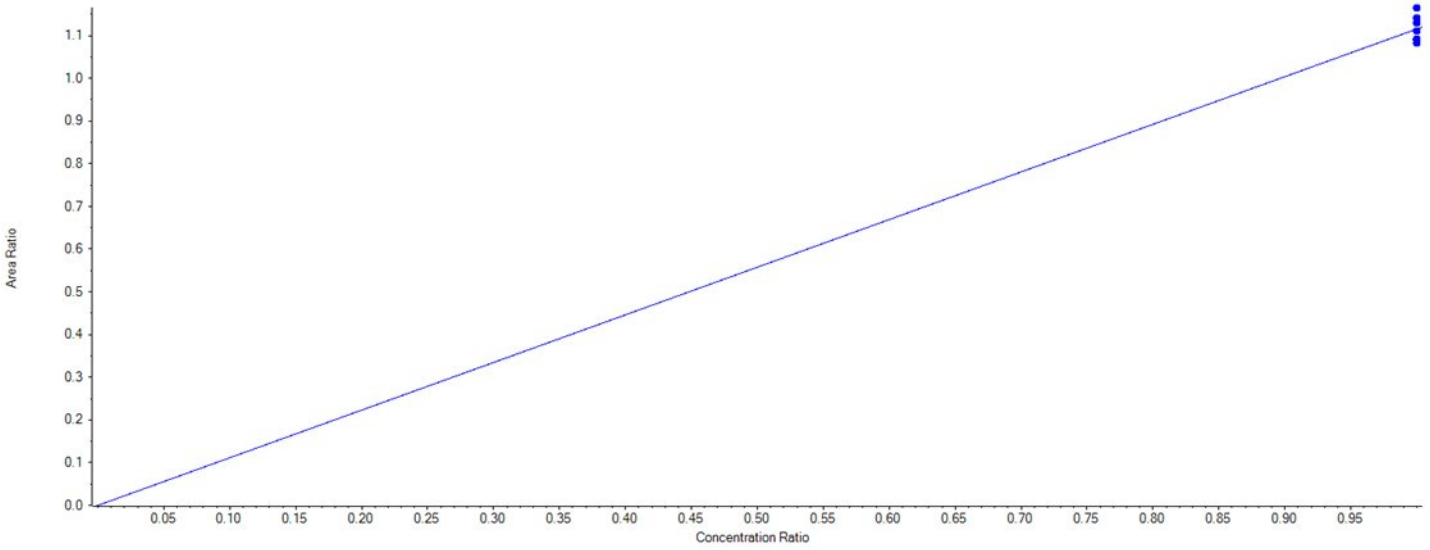
Analyte Name	CAL 1	CAL 2	CAL 3	CAL 4	CAL 5	CAL 6	CAL 7	%RSD	Limit	OOS	r^2	OOS
PFBA	1.059	0.868	1.034	0.919	0.966	0.910	0.882	7	20		0.999	
PFPeA	1.058	0.952	1.052	0.939	0.906	0.876	0.839	8	20		0.999	
PFBS	1.061	0.938	1.061	0.954	1.001	0.997	0.964	5	20		1.000	
4:2-FTS	1.764	1.591	1.797	1.672	1.662	1.782	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

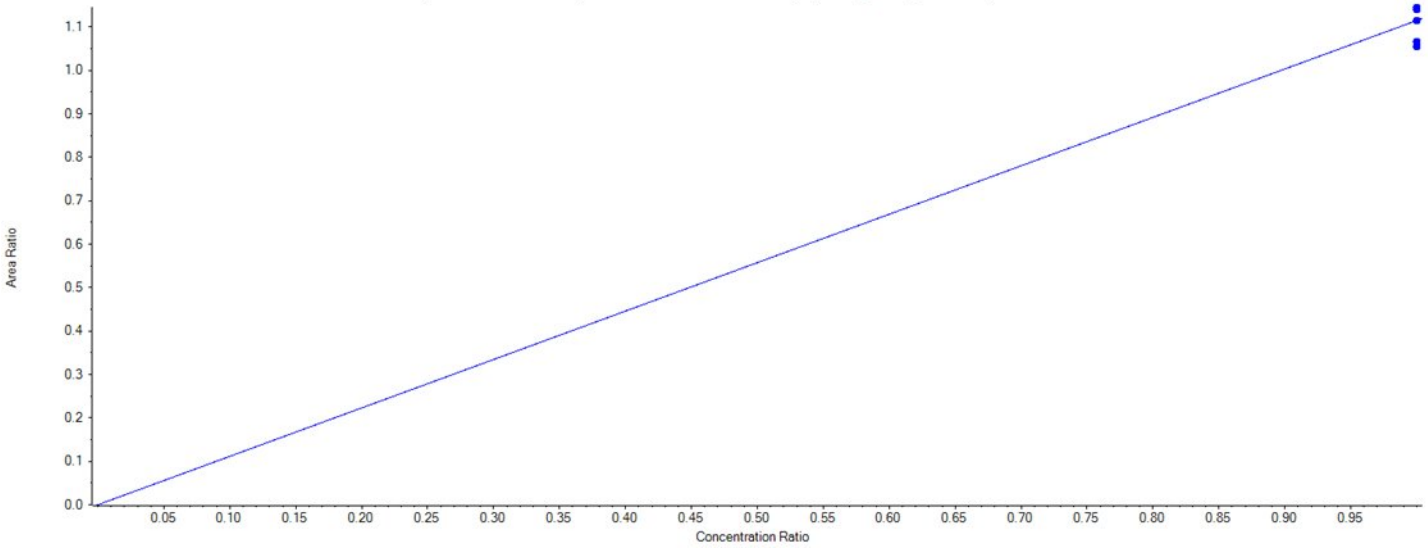
REVIEWED
By ucmr at 3:21 pm, 1/25/19

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	

APPROVED
By MCD at 3:22 pm, 1/10/19

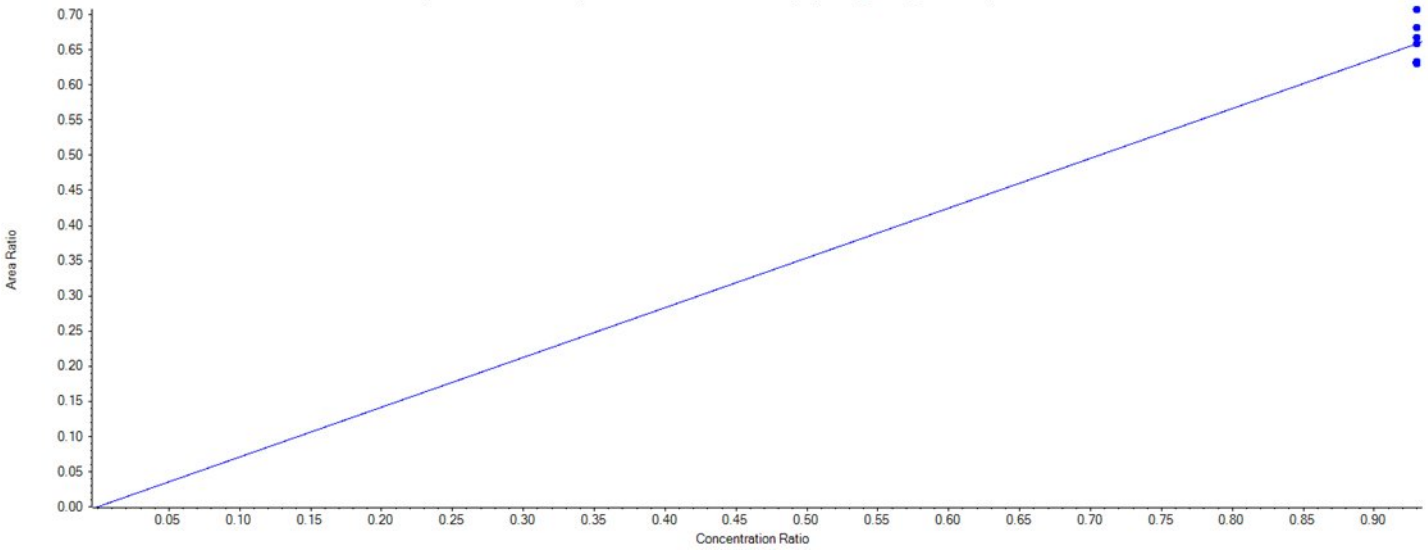
REVIEWED
By ucmr at 3:21 pm, 1/25/19

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

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	

APPROVED
By MCD at 3:22 pm, 1/10/19

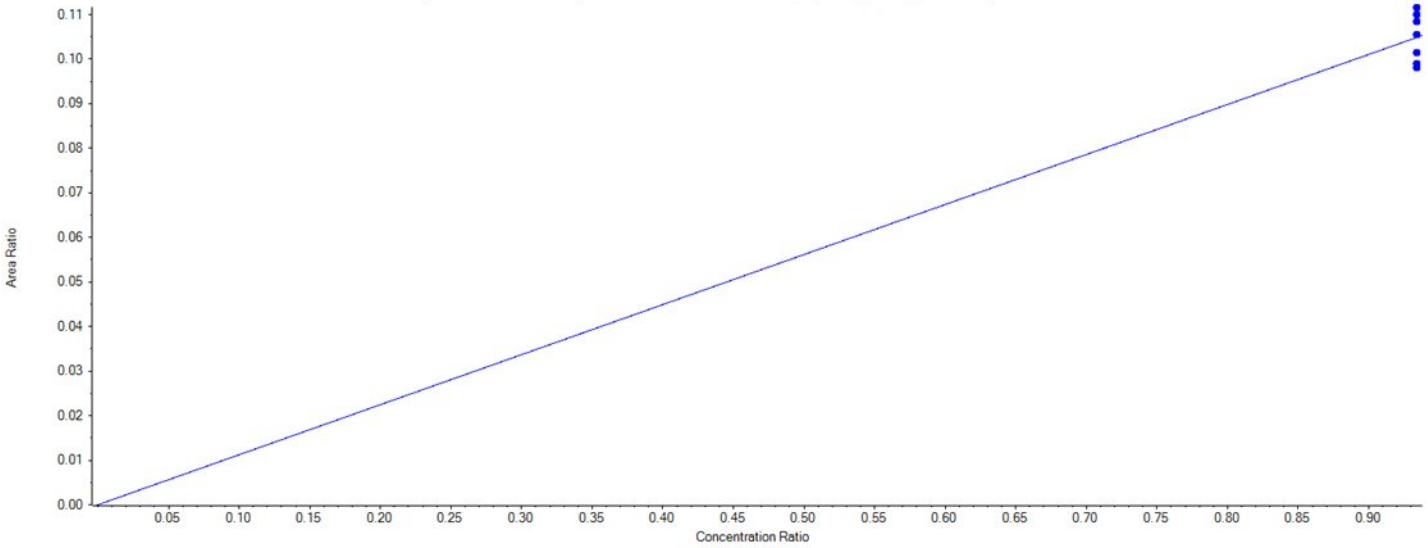
REVIEWED
By ucmr at 3:21 pm, 1/25/19

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

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	

APPROVED
By MCD at 3:22 pm, 1/10/19

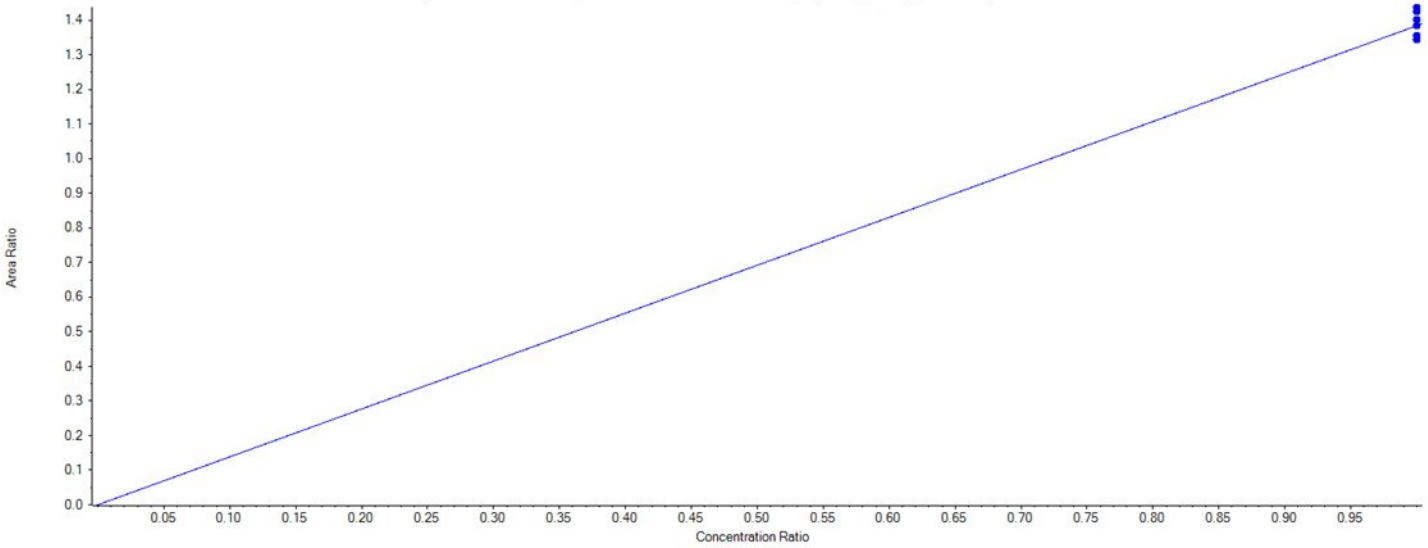
REVIEWED
By ucmr at 3:21 pm, 1/25/19

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-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	

APPROVED
By MCD at 3:22 pm, 1/10/19

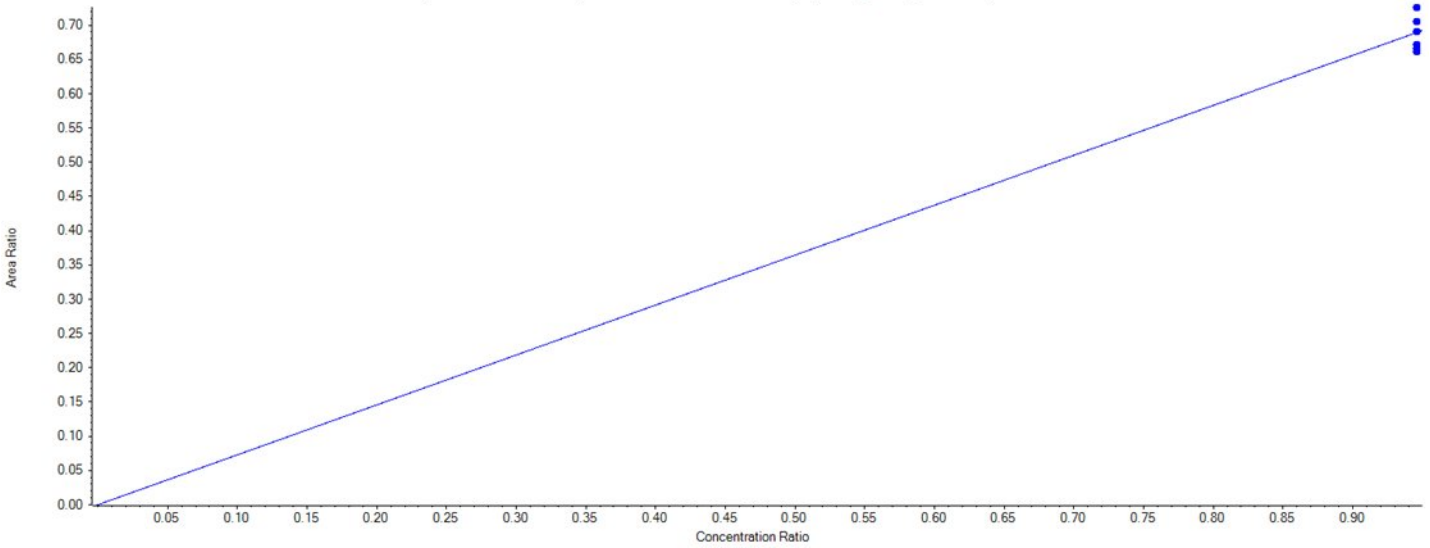
REVIEWED
By ucmr at 3:21 pm, 1/25/19

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

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	

APPROVED
By MCD at 3:23 pm, 1/10/19

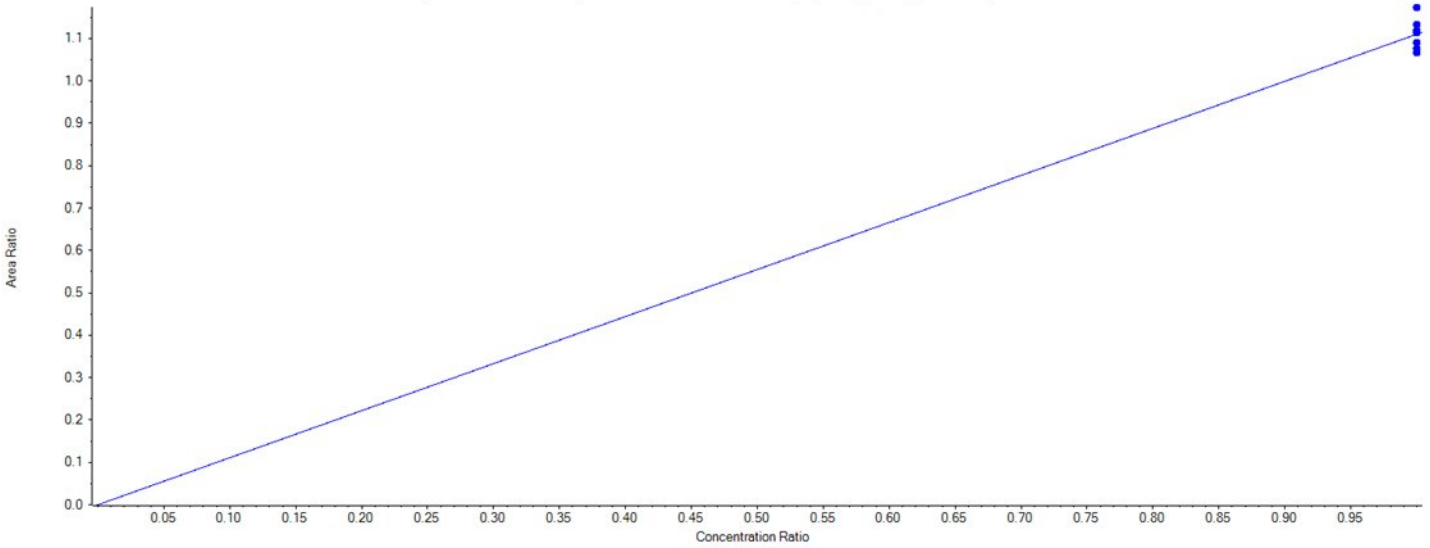
REVIEWED
By ucmr at 3:21 pm, 1/25/19

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

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

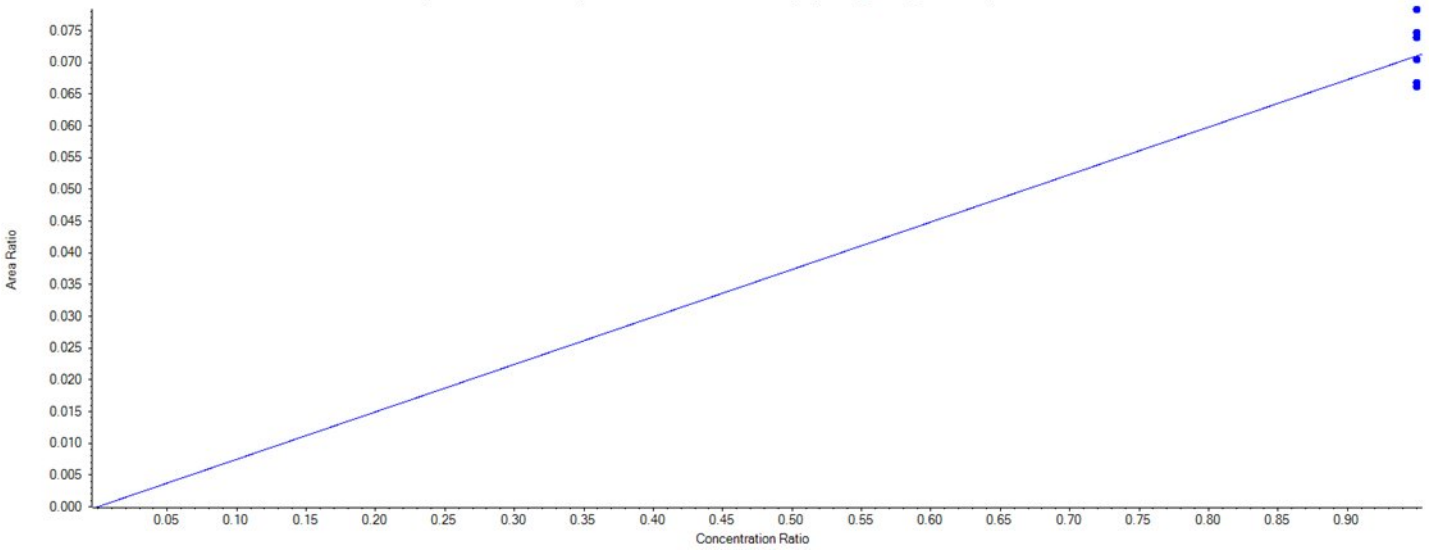
REVIEWED
By ucmr at 3:21 pm, 1/25/19

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	

APPROVED
By MCD at 3:23 pm, 1/10/19

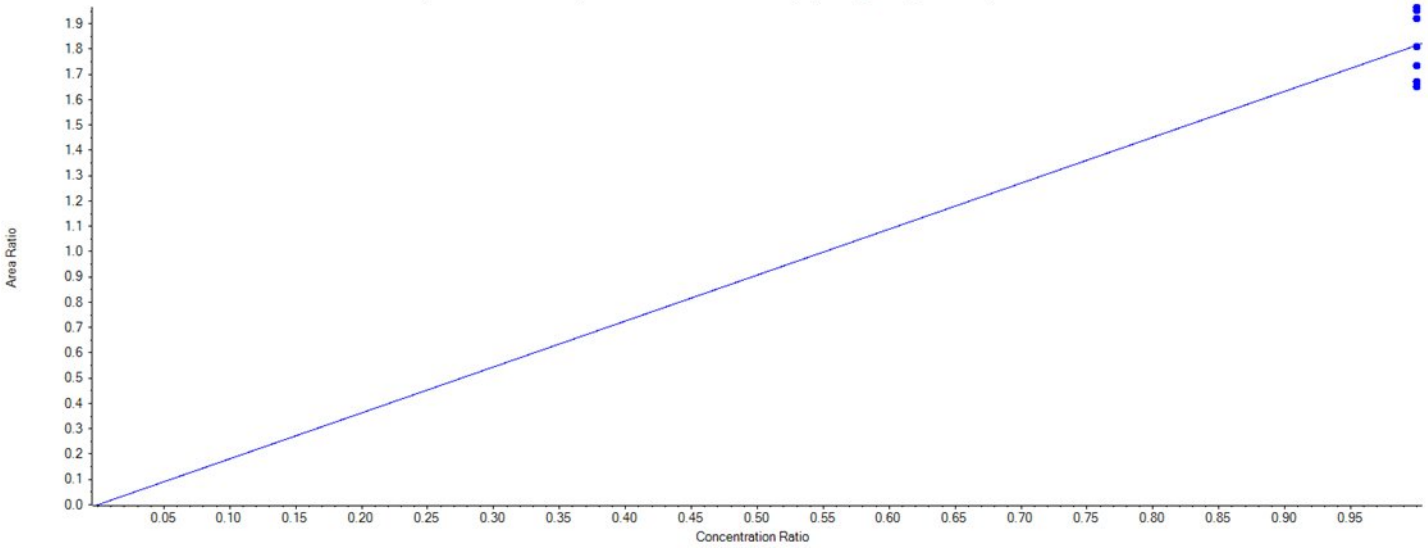
REVIEWED
By ucmr at 3:21 pm, 1/25/19

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

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	

APPROVED
By MCD at 3:23 pm, 1/10/19

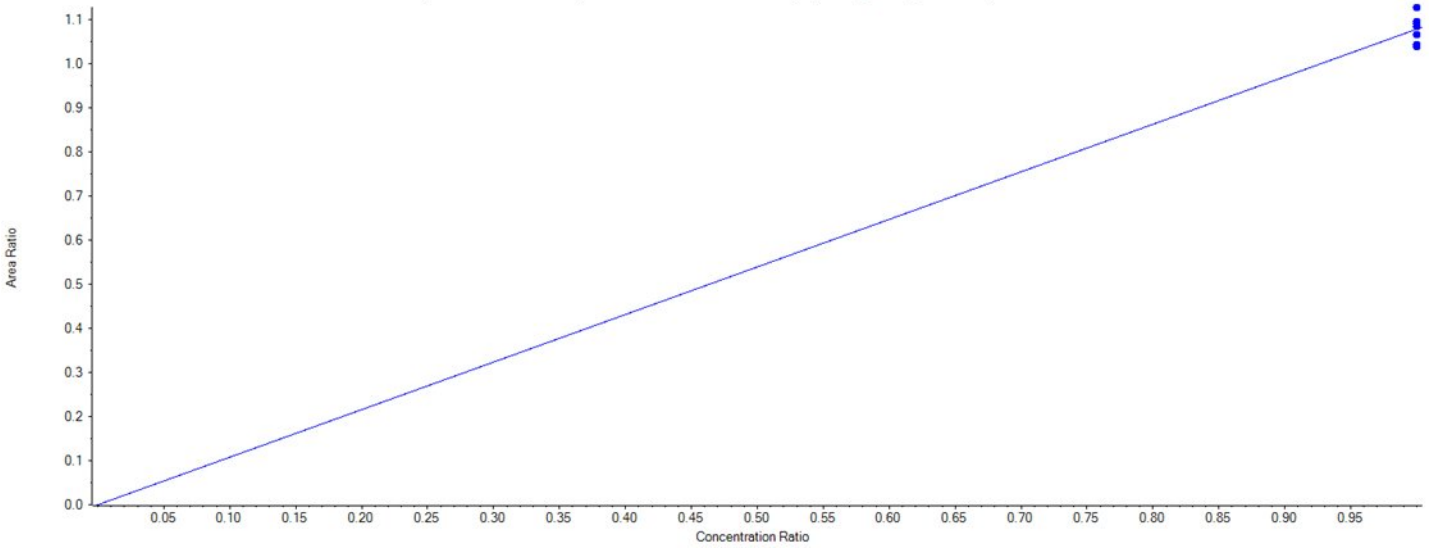
REVIEWED
By ucmr at 3:21 pm, 1/25/19

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

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	

APPROVED
By MCD at 3:23 pm, 1/10/19

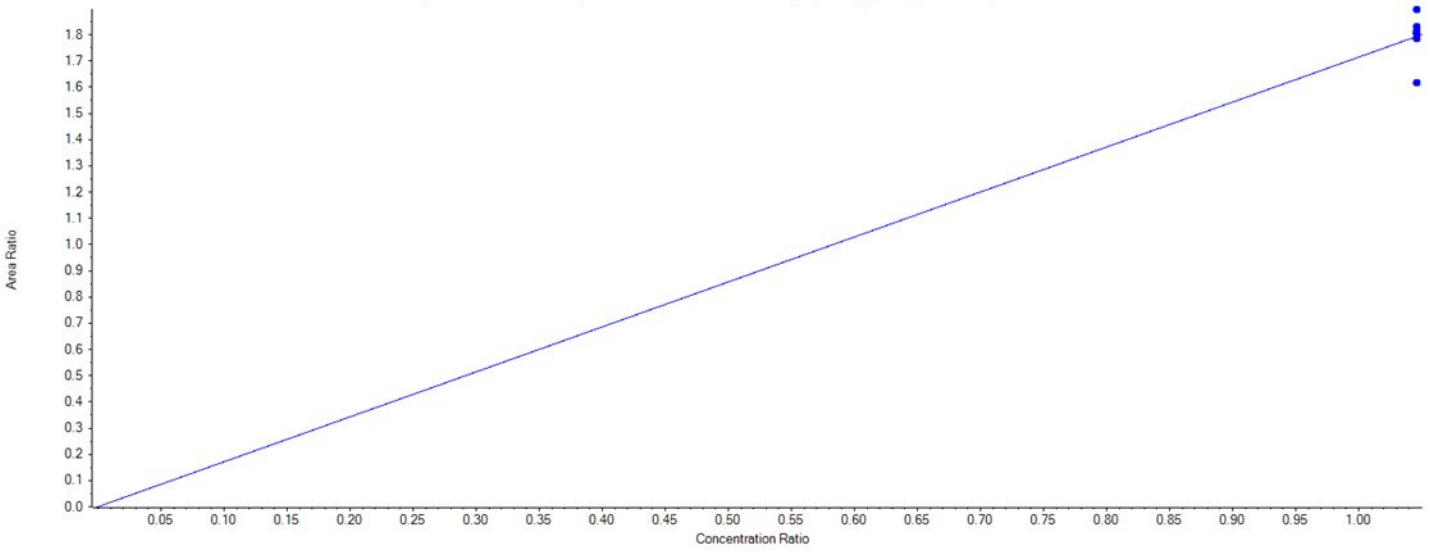
REVIEWED
By ucmr at 3:21 pm, 1/25/19

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

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	

APPROVED
By MCD at 3:23 pm, 1/10/19

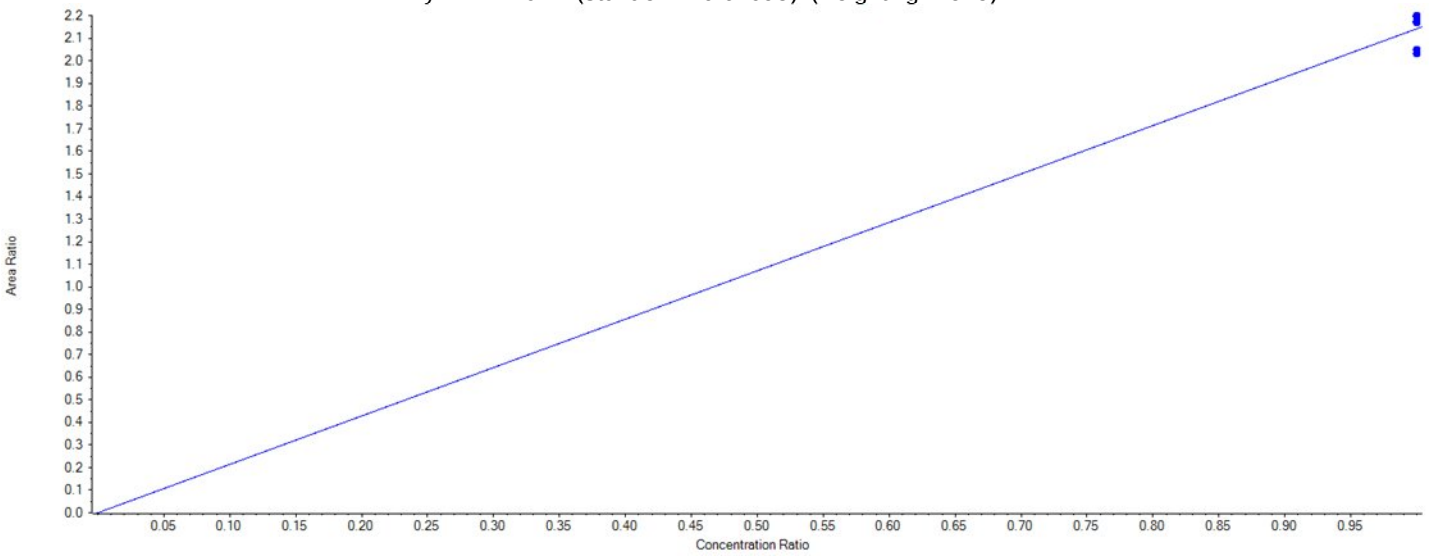
REVIEWED
By ucmr at 3:21 pm, 1/25/19

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

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	

APPROVED
By MCD at 3:23 pm, 1/10/19

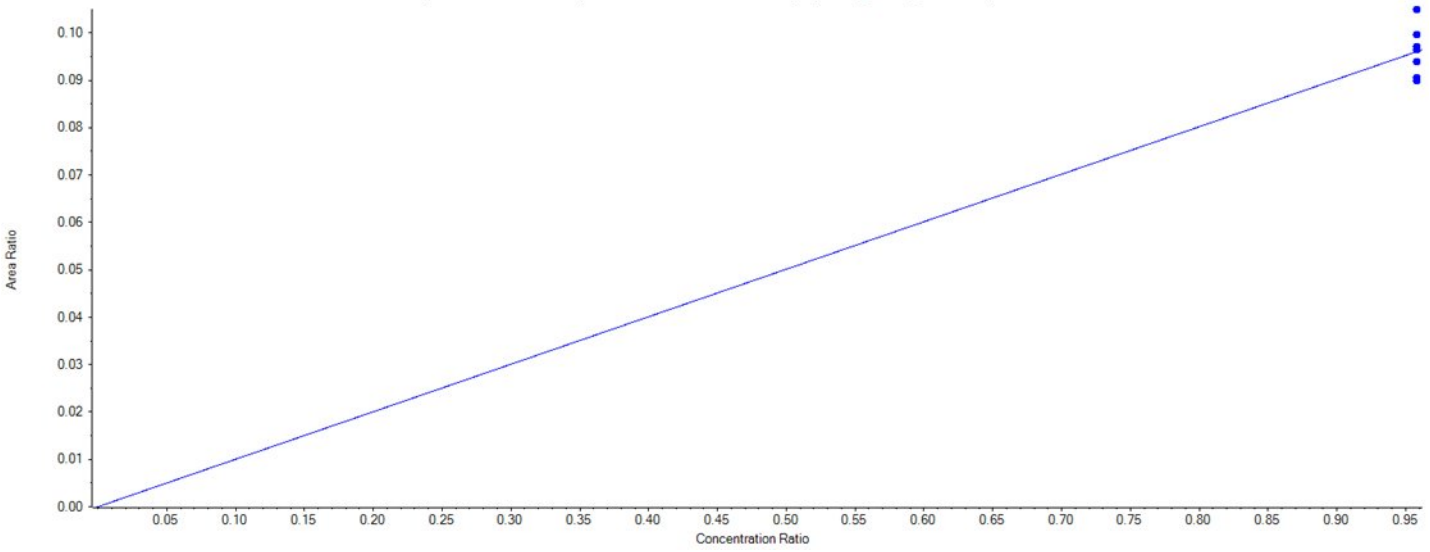
REVIEWED
By ucmr at 3:21 pm, 1/25/19

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

E13C2-8:2-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	

APPROVED
By MCD at 3:23 pm, 1/10/19

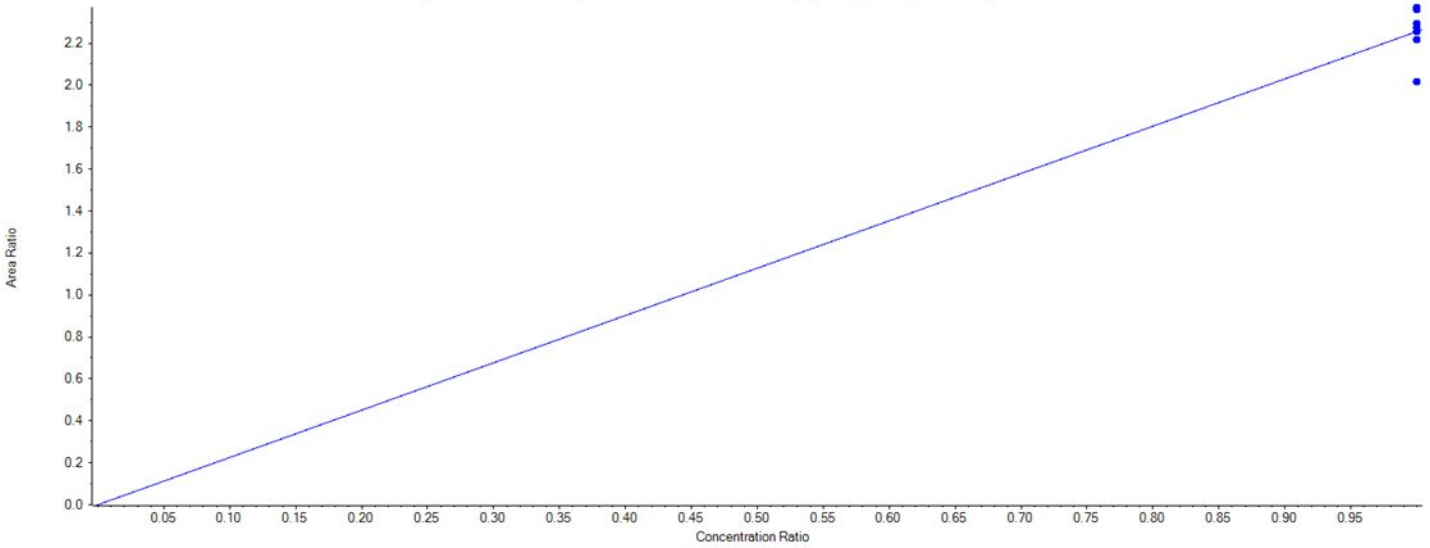
REVIEWED
By ucmr at 3:21 pm, 1/25/19

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

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	

APPROVED
By MCD at 3:23 pm, 1/10/19

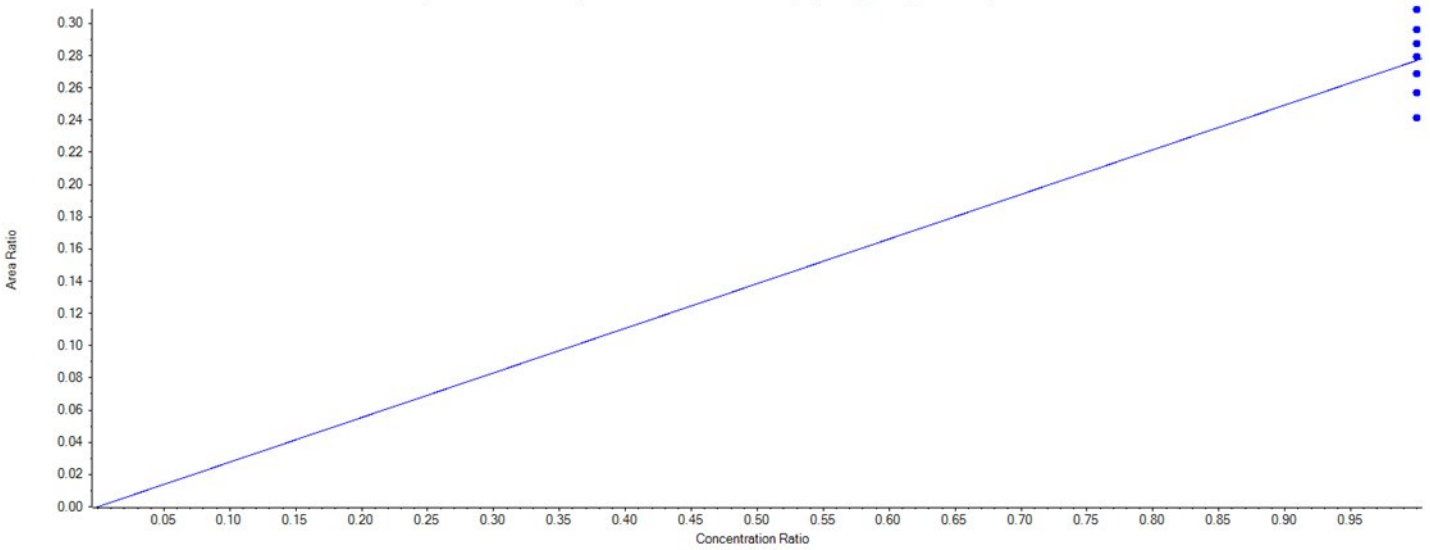
REVIEWED
By ucmr at 3:21 pm, 1/25/19

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

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	

APPROVED
By MCD at 3:23 pm, 1/10/19

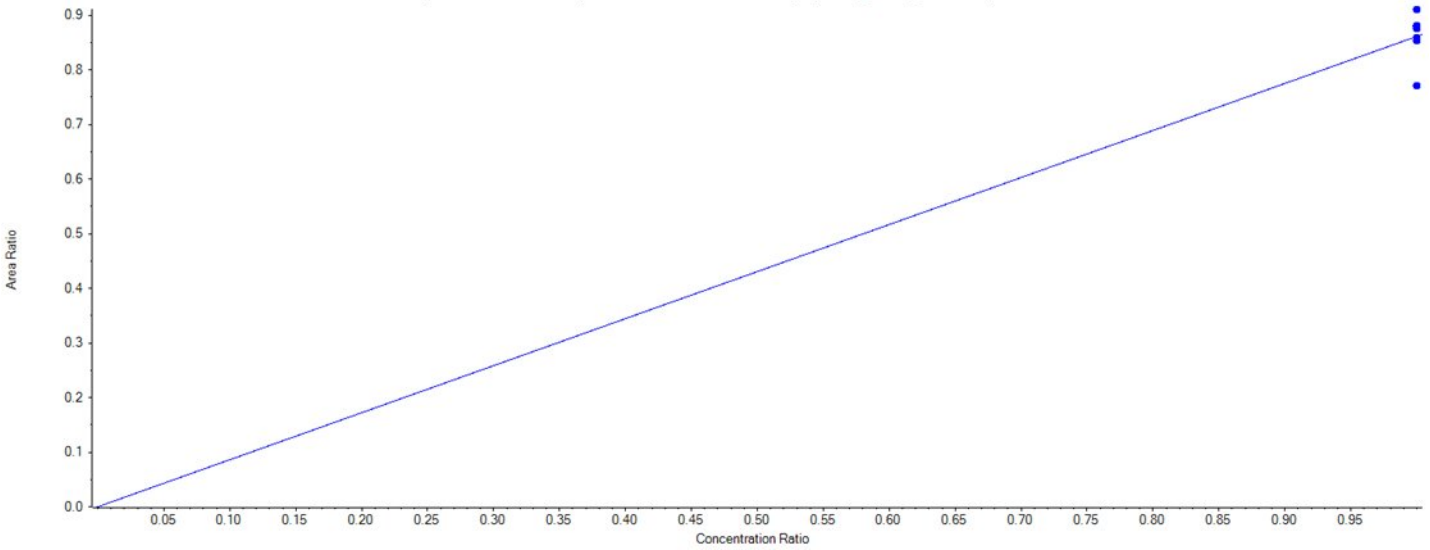
REVIEWED
By ucmr at 3:21 pm, 1/25/19

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

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	

APPROVED
By MCD at 3:23 pm, 1/10/19

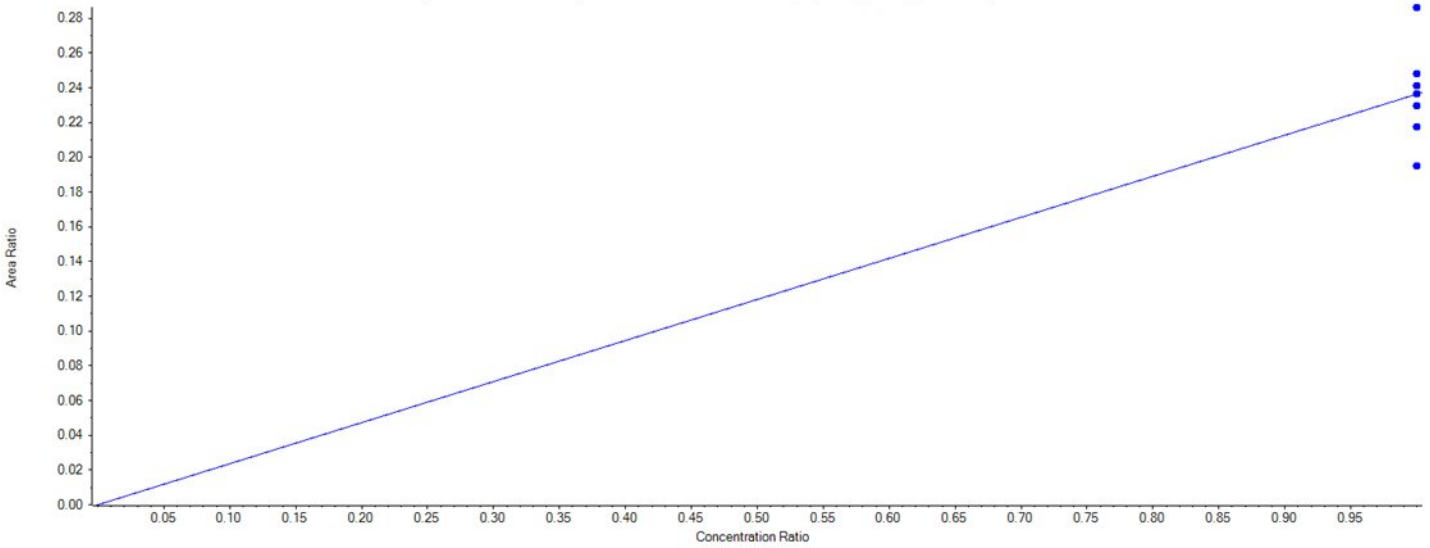
REVIEWED
By ucmr at 3:21 pm, 1/25/19

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

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	

APPROVED
By MCD at 3:23 pm, 1/10/19

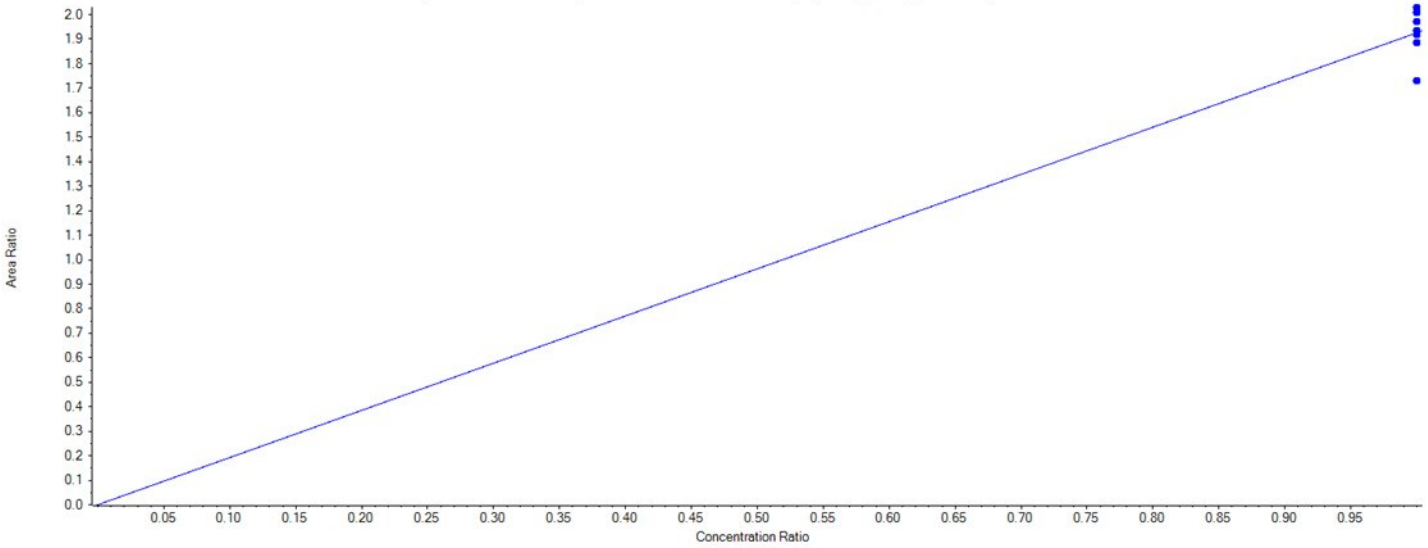
REVIEWED
By ucmr at 3:21 pm, 1/25/19

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-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	

APPROVED
By MCD at 3:23 pm, 1/10/19

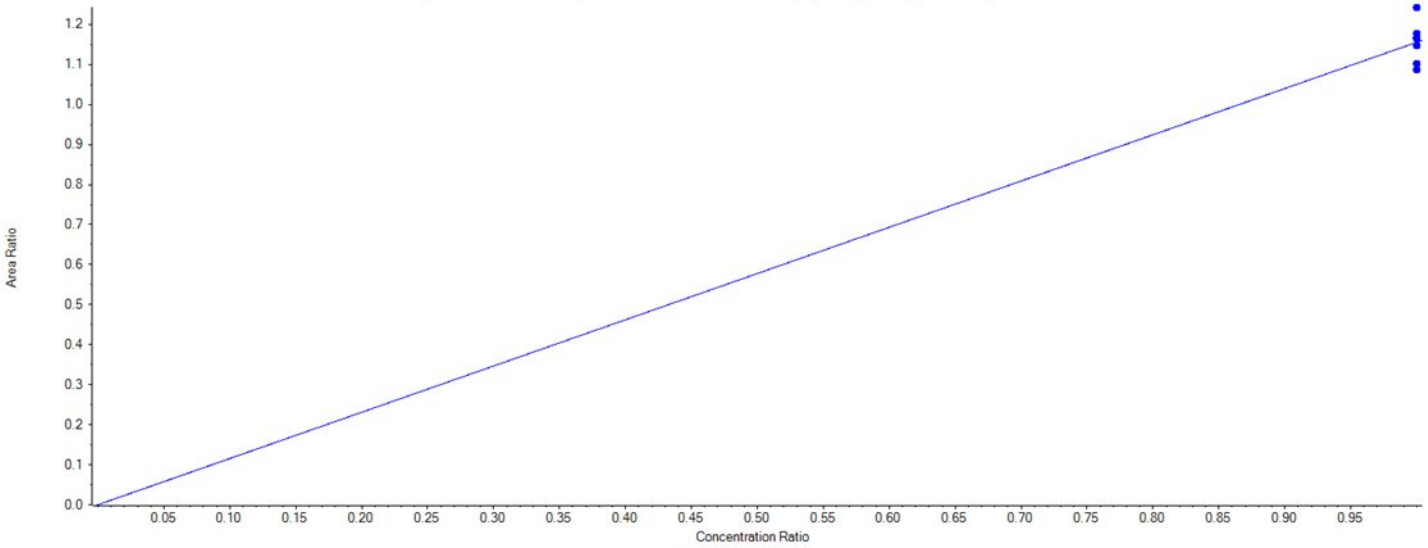
REVIEWED
By ucmr at 3:21 pm, 1/25/19

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

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	

APPROVED
By MCD at 3:23 pm, 1/10/19

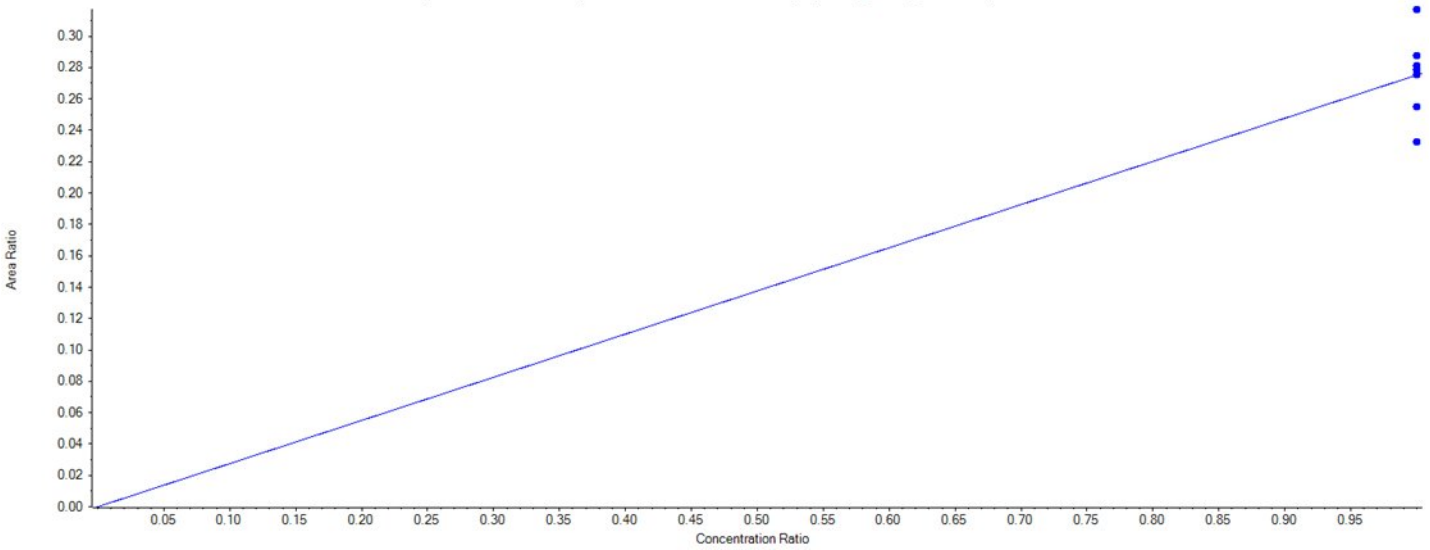
REVIEWED
By ucmr at 3:21 pm, 1/25/19

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

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

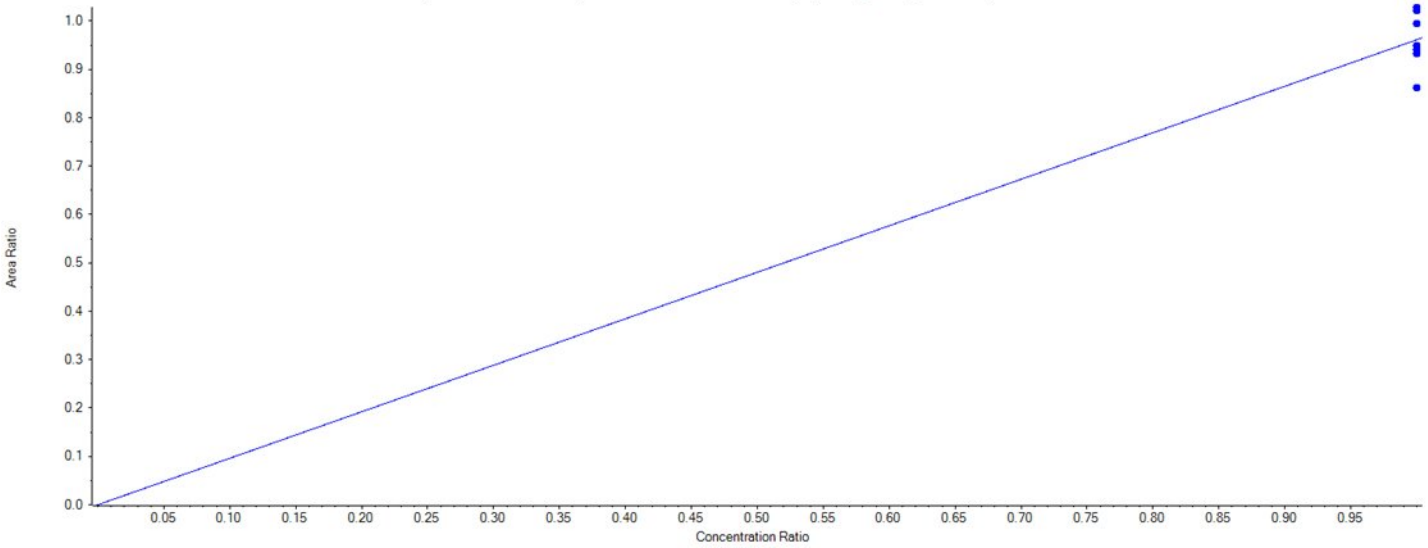
REVIEWED
By ucmr at 3:21 pm, 1/25/19

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	

APPROVED
By MCD at 3:23 pm, 1/10/19

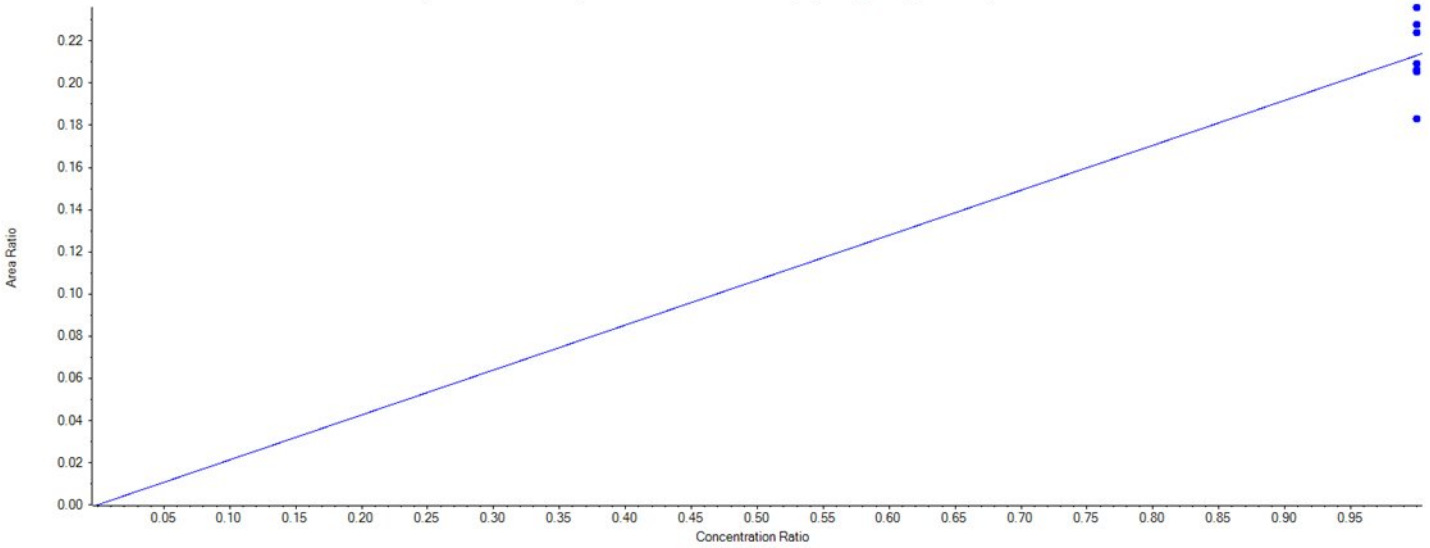
REVIEWED
By ucmr at 3:21 pm, 1/25/19

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

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	

APPROVED
By MCD at 3:23 pm, 1/10/19

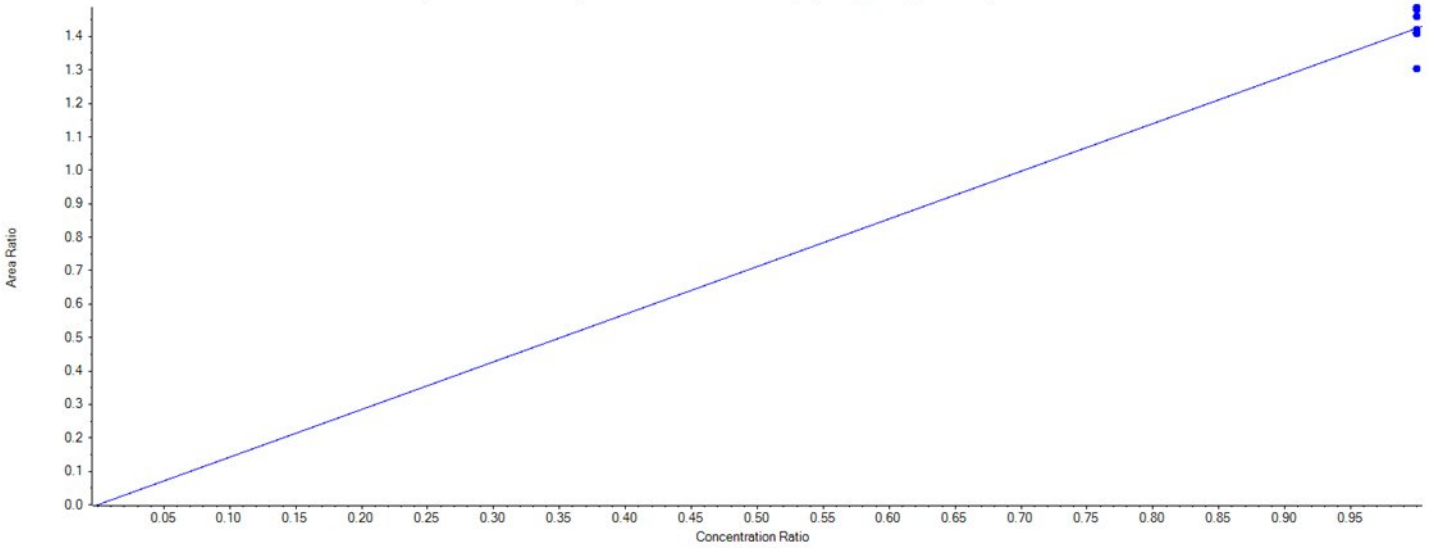
REVIEWED
By ucmr at 3:21 pm, 1/25/19

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-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	

APPROVED
By MCD at 3:23 pm, 1/10/19

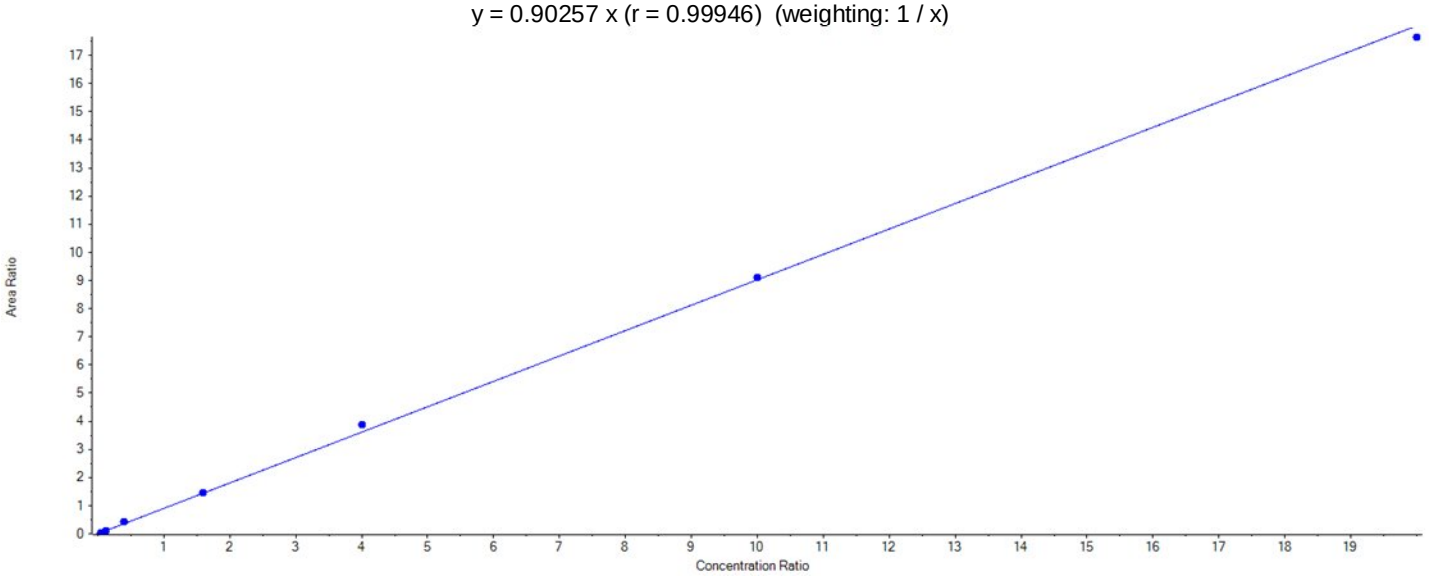
REVIEWED
By ucmr at 3:21 pm, 1/25/19

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

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

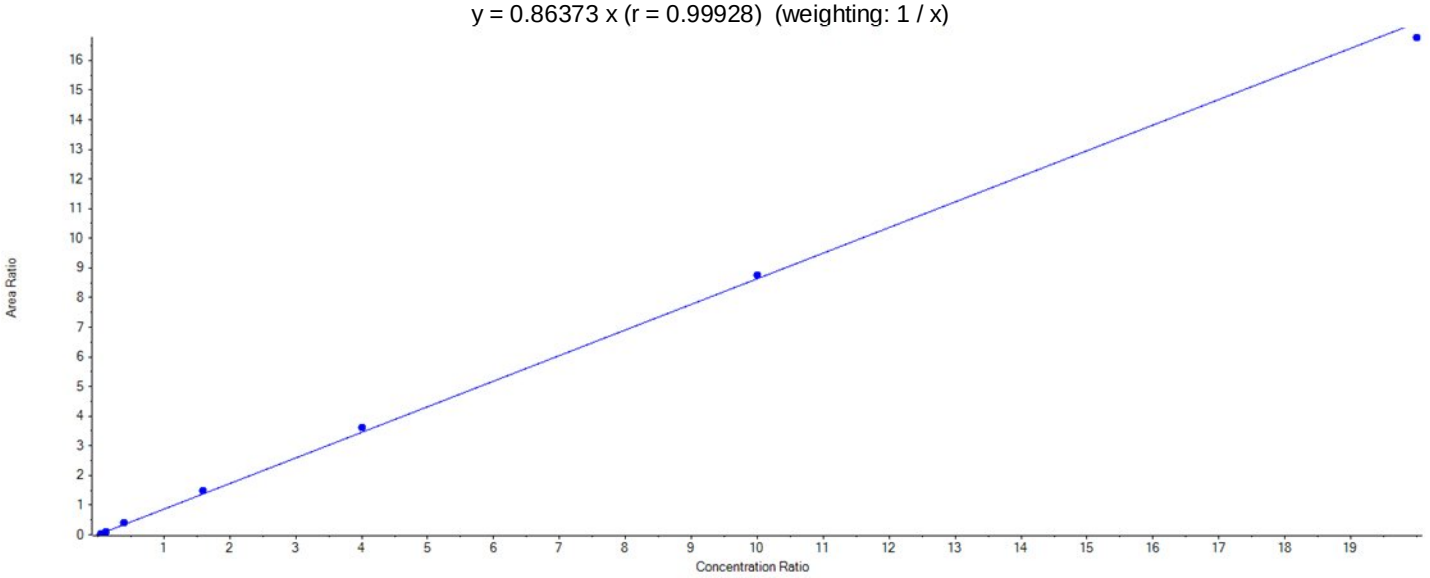
REVIEWED
By ucmr at 3:21 pm, 1/25/19

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	

APPROVED
By MCD at 3:23 pm, 1/10/19

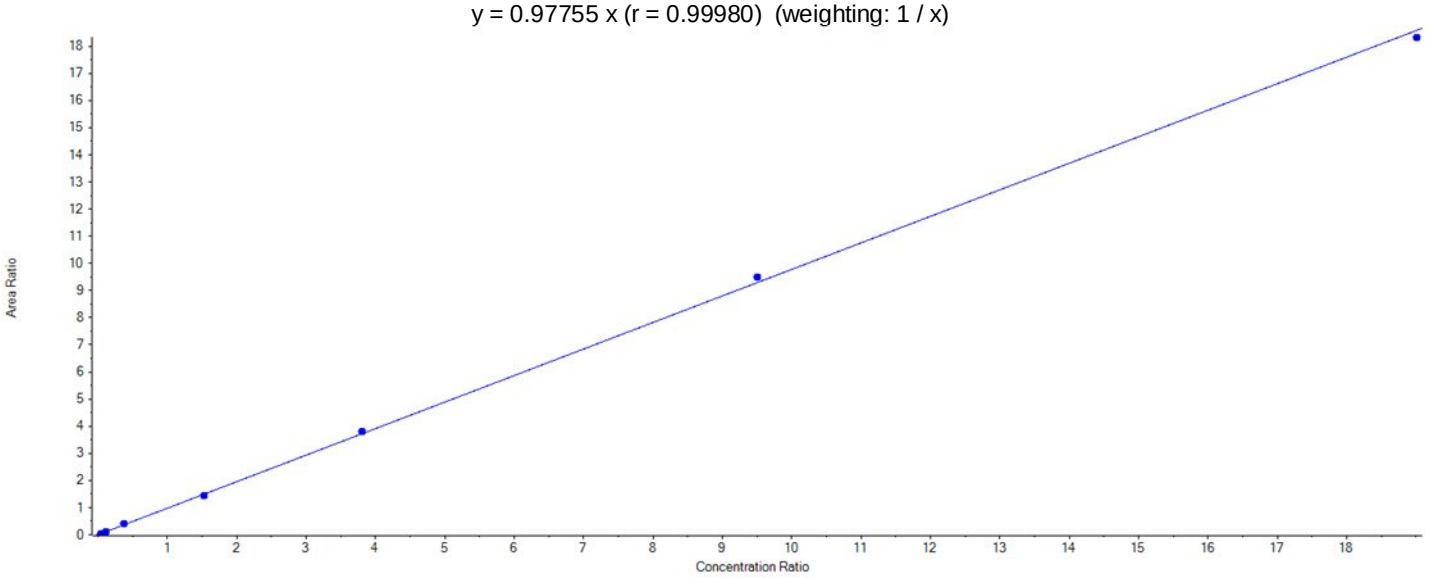
REVIEWED
By ucmr at 3:21 pm, 1/25/19

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

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	

APPROVED
By MCD at 3:23 pm, 1/10/19

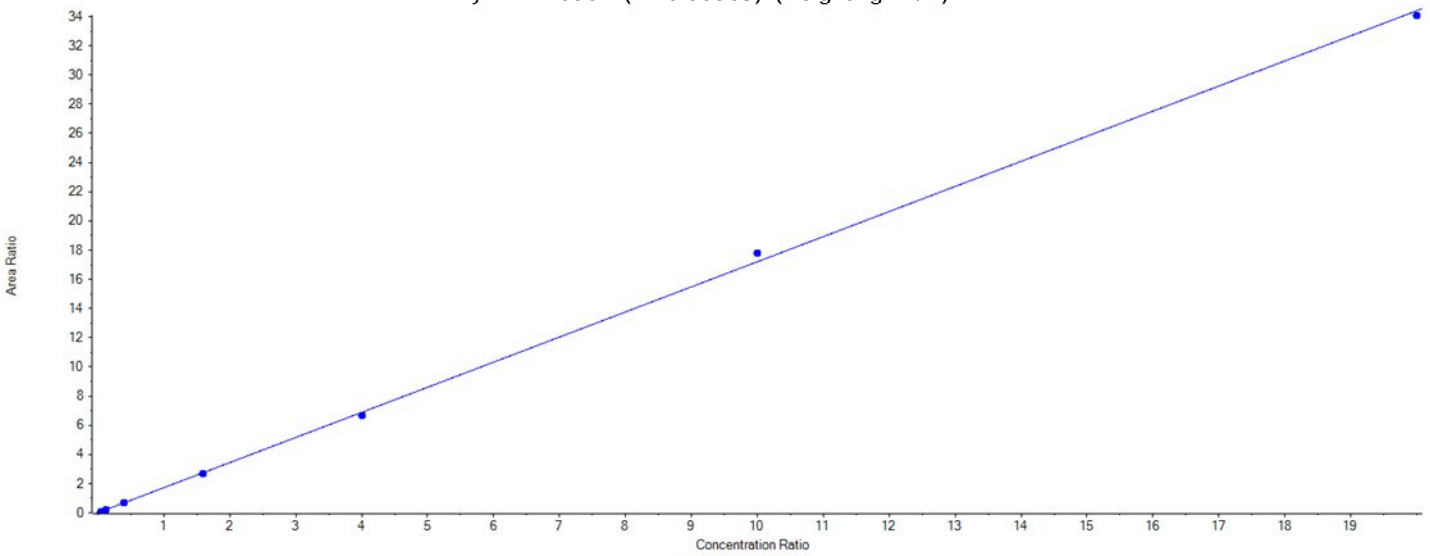
REVIEWED
By ucmr at 3:21 pm, 1/25/19

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

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	

APPROVED
By MCD at 3:23 pm, 1/10/19

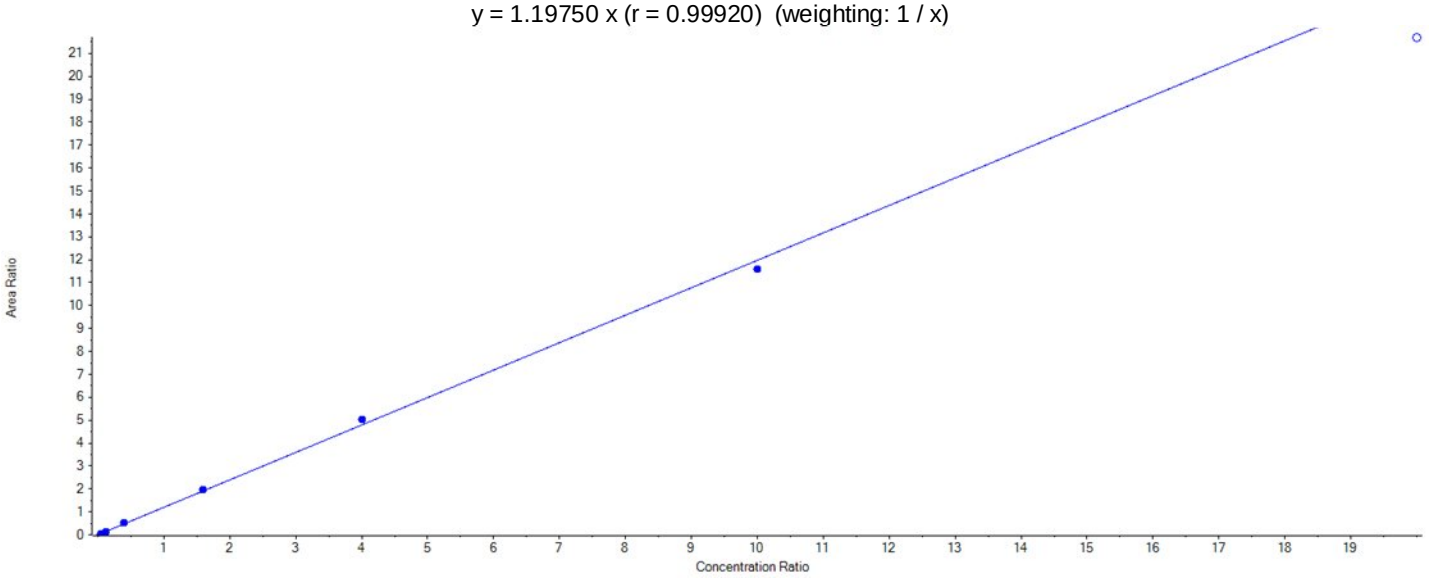
REVIEWED
By ucmr at 3:21 pm, 1/25/19

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

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

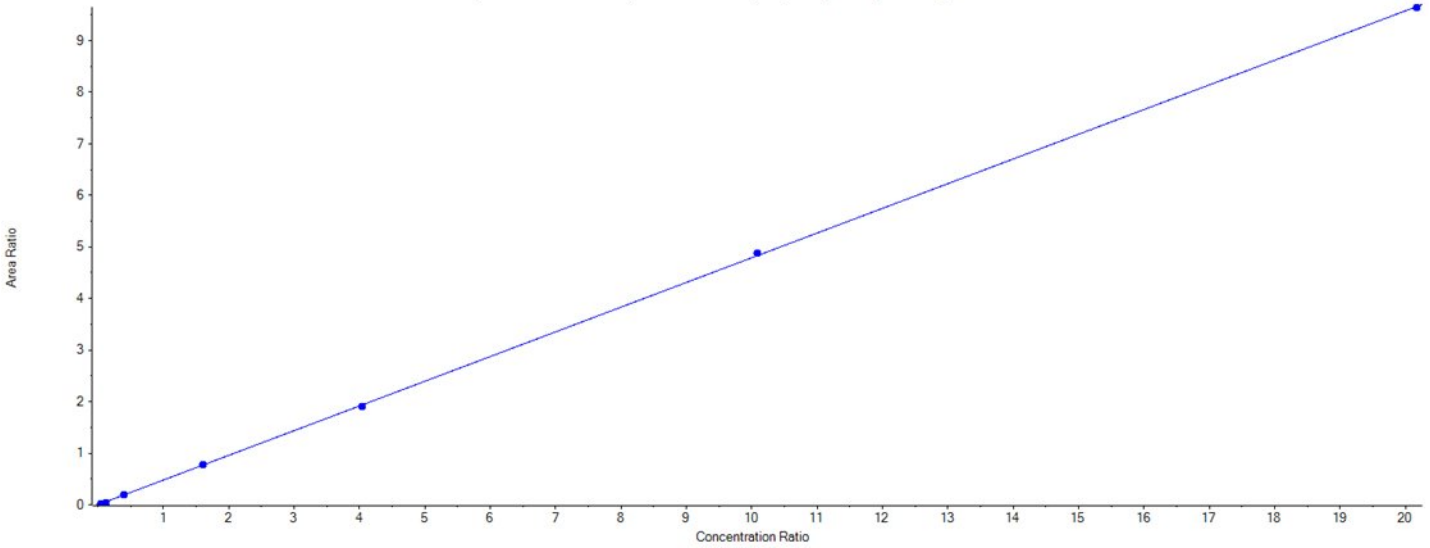
REVIEWED
By ucmr at 3:21 pm, 1/25/19

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	

APPROVED
By MCD at 3:23 pm, 1/10/19

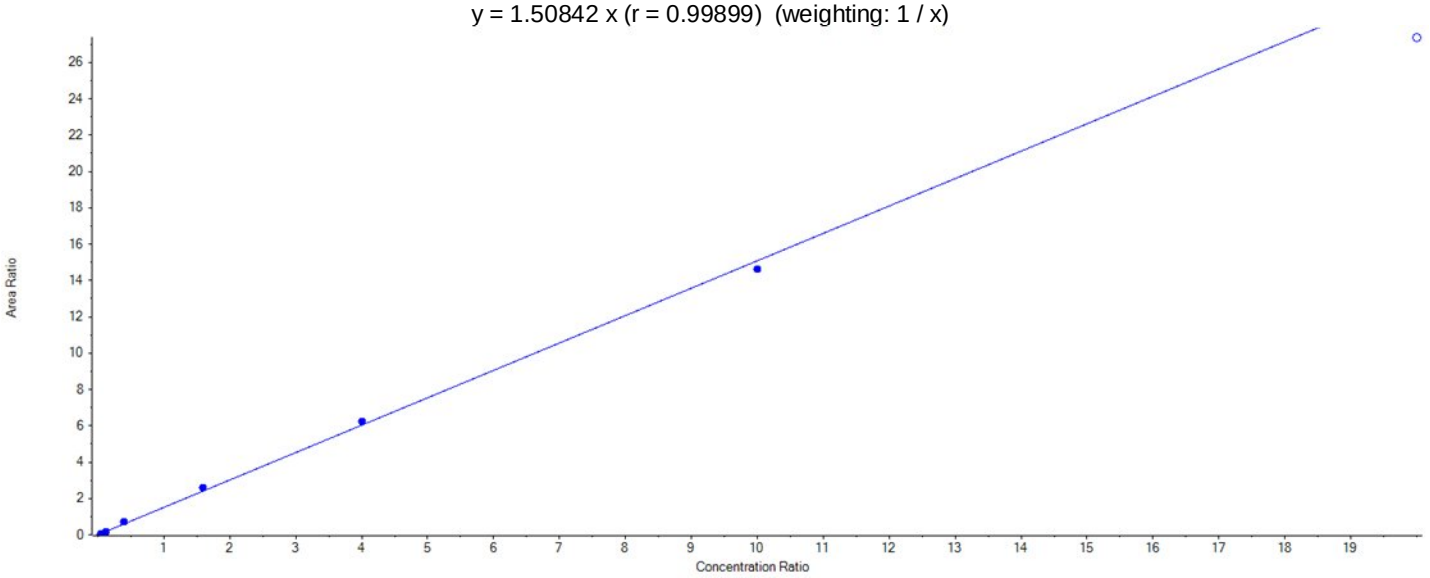
REVIEWED
By ucmr at 3:21 pm, 1/25/19

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

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	

APPROVED
By MCD at 3:23 pm, 1/10/19

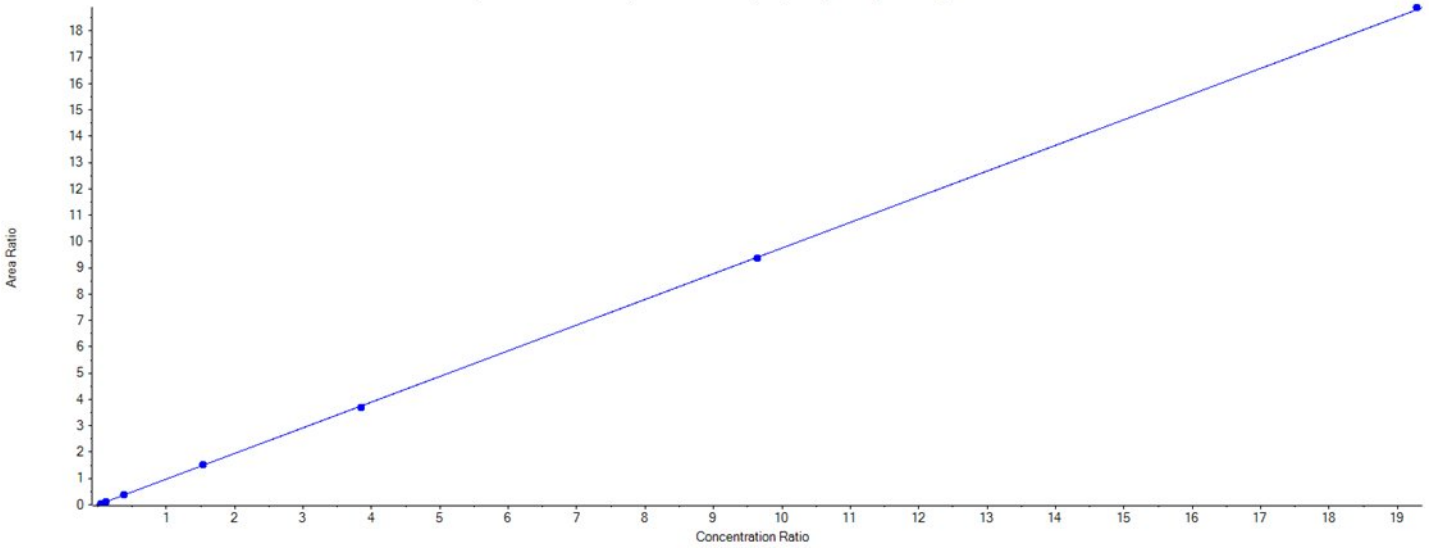
REVIEWED
By ucmr at 3:21 pm, 1/25/19

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

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	

APPROVED
By MCD at 3:23 pm, 1/10/19

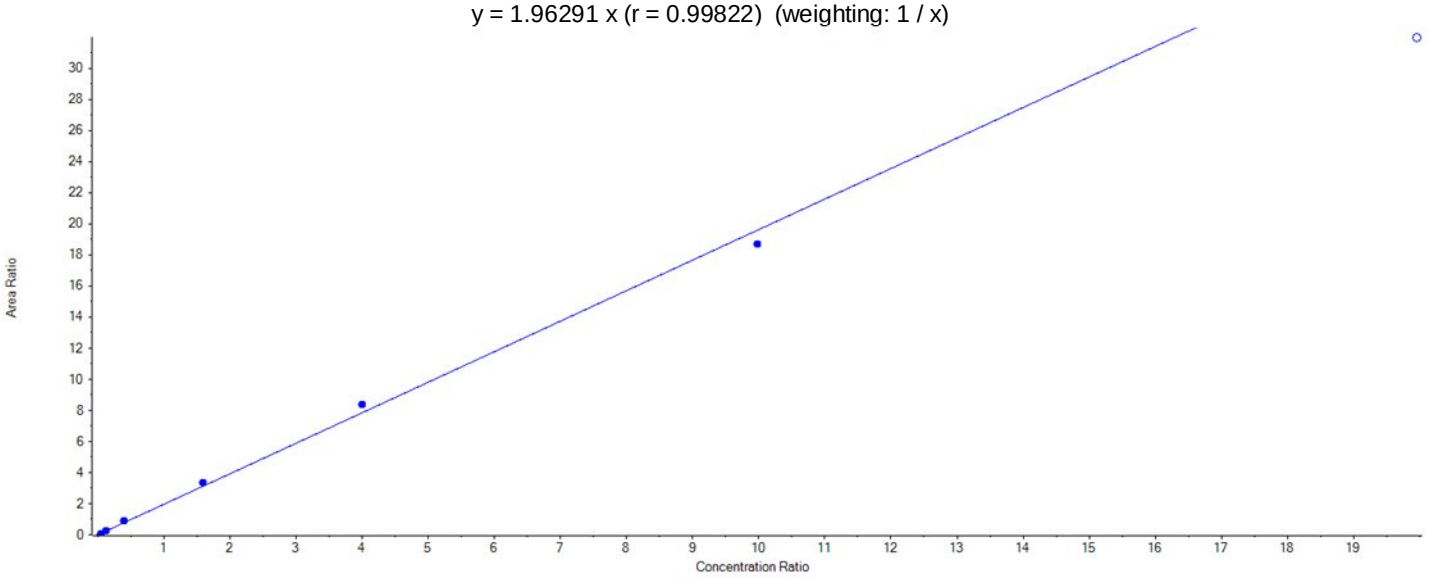
REVIEWED
By ucmr at 3:21 pm, 1/25/19

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

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	

APPROVED
By MCD at 3:23 pm, 1/10/19

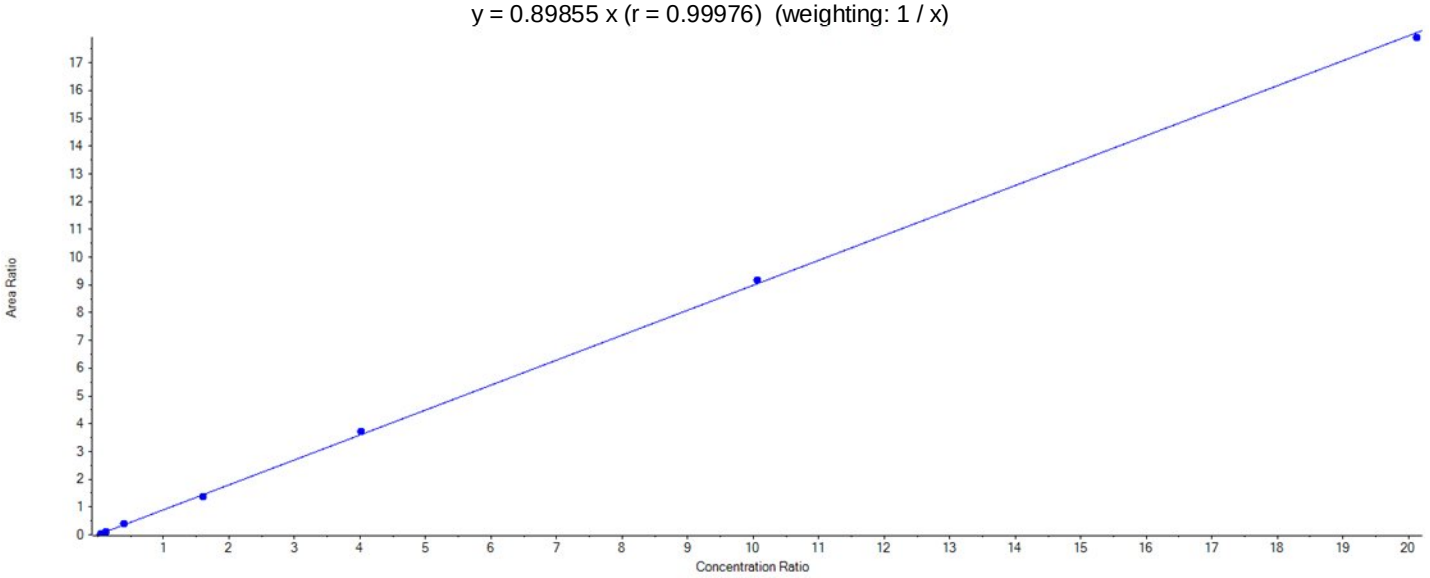
REVIEWED
By ucmr at 3:21 pm, 1/25/19

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

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	

APPROVED
By MCD at 3:23 pm, 1/10/19

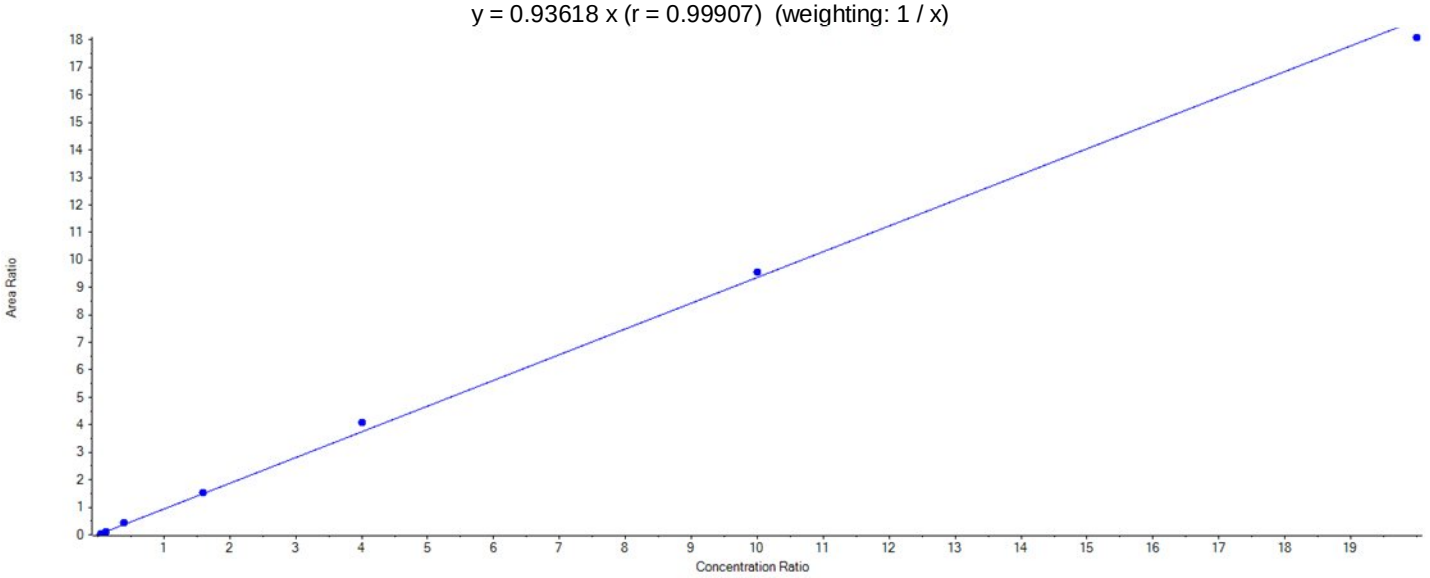
REVIEWED
By ucmr at 3:21 pm, 1/25/19

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

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	

APPROVED
By MCD at 3:23 pm, 1/10/19

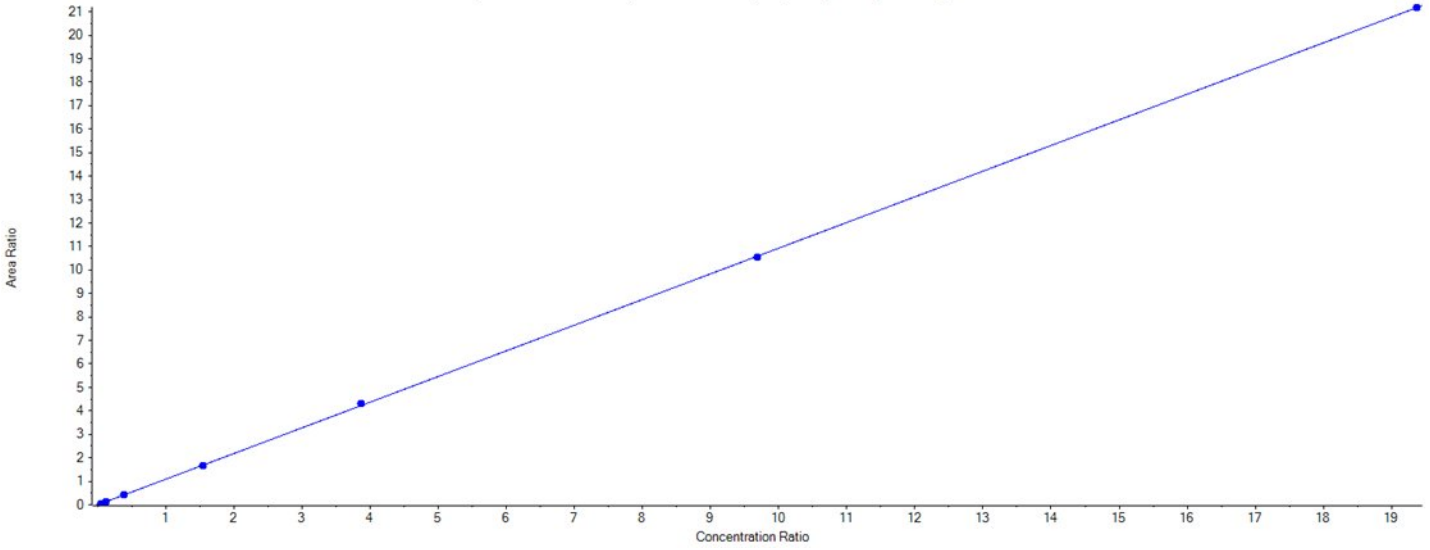
REVIEWED
By ucmr at 3:21 pm, 1/25/19

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

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	

APPROVED
By MCD at 3:23 pm, 1/10/19

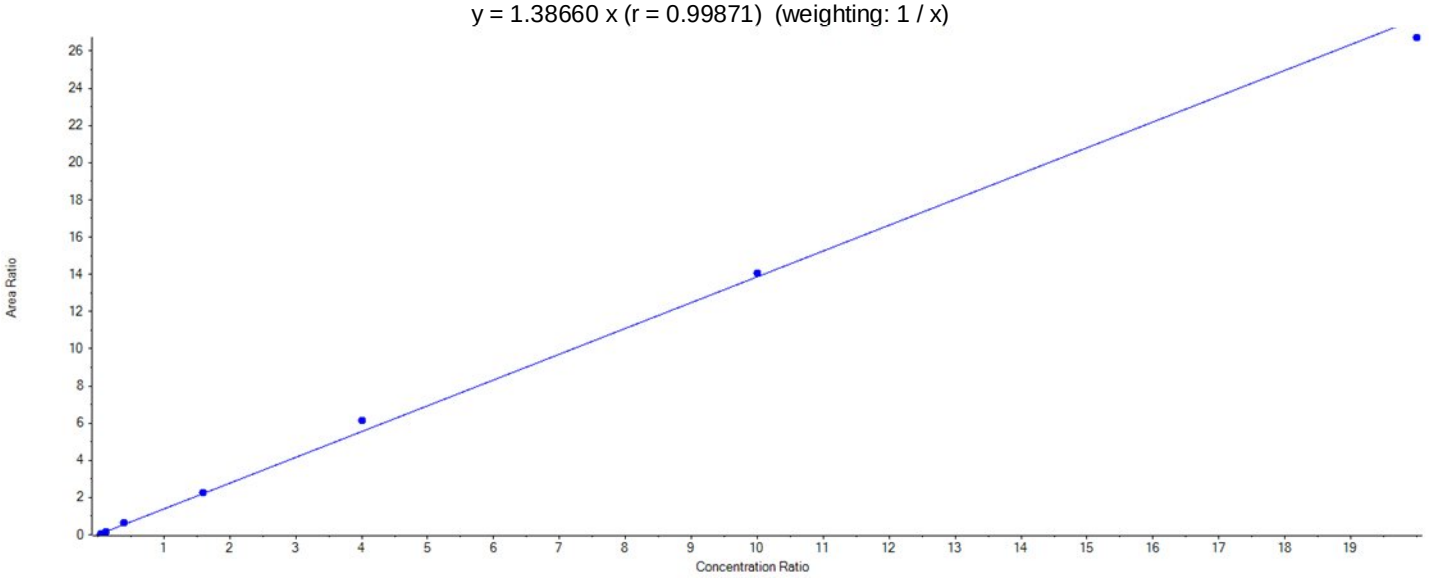
REVIEWED
By ucmr at 3:21 pm, 1/25/19

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

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	

APPROVED
By MCD at 3:23 pm, 1/10/19

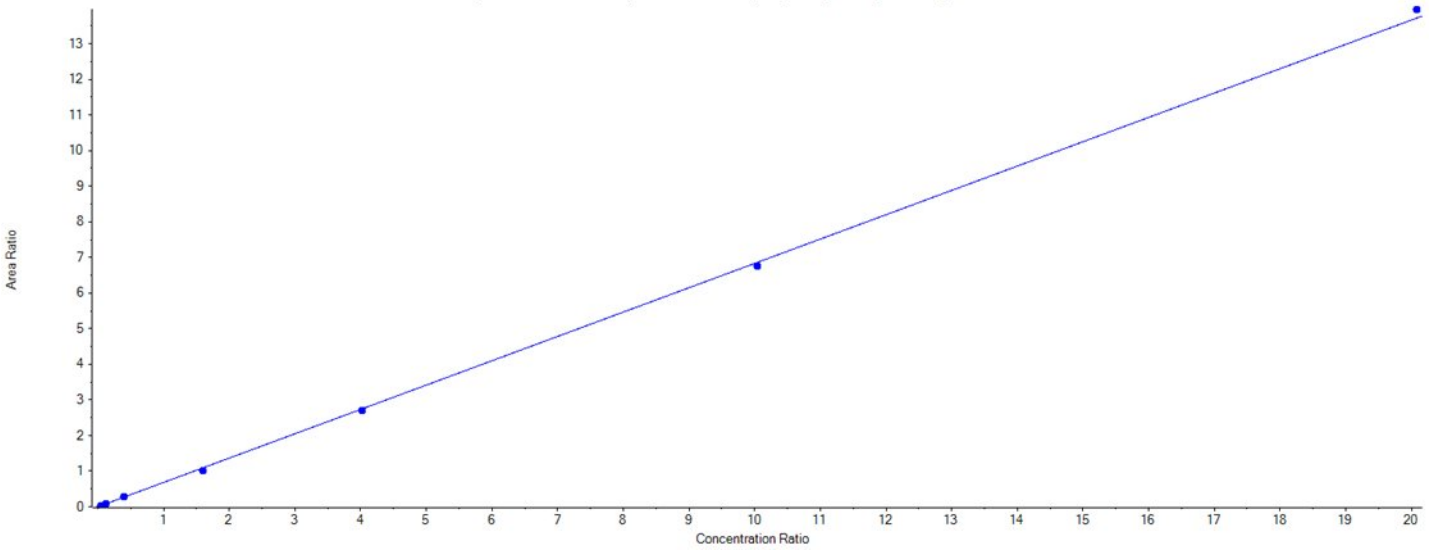
REVIEWED
By ucmr at 3:21 pm, 1/25/19

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

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	

APPROVED
By MCD at 3:23 pm, 1/10/19

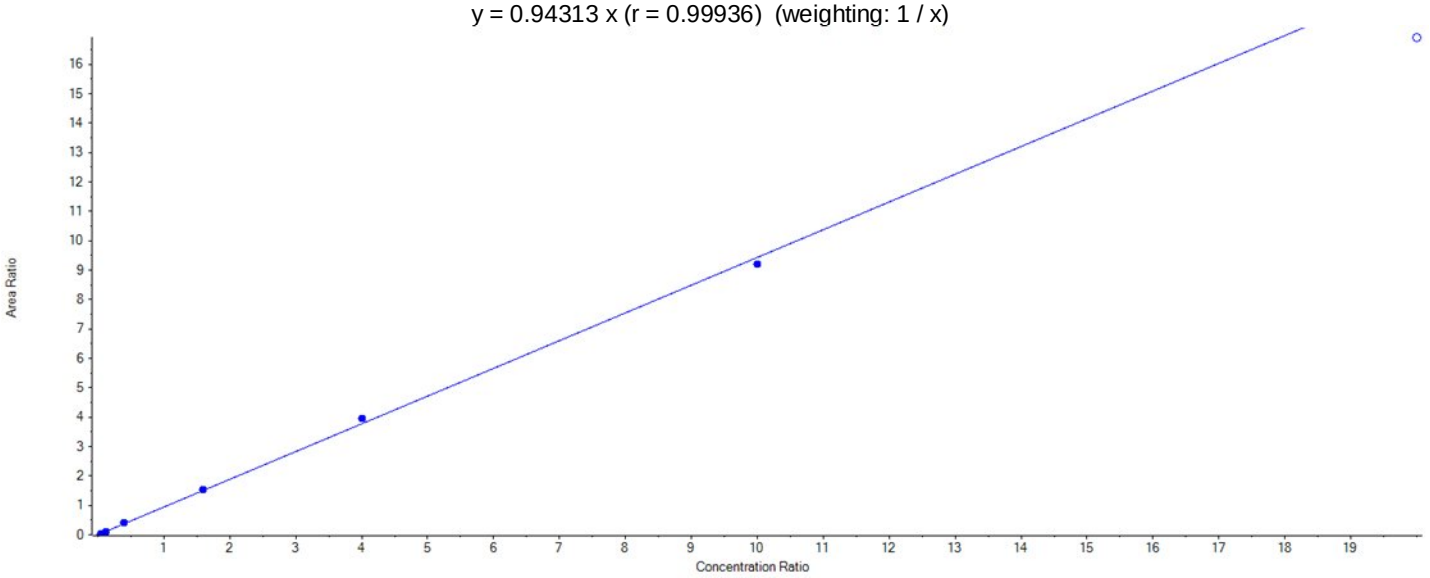
REVIEWED
By ucmr at 3:21 pm, 1/25/19

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

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	

APPROVED
By MCD at 3:23 pm, 1/10/19

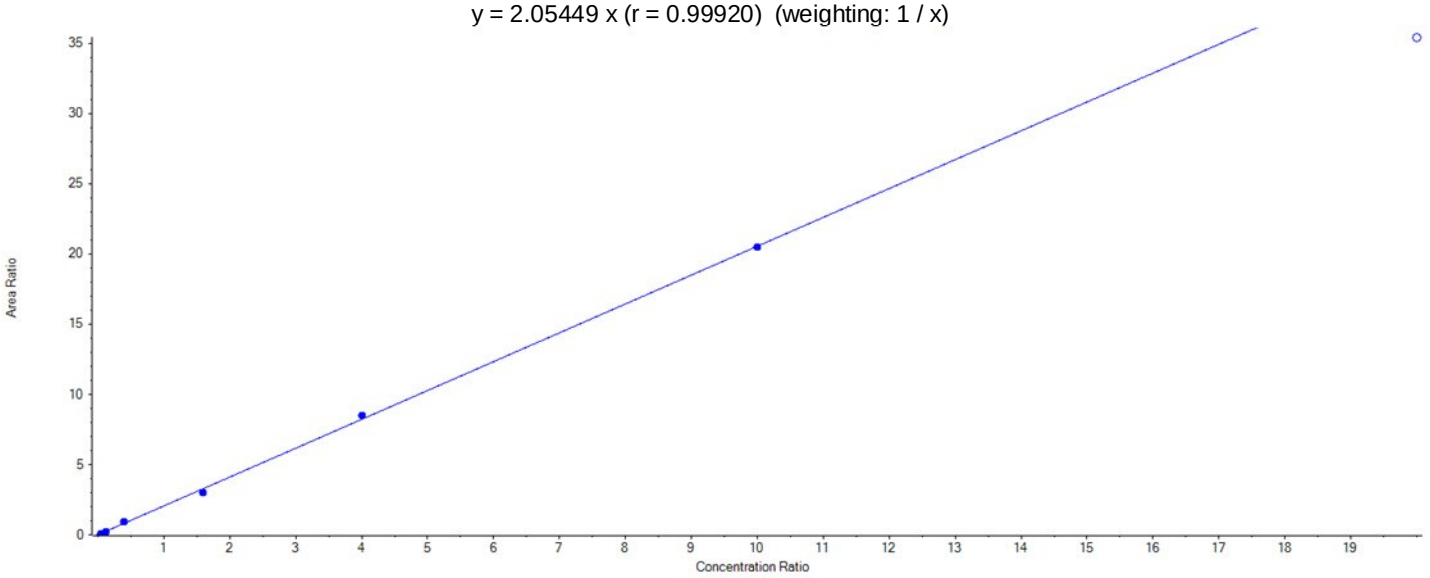
REVIEWED
By ucmr at 3:21 pm, 1/25/19

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

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	

APPROVED
By MCD at 3:23 pm, 1/10/19

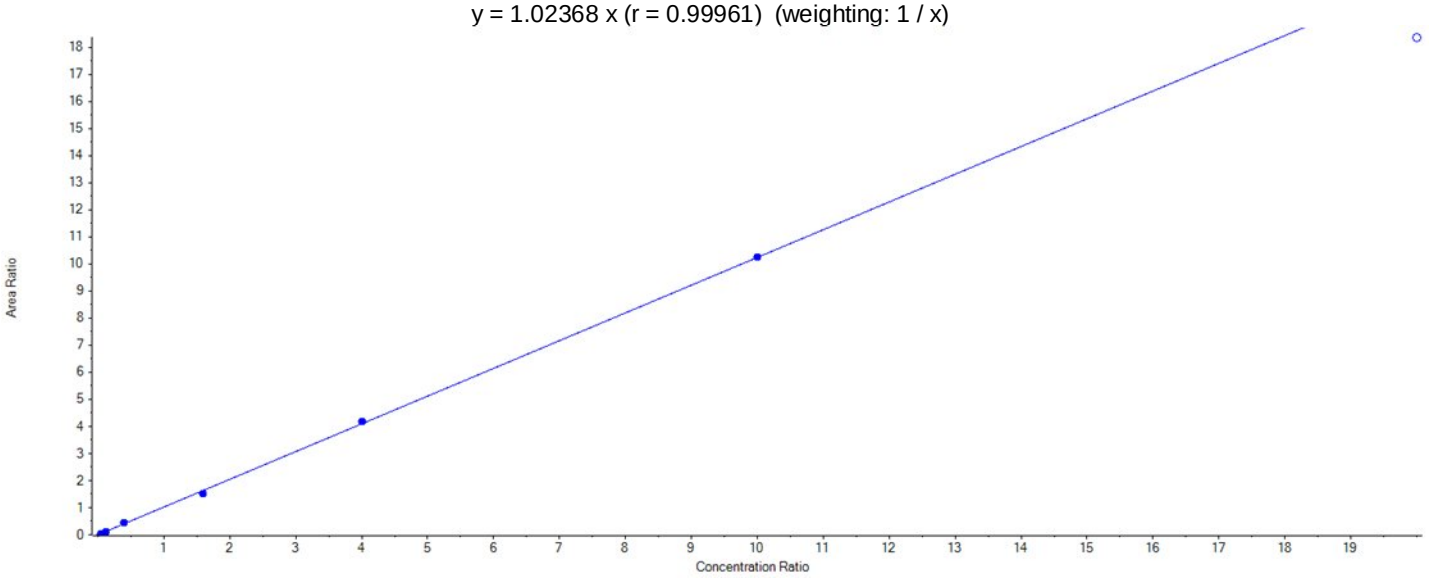
REVIEWED
By ucmr at 3:21 pm, 1/25/19

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

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	

APPROVED
By MCD at 3:23 pm, 1/10/19

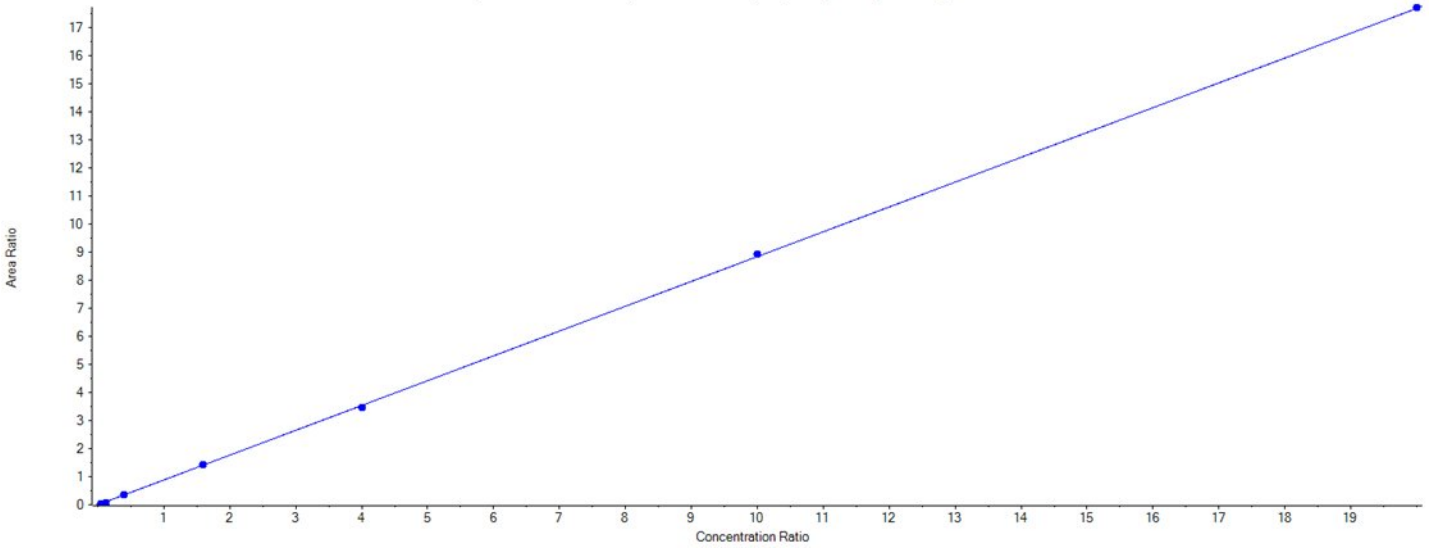
REVIEWED
By ucmr at 3:21 pm, 1/25/19

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

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

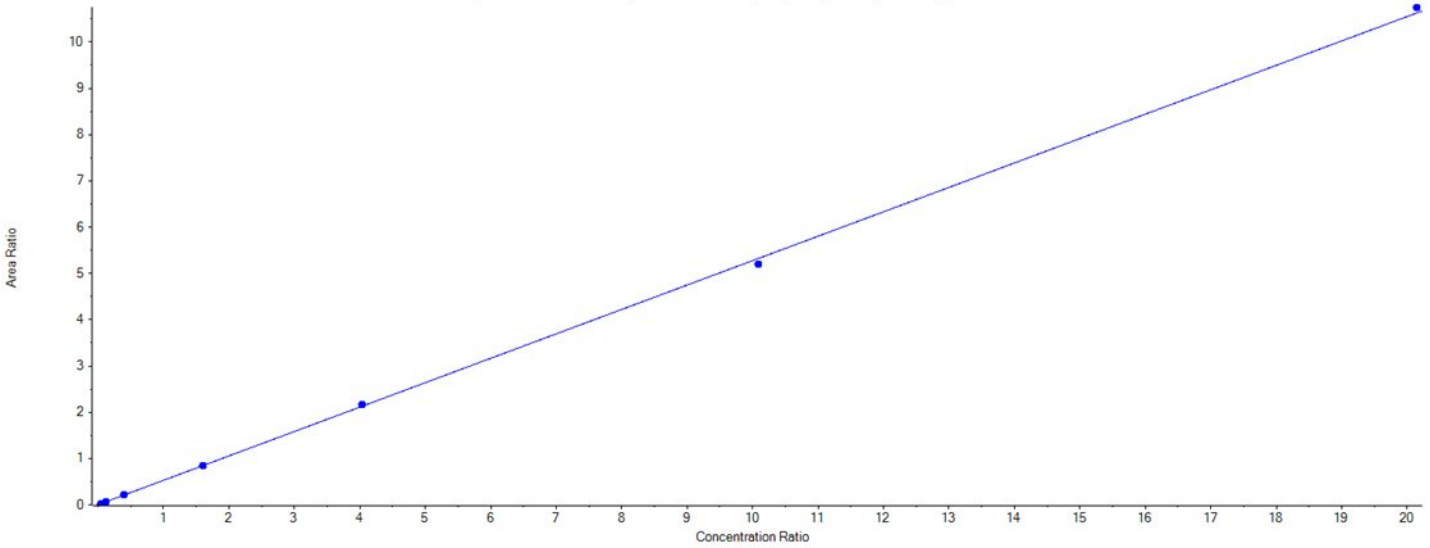
REVIEWED
By ucmr at 3:21 pm, 1/25/19

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	

APPROVED
By MCD at 3:23 pm, 1/10/19

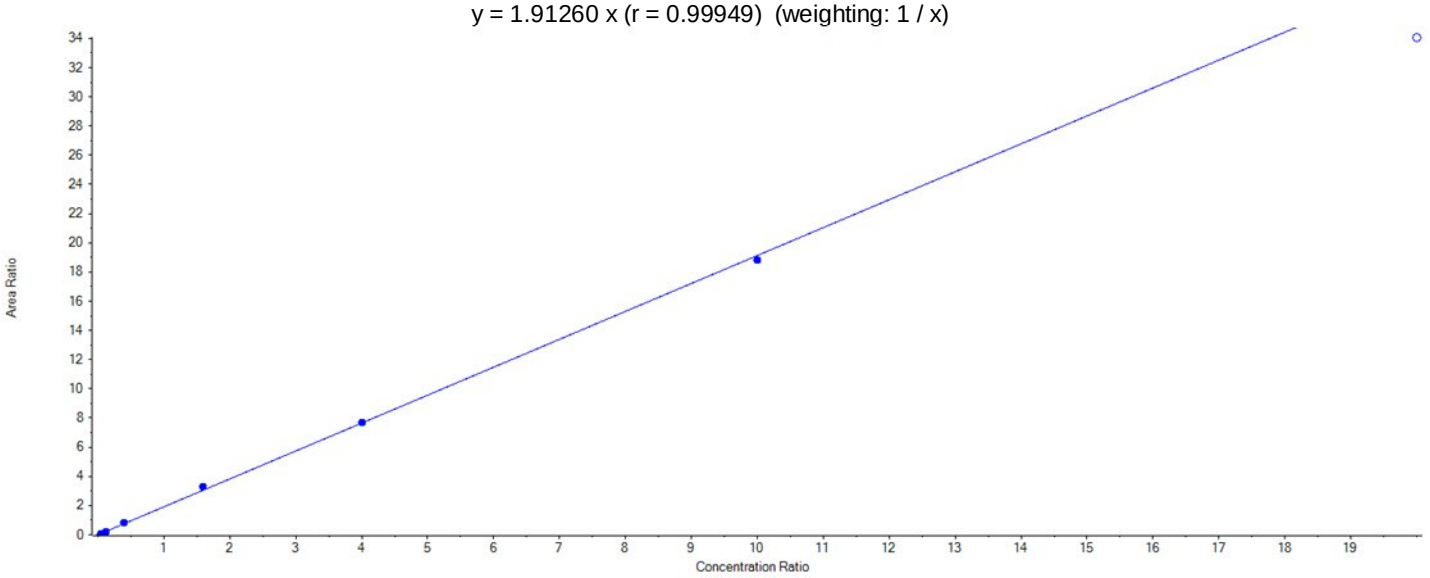
REVIEWED
By ucmr at 3:21 pm, 1/25/19

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

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	

APPROVED
By MCD at 3:23 pm, 1/10/19

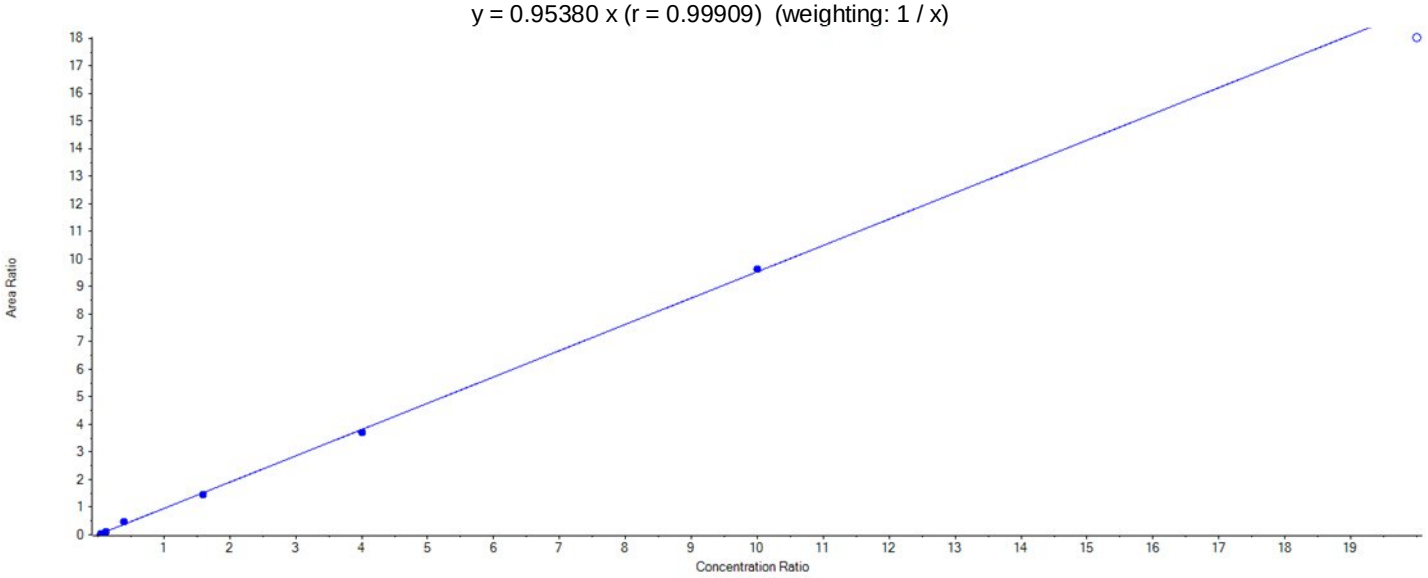
REVIEWED
By ucmr at 3:21 pm, 1/25/19

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

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	

APPROVED
By MCD at 3:23 pm, 1/10/19

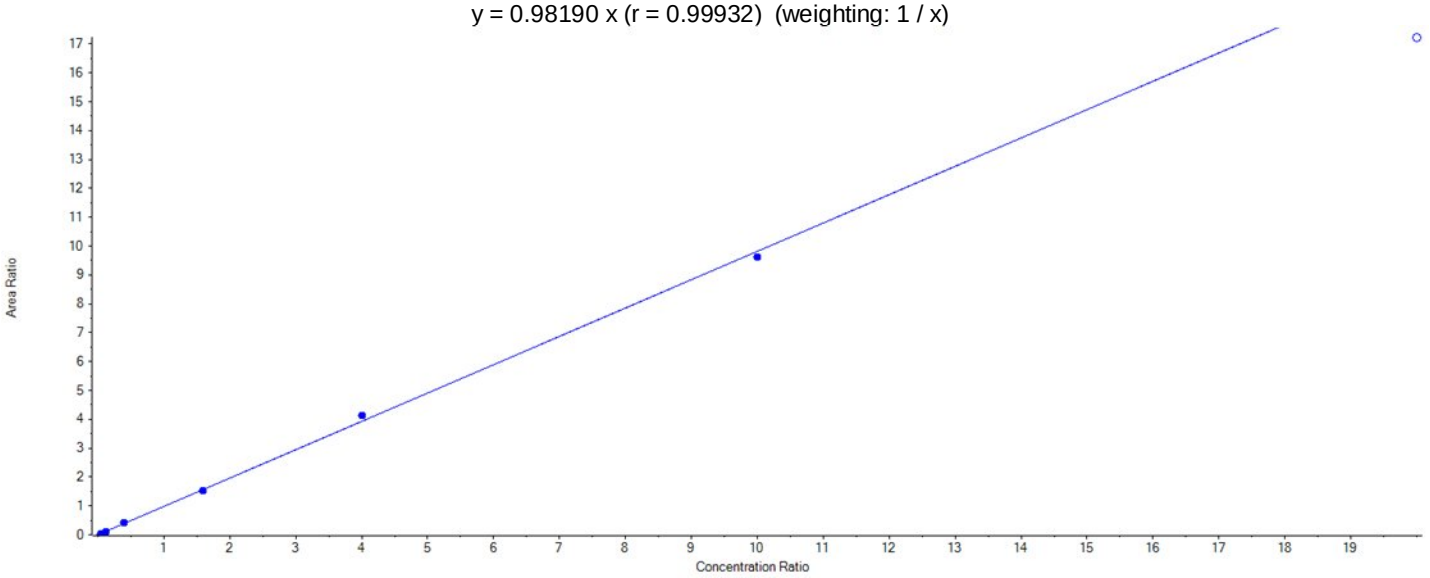
REVIEWED
By ucmr at 3:21 pm, 1/25/19

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

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	

APPROVED
By MCD at 3:23 pm, 1/10/19

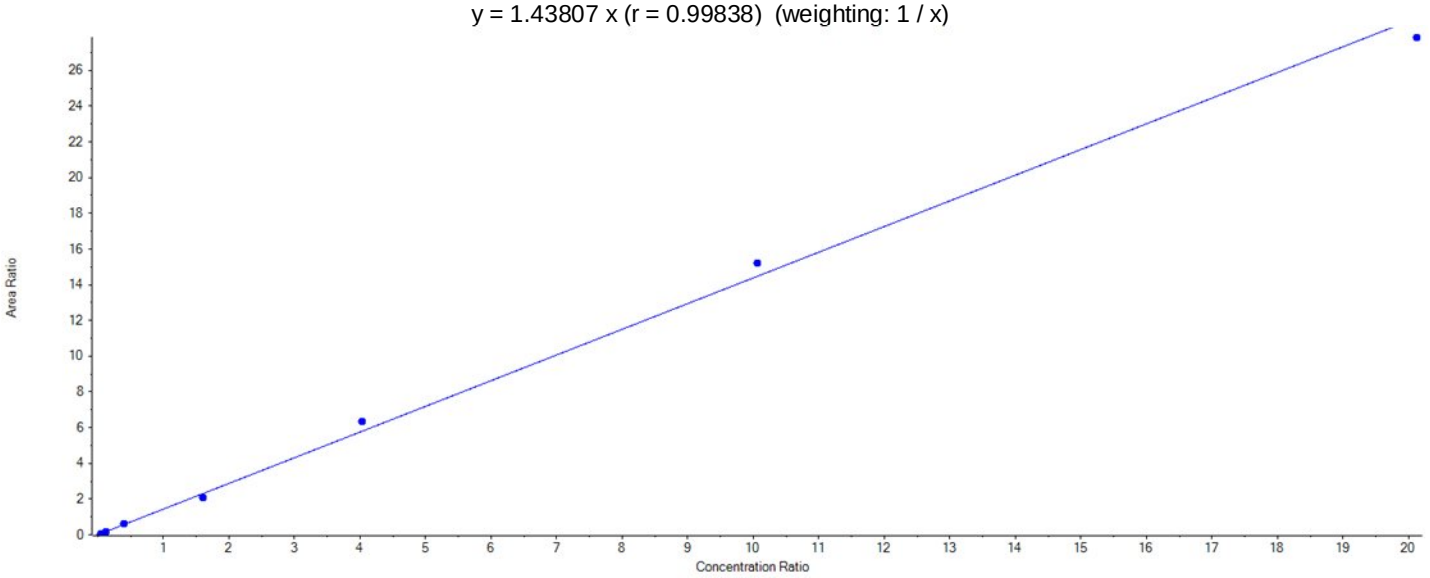
REVIEWED
By ucmr at 3:21 pm, 1/25/19

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

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	

APPROVED
By MCD at 3:23 pm, 1/10/19

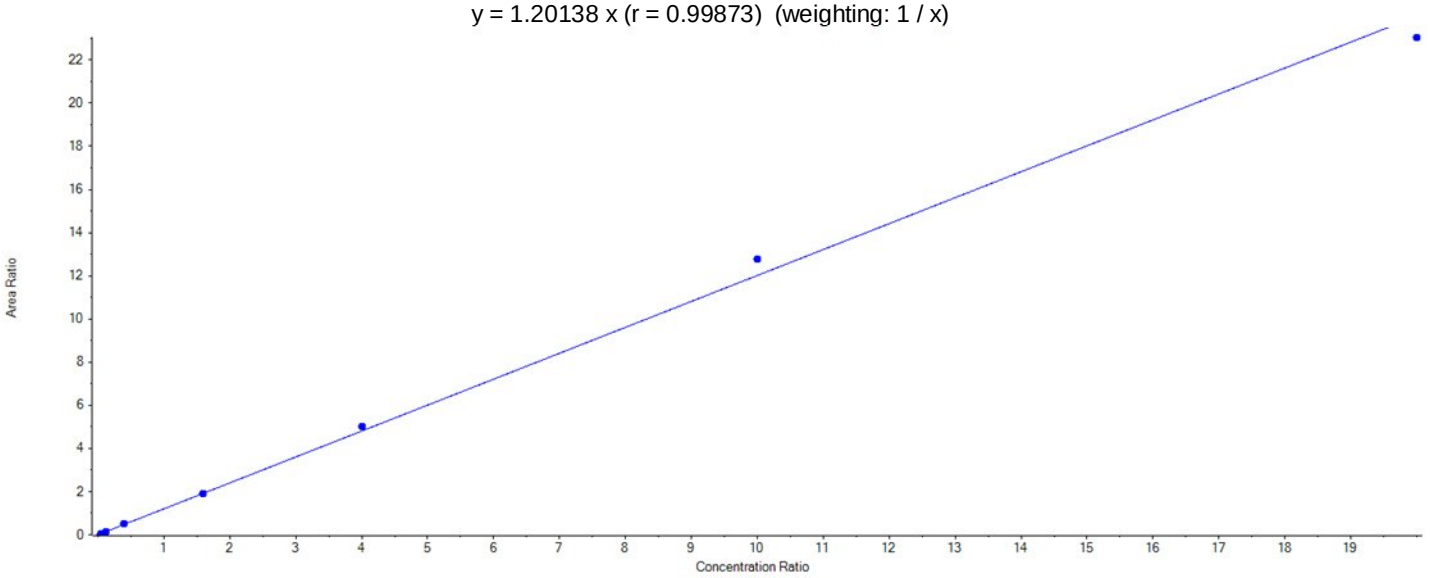
REVIEWED
By ucmr at 3:21 pm, 1/25/19

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

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

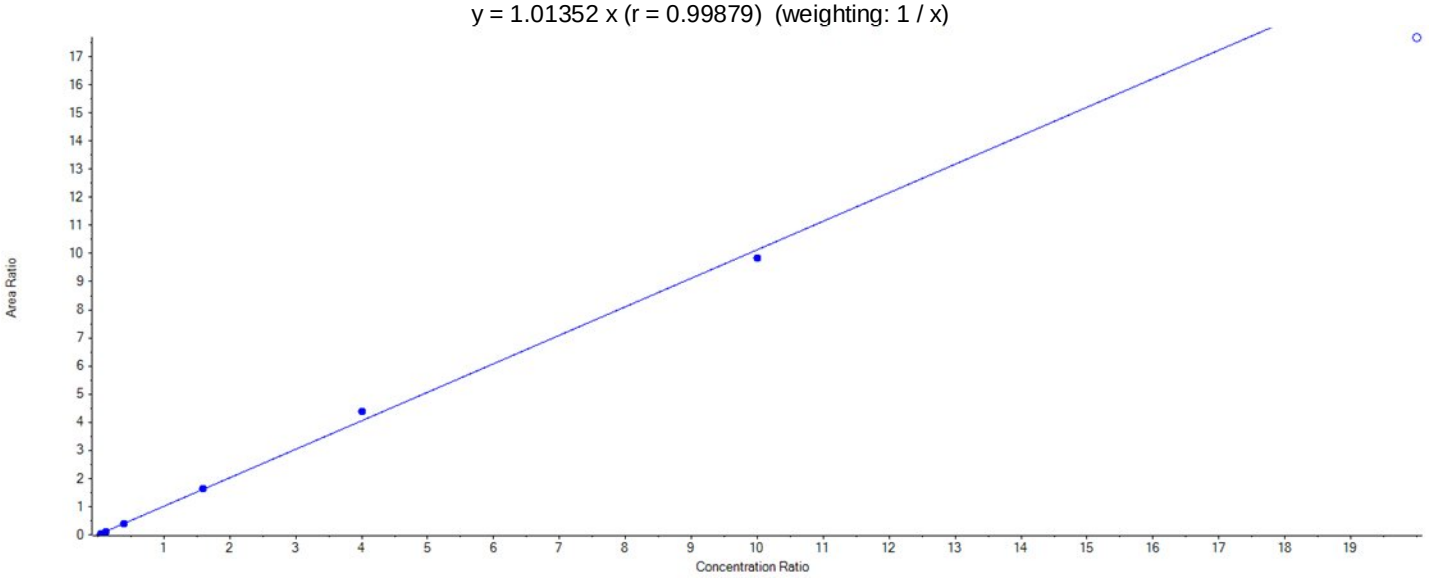
REVIEWED
By ucmr at 3:21 pm, 1/25/19

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	

APPROVED
By MCD at 3:23 pm, 1/10/19

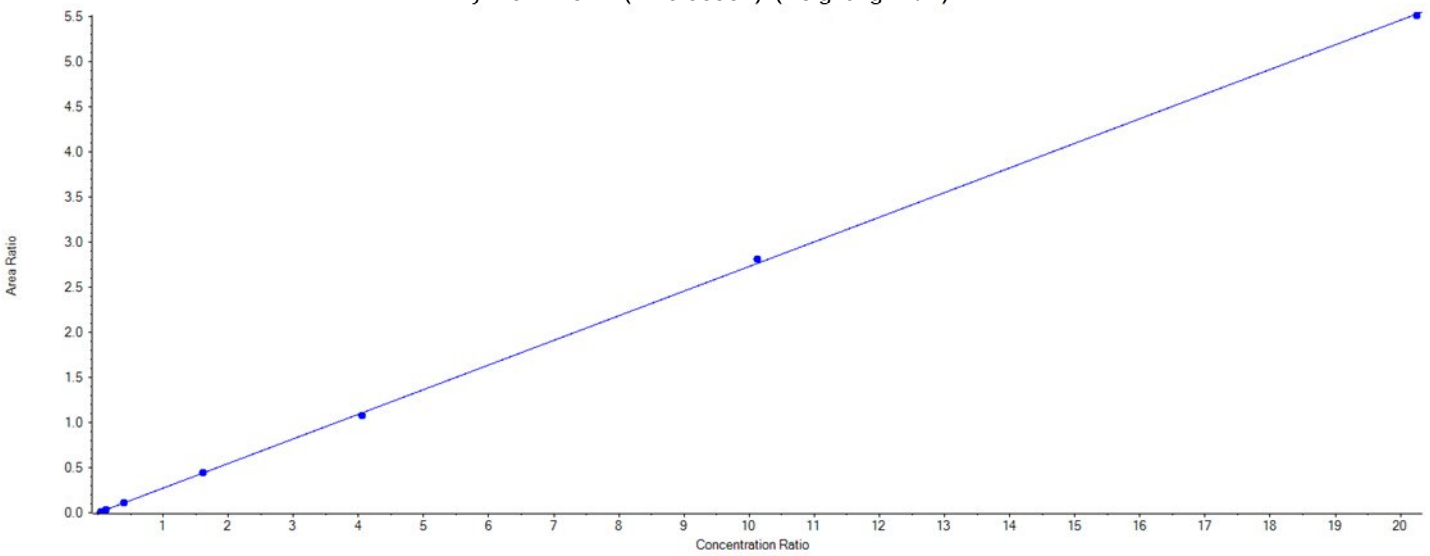
REVIEWED
By ucmr at 3:21 pm, 1/25/19

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

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	

APPROVED
By MCD at 3:23 pm, 1/10/19

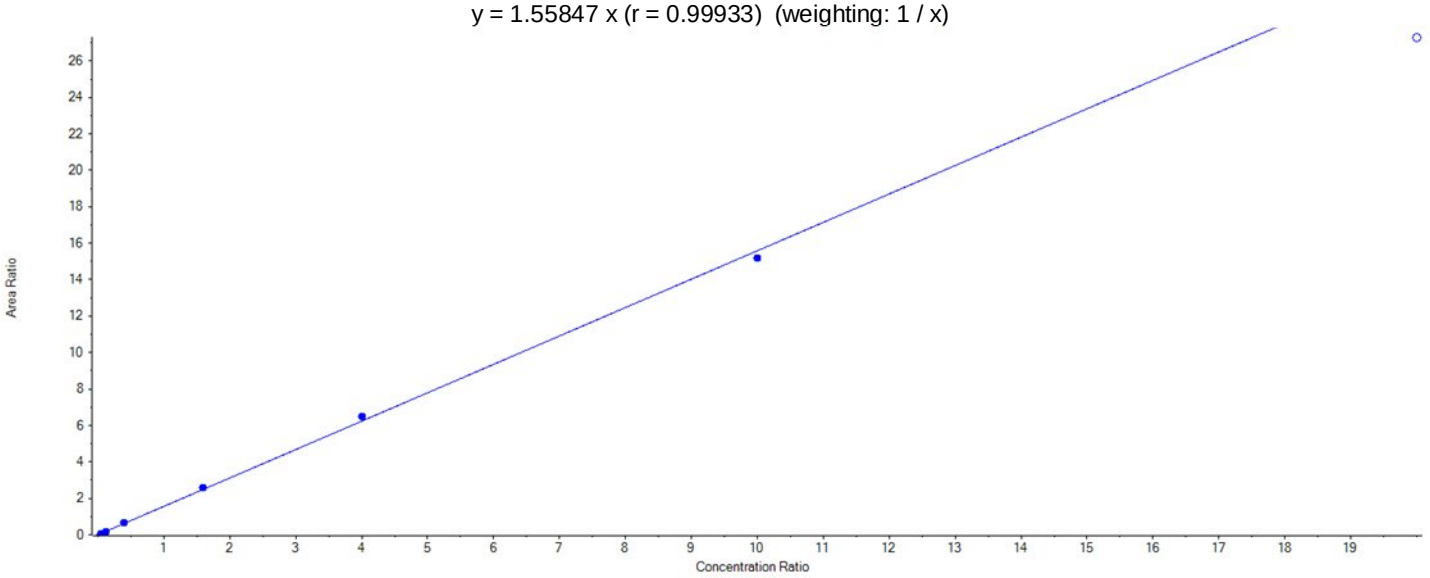
REVIEWED
By ucmr at 3:21 pm, 1/25/19

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

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	

APPROVED
By MCD at 3:23 pm, 1/10/19

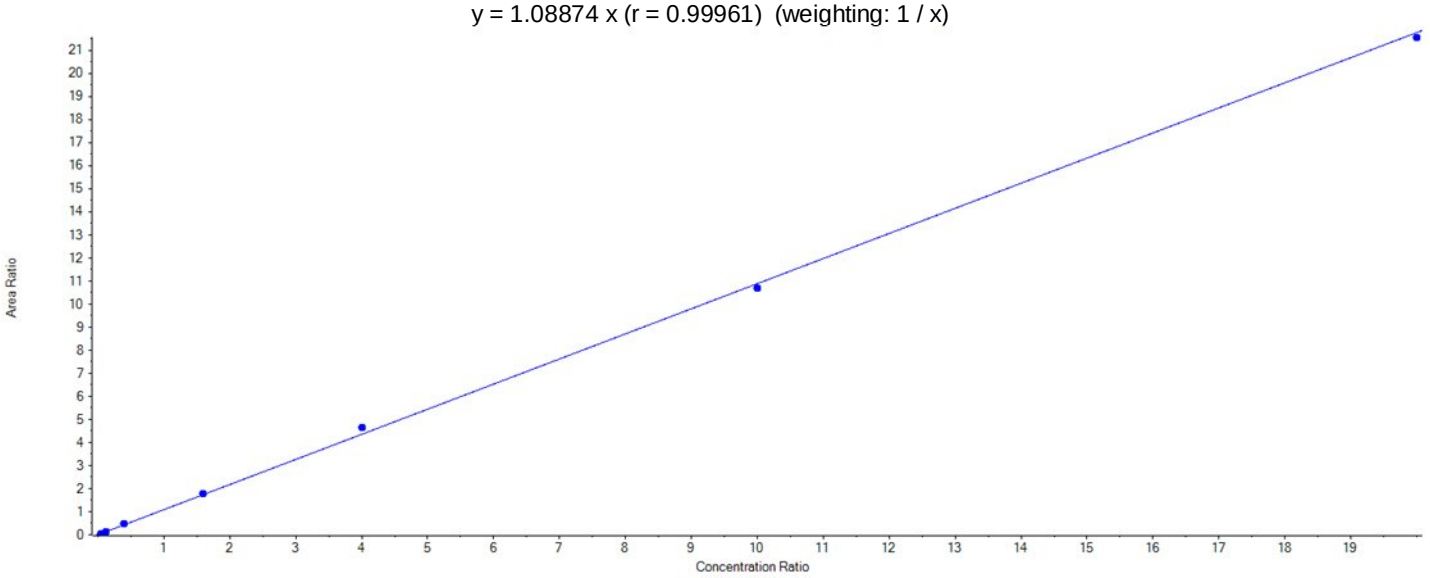
REVIEWED
By ucmr at 3:21 pm, 1/25/19

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

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

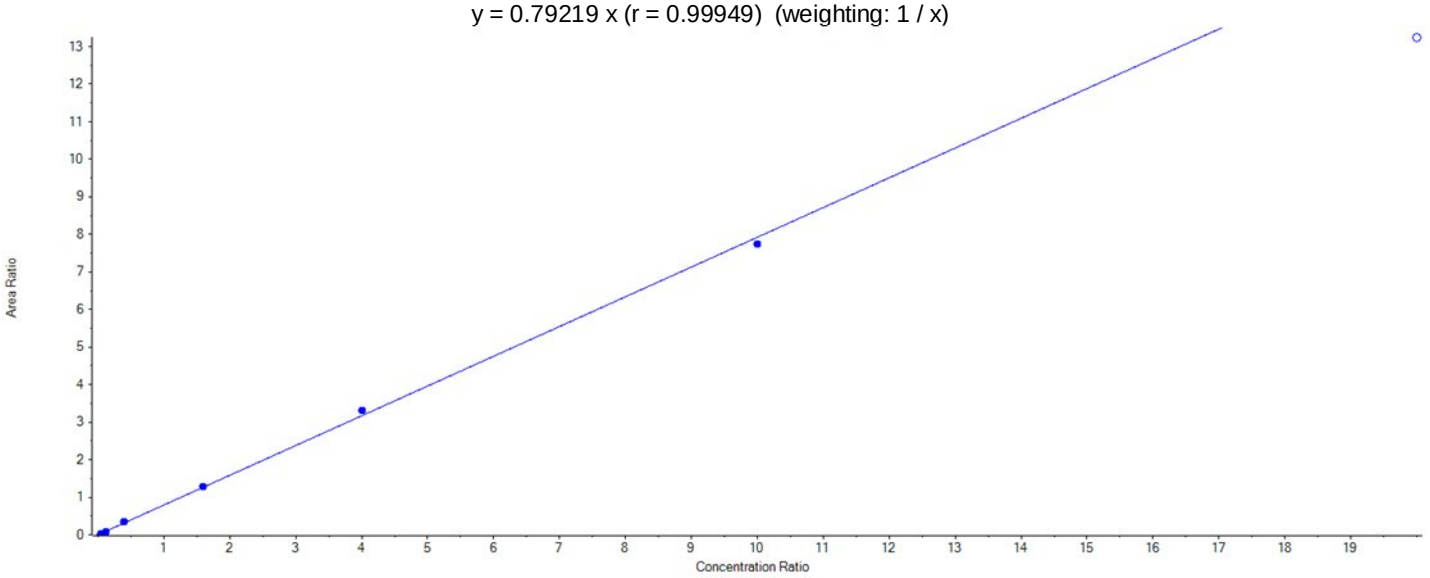
REVIEWED
By ucmr at 3:21 pm, 1/25/19

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	

APPROVED
By MCD at 3:23 pm, 1/10/19

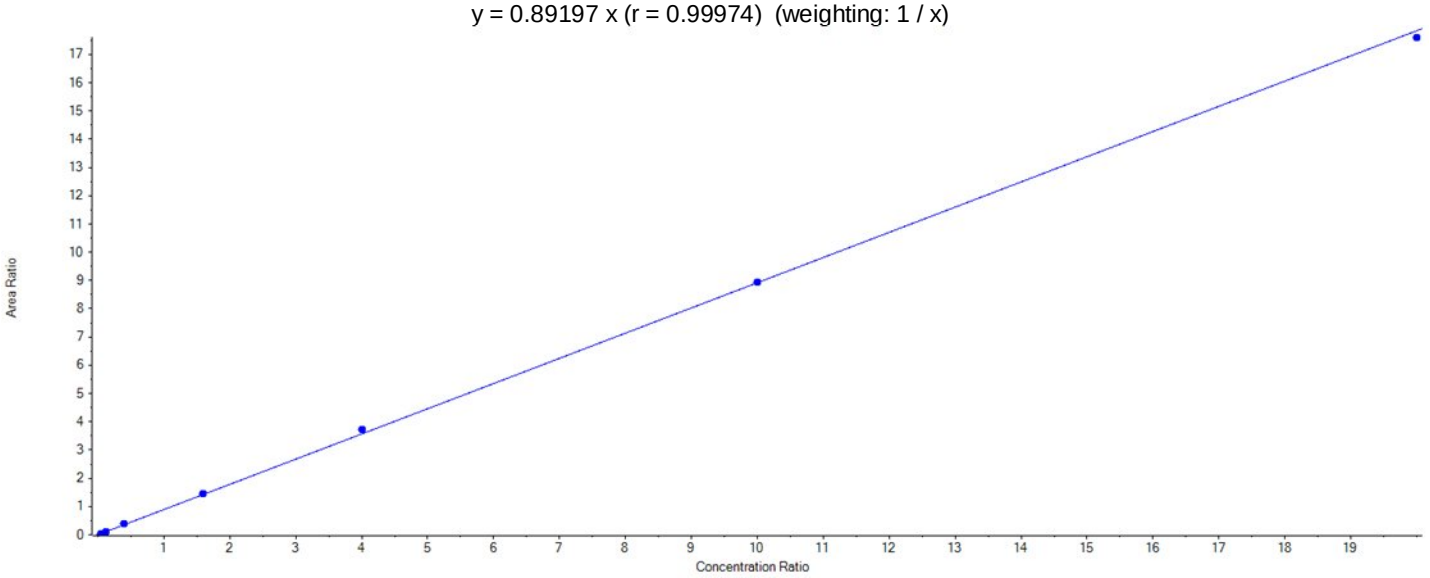
REVIEWED
By ucmr at 3:21 pm, 1/25/19

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

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

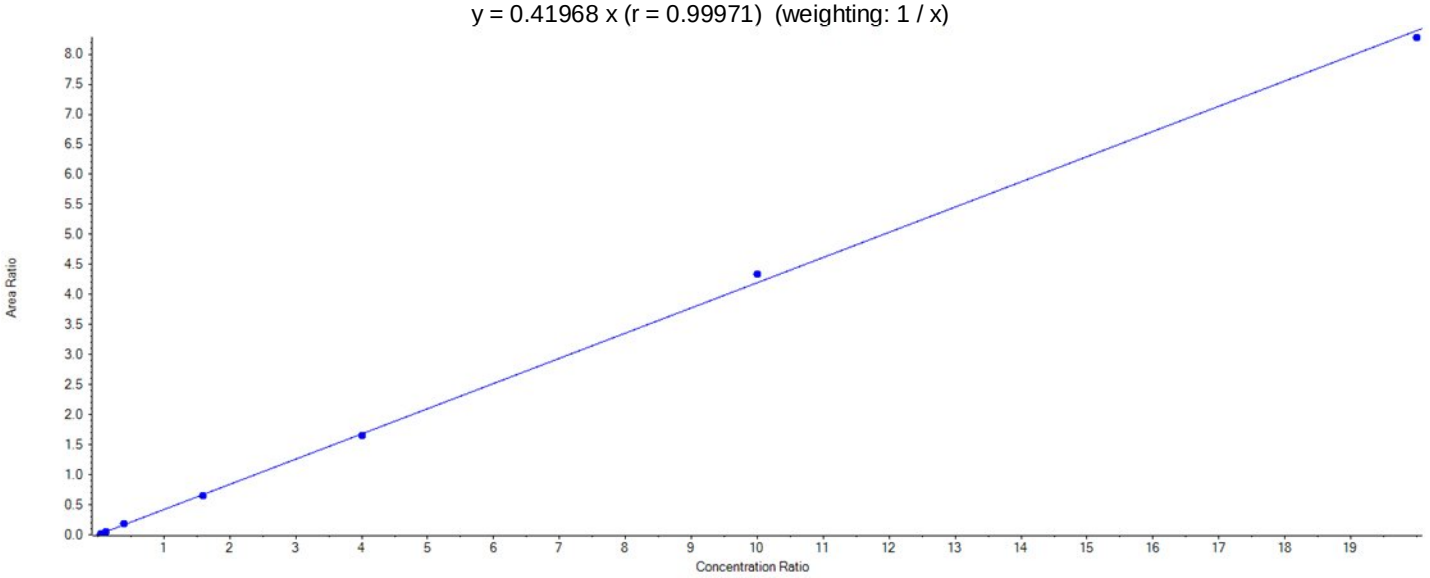
REVIEWED
By ucmr at 3:21 pm, 1/25/19

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

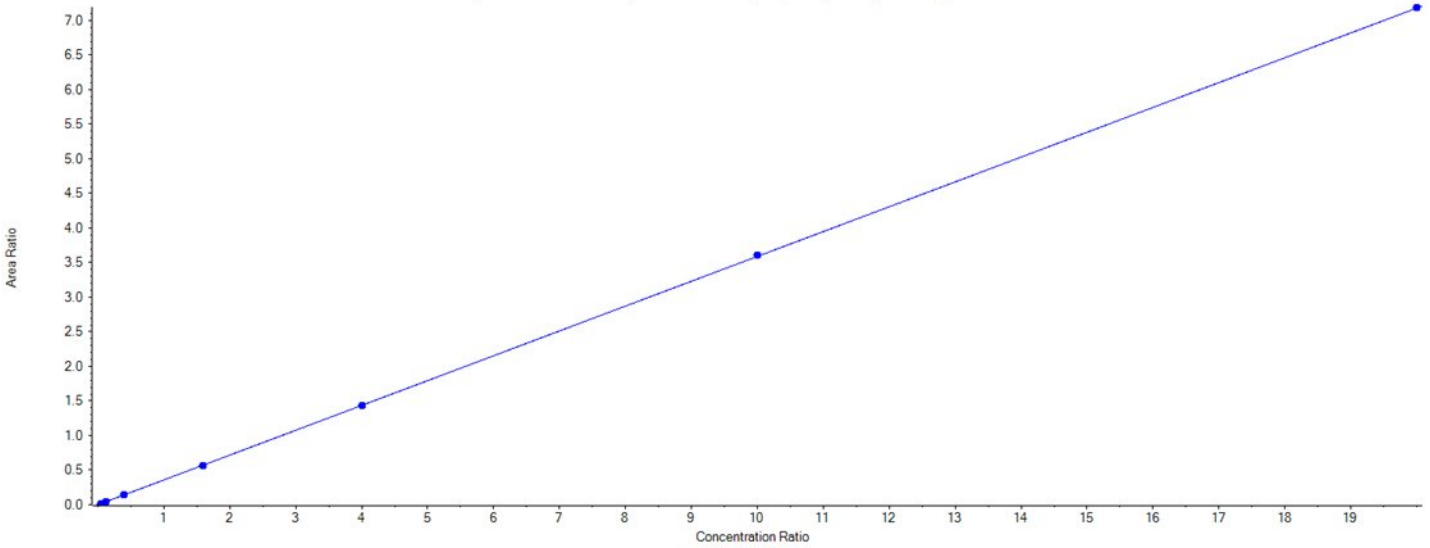
REVIEWED
By ucmr at 3:21 pm, 1/25/19

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	

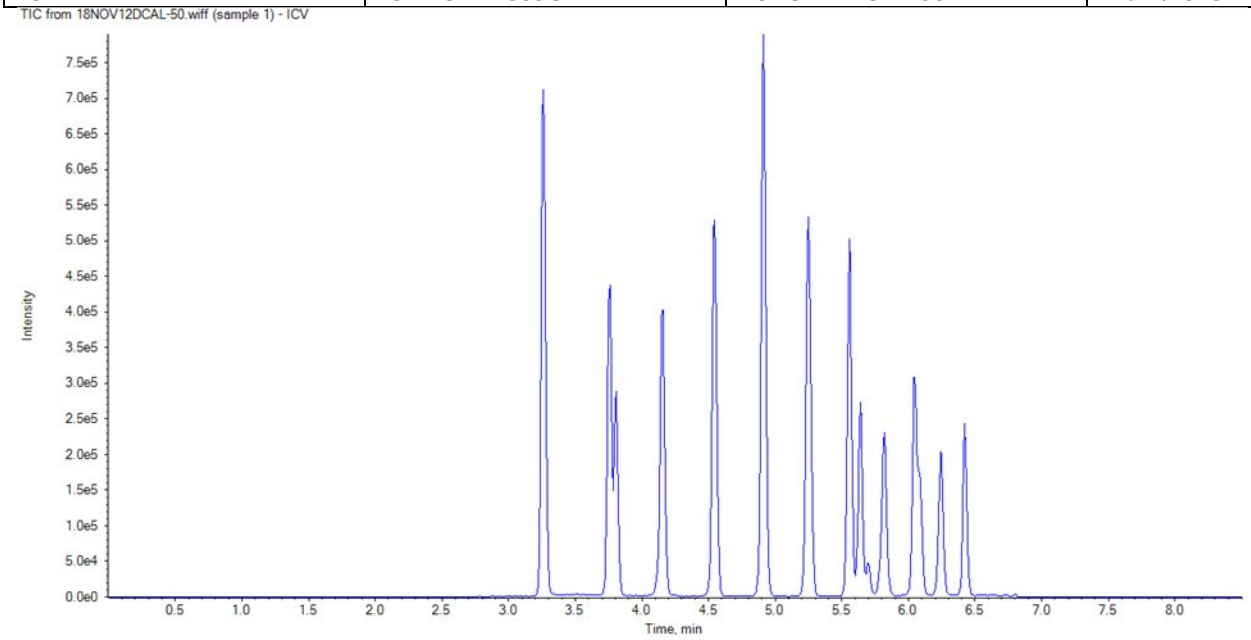
APPROVED
By MCD at 3:23 pm, 1/10/19

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

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	

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

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

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

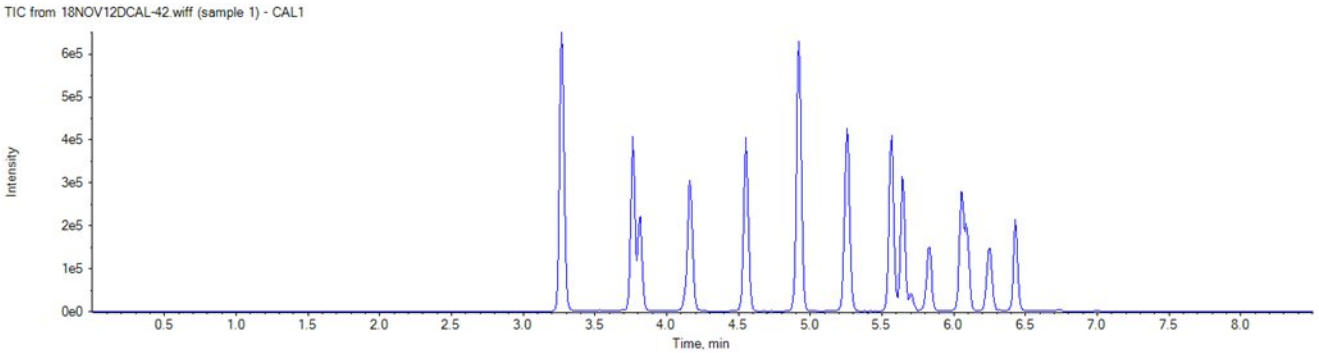
Analyte Quantitation Peak Table

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

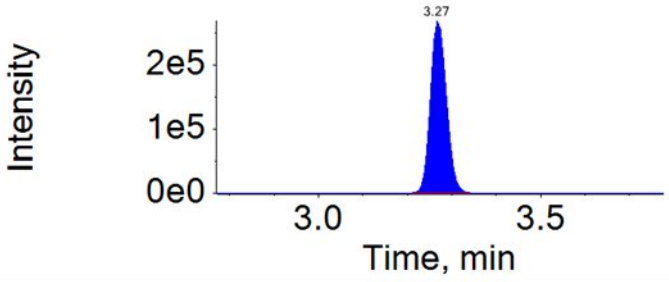


APPROVED
By MCD at 6:33 pm, 11/12/18

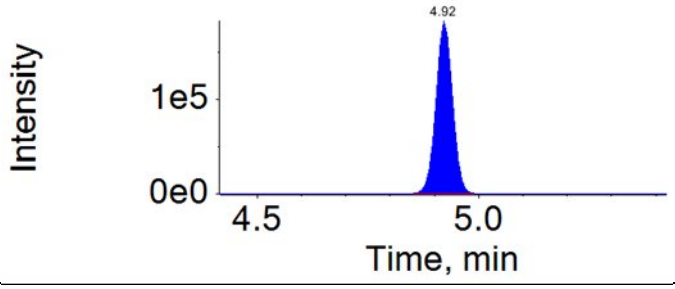
REVIEWED
By HMK at 10:53 am, 11/13/18

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

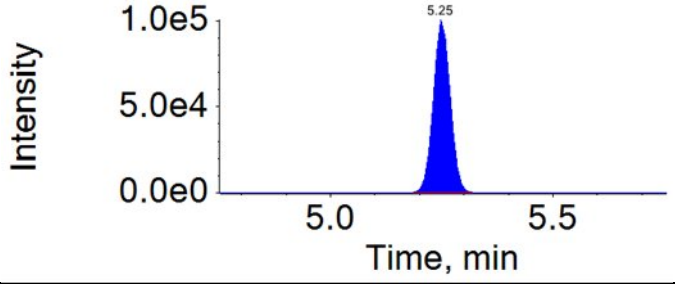
Injection Standard: 13C3-PFBA
216.0 / 172.0



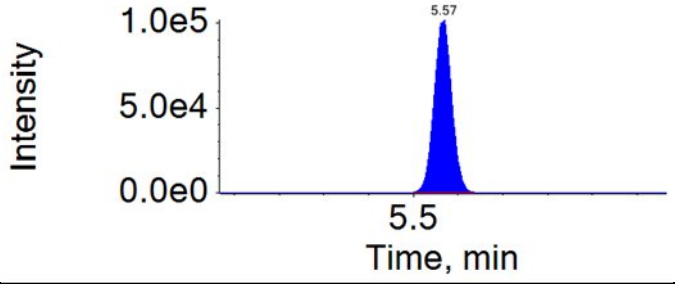
Injection Standard: 13C2-PFOA
415.0 / 370.0



Injection Standard: 13C4-PFOS
503.0 / 80.0



Injection Standard: 13C2-PFDA
515.0 / 470.0

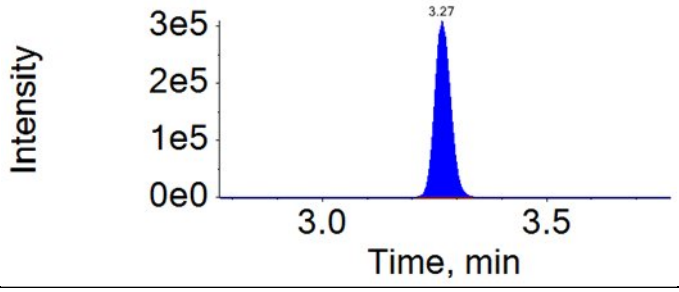


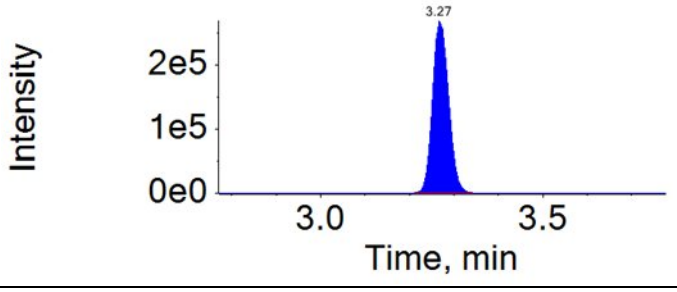
APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

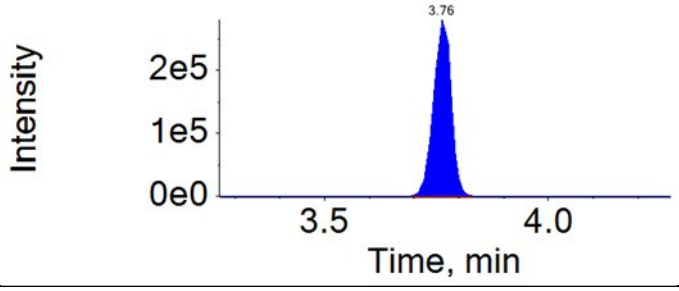
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

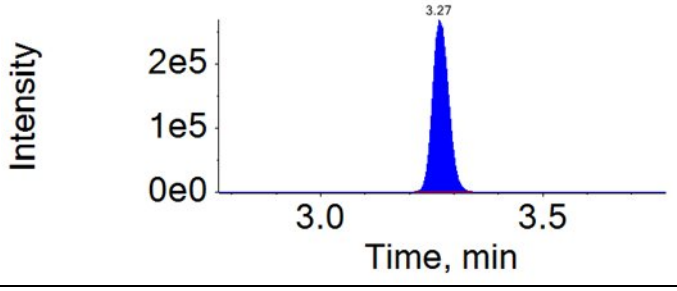
Extraction Standard: E13C4-PFBA	Injection Standard: 13C3-PFBA
217.0 / 172.0	216.0 / 172.0



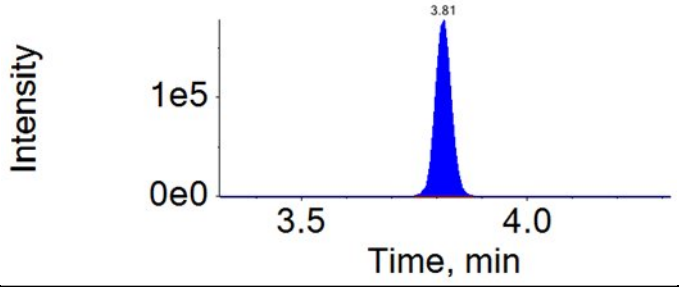


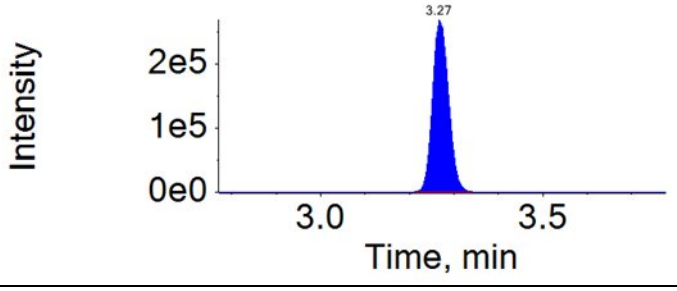
Extraction Standard: E13C5-PFPeA	Injection Standard: 13C3-PFBA
268.0 / 223.0	216.0 / 172.0



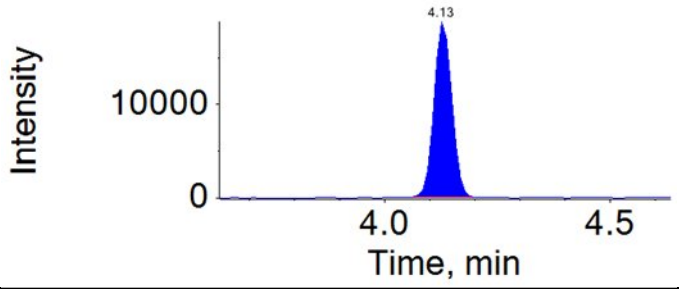


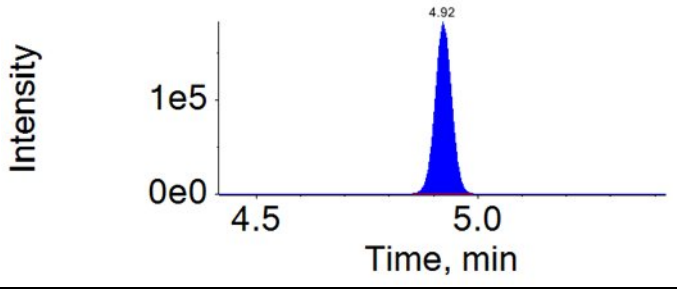
Extraction Standard: E13C3-PFBS	Injection Standard: 13C3-PFBA
302.0 / 80.0	216.0 / 172.0





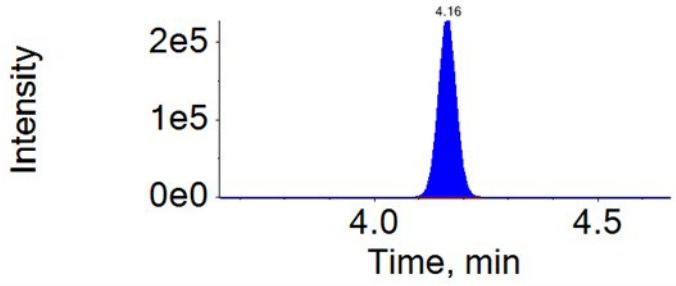
Extraction Standard: E13C2-4:2-FTS	Injection Standard: 13C2-PFOA
329.0 / 81.0	415.0 / 370.0

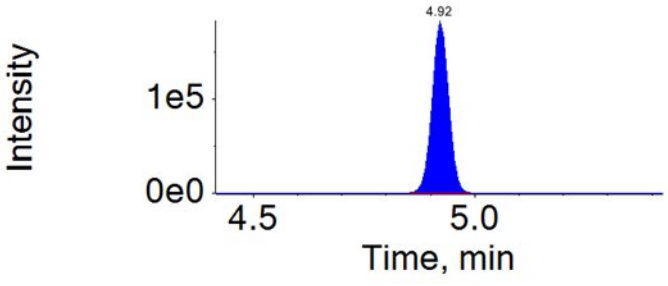




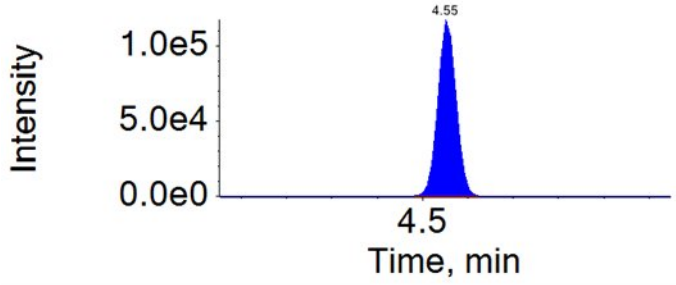
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

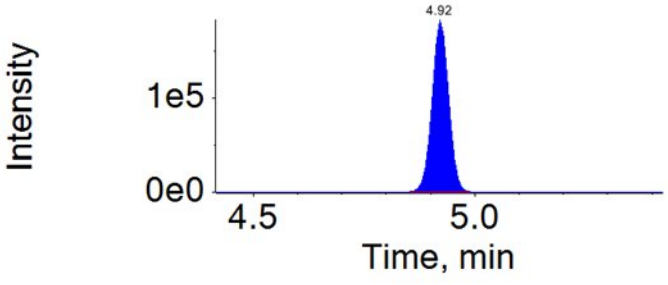
Extraction Standard: E13C5-PFHxA	Injection Standard: 13C2-PFOA
318.0 / 273.0	415.0 / 370.0



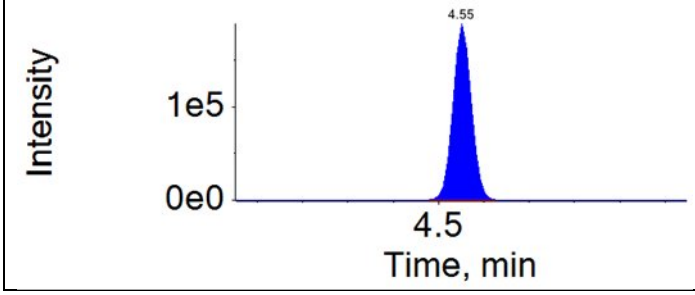


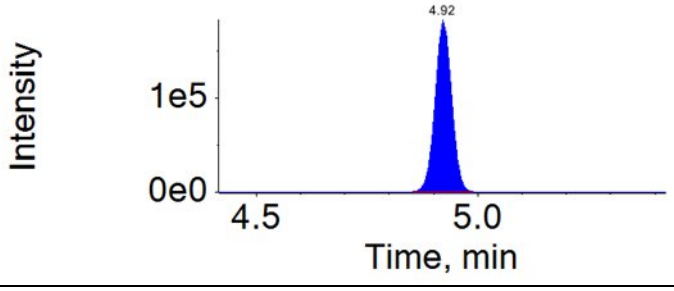
Extraction Standard: E13C3-PFHxS	Injection Standard: 13C2-PFOA
402.0 / 80.0	415.0 / 370.0



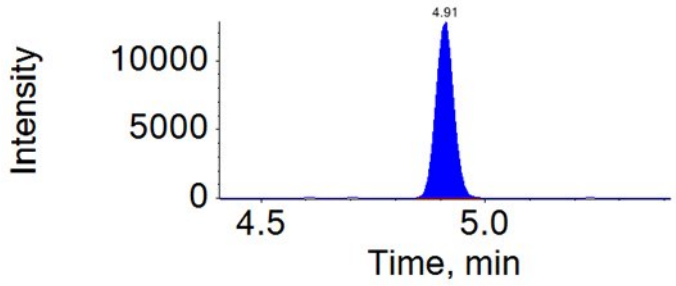


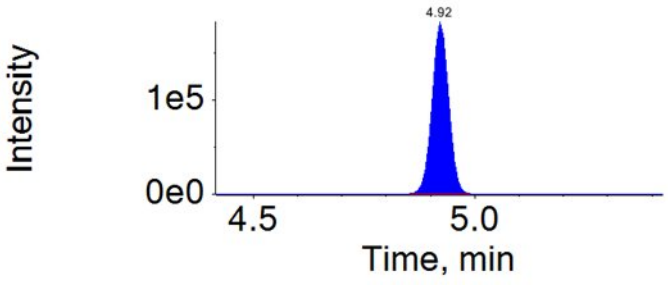
Extraction Standard: E13C4-PFHpA	Injection Standard: 13C2-PFOA
367.0 / 322.0	415.0 / 370.0





Extraction Standard: E13C2-6:2-FTS	Injection Standard: 13C2-PFOA
429.0 / 81.0	415.0 / 370.0



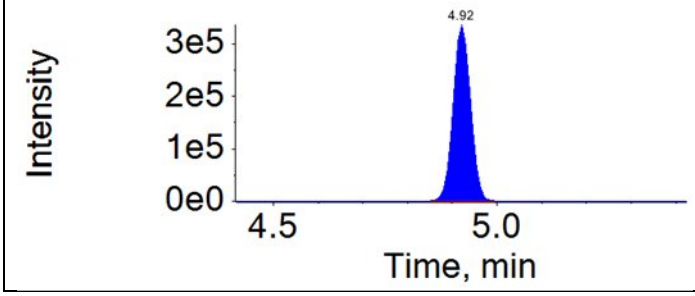


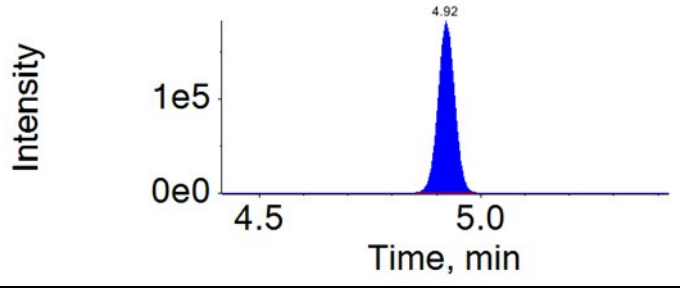
APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

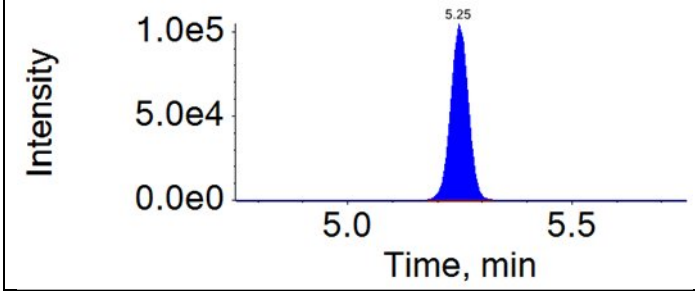
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

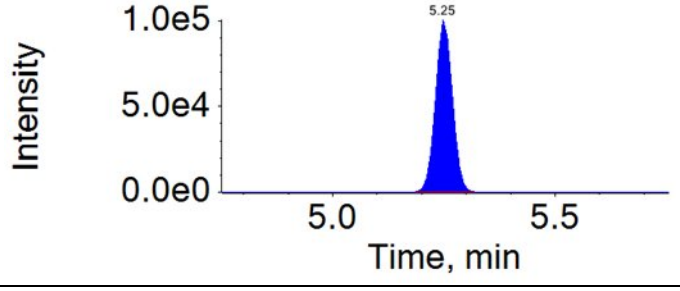
Extraction Standard: E13C8-PFOA	Injection Standard: 13C2-PFOA
421.0 / 376.0	415.0 / 370.0



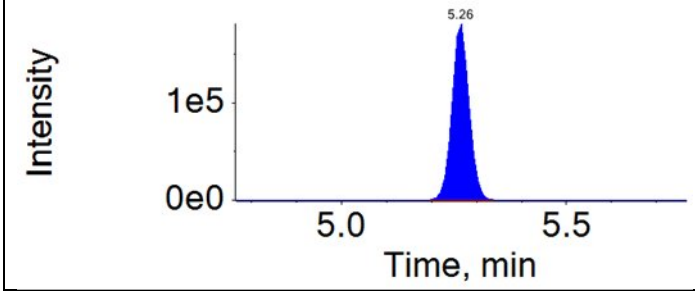


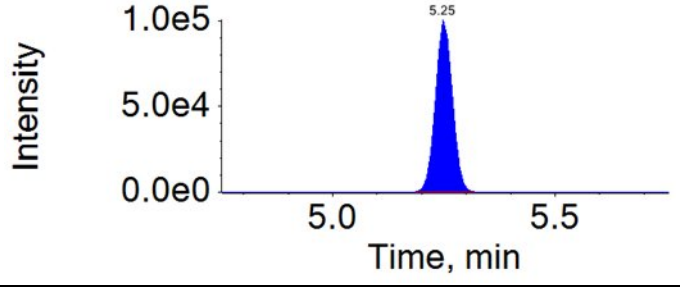
Extraction Standard: E13C8-PFOS	Injection Standard: 13C4-PFOS
507.0 / 80.0	503.0 / 80.0



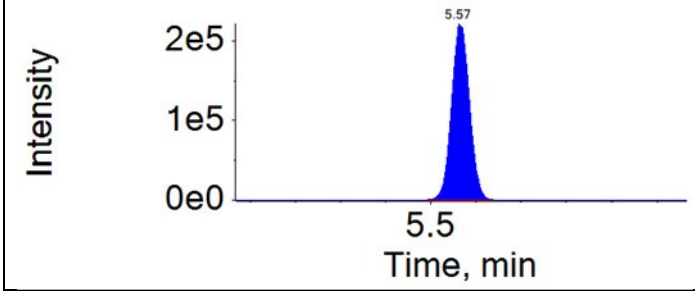


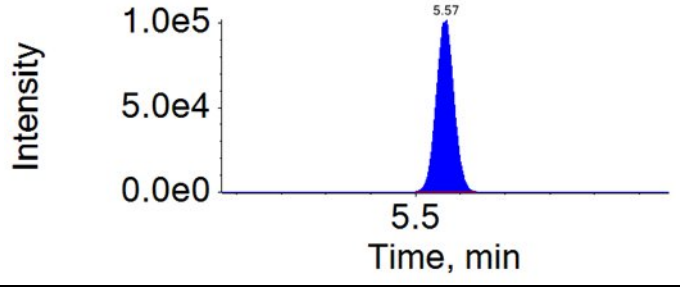
Extraction Standard: E13C9-PFNA	Injection Standard: 13C4-PFOS
472.0 / 427.0	503.0 / 80.0





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



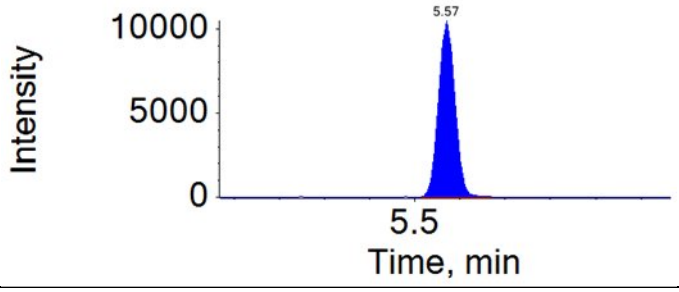


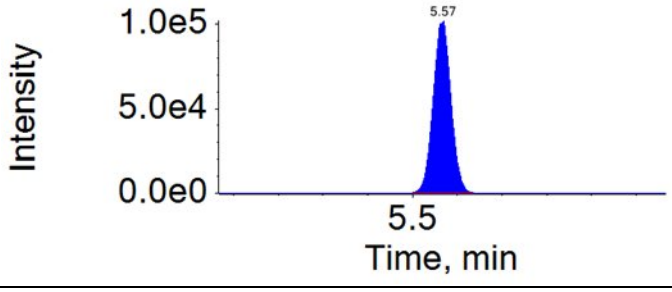
APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

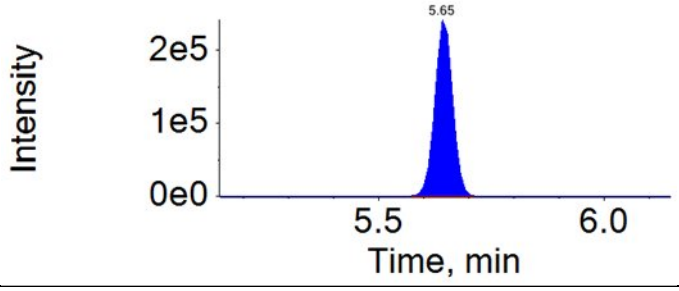
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

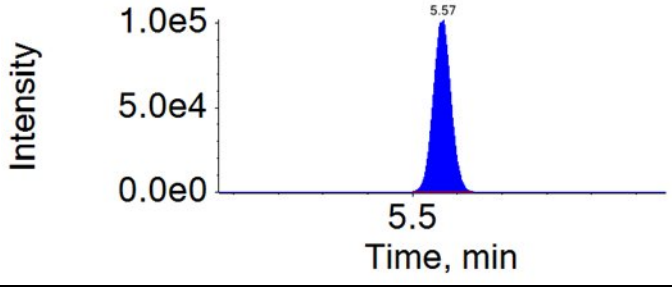
Extraction Standard: E13C2-8:2-FTS	Injection Standard: 13C2-PFDA
529.0 / 81.0	515.0 / 470.0



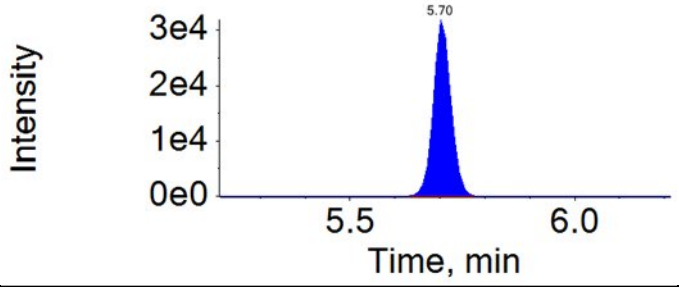


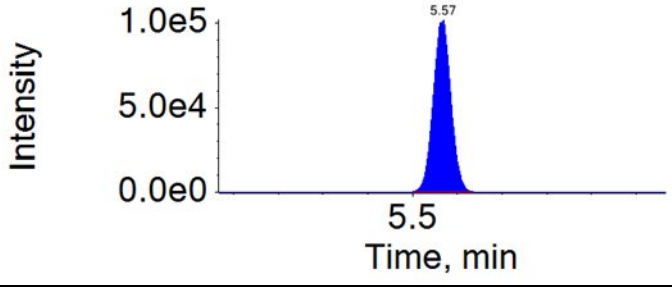
Extraction Standard: E13C8-PFOSA	Injection Standard: 13C2-PFDA
506.0 / 78.0	515.0 / 470.0



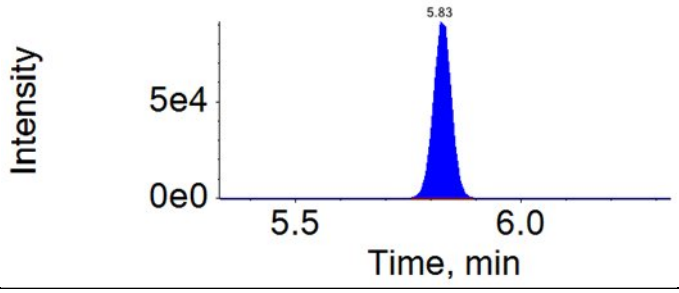


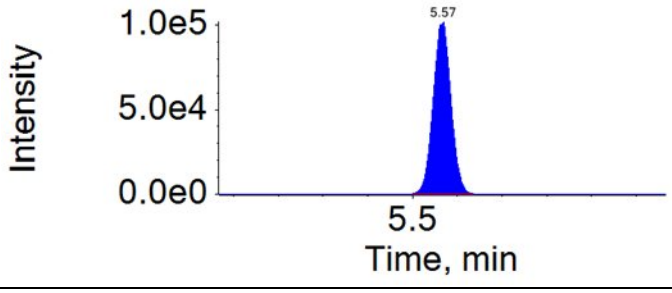
Extraction Standard: Ed3-NMeFOSAA	Injection Standard: 13C2-PFDA
573.0 / 419.0	515.0 / 470.0





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



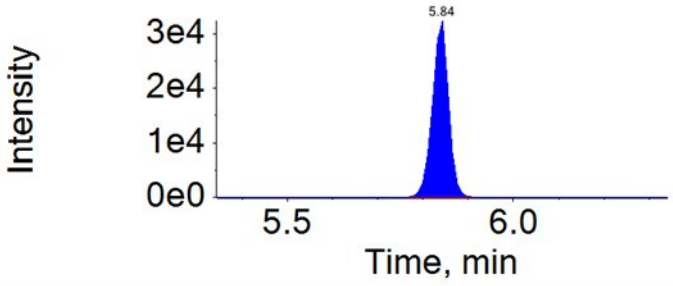


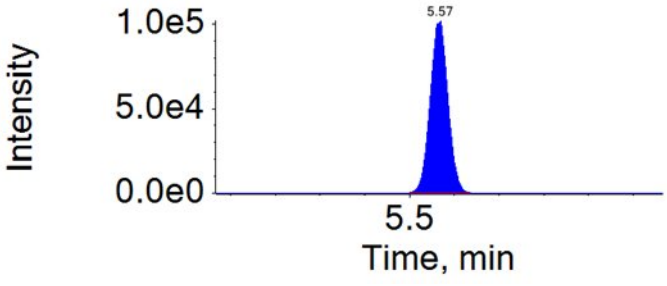
APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

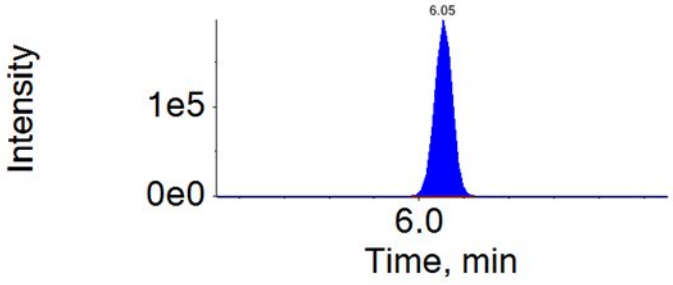
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

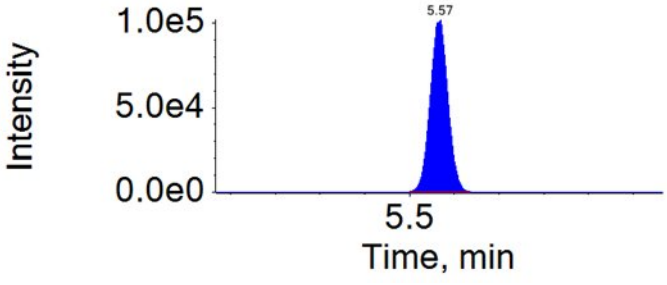
Extraction Standard: Ed5-NEtFOSAA	Injection Standard: 13C2-PFDA
589.0 / 419.0	515.0 / 470.0



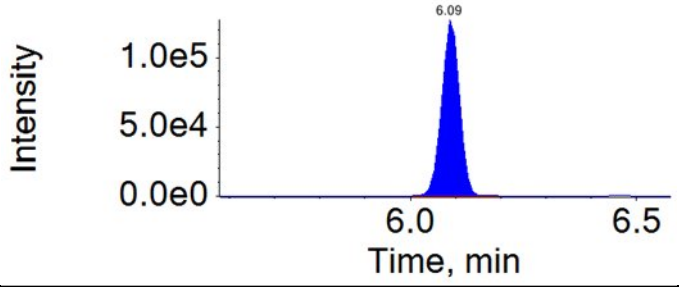


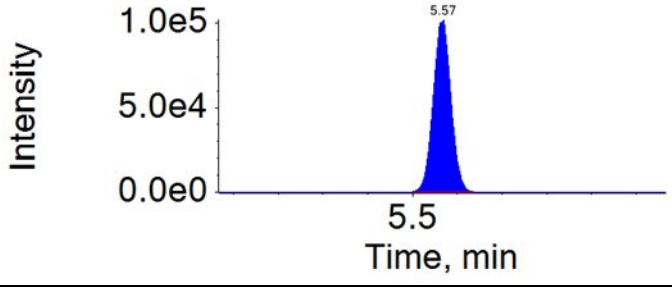
Extraction Standard: E13C2-PFDoDA	Injection Standard: 13C2-PFDA
615.0 / 570.0	515.0 / 470.0



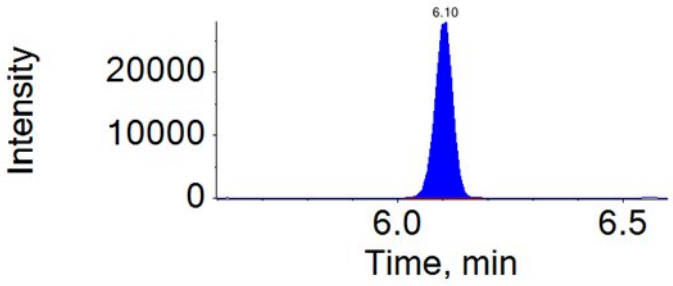


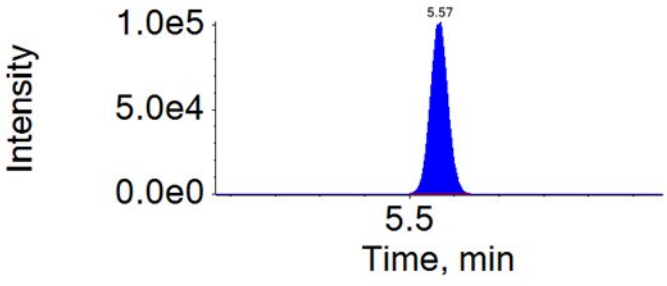
Extraction Standard: Ed7-NMePFOSAE	Injection Standard: 13C2-PFDA
623.0 / 59.0	515.0 / 470.0





Extraction Standard: Ed3-NMePFOSA	Injection Standard: 13C2-PFDA
515.0 / 169.0	515.0 / 470.0



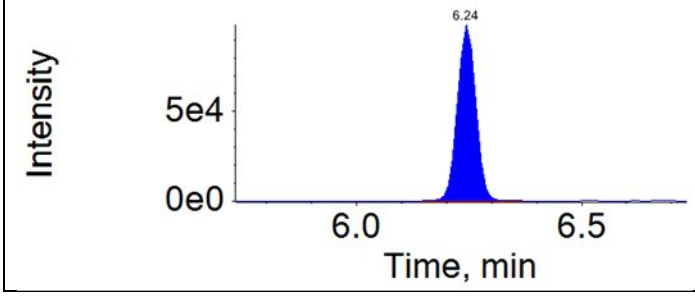


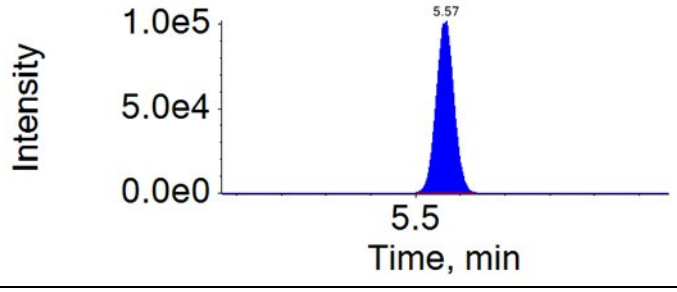
APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

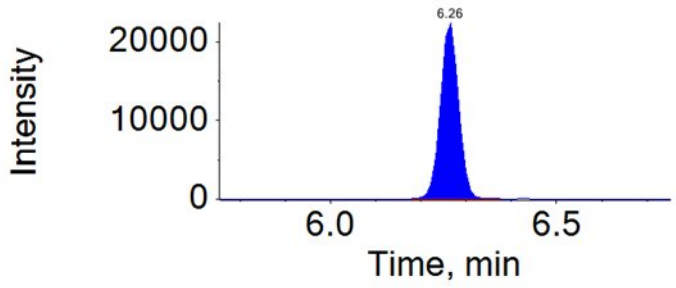
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

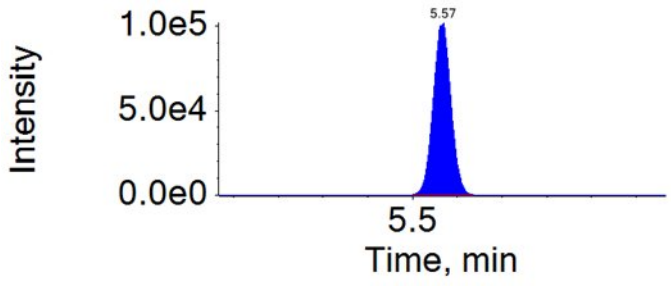
Extraction Standard: Ed9-NEtPFOSAE	Injection Standard: 13C2-PFDA
639.0 / 59.0	515.0 / 470.0



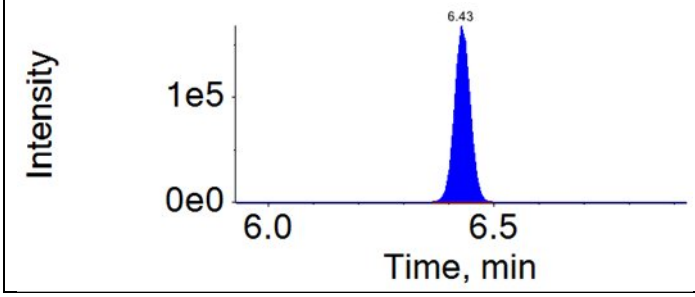


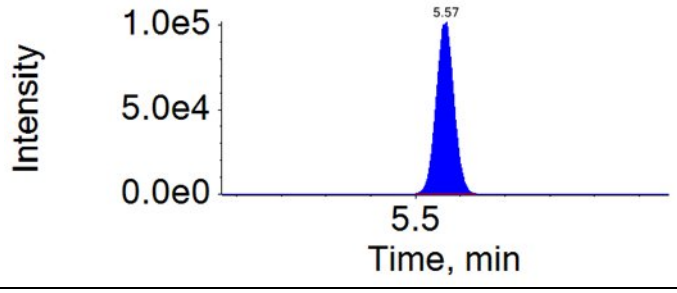
Extraction Standard: Ed5-NEtPFOSA	Injection Standard: 13C2-PFDA
531.0 / 169.0	515.0 / 470.0





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



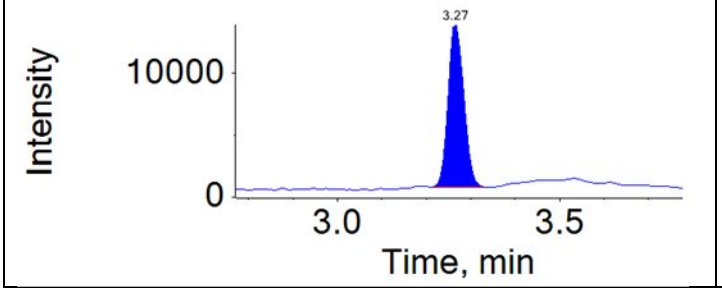


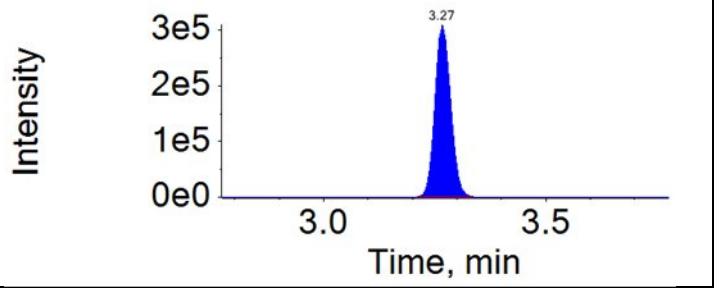
APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

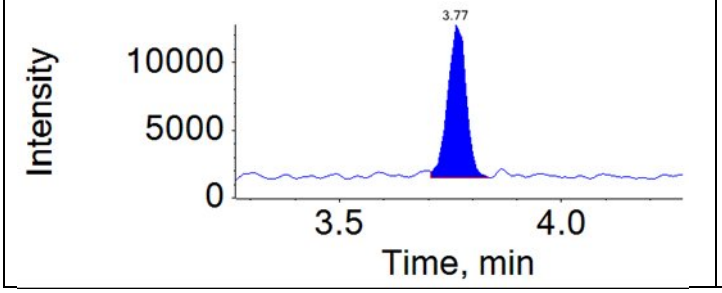
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

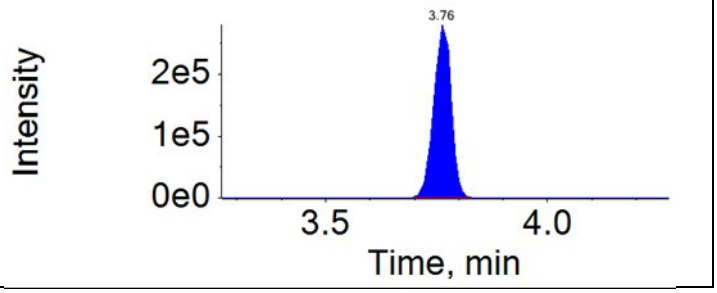
Analyte: PFBA	Extraction Standard: 13C4-PFBA
213.0 / 169.0	217.0 / 172.0



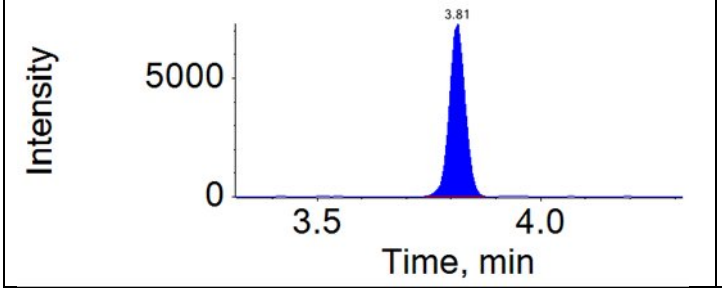


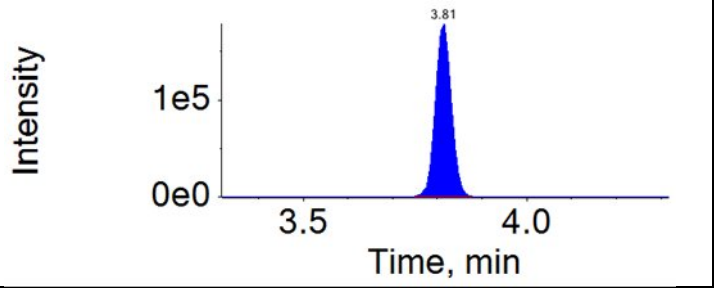
Analyte: PFPeA	Extraction Standard: 13C5-PFPeA
263.0 / 219.0	268.0 / 223.0



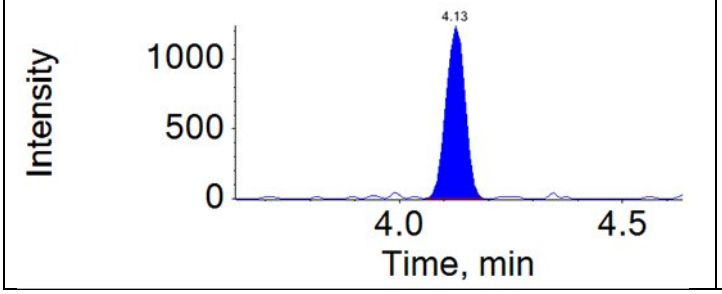


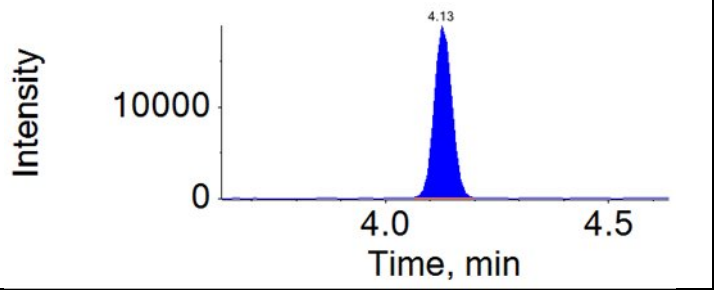
Analyte: PFBS	Extraction Standard: 13C3-PFBS
299.0 / 80.0	302.0 / 80.0





Analyte: 4:2-FTS	Extraction Standard: 13C2-4:2-FTS
327.0 / 307.0	329.0 / 81.0



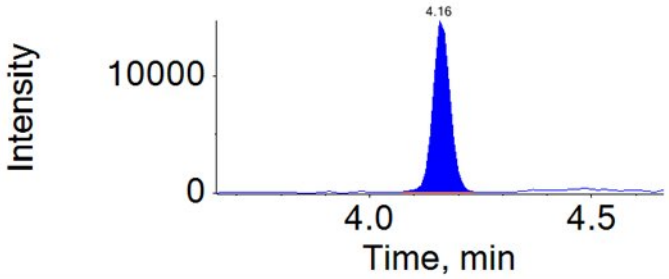


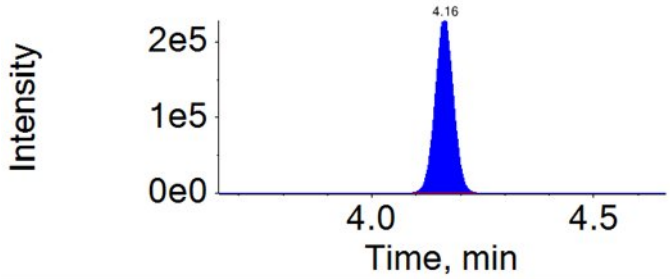
APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

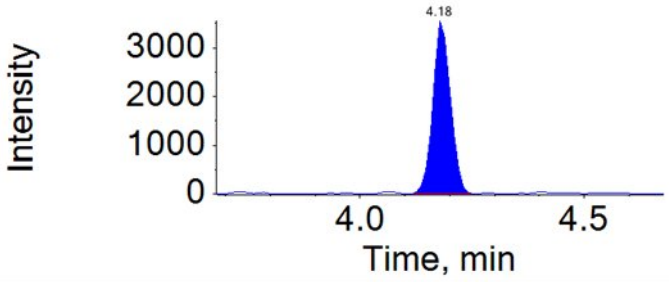
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

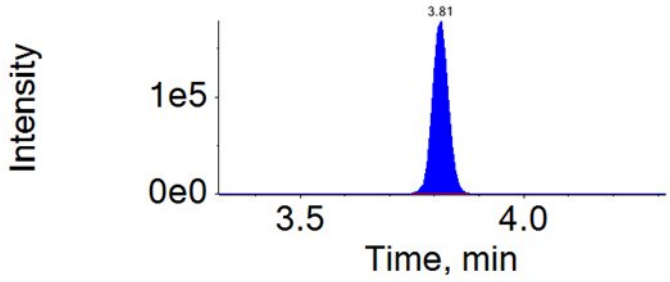
Analyte: PFHxA	Extraction Standard: 13C5-PFHxA
313.0 / 269.0	318.0 / 273.0



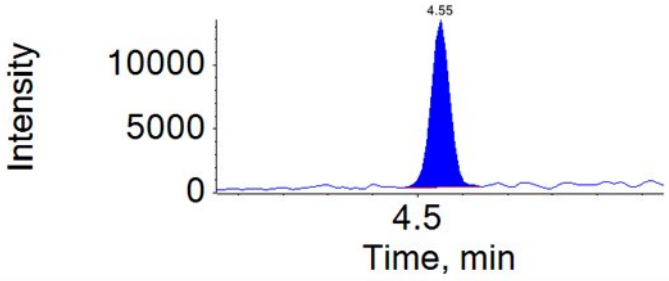


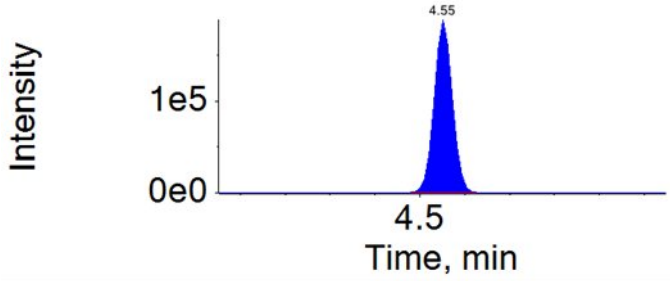
Analyte: PFPeS	Extraction Standard: 13C3-PFBS
349.0 / 80.0	302.0 / 80.0



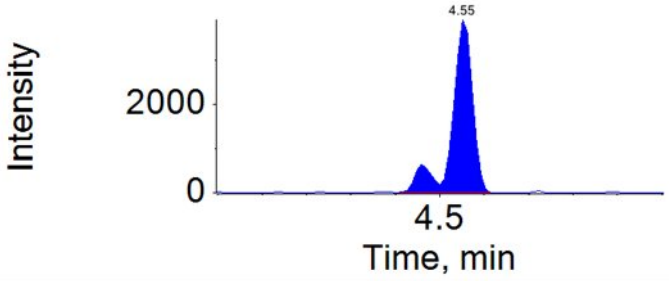


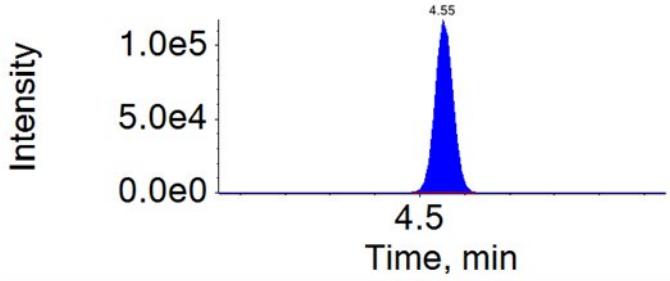
Analyte: PFHpA	Extraction Standard: 13C4-PFHpA
363.0 / 319.0	367.0 / 322.0





Analyte: PFHxS	Extraction Standard: 13C3-PFHxS
399.0 / 80.0	402.0 / 80.0



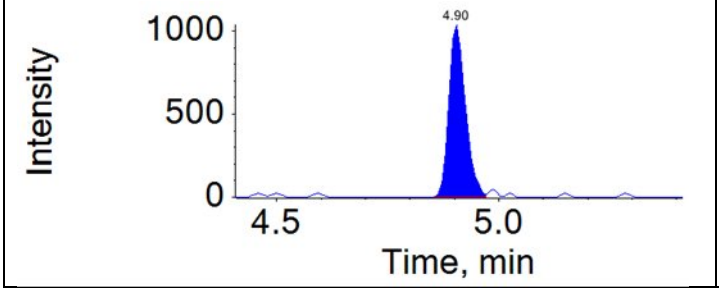


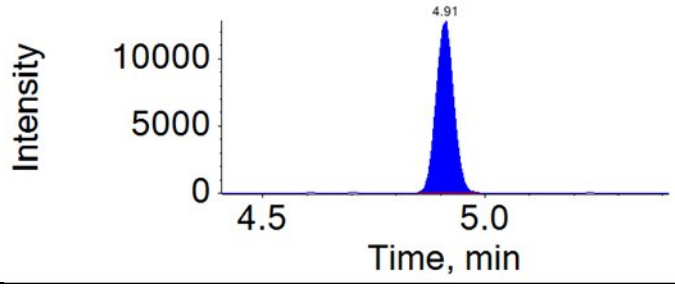
APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

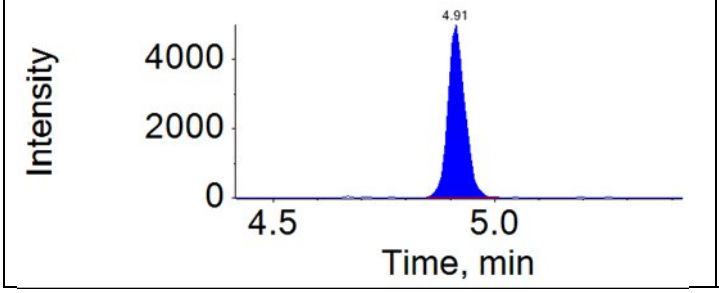
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

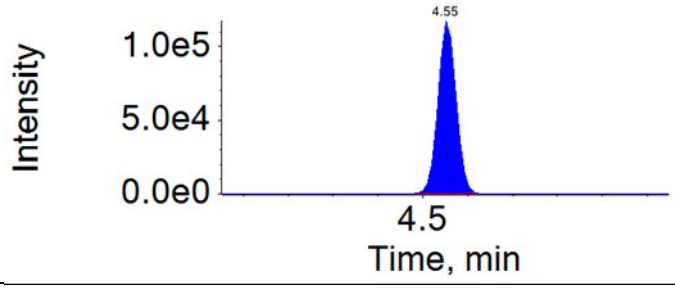
Analyte: 6:2-FTS	Extraction Standard: 13C2-6:2-FTS
427.0 / 407.0	429.0 / 81.0



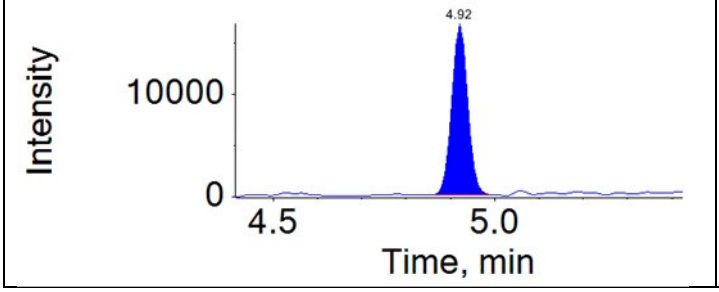


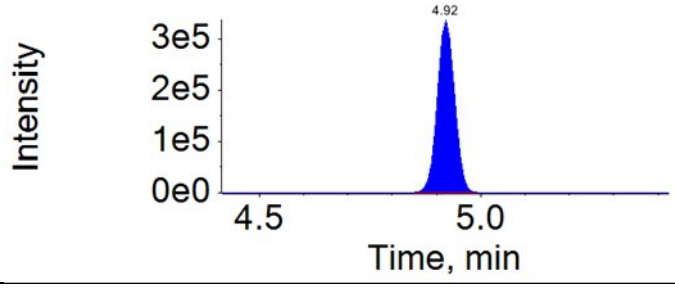
Analyte: PFHpS	Extraction Standard: 13C3-PFHxS
449.0 / 80.0	402.0 / 80.0



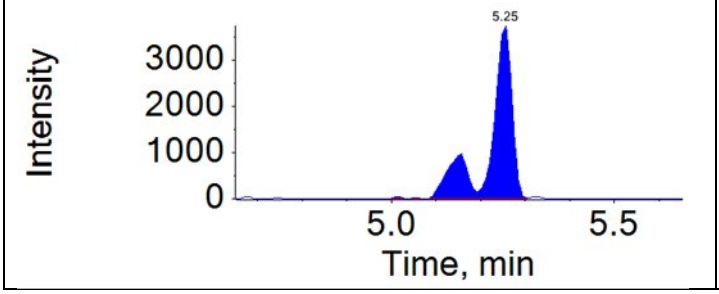


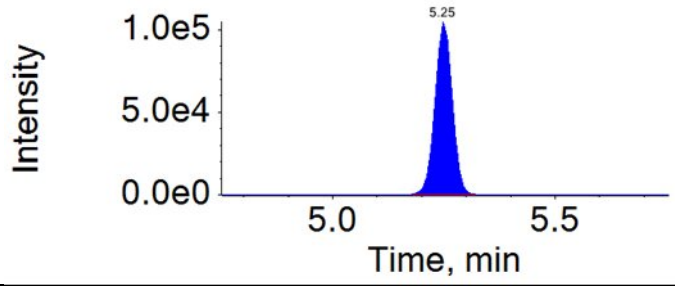
Analyte: PFOA	Extraction Standard: 13C8-PFOA
413.0 / 369.0	421.0 / 376.0





Analyte: PFOS	Extraction Standard: 13C8-PFOS
499.0 / 80.0	507.0 / 80.0



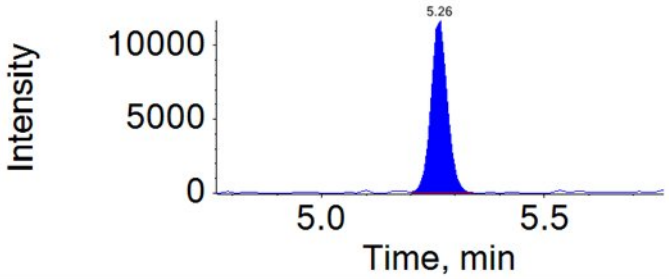


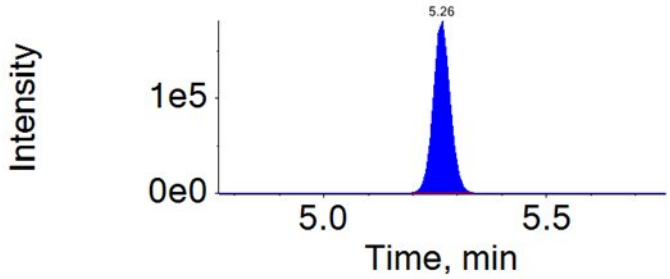
APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

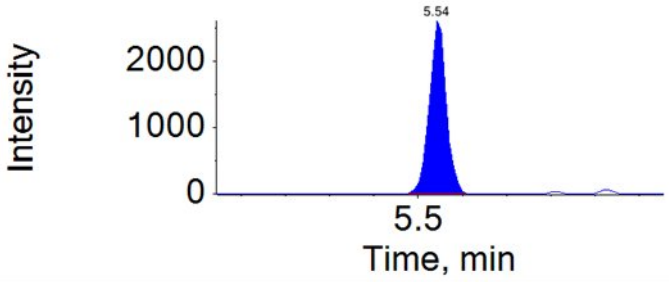
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

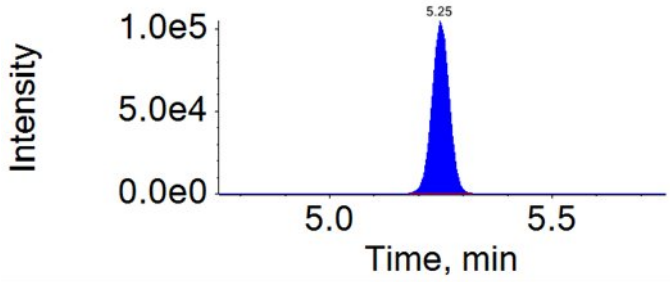
Analyte: PFNA	Extraction Standard: 13C9-PFNA
463.0 / 419.0	472.0 / 427.0



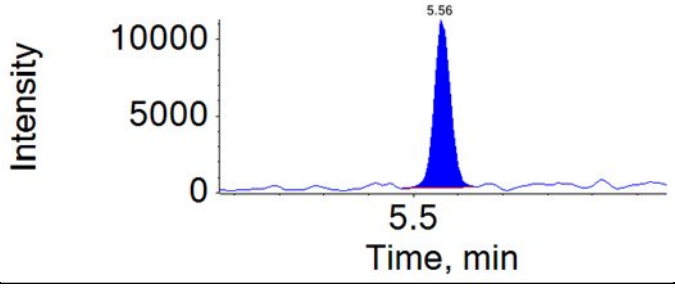


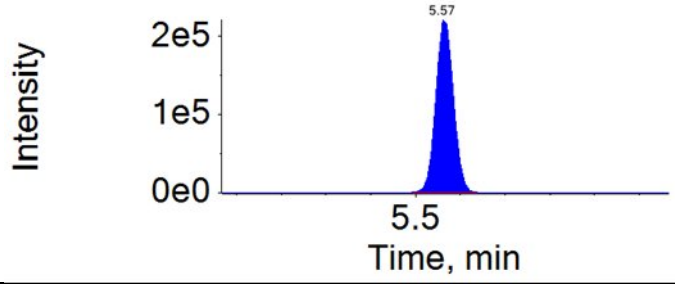
Analyte: PFNS	Extraction Standard: 13C8-PFOS
549.0 / 80.0	507.0 / 80.0



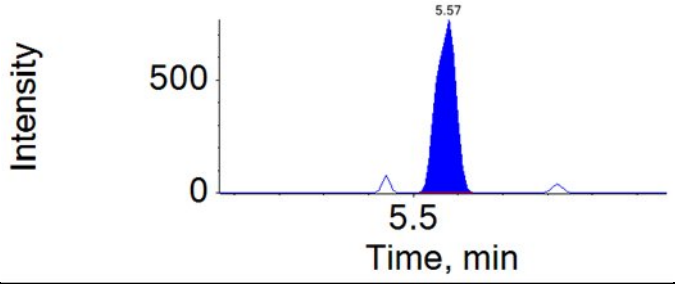


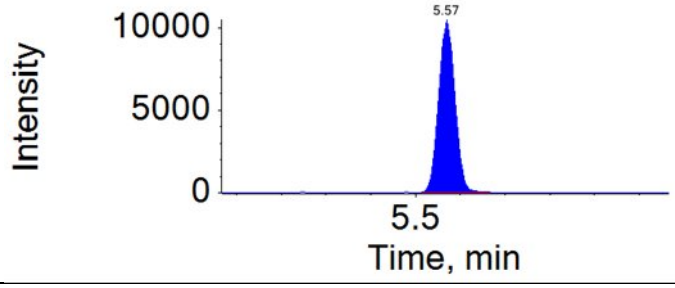
Analyte: PFDA	Extraction Standard: 13C6-PFDA
513.0 / 469.0	519.0 / 474.0





Analyte: 8:2-FTS	Extraction Standard: 13C2-8:2-FTS
527.0 / 507.0	529.0 / 81.0



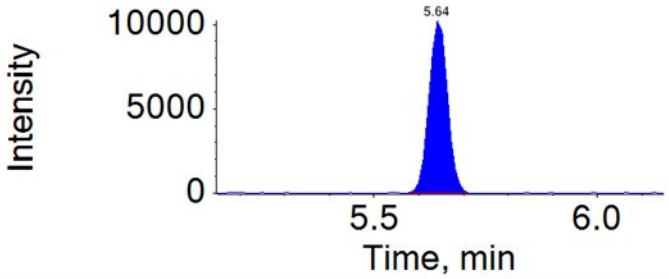


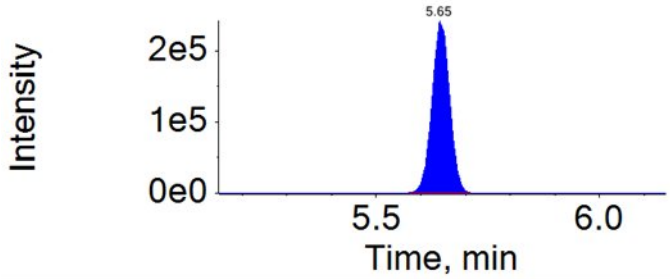
APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

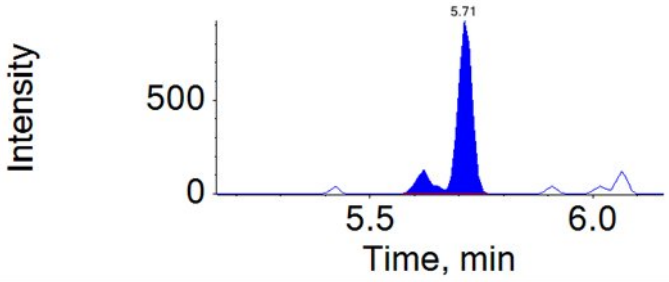
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

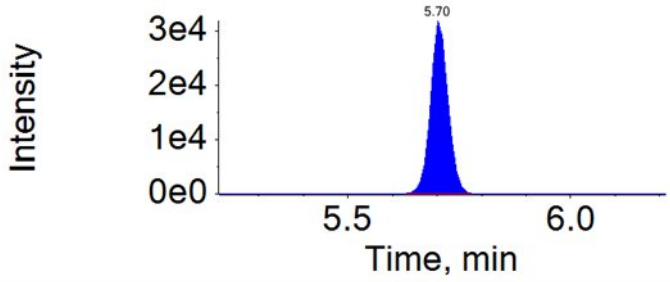
Analyte: PFOSA	Extraction Standard: 13C8-PFOSA
498.0 / 78.0	506.0 / 78.0



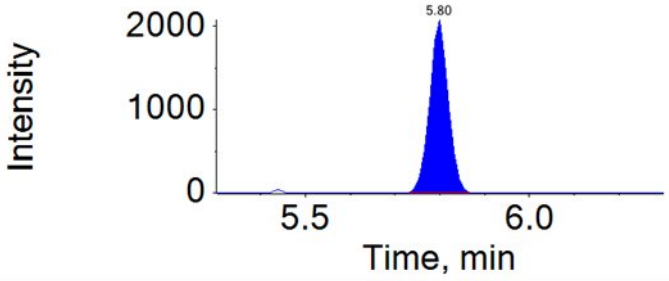


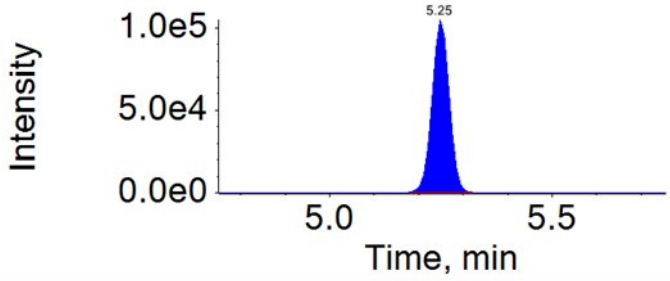
Analyte: NMeFOSAA	Extraction Standard: d3-NMeFOSAA
570.0 / 419.0	573.0 / 419.0



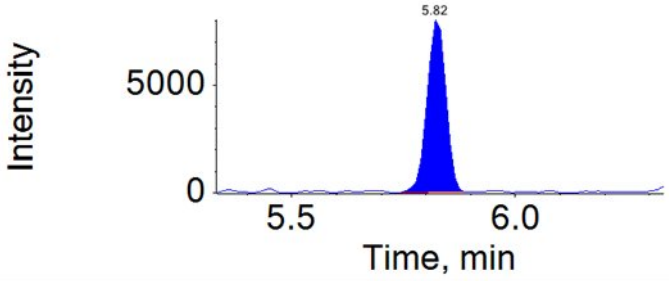


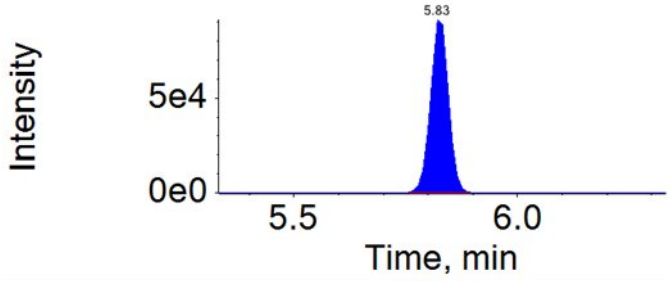
Analyte: PFDS	Extraction Standard: 13C8-PFOS
599.0 / 80.0	507.0 / 80.0





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



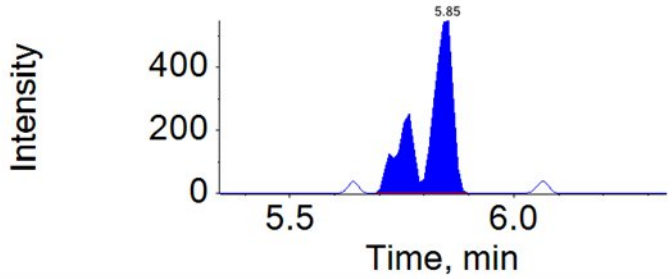


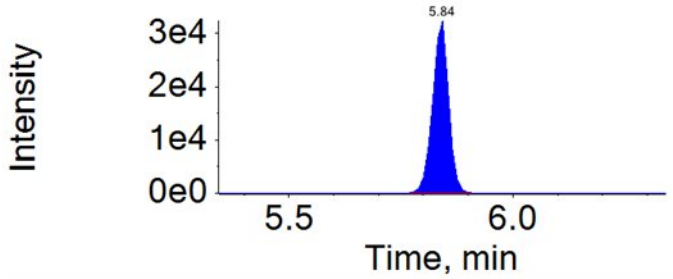
APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

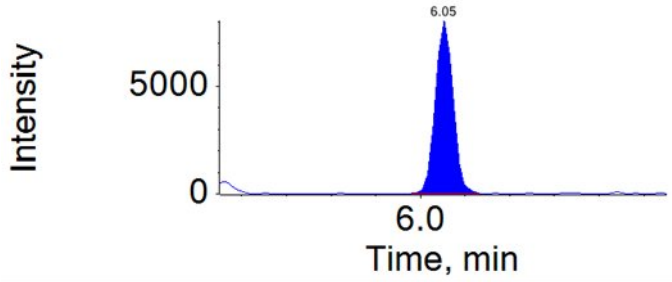
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

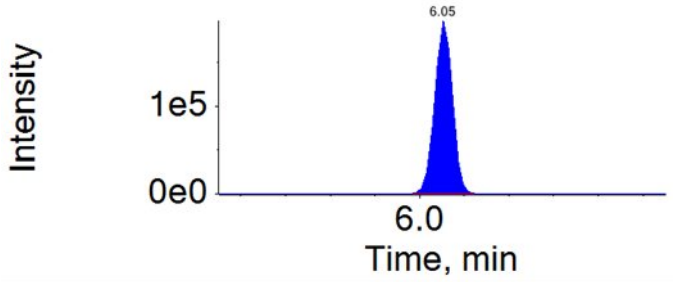
Analyte: NEtFOSAA	Extraction Standard: d5-NEtFOSAA
584.0 / 419.0	589.0 / 419.0



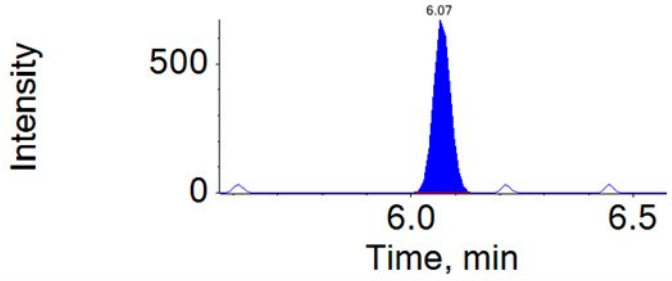


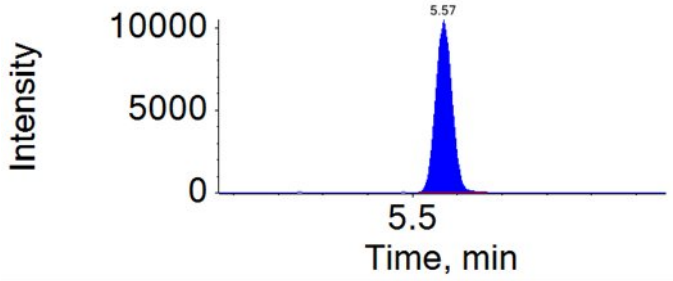
Analyte: PFDoDA	Extraction Standard: 13C2-PFDoDA
613.0 / 569.0	615.0 / 570.0



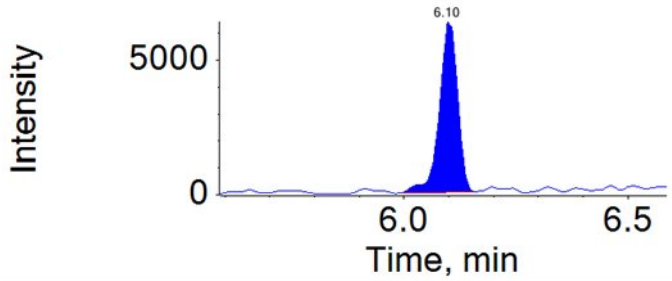


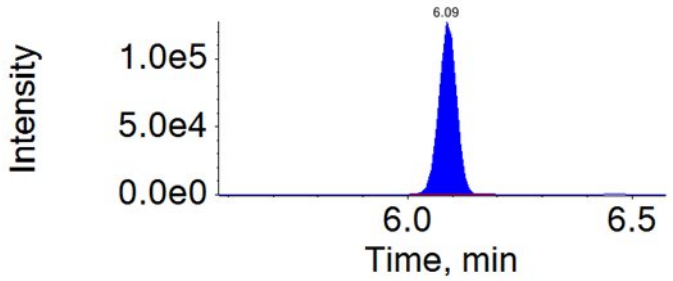
Analyte: 10:2-FTS	Extraction Standard: 13C2-8:2-FTS
627.0 / 607.0	529.0 / 81.0





Analyte: NMePFOSAE	Extraction Standard: d7-NMePFOSAE
616.0 / 59.0	623.0 / 59.0



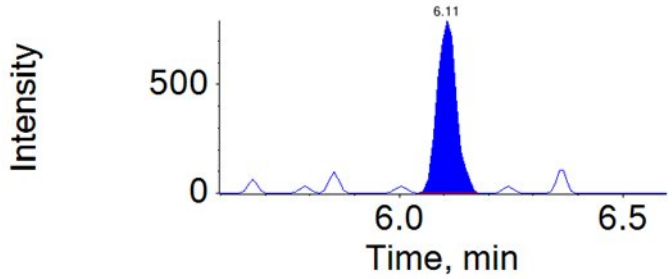


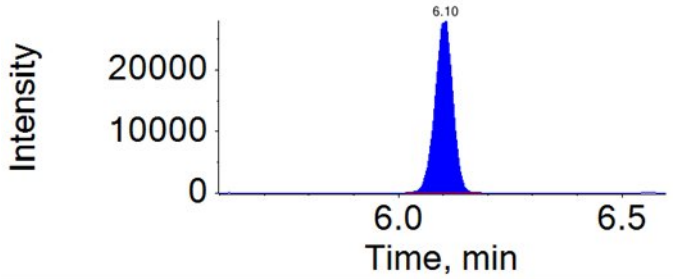
APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

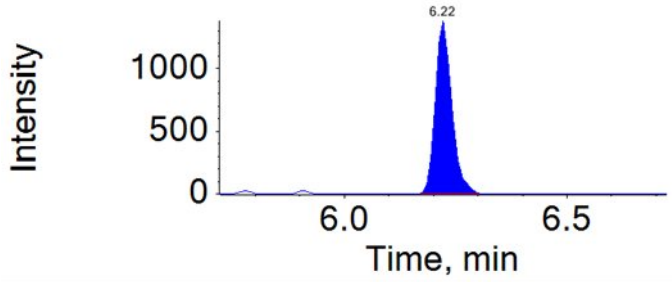
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

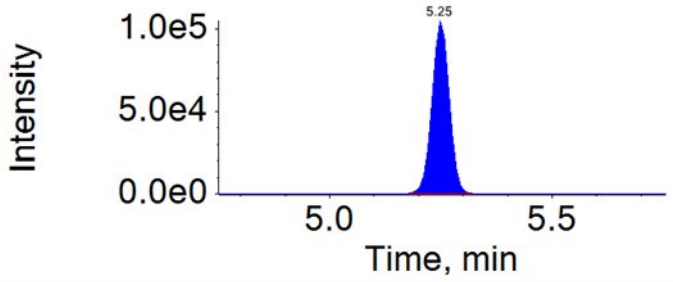
Analyte: NMePFOSA	Extraction Standard: d3-NMePFOSA
512.0 / 169.0	515.0 / 169.0



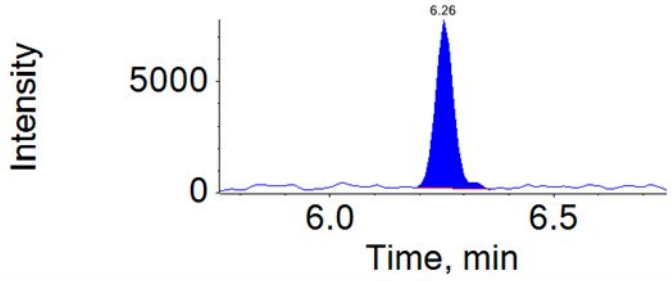


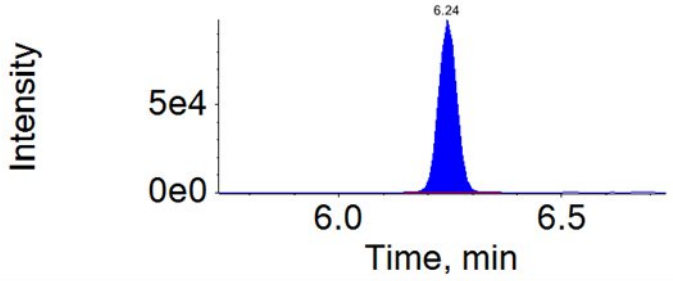
Analyte: PFDoS	Extraction Standard: 13C8-PFOS
699.0 / 80.0	507.0 / 80.0



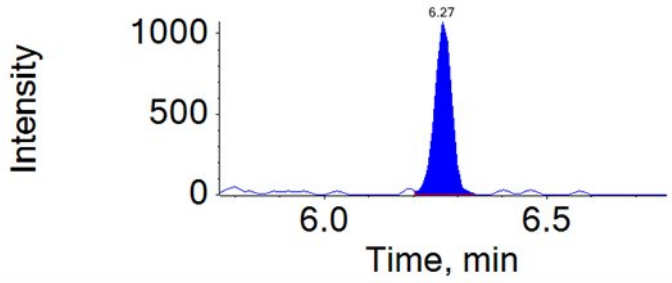


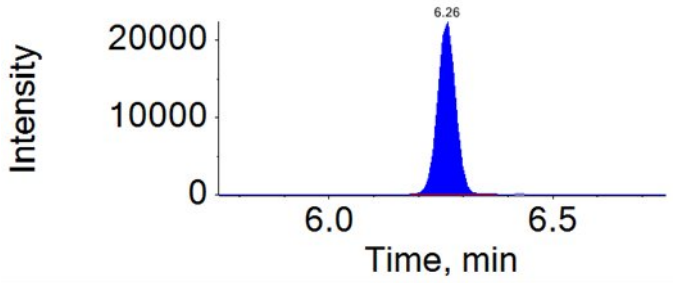
Analyte: NEtPFOSAE	Extraction Standard: d9-NEtPFOSAE
630.0 / 59.0	639.0 / 59.0





Analyte: NEtPFOSA	Extraction Standard: d5-NEtPFOSA
526.0 / 169.0	531.0 / 169.0



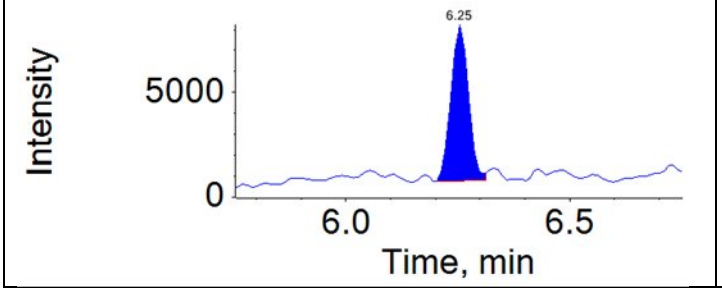


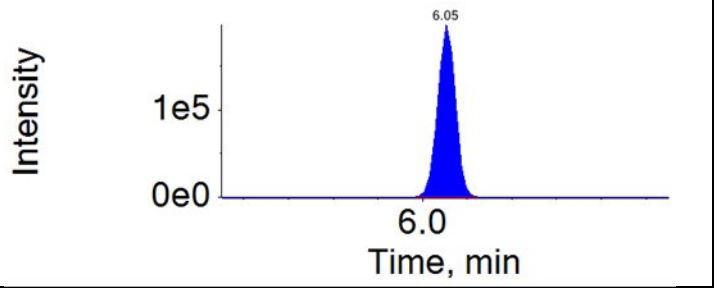
APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

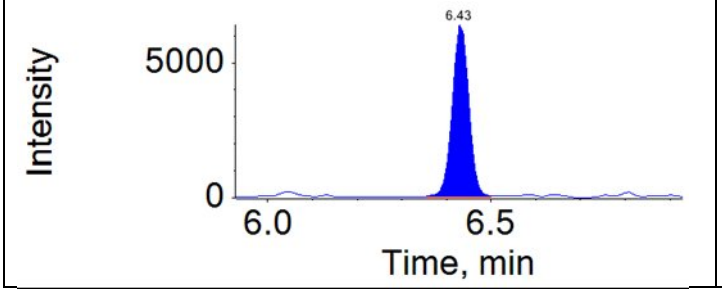
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

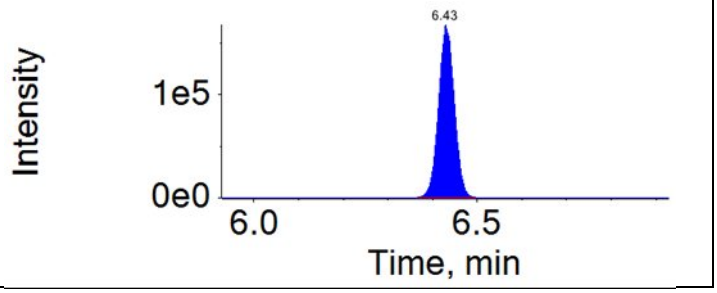
Analyte: PFTrDA	Extraction Standard: 13C2-PFDoDA
663.0 / 619.0	615.0 / 570.0



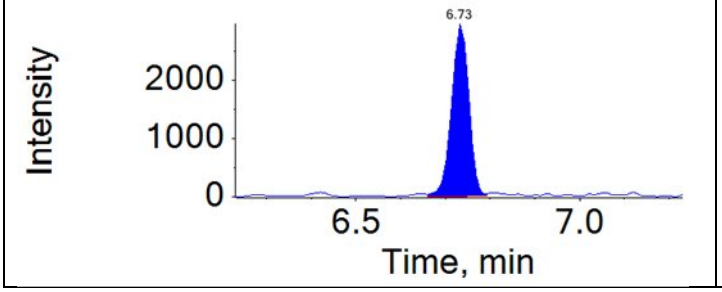


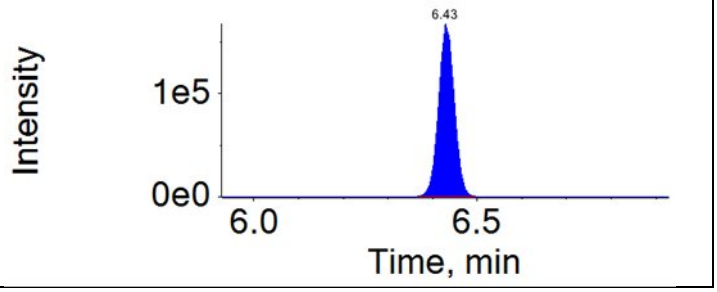
Analyte: PFTeDA	Extraction Standard: 13C2-PFTeDA
713.0 / 669.0	715.0 / 670.0



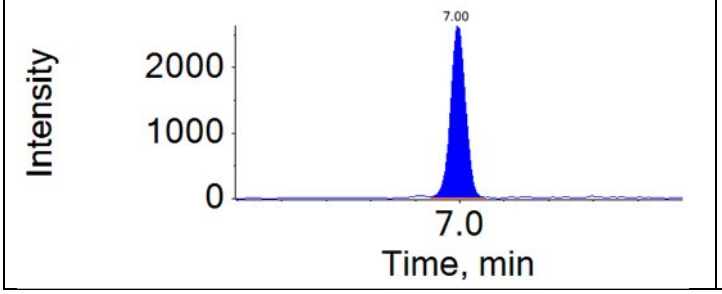


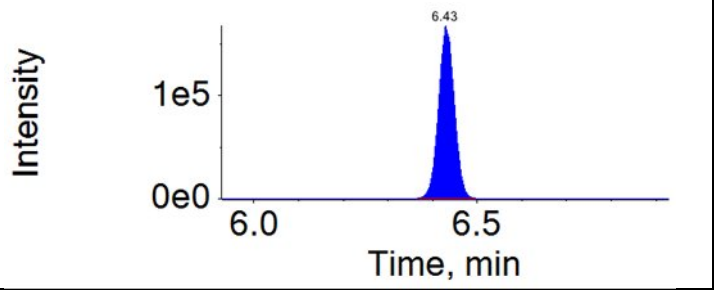
Analyte: PFHxDA	Extraction Standard: 13C2-PFTeDA
813.0 / 769.0	715.0 / 670.0





Analyte: PFODA	Extraction Standard: 13C2-PFTeDA
913.0 / 869.0	715.0 / 670.0



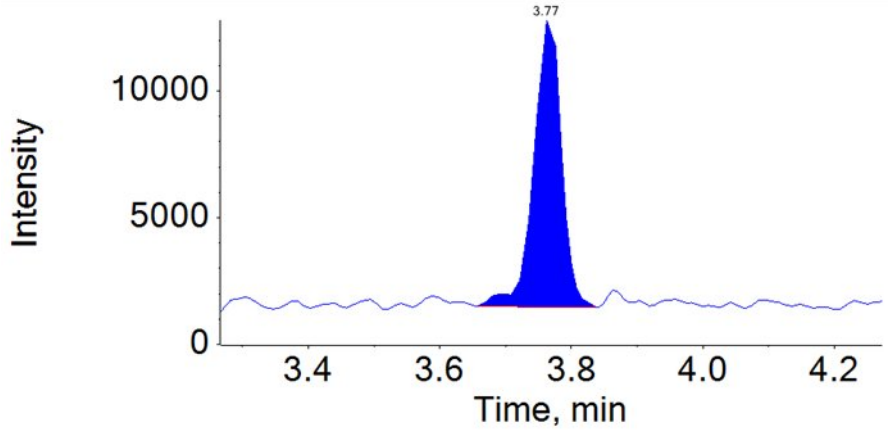


APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

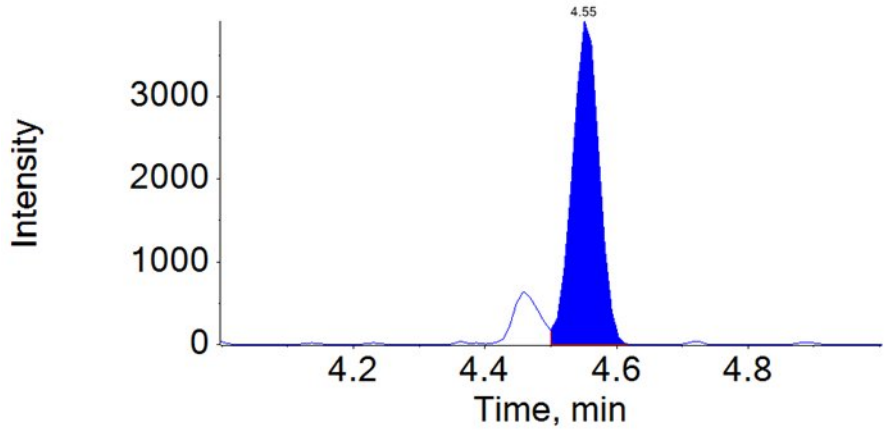
Results Table Name: 18NOV12DCAL
Results Table Date: 11/12/2018 6:23:42 PM
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

Component Name:
PFPeA
RT (min.):
3.77
Peak Area:
33474.86
Mass Range:
263.0 / 219.0
File Name:
18NOV12DCAL-42.wiff
Sample Name:
CAL1



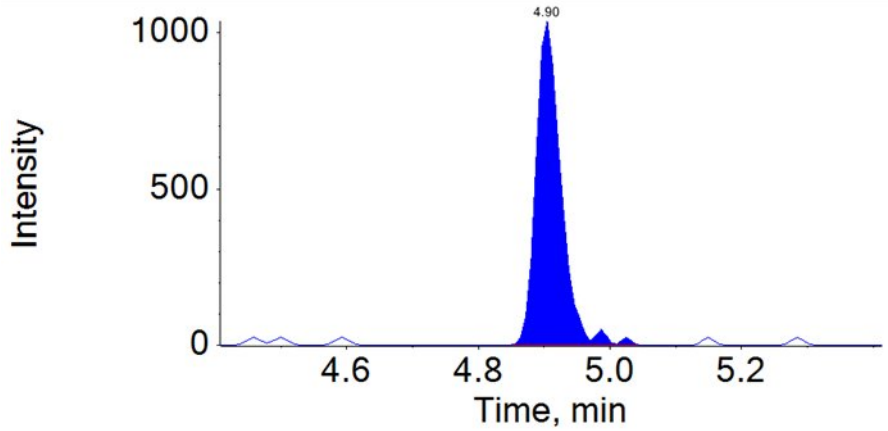
Integration Comment: incorrect integration

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



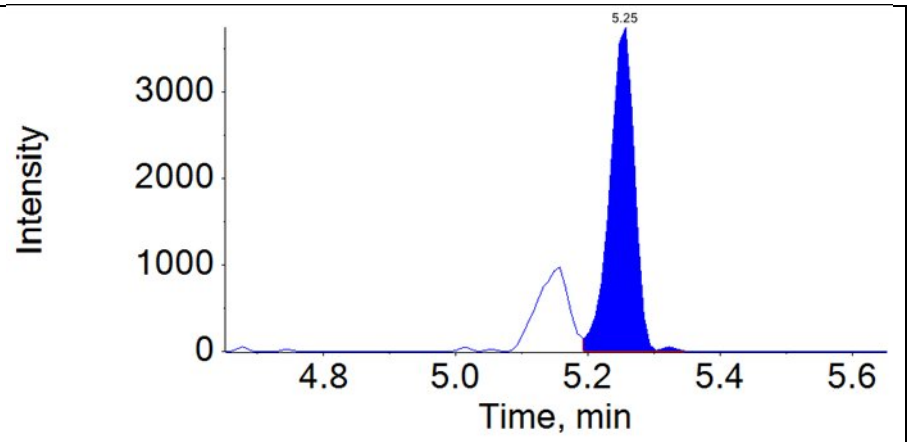
Integration Comment: incorrect integration

APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

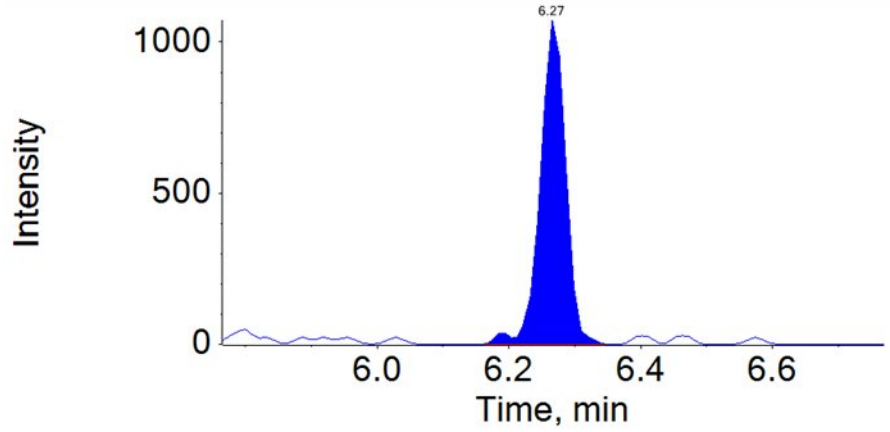
Results Table Name: 18NOV12DCAL
Results Table Date: 11/12/2018 6:23:42 PM
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

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



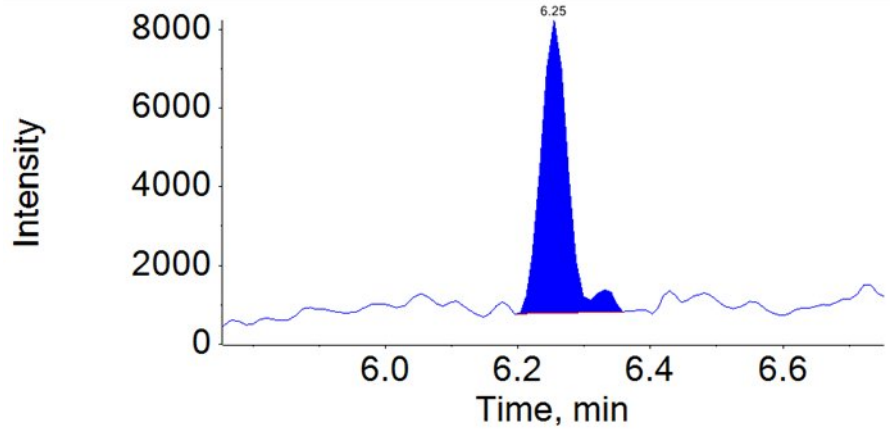
Integration Comment: incorrect integration

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: incorrect 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



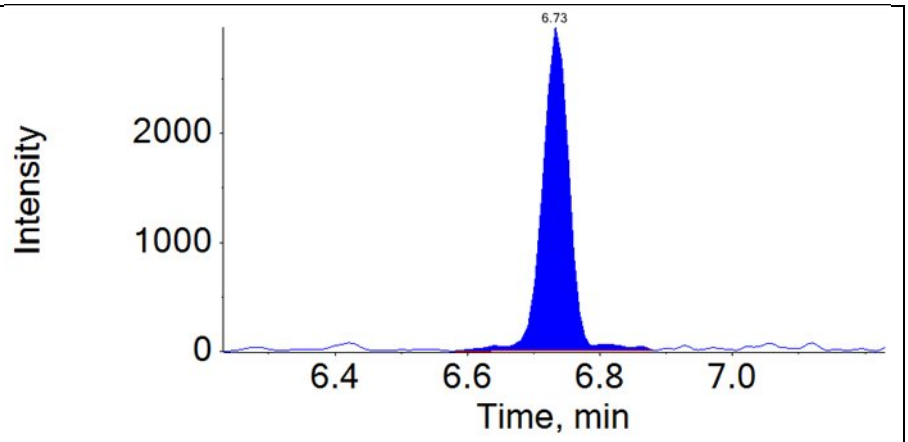
Integration Comment: incorrect integration

APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

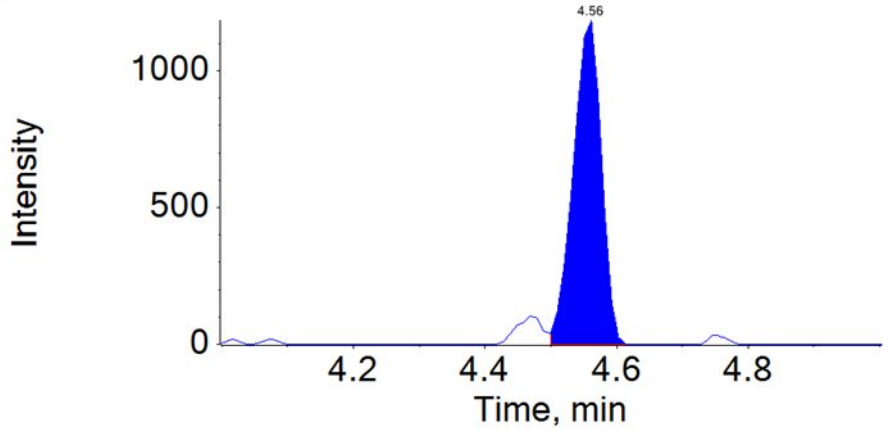
Results Table Name: 18NOV12DCAL
Results Table Date: 11/12/2018 6:23:42 PM
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

Component Name:
PFHxDA
RT (min.):
6.73
Peak Area:
8304.86
Mass Range:
813.0 / 769.0
File Name:
18NOV12DCAL-42.wiff
Sample Name:
CAL1



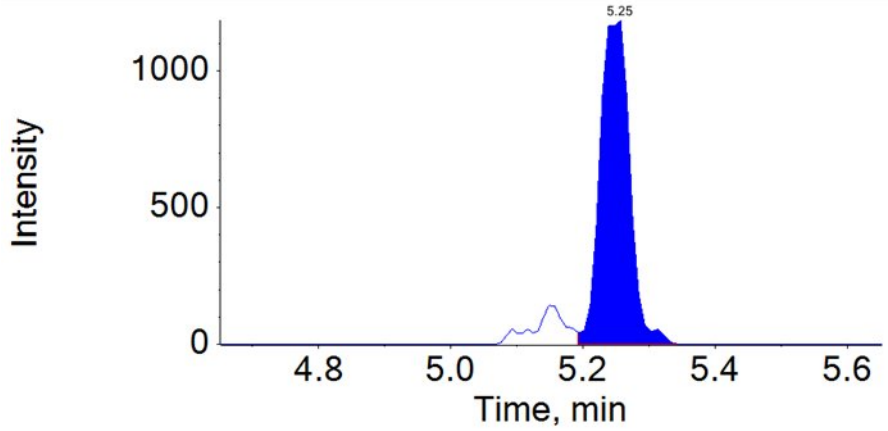
Integration Comment: incorrect integration

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



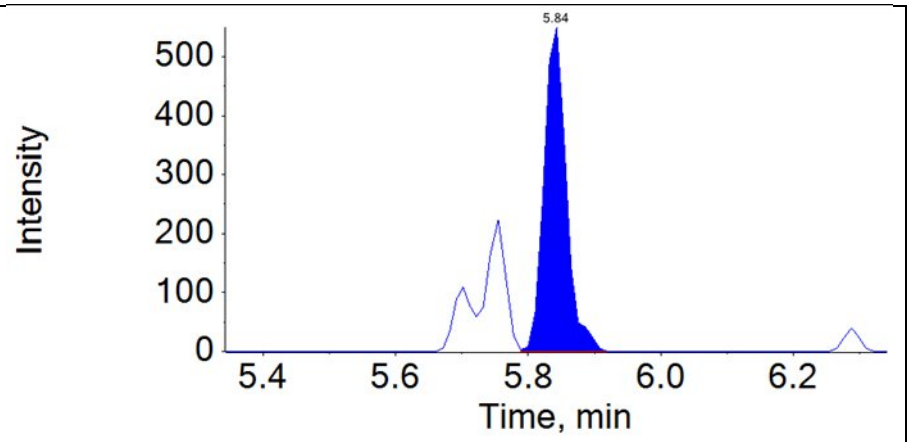
Integration Comment: incorrect integration

APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

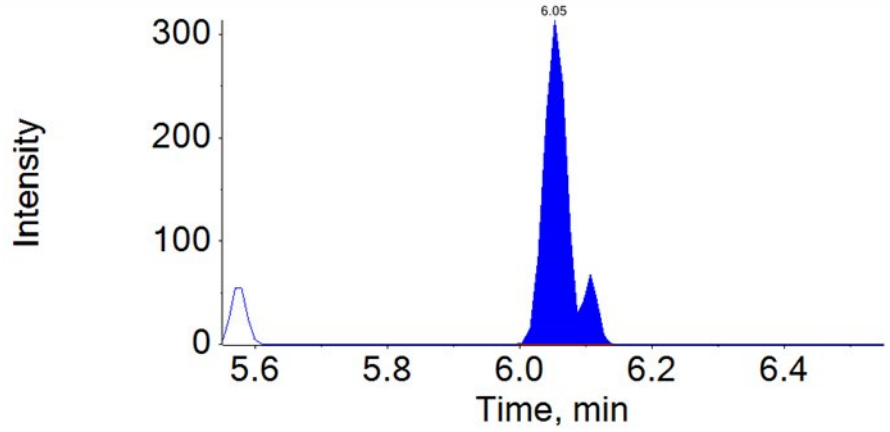
Results Table Name: 18NOV12DCAL
Results Table Date: 11/12/2018 6:23:42 PM
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

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



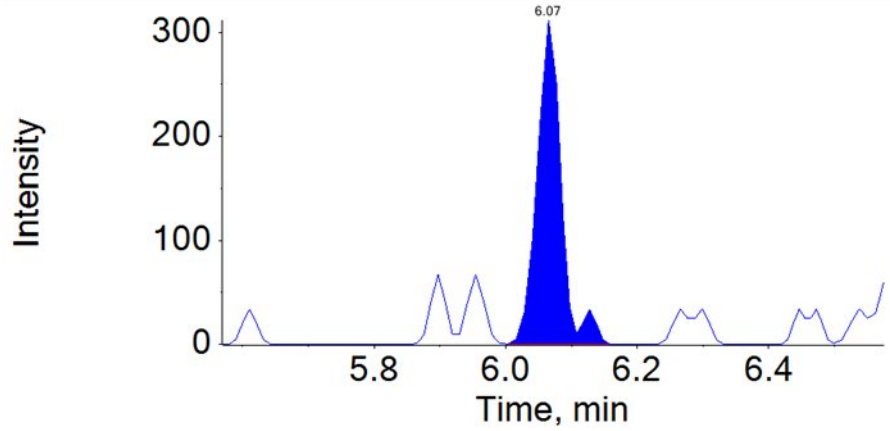
Integration Comment: incorrect integration

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

Ion Ratio Report

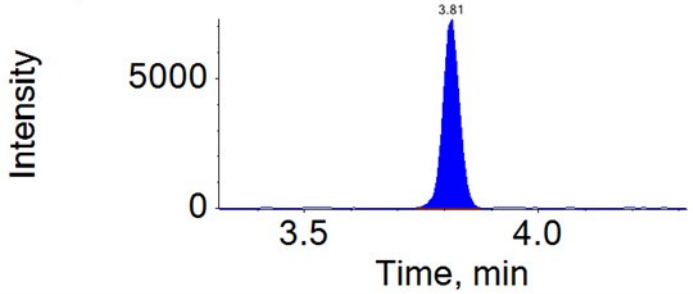
Sample Name: CAL1 **Instrument Name:** LM27631 **File Name:** 18NOV12DCAL-42.wiff

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	

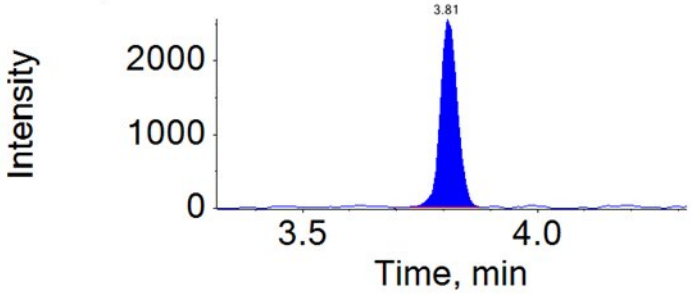
APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

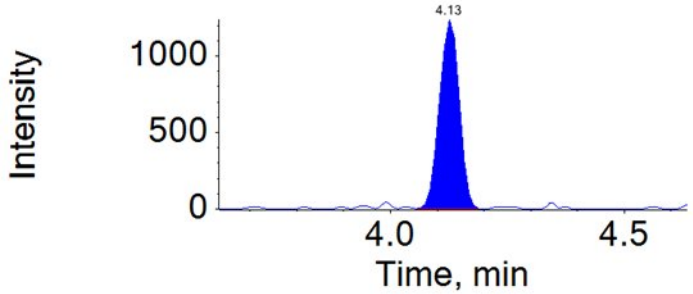
Component: PFBS
Primary Mass: 299.0 / 80.0



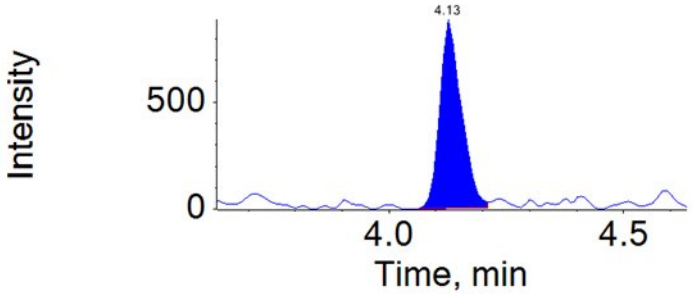
Component: PFBS_2
Secondary Mass: 299.0 / 99.0



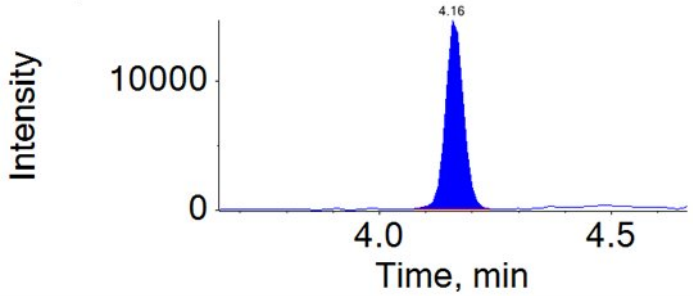
Component: 4:2-FTS
Primary Mass: 327.0 / 307.0



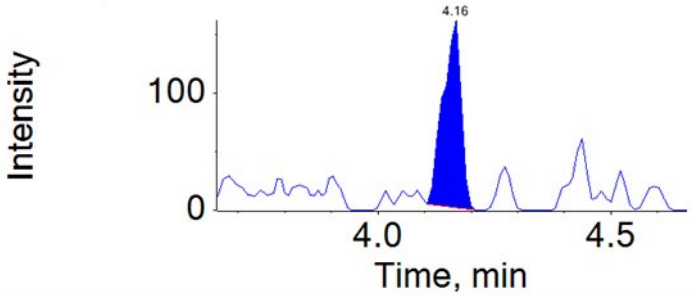
Component: 4:2 FTS_2
Secondary Mass: 327.0 / 81.0



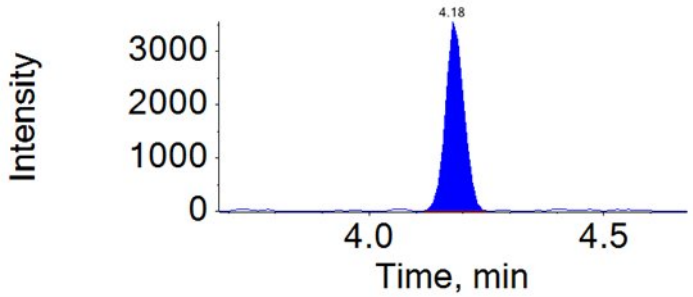
Component: PFHxA
Primary Mass: 313.0 / 269.0



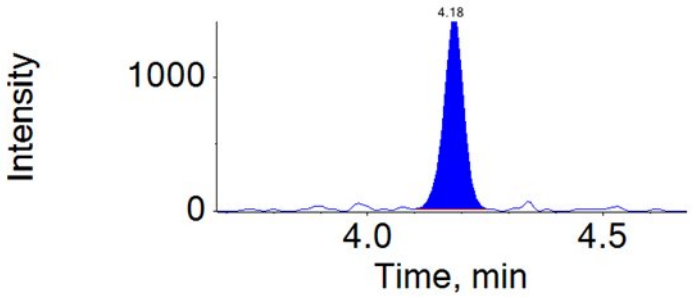
Component: PFHxA_2
Secondary Mass: 313.0 / 119.0



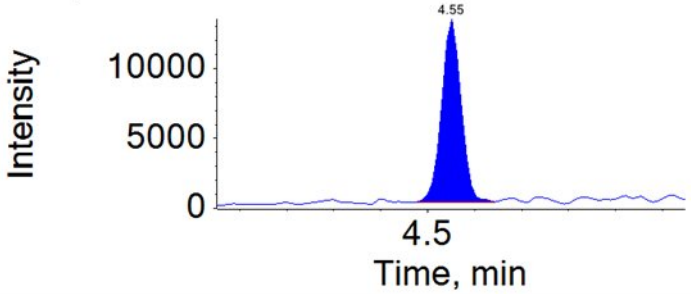
Component: PFPeS
Primary Mass: 349.0 / 80.0



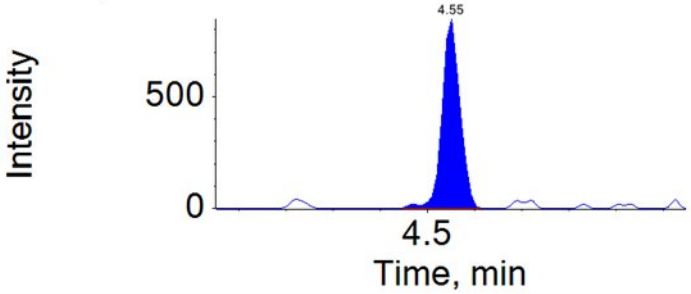
Component: PFPeS_2
Secondary Mass: 349.0 / 99.0



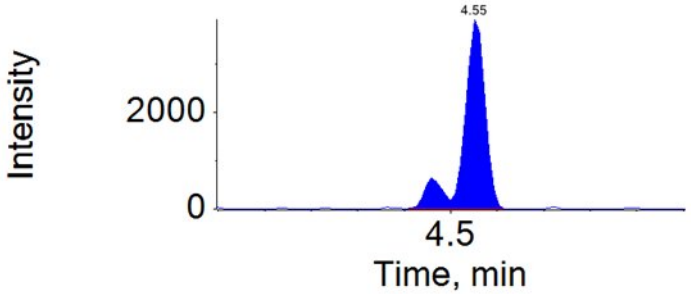
Component: PFHpA
Primary Mass: 363.0 / 319.0



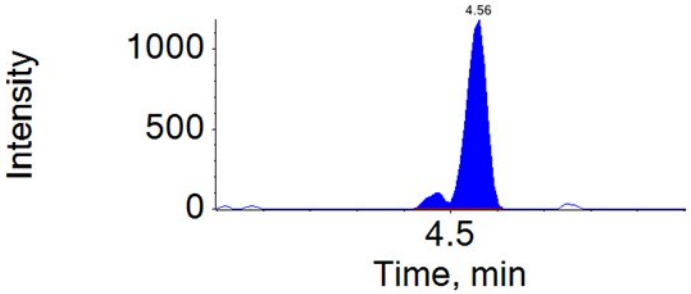
Component: PFHpA_2
Secondary Mass: 363.0 / 169.0



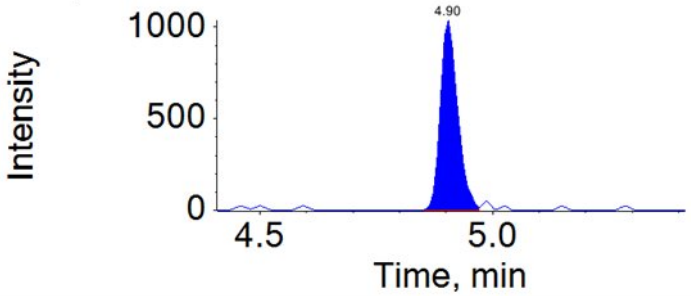
Component: PFHxS
Primary Mass: 399.0 / 80.0



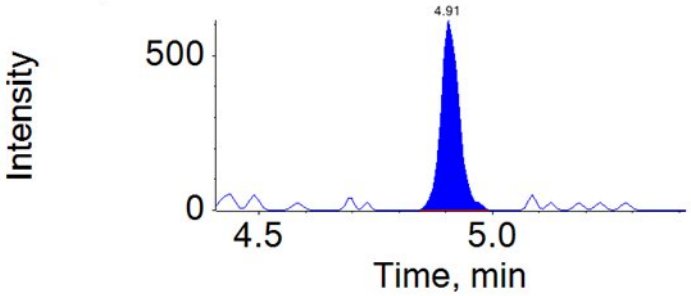
Component: PFHxS_2
Secondary Mass: 399.0 / 99.0



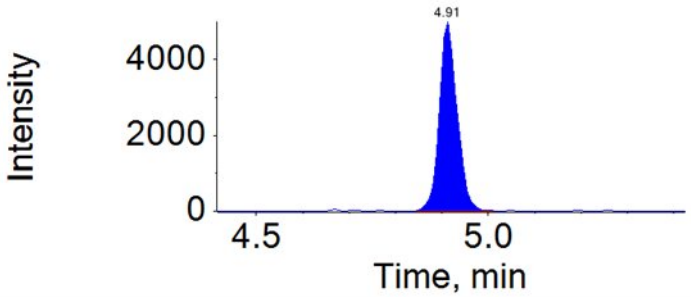
Component: 6:2-FTS
Primary Mass: 427.0 / 407.0



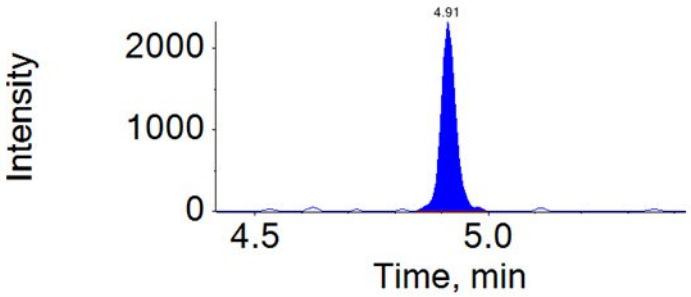
Component: 6:2 FTS_2
Secondary Mass: 427.0 / 81.0



Component: PFHpS
Primary Mass: 449.0 / 80.0



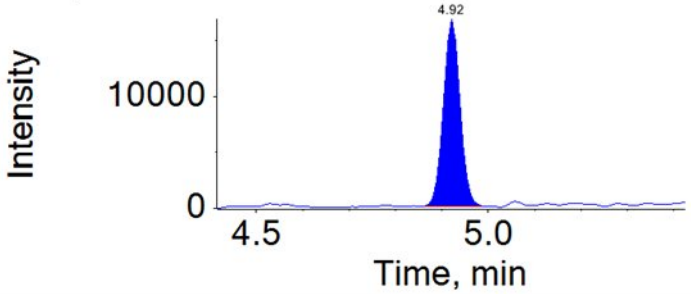
Component: PFHpS_2
Secondary Mass: 449.0 / 99.0



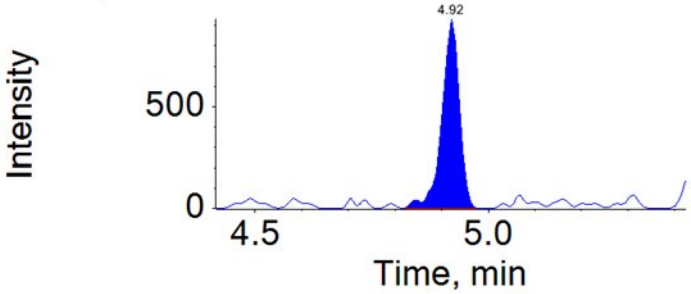
APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

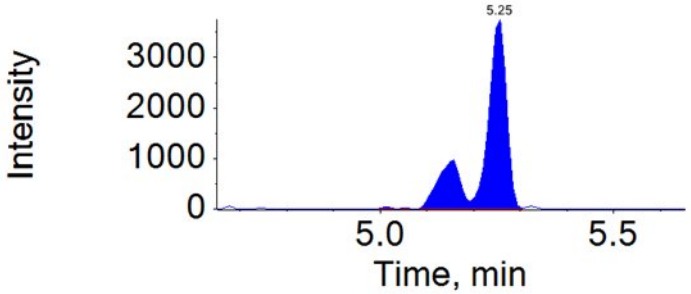
Component: PFOA
Primary Mass: 413.0 / 369.0



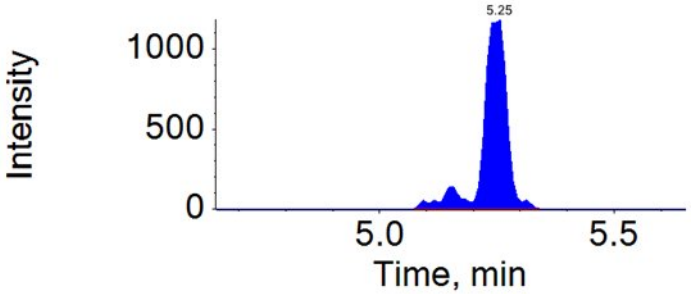
Component: PFOA_2
Secondary Mass: 413.0 / 169.0



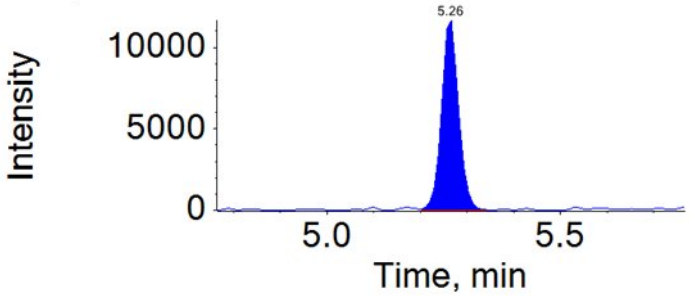
Component: PFOS
Primary Mass: 499.0 / 80.0



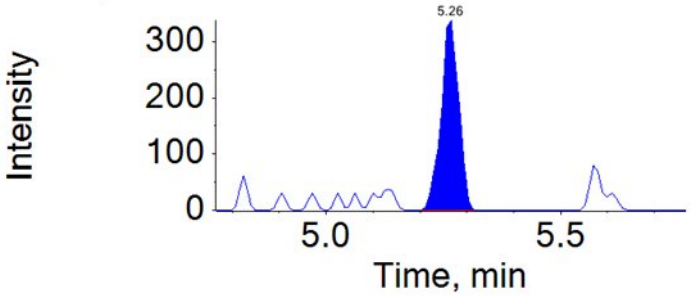
Component: PFOS_2
Secondary Mass: 499.0 / 99.0



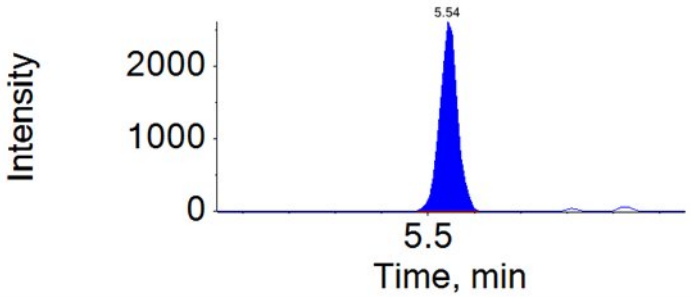
Component: PFNA
Primary Mass: 463.0 / 419.0



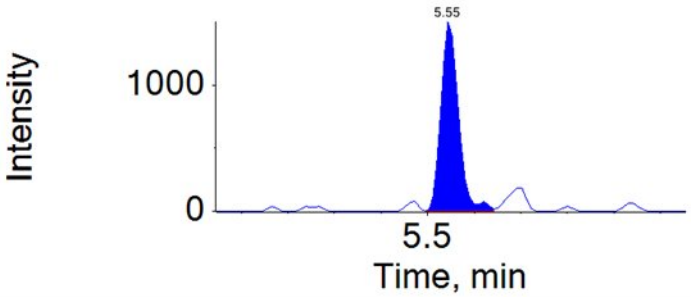
Component: PFNA_2
Secondary Mass: 463.0 / 169.0



Component: PFNS
Primary Mass: 549.0 / 80.0



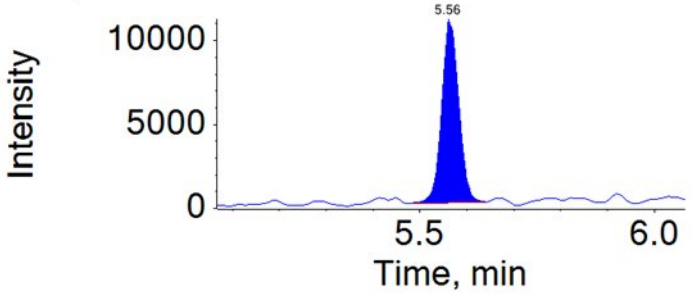
Component: PFNS_2
Secondary Mass: 549.0 / 99.0



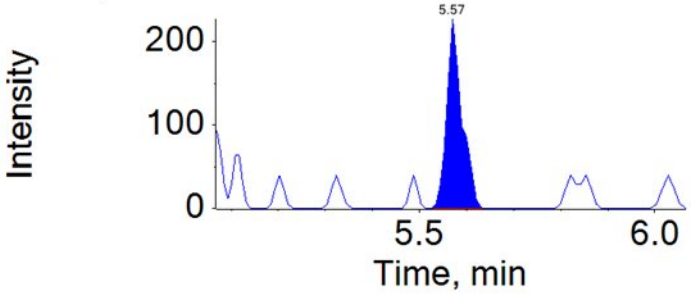
APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

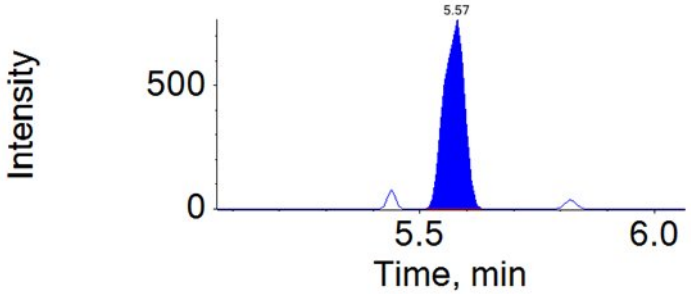
Component: PFDA
Primary Mass: 513.0 / 469.0



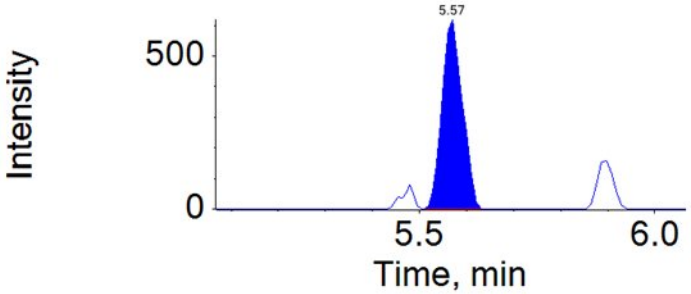
Component: PFDA_2
Secondary Mass: 513.0 / 169.0



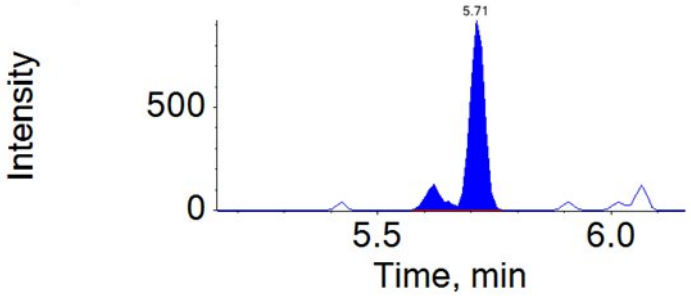
Component: 8:2-FTS
Primary Mass: 527.0 / 507.0



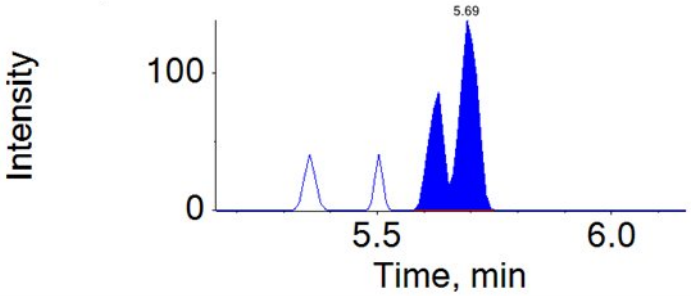
Component: 8:2 FTS_2
Secondary Mass: 527.0 / 81.0



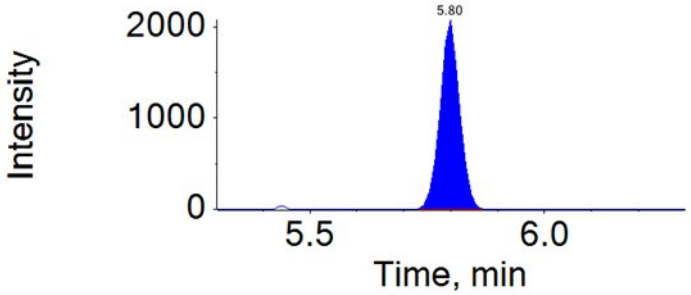
Component: NMeFOSAA
Primary Mass: 570.0 / 419.0



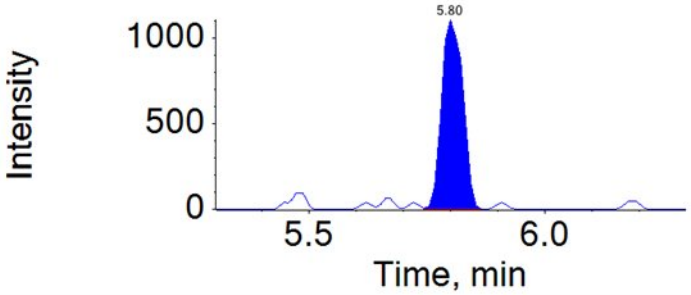
Component: NMeFOSAA_2
Secondary Mass: 570.0 / 483.0



Component: PFDS
Primary Mass: 599.0 / 80.0



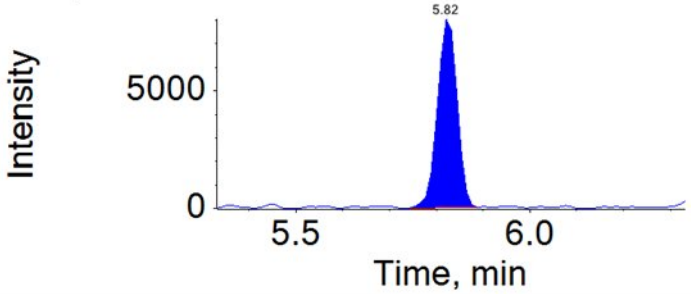
Component: PFDS_2
Secondary Mass: 599.0 / 99.0



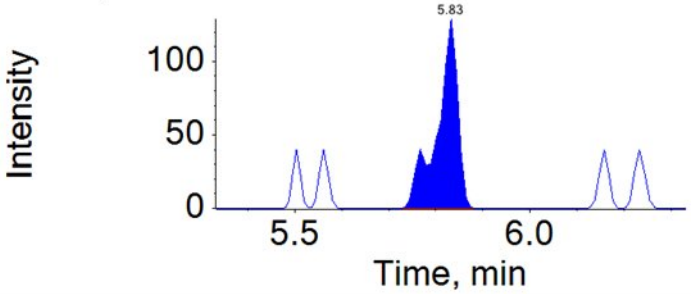
APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

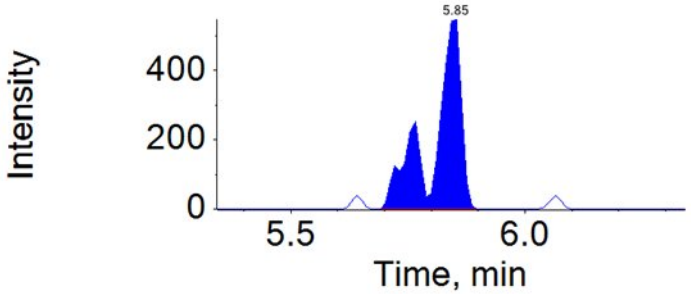
Component: PFUnDA
Primary Mass: 563.0 / 519.0



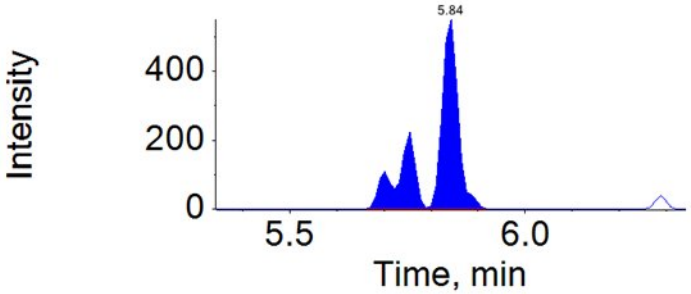
Component: PFUnDA_2
Secondary Mass: 563.0 / 169.0



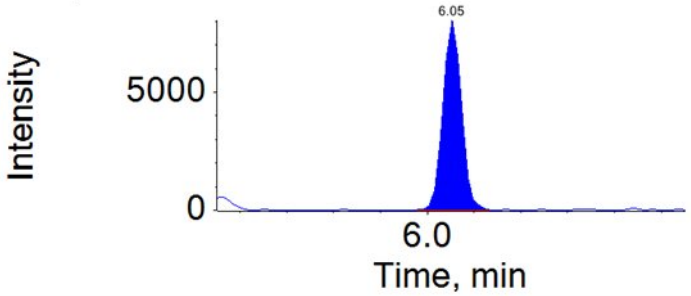
Component: NEtFOSAA
Primary Mass: 584.0 / 419.0



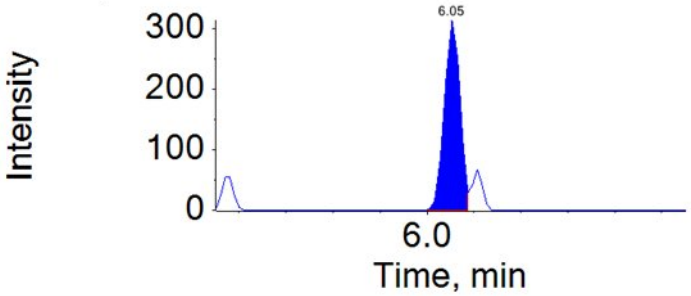
Component: NEtFOSAA_2
Secondary Mass: 584.0 / 526.0



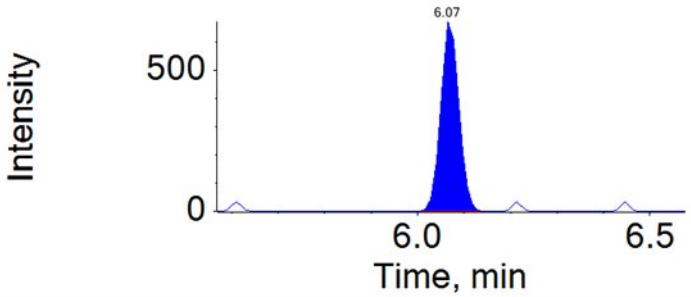
Component: PFDoDA
Primary Mass: 613.0 / 569.0



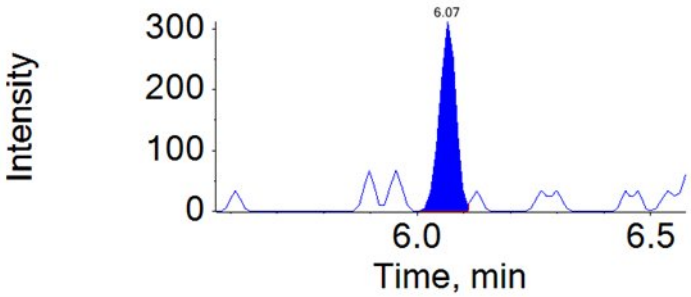
Component: PFDoDA_2
Secondary Mass: 613.0 / 169.0



Component: 10:2-FTS
Primary Mass: 627.0 / 607.0



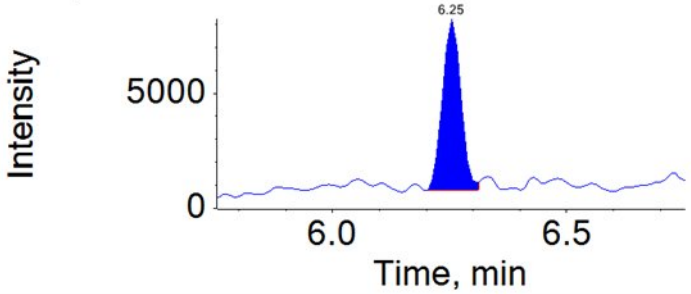
Component: 10:2 FTS_2
Secondary Mass: 627.0 / 81.0



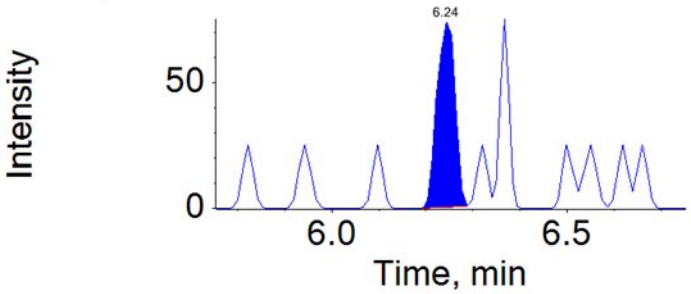
APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

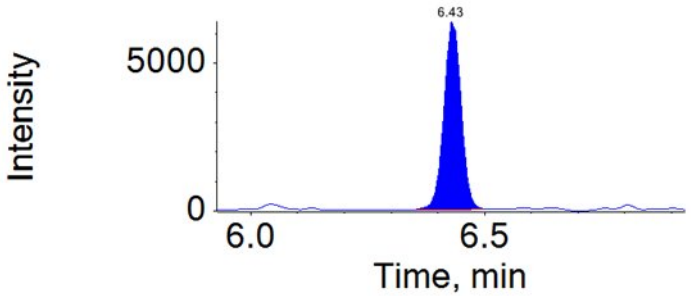
Component: PFTrDA
Primary Mass: 663.0 / 619.0



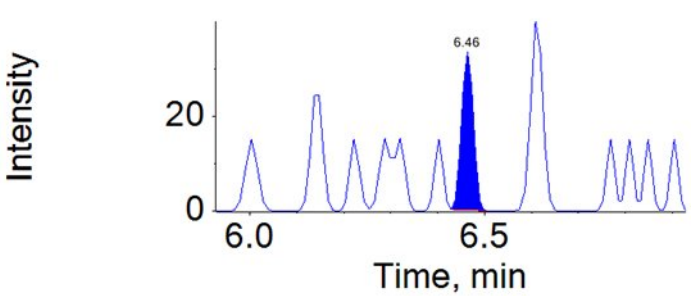
Component: PFTrDA_2
Secondary Mass: 663.0 / 169.0



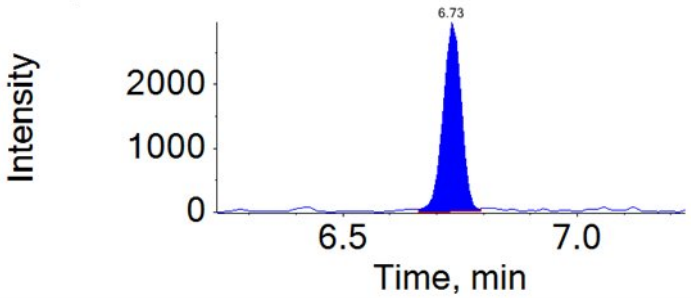
Component: PFTeDA
Primary Mass: 713.0 / 669.0



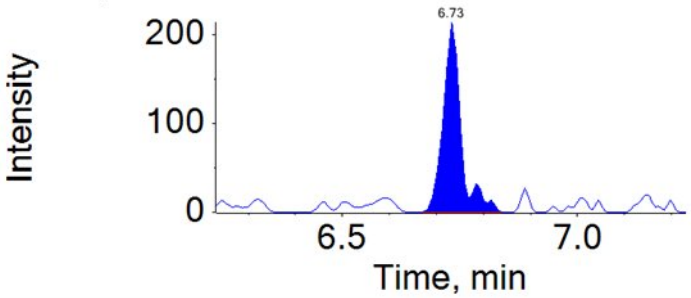
Component: PFTeDA_2
Secondary Mass: 713.0 / 169.0



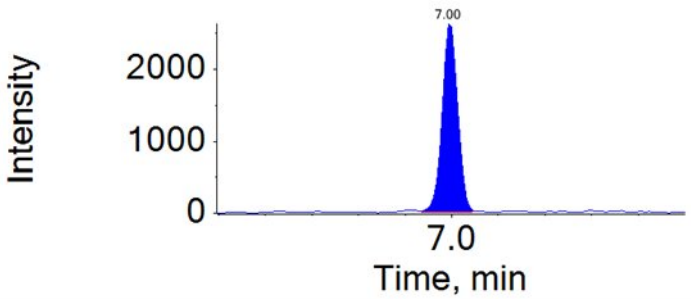
Component: PFHxDA
Primary Mass: 813.0 / 769.0



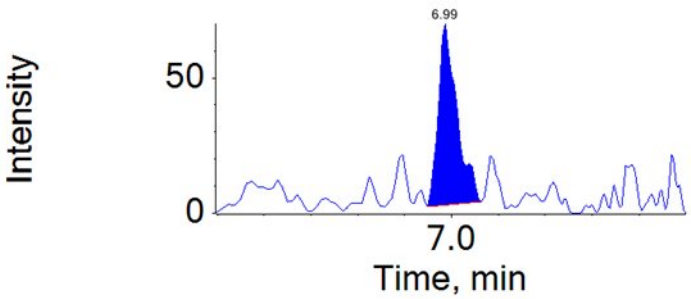
Component: PFHxDA_2
Secondary Mass: 813.0 / 169.0



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:	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

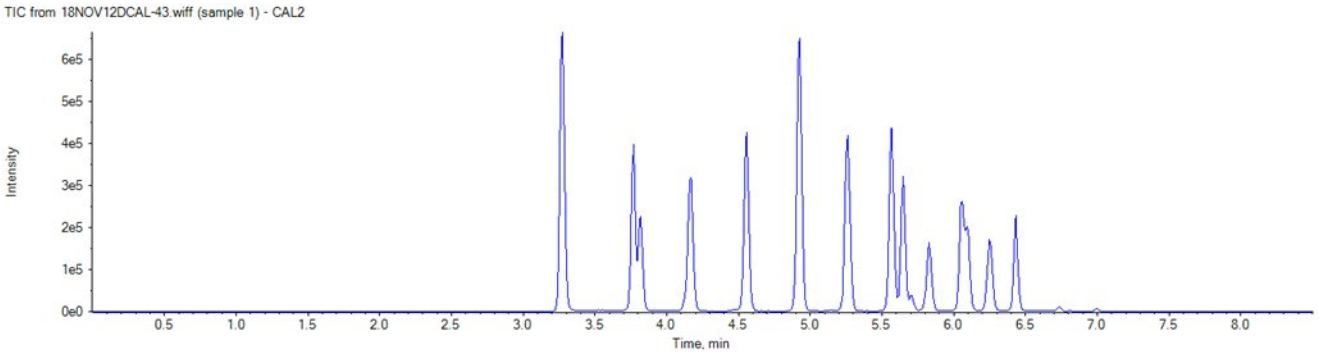
Analyte Quantitation Peak Table

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

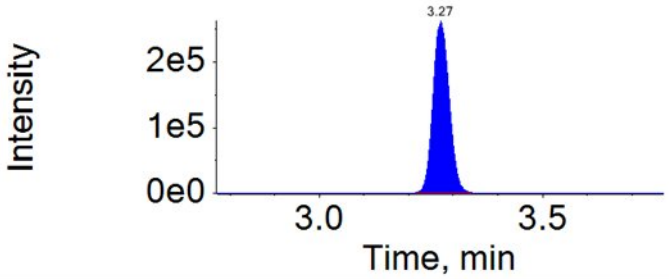


APPROVED
By MCD at 6:33 pm, 11/12/18

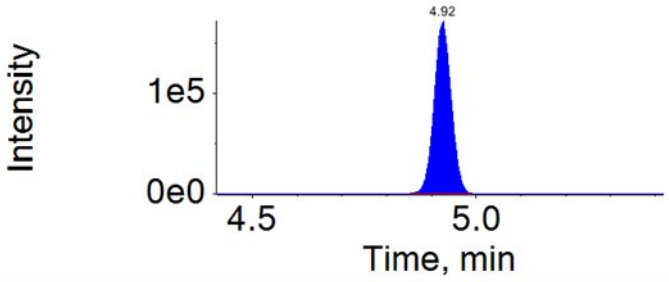
REVIEWED
By HMK at 10:53 am, 11/13/18

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

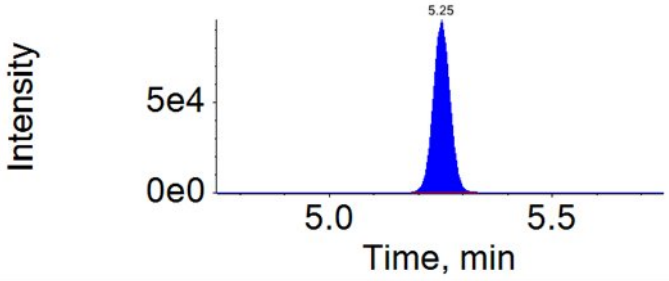
Injection Standard: 13C3-PFBA
216.0 / 172.0



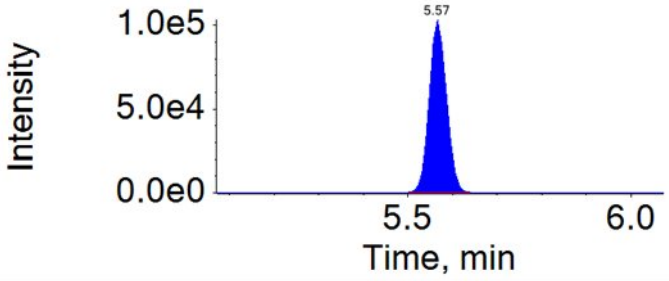
Injection Standard: 13C2-PFOA
415.0 / 370.0



Injection Standard: 13C4-PFOS
503.0 / 80.0



Injection Standard: 13C2-PFDA
515.0 / 470.0

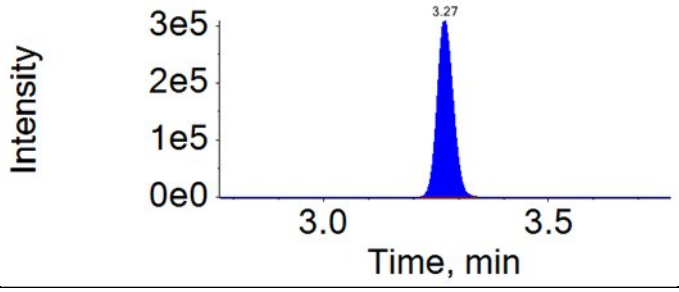


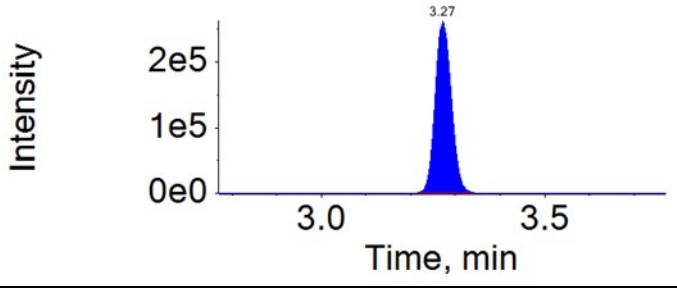
APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

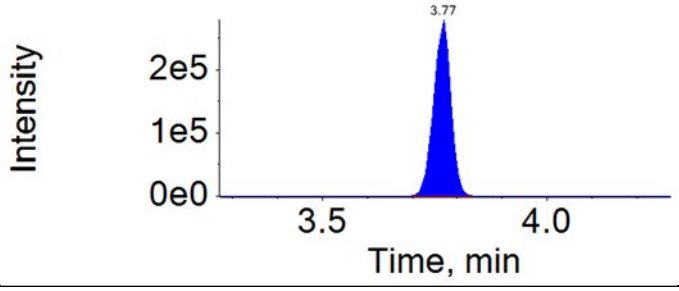
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

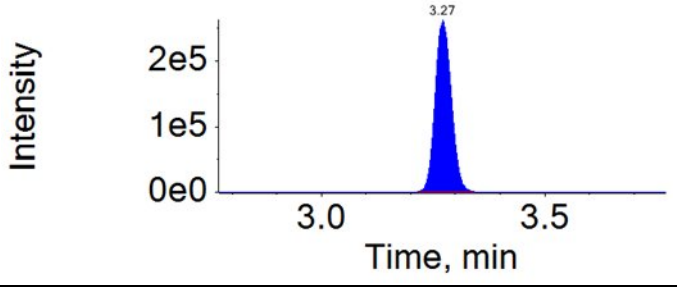
Extraction Standard: E13C4-PFBA	Injection Standard: 13C3-PFBA
217.0 / 172.0	216.0 / 172.0



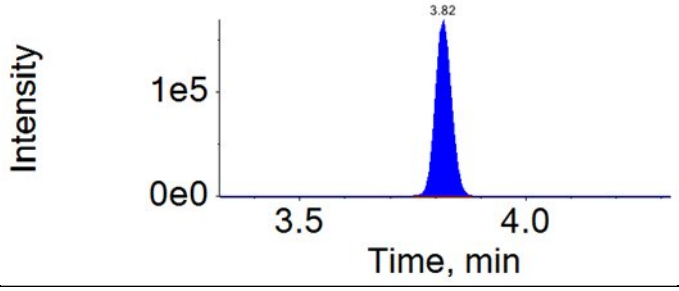


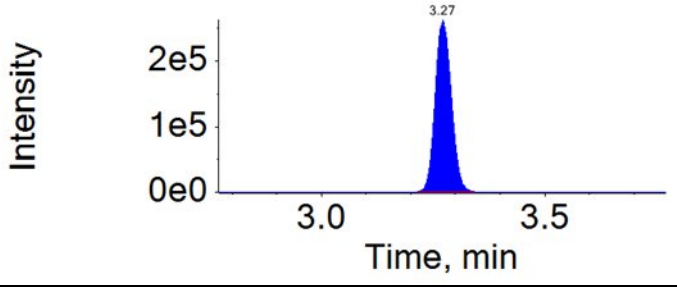
Extraction Standard: E13C5-PFPeA	Injection Standard: 13C3-PFBA
268.0 / 223.0	216.0 / 172.0



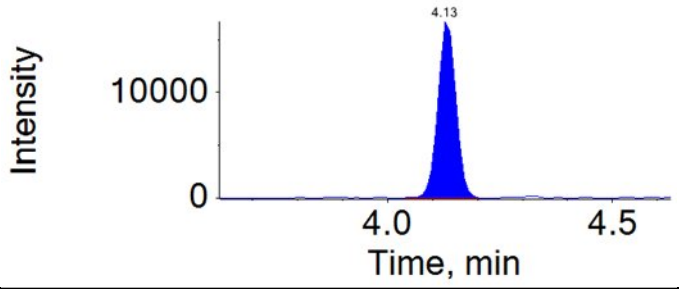


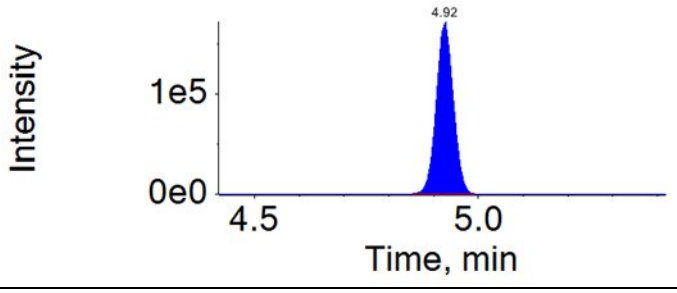
Extraction Standard: E13C3-PFBS	Injection Standard: 13C3-PFBA
302.0 / 80.0	216.0 / 172.0





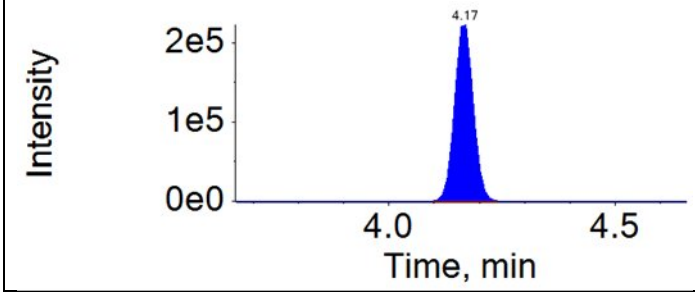
Extraction Standard: E13C2-4:2-FTS	Injection Standard: 13C2-PFOA
329.0 / 81.0	415.0 / 370.0

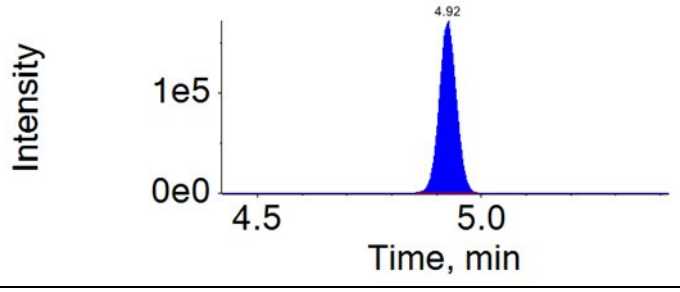




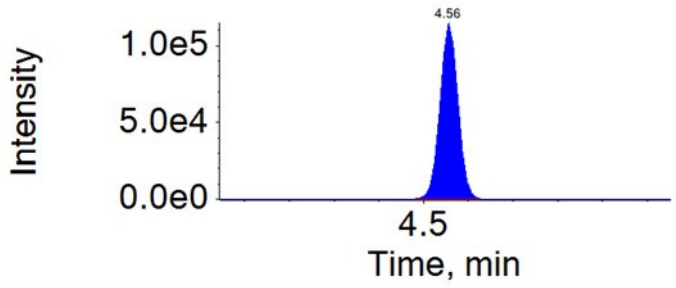
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

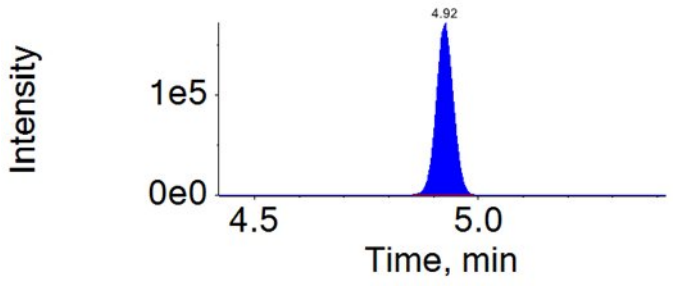
Extraction Standard: E13C5-PFHxA	Injection Standard: 13C2-PFOA
318.0 / 273.0	415.0 / 370.0



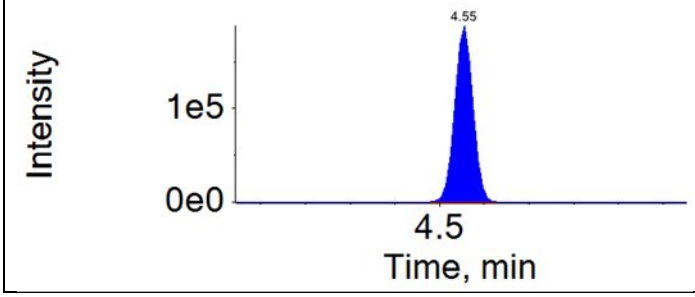


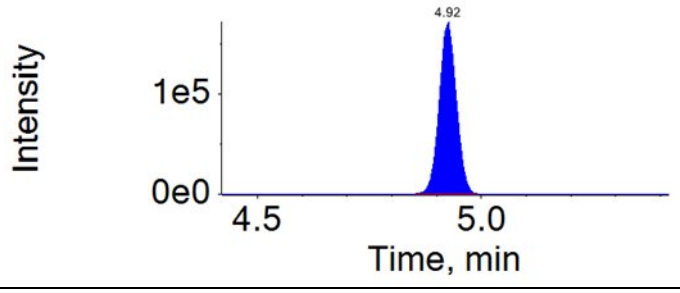
Extraction Standard: E13C3-PFHxS	Injection Standard: 13C2-PFOA
402.0 / 80.0	415.0 / 370.0



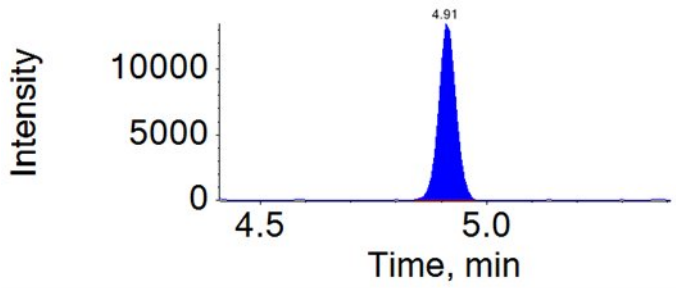


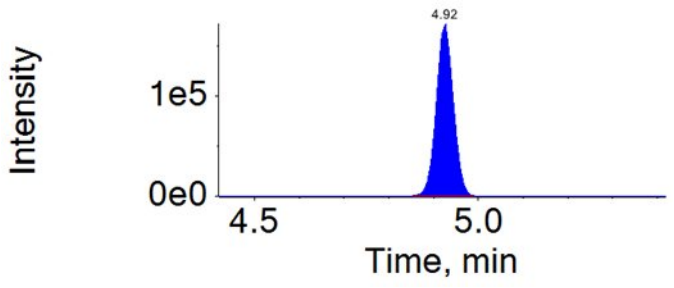
Extraction Standard: E13C4-PFHpA	Injection Standard: 13C2-PFOA
367.0 / 322.0	415.0 / 370.0





Extraction Standard: E13C2-6:2-FTS	Injection Standard: 13C2-PFOA
429.0 / 81.0	415.0 / 370.0

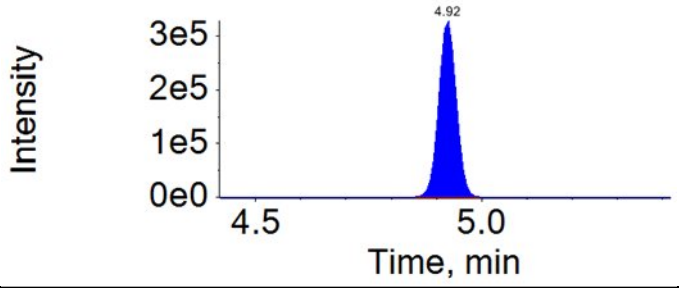
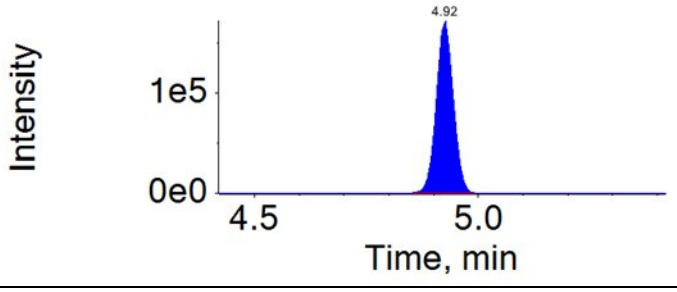


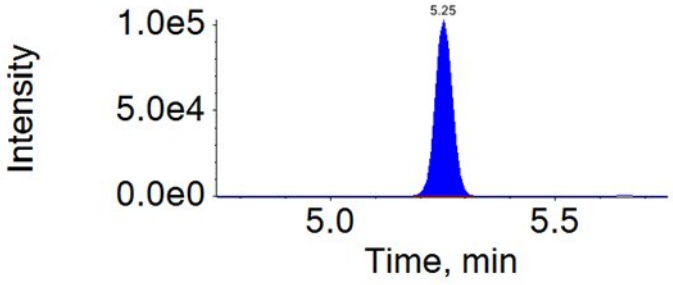
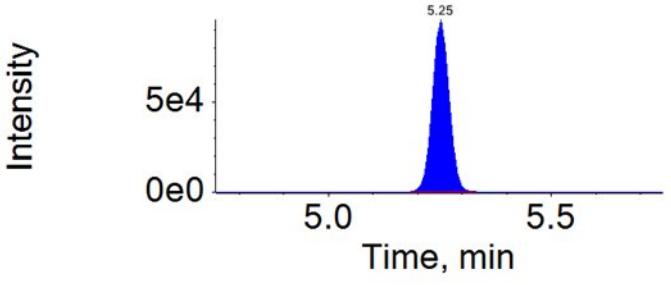


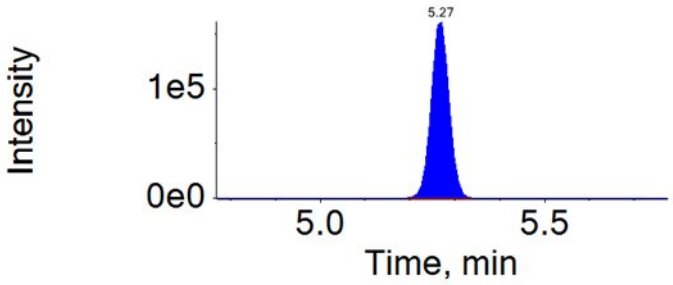
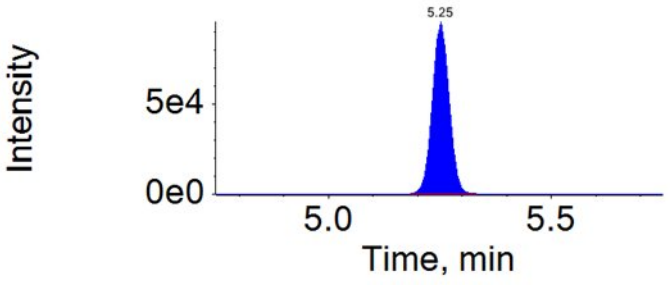
APPROVED
By MCD at 6:33 pm, 11/12/18

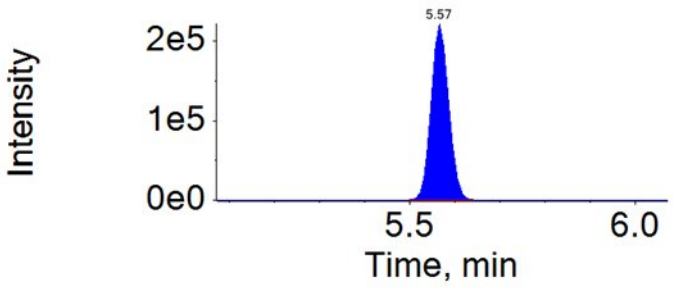
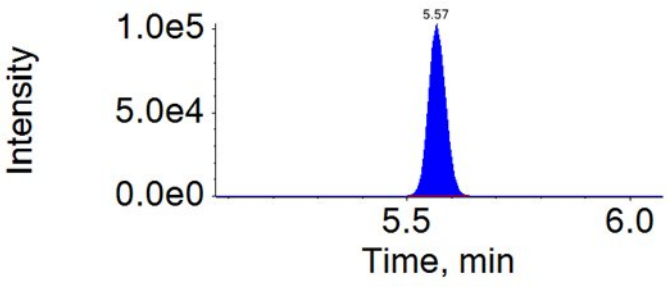
REVIEWED
By HMK at 10:53 am, 11/13/18

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

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

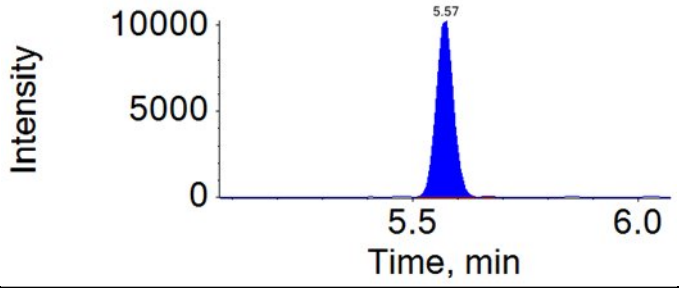
Extraction Standard: E13C8-PFOS	Injection Standard: 13C4-PFOS
507.0 / 80.0	503.0 / 80.0
	

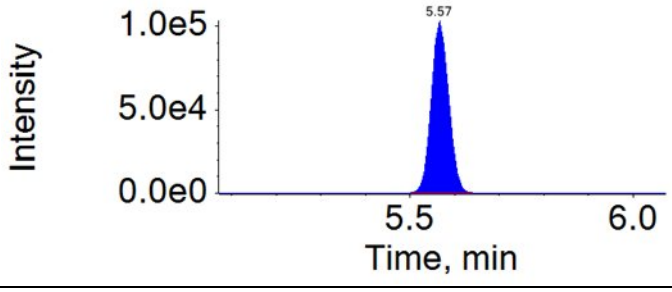
Extraction Standard: E13C9-PFNA	Injection Standard: 13C4-PFOS
472.0 / 427.0	503.0 / 80.0
	

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

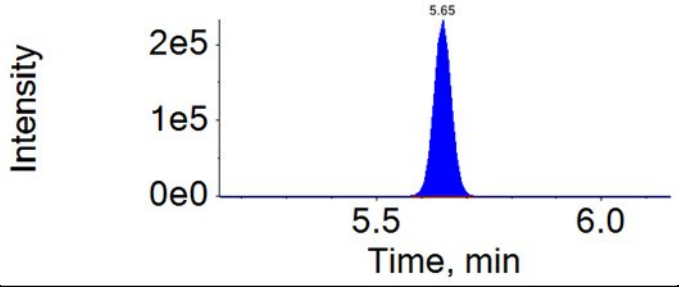
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

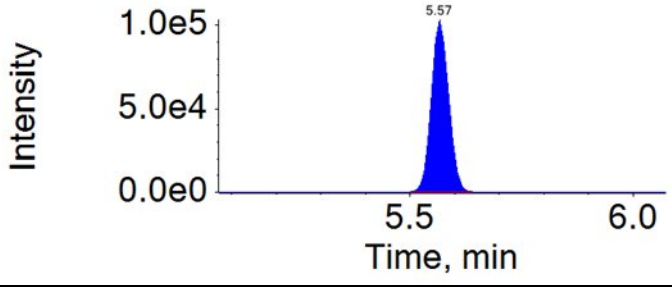
Extraction Standard: E13C2-8:2-FTS	Injection Standard: 13C2-PFDA
529.0 / 81.0	515.0 / 470.0



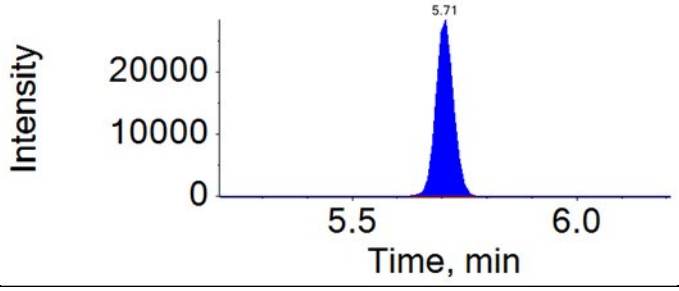


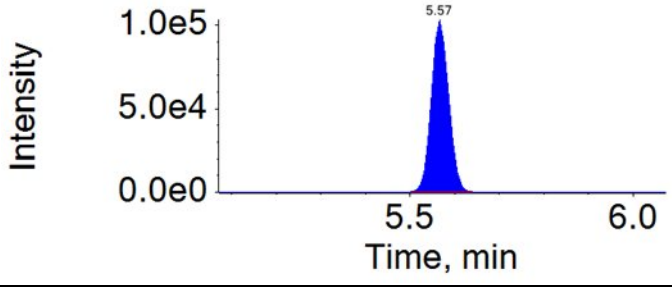
Extraction Standard: E13C8-PFOSA	Injection Standard: 13C2-PFDA
506.0 / 78.0	515.0 / 470.0



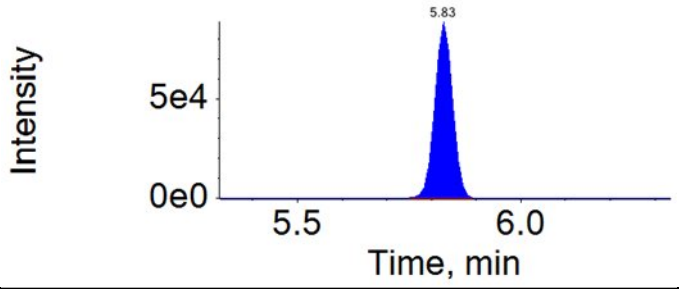


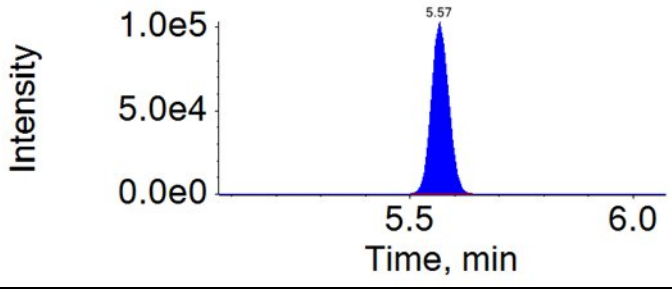
Extraction Standard: Ed3-NMeFOSAA	Injection Standard: 13C2-PFDA
573.0 / 419.0	515.0 / 470.0





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

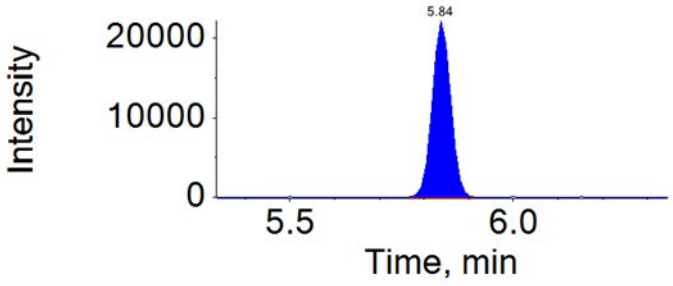
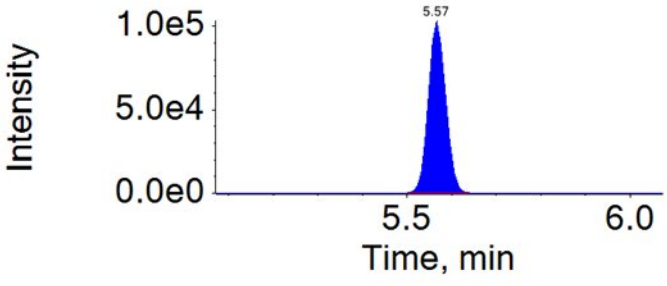


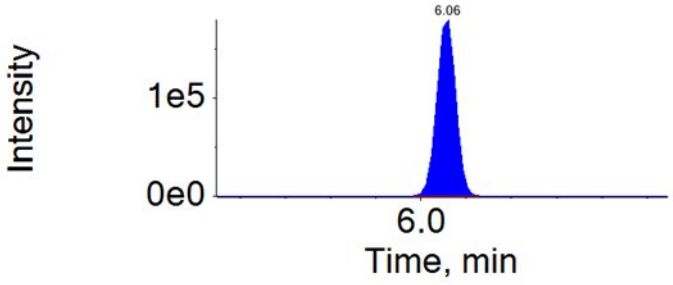
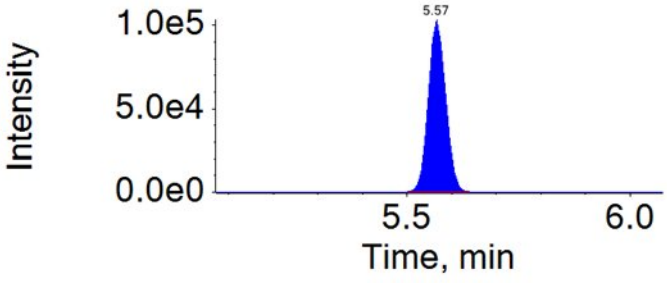


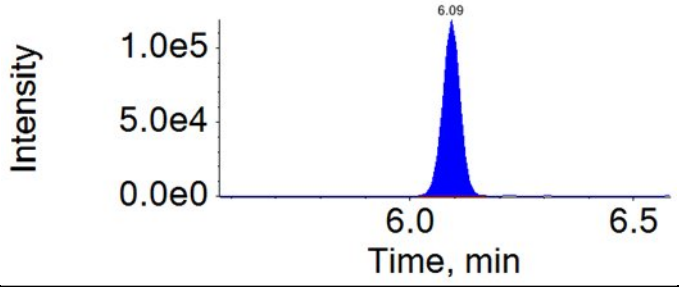
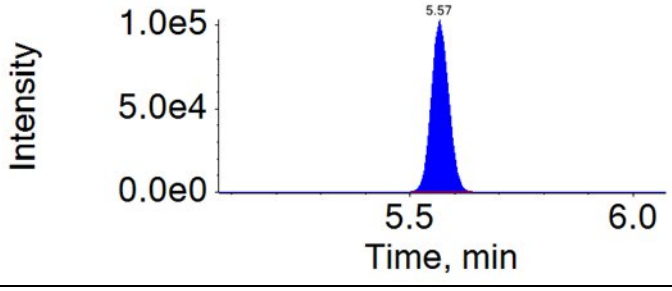
APPROVED
By MCD at 6:33 pm, 11/12/18

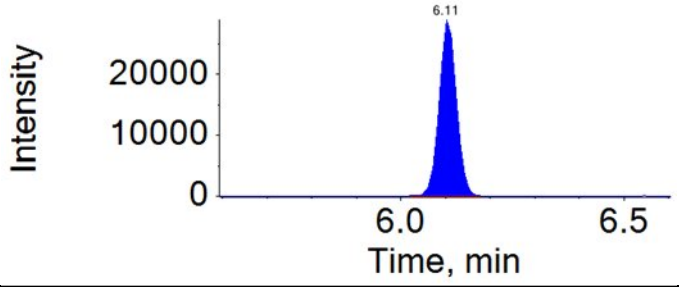
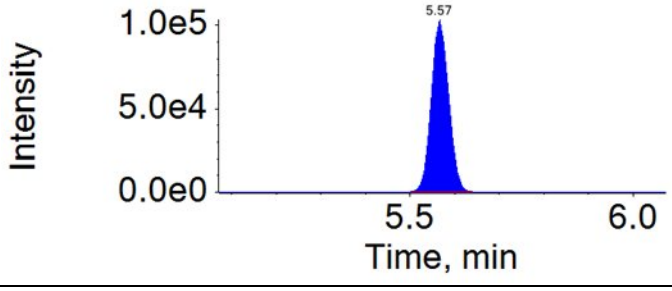
REVIEWED
By HMK at 10:53 am, 11/13/18

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

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

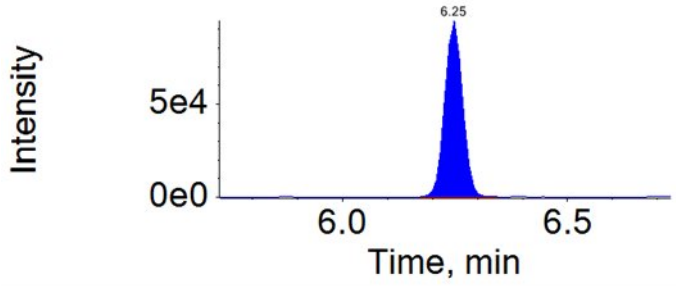
Extraction Standard: E13C2-PFDoDA	Injection Standard: 13C2-PFDA
615.0 / 570.0	515.0 / 470.0
	

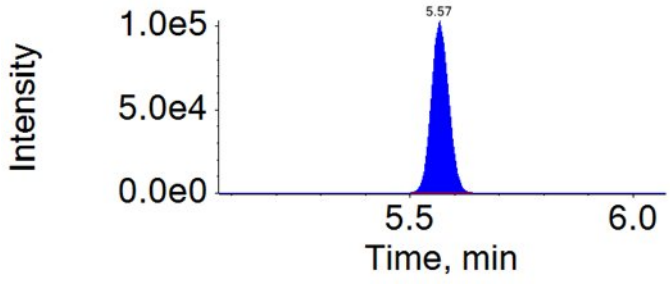
Extraction Standard: Ed7-NMePFOSAE	Injection Standard: 13C2-PFDA
623.0 / 59.0	515.0 / 470.0
	

Extraction Standard: Ed3-NMePFOSA	Injection Standard: 13C2-PFDA
515.0 / 169.0	515.0 / 470.0
	

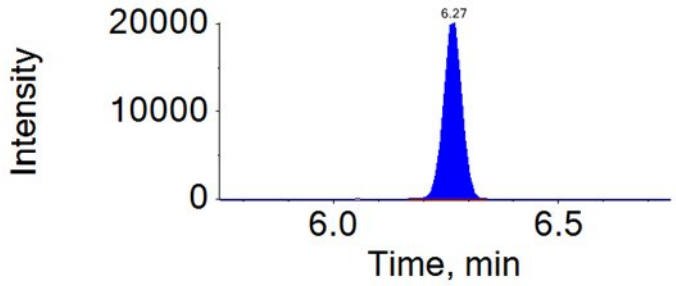
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

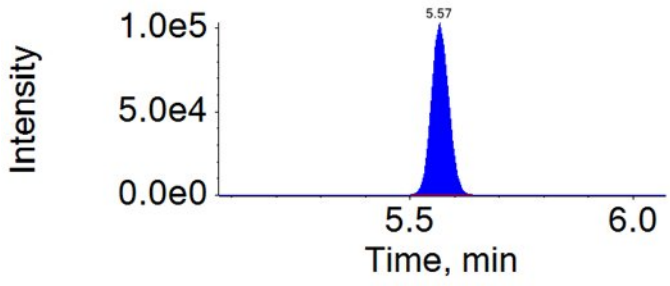
Extraction Standard: Ed9-NEtPFOSAE	Injection Standard: 13C2-PFDA
639.0 / 59.0	515.0 / 470.0



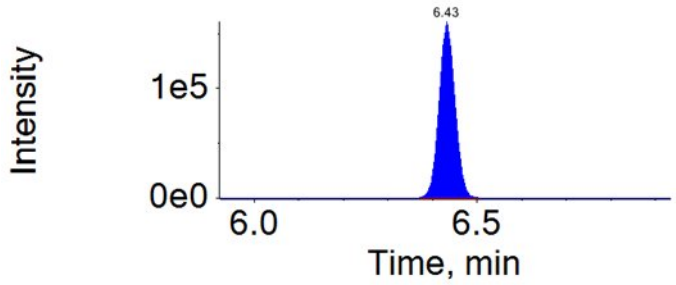


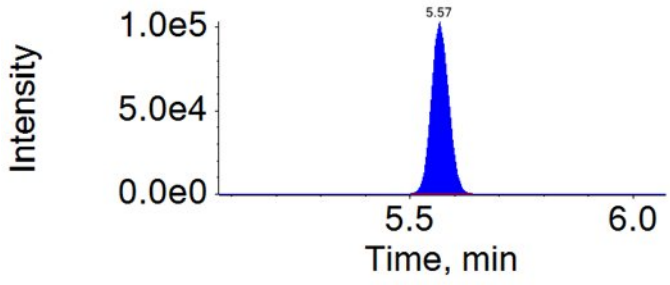
Extraction Standard: Ed5-NEtPFOSA	Injection Standard: 13C2-PFDA
531.0 / 169.0	515.0 / 470.0





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



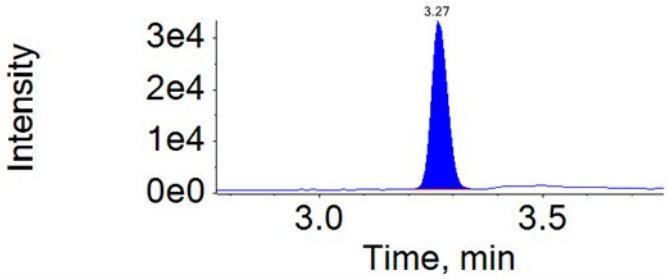


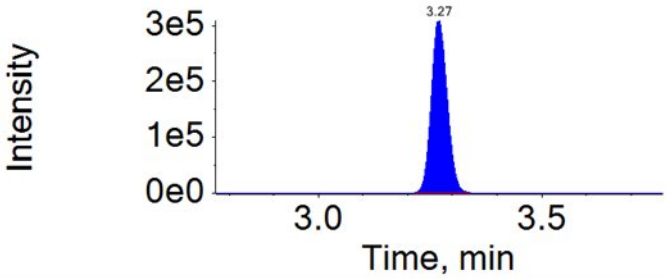
APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

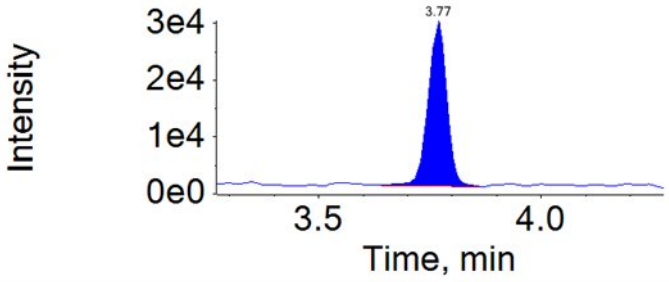
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

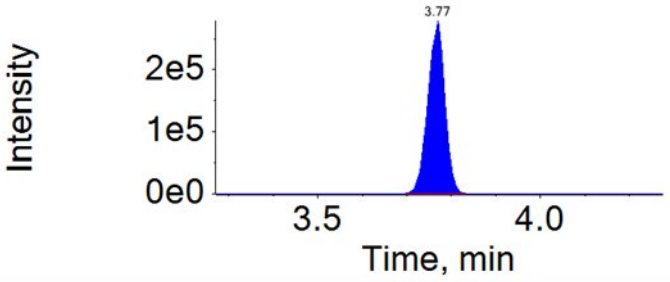
Analyte: PFBA	Extraction Standard: 13C4-PFBA
213.0 / 169.0	217.0 / 172.0



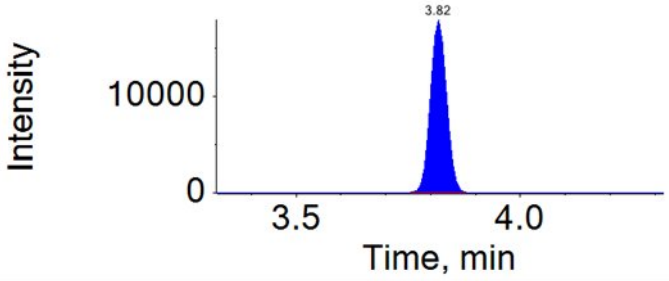


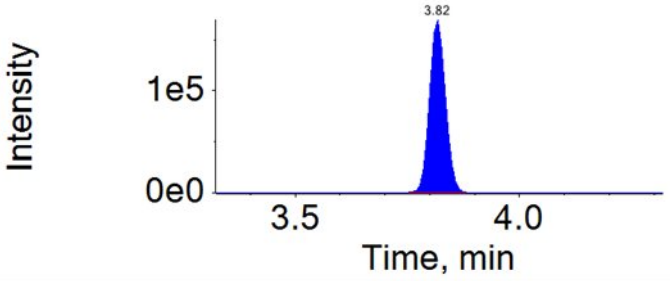
Analyte: PFPeA	Extraction Standard: 13C5-PFPeA
263.0 / 219.0	268.0 / 223.0



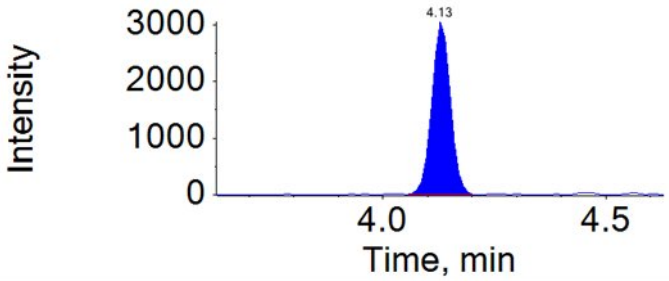


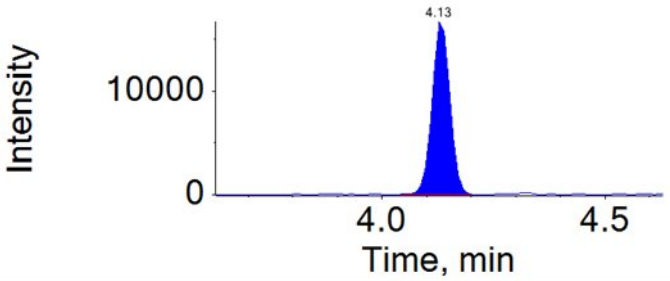
Analyte: PFBS	Extraction Standard: 13C3-PFBS
299.0 / 80.0	302.0 / 80.0





Analyte: 4:2-FTS	Extraction Standard: 13C2-4:2-FTS
327.0 / 307.0	329.0 / 81.0



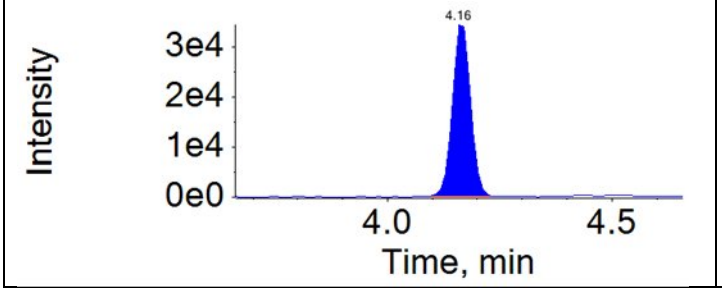


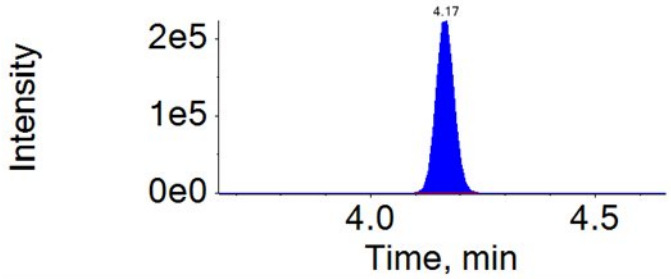
APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

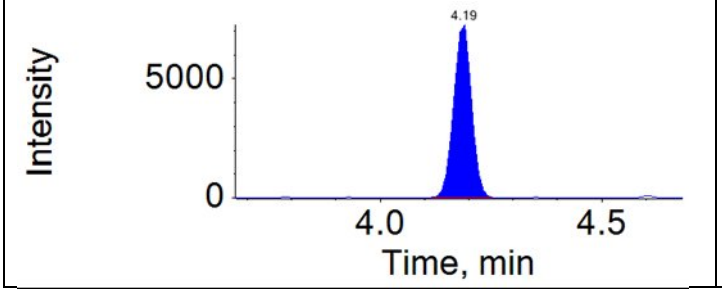
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

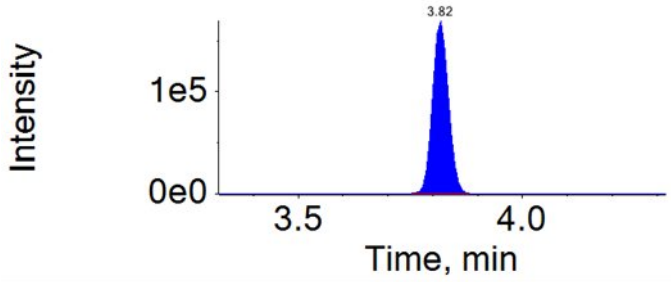
Analyte: PFHxA	Extraction Standard: 13C5-PFHxA
313.0 / 269.0	318.0 / 273.0



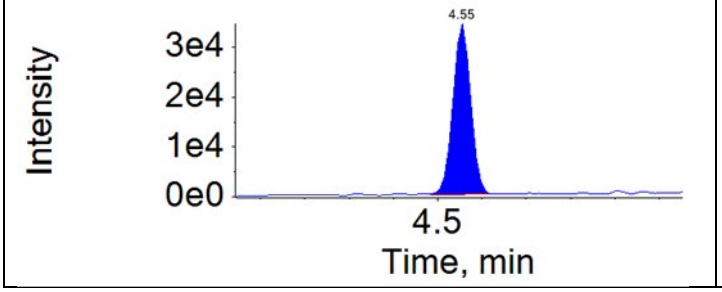


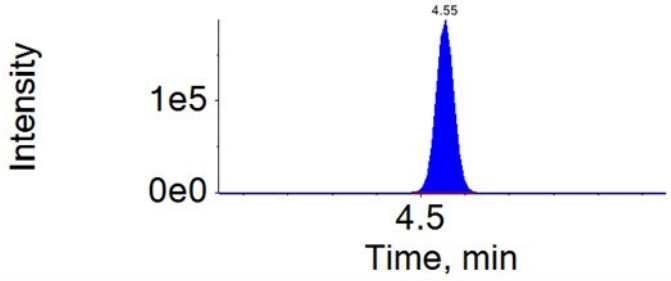
Analyte: PFPeS	Extraction Standard: 13C3-PFBS
349.0 / 80.0	302.0 / 80.0



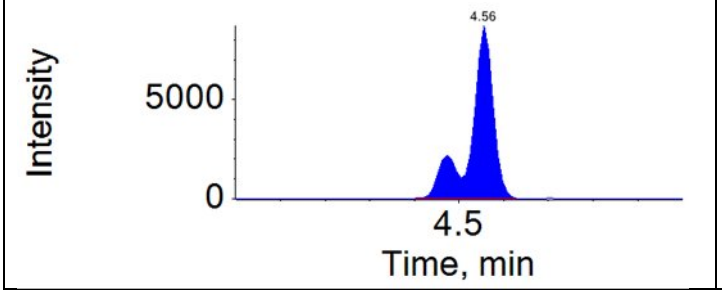


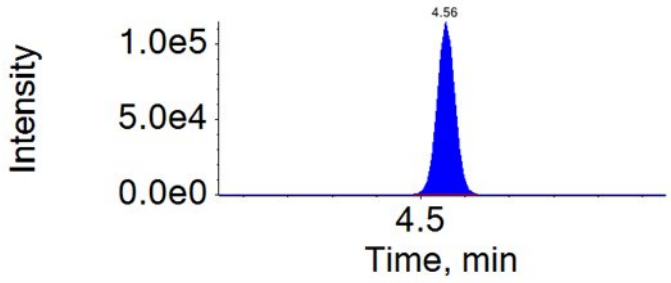
Analyte: PFHpA	Extraction Standard: 13C4-PFHpA
363.0 / 319.0	367.0 / 322.0





Analyte: PFHxS	Extraction Standard: 13C3-PFHxS
399.0 / 80.0	402.0 / 80.0



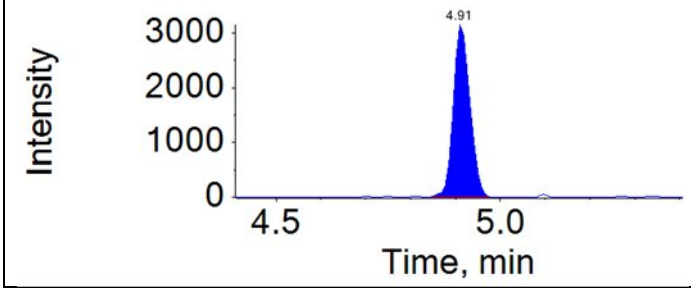


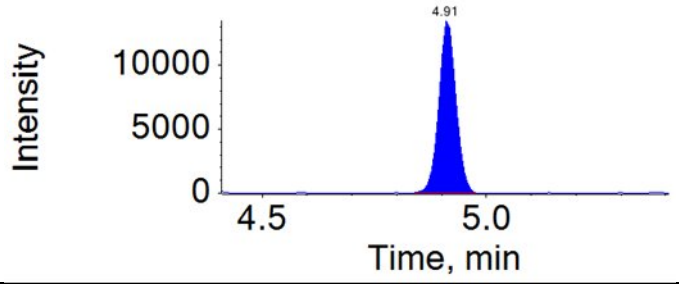
APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

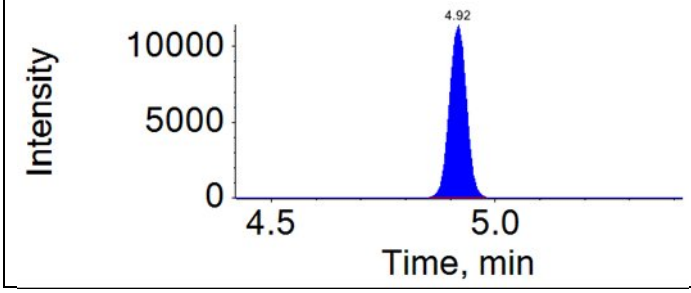
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

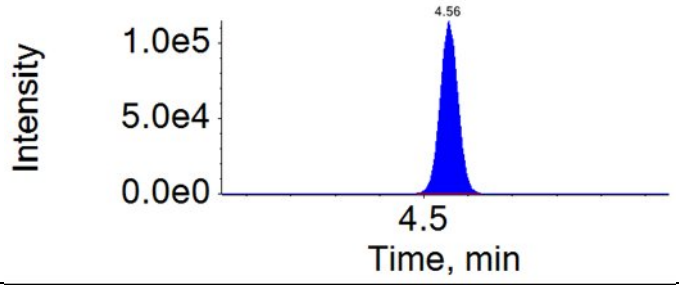
Analyte: 6:2-FTS	Extraction Standard: 13C2-6:2-FTS
427.0 / 407.0	429.0 / 81.0



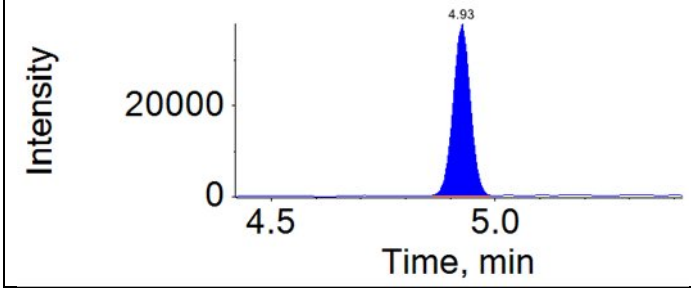


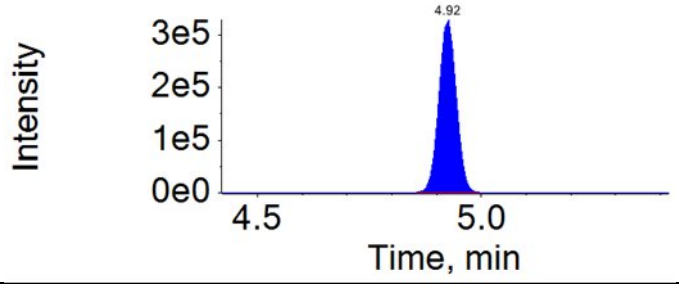
Analyte: PFHpS	Extraction Standard: 13C3-PFHxS
449.0 / 80.0	402.0 / 80.0



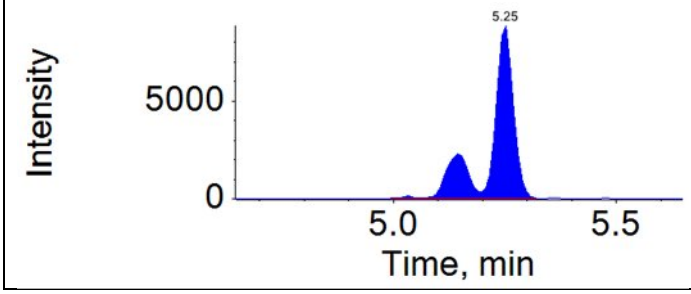


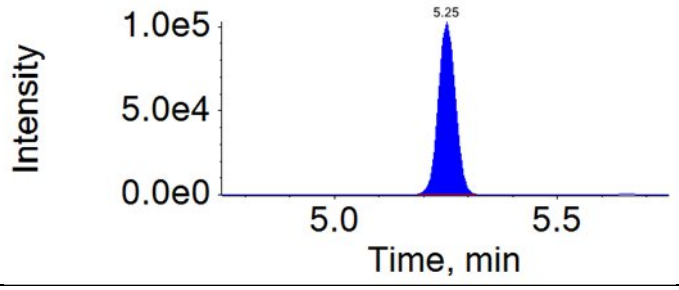
Analyte: PFOA	Extraction Standard: 13C8-PFOA
413.0 / 369.0	421.0 / 376.0





Analyte: PFOS	Extraction Standard: 13C8-PFOS
499.0 / 80.0	507.0 / 80.0



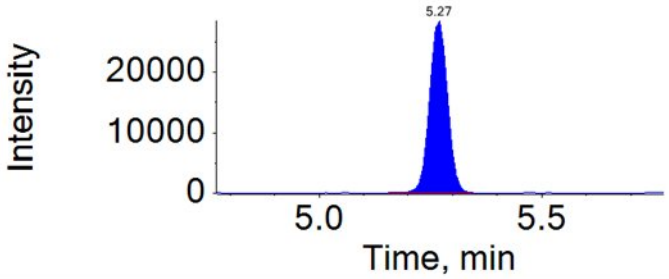


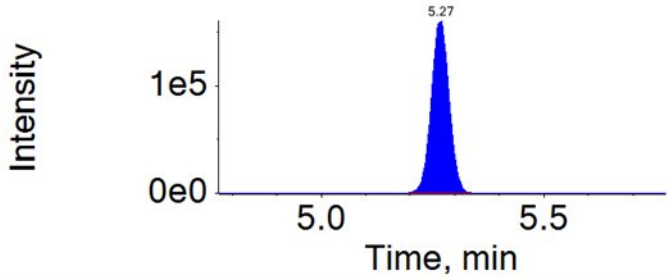
APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

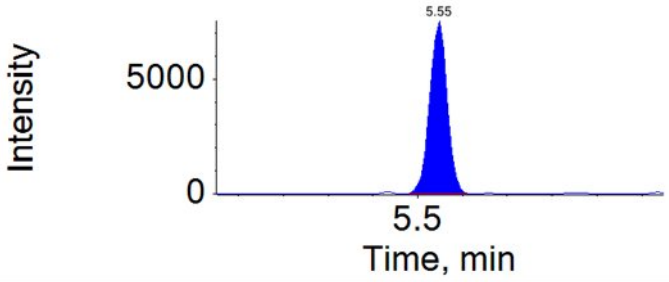
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

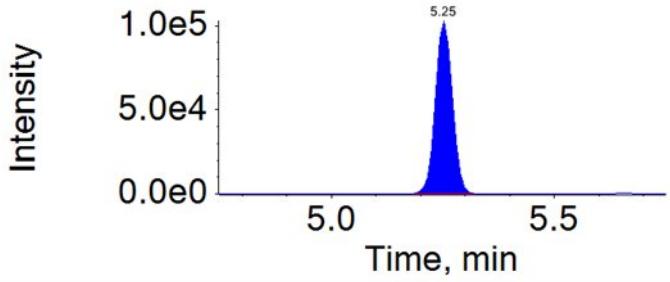
Analyte: PFNA	Extraction Standard: 13C9-PFNA
463.0 / 419.0	472.0 / 427.0



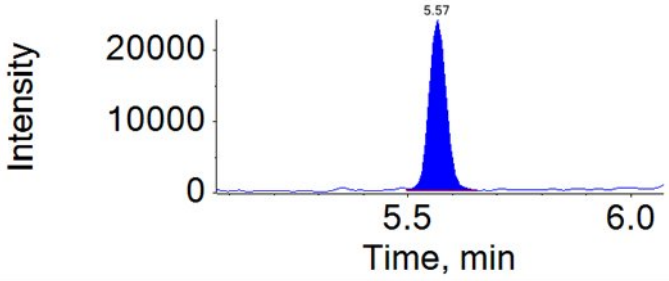


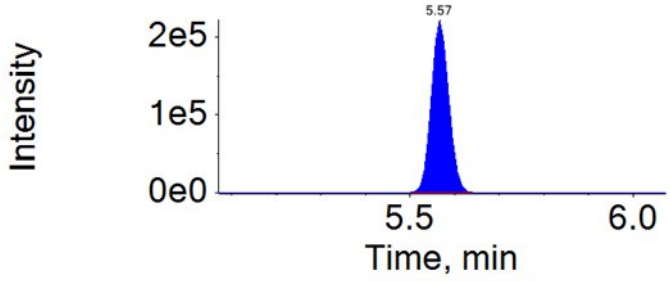
Analyte: PFNS	Extraction Standard: 13C8-PFOS
549.0 / 80.0	507.0 / 80.0



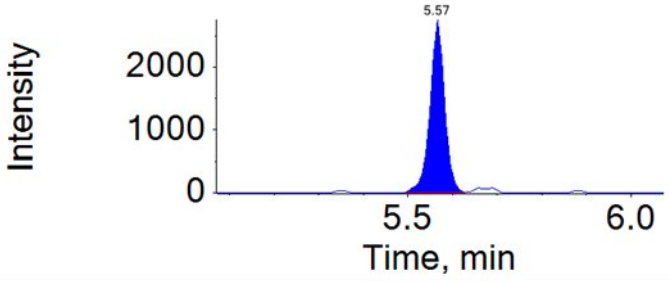


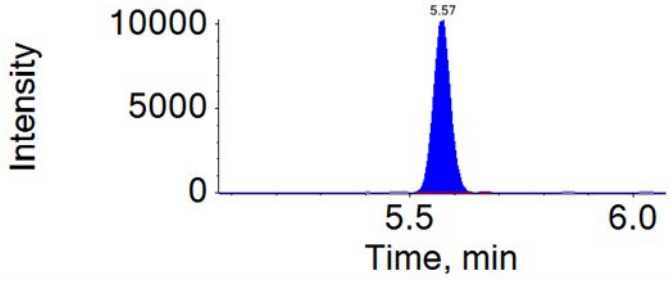
Analyte: PFDA	Extraction Standard: 13C6-PFDA
513.0 / 469.0	519.0 / 474.0





Analyte: 8:2-FTS	Extraction Standard: 13C2-8:2-FTS
527.0 / 507.0	529.0 / 81.0

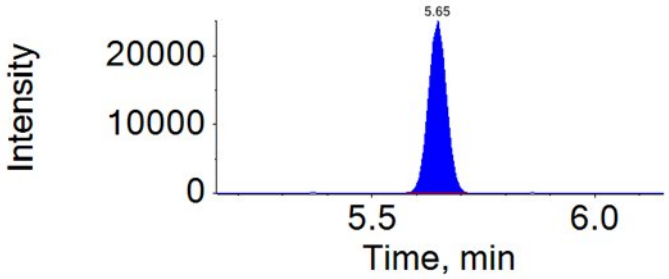
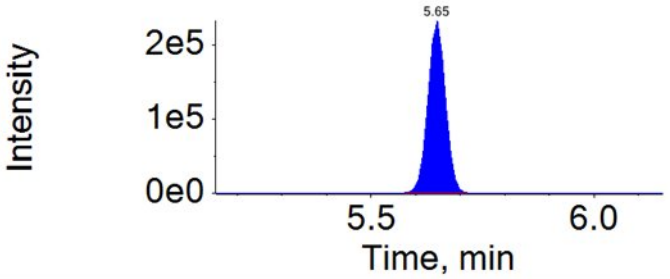


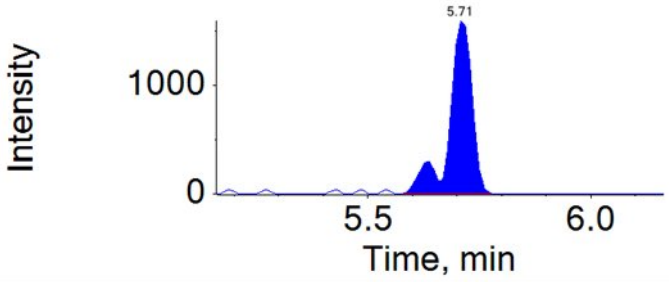
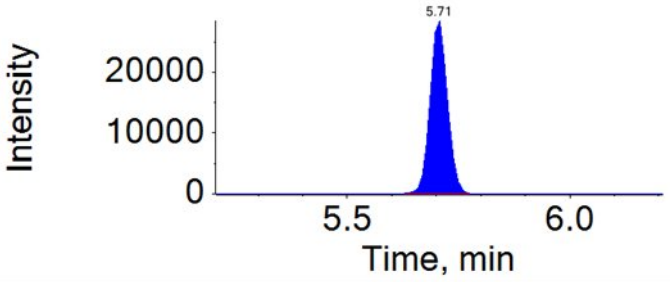


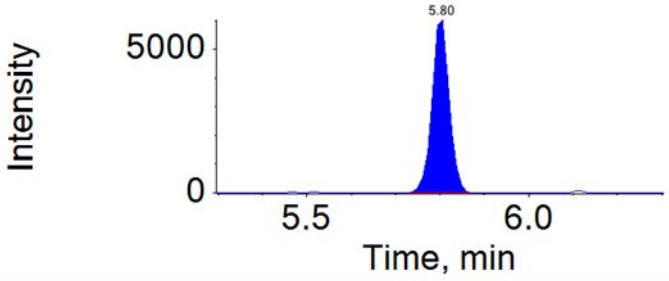
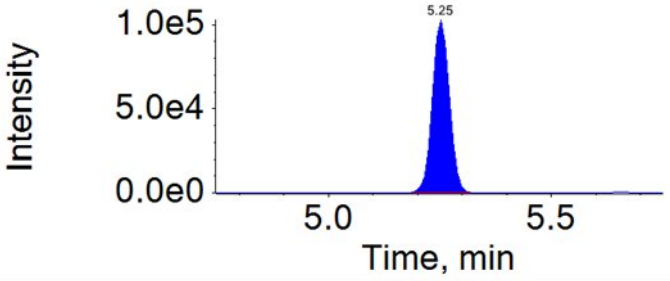
APPROVED
By MCD at 6:33 pm, 11/12/18

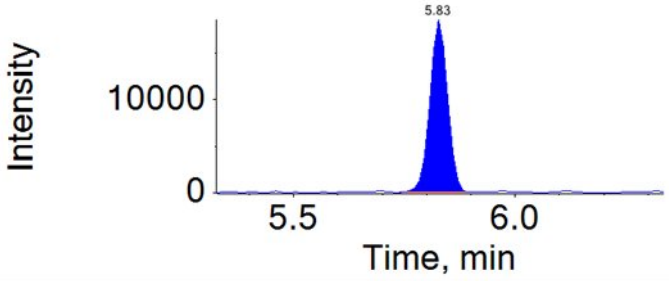
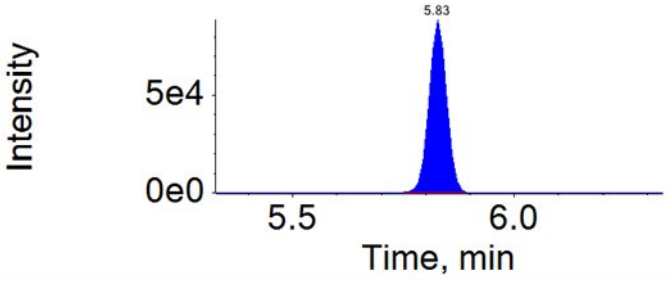
REVIEWED
By HMK at 10:53 am, 11/13/18

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Analyte: PFOSA	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
	

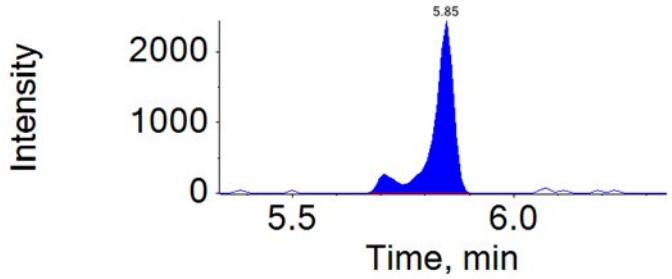
Analyte: PFUnDA	Extraction Standard: 13C7-PFUnDA
563.0 / 519.0	570.0 / 525.0
	

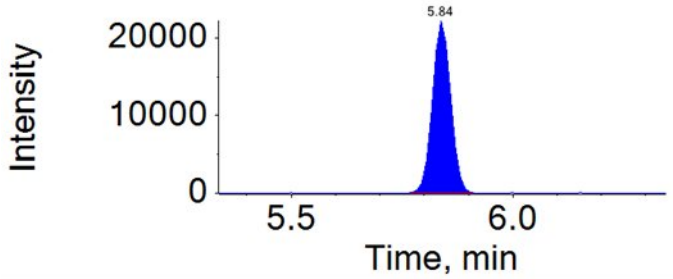
APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

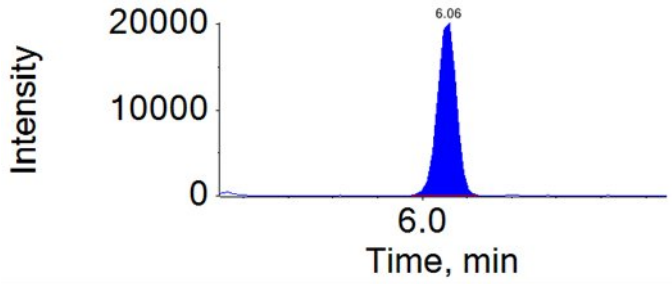
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

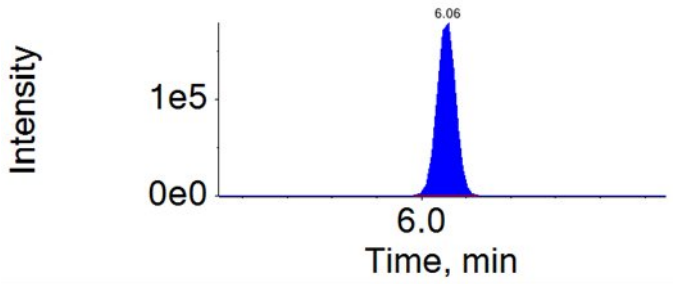
Analyte: NEtFOSAA	Extraction Standard: d5-NEtFOSAA
584.0 / 419.0	589.0 / 419.0



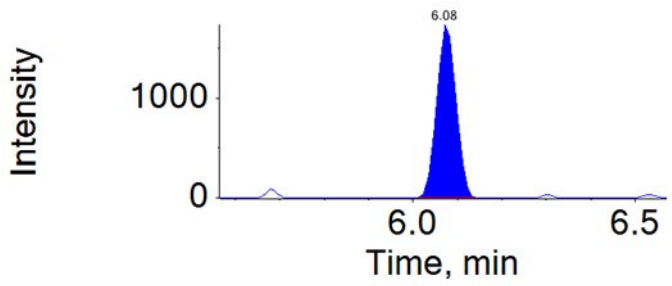


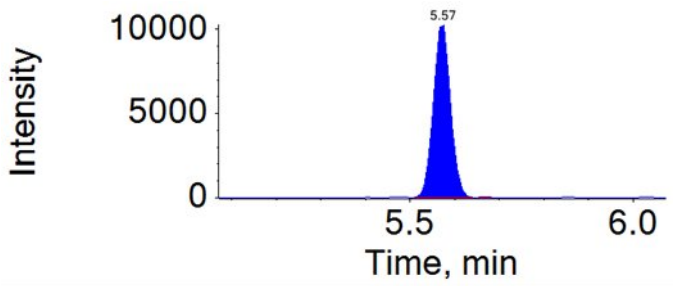
Analyte: PFDoDA	Extraction Standard: 13C2-PFDoDA
613.0 / 569.0	615.0 / 570.0



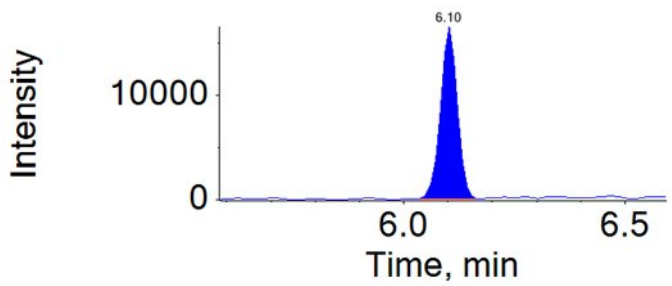


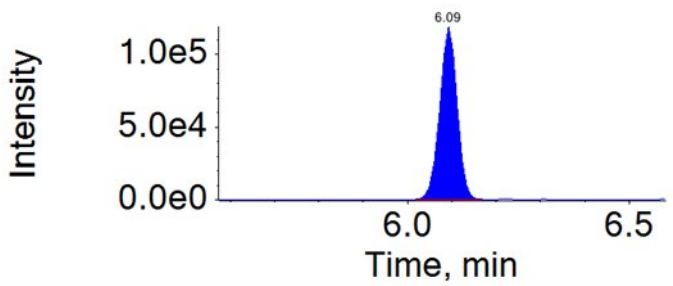
Analyte: 10:2-FTS	Extraction Standard: 13C2-8:2-FTS
627.0 / 607.0	529.0 / 81.0





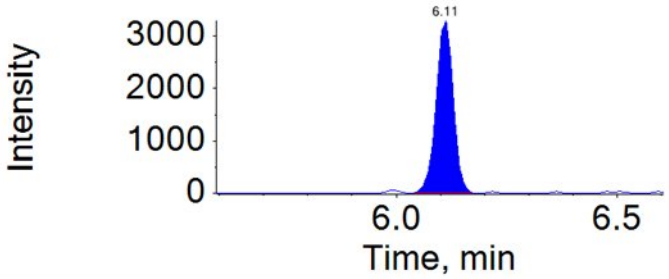
Analyte: NMePFOSAE	Extraction Standard: d7-NMePFOSAE
616.0 / 59.0	623.0 / 59.0

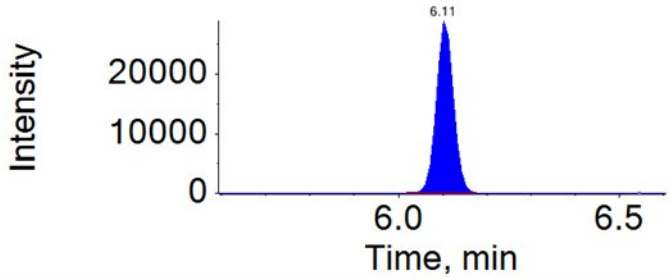




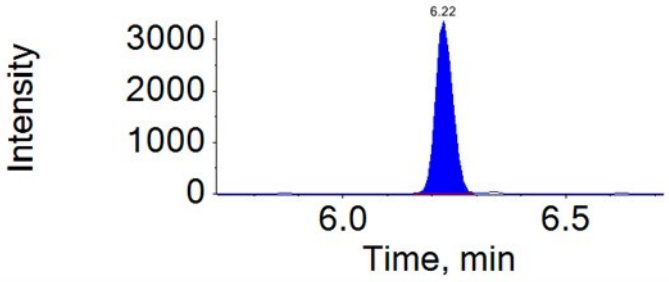
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

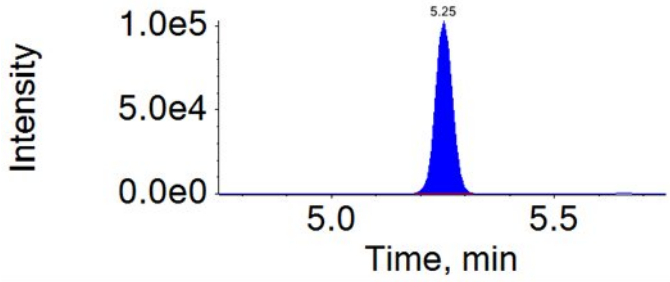
Analyte: NMePFOSA	Extraction Standard: d3-NMePFOSA
512.0 / 169.0	515.0 / 169.0



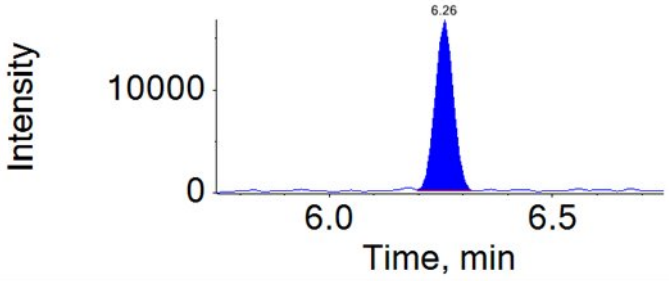


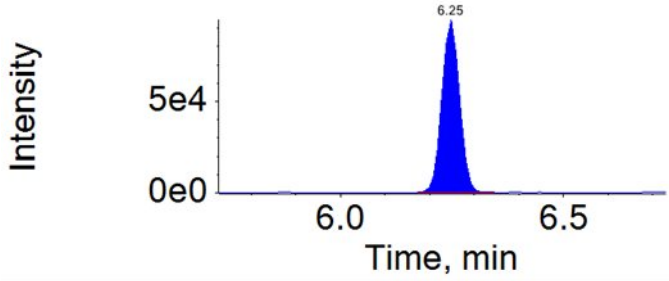
Analyte: PFDoS	Extraction Standard: 13C8-PFOS
699.0 / 80.0	507.0 / 80.0



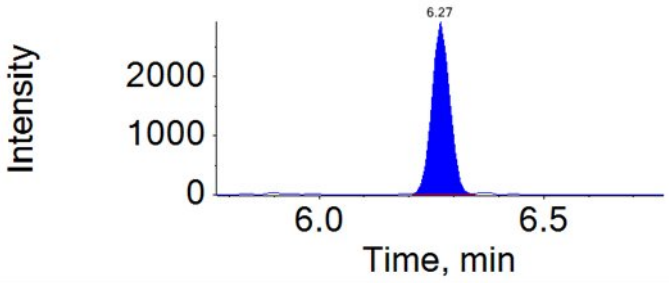


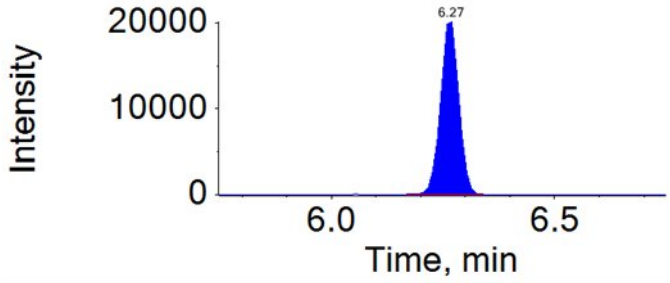
Analyte: NEtPFOSAE	Extraction Standard: d9-NEtPFOSAE
630.0 / 59.0	639.0 / 59.0





Analyte: NEtPFOSA	Extraction Standard: d5-NEtPFOSA
526.0 / 169.0	531.0 / 169.0

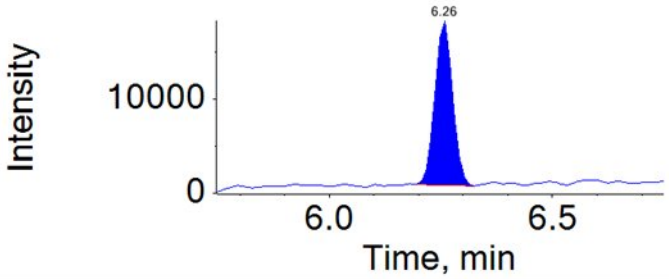
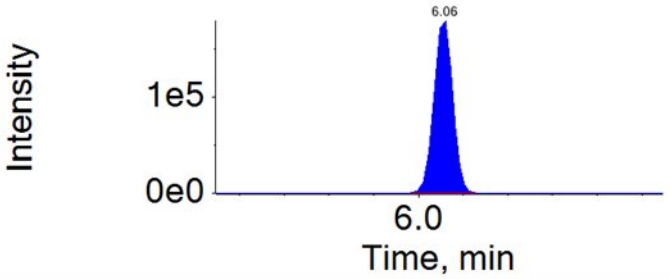


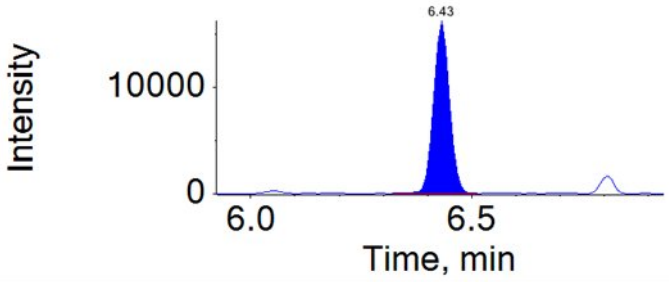
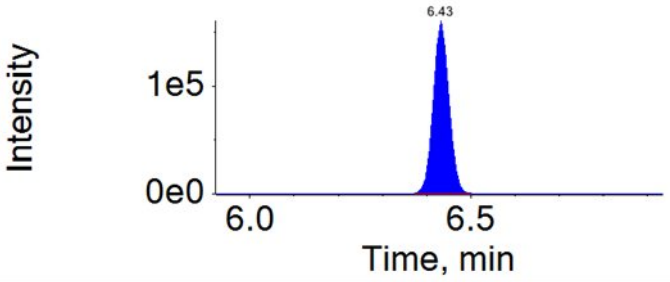


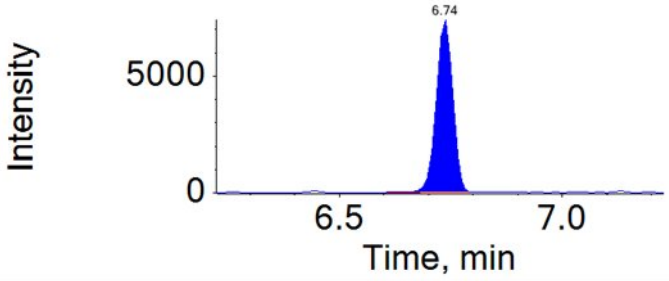
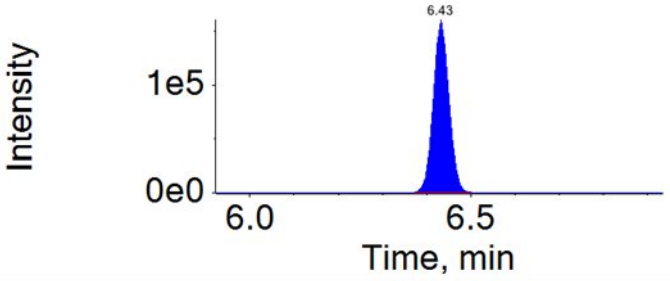
APPROVED
By MCD at 6:33 pm, 11/12/18

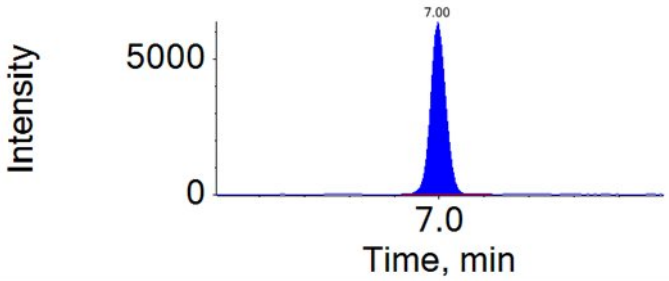
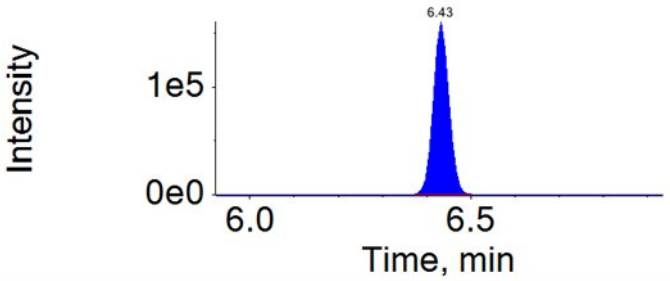
REVIEWED
By HMK at 10:53 am, 11/13/18

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Analyte: PFTrDA	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
	

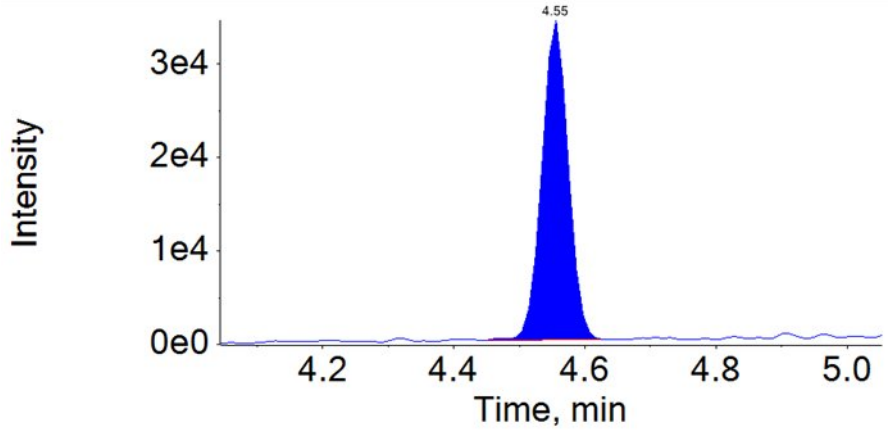
Analyte: PFODA	Extraction Standard: 13C2-PFTeDA
913.0 / 869.0	715.0 / 670.0
	

APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

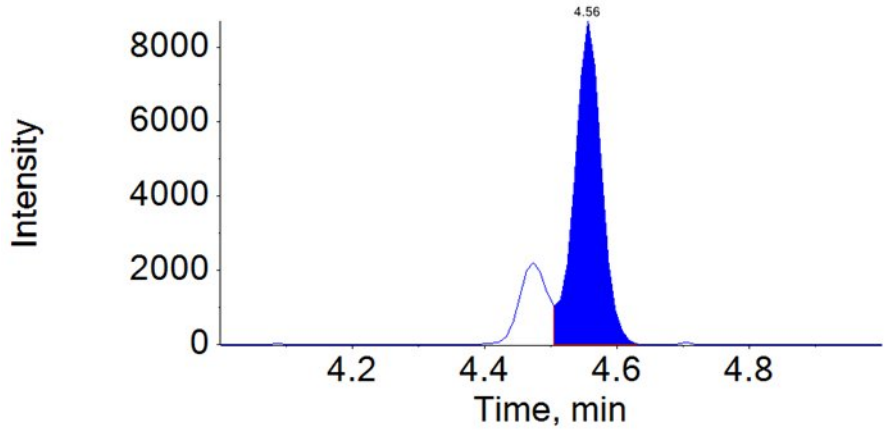
Results Table Name: 18NOV12DCAL
Results Table Date: 11/12/2018 6:23:42 PM
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

Component Name:
PFHpA
RT (min.):
4.55
Peak Area:
95434.80
Mass Range:
363.0 / 319.0
File Name:
18NOV12DCAL-43.wiff
Sample Name:
CAL2



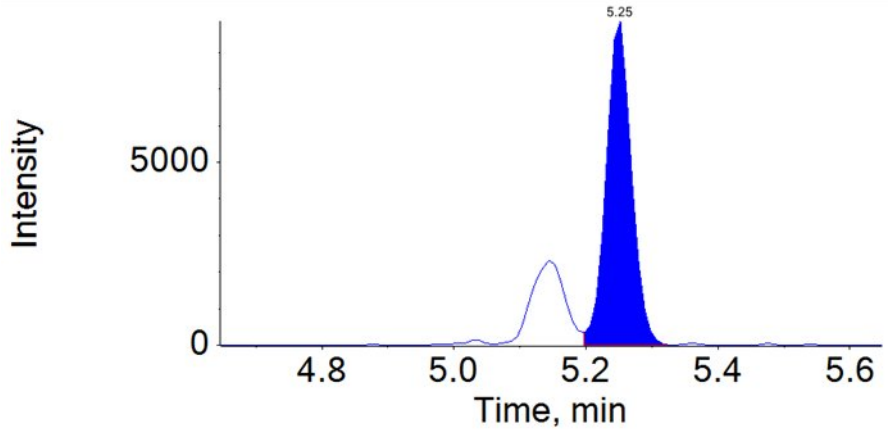
Integration Comment: incorrect integration

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



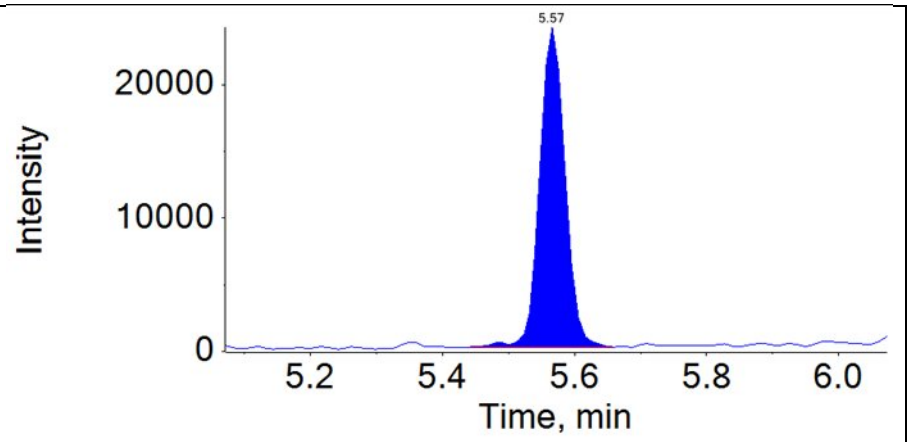
Integration Comment: incorrect integration

APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

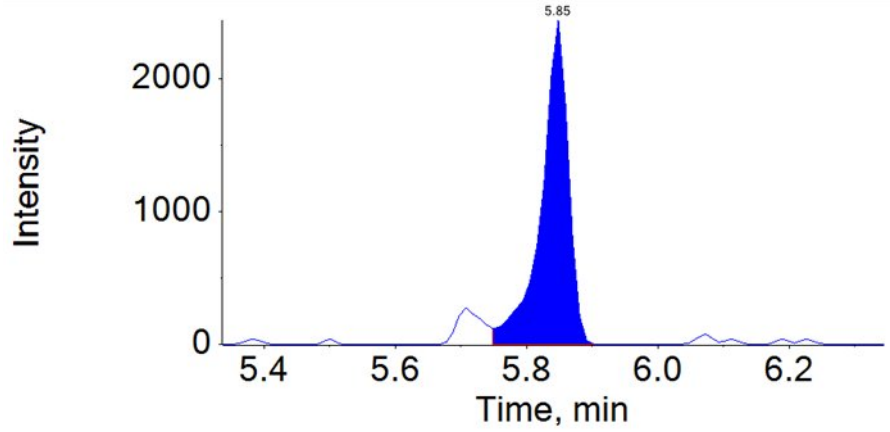
Results Table Name: 18NOV12DCAL
Results Table Date: 11/12/2018 6:23:42 PM
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

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



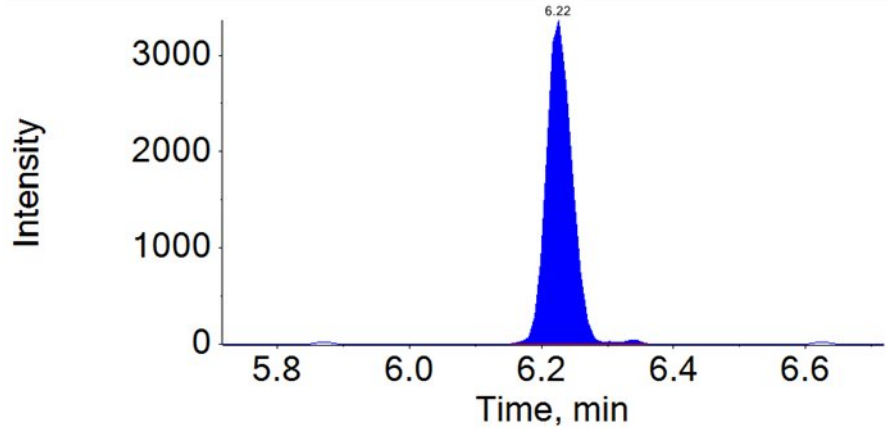
Integration Comment: incorrect integration

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



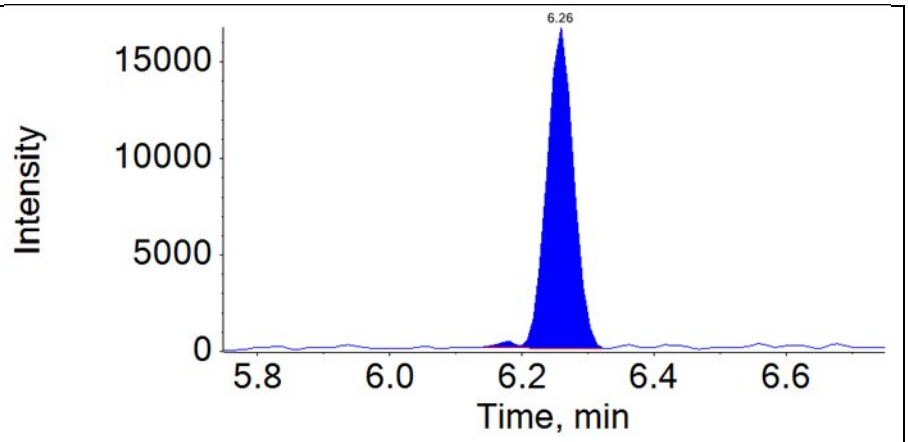
Integration Comment: incorrect integration

APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

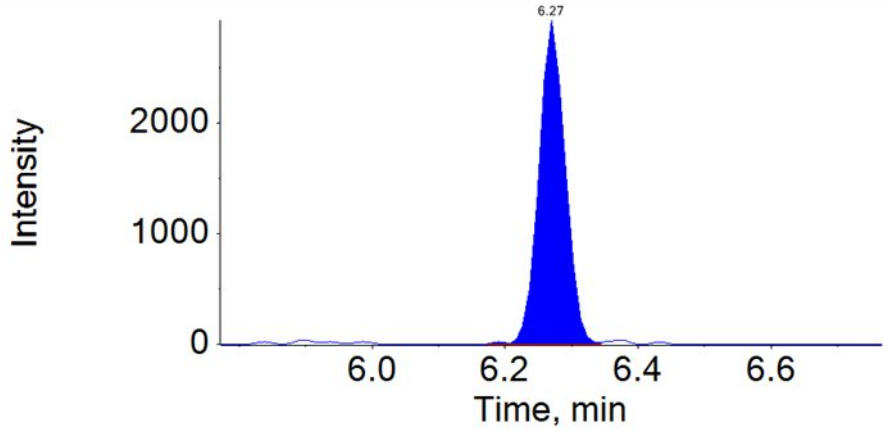
Results Table Name: 18NOV12DCAL
Results Table Date: 11/12/2018 6:23:42 PM
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

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



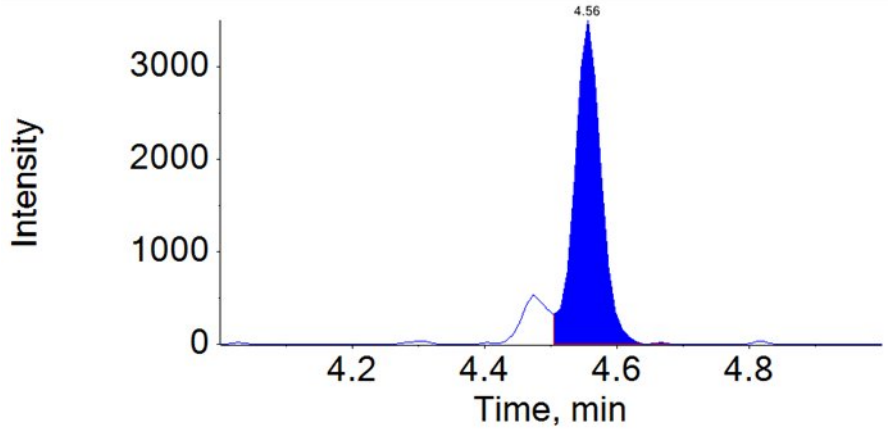
Integration Comment: incorrect integration

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

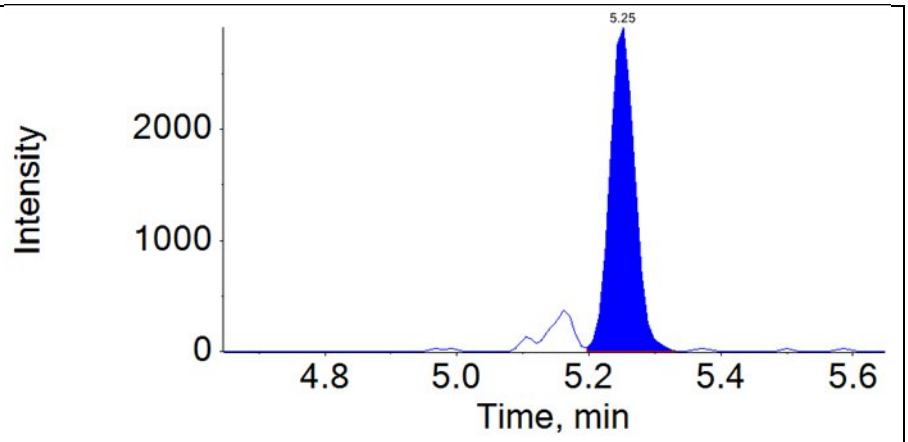


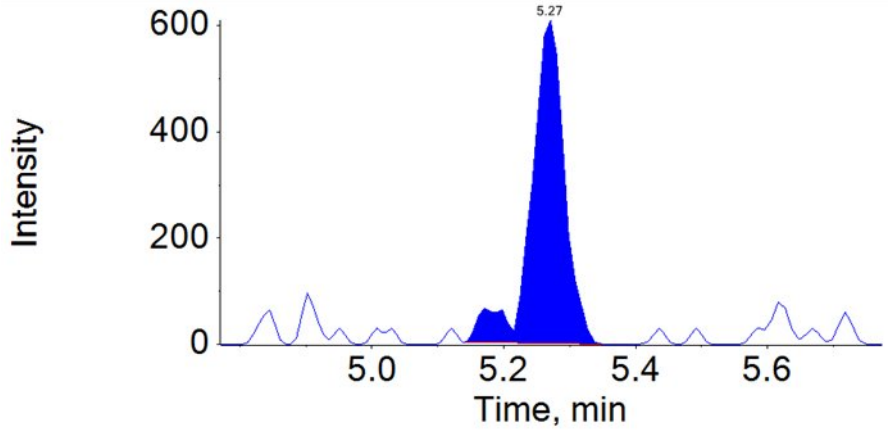
Integration Comment: incorrect integration

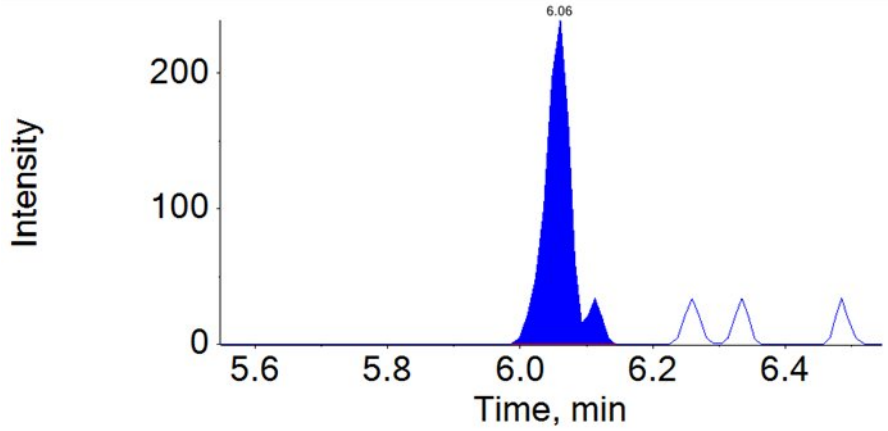
APPROVED
By MCD at 6:33 pm, 11/12/18

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

Ion Ratio Report

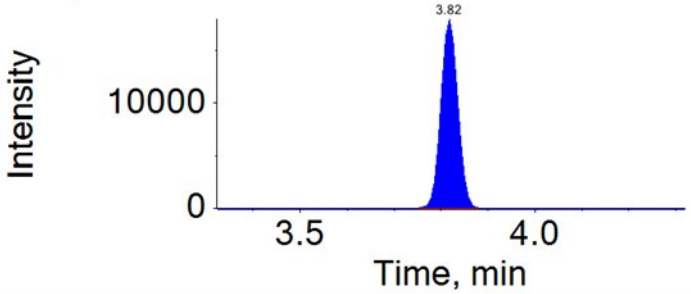
Sample Name: CAL2 **Instrument Name:** LM27631 **File Name:** 18NOV12DCAL-43.wiff

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	

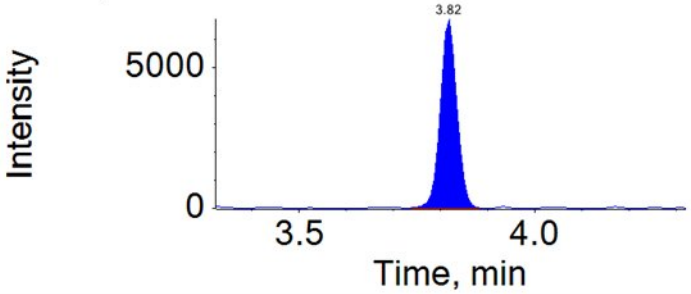
APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

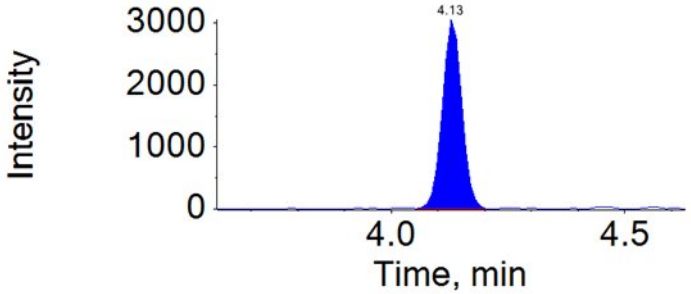
Component: PFBS
Primary Mass: 299.0 / 80.0



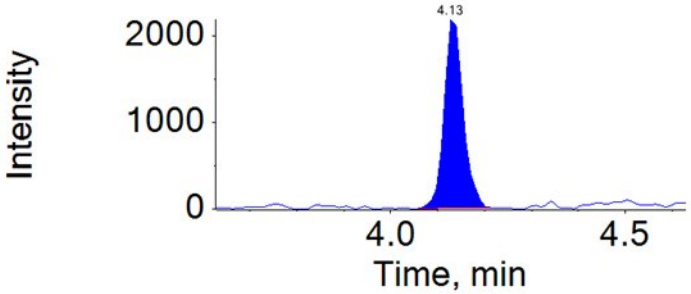
Component: PFBS_2
Secondary Mass: 299.0 / 99.0



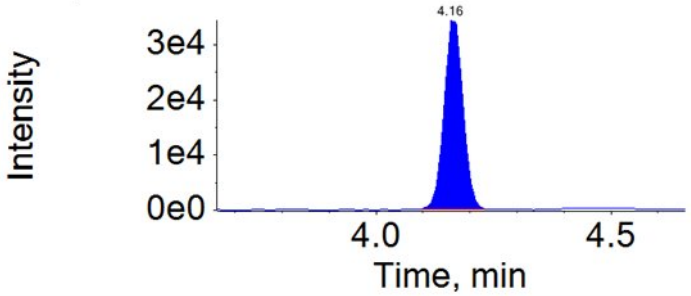
Component: 4:2-FTS
Primary Mass: 327.0 / 307.0



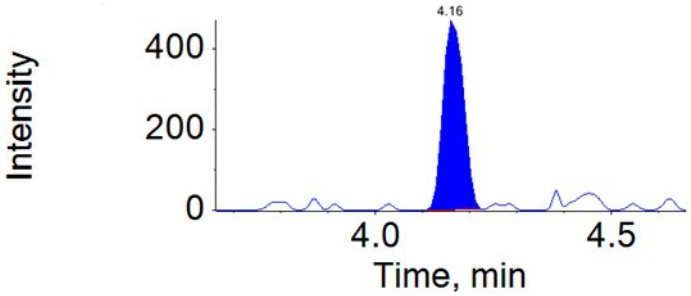
Component: 4:2 FTS_2
Secondary Mass: 327.0 / 81.0



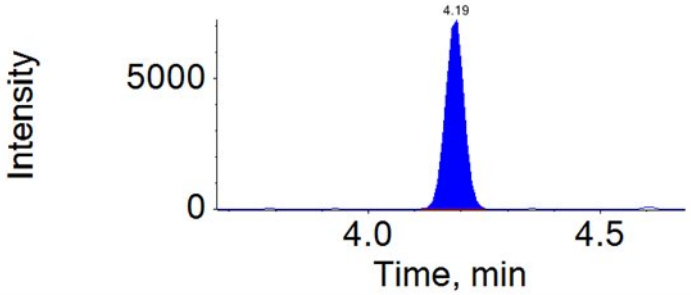
Component: PFHxA
Primary Mass: 313.0 / 269.0



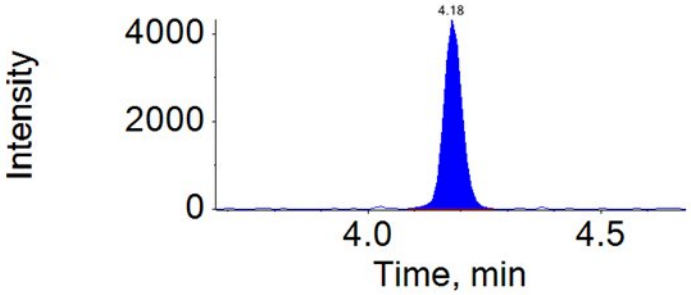
Component: PFHxA_2
Secondary Mass: 313.0 / 119.0



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

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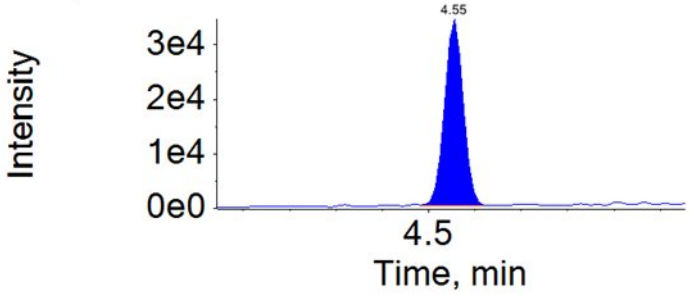
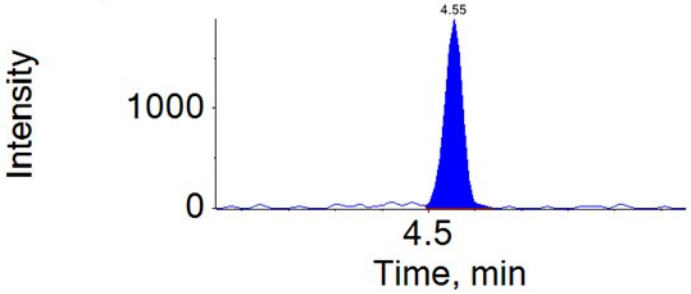
By HMK at 10:53 am, 11/13/18

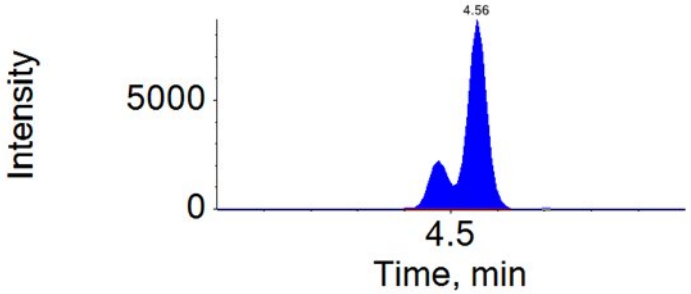
Component: PFHpA
Primary Mass: 363.0 / 319.0



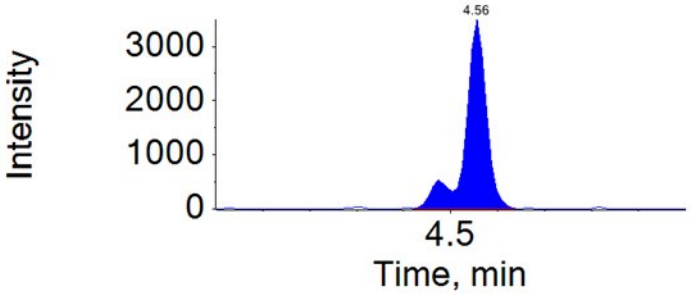
Component: PFHpA_2
Secondary Mass: 363.0 / 169.0



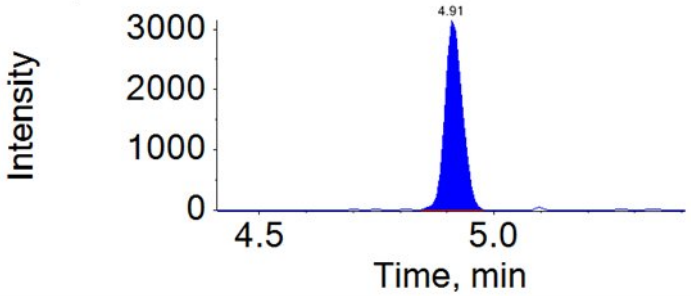
Component: PFHxS
Primary Mass: 399.0 / 80.0



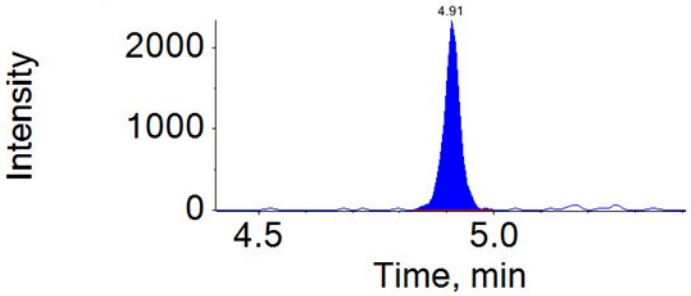
Component: PFHxS_2
Secondary Mass: 399.0 / 99.0



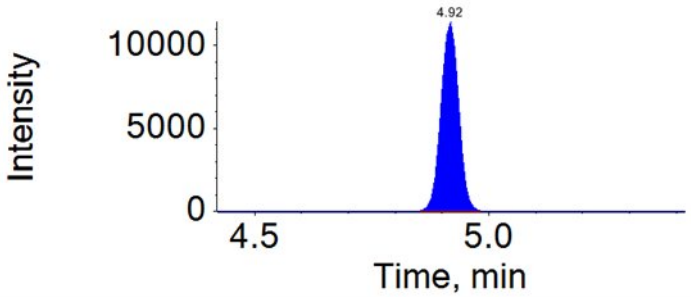
Component: 6:2-FTS
Primary Mass: 427.0 / 407.0



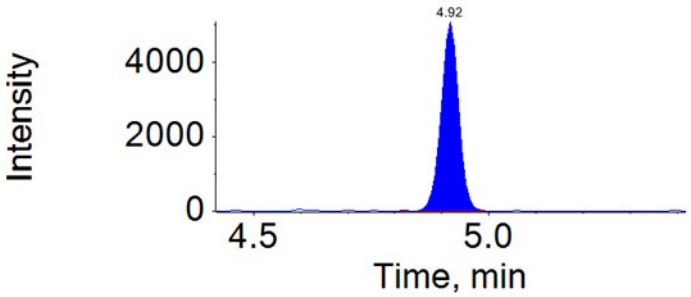
Component: 6:2 FTS_2
Secondary Mass: 427.0 / 81.0



Component: PFHpS
Primary Mass: 449.0 / 80.0



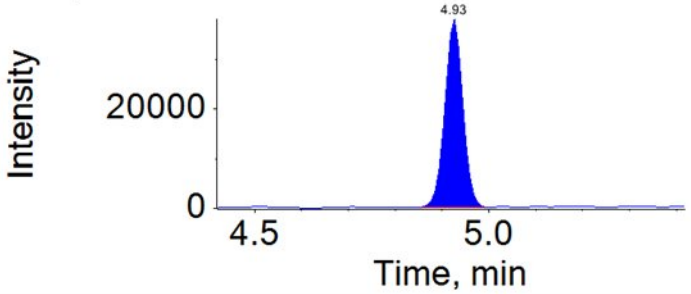
Component: PFHpS_2
Secondary Mass: 449.0 / 99.0



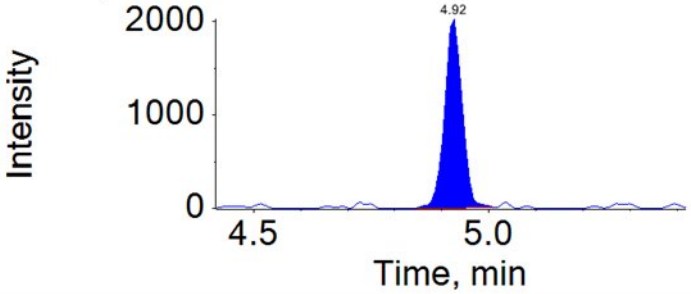
APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

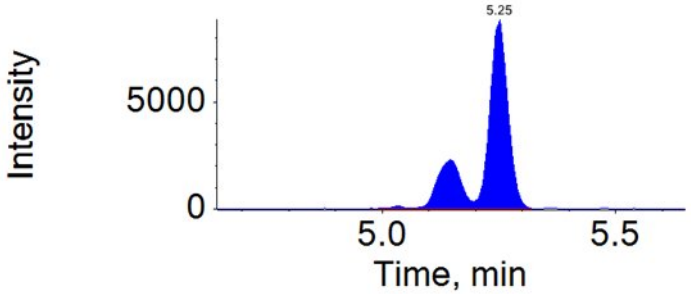
Component: PFOA
Primary Mass: 413.0 / 369.0



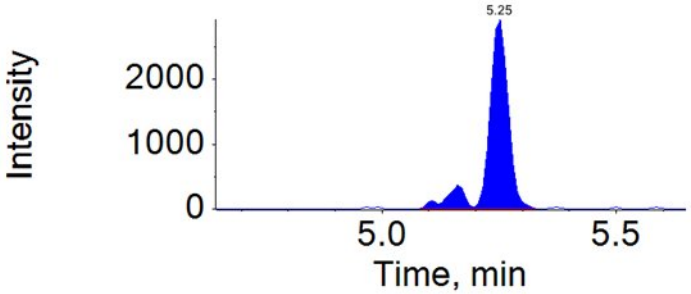
Component: PFOA_2
Secondary Mass: 413.0 / 169.0



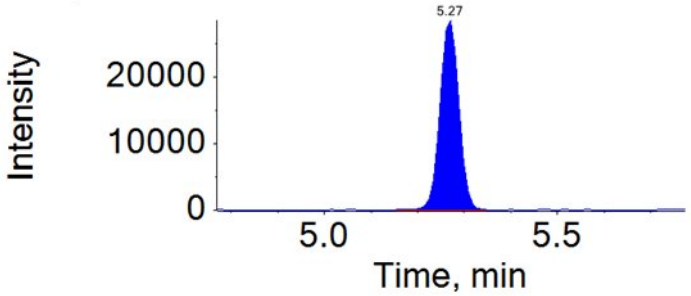
Component: PFOS
Primary Mass: 499.0 / 80.0



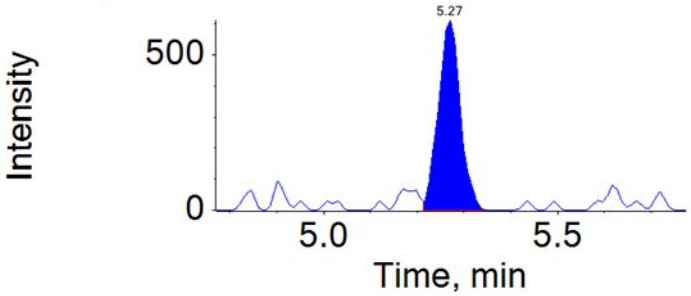
Component: PFOS_2
Secondary Mass: 499.0 / 99.0



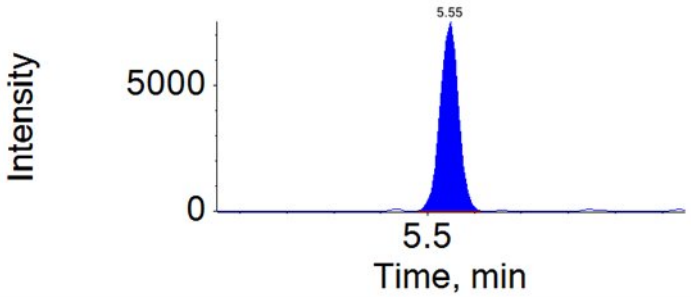
Component: PFNA
Primary Mass: 463.0 / 419.0



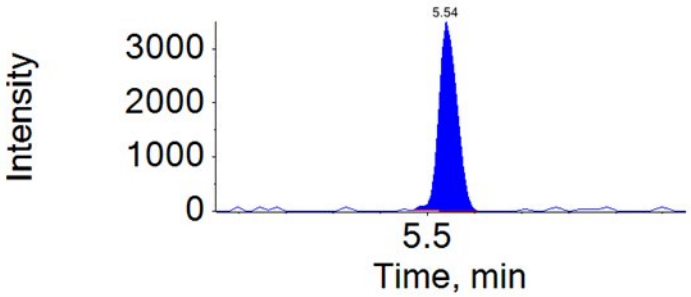
Component: PFNA_2
Secondary Mass: 463.0 / 169.0



Component: PFNS
Primary Mass: 549.0 / 80.0



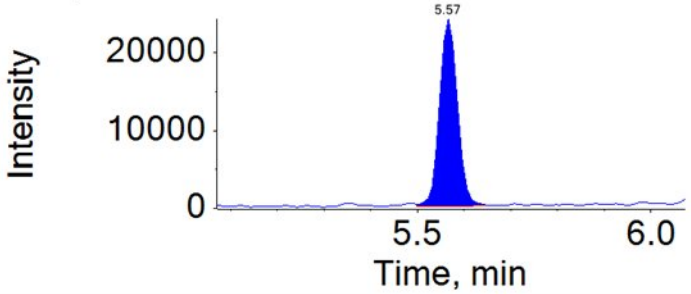
Component: PFNS_2
Secondary Mass: 549.0 / 99.0



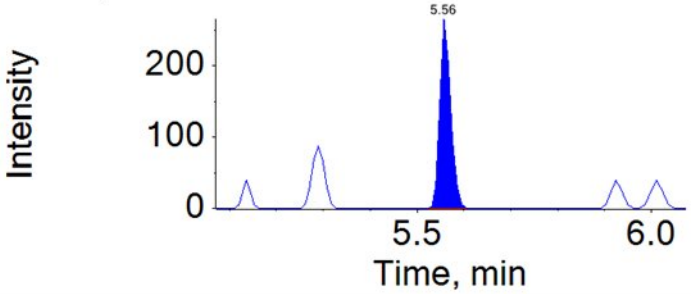
APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

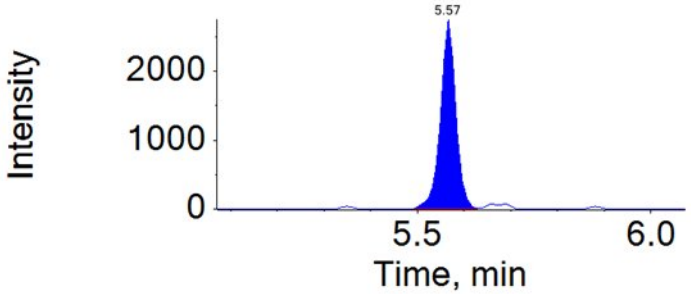
Component: PFDA
Primary Mass: 513.0 / 469.0



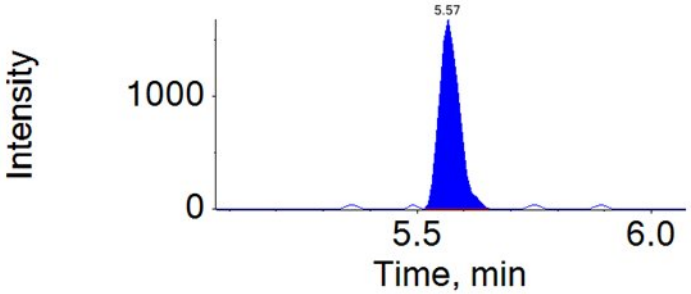
Component: PFDA_2
Secondary Mass: 513.0 / 169.0



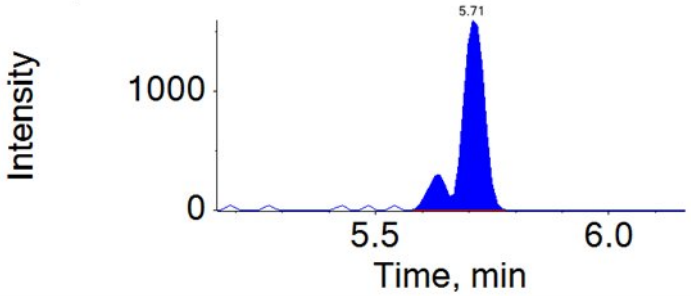
Component: 8:2-FTS
Primary Mass: 527.0 / 507.0



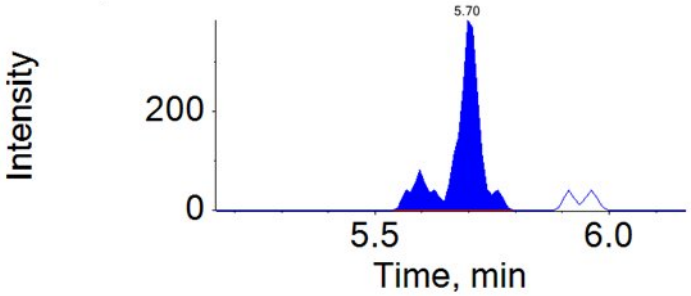
Component: 8:2 FTS_2
Secondary Mass: 527.0 / 81.0



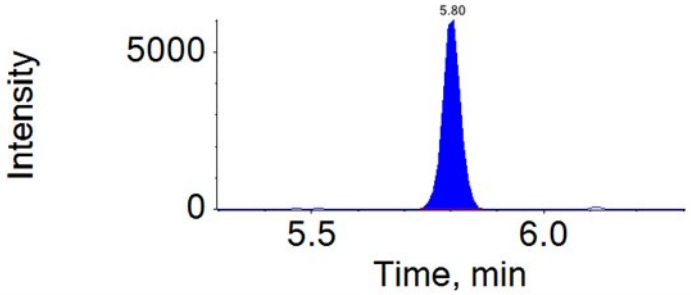
Component: NMeFOSAA
Primary Mass: 570.0 / 419.0



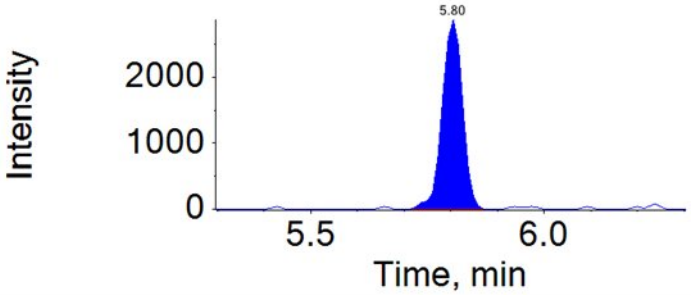
Component: NMeFOSAA_2
Secondary Mass: 570.0 / 483.0



Component: PFDS
Primary Mass: 599.0 / 80.0



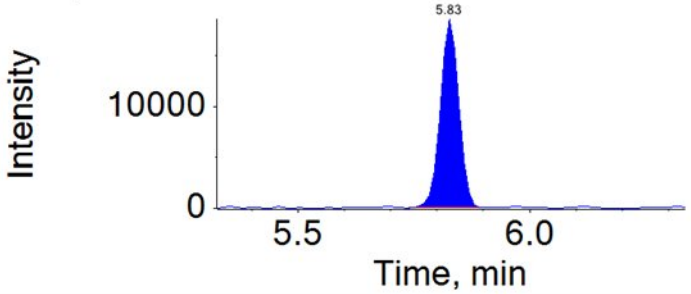
Component: PFDS_2
Secondary Mass: 599.0 / 99.0



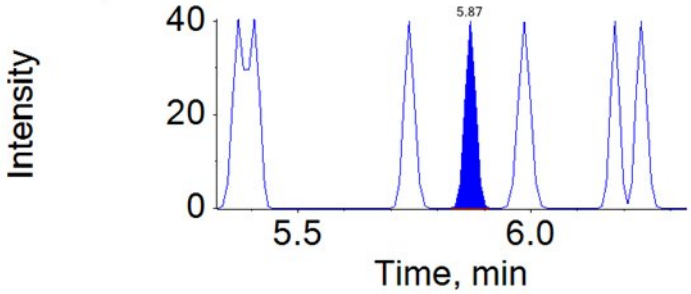
APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

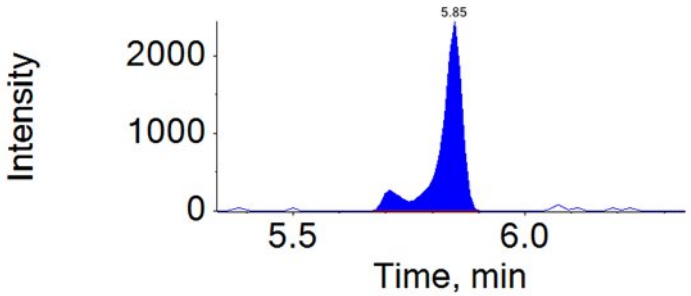
Component: PFUnDA
Primary Mass: 563.0 / 519.0



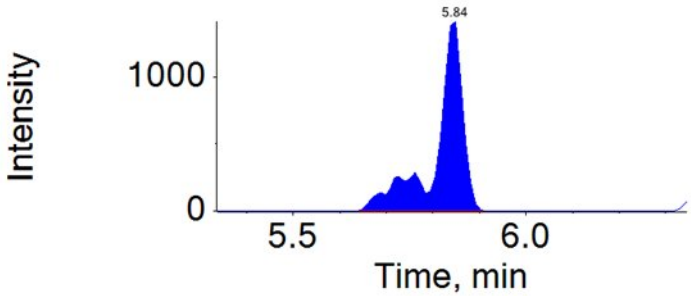
Component: PFUnDA_2
Secondary Mass: 563.0 / 169.0



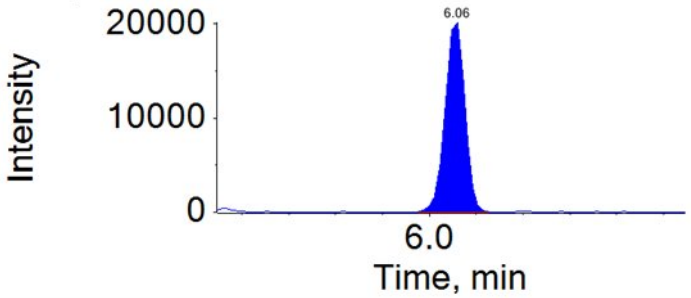
Component: NEtFOSAA
Primary Mass: 584.0 / 419.0



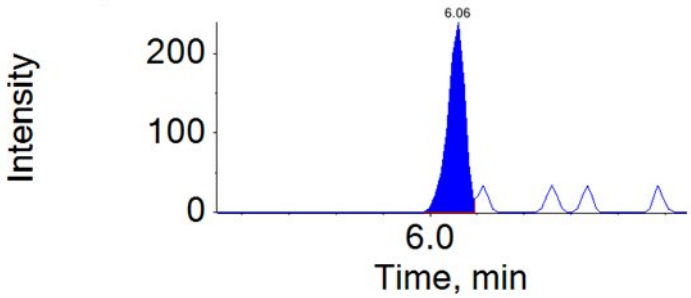
Component: NEtFOSAA_2
Secondary Mass: 584.0 / 526.0



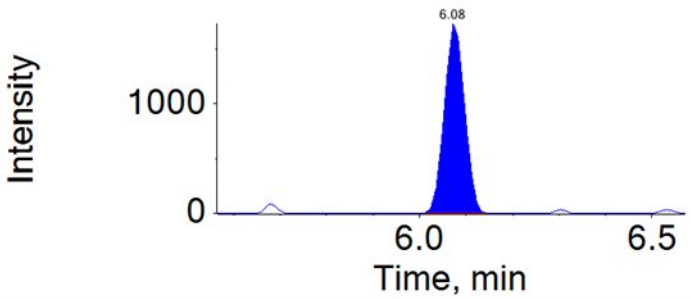
Component: PFDoDA
Primary Mass: 613.0 / 569.0



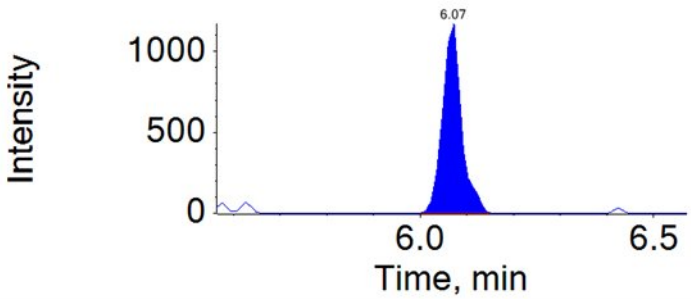
Component: PFDoDA_2
Secondary Mass: 613.0 / 169.0



Component: 10:2-FTS
Primary Mass: 627.0 / 607.0



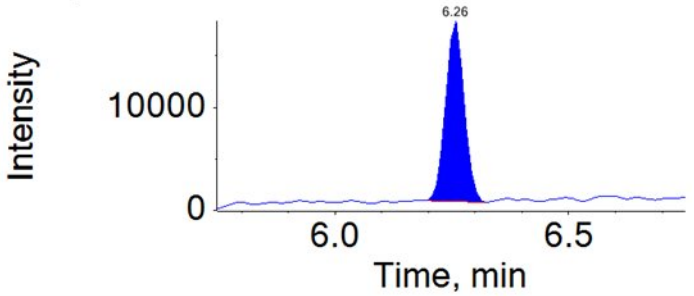
Component: 10:2 FTS_2
Secondary Mass: 627.0 / 81.0



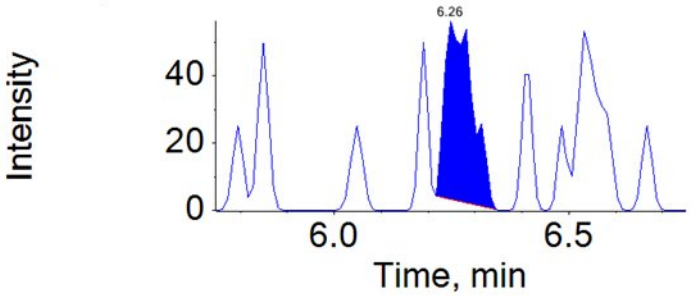
APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

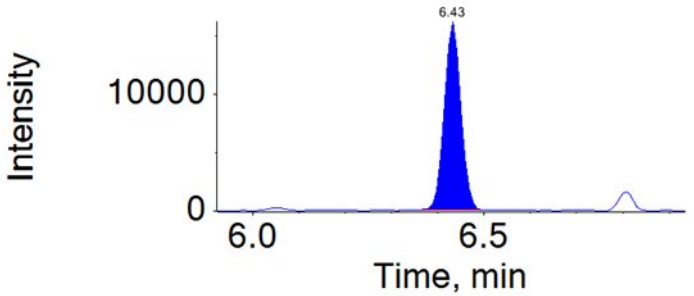
Component: PFTrDA
Primary Mass: 663.0 / 619.0



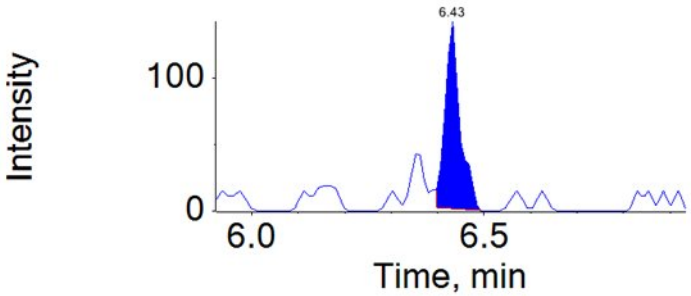
Component: PFTrDA_2
Secondary Mass: 663.0 / 169.0



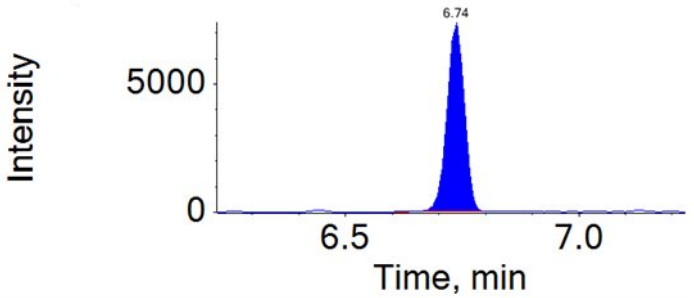
Component: PFTeDA
Primary Mass: 713.0 / 669.0



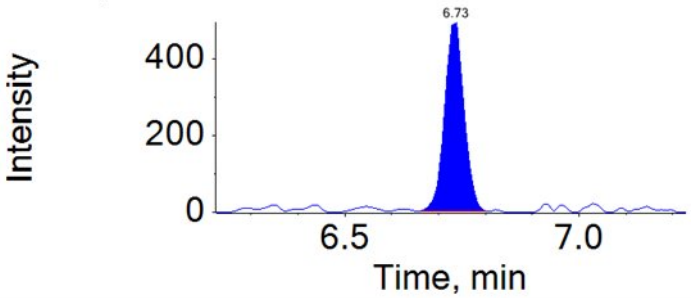
Component: PFTeDA_2
Secondary Mass: 713.0 / 169.0



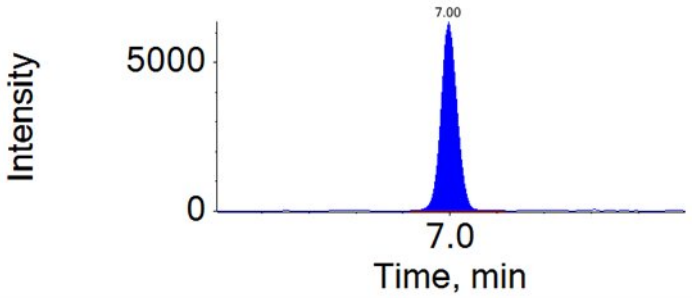
Component: PFHxDA
Primary Mass: 813.0 / 769.0



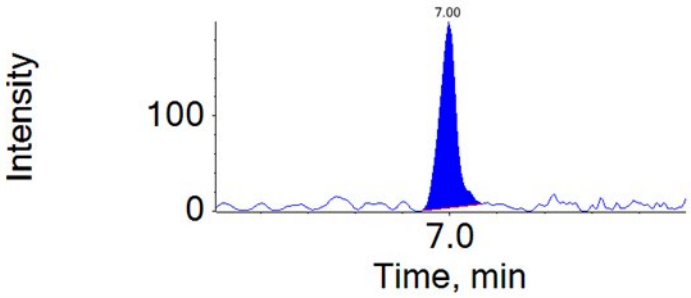
Component: PFHxDA_2
Secondary Mass: 813.0 / 169.0



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:	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

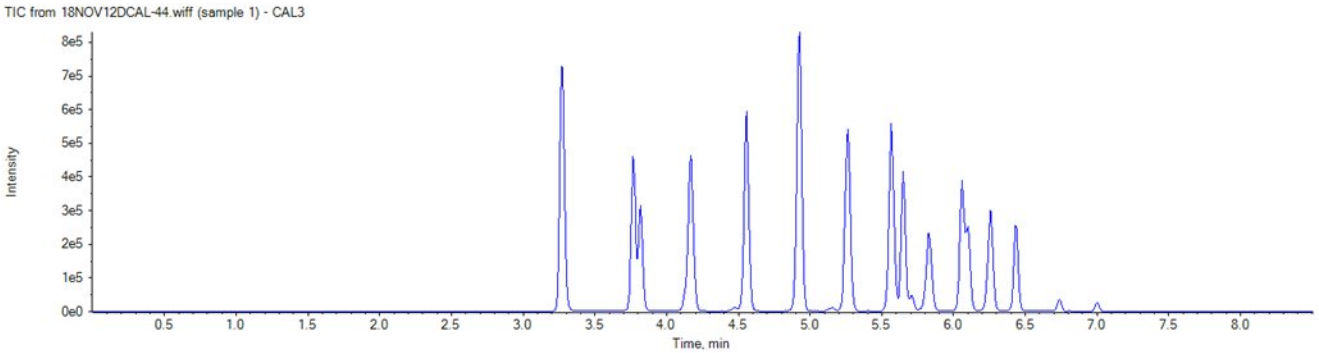
Analyte Quantitation Peak Table

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

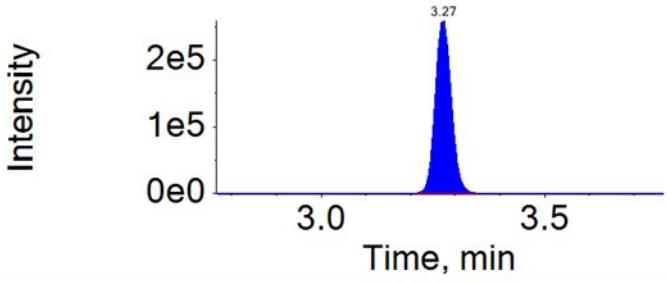


APPROVED
By MCD at 6:33 pm, 11/12/18

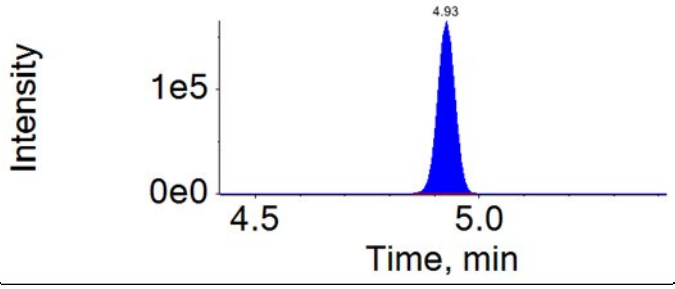
REVIEWED
By HMK at 10:53 am, 11/13/18

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

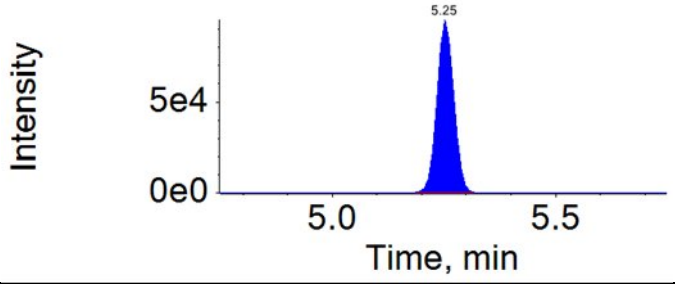
Injection Standard: 13C3-PFBA
216.0 / 172.0



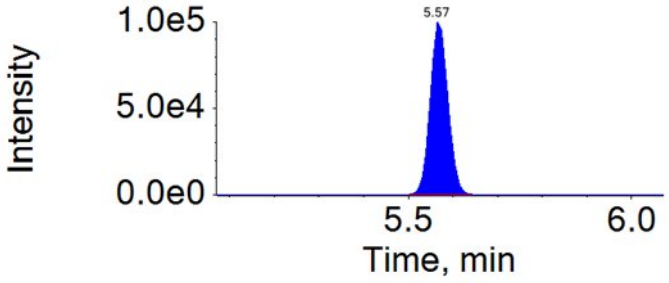
Injection Standard: 13C2-PFOA
415.0 / 370.0



Injection Standard: 13C4-PFOS
503.0 / 80.0



Injection Standard: 13C2-PFDA
515.0 / 470.0

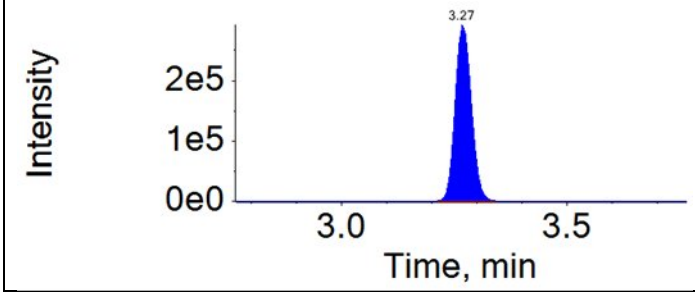


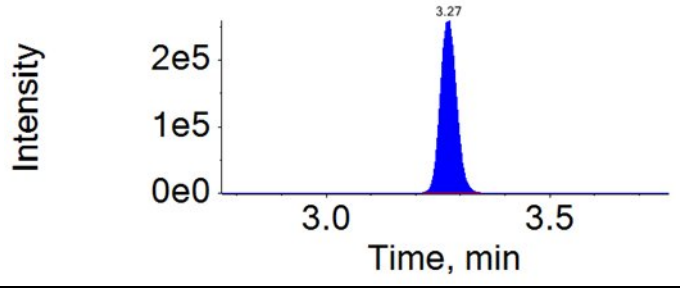
APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

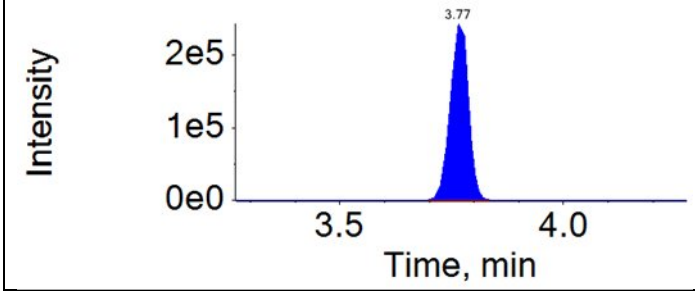
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

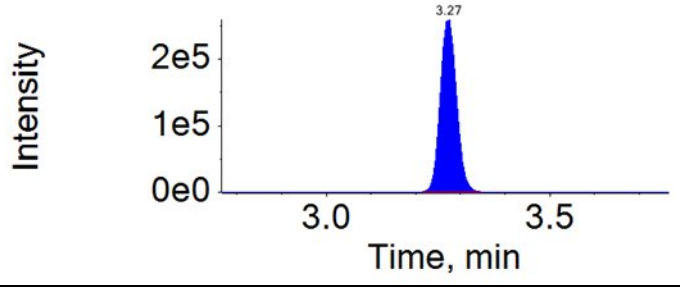
Extraction Standard: E13C4-PFBA	Injection Standard: 13C3-PFBA
217.0 / 172.0	216.0 / 172.0



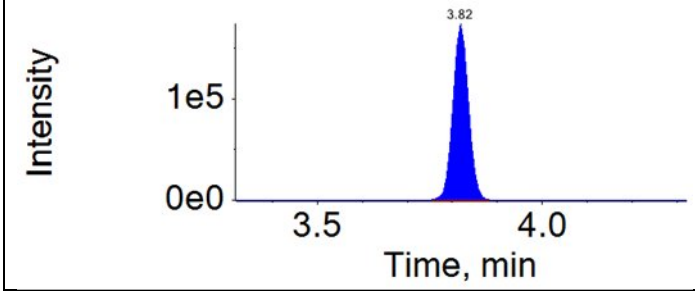


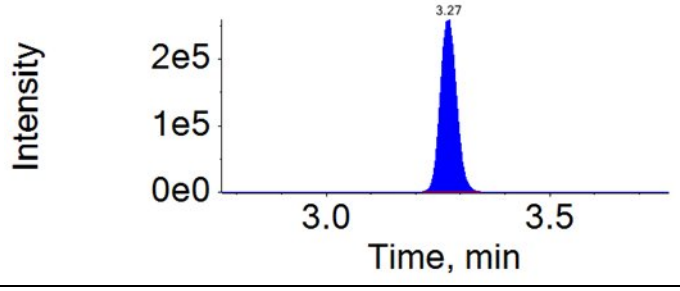
Extraction Standard: E13C5-PFPeA	Injection Standard: 13C3-PFBA
268.0 / 223.0	216.0 / 172.0



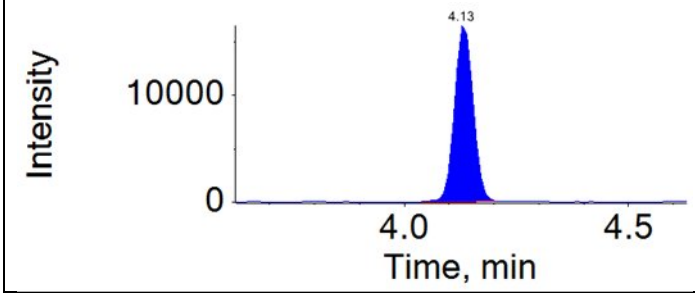


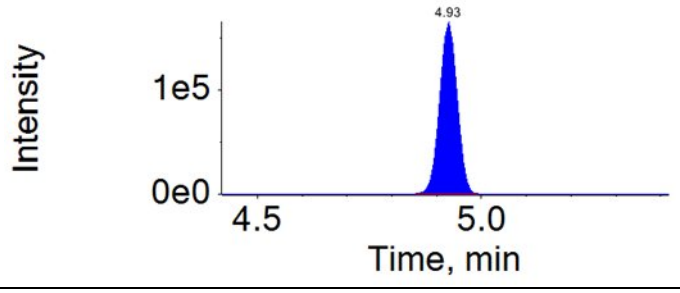
Extraction Standard: E13C3-PFBS	Injection Standard: 13C3-PFBA
302.0 / 80.0	216.0 / 172.0





Extraction Standard: E13C2-4:2-FTS	Injection Standard: 13C2-PFOA
329.0 / 81.0	415.0 / 370.0



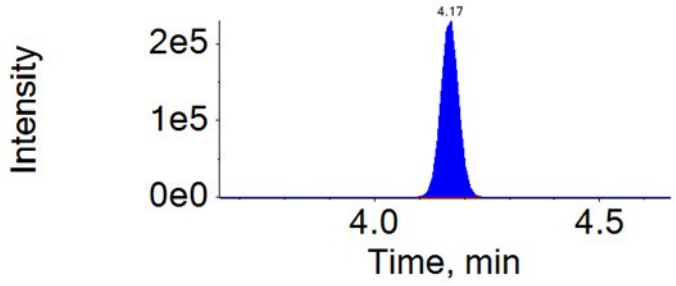


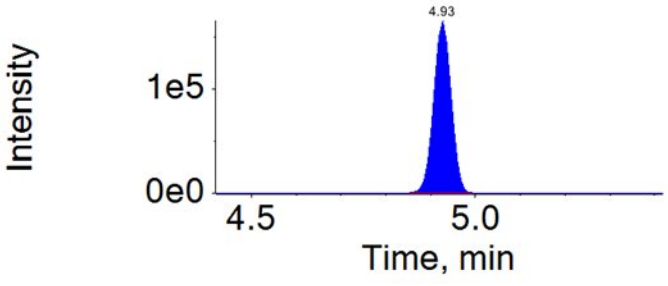
APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

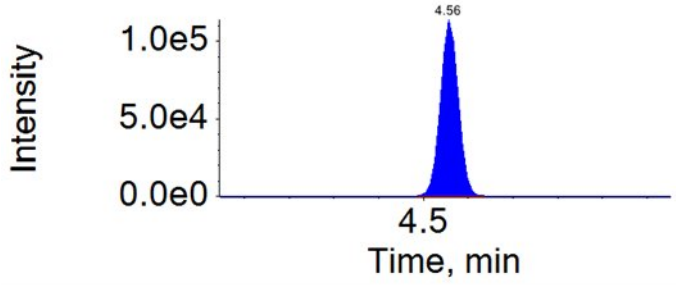
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

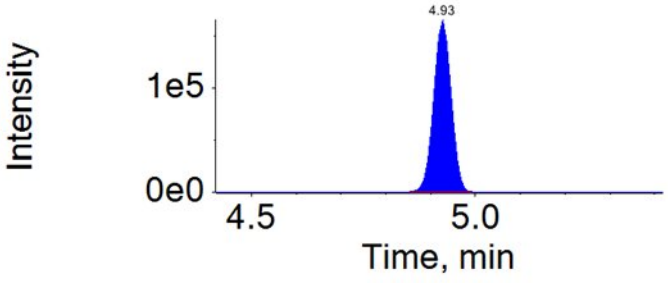
Extraction Standard: E13C5-PFHxA	Injection Standard: 13C2-PFOA
318.0 / 273.0	415.0 / 370.0



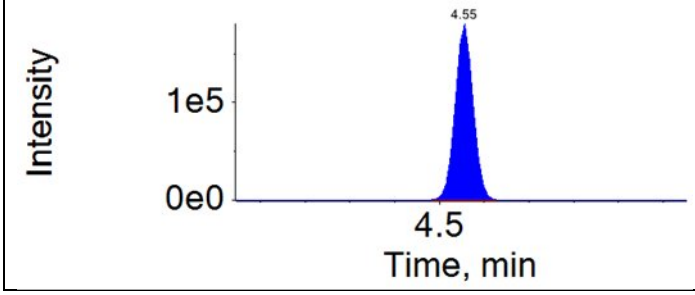


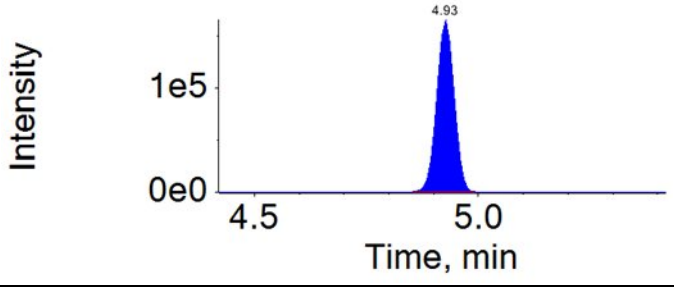
Extraction Standard: E13C3-PFHxS	Injection Standard: 13C2-PFOA
402.0 / 80.0	415.0 / 370.0



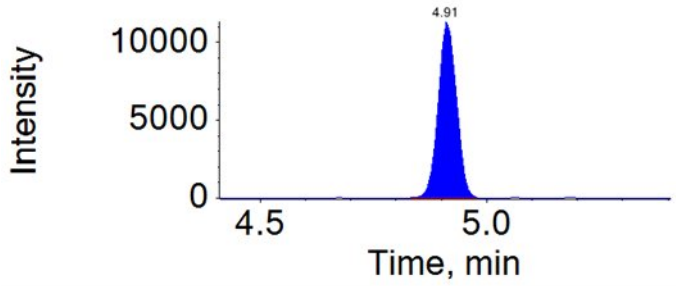


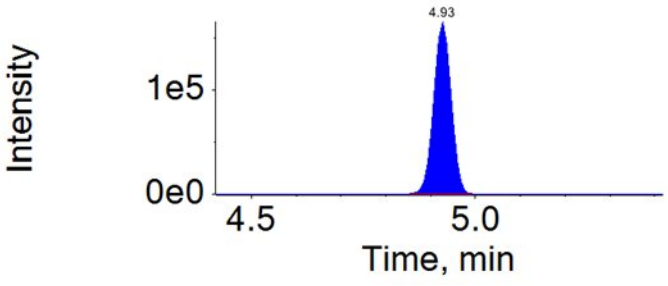
Extraction Standard: E13C4-PFHpA	Injection Standard: 13C2-PFOA
367.0 / 322.0	415.0 / 370.0





Extraction Standard: E13C2-6:2-FTS	Injection Standard: 13C2-PFOA
429.0 / 81.0	415.0 / 370.0



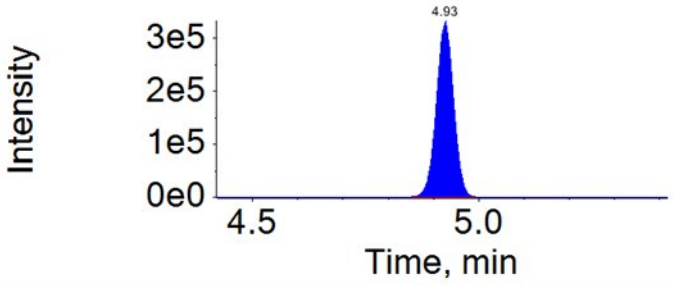


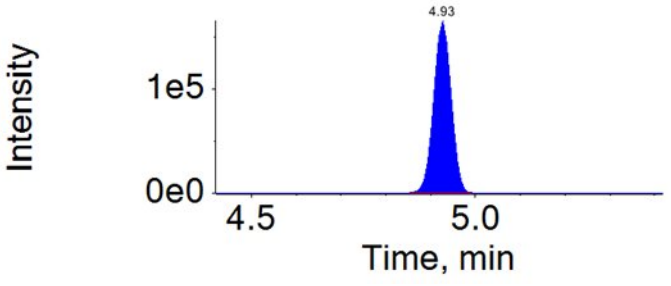
APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

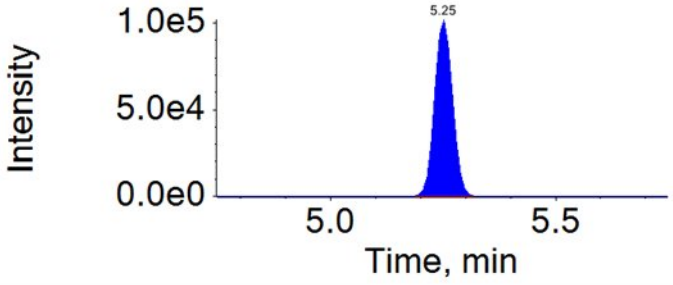
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

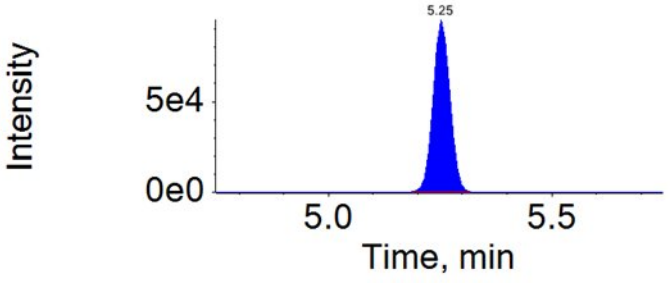
Extraction Standard: E13C8-PFOA	Injection Standard: 13C2-PFOA
421.0 / 376.0	415.0 / 370.0



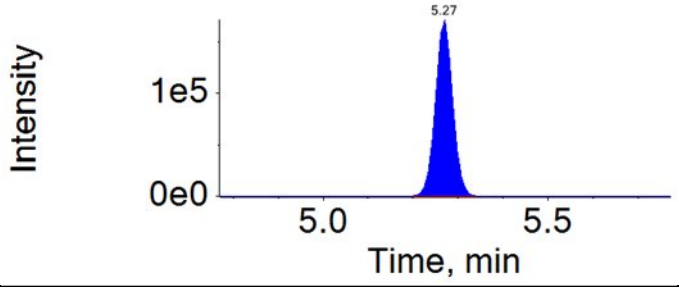


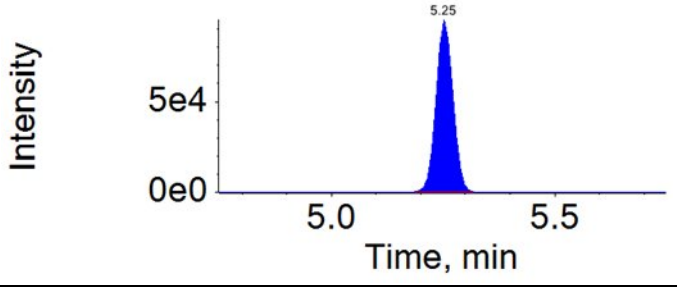
Extraction Standard: E13C8-PFOS	Injection Standard: 13C4-PFOS
507.0 / 80.0	503.0 / 80.0



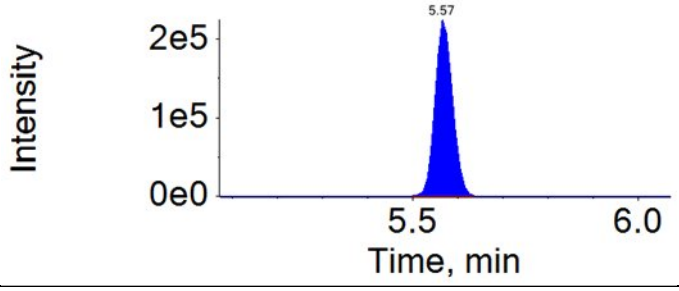


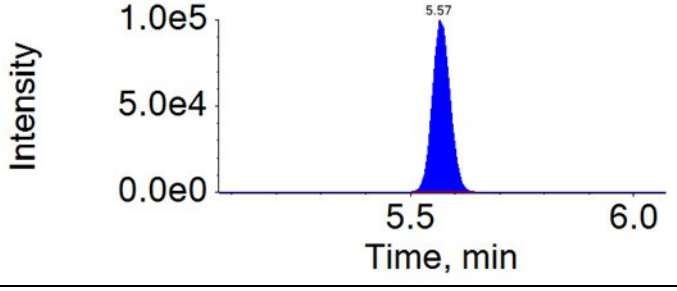
Extraction Standard: E13C9-PFNA	Injection Standard: 13C4-PFOS
472.0 / 427.0	503.0 / 80.0





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

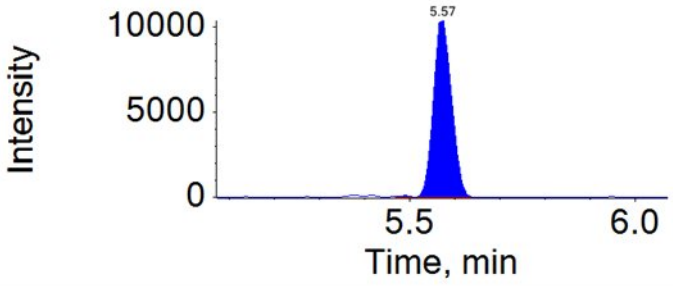
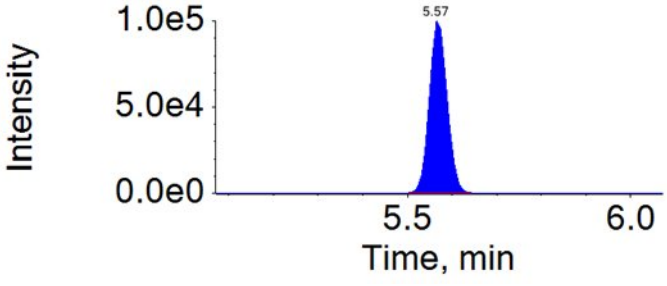


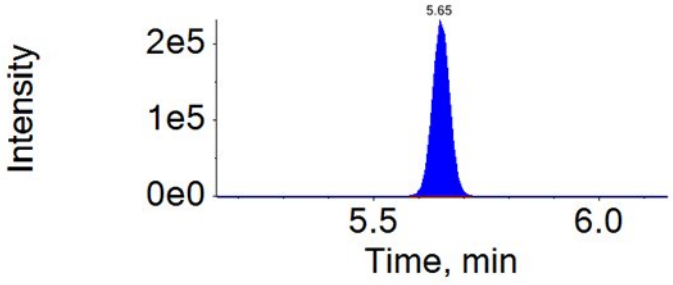
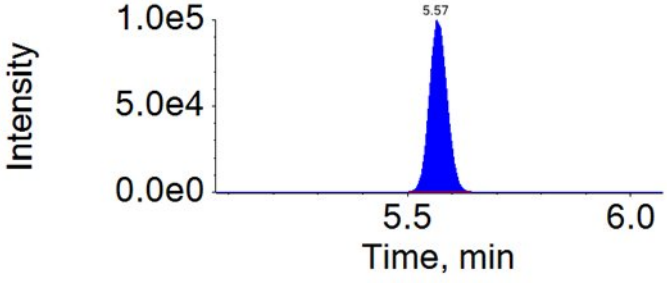


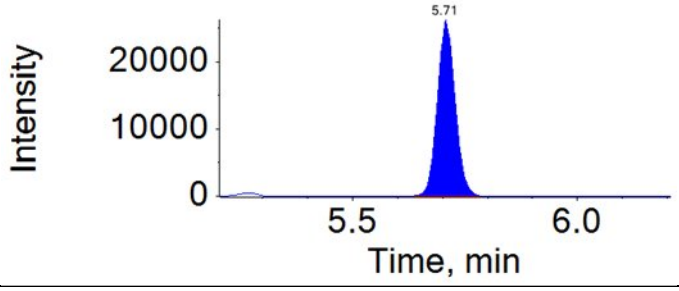
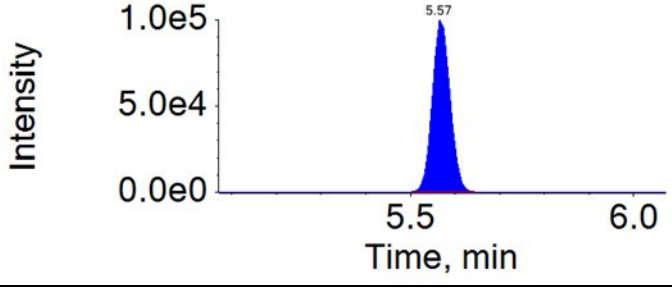
APPROVED
By MCD at 6:33 pm, 11/12/18

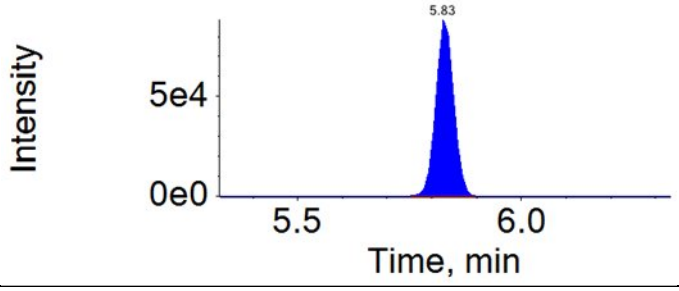
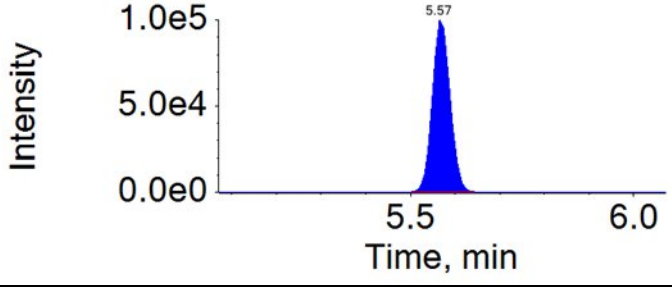
REVIEWED
By HMK at 10:53 am, 11/13/18

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

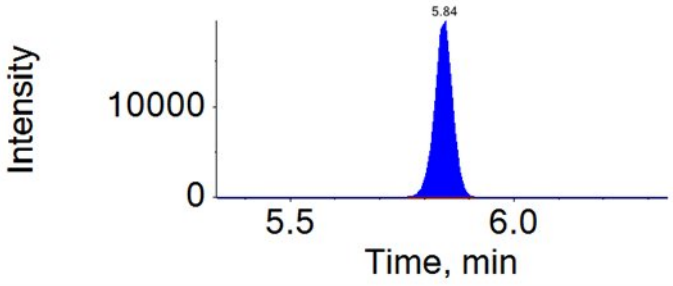
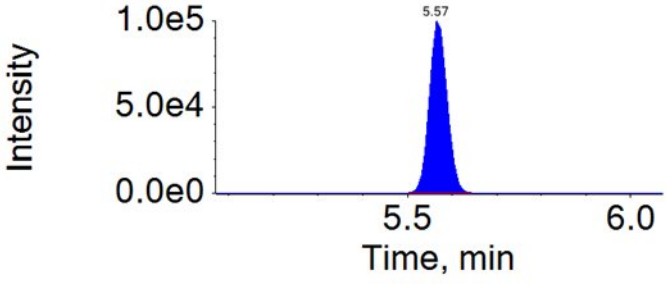
Extraction Standard: E13C2-8:2-FTS	Injection Standard: 13C2-PFDA
529.0 / 81.0	515.0 / 470.0
	

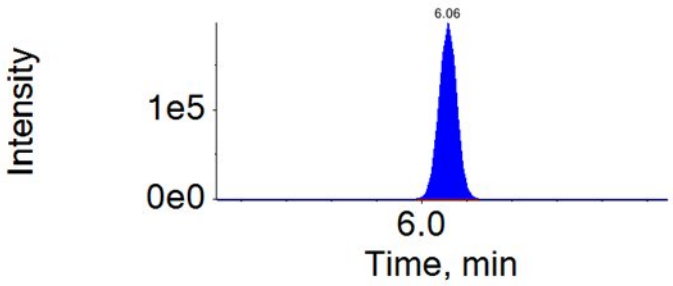
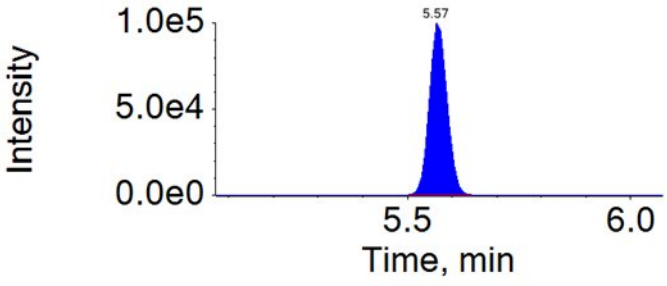
Extraction Standard: E13C8-PFOSA	Injection Standard: 13C2-PFDA
506.0 / 78.0	515.0 / 470.0
	

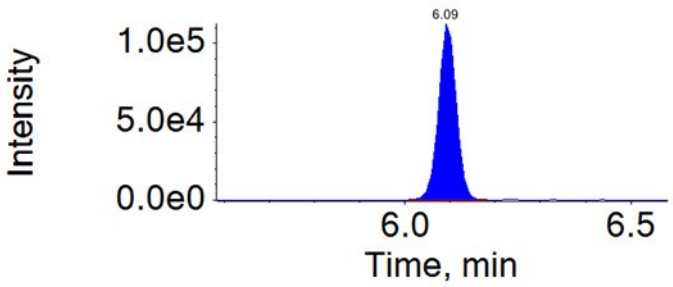
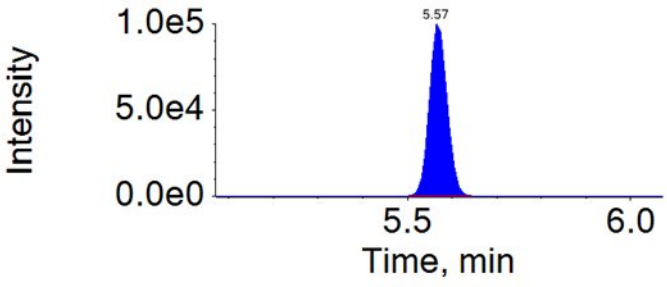
Extraction Standard: Ed3-NMeFOSAA	Injection Standard: 13C2-PFDA
573.0 / 419.0	515.0 / 470.0
	

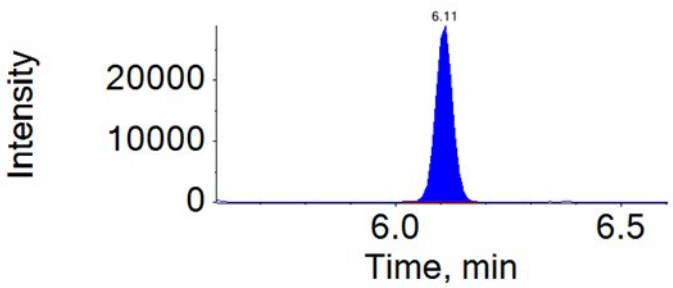
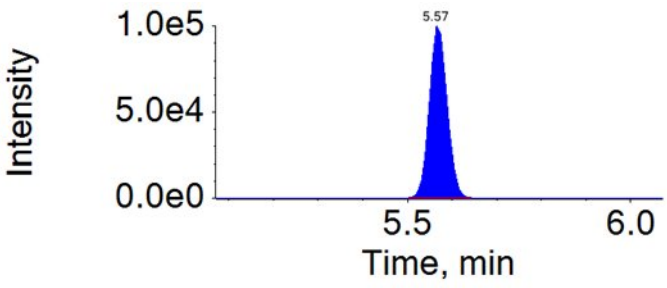
Extraction Standard: E13C7-PFUnDA	Injection Standard: 13C2-PFDA
570.0 / 525.0	515.0 / 470.0
	

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
	

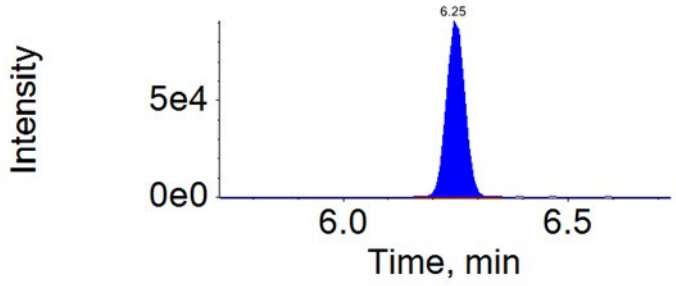
Extraction Standard: E13C2-PFDoDA	Injection Standard: 13C2-PFDA
615.0 / 570.0	515.0 / 470.0
	

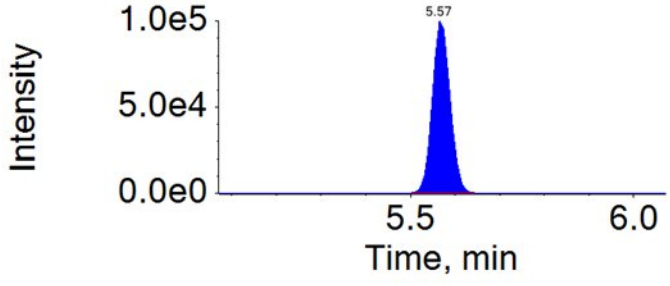
Extraction Standard: Ed7-NMePFOSAE	Injection Standard: 13C2-PFDA
623.0 / 59.0	515.0 / 470.0
	

Extraction Standard: Ed3-NMePFOSA	Injection Standard: 13C2-PFDA
515.0 / 169.0	515.0 / 470.0
	

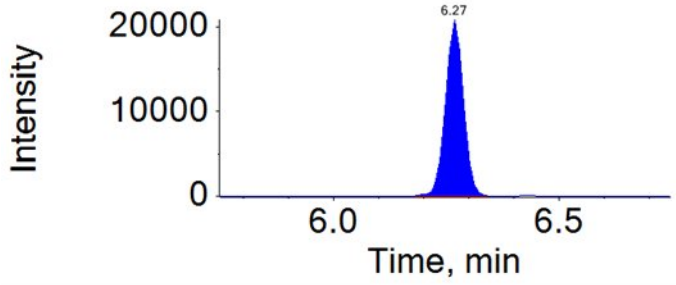
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

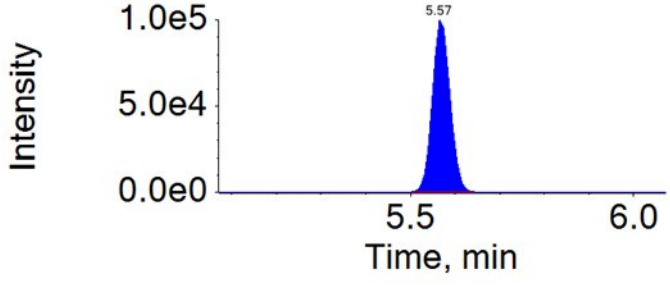
Extraction Standard: Ed9-NEtPFOSAE	Injection Standard: 13C2-PFDA
639.0 / 59.0	515.0 / 470.0



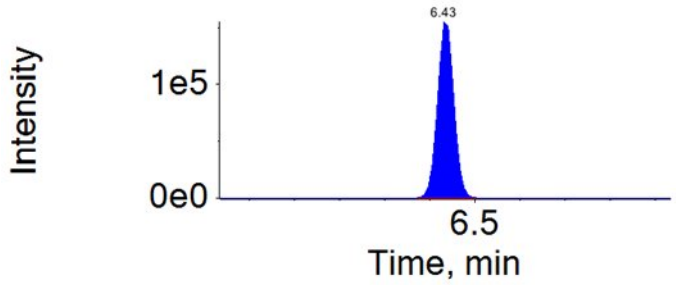


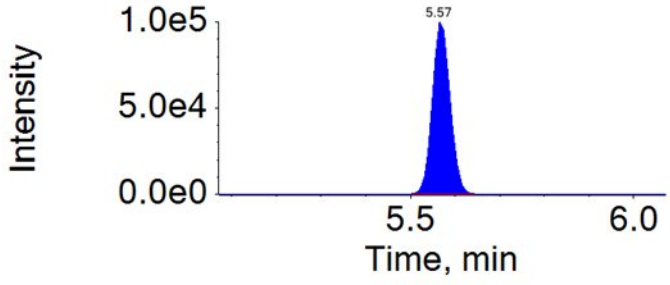
Extraction Standard: Ed5-NEtPFOSA	Injection Standard: 13C2-PFDA
531.0 / 169.0	515.0 / 470.0





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



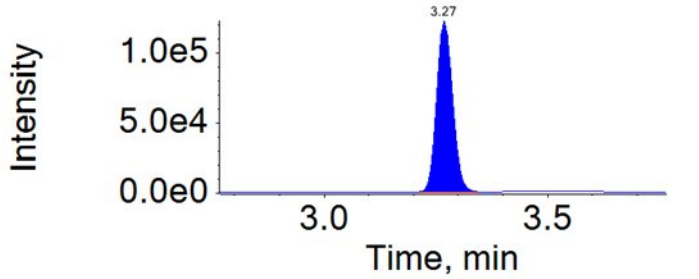


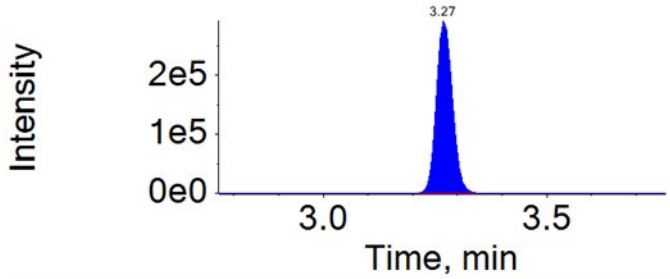
APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

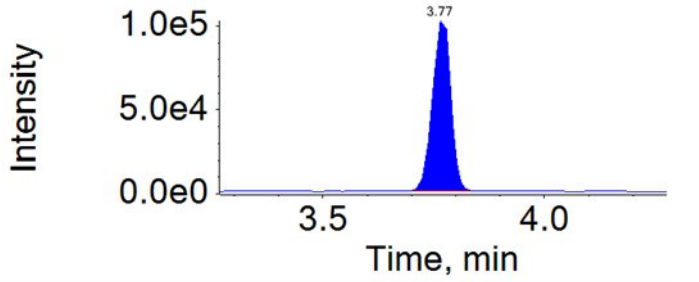
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

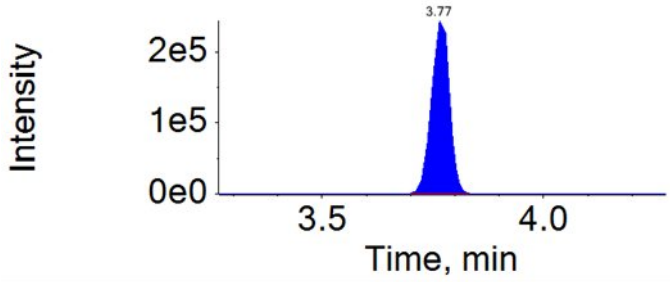
Analyte: PFBA	Extraction Standard: 13C4-PFBA
213.0 / 169.0	217.0 / 172.0



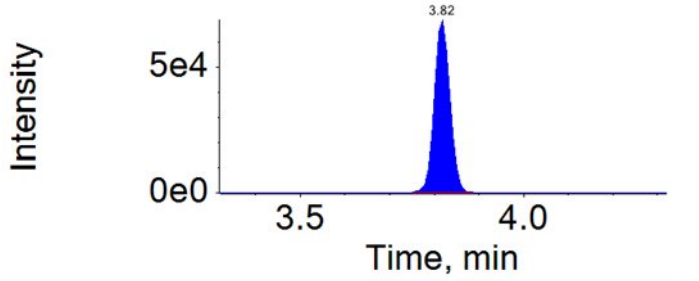


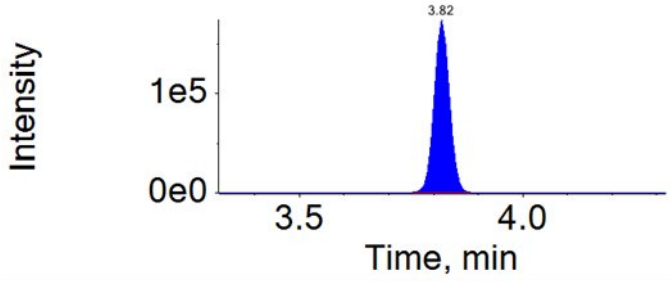
Analyte: PFPeA	Extraction Standard: 13C5-PFPeA
263.0 / 219.0	268.0 / 223.0



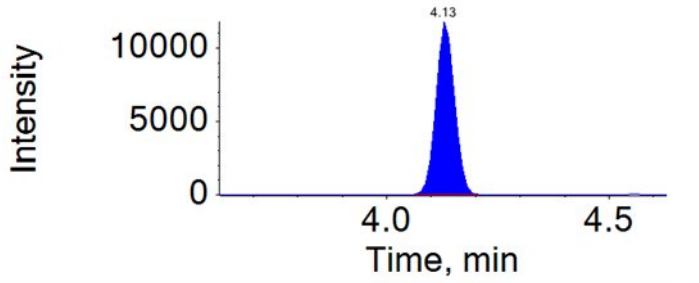


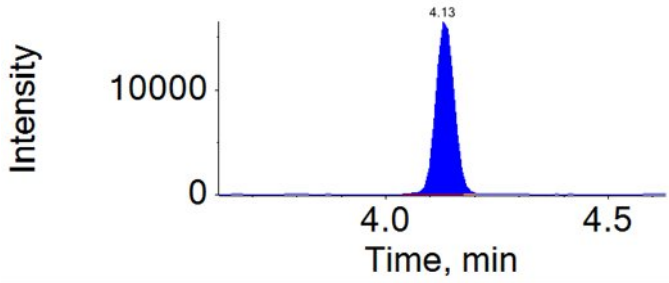
Analyte: PFBS	Extraction Standard: 13C3-PFBS
299.0 / 80.0	302.0 / 80.0





Analyte: 4:2-FTS	Extraction Standard: 13C2-4:2-FTS
327.0 / 307.0	329.0 / 81.0



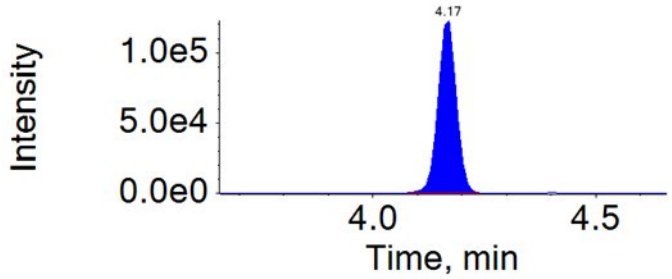


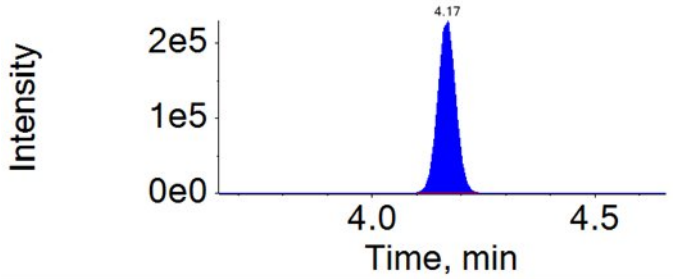
APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

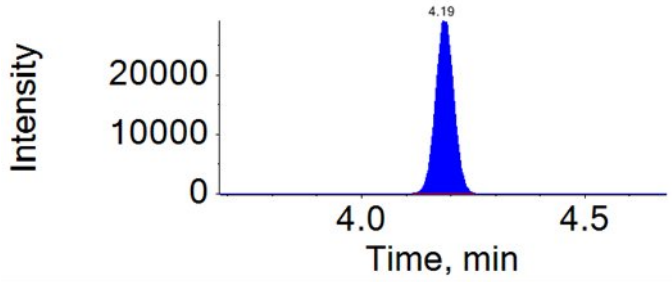
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

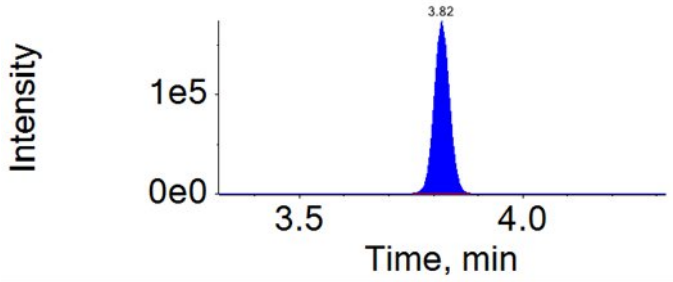
Analyte: PFHxA	Extraction Standard: 13C5-PFHxA
313.0 / 269.0	318.0 / 273.0



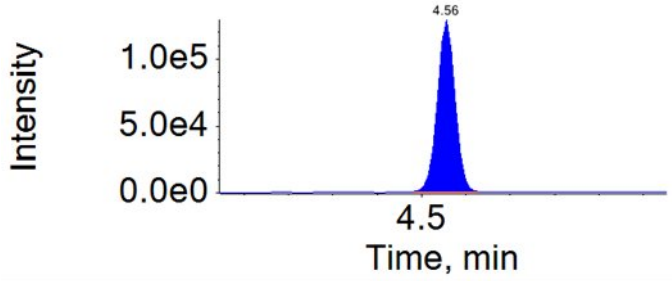


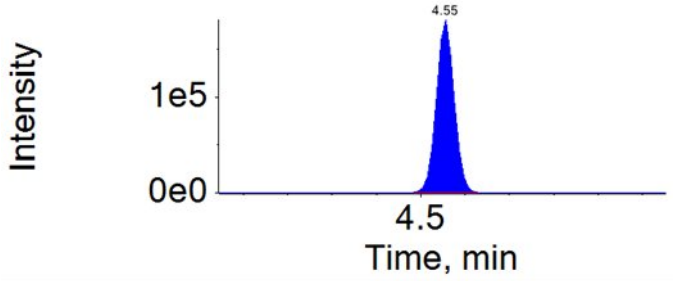
Analyte: PFPeS	Extraction Standard: 13C3-PFBS
349.0 / 80.0	302.0 / 80.0



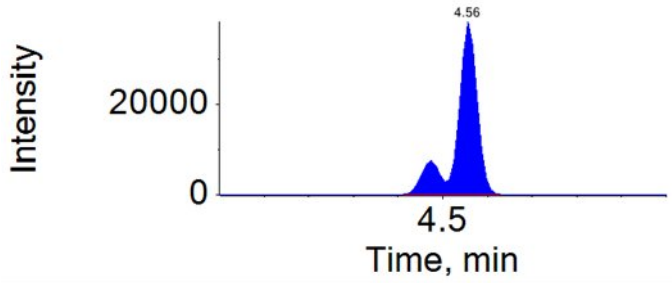


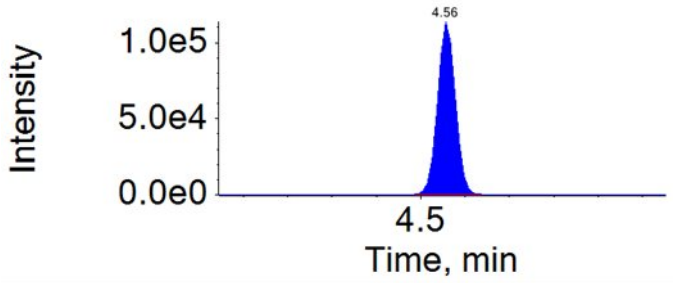
Analyte: PFHpA	Extraction Standard: 13C4-PFHpA
363.0 / 319.0	367.0 / 322.0





Analyte: PFHxS	Extraction Standard: 13C3-PFHxS
399.0 / 80.0	402.0 / 80.0



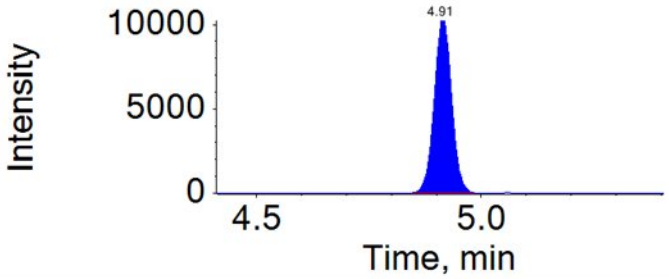


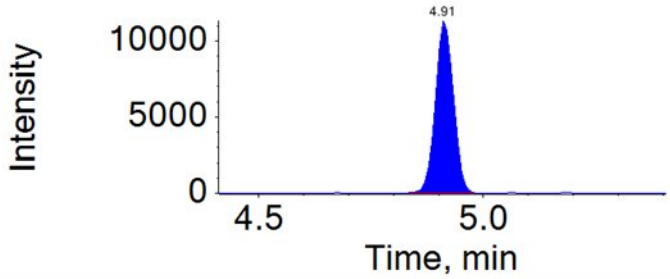
APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

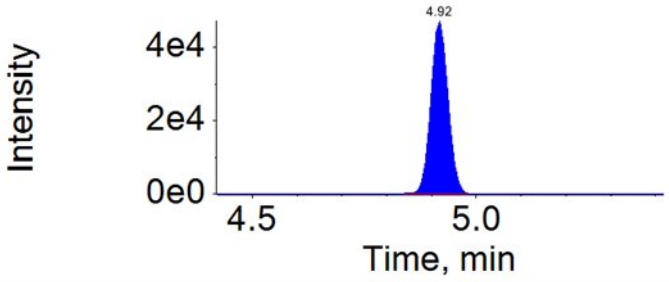
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

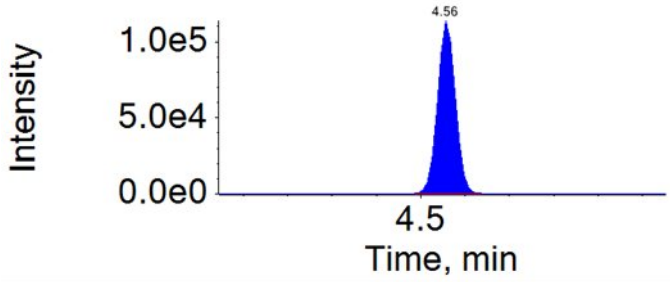
Analyte: 6:2-FTS	Extraction Standard: 13C2-6:2-FTS
427.0 / 407.0	429.0 / 81.0



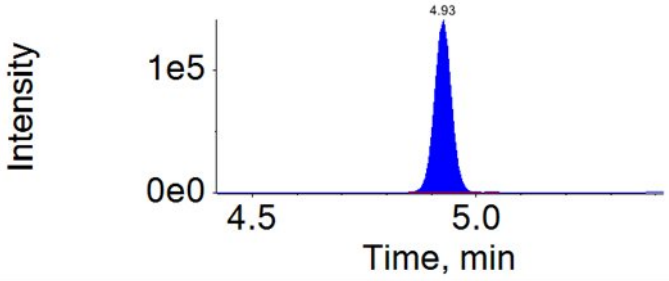


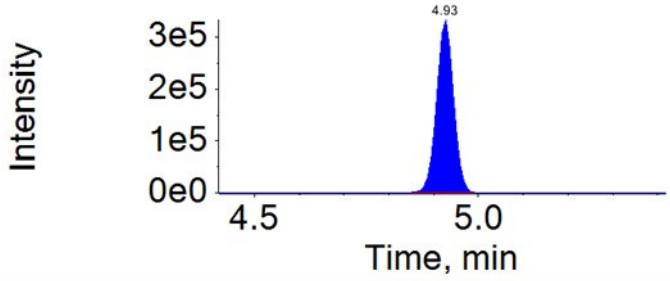
Analyte: PFHpS	Extraction Standard: 13C3-PFHxS
449.0 / 80.0	402.0 / 80.0



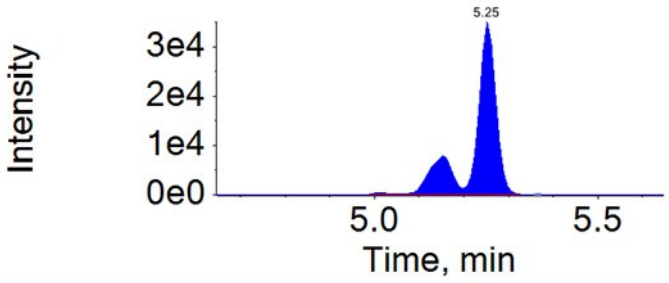


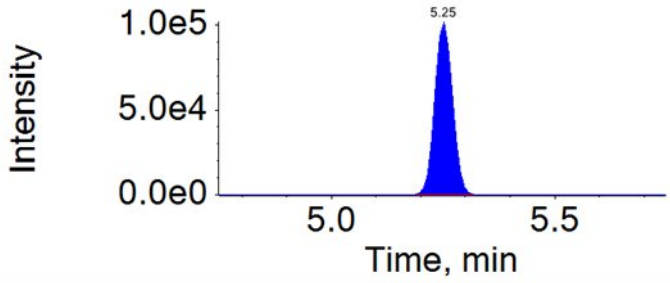
Analyte: PFOA	Extraction Standard: 13C8-PFOA
413.0 / 369.0	421.0 / 376.0





Analyte: PFOS	Extraction Standard: 13C8-PFOS
499.0 / 80.0	507.0 / 80.0



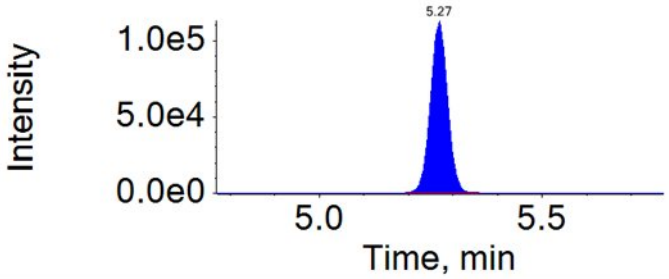


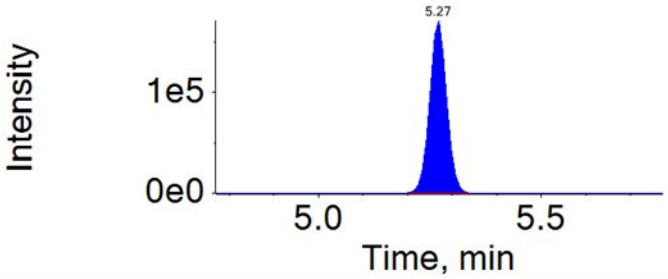
APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

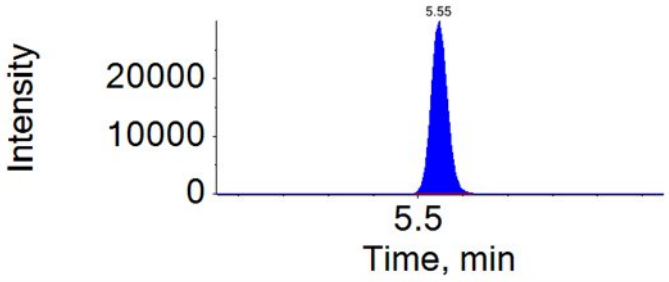
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

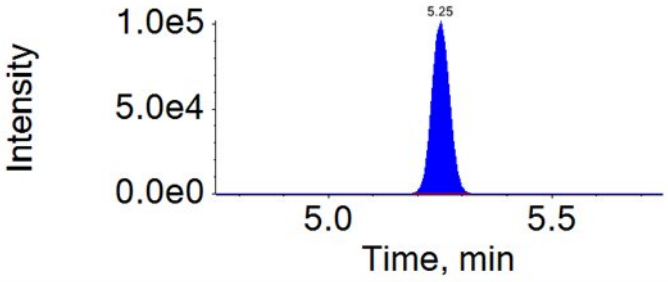
Analyte: PFNA	Extraction Standard: 13C9-PFNA
463.0 / 419.0	472.0 / 427.0



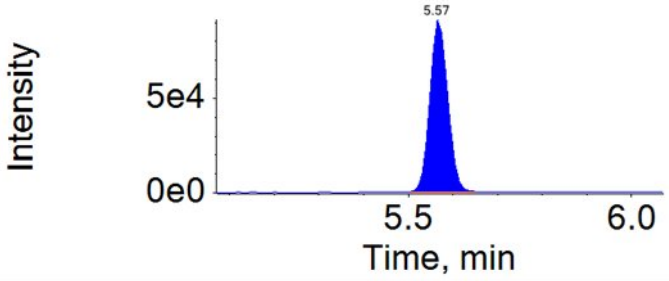


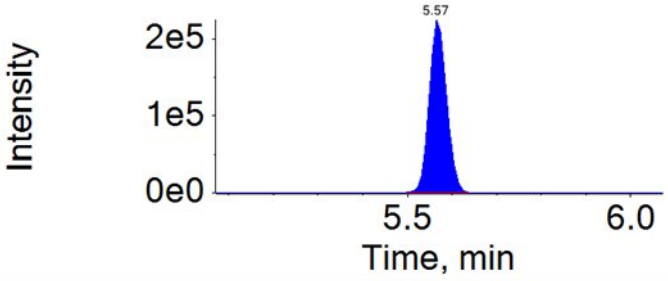
Analyte: PFNS	Extraction Standard: 13C8-PFOS
549.0 / 80.0	507.0 / 80.0



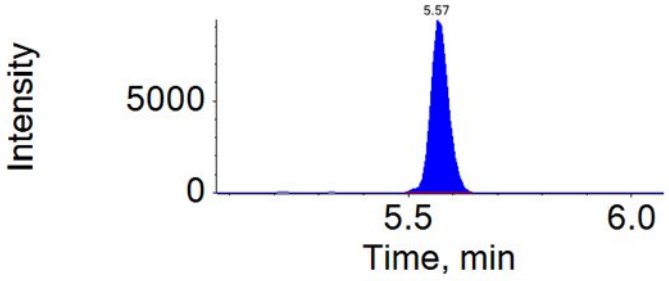


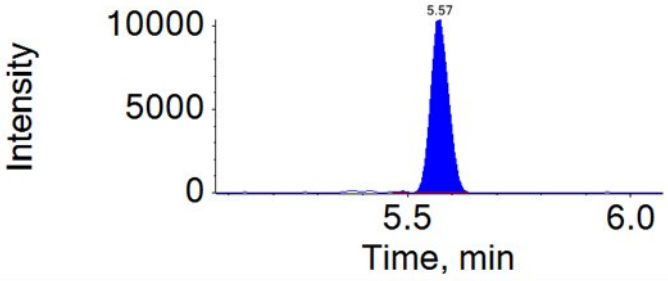
Analyte: PFDA	Extraction Standard: 13C6-PFDA
513.0 / 469.0	519.0 / 474.0





Analyte: 8:2-FTS	Extraction Standard: 13C2-8:2-FTS
527.0 / 507.0	529.0 / 81.0



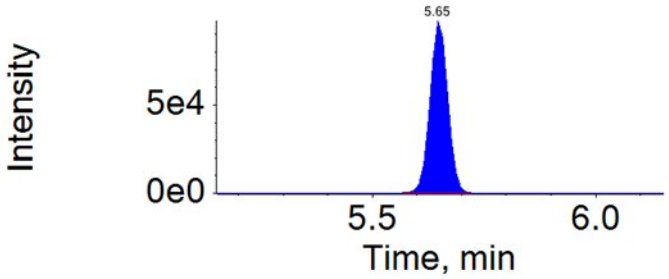


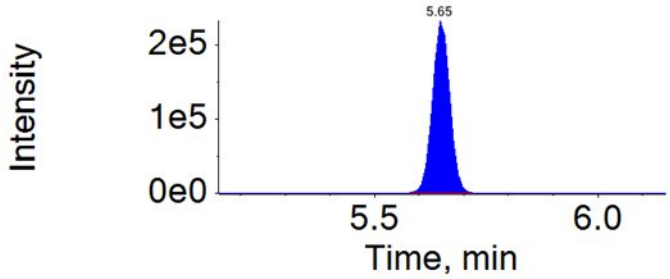
APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

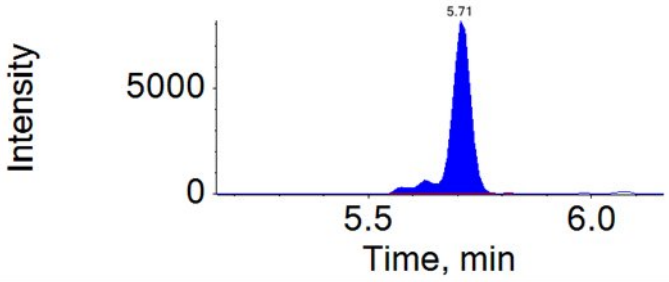
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

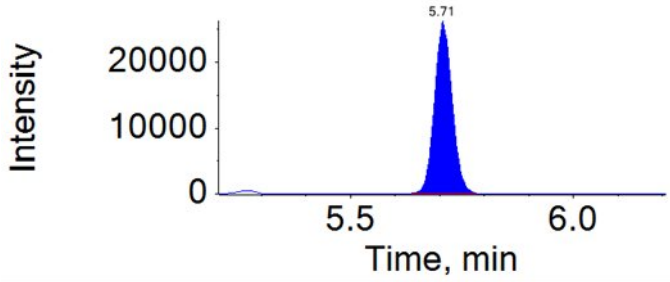
Analyte: PFOSA	Extraction Standard: 13C8-PFOSA
498.0 / 78.0	506.0 / 78.0



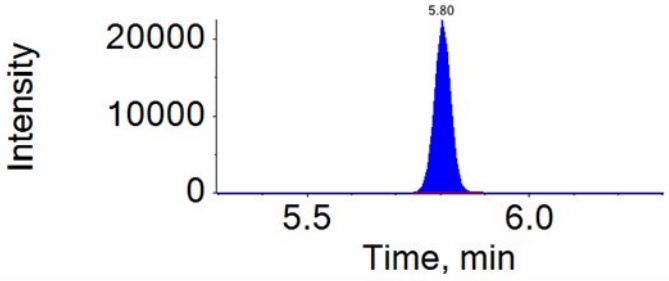


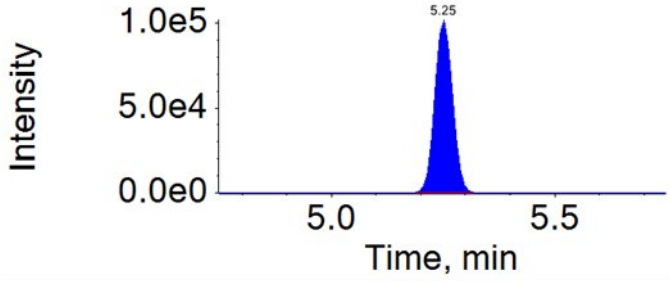
Analyte: NMeFOSAA	Extraction Standard: d3-NMeFOSAA
570.0 / 419.0	573.0 / 419.0



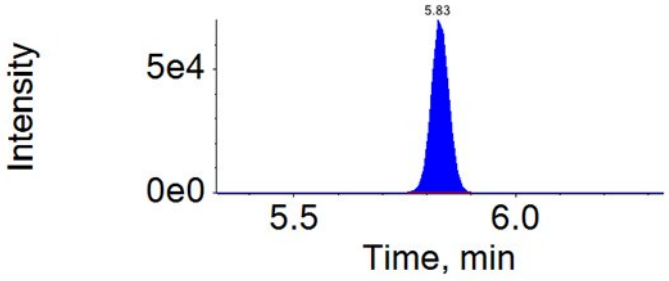


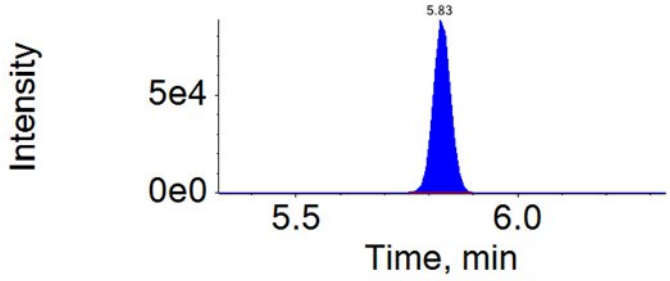
Analyte: PFDS	Extraction Standard: 13C8-PFOS
599.0 / 80.0	507.0 / 80.0





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



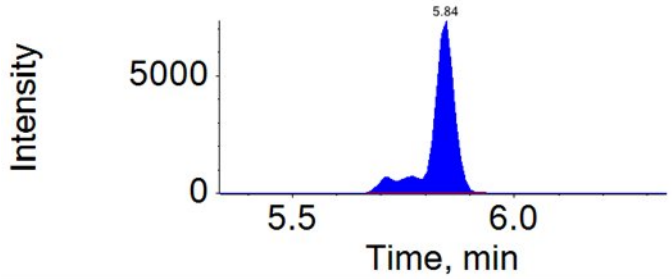


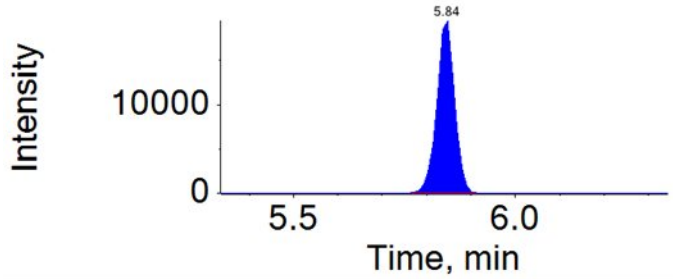
APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

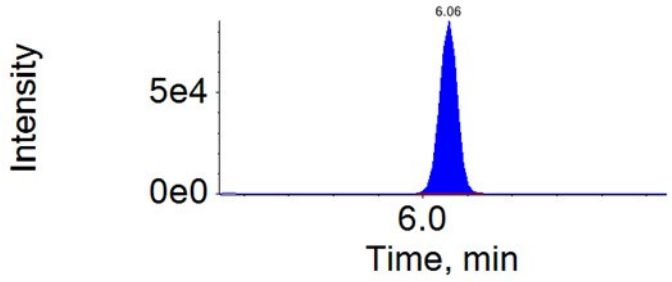
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

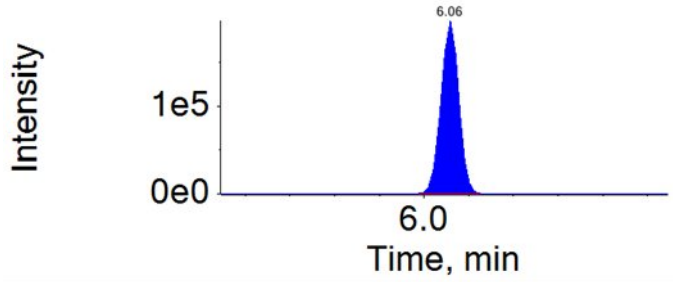
Analyte: NEtFOSAA	Extraction Standard: d5-NEtFOSAA
584.0 / 419.0	589.0 / 419.0



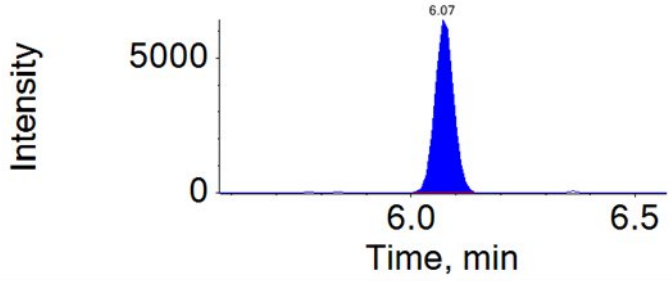


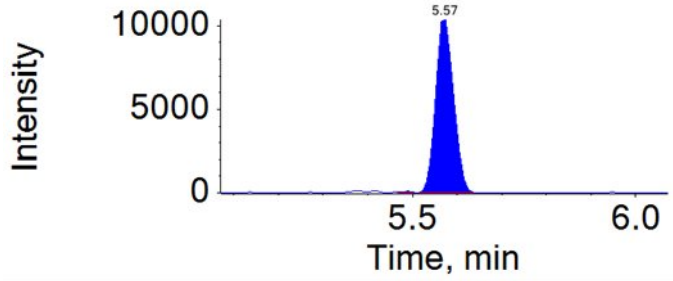
Analyte: PFDoDA	Extraction Standard: 13C2-PFDoDA
613.0 / 569.0	615.0 / 570.0



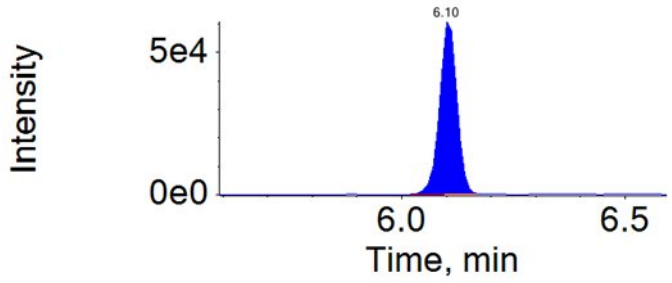


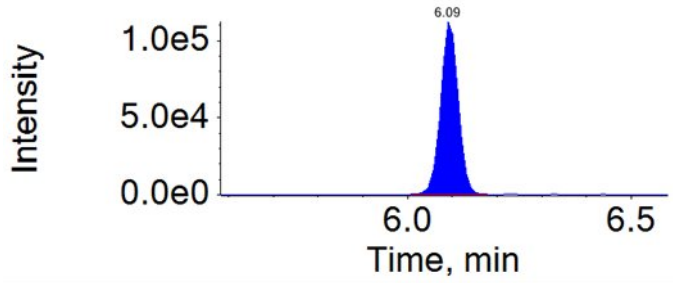
Analyte: 10:2-FTS	Extraction Standard: 13C2-8:2-FTS
627.0 / 607.0	529.0 / 81.0





Analyte: NMePFOSAE	Extraction Standard: d7-NMePFOSAE
616.0 / 59.0	623.0 / 59.0



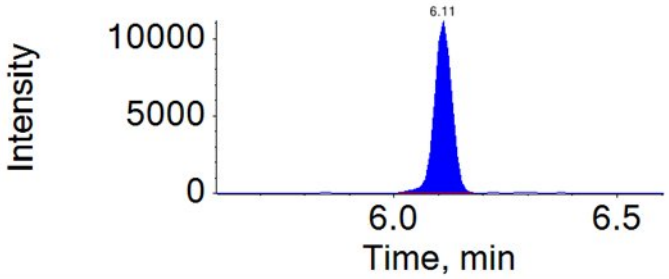


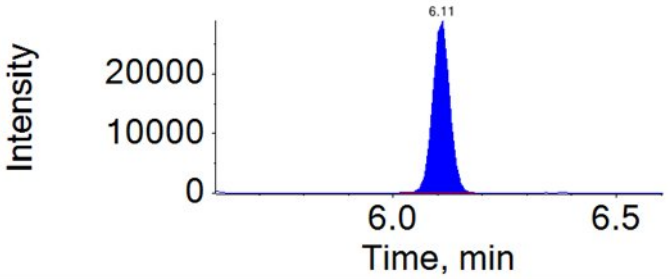
APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

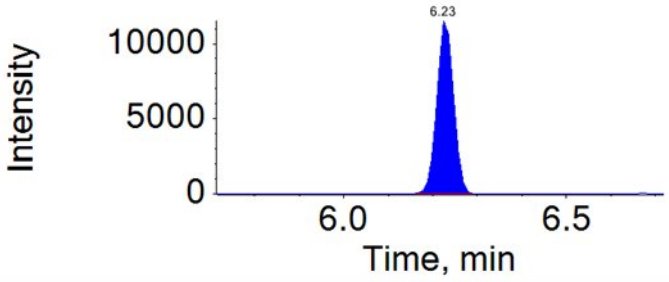
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

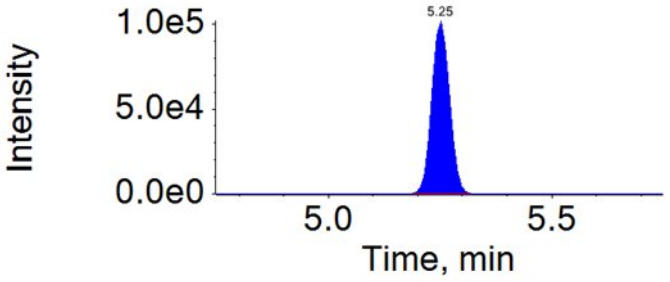
Analyte: NMePFOSA	Extraction Standard: d3-NMePFOSA
512.0 / 169.0	515.0 / 169.0



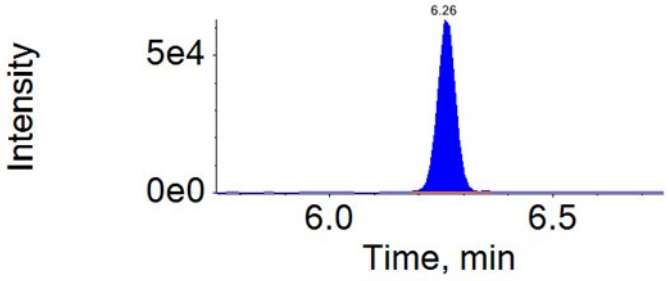


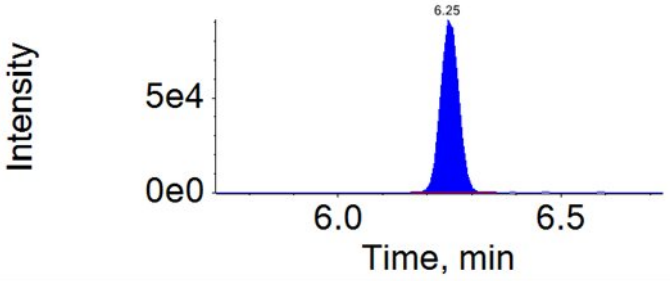
Analyte: PFDoS	Extraction Standard: 13C8-PFOS
699.0 / 80.0	507.0 / 80.0



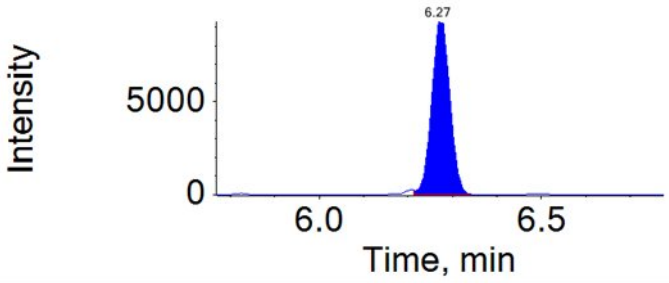


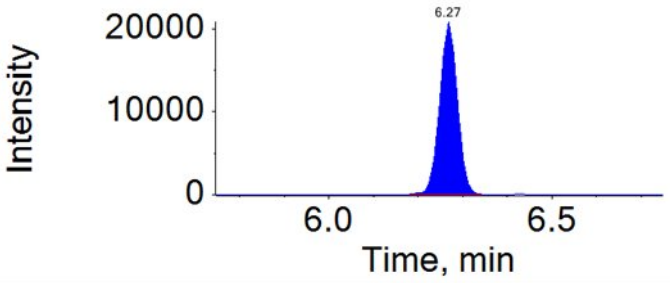
Analyte: NEtPFOSAE	Extraction Standard: d9-NEtPFOSAE
630.0 / 59.0	639.0 / 59.0





Analyte: NEtPFOSA	Extraction Standard: d5-NEtPFOSA
526.0 / 169.0	531.0 / 169.0



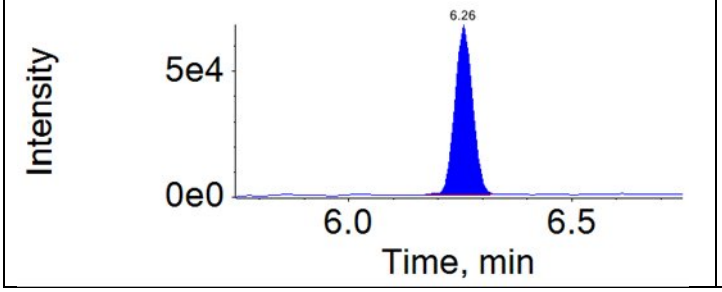


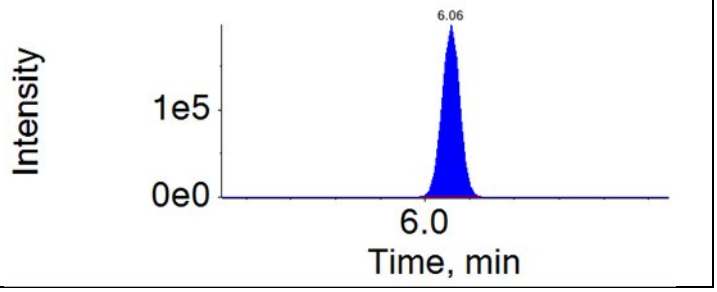
APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

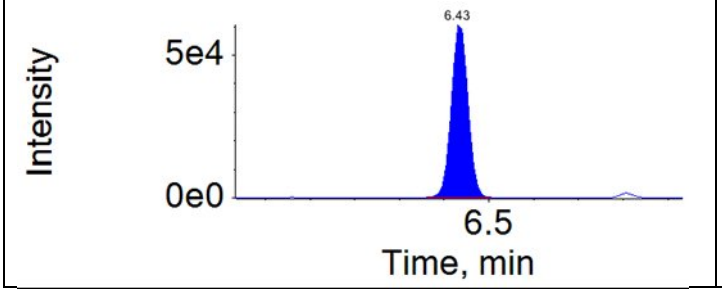
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

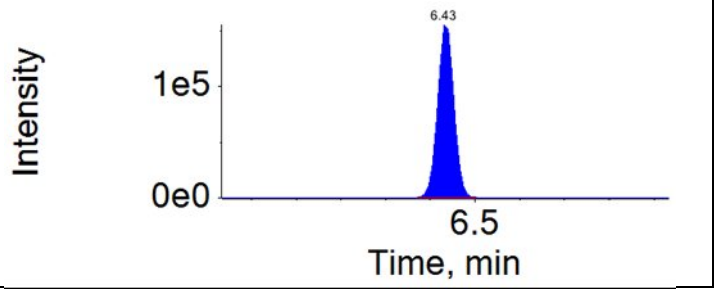
Analyte: PFTrDA	Extraction Standard: 13C2-PFDoDA
663.0 / 619.0	615.0 / 570.0



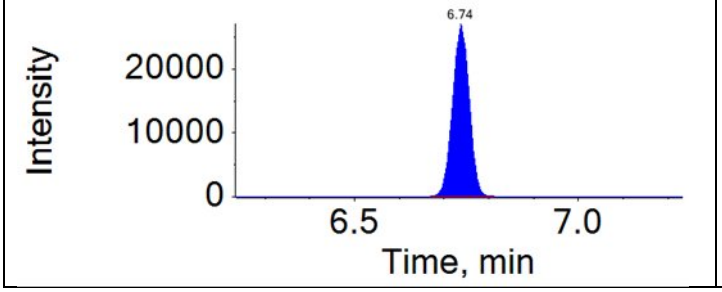


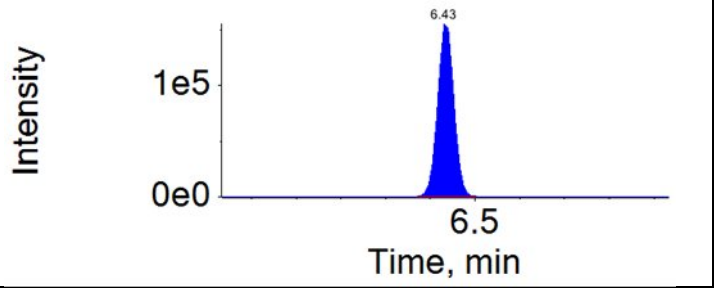
Analyte: PFTeDA	Extraction Standard: 13C2-PFTeDA
713.0 / 669.0	715.0 / 670.0



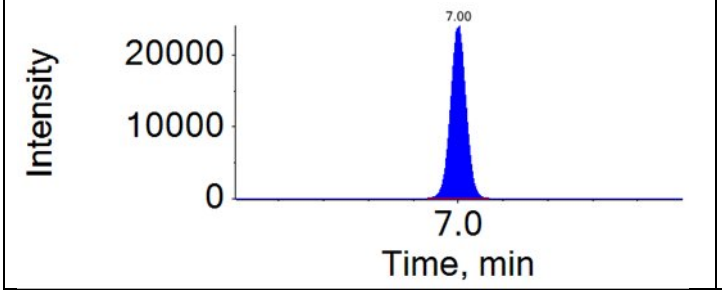


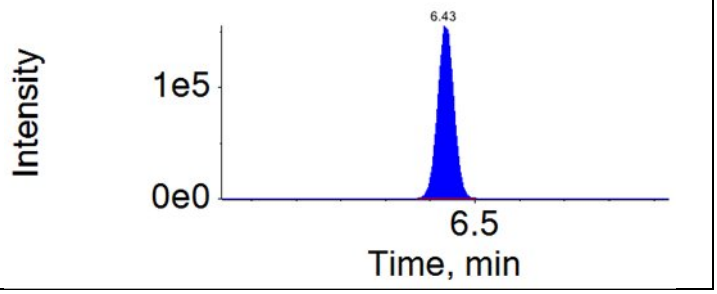
Analyte: PFHxDA	Extraction Standard: 13C2-PFTeDA
813.0 / 769.0	715.0 / 670.0





Analyte: PFODA	Extraction Standard: 13C2-PFTeDA
913.0 / 869.0	715.0 / 670.0



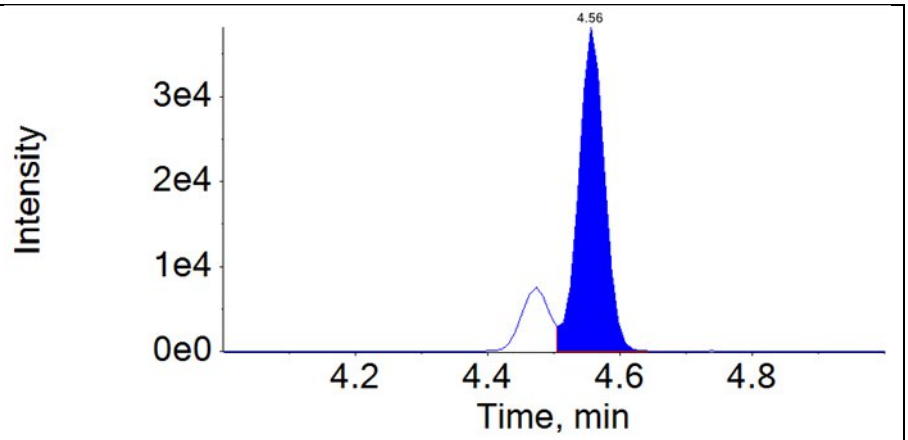


APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

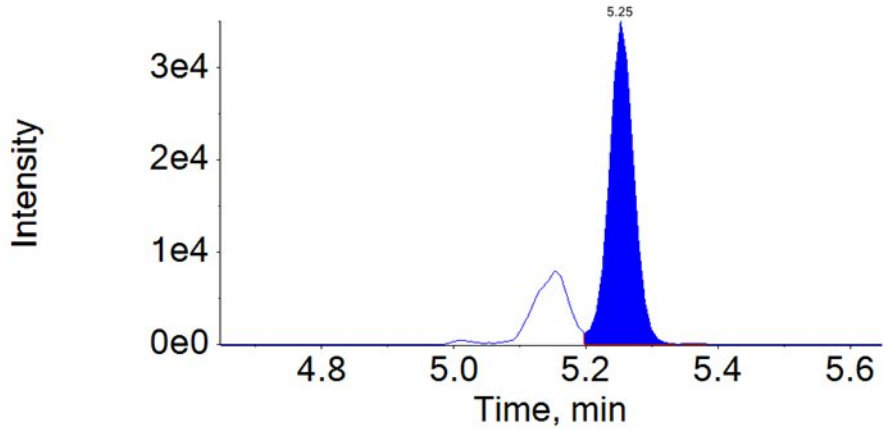
Results Table Name: 18NOV12DCAL
Results Table Date: 11/12/2018 6:23:42 PM
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

Component Name:
PFHxS
RT (min.):
4.56
Peak Area:
103825.76
Mass Range:
399.0 / 80.0
File Name:
18NOV12DCAL-44.wiff
Sample Name:
CAL3



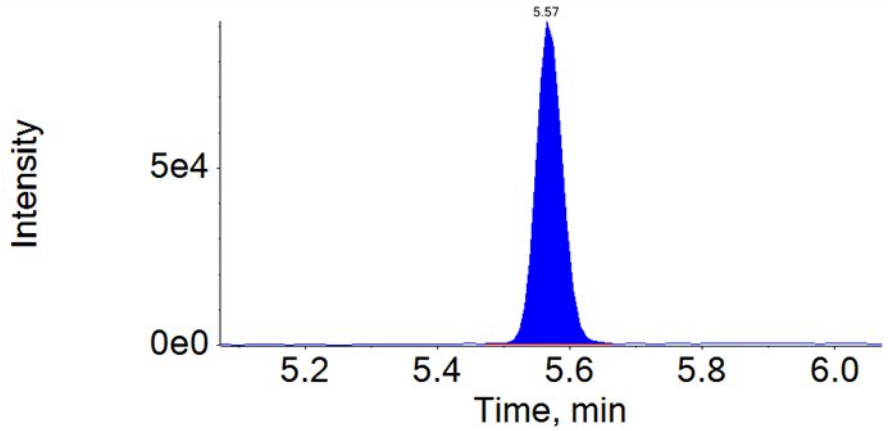
Integration Comment: incorrect integration

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



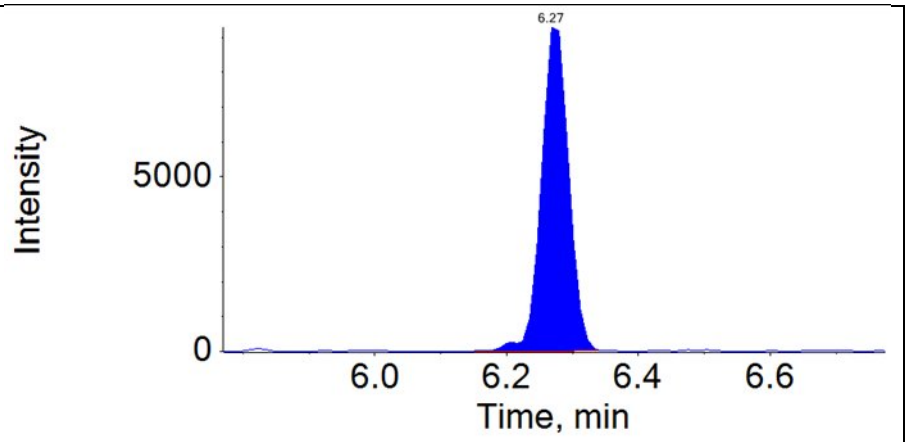
Integration Comment: incorrect integration

APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

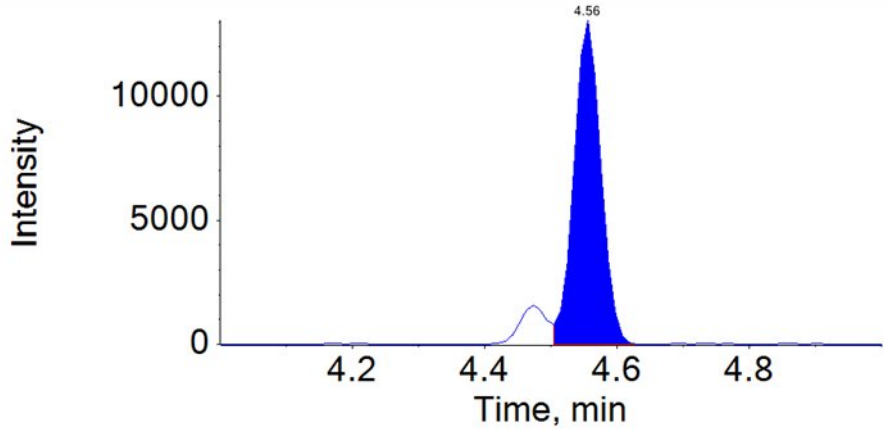
Results Table Name: 18NOV12DCAL
Results Table Date: 11/12/2018 6:23:42 PM
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

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



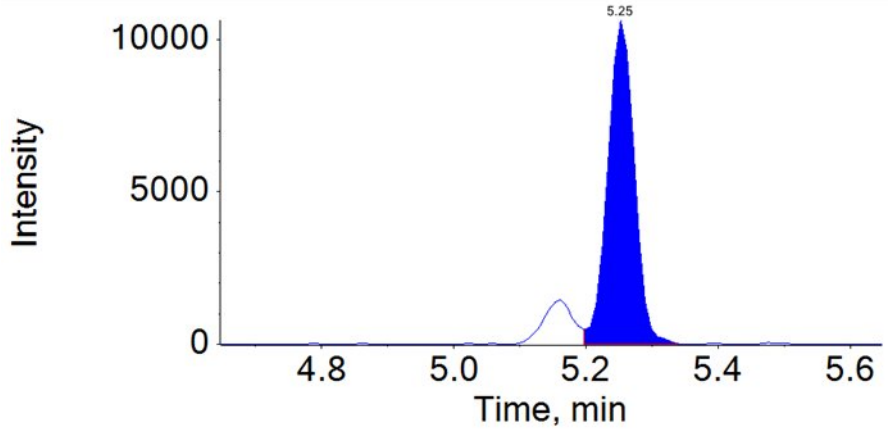
Integration Comment: incorrect integration

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

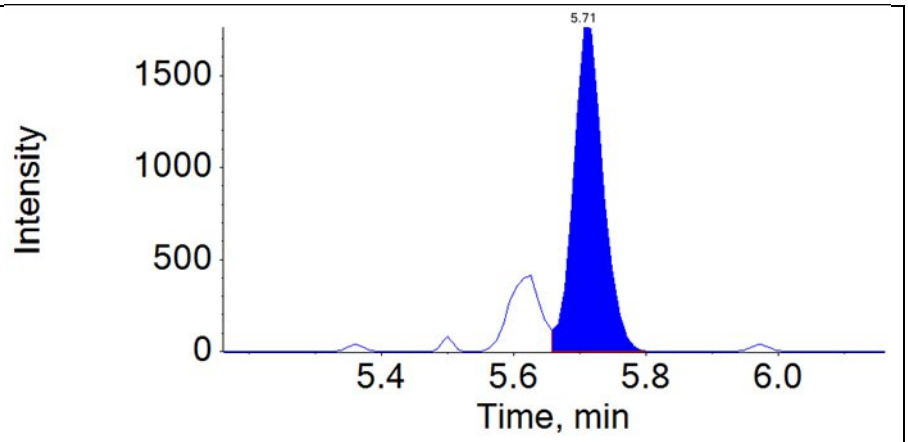


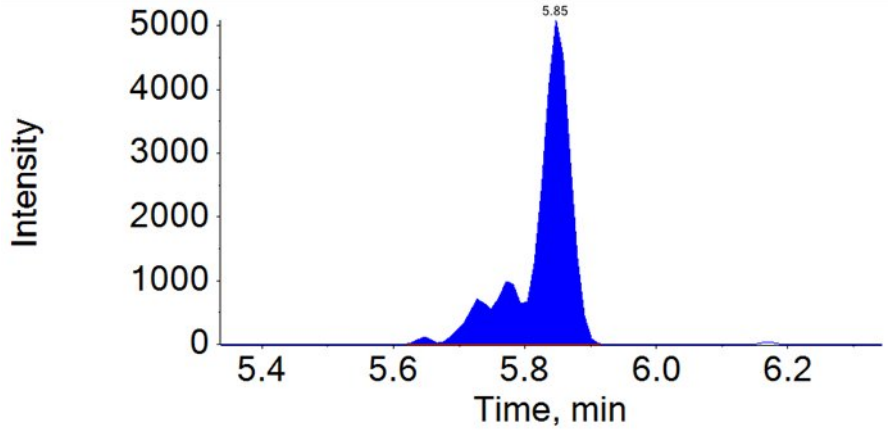
Integration Comment: incorrect integration

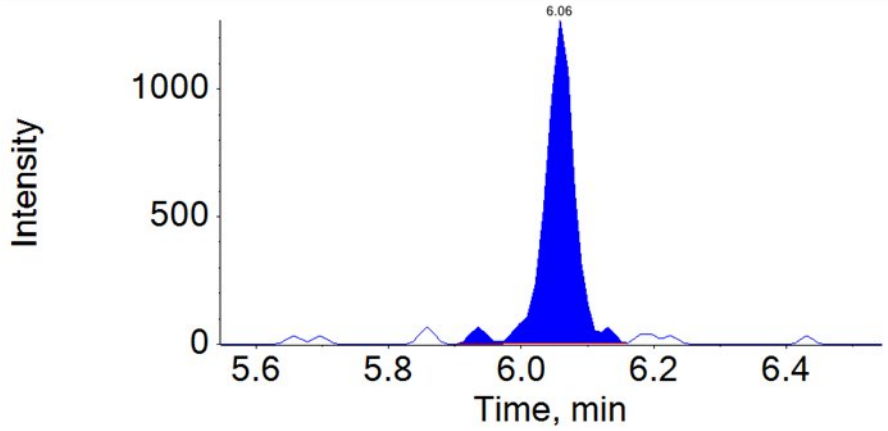
APPROVED
By MCD at 6:33 pm, 11/12/18

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

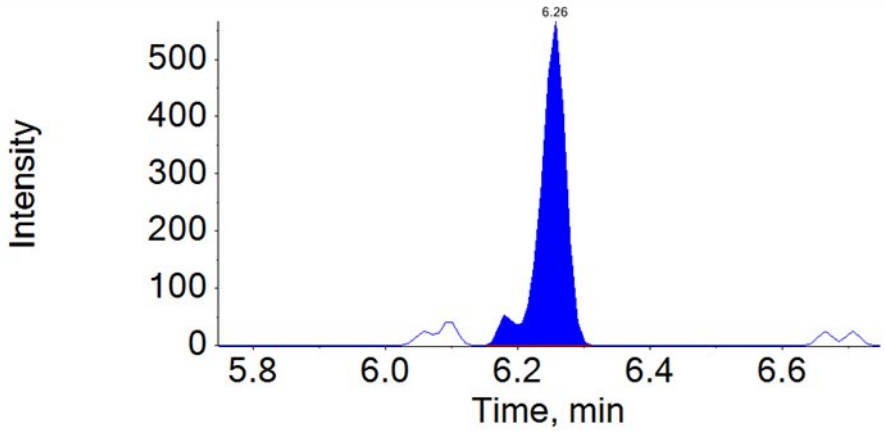
APPROVED
By MCD at 6:33 pm, 11/12/18

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.):
6.26
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

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

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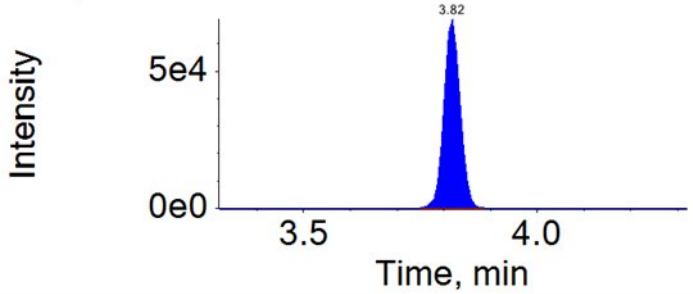
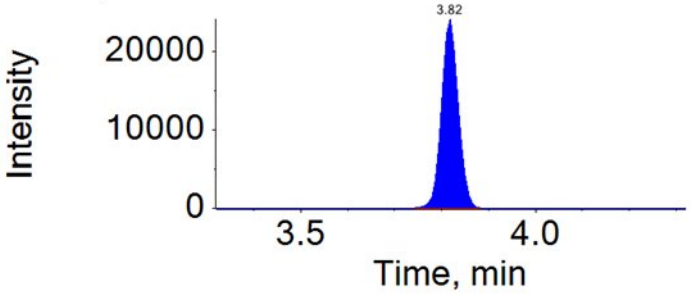
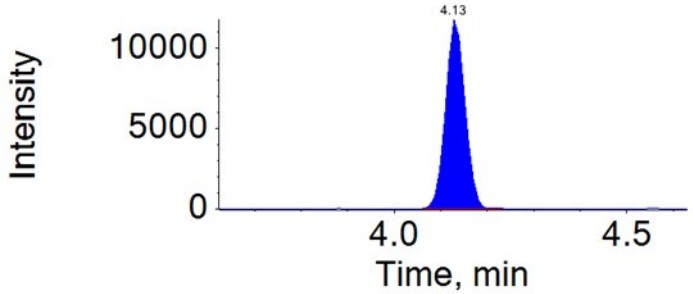
Component: PFBS
Primary Mass: 299.0 / 80.0



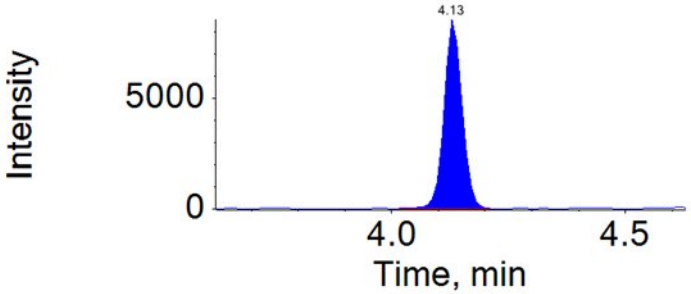
Component: PFBS_2
Secondary Mass: 299.0 / 99.0



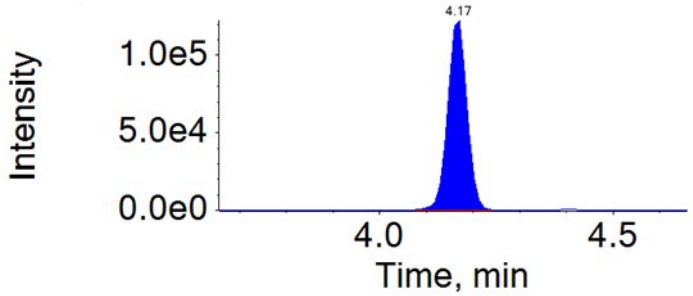
Component: 4:2-FTS
Primary Mass: 327.0 / 307.0



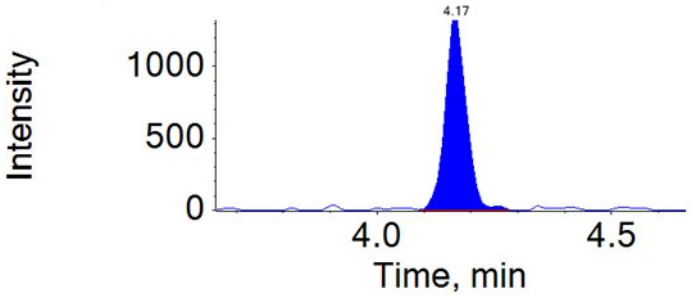
Component: 4:2 FTS_2
Secondary Mass: 327.0 / 81.0



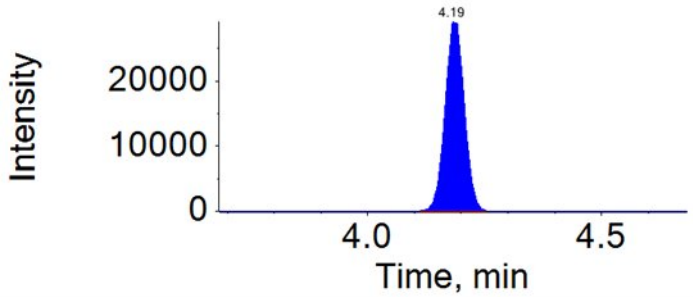
Component: PFHxA
Primary Mass: 313.0 / 269.0



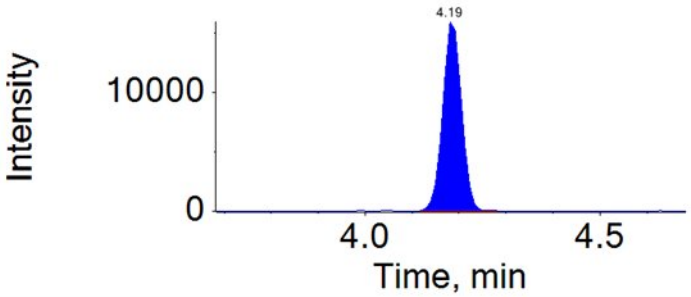
Component: PFHxA_2
Secondary Mass: 313.0 / 119.0



Component: PFPeS
Primary Mass: 349.0 / 80.0



Component: PFPeS_2
Secondary Mass: 349.0 / 99.0



APPROVED
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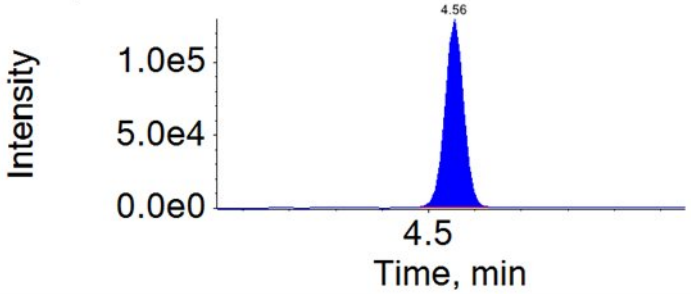
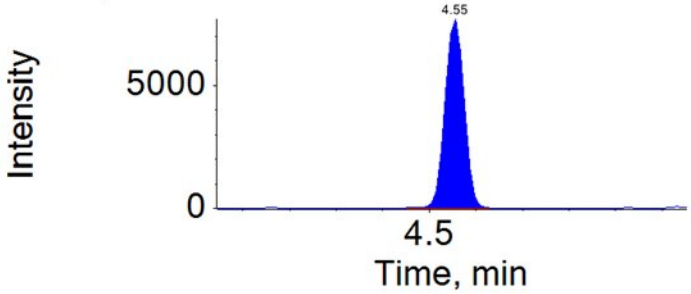
By HMK at 10:53 am, 11/13/18

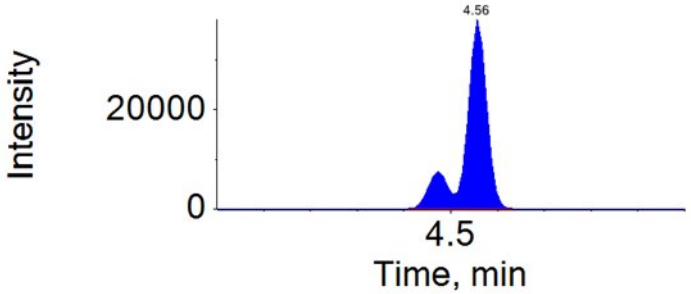
Component: PFHpA
Primary Mass: 363.0 / 319.0



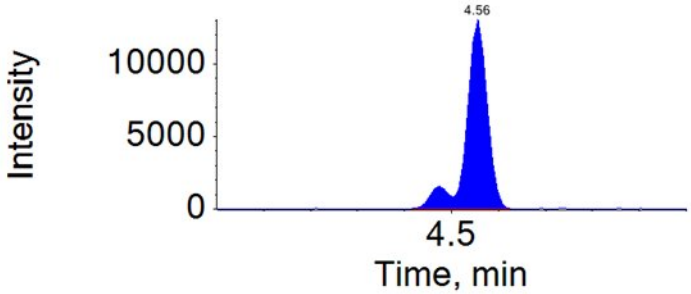
Component: PFHpA_2
Secondary Mass: 363.0 / 169.0



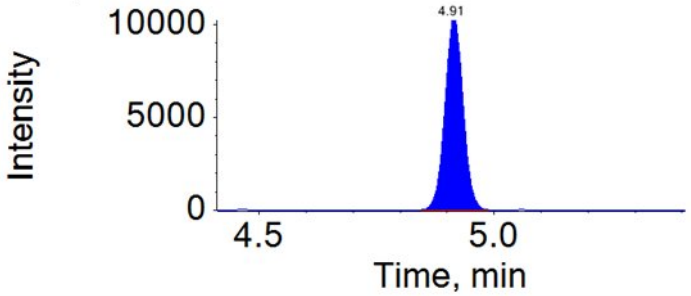
Component: PFHxS
Primary Mass: 399.0 / 80.0



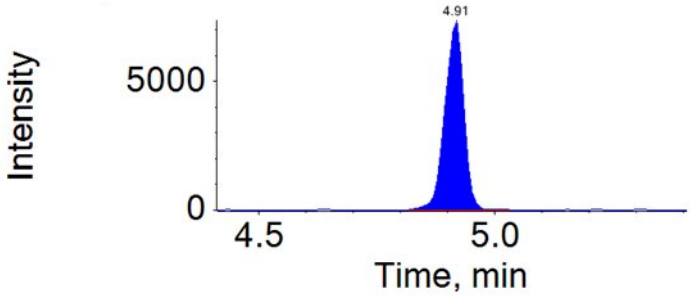
Component: PFHxS_2
Secondary Mass: 399.0 / 99.0



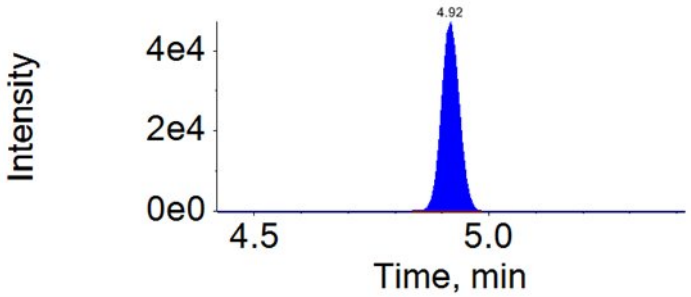
Component: 6:2-FTS
Primary Mass: 427.0 / 407.0



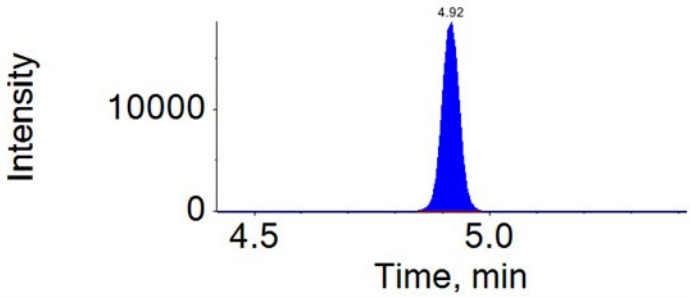
Component: 6:2 FTS_2
Secondary Mass: 427.0 / 81.0



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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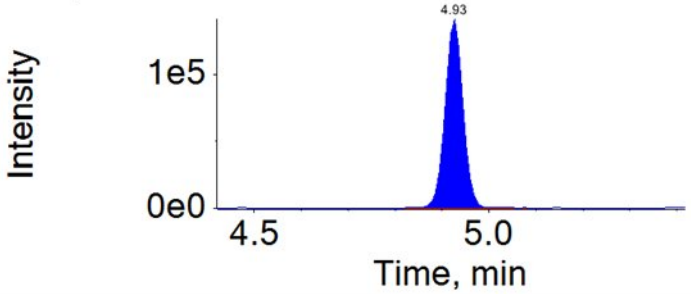
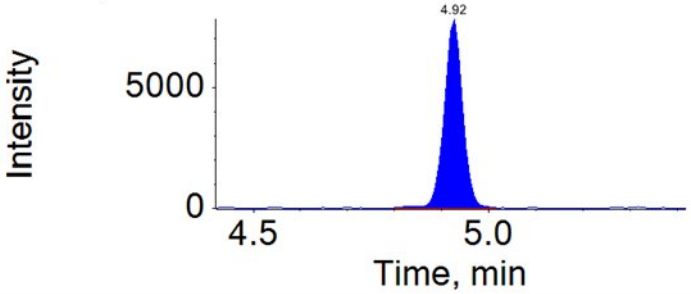
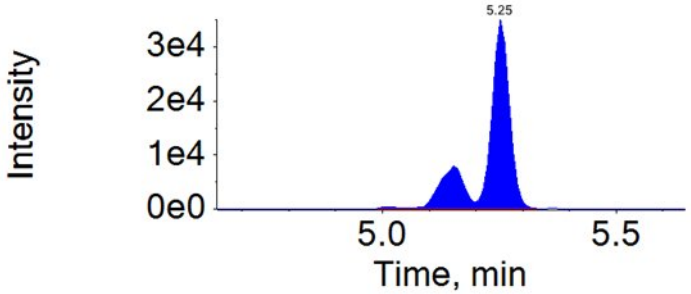
Component: PFOA
Primary Mass: 413.0 / 369.0



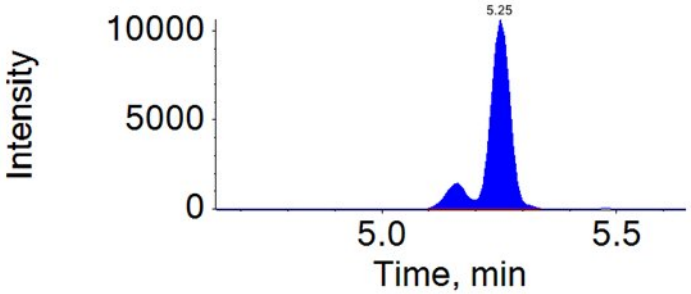
Component: PFOA_2
Secondary Mass: 413.0 / 169.0



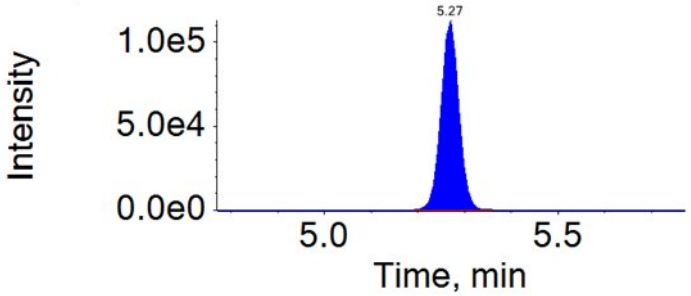
Component: PFOS
Primary Mass: 499.0 / 80.0



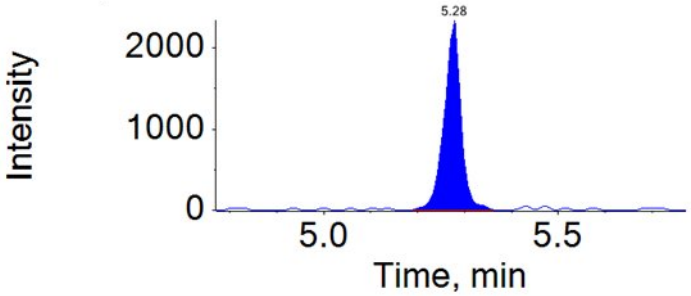
Component: PFOS_2
Secondary Mass: 499.0 / 99.0



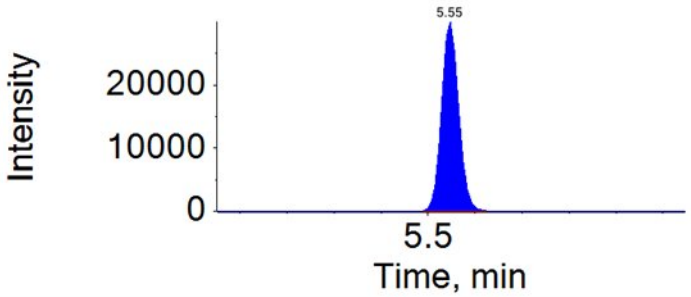
Component: PFNA
Primary Mass: 463.0 / 419.0



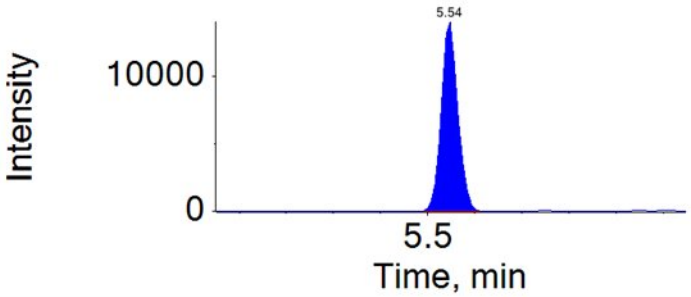
Component: PFNA_2
Secondary Mass: 463.0 / 169.0



Component: PFNS
Primary Mass: 549.0 / 80.0



Component: PFNS_2
Secondary Mass: 549.0 / 99.0



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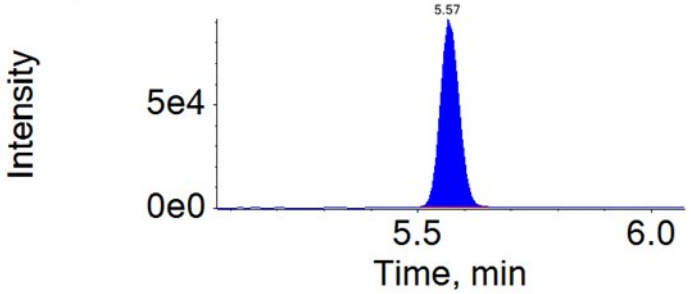
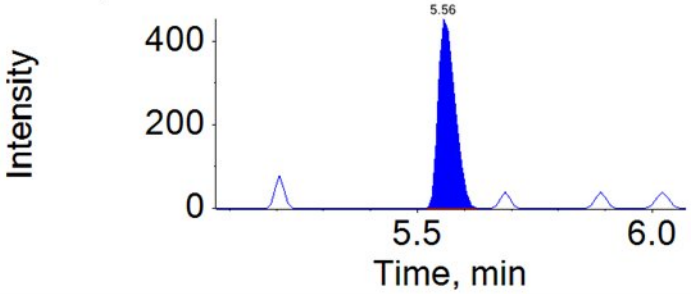
REVIEWED
By HMK at 10:53 am, 11/13/18

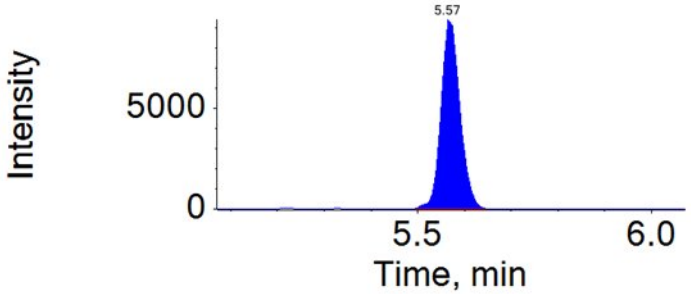
Component: PFDA
Primary Mass: 513.0 / 469.0



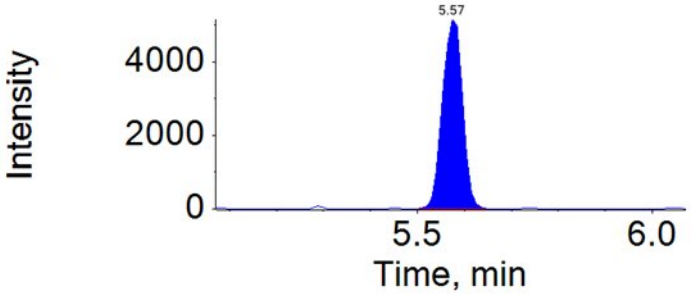
Component: PFDA_2
Secondary Mass: 513.0 / 169.0



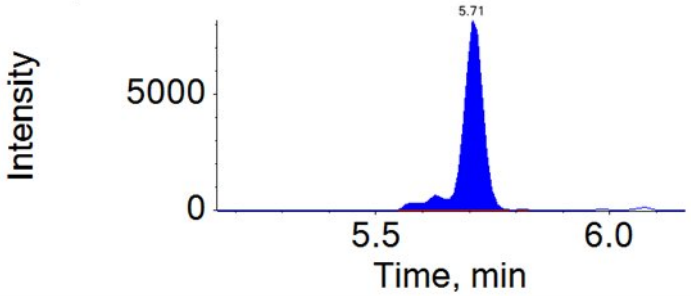
Component: 8:2-FTS
Primary Mass: 527.0 / 507.0



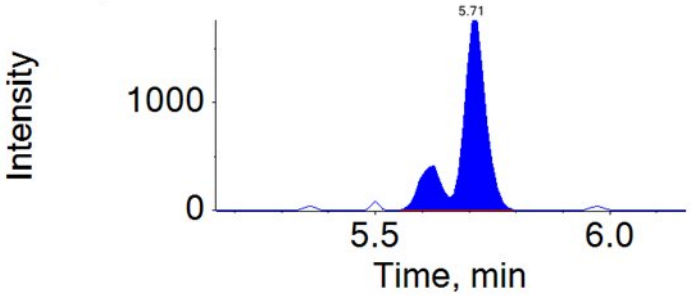
Component: 8:2 FTS_2
Secondary Mass: 527.0 / 81.0



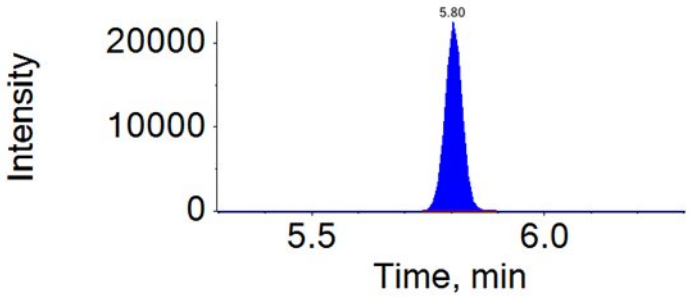
Component: NMeFOSAA
Primary Mass: 570.0 / 419.0



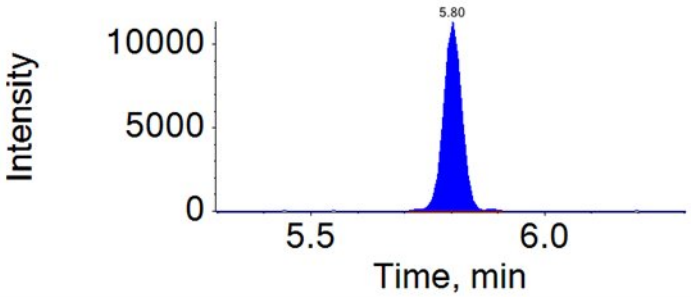
Component: NMeFOSAA_2
Secondary Mass: 570.0 / 483.0



Component: PFDS
Primary Mass: 599.0 / 80.0



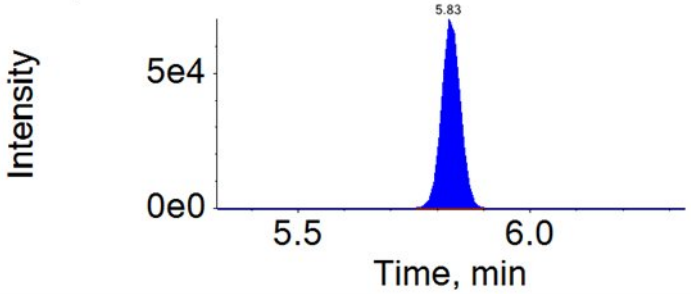
Component: PFDS_2
Secondary Mass: 599.0 / 99.0



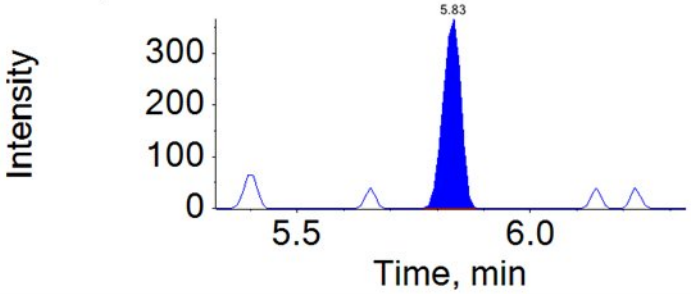
APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

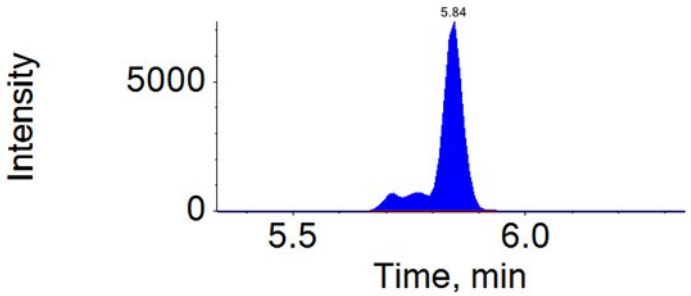
Component: PFUnDA
Primary Mass: 563.0 / 519.0



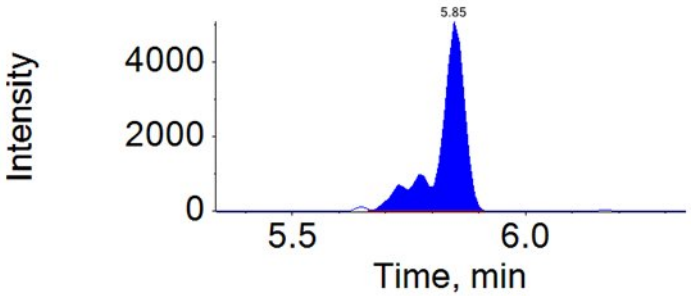
Component: PFUnDA_2
Secondary Mass: 563.0 / 169.0



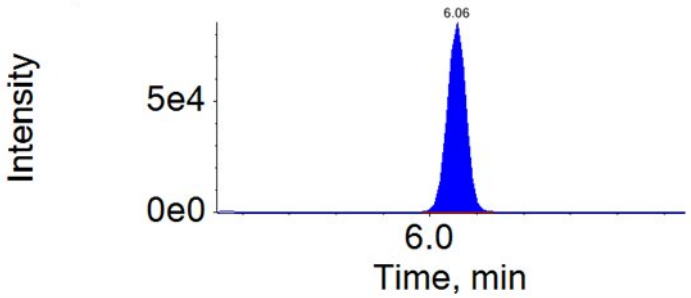
Component: NEtFOSAA
Primary Mass: 584.0 / 419.0



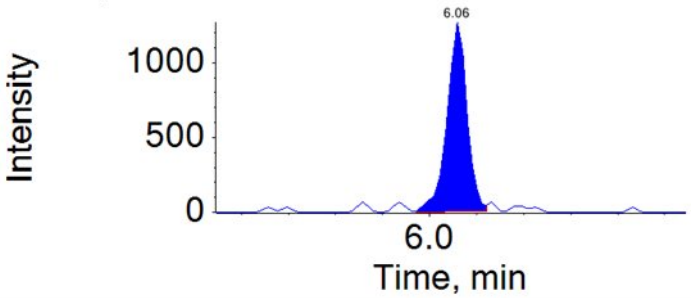
Component: NEtFOSAA_2
Secondary Mass: 584.0 / 526.0



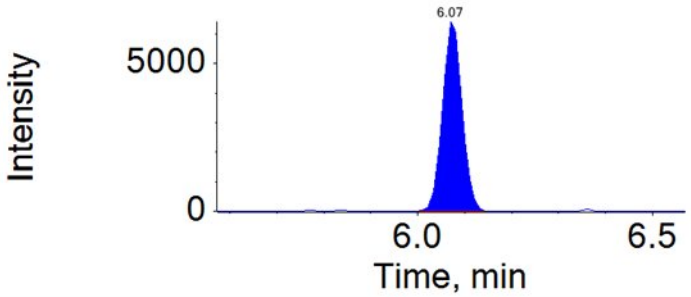
Component: PFDoDA
Primary Mass: 613.0 / 569.0



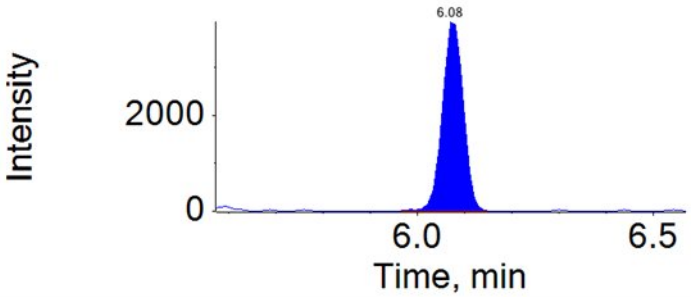
Component: PFDoDA_2
Secondary Mass: 613.0 / 169.0



Component: 10:2-FTS
Primary Mass: 627.0 / 607.0



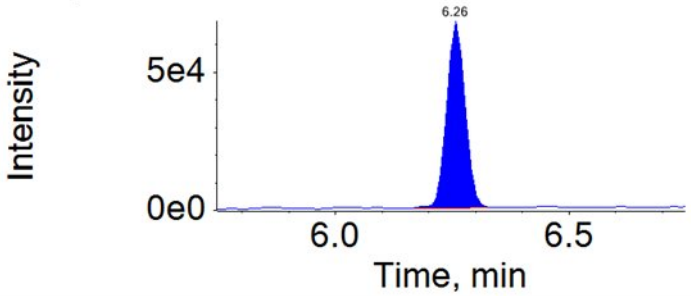
Component: 10:2 FTS_2
Secondary Mass: 627.0 / 81.0



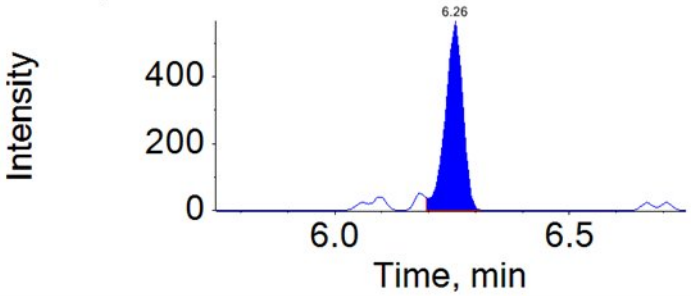
APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

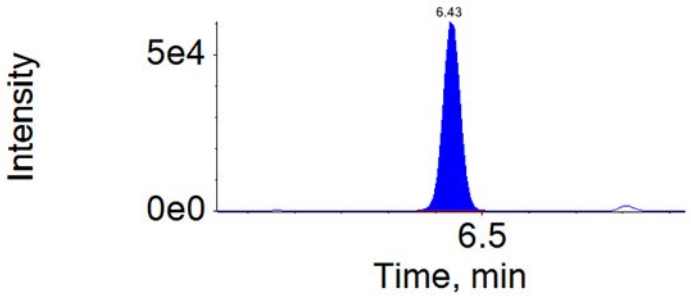
Component: PFTrDA
Primary Mass: 663.0 / 619.0



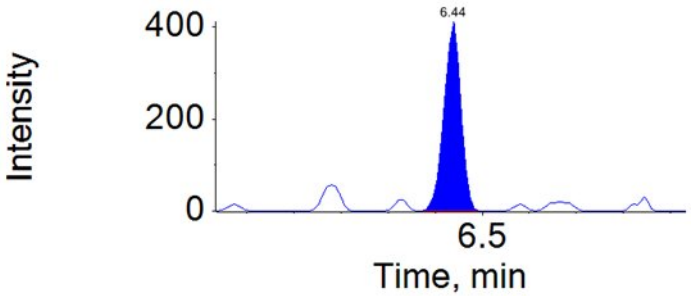
Component: PFTrDA_2
Secondary Mass: 663.0 / 169.0



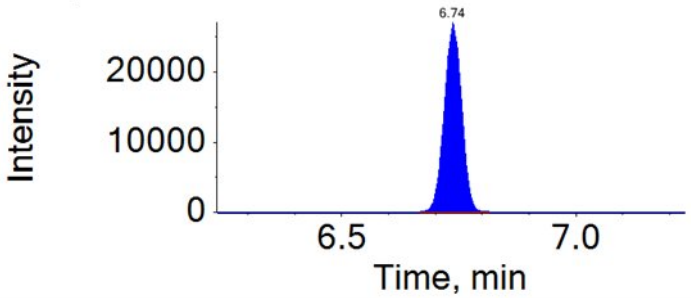
Component: PFTeDA
Primary Mass: 713.0 / 669.0



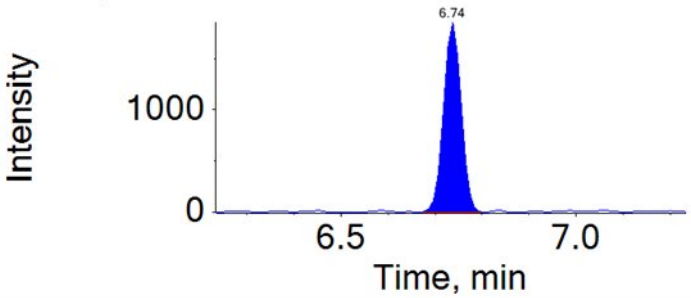
Component: PFTeDA_2
Secondary Mass: 713.0 / 169.0



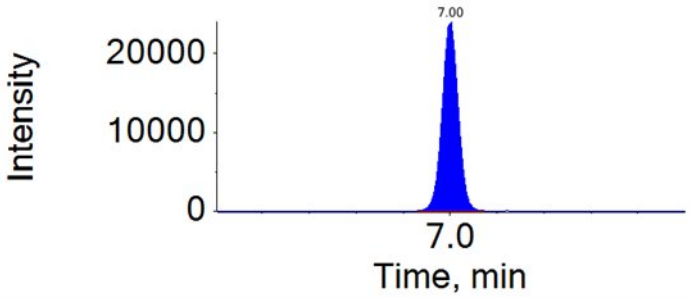
Component: PFHxDA
Primary Mass: 813.0 / 769.0



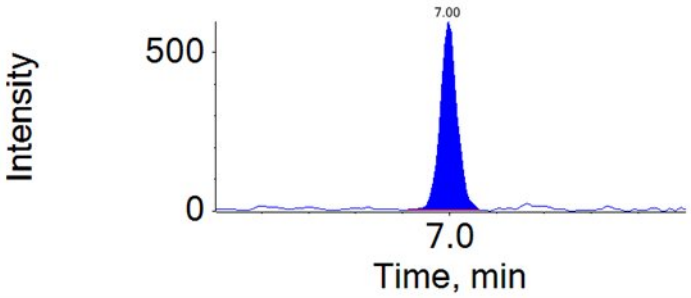
Component: PFHxDA_2
Secondary Mass: 813.0 / 169.0



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:	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

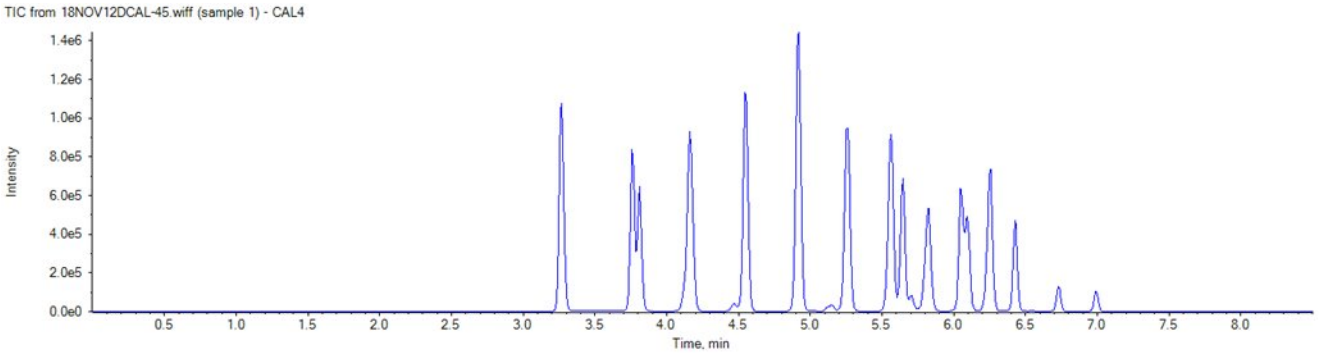
Analyte Quantitation Peak Table

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

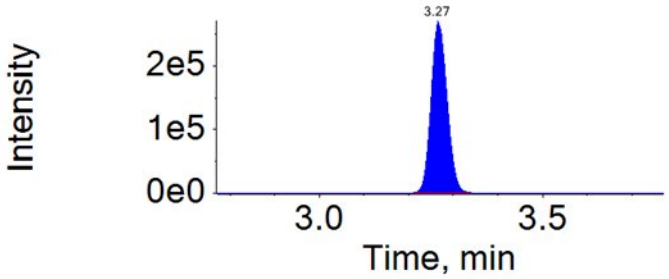


APPROVED
By MCD at 6:33 pm, 11/12/18

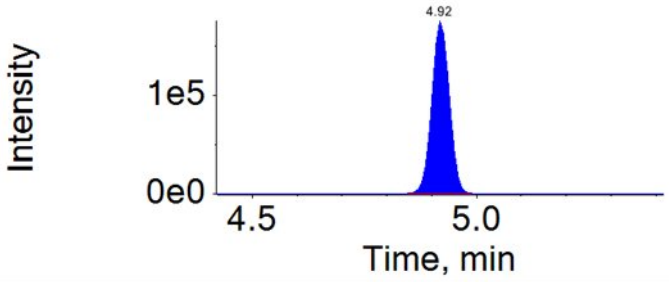
REVIEWED
By HMK at 10:53 am, 11/13/18

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

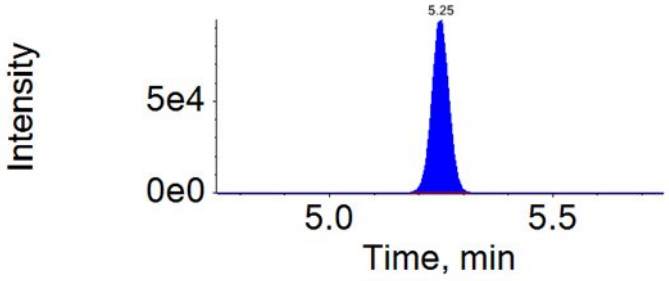
Injection Standard: 13C3-PFBA
216.0 / 172.0



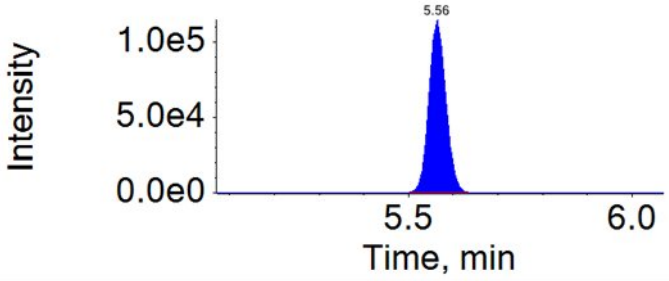
Injection Standard: 13C2-PFOA
415.0 / 370.0



Injection Standard: 13C4-PFOS
503.0 / 80.0



Injection Standard: 13C2-PFDA
515.0 / 470.0

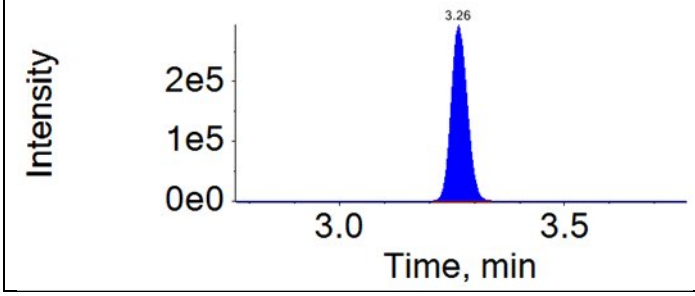


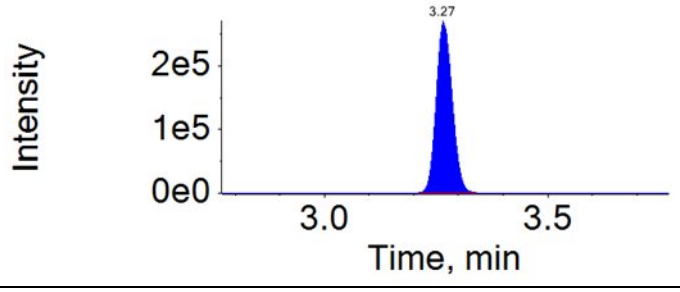
APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

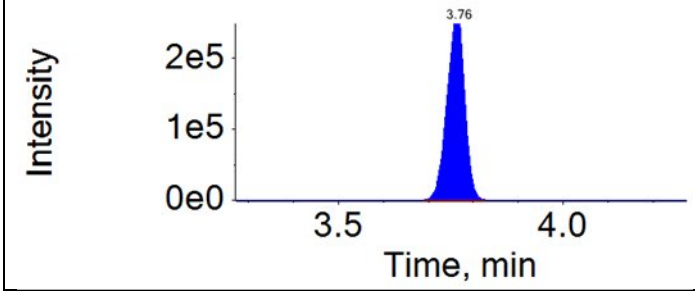
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

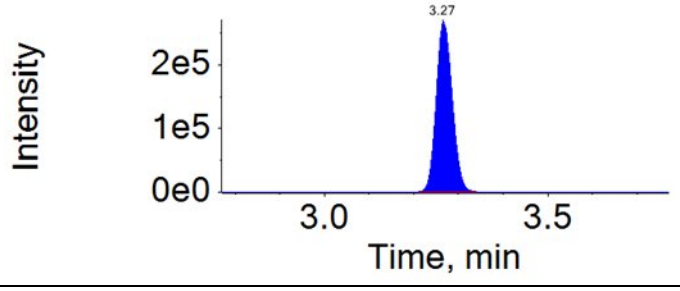
Extraction Standard: E13C4-PFBA	Injection Standard: 13C3-PFBA
217.0 / 172.0	216.0 / 172.0



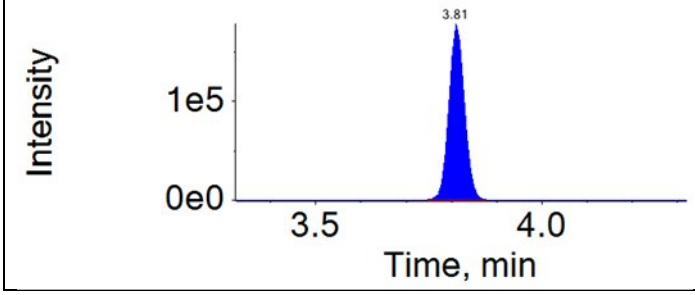


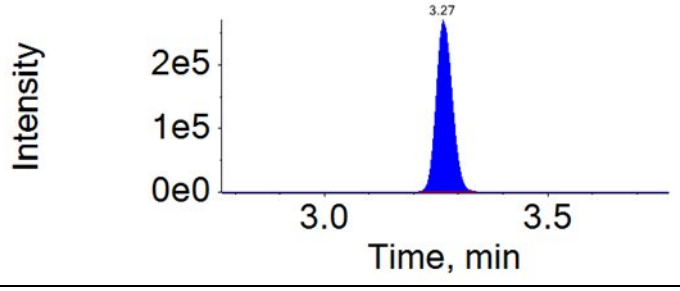
Extraction Standard: E13C5-PFPeA	Injection Standard: 13C3-PFBA
268.0 / 223.0	216.0 / 172.0



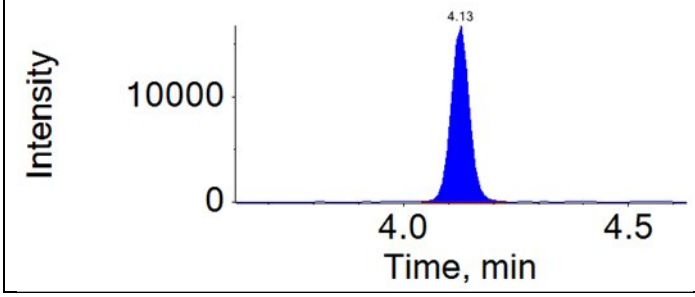


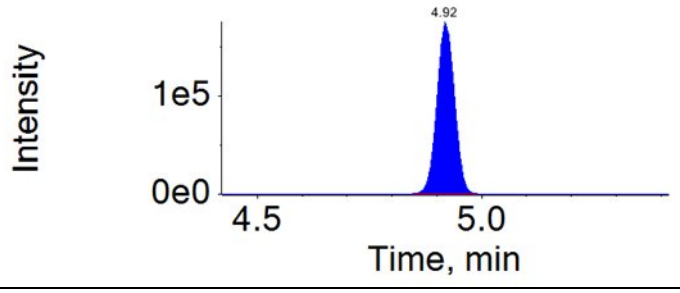
Extraction Standard: E13C3-PFBS	Injection Standard: 13C3-PFBA
302.0 / 80.0	216.0 / 172.0





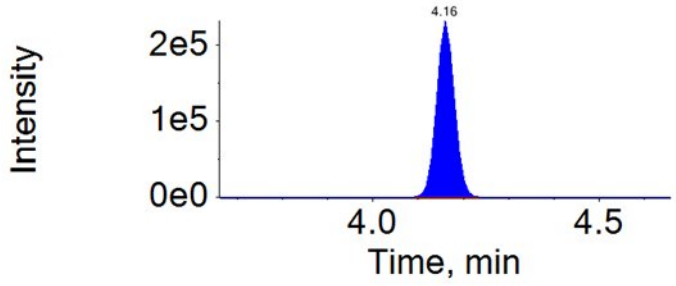
Extraction Standard: E13C2-4:2-FTS	Injection Standard: 13C2-PFOA
329.0 / 81.0	415.0 / 370.0

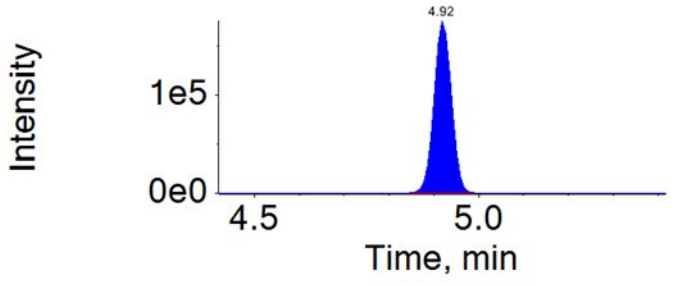




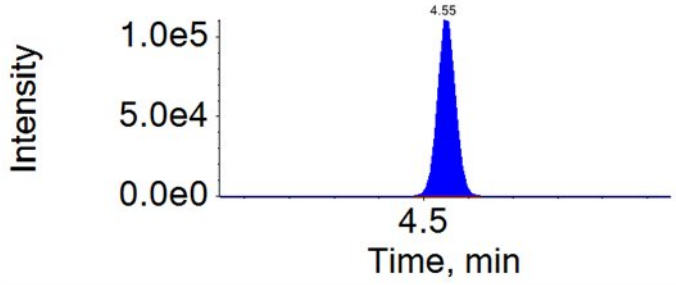
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

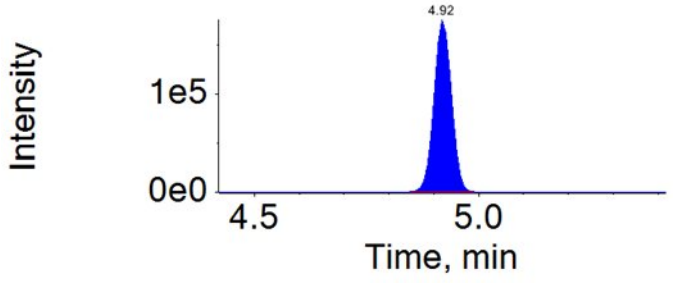
Extraction Standard: E13C5-PFHxA	Injection Standard: 13C2-PFOA
318.0 / 273.0	415.0 / 370.0



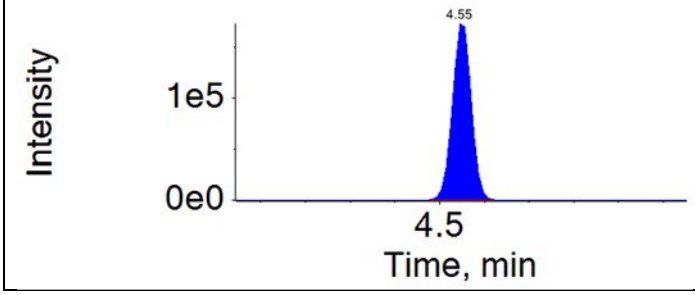


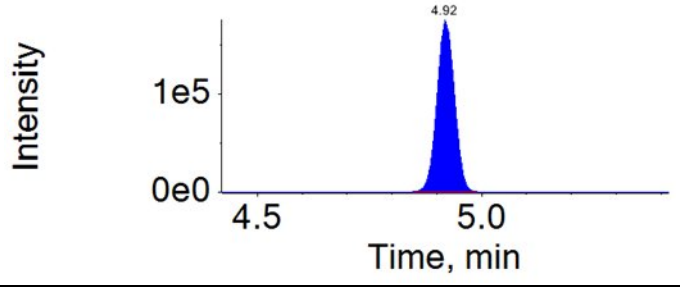
Extraction Standard: E13C3-PFHxS	Injection Standard: 13C2-PFOA
402.0 / 80.0	415.0 / 370.0



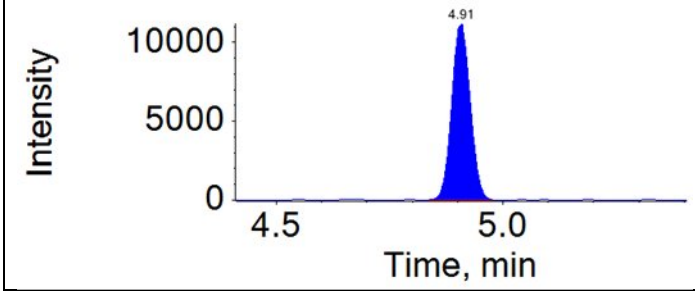


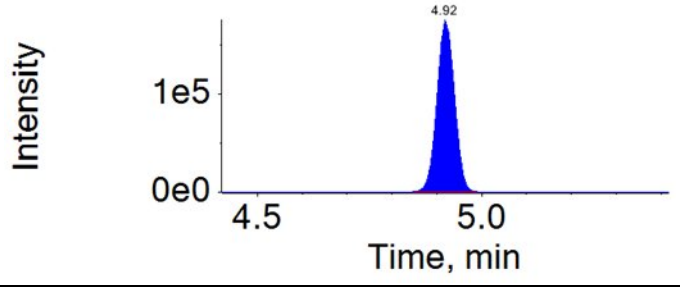
Extraction Standard: E13C4-PFHpA	Injection Standard: 13C2-PFOA
367.0 / 322.0	415.0 / 370.0





Extraction Standard: E13C2-6:2-FTS	Injection Standard: 13C2-PFOA
429.0 / 81.0	415.0 / 370.0



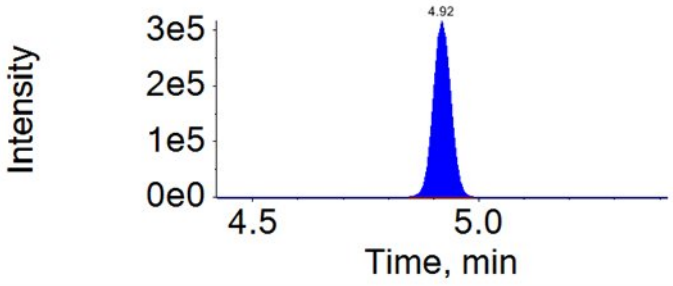


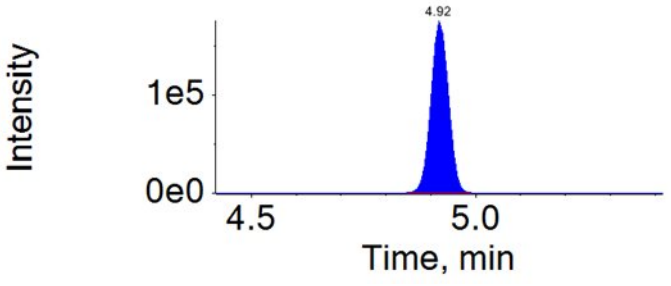
APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

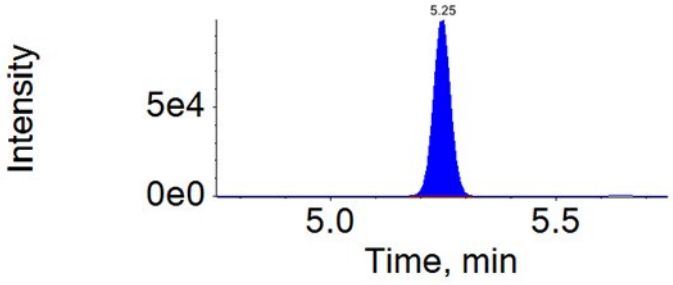
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

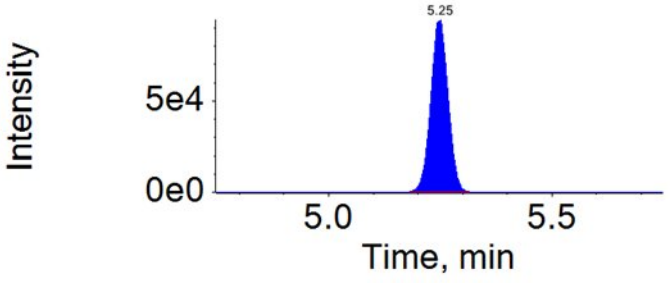
Extraction Standard: E13C8-PFOA	Injection Standard: 13C2-PFOA
421.0 / 376.0	415.0 / 370.0



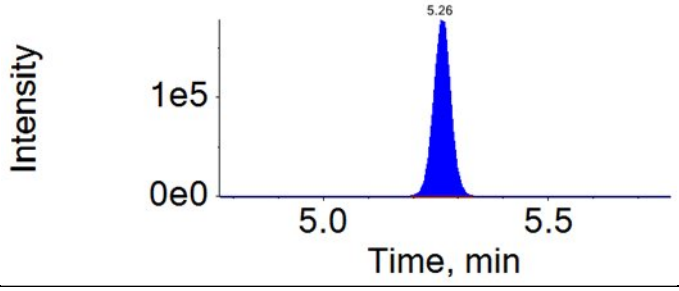


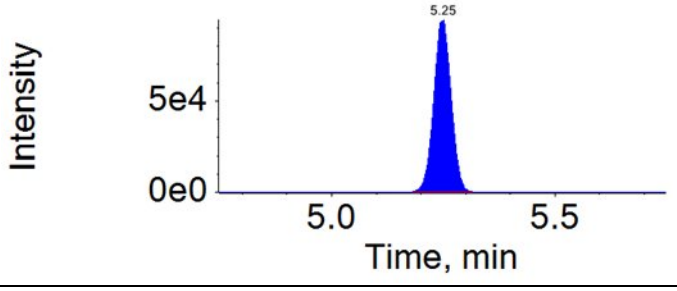
Extraction Standard: E13C8-PFOS	Injection Standard: 13C4-PFOS
507.0 / 80.0	503.0 / 80.0



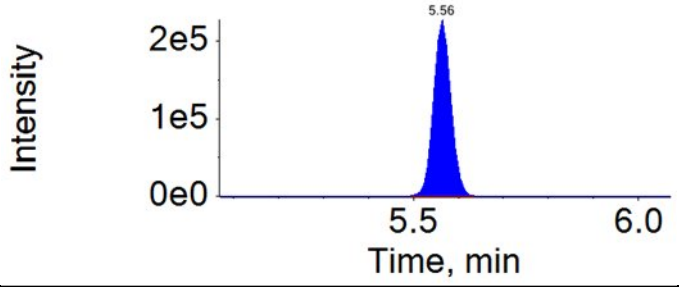


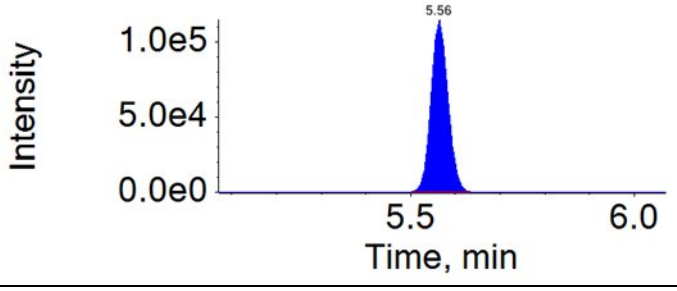
Extraction Standard: E13C9-PFNA	Injection Standard: 13C4-PFOS
472.0 / 427.0	503.0 / 80.0





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

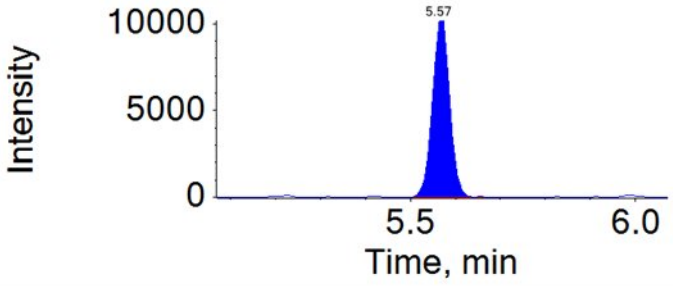
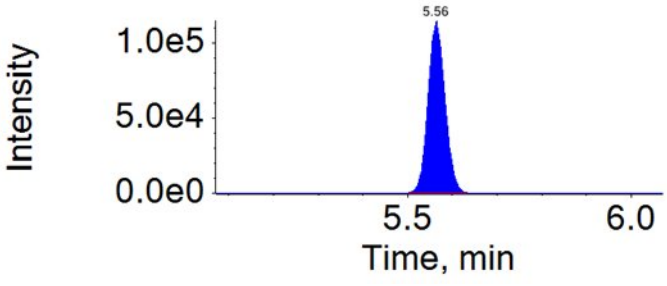


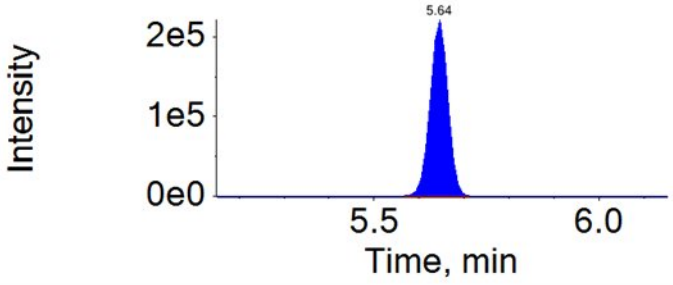
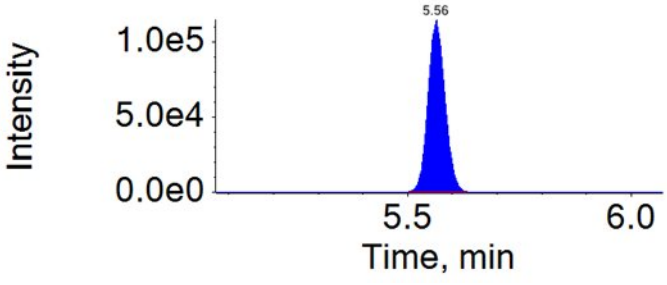


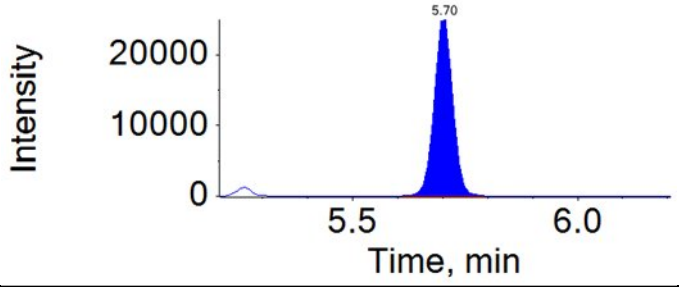
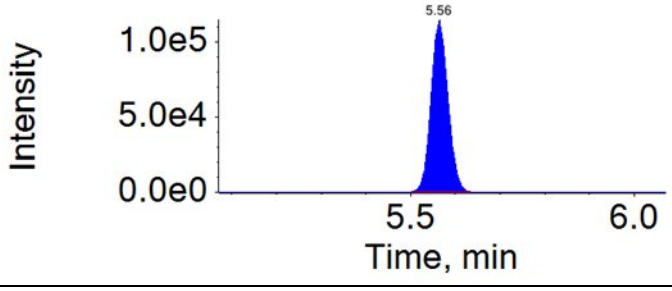
APPROVED
By MCD at 6:33 pm, 11/12/18

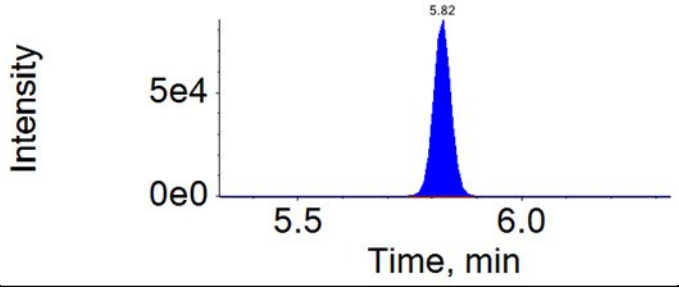
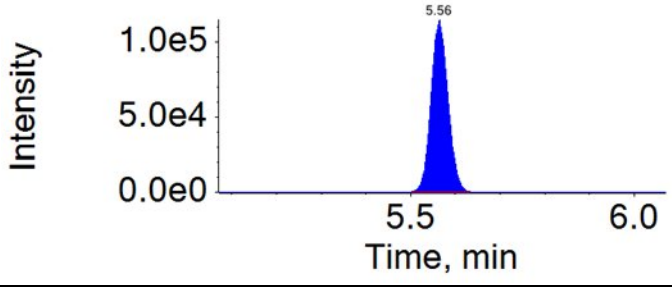
REVIEWED
By HMK at 10:53 am, 11/13/18

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

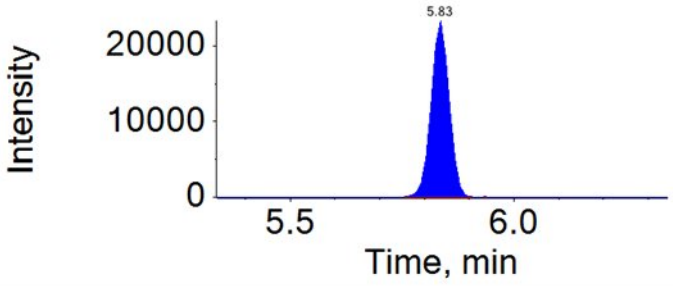
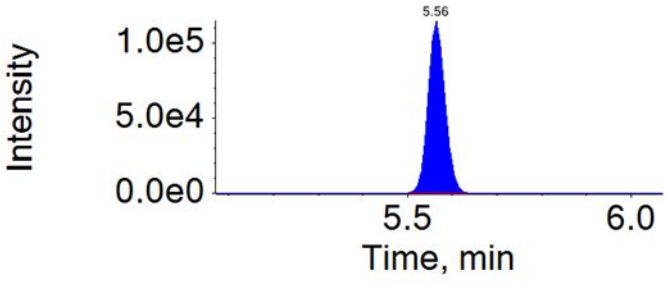
Extraction Standard: E13C2-8:2-FTS	Injection Standard: 13C2-PFDA
529.0 / 81.0	515.0 / 470.0
	

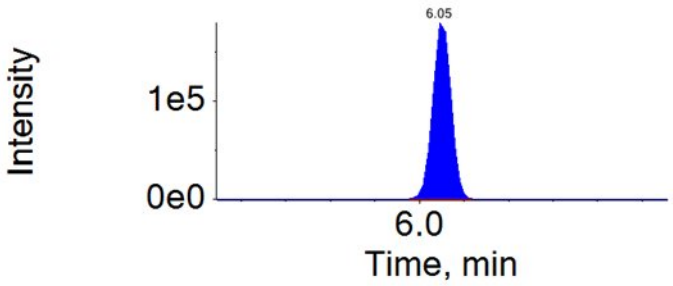
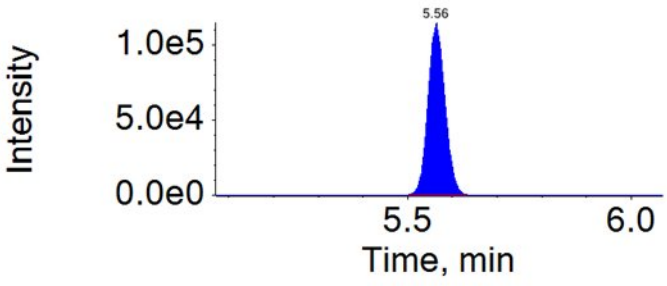
Extraction Standard: E13C8-PFOSA	Injection Standard: 13C2-PFDA
506.0 / 78.0	515.0 / 470.0
	

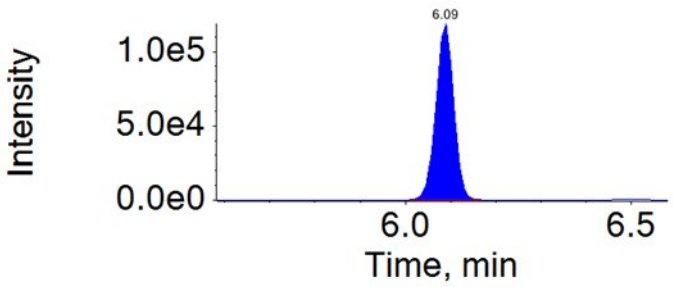
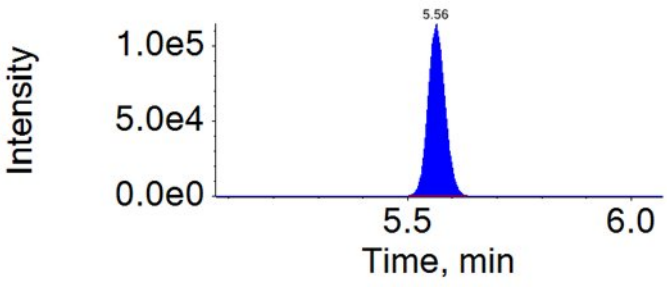
Extraction Standard: Ed3-NMeFOSAA	Injection Standard: 13C2-PFDA
573.0 / 419.0	515.0 / 470.0
	

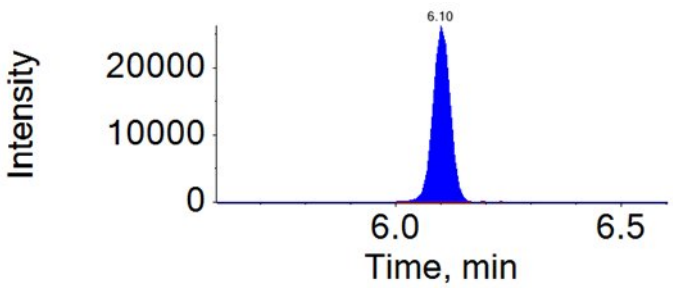
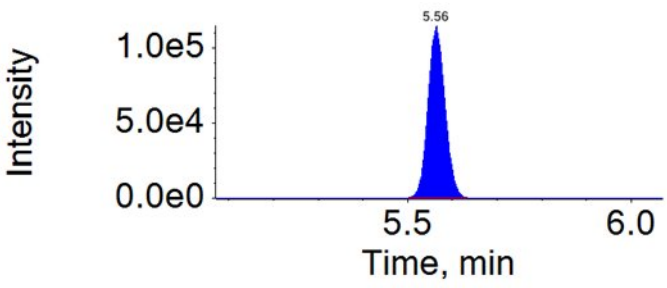
Extraction Standard: E13C7-PFUnDA	Injection Standard: 13C2-PFDA
570.0 / 525.0	515.0 / 470.0
	

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
	

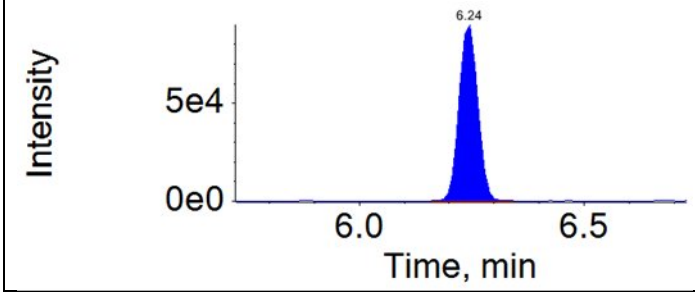
Extraction Standard: E13C2-PFDoDA	Injection Standard: 13C2-PFDA
615.0 / 570.0	515.0 / 470.0
	

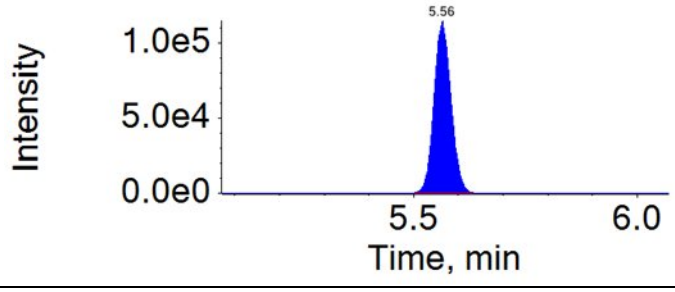
Extraction Standard: Ed7-NMePFOSAE	Injection Standard: 13C2-PFDA
623.0 / 59.0	515.0 / 470.0
	

Extraction Standard: Ed3-NMePFOSA	Injection Standard: 13C2-PFDA
515.0 / 169.0	515.0 / 470.0
	

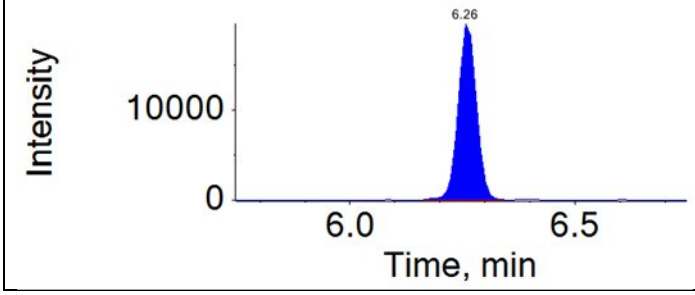
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

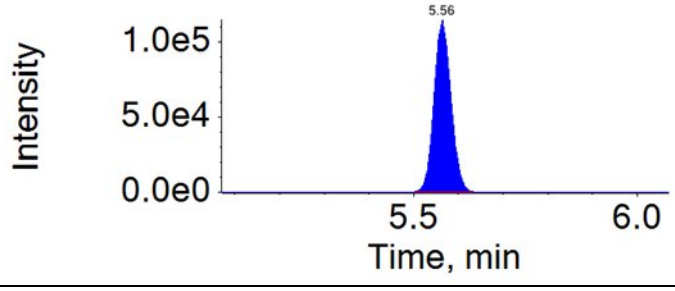
Extraction Standard: Ed9-NEtPFOSAE	Injection Standard: 13C2-PFDA
639.0 / 59.0	515.0 / 470.0



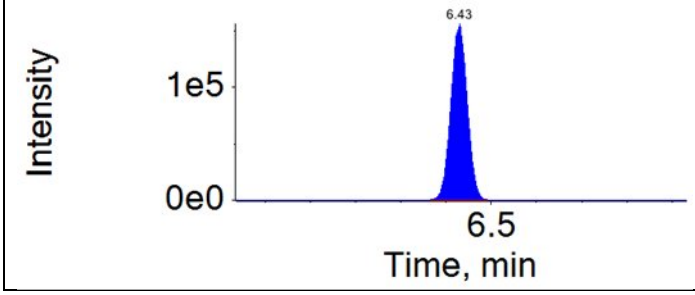


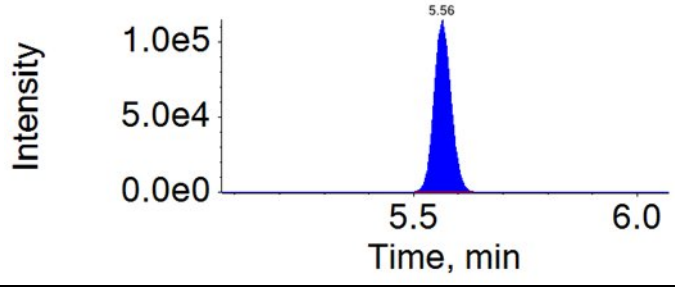
Extraction Standard: Ed5-NEtPFOSA	Injection Standard: 13C2-PFDA
531.0 / 169.0	515.0 / 470.0





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



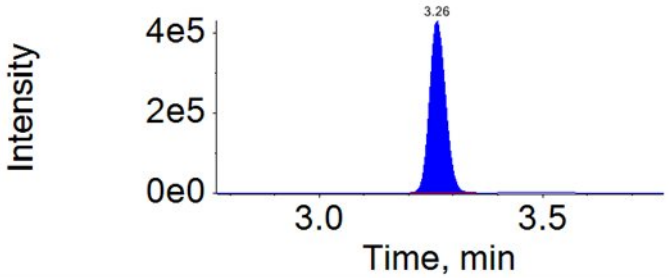


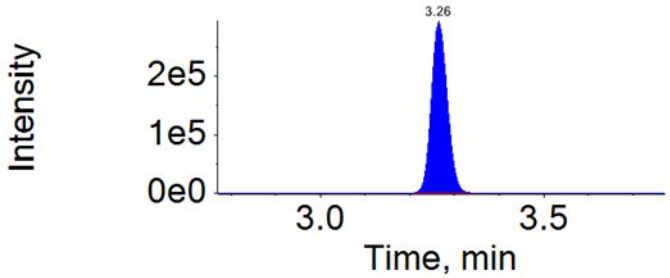
APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

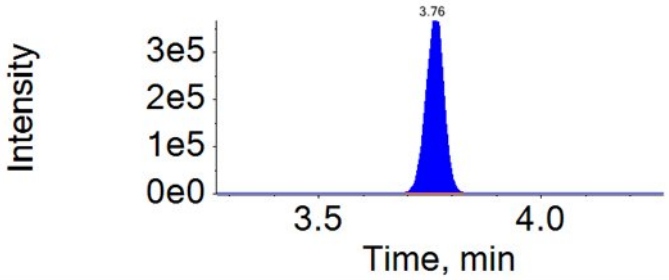
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

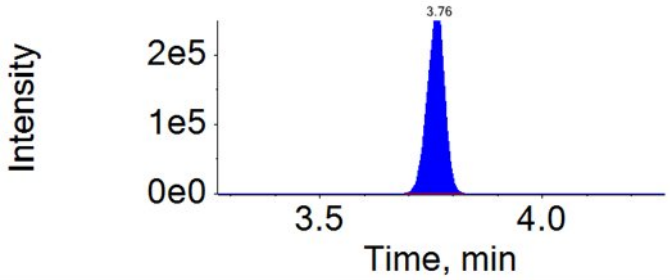
Analyte: PFBA	Extraction Standard: 13C4-PFBA
213.0 / 169.0	217.0 / 172.0



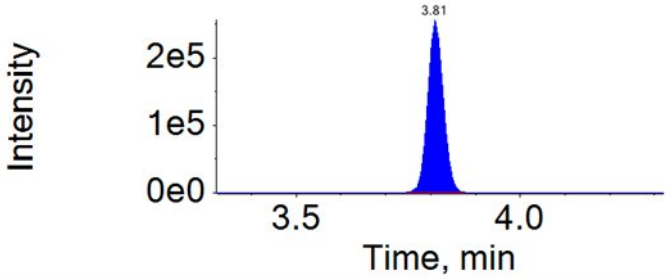


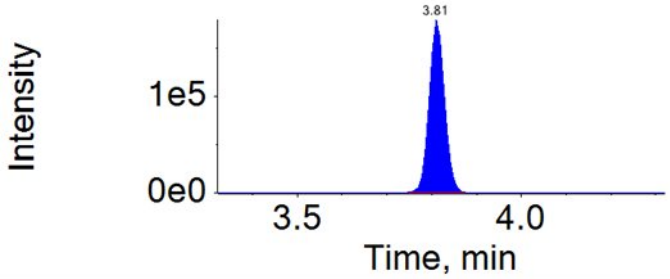
Analyte: PFPeA	Extraction Standard: 13C5-PFPeA
263.0 / 219.0	268.0 / 223.0



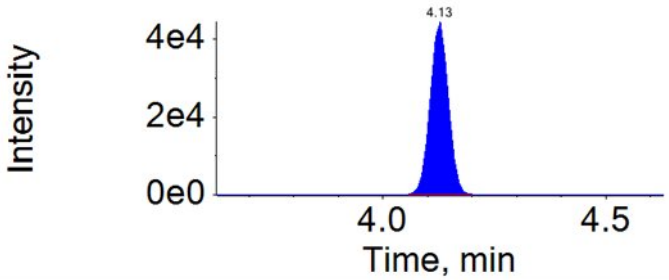


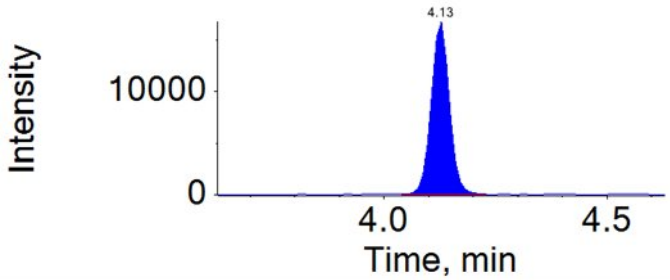
Analyte: PFBS	Extraction Standard: 13C3-PFBS
299.0 / 80.0	302.0 / 80.0





Analyte: 4:2-FTS	Extraction Standard: 13C2-4:2-FTS
327.0 / 307.0	329.0 / 81.0



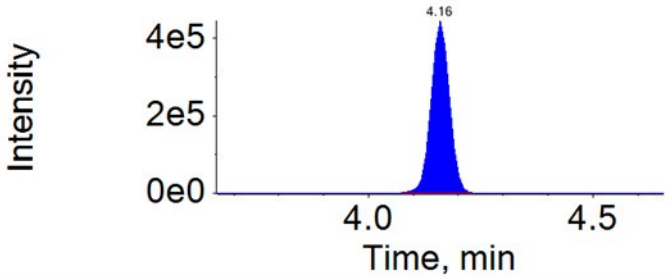


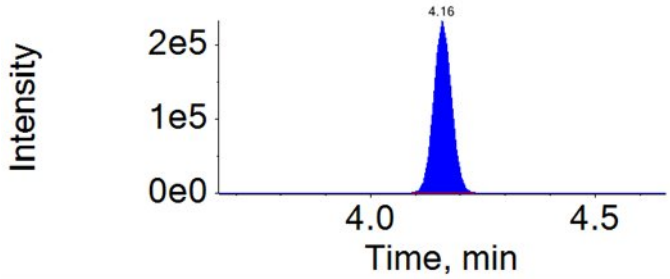
APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

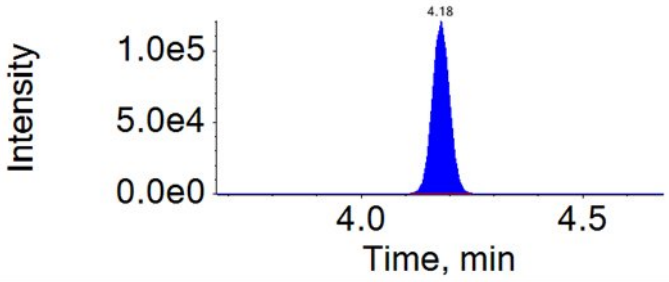
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

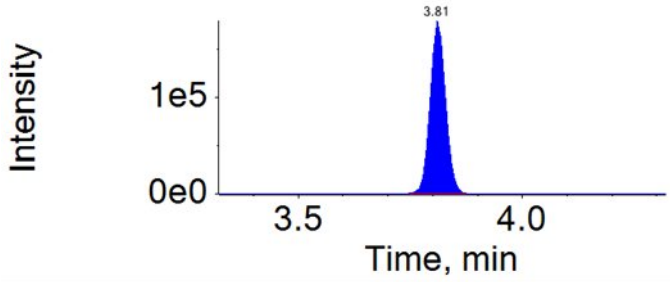
Analyte: PFHxA	Extraction Standard: 13C5-PFHxA
313.0 / 269.0	318.0 / 273.0



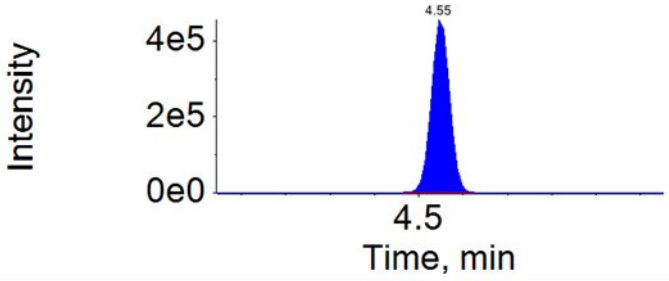


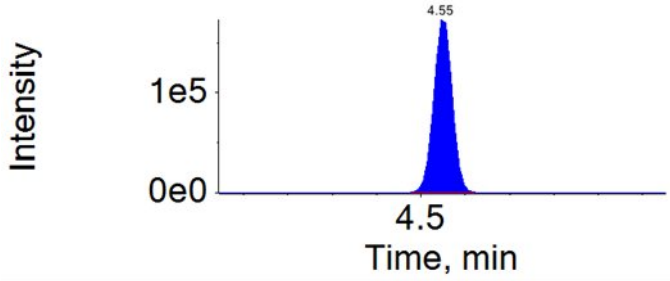
Analyte: PFPeS	Extraction Standard: 13C3-PFBS
349.0 / 80.0	302.0 / 80.0



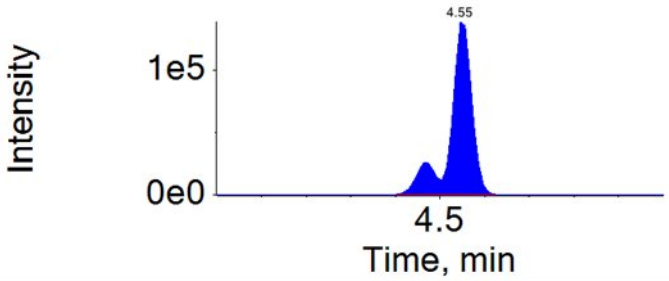


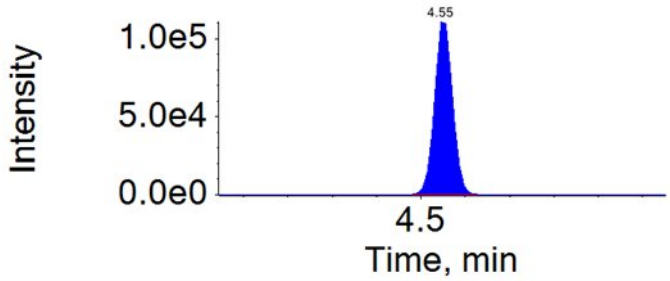
Analyte: PFHpA	Extraction Standard: 13C4-PFHpA
363.0 / 319.0	367.0 / 322.0





Analyte: PFHxS	Extraction Standard: 13C3-PFHxS
399.0 / 80.0	402.0 / 80.0



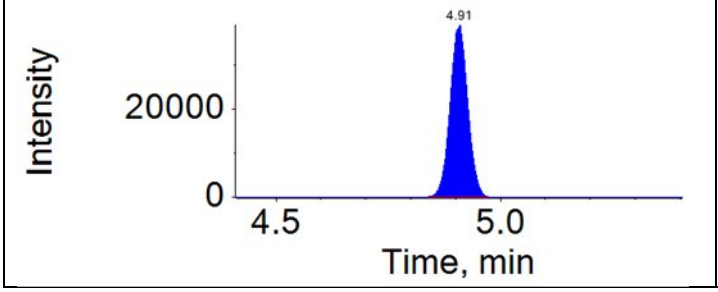


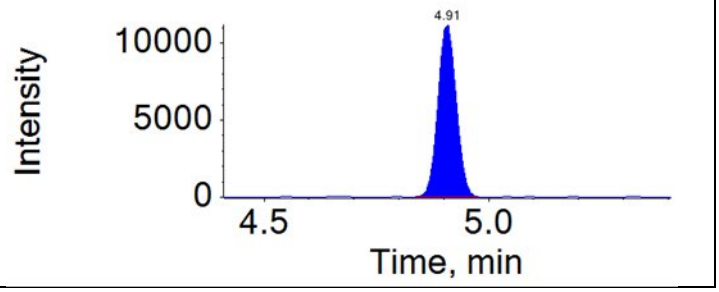
APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

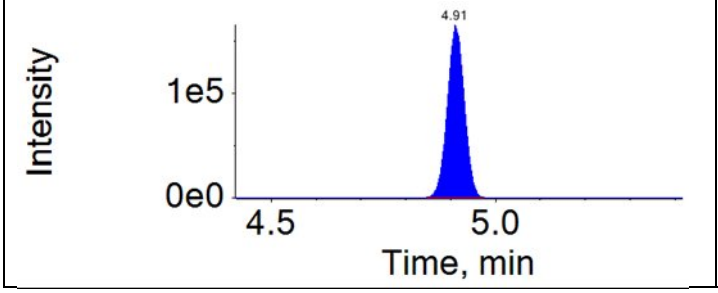
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

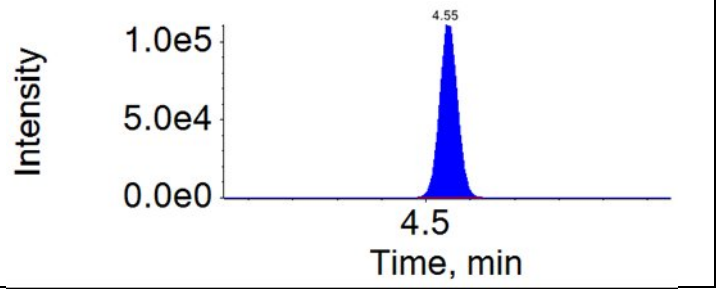
Analyte: 6:2-FTS	Extraction Standard: 13C2-6:2-FTS
427.0 / 407.0	429.0 / 81.0



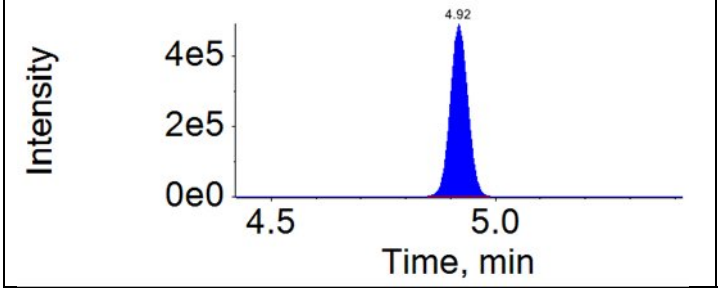


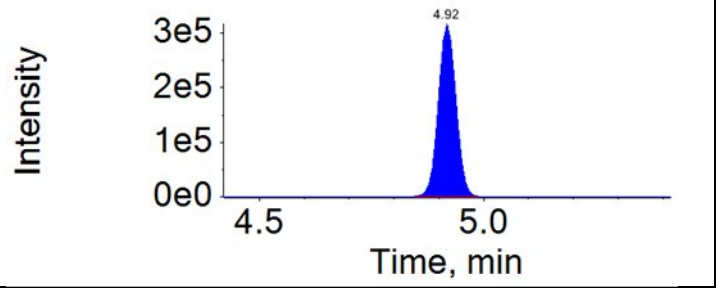
Analyte: PFHpS	Extraction Standard: 13C3-PFHxS
449.0 / 80.0	402.0 / 80.0



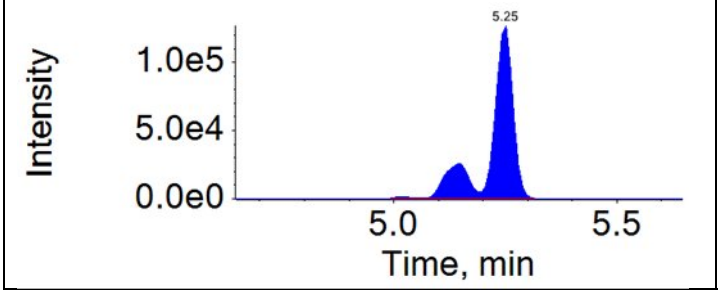


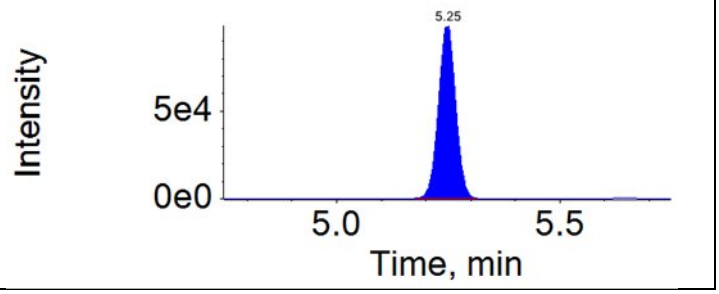
Analyte: PFOA	Extraction Standard: 13C8-PFOA
413.0 / 369.0	421.0 / 376.0





Analyte: PFOS	Extraction Standard: 13C8-PFOS
499.0 / 80.0	507.0 / 80.0



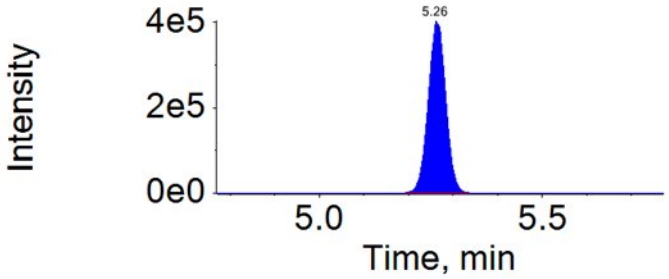


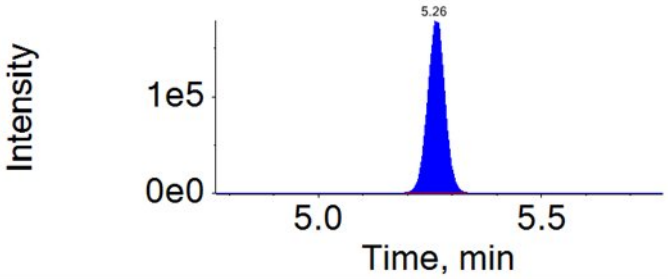
APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

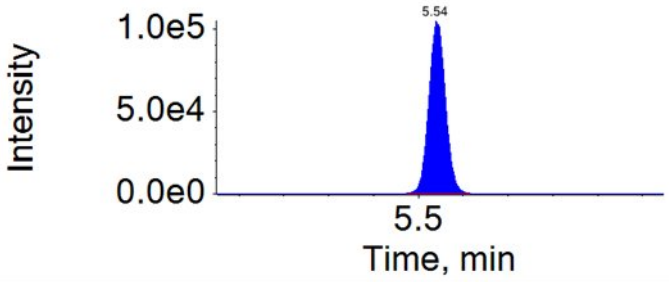
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

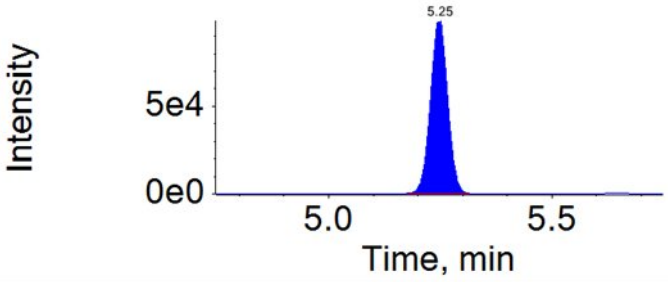
Analyte: PFNA	Extraction Standard: 13C9-PFNA
463.0 / 419.0	472.0 / 427.0



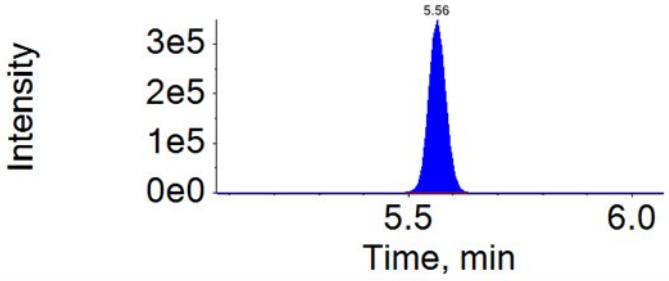


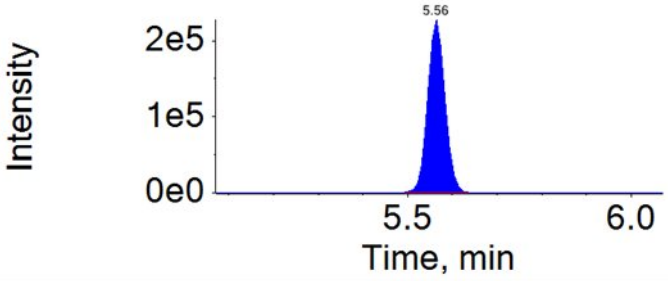
Analyte: PFNS	Extraction Standard: 13C8-PFOS
549.0 / 80.0	507.0 / 80.0



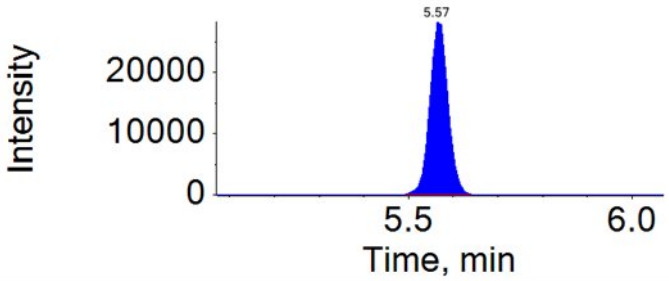


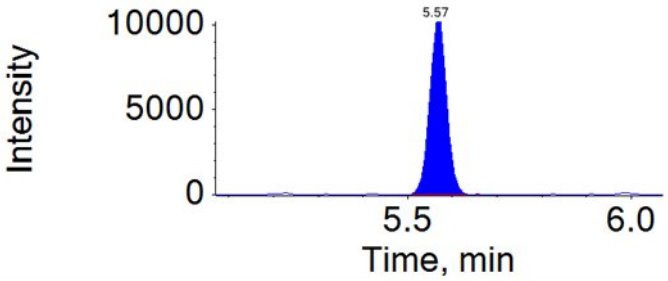
Analyte: PFDA	Extraction Standard: 13C6-PFDA
513.0 / 469.0	519.0 / 474.0





Analyte: 8:2-FTS	Extraction Standard: 13C2-8:2-FTS
527.0 / 507.0	529.0 / 81.0



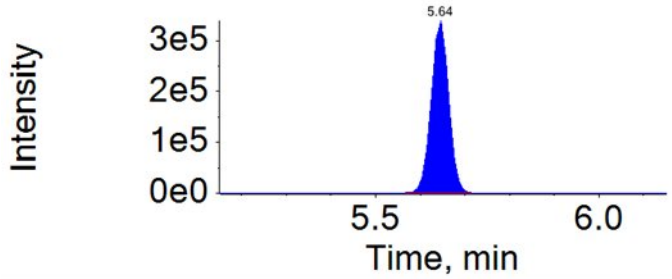


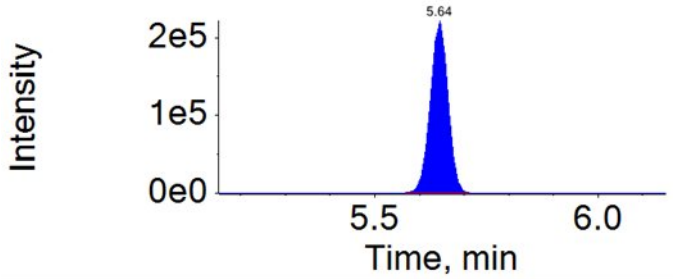
APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

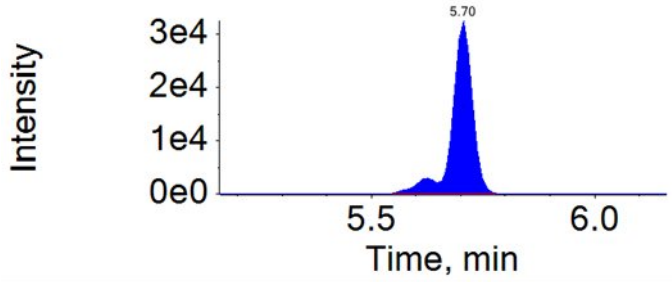
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

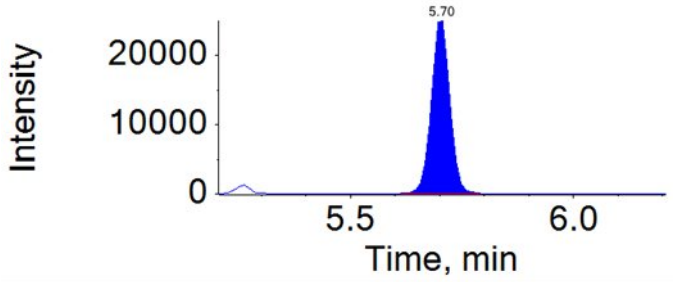
Analyte: PFOSA	Extraction Standard: 13C8-PFOSA
498.0 / 78.0	506.0 / 78.0



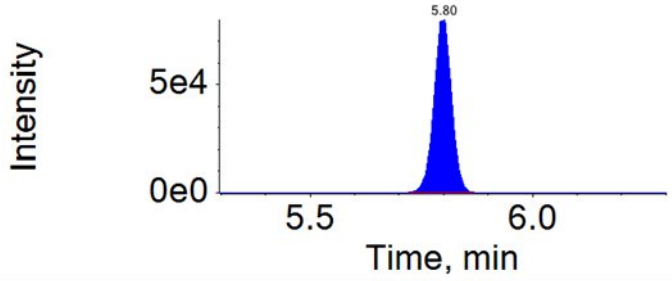


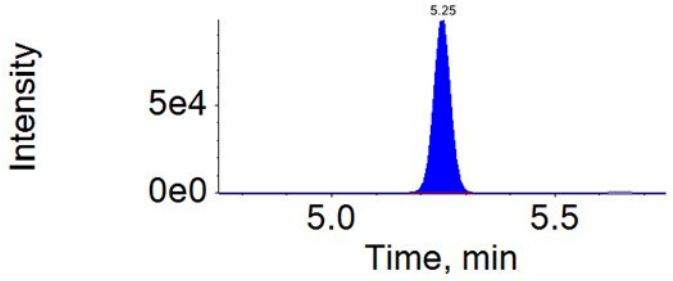
Analyte: NMeFOSAA	Extraction Standard: d3-NMeFOSAA
570.0 / 419.0	573.0 / 419.0



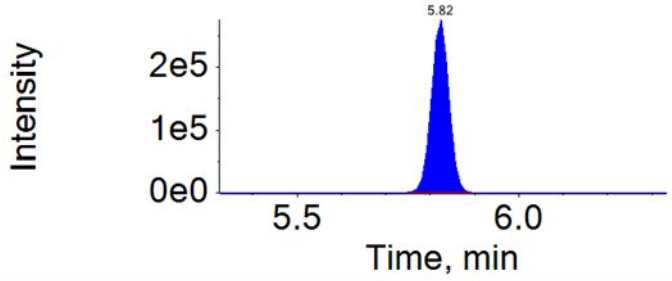


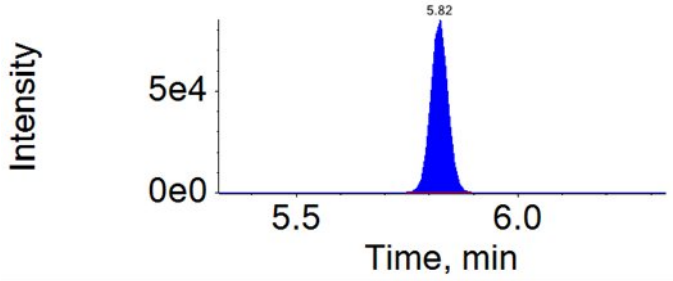
Analyte: PFDS	Extraction Standard: 13C8-PFOS
599.0 / 80.0	507.0 / 80.0





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



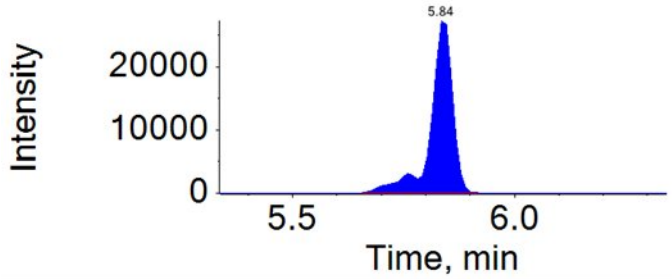


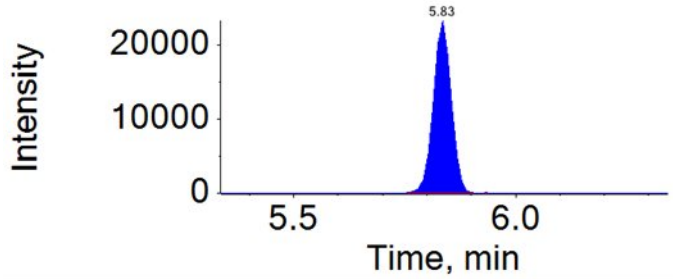
APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

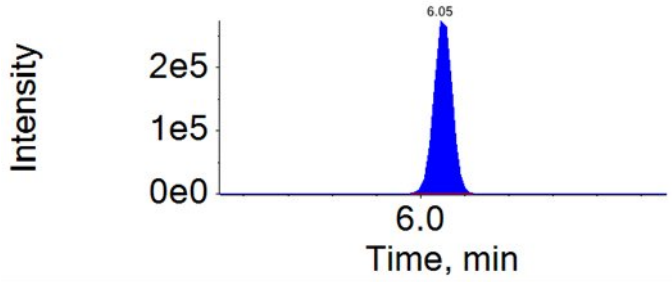
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

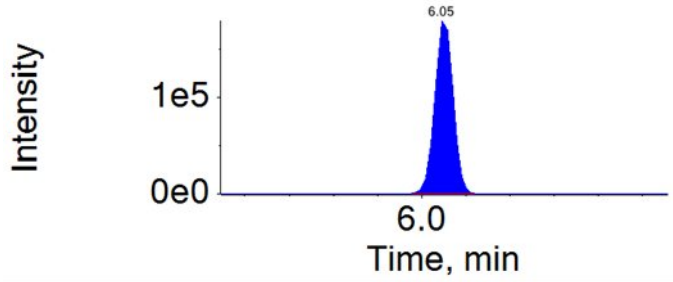
Analyte: NEtFOSAA	Extraction Standard: d5-NEtFOSAA
584.0 / 419.0	589.0 / 419.0



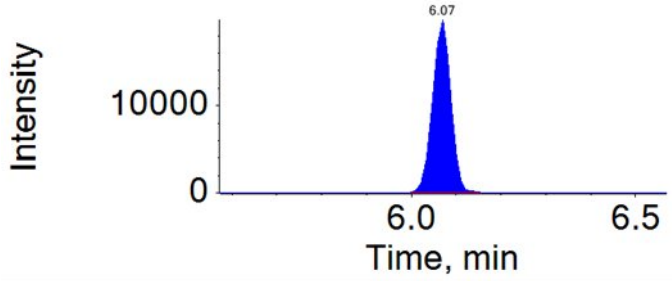


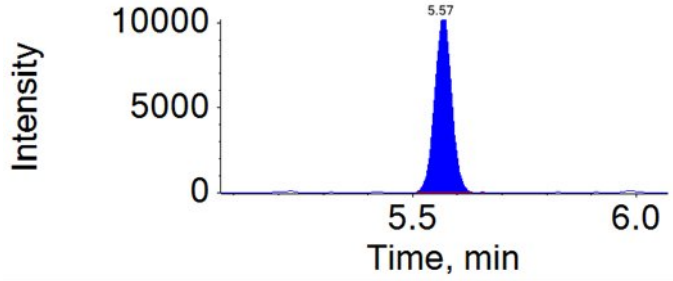
Analyte: PFDoDA	Extraction Standard: 13C2-PFDoDA
613.0 / 569.0	615.0 / 570.0



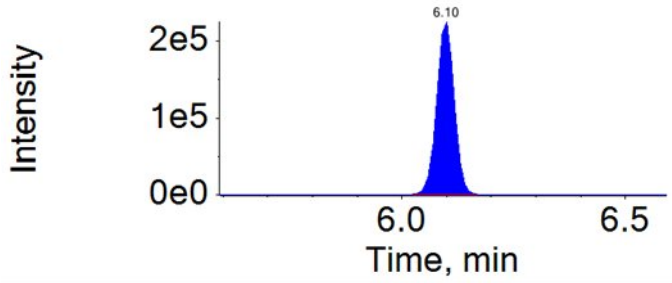


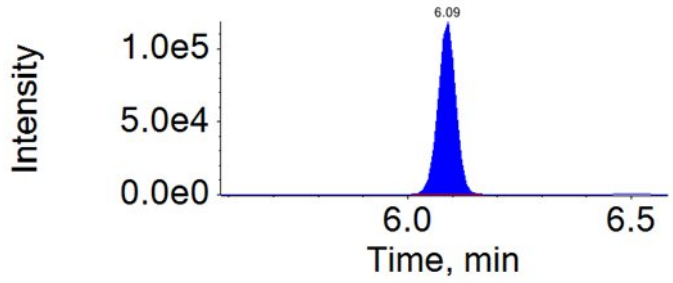
Analyte: 10:2-FTS	Extraction Standard: 13C2-8:2-FTS
627.0 / 607.0	529.0 / 81.0





Analyte: NMePFOSAE	Extraction Standard: d7-NMePFOSAE
616.0 / 59.0	623.0 / 59.0



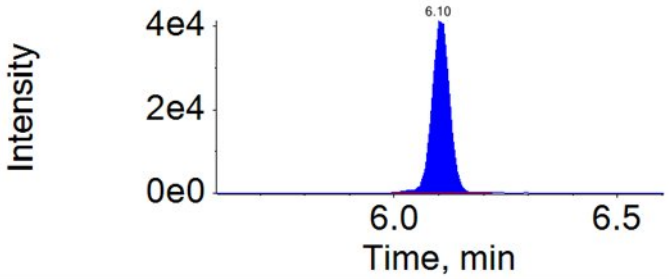


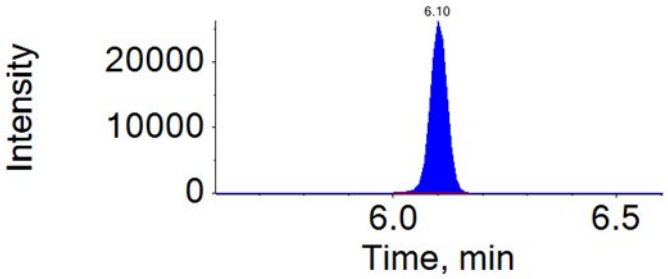
APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

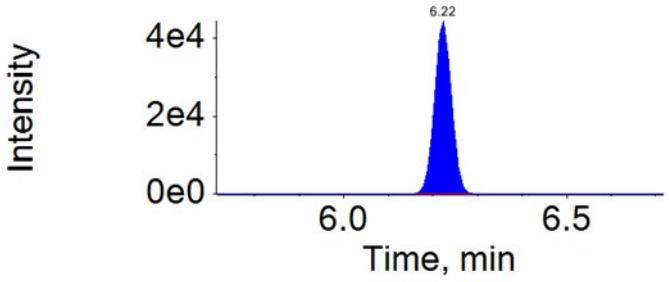
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

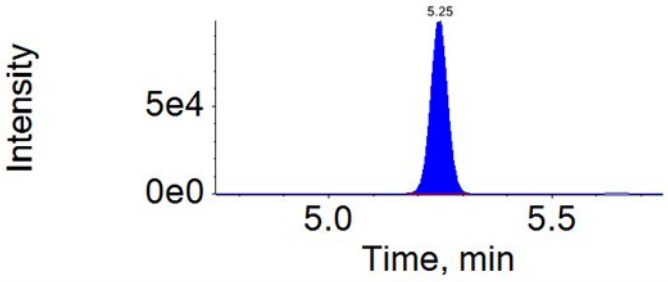
Analyte: NMePFOSA	Extraction Standard: d3-NMePFOSA
512.0 / 169.0	515.0 / 169.0



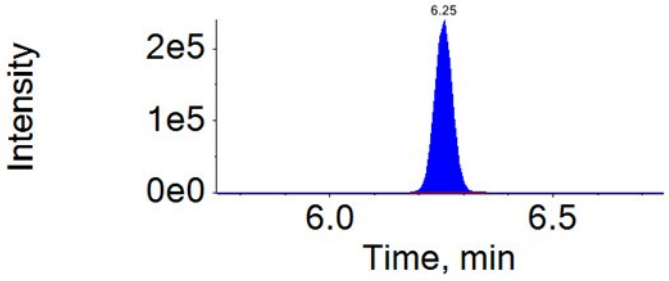


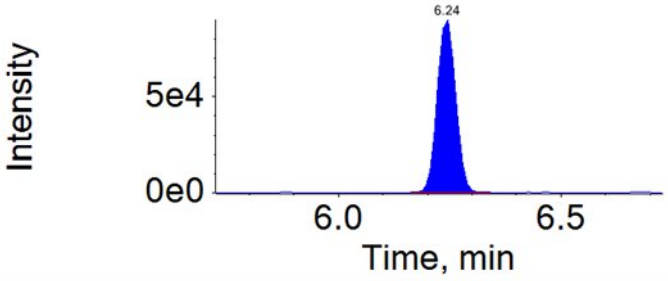
Analyte: PFDoS	Extraction Standard: 13C8-PFOS
699.0 / 80.0	507.0 / 80.0



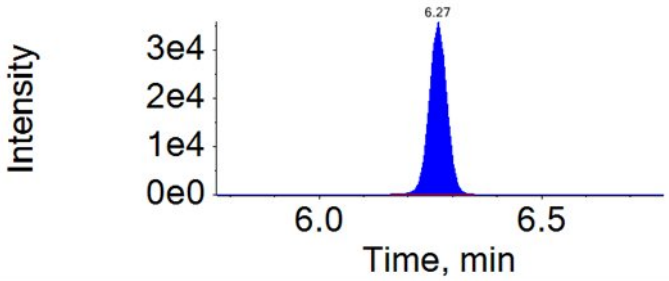


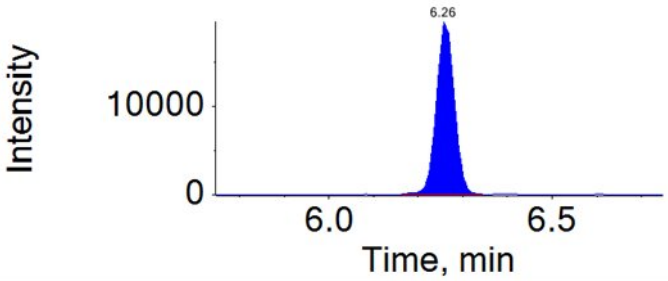
Analyte: NEtPFOSAE	Extraction Standard: d9-NEtPFOSAE
630.0 / 59.0	639.0 / 59.0





Analyte: NEtPFOSA	Extraction Standard: d5-NEtPFOSA
526.0 / 169.0	531.0 / 169.0



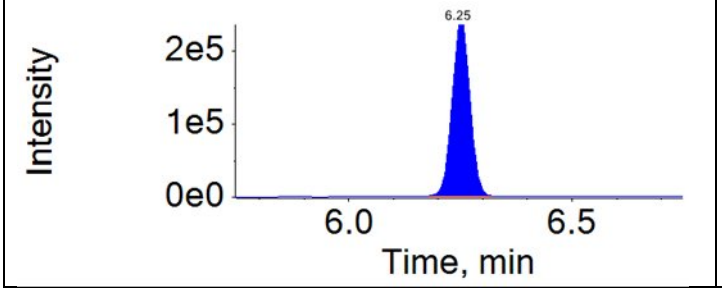


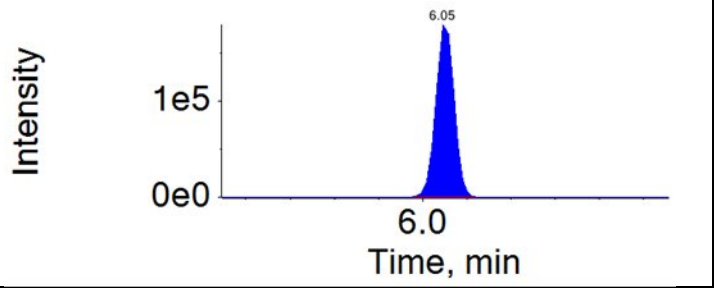
APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

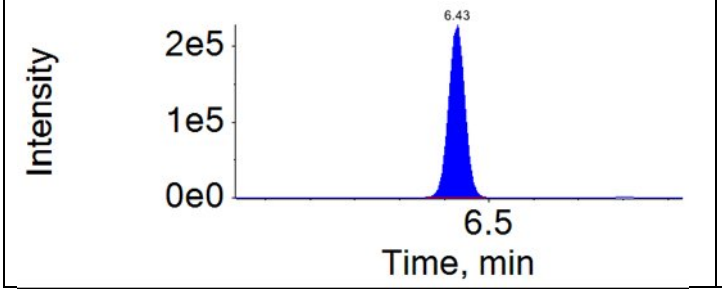
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

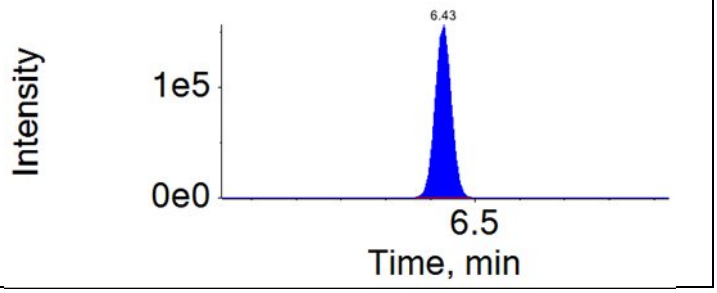
Analyte: PFTrDA	Extraction Standard: 13C2-PFDoDA
663.0 / 619.0	615.0 / 570.0



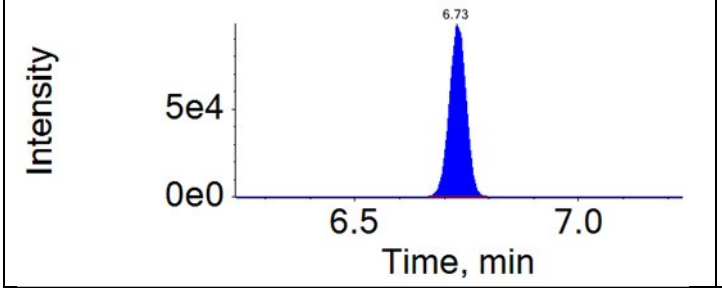


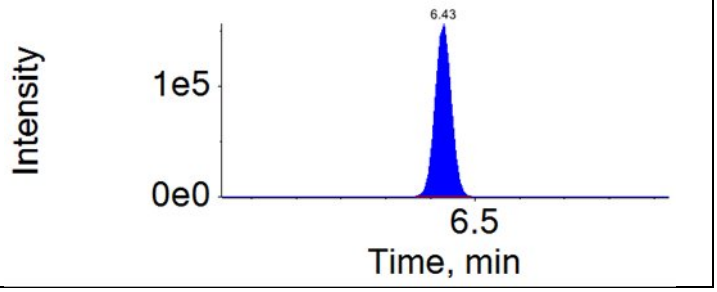
Analyte: PFTeDA	Extraction Standard: 13C2-PFTeDA
713.0 / 669.0	715.0 / 670.0



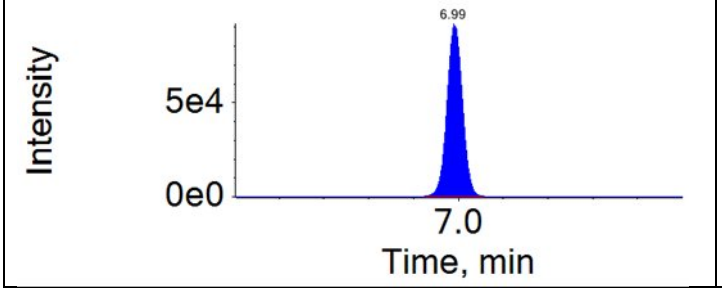


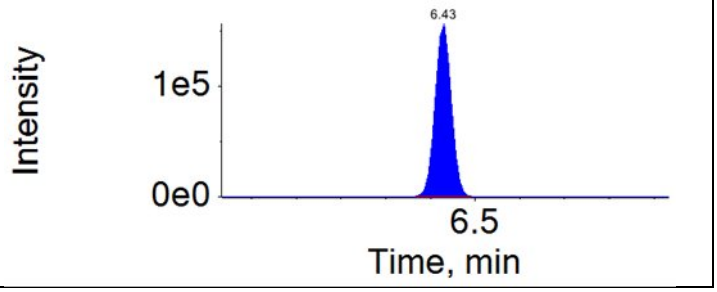
Analyte: PFHxDA	Extraction Standard: 13C2-PFTeDA
813.0 / 769.0	715.0 / 670.0





Analyte: PFODA	Extraction Standard: 13C2-PFTeDA
913.0 / 869.0	715.0 / 670.0



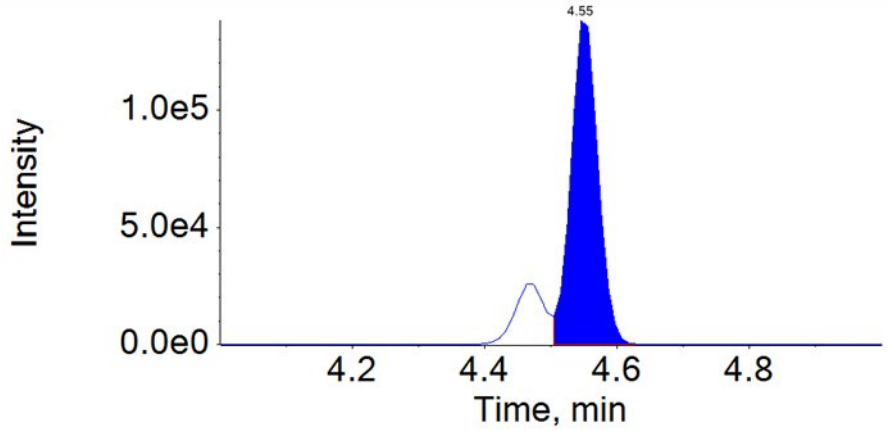


APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

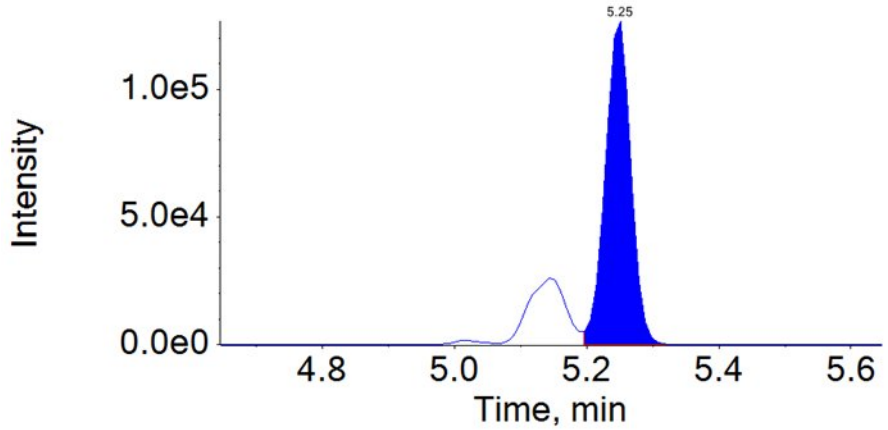
Results Table Name: 18NOV12DCAL
Results Table Date: 11/12/2018 6:23:42 PM
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

Component Name:
PFHxS
RT (min.):
4.55
Peak Area:
397028.39
Mass Range:
399.0 / 80.0
File Name:
18NOV12DCAL-45.wiff
Sample Name:
CAL4



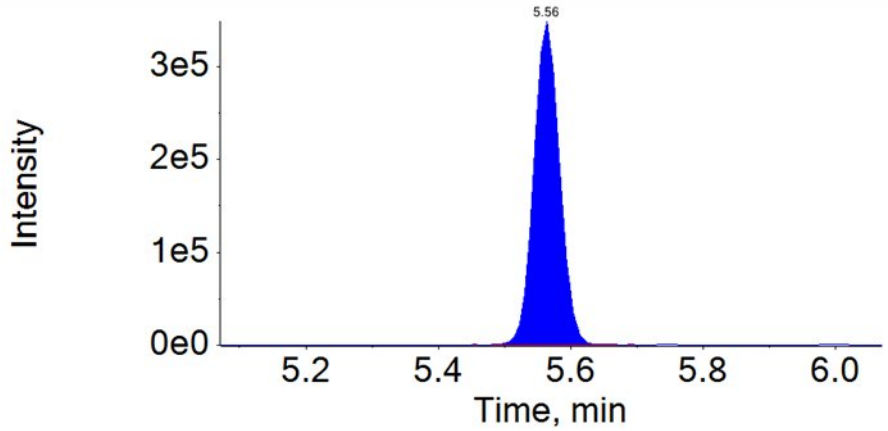
Integration Comment: incorrect integration

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



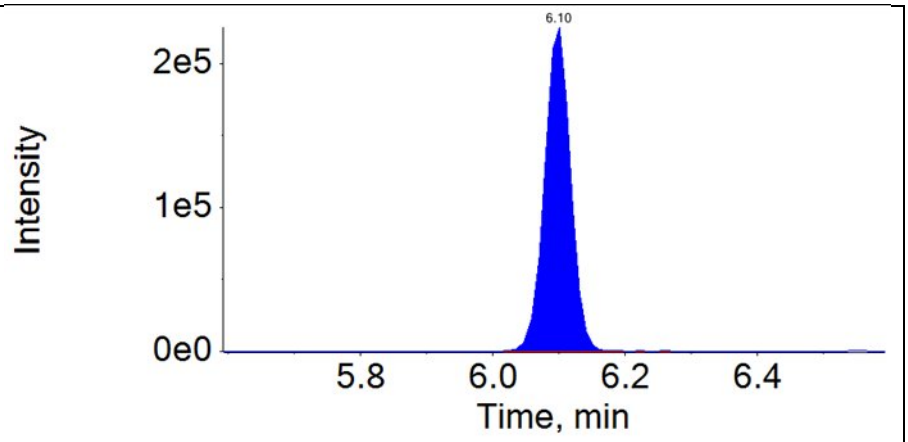
Integration Comment: incorrect integration

APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

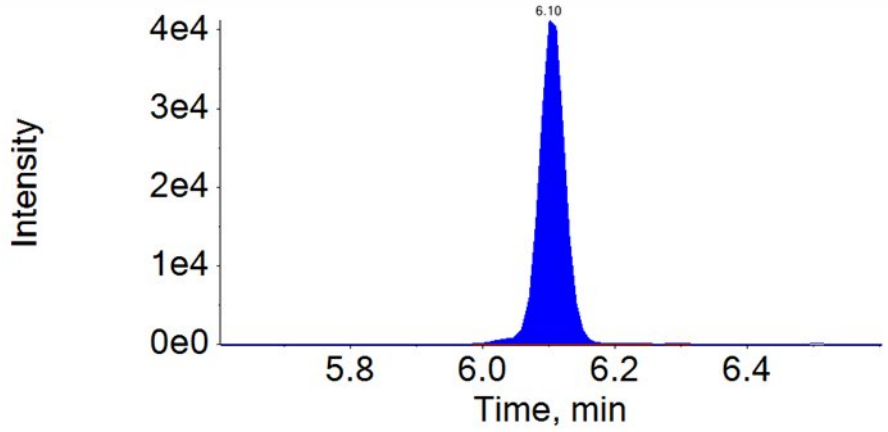
Results Table Name: 18NOV12DCAL
Results Table Date: 11/12/2018 6:23:42 PM
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

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



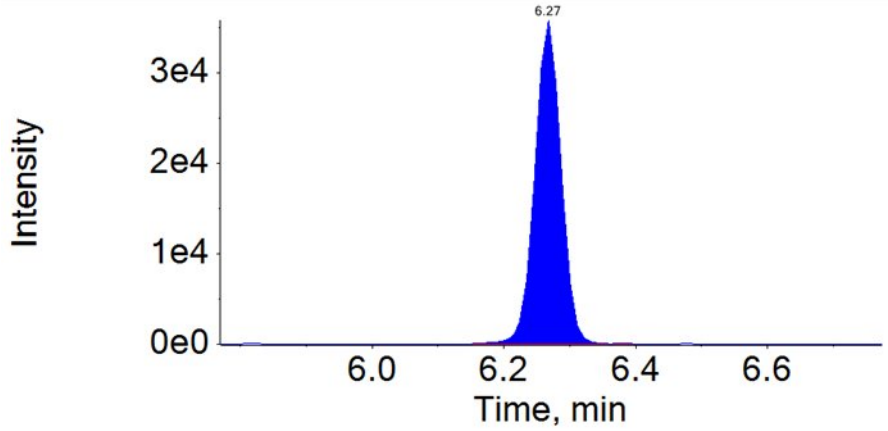
Integration Comment: incorrect integration

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



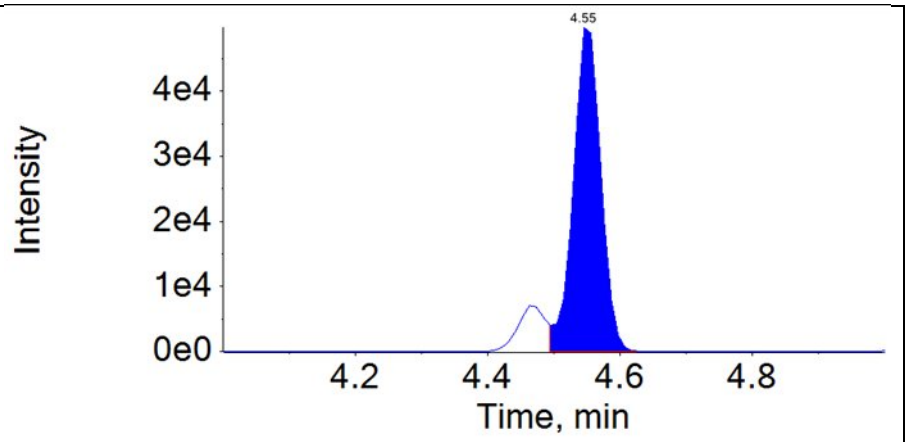
Integration Comment: incorrect integration

APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

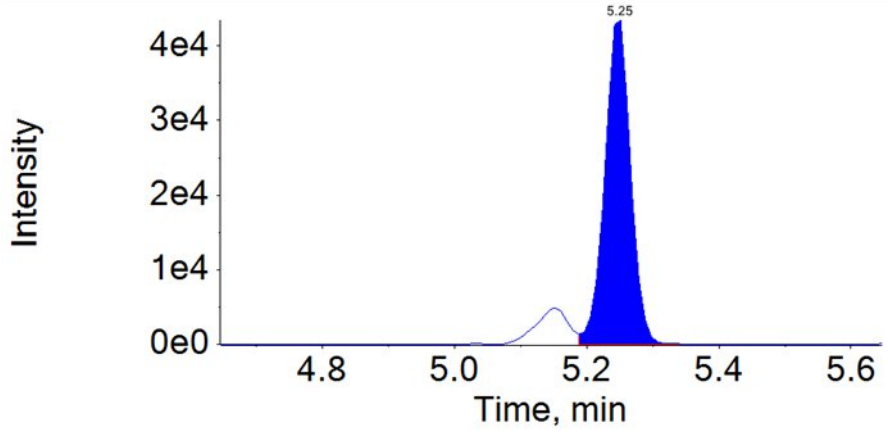
Results Table Name: 18NOV12DCAL
Results Table Date: 11/12/2018 6:23:42 PM
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

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



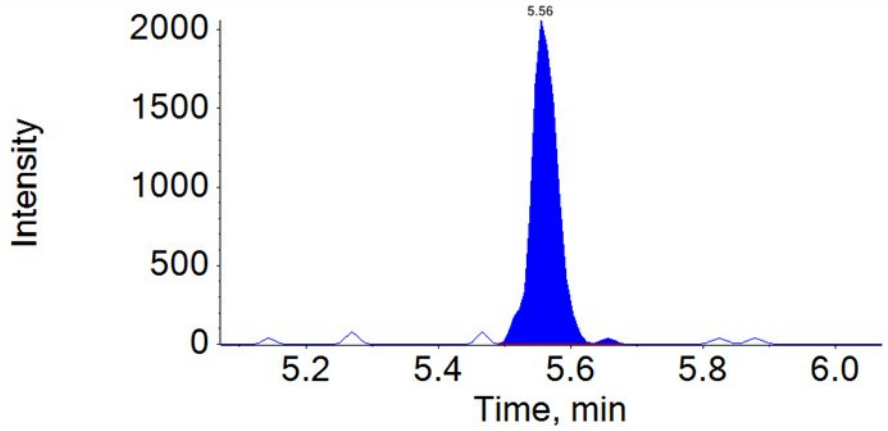
Integration Comment: incorrect integration

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



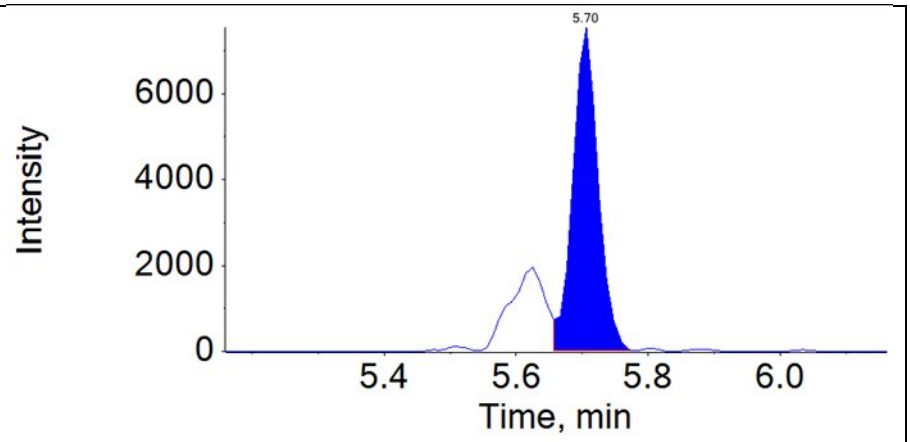
Integration Comment: incorrect integration

APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

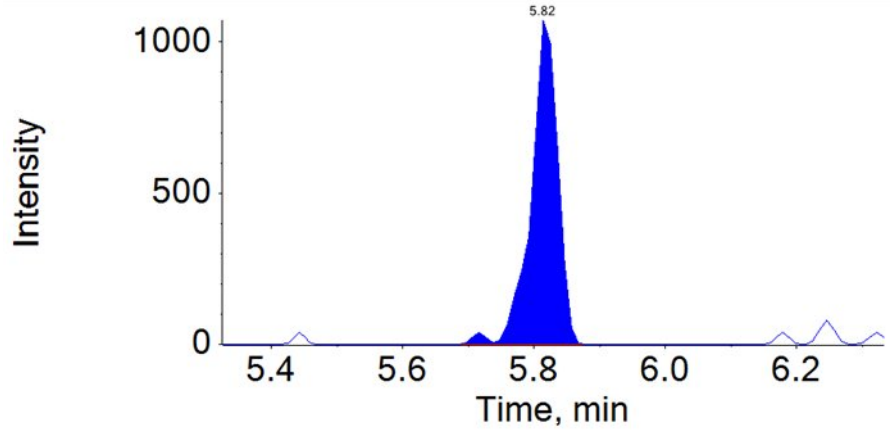
Results Table Name: 18NOV12DCAL
Results Table Date: 11/12/2018 6:23:42 PM
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

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



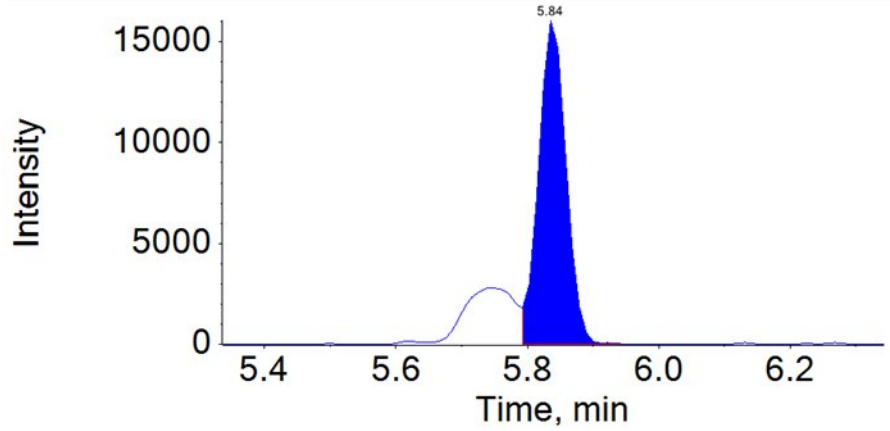
Integration Comment: incorrect integration

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

Ion Ratio Report

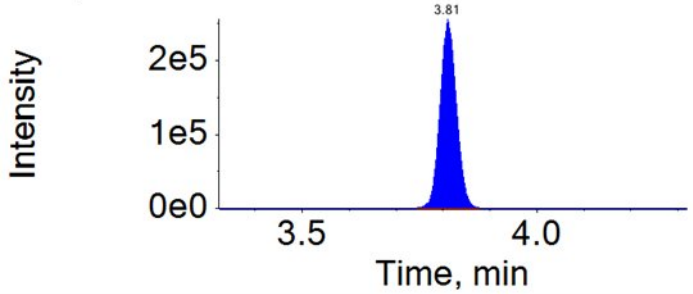
Sample Name: CAL4 **Instrument Name:** LM27631 **File Name:** 18NOV12DCAL-45.wiff

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	

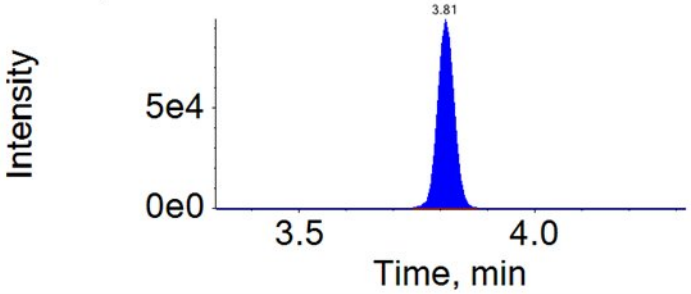
APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

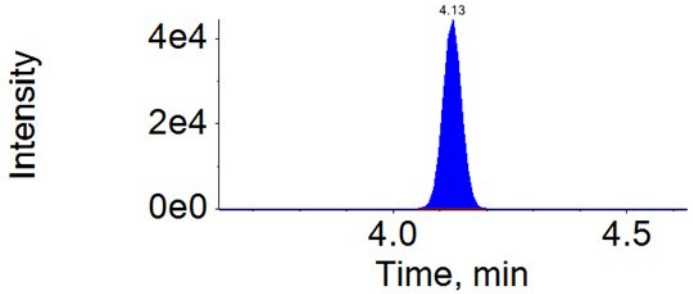
Component: PFBS
Primary Mass: 299.0 / 80.0



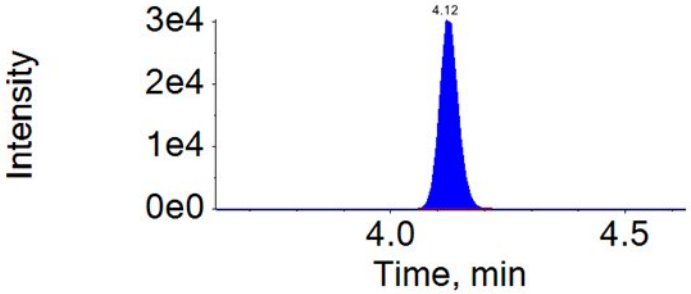
Component: PFBS_2
Secondary Mass: 299.0 / 99.0



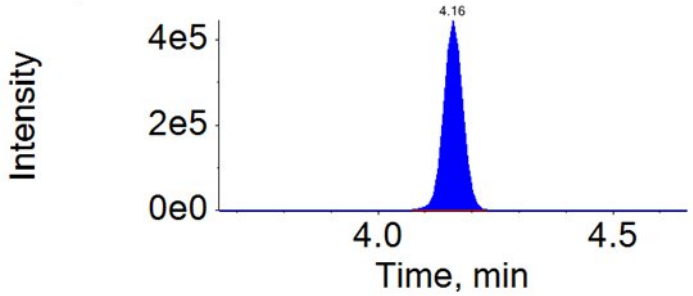
Component: 4:2-FTS
Primary Mass: 327.0 / 307.0



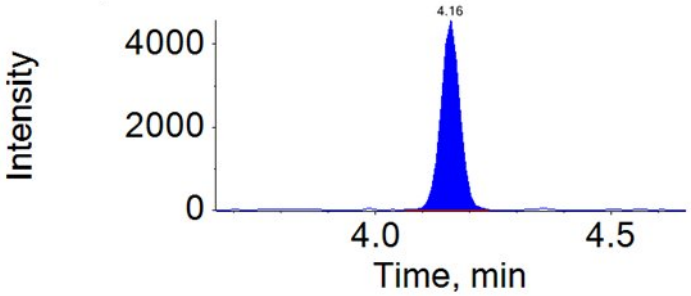
Component: 4:2 FTS_2
Secondary Mass: 327.0 / 81.0



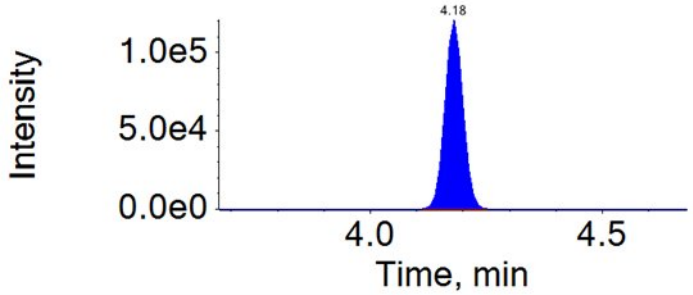
Component: PFHxA
Primary Mass: 313.0 / 269.0



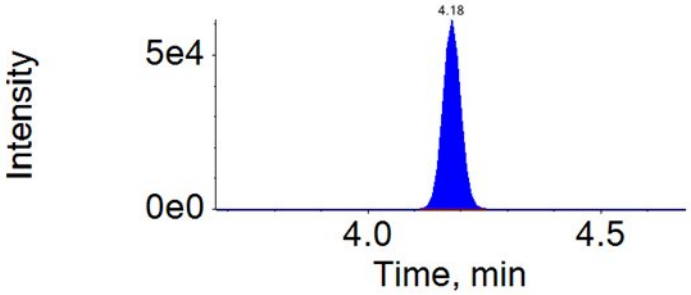
Component: PFHxA_2
Secondary Mass: 313.0 / 119.0



Component: PFPeS
Primary Mass: 349.0 / 80.0



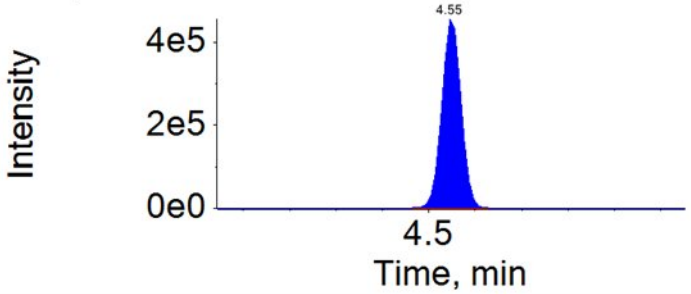
Component: PFPeS_2
Secondary Mass: 349.0 / 99.0



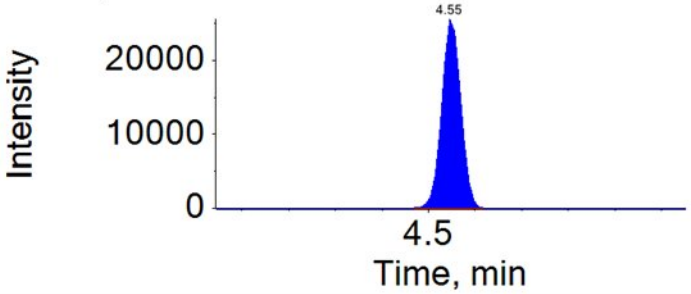
APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

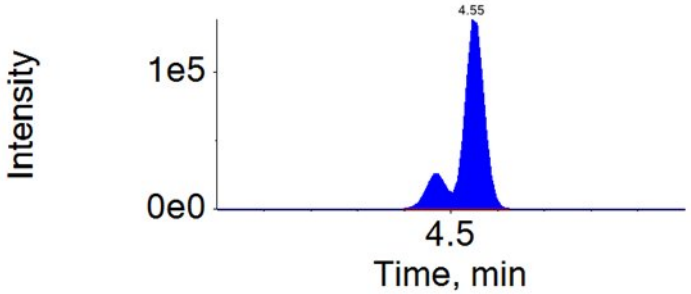
Component: PFHpA
Primary Mass: 363.0 / 319.0



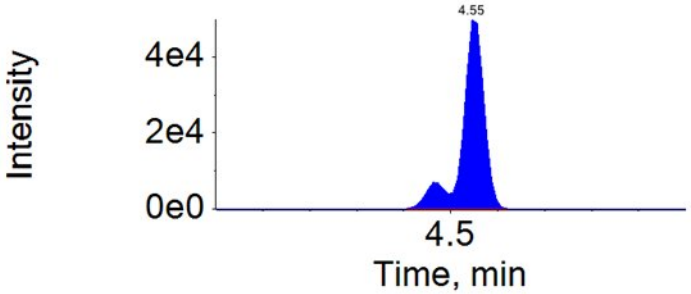
Component: PFHpA_2
Secondary Mass: 363.0 / 169.0



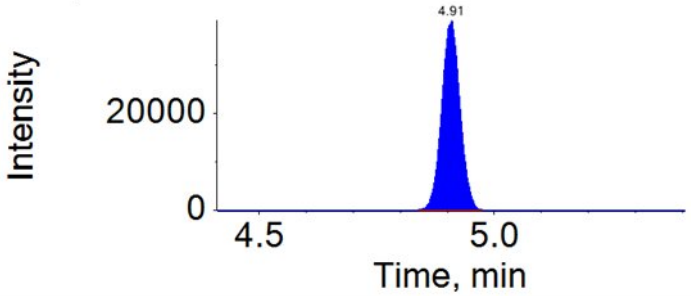
Component: PFHxS
Primary Mass: 399.0 / 80.0



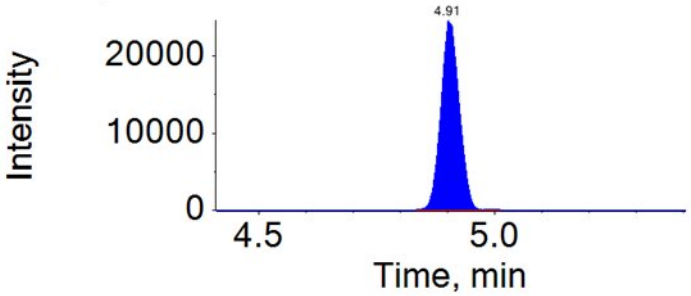
Component: PFHxS_2
Secondary Mass: 399.0 / 99.0



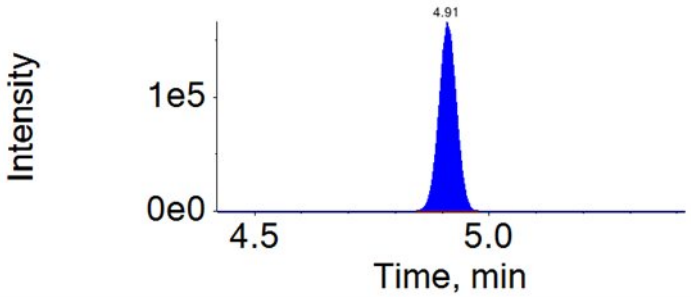
Component: 6:2-FTS
Primary Mass: 427.0 / 407.0



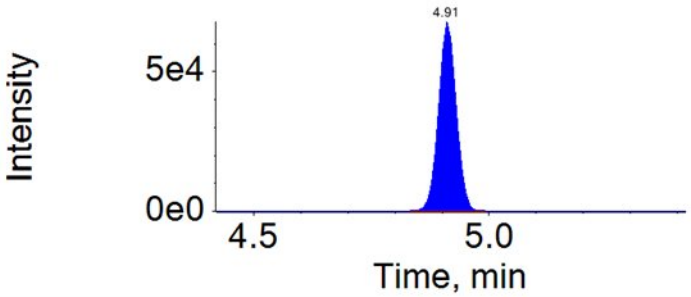
Component: 6:2 FTS_2
Secondary Mass: 427.0 / 81.0



Component: PFHpS
Primary Mass: 449.0 / 80.0



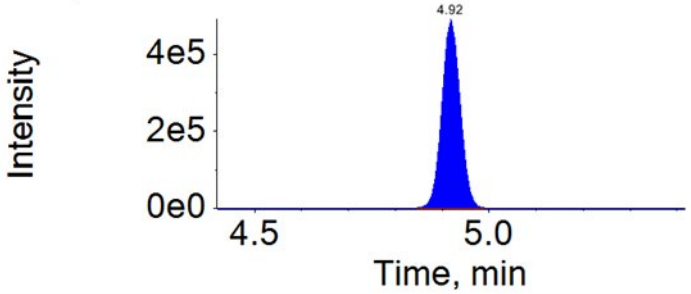
Component: PFHpS_2
Secondary Mass: 449.0 / 99.0



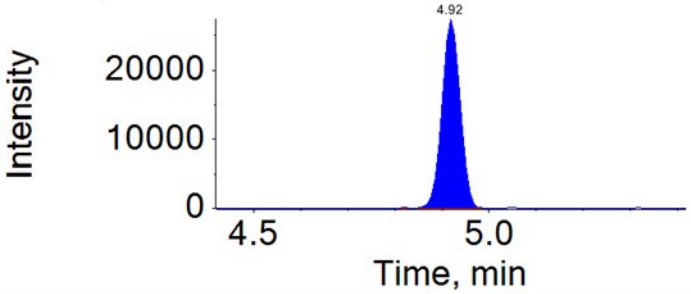
APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

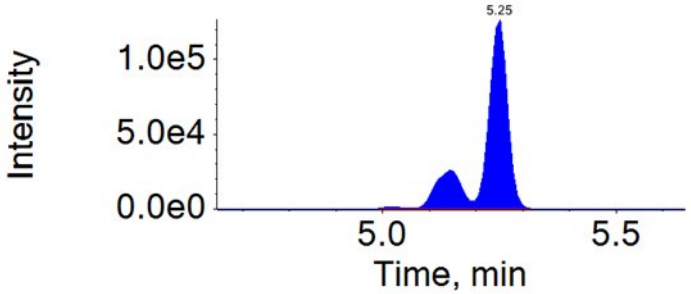
Component: PFOA
Primary Mass: 413.0 / 369.0



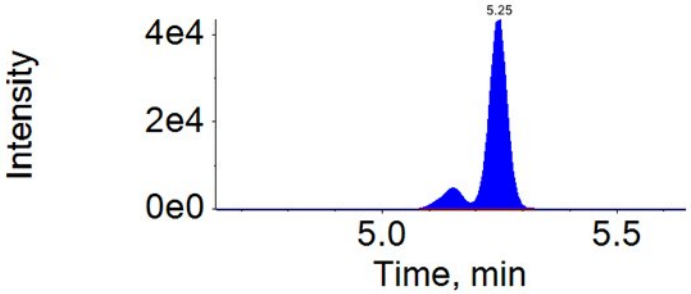
Component: PFOA_2
Secondary Mass: 413.0 / 169.0



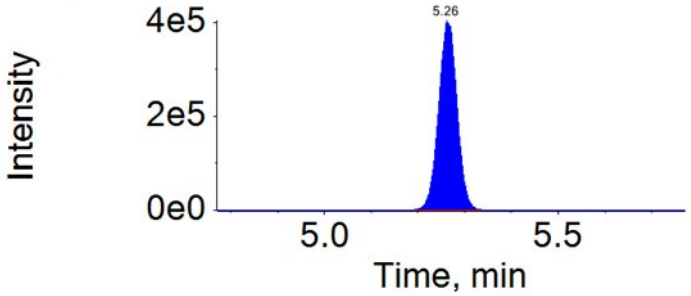
Component: PFOS
Primary Mass: 499.0 / 80.0



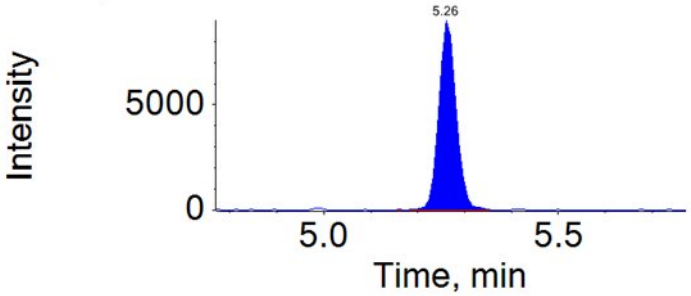
Component: PFOS_2
Secondary Mass: 499.0 / 99.0



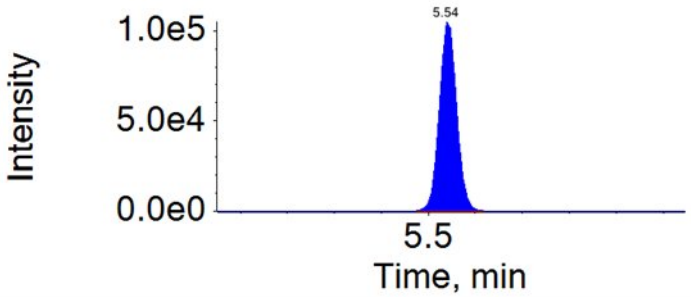
Component: PFNA
Primary Mass: 463.0 / 419.0



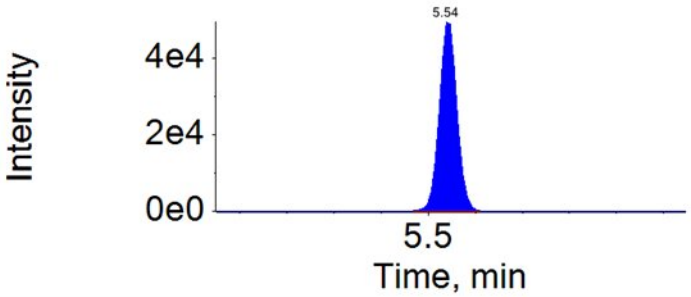
Component: PFNA_2
Secondary Mass: 463.0 / 169.0



Component: PFNS
Primary Mass: 549.0 / 80.0



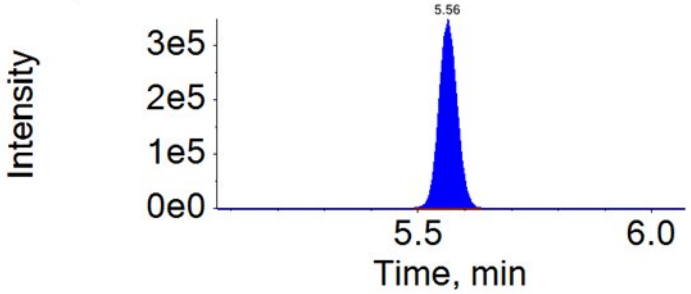
Component: PFNS_2
Secondary Mass: 549.0 / 99.0



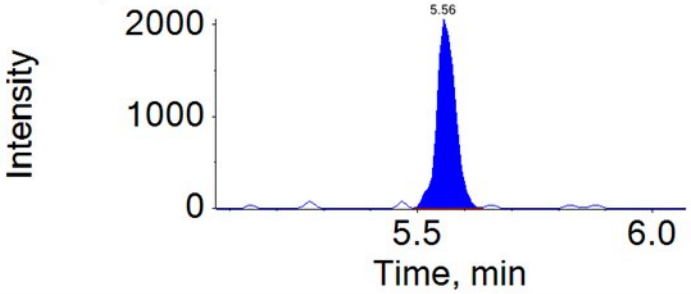
APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

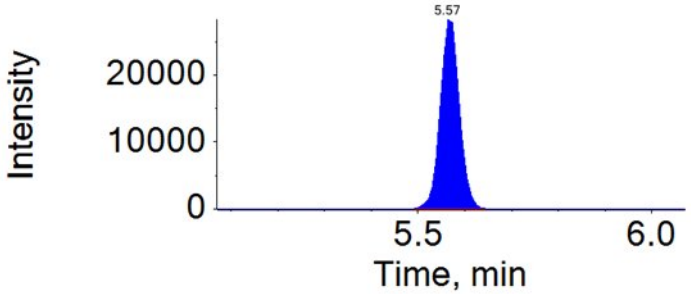
Component: PFDA
Primary Mass: 513.0 / 469.0



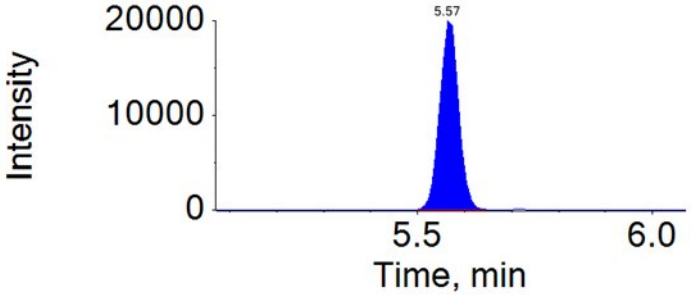
Component: PFDA_2
Secondary Mass: 513.0 / 169.0



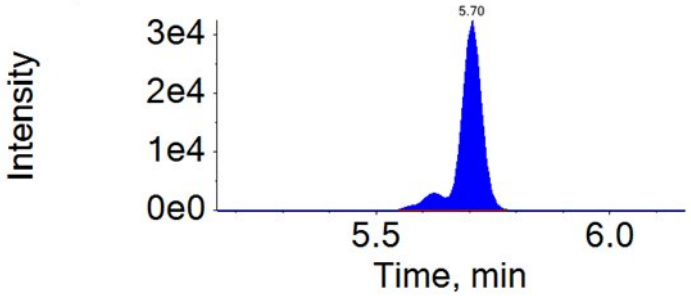
Component: 8:2-FTS
Primary Mass: 527.0 / 507.0



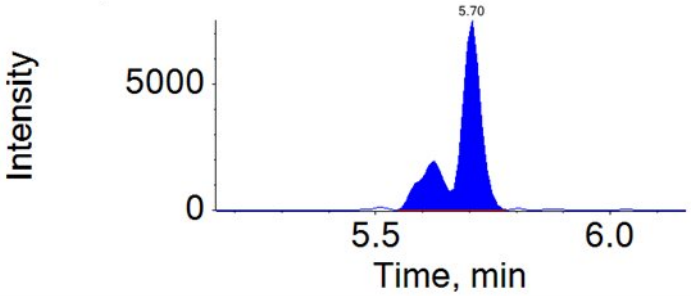
Component: 8:2 FTS_2
Secondary Mass: 527.0 / 81.0



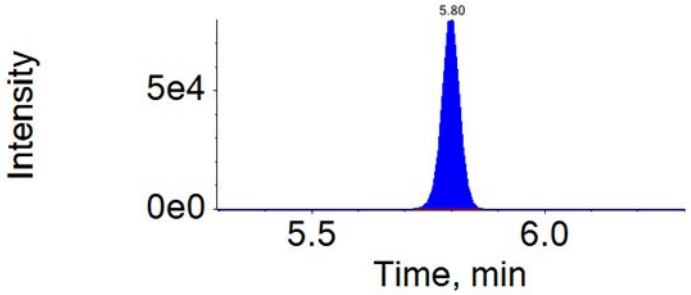
Component: NMeFOSAA
Primary Mass: 570.0 / 419.0



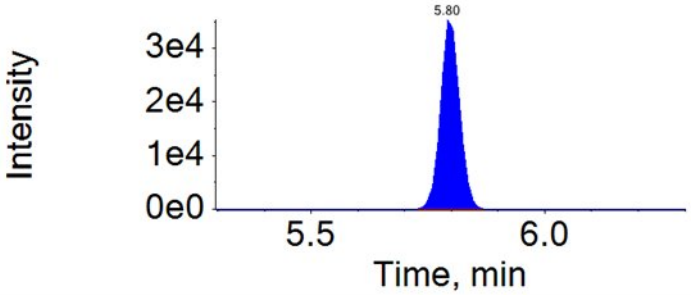
Component: NMeFOSAA_2
Secondary Mass: 570.0 / 483.0



Component: PFDS
Primary Mass: 599.0 / 80.0



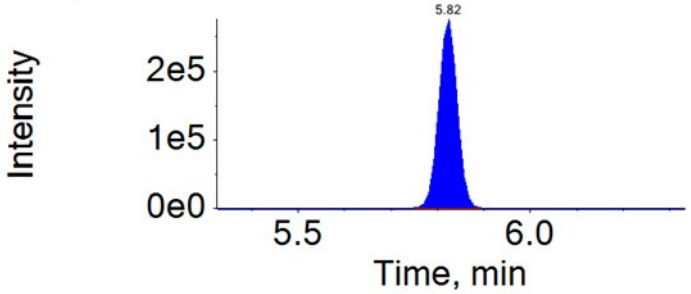
Component: PFDS_2
Secondary Mass: 599.0 / 99.0



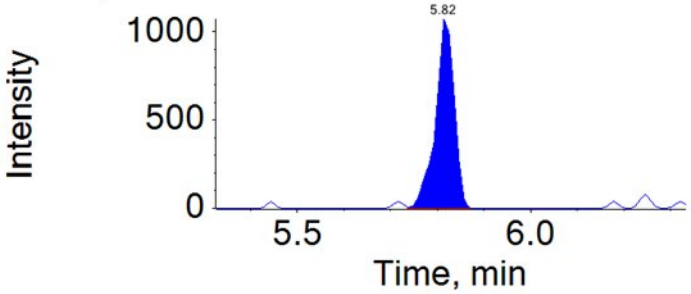
APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

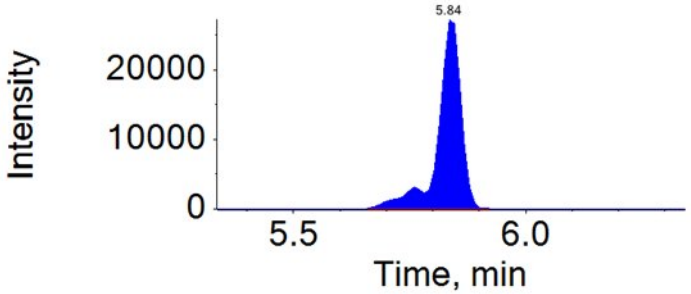
Component: PFUnDA
Primary Mass: 563.0 / 519.0



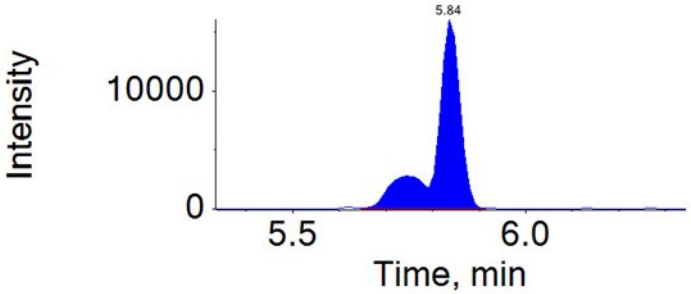
Component: PFUnDA_2
Secondary Mass: 563.0 / 169.0



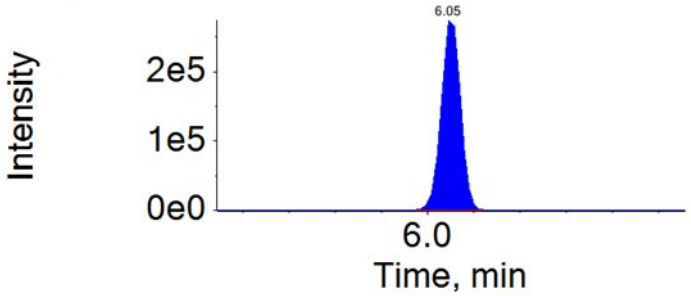
Component: NEtFOSAA
Primary Mass: 584.0 / 419.0



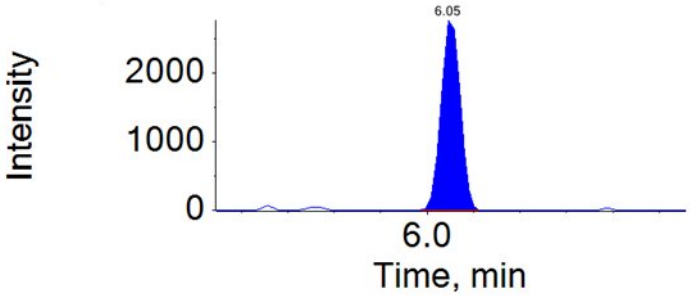
Component: NEtFOSAA_2
Secondary Mass: 584.0 / 526.0



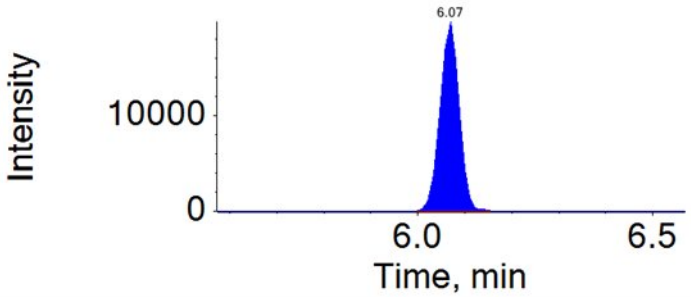
Component: PFDoDA
Primary Mass: 613.0 / 569.0



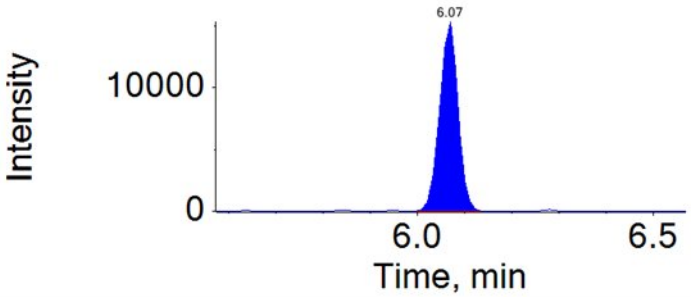
Component: PFDoDA_2
Secondary Mass: 613.0 / 169.0



Component: 10:2-FTS
Primary Mass: 627.0 / 607.0



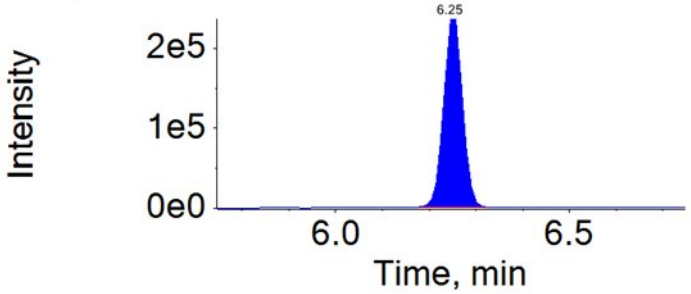
Component: 10:2 FTS_2
Secondary Mass: 627.0 / 81.0



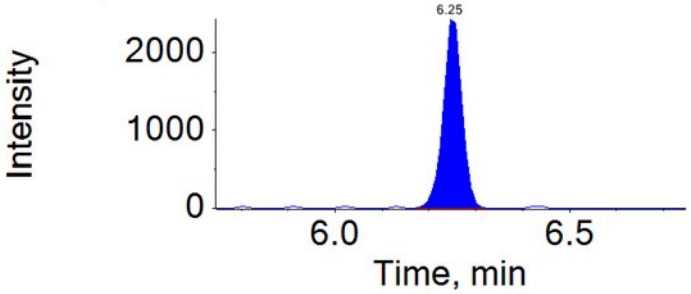
APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

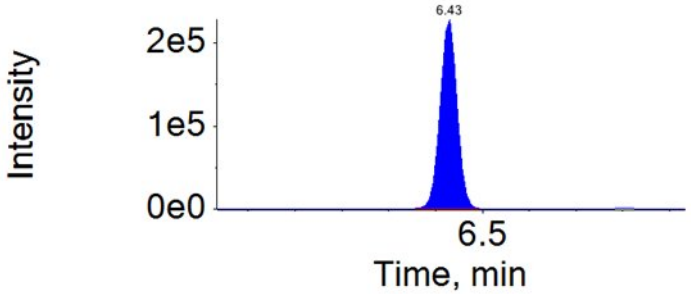
Component: PFTrDA
Primary Mass: 663.0 / 619.0



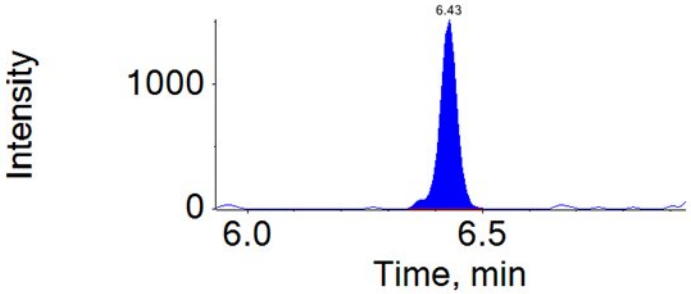
Component: PFTrDA_2
Secondary Mass: 663.0 / 169.0



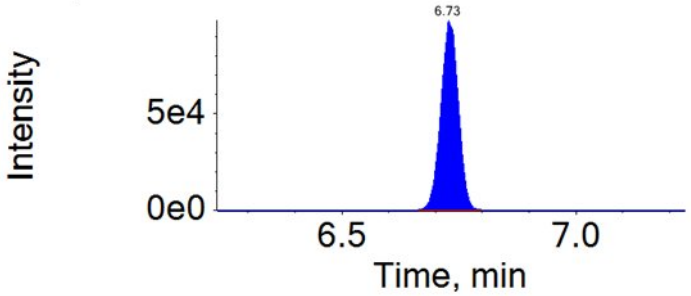
Component: PFTeDA
Primary Mass: 713.0 / 669.0



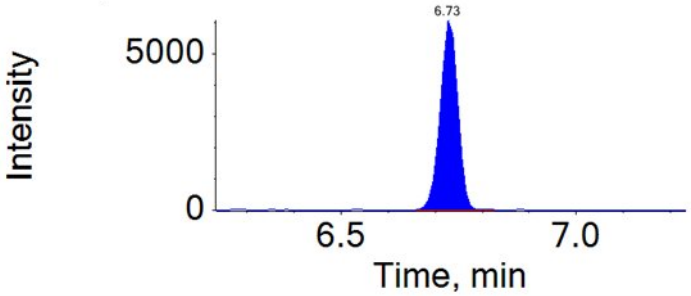
Component: PFTeDA_2
Secondary Mass: 713.0 / 169.0



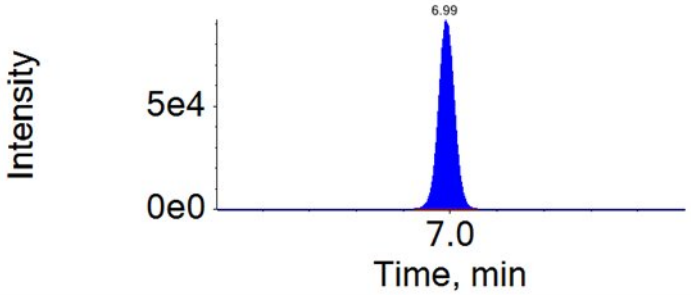
Component: PFHxDA
Primary Mass: 813.0 / 769.0



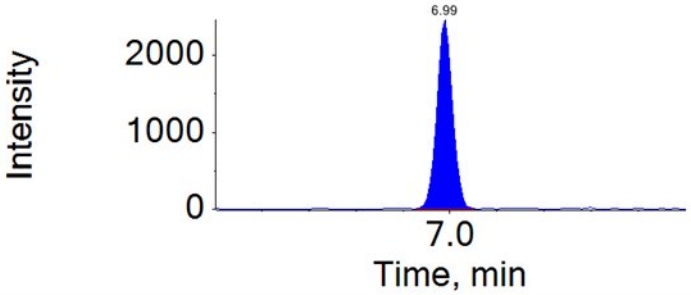
Component: PFHxDA_2
Secondary Mass: 813.0 / 169.0



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:	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

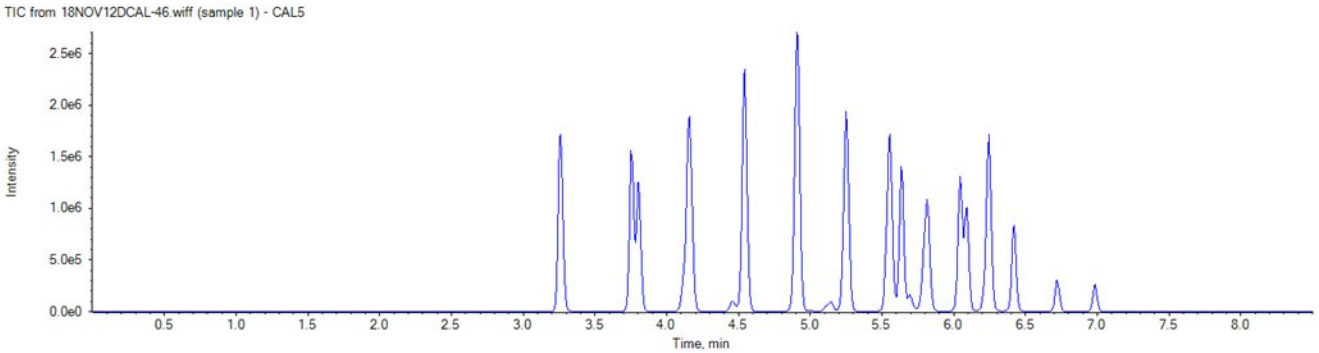
Analyte Quantitation Peak Table

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

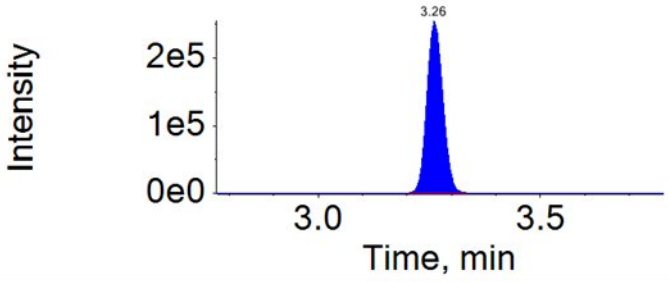


APPROVED
By MCD at 6:33 pm, 11/12/18

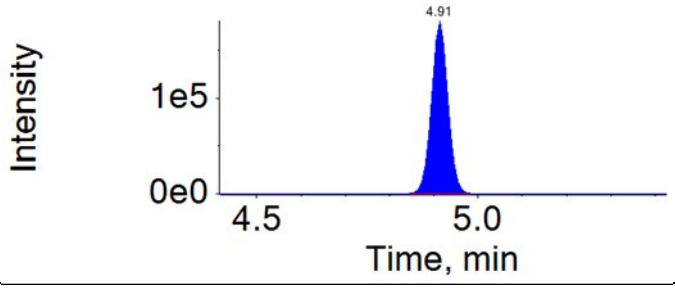
REVIEWED
By HMK at 10:53 am, 11/13/18

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

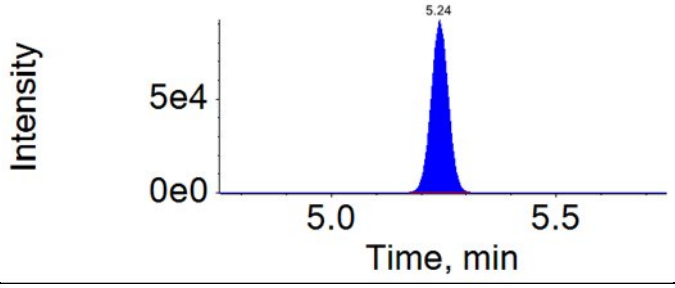
Injection Standard: 13C3-PFBA
216.0 / 172.0



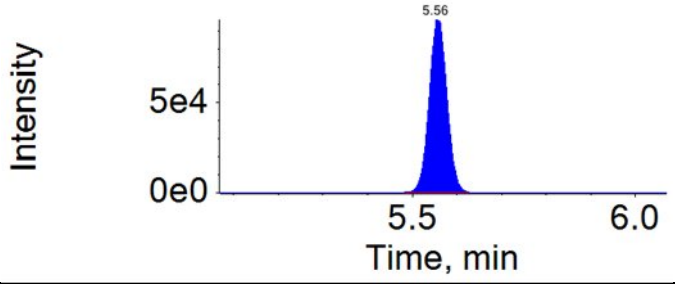
Injection Standard: 13C2-PFOA
415.0 / 370.0



Injection Standard: 13C4-PFOS
503.0 / 80.0



Injection Standard: 13C2-PFDA
515.0 / 470.0

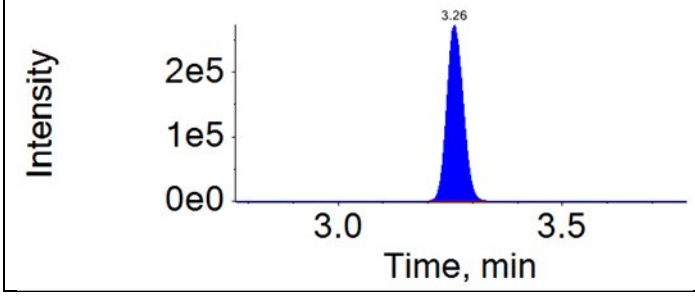


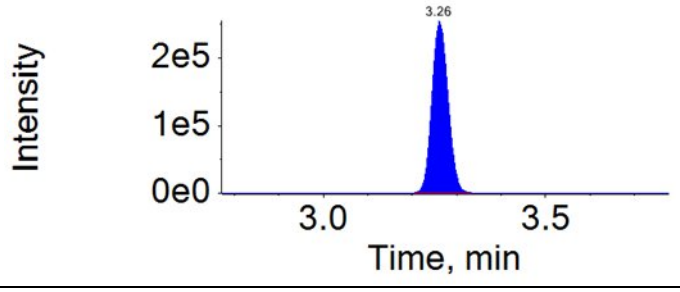
APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

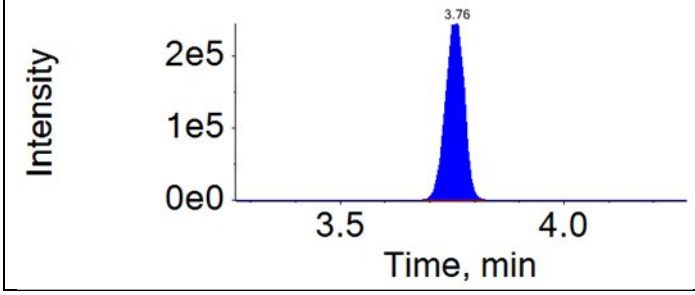
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

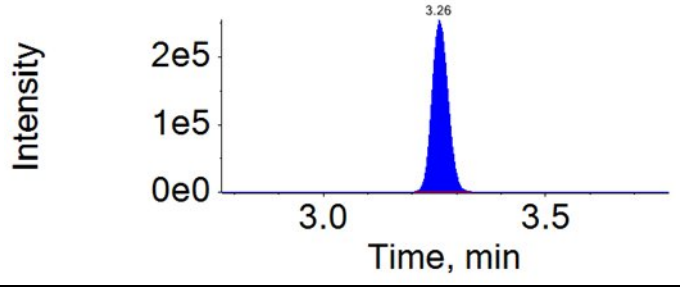
Extraction Standard: E13C4-PFBA	Injection Standard: 13C3-PFBA
217.0 / 172.0	216.0 / 172.0



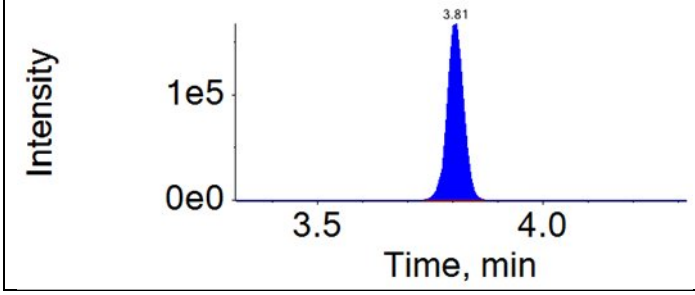


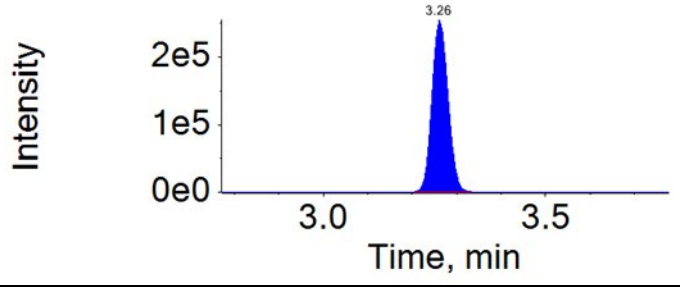
Extraction Standard: E13C5-PFPeA	Injection Standard: 13C3-PFBA
268.0 / 223.0	216.0 / 172.0



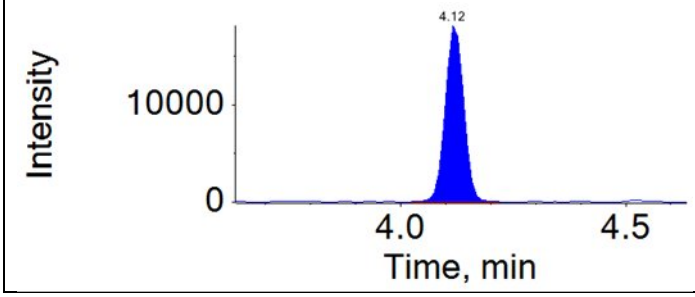


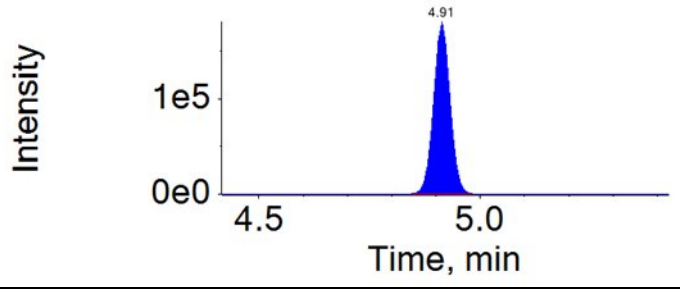
Extraction Standard: E13C3-PFBS	Injection Standard: 13C3-PFBA
302.0 / 80.0	216.0 / 172.0





Extraction Standard: E13C2-4:2-FTS	Injection Standard: 13C2-PFOA
329.0 / 81.0	415.0 / 370.0



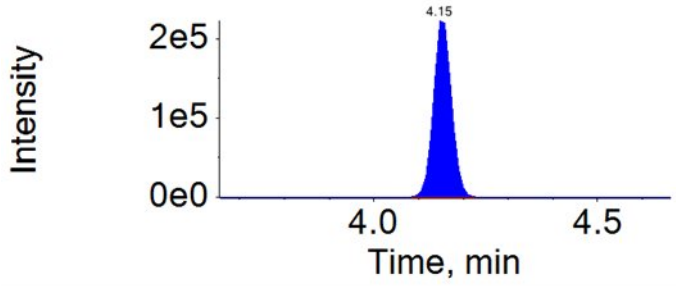


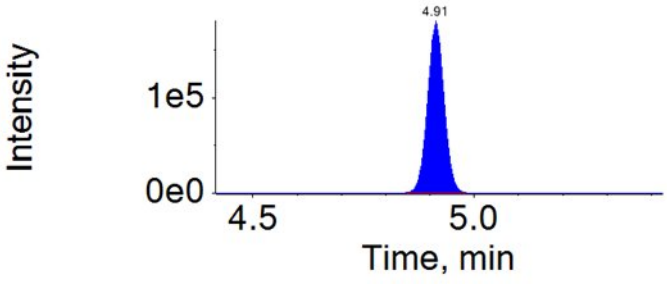
APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

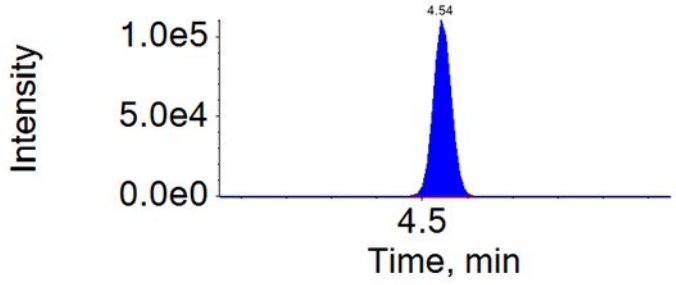
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

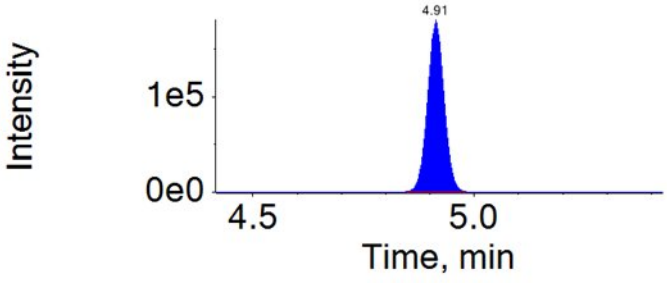
Extraction Standard: E13C5-PFHxA	Injection Standard: 13C2-PFOA
318.0 / 273.0	415.0 / 370.0



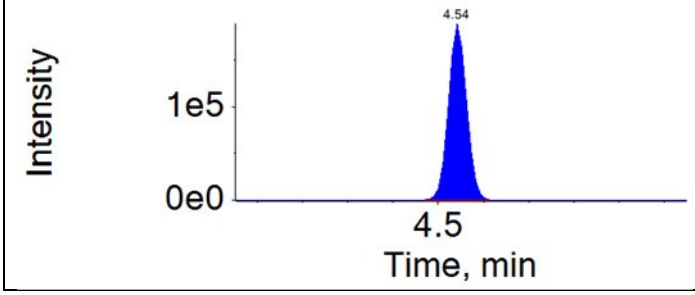


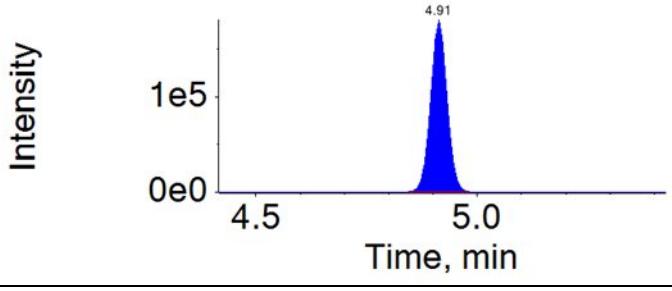
Extraction Standard: E13C3-PFHxS	Injection Standard: 13C2-PFOA
402.0 / 80.0	415.0 / 370.0



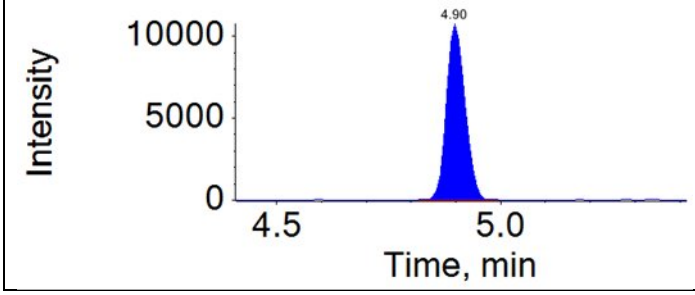


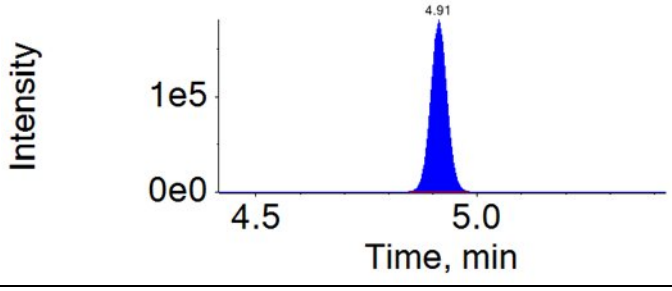
Extraction Standard: E13C4-PFHpA	Injection Standard: 13C2-PFOA
367.0 / 322.0	415.0 / 370.0





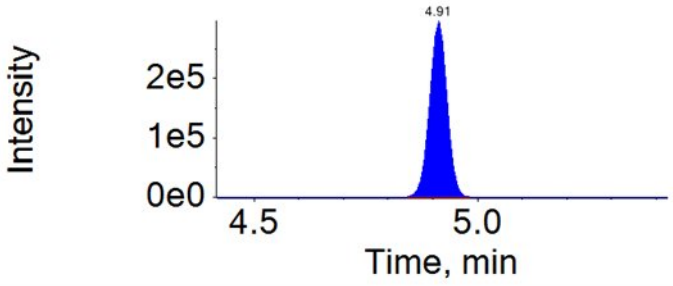
Extraction Standard: E13C2-6:2-FTS	Injection Standard: 13C2-PFOA
429.0 / 81.0	415.0 / 370.0

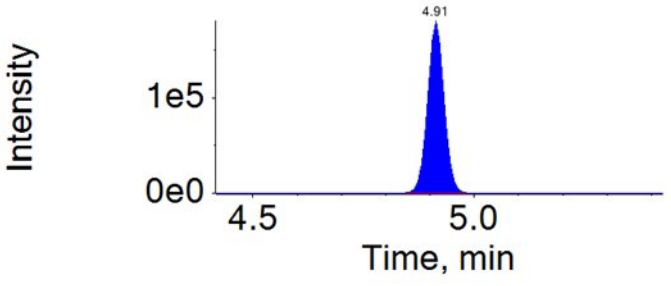




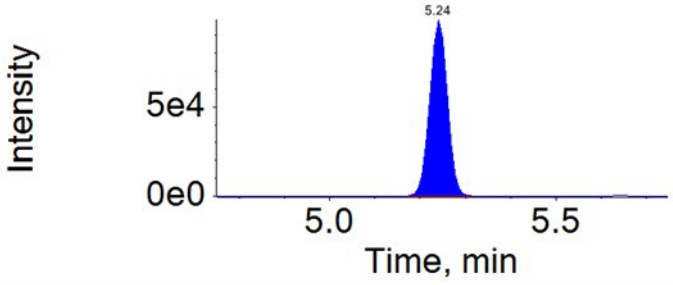
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

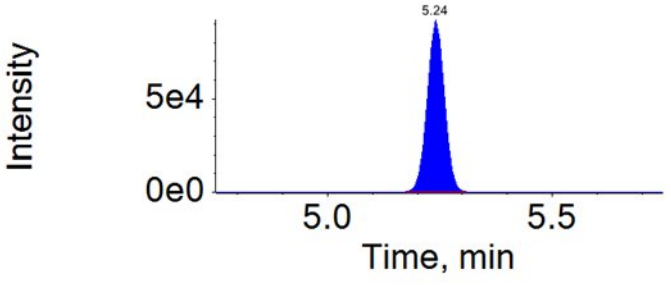
Extraction Standard: E13C8-PFOA	Injection Standard: 13C2-PFOA
421.0 / 376.0	415.0 / 370.0



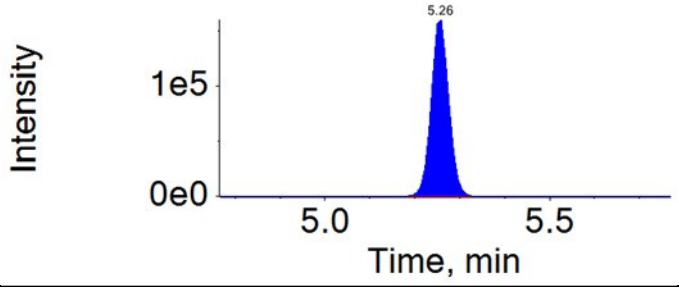


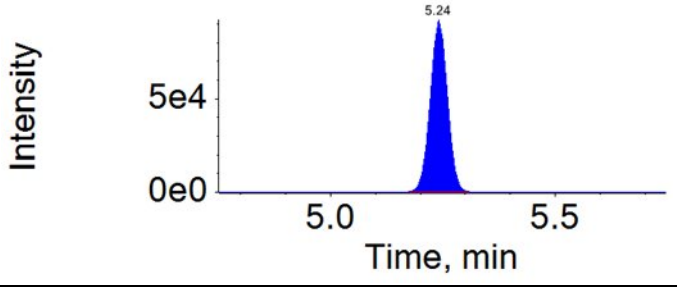
Extraction Standard: E13C8-PFOS	Injection Standard: 13C4-PFOS
507.0 / 80.0	503.0 / 80.0



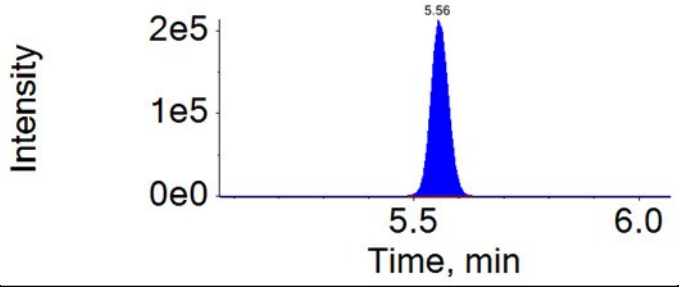


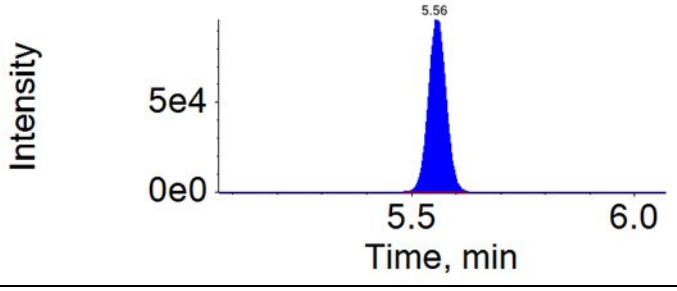
Extraction Standard: E13C9-PFNA	Injection Standard: 13C4-PFOS
472.0 / 427.0	503.0 / 80.0





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

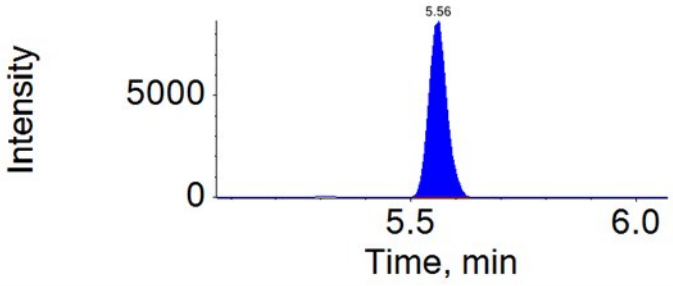
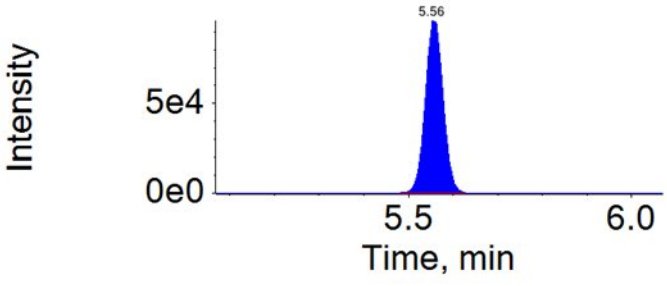


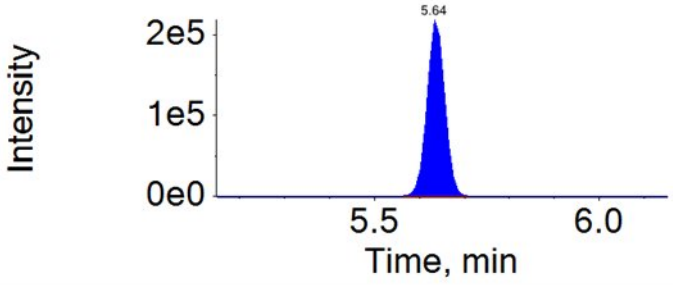
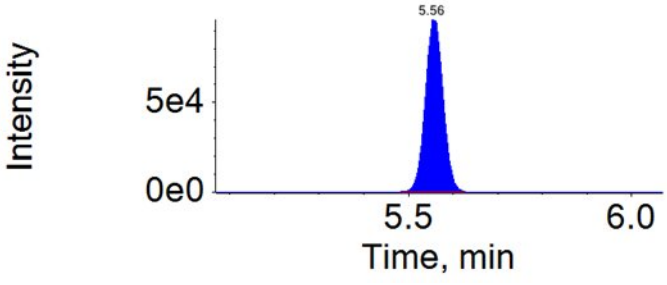


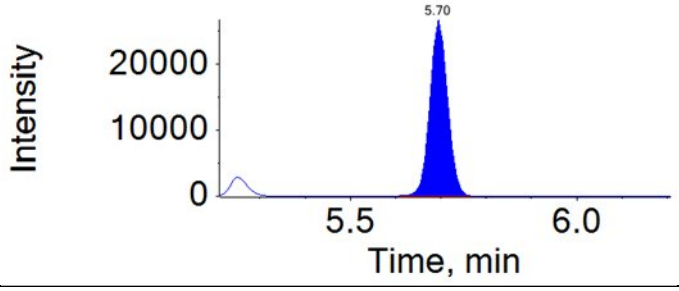
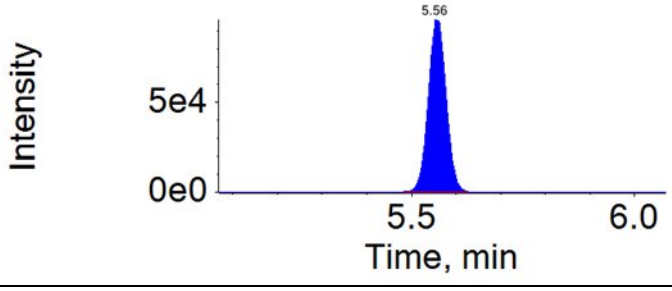
APPROVED
By MCD at 6:33 pm, 11/12/18

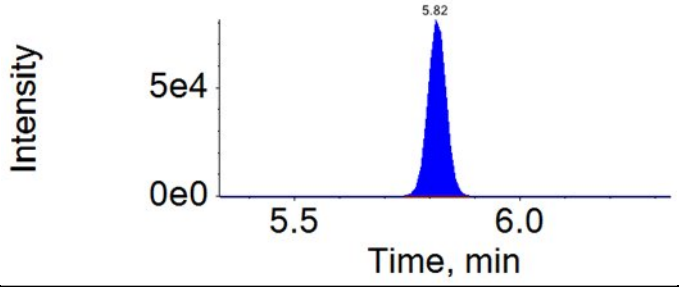
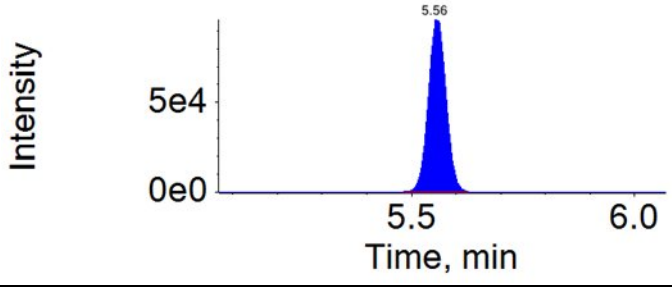
REVIEWED
By HMK at 10:53 am, 11/13/18

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

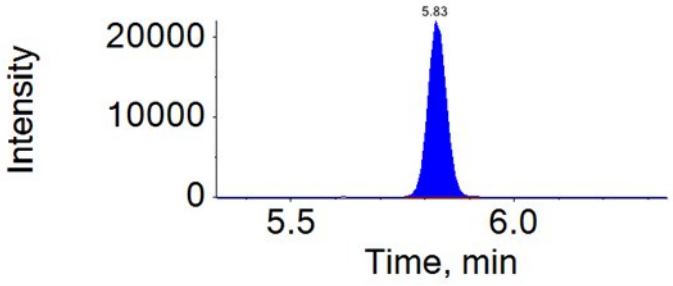
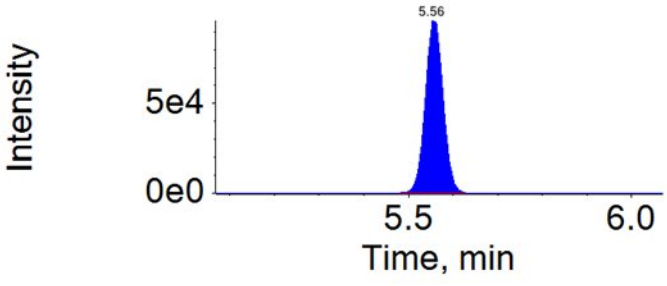
Extraction Standard: E13C2-8:2-FTS	Injection Standard: 13C2-PFDA
529.0 / 81.0	515.0 / 470.0
	

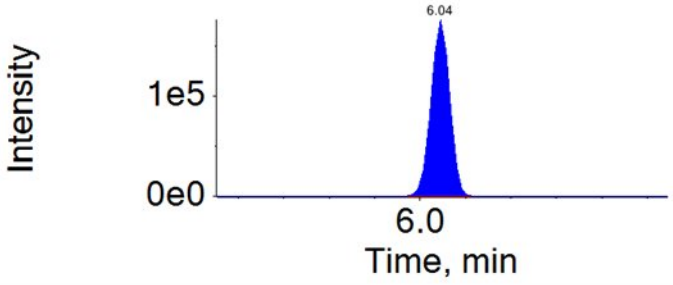
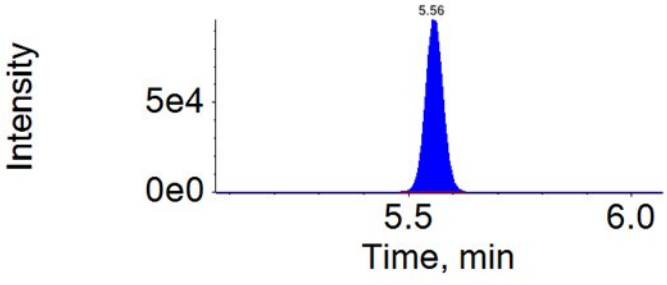
Extraction Standard: E13C8-PFOSA	Injection Standard: 13C2-PFDA
506.0 / 78.0	515.0 / 470.0
	

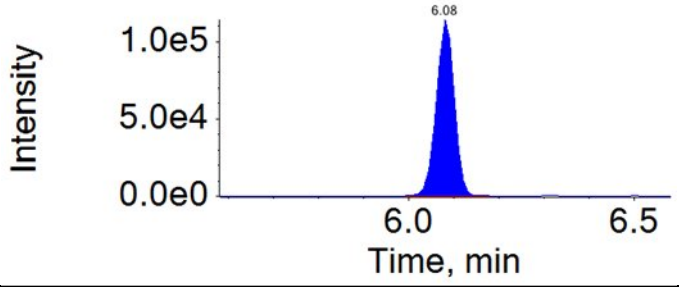
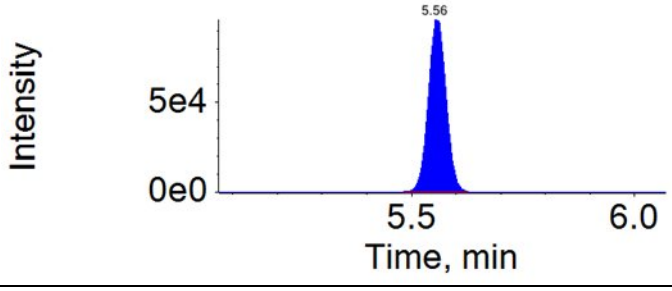
Extraction Standard: Ed3-NMeFOSAA	Injection Standard: 13C2-PFDA
573.0 / 419.0	515.0 / 470.0
	

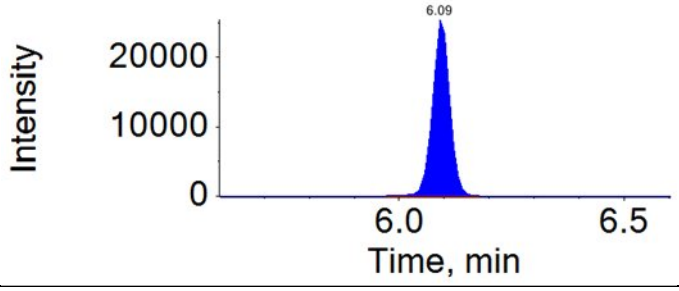
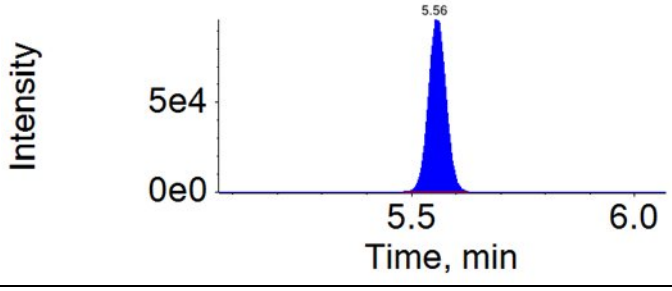
Extraction Standard: E13C7-PFUnDA	Injection Standard: 13C2-PFDA
570.0 / 525.0	515.0 / 470.0
	

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
	

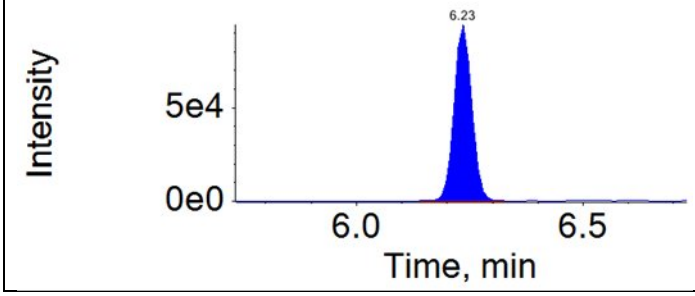
Extraction Standard: Ed3-NMePFOSA	Injection Standard: 13C2-PFDA
515.0 / 169.0	515.0 / 470.0
	

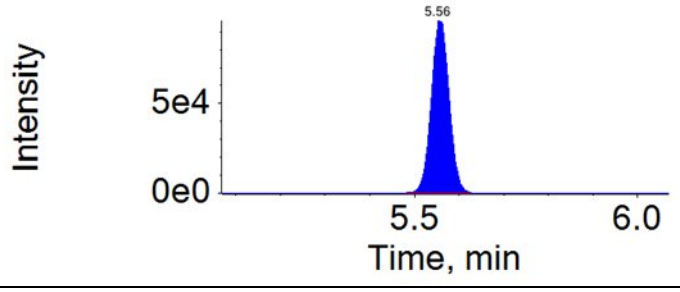
APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

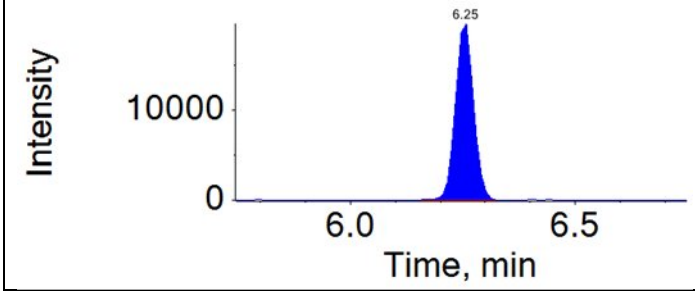
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

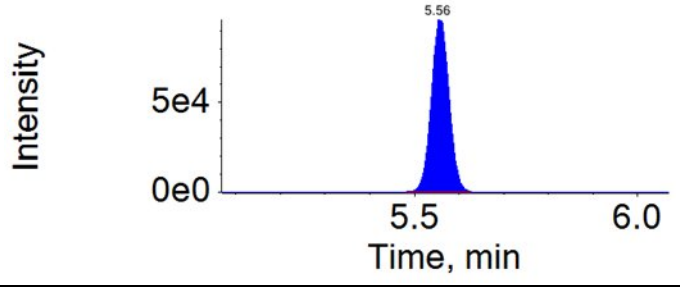
Extraction Standard: Ed9-NEtPFOSAE	Injection Standard: 13C2-PFDA
639.0 / 59.0	515.0 / 470.0



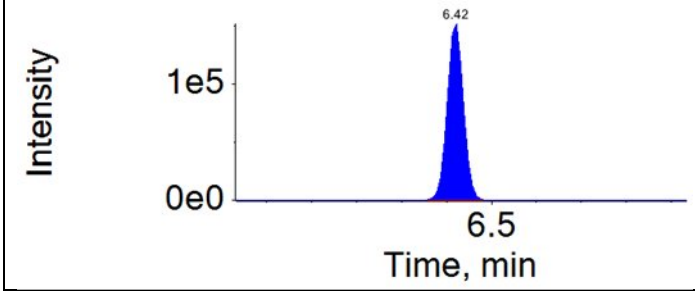


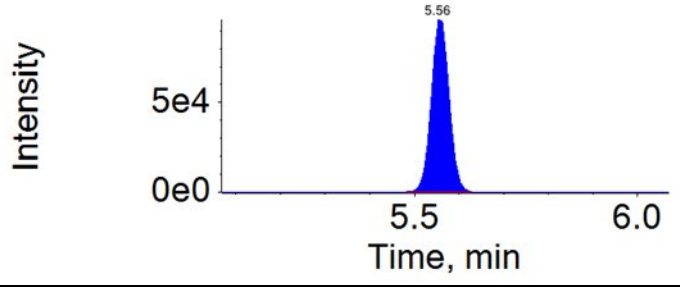
Extraction Standard: Ed5-NEtPFOSA	Injection Standard: 13C2-PFDA
531.0 / 169.0	515.0 / 470.0





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



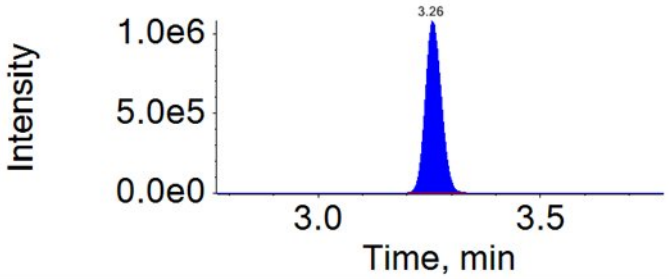


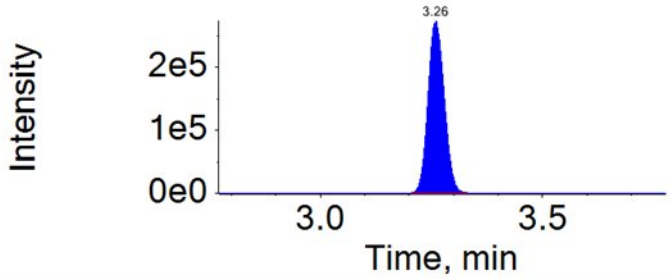
APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

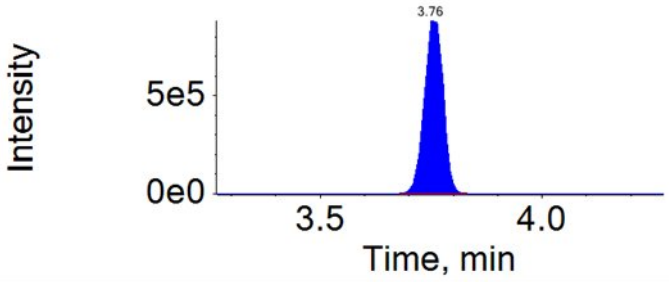
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

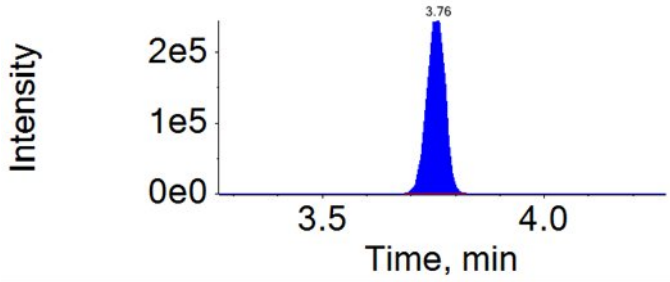
Analyte: PFBA	Extraction Standard: 13C4-PFBA
213.0 / 169.0	217.0 / 172.0



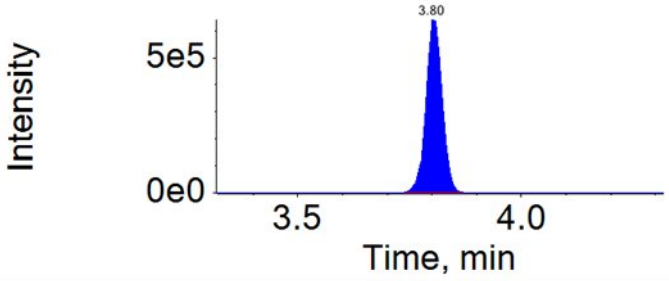


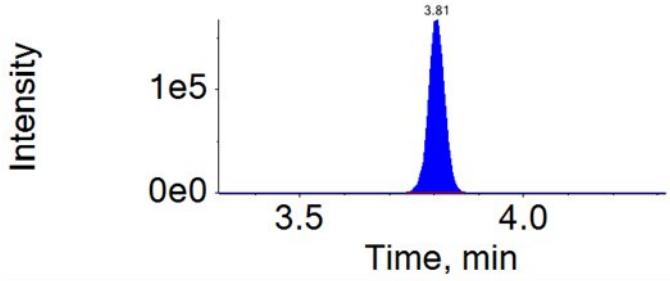
Analyte: PFPeA	Extraction Standard: 13C5-PFPeA
263.0 / 219.0	268.0 / 223.0



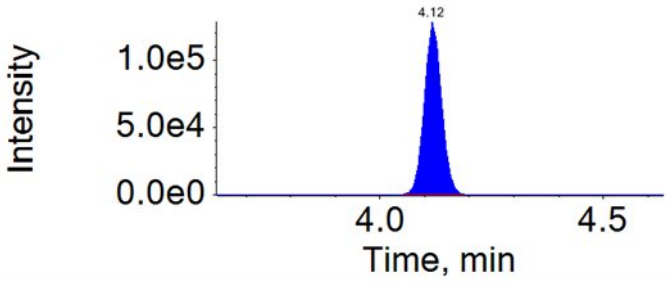


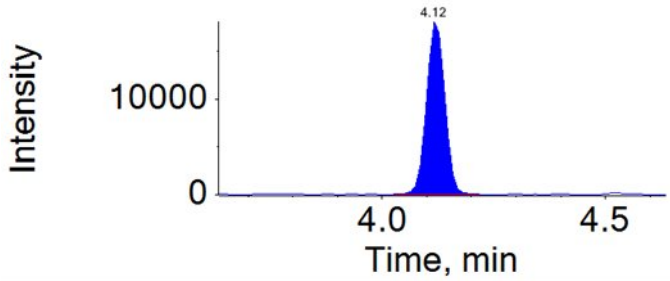
Analyte: PFBS	Extraction Standard: 13C3-PFBS
299.0 / 80.0	302.0 / 80.0





Analyte: 4:2-FTS	Extraction Standard: 13C2-4:2-FTS
327.0 / 307.0	329.0 / 81.0



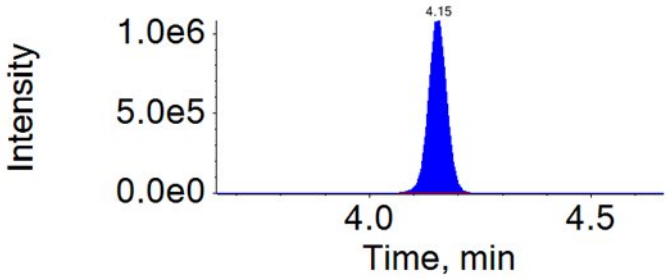


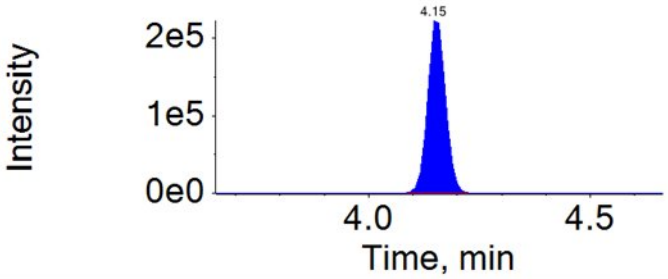
APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

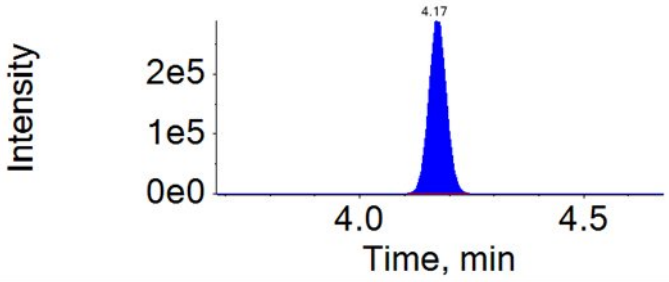
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

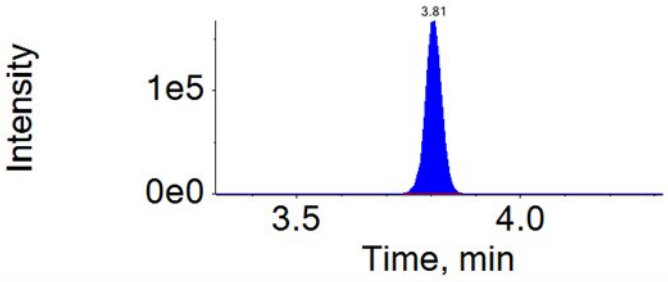
Analyte: PFHxA	Extraction Standard: 13C5-PFHxA
313.0 / 269.0	318.0 / 273.0



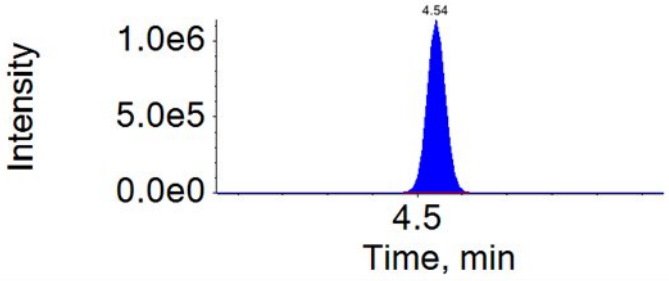


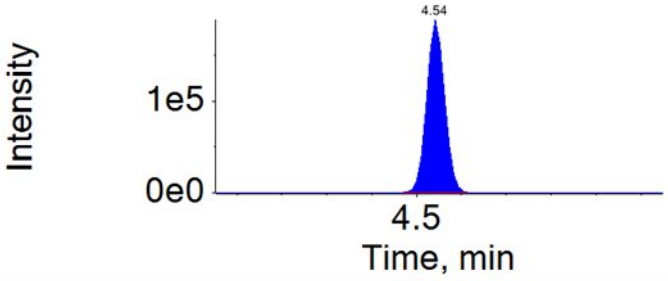
Analyte: PFPeS	Extraction Standard: 13C3-PFBS
349.0 / 80.0	302.0 / 80.0



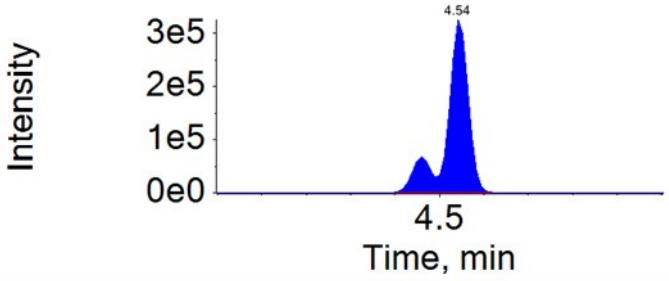


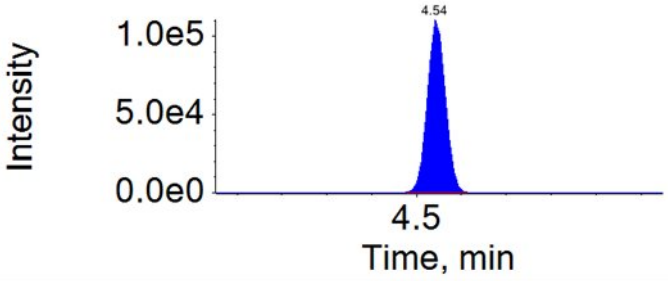
Analyte: PFHpA	Extraction Standard: 13C4-PFHpA
363.0 / 319.0	367.0 / 322.0





Analyte: PFHxS	Extraction Standard: 13C3-PFHxS
399.0 / 80.0	402.0 / 80.0



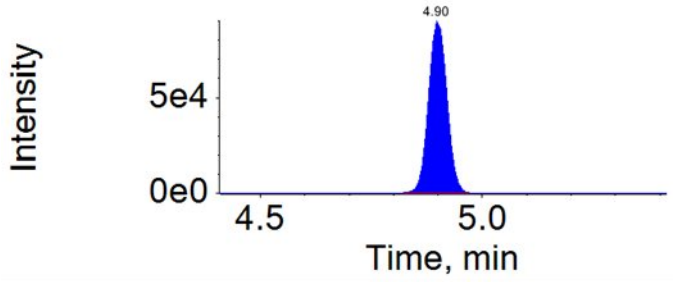


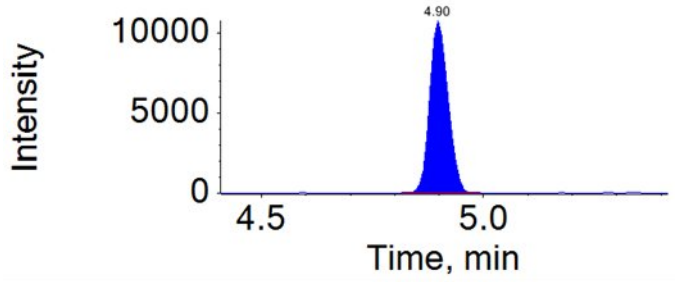
APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

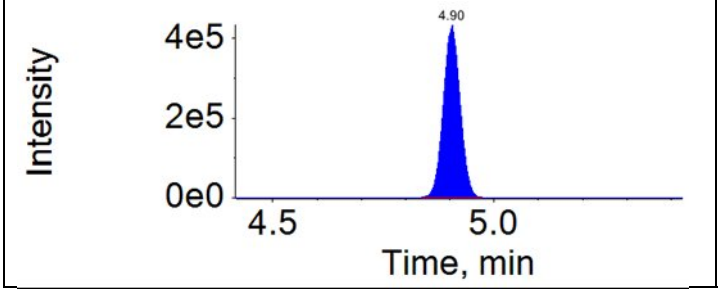
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

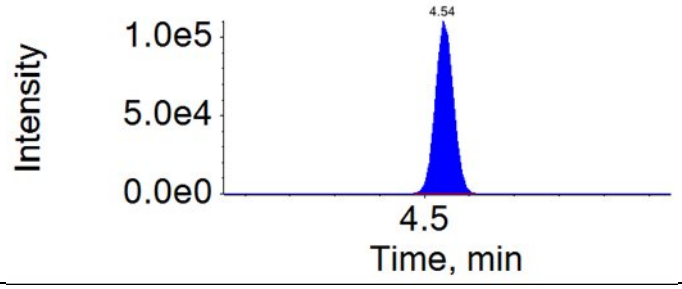
Analyte: 6:2-FTS	Extraction Standard: 13C2-6:2-FTS
427.0 / 407.0	429.0 / 81.0



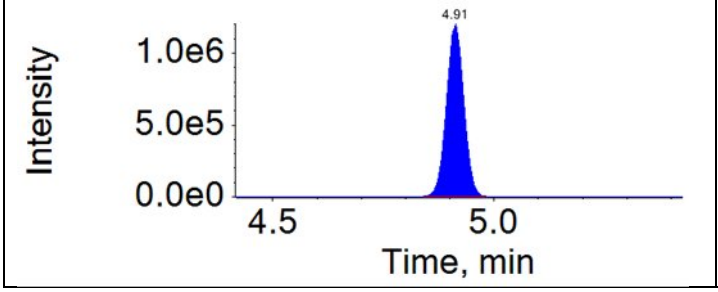


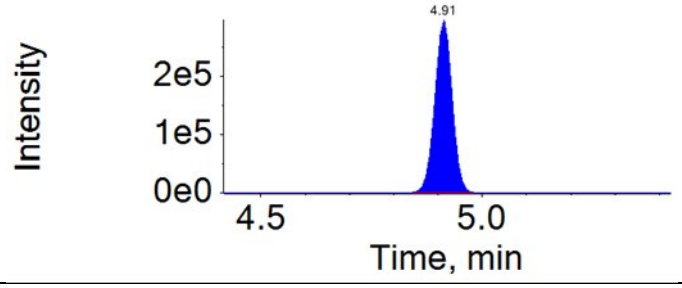
Analyte: PFHpS	Extraction Standard: 13C3-PFHxS
449.0 / 80.0	402.0 / 80.0



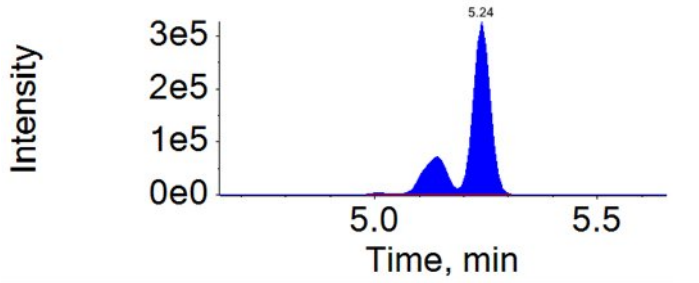


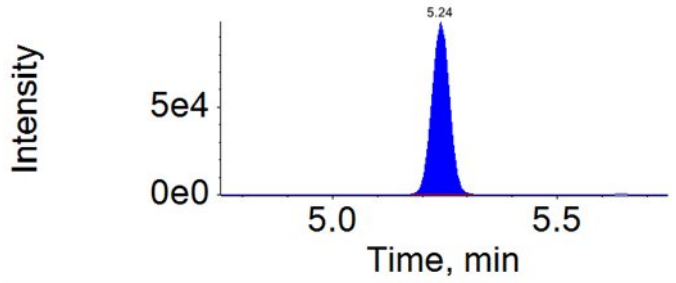
Analyte: PFOA	Extraction Standard: 13C8-PFOA
413.0 / 369.0	421.0 / 376.0





Analyte: PFOS	Extraction Standard: 13C8-PFOS
499.0 / 80.0	507.0 / 80.0



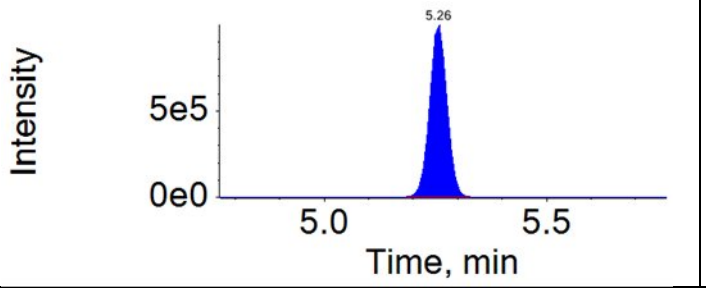


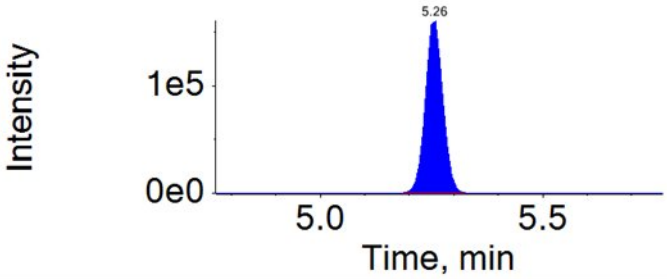
APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

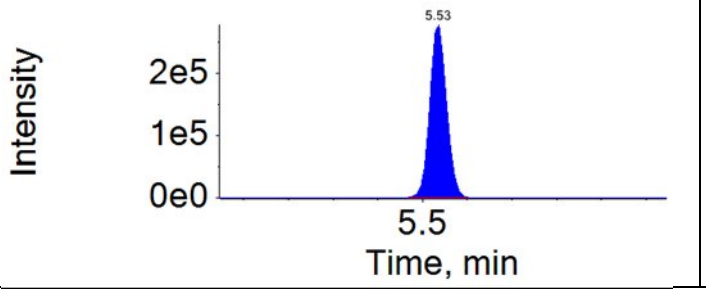
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

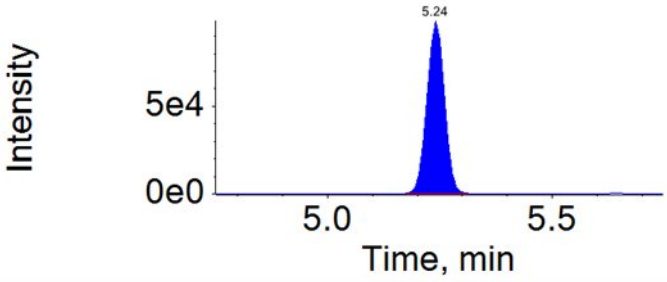
Analyte: PFNA	Extraction Standard: 13C9-PFNA
463.0 / 419.0	472.0 / 427.0



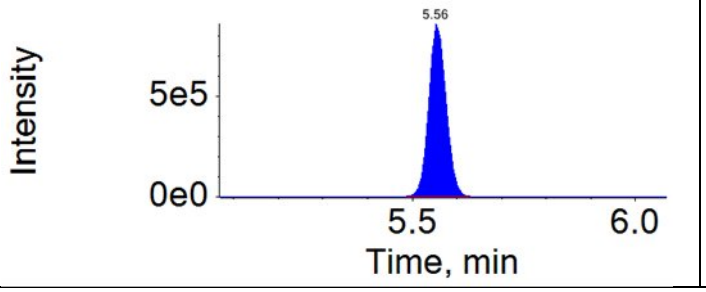


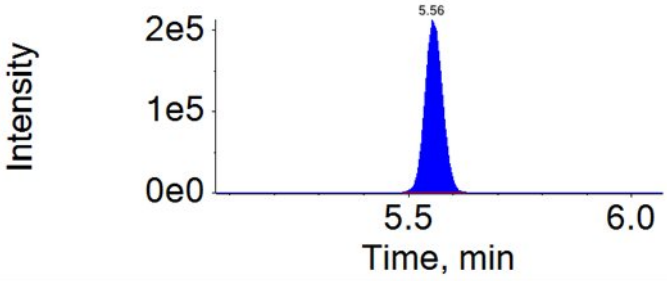
Analyte: PFNS	Extraction Standard: 13C8-PFOS
549.0 / 80.0	507.0 / 80.0



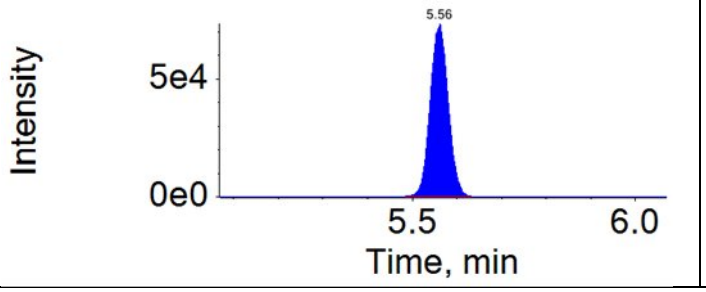


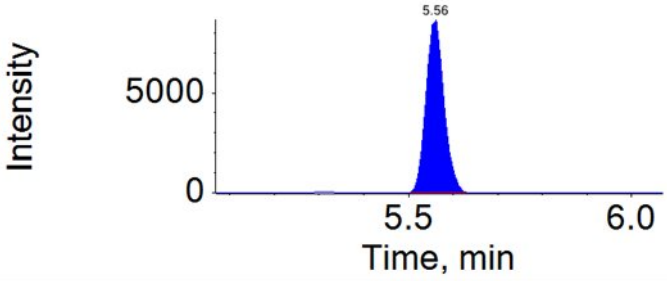
Analyte: PFDA	Extraction Standard: 13C6-PFDA
513.0 / 469.0	519.0 / 474.0





Analyte: 8:2-FTS	Extraction Standard: 13C2-8:2-FTS
527.0 / 507.0	529.0 / 81.0



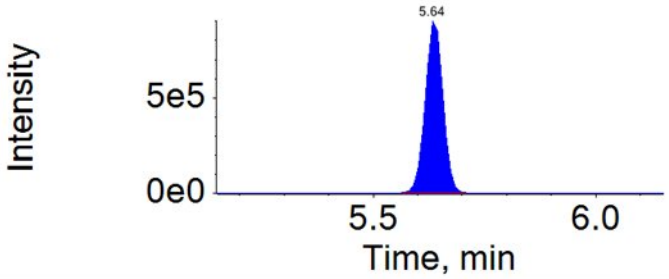


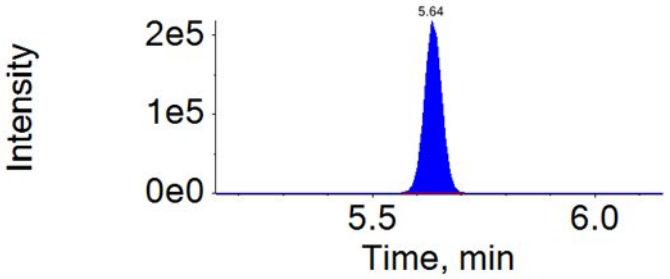
APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

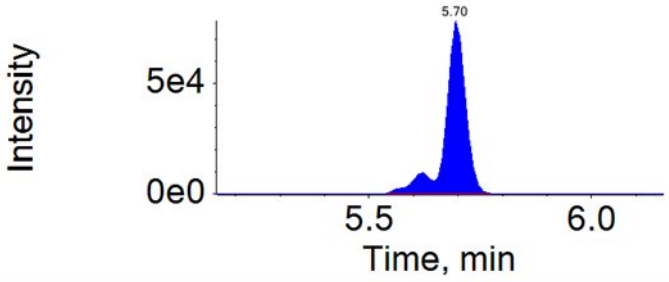
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

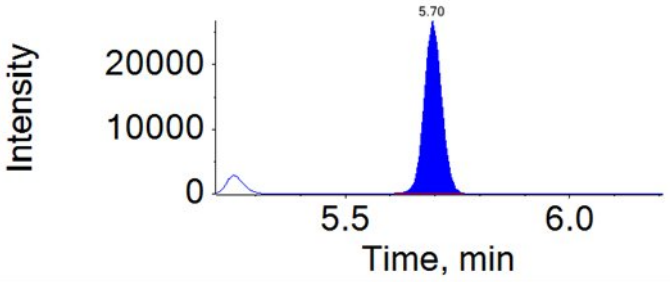
Analyte: PFOSA	Extraction Standard: 13C8-PFOSA
498.0 / 78.0	506.0 / 78.0



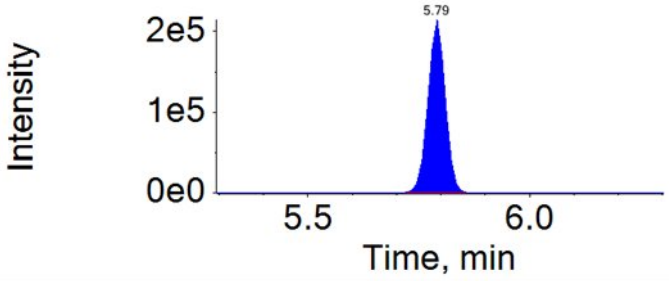


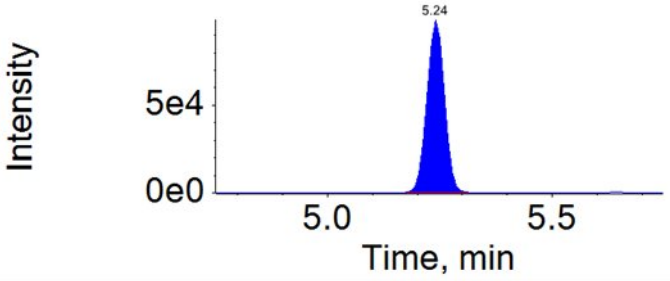
Analyte: NMeFOSAA	Extraction Standard: d3-NMeFOSAA
570.0 / 419.0	573.0 / 419.0



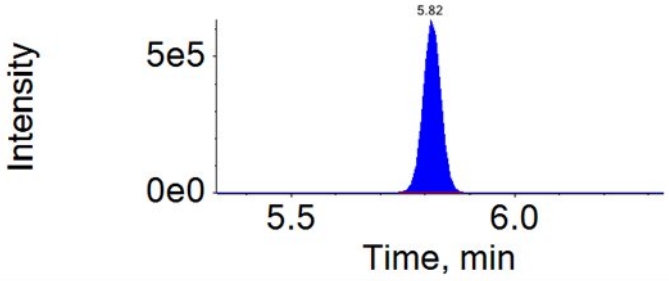


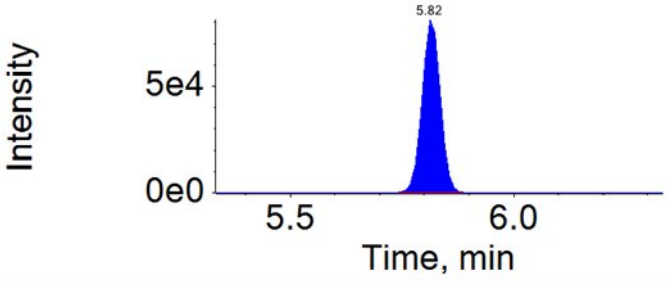
Analyte: PFDS	Extraction Standard: 13C8-PFOS
599.0 / 80.0	507.0 / 80.0





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



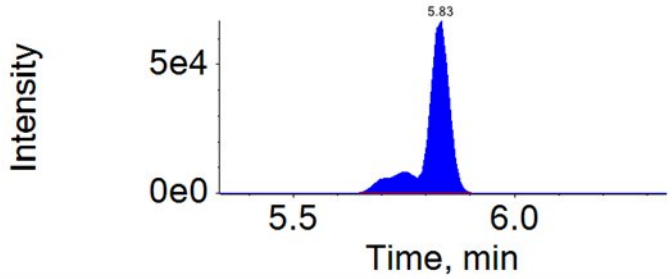


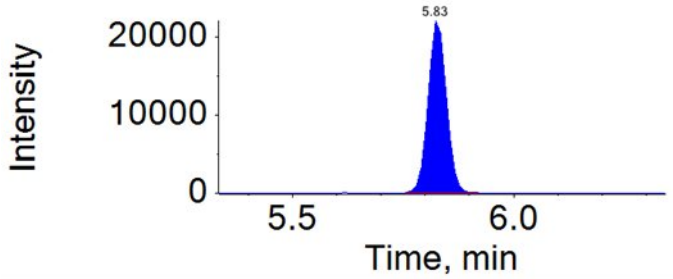
APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

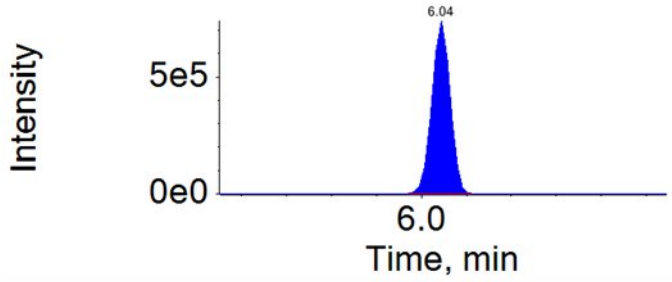
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

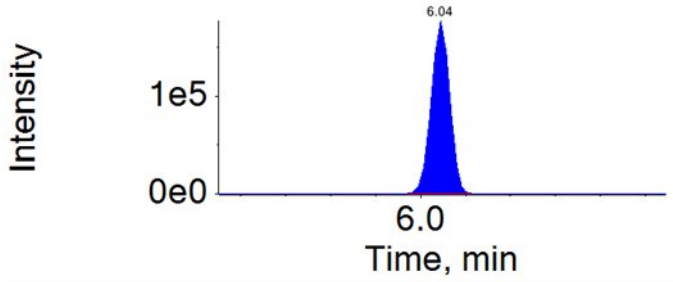
Analyte: NEtFOSAA	Extraction Standard: d5-NEtFOSAA
584.0 / 419.0	589.0 / 419.0



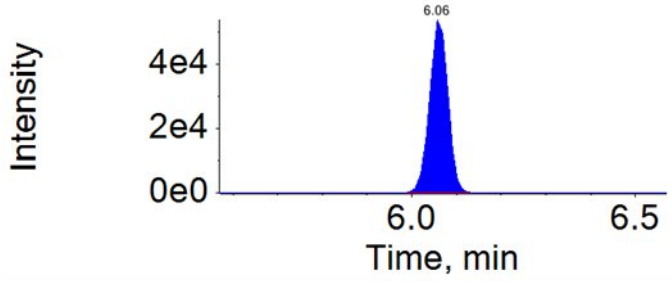


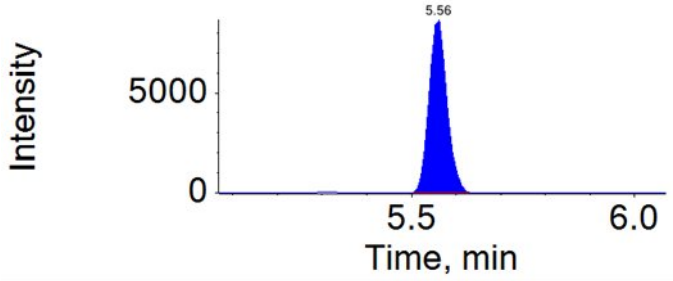
Analyte: PFDoDA	Extraction Standard: 13C2-PFDoDA
613.0 / 569.0	615.0 / 570.0



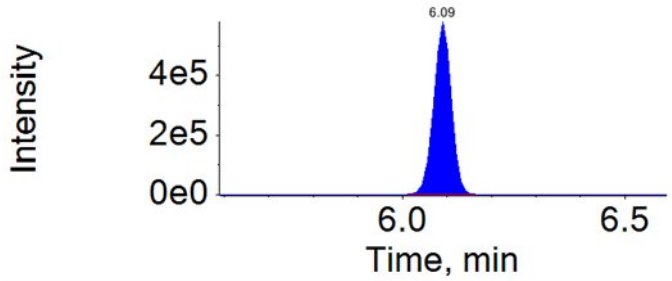


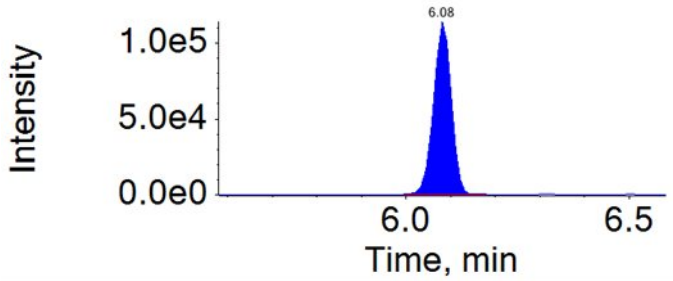
Analyte: 10:2-FTS	Extraction Standard: 13C2-8:2-FTS
627.0 / 607.0	529.0 / 81.0





Analyte: NMePFOSAE	Extraction Standard: d7-NMePFOSAE
616.0 / 59.0	623.0 / 59.0



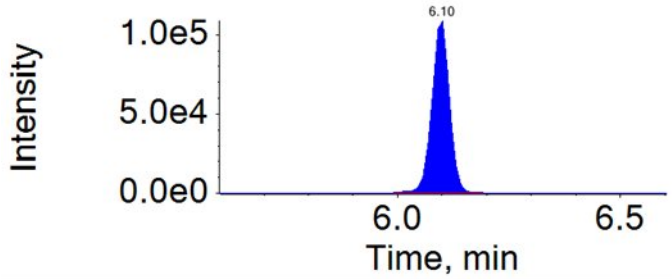


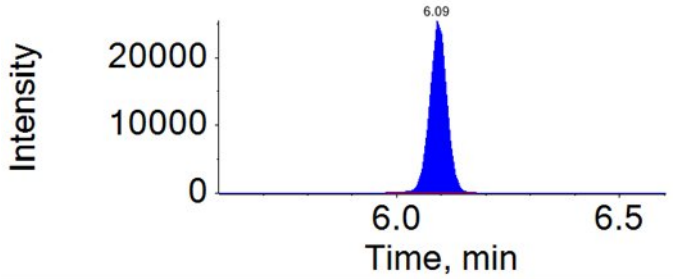
APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

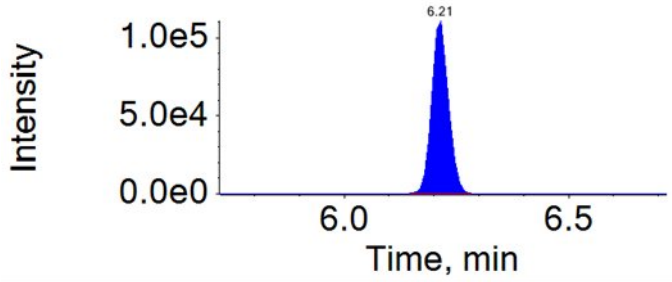
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

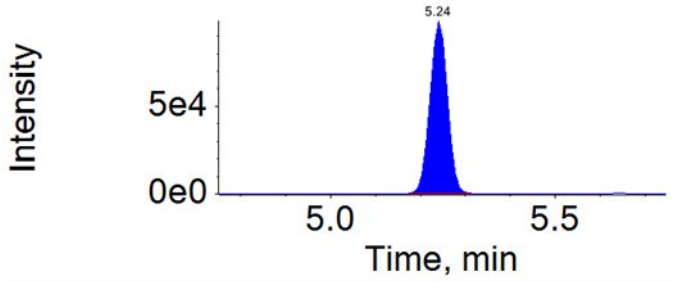
Analyte: NMePFOSA	Extraction Standard: d3-NMePFOSA
512.0 / 169.0	515.0 / 169.0



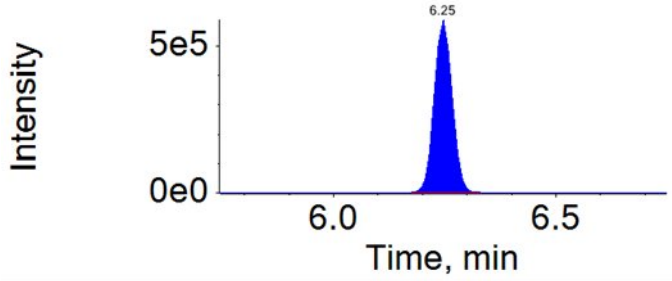


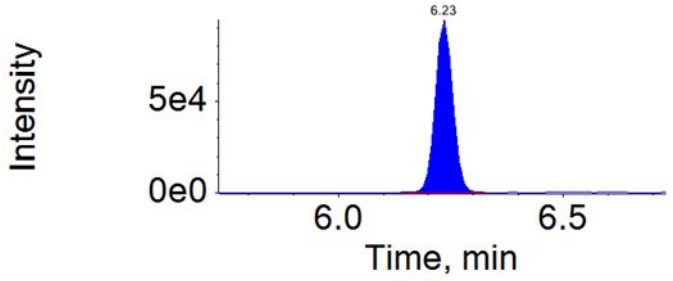
Analyte: PFDoS	Extraction Standard: 13C8-PFOS
699.0 / 80.0	507.0 / 80.0



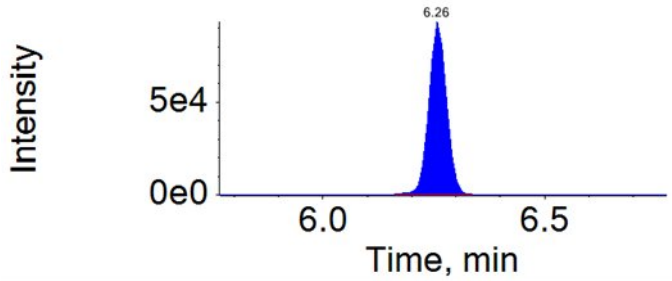


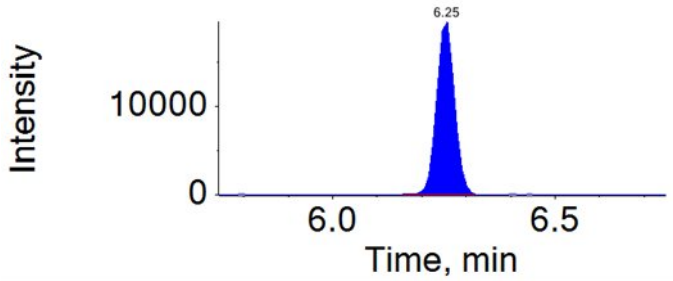
Analyte: NEtPFOSAE	Extraction Standard: d9-NEtPFOSAE
630.0 / 59.0	639.0 / 59.0





Analyte: NEtPFOSA	Extraction Standard: d5-NEtPFOSA
526.0 / 169.0	531.0 / 169.0



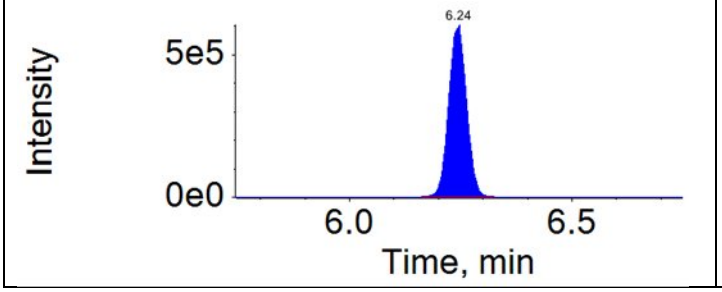


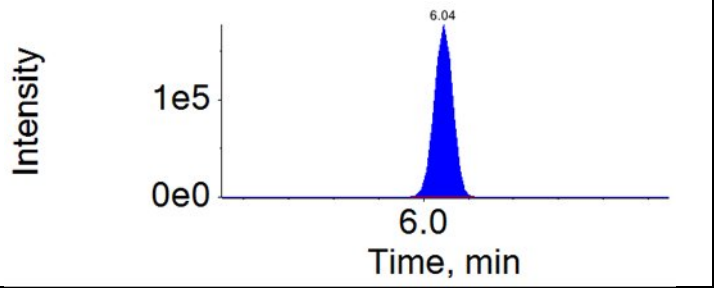
APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

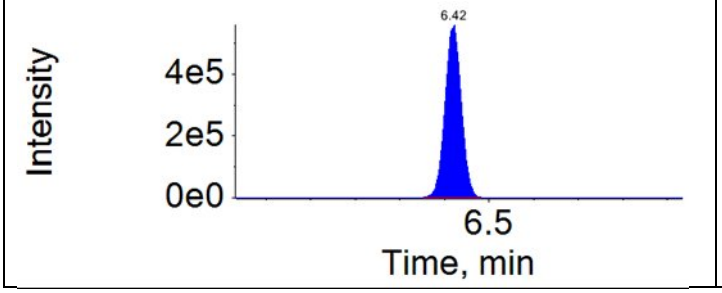
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

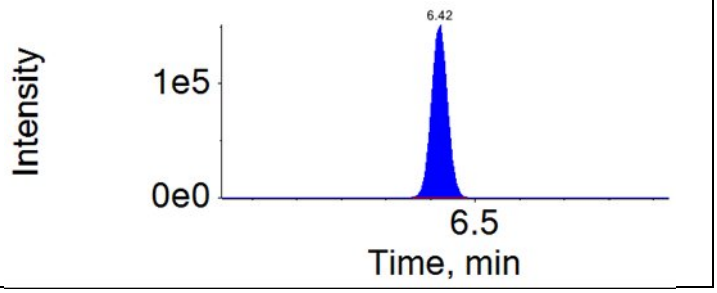
Analyte: PFTrDA	Extraction Standard: 13C2-PFDoDA
663.0 / 619.0	615.0 / 570.0



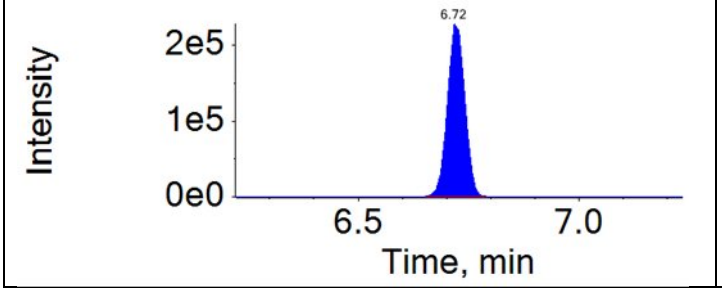


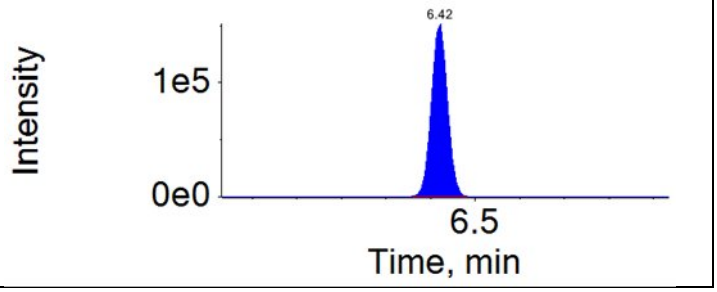
Analyte: PFTeDA	Extraction Standard: 13C2-PFTeDA
713.0 / 669.0	715.0 / 670.0



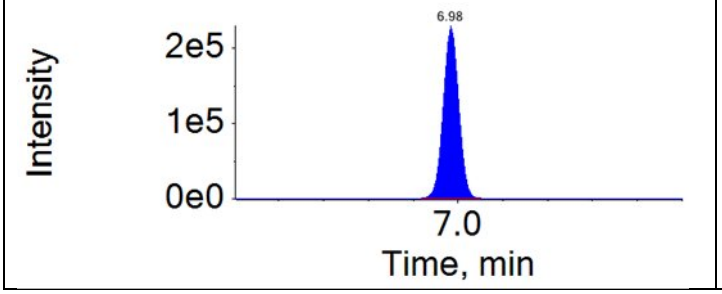


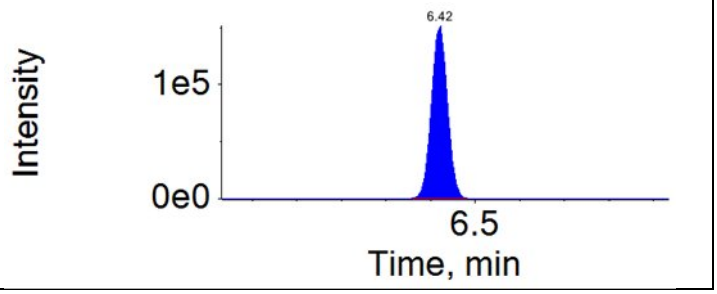
Analyte: PFHxDA	Extraction Standard: 13C2-PFTeDA
813.0 / 769.0	715.0 / 670.0





Analyte: PFODA	Extraction Standard: 13C2-PFTeDA
913.0 / 869.0	715.0 / 670.0



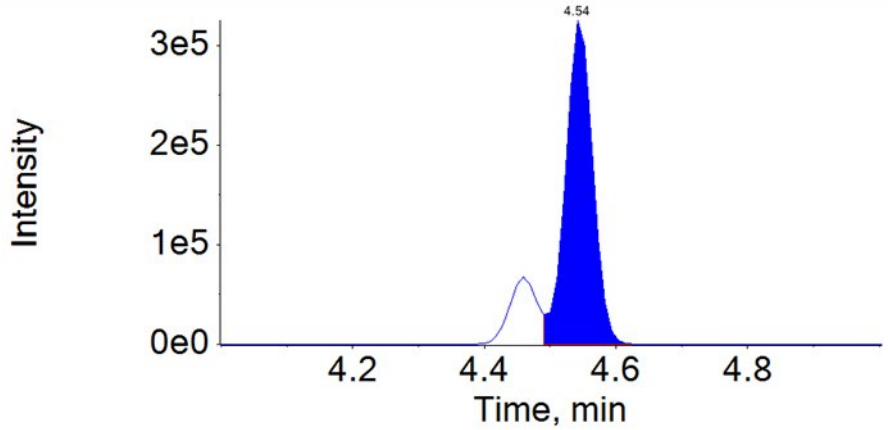


APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

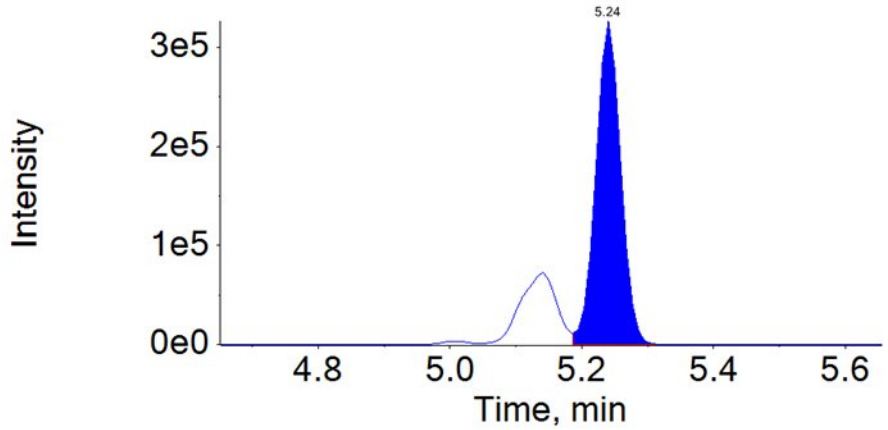
Results Table Name: 18NOV12DCAL
Results Table Date: 11/12/2018 6:23:42 PM
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

Component Name:
PFHxS
RT (min.):
4.54
Peak Area:
943687.14
Mass Range:
399.0 / 80.0
File Name:
18NOV12DCAL-46.wiff
Sample Name:
CAL5



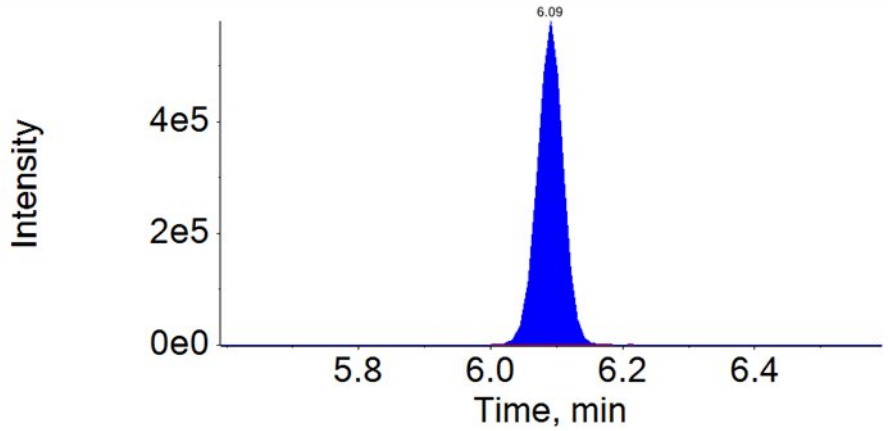
Integration Comment: incorrect integration

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

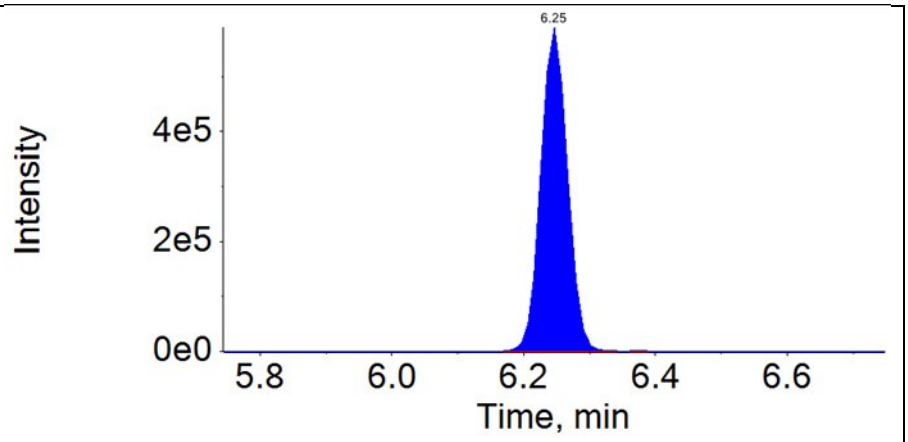


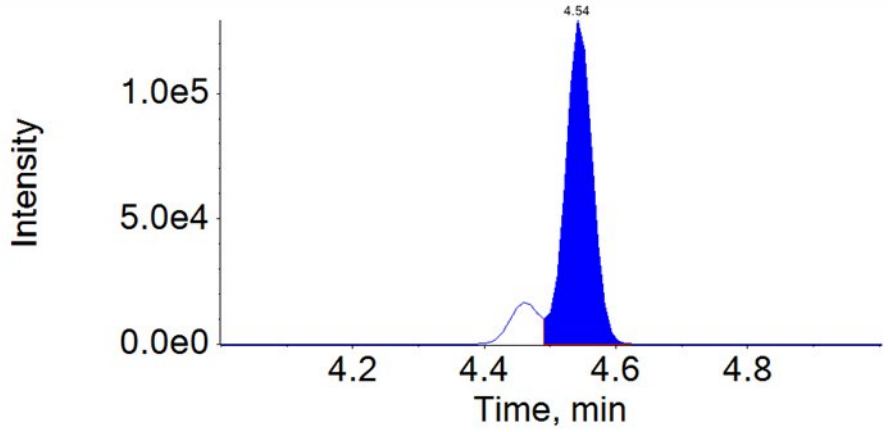
Integration Comment: incorrect integration

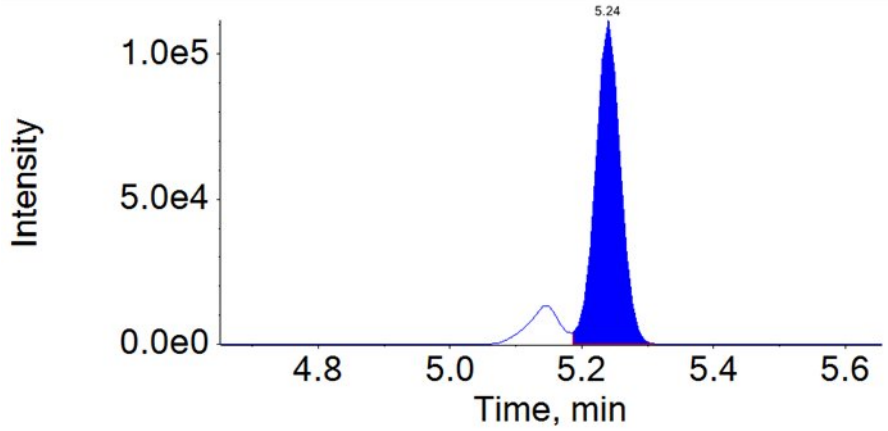
APPROVED
By MCD at 6:33 pm, 11/12/18

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

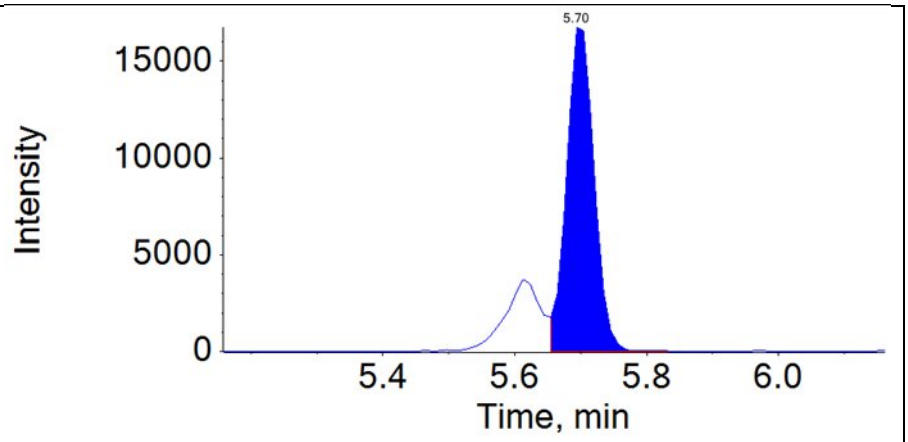
Component Name: PFOS_2 **RT (min.):** 5.24 **Peak Area:** 295251.82 **Mass Range:** 499.0 / 99.0 **File Name:** 18NOV12DCAL-46.wiff **Sample Name:** CAL5	 **Integration Comment:** incorrect integration

APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

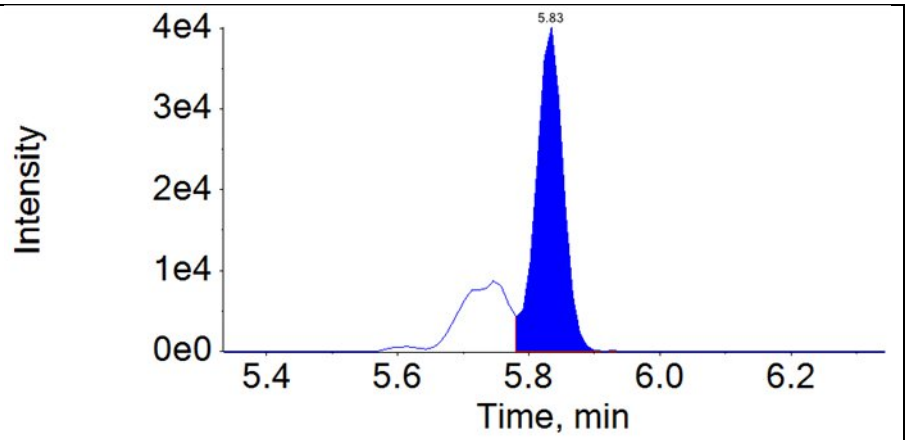
Results Table Name: 18NOV12DCAL
Results Table Date: 11/12/2018 6:23:42 PM
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

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



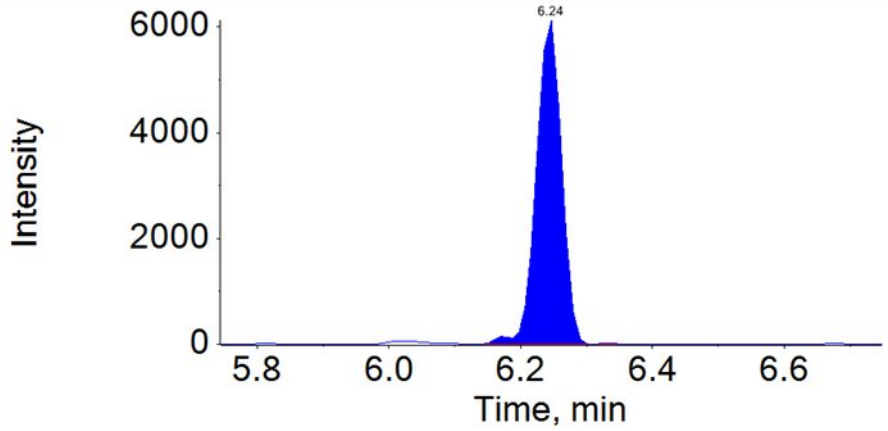
Integration Comment: incorrect integration

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

Ion Ratio Report

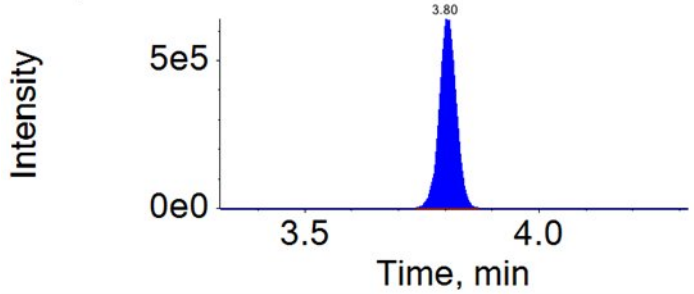
Sample Name: CAL5 **Instrument Name:** LM27631 **File Name:** 18NOV12DCAL-46.wiff

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	

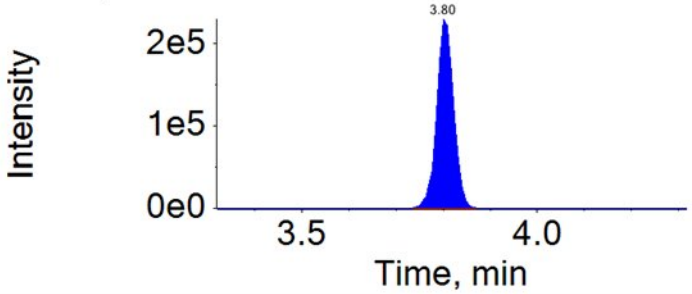
APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

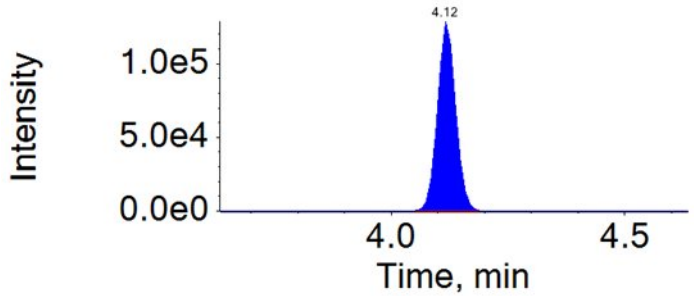
Component: PFBS
Primary Mass: 299.0 / 80.0



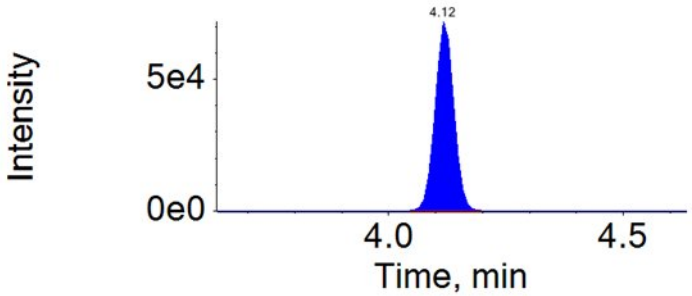
Component: PFBS_2
Secondary Mass: 299.0 / 99.0



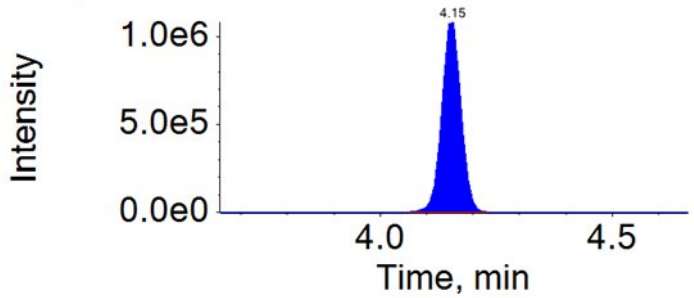
Component: 4:2-FTS
Primary Mass: 327.0 / 307.0



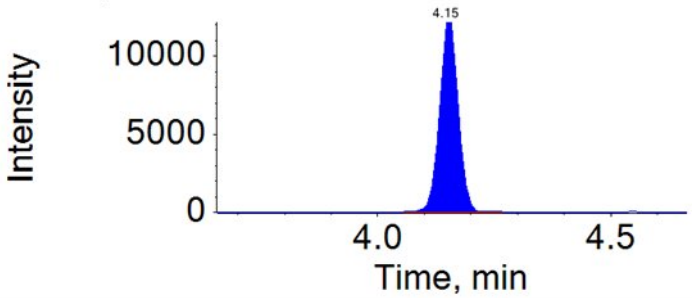
Component: 4:2 FTS_2
Secondary Mass: 327.0 / 81.0



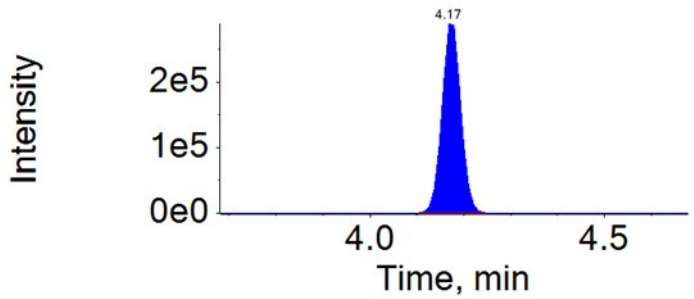
Component: PFHxA
Primary Mass: 313.0 / 269.0



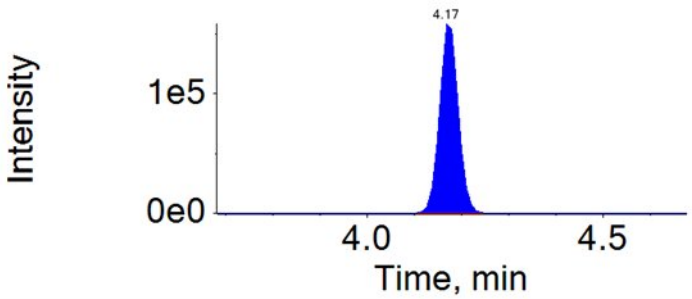
Component: PFHxA_2
Secondary Mass: 313.0 / 119.0



Component: PFPeS
Primary Mass: 349.0 / 80.0



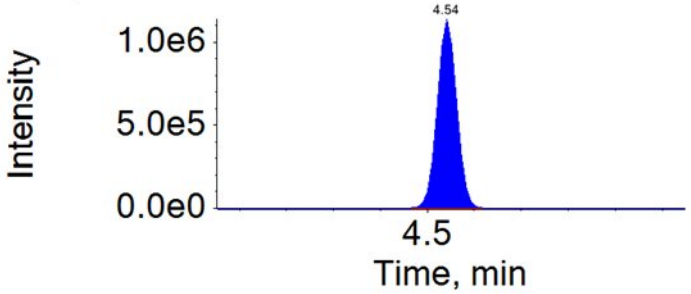
Component: PFPeS_2
Secondary Mass: 349.0 / 99.0



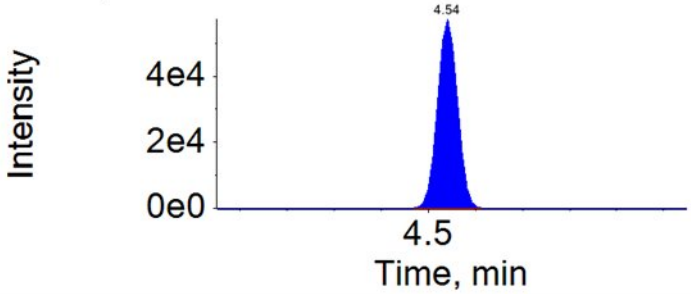
APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

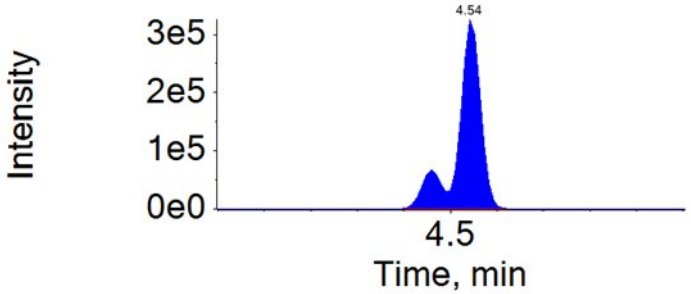
Component: PFHpA
Primary Mass: 363.0 / 319.0



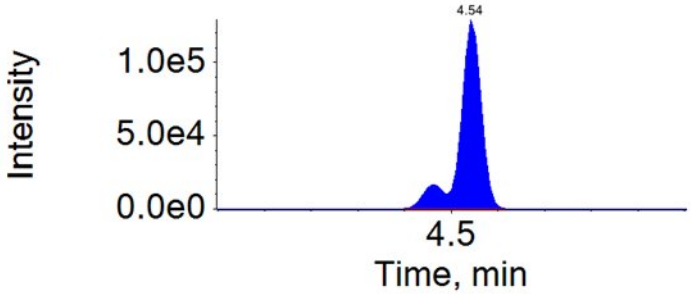
Component: PFHpA_2
Secondary Mass: 363.0 / 169.0



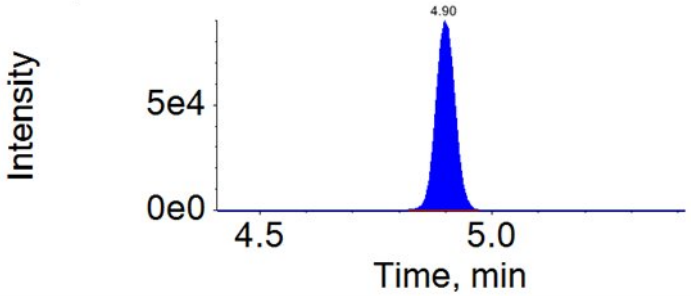
Component: PFHxS
Primary Mass: 399.0 / 80.0



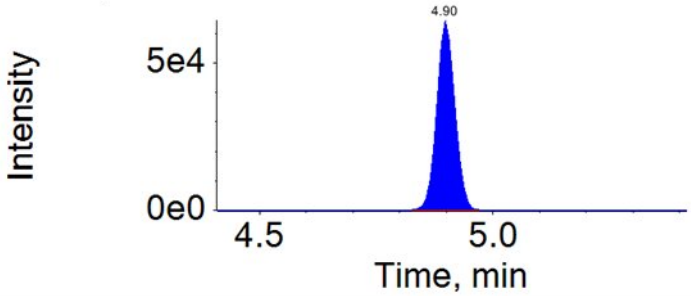
Component: PFHxS_2
Secondary Mass: 399.0 / 99.0



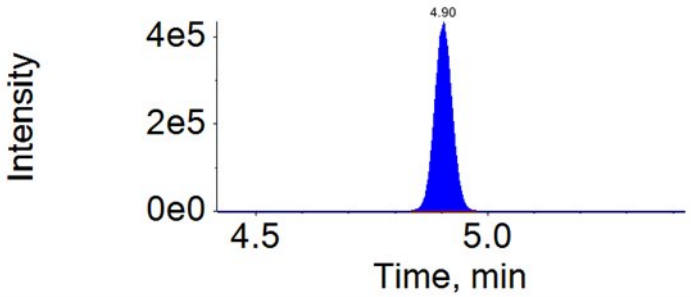
Component: 6:2-FTS
Primary Mass: 427.0 / 407.0



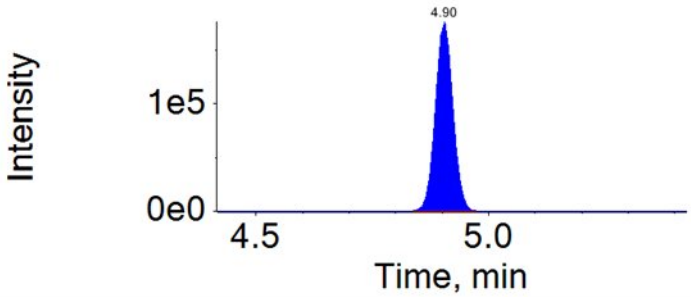
Component: 6:2 FTS_2
Secondary Mass: 427.0 / 81.0



Component: PFHpS
Primary Mass: 449.0 / 80.0



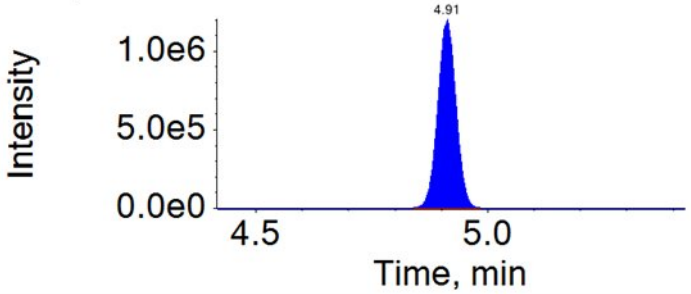
Component: PFHpS_2
Secondary Mass: 449.0 / 99.0



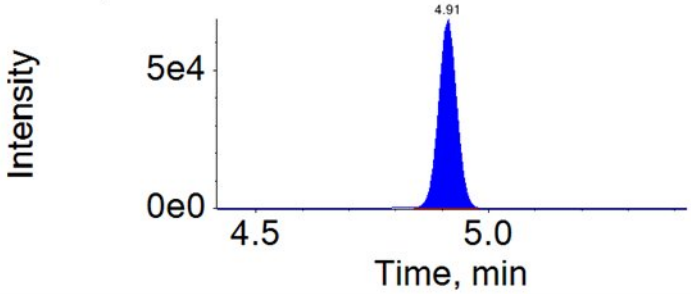
APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

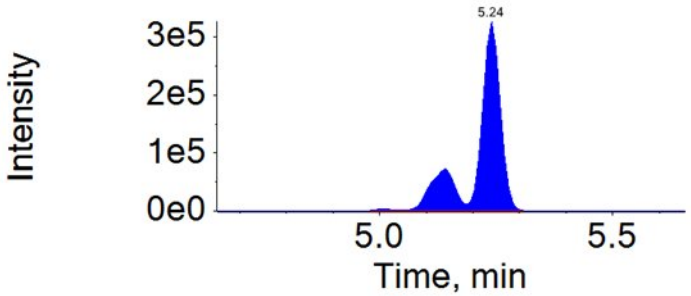
Component: PFOA
Primary Mass: 413.0 / 369.0



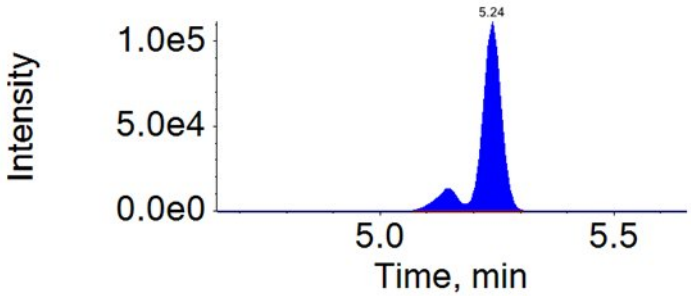
Component: PFOA_2
Secondary Mass: 413.0 / 169.0



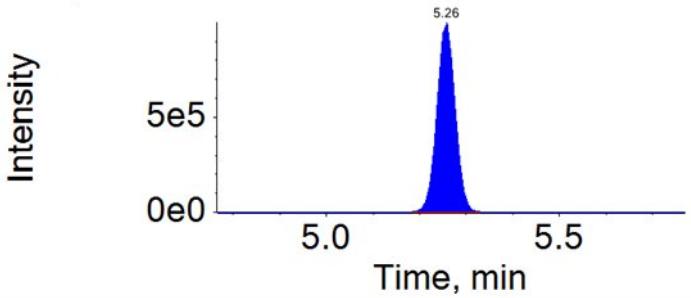
Component: PFOS
Primary Mass: 499.0 / 80.0



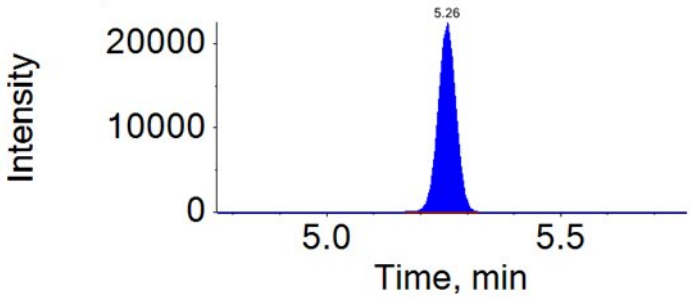
Component: PFOS_2
Secondary Mass: 499.0 / 99.0



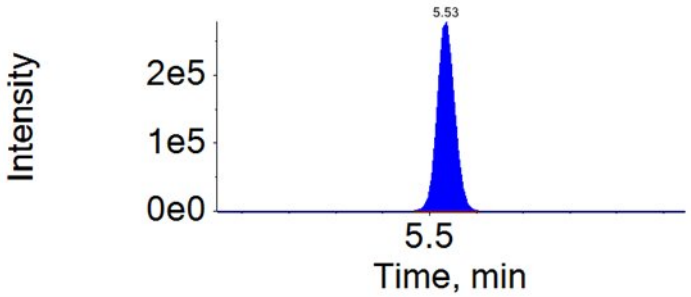
Component: PFNA
Primary Mass: 463.0 / 419.0



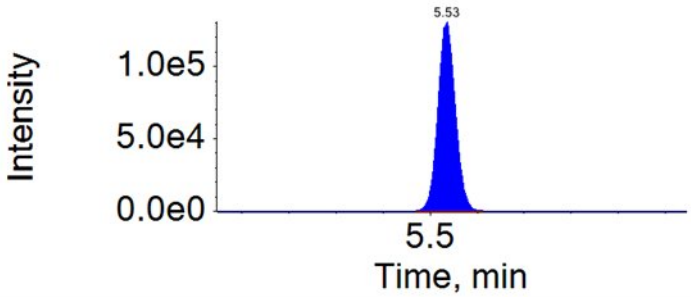
Component: PFNA_2
Secondary Mass: 463.0 / 169.0



Component: PFNS
Primary Mass: 549.0 / 80.0



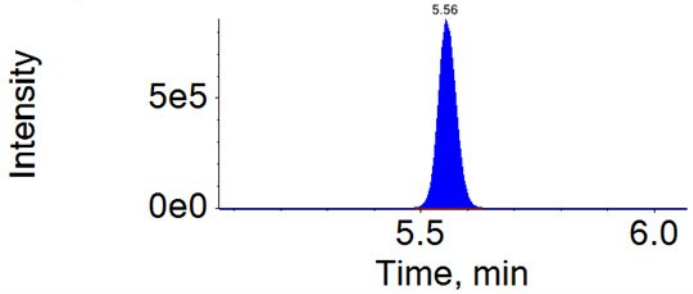
Component: PFNS_2
Secondary Mass: 549.0 / 99.0



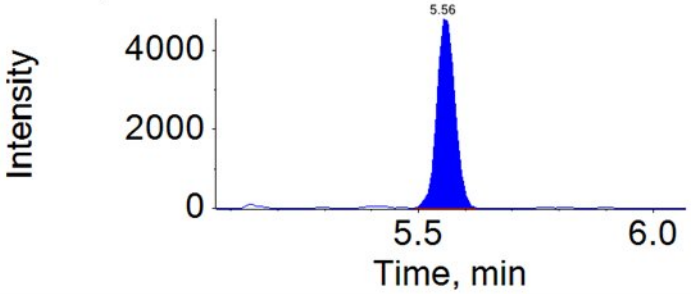
APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

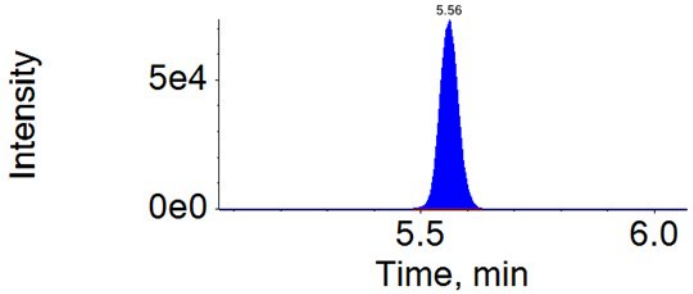
Component: PFDA
Primary Mass: 513.0 / 469.0



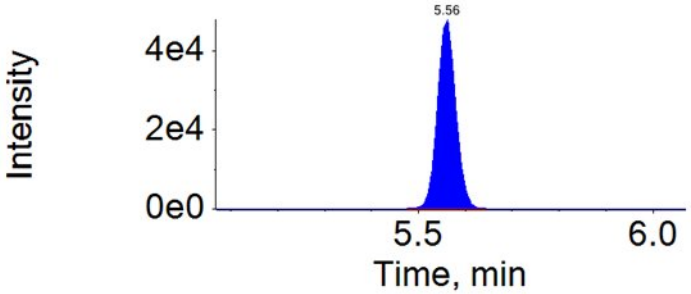
Component: PFDA_2
Secondary Mass: 513.0 / 169.0



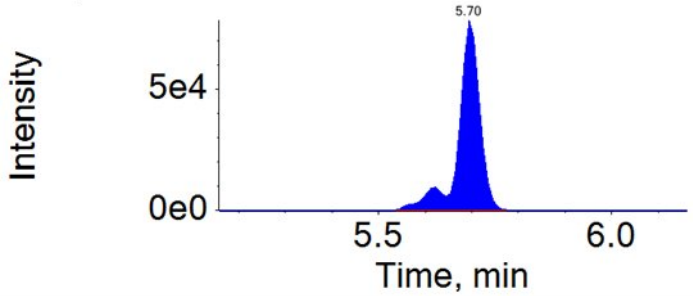
Component: 8:2-FTS
Primary Mass: 527.0 / 507.0



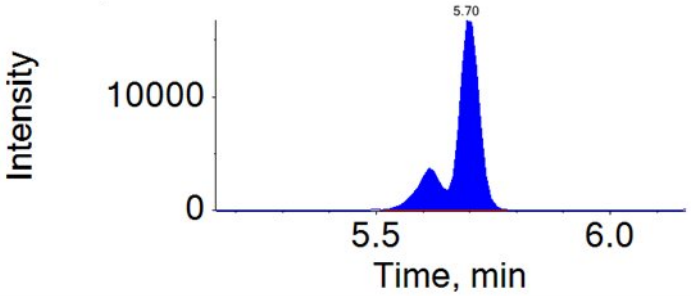
Component: 8:2 FTS_2
Secondary Mass: 527.0 / 81.0



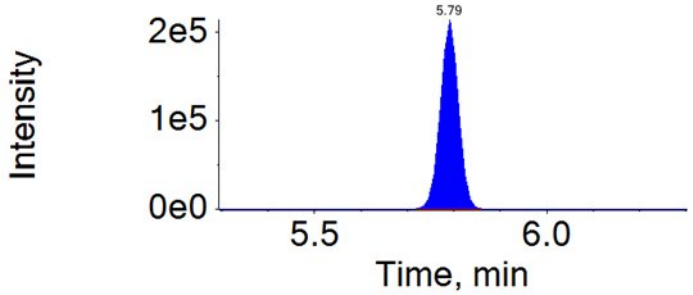
Component: NMeFOSAA
Primary Mass: 570.0 / 419.0



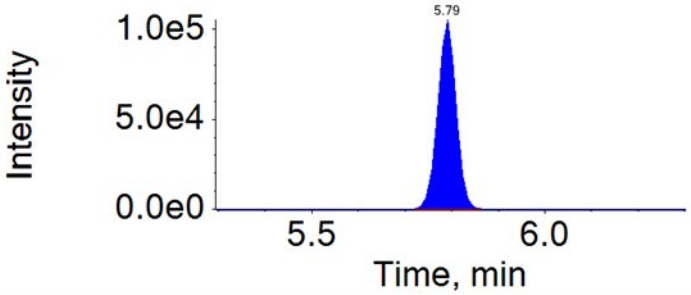
Component: NMeFOSAA_2
Secondary Mass: 570.0 / 483.0



Component: PFDS
Primary Mass: 599.0 / 80.0



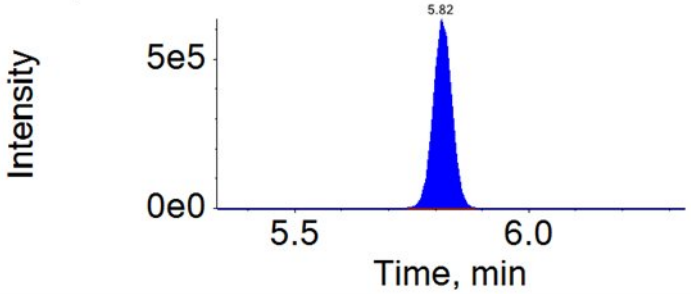
Component: PFDS_2
Secondary Mass: 599.0 / 99.0



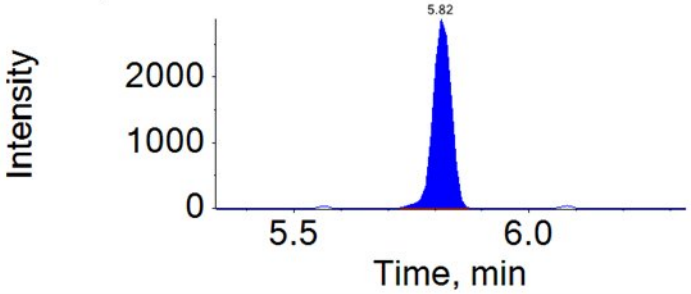
APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

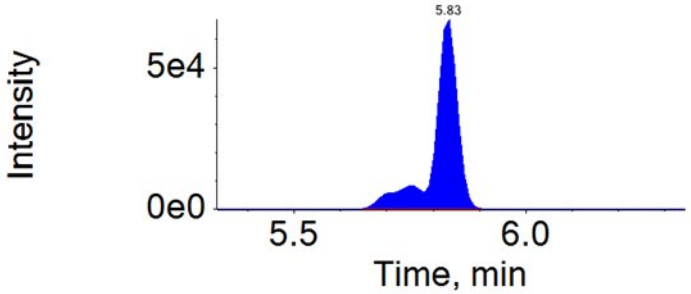
Component: PFUnDA
Primary Mass: 563.0 / 519.0



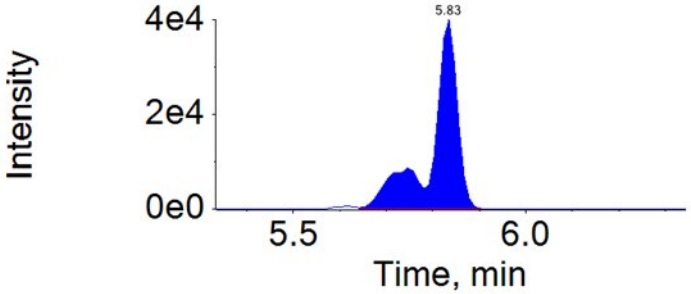
Component: PFUnDA_2
Secondary Mass: 563.0 / 169.0



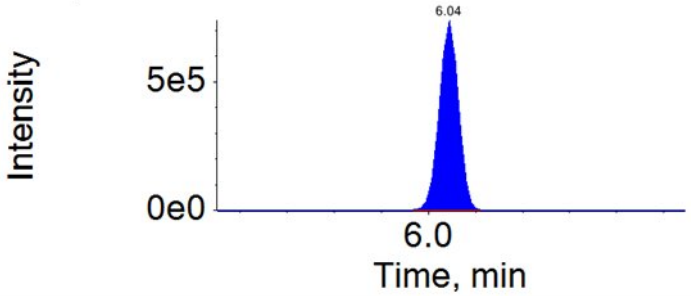
Component: NEtFOSAA
Primary Mass: 584.0 / 419.0



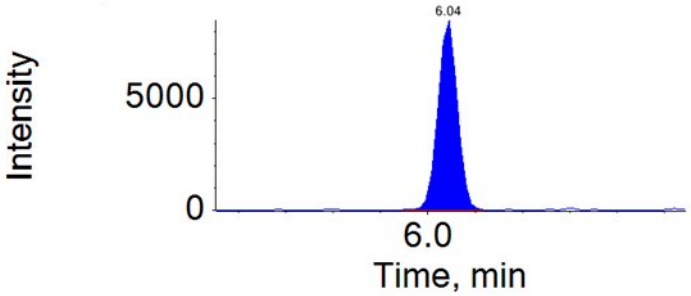
Component: NEtFOSAA_2
Secondary Mass: 584.0 / 526.0



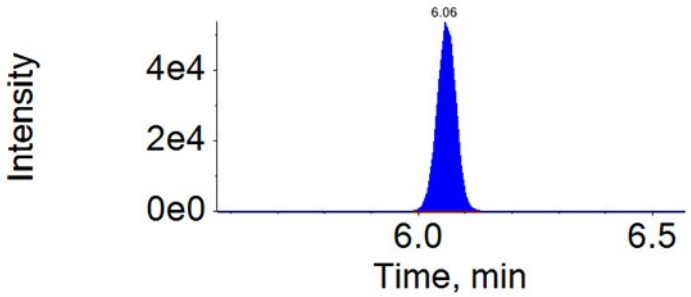
Component: PFDoDA
Primary Mass: 613.0 / 569.0



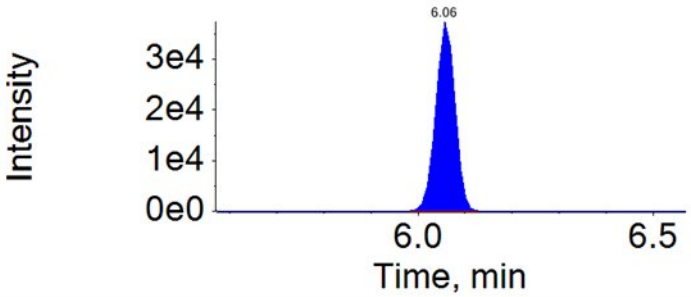
Component: PFDoDA_2
Secondary Mass: 613.0 / 169.0



Component: 10:2-FTS
Primary Mass: 627.0 / 607.0



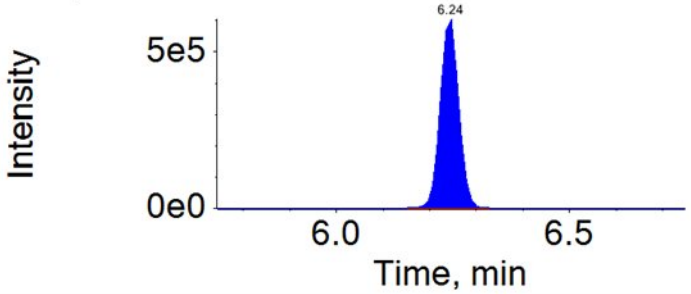
Component: 10:2 FTS_2
Secondary Mass: 627.0 / 81.0



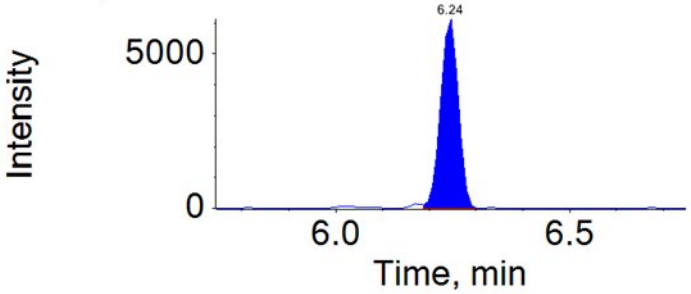
APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

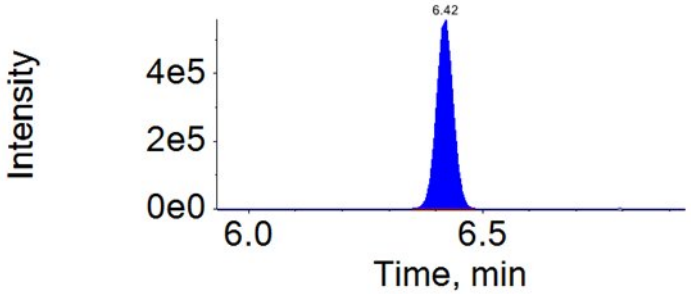
Component: PFTrDA
Primary Mass: 663.0 / 619.0



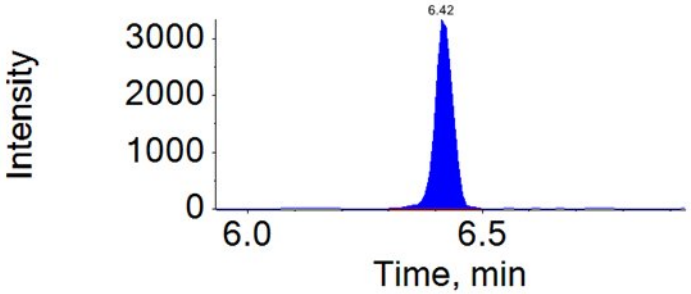
Component: PFTrDA_2
Secondary Mass: 663.0 / 169.0



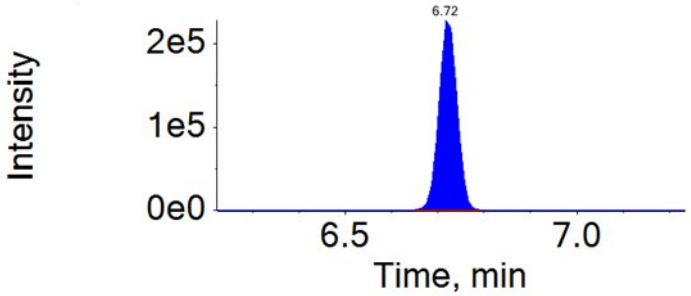
Component: PFTeDA
Primary Mass: 713.0 / 669.0



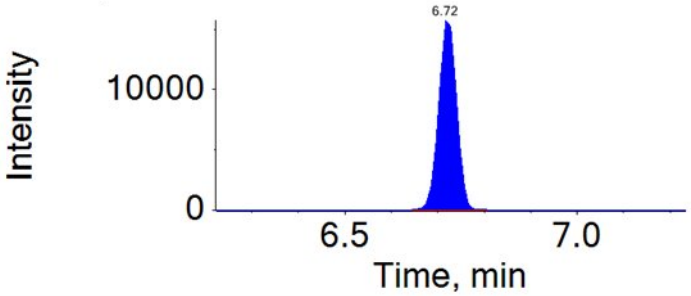
Component: PFTeDA_2
Secondary Mass: 713.0 / 169.0



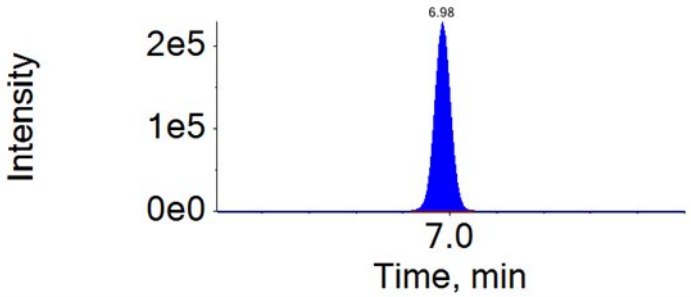
Component: PFHxDA
Primary Mass: 813.0 / 769.0



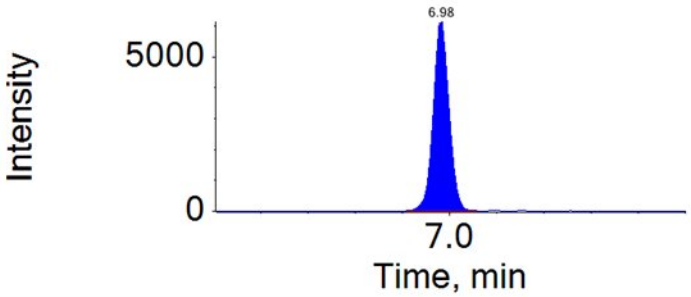
Component: PFHxDA_2
Secondary Mass: 813.0 / 169.0



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

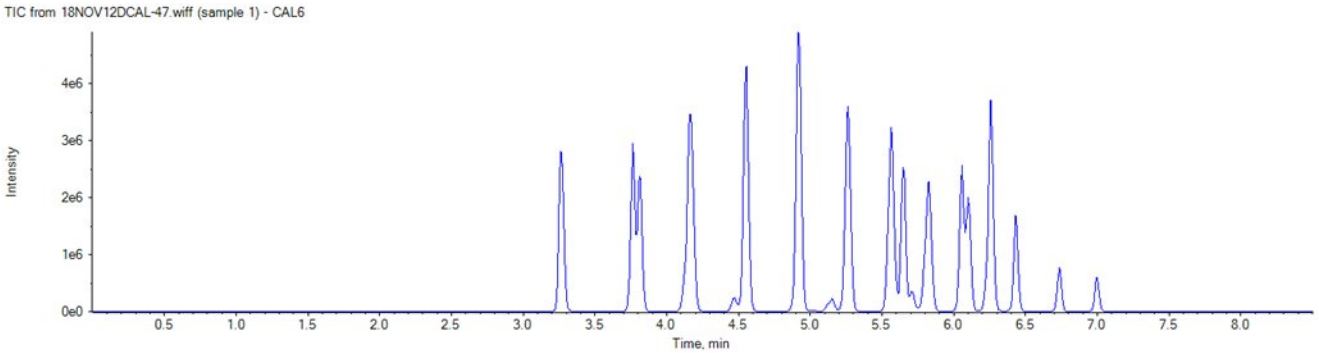
Analyte Quantitation Peak Table

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

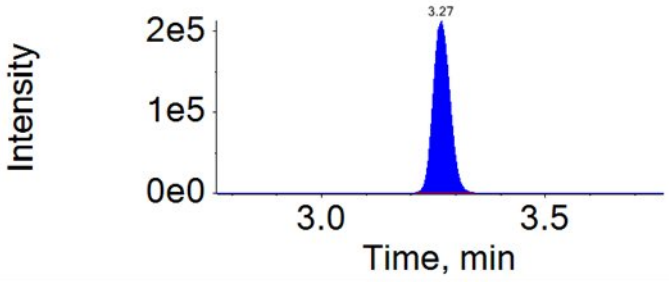


APPROVED
By MCD at 6:33 pm, 11/12/18

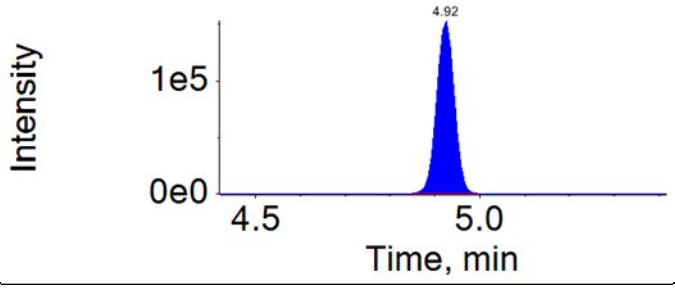
REVIEWED
By HMK at 10:53 am, 11/13/18

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

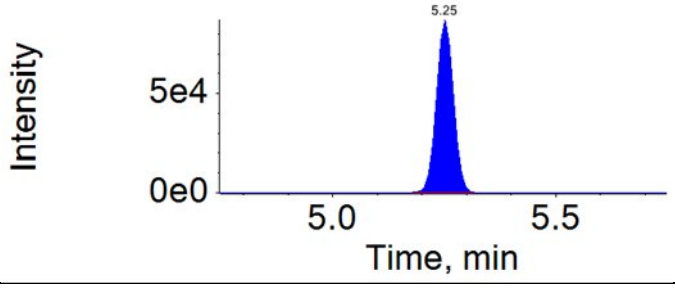
Injection Standard: 13C3-PFBA
216.0 / 172.0



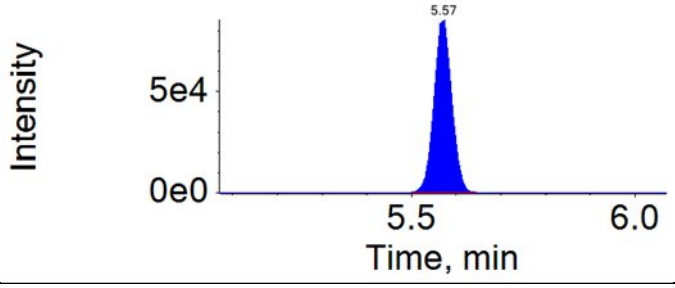
Injection Standard: 13C2-PFOA
415.0 / 370.0



Injection Standard: 13C4-PFOS
503.0 / 80.0



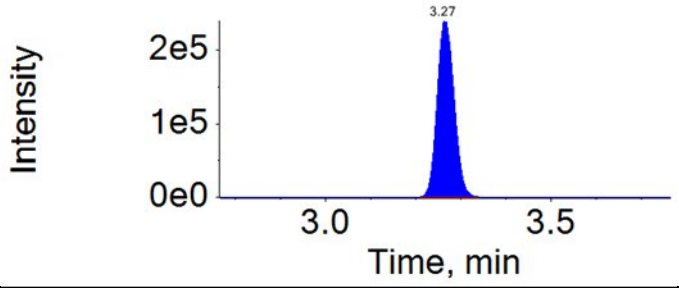
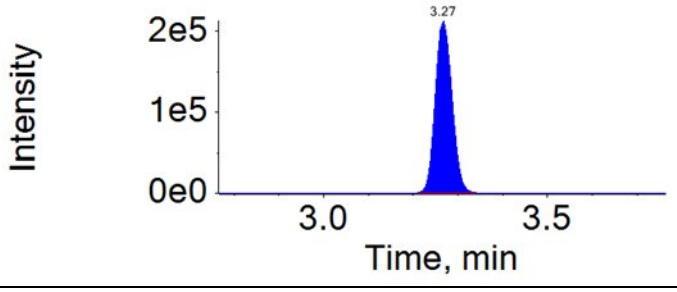
Injection Standard: 13C2-PFDA
515.0 / 470.0

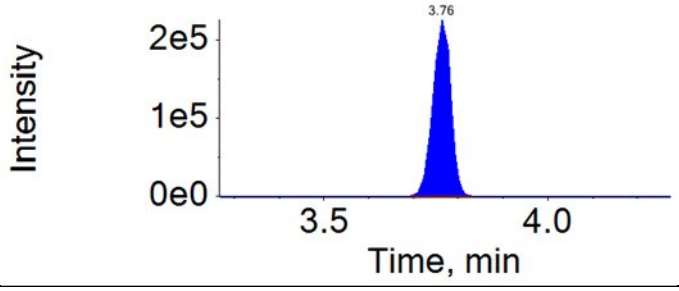
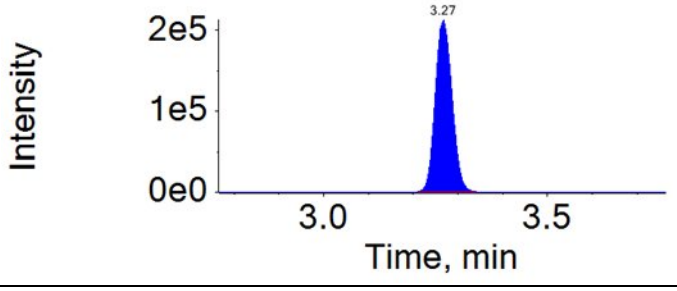


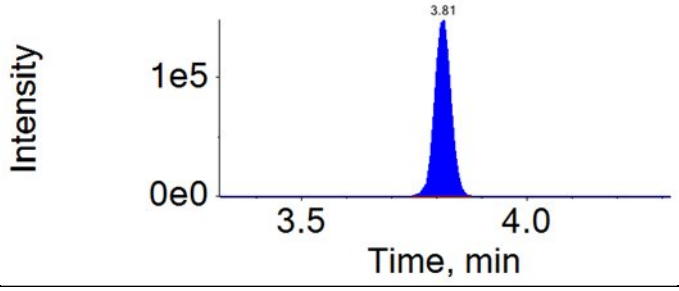
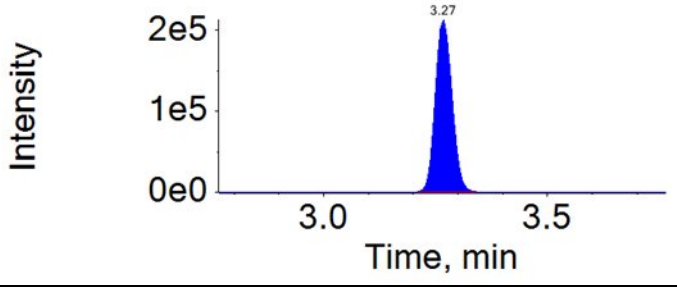
APPROVED
By MCD at 6:33 pm, 11/12/18

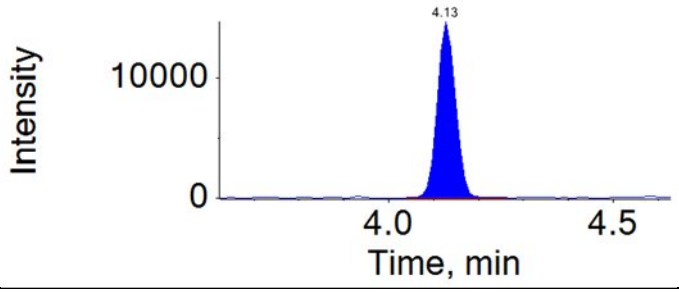
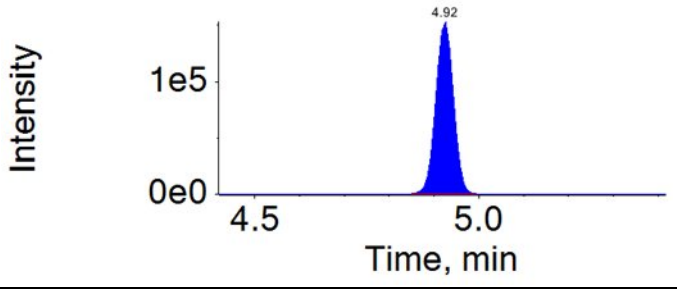
REVIEWED
By HMK at 10:53 am, 11/13/18

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
	

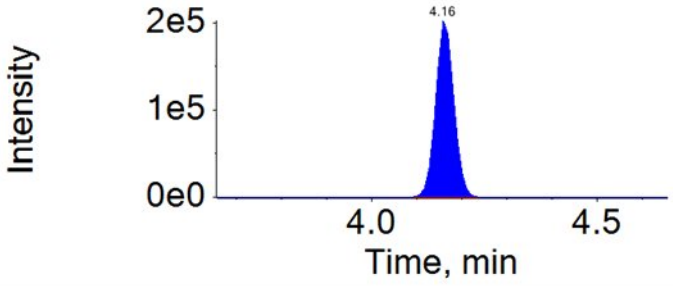
Extraction Standard: E13C2-4:2-FTS	Injection Standard: 13C2-PFOA
329.0 / 81.0	415.0 / 370.0
	

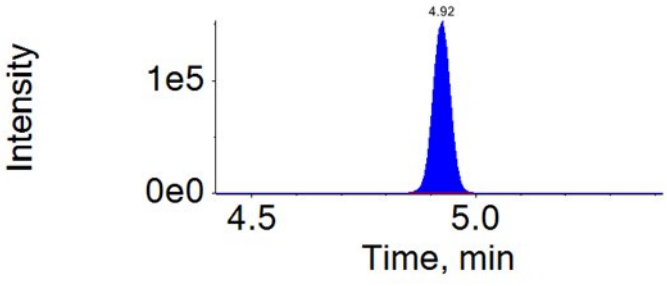
APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

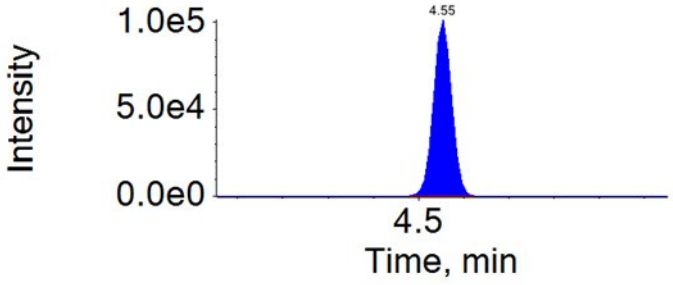
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

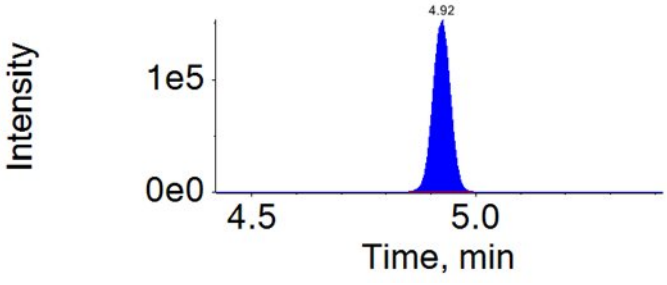
Extraction Standard: E13C5-PFHxA	Injection Standard: 13C2-PFOA
318.0 / 273.0	415.0 / 370.0



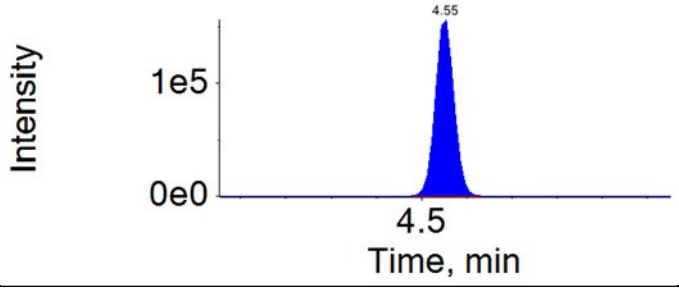


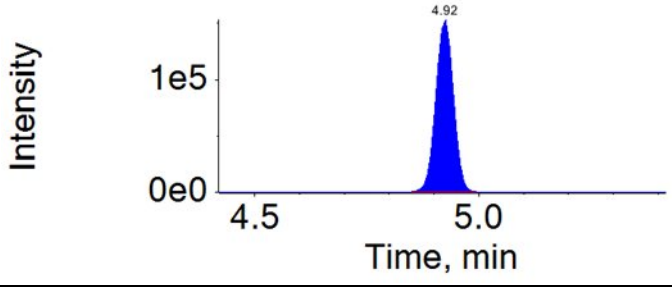
Extraction Standard: E13C3-PFHxS	Injection Standard: 13C2-PFOA
402.0 / 80.0	415.0 / 370.0



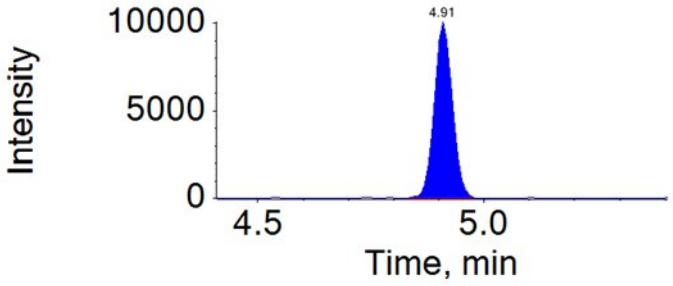


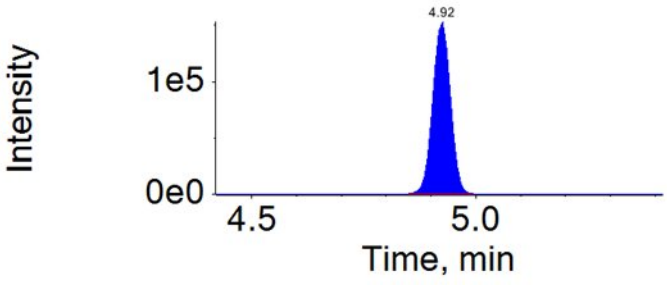
Extraction Standard: E13C4-PFHpA	Injection Standard: 13C2-PFOA
367.0 / 322.0	415.0 / 370.0





Extraction Standard: E13C2-6:2-FTS	Injection Standard: 13C2-PFOA
429.0 / 81.0	415.0 / 370.0



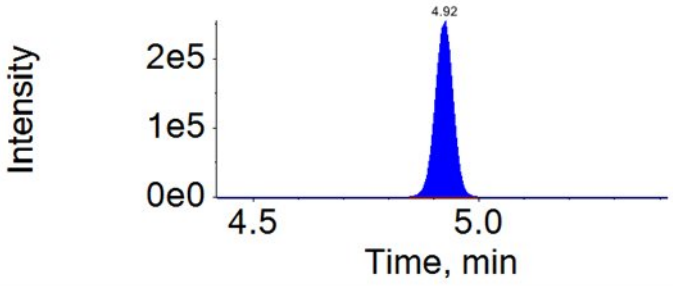


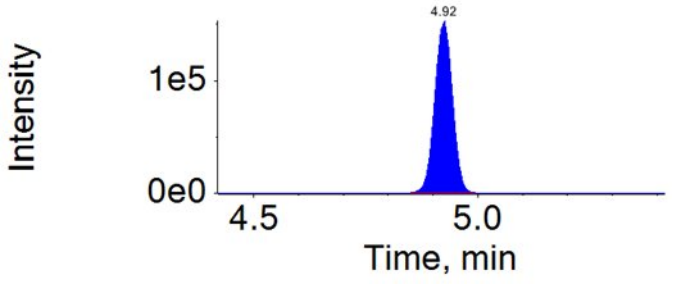
APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

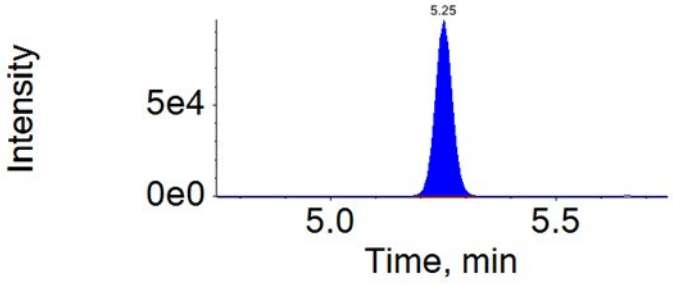
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

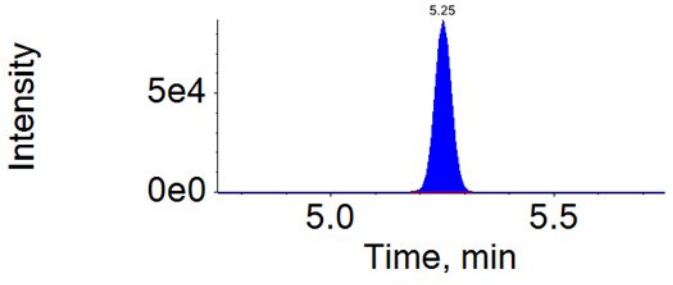
Extraction Standard: E13C8-PFOA	Injection Standard: 13C2-PFOA
421.0 / 376.0	415.0 / 370.0



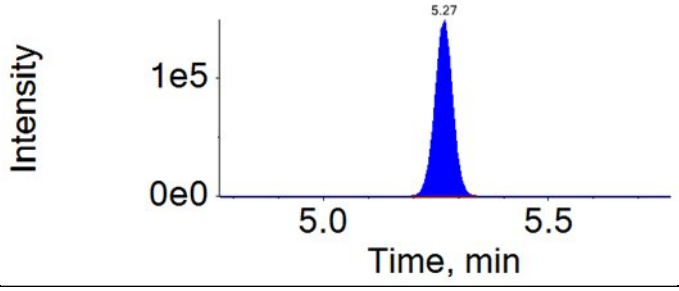


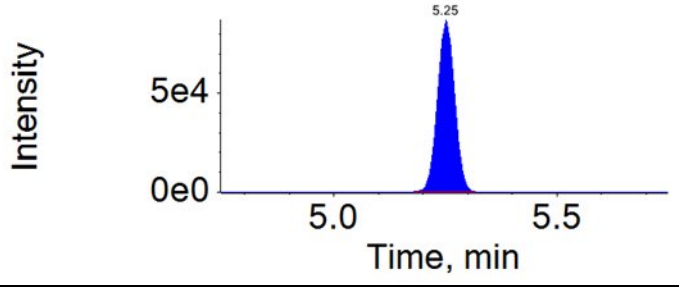
Extraction Standard: E13C8-PFOS	Injection Standard: 13C4-PFOS
507.0 / 80.0	503.0 / 80.0



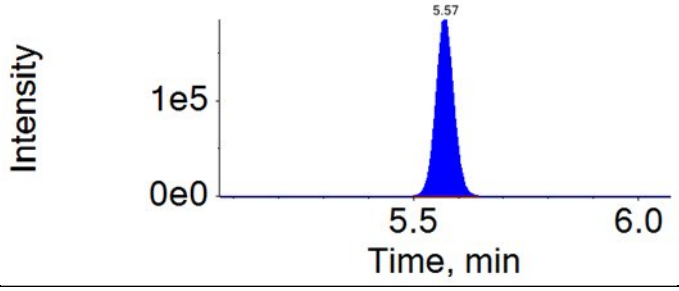


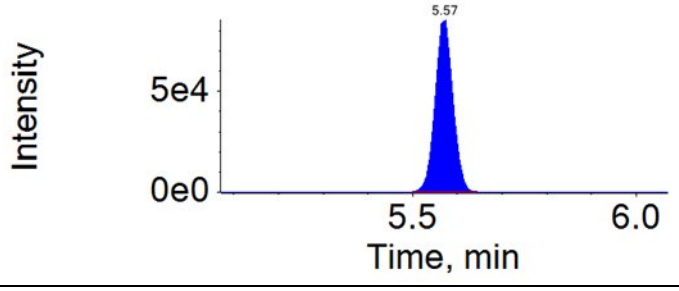
Extraction Standard: E13C9-PFNA	Injection Standard: 13C4-PFOS
472.0 / 427.0	503.0 / 80.0





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

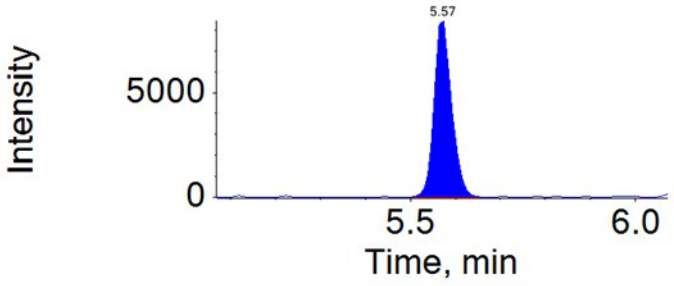
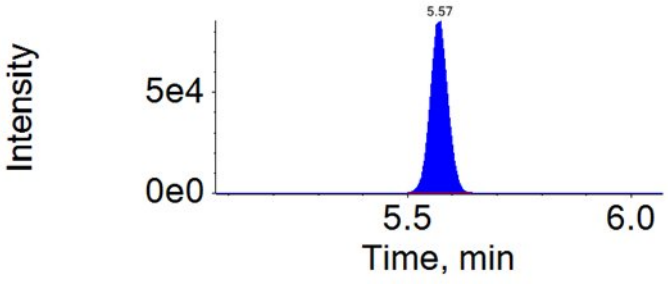


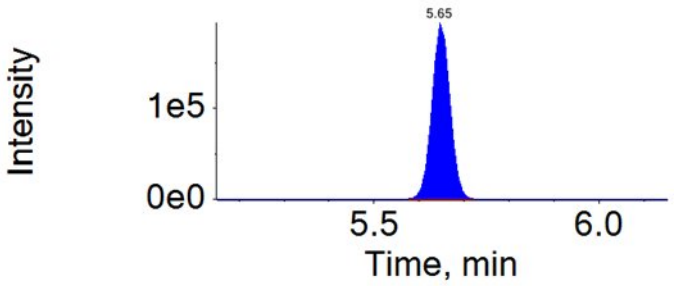
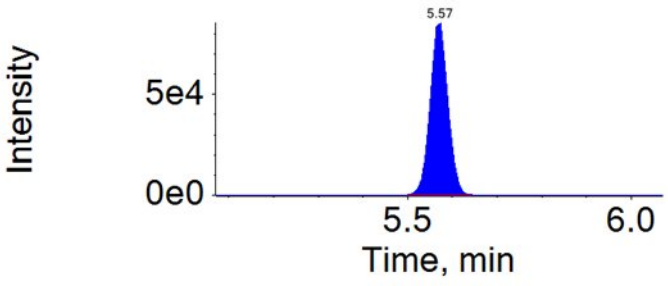


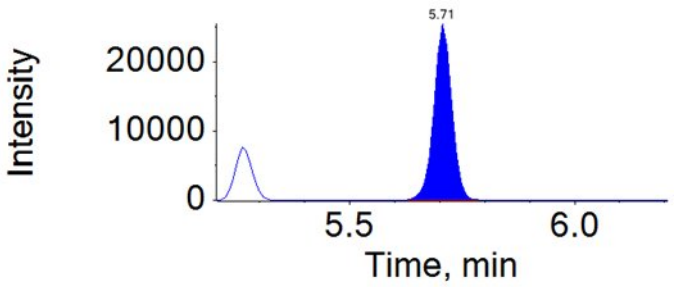
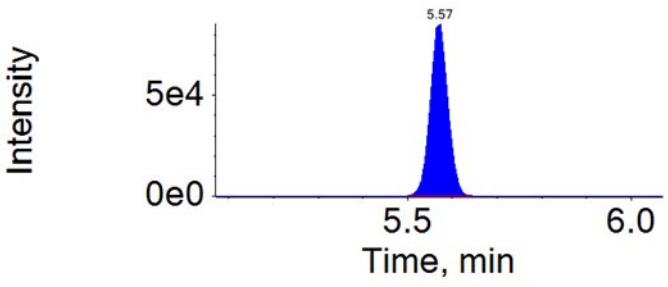
APPROVED
By MCD at 6:33 pm, 11/12/18

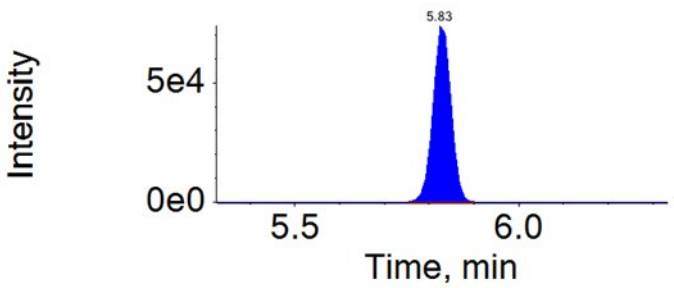
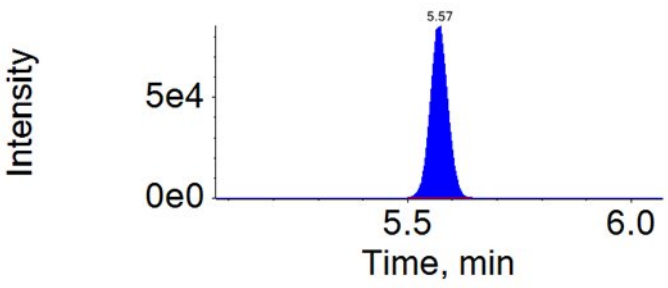
REVIEWED
By HMK at 10:53 am, 11/13/18

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
	

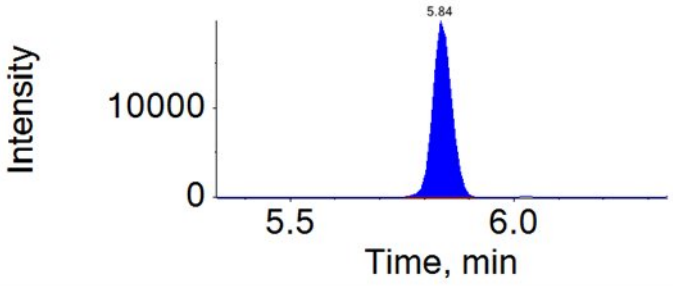
Extraction Standard: E13C8-PFOSA	Injection Standard: 13C2-PFDA
506.0 / 78.0	515.0 / 470.0
	

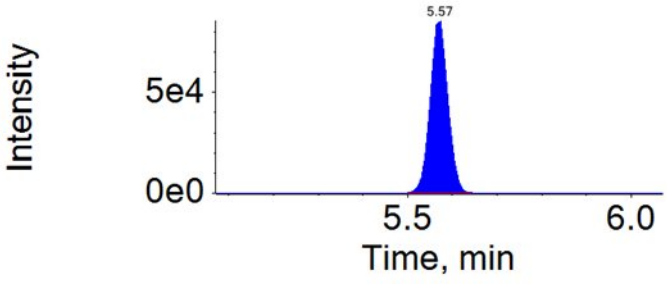
Extraction Standard: Ed3-NMeFOSAA	Injection Standard: 13C2-PFDA
573.0 / 419.0	515.0 / 470.0
	

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

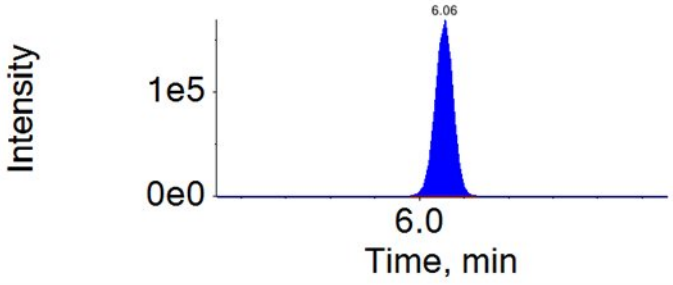
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

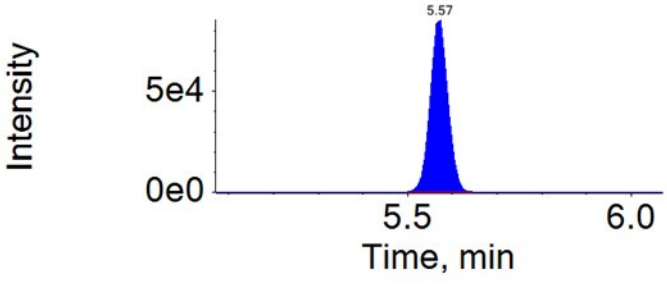
Extraction Standard: Ed5-NEtFOSAA	Injection Standard: 13C2-PFDA
589.0 / 419.0	515.0 / 470.0



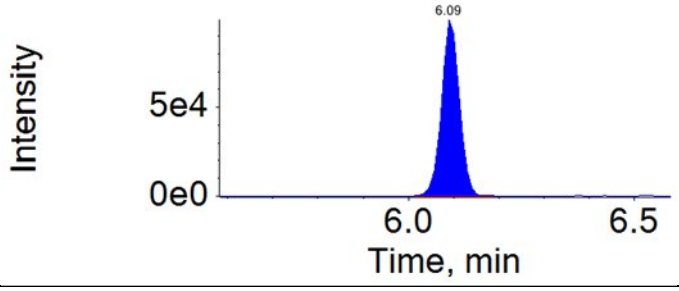


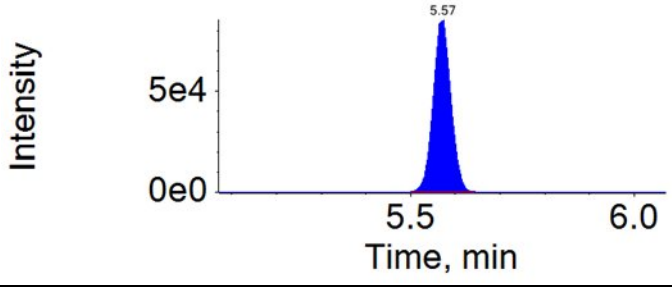
Extraction Standard: E13C2-PFDoDA	Injection Standard: 13C2-PFDA
615.0 / 570.0	515.0 / 470.0



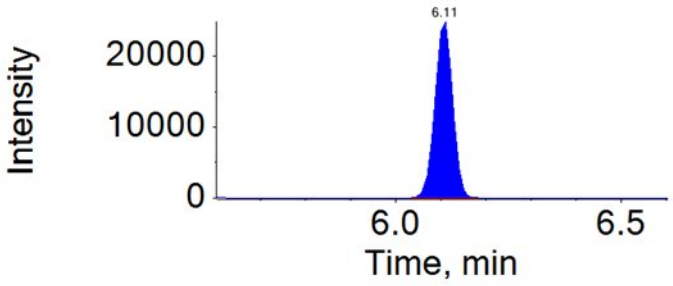


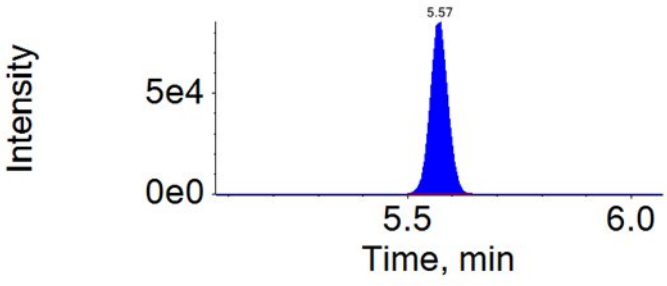
Extraction Standard: Ed7-NMePFOSAE	Injection Standard: 13C2-PFDA
623.0 / 59.0	515.0 / 470.0





Extraction Standard: Ed3-NMePFOSA	Injection Standard: 13C2-PFDA
515.0 / 169.0	515.0 / 470.0



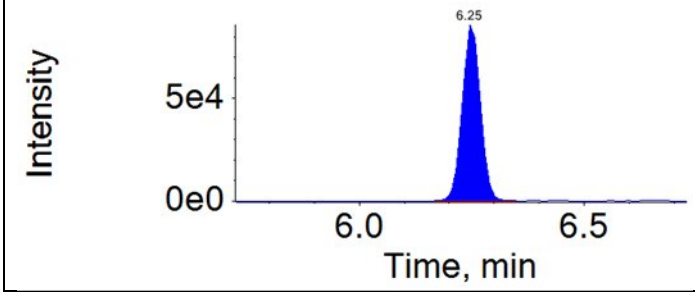


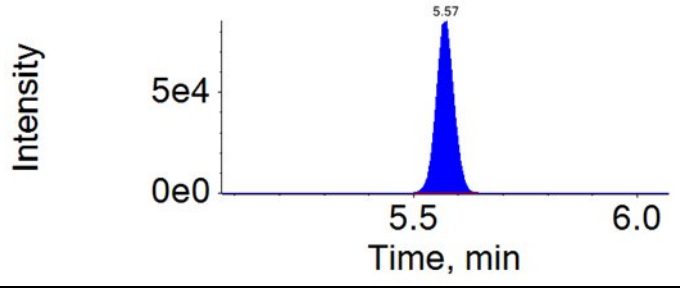
APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

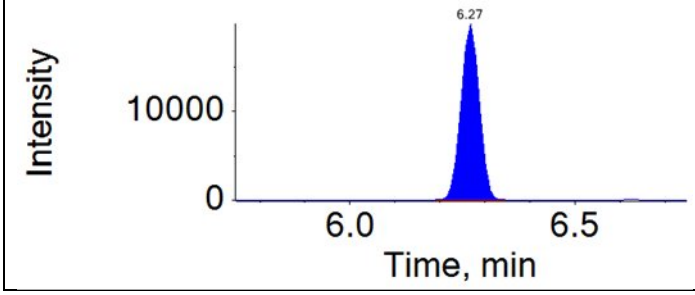
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

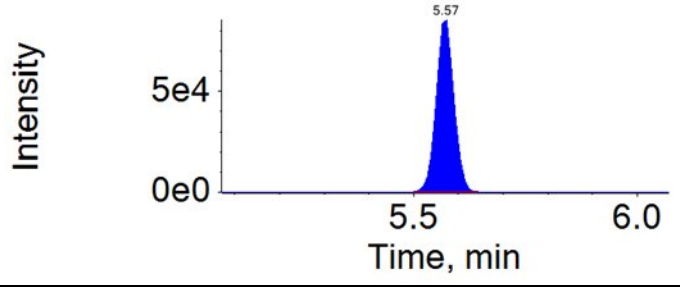
Extraction Standard: Ed9-NEtPFOSAE	Injection Standard: 13C2-PFDA
639.0 / 59.0	515.0 / 470.0



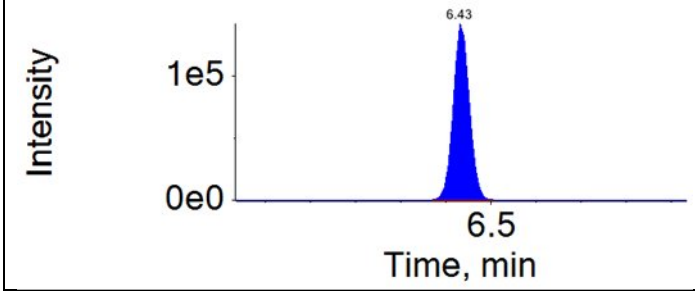


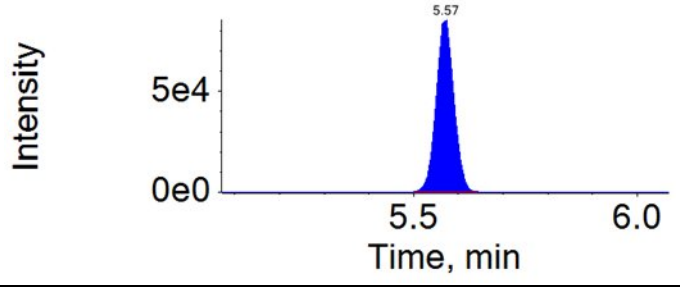
Extraction Standard: Ed5-NEtPFOSA	Injection Standard: 13C2-PFDA
531.0 / 169.0	515.0 / 470.0





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



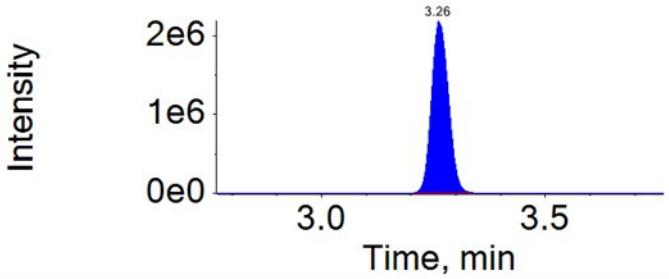


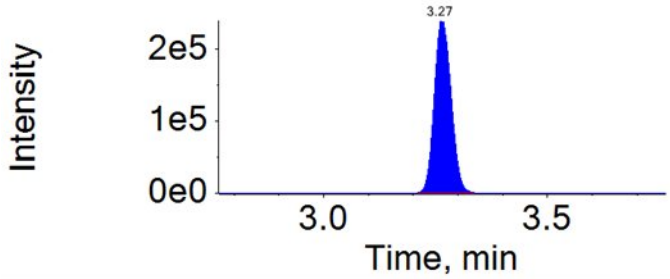
APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

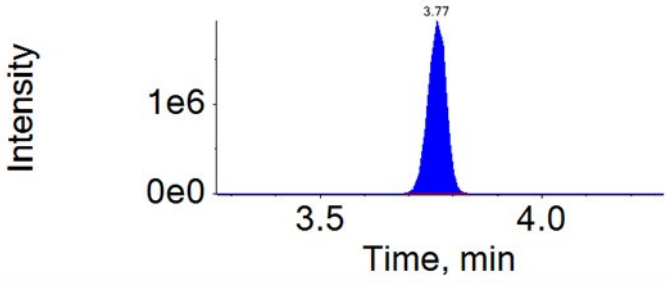
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

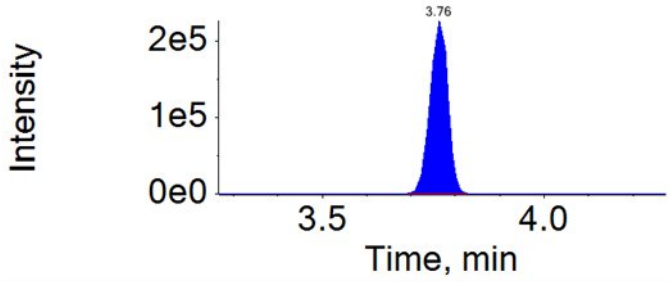
Analyte: PFBA	Extraction Standard: 13C4-PFBA
213.0 / 169.0	217.0 / 172.0



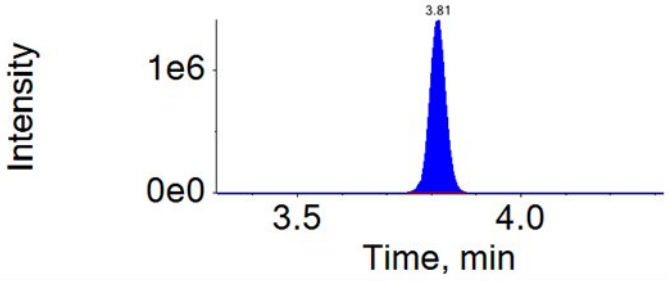


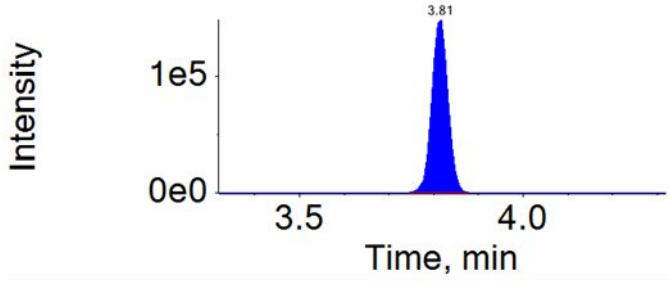
Analyte: PFPeA	Extraction Standard: 13C5-PFPeA
263.0 / 219.0	268.0 / 223.0



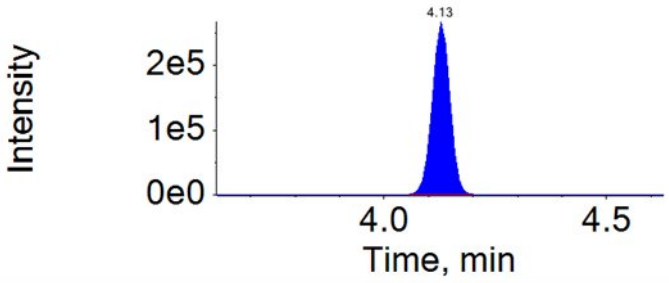


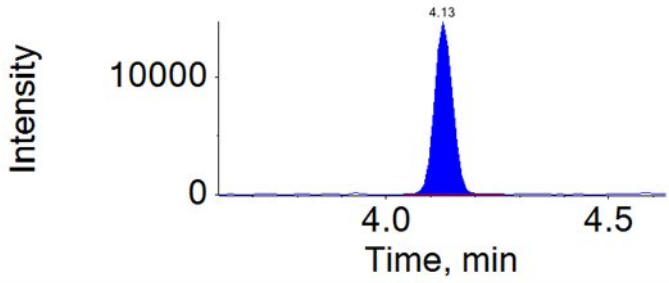
Analyte: PFBS	Extraction Standard: 13C3-PFBS
299.0 / 80.0	302.0 / 80.0





Analyte: 4:2-FTS	Extraction Standard: 13C2-4:2-FTS
327.0 / 307.0	329.0 / 81.0



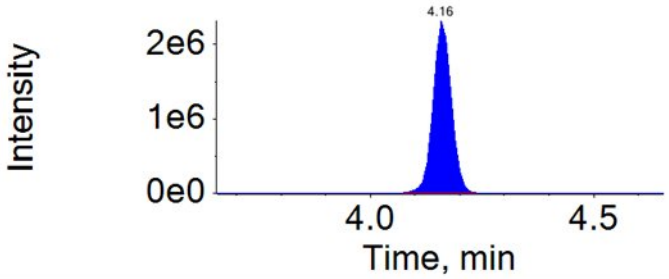


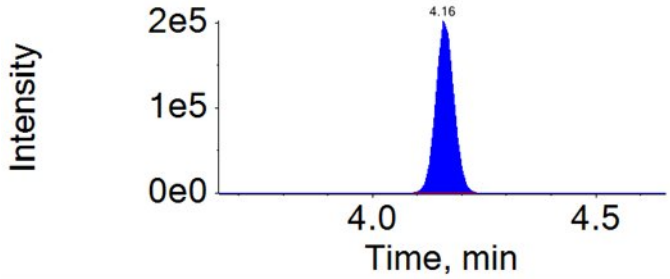
APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

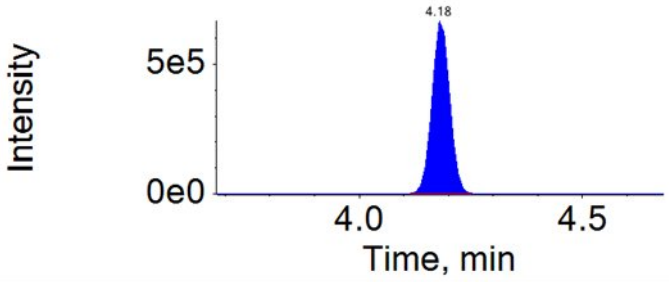
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

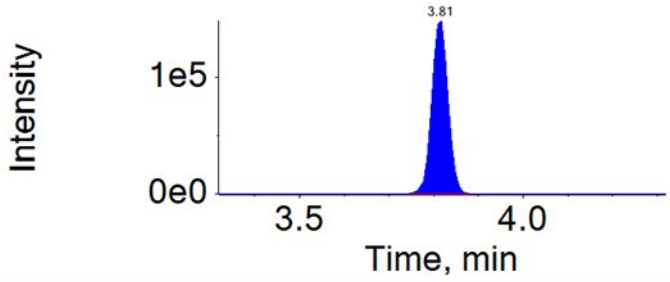
Analyte: PFHxA	Extraction Standard: 13C5-PFHxA
313.0 / 269.0	318.0 / 273.0



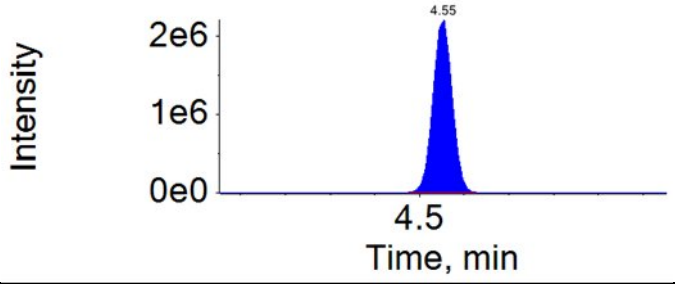


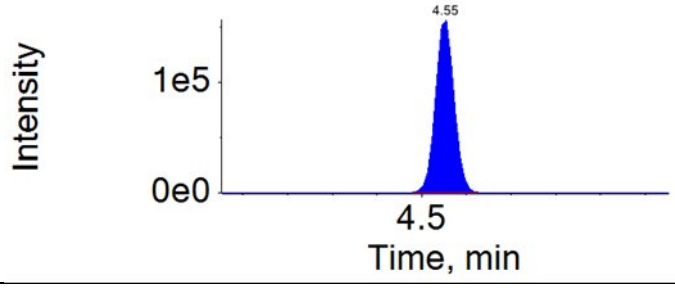
Analyte: PFPeS	Extraction Standard: 13C3-PFBS
349.0 / 80.0	302.0 / 80.0



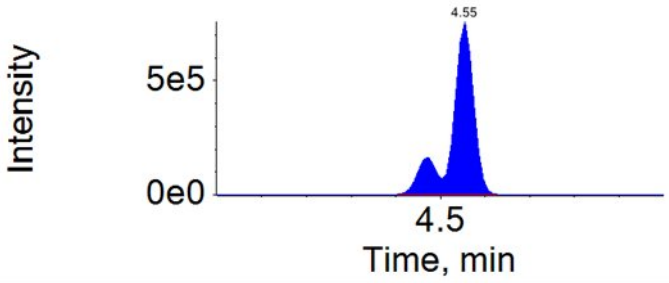


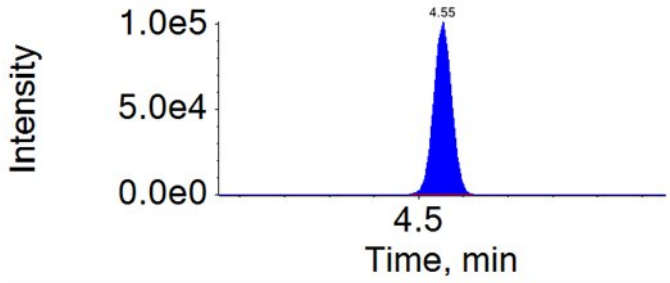
Analyte: PFHpA	Extraction Standard: 13C4-PFHpA
363.0 / 319.0	367.0 / 322.0





Analyte: PFHxS	Extraction Standard: 13C3-PFHxS
399.0 / 80.0	402.0 / 80.0



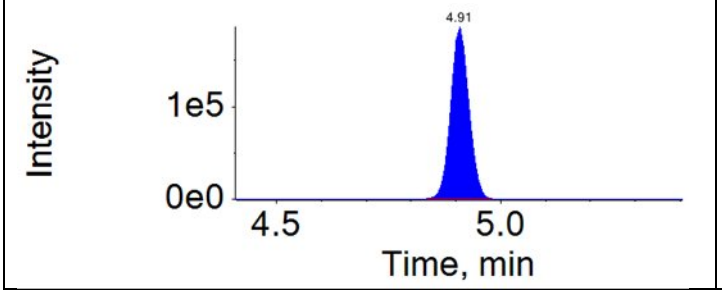


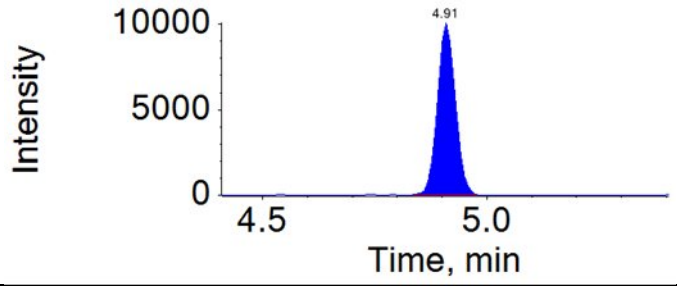
APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

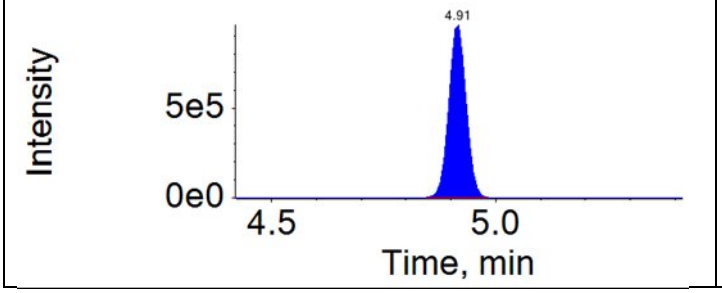
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

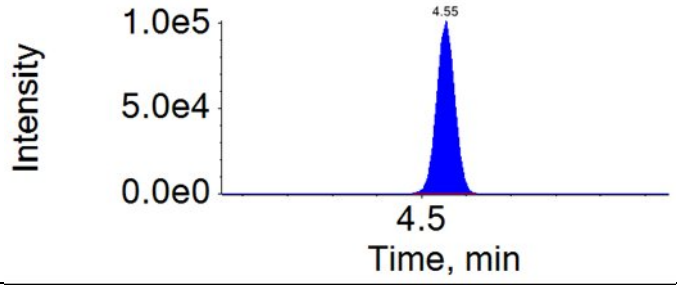
Analyte: 6:2-FTS	Extraction Standard: 13C2-6:2-FTS
427.0 / 407.0	429.0 / 81.0



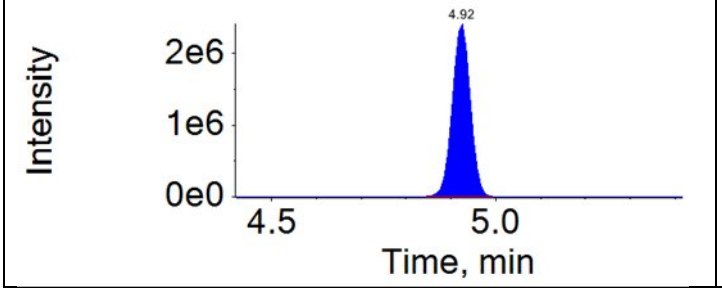


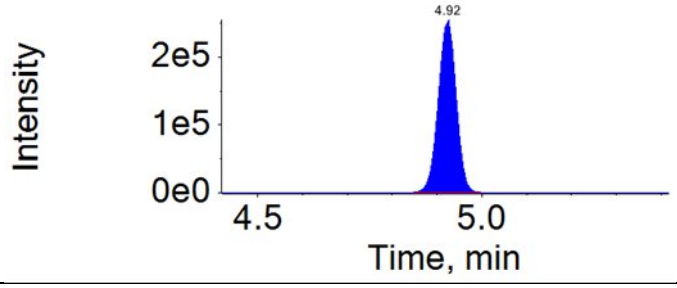
Analyte: PFHpS	Extraction Standard: 13C3-PFHxS
449.0 / 80.0	402.0 / 80.0



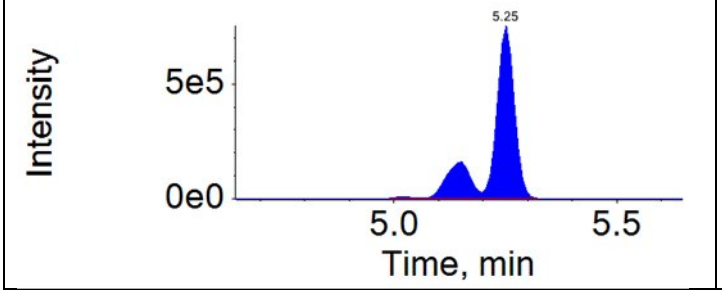


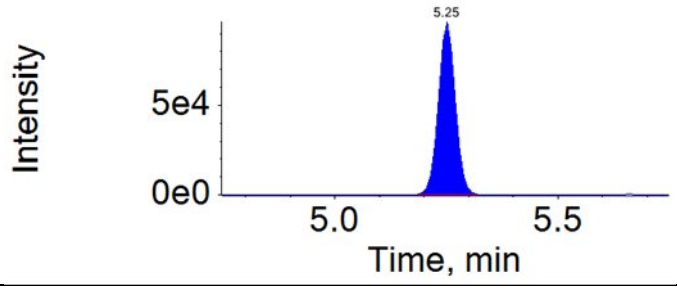
Analyte: PFOA	Extraction Standard: 13C8-PFOA
413.0 / 369.0	421.0 / 376.0





Analyte: PFOS	Extraction Standard: 13C8-PFOS
499.0 / 80.0	507.0 / 80.0



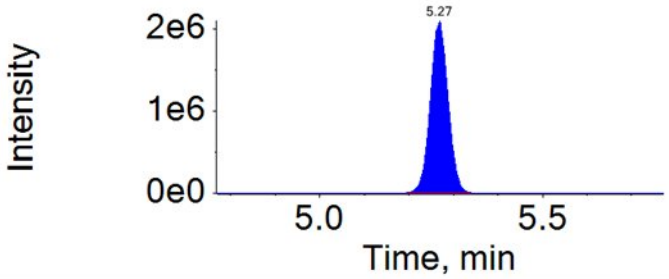


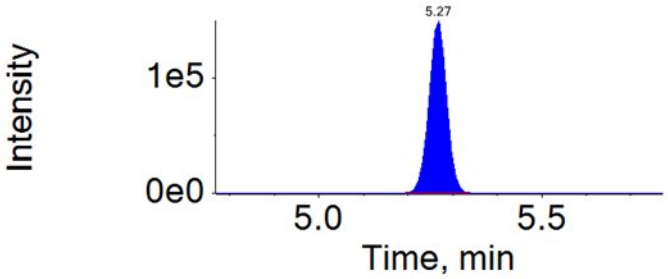
APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

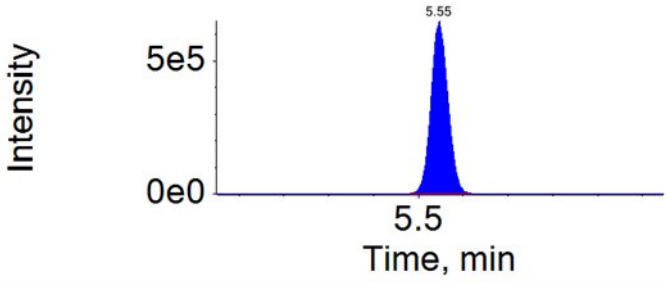
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

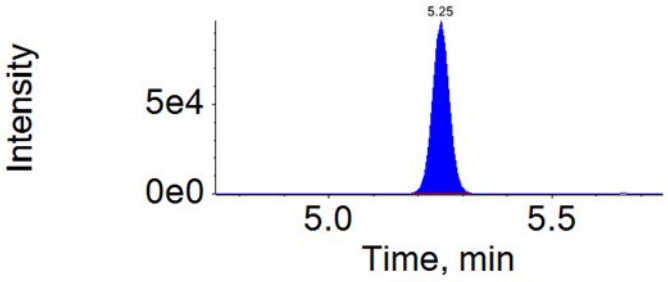
Analyte: PFNA	Extraction Standard: 13C9-PFNA
463.0 / 419.0	472.0 / 427.0



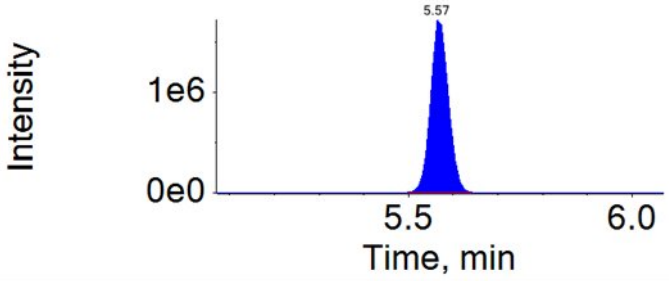


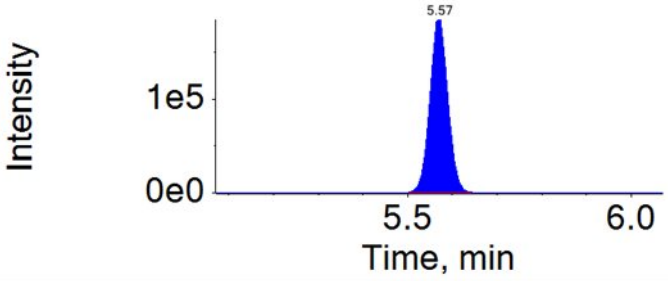
Analyte: PFNS	Extraction Standard: 13C8-PFOS
549.0 / 80.0	507.0 / 80.0



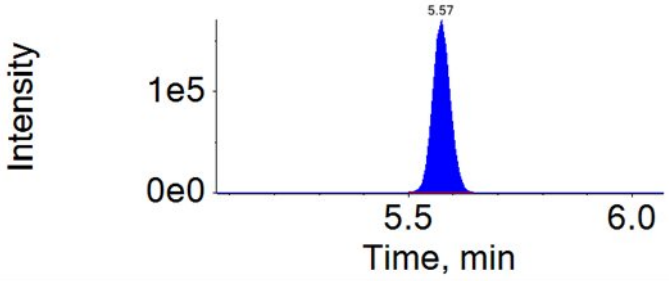


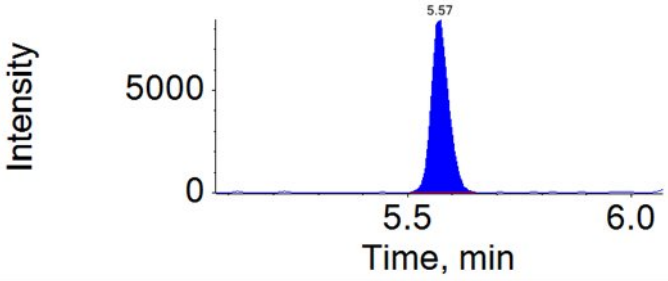
Analyte: PFDA	Extraction Standard: 13C6-PFDA
513.0 / 469.0	519.0 / 474.0





Analyte: 8:2-FTS	Extraction Standard: 13C2-8:2-FTS
527.0 / 507.0	529.0 / 81.0



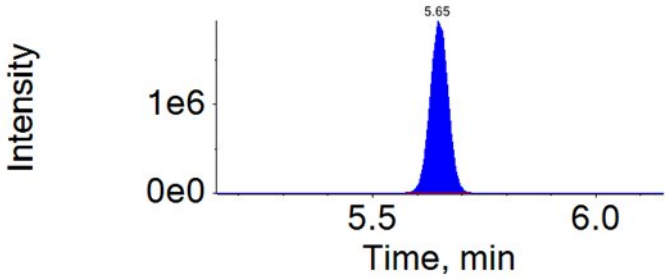


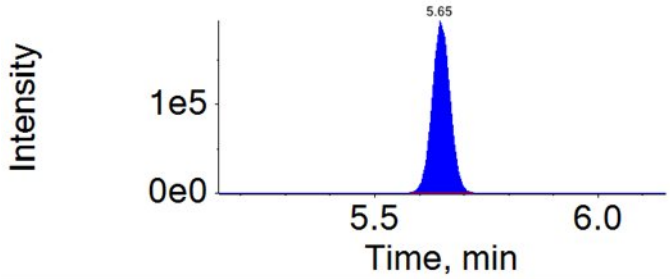
APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

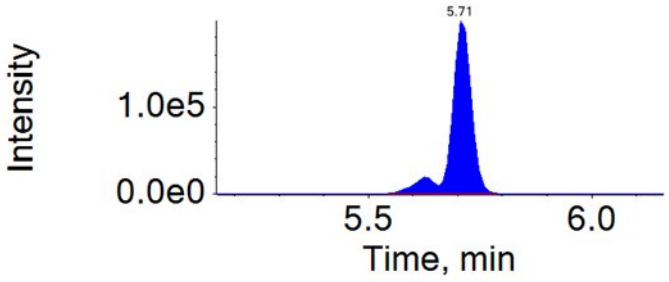
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

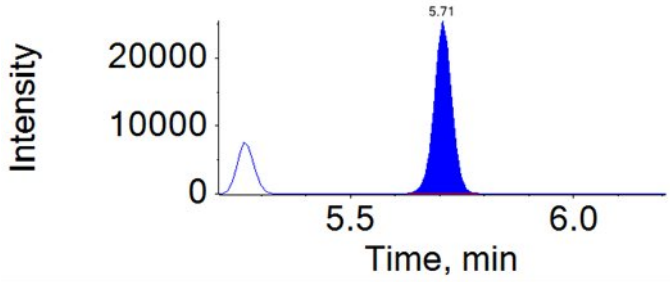
Analyte: PFOSA	Extraction Standard: 13C8-PFOSA
498.0 / 78.0	506.0 / 78.0



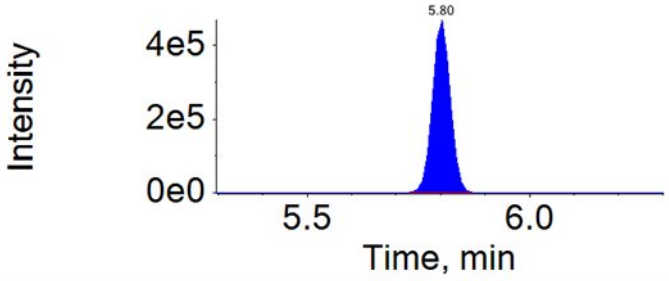


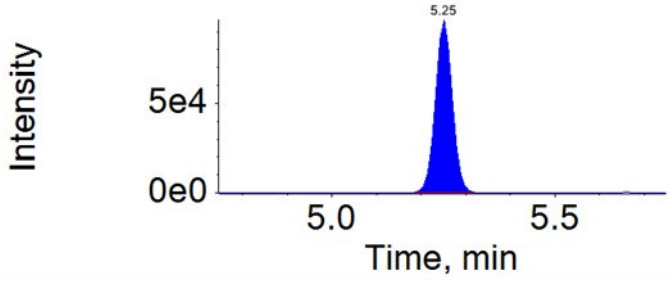
Analyte: NMeFOSAA	Extraction Standard: d3-NMeFOSAA
570.0 / 419.0	573.0 / 419.0



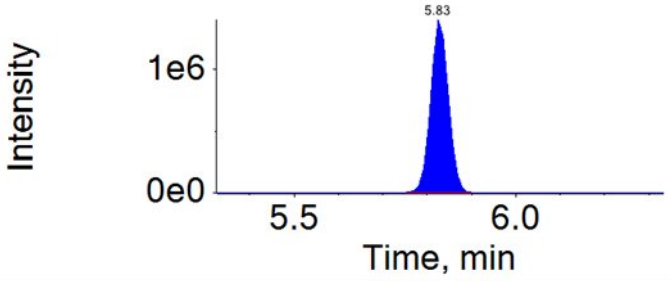


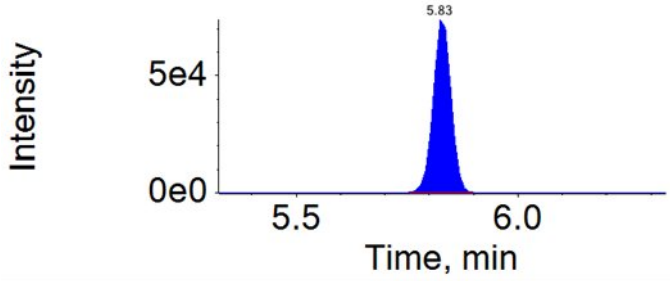
Analyte: PFDS	Extraction Standard: 13C8-PFOS
599.0 / 80.0	507.0 / 80.0





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



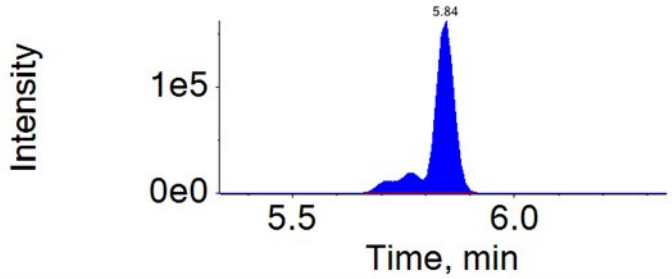


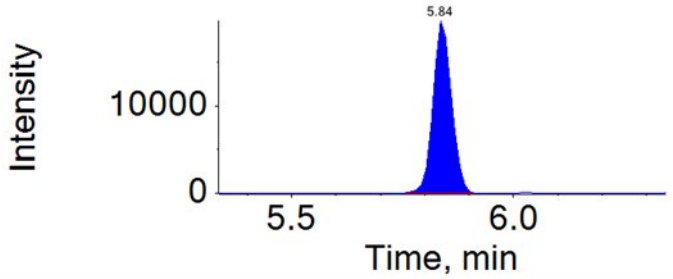
APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

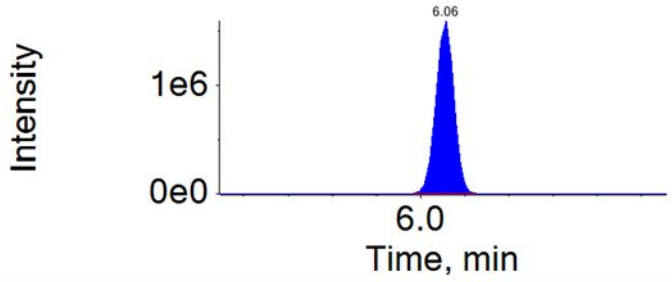
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

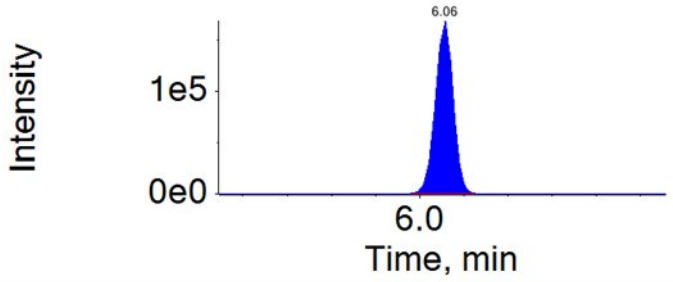
Analyte: NEtFOSAA	Extraction Standard: d5-NEtFOSAA
584.0 / 419.0	589.0 / 419.0



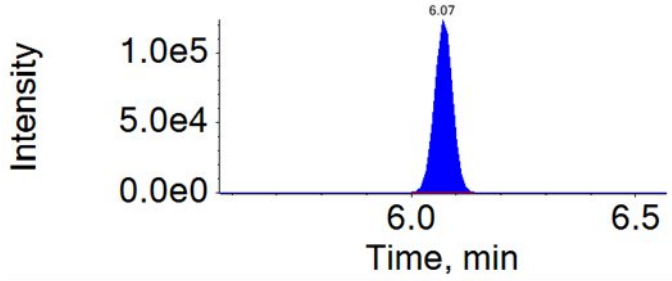


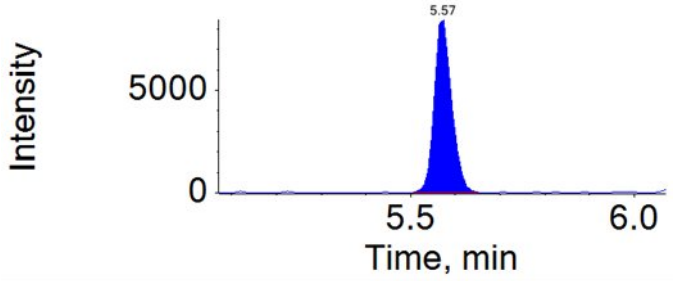
Analyte: PFDoDA	Extraction Standard: 13C2-PFDoDA
613.0 / 569.0	615.0 / 570.0



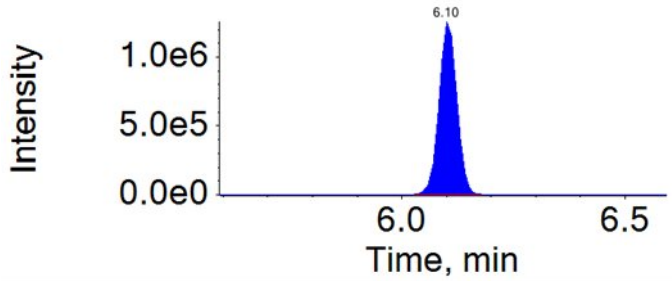


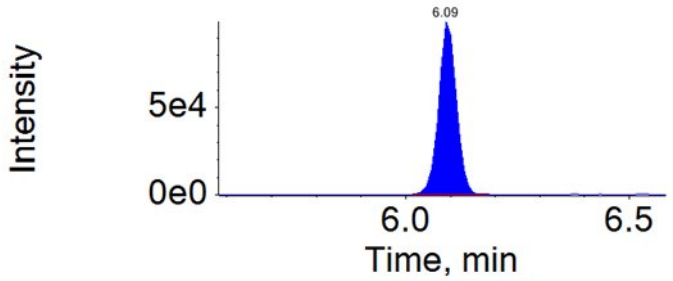
Analyte: 10:2-FTS	Extraction Standard: 13C2-8:2-FTS
627.0 / 607.0	529.0 / 81.0





Analyte: NMePFOSAE	Extraction Standard: d7-NMePFOSAE
616.0 / 59.0	623.0 / 59.0



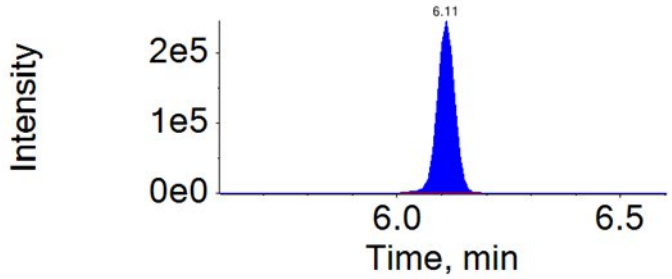


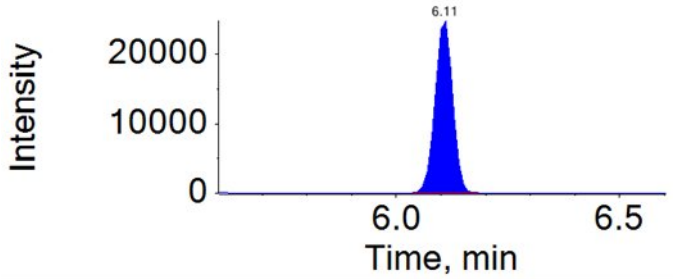
APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

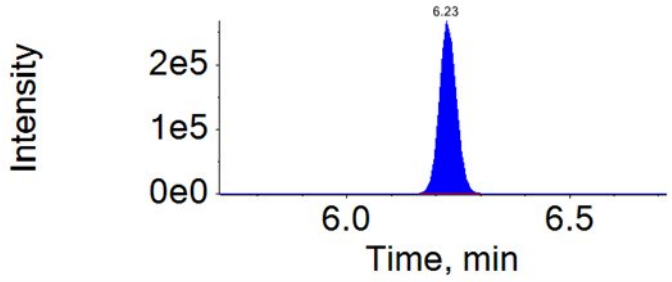
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

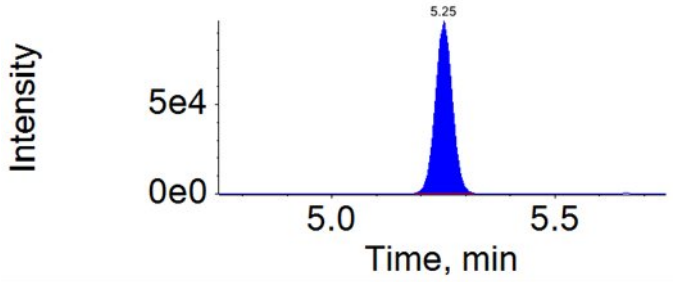
Analyte: NMePFOSA	Extraction Standard: d3-NMePFOSA
512.0 / 169.0	515.0 / 169.0



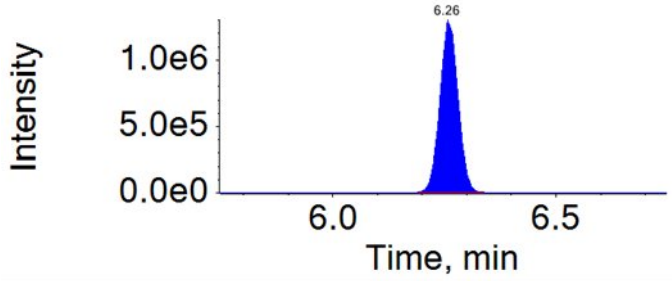


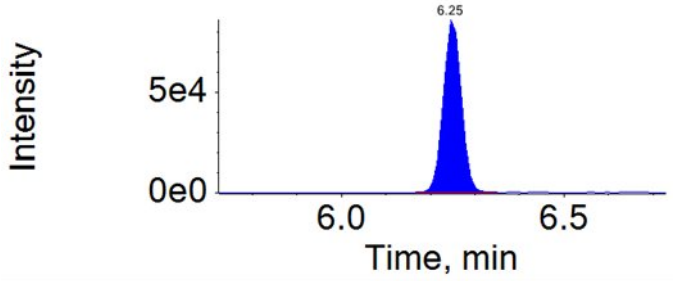
Analyte: PFDoS	Extraction Standard: 13C8-PFOS
699.0 / 80.0	507.0 / 80.0



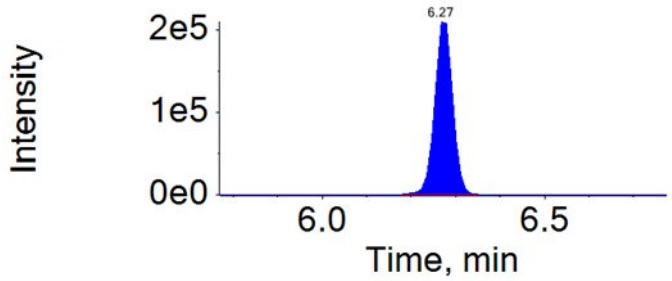


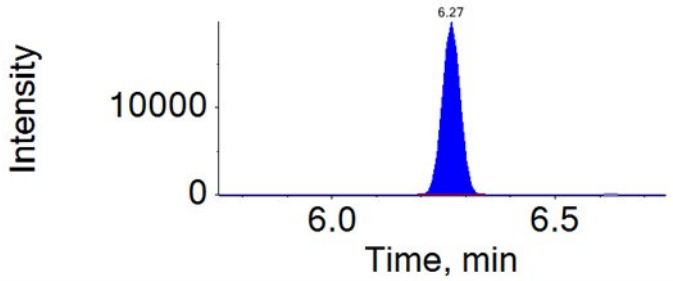
Analyte: NEtPFOSAE	Extraction Standard: d9-NEtPFOSAE
630.0 / 59.0	639.0 / 59.0





Analyte: NEtPFOSA	Extraction Standard: d5-NEtPFOSA
526.0 / 169.0	531.0 / 169.0



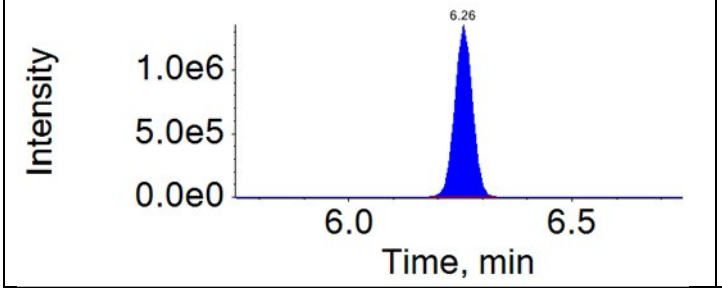


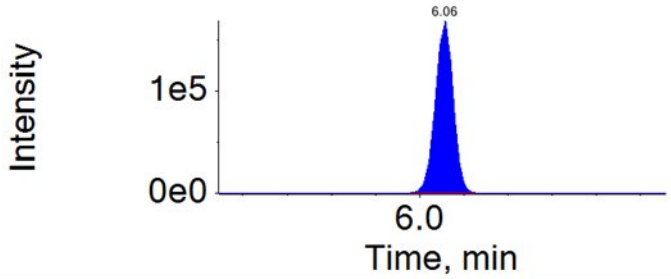
APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

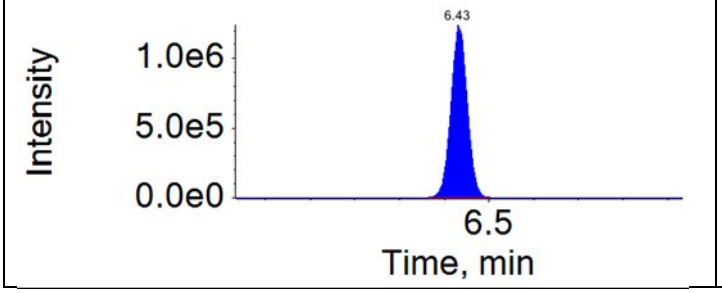
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

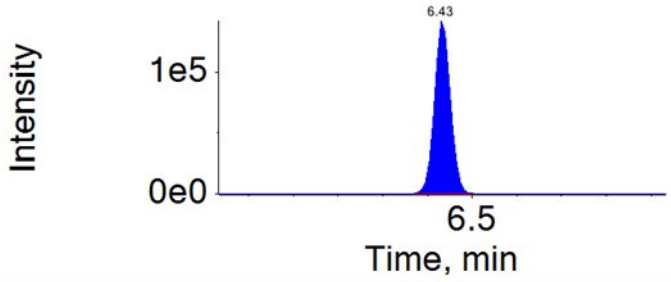
Analyte: PFTrDA	Extraction Standard: 13C2-PFDoDA
663.0 / 619.0	615.0 / 570.0



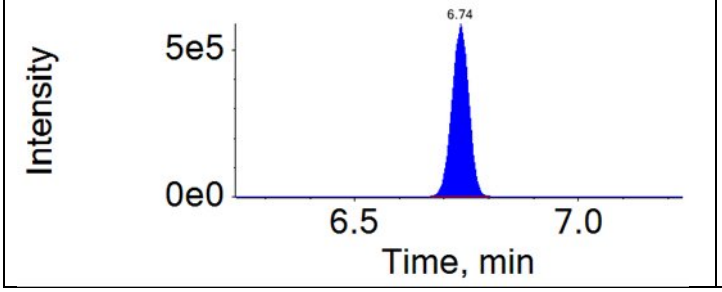


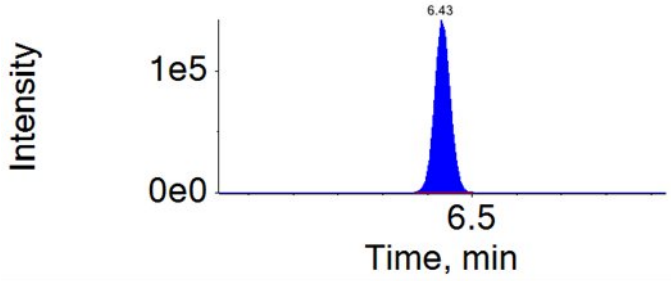
Analyte: PFTeDA	Extraction Standard: 13C2-PFTeDA
713.0 / 669.0	715.0 / 670.0



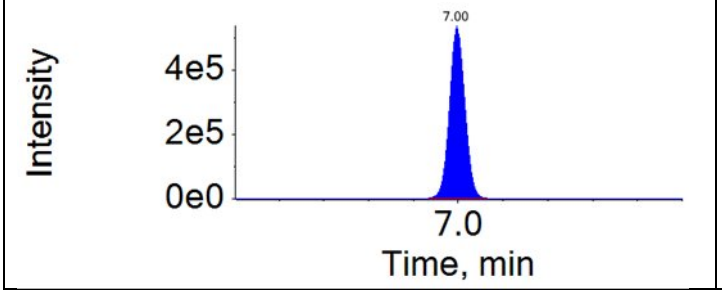


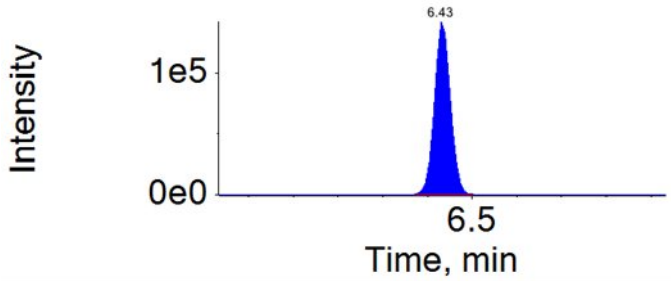
Analyte: PFHxDA	Extraction Standard: 13C2-PFTeDA
813.0 / 769.0	715.0 / 670.0





Analyte: PFODA	Extraction Standard: 13C2-PFTeDA
913.0 / 869.0	715.0 / 670.0



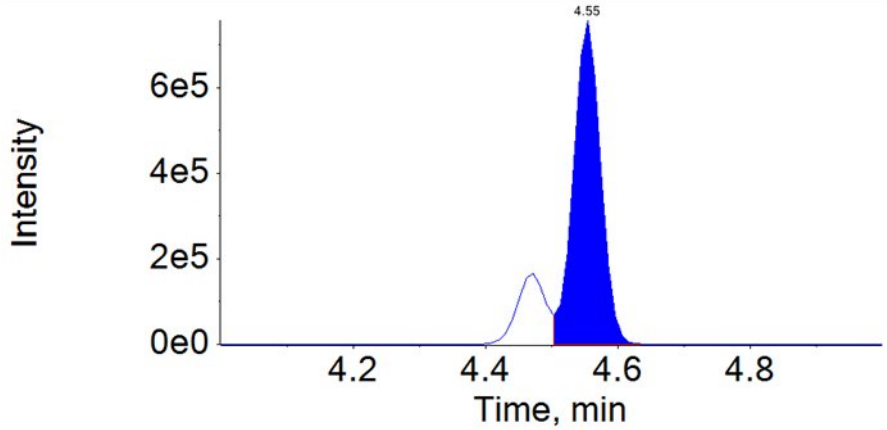


APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

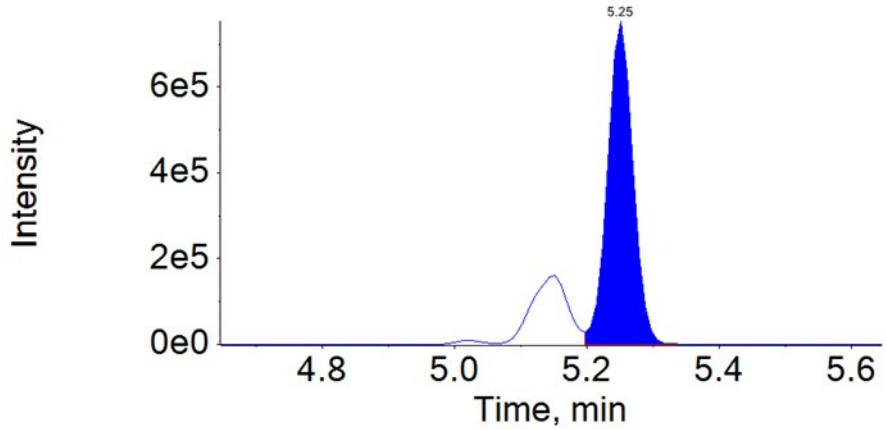
Results Table Name: 18NOV12DCAL
Results Table Date: 11/12/2018 6:23:42 PM
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

Component Name:
PFHxS
RT (min.):
4.55
Peak Area:
2168276.79
Mass Range:
399.0 / 80.0
File Name:
18NOV12DCAL-47.wiff
Sample Name:
CAL6



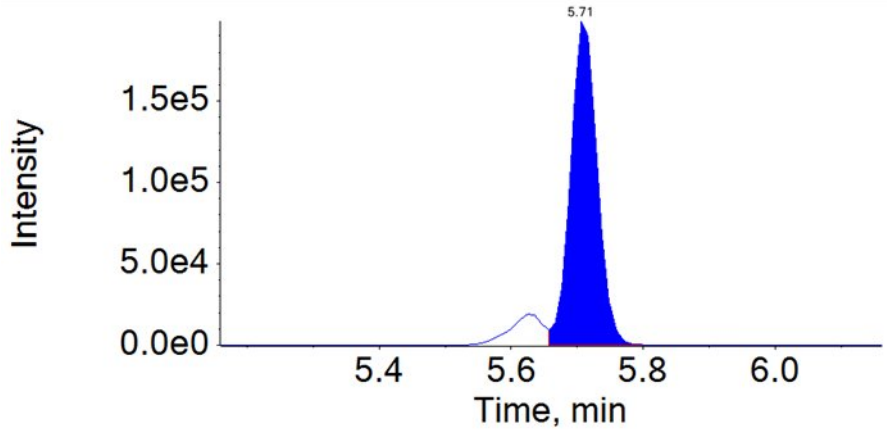
Integration Comment: incorrect integration

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

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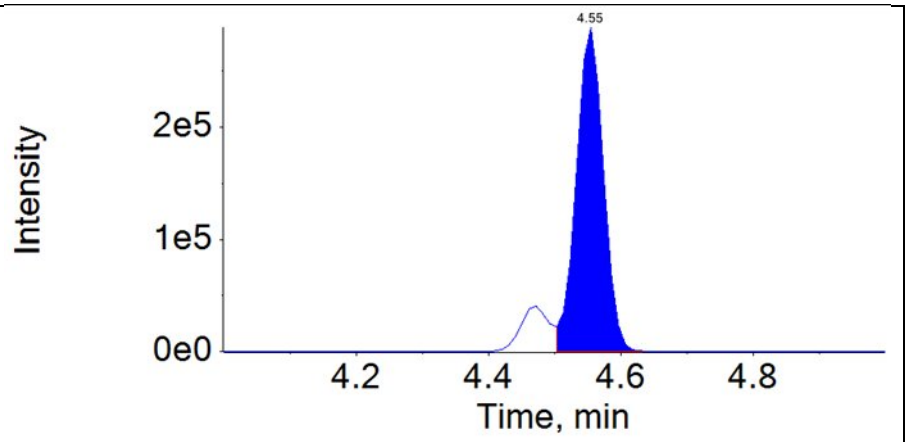
By HMK at 10:53 am, 11/13/18

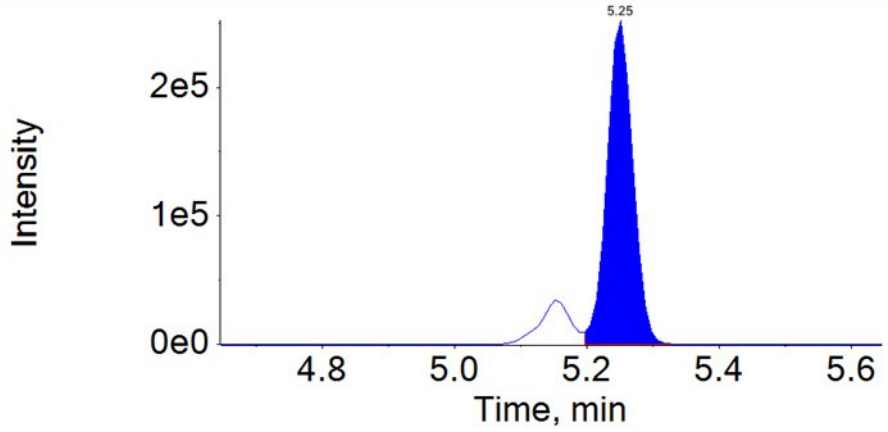
Results Table Name: 18NOV12DCAL
Results Table Date: 11/12/2018 6:23:42 PM
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

Component Name:
PFHxS_2
RT (min.):
4.55
Peak Area:
827831.34
Mass Range:
399.0 / 99.0
File Name:
18NOV12DCAL-47.wiff
Sample Name:
CAL6



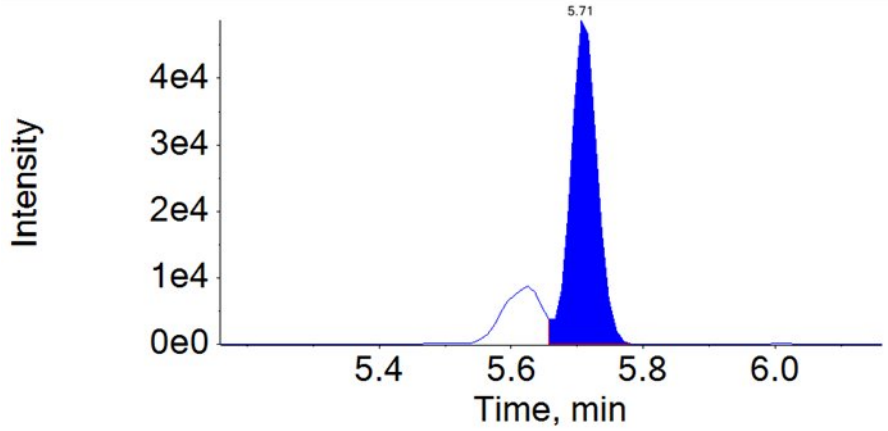
Integration Comment: incorrect integration

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



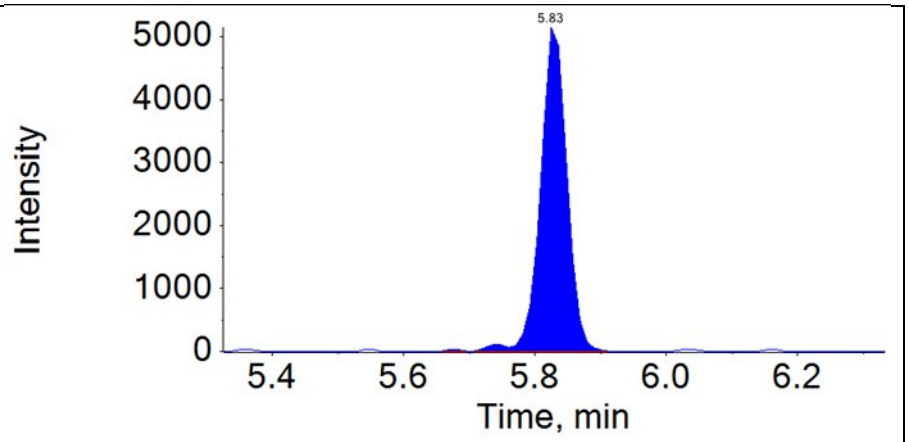
Integration Comment: incorrect integration

APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

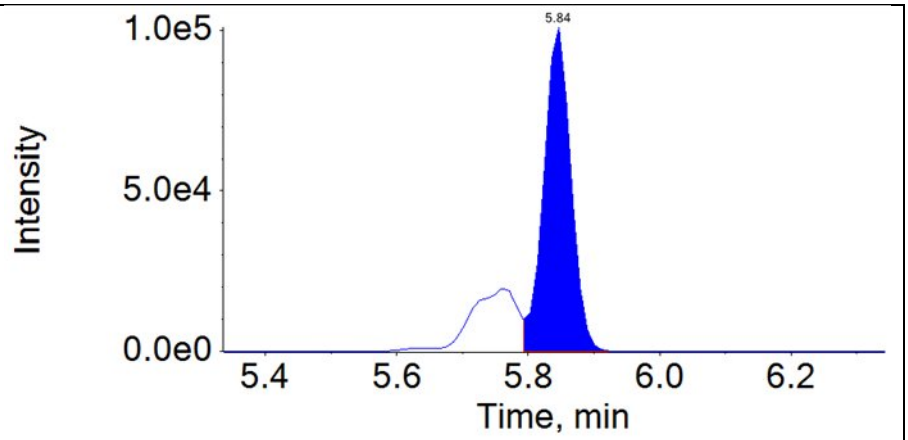
Results Table Name: 18NOV12DCAL
Results Table Date: 11/12/2018 6:23:42 PM
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

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



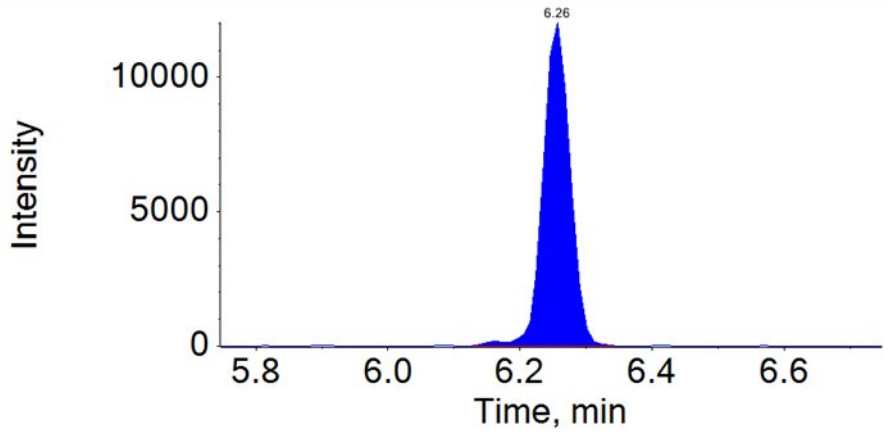
Integration Comment: incorrect integration

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: incorrect 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: 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

Ion Ratio Report

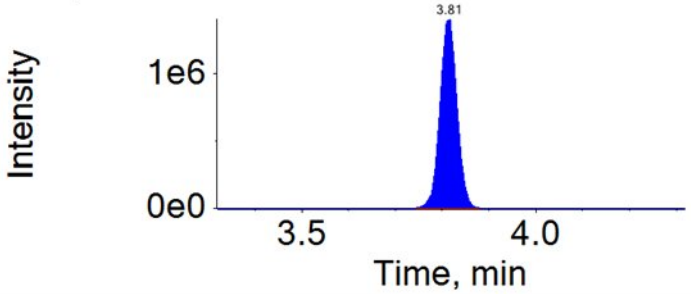
Sample Name: CAL6 **Instrument Name:** LM27631 **File Name:** 18NOV12DCAL-47.wiff

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	

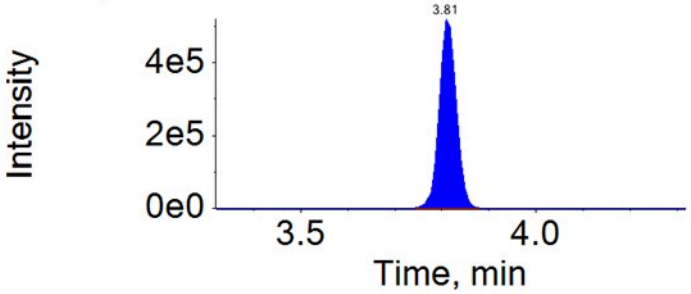
APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

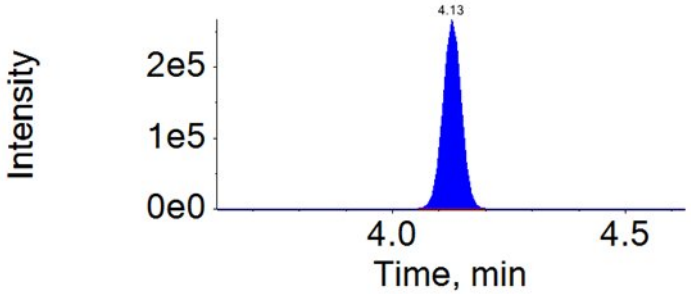
Component: PFBS
Primary Mass: 299.0 / 80.0



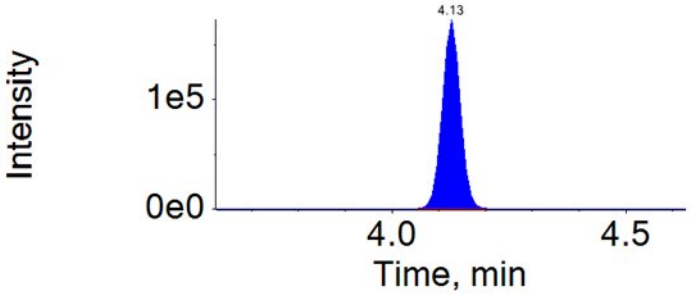
Component: PFBS_2
Secondary Mass: 299.0 / 99.0



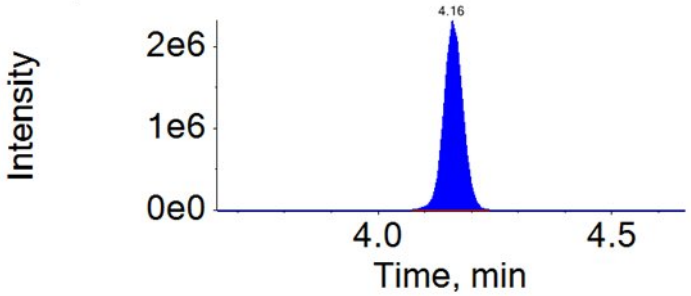
Component: 4:2-FTS
Primary Mass: 327.0 / 307.0



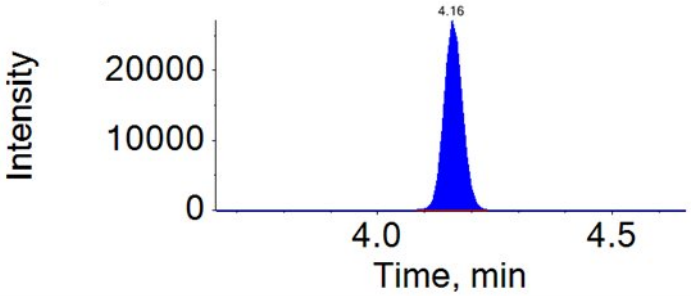
Component: 4:2 FTS_2
Secondary Mass: 327.0 / 81.0



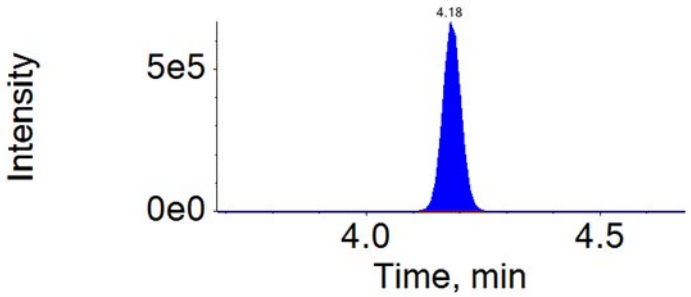
Component: PFHxA
Primary Mass: 313.0 / 269.0



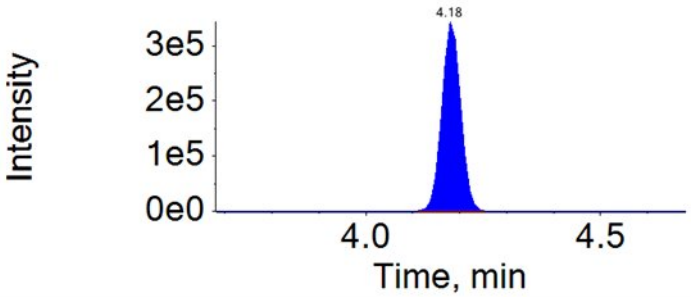
Component: PFHxA_2
Secondary Mass: 313.0 / 119.0



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

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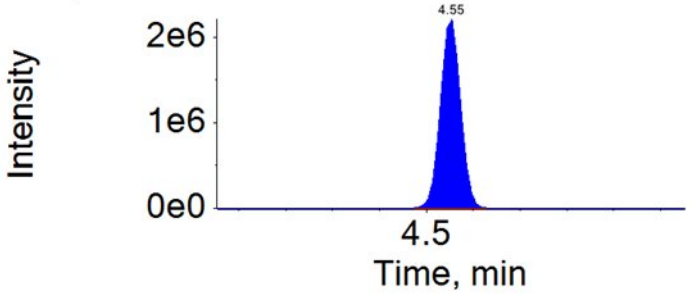
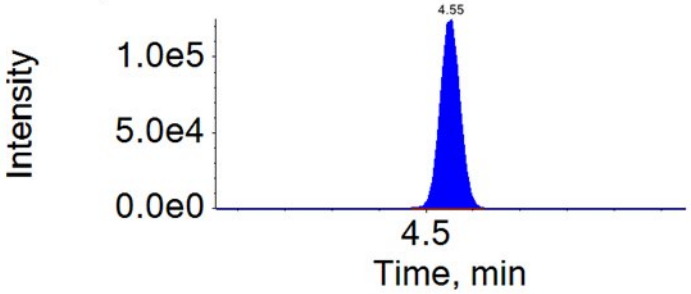
By HMK at 10:53 am, 11/13/18

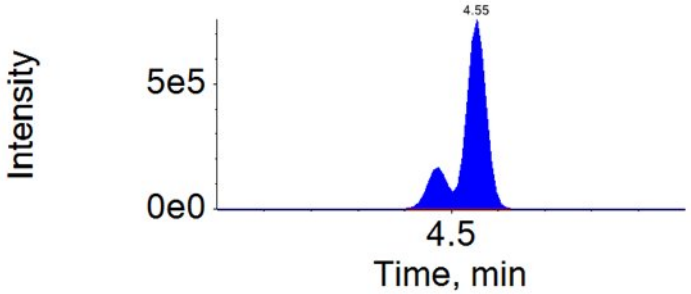
Component: PFHpA
Primary Mass: 363.0 / 319.0



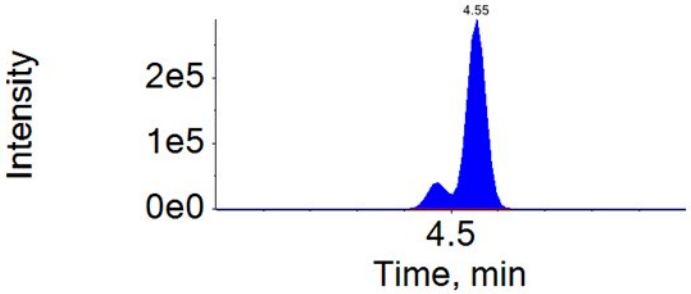
Component: PFHpA_2
Secondary Mass: 363.0 / 169.0



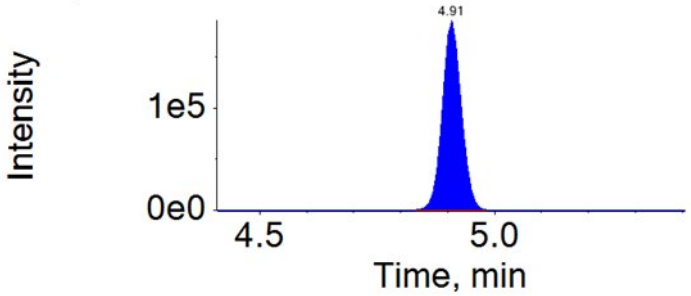
Component: PFHxS
Primary Mass: 399.0 / 80.0



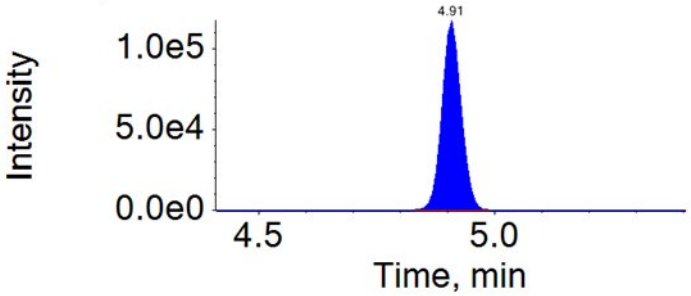
Component: PFHxS_2
Secondary Mass: 399.0 / 99.0



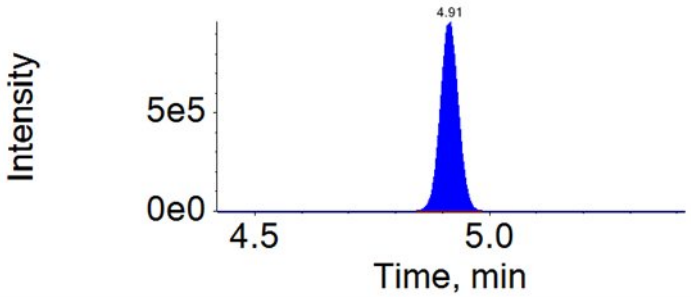
Component: 6:2-FTS
Primary Mass: 427.0 / 407.0



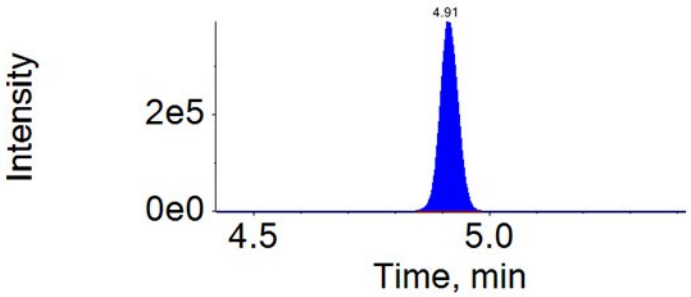
Component: 6:2 FTS_2
Secondary Mass: 427.0 / 81.0



Component: PFHpS
Primary Mass: 449.0 / 80.0



Component: PFHpS_2
Secondary Mass: 449.0 / 99.0



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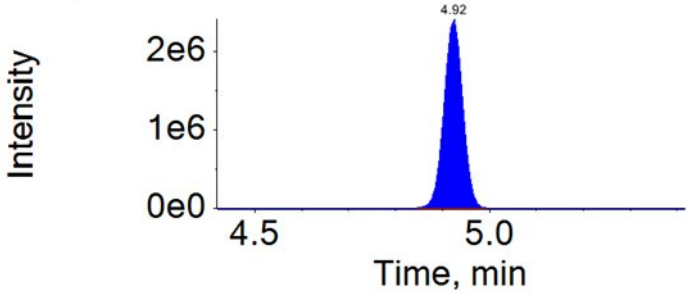
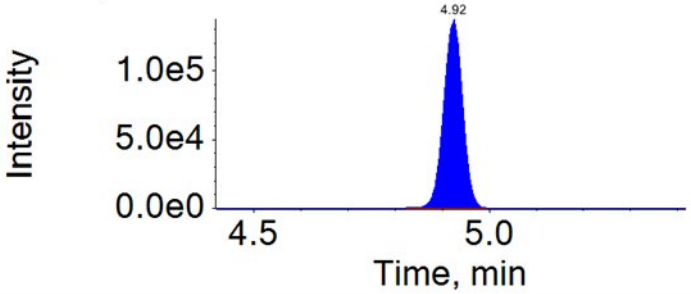
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

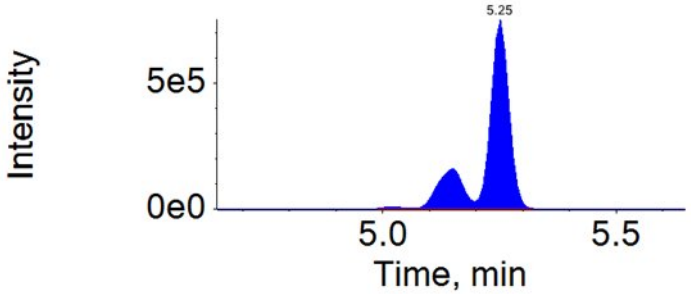
Component: PFOA
Primary Mass: 413.0 / 369.0



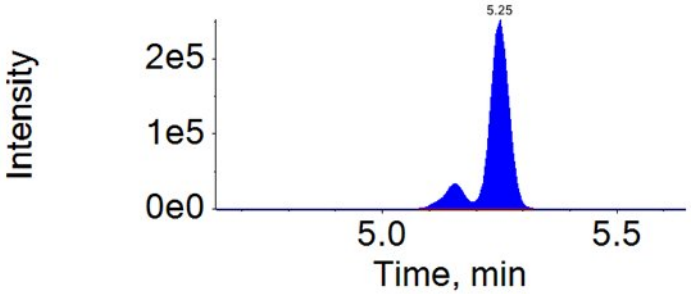
Component: PFOA_2
Secondary Mass: 413.0 / 169.0



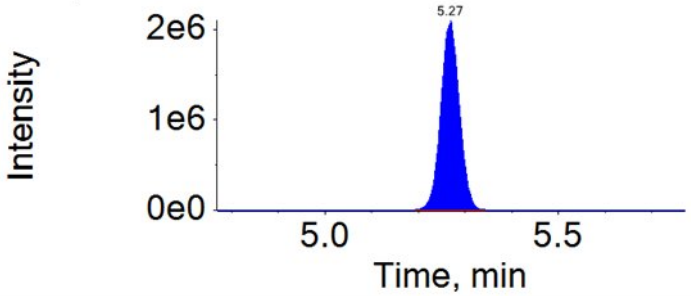
Component: PFOS
Primary Mass: 499.0 / 80.0



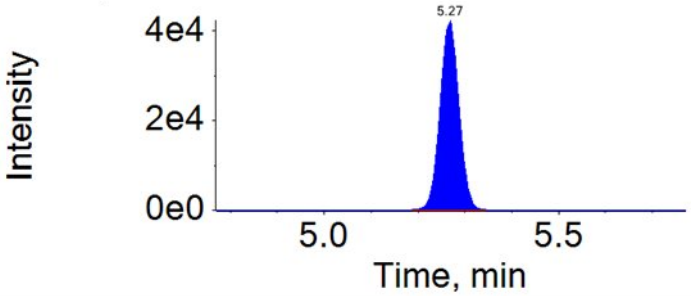
Component: PFOS_2
Secondary Mass: 499.0 / 99.0



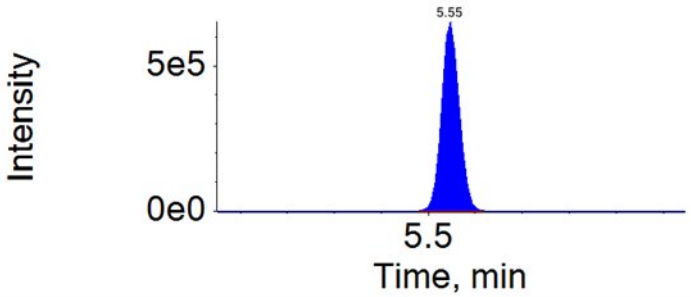
Component: PFNA
Primary Mass: 463.0 / 419.0



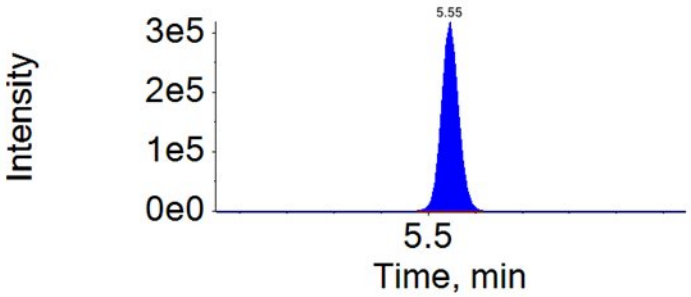
Component: PFNA_2
Secondary Mass: 463.0 / 169.0



Component: PFNS
Primary Mass: 549.0 / 80.0



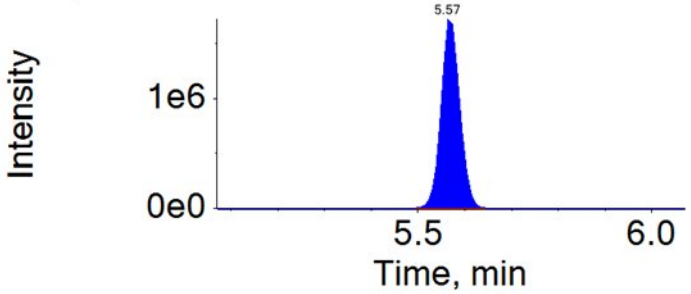
Component: PFNS_2
Secondary Mass: 549.0 / 99.0



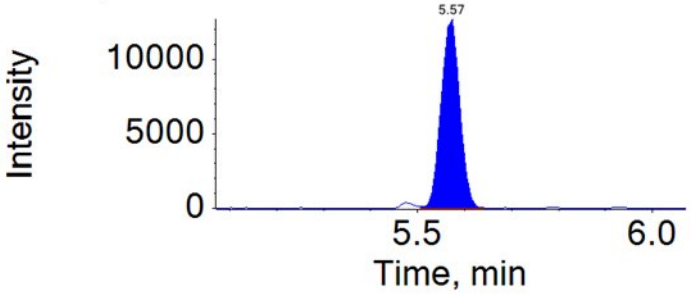
APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

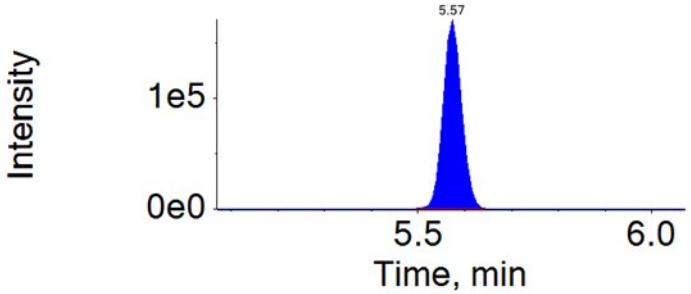
Component: PFDA
Primary Mass: 513.0 / 469.0



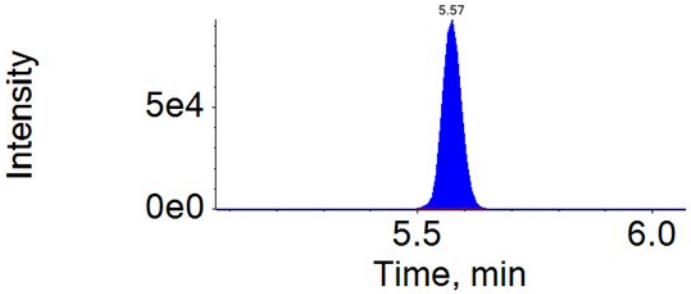
Component: PFDA_2
Secondary Mass: 513.0 / 169.0



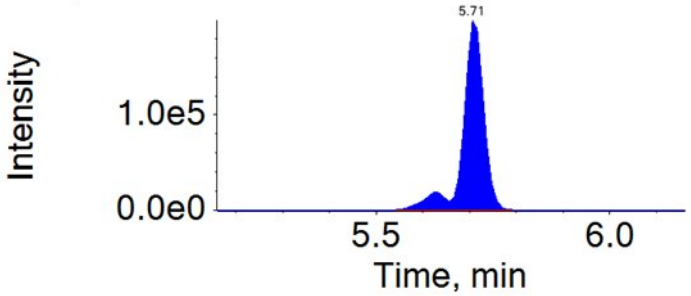
Component: 8:2-FTS
Primary Mass: 527.0 / 507.0



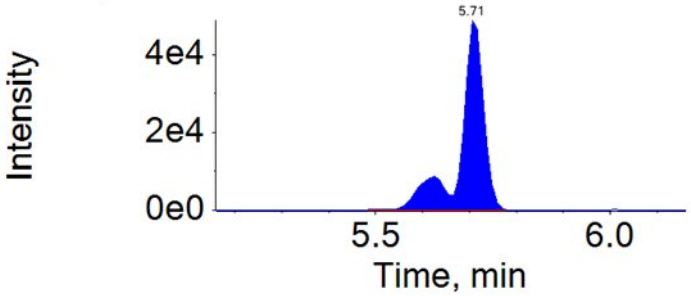
Component: 8:2 FTS_2
Secondary Mass: 527.0 / 81.0



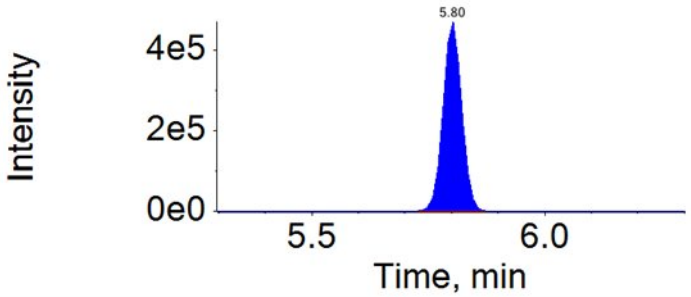
Component: NMeFOSAA
Primary Mass: 570.0 / 419.0



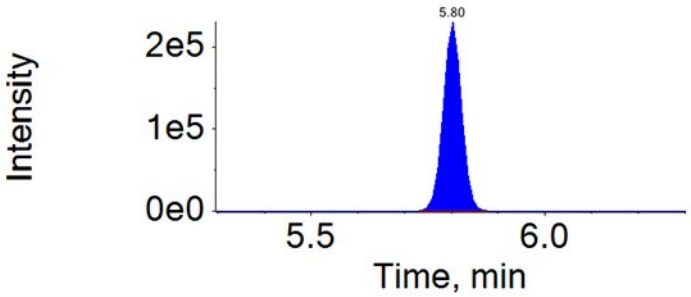
Component: NMeFOSAA_2
Secondary Mass: 570.0 / 483.0



Component: PFDS
Primary Mass: 599.0 / 80.0



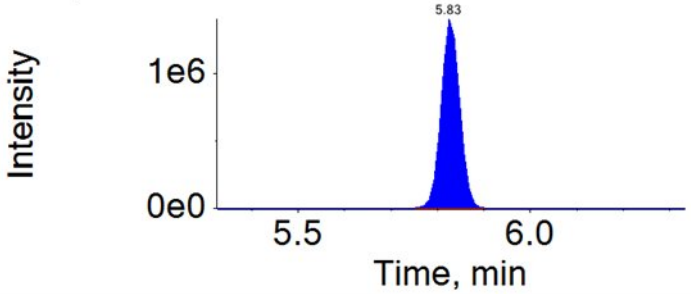
Component: PFDS_2
Secondary Mass: 599.0 / 99.0



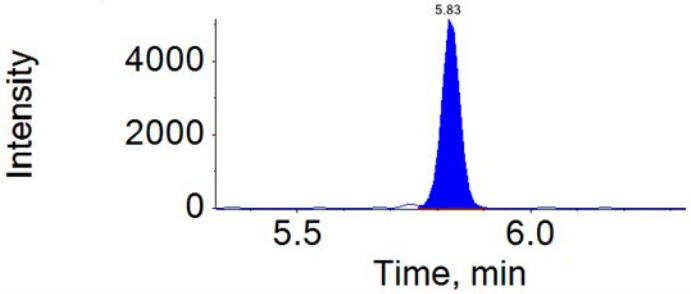
APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

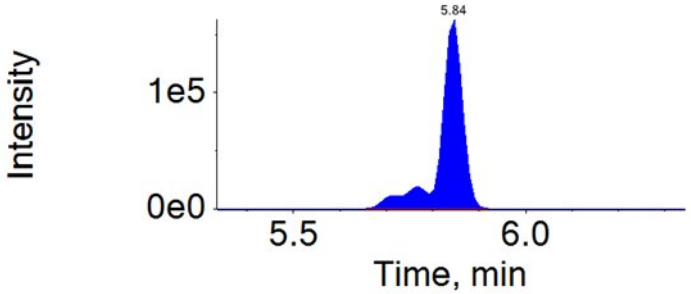
Component: PFUnDA
Primary Mass: 563.0 / 519.0



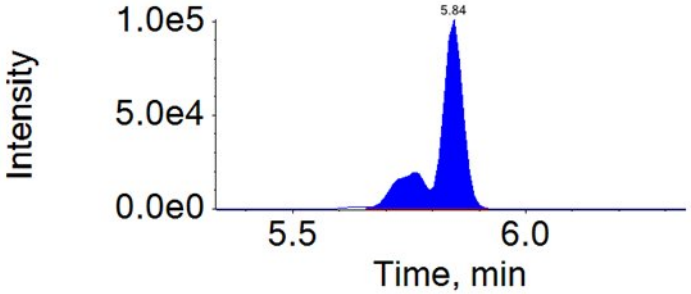
Component: PFUnDA_2
Secondary Mass: 563.0 / 169.0



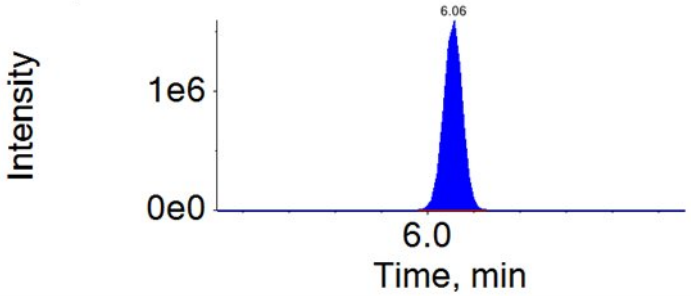
Component: NEtFOSAA
Primary Mass: 584.0 / 419.0



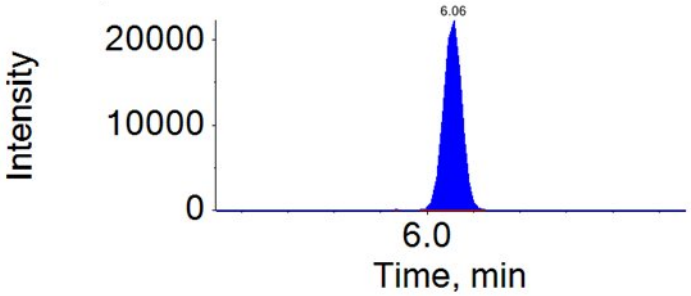
Component: NEtFOSAA_2
Secondary Mass: 584.0 / 526.0



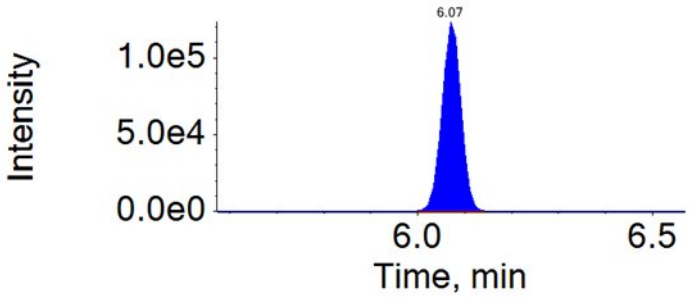
Component: PFDoDA
Primary Mass: 613.0 / 569.0



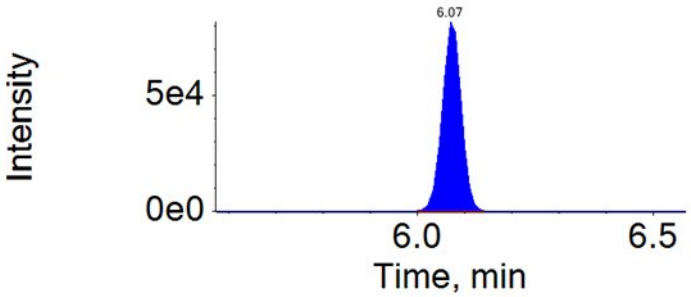
Component: PFDoDA_2
Secondary Mass: 613.0 / 169.0



Component: 10:2-FTS
Primary Mass: 627.0 / 607.0



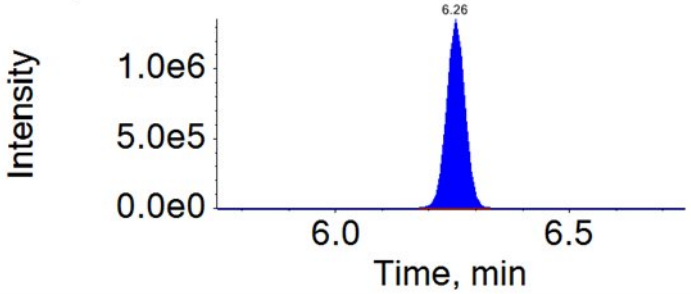
Component: 10:2 FTS_2
Secondary Mass: 627.0 / 81.0



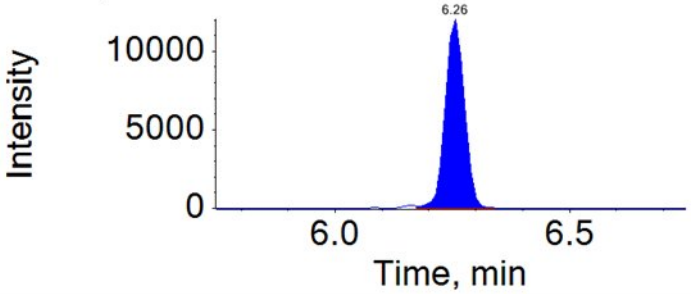
APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

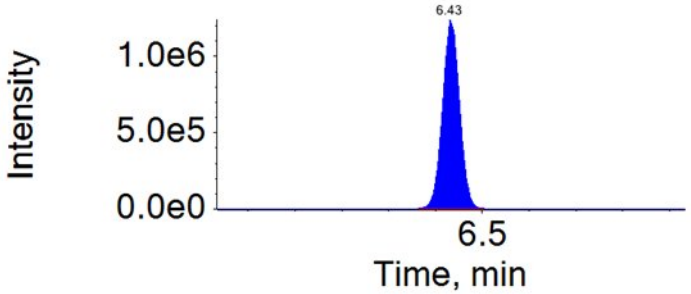
Component: PFTrDA
Primary Mass: 663.0 / 619.0



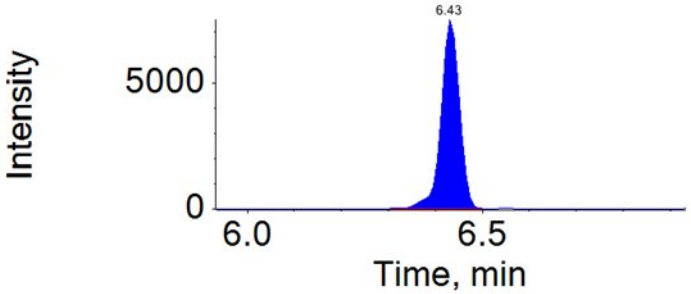
Component: PFTrDA_2
Secondary Mass: 663.0 / 169.0



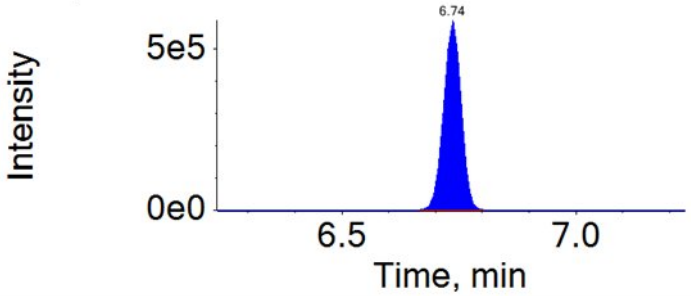
Component: PFTeDA
Primary Mass: 713.0 / 669.0



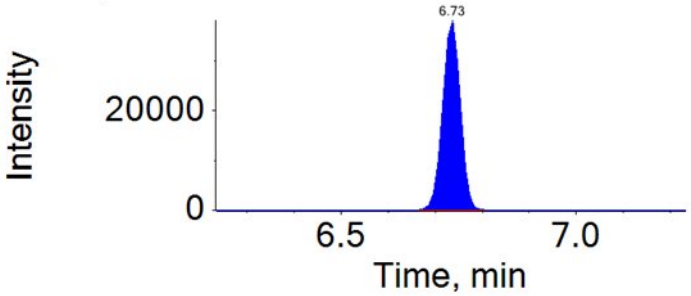
Component: PFTeDA_2
Secondary Mass: 713.0 / 169.0



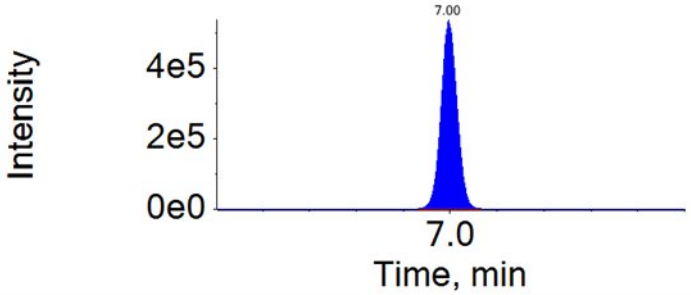
Component: PFHxDA
Primary Mass: 813.0 / 769.0



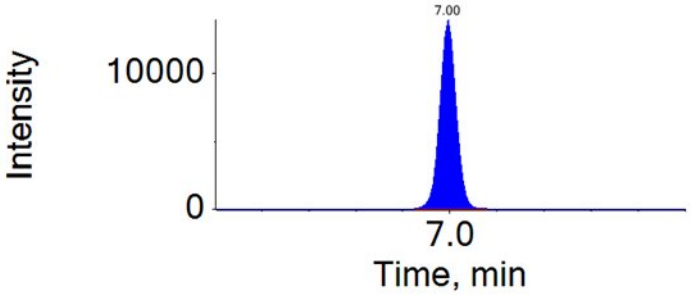
Component: PFHxDA_2
Secondary Mass: 813.0 / 169.0



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

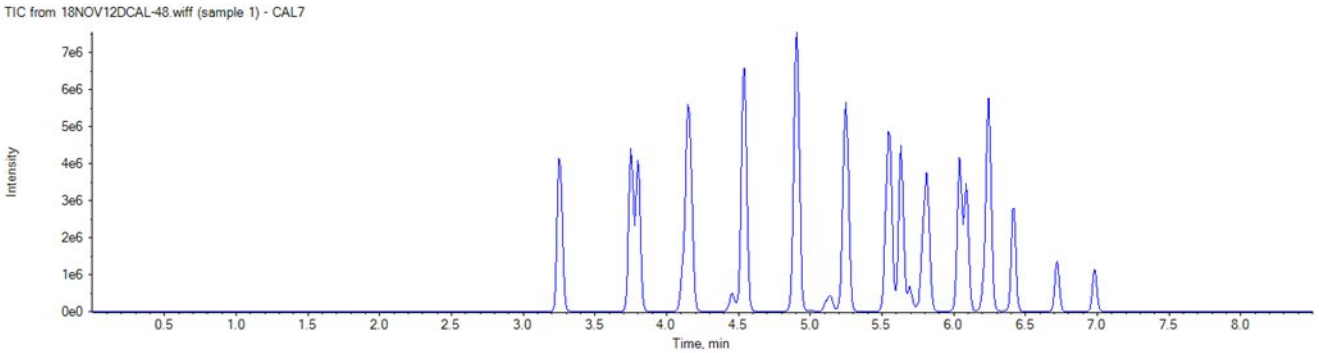
Analyte Quantitation Peak Table

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

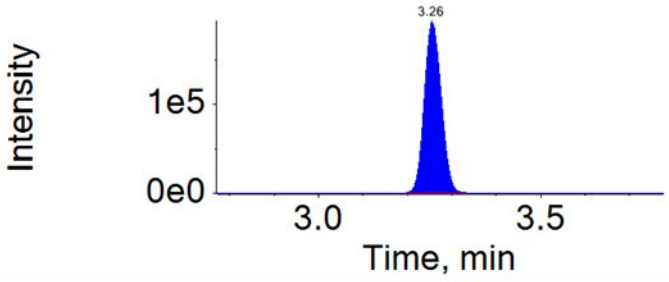


APPROVED
By MCD at 6:33 pm, 11/12/18

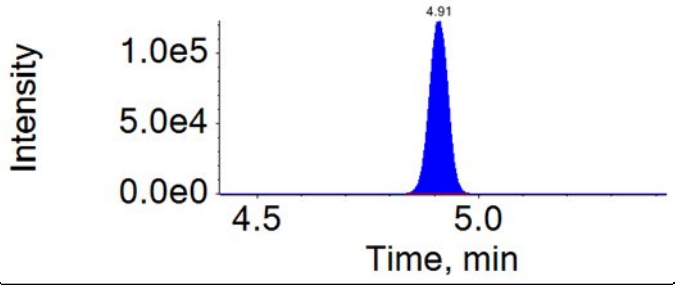
REVIEWED
By HMK at 10:53 am, 11/13/18

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

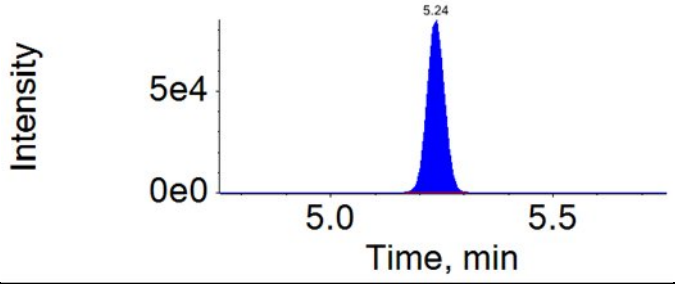
Injection Standard: 13C3-PFBA
216.0 / 172.0



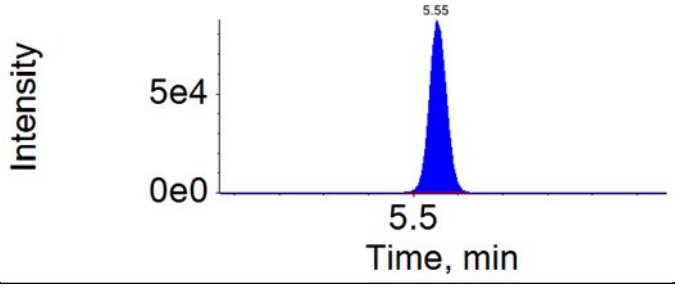
Injection Standard: 13C2-PFOA
415.0 / 370.0



Injection Standard: 13C4-PFOS
503.0 / 80.0



Injection Standard: 13C2-PFDA
515.0 / 470.0

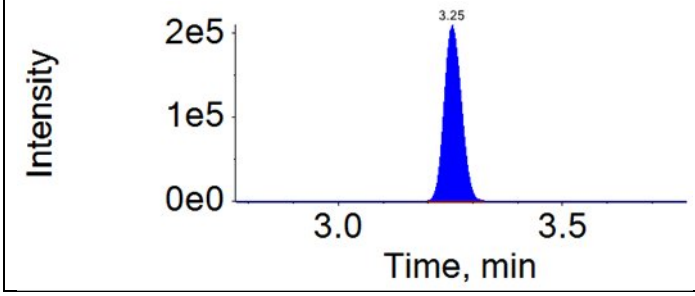


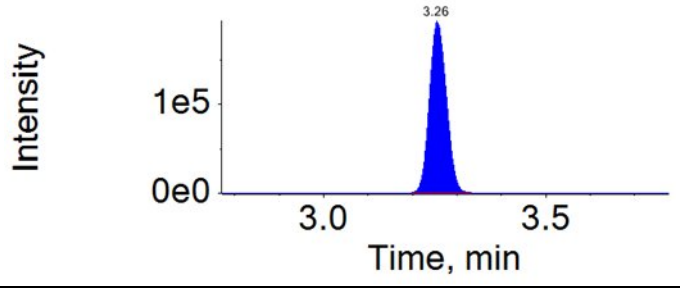
APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

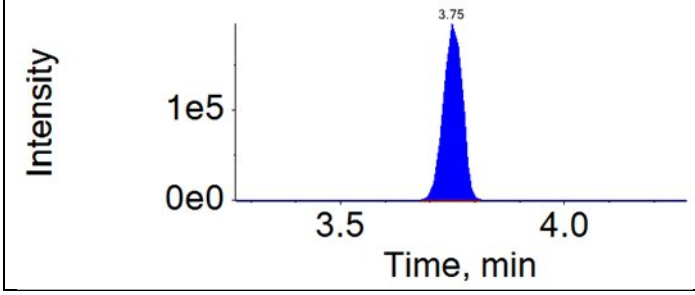
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

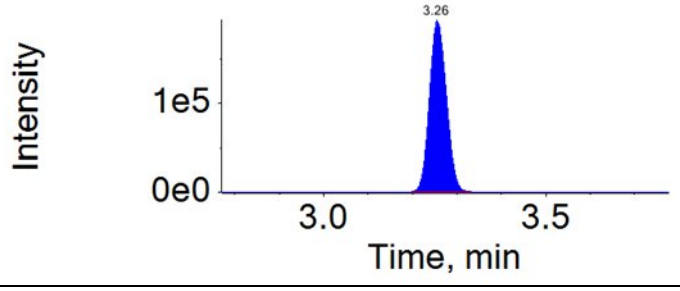
Extraction Standard: E13C4-PFBA	Injection Standard: 13C3-PFBA
217.0 / 172.0	216.0 / 172.0



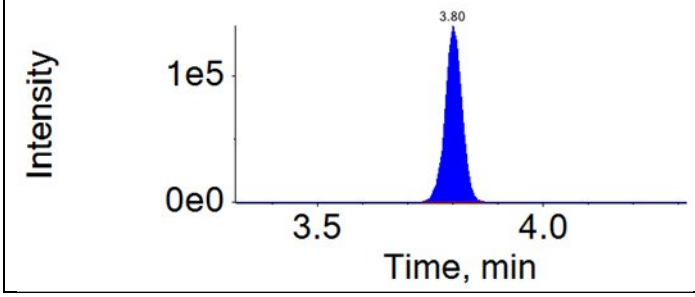


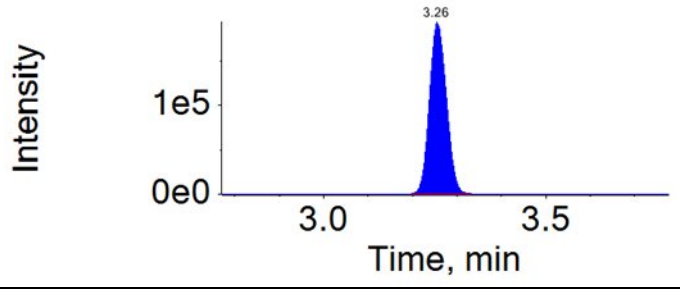
Extraction Standard: E13C5-PFPeA	Injection Standard: 13C3-PFBA
268.0 / 223.0	216.0 / 172.0



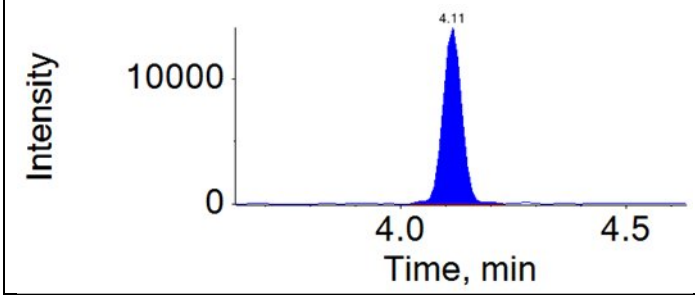


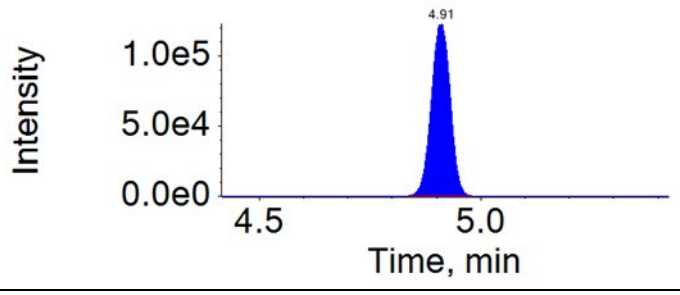
Extraction Standard: E13C3-PFBS	Injection Standard: 13C3-PFBA
302.0 / 80.0	216.0 / 172.0





Extraction Standard: E13C2-4:2-FTS	Injection Standard: 13C2-PFOA
329.0 / 81.0	415.0 / 370.0

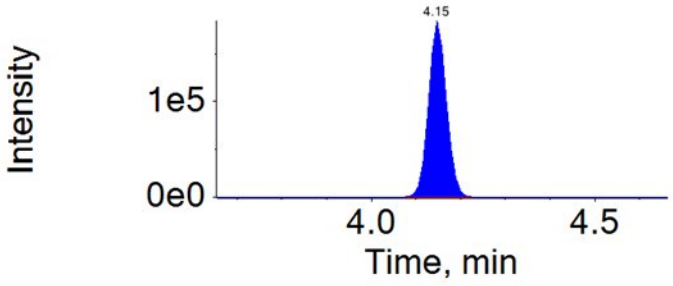
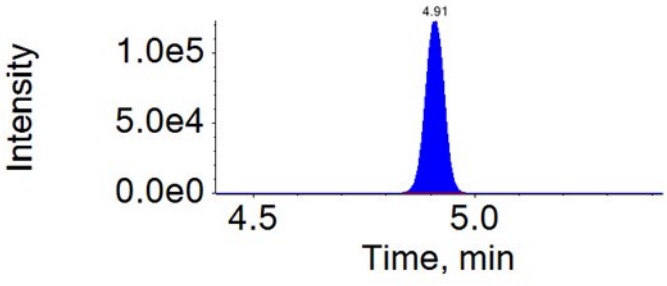


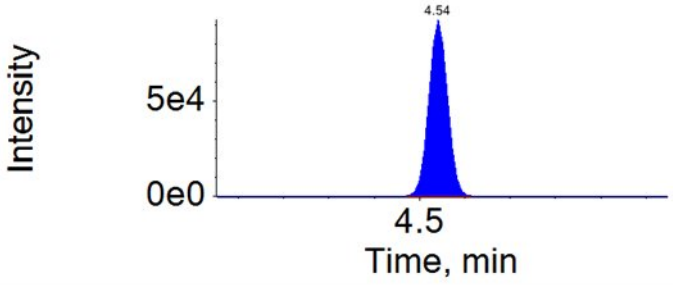
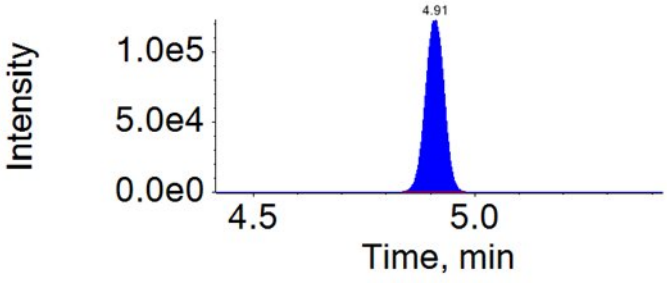


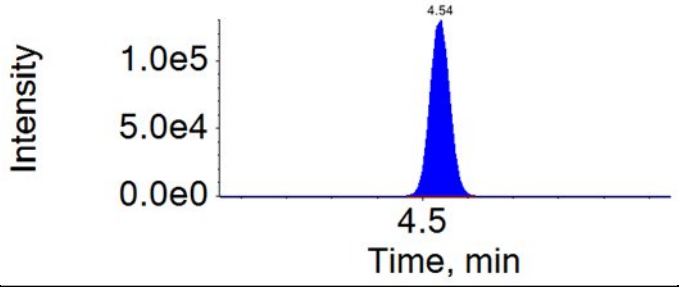
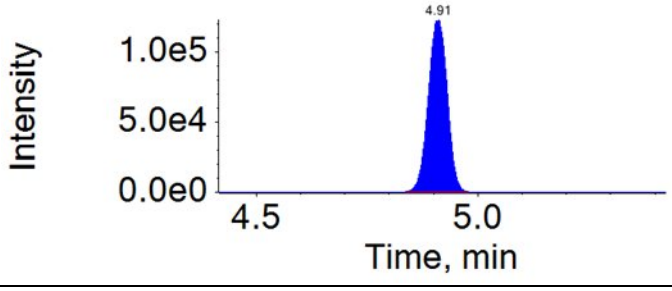
APPROVED
By MCD at 6:33 pm, 11/12/18

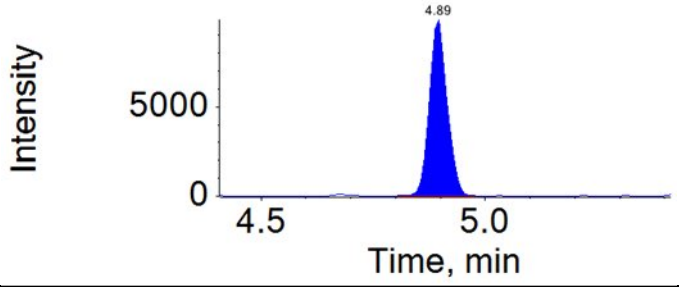
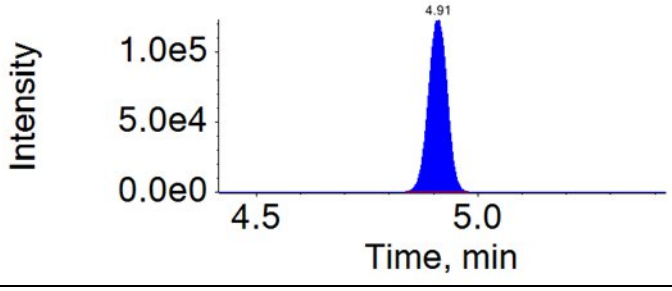
REVIEWED
By HMK at 10:53 am, 11/13/18

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
	

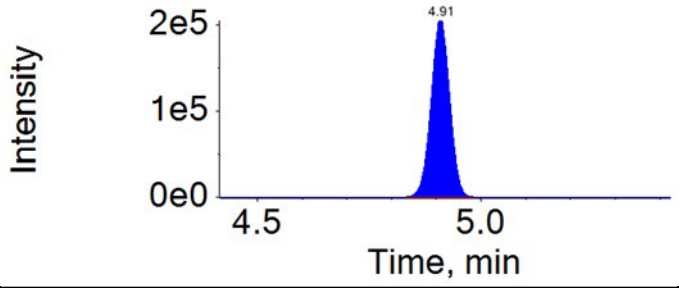
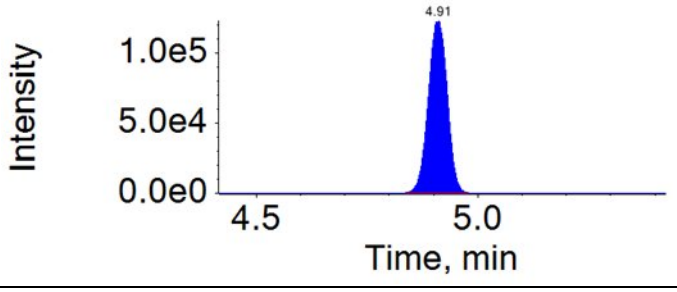
Extraction Standard: E13C4-PFHpA	Injection Standard: 13C2-PFOA
367.0 / 322.0	415.0 / 370.0
	

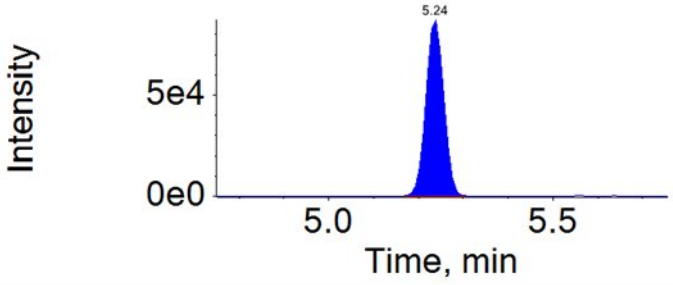
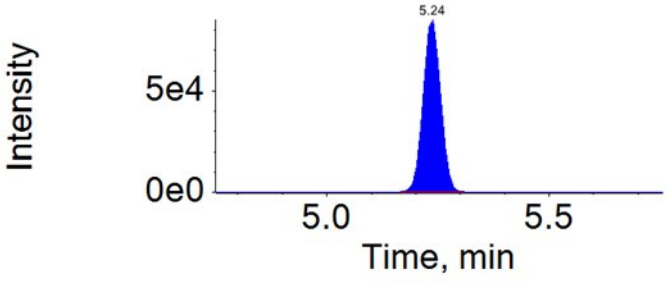
Extraction Standard: E13C2-6:2-FTS	Injection Standard: 13C2-PFOA
429.0 / 81.0	415.0 / 370.0
	

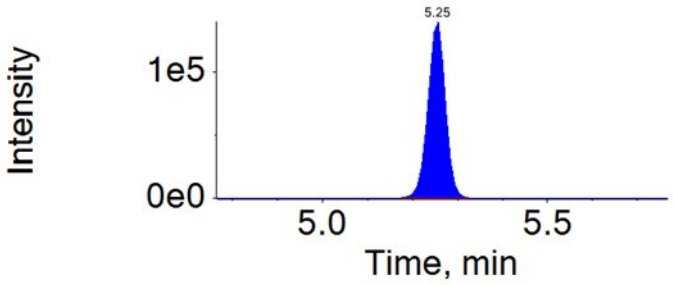
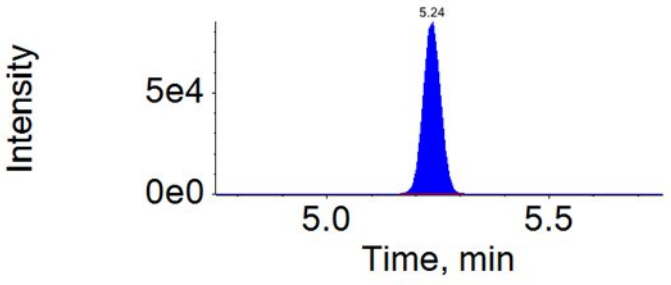
APPROVED
By MCD at 6:33 pm, 11/12/18

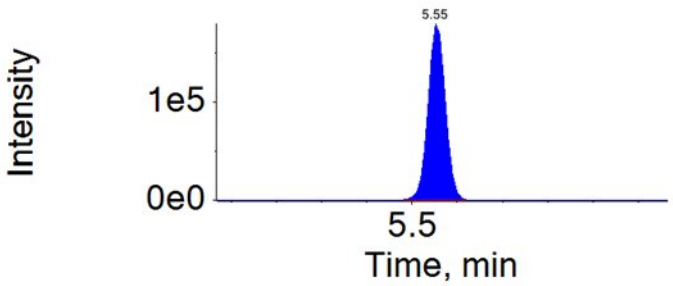
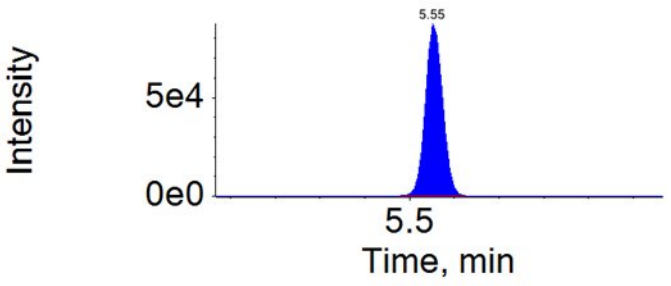
REVIEWED
By HMK at 10:53 am, 11/13/18

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Extraction Standard: 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
	

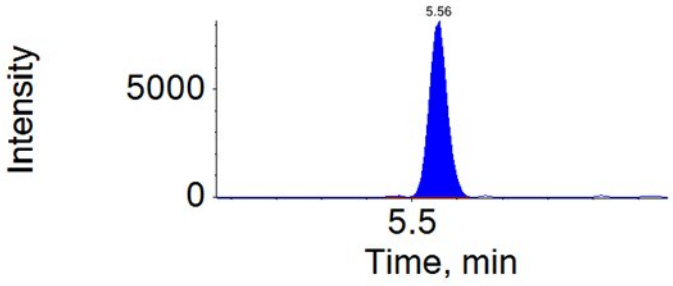
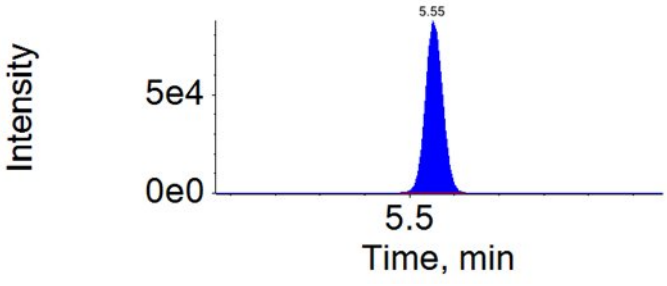
Extraction Standard: E13C9-PFNA	Injection Standard: 13C4-PFOS
472.0 / 427.0	503.0 / 80.0
	

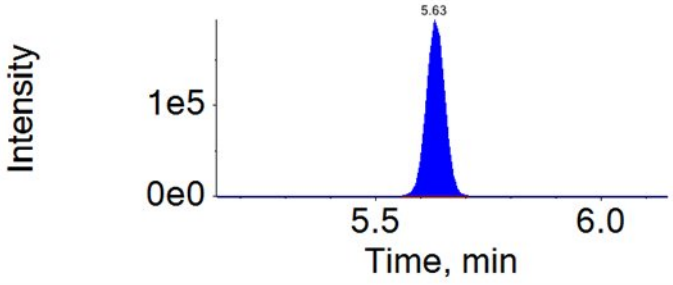
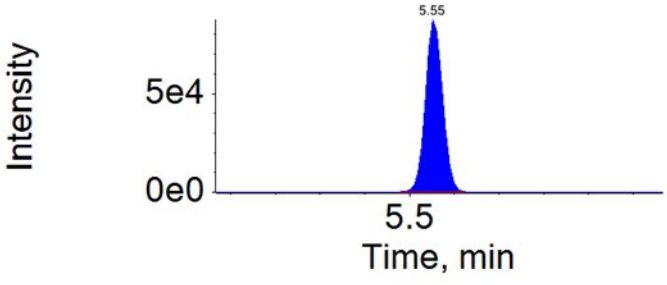
Extraction Standard: E13C6-PFDA	Injection Standard: 13C2-PFDA
519.0 / 474.0	515.0 / 470.0
	

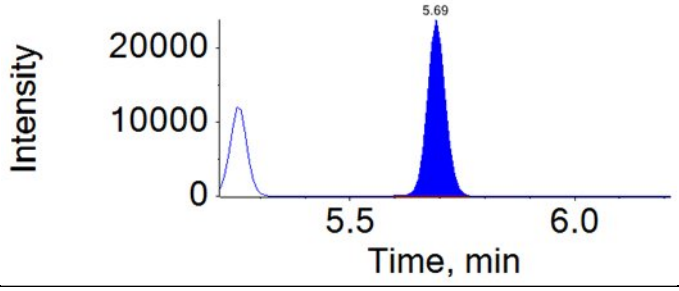
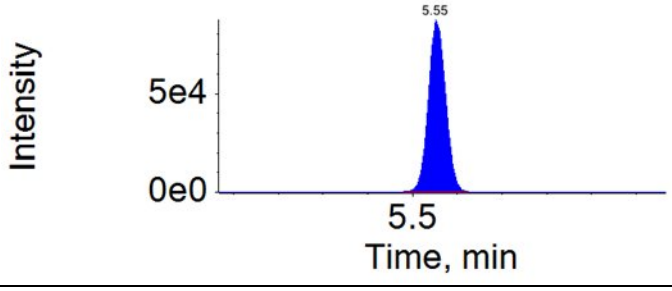
APPROVED
By MCD at 6:33 pm, 11/12/18

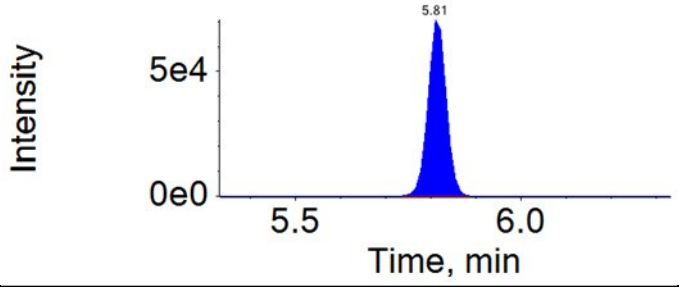
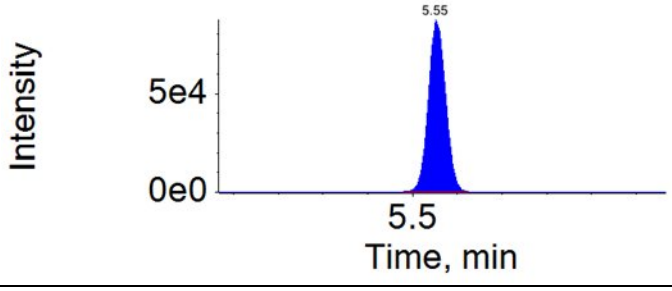
REVIEWED
By HMK at 10:53 am, 11/13/18

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
	

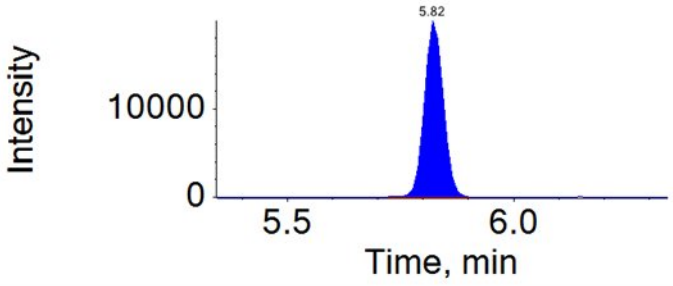
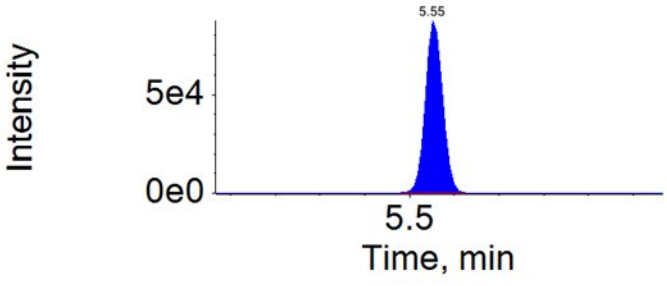
Extraction Standard: Ed3-NMeFOSAA	Injection Standard: 13C2-PFDA
573.0 / 419.0	515.0 / 470.0
	

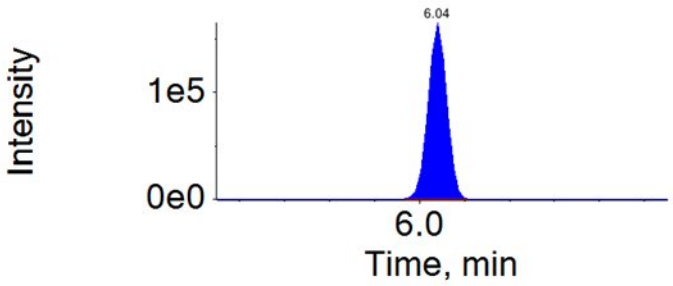
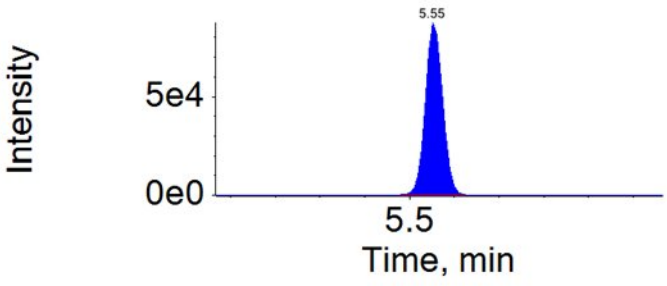
Extraction Standard: E13C7-PFUnDA	Injection Standard: 13C2-PFDA
570.0 / 525.0	515.0 / 470.0
	

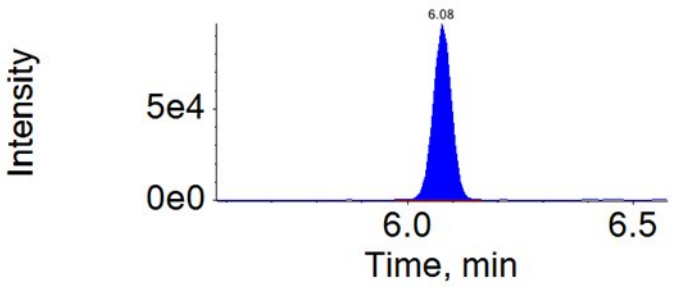
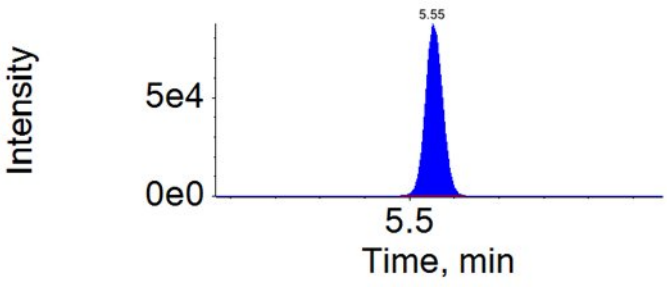
APPROVED
By MCD at 6:33 pm, 11/12/18

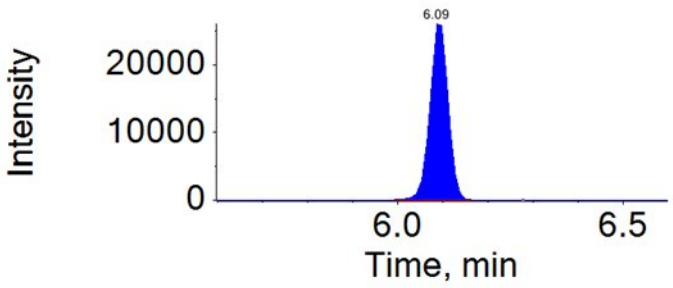
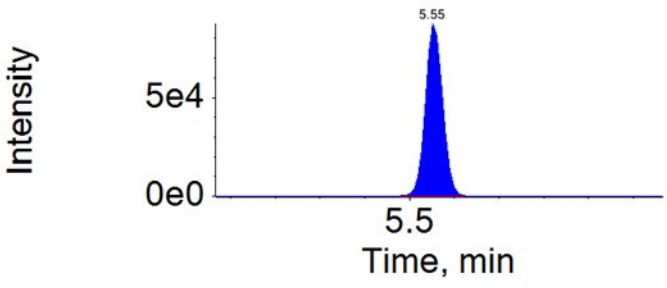
REVIEWED
By HMK at 10:53 am, 11/13/18

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

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

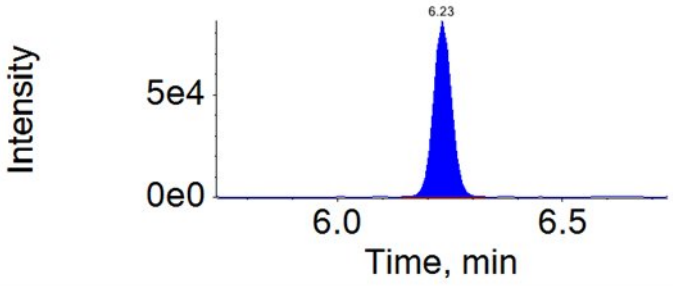
Extraction Standard: E13C2-PFDoDA	Injection Standard: 13C2-PFDA
615.0 / 570.0	515.0 / 470.0
	

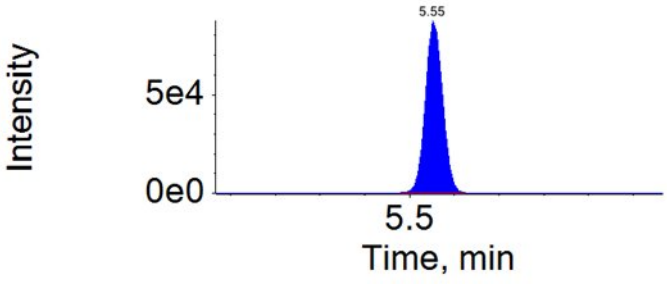
Extraction Standard: Ed7-NMePFOSAE	Injection Standard: 13C2-PFDA
623.0 / 59.0	515.0 / 470.0
	

Extraction Standard: Ed3-NMePFOSA	Injection Standard: 13C2-PFDA
515.0 / 169.0	515.0 / 470.0
	

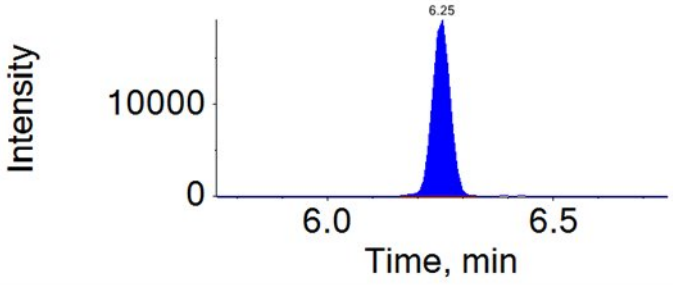
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

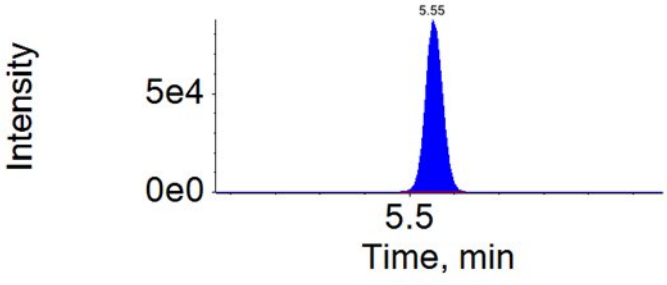
Extraction Standard: Ed9-NEtPFOSAE	Injection Standard: 13C2-PFDA
639.0 / 59.0	515.0 / 470.0



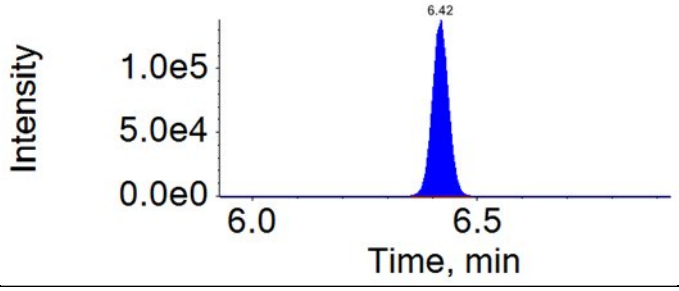


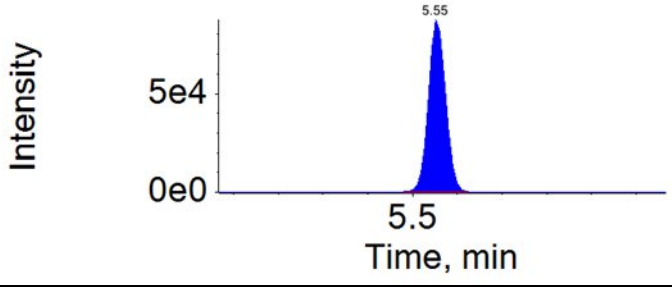
Extraction Standard: Ed5-NEtPFOSA	Injection Standard: 13C2-PFDA
531.0 / 169.0	515.0 / 470.0





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



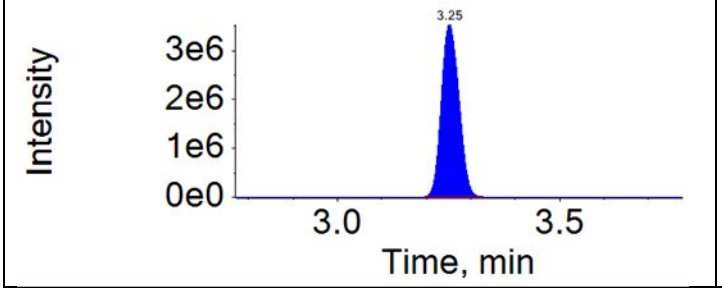


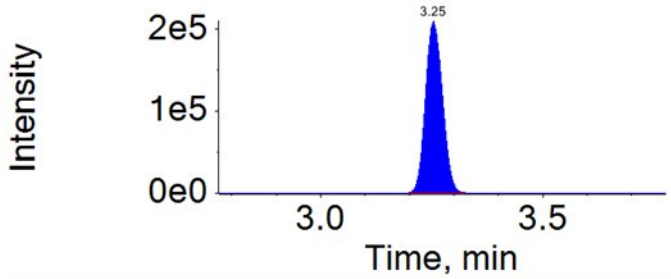
APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

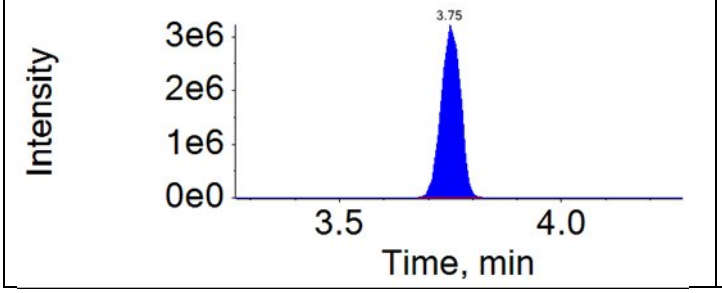
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

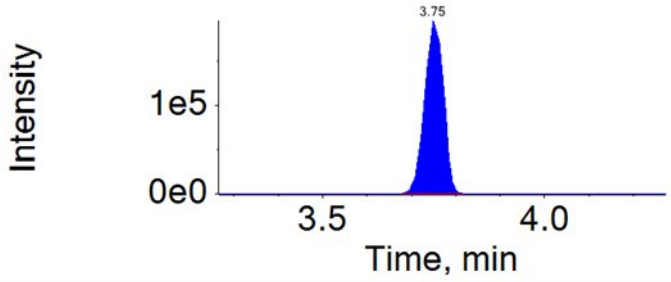
Analyte: PFBA	Extraction Standard: 13C4-PFBA
213.0 / 169.0	217.0 / 172.0



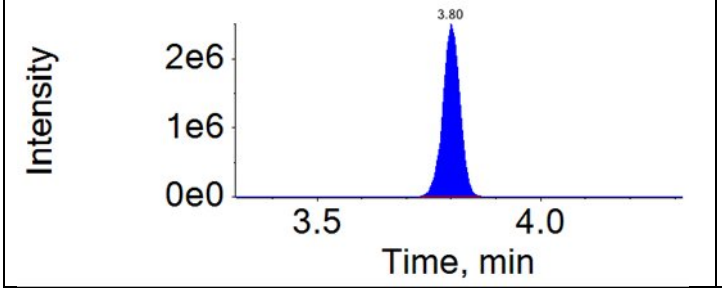


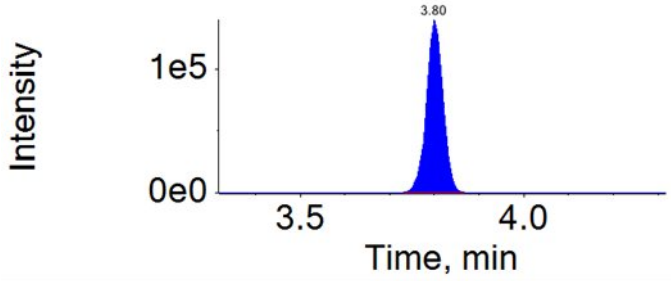
Analyte: PFPeA	Extraction Standard: 13C5-PFPeA
263.0 / 219.0	268.0 / 223.0



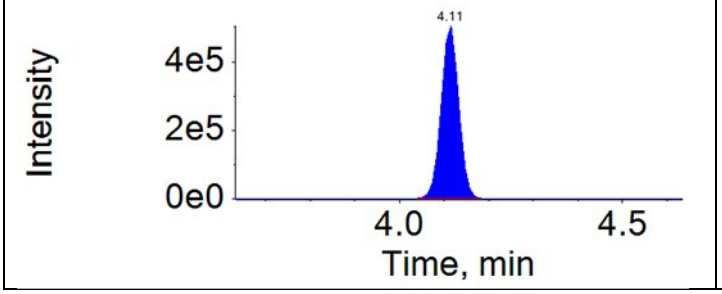


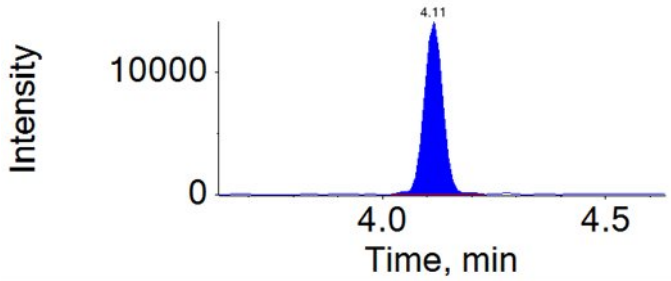
Analyte: PFBS	Extraction Standard: 13C3-PFBS
299.0 / 80.0	302.0 / 80.0





Analyte: 4:2-FTS	Extraction Standard: 13C2-4:2-FTS
327.0 / 307.0	329.0 / 81.0



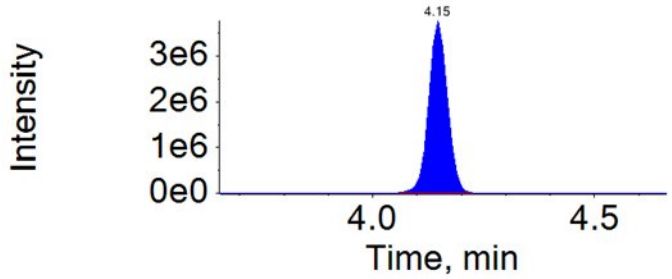


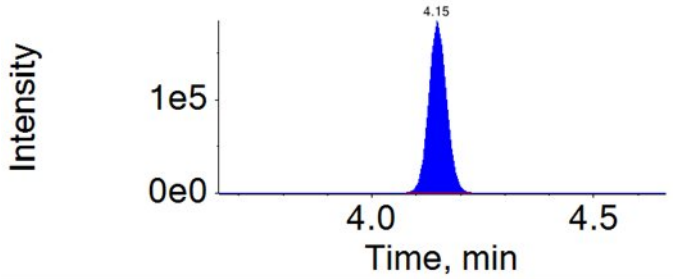
APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

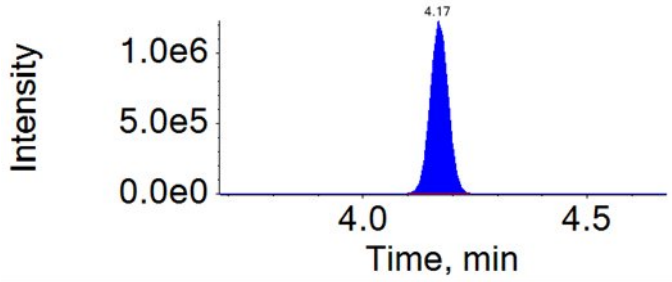
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

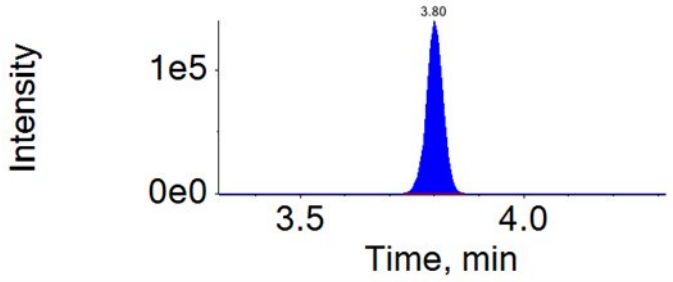
Analyte: PFHxA	Extraction Standard: 13C5-PFHxA
313.0 / 269.0	318.0 / 273.0



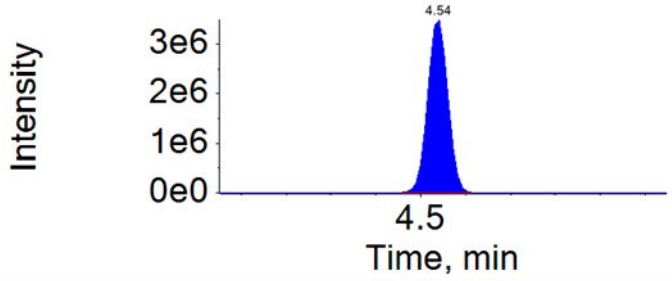


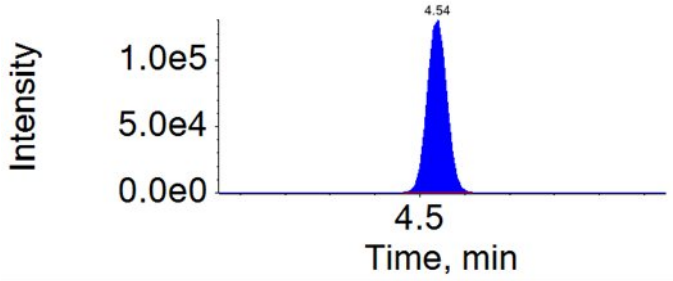
Analyte: PFPeS	Extraction Standard: 13C3-PFBS
349.0 / 80.0	302.0 / 80.0



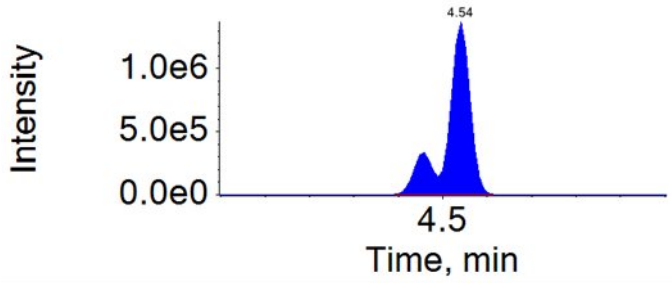


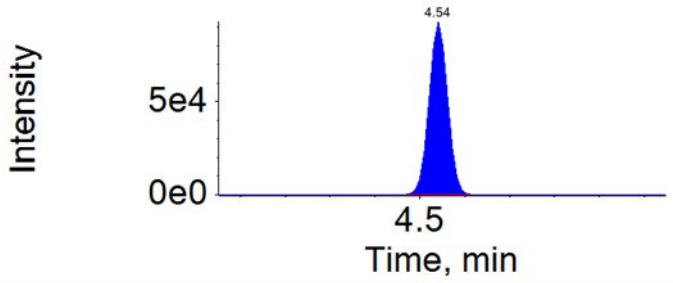
Analyte: PFHpA	Extraction Standard: 13C4-PFHpA
363.0 / 319.0	367.0 / 322.0





Analyte: PFHxS	Extraction Standard: 13C3-PFHxS
399.0 / 80.0	402.0 / 80.0



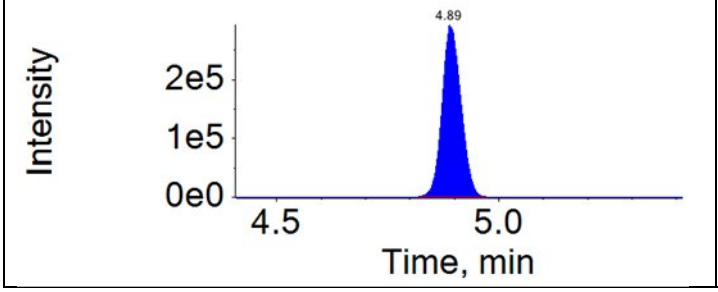


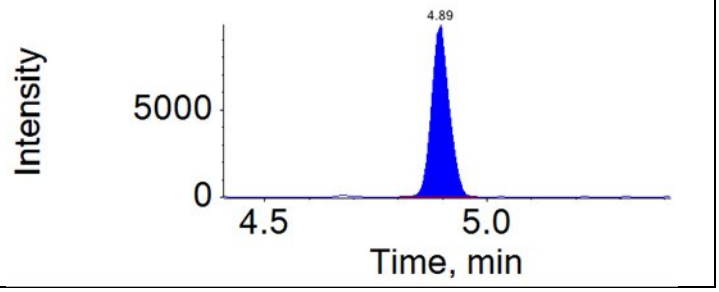
APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

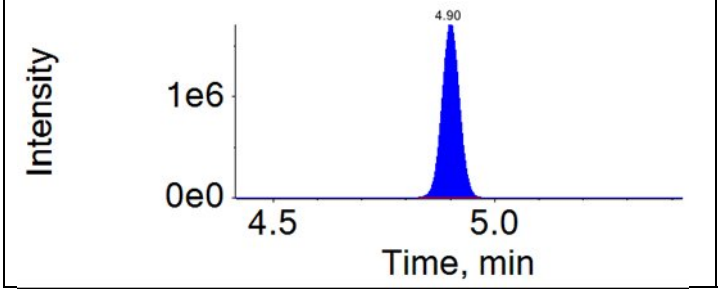
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

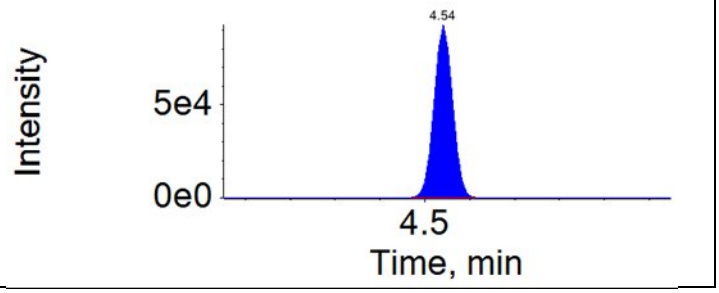
Analyte: 6:2-FTS	Extraction Standard: 13C2-6:2-FTS
427.0 / 407.0	429.0 / 81.0



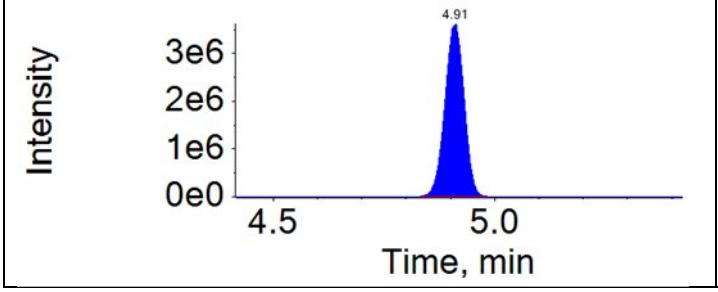


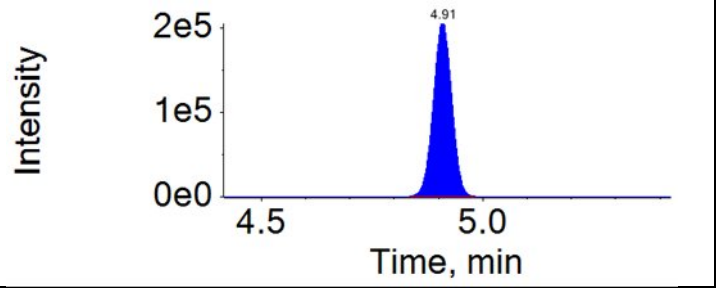
Analyte: PFHpS	Extraction Standard: 13C3-PFHxS
449.0 / 80.0	402.0 / 80.0



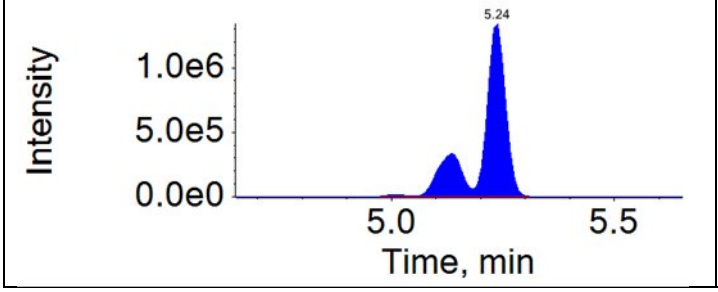


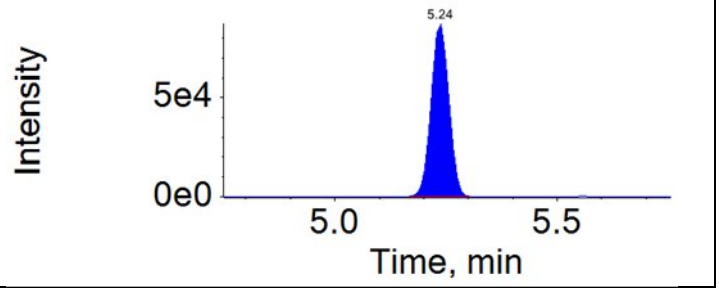
Analyte: PFOA	Extraction Standard: 13C8-PFOA
413.0 / 369.0	421.0 / 376.0





Analyte: PFOS	Extraction Standard: 13C8-PFOS
499.0 / 80.0	507.0 / 80.0



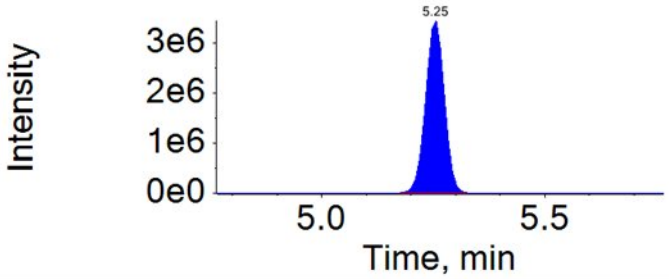


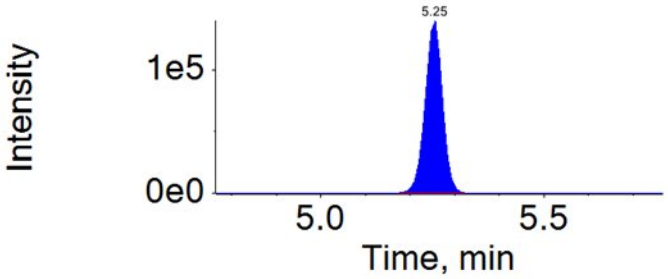
APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

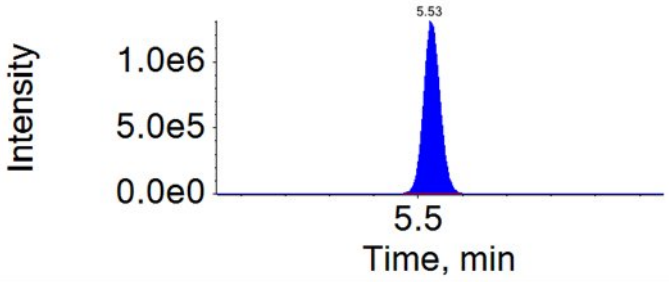
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

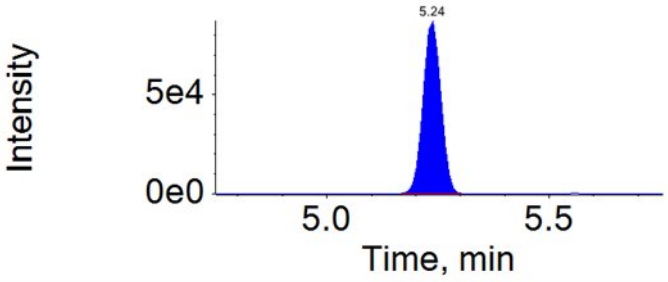
Analyte: PFNA	Extraction Standard: 13C9-PFNA
463.0 / 419.0	472.0 / 427.0



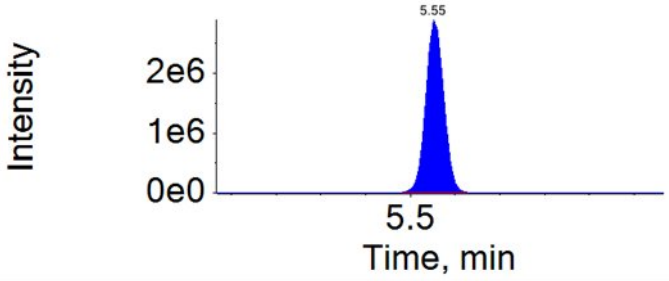


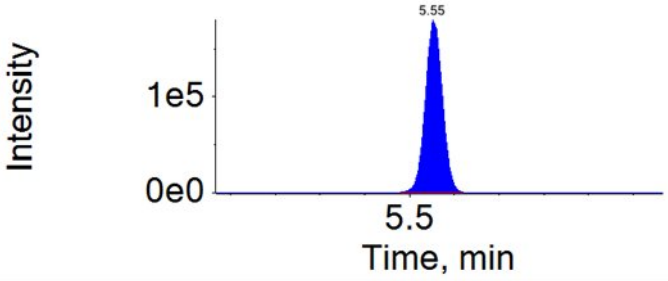
Analyte: PFNS	Extraction Standard: 13C8-PFOS
549.0 / 80.0	507.0 / 80.0



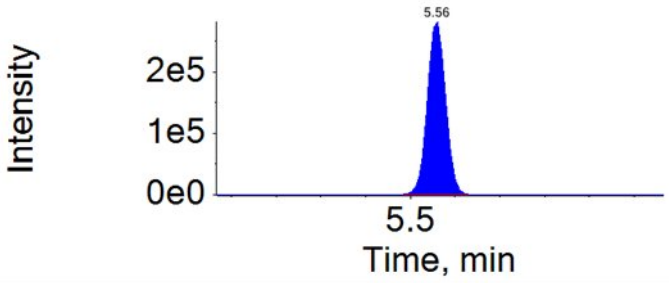


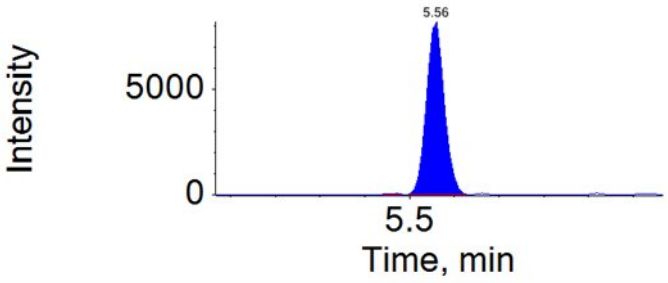
Analyte: PFDA	Extraction Standard: 13C6-PFDA
513.0 / 469.0	519.0 / 474.0





Analyte: 8:2-FTS	Extraction Standard: 13C2-8:2-FTS
527.0 / 507.0	529.0 / 81.0



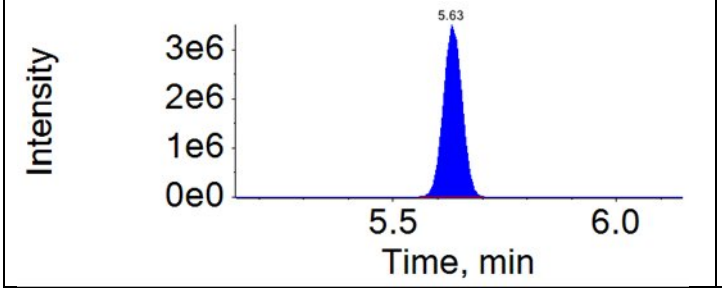


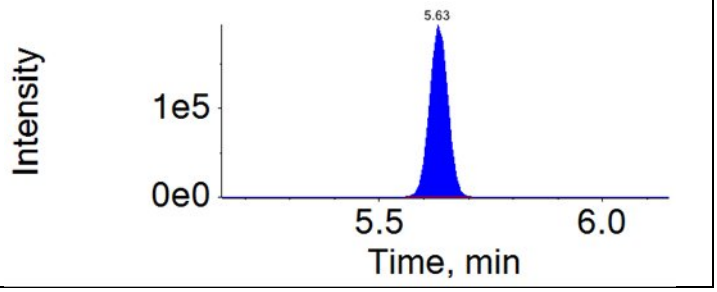
APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

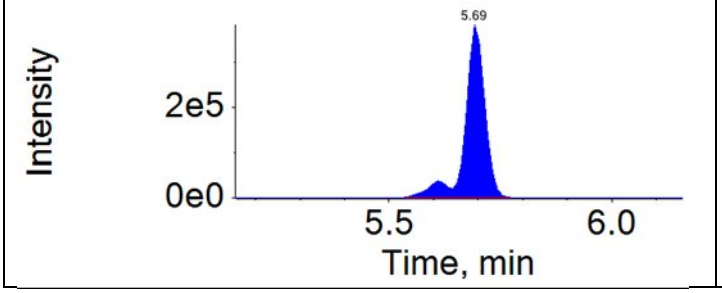
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

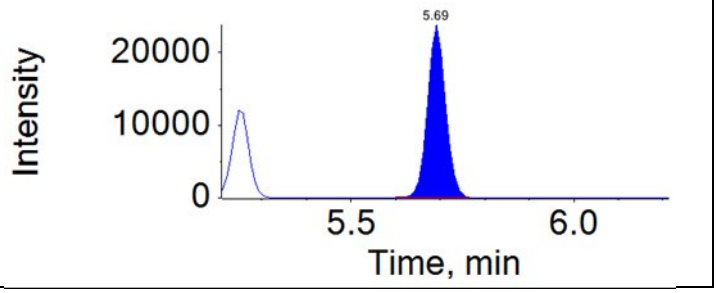
Analyte: PFOSA	Extraction Standard: 13C8-PFOSA
498.0 / 78.0	506.0 / 78.0



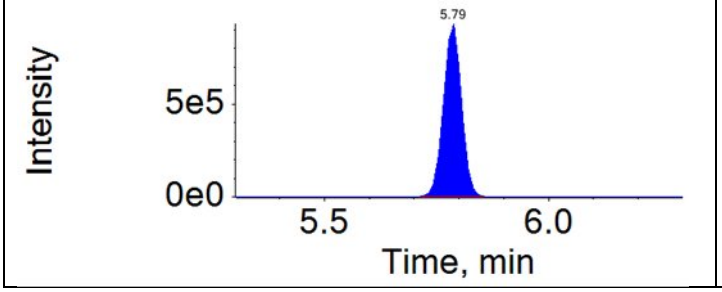


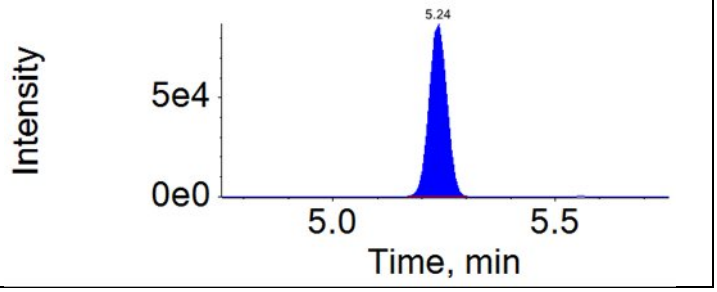
Analyte: NMeFOSAA	Extraction Standard: d3-NMeFOSAA
570.0 / 419.0	573.0 / 419.0



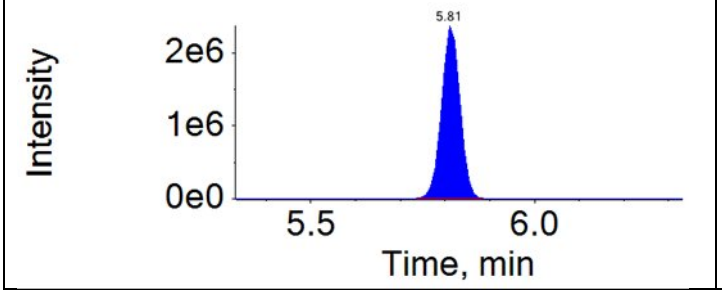


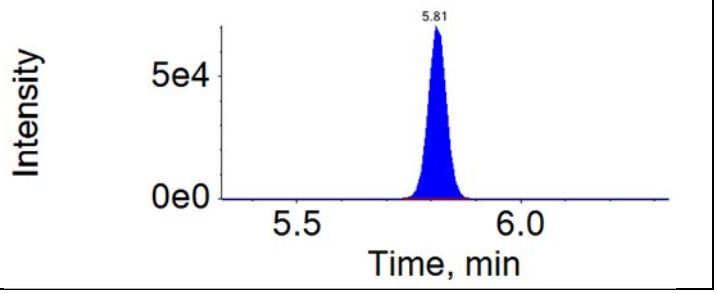
Analyte: PFDS	Extraction Standard: 13C8-PFOS
599.0 / 80.0	507.0 / 80.0





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



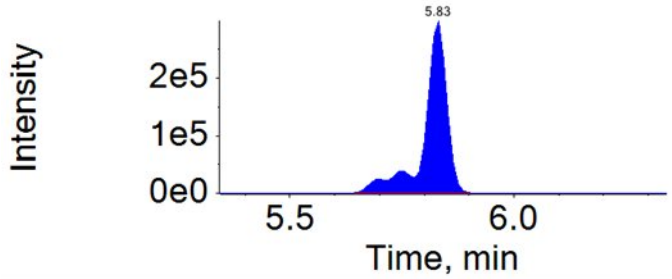


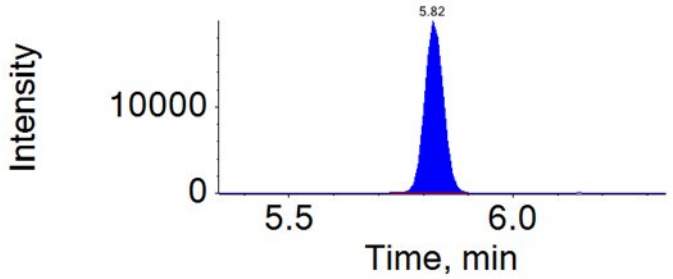
APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

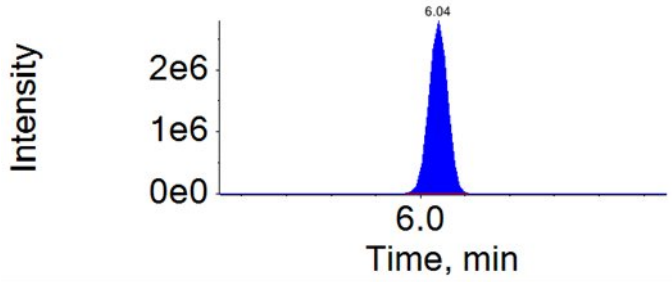
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

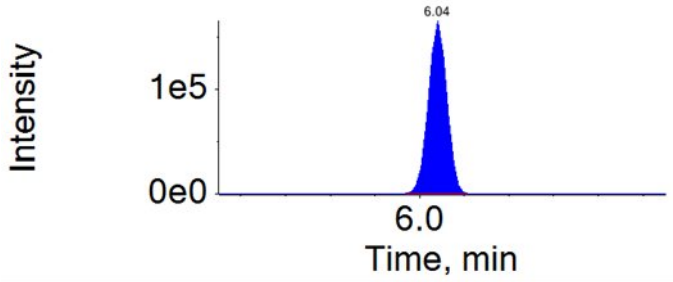
Analyte: NEtFOSAA	Extraction Standard: d5-NEtFOSAA
584.0 / 419.0	589.0 / 419.0



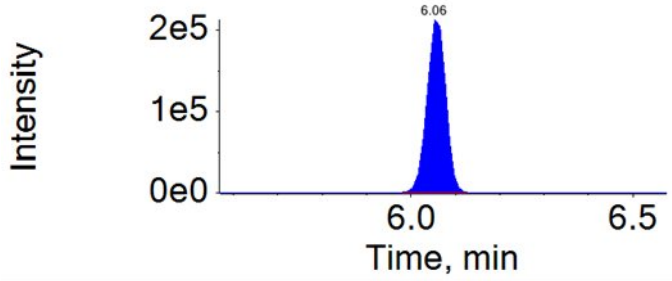


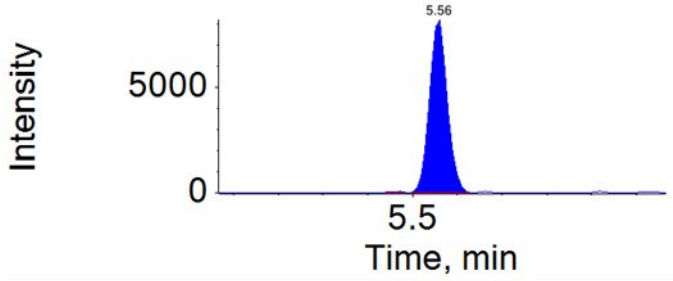
Analyte: PFDoDA	Extraction Standard: 13C2-PFDoDA
613.0 / 569.0	615.0 / 570.0



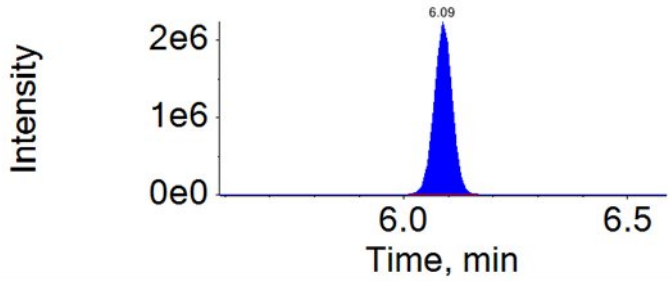


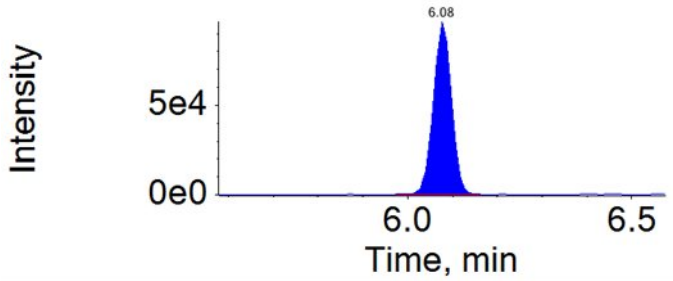
Analyte: 10:2-FTS	Extraction Standard: 13C2-8:2-FTS
627.0 / 607.0	529.0 / 81.0





Analyte: NMePFOSAE	Extraction Standard: d7-NMePFOSAE
616.0 / 59.0	623.0 / 59.0



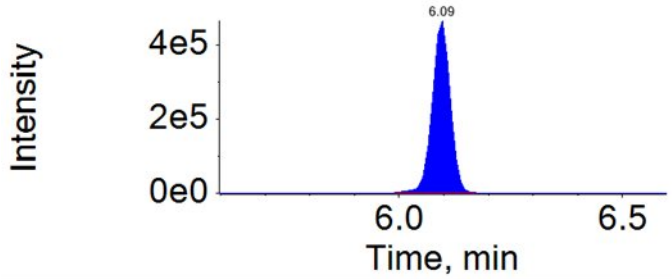


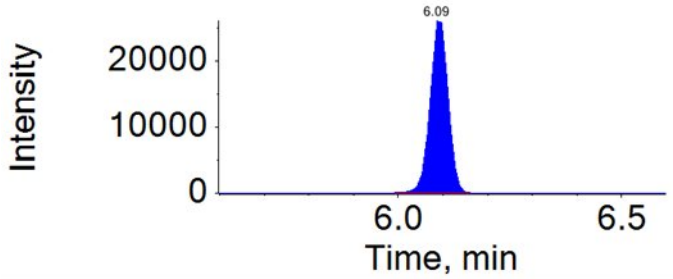
APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

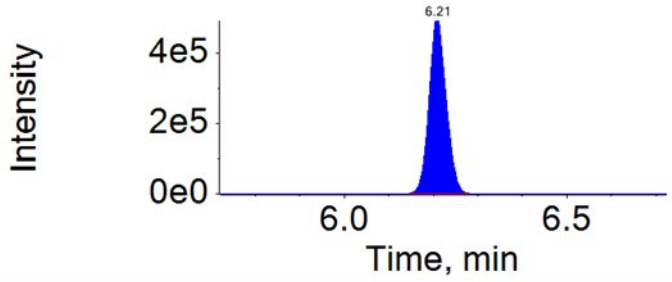
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

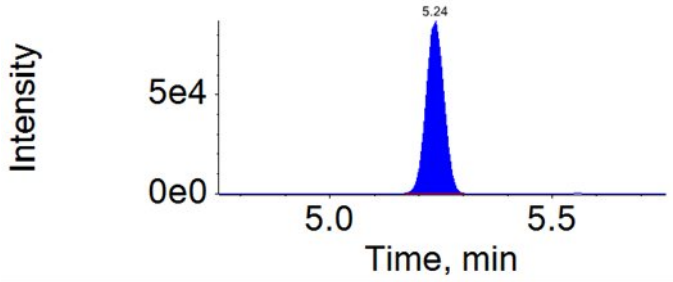
Analyte: NMePFOSA	Extraction Standard: d3-NMePFOSA
512.0 / 169.0	515.0 / 169.0



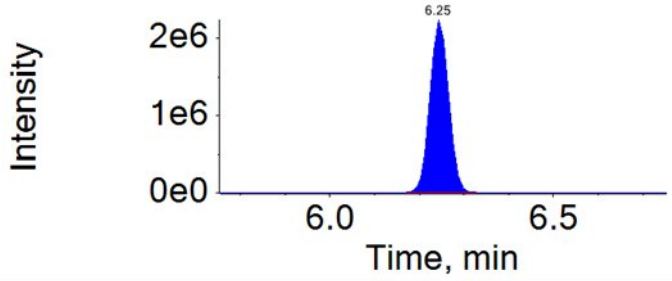


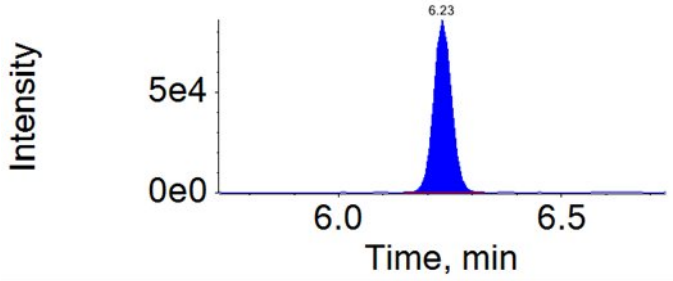
Analyte: PFDoS	Extraction Standard: 13C8-PFOS
699.0 / 80.0	507.0 / 80.0



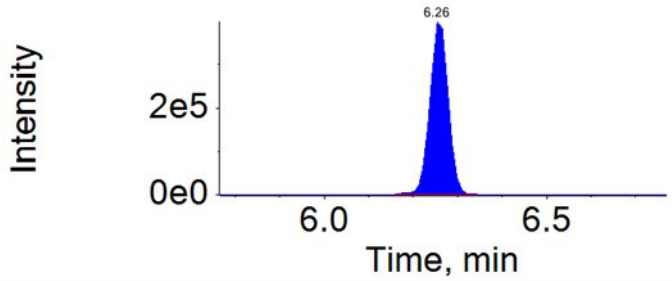


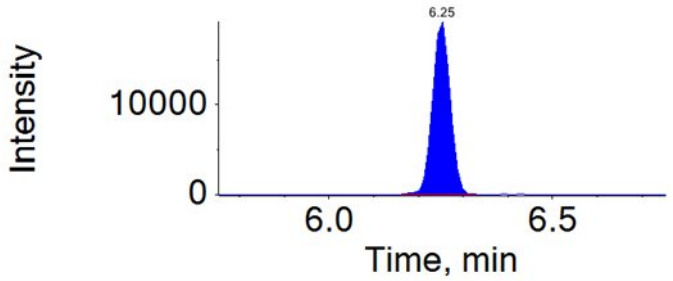
Analyte: NEtPFOSAE	Extraction Standard: d9-NEtPFOSAE
630.0 / 59.0	639.0 / 59.0





Analyte: NEtPFOSA	Extraction Standard: d5-NEtPFOSA
526.0 / 169.0	531.0 / 169.0



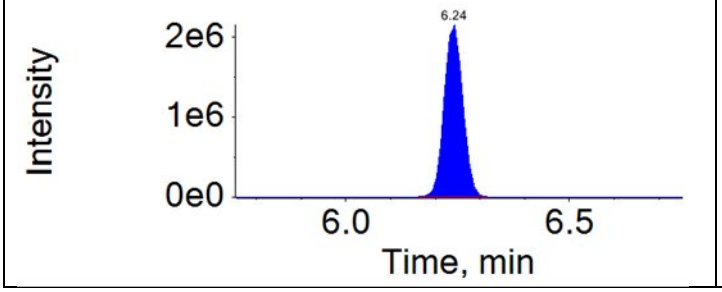


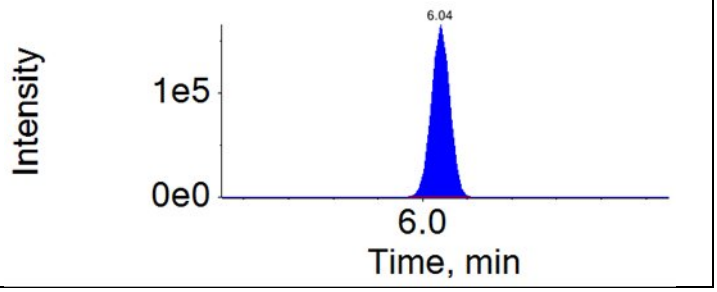
APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

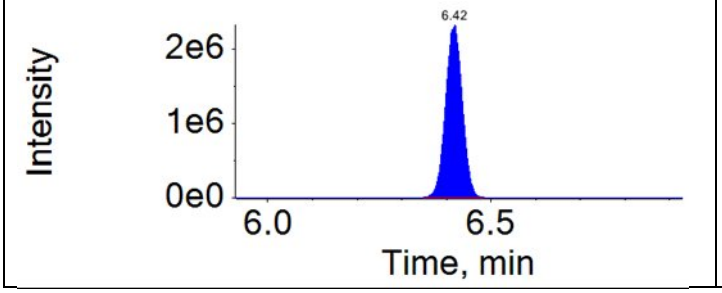
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

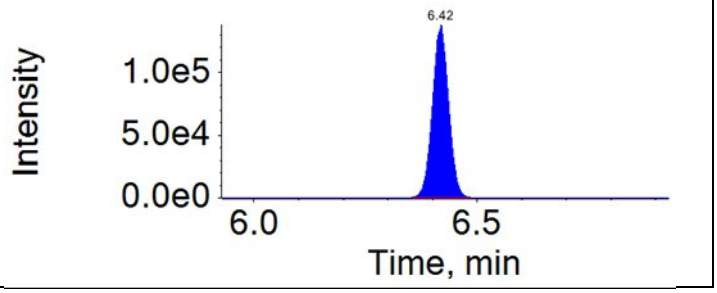
Analyte: PFTrDA	Extraction Standard: 13C2-PFDoDA
663.0 / 619.0	615.0 / 570.0



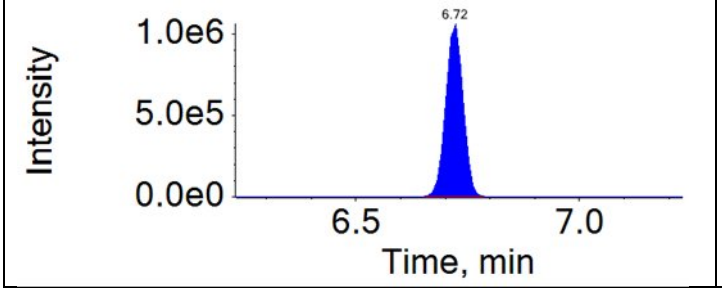


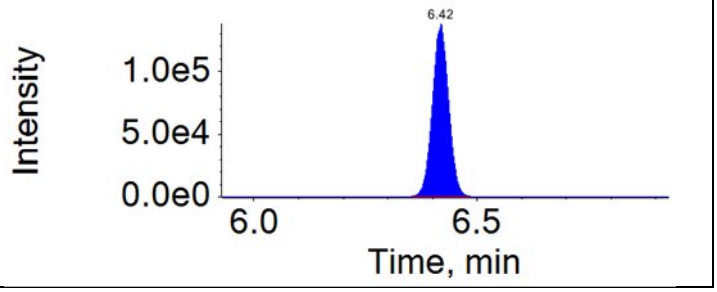
Analyte: PFTeDA	Extraction Standard: 13C2-PFTeDA
713.0 / 669.0	715.0 / 670.0



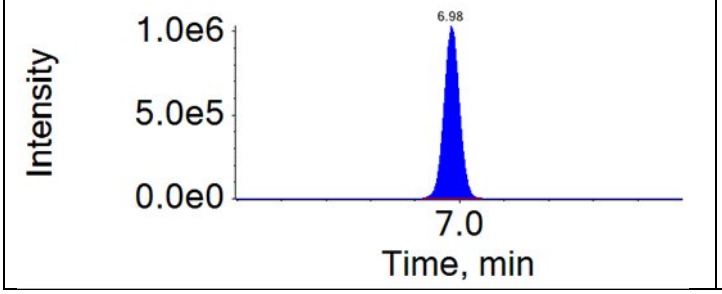


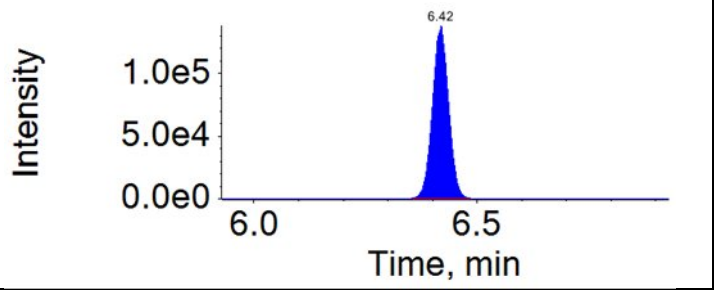
Analyte: PFHxDA	Extraction Standard: 13C2-PFTeDA
813.0 / 769.0	715.0 / 670.0





Analyte: PFODA	Extraction Standard: 13C2-PFTeDA
913.0 / 869.0	715.0 / 670.0



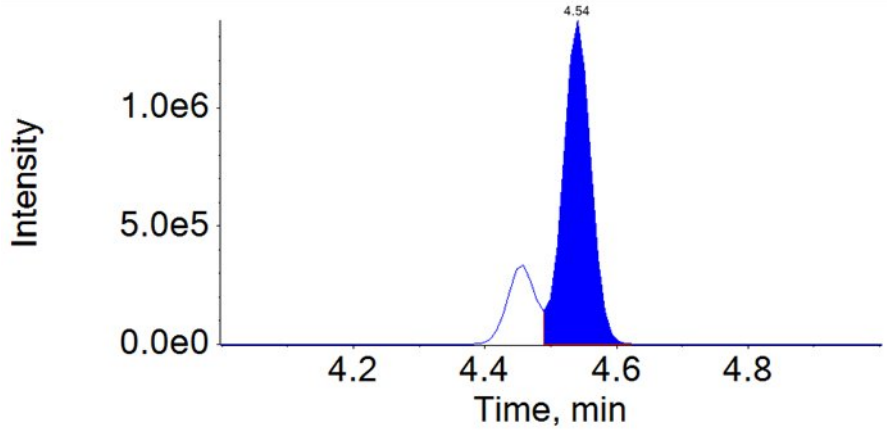


APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

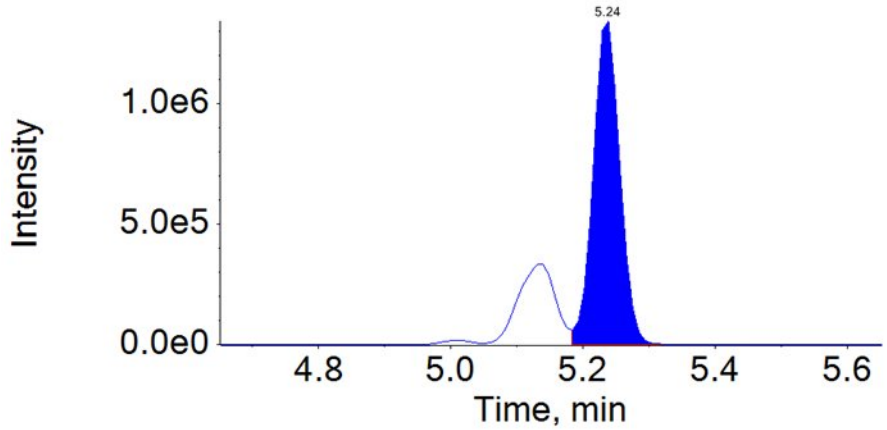
Results Table Name: 18NOV12DCAL
Results Table Date: 11/12/2018 6:23:42 PM
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

Component Name:
PFHxS
RT (min.):
4.54
Peak Area:
4044983.17
Mass Range:
399.0 / 80.0
File Name:
18NOV12DCAL-48.wiff
Sample Name:
CAL7



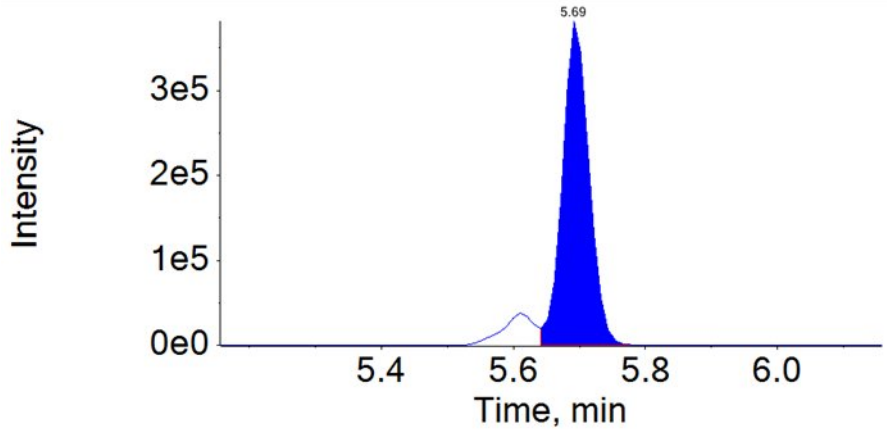
Integration Comment: incorrect integration

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

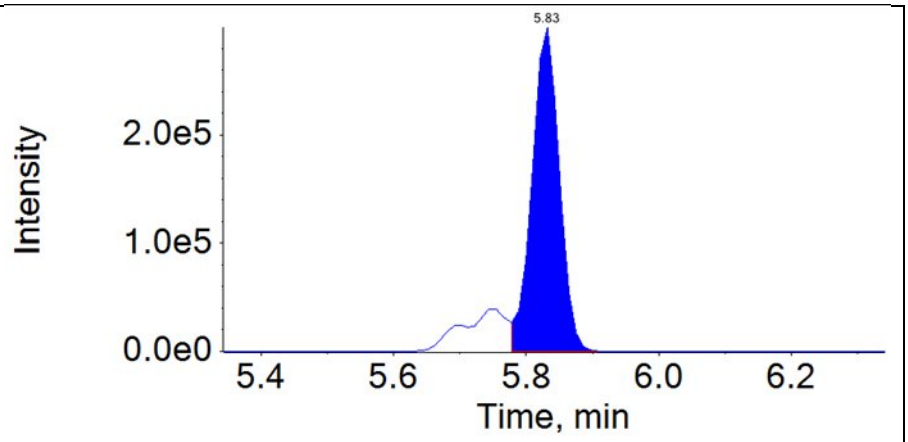


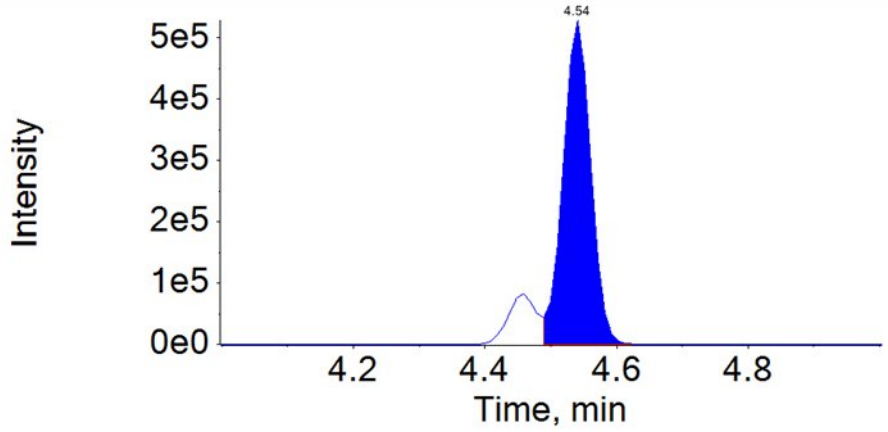
Integration Comment: incorrect integration

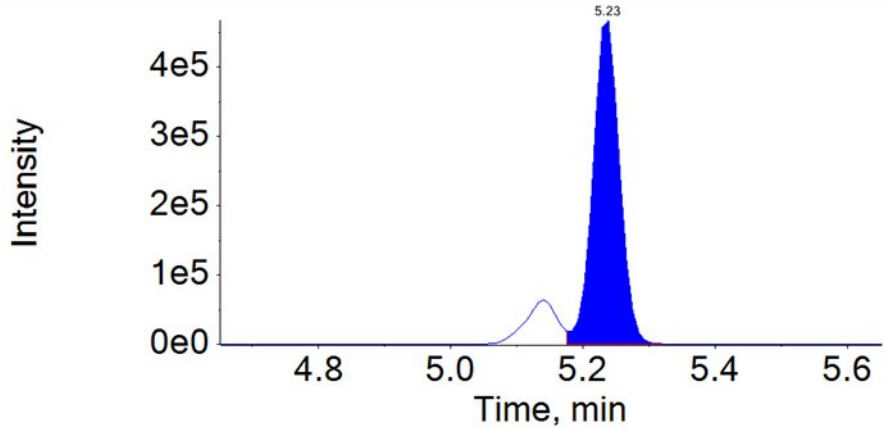
APPROVED
By MCD at 6:33 pm, 11/12/18

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 **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

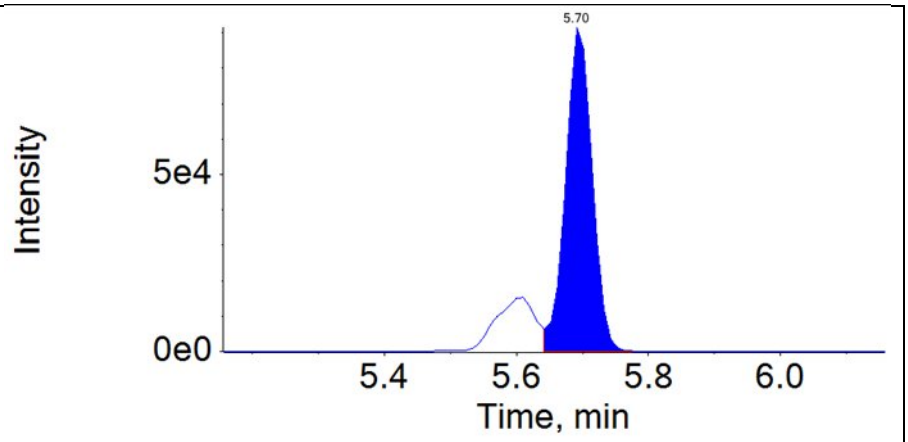
Component Name: PFOS_2 **RT (min.):** 5.23 **Peak Area:** 1316284.93 **Mass Range:** 499.0 / 99.0 **File Name:** 18NOV12DCAL-48.wiff **Sample Name:** CAL7	 **Integration Comment:** incorrect integration

APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

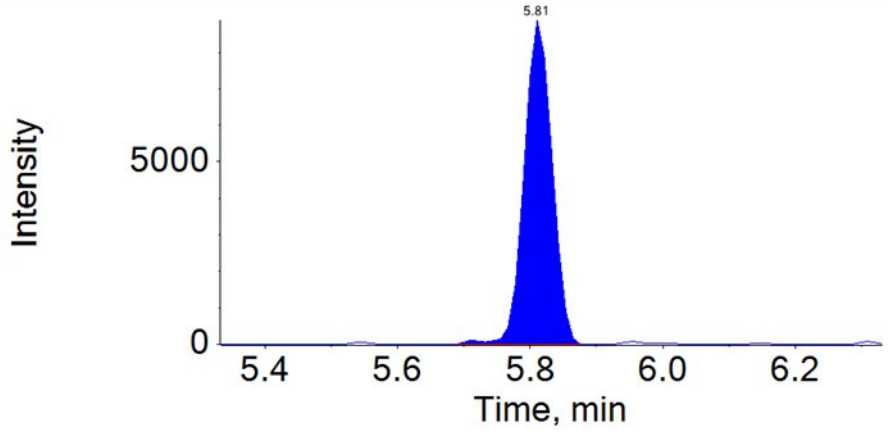
Results Table Name: 18NOV12DCAL
Results Table Date: 11/12/2018 6:23:42 PM
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

Component Name:
NMeFOSAA_2
RT (min.):
5.70
Peak Area:
256419.22
Mass Range:
570.0 / 483.0
File Name:
18NOV12DCAL-48.wiff
Sample Name:
CAL7



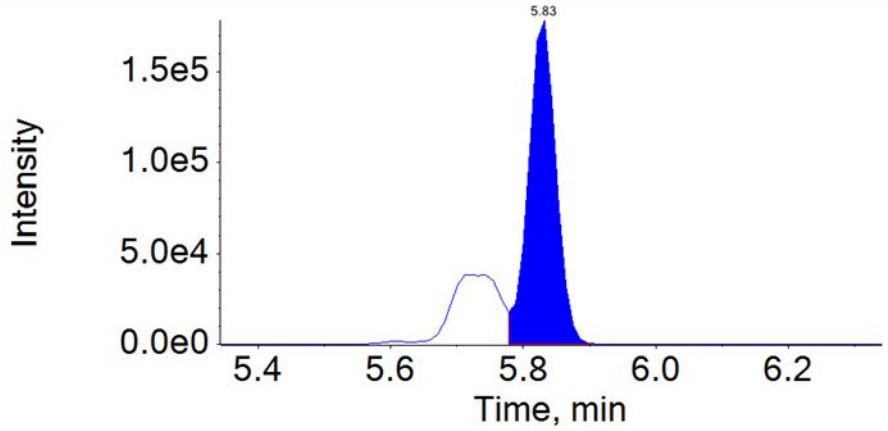
Integration Comment: incorrect integration

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

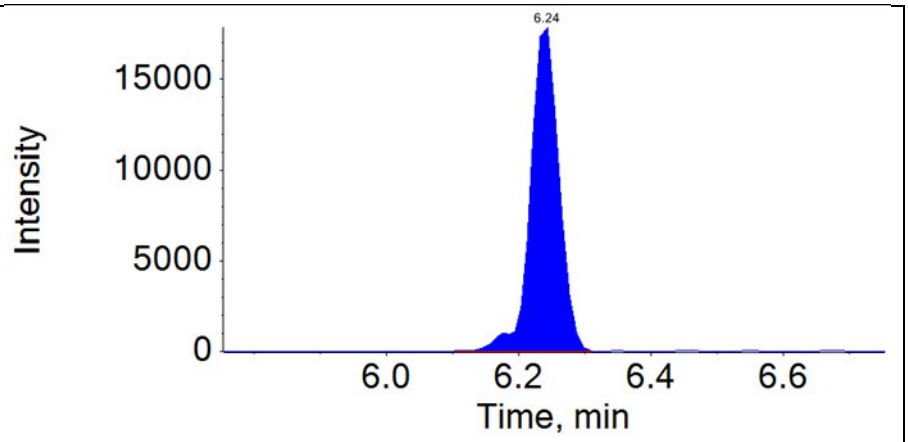
APPROVED
By MCD at 6:33 pm, 11/12/18

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

Ion Ratio Report

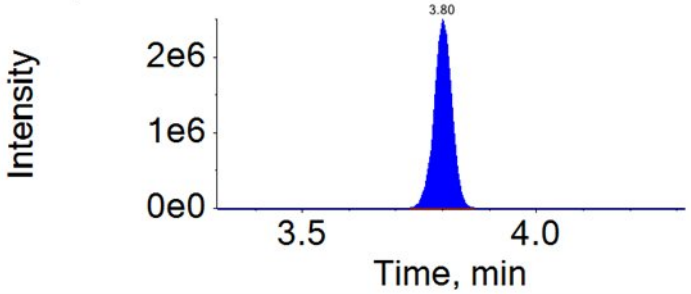
Sample Name: CAL7 **Instrument Name:** LM27631 **File Name:** 18NOV12DCAL-48.wiff

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	

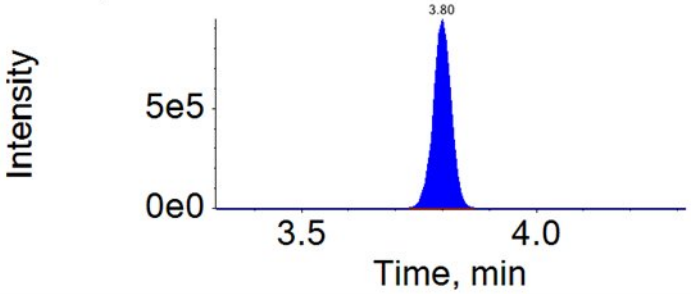
APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

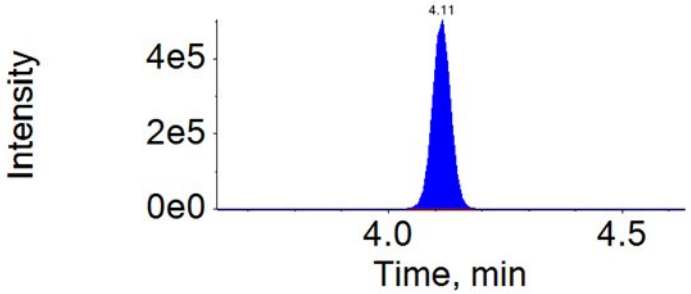
Component: PFBS
Primary Mass: 299.0 / 80.0



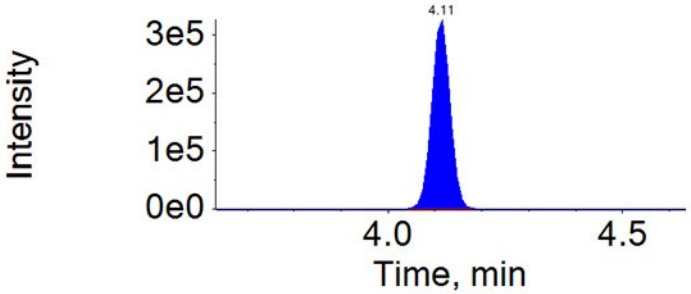
Component: PFBS_2
Secondary Mass: 299.0 / 99.0



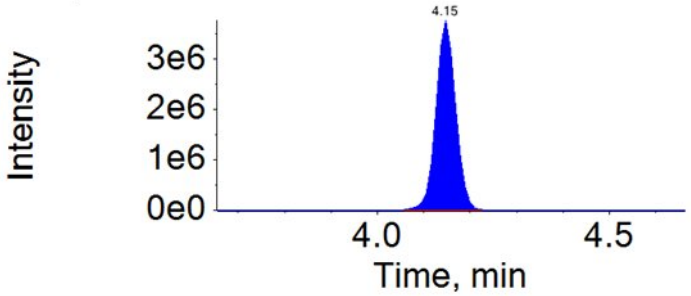
Component: 4:2-FTS
Primary Mass: 327.0 / 307.0



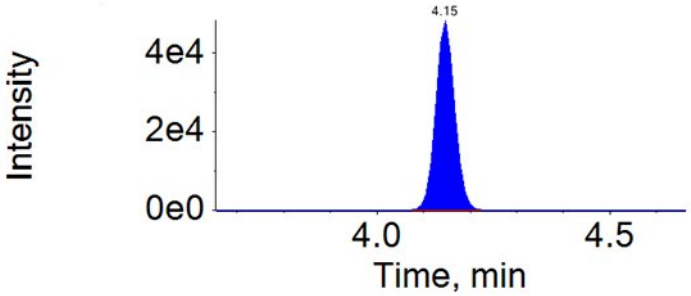
Component: 4:2 FTS_2
Secondary Mass: 327.0 / 81.0



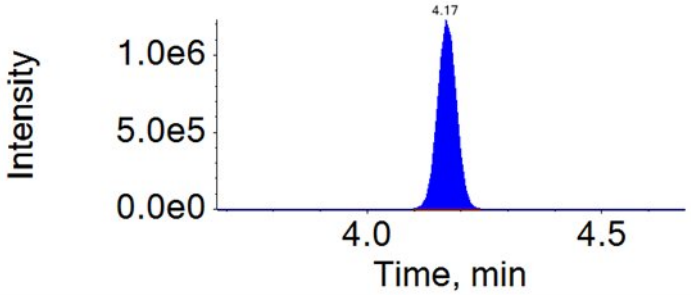
Component: PFHxA
Primary Mass: 313.0 / 269.0



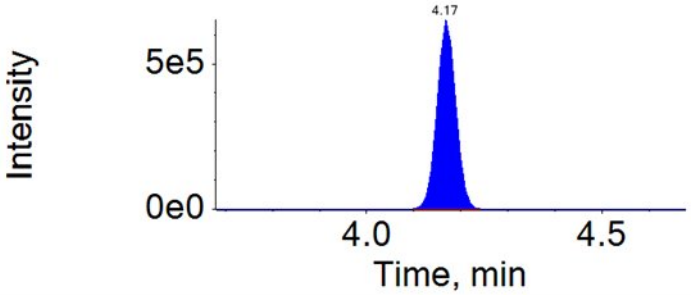
Component: PFHxA_2
Secondary Mass: 313.0 / 119.0



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

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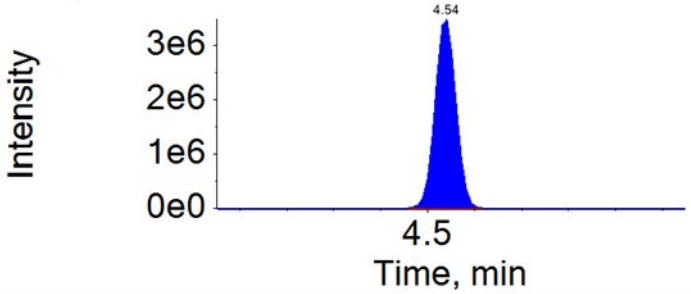
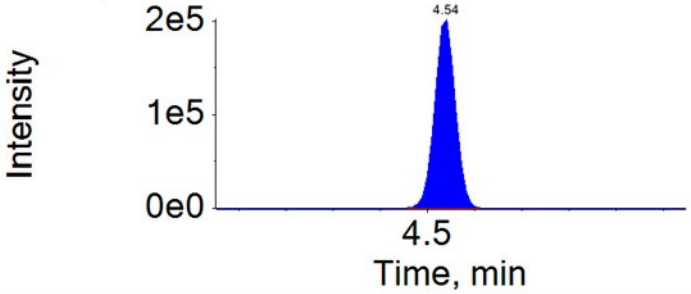
By HMK at 10:53 am, 11/13/18

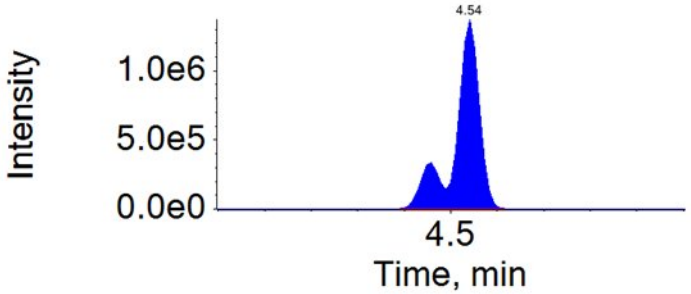
Component: PFHpA
Primary Mass: 363.0 / 319.0



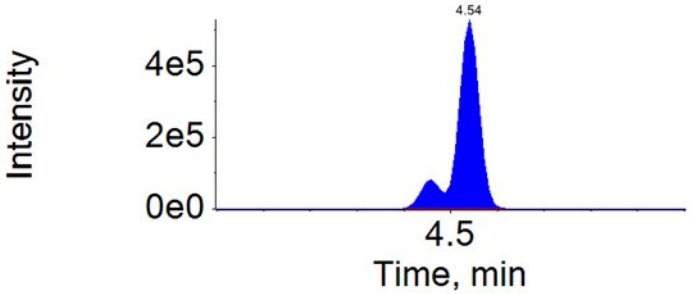
Component: PFHpA_2
Secondary Mass: 363.0 / 169.0



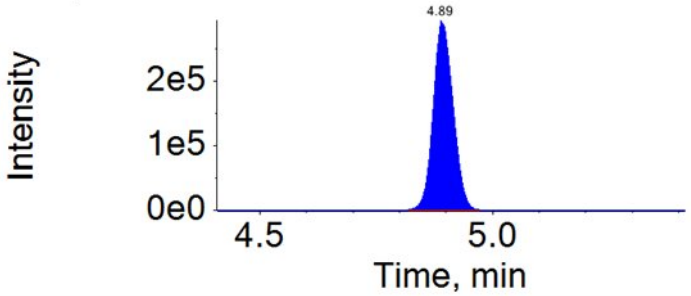
Component: PFHxS
Primary Mass: 399.0 / 80.0



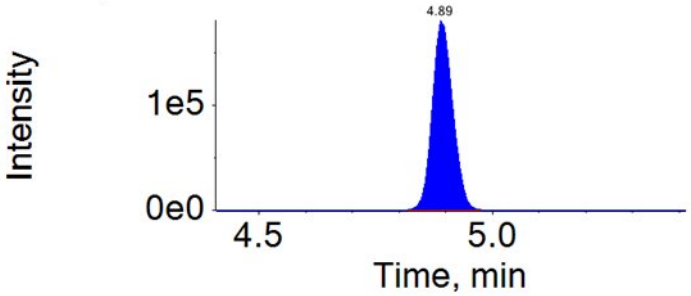
Component: PFHxS_2
Secondary Mass: 399.0 / 99.0



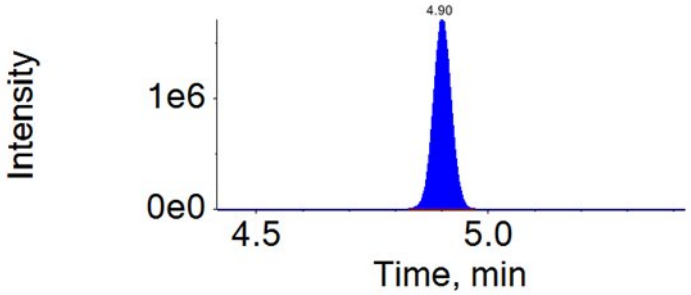
Component: 6:2-FTS
Primary Mass: 427.0 / 407.0



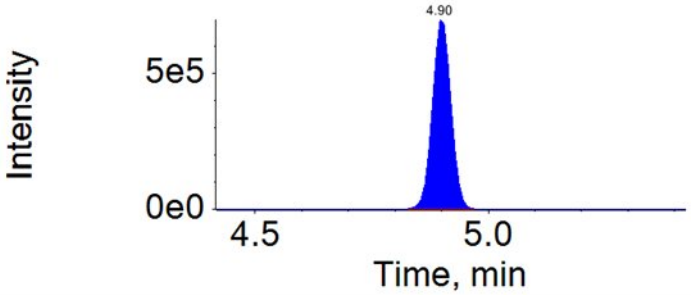
Component: 6:2 FTS_2
Secondary Mass: 427.0 / 81.0



Component: PFHpS
Primary Mass: 449.0 / 80.0



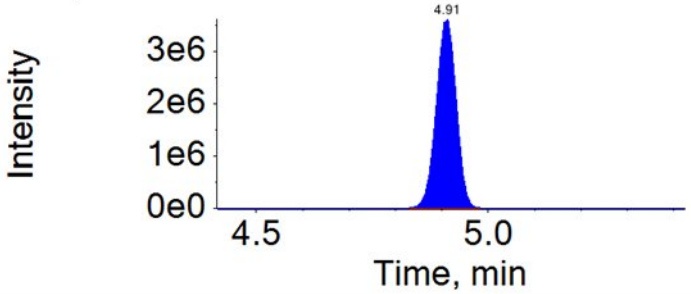
Component: PFHpS_2
Secondary Mass: 449.0 / 99.0



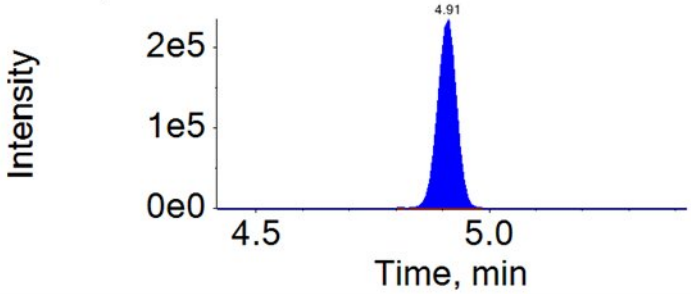
APPROVED
By MCD at 6:33 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

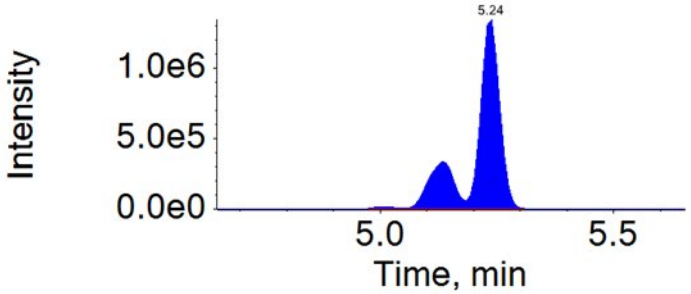
Component: PFOA
Primary Mass: 413.0 / 369.0



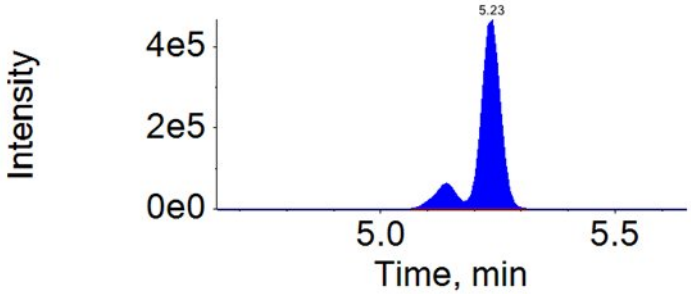
Component: PFOA_2
Secondary Mass: 413.0 / 169.0



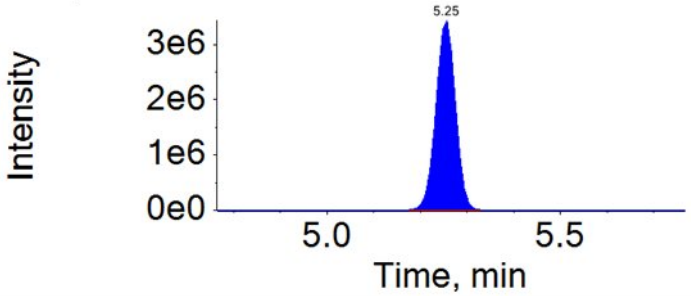
Component: PFOS
Primary Mass: 499.0 / 80.0



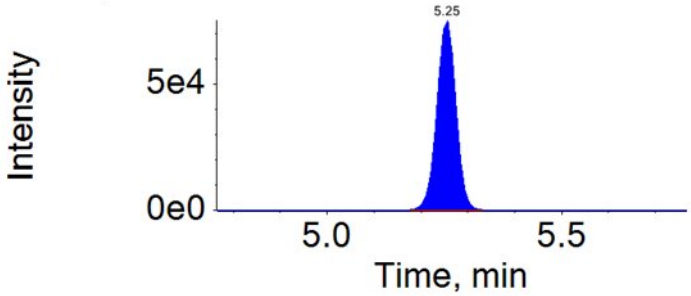
Component: PFOS_2
Secondary Mass: 499.0 / 99.0



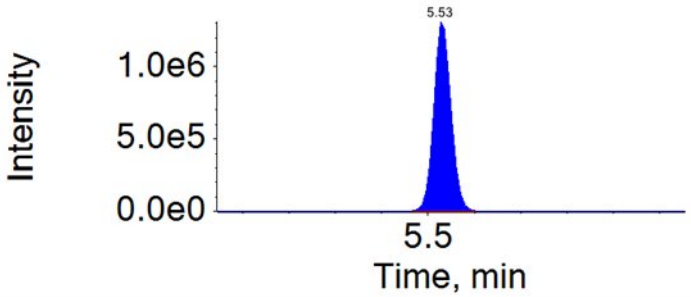
Component: PFNA
Primary Mass: 463.0 / 419.0



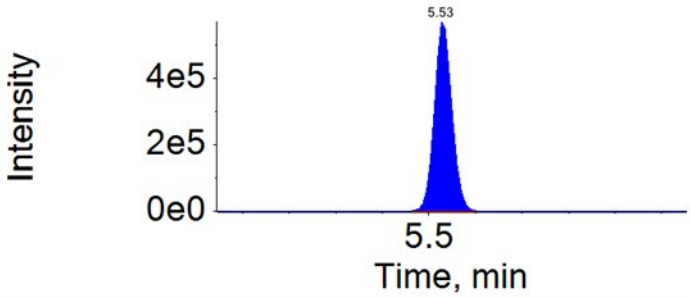
Component: PFNA_2
Secondary Mass: 463.0 / 169.0



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

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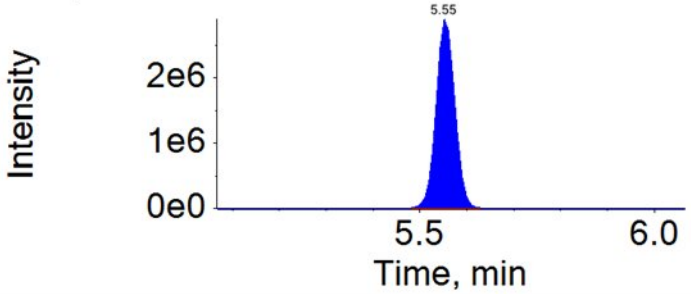
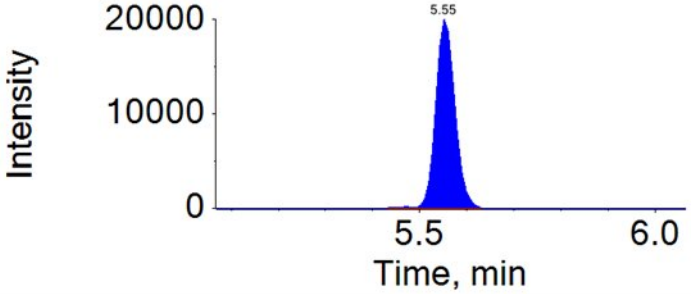
By HMK at 10:53 am, 11/13/18

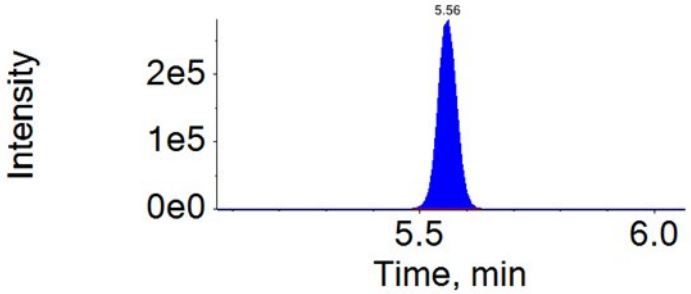
Component: PFDA
Primary Mass: 513.0 / 469.0



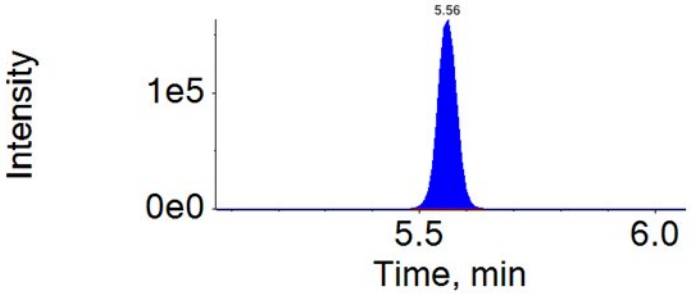
Component: PFDA_2
Secondary Mass: 513.0 / 169.0



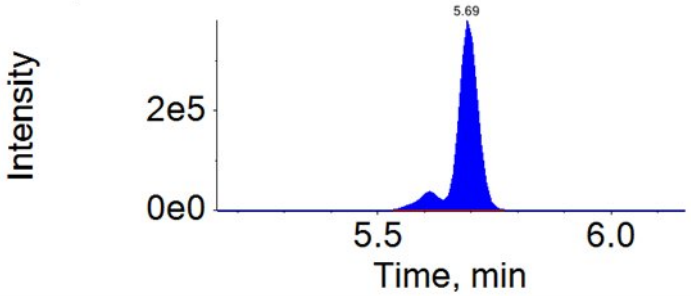
Component: 8:2-FTS
Primary Mass: 527.0 / 507.0



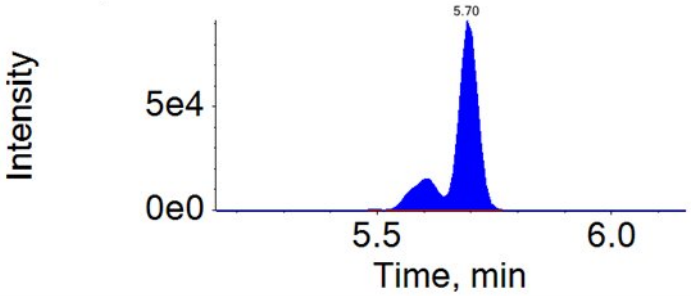
Component: 8:2 FTS_2
Secondary Mass: 527.0 / 81.0



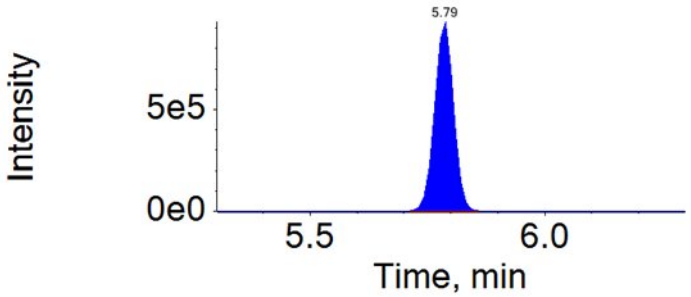
Component: NMeFOSAA
Primary Mass: 570.0 / 419.0



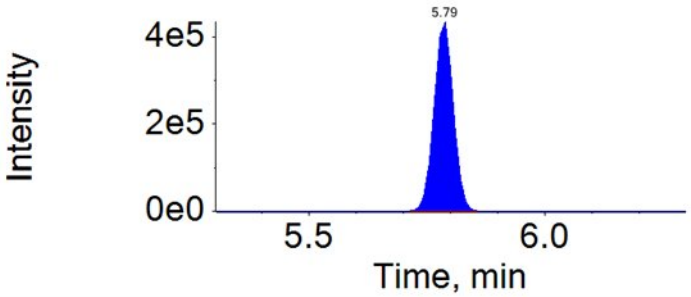
Component: NMeFOSAA_2
Secondary Mass: 570.0 / 483.0



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

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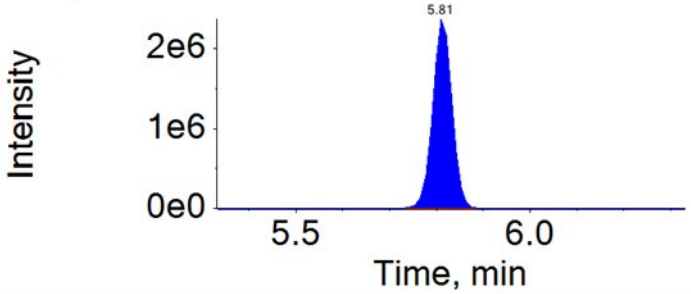
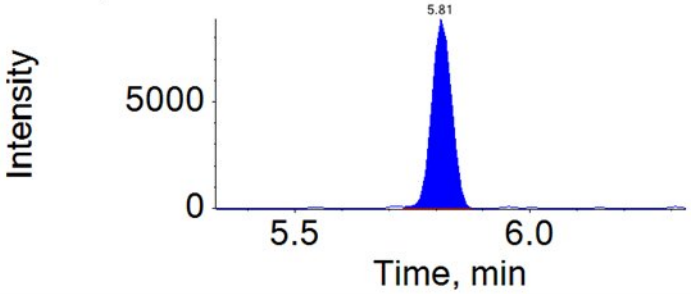
By HMK at 10:53 am, 11/13/18

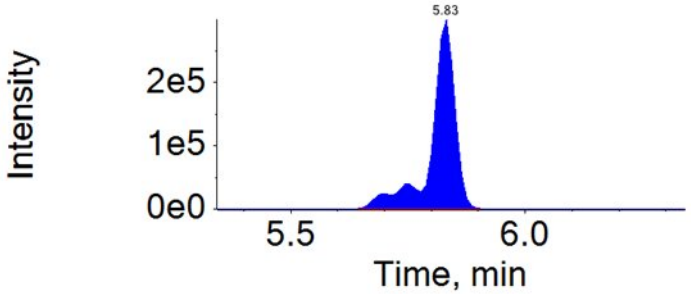
Component: PFUnDA
Primary Mass: 563.0 / 519.0



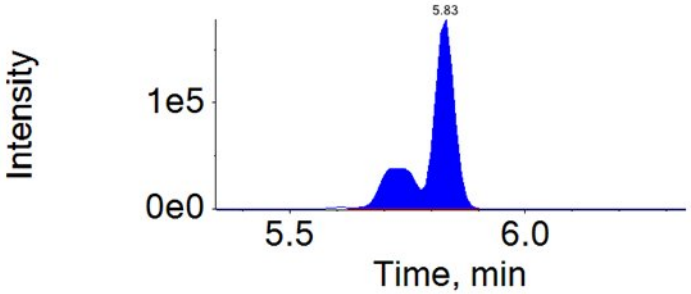
Component: PFUnDA_2
Secondary Mass: 563.0 / 169.0



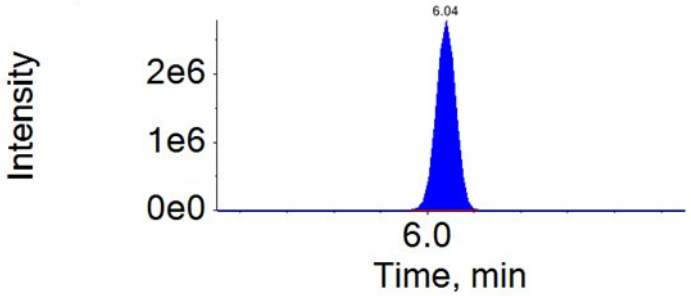
Component: NEtFOSAA
Primary Mass: 584.0 / 419.0



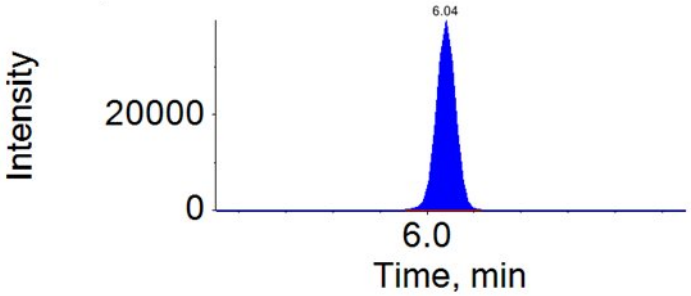
Component: NEtFOSAA_2
Secondary Mass: 584.0 / 526.0



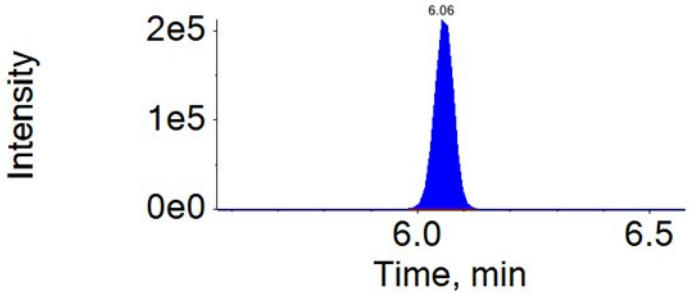
Component: PFDoDA
Primary Mass: 613.0 / 569.0



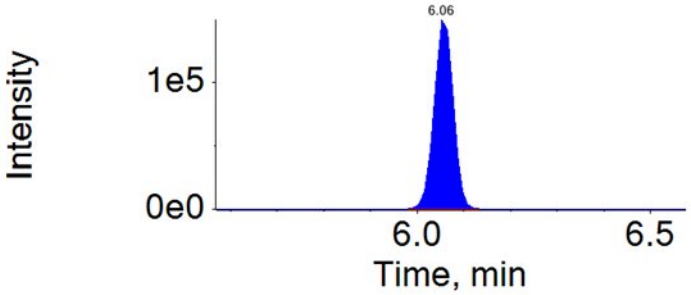
Component: PFDoDA_2
Secondary Mass: 613.0 / 169.0



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

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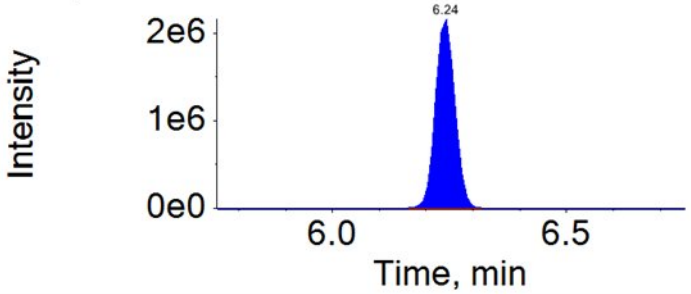
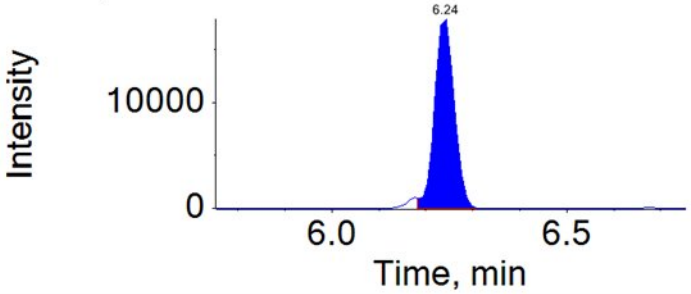
By HMK at 10:53 am, 11/13/18

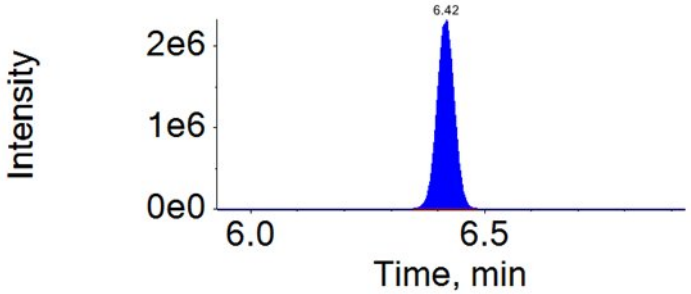
Component: PFTrDA
Primary Mass: 663.0 / 619.0



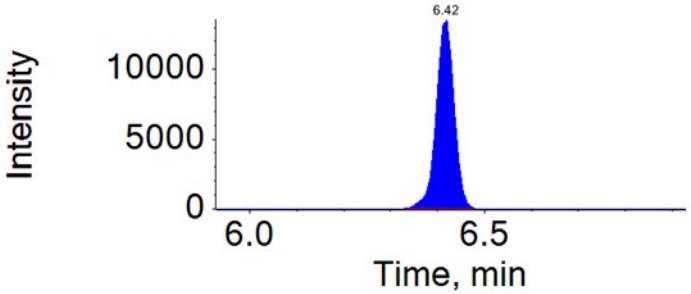
Component: PFTrDA_2
Secondary Mass: 663.0 / 169.0



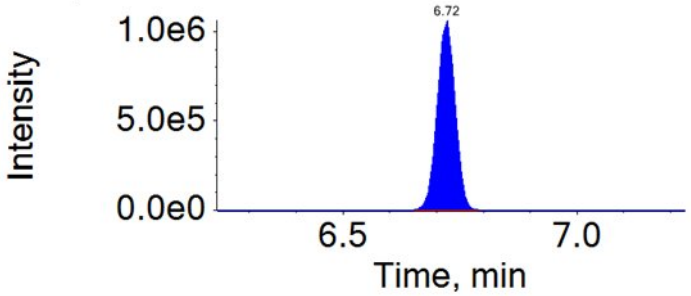
Component: PFTeDA
Primary Mass: 713.0 / 669.0



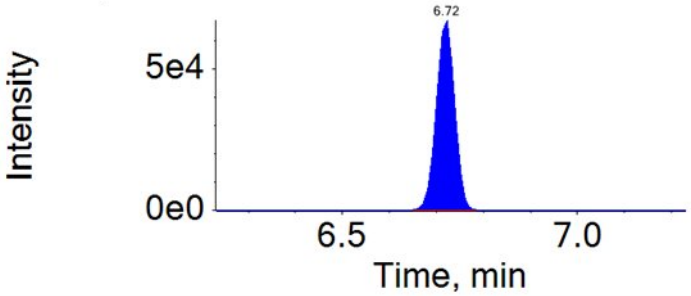
Component: PFTeDA_2
Secondary Mass: 713.0 / 169.0



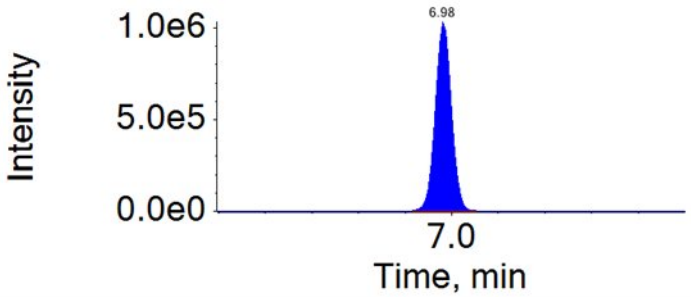
Component: PFHxDA
Primary Mass: 813.0 / 769.0



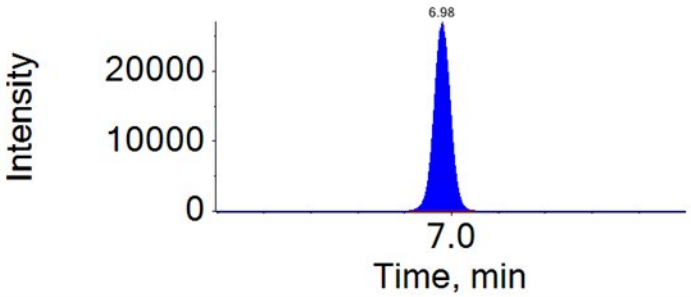
Component: PFHxDA_2
Secondary Mass: 813.0 / 169.0



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:	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

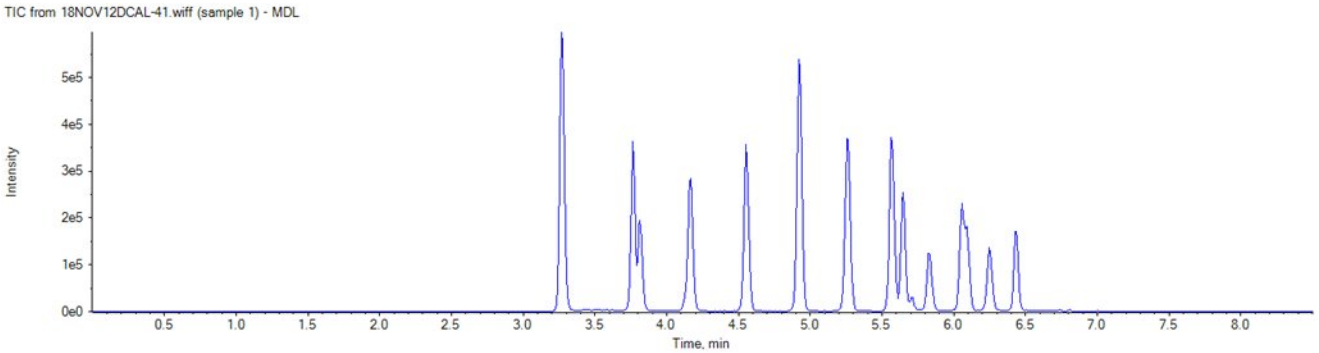
Analyte Quantitation Peak Table

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

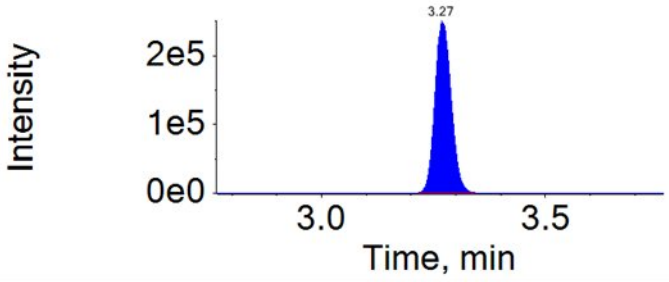


APPROVED
By MCD at 6:34 pm, 11/12/18

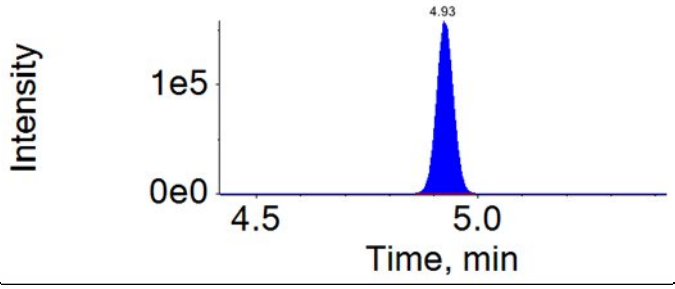
REVIEWED
By HMK at 10:54 am, 11/13/18

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

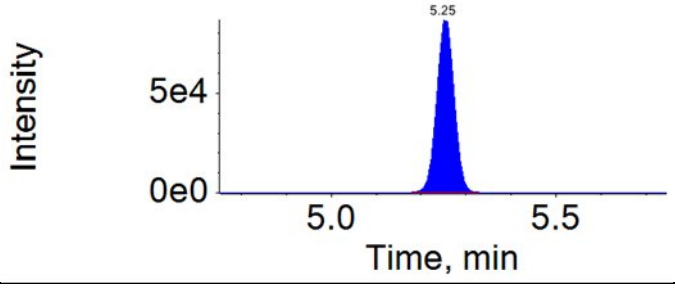
Injection Standard: 13C3-PFBA
216.0 / 172.0



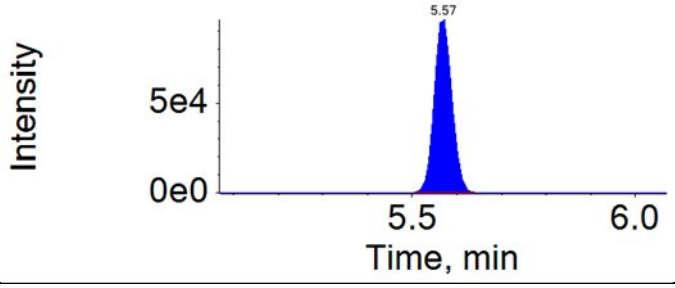
Injection Standard: 13C2-PFOA
415.0 / 370.0



Injection Standard: 13C4-PFOS
503.0 / 80.0



Injection Standard: 13C2-PFDA
515.0 / 470.0

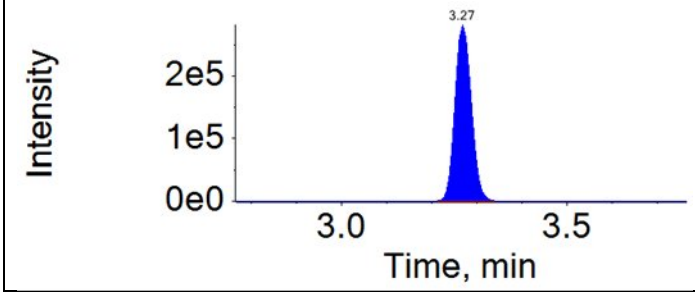


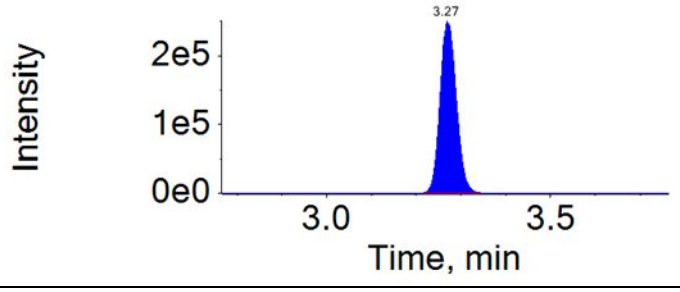
APPROVED
By MCD at 6:34 pm, 11/12/18

REVIEWED
By HMK at 10:54 am, 11/13/18

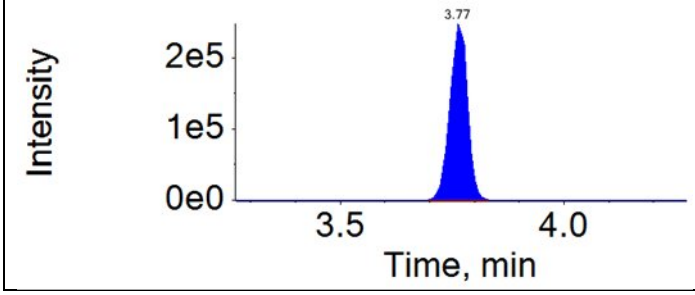
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

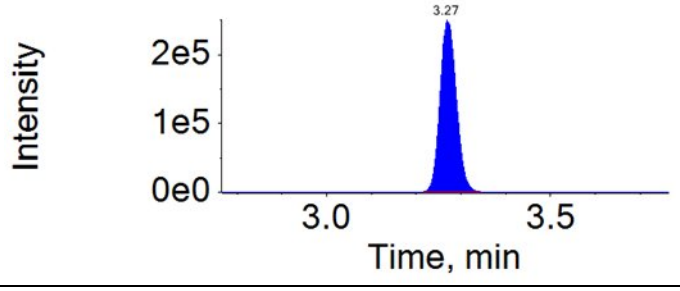
Extraction Standard: E13C4-PFBA	Injection Standard: 13C3-PFBA
217.0 / 172.0	216.0 / 172.0



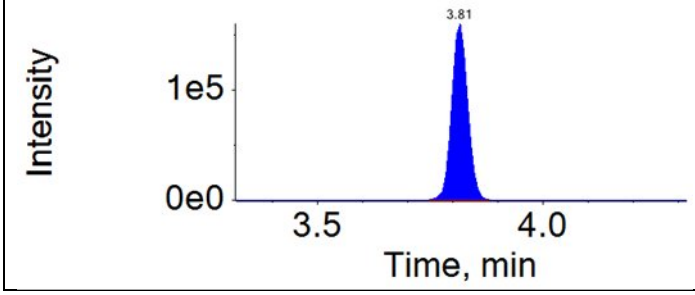


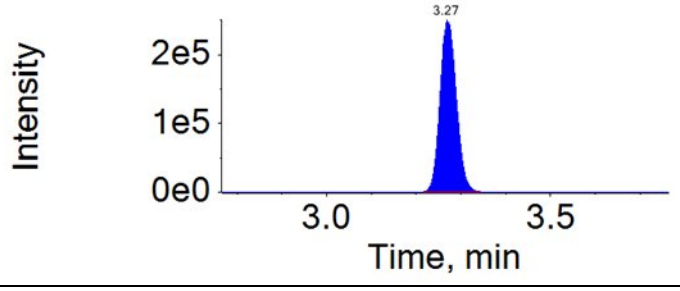
Extraction Standard: E13C5-PFPeA	Injection Standard: 13C3-PFBA
268.0 / 223.0	216.0 / 172.0



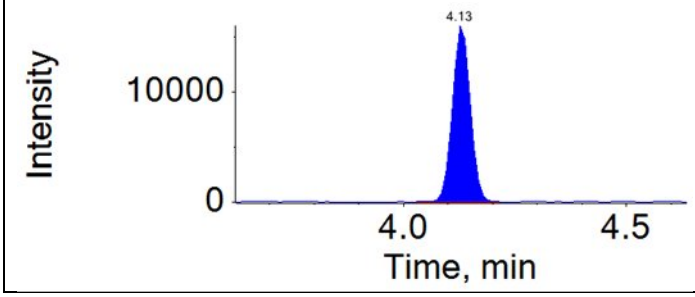


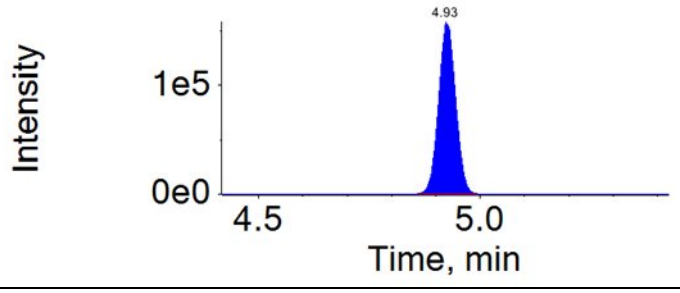
Extraction Standard: E13C3-PFBS	Injection Standard: 13C3-PFBA
302.0 / 80.0	216.0 / 172.0





Extraction Standard: E13C2-4:2-FTS	Injection Standard: 13C2-PFOA
329.0 / 81.0	415.0 / 370.0



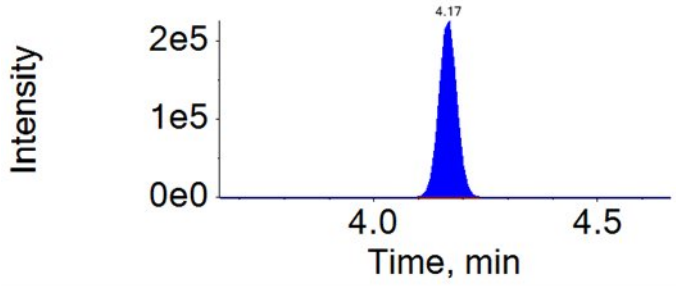


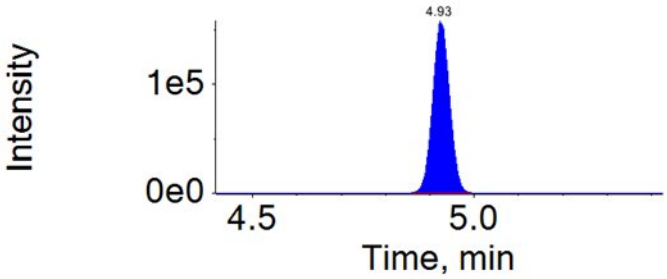
APPROVED
By MCD at 6:34 pm, 11/12/18

REVIEWED
By HMK at 10:54 am, 11/13/18

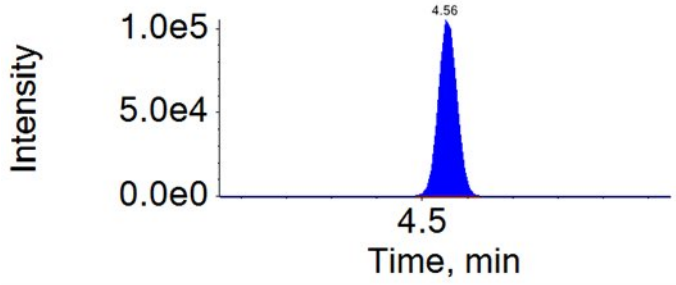
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

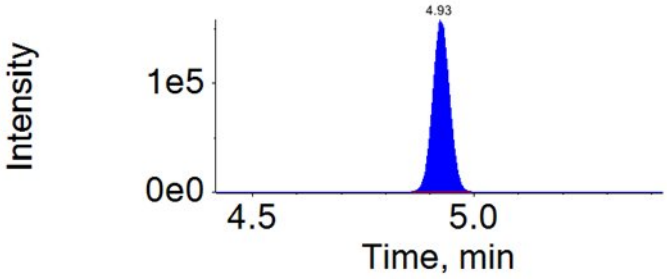
Extraction Standard: E13C5-PFHxA	Injection Standard: 13C2-PFOA
318.0 / 273.0	415.0 / 370.0



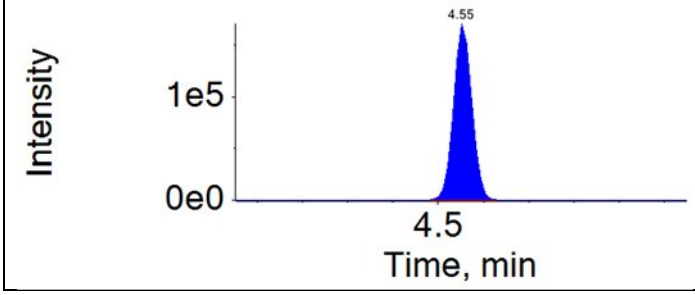


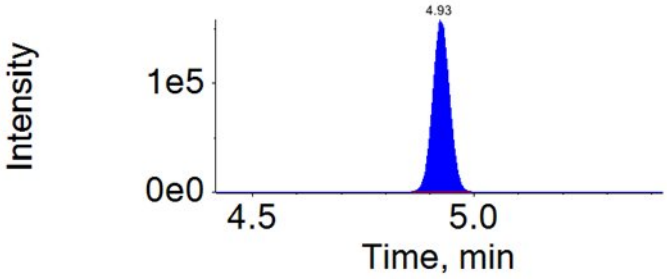
Extraction Standard: E13C3-PFHxS	Injection Standard: 13C2-PFOA
402.0 / 80.0	415.0 / 370.0



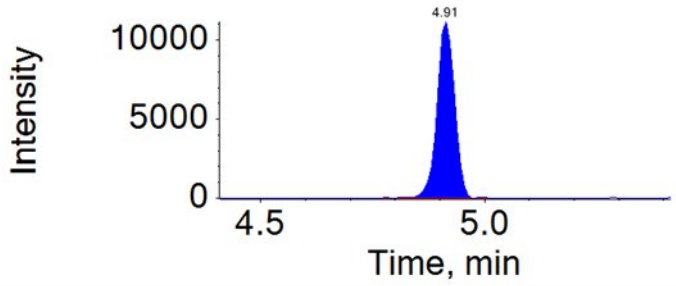


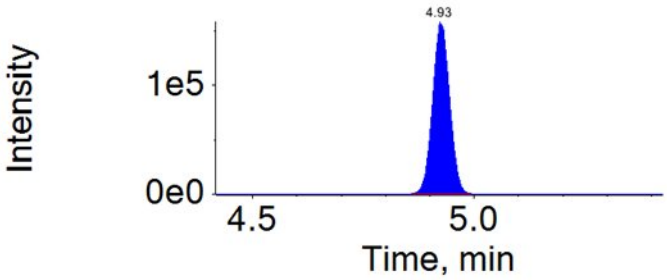
Extraction Standard: E13C4-PFHpA	Injection Standard: 13C2-PFOA
367.0 / 322.0	415.0 / 370.0





Extraction Standard: E13C2-6:2-FTS	Injection Standard: 13C2-PFOA
429.0 / 81.0	415.0 / 370.0

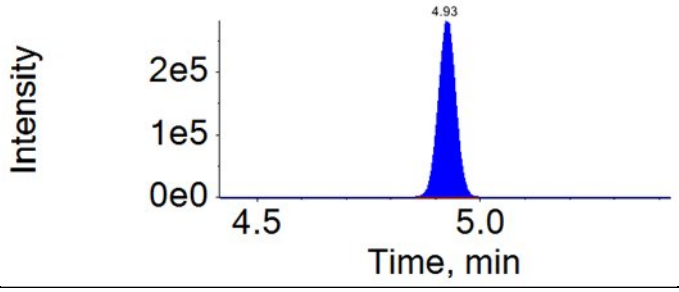
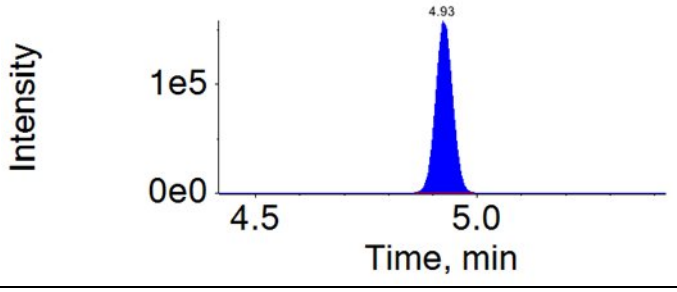


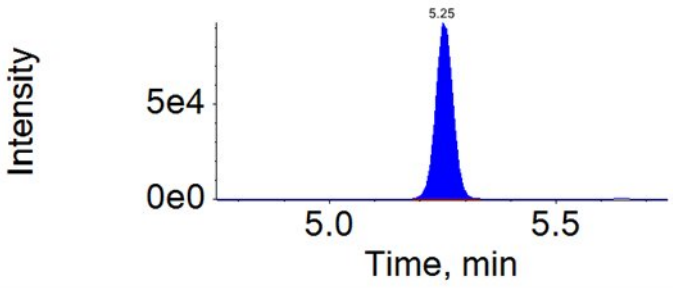
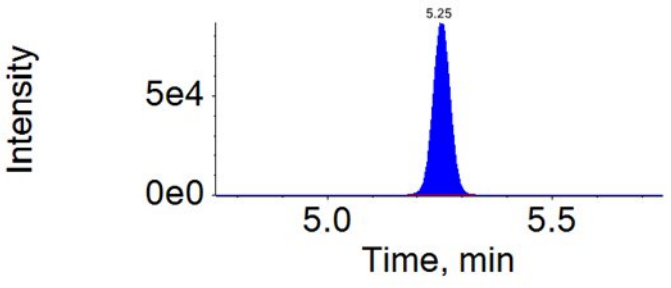


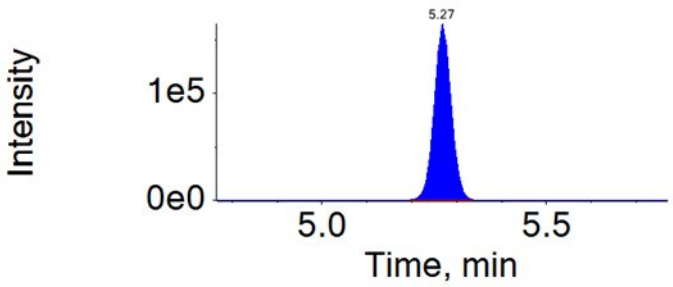
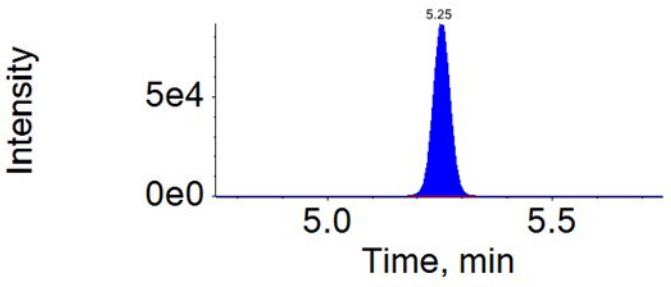
APPROVED
By MCD at 6:34 pm, 11/12/18

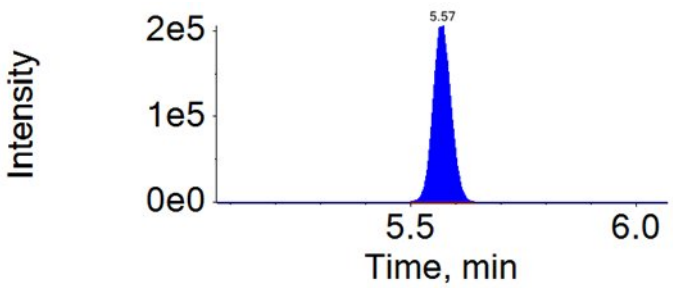
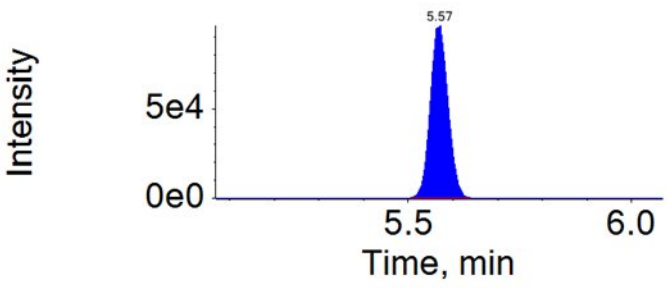
REVIEWED
By HMK at 10:54 am, 11/13/18

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

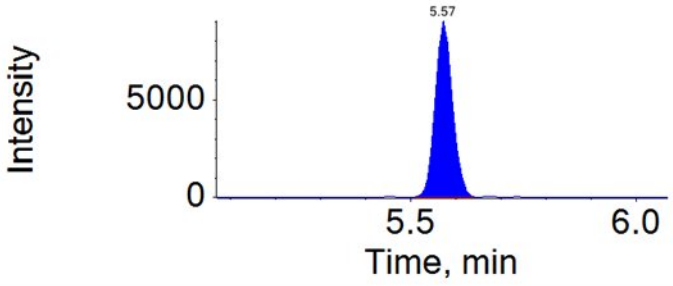
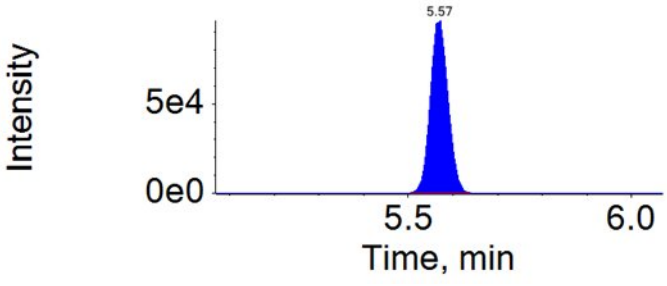
Extraction Standard: E13C8-PFOA	Injection Standard: 13C2-PFOA
421.0 / 376.0	415.0 / 370.0
	

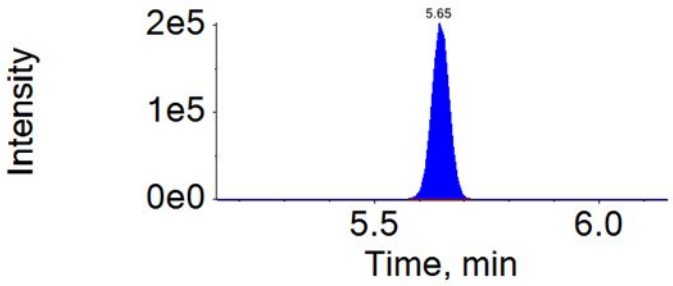
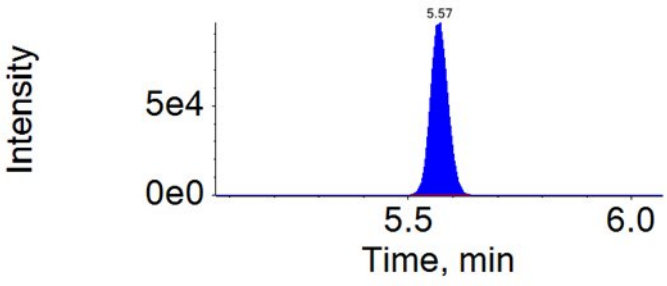
Extraction Standard: E13C8-PFOS	Injection Standard: 13C4-PFOS
507.0 / 80.0	503.0 / 80.0
	

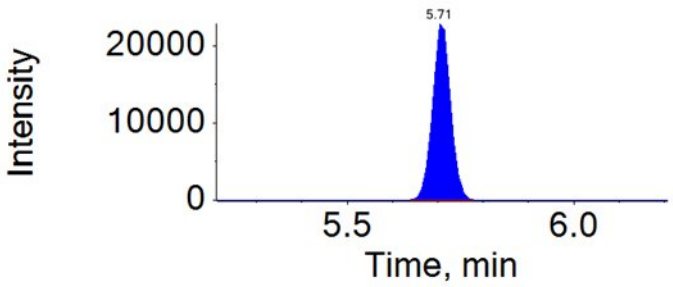
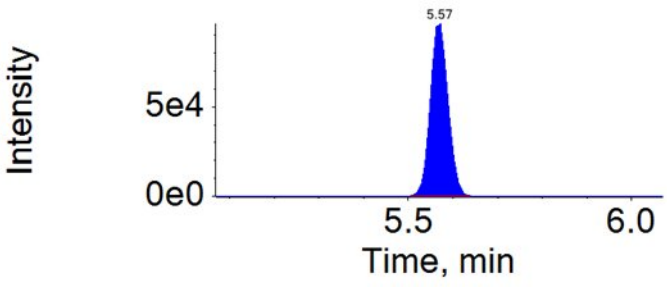
Extraction Standard: E13C9-PFNA	Injection Standard: 13C4-PFOS
472.0 / 427.0	503.0 / 80.0
	

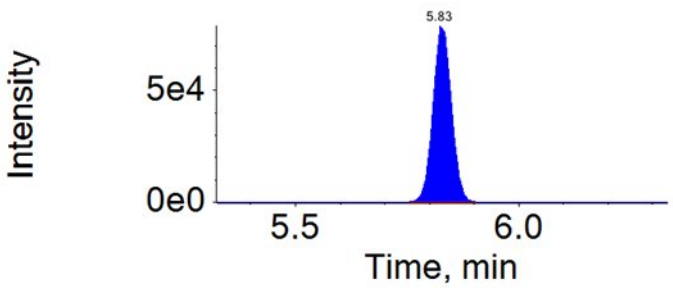
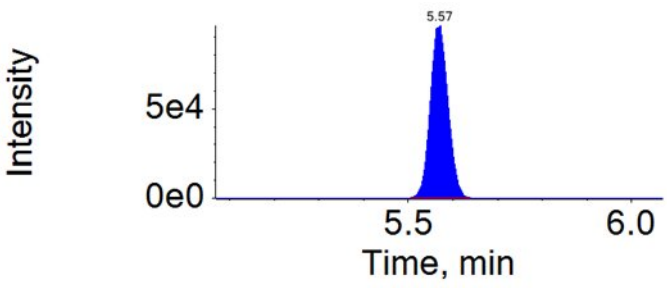
Extraction Standard: E13C6-PFDA	Injection Standard: 13C2-PFDA
519.0 / 474.0	515.0 / 470.0
	

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

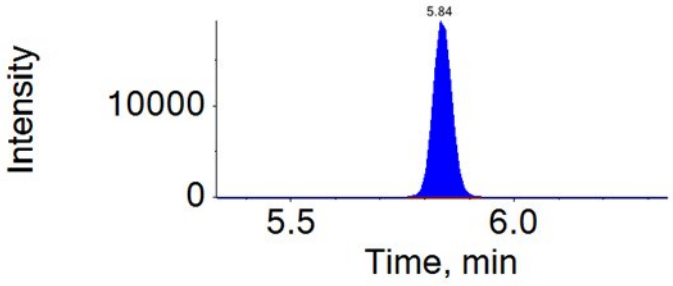
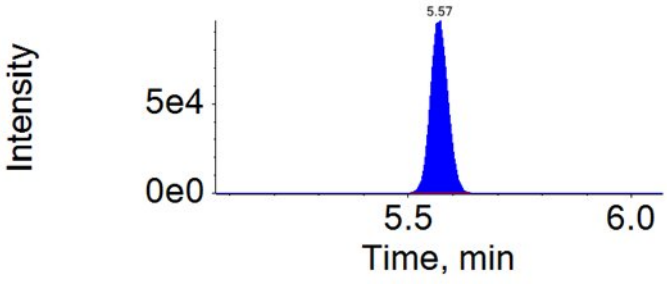
Extraction Standard: E13C2-8:2-FTS	Injection Standard: 13C2-PFDA
529.0 / 81.0	515.0 / 470.0
	

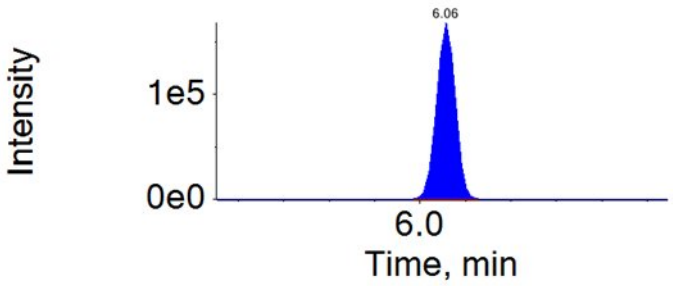
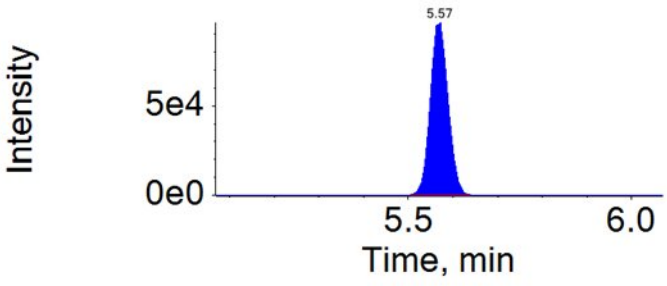
Extraction Standard: E13C8-PFOSA	Injection Standard: 13C2-PFDA
506.0 / 78.0	515.0 / 470.0
	

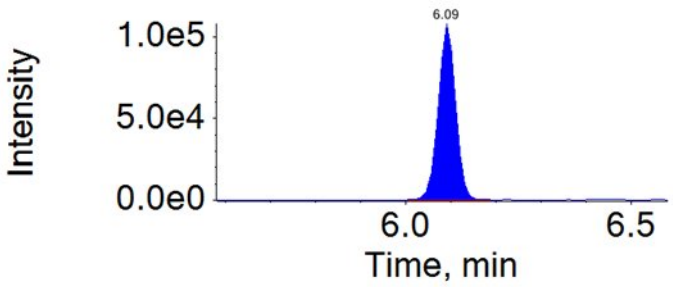
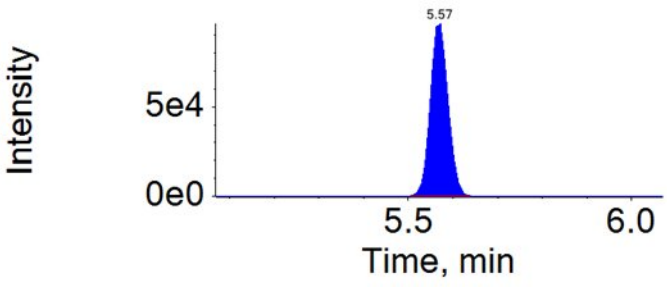
Extraction Standard: Ed3-NMeFOSAA	Injection Standard: 13C2-PFDA
573.0 / 419.0	515.0 / 470.0
	

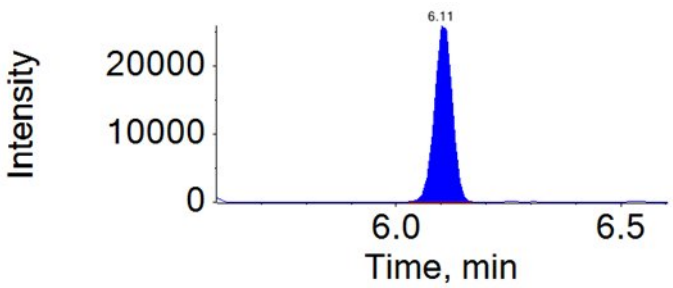
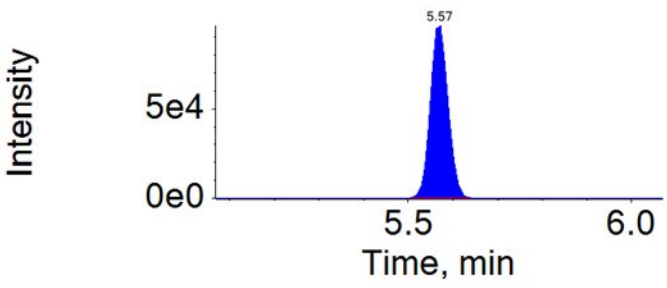
Extraction Standard: E13C7-PFUnDA	Injection Standard: 13C2-PFDA
570.0 / 525.0	515.0 / 470.0
	

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

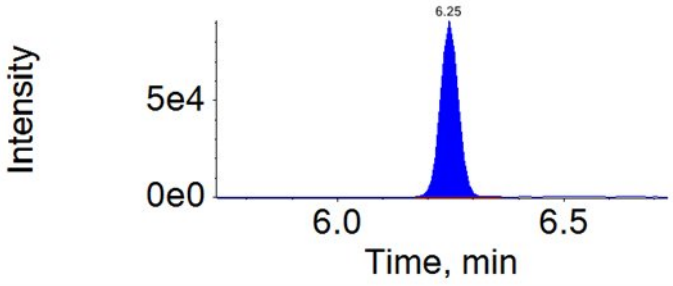
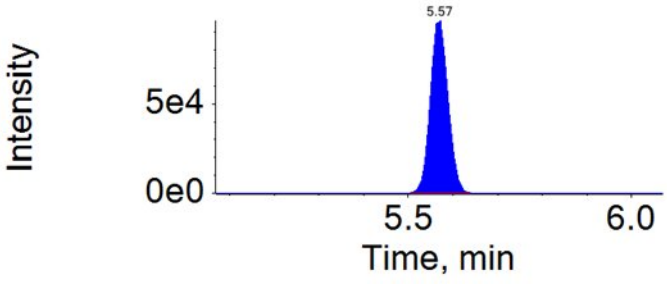
Extraction Standard: Ed5-NEtFOSAA	Injection Standard: 13C2-PFDA
589.0 / 419.0	515.0 / 470.0
	

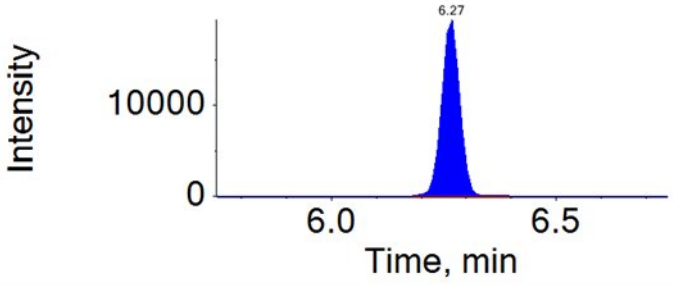
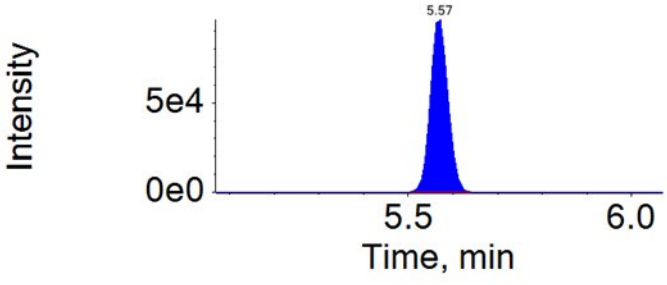
Extraction Standard: E13C2-PFDoDA	Injection Standard: 13C2-PFDA
615.0 / 570.0	515.0 / 470.0
	

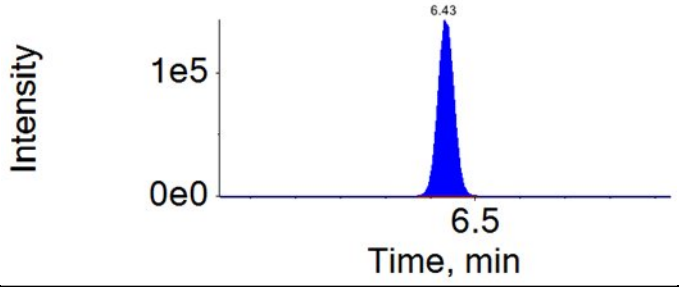
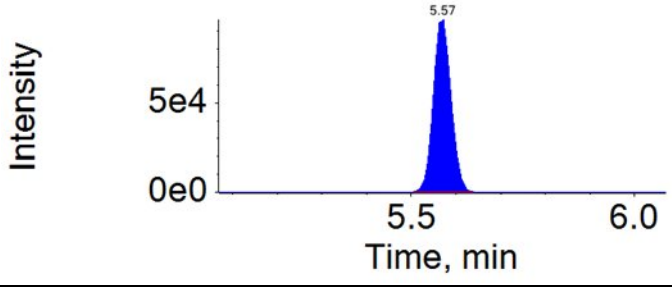
Extraction Standard: Ed7-NMePFOSAE	Injection Standard: 13C2-PFDA
623.0 / 59.0	515.0 / 470.0
	

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
	

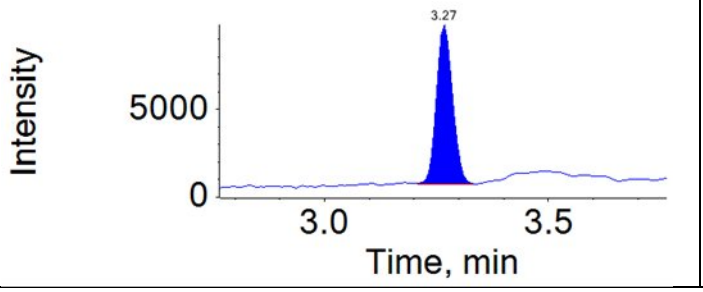
Extraction Standard: E13C2-PFTeDA	Injection Standard: 13C2-PFDA
715.0 / 670.0	515.0 / 470.0
	

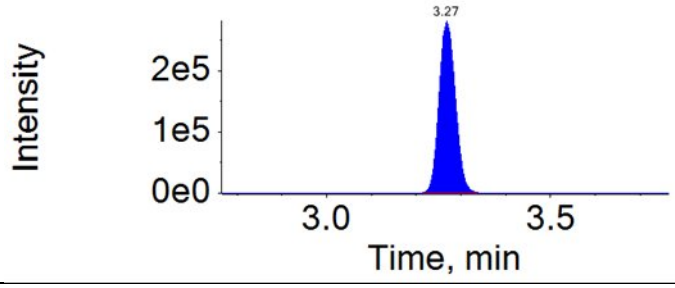
APPROVED
By MCD at 6:34 pm, 11/12/18

REVIEWED
By HMK at 10:54 am, 11/13/18

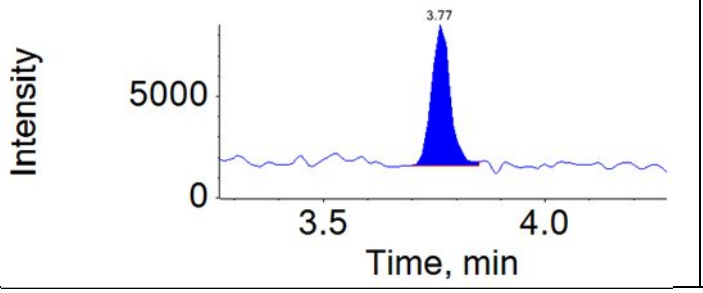
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

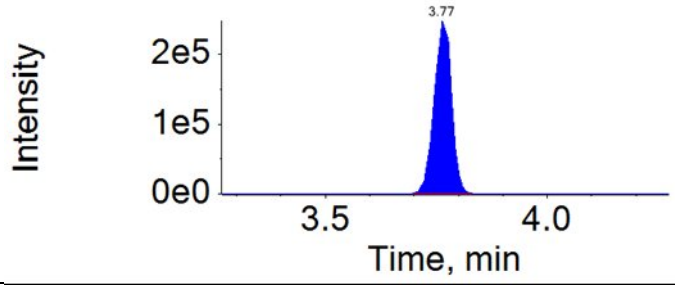
Analyte: PFBA	Extraction Standard: 13C4-PFBA
213.0 / 169.0	217.0 / 172.0



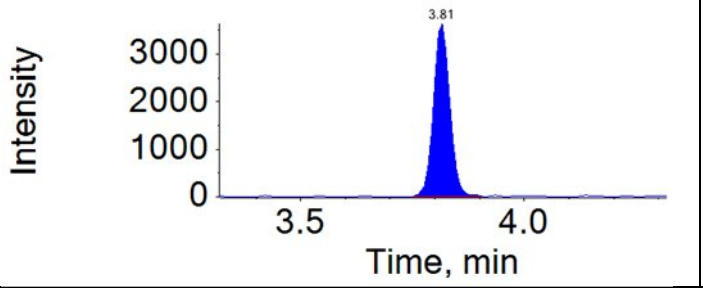


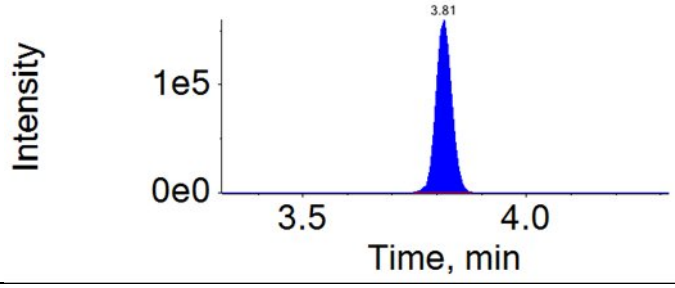
Analyte: PFPeA	Extraction Standard: 13C5-PFPeA
263.0 / 219.0	268.0 / 223.0



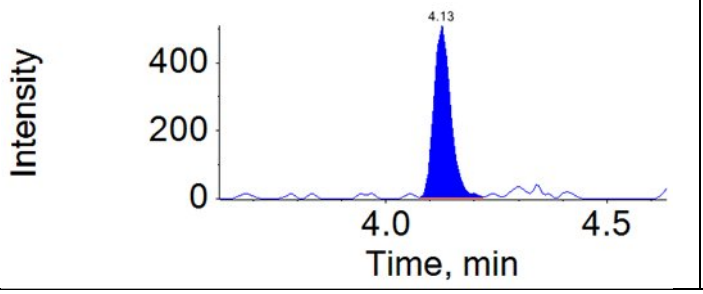


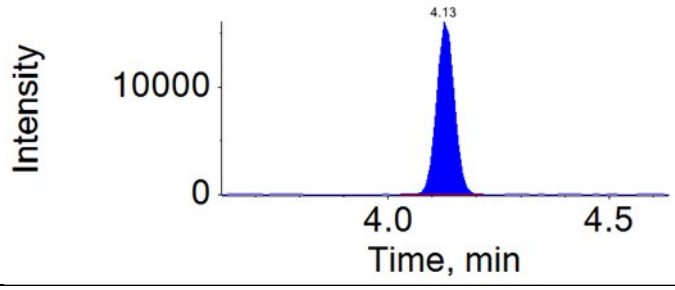
Analyte: PFBS	Extraction Standard: 13C3-PFBS
299.0 / 80.0	302.0 / 80.0





Analyte: 4:2-FTS	Extraction Standard: 13C2-4:2-FTS
327.0 / 307.0	329.0 / 81.0



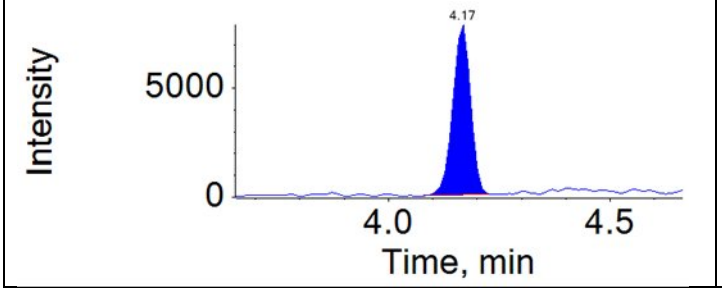


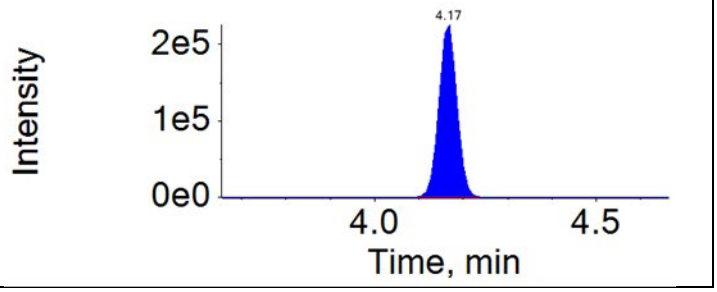
APPROVED
By MCD at 6:34 pm, 11/12/18

REVIEWED
By HMK at 10:54 am, 11/13/18

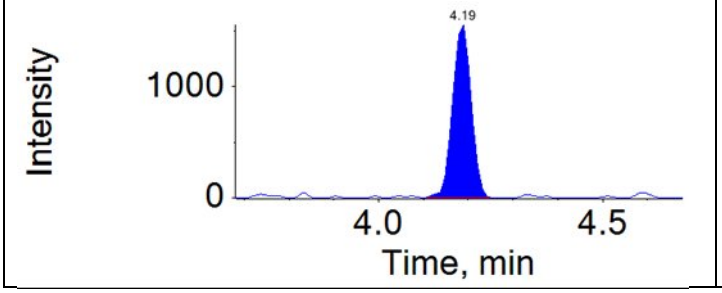
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

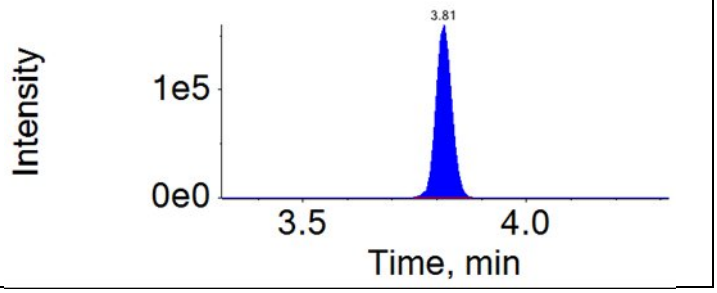
Analyte: PFHxA	Extraction Standard: 13C5-PFHxA
313.0 / 269.0	318.0 / 273.0



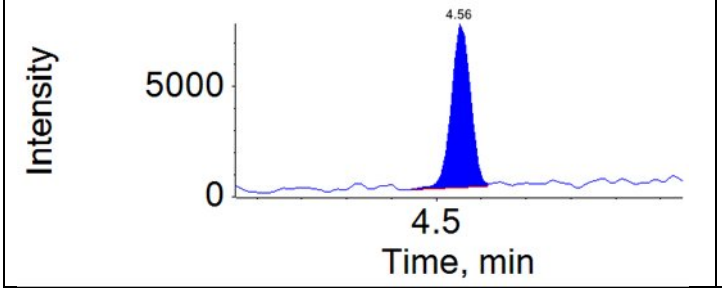


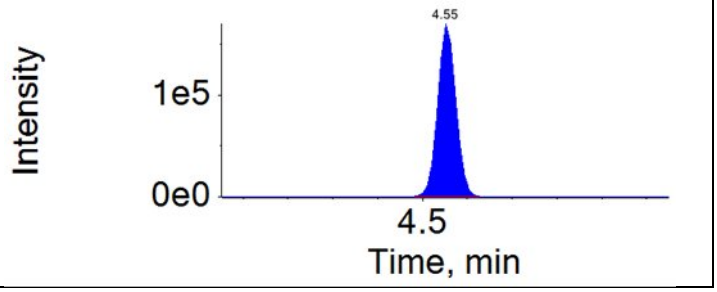
Analyte: PFPeS	Extraction Standard: 13C3-PFBS
349.0 / 80.0	302.0 / 80.0



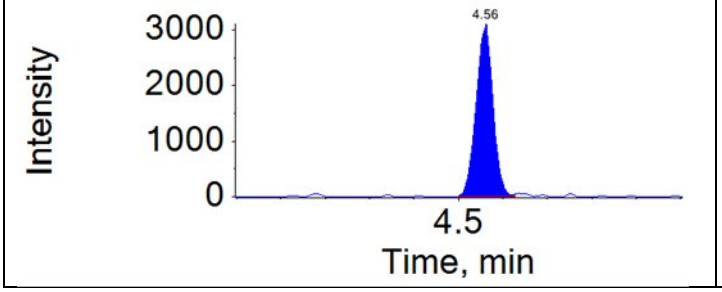


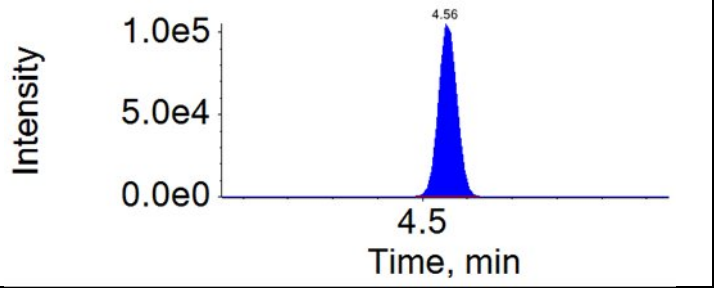
Analyte: PFHpA	Extraction Standard: 13C4-PFHpA
363.0 / 319.0	367.0 / 322.0





Analyte: PFHxS	Extraction Standard: 13C3-PFHxS
399.0 / 80.0	402.0 / 80.0



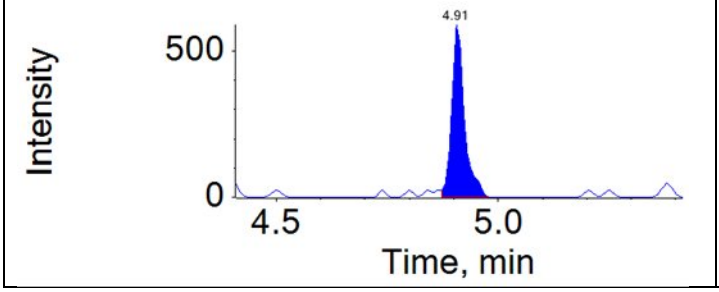


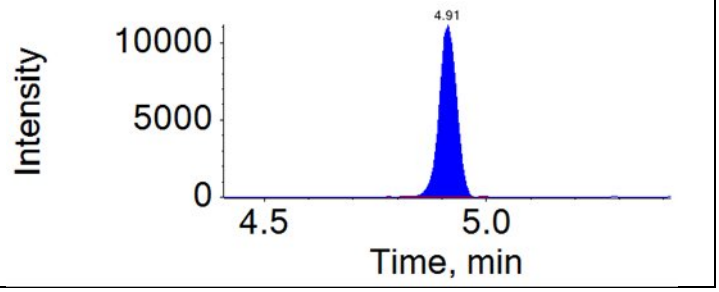
APPROVED
By MCD at 6:34 pm, 11/12/18

REVIEWED
By HMK at 10:54 am, 11/13/18

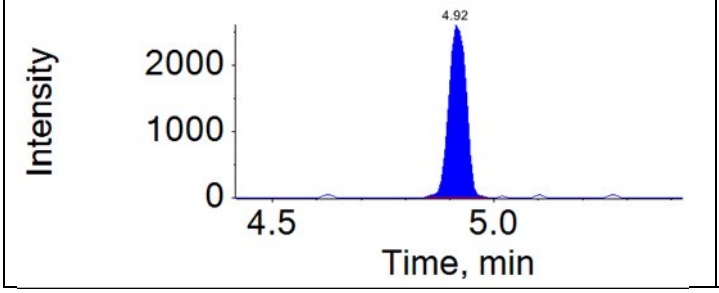
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

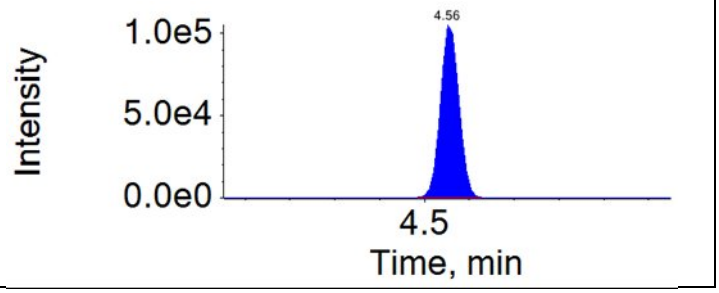
Analyte: 6:2-FTS	Extraction Standard: 13C2-6:2-FTS
427.0 / 407.0	429.0 / 81.0



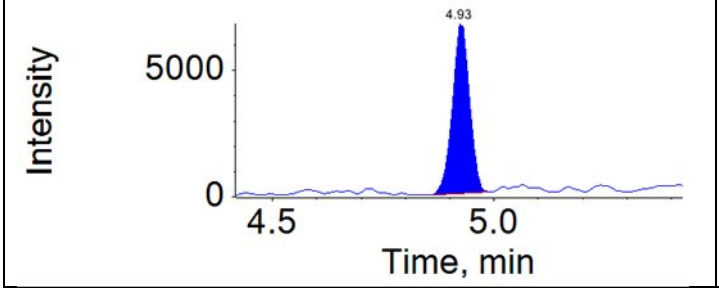


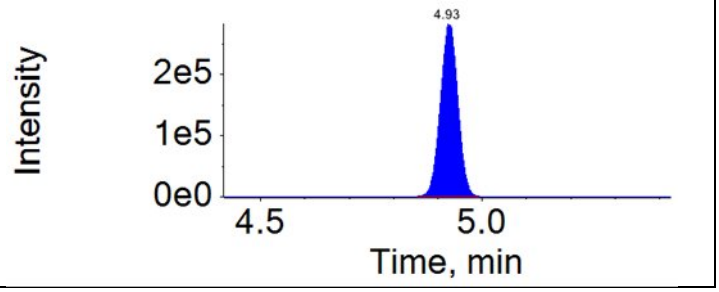
Analyte: PFHpS	Extraction Standard: 13C3-PFHxS
449.0 / 80.0	402.0 / 80.0



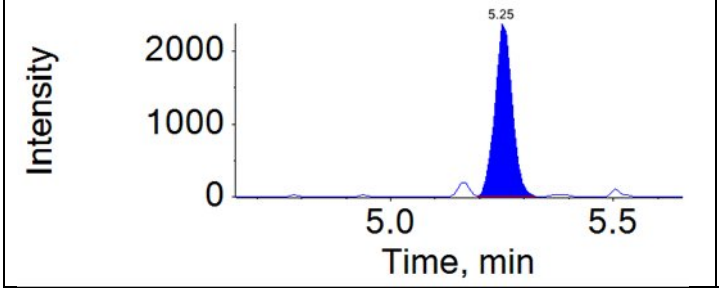


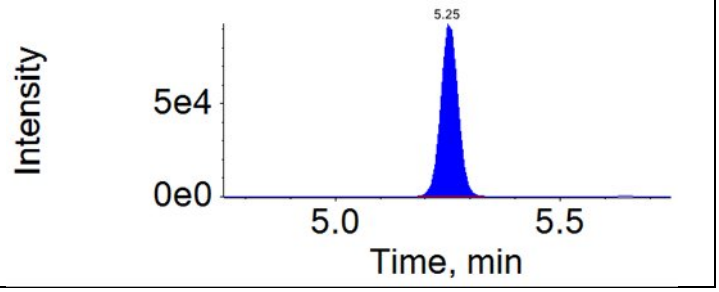
Analyte: PFOA	Extraction Standard: 13C8-PFOA
413.0 / 369.0	421.0 / 376.0





Analyte: PFOS	Extraction Standard: 13C8-PFOS
499.0 / 80.0	507.0 / 80.0



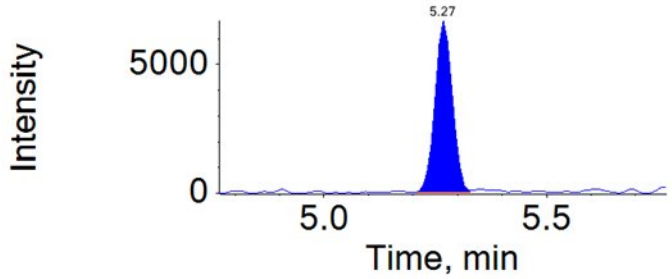


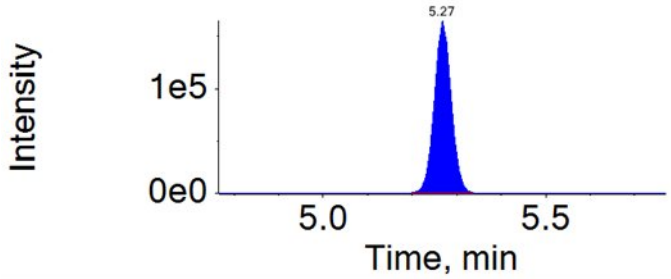
APPROVED
By MCD at 6:34 pm, 11/12/18

REVIEWED
By HMK at 10:54 am, 11/13/18

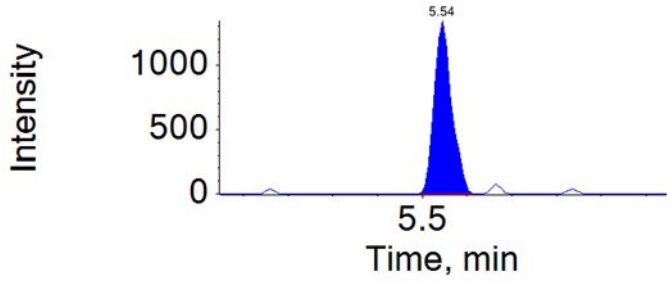
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

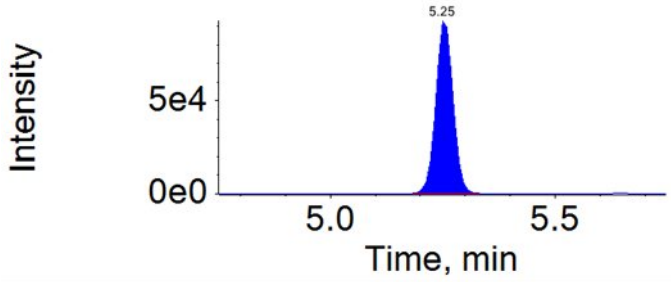
Analyte: PFNA	Extraction Standard: 13C9-PFNA
463.0 / 419.0	472.0 / 427.0



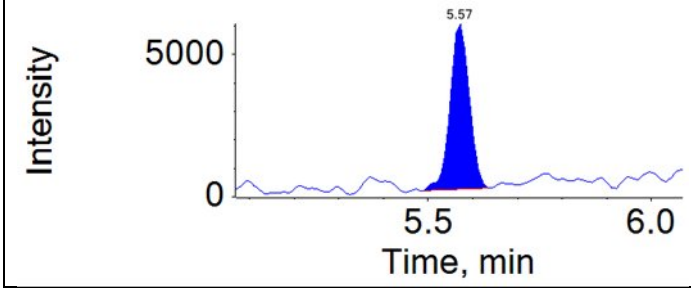


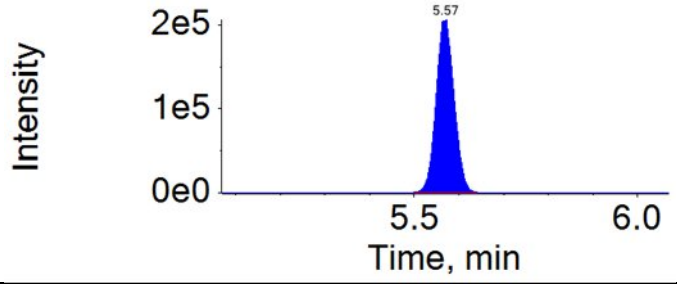
Analyte: PFNS	Extraction Standard: 13C8-PFOS
549.0 / 80.0	507.0 / 80.0



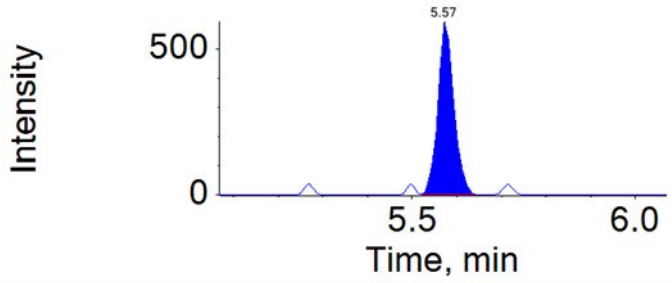


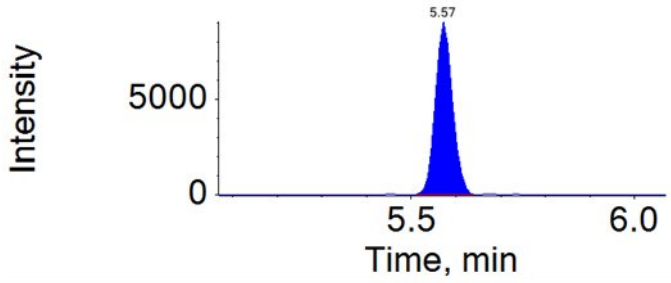
Analyte: PFDA	Extraction Standard: 13C6-PFDA
513.0 / 469.0	519.0 / 474.0





Analyte: 8:2-FTS	Extraction Standard: 13C2-8:2-FTS
527.0 / 507.0	529.0 / 81.0



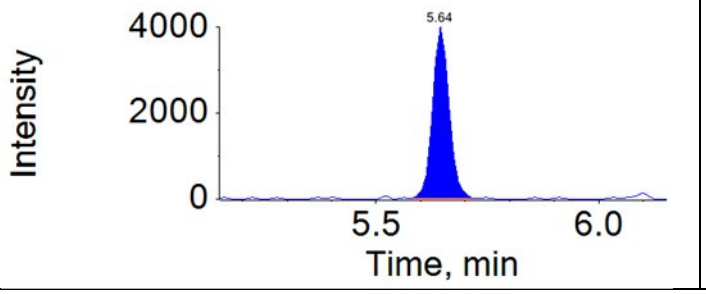


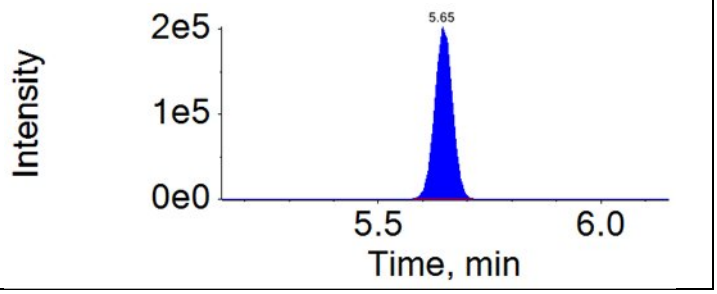
APPROVED
By MCD at 6:34 pm, 11/12/18

REVIEWED
By HMK at 10:54 am, 11/13/18

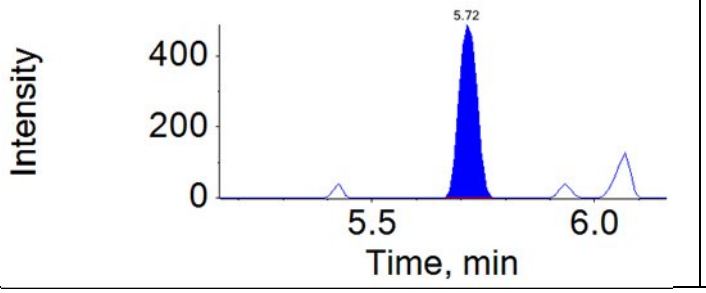
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

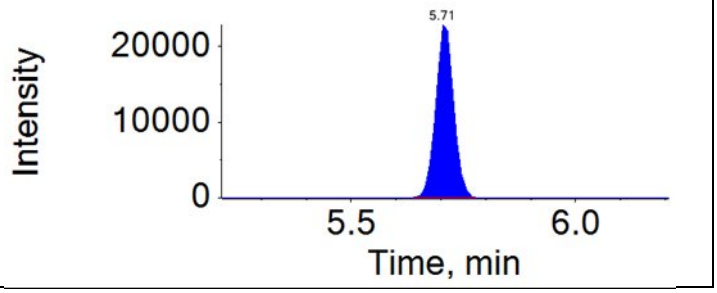
Analyte: PFOSA	Extraction Standard: 13C8-PFOSA
498.0 / 78.0	506.0 / 78.0



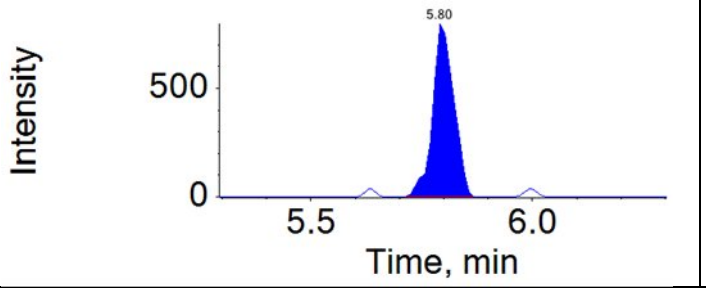


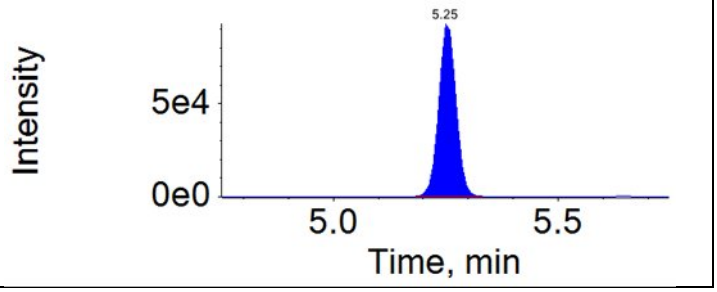
Analyte: NMeFOSAA	Extraction Standard: d3-NMeFOSAA
570.0 / 419.0	573.0 / 419.0



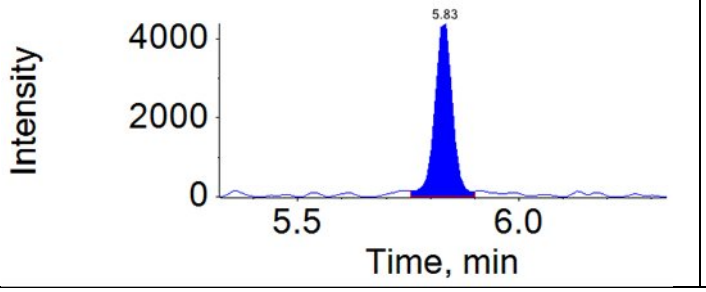


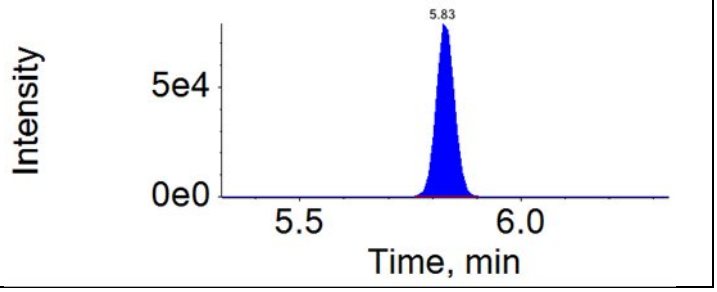
Analyte: PFDS	Extraction Standard: 13C8-PFOS
599.0 / 80.0	507.0 / 80.0





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



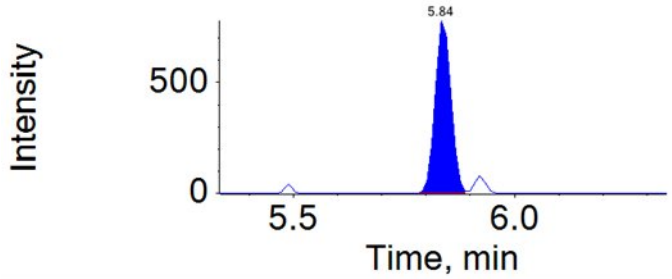


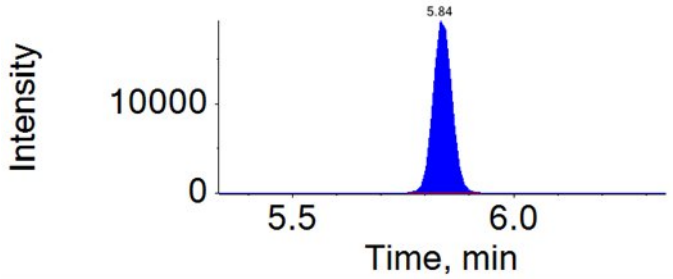
APPROVED
By MCD at 6:34 pm, 11/12/18

REVIEWED
By HMK at 10:54 am, 11/13/18

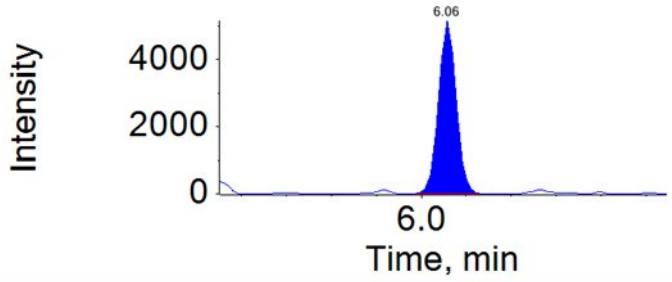
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

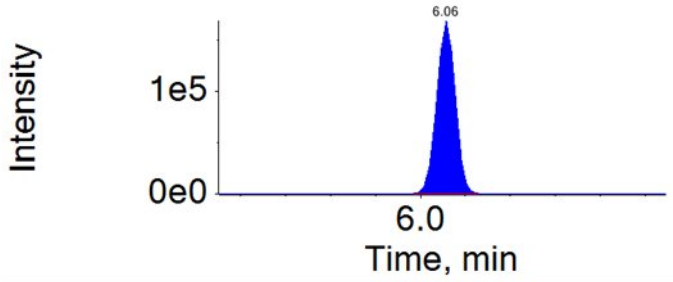
Analyte: NEtFOSAA	Extraction Standard: d5-NEtFOSAA
584.0 / 419.0	589.0 / 419.0



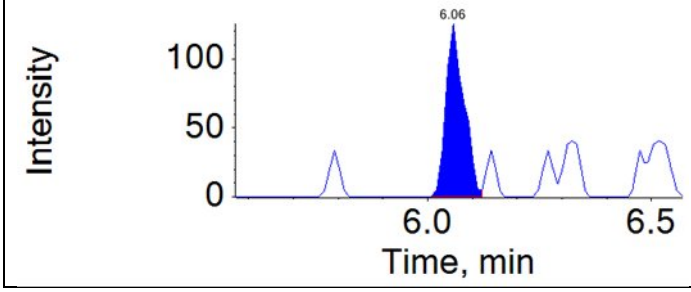


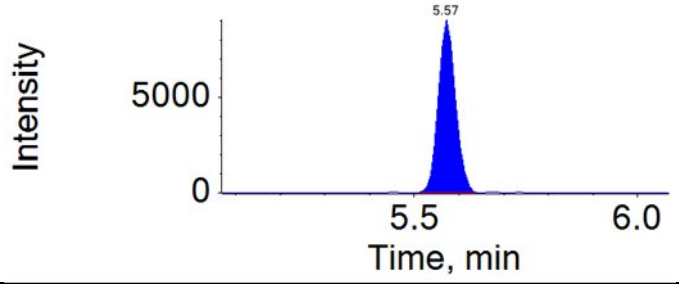
Analyte: PFDoDA	Extraction Standard: 13C2-PFDoDA
613.0 / 569.0	615.0 / 570.0



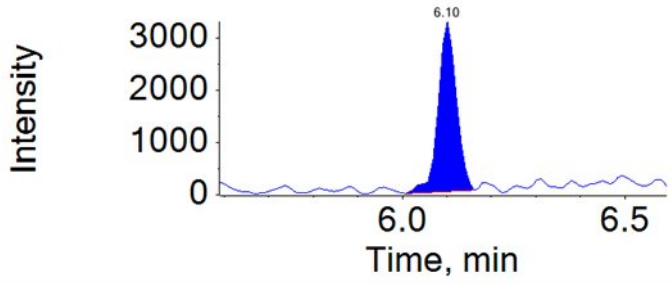


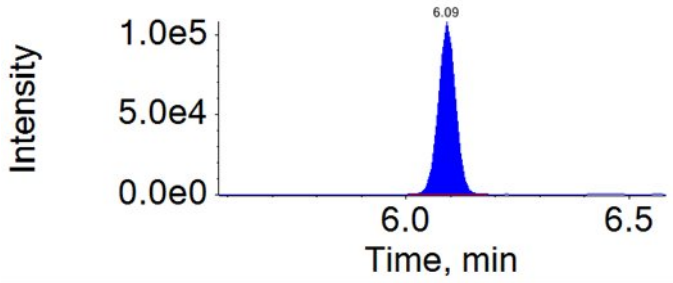
Analyte: 10:2-FTS	Extraction Standard: 13C2-8:2-FTS
627.0 / 607.0	529.0 / 81.0





Analyte: NMePFOSAE	Extraction Standard: d7-NMePFOSAE
616.0 / 59.0	623.0 / 59.0



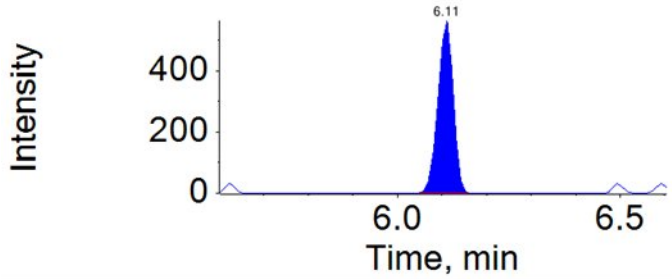


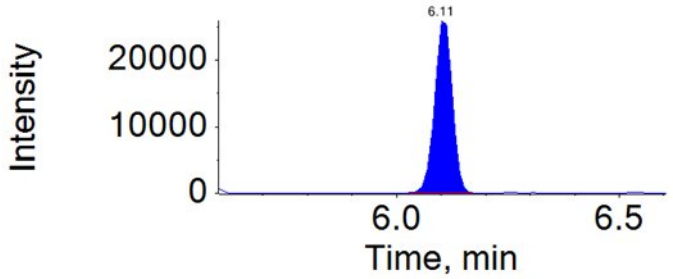
APPROVED
By MCD at 6:34 pm, 11/12/18

REVIEWED
By HMK at 10:54 am, 11/13/18

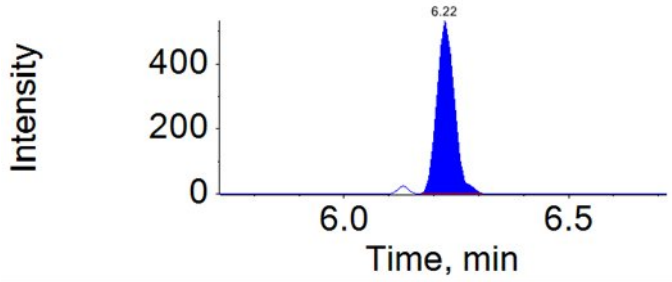
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

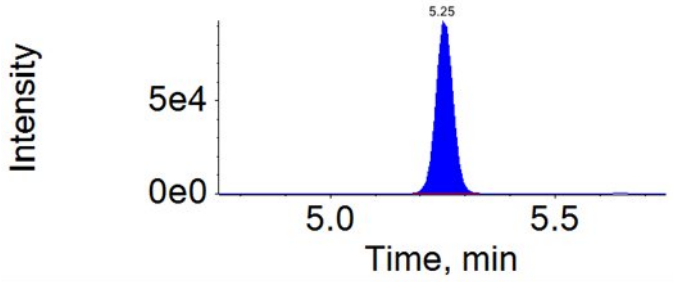
Analyte: NMePFOSA	Extraction Standard: d3-NMePFOSA
512.0 / 169.0	515.0 / 169.0



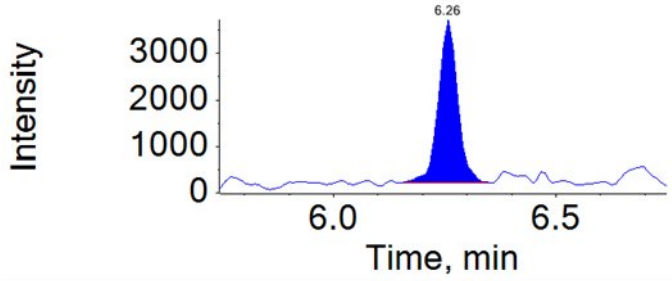


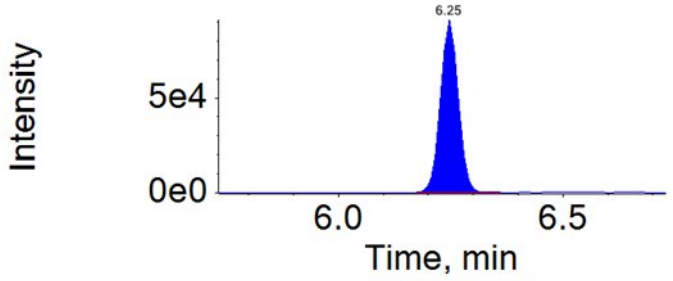
Analyte: PFDoS	Extraction Standard: 13C8-PFOS
699.0 / 80.0	507.0 / 80.0



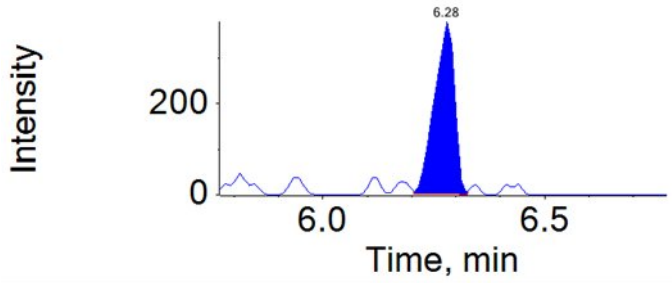


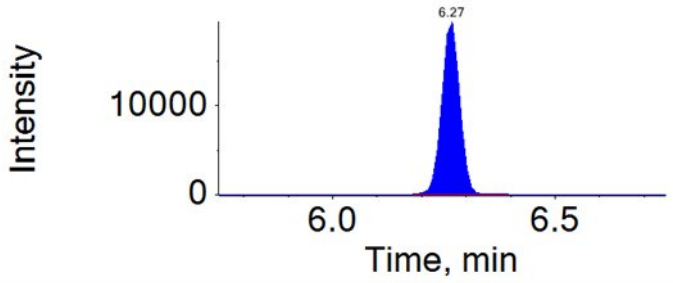
Analyte: NEtPFOSAE	Extraction Standard: d9-NEtPFOSAE
630.0 / 59.0	639.0 / 59.0





Analyte: NEtPFOSA	Extraction Standard: d5-NEtPFOSA
526.0 / 169.0	531.0 / 169.0



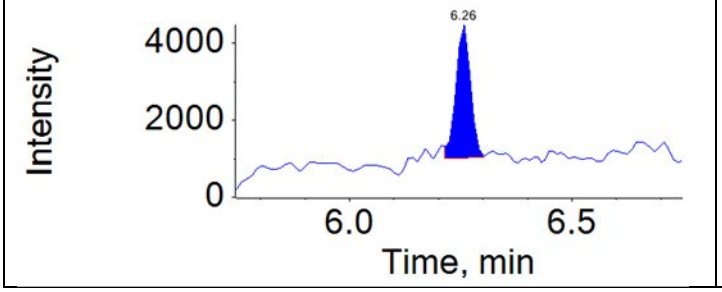


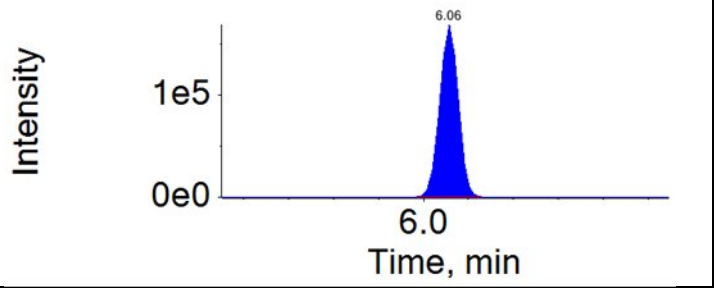
APPROVED
By MCD at 6:34 pm, 11/12/18

REVIEWED
By HMK at 10:54 am, 11/13/18

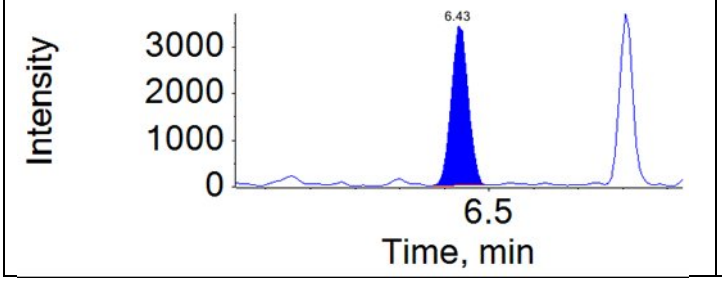
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

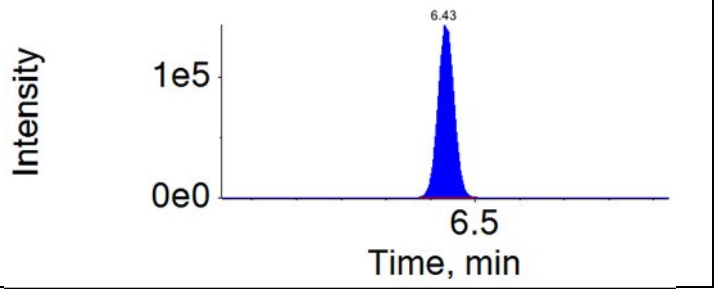
Analyte: PFTrDA	Extraction Standard: 13C2-PFDoDA
663.0 / 619.0	615.0 / 570.0



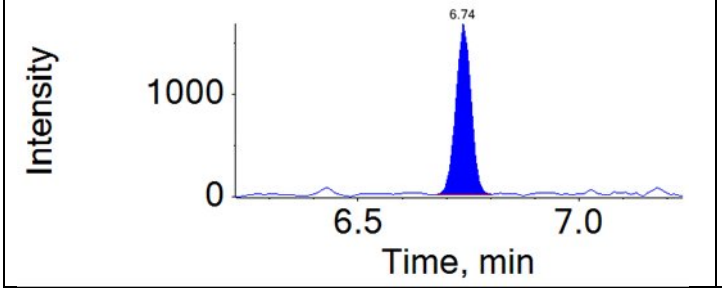


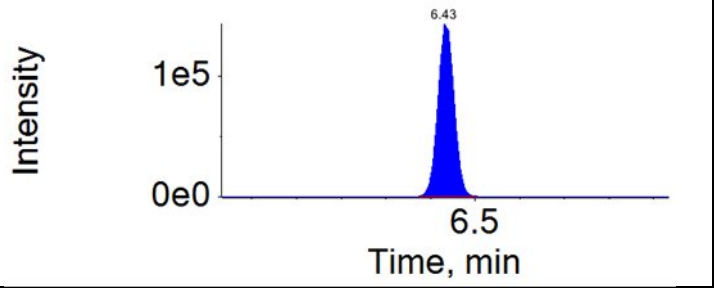
Analyte: PFTeDA	Extraction Standard: 13C2-PFTeDA
713.0 / 669.0	715.0 / 670.0



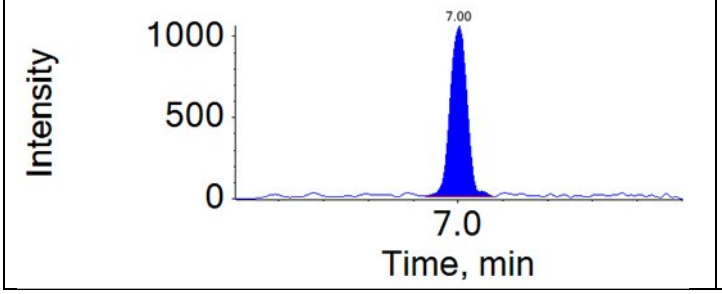


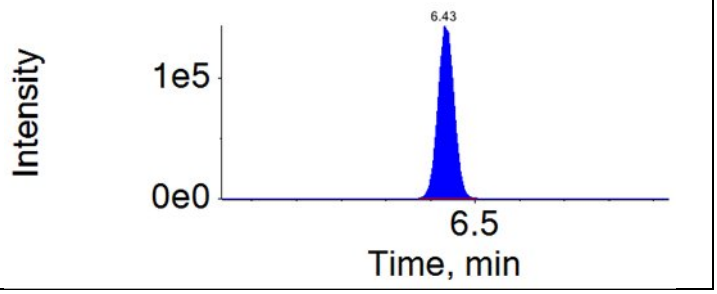
Analyte: PFHxDA	Extraction Standard: 13C2-PFTeDA
813.0 / 769.0	715.0 / 670.0





Analyte: PFODA	Extraction Standard: 13C2-PFTeDA
913.0 / 869.0	715.0 / 670.0



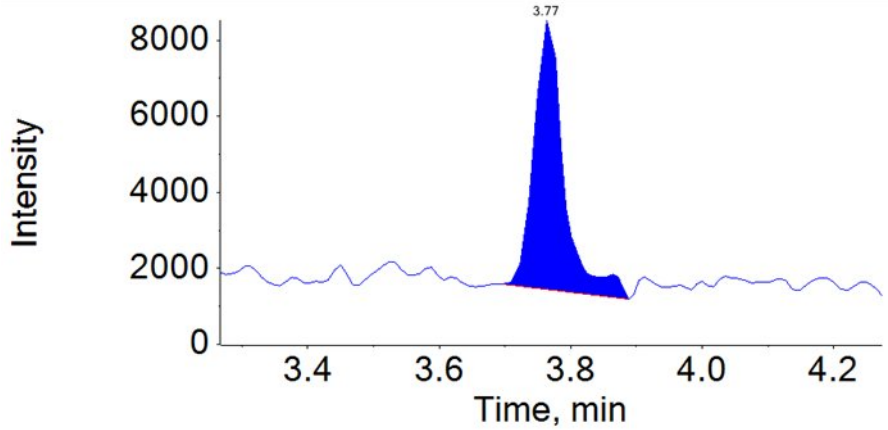


APPROVED
By MCD at 6:34 pm, 11/12/18

REVIEWED
By HMK at 10:54 am, 11/13/18

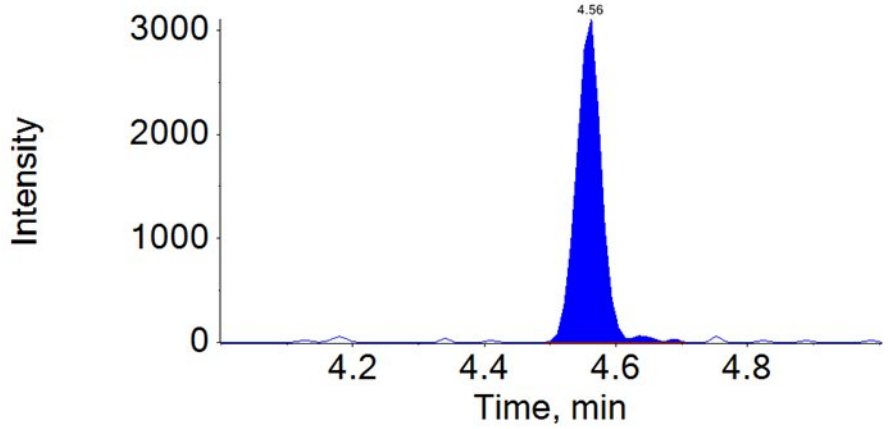
Results Table Name: 18NOV12DCAL
Results Table Date: 11/12/2018 6:23:42 PM
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

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



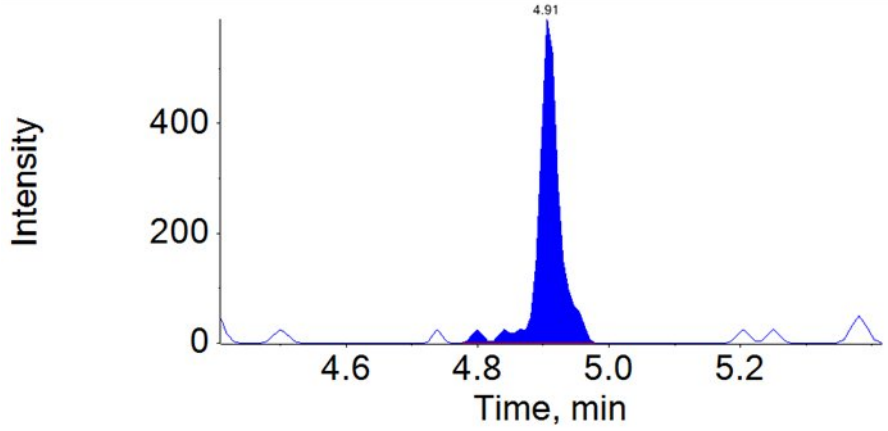
Integration Comment: incorrect integration

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



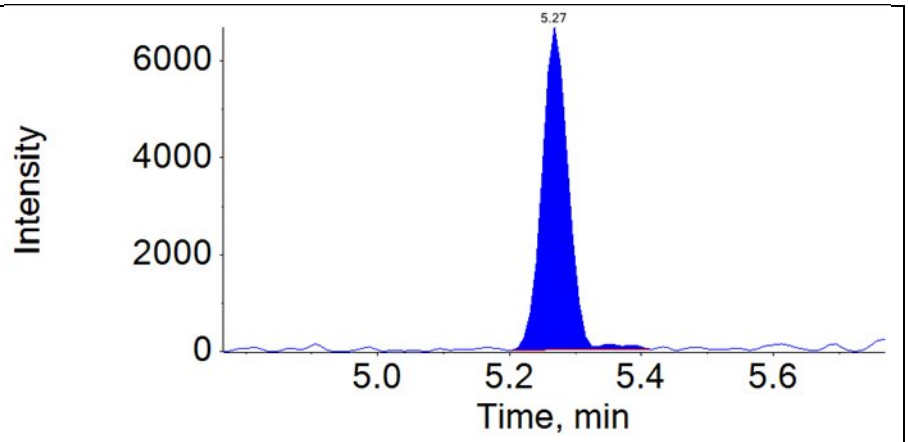
Integration Comment: incorrect integration

APPROVED
By MCD at 6:34 pm, 11/12/18

REVIEWED
By HMK at 10:54 am, 11/13/18

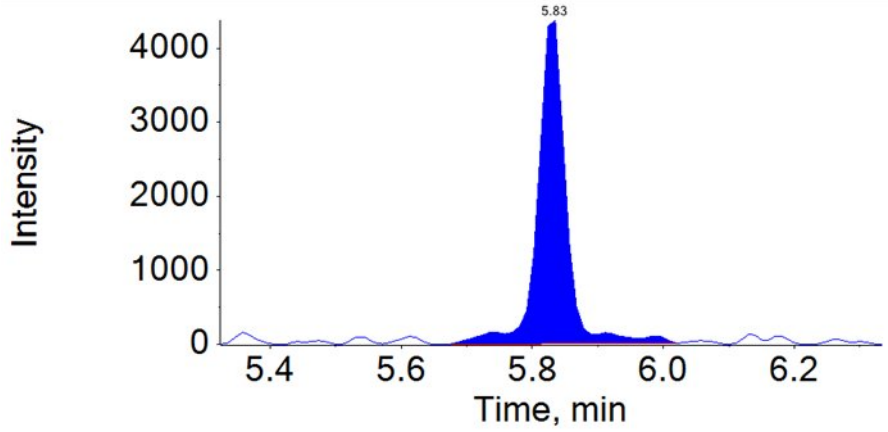
Results Table Name: 18NOV12DCAL
Results Table Date: 11/12/2018 6:23:42 PM
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

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



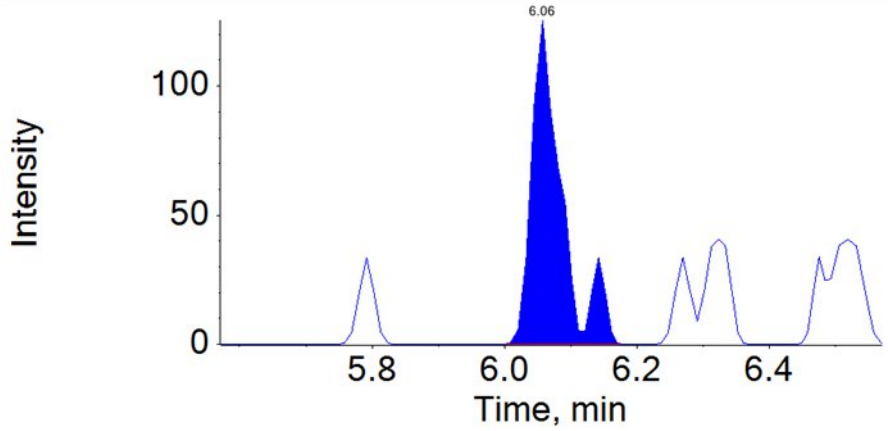
Integration Comment: incorrect integration

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



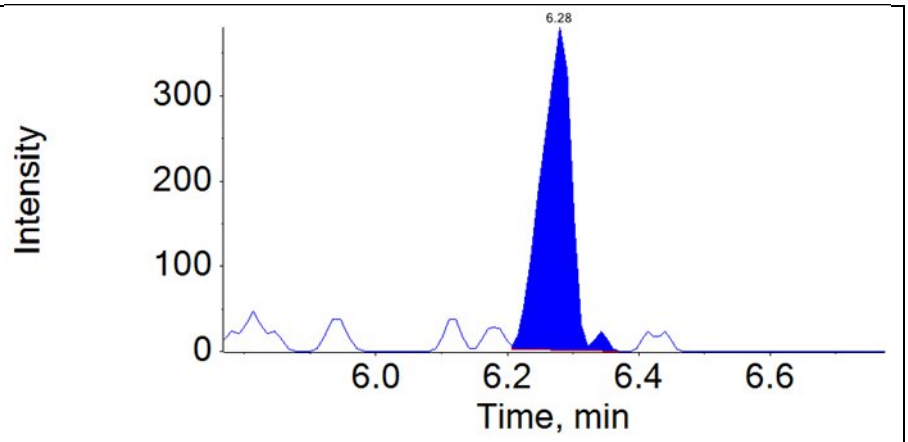
Integration Comment: incorrect integration

APPROVED
By MCD at 6:34 pm, 11/12/18

REVIEWED
By HMK at 10:54 am, 11/13/18

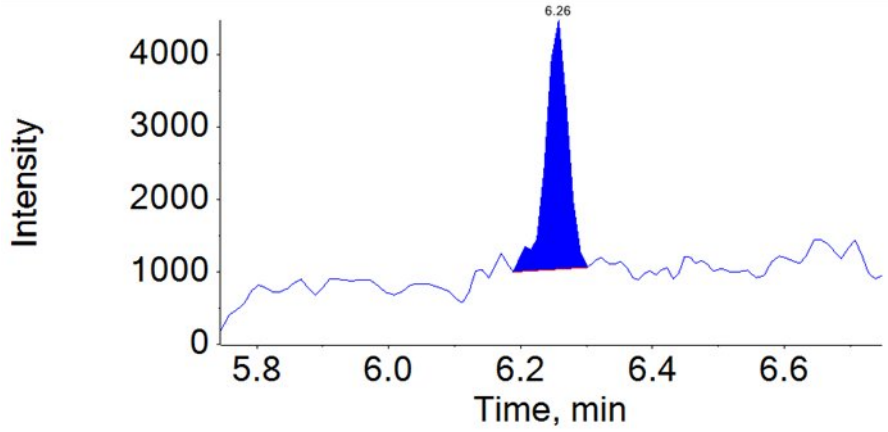
Results Table Name: 18NOV12DCAL
Results Table Date: 11/12/2018 6:23:42 PM
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

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



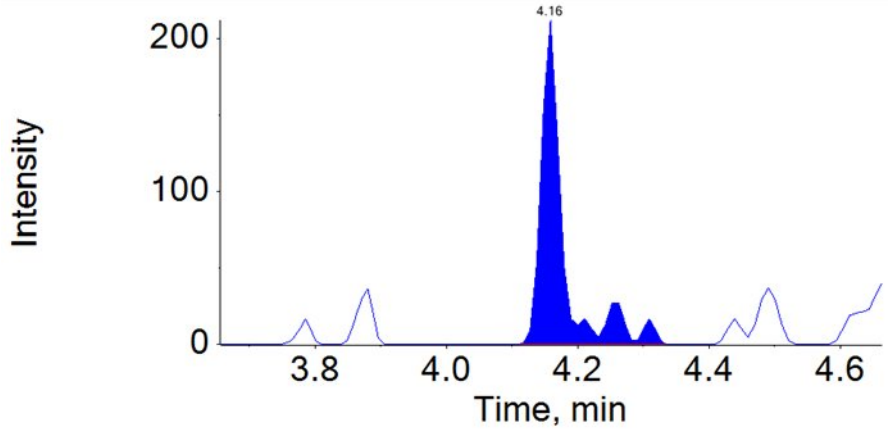
Integration Comment: incorrect integration

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



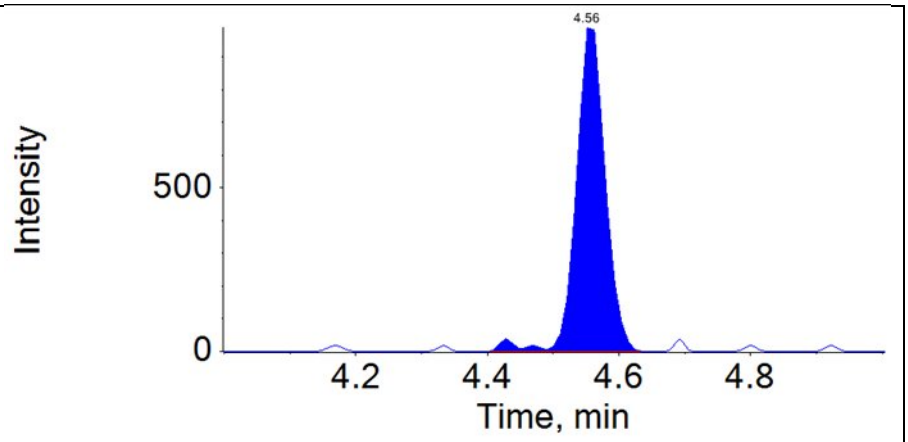
Integration Comment: incorrect integration

APPROVED
By MCD at 6:34 pm, 11/12/18

REVIEWED
By HMK at 10:54 am, 11/13/18

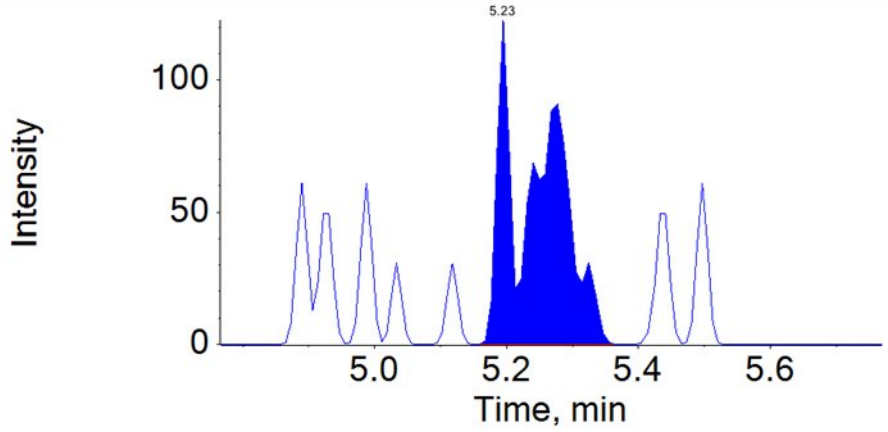
Results Table Name: 18NOV12DCAL
Results Table Date: 11/12/2018 6:23:42 PM
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

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



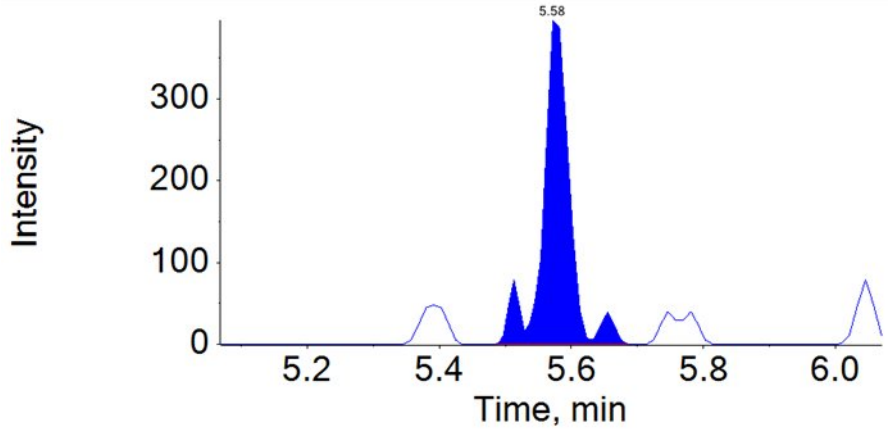
Integration Comment: incorrect integration

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

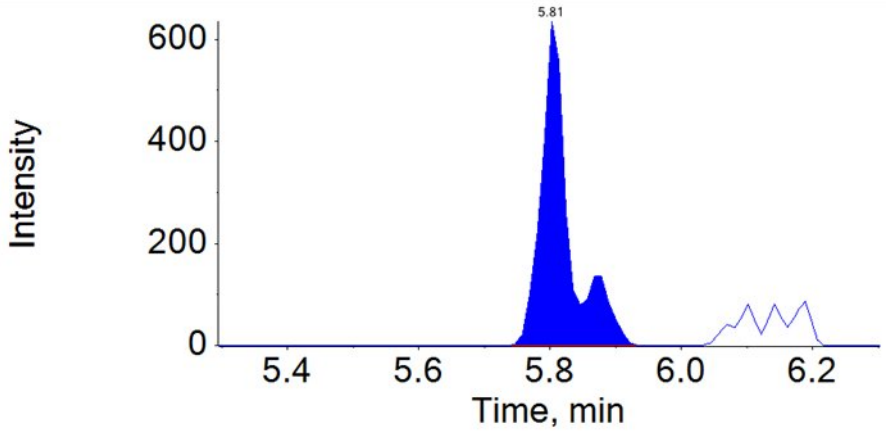


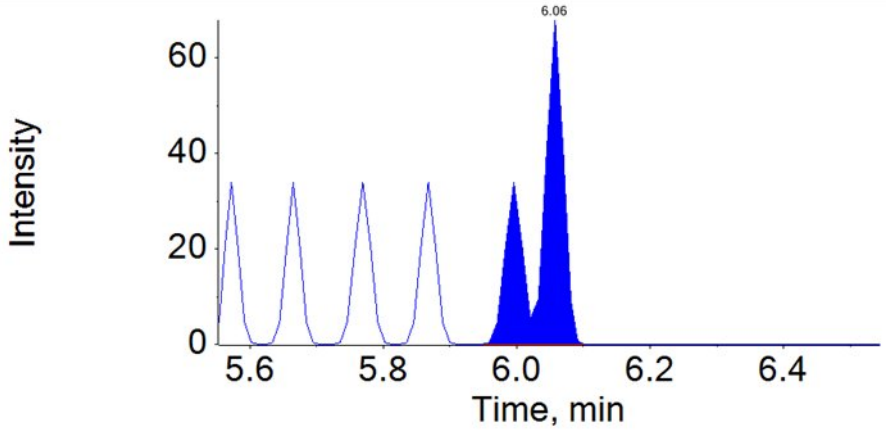
Integration Comment: incorrect integration

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

Ion Ratio Report

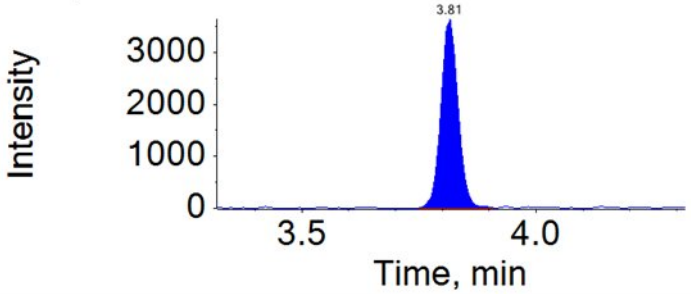
Sample Name: MDL **Instrument Name:** LM27631 **File Name:** 18NOV12DCAL-41.wiff

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	

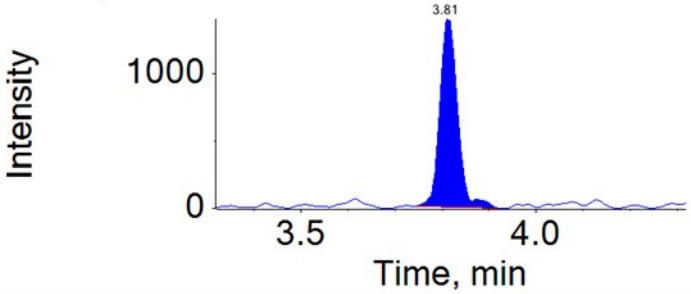
APPROVED
By MCD at 6:34 pm, 11/12/18

REVIEWED
By HMK at 10:54 am, 11/13/18

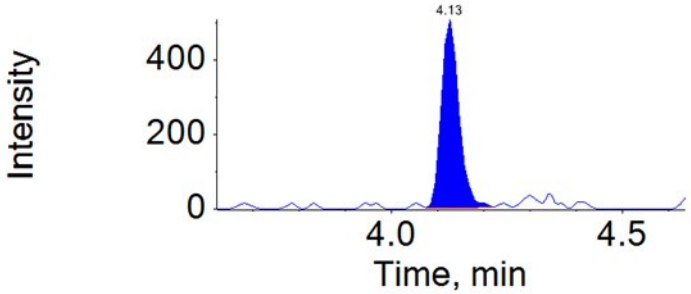
Component: PFBS
Primary Mass: 299.0 / 80.0



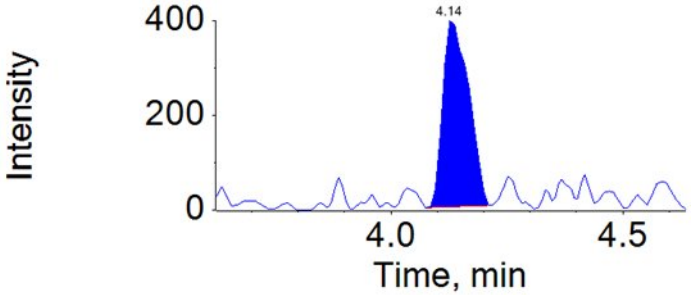
Component: PFBS_2
Secondary Mass: 299.0 / 99.0



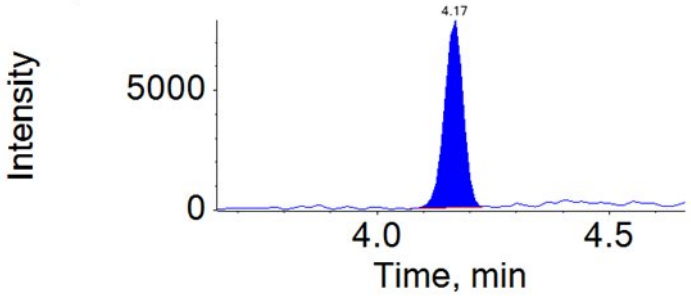
Component: 4:2-FTS
Primary Mass: 327.0 / 307.0



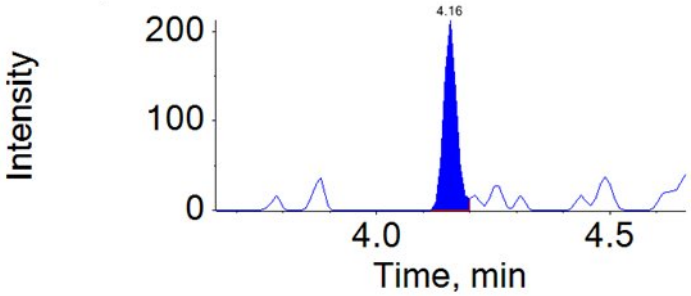
Component: 4:2 FTS_2
Secondary Mass: 327.0 / 81.0



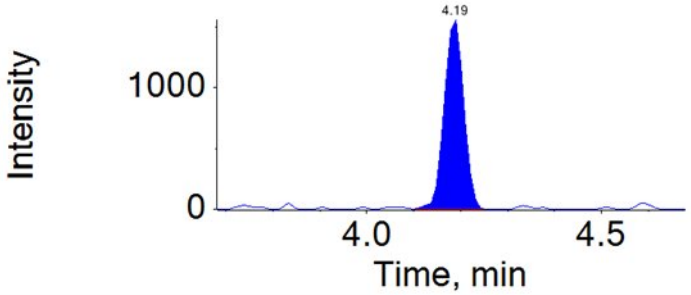
Component: PFHxA
Primary Mass: 313.0 / 269.0



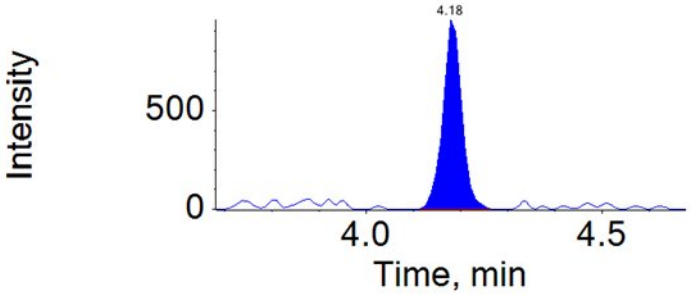
Component: PFHxA_2
Secondary Mass: 313.0 / 119.0



Component: PFPeS
Primary Mass: 349.0 / 80.0



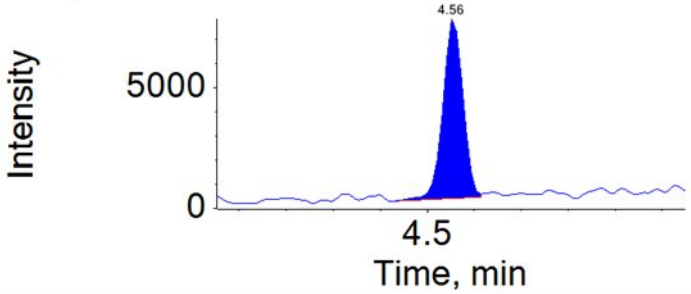
Component: PFPeS_2
Secondary Mass: 349.0 / 99.0



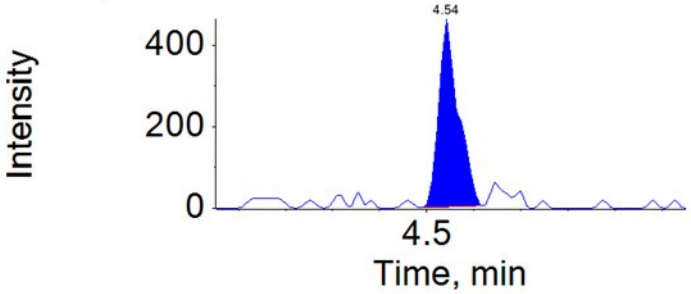
APPROVED
By MCD at 6:34 pm, 11/12/18

REVIEWED
By HMK at 10:54 am, 11/13/18

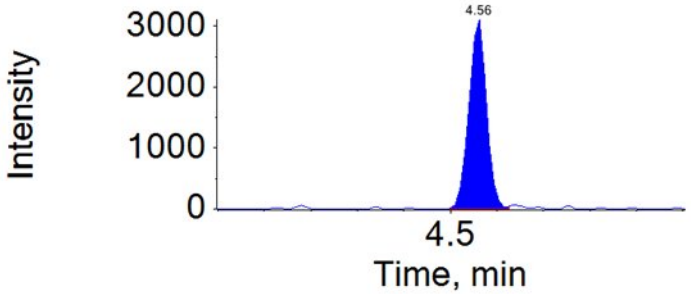
Component: PFHpA
Primary Mass: 363.0 / 319.0



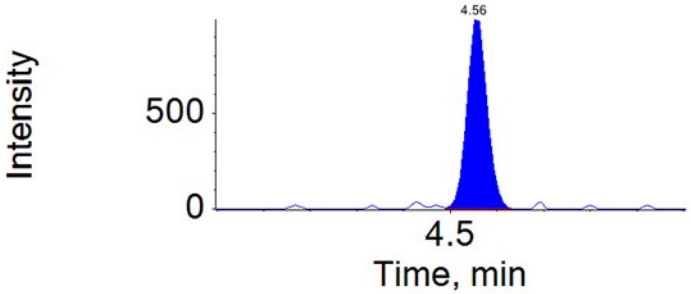
Component: PFHpA_2
Secondary Mass: 363.0 / 169.0



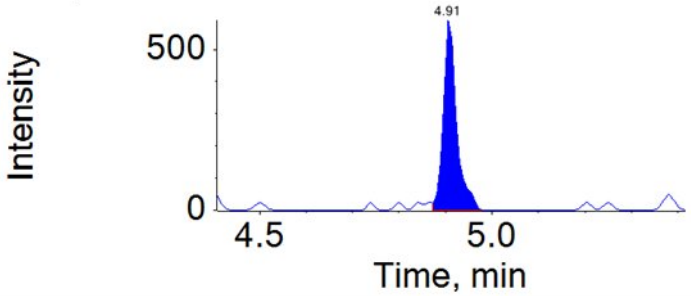
Component: PFHxS
Primary Mass: 399.0 / 80.0



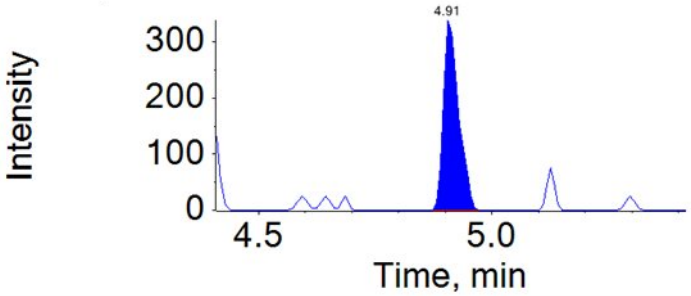
Component: PFHxS_2
Secondary Mass: 399.0 / 99.0



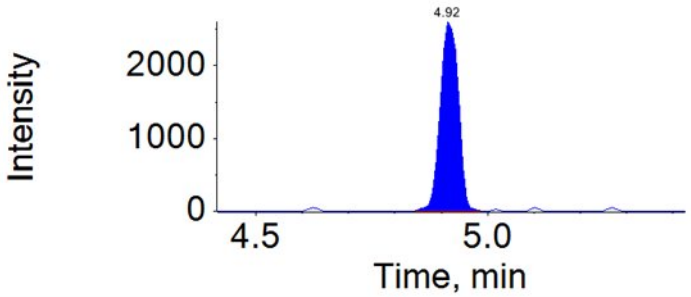
Component: 6:2-FTS
Primary Mass: 427.0 / 407.0



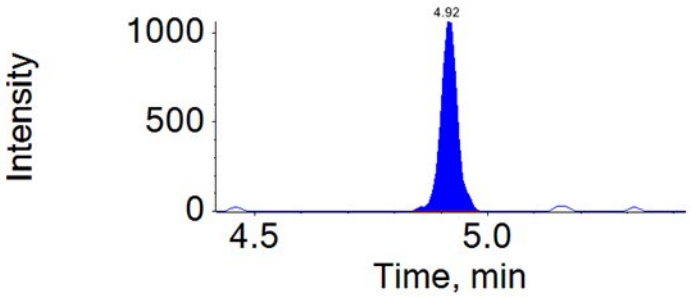
Component: 6:2 FTS_2
Secondary Mass: 427.0 / 81.0



Component: PFHpS
Primary Mass: 449.0 / 80.0



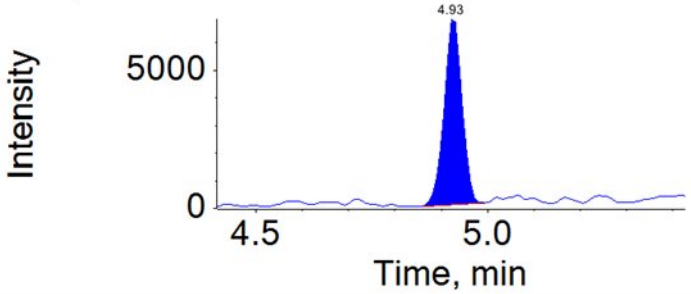
Component: PFHpS_2
Secondary Mass: 449.0 / 99.0



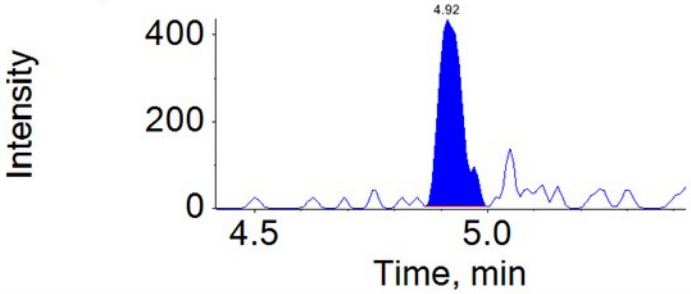
APPROVED
By MCD at 6:34 pm, 11/12/18

REVIEWED
By HMK at 10:54 am, 11/13/18

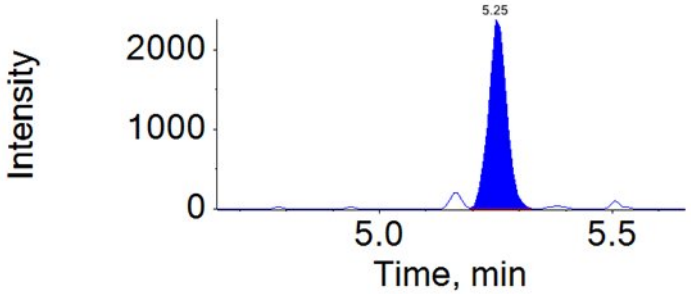
Component: PFOA
Primary Mass: 413.0 / 369.0



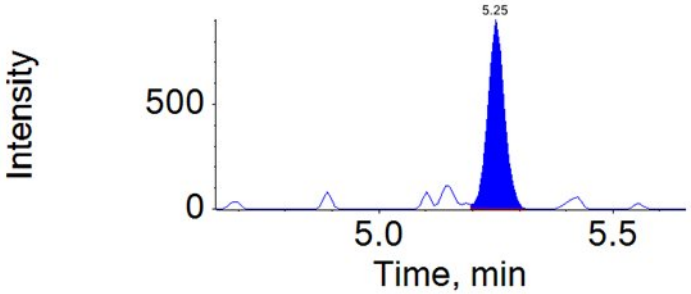
Component: PFOA_2
Secondary Mass: 413.0 / 169.0



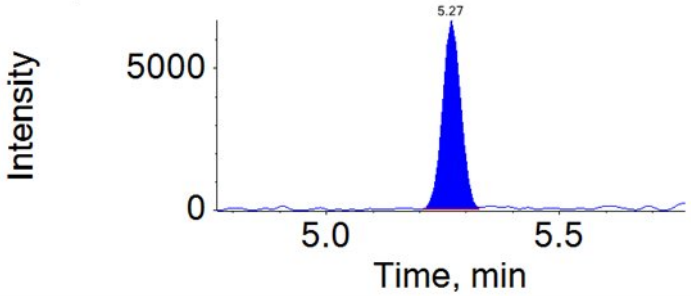
Component: PFOS
Primary Mass: 499.0 / 80.0



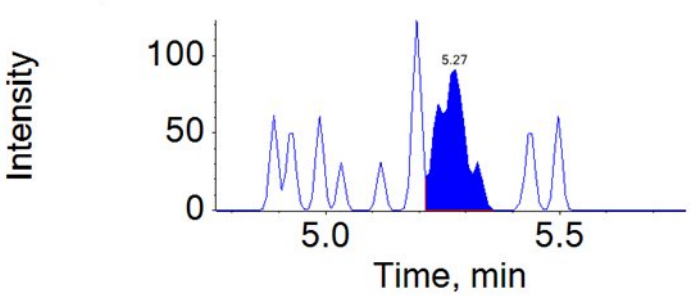
Component: PFOS_2
Secondary Mass: 499.0 / 99.0



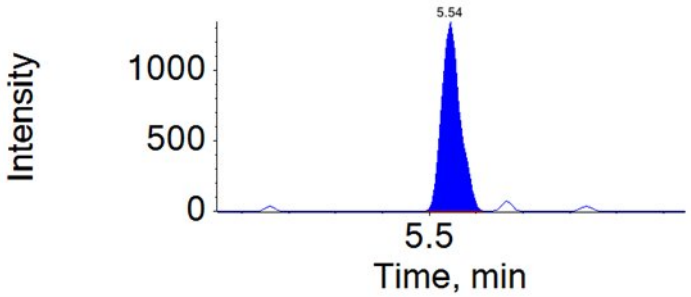
Component: PFNA
Primary Mass: 463.0 / 419.0



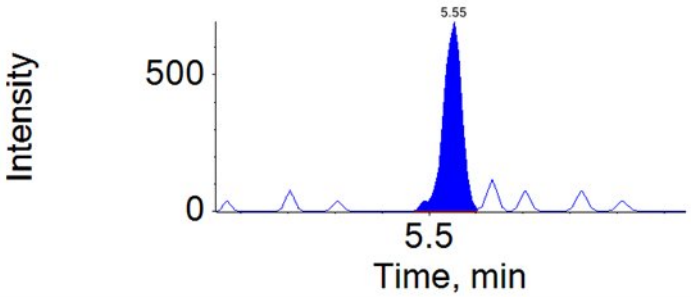
Component: PFNA_2
Secondary Mass: 463.0 / 169.0



Component: PFNS
Primary Mass: 549.0 / 80.0



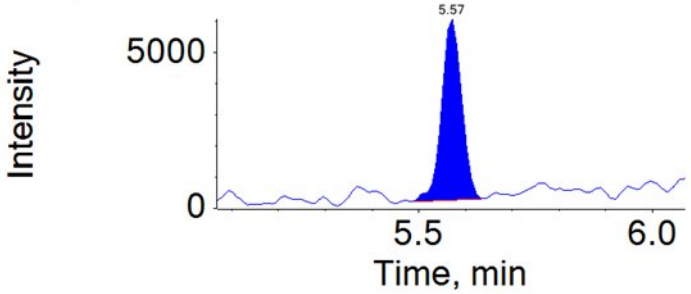
Component: PFNS_2
Secondary Mass: 549.0 / 99.0



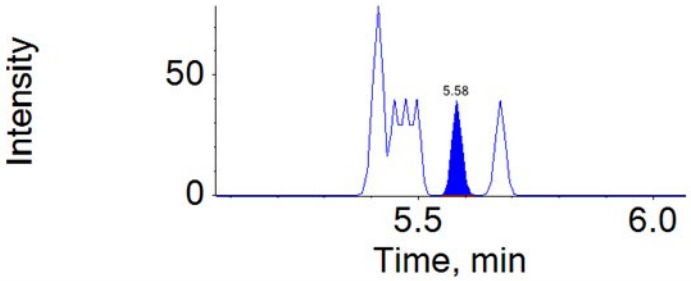
APPROVED
By MCD at 6:34 pm, 11/12/18

REVIEWED
By HMK at 10:54 am, 11/13/18

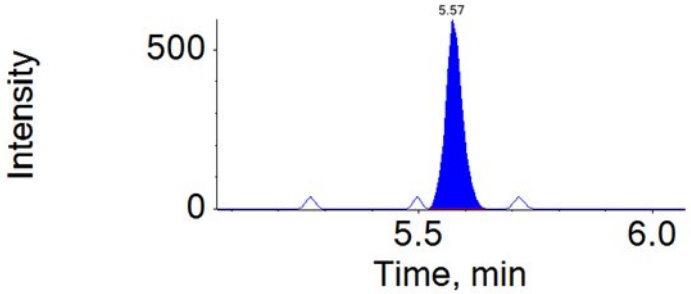
Component: PFDA
Primary Mass: 513.0 / 469.0



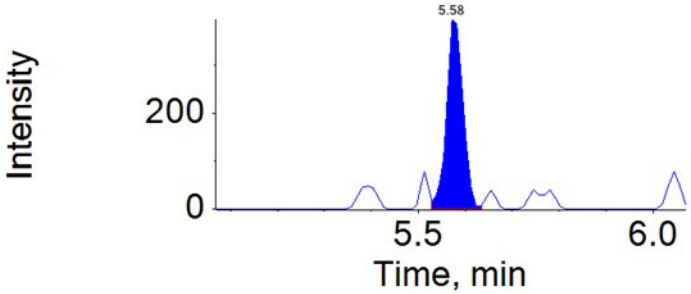
Component: PFDA_2
Secondary Mass: 513.0 / 169.0



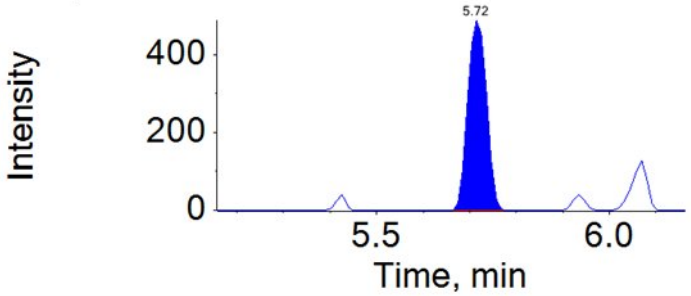
Component: 8:2-FTS
Primary Mass: 527.0 / 507.0



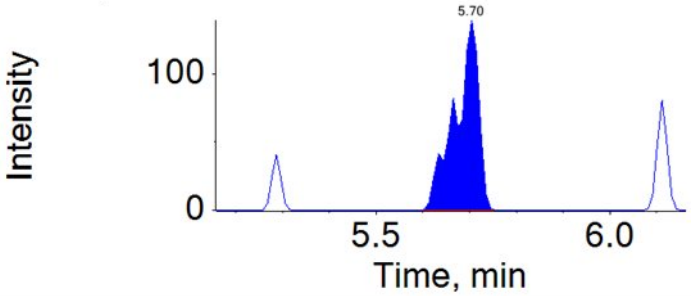
Component: 8:2 FTS_2
Secondary Mass: 527.0 / 81.0



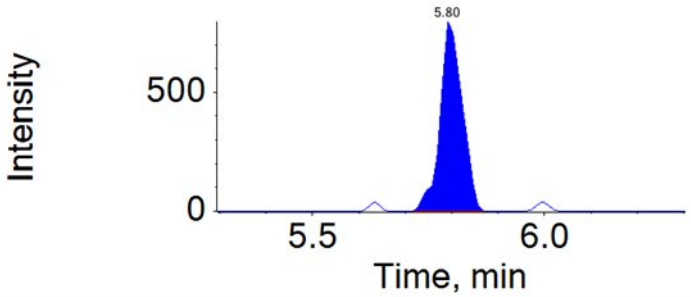
Component: NMeFOSAA
Primary Mass: 570.0 / 419.0



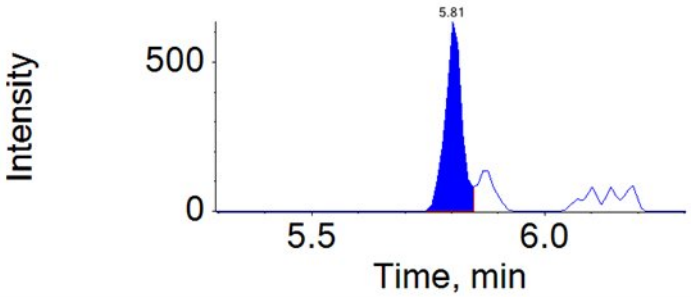
Component: NMeFOSAA_2
Secondary Mass: 570.0 / 483.0



Component: PFDS
Primary Mass: 599.0 / 80.0



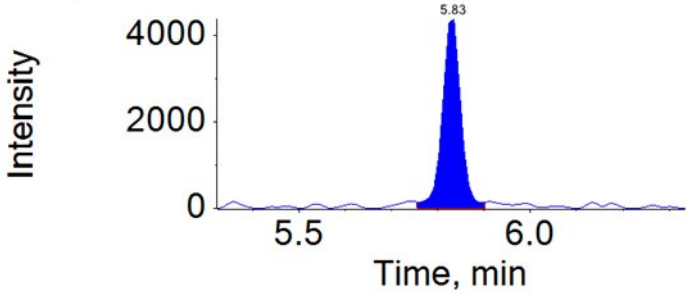
Component: PFDS_2
Secondary Mass: 599.0 / 99.0



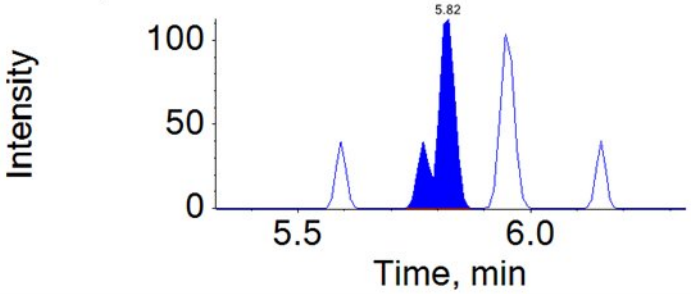
APPROVED
By MCD at 6:34 pm, 11/12/18

REVIEWED
By HMK at 10:54 am, 11/13/18

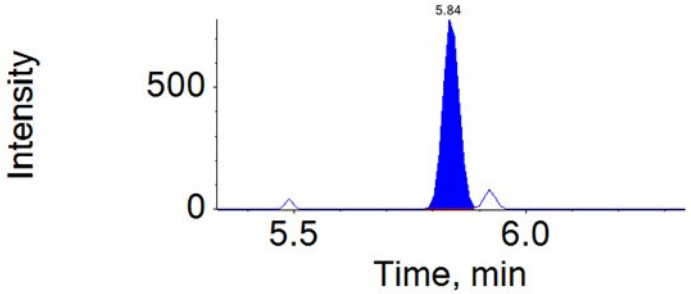
Component: PFUnDA
Primary Mass: 563.0 / 519.0



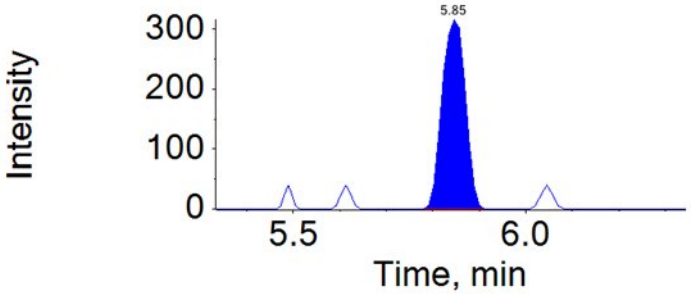
Component: PFUnDA_2
Secondary Mass: 563.0 / 169.0



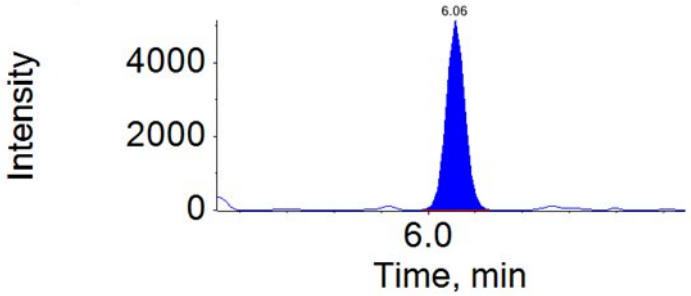
Component: NEtFOSAA
Primary Mass: 584.0 / 419.0



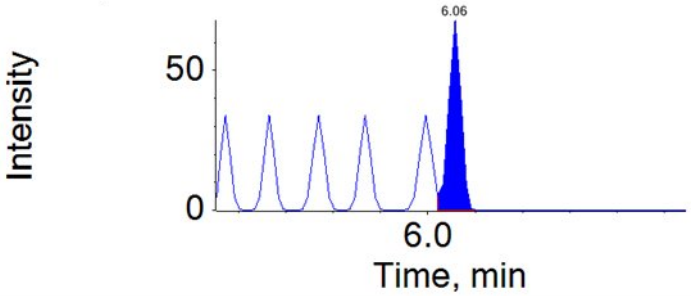
Component: NEtFOSAA_2
Secondary Mass: 584.0 / 526.0



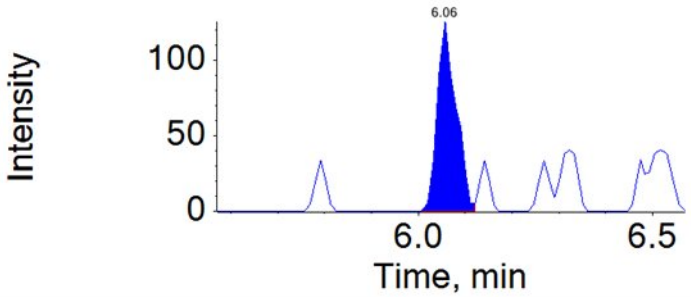
Component: PFDoDA
Primary Mass: 613.0 / 569.0



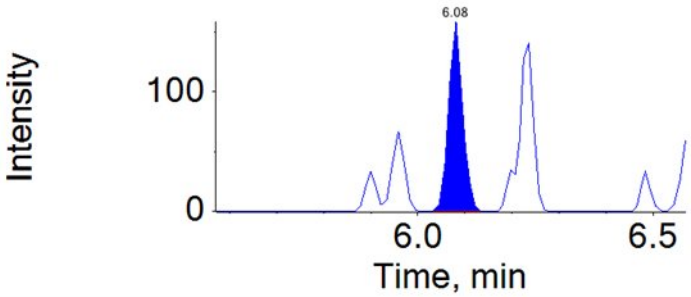
Component: PFDoDA_2
Secondary Mass: 613.0 / 169.0



Component: 10:2-FTS
Primary Mass: 627.0 / 607.0



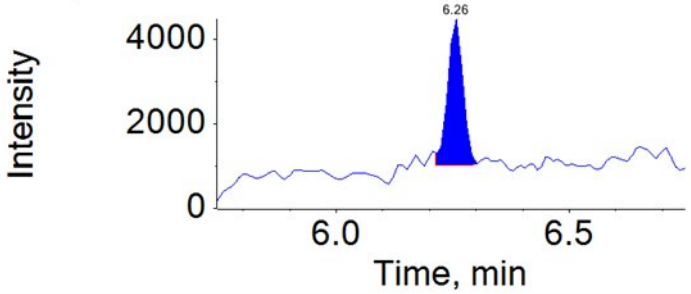
Component: 10:2 FTS_2
Secondary Mass: 627.0 / 81.0



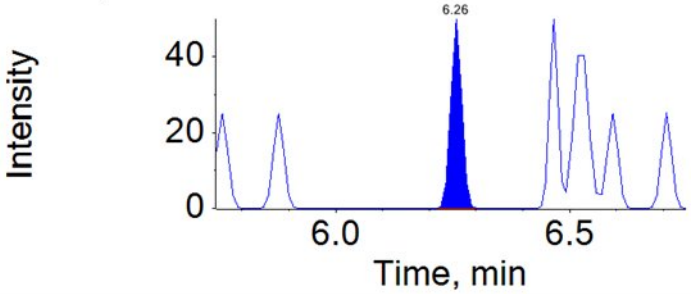
APPROVED
By MCD at 6:34 pm, 11/12/18

REVIEWED
By HMK at 10:54 am, 11/13/18

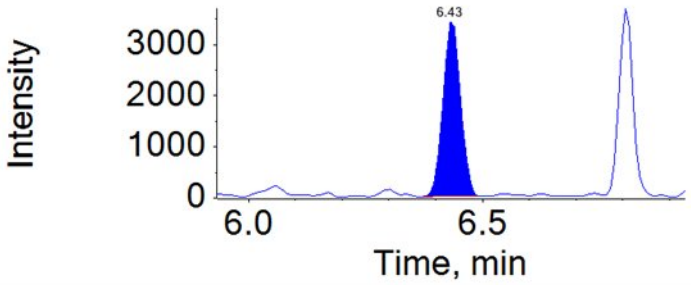
Component: PFTrDA
Primary Mass: 663.0 / 619.0



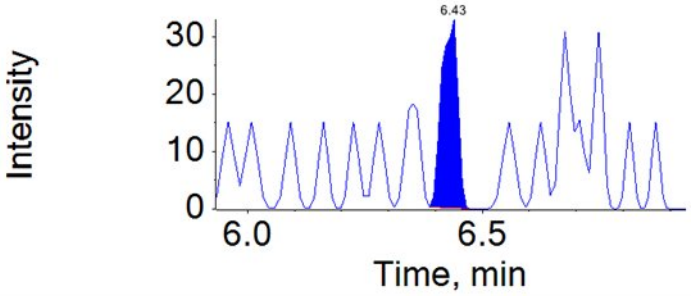
Component: PFTrDA_2
Secondary Mass: 663.0 / 169.0



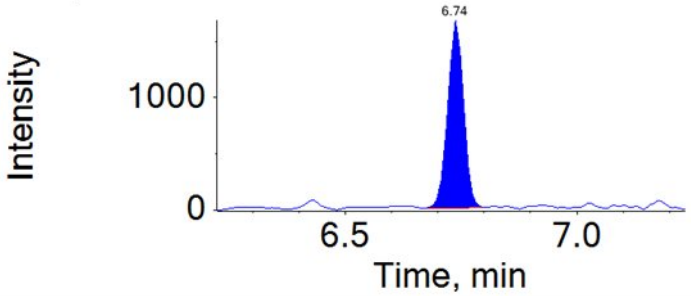
Component: PFTeDA
Primary Mass: 713.0 / 669.0



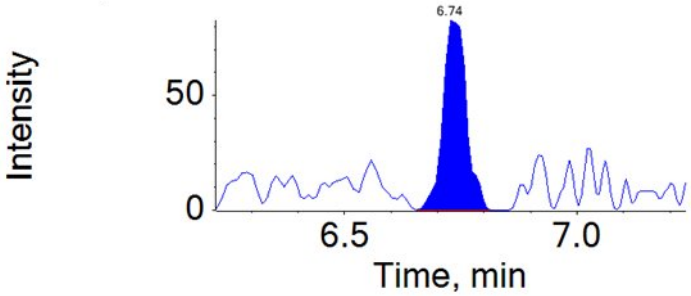
Component: PFTeDA_2
Secondary Mass: 713.0 / 169.0



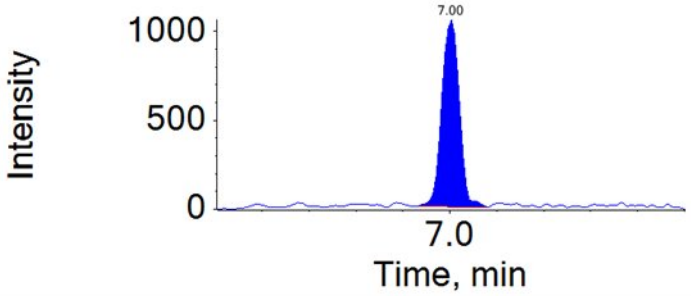
Component: PFHxDA
Primary Mass: 813.0 / 769.0



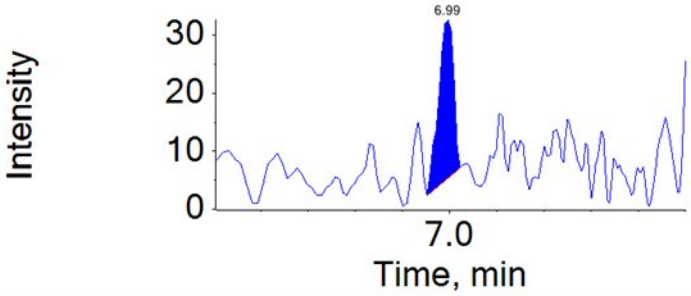
Component: PFHxDA_2
Secondary Mass: 813.0 / 169.0



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

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/20/2018 8:36:28 AM
QMethod Name: 18AUG20QM **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

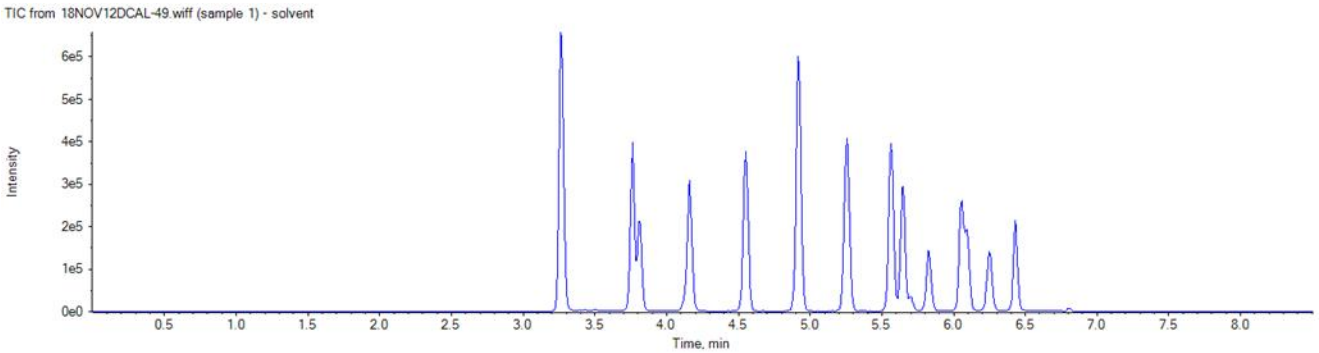
Analyte Quantitation Peak Table

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

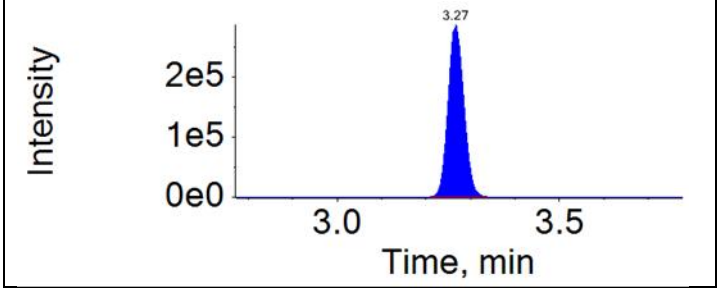


APPROVED
By JPT at 8:42 am, 11/20/18

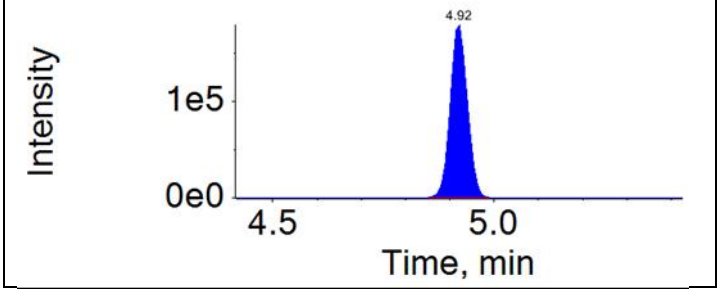
REVIEWED
By HMK at 8:47 am, 11/20/18

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/20/2018 8:36:28 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

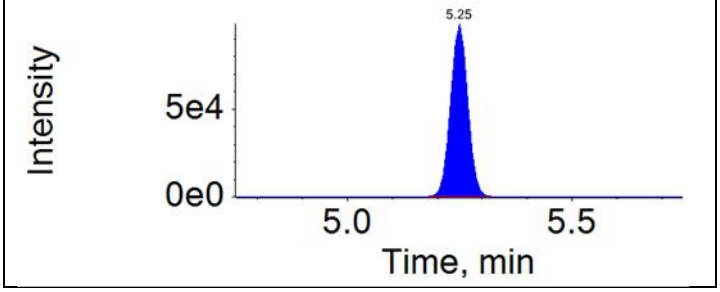
Injection Standard: 13C3-PFBA
216.0 / 172.0



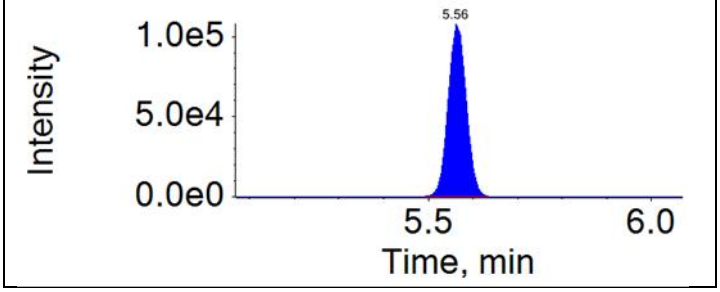
Injection Standard: 13C2-PFOA
415.0 / 370.0



Injection Standard: 13C4-PFOS
503.0 / 80.0



Injection Standard: 13C2-PFDA
515.0 / 470.0

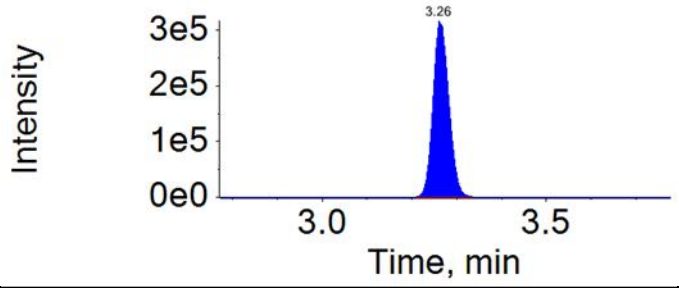


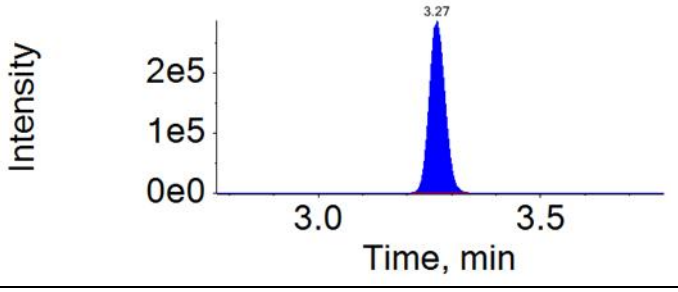
APPROVED
By JPT at 8:42 am, 11/20/18

REVIEWED
By HMK at 8:47 am, 11/20/18

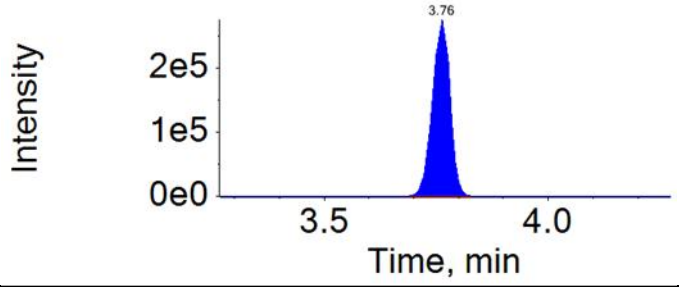
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/20/2018 8:36:28 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

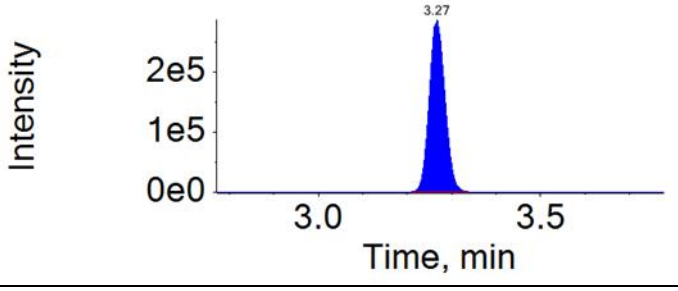
Extraction Standard: E13C4-PFBA	Injection Standard: 13C3-PFBA
217.0 / 172.0	216.0 / 172.0



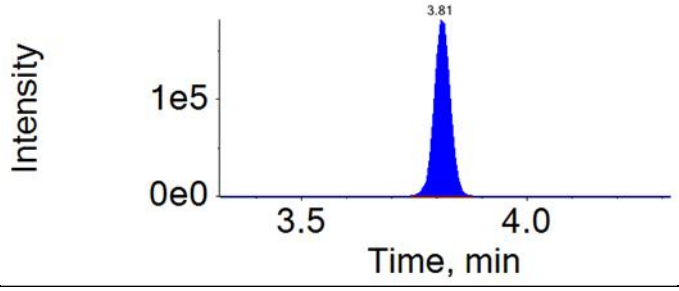


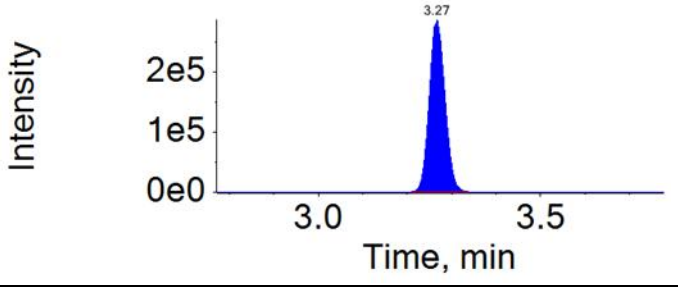
Extraction Standard: E13C5-PFPeA	Injection Standard: 13C3-PFBA
268.0 / 223.0	216.0 / 172.0



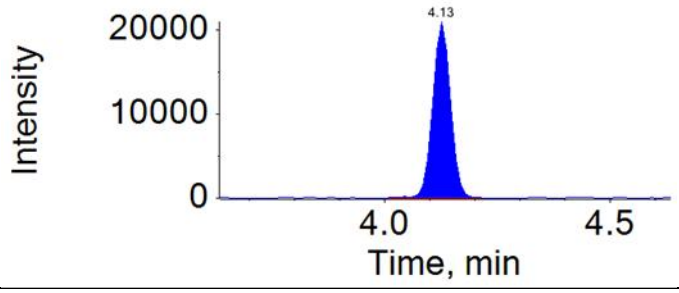


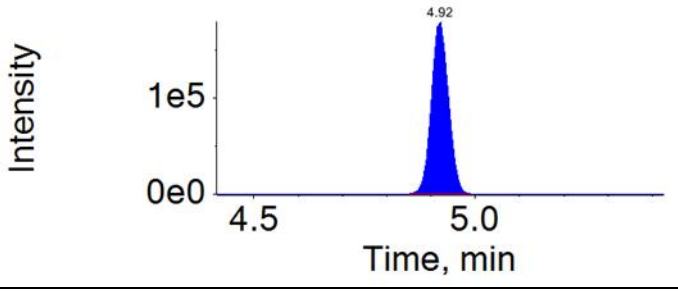
Extraction Standard: E13C3-PFBS	Injection Standard: 13C3-PFBA
302.0 / 80.0	216.0 / 172.0





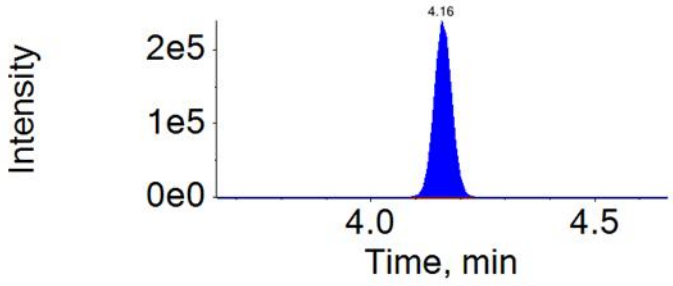
Extraction Standard: E13C2-4:2-FTS	Injection Standard: 13C2-PFOA
329.0 / 81.0	415.0 / 370.0

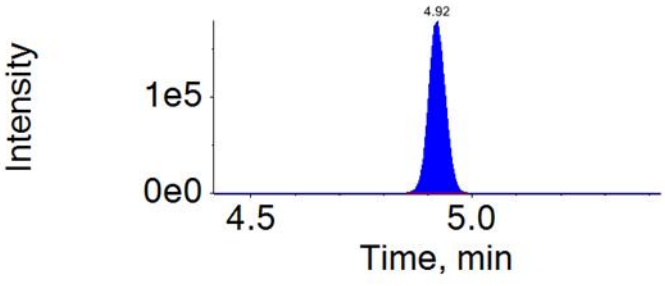




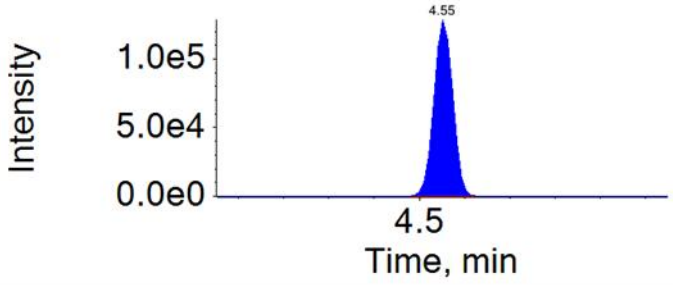
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/20/2018 8:36:28 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

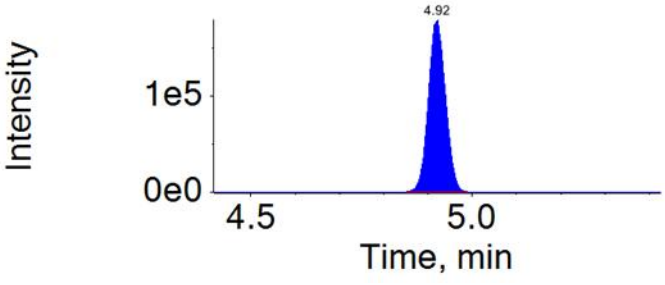
Extraction Standard: E13C5-PFHxA	Injection Standard: 13C2-PFOA
318.0 / 273.0	415.0 / 370.0



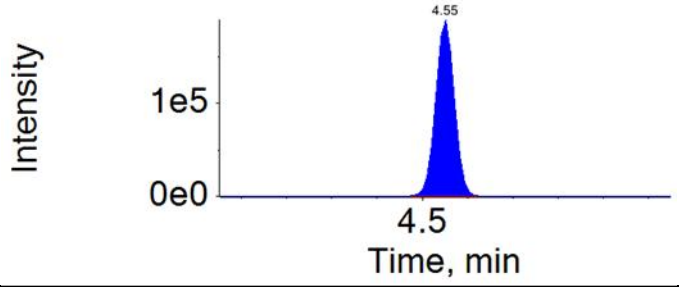


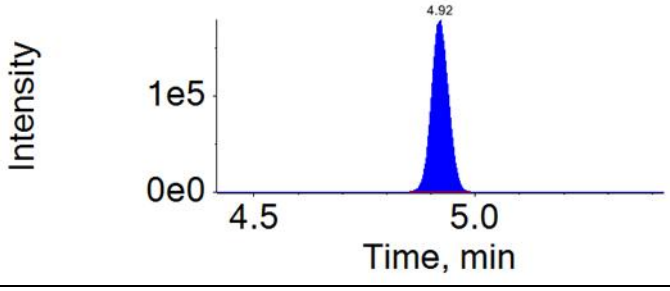
Extraction Standard: E13C3-PFHxS	Injection Standard: 13C2-PFOA
402.0 / 80.0	415.0 / 370.0



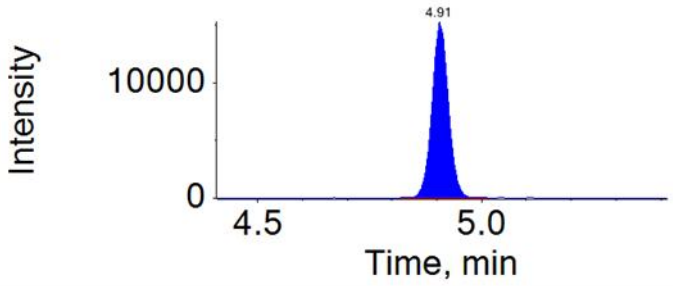


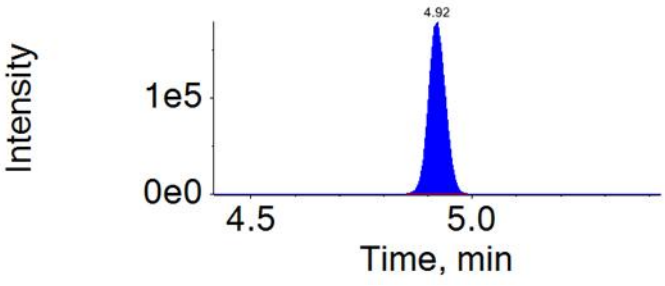
Extraction Standard: E13C4-PFHpA	Injection Standard: 13C2-PFOA
367.0 / 322.0	415.0 / 370.0





Extraction Standard: E13C2-6:2-FTS	Injection Standard: 13C2-PFOA
429.0 / 81.0	415.0 / 370.0

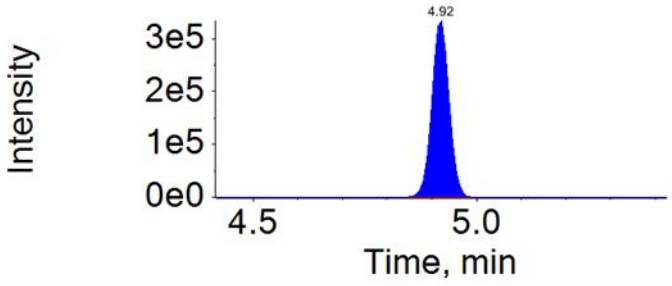
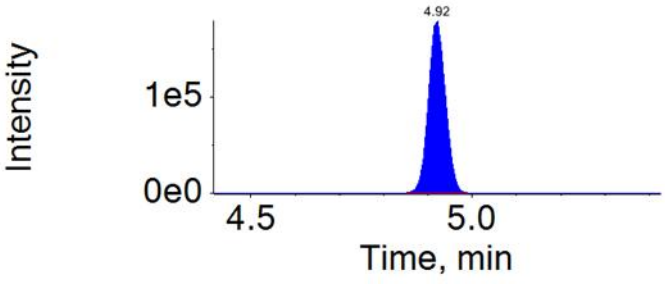


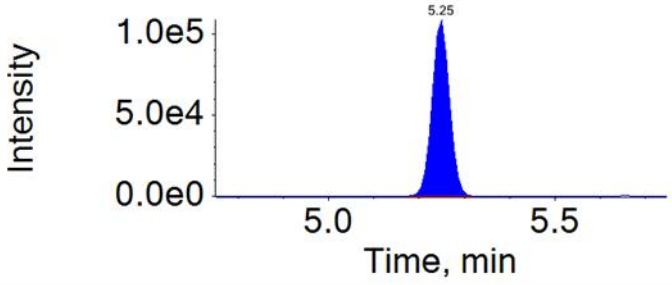
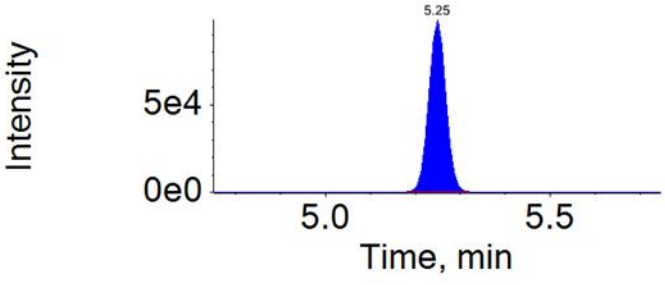


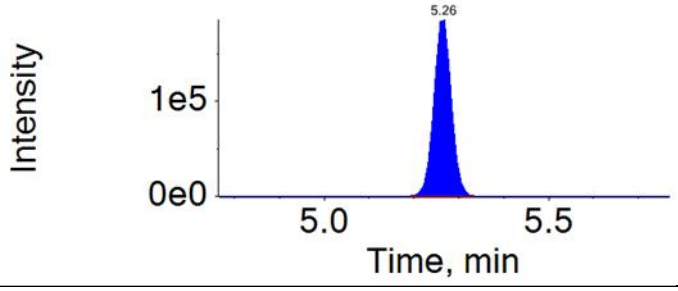
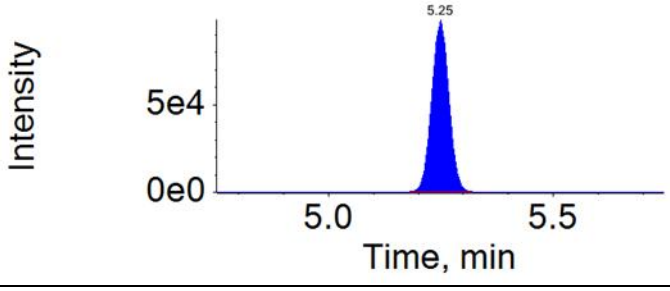
APPROVED
By JPT at 8:42 am, 11/20/18

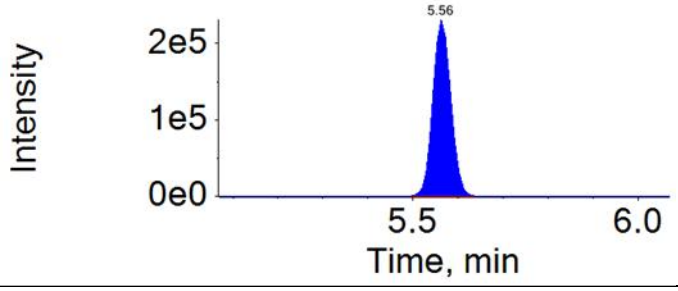
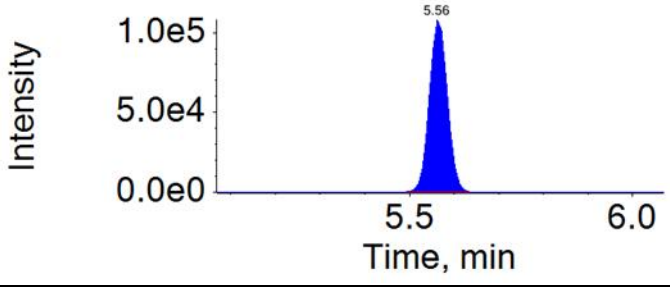
REVIEWED
By HMK at 8:47 am, 11/20/18

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

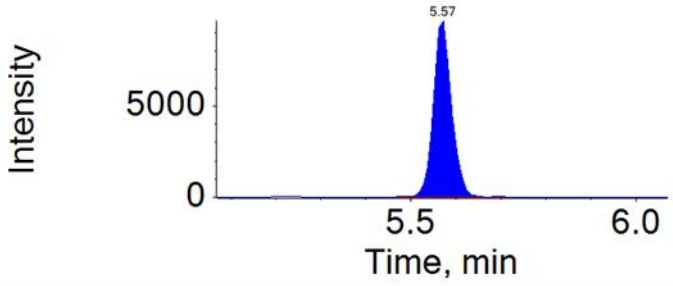
Extraction Standard: E13C8-PFOS	Injection Standard: 13C4-PFOS
507.0 / 80.0	503.0 / 80.0
	

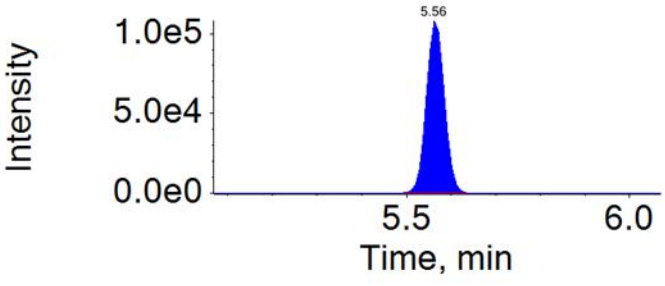
Extraction Standard: E13C9-PFNA	Injection Standard: 13C4-PFOS
472.0 / 427.0	503.0 / 80.0
	

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

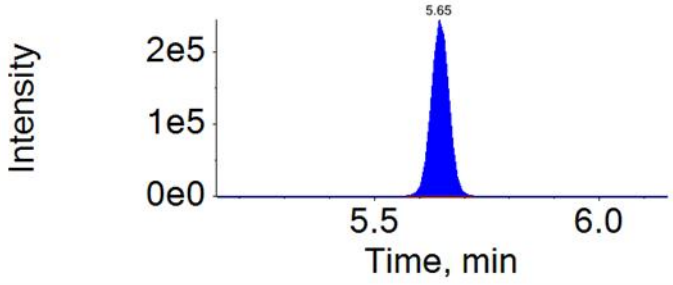
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/20/2018 8:36:28 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

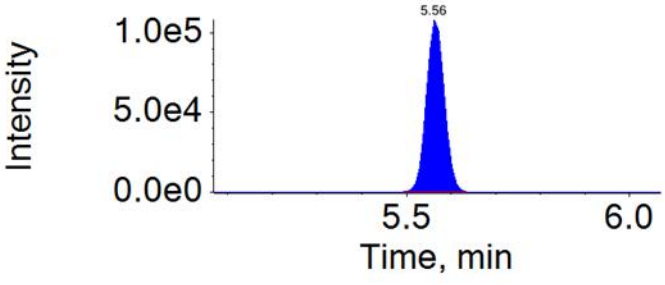
Extraction Standard: E13C2-8:2-FTS	Injection Standard: 13C2-PFDA
529.0 / 81.0	515.0 / 470.0



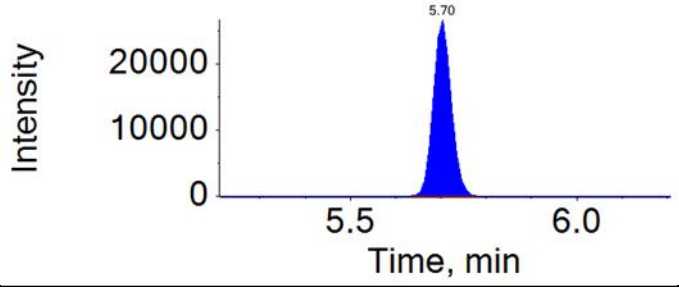


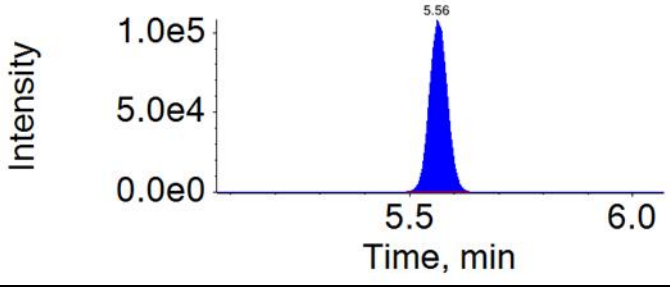
Extraction Standard: E13C8-PFOSA	Injection Standard: 13C2-PFDA
506.0 / 78.0	515.0 / 470.0



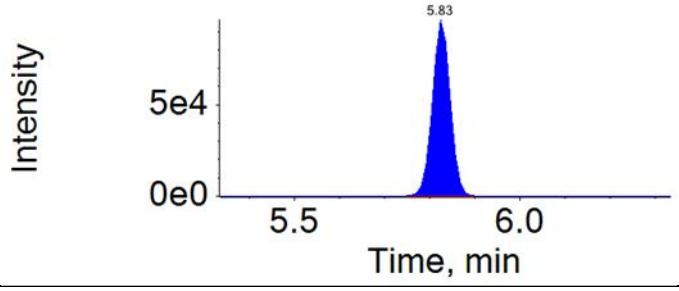


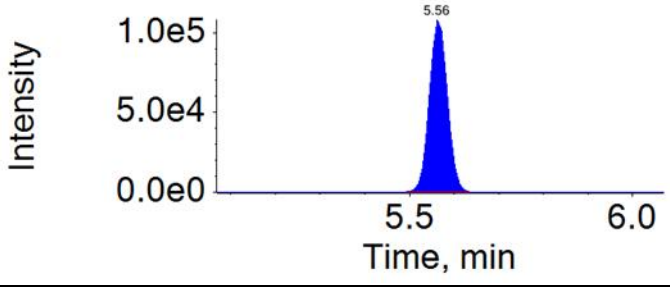
Extraction Standard: Ed3-NMeFOSAA	Injection Standard: 13C2-PFDA
573.0 / 419.0	515.0 / 470.0





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

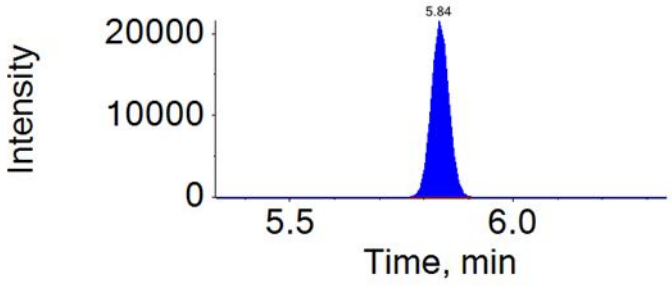
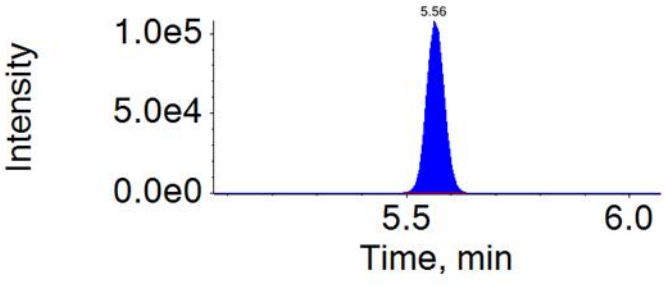


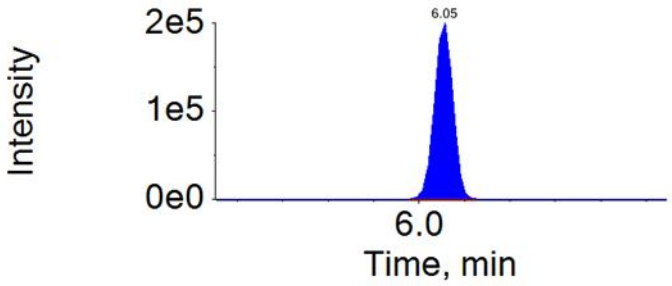
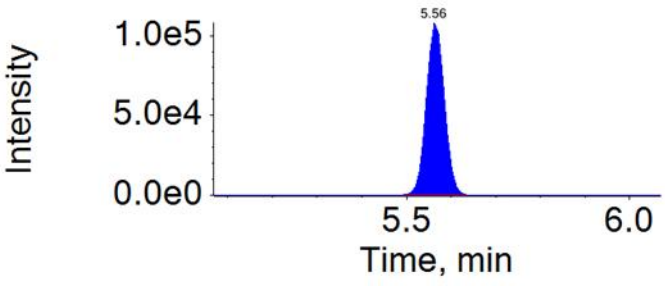


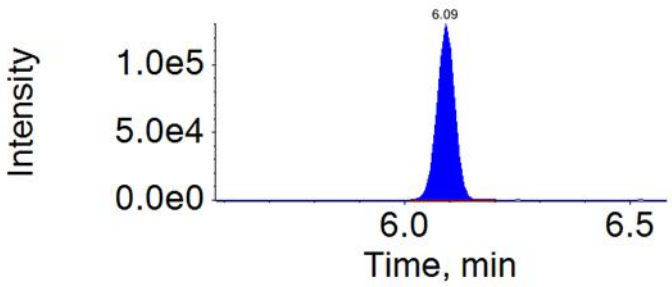
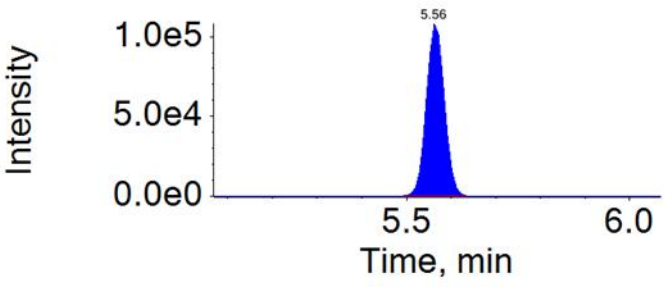
APPROVED
By JPT at 8:42 am, 11/20/18

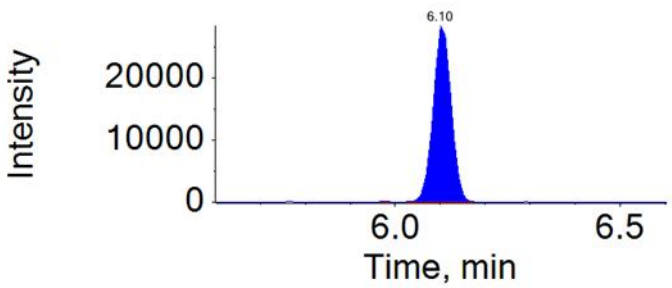
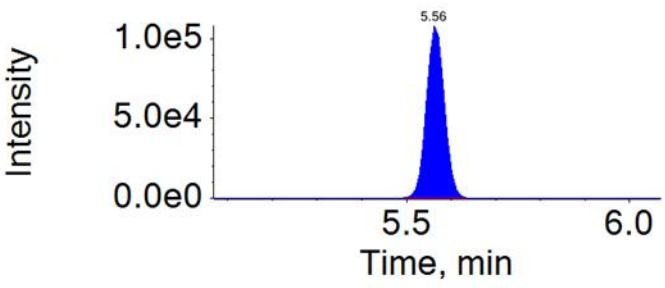
REVIEWED
By HMK at 8:47 am, 11/20/18

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/20/2018 8:36:28 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

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

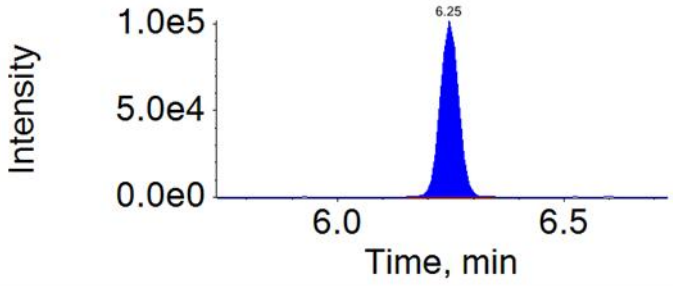
Extraction Standard: E13C2-PFDoDA	Injection Standard: 13C2-PFDA
615.0 / 570.0	515.0 / 470.0
	

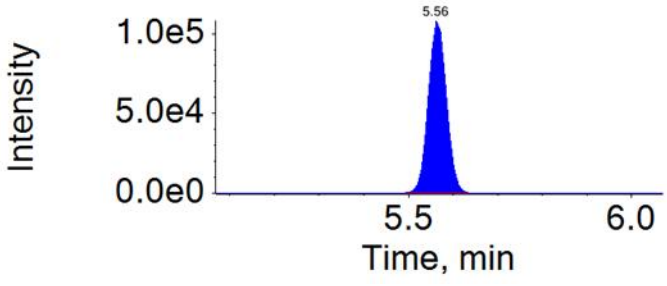
Extraction Standard: Ed7-NMePFOSAE	Injection Standard: 13C2-PFDA
623.0 / 59.0	515.0 / 470.0
	

Extraction Standard: Ed3-NMePFOSA	Injection Standard: 13C2-PFDA
515.0 / 169.0	515.0 / 470.0
	

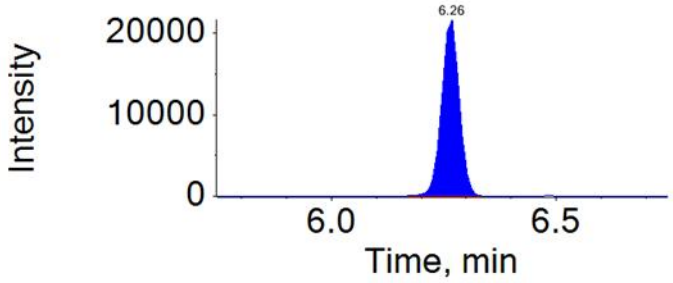
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/20/2018 8:36:28 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

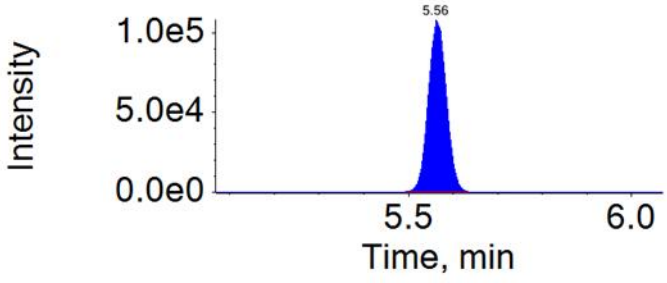
Extraction Standard: Ed9-NEtPFOSAE	Injection Standard: 13C2-PFDA
639.0 / 59.0	515.0 / 470.0



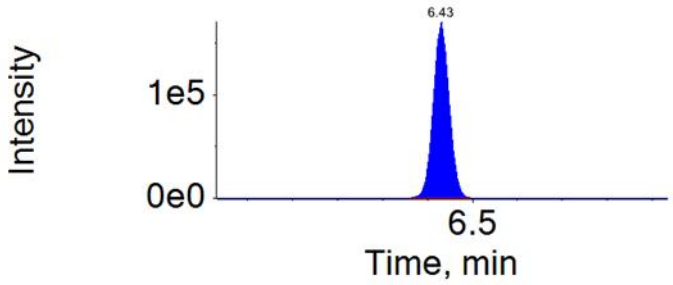


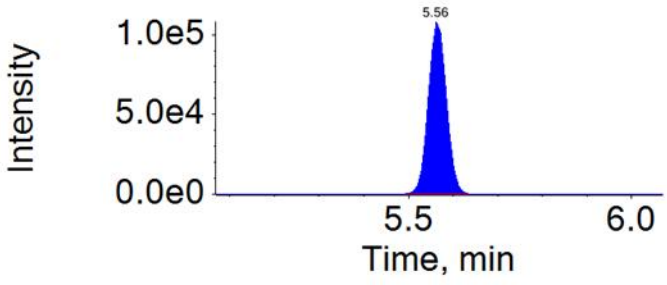
Extraction Standard: Ed5-NEtPFOSA	Injection Standard: 13C2-PFDA
531.0 / 169.0	515.0 / 470.0





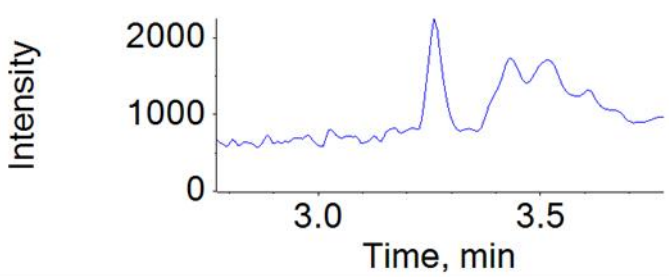
Extraction Standard: E13C2-PFTeDA	Injection Standard: 13C2-PFDA
715.0 / 670.0	515.0 / 470.0

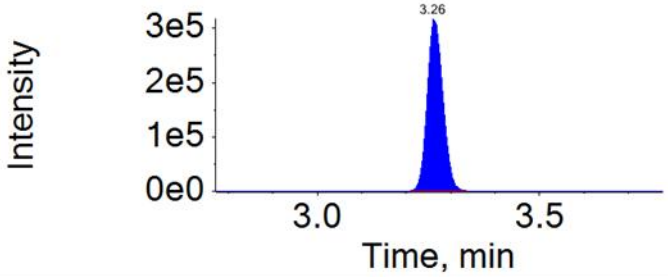




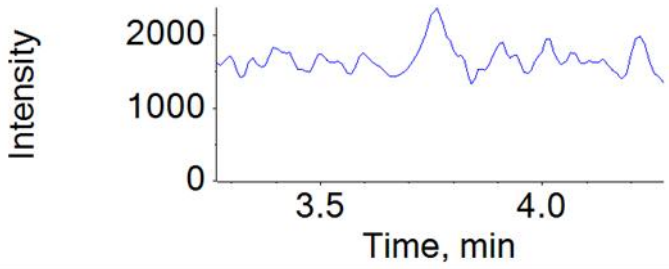
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/20/2018 8:36:28 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

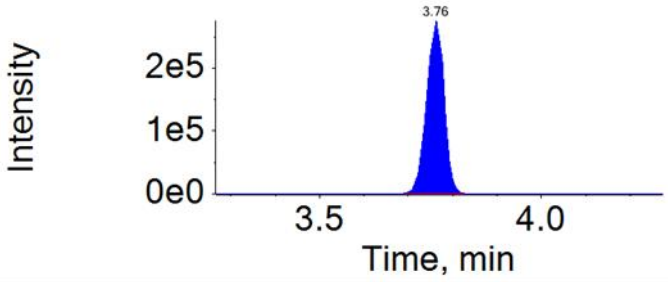
Analyte: PFBA	Extraction Standard: 13C4-PFBA
213.0 / 169.0	217.0 / 172.0



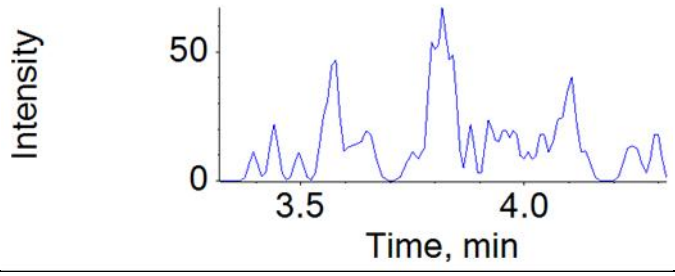


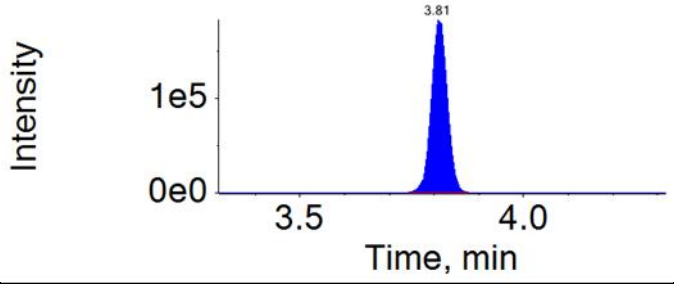
Analyte: PFPeA	Extraction Standard: 13C5-PFPeA
263.0 / 219.0	268.0 / 223.0



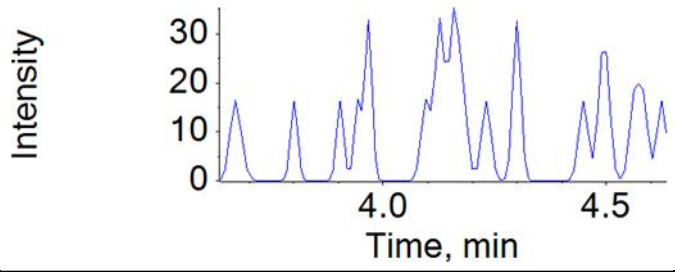


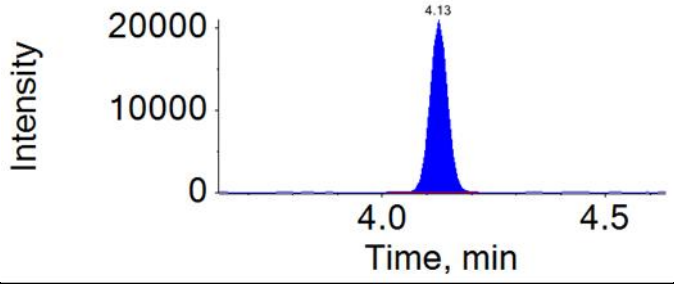
Analyte: PFBS	Extraction Standard: 13C3-PFBS
299.0 / 80.0	302.0 / 80.0





Analyte: 4:2-FTS	Extraction Standard: 13C2-4:2-FTS
327.0 / 307.0	329.0 / 81.0



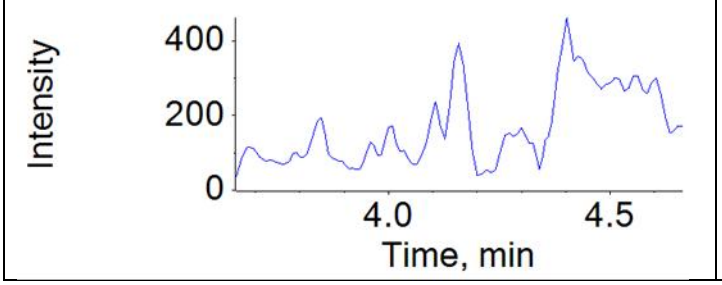


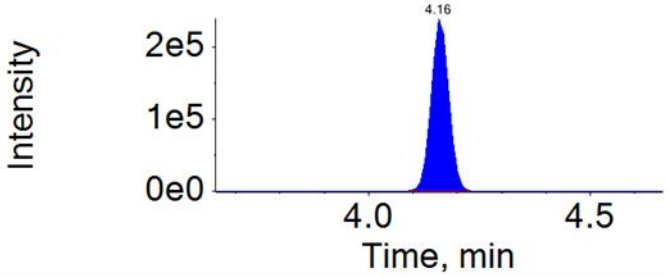
APPROVED
By JPT at 8:42 am, 11/20/18

REVIEWED
By HMK at 8:47 am, 11/20/18

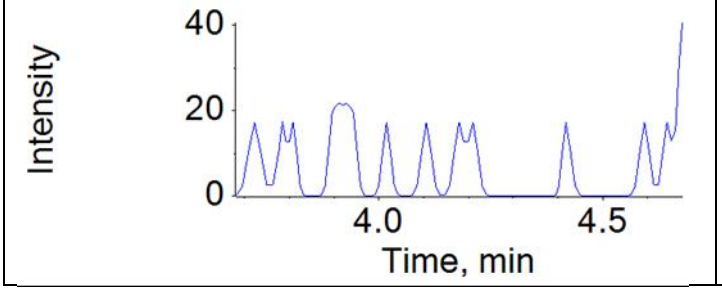
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/20/2018 8:36:28 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

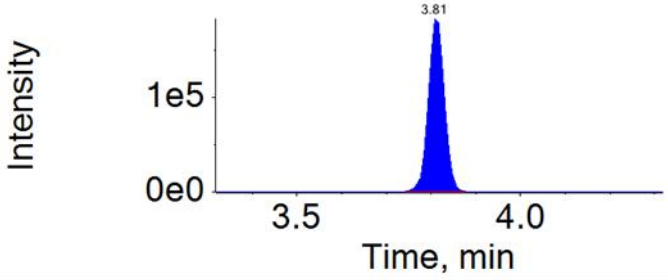
Analyte: PFHxA	Extraction Standard: 13C5-PFHxA
313.0 / 269.0	318.0 / 273.0



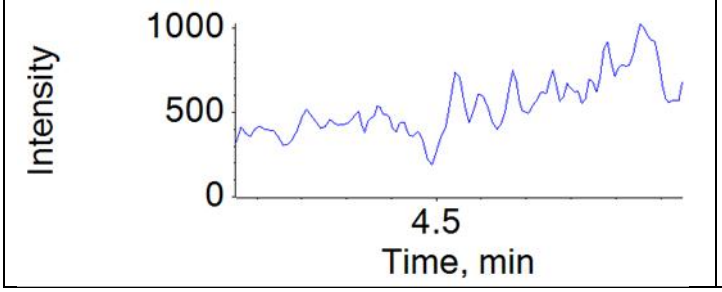


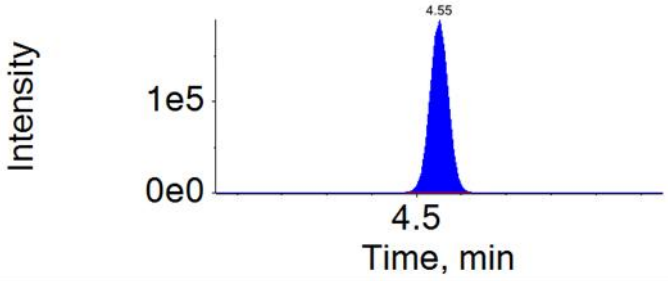
Analyte: PFPeS	Extraction Standard: 13C3-PFBS
349.0 / 80.0	302.0 / 80.0



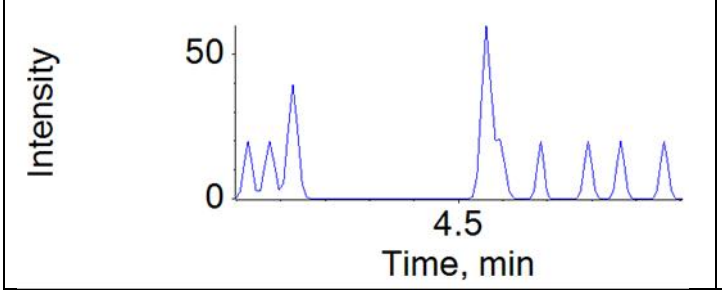


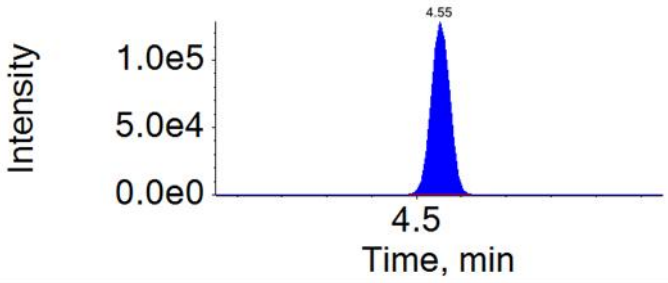
Analyte: PFHpA	Extraction Standard: 13C4-PFHpA
363.0 / 319.0	367.0 / 322.0





Analyte: PFHxS	Extraction Standard: 13C3-PFHxS
399.0 / 80.0	402.0 / 80.0



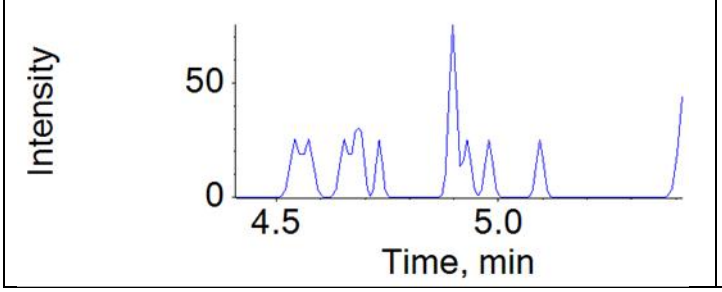


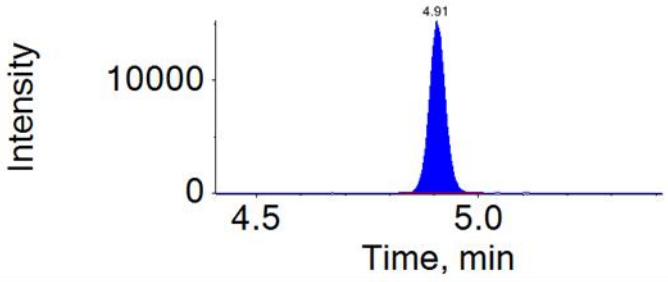
APPROVED
By JPT at 8:42 am, 11/20/18

REVIEWED
By HMK at 8:47 am, 11/20/18

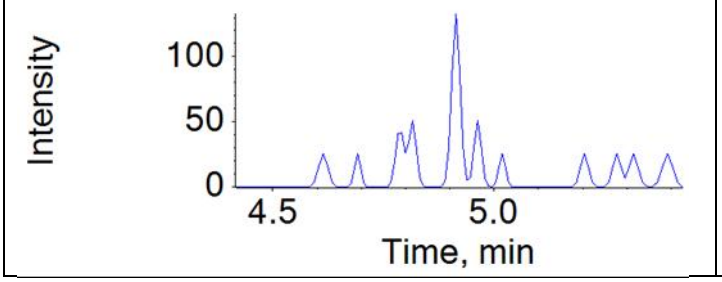
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/20/2018 8:36:28 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

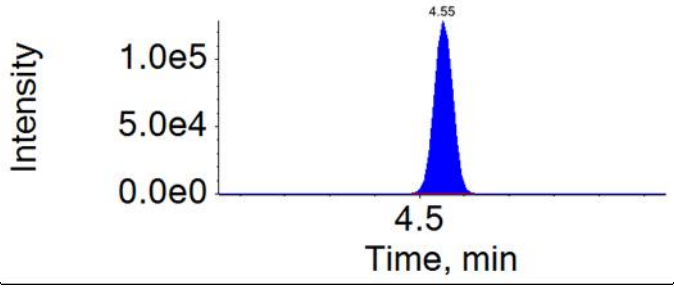
Analyte: 6:2-FTS	Extraction Standard: 13C2-6:2-FTS
427.0 / 407.0	429.0 / 81.0



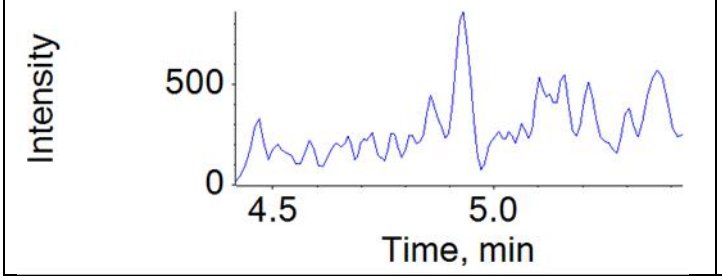


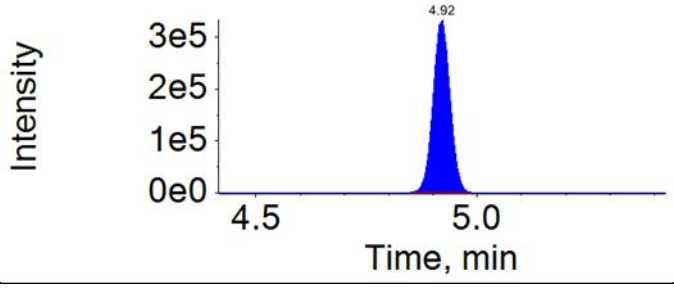
Analyte: PFHpS	Extraction Standard: 13C3-PFHxS
449.0 / 80.0	402.0 / 80.0



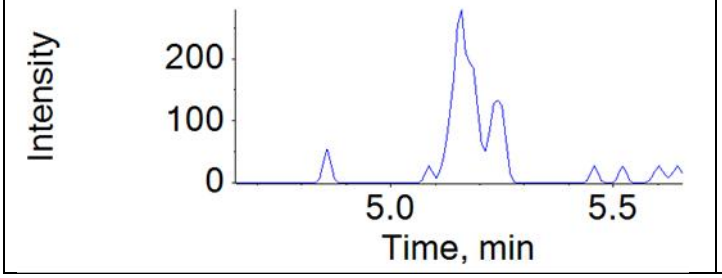


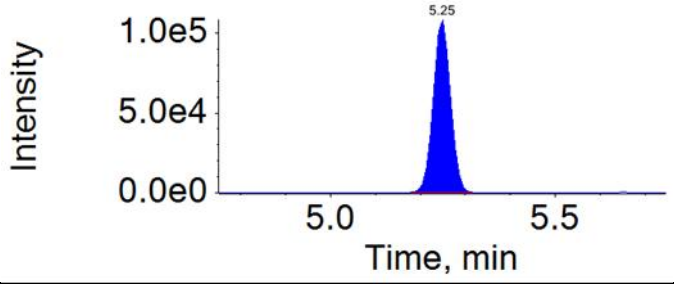
Analyte: PFOA	Extraction Standard: 13C8-PFOA
413.0 / 369.0	421.0 / 376.0





Analyte: PFOS	Extraction Standard: 13C8-PFOS
499.0 / 80.0	507.0 / 80.0



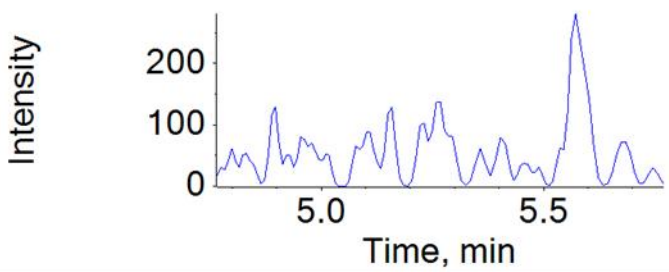


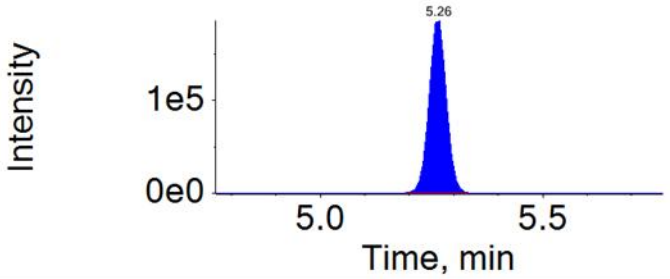
APPROVED
By JPT at 8:42 am, 11/20/18

REVIEWED
By HMK at 8:47 am, 11/20/18

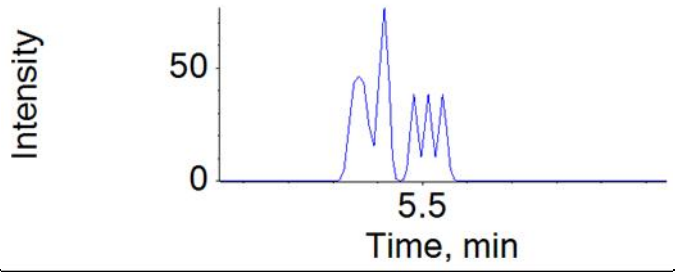
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/20/2018 8:36:28 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

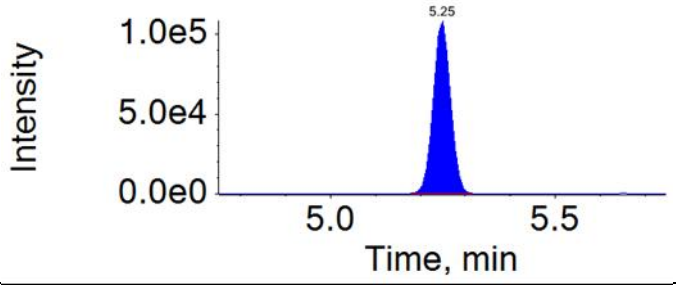
Analyte: PFNA	Extraction Standard: 13C9-PFNA
463.0 / 419.0	472.0 / 427.0



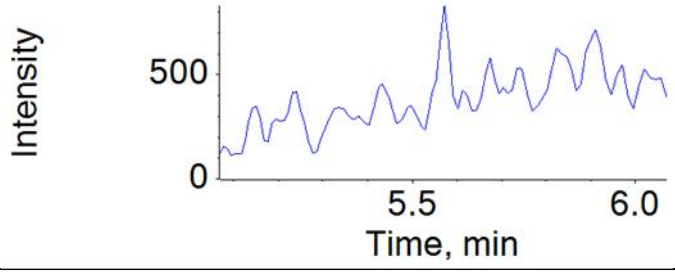


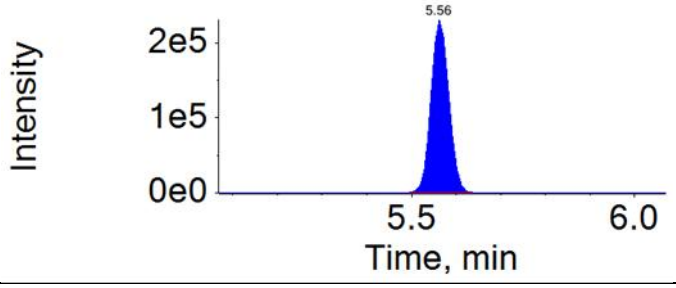
Analyte: PFNS	Extraction Standard: 13C8-PFOS
549.0 / 80.0	507.0 / 80.0



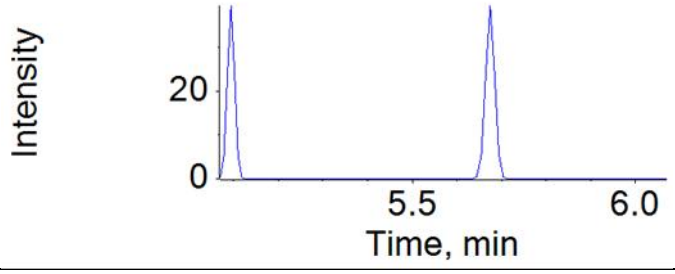


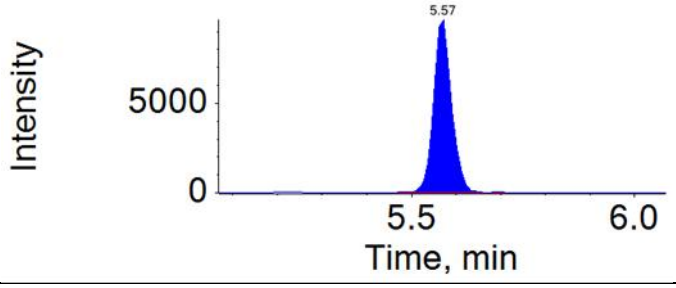
Analyte: PFDA	Extraction Standard: 13C6-PFDA
513.0 / 469.0	519.0 / 474.0





Analyte: 8:2-FTS	Extraction Standard: 13C2-8:2-FTS
527.0 / 507.0	529.0 / 81.0



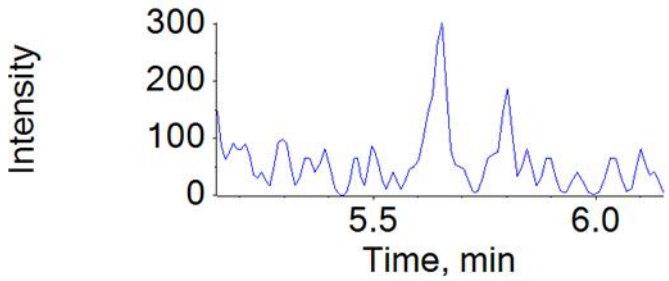


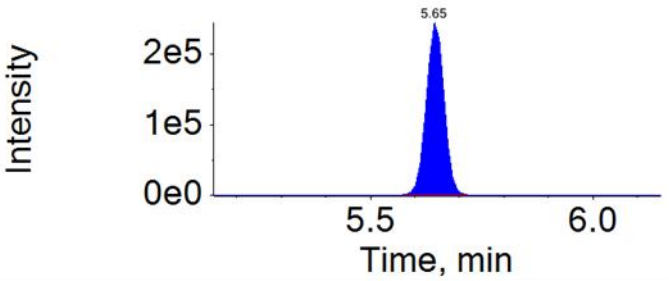
APPROVED
By JPT at 8:42 am, 11/20/18

REVIEWED
By HMK at 8:47 am, 11/20/18

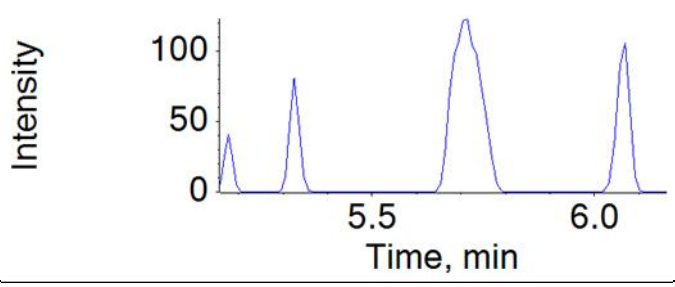
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/20/2018 8:36:28 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

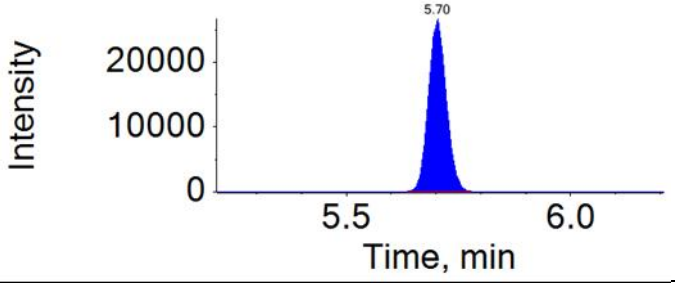
Analyte: PFOSA	Extraction Standard: 13C8-PFOSA
498.0 / 78.0	506.0 / 78.0



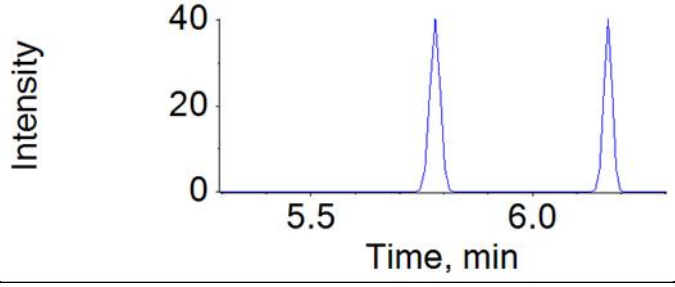


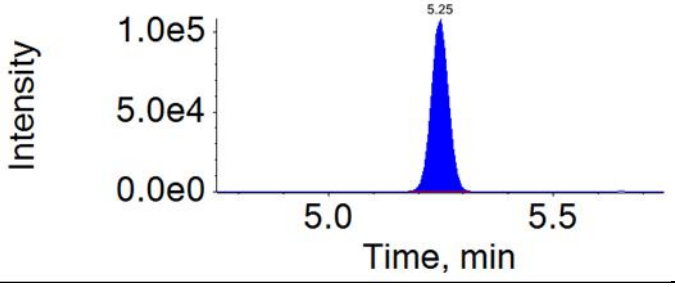
Analyte: NMeFOSAA	Extraction Standard: d3-NMeFOSAA
570.0 / 419.0	573.0 / 419.0



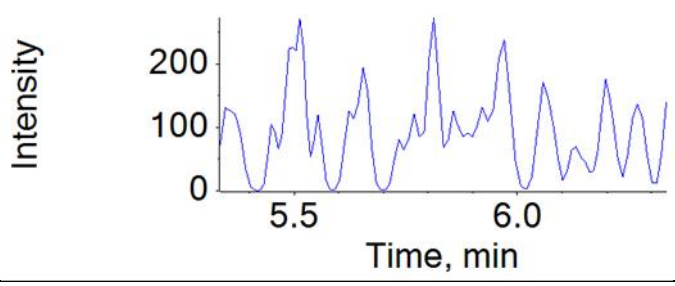


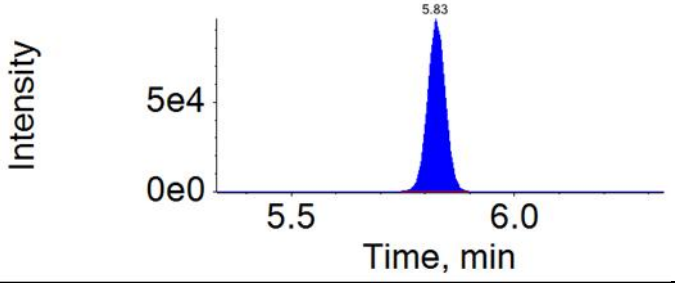
Analyte: PFDS	Extraction Standard: 13C8-PFOS
599.0 / 80.0	507.0 / 80.0





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



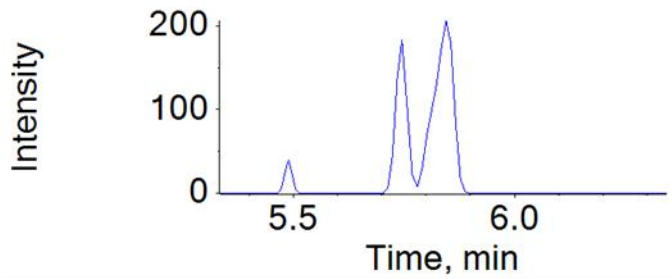


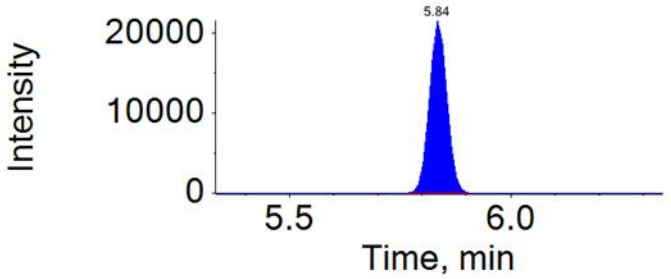
APPROVED
By JPT at 8:42 am, 11/20/18

REVIEWED
By HMK at 8:47 am, 11/20/18

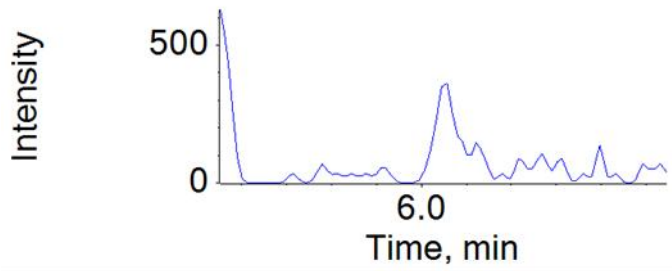
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/20/2018 8:36:28 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

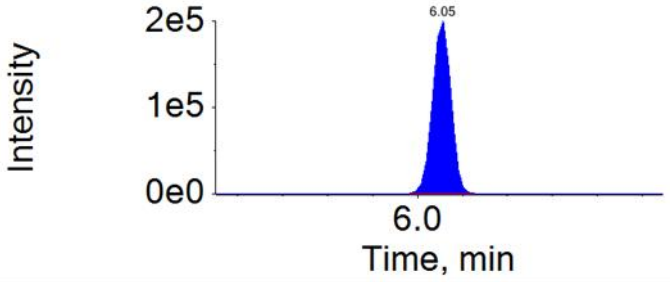
Analyte: NEtFOSAA	Extraction Standard: d5-NEtFOSAA
584.0 / 419.0	589.0 / 419.0



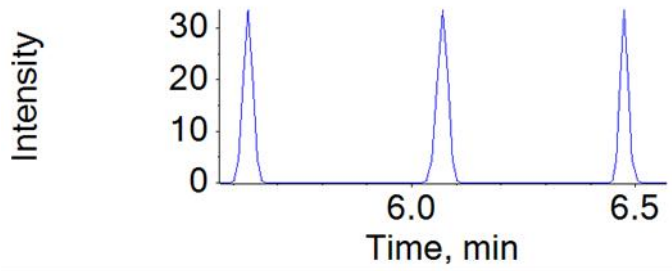


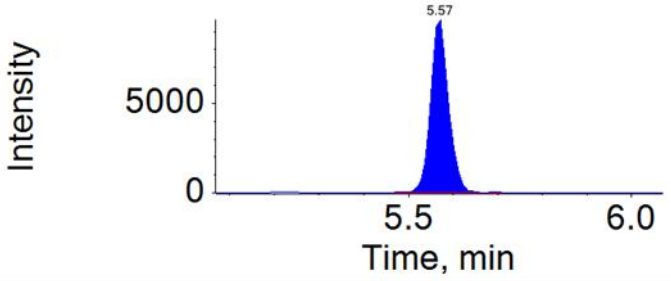
Analyte: PFDoDA	Extraction Standard: 13C2-PFDoDA
613.0 / 569.0	615.0 / 570.0



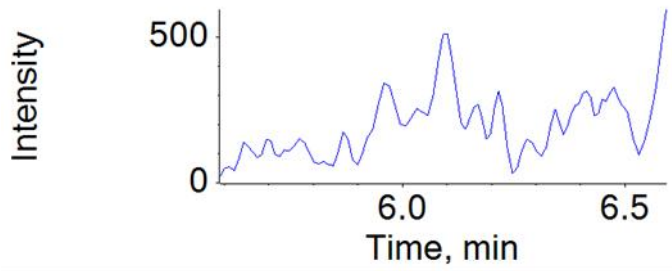


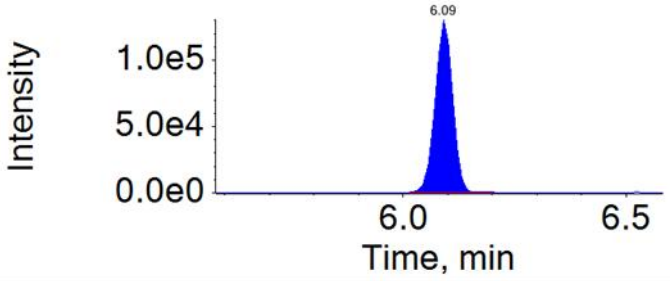
Analyte: 10:2-FTS	Extraction Standard: 13C2-8:2-FTS
627.0 / 607.0	529.0 / 81.0





Analyte: NMePFOSAE	Extraction Standard: d7-NMePFOSAE
616.0 / 59.0	623.0 / 59.0



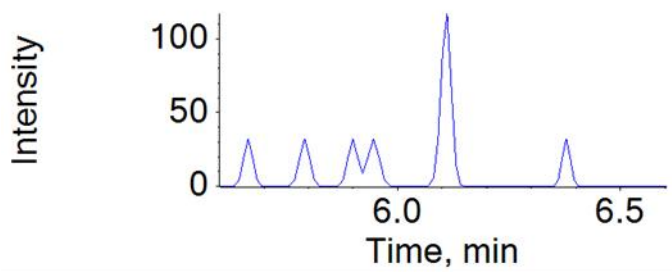


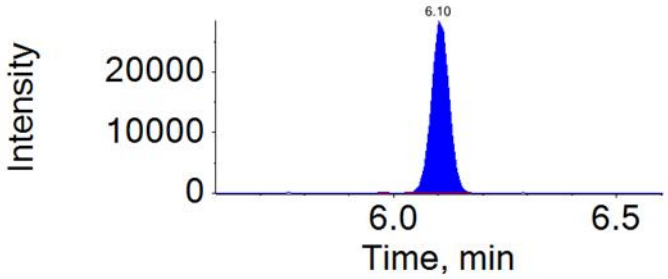
APPROVED
By JPT at 8:42 am, 11/20/18

REVIEWED
By HMK at 8:47 am, 11/20/18

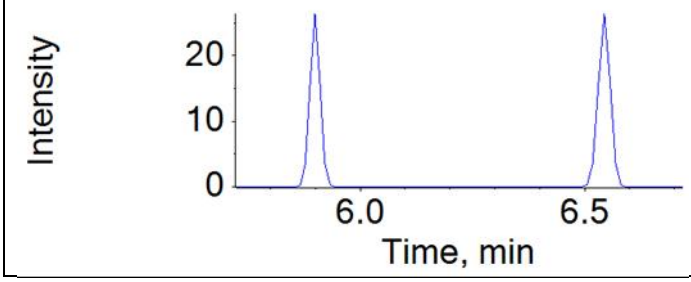
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/20/2018 8:36:28 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

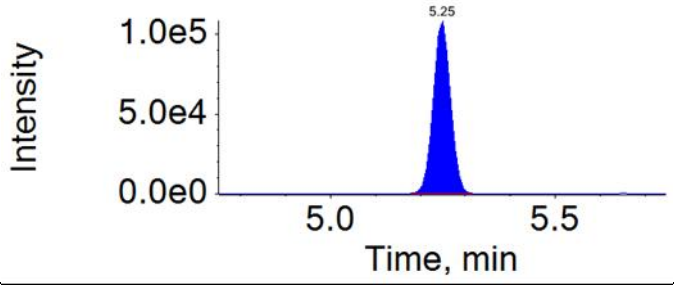
Analyte: NMePFOSA	Extraction Standard: d3-NMePFOSA
512.0 / 169.0	515.0 / 169.0



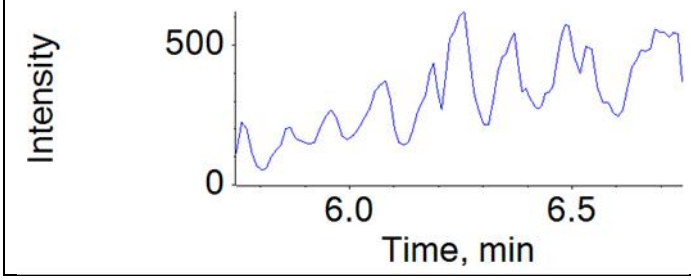


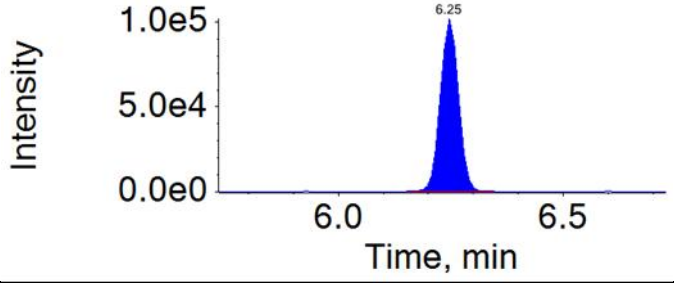
Analyte: PFDoS	Extraction Standard: 13C8-PFOS
699.0 / 80.0	507.0 / 80.0



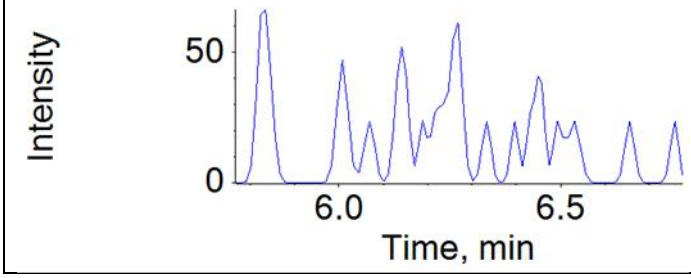


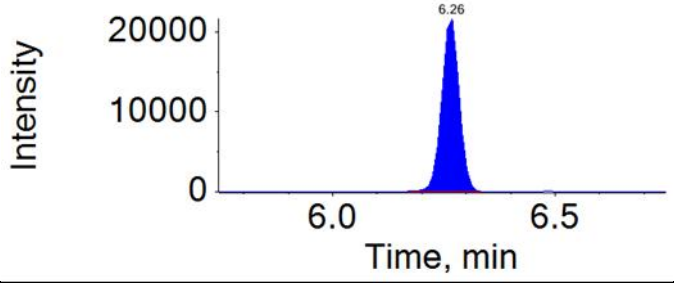
Analyte: NEtPFOSAE	Extraction Standard: d9-NEtPFOSAE
630.0 / 59.0	639.0 / 59.0





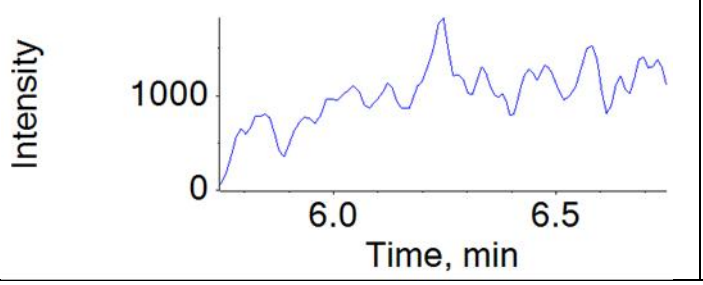
Analyte: NEtPFOSA	Extraction Standard: d5-NEtPFOSA
526.0 / 169.0	531.0 / 169.0

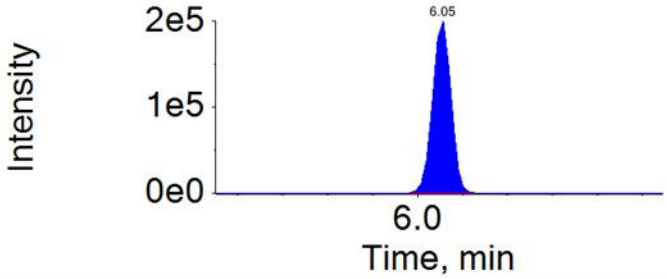




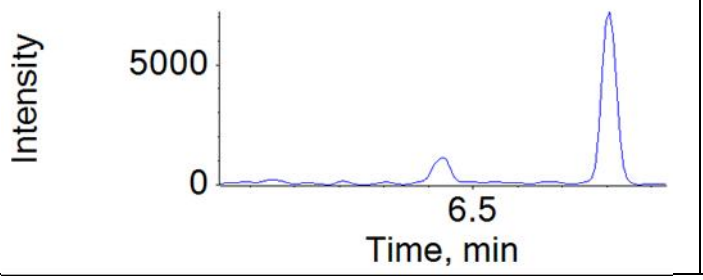
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/20/2018 8:36:28 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

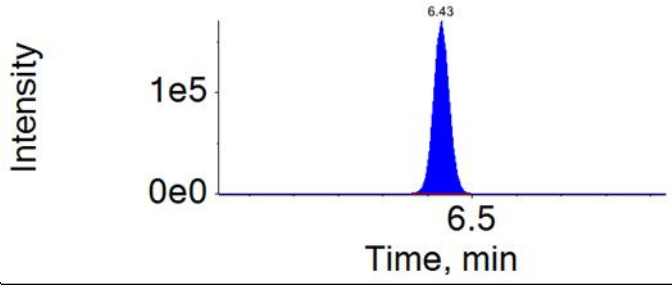
Analyte: PFTrDA	Extraction Standard: 13C2-PFDoDA
663.0 / 619.0	615.0 / 570.0



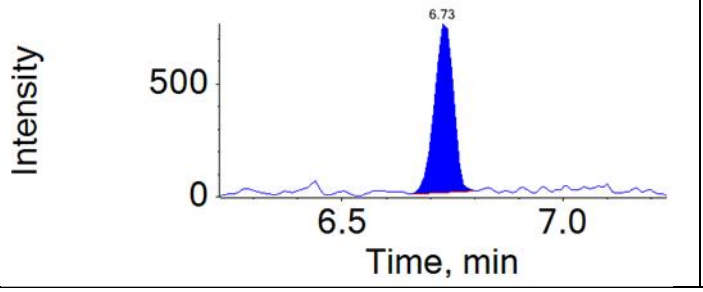


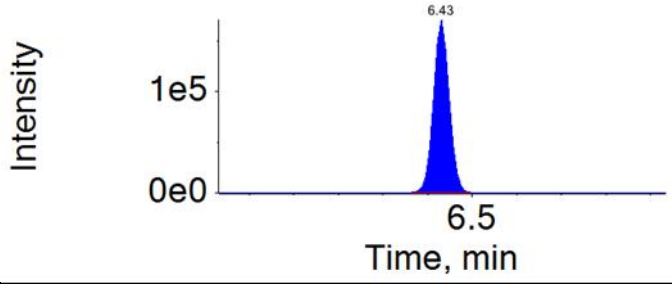
Analyte: PFTeDA	Extraction Standard: 13C2-PFTeDA
713.0 / 669.0	715.0 / 670.0



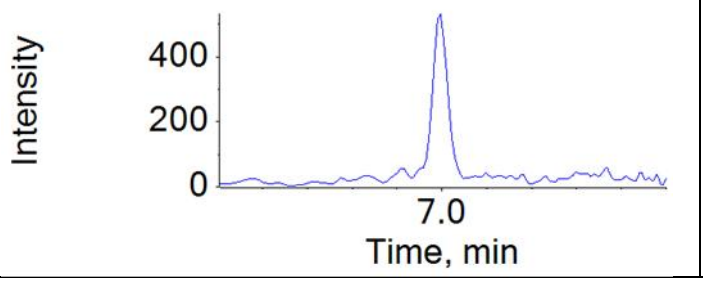


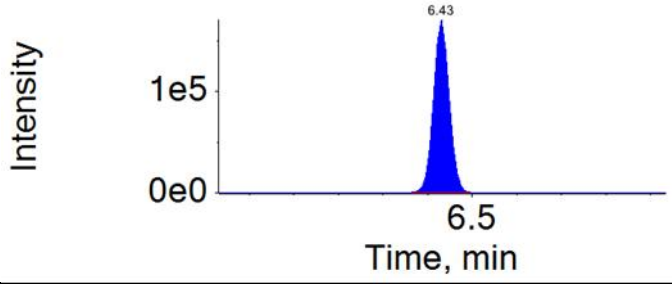
Analyte: PFHxDA	Extraction Standard: 13C2-PFTeDA
813.0 / 769.0	715.0 / 670.0





Analyte: PFODA	Extraction Standard: 13C2-PFTeDA
913.0 / 869.0	715.0 / 670.0





APPROVED
By JPT at 8:42 am, 11/20/18

REVIEWED
By HMK at 8:47 am, 11/20/18

Ion Ratio Report

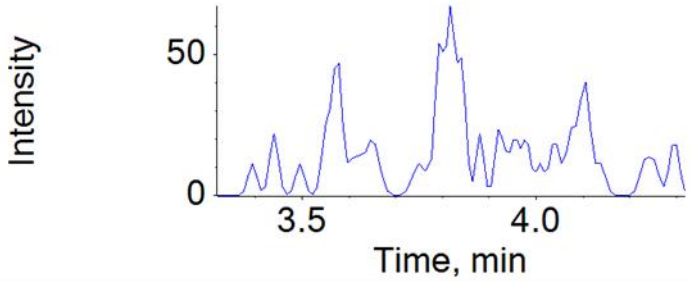
Sample Name: INBLK **Instrument Name:** LM27631 **File Name:** 18NOV12DCAL-49.wiff

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	

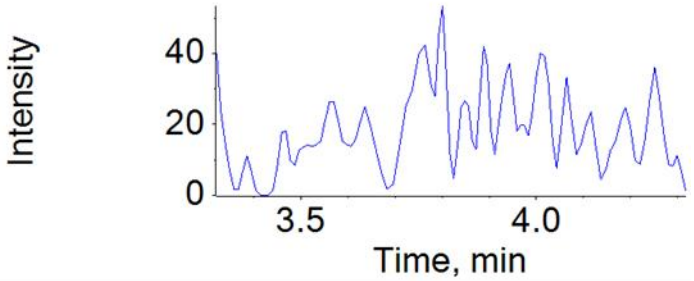
APPROVED
By JPT at 8:42 am, 11/20/18

REVIEWED
By HMK at 8:47 am, 11/20/18

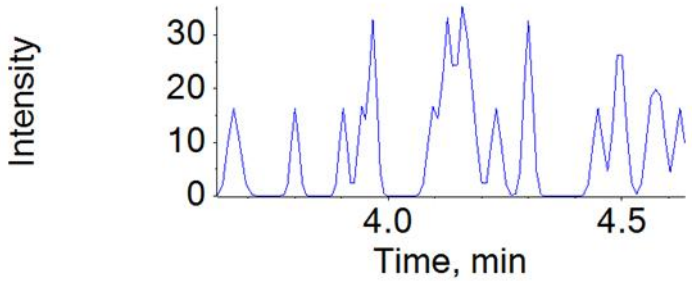
Component: PFBS
Primary Mass: 299.0 / 80.0



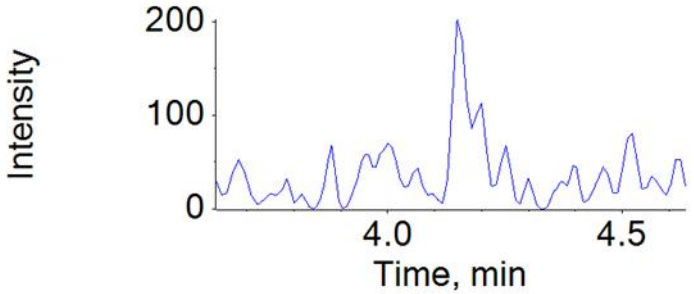
Component: PFBS_2
Secondary Mass: 299.0 / 99.0



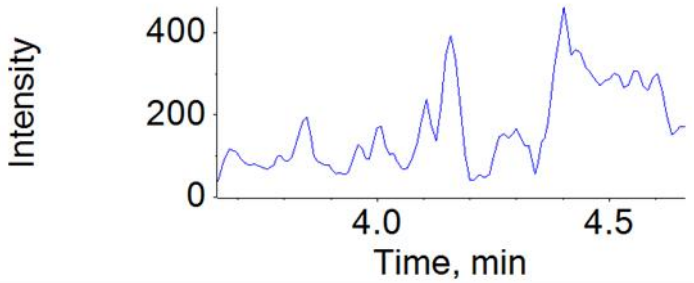
Component: 4:2-FTS
Primary Mass: 327.0 / 307.0



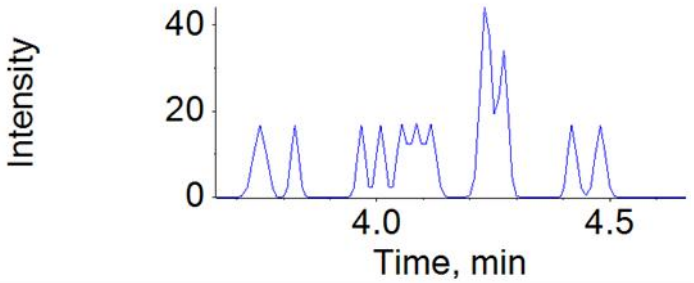
Component: 4:2 FTS_2
Secondary Mass: 327.0 / 81.0



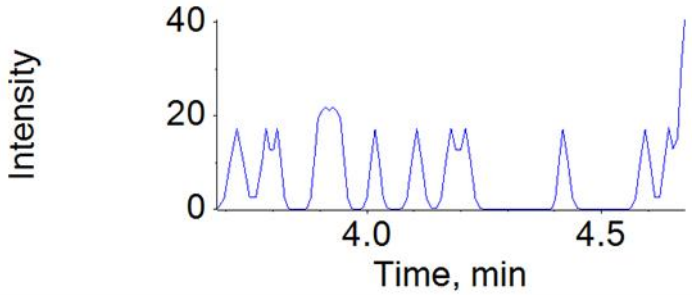
Component: PFHxA
Primary Mass: 313.0 / 269.0



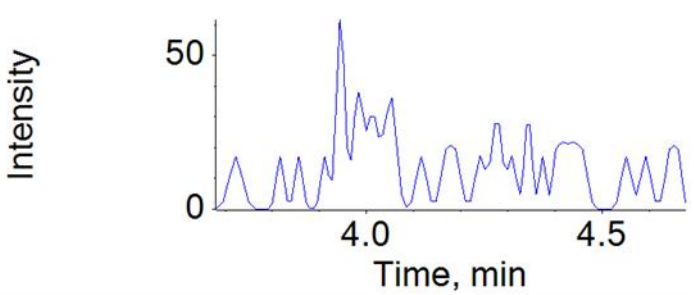
Component: PFHxA_2
Secondary Mass: 313.0 / 119.0



Component: PFPeS
Primary Mass: 349.0 / 80.0



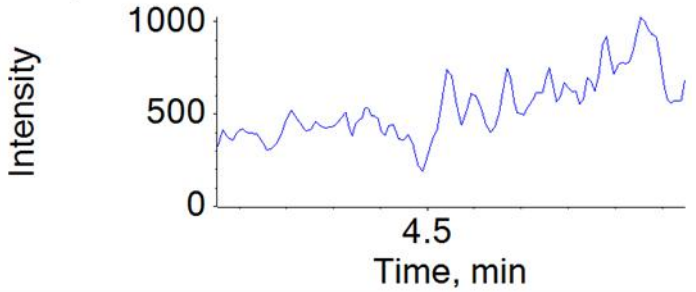
Component: PFPeS_2
Secondary Mass: 349.0 / 99.0



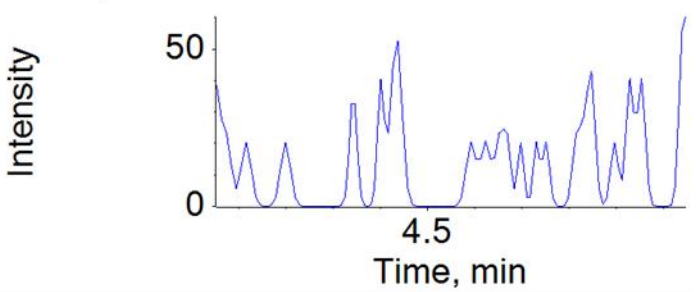
APPROVED
By JPT at 8:42 am, 11/20/18

REVIEWED
By HMK at 8:47 am, 11/20/18

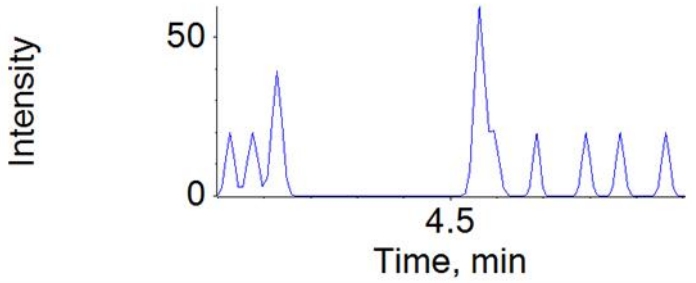
Component: PFHpA
Primary Mass: 363.0 / 319.0



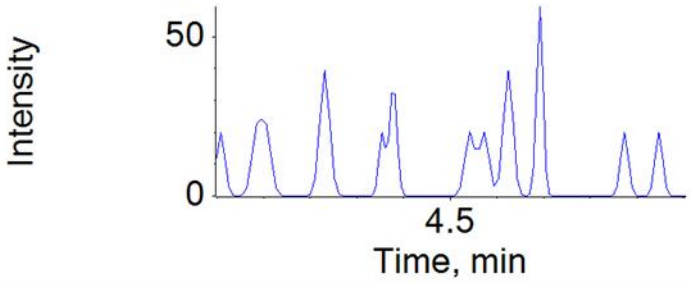
Component: PFHpA_2
Secondary Mass: 363.0 / 169.0



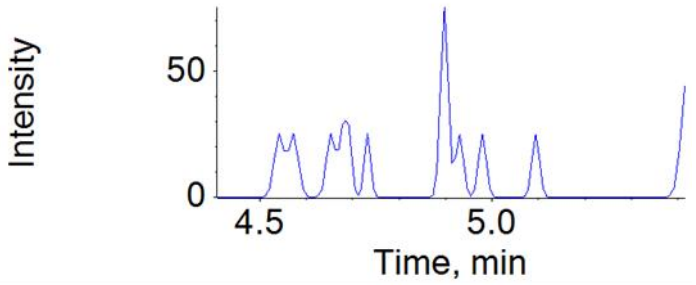
Component: PFHxS
Primary Mass: 399.0 / 80.0



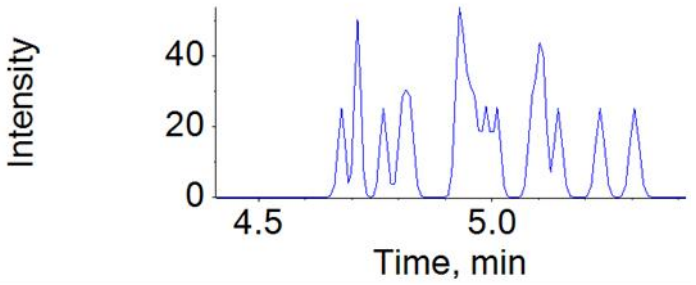
Component: PFHxS_2
Secondary Mass: 399.0 / 99.0



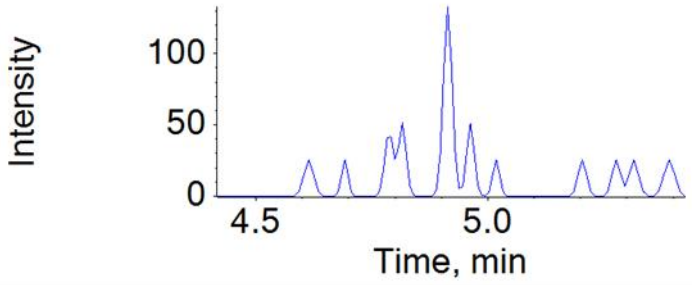
Component: 6:2-FTS
Primary Mass: 427.0 / 407.0



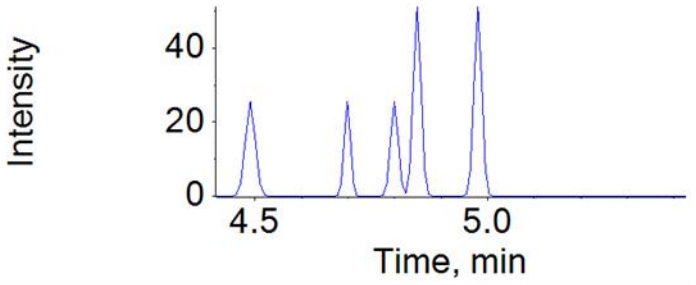
Component: 6:2 FTS_2
Secondary Mass: 427.0 / 81.0



Component: PFHpS
Primary Mass: 449.0 / 80.0



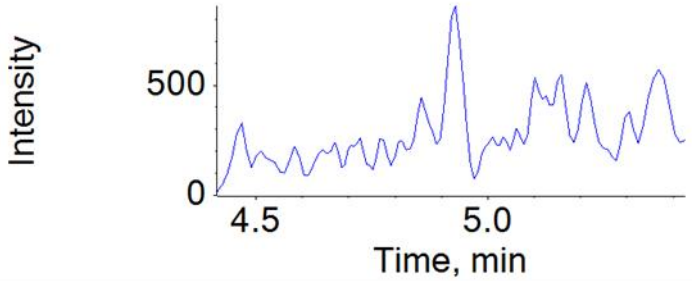
Component: PFHpS_2
Secondary Mass: 449.0 / 99.0



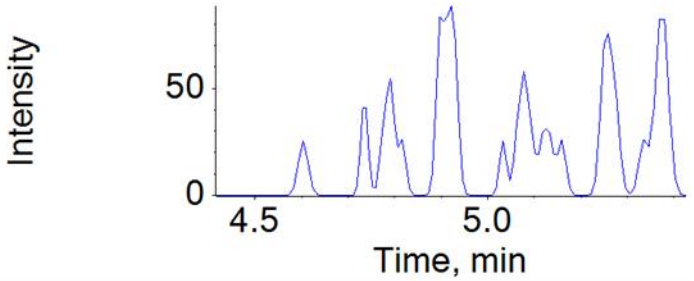
APPROVED
By JPT at 8:42 am, 11/20/18

REVIEWED
By HMK at 8:47 am, 11/20/18

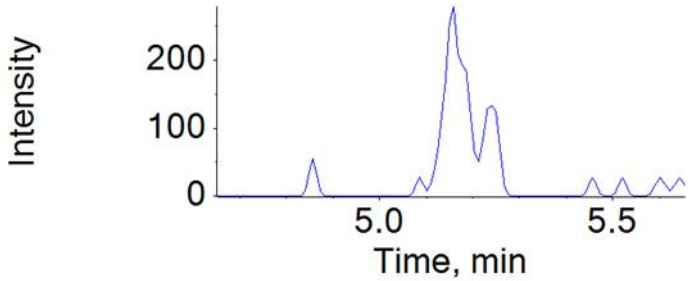
Component: PFOA
Primary Mass: 413.0 / 369.0



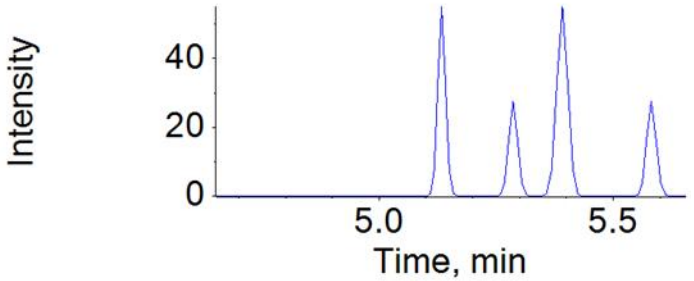
Component: PFOA_2
Secondary Mass: 413.0 / 169.0



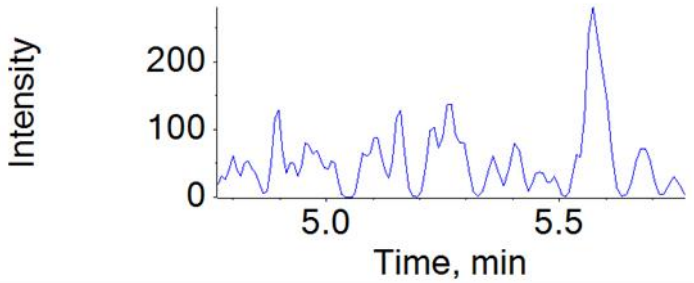
Component: PFOS
Primary Mass: 499.0 / 80.0



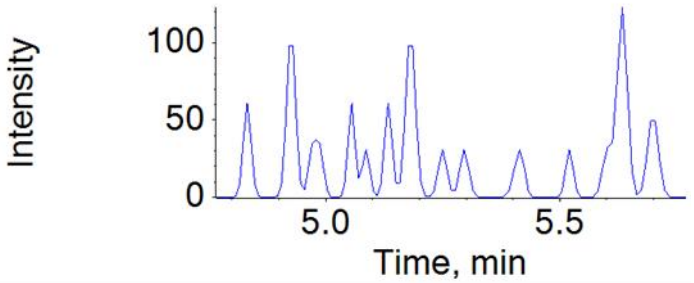
Component: PFOS_2
Secondary Mass: 499.0 / 99.0



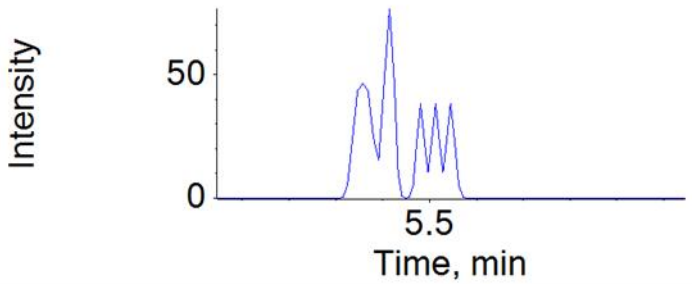
Component: PFNA
Primary Mass: 463.0 / 419.0



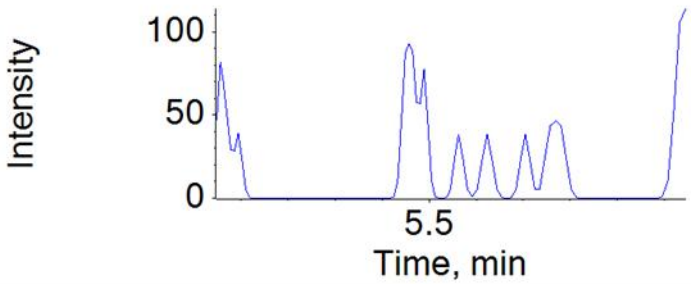
Component: PFNA_2
Secondary Mass: 463.0 / 169.0



Component: PFNS
Primary Mass: 549.0 / 80.0



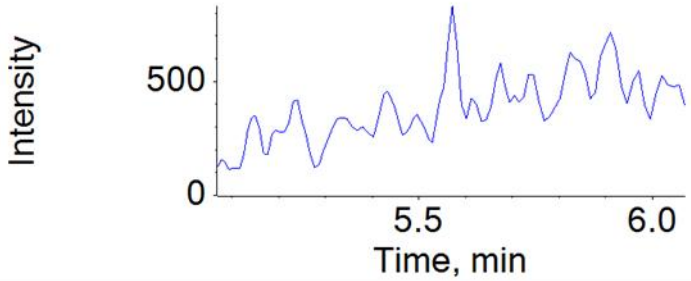
Component: PFNS_2
Secondary Mass: 549.0 / 99.0



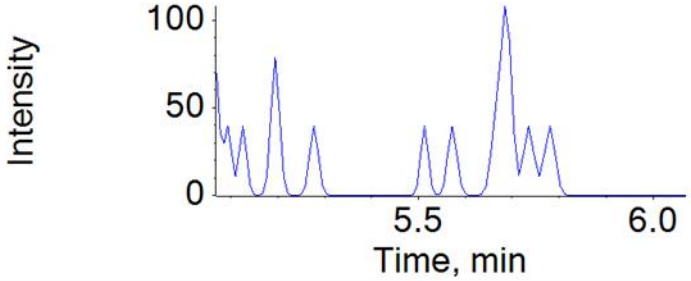
APPROVED
By JPT at 8:42 am, 11/20/18

REVIEWED
By HMK at 8:47 am, 11/20/18

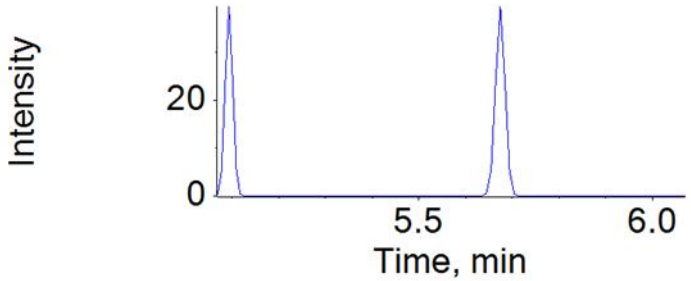
Component: PFDA
Primary Mass: 513.0 / 469.0



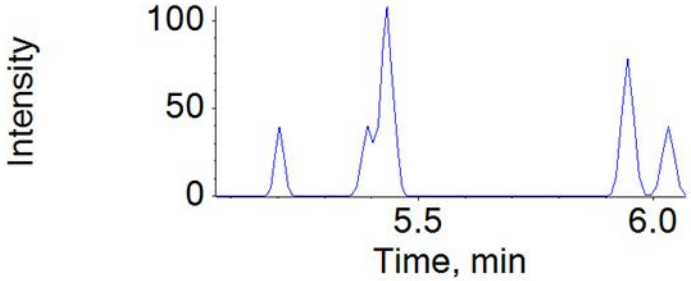
Component: PFDA_2
Secondary Mass: 513.0 / 169.0



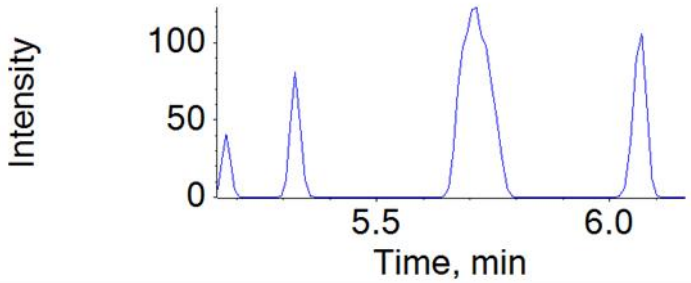
Component: 8:2-FTS
Primary Mass: 527.0 / 507.0



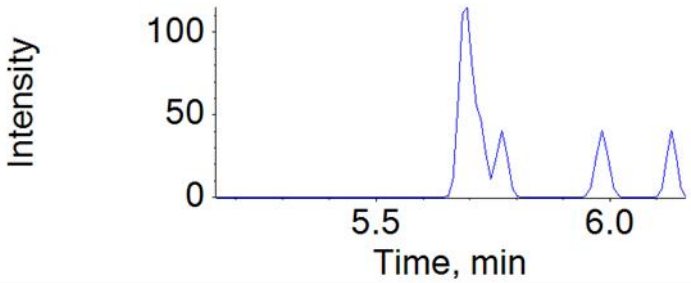
Component: 8:2 FTS_2
Secondary Mass: 527.0 / 81.0



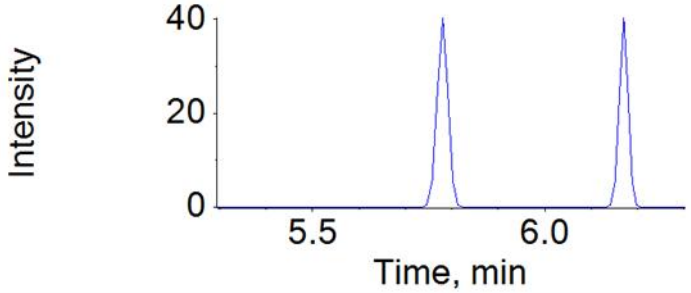
Component: NMeFOSAA
Primary Mass: 570.0 / 419.0



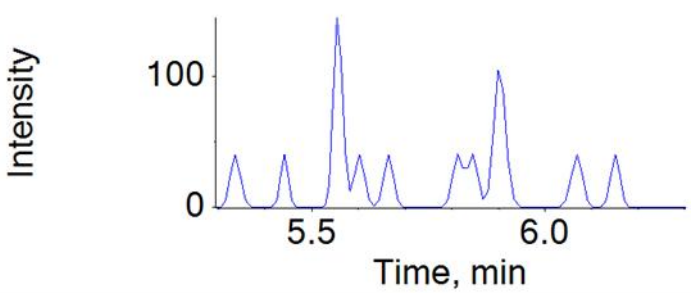
Component: NMeFOSAA_2
Secondary Mass: 570.0 / 483.0



Component: PFDS
Primary Mass: 599.0 / 80.0



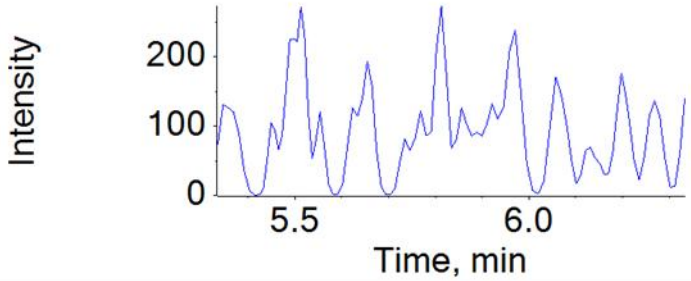
Component: PFDS_2
Secondary Mass: 599.0 / 99.0



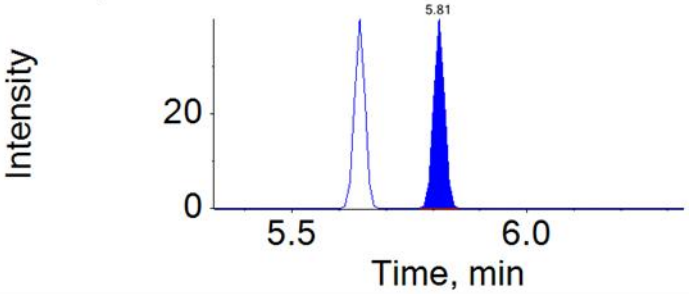
APPROVED
By JPT at 8:42 am, 11/20/18

REVIEWED
By HMK at 8:47 am, 11/20/18

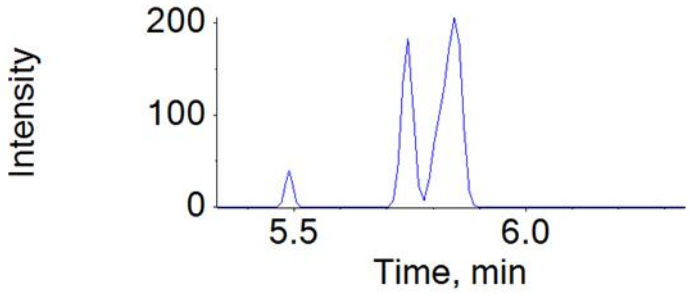
Component: PFUnDA
Primary Mass: 563.0 / 519.0



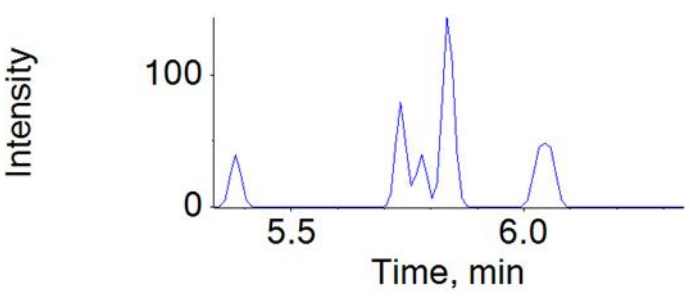
Component: PFUnDA_2
Secondary Mass: 563.0 / 169.0



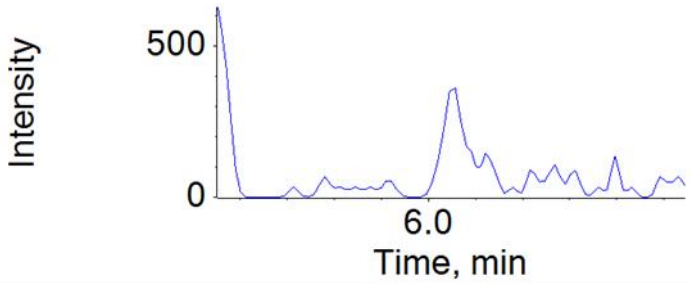
Component: NEtFOSAA
Primary Mass: 584.0 / 419.0



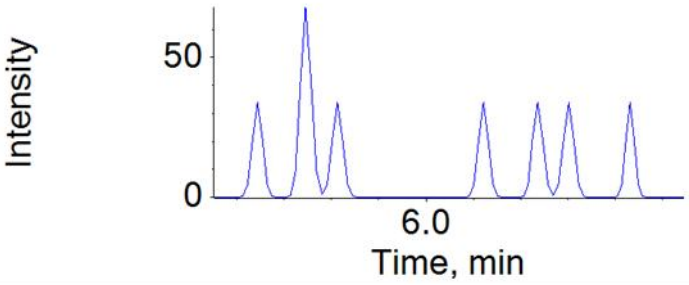
Component: NEtFOSAA_2
Secondary Mass: 584.0 / 526.0



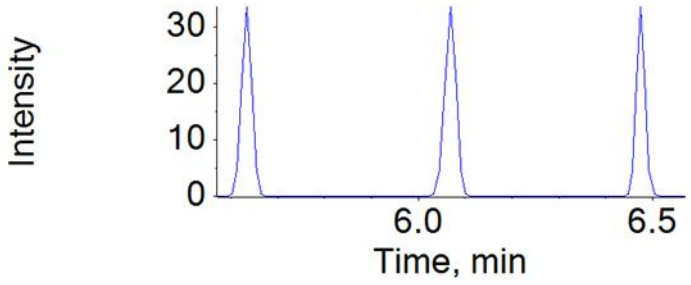
Component: PFDoDA
Primary Mass: 613.0 / 569.0



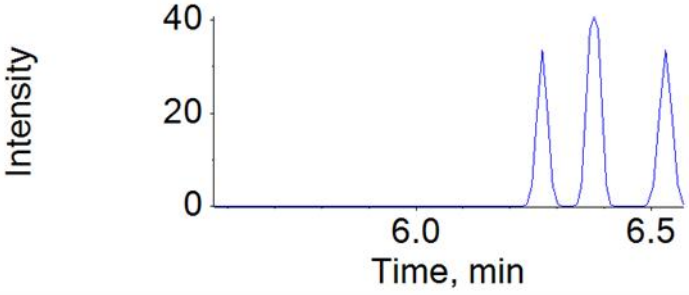
Component: PFDoDA_2
Secondary Mass: 613.0 / 169.0



Component: 10:2-FTS
Primary Mass: 627.0 / 607.0



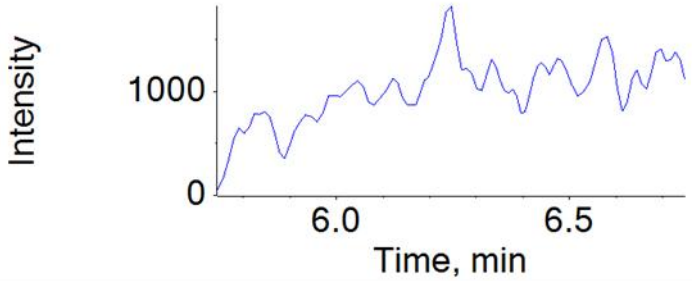
Component: 10:2 FTS_2
Secondary Mass: 627.0 / 81.0



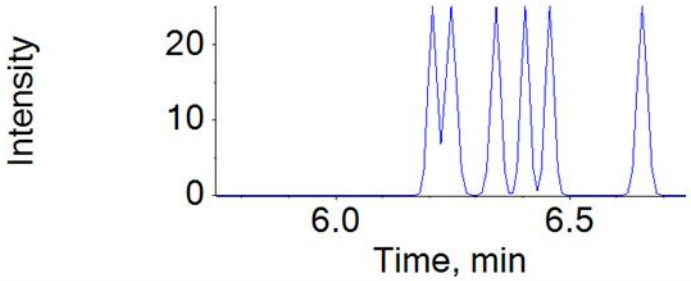
APPROVED
By JPT at 8:42 am, 11/20/18

REVIEWED
By HMK at 8:47 am, 11/20/18

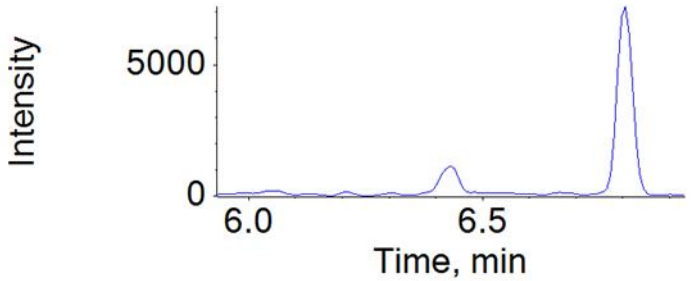
Component: PFTrDA
Primary Mass: 663.0 / 619.0



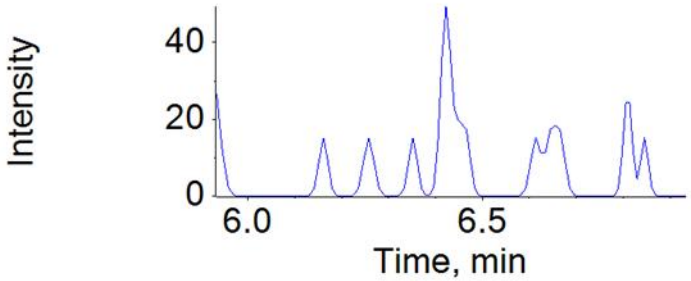
Component: PFTrDA_2
Secondary Mass: 663.0 / 169.0



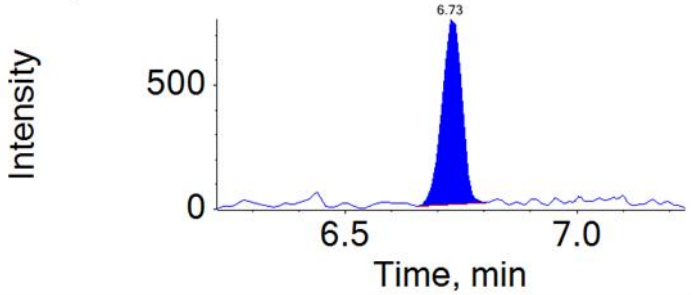
Component: PFTeDA
Primary Mass: 713.0 / 669.0



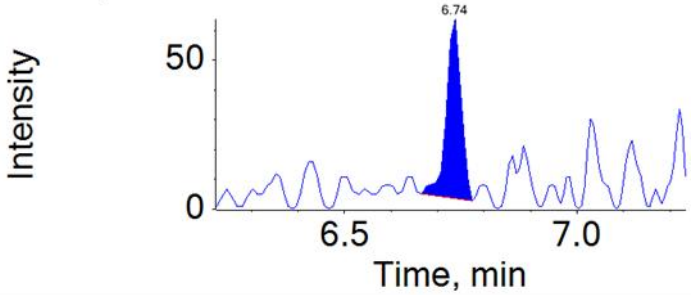
Component: PFTeDA_2
Secondary Mass: 713.0 / 169.0



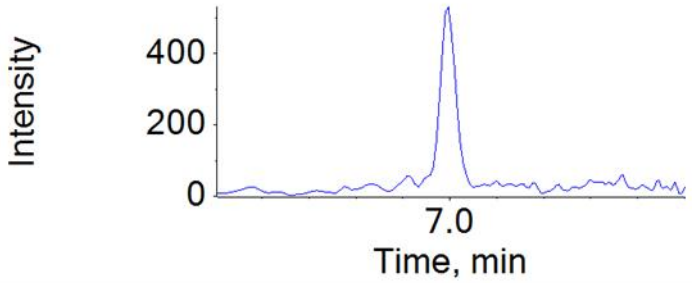
Component: PFHxDA
Primary Mass: 813.0 / 769.0



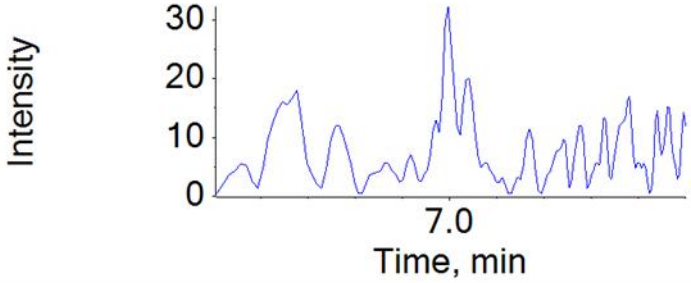
Component: PFHxDA_2
Secondary Mass: 813.0 / 169.0



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

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL_Updated 1/10/2019 3:19:00 PM
QMethod Name: 18AUG20QM **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

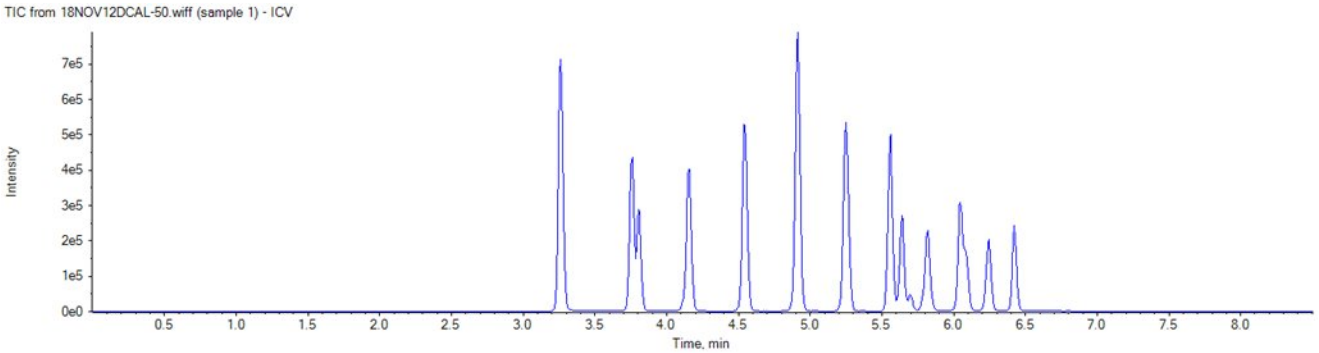
Analyte Quantitation Peak Table

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

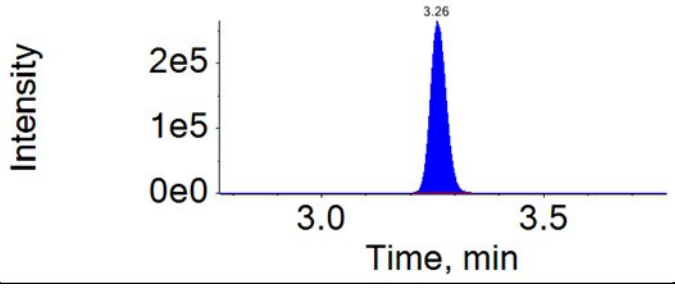


APPROVED
By MCD at 3:23 pm, 1/10/19

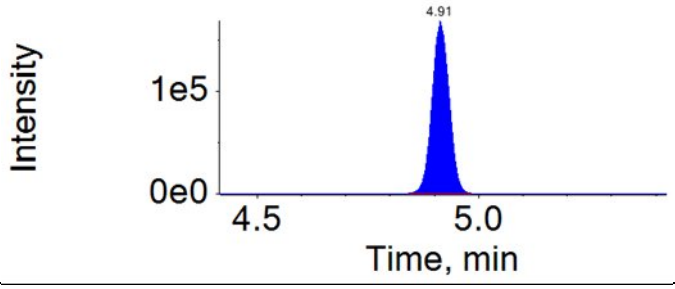
REVIEWED
By ucmr at 3:21 pm, 1/25/19

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL_Updated 1/10/2019 3:19:00 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

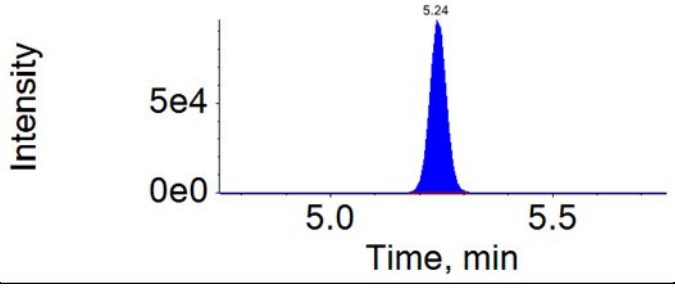
Injection Standard: 13C3-PFBA
216.0 / 172.0



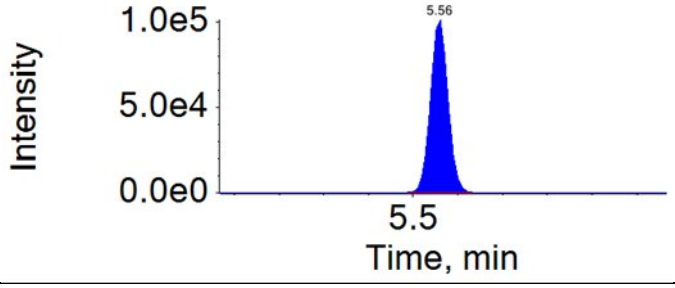
Injection Standard: 13C2-PFOA
415.0 / 370.0



Injection Standard: 13C4-PFOS
503.0 / 80.0

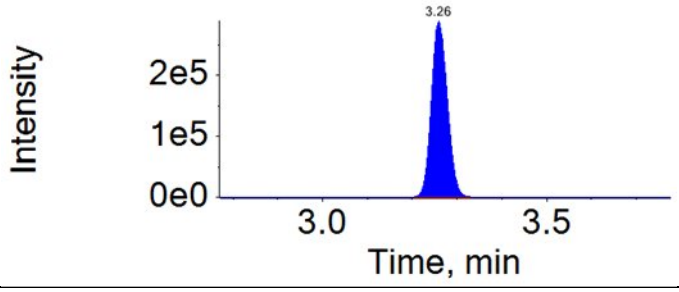


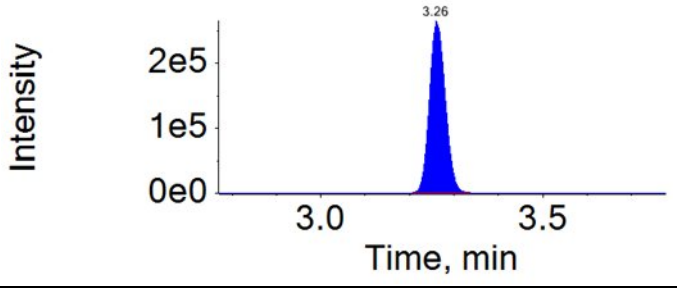
Injection Standard: 13C2-PFDA
515.0 / 470.0



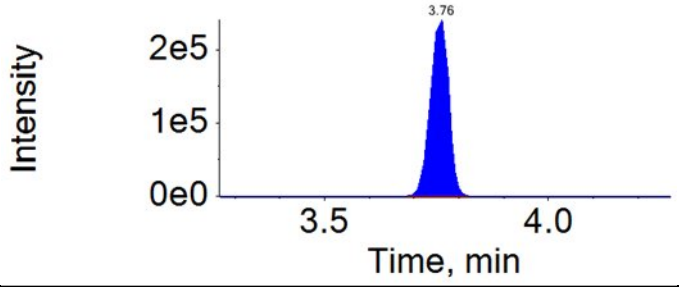
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL_Updated 1/10/2019 3:19:00 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

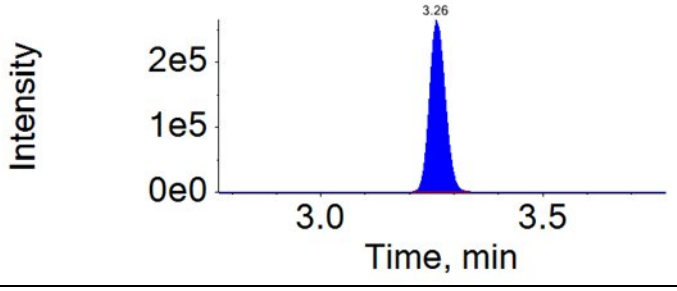
Extraction Standard: E13C4-PFBA	Injection Standard: 13C3-PFBA
217.0 / 172.0	216.0 / 172.0



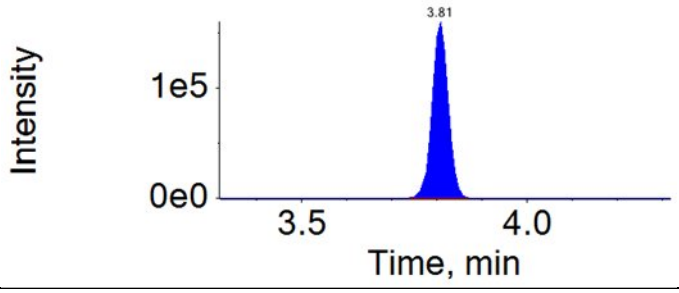


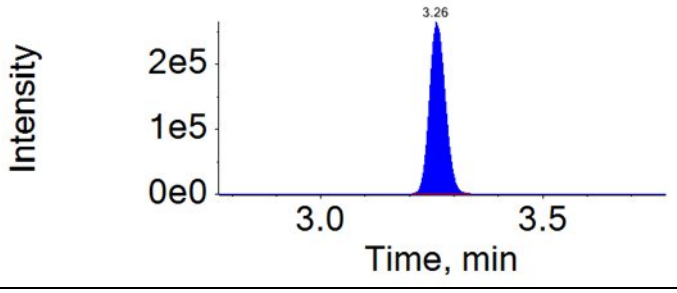
Extraction Standard: E13C5-PFPeA	Injection Standard: 13C3-PFBA
268.0 / 223.0	216.0 / 172.0



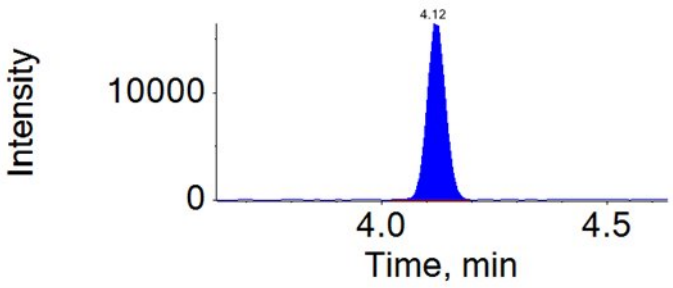


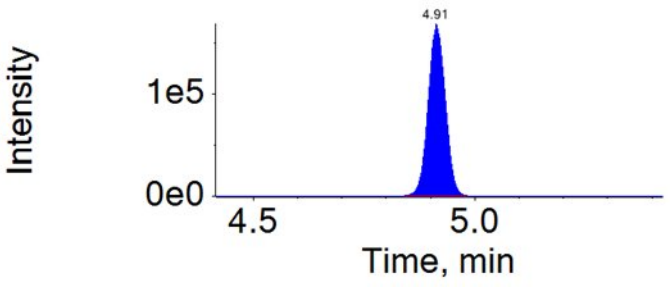
Extraction Standard: E13C3-PFBS	Injection Standard: 13C3-PFBA
302.0 / 80.0	216.0 / 172.0





Extraction Standard: E13C2-4:2-FTS	Injection Standard: 13C2-PFOA
329.0 / 81.0	415.0 / 370.0



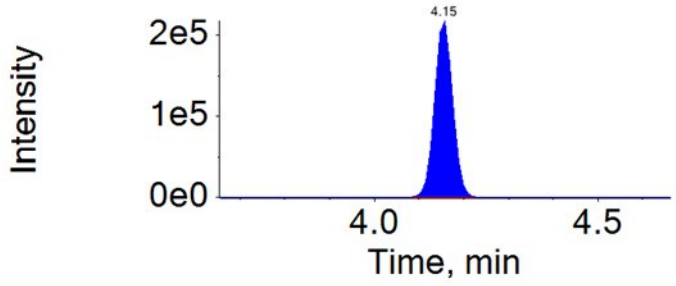


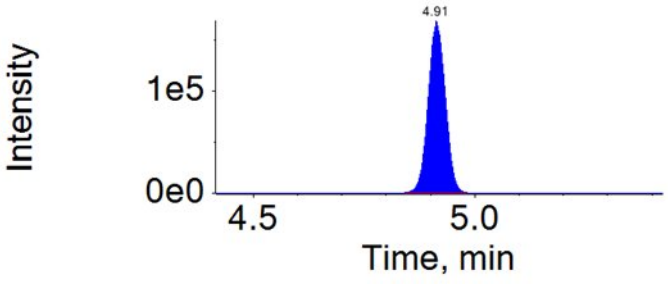
APPROVED
By MCD at 3:23 pm, 1/10/19

REVIEWED
By ucmr at 3:21 pm, 1/25/19

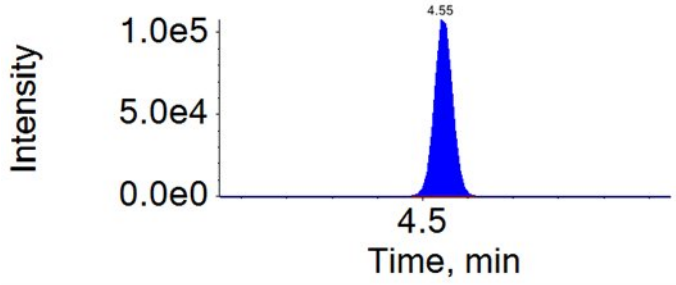
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL_Updated 1/10/2019 3:19:00 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

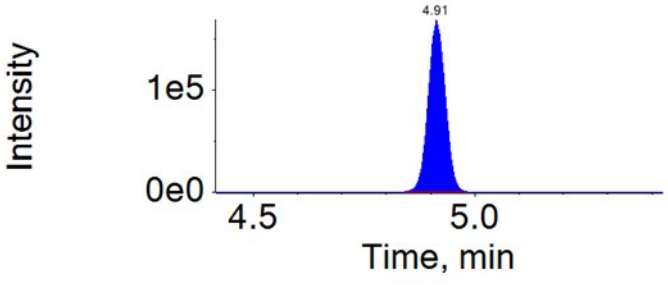
Extraction Standard: E13C5-PFHxA	Injection Standard: 13C2-PFOA
318.0 / 273.0	415.0 / 370.0



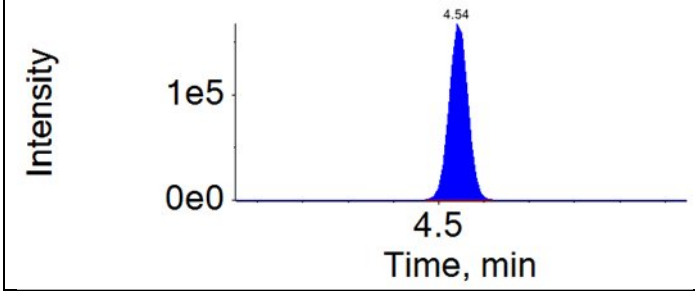


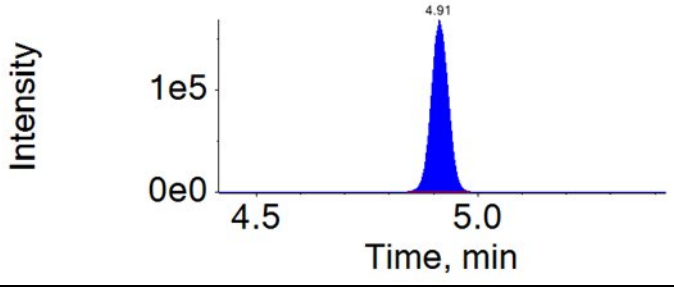
Extraction Standard: E13C3-PFHxS	Injection Standard: 13C2-PFOA
402.0 / 80.0	415.0 / 370.0



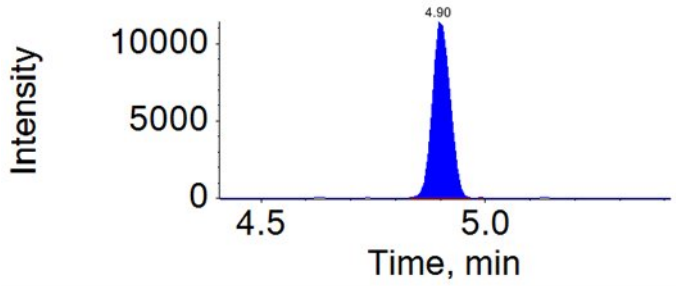


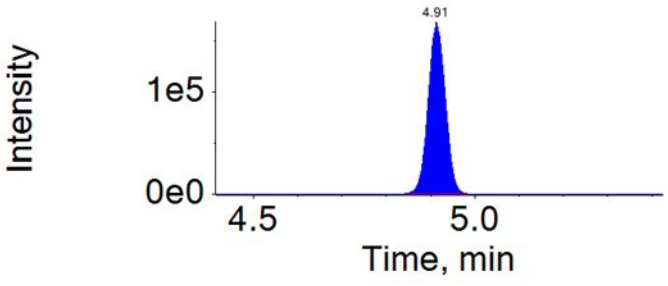
Extraction Standard: E13C4-PFHpA	Injection Standard: 13C2-PFOA
367.0 / 322.0	415.0 / 370.0





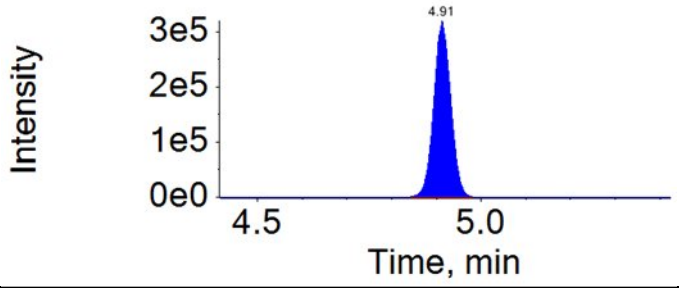
Extraction Standard: E13C2-6:2-FTS	Injection Standard: 13C2-PFOA
429.0 / 81.0	415.0 / 370.0

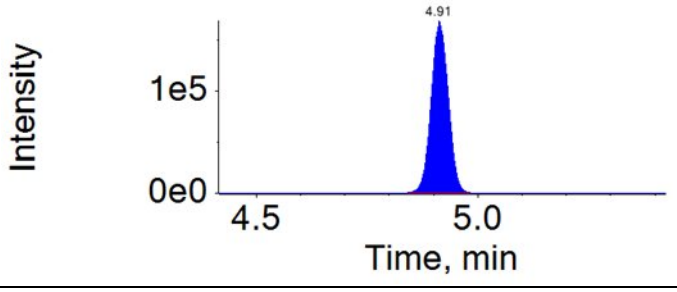




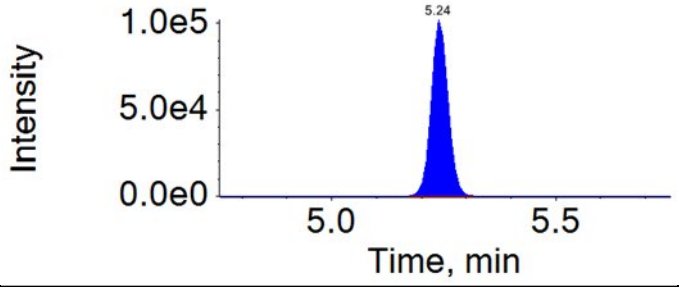
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL_Updated 1/10/2019 3:19:00 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

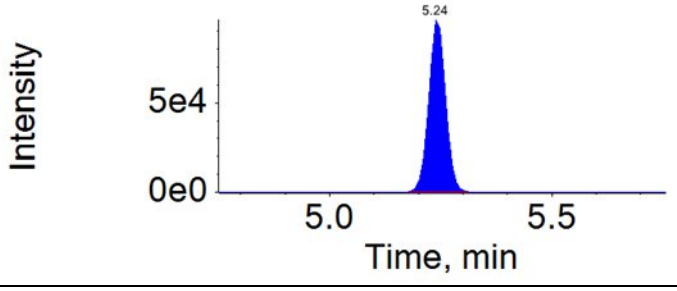
Extraction Standard: E13C8-PFOA	Injection Standard: 13C2-PFOA
421.0 / 376.0	415.0 / 370.0



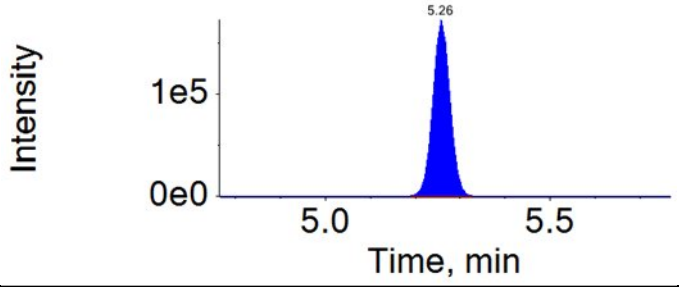


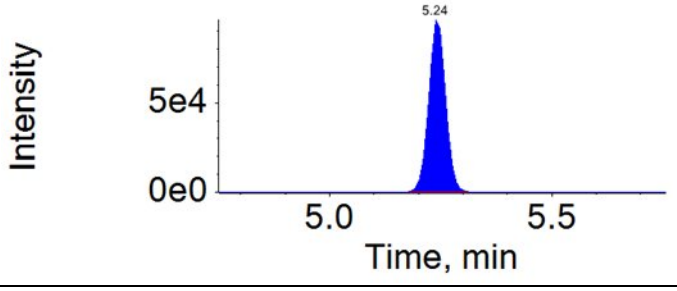
Extraction Standard: E13C8-PFOS	Injection Standard: 13C4-PFOS
507.0 / 80.0	503.0 / 80.0



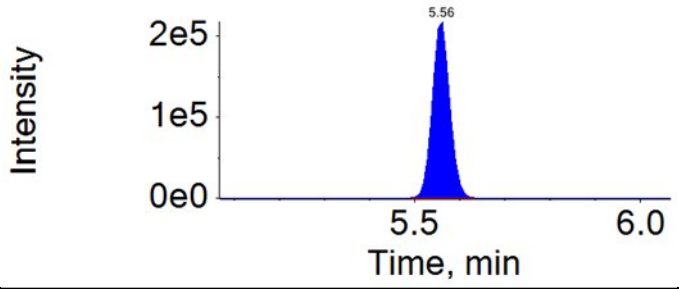


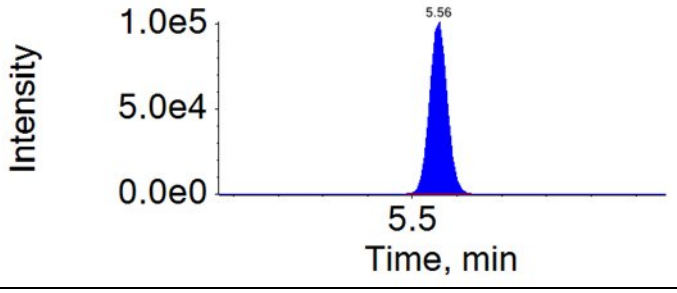
Extraction Standard: E13C9-PFNA	Injection Standard: 13C4-PFOS
472.0 / 427.0	503.0 / 80.0



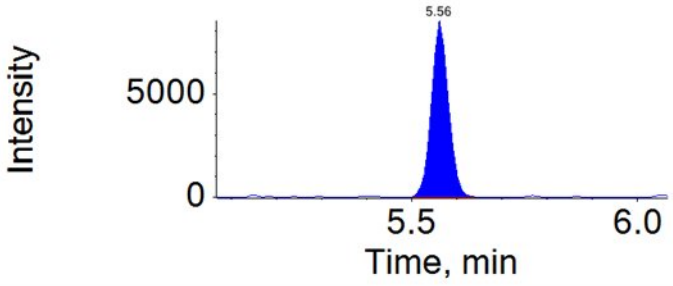
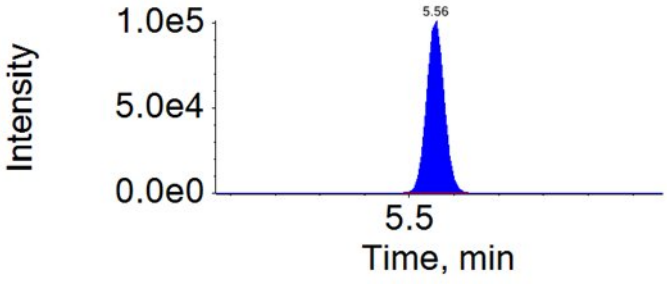


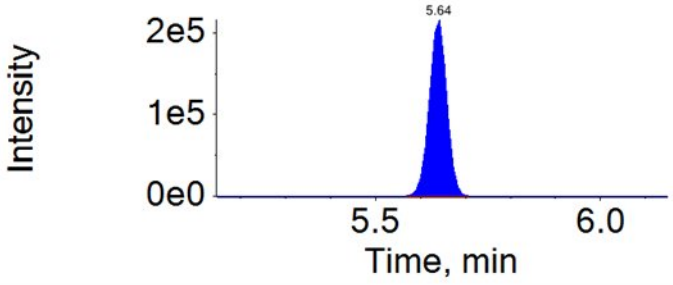
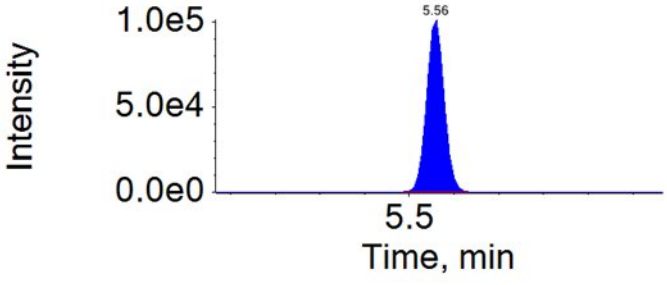
Extraction Standard: E13C6-PFDA	Injection Standard: 13C2-PFDA
519.0 / 474.0	515.0 / 470.0

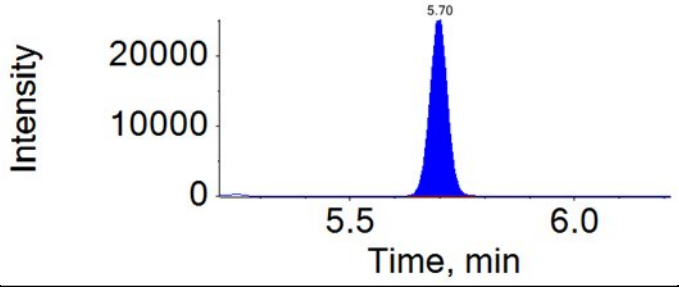
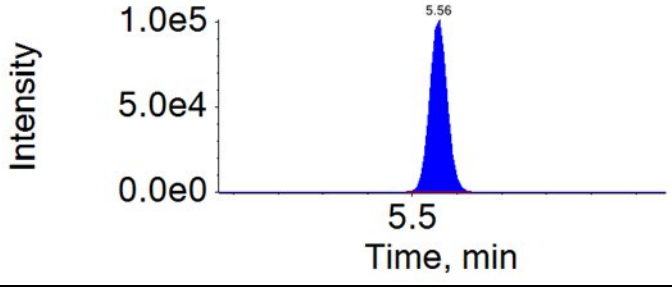


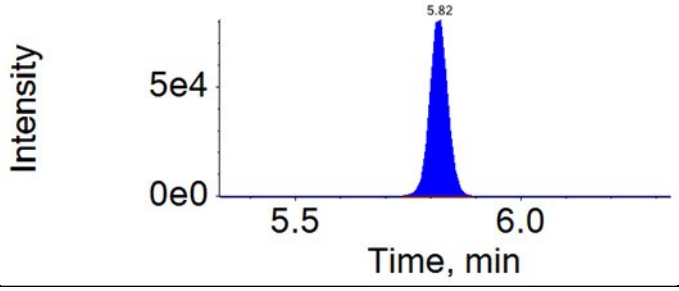
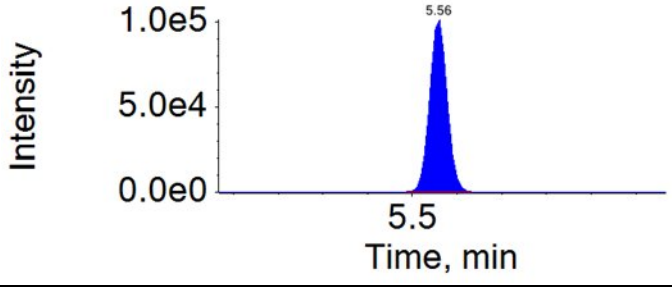


ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL_Updated 1/10/2019 3:19:00 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Extraction Standard: E13C2-8:2-FTS	Injection Standard: 13C2-PFDA
529.0 / 81.0	515.0 / 470.0
	

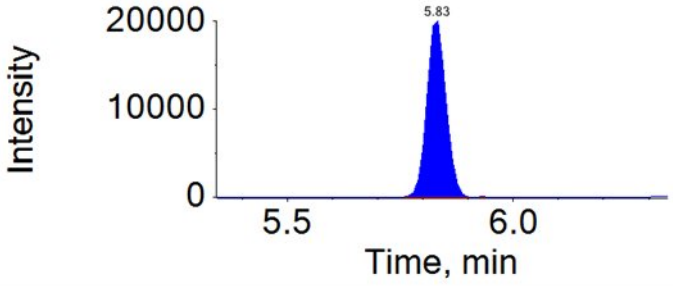
Extraction Standard: E13C8-PFOSA	Injection Standard: 13C2-PFDA
506.0 / 78.0	515.0 / 470.0
	

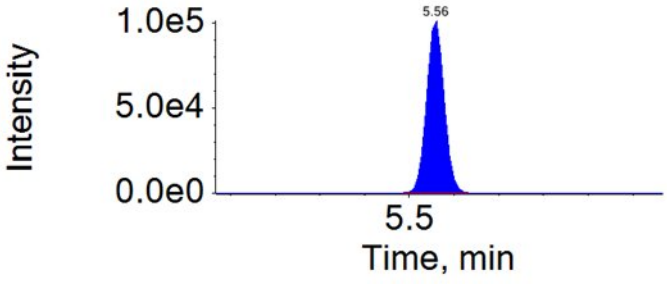
Extraction Standard: Ed3-NMeFOSAA	Injection Standard: 13C2-PFDA
573.0 / 419.0	515.0 / 470.0
	

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

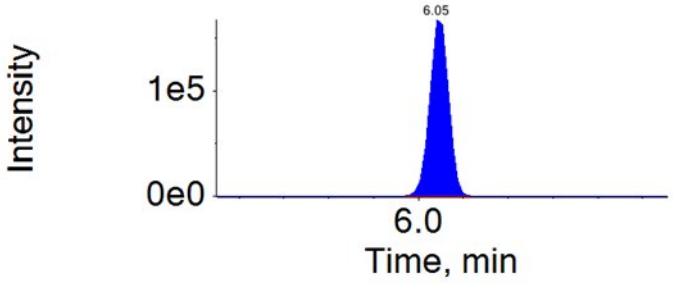
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL_Updated 1/10/2019 3:19:00 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

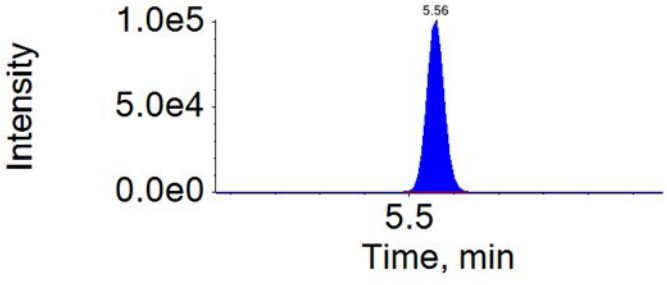
Extraction Standard: Ed5-NEtFOSAA	Injection Standard: 13C2-PFDA
589.0 / 419.0	515.0 / 470.0



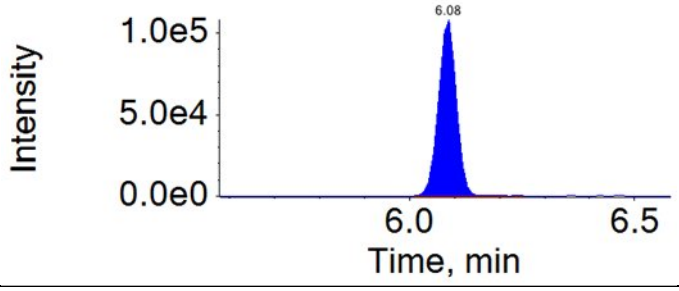


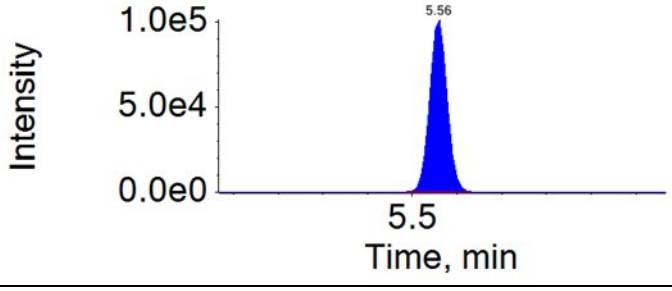
Extraction Standard: E13C2-PFDoDA	Injection Standard: 13C2-PFDA
615.0 / 570.0	515.0 / 470.0



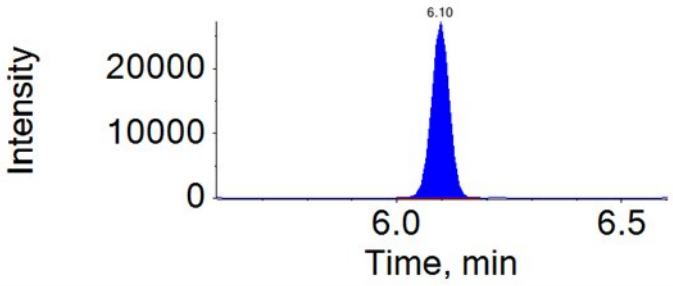


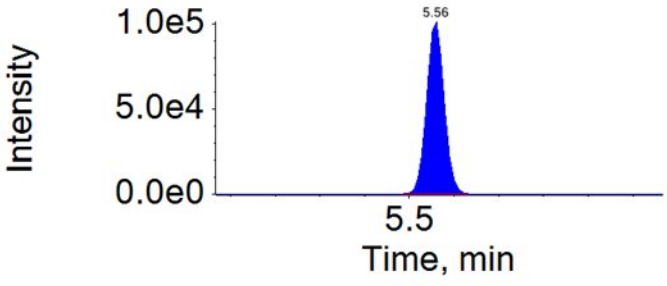
Extraction Standard: Ed7-NMePFOSAE	Injection Standard: 13C2-PFDA
623.0 / 59.0	515.0 / 470.0





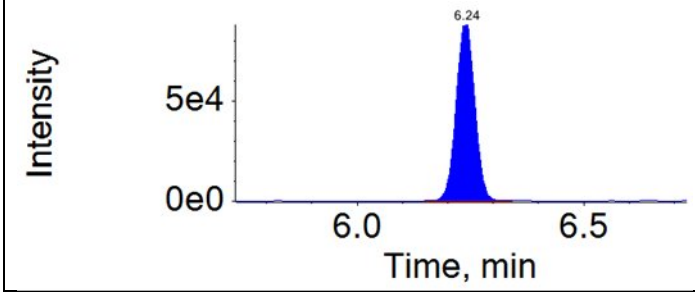
Extraction Standard: Ed3-NMePFOSA	Injection Standard: 13C2-PFDA
515.0 / 169.0	515.0 / 470.0

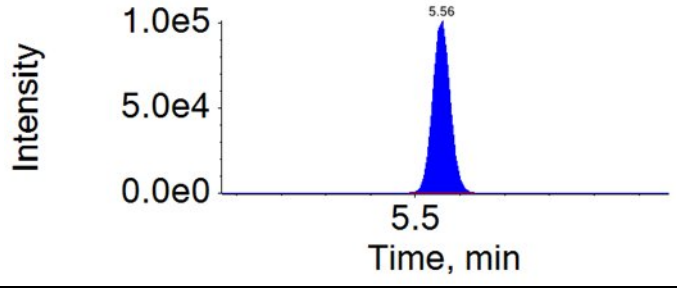




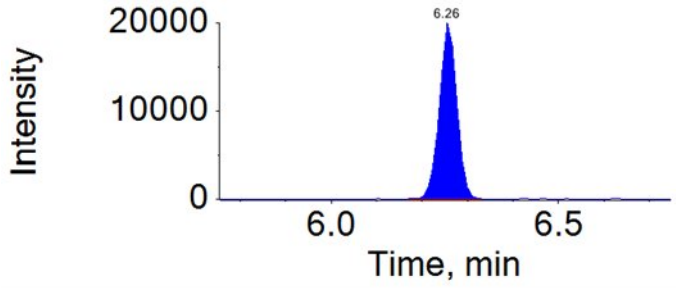
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL_Updated 1/10/2019 3:19:00 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

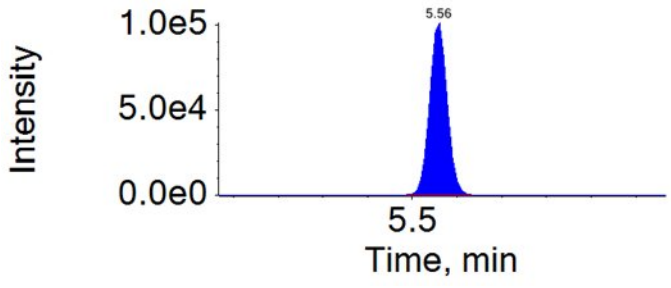
Extraction Standard: Ed9-NEtPFOSAE	Injection Standard: 13C2-PFDA
639.0 / 59.0	515.0 / 470.0



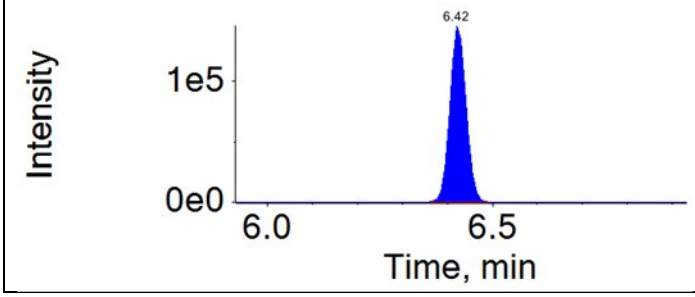


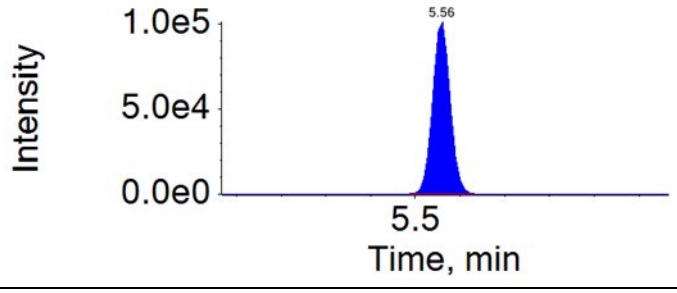
Extraction Standard: Ed5-NEtPFOSA	Injection Standard: 13C2-PFDA
531.0 / 169.0	515.0 / 470.0





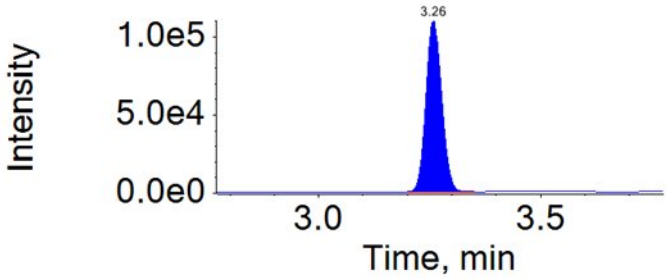
Extraction Standard: E13C2-PFTeDA	Injection Standard: 13C2-PFDA
715.0 / 670.0	515.0 / 470.0

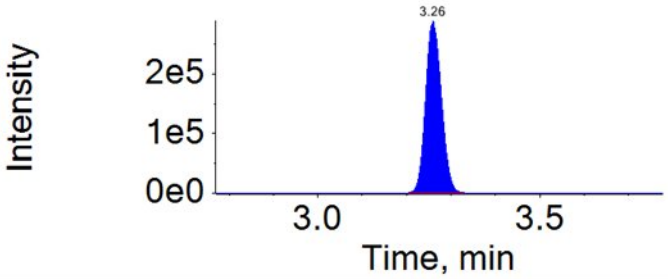




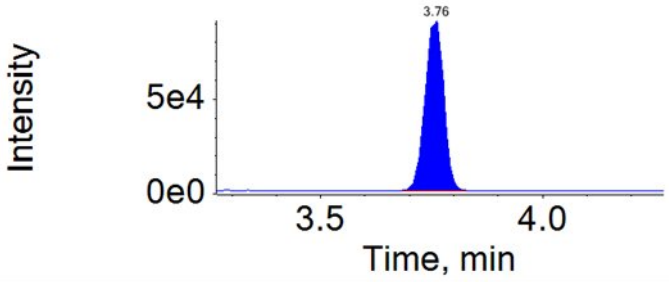
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL_Updated 1/10/2019 3:19:00 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

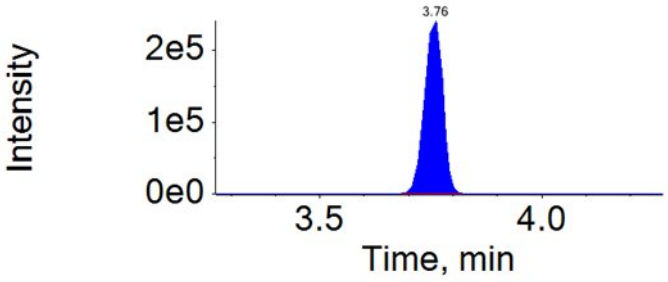
Analyte: PFBA	Extraction Standard: 13C4-PFBA
213.0 / 169.0	217.0 / 172.0



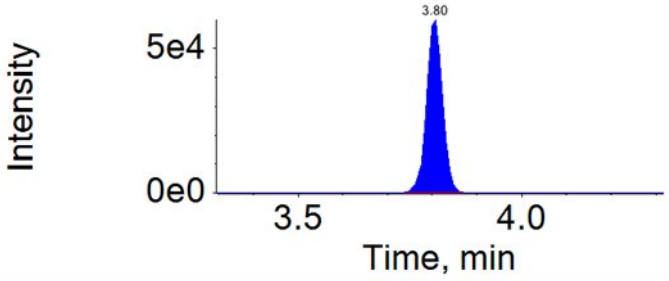


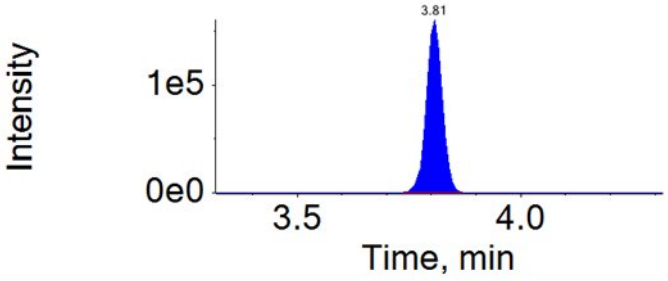
Analyte: PFPeA	Extraction Standard: 13C5-PFPeA
263.0 / 219.0	268.0 / 223.0



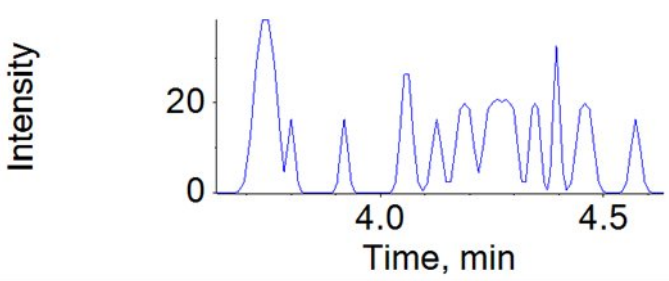


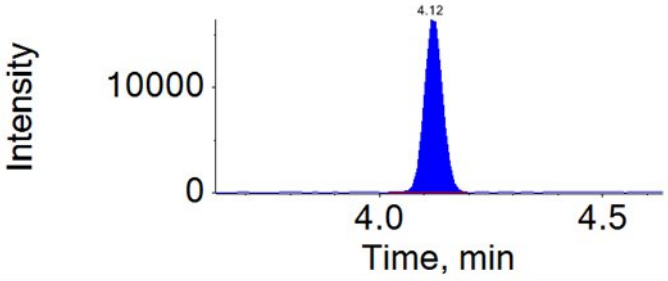
Analyte: PFBS	Extraction Standard: 13C3-PFBS
299.0 / 80.0	302.0 / 80.0





Analyte: 4:2-FTS	Extraction Standard: 13C2-4:2-FTS
327.0 / 307.0	329.0 / 81.0



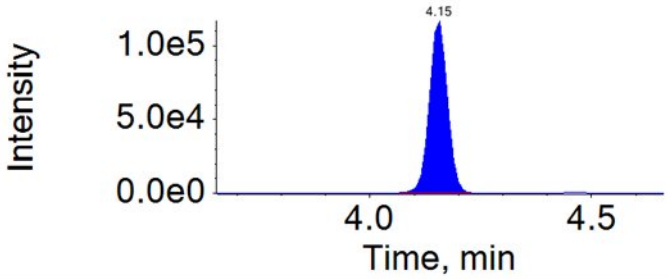


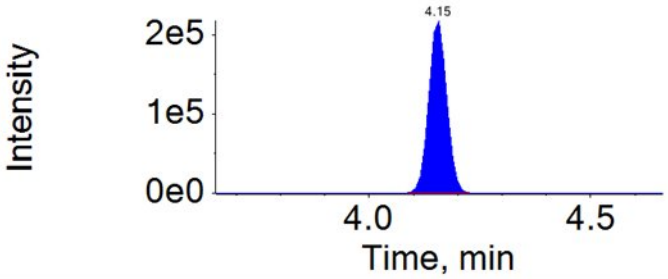
APPROVED
By MCD at 3:23 pm, 1/10/19

REVIEWED
By ucmr at 3:21 pm, 1/25/19

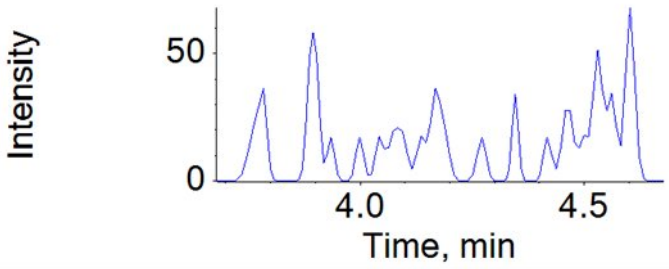
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL_Updated 1/10/2019 3:19:00 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

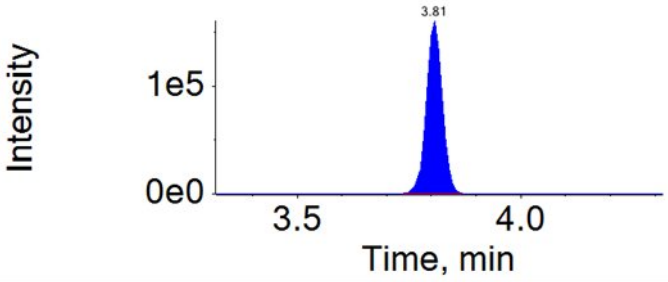
Analyte: PFHxA	Extraction Standard: 13C5-PFHxA
313.0 / 269.0	318.0 / 273.0



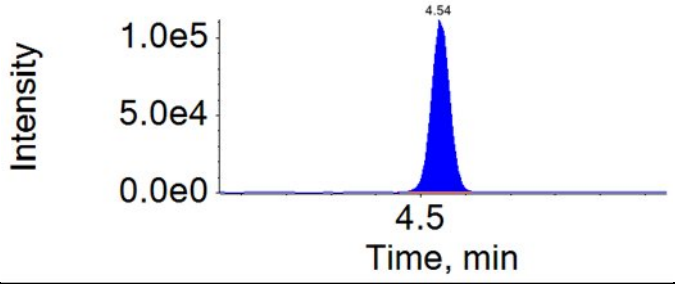


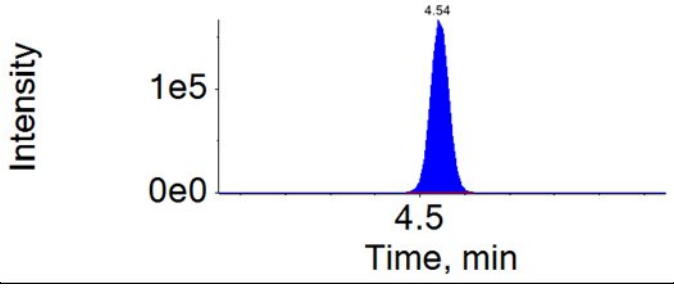
Analyte: PFPeS	Extraction Standard: 13C3-PFBS
349.0 / 80.0	302.0 / 80.0



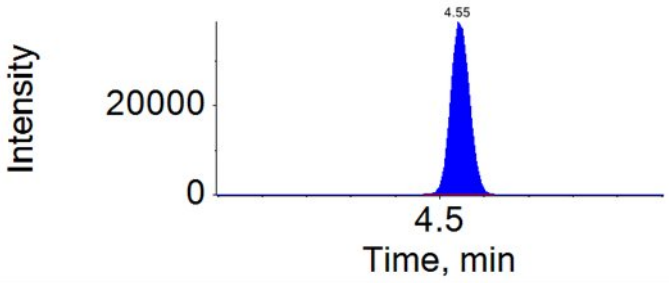


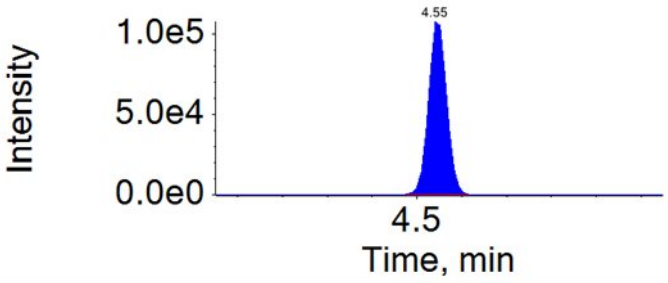
Analyte: PFHpA	Extraction Standard: 13C4-PFHpA
363.0 / 319.0	367.0 / 322.0





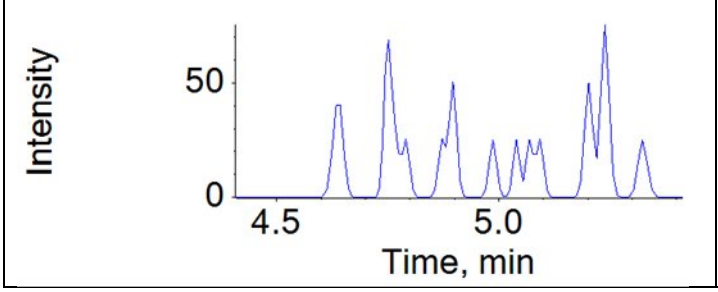
Analyte: PFHxS	Extraction Standard: 13C3-PFHxS
399.0 / 80.0	402.0 / 80.0

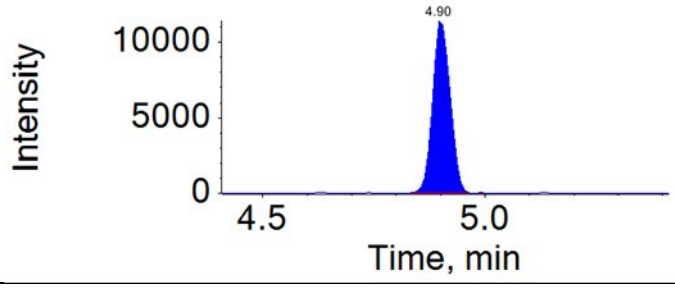




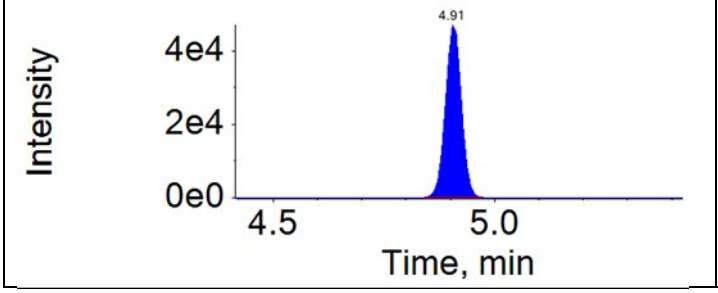
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL_Updated 1/10/2019 3:19:00 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

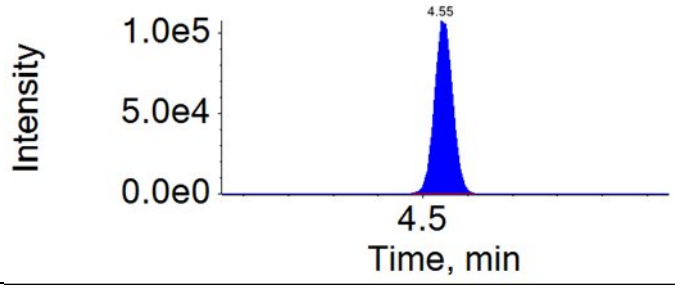
Analyte: 6:2-FTS	Extraction Standard: 13C2-6:2-FTS
427.0 / 407.0	429.0 / 81.0



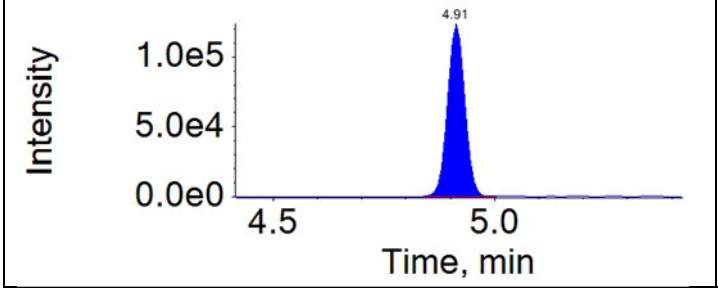


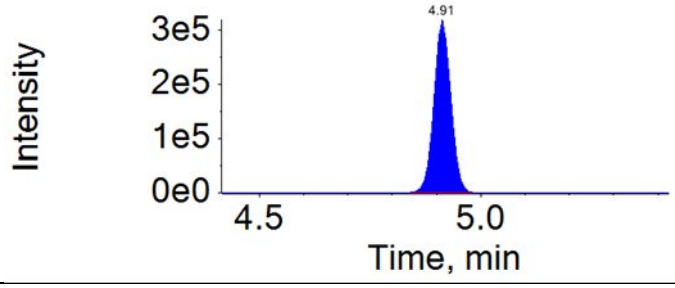
Analyte: PFHpS	Extraction Standard: 13C3-PFHxS
449.0 / 80.0	402.0 / 80.0



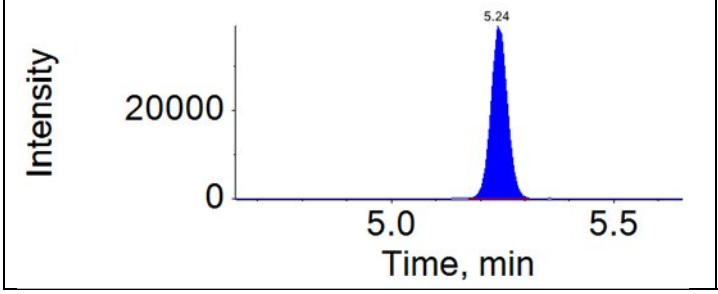


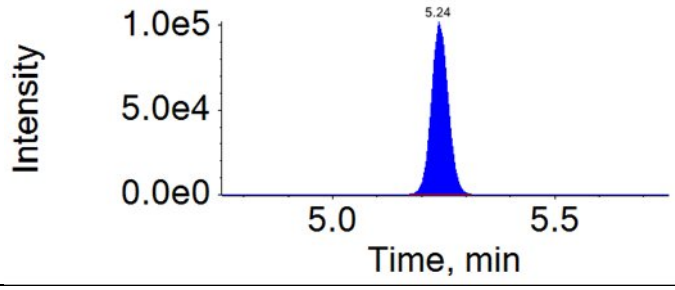
Analyte: PFOA	Extraction Standard: 13C8-PFOA
413.0 / 369.0	421.0 / 376.0





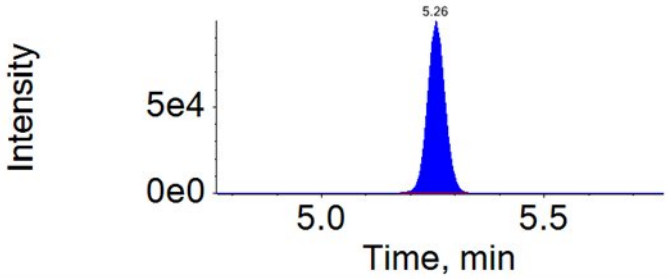
Analyte: PFOS	Extraction Standard: 13C8-PFOS
499.0 / 80.0	507.0 / 80.0

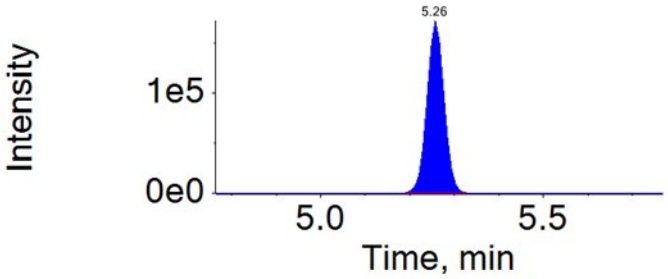




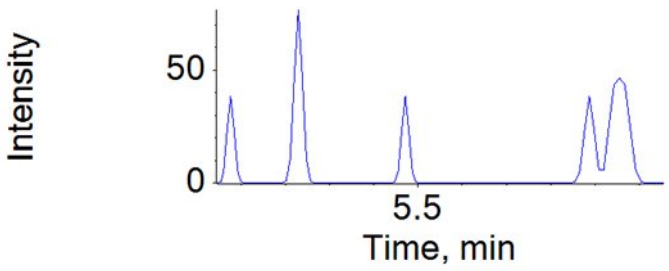
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL_Updated 1/10/2019 3:19:00 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

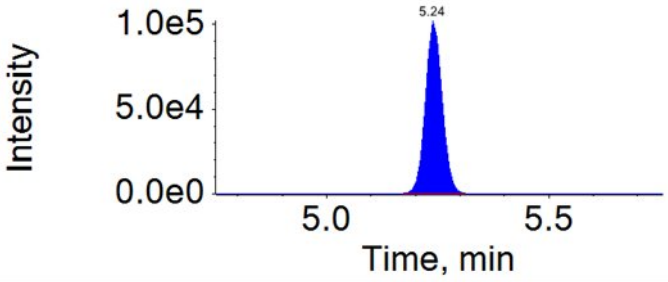
Analyte: PFNA	Extraction Standard: 13C9-PFNA
463.0 / 419.0	472.0 / 427.0



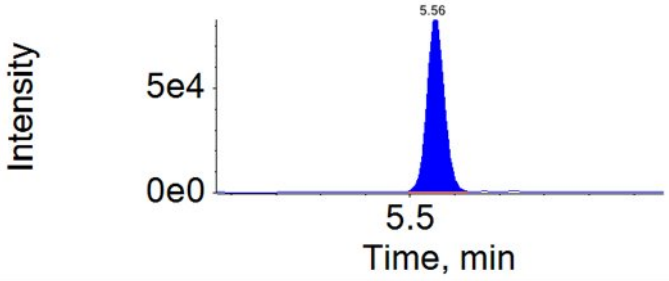


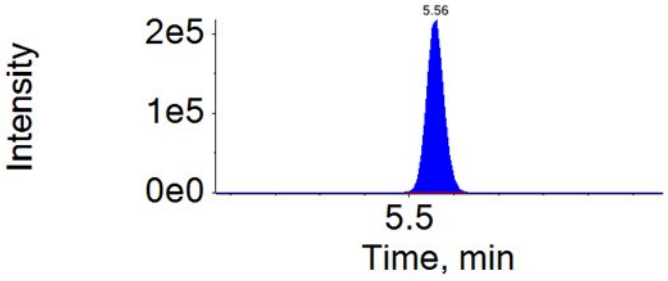
Analyte: PFNS	Extraction Standard: 13C8-PFOS
549.0 / 80.0	507.0 / 80.0



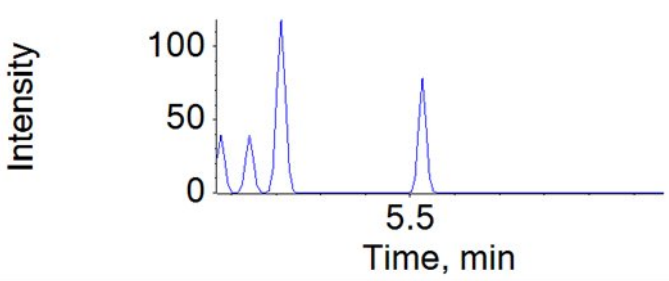


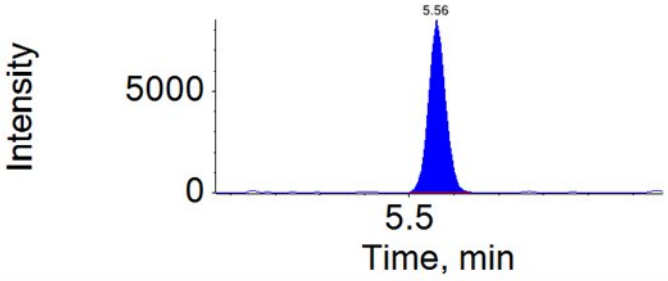
Analyte: PFDA	Extraction Standard: 13C6-PFDA
513.0 / 469.0	519.0 / 474.0





Analyte: 8:2-FTS	Extraction Standard: 13C2-8:2-FTS
527.0 / 507.0	529.0 / 81.0



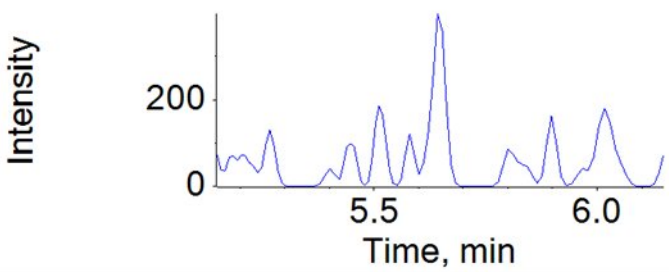


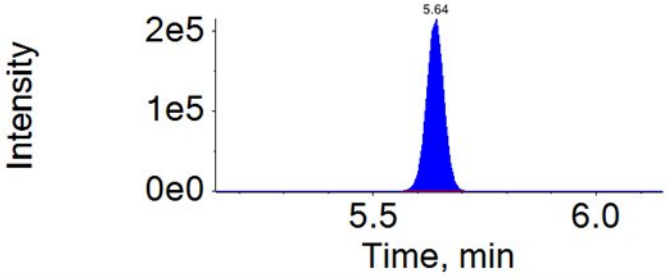
APPROVED
By MCD at 3:23 pm, 1/10/19

REVIEWED
By ucmr at 3:21 pm, 1/25/19

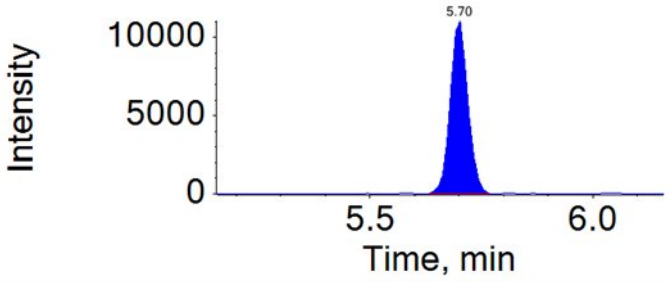
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL_Updated 1/10/2019 3:19:00 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

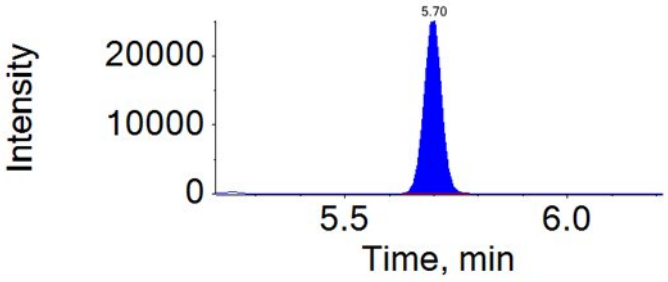
Analyte: PFOSA	Extraction Standard: 13C8-PFOSA
498.0 / 78.0	506.0 / 78.0



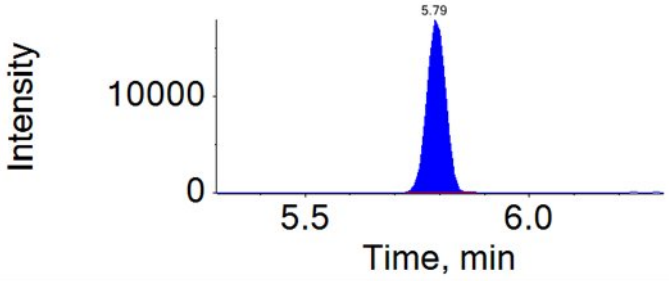


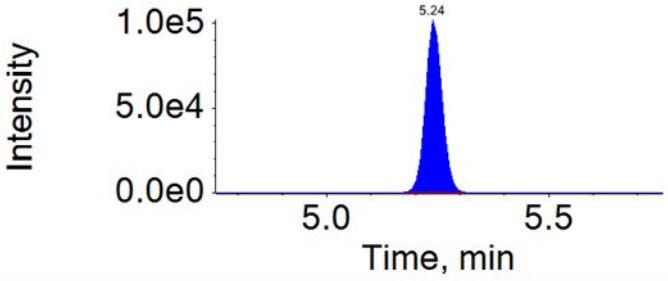
Analyte: NMeFOSAA	Extraction Standard: d3-NMeFOSAA
570.0 / 419.0	573.0 / 419.0



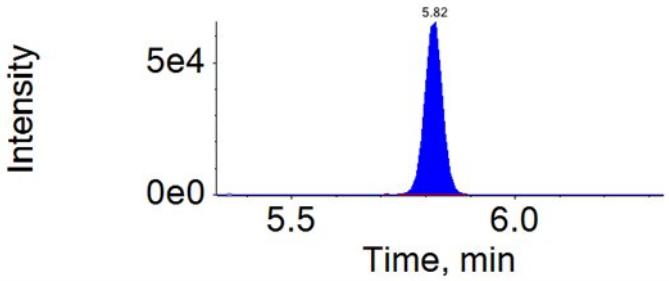


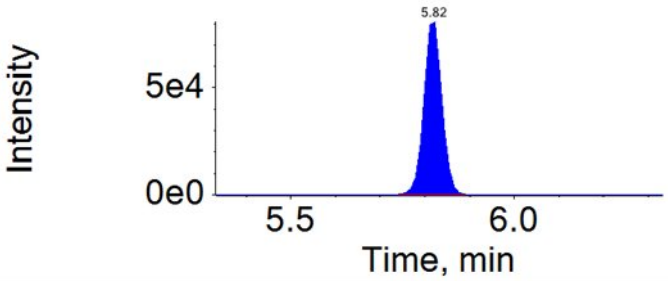
Analyte: PFDS	Extraction Standard: 13C8-PFOS
599.0 / 80.0	507.0 / 80.0





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



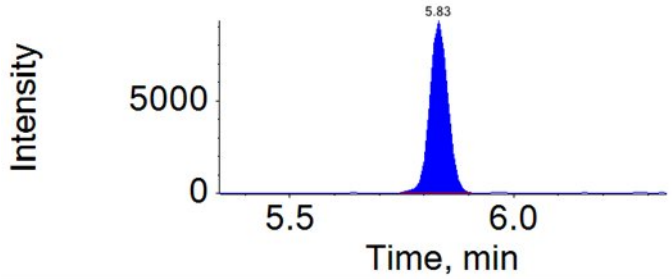


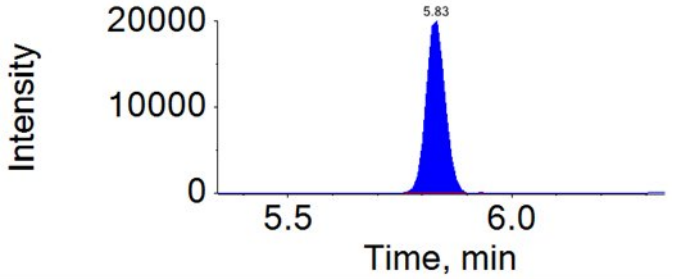
APPROVED
By MCD at 3:23 pm, 1/10/19

REVIEWED
By ucmr at 3:21 pm, 1/25/19

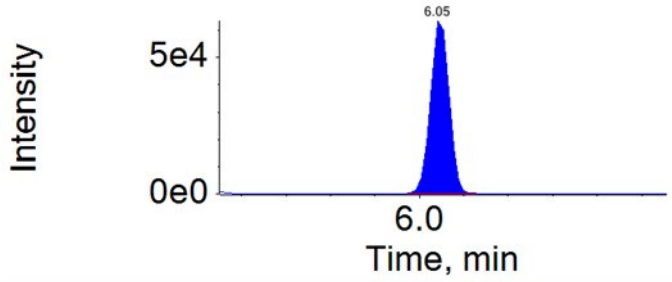
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL_Updated 1/10/2019 3:19:00 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

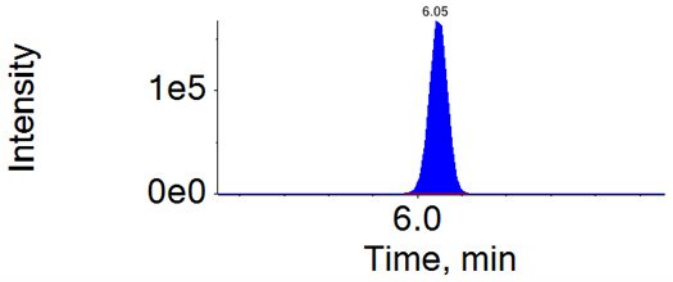
Analyte: NEtFOSAA	Extraction Standard: d5-NEtFOSAA
584.0 / 419.0	589.0 / 419.0



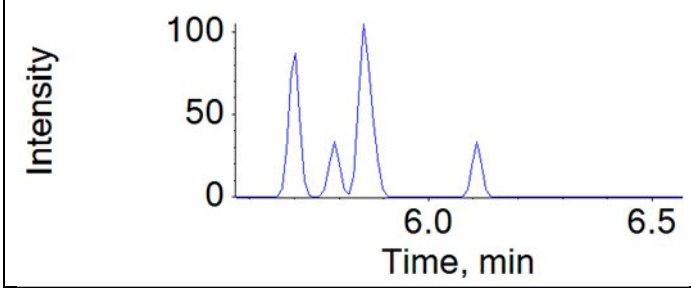


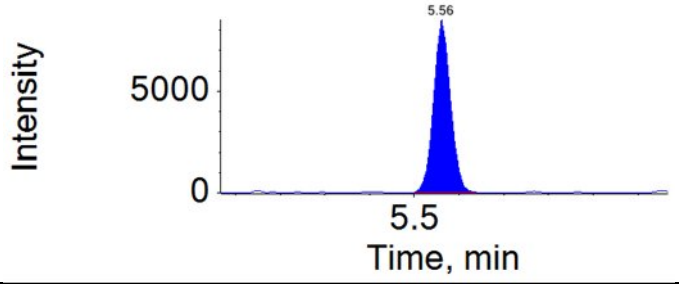
Analyte: PFDoDA	Extraction Standard: 13C2-PFDoDA
613.0 / 569.0	615.0 / 570.0



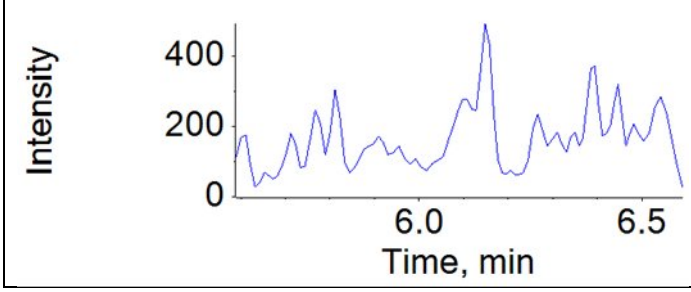


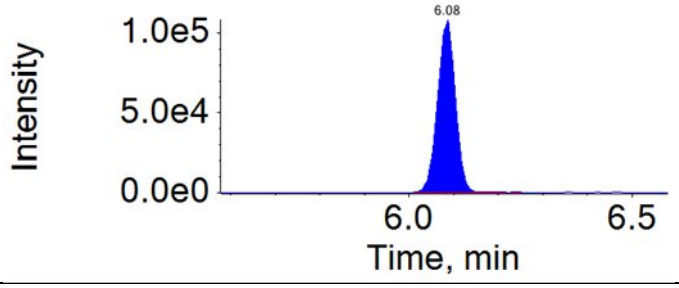
Analyte: 10:2-FTS	Extraction Standard: 13C2-8:2-FTS
627.0 / 607.0	529.0 / 81.0





Analyte: NMePFOSAE	Extraction Standard: d7-NMePFOSAE
616.0 / 59.0	623.0 / 59.0



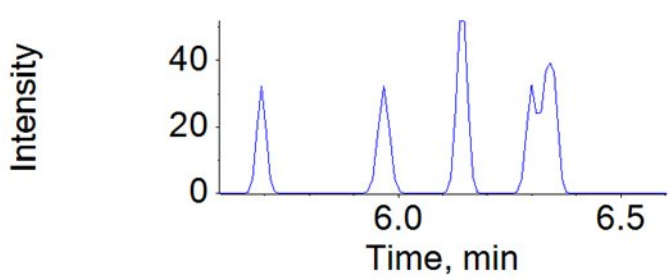


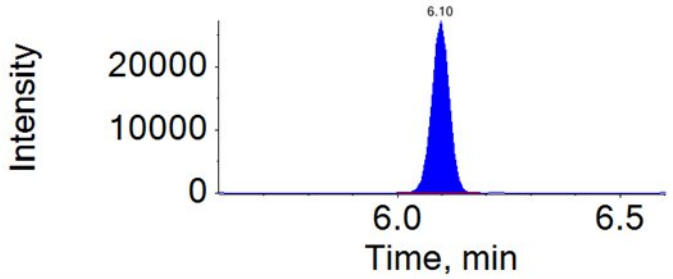
APPROVED
By MCD at 3:23 pm, 1/10/19

REVIEWED
By ucmr at 3:21 pm, 1/25/19

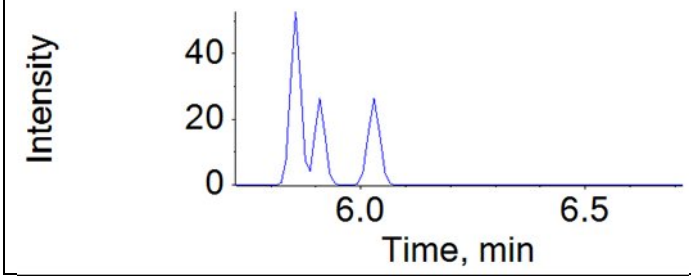
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL_Updated 1/10/2019 3:19:00 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

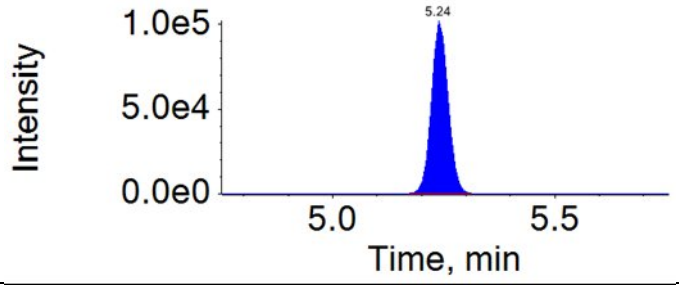
Analyte: NMePFOSA	Extraction Standard: d3-NMePFOSA
512.0 / 169.0	515.0 / 169.0



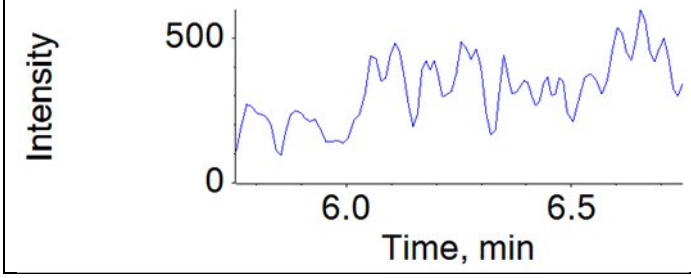


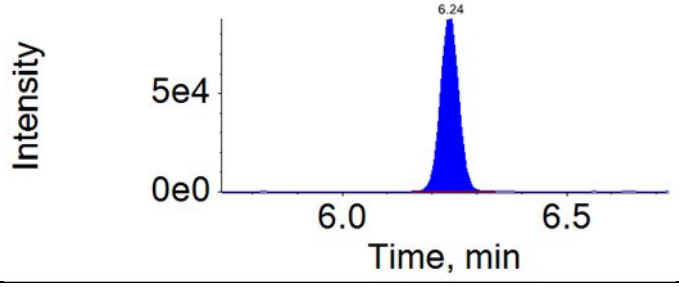
Analyte: PFDoS	Extraction Standard: 13C8-PFOS
699.0 / 80.0	507.0 / 80.0



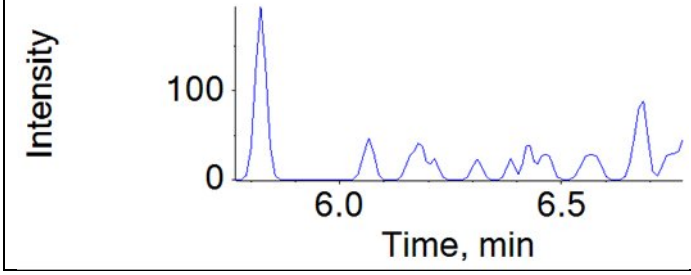


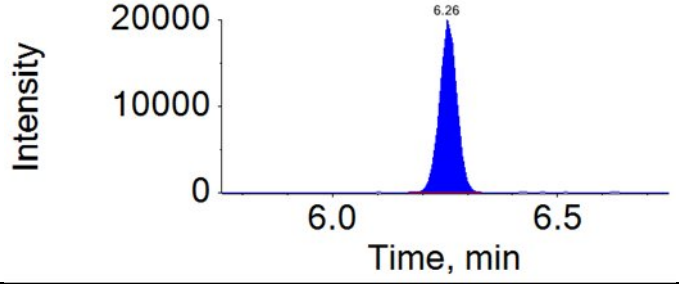
Analyte: NEtPFOSAE	Extraction Standard: d9-NEtPFOSAE
630.0 / 59.0	639.0 / 59.0





Analyte: NEtPFOSA	Extraction Standard: d5-NEtPFOSA
526.0 / 169.0	531.0 / 169.0



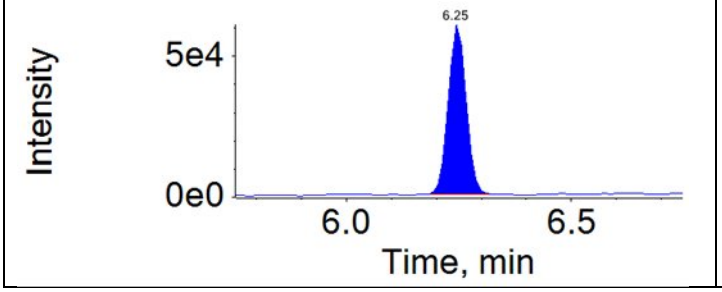


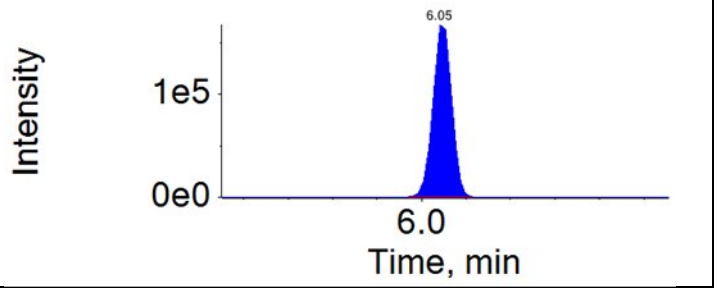
APPROVED
By MCD at 3:23 pm, 1/10/19

REVIEWED
By ucmr at 3:21 pm, 1/25/19

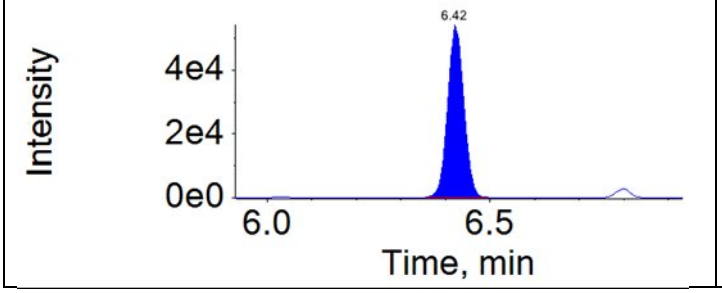
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL_Updated 1/10/2019 3:19:00 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

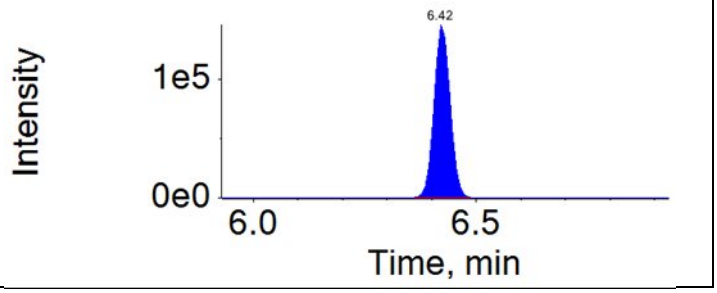
Analyte: PFTrDA	Extraction Standard: 13C2-PFDoDA
663.0 / 619.0	615.0 / 570.0



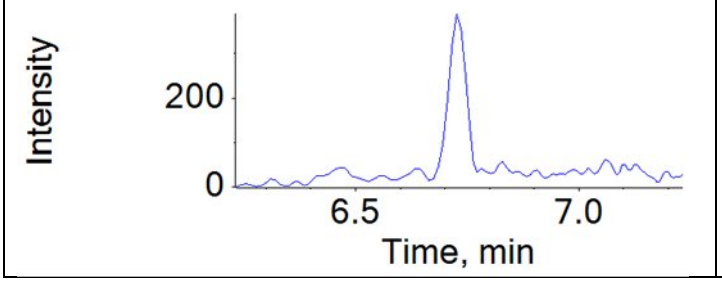


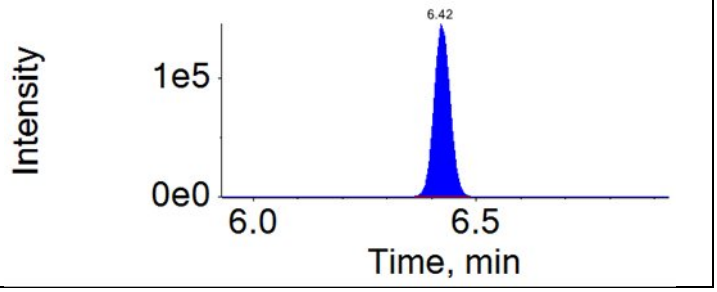
Analyte: PFTeDA	Extraction Standard: 13C2-PFTeDA
713.0 / 669.0	715.0 / 670.0



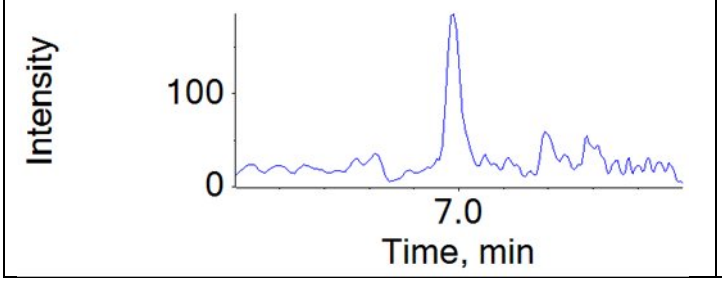


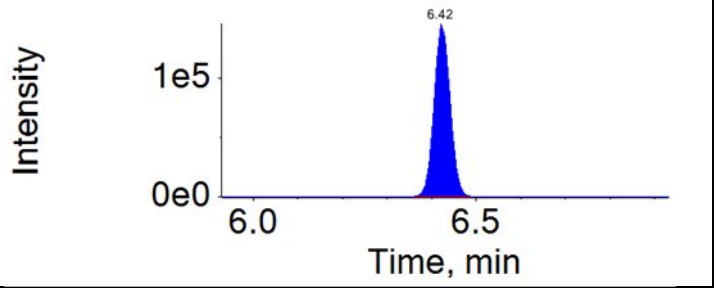
Analyte: PFHxDA	Extraction Standard: 13C2-PFTeDA
813.0 / 769.0	715.0 / 670.0





Analyte: PFODA	Extraction Standard: 13C2-PFTeDA
913.0 / 869.0	715.0 / 670.0



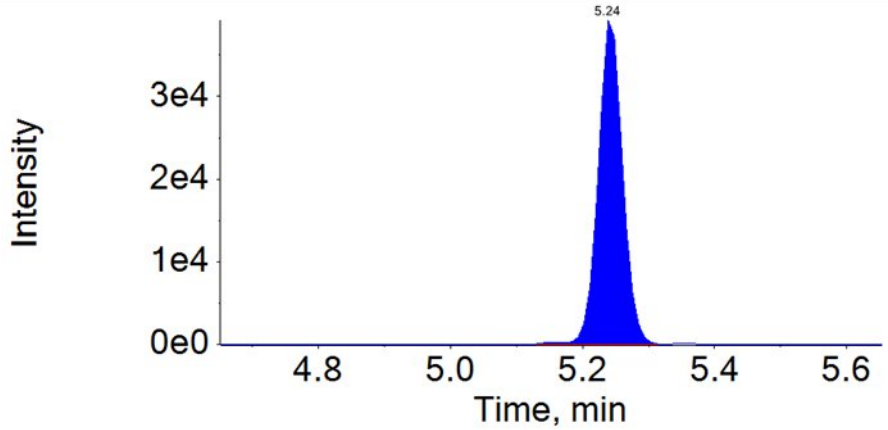


APPROVED
By MCD at 3:23 pm, 1/10/19

REVIEWED
By ucmr at 3:21 pm, 1/25/19

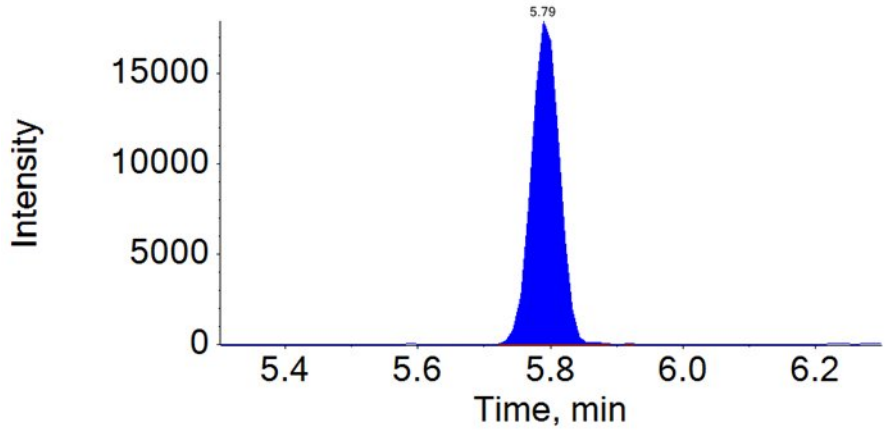
Results Table Name: 18NOV12DCAL_Updated
Results Table Date: 1/10/2019 3:19:00 PM
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

Component Name:
PFOS
RT (min.):
5.24
Peak Area:
101508.8
Mass Range:
499.0 / 80.0
File Name:
18NOV12DCAL-50.wiff
Sample Name:
ICV



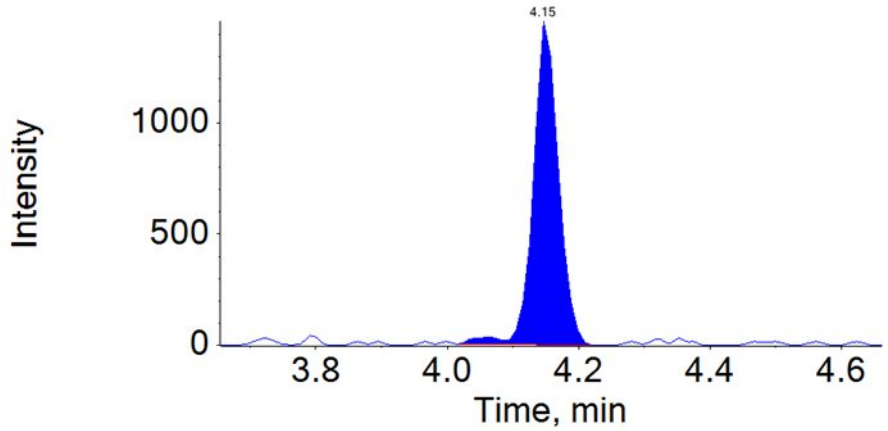
Integration Comment: incorrect integration

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

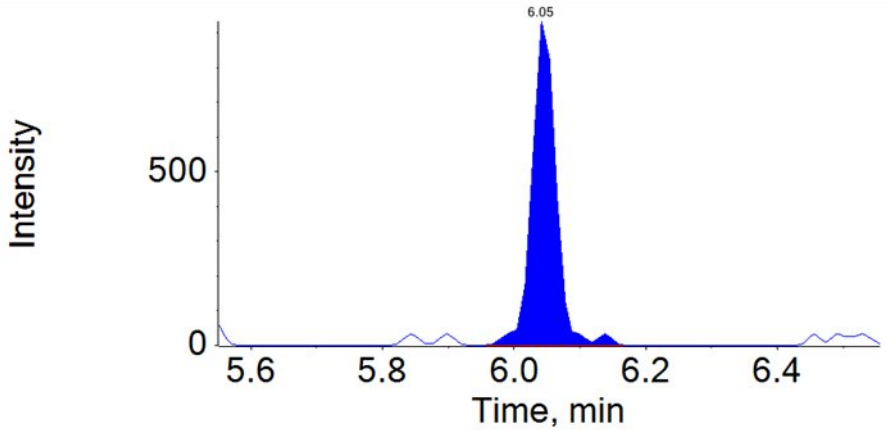


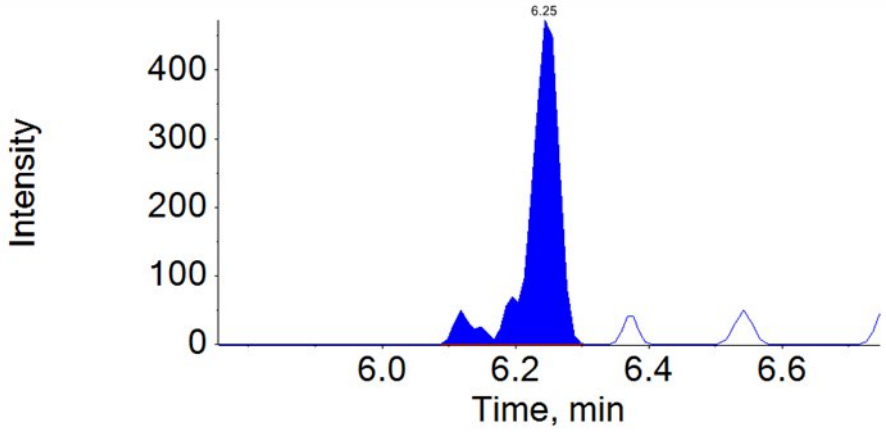
Integration Comment: incorrect integration

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

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

Ion Ratio Report

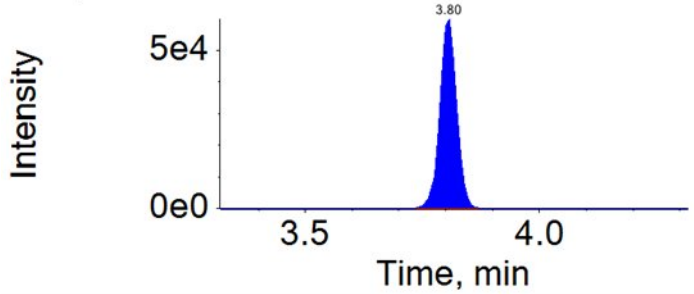
Sample Name: ICV **Instrument Name:** LM27631 **File Name:** 18NOV12DCAL-50.wiff

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	

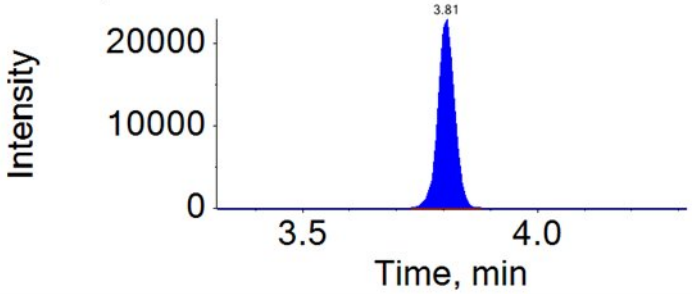
APPROVED
By MCD at 3:23 pm, 1/10/19

REVIEWED
By ucmr at 3:21 pm, 1/25/19

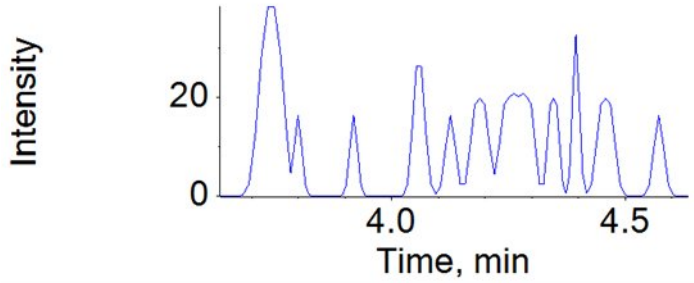
Component: PFBS
Primary Mass: 299.0 / 80.0



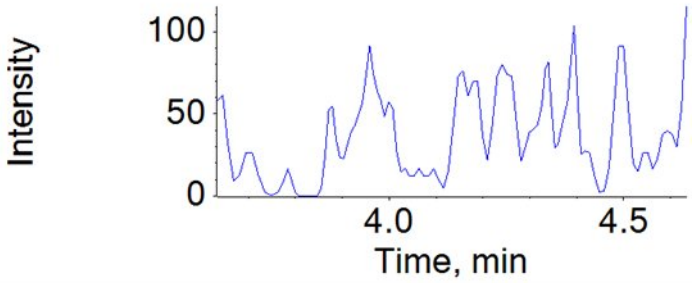
Component: PFBS_2
Secondary Mass: 299.0 / 99.0



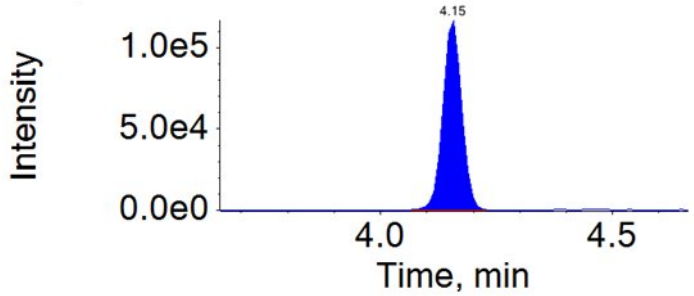
Component: 4:2-FTS
Primary Mass: 327.0 / 307.0



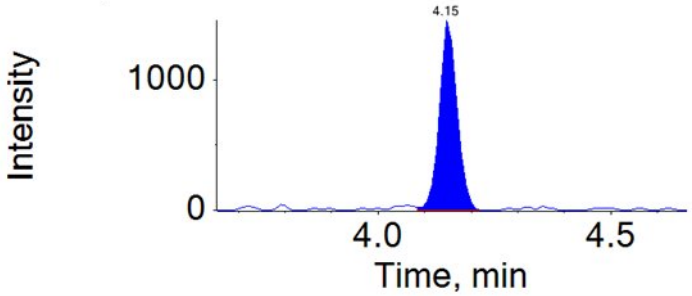
Component: 4:2 FTS_2
Secondary Mass: 327.0 / 81.0



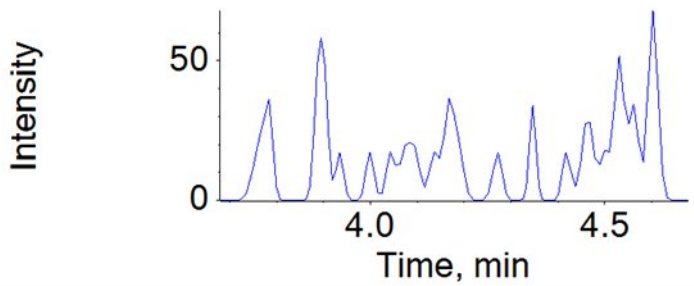
Component: PFHxA
Primary Mass: 313.0 / 269.0



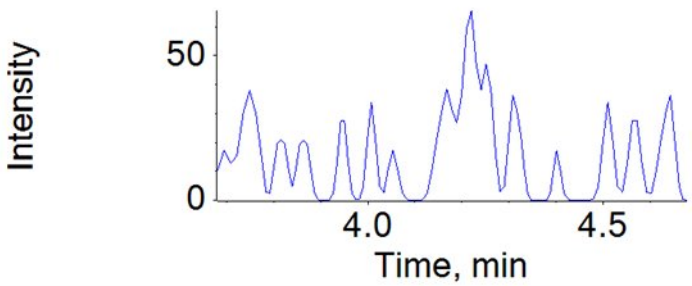
Component: PFHxA_2
Secondary Mass: 313.0 / 119.0



Component: PFPeS
Primary Mass: 349.0 / 80.0



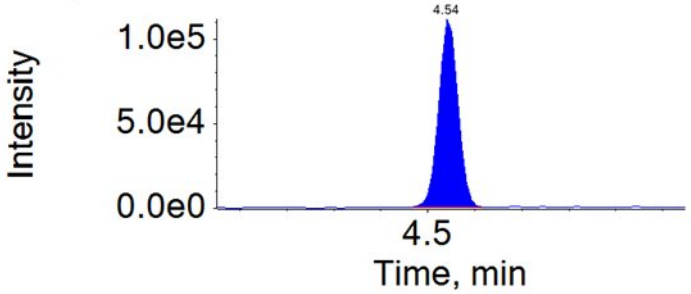
Component: PFPeS_2
Secondary Mass: 349.0 / 99.0



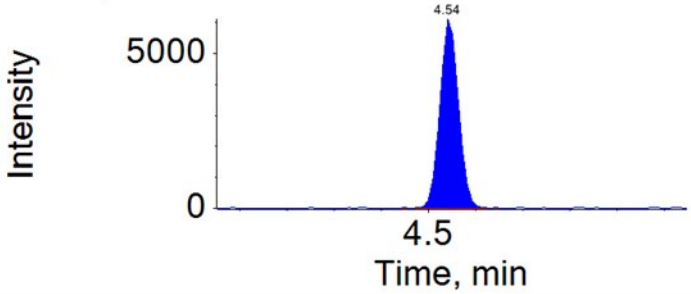
APPROVED
By MCD at 3:23 pm, 1/10/19

REVIEWED
By ucmr at 3:21 pm, 1/25/19

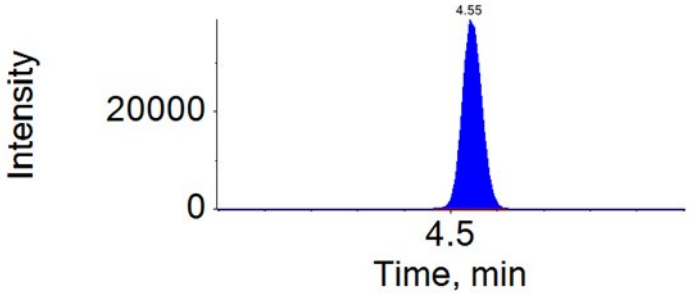
Component: PFHpA
Primary Mass: 363.0 / 319.0



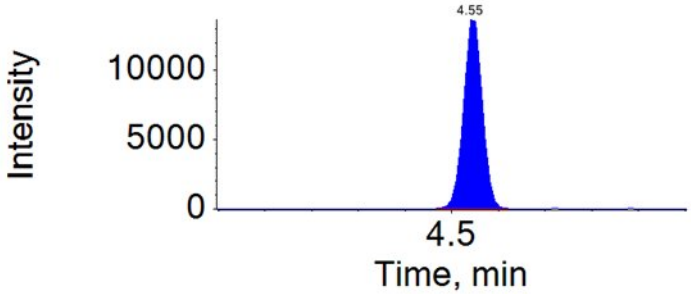
Component: PFHpA_2
Secondary Mass: 363.0 / 169.0



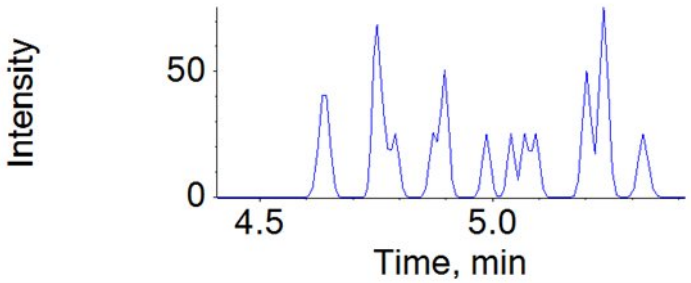
Component: PFHxS
Primary Mass: 399.0 / 80.0



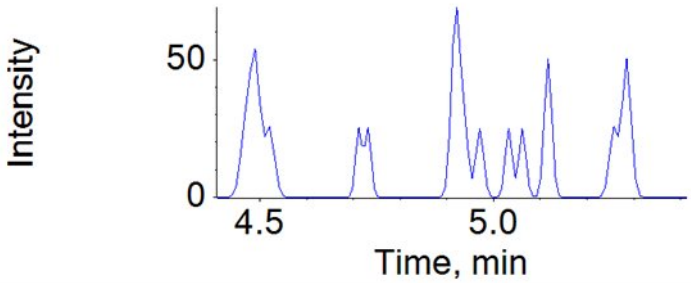
Component: PFHxS_2
Secondary Mass: 399.0 / 99.0



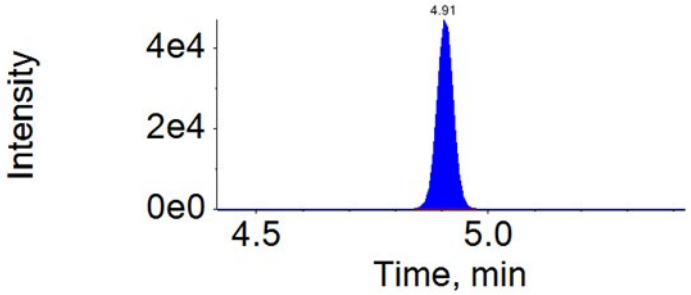
Component: 6:2-FTS
Primary Mass: 427.0 / 407.0



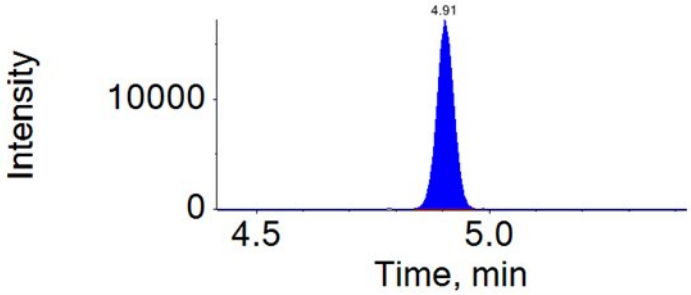
Component: 6:2 FTS_2
Secondary Mass: 427.0 / 81.0



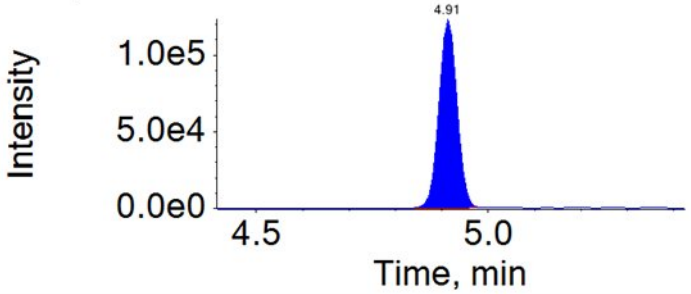
Component: PFHpS
Primary Mass: 449.0 / 80.0



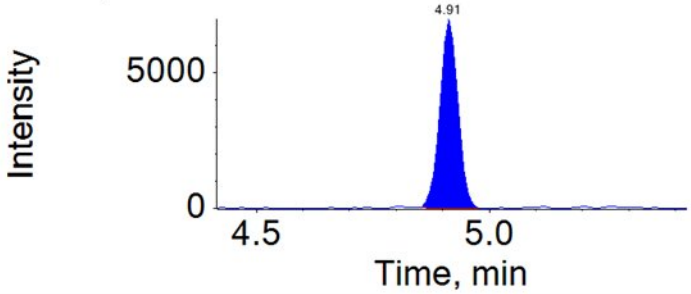
Component: PFHpS_2
Secondary Mass: 449.0 / 99.0



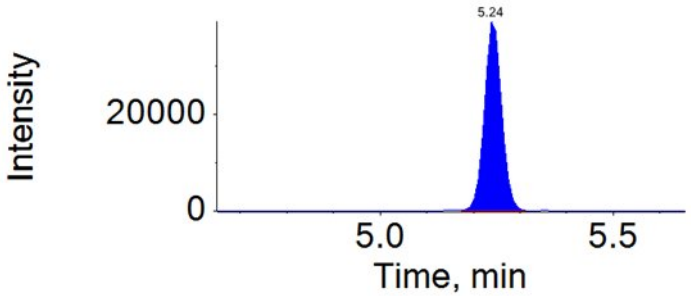
Component: PFOA
Primary Mass: 413.0 / 369.0



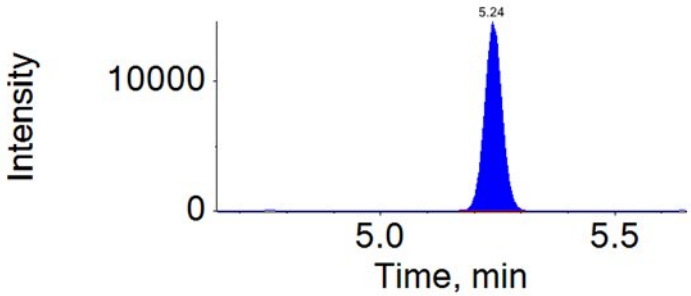
Component: PFOA_2
Secondary Mass: 413.0 / 169.0



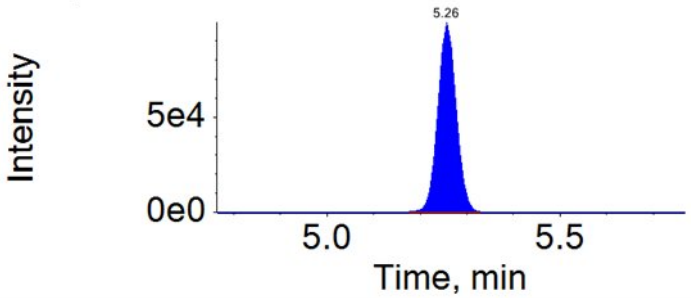
Component: PFOS
Primary Mass: 499.0 / 80.0



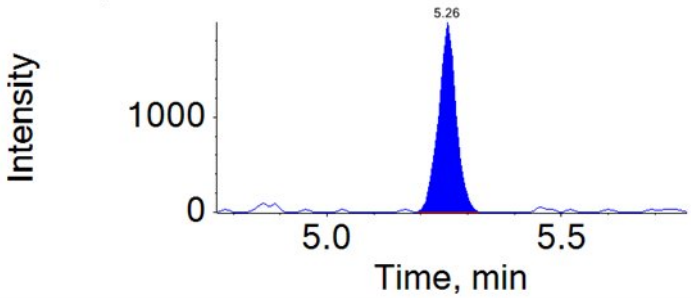
Component: PFOS_2
Secondary Mass: 499.0 / 99.0



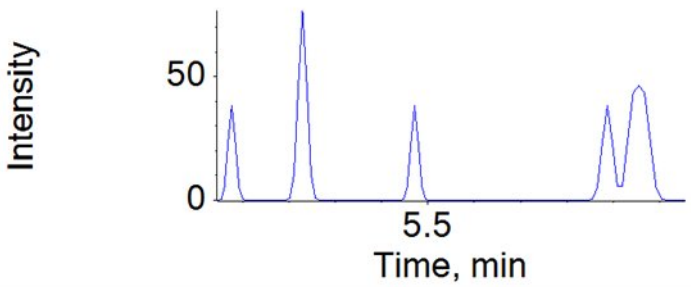
Component: PFNA
Primary Mass: 463.0 / 419.0



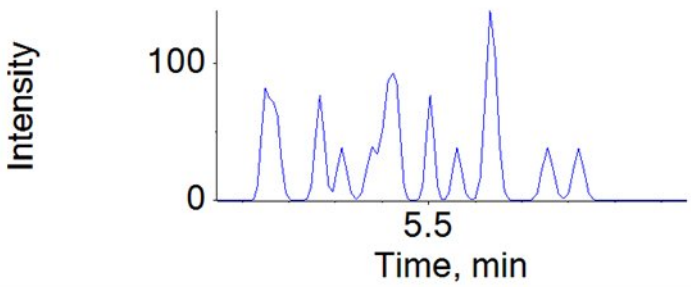
Component: PFNA_2
Secondary Mass: 463.0 / 169.0



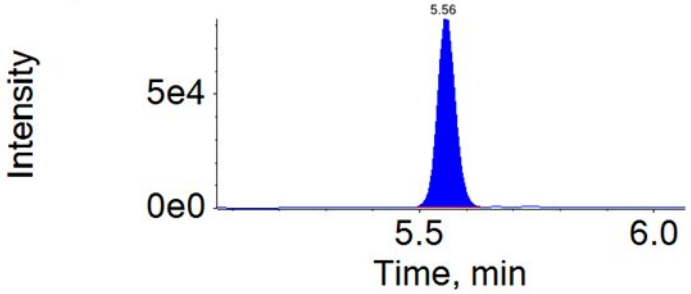
Component: PFNS
Primary Mass: 549.0 / 80.0



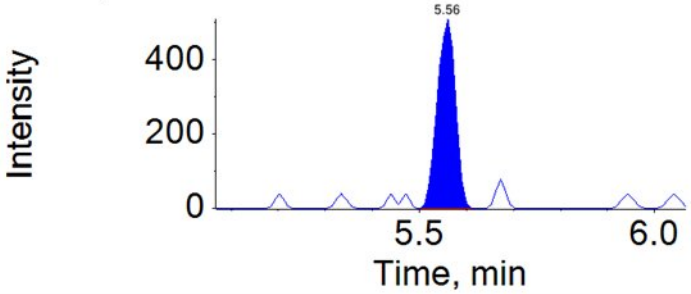
Component: PFNS_2
Secondary Mass: 549.0 / 99.0



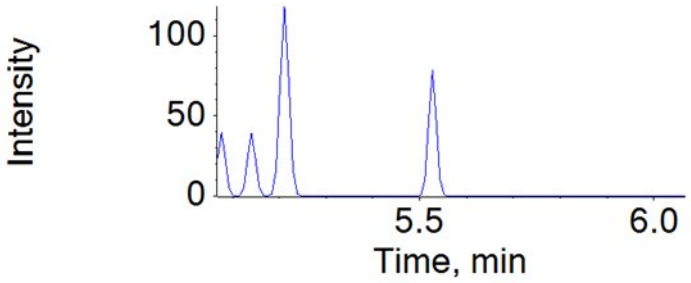
Component: PFDA
Primary Mass: 513.0 / 469.0



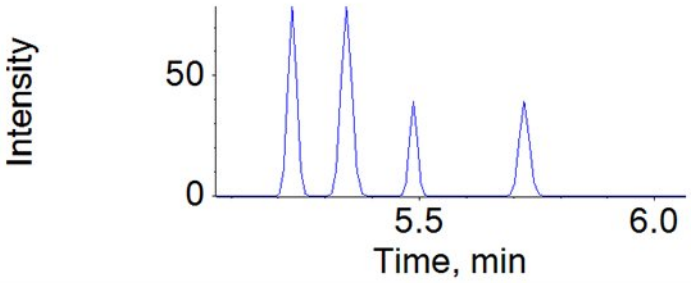
Component: PFDA_2
Secondary Mass: 513.0 / 169.0



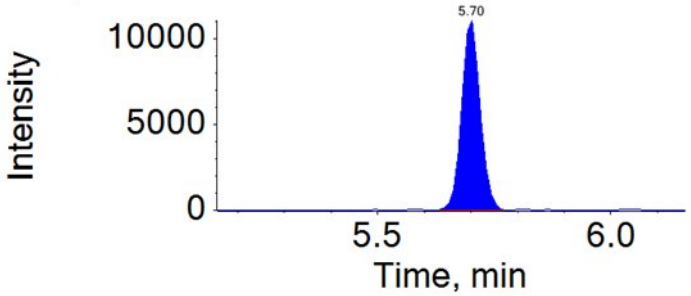
Component: 8:2-FTS
Primary Mass: 527.0 / 507.0



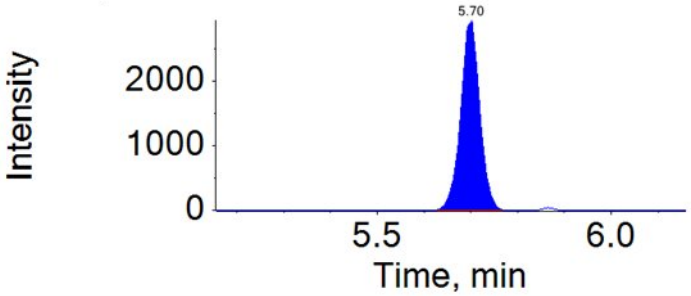
Component: 8:2 FTS_2
Secondary Mass: 527.0 / 81.0



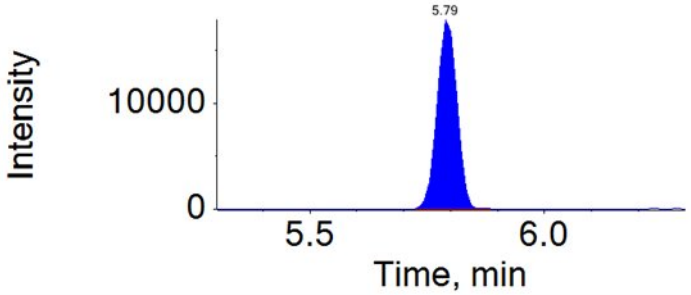
Component: NMeFOSAA
Primary Mass: 570.0 / 419.0



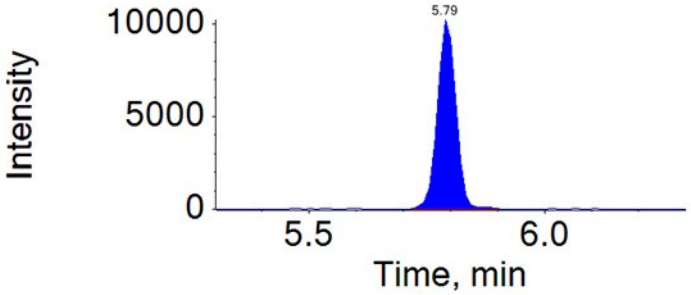
Component: NMeFOSAA_2
Secondary Mass: 570.0 / 483.0



Component: PFDS
Primary Mass: 599.0 / 80.0



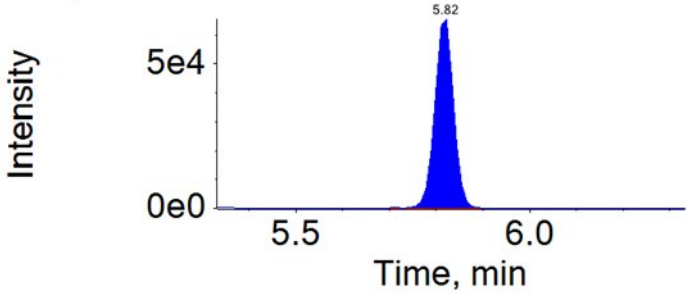
Component: PFDS_2
Secondary Mass: 599.0 / 99.0



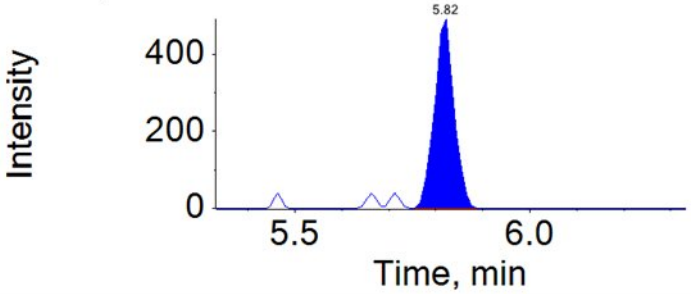
APPROVED
By MCD at 3:23 pm, 1/10/19

REVIEWED
By ucmr at 3:21 pm, 1/25/19

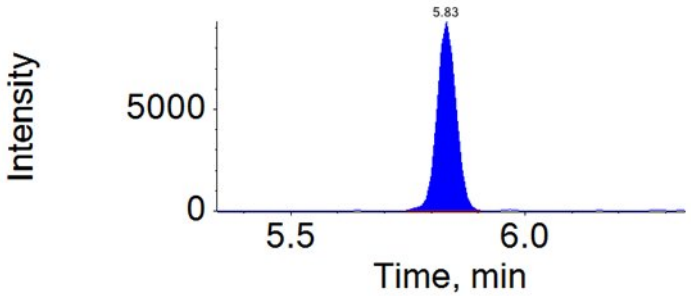
Component: PFUnDA
Primary Mass: 563.0 / 519.0



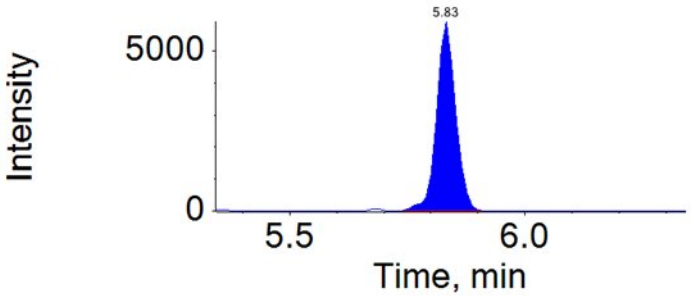
Component: PFUnDA_2
Secondary Mass: 563.0 / 169.0



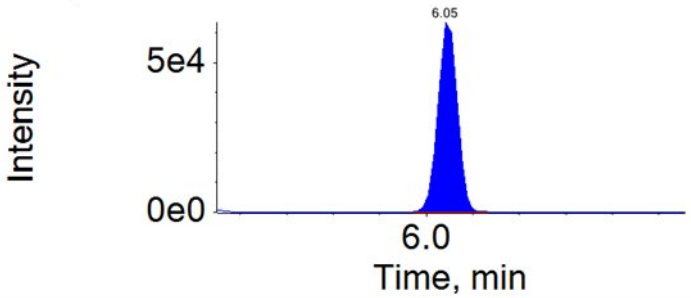
Component: NEtFOSAA
Primary Mass: 584.0 / 419.0



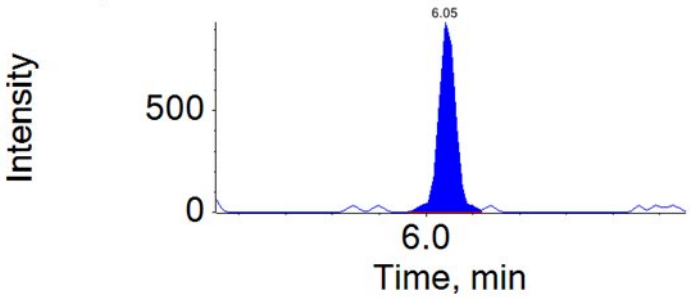
Component: NEtFOSAA_2
Secondary Mass: 584.0 / 526.0



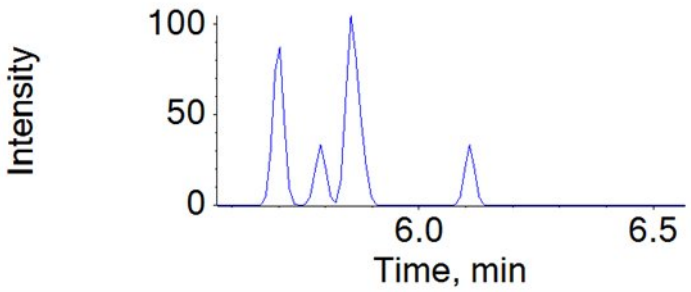
Component: PFDoDA
Primary Mass: 613.0 / 569.0



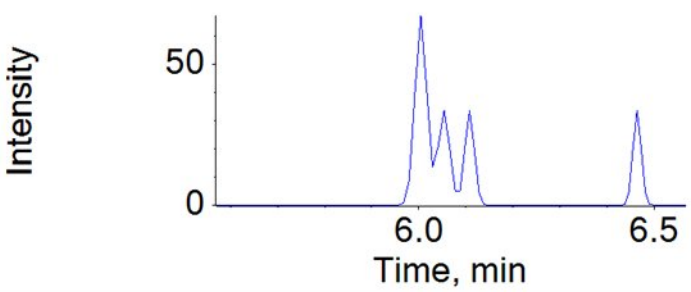
Component: PFDoDA_2
Secondary Mass: 613.0 / 169.0



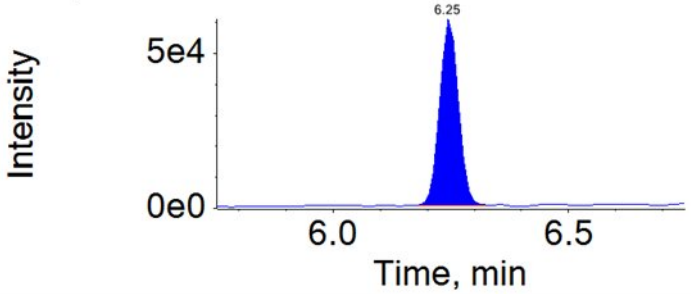
Component: 10:2-FTS
Primary Mass: 627.0 / 607.0



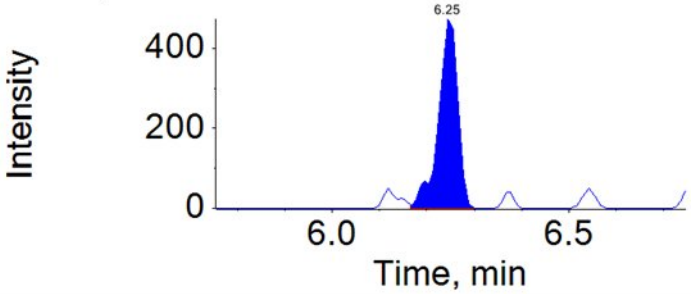
Component: 10:2 FTS_2
Secondary Mass: 627.0 / 81.0



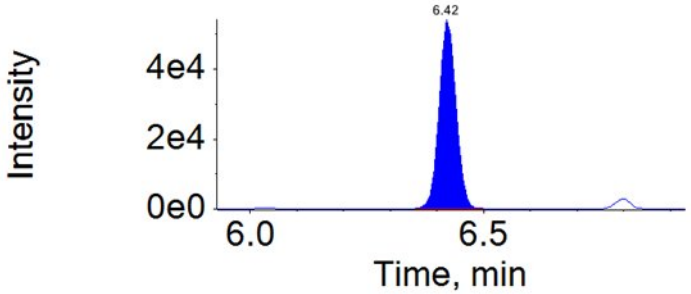
Component: PFTrDA
Primary Mass: 663.0 / 619.0



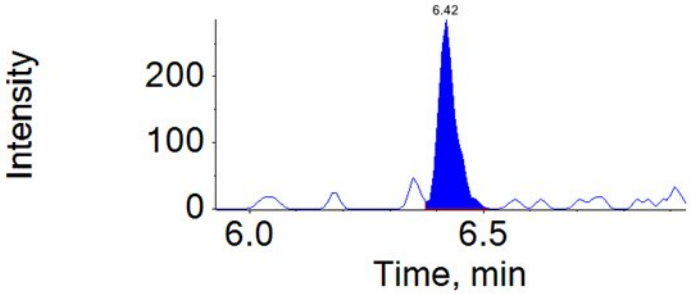
Component: PFTrDA_2
Secondary Mass: 663.0 / 169.0



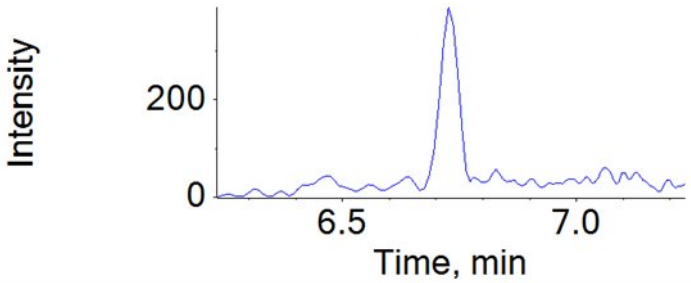
Component: PFTeDA
Primary Mass: 713.0 / 669.0



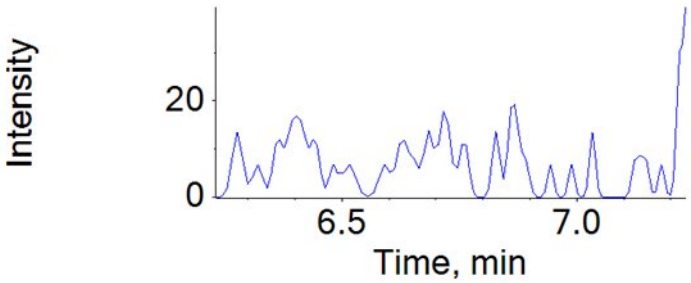
Component: PFTeDA_2
Secondary Mass: 713.0 / 169.0



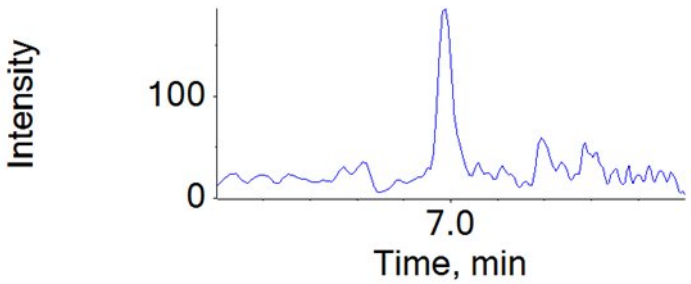
Component: PFHxDA
Primary Mass: 813.0 / 769.0



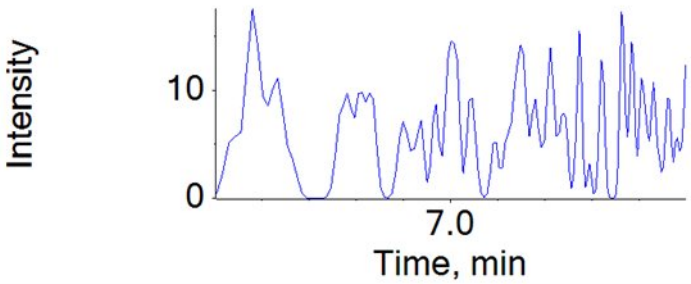
Component: PFHxDA_2
Secondary Mass: 813.0 / 169.0



Component: PFODA
Primary Mass: 913.0 / 869.0



Component: PFODA_2
Secondary Mass: 913.0 / 169.0



ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **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

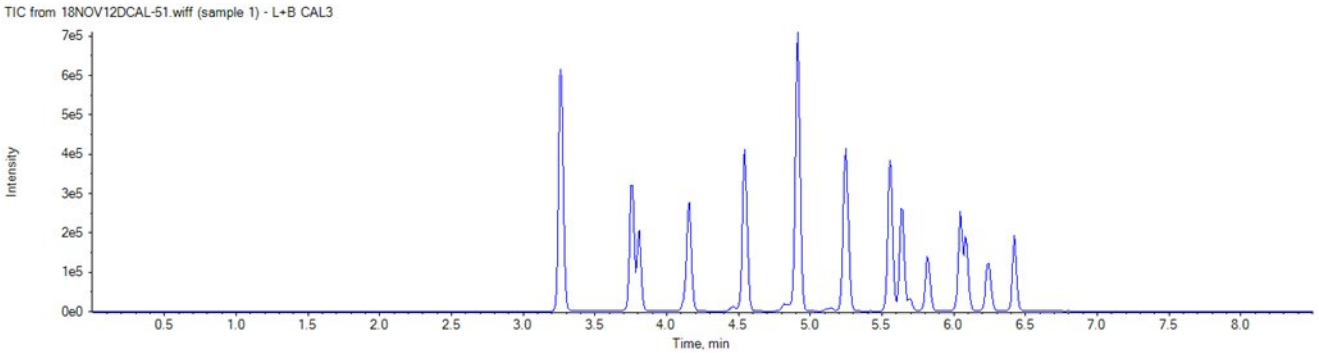
Analyte Quantitation Peak Table

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

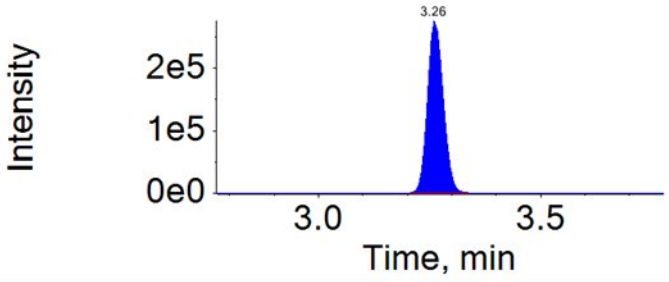


APPROVED
By MCD at 6:34 pm, 11/12/18

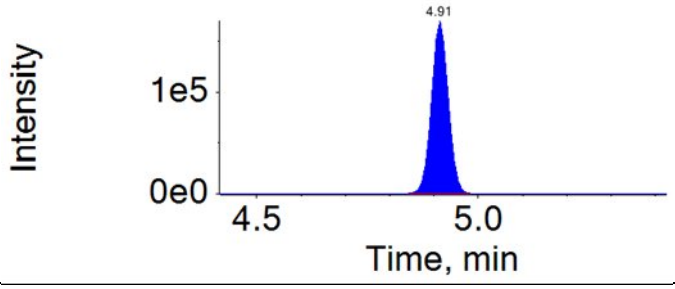
REVIEWED
By HMK at 10:53 am, 11/13/18

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

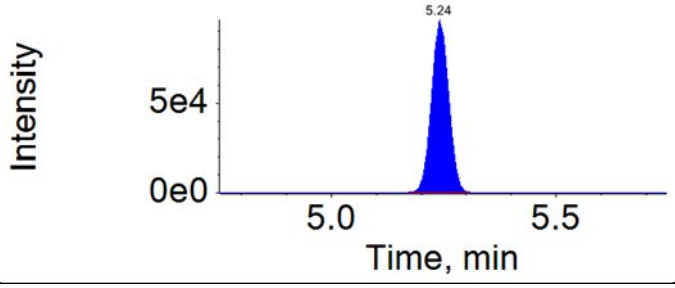
Injection Standard: 13C3-PFBA
216.0 / 172.0



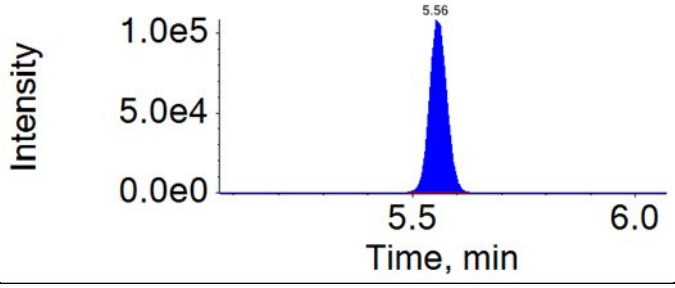
Injection Standard: 13C2-PFOA
415.0 / 370.0



Injection Standard: 13C4-PFOS
503.0 / 80.0



Injection Standard: 13C2-PFDA
515.0 / 470.0

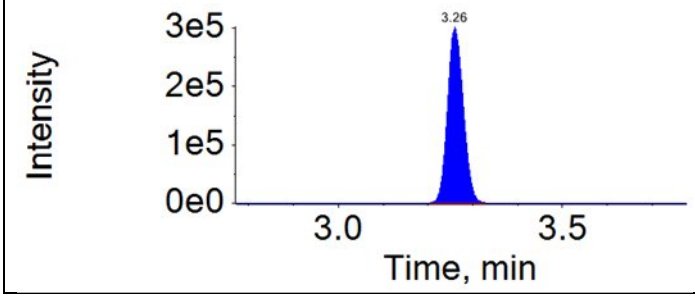


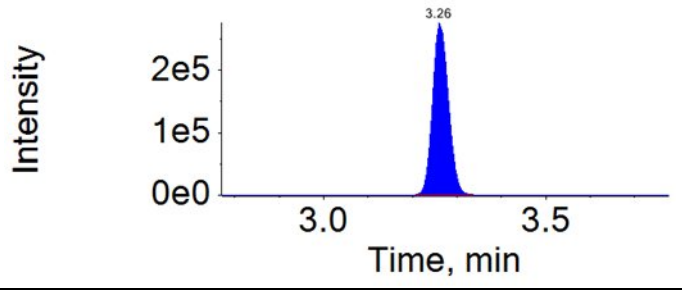
APPROVED
By MCD at 6:34 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

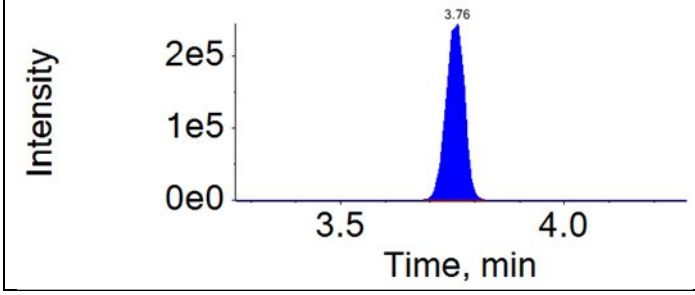
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

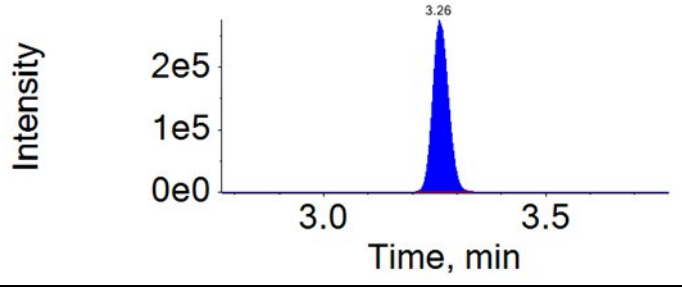
Extraction Standard: E13C4-PFBA	Injection Standard: 13C3-PFBA
217.0 / 172.0	216.0 / 172.0



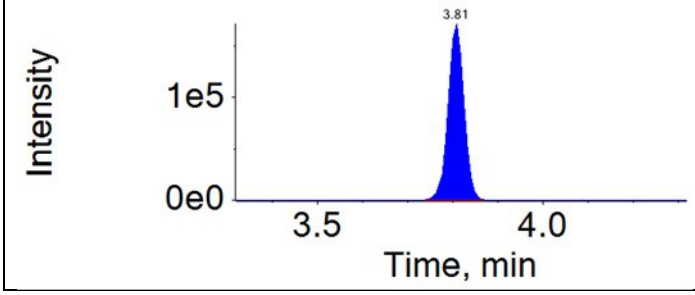


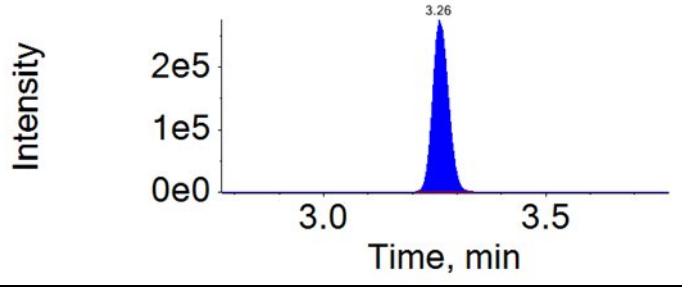
Extraction Standard: E13C5-PFPeA	Injection Standard: 13C3-PFBA
268.0 / 223.0	216.0 / 172.0



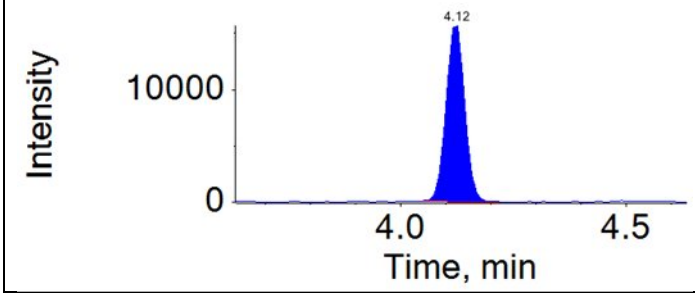


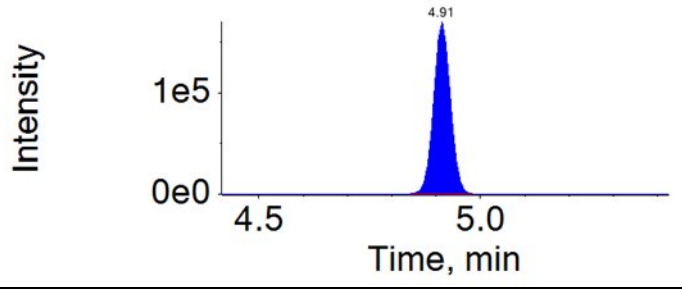
Extraction Standard: E13C3-PFBS	Injection Standard: 13C3-PFBA
302.0 / 80.0	216.0 / 172.0





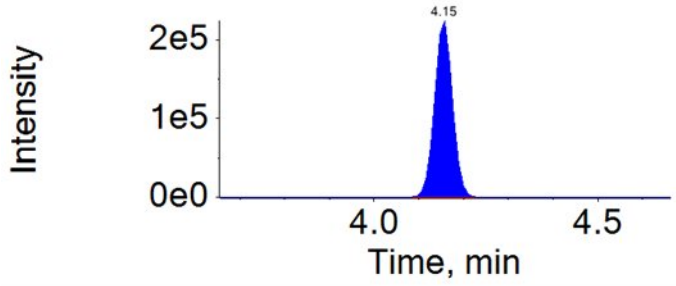
Extraction Standard: E13C2-4:2-FTS	Injection Standard: 13C2-PFOA
329.0 / 81.0	415.0 / 370.0

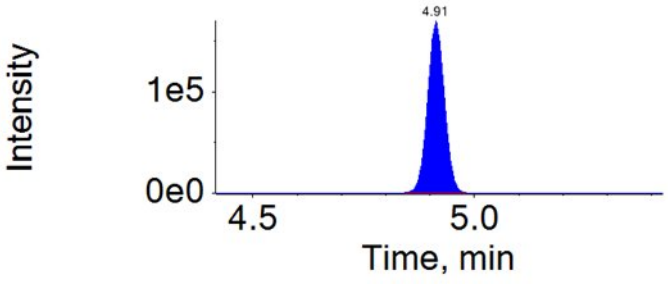




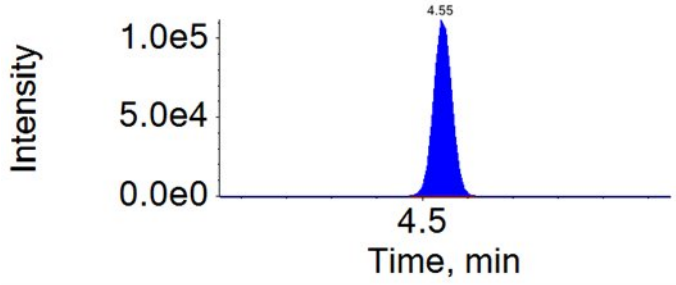
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

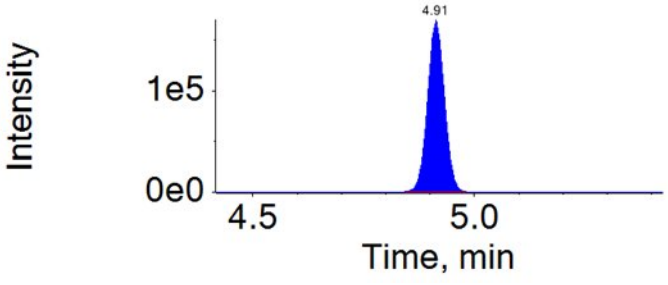
Extraction Standard: E13C5-PFHxA	Injection Standard: 13C2-PFOA
318.0 / 273.0	415.0 / 370.0



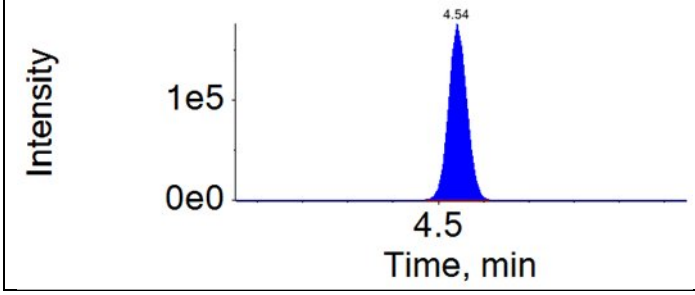


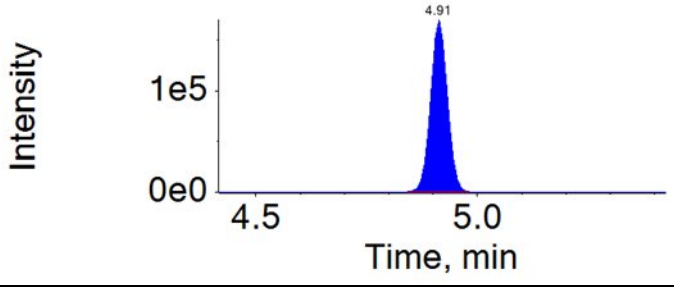
Extraction Standard: E13C3-PFHxS	Injection Standard: 13C2-PFOA
402.0 / 80.0	415.0 / 370.0



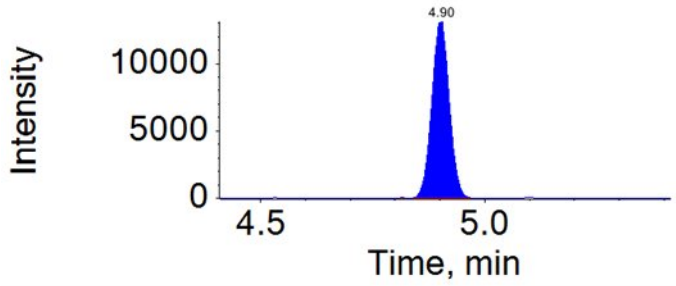


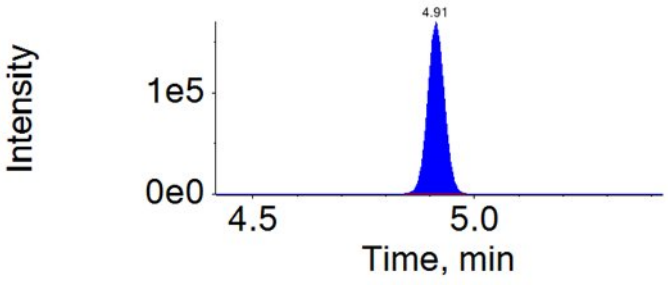
Extraction Standard: E13C4-PFHpA	Injection Standard: 13C2-PFOA
367.0 / 322.0	415.0 / 370.0





Extraction Standard: E13C2-6:2-FTS	Injection Standard: 13C2-PFOA
429.0 / 81.0	415.0 / 370.0



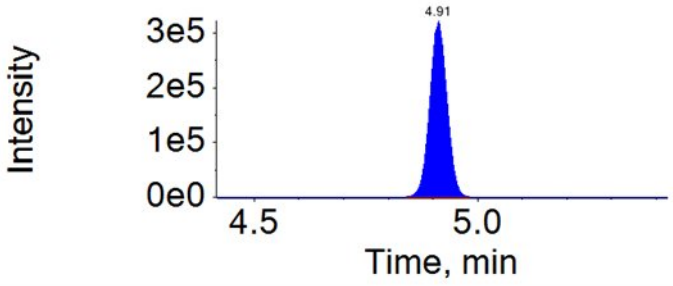


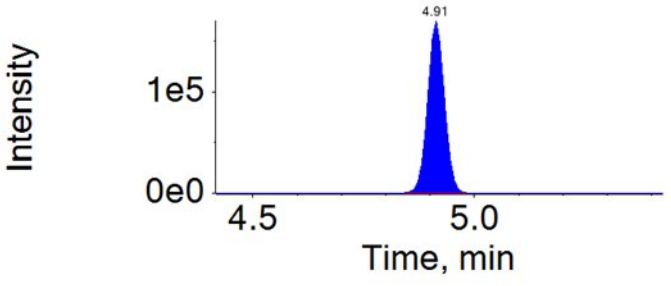
APPROVED
By MCD at 6:34 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

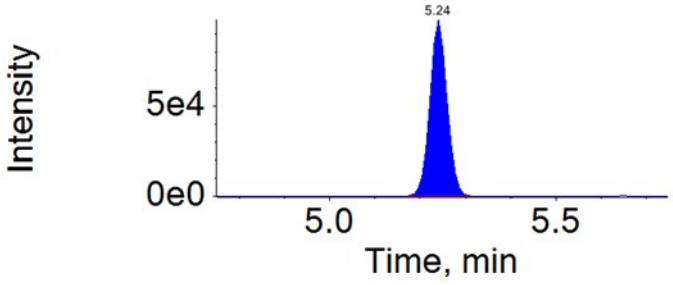
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

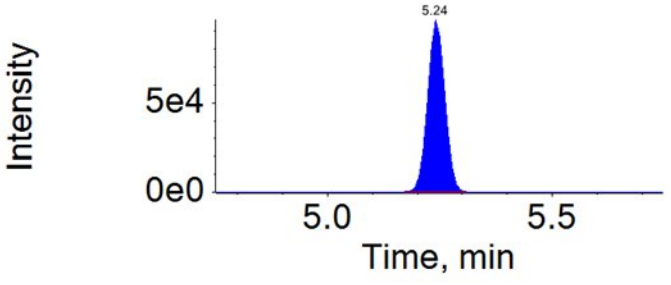
Extraction Standard: E13C8-PFOA	Injection Standard: 13C2-PFOA
421.0 / 376.0	415.0 / 370.0



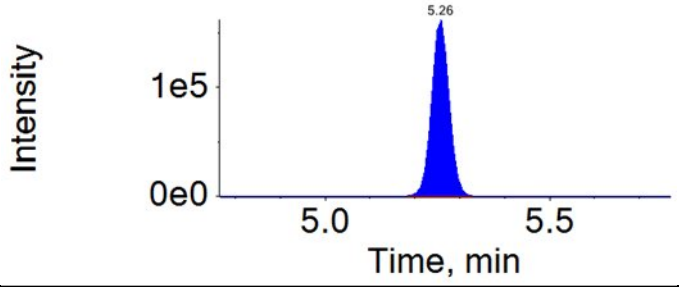


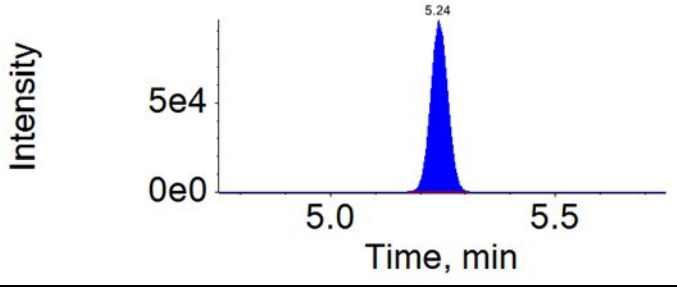
Extraction Standard: E13C8-PFOS	Injection Standard: 13C4-PFOS
507.0 / 80.0	503.0 / 80.0



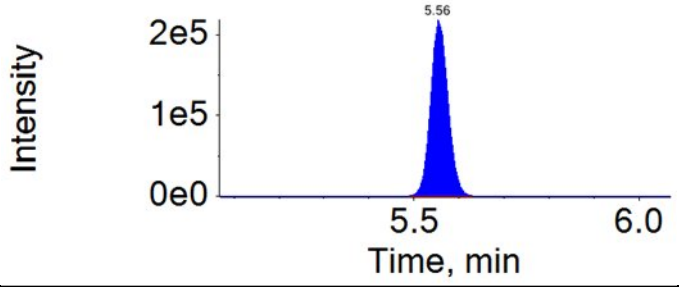


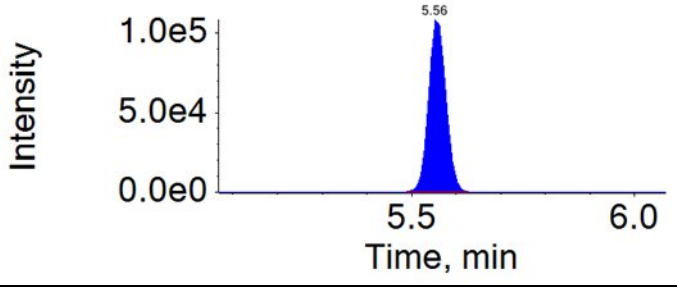
Extraction Standard: E13C9-PFNA	Injection Standard: 13C4-PFOS
472.0 / 427.0	503.0 / 80.0





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

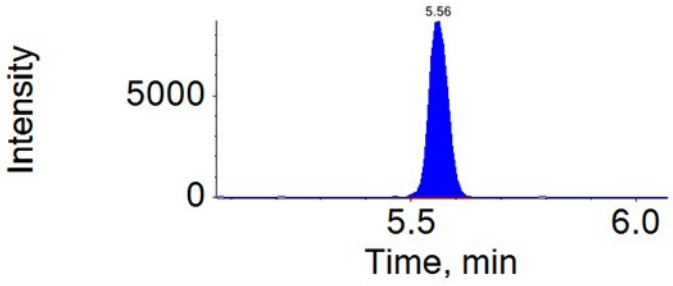
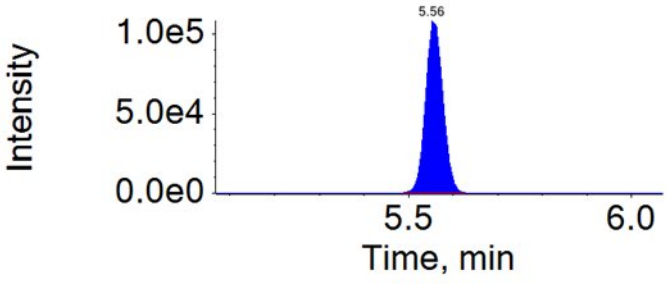


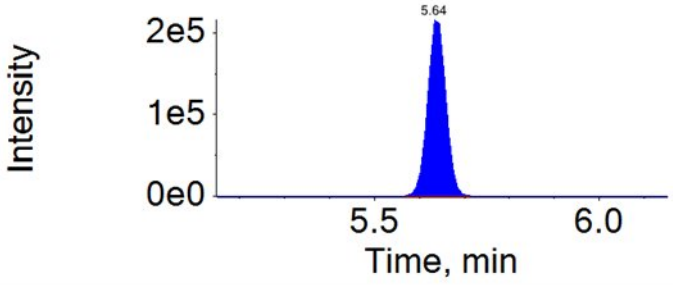
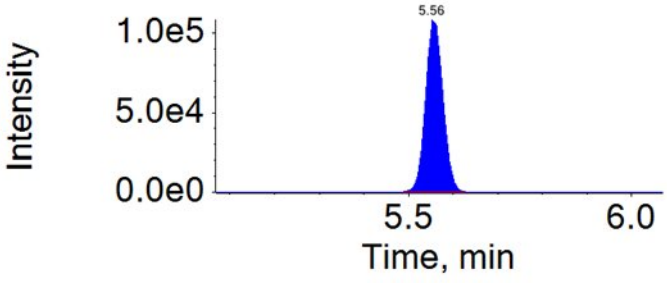


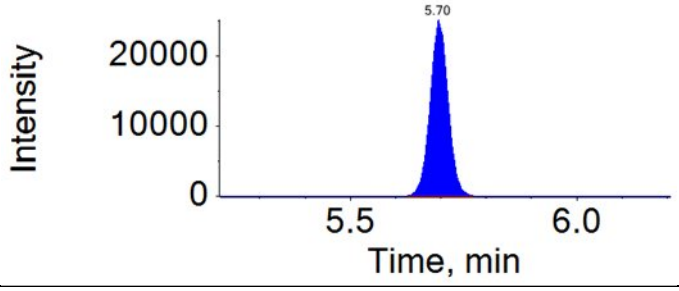
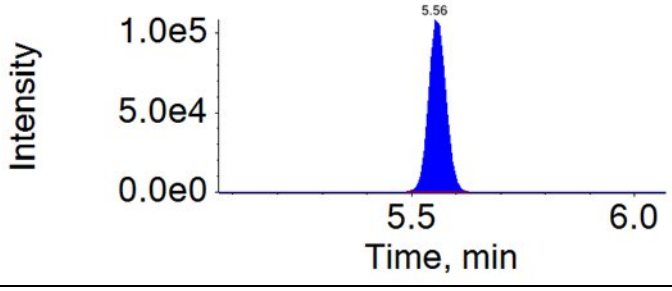
APPROVED
By MCD at 6:34 pm, 11/12/18

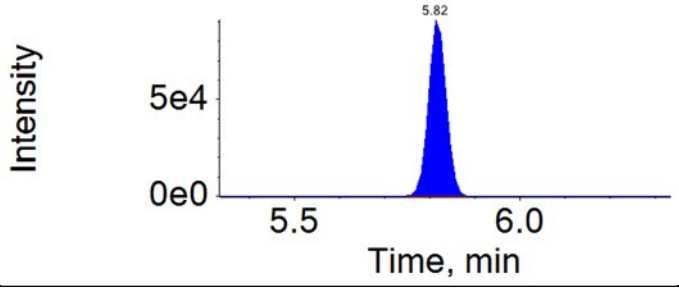
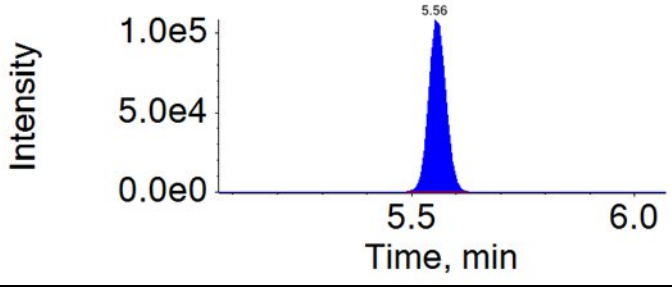
REVIEWED
By HMK at 10:53 am, 11/13/18

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

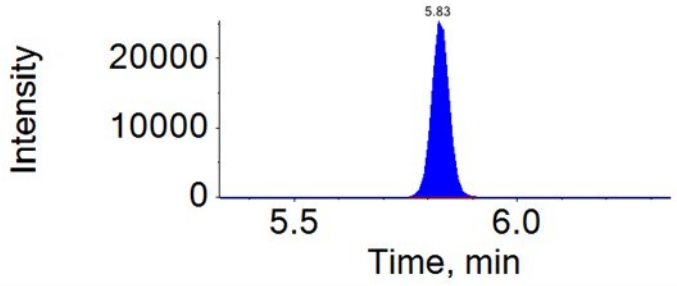
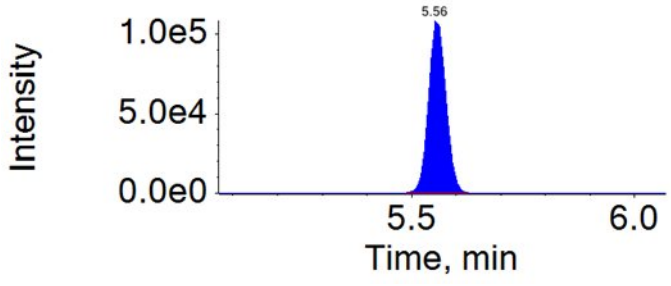
Extraction Standard: E13C2-8:2-FTS	Injection Standard: 13C2-PFDA
529.0 / 81.0	515.0 / 470.0
	

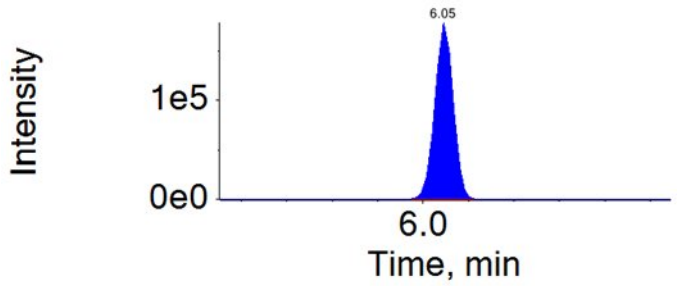
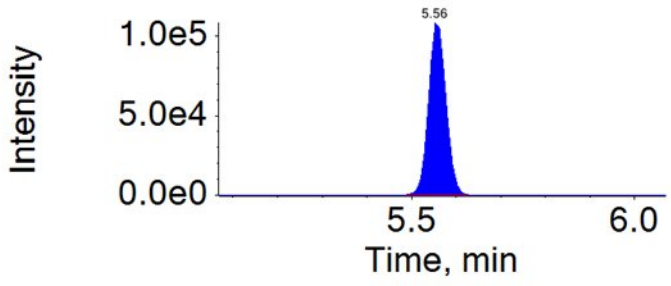
Extraction Standard: E13C8-PFOSA	Injection Standard: 13C2-PFDA
506.0 / 78.0	515.0 / 470.0
	

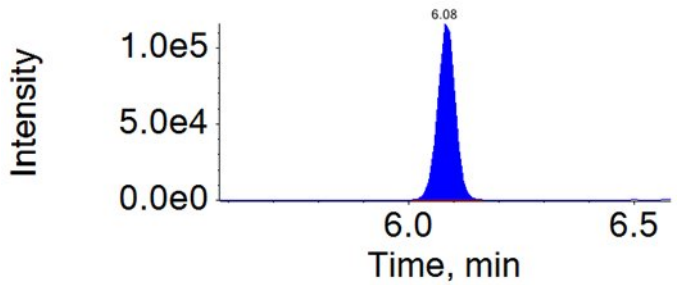
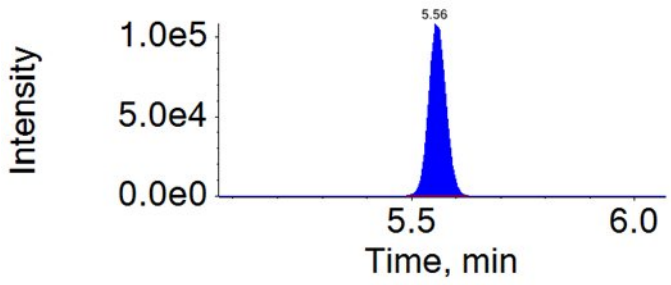
Extraction Standard: Ed3-NMeFOSAA	Injection Standard: 13C2-PFDA
573.0 / 419.0	515.0 / 470.0
	

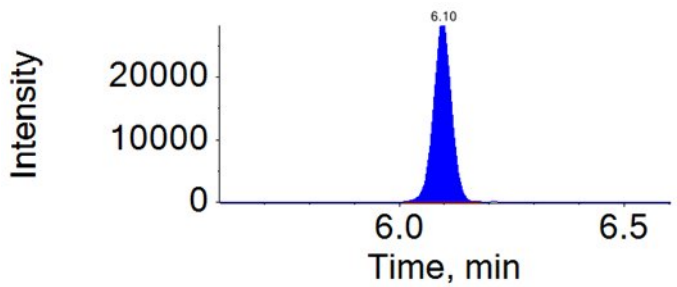
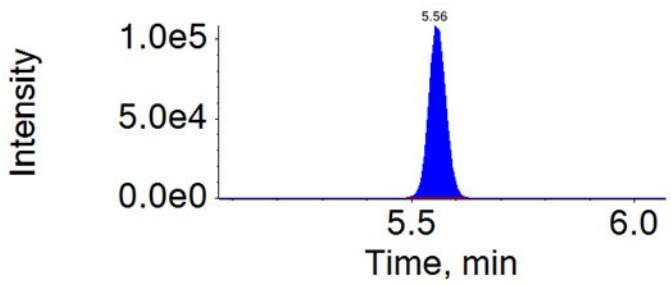
Extraction Standard: E13C7-PFUnDA	Injection Standard: 13C2-PFDA
570.0 / 525.0	515.0 / 470.0
	

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
	

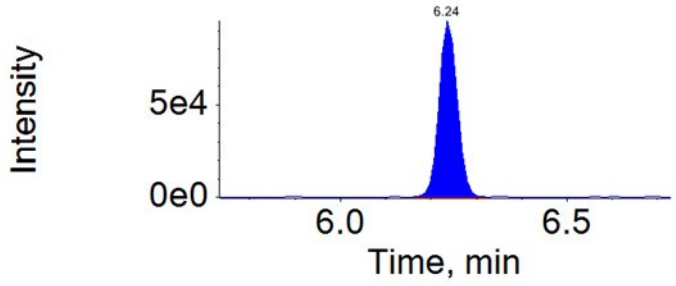
Extraction Standard: E13C2-PFDoDA	Injection Standard: 13C2-PFDA
615.0 / 570.0	515.0 / 470.0
	

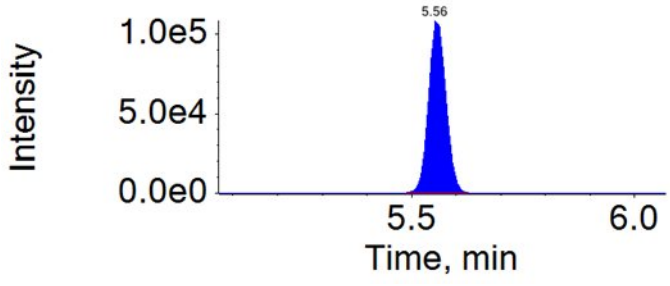
Extraction Standard: Ed7-NMePFOSAE	Injection Standard: 13C2-PFDA
623.0 / 59.0	515.0 / 470.0
	

Extraction Standard: Ed3-NMePFOSA	Injection Standard: 13C2-PFDA
515.0 / 169.0	515.0 / 470.0
	

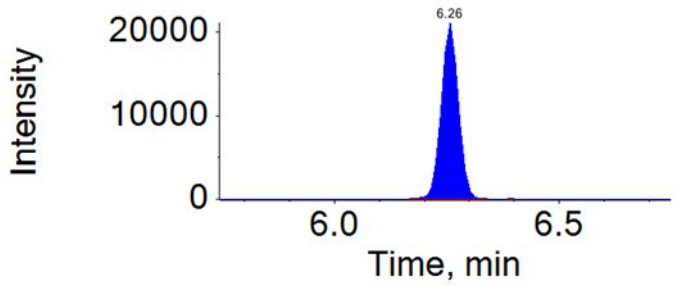
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

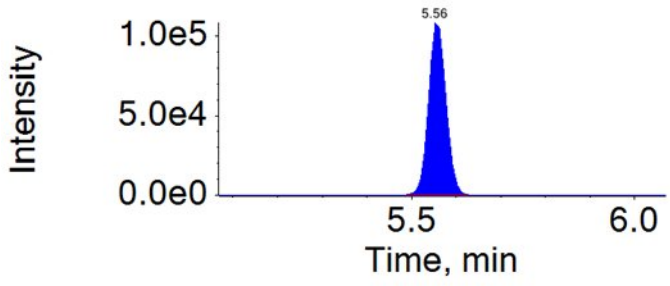
Extraction Standard: Ed9-NEtPFOSAE	Injection Standard: 13C2-PFDA
639.0 / 59.0	515.0 / 470.0



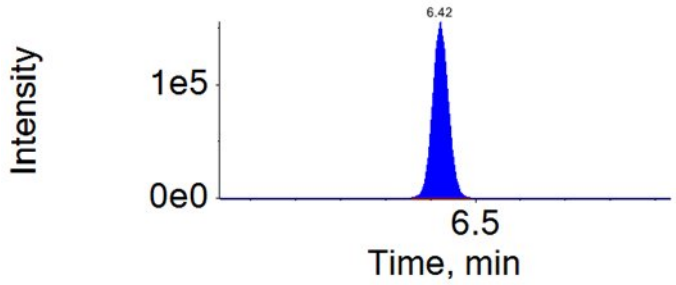


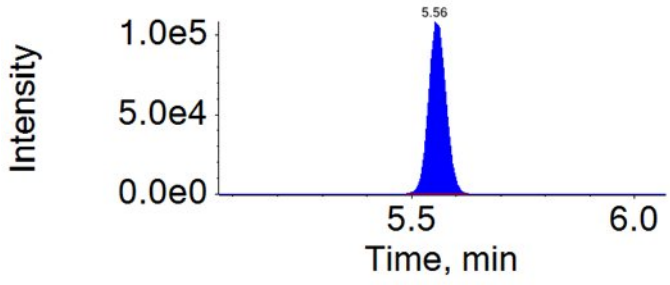
Extraction Standard: Ed5-NEtPFOSA	Injection Standard: 13C2-PFDA
531.0 / 169.0	515.0 / 470.0





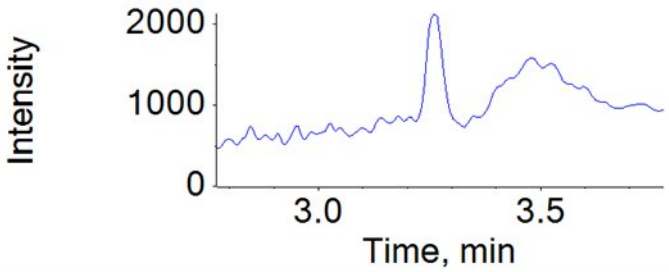
Extraction Standard: E13C2-PFTeDA	Injection Standard: 13C2-PFDA
715.0 / 670.0	515.0 / 470.0

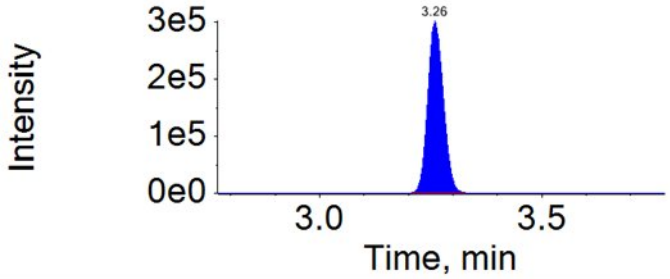




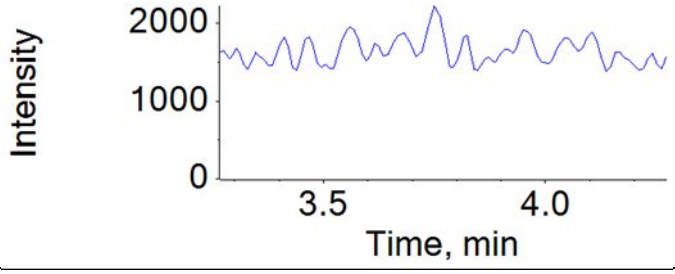
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

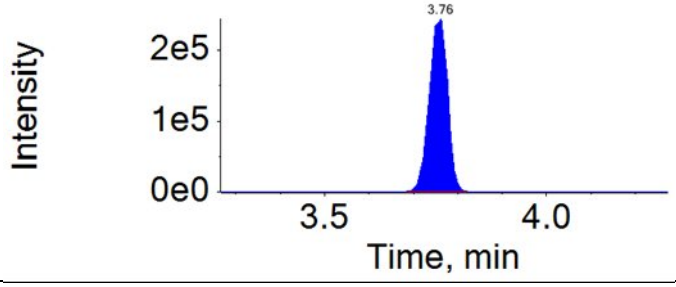
Analyte: PFBA	Extraction Standard: 13C4-PFBA
213.0 / 169.0	217.0 / 172.0



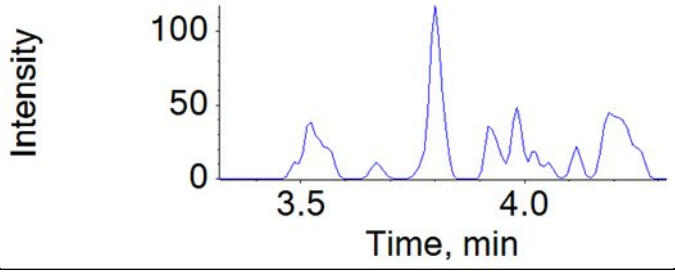


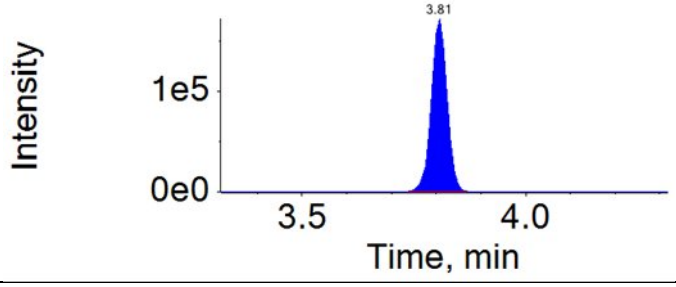
Analyte: PFPeA	Extraction Standard: 13C5-PFPeA
263.0 / 219.0	268.0 / 223.0



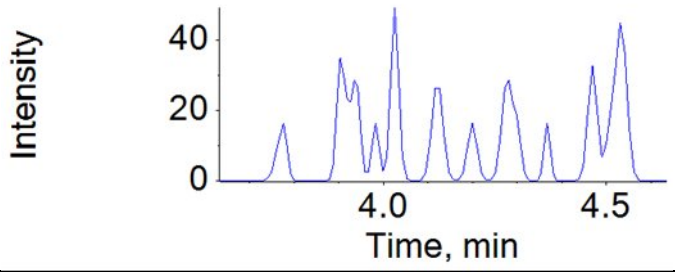


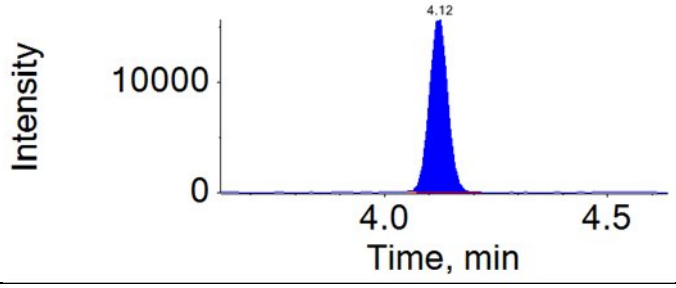
Analyte: PFBS	Extraction Standard: 13C3-PFBS
299.0 / 80.0	302.0 / 80.0





Analyte: 4:2-FTS	Extraction Standard: 13C2-4:2-FTS
327.0 / 307.0	329.0 / 81.0



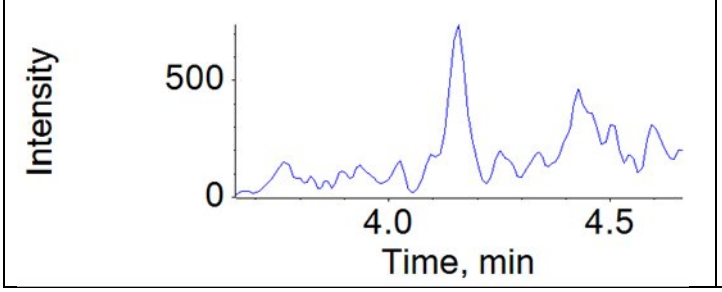


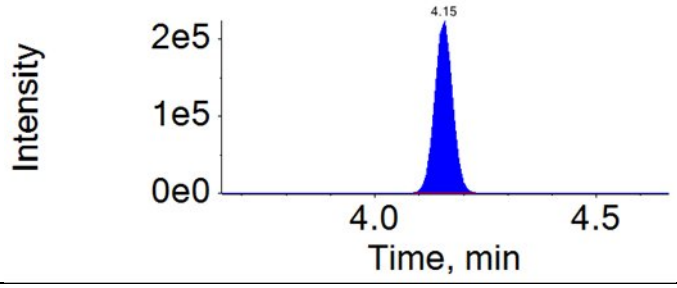
APPROVED
By MCD at 6:34 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

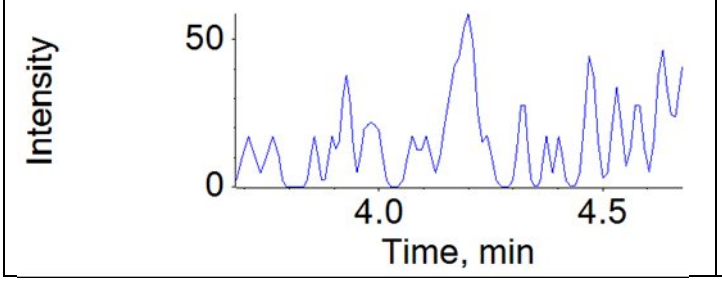
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

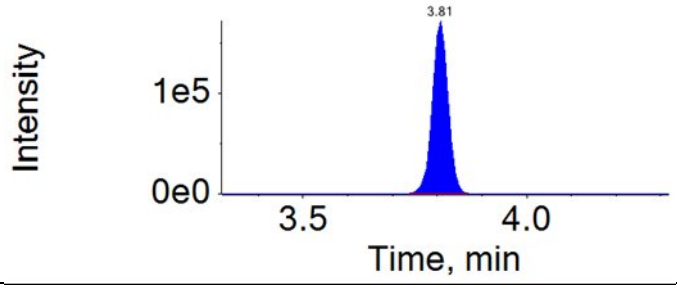
Analyte: PFHxA	Extraction Standard: 13C5-PFHxA
313.0 / 269.0	318.0 / 273.0



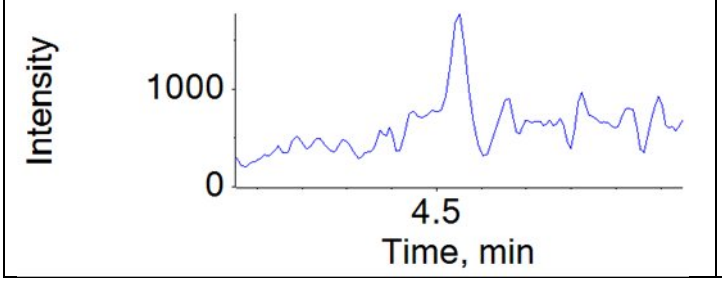


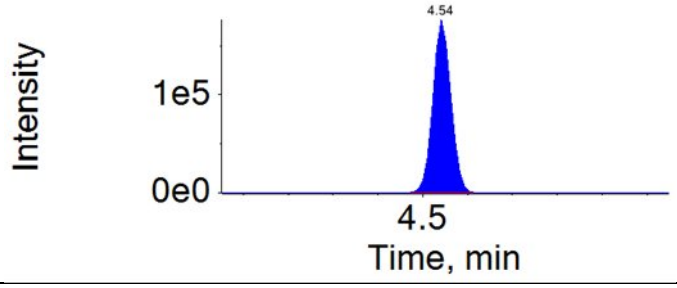
Analyte: PFPeS	Extraction Standard: 13C3-PFBS
349.0 / 80.0	302.0 / 80.0



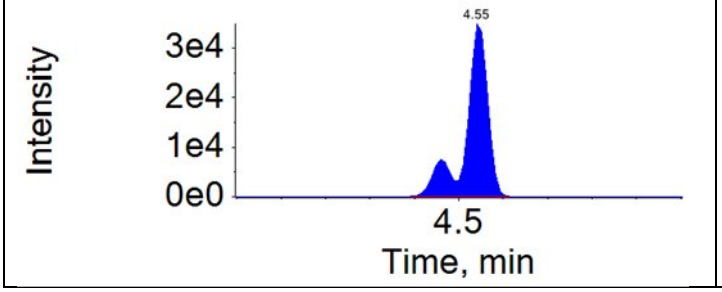


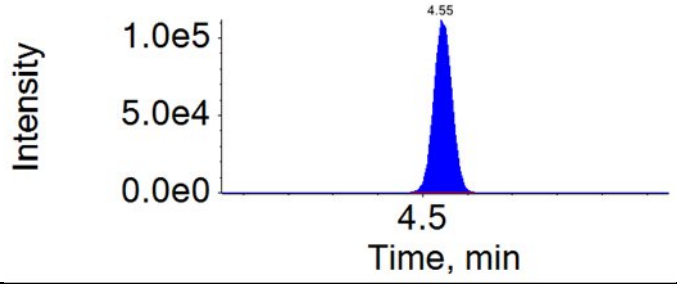
Analyte: PFHpA	Extraction Standard: 13C4-PFHpA
363.0 / 319.0	367.0 / 322.0





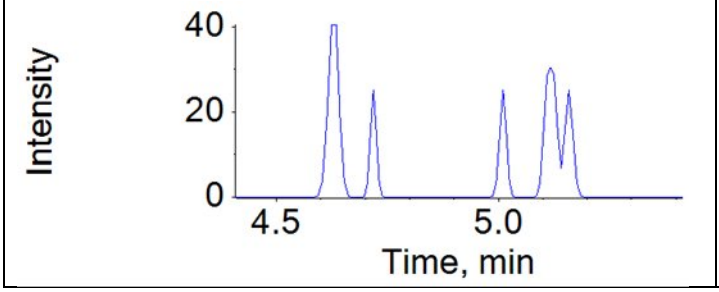
Analyte: PFHxS	Extraction Standard: 13C3-PFHxS
399.0 / 80.0	402.0 / 80.0

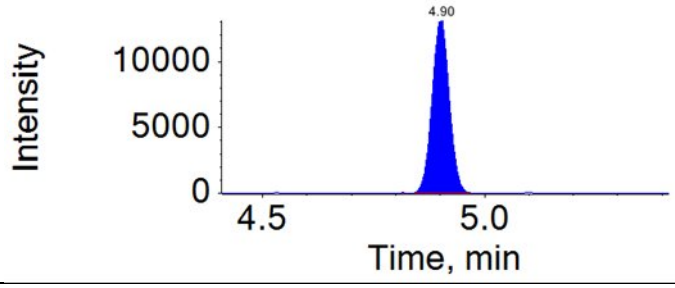




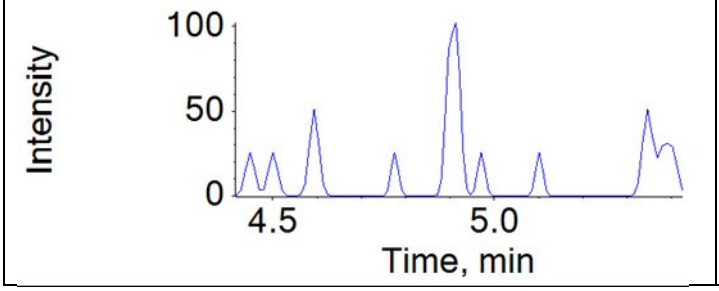
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

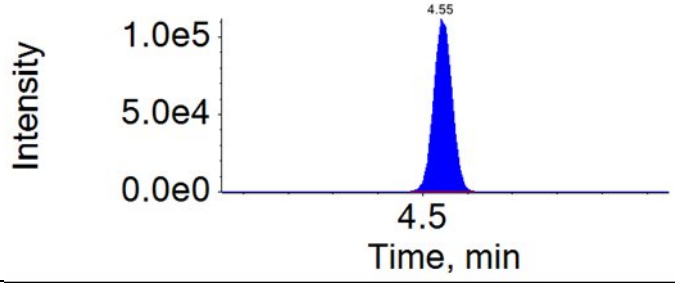
Analyte: 6:2-FTS	Extraction Standard: 13C2-6:2-FTS
427.0 / 407.0	429.0 / 81.0



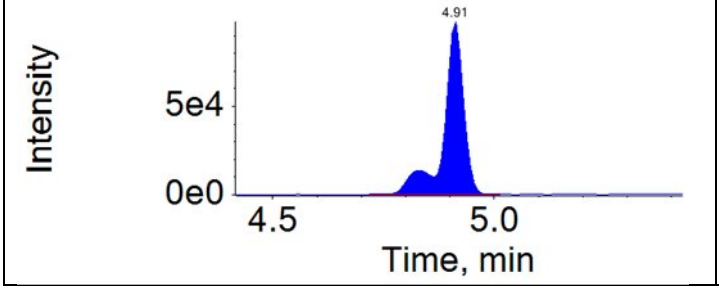


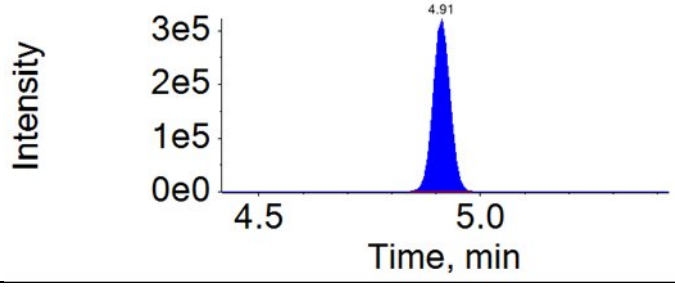
Analyte: PFHpS	Extraction Standard: 13C3-PFHxS
449.0 / 80.0	402.0 / 80.0



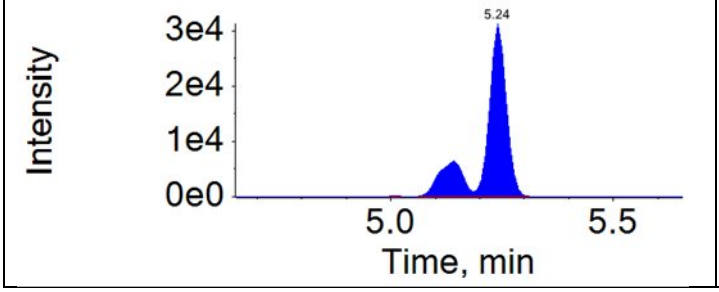


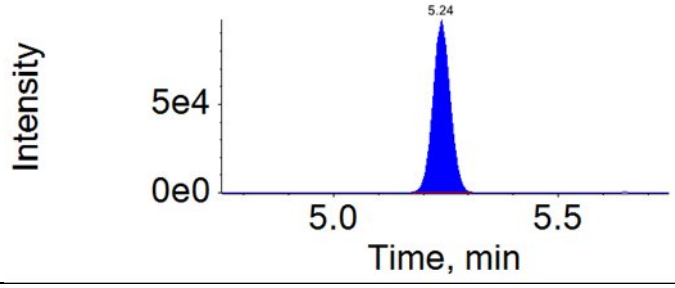
Analyte: PFOA	Extraction Standard: 13C8-PFOA
413.0 / 369.0	421.0 / 376.0





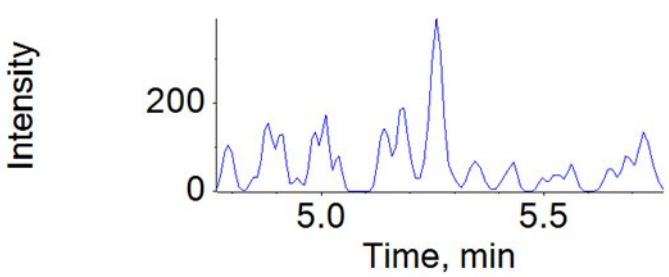
Analyte: PFOS	Extraction Standard: 13C8-PFOS
499.0 / 80.0	507.0 / 80.0

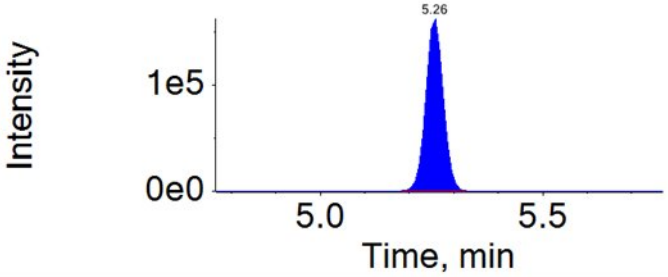




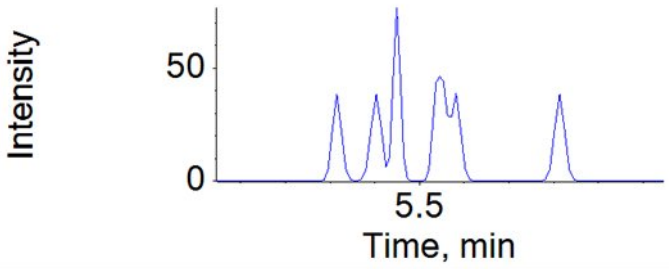
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

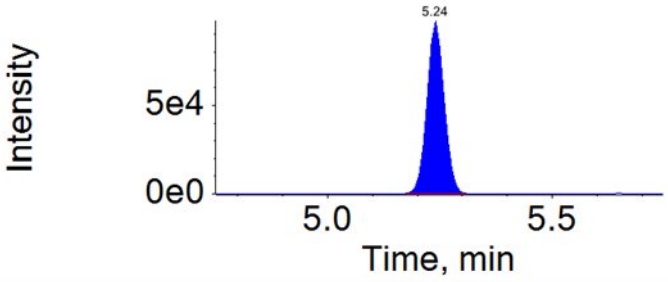
Analyte: PFNA	Extraction Standard: 13C9-PFNA
463.0 / 419.0	472.0 / 427.0



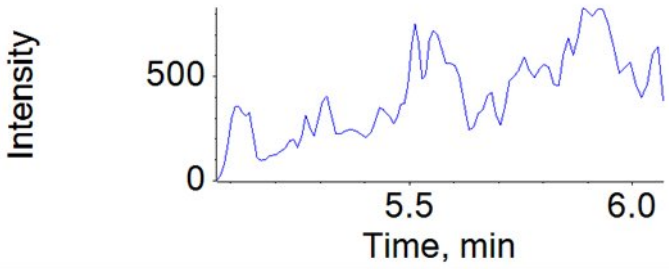


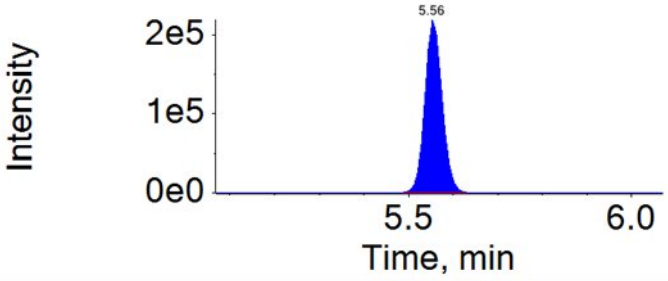
Analyte: PFNS	Extraction Standard: 13C8-PFOS
549.0 / 80.0	507.0 / 80.0



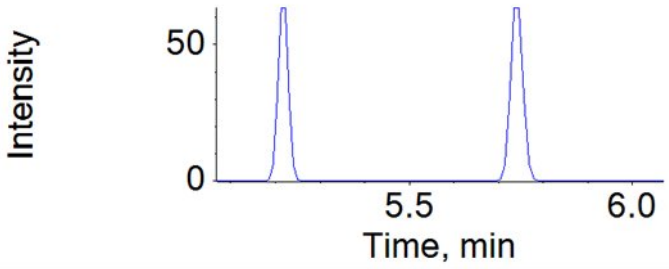


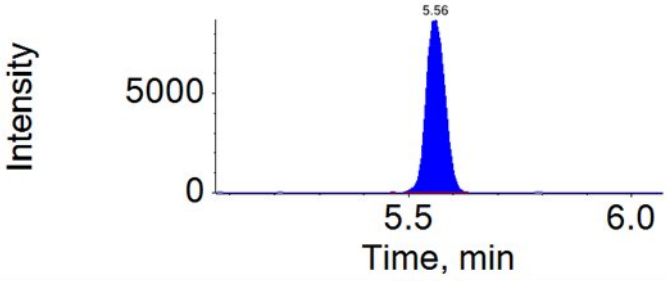
Analyte: PFDA	Extraction Standard: 13C6-PFDA
513.0 / 469.0	519.0 / 474.0





Analyte: 8:2-FTS	Extraction Standard: 13C2-8:2-FTS
527.0 / 507.0	529.0 / 81.0



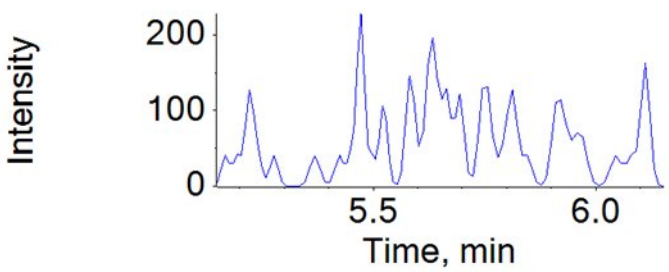


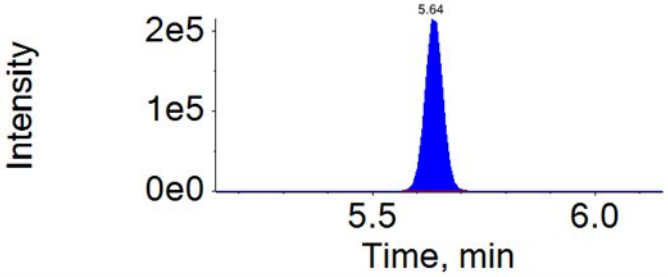
APPROVED
By MCD at 6:34 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

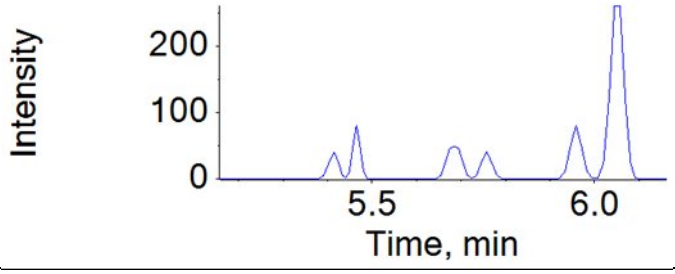
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

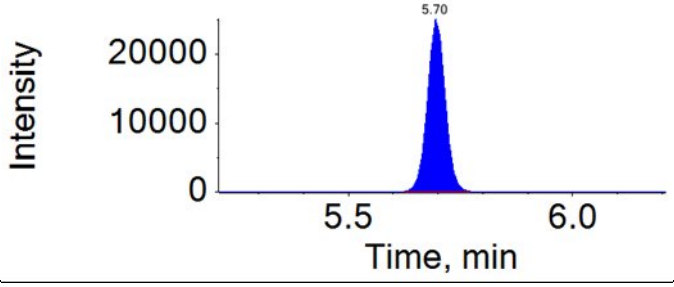
Analyte: PFOSA	Extraction Standard: 13C8-PFOSA
498.0 / 78.0	506.0 / 78.0



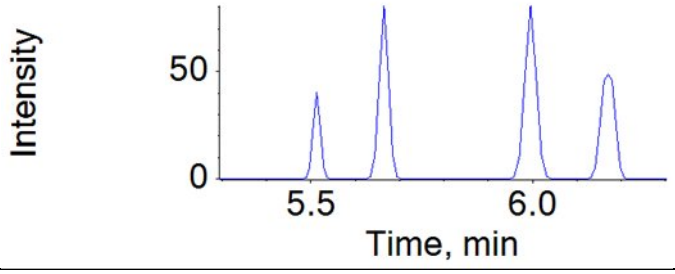


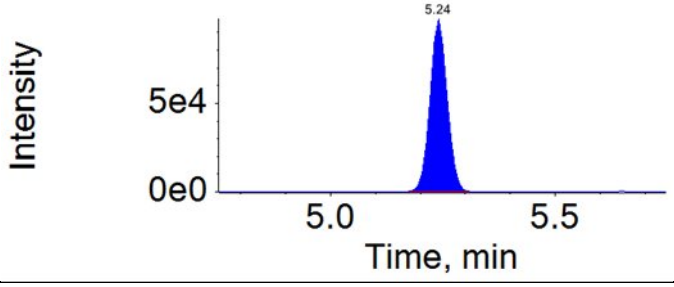
Analyte: NMeFOSAA	Extraction Standard: d3-NMeFOSAA
570.0 / 419.0	573.0 / 419.0



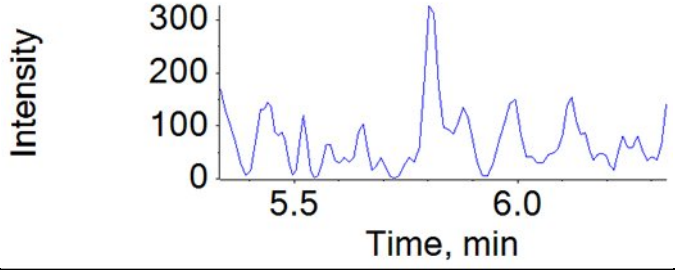


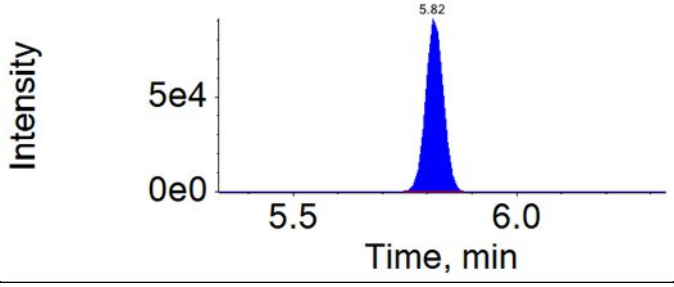
Analyte: PFDS	Extraction Standard: 13C8-PFOS
599.0 / 80.0	507.0 / 80.0





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



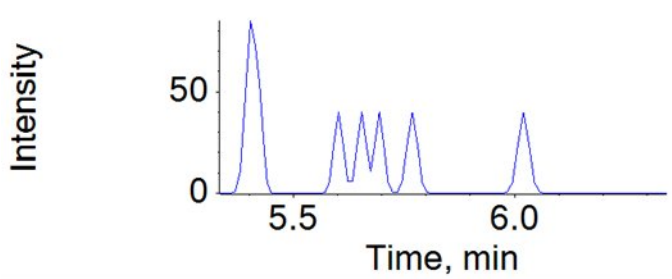


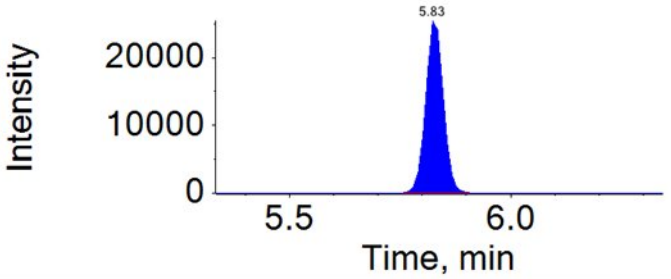
APPROVED
By MCD at 6:34 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

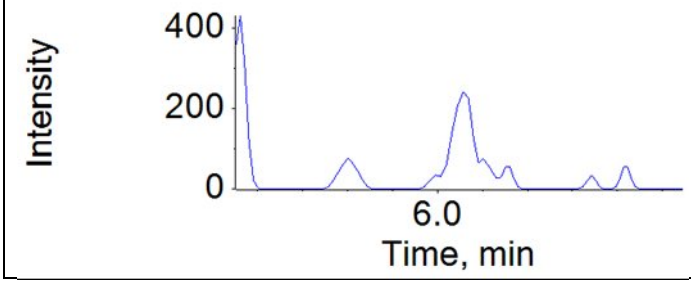
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

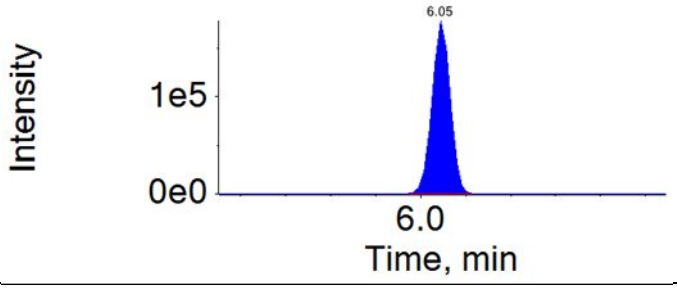
Analyte: NEtFOSAA	Extraction Standard: d5-NEtFOSAA
584.0 / 419.0	589.0 / 419.0



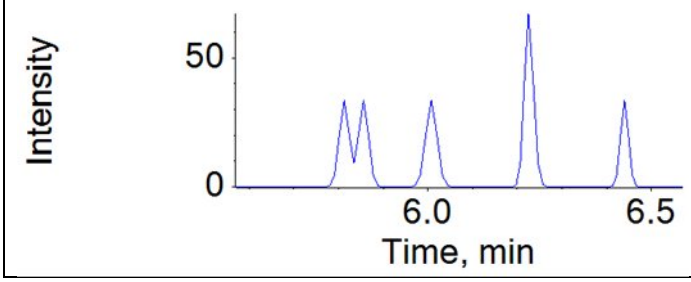


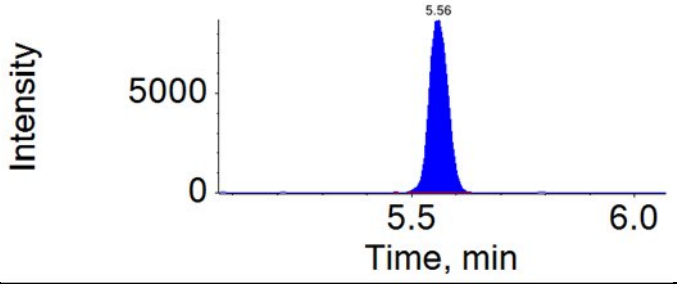
Analyte: PFDoDA	Extraction Standard: 13C2-PFDoDA
613.0 / 569.0	615.0 / 570.0



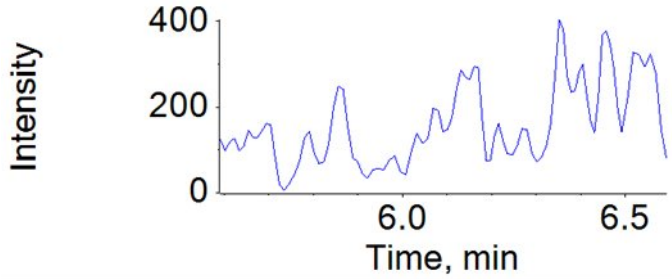


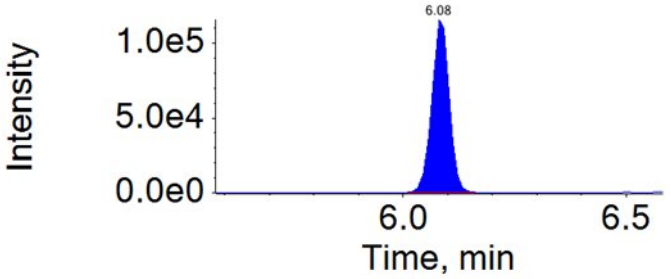
Analyte: 10:2-FTS	Extraction Standard: 13C2-8:2-FTS
627.0 / 607.0	529.0 / 81.0





Analyte: NMePFOSAE	Extraction Standard: d7-NMePFOSAE
616.0 / 59.0	623.0 / 59.0



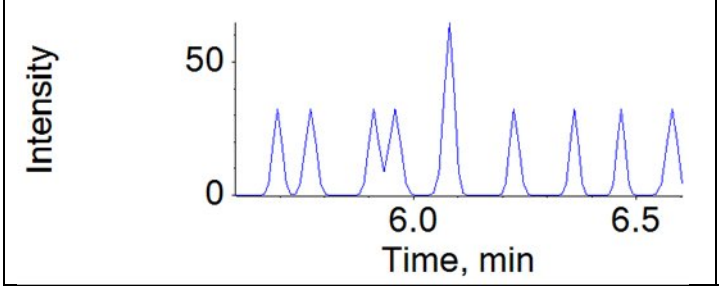


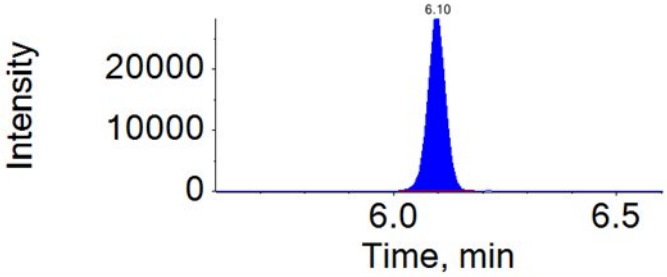
APPROVED
By MCD at 6:34 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

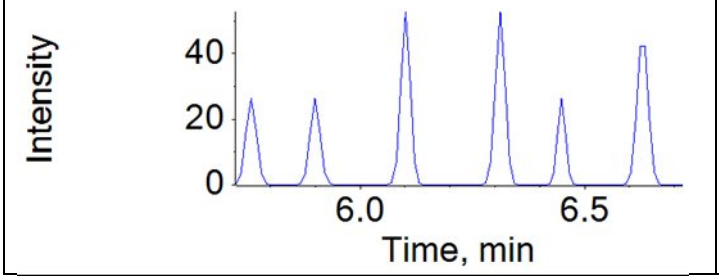
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

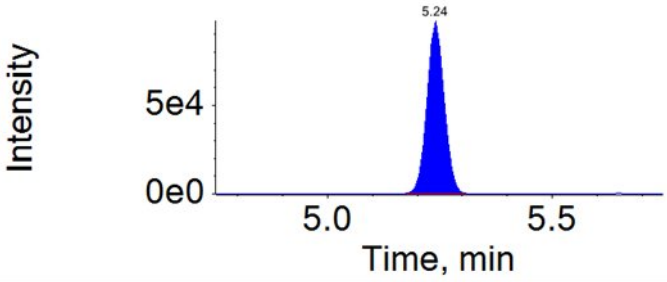
Analyte: NMePFOSA	Extraction Standard: d3-NMePFOSA
512.0 / 169.0	515.0 / 169.0



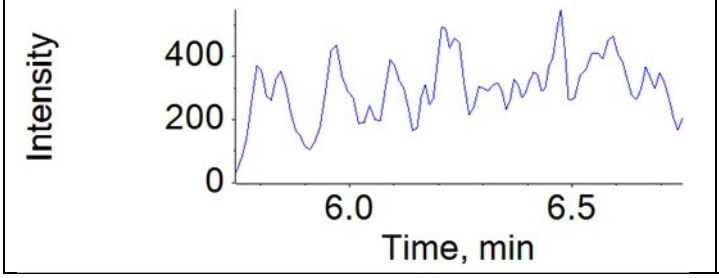


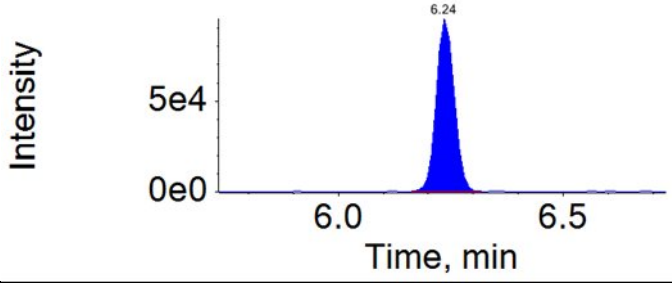
Analyte: PFDoS	Extraction Standard: 13C8-PFOS
699.0 / 80.0	507.0 / 80.0



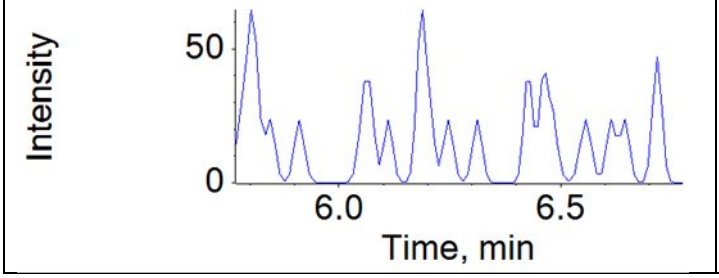


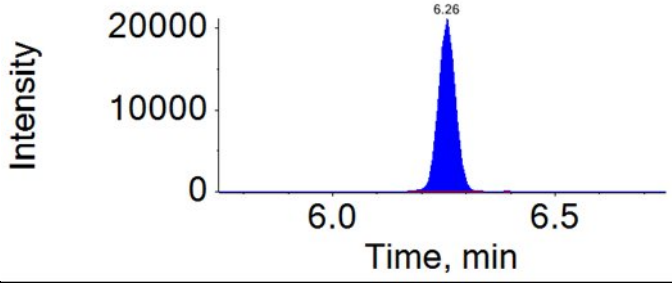
Analyte: NEtPFOSAE	Extraction Standard: d9-NEtPFOSAE
630.0 / 59.0	639.0 / 59.0





Analyte: NEtPFOSA	Extraction Standard: d5-NEtPFOSA
526.0 / 169.0	531.0 / 169.0



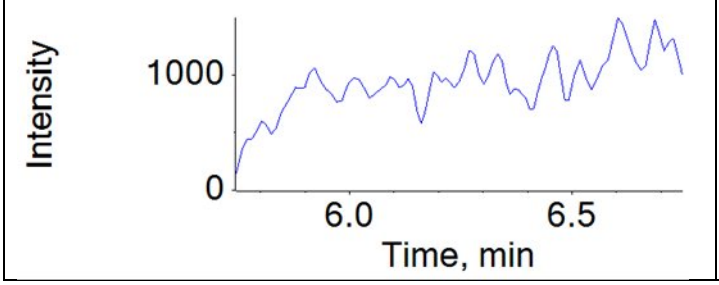


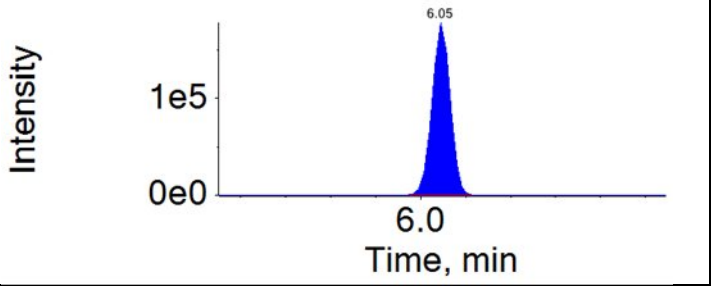
APPROVED
By MCD at 6:34 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

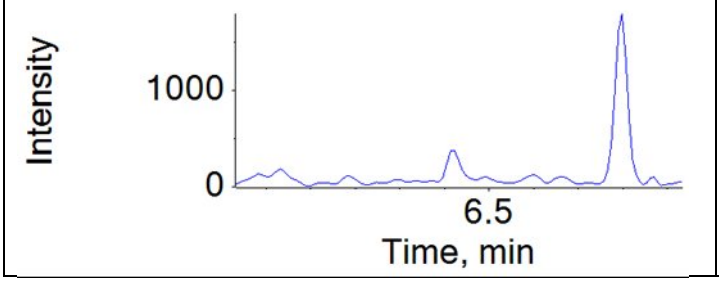
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

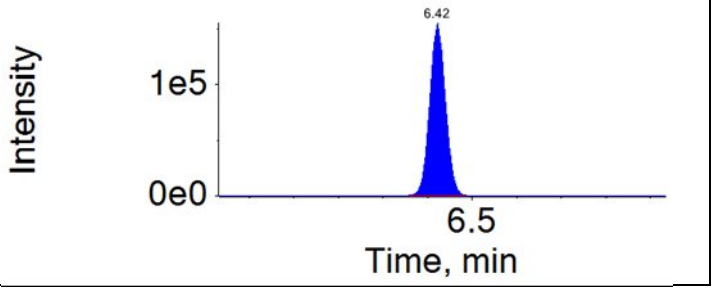
Analyte: PFTrDA	Extraction Standard: 13C2-PFDoDA
663.0 / 619.0	615.0 / 570.0



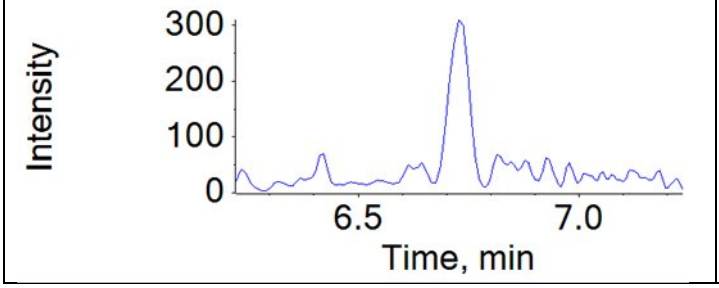


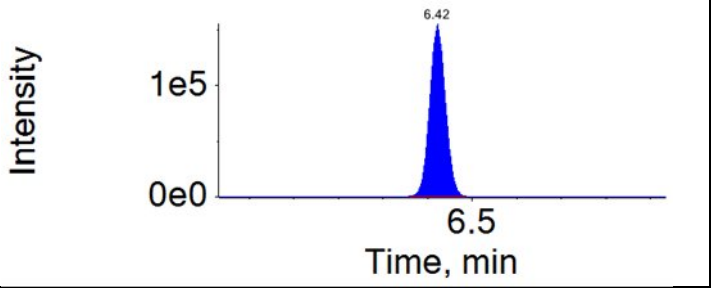
Analyte: PFTeDA	Extraction Standard: 13C2-PFTeDA
713.0 / 669.0	715.0 / 670.0



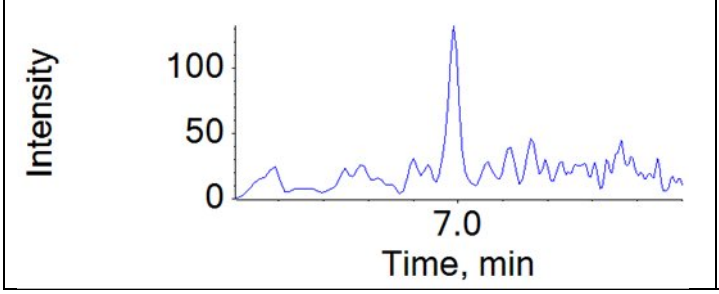


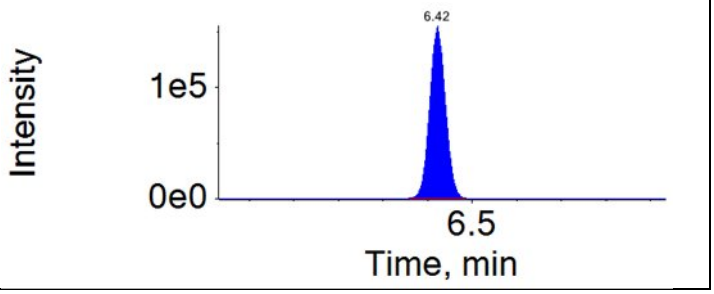
Analyte: PFHxDA	Extraction Standard: 13C2-PFTeDA
813.0 / 769.0	715.0 / 670.0





Analyte: PFODA	Extraction Standard: 13C2-PFTeDA
913.0 / 869.0	715.0 / 670.0



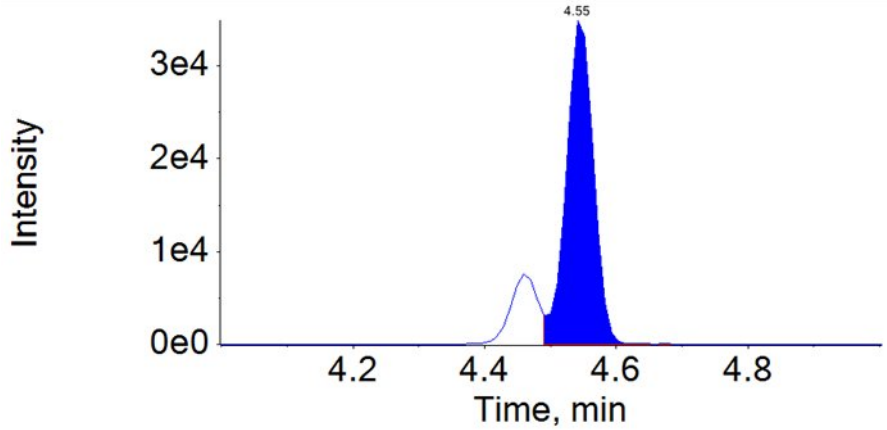


APPROVED
By MCD at 6:34 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

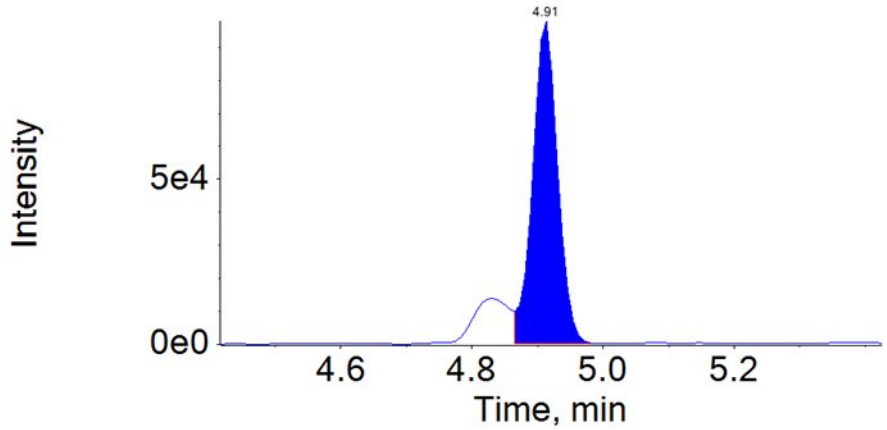
Results Table Name: 18NOV12DCAL
Results Table Date: 11/12/2018 6:23:42 PM
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

Component Name:
PFHxS
RT (min.):
4.55
Peak Area:
101341.11
Mass Range:
399.0 / 80.0
File Name:
18NOV12DCAL-51.wiff
Sample Name:
L+B CAL3



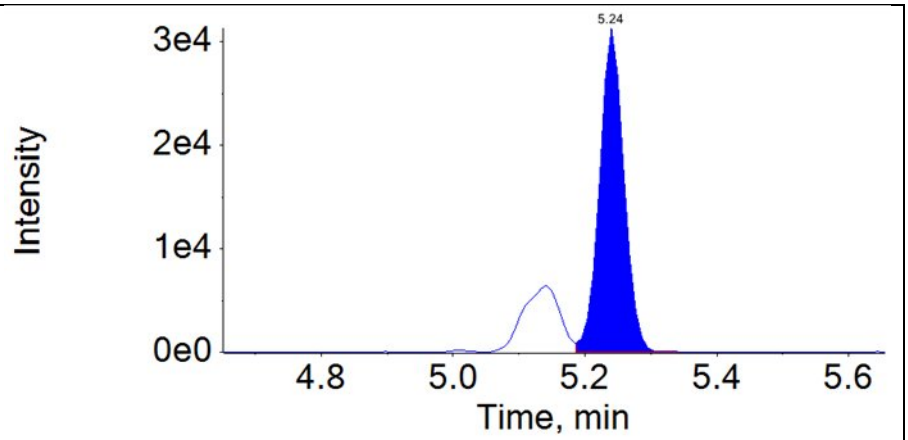
Integration Comment: incorrect integration

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



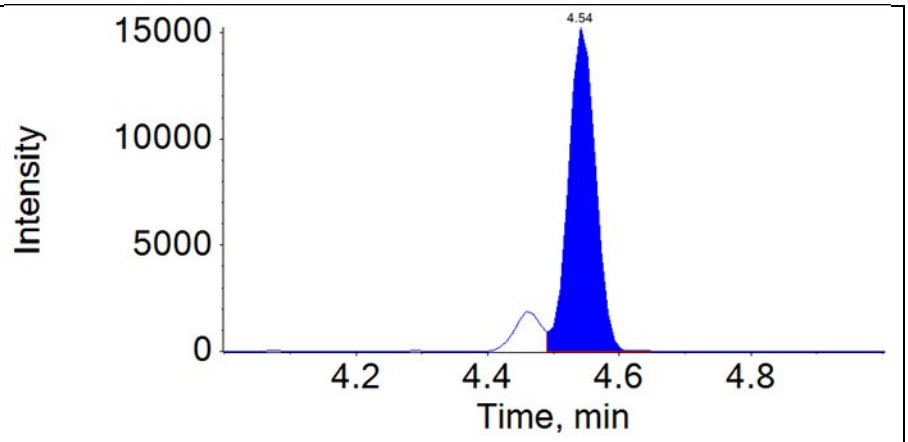
Integration Comment: incorrect integration

APPROVED
By MCD at 6:34 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

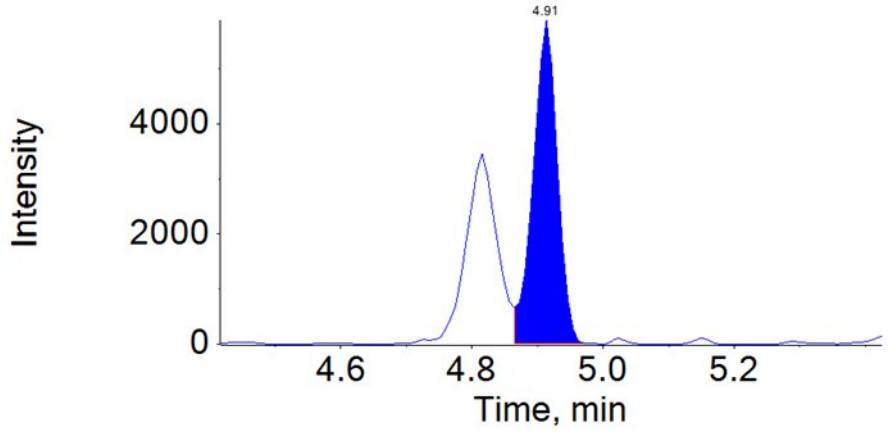
Results Table Name: 18NOV12DCAL
Results Table Date: 11/12/2018 6:23:42 PM
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

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



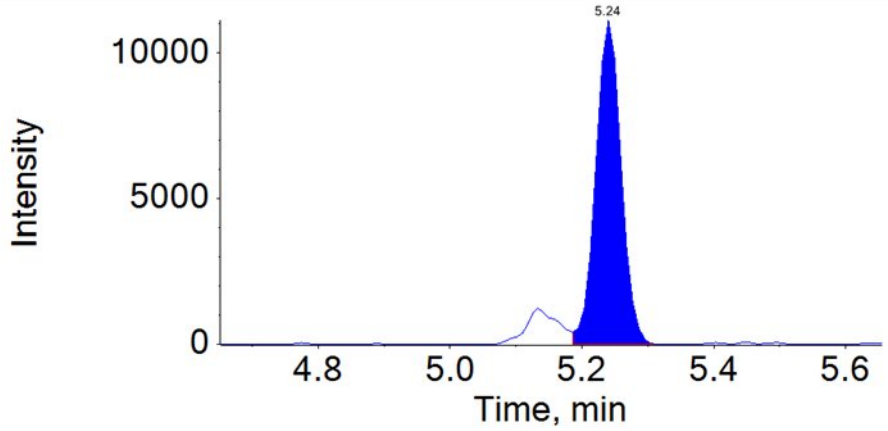
Integration Comment: incorrect integration

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

Ion Ratio Report

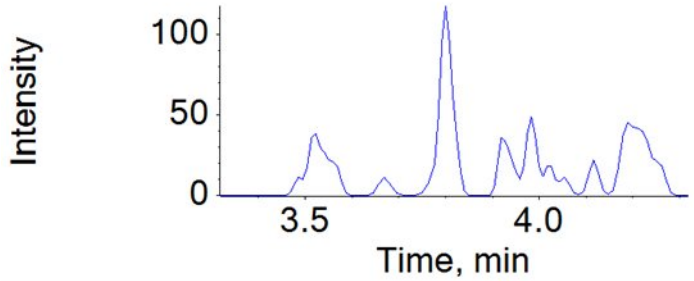
Sample Name: L+B CAL3 **Instrument Name:** LM27631 **File Name:** 18NOV12DCAL-51.wiff

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	

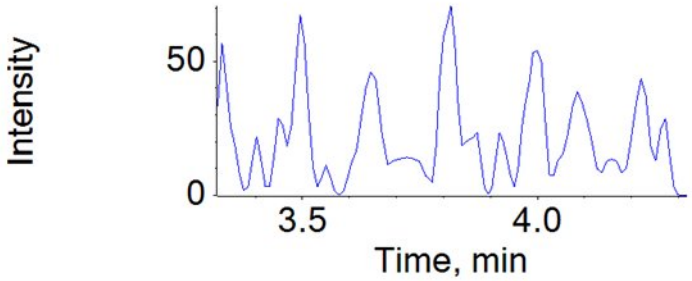
APPROVED
By MCD at 6:34 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

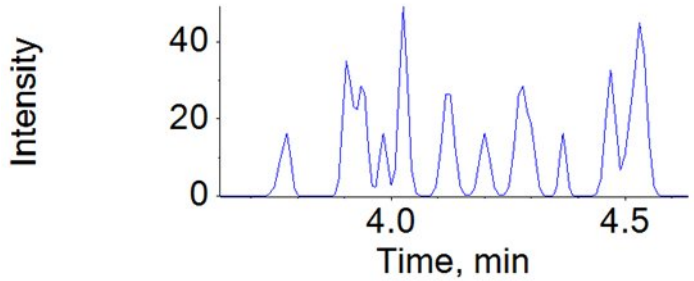
Component: PFBS
Primary Mass: 299.0 / 80.0



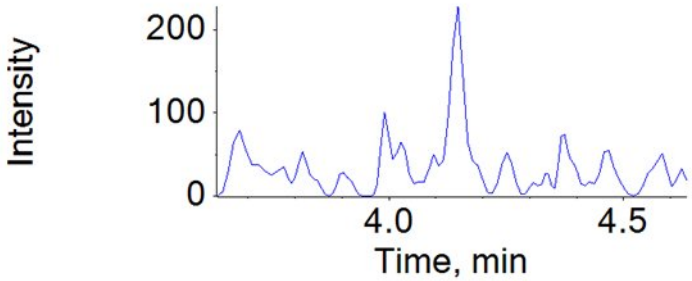
Component: PFBS_2
Secondary Mass: 299.0 / 99.0



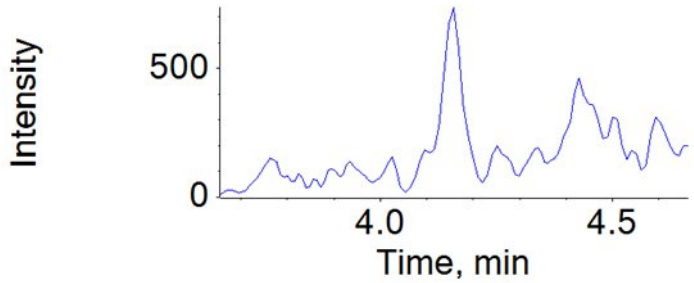
Component: 4:2-FTS
Primary Mass: 327.0 / 307.0



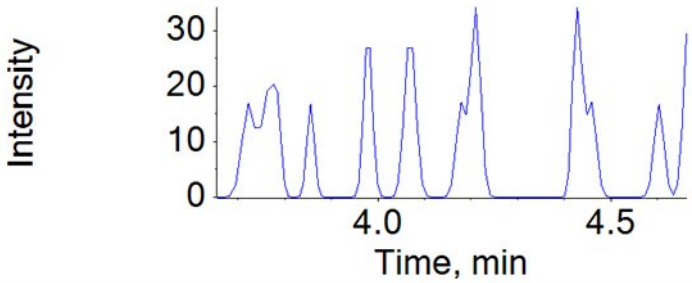
Component: 4:2 FTS_2
Secondary Mass: 327.0 / 81.0



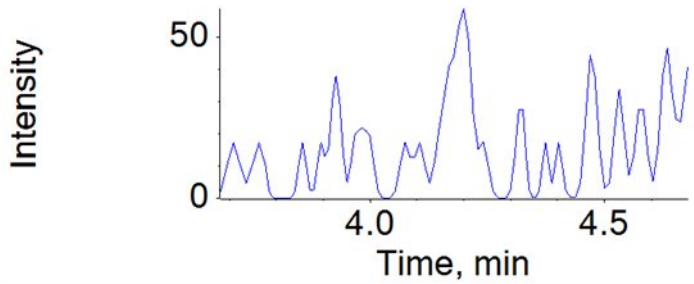
Component: PFHxA
Primary Mass: 313.0 / 269.0



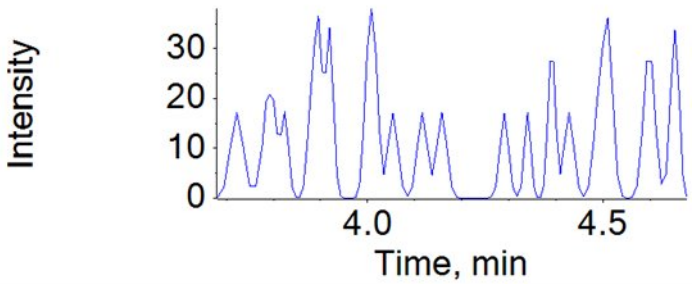
Component: PFHxA_2
Secondary Mass: 313.0 / 119.0



Component: PFPeS
Primary Mass: 349.0 / 80.0



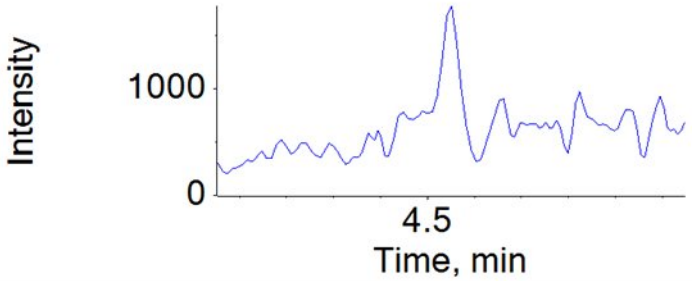
Component: PFPeS_2
Secondary Mass: 349.0 / 99.0



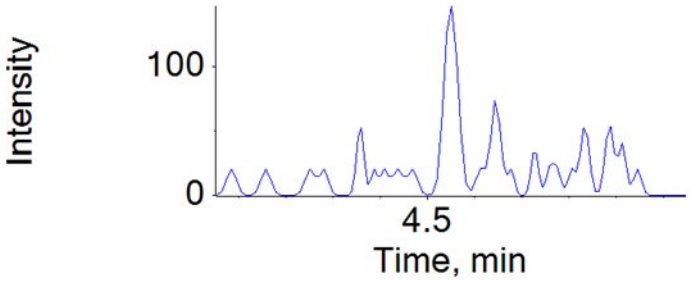
APPROVED
By MCD at 6:34 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

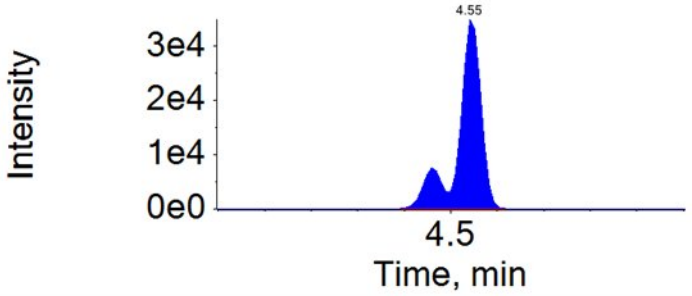
Component: PFHpA
Primary Mass: 363.0 / 319.0



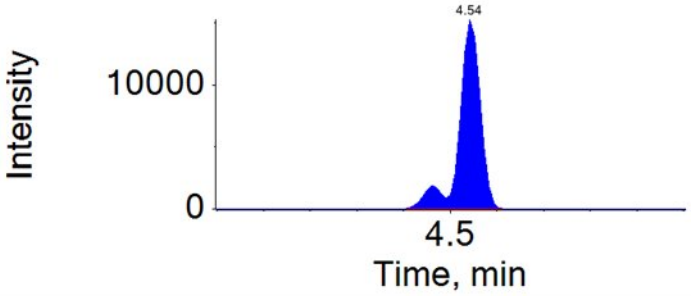
Component: PFHpA_2
Secondary Mass: 363.0 / 169.0



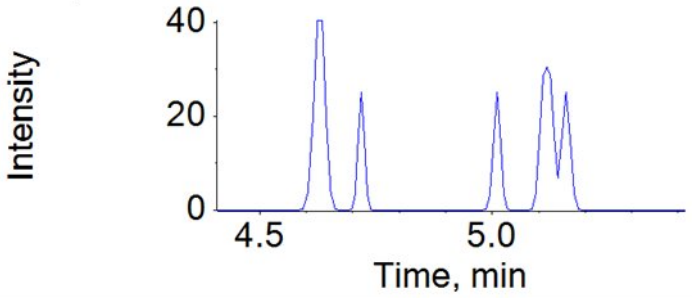
Component: PFHxS
Primary Mass: 399.0 / 80.0



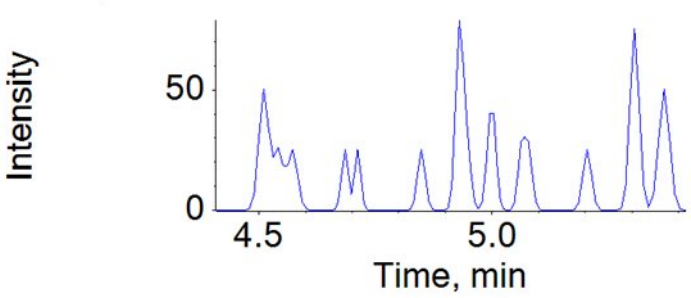
Component: PFHxS_2
Secondary Mass: 399.0 / 99.0



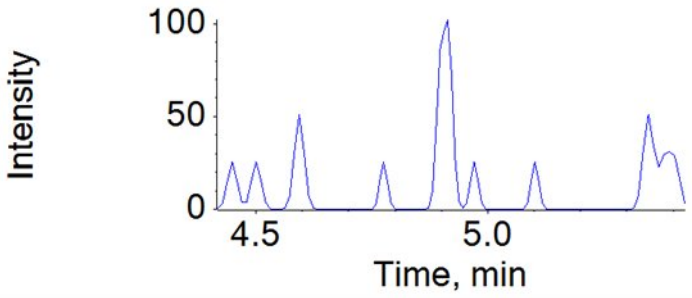
Component: 6:2-FTS
Primary Mass: 427.0 / 407.0



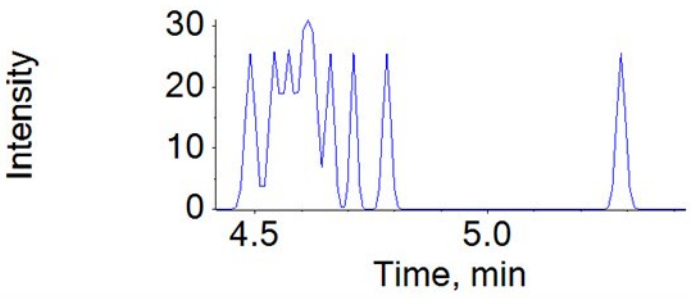
Component: 6:2 FTS_2
Secondary Mass: 427.0 / 81.0



Component: PFHpS
Primary Mass: 449.0 / 80.0



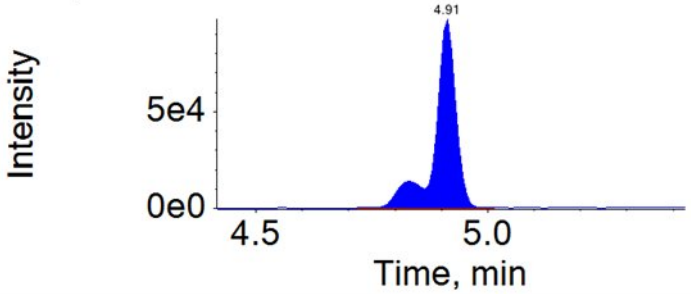
Component: PFHpS_2
Secondary Mass: 449.0 / 99.0



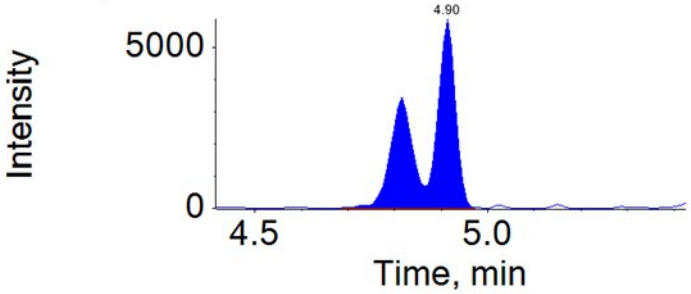
APPROVED
By MCD at 6:34 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

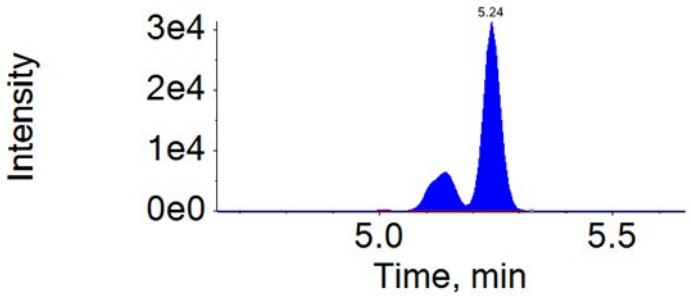
Component: PFOA
Primary Mass: 413.0 / 369.0



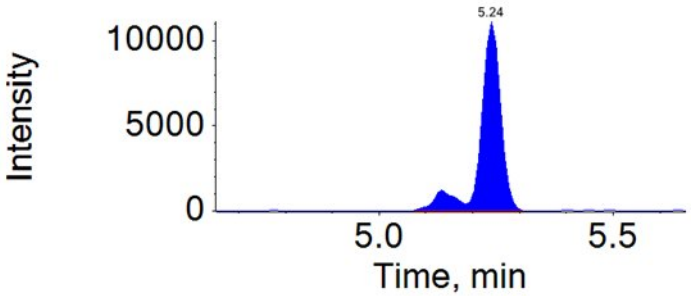
Component: PFOA_2
Secondary Mass: 413.0 / 169.0



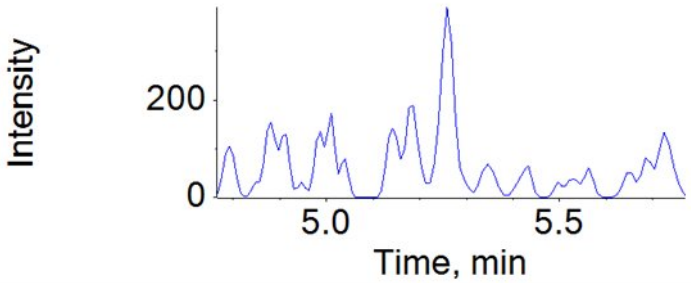
Component: PFOS
Primary Mass: 499.0 / 80.0



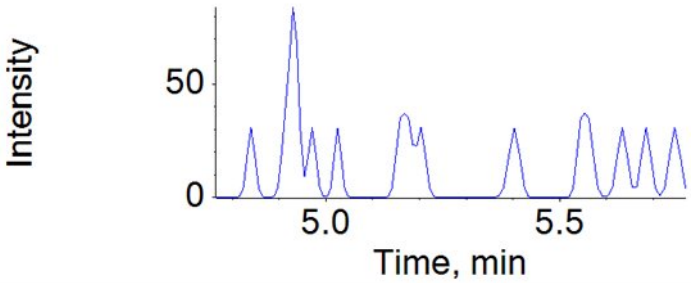
Component: PFOS_2
Secondary Mass: 499.0 / 99.0



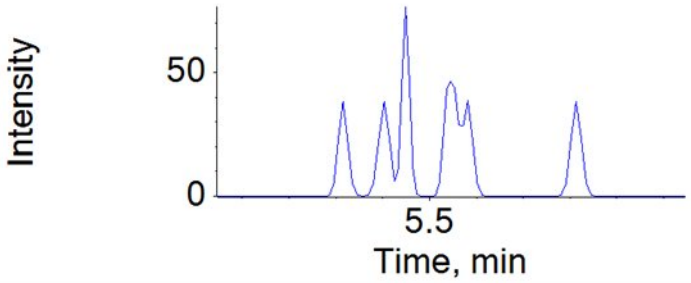
Component: PFNA
Primary Mass: 463.0 / 419.0



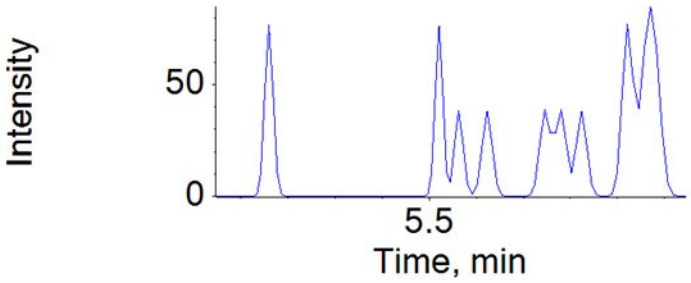
Component: PFNA_2
Secondary Mass: 463.0 / 169.0



Component: PFNS
Primary Mass: 549.0 / 80.0



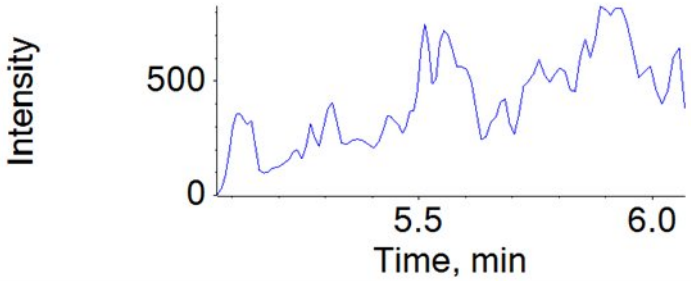
Component: PFNS_2
Secondary Mass: 549.0 / 99.0



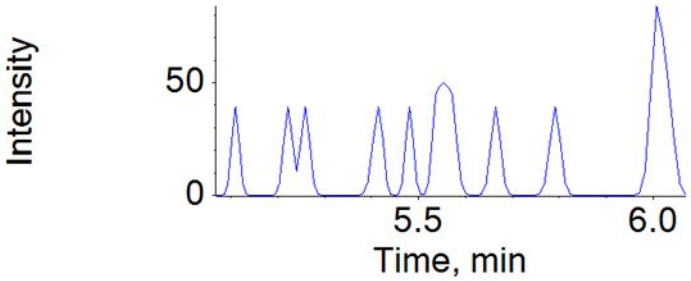
APPROVED
By MCD at 6:34 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

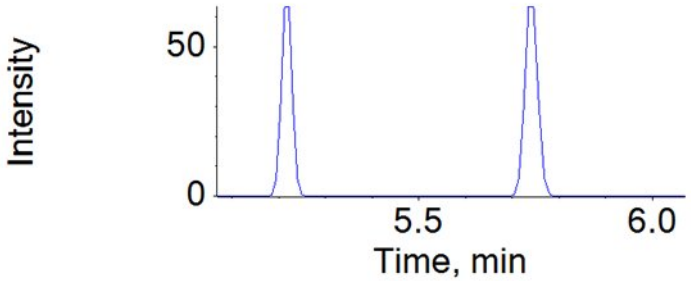
Component: PFDA
Primary Mass: 513.0 / 469.0



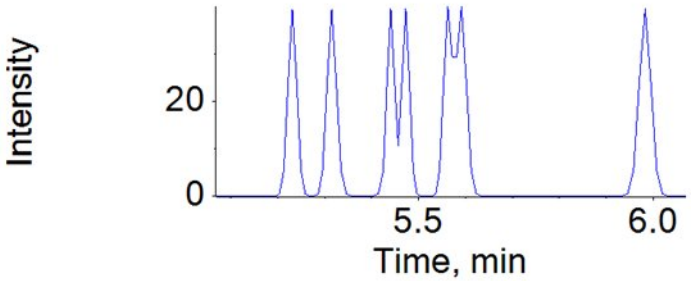
Component: PFDA_2
Secondary Mass: 513.0 / 169.0



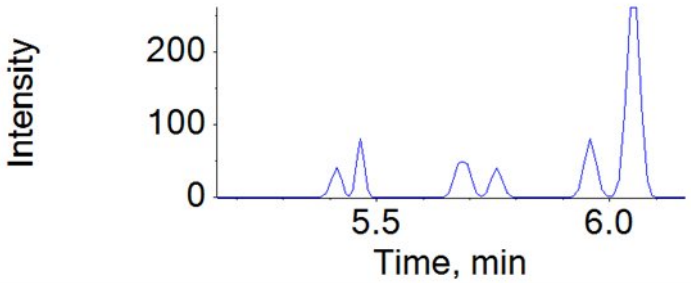
Component: 8:2-FTS
Primary Mass: 527.0 / 507.0



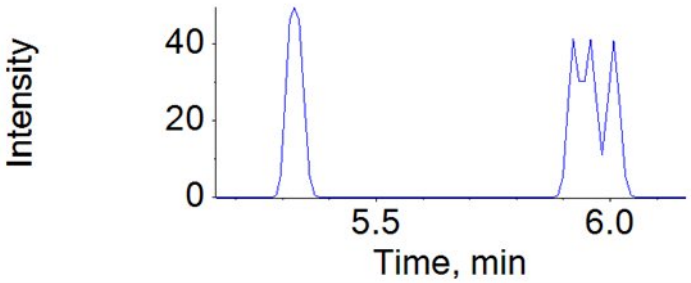
Component: 8:2 FTS_2
Secondary Mass: 527.0 / 81.0



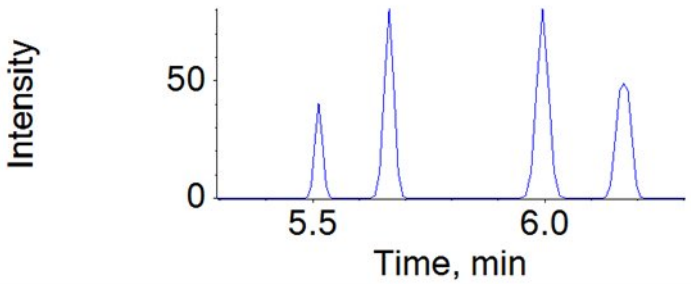
Component: NMeFOSAA
Primary Mass: 570.0 / 419.0



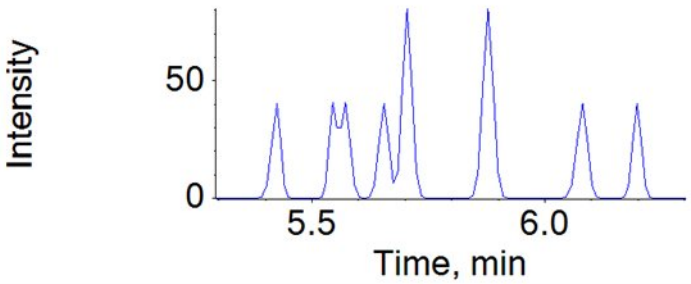
Component: NMeFOSAA_2
Secondary Mass: 570.0 / 483.0



Component: PFDS
Primary Mass: 599.0 / 80.0



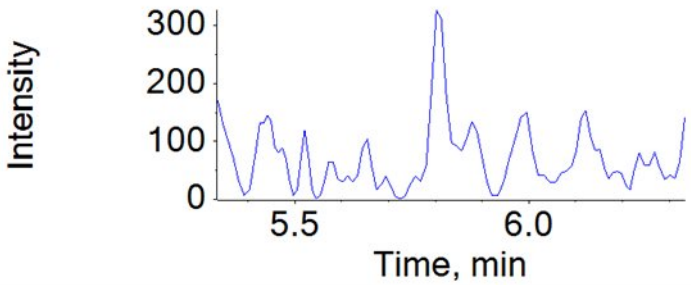
Component: PFDS_2
Secondary Mass: 599.0 / 99.0



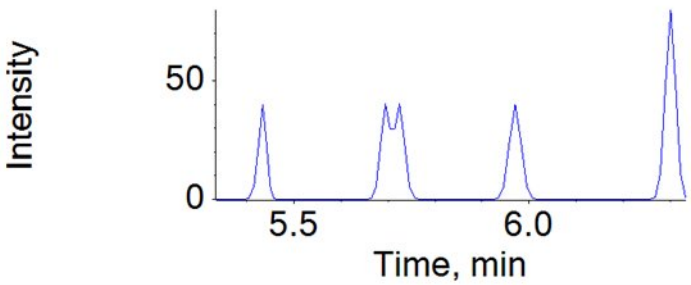
APPROVED
By MCD at 6:34 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

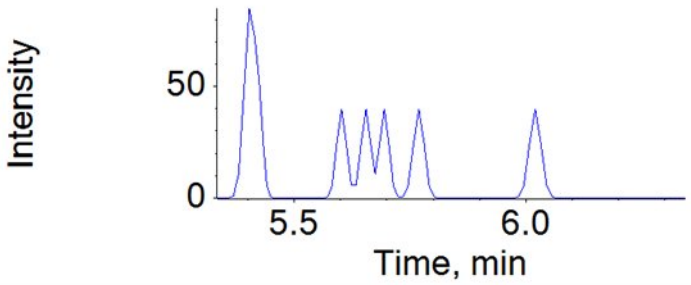
Component: PFUnDA
Primary Mass: 563.0 / 519.0



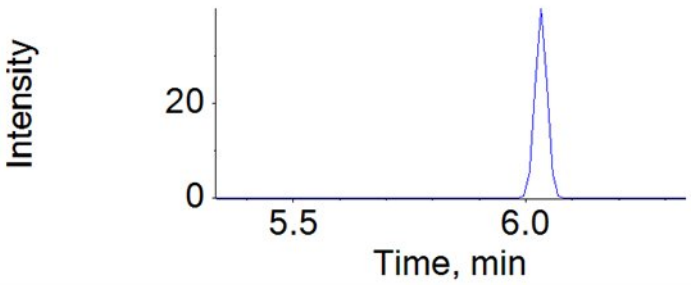
Component: PFUnDA_2
Secondary Mass: 563.0 / 169.0



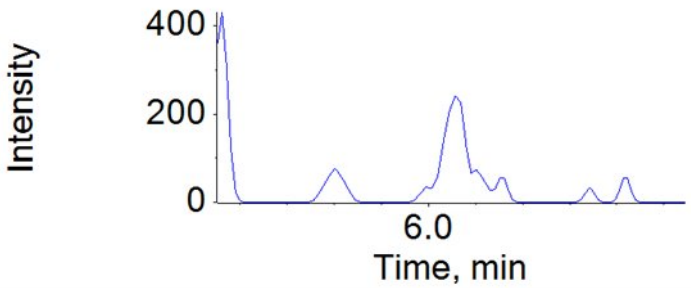
Component: NEtFOSAA
Primary Mass: 584.0 / 419.0



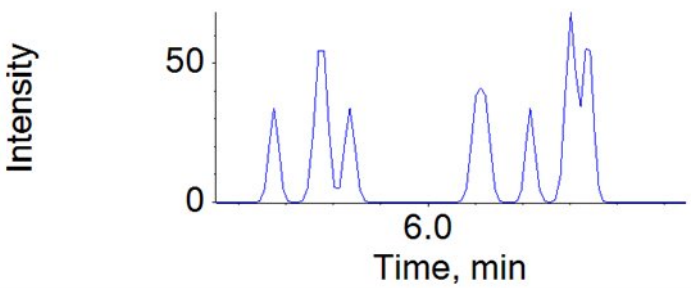
Component: NEtFOSAA_2
Secondary Mass: 584.0 / 526.0



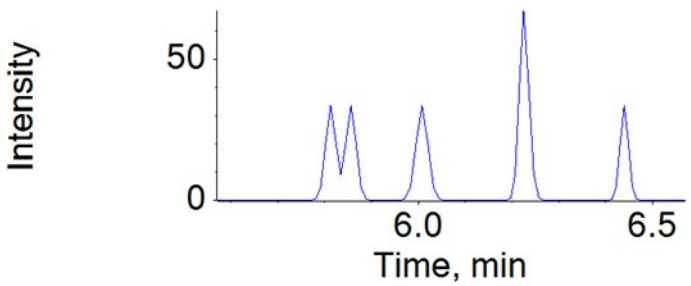
Component: PFDoDA
Primary Mass: 613.0 / 569.0



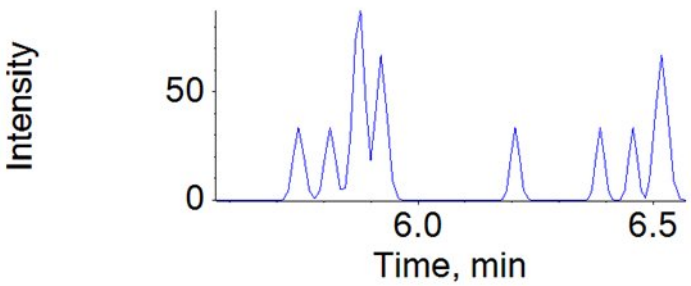
Component: PFDoDA_2
Secondary Mass: 613.0 / 169.0



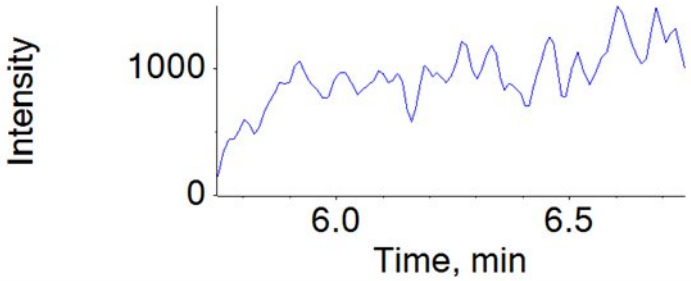
Component: 10:2-FTS
Primary Mass: 627.0 / 607.0



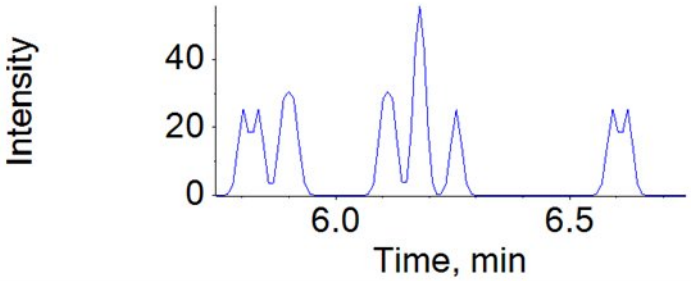
Component: 10:2 FTS_2
Secondary Mass: 627.0 / 81.0



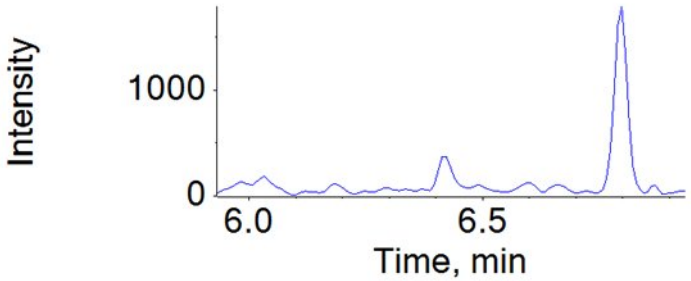
Component: PFTrDA
Primary Mass: 663.0 / 619.0



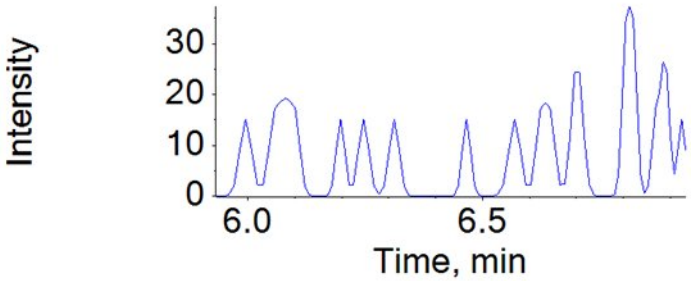
Component: PFTrDA_2
Secondary Mass: 663.0 / 169.0



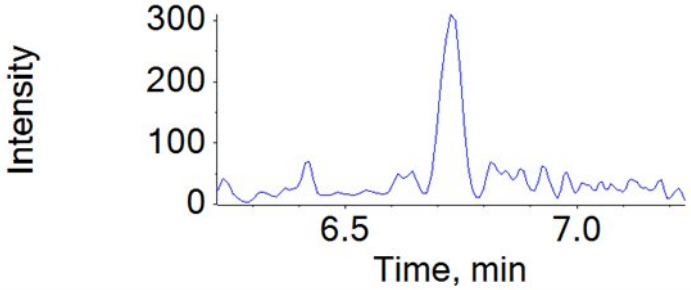
Component: PFTeDA
Primary Mass: 713.0 / 669.0



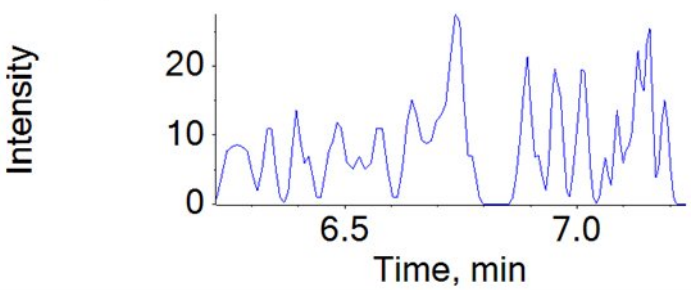
Component: PFTeDA_2
Secondary Mass: 713.0 / 169.0



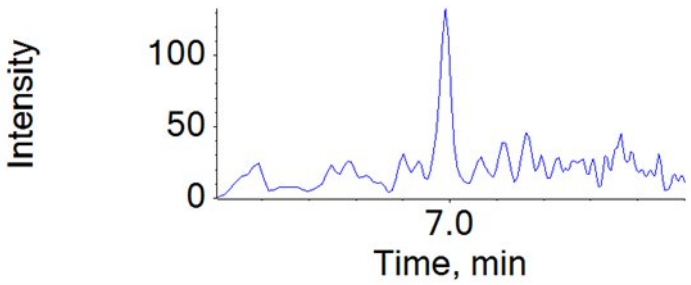
Component: PFHxDA
Primary Mass: 813.0 / 769.0



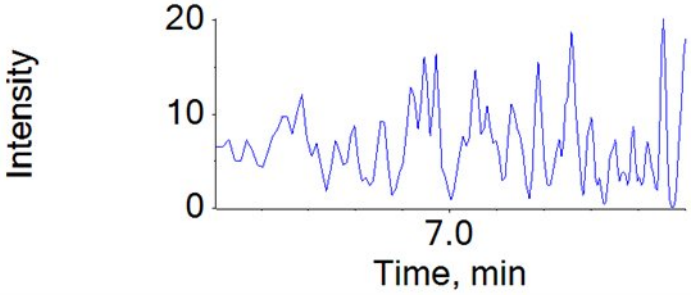
Component: PFHxDA_2
Secondary Mass: 813.0 / 169.0



Component: PFODA
Primary Mass: 913.0 / 869.0



Component: PFODA_2
Secondary Mass: 913.0 / 169.0



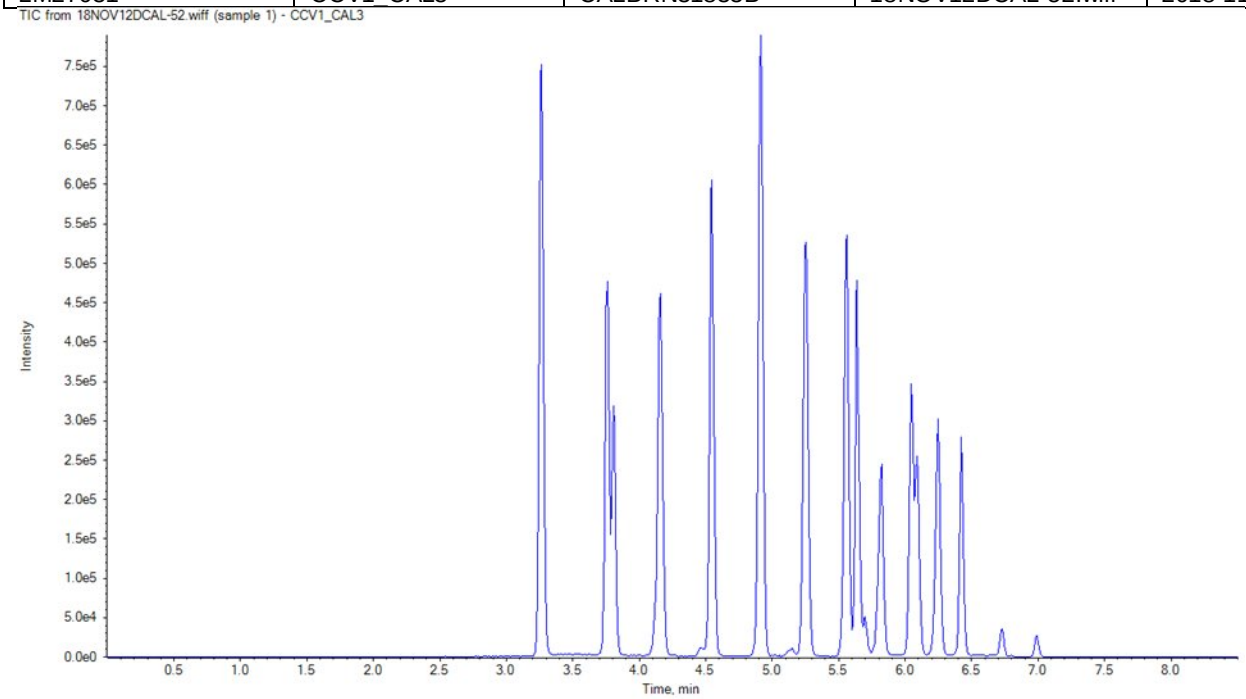
APPROVED
By MCD at 6:34 pm, 11/12/18

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
QMethod Name: 18AUG20QM
Result Table: 18NOV12DCAL 11/12/2018 6:14:07 PM
Acquisition Method: 18AUG13_3uL.dam

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **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

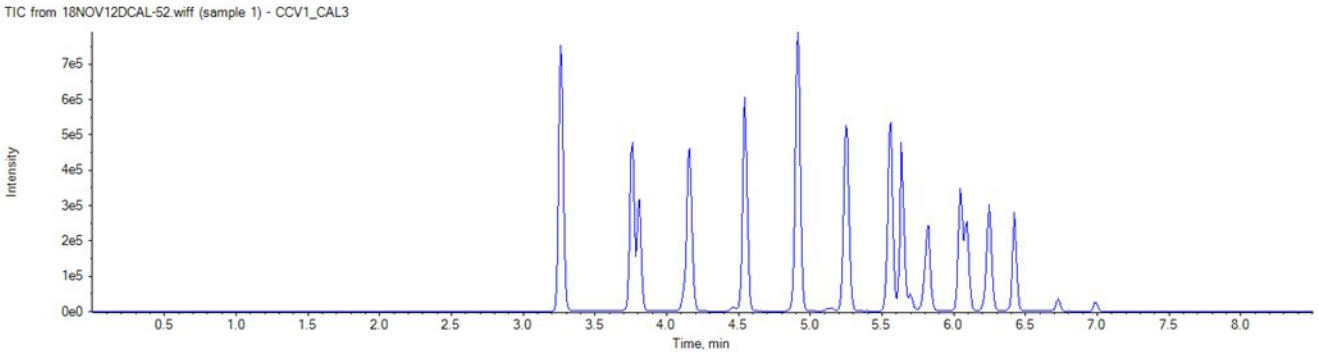
Analyte Quantitation Peak Table

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

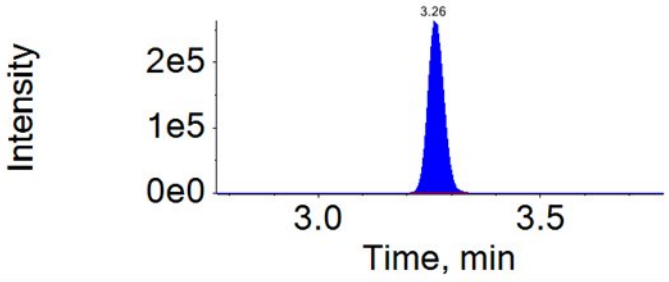


APPROVED
By MCD at 6:34 pm, 11/12/18

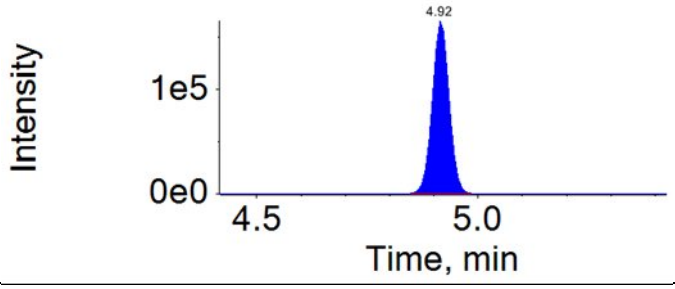
REVIEWED
By HMK at 10:53 am, 11/13/18

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

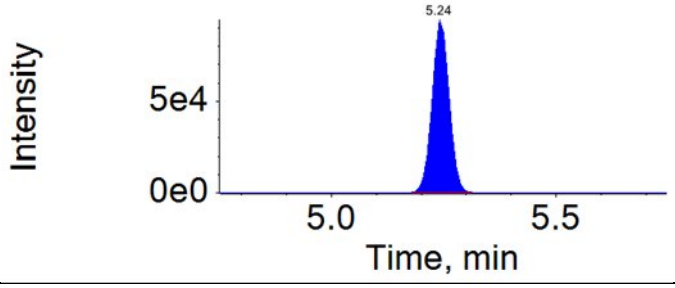
Injection Standard: 13C3-PFBA
216.0 / 172.0



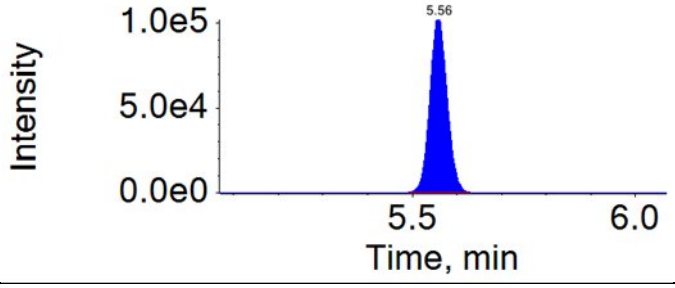
Injection Standard: 13C2-PFOA
415.0 / 370.0



Injection Standard: 13C4-PFOS
503.0 / 80.0



Injection Standard: 13C2-PFDA
515.0 / 470.0

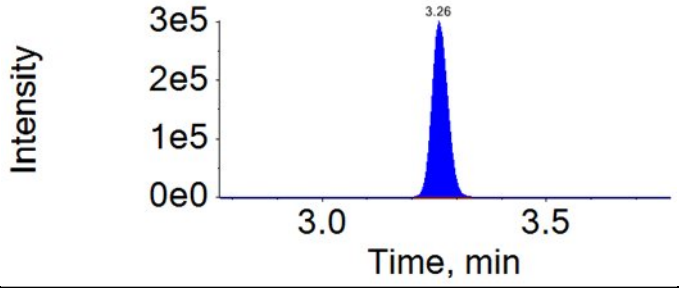


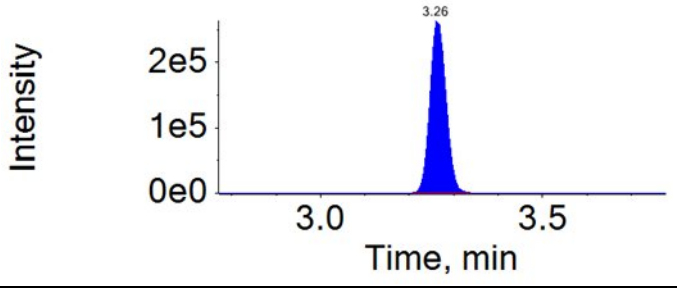
APPROVED
By MCD at 6:34 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

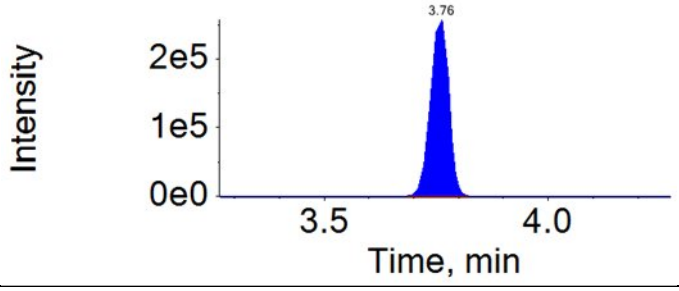
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

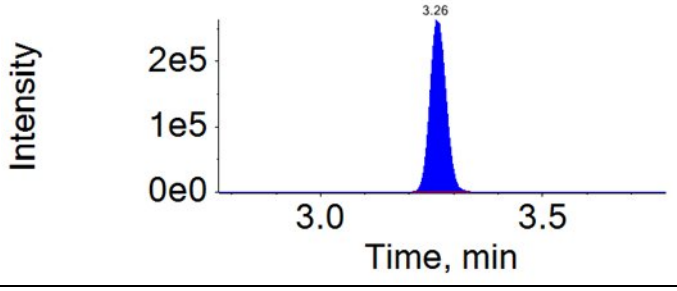
Extraction Standard: E13C4-PFBA	Injection Standard: 13C3-PFBA
217.0 / 172.0	216.0 / 172.0



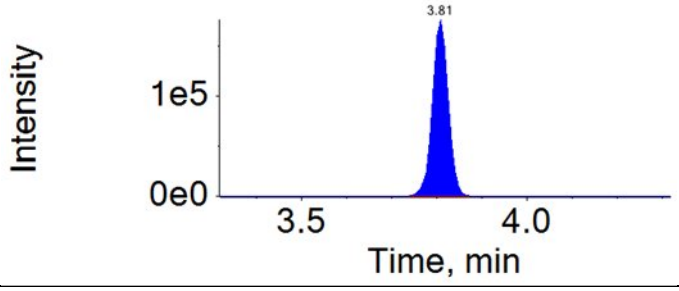


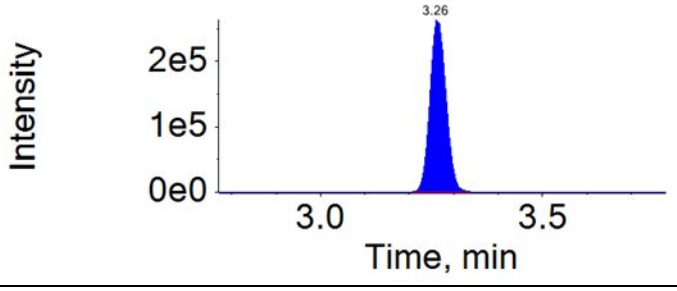
Extraction Standard: E13C5-PFPeA	Injection Standard: 13C3-PFBA
268.0 / 223.0	216.0 / 172.0



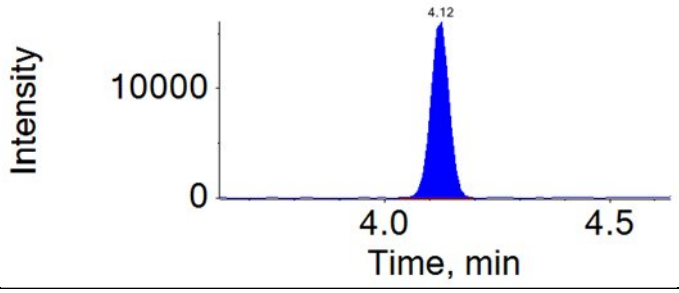


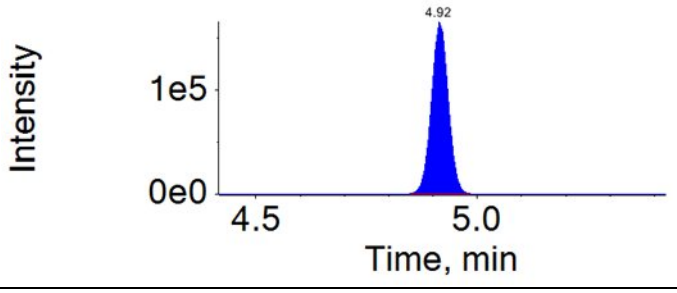
Extraction Standard: E13C3-PFBS	Injection Standard: 13C3-PFBA
302.0 / 80.0	216.0 / 172.0





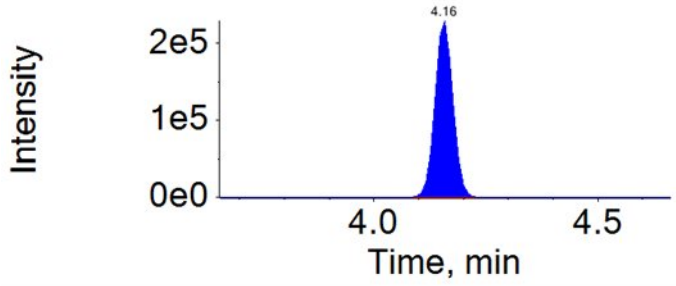
Extraction Standard: E13C2-4:2-FTS	Injection Standard: 13C2-PFOA
329.0 / 81.0	415.0 / 370.0

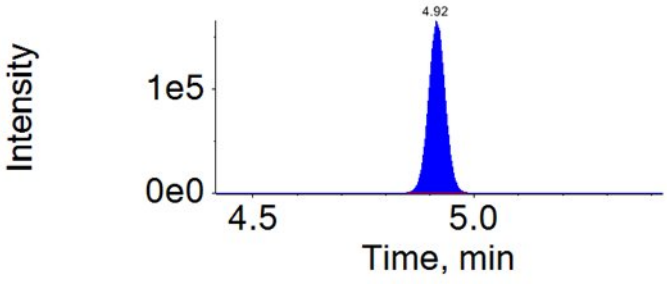




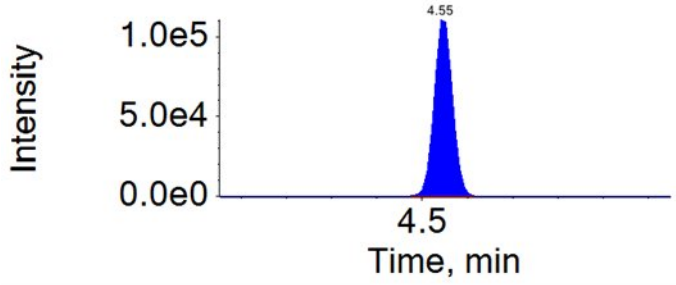
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

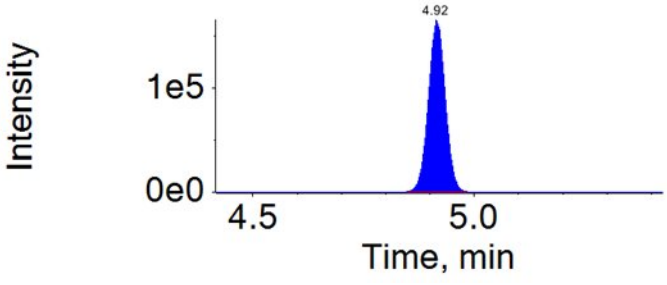
Extraction Standard: E13C5-PFHxA	Injection Standard: 13C2-PFOA
318.0 / 273.0	415.0 / 370.0



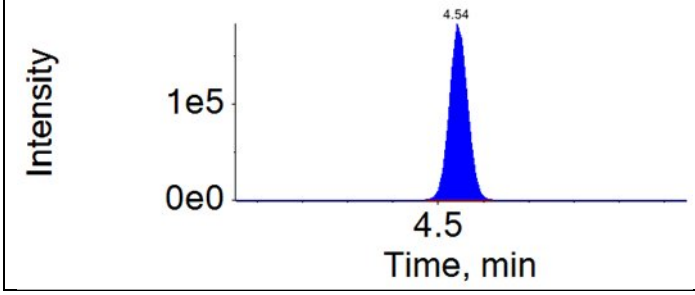


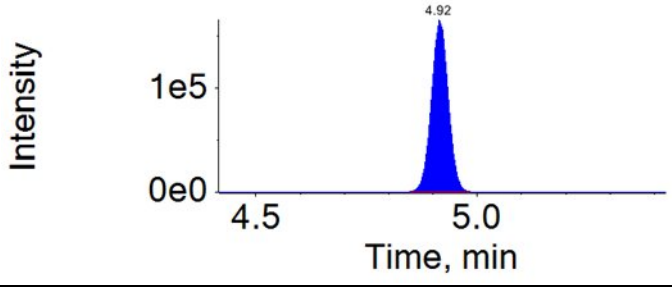
Extraction Standard: E13C3-PFHxS	Injection Standard: 13C2-PFOA
402.0 / 80.0	415.0 / 370.0



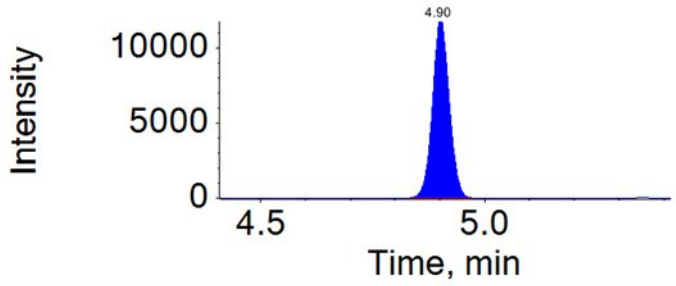


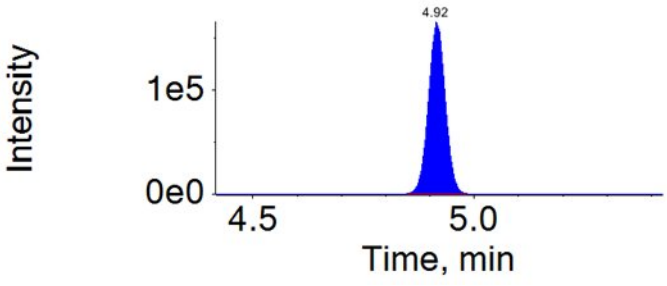
Extraction Standard: E13C4-PFHpA	Injection Standard: 13C2-PFOA
367.0 / 322.0	415.0 / 370.0





Extraction Standard: E13C2-6:2-FTS	Injection Standard: 13C2-PFOA
429.0 / 81.0	415.0 / 370.0



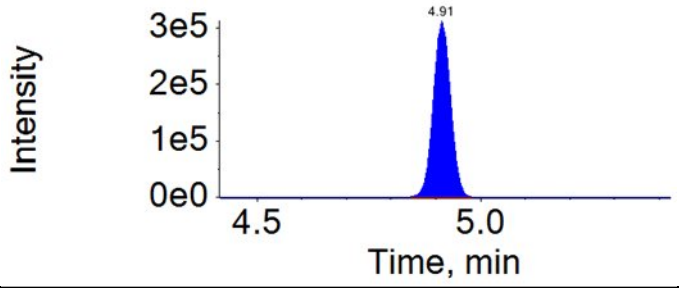


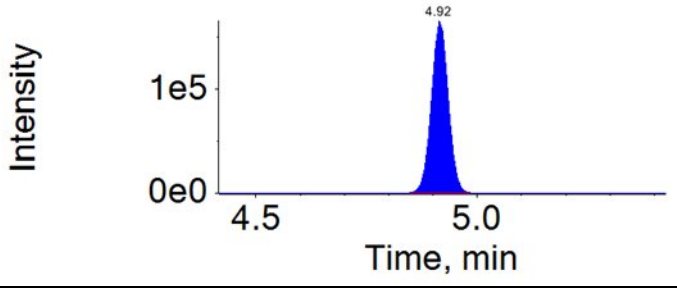
APPROVED
By MCD at 6:34 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

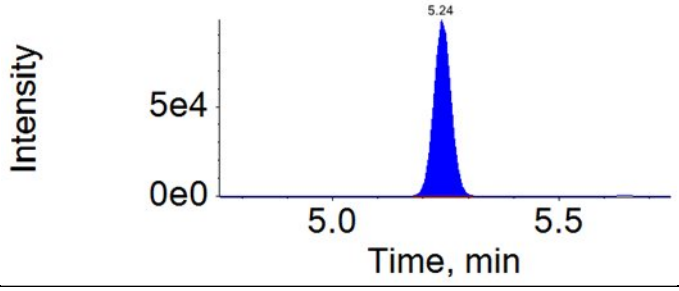
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

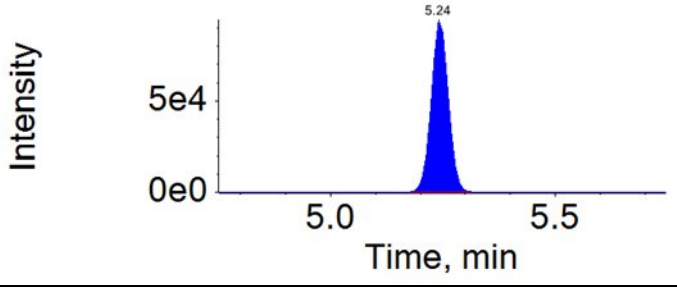
Extraction Standard: E13C8-PFOA	Injection Standard: 13C2-PFOA
421.0 / 376.0	415.0 / 370.0



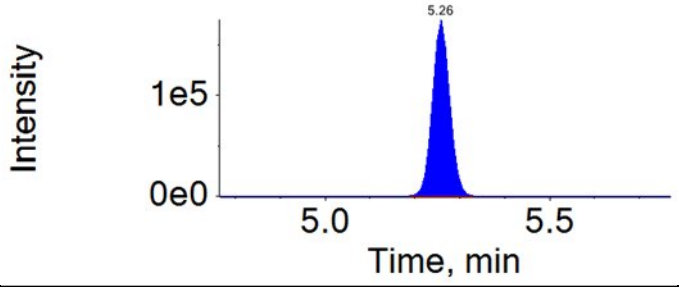


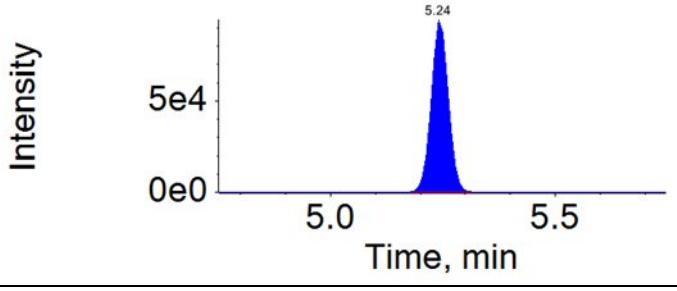
Extraction Standard: E13C8-PFOS	Injection Standard: 13C4-PFOS
507.0 / 80.0	503.0 / 80.0



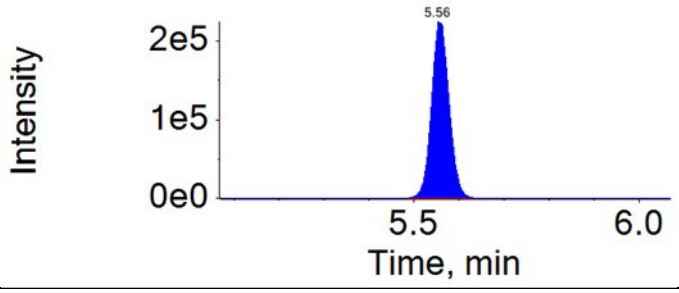


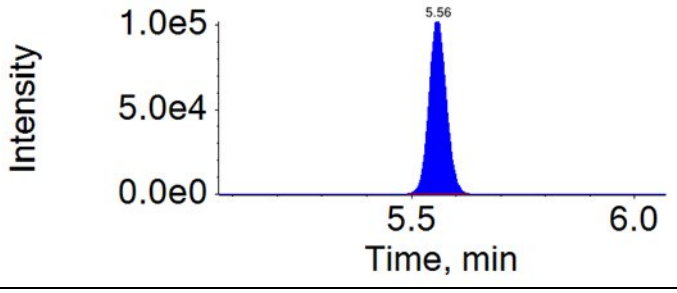
Extraction Standard: E13C9-PFNA	Injection Standard: 13C4-PFOS
472.0 / 427.0	503.0 / 80.0





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



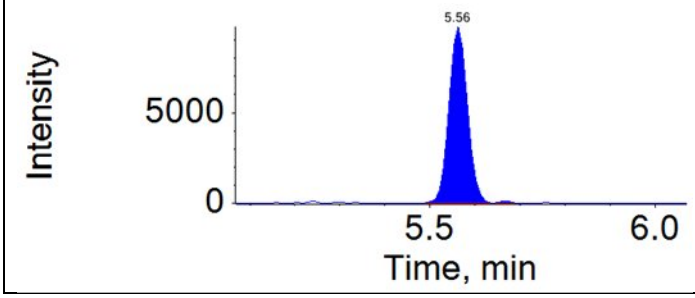


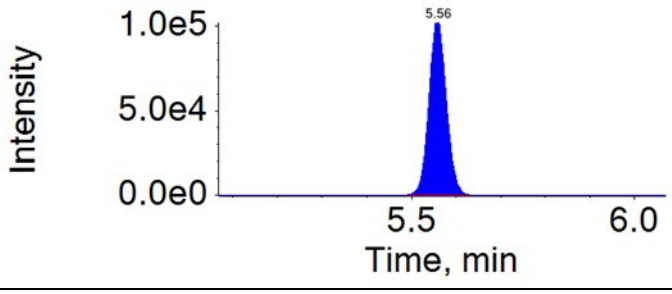
APPROVED
By MCD at 6:34 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

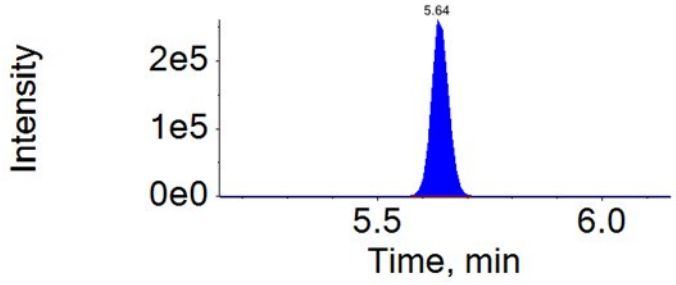
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

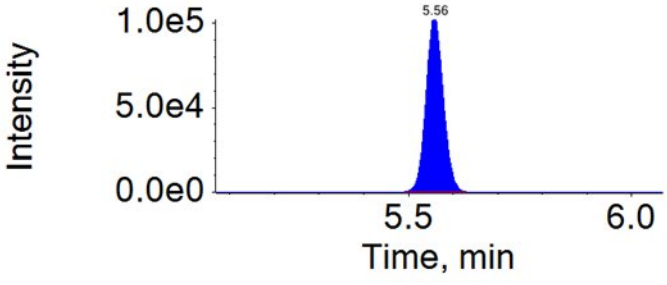
Extraction Standard: E13C2-8:2-FTS	Injection Standard: 13C2-PFDA
529.0 / 81.0	515.0 / 470.0



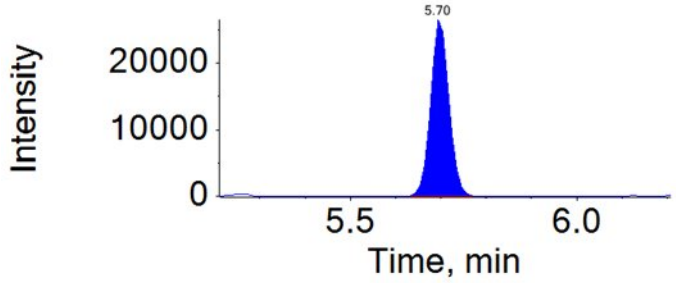


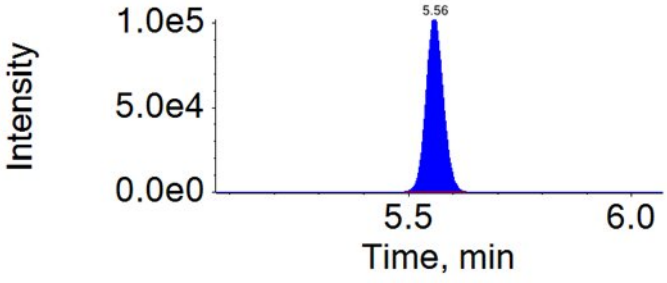
Extraction Standard: E13C8-PFOSA	Injection Standard: 13C2-PFDA
506.0 / 78.0	515.0 / 470.0



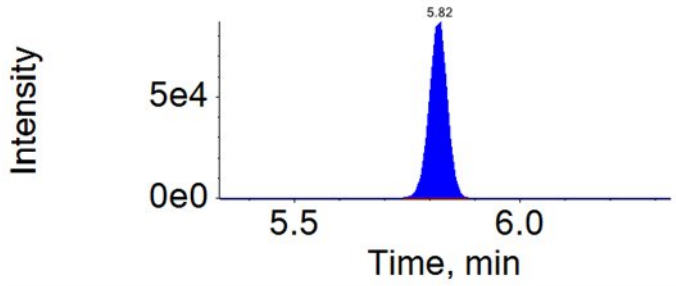


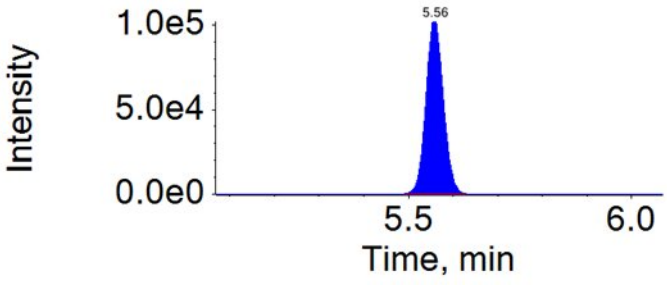
Extraction Standard: Ed3-NMeFOSAA	Injection Standard: 13C2-PFDA
573.0 / 419.0	515.0 / 470.0





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



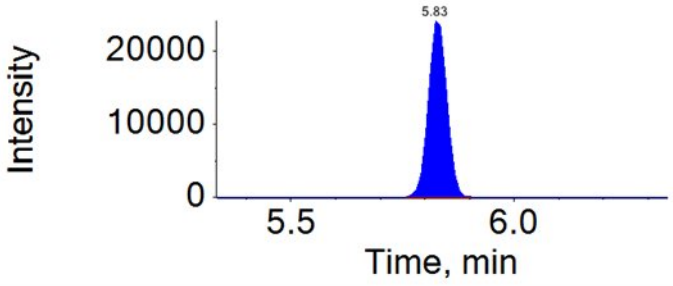


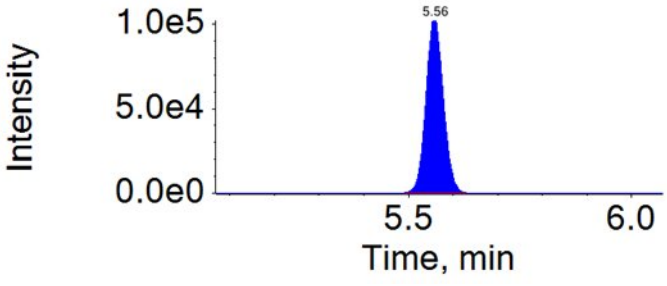
APPROVED
By MCD at 6:34 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

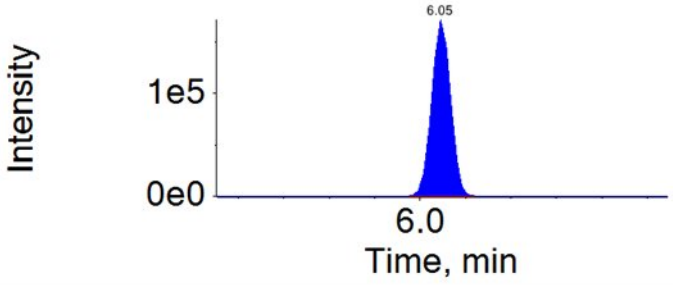
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

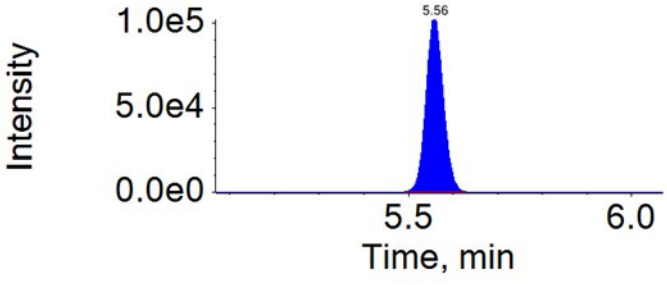
Extraction Standard: Ed5-NEtFOSAA	Injection Standard: 13C2-PFDA
589.0 / 419.0	515.0 / 470.0



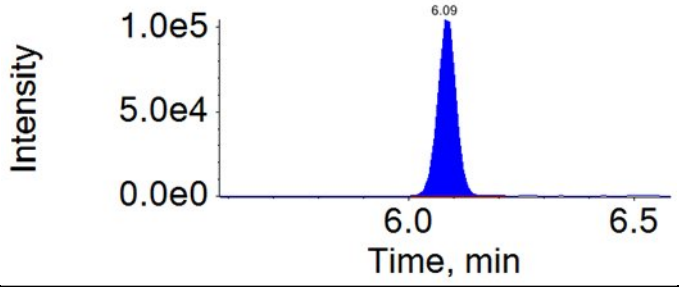


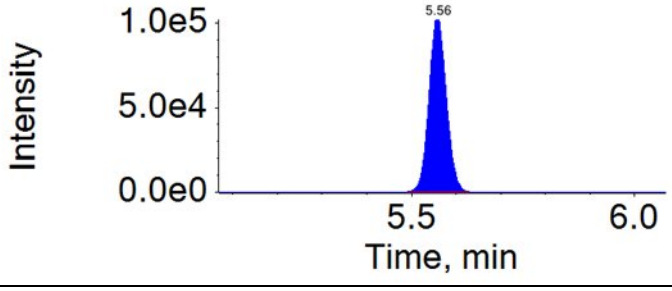
Extraction Standard: E13C2-PFDoDA	Injection Standard: 13C2-PFDA
615.0 / 570.0	515.0 / 470.0



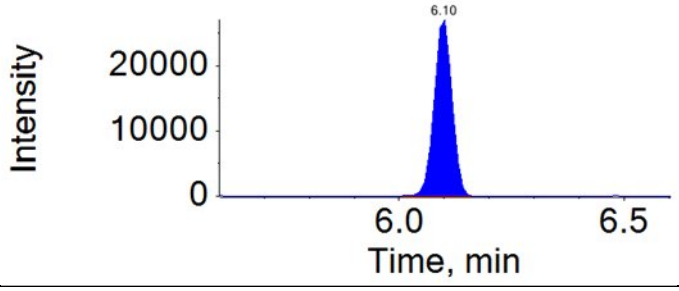


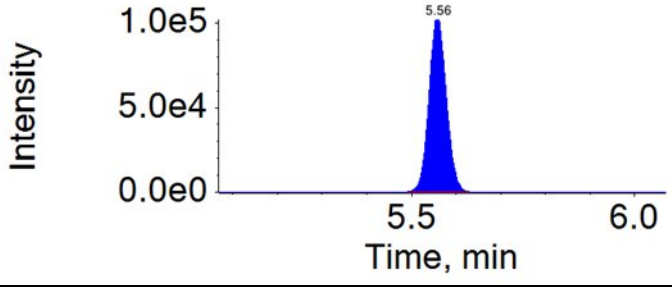
Extraction Standard: Ed7-NMePFOSAE	Injection Standard: 13C2-PFDA
623.0 / 59.0	515.0 / 470.0





Extraction Standard: Ed3-NMePFOSA	Injection Standard: 13C2-PFDA
515.0 / 169.0	515.0 / 470.0

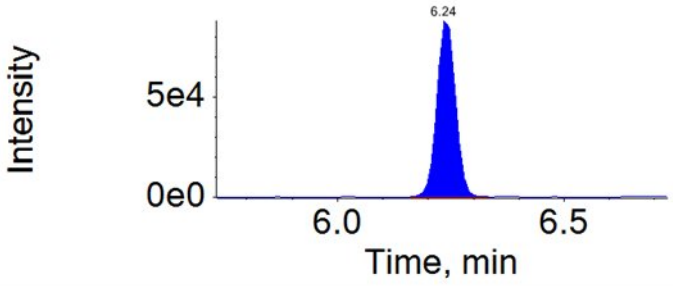
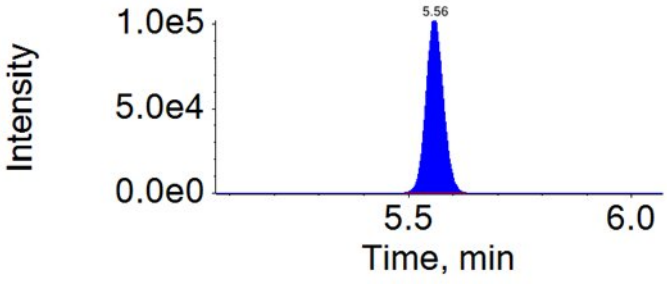


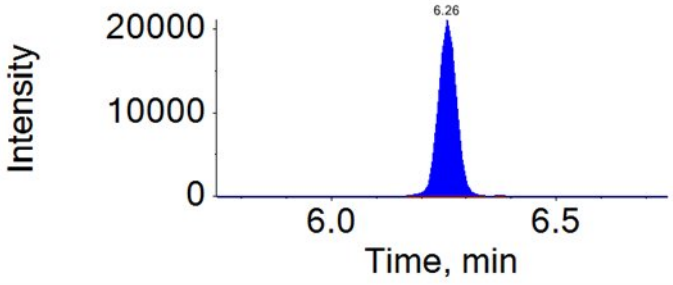
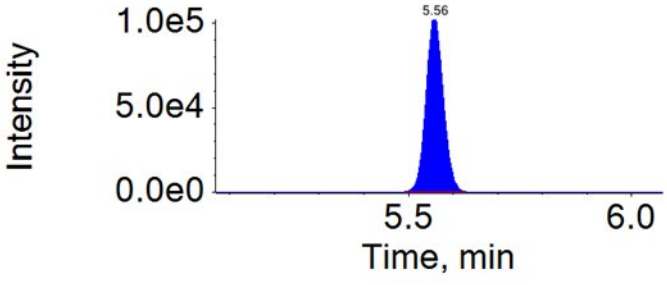


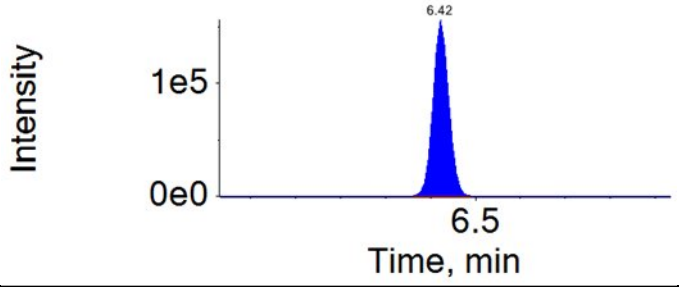
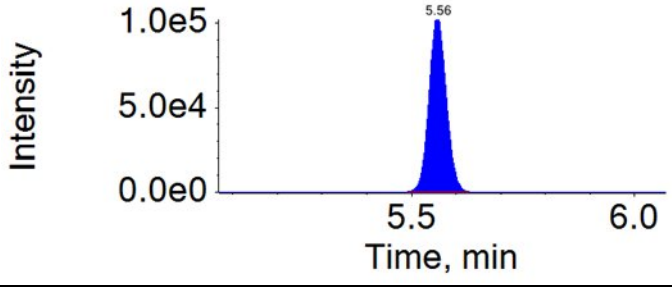
APPROVED
By MCD at 6:34 pm, 11/12/18

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: 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
	

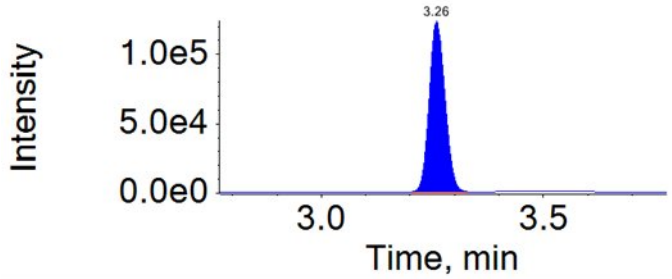
Extraction Standard: E13C2-PFTeDA	Injection Standard: 13C2-PFDA
715.0 / 670.0	515.0 / 470.0
	

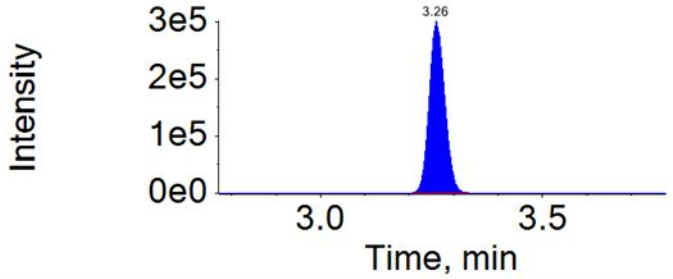
APPROVED
By MCD at 6:34 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

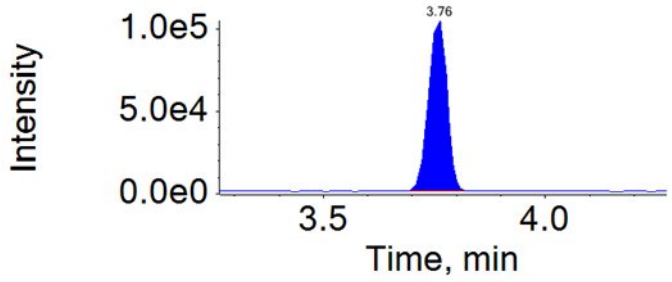
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

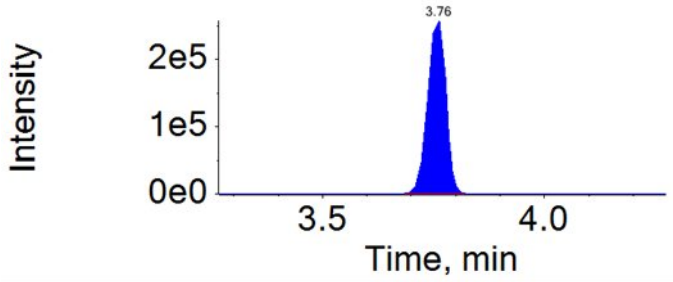
Analyte: PFBA	Extraction Standard: 13C4-PFBA
213.0 / 169.0	217.0 / 172.0



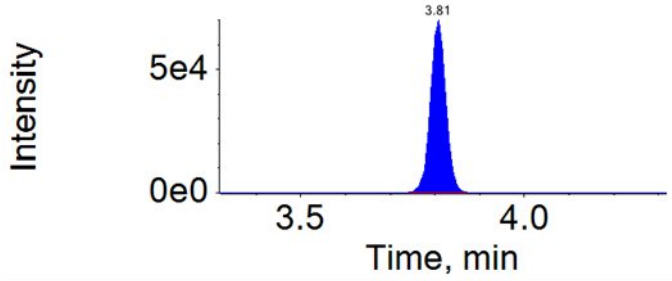


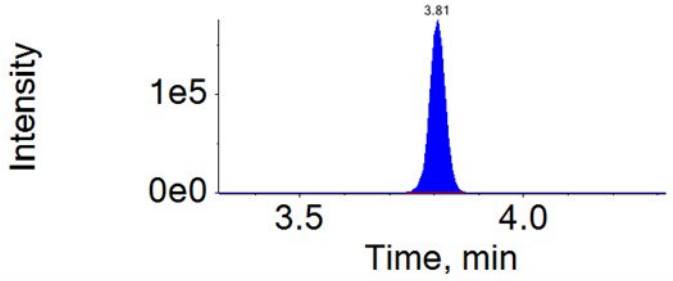
Analyte: PFPeA	Extraction Standard: 13C5-PFPeA
263.0 / 219.0	268.0 / 223.0



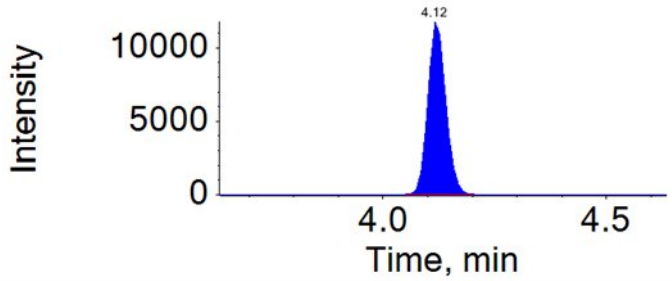


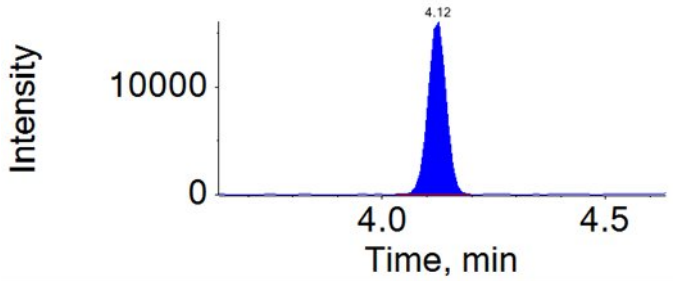
Analyte: PFBS	Extraction Standard: 13C3-PFBS
299.0 / 80.0	302.0 / 80.0





Analyte: 4:2-FTS	Extraction Standard: 13C2-4:2-FTS
327.0 / 307.0	329.0 / 81.0



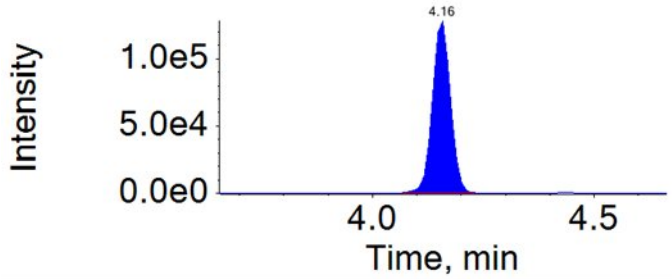


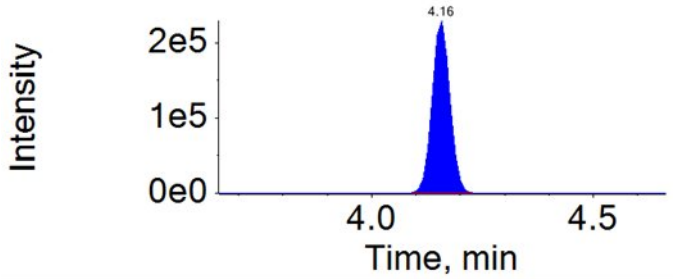
APPROVED
By MCD at 6:34 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

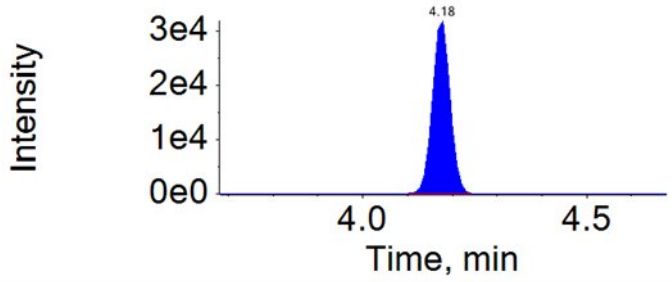
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

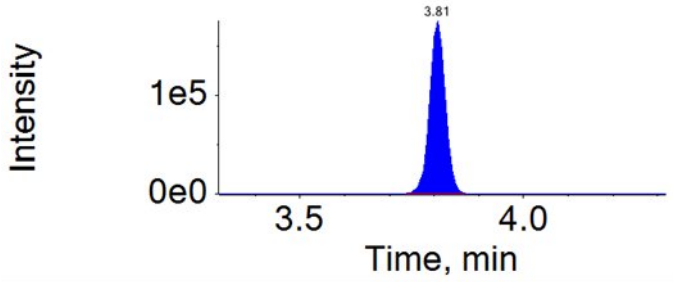
Analyte: PFHxA	Extraction Standard: 13C5-PFHxA
313.0 / 269.0	318.0 / 273.0



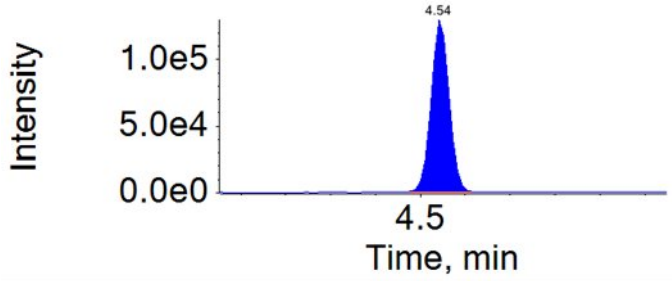


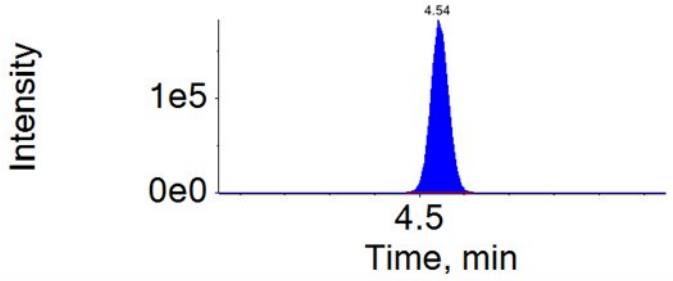
Analyte: PFPeS	Extraction Standard: 13C3-PFBS
349.0 / 80.0	302.0 / 80.0



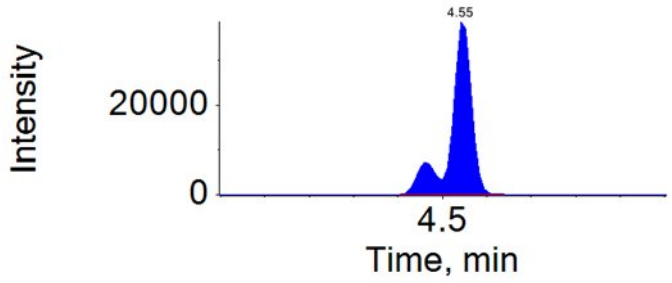


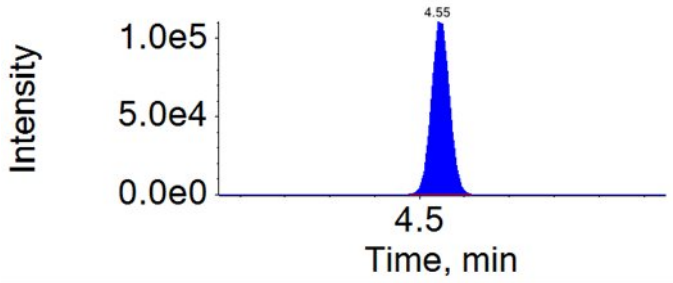
Analyte: PFHpA	Extraction Standard: 13C4-PFHpA
363.0 / 319.0	367.0 / 322.0





Analyte: PFHxS	Extraction Standard: 13C3-PFHxS
399.0 / 80.0	402.0 / 80.0



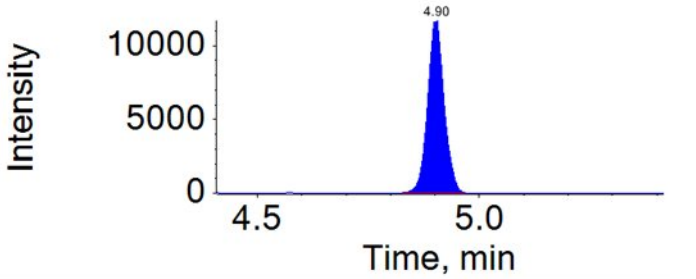


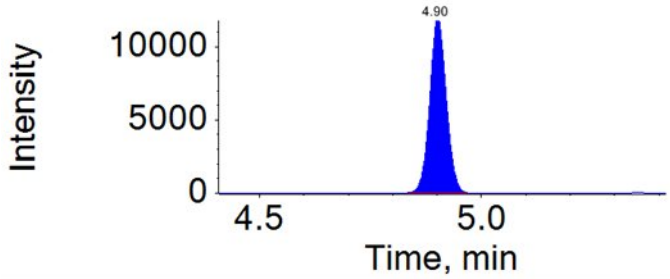
APPROVED
By MCD at 6:34 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

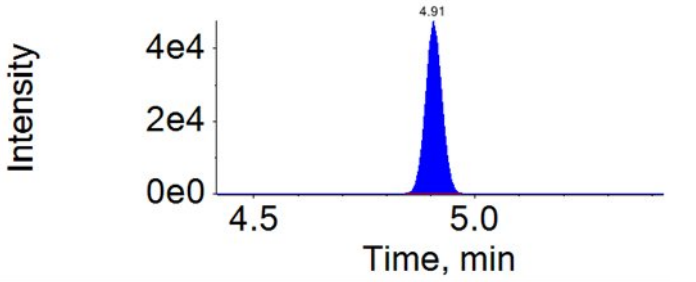
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

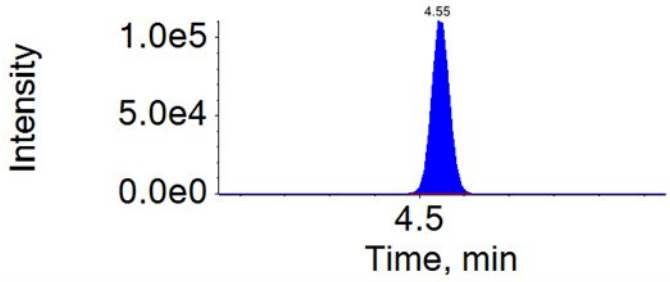
Analyte: 6:2-FTS	Extraction Standard: 13C2-6:2-FTS
427.0 / 407.0	429.0 / 81.0



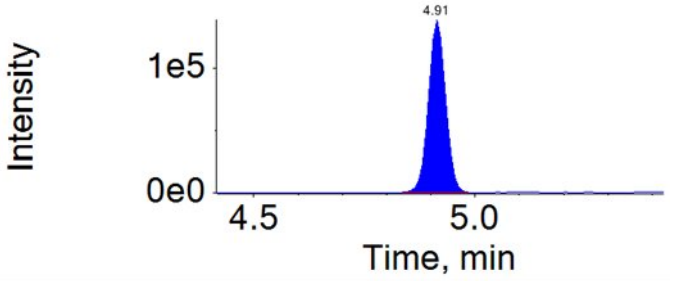


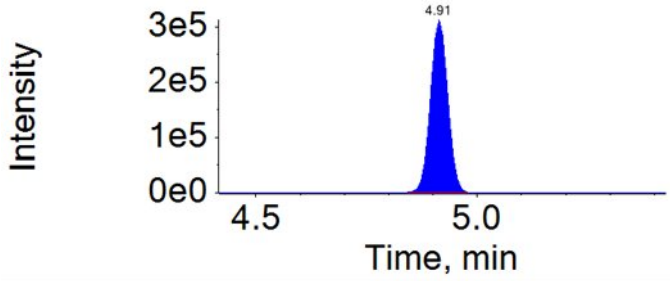
Analyte: PFHpS	Extraction Standard: 13C3-PFHxS
449.0 / 80.0	402.0 / 80.0



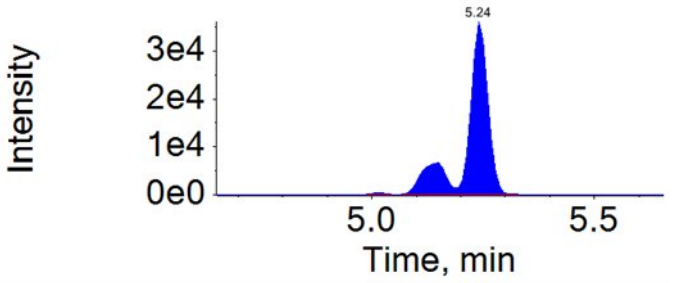


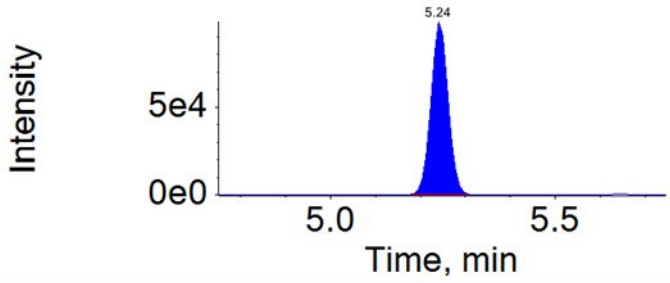
Analyte: PFOA	Extraction Standard: 13C8-PFOA
413.0 / 369.0	421.0 / 376.0





Analyte: PFOS	Extraction Standard: 13C8-PFOS
499.0 / 80.0	507.0 / 80.0



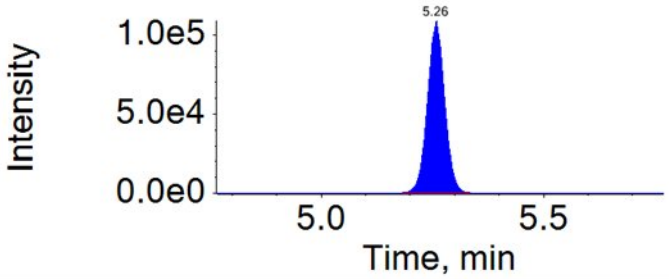


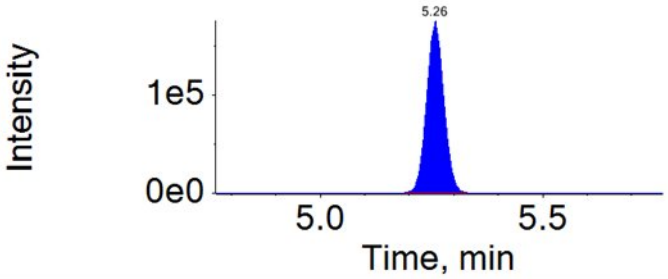
APPROVED
By MCD at 6:34 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

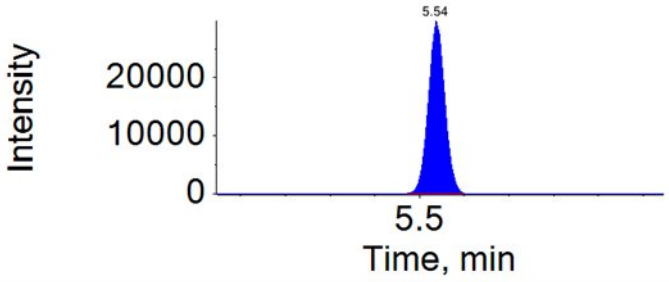
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

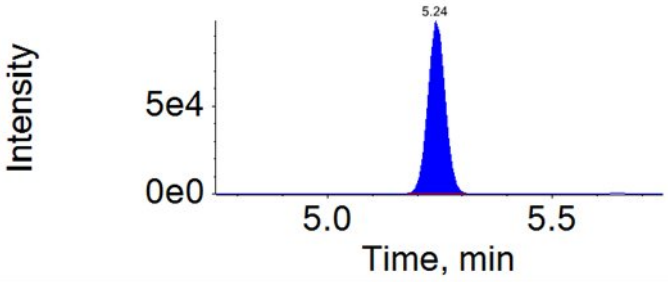
Analyte: PFNA	Extraction Standard: 13C9-PFNA
463.0 / 419.0	472.0 / 427.0



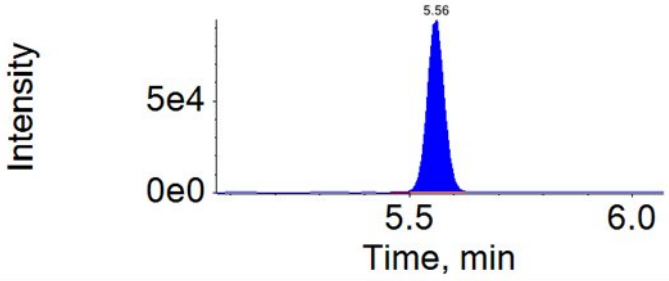


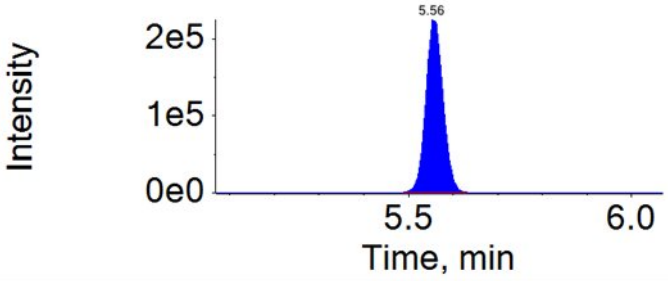
Analyte: PFNS	Extraction Standard: 13C8-PFOS
549.0 / 80.0	507.0 / 80.0



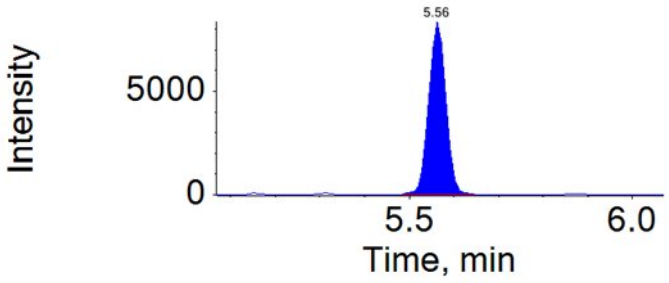


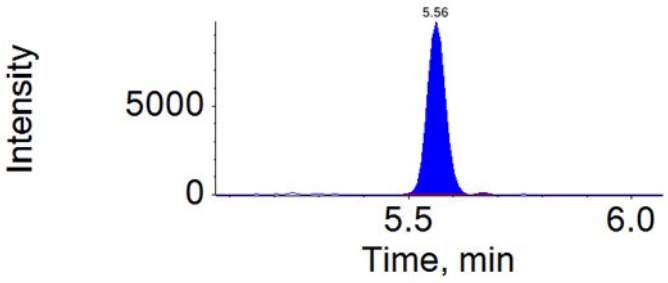
Analyte: PFDA	Extraction Standard: 13C6-PFDA
513.0 / 469.0	519.0 / 474.0





Analyte: 8:2-FTS	Extraction Standard: 13C2-8:2-FTS
527.0 / 507.0	529.0 / 81.0



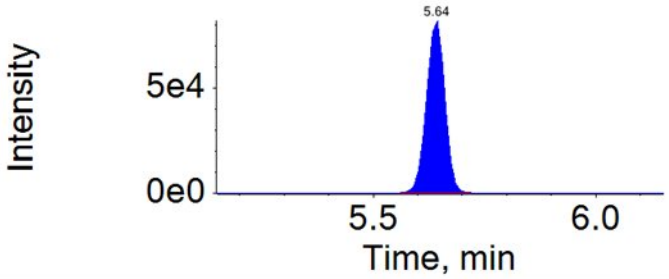


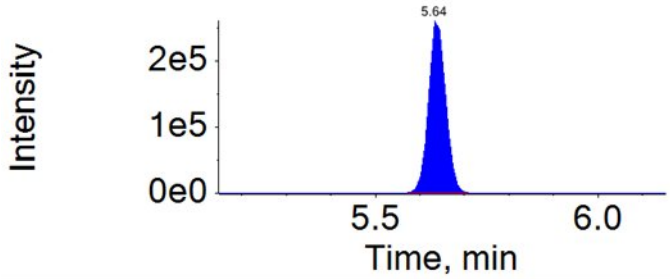
APPROVED
By MCD at 6:34 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

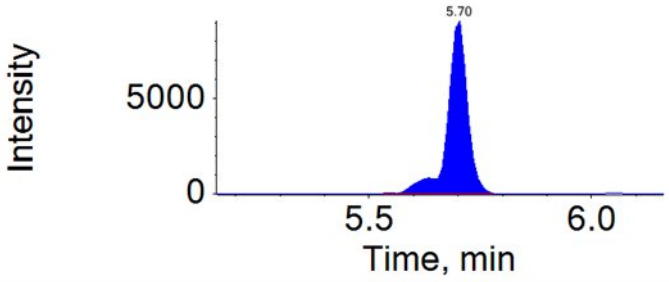
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

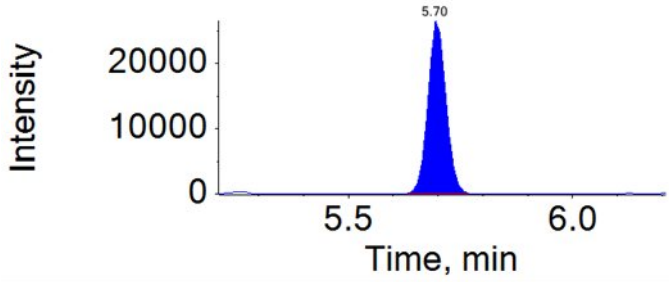
Analyte: PFOSA	Extraction Standard: 13C8-PFOSA
498.0 / 78.0	506.0 / 78.0



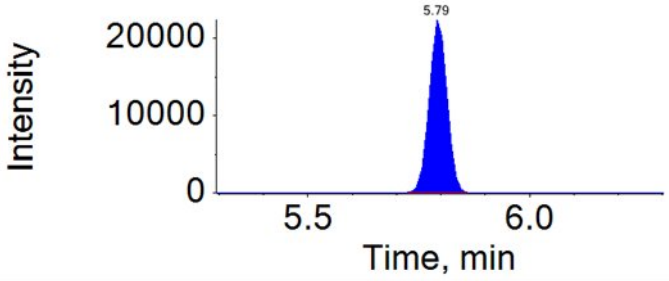


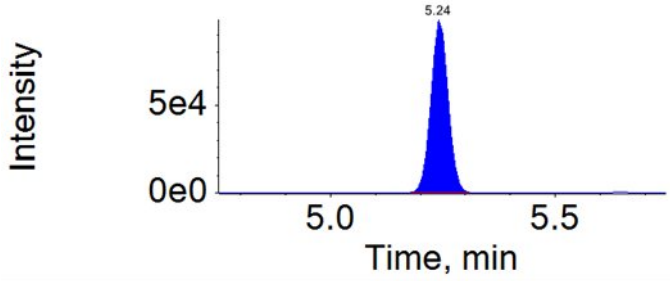
Analyte: NMeFOSAA	Extraction Standard: d3-NMeFOSAA
570.0 / 419.0	573.0 / 419.0



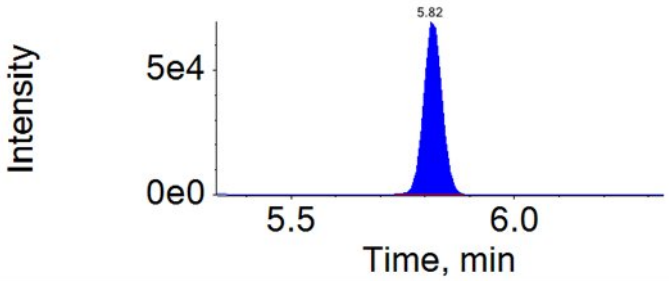


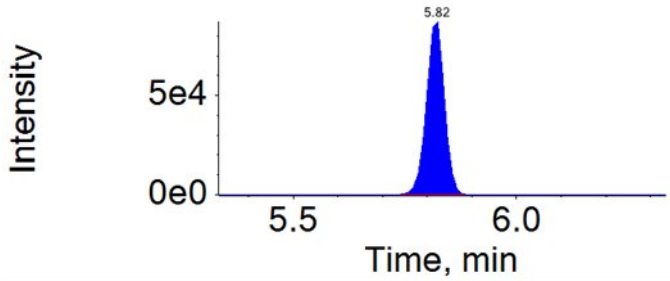
Analyte: PFDS	Extraction Standard: 13C8-PFOS
599.0 / 80.0	507.0 / 80.0





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



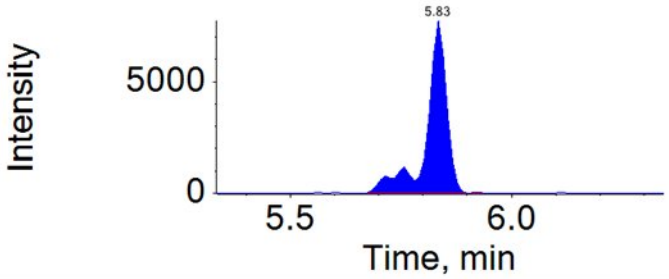


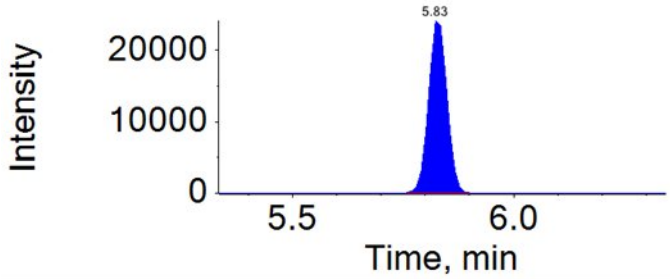
APPROVED
By MCD at 6:34 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

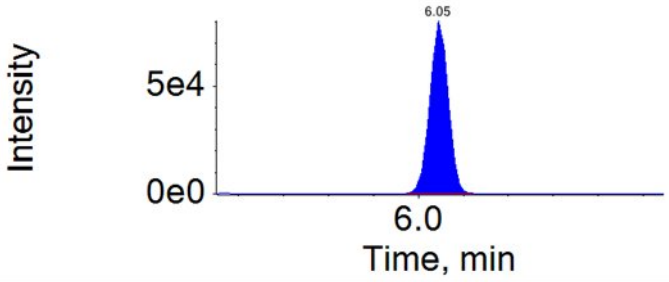
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

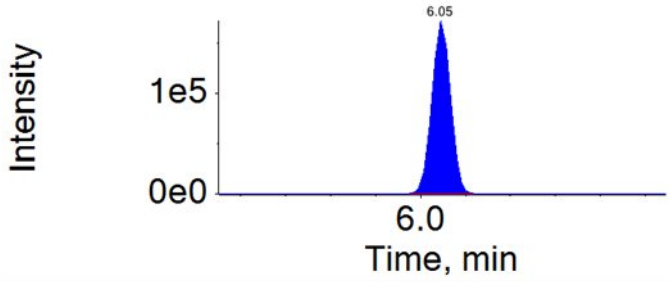
Analyte: NEtFOSAA	Extraction Standard: d5-NEtFOSAA
584.0 / 419.0	589.0 / 419.0



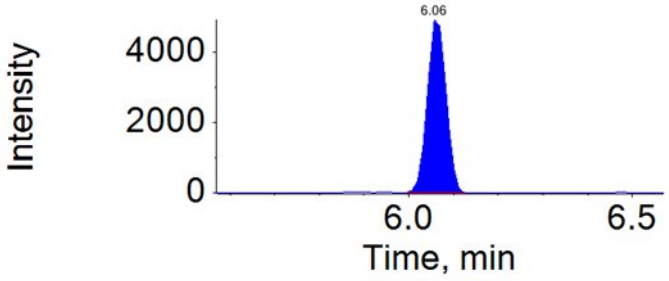


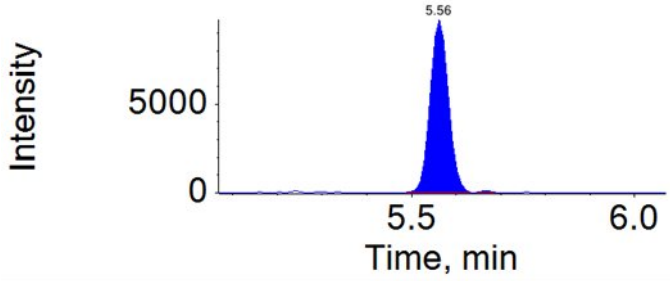
Analyte: PFDoDA	Extraction Standard: 13C2-PFDoDA
613.0 / 569.0	615.0 / 570.0



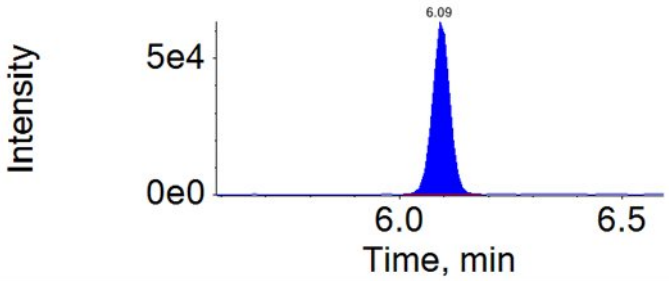


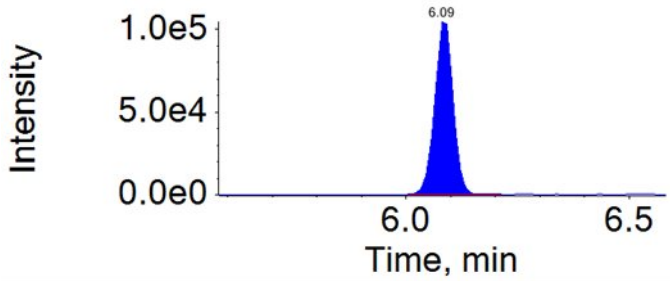
Analyte: 10:2-FTS	Extraction Standard: 13C2-8:2-FTS
627.0 / 607.0	529.0 / 81.0





Analyte: NMePFOSAE	Extraction Standard: d7-NMePFOSAE
616.0 / 59.0	623.0 / 59.0



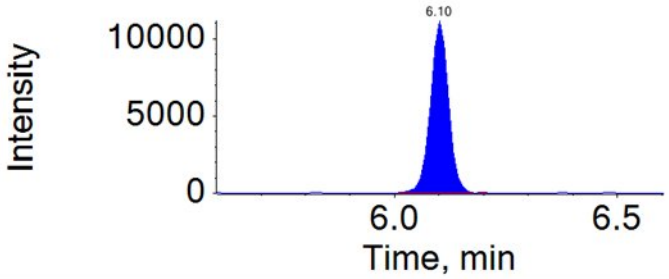


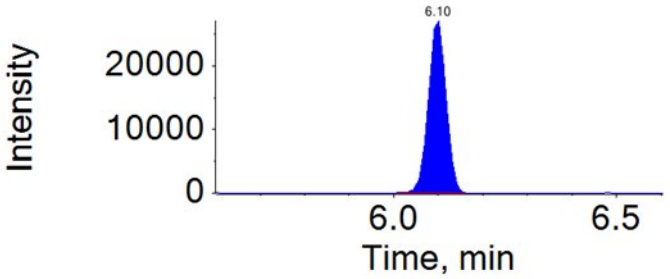
APPROVED
By MCD at 6:34 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

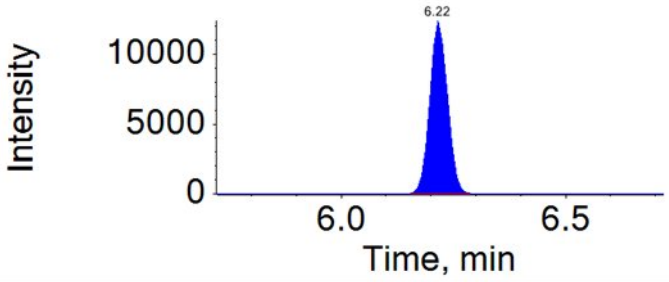
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

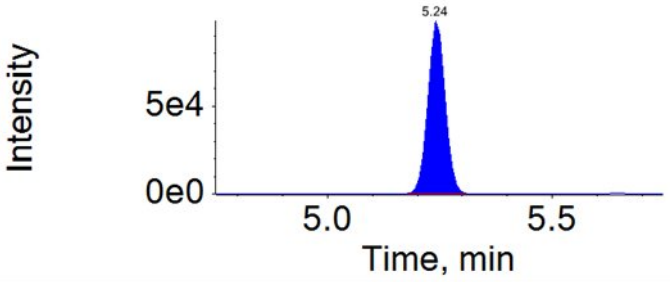
Analyte: NMePFOSA	Extraction Standard: d3-NMePFOSA
512.0 / 169.0	515.0 / 169.0



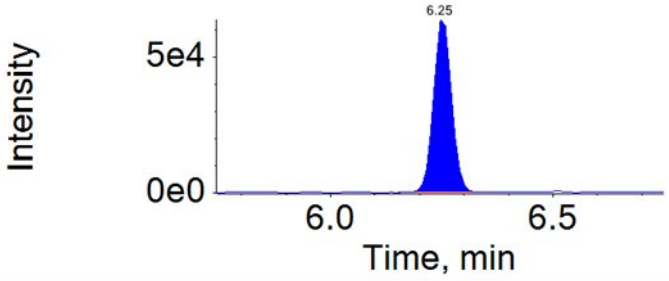


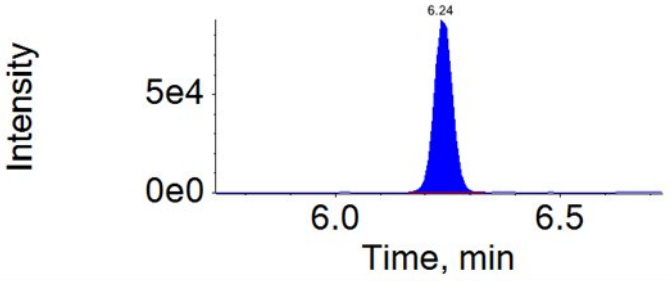
Analyte: PFDoS	Extraction Standard: 13C8-PFOS
699.0 / 80.0	507.0 / 80.0



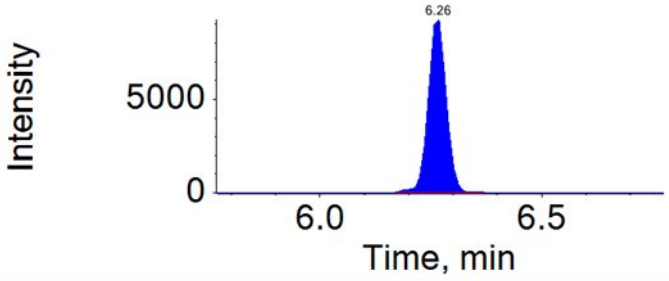


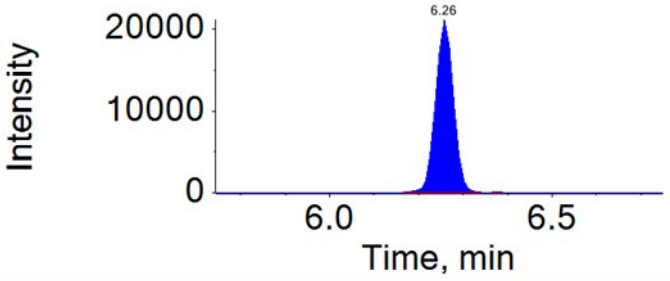
Analyte: NEtPFOSAE	Extraction Standard: d9-NEtPFOSAE
630.0 / 59.0	639.0 / 59.0





Analyte: NEtPFOSA	Extraction Standard: d5-NEtPFOSA
526.0 / 169.0	531.0 / 169.0



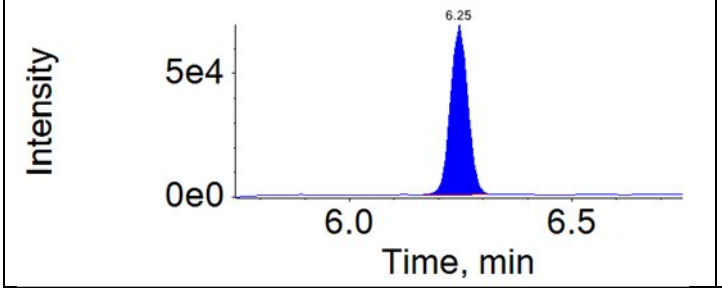


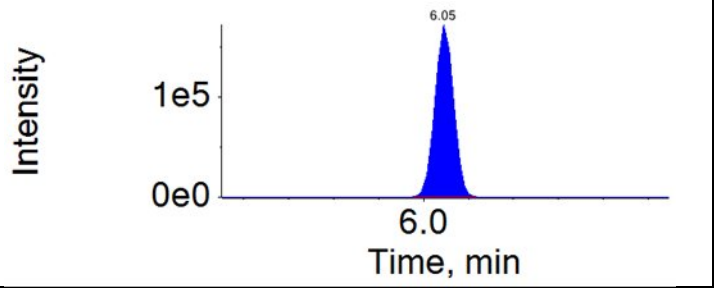
APPROVED
By MCD at 6:34 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

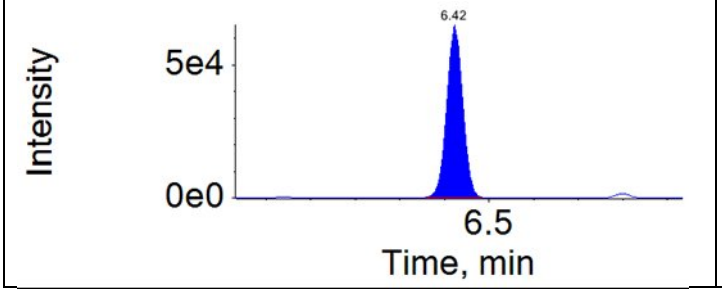
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV12DCAL 11/12/2018 6:14:07 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

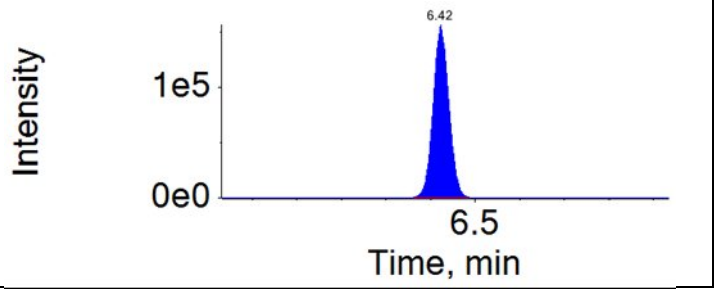
Analyte: PFTrDA	Extraction Standard: 13C2-PFDoDA
663.0 / 619.0	615.0 / 570.0



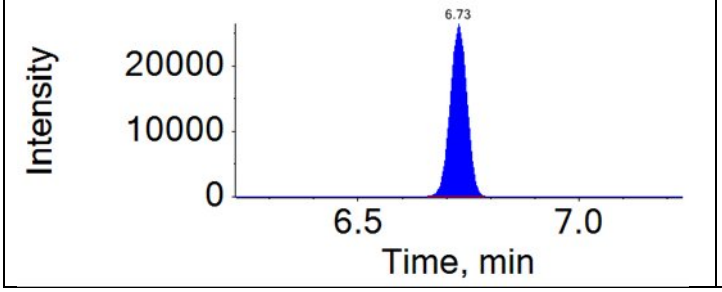


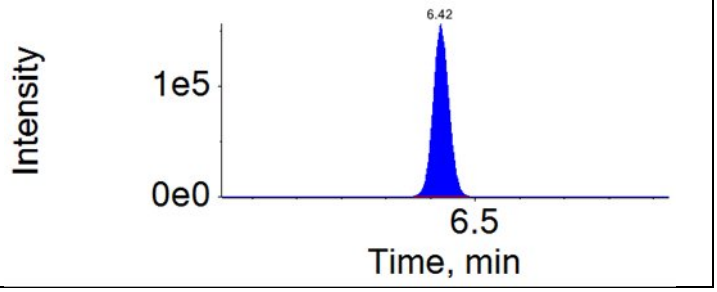
Analyte: PFTeDA	Extraction Standard: 13C2-PFTeDA
713.0 / 669.0	715.0 / 670.0



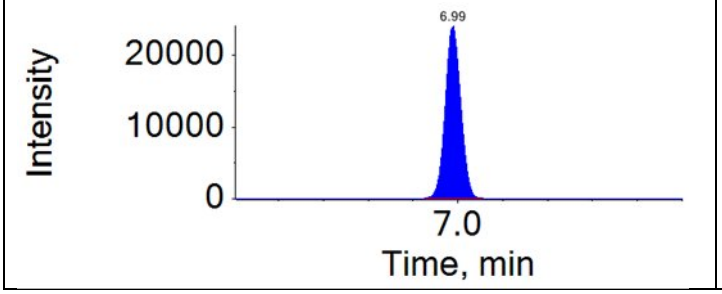


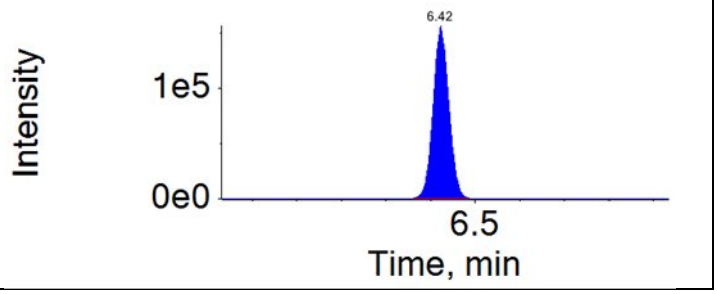
Analyte: PFHxDA	Extraction Standard: 13C2-PFTeDA
813.0 / 769.0	715.0 / 670.0





Analyte: PFODA	Extraction Standard: 13C2-PFTeDA
913.0 / 869.0	715.0 / 670.0



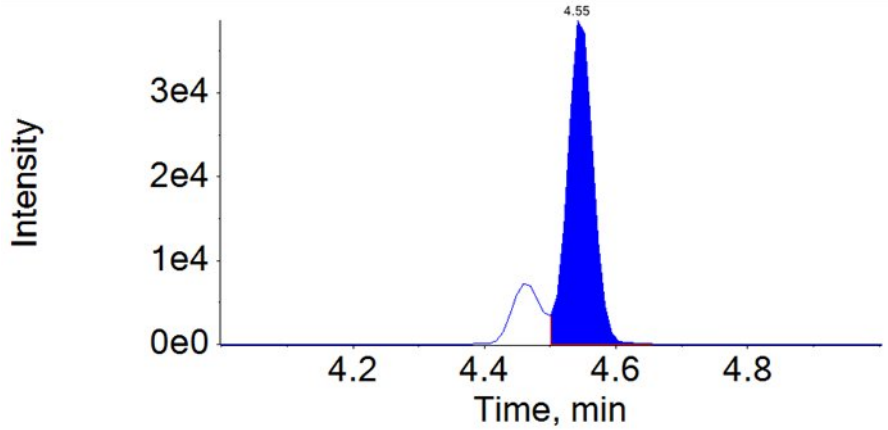


APPROVED
By MCD at 6:34 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

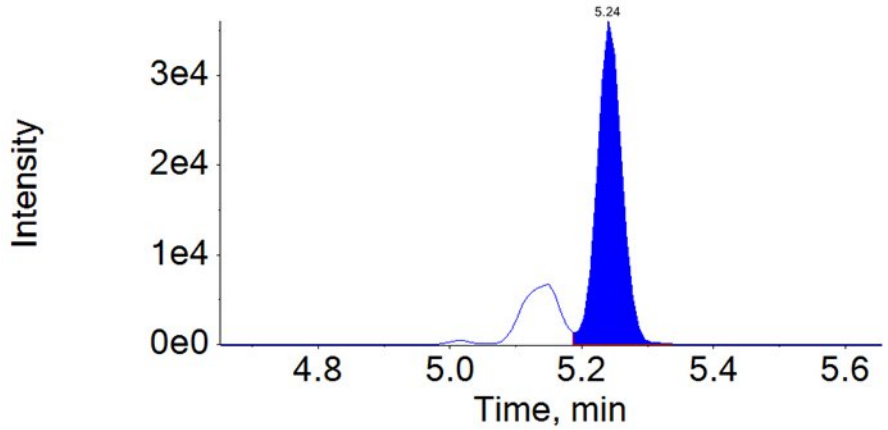
Results Table Name: 18NOV12DCAL
Results Table Date: 11/12/2018 6:23:42 PM
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

Component Name:
PFHxS
RT (min.):
4.55
Peak Area:
105576.75
Mass Range:
399.0 / 80.0
File Name:
18NOV12DCAL-52.wiff
Sample Name:
CCV1_CAL3



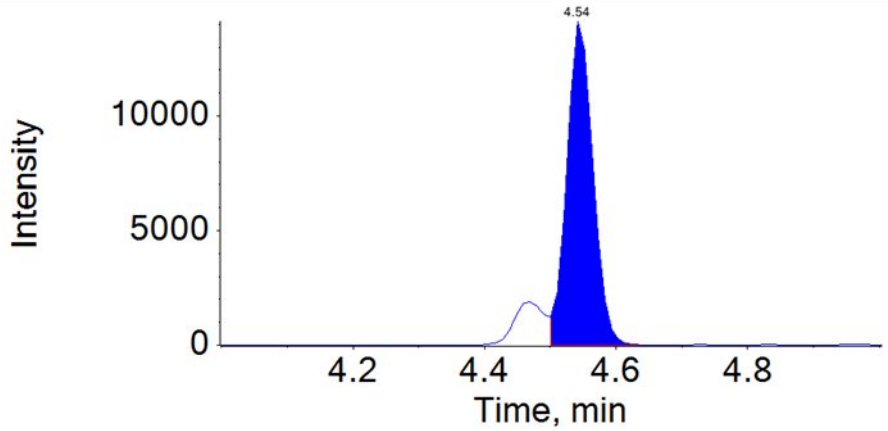
Integration Comment: incorrect integration

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



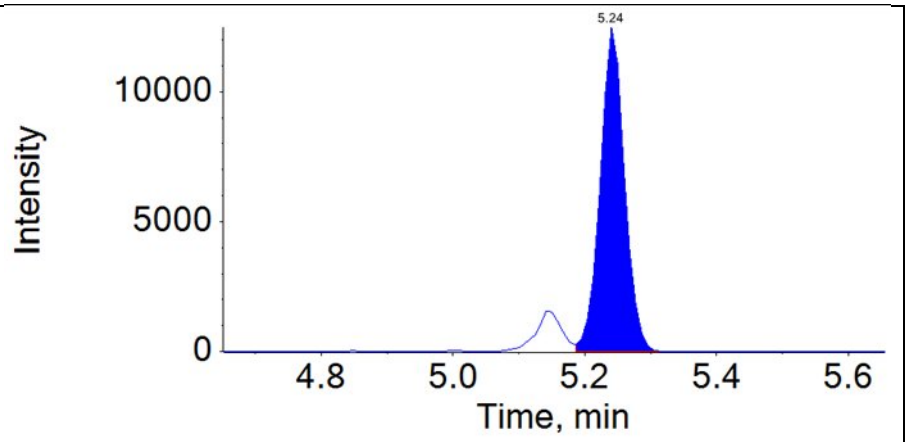
Integration Comment: incorrect integration

APPROVED
By MCD at 6:34 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

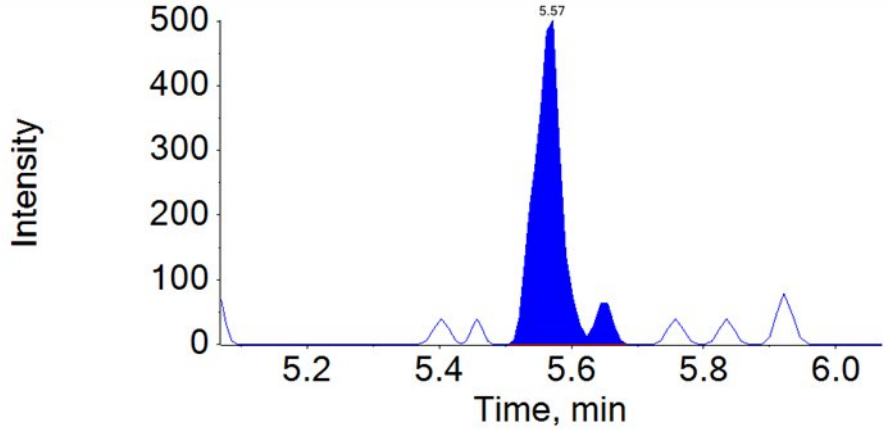
Results Table Name: 18NOV12DCAL
Results Table Date: 11/12/2018 6:23:42 PM
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

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



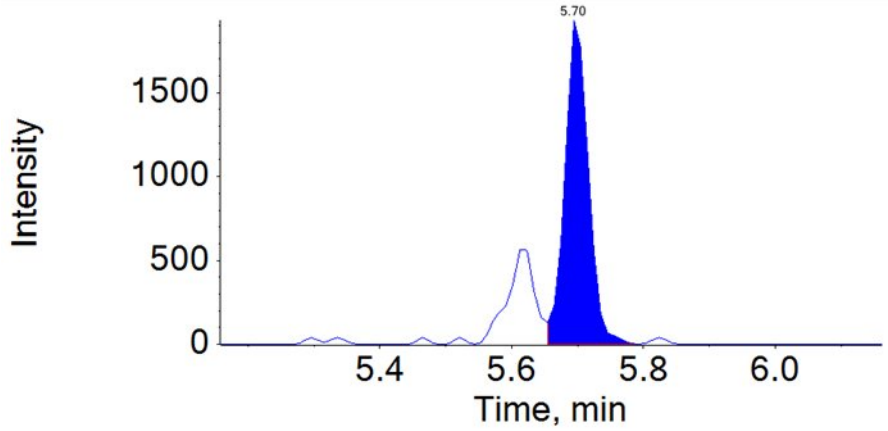
Integration Comment: incorrect integration

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

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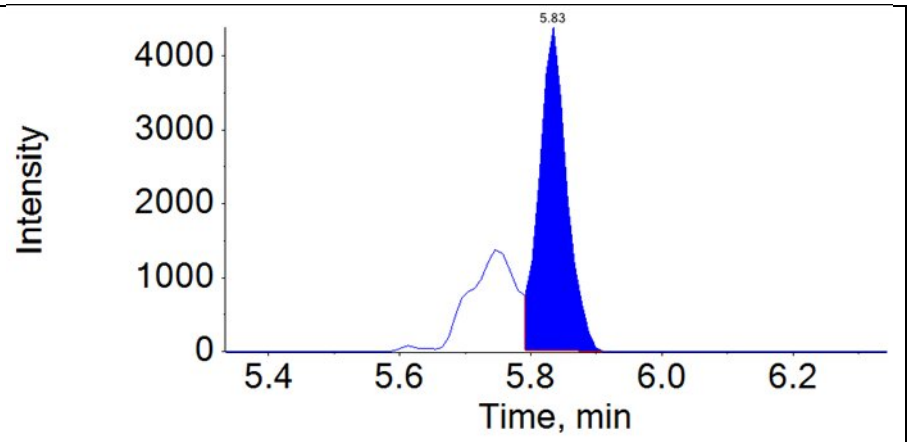
By HMK at 10:53 am, 11/13/18

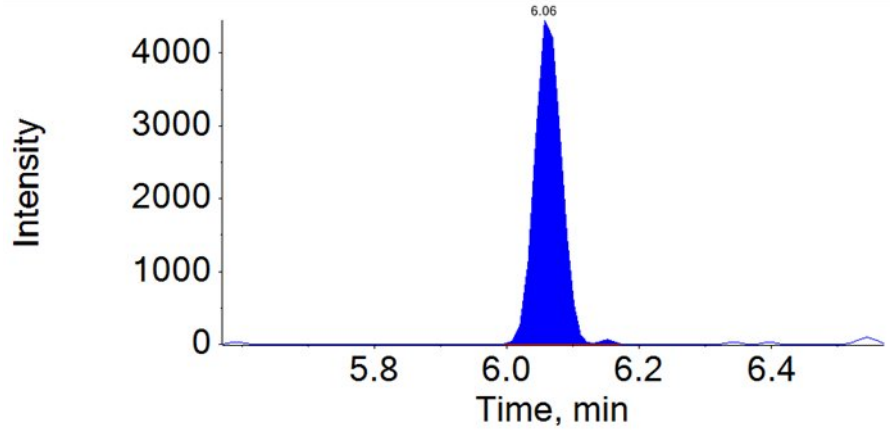
Results Table Name: 18NOV12DCAL
Results Table Date: 11/12/2018 6:23:42 PM
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

Component Name:
NEtFOSAA_2
RT (min.):
5.83
Peak Area:
12735.31
Mass Range:
584.0 / 526.0
File Name:
18NOV12DCAL-52.wiff
Sample Name:
CCV1_CAL3



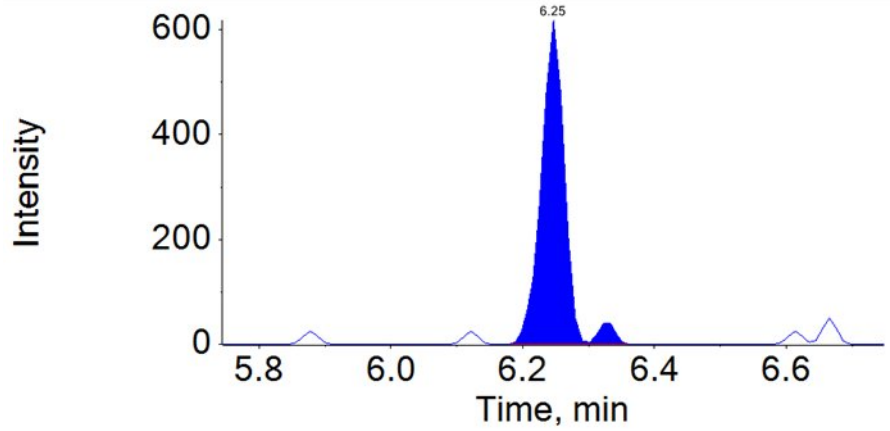
Integration Comment: incorrect integration

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

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

Ion Ratio Report

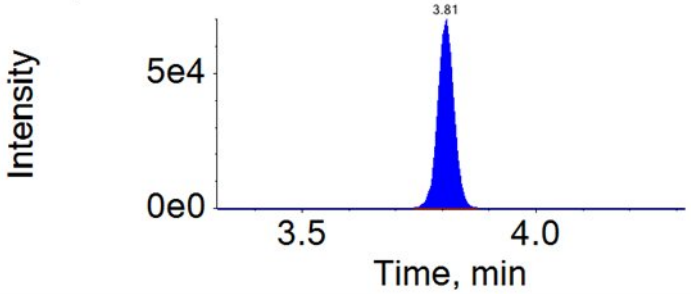
Sample Name: CCV1_CAL3 **Instrument Name:** LM27631 **File Name:** 18NOV12DCAL-52.wiff

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	

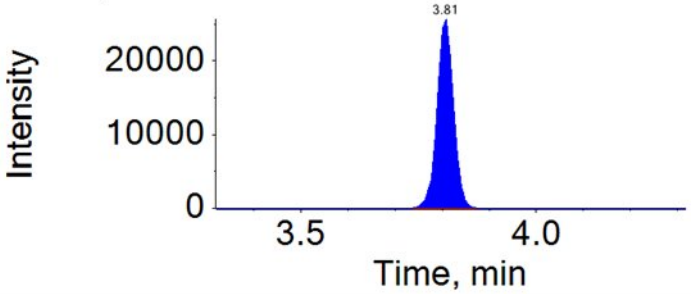
APPROVED
By MCD at 6:34 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

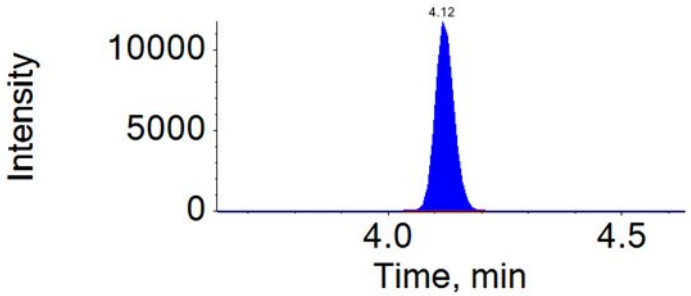
Component: PFBS
Primary Mass: 299.0 / 80.0



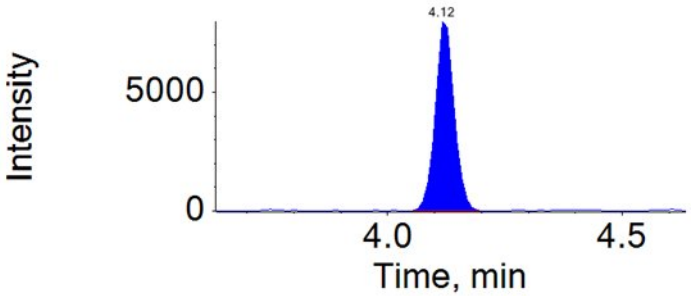
Component: PFBS_2
Secondary Mass: 299.0 / 99.0



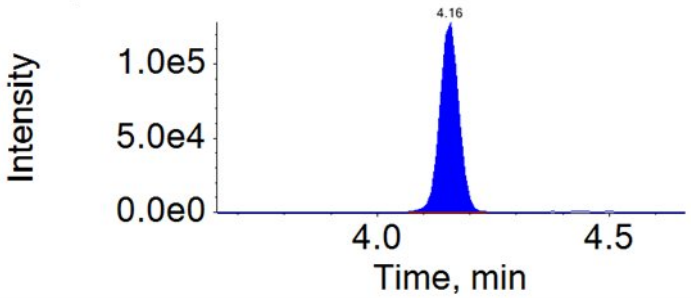
Component: 4:2-FTS
Primary Mass: 327.0 / 307.0



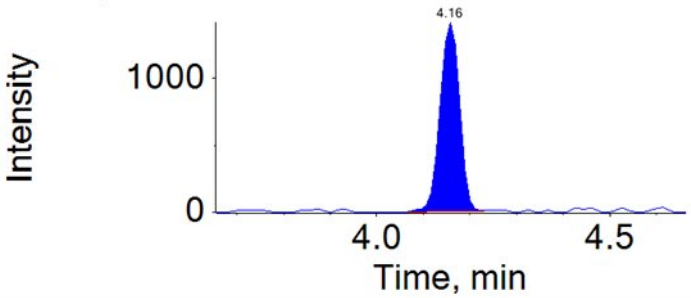
Component: 4:2 FTS_2
Secondary Mass: 327.0 / 81.0



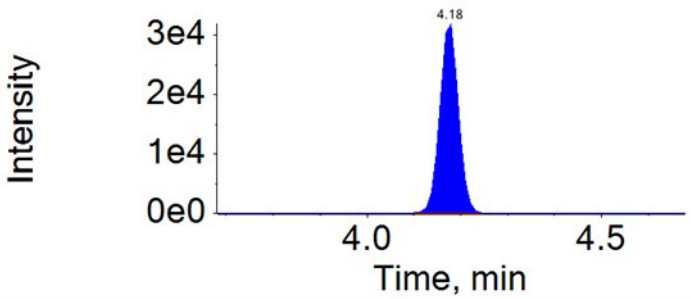
Component: PFHxA
Primary Mass: 313.0 / 269.0



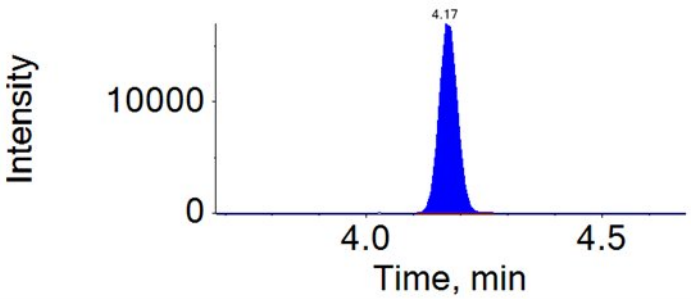
Component: PFHxA_2
Secondary Mass: 313.0 / 119.0



Component: PFPeS
Primary Mass: 349.0 / 80.0



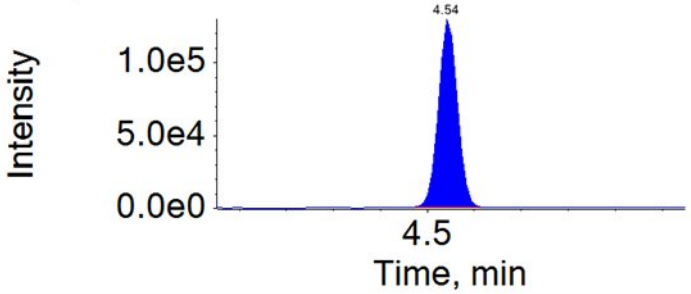
Component: PFPeS_2
Secondary Mass: 349.0 / 99.0



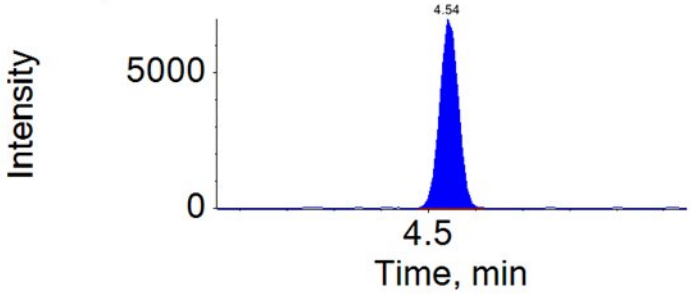
APPROVED
By MCD at 6:34 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

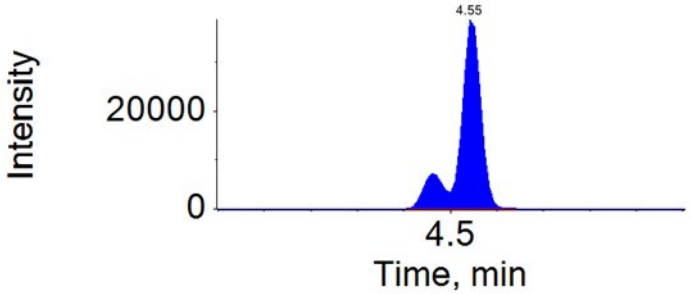
Component: PFHpA
Primary Mass: 363.0 / 319.0



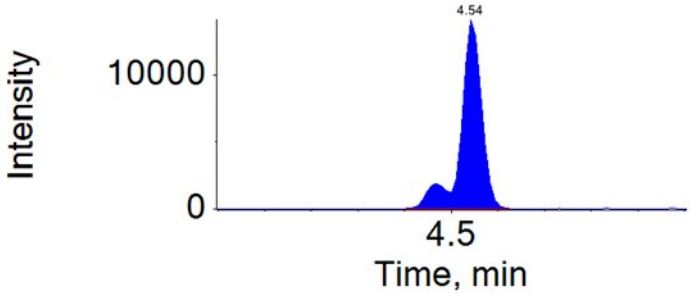
Component: PFHpA_2
Secondary Mass: 363.0 / 169.0



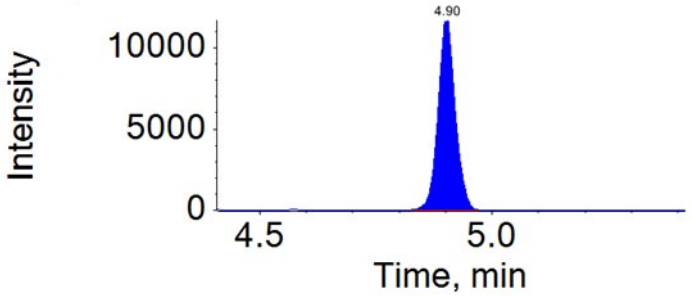
Component: PFHxS
Primary Mass: 399.0 / 80.0



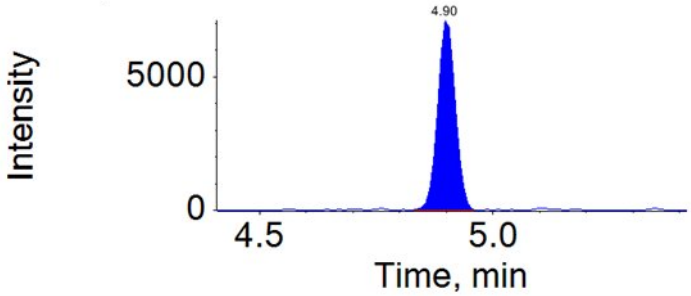
Component: PFHxS_2
Secondary Mass: 399.0 / 99.0



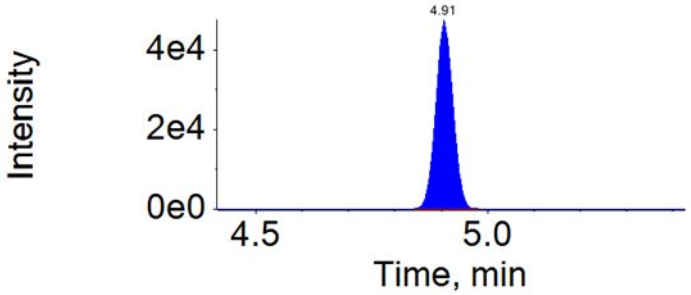
Component: 6:2-FTS
Primary Mass: 427.0 / 407.0



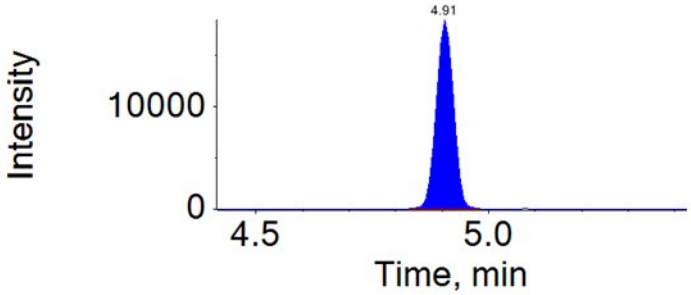
Component: 6:2 FTS_2
Secondary Mass: 427.0 / 81.0



Component: PFHpS
Primary Mass: 449.0 / 80.0



Component: PFHpS_2
Secondary Mass: 449.0 / 99.0



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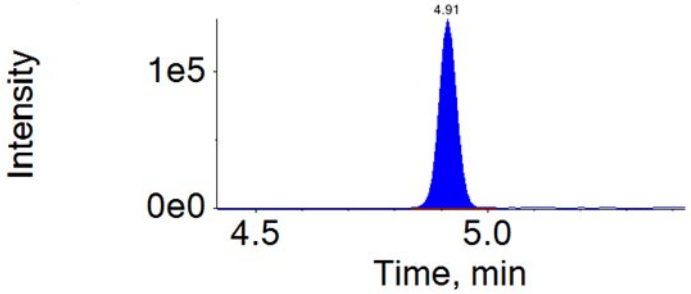
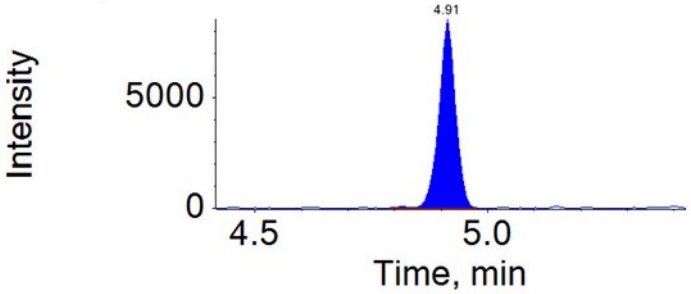
By MCD at 6:34 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

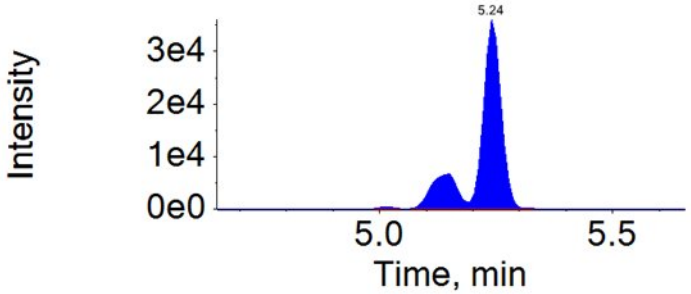
Component: PFOA
Primary Mass: 413.0 / 369.0



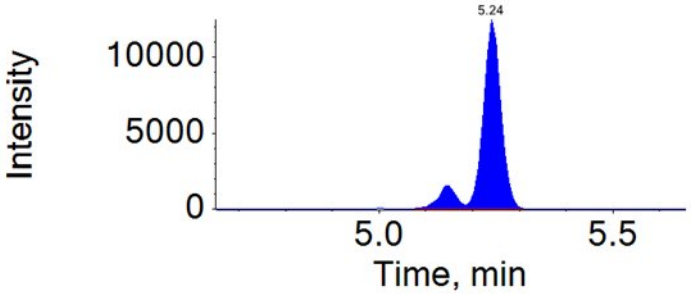
Component: PFOA_2
Secondary Mass: 413.0 / 169.0



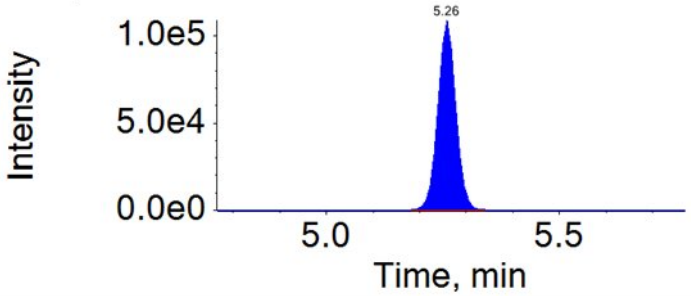
Component: PFOS
Primary Mass: 499.0 / 80.0



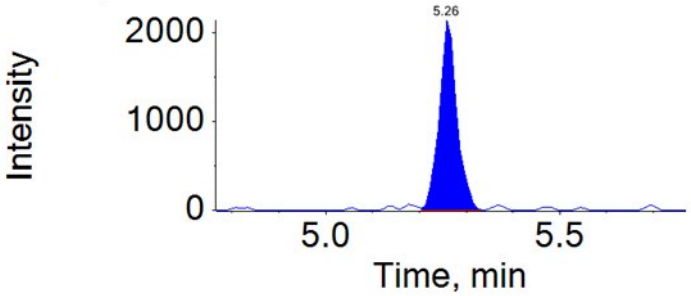
Component: PFOS_2
Secondary Mass: 499.0 / 99.0



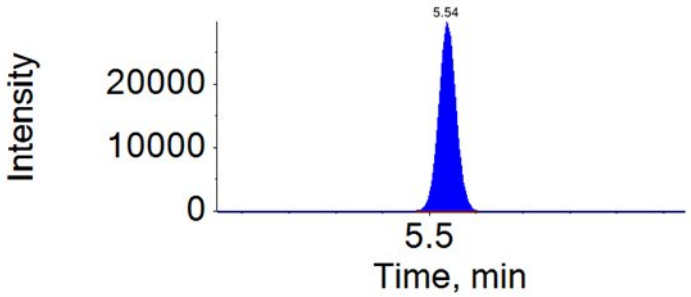
Component: PFNA
Primary Mass: 463.0 / 419.0



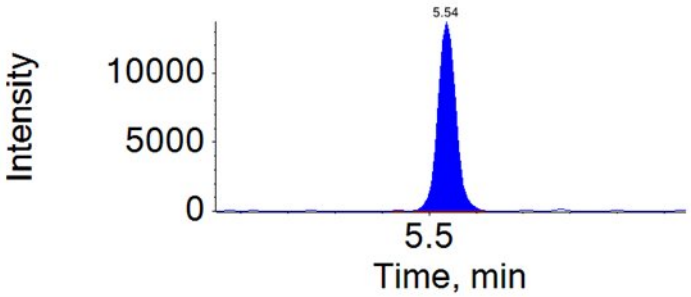
Component: PFNA_2
Secondary Mass: 463.0 / 169.0



Component: PFNS
Primary Mass: 549.0 / 80.0



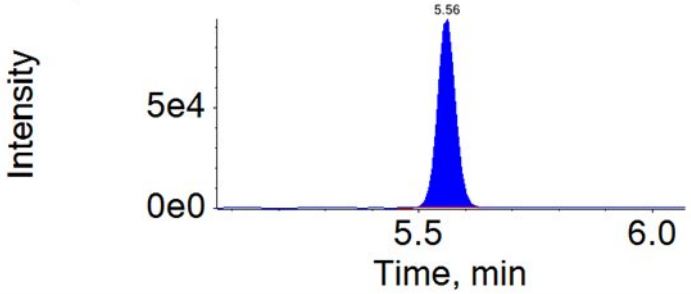
Component: PFNS_2
Secondary Mass: 549.0 / 99.0



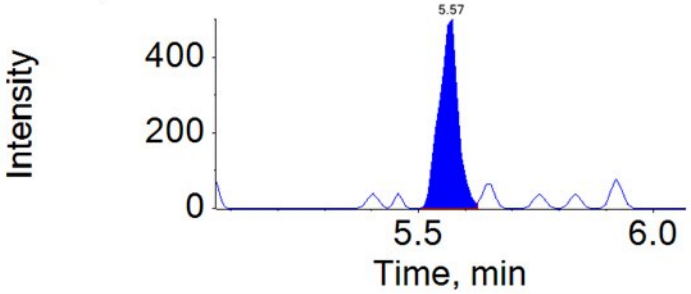
APPROVED
By MCD at 6:34 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

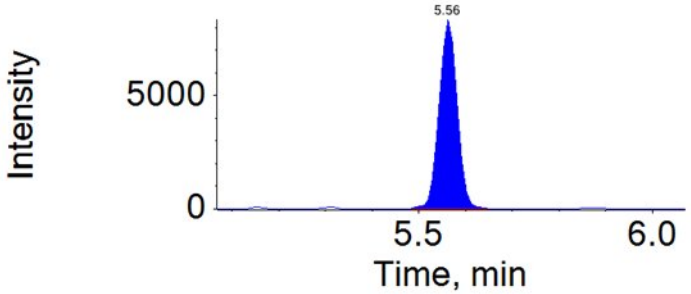
Component: PFDA
Primary Mass: 513.0 / 469.0



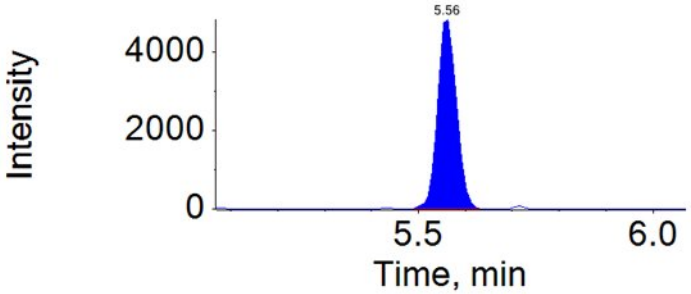
Component: PFDA_2
Secondary Mass: 513.0 / 169.0



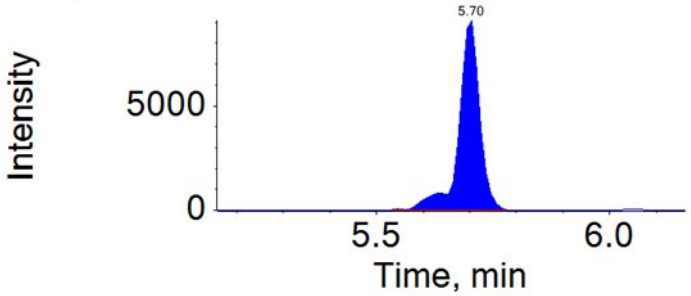
Component: 8:2-FTS
Primary Mass: 527.0 / 507.0



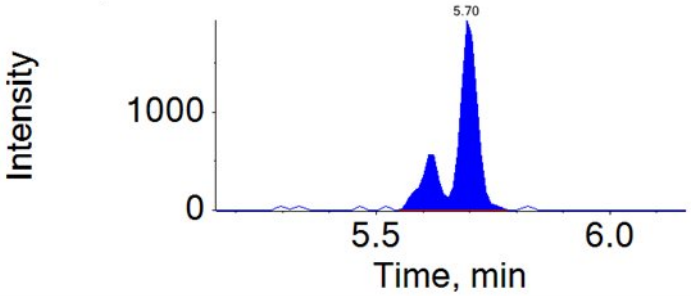
Component: 8:2 FTS_2
Secondary Mass: 527.0 / 81.0



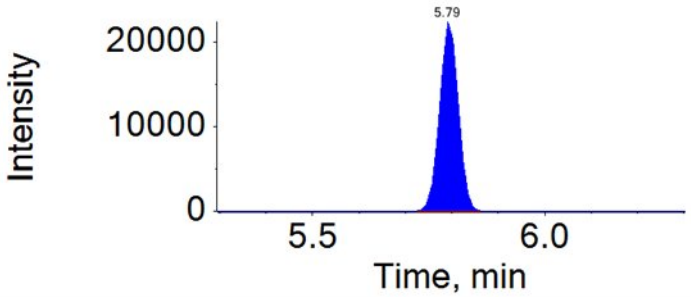
Component: NMeFOSAA
Primary Mass: 570.0 / 419.0



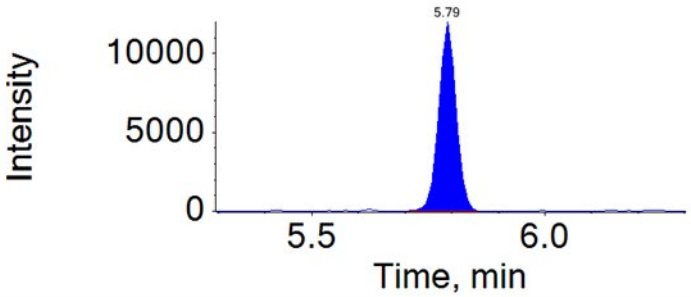
Component: NMeFOSAA_2
Secondary Mass: 570.0 / 483.0



Component: PFDS
Primary Mass: 599.0 / 80.0



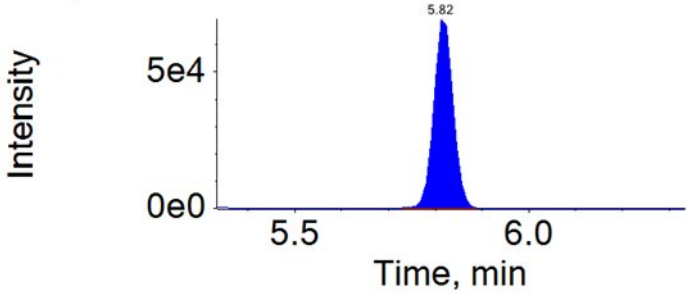
Component: PFDS_2
Secondary Mass: 599.0 / 99.0



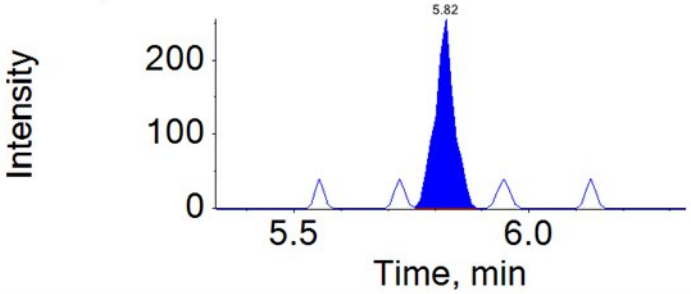
APPROVED
By MCD at 6:34 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

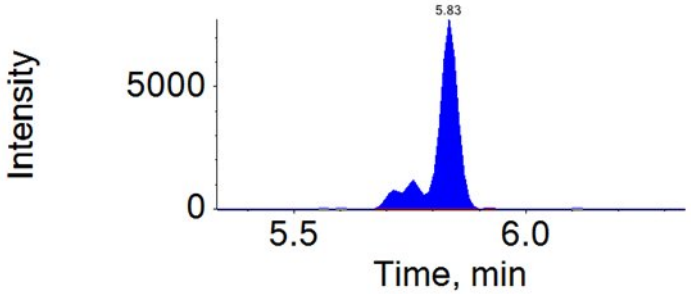
Component: PFUnDA
Primary Mass: 563.0 / 519.0



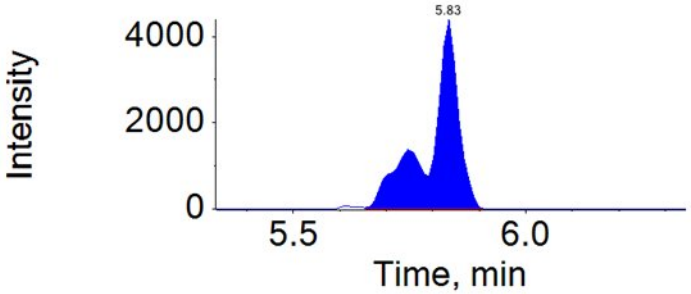
Component: PFUnDA_2
Secondary Mass: 563.0 / 169.0



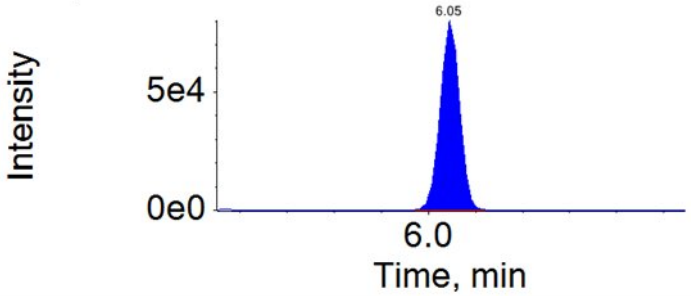
Component: NEtFOSAA
Primary Mass: 584.0 / 419.0



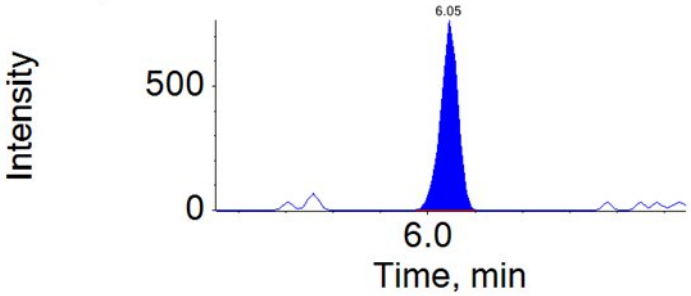
Component: NEtFOSAA_2
Secondary Mass: 584.0 / 526.0



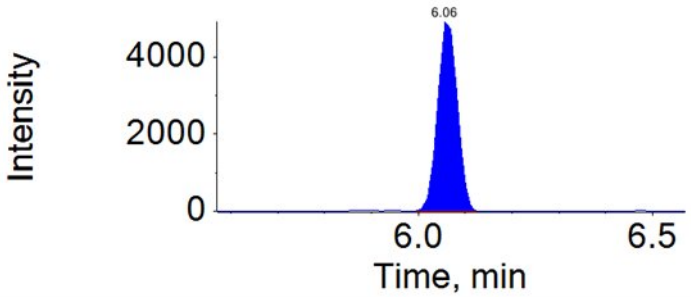
Component: PFDoDA
Primary Mass: 613.0 / 569.0



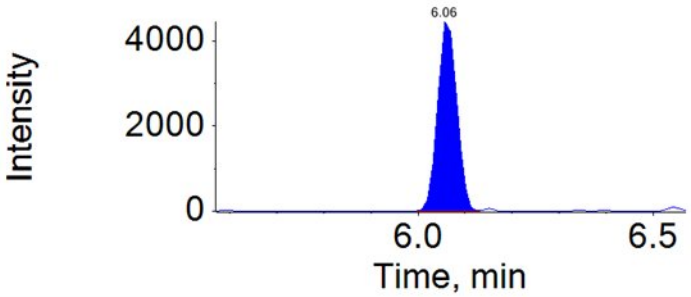
Component: PFDoDA_2
Secondary Mass: 613.0 / 169.0



Component: 10:2-FTS
Primary Mass: 627.0 / 607.0



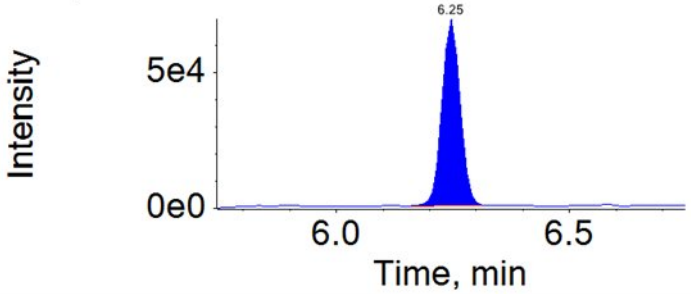
Component: 10:2 FTS_2
Secondary Mass: 627.0 / 81.0



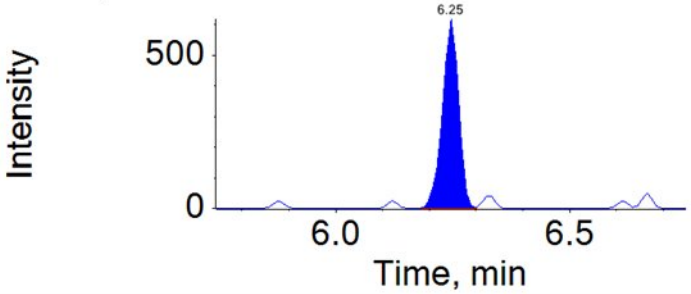
APPROVED
By MCD at 6:34 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

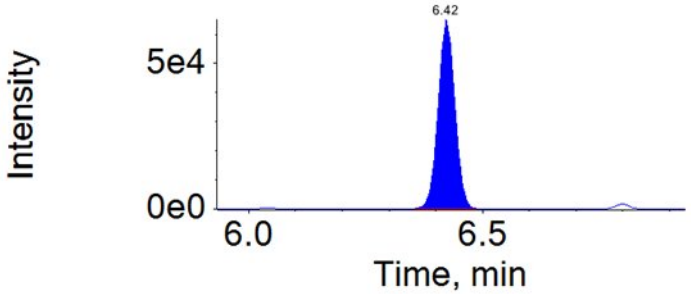
Component: PFTrDA
Primary Mass: 663.0 / 619.0



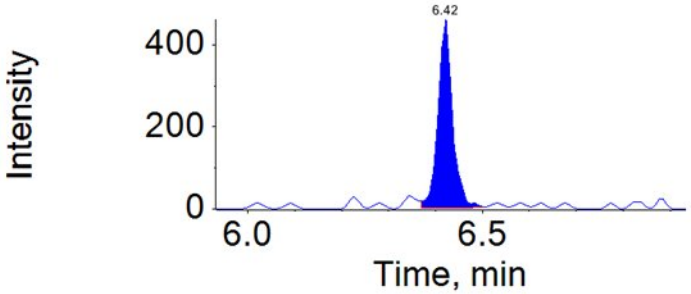
Component: PFTrDA_2
Secondary Mass: 663.0 / 169.0



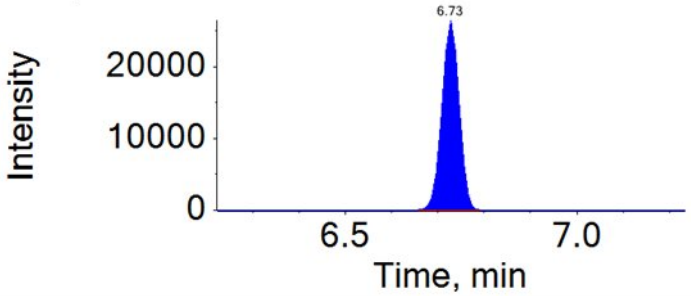
Component: PFTeDA
Primary Mass: 713.0 / 669.0



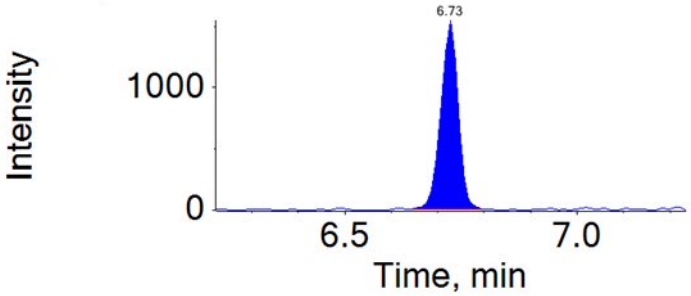
Component: PFTeDA_2
Secondary Mass: 713.0 / 169.0



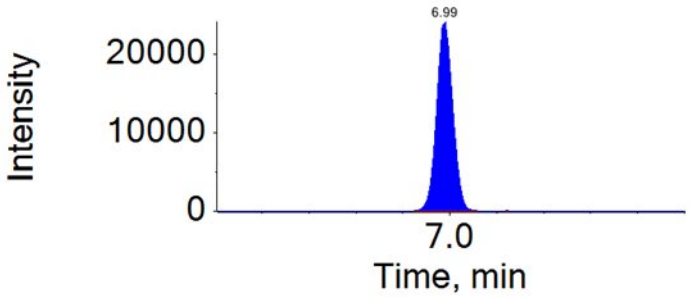
Component: PFHxDA
Primary Mass: 813.0 / 769.0



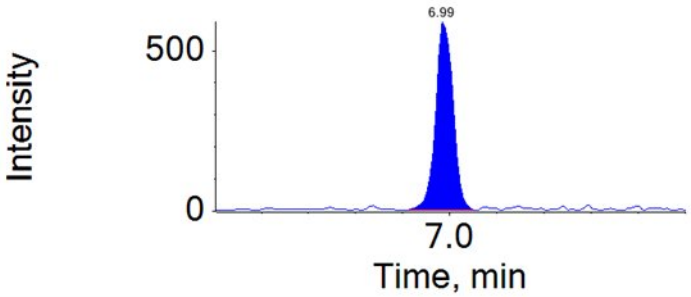
Component: PFHxDA_2
Secondary Mass: 813.0 / 169.0



Component: PFODA
Primary Mass: 913.0 / 869.0



Component: PFODA_2
Secondary Mass: 913.0 / 169.0



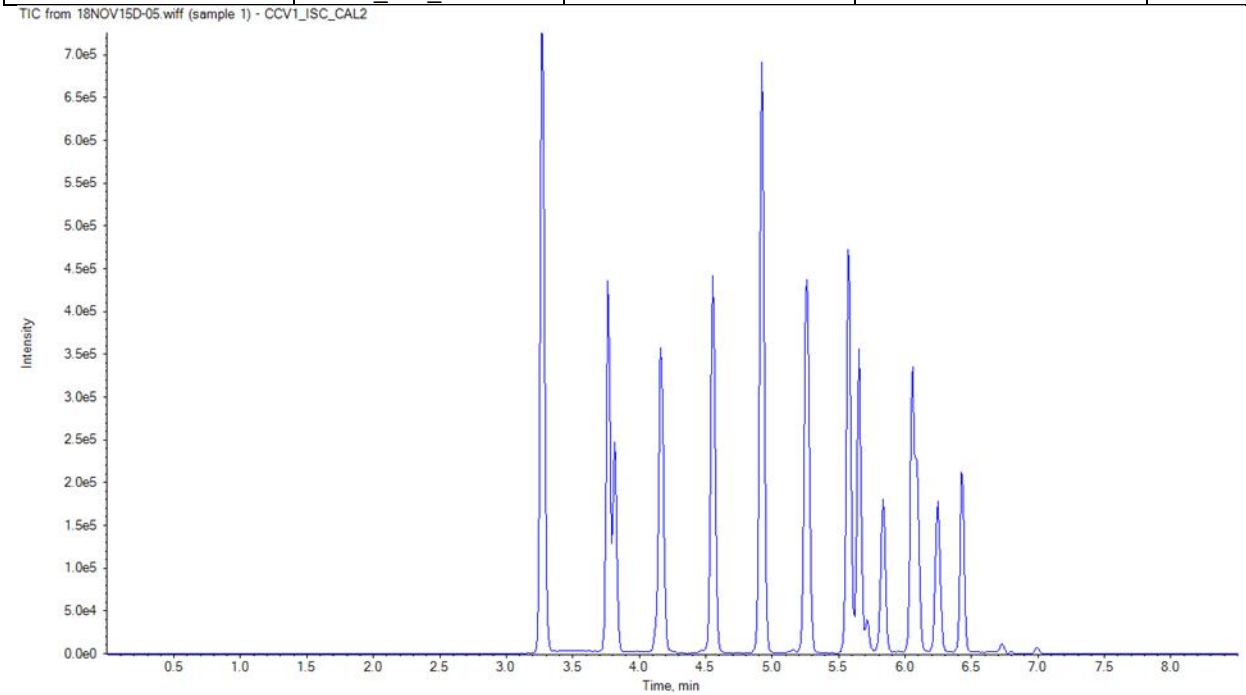
APPROVED
By MCD at 6:34 pm, 11/12/18

REVIEWED
By HMK at 10:53 am, 11/13/18

Instrument Sensitivity Check/ Continuing Calibration Verfication

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV15DCCV1-4 11/16/2018 8:47:00 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Instrument Name:	Sample Name:	Sample ID:	Sample File:	Acquisition Date:
LM27631	CCV1_ISC_CAL2	CALBRN21833C	18NOV15D-05.wiff	2018-11-15T12:39:12



Injection Standard Area Reference File: 18NOV14D-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	732179.1	700694.9	4	50	
13C2-PFOA	5.0	479663.2	493563.9	-3	50	
13C4-PFOS	4.8	269685.3	254050.4	6	50	
13C2-PFDA	5.0	302309.9	286010.1	6	50	

APPROVED
By JPT at 8:56 am, 11/16/18

REVIEWED
By HMK at 7:38 am, 11/19/18

Instrument Sensitivity Check/ Continuing Calibration Verfication

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV15DCCV1-4 11/16/2018 8:47:00 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Instrument Name:	Sample Name:	Sample ID:	Sample File:	Acquisition Date:
LM27631	CCV1_ISC_CAL2	CALBRN21833C	18NOV15D-05.wiff	2018-11-15T12:39:12

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	89981.7	10	13C4-PFBA	834116.1	5.0	0.108	3.27	1.000	0.600	0.598	0	30	
PFPeA	82459.6	12	13C5-PFPeA	794670.3	5.0	0.104	3.77	1.000	0.600	0.601	0	30	
PFBS	43949.1	10	13C3-PFBS	438912.8	4.7	0.100	3.82	1.000	0.531	0.476	-10	30	
4:2-FTS	10004.2	11	13C2-4:2-FTS	52105.6	4.7	0.192	4.13	1.000	0.560	0.521	-7	30	
PFHxA	100146.0	12	13C5-PFHxA	721373.5	5.0	0.139	4.16	1.000	0.600	0.580	-3	30	
PFPeS	23408.3	11	13C3-PFBS	438912.8	4.7	0.053	4.18	1.100	0.563	0.518	-8	30	
PFHpA	102557.6	12	13C4-PFHpA	550528.1	5.0	0.186	4.55	1.000	0.600	0.618	3	30	
PFHxS	33173.1	18	13C3-PFHxS	348032.6	4.7	0.095	4.56	1.000	0.547	0.462	-16	30	
6:2-FTS	8730.1	11	13C2-6:2-FTS	35792.4	4.8	0.244	4.91	1.000	0.569	0.590	4	30	
PFHpS	34554.4	11	13C3-PFHxS	348032.6	4.7	0.099	4.91	1.080	0.571	0.523	-8	30	
PFOA	101483.1	11	13C8-PFOA	933319.5	5.0	0.109	4.92	1.000	0.600	0.581	-3	30	
PFOS	33155.1	22	13C8-PFOS	308307.9	4.8	0.108	5.25	1.000	0.555	0.470	-15	30	
PFNA	82368.1	12	13C9-PFNA	495918.4	5.0	0.166	5.27	1.000	0.600	0.599	0	30	
PFNS	22643.7	11	13C8-PFOS	308307.9	4.8	0.073	5.55	1.060	0.576	0.514	-11	30	
PFDA	72511.4	12	13C6-PFDA	659112.5	5.0	0.110	5.57	1.000	0.600	0.583	-3	30	
8:2-FTS	5899.7	11	13C2-8:2-FTS	27837.3	4.8	0.212	5.58	1.000	0.575	0.494	-14	30	
PFOSA	79551.3	11	13C8-PFOSA	674851.4	5.0	0.118	5.65	1.000	0.600	0.576	-4	30	
NMeFOSAA	8526.2	18	d3-NMeFOSAA	76975.2	5.0	0.111	5.72	1.000	0.600	0.626	4	30	
PFDS	16839.4	11	13C8-PFOS	308307.9	4.8	0.055	5.81	1.110	0.578	0.495	-14	30	
PFUnDA	58763.0	12	13C7-PFUnDA	275106.7	5.0	0.214	5.83	1.000	0.600	0.558	-7	30	
NEtFOSAA	6799.8	21	d5-NEtFOSAA	72633.4	5.0	0.094	5.84	1.000	0.600	0.491	-18	30	
PFDoDA	69810.9	12	13C2-PFDoDA	609426.5	5.0	0.115	6.05	1.000	0.600	0.583	-3	30	
10:2-FTS	4486.1	12	13C2-8:2-FTS	27837.3	4.8	0.161	6.07	1.090	0.578	0.537	-7	30	
NMePFOSAE	47071.2	12	d7-NMePFOSAE	336103.9	5.0	0.140	6.10	1.000	0.600	0.583	-3	30	
NMePFOSA	9187.2	11	d3-NMePFOSA	80686.5	5.0	0.114	6.10	1.000	0.600	0.562	-6	30	
PFDoS	7550.7	11	13C8-PFOS	308307.9	4.8	0.024	6.22	1.180	0.581	0.429	-26	30	
NEtPFOSAE	51565.0	11	d9-NEtPFOSAE	267032.8	5.0	0.193	6.25	1.000	0.600	0.620	3	30	
NEtPFOSA	8085.5	11	d5-NEtPFOSA	61678.7	5.0	0.131	6.26	1.000	0.600	0.602	0	30	
PFTrDA	54960.7	12	13C2-PFDoDA	609426.5	5.0	0.090	6.25	1.030	0.600	0.569	-5	30	
PFTeDA	41384.0	11	13C2-PFTeDA	419854.5	5.0	0.099	6.43	1.000	0.600	0.553	-8	30	
PFHxDA	19352.2	11	13C2-PFTeDA	419854.5	5.0	0.046	6.73	1.050	0.600	0.549	-8	30	
PFODA	15579.3	10	13C2-PFTeDA	419854.5	5.0	0.037	6.99	1.090	0.600	0.517	-14	30	

APPROVED
By JPT at 8:56 am, 11/16/18

REVIEWED
By HMK at 7:38 am, 11/19/18

Instrument Sensitivity Check/ Continuing Calibration Verfication

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV15DCCV1-4 11/16/2018 8:47:00 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

APPROVED
By JPT at 8:56 am, 11/16/18

REVIEWED
By HMK at 7:38 am, 11/19/18

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV15DCCV1-4 11/16/2018 8:47:00 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Sample Name:	CCV1_ISC_CAL2			**Data File:**		18NOV15D-05.wiff
Sample ID:	CALBRN21833C			**Acquis Date:**		2018-11-15T12:39:12
Sample Type:	Quality Control			**Instrument:**		LM27631
Vial Position:	4			**Acquis Method:**		18AUG13_3uL.dam
Injection Vol:	3.00			**Result Table:**		18NOV15DCCV1-4
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: 18NOV14D-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	732179.1	700694.9	4	50	
13C2-PFOA	5.0	479663.2	493563.9	-3	50	
13C4-PFOS	4.8	269685.3	254050.4	6	50	
13C2-PFDA	5.0	302309.9	286010.1	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	834116.1	13C3-PFBA	732179.1	1.139	5.000	5.108	102	70-130	
E13C5-PFPeA	794670.3	13C3-PFBA	732179.1	1.085	5.000	4.868	97	70-130	
E13C3-PFBS	438912.8	13C3-PFBA	732179.1	0.599	4.650	4.232	91	70-130	
E13C2-4:2-FTS	52105.6	13C2-PFOA	479663.2	0.109	4.670	4.838	104	70-130	
E13C5-PFHxA	721373.5	13C2-PFOA	479663.2	1.504	5.000	5.433	109	70-130	
E13C3-PFHxS	348032.6	13C2-PFOA	479663.2	0.726	4.730	4.979	105	70-130	
E13C4-PFHpA	550528.1	13C2-PFOA	479663.2	1.148	5.000	5.171	103	70-130	
E13C2-6:2-FTS	35792.4	13C2-PFOA	479663.2	0.075	4.750	4.992	105	70-130	
E13C8-PFOA	933319.5	13C2-PFOA	479663.2	1.946	5.000	5.361	107	70-130	
E13C8-PFOS	308307.9	13C4-PFOS	269685.3	1.143	4.780	5.065	106	70-130	
E13C9-PFNA	495918.4	13C4-PFOS	269685.3	1.839	5.000	5.127	103	70-130	
E13C6-PFDA	659112.5	13C2-PFDA	302309.9	2.180	5.000	5.088	102	70-130	
E13C2-8:2-FTS	27837.3	13C2-PFDA	302309.9	0.092	4.790	4.592	96	70-130	
E13C8-PFOSA	674851.4	13C2-PFDA	302309.9	2.232	5.000	4.949	99	70-130	
Ed3-NMeFOSAA	76975.2	13C2-PFDA	302309.9	0.255	5.000	4.596	92	70-130	
E13C7-PFUnDA	275106.7	13C2-PFDA	302309.9	0.910	5.000	5.283	106	70-130	
Ed5-NEtFOSAA	72633.4	13C2-PFDA	302309.9	0.240	5.000	5.083	102	70-130	
E13C2-PFDoDA	609426.5	13C2-PFDA	302309.9	2.016	5.000	5.234	105	70-130	
Ed7-NMePFOSAE	336103.9	13C2-PFDA	302309.9	1.112	5.000	4.811	96	70-130	
Ed3-NMePFOSA	80686.5	13C2-PFDA	302309.9	0.267	5.000	4.849	97	70-130	
Ed9-NEtPFOSAE	267032.7	13C2-PFDA	302309.9	0.883	5.000	4.594	92	70-130	
Ed5-NEtPFOSA	61678.7	13C2-PFDA	302309.9	0.204	5.000	4.786	96	70-130	
E13C2-PFTeDA	419854.5	13C2-PFDA	302309.9	1.389	5.000	4.876	98	70-130	

APPROVED
By JPT at 8:56 am, 11/16/18

REVIEWED
By HMK at 7:38 am, 11/19/18

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV15DCCV1-4 11/16/2018 8:47:00 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

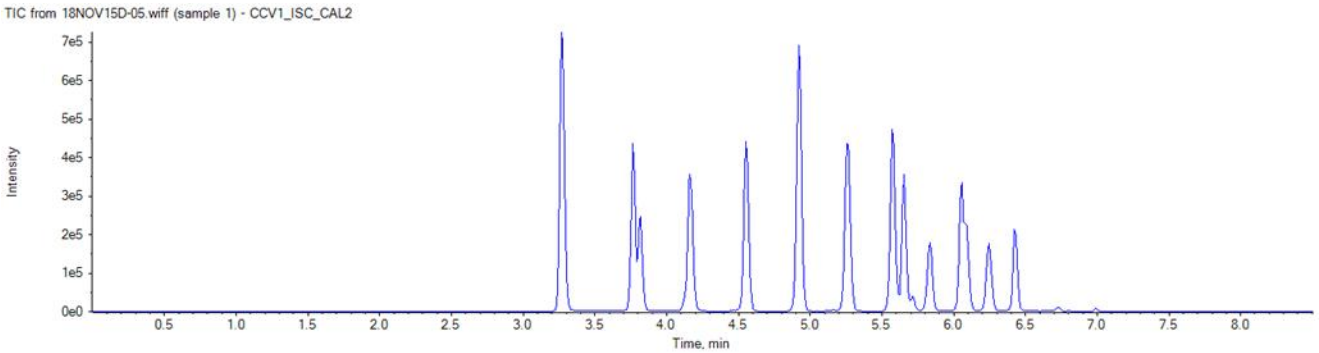
Analyte Quantitation Peak Table

Sample Name: CCV1_ISC_CAL2 **Instrument Name:** LM27631 **File Name:** 18NOV15D-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	3.27	1.000	89981.7		A	13C4-PFBA	3.27	834116.1	0.108	0.598
PFPeA	3.77	1.000	82459.6		A	13C5-PFPeA	3.77	794670.3	0.104	0.601
PFBS	3.82	1.000	43949.1		A	13C3-PFBS	3.82	438912.8	0.100	0.476
4:2-FTS	4.13	1.000	10004.2		M	13C2-4:2-FTS	4.13	52105.6	0.192	0.521
PFHxA	4.16	1.000	100146.0		A	13C5-PFHxA	4.16	721373.5	0.139	0.580
PFPeS	4.18	1.100	23408.3		A	13C3-PFBS	3.82	438912.8	0.053	0.518
PFHpA	4.55	1.000	102557.6		A	13C4-PFHpA	4.55	550528.1	0.186	0.618
PFHxS	4.56	1.000	33173.1		M	13C3-PFHxS	4.56	348032.6	0.095	0.462
6:2-FTS	4.91	1.000	8730.1		A	13C2-6:2-FTS	4.91	35792.4	0.244	0.590
PFHpS	4.91	1.080	34554.4		A	13C3-PFHxS	4.56	348032.6	0.099	0.523
PFOA	4.92	1.000	101483.1		A	13C8-PFOA	4.92	933319.5	0.109	0.581
PFOS	5.25	1.000	33155.1		M	13C8-PFOS	5.25	308307.9	0.108	0.470
PFNA	5.27	1.000	82368.1		A	13C9-PFNA	5.27	495918.4	0.166	0.599
PFNS	5.55	1.060	22643.7		A	13C8-PFOS	5.25	308307.9	0.073	0.514
PFDA	5.57	1.000	72511.4		A	13C6-PFDA	5.57	659112.5	0.110	0.583
8:2-FTS	5.58	1.000	5899.7		M	13C2-8:2-FTS	5.58	27837.3	0.212	0.494
PFOSA	5.65	1.000	79551.3		A	13C8-PFOSA	5.65	674851.4	0.118	0.576
NMeFOSAA	5.72	1.000	8526.2		M	d3-NMeFOSAA	5.71	76975.2	0.111	0.626
PFDS	5.81	1.110	16839.4		A	13C8-PFOS	5.25	308307.9	0.055	0.495
PFUnDA	5.83	1.000	58763.0		A	13C7-PFUnDA	5.83	275106.7	0.214	0.558
NEtFOSAA	5.84	1.000	6799.8		M	d5-NEtFOSAA	5.84	72633.4	0.094	0.491
PFDoDA	6.05	1.000	69810.9		A	13C2-PFDoDA	6.05	609426.5	0.115	0.583
10:2-FTS	6.07	1.090	4486.1		A	13C2-8:2-FTS	5.58	27837.3	0.161	0.537
NMePFOSAE	6.10	1.000	47071.2		A	d7-NMePFOSAE	6.09	336103.9	0.140	0.583
NMePFOSA	6.10	1.000	9187.2		A	d3-NMePFOSA	6.10	80686.5	0.114	0.562
PFDoS	6.22	1.180	7550.7		M	13C8-PFOS	5.25	308307.9	0.024	0.429
NEtPFOSAE	6.25	1.000	51565.0		M	d9-NEtPFOSAE	6.24	267032.8	0.193	0.620
NEtPFOSA	6.26	1.000	8085.5		A	d5-NEtPFOSA	6.26	61678.7	0.131	0.602
PFTrDA	6.25	1.030	54960.7		M	13C2-PFDoDA	6.05	609426.5	0.090	0.569
PFTeDA	6.43	1.000	41384.0		M	13C2-PFTeDA	6.43	419854.5	0.099	0.553
PFHxDA	6.73	1.050	19352.2		A	13C2-PFTeDA	6.43	419854.5	0.046	0.549
PFODA	6.99	1.090	15579.3		A	13C2-PFTeDA	6.43	419854.5	0.037	0.517

Total Ion Chromatogram

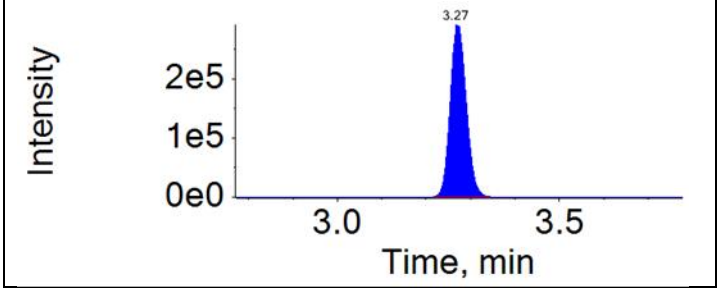


APPROVED
By JPT at 8:56 am, 11/16/18

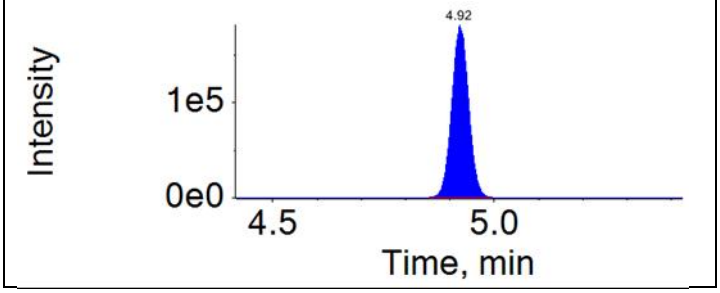
REVIEWED
By HMK at 7:38 am, 11/19/18

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV15DCCV1-4 11/16/2018 8:47:00 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

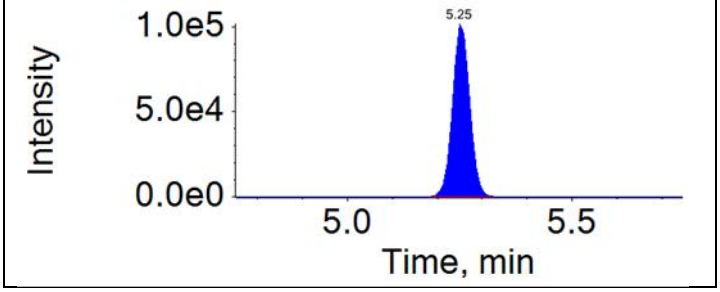
Injection Standard: 13C3-PFBA
216.0 / 172.0



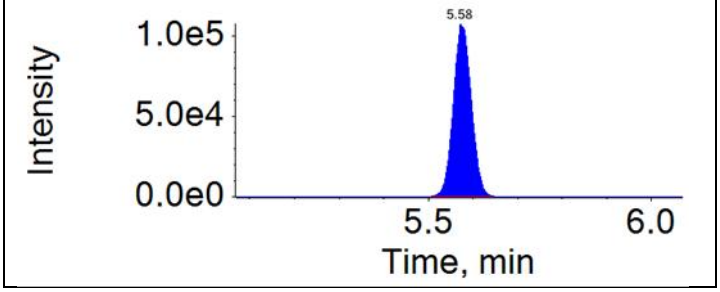
Injection Standard: 13C2-PFOA
415.0 / 370.0



Injection Standard: 13C4-PFOS
503.0 / 80.0



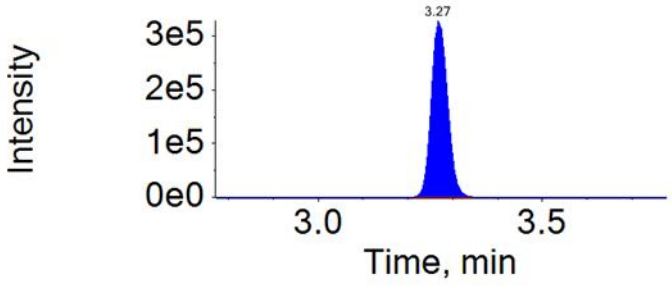
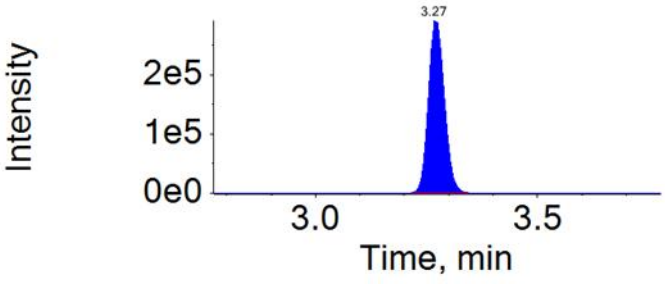
Injection Standard: 13C2-PFDA
515.0 / 470.0

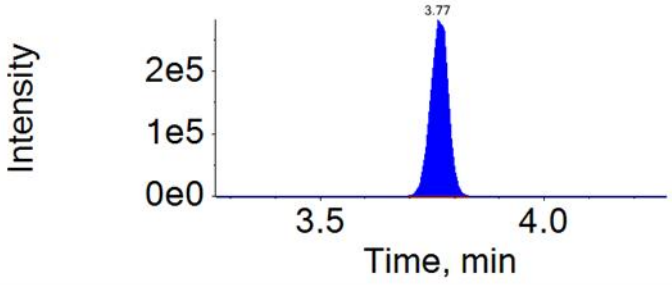
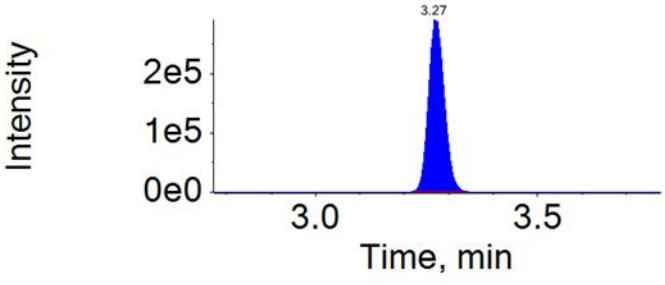


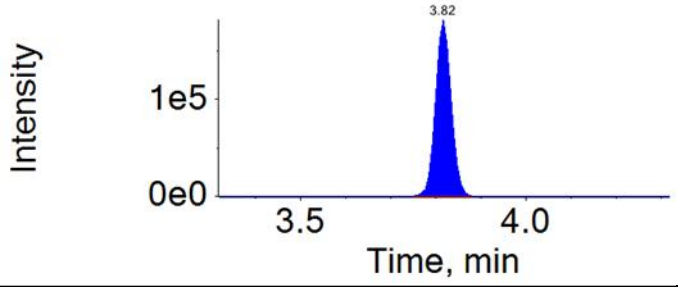
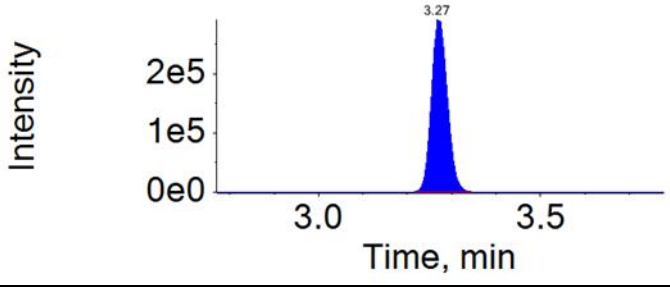
APPROVED
By JPT at 8:56 am, 11/16/18

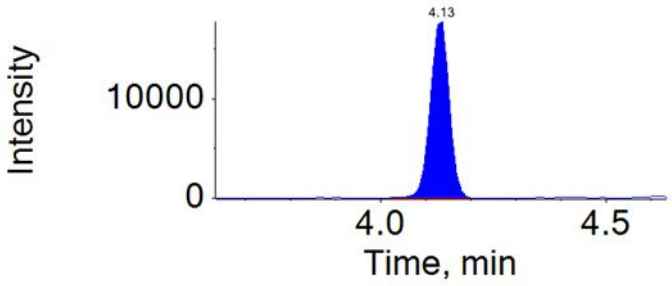
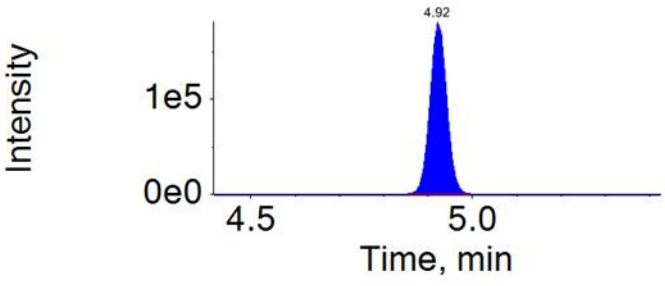
REVIEWED
By HMK at 7:38 am, 11/19/18

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV15DCCV1-4 11/16/2018 8:47:00 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
	

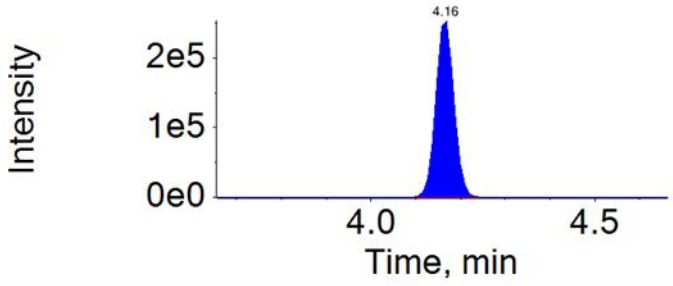
Extraction Standard: E13C2-4:2-FTS	Injection Standard: 13C2-PFOA
329.0 / 81.0	415.0 / 370.0
	

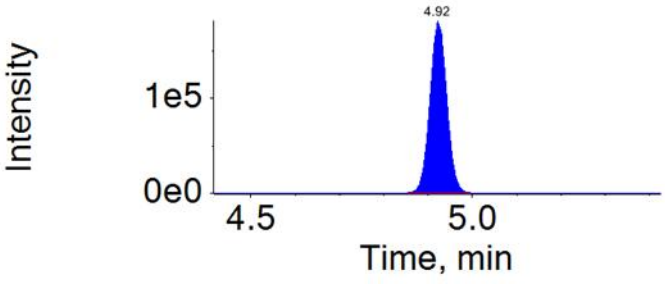
APPROVED
By JPT at 8:56 am, 11/16/18

REVIEWED
By HMK at 7:38 am, 11/19/18

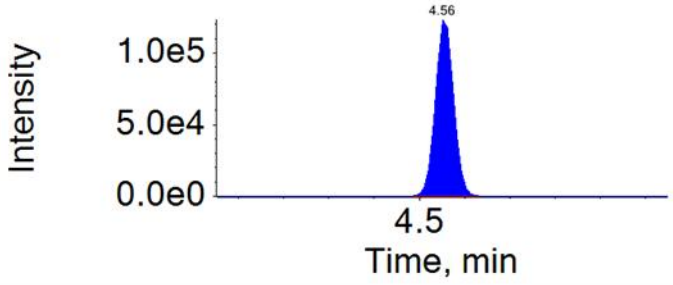
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV15DCCV1-4 11/16/2018 8:47:00 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

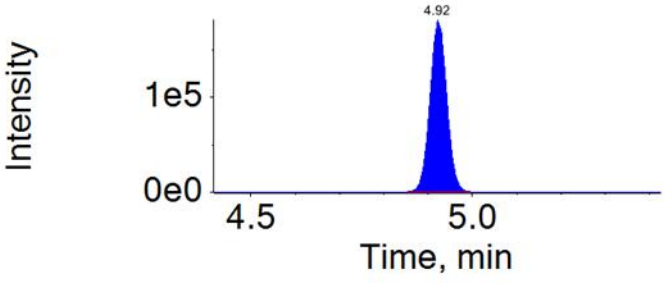
Extraction Standard: E13C5-PFHxA	Injection Standard: 13C2-PFOA
318.0 / 273.0	415.0 / 370.0



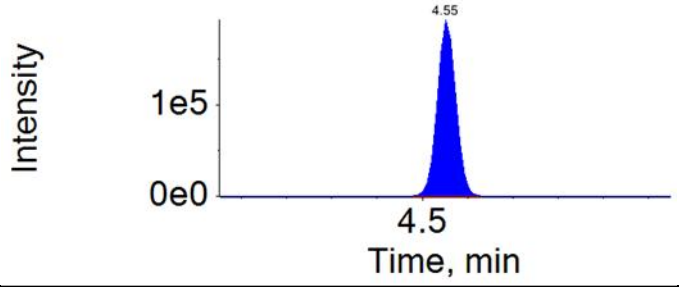


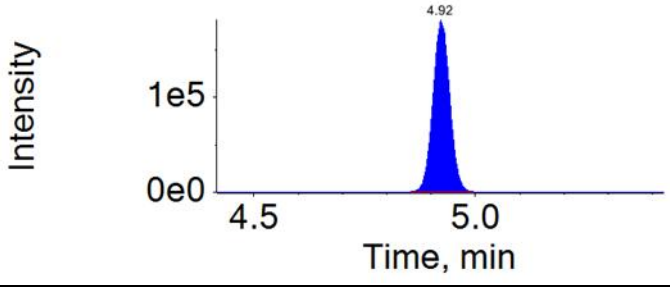
Extraction Standard: E13C3-PFHxS	Injection Standard: 13C2-PFOA
402.0 / 80.0	415.0 / 370.0



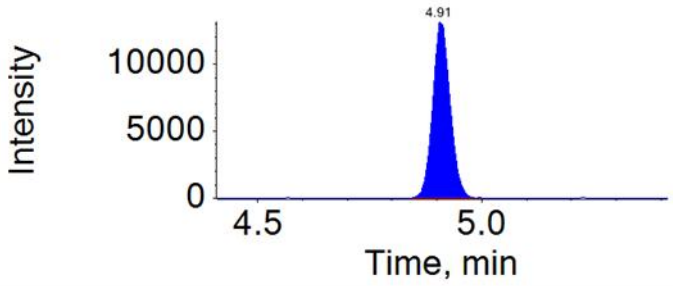


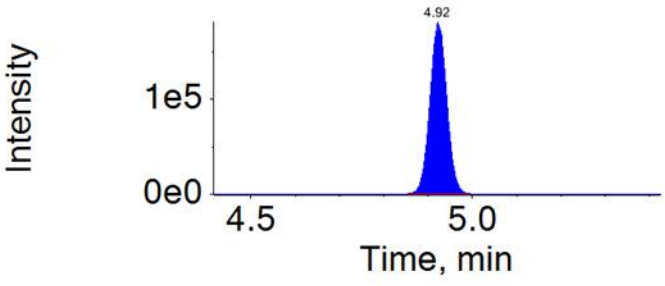
Extraction Standard: E13C4-PFHpA	Injection Standard: 13C2-PFOA
367.0 / 322.0	415.0 / 370.0



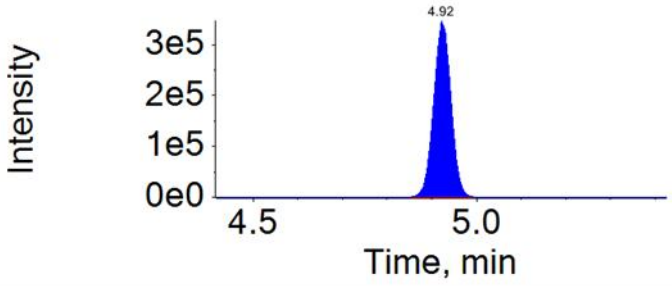
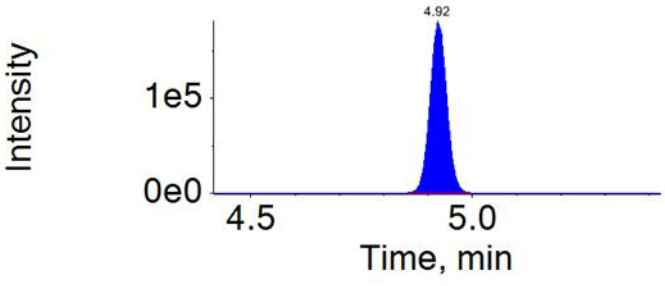


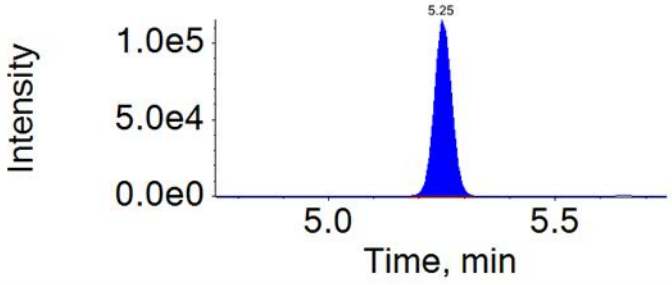
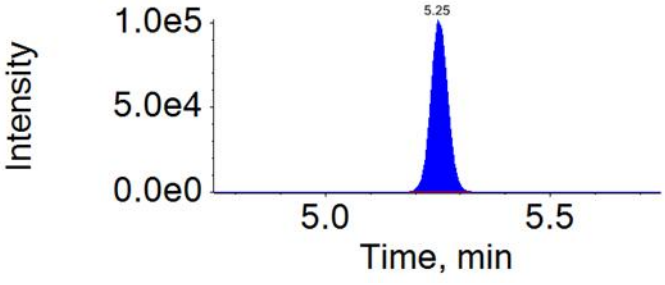
Extraction Standard: E13C2-6:2-FTS	Injection Standard: 13C2-PFOA
429.0 / 81.0	415.0 / 370.0

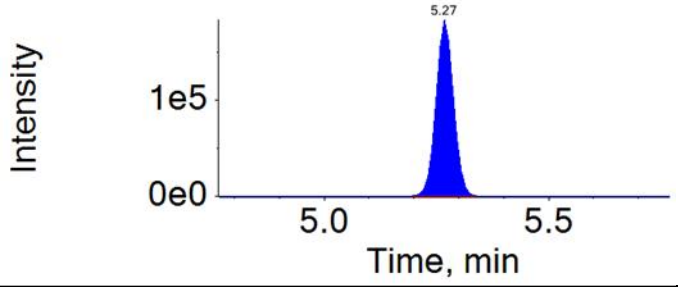
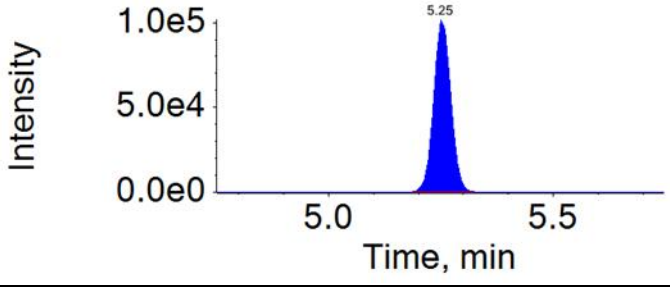


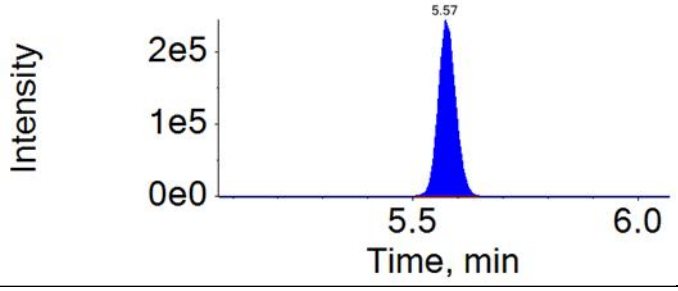
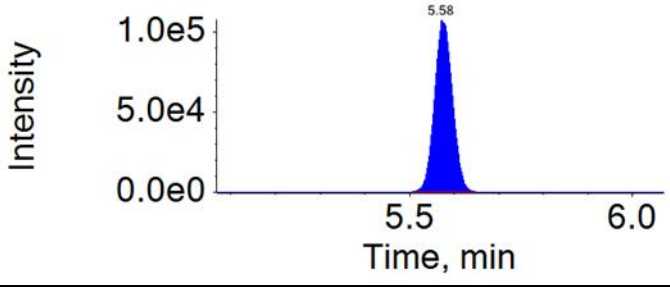


ICAL Name: 18NOV12DCAL **Result Table:** 18NOV15DCCV1-4 11/16/2018 8:47:00 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

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
	

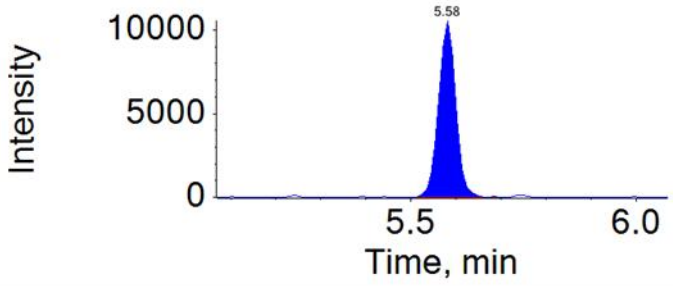
Extraction Standard: E13C6-PFDA	Injection Standard: 13C2-PFDA
519.0 / 474.0	515.0 / 470.0
	

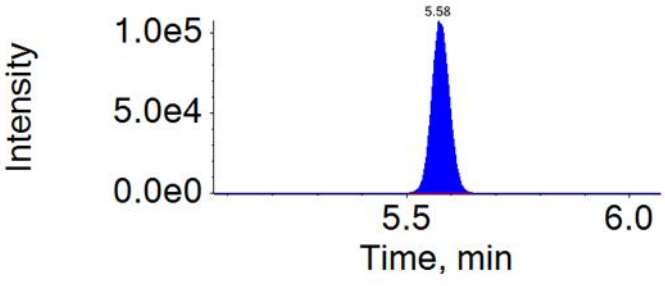
APPROVED
By JPT at 8:56 am, 11/16/18

REVIEWED
By HMK at 7:38 am, 11/19/18

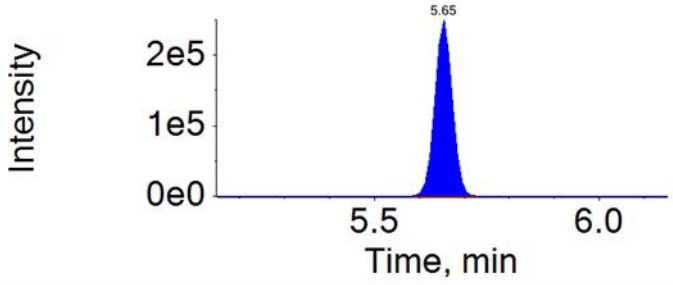
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV15DCCV1-4 11/16/2018 8:47:00 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

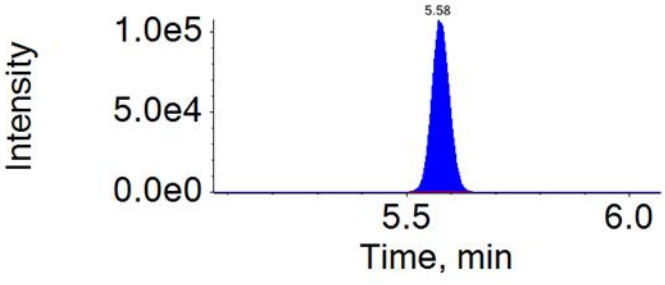
Extraction Standard: E13C2-8:2-FTS	Injection Standard: 13C2-PFDA
529.0 / 81.0	515.0 / 470.0



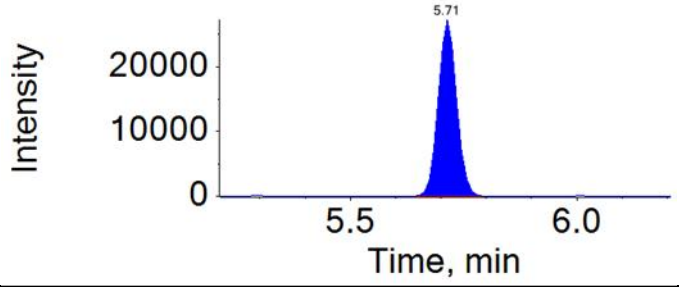


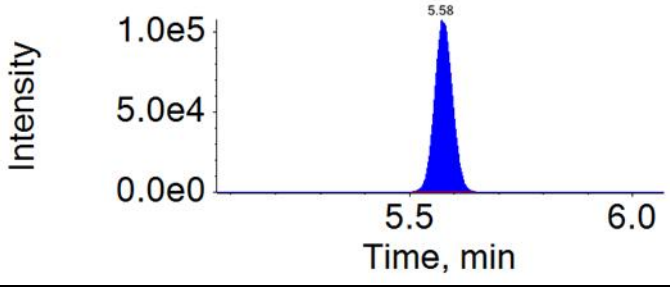
Extraction Standard: E13C8-PFOSA	Injection Standard: 13C2-PFDA
506.0 / 78.0	515.0 / 470.0



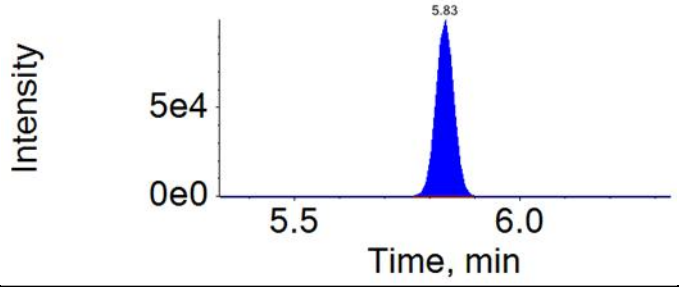


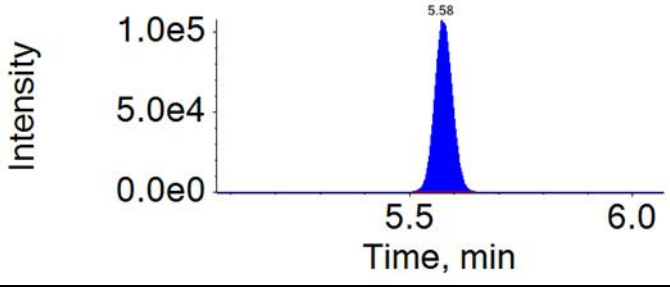
Extraction Standard: Ed3-NMeFOSAA	Injection Standard: 13C2-PFDA
573.0 / 419.0	515.0 / 470.0





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



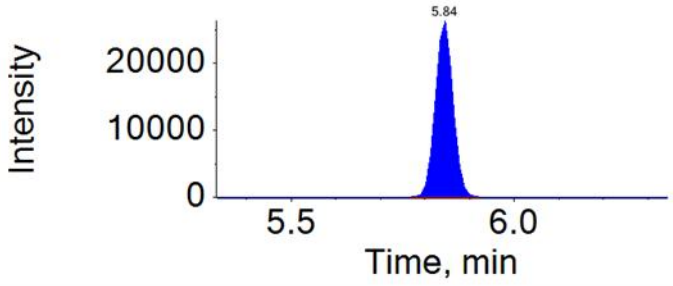


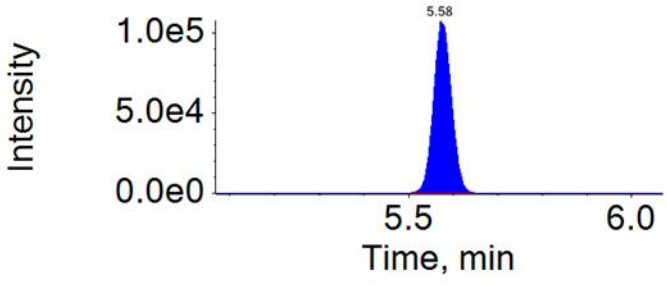
APPROVED
By JPT at 8:56 am, 11/16/18

REVIEWED
By HMK at 7:38 am, 11/19/18

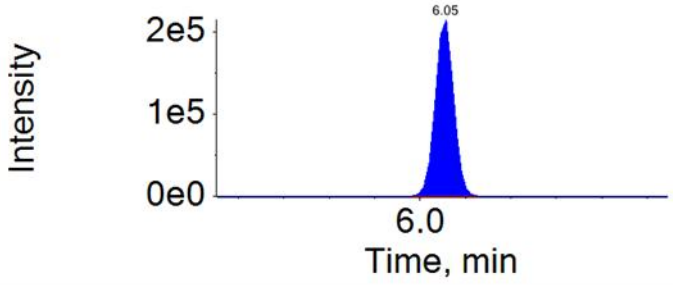
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV15DCCV1-4 11/16/2018 8:47:00 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

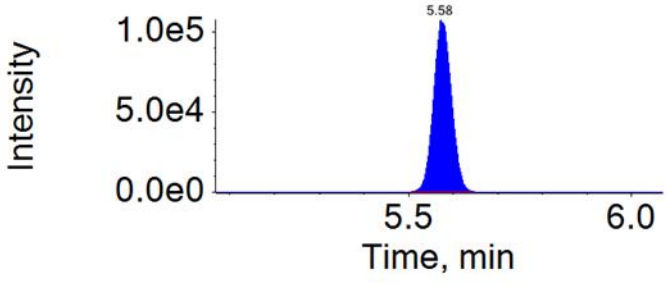
Extraction Standard: Ed5-NEtFOSAA	Injection Standard: 13C2-PFDA
589.0 / 419.0	515.0 / 470.0



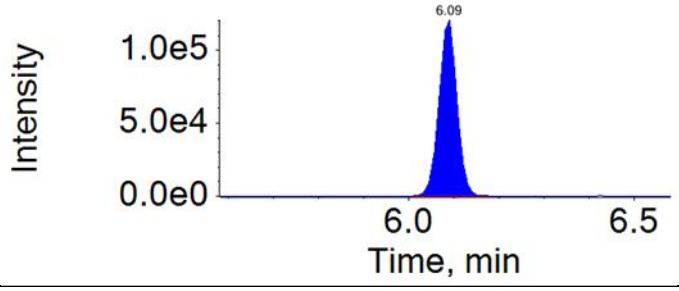


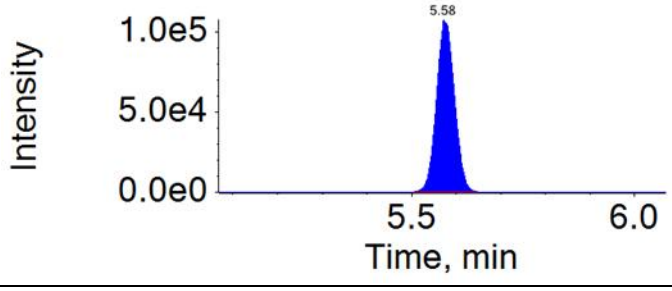
Extraction Standard: E13C2-PFDoDA	Injection Standard: 13C2-PFDA
615.0 / 570.0	515.0 / 470.0



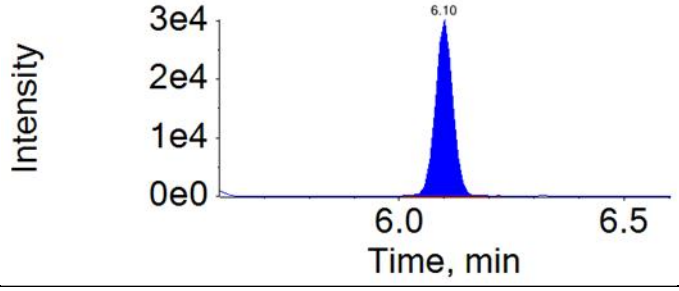


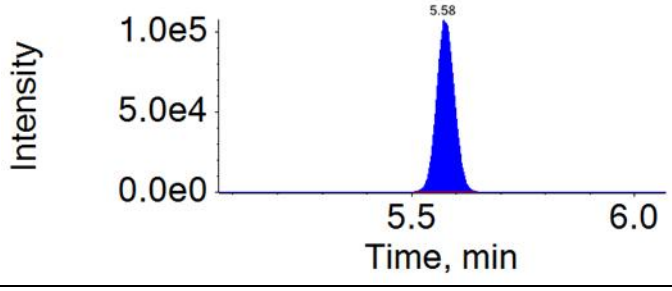
Extraction Standard: Ed7-NMePFOSAE	Injection Standard: 13C2-PFDA
623.0 / 59.0	515.0 / 470.0





Extraction Standard: Ed3-NMePFOSA	Injection Standard: 13C2-PFDA
515.0 / 169.0	515.0 / 470.0



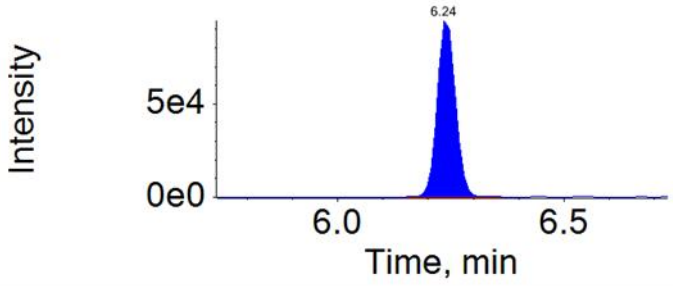


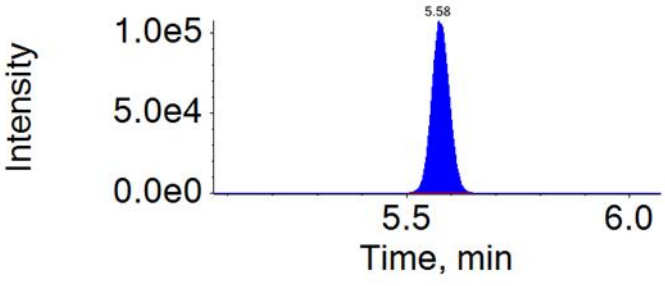
APPROVED
By JPT at 8:56 am, 11/16/18

REVIEWED
By HMK at 7:38 am, 11/19/18

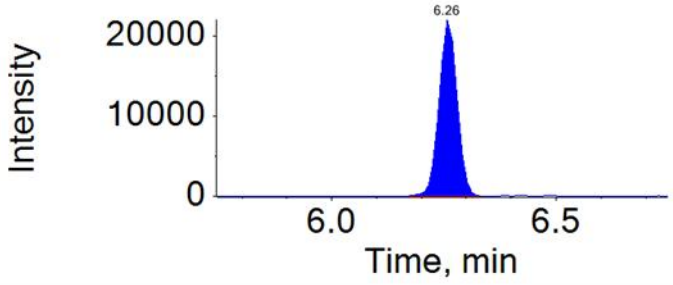
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV15DCCV1-4 11/16/2018 8:47:00 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

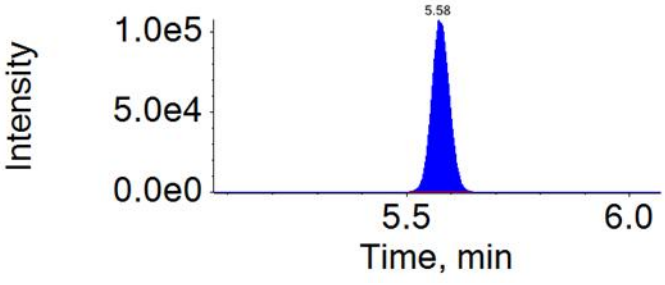
Extraction Standard: Ed9-NEtPFOSAE	Injection Standard: 13C2-PFDA
639.0 / 59.0	515.0 / 470.0



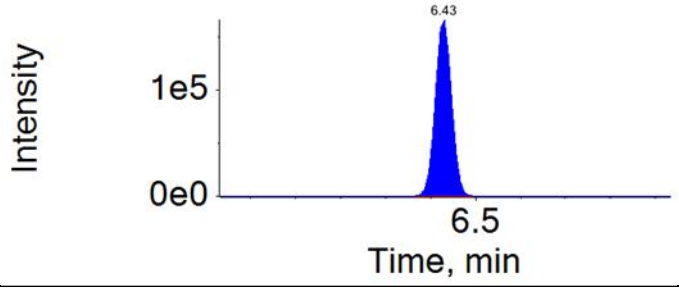


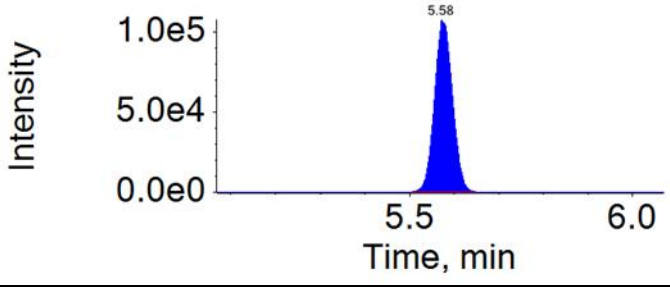
Extraction Standard: Ed5-NEtPFOSA	Injection Standard: 13C2-PFDA
531.0 / 169.0	515.0 / 470.0





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



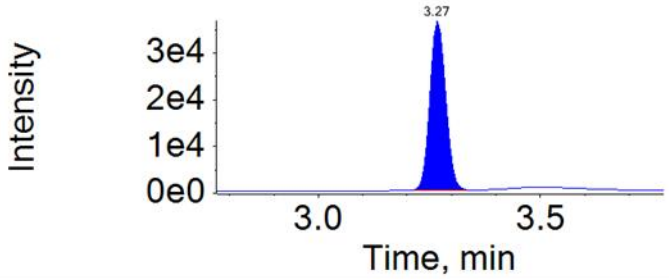


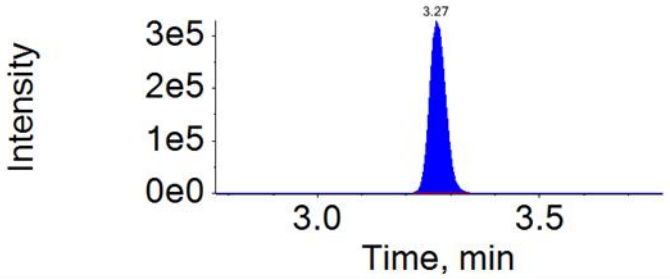
APPROVED
By JPT at 8:56 am, 11/16/18

REVIEWED
By HMK at 7:38 am, 11/19/18

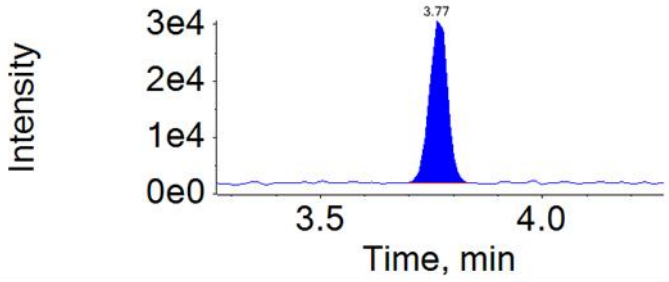
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV15DCCV1-4 11/16/2018 8:47:00 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

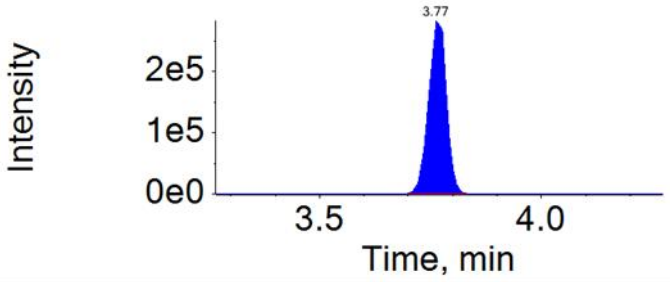
Analyte: PFBA	Extraction Standard: 13C4-PFBA
213.0 / 169.0	217.0 / 172.0



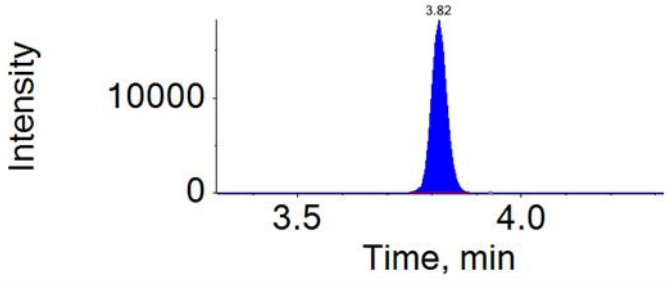


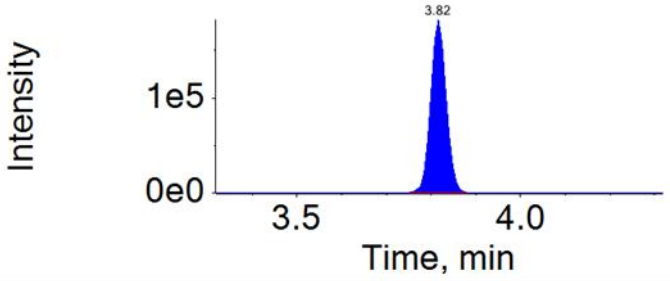
Analyte: PFPeA	Extraction Standard: 13C5-PFPeA
263.0 / 219.0	268.0 / 223.0



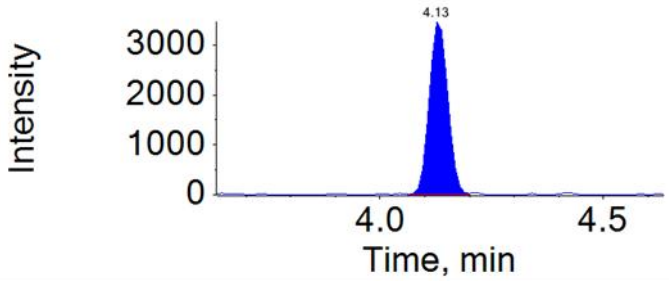


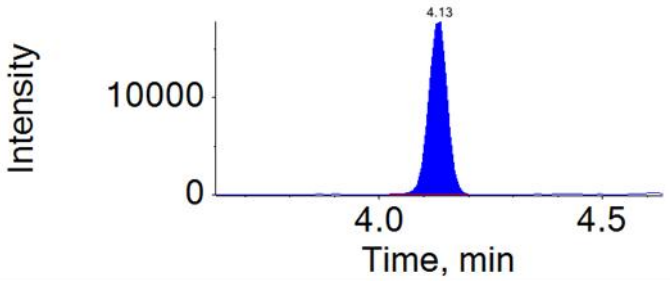
Analyte: PFBS	Extraction Standard: 13C3-PFBS
299.0 / 80.0	302.0 / 80.0





Analyte: 4:2-FTS	Extraction Standard: 13C2-4:2-FTS
327.0 / 307.0	329.0 / 81.0



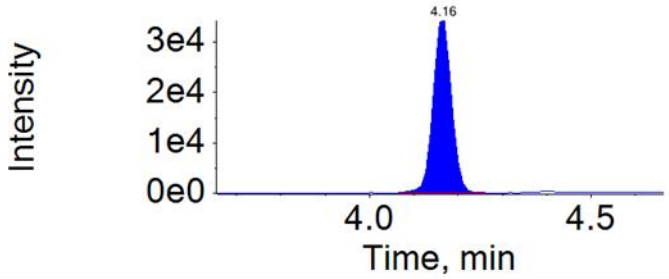


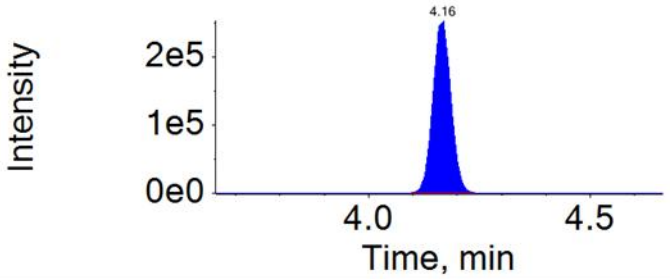
APPROVED
By JPT at 8:56 am, 11/16/18

REVIEWED
By HMK at 7:38 am, 11/19/18

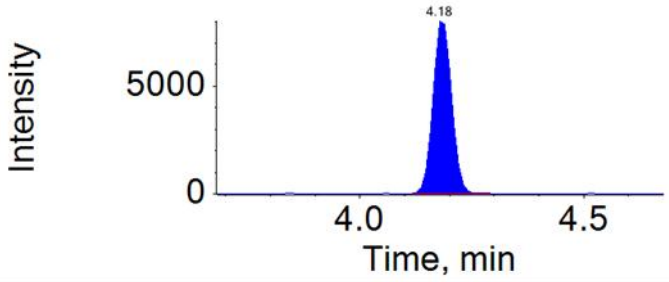
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV15DCCV1-4 11/16/2018 8:47:00 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

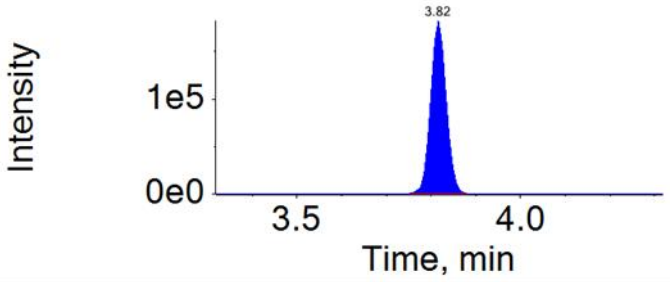
Analyte: PFHxA	Extraction Standard: 13C5-PFHxA
313.0 / 269.0	318.0 / 273.0



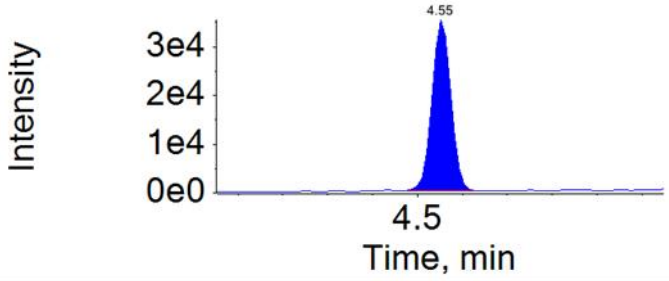


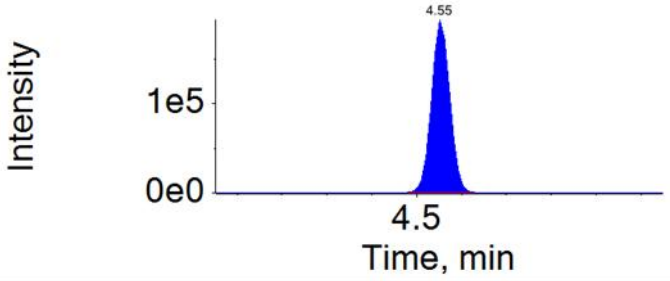
Analyte: PFPeS	Extraction Standard: 13C3-PFBS
349.0 / 80.0	302.0 / 80.0



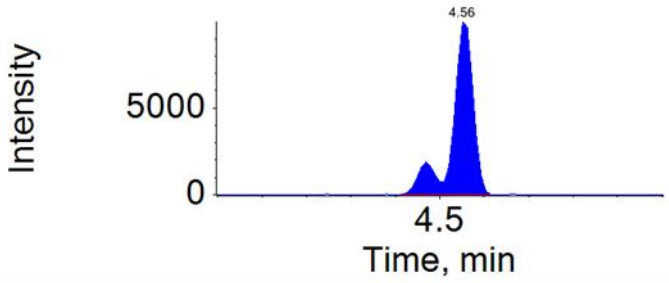


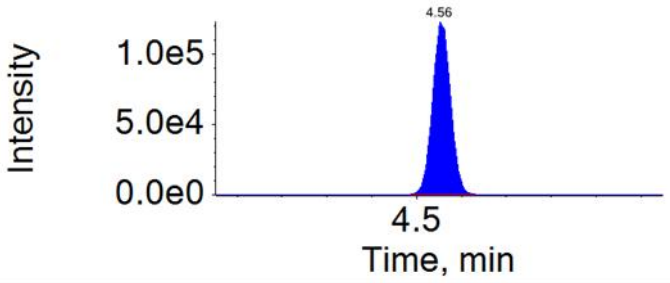
Analyte: PFHpA	Extraction Standard: 13C4-PFHpA
363.0 / 319.0	367.0 / 322.0





Analyte: PFHxS	Extraction Standard: 13C3-PFHxS
399.0 / 80.0	402.0 / 80.0



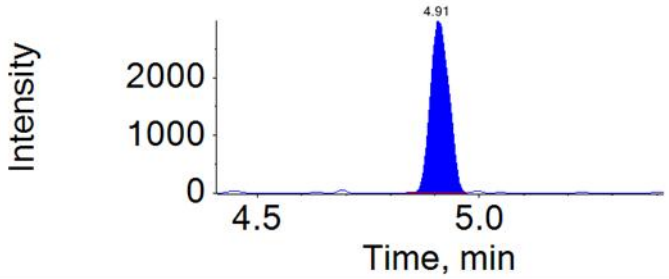


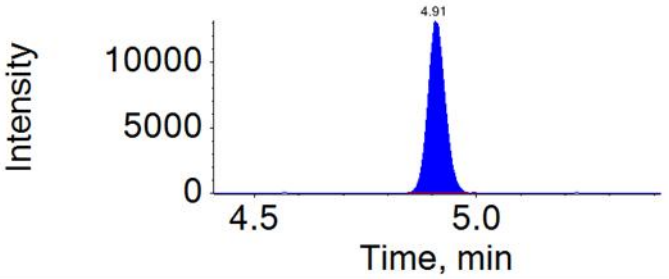
APPROVED
By JPT at 8:56 am, 11/16/18

REVIEWED
By HMK at 7:38 am, 11/19/18

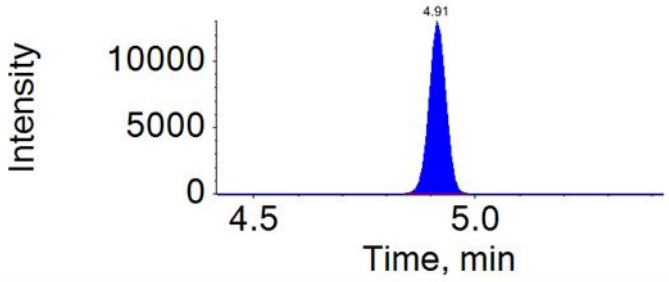
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV15DCCV1-4 11/16/2018 8:47:00 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

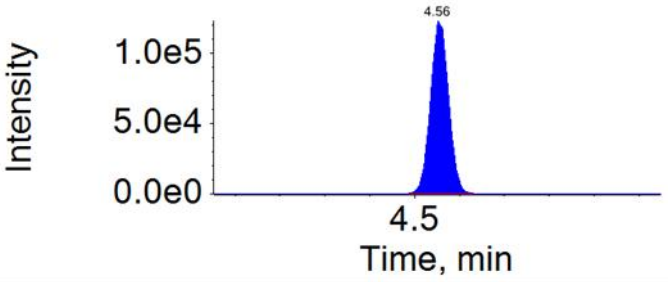
Analyte: 6:2-FTS	Extraction Standard: 13C2-6:2-FTS
427.0 / 407.0	429.0 / 81.0



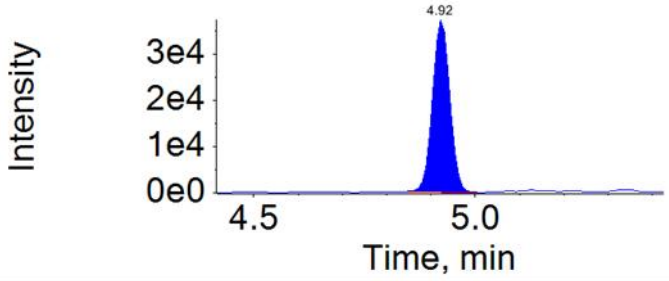


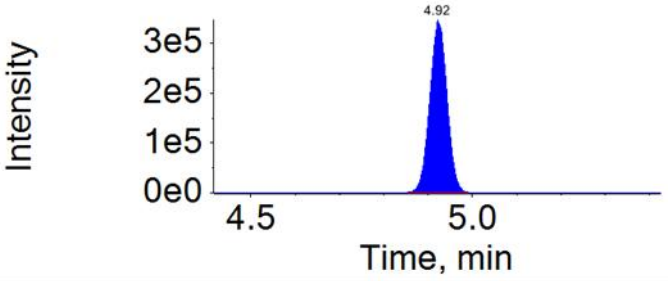
Analyte: PFHpS	Extraction Standard: 13C3-PFHxS
449.0 / 80.0	402.0 / 80.0



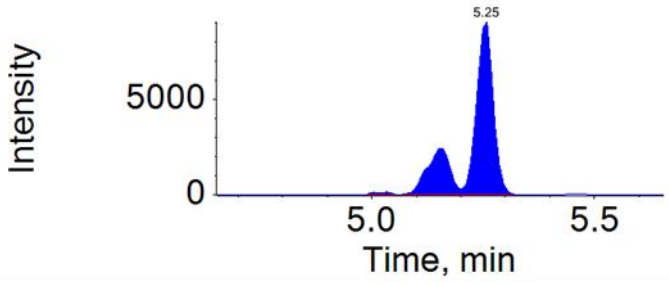


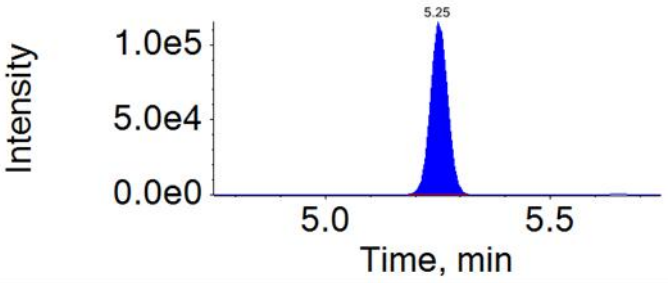
Analyte: PFOA	Extraction Standard: 13C8-PFOA
413.0 / 369.0	421.0 / 376.0





Analyte: PFOS	Extraction Standard: 13C8-PFOS
499.0 / 80.0	507.0 / 80.0



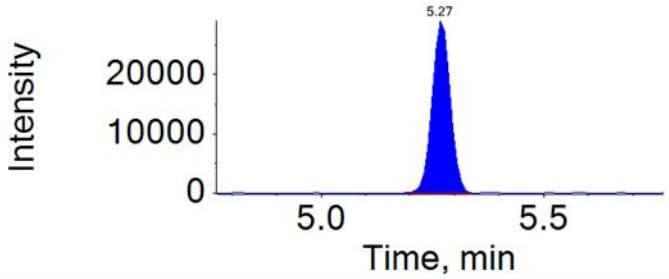


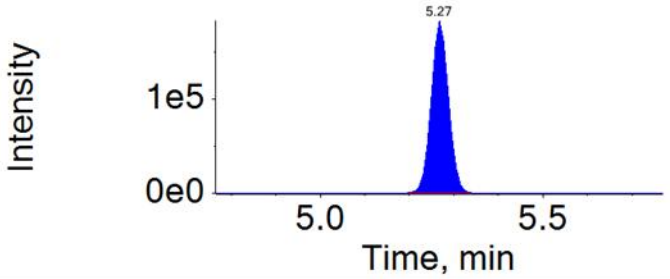
APPROVED
By JPT at 8:56 am, 11/16/18

REVIEWED
By HMK at 7:38 am, 11/19/18

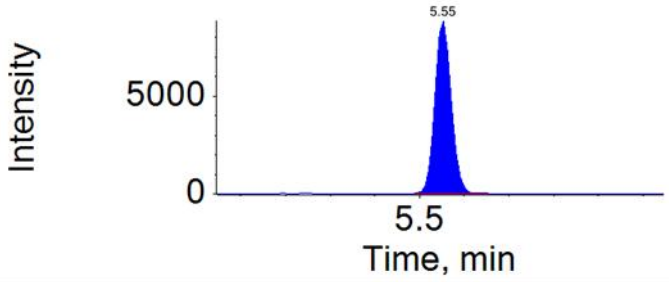
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV15DCCV1-4 11/16/2018 8:47:00 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

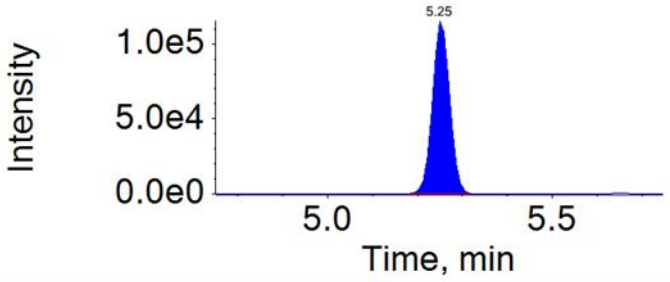
Analyte: PFNA	Extraction Standard: 13C9-PFNA
463.0 / 419.0	472.0 / 427.0



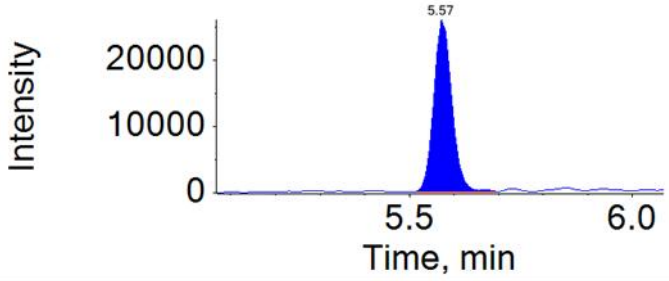


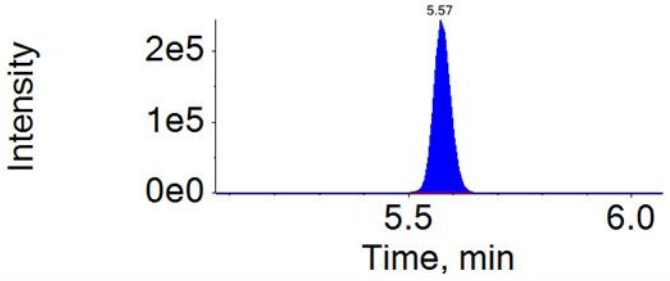
Analyte: PFNS	Extraction Standard: 13C8-PFOS
549.0 / 80.0	507.0 / 80.0



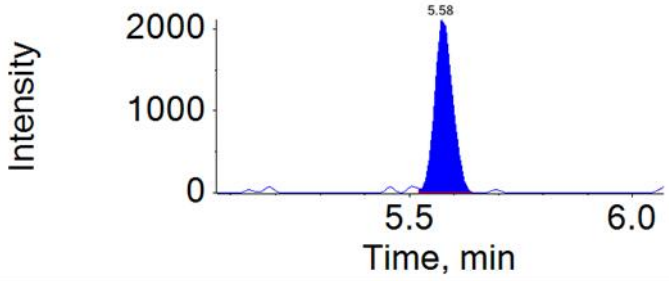


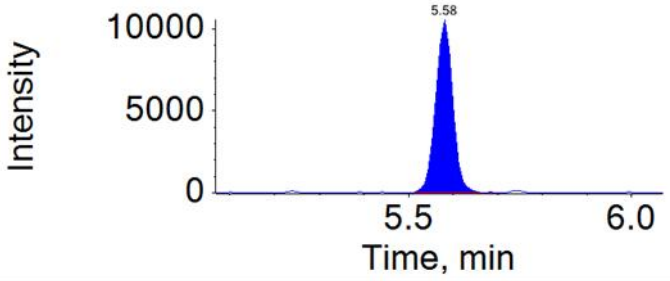
Analyte: PFDA	Extraction Standard: 13C6-PFDA
513.0 / 469.0	519.0 / 474.0





Analyte: 8:2-FTS	Extraction Standard: 13C2-8:2-FTS
527.0 / 507.0	529.0 / 81.0



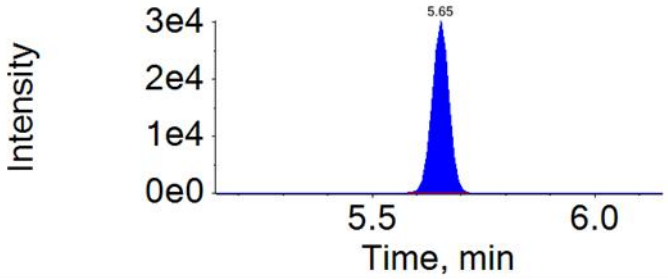


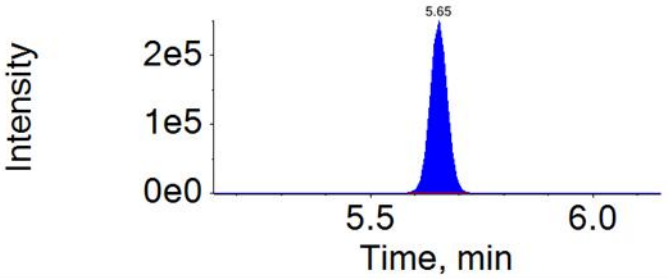
APPROVED
By JPT at 8:56 am, 11/16/18

REVIEWED
By HMK at 7:38 am, 11/19/18

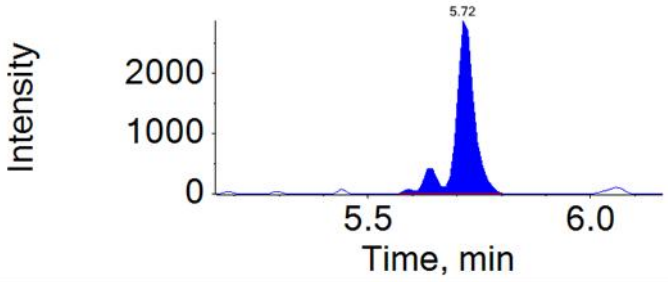
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV15DCCV1-4 11/16/2018 8:47:00 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

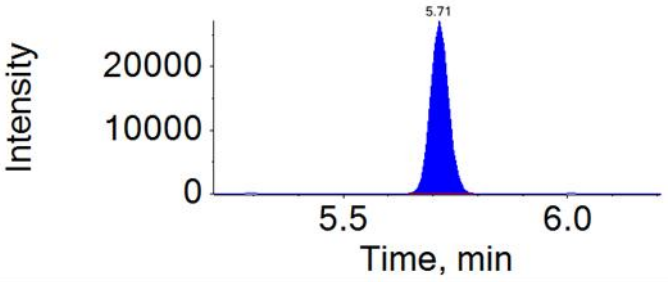
Analyte: PFOSA	Extraction Standard: 13C8-PFOSA
498.0 / 78.0	506.0 / 78.0



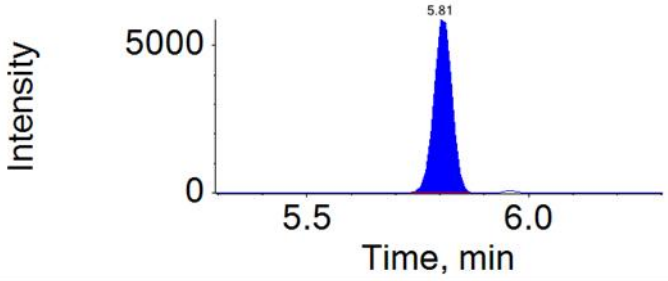


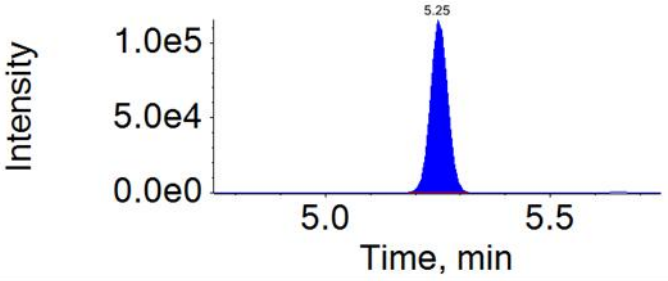
Analyte: NMeFOSAA	Extraction Standard: d3-NMeFOSAA
570.0 / 419.0	573.0 / 419.0



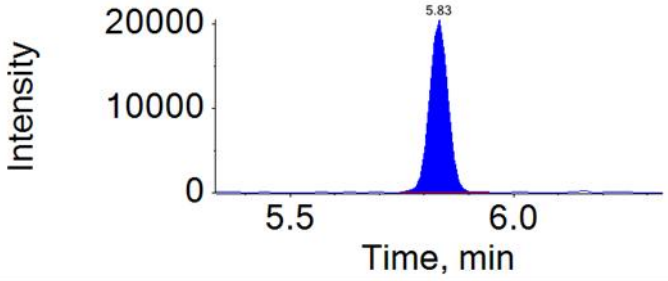


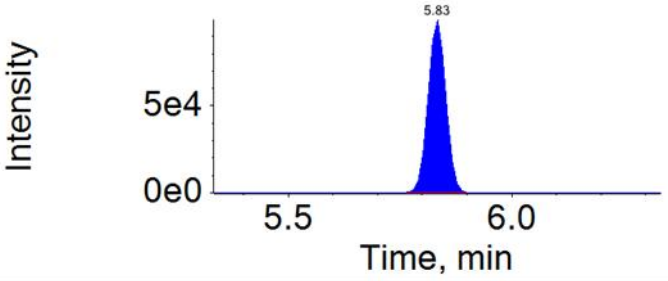
Analyte: PFDS	Extraction Standard: 13C8-PFOS
599.0 / 80.0	507.0 / 80.0





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



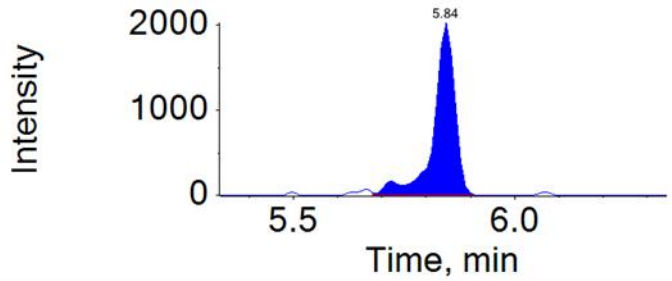


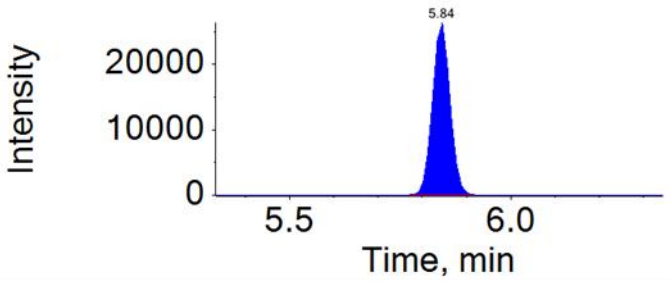
APPROVED
By JPT at 8:56 am, 11/16/18

REVIEWED
By HMK at 7:38 am, 11/19/18

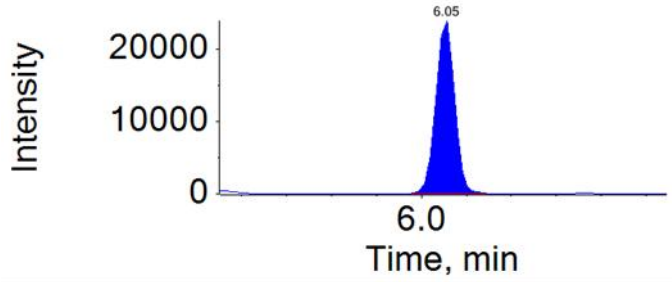
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV15DCCV1-4 11/16/2018 8:47:00 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

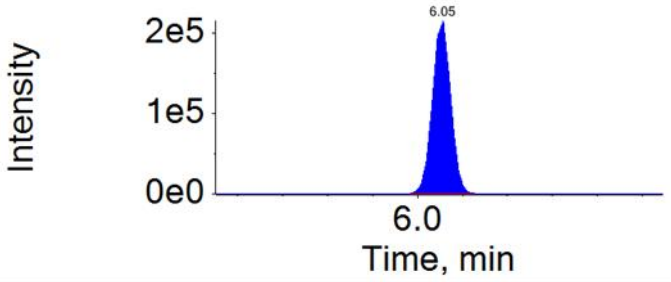
Analyte: NEtFOSAA	Extraction Standard: d5-NEtFOSAA
584.0 / 419.0	589.0 / 419.0



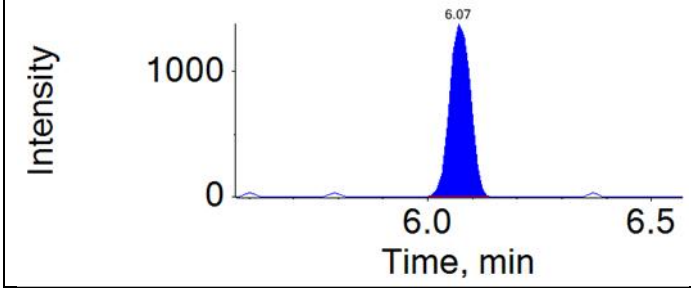


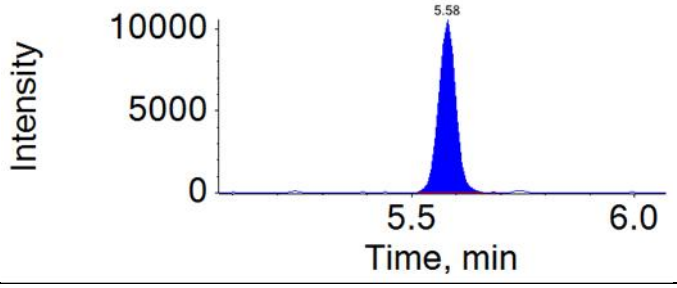
Analyte: PFDoDA	Extraction Standard: 13C2-PFDoDA
613.0 / 569.0	615.0 / 570.0



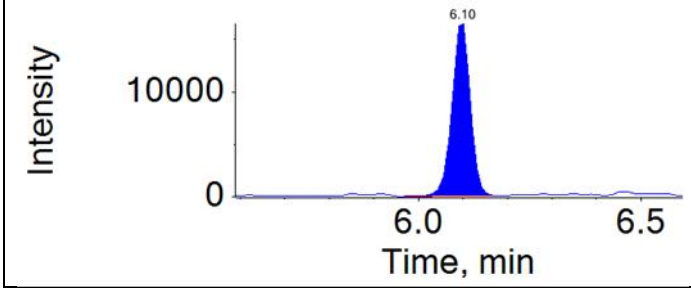


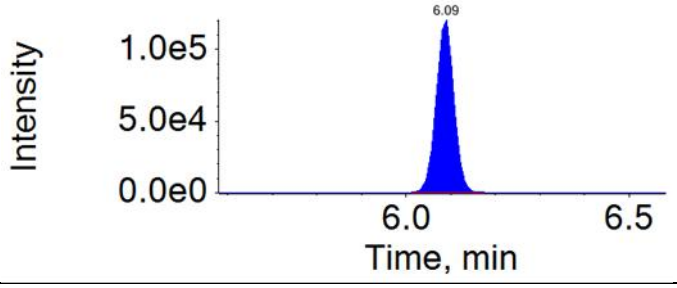
Analyte: 10:2-FTS	Extraction Standard: 13C2-8:2-FTS
627.0 / 607.0	529.0 / 81.0





Analyte: NMePFOSAE	Extraction Standard: d7-NMePFOSAE
616.0 / 59.0	623.0 / 59.0



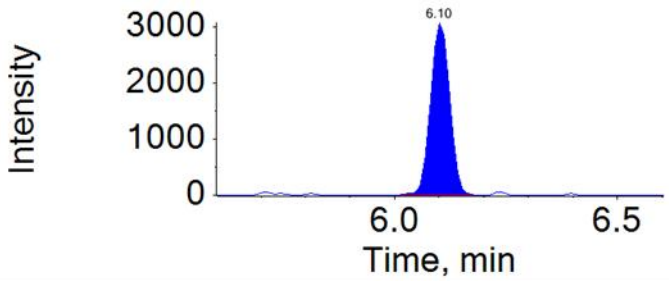


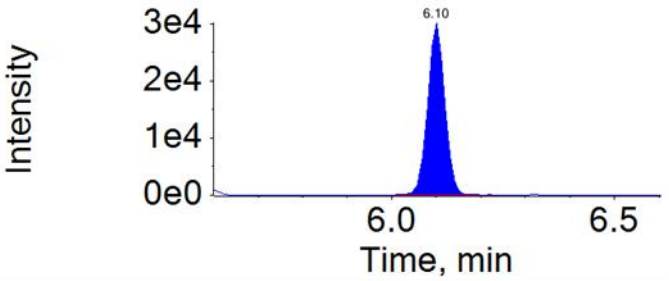
APPROVED
By JPT at 8:56 am, 11/16/18

REVIEWED
By HMK at 7:38 am, 11/19/18

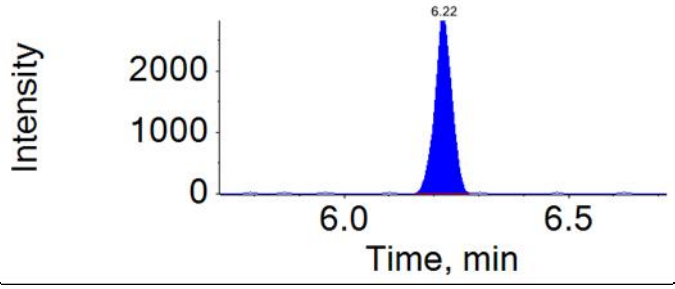
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV15DCCV1-4 11/16/2018 8:47:00 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

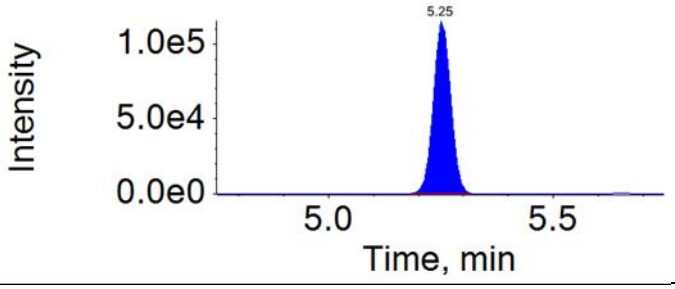
Analyte: NMePFOSA	Extraction Standard: d3-NMePFOSA
512.0 / 169.0	515.0 / 169.0



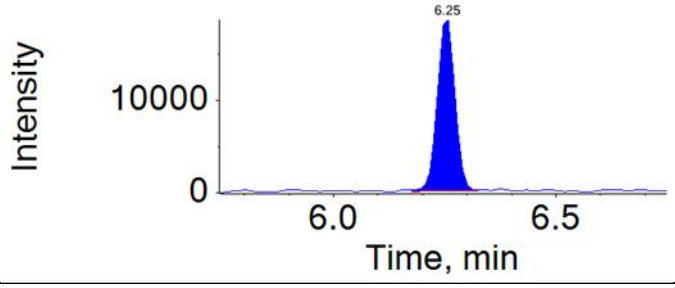


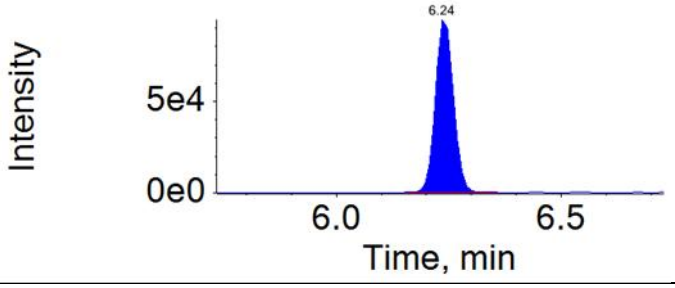
Analyte: PFDoS	Extraction Standard: 13C8-PFOS
699.0 / 80.0	507.0 / 80.0



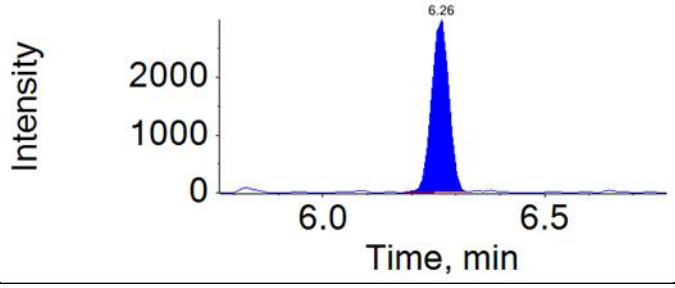


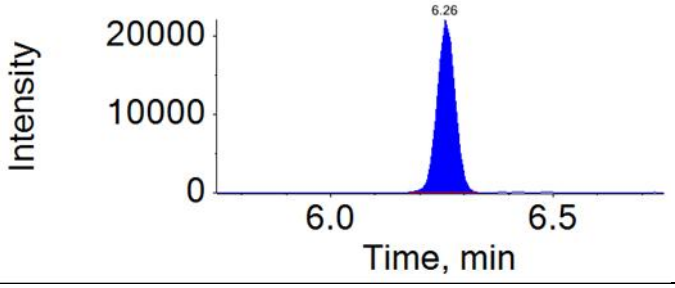
Analyte: NEtPFOSAE	Extraction Standard: d9-NEtPFOSAE
630.0 / 59.0	639.0 / 59.0





Analyte: NEtPFOSA	Extraction Standard: d5-NEtPFOSA
526.0 / 169.0	531.0 / 169.0



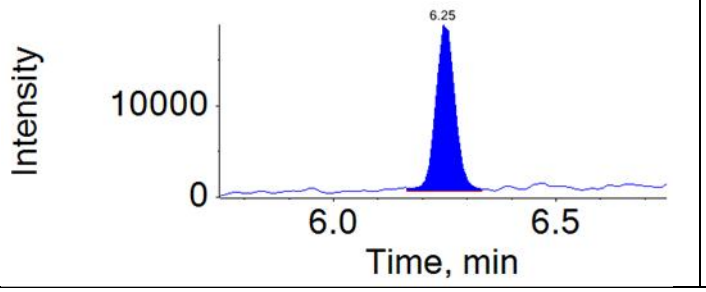


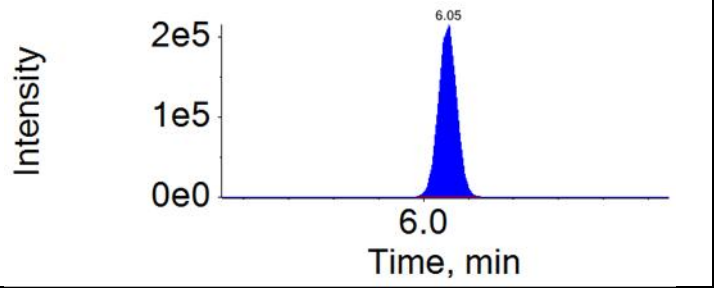
APPROVED
By JPT at 8:56 am, 11/16/18

REVIEWED
By HMK at 7:38 am, 11/19/18

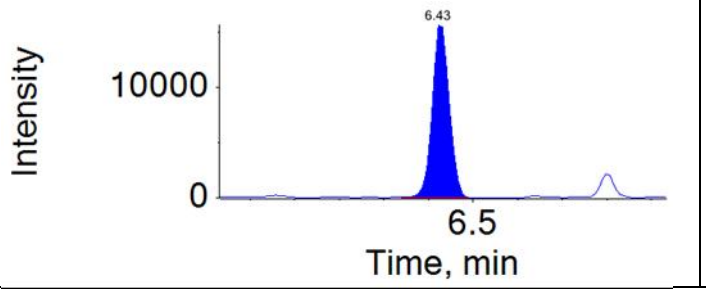
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV15DCCV1-4 11/16/2018 8:47:00 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

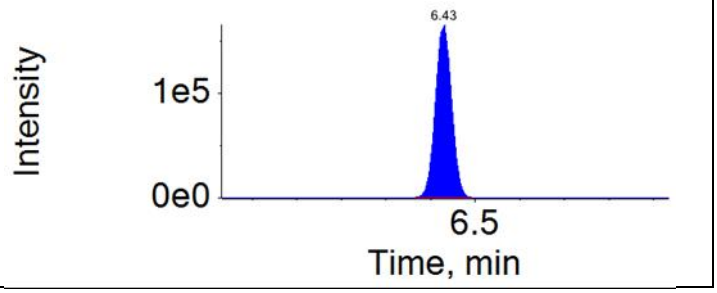
Analyte: PFTrDA	Extraction Standard: 13C2-PFDoDA
663.0 / 619.0	615.0 / 570.0



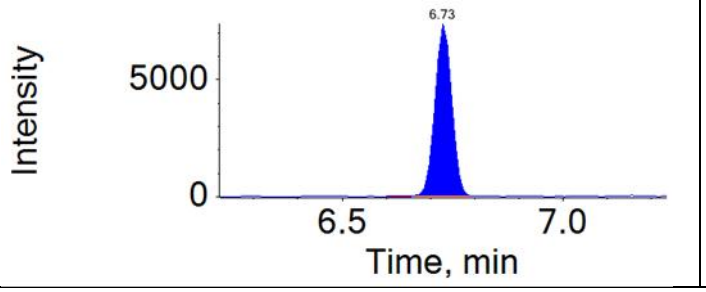


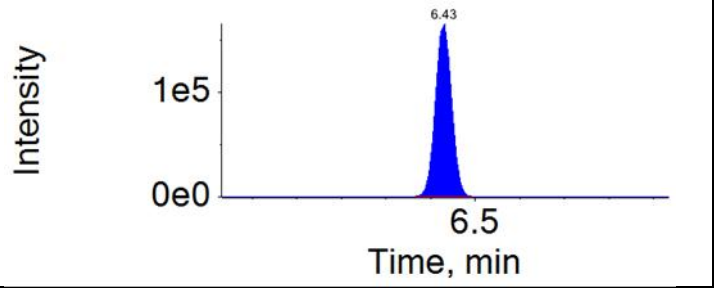
Analyte: PFTeDA	Extraction Standard: 13C2-PFTeDA
713.0 / 669.0	715.0 / 670.0



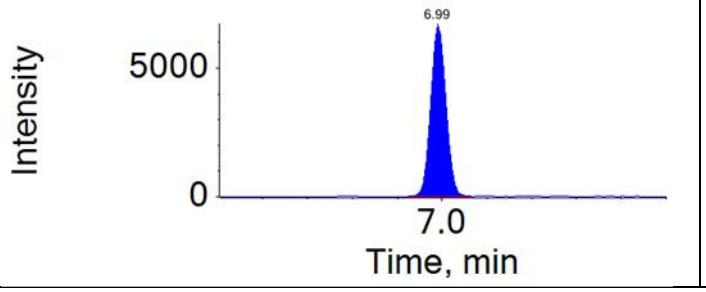


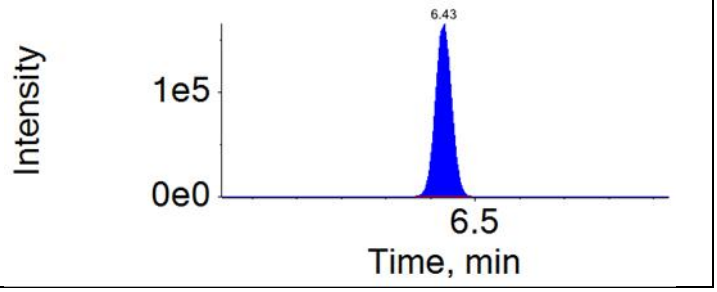
Analyte: PFHxDA	Extraction Standard: 13C2-PFTeDA
813.0 / 769.0	715.0 / 670.0





Analyte: PFODA	Extraction Standard: 13C2-PFTeDA
913.0 / 869.0	715.0 / 670.0



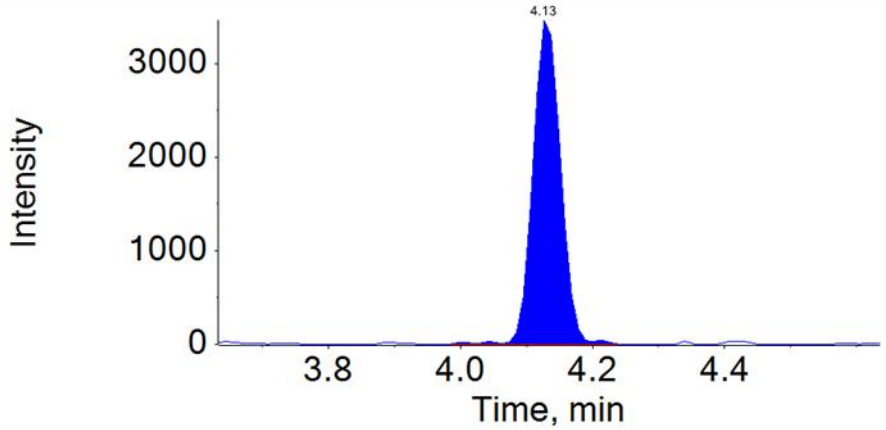


APPROVED
By JPT at 8:56 am, 11/16/18

REVIEWED
By HMK at 7:38 am, 11/19/18

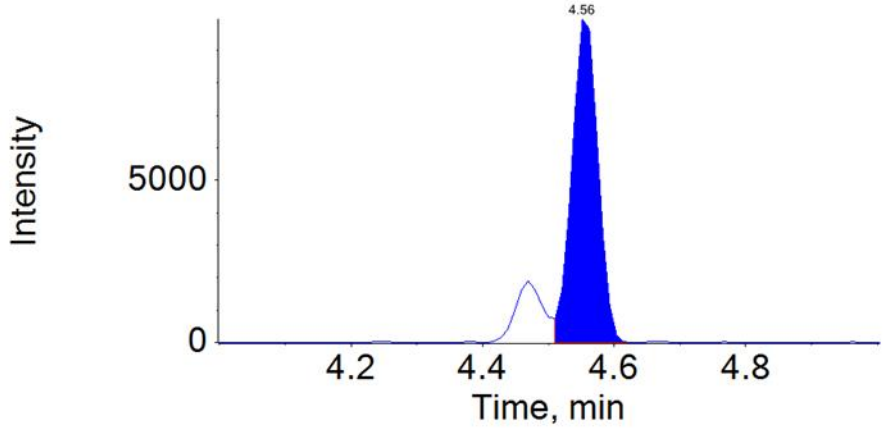
Results Table Name: 18NOV15DCCV1-4
Results Table Date: 11/16/2018 8:47:00 AM
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

Component Name:
4:2-FTS
RT (min.):
4.13
Peak Area:
10165.0
Mass Range:
327.0 / 307.0
File Name:
18NOV15D-05.wiff
Sample Name:
CCV1_ISC_CAL2



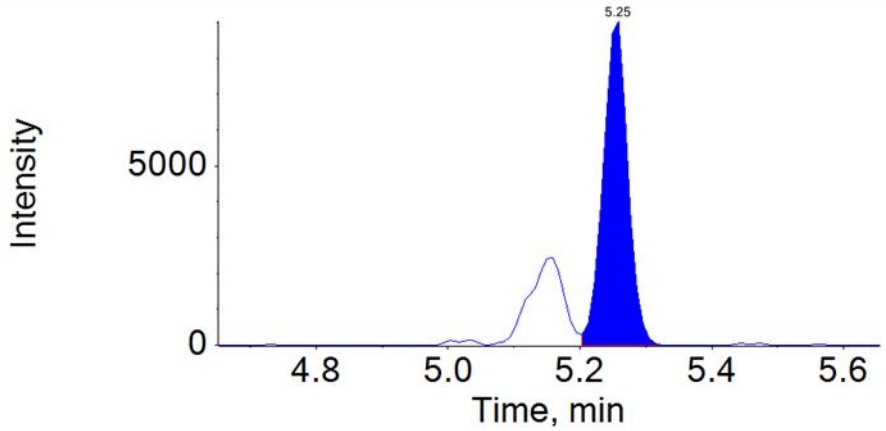
Integration Comment: incorrect integration

Component Name:
PFHxS
RT (min.):
4.56
Peak Area:
27581.5
Mass Range:
399.0 / 80.0
File Name:
18NOV15D-05.wiff
Sample Name:
CCV1_ISC_CAL2



Integration Comment: incorrect integration

Component Name:
PFOS
RT (min.):
5.25
Peak Area:
23710.7
Mass Range:
499.0 / 80.0
File Name:
18NOV15D-05.wiff
Sample Name:
CCV1_ISC_CAL2



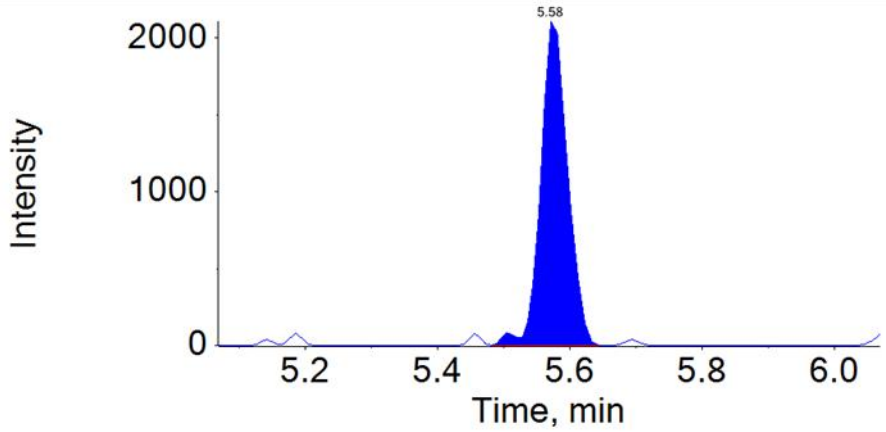
Integration Comment: incorrect integration

APPROVED
By JPT at 8:56 am, 11/16/18

REVIEWED
By HMK at 7:38 am, 11/19/18

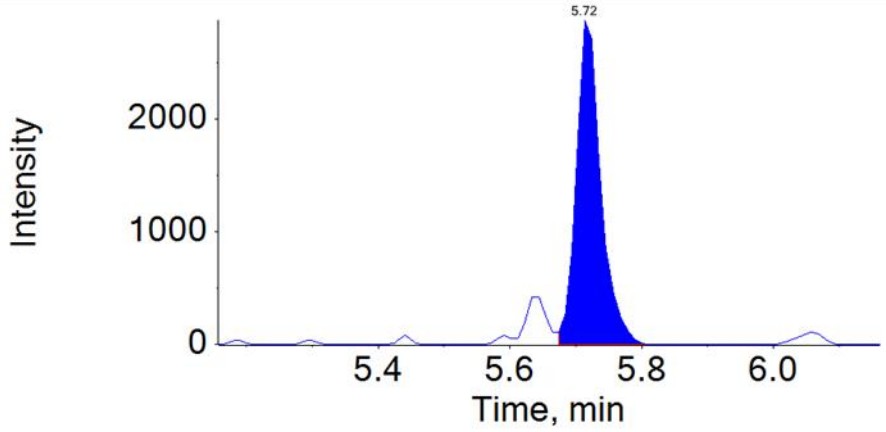
Results Table Name: 18NOV15DCCV1-4
Results Table Date: 11/16/2018 8:47:00 AM
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

Component Name:
8:2-FTS
RT (min.):
5.58
Peak Area:
6017.4
Mass Range:
527.0 / 507.0
File Name:
18NOV15D-05.wiff
Sample Name:
CCV1_ISC_CAL2



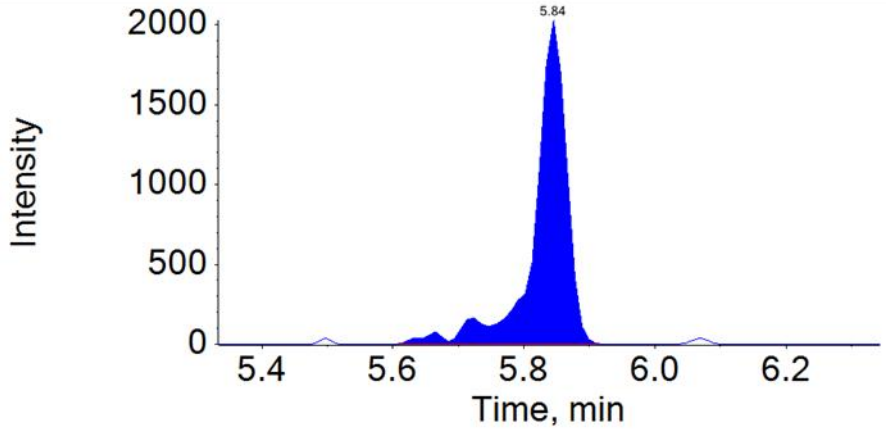
Integration Comment: incorrect integration

Component Name:
NMeFOSAA
RT (min.):
5.72
Peak Area:
7464.3
Mass Range:
570.0 / 419.0
File Name:
18NOV15D-05.wiff
Sample Name:
CCV1_ISC_CAL2



Integration Comment: incorrect integration

Component Name:
NEtFOSAA
RT (min.):
5.84
Peak Area:
6975.1
Mass Range:
584.0 / 419.0
File Name:
18NOV15D-05.wiff
Sample Name:
CCV1_ISC_CAL2

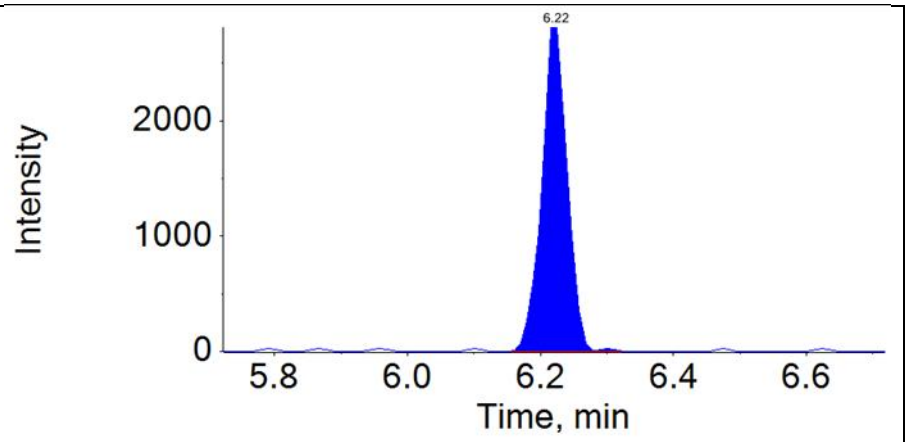


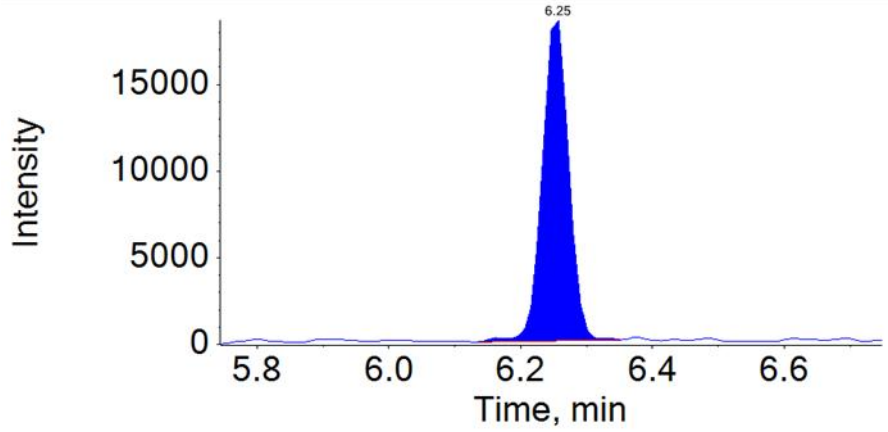
Integration Comment: incorrect integration

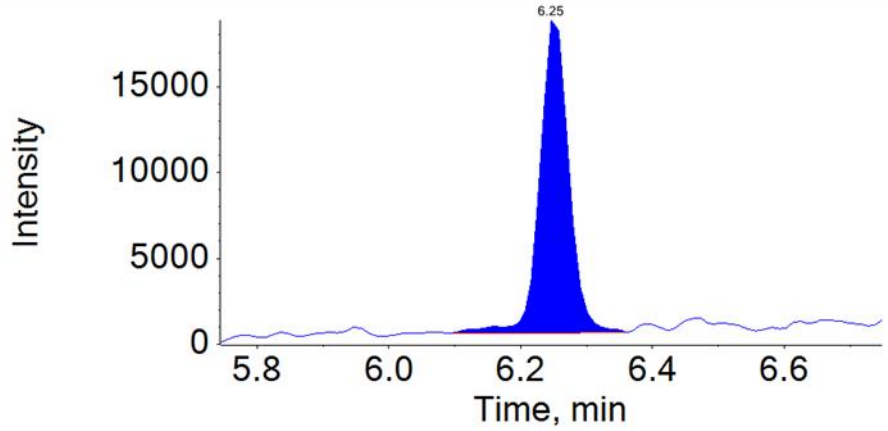
APPROVED
By JPT at 8:56 am, 11/16/18

REVIEWED
By HMK at 7:38 am, 11/19/18

Results Table Name: 18NOV15DCCV1-4
Results Table Date: 11/16/2018 8:47:00 AM
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

Component Name: PFDoS **RT (min.):** 6.22 **Peak Area:** 7594.2 **Mass Range:** 699.0 / 80.0 **File Name:** 18NOV15D-05.wiff **Sample Name:** CCV1_ISC_CAL2	 **Integration Comment:** incorrect integration

Component Name: NEtPFOSAE **RT (min.):** 6.25 **Peak Area:** 51963.9 **Mass Range:** 630.0 / 59.0 **File Name:** 18NOV15D-05.wiff **Sample Name:** CCV1_ISC_CAL2	 **Integration Comment:** incorrect integration

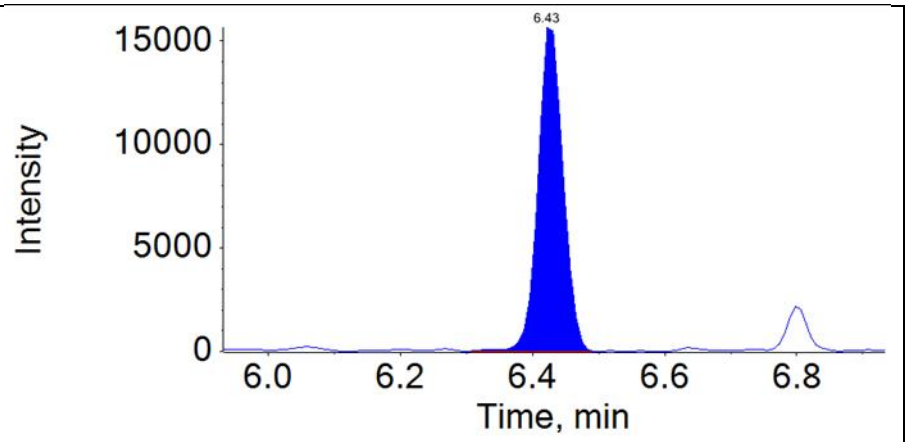
Component Name: PFTrDA **RT (min.):** 6.25 **Peak Area:** 56262.0 **Mass Range:** 663.0 / 619.0 **File Name:** 18NOV15D-05.wiff **Sample Name:** CCV1_ISC_CAL2	 **Integration Comment:** incorrect integration

APPROVED
By JPT at 8:56 am, 11/16/18

REVIEWED
By HMK at 7:38 am, 11/19/18

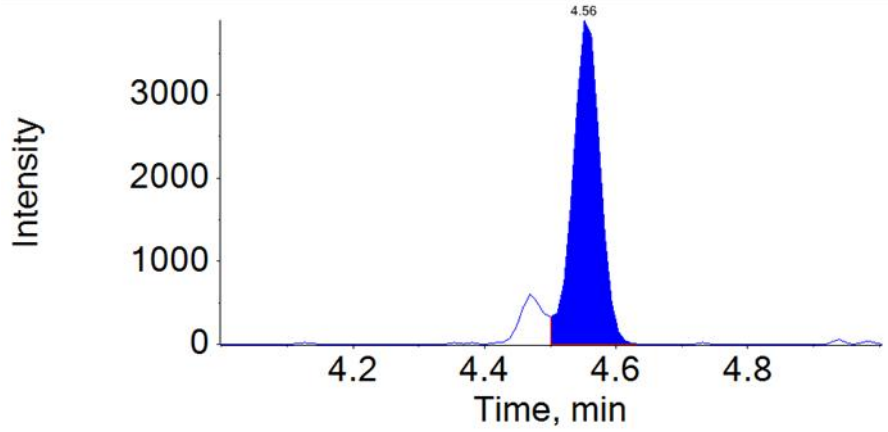
Results Table Name: 18NOV15DCCV1-4
Results Table Date: 11/16/2018 8:47:00 AM
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

Component Name:
PFTeDA
RT (min.):
6.43
Peak Area:
41424.1
Mass Range:
713.0 / 669.0
File Name:
18NOV15D-05.wiff
Sample Name:
CCV1_ISC_CAL2



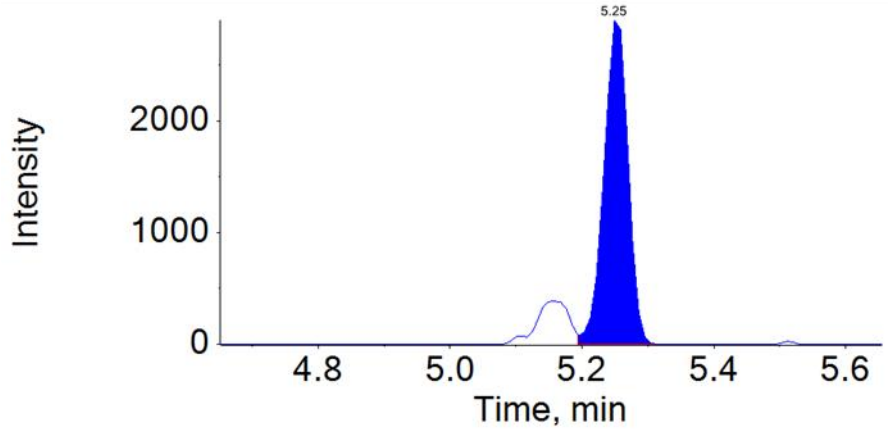
Integration Comment: incorrect integration

Component Name:
PFHxS_2
RT (min.):
4.56
Peak Area:
11251.5
Mass Range:
399.0 / 99.0
File Name:
18NOV15D-05.wiff
Sample Name:
CCV1_ISC_CAL2



Integration Comment: incorrect integration

Component Name:
PFOS_2
RT (min.):
5.25
Peak Area:
7439.1
Mass Range:
499.0 / 99.0
File Name:
18NOV15D-05.wiff
Sample Name:
CCV1_ISC_CAL2



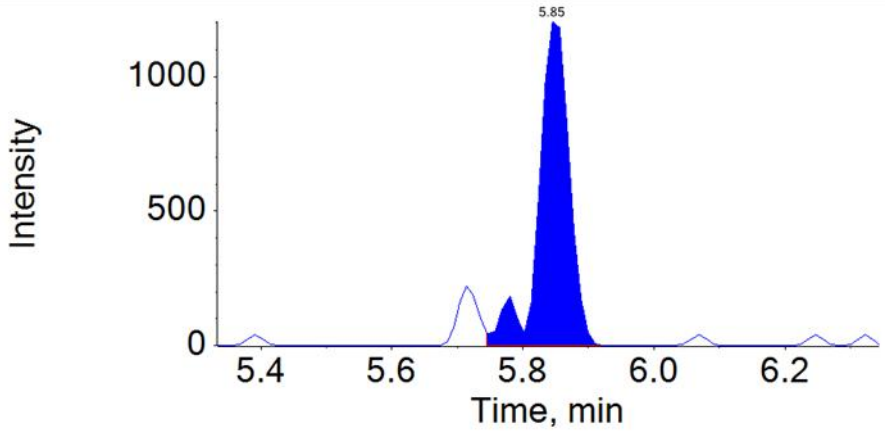
Integration Comment: incorrect integration

APPROVED
By JPT at 8:56 am, 11/16/18

REVIEWED
By HMK at 7:38 am, 11/19/18

Results Table Name: 18NOV15DCCV1-4
Results Table Date: 11/16/2018 8:47:00 AM
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

Component Name:
NEtFOSAA_2
RT (min.):
5.85
Peak Area:
3974.9
Mass Range:
584.0 / 526.0
File Name:
18NOV15D-05.wiff
Sample Name:
CCV1_ISC_CAL2



Integration Comment: incorrect integration

APPROVED
By JPT at 8:56 am, 11/16/18

REVIEWED
By HMK at 7:38 am, 11/19/18

Results Table Name: 18NOV15DCCV1-4
Results Table Date: 11/16/2018 8:47:00 AM

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

APPROVED
By JPT at 8:56 am, 11/16/18

REVIEWED
By HMK at 7:38 am, 11/19/18

Ion Ratio Report

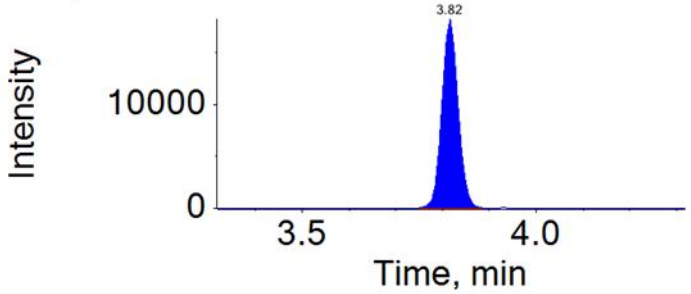
Sample Name: CCV1_ISC_CAL2 **Instrument Name:** LM27631 **File Name:** 18NOV15D-05.wiff

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	43949.1	A	N/A	1.0000			
PFBS_2	3.81	1.00	16763.3	A	N/A	0.3814	5	50	
4:2-FTS	4.13	1.00	10004.2	M	N/A	1.0000			
4:2 FTS_2	4.13	1.00	5937.7	A	N/A	0.5935		#NA!	
PFHxA	4.16	1.00	100146.0	A	N/A	1.0000			
PFHxA_2	4.17	1.00	1051.1	A	N/A	0.0105	-11	50	
PFPeS	4.18	1.10	23408.3	A	N/A	1.0000			
PFPeS_2	4.19	1.10	12242.3	A	N/A	0.5230	1	50	
PFHpA	4.55	1.00	102557.6	A	N/A	1.0000			
PFHpA_2	4.55	1.00	5680.1	A	N/A	0.0554	-2	50	
PFHxS	4.56	1.00	33173.1	M	N/A	1.0000			
PFHxS_2	4.56	1.00	12761.3	M	N/A	0.3847	12	50	
6:2-FTS	4.91	1.00	8730.1	A	N/A	1.0000			
6:2 FTS_2	4.91	1.00	4596.8	A	N/A	0.5265		#NA!	
PFHpS	4.91	1.08	34554.4	A	N/A	1.0000			
PFHpS_2	4.92	1.08	13298.6	A	N/A	0.3849	-5	50	
PFOA	4.92	1.00	101483.1	A	N/A	1.0000			
PFOA_2	4.92	1.00	6066.4	A	N/A	0.0598	5	50	
PFOS	5.25	1.00	33155.1	M	N/A	1.0000			
PFOS_2	5.25	1.00	8776.7	M	N/A	0.2647	-11	50	
PFNA	5.27	1.00	82368.1	A	N/A	1.0000			
PFNA_2	5.27	1.00	2107.4	A	N/A	0.0256	13	50	
PFNS	5.55	1.06	22643.7	A	N/A	1.0000			
PFNS_2	5.55	1.06	8812.1	A	N/A	0.3892	-18	50	
PFDA	5.57	1.00	72511.4	A	N/A	1.0000			
PFDA_2	5.58	1.00	406.5	A	N/A	0.0056	-29	50	
8:2-FTS	5.58	1.00	5899.7	M	N/A	1.0000			
8:2 FTS_2	5.58	1.00	4890.0	A	N/A	0.8289		#NA!	
NMeFOSAA	5.72	1.00	8526.2	M	N/A	1.0000			
NMeFOSAA_2	5.72	1.00	1811.6	A	N/A	0.2125	-18	50	
PFDS	5.81	1.11	16839.4	A	N/A	1.0000			
PFDS_2	5.81	1.11	8965.0	A	N/A	0.5324	5	50	
PFUnDA	5.83	1.00	58763.0	A	N/A	1.0000			
PFUnDA_2	5.84	1.00	259.6	A	N/A	0.0044	-20	50	
NEtFOSAA	5.84	1.00	6799.8	M	N/A	1.0000			
NEtFOSAA_2	5.85	1.00	4445.0	M	N/A	0.6537	-9	50	
PFDoDA	6.05	1.00	69810.9	A	N/A	1.0000			
PFDoDA_2	6.05	1.00	789.4	A	N/A	0.0113	-27	50	
10:2-FTS	6.07	1.09	4486.1	A	N/A	1.0000			
10:2 FTS_2	6.08	1.09	3329.2	A	N/A	0.7421		#NA!	
PFTrDA	6.25	1.03	54960.7	M	N/A	1.0000			
PFTrDA_2	6.25	1.03	610.1	A	N/A	0.0111	30	50	
PFTeDA	6.43	1.00	41384.0	M	N/A	1.0000			
PFTeDA_2	6.42	1.00	242.3	A	N/A	0.0059	-6	50	
PFHxDA	6.73	1.05	19352.2	A	N/A	1.0000			
PFHxDA_2	6.73	1.05	1411.7	A	N/A	0.0729	8	50	
PFODA	6.99	1.09	15579.3	A	N/A	1.0000			
PFODA_2	6.99	1.09	436.2	A	N/A	0.0280	2	50	

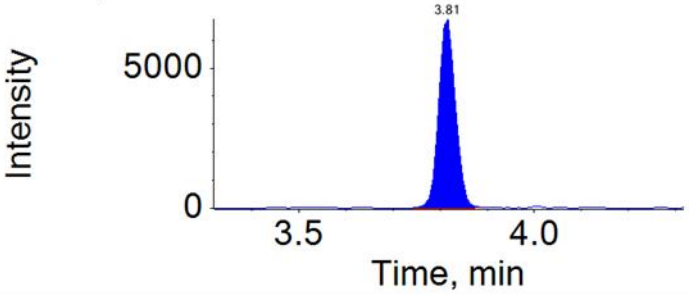
APPROVED
By JPT at 8:56 am, 11/16/18

REVIEWED
By HMK at 7:38 am, 11/19/18

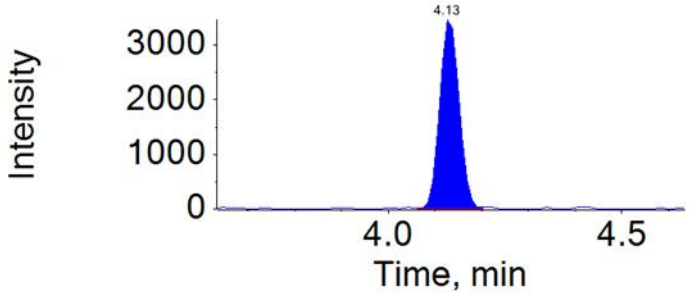
Component: PFBS
Primary Mass: 299.0 / 80.0



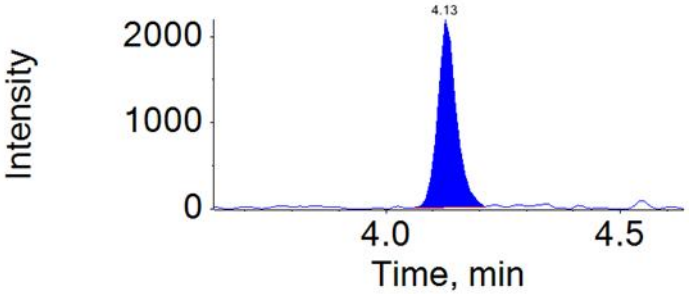
Component: PFBS_2
Secondary Mass: 299.0 / 99.0



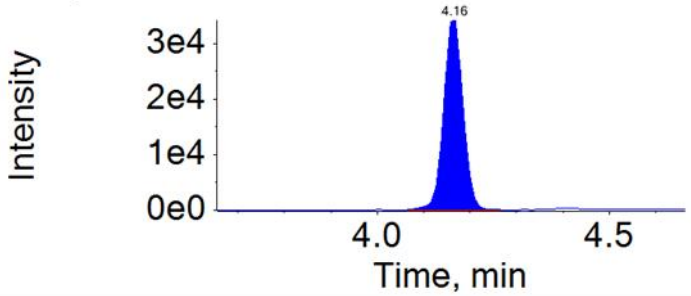
Component: 4:2-FTS
Primary Mass: 327.0 / 307.0



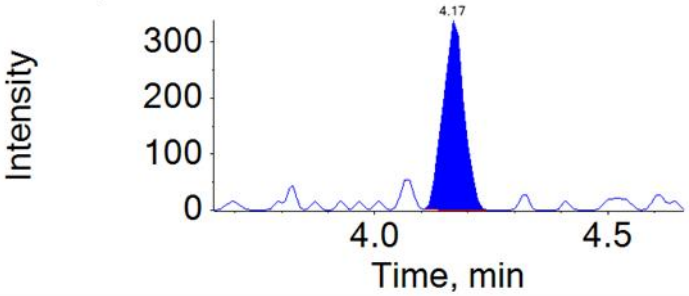
Component: 4:2 FTS_2
Secondary Mass: 327.0 / 81.0



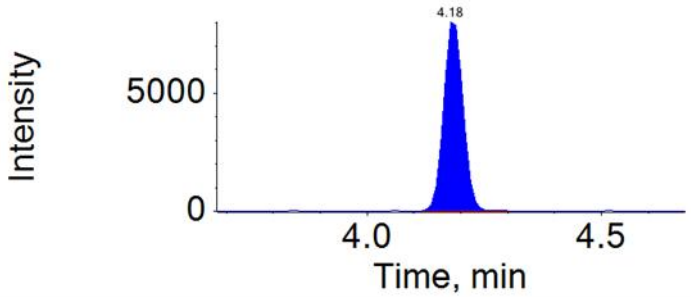
Component: PFHxA
Primary Mass: 313.0 / 269.0



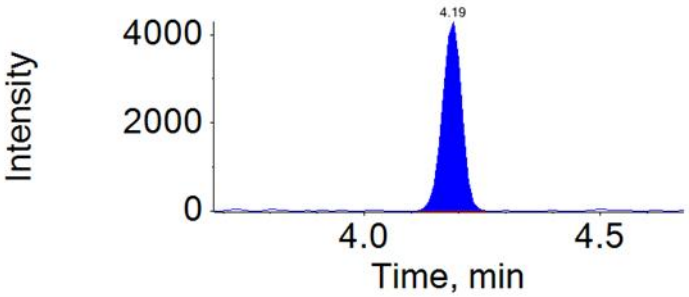
Component: PFHxA_2
Secondary Mass: 313.0 / 119.0



Component: PFPeS
Primary Mass: 349.0 / 80.0



Component: PFPeS_2
Secondary Mass: 349.0 / 99.0



APPROVED
By JPT at 8:56 am, 11/16/18

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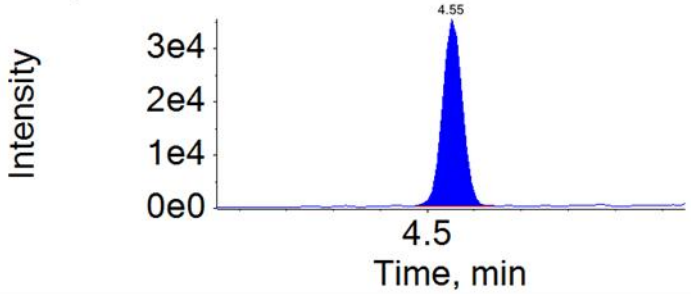
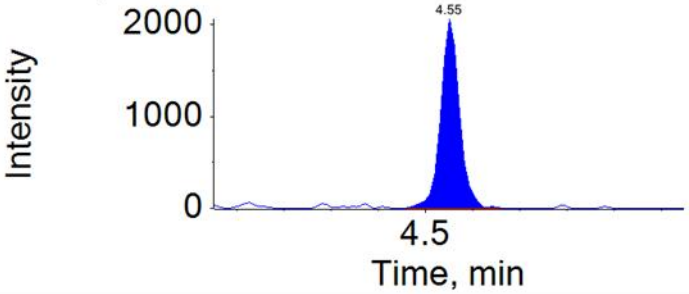
By HMK at 7:38 am, 11/19/18

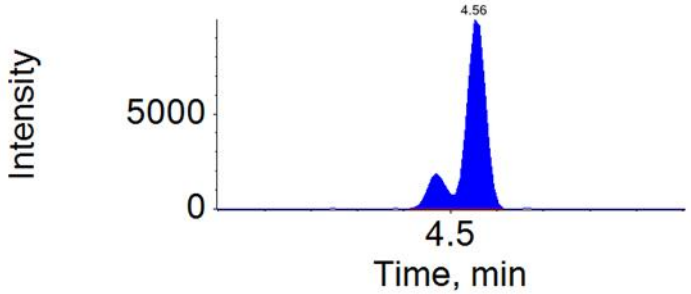
Component: PFHpA
Primary Mass: 363.0 / 319.0



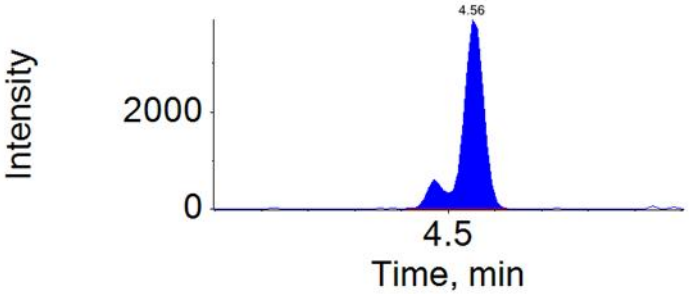
Component: PFHpA_2
Secondary Mass: 363.0 / 169.0



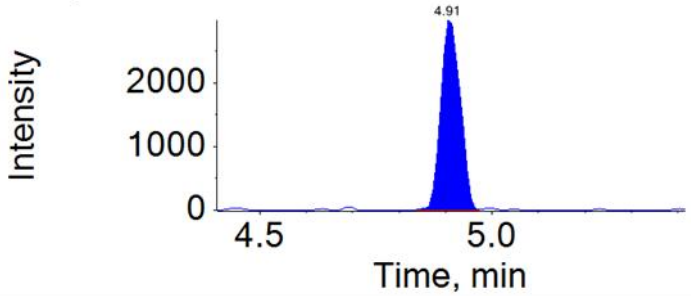
Component: PFHxS
Primary Mass: 399.0 / 80.0



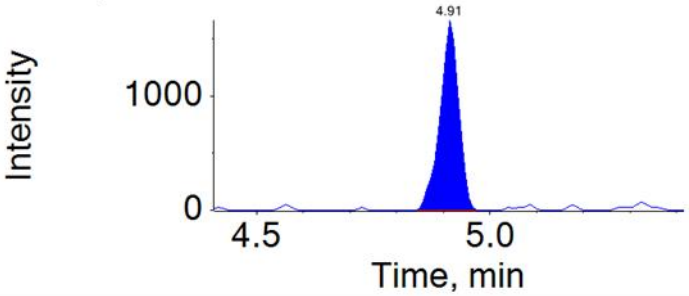
Component: PFHxS_2
Secondary Mass: 399.0 / 99.0



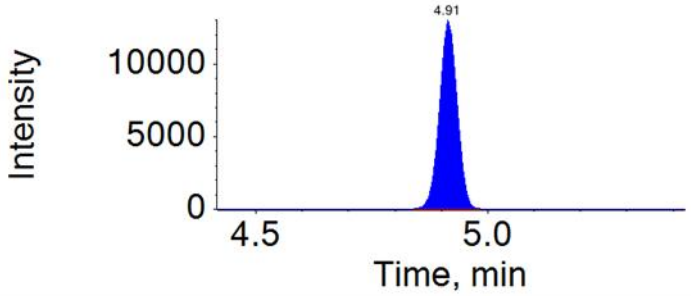
Component: 6:2-FTS
Primary Mass: 427.0 / 407.0



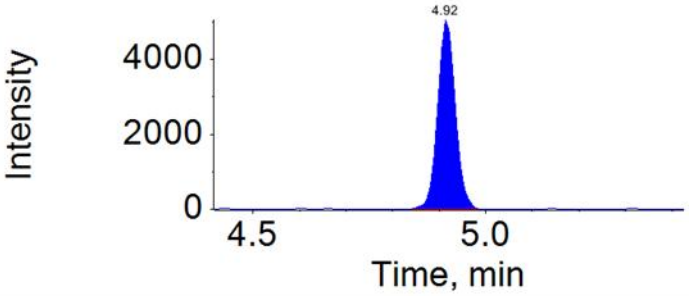
Component: 6:2 FTS_2
Secondary Mass: 427.0 / 81.0



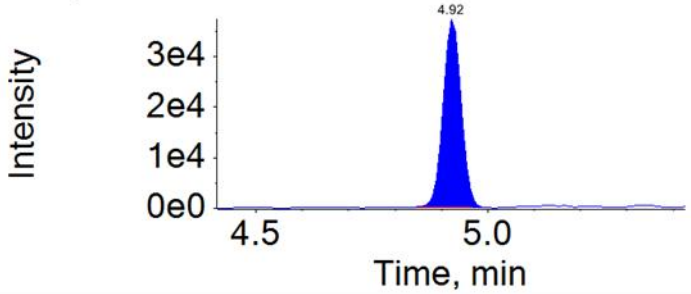
Component: PFHpS
Primary Mass: 449.0 / 80.0



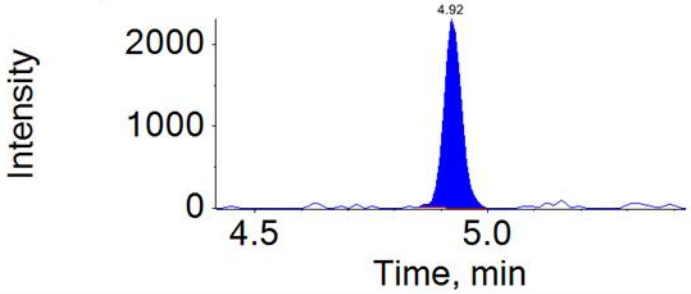
Component: PFHpS_2
Secondary Mass: 449.0 / 99.0



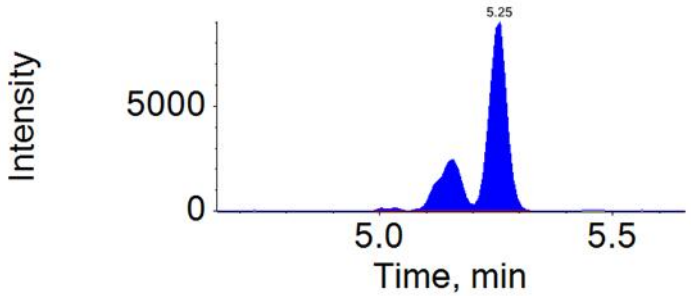
Component: PFOA
Primary Mass: 413.0 / 369.0



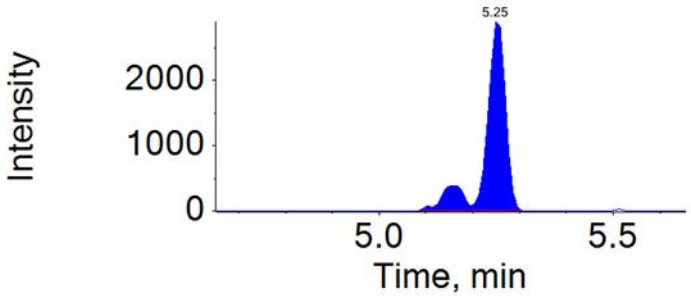
Component: PFOA_2
Secondary Mass: 413.0 / 169.0



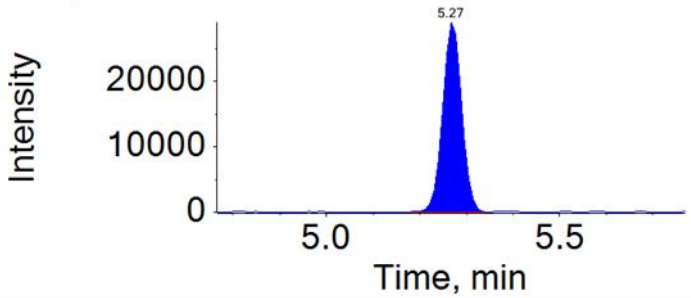
Component: PFOS
Primary Mass: 499.0 / 80.0



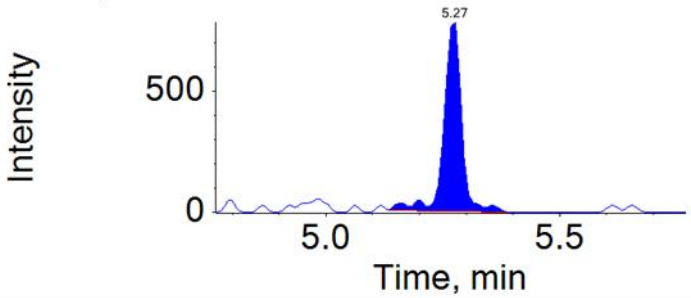
Component: PFOS_2
Secondary Mass: 499.0 / 99.0



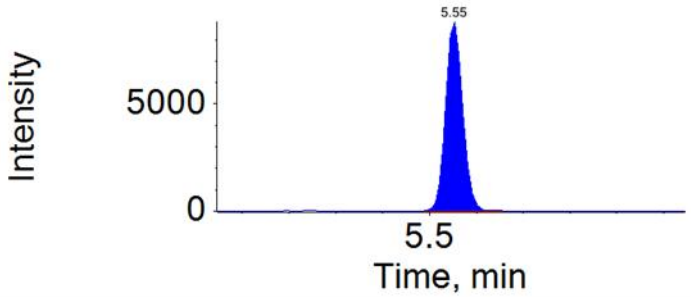
Component: PFNA
Primary Mass: 463.0 / 419.0



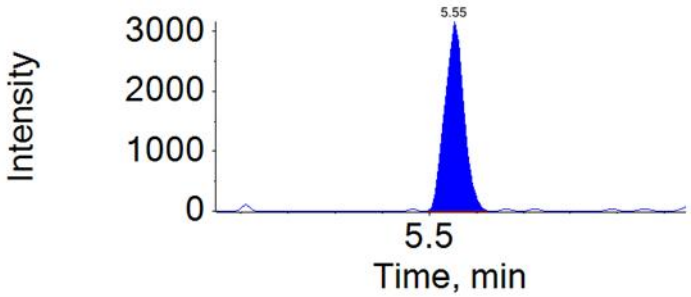
Component: PFNA_2
Secondary Mass: 463.0 / 169.0



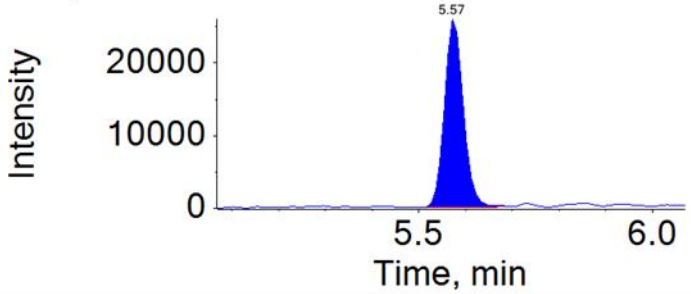
Component: PFNS
Primary Mass: 549.0 / 80.0



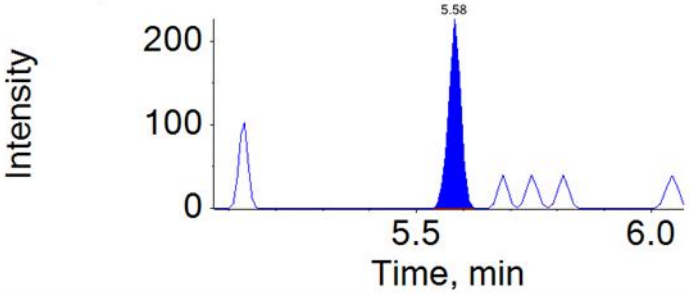
Component: PFNS_2
Secondary Mass: 549.0 / 99.0



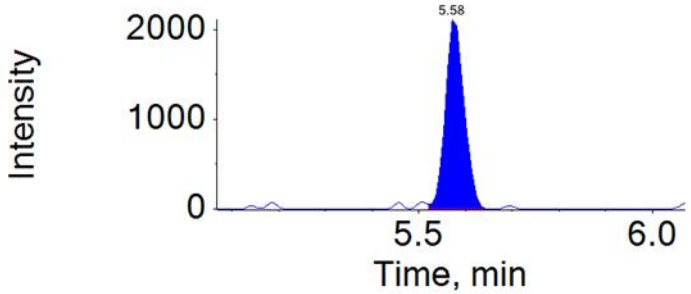
Component: PFDA
Primary Mass: 513.0 / 469.0



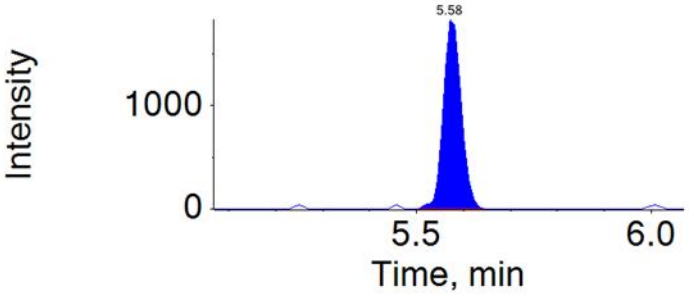
Component: PFDA_2
Secondary Mass: 513.0 / 169.0



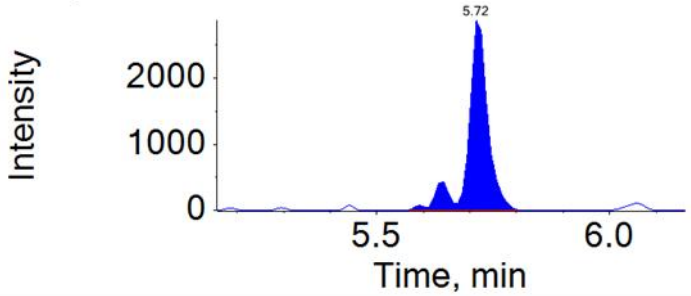
Component: 8:2-FTS
Primary Mass: 527.0 / 507.0



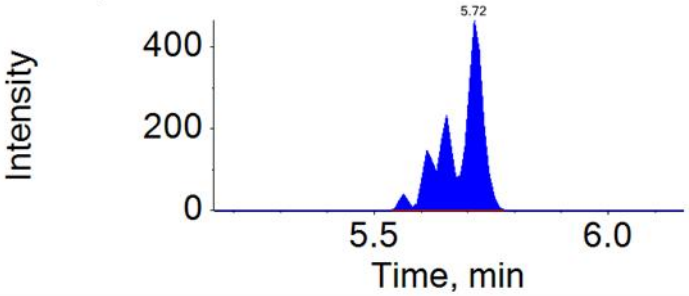
Component: 8:2 FTS_2
Secondary Mass: 527.0 / 81.0



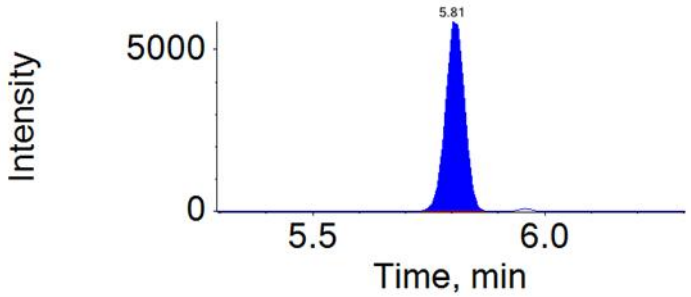
Component: NMeFOSAA
Primary Mass: 570.0 / 419.0



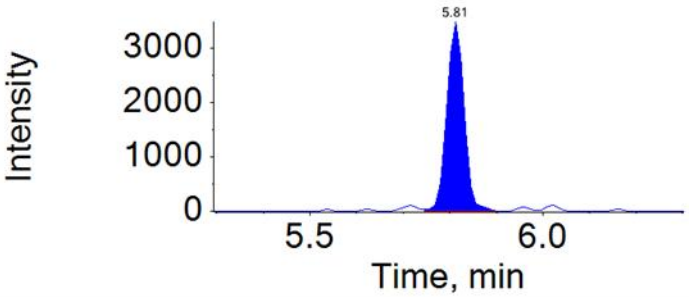
Component: NMeFOSAA_2
Secondary Mass: 570.0 / 483.0



Component: PFDS
Primary Mass: 599.0 / 80.0



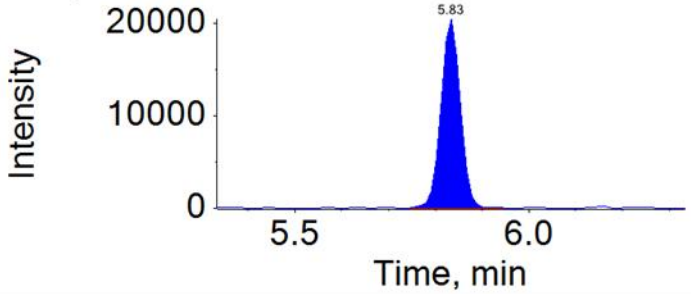
Component: PFDS_2
Secondary Mass: 599.0 / 99.0



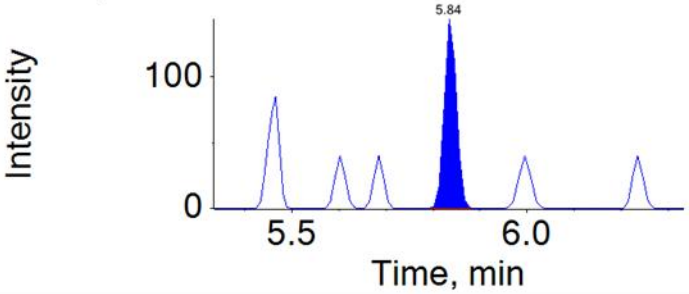
APPROVED
By JPT at 8:56 am, 11/16/18

REVIEWED
By HMK at 7:38 am, 11/19/18

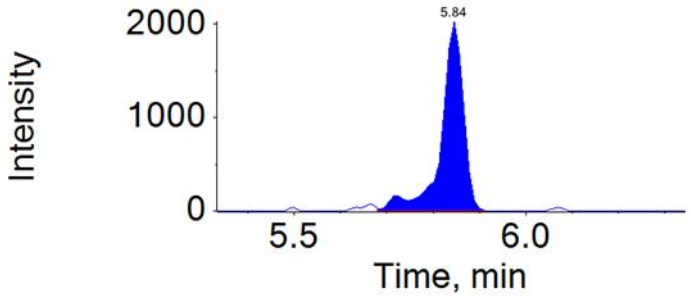
Component: PFUnDA
Primary Mass: 563.0 / 519.0



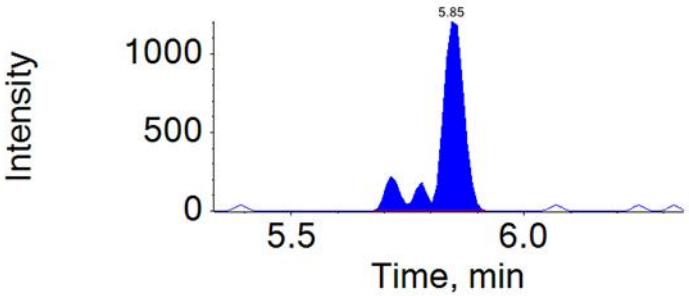
Component: PFUnDA_2
Secondary Mass: 563.0 / 169.0



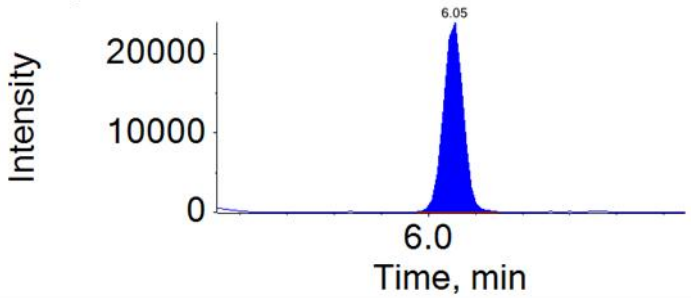
Component: NEtFOSAA
Primary Mass: 584.0 / 419.0



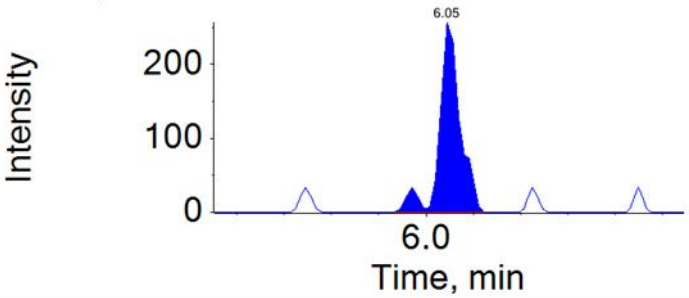
Component: NEtFOSAA_2
Secondary Mass: 584.0 / 526.0



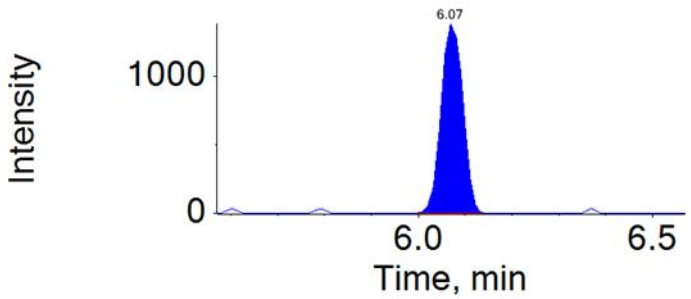
Component: PFDoDA
Primary Mass: 613.0 / 569.0



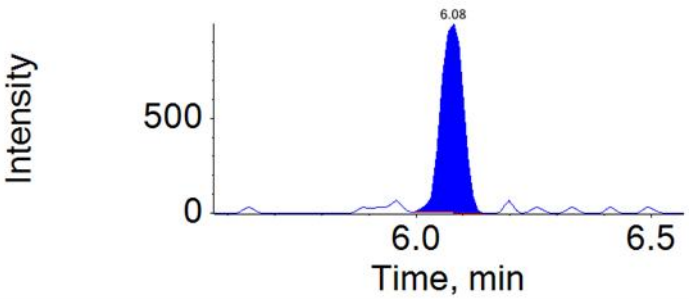
Component: PFDoDA_2
Secondary Mass: 613.0 / 169.0



Component: 10:2-FTS
Primary Mass: 627.0 / 607.0



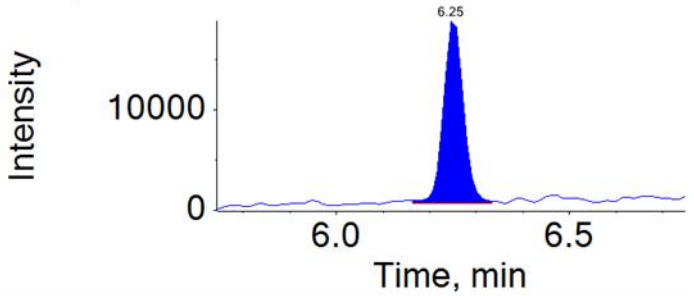
Component: 10:2 FTS_2
Secondary Mass: 627.0 / 81.0



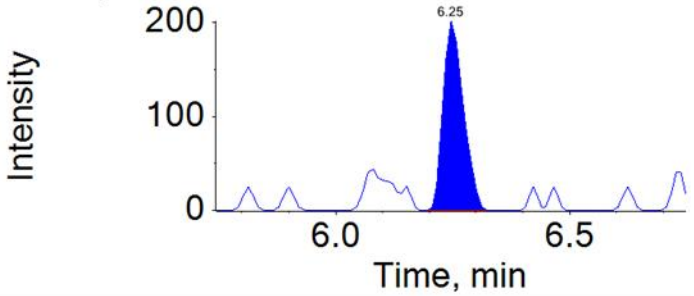
APPROVED
By JPT at 8:56 am, 11/16/18

REVIEWED
By HMK at 7:38 am, 11/19/18

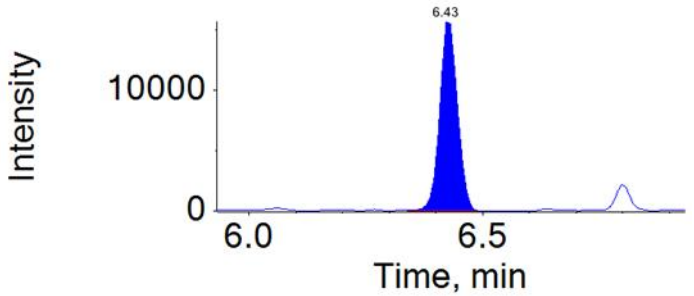
Component: PFTrDA
Primary Mass: 663.0 / 619.0



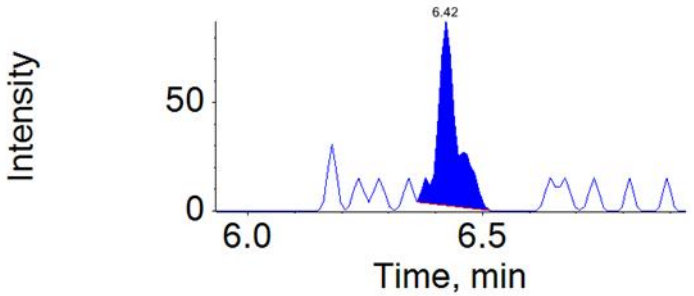
Component: PFTrDA_2
Secondary Mass: 663.0 / 169.0



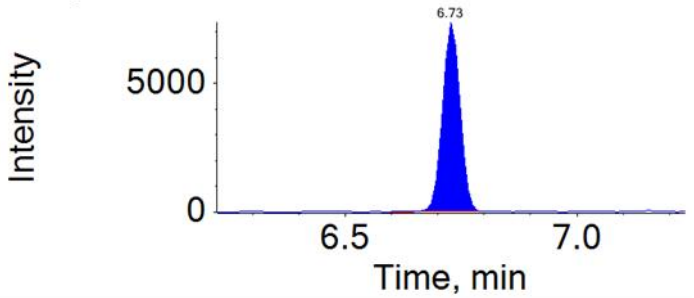
Component: PFTeDA
Primary Mass: 713.0 / 669.0



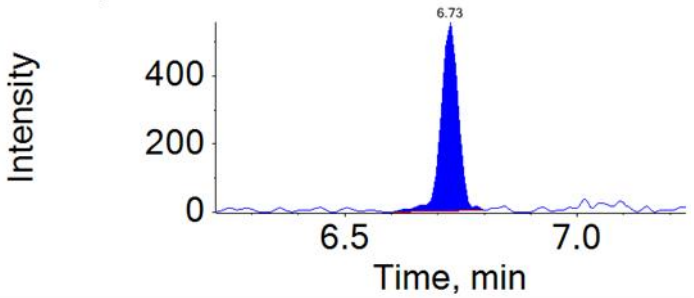
Component: PFTeDA_2
Secondary Mass: 713.0 / 169.0



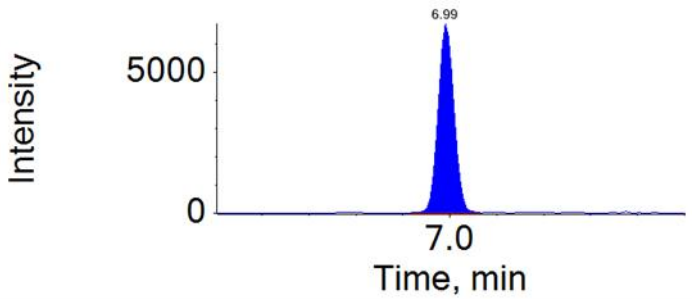
Component: PFHxDA
Primary Mass: 813.0 / 769.0



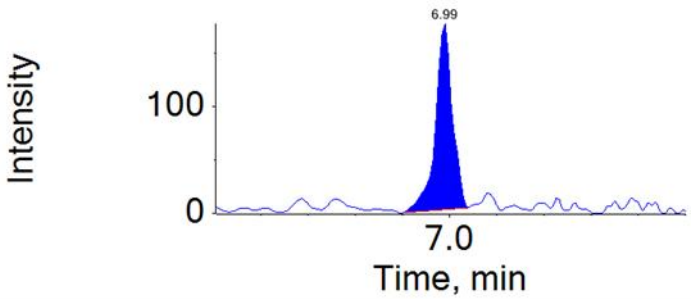
Component: PFHxDA_2
Secondary Mass: 813.0 / 169.0



Component: PFODA
Primary Mass: 913.0 / 869.0



Component: PFODA_2
Secondary Mass: 913.0 / 169.0



APPROVED
By JPT at 8:56 am, 11/16/18

REVIEWED
By HMK at 7:38 am, 11/19/18

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV15DCCV1-4 11/16/2018 8:47:00 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Sample Name:	INBLK			**Data File:**		18NOV15D-06.wiff
Sample ID:	methanol + labels			**Acquis Date:**		2018-11-15T12:48:12
Sample Type:	Unknown			**Instrument:**		LM27631
Vial Position:	1			**Acquis Method:**		18AUG13_3uL.dam
Injection Vol:	3.00			**Result Table:**		18NOV15DCCV1-4
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: 18NOV15D-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	752690.7	732179.1	3	50	
13C2-PFOA	5.0	524540.4	479663.2	9	50	
13C4-PFOS	4.8	277209.8	269685.3	3	50	
13C2-PFDA	5.0	320842.0	302309.9	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	846144.3	13C3-PFBA	752690.7	1.124	5.000	5.040	101	70-130	
E13C5-PFPeA	794384.0	13C3-PFBA	752690.7	1.055	5.000	4.734	95	70-130	
E13C3-PFBS	498508.5	13C3-PFBA	752690.7	0.662	4.650	4.675	101	70-130	
E13C2-4:2-FTS	54878.9	13C2-PFOA	524540.4	0.105	4.670	4.660	100	70-130	
E13C5-PFHxA	710258.0	13C2-PFOA	524540.4	1.354	5.000	4.891	98	70-130	
E13C3-PFHxS	363590.9	13C2-PFOA	524540.4	0.693	4.730	4.756	101	70-130	
E13C4-PFHpA	564796.4	13C2-PFOA	524540.4	1.077	5.000	4.851	97	70-130	
E13C2-6:2-FTS	40761.5	13C2-PFOA	524540.4	0.078	4.750	5.199	109	70-130	
E13C8-PFOA	982107.7	13C2-PFOA	524540.4	1.872	5.000	5.158	103	70-130	
E13C8-PFOS	296151.8	13C4-PFOS	277209.8	1.068	4.780	4.734	99	70-130	
E13C9-PFNA	505858.8	13C4-PFOS	277209.8	1.825	5.000	5.088	102	70-130	
E13C6-PFDA	706781.0	13C2-PFDA	320842.0	2.203	5.000	5.141	103	70-130	
E13C2-8:2-FTS	29281.7	13C2-PFDA	320842.0	0.091	4.790	4.552	95	70-130	
E13C8-PFOSA	717711.5	13C2-PFDA	320842.0	2.237	5.000	4.959	99	70-130	
Ed3-NMeFOSAA	82084.3	13C2-PFDA	320842.0	0.256	5.000	4.618	92	70-130	
E13C7-PFUnDA	288799.8	13C2-PFDA	320842.0	0.900	5.000	5.226	105	70-130	
Ed5-NEtFOSAA	67339.9	13C2-PFDA	320842.0	0.210	5.000	4.440	89	70-130	
E13C2-PFDoDA	596655.3	13C2-PFDA	320842.0	1.860	5.000	4.828	97	70-130	
Ed7-NMePFOSAE	360623.2	13C2-PFDA	320842.0	1.124	5.000	4.864	97	70-130	
Ed3-NMePFOSA	79780.5	13C2-PFDA	320842.0	0.249	5.000	4.518	90	70-130	
Ed9-NEtPFOSAE	293338.6	13C2-PFDA	320842.0	0.914	5.000	4.755	95	70-130	
Ed5-NEtPFOSA	63584.6	13C2-PFDA	320842.0	0.198	5.000	4.649	93	70-130	
E13C2-PFTeDA	458603.0	13C2-PFDA	320842.0	1.429	5.000	5.018	100	70-130	

APPROVED
By JPT at 8:56 am, 11/16/18

REVIEWED
By HMK at 7:38 am, 11/19/18

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV15DCCV1-4 11/16/2018 8:47:00 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

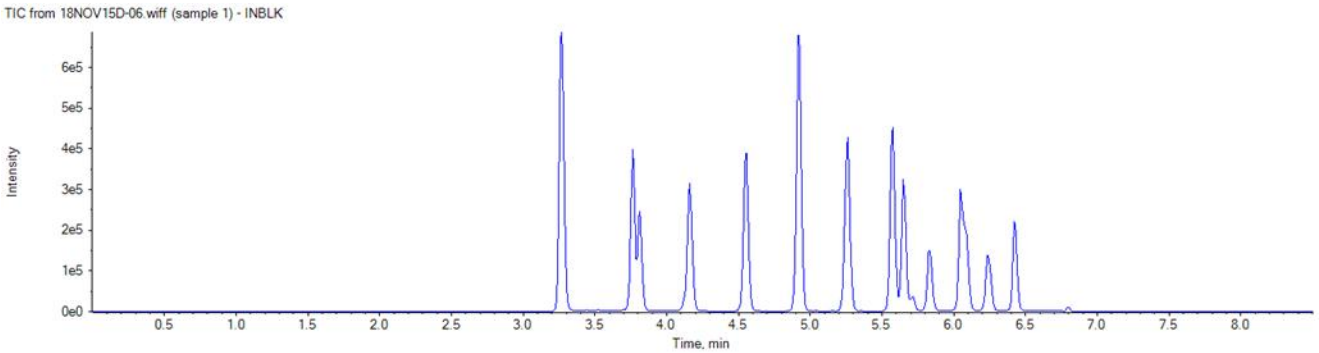
Analyte Quantitation Peak Table

Sample Name: INBLK **Instrument Name:** LM27631 **File Name:** 18NOV15D-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	846144.3	N/A	
PFPeA	N/A	N/A	N/A		A	13C5-PFPeA	3.76	794384.0	N/A	
PFBS	N/A	N/A	N/A		A	13C3-PFBS	3.81	498508.5	N/A	
4:2-FTS	N/A	N/A	N/A		A	13C2-4:2-FTS	4.13	54878.9	N/A	
PFHxA	N/A	N/A	N/A		A	13C5-PFHxA	4.16	710258.0	N/A	
PFPeS	N/A	N/A	N/A		A	13C3-PFBS	3.81	498508.5	N/A	
PFHpA	N/A	N/A	N/A		A	13C4-PFHpA	4.55	564796.4	N/A	
PFHxS	N/A	N/A	N/A		A	13C3-PFHxS	4.55	363590.9	N/A	
6:2-FTS	N/A	N/A	N/A		A	13C2-6:2-FTS	4.91	40761.5	N/A	
PFHpS	N/A	N/A	N/A		A	13C3-PFHxS	4.55	363590.9	N/A	
PFOA	N/A	N/A	N/A		A	13C8-PFOA	4.92	982107.7	N/A	
PFOS	N/A	N/A	N/A		A	13C8-PFOS	5.25	296151.8	N/A	
PFNA	N/A	N/A	N/A		A	13C9-PFNA	5.27	505858.8	N/A	
PFNS	N/A	N/A	N/A		A	13C8-PFOS	5.25	296151.8	N/A	
PFDA	N/A	N/A	N/A		A	13C6-PFDA	5.57	706781.0	N/A	
8:2-FTS	N/A	N/A	N/A		A	13C2-8:2-FTS	5.58	29281.7	N/A	
PFOSA	N/A	N/A	N/A		A	13C8-PFOSA	5.65	717711.5	N/A	
NMeFOSAA	N/A	N/A	N/A		A	d3-NMeFOSAA	5.71	82084.3	N/A	
PFDS	N/A	N/A	N/A		A	13C8-PFOS	5.25	296151.8	N/A	
PFUnDA	N/A	N/A	N/A		A	13C7-PFUnDA	5.83	288799.8	N/A	
NEtFOSAA	N/A	N/A	N/A		A	d5-NEtFOSAA	5.84	67339.9	N/A	
PFDoDA	N/A	N/A	N/A		A	13C2-PFDoDA	6.05	596655.3	N/A	
10:2-FTS	N/A	N/A	N/A		A	13C2-8:2-FTS	5.58	29281.7	N/A	
NMePFOSAE	N/A	N/A	N/A		A	d7-NMePFOSAE	6.09	360623.2	N/A	
NMePFOSA	N/A	N/A	N/A		A	d3-NMePFOSA	6.10	79780.5	N/A	
PFDoS	N/A	N/A	N/A		A	13C8-PFOS	5.25	296151.8	N/A	
NEtPFOSAE	N/A	N/A	N/A		A	d9-NEtPFOSAE	6.24	293338.6	N/A	
NEtPFOSA	N/A	N/A	N/A		A	d5-NEtPFOSA	6.26	63584.6	N/A	
PFTrDA	N/A	N/A	N/A		A	13C2-PFDoDA	6.05	596655.3	N/A	
PFTeDA	N/A	N/A	N/A		A	13C2-PFTeDA	6.43	458603.0	N/A	
PFHxDA	N/A	N/A	N/A		A	13C2-PFTeDA	6.43	458603.0	N/A	
PFODA	N/A	N/A	N/A		A	13C2-PFTeDA	6.43	458603.0	N/A	

Total Ion Chromatogram

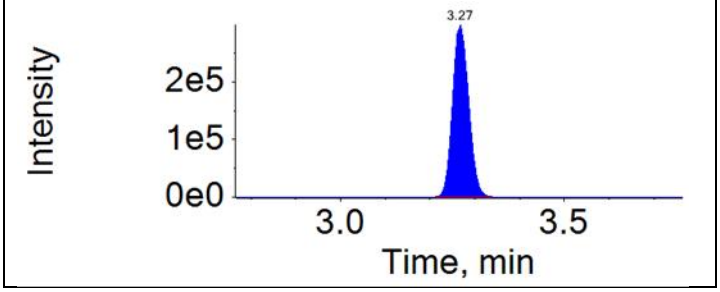


APPROVED
By JPT at 8:56 am, 11/16/18

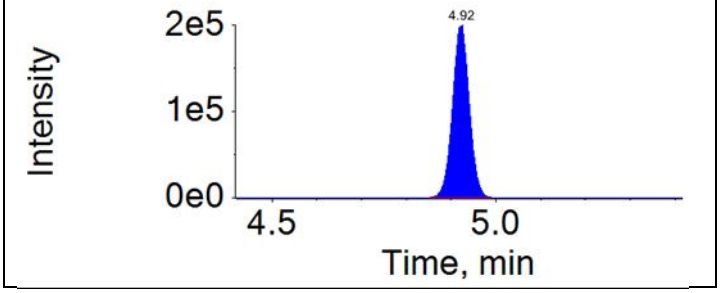
REVIEWED
By HMK at 7:38 am, 11/19/18

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV15DCCV1-4 11/16/2018 8:47:00 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

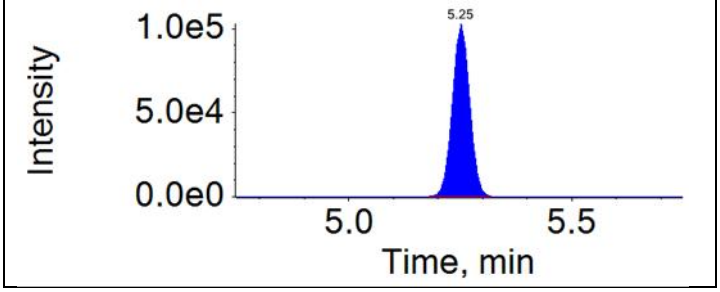
Injection Standard: 13C3-PFBA
216.0 / 172.0



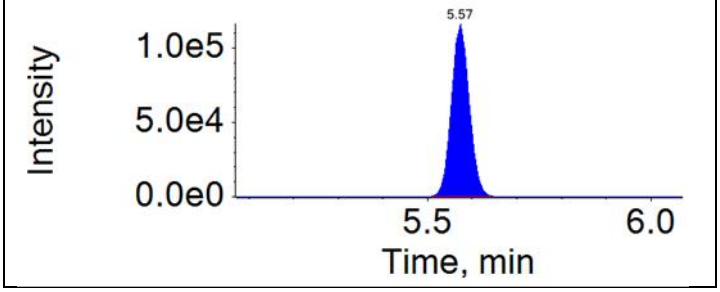
Injection Standard: 13C2-PFOA
415.0 / 370.0



Injection Standard: 13C4-PFOS
503.0 / 80.0



Injection Standard: 13C2-PFDA
515.0 / 470.0

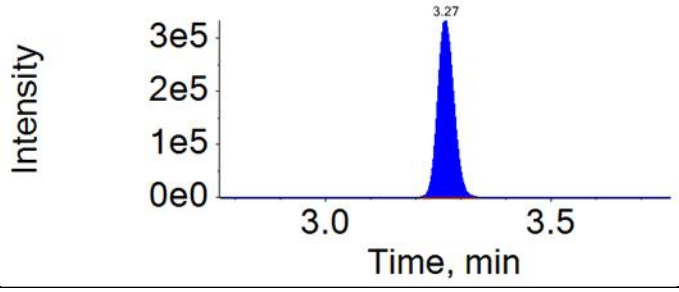


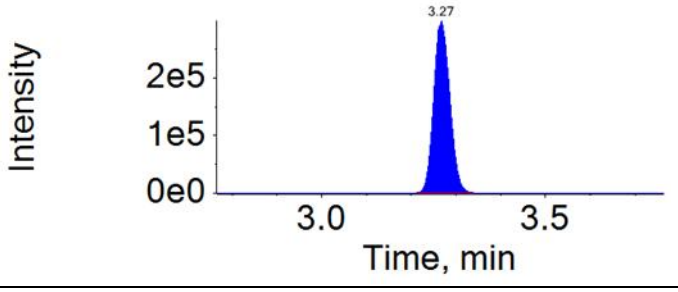
APPROVED
By JPT at 8:56 am, 11/16/18

REVIEWED
By HMK at 7:38 am, 11/19/18

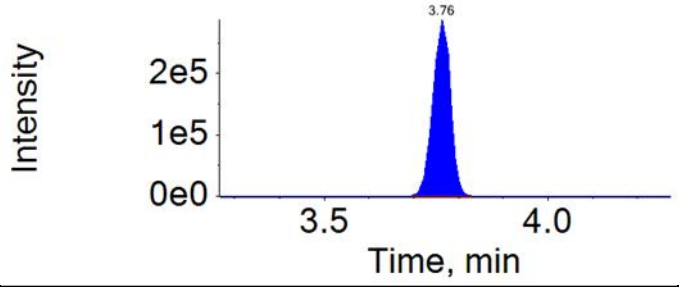
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV15DCCV1-4 11/16/2018 8:47:00 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

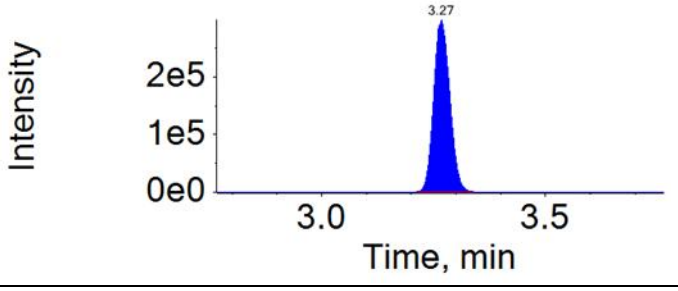
Extraction Standard: E13C4-PFBA	Injection Standard: 13C3-PFBA
217.0 / 172.0	216.0 / 172.0



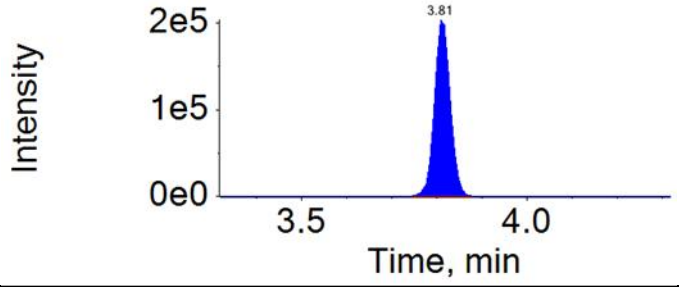


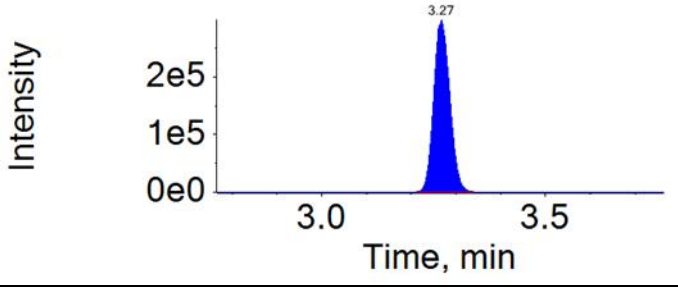
Extraction Standard: E13C5-PFPeA	Injection Standard: 13C3-PFBA
268.0 / 223.0	216.0 / 172.0



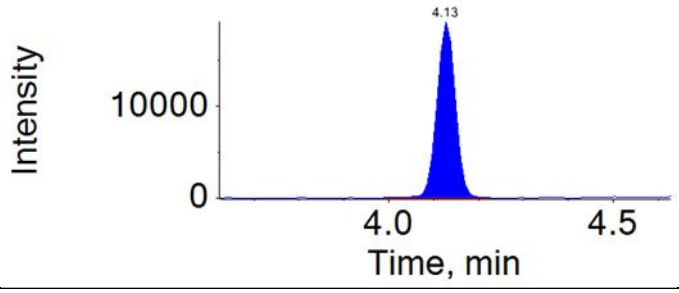


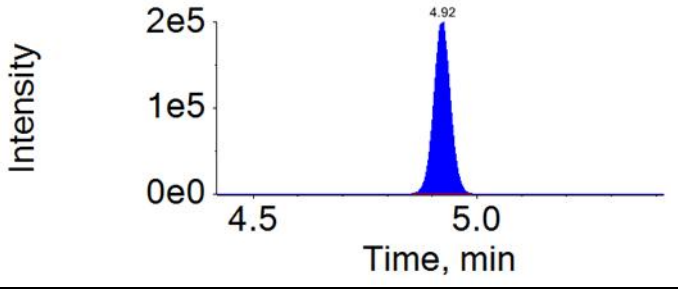
Extraction Standard: E13C3-PFBS	Injection Standard: 13C3-PFBA
302.0 / 80.0	216.0 / 172.0





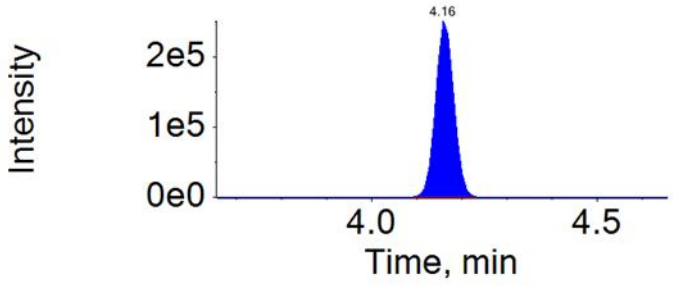
Extraction Standard: E13C2-4:2-FTS	Injection Standard: 13C2-PFOA
329.0 / 81.0	415.0 / 370.0

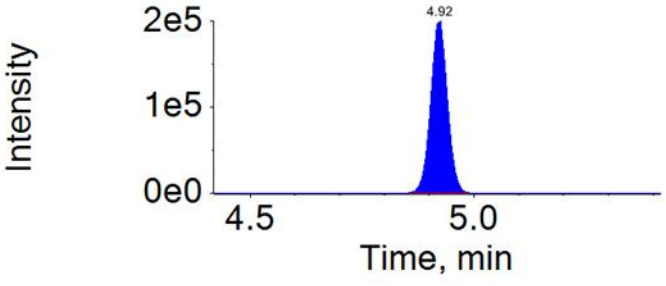




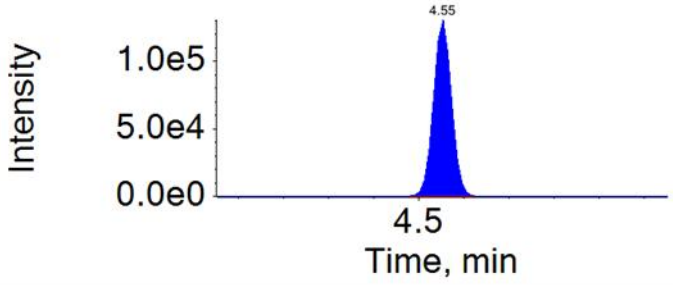
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV15DCCV1-4 11/16/2018 8:47:00 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

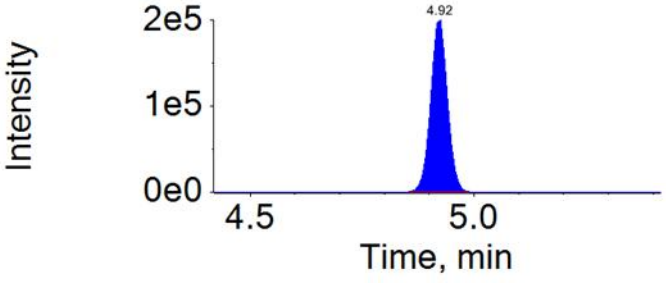
Extraction Standard: E13C5-PFHxA	Injection Standard: 13C2-PFOA
318.0 / 273.0	415.0 / 370.0



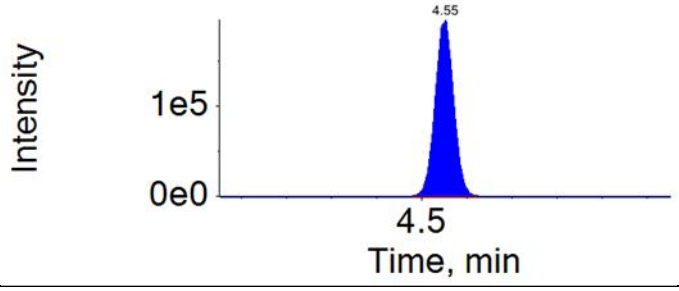


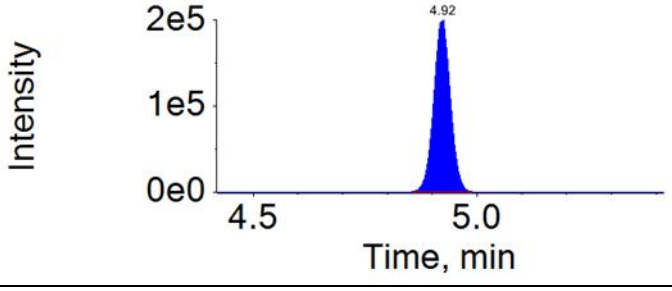
Extraction Standard: E13C3-PFHxS	Injection Standard: 13C2-PFOA
402.0 / 80.0	415.0 / 370.0



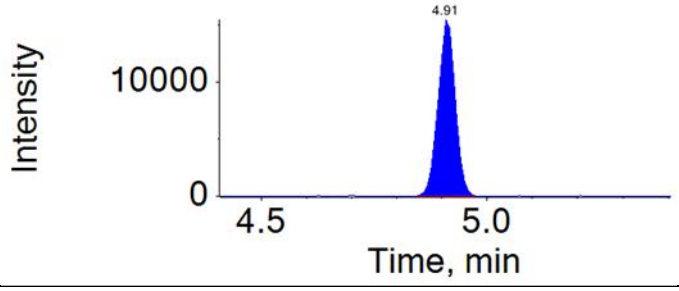


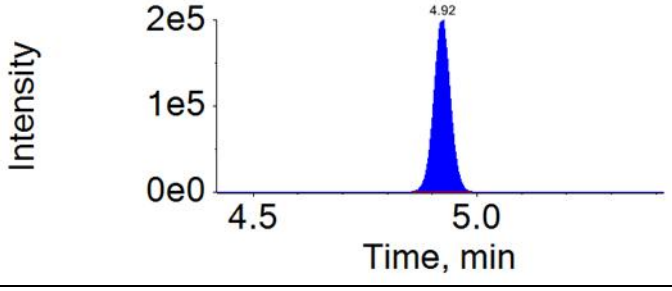
Extraction Standard: E13C4-PFHpA	Injection Standard: 13C2-PFOA
367.0 / 322.0	415.0 / 370.0



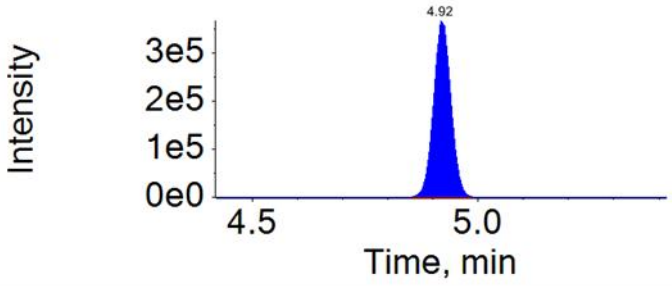
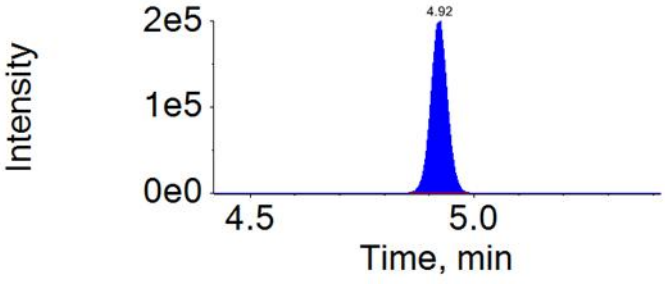


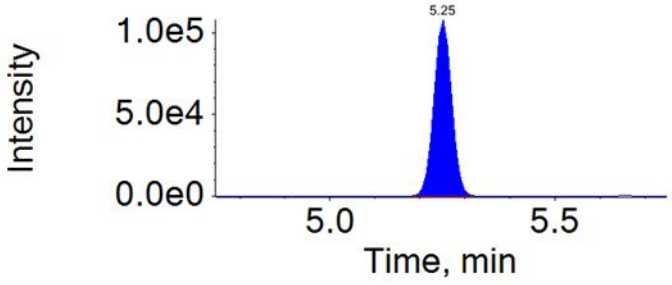
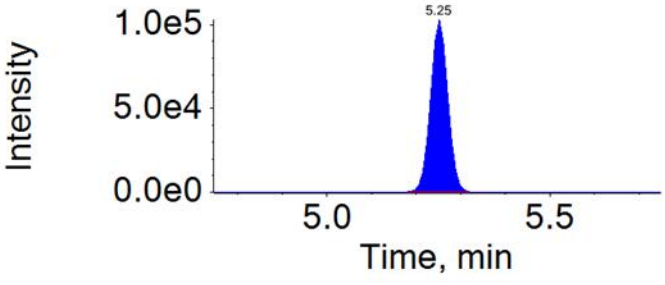
Extraction Standard: E13C2-6:2-FTS	Injection Standard: 13C2-PFOA
429.0 / 81.0	415.0 / 370.0

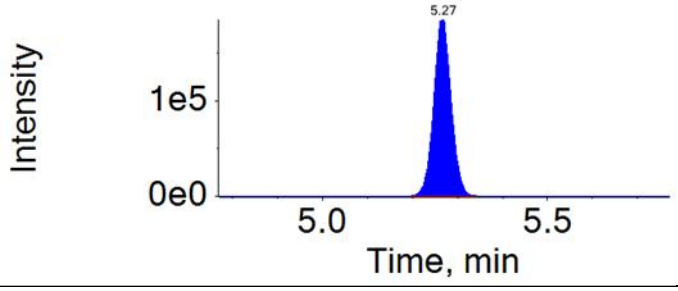
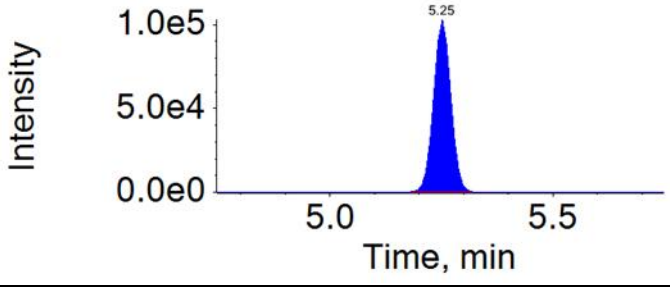


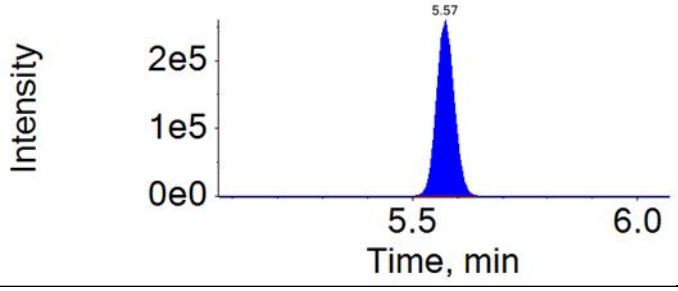
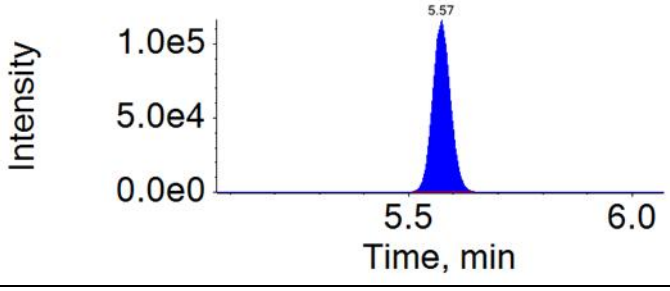


ICAL Name: 18NOV12DCAL **Result Table:** 18NOV15DCCV1-4 11/16/2018 8:47:00 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

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
	

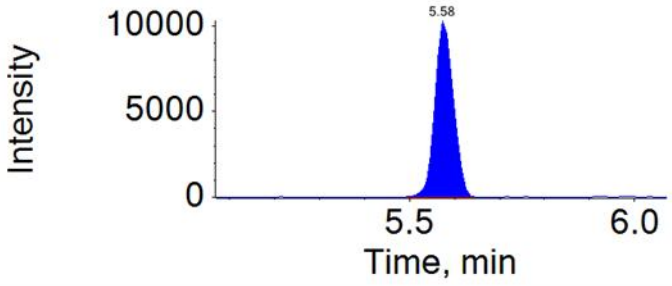
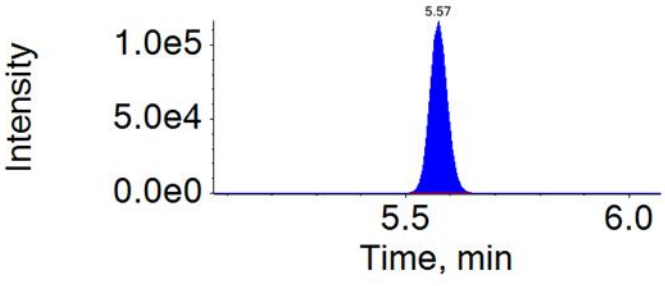
Extraction Standard: E13C9-PFNA	Injection Standard: 13C4-PFOS
472.0 / 427.0	503.0 / 80.0
	

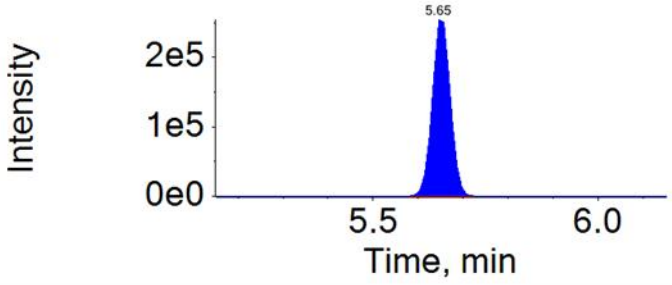
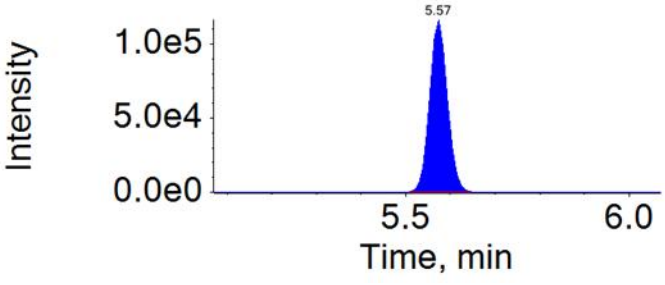
Extraction Standard: E13C6-PFDA	Injection Standard: 13C2-PFDA
519.0 / 474.0	515.0 / 470.0
	

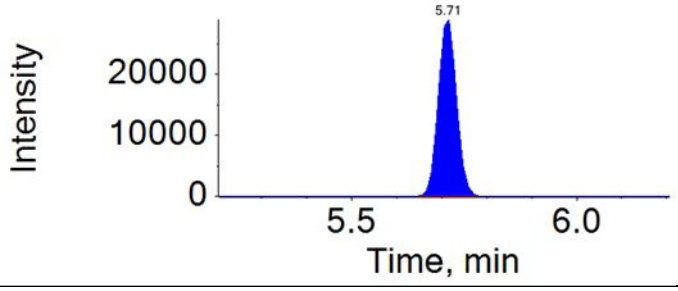
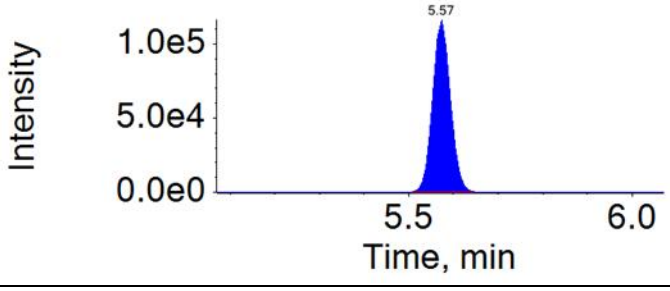
APPROVED
By JPT at 8:56 am, 11/16/18

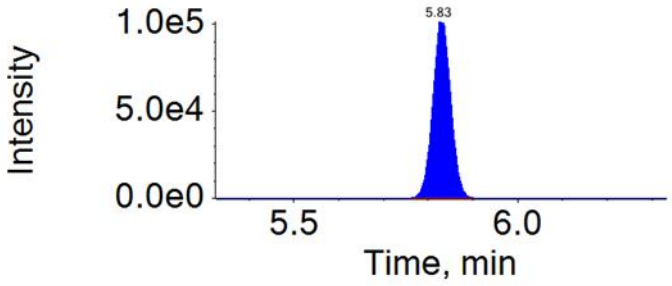
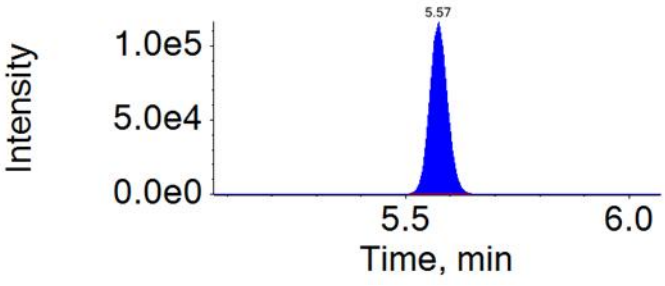
REVIEWED
By HMK at 7:38 am, 11/19/18

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV15DCCV1-4 11/16/2018 8:47:00 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
	

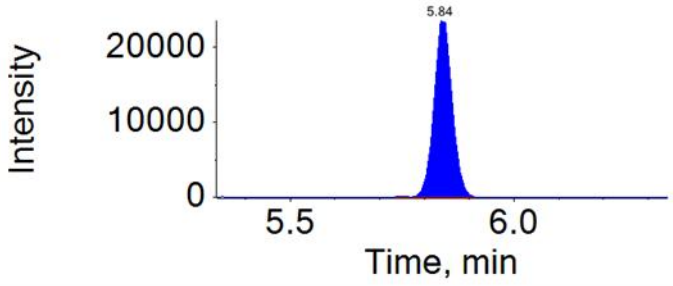
Extraction Standard: E13C7-PFUnDA	Injection Standard: 13C2-PFDA
570.0 / 525.0	515.0 / 470.0
	

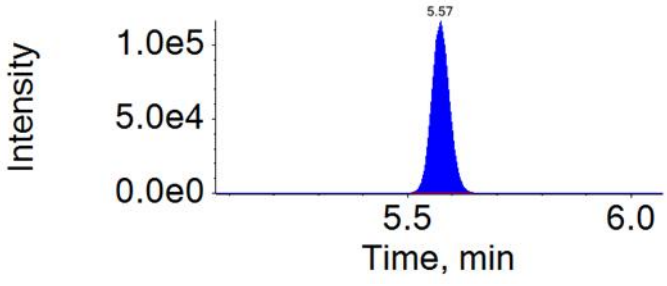
APPROVED
By JPT at 8:56 am, 11/16/18

REVIEWED
By HMK at 7:38 am, 11/19/18

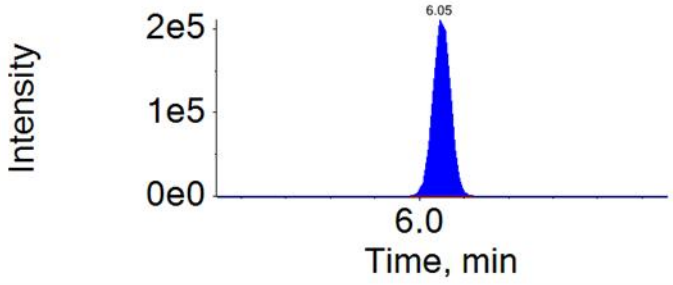
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV15DCCV1-4 11/16/2018 8:47:00 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

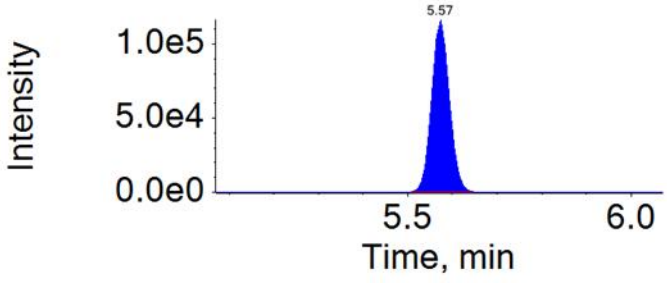
Extraction Standard: Ed5-NEtFOSAA	Injection Standard: 13C2-PFDA
589.0 / 419.0	515.0 / 470.0



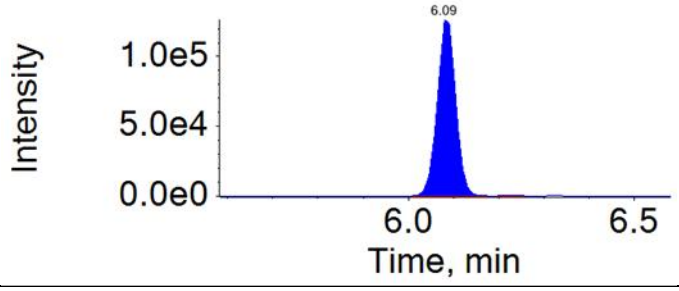


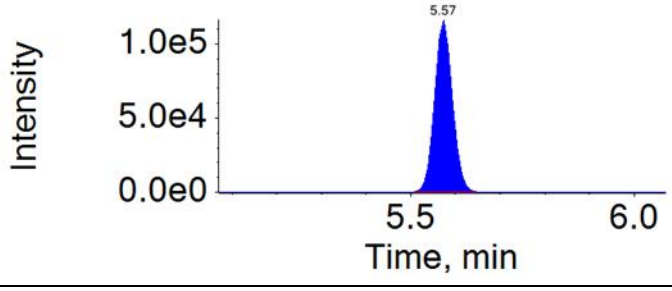
Extraction Standard: E13C2-PFDoDA	Injection Standard: 13C2-PFDA
615.0 / 570.0	515.0 / 470.0



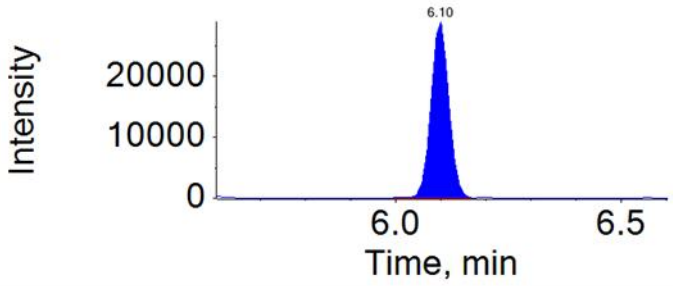


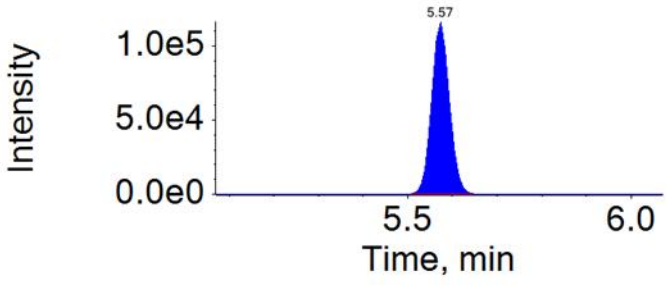
Extraction Standard: Ed7-NMePFOSAE	Injection Standard: 13C2-PFDA
623.0 / 59.0	515.0 / 470.0





Extraction Standard: Ed3-NMePFOSA	Injection Standard: 13C2-PFDA
515.0 / 169.0	515.0 / 470.0



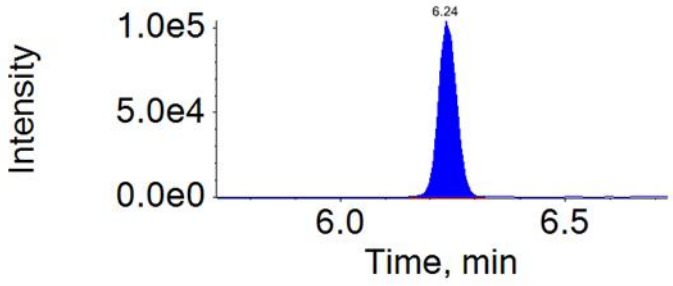


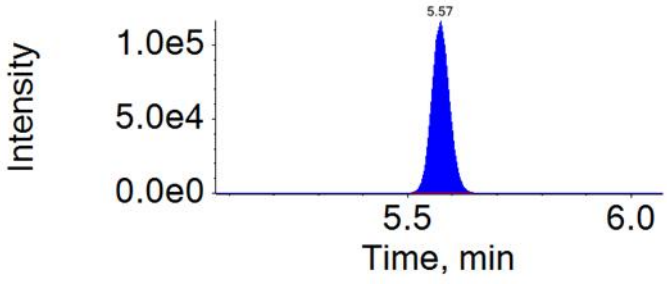
APPROVED
By JPT at 8:56 am, 11/16/18

REVIEWED
By HMK at 7:38 am, 11/19/18

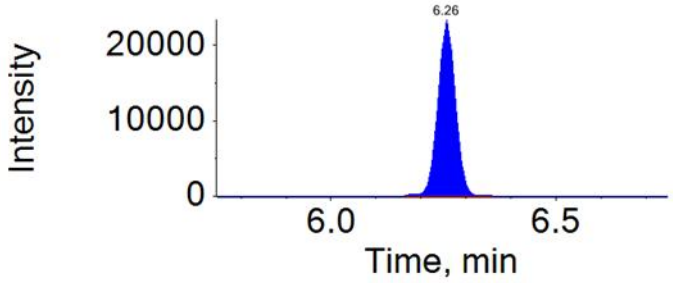
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV15DCCV1-4 11/16/2018 8:47:00 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

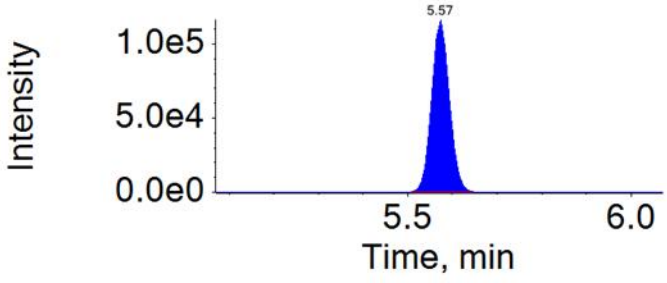
Extraction Standard: Ed9-NEtPFOSAE	Injection Standard: 13C2-PFDA
639.0 / 59.0	515.0 / 470.0



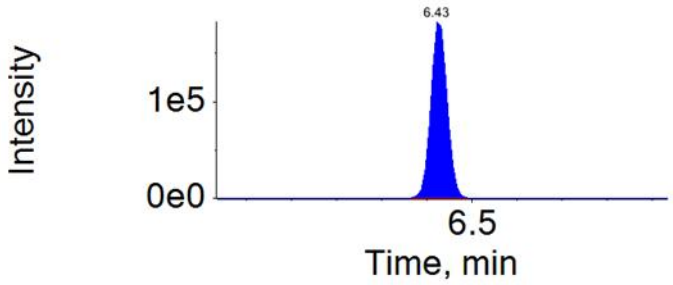


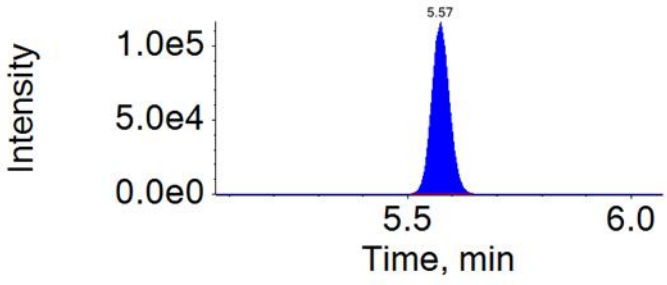
Extraction Standard: Ed5-NEtPFOSA	Injection Standard: 13C2-PFDA
531.0 / 169.0	515.0 / 470.0





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



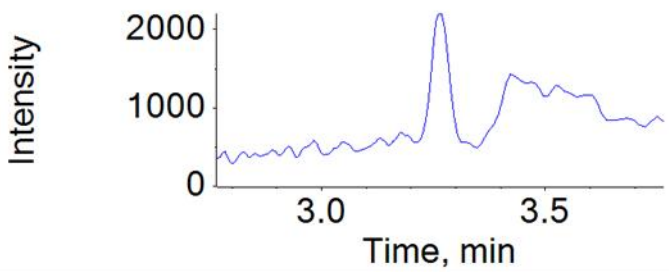


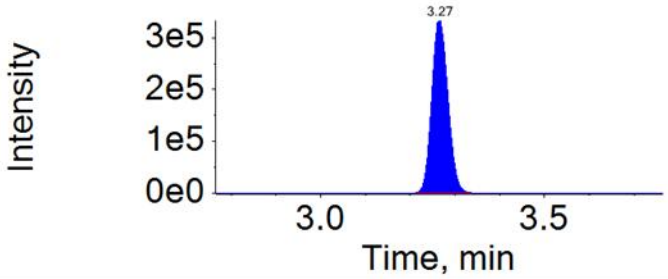
APPROVED
By JPT at 8:56 am, 11/16/18

REVIEWED
By HMK at 7:38 am, 11/19/18

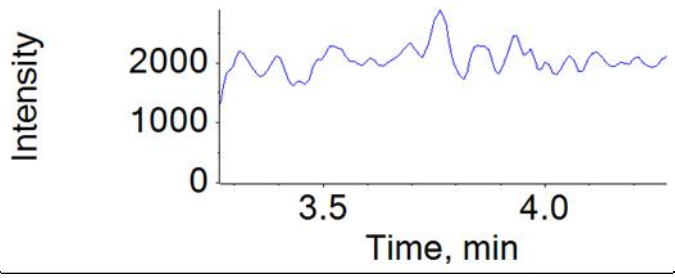
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV15DCCV1-4 11/16/2018 8:47:00 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

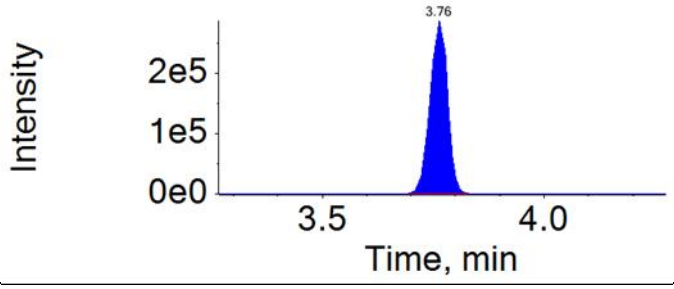
Analyte: PFBA	Extraction Standard: 13C4-PFBA
213.0 / 169.0	217.0 / 172.0



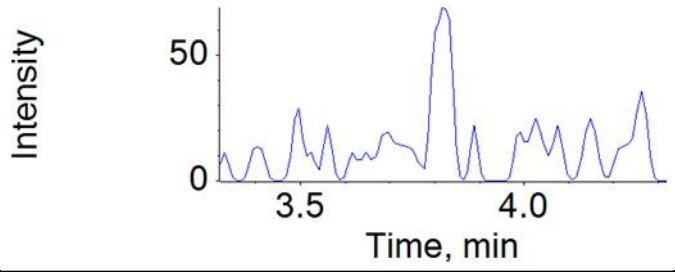


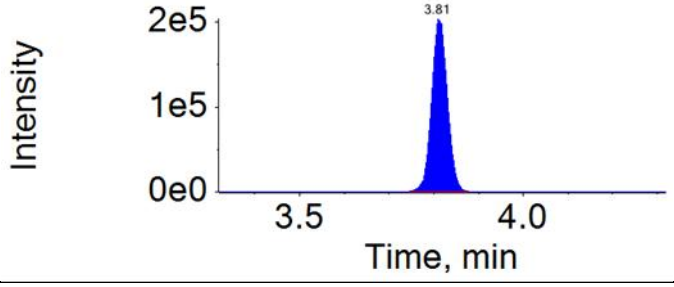
Analyte: PFPeA	Extraction Standard: 13C5-PFPeA
263.0 / 219.0	268.0 / 223.0



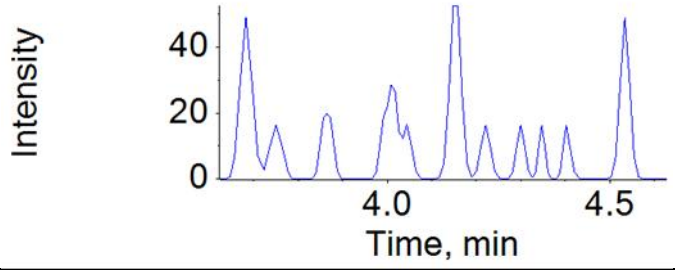


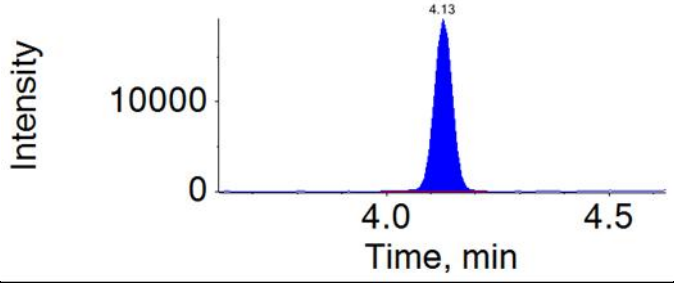
Analyte: PFBS	Extraction Standard: 13C3-PFBS
299.0 / 80.0	302.0 / 80.0





Analyte: 4:2-FTS	Extraction Standard: 13C2-4:2-FTS
327.0 / 307.0	329.0 / 81.0



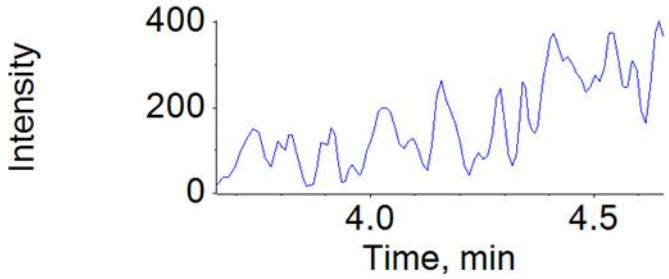


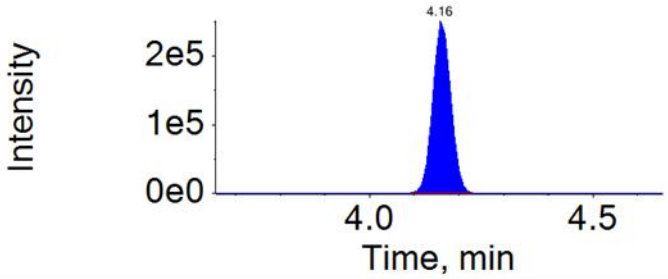
APPROVED
By JPT at 8:56 am, 11/16/18

REVIEWED
By HMK at 7:38 am, 11/19/18

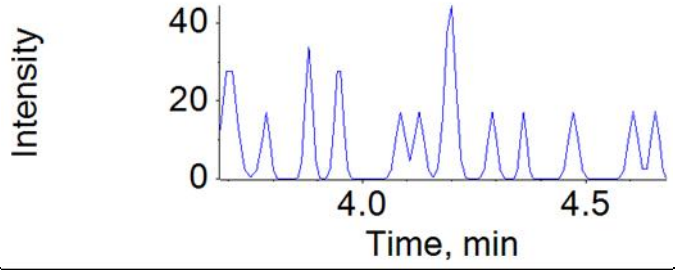
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV15DCCV1-4 11/16/2018 8:47:00 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

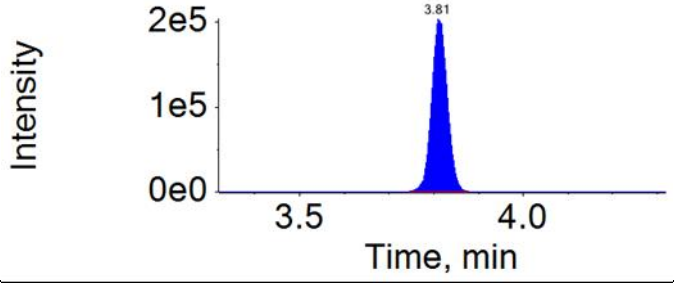
Analyte: PFHxA	Extraction Standard: 13C5-PFHxA
313.0 / 269.0	318.0 / 273.0



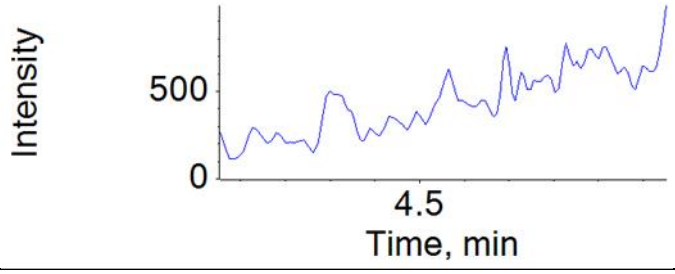


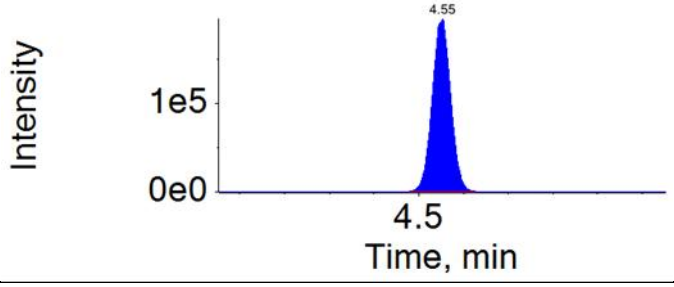
Analyte: PFPeS	Extraction Standard: 13C3-PFBS
349.0 / 80.0	302.0 / 80.0



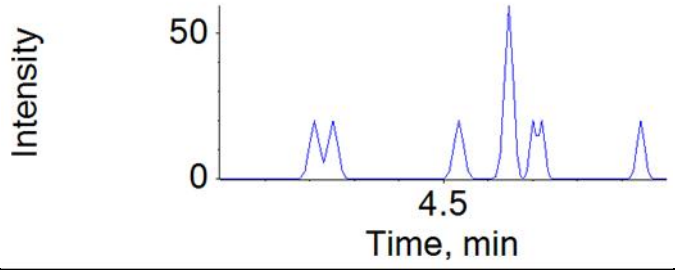


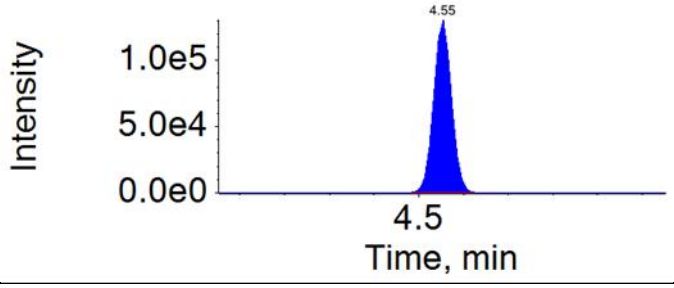
Analyte: PFHpA	Extraction Standard: 13C4-PFHpA
363.0 / 319.0	367.0 / 322.0





Analyte: PFHxS	Extraction Standard: 13C3-PFHxS
399.0 / 80.0	402.0 / 80.0



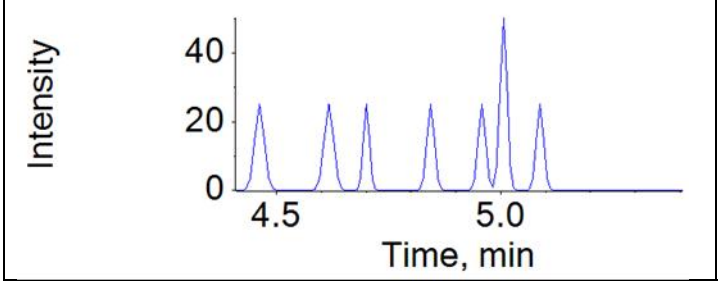


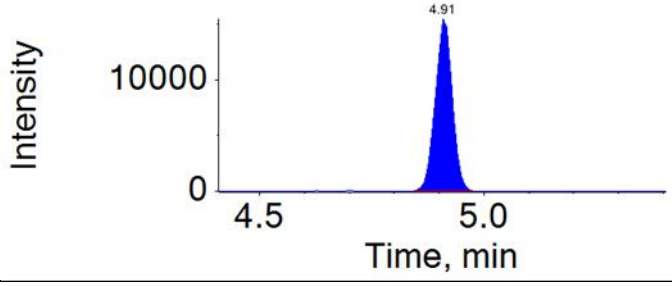
APPROVED
By JPT at 8:56 am, 11/16/18

REVIEWED
By HMK at 7:38 am, 11/19/18

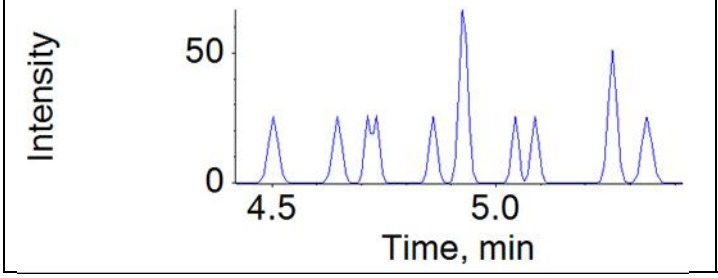
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV15DCCV1-4 11/16/2018 8:47:00 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

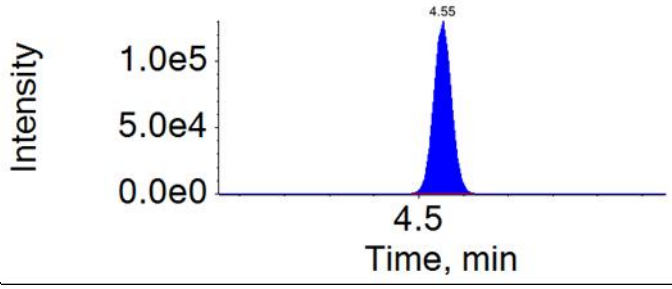
Analyte: 6:2-FTS	Extraction Standard: 13C2-6:2-FTS
427.0 / 407.0	429.0 / 81.0



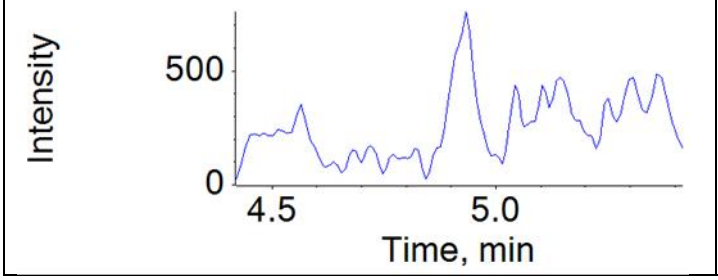


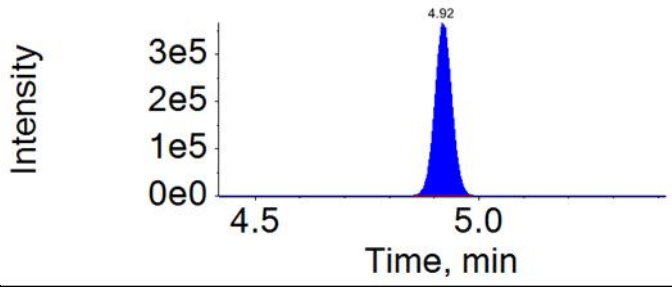
Analyte: PFHpS	Extraction Standard: 13C3-PFHxS
449.0 / 80.0	402.0 / 80.0



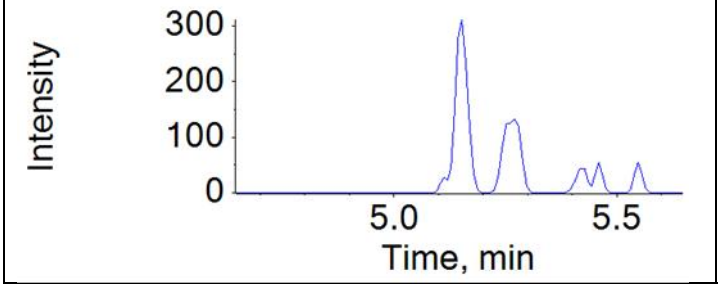


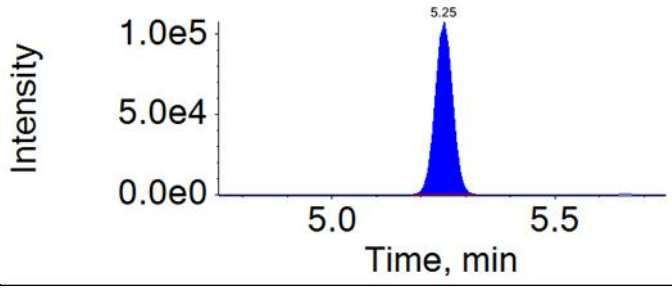
Analyte: PFOA	Extraction Standard: 13C8-PFOA
413.0 / 369.0	421.0 / 376.0





Analyte: PFOS	Extraction Standard: 13C8-PFOS
499.0 / 80.0	507.0 / 80.0



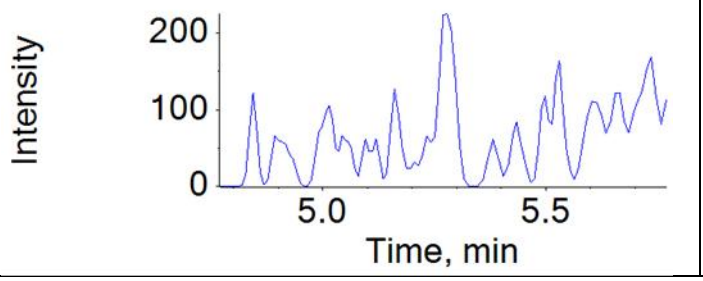


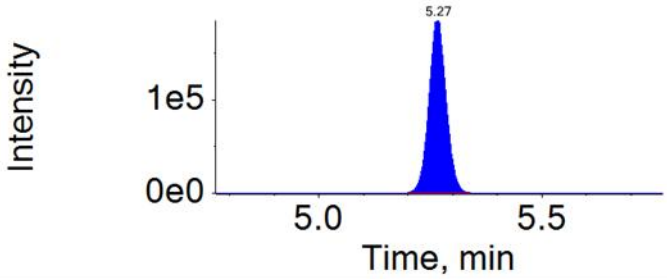
APPROVED
By JPT at 8:56 am, 11/16/18

REVIEWED
By HMK at 7:38 am, 11/19/18

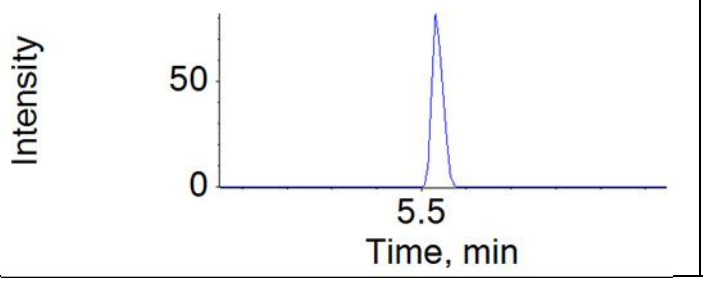
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV15DCCV1-4 11/16/2018 8:47:00 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

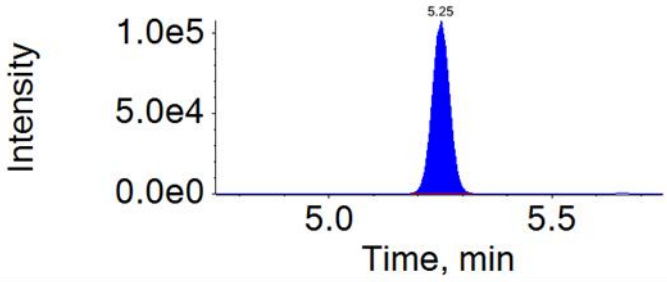
Analyte: PFNA	Extraction Standard: 13C9-PFNA
463.0 / 419.0	472.0 / 427.0



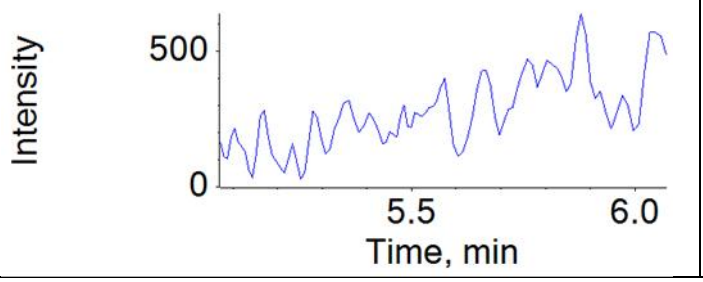


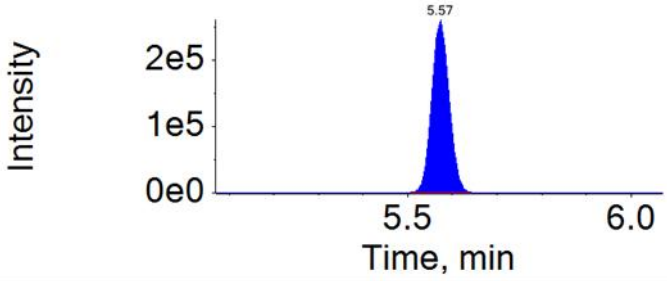
Analyte: PFNS	Extraction Standard: 13C8-PFOS
549.0 / 80.0	507.0 / 80.0



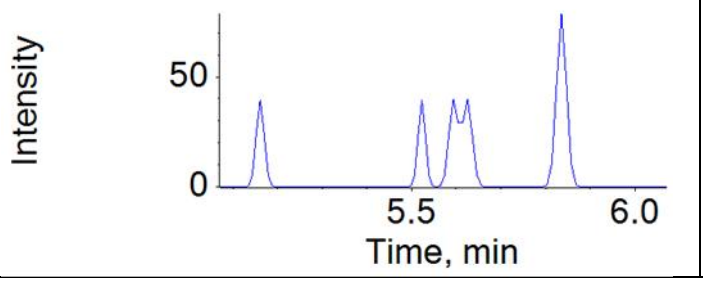


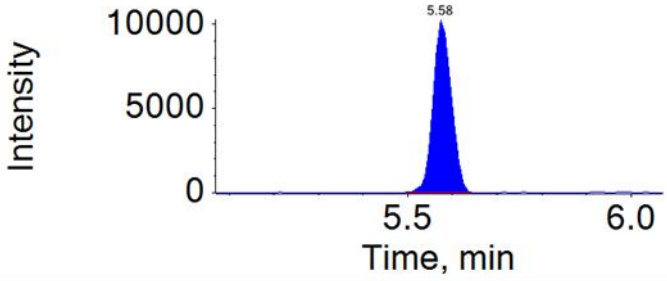
Analyte: PFDA	Extraction Standard: 13C6-PFDA
513.0 / 469.0	519.0 / 474.0





Analyte: 8:2-FTS	Extraction Standard: 13C2-8:2-FTS
527.0 / 507.0	529.0 / 81.0



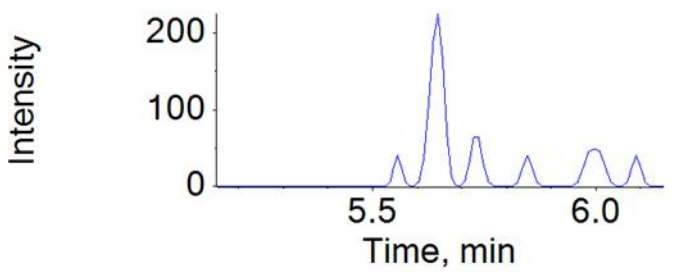


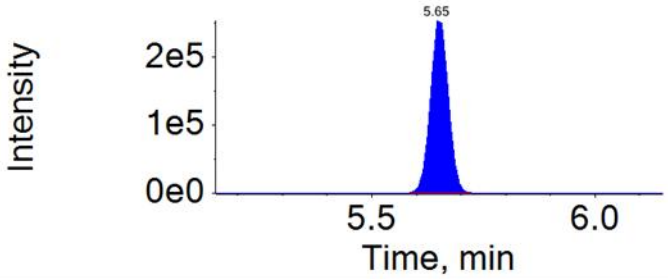
APPROVED
By JPT at 8:56 am, 11/16/18

REVIEWED
By HMK at 7:38 am, 11/19/18

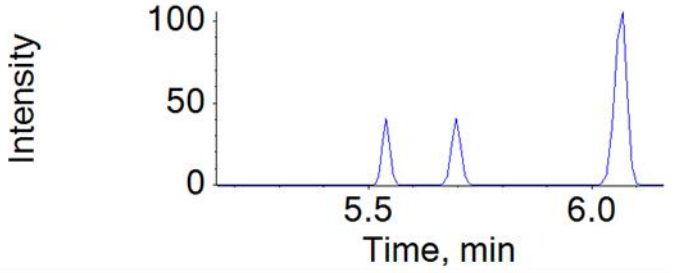
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV15DCCV1-4 11/16/2018 8:47:00 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

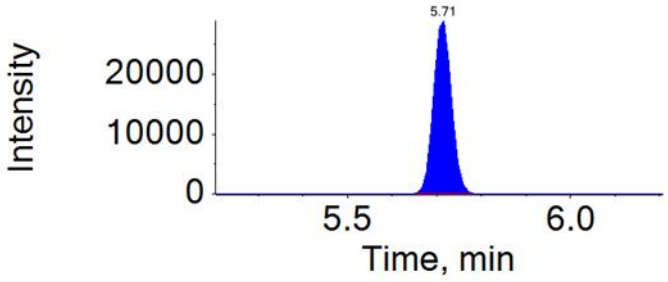
Analyte: PFOSA	Extraction Standard: 13C8-PFOSA
498.0 / 78.0	506.0 / 78.0



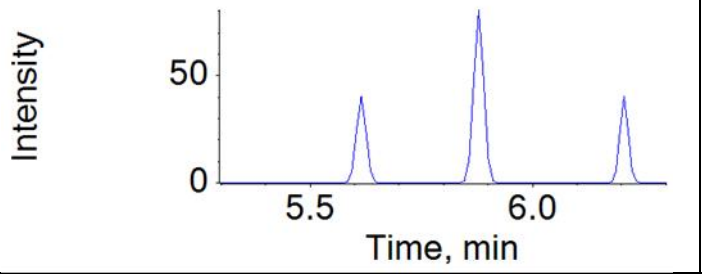


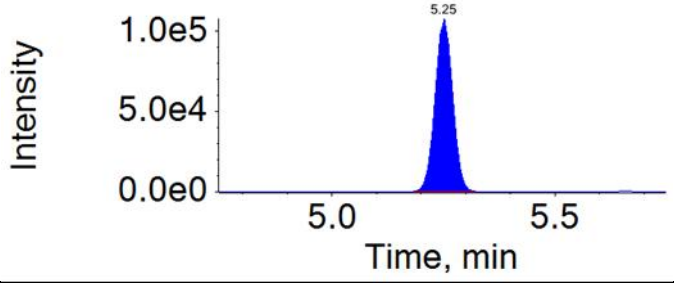
Analyte: NMeFOSAA	Extraction Standard: d3-NMeFOSAA
570.0 / 419.0	573.0 / 419.0



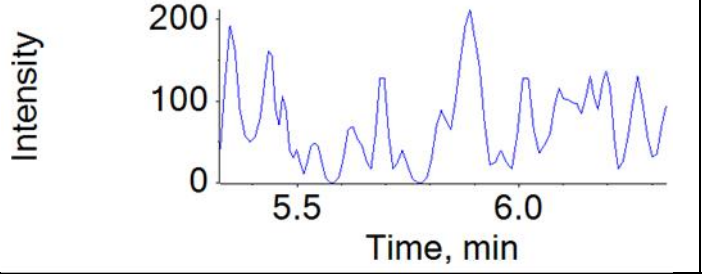


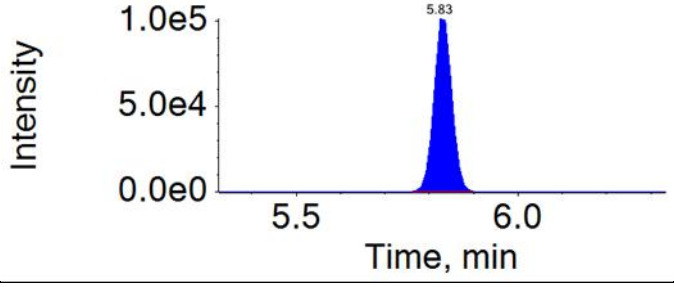
Analyte: PFDS	Extraction Standard: 13C8-PFOS
599.0 / 80.0	507.0 / 80.0





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



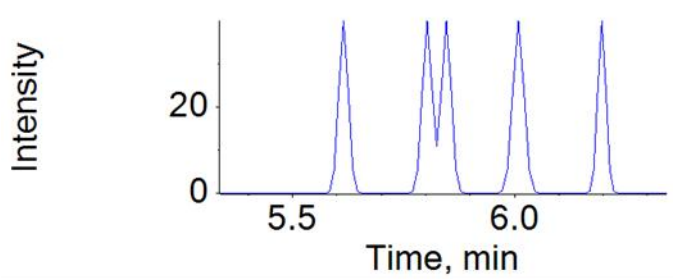


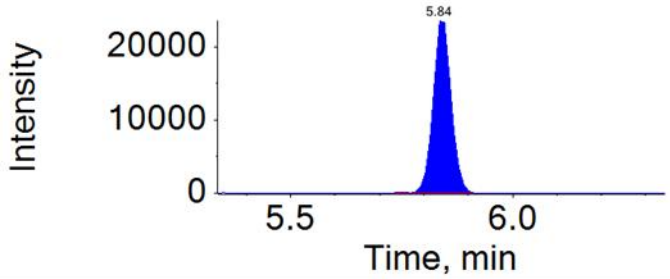
APPROVED
By JPT at 8:56 am, 11/16/18

REVIEWED
By HMK at 7:38 am, 11/19/18

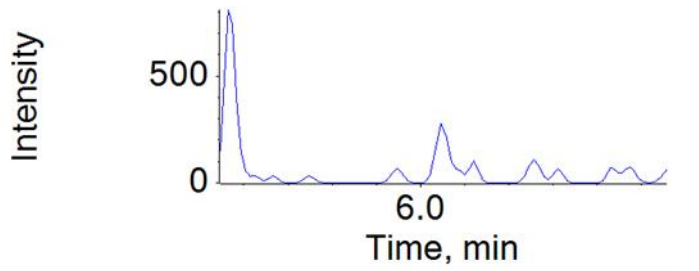
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV15DCCV1-4 11/16/2018 8:47:00 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

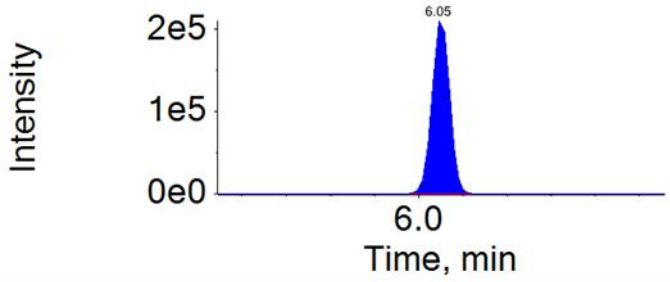
Analyte: NEtFOSAA	Extraction Standard: d5-NEtFOSAA
584.0 / 419.0	589.0 / 419.0



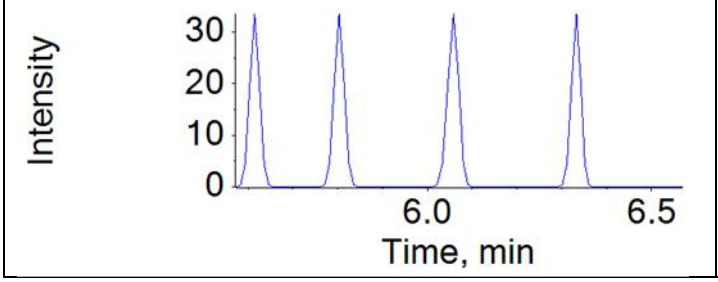


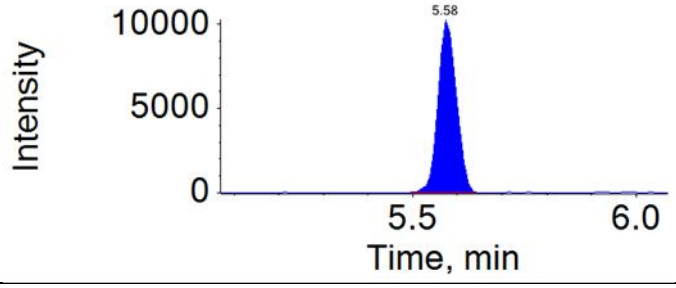
Analyte: PFDoDA	Extraction Standard: 13C2-PFDoDA
613.0 / 569.0	615.0 / 570.0



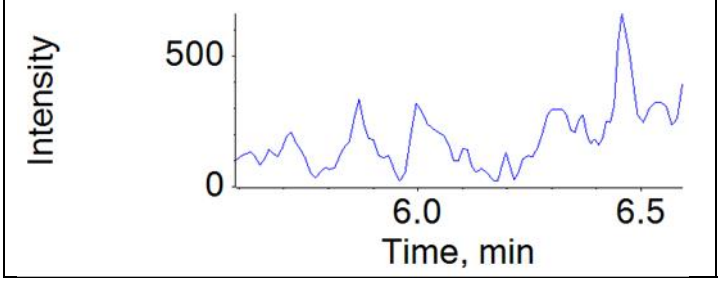


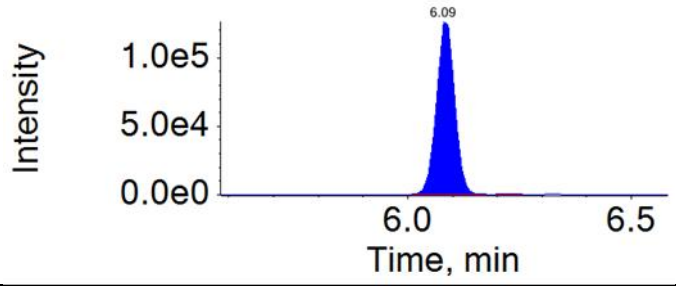
Analyte: 10:2-FTS	Extraction Standard: 13C2-8:2-FTS
627.0 / 607.0	529.0 / 81.0





Analyte: NMePFOSAE	Extraction Standard: d7-NMePFOSAE
616.0 / 59.0	623.0 / 59.0



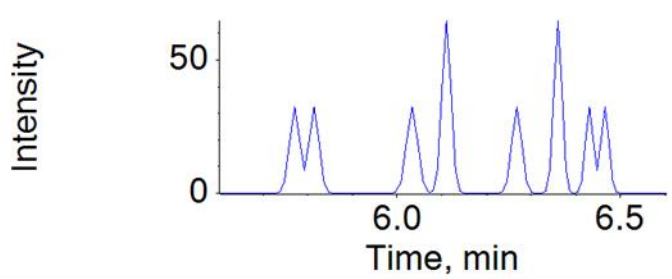


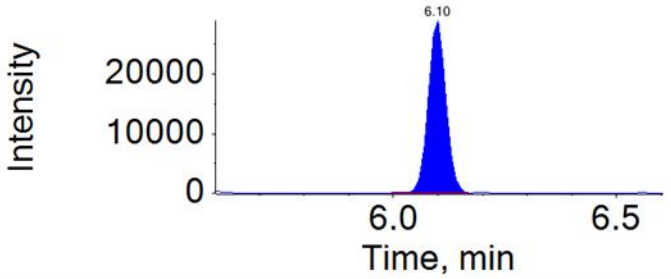
APPROVED
By JPT at 8:56 am, 11/16/18

REVIEWED
By HMK at 7:38 am, 11/19/18

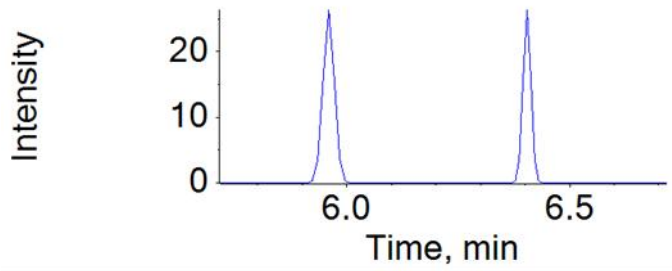
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV15DCCV1-4 11/16/2018 8:47:00 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

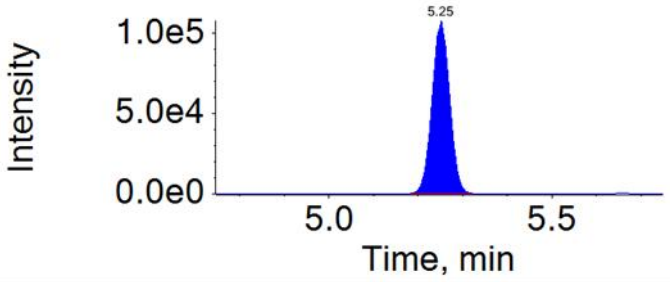
Analyte: NMePFOSA	Extraction Standard: d3-NMePFOSA
512.0 / 169.0	515.0 / 169.0



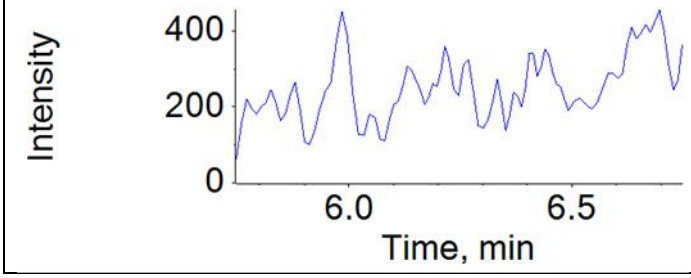


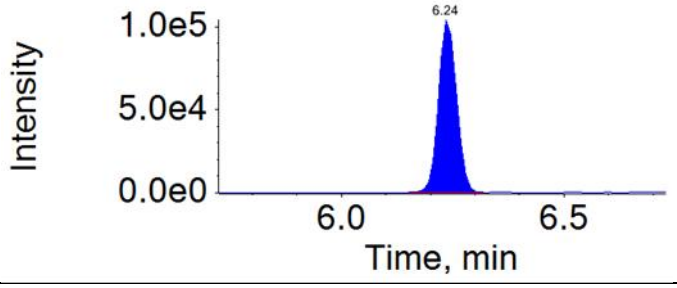
Analyte: PFDoS	Extraction Standard: 13C8-PFOS
699.0 / 80.0	507.0 / 80.0



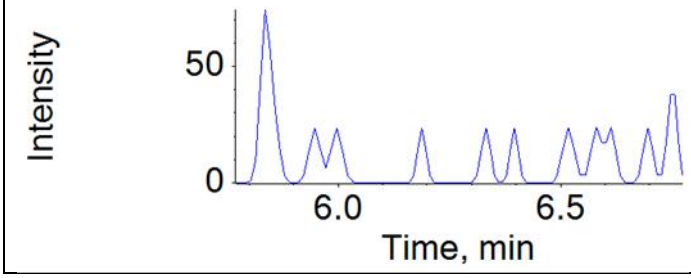


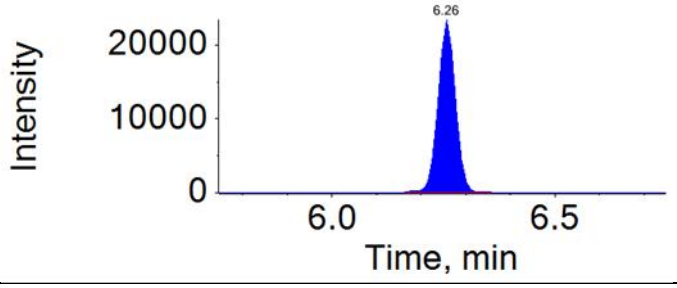
Analyte: NEtPFOSAE	Extraction Standard: d9-NEtPFOSAE
630.0 / 59.0	639.0 / 59.0





Analyte: NEtPFOSA	Extraction Standard: d5-NEtPFOSA
526.0 / 169.0	531.0 / 169.0





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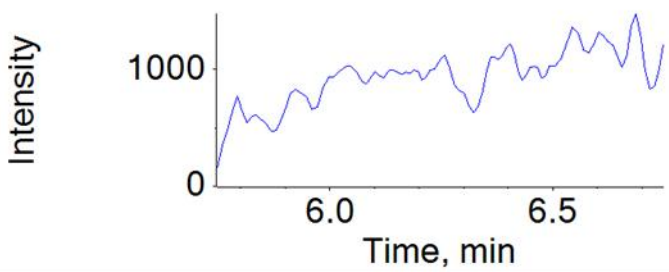
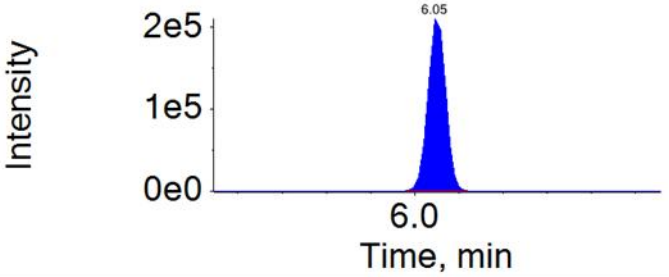
By JPT at 8:56 am, 11/16/18

REVIEWED
By HMK at 7:38 am, 11/19/18

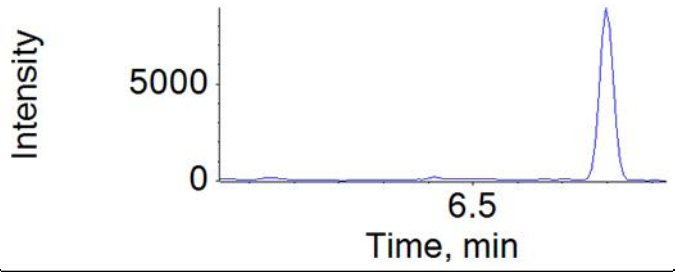
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV15DCCV1-4 11/16/2018 8:47:00 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

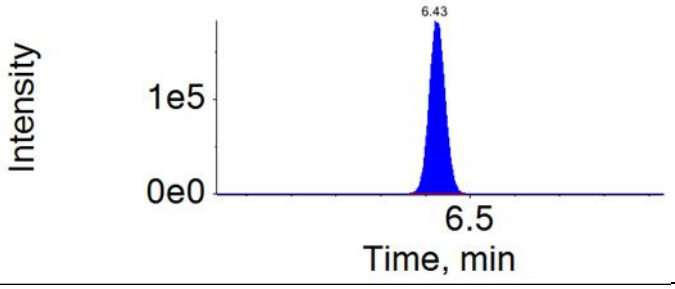
Analyte: PFTrDA	Extraction Standard: 13C2-PFDoDA
663.0 / 619.0	615.0 / 570.0



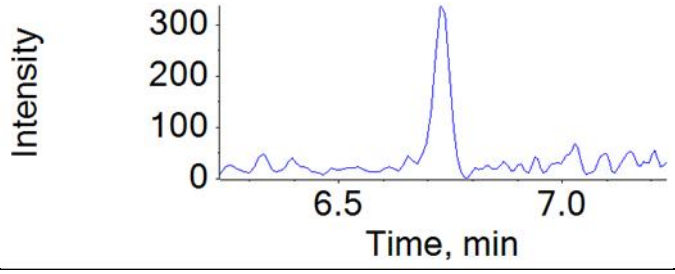


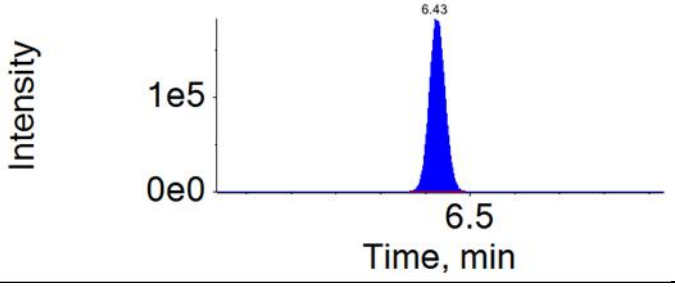
Analyte: PFTeDA	Extraction Standard: 13C2-PFTeDA
713.0 / 669.0	715.0 / 670.0



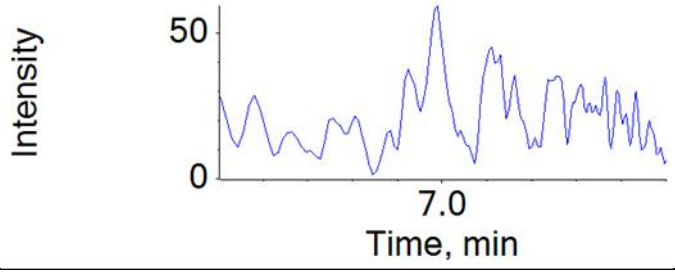


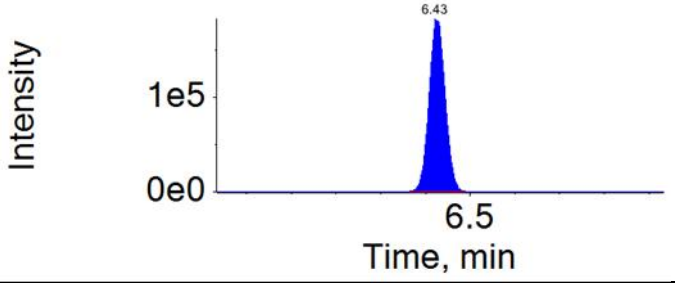
Analyte: PFHxDA	Extraction Standard: 13C2-PFTeDA
813.0 / 769.0	715.0 / 670.0





Analyte: PFODA	Extraction Standard: 13C2-PFTeDA
913.0 / 869.0	715.0 / 670.0





APPROVED
By JPT at 8:56 am, 11/16/18

REVIEWED
By HMK at 7:38 am, 11/19/18

Ion Ratio Report

Sample Name: INBLK **Instrument Name:** LM27631 **File Name:** 18NOV15D-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 8:56 am, 11/16/18

REVIEWED
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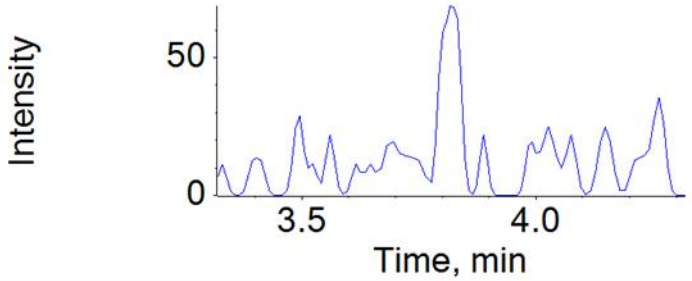
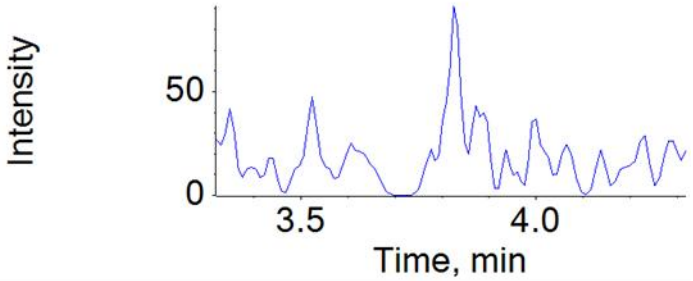
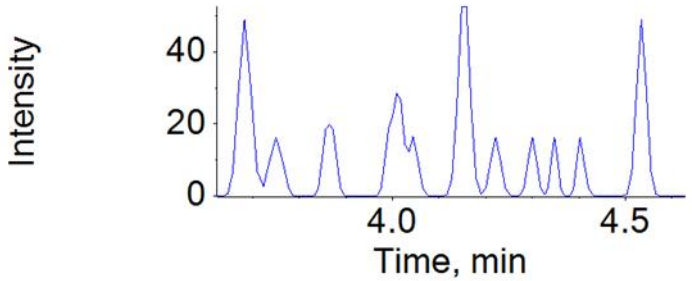
Component: PFBS
Primary Mass: 299.0 / 80.0



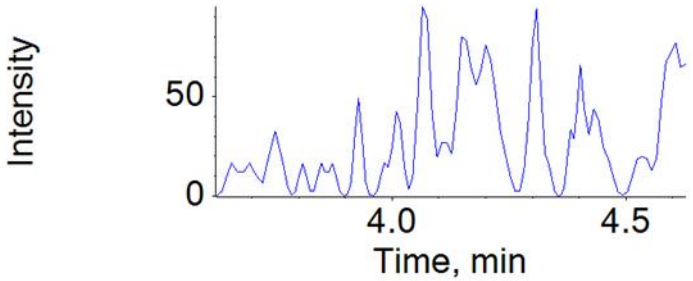
Component: PFBS_2
Secondary Mass: 299.0 / 99.0



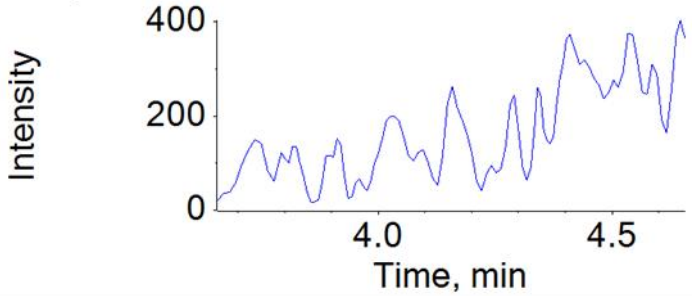
Component: 4:2-FTS
Primary Mass: 327.0 / 307.0



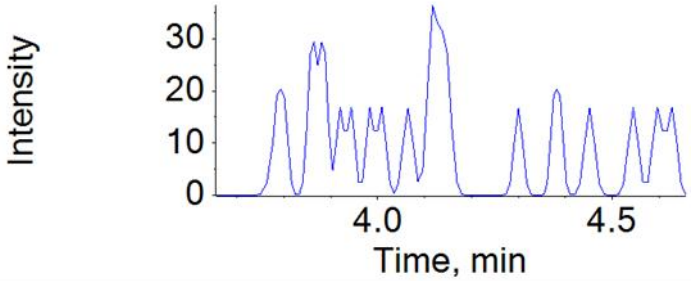
Component: 4:2 FTS_2
Secondary Mass: 327.0 / 81.0



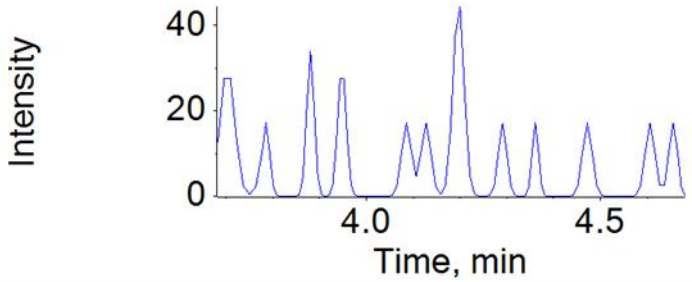
Component: PFHxA
Primary Mass: 313.0 / 269.0



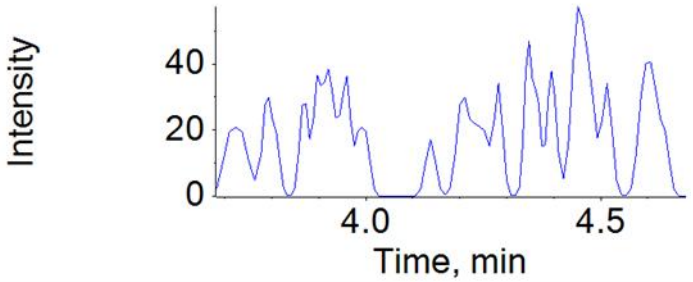
Component: PFHxA_2
Secondary Mass: 313.0 / 119.0



Component: PFPeS
Primary Mass: 349.0 / 80.0



Component: PFPeS_2
Secondary Mass: 349.0 / 99.0



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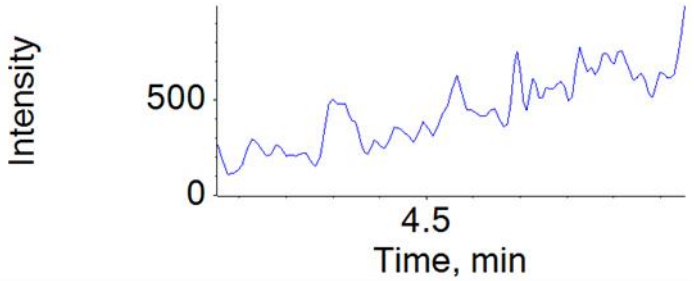
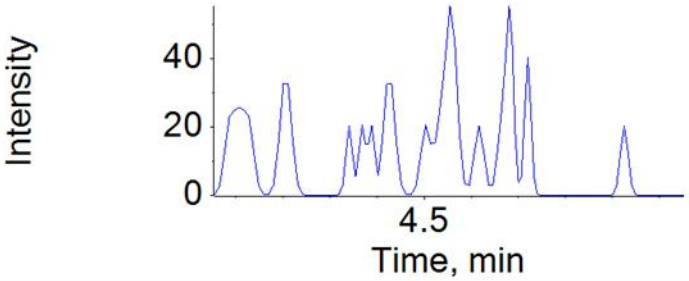
By HMK at 7:38 am, 11/19/18

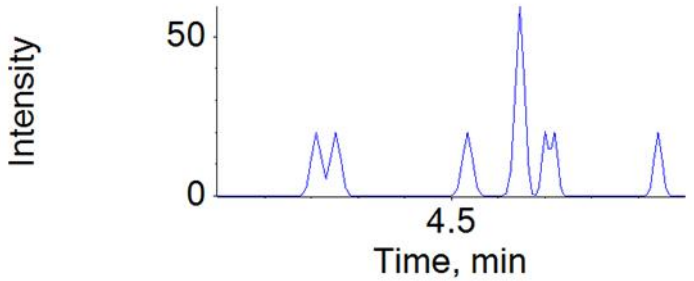
Component: PFHpA
Primary Mass: 363.0 / 319.0



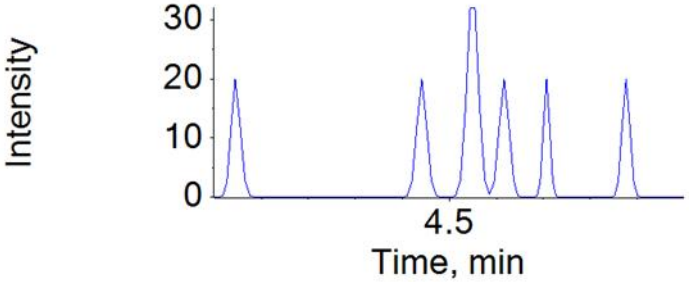
Component: PFHpA_2
Secondary Mass: 363.0 / 169.0



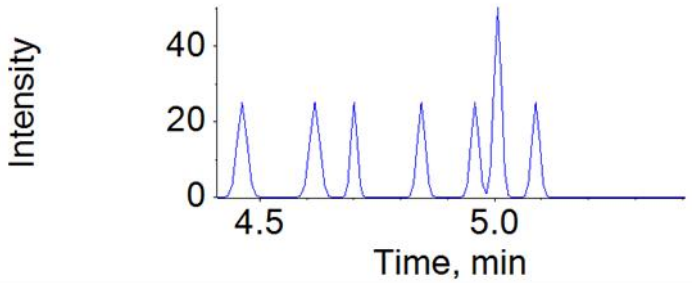
Component: PFHxS
Primary Mass: 399.0 / 80.0



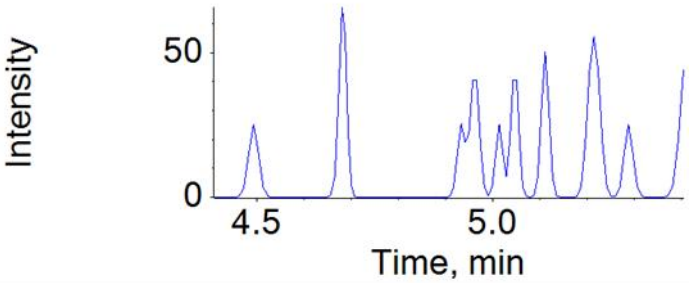
Component: PFHxS_2
Secondary Mass: 399.0 / 99.0



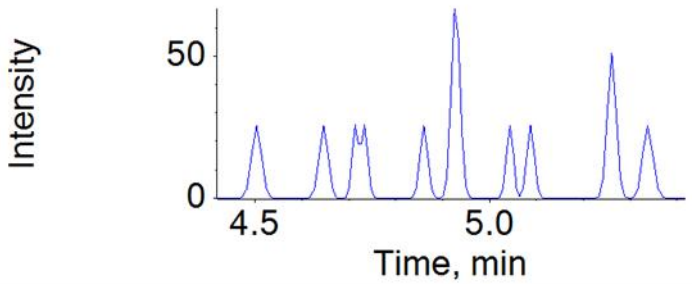
Component: 6:2-FTS
Primary Mass: 427.0 / 407.0



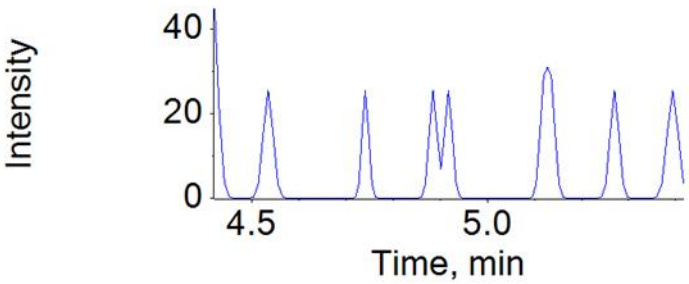
Component: 6:2 FTS_2
Secondary Mass: 427.0 / 81.0



Component: PFHpS
Primary Mass: 449.0 / 80.0



Component: PFHpS_2
Secondary Mass: 449.0 / 99.0



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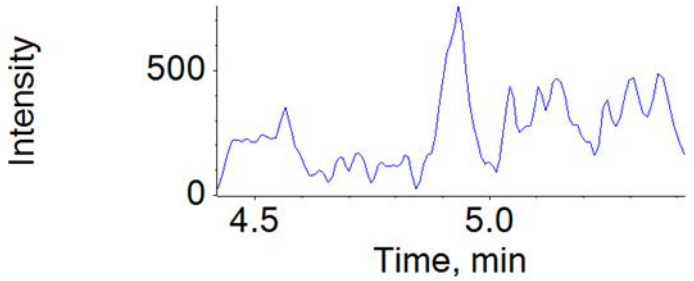
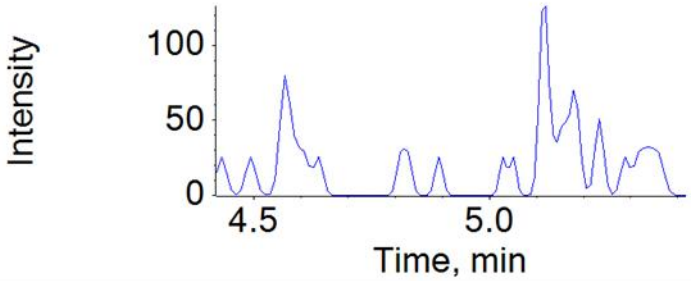
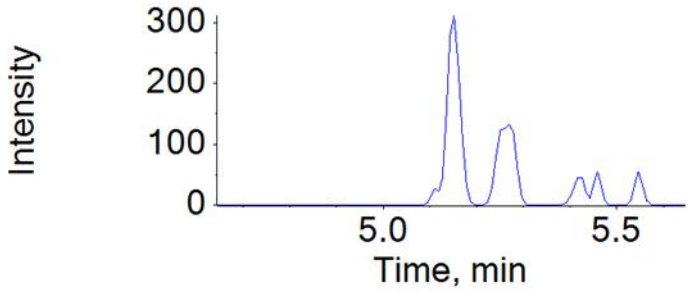
Component: PFOA
Primary Mass: 413.0 / 369.0



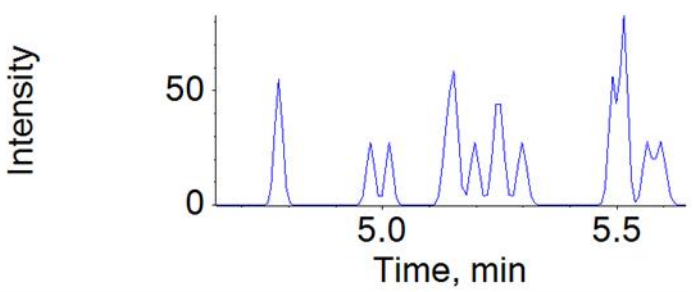
Component: PFOA_2
Secondary Mass: 413.0 / 169.0



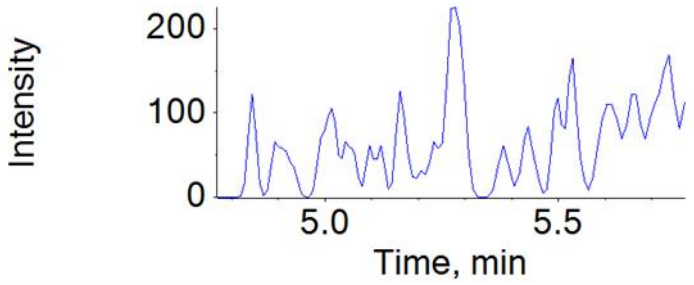
Component: PFOS
Primary Mass: 499.0 / 80.0



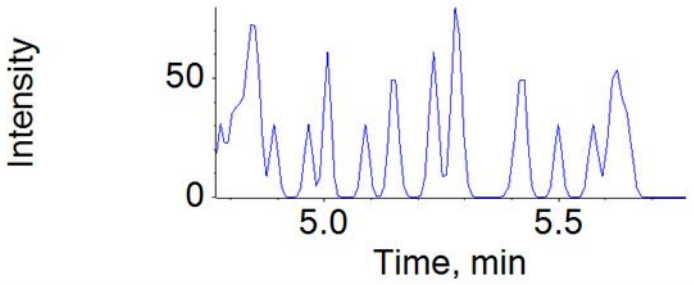
Component: PFOS_2
Secondary Mass: 499.0 / 99.0



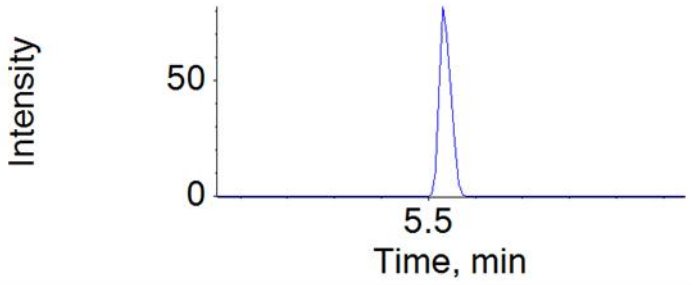
Component: PFNA
Primary Mass: 463.0 / 419.0



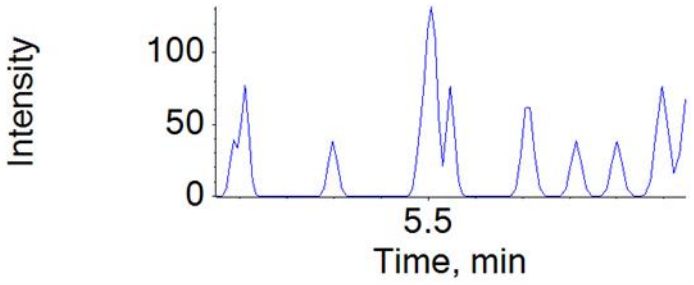
Component: PFNA_2
Secondary Mass: 463.0 / 169.0



Component: PFNS
Primary Mass: 549.0 / 80.0



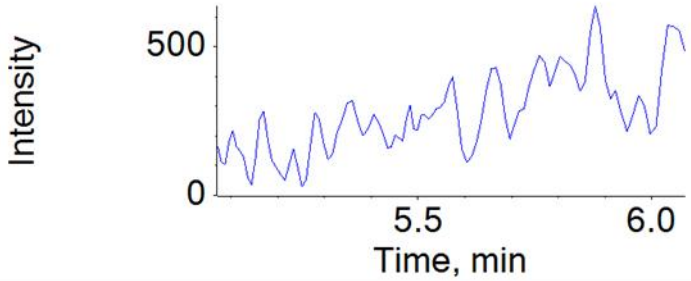
Component: PFNS_2
Secondary Mass: 549.0 / 99.0



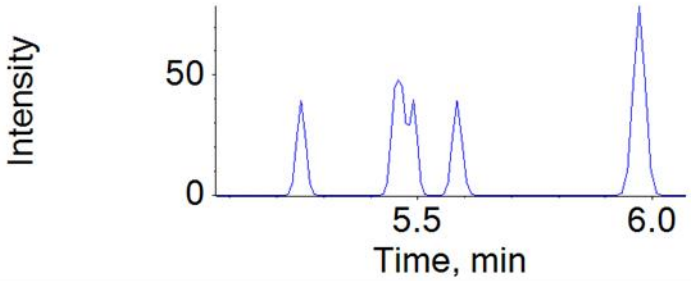
APPROVED
By JPT at 8:56 am, 11/16/18

REVIEWED
By HMK at 7:38 am, 11/19/18

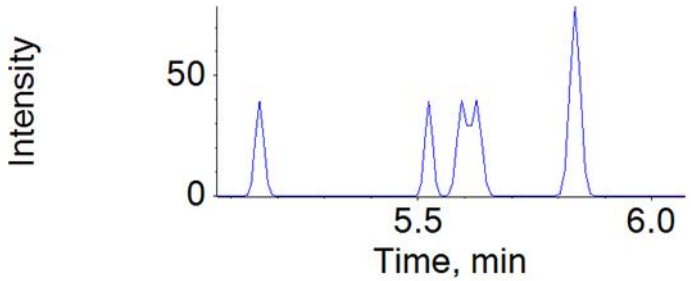
Component: PFDA
Primary Mass: 513.0 / 469.0



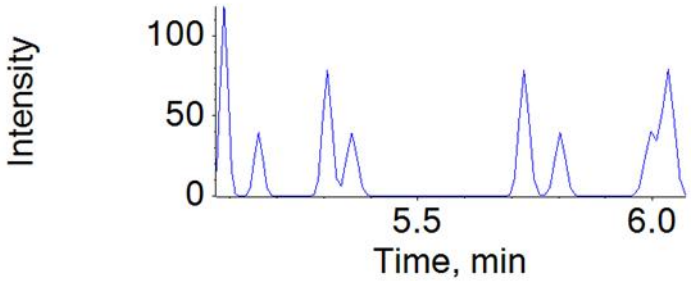
Component: PFDA_2
Secondary Mass: 513.0 / 169.0



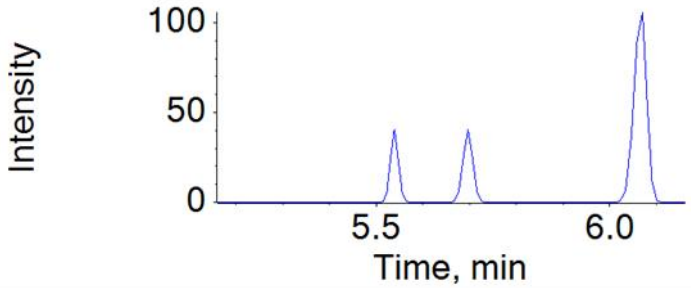
Component: 8:2-FTS
Primary Mass: 527.0 / 507.0



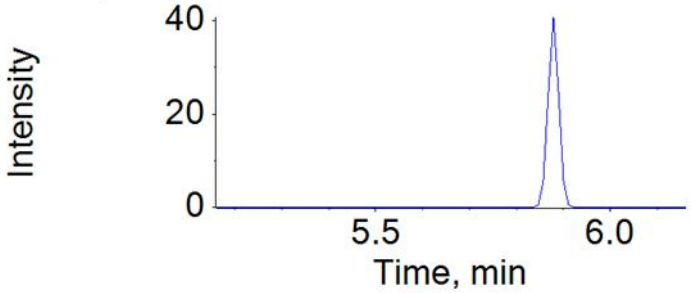
Component: 8:2 FTS_2
Secondary Mass: 527.0 / 81.0



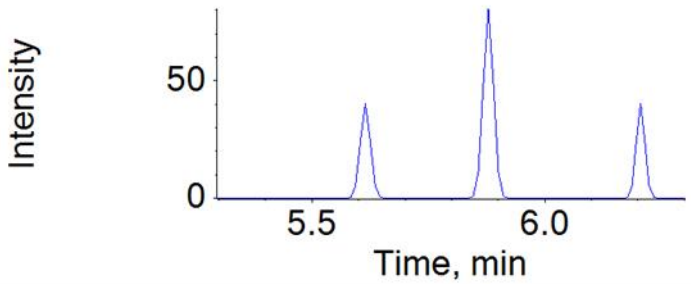
Component: NMeFOSAA
Primary Mass: 570.0 / 419.0



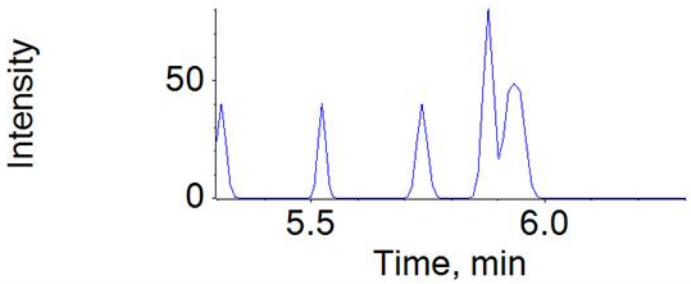
Component: NMeFOSAA_2
Secondary Mass: 570.0 / 483.0



Component: PFDS
Primary Mass: 599.0 / 80.0



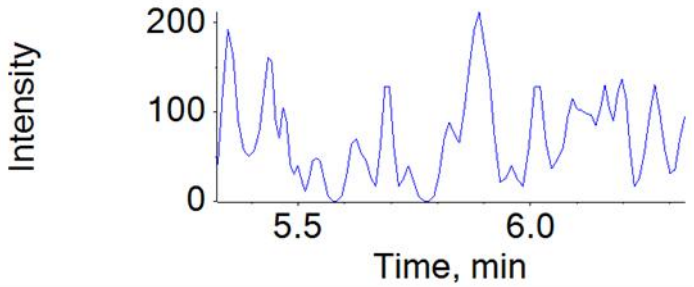
Component: PFDS_2
Secondary Mass: 599.0 / 99.0



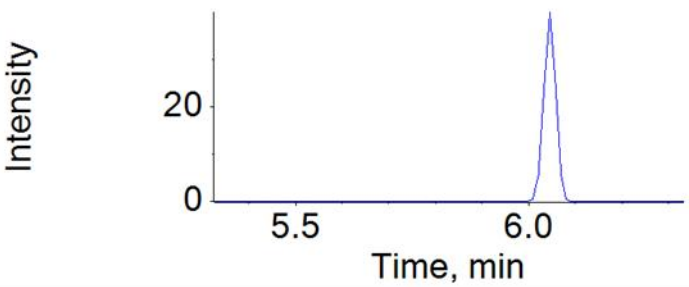
APPROVED
By JPT at 8:56 am, 11/16/18

REVIEWED
By HMK at 7:38 am, 11/19/18

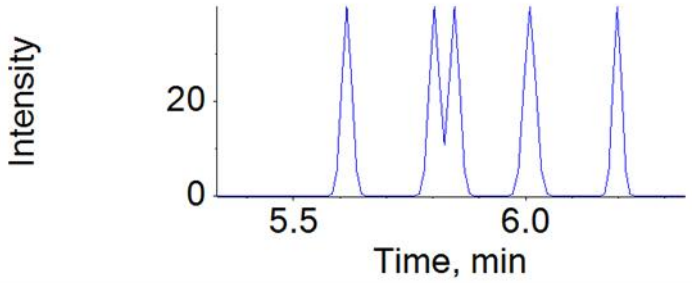
Component: PFUnDA
Primary Mass: 563.0 / 519.0



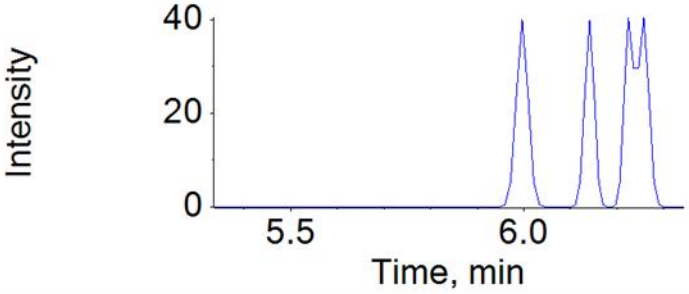
Component: PFUnDA_2
Secondary Mass: 563.0 / 169.0



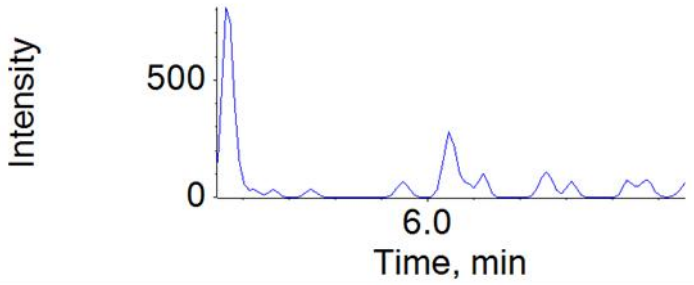
Component: NEtFOSAA
Primary Mass: 584.0 / 419.0



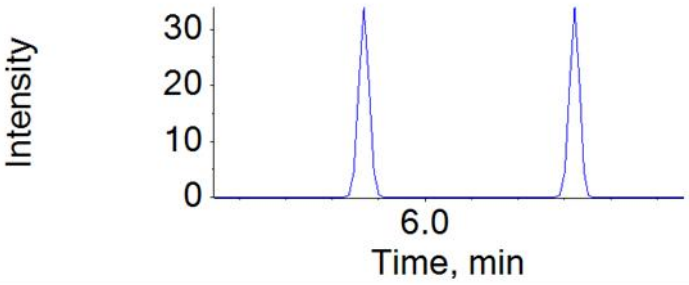
Component: NEtFOSAA_2
Secondary Mass: 584.0 / 526.0



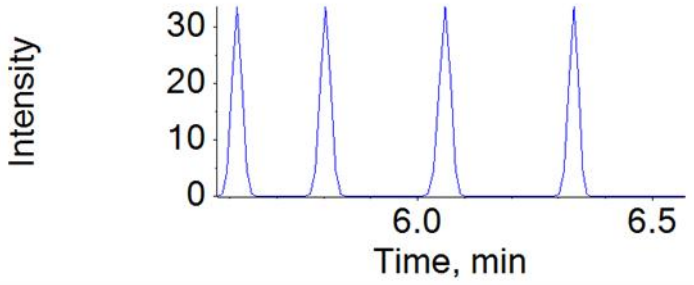
Component: PFDoDA
Primary Mass: 613.0 / 569.0



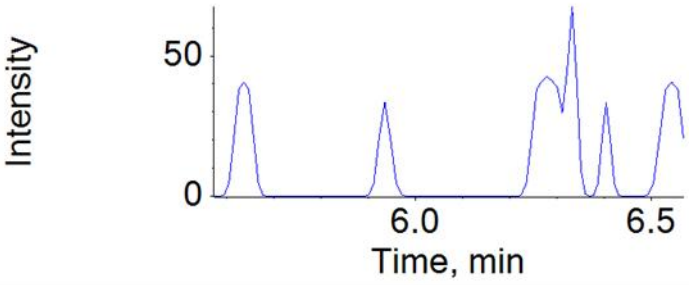
Component: PFDoDA_2
Secondary Mass: 613.0 / 169.0



Component: 10:2-FTS
Primary Mass: 627.0 / 607.0



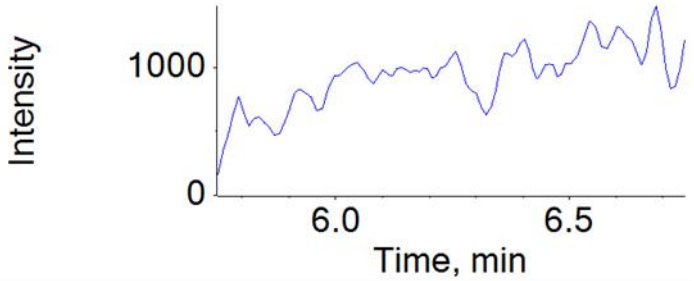
Component: 10:2 FTS_2
Secondary Mass: 627.0 / 81.0



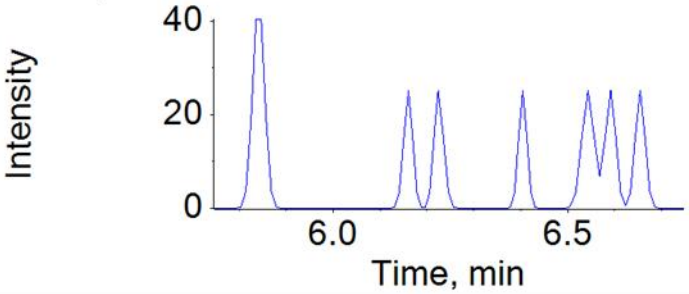
APPROVED
By JPT at 8:56 am, 11/16/18

REVIEWED
By HMK at 7:38 am, 11/19/18

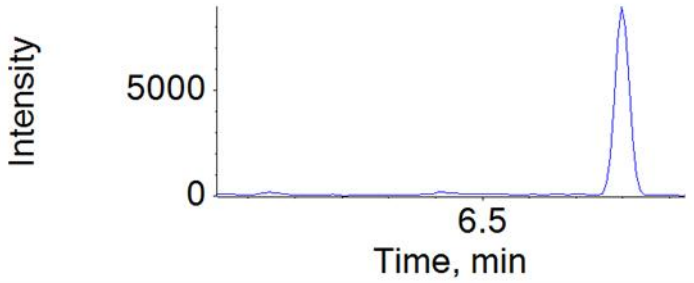
Component: PFTrDA
Primary Mass: 663.0 / 619.0



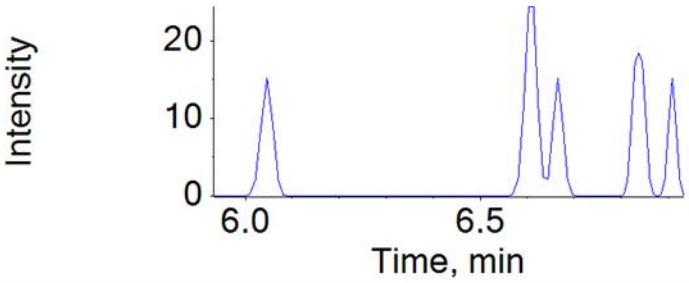
Component: PFTrDA_2
Secondary Mass: 663.0 / 169.0



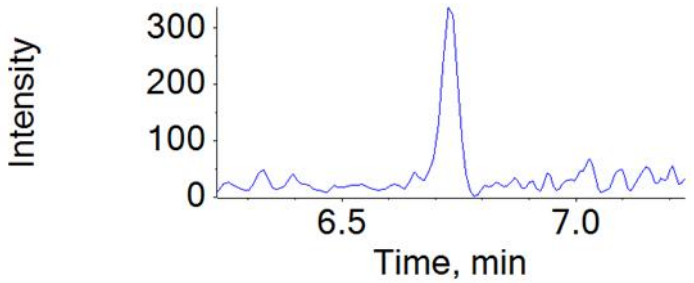
Component: PFTeDA
Primary Mass: 713.0 / 669.0



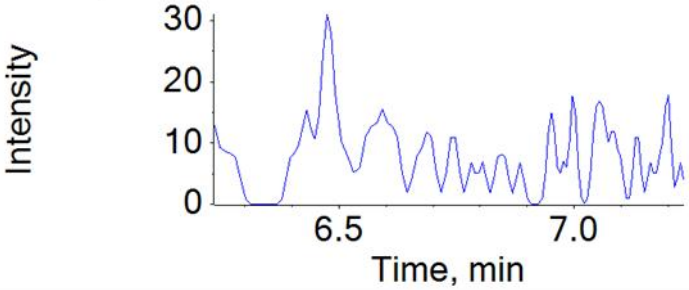
Component: PFTeDA_2
Secondary Mass: 713.0 / 169.0



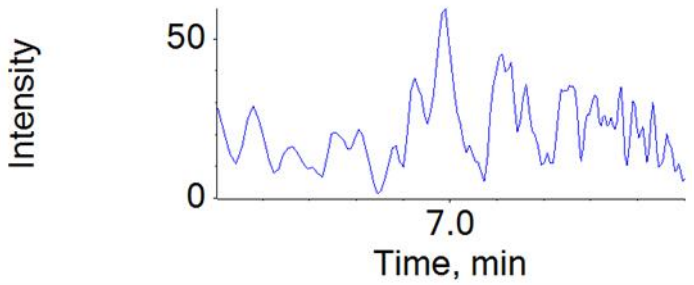
Component: PFHxDA
Primary Mass: 813.0 / 769.0



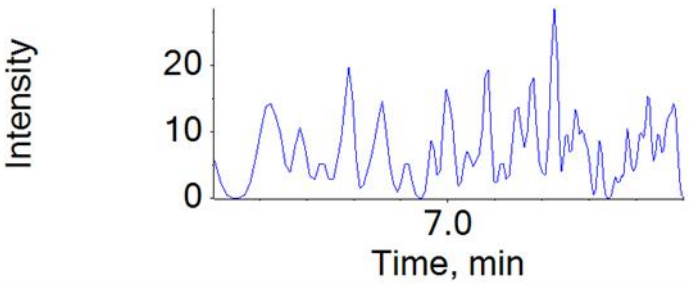
Component: PFHxDA_2
Secondary Mass: 813.0 / 169.0



Component: PFODA
Primary Mass: 913.0 / 869.0



Component: PFODA_2
Secondary Mass: 913.0 / 169.0



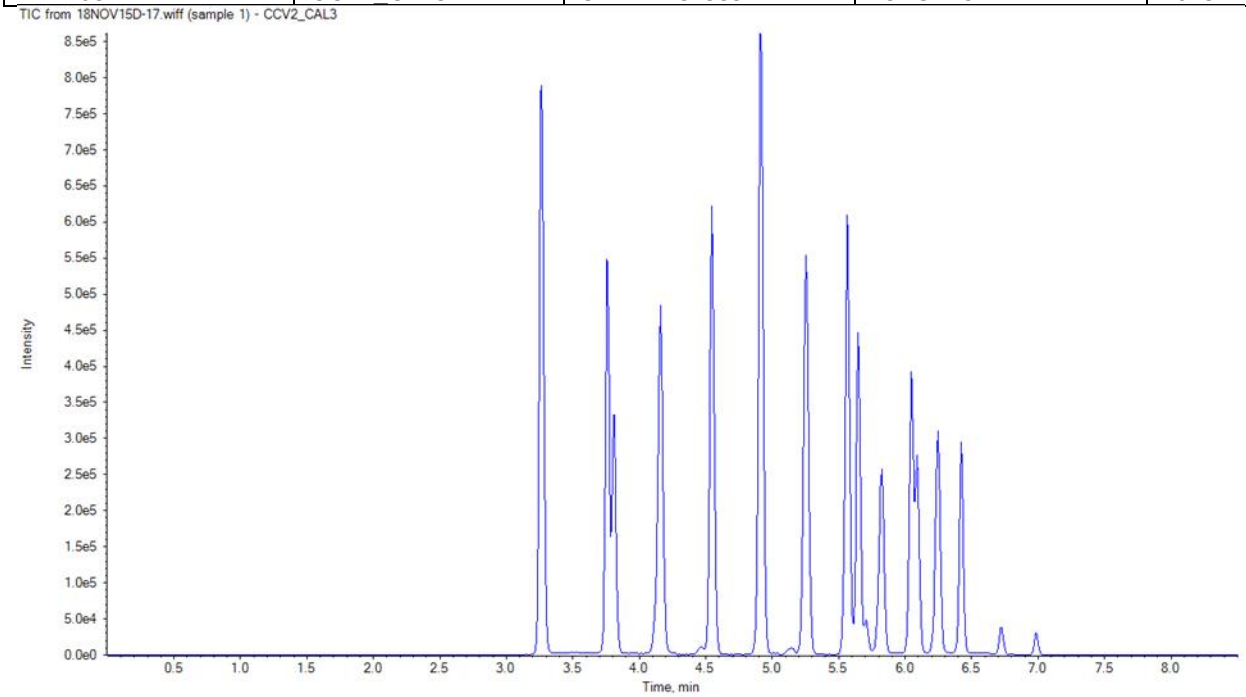
APPROVED
By JPT at 8:56 am, 11/16/18

REVIEWED
By HMK at 7:38 am, 11/19/18

Continuing Calibration Verfication

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV15DCCV1-4 11/16/2018 8:47:00 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Instrument Name:	Sample Name:	Sample ID:	Sample File:	Acquisition Date:
LM27631	CCV2_CAL3	CALBRN31833B	18NOV15D-17.wiff	2018-11-15T14:27:27



Injection Standard Area Reference File: 18NOV15D-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	708681.5	732179.1	-3	50	
13C2-PFOA	5.0	483368.6	479663.2	1	50	
13C4-PFOS	4.8	262609.5	269685.3	-3	50	
13C2-PFDA	5.0	300649.2	302309.9	-1	50	

APPROVED
By JPT at 8:56 am, 11/16/18

REVIEWED
By HMK at 7:38 am, 11/19/18

Continuing Calibration Verfication

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV15DCCV1-4 11/16/2018 8:47:00 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Instrument Name:	Sample Name:	Sample ID:	Sample File:	Acquisition Date:
LM27631	CCV2_CAL3	CALBRN31833B	18NOV15D-17.wiff	2018-11-15T14:27:27

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	330111.6	10	13C4-PFBA	805100.8	5.0	0.410	3.26	1.000	2.000	2.271	14	30	
PFPeA	311444.5	11	13C5-PFPeA	795910.6	5.0	0.391	3.76	1.000	2.000	2.265	13	30	
PFBS	170752.0	10	13C3-PFBS	440796.1	4.7	0.387	3.81	1.000	1.770	1.843	4	30	
4:2-FTS	38005.5	11	13C2-4:2-FTS	53277.3	4.7	0.713	4.12	1.000	1.870	1.937	4	30	
PFHxA	331266.2	12	13C5-PFHxA	698560.7	5.0	0.474	4.16	1.000	2.000	1.980	-1	30	
PFPeS	92420.6	11	13C3-PFBS	440796.1	4.7	0.210	4.18	1.100	1.880	2.036	8	30	
PFHpA	392775.4	11	13C4-PFHpA	536513.8	5.0	0.732	4.55	1.000	2.000	2.427	21	30	
PFHxS	127507.7	19	13C3-PFHxS	318911.8	4.7	0.400	4.55	1.000	1.820	1.939	7	30	
6:2-FTS	30390.4	11	13C2-6:2-FTS	35048.1	4.8	0.867	4.90	1.000	1.900	2.098	10	30	
PFHpS	127618.9	11	13C3-PFHxS	318911.8	4.7	0.400	4.91	1.080	1.900	2.107	11	30	
PFOA	378071.7	11	13C8-PFOA	919301.7	5.0	0.411	4.92	1.000	2.000	2.196	10	30	
PFOS	125131.3	22	13C8-PFOS	276362.5	4.8	0.453	5.25	1.000	1.850	1.980	7	30	
PFNA	313870.7	11	13C9-PFNA	486368.3	5.0	0.645	5.26	1.000	2.000	2.327	16	30	
PFNS	82338.4	11	13C8-PFOS	276362.5	4.8	0.298	5.54	1.060	1.920	2.084	9	30	
PFDA	253223.2	11	13C6-PFDA	664128.1	5.0	0.381	5.57	1.000	2.000	2.021	1	30	
8:2-FTS	24874.7	11	13C2-8:2-FTS	25867.9	4.8	0.962	5.57	1.000	1.920	2.242	17	30	
PFOSA	287731.8	11	13C8-PFOSA	691277.8	5.0	0.416	5.65	1.000	2.000	2.033	2	30	
NMeFOSAA	28588.3	18	d3-NMeFOSAA	69878.3	5.0	0.409	5.71	1.000	2.000	2.312	16	30	
PFDS	61289.2	11	13C8-PFOS	276362.5	4.8	0.222	5.80	1.110	1.930	2.009	4	30	
PFUnDA	212907.1	11	13C7-PFUnDA	276387.0	5.0	0.770	5.82	1.000	2.000	2.014	1	30	
NEtFOSAA	26369.1	22	d5-NEtFOSAA	67326.9	5.0	0.392	5.84	1.000	2.000	2.053	3	30	
PFDoDA	239087.4	11	13C2-PFDoDA	544644.0	5.0	0.439	6.05	1.000	2.000	2.235	12	30	
10:2-FTS	18636.1	11	13C2-8:2-FTS	25867.9	4.8	0.720	6.06	1.090	1.930	2.400	24	30	
NMePFOSAE	179582.3	11	d7-NMePFOSAE	325506.1	5.0	0.552	6.09	1.000	2.000	2.296	15	30	
NMePFOSA	32647.0	12	d3-NMePFOSA	77095.3	5.0	0.423	6.10	1.000	2.000	2.089	4	30	
PFDoS	31258.0	11	13C8-PFOS	276362.5	4.8	0.113	6.21	1.180	1.940	1.981	2	30	
NEtPFOSAE	186894.4	11	d9-NEtPFOSAE	275243.8	5.0	0.679	6.25	1.000	2.000	2.178	9	30	
NEtPFOSA	28095.6	11	d5-NEtPFOSA	63071.4	5.0	0.445	6.26	1.000	2.000	2.046	2	30	
PFTrDA	196890.1	11	13C2-PFDoDA	544644.0	5.0	0.362	6.25	1.030	2.000	2.282	14	30	
PFTeDA	170072.7	10	13C2-PFTeDA	423538.7	5.0	0.402	6.42	1.000	2.000	2.251	13	30	
PFHxDA	74302.7	11	13C2-PFTeDA	423538.7	5.0	0.175	6.72	1.050	2.000	2.090	5	30	
PFODA	61703.9	10	13C2-PFTeDA	423538.7	5.0	0.146	6.99	1.090	2.000	2.029	1	30	

APPROVED
By JPT at 8:56 am, 11/16/18

REVIEWED
By HMK at 7:38 am, 11/19/18

Continuing Calibration Verfication

ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM
Result Table: 18NOV15DCCV1-4 11/16/2018 8:47:00 AM
Acquisition Method: 18AUG13_3uL.dam

APPROVED
By JPT at 8:56 am, 11/16/18

REVIEWED
By HMK at 7:38 am, 11/19/18

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV15DCCV1-4 11/16/2018 8:47:00 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Sample Name:	CCV2_CAL3			**Data File:**		18NOV15D-17.wiff
Sample ID:	CALBRN31833B			**Acquis Date:**		2018-11-15T14:27:27
Sample Type:	Quality Control			**Instrument:**		LM27631
Vial Position:	5			**Acquis Method:**		18AUG13_3uL.dam
Injection Vol:	3.00			**Result Table:**		18NOV15DCCV1-4
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: 18NOV15D-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	708681.5	732179.1	-3	50	
13C2-PFOA	5.0	483368.6	479663.2	1	50	
13C4-PFOS	4.8	262609.5	269685.3	-3	50	
13C2-PFDA	5.0	300649.2	302309.9	-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	805100.8	13C3-PFBA	708681.5	1.136	5.000	5.093	102	70-130	
E13C5-PFPeA	795910.6	13C3-PFBA	708681.5	1.123	5.000	5.037	101	70-130	
E13C3-PFBS	440796.1	13C3-PFBA	708681.5	0.622	4.650	4.391	94	70-130	
E13C2-4:2-FTS	53277.3	13C2-PFOA	483368.6	0.110	4.670	4.909	105	70-130	
E13C5-PFHxA	698560.7	13C2-PFOA	483368.6	1.445	5.000	5.221	104	70-130	
E13C3-PFHxS	318911.8	13C2-PFOA	483368.6	0.660	4.730	4.527	96	70-130	
E13C4-PFHpA	536513.8	13C2-PFOA	483368.6	1.110	5.000	5.000	100	70-130	
E13C2-6:2-FTS	35048.1	13C2-PFOA	483368.6	0.073	4.750	4.851	102	70-130	
E13C8-PFOA	919301.7	13C2-PFOA	483368.6	1.902	5.000	5.240	105	70-130	
E13C8-PFOS	276362.5	13C4-PFOS	262609.5	1.052	4.780	4.663	98	70-130	
E13C9-PFNA	486368.3	13C4-PFOS	262609.5	1.852	5.000	5.164	103	70-130	
E13C6-PFDA	664128.1	13C2-PFDA	300649.2	2.209	5.000	5.155	103	70-130	
E13C2-8:2-FTS	25867.9	13C2-PFDA	300649.2	0.086	4.790	4.291	90	70-130	
E13C8-PFOSA	691277.8	13C2-PFDA	300649.2	2.299	5.000	5.097	102	70-130	
Ed3-NMeFOSAA	69878.3	13C2-PFDA	300649.2	0.232	5.000	4.195	84	70-130	
E13C7-PFUnDA	276387.0	13C2-PFDA	300649.2	0.919	5.000	5.337	107	70-130	
Ed5-NEtFOSAA	67326.9	13C2-PFDA	300649.2	0.224	5.000	4.738	95	70-130	
E13C2-PFDoDA	544644.0	13C2-PFDA	300649.2	1.812	5.000	4.703	94	70-130	
Ed7-NMePFOSAE	325506.1	13C2-PFDA	300649.2	1.083	5.000	4.685	94	70-130	
Ed3-NMePFOSA	77095.3	13C2-PFDA	300649.2	0.256	5.000	4.659	93	70-130	
Ed9-NEtPFOSAE	275243.8	13C2-PFDA	300649.2	0.915	5.000	4.762	95	70-130	
Ed5-NEtPFOSA	63071.3	13C2-PFDA	300649.2	0.210	5.000	4.921	98	70-130	
E13C2-PFTeDA	423538.7	13C2-PFDA	300649.2	1.409	5.000	4.946	99	70-130	

APPROVED
By JPT at 8:56 am, 11/16/18

REVIEWED
By HMK at 7:38 am, 11/19/18

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV15DCCV1-4 11/16/2018 8:47:00 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

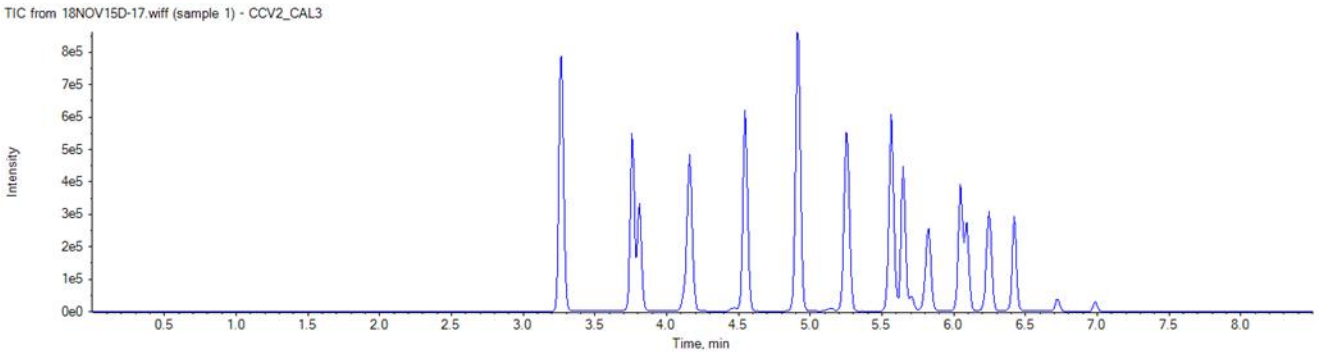
Analyte Quantitation Peak Table

Sample Name: CCV2_CAL3 **Instrument Name:** LM27631 **File Name:** 18NOV15D-17.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	330111.6		A	13C4-PFBA	3.26	805100.8	0.410	2.271
PFPeA	3.76	1.000	311444.5		A	13C5-PFPeA	3.76	795910.6	0.391	2.265
PFBS	3.81	1.000	170752.0		A	13C3-PFBS	3.81	440796.1	0.387	1.843
4:2-FTS	4.12	1.000	38005.5		A	13C2-4:2-FTS	4.12	53277.3	0.713	1.937
PFHxA	4.16	1.000	331266.2		A	13C5-PFHxA	4.16	698560.7	0.474	1.980
PFPeS	4.18	1.100	92420.6		A	13C3-PFBS	3.81	440796.1	0.210	2.036
PFHpA	4.55	1.000	392775.4		A	13C4-PFHpA	4.55	536513.8	0.732	2.427
PFHxS	4.55	1.000	127507.7		M	13C3-PFHxS	4.55	318911.8	0.400	1.939
6:2-FTS	4.90	1.000	30390.4		A	13C2-6:2-FTS	4.90	35048.1	0.867	2.098
PFHpS	4.91	1.080	127618.9		A	13C3-PFHxS	4.55	318911.8	0.400	2.107
PFOA	4.92	1.000	378071.7		A	13C8-PFOA	4.92	919301.7	0.411	2.196
PFOS	5.25	1.000	125131.3		M	13C8-PFOS	5.25	276362.5	0.453	1.980
PFNA	5.26	1.000	313870.7		A	13C9-PFNA	5.26	486368.3	0.645	2.327
PFNS	5.54	1.060	82338.4		A	13C8-PFOS	5.25	276362.5	0.298	2.084
PFDA	5.57	1.000	253223.2		A	13C6-PFDA	5.57	664128.1	0.381	2.021
8:2-FTS	5.57	1.000	24874.7		A	13C2-8:2-FTS	5.57	25867.9	0.962	2.242
PFOSA	5.65	1.000	287731.8		A	13C8-PFOSA	5.65	691277.8	0.416	2.033
NMeFOSAA	5.71	1.000	28588.3		A	d3-NMeFOSAA	5.70	69878.3	0.409	2.312
PFDS	5.80	1.110	61289.2		A	13C8-PFOS	5.25	276362.5	0.222	2.009
PFUnDA	5.82	1.000	212907.1		A	13C7-PFUnDA	5.82	276387.0	0.770	2.014
NEtFOSAA	5.84	1.000	26369.1		M	d5-NEtFOSAA	5.83	67326.9	0.392	2.053
PFDoDA	6.05	1.000	239087.4		A	13C2-PFDoDA	6.05	544644.0	0.439	2.235
10:2-FTS	6.06	1.090	18636.1		A	13C2-8:2-FTS	5.57	25867.9	0.720	2.400
NMePFOSAE	6.09	1.000	179582.3		A	d7-NMePFOSAE	6.09	325506.1	0.552	2.296
NMePFOSA	6.10	1.000	32647.0		A	d3-NMePFOSA	6.10	77095.3	0.423	2.089
PFDoS	6.21	1.180	31258.0		A	13C8-PFOS	5.25	276362.5	0.113	1.981
NEtPFOSAE	6.25	1.000	186894.4		A	d9-NEtPFOSAE	6.24	275243.8	0.679	2.178
NEtPFOSA	6.26	1.000	28095.6		A	d5-NEtPFOSA	6.26	63071.4	0.445	2.046
PFTrDA	6.25	1.030	196890.1		A	13C2-PFDoDA	6.05	544644.0	0.362	2.282
PFTeDA	6.42	1.000	170072.7		A	13C2-PFTeDA	6.42	423538.7	0.402	2.251
PFHxDA	6.72	1.050	74302.7		A	13C2-PFTeDA	6.42	423538.7	0.175	2.090
PFODA	6.99	1.090	61703.9		A	13C2-PFTeDA	6.42	423538.7	0.146	2.029

Total Ion Chromatogram

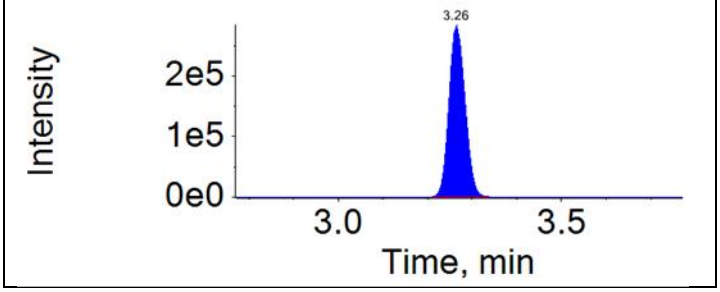


APPROVED
By JPT at 8:56 am, 11/16/18

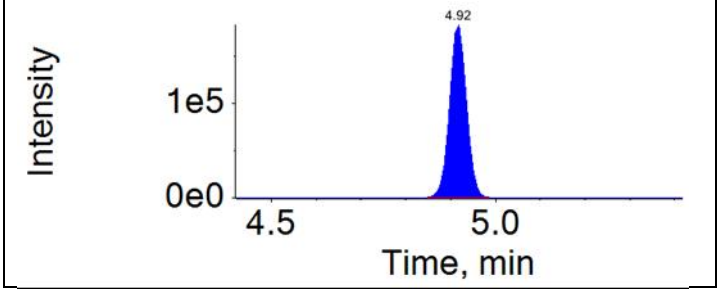
REVIEWED
By HMK at 7:38 am, 11/19/18

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV15DCCV1-4 11/16/2018 8:47:00 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

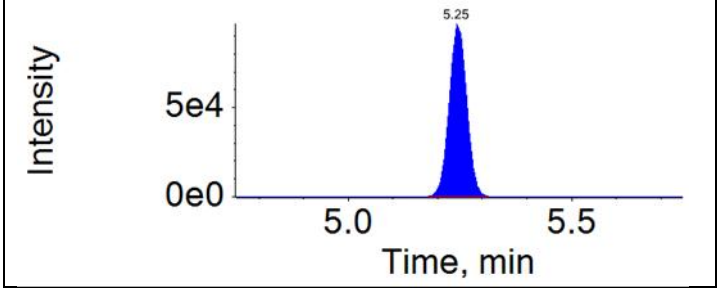
Injection Standard: 13C3-PFBA
216.0 / 172.0



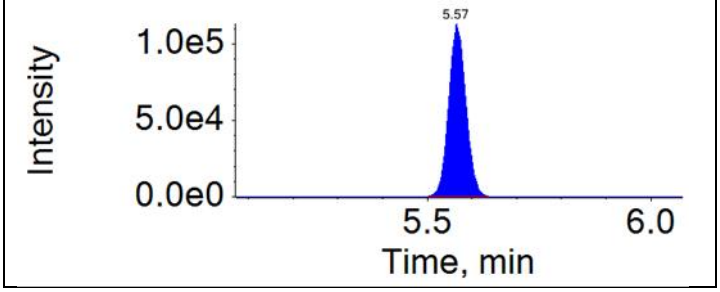
Injection Standard: 13C2-PFOA
415.0 / 370.0



Injection Standard: 13C4-PFOS
503.0 / 80.0



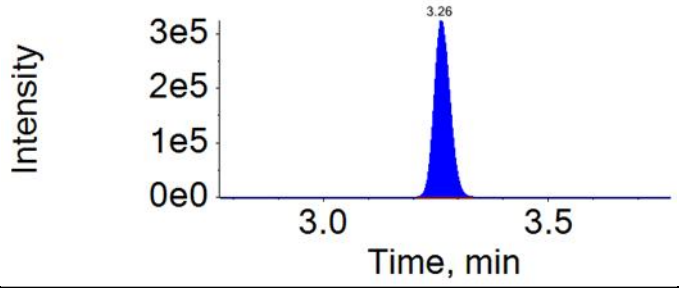
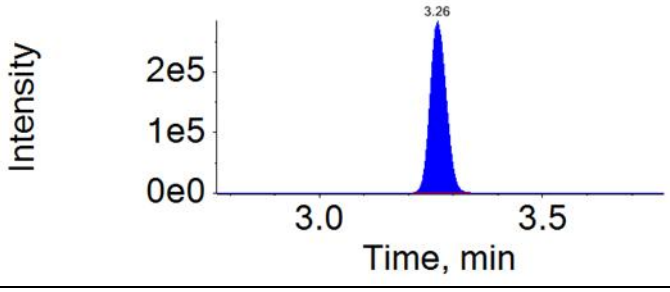
Injection Standard: 13C2-PFDA
515.0 / 470.0

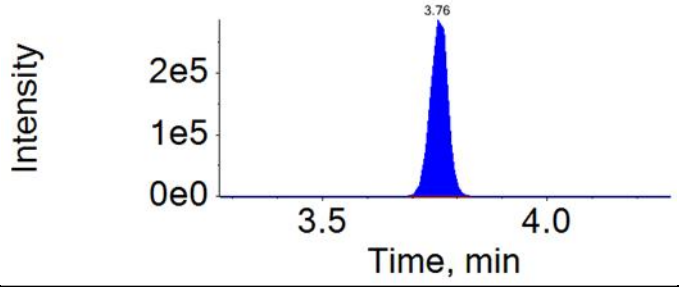
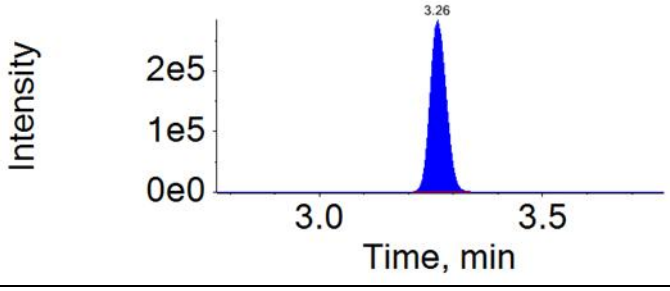


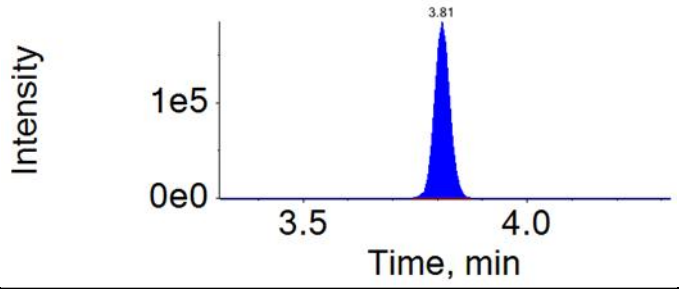
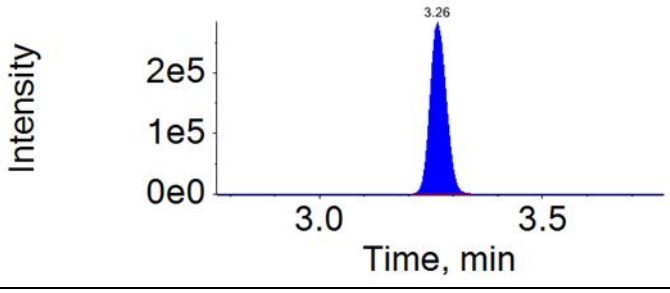
APPROVED
By JPT at 8:56 am, 11/16/18

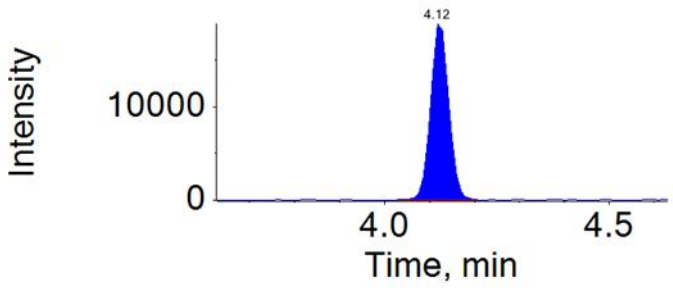
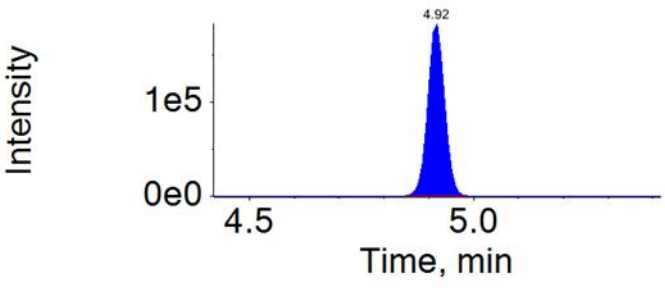
REVIEWED
By HMK at 7:38 am, 11/19/18

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV15DCCV1-4 11/16/2018 8:47:00 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
	

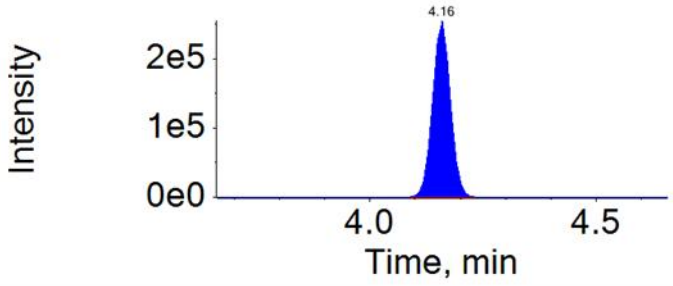
Extraction Standard: E13C5-PFPeA	Injection Standard: 13C3-PFBA
268.0 / 223.0	216.0 / 172.0
	

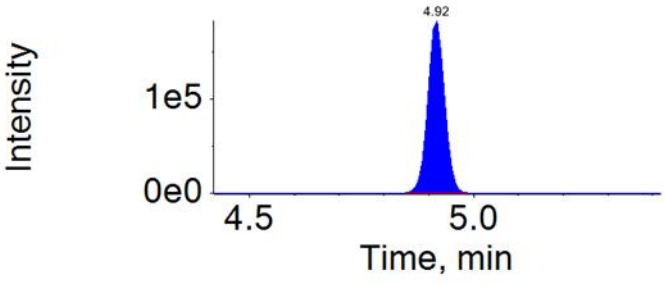
Extraction Standard: E13C3-PFBS	Injection Standard: 13C3-PFBA
302.0 / 80.0	216.0 / 172.0
	

Extraction Standard: E13C2-4:2-FTS	Injection Standard: 13C2-PFOA
329.0 / 81.0	415.0 / 370.0
	

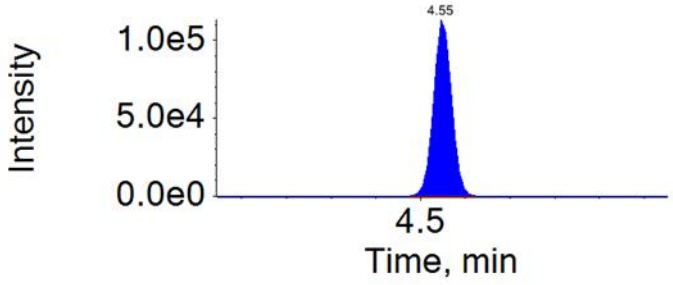
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV15DCCV1-4 11/16/2018 8:47:00 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

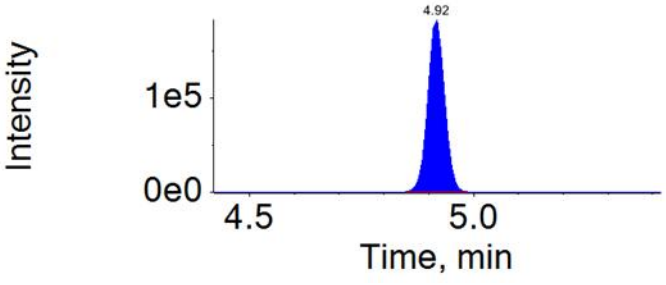
Extraction Standard: E13C5-PFHxA	Injection Standard: 13C2-PFOA
318.0 / 273.0	415.0 / 370.0



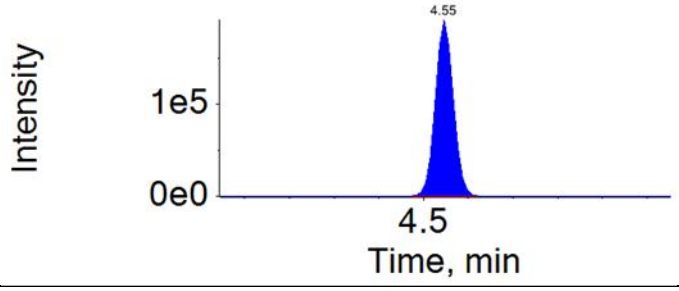


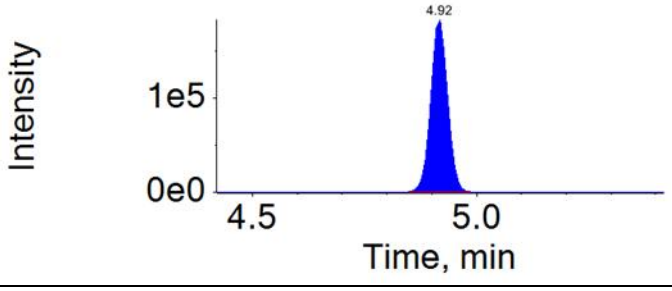
Extraction Standard: E13C3-PFHxS	Injection Standard: 13C2-PFOA
402.0 / 80.0	415.0 / 370.0



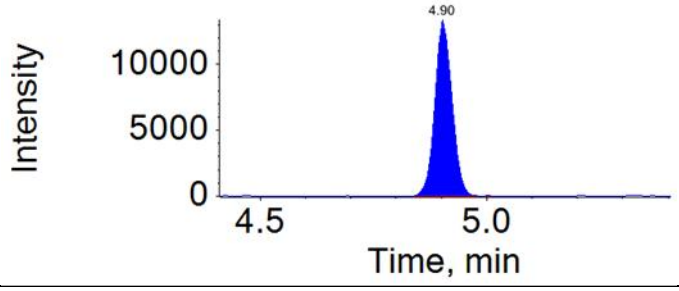


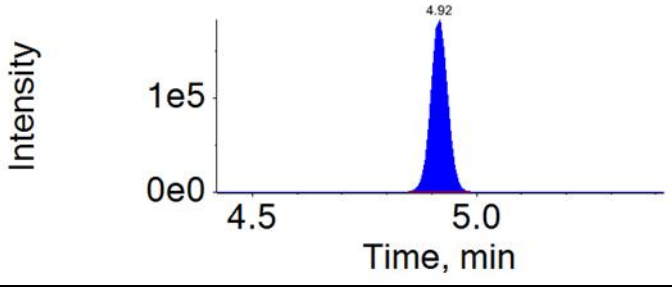
Extraction Standard: E13C4-PFHpA	Injection Standard: 13C2-PFOA
367.0 / 322.0	415.0 / 370.0





Extraction Standard: E13C2-6:2-FTS	Injection Standard: 13C2-PFOA
429.0 / 81.0	415.0 / 370.0

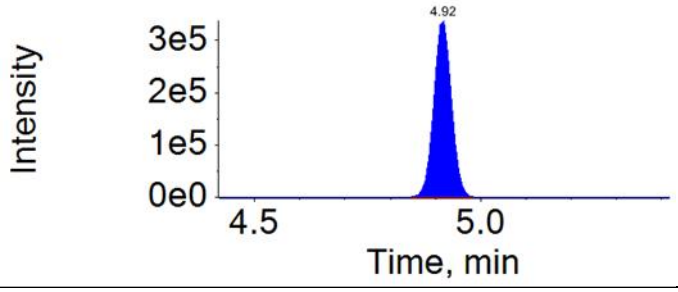
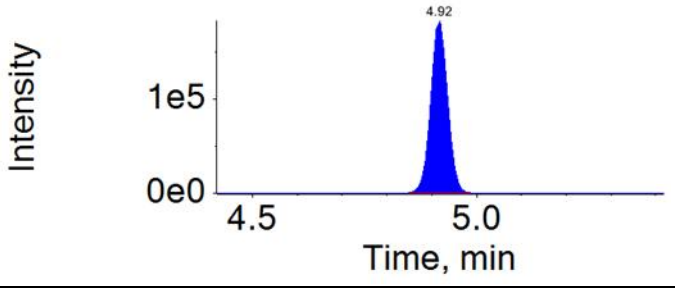


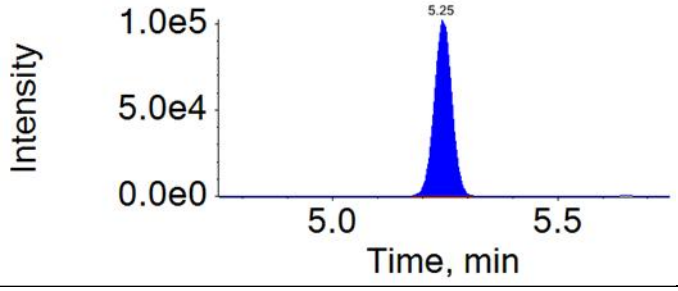
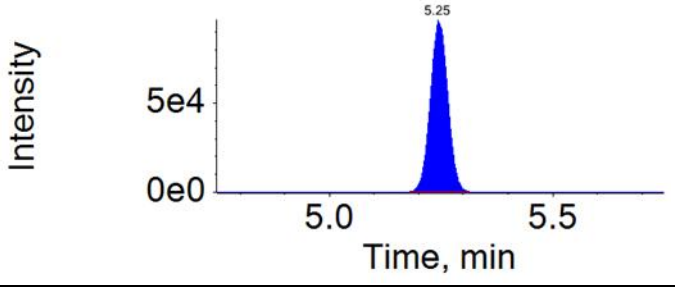


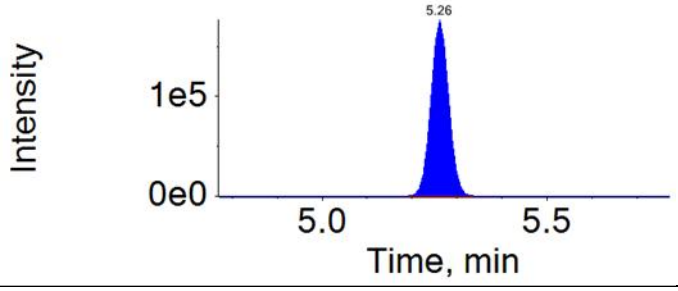
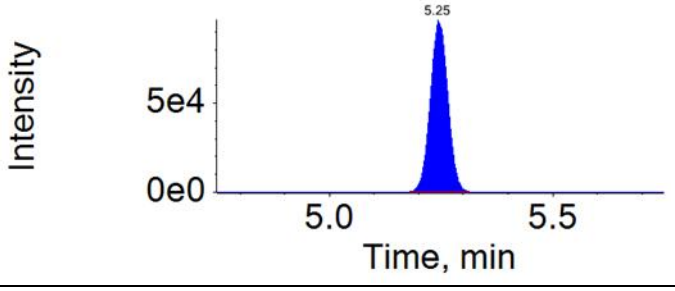
APPROVED
By JPT at 8:56 am, 11/16/18

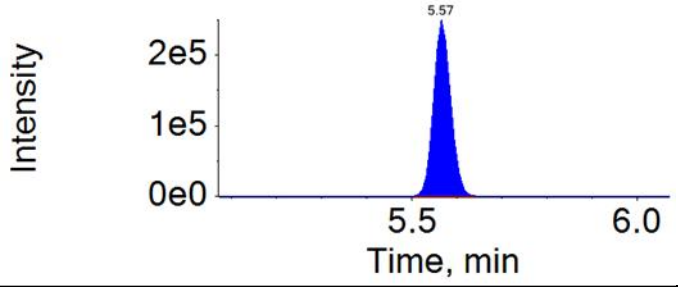
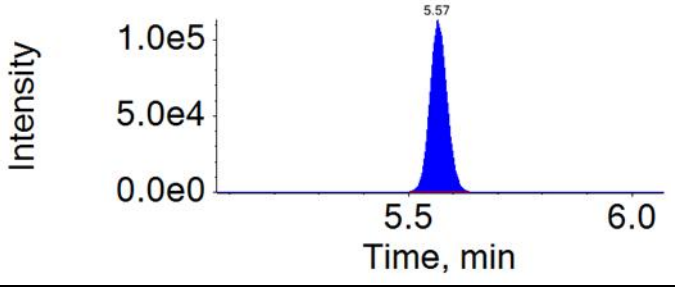
REVIEWED
By HMK at 7:38 am, 11/19/18

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV15DCCV1-4 11/16/2018 8:47:00 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
	

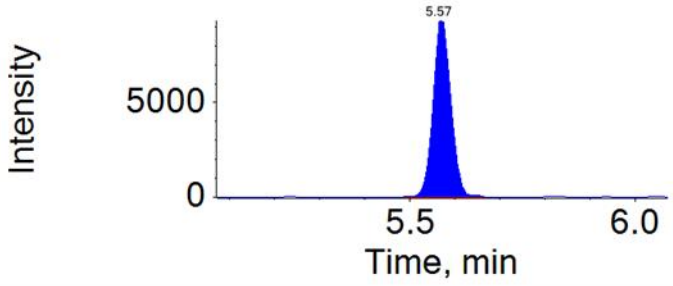
Extraction Standard: E13C8-PFOS	Injection Standard: 13C4-PFOS
507.0 / 80.0	503.0 / 80.0
	

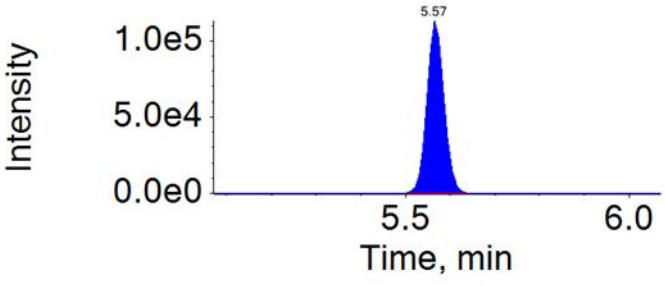
Extraction Standard: E13C9-PFNA	Injection Standard: 13C4-PFOS
472.0 / 427.0	503.0 / 80.0
	

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

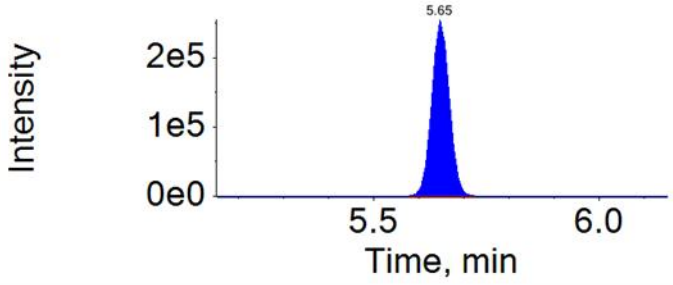
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV15DCCV1-4 11/16/2018 8:47:00 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

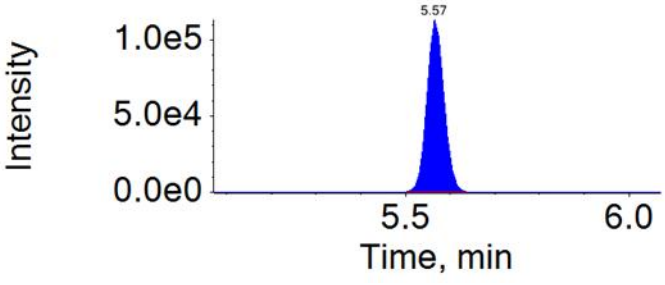
Extraction Standard: E13C2-8:2-FTS	Injection Standard: 13C2-PFDA
529.0 / 81.0	515.0 / 470.0



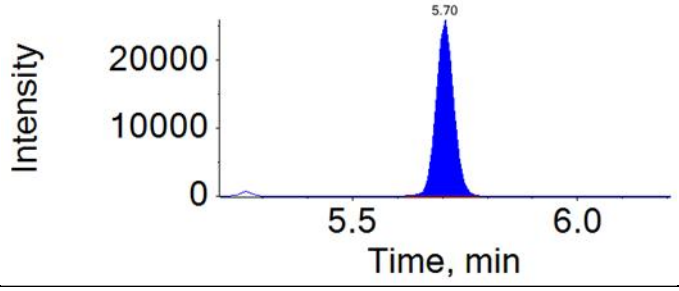


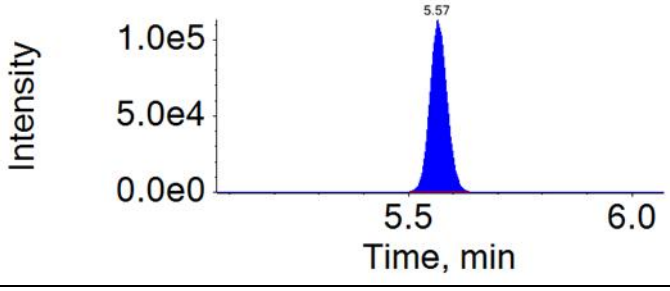
Extraction Standard: E13C8-PFOSA	Injection Standard: 13C2-PFDA
506.0 / 78.0	515.0 / 470.0



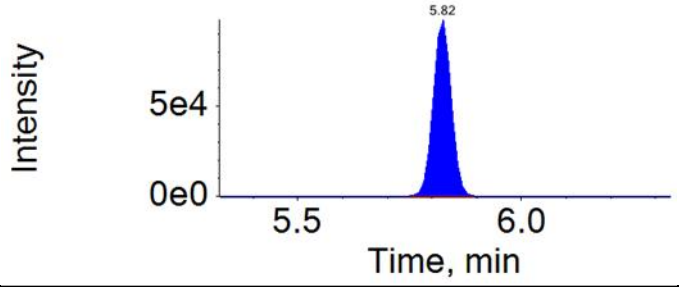


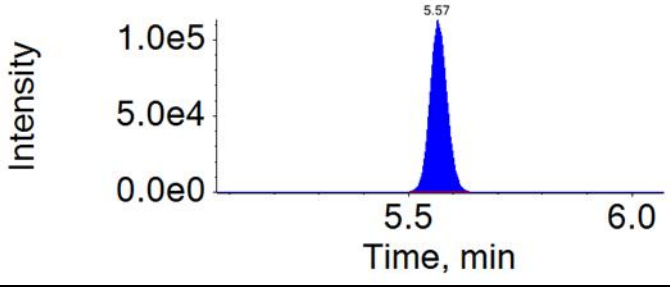
Extraction Standard: Ed3-NMeFOSAA	Injection Standard: 13C2-PFDA
573.0 / 419.0	515.0 / 470.0





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



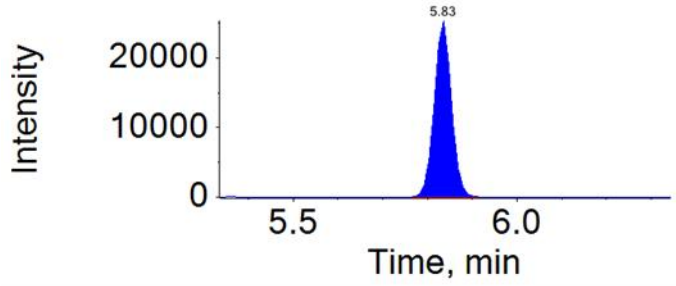


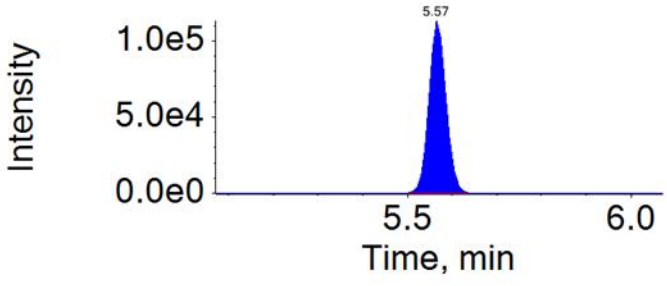
APPROVED
By JPT at 8:56 am, 11/16/18

REVIEWED
By HMK at 7:38 am, 11/19/18

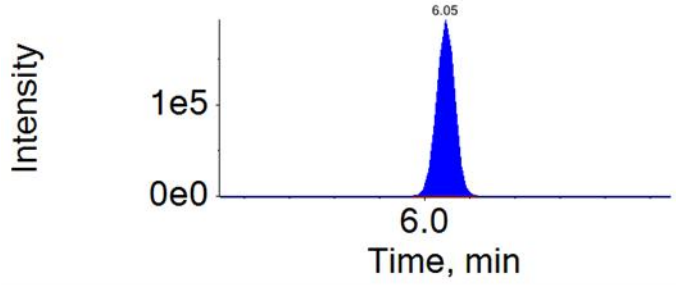
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV15DCCV1-4 11/16/2018 8:47:00 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

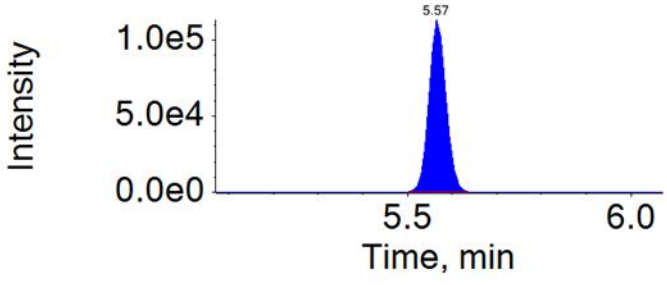
Extraction Standard: Ed5-NEtFOSAA	Injection Standard: 13C2-PFDA
589.0 / 419.0	515.0 / 470.0



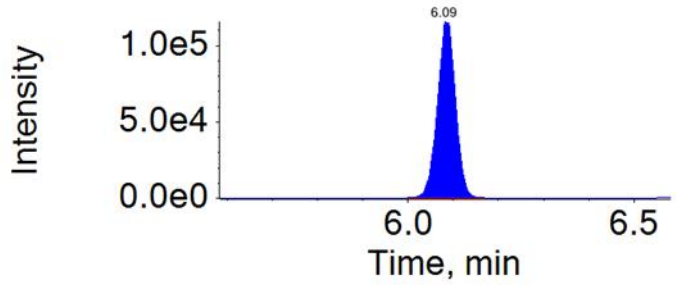


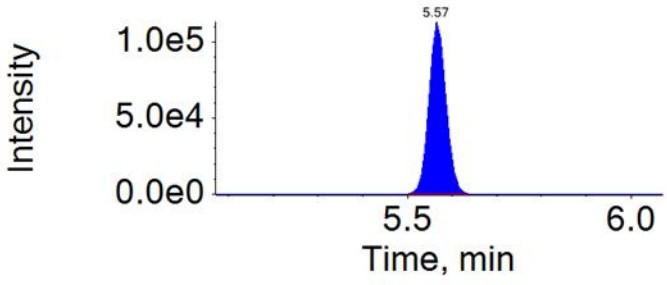
Extraction Standard: E13C2-PFDoDA	Injection Standard: 13C2-PFDA
615.0 / 570.0	515.0 / 470.0



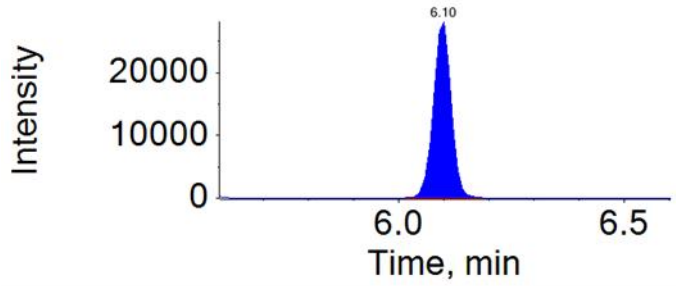


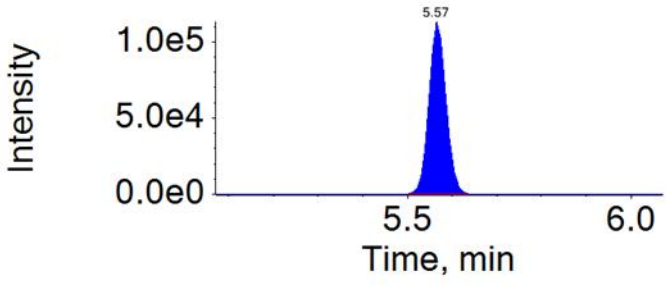
Extraction Standard: Ed7-NMePFOSAE	Injection Standard: 13C2-PFDA
623.0 / 59.0	515.0 / 470.0





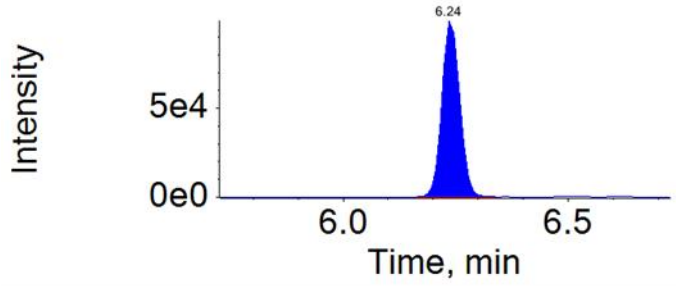
Extraction Standard: Ed3-NMePFOSA	Injection Standard: 13C2-PFDA
515.0 / 169.0	515.0 / 470.0

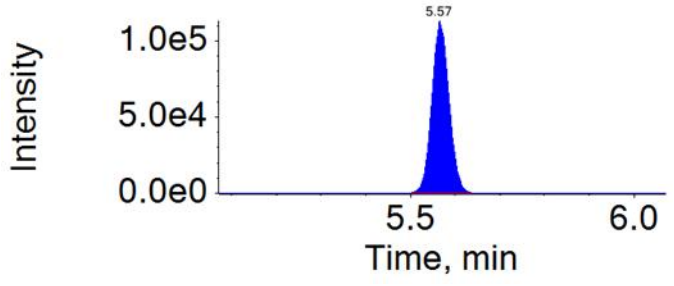




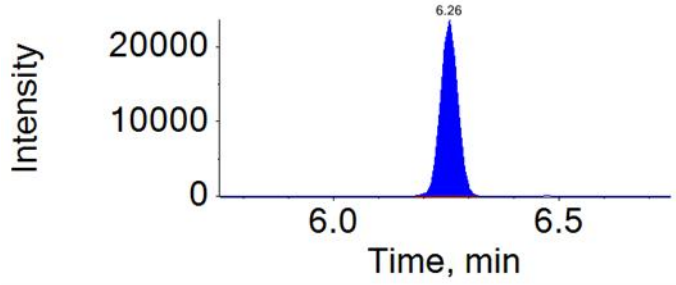
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV15DCCV1-4 11/16/2018 8:47:00 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

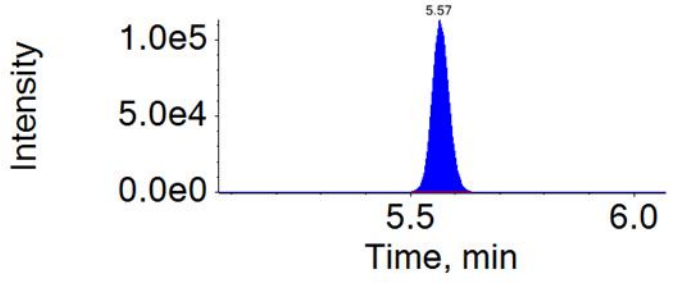
Extraction Standard: Ed9-NEtPFOSAE	Injection Standard: 13C2-PFDA
639.0 / 59.0	515.0 / 470.0



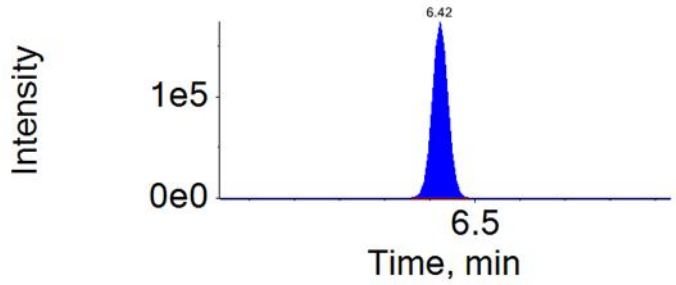


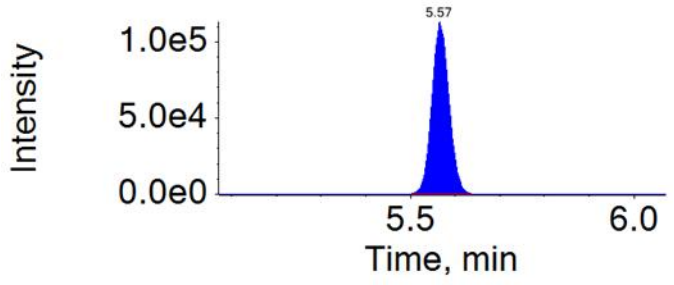
Extraction Standard: Ed5-NEtPFOSA	Injection Standard: 13C2-PFDA
531.0 / 169.0	515.0 / 470.0





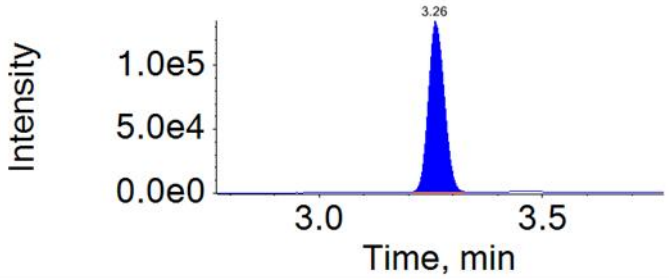
Extraction Standard: E13C2-PFTeDA	Injection Standard: 13C2-PFDA
715.0 / 670.0	515.0 / 470.0

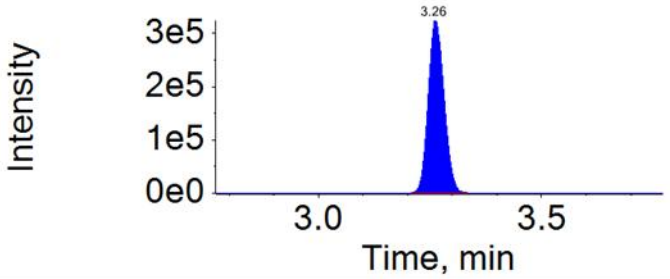




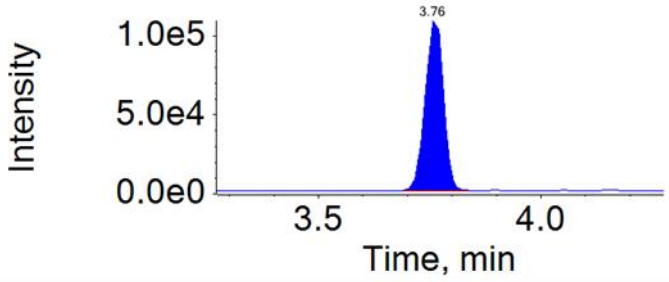
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV15DCCV1-4 11/16/2018 8:47:00 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

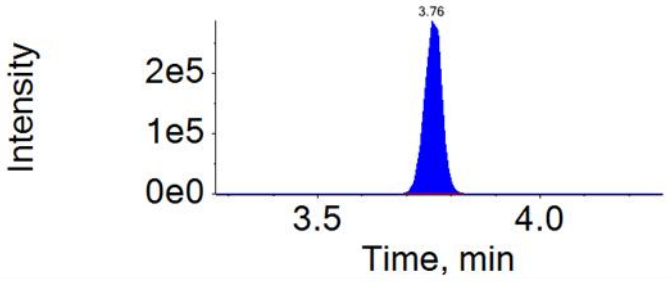
Analyte: PFBA	Extraction Standard: 13C4-PFBA
213.0 / 169.0	217.0 / 172.0



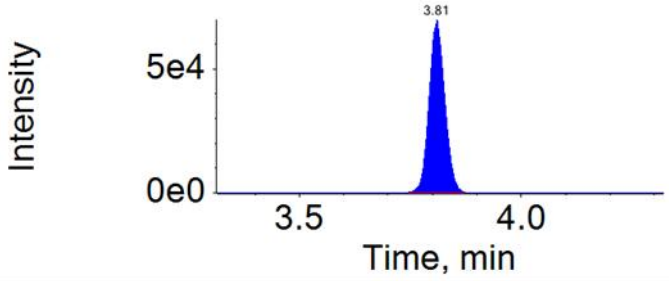


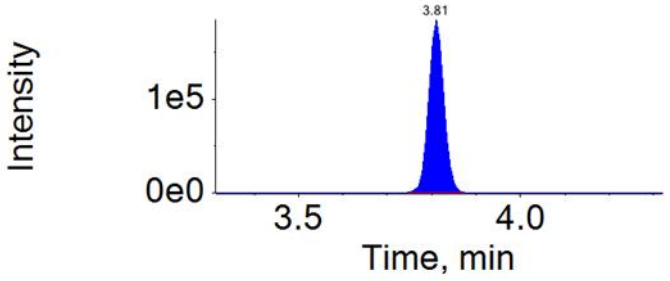
Analyte: PFPeA	Extraction Standard: 13C5-PFPeA
263.0 / 219.0	268.0 / 223.0



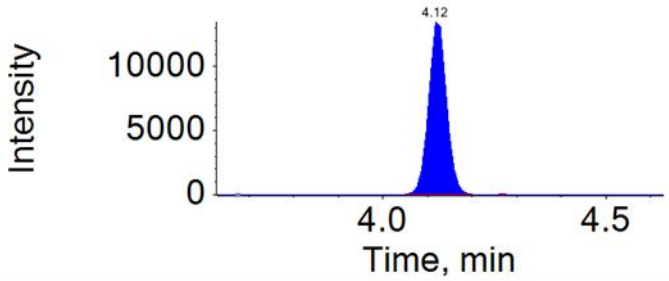


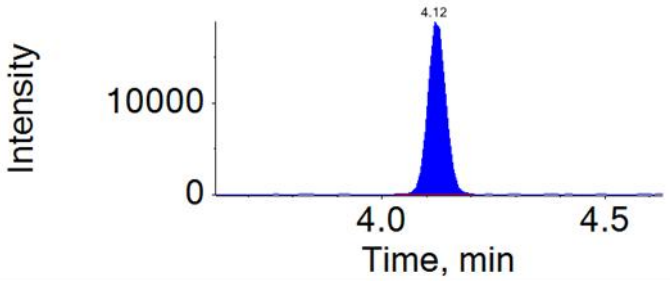
Analyte: PFBS	Extraction Standard: 13C3-PFBS
299.0 / 80.0	302.0 / 80.0





Analyte: 4:2-FTS	Extraction Standard: 13C2-4:2-FTS
327.0 / 307.0	329.0 / 81.0



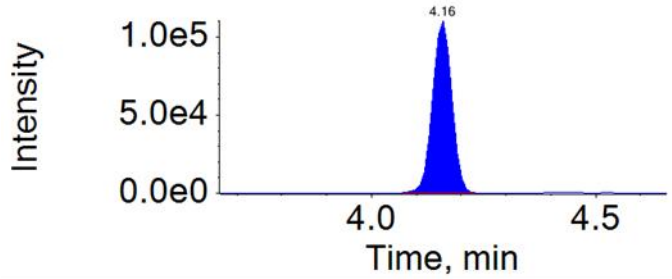


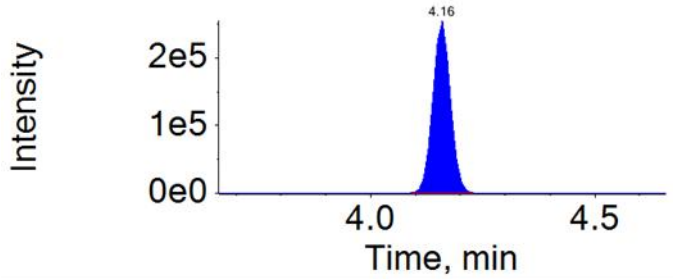
APPROVED
By JPT at 8:56 am, 11/16/18

REVIEWED
By HMK at 7:38 am, 11/19/18

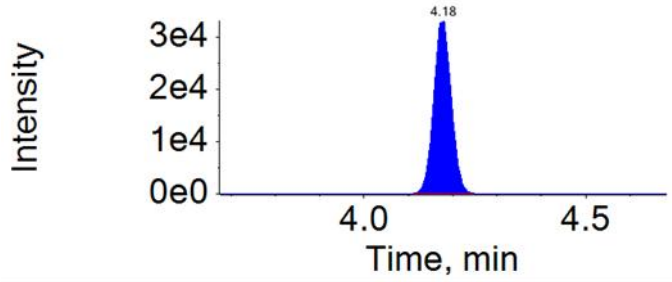
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV15DCCV1-4 11/16/2018 8:47:00 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

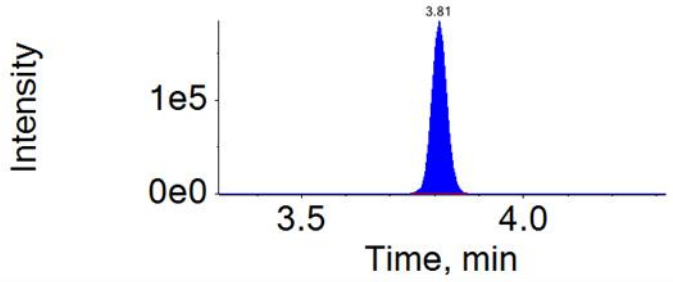
Analyte: PFHxA	Extraction Standard: 13C5-PFHxA
313.0 / 269.0	318.0 / 273.0



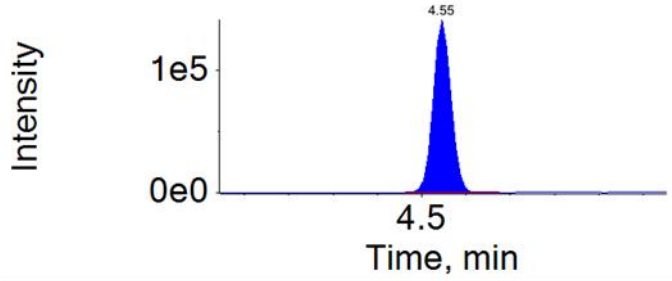


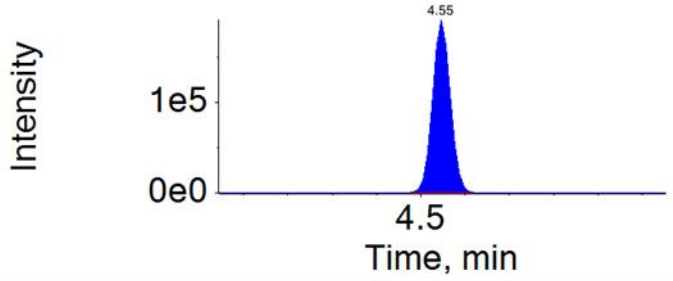
Analyte: PFPeS	Extraction Standard: 13C3-PFBS
349.0 / 80.0	302.0 / 80.0



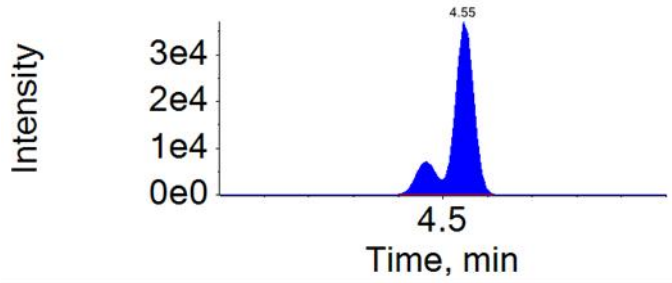


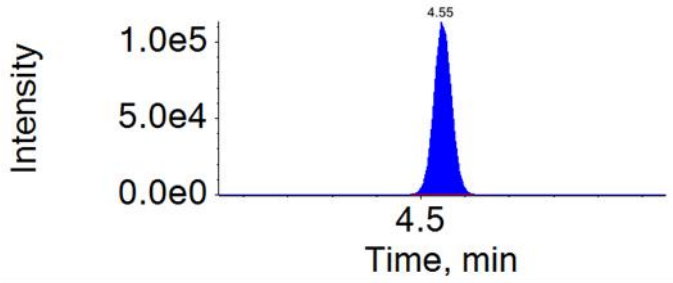
Analyte: PFHpA	Extraction Standard: 13C4-PFHpA
363.0 / 319.0	367.0 / 322.0





Analyte: PFHxS	Extraction Standard: 13C3-PFHxS
399.0 / 80.0	402.0 / 80.0



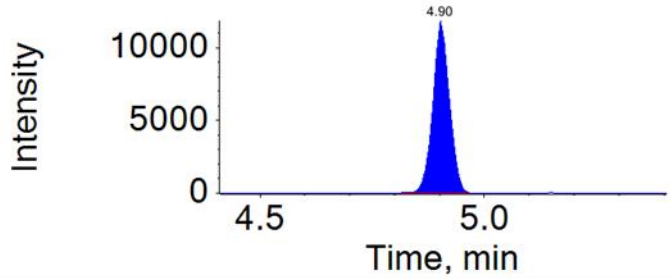


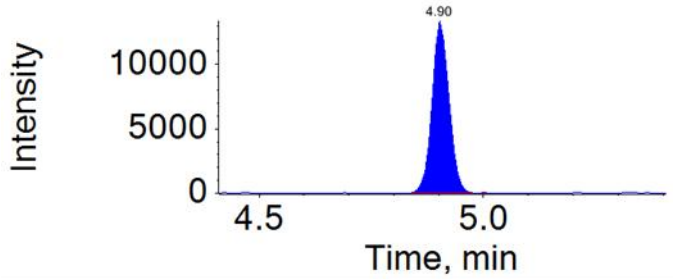
APPROVED
By JPT at 8:56 am, 11/16/18

REVIEWED
By HMK at 7:38 am, 11/19/18

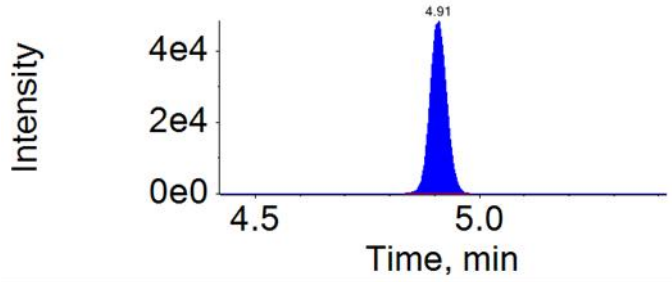
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV15DCCV1-4 11/16/2018 8:47:00 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

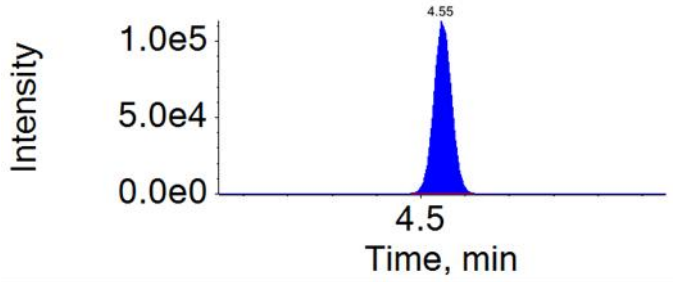
Analyte: 6:2-FTS	Extraction Standard: 13C2-6:2-FTS
427.0 / 407.0	429.0 / 81.0



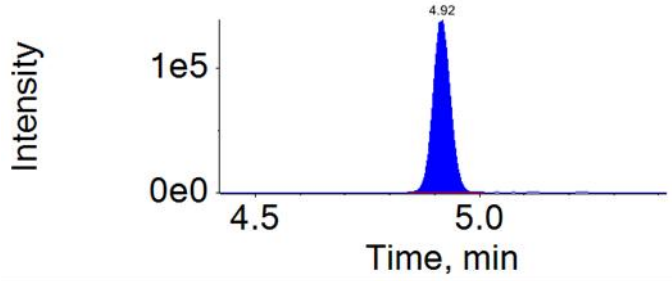


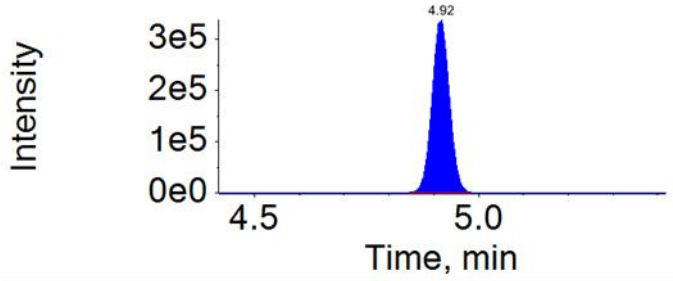
Analyte: PFHpS	Extraction Standard: 13C3-PFHxS
449.0 / 80.0	402.0 / 80.0



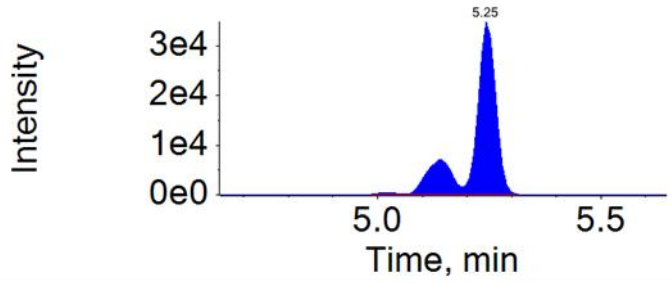


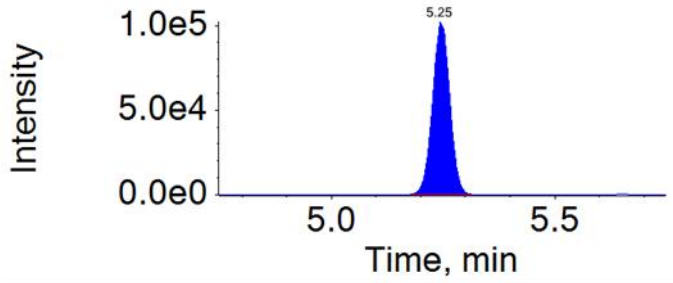
Analyte: PFOA	Extraction Standard: 13C8-PFOA
413.0 / 369.0	421.0 / 376.0





Analyte: PFOS	Extraction Standard: 13C8-PFOS
499.0 / 80.0	507.0 / 80.0



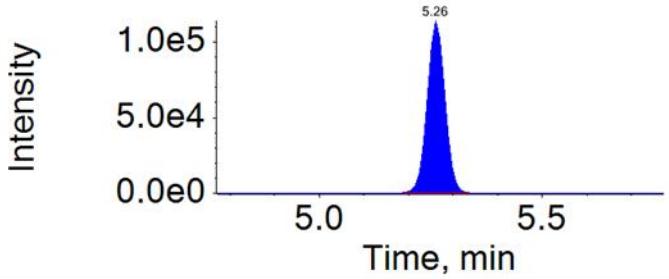


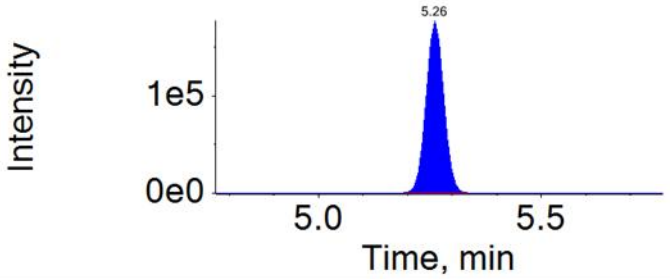
APPROVED
By JPT at 8:56 am, 11/16/18

REVIEWED
By HMK at 7:38 am, 11/19/18

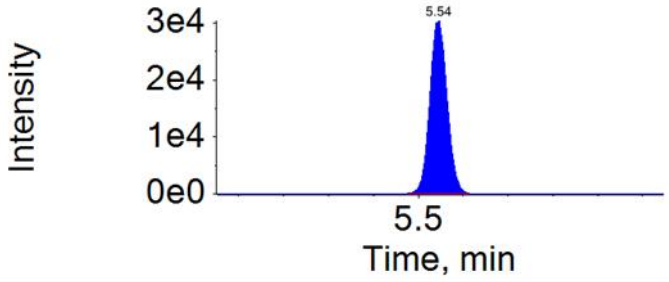
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV15DCCV1-4 11/16/2018 8:47:00 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

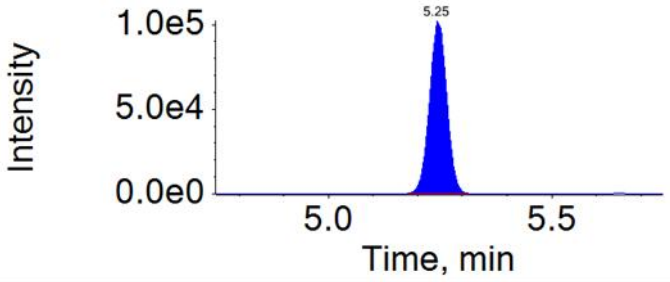
Analyte: PFNA	Extraction Standard: 13C9-PFNA
463.0 / 419.0	472.0 / 427.0



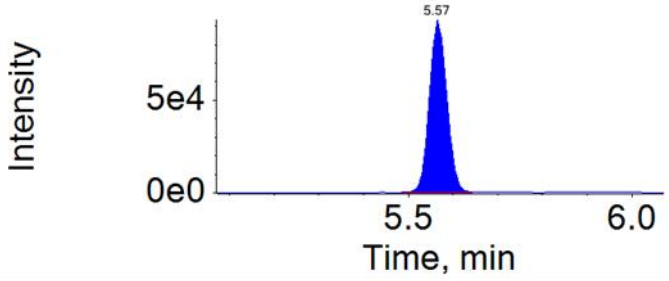


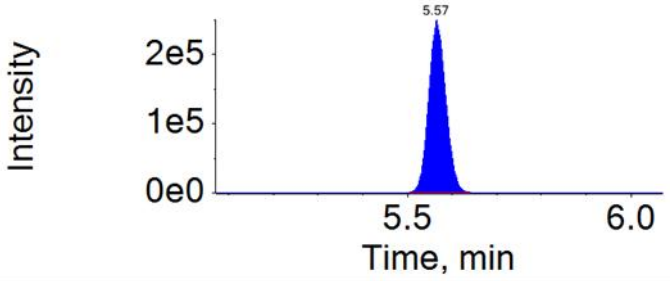
Analyte: PFNS	Extraction Standard: 13C8-PFOS
549.0 / 80.0	507.0 / 80.0



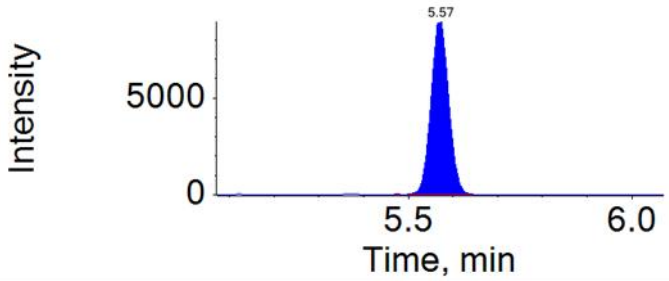


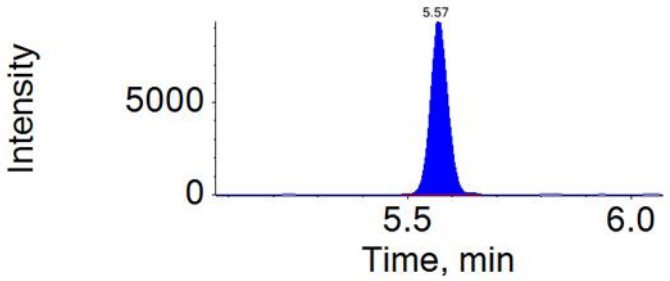
Analyte: PFDA	Extraction Standard: 13C6-PFDA
513.0 / 469.0	519.0 / 474.0





Analyte: 8:2-FTS	Extraction Standard: 13C2-8:2-FTS
527.0 / 507.0	529.0 / 81.0



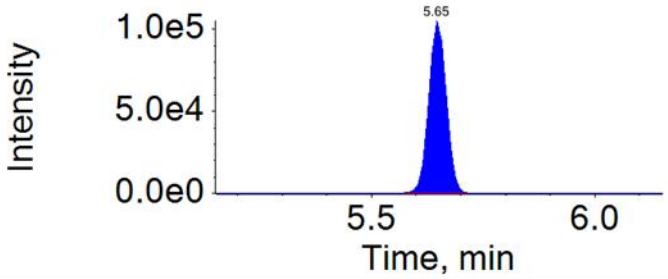


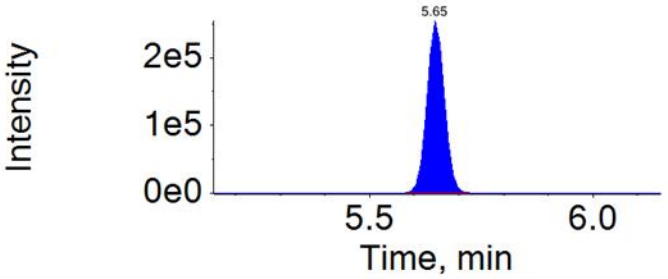
APPROVED
By JPT at 8:56 am, 11/16/18

REVIEWED
By HMK at 7:38 am, 11/19/18

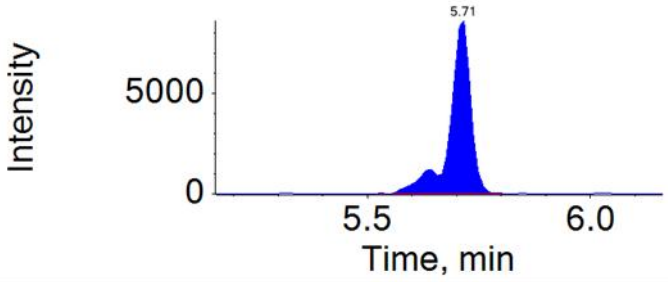
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV15DCCV1-4 11/16/2018 8:47:00 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

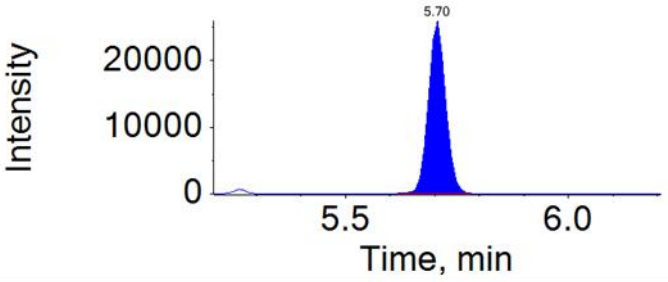
Analyte: PFOSA	Extraction Standard: 13C8-PFOSA
498.0 / 78.0	506.0 / 78.0



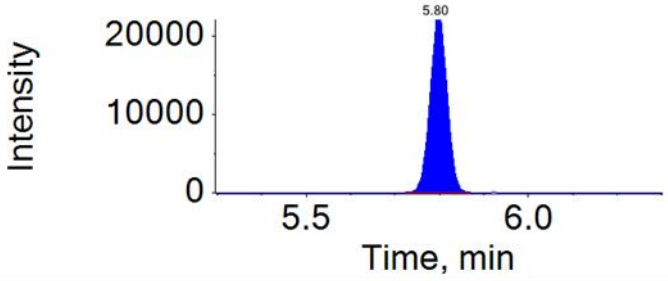


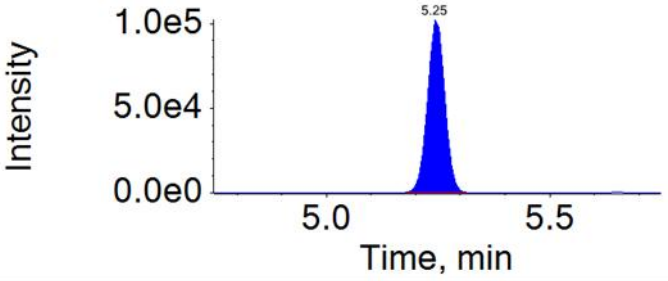
Analyte: NMeFOSAA	Extraction Standard: d3-NMeFOSAA
570.0 / 419.0	573.0 / 419.0



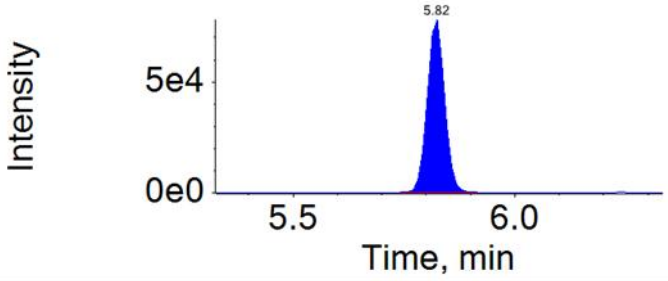


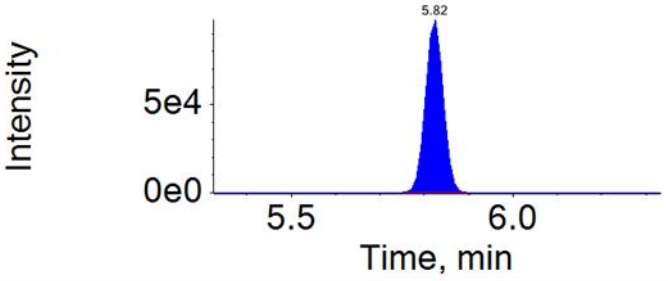
Analyte: PFDS	Extraction Standard: 13C8-PFOS
599.0 / 80.0	507.0 / 80.0





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



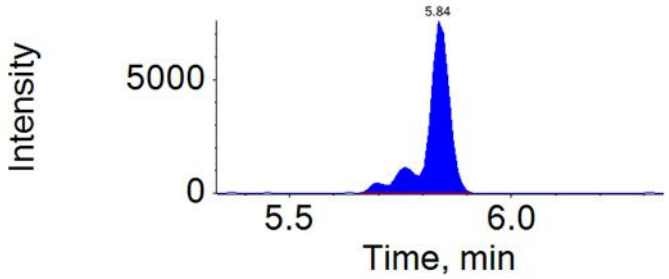


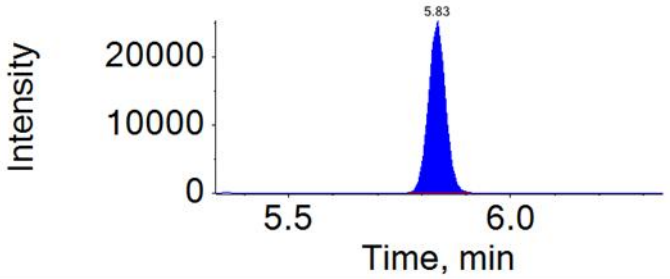
APPROVED
By JPT at 8:56 am, 11/16/18

REVIEWED
By HMK at 7:38 am, 11/19/18

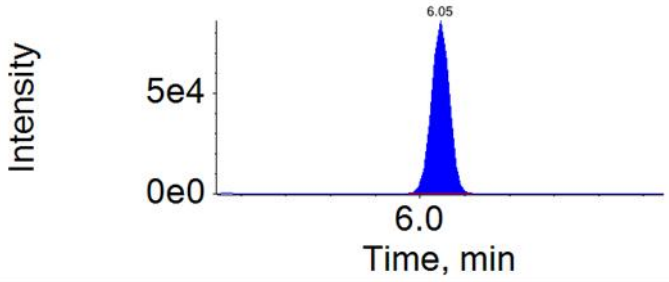
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV15DCCV1-4 11/16/2018 8:47:00 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

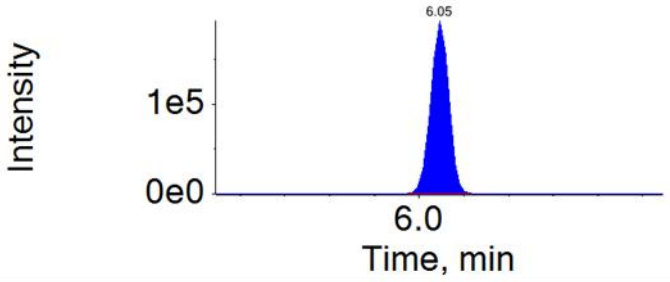
Analyte: NEtFOSAA	Extraction Standard: d5-NEtFOSAA
584.0 / 419.0	589.0 / 419.0



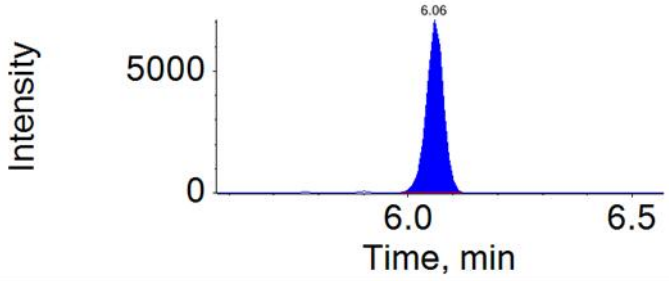


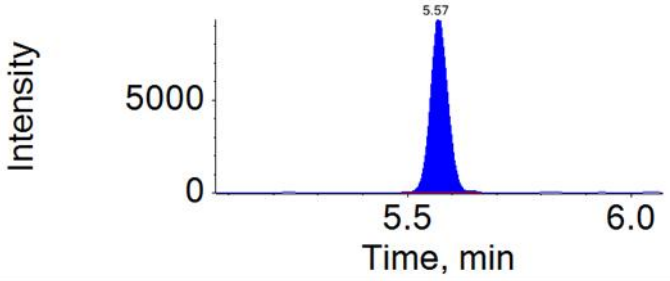
Analyte: PFDoDA	Extraction Standard: 13C2-PFDoDA
613.0 / 569.0	615.0 / 570.0



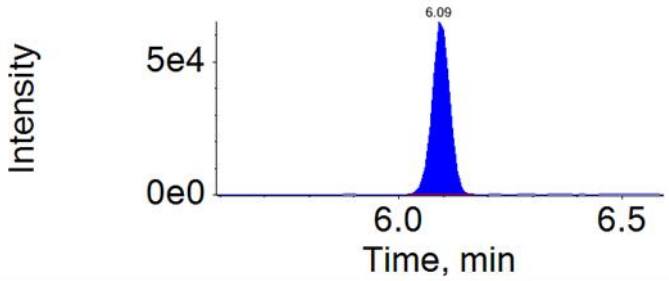


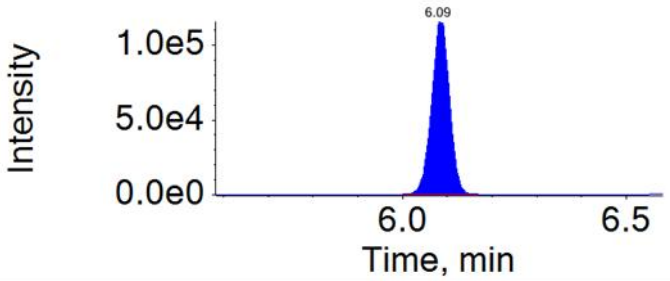
Analyte: 10:2-FTS	Extraction Standard: 13C2-8:2-FTS
627.0 / 607.0	529.0 / 81.0





Analyte: NMePFOSAE	Extraction Standard: d7-NMePFOSAE
616.0 / 59.0	623.0 / 59.0



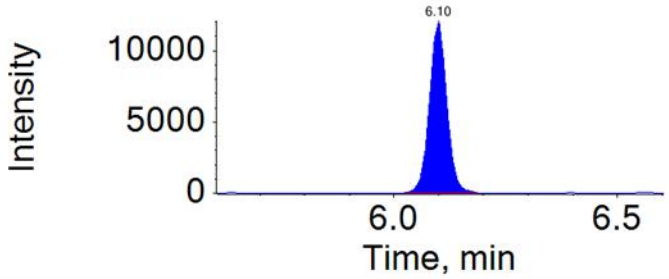


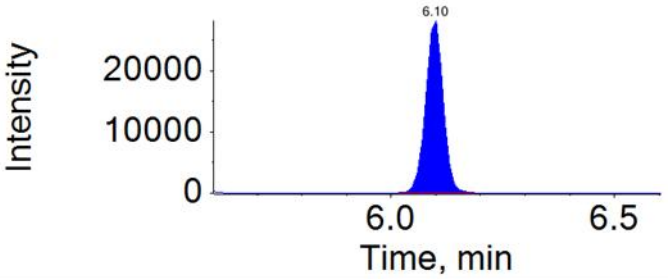
APPROVED
By JPT at 8:56 am, 11/16/18

REVIEWED
By HMK at 7:38 am, 11/19/18

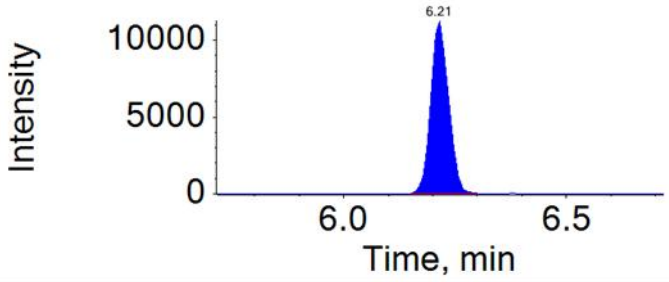
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV15DCCV1-4 11/16/2018 8:47:00 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

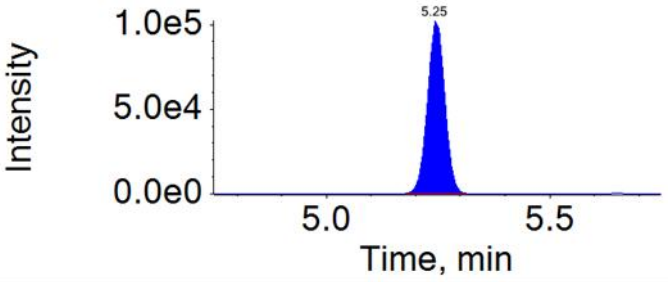
Analyte: NMePFOSA	Extraction Standard: d3-NMePFOSA
512.0 / 169.0	515.0 / 169.0



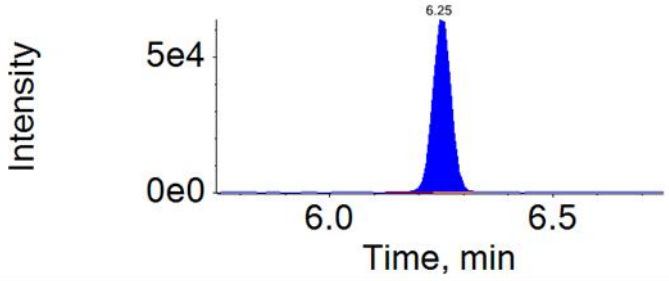


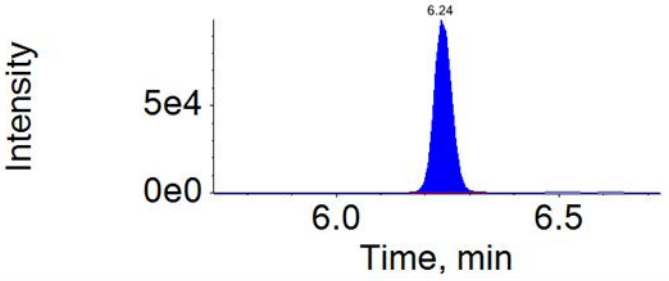
Analyte: PFDoS	Extraction Standard: 13C8-PFOS
699.0 / 80.0	507.0 / 80.0



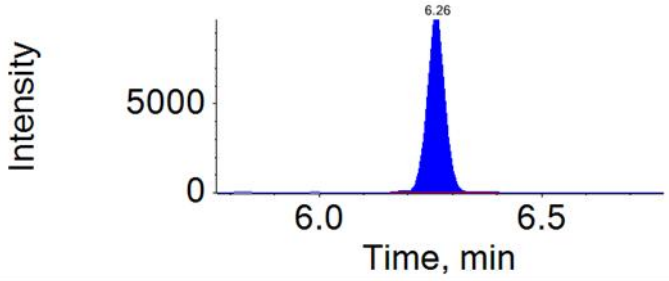


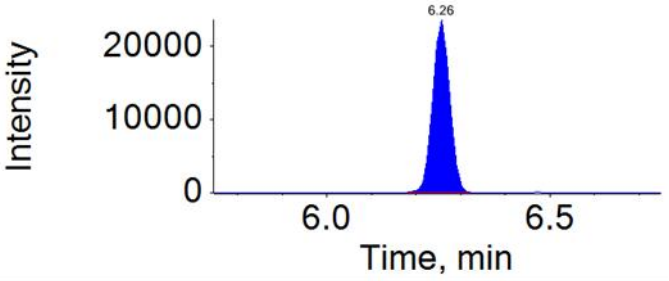
Analyte: NEtPFOSAE	Extraction Standard: d9-NEtPFOSAE
630.0 / 59.0	639.0 / 59.0





Analyte: NEtPFOSA	Extraction Standard: d5-NEtPFOSA
526.0 / 169.0	531.0 / 169.0



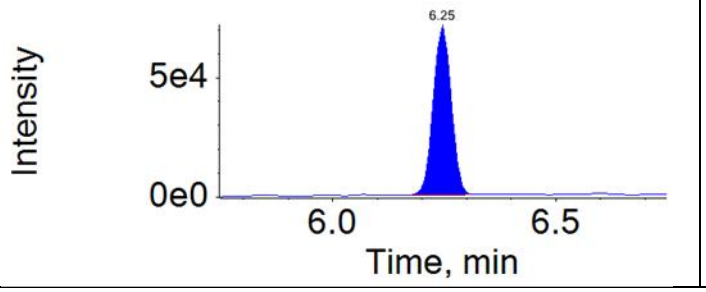


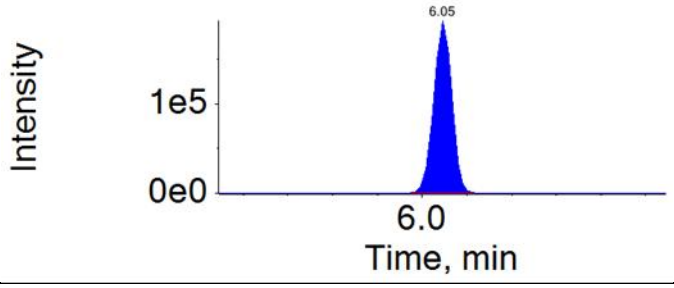
APPROVED
By JPT at 8:56 am, 11/16/18

REVIEWED
By HMK at 7:38 am, 11/19/18

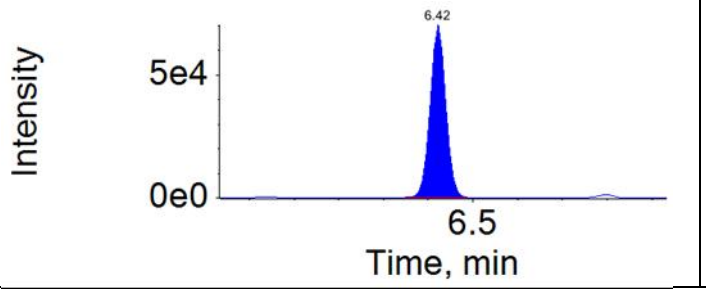
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV15DCCV1-4 11/16/2018 8:47:00 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

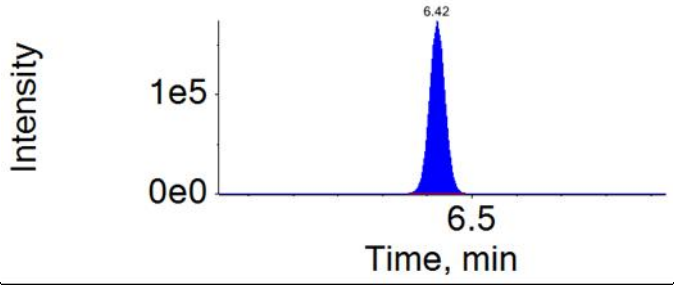
Analyte: PFTrDA	Extraction Standard: 13C2-PFDoDA
663.0 / 619.0	615.0 / 570.0



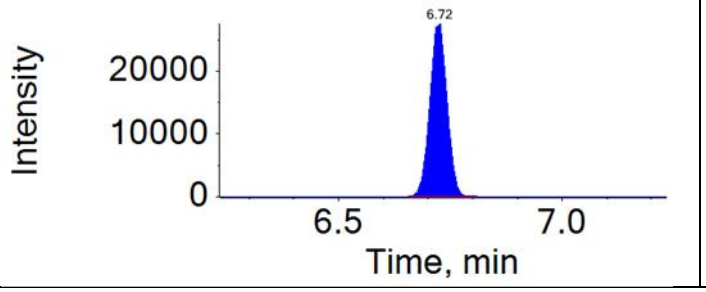


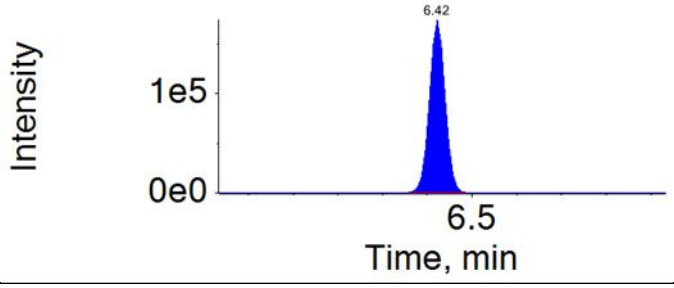
Analyte: PFTeDA	Extraction Standard: 13C2-PFTeDA
713.0 / 669.0	715.0 / 670.0



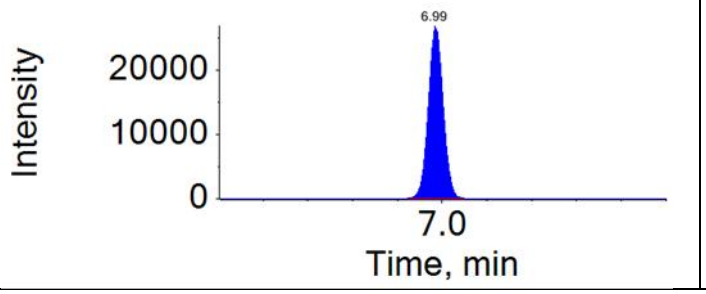


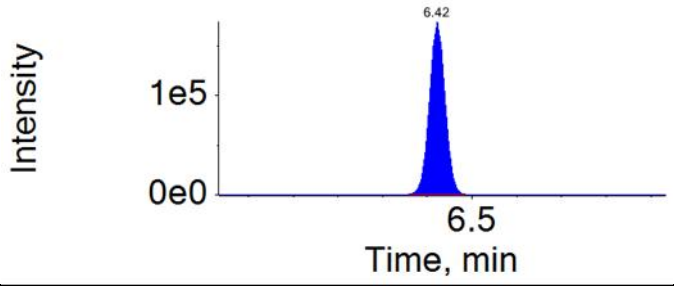
Analyte: PFHxDA	Extraction Standard: 13C2-PFTeDA
813.0 / 769.0	715.0 / 670.0





Analyte: PFODA	Extraction Standard: 13C2-PFTeDA
913.0 / 869.0	715.0 / 670.0



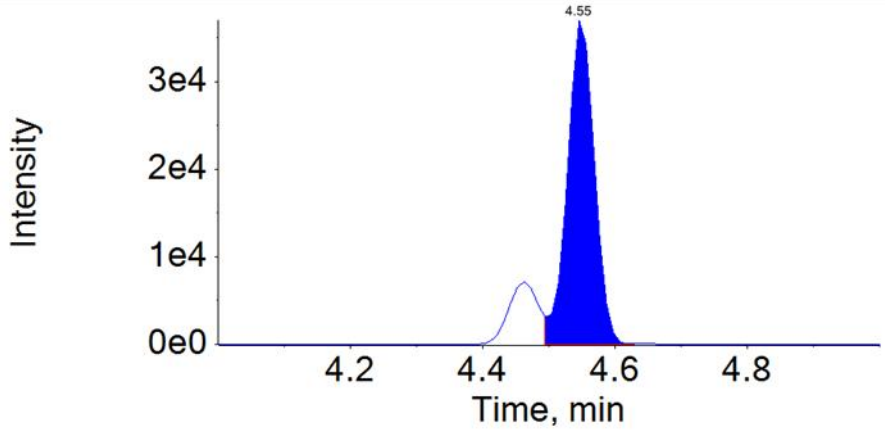


APPROVED
By JPT at 8:56 am, 11/16/18

REVIEWED
By HMK at 7:38 am, 11/19/18

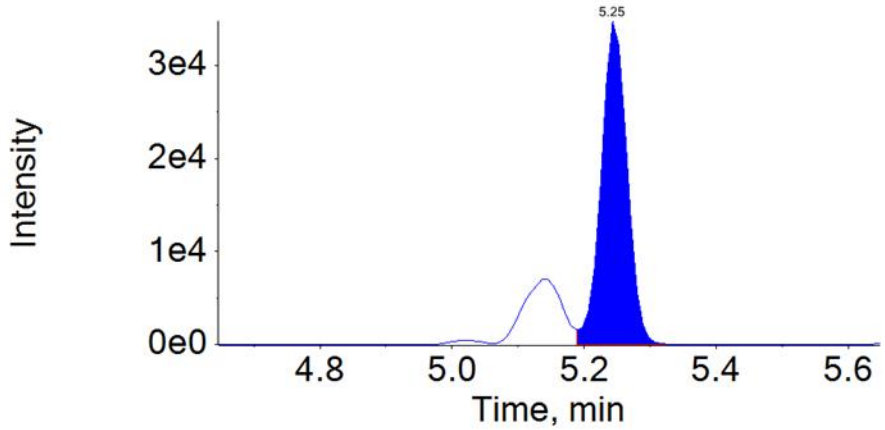
Results Table Name: 18NOV15DCCV1-4
Results Table Date: 11/16/2018 8:47:00 AM
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

Component Name:
PFHxS
RT (min.):
4.55
Peak Area:
105613.5
Mass Range:
399.0 / 80.0
File Name:
18NOV15D-17.wiff
Sample Name:
CCV2_CAL3



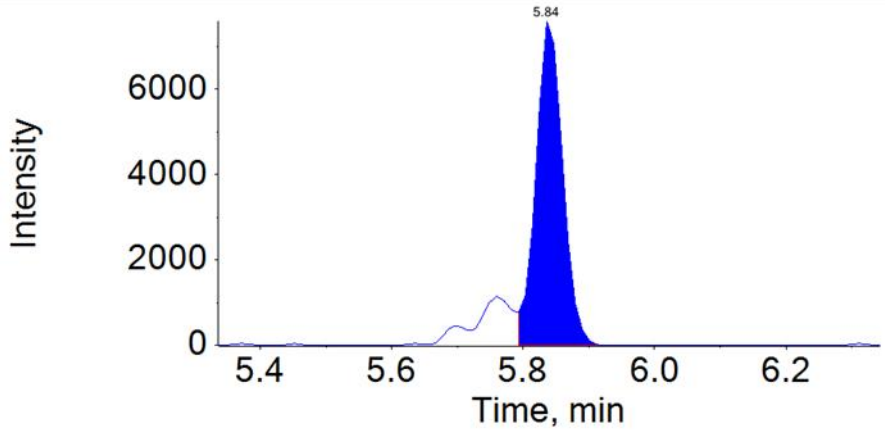
Integration Comment: incorrect integration

Component Name:
PFOS
RT (min.):
5.25
Peak Area:
95008.8
Mass Range:
499.0 / 80.0
File Name:
18NOV15D-17.wiff
Sample Name:
CCV2_CAL3



Integration Comment: incorrect integration

Component Name:
NEtFOSAA
RT (min.):
5.84
Peak Area:
21660.4
Mass Range:
584.0 / 419.0
File Name:
18NOV15D-17.wiff
Sample Name:
CCV2_CAL3

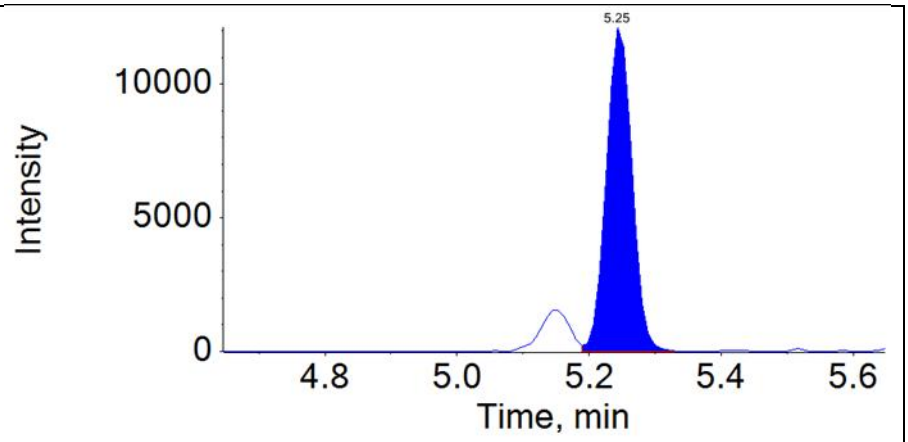


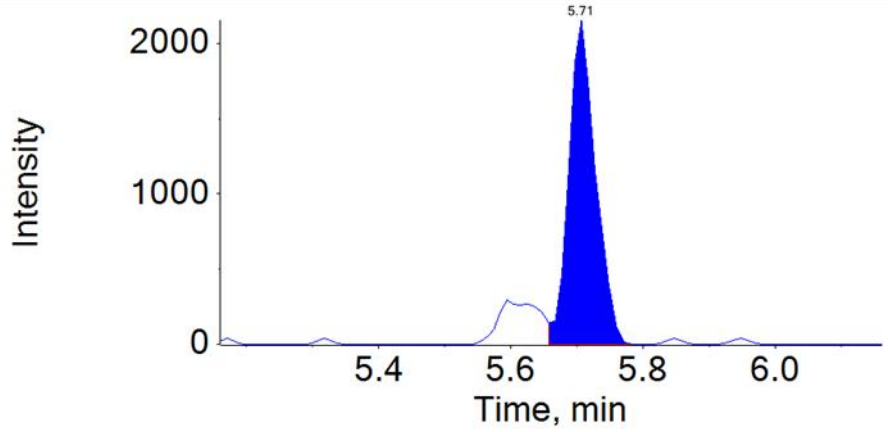
Integration Comment: incorrect integration

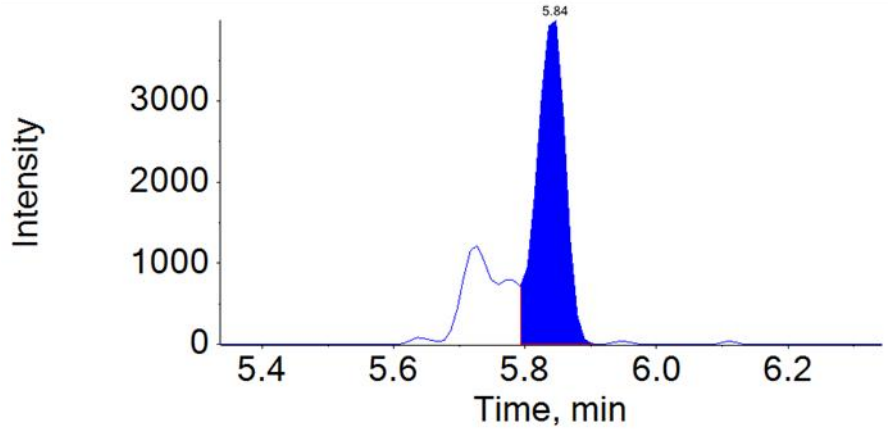
APPROVED
By JPT at 8:56 am, 11/16/18

REVIEWED
By HMK at 7:38 am, 11/19/18

Results Table Name: 18NOV15DCCV1-4
Results Table Date: 11/16/2018 8:47:00 AM
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

Component Name: PFOS_2 **RT (min.):** 5.25 **Peak Area:** 32951.7 **Mass Range:** 499.0 / 99.0 **File Name:** 18NOV15D-17.wiff **Sample Name:** CCV2_CAL3	 **Integration Comment:** incorrect integration

Component Name: NMeFOSAA_2 **RT (min.):** 5.71 **Peak Area:** 6100.5 **Mass Range:** 570.0 / 483.0 **File Name:** 18NOV15D-17.wiff **Sample Name:** CCV2_CAL3	 **Integration Comment:** incorrect integration

Component Name: NEtFOSAA_2 **RT (min.):** 5.84 **Peak Area:** 12155.7 **Mass Range:** 584.0 / 526.0 **File Name:** 18NOV15D-17.wiff **Sample Name:** CCV2_CAL3	 **Integration Comment:** incorrect integration

APPROVED
By JPT at 8:56 am, 11/16/18

REVIEWED
By HMK at 7:38 am, 11/19/18

Results Table Name: 18NOV15DCCV1-4
Results Table Date: 11/16/2018 8:47:00 AM

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

APPROVED
By JPT at 8:56 am, 11/16/18

REVIEWED
By HMK at 7:38 am, 11/19/18

Ion Ratio Report

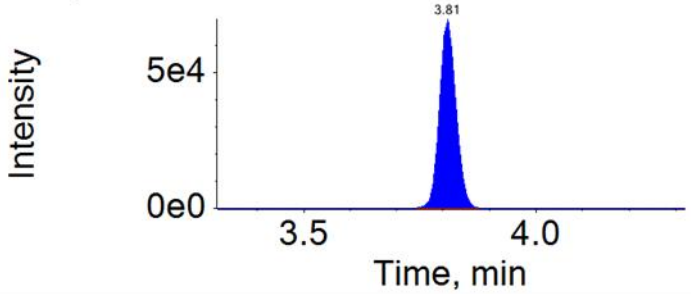
Sample Name: CCV2_CAL3 **Instrument Name:** LM27631 **File Name:** 18NOV15D-17.wiff

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	170752.0	A	N/A	1.0000			
PFBS_2	3.81	1.00	63379.7	A	N/A	0.3712	2	50	
4:2-FTS	4.12	1.00	38005.5	A	N/A	1.0000			
4:2 FTS_2	4.12	1.00	23298.9	A	N/A	0.6130		#NA!	
PFHxA	4.16	1.00	331266.2	A	N/A	1.0000			
PFHxA_2	4.15	1.00	4913.1	A	N/A	0.0148	26	50	
PFPeS	4.18	1.10	92420.6	A	N/A	1.0000			
PFPeS_2	4.18	1.10	46455.5	A	N/A	0.5027	-3	50	
PFHpA	4.55	1.00	392775.4	A	N/A	1.0000			
PFHpA_2	4.55	1.00	20837.8	A	N/A	0.0531	-6	50	
PFHxS	4.55	1.00	127507.7	M	N/A	1.0000			
PFHxS_2	4.55	1.00	46126.5	A	N/A	0.3618	5	50	
6:2-FTS	4.90	1.00	30390.4	A	N/A	1.0000			
6:2 FTS_2	4.90	1.00	21288.3	A	N/A	0.7005		#NA!	
PFHpS	4.91	1.08	127618.9	A	N/A	1.0000			
PFHpS_2	4.91	1.08	52060.7	A	N/A	0.4079	0	50	
PFOA	4.92	1.00	378071.7	A	N/A	1.0000			
PFOA_2	4.92	1.00	20981.9	A	N/A	0.0555	-2	50	
PFOS	5.25	1.00	125131.3	M	N/A	1.0000			
PFOS_2	5.25	1.00	37718.5	M	N/A	0.3014	2	50	
PFNA	5.26	1.00	313870.7	A	N/A	1.0000			
PFNA_2	5.26	1.00	5766.9	A	N/A	0.0184	-19	50	
PFNS	5.54	1.06	82338.4	A	N/A	1.0000			
PFNS_2	5.54	1.06	37960.6	A	N/A	0.4610	-3	50	
PFDA	5.57	1.00	253223.2	A	N/A	1.0000			
PFDA_2	5.57	1.00	1673.2	A	N/A	0.0066	-17	50	
8:2-FTS	5.57	1.00	24874.7	A	N/A	1.0000			
8:2 FTS_2	5.57	1.00	16031.9	A	N/A	0.6445		#NA!	
NMeFOSAA	5.71	1.00	28588.3	A	N/A	1.0000			
NMeFOSAA_2	5.71	1.00	7354.6	M	N/A	0.2573	-1	50	
PFDS	5.80	1.11	61289.2	A	N/A	1.0000			
PFDS_2	5.80	1.11	32420.8	A	N/A	0.5290	4	50	
PFUnDA	5.82	1.00	212907.1	A	N/A	1.0000			
PFUnDA_2	5.84	1.00	584.2	A	N/A	0.0027	-50	50	
NEtFOSAA	5.84	1.00	26369.1	M	N/A	1.0000			
NEtFOSAA_2	5.84	1.00	17495.0	M	N/A	0.6635	-8	50	
PFDoDA	6.05	1.00	239087.4	A	N/A	1.0000			
PFDoDA_2	6.05	1.00	3379.4	A	N/A	0.0141	-8	50	
10:2-FTS	6.06	1.09	18636.1	A	N/A	1.0000			
10:2 FTS_2	6.06	1.09	11927.4	A	N/A	0.6400		#NA!	
PFTrDA	6.25	1.03	196890.1	A	N/A	1.0000			
PFTrDA_2	6.25	1.03	2351.7	A	N/A	0.0119	40	50	
PFTeDA	6.42	1.00	170072.7	A	N/A	1.0000			
PFTeDA_2	6.42	1.00	1048.5	A	N/A	0.0062	-1	50	
PFHxDA	6.72	1.05	74302.7	A	N/A	1.0000			
PFHxDA_2	6.72	1.05	4851.2	A	N/A	0.0653	-4	50	
PFODA	6.99	1.09	61703.9	A	N/A	1.0000			
PFODA_2	6.98	1.09	1412.0	A	N/A	0.0229	-17	50	

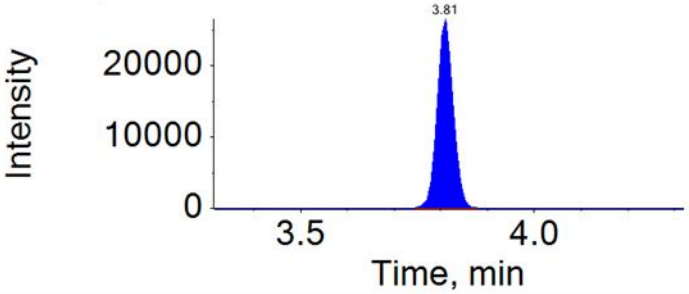
APPROVED
By JPT at 8:56 am, 11/16/18

REVIEWED
By HMK at 7:38 am, 11/19/18

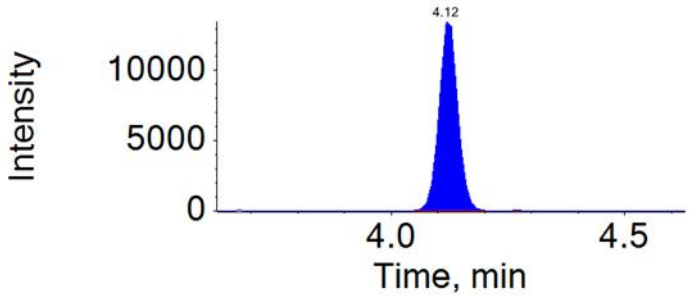
Component: PFBS
Primary Mass: 299.0 / 80.0



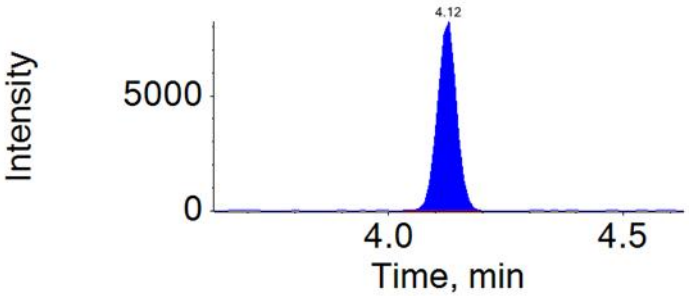
Component: PFBS_2
Secondary Mass: 299.0 / 99.0



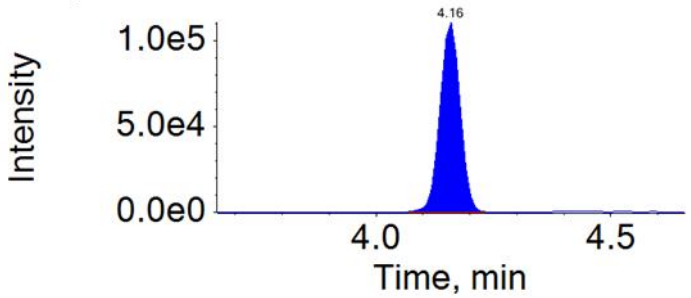
Component: 4:2-FTS
Primary Mass: 327.0 / 307.0



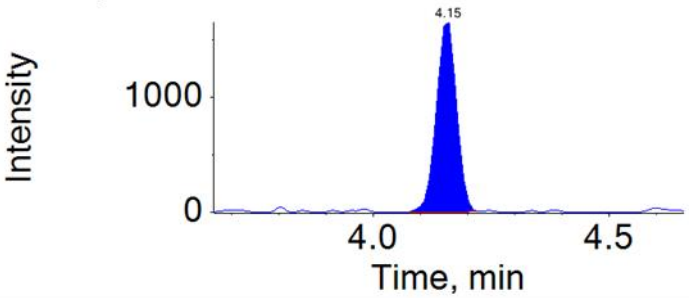
Component: 4:2 FTS_2
Secondary Mass: 327.0 / 81.0



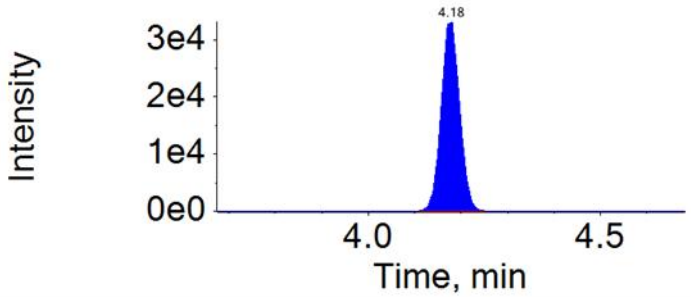
Component: PFHxA
Primary Mass: 313.0 / 269.0



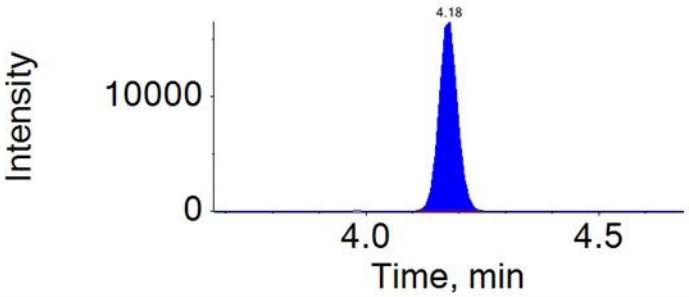
Component: PFHxA_2
Secondary Mass: 313.0 / 119.0



Component: PFPeS
Primary Mass: 349.0 / 80.0



Component: PFPeS_2
Secondary Mass: 349.0 / 99.0



APPROVED
By JPT at 8:56 am, 11/16/18

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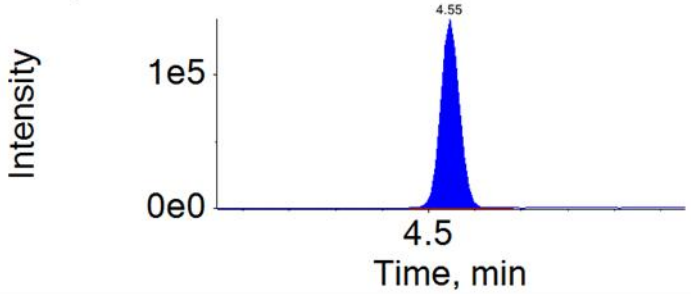
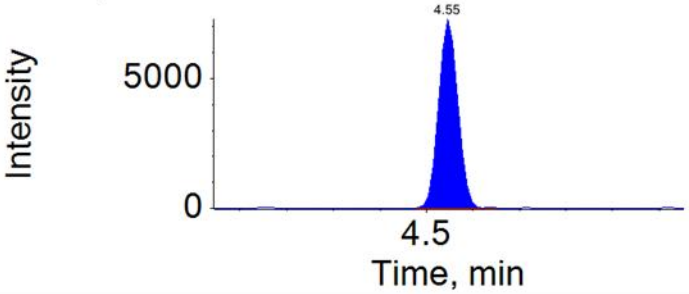
By HMK at 7:38 am, 11/19/18

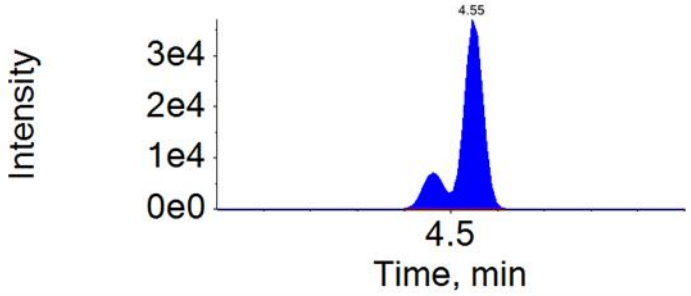
Component: PFHpA
Primary Mass: 363.0 / 319.0



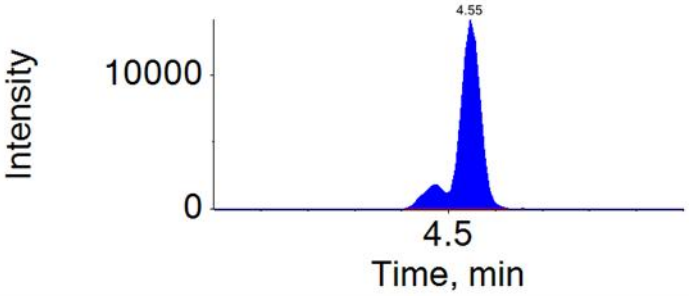
Component: PFHpA_2
Secondary Mass: 363.0 / 169.0



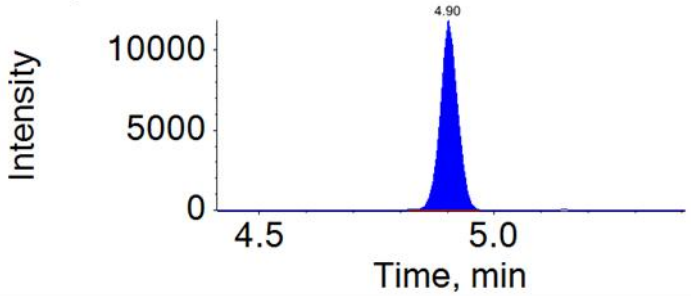
Component: PFHxS
Primary Mass: 399.0 / 80.0



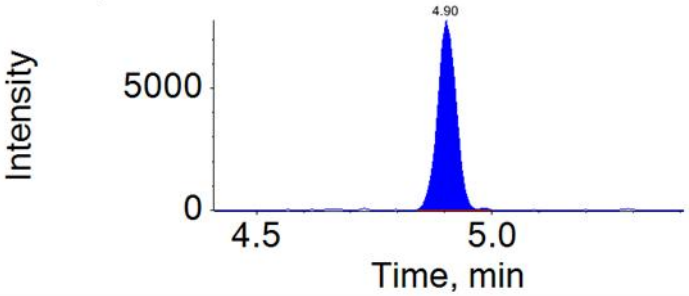
Component: PFHxS_2
Secondary Mass: 399.0 / 99.0



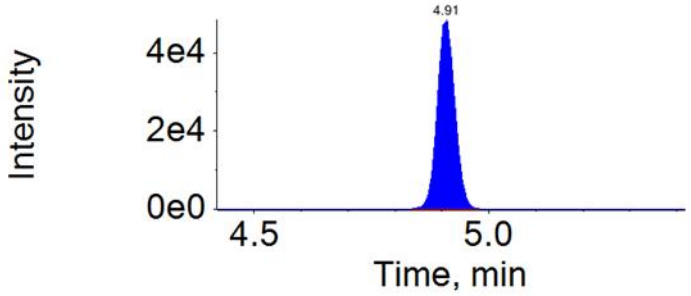
Component: 6:2-FTS
Primary Mass: 427.0 / 407.0



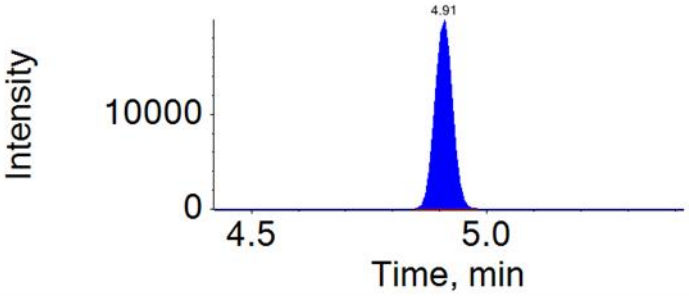
Component: 6:2 FTS_2
Secondary Mass: 427.0 / 81.0



Component: PFHpS
Primary Mass: 449.0 / 80.0



Component: PFHpS_2
Secondary Mass: 449.0 / 99.0



APPROVED
By JPT at 8:56 am, 11/16/18

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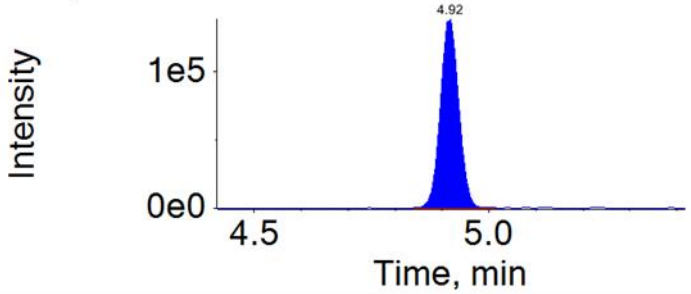
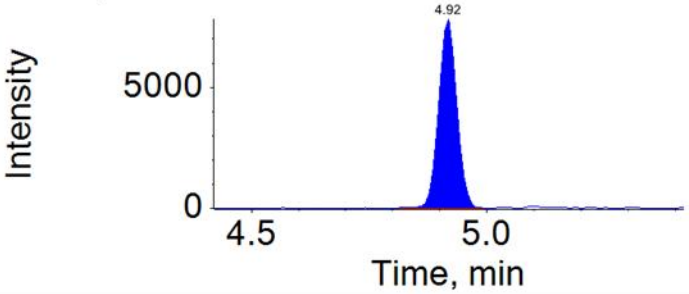
By HMK at 7:38 am, 11/19/18

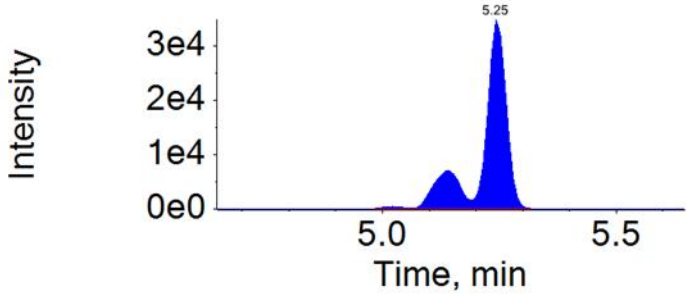
Component: PFOA
Primary Mass: 413.0 / 369.0



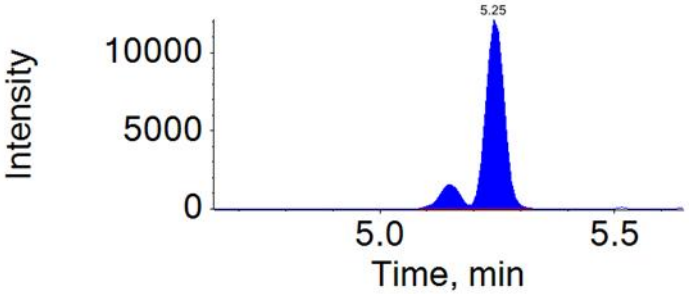
Component: PFOA_2
Secondary Mass: 413.0 / 169.0



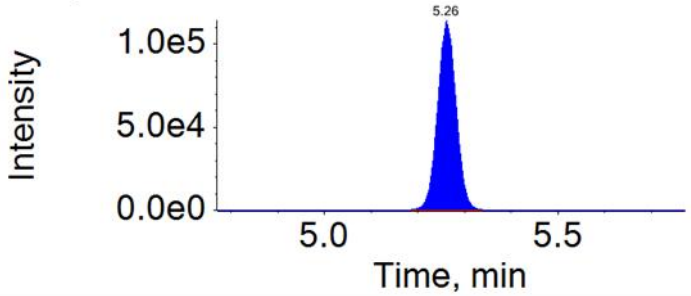
Component: PFOS
Primary Mass: 499.0 / 80.0



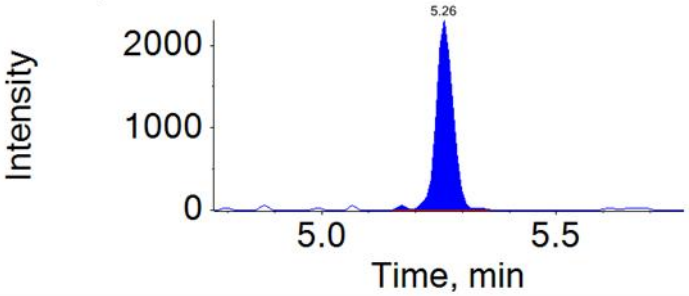
Component: PFOS_2
Secondary Mass: 499.0 / 99.0



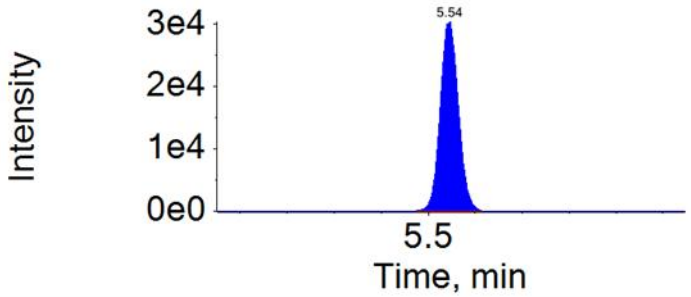
Component: PFNA
Primary Mass: 463.0 / 419.0



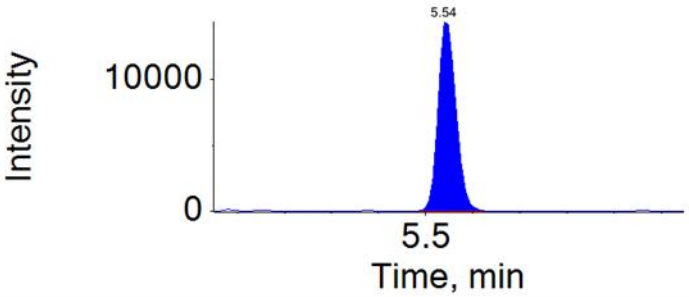
Component: PFNA_2
Secondary Mass: 463.0 / 169.0



Component: PFNS
Primary Mass: 549.0 / 80.0



Component: PFNS_2
Secondary Mass: 549.0 / 99.0



APPROVED
By JPT at 8:56 am, 11/16/18

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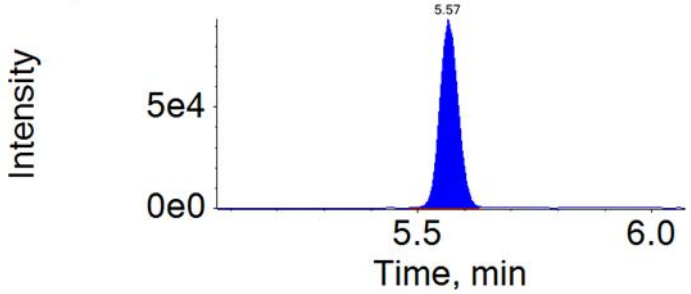
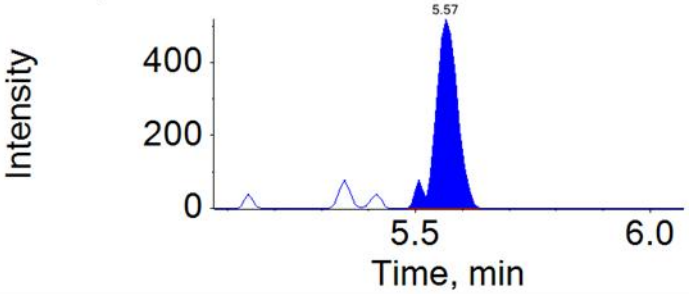
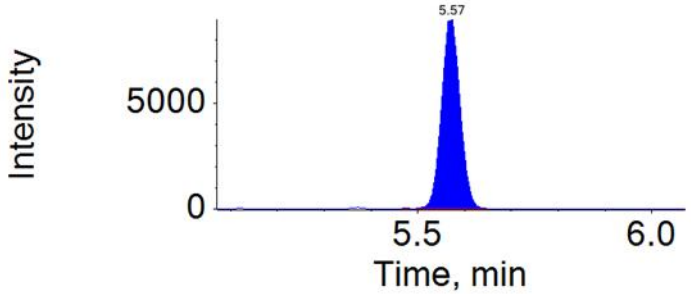
Component: PFDA
Primary Mass: 513.0 / 469.0



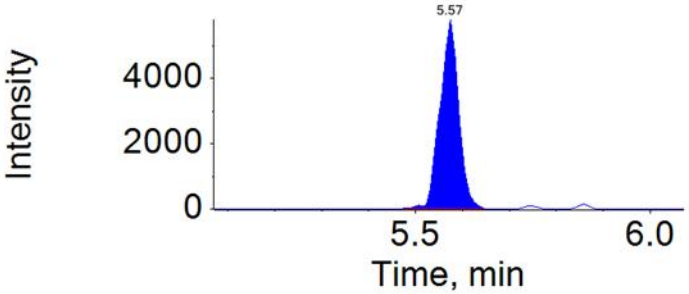
Component: PFDA_2
Secondary Mass: 513.0 / 169.0



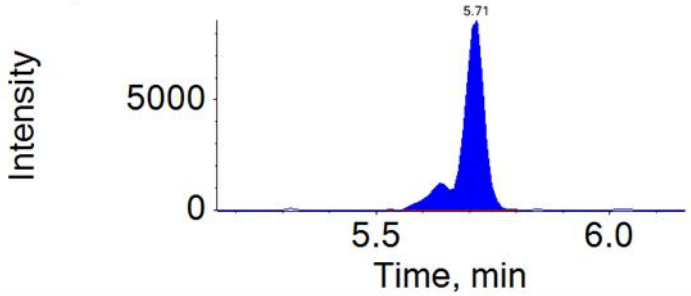
Component: 8:2-FTS
Primary Mass: 527.0 / 507.0



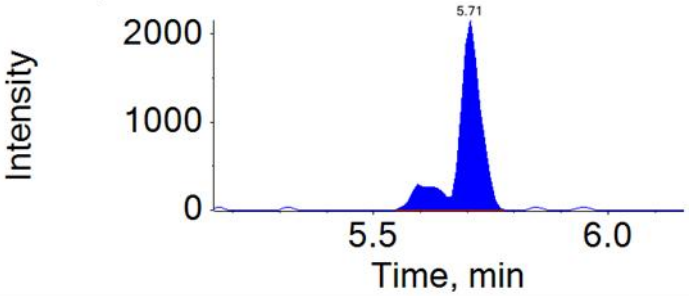
Component: 8:2 FTS_2
Secondary Mass: 527.0 / 81.0



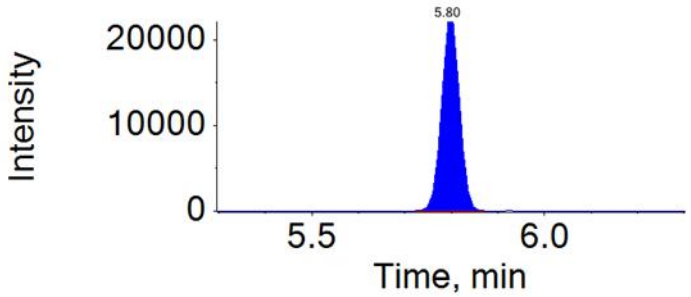
Component: NMeFOSAA
Primary Mass: 570.0 / 419.0



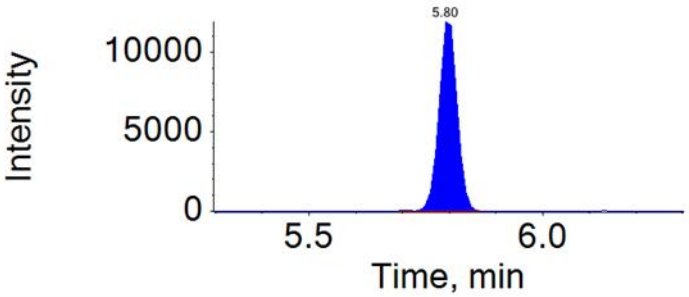
Component: NMeFOSAA_2
Secondary Mass: 570.0 / 483.0



Component: PFDS
Primary Mass: 599.0 / 80.0



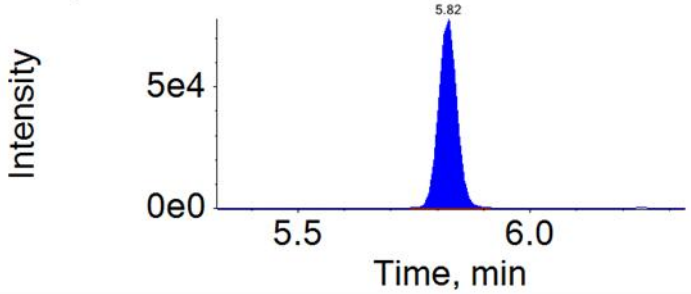
Component: PFDS_2
Secondary Mass: 599.0 / 99.0



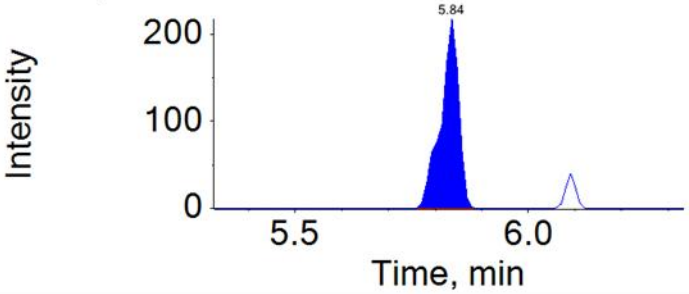
APPROVED
By JPT at 8:56 am, 11/16/18

REVIEWED
By HMK at 7:38 am, 11/19/18

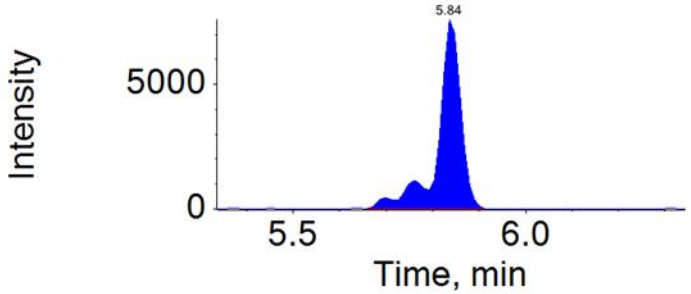
Component: PFUnDA
Primary Mass: 563.0 / 519.0



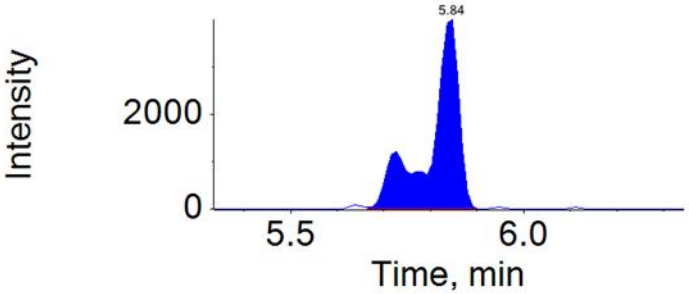
Component: PFUnDA_2
Secondary Mass: 563.0 / 169.0



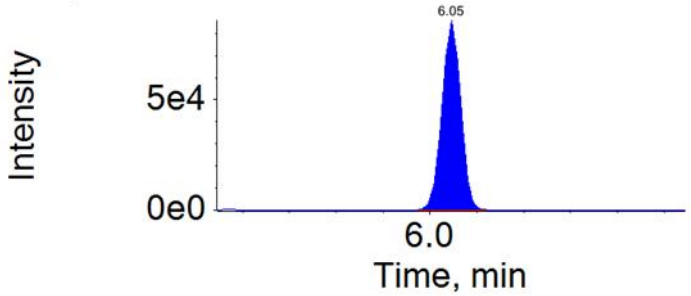
Component: NEtFOSAA
Primary Mass: 584.0 / 419.0



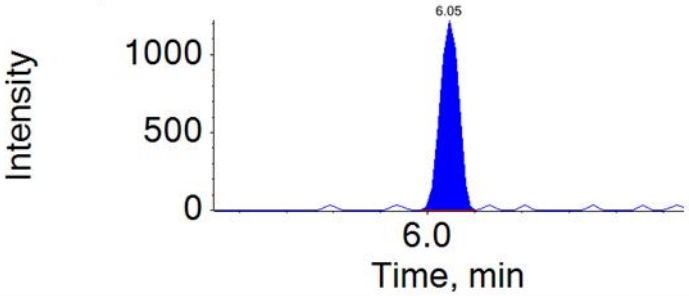
Component: NEtFOSAA_2
Secondary Mass: 584.0 / 526.0



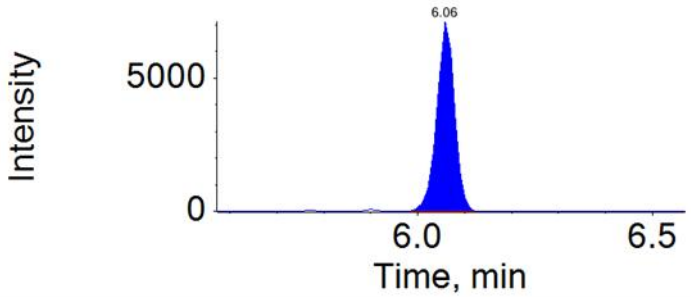
Component: PFDoDA
Primary Mass: 613.0 / 569.0



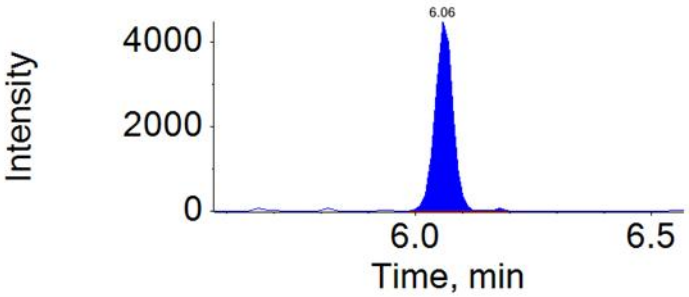
Component: PFDoDA_2
Secondary Mass: 613.0 / 169.0



Component: 10:2-FTS
Primary Mass: 627.0 / 607.0



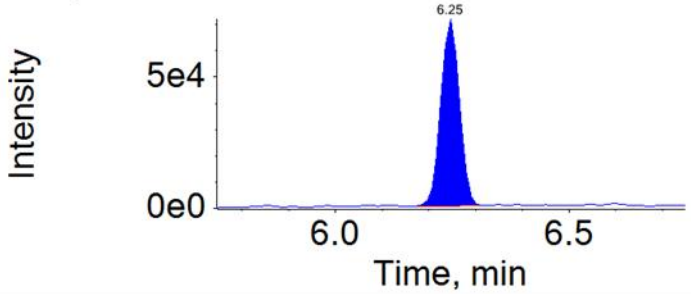
Component: 10:2 FTS_2
Secondary Mass: 627.0 / 81.0



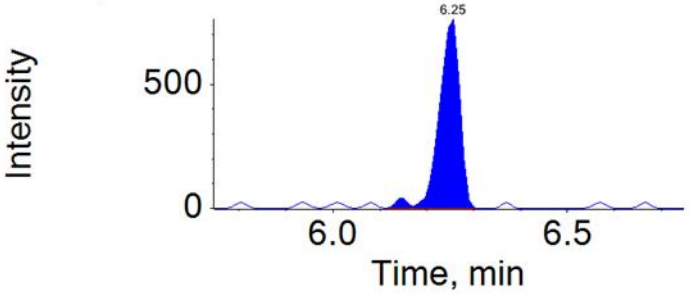
APPROVED
By JPT at 8:56 am, 11/16/18

REVIEWED
By HMK at 7:38 am, 11/19/18

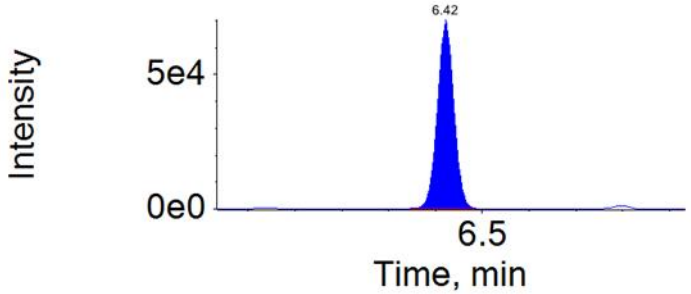
Component: PFTrDA
Primary Mass: 663.0 / 619.0



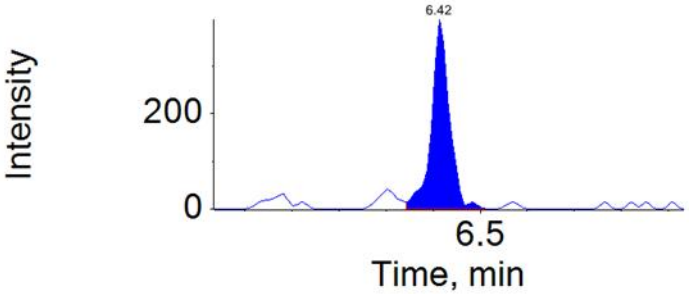
Component: PFTrDA_2
Secondary Mass: 663.0 / 169.0



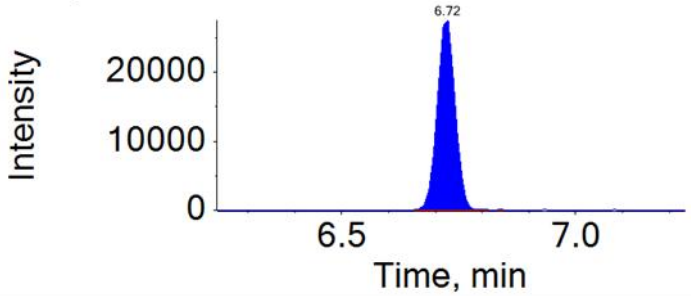
Component: PFTeDA
Primary Mass: 713.0 / 669.0



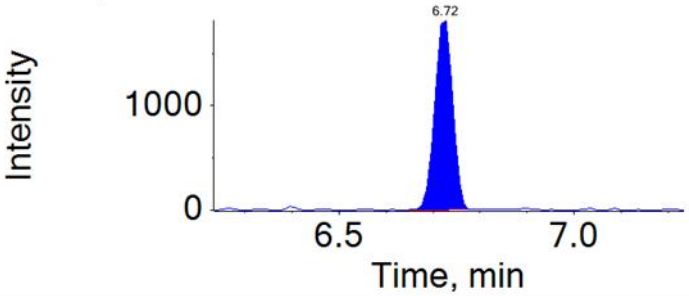
Component: PFTeDA_2
Secondary Mass: 713.0 / 169.0



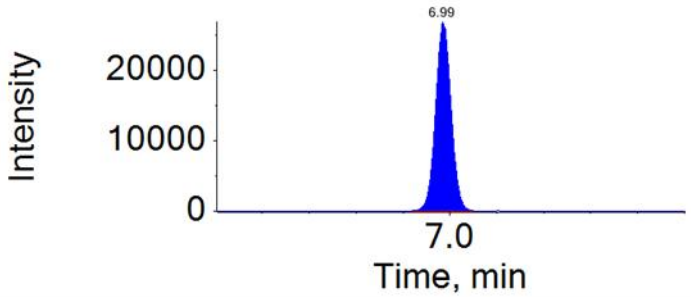
Component: PFHxDA
Primary Mass: 813.0 / 769.0



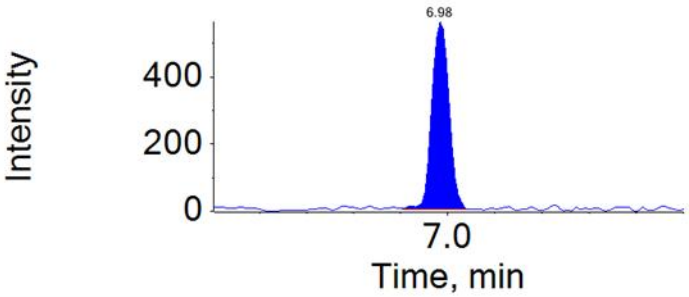
Component: PFHxDA_2
Secondary Mass: 813.0 / 169.0



Component: PFODA
Primary Mass: 913.0 / 869.0



Component: PFODA_2
Secondary Mass: 913.0 / 169.0



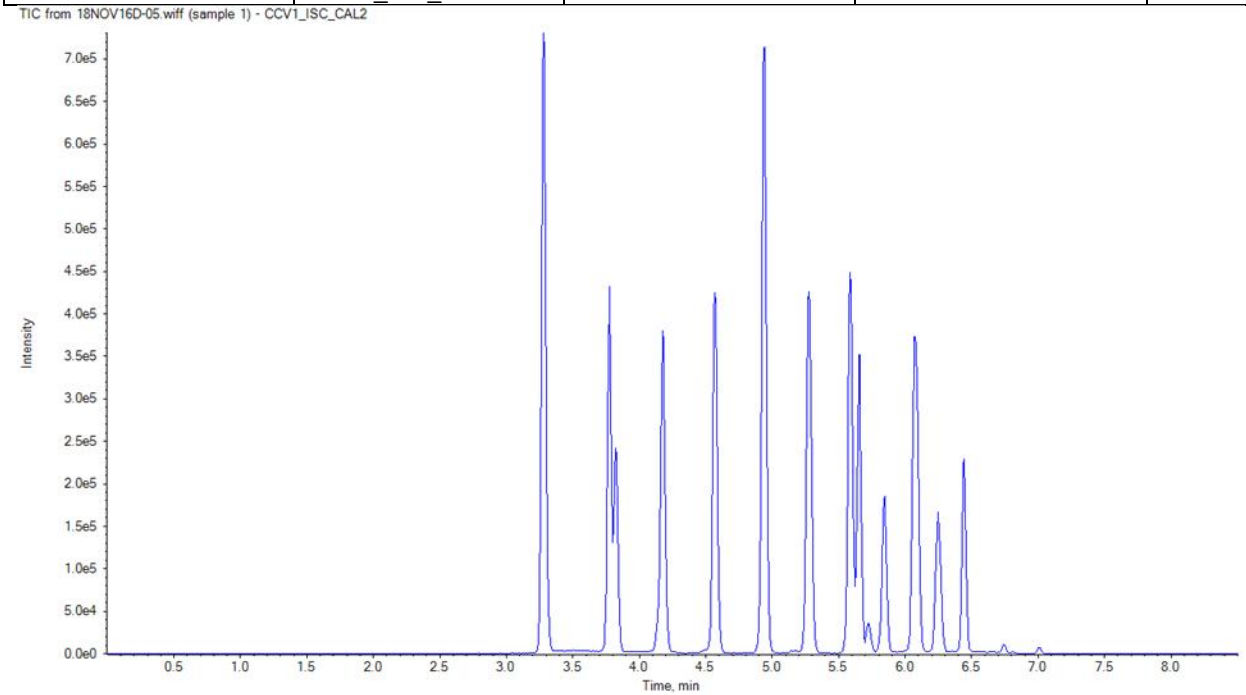
APPROVED
By JPT at 8:56 am, 11/16/18

REVIEWED
By HMK at 7:38 am, 11/19/18

Instrument Sensitivity Check/ Continuing Calibration Verfication

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV16DCCV1-3 11/16/2018 2:28:58 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Instrument Name:	Sample Name:	Sample ID:	Sample File:	Acquisition Date:
LM27631	CCV1_ISC_CAL2	CALBRN21833C	18NOV16D-05.wiff	11/16/2018 10:50:13 AM



Injection Standard Area Reference File: 18NOV15D-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	707280.6	732179.1	-3	50	
13C2-PFOA	5.0	484265.4	479663.2	1	50	
13C4-PFOS	4.8	256987.3	269685.3	-5	50	
13C2-PFDA	5.0	302418.6	302309.9	0	50	

APPROVED
By JPT at 2:36 pm, 11/16/18

REVIEWED
By HMK at 9:06 am, 11/19/18

Instrument Sensitivity Check/ Continuing Calibration Verfication

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV16DCCV1-3 11/16/2018 2:28:58 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Instrument Name:	Sample Name:	Sample ID:	Sample File:	Acquisition Date:
LM27631	CCV1_ISC_CAL2	CALBRN21833C	18NOV16D-05.wiff	11/16/2018 10:50:13 AM

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	87364.8	10	13C4-PFBA	833599.8	5.0	0.105	3.28	1.000	0.600	0.581	-3	30	
PFPeA	84587.2	11	13C5-PFPeA	772587.5	5.0	0.109	3.78	1.000	0.600	0.634	6	30	
PFBS	44532.9	10	13C3-PFBS	442263.9	4.7	0.101	3.82	1.000	0.531	0.479	-10	30	
4:2-FTS	10925.8	11	13C2-4:2-FTS	48350.2	4.7	0.226	4.14	1.000	0.560	0.614	10	30	
PFHxA	100109.0	12	13C5-PFHxA	714593.0	5.0	0.140	4.18	1.000	0.600	0.585	-3	30	
PFPeS	21907.1	11	13C3-PFBS	442263.9	4.7	0.050	4.20	1.100	0.563	0.481	-15	30	
PFHpA	101355.3	12	13C4-PFHpA	565744.4	5.0	0.179	4.57	1.000	0.600	0.594	-1	30	
PFHxS	31686.4	19	13C3-PFHxS	324982.5	4.7	0.098	4.57	1.000	0.547	0.473	-14	30	
6:2-FTS	8266.5	11	13C2-6:2-FTS	33257.9	4.8	0.249	4.93	1.000	0.569	0.601	6	30	
PFHpS	32990.3	10	13C3-PFHxS	324982.5	4.7	0.102	4.93	1.080	0.571	0.534	-6	30	
PFOA	105529.9	11	13C8-PFOA	980658.6	5.0	0.108	4.94	1.000	0.600	0.575	-4	30	
PFOS	33641.8	22	13C8-PFOS	293792.7	4.8	0.115	5.27	1.000	0.555	0.501	-10	30	
PFNA	82783.6	11	13C9-PFNA	495881.7	5.0	0.167	5.28	1.000	0.600	0.602	0	30	
PFNS	20896.6	12	13C8-PFOS	293792.7	4.8	0.071	5.57	1.060	0.576	0.498	-14	30	
PFDA	70742.7	12	13C6-PFDA	644081.8	5.0	0.110	5.59	1.000	0.600	0.582	-3	30	
8:2-FTS	6975.3	12	13C2-8:2-FTS	25855.0	4.8	0.270	5.59	1.000	0.575	0.629	9	30	
PFOSA	72744.0	11	13C8-PFOSA	653248.8	5.0	0.111	5.65	1.000	0.600	0.544	-9	30	
NMeFOSAA	7848.6	16	d3-NMeFOSAA	78348.9	5.0	0.100	5.73	1.000	0.600	0.566	-6	30	
PFDS	14124.2	11	13C8-PFOS	293792.7	4.8	0.048	5.82	1.100	0.578	0.436	-25	30	
PFUnDA	56783.3	11	13C7-PFUnDA	280796.1	5.0	0.202	5.84	1.000	0.600	0.529	-12	30	
NEtFOSAA	7760.9	18	d5-NEtFOSAA	75869.3	5.0	0.102	5.86	1.000	0.600	0.536	-11	30	
PFDoDA	66432.8	12	13C2-PFDoDA	611071.7	5.0	0.109	6.07	1.000	0.600	0.554	-8	30	
10:2-FTS	7967.4	11	13C2-8:2-FTS	25855.0	4.8	0.308	6.09	1.090	0.578	1.026	78	30	OOS
NMePFOSAE	43619.2	12	d7-NMePFOSAE	333633.7	5.0	0.131	6.10	1.000	0.600	0.544	-9	30	
NMePFOSA	10092.9	12	d3-NMePFOSA	83535.7	5.0	0.121	6.11	1.000	0.600	0.596	-1	30	
PFDoS	8579.0	11	13C8-PFOS	293792.7	4.8	0.029	6.24	1.180	0.581	0.511	-12	30	
NEtPFOSAE	51310.2	11	d9-NEtPFOSAE	273006.2	5.0	0.188	6.25	1.000	0.600	0.603	0	30	
NEtPFOSA	7599.1	11	d5-NEtPFOSA	56807.1	5.0	0.134	6.27	1.000	0.600	0.614	2	30	
PFTrDA	50629.1	11	13C2-PFDoDA	611071.7	5.0	0.083	6.27	1.030	0.600	0.523	-13	30	
PFTeDA	41816.7	10	13C2-PFTeDA	430375.4	5.0	0.097	6.44	1.000	0.600	0.545	-9	30	
PFHxDA	17769.0	11	13C2-PFTeDA	430375.4	5.0	0.041	6.75	1.050	0.600	0.492	-18	30	
PFODA	15991.1	10	13C2-PFTeDA	430375.4	5.0	0.037	7.01	1.090	0.600	0.517	-14	30	

APPROVED
By JPT at 2:36 pm, 11/16/18

REVIEWED
By HMK at 9:06 am, 11/19/18

Instrument Sensitivity Check/ Continuing Calibration Verfication

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV16DCCV1-3 11/16/2018 2:28:58 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

APPROVED
By JPT at 2:36 pm, 11/16/18

REVIEWED
By HMK at 9:06 am, 11/19/18

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV16DCCV1-3 11/16/2018 2:28:58 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Sample Name:	CCV1_ISC_CAL2			**Data File:**		18NOV16D-05.wiff
Sample ID:	CALBRN21833C			**Acquis Date:**		2018-11-16T10:50:13
Sample Type:	Quality Control			**Instrument:**		LM27631
Vial Position:	4			**Acquis Method:**		18AUG13_3uL.dam
Injection Vol:	3.00			**Result Table:**		18NOV16DCCV1-3
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: 18NOV15D-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	707280.6	732179.1	-3	50	
13C2-PFOA	5.0	484265.4	479663.2	1	50	
13C4-PFOS	4.8	256987.3	269685.3	-5	50	
13C2-PFDA	5.0	302418.6	302309.9	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	833599.8	13C3-PFBA	707280.6	1.179	5.000	5.284	106	70-130	
E13C5-PFPeA	772587.5	13C3-PFBA	707280.6	1.092	5.000	4.899	98	70-130	
E13C3-PFBS	442263.9	13C3-PFBA	707280.6	0.625	4.650	4.414	95	70-130	
E13C2-4:2-FTS	48350.2	13C2-PFOA	484265.4	0.100	4.670	4.447	95	70-130	
E13C5-PFHxA	714593.0	13C2-PFOA	484265.4	1.476	5.000	5.330	107	70-130	
E13C3-PFHxS	324982.5	13C2-PFOA	484265.4	0.671	4.730	4.605	97	70-130	
E13C4-PFHpA	565744.4	13C2-PFOA	484265.4	1.168	5.000	5.263	105	70-130	
E13C2-6:2-FTS	33257.9	13C2-PFOA	484265.4	0.069	4.750	4.595	97	70-130	
E13C8-PFOA	980658.6	13C2-PFOA	484265.4	2.025	5.000	5.579	112	70-130	
E13C8-PFOS	293792.7	13C4-PFOS	256987.3	1.143	4.780	5.065	106	70-130	
E13C9-PFNA	495881.7	13C4-PFOS	256987.3	1.930	5.000	5.380	108	70-130	
E13C6-PFDA	644081.8	13C2-PFDA	302418.6	2.130	5.000	4.970	99	70-130	
E13C2-8:2-FTS	25855.0	13C2-PFDA	302418.6	0.085	4.790	4.264	89	70-130	
E13C8-PFOSA	653248.8	13C2-PFDA	302418.6	2.160	5.000	4.789	96	70-130	
Ed3-NMeFOSAA	78348.9	13C2-PFDA	302418.6	0.259	5.000	4.676	94	70-130	
E13C7-PFUnDA	280796.1	13C2-PFDA	302418.6	0.929	5.000	5.391	108	70-130	
Ed5-NEtFOSAA	75869.3	13C2-PFDA	302418.6	0.251	5.000	5.308	106	70-130	
E13C2-PFDoDA	611071.7	13C2-PFDA	302418.6	2.021	5.000	5.246	105	70-130	
Ed7-NMePFOSAE	333633.7	13C2-PFDA	302418.6	1.103	5.000	4.774	95	70-130	
Ed3-NMePFOSA	83535.7	13C2-PFDA	302418.6	0.276	5.000	5.019	100	70-130	
Ed9-NEtPFOSAE	273006.2	13C2-PFDA	302418.6	0.903	5.000	4.695	94	70-130	
Ed5-NEtPFOSA	56807.1	13C2-PFDA	302418.6	0.188	5.000	4.406	88	70-130	
E13C2-PFTeDA	430375.4	13C2-PFDA	302418.6	1.423	5.000	4.996	100	70-130	

APPROVED
By JPT at 2:36 pm, 11/16/18

REVIEWED
By HMK at 9:06 am, 11/19/18

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV16DCCV1-3 11/16/2018 2:28:58 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

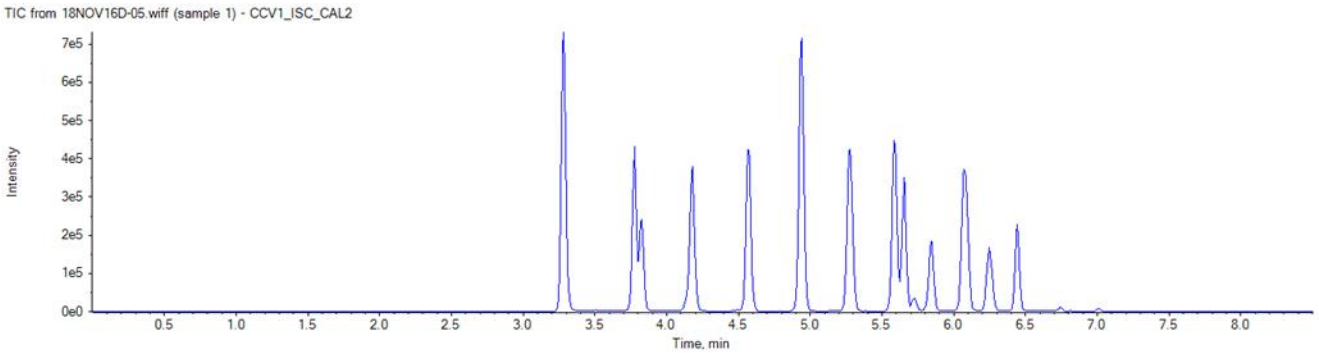
Analyte Quantitation Peak Table

Sample Name: CCV1_ISC_CAL2 **Instrument Name:** LM27631 **File Name:** 18NOV16D-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	87364.8		A	13C4-PFBA	3.28	833599.8	0.105	0.581
PFPeA	3.78	1.000	84587.2		A	13C5-PFPeA	3.78	772587.5	0.109	0.634
PFBS	3.82	1.000	44532.9		A	13C3-PFBS	3.82	442263.9	0.101	0.479
4:2-FTS	4.14	1.000	10925.8		A	13C2-4:2-FTS	4.14	48350.2	0.226	0.614
PFHxA	4.18	1.000	100109.0		A	13C5-PFHxA	4.18	714593.0	0.140	0.585
PFPeS	4.20	1.100	21907.1		A	13C3-PFBS	3.82	442263.9	0.050	0.481
PFHpA	4.57	1.000	101355.3		A	13C4-PFHpA	4.57	565744.4	0.179	0.594
PFHxS	4.57	1.000	31686.4		M	13C3-PFHxS	4.57	324982.5	0.098	0.473
6:2-FTS	4.93	1.000	8266.5		A	13C2-6:2-FTS	4.92	33257.9	0.249	0.601
PFHpS	4.93	1.080	32990.3		A	13C3-PFHxS	4.57	324982.5	0.102	0.534
PFOA	4.94	1.000	105529.9		A	13C8-PFOA	4.94	980658.6	0.108	0.575
PFOS	5.27	1.000	33641.8		M	13C8-PFOS	5.27	293792.7	0.115	0.501
PFNA	5.28	1.000	82783.6		A	13C9-PFNA	5.28	495881.7	0.167	0.602
PFNS	5.57	1.060	20896.6		A	13C8-PFOS	5.27	293792.7	0.071	0.498
PFDA	5.59	1.000	70742.7		M	13C6-PFDA	5.59	644081.8	0.110	0.582
8:2-FTS	5.59	1.000	6975.3		A	13C2-8:2-FTS	5.59	25855.0	0.270	0.629
PFOSA	5.65	1.000	72744.0		A	13C8-PFOSA	5.65	653248.8	0.111	0.544
NMeFOSAA	5.73	1.000	7848.6		A	d3-NMeFOSAA	5.72	78348.9	0.100	0.566
PFDS	5.82	1.100	14124.2		A	13C8-PFOS	5.27	293792.7	0.048	0.436
PFUnDA	5.84	1.000	56783.3		A	13C7-PFUnDA	5.84	280796.1	0.202	0.529
NEtFOSAA	5.86	1.000	7760.9		A	d5-NEtFOSAA	5.85	75869.3	0.102	0.536
PFDoDA	6.07	1.000	66432.8		A	13C2-PFDoDA	6.07	611071.7	0.109	0.554
10:2-FTS	6.09	1.090	7967.4		A	13C2-8:2-FTS	5.59	25855.0	0.308	1.026
NMePFOSAE	6.10	1.000	43619.2		A	d7-NMePFOSAE	6.09	333633.7	0.131	0.544
NMePFOSA	6.11	1.000	10092.9		A	d3-NMePFOSA	6.10	83535.7	0.121	0.596
PFDoS	6.24	1.180	8579.0		A	13C8-PFOS	5.27	293792.7	0.029	0.511
NEtPFOSAE	6.25	1.000	51310.2		A	d9-NEtPFOSAE	6.24	273006.2	0.188	0.603
NEtPFOSA	6.27	1.000	7599.1		M	d5-NEtPFOSA	6.26	56807.1	0.134	0.614
PFTrDA	6.27	1.030	50629.1		A	13C2-PFDoDA	6.07	611071.7	0.083	0.523
PFTeDA	6.44	1.000	41816.7		A	13C2-PFTeDA	6.44	430375.4	0.097	0.545
PFHxDA	6.75	1.050	17769.0		A	13C2-PFTeDA	6.44	430375.4	0.041	0.492
PFODA	7.01	1.090	15991.1		A	13C2-PFTeDA	6.44	430375.4	0.037	0.517

Total Ion Chromatogram

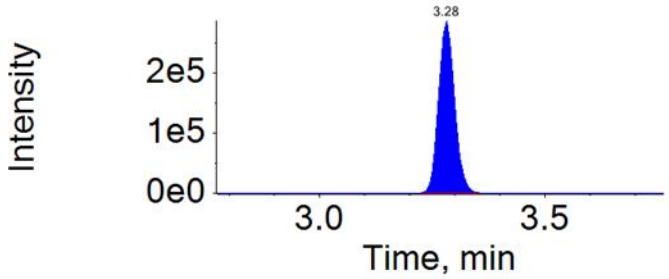


APPROVED
By JPT at 2:36 pm, 11/16/18

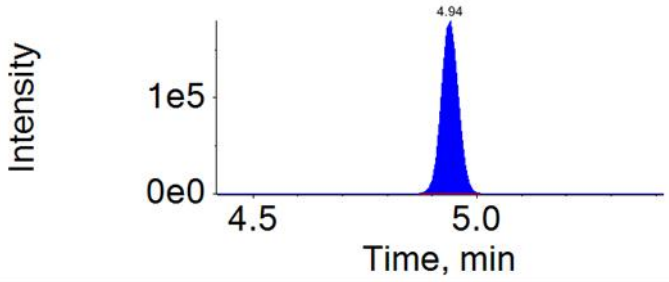
REVIEWED
By HMK at 9:06 am, 11/19/18

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV16DCCV1-3 11/16/2018 2:28:58 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

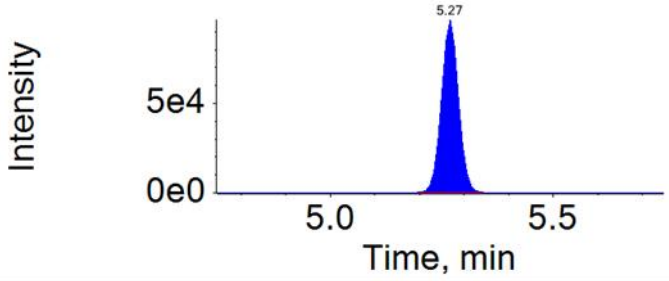
Injection Standard: 13C3-PFBA
216.0 / 172.0



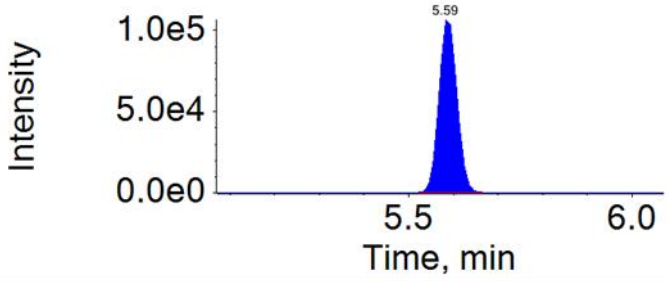
Injection Standard: 13C2-PFOA
415.0 / 370.0



Injection Standard: 13C4-PFOS
503.0 / 80.0



Injection Standard: 13C2-PFDA
515.0 / 470.0

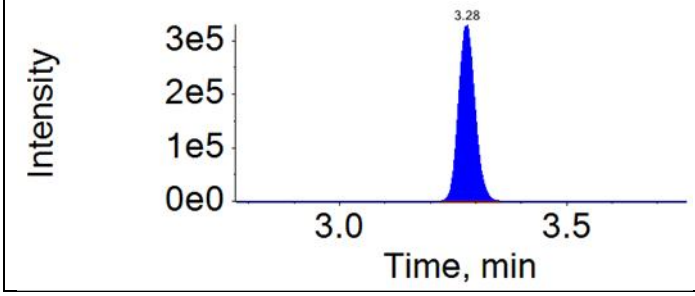


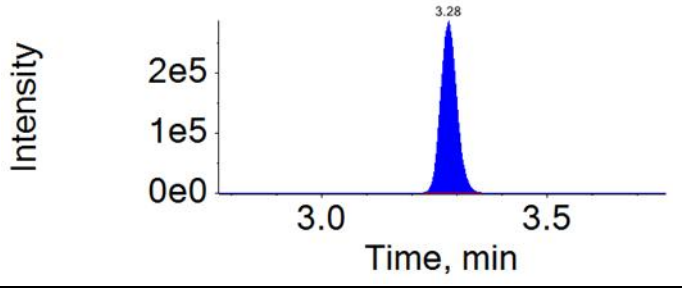
APPROVED
By JPT at 2:36 pm, 11/16/18

REVIEWED
By HMK at 9:06 am, 11/19/18

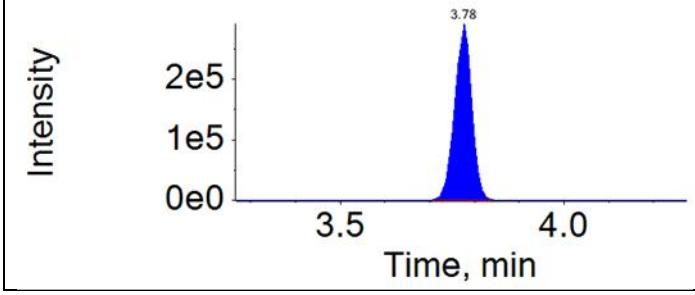
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV16DCCV1-3 11/16/2018 2:28:58 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

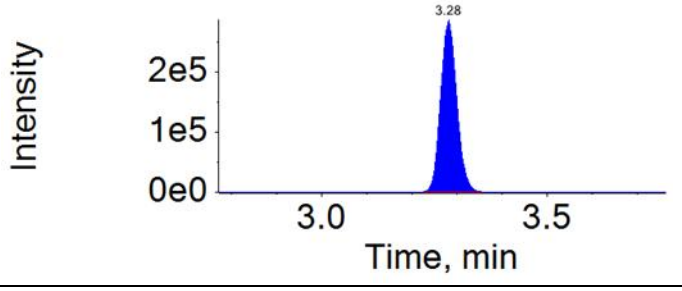
Extraction Standard: E13C4-PFBA	Injection Standard: 13C3-PFBA
217.0 / 172.0	216.0 / 172.0



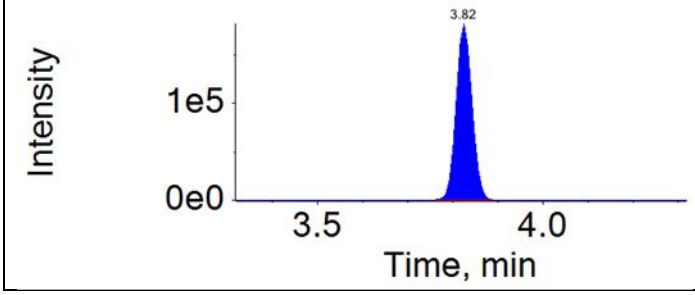


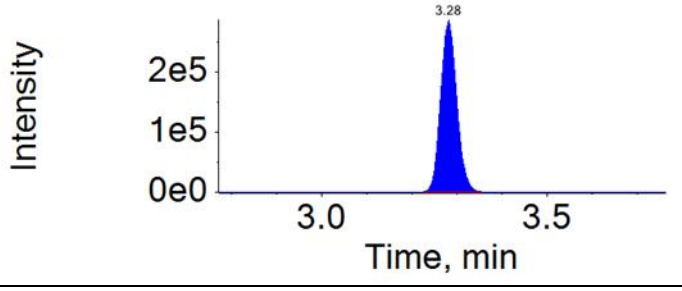
Extraction Standard: E13C5-PFPeA	Injection Standard: 13C3-PFBA
268.0 / 223.0	216.0 / 172.0



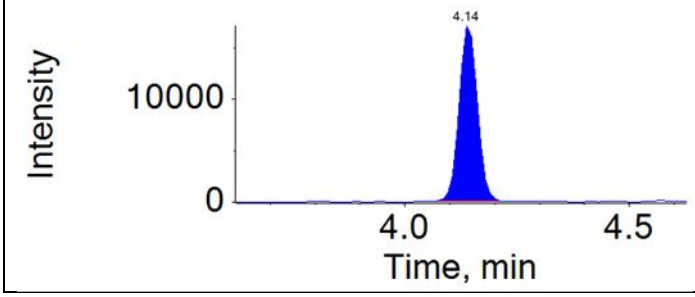


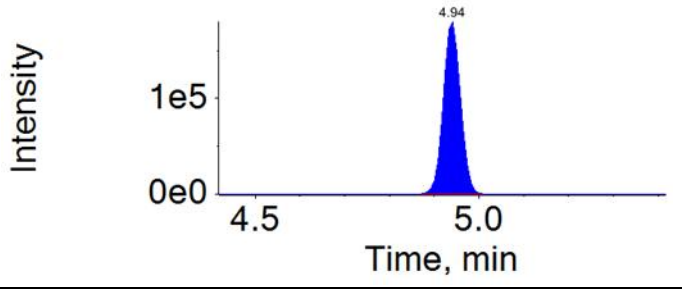
Extraction Standard: E13C3-PFBS	Injection Standard: 13C3-PFBA
302.0 / 80.0	216.0 / 172.0



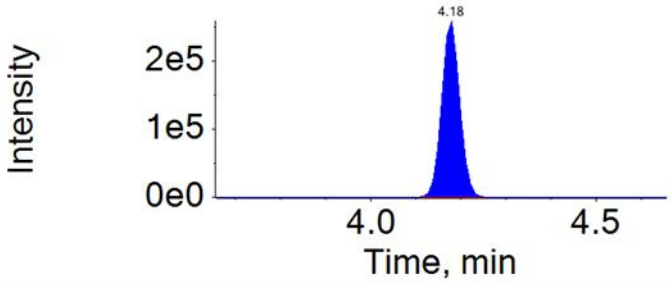
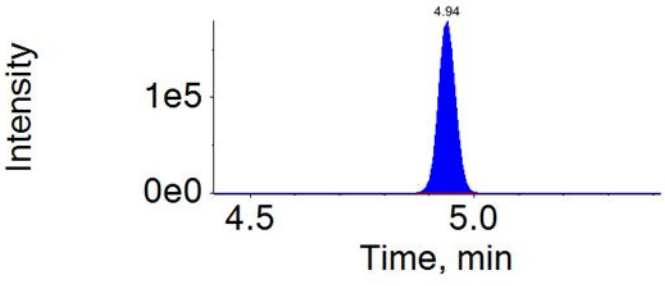


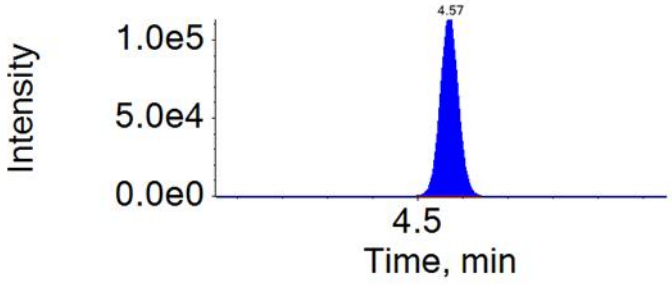
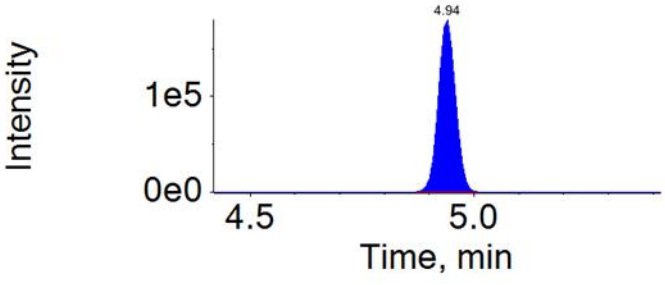
Extraction Standard: E13C2-4:2-FTS	Injection Standard: 13C2-PFOA
329.0 / 81.0	415.0 / 370.0

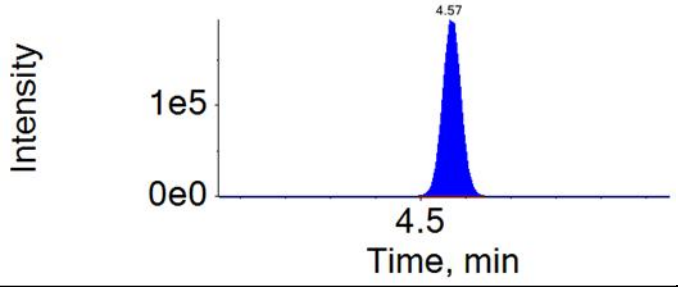
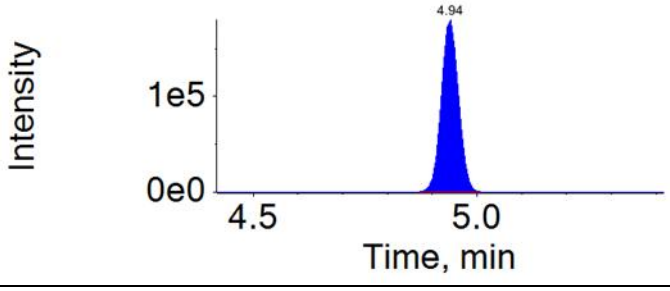


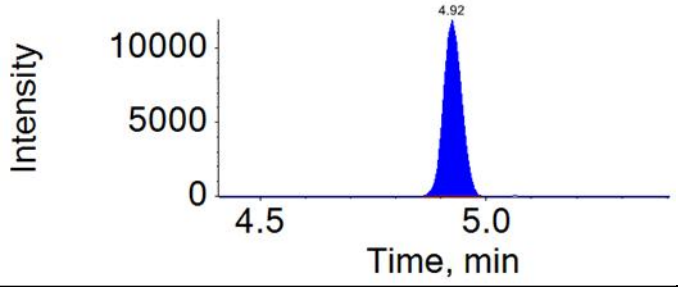
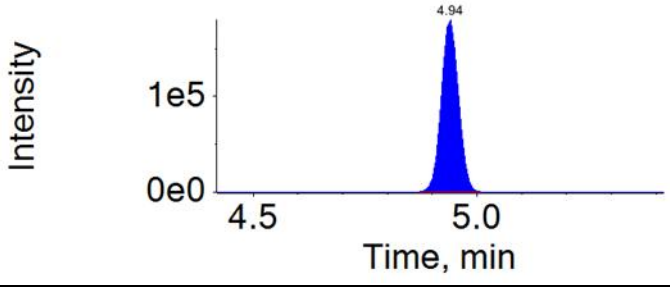


ICAL Name: 18NOV12DCAL **Result Table:** 18NOV16DCCV1-3 11/16/2018 2:28:58 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

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
	

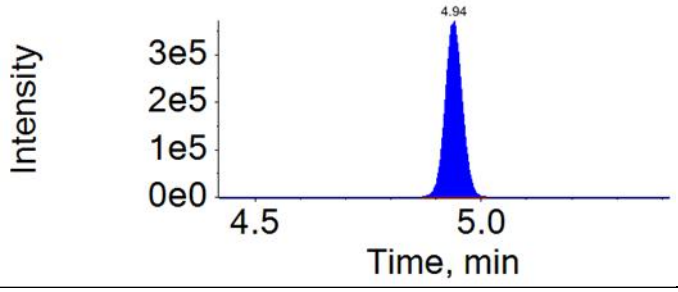
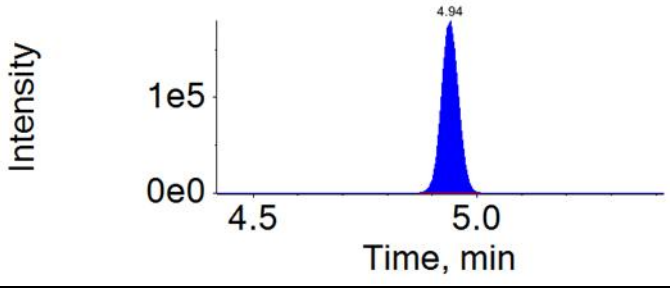
Extraction Standard: E13C4-PFHpA	Injection Standard: 13C2-PFOA
367.0 / 322.0	415.0 / 370.0
	

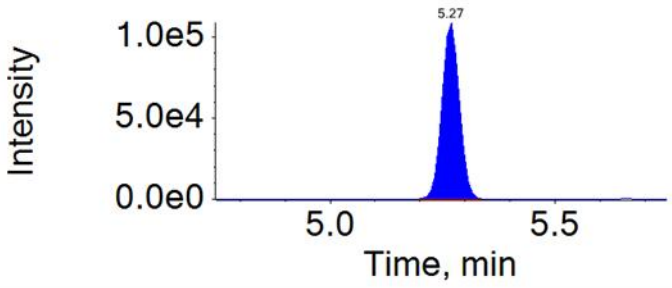
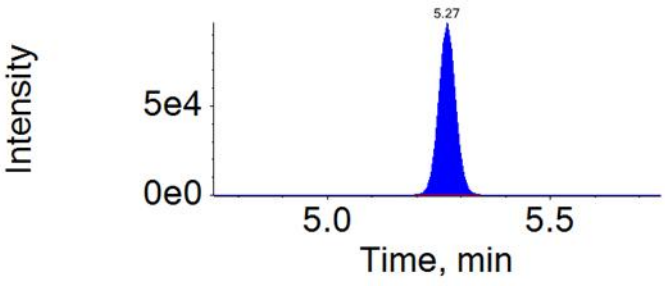
Extraction Standard: E13C2-6:2-FTS	Injection Standard: 13C2-PFOA
429.0 / 81.0	415.0 / 370.0
	

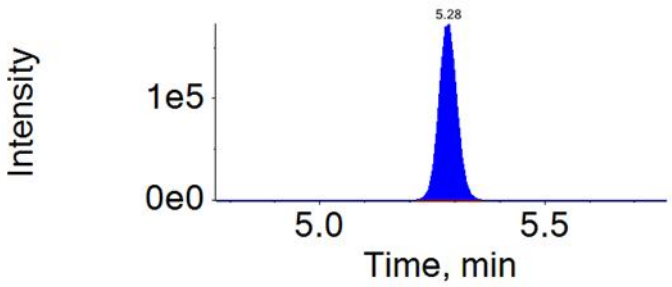
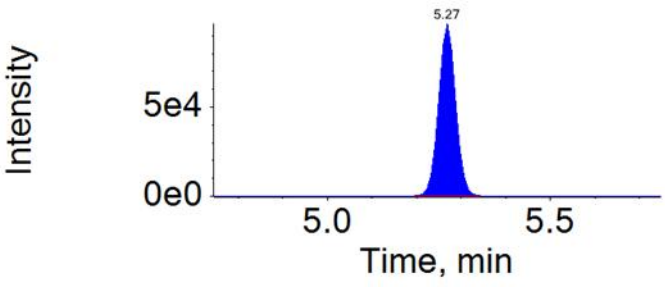
APPROVED
By JPT at 2:36 pm, 11/16/18

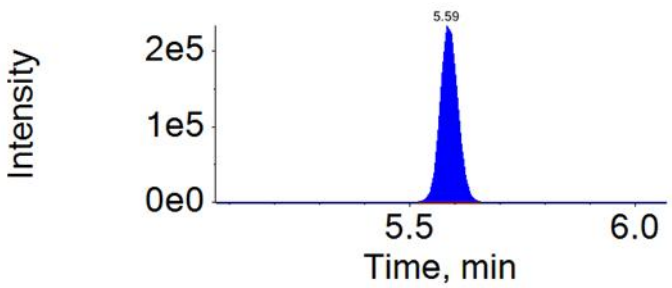
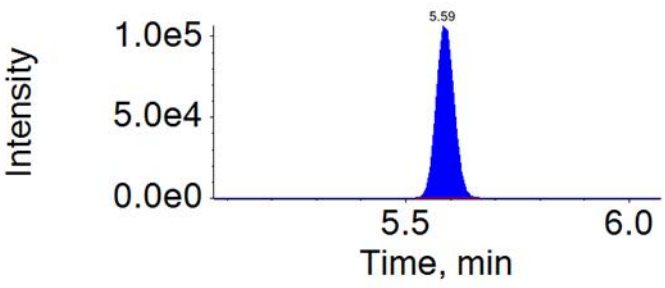
REVIEWED
By HMK at 9:06 am, 11/19/18

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV16DCCV1-3 11/16/2018 2:28:58 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

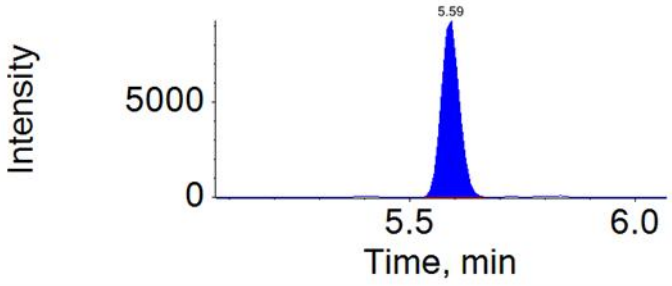
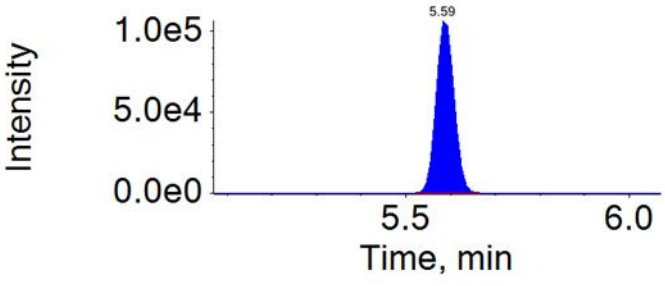
Extraction Standard: E13C8-PFOA	Injection Standard: 13C2-PFOA
421.0 / 376.0	415.0 / 370.0
	

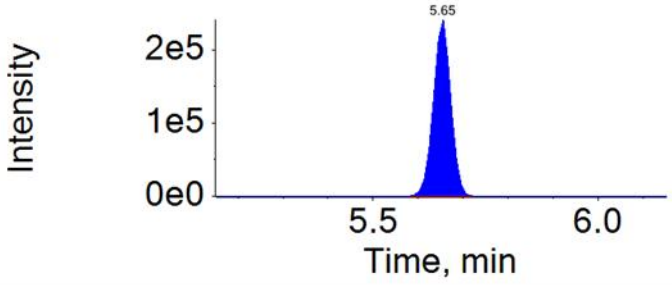
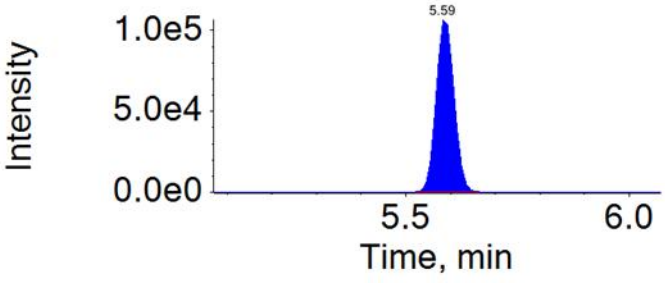
Extraction Standard: E13C8-PFOS	Injection Standard: 13C4-PFOS
507.0 / 80.0	503.0 / 80.0
	

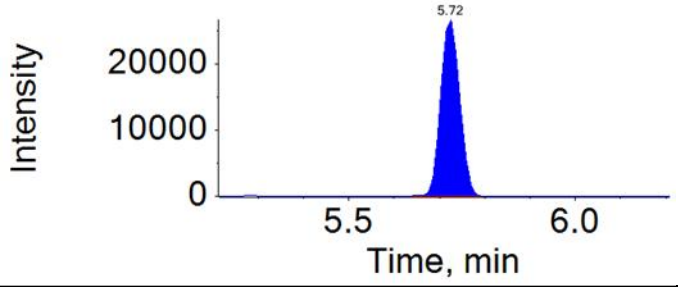
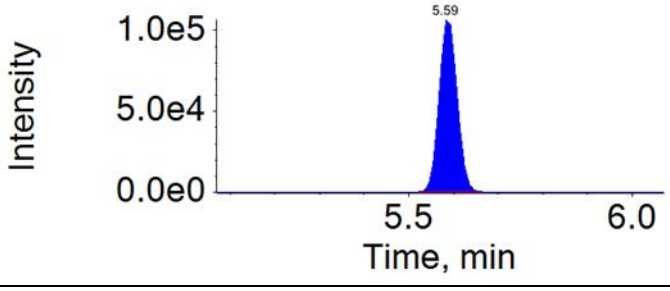
Extraction Standard: E13C9-PFNA	Injection Standard: 13C4-PFOS
472.0 / 427.0	503.0 / 80.0
	

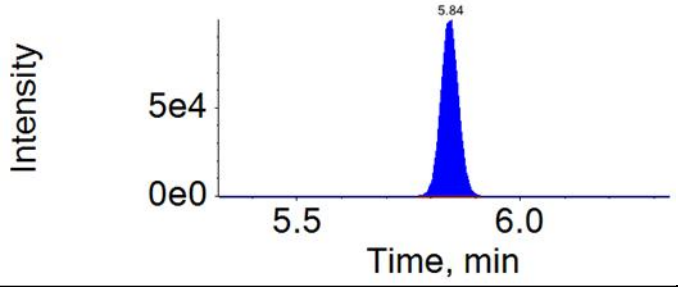
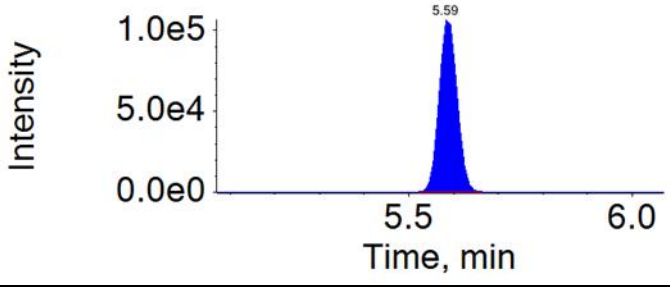
Extraction Standard: E13C6-PFDA	Injection Standard: 13C2-PFDA
519.0 / 474.0	515.0 / 470.0
	

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV16DCCV1-3 11/16/2018 2:28:58 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

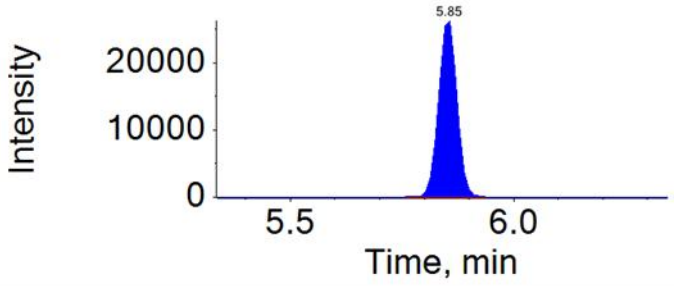
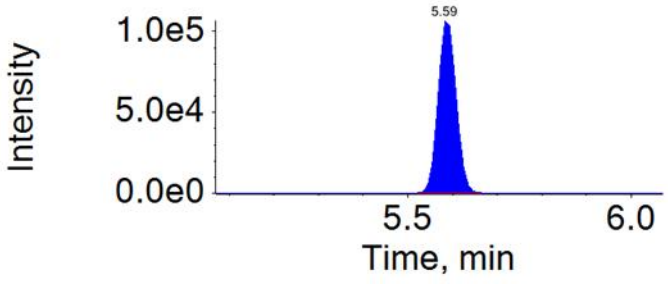
Extraction Standard: E13C2-8:2-FTS	Injection Standard: 13C2-PFDA
529.0 / 81.0	515.0 / 470.0
	

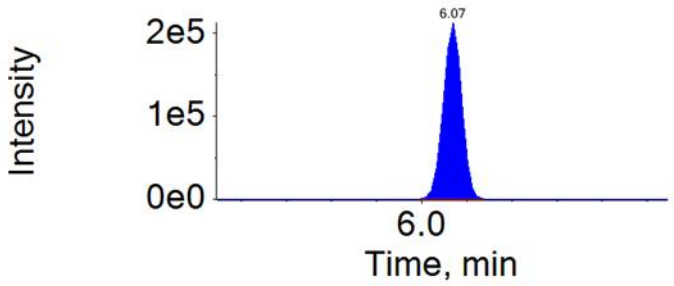
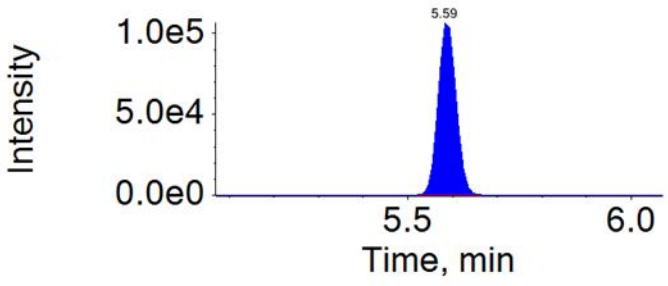
Extraction Standard: E13C8-PFOSA	Injection Standard: 13C2-PFDA
506.0 / 78.0	515.0 / 470.0
	

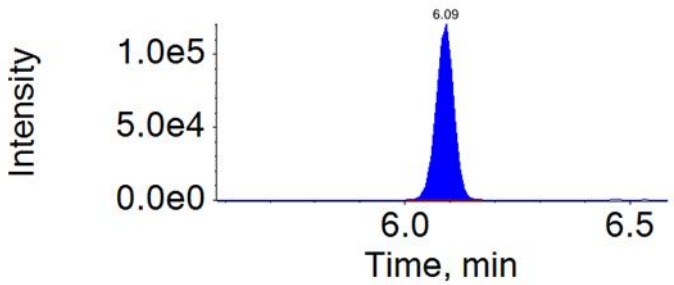
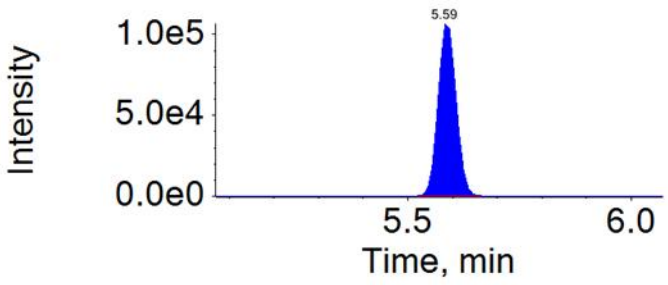
Extraction Standard: Ed3-NMeFOSAA	Injection Standard: 13C2-PFDA
573.0 / 419.0	515.0 / 470.0
	

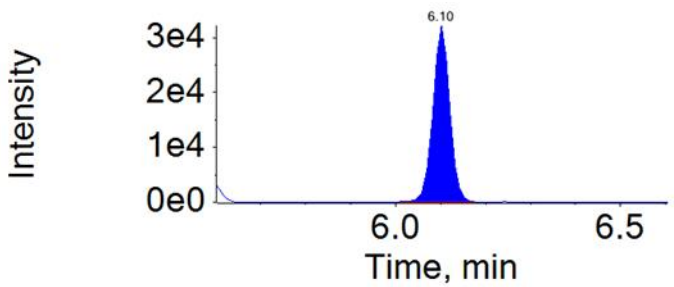
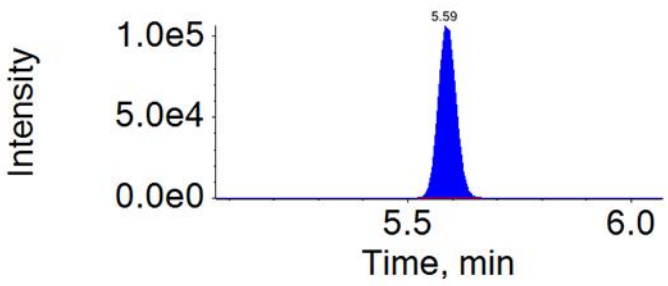
Extraction Standard: E13C7-PFUnDA	Injection Standard: 13C2-PFDA
570.0 / 525.0	515.0 / 470.0
	

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV16DCCV1-3 11/16/2018 2:28:58 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
	

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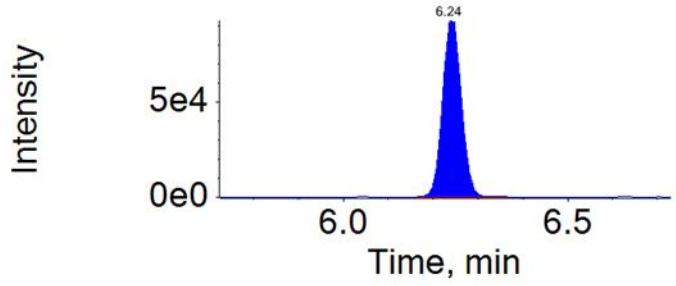
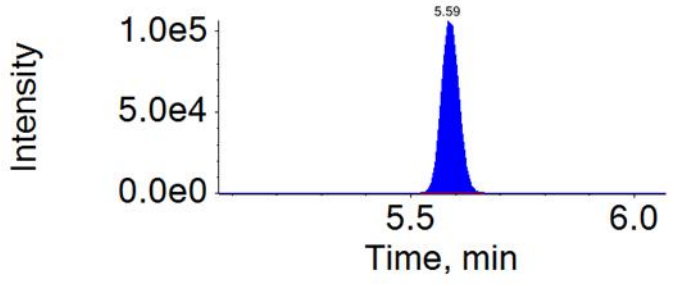
By JPT at 2:36 pm, 11/16/18

REVIEWED
By HMK at 9:06 am, 11/19/18

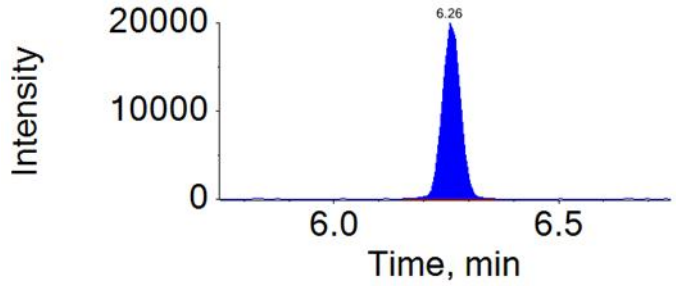
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV16DCCV1-3 11/16/2018 2:28:58 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

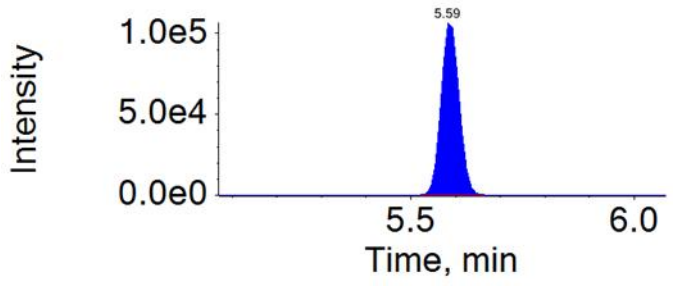
Extraction Standard: Ed9-NEtPFOSAE	Injection Standard: 13C2-PFDA
639.0 / 59.0	515.0 / 470.0



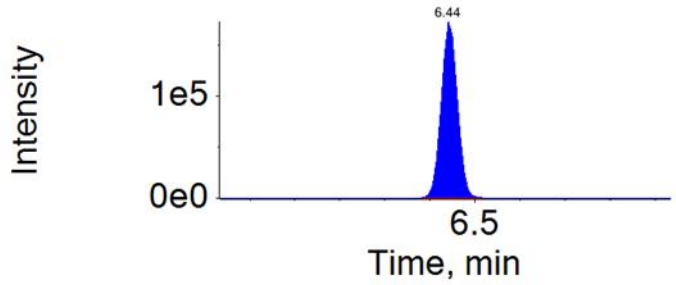


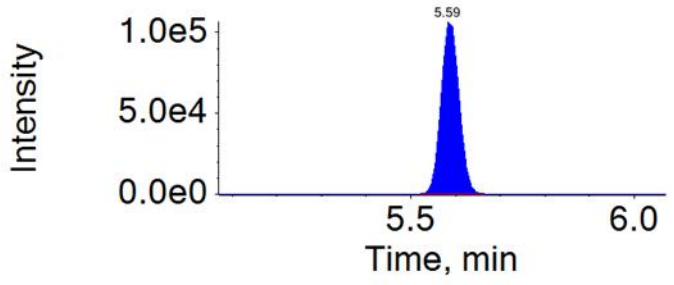
Extraction Standard: Ed5-NEtPFOSA	Injection Standard: 13C2-PFDA
531.0 / 169.0	515.0 / 470.0





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





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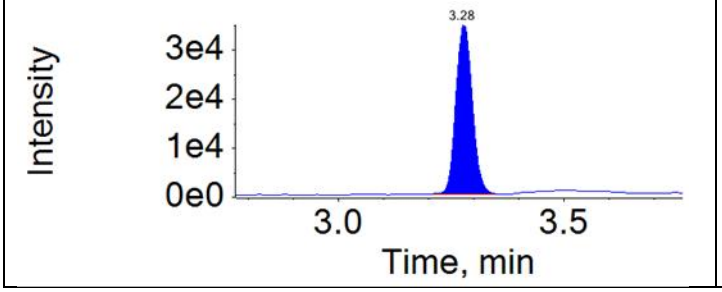
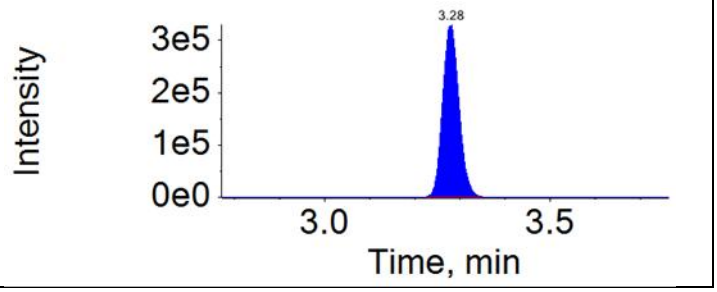
By JPT at 2:36 pm, 11/16/18

REVIEWED
By HMK at 9:06 am, 11/19/18

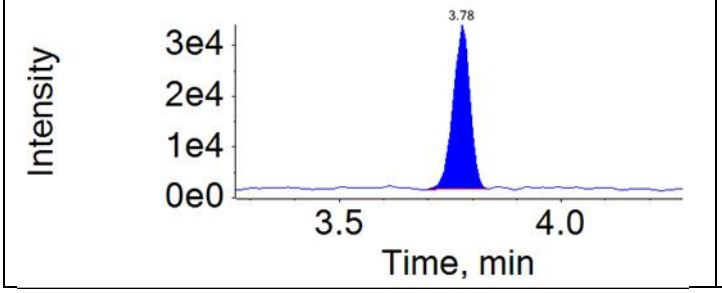
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV16DCCV1-3 11/16/2018 2:28:58 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

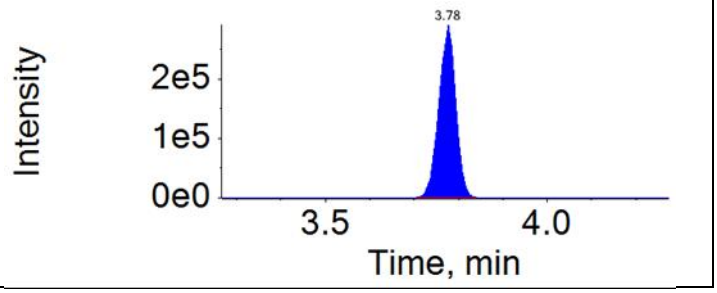
Analyte: PFBA	Extraction Standard: 13C4-PFBA
213.0 / 169.0	217.0 / 172.0



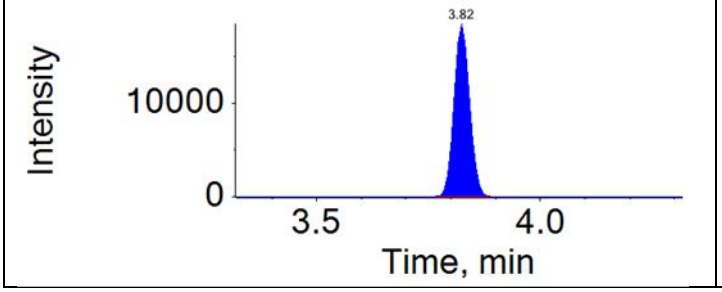


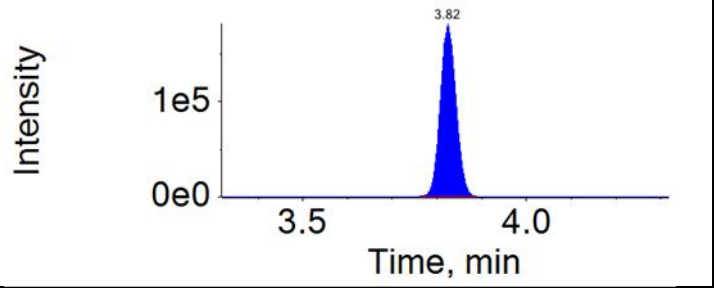
Analyte: PFPeA	Extraction Standard: 13C5-PFPeA
263.0 / 219.0	268.0 / 223.0



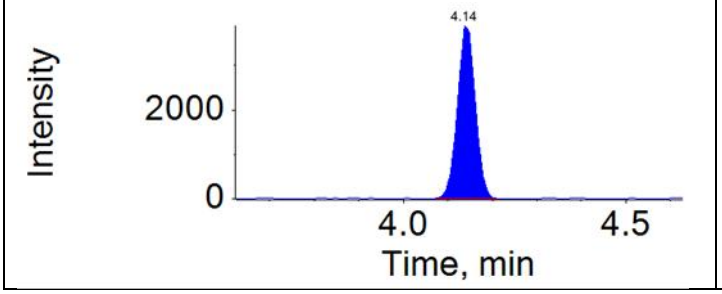


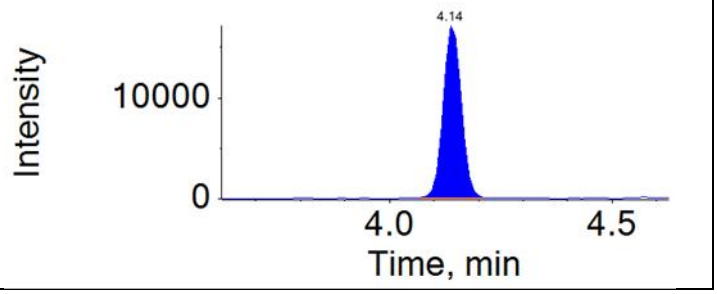
Analyte: PFBS	Extraction Standard: 13C3-PFBS
299.0 / 80.0	302.0 / 80.0





Analyte: 4:2-FTS	Extraction Standard: 13C2-4:2-FTS
327.0 / 307.0	329.0 / 81.0



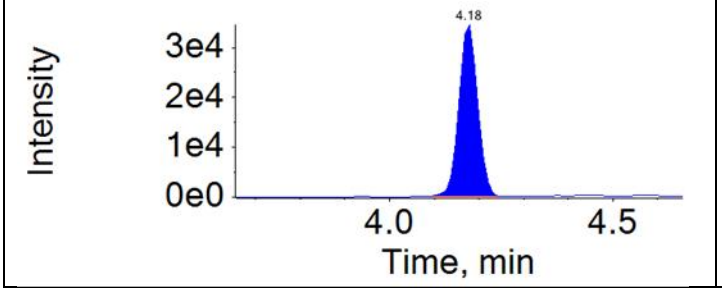


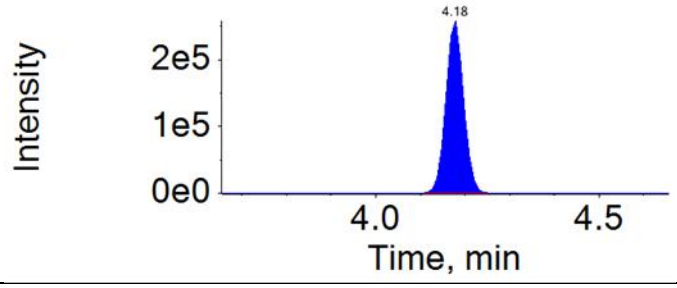
APPROVED
By JPT at 2:36 pm, 11/16/18

REVIEWED
By HMK at 9:06 am, 11/19/18

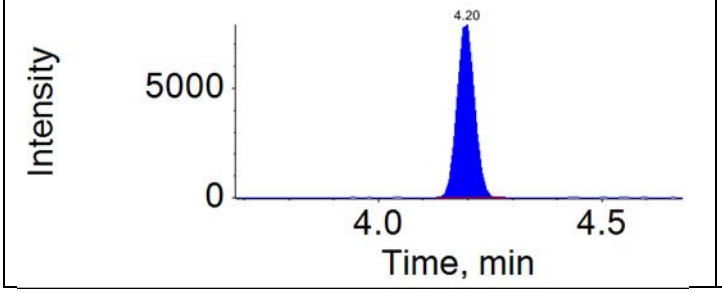
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV16DCCV1-3 11/16/2018 2:28:58 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

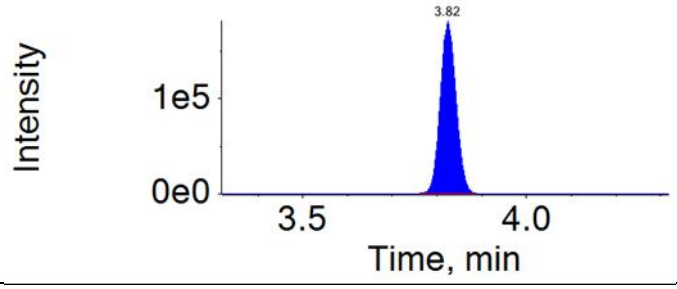
Analyte: PFHxA	Extraction Standard: 13C5-PFHxA
313.0 / 269.0	318.0 / 273.0



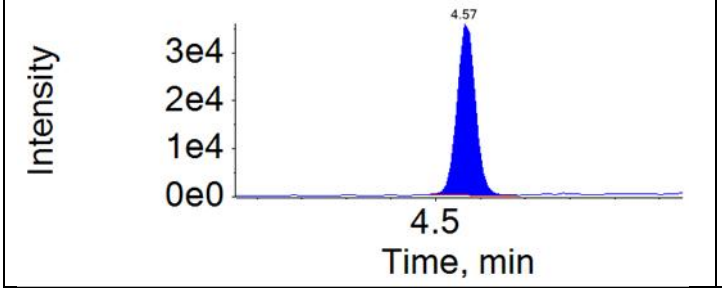


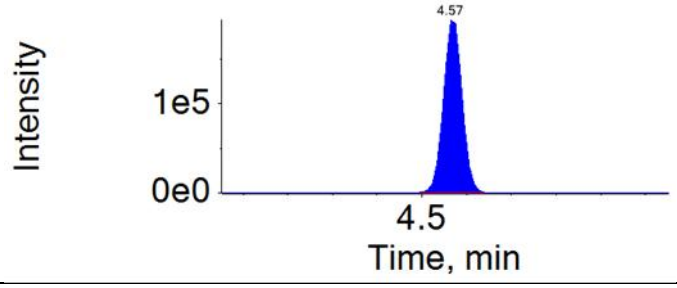
Analyte: PFPeS	Extraction Standard: 13C3-PFBS
349.0 / 80.0	302.0 / 80.0



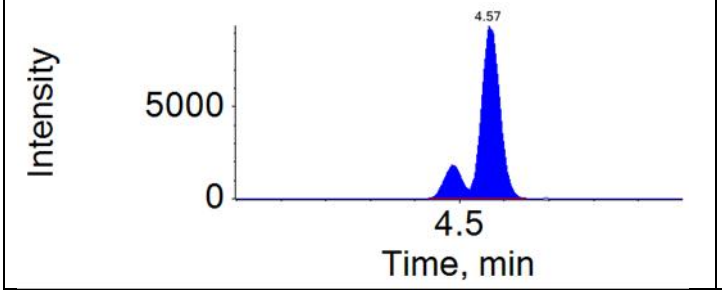


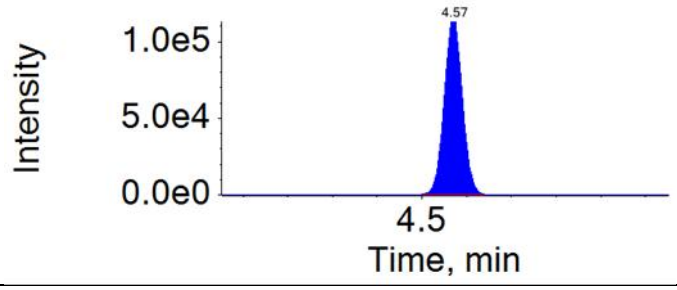
Analyte: PFHpA	Extraction Standard: 13C4-PFHpA
363.0 / 319.0	367.0 / 322.0





Analyte: PFHxS	Extraction Standard: 13C3-PFHxS
399.0 / 80.0	402.0 / 80.0

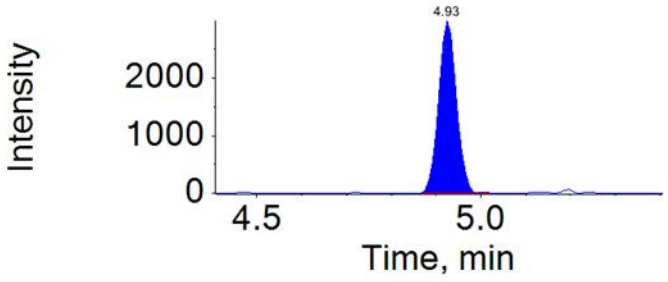
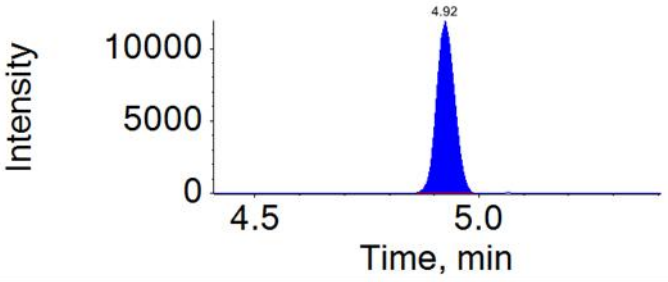


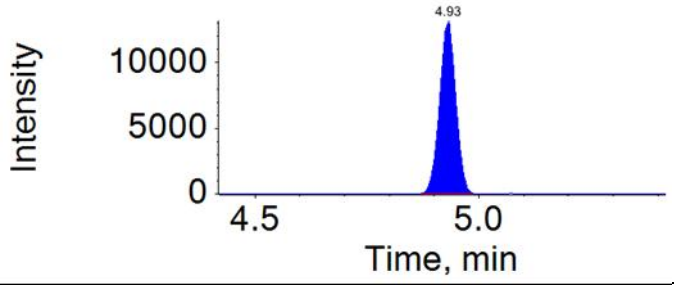
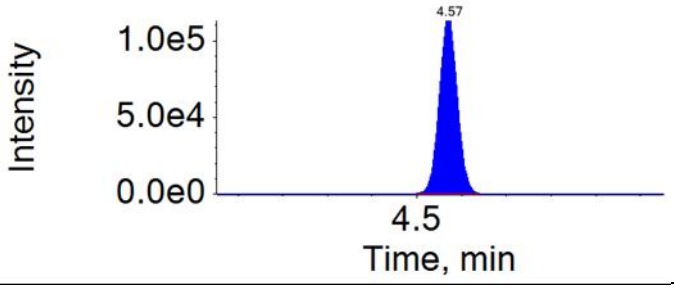


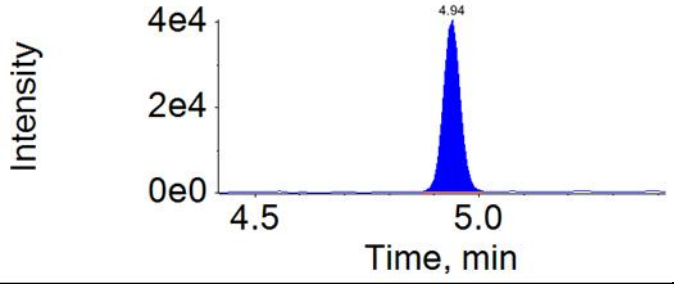
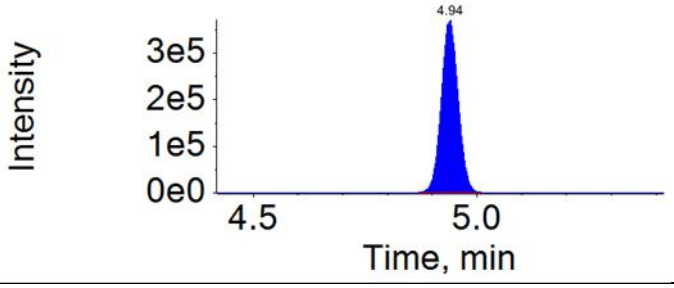
APPROVED
By JPT at 2:36 pm, 11/16/18

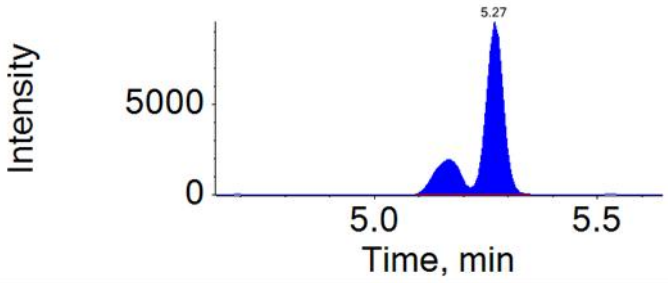
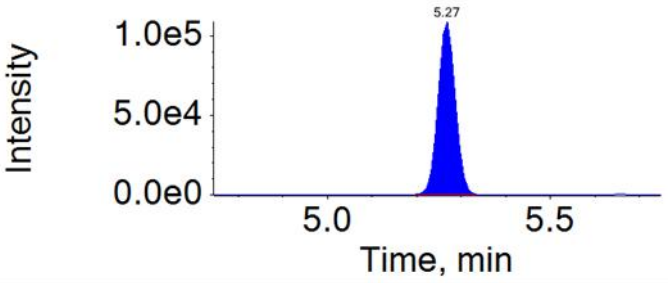
REVIEWED
By HMK at 9:06 am, 11/19/18

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV16DCCV1-3 11/16/2018 2:28:58 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Analyte: 6:2-FTS	Extraction Standard: 13C2-6:2-FTS
427.0 / 407.0	429.0 / 81.0
	

Analyte: PFHpS	Extraction Standard: 13C3-PFHxS
449.0 / 80.0	402.0 / 80.0
	

Analyte: PFOA	Extraction Standard: 13C8-PFOA
413.0 / 369.0	421.0 / 376.0
	

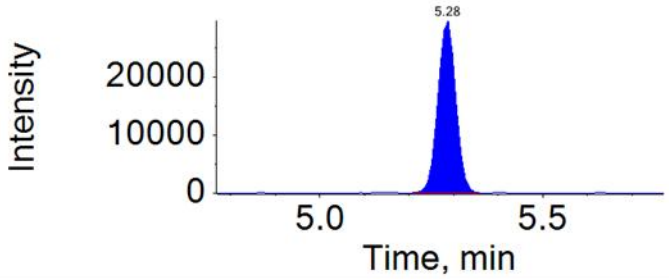
Analyte: PFOS	Extraction Standard: 13C8-PFOS
499.0 / 80.0	507.0 / 80.0
	

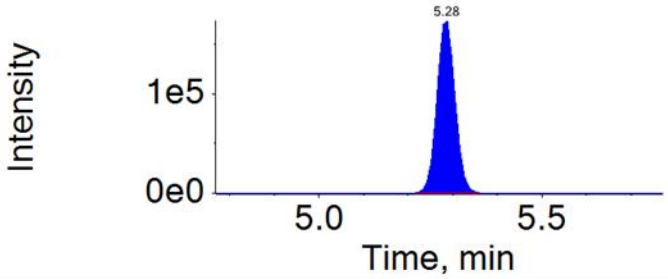
APPROVED
By JPT at 2:36 pm, 11/16/18

REVIEWED
By HMK at 9:06 am, 11/19/18

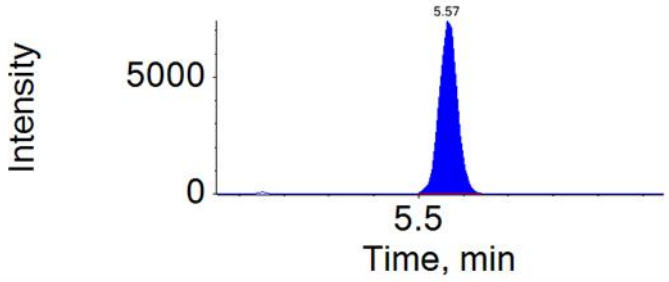
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV16DCCV1-3 11/16/2018 2:28:58 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

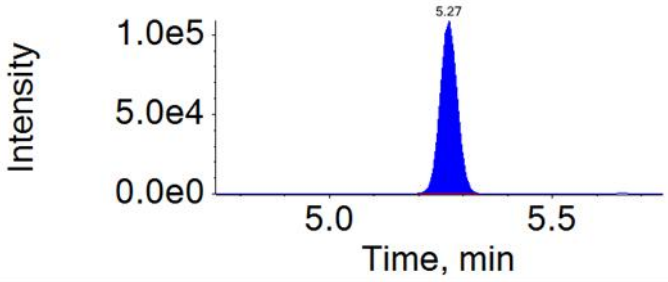
Analyte: PFNA	Extraction Standard: 13C9-PFNA
463.0 / 419.0	472.0 / 427.0



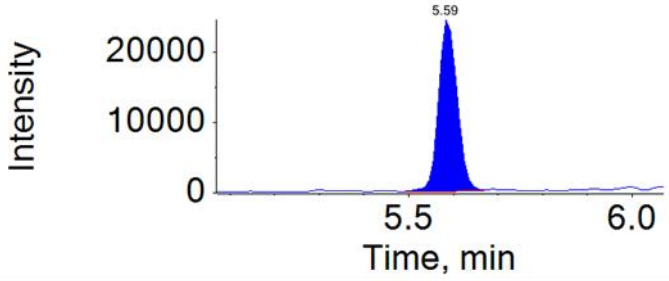


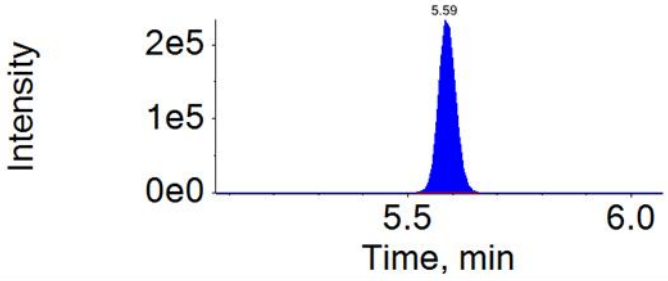
Analyte: PFNS	Extraction Standard: 13C8-PFOS
549.0 / 80.0	507.0 / 80.0



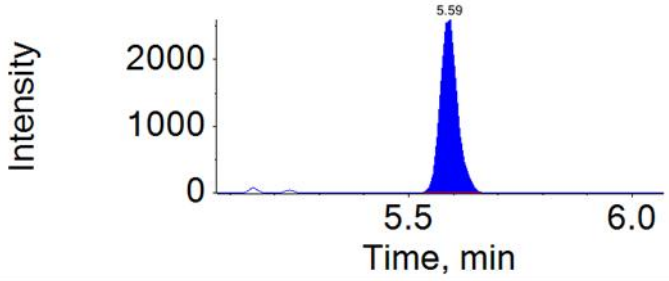


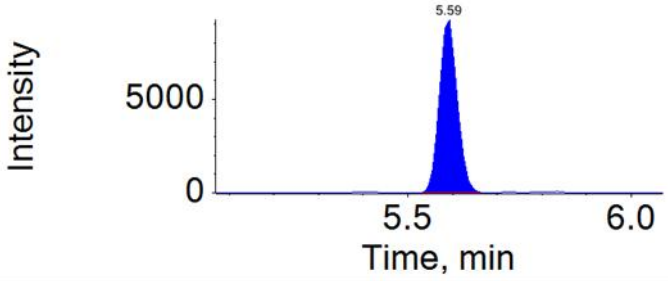
Analyte: PFDA	Extraction Standard: 13C6-PFDA
513.0 / 469.0	519.0 / 474.0





Analyte: 8:2-FTS	Extraction Standard: 13C2-8:2-FTS
527.0 / 507.0	529.0 / 81.0



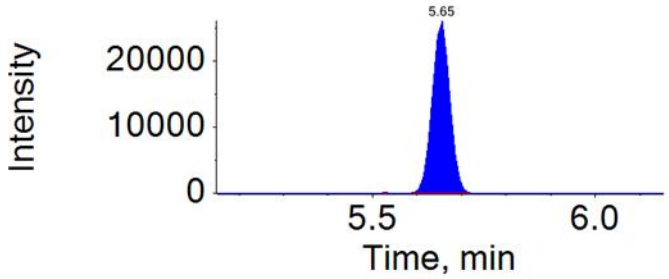


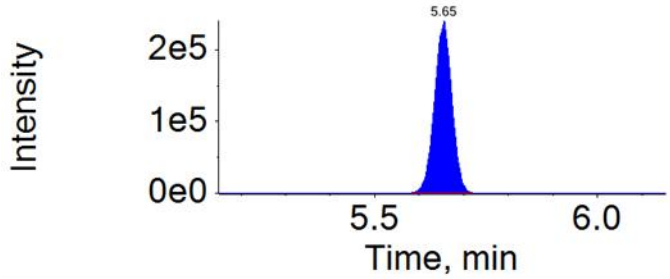
APPROVED
By JPT at 2:36 pm, 11/16/18

REVIEWED
By HMK at 9:06 am, 11/19/18

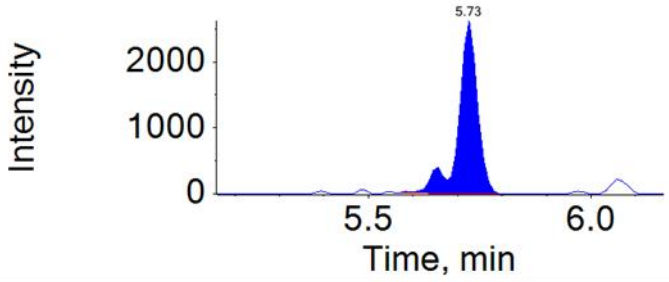
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV16DCCV1-3 11/16/2018 2:28:58 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

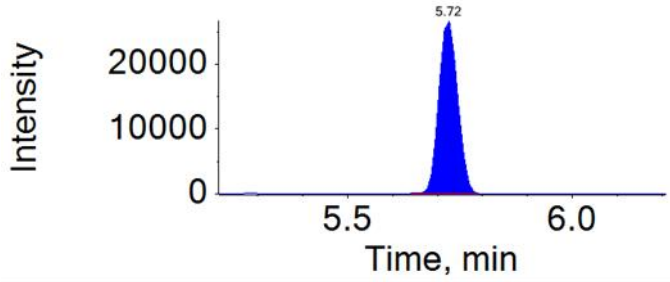
Analyte: PFOSA	Extraction Standard: 13C8-PFOSA
498.0 / 78.0	506.0 / 78.0



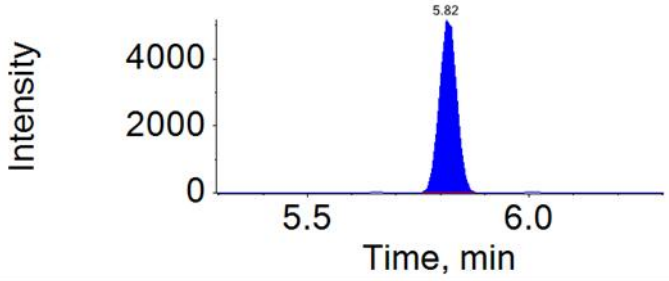


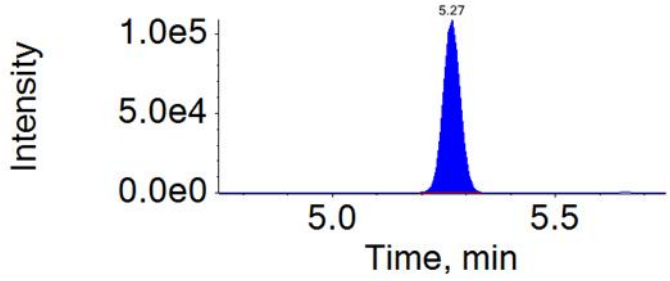
Analyte: NMeFOSAA	Extraction Standard: d3-NMeFOSAA
570.0 / 419.0	573.0 / 419.0



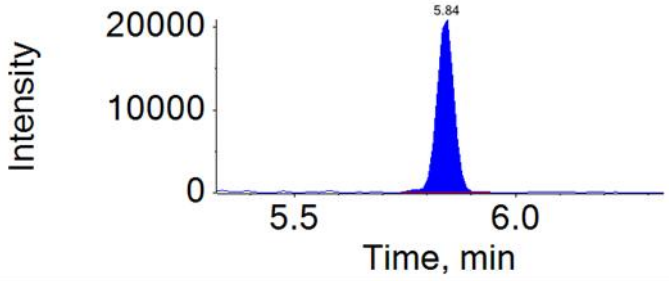


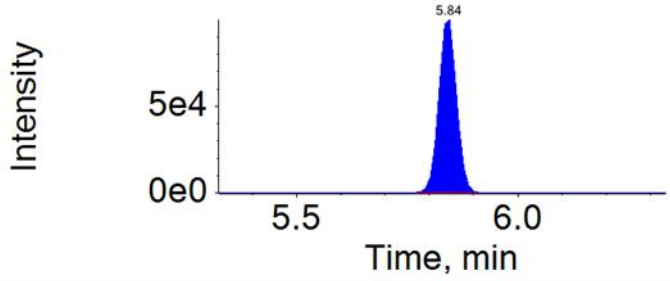
Analyte: PFDS	Extraction Standard: 13C8-PFOS
599.0 / 80.0	507.0 / 80.0





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

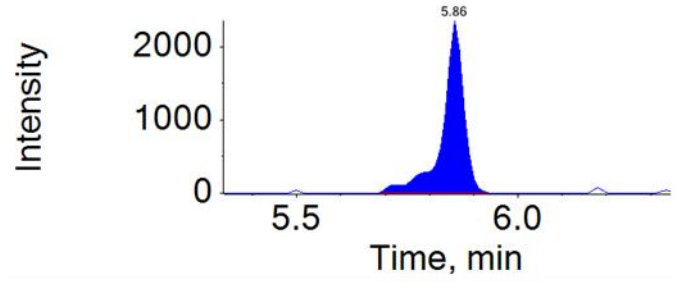
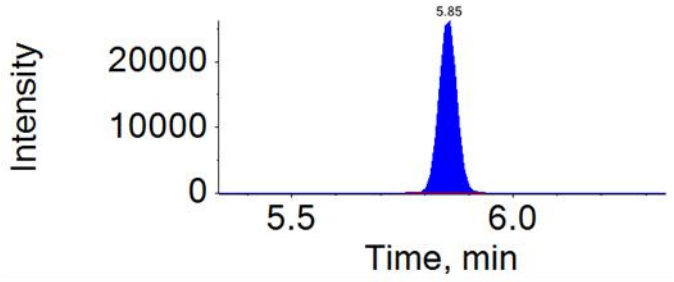


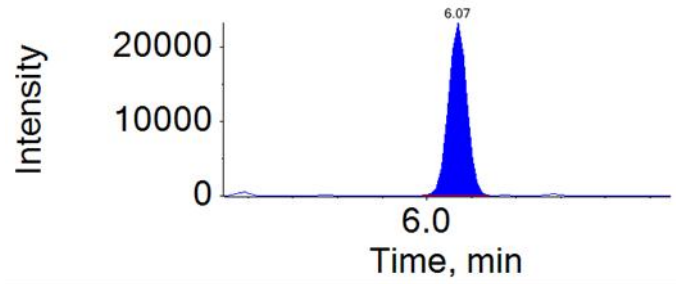
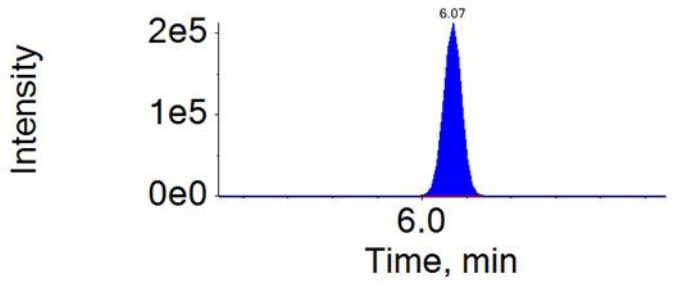


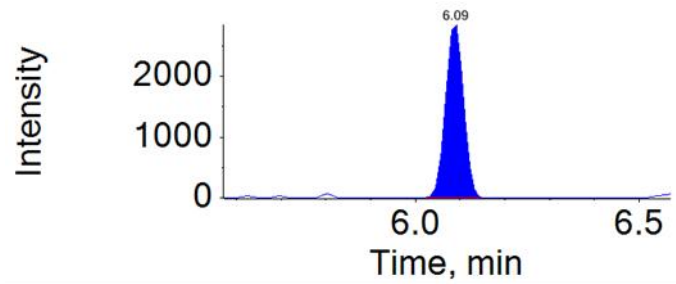
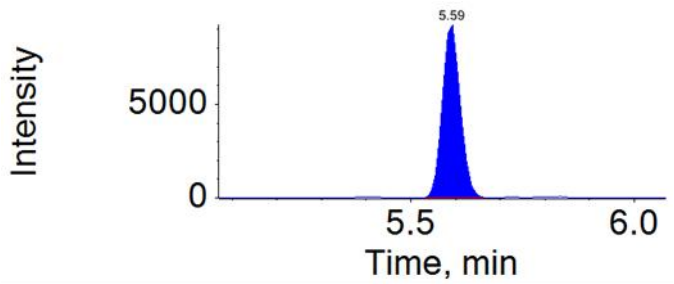
APPROVED
By JPT at 2:36 pm, 11/16/18

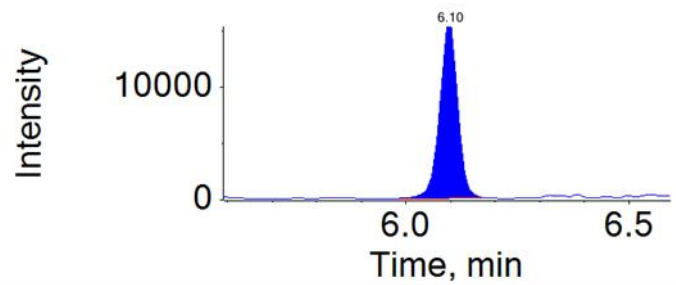
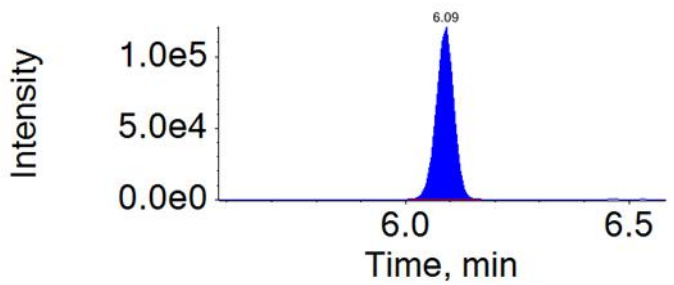
REVIEWED
By HMK at 9:06 am, 11/19/18

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV16DCCV1-3 11/16/2018 2:28:58 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

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

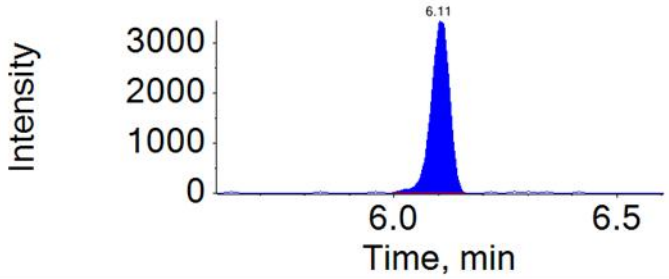
Analyte: PFDoDA	Extraction Standard: 13C2-PFDoDA
613.0 / 569.0	615.0 / 570.0
	

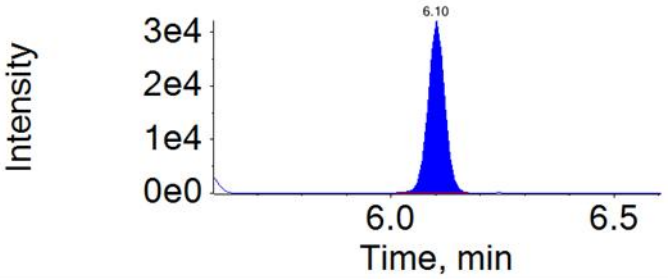
Analyte: 10:2-FTS	Extraction Standard: 13C2-8:2-FTS
627.0 / 607.0	529.0 / 81.0
	

Analyte: NMePFOSAE	Extraction Standard: d7-NMePFOSAE
616.0 / 59.0	623.0 / 59.0
	

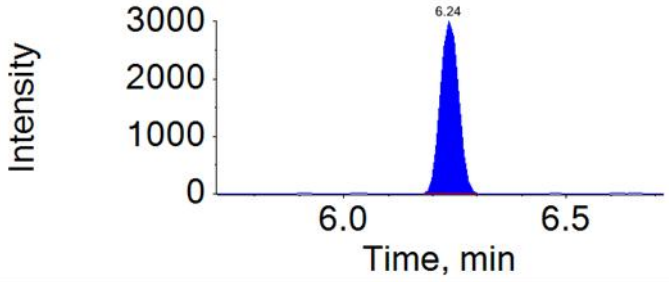
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV16DCCV1-3 11/16/2018 2:28:58 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

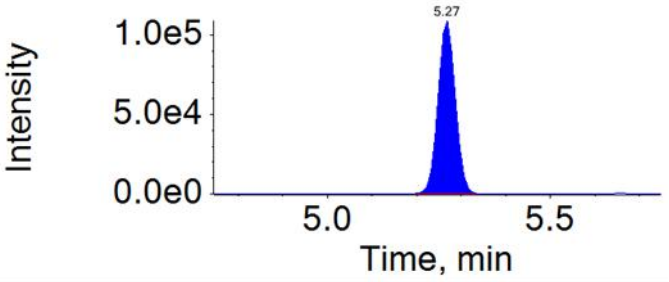
Analyte: NMePFOSA	Extraction Standard: d3-NMePFOSA
512.0 / 169.0	515.0 / 169.0



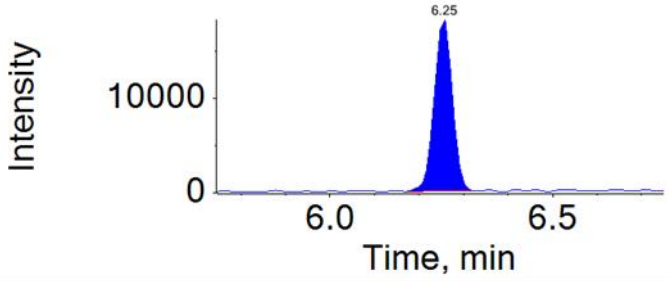


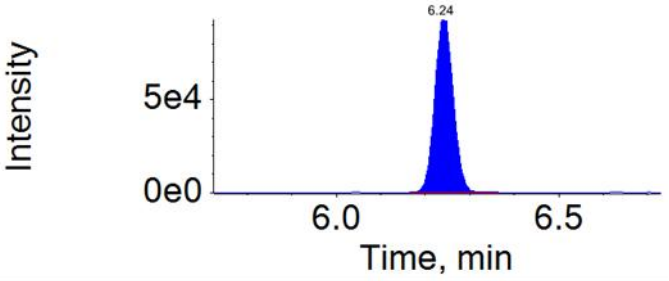
Analyte: PFDoS	Extraction Standard: 13C8-PFOS
699.0 / 80.0	507.0 / 80.0



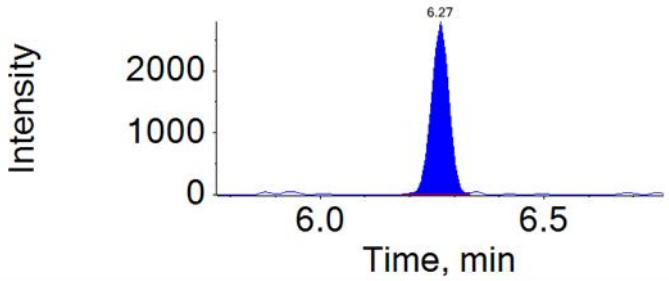


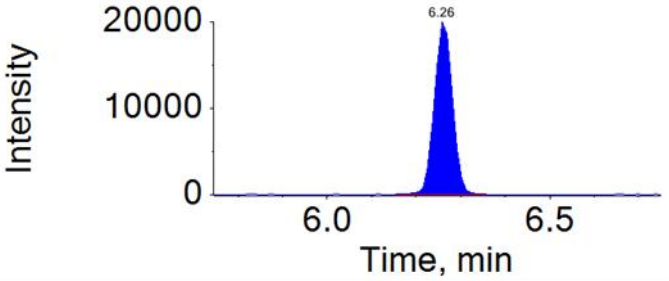
Analyte: NEtPFOSAE	Extraction Standard: d9-NEtPFOSAE
630.0 / 59.0	639.0 / 59.0





Analyte: NEtPFOSA	Extraction Standard: d5-NEtPFOSA
526.0 / 169.0	531.0 / 169.0



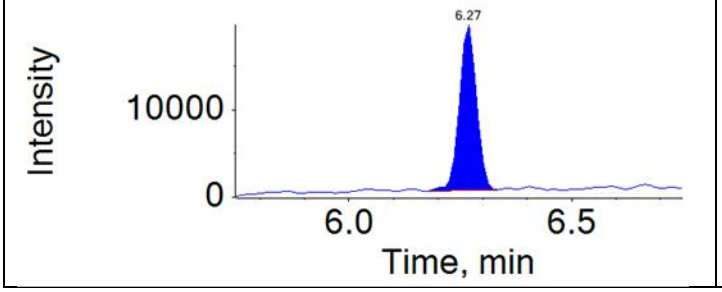


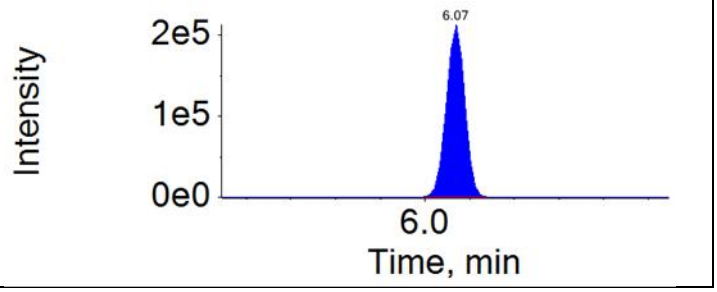
APPROVED
By JPT at 2:36 pm, 11/16/18

REVIEWED
By HMK at 9:06 am, 11/19/18

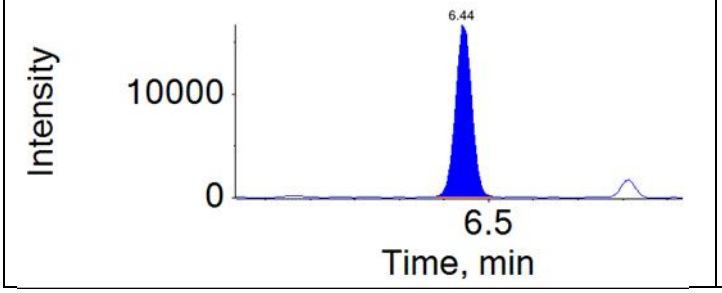
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV16DCCV1-3 11/16/2018 2:28:58 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

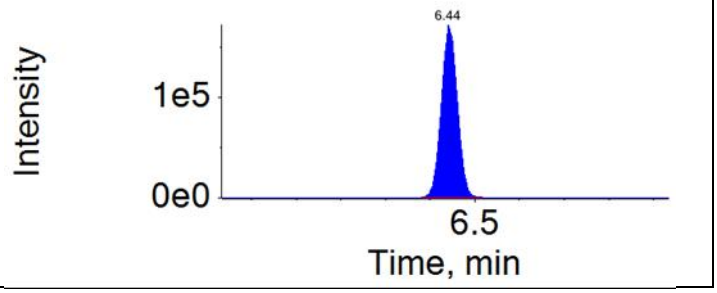
Analyte: PFTrDA	Extraction Standard: 13C2-PFDoDA
663.0 / 619.0	615.0 / 570.0



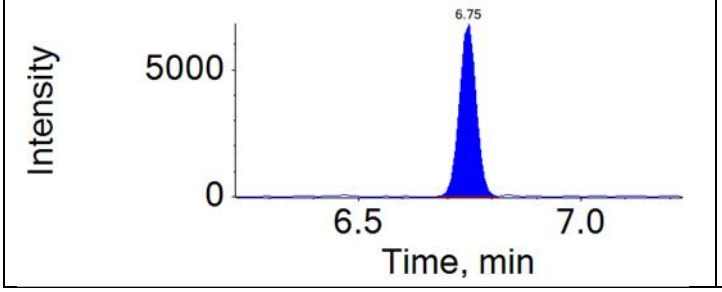


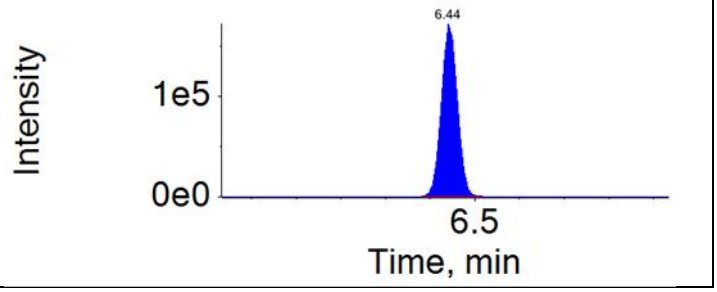
Analyte: PFTeDA	Extraction Standard: 13C2-PFTeDA
713.0 / 669.0	715.0 / 670.0



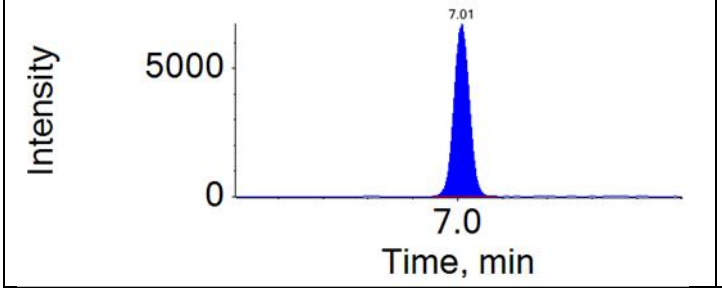


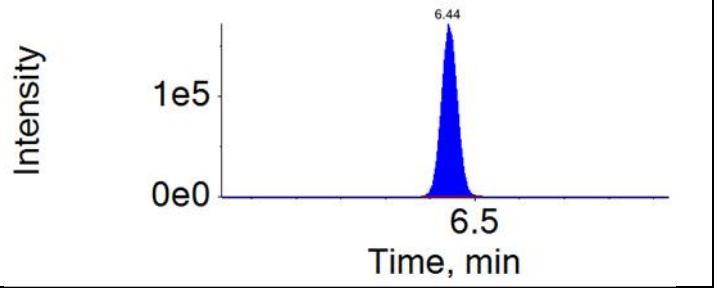
Analyte: PFHxDA	Extraction Standard: 13C2-PFTeDA
813.0 / 769.0	715.0 / 670.0





Analyte: PFODA	Extraction Standard: 13C2-PFTeDA
913.0 / 869.0	715.0 / 670.0

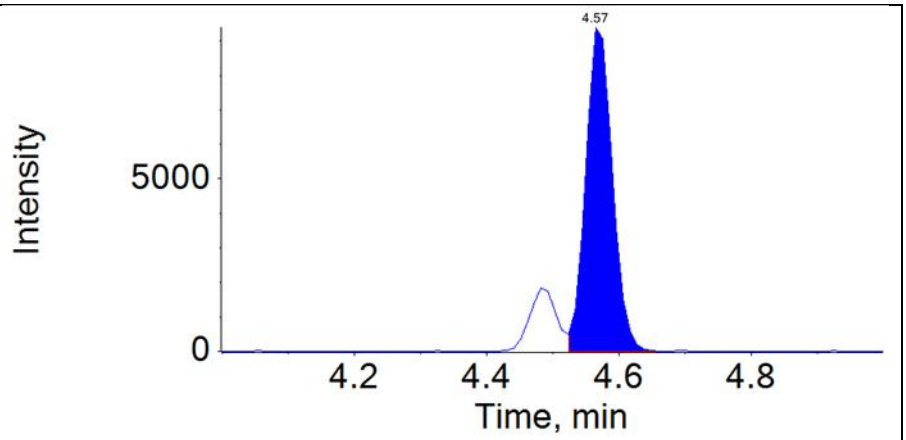


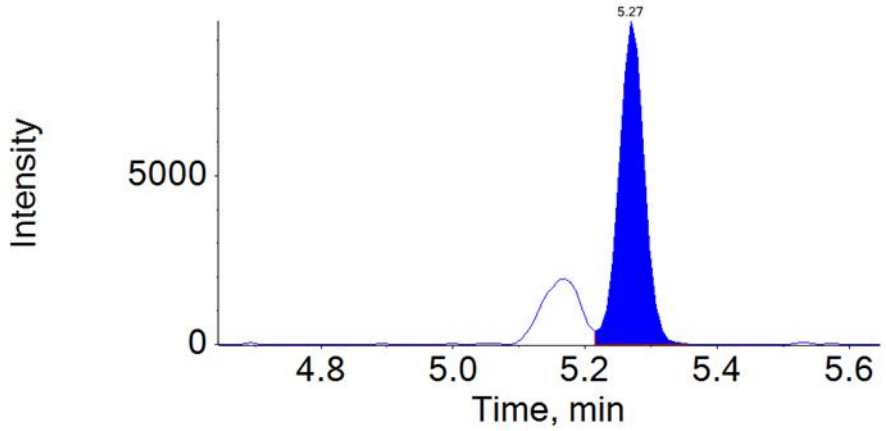


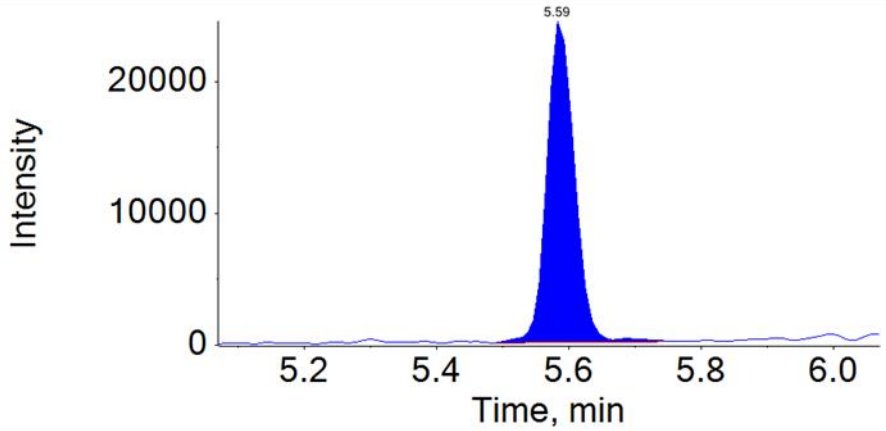
APPROVED
By JPT at 2:36 pm, 11/16/18

REVIEWED
By HMK at 9:06 am, 11/19/18

Results Table Name: 18NOV16DCCV1-3
Results Table Date: 11/16/2018 2:28:58 PM
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

Component Name: PFHxS **RT (min.):** 4.57 **Peak Area:** 26483.6 **Mass Range:** 399.0 / 80.0 **File Name:** 18NOV16D-05.wiff **Sample Name:** CCV1_ISC_CAL2	 **Integration Comment:** incorrect integration

Component Name: PFOS **RT (min.):** 5.27 **Peak Area:** 25515.2 **Mass Range:** 499.0 / 80.0 **File Name:** 18NOV16D-05.wiff **Sample Name:** CCV1_ISC_CAL2	 **Integration Comment:** incorrect integration

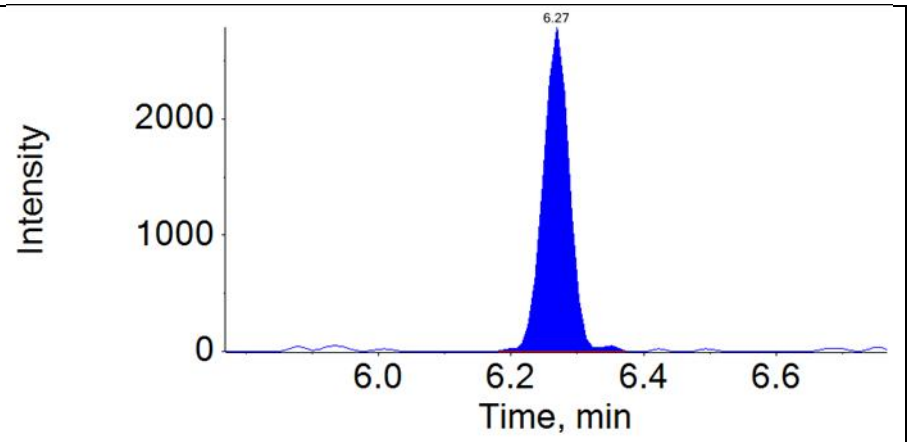
Component Name: PFDA **RT (min.):** 5.59 **Peak Area:** 71564.4 **Mass Range:** 513.0 / 469.0 **File Name:** 18NOV16D-05.wiff **Sample Name:** CCV1_ISC_CAL2	 **Integration Comment:** incorrect integration

APPROVED
By JPT at 2:36 pm, 11/16/18

REVIEWED
By HMK at 9:06 am, 11/19/18

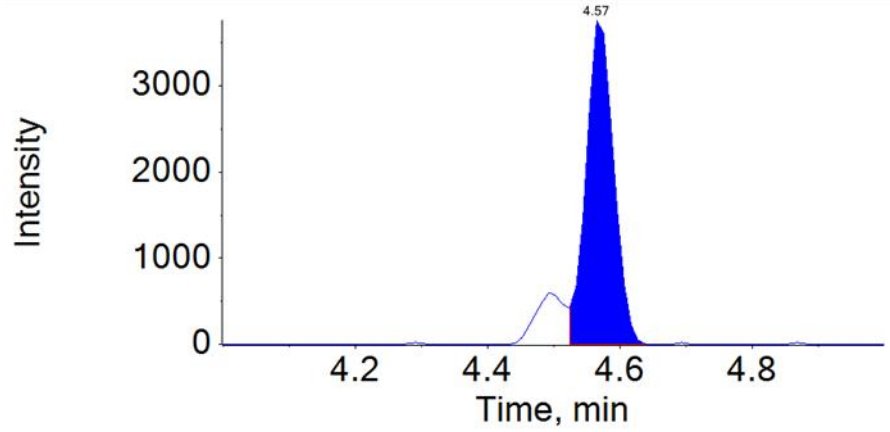
Results Table Name: 18NOV16DCCV1-3
Results Table Date: 11/16/2018 2:28:58 PM
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

Component Name:
NEtPFOSA
RT (min.):
6.27
Peak Area:
7675.7
Mass Range:
526.0 / 169.0
File Name:
18NOV16D-05.wiff
Sample Name:
CCV1_ISC_CAL2



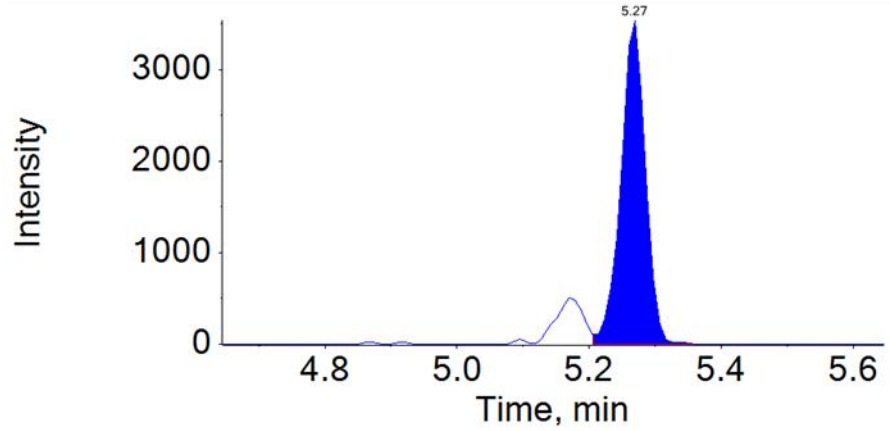
Integration Comment: incorrect integration

Component Name:
PFHxS_2
RT (min.):
4.57
Peak Area:
10957.1
Mass Range:
399.0 / 99.0
File Name:
18NOV16D-05.wiff
Sample Name:
CCV1_ISC_CAL2



Integration Comment: incorrect integration

Component Name:
PFOS_2
RT (min.):
5.27
Peak Area:
9146.7
Mass Range:
499.0 / 99.0
File Name:
18NOV16D-05.wiff
Sample Name:
CCV1_ISC_CAL2



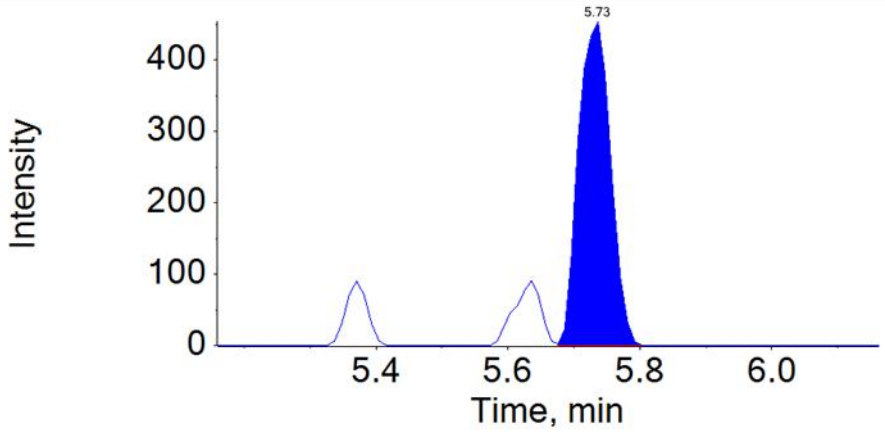
Integration Comment: incorrect integration

APPROVED
By JPT at 2:36 pm, 11/16/18

REVIEWED
By HMK at 9:06 am, 11/19/18

Results Table Name: 18NOV16DCCV1-3
Results Table Date: 11/16/2018 2:28:58 PM
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

Component Name:
NMeFOSAA_2
RT (min.):
5.73
Peak Area:
1548.1
Mass Range:
570.0 / 483.0
File Name:
18NOV16D-05.wiff
Sample Name:
CCV1_ISC_CAL2



Integration Comment: incorrect integration

APPROVED
By JPT at 2:36 pm, 11/16/18

REVIEWED
By HMK at 9:06 am, 11/19/18

Results Table Name: 18NOV16DCCV1-3
Results Table Date: 11/16/2018 2:28:58 PM

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

APPROVED
By JPT at 2:36 pm, 11/16/18

REVIEWED
By HMK at 9:06 am, 11/19/18

Ion Ratio Report

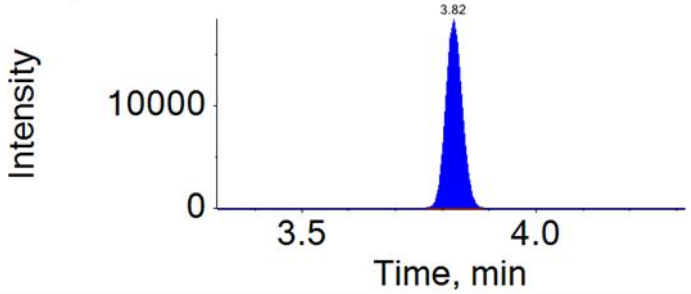
Sample Name: CCV1_ISC_CAL2 **Instrument Name:** LM27631 **File Name:** 18NOV16D-05.wiff

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	44532.9	A	N/A	1.0000			
PFBS_2	3.82	1.00	17393.6	A	N/A	0.3906	7	50	
4:2-FTS	4.14	1.00	10925.8	A	N/A	1.0000			
4:2 FTS_2	4.14	1.00	6061.8	A	N/A	0.5548		#NA!	
PFHxA	4.18	1.00	100109.0	A	N/A	1.0000			
PFHxA_2	4.17	1.00	788.9	A	N/A	0.0079	-33	50	
PFPeS	4.20	1.10	21907.1	A	N/A	1.0000			
PFPeS_2	4.19	1.10	11748.7	A	N/A	0.5363	3	50	
PFHpA	4.57	1.00	101355.3	A	N/A	1.0000			
PFHpA_2	4.57	1.00	5671.5	A	N/A	0.0560	-1	50	
PFHxS	4.57	1.00	31686.4	M	N/A	1.0000			
PFHxS_2	4.57	1.00	12800.1	M	N/A	0.4040	17	50	
6:2-FTS	4.93	1.00	8266.5	A	N/A	1.0000			
6:2 FTS_2	4.93	1.00	5553.3	A	N/A	0.6718		#NA!	
PFHpS	4.93	1.08	32990.3	A	N/A	1.0000			
PFHpS_2	4.93	1.08	12979.4	A	N/A	0.3934	-3	50	
PFOA	4.94	1.00	105529.9	A	N/A	1.0000			
PFOA_2	4.94	1.00	6267.8	A	N/A	0.0594	4	50	
PFOS	5.27	1.00	33641.8	M	N/A	1.0000			
PFOS_2	5.27	1.00	10643.1	M	N/A	0.3164	7	50	
PFNA	5.28	1.00	82783.6	A	N/A	1.0000			
PFNA_2	5.29	1.00	1324.6	A	N/A	0.0160	-29	50	
PFNS	5.57	1.06	20896.6	A	N/A	1.0000			
PFNS_2	5.57	1.06	8923.1	A	N/A	0.4270	-10	50	
PFDA	5.59	1.00	70742.7	M	N/A	1.0000			
PFDA_2	5.58	1.00	456.7	A	N/A	0.0065	-19	50	
8:2-FTS	5.59	1.00	6975.3	A	N/A	1.0000			
8:2 FTS_2	5.59	1.00	3095.7	A	N/A	0.4438		#NA!	
NMeFOSAA	5.73	1.00	7848.6	A	N/A	1.0000			
NMeFOSAA_2	5.73	1.00	1805.0	M	N/A	0.2300	-11	50	
PFDS	5.82	1.10	14124.2	A	N/A	1.0000			
PFDS_2	5.81	1.10	8237.8	A	N/A	0.5832	15	50	
PFUnDA	5.84	1.00	56783.3	A	N/A	1.0000			
PFUnDA_2	5.84	1.00	714.2	A	N/A	0.0126	127	50	OOS
NEtFOSAA	5.86	1.00	7760.9	A	N/A	1.0000			
NEtFOSAA_2	5.86	1.00	4789.1	A	N/A	0.6171	-14	50	
PFDoDA	6.07	1.00	66432.8	A	N/A	1.0000			
PFDoDA_2	6.07	1.00	780.4	A	N/A	0.0117	-24	50	
10:2-FTS	6.09	1.09	7967.4	A	N/A	1.0000			
10:2 FTS_2	6.09	1.09	5558.8	A	N/A	0.6977		#NA!	
PFTrDA	6.27	1.03	50629.1	A	N/A	1.0000			
PFTrDA_2	6.26	1.03	1077.8	A	N/A	0.0213	149	50	OOS
PFTeDA	6.44	1.00	41816.7	A	N/A	1.0000			
PFTeDA_2	6.44	1.00	201.5	A	N/A	0.0048	-22	50	
PFHxDA	6.75	1.05	17769.0	A	N/A	1.0000			
PFHxDA_2	6.74	1.05	1249.5	A	N/A	0.0703	4	50	
PFODA	7.01	1.09	15991.1	A	N/A	1.0000			
PFODA_2	7.01	1.09	379.2	A	N/A	0.0237	-14	50	

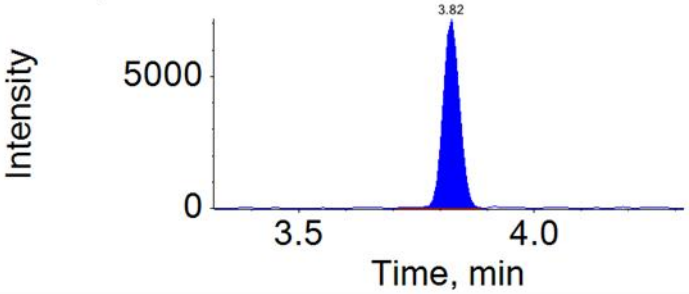
APPROVED
By JPT at 2:36 pm, 11/16/18

REVIEWED
By HMK at 9:06 am, 11/19/18

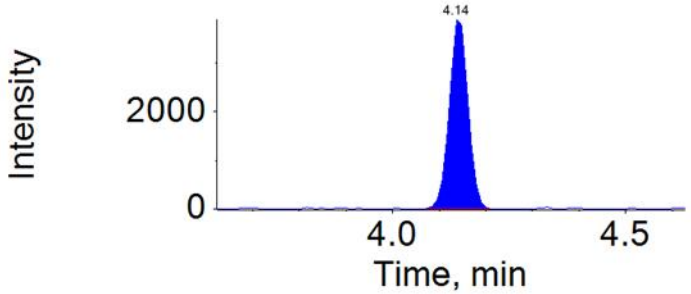
Component: PFBS
Primary Mass: 299.0 / 80.0



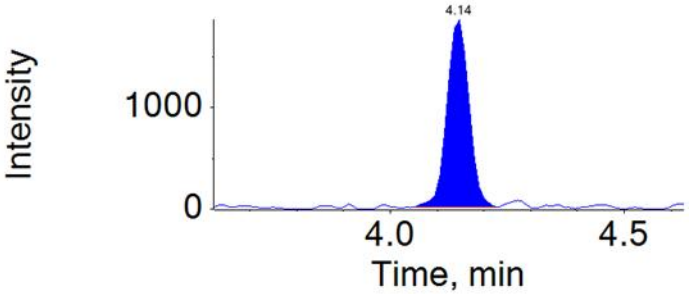
Component: PFBS_2
Secondary Mass: 299.0 / 99.0



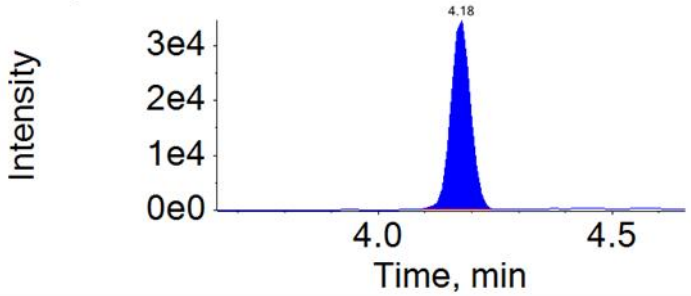
Component: 4:2-FTS
Primary Mass: 327.0 / 307.0



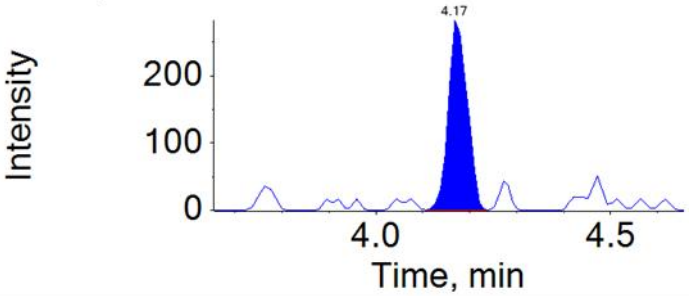
Component: 4:2 FTS_2
Secondary Mass: 327.0 / 81.0



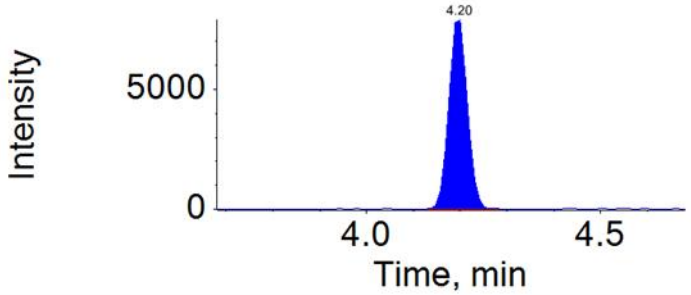
Component: PFHxA
Primary Mass: 313.0 / 269.0



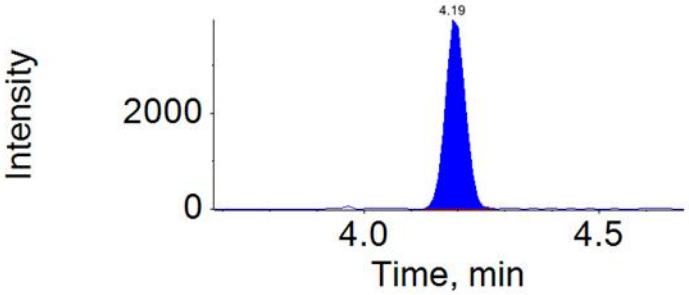
Component: PFHxA_2
Secondary Mass: 313.0 / 119.0



Component: PFPeS
Primary Mass: 349.0 / 80.0



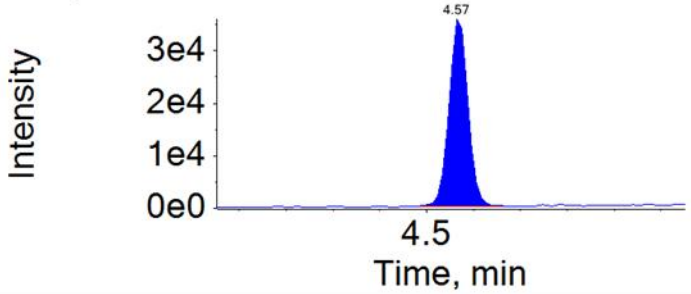
Component: PFPeS_2
Secondary Mass: 349.0 / 99.0



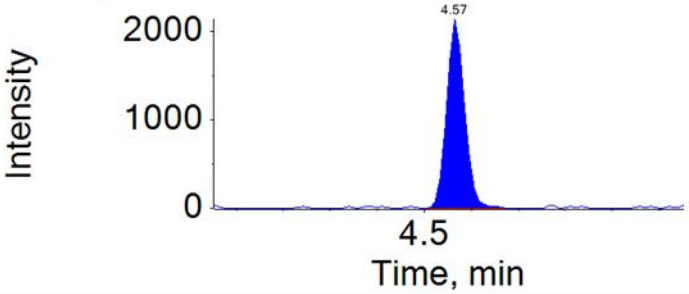
APPROVED
By JPT at 2:36 pm, 11/16/18

REVIEWED
By HMK at 9:06 am, 11/19/18

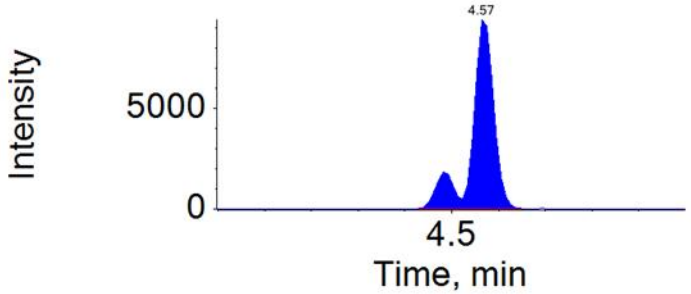
Component: PFHpA
Primary Mass: 363.0 / 319.0



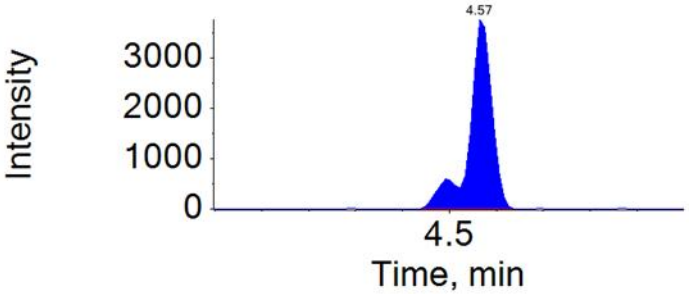
Component: PFHpA_2
Secondary Mass: 363.0 / 169.0



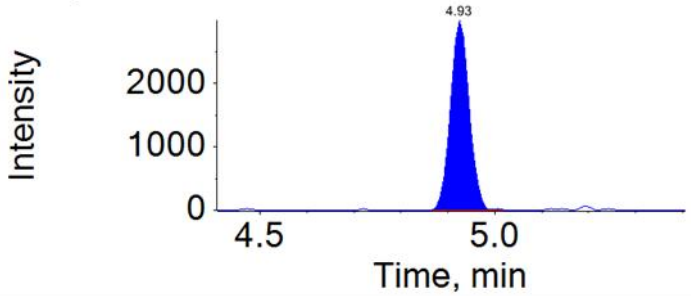
Component: PFHxS
Primary Mass: 399.0 / 80.0



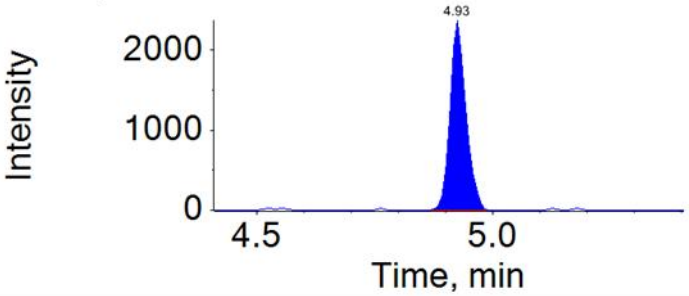
Component: PFHxS_2
Secondary Mass: 399.0 / 99.0



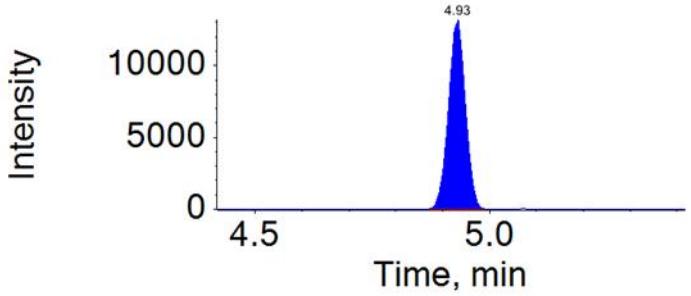
Component: 6:2-FTS
Primary Mass: 427.0 / 407.0



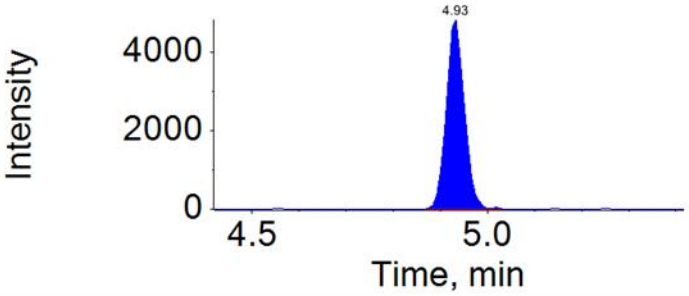
Component: 6:2 FTS_2
Secondary Mass: 427.0 / 81.0



Component: PFHpS
Primary Mass: 449.0 / 80.0



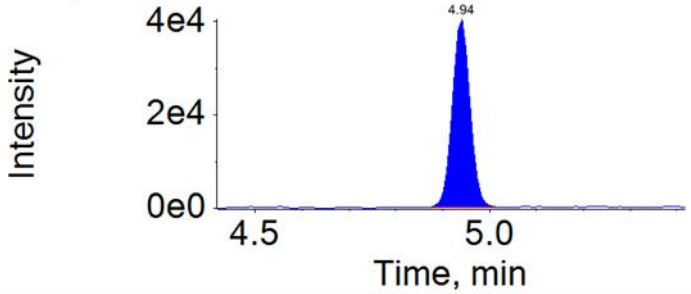
Component: PFHpS_2
Secondary Mass: 449.0 / 99.0



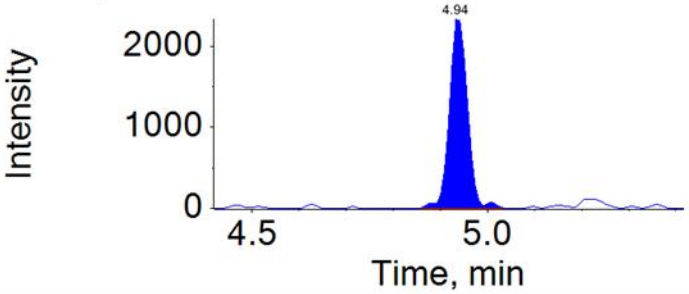
APPROVED
By JPT at 2:36 pm, 11/16/18

REVIEWED
By HMK at 9:06 am, 11/19/18

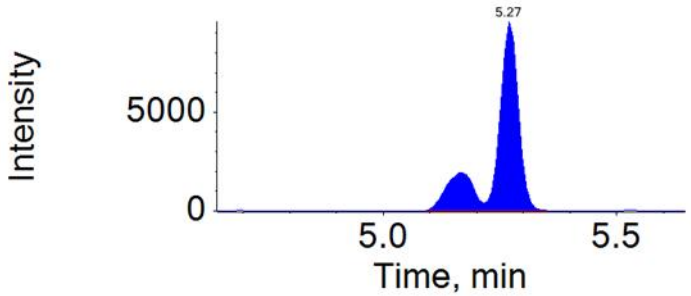
Component: PFOA
Primary Mass: 413.0 / 369.0



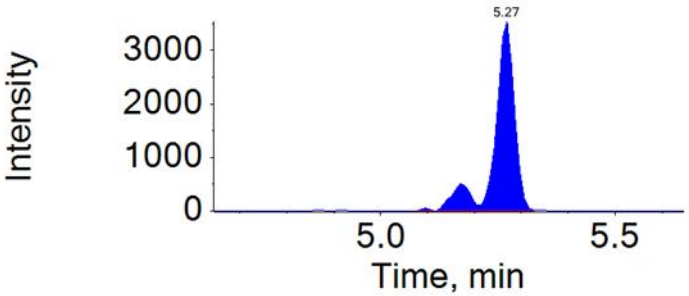
Component: PFOA_2
Secondary Mass: 413.0 / 169.0



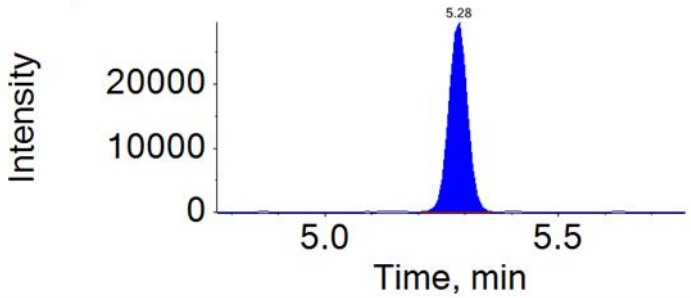
Component: PFOS
Primary Mass: 499.0 / 80.0



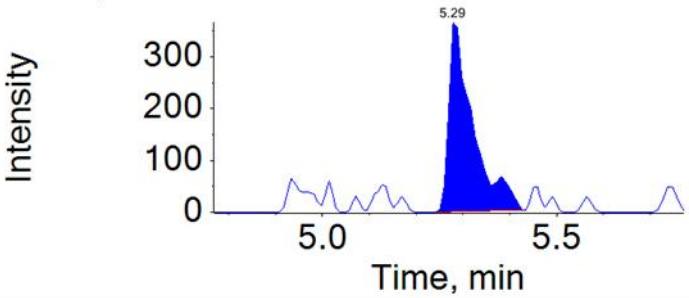
Component: PFOS_2
Secondary Mass: 499.0 / 99.0



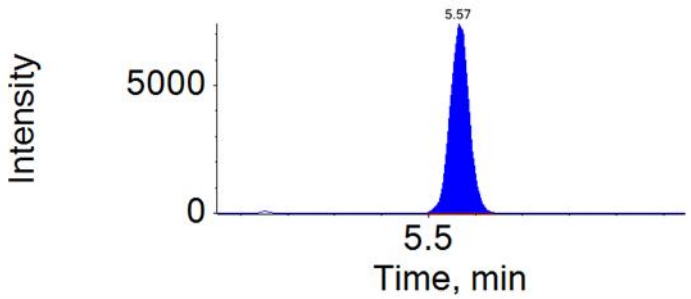
Component: PFNA
Primary Mass: 463.0 / 419.0



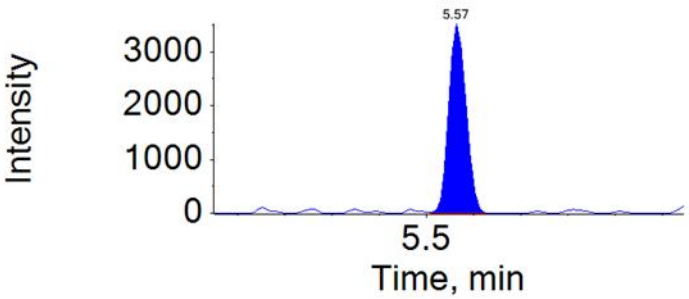
Component: PFNA_2
Secondary Mass: 463.0 / 169.0



Component: PFNS
Primary Mass: 549.0 / 80.0



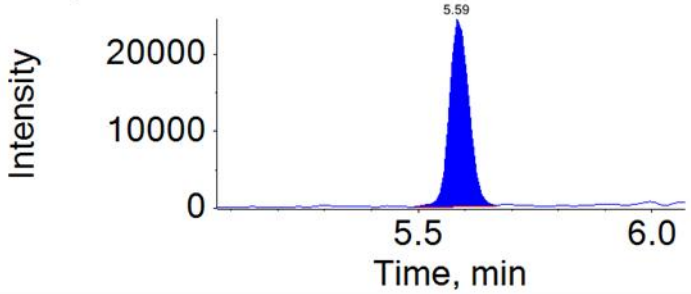
Component: PFNS_2
Secondary Mass: 549.0 / 99.0



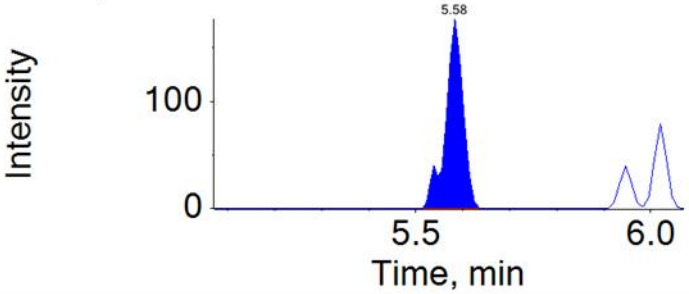
APPROVED
By JPT at 2:36 pm, 11/16/18

REVIEWED
By HMK at 9:06 am, 11/19/18

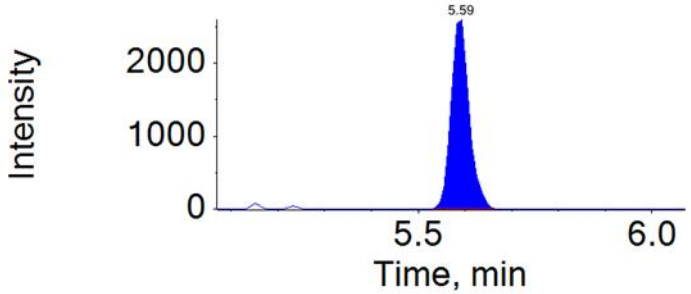
Component: PFDA
Primary Mass: 513.0 / 469.0



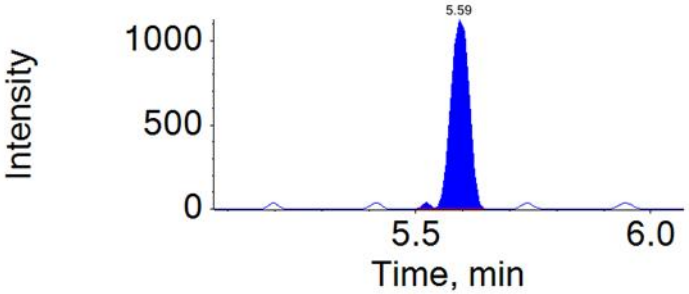
Component: PFDA_2
Secondary Mass: 513.0 / 169.0



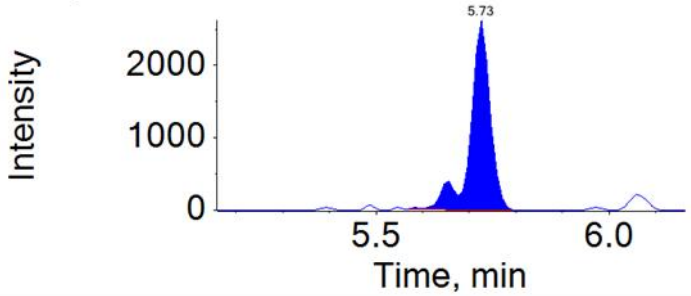
Component: 8:2-FTS
Primary Mass: 527.0 / 507.0



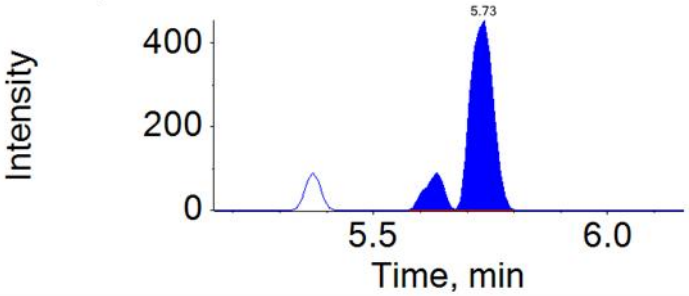
Component: 8:2 FTS_2
Secondary Mass: 527.0 / 81.0



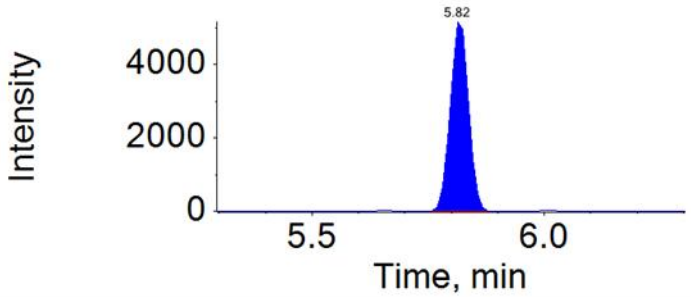
Component: NMeFOSAA
Primary Mass: 570.0 / 419.0



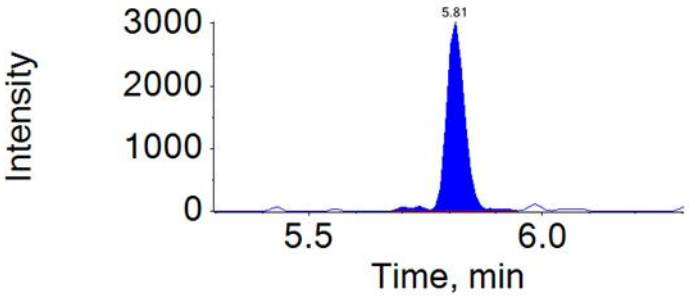
Component: NMeFOSAA_2
Secondary Mass: 570.0 / 483.0



Component: PFDS
Primary Mass: 599.0 / 80.0



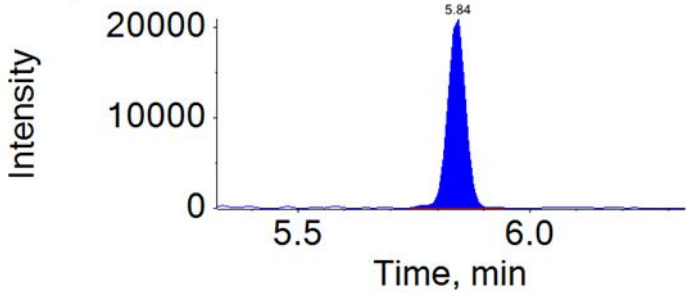
Component: PFDS_2
Secondary Mass: 599.0 / 99.0



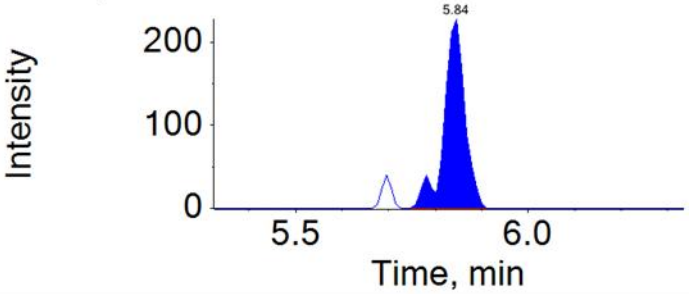
APPROVED
By JPT at 2:36 pm, 11/16/18

REVIEWED
By HMK at 9:06 am, 11/19/18

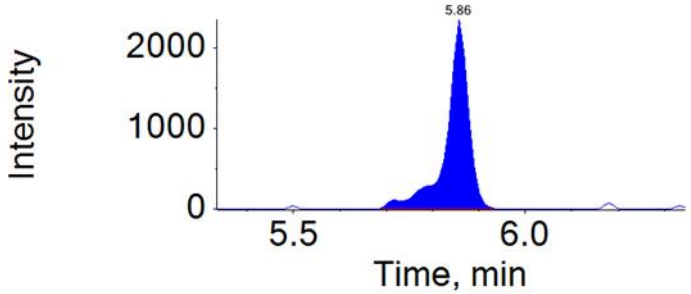
Component: PFUnDA
Primary Mass: 563.0 / 519.0



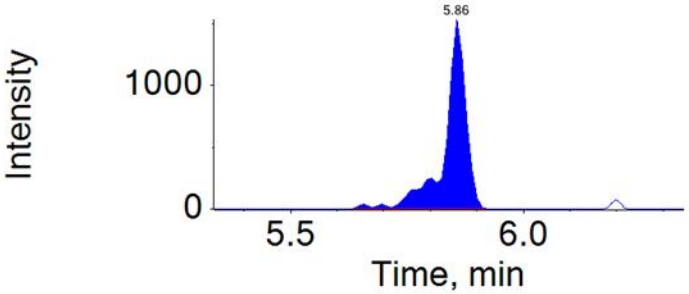
Component: PFUnDA_2
Secondary Mass: 563.0 / 169.0



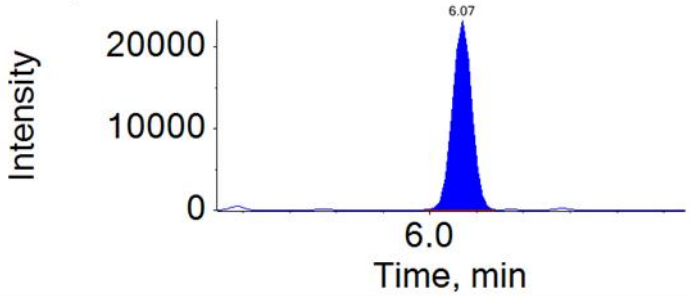
Component: NEtFOSAA
Primary Mass: 584.0 / 419.0



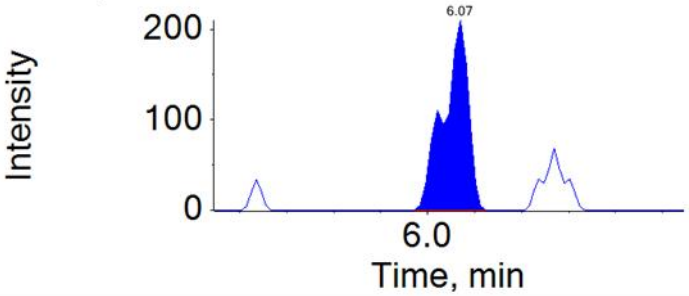
Component: NEtFOSAA_2
Secondary Mass: 584.0 / 526.0



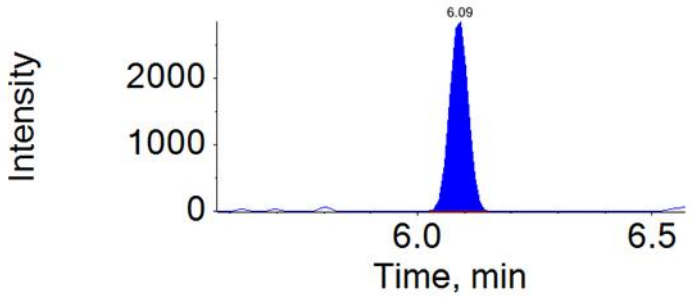
Component: PFDoDA
Primary Mass: 613.0 / 569.0



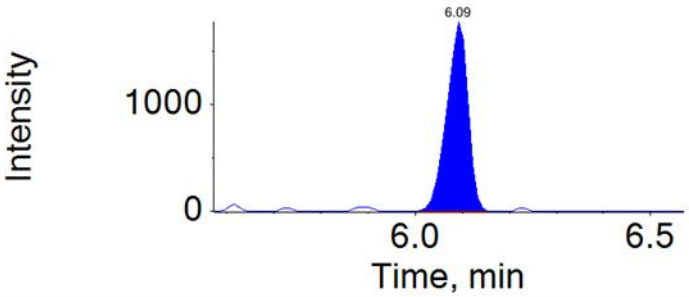
Component: PFDoDA_2
Secondary Mass: 613.0 / 169.0



Component: 10:2-FTS
Primary Mass: 627.0 / 607.0



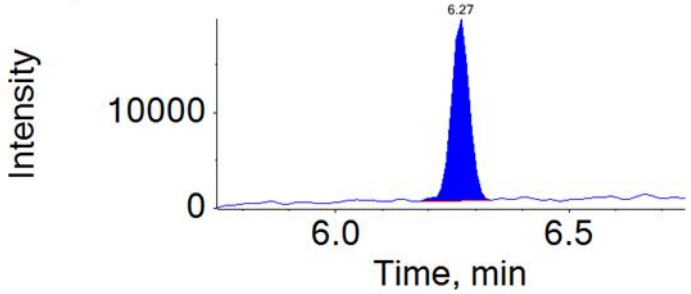
Component: 10:2 FTS_2
Secondary Mass: 627.0 / 81.0



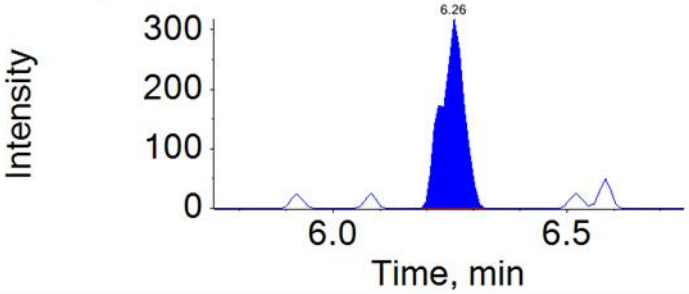
APPROVED
By JPT at 2:36 pm, 11/16/18

REVIEWED
By HMK at 9:06 am, 11/19/18

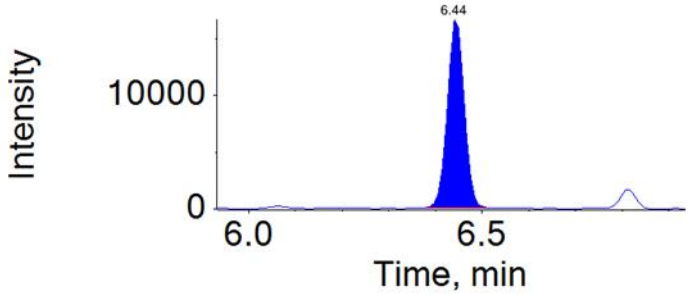
Component: PFTrDA
Primary Mass: 663.0 / 619.0



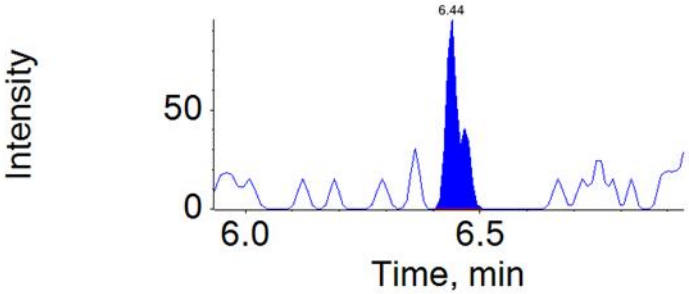
Component: PFTrDA_2
Secondary Mass: 663.0 / 169.0



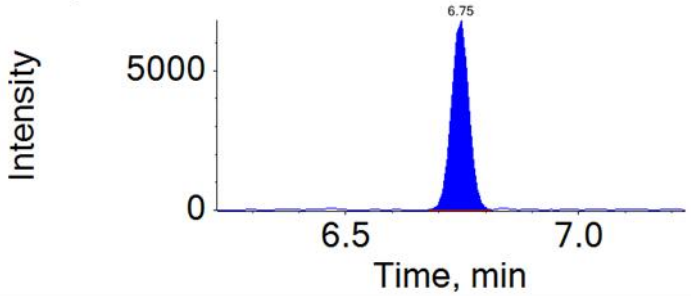
Component: PFTeDA
Primary Mass: 713.0 / 669.0



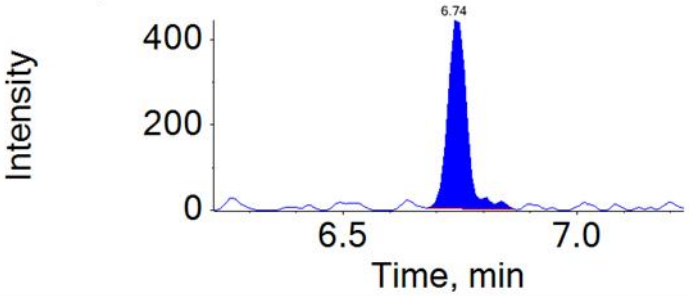
Component: PFTeDA_2
Secondary Mass: 713.0 / 169.0



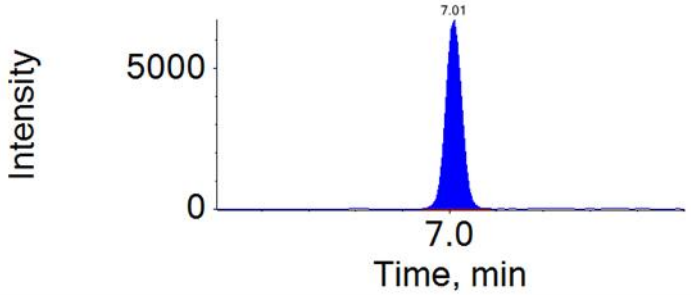
Component: PFHxDA
Primary Mass: 813.0 / 769.0



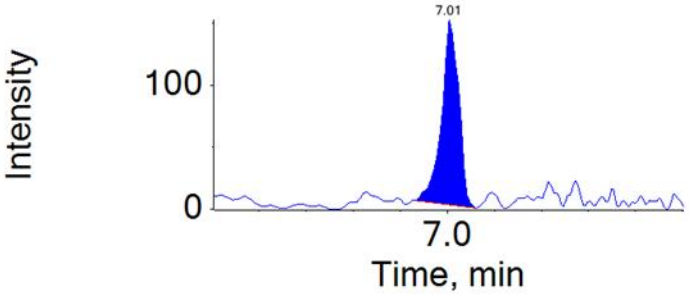
Component: PFHxDA_2
Secondary Mass: 813.0 / 169.0



Component: PFODA
Primary Mass: 913.0 / 869.0



Component: PFODA_2
Secondary Mass: 913.0 / 169.0



APPROVED
By JPT at 2:36 pm, 11/16/18

REVIEWED
By HMK at 9:06 am, 11/19/18

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV16DCCV1-3 11/16/2018 2:28:58 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Sample Name:	INBLK			**Data File:**		18NOV16D-06.wiff
Sample ID:	methanol + labels			**Acquis Date:**		2018-11-16T10:59:13
Sample Type:	Unknown			**Instrument:**		LM27631
Vial Position:	1			**Acquis Method:**		18AUG13_3uL.dam
Injection Vol:	3.00			**Result Table:**		18NOV16DCCV1-3
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: 18NOV16D-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	734243.5	707280.6	4	50	
13C2-PFOA	5.0	537523.3	484265.4	11	50	
13C4-PFOS	4.8	276200.8	256987.3	7	50	
13C2-PFDA	5.0	320533.8	302418.6	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	813280.5	13C3-PFBA	734243.5	1.108	5.000	4.966	99	70-130	
E13C5-PFPeA	783623.8	13C3-PFBA	734243.5	1.067	5.000	4.787	96	70-130	
E13C3-PFBS	467802.3	13C3-PFBA	734243.5	0.637	4.650	4.498	97	70-130	
E13C2-4:2-FTS	56693.6	13C2-PFOA	537523.3	0.105	4.670	4.698	101	70-130	
E13C5-PFHxA	710951.9	13C2-PFOA	537523.3	1.323	5.000	4.778	96	70-130	
E13C3-PFHxS	352436.7	13C2-PFOA	537523.3	0.656	4.730	4.499	95	70-130	
E13C4-PFHpA	591866.4	13C2-PFOA	537523.3	1.101	5.000	4.961	99	70-130	
E13C2-6:2-FTS	39538.3	13C2-PFOA	537523.3	0.074	4.750	4.921	104	70-130	
E13C8-PFOA	976135.4	13C2-PFOA	537523.3	1.816	5.000	5.003	100	70-130	
E13C8-PFOS	308275.2	13C4-PFOS	276200.8	1.116	4.780	4.945	103	70-130	
E13C9-PFNA	524987.8	13C4-PFOS	276200.8	1.901	5.000	5.300	106	70-130	
E13C6-PFDA	666776.3	13C2-PFDA	320533.8	2.080	5.000	4.854	97	70-130	
E13C2-8:2-FTS	26020.0	13C2-PFDA	320533.8	0.081	4.790	4.048	85	70-130	
E13C8-PFOSA	690769.0	13C2-PFDA	320533.8	2.155	5.000	4.778	96	70-130	
Ed3-NMeFOSAA	79519.0	13C2-PFDA	320533.8	0.248	5.000	4.478	90	70-130	
E13C7-PFUnDA	300672.6	13C2-PFDA	320533.8	0.938	5.000	5.446	109	70-130	
Ed5-NEtFOSAA	61392.5	13C2-PFDA	320533.8	0.192	5.000	4.052	81	70-130	
E13C2-PFDoDA	593068.8	13C2-PFDA	320533.8	1.850	5.000	4.804	96	70-130	
Ed7-NMePFOSAE	344799.6	13C2-PFDA	320533.8	1.076	5.000	4.655	93	70-130	
Ed3-NMePFOSA	80991.3	13C2-PFDA	320533.8	0.253	5.000	4.591	92	70-130	
Ed9-NEtPFOSAE	280535.1	13C2-PFDA	320533.8	0.875	5.000	4.552	91	70-130	
Ed5-NEtPFOSA	60752.9	13C2-PFDA	320533.8	0.190	5.000	4.446	89	70-130	
E13C2-PFTeDA	432701.4	13C2-PFDA	320533.8	1.350	5.000	4.739	95	70-130	

APPROVED
By JPT at 2:36 pm, 11/16/18

REVIEWED
By HMK at 9:06 am, 11/19/18

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV16DCCV1-3 11/16/2018 2:28:58 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

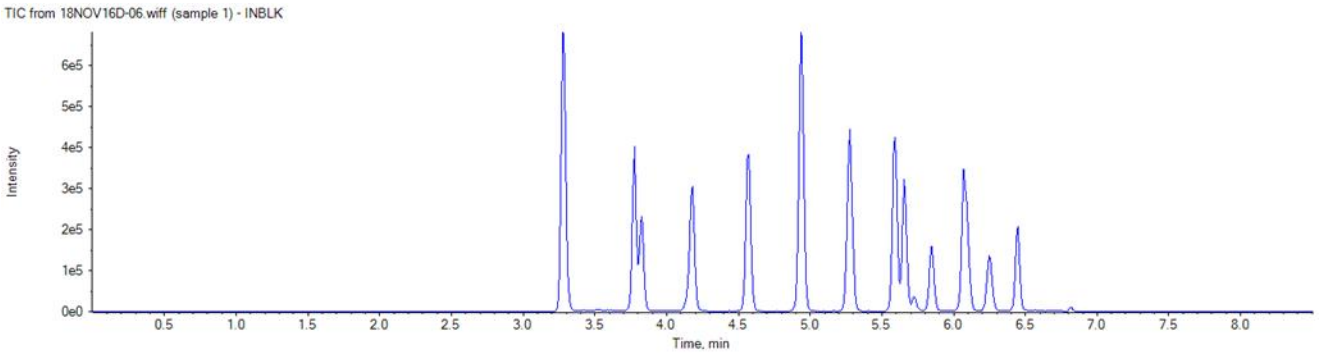
Analyte Quantitation Peak Table

Sample Name: INBLK **Instrument Name:** LM27631 **File Name:** 18NOV16D-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	3.28	813280.5	N/A	
PFPeA	N/A	N/A	N/A		A	13C5-PFPeA	3.78	783623.8	N/A	
PFBS	N/A	N/A	N/A		A	13C3-PFBS	3.83	467802.3	N/A	
4:2-FTS	N/A	N/A	N/A		A	13C2-4:2-FTS	4.14	56693.6	N/A	
PFHxA	N/A	N/A	N/A		A	13C5-PFHxA	4.18	710951.9	N/A	
PFPeS	N/A	N/A	N/A		A	13C3-PFBS	3.83	467802.3	N/A	
PFHpA	N/A	N/A	N/A		A	13C4-PFHpA	4.57	591866.4	N/A	
PFHxS	N/A	N/A	N/A		A	13C3-PFHxS	4.57	352436.7	N/A	
6:2-FTS	N/A	N/A	N/A		A	13C2-6:2-FTS	4.93	39538.3	N/A	
PFHpS	N/A	N/A	N/A		A	13C3-PFHxS	4.57	352436.7	N/A	
PFOA	N/A	N/A	N/A		A	13C8-PFOA	4.94	976135.4	N/A	
PFOS	N/A	N/A	N/A		A	13C8-PFOS	5.27	308275.2	N/A	
PFNA	N/A	N/A	N/A		A	13C9-PFNA	5.28	524987.8	N/A	
PFNS	N/A	N/A	N/A		A	13C8-PFOS	5.27	308275.2	N/A	
PFDA	N/A	N/A	N/A		A	13C6-PFDA	5.59	666776.3	N/A	
8:2-FTS	N/A	N/A	N/A		A	13C2-8:2-FTS	5.59	26020.0	N/A	
PFOSA	N/A	N/A	N/A		A	13C8-PFOSA	5.66	690769.0	N/A	
NMeFOSAA	N/A	N/A	N/A		A	d3-NMeFOSAA	5.73	79519.0	N/A	
PFDS	N/A	N/A	N/A		A	13C8-PFOS	5.27	308275.2	N/A	
PFUnDA	N/A	N/A	N/A		A	13C7-PFUnDA	5.84	300672.6	N/A	
NEtFOSAA	N/A	N/A	N/A		A	d5-NEtFOSAA	5.85	61392.5	N/A	
PFDoDA	N/A	N/A	N/A		A	13C2-PFDoDA	6.07	593068.8	N/A	
10:2-FTS	N/A	N/A	N/A		A	13C2-8:2-FTS	5.59	26020.0	N/A	
NMePFOSAE	N/A	N/A	N/A		A	d7-NMePFOSAE	6.09	344799.6	N/A	
NMePFOSA	N/A	N/A	N/A		A	d3-NMePFOSA	6.11	80991.3	N/A	
PFDoS	N/A	N/A	N/A		A	13C8-PFOS	5.27	308275.2	N/A	
NEtPFOSAE	N/A	N/A	N/A		A	d9-NEtPFOSAE	6.25	280535.1	N/A	
NEtPFOSA	N/A	N/A	N/A		A	d5-NEtPFOSA	6.27	60752.9	N/A	
PFTrDA	N/A	N/A	N/A		A	13C2-PFDoDA	6.07	593068.8	N/A	
PFTeDA	N/A	N/A	N/A		A	13C2-PFTeDA	6.44	432701.4	N/A	
PFHxDA	N/A	N/A	N/A		A	13C2-PFTeDA	6.44	432701.4	N/A	
PFODA	N/A	N/A	N/A		A	13C2-PFTeDA	6.44	432701.4	N/A	

Total Ion Chromatogram

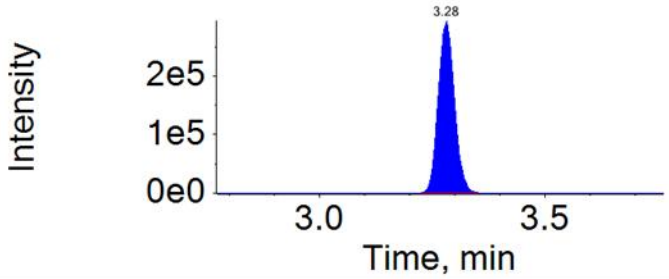


APPROVED
By JPT at 2:36 pm, 11/16/18

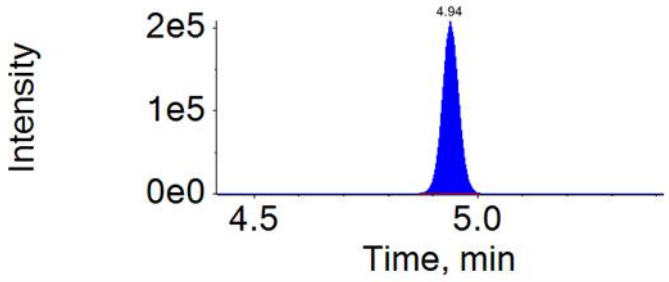
REVIEWED
By HMK at 9:06 am, 11/19/18

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV16DCCV1-3 11/16/2018 2:28:58 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

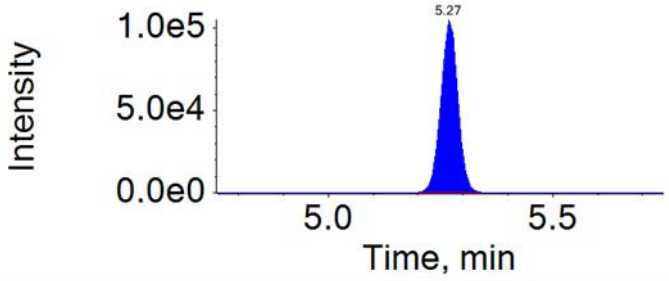
Injection Standard: 13C3-PFBA
216.0 / 172.0



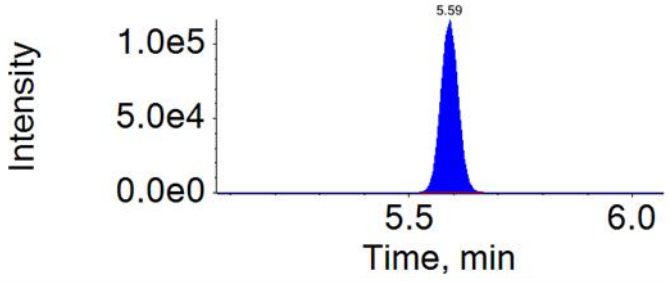
Injection Standard: 13C2-PFOA
415.0 / 370.0



Injection Standard: 13C4-PFOS
503.0 / 80.0



Injection Standard: 13C2-PFDA
515.0 / 470.0

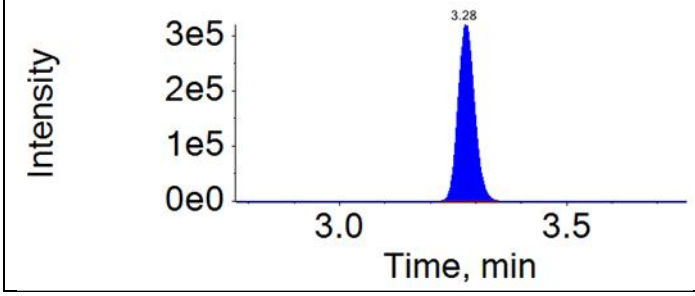


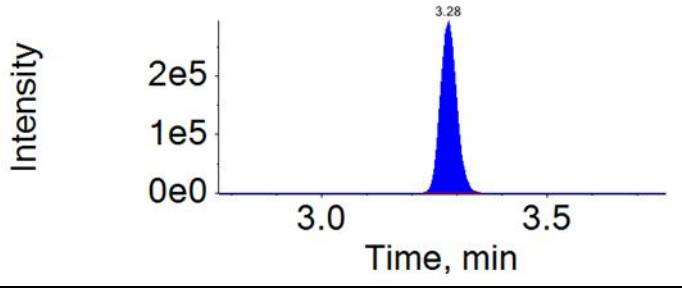
APPROVED
By JPT at 2:36 pm, 11/16/18

REVIEWED
By HMK at 9:06 am, 11/19/18

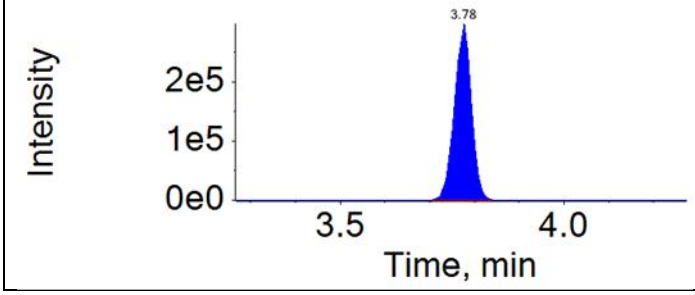
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV16DCCV1-3 11/16/2018 2:28:58 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

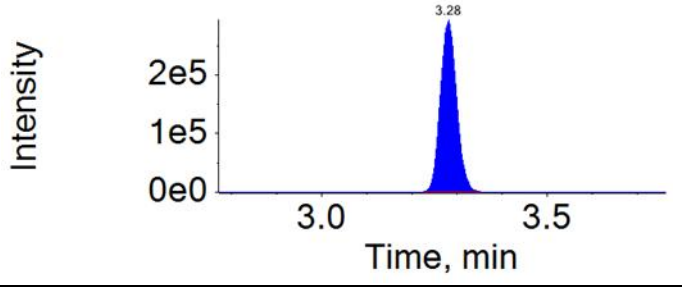
Extraction Standard: E13C4-PFBA	Injection Standard: 13C3-PFBA
217.0 / 172.0	216.0 / 172.0



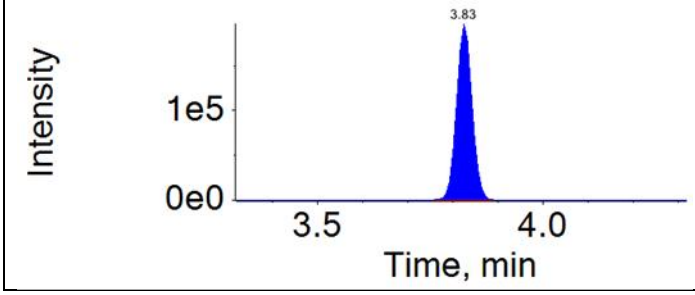


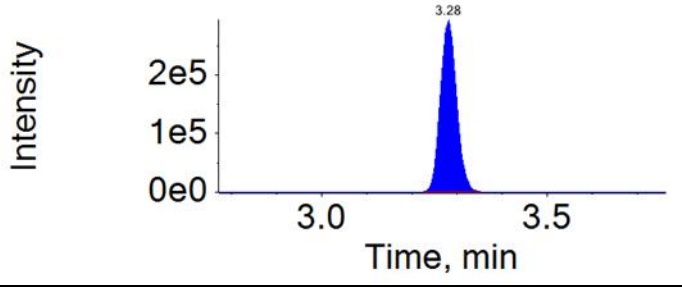
Extraction Standard: E13C5-PFPeA	Injection Standard: 13C3-PFBA
268.0 / 223.0	216.0 / 172.0



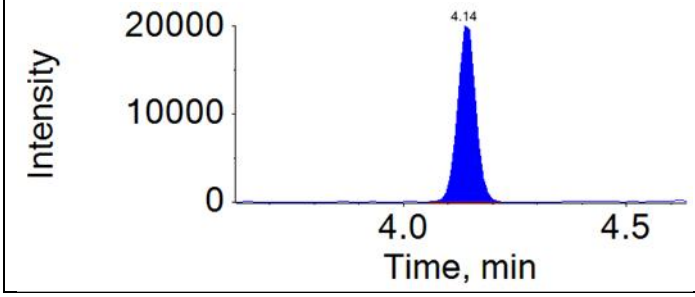


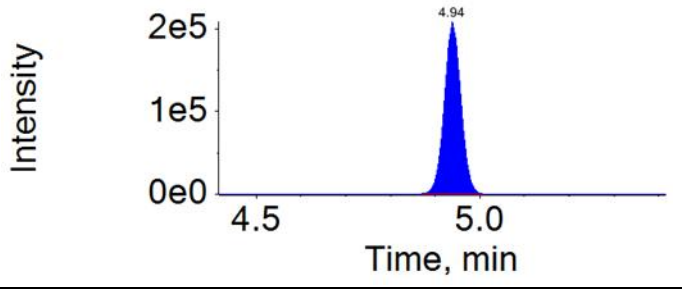
Extraction Standard: E13C3-PFBS	Injection Standard: 13C3-PFBA
302.0 / 80.0	216.0 / 172.0





Extraction Standard: E13C2-4:2-FTS	Injection Standard: 13C2-PFOA
329.0 / 81.0	415.0 / 370.0



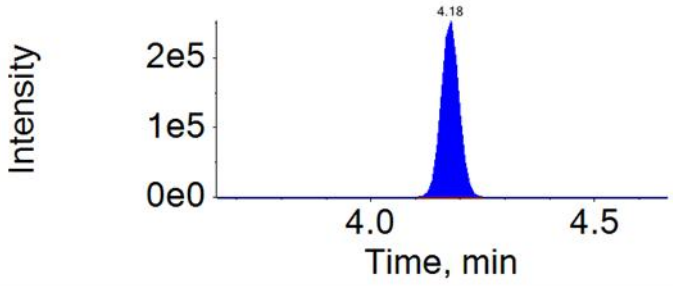


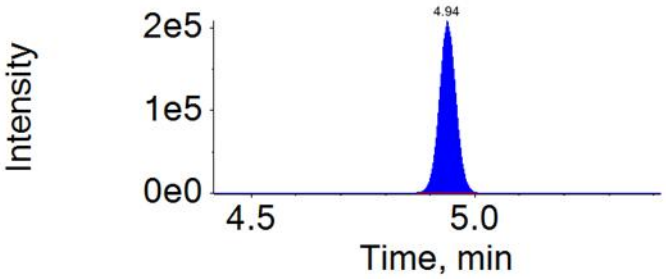
APPROVED
By JPT at 2:36 pm, 11/16/18

REVIEWED
By HMK at 9:06 am, 11/19/18

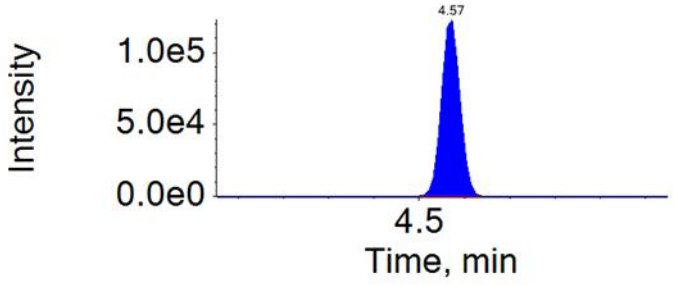
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV16DCCV1-3 11/16/2018 2:28:58 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

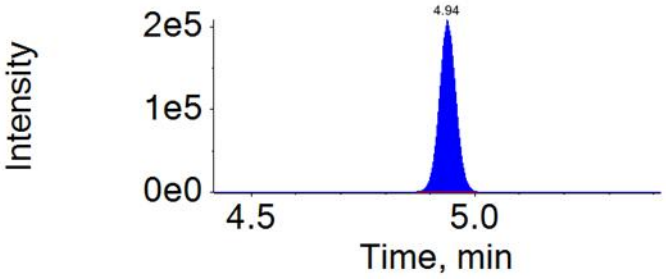
Extraction Standard: E13C5-PFHxA	Injection Standard: 13C2-PFOA
318.0 / 273.0	415.0 / 370.0



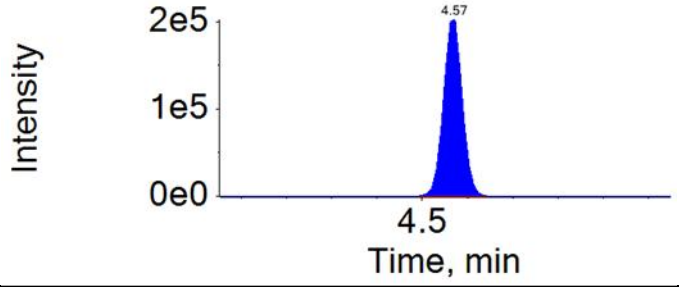


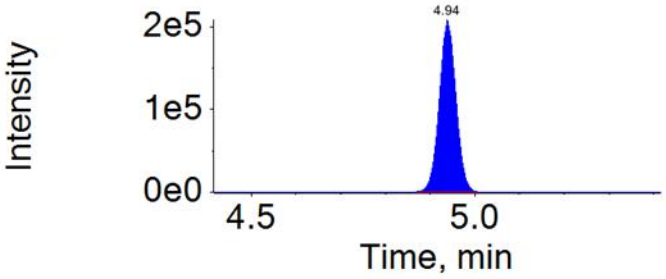
Extraction Standard: E13C3-PFHxS	Injection Standard: 13C2-PFOA
402.0 / 80.0	415.0 / 370.0



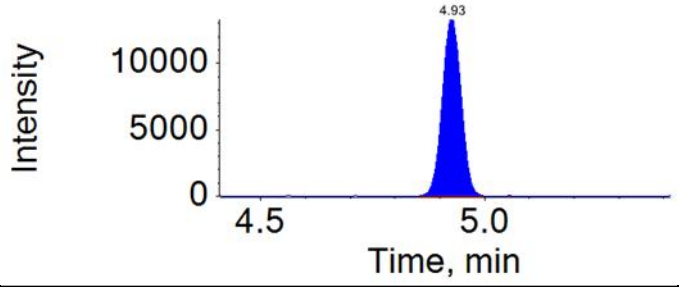


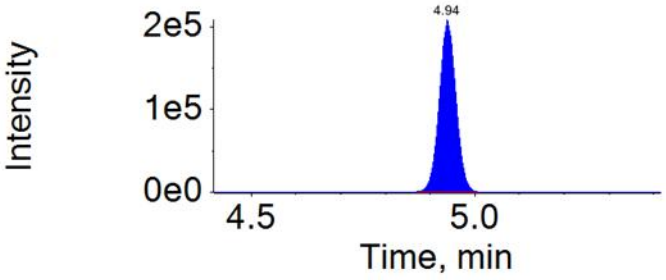
Extraction Standard: E13C4-PFHpA	Injection Standard: 13C2-PFOA
367.0 / 322.0	415.0 / 370.0





Extraction Standard: E13C2-6:2-FTS	Injection Standard: 13C2-PFOA
429.0 / 81.0	415.0 / 370.0

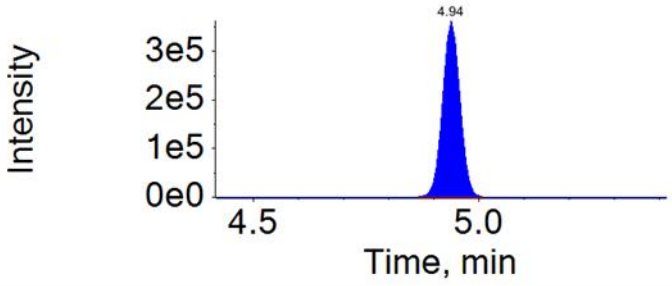
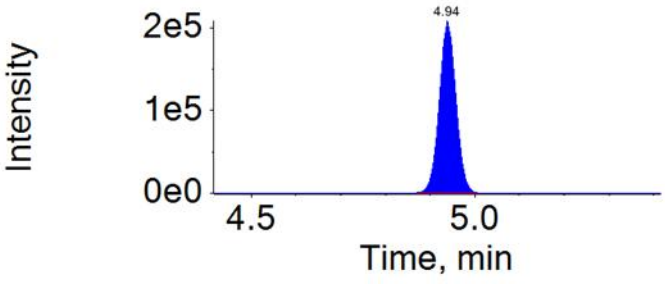


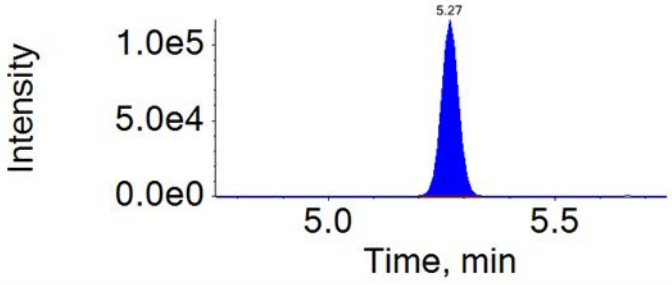
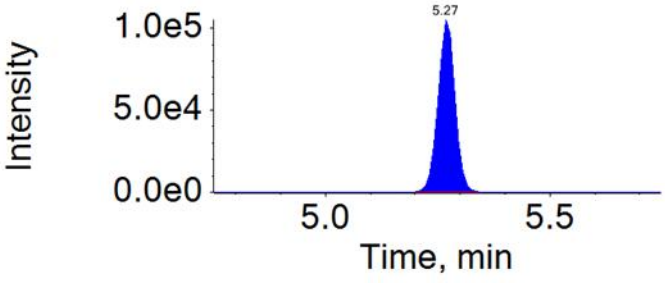


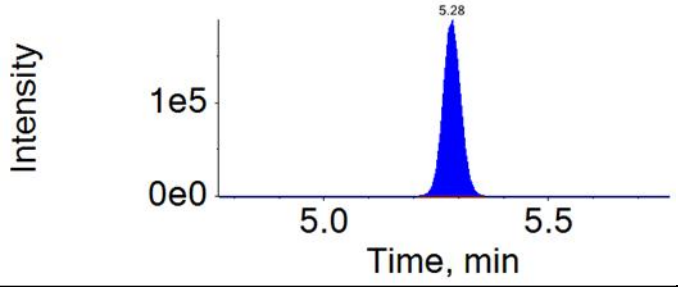
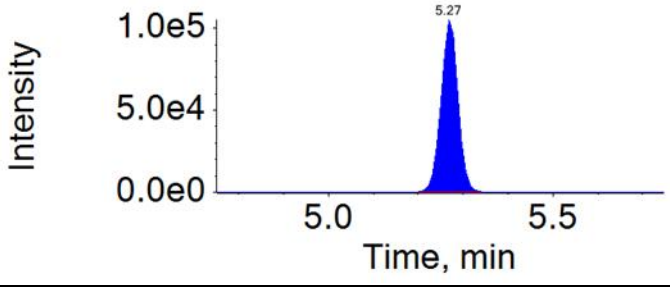
APPROVED
By JPT at 2:36 pm, 11/16/18

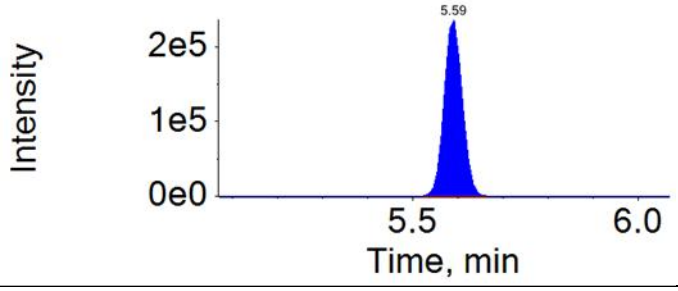
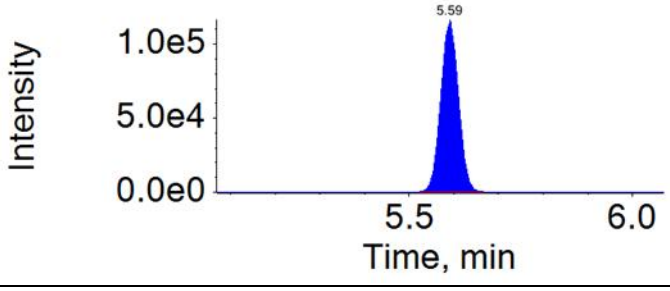
REVIEWED
By HMK at 9:06 am, 11/19/18

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV16DCCV1-3 11/16/2018 2:28:58 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
	

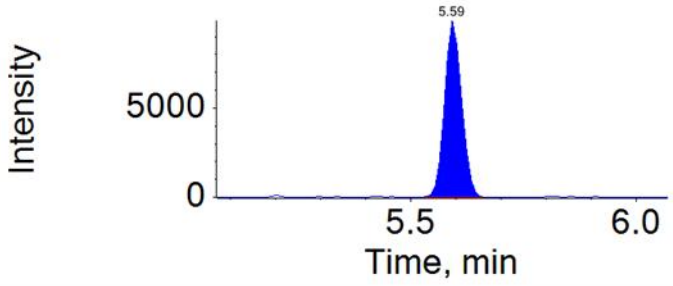
Extraction Standard: E13C6-PFDA	Injection Standard: 13C2-PFDA
519.0 / 474.0	515.0 / 470.0
	

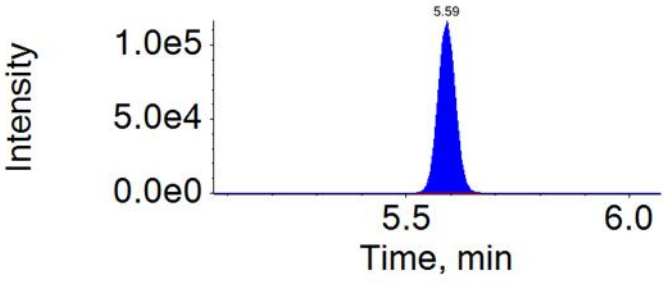
APPROVED
By JPT at 2:36 pm, 11/16/18

REVIEWED
By HMK at 9:06 am, 11/19/18

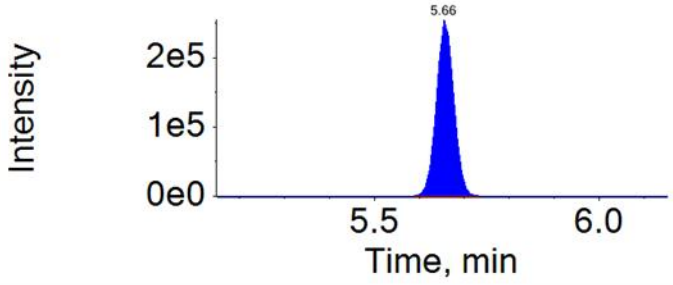
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV16DCCV1-3 11/16/2018 2:28:58 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

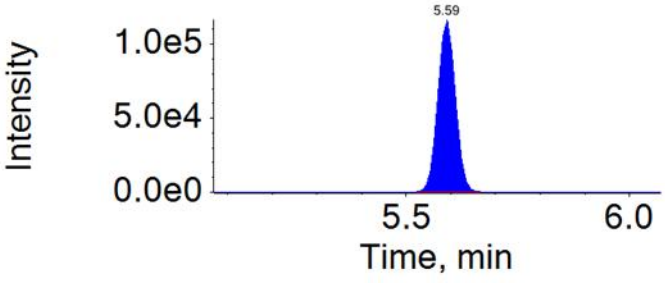
Extraction Standard: E13C2-8:2-FTS	Injection Standard: 13C2-PFDA
529.0 / 81.0	515.0 / 470.0



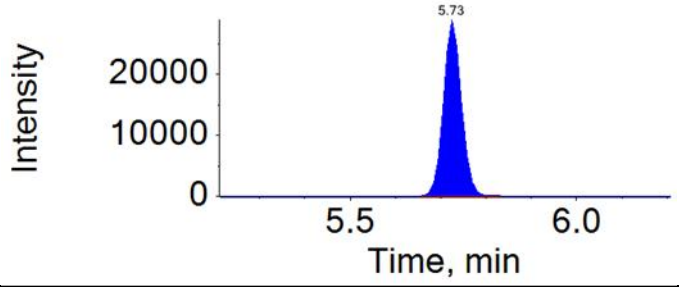


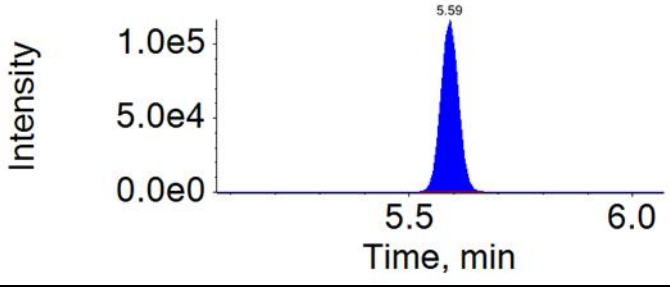
Extraction Standard: E13C8-PFOSA	Injection Standard: 13C2-PFDA
506.0 / 78.0	515.0 / 470.0



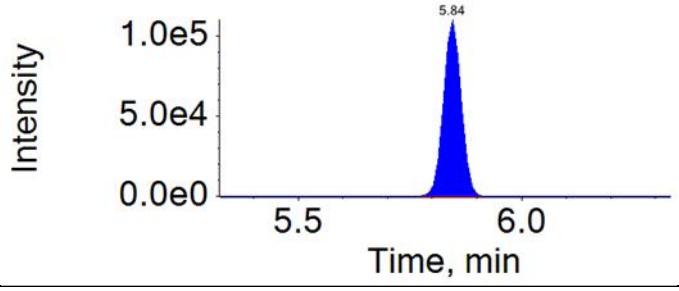


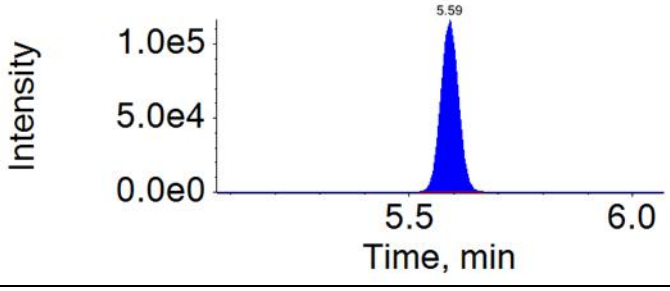
Extraction Standard: Ed3-NMeFOSAA	Injection Standard: 13C2-PFDA
573.0 / 419.0	515.0 / 470.0





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



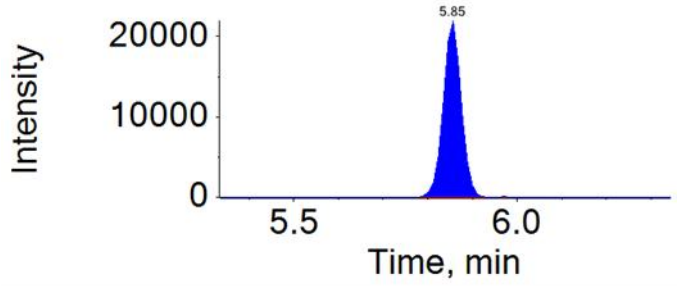


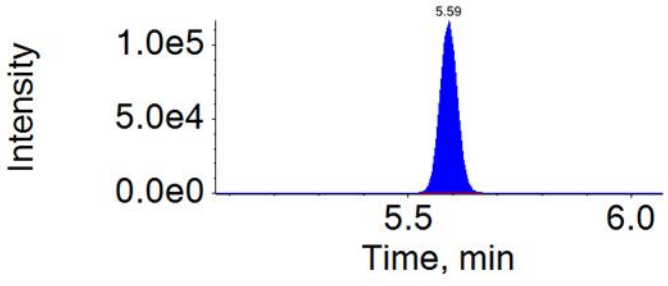
APPROVED
By JPT at 2:36 pm, 11/16/18

REVIEWED
By HMK at 9:06 am, 11/19/18

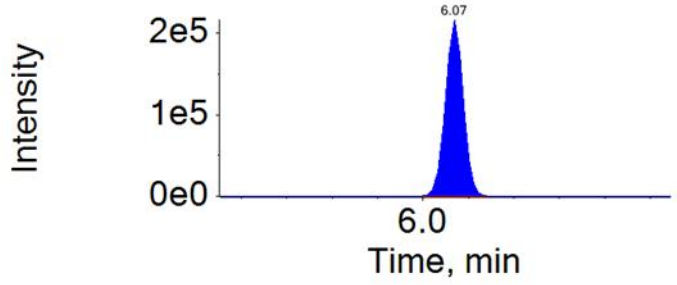
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV16DCCV1-3 11/16/2018 2:28:58 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

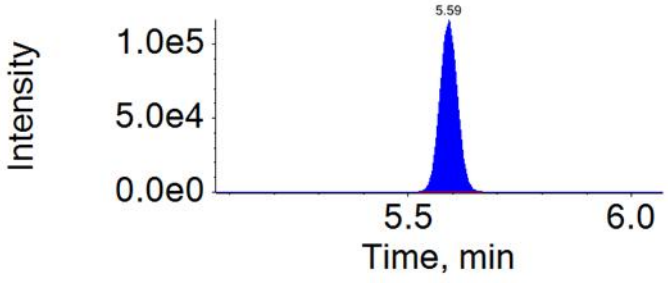
Extraction Standard: Ed5-NEtFOSAA	Injection Standard: 13C2-PFDA
589.0 / 419.0	515.0 / 470.0



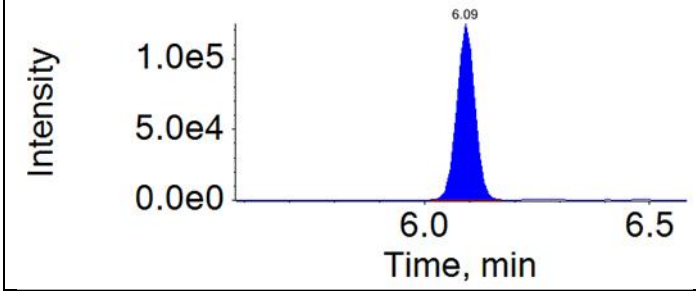


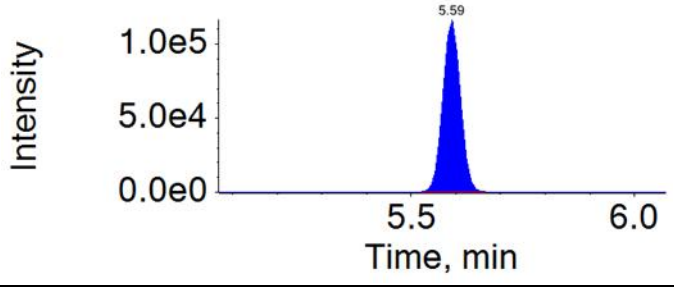
Extraction Standard: E13C2-PFDoDA	Injection Standard: 13C2-PFDA
615.0 / 570.0	515.0 / 470.0



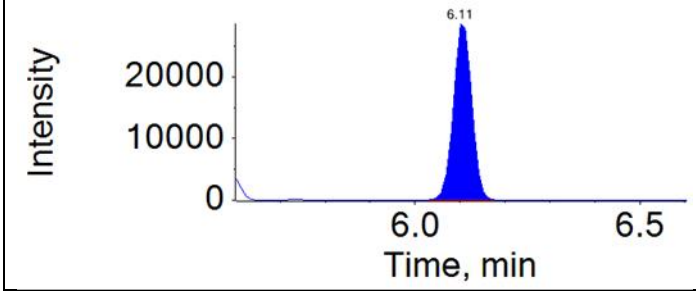


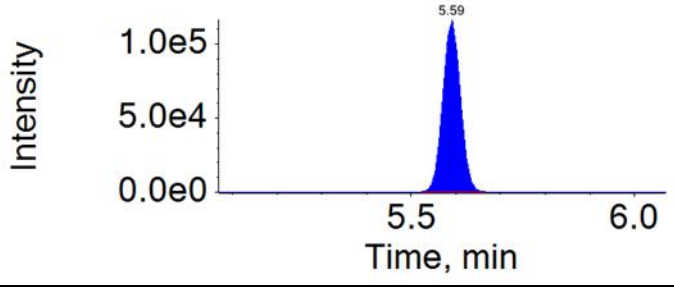
Extraction Standard: Ed7-NMePFOSAE	Injection Standard: 13C2-PFDA
623.0 / 59.0	515.0 / 470.0





Extraction Standard: Ed3-NMePFOSA	Injection Standard: 13C2-PFDA
515.0 / 169.0	515.0 / 470.0



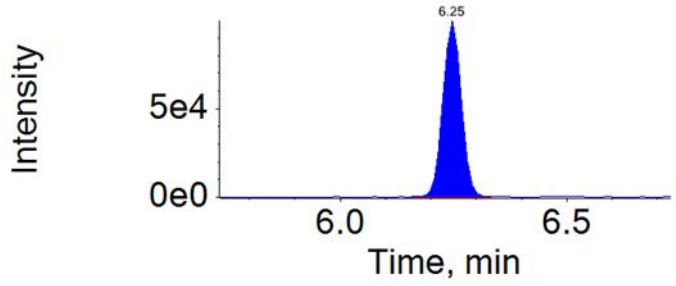


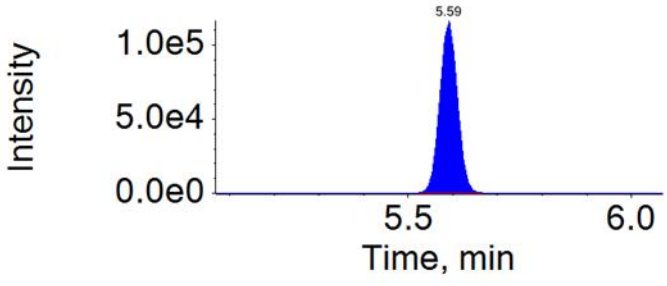
APPROVED
By JPT at 2:36 pm, 11/16/18

REVIEWED
By HMK at 9:06 am, 11/19/18

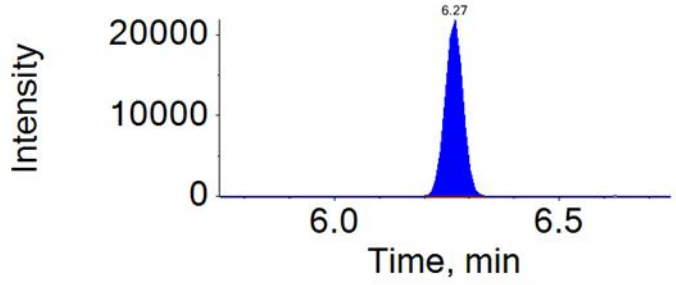
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV16DCCV1-3 11/16/2018 2:28:58 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

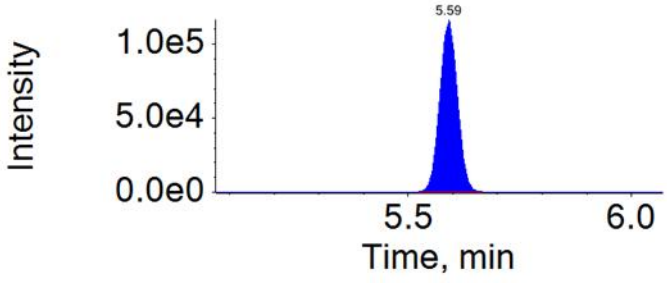
Extraction Standard: Ed9-NEtPFOSAE	Injection Standard: 13C2-PFDA
639.0 / 59.0	515.0 / 470.0



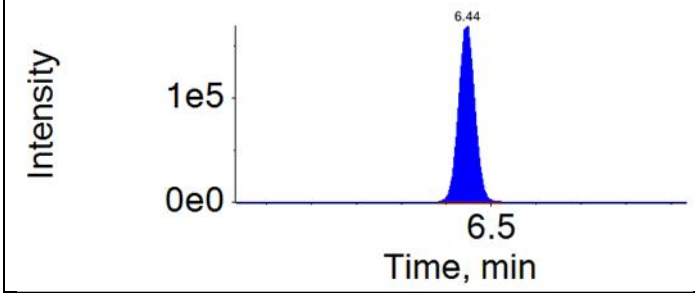


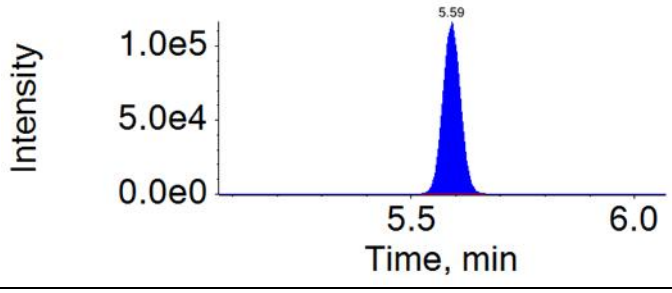
Extraction Standard: Ed5-NEtPFOSA	Injection Standard: 13C2-PFDA
531.0 / 169.0	515.0 / 470.0





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



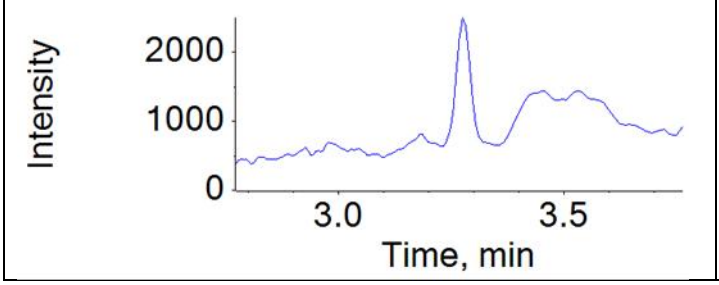


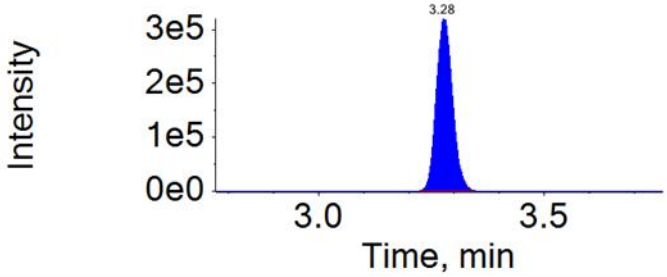
APPROVED
By JPT at 2:36 pm, 11/16/18

REVIEWED
By HMK at 9:06 am, 11/19/18

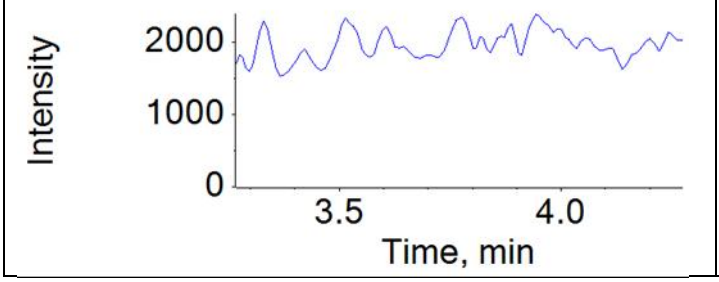
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV16DCCV1-3 11/16/2018 2:28:58 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

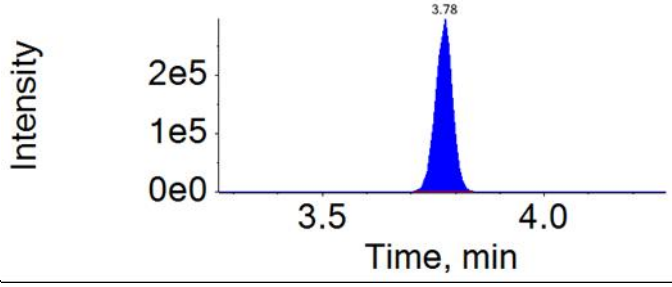
Analyte: PFBA	Extraction Standard: 13C4-PFBA
213.0 / 169.0	217.0 / 172.0



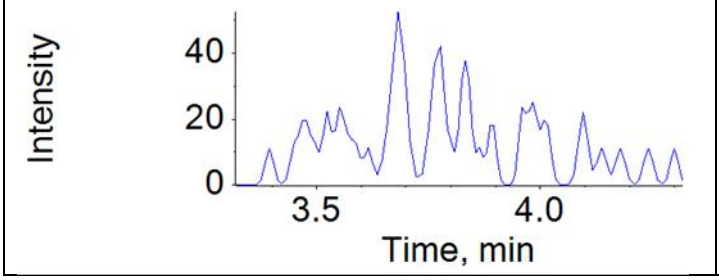


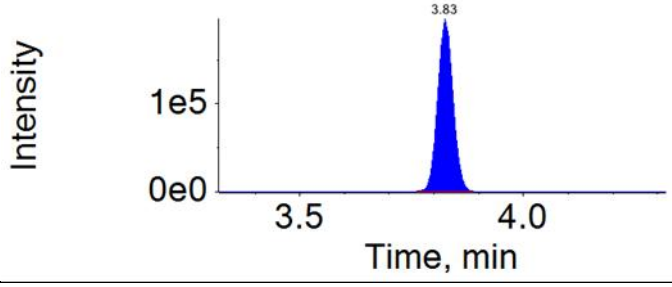
Analyte: PFPeA	Extraction Standard: 13C5-PFPeA
263.0 / 219.0	268.0 / 223.0



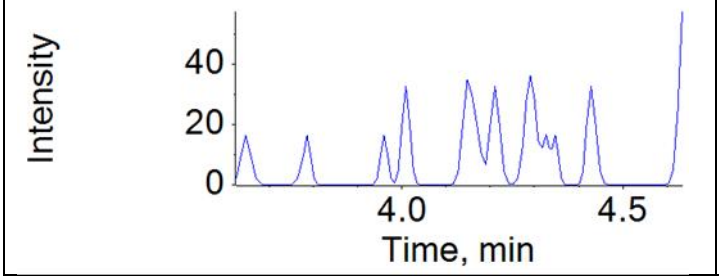


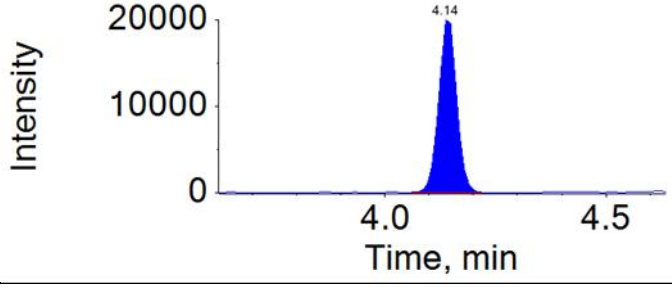
Analyte: PFBS	Extraction Standard: 13C3-PFBS
299.0 / 80.0	302.0 / 80.0





Analyte: 4:2-FTS	Extraction Standard: 13C2-4:2-FTS
327.0 / 307.0	329.0 / 81.0



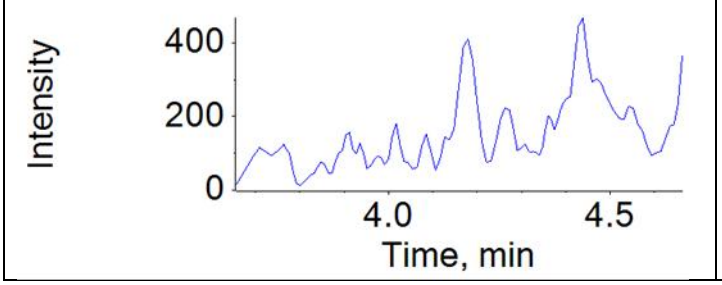


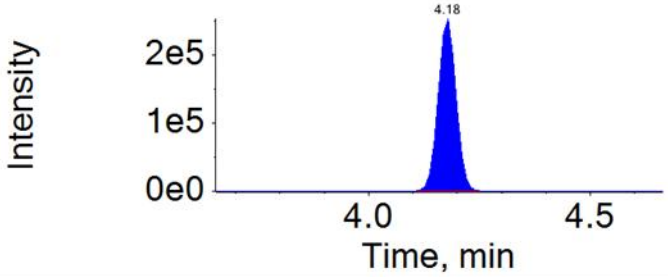
APPROVED
By JPT at 2:36 pm, 11/16/18

REVIEWED
By HMK at 9:06 am, 11/19/18

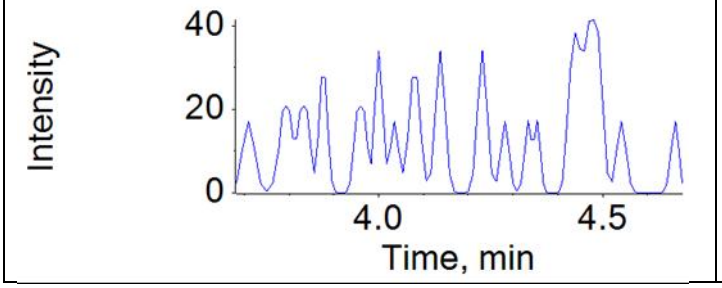
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV16DCCV1-3 11/16/2018 2:28:58 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

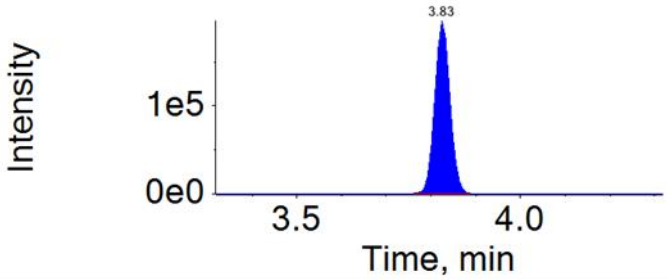
Analyte: PFHxA	Extraction Standard: 13C5-PFHxA
313.0 / 269.0	318.0 / 273.0



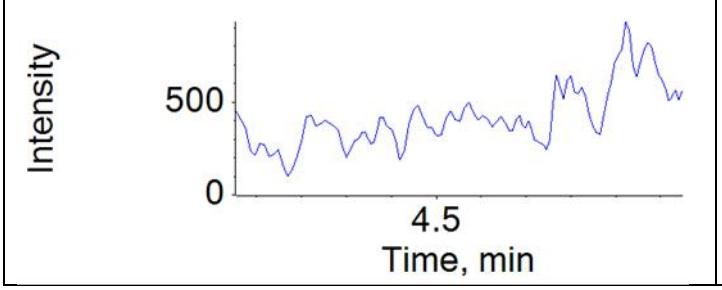


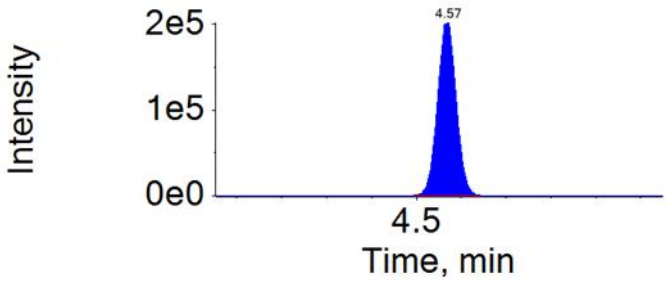
Analyte: PFPeS	Extraction Standard: 13C3-PFBS
349.0 / 80.0	302.0 / 80.0



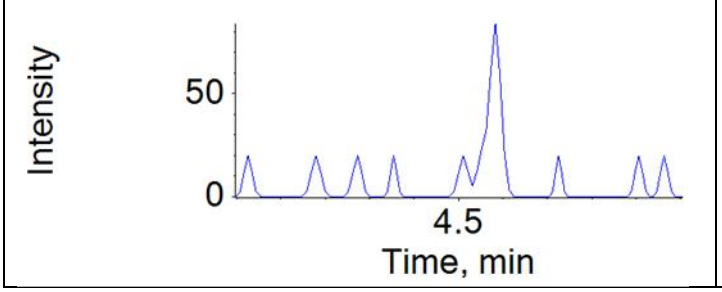


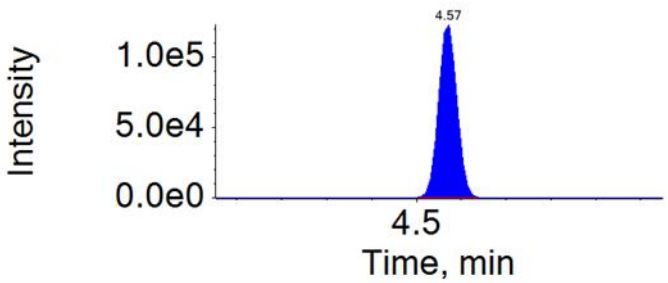
Analyte: PFHpA	Extraction Standard: 13C4-PFHpA
363.0 / 319.0	367.0 / 322.0





Analyte: PFHxS	Extraction Standard: 13C3-PFHxS
399.0 / 80.0	402.0 / 80.0



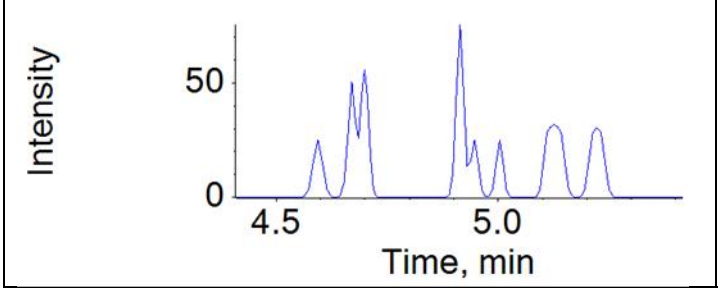


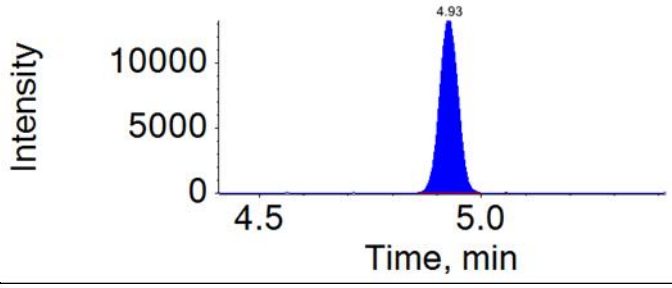
APPROVED
By JPT at 2:36 pm, 11/16/18

REVIEWED
By HMK at 9:06 am, 11/19/18

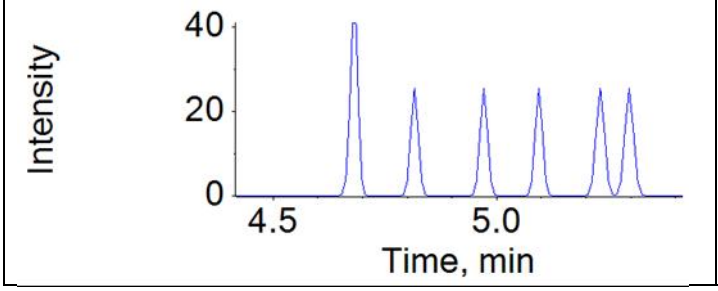
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV16DCCV1-3 11/16/2018 2:28:58 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

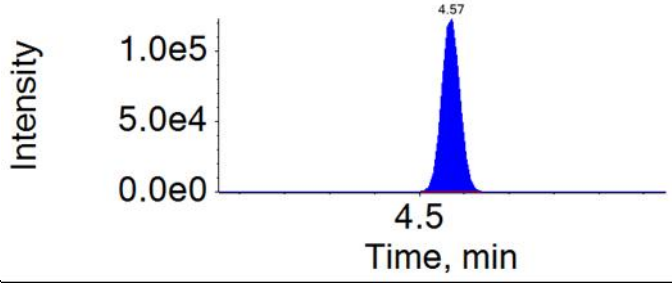
Analyte: 6:2-FTS	Extraction Standard: 13C2-6:2-FTS
427.0 / 407.0	429.0 / 81.0



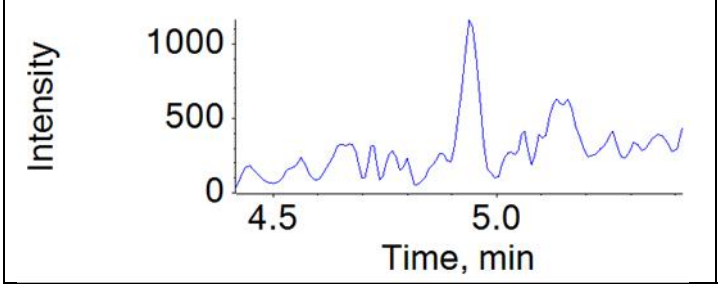


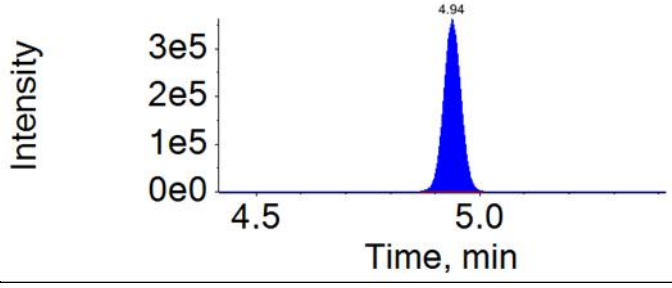
Analyte: PFHpS	Extraction Standard: 13C3-PFHxS
449.0 / 80.0	402.0 / 80.0



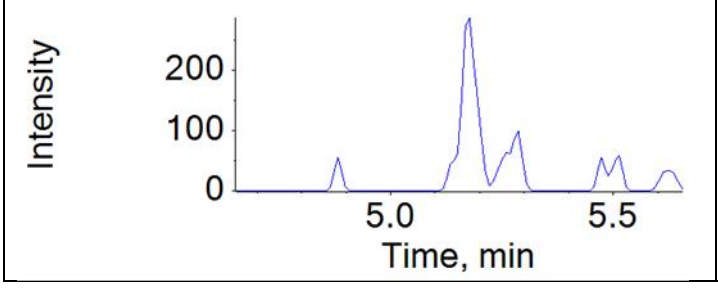


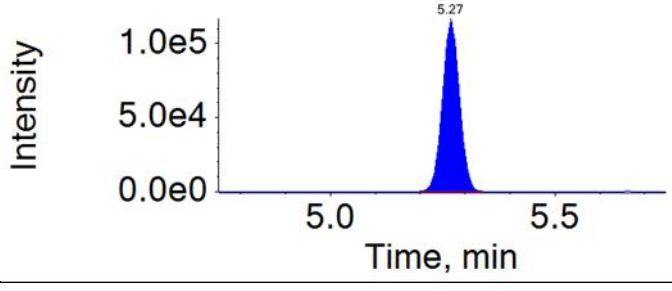
Analyte: PFOA	Extraction Standard: 13C8-PFOA
413.0 / 369.0	421.0 / 376.0





Analyte: PFOS	Extraction Standard: 13C8-PFOS
499.0 / 80.0	507.0 / 80.0



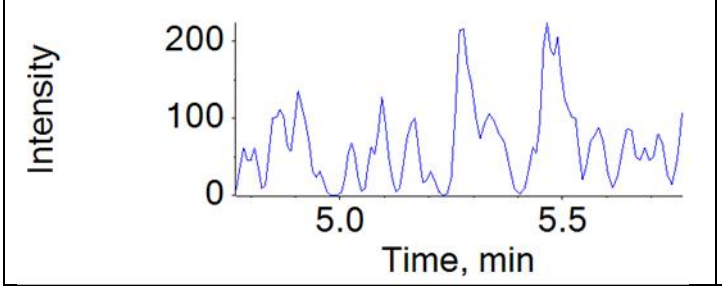


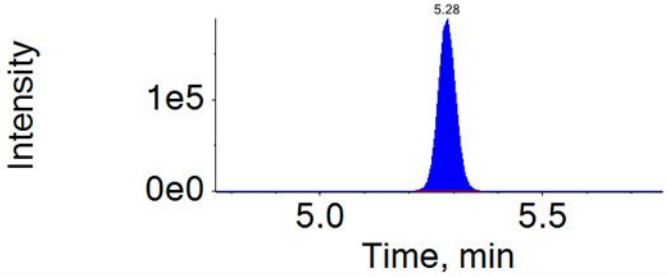
APPROVED
By JPT at 2:36 pm, 11/16/18

REVIEWED
By HMK at 9:06 am, 11/19/18

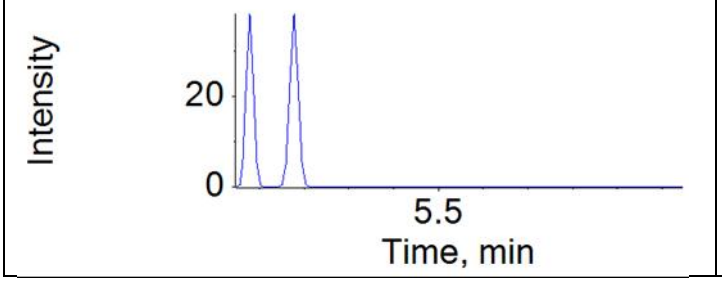
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV16DCCV1-3 11/16/2018 2:28:58 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

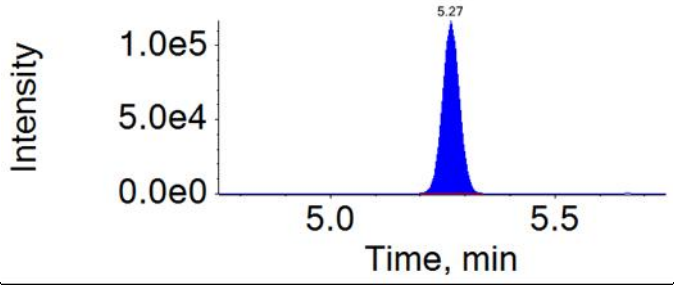
Analyte: PFNA	Extraction Standard: 13C9-PFNA
463.0 / 419.0	472.0 / 427.0



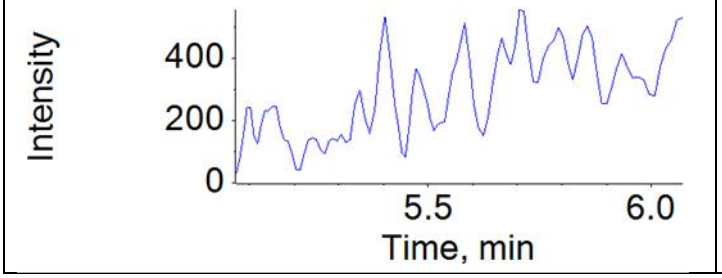


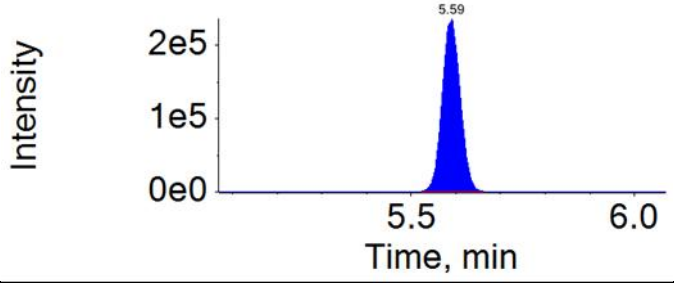
Analyte: PFNS	Extraction Standard: 13C8-PFOS
549.0 / 80.0	507.0 / 80.0



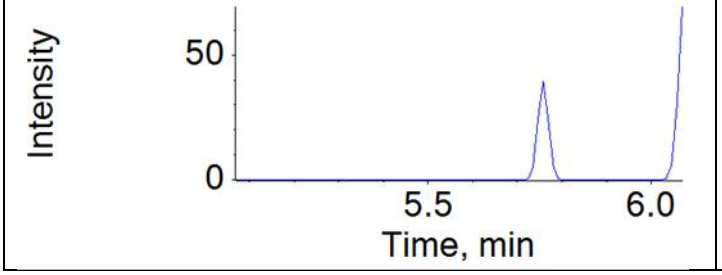


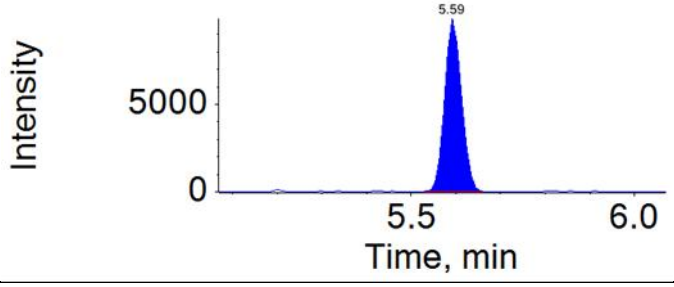
Analyte: PFDA	Extraction Standard: 13C6-PFDA
513.0 / 469.0	519.0 / 474.0





Analyte: 8:2-FTS	Extraction Standard: 13C2-8:2-FTS
527.0 / 507.0	529.0 / 81.0



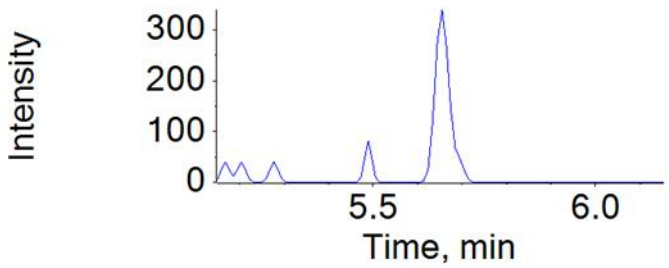


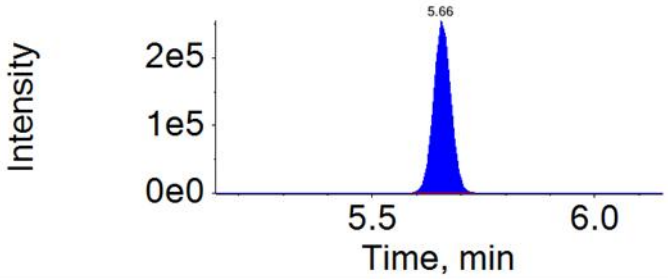
APPROVED
By JPT at 2:36 pm, 11/16/18

REVIEWED
By HMK at 9:06 am, 11/19/18

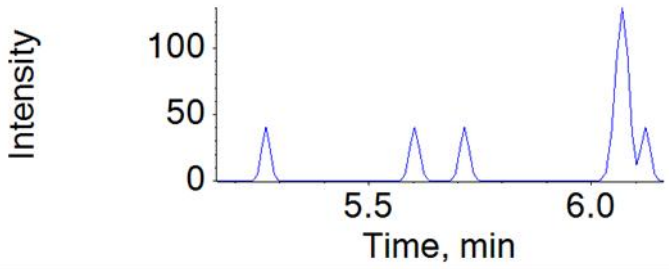
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV16DCCV1-3 11/16/2018 2:28:58 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

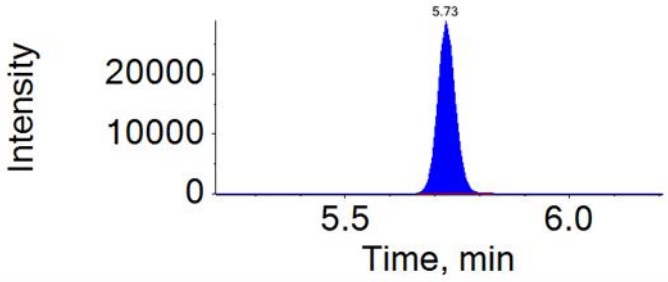
Analyte: PFOSA	Extraction Standard: 13C8-PFOSA
498.0 / 78.0	506.0 / 78.0



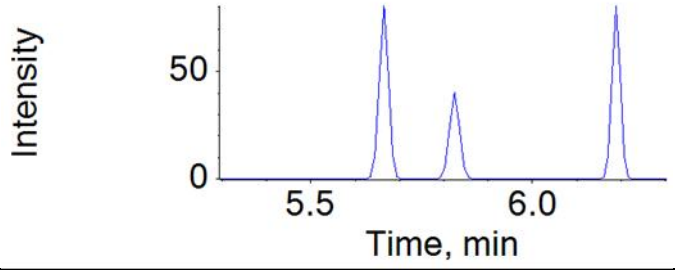


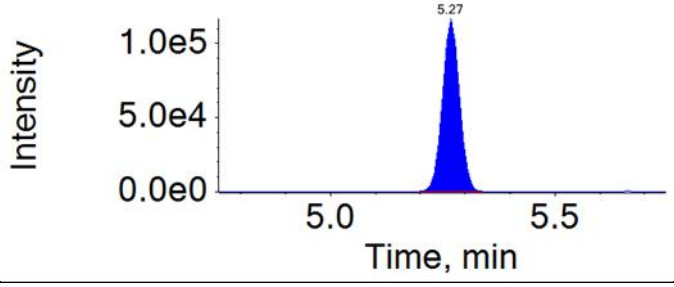
Analyte: NMeFOSAA	Extraction Standard: d3-NMeFOSAA
570.0 / 419.0	573.0 / 419.0



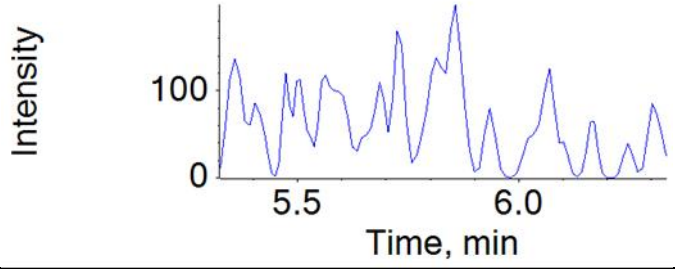


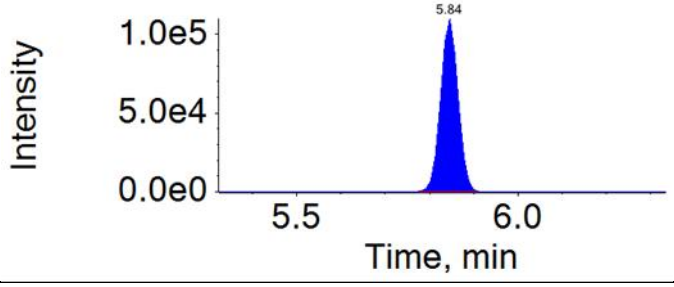
Analyte: PFDS	Extraction Standard: 13C8-PFOS
599.0 / 80.0	507.0 / 80.0





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



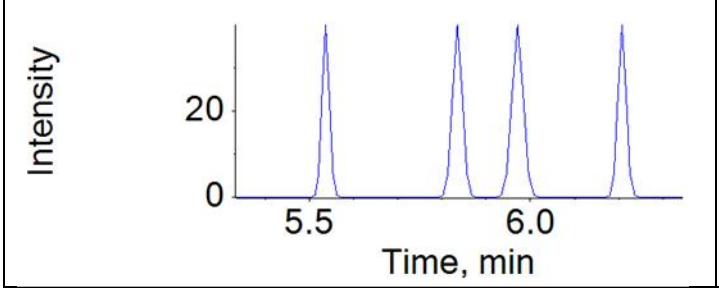


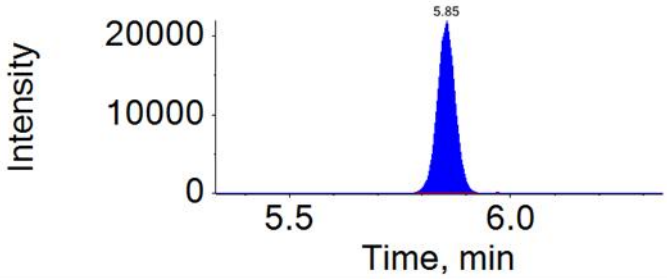
APPROVED
By JPT at 2:36 pm, 11/16/18

REVIEWED
By HMK at 9:06 am, 11/19/18

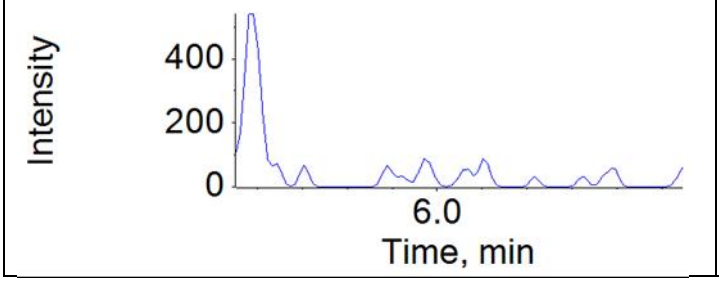
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV16DCCV1-3 11/16/2018 2:28:58 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

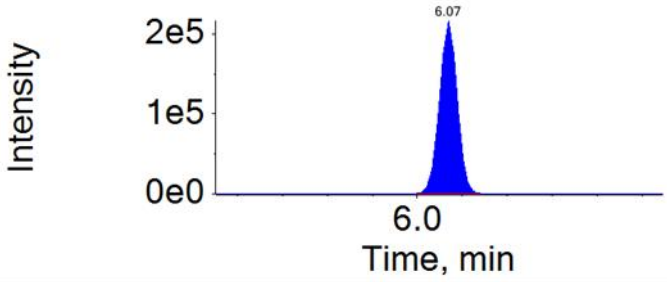
Analyte: NEtFOSAA	Extraction Standard: d5-NEtFOSAA
584.0 / 419.0	589.0 / 419.0



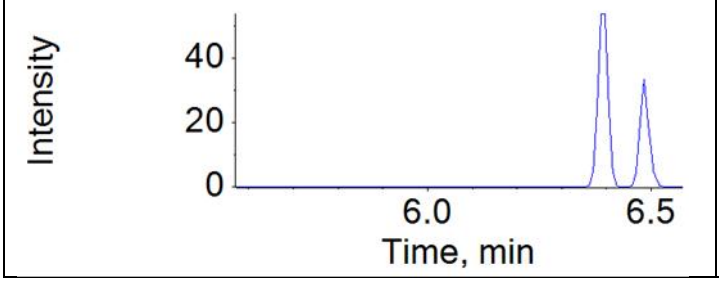


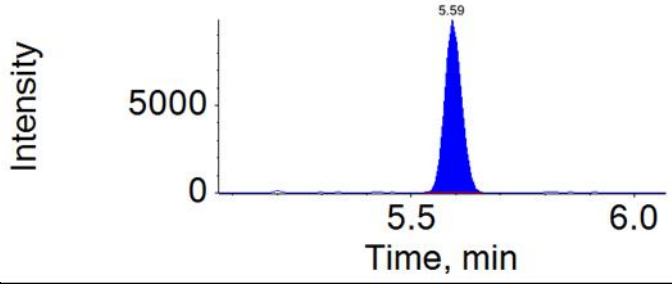
Analyte: PFDoDA	Extraction Standard: 13C2-PFDoDA
613.0 / 569.0	615.0 / 570.0



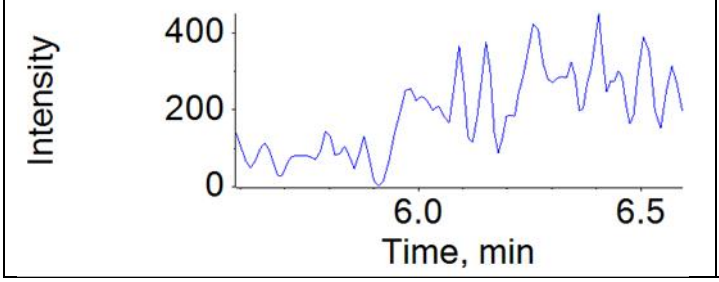


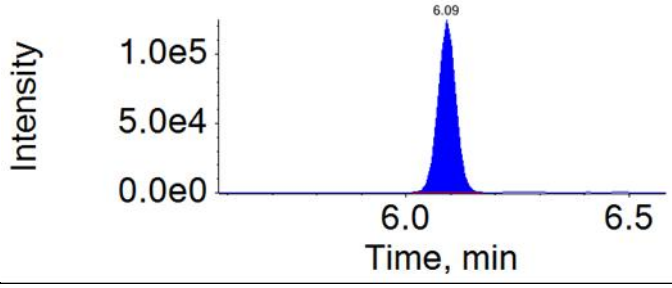
Analyte: 10:2-FTS	Extraction Standard: 13C2-8:2-FTS
627.0 / 607.0	529.0 / 81.0





Analyte: NMePFOSAE	Extraction Standard: d7-NMePFOSAE
616.0 / 59.0	623.0 / 59.0



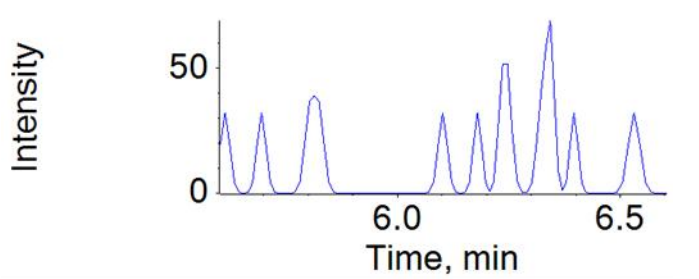


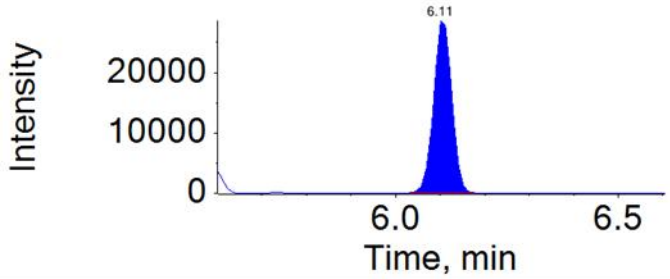
APPROVED
By JPT at 2:36 pm, 11/16/18

REVIEWED
By HMK at 9:06 am, 11/19/18

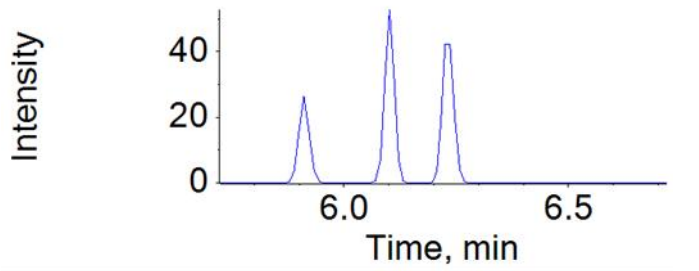
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV16DCCV1-3 11/16/2018 2:28:58 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

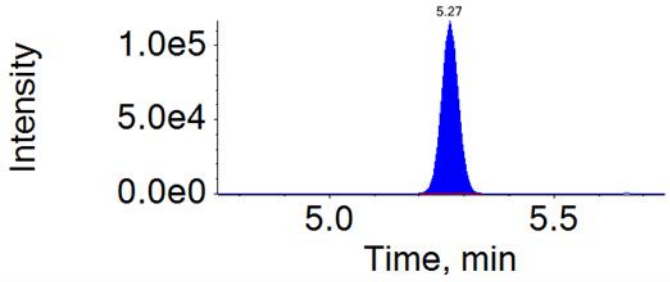
Analyte: NMePFOSA	Extraction Standard: d3-NMePFOSA
512.0 / 169.0	515.0 / 169.0



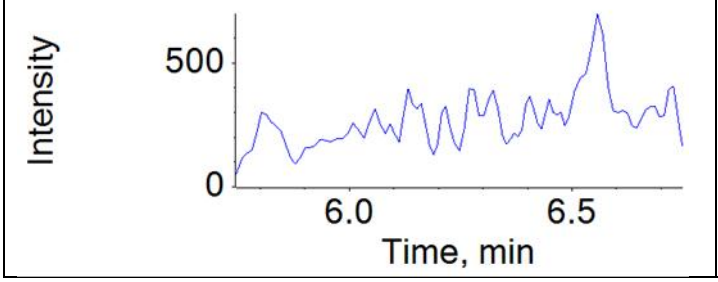


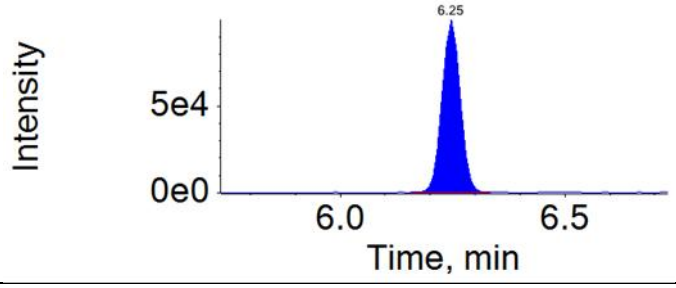
Analyte: PFDoS	Extraction Standard: 13C8-PFOS
699.0 / 80.0	507.0 / 80.0



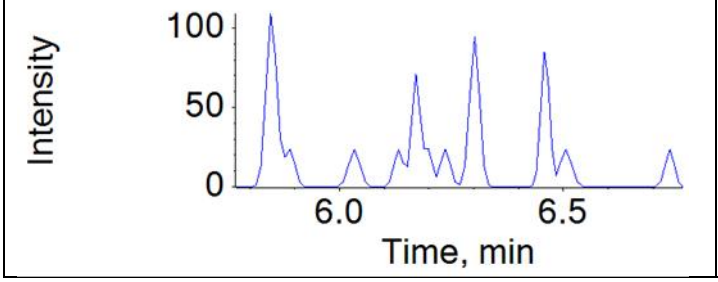


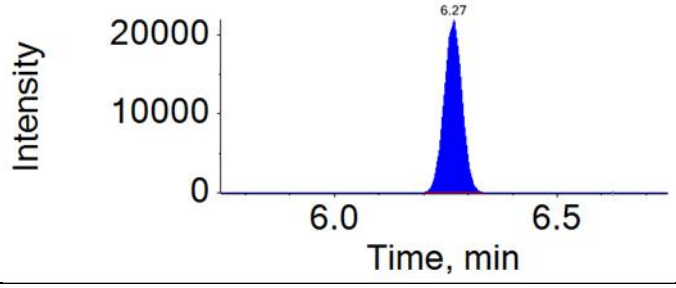
Analyte: NEtPFOSAE	Extraction Standard: d9-NEtPFOSAE
630.0 / 59.0	639.0 / 59.0





Analyte: NEtPFOSA	Extraction Standard: d5-NEtPFOSA
526.0 / 169.0	531.0 / 169.0



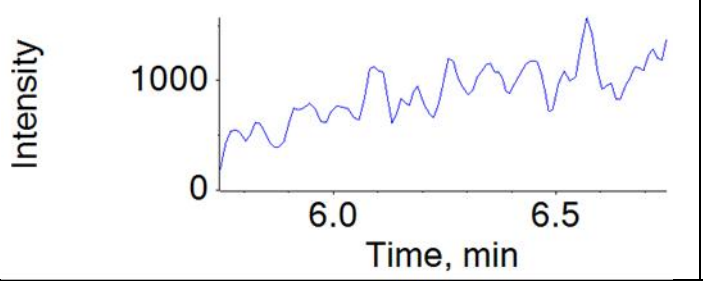


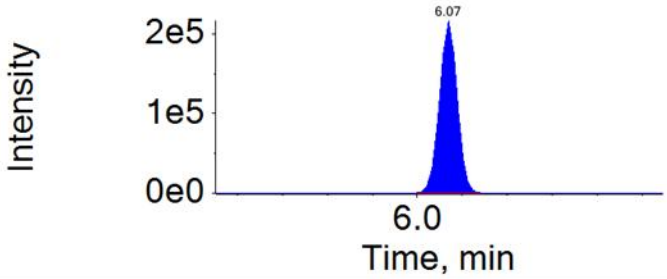
APPROVED
By JPT at 2:36 pm, 11/16/18

REVIEWED
By HMK at 9:06 am, 11/19/18

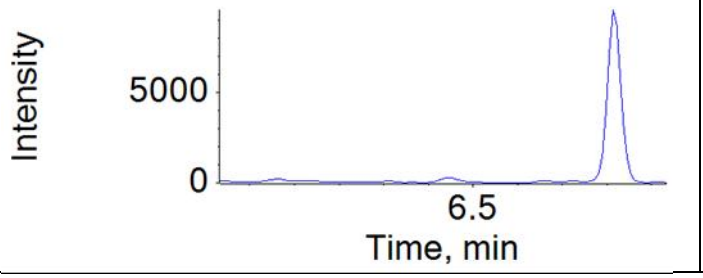
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV16DCCV1-3 11/16/2018 2:28:58 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

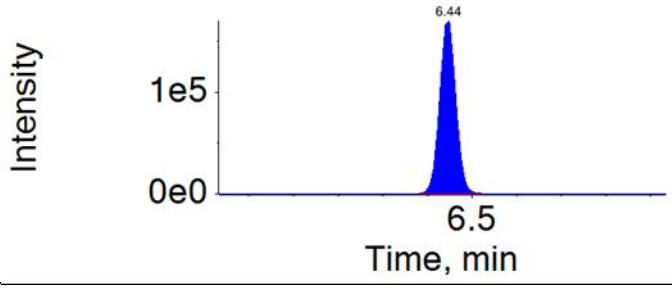
Analyte: PFTrDA	Extraction Standard: 13C2-PFDoDA
663.0 / 619.0	615.0 / 570.0



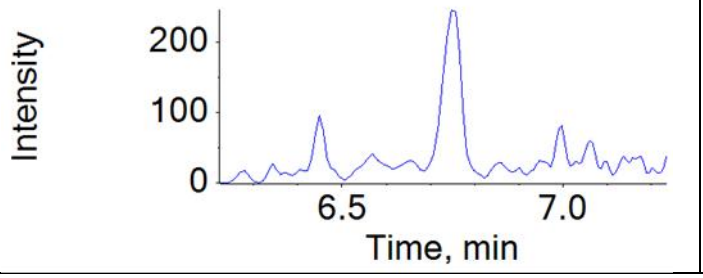


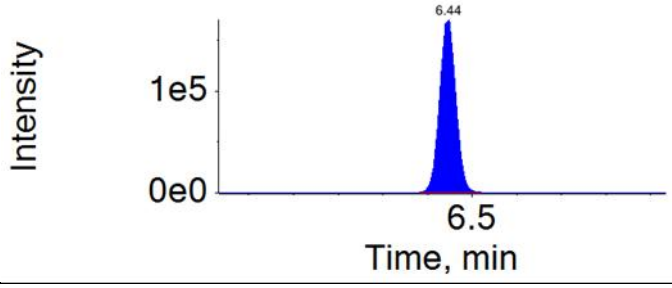
Analyte: PFTeDA	Extraction Standard: 13C2-PFTeDA
713.0 / 669.0	715.0 / 670.0



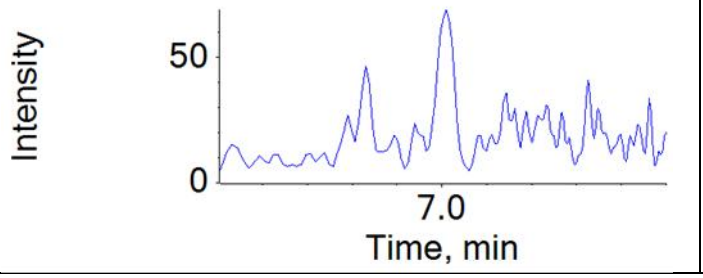


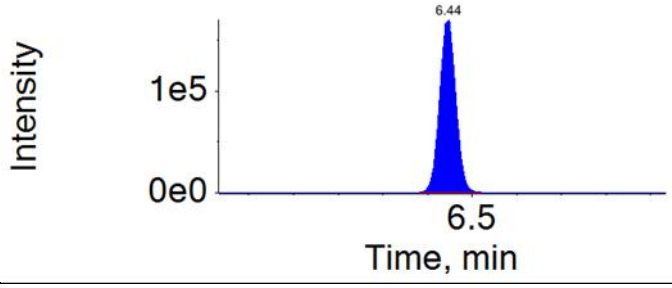
Analyte: PFHxDA	Extraction Standard: 13C2-PFTeDA
813.0 / 769.0	715.0 / 670.0





Analyte: PFODA	Extraction Standard: 13C2-PFTeDA
913.0 / 869.0	715.0 / 670.0





APPROVED
By JPT at 2:36 pm, 11/16/18

REVIEWED
By HMK at 9:06 am, 11/19/18

Ion Ratio Report

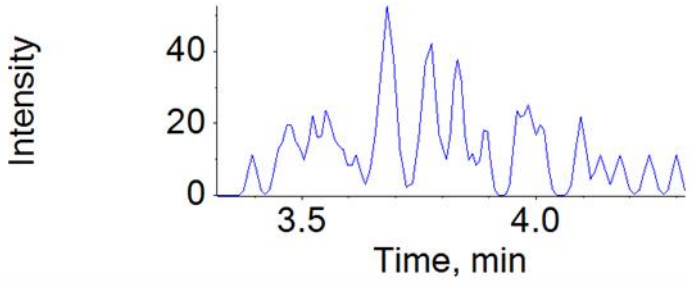
Sample Name: INBLK **Instrument Name:** LM27631 **File Name:** 18NOV16D-06.wiff

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	

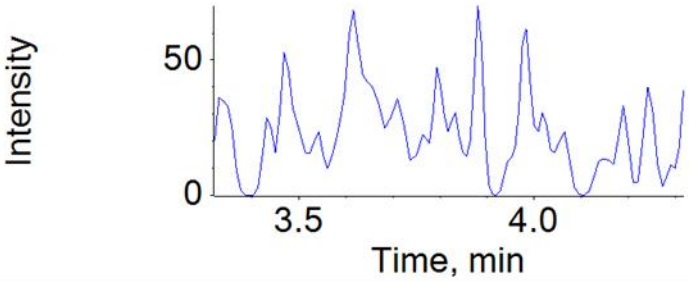
APPROVED
By JPT at 2:36 pm, 11/16/18

REVIEWED
By HMK at 9:06 am, 11/19/18

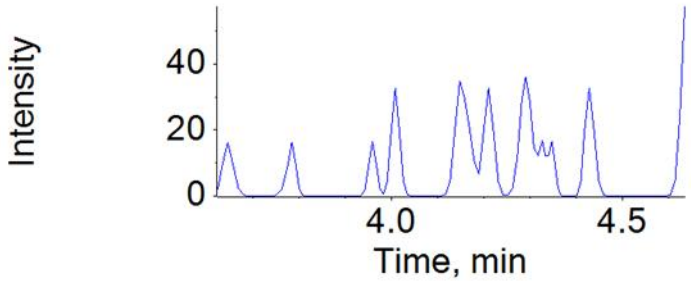
Component: PFBS
Primary Mass: 299.0 / 80.0



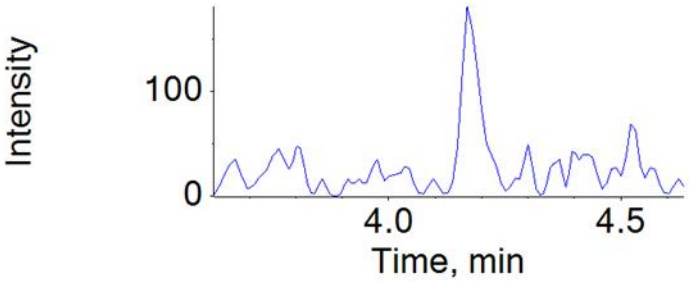
Component: PFBS_2
Secondary Mass: 299.0 / 99.0



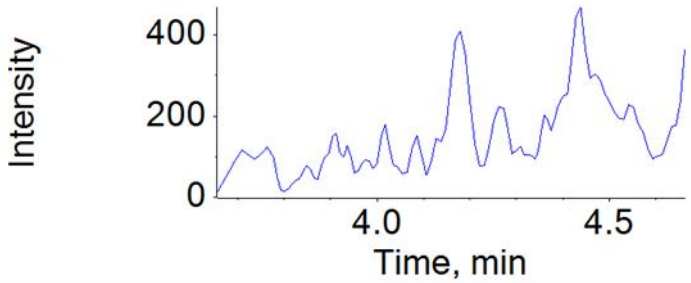
Component: 4:2-FTS
Primary Mass: 327.0 / 307.0



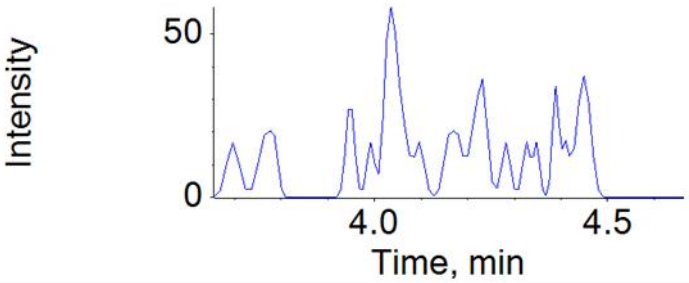
Component: 4:2 FTS_2
Secondary Mass: 327.0 / 81.0



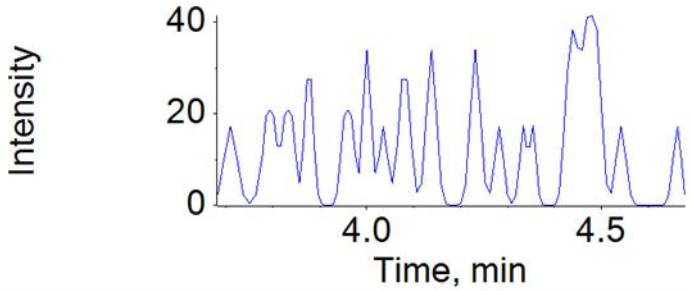
Component: PFHxA
Primary Mass: 313.0 / 269.0



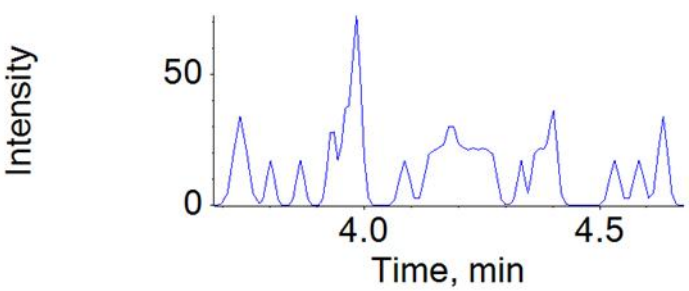
Component: PFHxA_2
Secondary Mass: 313.0 / 119.0



Component: PFPeS
Primary Mass: 349.0 / 80.0



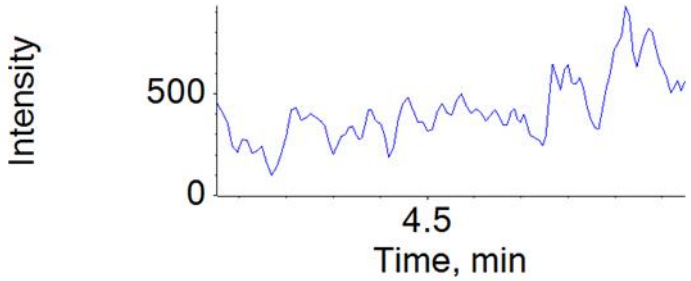
Component: PFPeS_2
Secondary Mass: 349.0 / 99.0



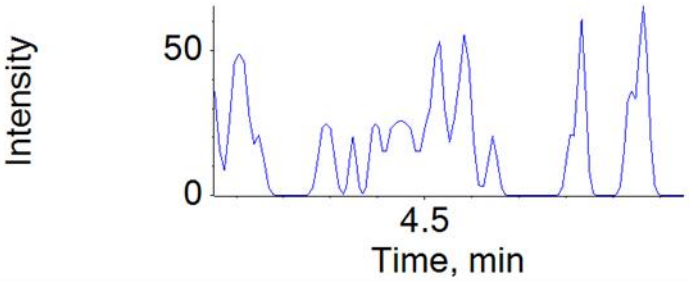
APPROVED
By JPT at 2:36 pm, 11/16/18

REVIEWED
By HMK at 9:06 am, 11/19/18

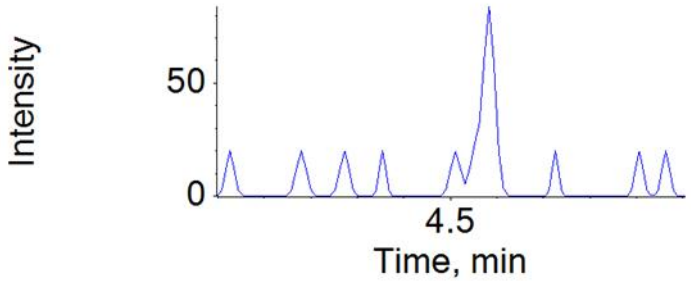
Component: PFHpA
Primary Mass: 363.0 / 319.0



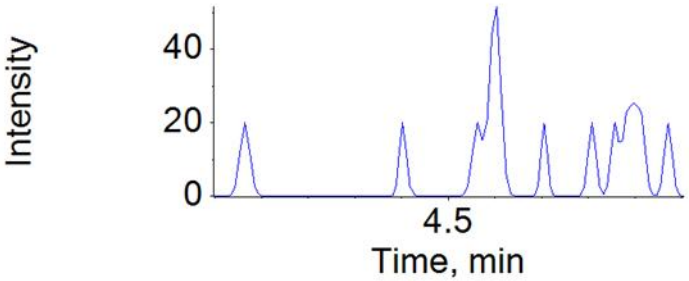
Component: PFHpA_2
Secondary Mass: 363.0 / 169.0



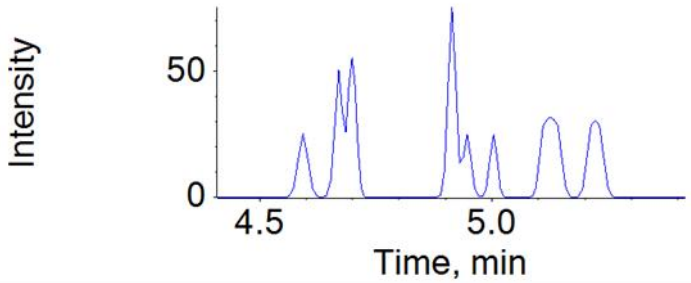
Component: PFHxS
Primary Mass: 399.0 / 80.0



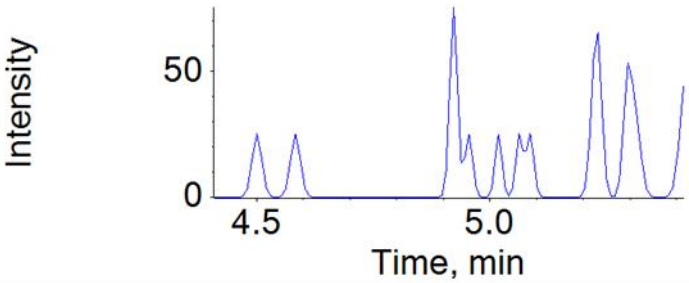
Component: PFHxS_2
Secondary Mass: 399.0 / 99.0



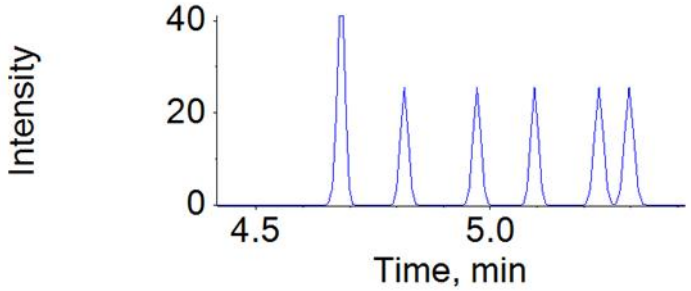
Component: 6:2-FTS
Primary Mass: 427.0 / 407.0



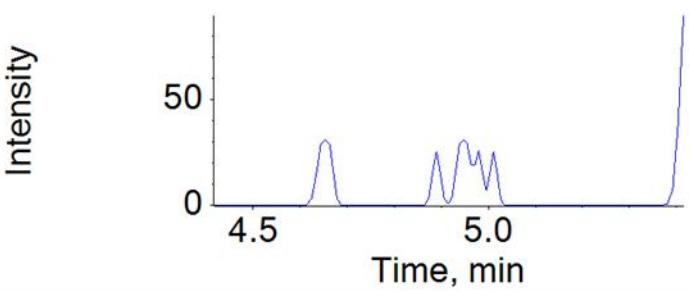
Component: 6:2 FTS_2
Secondary Mass: 427.0 / 81.0



Component: PFHpS
Primary Mass: 449.0 / 80.0



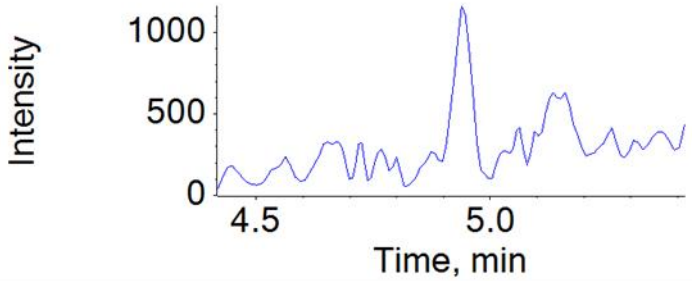
Component: PFHpS_2
Secondary Mass: 449.0 / 99.0



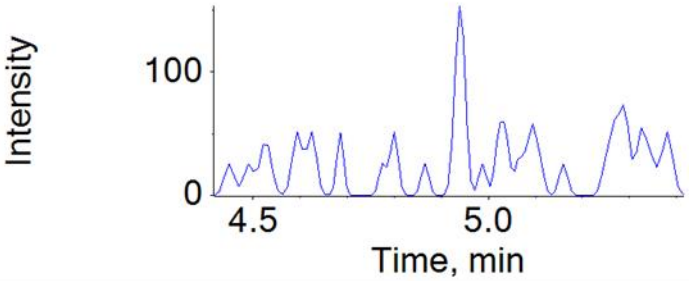
APPROVED
By JPT at 2:36 pm, 11/16/18

REVIEWED
By HMK at 9:06 am, 11/19/18

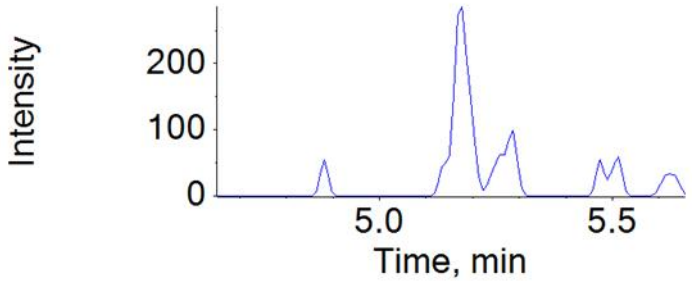
Component: PFOA
Primary Mass: 413.0 / 369.0



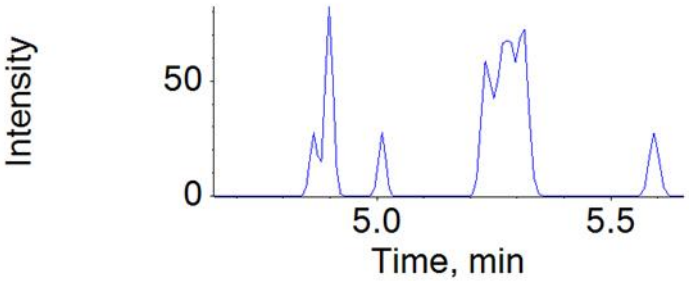
Component: PFOA_2
Secondary Mass: 413.0 / 169.0



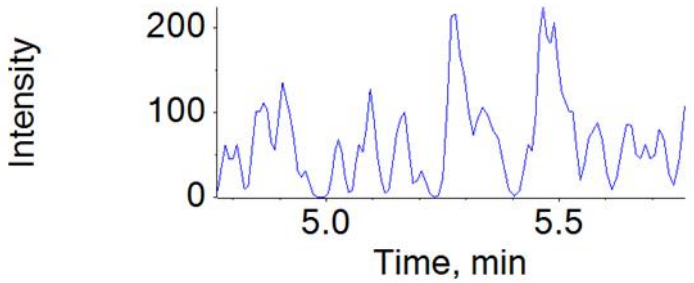
Component: PFOS
Primary Mass: 499.0 / 80.0



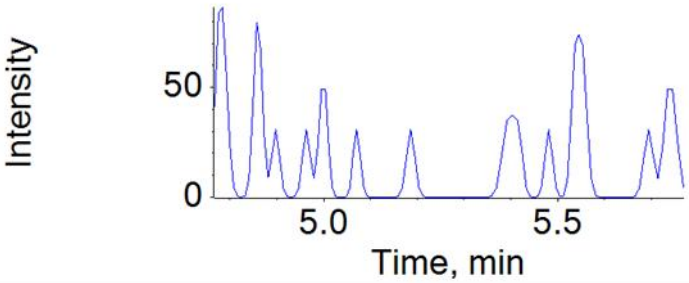
Component: PFOS_2
Secondary Mass: 499.0 / 99.0



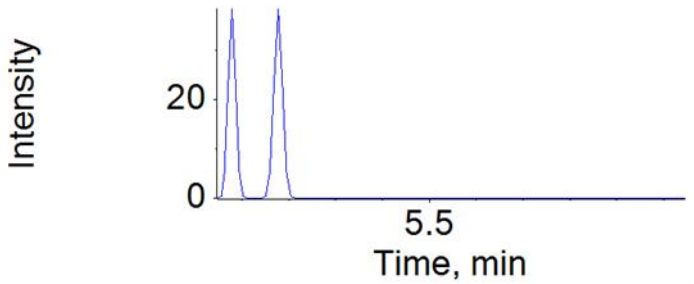
Component: PFNA
Primary Mass: 463.0 / 419.0



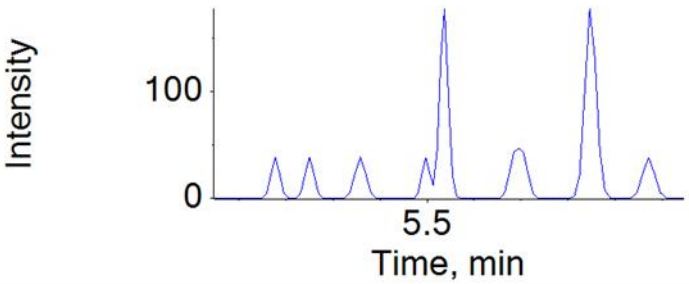
Component: PFNA_2
Secondary Mass: 463.0 / 169.0



Component: PFNS
Primary Mass: 549.0 / 80.0



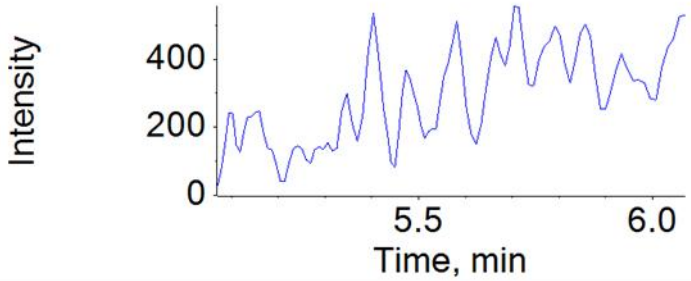
Component: PFNS_2
Secondary Mass: 549.0 / 99.0



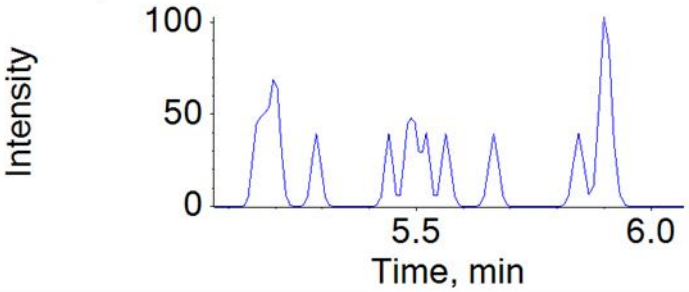
APPROVED
By JPT at 2:36 pm, 11/16/18

REVIEWED
By HMK at 9:06 am, 11/19/18

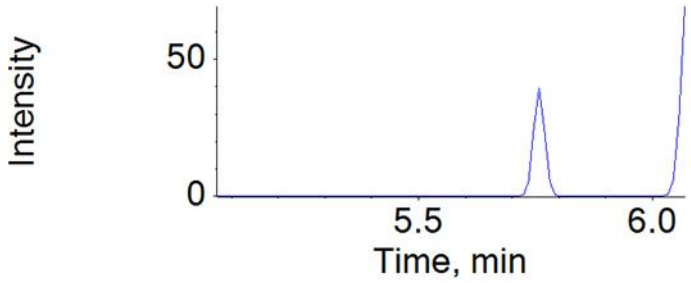
Component: PFDA
Primary Mass: 513.0 / 469.0



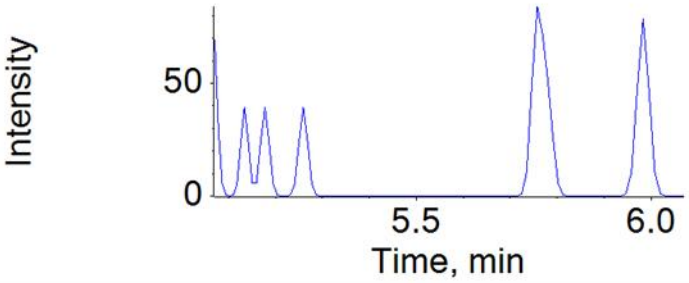
Component: PFDA_2
Secondary Mass: 513.0 / 169.0



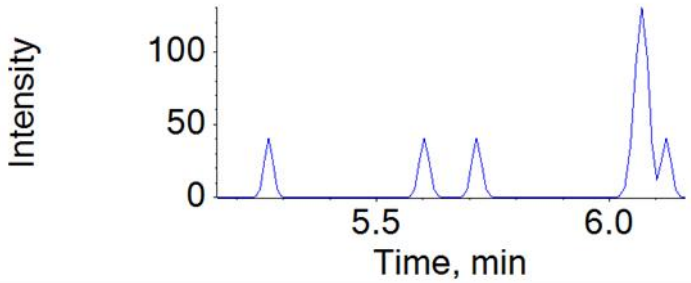
Component: 8:2-FTS
Primary Mass: 527.0 / 507.0



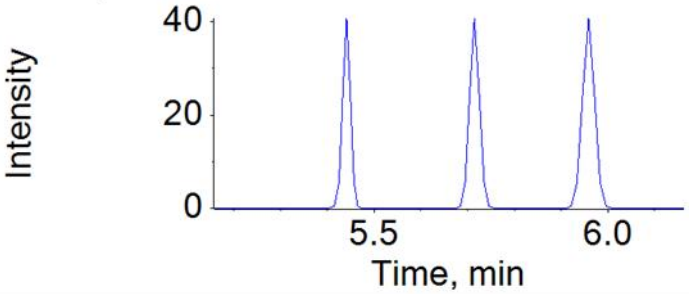
Component: 8:2 FTS_2
Secondary Mass: 527.0 / 81.0



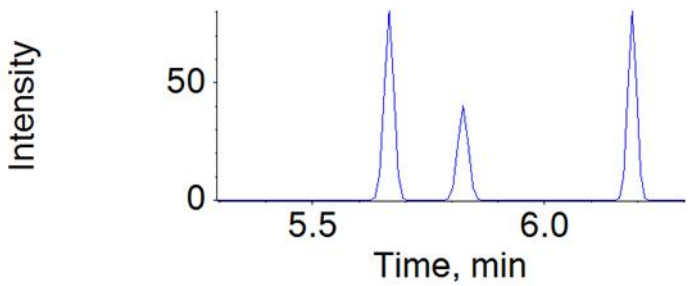
Component: NMeFOSAA
Primary Mass: 570.0 / 419.0



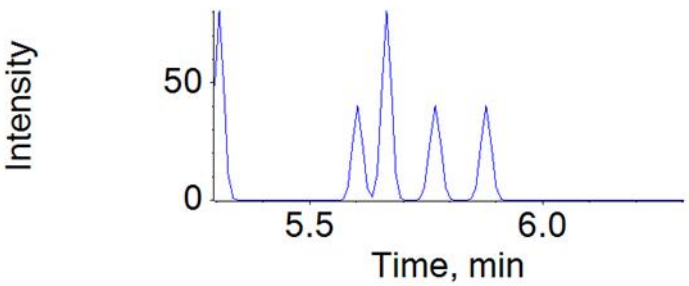
Component: NMeFOSAA_2
Secondary Mass: 570.0 / 483.0



Component: PFDS
Primary Mass: 599.0 / 80.0



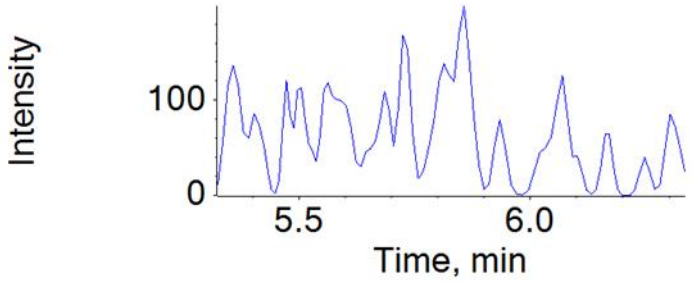
Component: PFDS_2
Secondary Mass: 599.0 / 99.0



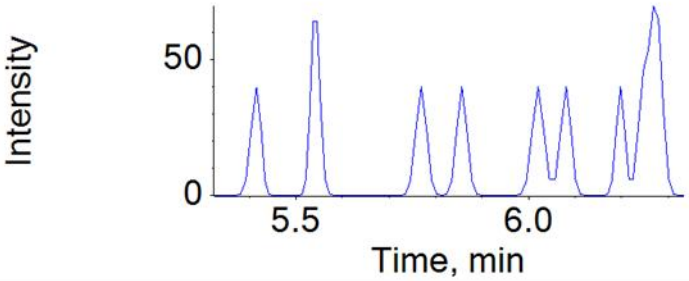
APPROVED
By JPT at 2:36 pm, 11/16/18

REVIEWED
By HMK at 9:06 am, 11/19/18

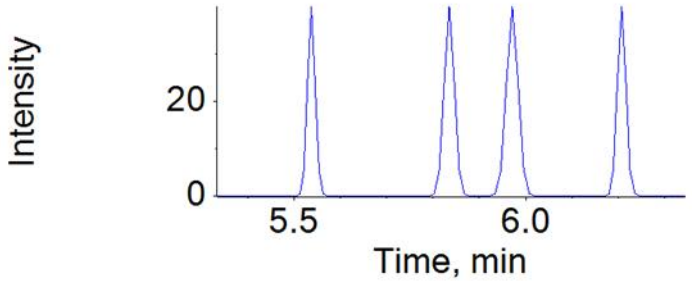
Component: PFUnDA
Primary Mass: 563.0 / 519.0



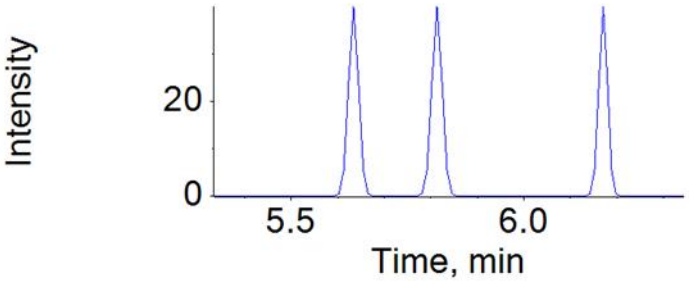
Component: PFUnDA_2
Secondary Mass: 563.0 / 169.0



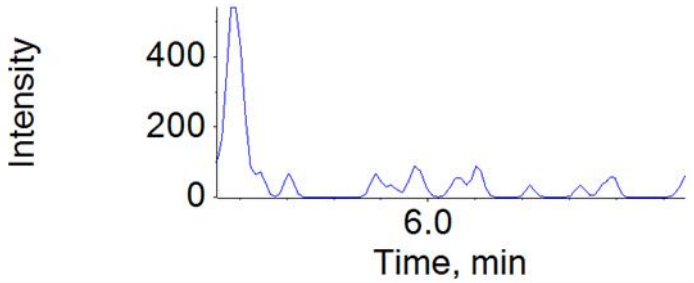
Component: NEtFOSAA
Primary Mass: 584.0 / 419.0



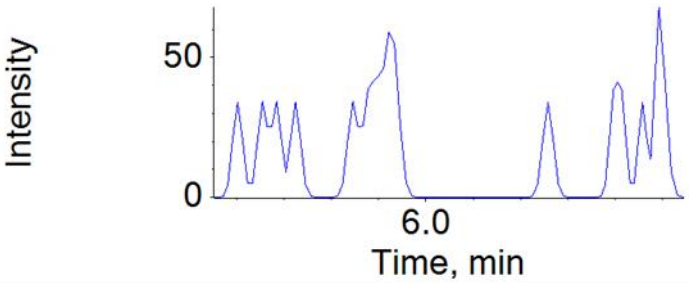
Component: NEtFOSAA_2
Secondary Mass: 584.0 / 526.0



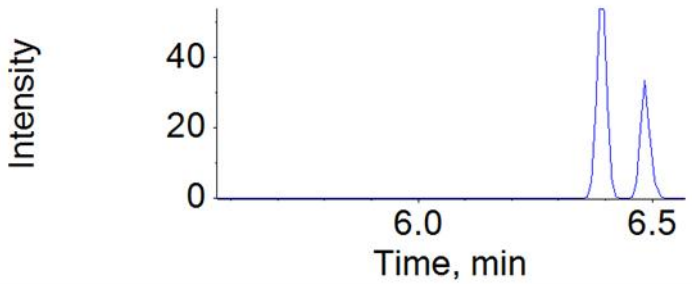
Component: PFDoDA
Primary Mass: 613.0 / 569.0



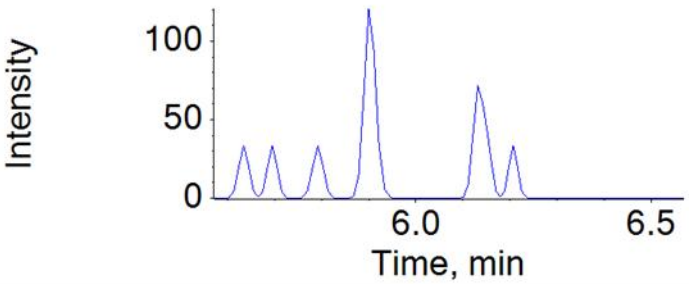
Component: PFDoDA_2
Secondary Mass: 613.0 / 169.0



Component: 10:2-FTS
Primary Mass: 627.0 / 607.0



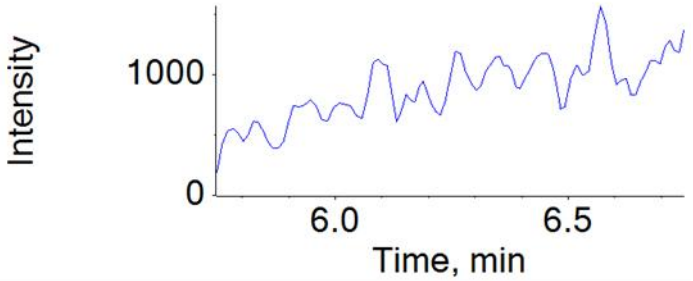
Component: 10:2 FTS_2
Secondary Mass: 627.0 / 81.0



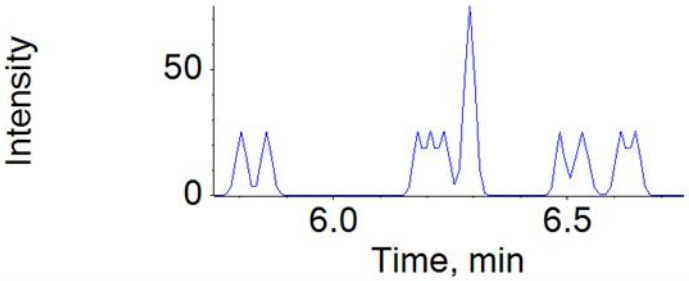
APPROVED
By JPT at 2:36 pm, 11/16/18

REVIEWED
By HMK at 9:06 am, 11/19/18

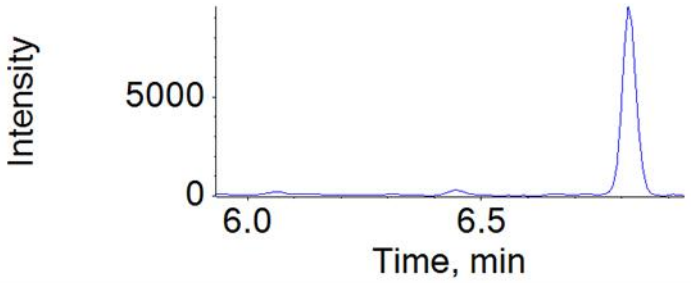
Component: PFTrDA
Primary Mass: 663.0 / 619.0



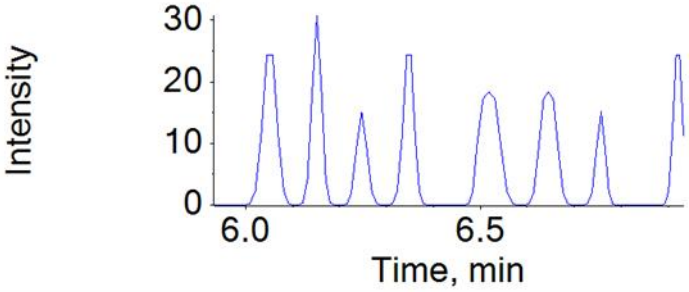
Component: PFTrDA_2
Secondary Mass: 663.0 / 169.0



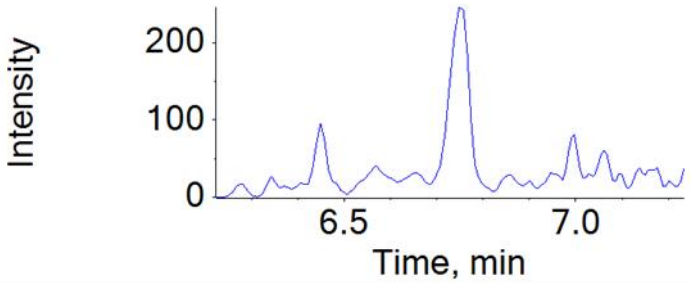
Component: PFTeDA
Primary Mass: 713.0 / 669.0



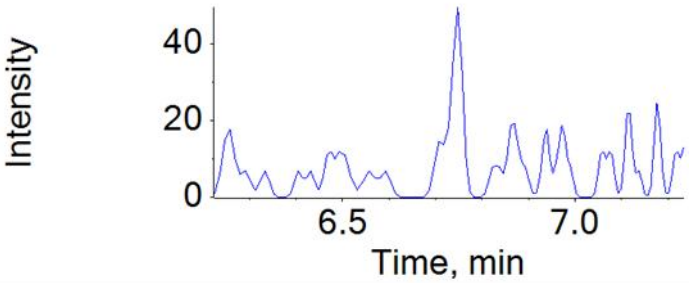
Component: PFTeDA_2
Secondary Mass: 713.0 / 169.0



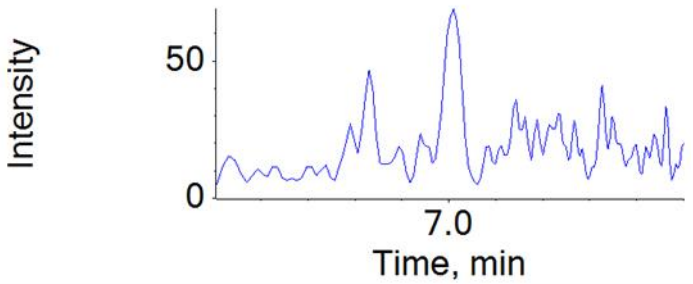
Component: PFHxDA
Primary Mass: 813.0 / 769.0



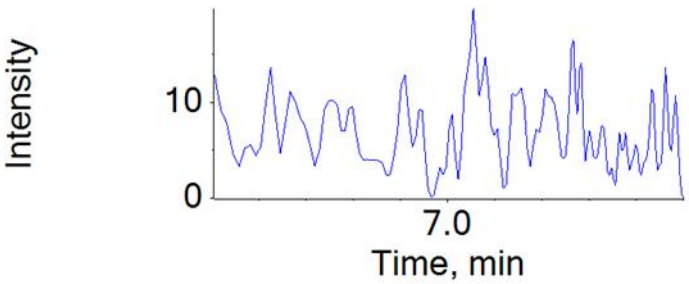
Component: PFHxDA_2
Secondary Mass: 813.0 / 169.0



Component: PFODA
Primary Mass: 913.0 / 869.0



Component: PFODA_2
Secondary Mass: 913.0 / 169.0



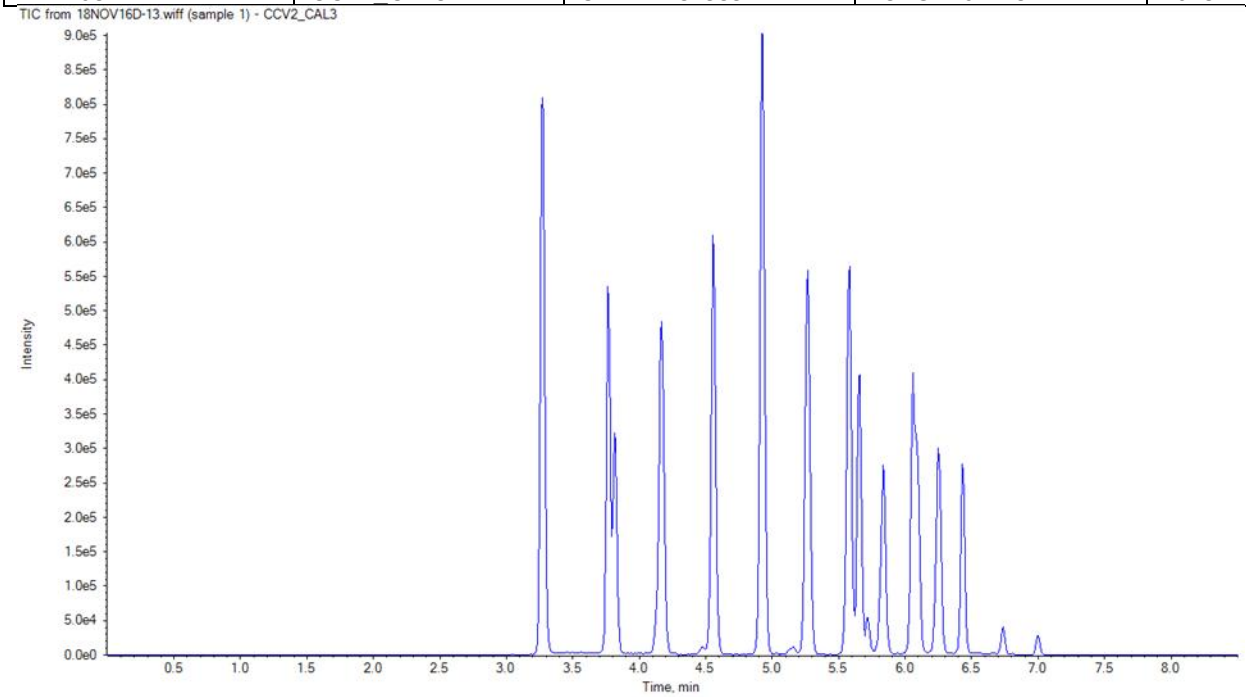
APPROVED
By JPT at 2:36 pm, 11/16/18

REVIEWED
By HMK at 9:06 am, 11/19/18

Continuing Calibration Verfication

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV16DCCV1-3 11/16/2018 2:28:58 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Instrument Name:	Sample Name:	Sample ID:	Sample File:	Acquisition Date:
LM27631	CCV2_CAL3	CALBRN31833B	18NOV16D-13.wiff	2018-11-16T12:02:26



Injection Standard Area Reference File: 18NOV16D-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	725851.4	707280.6	3	50	
13C2-PFOA	5.0	500823.7	484265.4	3	50	
13C4-PFOS	4.8	251960.4	256987.3	-2	50	
13C2-PFDA	5.0	298259.9	302418.6	-1	50	

APPROVED
By JPT at 2:36 pm, 11/16/18

REVIEWED
By HMK at 9:06 am, 11/19/18

Continuing Calibration Verfication

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV16DCCV1-3 11/16/2018 2:28:58 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Instrument Name:	Sample Name:	Sample ID:	Sample File:	Acquisition Date:
LM27631	CCV2_CAL3	CALBRN31833B	18NOV16D-13.wiff	2018-11-16T12:02:26

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	333685.8	10	13C4-PFBA	809301.7	5.0	0.412	3.27	1.000	2.000	2.284	14	30	
PFPeA	314813.4	11	13C5-PFPeA	782160.2	5.0	0.402	3.77	1.000	2.000	2.330	16	30	
PFBS	171361.6	10	13C3-PFBS	431863.5	4.7	0.397	3.82	1.000	1.770	1.887	7	30	
4:2-FTS	38184.8	11	13C2-4:2-FTS	52024.9	4.7	0.734	4.13	1.000	1.870	1.993	7	30	
PFHxA	382585.3	12	13C5-PFHxA	706212.9	5.0	0.542	4.17	1.000	2.000	2.262	13	30	
PFPeS	85975.6	11	13C3-PFBS	431863.5	4.7	0.199	4.19	1.100	1.880	1.933	3	30	
PFHpA	386297.6	12	13C4-PFHpA	537206.2	5.0	0.719	4.56	1.000	2.000	2.384	19	30	
PFHxS	125370.4	19	13C3-PFHxS	331095.5	4.7	0.379	4.56	1.000	1.820	1.836	1	30	
6:2-FTS	32488.9	11	13C2-6:2-FTS	36704.5	4.8	0.885	4.91	1.000	1.900	2.142	13	30	
PFHpS	129990.3	11	13C3-PFHxS	331095.5	4.7	0.393	4.92	1.080	1.900	2.067	9	30	
PFOA	398630.7	11	13C8-PFOA	933649.4	5.0	0.427	4.93	1.000	2.000	2.280	14	30	
PFOS	126914.0	22	13C8-PFOS	282530.0	4.8	0.449	5.26	1.000	1.850	1.964	6	30	
PFNA	313216.9	12	13C9-PFNA	500861.6	5.0	0.625	5.27	1.000	2.000	2.255	13	30	
PFNS	79657.3	11	13C8-PFOS	282530.0	4.8	0.282	5.56	1.060	1.920	1.973	3	30	
PFDA	272986.6	11	13C6-PFDA	660833.4	5.0	0.413	5.58	1.000	2.000	2.190	10	30	
8:2-FTS	25309.8	12	13C2-8:2-FTS	26262.4	4.8	0.964	5.58	1.000	1.920	2.247	17	30	
PFOSA	273099.3	11	13C8-PFOSA	674079.8	5.0	0.405	5.65	1.000	2.000	1.979	-1	30	
NMeFOSAA	32080.3	17	d3-NMeFOSAA	79462.6	5.0	0.404	5.72	1.000	2.000	2.282	14	30	
PFDS	64315.3	11	13C8-PFOS	282530.0	4.8	0.228	5.81	1.110	1.930	2.063	7	30	
PFUnDA	228551.3	11	13C7-PFUnDA	260760.8	5.0	0.876	5.84	1.000	2.000	2.291	15	30	
NEtFOSAA	27388.2	22	d5-NEtFOSAA	67140.0	5.0	0.408	5.85	1.000	2.000	2.138	7	30	
PFDoDA	246493.8	11	13C2-PFDoDA	560649.1	5.0	0.440	6.06	1.000	2.000	2.239	12	30	
10:2-FTS	15480.9	12	13C2-8:2-FTS	26262.4	4.8	0.589	6.08	1.090	1.930	1.963	2	30	
NMePFOSAE	182202.8	11	d7-NMePFOSAE	343081.1	5.0	0.531	6.10	1.000	2.000	2.210	11	30	
NMePFOSA	36506.7	11	d3-NMePFOSA	79406.4	5.0	0.460	6.10	1.000	2.000	2.268	13	30	
PFDoS	33422.9	11	13C8-PFOS	282530.0	4.8	0.118	6.23	1.180	1.940	2.072	7	30	
NEtPFOSAE	193092.5	11	d9-NEtPFOSAE	278917.2	5.0	0.692	6.25	1.000	2.000	2.221	11	30	
NEtPFOSA	27931.8	11	d5-NEtPFOSA	63521.9	5.0	0.440	6.27	1.000	2.000	2.019	1	30	
PFTrDA	195438.6	11	13C2-PFDoDA	560649.1	5.0	0.349	6.26	1.030	2.000	2.200	10	30	
PFTeDA	169275.8	10	13C2-PFTeDA	421109.7	5.0	0.402	6.43	1.000	2.000	2.253	13	30	
PFHxDA	75082.7	11	13C2-PFTeDA	421109.7	5.0	0.178	6.74	1.050	2.000	2.124	6	30	
PFODA	60087.8	10	13C2-PFTeDA	421109.7	5.0	0.143	7.00	1.090	2.000	1.987	-1	30	

APPROVED
By JPT at 2:36 pm, 11/16/18

REVIEWED
By HMK at 9:06 am, 11/19/18

Continuing Calibration Verfication

ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM
Result Table: 18NOV16DCCV1-3 11/16/2018 2:28:58 PM
Acquisition Method: 18AUG13_3uL.dam

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV16DCCV1-3 11/16/2018 2:28:58 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Sample Name:	CCV2_CAL3			**Data File:**		18NOV16D-13.wiff
Sample ID:	CALBRN31833B			**Acquis Date:**		2018-11-16T12:02:26
Sample Type:	Quality Control			**Instrument:**		LM27631
Vial Position:	5			**Acquis Method:**		18AUG13_3uL.dam
Injection Vol:	3.00			**Result Table:**		18NOV16DCCV1-3
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: 18NOV16D-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	725851.4	707280.6	3	50	
13C2-PFOA	5.0	500823.7	484265.4	3	50	
13C4-PFOS	4.8	251960.4	256987.3	-2	50	
13C2-PFDA	5.0	298259.9	302418.6	-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	809301.7	13C3-PFBA	725851.4	1.115	5.000	4.999	100	70-130	
E13C5-PFPeA	782160.2	13C3-PFBA	725851.4	1.078	5.000	4.833	97	70-130	
E13C3-PFBS	431863.5	13C3-PFBA	725851.4	0.595	4.650	4.200	90	70-130	
E13C2-4:2-FTS	52024.9	13C2-PFOA	500823.7	0.104	4.670	4.627	99	70-130	
E13C5-PFHxA	706212.9	13C2-PFOA	500823.7	1.410	5.000	5.094	102	70-130	
E13C3-PFHxS	331095.5	13C2-PFOA	500823.7	0.661	4.730	4.536	96	70-130	
E13C4-PFHpA	537206.2	13C2-PFOA	500823.7	1.073	5.000	4.832	97	70-130	
E13C2-6:2-FTS	36704.5	13C2-PFOA	500823.7	0.073	4.750	4.903	103	70-130	
E13C8-PFOA	933649.4	13C2-PFOA	500823.7	1.864	5.000	5.136	103	70-130	
E13C8-PFOS	282530.0	13C4-PFOS	251960.4	1.121	4.780	4.968	104	70-130	
E13C9-PFNA	500861.6	13C4-PFOS	251960.4	1.988	5.000	5.542	111	70-130	
E13C6-PFDA	660833.4	13C2-PFDA	298259.9	2.216	5.000	5.170	103	70-130	
E13C2-8:2-FTS	26262.4	13C2-PFDA	298259.9	0.088	4.790	4.391	92	70-130	
E13C8-PFOSA	674079.8	13C2-PFDA	298259.9	2.260	5.000	5.010	100	70-130	
Ed3-NMeFOSAA	79462.6	13C2-PFDA	298259.9	0.266	5.000	4.809	96	70-130	
E13C7-PFUnDA	260760.8	13C2-PFDA	298259.9	0.874	5.000	5.076	102	70-130	
Ed5-NEtFOSAA	67140.0	13C2-PFDA	298259.9	0.225	5.000	4.762	95	70-130	
E13C2-PFDoDA	560649.1	13C2-PFDA	298259.9	1.880	5.000	4.880	98	70-130	
Ed7-NMePFOSAE	343081.1	13C2-PFDA	298259.9	1.150	5.000	4.978	100	70-130	
Ed3-NMePFOSA	79406.4	13C2-PFDA	298259.9	0.266	5.000	4.837	97	70-130	
Ed9-NEtPFOSAE	278917.2	13C2-PFDA	298259.9	0.935	5.000	4.864	97	70-130	
Ed5-NEtPFOSA	63521.9	13C2-PFDA	298259.9	0.213	5.000	4.996	100	70-130	
E13C2-PFTeDA	421109.7	13C2-PFDA	298259.9	1.412	5.000	4.957	99	70-130	

APPROVED
By JPT at 2:36 pm, 11/16/18

REVIEWED
By HMK at 9:06 am, 11/19/18

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV16DCCV1-3 11/16/2018 2:28:58 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

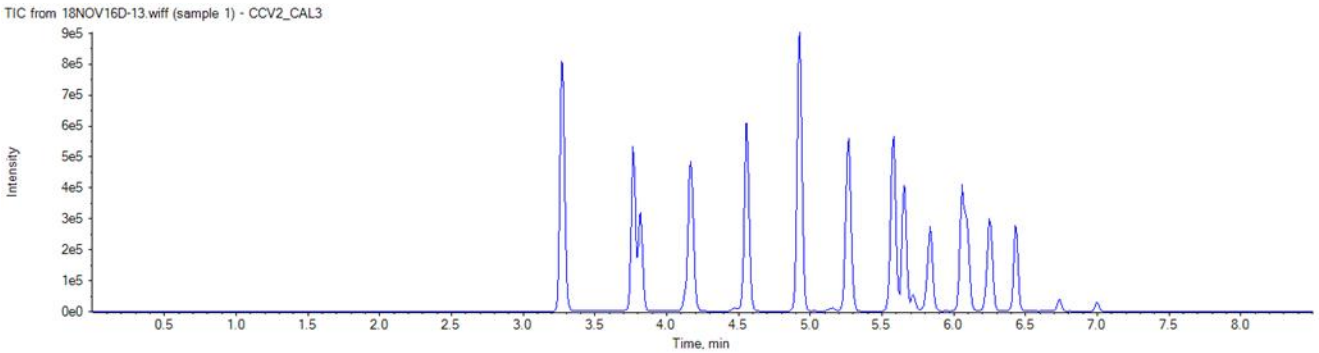
Analyte Quantitation Peak Table

Sample Name: CCV2_CAL3 **Instrument Name:** LM27631 **File Name:** 18NOV16D-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	3.27	1.000	333685.8		A	13C4-PFBA	3.27	809301.7	0.412	2.284
PFPeA	3.77	1.000	314813.4		A	13C5-PFPeA	3.77	782160.2	0.402	2.330
PFBS	3.82	1.000	171361.6		A	13C3-PFBS	3.82	431863.5	0.397	1.887
4:2-FTS	4.13	1.000	38184.8		A	13C2-4:2-FTS	4.13	52024.9	0.734	1.993
PFHxA	4.17	1.000	382585.3		A	13C5-PFHxA	4.17	706212.9	0.542	2.262
PFPeS	4.19	1.100	85975.6		A	13C3-PFBS	3.82	431863.5	0.199	1.933
PFHpA	4.56	1.000	386297.6		A	13C4-PFHpA	4.56	537206.2	0.719	2.384
PFHxS	4.56	1.000	125370.4		M	13C3-PFHxS	4.56	331095.5	0.379	1.836
6:2-FTS	4.91	1.000	32488.9		A	13C2-6:2-FTS	4.91	36704.5	0.885	2.142
PFHpS	4.92	1.080	129990.3		A	13C3-PFHxS	4.56	331095.5	0.393	2.067
PFOA	4.93	1.000	398630.7		A	13C8-PFOA	4.93	933649.4	0.427	2.280
PFOS	5.26	1.000	126914.0		M	13C8-PFOS	5.26	282530.0	0.449	1.964
PFNA	5.27	1.000	313216.9		A	13C9-PFNA	5.27	500861.6	0.625	2.255
PFNS	5.56	1.060	79657.3		A	13C8-PFOS	5.26	282530.0	0.282	1.973
PFDA	5.58	1.000	272986.6		A	13C6-PFDA	5.58	660833.4	0.413	2.190
8:2-FTS	5.58	1.000	25309.8		A	13C2-8:2-FTS	5.58	26262.4	0.964	2.247
PFOSA	5.65	1.000	273099.3		A	13C8-PFOSA	5.65	674079.8	0.405	1.979
NMeFOSAA	5.72	1.000	32080.3		A	d3-NMeFOSAA	5.72	79462.6	0.404	2.282
PFDS	5.81	1.110	64315.3		A	13C8-PFOS	5.26	282530.0	0.228	2.063
PFUnDA	5.84	1.000	228551.3		A	13C7-PFUnDA	5.84	260760.8	0.876	2.291
NEtFOSAA	5.85	1.000	27388.2		A	d5-NEtFOSAA	5.85	67140.0	0.408	2.138
PFDoDA	6.06	1.000	246493.8		A	13C2-PFDoDA	6.06	560649.1	0.440	2.239
10:2-FTS	6.08	1.090	15480.9		A	13C2-8:2-FTS	5.58	26262.4	0.589	1.963
NMePFOSAE	6.10	1.000	182202.8		A	d7-NMePFOSAE	6.09	343081.1	0.531	2.210
NMePFOSA	6.10	1.000	36506.7		A	d3-NMePFOSA	6.10	79406.4	0.460	2.268
PFDoS	6.23	1.180	33422.9		A	13C8-PFOS	5.26	282530.0	0.118	2.072
NEtPFOSAE	6.25	1.000	193092.5		A	d9-NEtPFOSAE	6.24	278917.2	0.692	2.221
NEtPFOSA	6.27	1.000	27931.8		A	d5-NEtPFOSA	6.26	63521.9	0.440	2.019
PFTrDA	6.26	1.030	195438.6		A	13C2-PFDoDA	6.06	560649.1	0.349	2.200
PFTeDA	6.43	1.000	169275.8		A	13C2-PFTeDA	6.43	421109.7	0.402	2.253
PFHxDA	6.74	1.050	75082.7		A	13C2-PFTeDA	6.43	421109.7	0.178	2.124
PFODA	7.00	1.090	60087.8		A	13C2-PFTeDA	6.43	421109.7	0.143	1.987

Total Ion Chromatogram

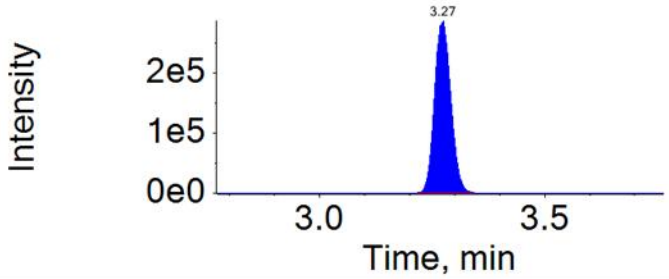


APPROVED
By JPT at 2:36 pm, 11/16/18

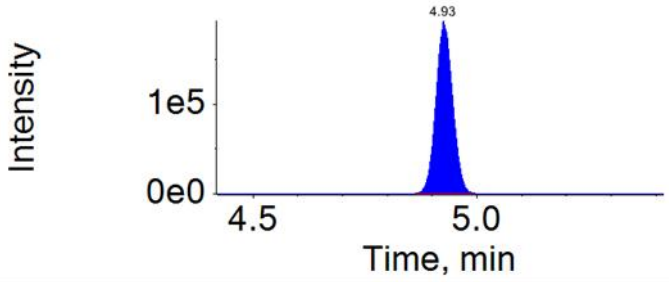
REVIEWED
By HMK at 9:06 am, 11/19/18

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV16DCCV1-3 11/16/2018 2:28:58 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

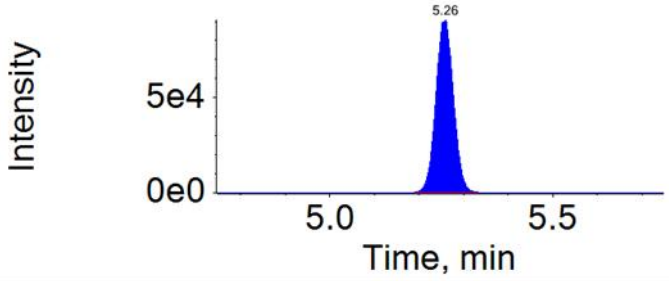
Injection Standard: 13C3-PFBA
216.0 / 172.0



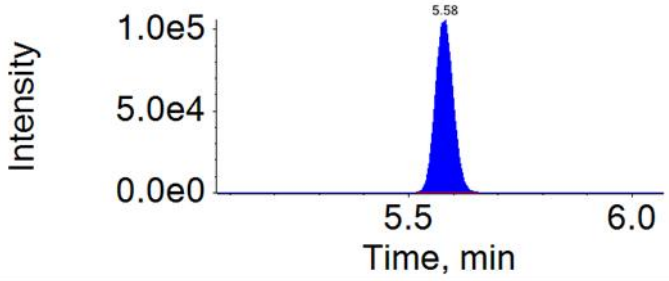
Injection Standard: 13C2-PFOA
415.0 / 370.0



Injection Standard: 13C4-PFOS
503.0 / 80.0



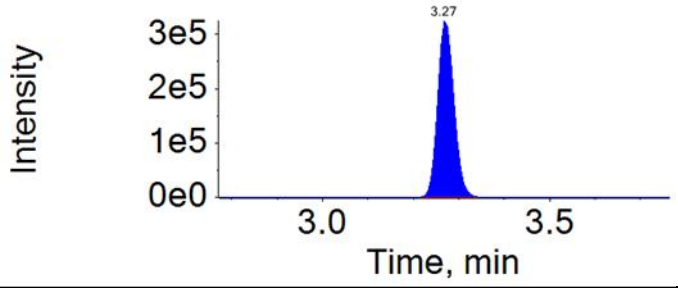
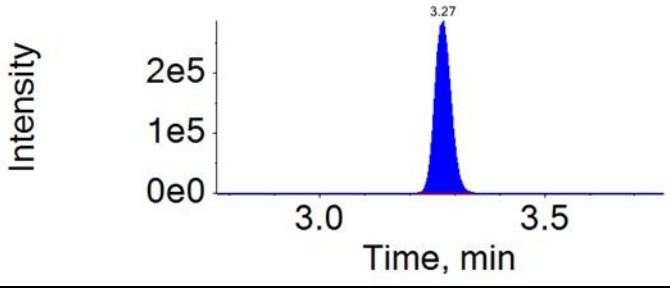
Injection Standard: 13C2-PFDA
515.0 / 470.0

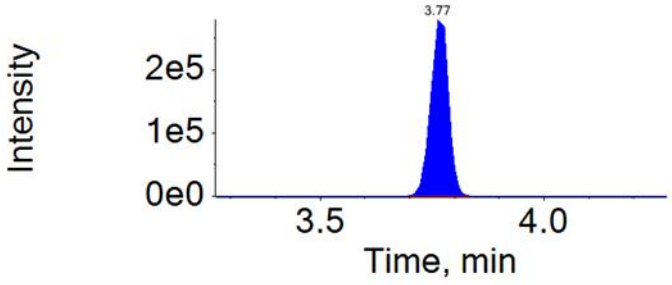
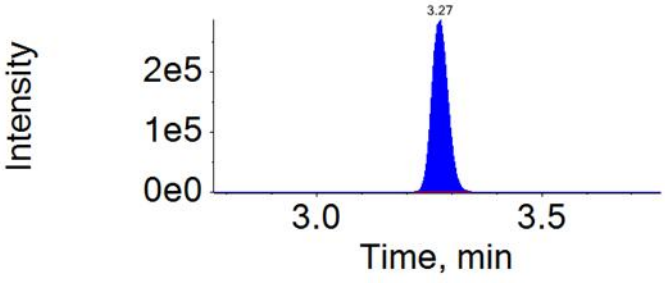


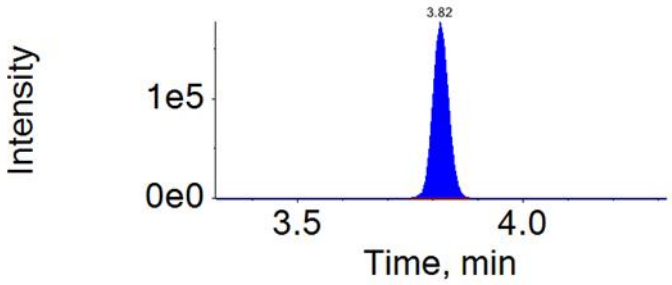
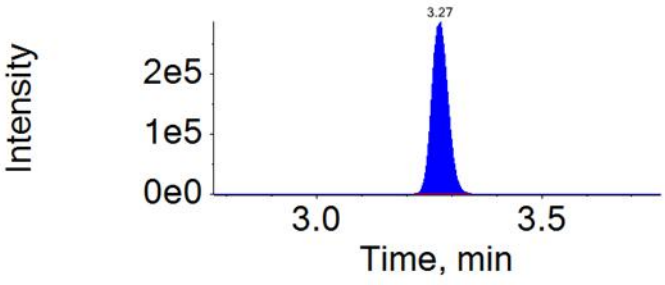
APPROVED
By JPT at 2:36 pm, 11/16/18

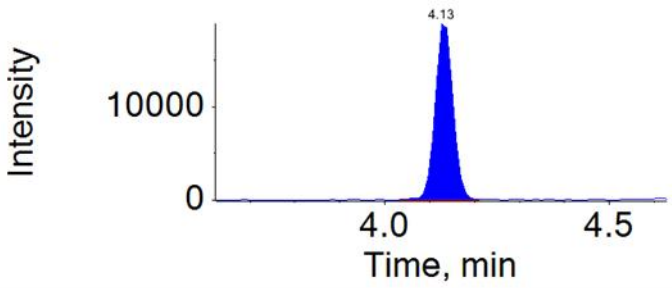
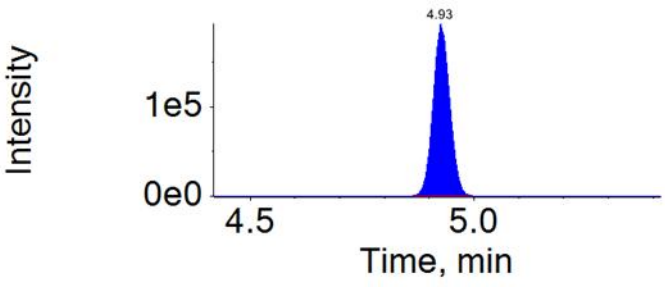
REVIEWED
By HMK at 9:06 am, 11/19/18

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV16DCCV1-3 11/16/2018 2:28:58 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
	

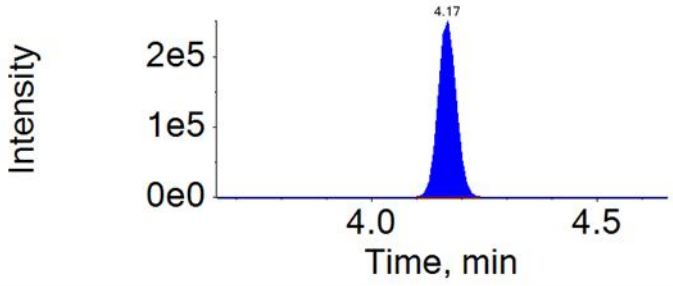
Extraction Standard: E13C2-4:2-FTS	Injection Standard: 13C2-PFOA
329.0 / 81.0	415.0 / 370.0
	

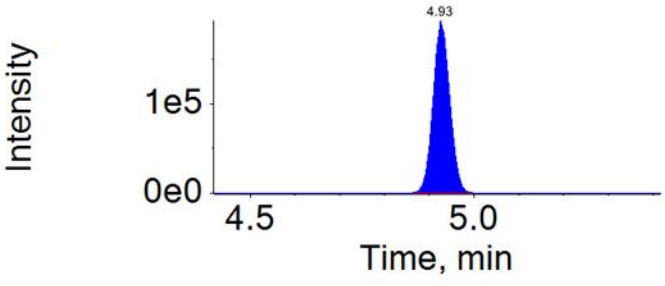
APPROVED
By JPT at 2:36 pm, 11/16/18

REVIEWED
By HMK at 9:06 am, 11/19/18

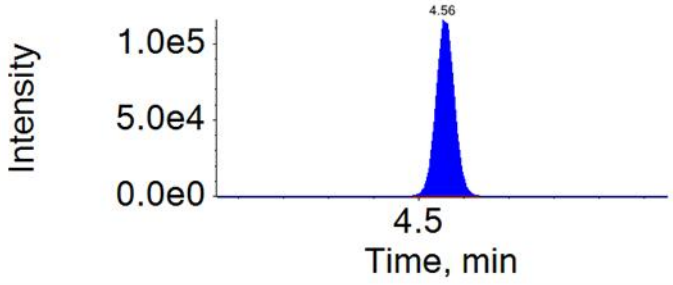
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV16DCCV1-3 11/16/2018 2:28:58 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

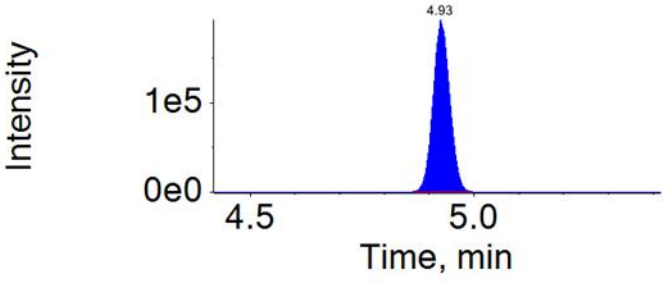
Extraction Standard: E13C5-PFHxA	Injection Standard: 13C2-PFOA
318.0 / 273.0	415.0 / 370.0



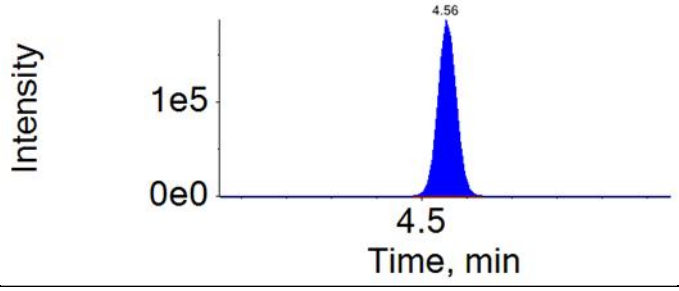


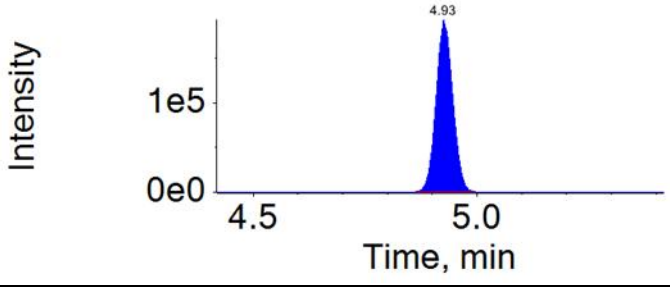
Extraction Standard: E13C3-PFHxS	Injection Standard: 13C2-PFOA
402.0 / 80.0	415.0 / 370.0



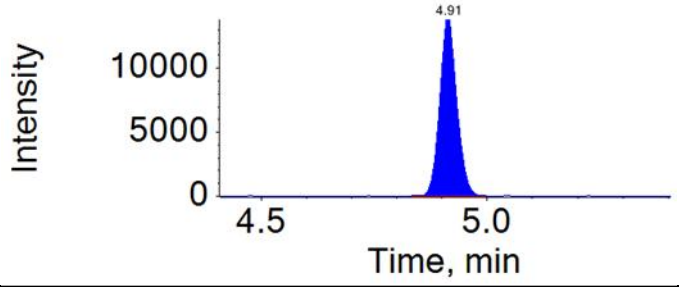


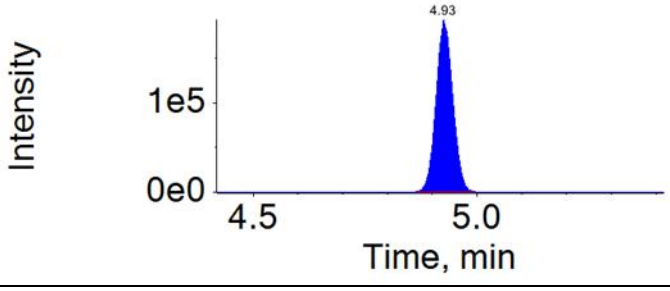
Extraction Standard: E13C4-PFHpA	Injection Standard: 13C2-PFOA
367.0 / 322.0	415.0 / 370.0





Extraction Standard: E13C2-6:2-FTS	Injection Standard: 13C2-PFOA
429.0 / 81.0	415.0 / 370.0



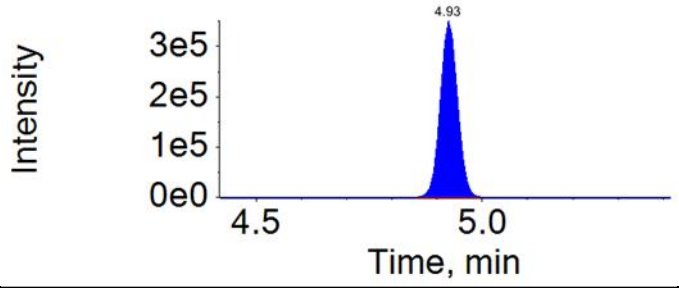


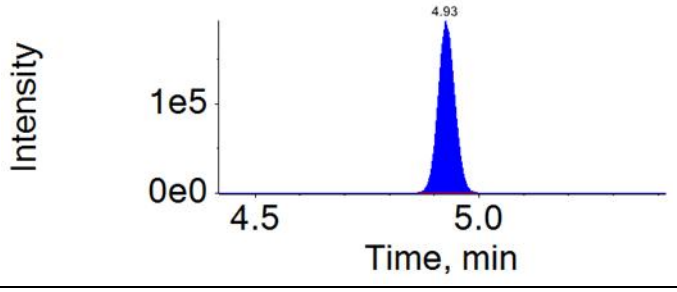
APPROVED
By JPT at 2:36 pm, 11/16/18

REVIEWED
By HMK at 9:06 am, 11/19/18

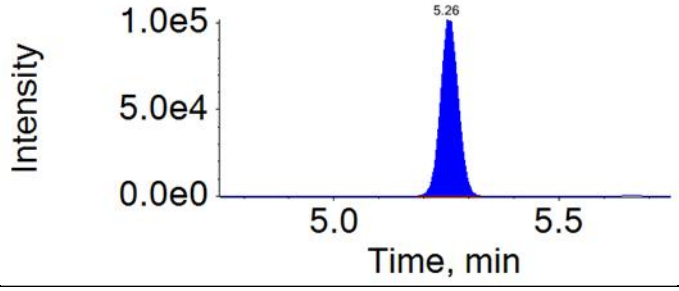
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV16DCCV1-3 11/16/2018 2:28:58 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

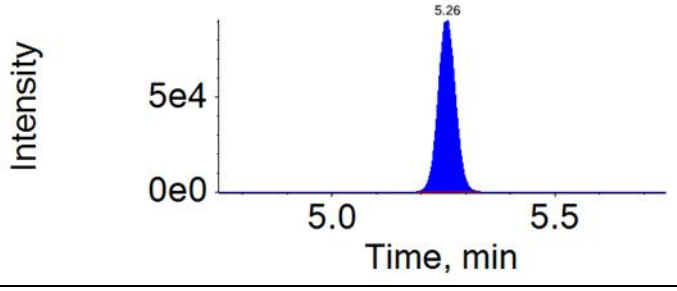
Extraction Standard: E13C8-PFOA	Injection Standard: 13C2-PFOA
421.0 / 376.0	415.0 / 370.0



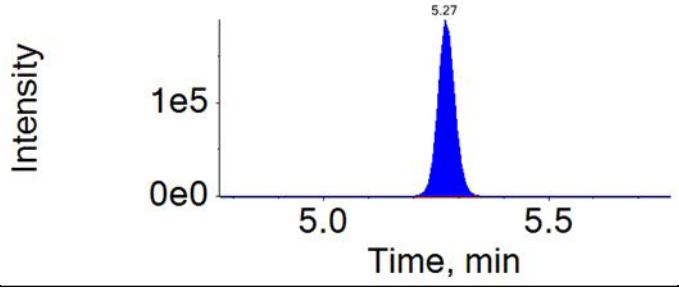


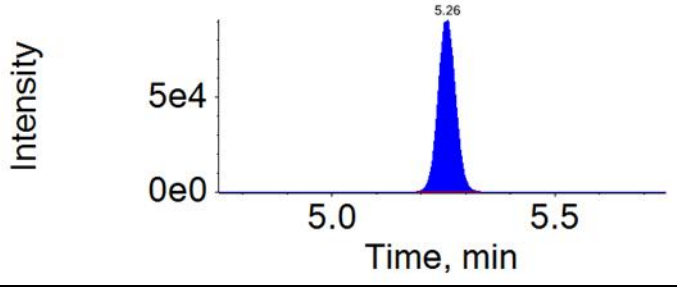
Extraction Standard: E13C8-PFOS	Injection Standard: 13C4-PFOS
507.0 / 80.0	503.0 / 80.0



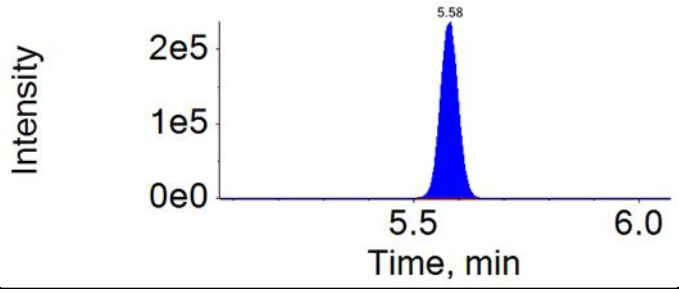


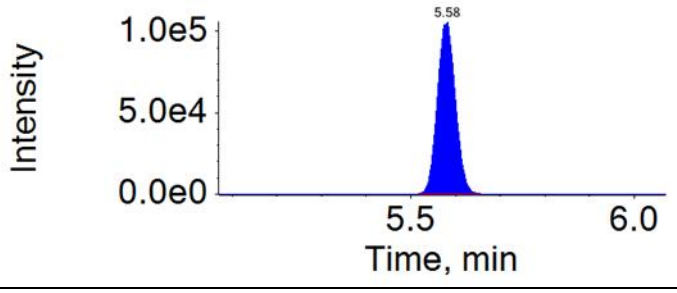
Extraction Standard: E13C9-PFNA	Injection Standard: 13C4-PFOS
472.0 / 427.0	503.0 / 80.0





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



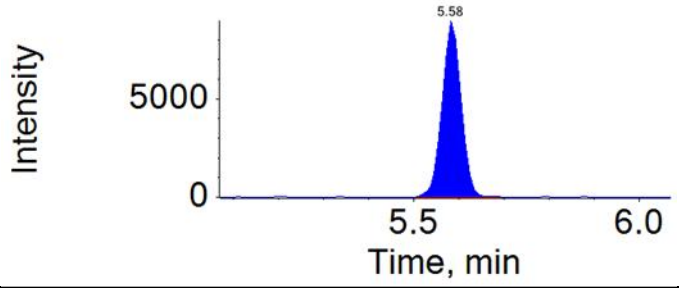


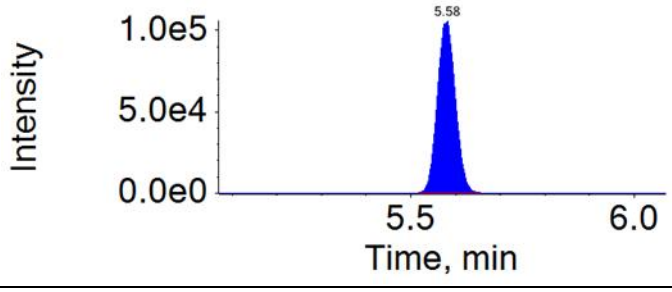
APPROVED
By JPT at 2:36 pm, 11/16/18

REVIEWED
By HMK at 9:06 am, 11/19/18

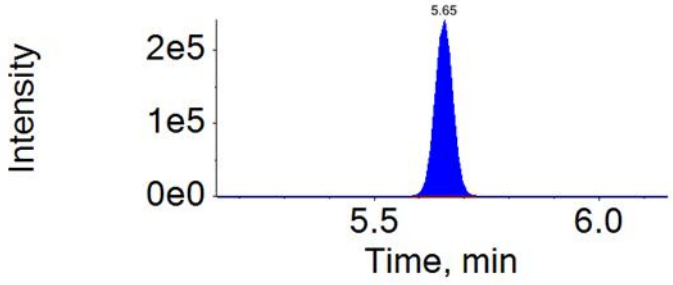
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV16DCCV1-3 11/16/2018 2:28:58 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

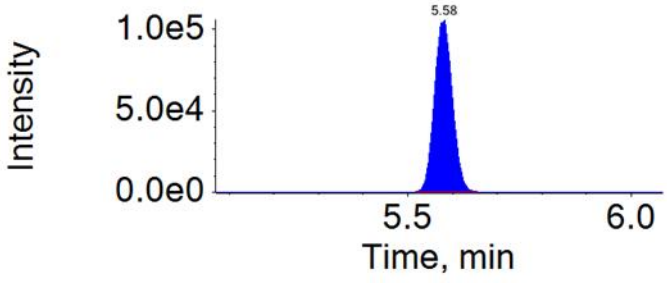
Extraction Standard: E13C2-8:2-FTS	Injection Standard: 13C2-PFDA
529.0 / 81.0	515.0 / 470.0



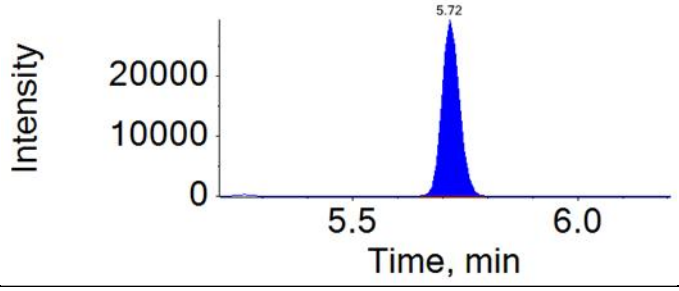


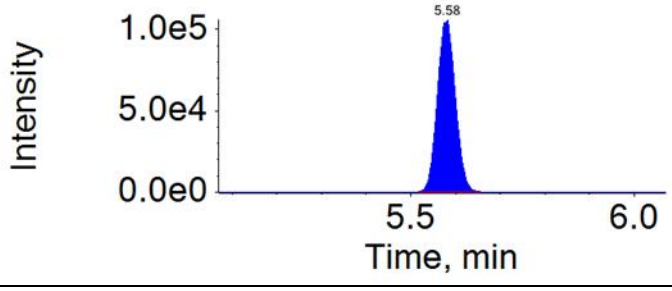
Extraction Standard: E13C8-PFOSA	Injection Standard: 13C2-PFDA
506.0 / 78.0	515.0 / 470.0



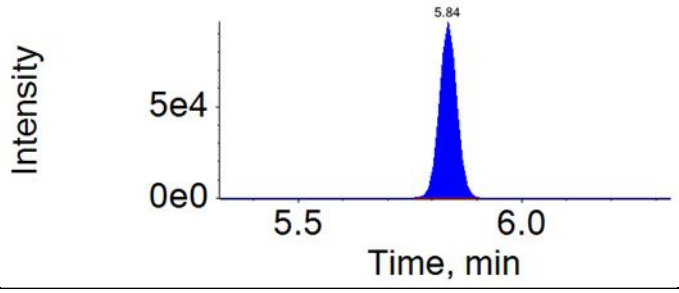


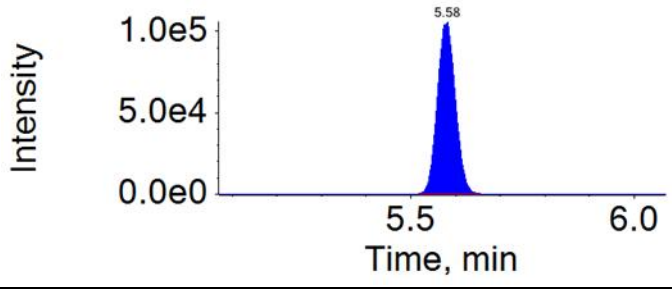
Extraction Standard: Ed3-NMeFOSAA	Injection Standard: 13C2-PFDA
573.0 / 419.0	515.0 / 470.0





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



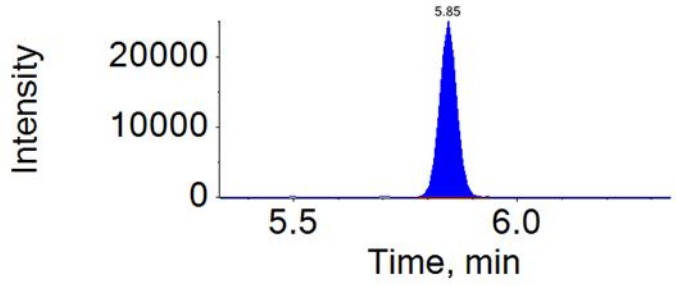


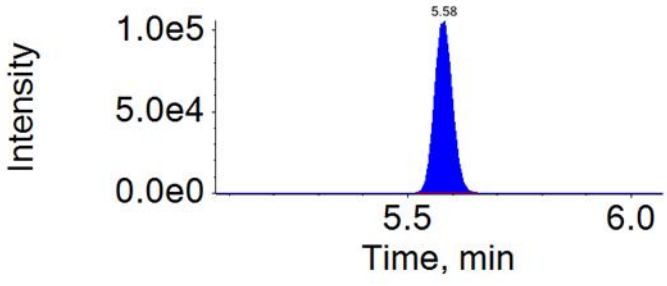
APPROVED
By JPT at 2:36 pm, 11/16/18

REVIEWED
By HMK at 9:06 am, 11/19/18

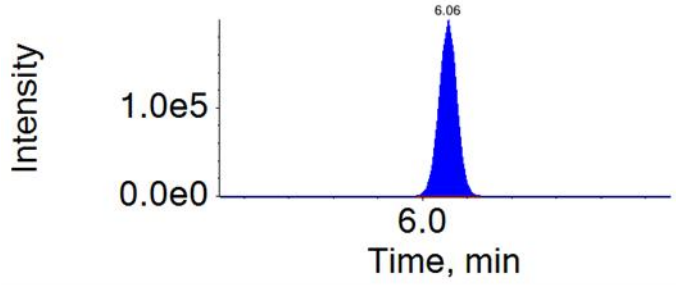
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV16DCCV1-3 11/16/2018 2:28:58 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

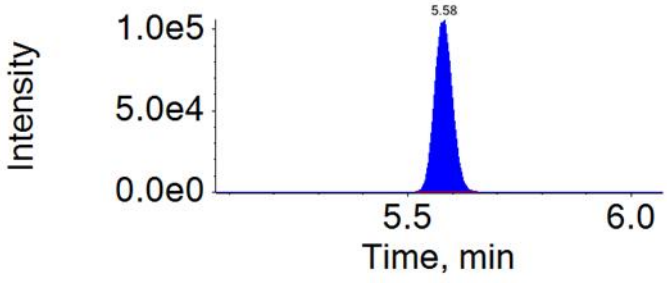
Extraction Standard: Ed5-NEtFOSAA	Injection Standard: 13C2-PFDA
589.0 / 419.0	515.0 / 470.0



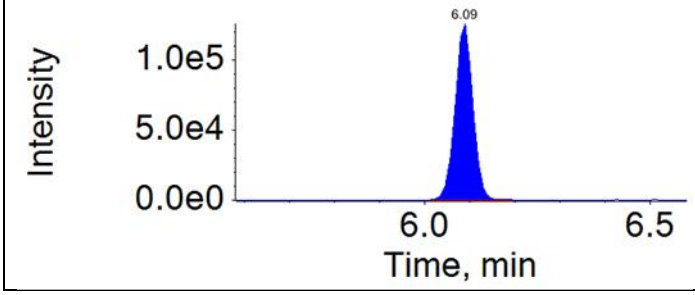


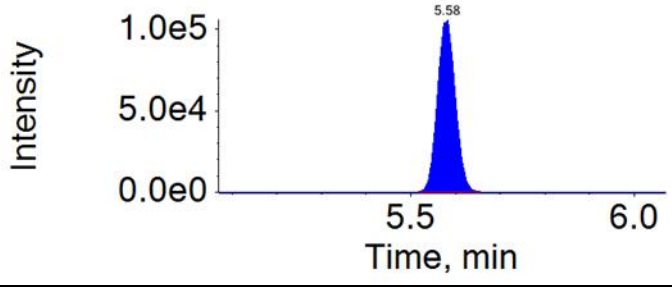
Extraction Standard: E13C2-PFDoDA	Injection Standard: 13C2-PFDA
615.0 / 570.0	515.0 / 470.0



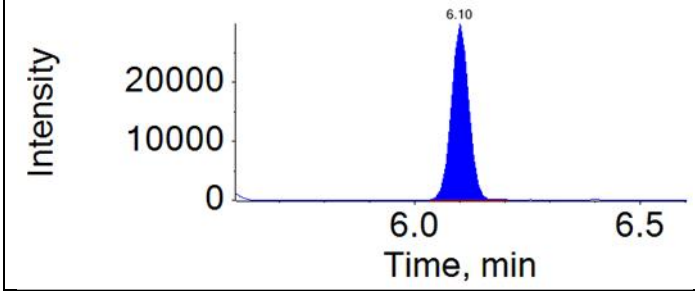


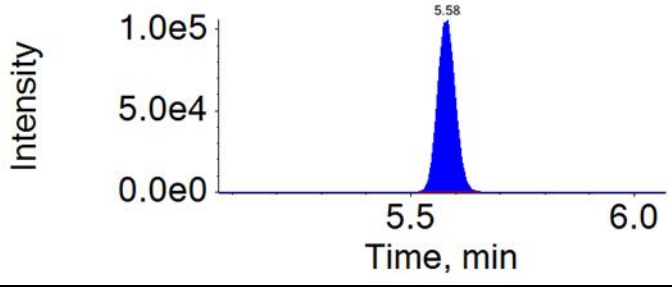
Extraction Standard: Ed7-NMePFOSAE	Injection Standard: 13C2-PFDA
623.0 / 59.0	515.0 / 470.0





Extraction Standard: Ed3-NMePFOSA	Injection Standard: 13C2-PFDA
515.0 / 169.0	515.0 / 470.0



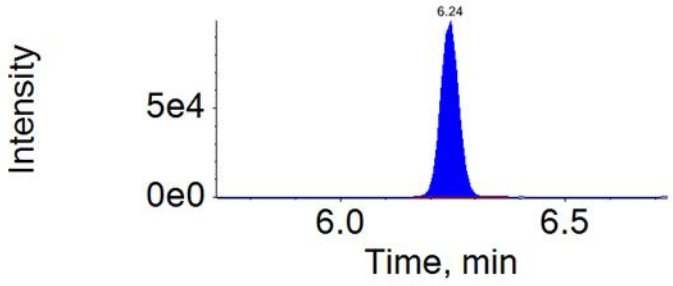


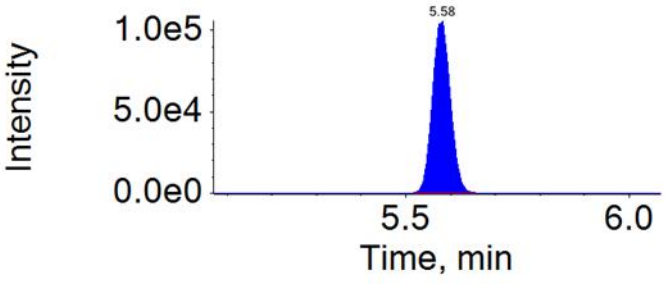
APPROVED
By JPT at 2:36 pm, 11/16/18

REVIEWED
By HMK at 9:06 am, 11/19/18

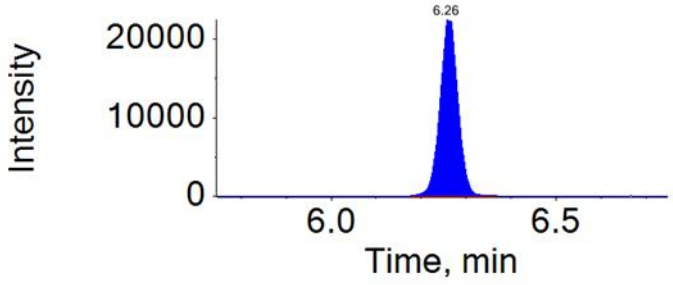
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV16DCCV1-3 11/16/2018 2:28:58 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

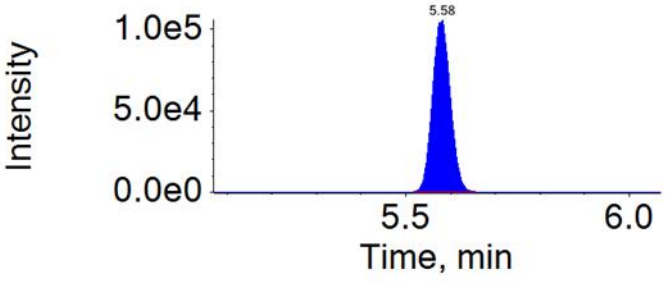
Extraction Standard: Ed9-NEtPFOSAE	Injection Standard: 13C2-PFDA
639.0 / 59.0	515.0 / 470.0



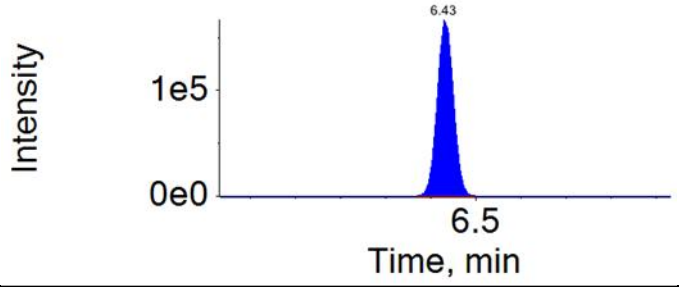


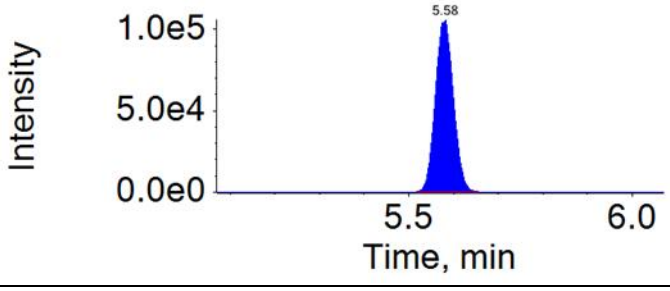
Extraction Standard: Ed5-NEtPFOSA	Injection Standard: 13C2-PFDA
531.0 / 169.0	515.0 / 470.0





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



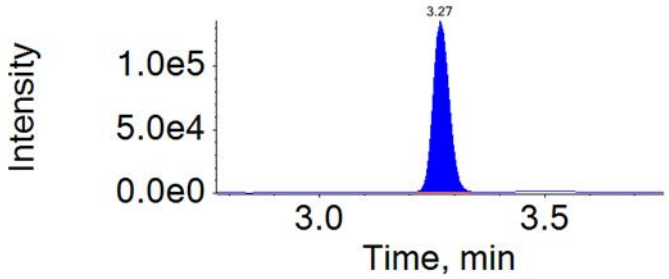


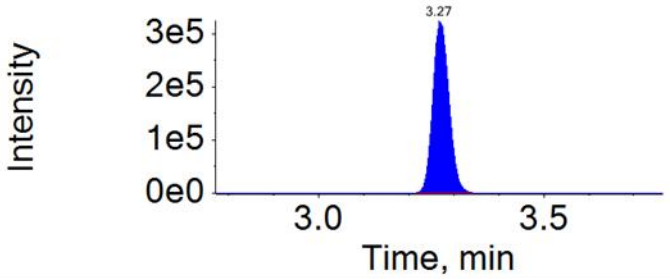
APPROVED
By JPT at 2:36 pm, 11/16/18

REVIEWED
By HMK at 9:06 am, 11/19/18

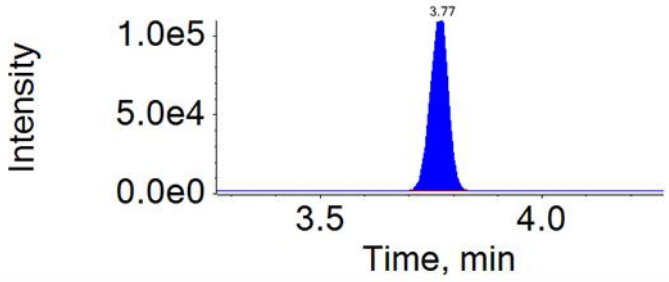
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV16DCCV1-3 11/16/2018 2:28:58 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

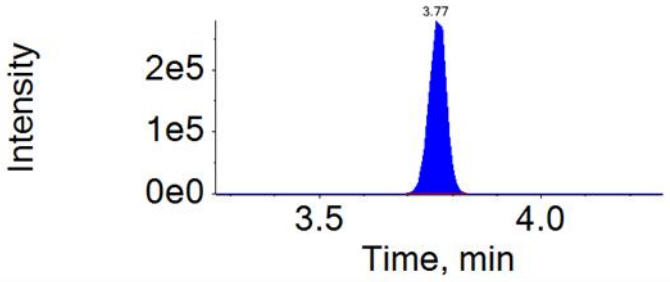
Analyte: PFBA	Extraction Standard: 13C4-PFBA
213.0 / 169.0	217.0 / 172.0



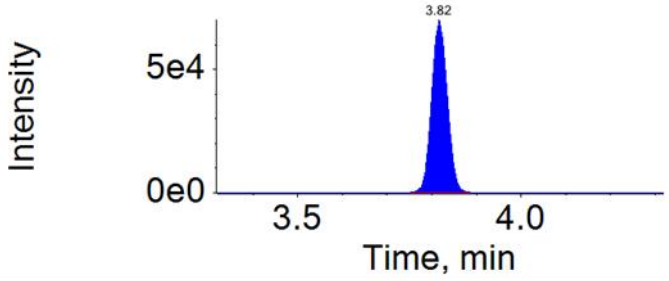


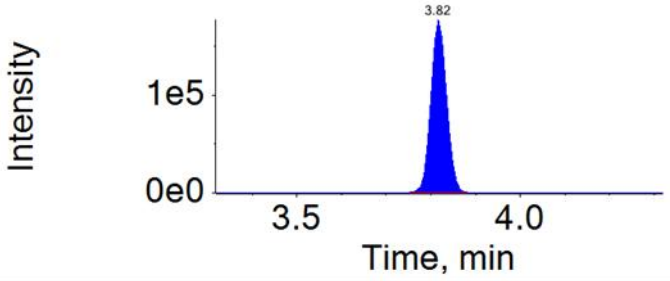
Analyte: PFPeA	Extraction Standard: 13C5-PFPeA
263.0 / 219.0	268.0 / 223.0



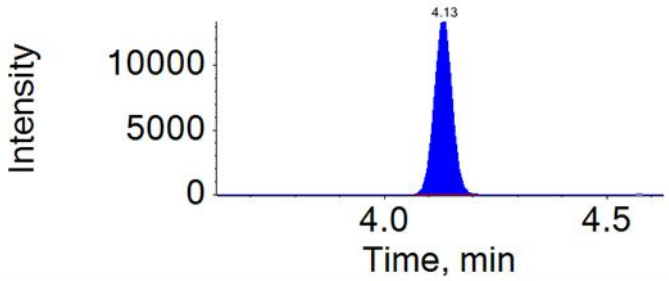


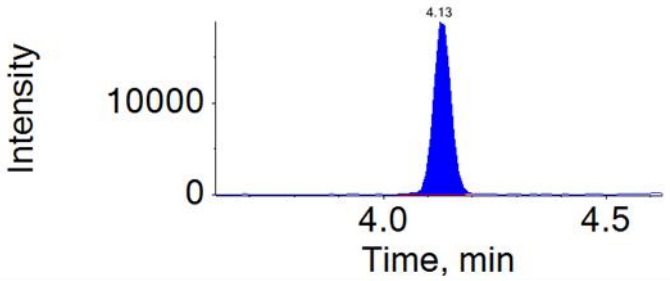
Analyte: PFBS	Extraction Standard: 13C3-PFBS
299.0 / 80.0	302.0 / 80.0





Analyte: 4:2-FTS	Extraction Standard: 13C2-4:2-FTS
327.0 / 307.0	329.0 / 81.0



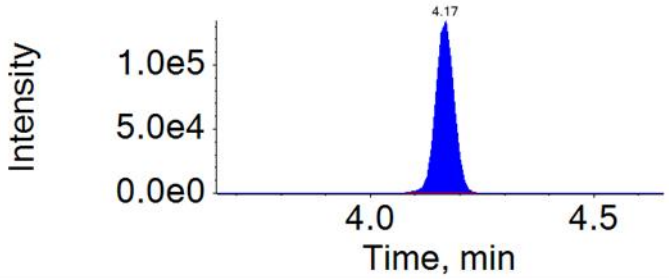


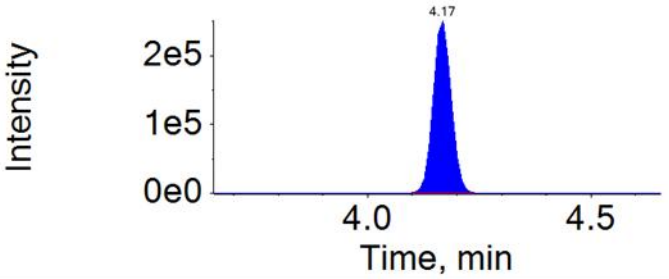
APPROVED
By JPT at 2:36 pm, 11/16/18

REVIEWED
By HMK at 9:06 am, 11/19/18

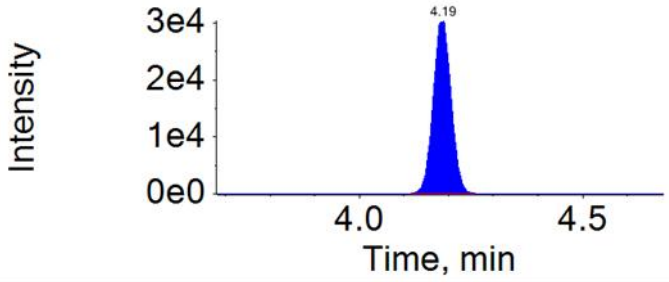
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV16DCCV1-3 11/16/2018 2:28:58 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

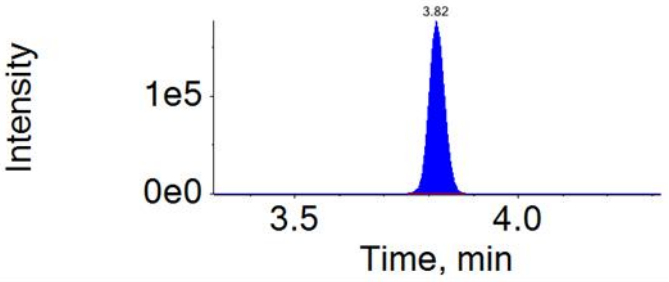
Analyte: PFHxA	Extraction Standard: 13C5-PFHxA
313.0 / 269.0	318.0 / 273.0



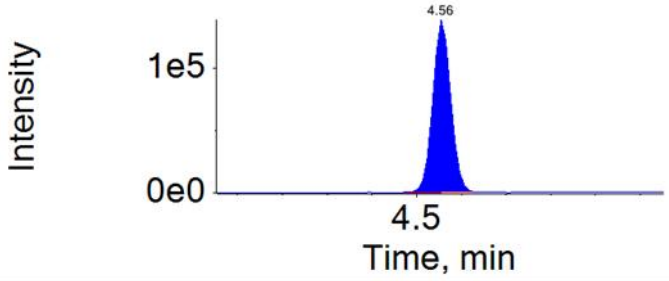


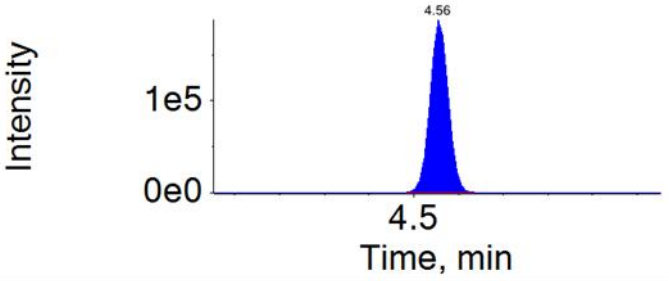
Analyte: PFPeS	Extraction Standard: 13C3-PFBS
349.0 / 80.0	302.0 / 80.0



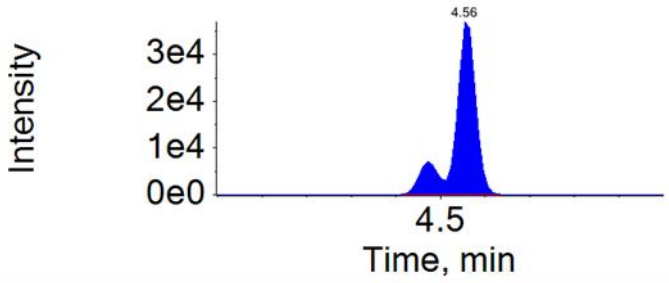


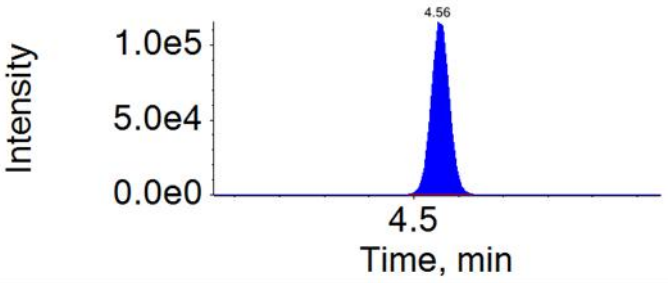
Analyte: PFHpA	Extraction Standard: 13C4-PFHpA
363.0 / 319.0	367.0 / 322.0





Analyte: PFHxS	Extraction Standard: 13C3-PFHxS
399.0 / 80.0	402.0 / 80.0



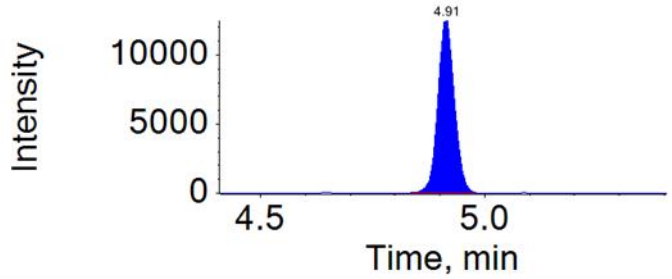


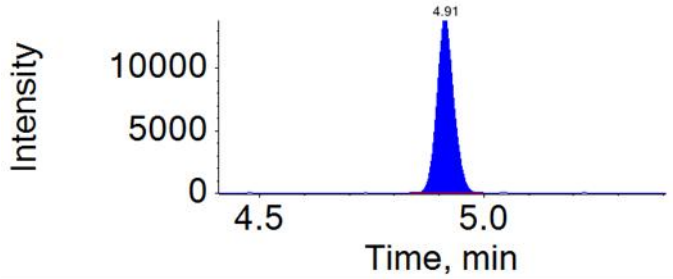
APPROVED
By JPT at 2:36 pm, 11/16/18

REVIEWED
By HMK at 9:06 am, 11/19/18

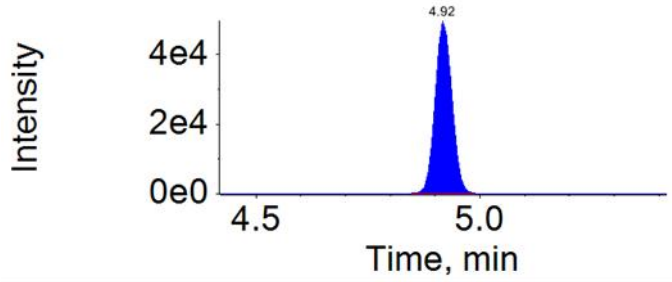
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV16DCCV1-3 11/16/2018 2:28:58 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

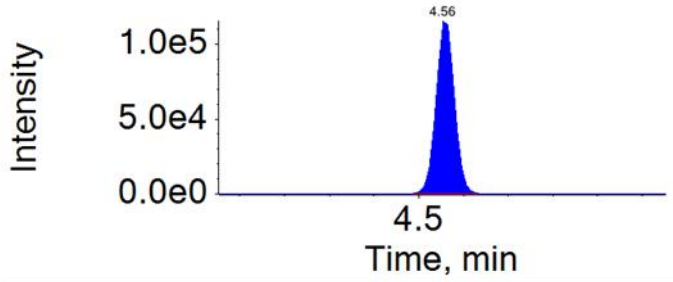
Analyte: 6:2-FTS	Extraction Standard: 13C2-6:2-FTS
427.0 / 407.0	429.0 / 81.0



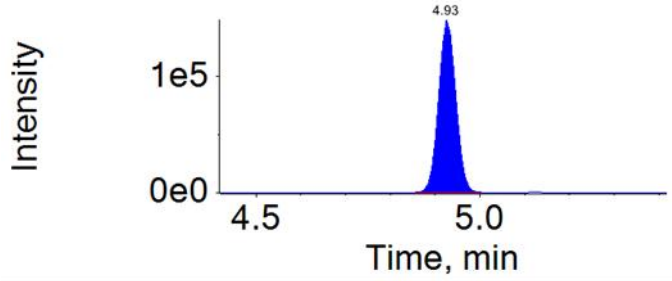


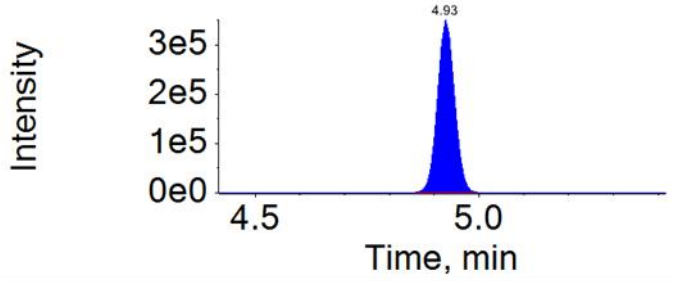
Analyte: PFHpS	Extraction Standard: 13C3-PFHxS
449.0 / 80.0	402.0 / 80.0



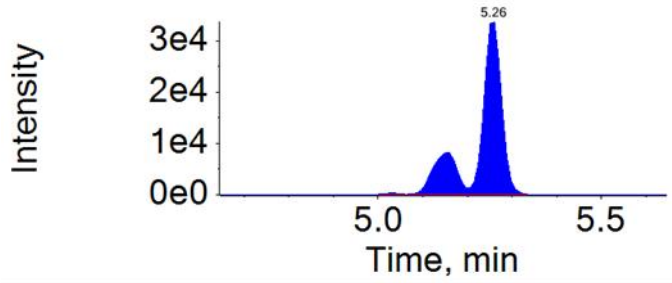


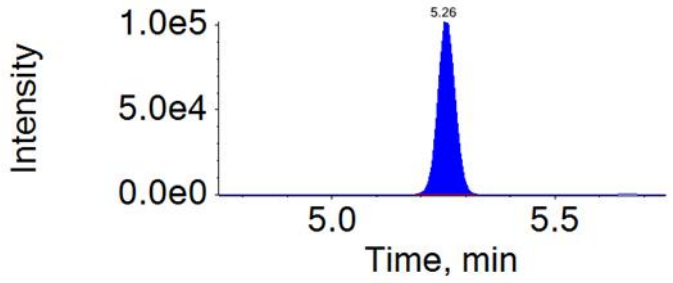
Analyte: PFOA	Extraction Standard: 13C8-PFOA
413.0 / 369.0	421.0 / 376.0





Analyte: PFOS	Extraction Standard: 13C8-PFOS
499.0 / 80.0	507.0 / 80.0



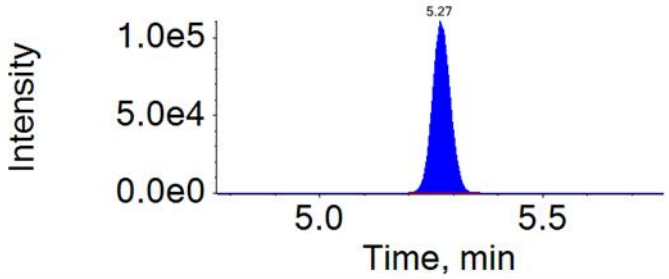


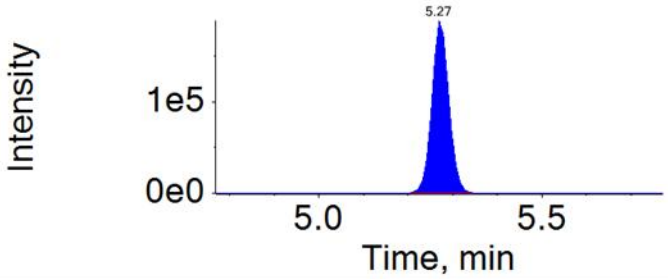
APPROVED
By JPT at 2:36 pm, 11/16/18

REVIEWED
By HMK at 9:06 am, 11/19/18

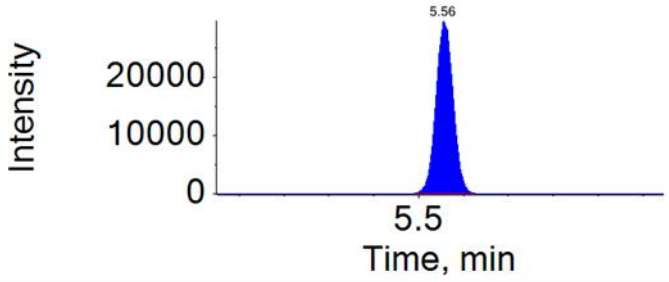
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV16DCCV1-3 11/16/2018 2:28:58 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

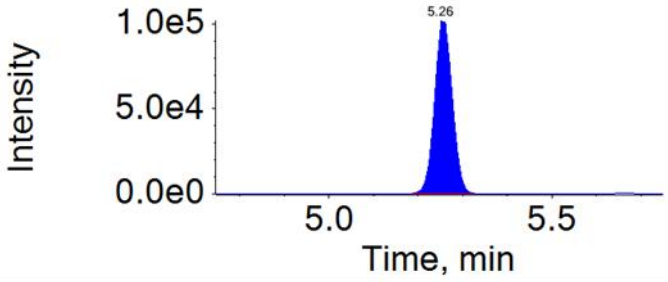
Analyte: PFNA	Extraction Standard: 13C9-PFNA
463.0 / 419.0	472.0 / 427.0



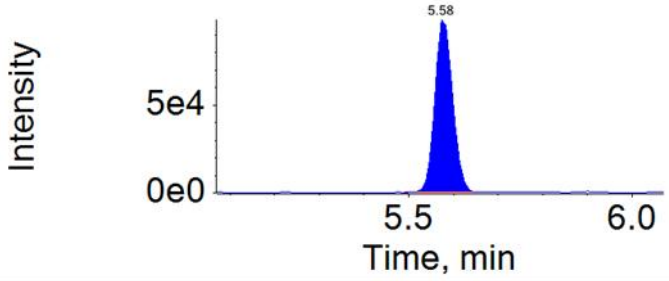


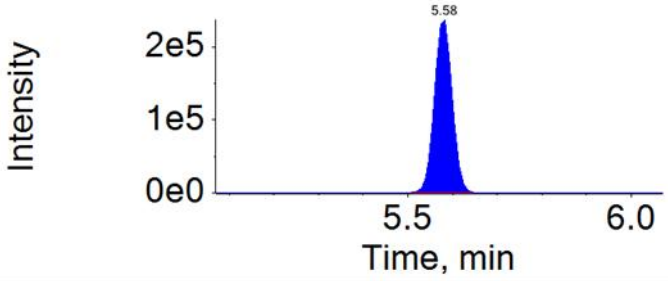
Analyte: PFNS	Extraction Standard: 13C8-PFOS
549.0 / 80.0	507.0 / 80.0



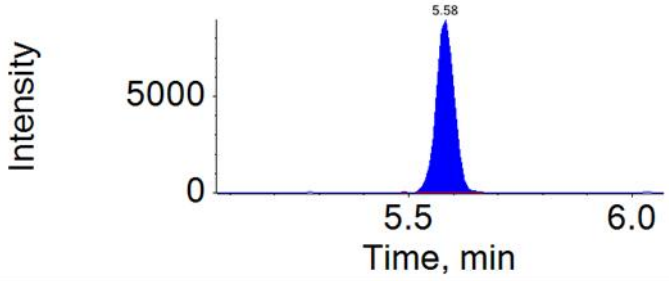


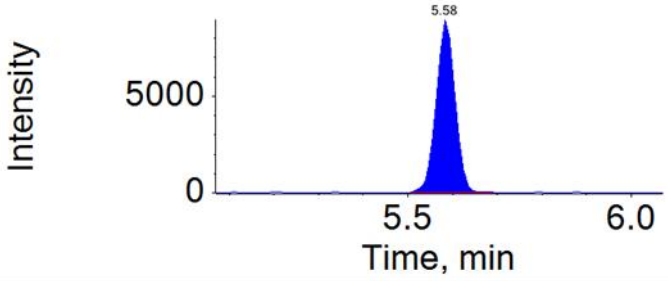
Analyte: PFDA	Extraction Standard: 13C6-PFDA
513.0 / 469.0	519.0 / 474.0





Analyte: 8:2-FTS	Extraction Standard: 13C2-8:2-FTS
527.0 / 507.0	529.0 / 81.0

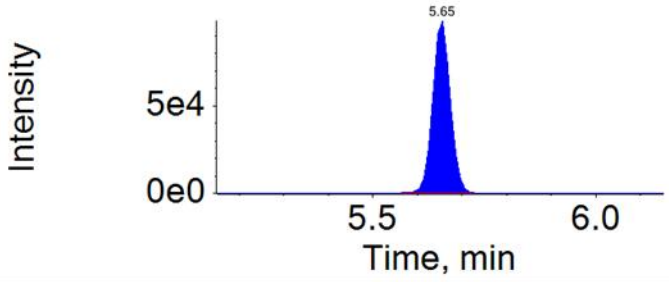
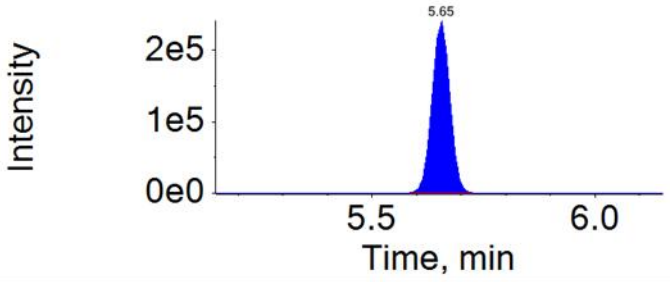


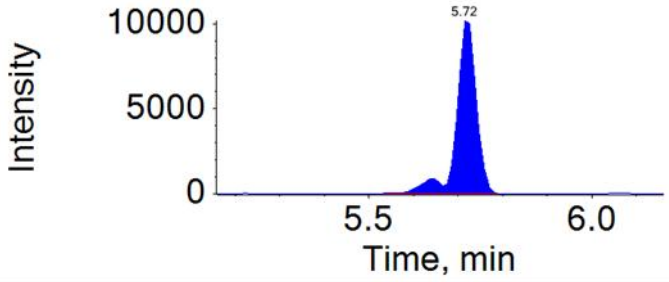
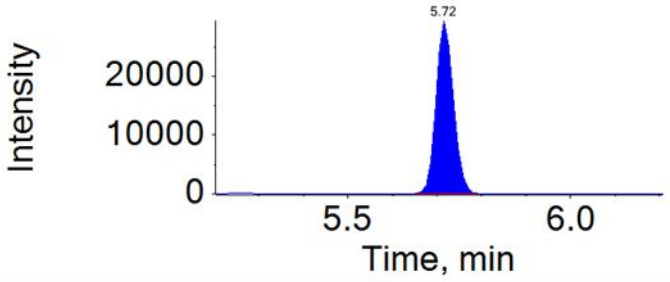


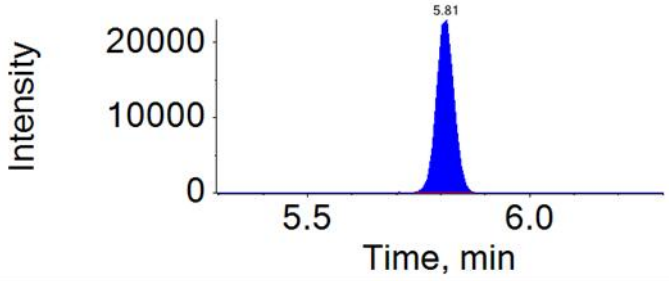
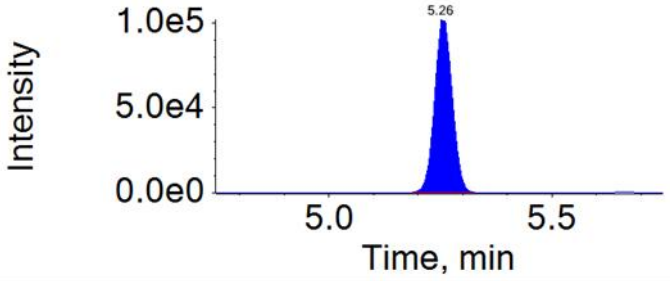
APPROVED
By JPT at 2:36 pm, 11/16/18

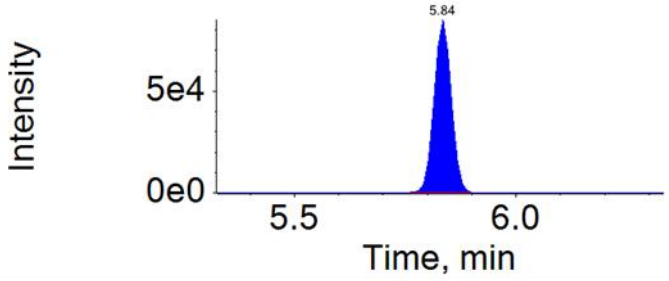
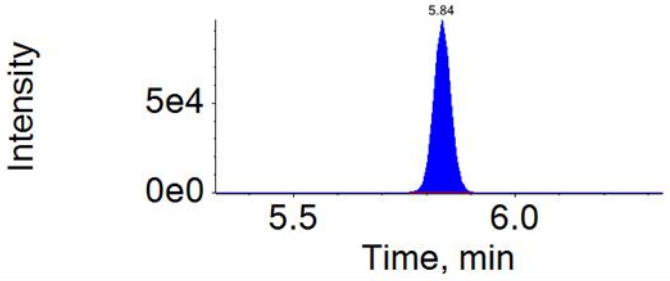
REVIEWED
By HMK at 9:06 am, 11/19/18

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV16DCCV1-3 11/16/2018 2:28:58 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
	

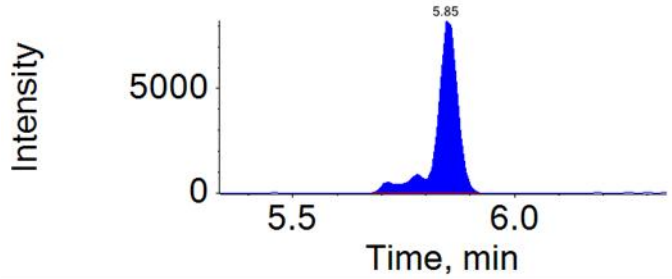
Analyte: PFUnDA	Extraction Standard: 13C7-PFUnDA
563.0 / 519.0	570.0 / 525.0
	

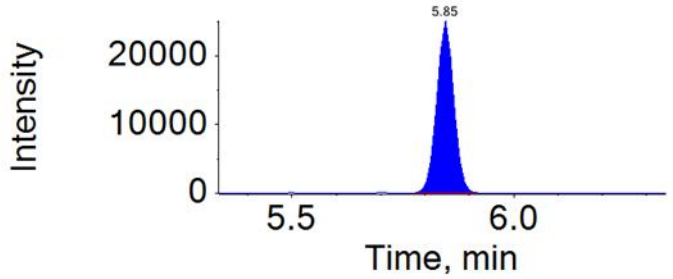
APPROVED
By JPT at 2:36 pm, 11/16/18

REVIEWED
By HMK at 9:06 am, 11/19/18

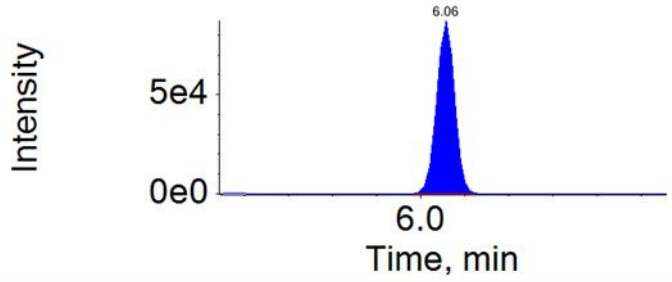
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV16DCCV1-3 11/16/2018 2:28:58 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

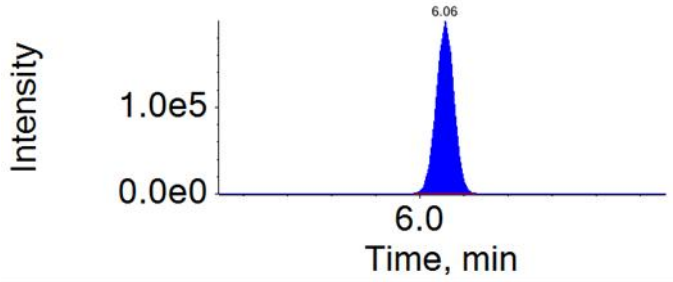
Analyte: NEtFOSAA	Extraction Standard: d5-NEtFOSAA
584.0 / 419.0	589.0 / 419.0



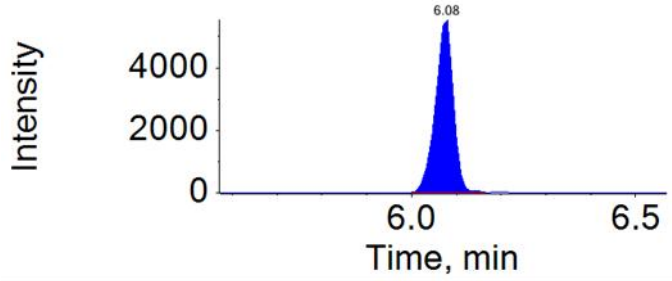


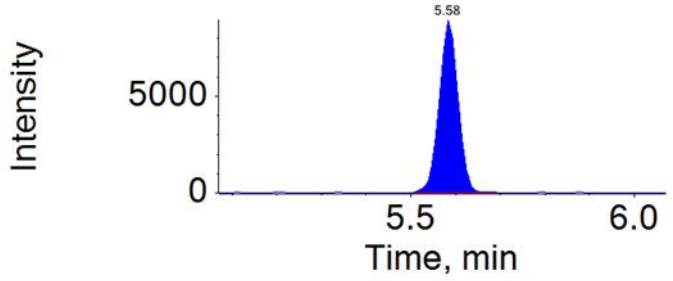
Analyte: PFDoDA	Extraction Standard: 13C2-PFDoDA
613.0 / 569.0	615.0 / 570.0



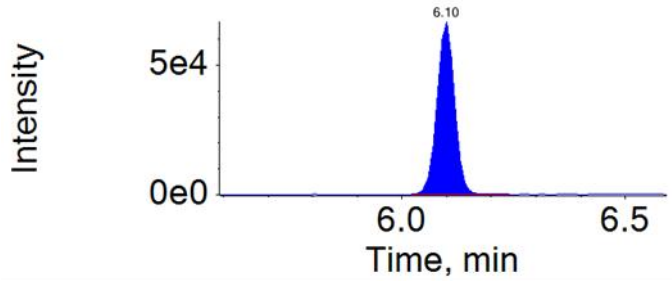


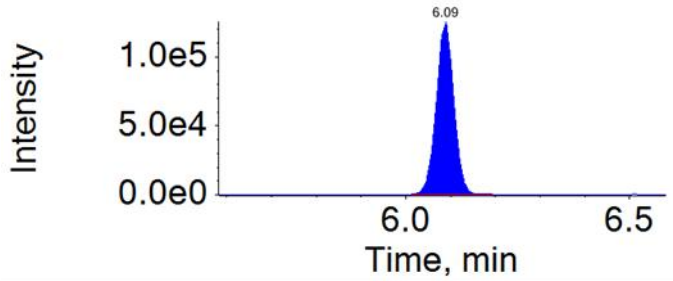
Analyte: 10:2-FTS	Extraction Standard: 13C2-8:2-FTS
627.0 / 607.0	529.0 / 81.0





Analyte: NMePFOSAE	Extraction Standard: d7-NMePFOSAE
616.0 / 59.0	623.0 / 59.0



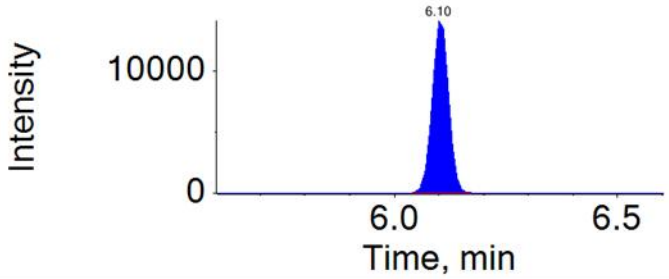


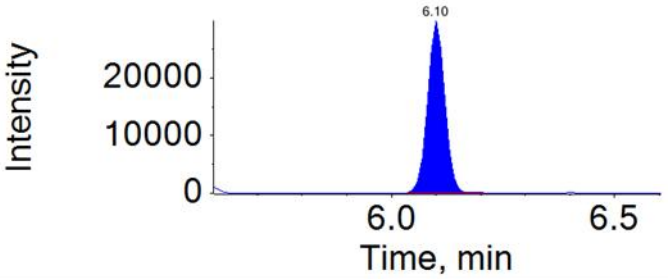
APPROVED
By JPT at 2:36 pm, 11/16/18

REVIEWED
By HMK at 9:06 am, 11/19/18

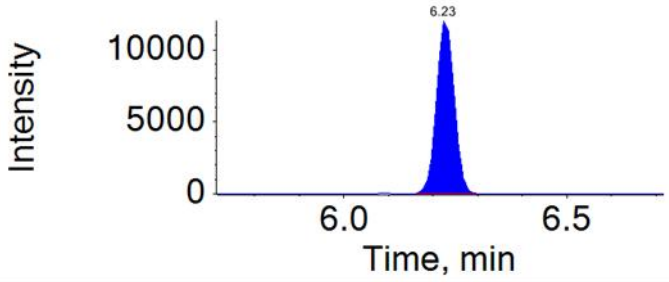
ICAL Name: 18NOV12DCAL **Result Table:** 18NOV16DCCV1-3 11/16/2018 2:28:58 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

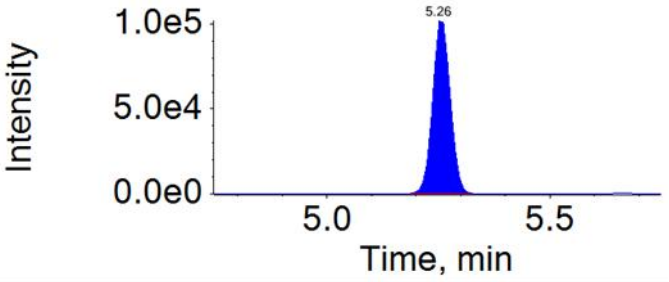
Analyte: NMePFOSA	Extraction Standard: d3-NMePFOSA
512.0 / 169.0	515.0 / 169.0



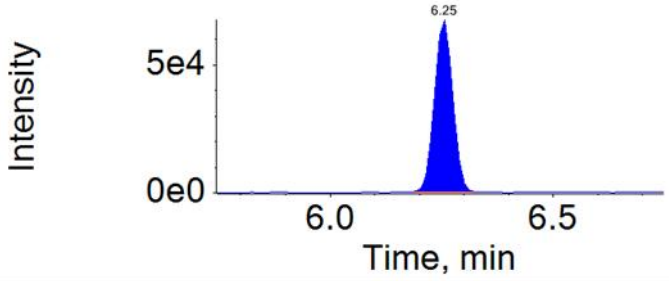


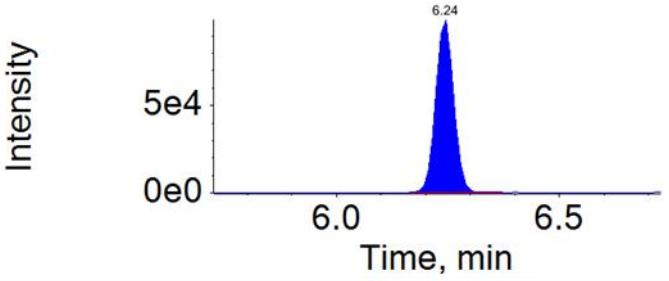
Analyte: PFDoS	Extraction Standard: 13C8-PFOS
699.0 / 80.0	507.0 / 80.0



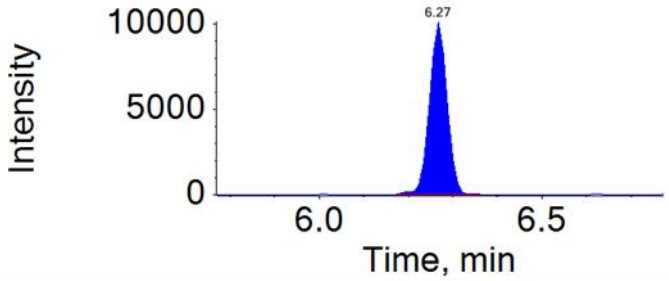


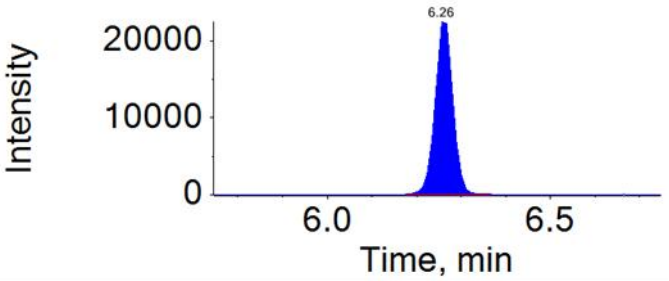
Analyte: NEtPFOSAE	Extraction Standard: d9-NEtPFOSAE
630.0 / 59.0	639.0 / 59.0





Analyte: NEtPFOSA	Extraction Standard: d5-NEtPFOSA
526.0 / 169.0	531.0 / 169.0

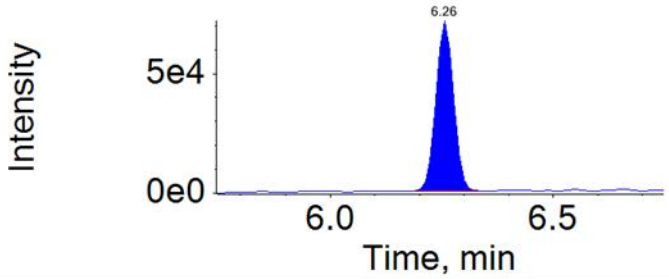
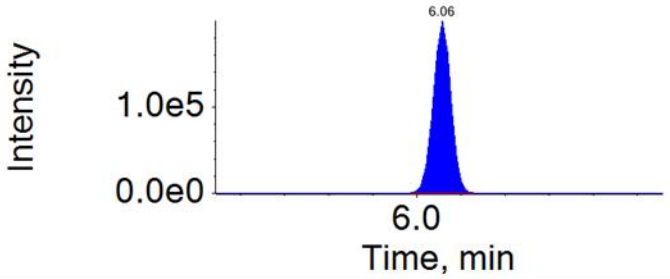


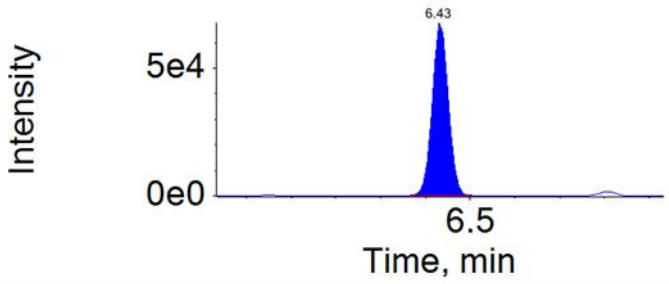
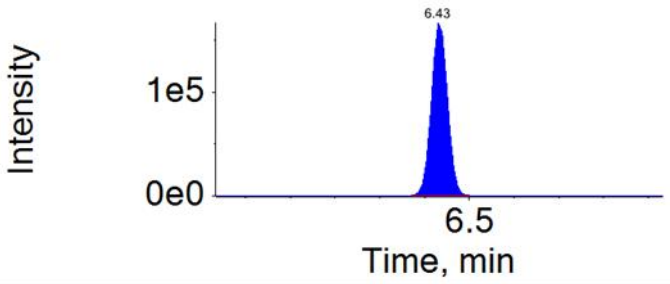


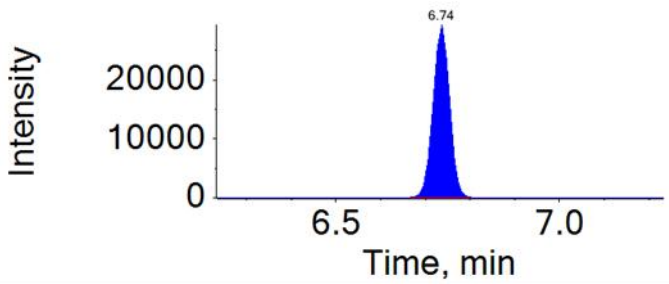
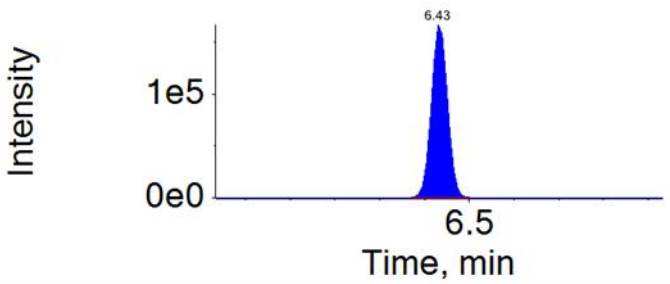
APPROVED
By JPT at 2:36 pm, 11/16/18

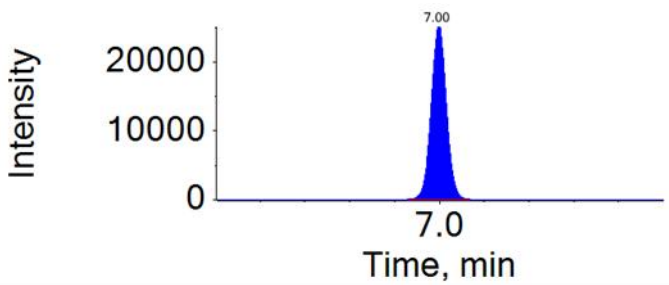
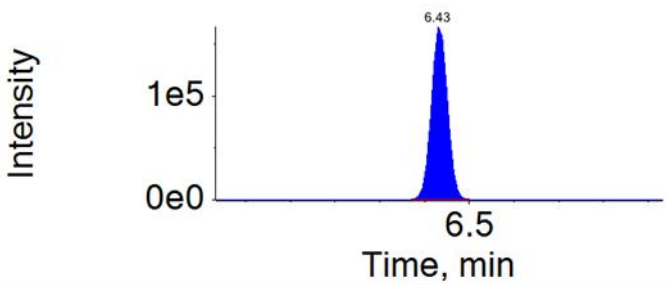
REVIEWED
By HMK at 9:06 am, 11/19/18

ICAL Name: 18NOV12DCAL **Result Table:** 18NOV16DCCV1-3 11/16/2018 2:28:58 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
	

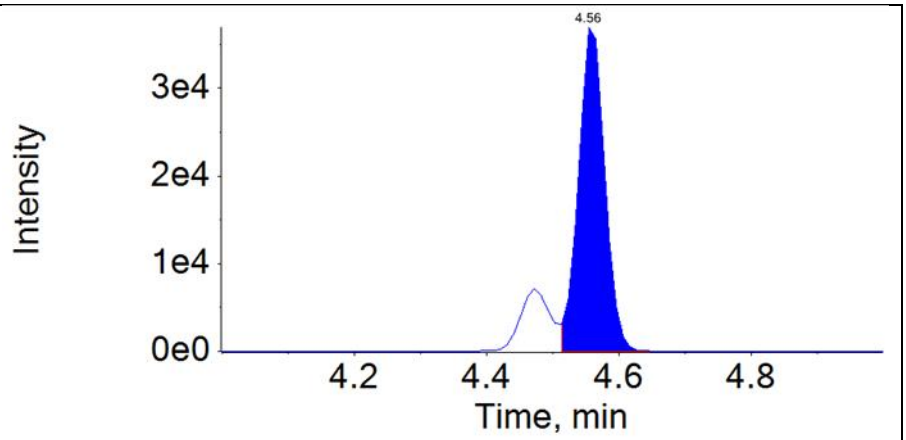
Analyte: PFODA	Extraction Standard: 13C2-PFTeDA
913.0 / 869.0	715.0 / 670.0
	

APPROVED
By JPT at 2:36 pm, 11/16/18

REVIEWED
By HMK at 9:06 am, 11/19/18

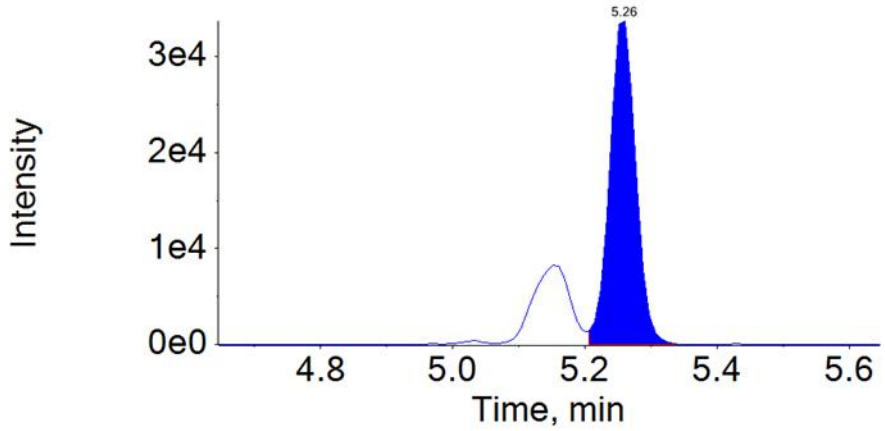
Results Table Name: 18NOV16DCCV1-3
Results Table Date: 11/16/2018 2:28:58 PM
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

Component Name:
PFHxS
RT (min.):
4.56
Peak Area:
102731.7
Mass Range:
399.0 / 80.0
File Name:
18NOV16D-13.wiff
Sample Name:
CCV2_CAL3



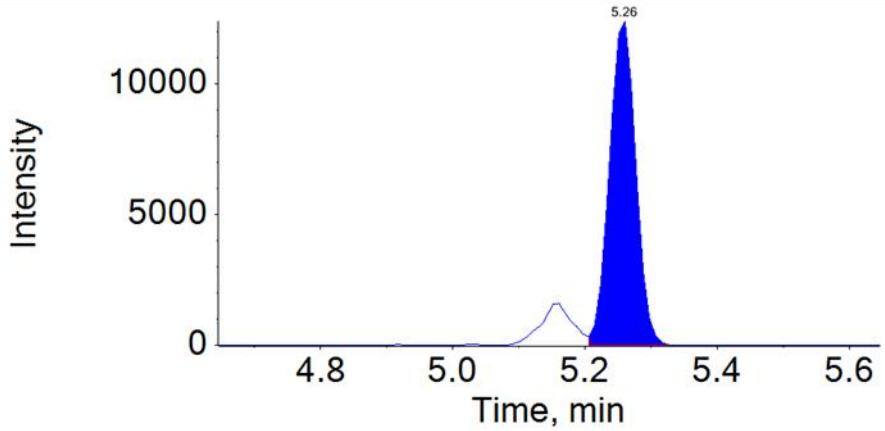
Integration Comment: incorrect integration

Component Name:
PFOS
RT (min.):
5.26
Peak Area:
93200.9
Mass Range:
499.0 / 80.0
File Name:
18NOV16D-13.wiff
Sample Name:
CCV2_CAL3



Integration Comment: incorrect integration

Component Name:
PFOS_2
RT (min.):
5.26
Peak Area:
34413.5
Mass Range:
499.0 / 99.0
File Name:
18NOV16D-13.wiff
Sample Name:
CCV2_CAL3



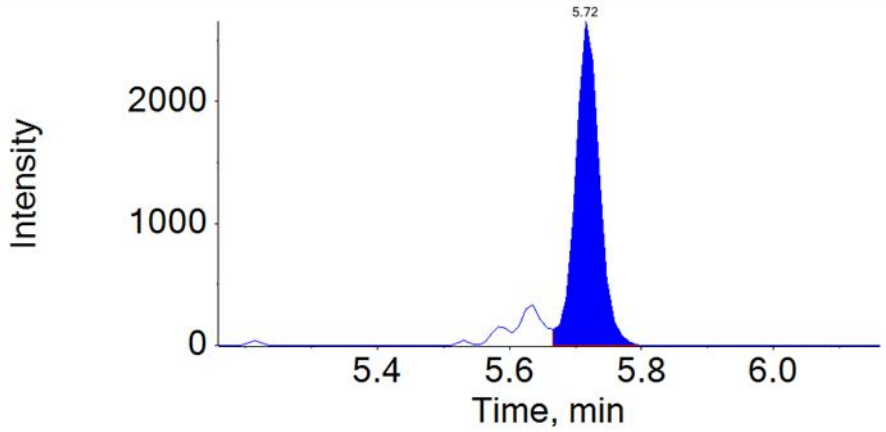
Integration Comment: incorrect integration

APPROVED
By JPT at 2:36 pm, 11/16/18

REVIEWED
By HMK at 9:06 am, 11/19/18

Results Table Name: 18NOV16DCCV1-3
Results Table Date: 11/16/2018 2:28:58 PM
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

Component Name:
NMeFOSAA_2
RT (min.):
5.72
Peak Area:
6657.6
Mass Range:
570.0 / 483.0
File Name:
18NOV16D-13.wiff
Sample Name:
CCV2_CAL3



Integration Comment: incorrect integration

APPROVED
By JPT at 2:36 pm, 11/16/18

REVIEWED
By HMK at 9:06 am, 11/19/18

Results Table Name: 18NOV16DCCV1-3
Results Table Date: 11/16/2018 2:28:58 PM

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

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By JPT at 2:36 pm, 11/16/18

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By HMK at 9:06 am, 11/19/18

Ion Ratio Report

Sample Name: CCV2_CAL3 **Instrument Name:** LM27631 **File Name:** 18NOV16D-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	3.82	1.00	171361.6	A	N/A	1.0000			
PFBS_2	3.82	1.00	62005.0	A	N/A	0.3618	-1	50	
4:2-FTS	4.13	1.00	38184.8	A	N/A	1.0000			
4:2 FTS_2	4.13	1.00	22598.2	A	N/A	0.5918		#NA!	
PFHxA	4.17	1.00	382585.3	A	N/A	1.0000			
PFHxA_2	4.16	1.00	3794.9	A	N/A	0.0099	-16	50	
PFPeS	4.19	1.10	85975.6	A	N/A	1.0000			
PFPeS_2	4.19	1.10	45036.4	A	N/A	0.5238	1	50	
PFHpA	4.56	1.00	386297.6	A	N/A	1.0000			
PFHpA_2	4.56	1.00	20400.9	A	N/A	0.0528	-6	50	
PFHxS	4.56	1.00	125370.4	M	N/A	1.0000			
PFHxS_2	4.56	1.00	45779.6	A	N/A	0.3652	6	50	
6:2-FTS	4.91	1.00	32488.9	A	N/A	1.0000			
6:2 FTS_2	4.91	1.00	19459.0	A	N/A	0.5989		#NA!	
PFHpS	4.92	1.08	129990.3	A	N/A	1.0000			
PFHpS_2	4.92	1.08	53256.4	A	N/A	0.4097	1	50	
PFOA	4.93	1.00	398630.7	A	N/A	1.0000			
PFOA_2	4.92	1.00	23590.8	A	N/A	0.0592	4	50	
PFOS	5.26	1.00	126914.0	M	N/A	1.0000			
PFOS_2	5.26	1.00	39832.2	M	N/A	0.3139	6	50	
PFNA	5.27	1.00	313216.9	A	N/A	1.0000			
PFNA_2	5.27	1.00	6686.1	A	N/A	0.0213	-6	50	
PFNS	5.56	1.06	79657.3	A	N/A	1.0000			
PFNS_2	5.56	1.06	37668.1	A	N/A	0.4729	-1	50	
PFDA	5.58	1.00	272986.6	A	N/A	1.0000			
PFDA_2	5.57	1.00	1799.8	A	N/A	0.0066	-17	50	
8:2-FTS	5.58	1.00	25309.8	A	N/A	1.0000			
8:2 FTS_2	5.58	1.00	14887.4	A	N/A	0.5882		#NA!	
NMeFOSAA	5.72	1.00	32080.3	A	N/A	1.0000			
NMeFOSAA_2	5.72	1.00	7800.0	M	N/A	0.2431	-6	50	
PFDS	5.81	1.11	64315.3	A	N/A	1.0000			
PFDS_2	5.81	1.11	31933.3	A	N/A	0.4965	-2	50	
PFUnDA	5.84	1.00	228551.3	A	N/A	1.0000			
PFUnDA_2	5.84	1.00	649.8	A	N/A	0.0028	-49	50	
NEtFOSAA	5.85	1.00	27388.2	A	N/A	1.0000			
NEtFOSAA_2	5.85	1.00	19270.2	A	N/A	0.7036	-2	50	
PFDoDA	6.06	1.00	246493.8	A	N/A	1.0000			
PFDoDA_2	6.06	1.00	2658.1	A	N/A	0.0108	-30	50	
10:2-FTS	6.08	1.09	15480.9	A	N/A	1.0000			
10:2 FTS_2	6.08	1.09	11636.4	A	N/A	0.7517		#NA!	
PFTrDA	6.26	1.03	195438.6	A	N/A	1.0000			
PFTrDA_2	6.25	1.03	1183.4	A	N/A	0.0061	-29	50	
PFTeDA	6.43	1.00	169275.8	A	N/A	1.0000			
PFTeDA_2	6.43	1.00	1173.6	A	N/A	0.0069	12	50	
PFHxDA	6.74	1.05	75082.7	A	N/A	1.0000			
PFHxDA_2	6.74	1.05	4555.4	A	N/A	0.0607	-10	50	
PFODA	7.00	1.09	60087.8	A	N/A	1.0000			
PFODA_2	7.00	1.09	1673.1	A	N/A	0.0278	1	50	

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By JPT at 2:36 pm, 11/16/18

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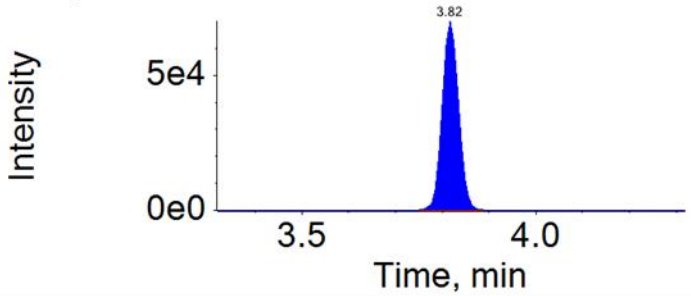
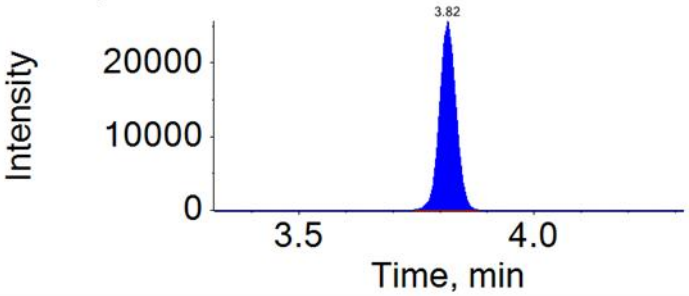
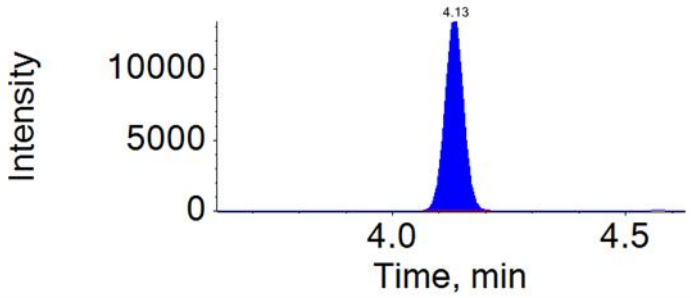
Component: PFBS
Primary Mass: 299.0 / 80.0



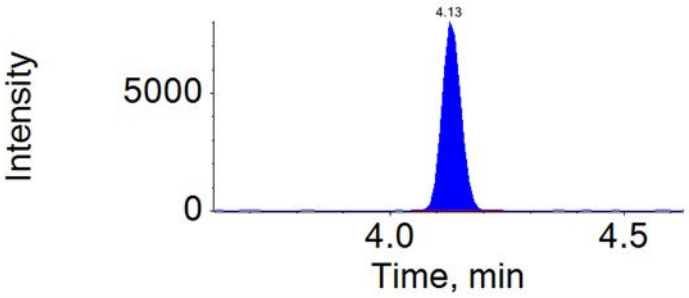
Component: PFBS_2
Secondary Mass: 299.0 / 99.0



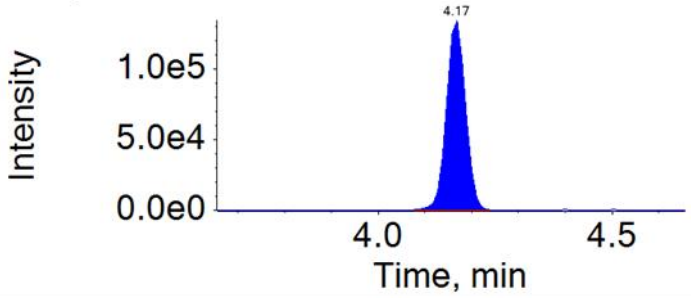
Component: 4:2-FTS
Primary Mass: 327.0 / 307.0



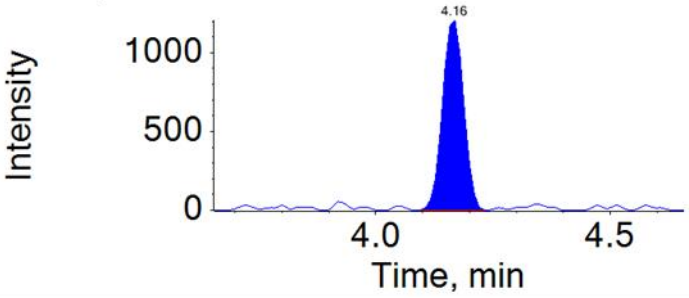
Component: 4:2 FTS_2
Secondary Mass: 327.0 / 81.0



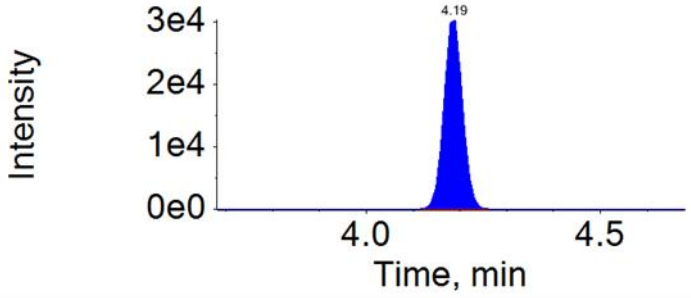
Component: PFHxA
Primary Mass: 313.0 / 269.0



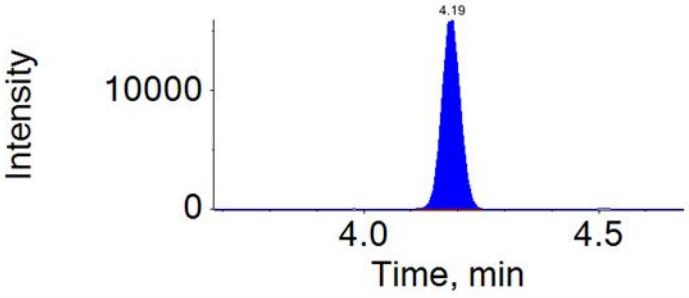
Component: PFHxA_2
Secondary Mass: 313.0 / 119.0



Component: PFPeS
Primary Mass: 349.0 / 80.0



Component: PFPeS_2
Secondary Mass: 349.0 / 99.0



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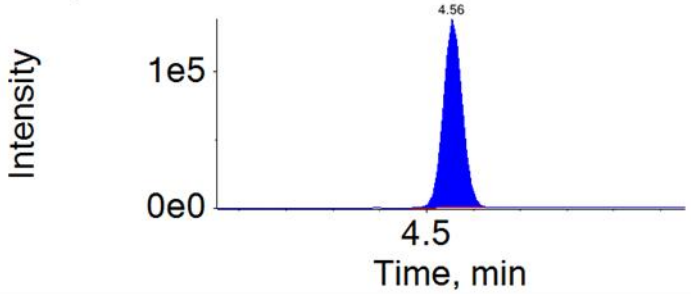
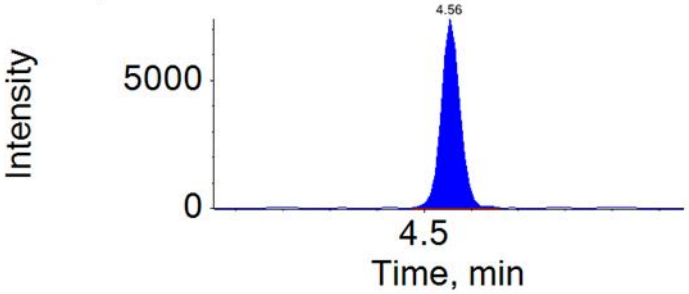
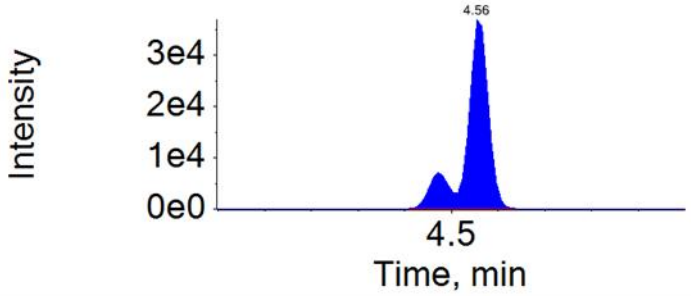
Component: PFHpA
Primary Mass: 363.0 / 319.0



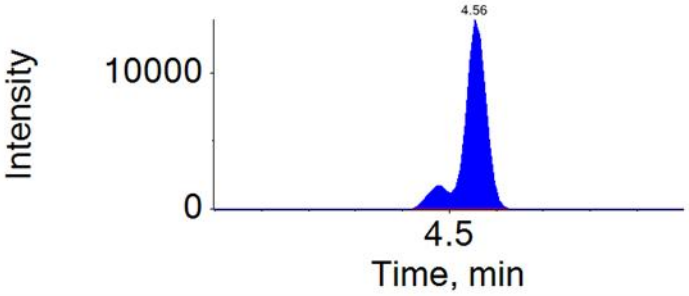
Component: PFHpA_2
Secondary Mass: 363.0 / 169.0



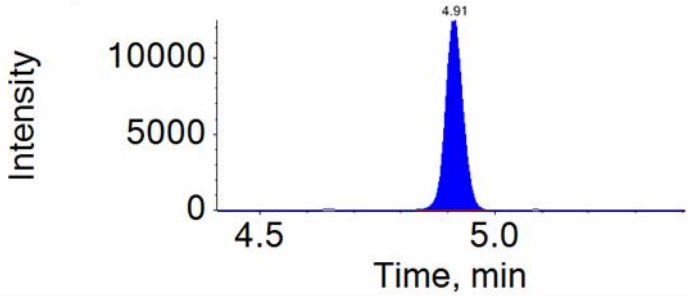
Component: PFHxS
Primary Mass: 399.0 / 80.0



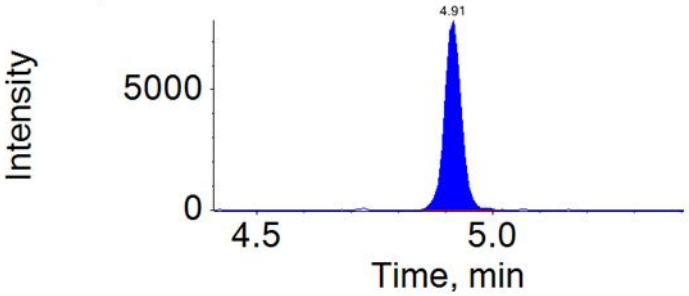
Component: PFHxS_2
Secondary Mass: 399.0 / 99.0



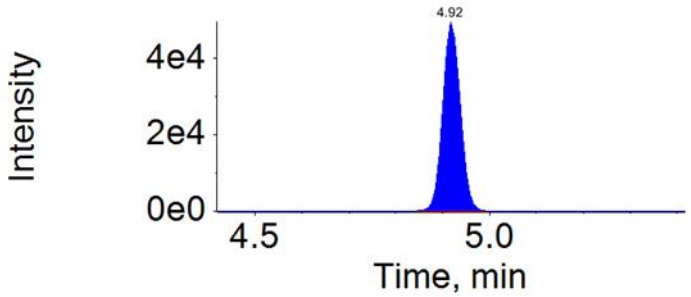
Component: 6:2-FTS
Primary Mass: 427.0 / 407.0



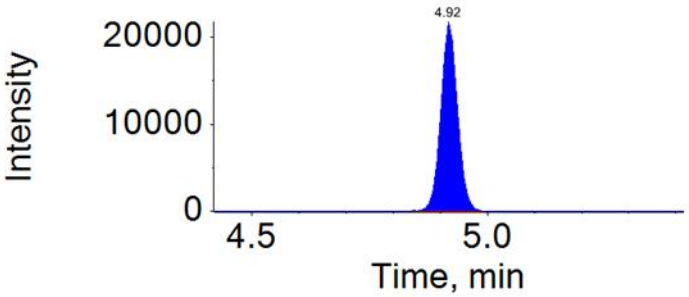
Component: 6:2 FTS_2
Secondary Mass: 427.0 / 81.0



Component: PFHpS
Primary Mass: 449.0 / 80.0



Component: PFHpS_2
Secondary Mass: 449.0 / 99.0



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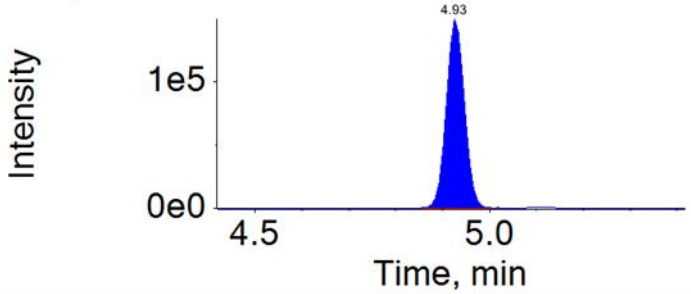
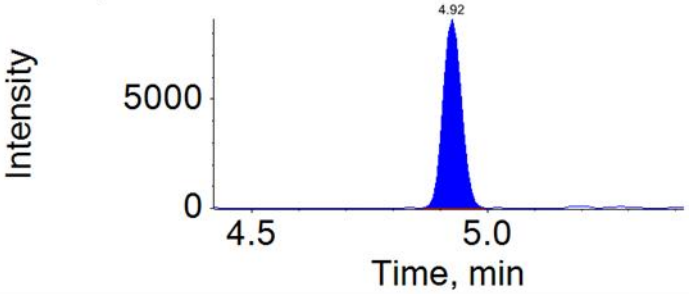
By HMK at 9:06 am, 11/19/18

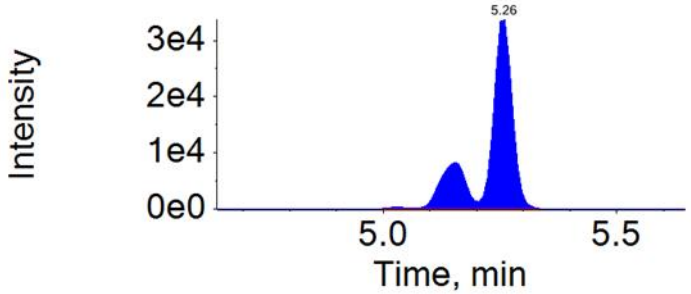
Component: PFOA
Primary Mass: 413.0 / 369.0



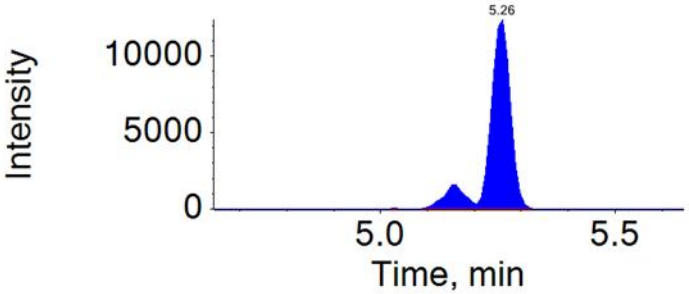
Component: PFOA_2
Secondary Mass: 413.0 / 169.0



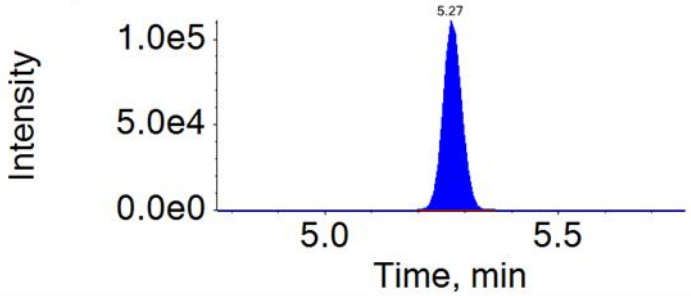
Component: PFOS
Primary Mass: 499.0 / 80.0



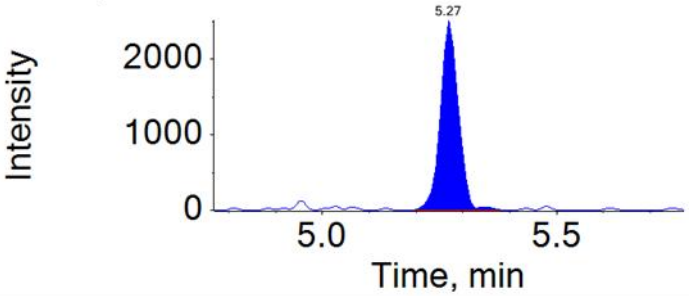
Component: PFOS_2
Secondary Mass: 499.0 / 99.0



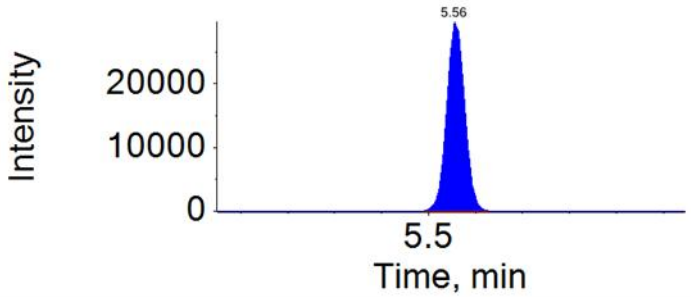
Component: PFNA
Primary Mass: 463.0 / 419.0



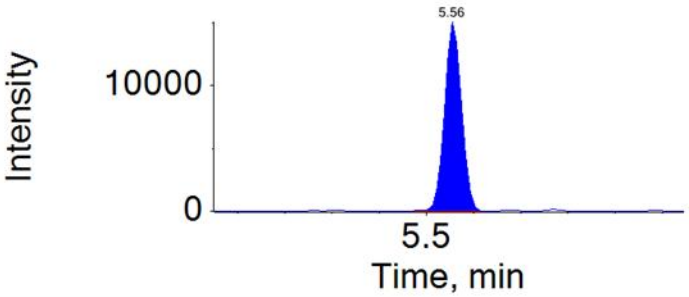
Component: PFNA_2
Secondary Mass: 463.0 / 169.0



Component: PFNS
Primary Mass: 549.0 / 80.0



Component: PFNS_2
Secondary Mass: 549.0 / 99.0



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REVIEWED
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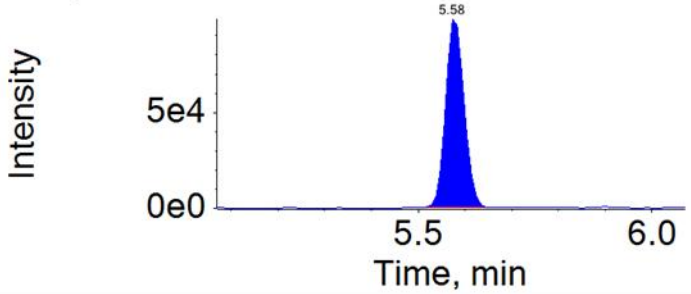
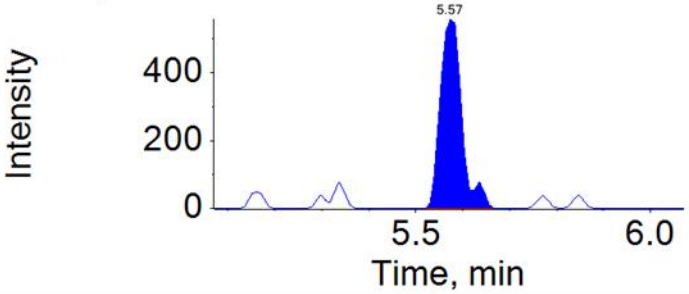
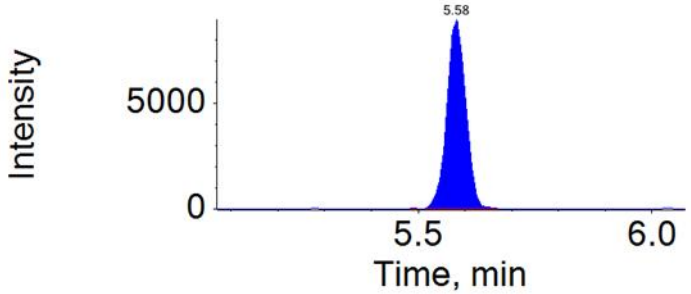
Component: PFDA
Primary Mass: 513.0 / 469.0



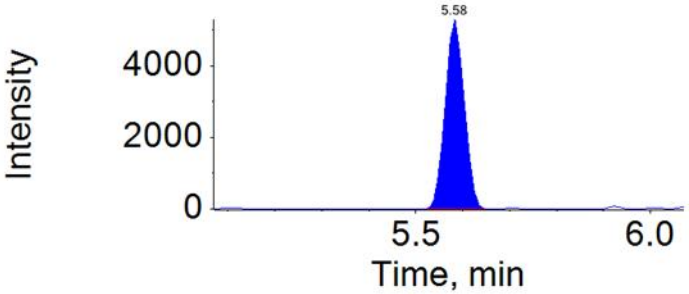
Component: PFDA_2
Secondary Mass: 513.0 / 169.0



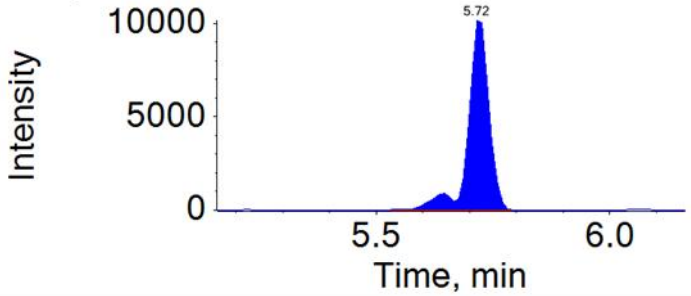
Component: 8:2-FTS
Primary Mass: 527.0 / 507.0



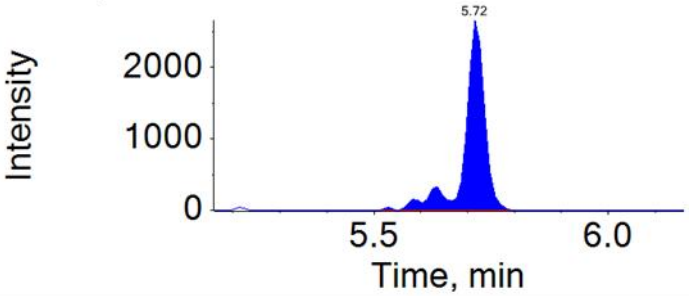
Component: 8:2 FTS_2
Secondary Mass: 527.0 / 81.0



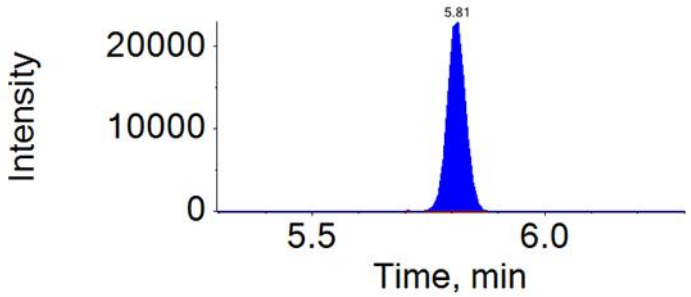
Component: NMeFOSAA
Primary Mass: 570.0 / 419.0



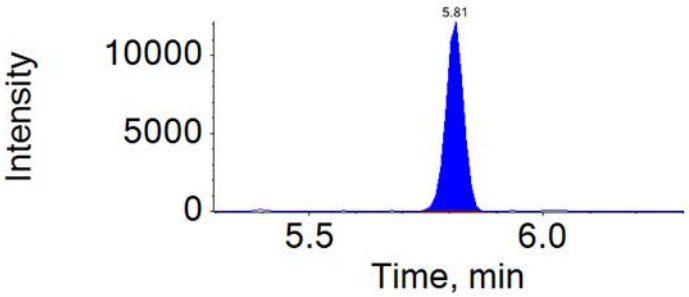
Component: NMeFOSAA_2
Secondary Mass: 570.0 / 483.0



Component: PFDS
Primary Mass: 599.0 / 80.0



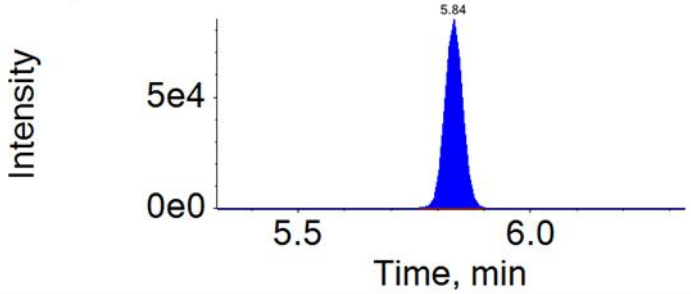
Component: PFDS_2
Secondary Mass: 599.0 / 99.0



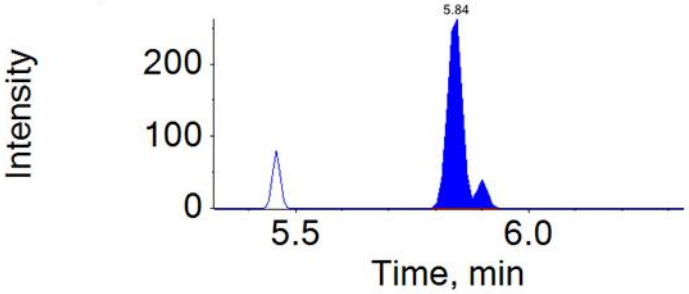
APPROVED
By JPT at 2:36 pm, 11/16/18

REVIEWED
By HMK at 9:06 am, 11/19/18

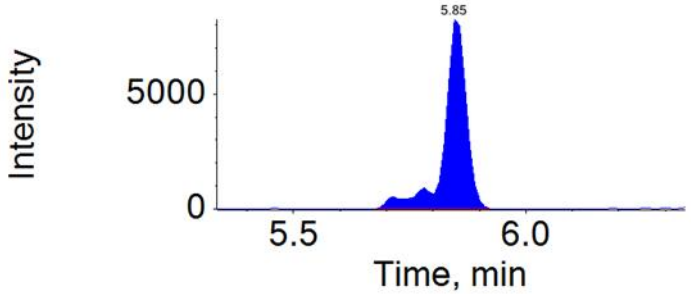
Component: PFUnDA
Primary Mass: 563.0 / 519.0



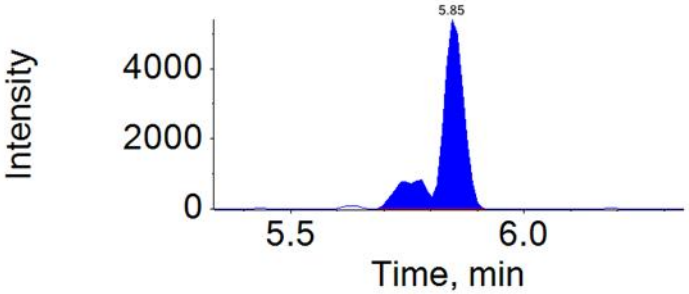
Component: PFUnDA_2
Secondary Mass: 563.0 / 169.0



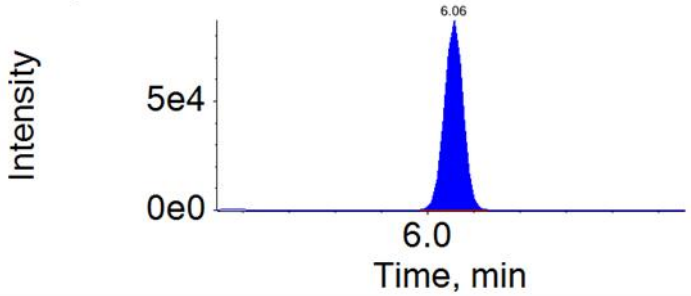
Component: NEtFOSAA
Primary Mass: 584.0 / 419.0



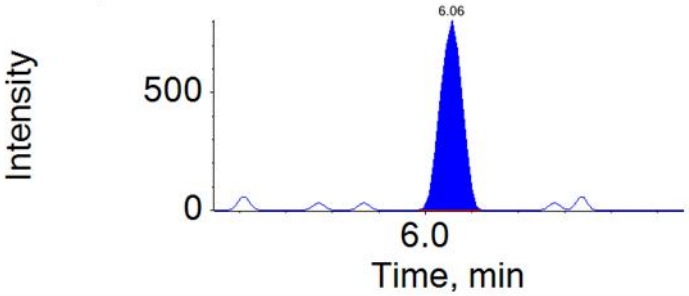
Component: NEtFOSAA_2
Secondary Mass: 584.0 / 526.0



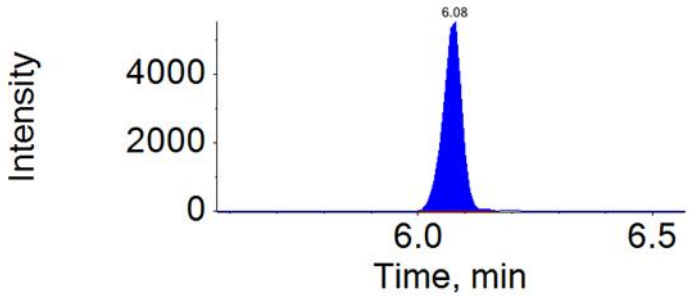
Component: PFDoDA
Primary Mass: 613.0 / 569.0



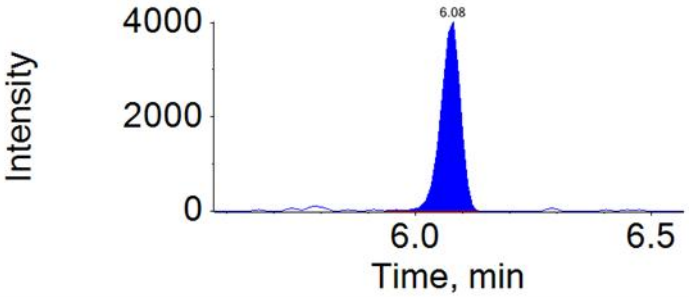
Component: PFDoDA_2
Secondary Mass: 613.0 / 169.0



Component: 10:2-FTS
Primary Mass: 627.0 / 607.0



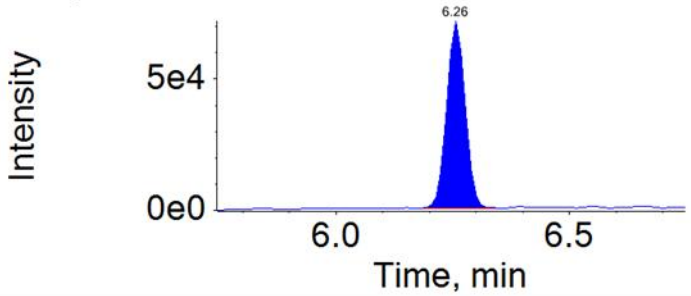
Component: 10:2 FTS_2
Secondary Mass: 627.0 / 81.0



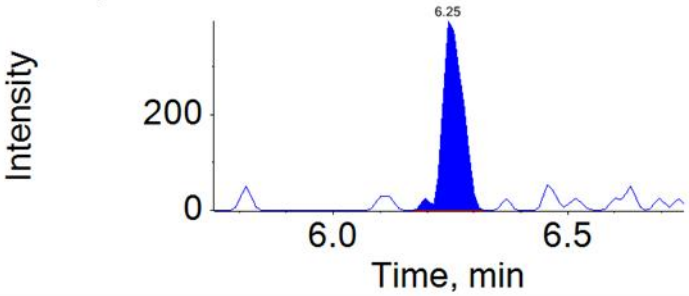
APPROVED
By JPT at 2:36 pm, 11/16/18

REVIEWED
By HMK at 9:06 am, 11/19/18

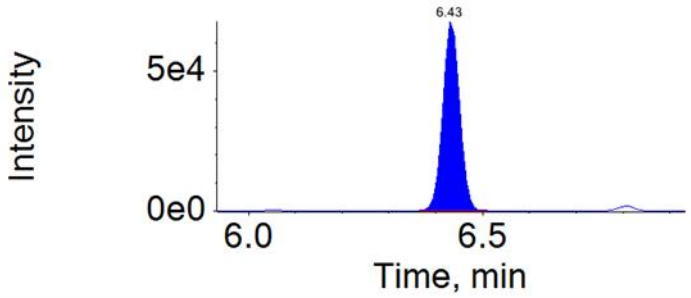
Component: PFTrDA
Primary Mass: 663.0 / 619.0



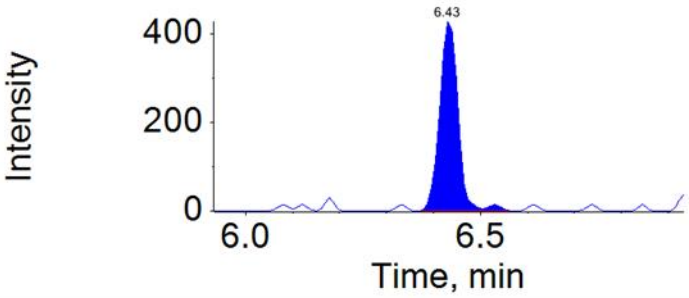
Component: PFTrDA_2
Secondary Mass: 663.0 / 169.0



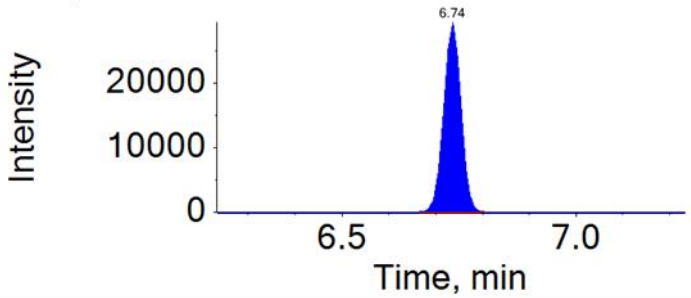
Component: PFTeDA
Primary Mass: 713.0 / 669.0



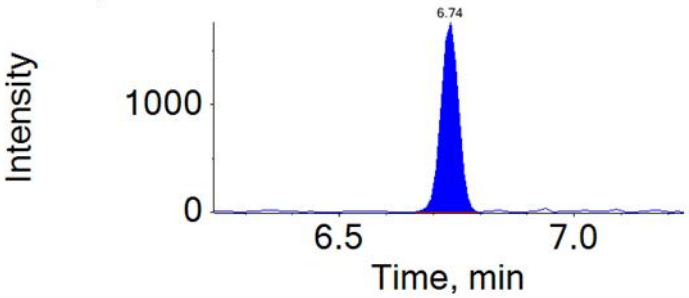
Component: PFTeDA_2
Secondary Mass: 713.0 / 169.0



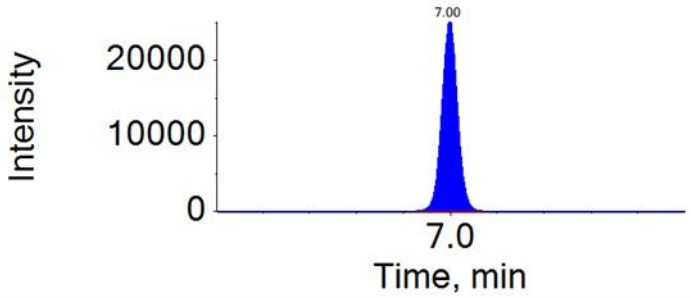
Component: PFHxDA
Primary Mass: 813.0 / 769.0



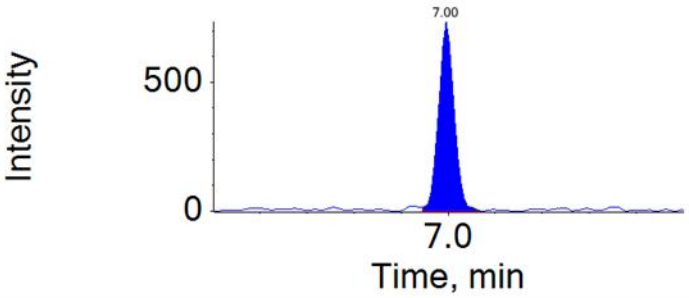
Component: PFHxDA_2
Secondary Mass: 813.0 / 169.0



Component: PFODA
Primary Mass: 913.0 / 869.0



Component: PFODA_2
Secondary Mass: 913.0 / 169.0



APPROVED
By JPT at 2:36 pm, 11/16/18

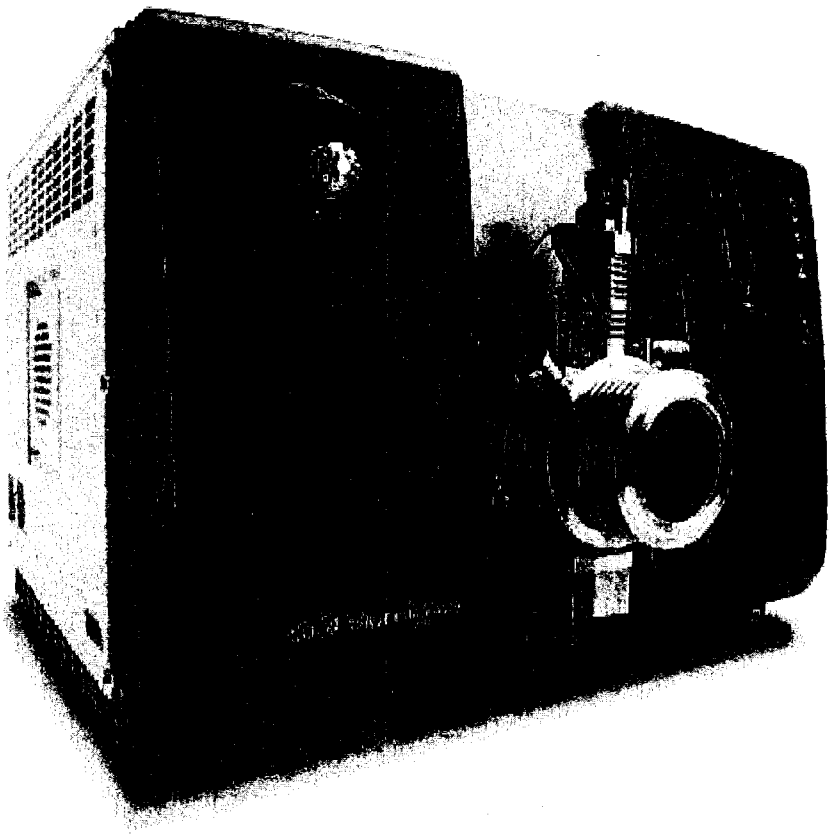
REVIEWED
By HMK at 9:06 am, 11/19/18

LM27631

SCIEX

Triple Quad™ 4500 and Triple Quad™ 4500MD Systems

Installation Checklist and Data Log



GEN-IDV-06-1212-C | D5082309 C

October 2016

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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.	○	◉

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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.	☑	

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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.	◉	◉

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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.	☑	

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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.	☑	

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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 ≤ $P_{CAD\ 0}$ ≤ 1.1×10^{-5} torr	0.7 x 10e-5 torr
Vacuum chamber pressure with CAD gas set to Full	1.8×10^{-5} torr ≤ ($P_{CAD\ 12} - P_{CAD\ 0}$) ≤ 2.8×10^{-5} torr	2.1 x 10e-5 torr

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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	$\geq 8.8 \times 10^5$	1.8122e6	0.6 to 0.8	0.7423

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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	

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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	≥ 8.0×10^6	1.9501e7	0.6 to 0.8	0.6916
500.380	≥ 8.0×10^6	1.9253e7	0.6 to 0.8	0.7278
906.673	≥ 2.0×10^7	3.1634e7	0.6 to 0.8	0.7403
1952.427	≥ 8.8×10^5	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	

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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	≥ 1.8×10^7	2.23786e7	0.6 to 0.8	0.6638
1863.306	≥ 1.4×10^6	2.11046e6	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	≥ 1.8×10^7	2.6621e7	0.6 to 0.8	0.7288
1863.306	≥ 2.0×10^6	3.5734e6	0.6 to 0.8	0.7033

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	

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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%

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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.	☑

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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 ≤ $P_{CAD\ 0}$ ≤ 1.1×10^{-5} torr	0.7x10e-5torr
Vacuum chamber pressure with CAD gas set to Full	1.8×10^{-5} torr ≤ ($P_{CAD\ 12} - P_{CAD\ 0}$) ≤ 2.8×10^{-5} torr	2.1x10e-5torr

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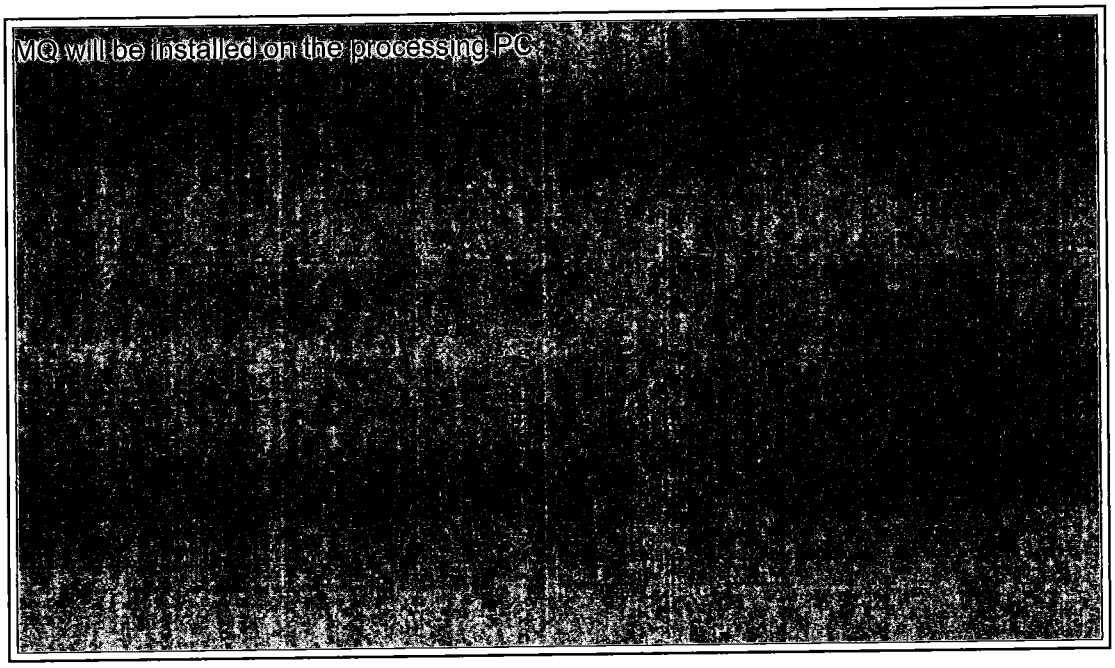
Signoff 4

Organization	Eurofins		
Customer contact name		Date (yyyy-mm-dd)	
Customer contact signature*			
FSE name	Michael F Pennell	Date (yyyy-mm-dd)	2018-05-29
FSE signature			

* Signature required on hard copy only.

Comments and Exceptions



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

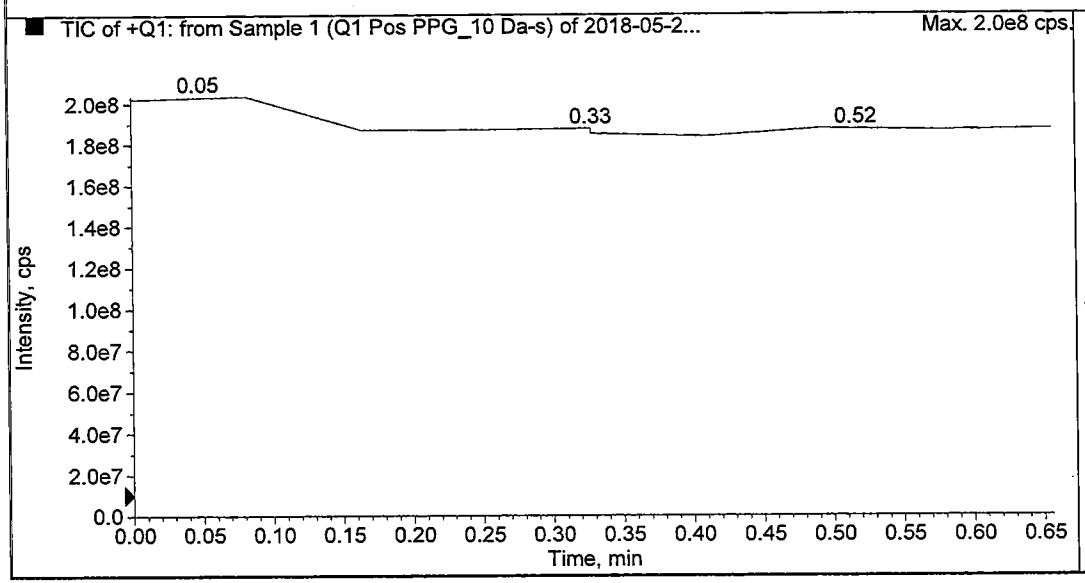
Mass Spectrometer Method Properties

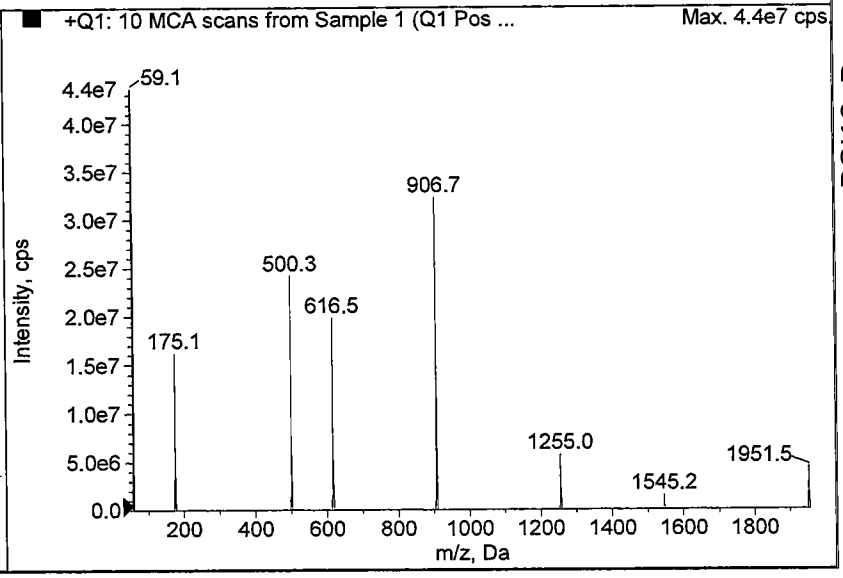
Period 1:

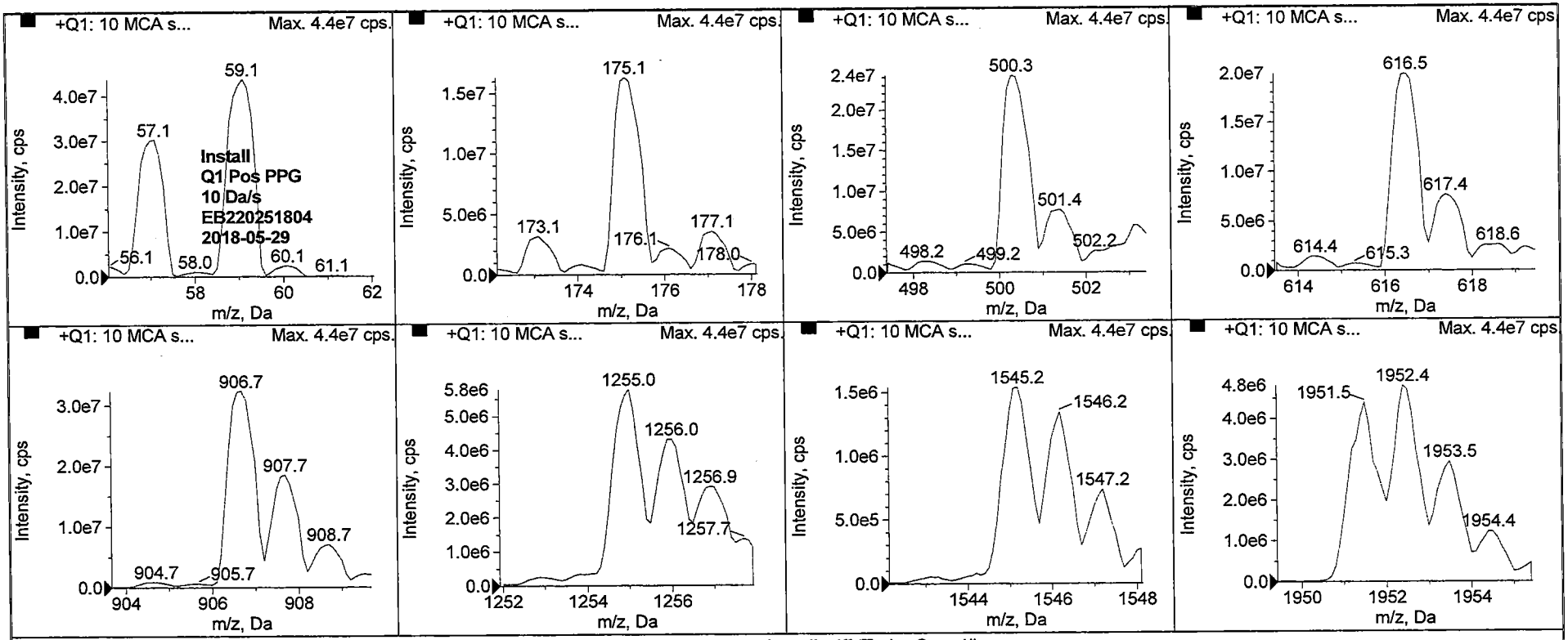
Scans in Period: 10
Relative Start Time: 0.00 msec
Scheduled Ionization: Off
Experiments in Period: 1

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

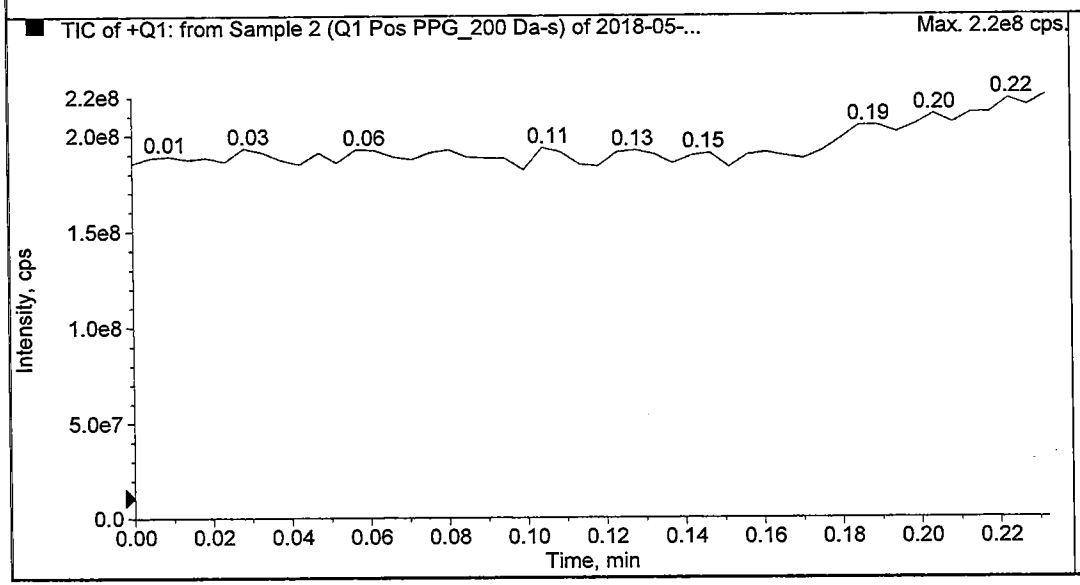
Mass Spectrometer Method Properties

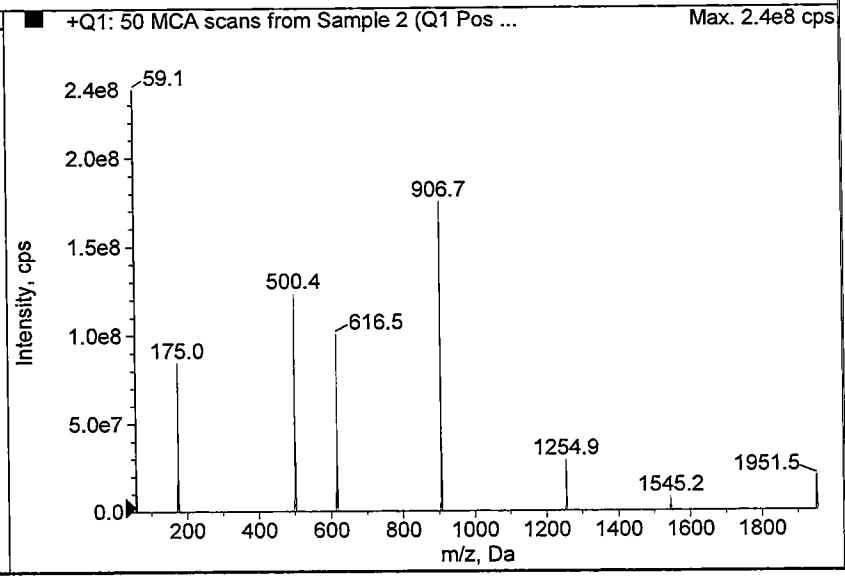
Period 1:

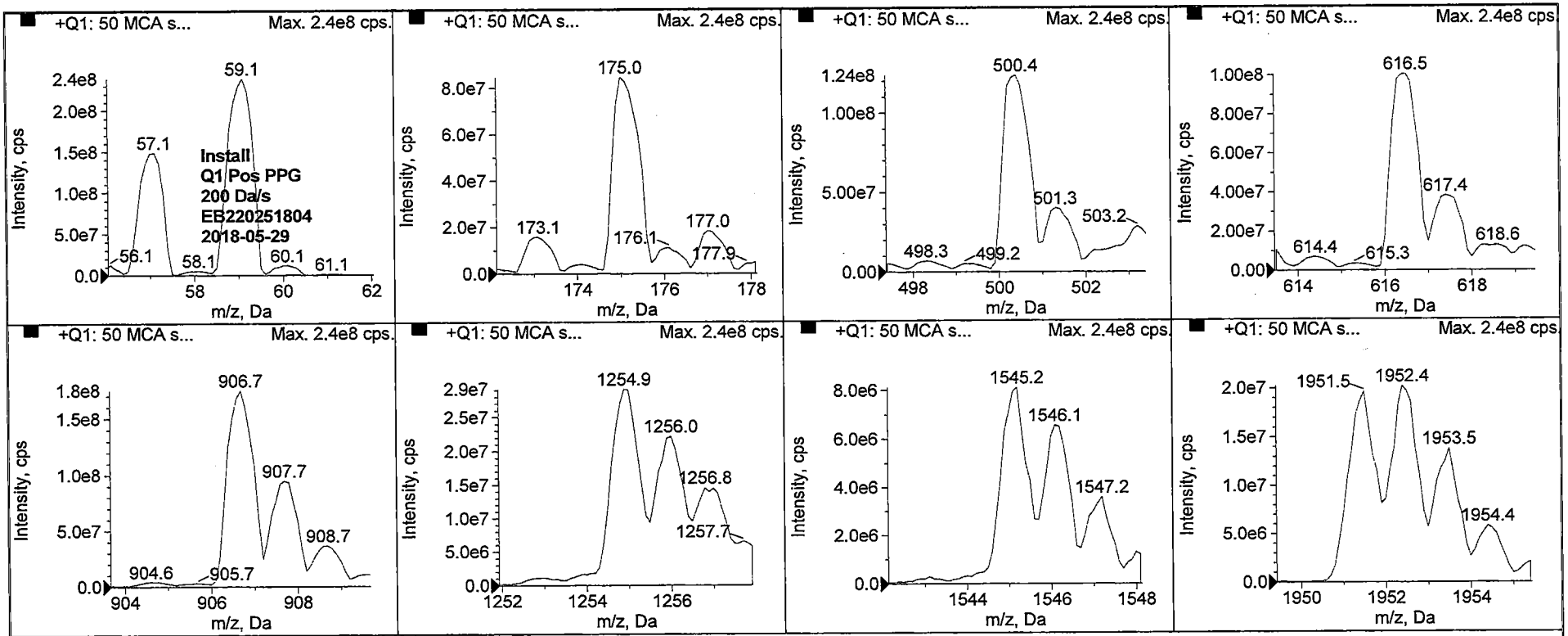
Scans in Period: 50
Relative Start Time: 0.00 msec
Scheduled Ionization: Off
Experiments in Period: 1

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

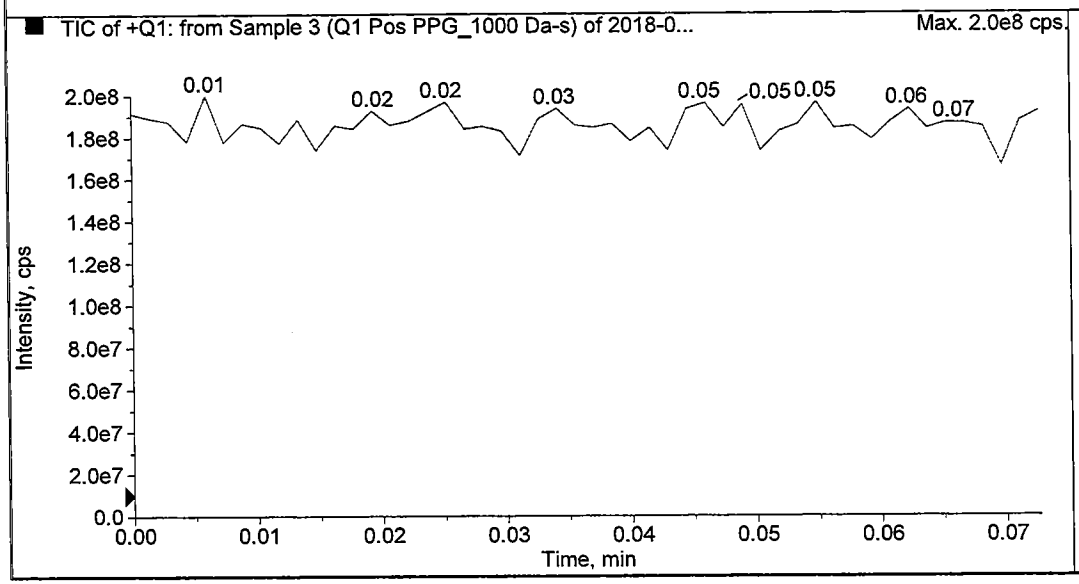
Mass Spectrometer Method Properties

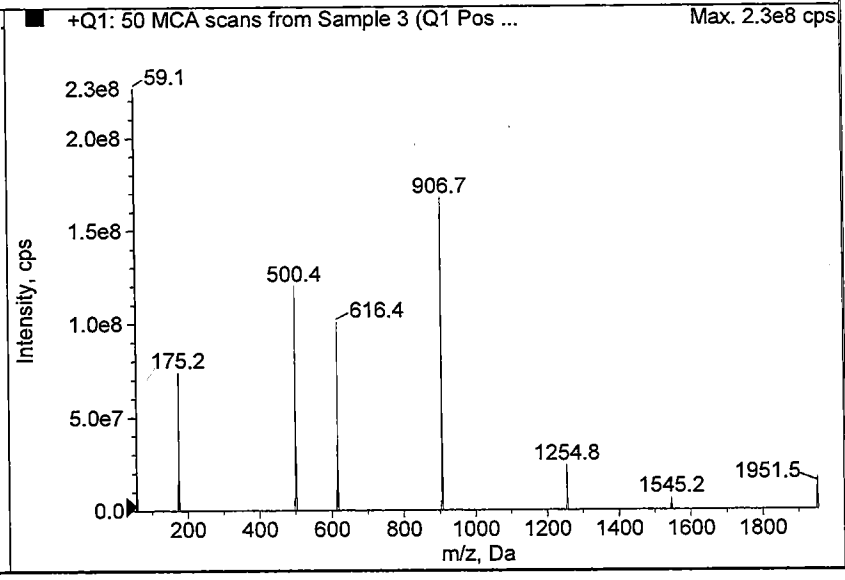
Period 1:

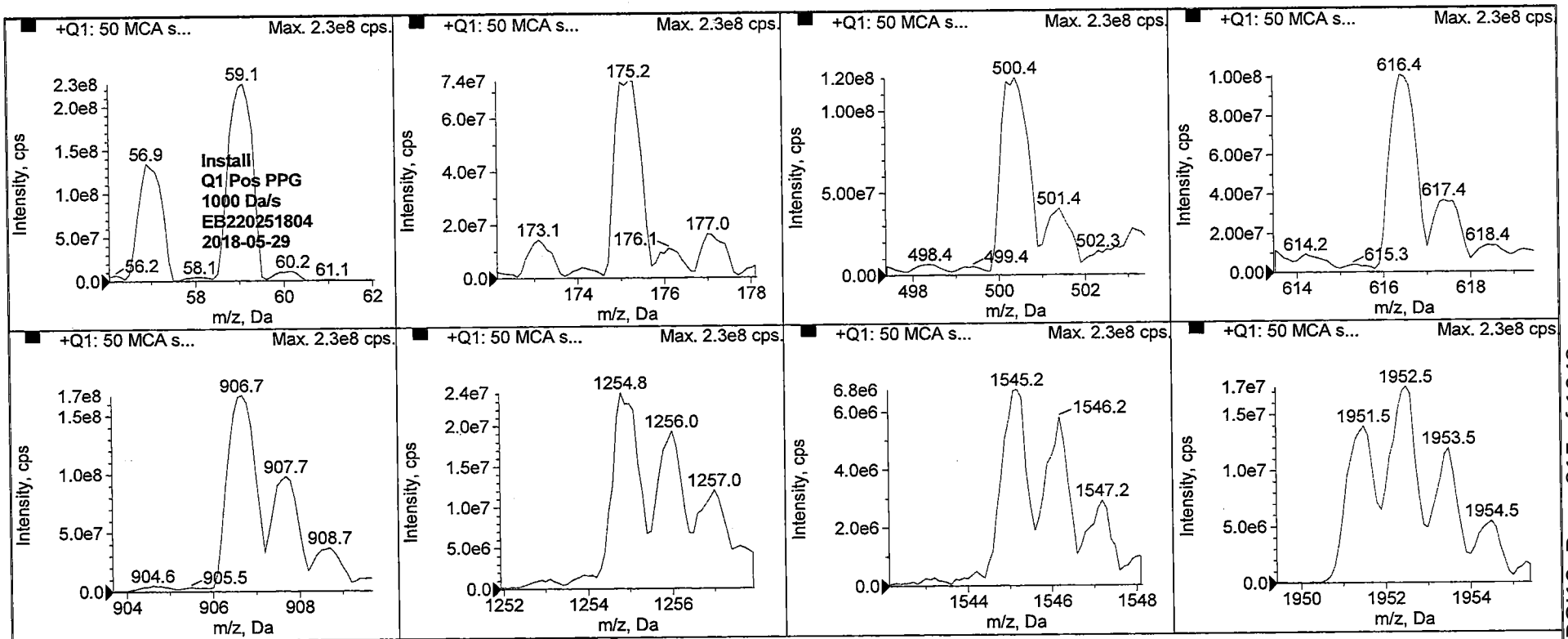
Scans in Period: 50
Relative Start Time: 0.00 msec
Scheduled Ionization: Off
Experiments in Period: 1

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

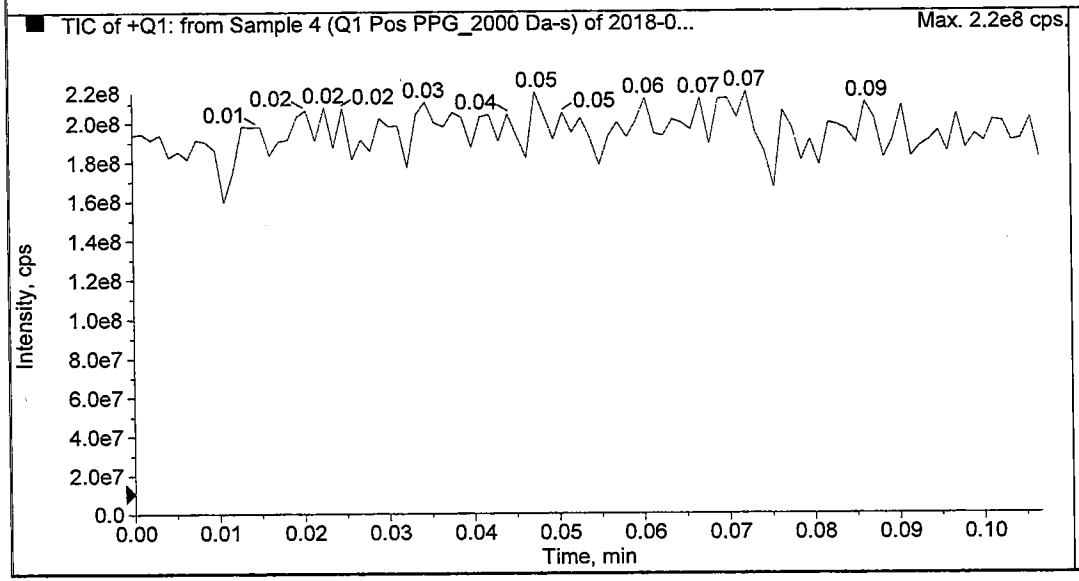
Mass Spectrometer Method Properties

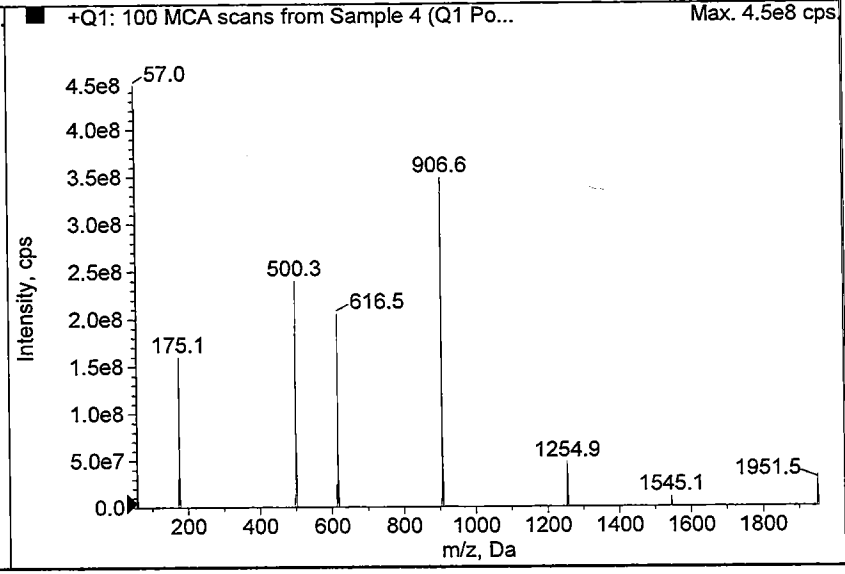
Period 1:

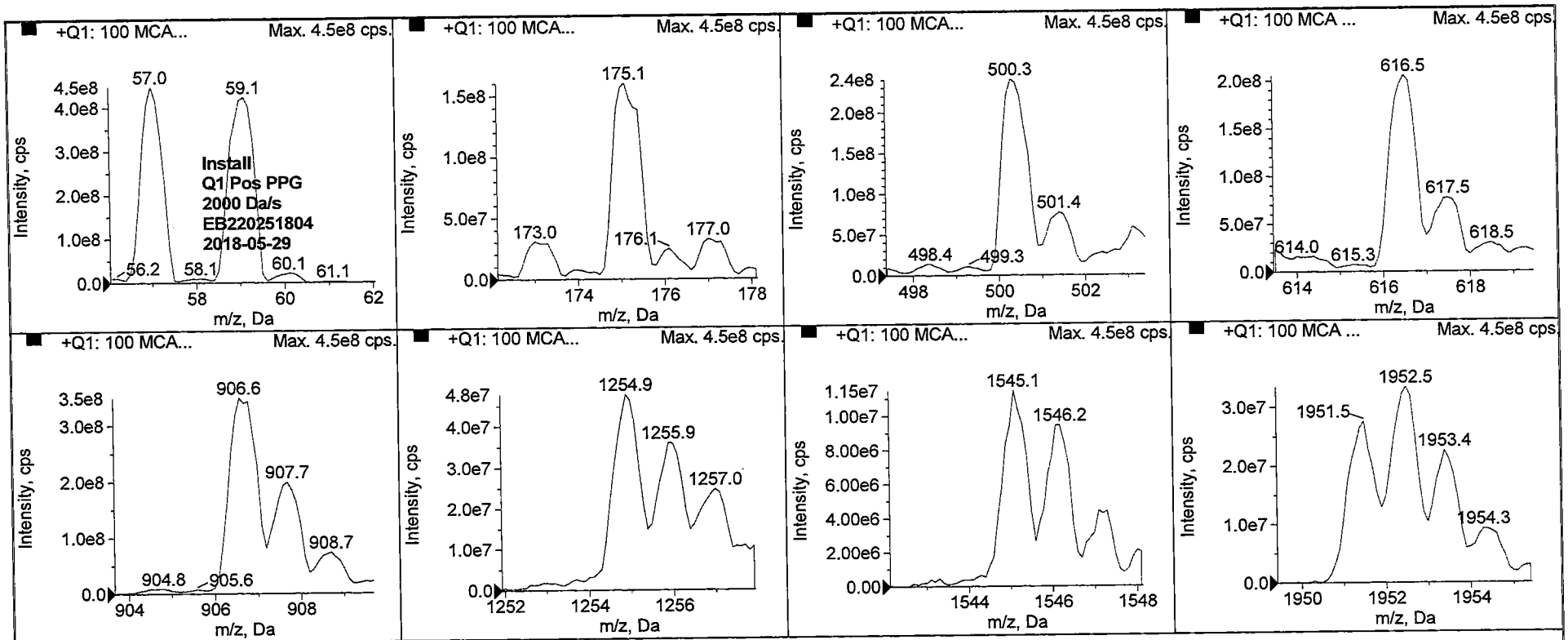
Scans in Period:	100
Relative Start Time:	0.00 msec
Scheduled Ionization:	Off
Experiments in Period:	1

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

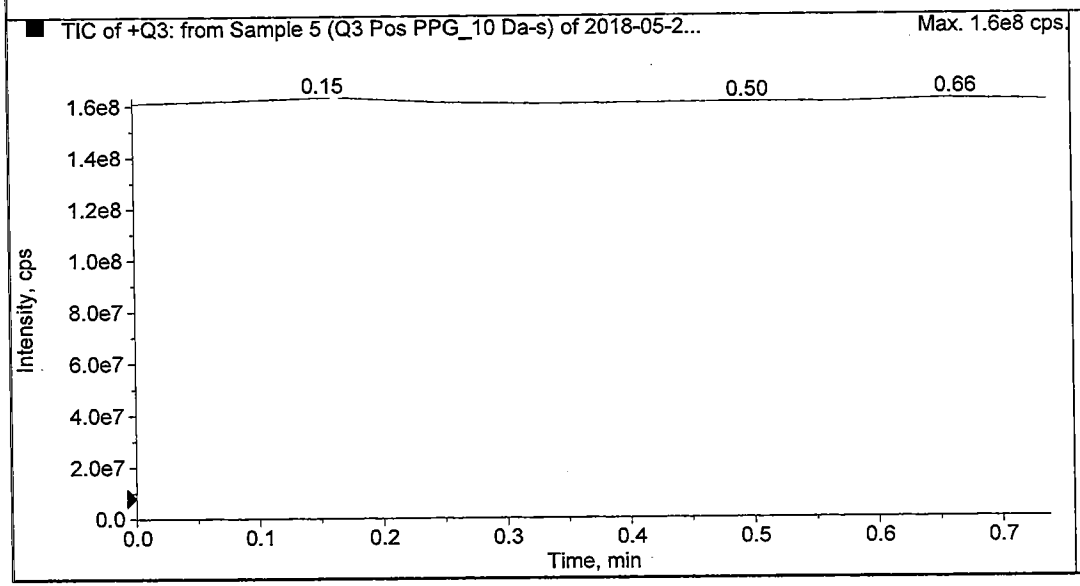
Mass Spectrometer Method Properties

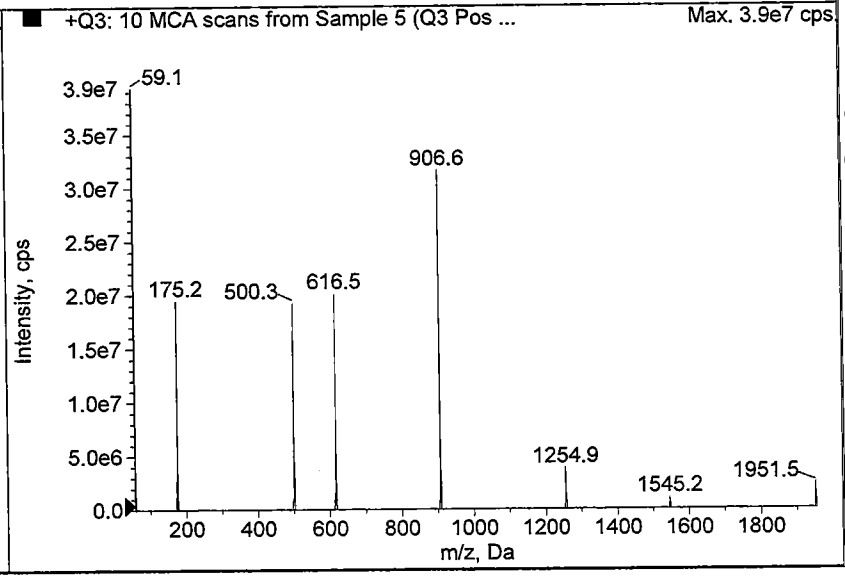
Period 1:

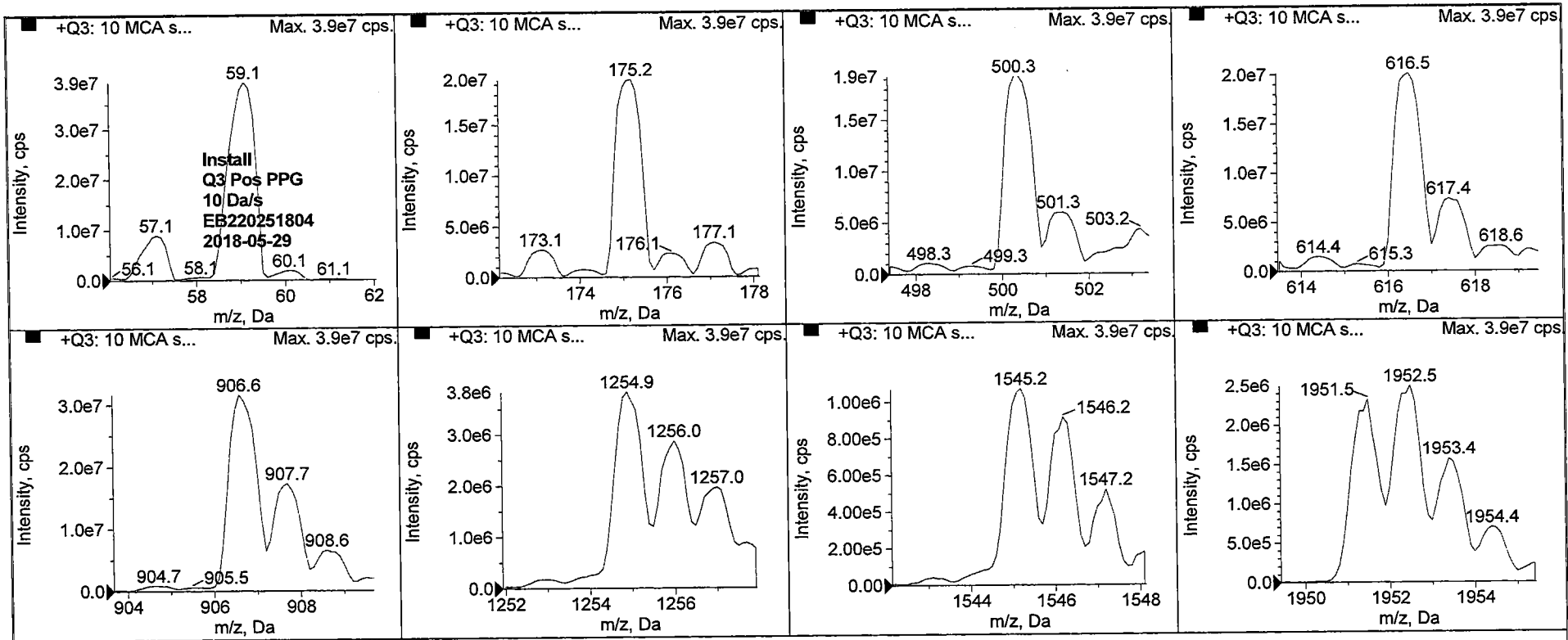
Scans in Period:	10
Relative Start Time:	0.00 msec
Scheduled Ionization:	Off
Experiments in Period:	1

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

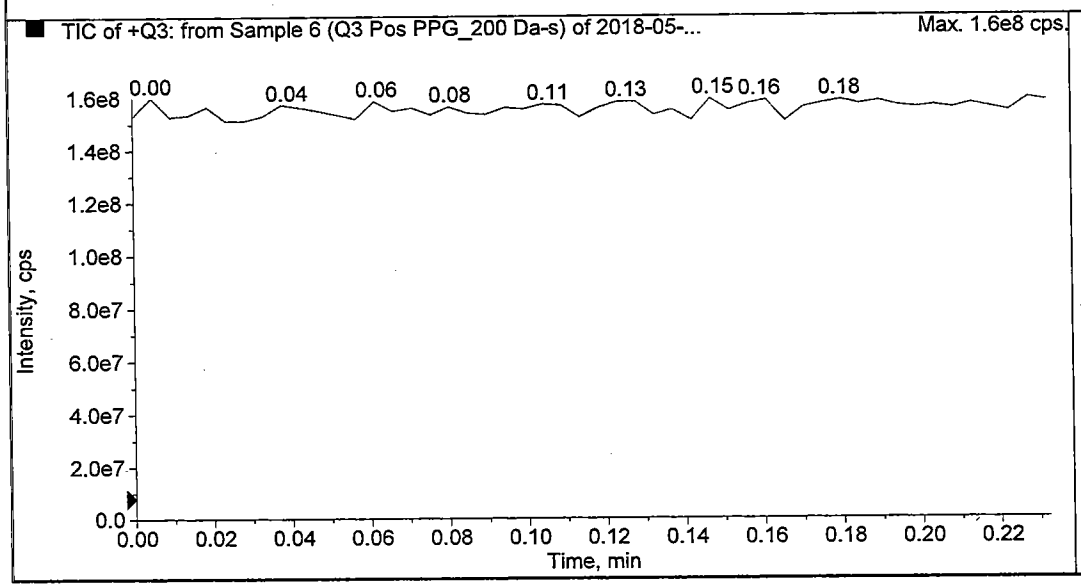
Mass Spectrometer Method Properties

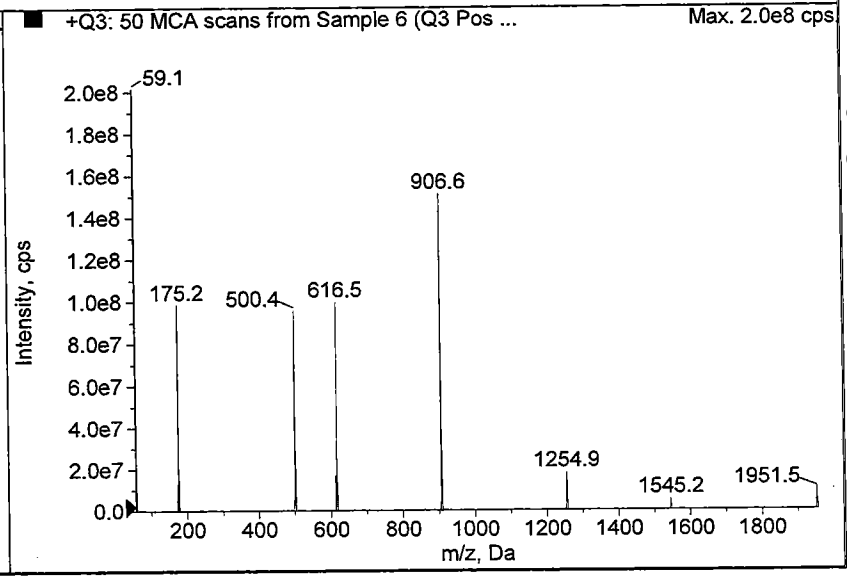
Period 1:

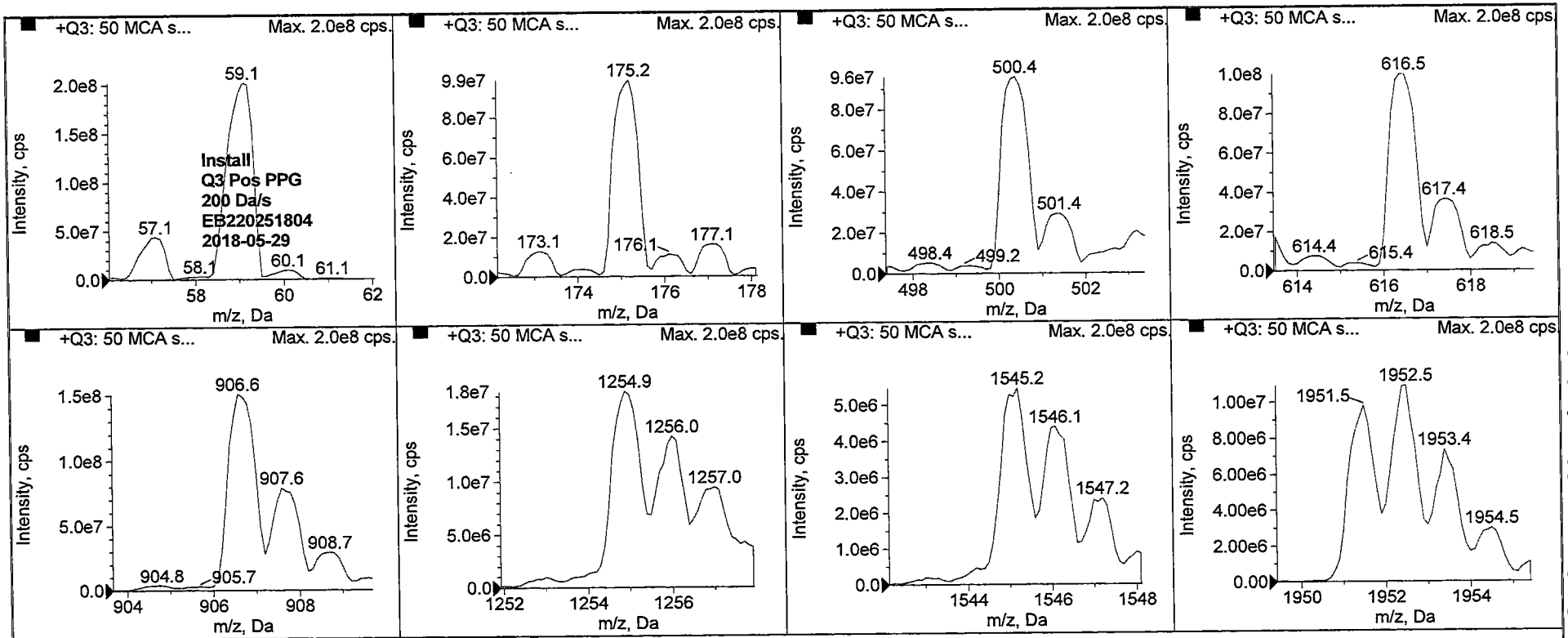
Scans in Period: 50
Relative Start Time: 0.00 msec
Scheduled Ionization: Off
Experiments in Period: 1

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

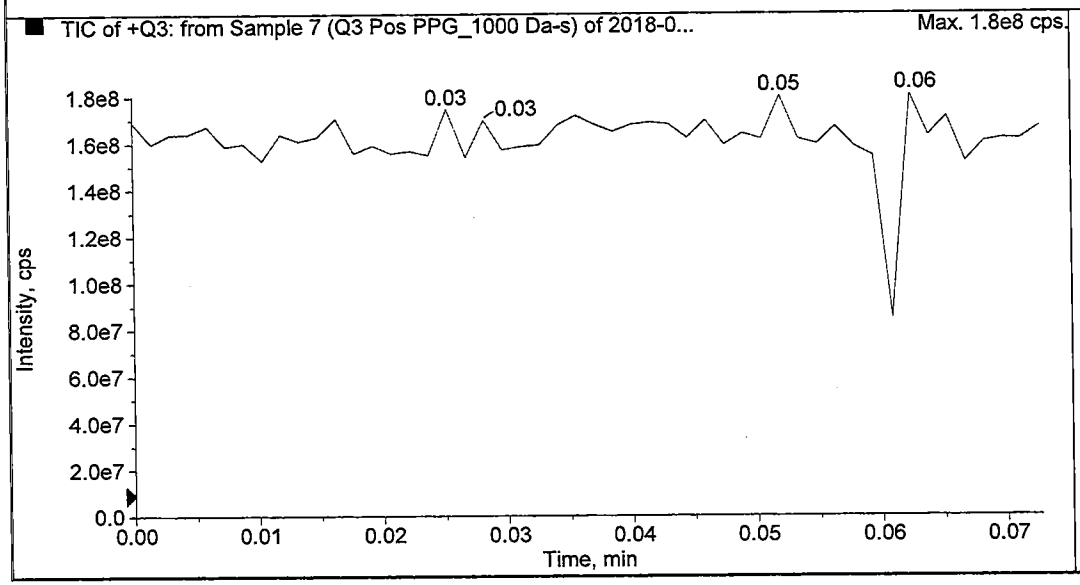
Mass Spectrometer Method Properties

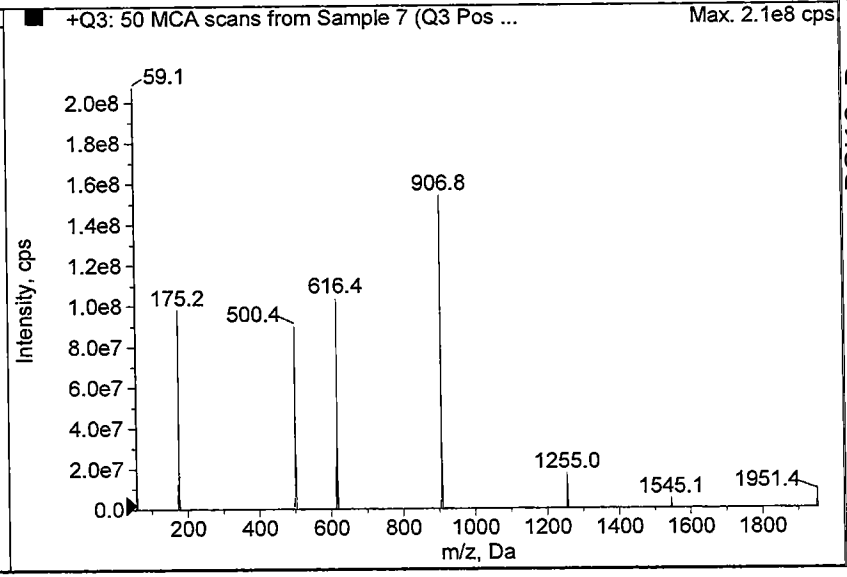
Period 1:

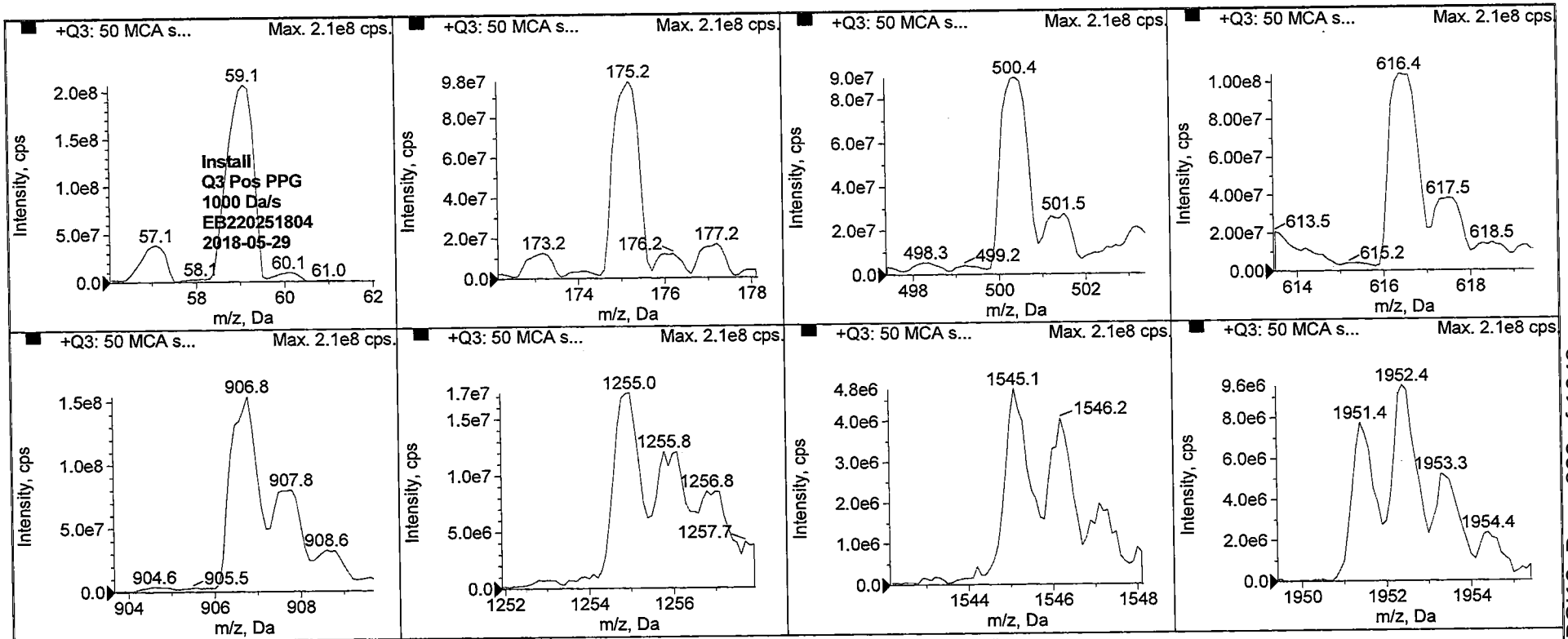
Scans in Period:	50
Relative Start Time:	0.00 msec
Scheduled Ionization:	Off
Experiments in Period:	1

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

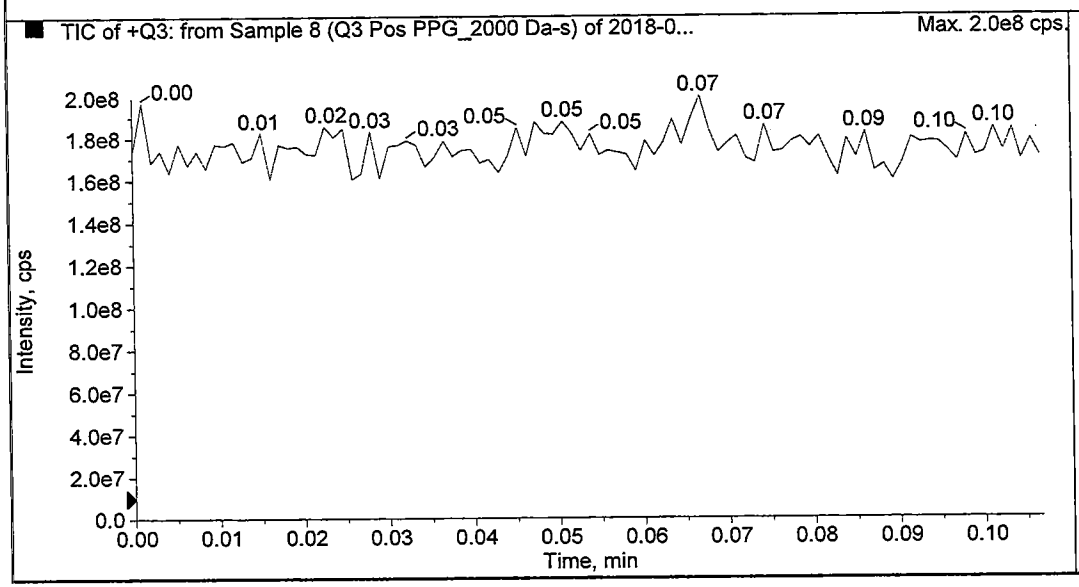
Mass Spectrometer Method Properties

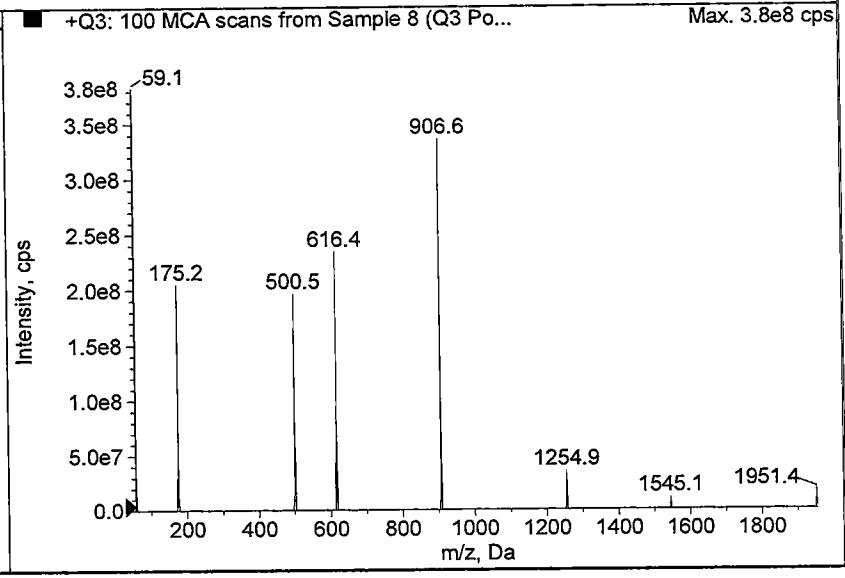
Period 1:

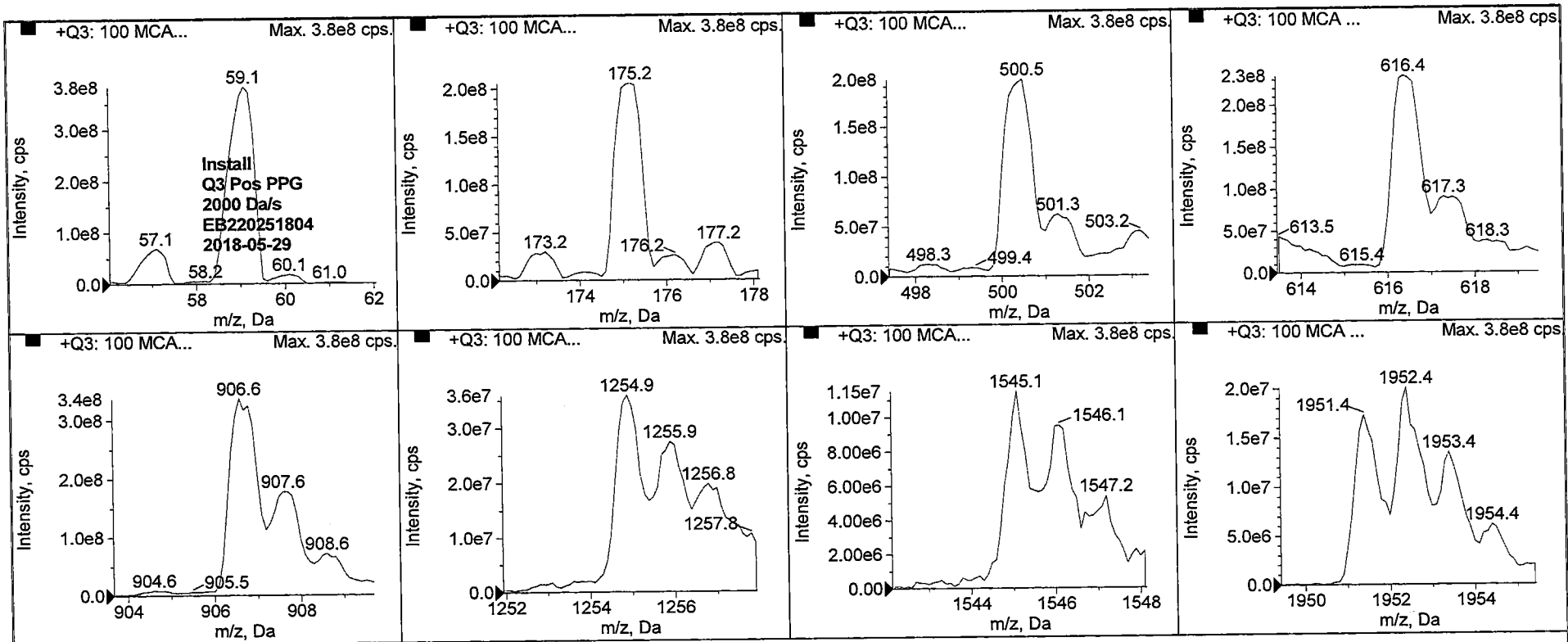
Scans in Period: 100
Relative Start Time: 0.00 msec
Scheduled Ionization: Off
Experiments in Period: 1

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

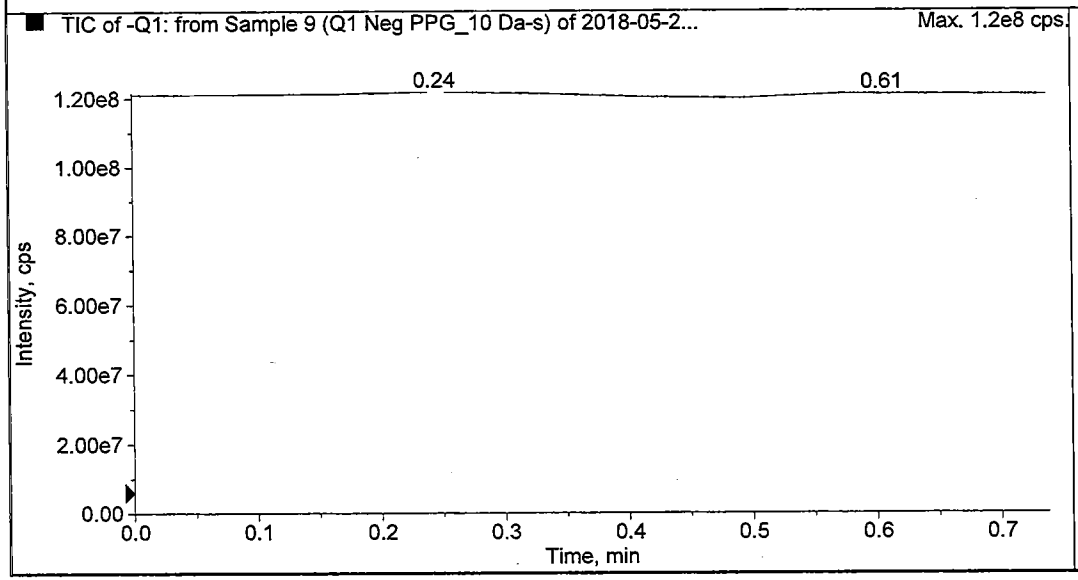
Mass Spectrometer Method Properties

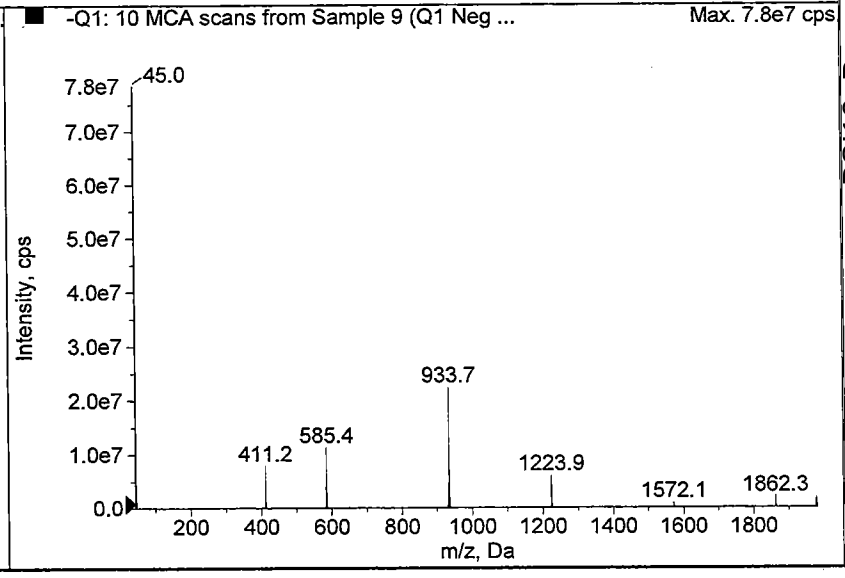
Period 1:

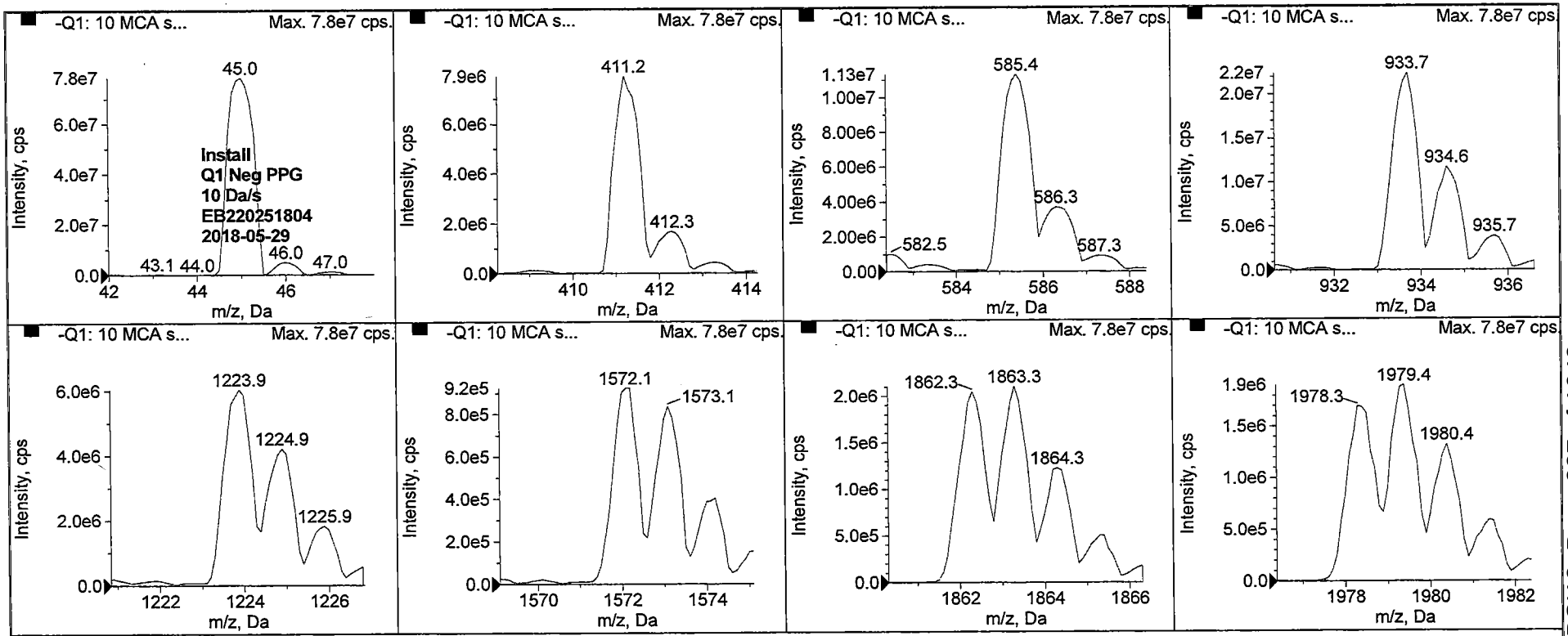
Scans in Period: 10
Relative Start Time: 0.00 msec
Scheduled Ionization: Off
Experiments in Period: 1

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

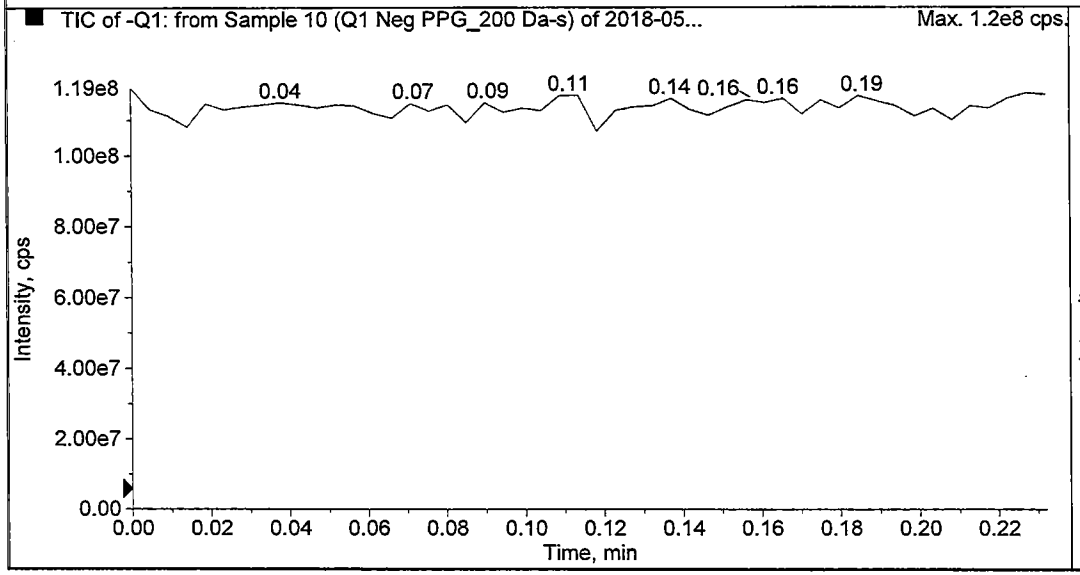
Mass Spectrometer Method Properties

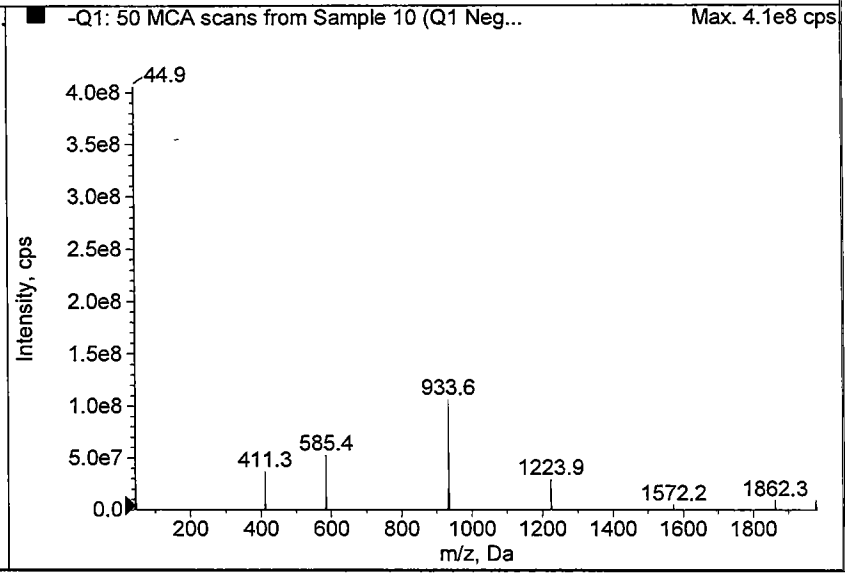
Period 1:

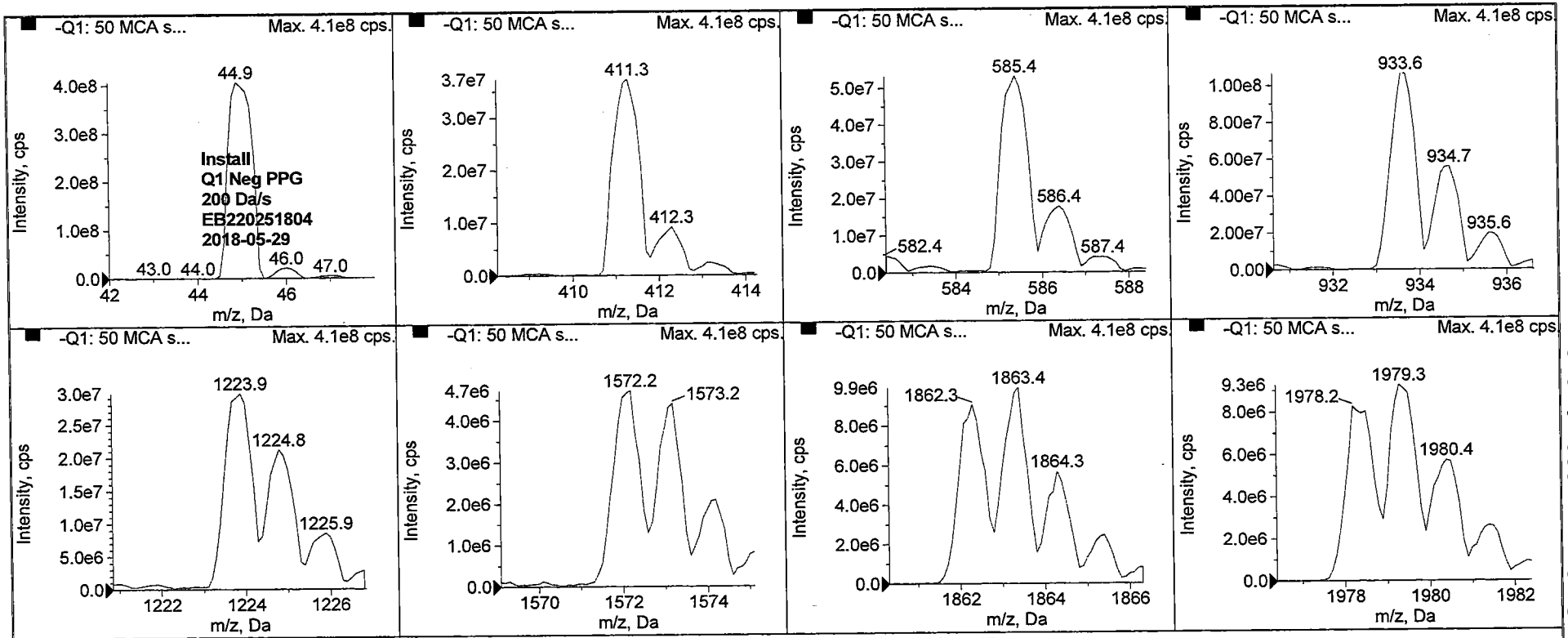
Scans in Period: 50
Relative Start Time: 0.00 msec
Scheduled Ionization: Off
Experiments in Period: 1

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

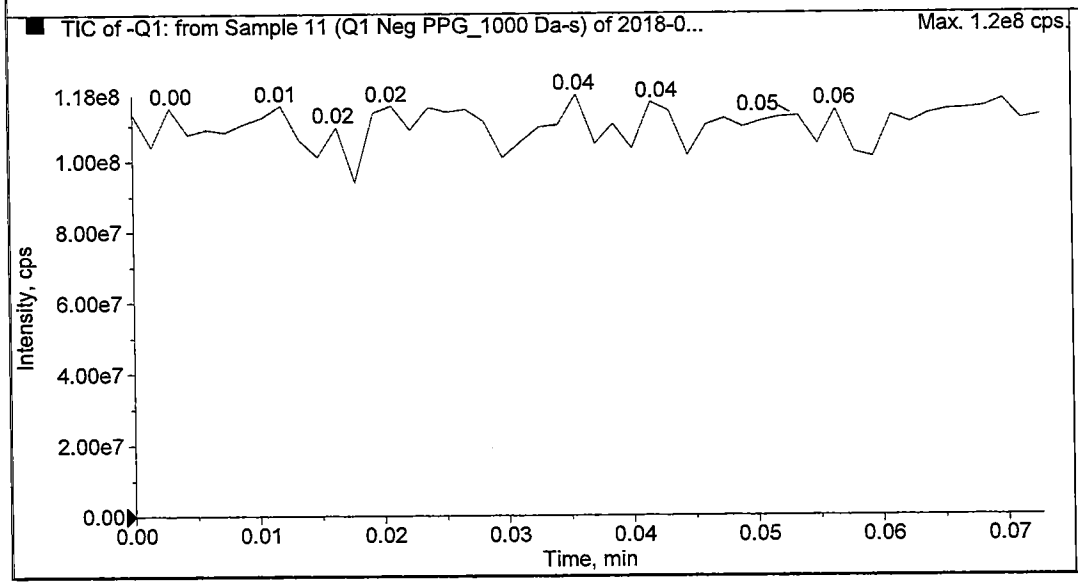
Mass Spectrometer Method Properties

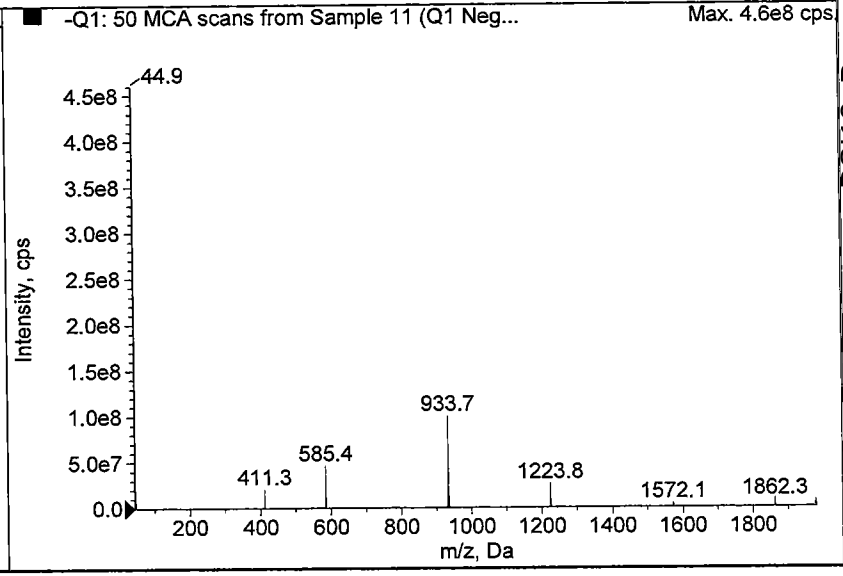
Period 1:

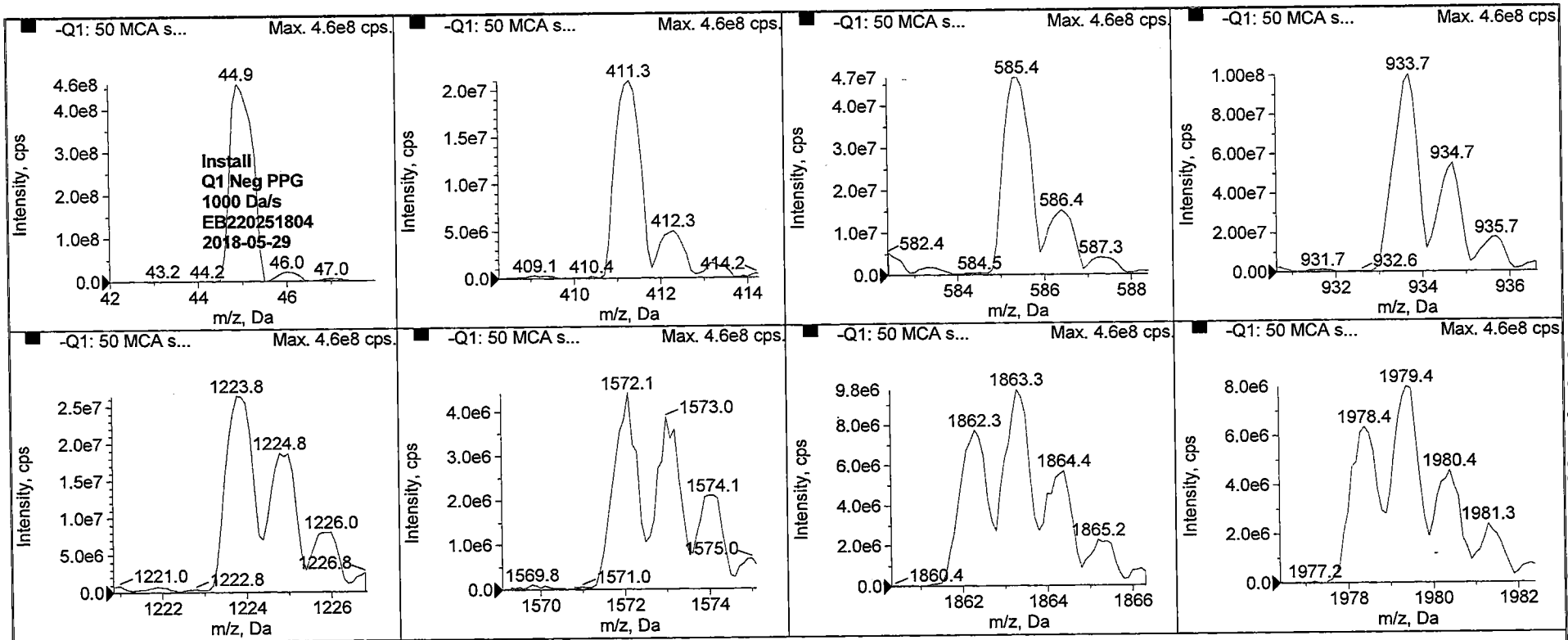
Scans in Period: 50
Relative Start Time: 0.00 msec
Scheduled Ionization: Off
Experiments in Period: 1

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

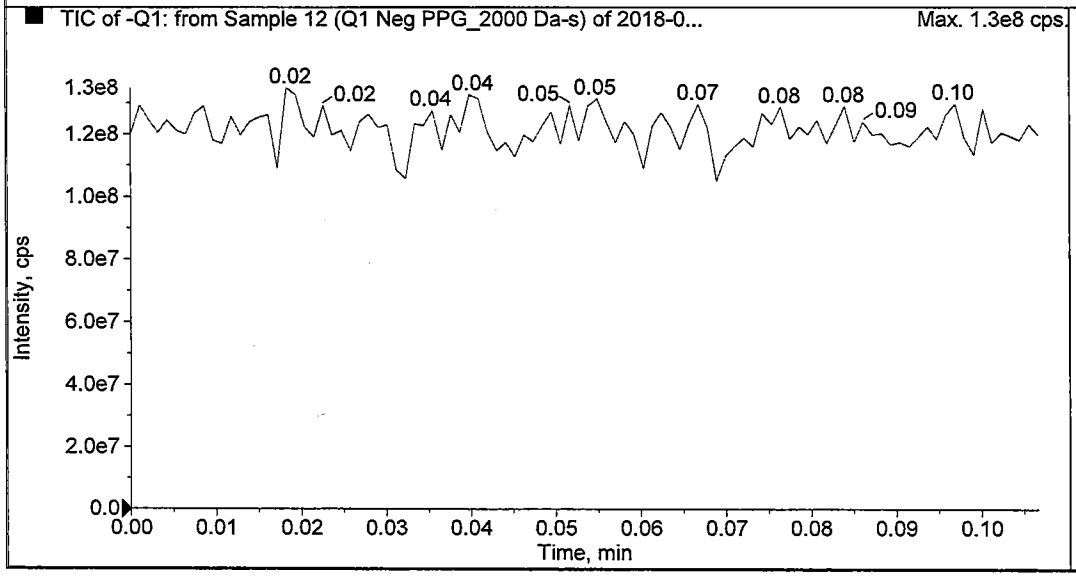
Mass Spectrometer Method Properties

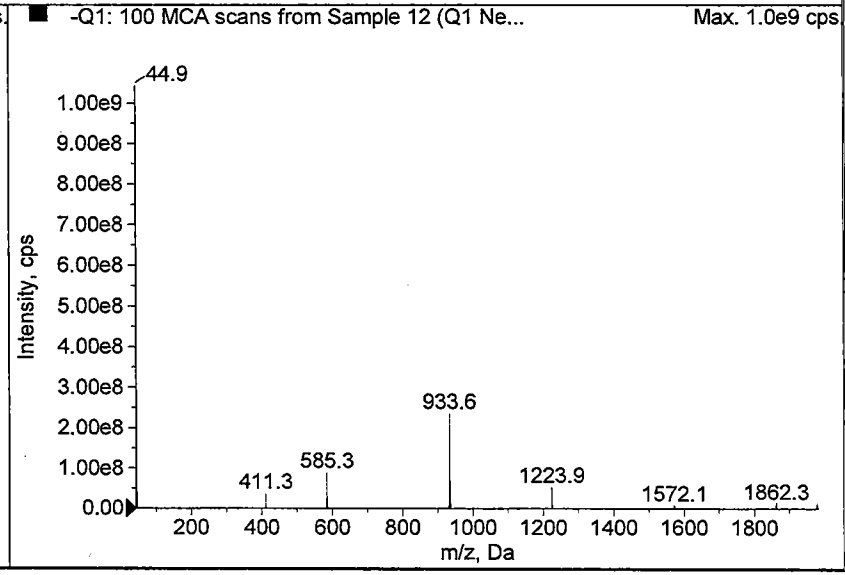
Period 1:

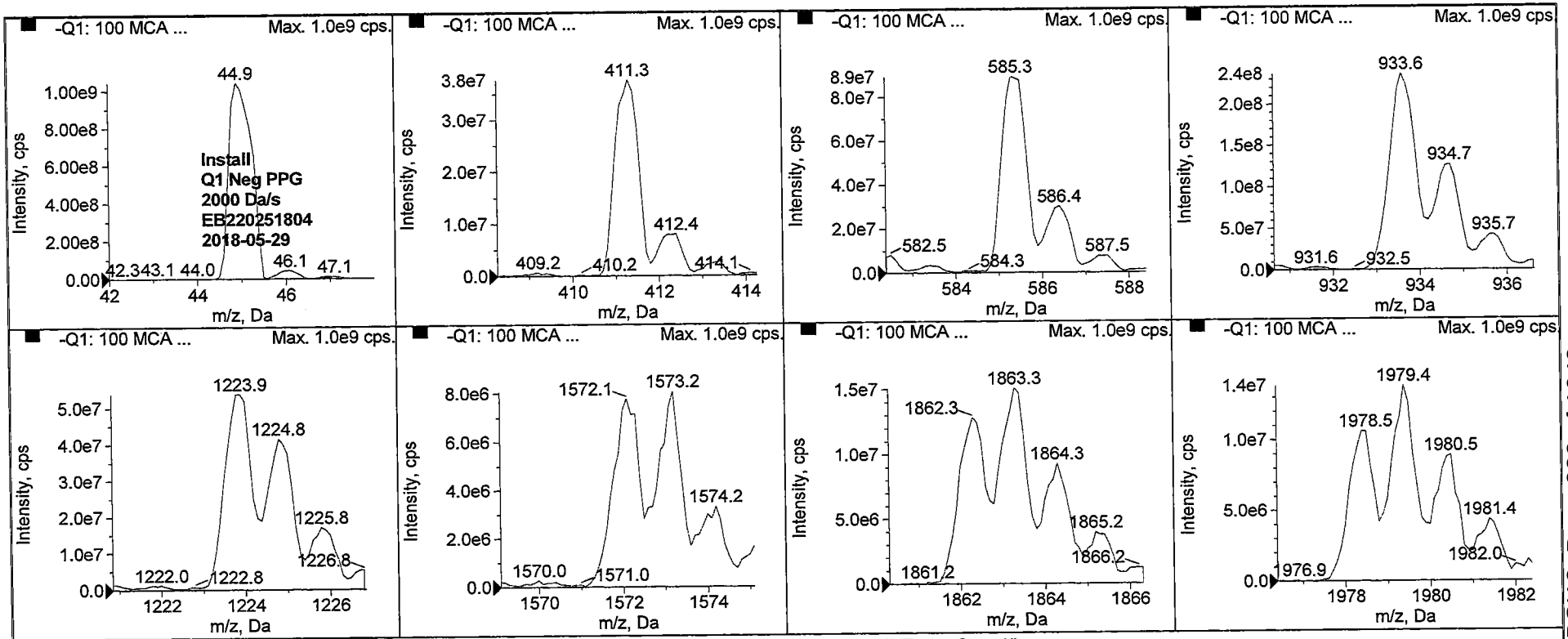
Scans in Period:	100
Relative Start Time:	0.00 msec
Scheduled Ionization:	Off
Experiments in Period:	1

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

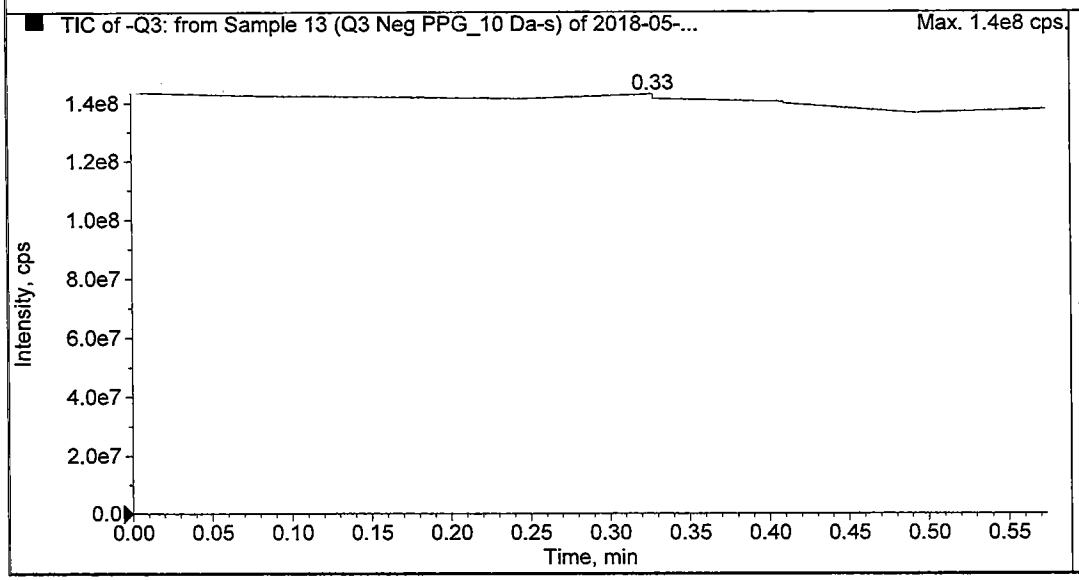
Mass Spectrometer Method Properties

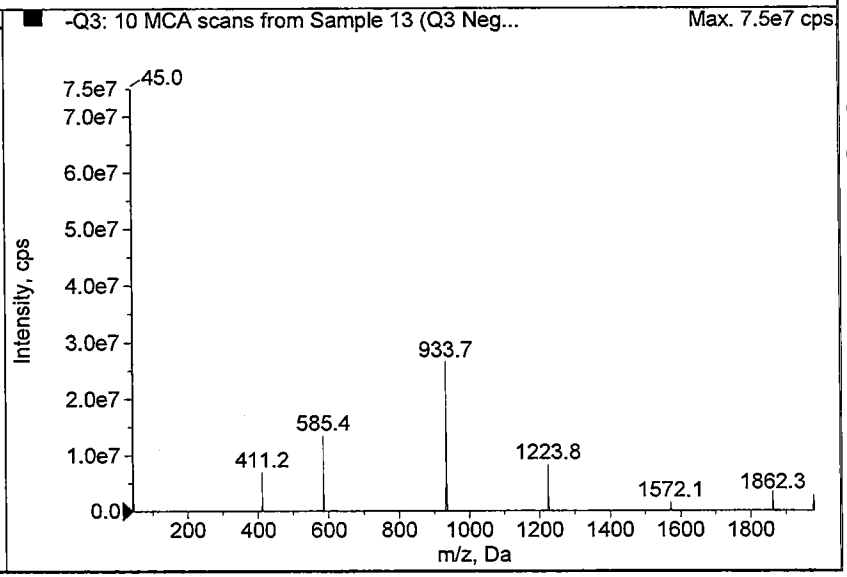
Period 1:

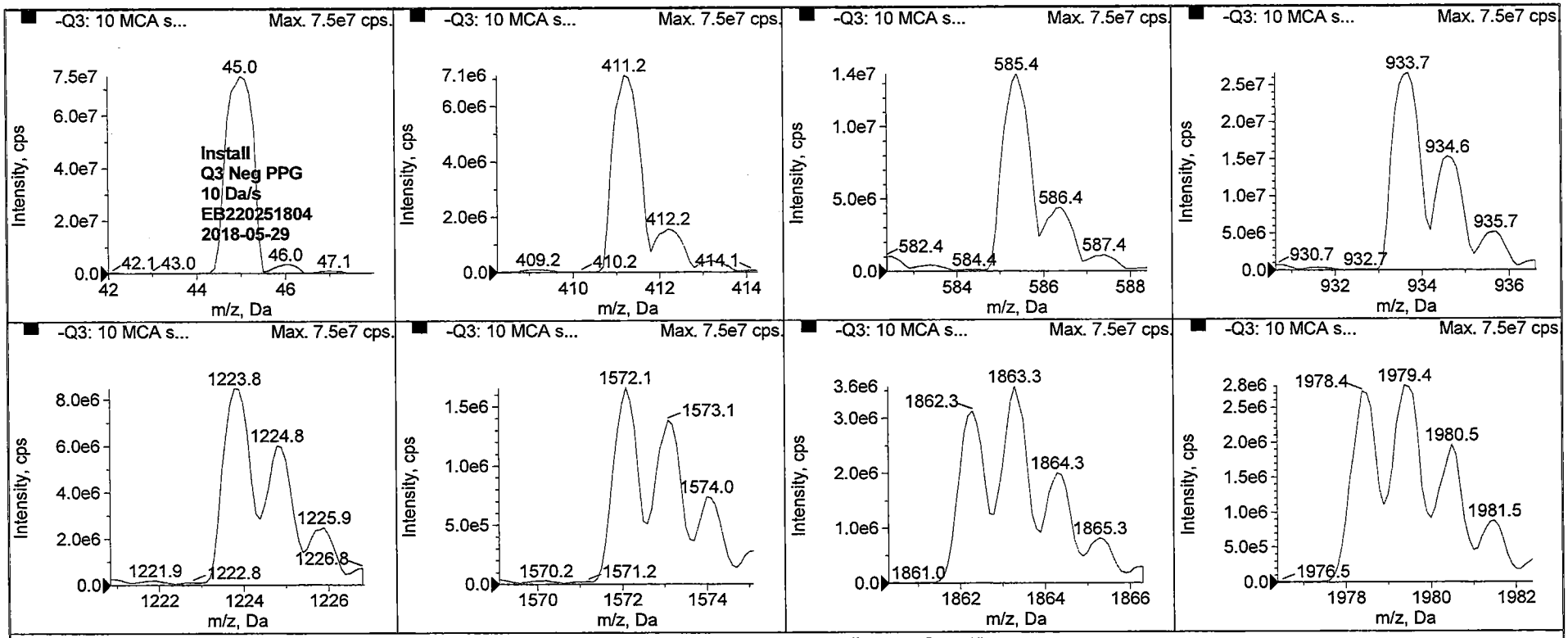
Scans in Period: 10
Relative Start Time: 0.00 msec
Scheduled Ionization: Off
Experiments in Period: 1

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

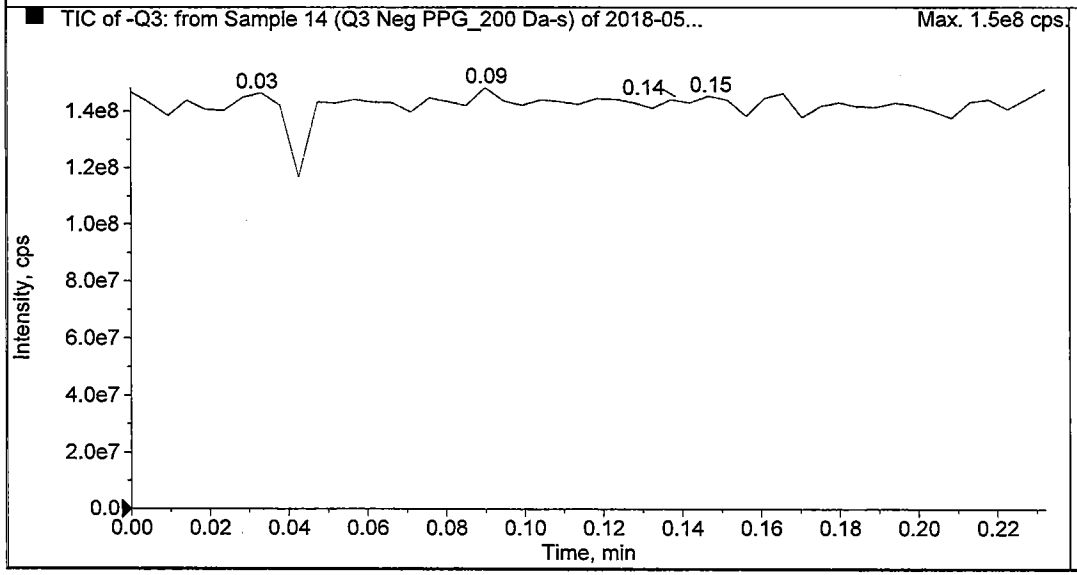
Mass Spectrometer Method Properties

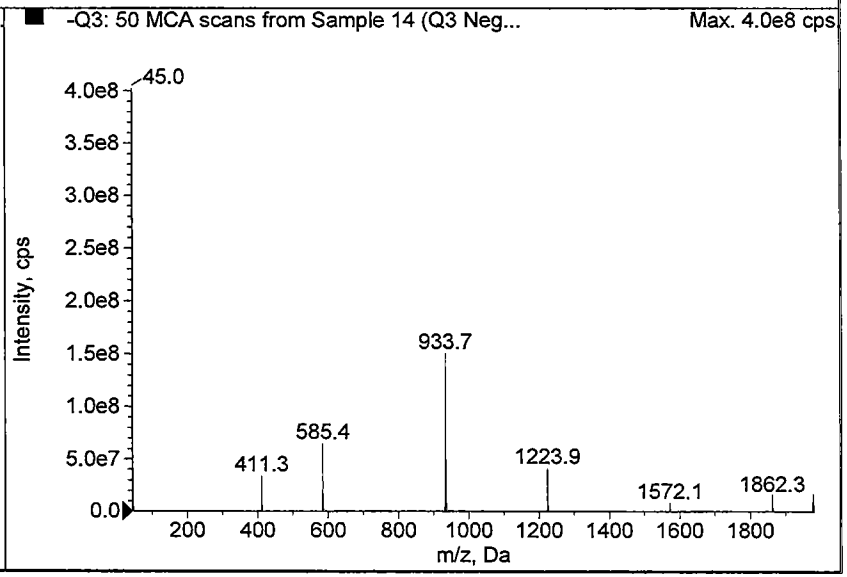
Period 1:

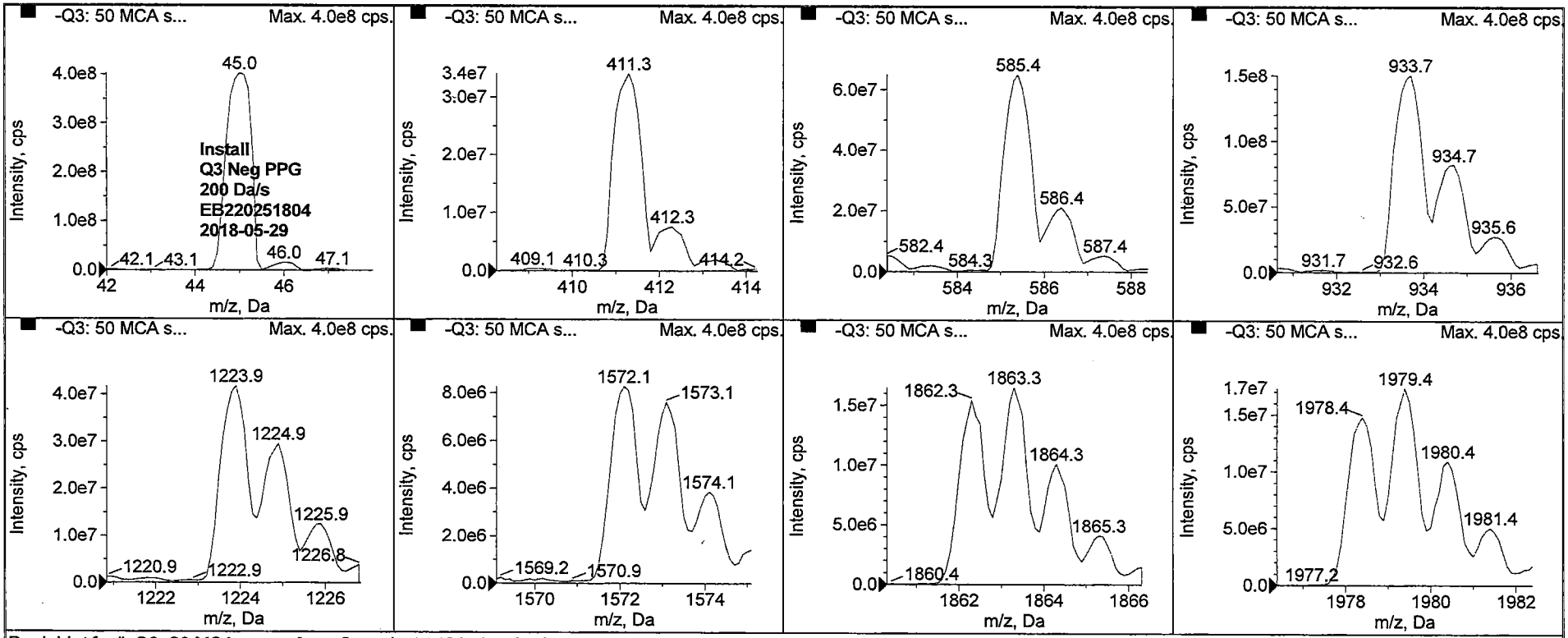
Scans in Period:	50
Relative Start Time:	0.00 msec
Scheduled Ionization:	Off
Experiments in Period:	1

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

Sate 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

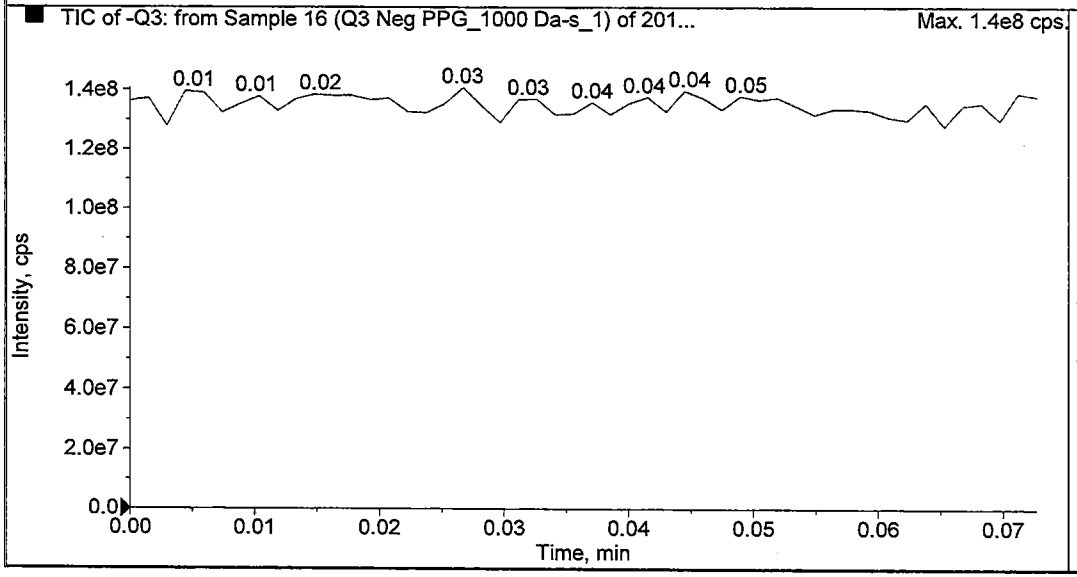
Mass Spectrometer Method Properties

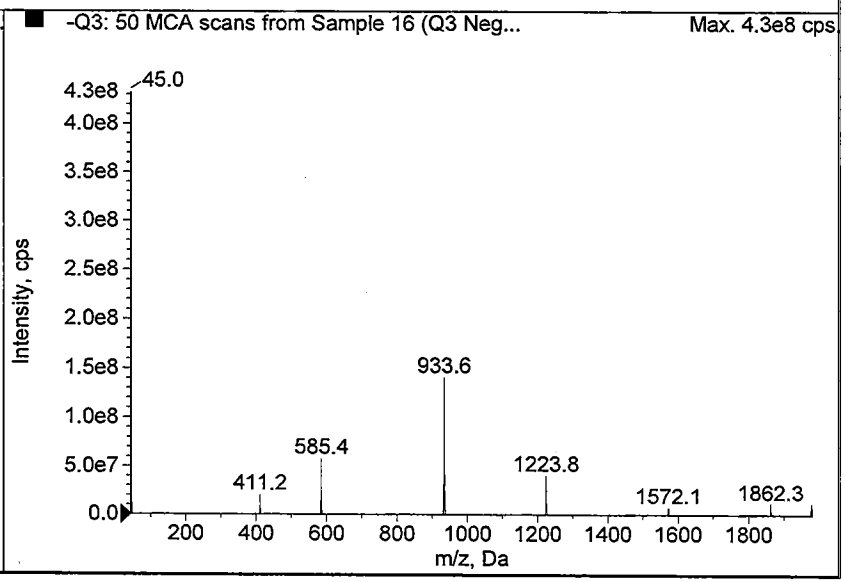
Period 1:

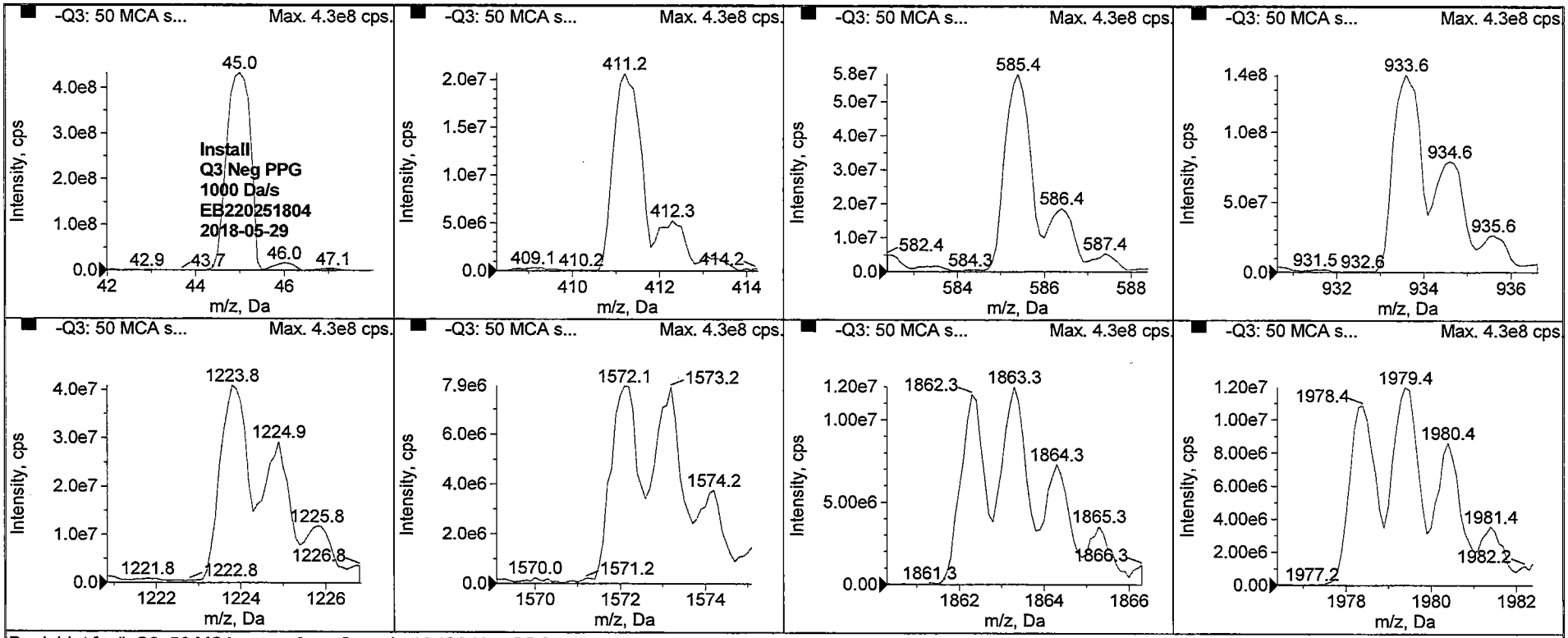
Scans in Period: 50
Relative Start Time: 0.00 msec
Scheduled Ionization: Off
Experiments in Period: 1

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

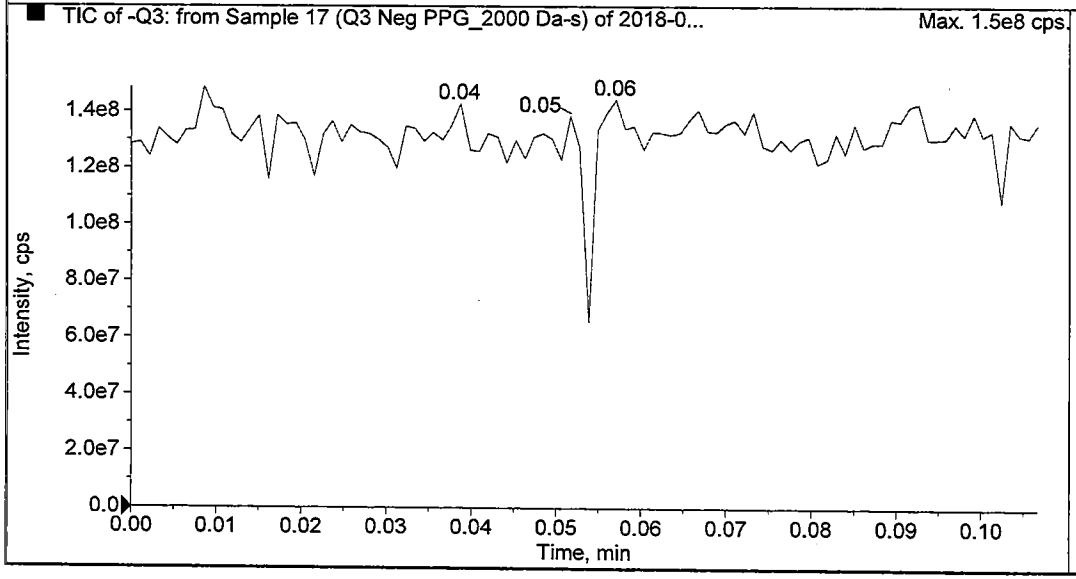
Mass Spectrometer Method Properties

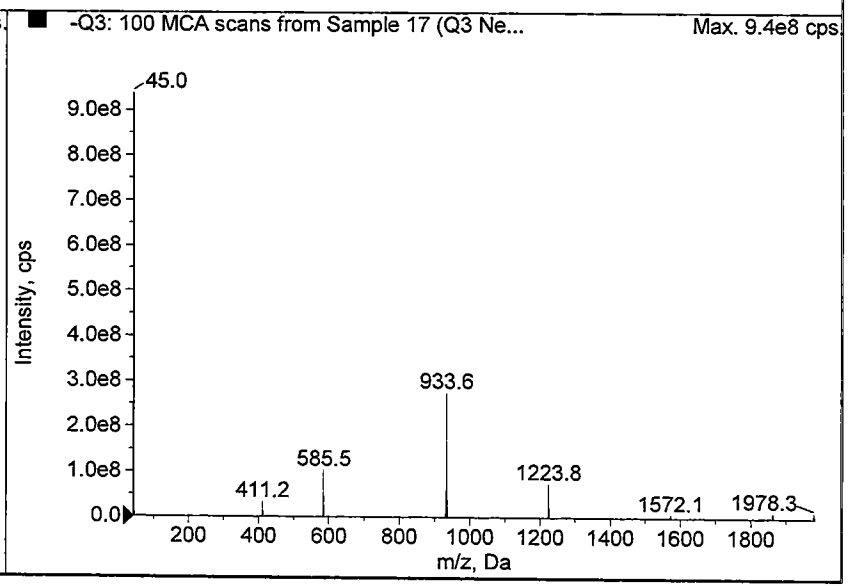
Period 1:

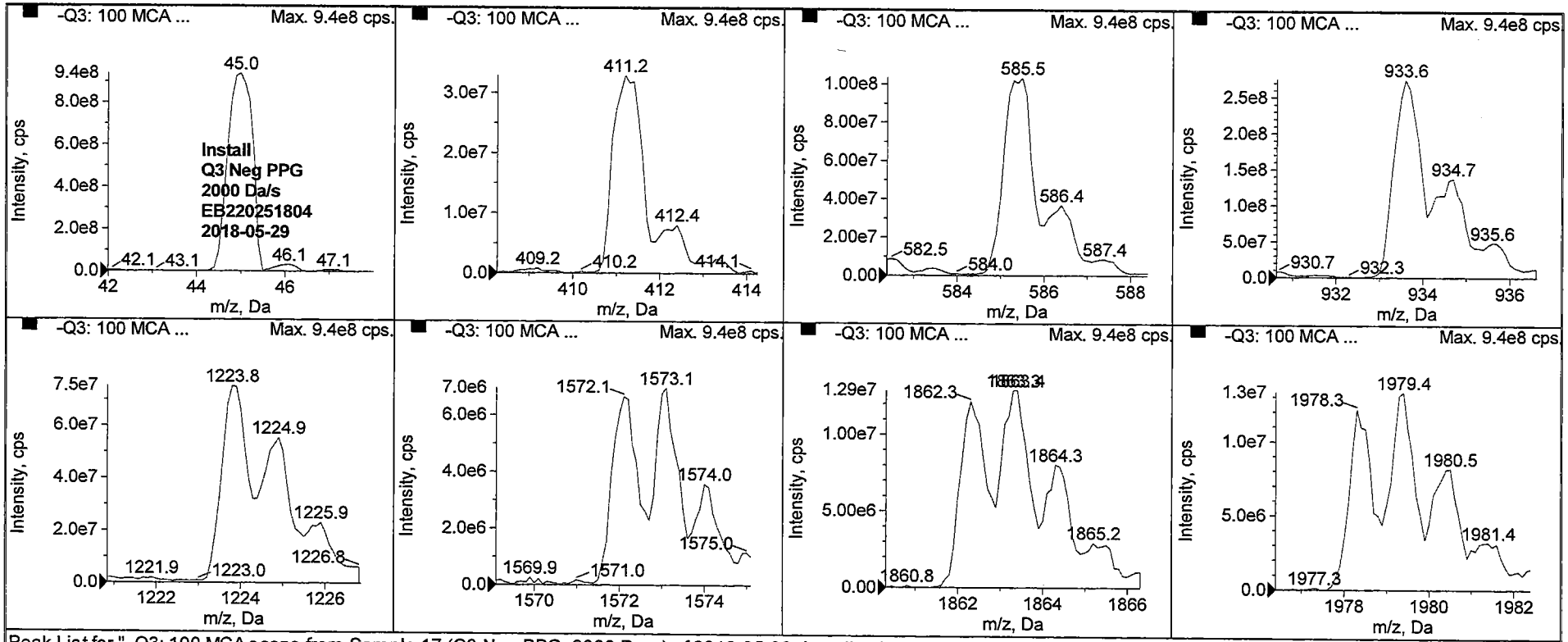
Scans in Period: 100
Relative Start Time: 0.00 msec
Scheduled Ionization: Off
Experiments in Period: 1

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

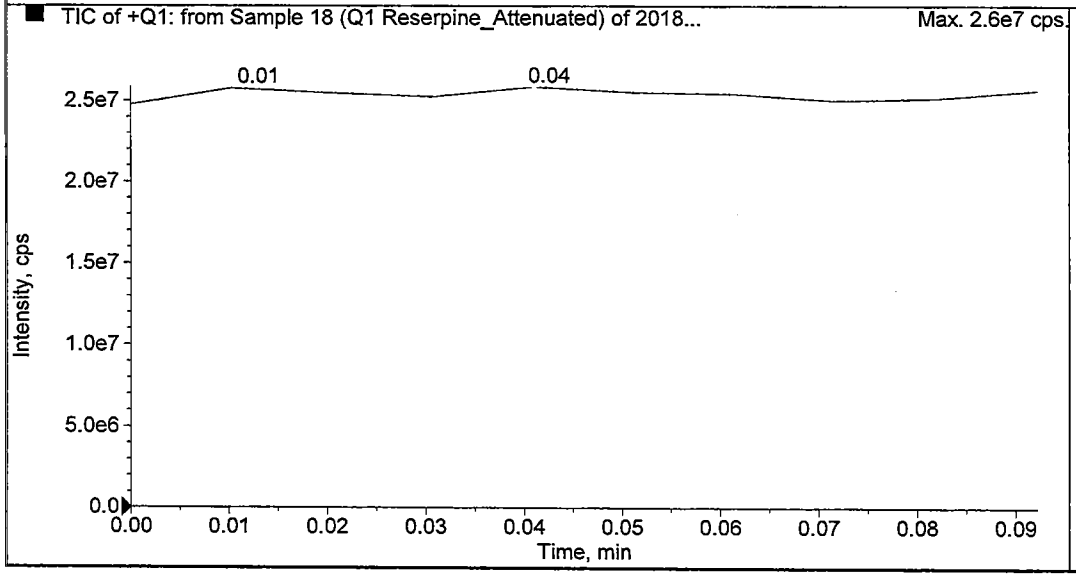
Mass Spectrometer Method Properties

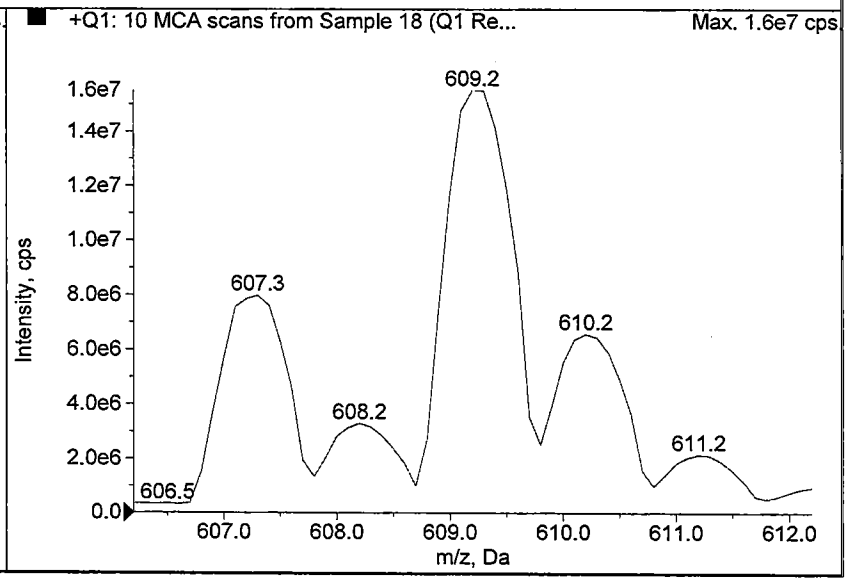
Period 1:

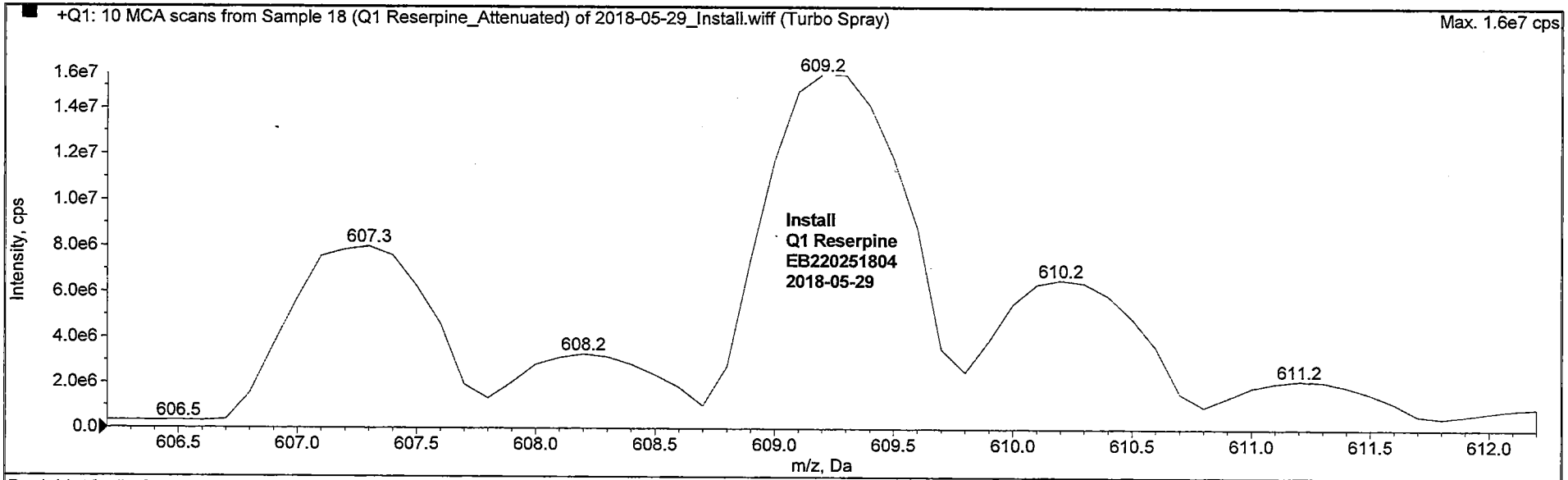
Scans in Period:	10
Relative Start Time:	0.00 msec
Scheduled Ionization:	Off
Experiments in Period:	1

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







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

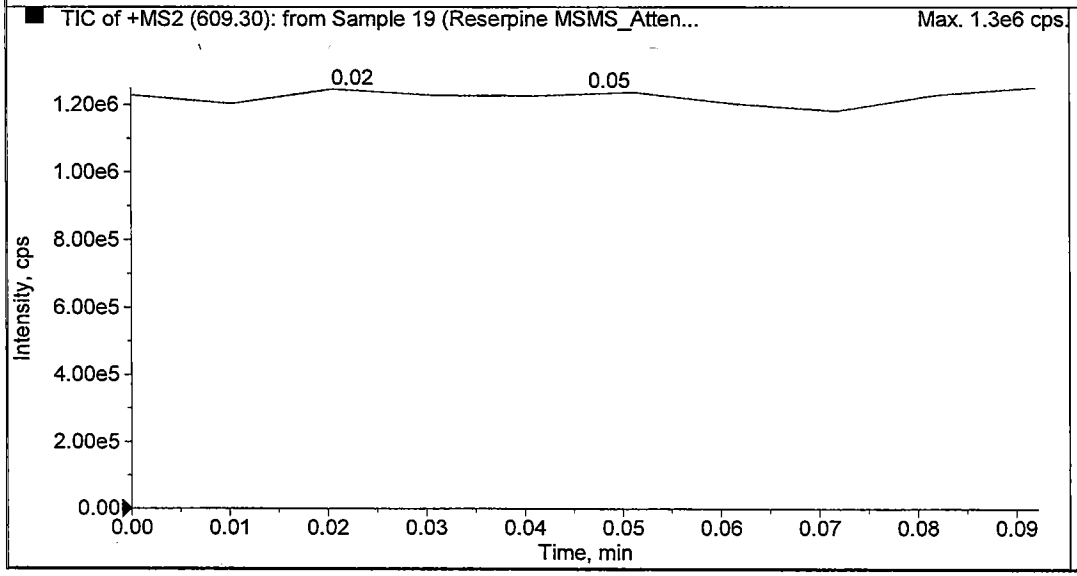
Mass Spectrometer Method Properties

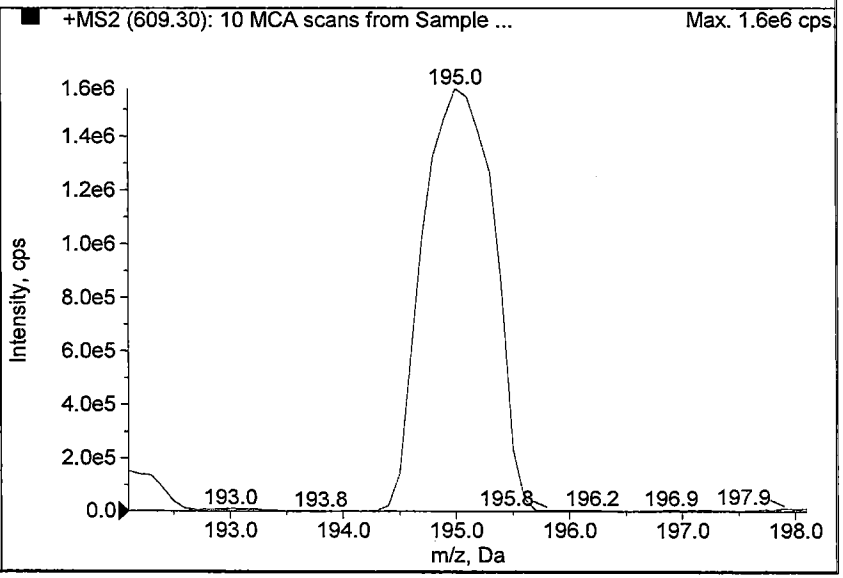
Period 1:

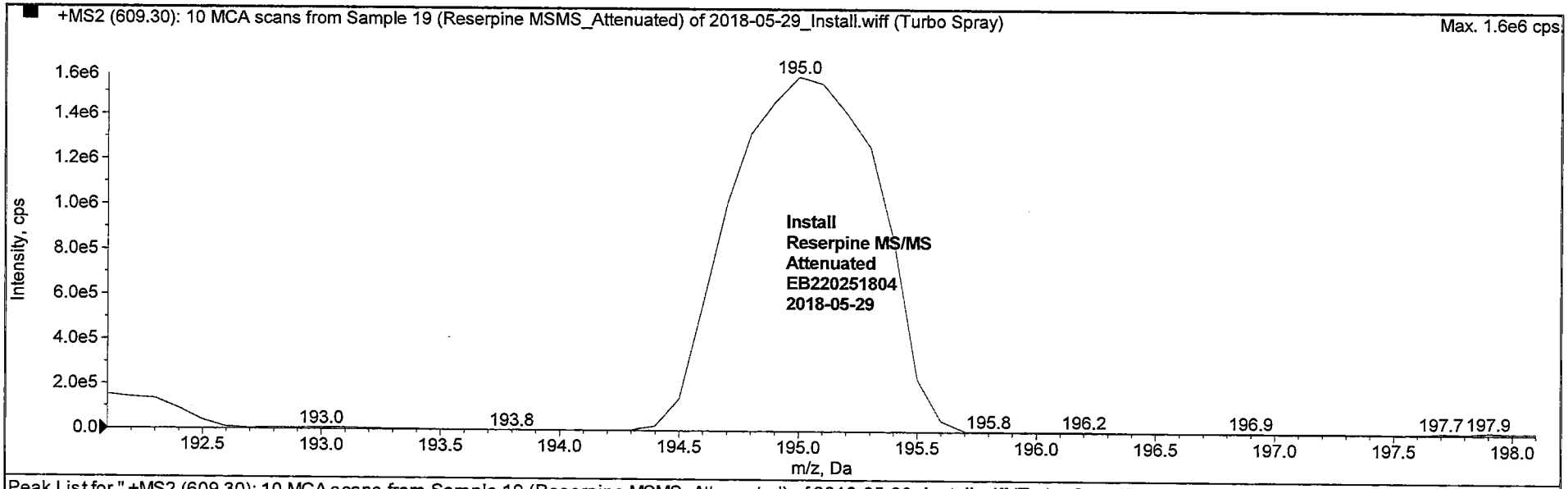
Scans in Period: 10
Relative Start Time: 0.00 msec
Scheduled Ionization: Off
Experiments in Period: 1

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







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

ICAL Name: 18NOV12DCAL **Result Table:** 18311021 11/16/2018 3:49:12 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Sample Name:	BLK311021			**Data File:**		18NOV16D-07.wiff
Sample ID:	EPA 537 mod QSM 5.1 table B-15 18311021			**Acquis Date:**		2018-11-16T11:08:13
Sample Type:	Unknown			**Instrument:**		LM27631
Vial Position:	39			**Acquis Method:**		18AUG13_3uL.dam
Injection Vol:	3.00			**Result Table:**		18311021
QMethod File:	18AUG20QM			**ICAL Name:**		18NOV12DCAL
Batch Number:	18311021			**Operator:**		JPT12262
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: 18NOV16D-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	757123.1	707280.6	7	50	
13C2-PFOA	5.0	520509.8	484265.4	7	50	
13C4-PFOS	4.8	271489.4	256987.3	6	50	
13C2-PFDA	5.0	333127.5	302418.6	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
E13C4-PFBA	642085.0	13C3-PFBA	757123.1	0.848	10.000	7.604	76	50-150	
E13C5-PFPeA	632952.5	13C3-PFBA	757123.1	0.836	10.000	7.499	75	50-150	
E13C3-PFBS	345416.1	13C3-PFBA	757123.1	0.456	9.300	6.441	69	50-150	
E13C2-4:2-FTS	41376.1	13C2-PFOA	520509.8	0.079	9.340	7.081	76	50-150	
E13C5-PFHxA	591202.6	13C2-PFOA	520509.8	1.136	10.000	8.206	82	50-150	
E13C3-PFHxS	264556.4	13C2-PFOA	520509.8	0.508	9.460	6.975	74	50-150	
E13C4-PFHpA	475756.1	13C2-PFOA	520509.8	0.914	10.000	8.236	82	50-150	
E13C2-6:2-FTS	30667.5	13C2-PFOA	520509.8	0.059	9.500	7.884	83	50-150	
E13C8-PFOA	759883.3	13C2-PFOA	520509.8	1.460	10.000	8.044	80	50-150	
E13C8-PFOS	228176.4	13C4-PFOS	271489.4	0.840	9.560	7.448	78	50-150	
E13C9-PFNA	412506.9	13C4-PFOS	271489.4	1.519	10.000	8.473	85	50-150	
E13C6-PFDA	550408.7	13C2-PFDA	333127.5	1.652	10.000	7.711	77	50-150	
E13C2-8:2-FTS	23065.7	13C2-PFDA	333127.5	0.069	9.580	6.906	72	50-150	
E13C8-PFOSA	599719.7	13C2-PFDA	333127.5	1.800	10.000	7.982	80	50-150	
Ed3-NMeFOSAA	71919.3	13C2-PFDA	333127.5	0.216	10.000	7.794	78	50-150	
E13C7-PFUnDA	231963.8	13C2-PFDA	333127.5	0.696	10.000	8.086	81	50-150	
Ed5-NEtFOSAA	57234.7	13C2-PFDA	333127.5	0.172	10.000	7.270	73	50-150	
E13C2-PFDoDA	455672.1	13C2-PFDA	333127.5	1.368	10.000	7.103	71	50-150	
Ed7-NMePFOSAE	301710.6	13C2-PFDA	333127.5	0.906	10.000	7.839	78	50-150	
Ed3-NMePFOSA	68613.7	13C2-PFDA	333127.5	0.206	10.000	7.484	75	50-150	
Ed9-NEtPFOSAE	239283.9	13C2-PFDA	333127.5	0.718	10.000	7.472	75	50-150	
Ed5-NEtPFOSA	56326.0	13C2-PFDA	333127.5	0.169	10.000	7.933	79	50-150	
E13C2-PFTeDA	320795.7	13C2-PFDA	333127.5	0.963	10.000	6.761	68	50-150	

APPROVED
By JPT at 4:01 pm, 11/16/18

REVIEWED
By HMK at 9:07 am, 11/19/18

ICAL Name: 18NOV12DCAL **Result Table:** 18311021 11/16/2018 3:49:12 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

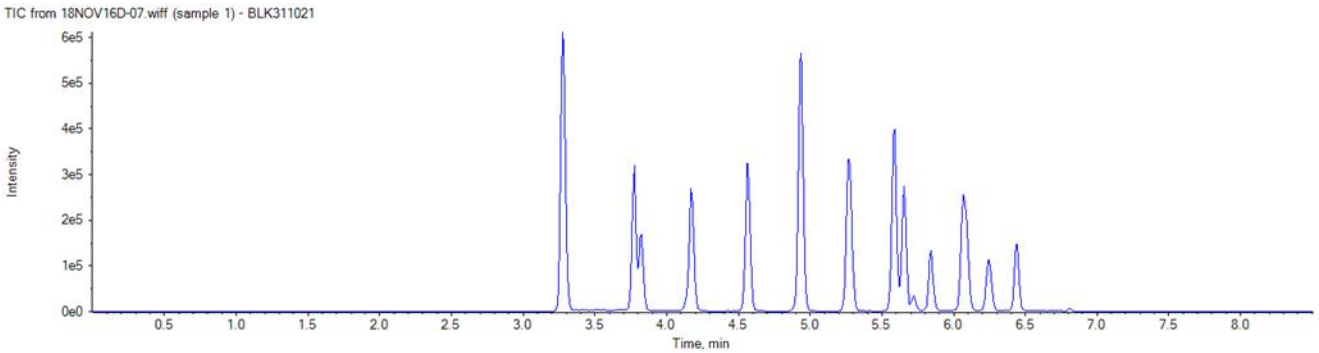
Analyte Quantitation Peak Table

Sample Name: BLK311021 **Instrument Name:** LM27631 **File Name:** 18NOV16D-07.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	3.28	1.000	10794.0		A	13C4-PFBA	3.28	642085.0	0.017	0.186
PFPeA	N/A	N/A	N/A		A	13C5-PFPeA	3.77	632952.5	N/A	
PFBS	N/A	N/A	N/A		A	13C3-PFBS	3.82	345416.1	N/A	
4:2-FTS	N/A	N/A	N/A		A	13C2-4:2-FTS	4.14	41376.1	N/A	
PFHxA	N/A	N/A	N/A		A	13C5-PFHxA	4.17	591202.6	N/A	
PFPeS	N/A	N/A	N/A		A	13C3-PFBS	3.82	345416.1	N/A	
PFHpA	N/A	N/A	N/A		A	13C4-PFHpA	4.56	475756.1	N/A	
PFHxS	N/A	N/A	N/A		A	13C3-PFHxS	4.57	264556.4	N/A	
6:2-FTS	N/A	N/A	N/A		A	13C2-6:2-FTS	4.92	30667.5	N/A	
PFHpS	N/A	N/A	N/A		A	13C3-PFHxS	4.57	264556.4	N/A	
PFOA	N/A	N/A	N/A		A	13C8-PFOA	4.93	759883.3	N/A	
PFOS	N/A	N/A	N/A		A	13C8-PFOS	5.26	228176.4	N/A	
PFNA	N/A	N/A	N/A		A	13C9-PFNA	5.28	412506.9	N/A	
PFNS	N/A	N/A	N/A		A	13C8-PFOS	5.26	228176.4	N/A	
PFDA	N/A	N/A	N/A		A	13C6-PFDA	5.58	550408.7	N/A	
8:2-FTS	N/A	N/A	N/A		A	13C2-8:2-FTS	5.59	23065.7	N/A	
PFOSA	N/A	N/A	N/A		A	13C8-PFOSA	5.66	599719.7	N/A	
NMeFOSAA	N/A	N/A	N/A		A	d3-NMeFOSAA	5.72	71919.3	N/A	
PFDS	N/A	N/A	N/A		A	13C8-PFOS	5.26	228176.4	N/A	
PFUnDA	N/A	N/A	N/A		A	13C7-PFUnDA	5.84	231963.8	N/A	
NEtFOSAA	N/A	N/A	N/A		A	d5-NEtFOSAA	5.85	57234.7	N/A	
PFDoDA	N/A	N/A	N/A		A	13C2-PFDoDA	6.06	455672.1	N/A	
10:2-FTS	N/A	N/A	N/A		A	13C2-8:2-FTS	5.59	23065.7	N/A	
NMePFOSAE	N/A	N/A	N/A		A	d7-NMePFOSAE	6.09	301710.6	N/A	
NMePFOSA	N/A	N/A	N/A		A	d3-NMePFOSA	6.10	68613.7	N/A	
PFDoS	N/A	N/A	N/A		A	13C8-PFOS	5.26	228176.4	N/A	
NEtPFOSAE	N/A	N/A	N/A		A	d9-NEtPFOSAE	6.24	239283.9	N/A	
NEtPFOSA	N/A	N/A	N/A		A	d5-NEtPFOSA	6.26	56326.0	N/A	
PFTrDA	N/A	N/A	N/A		A	13C2-PFDoDA	6.06	455672.1	N/A	
PFTeDA	N/A	N/A	N/A		A	13C2-PFTeDA	6.44	320795.7	N/A	
PFHxDA	N/A	N/A	N/A		A	13C2-PFTeDA	6.44	320795.7	N/A	
PFODA	N/A	N/A	N/A		A	13C2-PFTeDA	6.44	320795.7	N/A	

Total Ion Chromatogram

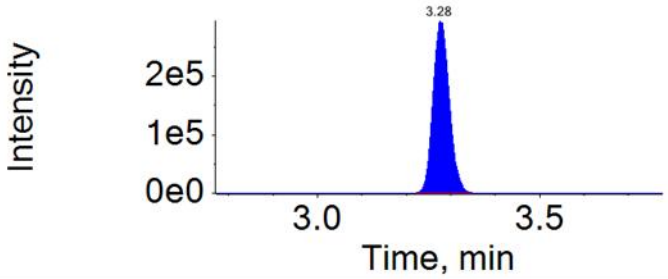


APPROVED
By JPT at 4:01 pm, 11/16/18

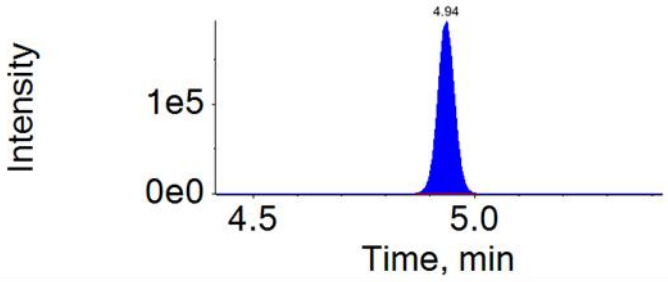
REVIEWED
By HMK at 9:07 am, 11/19/18

ICAL Name: 18NOV12DCAL **Result Table:** 18311021 11/16/2018 3:49:12 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

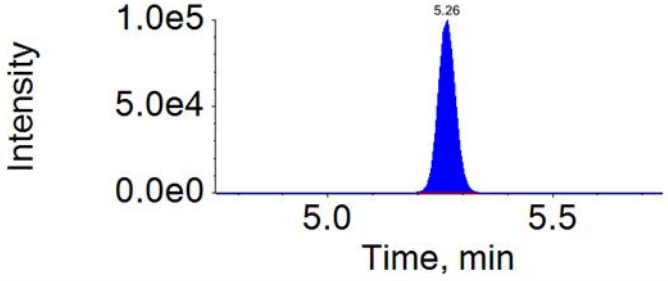
Injection Standard: 13C3-PFBA
216.0 / 172.0



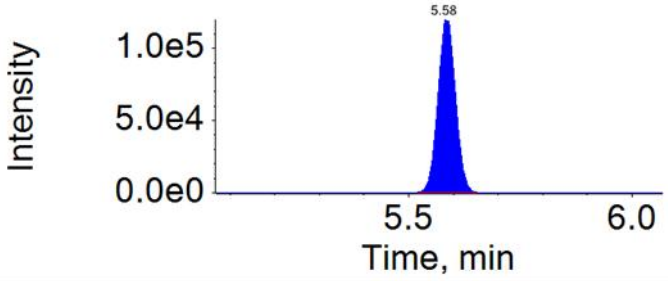
Injection Standard: 13C2-PFOA
415.0 / 370.0



Injection Standard: 13C4-PFOS
503.0 / 80.0



Injection Standard: 13C2-PFDA
515.0 / 470.0

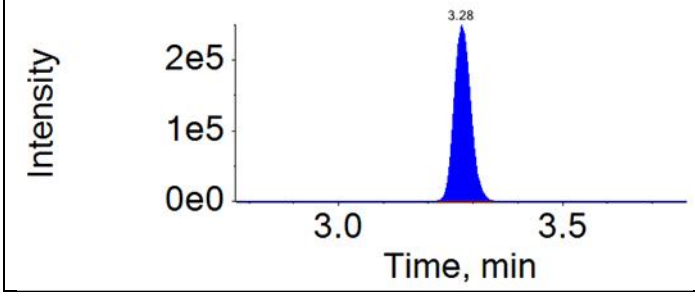


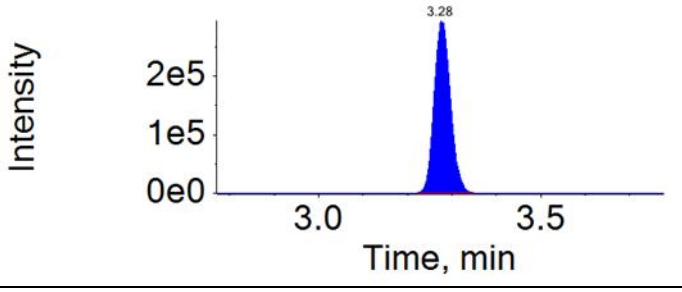
APPROVED
By JPT at 4:01 pm, 11/16/18

REVIEWED
By HMK at 9:07 am, 11/19/18

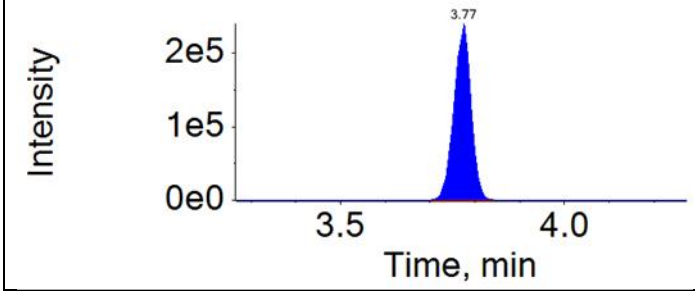
ICAL Name: 18NOV12DCAL **Result Table:** 18311021 11/16/2018 3:49:12 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

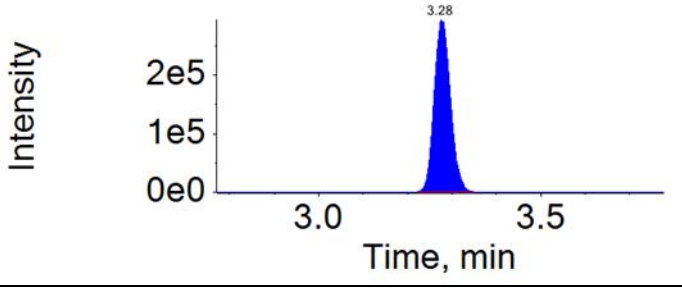
Extraction Standard: E13C4-PFBA	Injection Standard: 13C3-PFBA
217.0 / 172.0	216.0 / 172.0



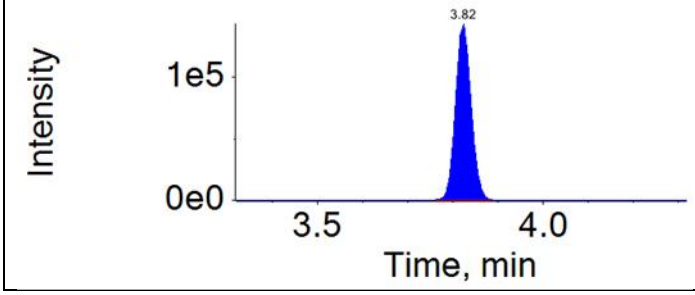


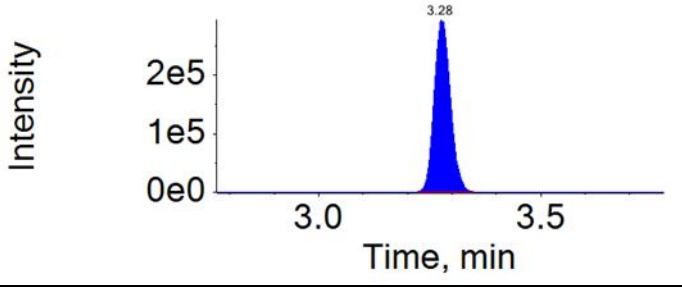
Extraction Standard: E13C5-PFPeA	Injection Standard: 13C3-PFBA
268.0 / 223.0	216.0 / 172.0



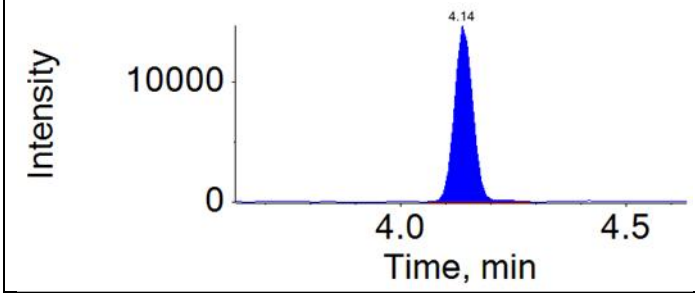


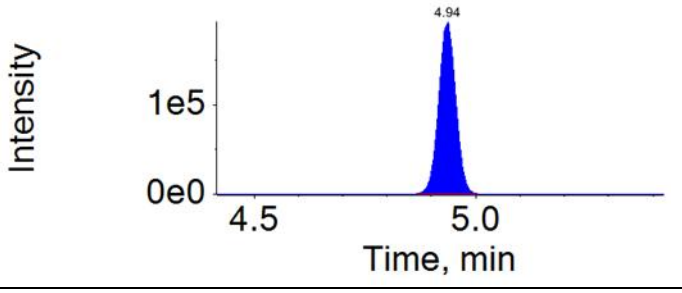
Extraction Standard: E13C3-PFBS	Injection Standard: 13C3-PFBA
302.0 / 80.0	216.0 / 172.0





Extraction Standard: E13C2-4:2-FTS	Injection Standard: 13C2-PFOA
329.0 / 81.0	415.0 / 370.0



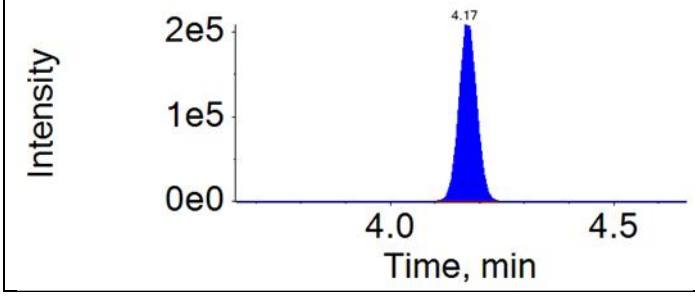


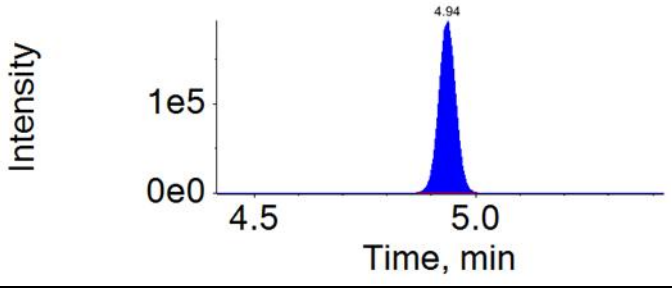
APPROVED
By JPT at 4:01 pm, 11/16/18

REVIEWED
By HMK at 9:07 am, 11/19/18

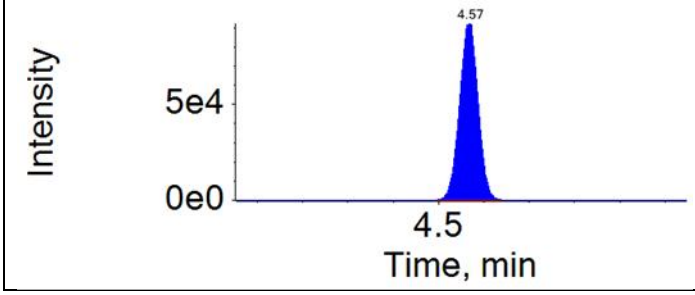
ICAL Name: 18NOV12DCAL **Result Table:** 18311021 11/16/2018 3:49:12 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

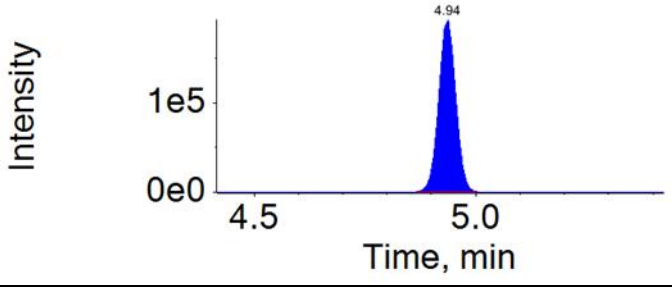
Extraction Standard: E13C5-PFHxA	Injection Standard: 13C2-PFOA
318.0 / 273.0	415.0 / 370.0



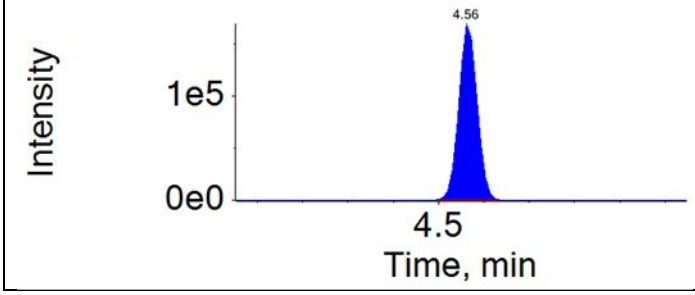


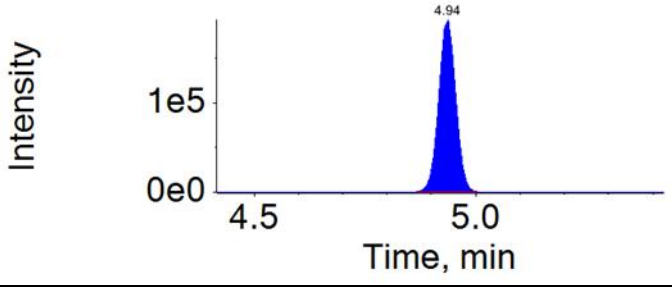
Extraction Standard: E13C3-PFHxS	Injection Standard: 13C2-PFOA
402.0 / 80.0	415.0 / 370.0



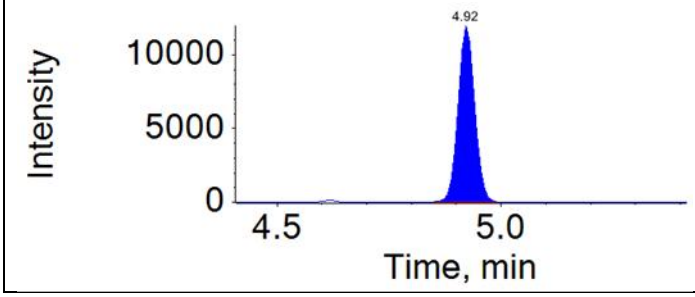


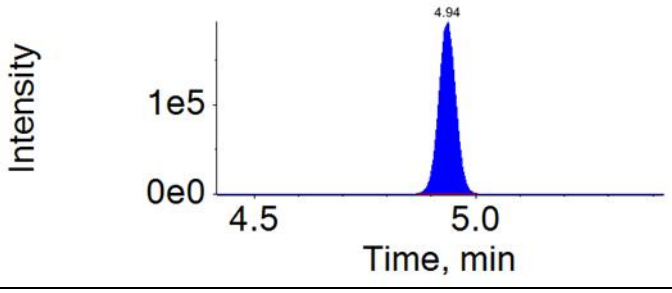
Extraction Standard: E13C4-PFHpA	Injection Standard: 13C2-PFOA
367.0 / 322.0	415.0 / 370.0





Extraction Standard: E13C2-6:2-FTS	Injection Standard: 13C2-PFOA
429.0 / 81.0	415.0 / 370.0

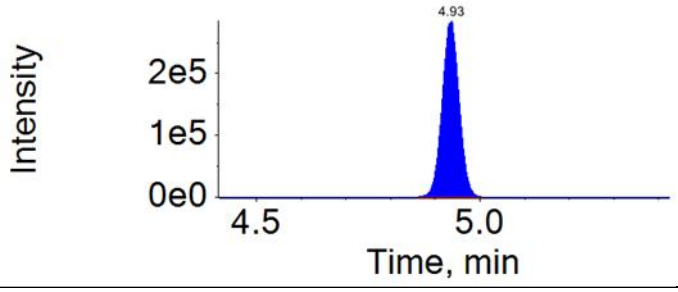
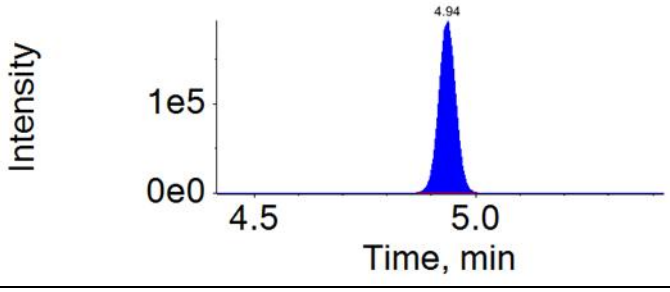


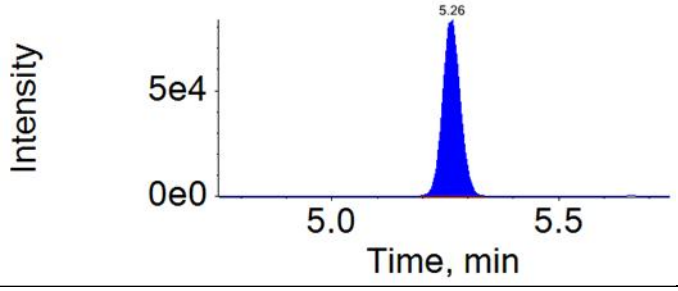
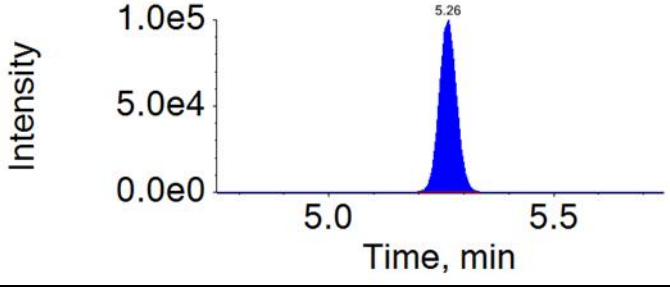


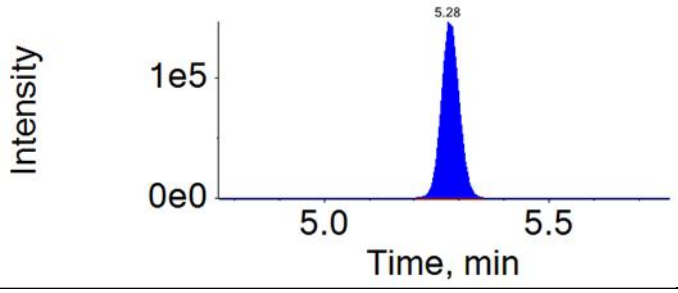
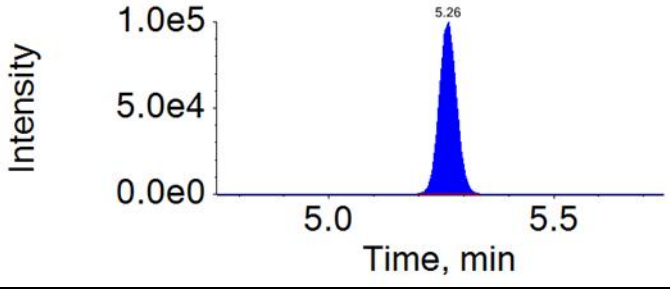
APPROVED
By JPT at 4:01 pm, 11/16/18

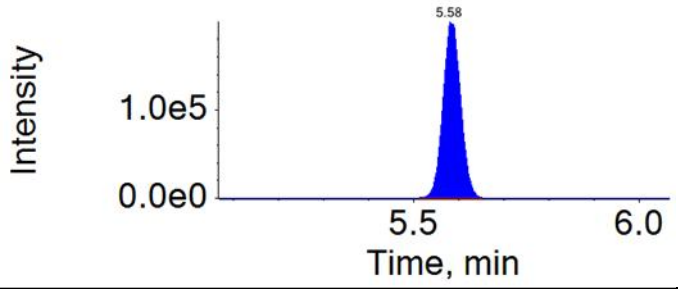
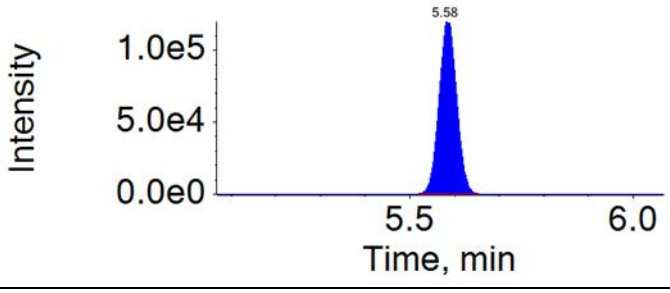
REVIEWED
By HMK at 9:07 am, 11/19/18

ICAL Name: 18NOV12DCAL **Result Table:** 18311021 11/16/2018 3:49:12 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
	

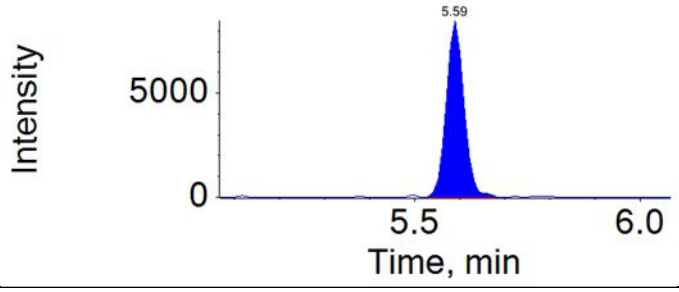
Extraction Standard: E13C6-PFDA	Injection Standard: 13C2-PFDA
519.0 / 474.0	515.0 / 470.0
	

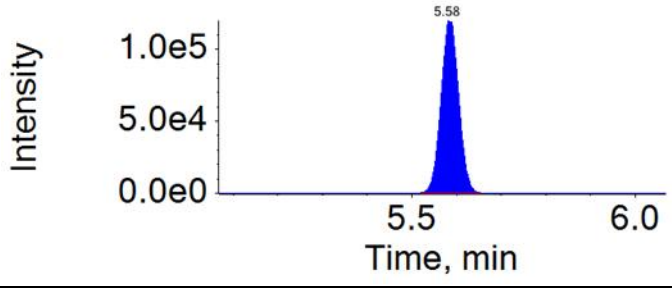
APPROVED
By JPT at 4:01 pm, 11/16/18

REVIEWED
By HMK at 9:07 am, 11/19/18

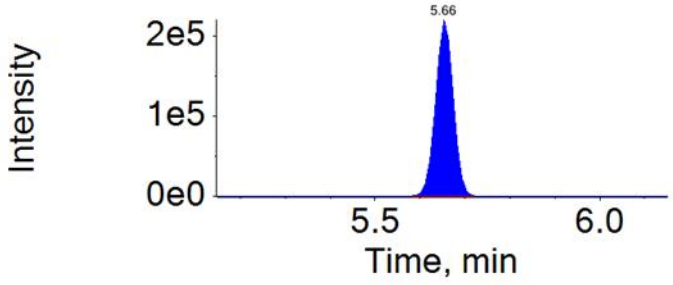
ICAL Name: 18NOV12DCAL **Result Table:** 18311021 11/16/2018 3:49:12 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

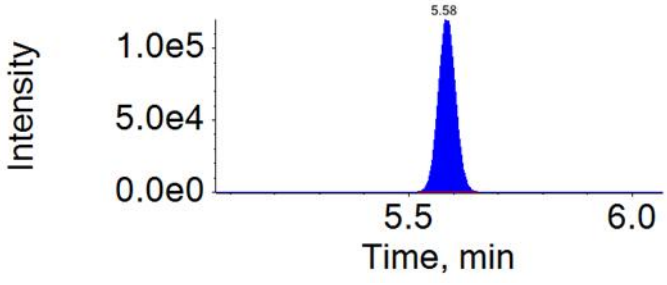
Extraction Standard: E13C2-8:2-FTS	Injection Standard: 13C2-PFDA
529.0 / 81.0	515.0 / 470.0



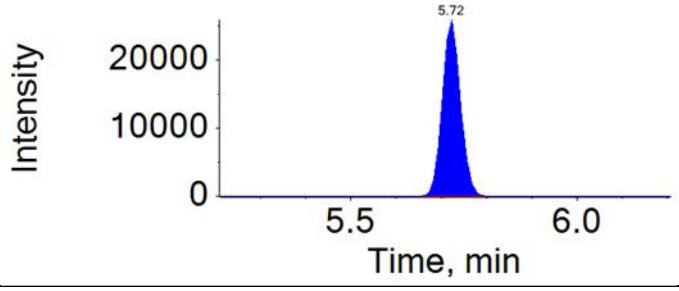


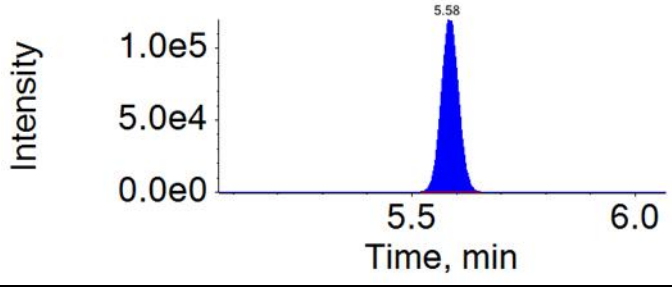
Extraction Standard: E13C8-PFOSA	Injection Standard: 13C2-PFDA
506.0 / 78.0	515.0 / 470.0



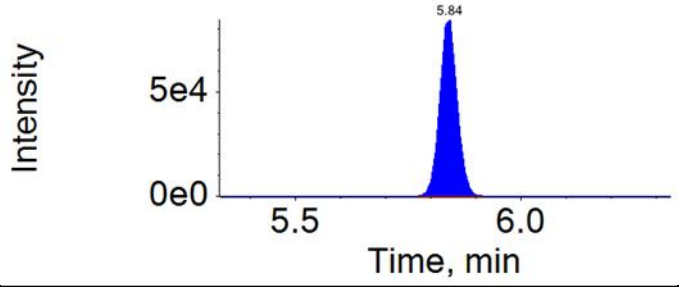


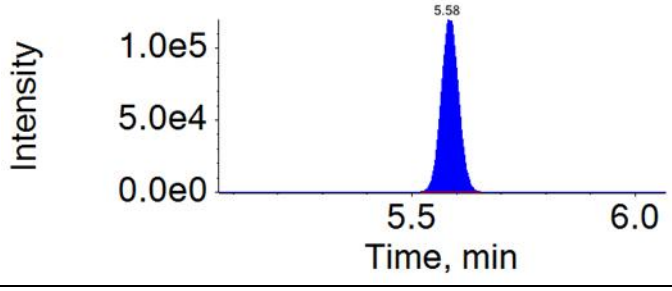
Extraction Standard: Ed3-NMeFOSAA	Injection Standard: 13C2-PFDA
573.0 / 419.0	515.0 / 470.0





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

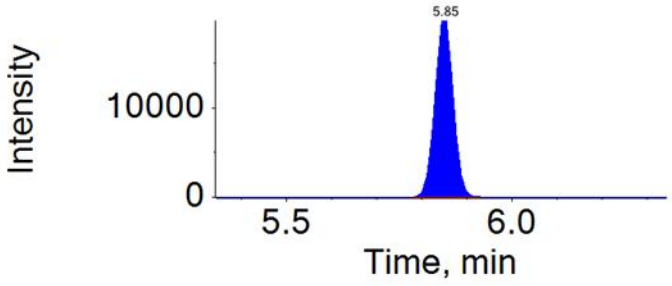
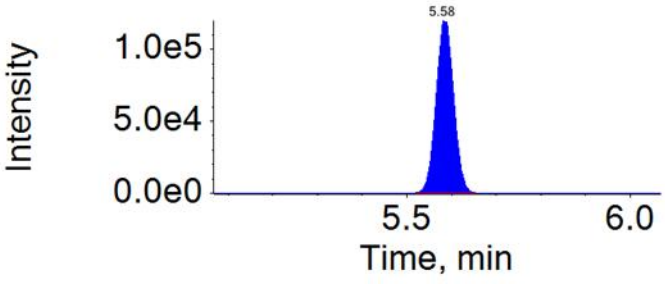


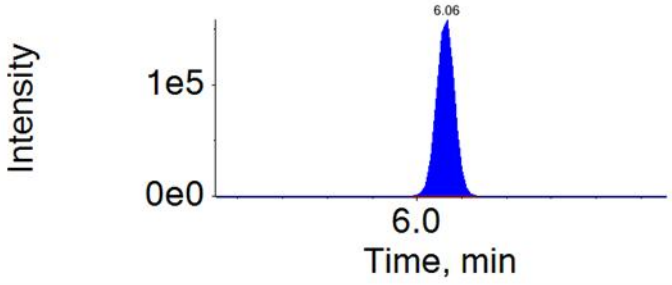
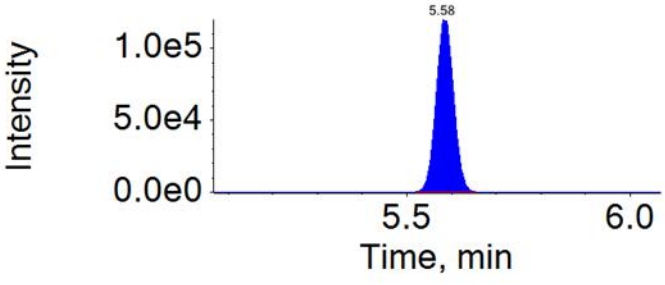


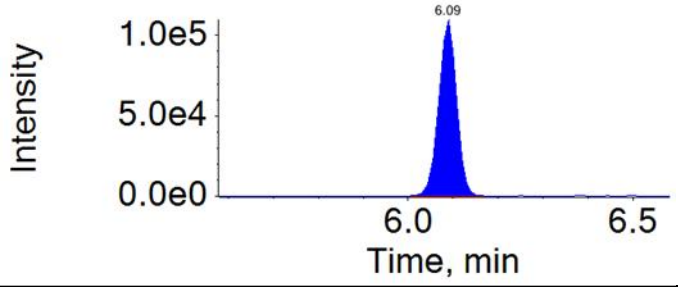
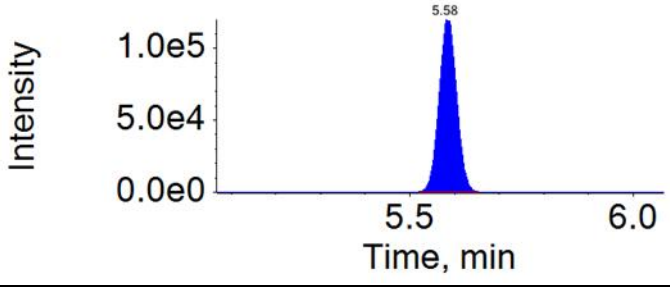
APPROVED
By JPT at 4:01 pm, 11/16/18

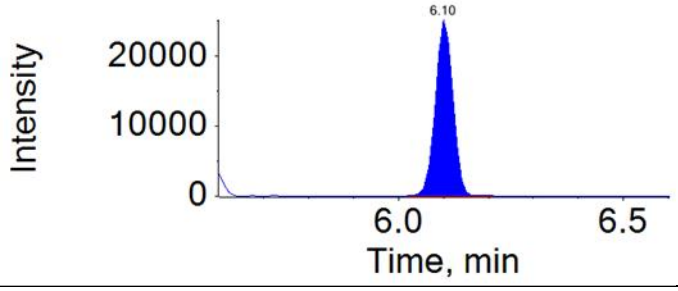
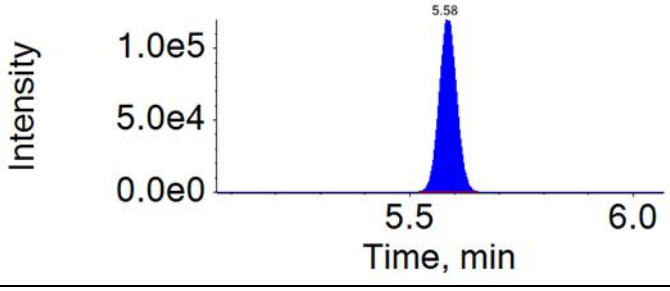
REVIEWED
By HMK at 9:07 am, 11/19/18

ICAL Name: 18NOV12DCAL **Result Table:** 18311021 11/16/2018 3:49:12 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
	

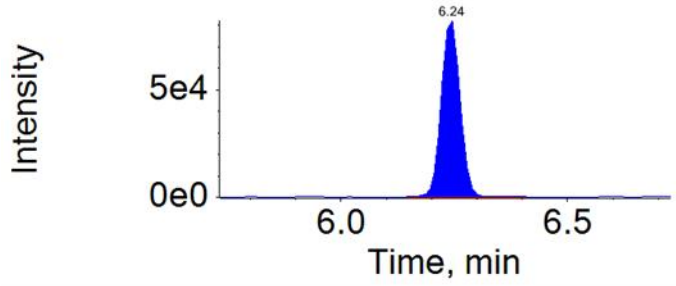
Extraction Standard: E13C2-PFDoDA	Injection Standard: 13C2-PFDA
615.0 / 570.0	515.0 / 470.0
	

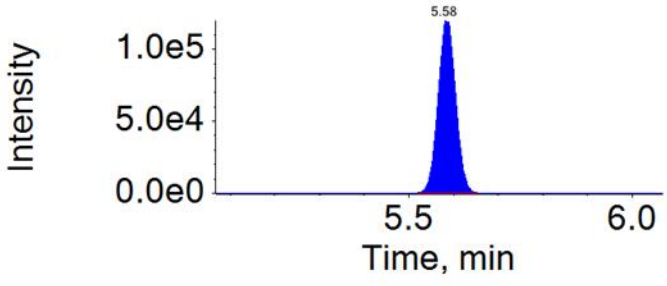
Extraction Standard: Ed7-NMePFOSAE	Injection Standard: 13C2-PFDA
623.0 / 59.0	515.0 / 470.0
	

Extraction Standard: Ed3-NMePFOSA	Injection Standard: 13C2-PFDA
515.0 / 169.0	515.0 / 470.0
	

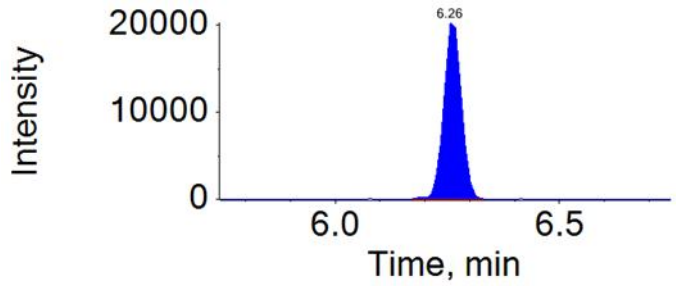
ICAL Name: 18NOV12DCAL **Result Table:** 18311021 11/16/2018 3:49:12 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

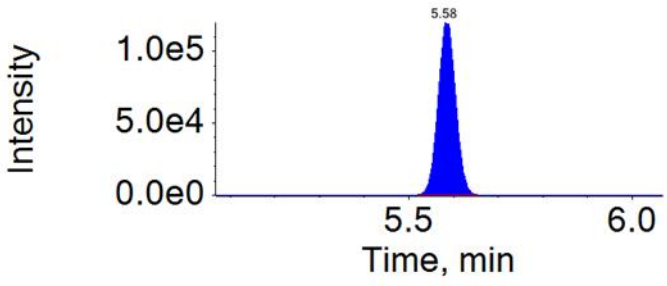
Extraction Standard: Ed9-NEtPFOSAE	Injection Standard: 13C2-PFDA
639.0 / 59.0	515.0 / 470.0



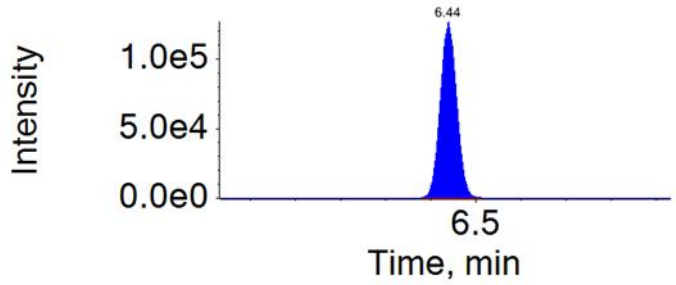


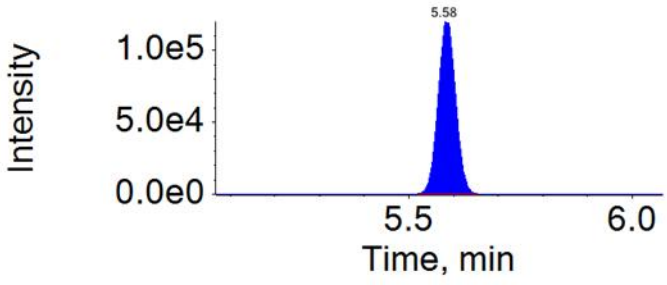
Extraction Standard: Ed5-NEtPFOSA	Injection Standard: 13C2-PFDA
531.0 / 169.0	515.0 / 470.0





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



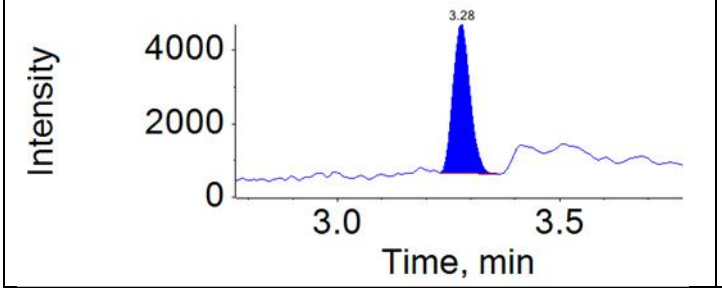


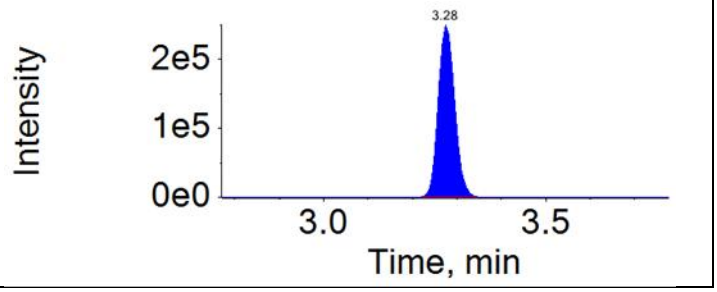
APPROVED
By JPT at 4:01 pm, 11/16/18

REVIEWED
By HMK at 9:07 am, 11/19/18

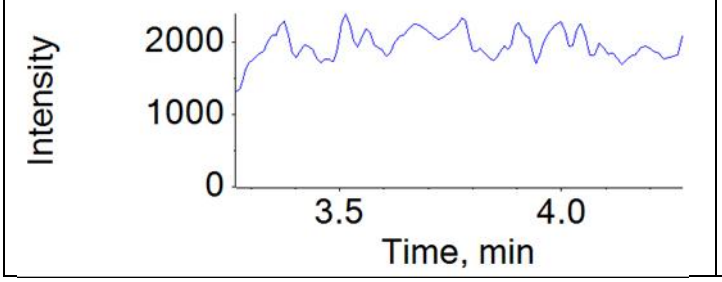
ICAL Name: 18NOV12DCAL **Result Table:** 18311021 11/16/2018 3:49:12 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

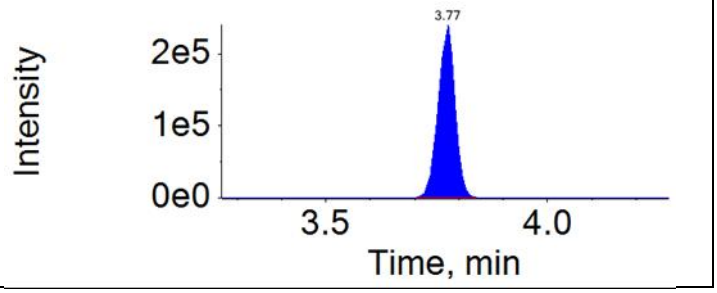
Analyte: PFBA	Extraction Standard: 13C4-PFBA
213.0 / 169.0	217.0 / 172.0



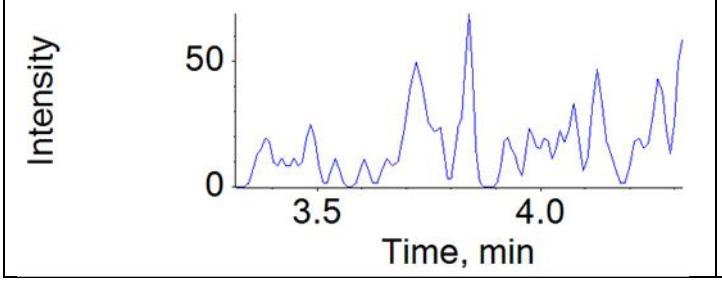


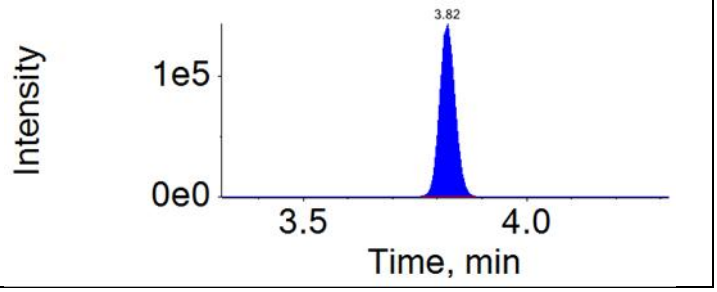
Analyte: PFPeA	Extraction Standard: 13C5-PFPeA
263.0 / 219.0	268.0 / 223.0



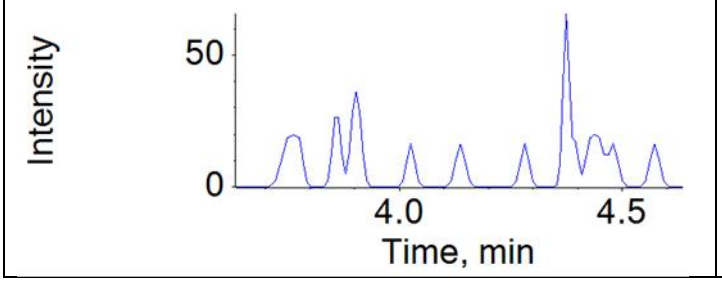


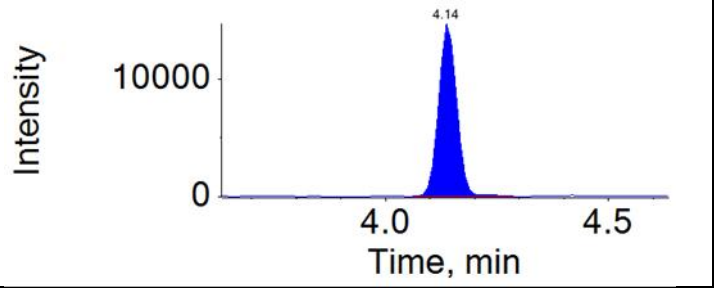
Analyte: PFBS	Extraction Standard: 13C3-PFBS
299.0 / 80.0	302.0 / 80.0





Analyte: 4:2-FTS	Extraction Standard: 13C2-4:2-FTS
327.0 / 307.0	329.0 / 81.0



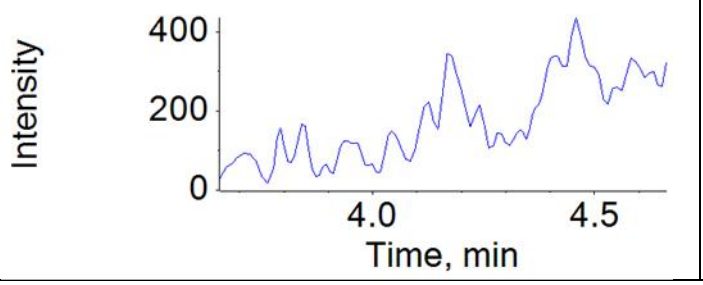


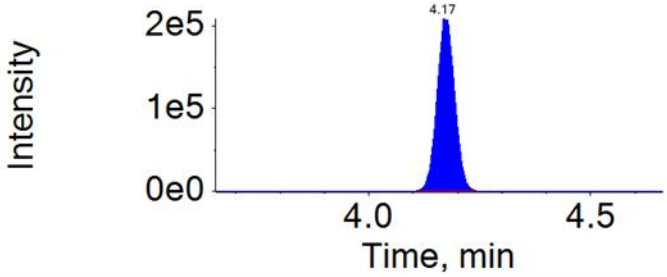
APPROVED
By JPT at 4:01 pm, 11/16/18

REVIEWED
By HMK at 9:07 am, 11/19/18

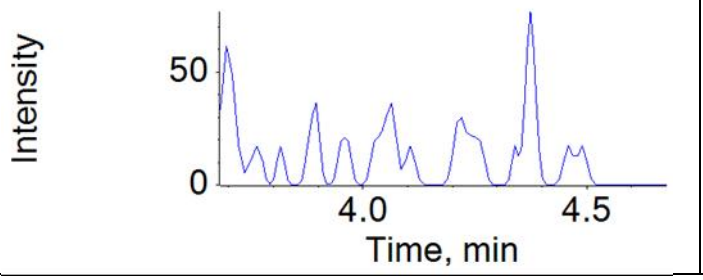
ICAL Name: 18NOV12DCAL **Result Table:** 18311021 11/16/2018 3:49:12 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

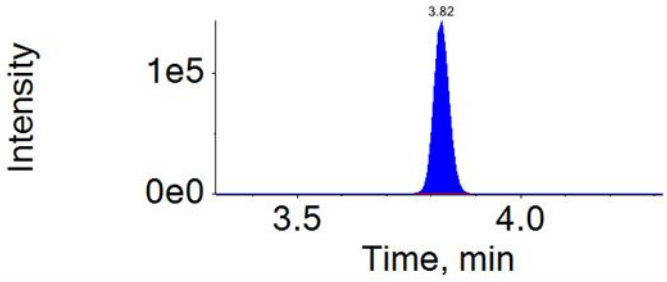
Analyte: PFHxA	Extraction Standard: 13C5-PFHxA
313.0 / 269.0	318.0 / 273.0



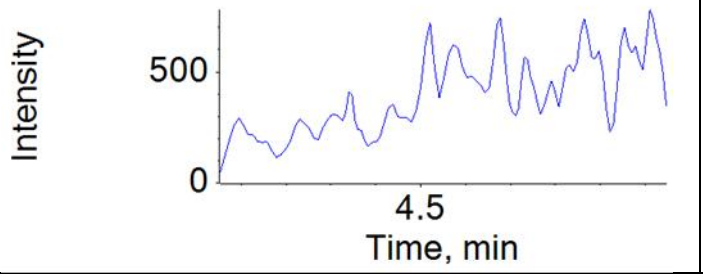


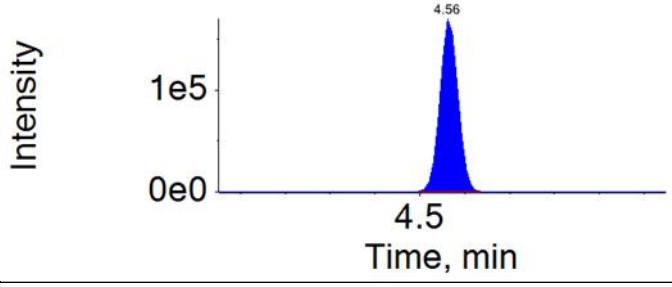
Analyte: PFPeS	Extraction Standard: 13C3-PFBS
349.0 / 80.0	302.0 / 80.0



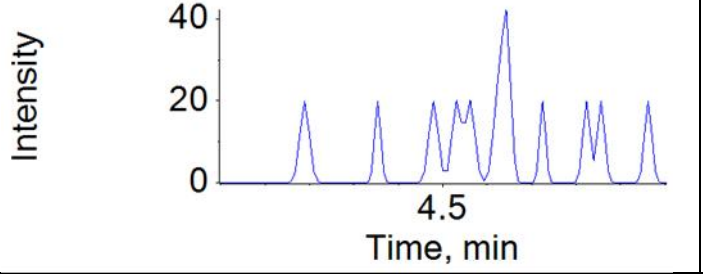


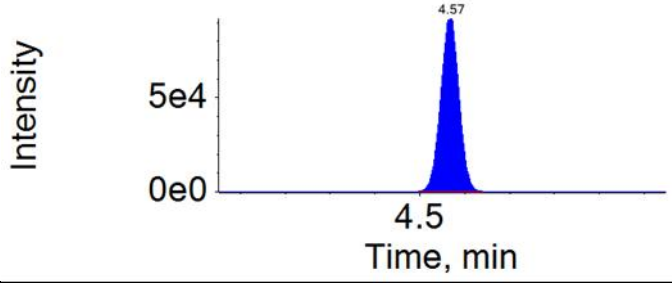
Analyte: PFHpA	Extraction Standard: 13C4-PFHpA
363.0 / 319.0	367.0 / 322.0





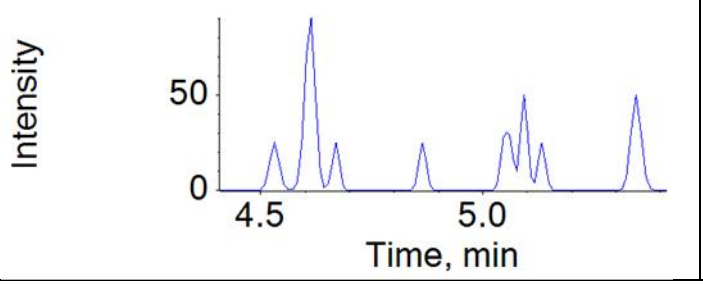
Analyte: PFHxS	Extraction Standard: 13C3-PFHxS
399.0 / 80.0	402.0 / 80.0

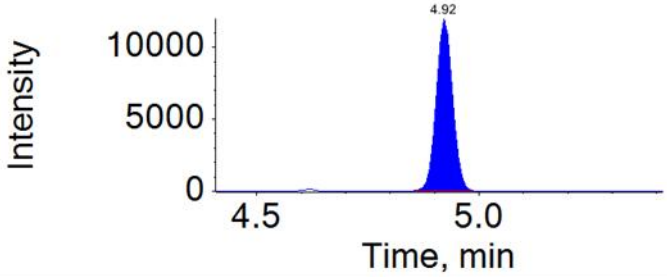




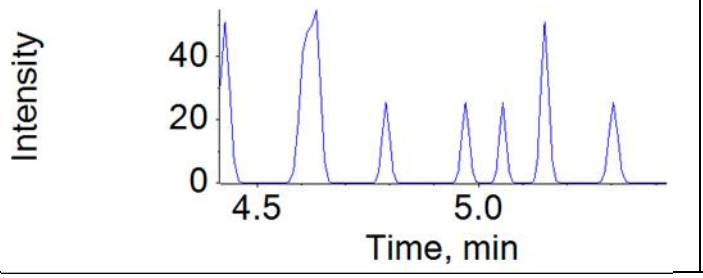
ICAL Name: 18NOV12DCAL **Result Table:** 18311021 11/16/2018 3:49:12 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

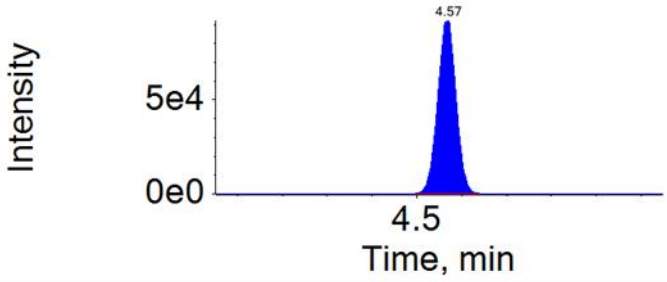
Analyte: 6:2-FTS	Extraction Standard: 13C2-6:2-FTS
427.0 / 407.0	429.0 / 81.0



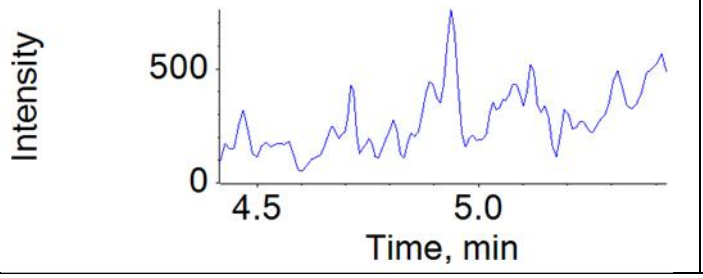


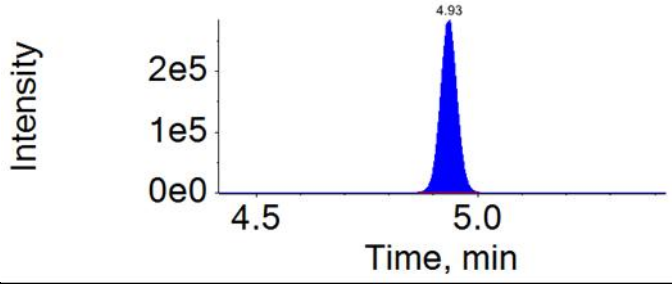
Analyte: PFHpS	Extraction Standard: 13C3-PFHxS
449.0 / 80.0	402.0 / 80.0



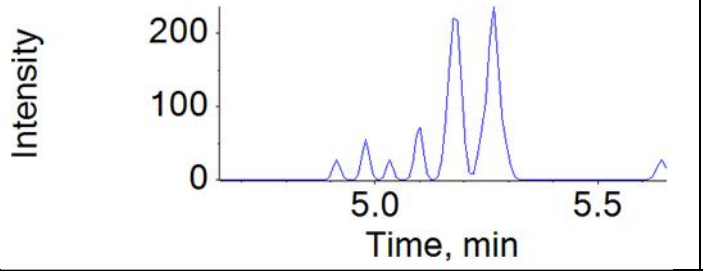


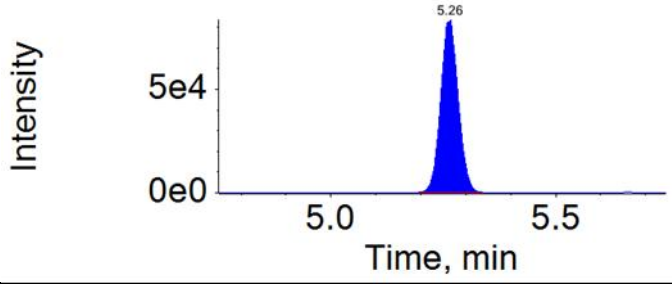
Analyte: PFOA	Extraction Standard: 13C8-PFOA
413.0 / 369.0	421.0 / 376.0





Analyte: PFOS	Extraction Standard: 13C8-PFOS
499.0 / 80.0	507.0 / 80.0



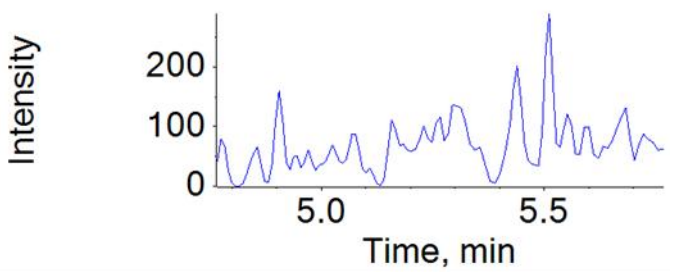


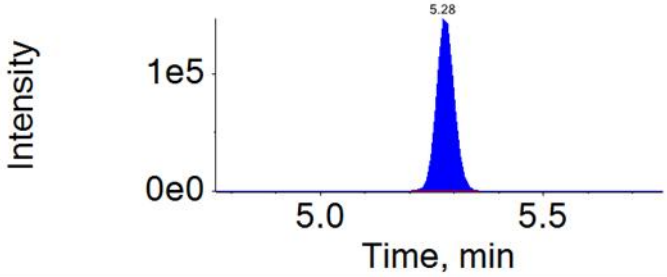
APPROVED
By JPT at 4:01 pm, 11/16/18

REVIEWED
By HMK at 9:07 am, 11/19/18

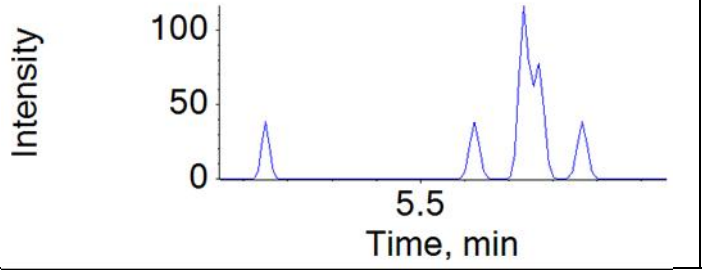
ICAL Name: 18NOV12DCAL **Result Table:** 18311021 11/16/2018 3:49:12 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

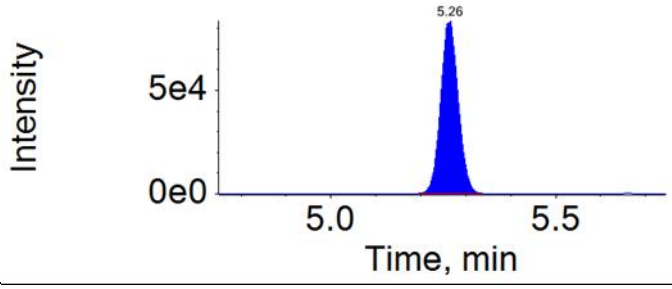
Analyte: PFNA	Extraction Standard: 13C9-PFNA
463.0 / 419.0	472.0 / 427.0



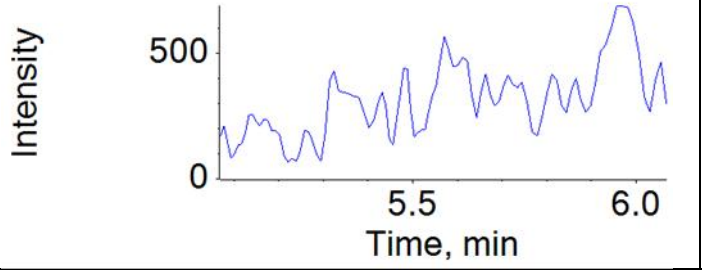


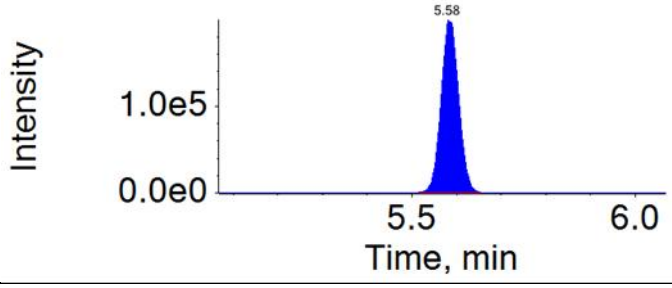
Analyte: PFNS	Extraction Standard: 13C8-PFOS
549.0 / 80.0	507.0 / 80.0



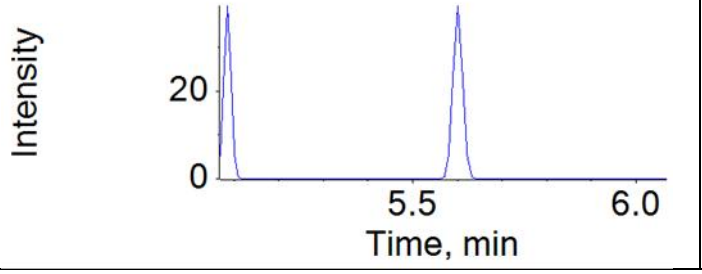


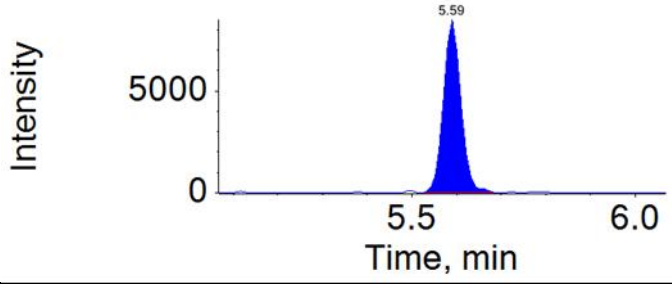
Analyte: PFDA	Extraction Standard: 13C6-PFDA
513.0 / 469.0	519.0 / 474.0





Analyte: 8:2-FTS	Extraction Standard: 13C2-8:2-FTS
527.0 / 507.0	529.0 / 81.0



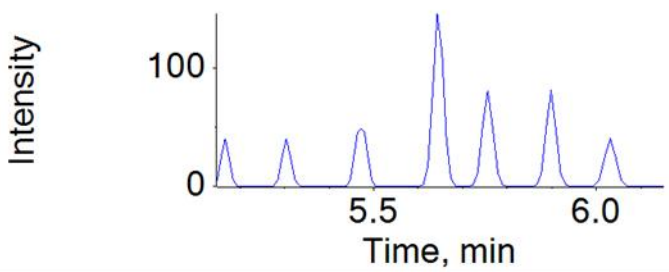


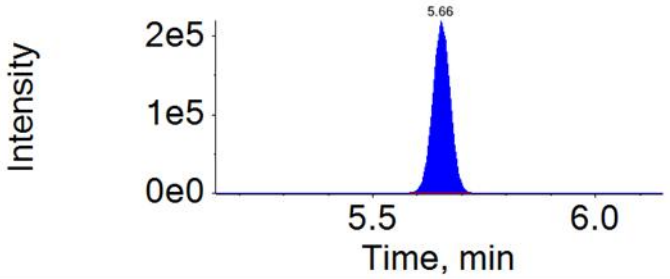
APPROVED
By JPT at 4:01 pm, 11/16/18

REVIEWED
By HMK at 9:07 am, 11/19/18

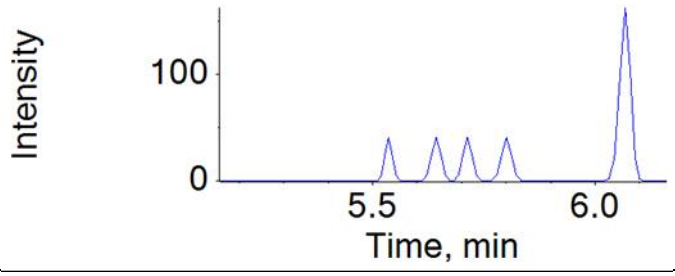
ICAL Name: 18NOV12DCAL **Result Table:** 18311021 11/16/2018 3:49:12 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

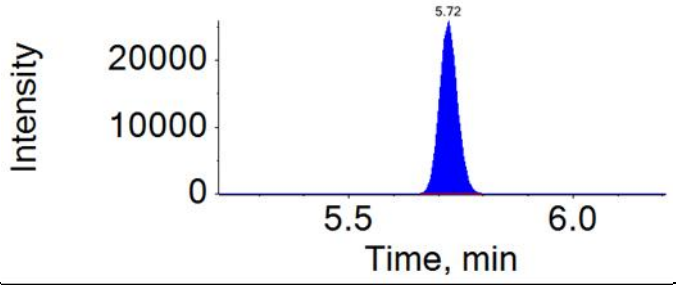
Analyte: PFOSA	Extraction Standard: 13C8-PFOSA
498.0 / 78.0	506.0 / 78.0



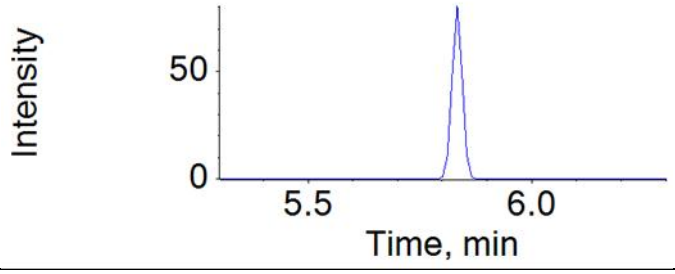


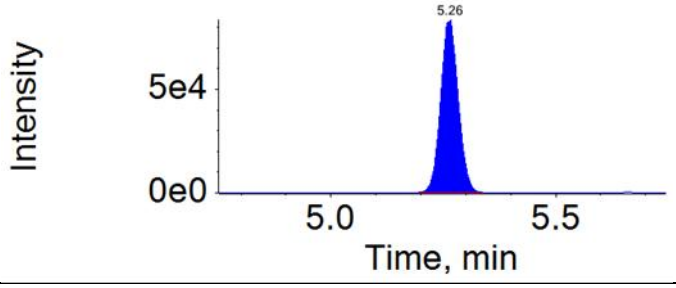
Analyte: NMeFOSAA	Extraction Standard: d3-NMeFOSAA
570.0 / 419.0	573.0 / 419.0



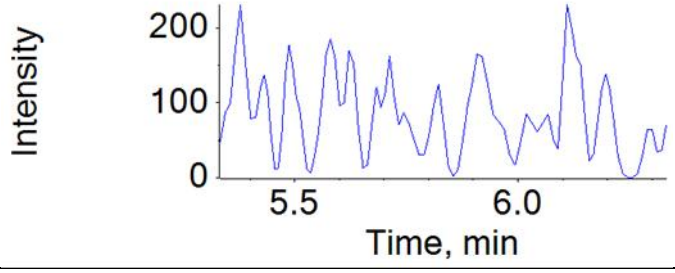


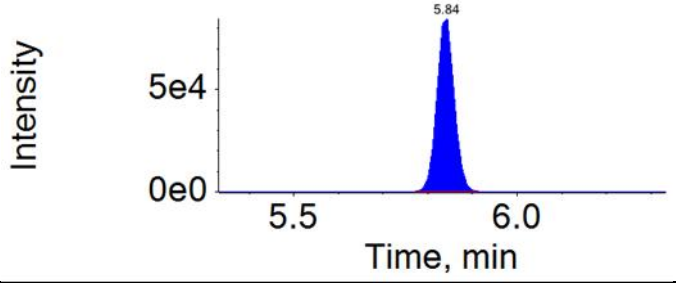
Analyte: PFDS	Extraction Standard: 13C8-PFOS
599.0 / 80.0	507.0 / 80.0





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



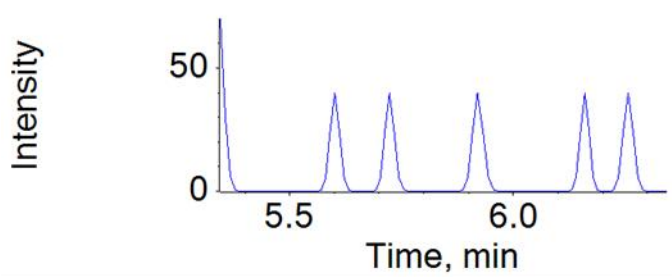


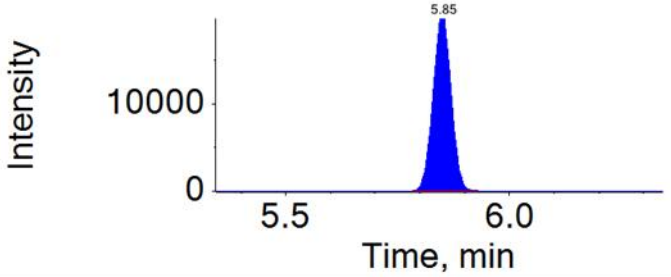
APPROVED
By JPT at 4:01 pm, 11/16/18

REVIEWED
By HMK at 9:07 am, 11/19/18

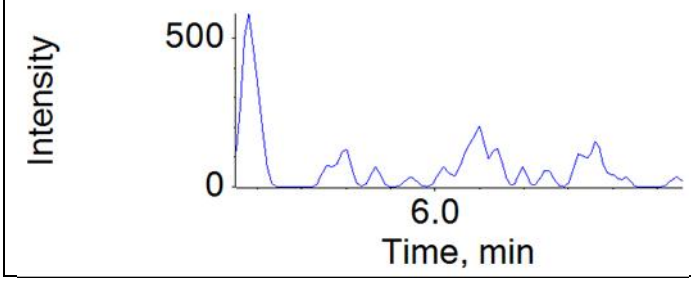
ICAL Name: 18NOV12DCAL **Result Table:** 18311021 11/16/2018 3:49:12 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

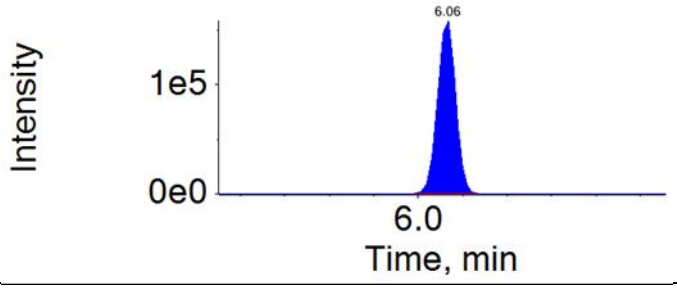
Analyte: NEtFOSAA	Extraction Standard: d5-NEtFOSAA
584.0 / 419.0	589.0 / 419.0



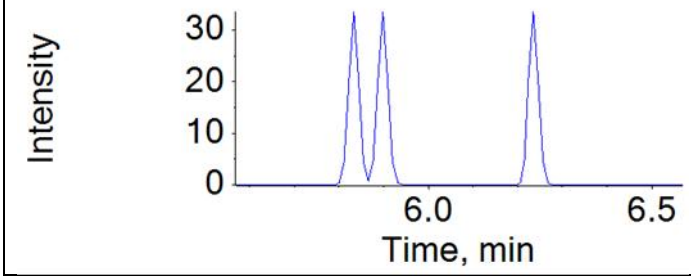


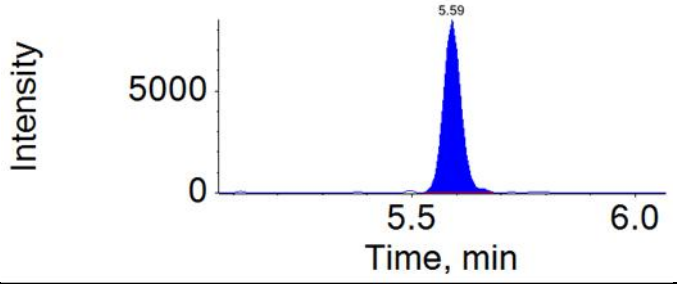
Analyte: PFDoDA	Extraction Standard: 13C2-PFDoDA
613.0 / 569.0	615.0 / 570.0



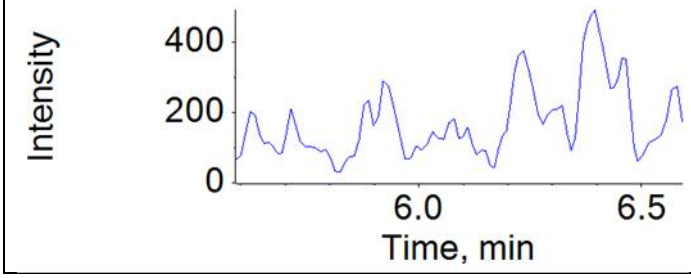


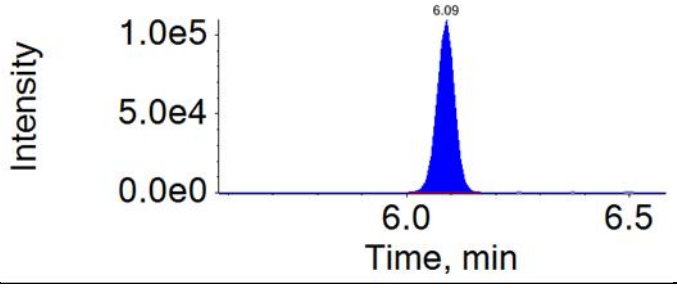
Analyte: 10:2-FTS	Extraction Standard: 13C2-8:2-FTS
627.0 / 607.0	529.0 / 81.0





Analyte: NMePFOSAE	Extraction Standard: d7-NMePFOSAE
616.0 / 59.0	623.0 / 59.0



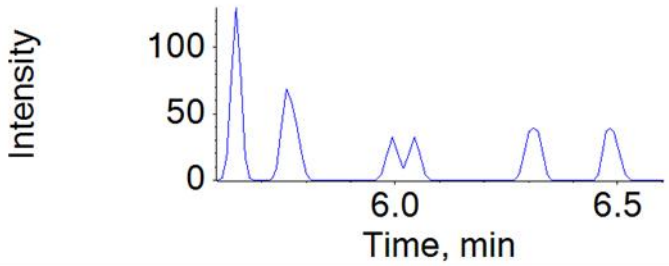


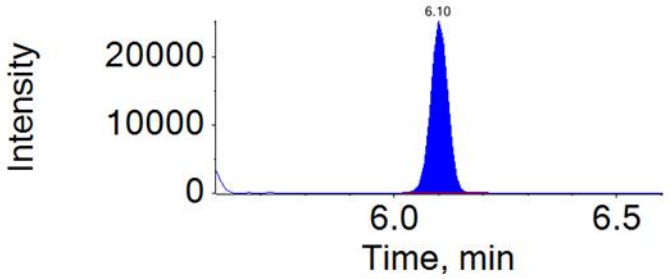
APPROVED
By JPT at 4:01 pm, 11/16/18

REVIEWED
By HMK at 9:07 am, 11/19/18

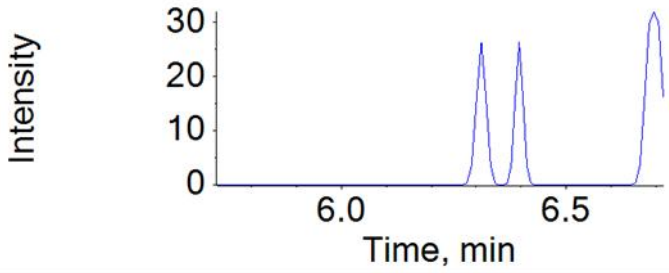
ICAL Name: 18NOV12DCAL **Result Table:** 18311021 11/16/2018 3:49:12 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

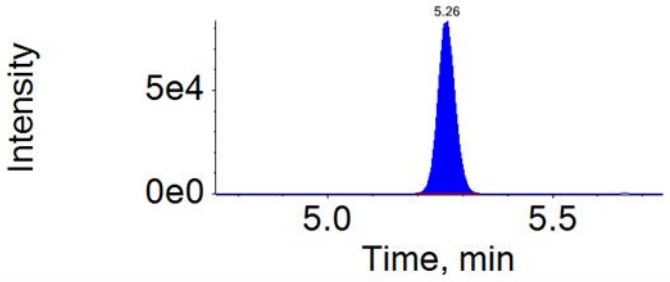
Analyte: NMePFOSA	Extraction Standard: d3-NMePFOSA
512.0 / 169.0	515.0 / 169.0



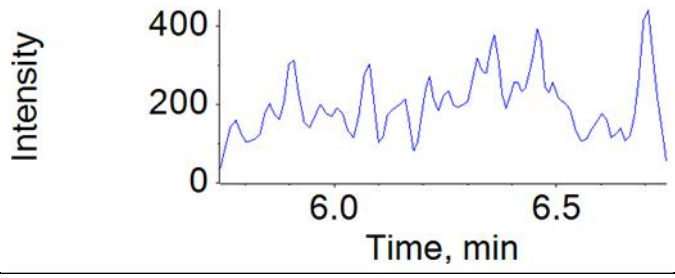


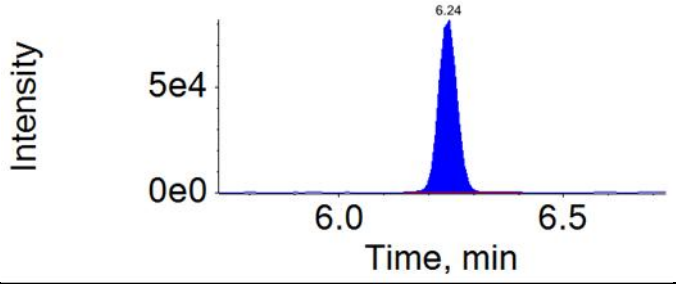
Analyte: PFDoS	Extraction Standard: 13C8-PFOS
699.0 / 80.0	507.0 / 80.0



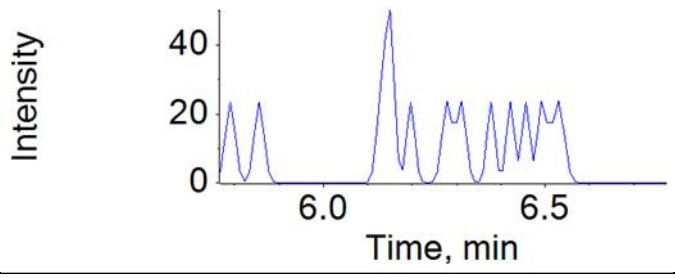


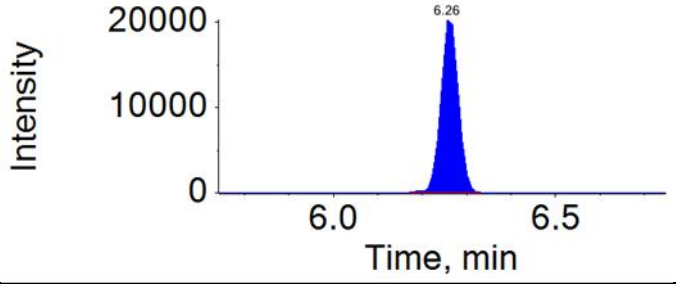
Analyte: NEtPFOSAE	Extraction Standard: d9-NEtPFOSAE
630.0 / 59.0	639.0 / 59.0





Analyte: NEtPFOSA	Extraction Standard: d5-NEtPFOSA
526.0 / 169.0	531.0 / 169.0



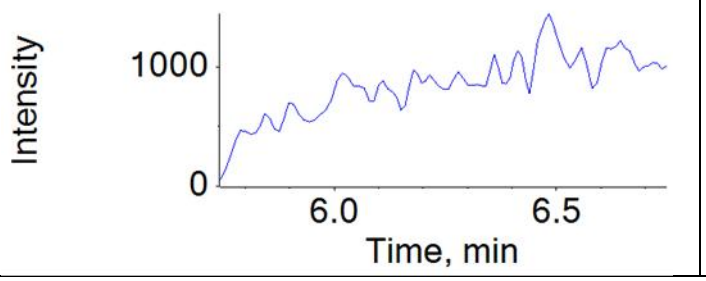


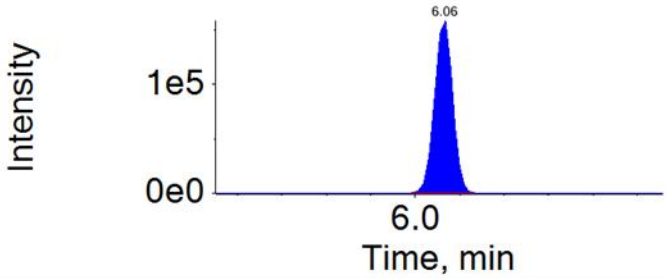
APPROVED
By JPT at 4:01 pm, 11/16/18

REVIEWED
By HMK at 9:07 am, 11/19/18

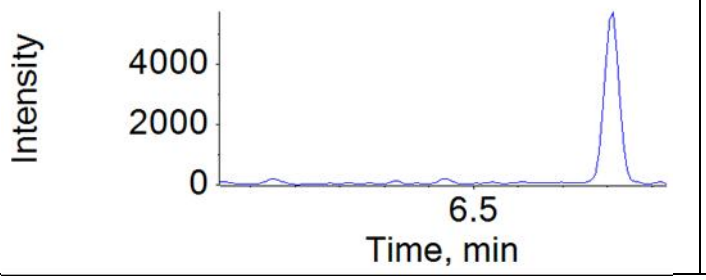
ICAL Name: 18NOV12DCAL **Result Table:** 18311021 11/16/2018 3:49:12 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

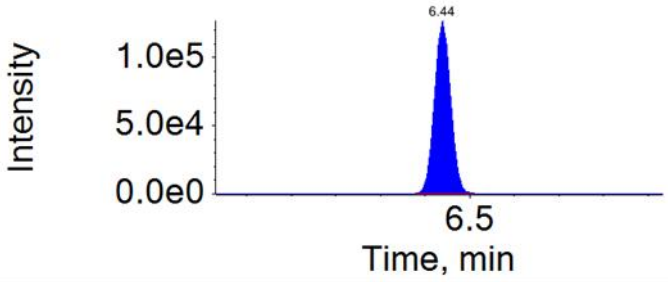
Analyte: PFTrDA	Extraction Standard: 13C2-PFDoDA
663.0 / 619.0	615.0 / 570.0



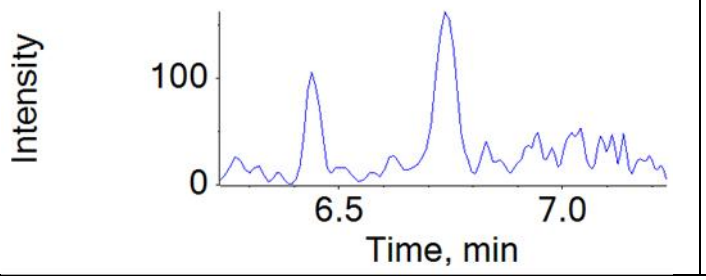


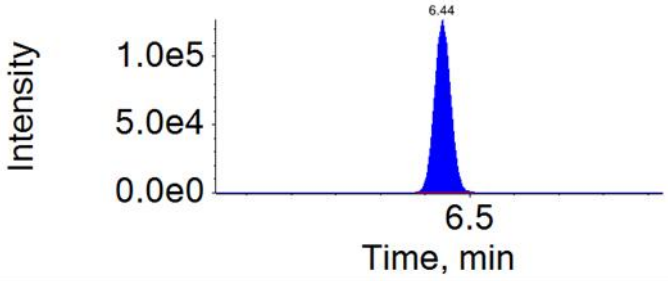
Analyte: PFTeDA	Extraction Standard: 13C2-PFTeDA
713.0 / 669.0	715.0 / 670.0



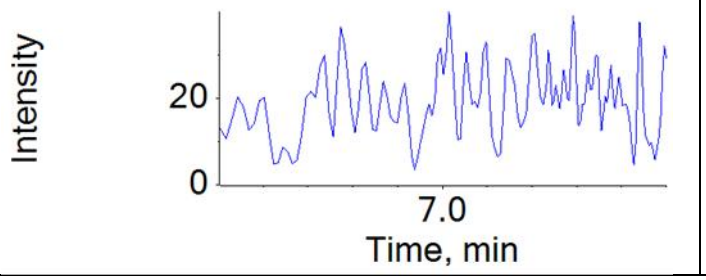


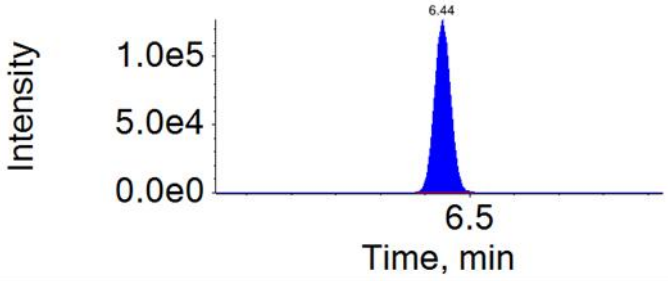
Analyte: PFHxDA	Extraction Standard: 13C2-PFTeDA
813.0 / 769.0	715.0 / 670.0





Analyte: PFODA	Extraction Standard: 13C2-PFTeDA
913.0 / 869.0	715.0 / 670.0





APPROVED
By JPT at 4:01 pm, 11/16/18

REVIEWED
By HMK at 9:07 am, 11/19/18

Ion Ratio Report

Sample Name: BLK311021 **Instrument Name:** LM27631 **File Name:** 18NOV16D-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	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 4:01 pm, 11/16/18

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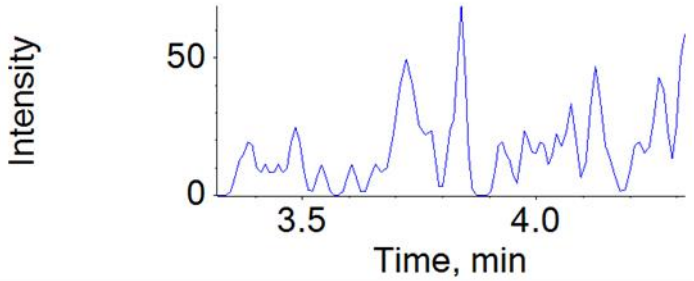
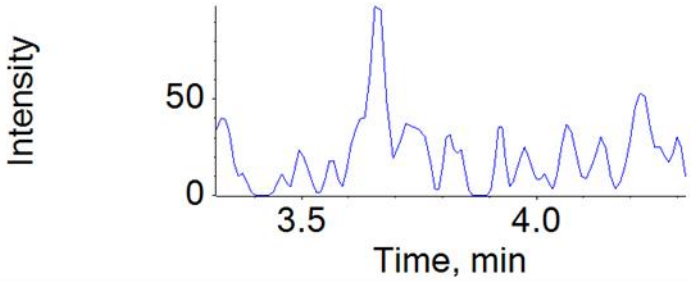
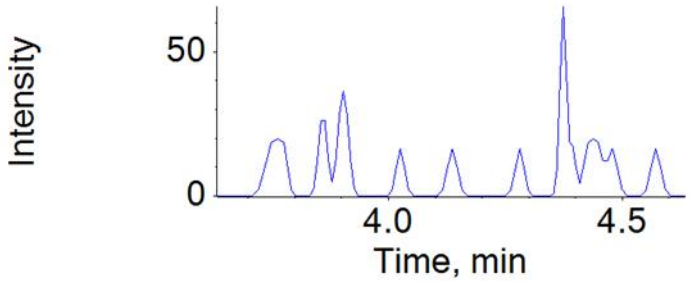
Component: PFBS
Primary Mass: 299.0 / 80.0



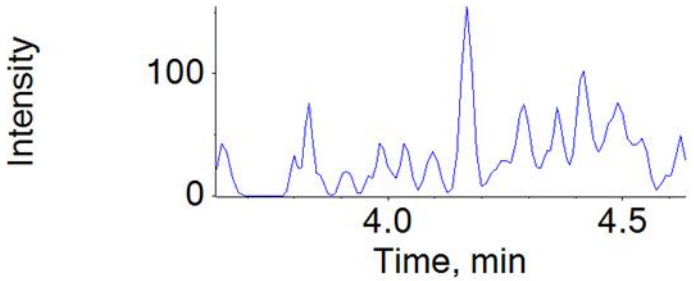
Component: PFBS_2
Secondary Mass: 299.0 / 99.0



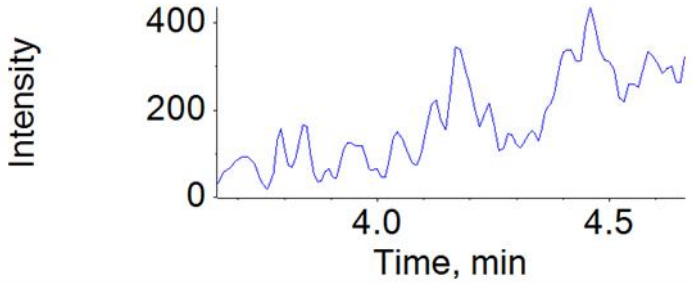
Component: 4:2-FTS
Primary Mass: 327.0 / 307.0



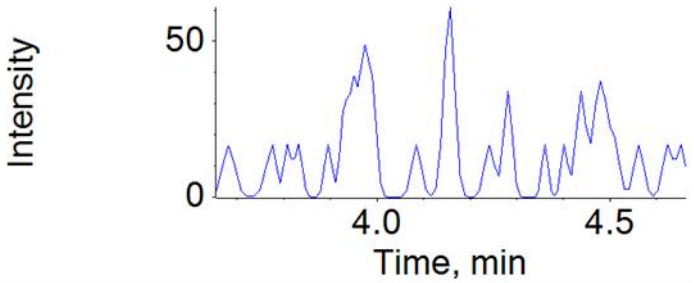
Component: 4:2 FTS_2
Secondary Mass: 327.0 / 81.0



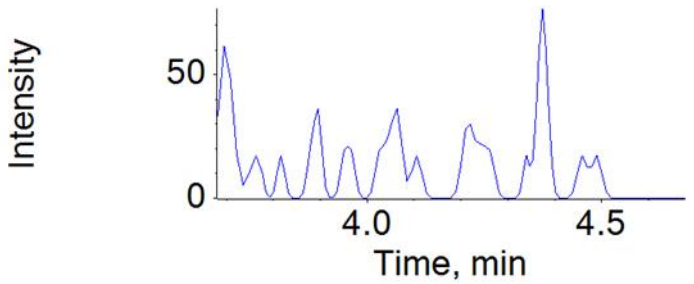
Component: PFHxA
Primary Mass: 313.0 / 269.0



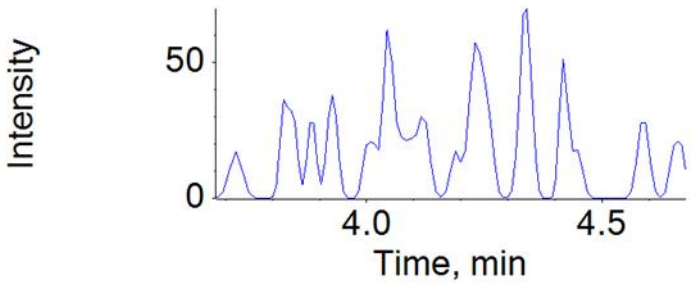
Component: PFHxA_2
Secondary Mass: 313.0 / 119.0



Component: PFPeS
Primary Mass: 349.0 / 80.0



Component: PFPeS_2
Secondary Mass: 349.0 / 99.0



APPROVED
By JPT at 4:01 pm, 11/16/18

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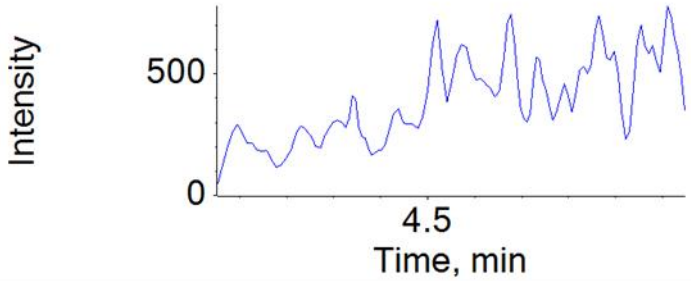
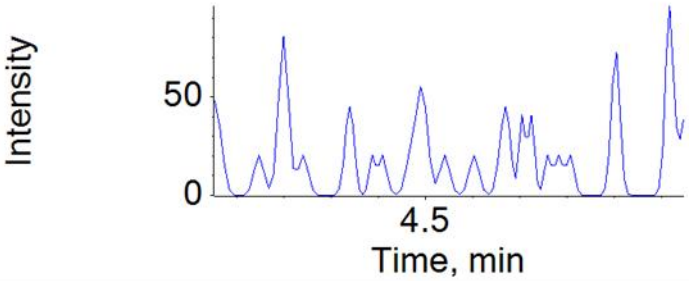
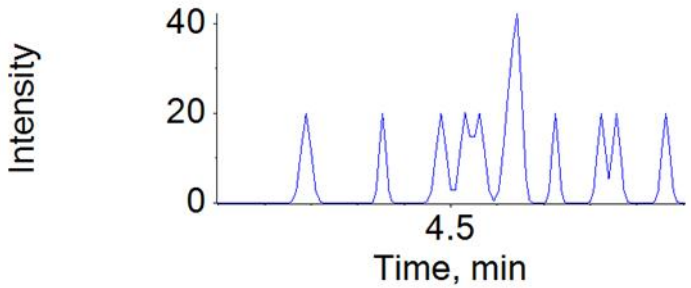
Component: PFHpA
Primary Mass: 363.0 / 319.0



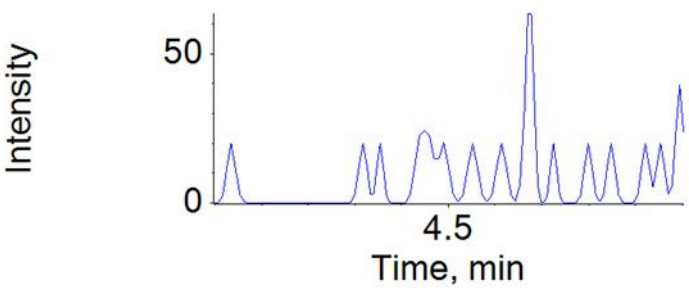
Component: PFHpA_2
Secondary Mass: 363.0 / 169.0



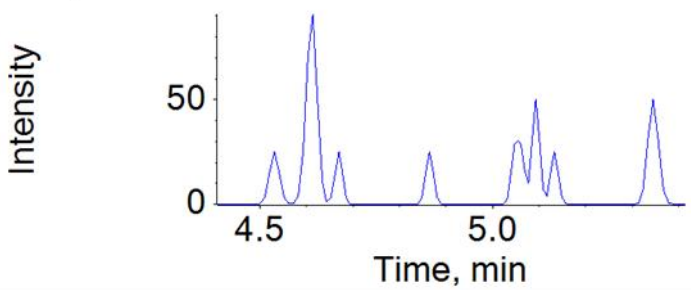
Component: PFHxS
Primary Mass: 399.0 / 80.0



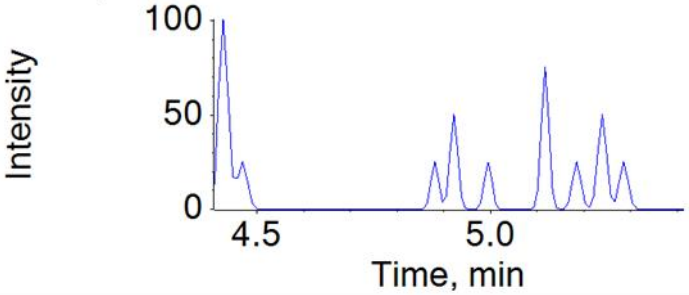
Component: PFHxS_2
Secondary Mass: 399.0 / 99.0



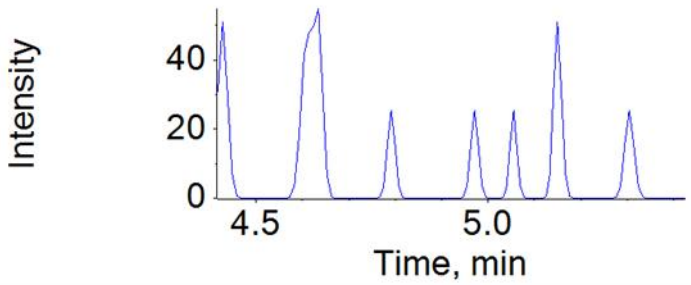
Component: 6:2-FTS
Primary Mass: 427.0 / 407.0



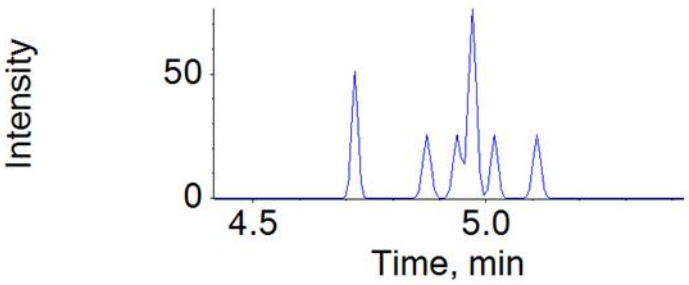
Component: 6:2 FTS_2
Secondary Mass: 427.0 / 81.0



Component: PFHpS
Primary Mass: 449.0 / 80.0



Component: PFHpS_2
Secondary Mass: 449.0 / 99.0



APPROVED
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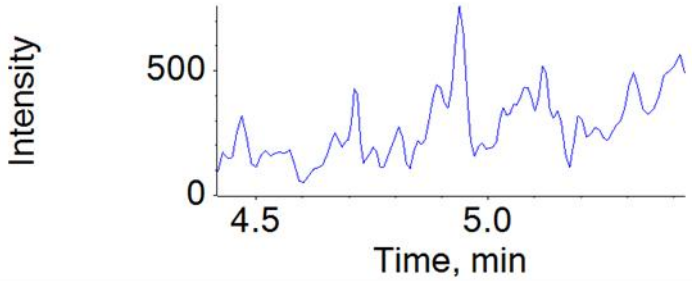
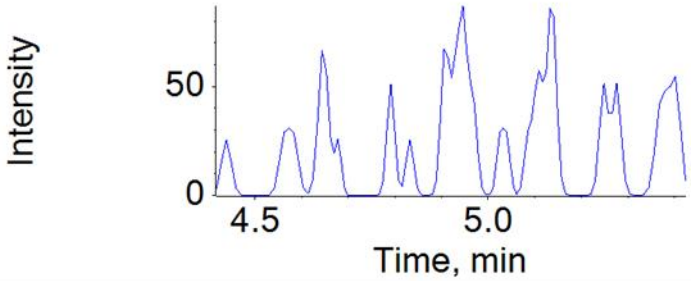
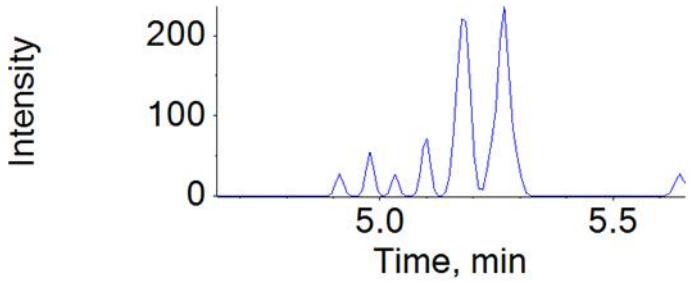
Component: PFOA
Primary Mass: 413.0 / 369.0



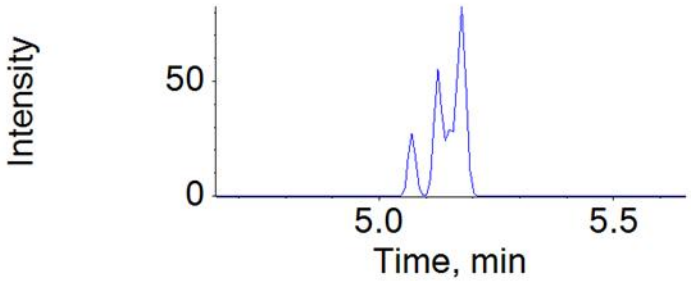
Component: PFOA_2
Secondary Mass: 413.0 / 169.0



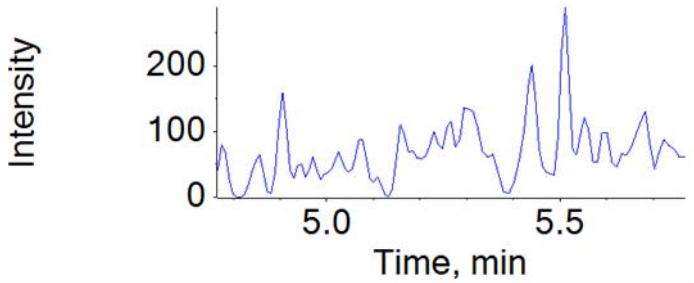
Component: PFOS
Primary Mass: 499.0 / 80.0



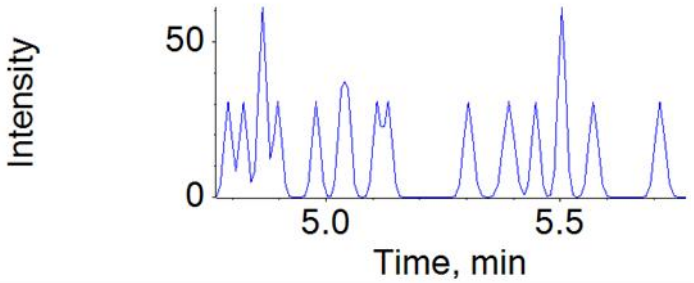
Component: PFOS_2
Secondary Mass: 499.0 / 99.0



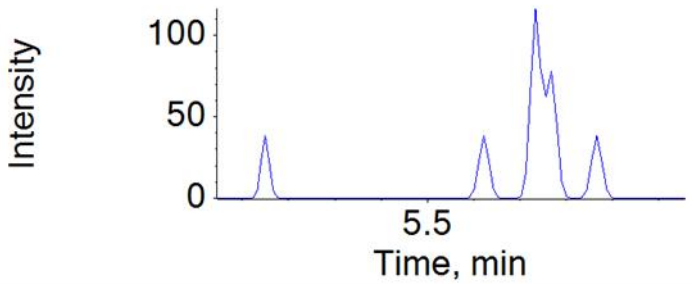
Component: PFNA
Primary Mass: 463.0 / 419.0



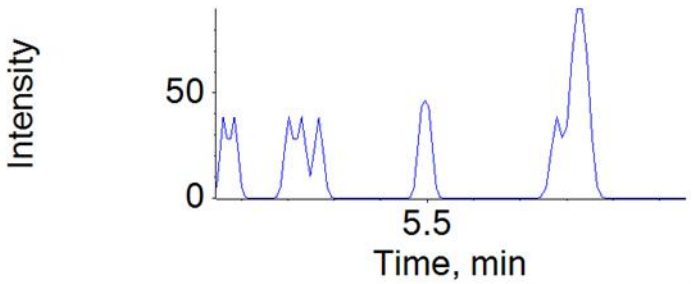
Component: PFNA_2
Secondary Mass: 463.0 / 169.0



Component: PFNS
Primary Mass: 549.0 / 80.0



Component: PFNS_2
Secondary Mass: 549.0 / 99.0



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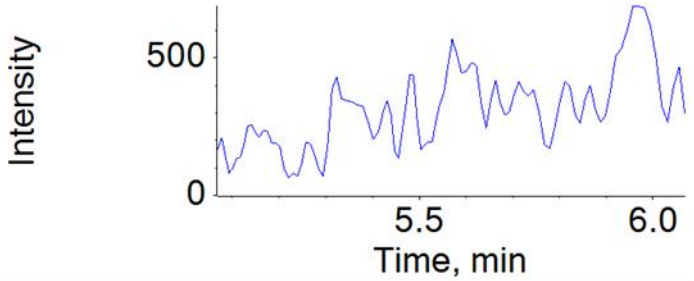
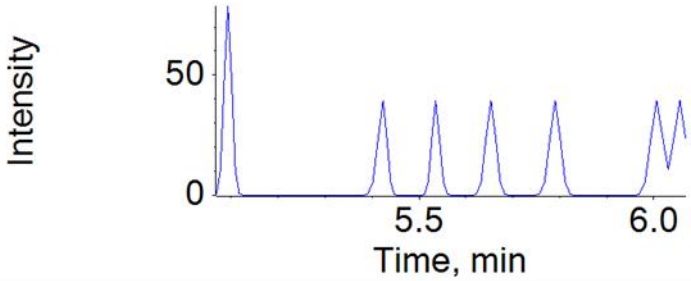
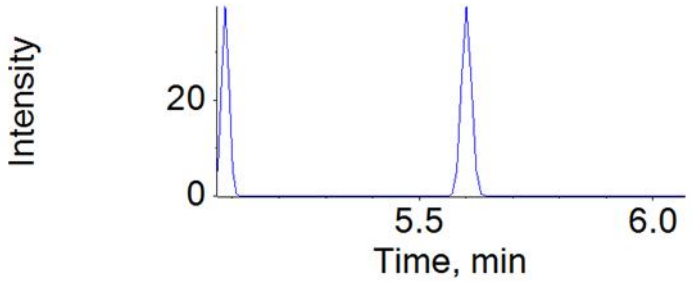
Component: PFDA
Primary Mass: 513.0 / 469.0



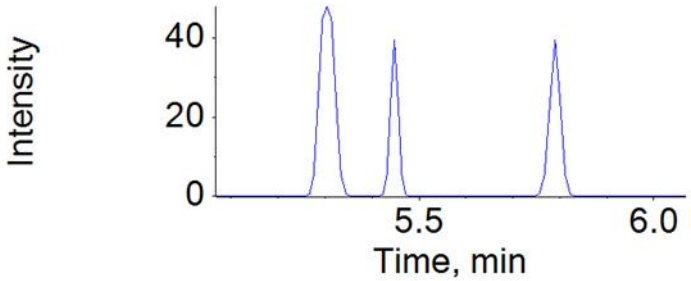
Component: PFDA_2
Secondary Mass: 513.0 / 169.0



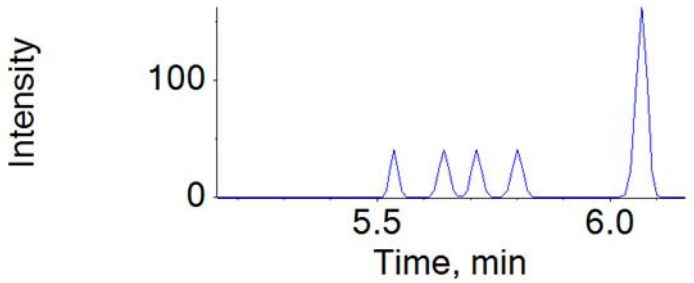
Component: 8:2-FTS
Primary Mass: 527.0 / 507.0



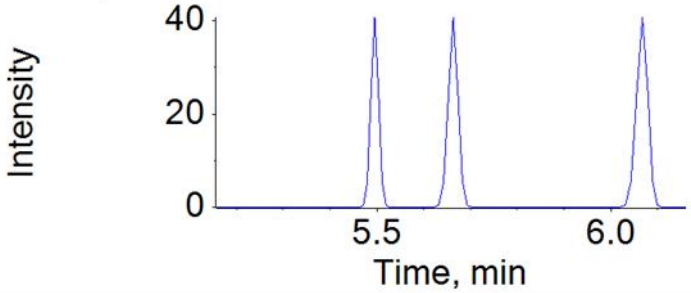
Component: 8:2 FTS_2
Secondary Mass: 527.0 / 81.0



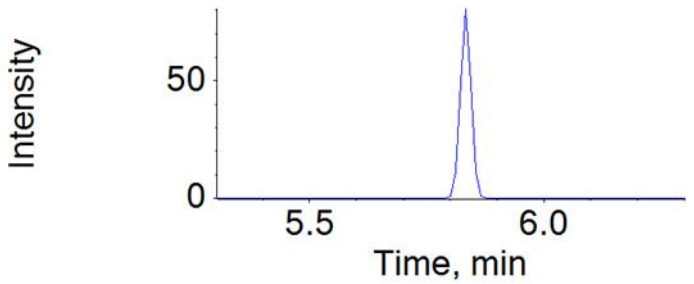
Component: NMeFOSAA
Primary Mass: 570.0 / 419.0



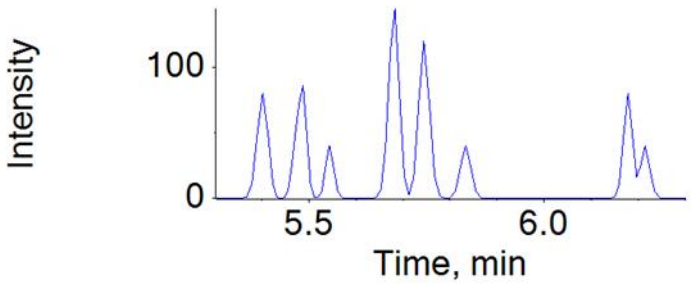
Component: NMeFOSAA_2
Secondary Mass: 570.0 / 483.0



Component: PFDS
Primary Mass: 599.0 / 80.0



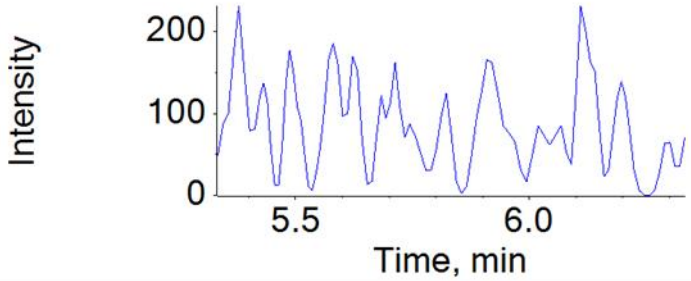
Component: PFDS_2
Secondary Mass: 599.0 / 99.0



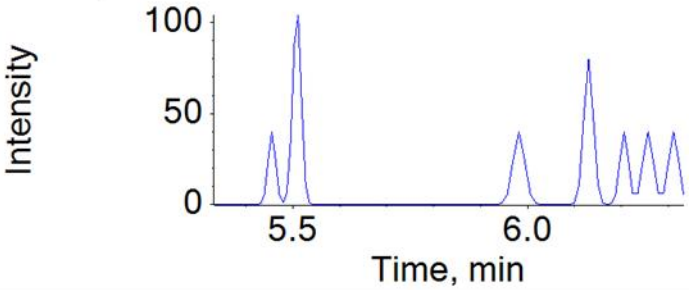
APPROVED
By JPT at 4:01 pm, 11/16/18

REVIEWED
By HMK at 9:07 am, 11/19/18

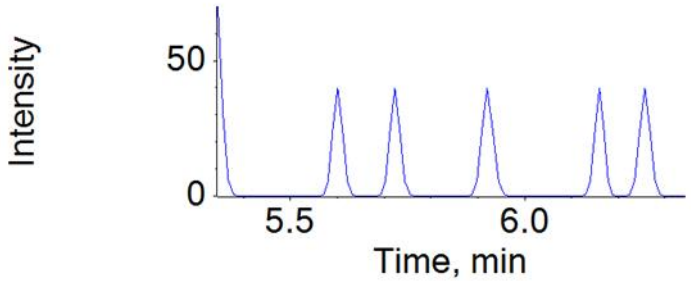
Component: PFUnDA
Primary Mass: 563.0 / 519.0



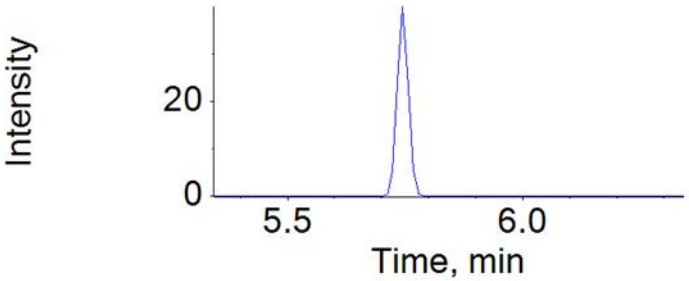
Component: PFUnDA_2
Secondary Mass: 563.0 / 169.0



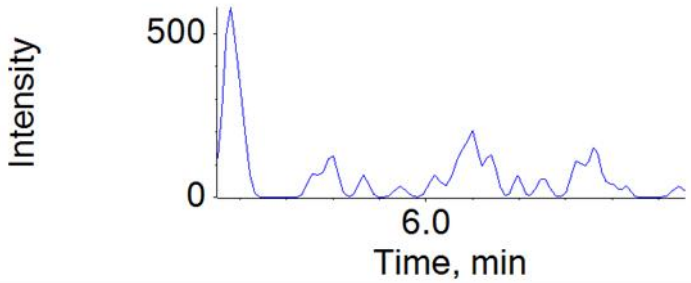
Component: NEtFOSAA
Primary Mass: 584.0 / 419.0



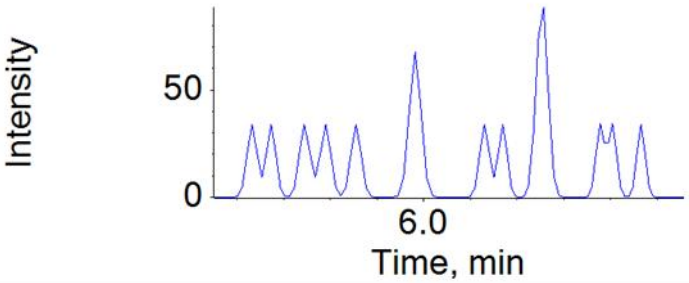
Component: NEtFOSAA_2
Secondary Mass: 584.0 / 526.0



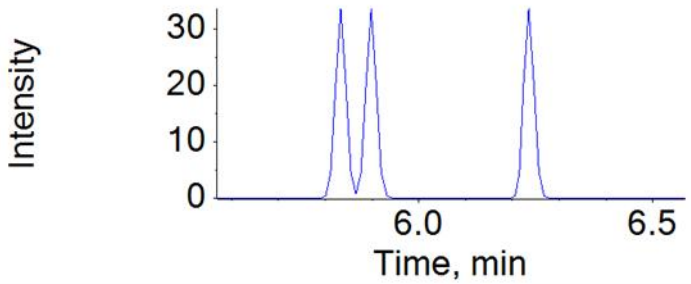
Component: PFDoDA
Primary Mass: 613.0 / 569.0



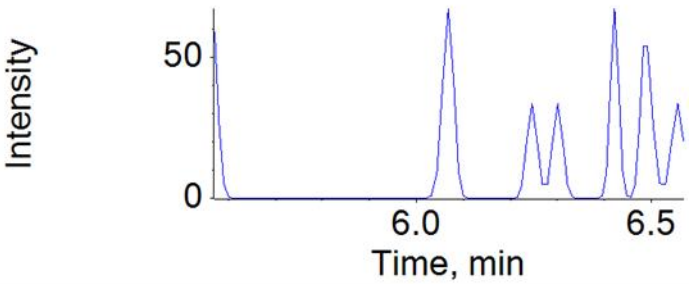
Component: PFDoDA_2
Secondary Mass: 613.0 / 169.0



Component: 10:2-FTS
Primary Mass: 627.0 / 607.0



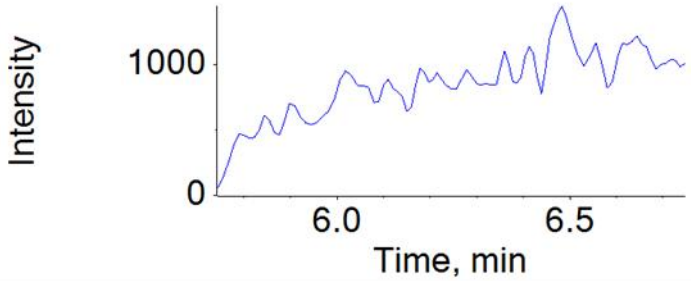
Component: 10:2 FTS_2
Secondary Mass: 627.0 / 81.0



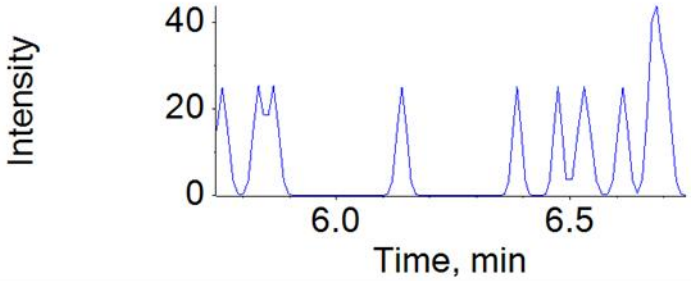
APPROVED
By JPT at 4:01 pm, 11/16/18

REVIEWED
By HMK at 9:07 am, 11/19/18

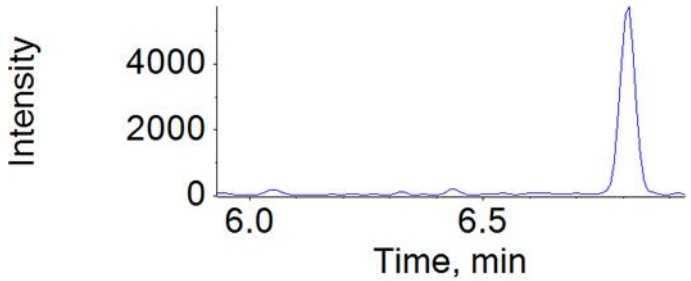
Component: PFTrDA
Primary Mass: 663.0 / 619.0



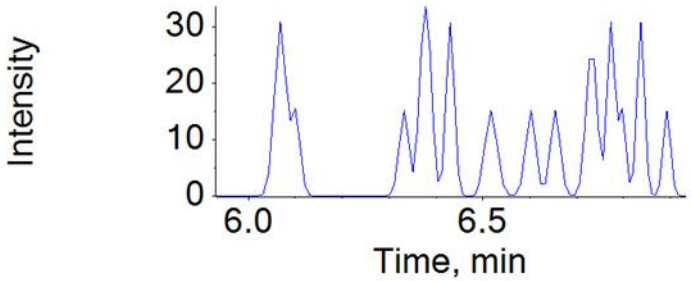
Component: PFTrDA_2
Secondary Mass: 663.0 / 169.0



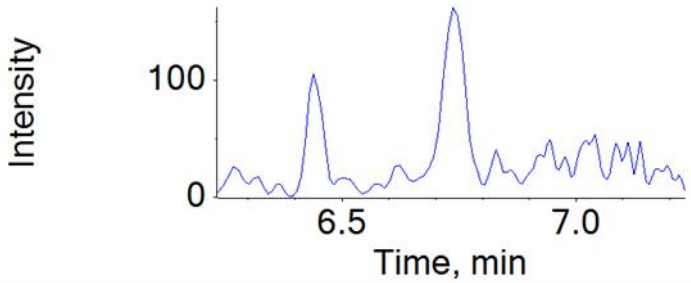
Component: PFTeDA
Primary Mass: 713.0 / 669.0



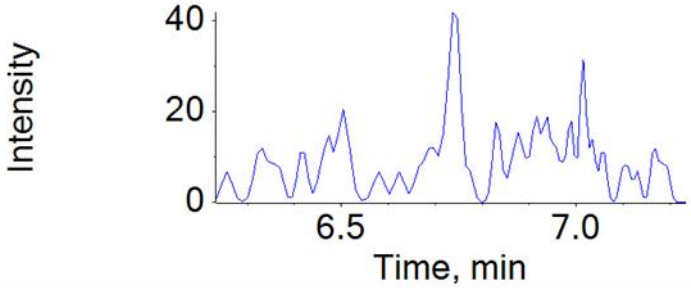
Component: PFTeDA_2
Secondary Mass: 713.0 / 169.0



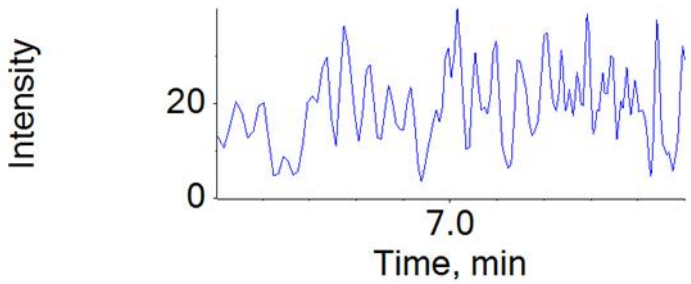
Component: PFHxDA
Primary Mass: 813.0 / 769.0



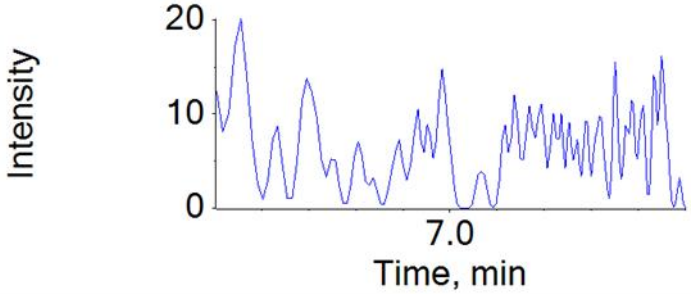
Component: PFHxDA_2
Secondary Mass: 813.0 / 169.0



Component: PFODA
Primary Mass: 913.0 / 869.0



Component: PFODA_2
Secondary Mass: 913.0 / 169.0



APPROVED
By JPT at 4:01 pm, 11/16/18

REVIEWED
By HMK at 9:07 am, 11/19/18

ICAL Name: 18NOV12DCAL **Result Table:** 18319003 11/19/2018 10:28:58 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Sample Name:	BLK319003			**Data File:**		18NOV15D-07.wiff
Sample ID:	EPA 537 mod QSM 5.1 table B-15 18319003			**Acquis Date:**		2018-11-15T12:57:12
Sample Type:	Unknown			**Instrument:**		LM27631
Vial Position:	25			**Acquis Method:**		18AUG13_3uL.dam
Injection Vol:	3.00			**Result Table:**		18319003
QMethod File:	18AUG20QM			**ICAL Name:**		18NOV12DCAL
Batch Number:	18319003			**Operator:**		JPT12262
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: 18NOV15D-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	742585.3	732179.1	1	50	
13C2-PFOA	5.0	510635.8	479663.2	6	50	
13C4-PFOS	4.8	281649.3	269685.3	4	50	
13C2-PFDA	5.0	311632.0	302309.9	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	709228.9	13C3-PFBA	742585.3	0.955	10.000	8.564	86	50-150	
E13C5-PFPeA	681844.0	13C3-PFBA	742585.3	0.918	10.000	8.237	82	50-150	
E13C3-PFBS	367141.2	13C3-PFBA	742585.3	0.494	9.300	6.980	75	50-150	
E13C2-4:2-FTS	49033.5	13C2-PFOA	510635.8	0.096	9.340	8.554	92	50-150	
E13C5-PFHxA	587657.3	13C2-PFOA	510635.8	1.151	10.000	8.314	83	50-150	
E13C3-PFHxS	293554.8	13C2-PFOA	510635.8	0.575	9.460	7.890	83	50-150	
E13C4-PFHpA	489633.0	13C2-PFOA	510635.8	0.959	10.000	8.640	86	50-150	
E13C2-6:2-FTS	36333.3	13C2-PFOA	510635.8	0.071	9.500	9.521	100	50-150	
E13C8-PFOA	822063.6	13C2-PFOA	510635.8	1.610	10.000	8.871	89	50-150	
E13C8-PFOS	258528.6	13C4-PFOS	281649.3	0.918	9.560	8.134	85	50-150	
E13C9-PFNA	433269.4	13C4-PFOS	281649.3	1.538	10.000	8.578	86	50-150	
E13C6-PFDA	580673.2	13C2-PFDA	311632.0	1.863	10.000	8.697	87	50-150	
E13C2-8:2-FTS	25196.7	13C2-PFDA	311632.0	0.081	9.580	8.065	84	50-150	
E13C8-PFOSA	645025.6	13C2-PFDA	311632.0	2.070	10.000	9.178	92	50-150	
Ed3-NMeFOSAA	84691.7	13C2-PFDA	311632.0	0.272	10.000	9.811	98	50-150	
E13C7-PFUnDA	237867.0	13C2-PFDA	311632.0	0.763	10.000	8.863	89	50-150	
Ed5-NEtFOSAA	61364.4	13C2-PFDA	311632.0	0.197	10.000	8.332	83	50-150	
E13C2-PFDoDA	503994.2	13C2-PFDA	311632.0	1.617	10.000	8.398	84	50-150	
Ed7-NMePFOSAE	326361.2	13C2-PFDA	311632.0	1.047	10.000	9.064	91	50-150	
Ed3-NMePFOSA	74301.8	13C2-PFDA	311632.0	0.238	10.000	8.664	87	50-150	
Ed9-NEtPFOSAE	264458.0	13C2-PFDA	311632.0	0.849	10.000	8.827	88	50-150	
Ed5-NEtPFOSA	60107.7	13C2-PFDA	311632.0	0.193	10.000	9.049	90	50-150	
E13C2-PFTeDA	348872.4	13C2-PFDA	311632.0	1.120	10.000	7.860	79	50-150	

APPROVED
By JPT at 10:38 am, 11/19/18

REVIEWED
By HMK at 11:46 am, 11/19/18

ICAL Name: 18NOV12DCAL **Result Table:** 18319003 11/19/2018 10:28:58 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

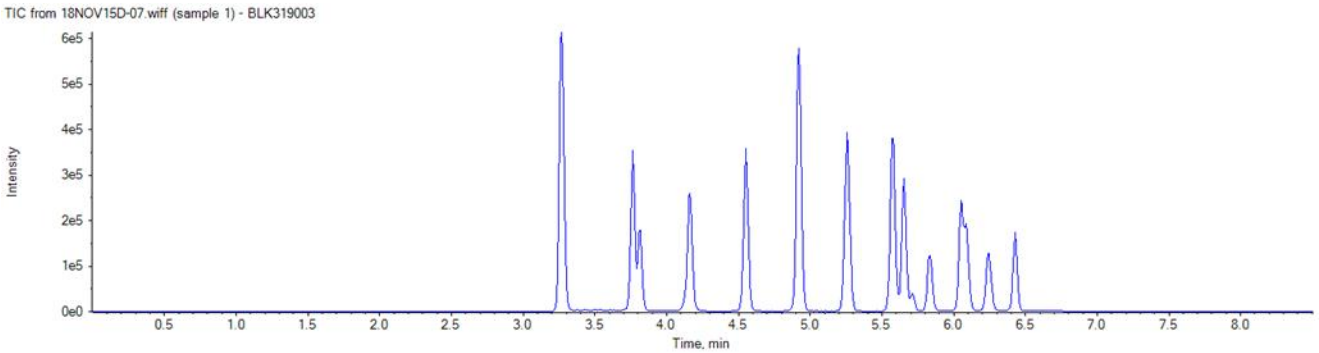
Analyte Quantitation Peak Table

Sample Name: BLK319003 **Instrument Name:** LM27631 **File Name:** 18NOV15D-07.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	3.27	709228.9	N/A	
PFPeA	N/A	N/A	N/A		A	13C5-PFPeA	3.76	681844.0	N/A	
PFBS	N/A	N/A	N/A		A	13C3-PFBS	3.81	367141.2	N/A	
4:2-FTS	N/A	N/A	N/A		A	13C2-4:2-FTS	4.13	49033.5	N/A	
PFHxA	N/A	N/A	N/A		A	13C5-PFHxA	4.16	587657.3	N/A	
PFPeS	N/A	N/A	N/A		A	13C3-PFBS	3.81	367141.2	N/A	
PFHpA	N/A	N/A	N/A		A	13C4-PFHpA	4.55	489633.0	N/A	
PFHxS	N/A	N/A	N/A		A	13C3-PFHxS	4.55	293554.8	N/A	
6:2-FTS	N/A	N/A	N/A		A	13C2-6:2-FTS	4.91	36333.3	N/A	
PFHpS	N/A	N/A	N/A		A	13C3-PFHxS	4.55	293554.8	N/A	
PFOA	N/A	N/A	N/A		A	13C8-PFOA	4.92	822063.6	N/A	
PFOS	N/A	N/A	N/A		A	13C8-PFOS	5.25	258528.6	N/A	
PFNA	N/A	N/A	N/A		A	13C9-PFNA	5.27	433269.4	N/A	
PFNS	N/A	N/A	N/A		A	13C8-PFOS	5.25	258528.6	N/A	
PFDA	N/A	N/A	N/A		A	13C6-PFDA	5.57	580673.2	N/A	
8:2-FTS	N/A	N/A	N/A		A	13C2-8:2-FTS	5.58	25196.7	N/A	
PFOSA	N/A	N/A	N/A		A	13C8-PFOSA	5.65	645025.6	N/A	
NMeFOSAA	N/A	N/A	N/A		A	d3-NMeFOSAA	5.71	84691.7	N/A	
PFDS	N/A	N/A	N/A		A	13C8-PFOS	5.25	258528.6	N/A	
PFUnDA	N/A	N/A	N/A		A	13C7-PFUnDA	5.83	237867.0	N/A	
NEtFOSAA	N/A	N/A	N/A		A	d5-NEtFOSAA	5.84	61364.4	N/A	
PFDoDA	N/A	N/A	N/A		A	13C2-PFDoDA	6.05	503994.2	N/A	
10:2-FTS	N/A	N/A	N/A		A	13C2-8:2-FTS	5.58	25196.7	N/A	
NMePFOSAE	N/A	N/A	N/A		A	d7-NMePFOSAE	6.09	326361.2	N/A	
NMePFOSA	N/A	N/A	N/A		A	d3-NMePFOSA	6.10	74301.8	N/A	
PFDoS	N/A	N/A	N/A		A	13C8-PFOS	5.25	258528.6	N/A	
NEtPFOSAE	N/A	N/A	N/A		A	d9-NEtPFOSAE	6.24	264458.0	N/A	
NEtPFOSA	N/A	N/A	N/A		A	d5-NEtPFOSA	6.26	60107.7	N/A	
PFTrDA	N/A	N/A	N/A		A	13C2-PFDoDA	6.05	503994.2	N/A	
PFTeDA	N/A	N/A	N/A		A	13C2-PFTeDA	6.43	348872.4	N/A	
PFHxDA	N/A	N/A	N/A		A	13C2-PFTeDA	6.43	348872.4	N/A	
PFODA	N/A	N/A	N/A		A	13C2-PFTeDA	6.43	348872.4	N/A	

Total Ion Chromatogram

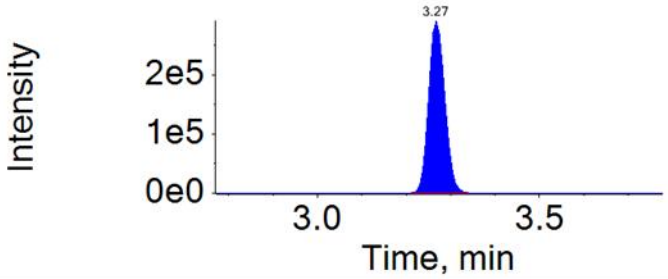


APPROVED
By JPT at 10:38 am, 11/19/18

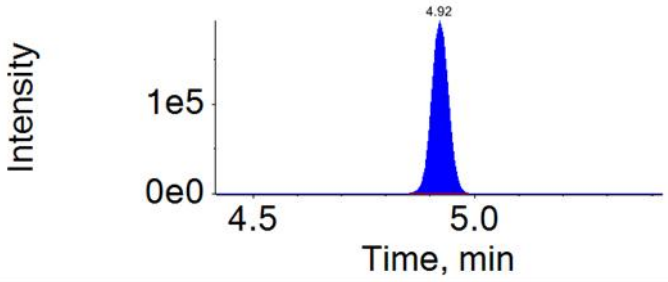
REVIEWED
By HMK at 11:46 am, 11/19/18

ICAL Name: 18NOV12DCAL **Result Table:** 18319003 11/19/2018 10:28:58 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

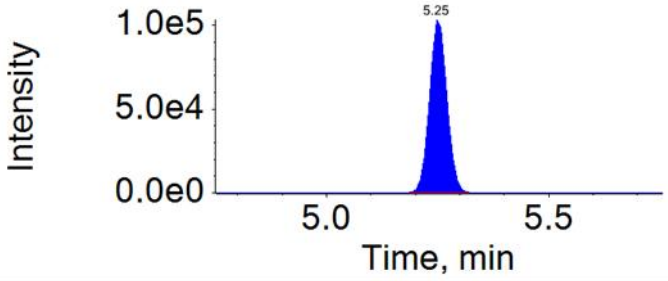
Injection Standard: 13C3-PFBA
216.0 / 172.0



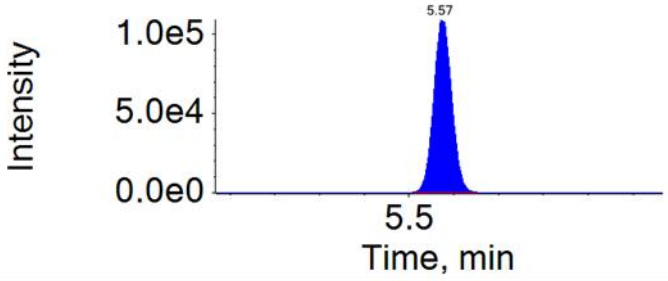
Injection Standard: 13C2-PFOA
415.0 / 370.0



Injection Standard: 13C4-PFOS
503.0 / 80.0



Injection Standard: 13C2-PFDA
515.0 / 470.0

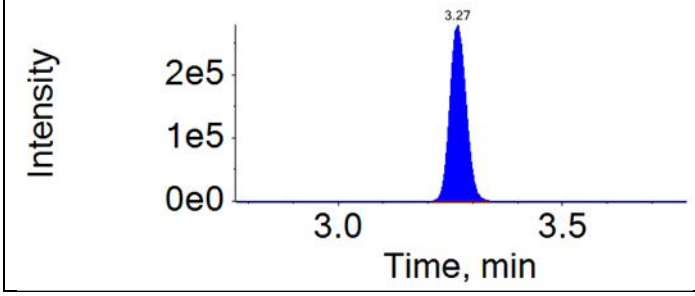


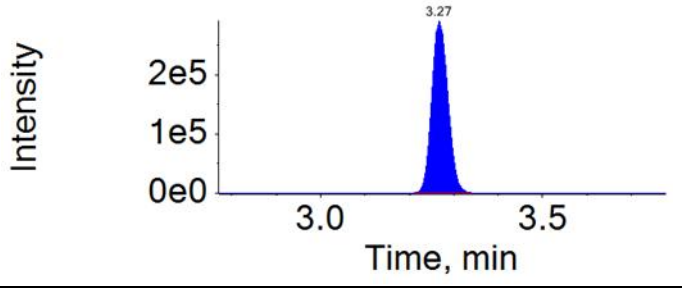
APPROVED
By JPT at 10:38 am, 11/19/18

REVIEWED
By HMK at 11:46 am, 11/19/18

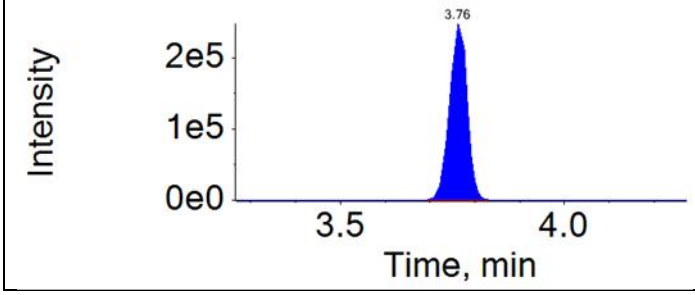
ICAL Name: 18NOV12DCAL **Result Table:** 18319003 11/19/2018 10:28:58 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

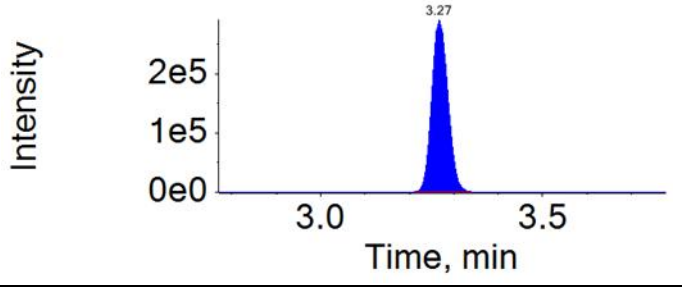
Extraction Standard: E13C4-PFBA	Injection Standard: 13C3-PFBA
217.0 / 172.0	216.0 / 172.0



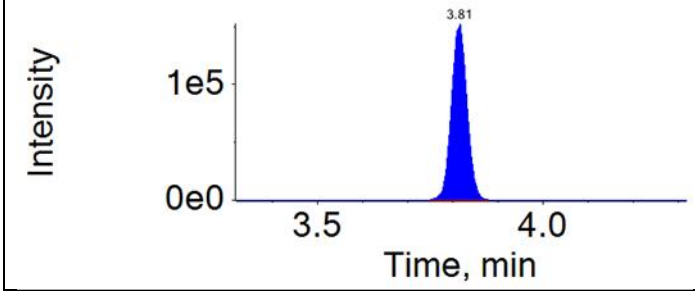


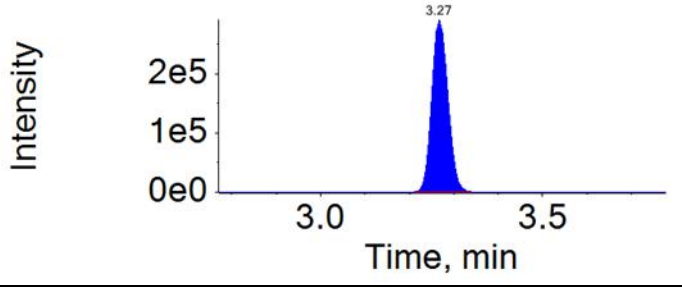
Extraction Standard: E13C5-PFPeA	Injection Standard: 13C3-PFBA
268.0 / 223.0	216.0 / 172.0



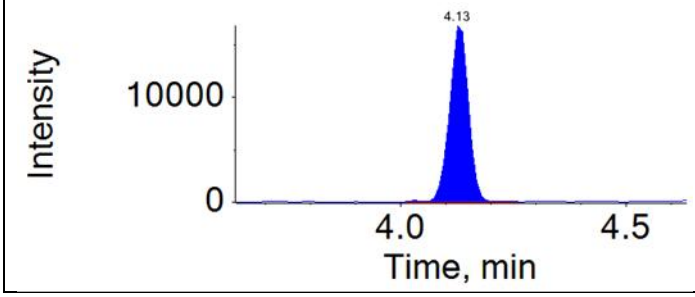


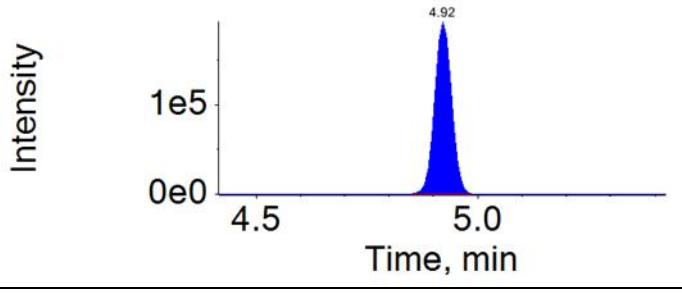
Extraction Standard: E13C3-PFBS	Injection Standard: 13C3-PFBA
302.0 / 80.0	216.0 / 172.0





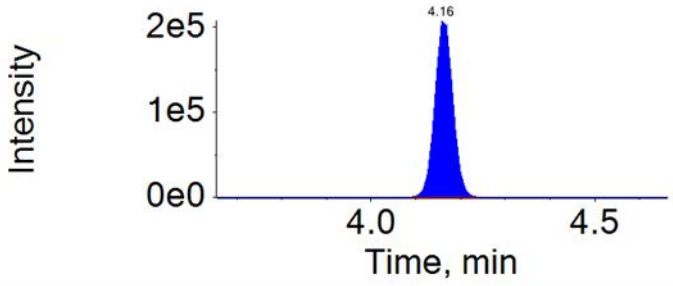
Extraction Standard: E13C2-4:2-FTS	Injection Standard: 13C2-PFOA
329.0 / 81.0	415.0 / 370.0

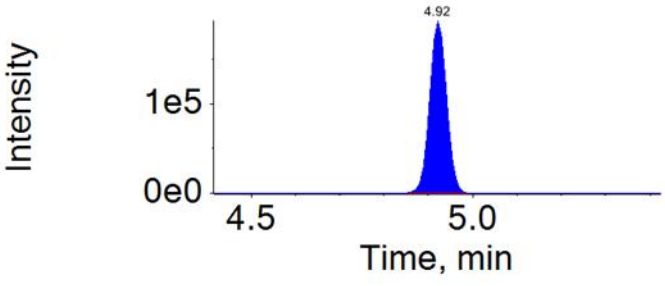




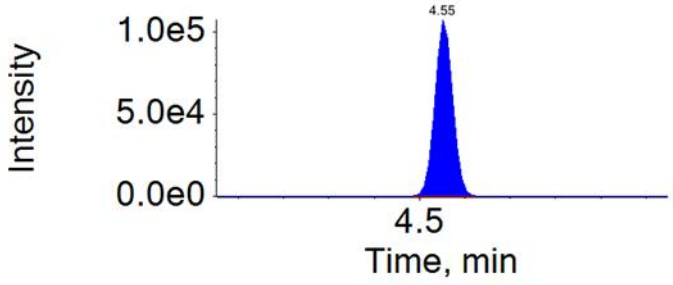
ICAL Name: 18NOV12DCAL **Result Table:** 18319003 11/19/2018 10:28:58 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

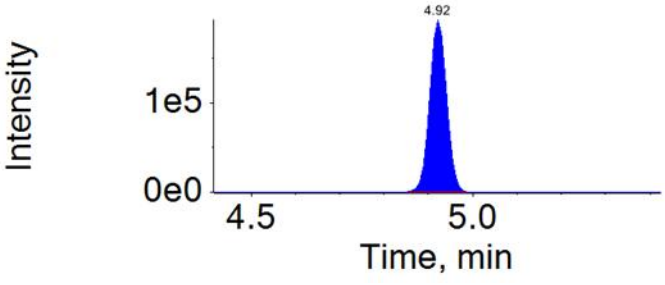
Extraction Standard: E13C5-PFHxA	Injection Standard: 13C2-PFOA
318.0 / 273.0	415.0 / 370.0



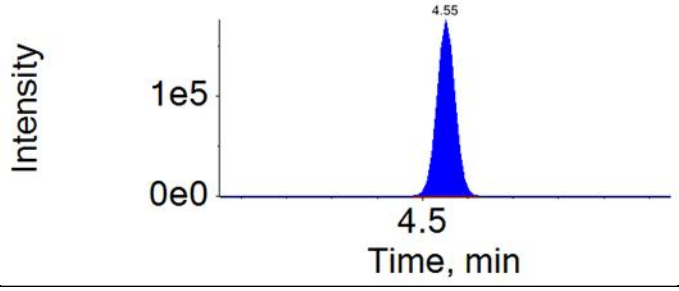


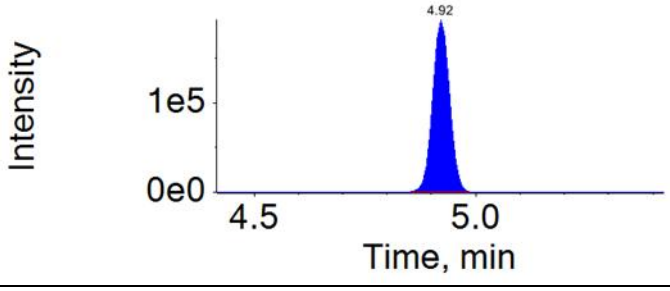
Extraction Standard: E13C3-PFHxS	Injection Standard: 13C2-PFOA
402.0 / 80.0	415.0 / 370.0



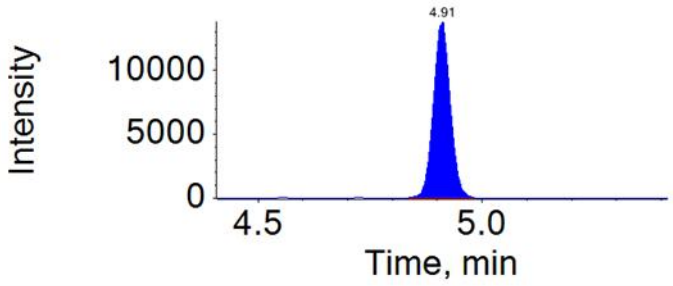


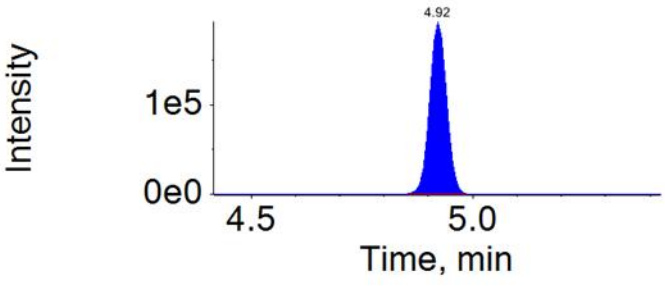
Extraction Standard: E13C4-PFHpA	Injection Standard: 13C2-PFOA
367.0 / 322.0	415.0 / 370.0





Extraction Standard: E13C2-6:2-FTS	Injection Standard: 13C2-PFOA
429.0 / 81.0	415.0 / 370.0

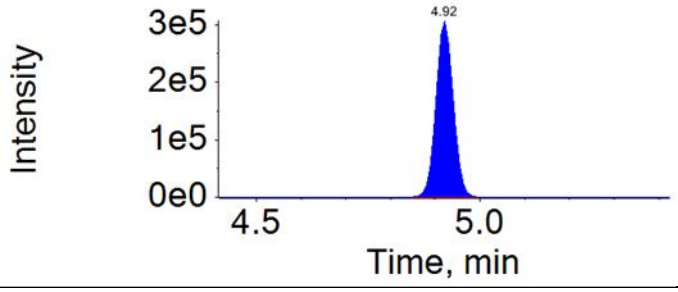
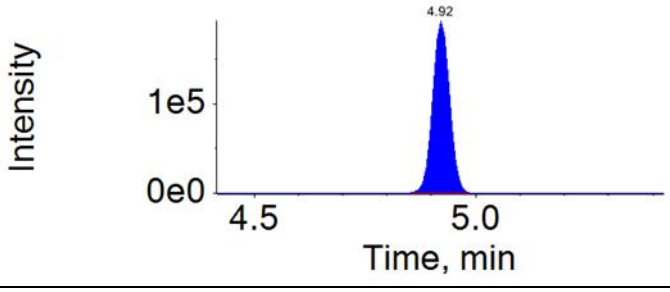


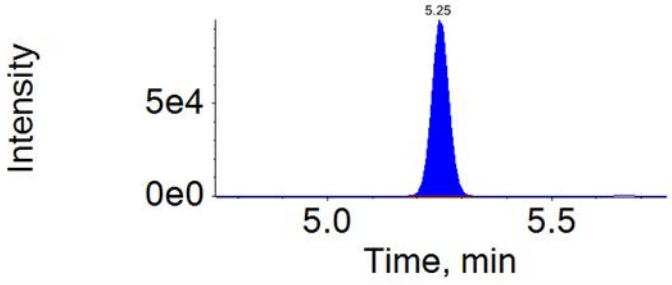
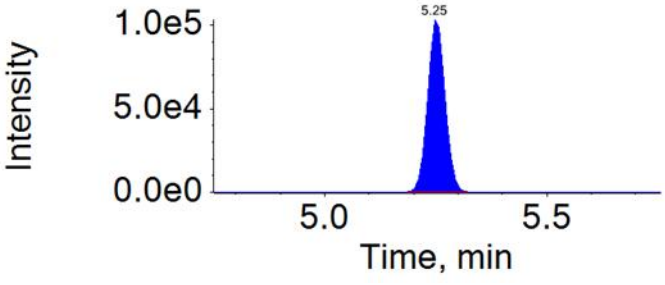


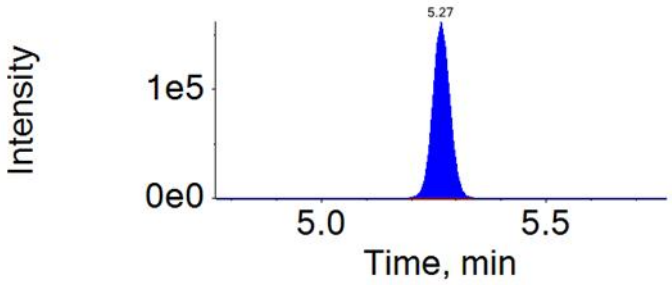
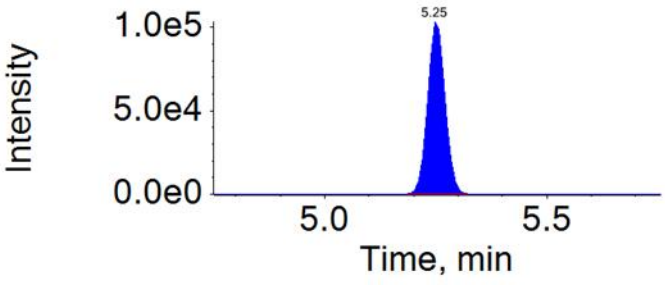
APPROVED
By JPT at 10:38 am, 11/19/18

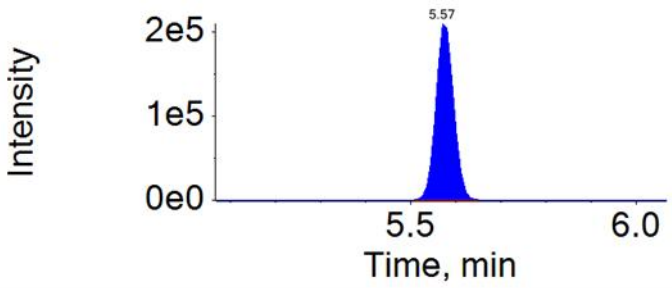
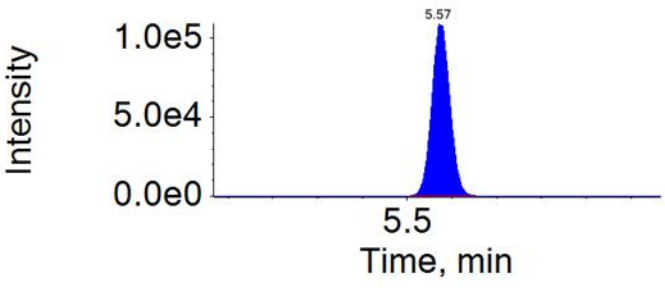
REVIEWED
By HMK at 11:46 am, 11/19/18

ICAL Name: 18NOV12DCAL **Result Table:** 18319003 11/19/2018 10:28:58 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
	

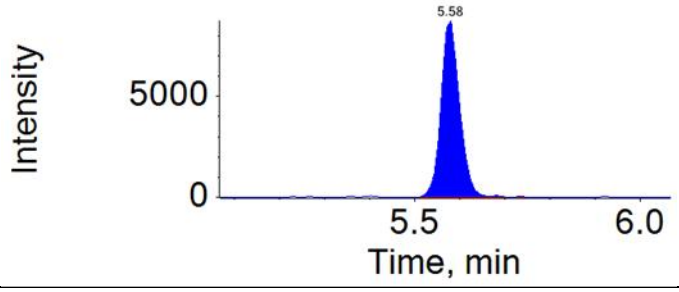
Extraction Standard: E13C6-PFDA	Injection Standard: 13C2-PFDA
519.0 / 474.0	515.0 / 470.0
	

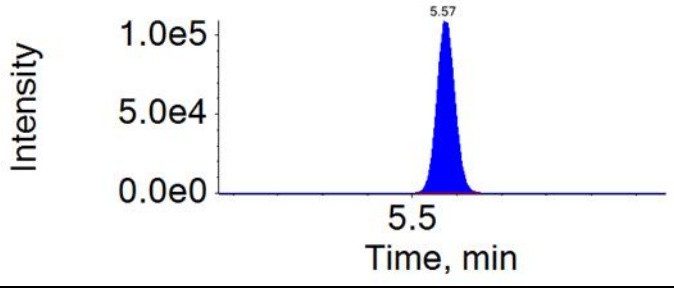
APPROVED
By JPT at 10:38 am, 11/19/18

REVIEWED
By HMK at 11:46 am, 11/19/18

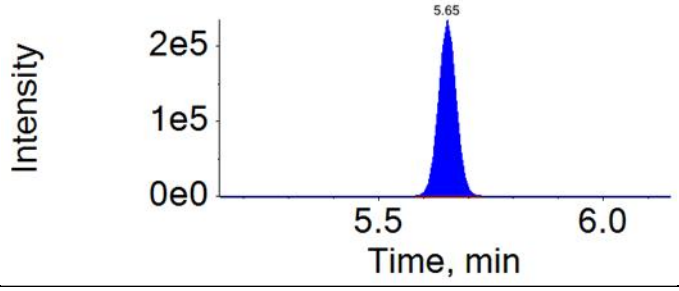
ICAL Name: 18NOV12DCAL **Result Table:** 18319003 11/19/2018 10:28:58 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

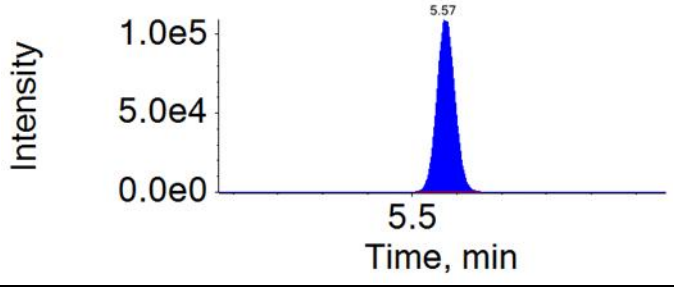
Extraction Standard: E13C2-8:2-FTS	Injection Standard: 13C2-PFDA
529.0 / 81.0	515.0 / 470.0



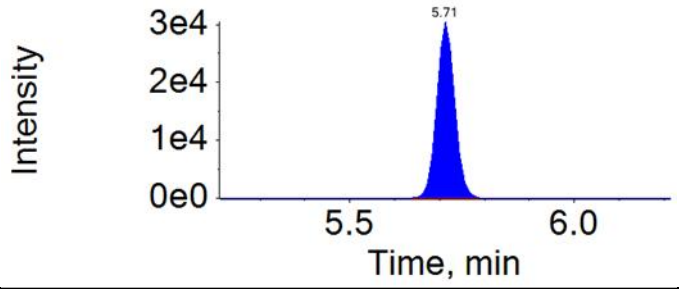


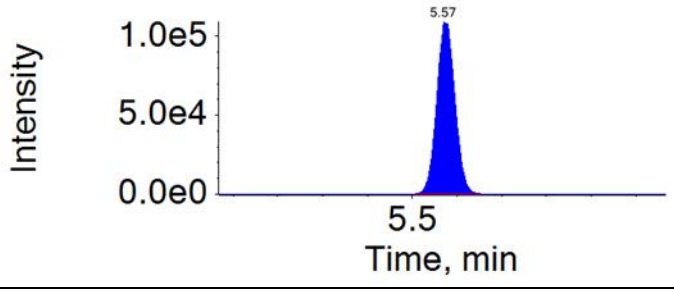
Extraction Standard: E13C8-PFOSA	Injection Standard: 13C2-PFDA
506.0 / 78.0	515.0 / 470.0



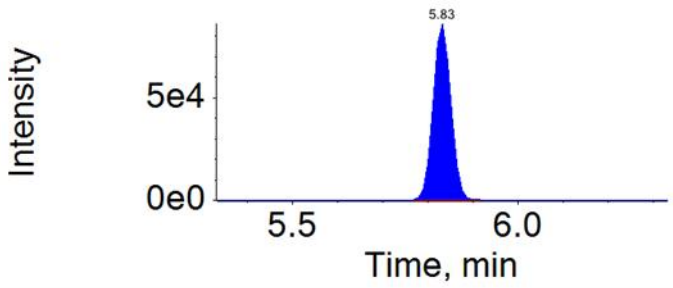


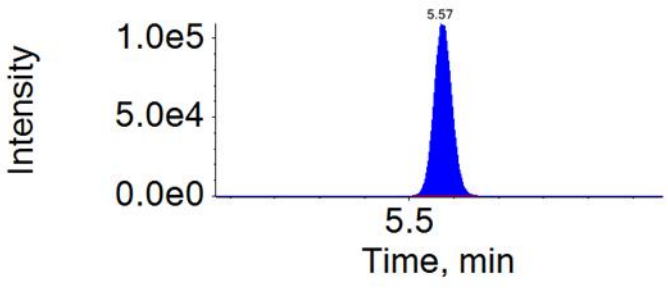
Extraction Standard: Ed3-NMeFOSAA	Injection Standard: 13C2-PFDA
573.0 / 419.0	515.0 / 470.0





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

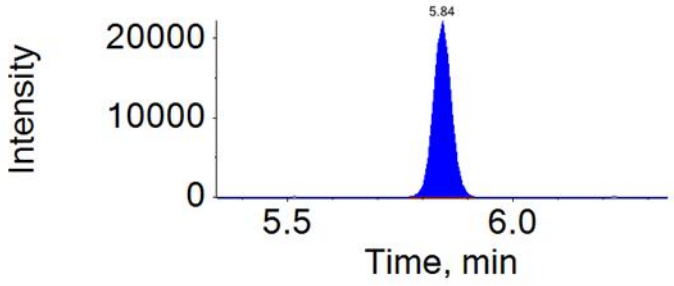
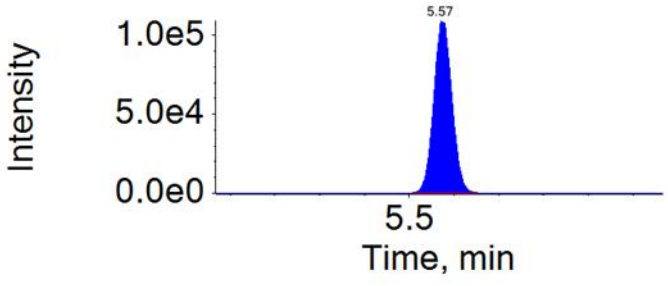


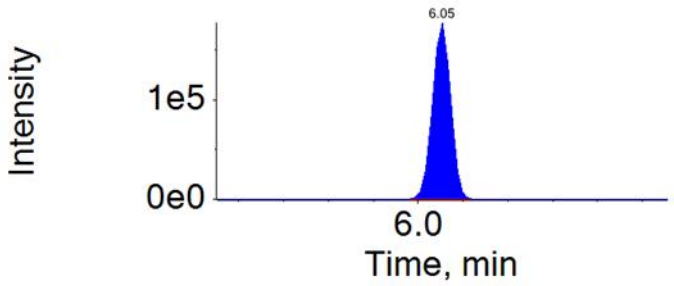
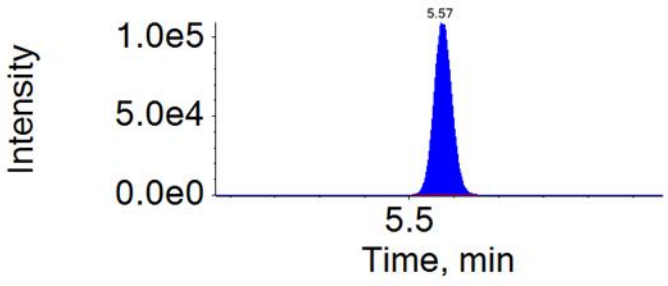


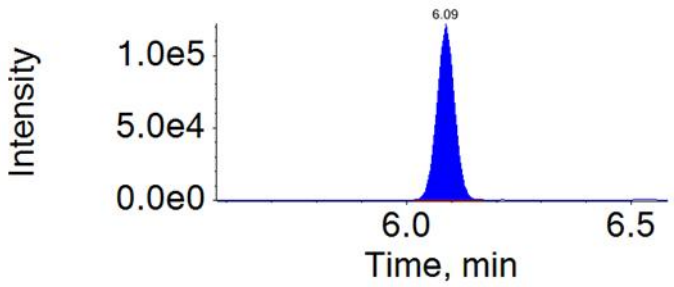
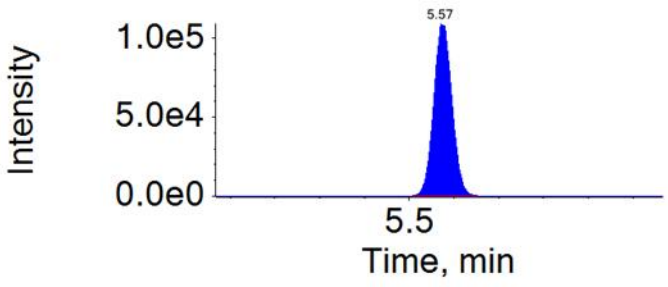
APPROVED
By JPT at 10:38 am, 11/19/18

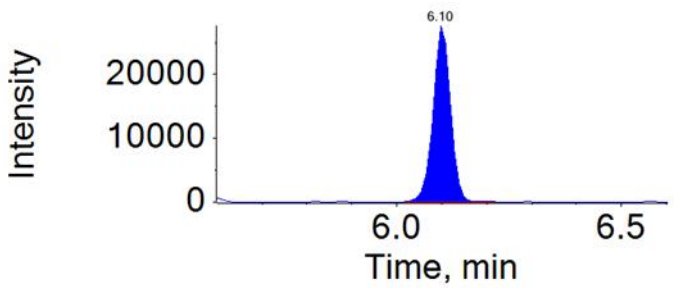
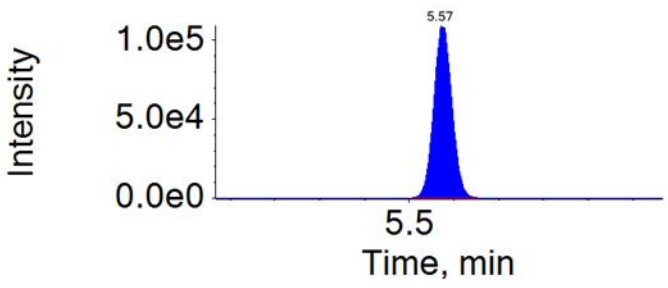
REVIEWED
By HMK at 11:46 am, 11/19/18

ICAL Name: 18NOV12DCAL **Result Table:** 18319003 11/19/2018 10:28:58 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
	

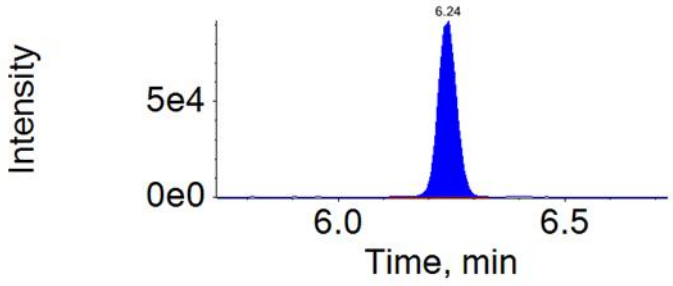
Extraction Standard: E13C2-PFDoDA	Injection Standard: 13C2-PFDA
615.0 / 570.0	515.0 / 470.0
	

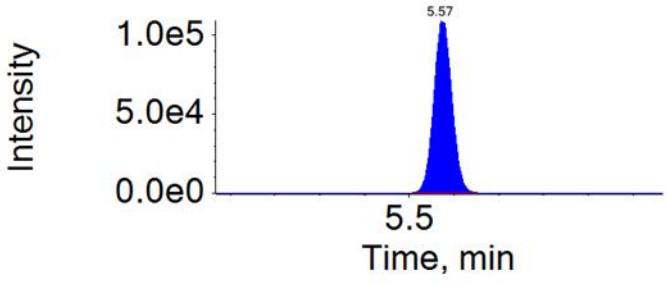
Extraction Standard: Ed7-NMePFOSAE	Injection Standard: 13C2-PFDA
623.0 / 59.0	515.0 / 470.0
	

Extraction Standard: Ed3-NMePFOSA	Injection Standard: 13C2-PFDA
515.0 / 169.0	515.0 / 470.0
	

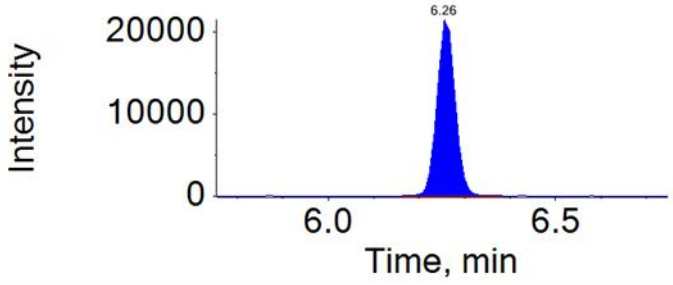
ICAL Name: 18NOV12DCAL **Result Table:** 18319003 11/19/2018 10:28:58 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

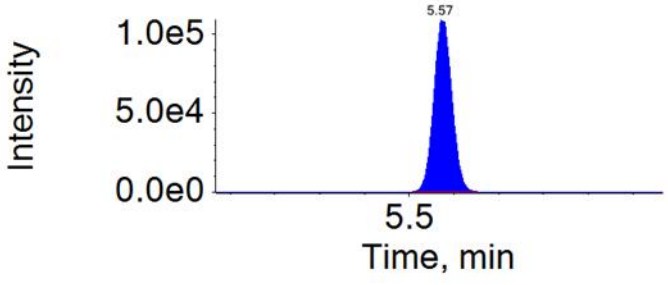
Extraction Standard: Ed9-NEtPFOSAE	Injection Standard: 13C2-PFDA
639.0 / 59.0	515.0 / 470.0



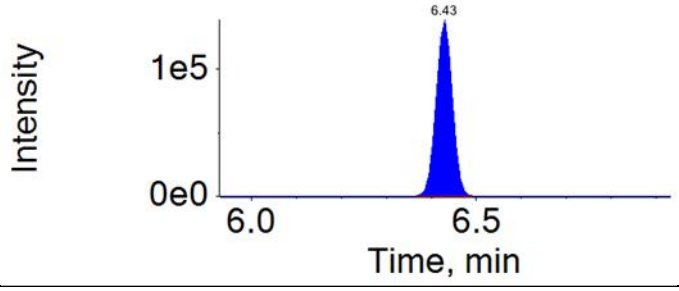


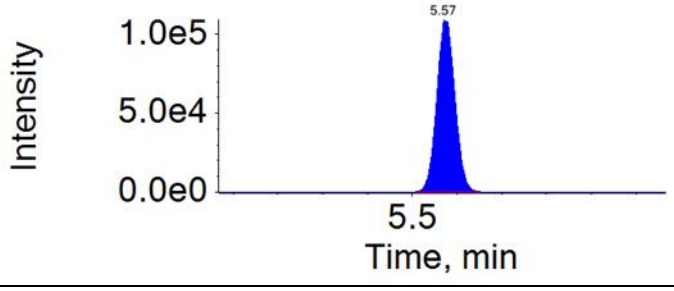
Extraction Standard: Ed5-NEtPFOSA	Injection Standard: 13C2-PFDA
531.0 / 169.0	515.0 / 470.0





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



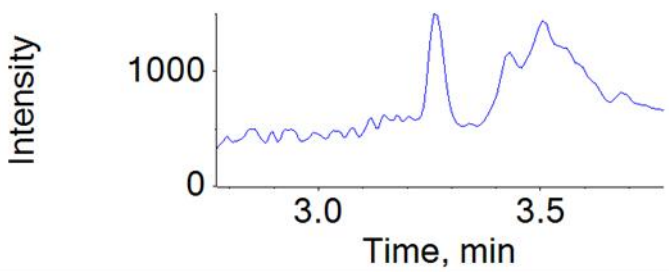


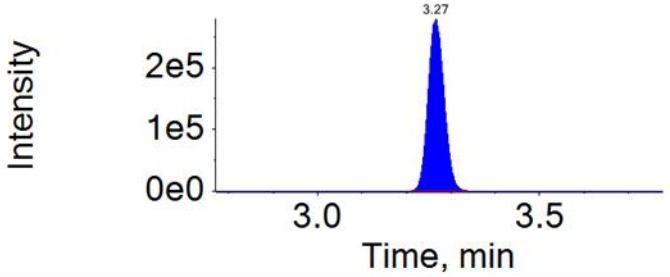
APPROVED
By JPT at 10:38 am, 11/19/18

REVIEWED
By HMK at 11:46 am, 11/19/18

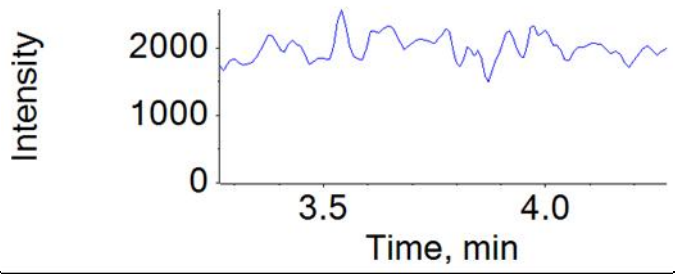
ICAL Name: 18NOV12DCAL **Result Table:** 18319003 11/19/2018 10:28:58 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

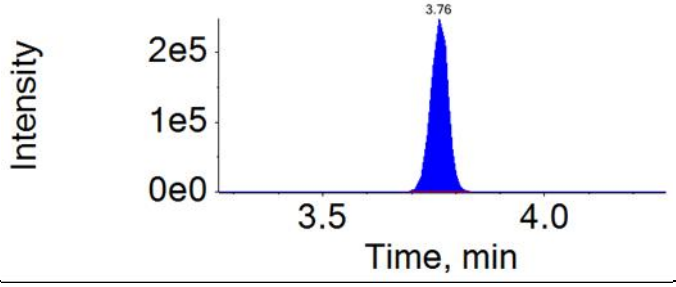
Analyte: PFBA	Extraction Standard: 13C4-PFBA
213.0 / 169.0	217.0 / 172.0



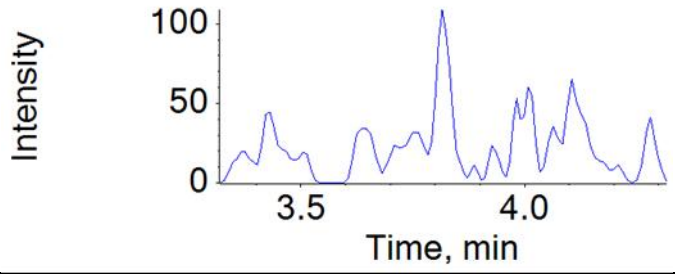


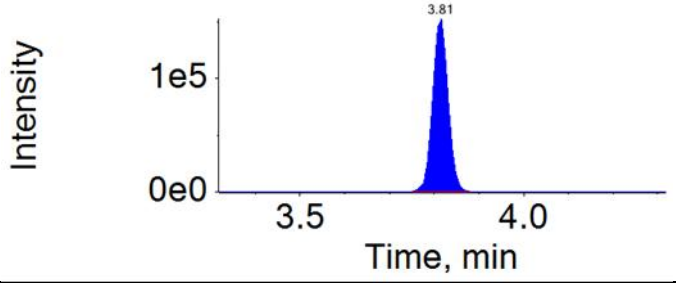
Analyte: PFPeA	Extraction Standard: 13C5-PFPeA
263.0 / 219.0	268.0 / 223.0



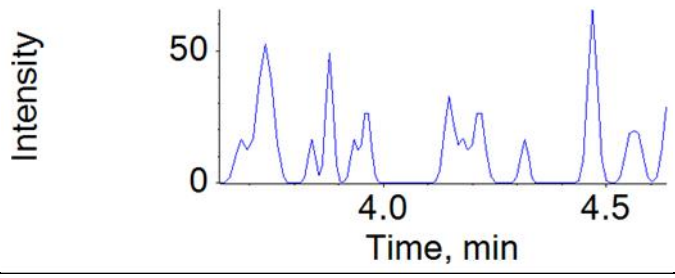


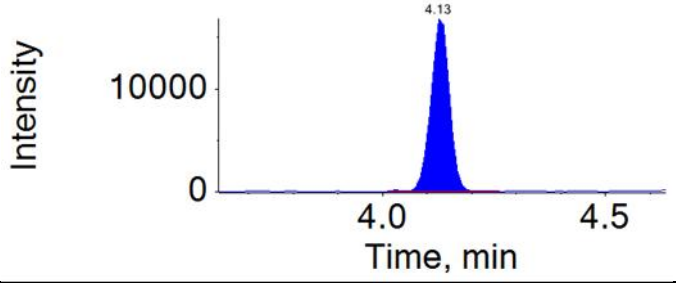
Analyte: PFBS	Extraction Standard: 13C3-PFBS
299.0 / 80.0	302.0 / 80.0





Analyte: 4:2-FTS	Extraction Standard: 13C2-4:2-FTS
327.0 / 307.0	329.0 / 81.0



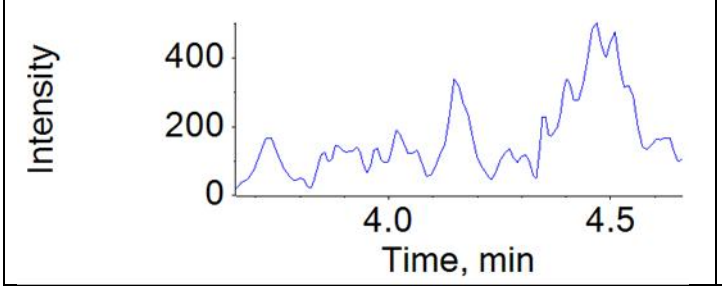


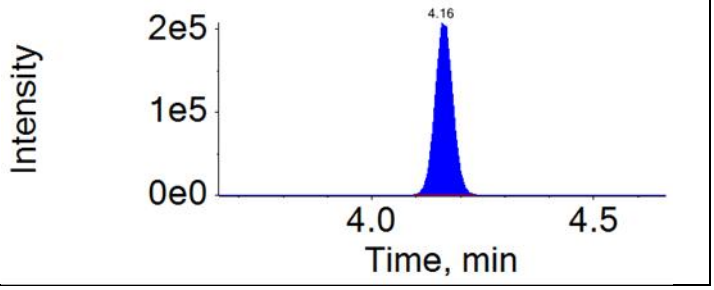
APPROVED
By JPT at 10:38 am, 11/19/18

REVIEWED
By HMK at 11:46 am, 11/19/18

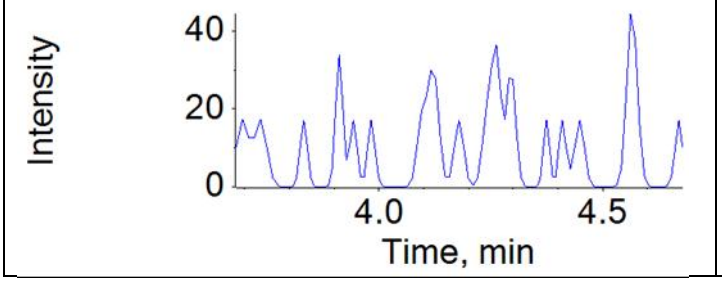
ICAL Name: 18NOV12DCAL **Result Table:** 18319003 11/19/2018 10:28:58 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

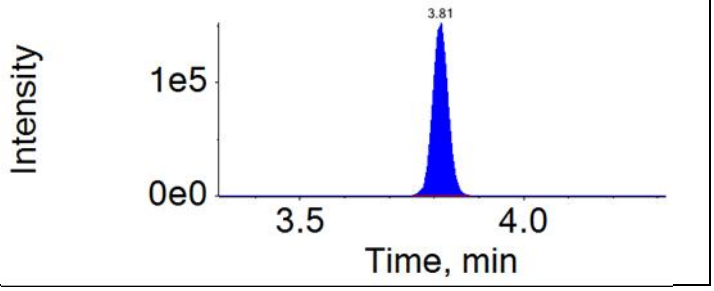
Analyte: PFHxA	Extraction Standard: 13C5-PFHxA
313.0 / 269.0	318.0 / 273.0



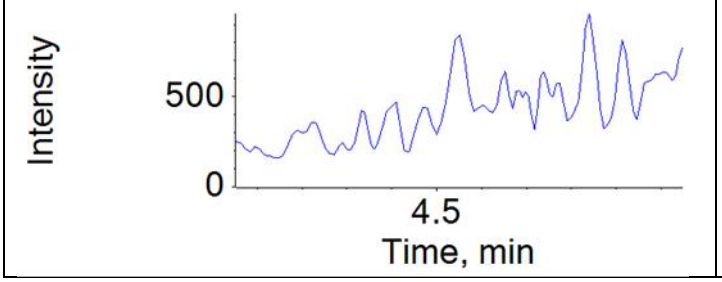


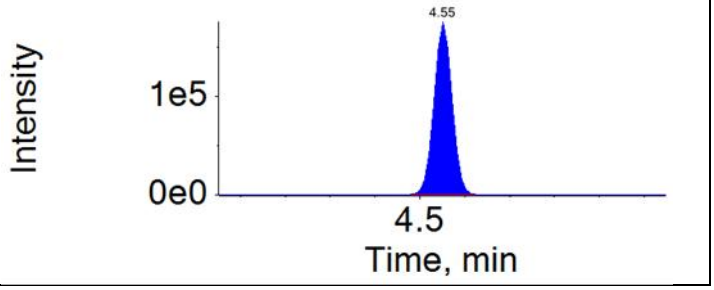
Analyte: PFPeS	Extraction Standard: 13C3-PFBS
349.0 / 80.0	302.0 / 80.0



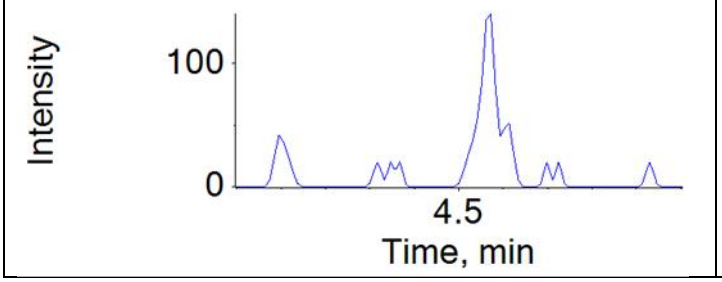


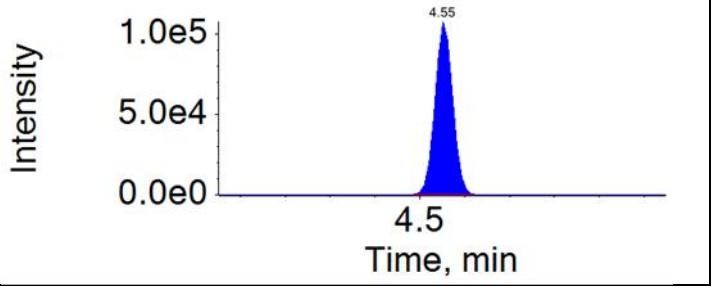
Analyte: PFHpA	Extraction Standard: 13C4-PFHpA
363.0 / 319.0	367.0 / 322.0





Analyte: PFHxS	Extraction Standard: 13C3-PFHxS
399.0 / 80.0	402.0 / 80.0



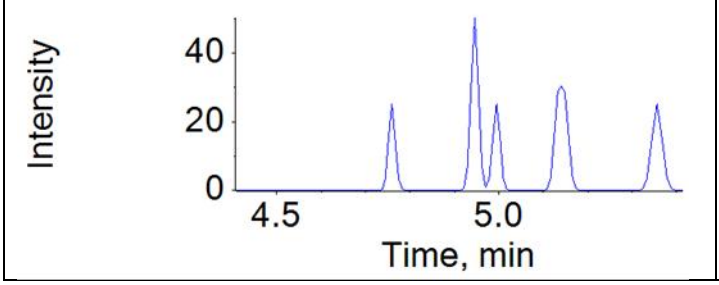


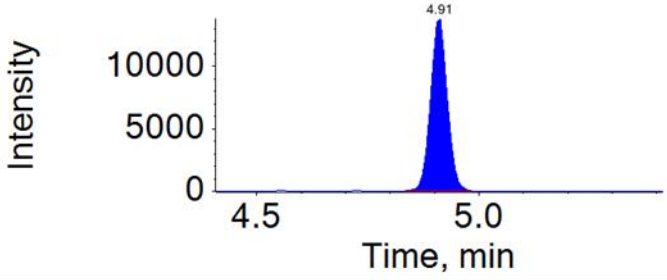
APPROVED
By JPT at 10:38 am, 11/19/18

REVIEWED
By HMK at 11:46 am, 11/19/18

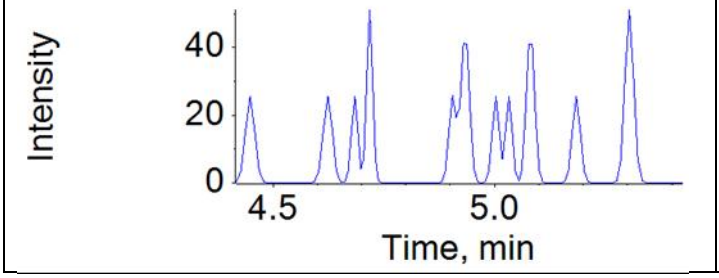
ICAL Name: 18NOV12DCAL **Result Table:** 18319003 11/19/2018 10:28:58 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

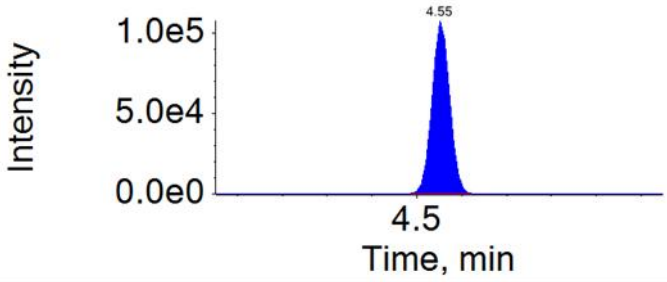
Analyte: 6:2-FTS	Extraction Standard: 13C2-6:2-FTS
427.0 / 407.0	429.0 / 81.0



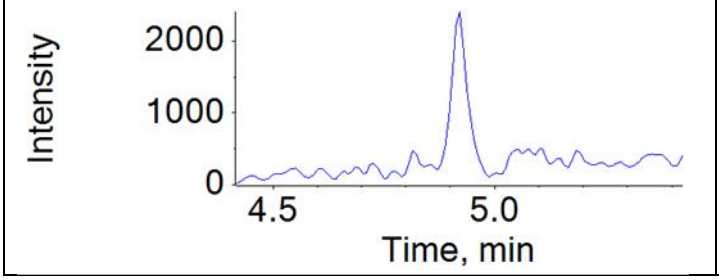


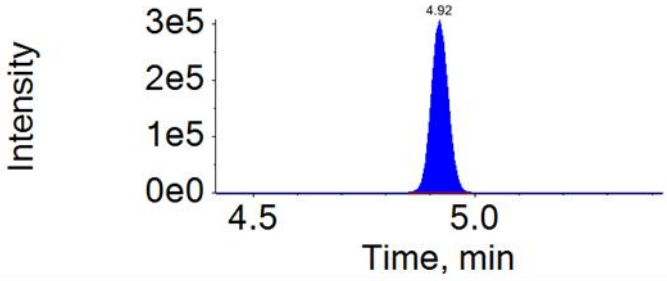
Analyte: PFHpS	Extraction Standard: 13C3-PFHxS
449.0 / 80.0	402.0 / 80.0



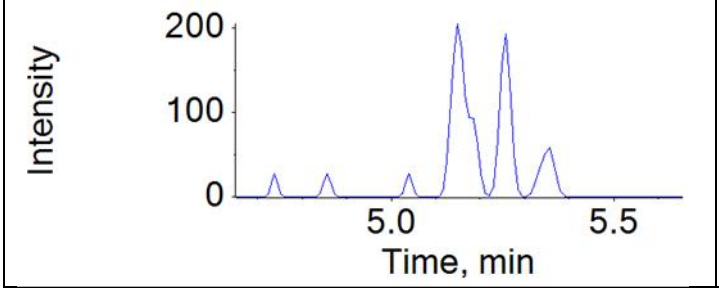


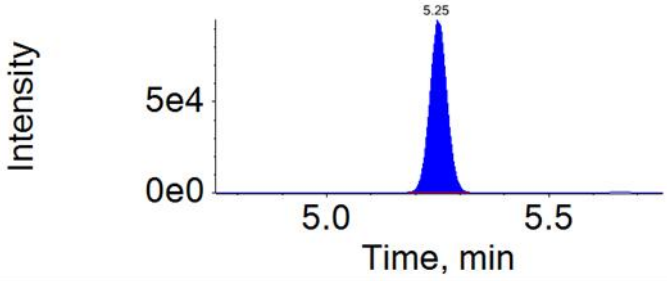
Analyte: PFOA	Extraction Standard: 13C8-PFOA
413.0 / 369.0	421.0 / 376.0





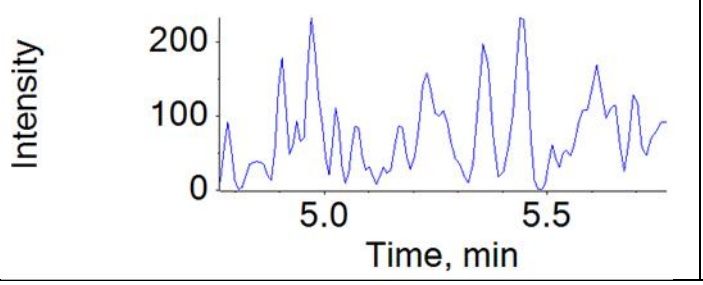
Analyte: PFOS	Extraction Standard: 13C8-PFOS
499.0 / 80.0	507.0 / 80.0

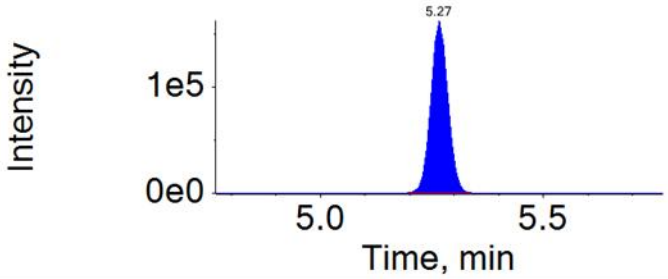




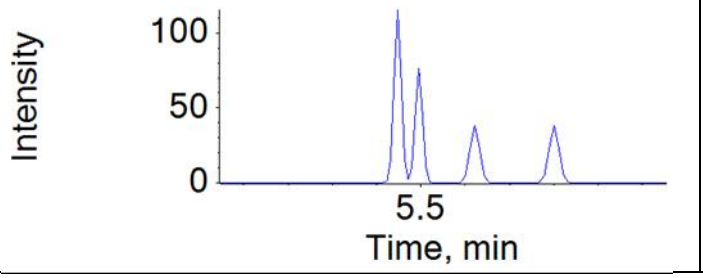
ICAL Name: 18NOV12DCAL **Result Table:** 18319003 11/19/2018 10:28:58 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

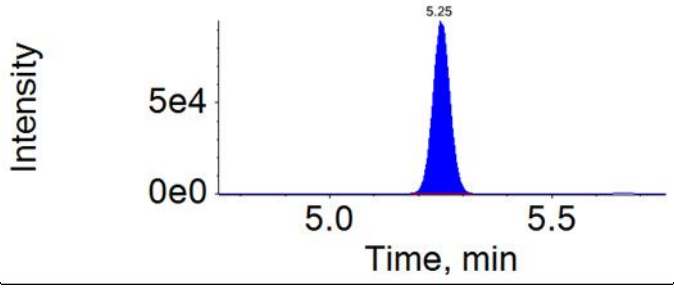
Analyte: PFNA	Extraction Standard: 13C9-PFNA
463.0 / 419.0	472.0 / 427.0



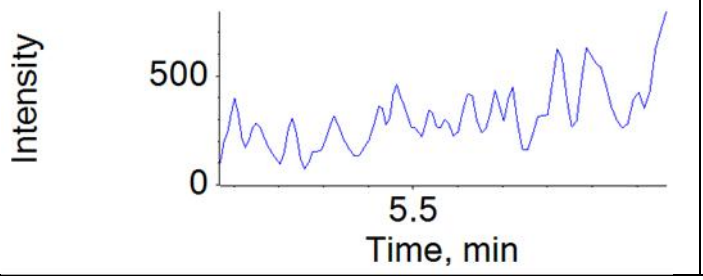


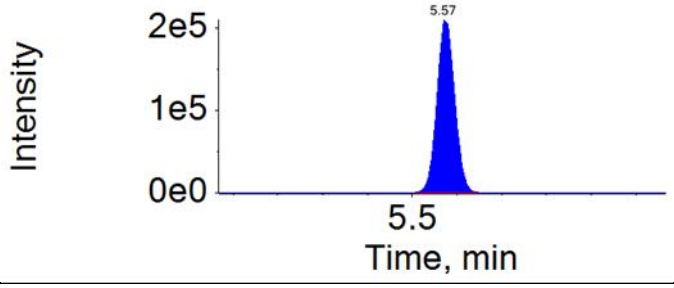
Analyte: PFNS	Extraction Standard: 13C8-PFOS
549.0 / 80.0	507.0 / 80.0



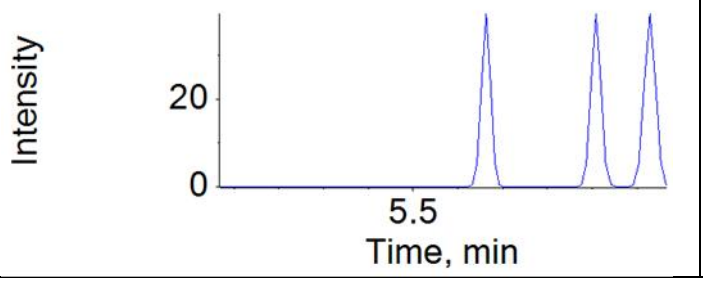


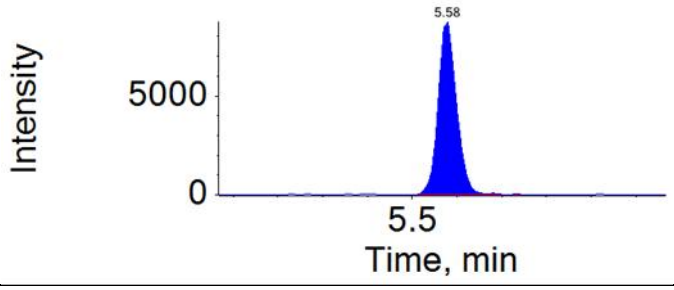
Analyte: PFDA	Extraction Standard: 13C6-PFDA
513.0 / 469.0	519.0 / 474.0





Analyte: 8:2-FTS	Extraction Standard: 13C2-8:2-FTS
527.0 / 507.0	529.0 / 81.0

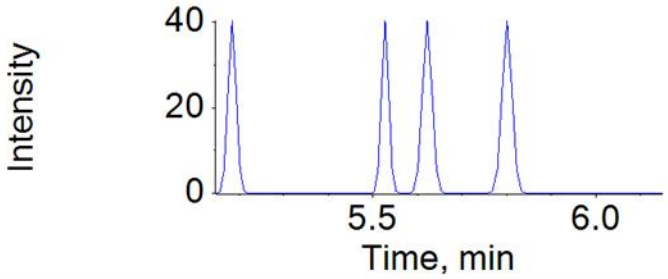
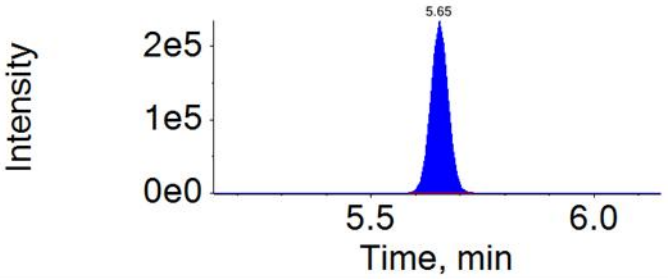


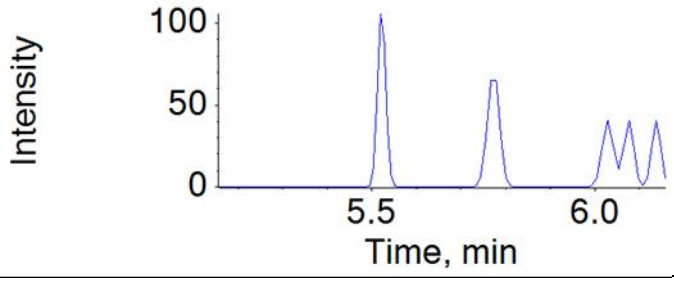
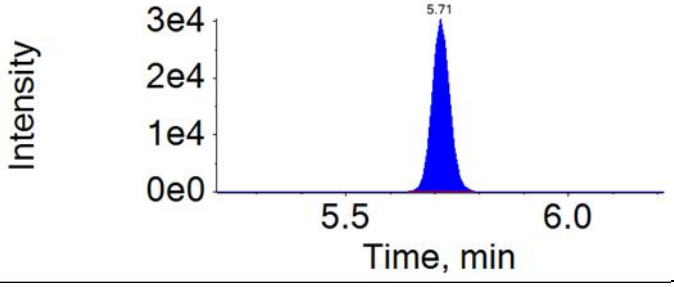


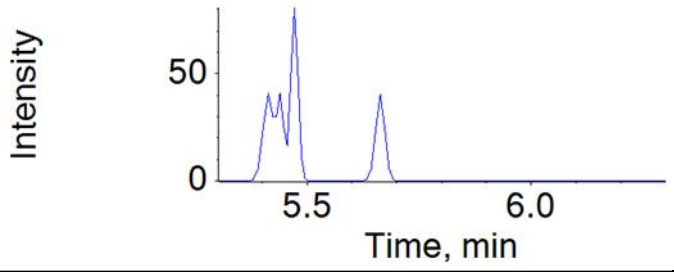
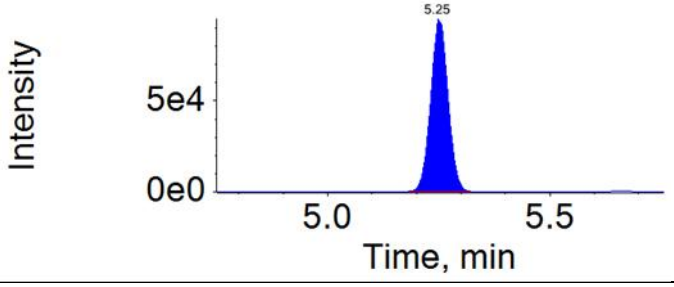
APPROVED
By JPT at 10:38 am, 11/19/18

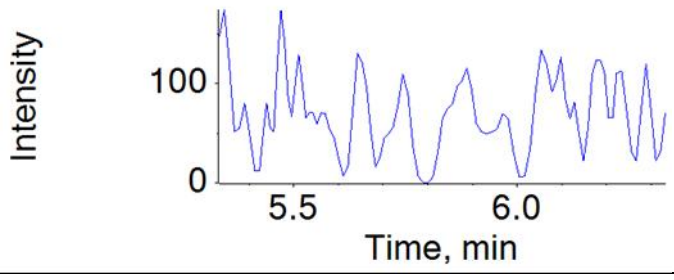
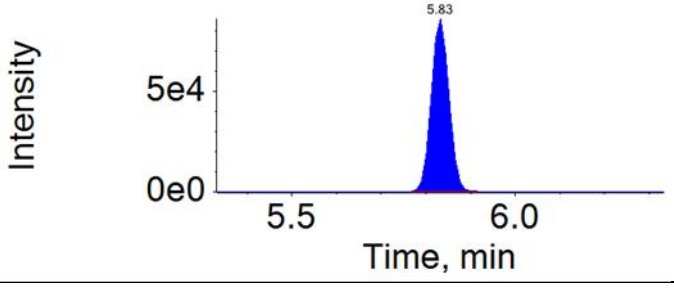
REVIEWED
By HMK at 11:46 am, 11/19/18

ICAL Name: 18NOV12DCAL **Result Table:** 18319003 11/19/2018 10:28:58 AM
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
	

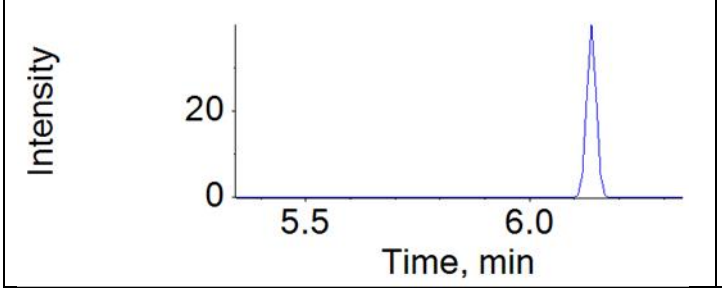
Analyte: PFUnDA	Extraction Standard: 13C7-PFUnDA
563.0 / 519.0	570.0 / 525.0
	

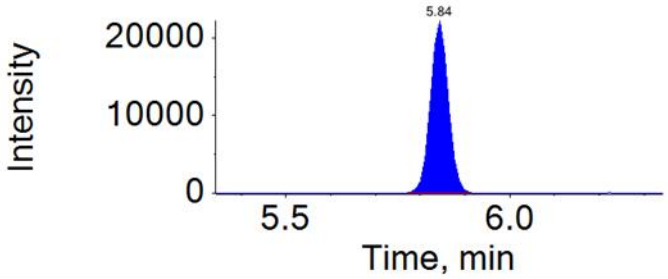
APPROVED
By JPT at 10:38 am, 11/19/18

REVIEWED
By HMK at 11:46 am, 11/19/18

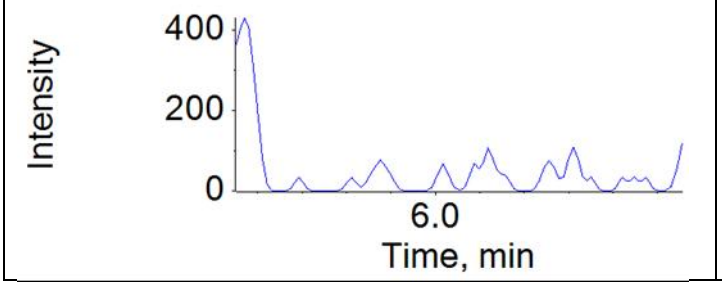
ICAL Name: 18NOV12DCAL **Result Table:** 18319003 11/19/2018 10:28:58 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

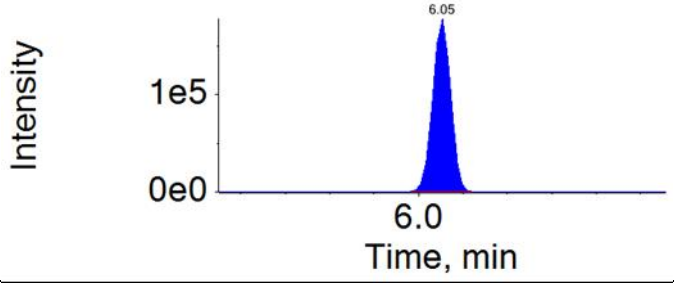
Analyte: NEtFOSAA	Extraction Standard: d5-NEtFOSAA
584.0 / 419.0	589.0 / 419.0



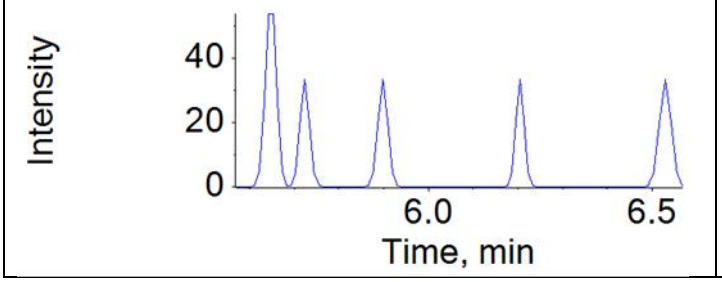


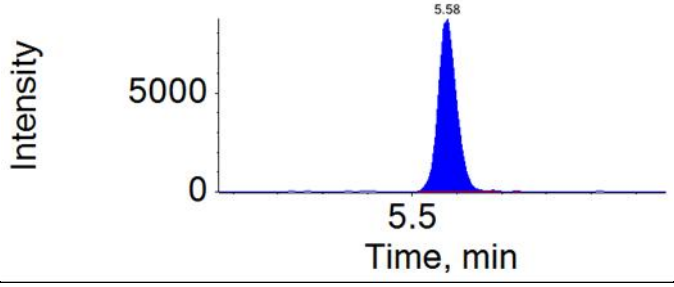
Analyte: PFDoDA	Extraction Standard: 13C2-PFDoDA
613.0 / 569.0	615.0 / 570.0



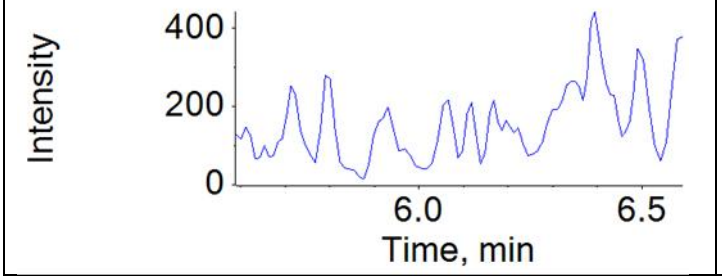


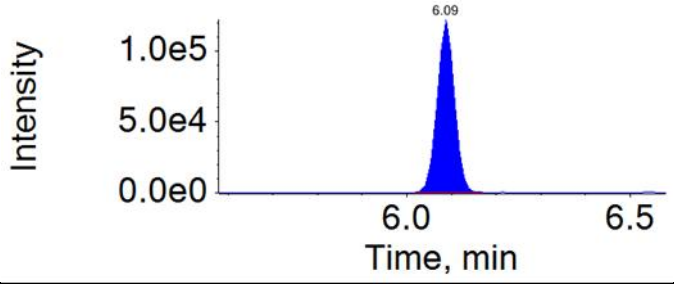
Analyte: 10:2-FTS	Extraction Standard: 13C2-8:2-FTS
627.0 / 607.0	529.0 / 81.0





Analyte: NMePFOSAE	Extraction Standard: d7-NMePFOSAE
616.0 / 59.0	623.0 / 59.0





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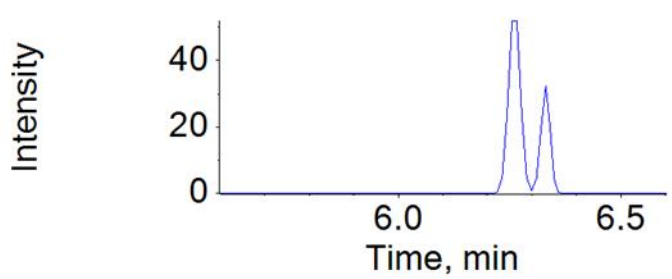
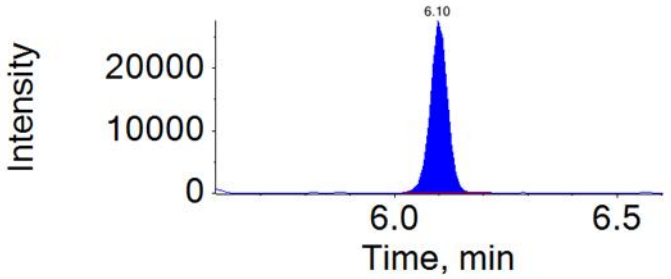
By HMK at 11:46 am, 11/19/18

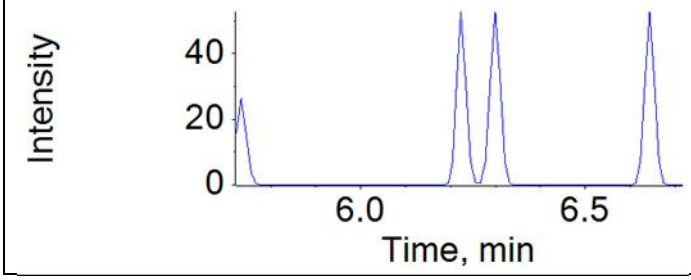
ICAL Name: 18NOV12DCAL **Result Table:** 18319003 11/19/2018 10:28:58 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

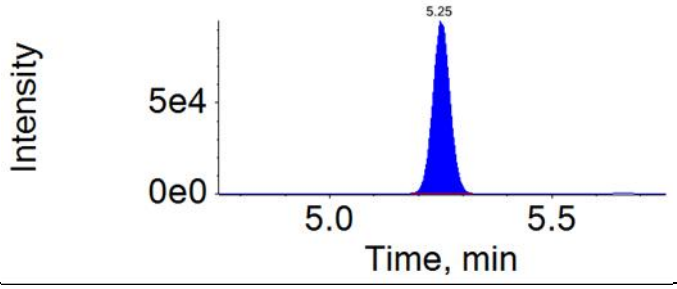
Analyte: NMePFOSA	Extraction Standard: d3-NMePFOSA
512.0 / 169.0	515.0 / 169.0



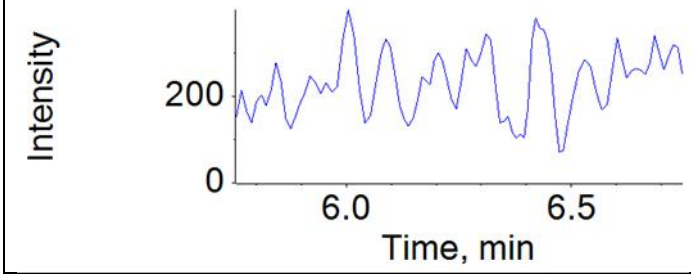


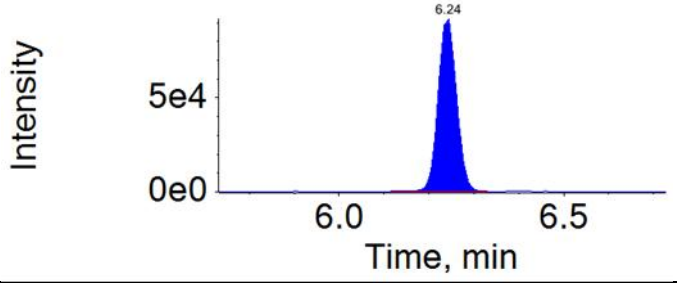
Analyte: PFDoS	Extraction Standard: 13C8-PFOS
699.0 / 80.0	507.0 / 80.0



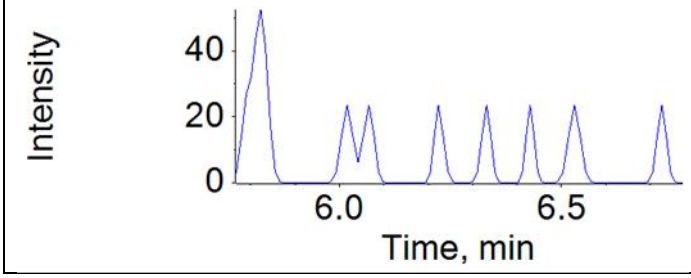


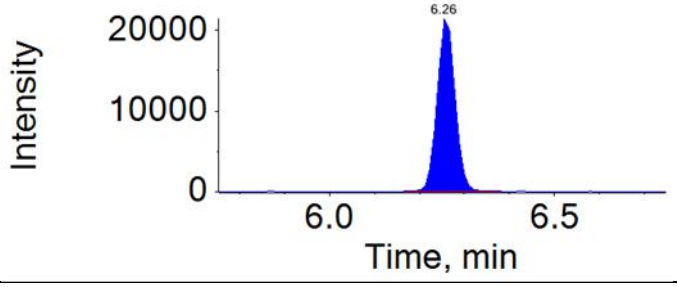
Analyte: NEtPFOSAE	Extraction Standard: d9-NEtPFOSAE
630.0 / 59.0	639.0 / 59.0





Analyte: NEtPFOSA	Extraction Standard: d5-NEtPFOSA
526.0 / 169.0	531.0 / 169.0



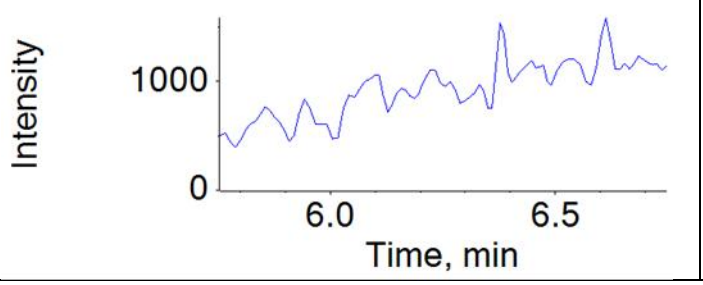


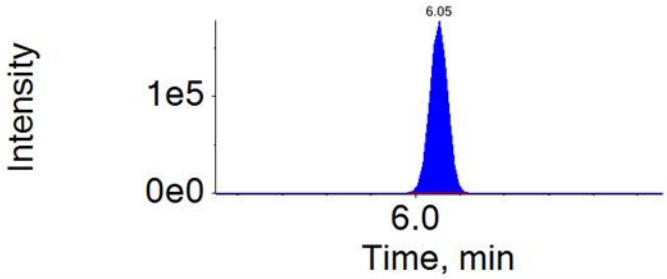
APPROVED
By JPT at 10:38 am, 11/19/18

REVIEWED
By HMK at 11:46 am, 11/19/18

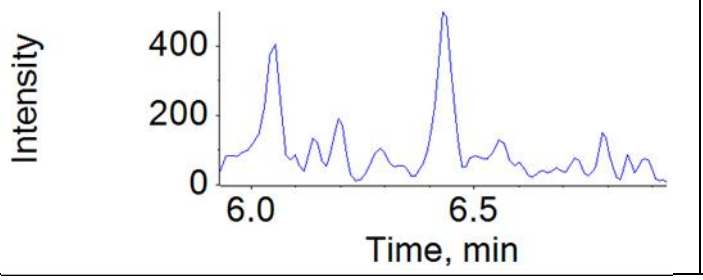
ICAL Name: 18NOV12DCAL **Result Table:** 18319003 11/19/2018 10:28:58 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

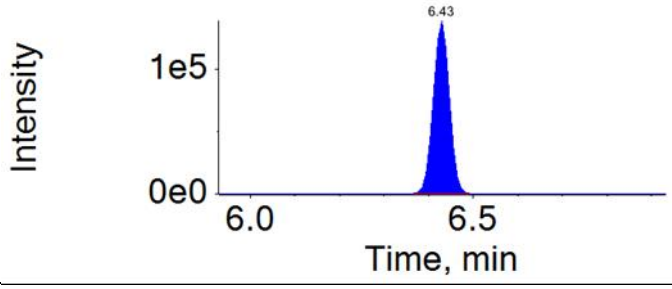
Analyte: PFTrDA	Extraction Standard: 13C2-PFDoDA
663.0 / 619.0	615.0 / 570.0



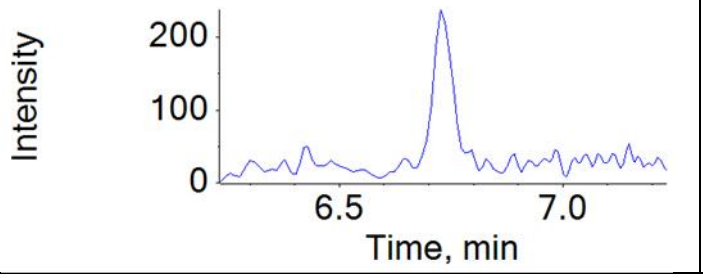


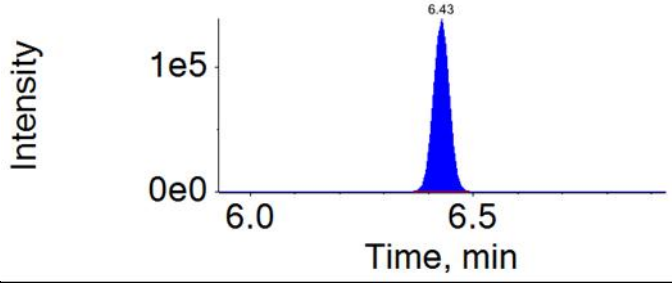
Analyte: PFTeDA	Extraction Standard: 13C2-PFTeDA
713.0 / 669.0	715.0 / 670.0



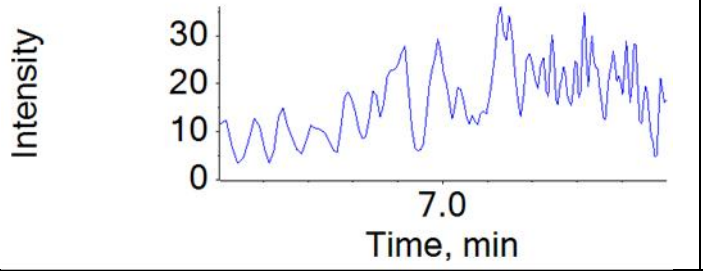


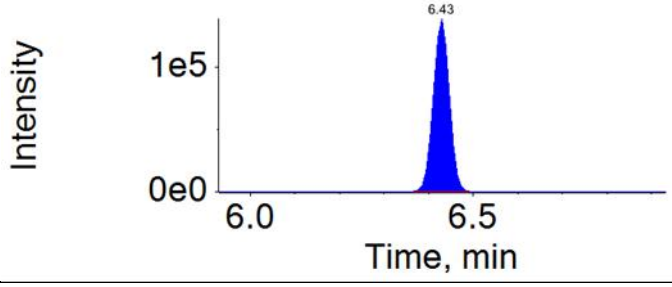
Analyte: PFHxDA	Extraction Standard: 13C2-PFTeDA
813.0 / 769.0	715.0 / 670.0





Analyte: PFODA	Extraction Standard: 13C2-PFTeDA
913.0 / 869.0	715.0 / 670.0





APPROVED
By JPT at 10:38 am, 11/19/18

REVIEWED
By HMK at 11:46 am, 11/19/18

Ion Ratio Report

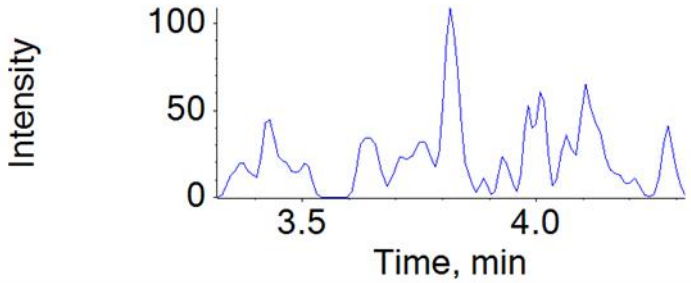
Sample Name: BLK319003 **Instrument Name:** LM27631 **File Name:** 18NOV15D-07.wiff

Component Name	RT	RRT	Analyte Area Response	Int Typ	Expected Ion Ratio	Ion Ratio	Ion Ratio % Diff	Ion Ratio Limit	Ion Ratio OOS
PFBS	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	

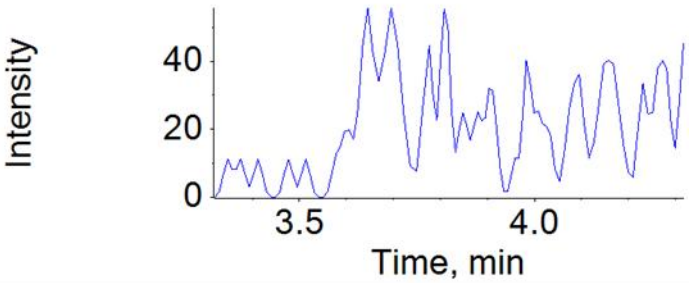
APPROVED
By JPT at 10:38 am, 11/19/18

REVIEWED
By HMK at 11:46 am, 11/19/18

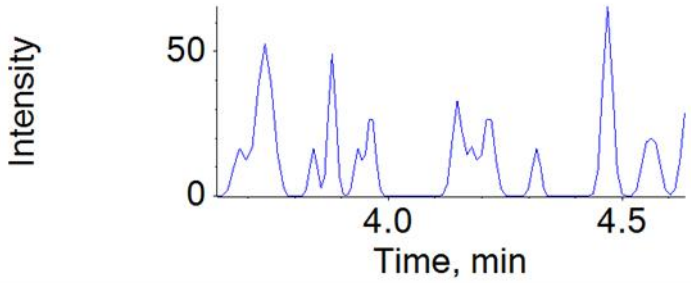
Component: PFBS
Primary Mass: 299.0 / 80.0



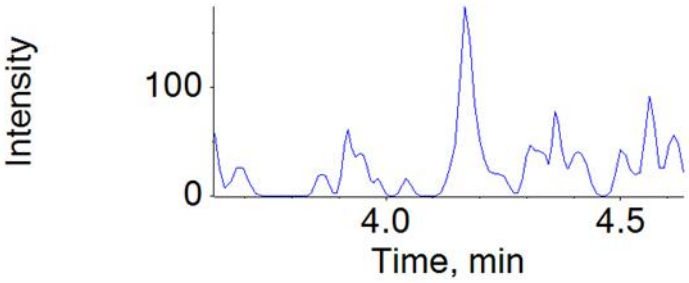
Component: PFBS_2
Secondary Mass: 299.0 / 99.0



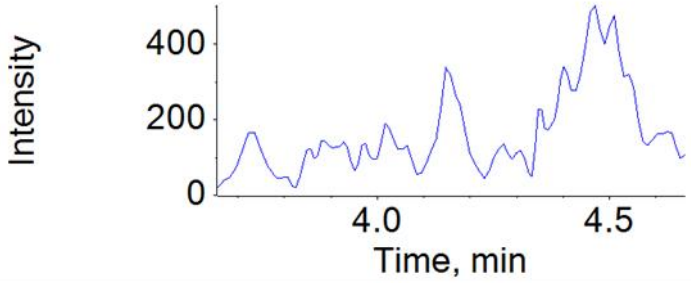
Component: 4:2-FTS
Primary Mass: 327.0 / 307.0



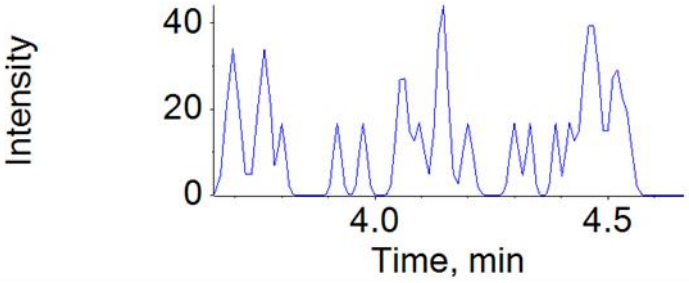
Component: 4:2 FTS_2
Secondary Mass: 327.0 / 81.0



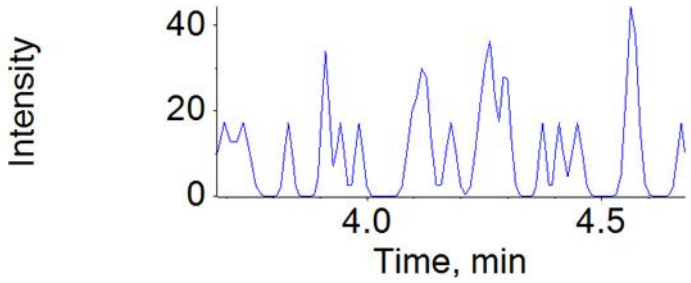
Component: PFHxA
Primary Mass: 313.0 / 269.0



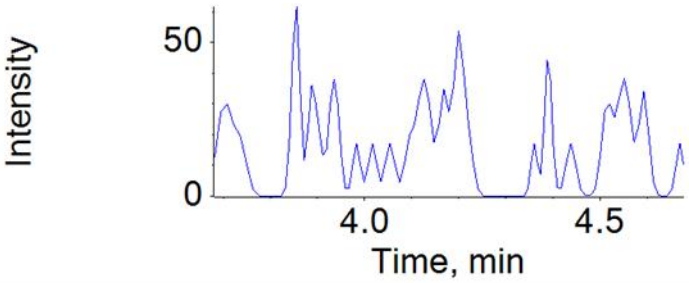
Component: PFHxA_2
Secondary Mass: 313.0 / 119.0



Component: PFPeS
Primary Mass: 349.0 / 80.0



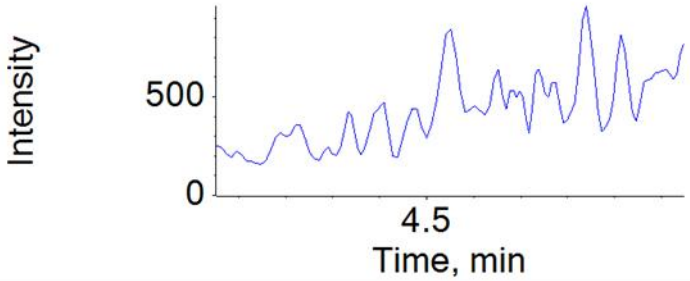
Component: PFPeS_2
Secondary Mass: 349.0 / 99.0



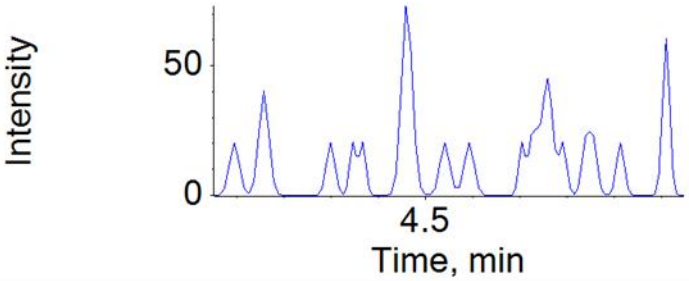
APPROVED
By JPT at 10:38 am, 11/19/18

REVIEWED
By HMK at 11:46 am, 11/19/18

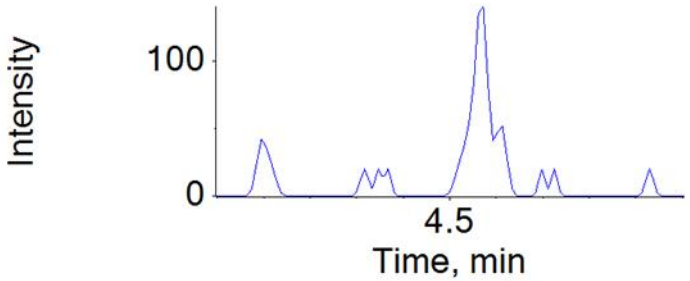
Component: PFHpA
Primary Mass: 363.0 / 319.0



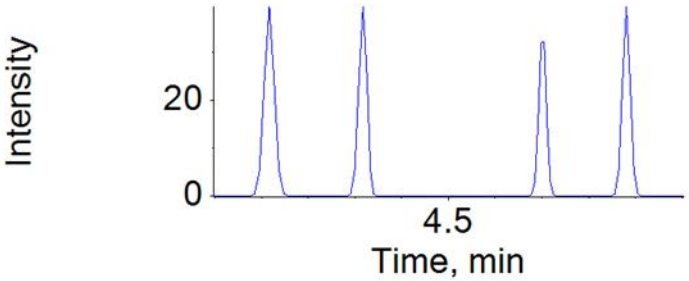
Component: PFHpA_2
Secondary Mass: 363.0 / 169.0



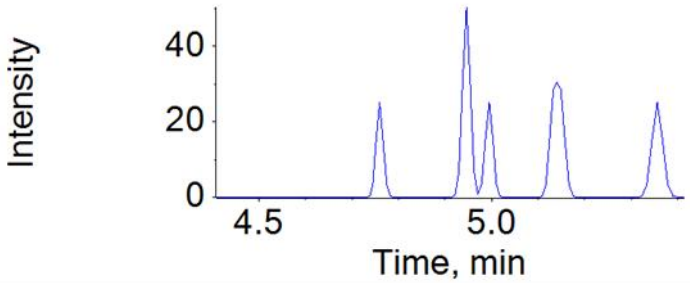
Component: PFHxS
Primary Mass: 399.0 / 80.0



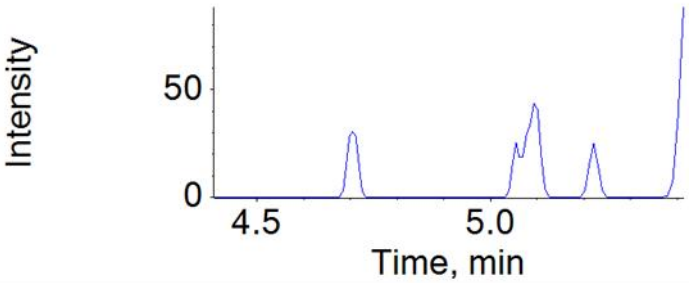
Component: PFHxS_2
Secondary Mass: 399.0 / 99.0



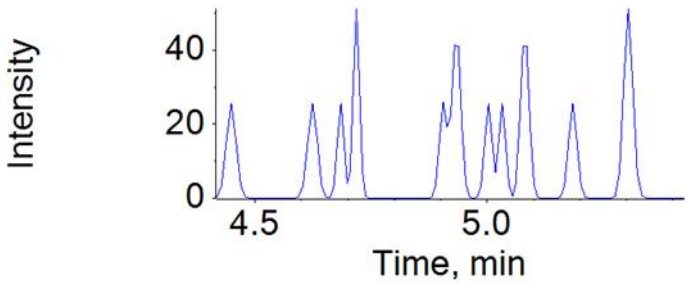
Component: 6:2-FTS
Primary Mass: 427.0 / 407.0



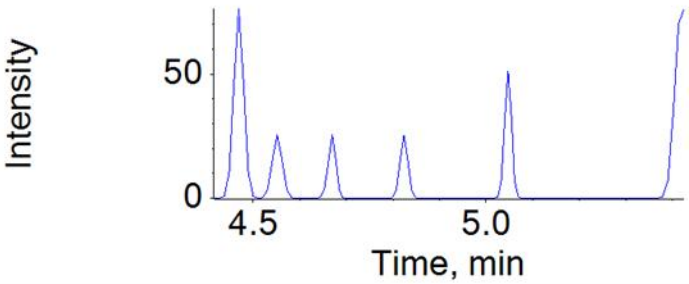
Component: 6:2 FTS_2
Secondary Mass: 427.0 / 81.0



Component: PFHpS
Primary Mass: 449.0 / 80.0



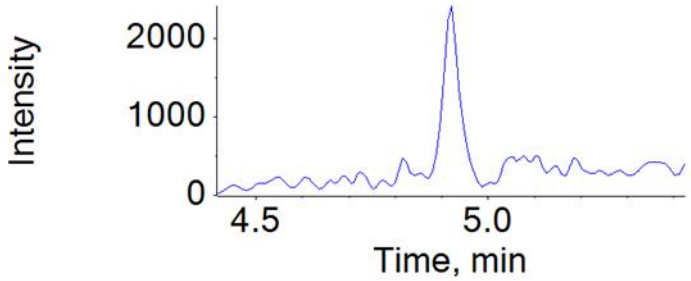
Component: PFHpS_2
Secondary Mass: 449.0 / 99.0



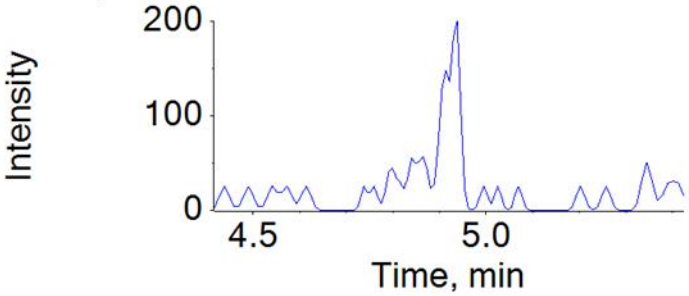
APPROVED
By JPT at 10:38 am, 11/19/18

REVIEWED
By HMK at 11:46 am, 11/19/18

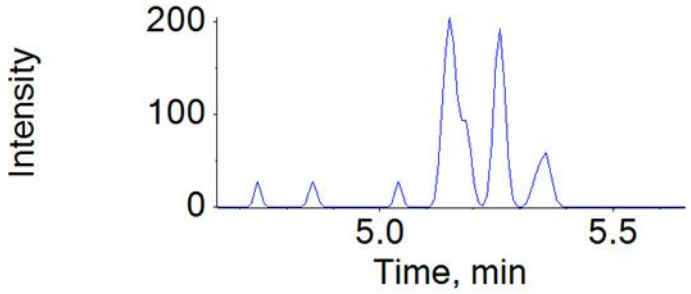
Component: PFOA
Primary Mass: 413.0 / 369.0



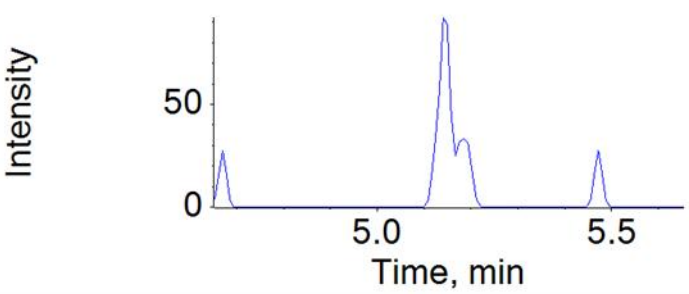
Component: PFOA_2
Secondary Mass: 413.0 / 169.0



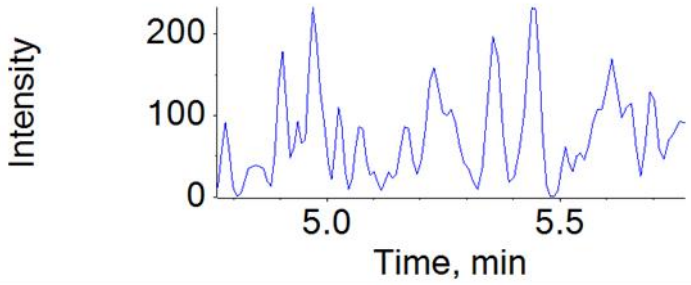
Component: PFOS
Primary Mass: 499.0 / 80.0



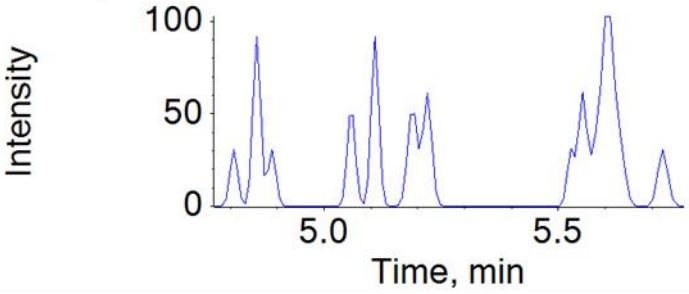
Component: PFOS_2
Secondary Mass: 499.0 / 99.0



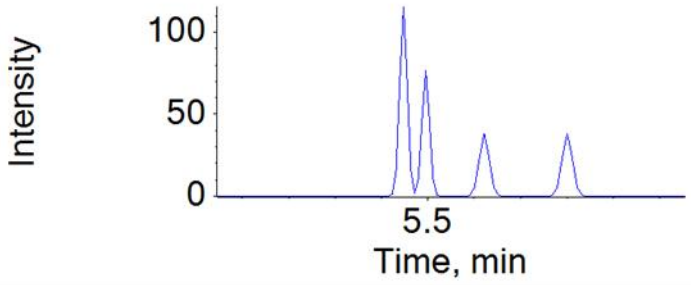
Component: PFNA
Primary Mass: 463.0 / 419.0



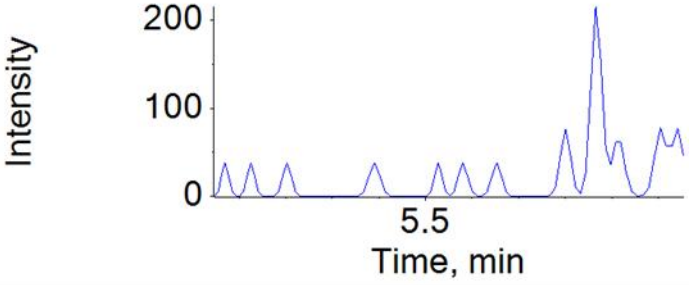
Component: PFNA_2
Secondary Mass: 463.0 / 169.0



Component: PFNS
Primary Mass: 549.0 / 80.0



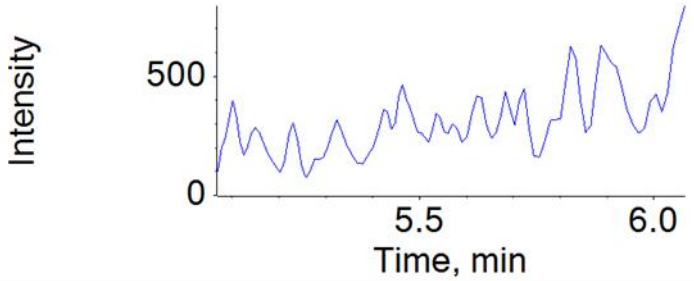
Component: PFNS_2
Secondary Mass: 549.0 / 99.0



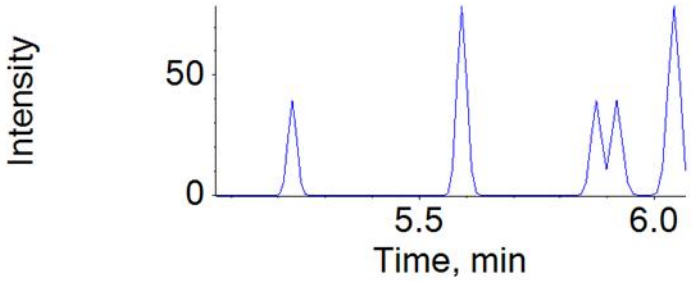
APPROVED
By JPT at 10:38 am, 11/19/18

REVIEWED
By HMK at 11:46 am, 11/19/18

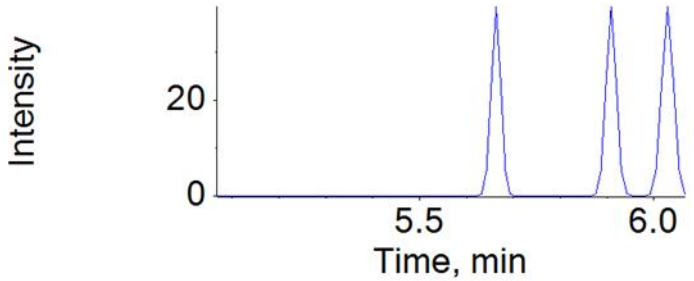
Component: PFDA
Primary Mass: 513.0 / 469.0



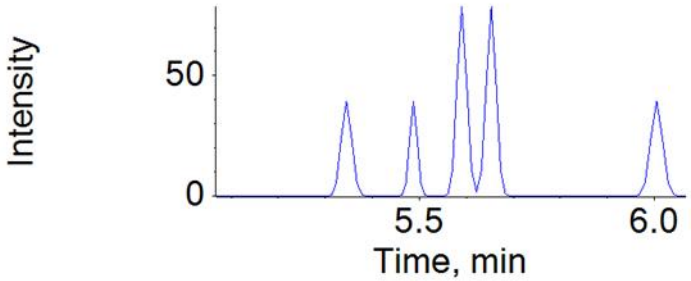
Component: PFDA_2
Secondary Mass: 513.0 / 169.0



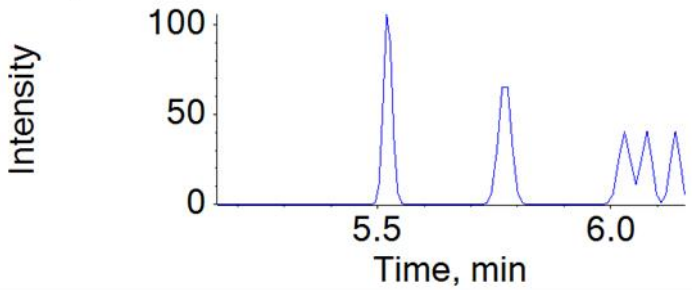
Component: 8:2-FTS
Primary Mass: 527.0 / 507.0



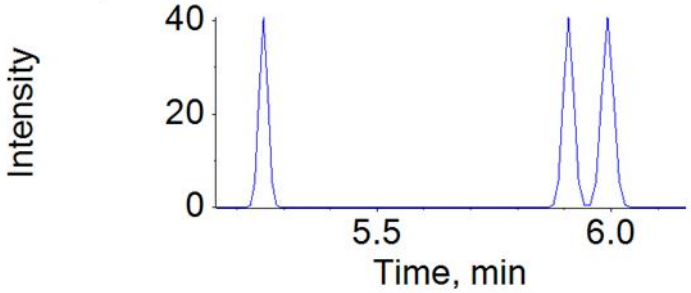
Component: 8:2 FTS_2
Secondary Mass: 527.0 / 81.0



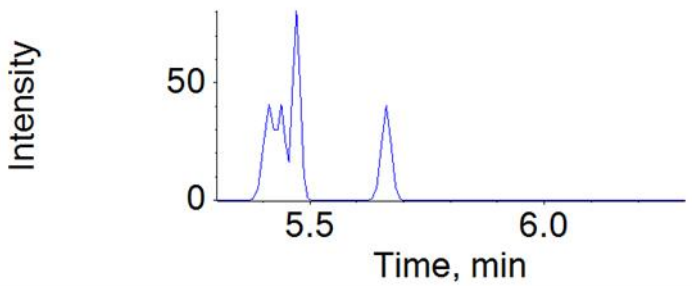
Component: NMeFOSAA
Primary Mass: 570.0 / 419.0



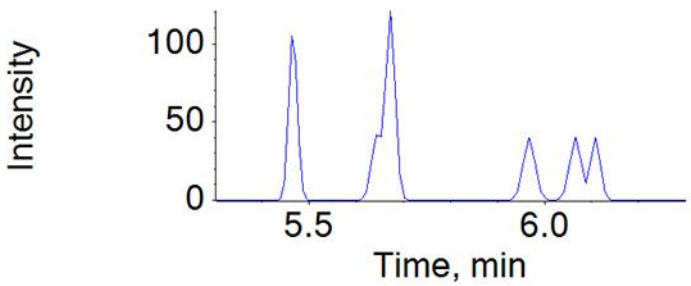
Component: NMeFOSAA_2
Secondary Mass: 570.0 / 483.0



Component: PFDS
Primary Mass: 599.0 / 80.0



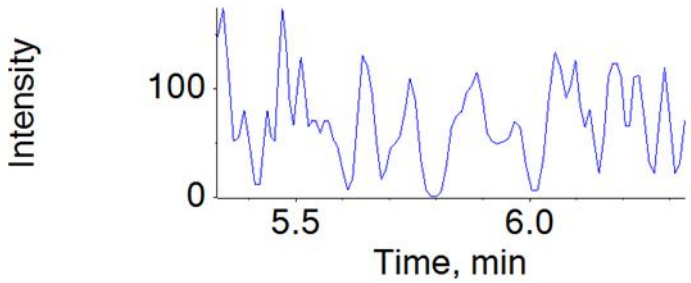
Component: PFDS_2
Secondary Mass: 599.0 / 99.0



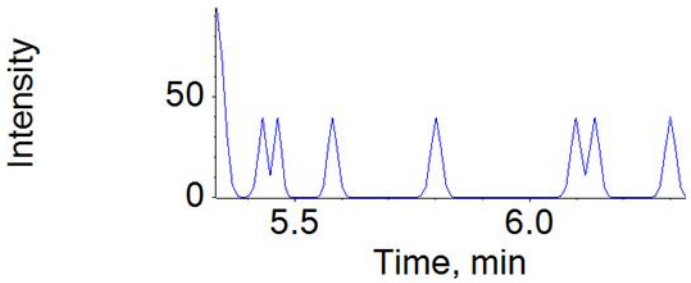
APPROVED
By JPT at 10:38 am, 11/19/18

REVIEWED
By HMK at 11:46 am, 11/19/18

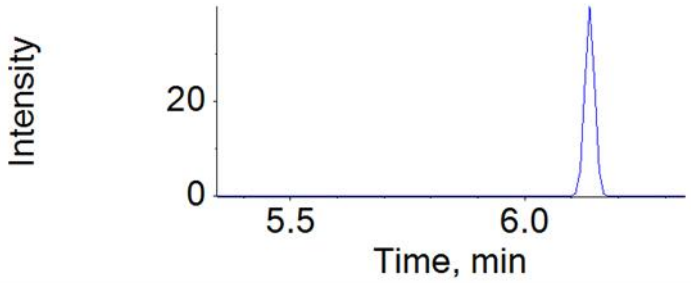
Component: PFUnDA
Primary Mass: 563.0 / 519.0



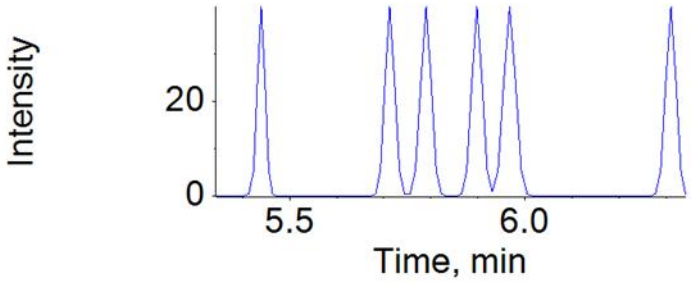
Component: PFUnDA_2
Secondary Mass: 563.0 / 169.0



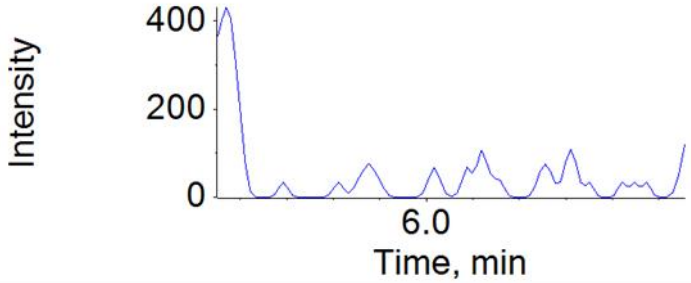
Component: NEtFOSAA
Primary Mass: 584.0 / 419.0



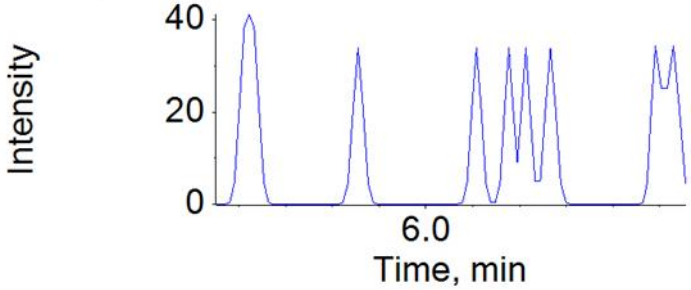
Component: NEtFOSAA_2
Secondary Mass: 584.0 / 526.0



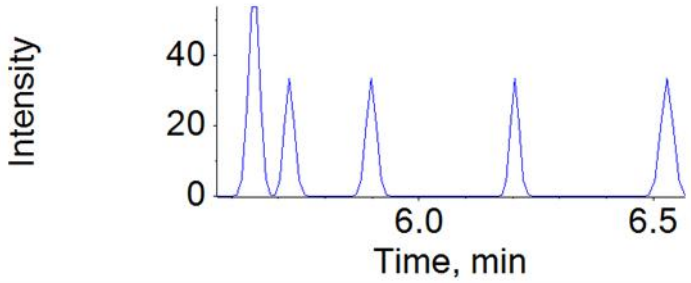
Component: PFDoDA
Primary Mass: 613.0 / 569.0



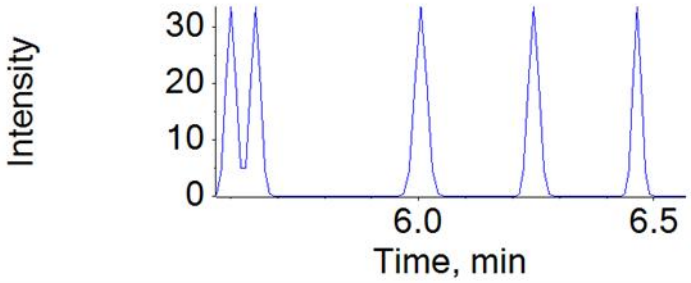
Component: PFDoDA_2
Secondary Mass: 613.0 / 169.0



Component: 10:2-FTS
Primary Mass: 627.0 / 607.0



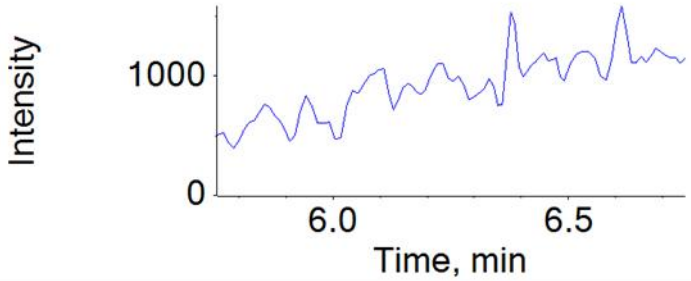
Component: 10:2 FTS_2
Secondary Mass: 627.0 / 81.0



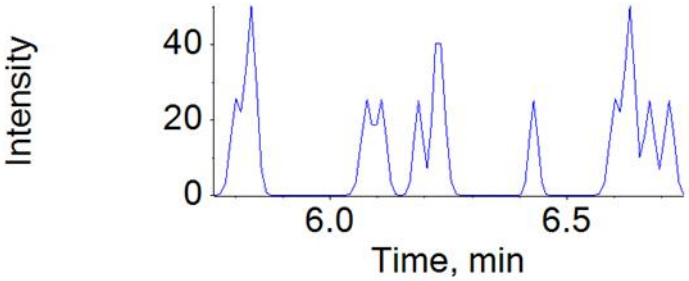
APPROVED
By JPT at 10:38 am, 11/19/18

REVIEWED
By HMK at 11:46 am, 11/19/18

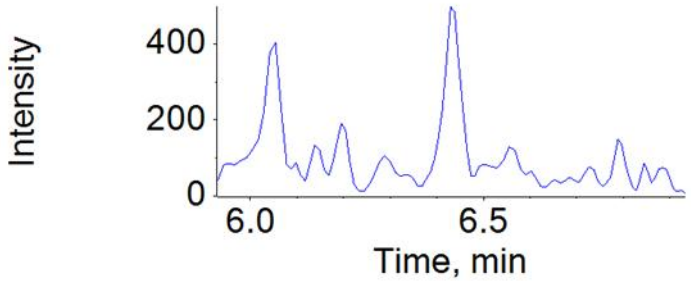
Component: PFTrDA
Primary Mass: 663.0 / 619.0



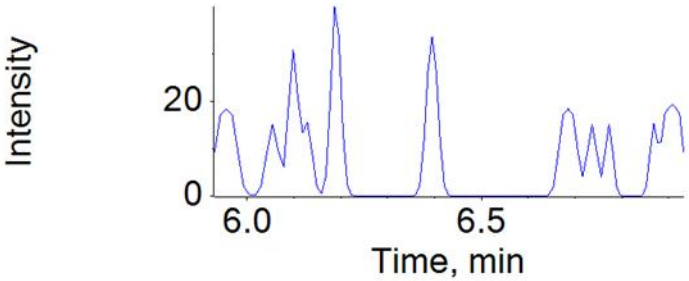
Component: PFTrDA_2
Secondary Mass: 663.0 / 169.0



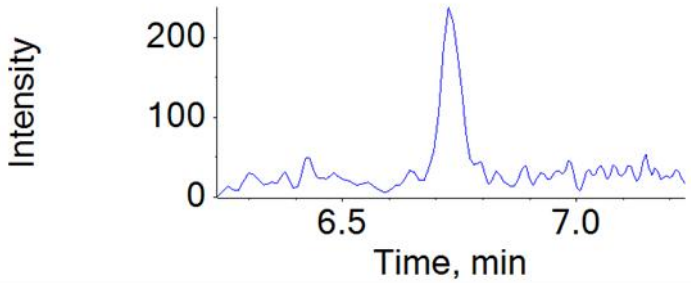
Component: PFTeDA
Primary Mass: 713.0 / 669.0



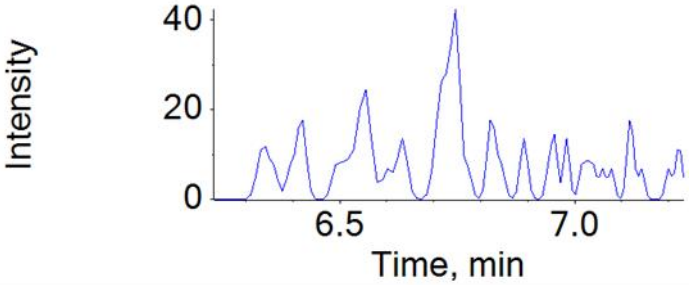
Component: PFTeDA_2
Secondary Mass: 713.0 / 169.0



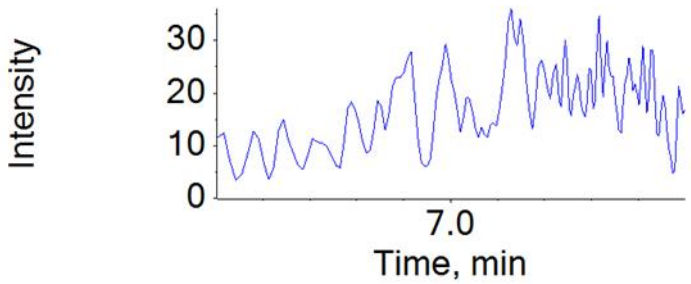
Component: PFHxDA
Primary Mass: 813.0 / 769.0



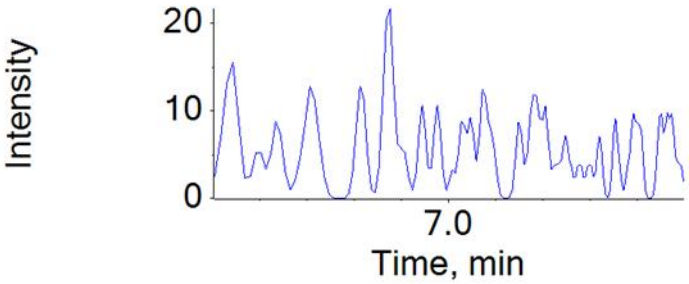
Component: PFHxDA_2
Secondary Mass: 813.0 / 169.0



Component: PFODA
Primary Mass: 913.0 / 869.0



Component: PFODA_2
Secondary Mass: 913.0 / 169.0



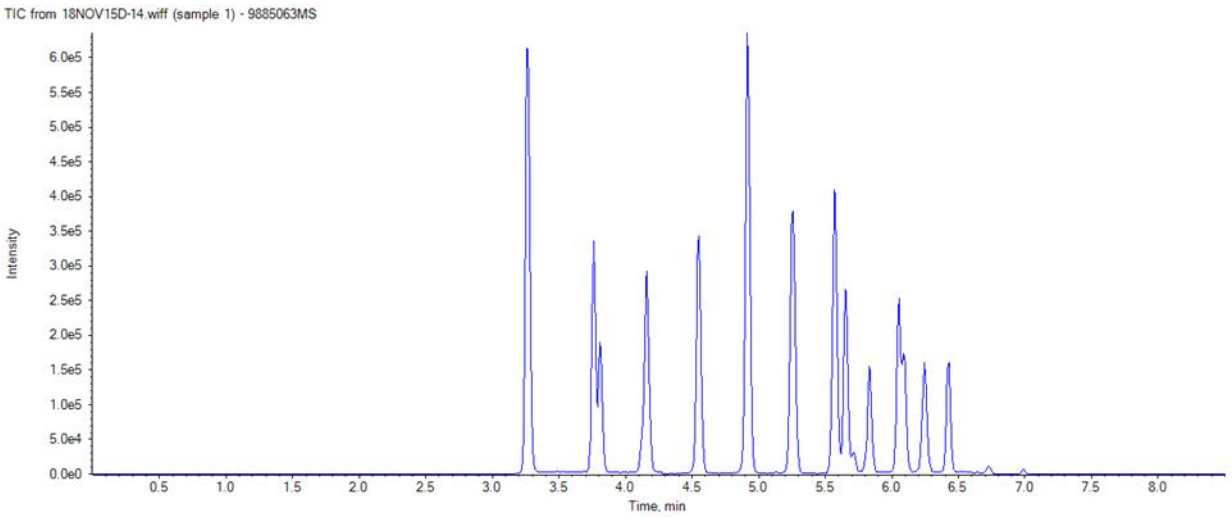
APPROVED
By JPT at 10:38 am, 11/19/18

REVIEWED
By HMK at 11:46 am, 11/19/18

Matrix Spike Recovery

ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM
Result Table: 18319003 11/16/2018 11:16:11 AM
Acquisition Method: 18AUG13_3uL.dam

Instrument Name:	Sample Name:	Sample ID:	Sample File:	Acquisition Date:
LM27631	9885063MS	EPA 537 mod QSM 5.1 table B-15 18319003 OU1-GCI-S-01-01 MS Grab Soil	18NOV15D-14.wiff	2018-11-15T14:00:26



Injection Standard Area Reference File**:** 18NOV15D-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	742485.8	732179.1	1	50	
13C2-PFOA	5.00	508702.2	479663.2	6	50	
13C4-PFOS	4.78	280488.6	269685.3	4	50	
13C2-PFDA	5.00	317476.3	302309.9	5	50	

APPROVED
By JPT at 3:31 pm, 11/16/18

REVIEWED
By HMK at 9:04 am, 11/19/18

Matrix Spike Recovery

ICAL Name: 18NOV12DCAL **Result Table:** 18319003 11/16/2018 11:16:11 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Instrument Name:	Sample Name:	Sample ID:	Sample File:	Acquisition Date:
LM27631	9885063MS	EPA 537 mod QSM 5.1 table B-15 18319003 OU1-GCI-S-01-01 MS Grab Soil	18NOV15D-14.wiff	2018-11-15T14:00:26

Analyte Name	Analyte Area	Ext Std Area	Area Ratio	Adj Actual Conc	Sample Result	%REC	% REC Limit	%REC OOS
PFBS	44546.0	327294.2	0.136	1.136	1.222	108	70-130	
PFHxA	96621.2	515571.8	0.187	1.283	1.476	115	70-130	
PFHpA	98125.5	413415.9	0.237	1.283	1.484	116	70-130	
PFHxS	39852.2	253555.4	0.157	1.213	1.438	119	70-130	
PFOA	126687.4	717049.0	0.177	1.283	1.780	139	70-130	OOS
PFOS	43296.8	227612.0	0.190	1.226	1.570	128	70-130	
PFNA	79770.6	386332.5	0.206	1.283	1.405	109	70-130	
PFDA	66759.4	494194.5	0.135	1.283	1.351	105	70-130	
NMeFOSAA	6120.3	60442.6	0.101	1.283	1.080	84	70-130	
PFUnDA	56526.9	210041.4	0.269	1.283	1.327	103	70-130	
NEtFOSAA	5949.2	41644.2	0.143	1.283	1.413	110	70-130	
PFDoDA	55906.2	441908.9	0.127	1.283	1.215	95	70-130	
PFTrDA	46624.6	441908.9	0.106	1.283	1.256	98	70-130	
PFTeDA	39790.1	313040.4	0.127	1.283	1.344	105	70-130	

APPROVED
By JPT at 3:31 pm, 11/16/18

REVIEWED
By HMK at 9:04 am, 11/19/18

Matrix Spike Recovery

ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM
Result Table: 18319003 11/16/2018 11:16:11 AM
Acquisition Method: 18AUG13_3uL.dam

APPROVED
By JPT at 3:31 pm, 11/16/18

REVIEWED
By HMK at 9:04 am, 11/19/18

ICAL Name: 18NOV12DCAL **Result Table:** 18319003 11/16/2018 11:16:11 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Sample Name:	9885063MS			**Data File:**		18NOV15D-14.wiff
Sample ID:	EPA 537 mod QSM 5.1 table B-15 18319003 OU1-GCI-S-01-01 MS Grab Soil			**Acquis Date:**		2018-11-15T14:00:26
Sample Type:	Quality Control			**Instrument:**		LM27631
Vial Position:	32			**Acquis Method:**		18AUG13_3uL.dam
Injection Vol:	3.00			**Result Table:**		18319003
QMethod File:	18AUG20QM			**ICAL Name:**		18NOV12DCAL
Batch Number:	18319003			**Operator:**		JPT12262
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: 18NOV15D-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	742485.8	732179.1	1	50	
13C2-PFOA	5.0	508702.2	479663.2	6	50	
13C4-PFOS	4.8	280488.6	269685.3	4	50	
13C2-PFDA	5.0	317476.3	302309.9	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
E13C3-PFBS	327294.2	13C3-PFBA	742485.8	0.441	8.774	5.871	67	50-150	
E13C5-PFHxA	515571.8	13C2-PFOA	508702.2	1.014	9.434	6.908	73	50-150	
E13C3-PFHxS	253555.4	13C2-PFOA	508702.2	0.498	8.925	6.453	72	50-150	
E13C4-PFHpA	413415.9	13C2-PFOA	508702.2	0.813	9.434	6.908	73	50-150	
E13C8-PFOA	717049.0	13C2-PFOA	508702.2	1.410	9.434	7.327	78	50-150	
E13C8-PFOS	227612.0	13C4-PFOS	280488.6	0.811	9.019	6.784	75	50-150	
E13C9-PFNA	386332.5	13C4-PFOS	280488.6	1.377	9.434	7.246	77	50-150	
E13C6-PFDA	494194.5	13C2-PFDA	317476.3	1.557	9.434	6.854	73	50-150	
Ed3-NMeFOSAA	60442.6	13C2-PFDA	317476.3	0.190	9.434	6.484	69	50-150	
E13C7-PFUnDA	210041.4	13C2-PFDA	317476.3	0.662	9.434	7.248	77	50-150	
Ed5-NEtFOSAA	41644.2	13C2-PFDA	317476.3	0.131	9.434	5.236	56	50-150	
E13C2-PFDoDA	441908.9	13C2-PFDA	317476.3	1.392	9.434	6.819	72	50-150	
E13C2-PFTeDA	313040.4	13C2-PFDA	317476.3	0.986	9.434	6.531	69	50-150	

APPROVED
By JPT at 3:31 pm, 11/16/18

REVIEWED
By HMK at 9:04 am, 11/19/18

ICAL Name: 18NOV12DCAL **Result Table:** 18319003 11/16/2018 11:16:11 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

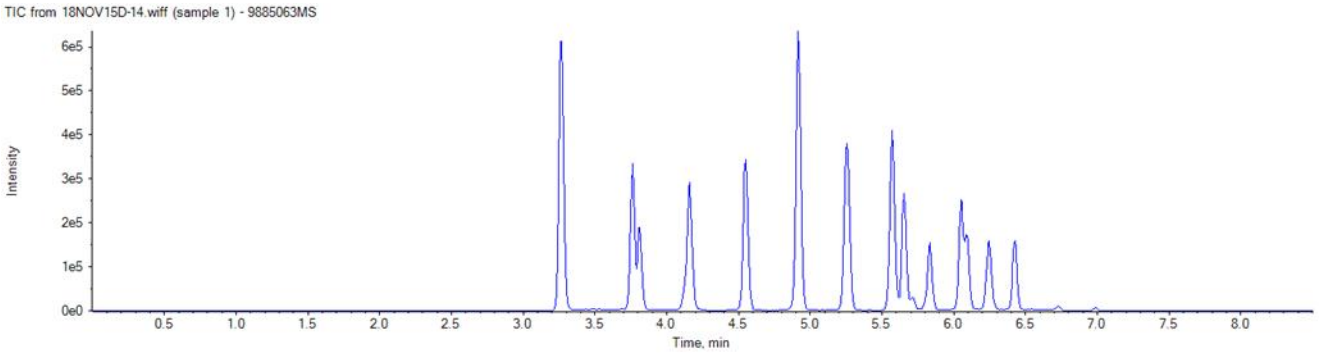
Analyte Quantitation Peak Table

Sample Name: 9885063MS **Instrument Name:** LM27631 **File Name:** 18NOV15D-14.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	3.81	1.000	44546.0		A	13C3-PFBS	3.81	327294.2	0.136	1.222
PFHxA	4.16	1.000	96621.2		A	13C5-PFHxA	4.16	515571.8	0.187	1.476
PFHpA	4.55	1.000	98125.5		M	13C4-PFHpA	4.55	413415.9	0.237	1.484
PFHxS	4.55	1.000	39852.2		A	13C3-PFHxS	4.55	253555.4	0.157	1.438
PFOA	4.92	1.000	126687.4		A	13C8-PFOA	4.92	717049.0	0.177	1.780
PFOS	5.25	1.000	43296.8		M	13C8-PFOS	5.25	227612.0	0.190	1.570
PFNA	5.26	1.000	79770.6		A	13C9-PFNA	5.26	386332.5	0.206	1.405
PFDA	5.57	1.000	66759.4		M	13C6-PFDA	5.57	494194.5	0.135	1.351
NMeFOSAA	5.71	1.000	6120.3		A	d3-NMeFOSAA	5.71	60442.6	0.101	1.080
PFUnDA	5.83	1.000	56526.9		M	13C7-PFUnDA	5.83	210041.4	0.269	1.327
NEtFOSAA	5.85	1.000	5949.2		A	d5-NEtFOSAA	5.84	41644.2	0.143	1.413
PFDoDA	6.05	1.000	55906.2		A	13C2-PFDoDA	6.05	441908.9	0.127	1.215
PFTrDA	6.25	1.030	46624.6		M	13C2-PFDoDA	6.05	441908.9	0.106	1.256
PFTeDA	6.43	1.000	39790.1		A	13C2-PFTeDA	6.42	313040.4	0.127	1.344

Total Ion Chromatogram

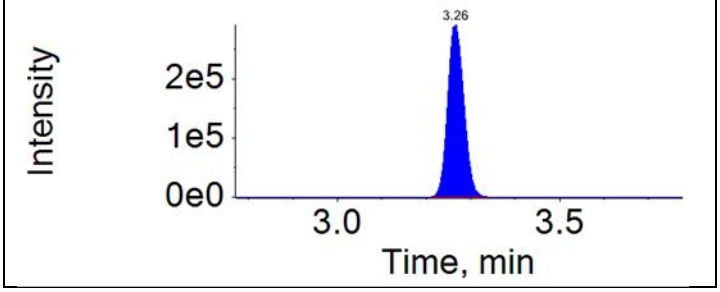


APPROVED
By JPT at 3:31 pm, 11/16/18

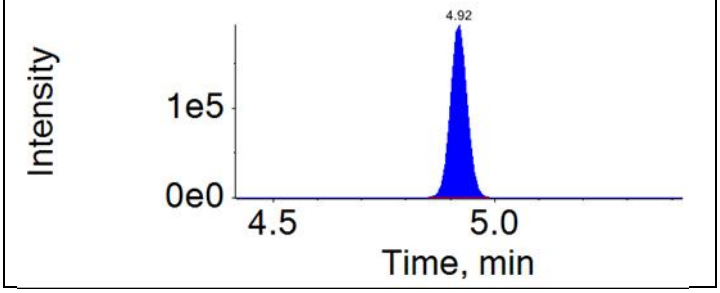
REVIEWED
By HMK at 9:04 am, 11/19/18

ICAL Name: 18NOV12DCAL **Result Table:** 18319003 11/16/2018 11:16:11 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

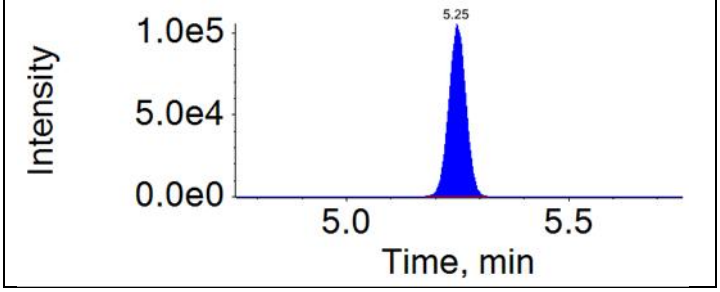
Injection Standard: 13C3-PFBA
216.0 / 172.0



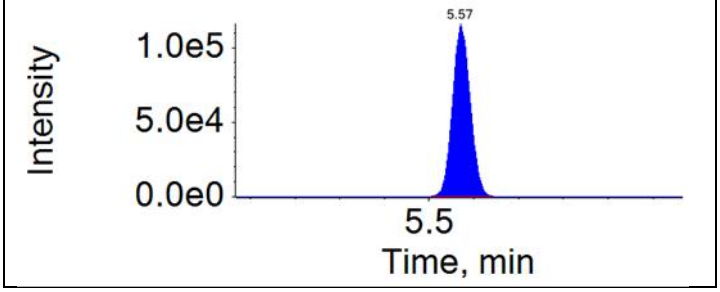
Injection Standard: 13C2-PFOA
415.0 / 370.0



Injection Standard: 13C4-PFOS
503.0 / 80.0



Injection Standard: 13C2-PFDA
515.0 / 470.0

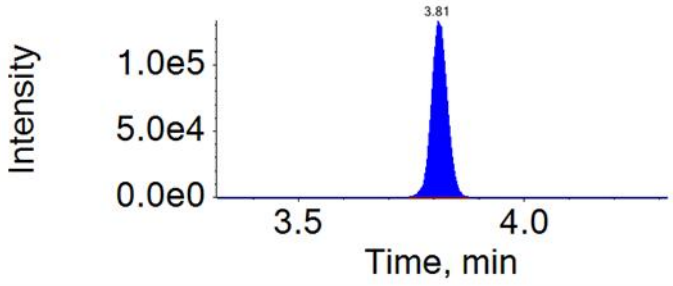


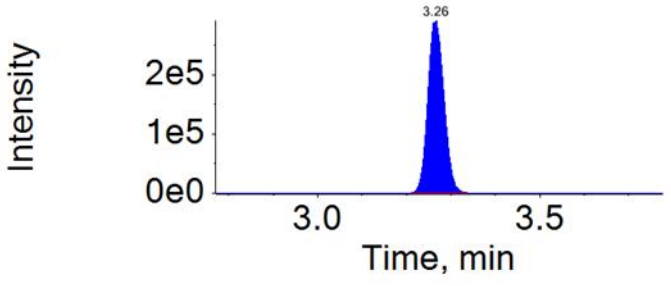
APPROVED
By JPT at 3:31 pm, 11/16/18

REVIEWED
By HMK at 9:04 am, 11/19/18

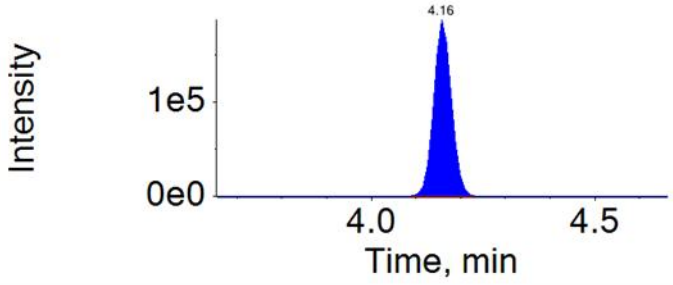
ICAL Name: 18NOV12DCAL **Result Table:** 18319003 11/16/2018 11:16:11 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

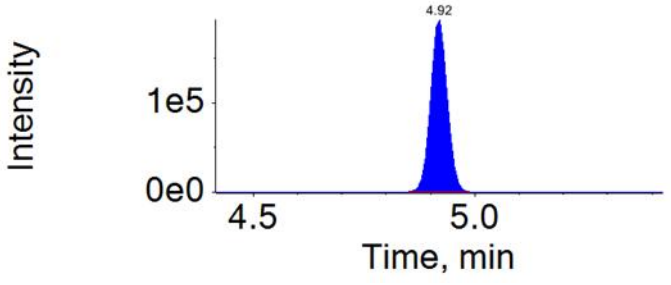
Extraction Standard: E13C3-PFBS	Injection Standard: 13C3-PFBA
302.0 / 80.0	216.0 / 172.0



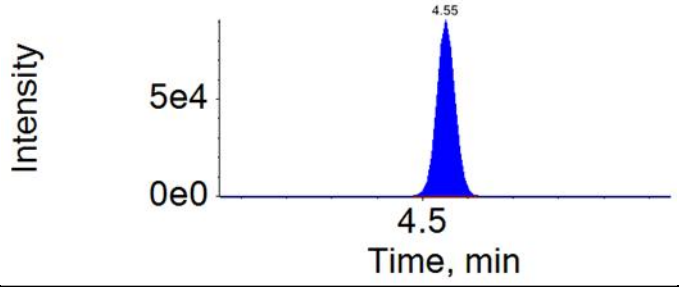


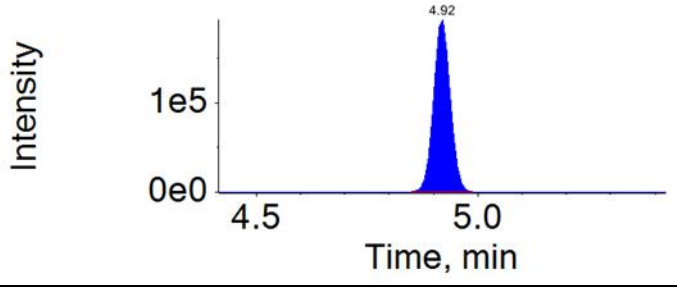
Extraction Standard: E13C5-PFHxA	Injection Standard: 13C2-PFOA
318.0 / 273.0	415.0 / 370.0



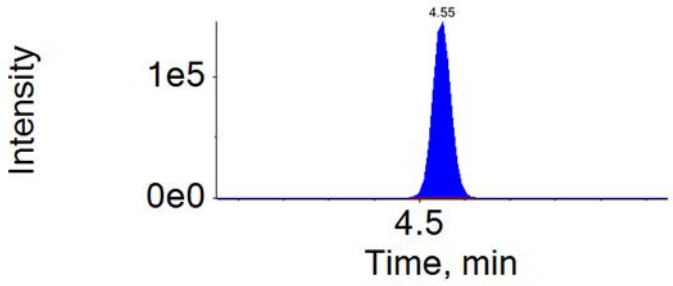


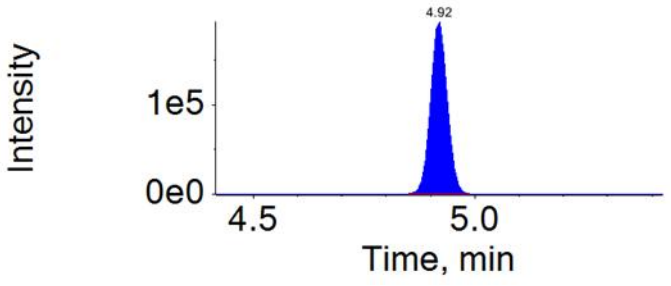
Extraction Standard: E13C3-PFHxS	Injection Standard: 13C2-PFOA
402.0 / 80.0	415.0 / 370.0





Extraction Standard: E13C4-PFHpA	Injection Standard: 13C2-PFOA
367.0 / 322.0	415.0 / 370.0

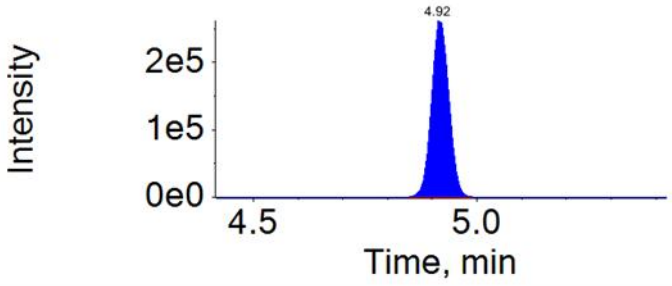
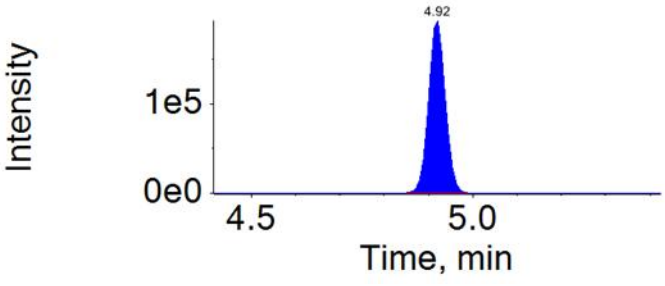


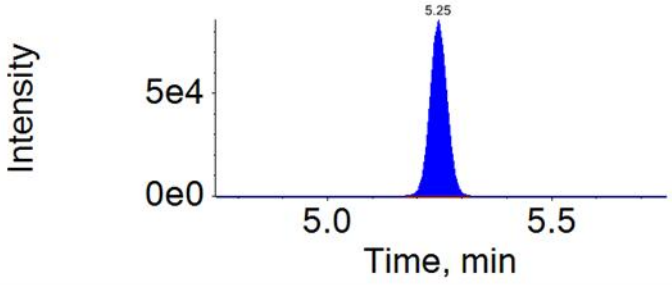
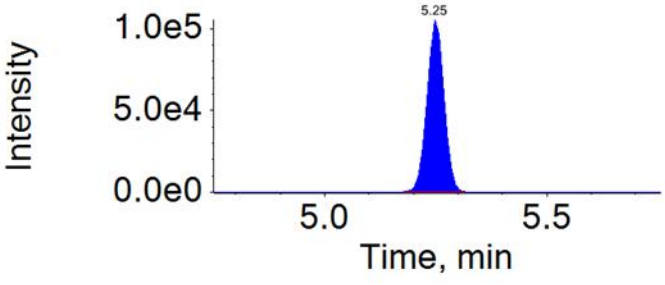


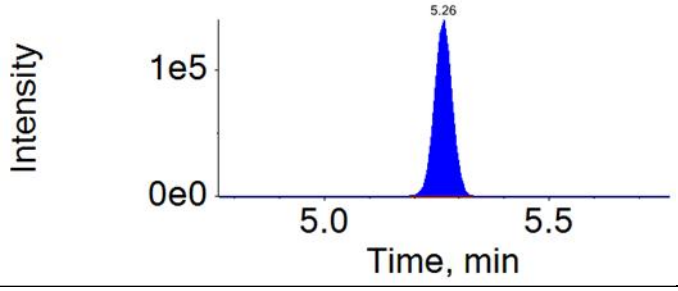
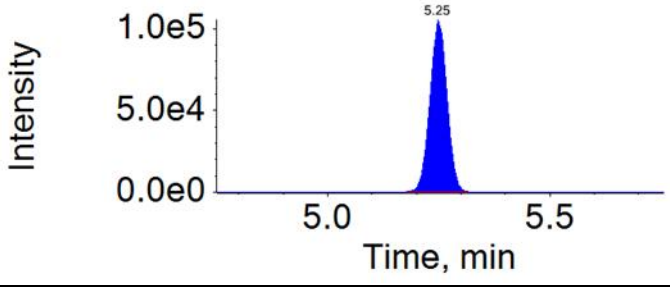
APPROVED
By JPT at 3:31 pm, 11/16/18

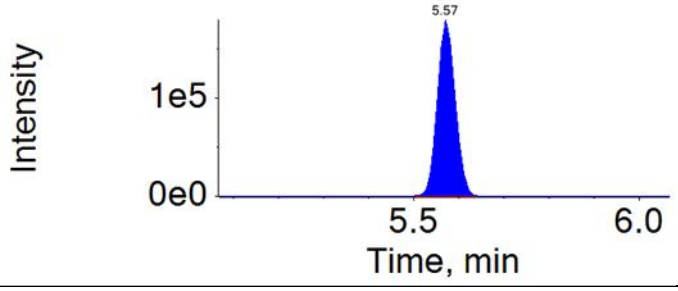
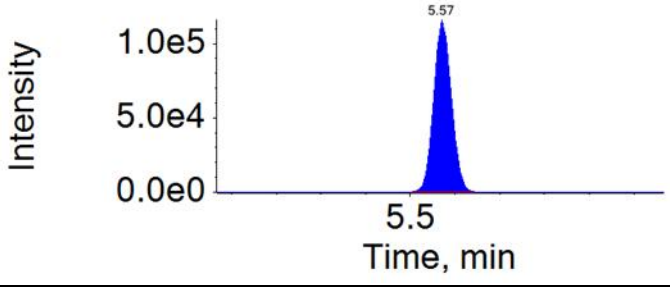
REVIEWED
By HMK at 9:04 am, 11/19/18

ICAL Name: 18NOV12DCAL **Result Table:** 18319003 11/16/2018 11:16:11 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
	

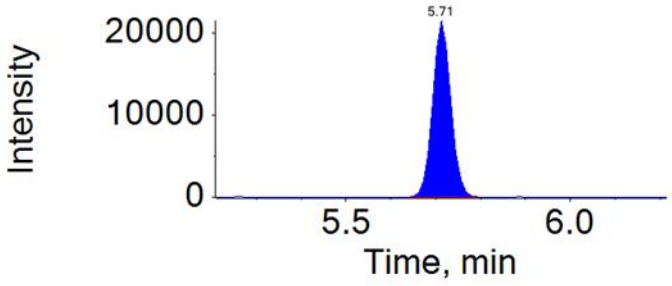
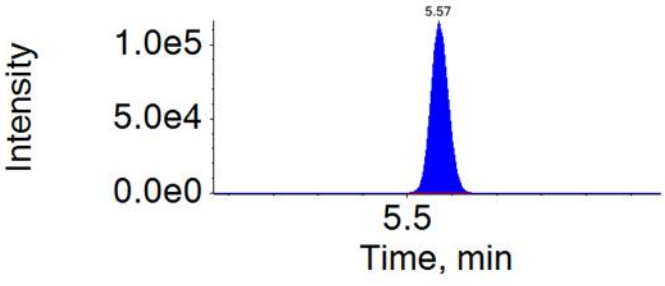
Extraction Standard: E13C9-PFNA	Injection Standard: 13C4-PFOS
472.0 / 427.0	503.0 / 80.0
	

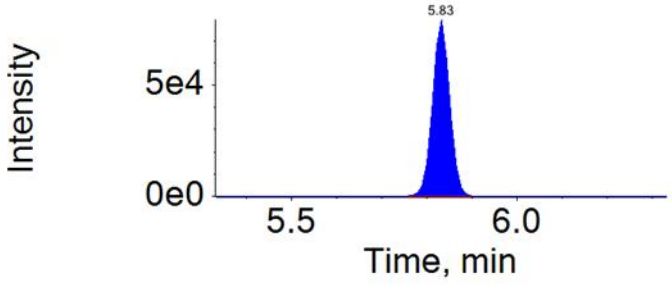
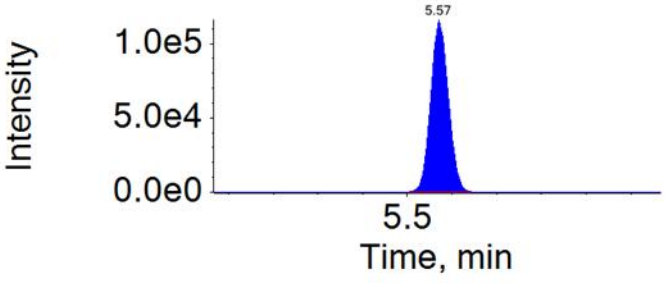
Extraction Standard: E13C6-PFDA	Injection Standard: 13C2-PFDA
519.0 / 474.0	515.0 / 470.0
	

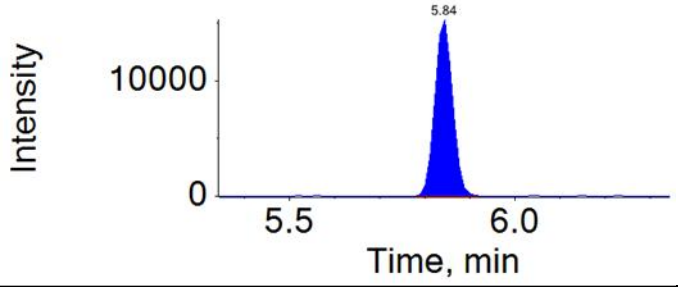
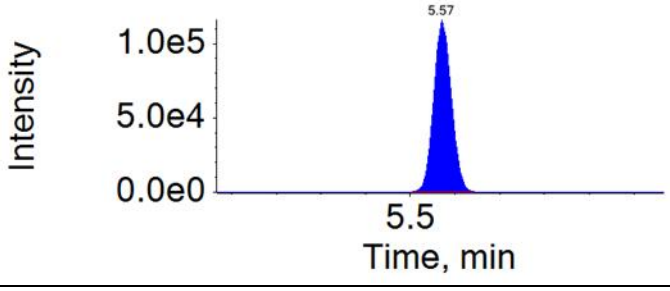
APPROVED
By JPT at 3:31 pm, 11/16/18

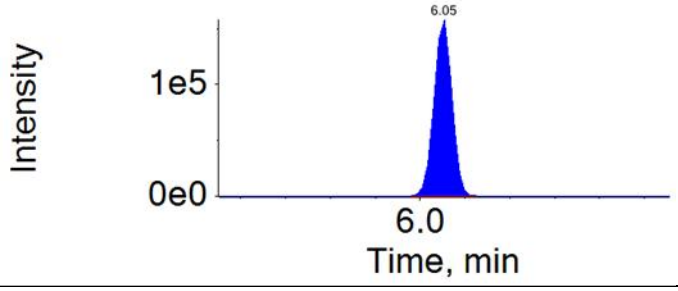
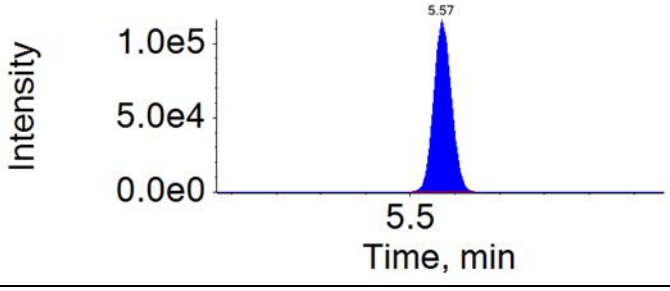
REVIEWED
By HMK at 9:04 am, 11/19/18

ICAL Name: 18NOV12DCAL **Result Table:** 18319003 11/16/2018 11:16:11 AM
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
	

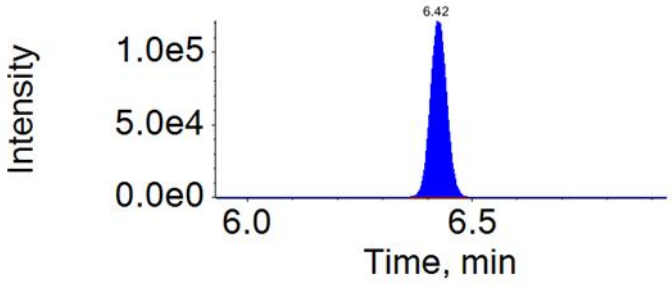
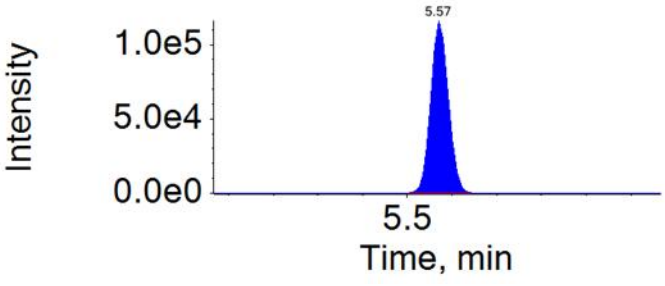
Extraction Standard: Ed5-NEtFOSAA	Injection Standard: 13C2-PFDA
589.0 / 419.0	515.0 / 470.0
	

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

APPROVED
By JPT at 3:31 pm, 11/16/18

REVIEWED
By HMK at 9:04 am, 11/19/18

ICAL Name: 18NOV12DCAL **Result Table:** 18319003 11/16/2018 11:16:11 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

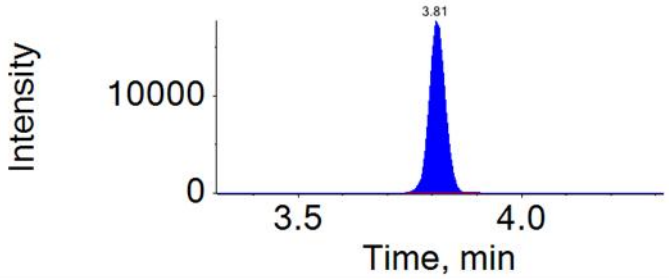
Extraction Standard: E13C2-PFTeDA	Injection Standard: 13C2-PFDA
715.0 / 670.0	515.0 / 470.0
	

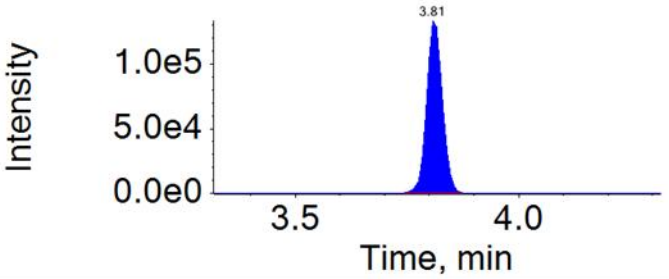
APPROVED
By JPT at 3:31 pm, 11/16/18

REVIEWED
By HMK at 9:04 am, 11/19/18

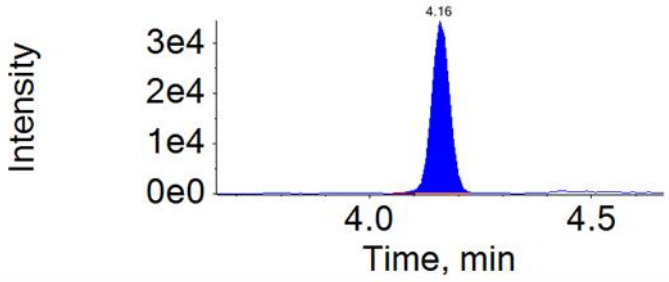
ICAL Name: 18NOV12DCAL **Result Table:** 18319003 11/16/2018 11:16:11 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

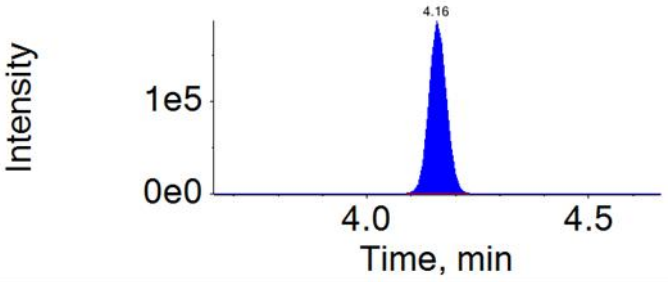
Analyte: PFBS	Extraction Standard: 13C3-PFBS
299.0 / 80.0	302.0 / 80.0



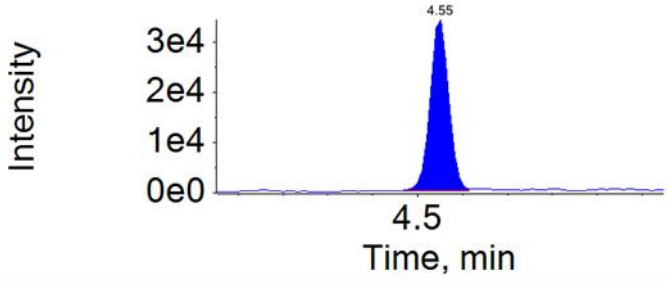


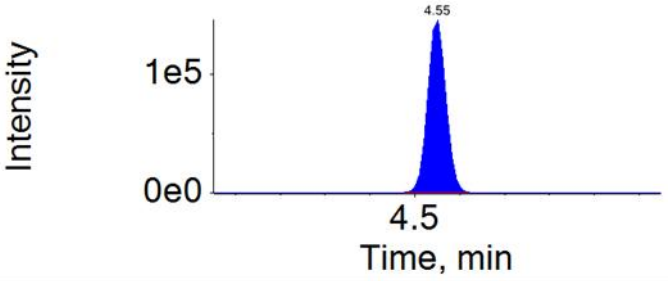
Analyte: PFHxA	Extraction Standard: 13C5-PFHxA
313.0 / 269.0	318.0 / 273.0



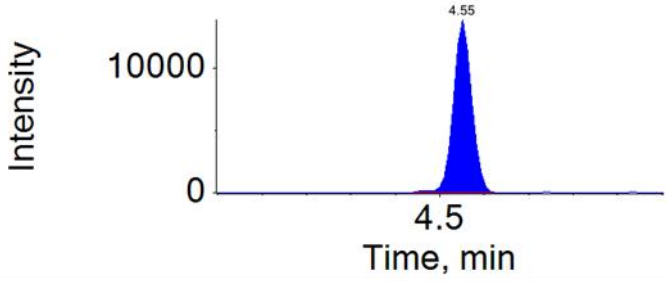


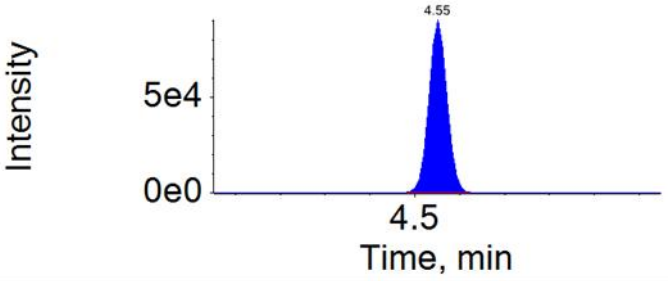
Analyte: PFHpA	Extraction Standard: 13C4-PFHpA
363.0 / 319.0	367.0 / 322.0





Analyte: PFHxS	Extraction Standard: 13C3-PFHxS
399.0 / 80.0	402.0 / 80.0



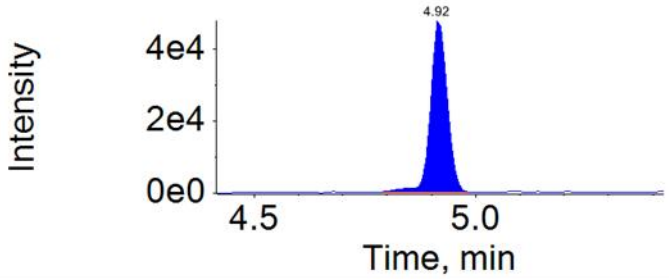


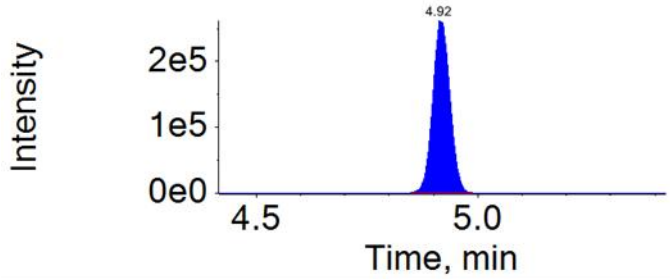
APPROVED
By JPT at 3:31 pm, 11/16/18

REVIEWED
By HMK at 9:04 am, 11/19/18

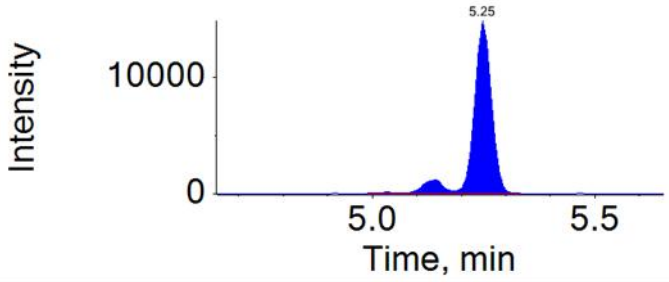
ICAL Name: 18NOV12DCAL **Result Table:** 18319003 11/16/2018 11:16:11 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

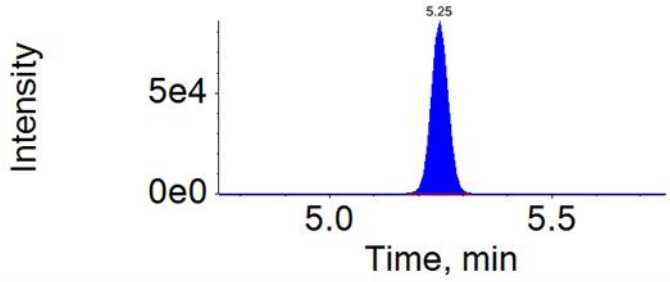
Analyte: PFOA	Extraction Standard: 13C8-PFOA
413.0 / 369.0	421.0 / 376.0



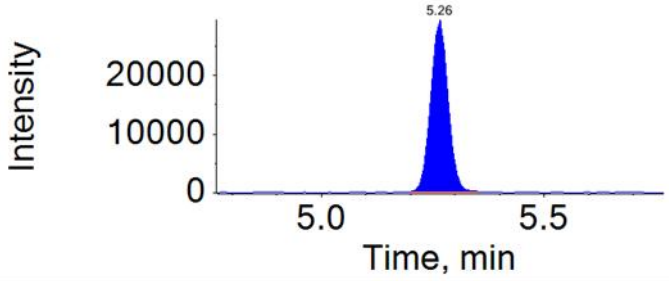


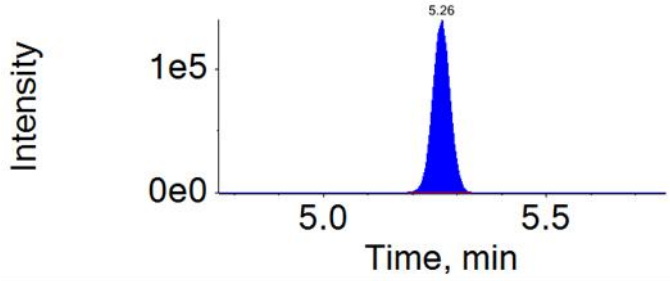
Analyte: PFOS	Extraction Standard: 13C8-PFOS
499.0 / 80.0	507.0 / 80.0



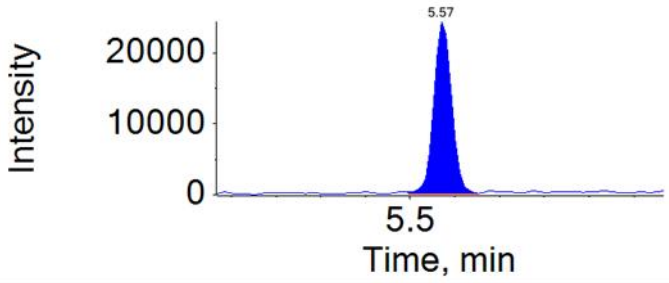


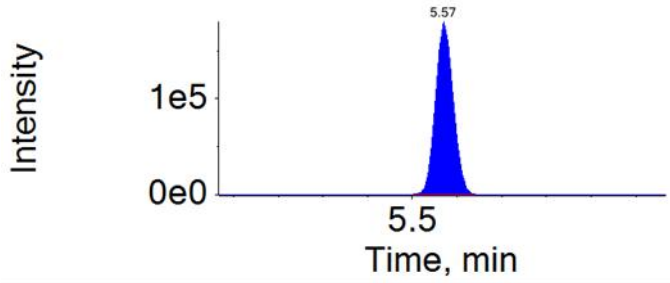
Analyte: PFNA	Extraction Standard: 13C9-PFNA
463.0 / 419.0	472.0 / 427.0





Analyte: PFDA	Extraction Standard: 13C6-PFDA
513.0 / 469.0	519.0 / 474.0



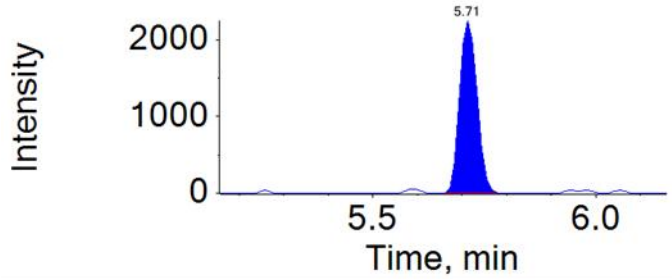


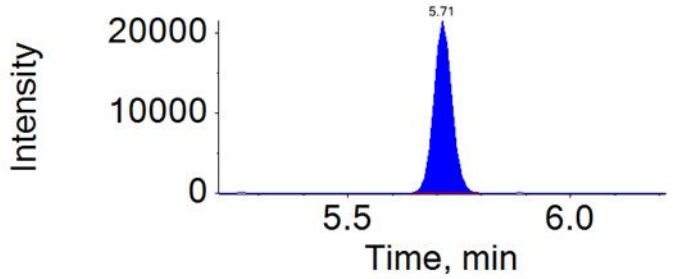
APPROVED
By JPT at 3:31 pm, 11/16/18

REVIEWED
By HMK at 9:04 am, 11/19/18

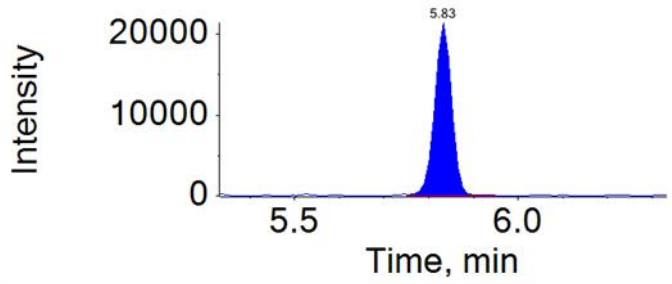
ICAL Name: 18NOV12DCAL **Result Table:** 18319003 11/16/2018 11:16:11 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

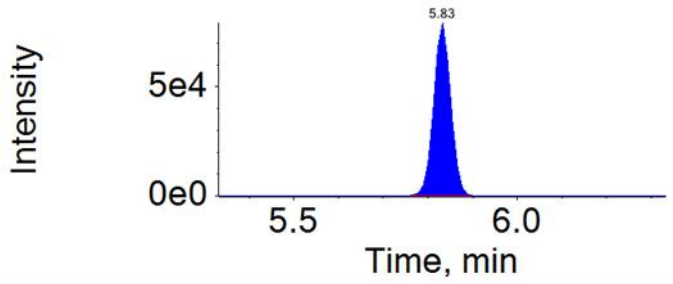
Analyte: NMeFOSAA	Extraction Standard: d3-NMeFOSAA
570.0 / 419.0	573.0 / 419.0



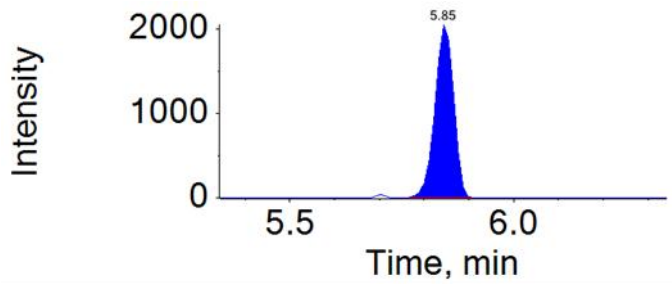


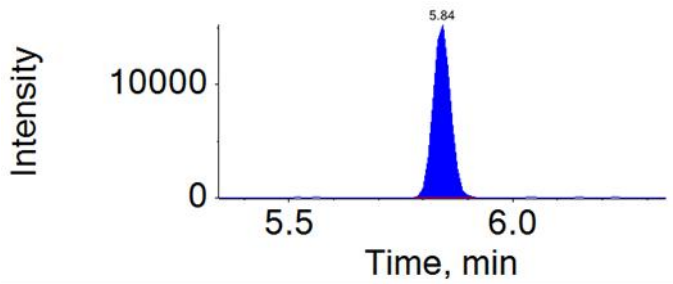
Analyte: PFUnDA	Extraction Standard: 13C7-PFUnDA
563.0 / 519.0	570.0 / 525.0



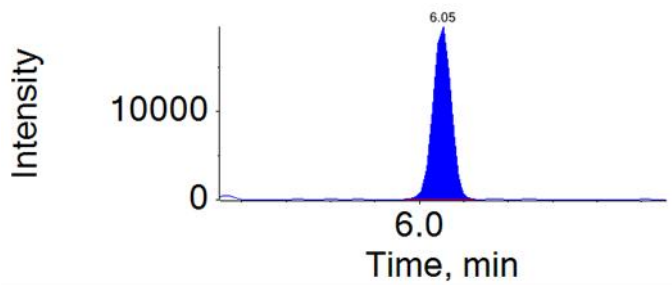


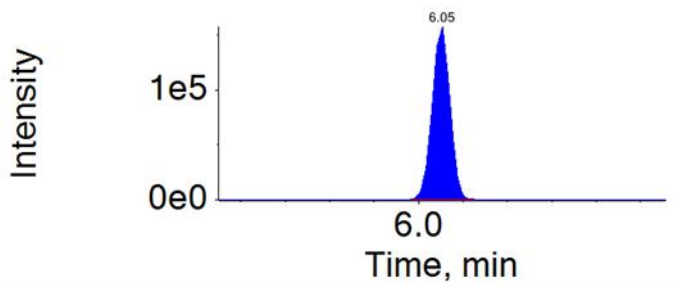
Analyte: NEtFOSAA	Extraction Standard: d5-NEtFOSAA
584.0 / 419.0	589.0 / 419.0





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



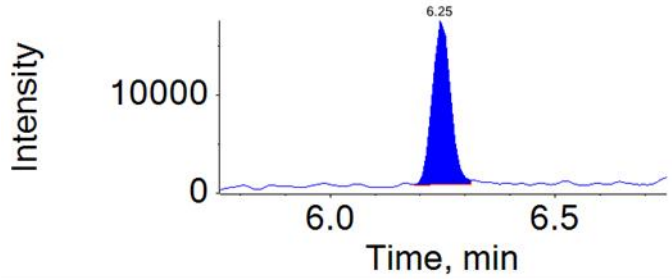


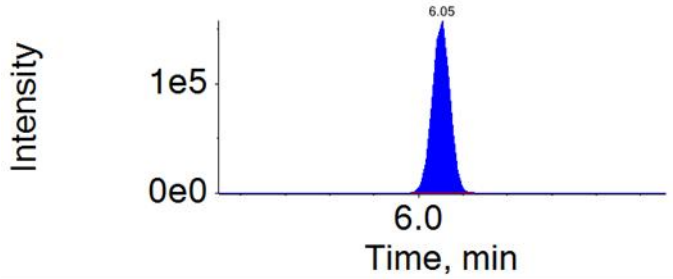
APPROVED
By JPT at 3:31 pm, 11/16/18

REVIEWED
By HMK at 9:04 am, 11/19/18

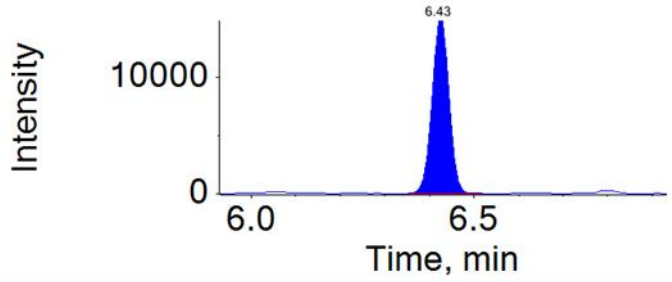
ICAL Name: 18NOV12DCAL **Result Table:** 18319003 11/16/2018 11:16:11 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

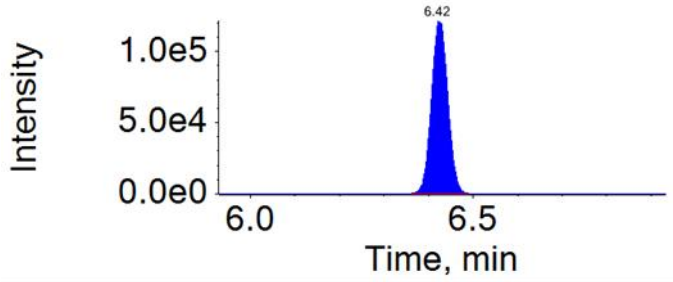
Analyte: PFTrDA	Extraction Standard: 13C2-PFDoDA
663.0 / 619.0	615.0 / 570.0





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



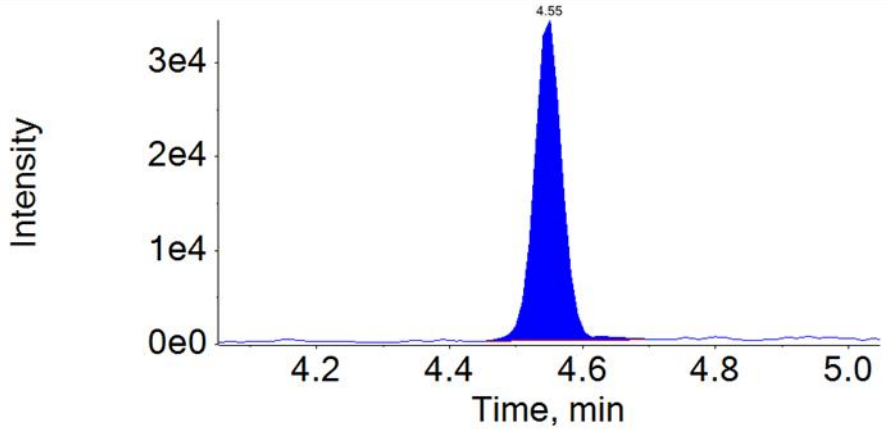


APPROVED
By JPT at 3:31 pm, 11/16/18

REVIEWED
By HMK at 9:04 am, 11/19/18

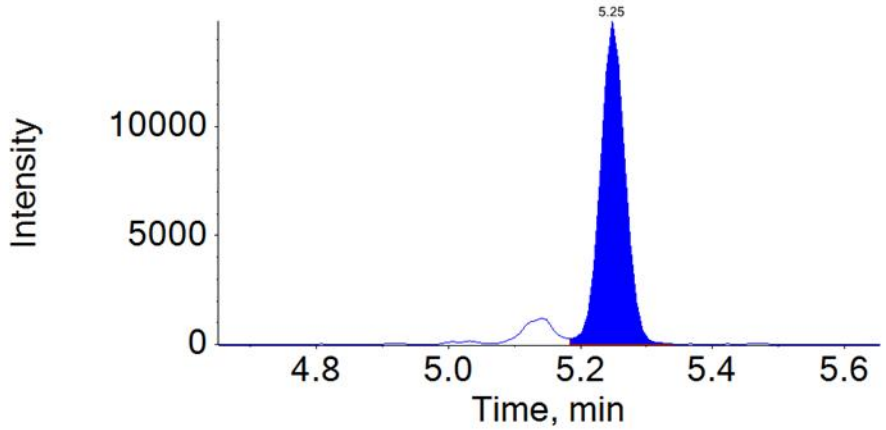
Results Table Name: 18319003
Results Table Date: 11/16/2018 3:25:03 PM
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

Component Name: PFHpA
RT (min.): 4.55
Peak Area: 99243.6
Mass Range: 363.0 / 319.0
File Name: 18NOV15D-14.wiff
Sample Name: 9885063MS



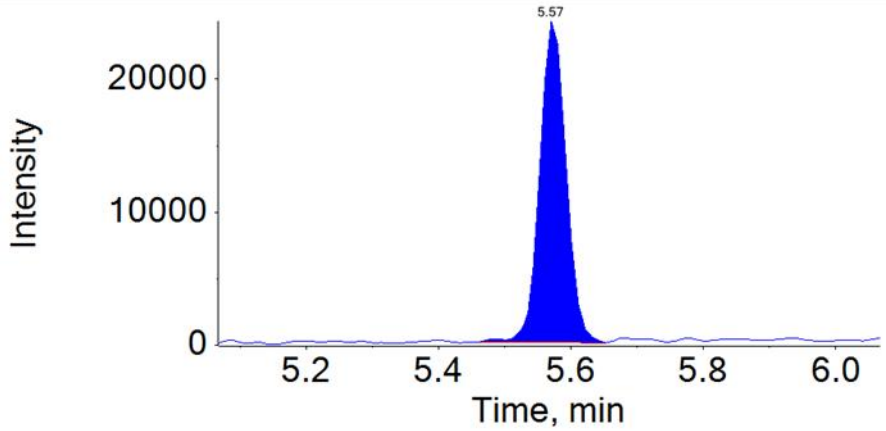
Integration Comment: incorrect integration

Component Name: PFOS
RT (min.): 5.25
Peak Area: 38626.2
Mass Range: 499.0 / 80.0
File Name: 18NOV15D-14.wiff
Sample Name: 9885063MS



Integration Comment: incorrect integration

Component Name: PFDA
RT (min.): 5.57
Peak Area: 67132.8
Mass Range: 513.0 / 469.0
File Name: 18NOV15D-14.wiff
Sample Name: 9885063MS



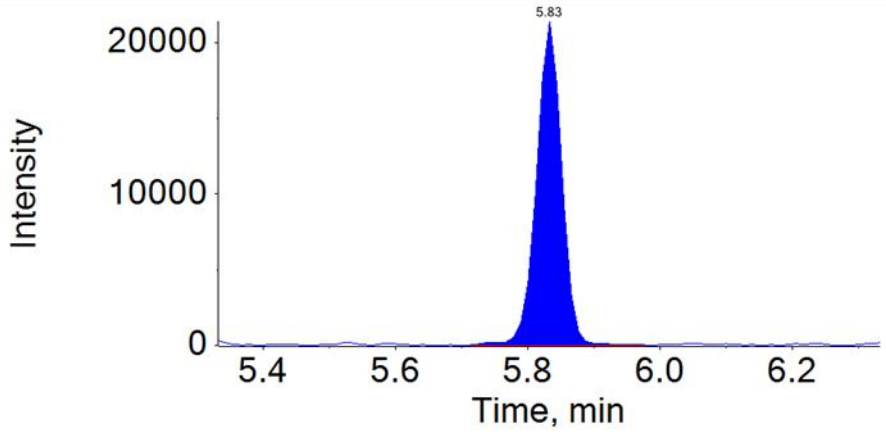
Integration Comment: incorrect integration

APPROVED
By JPT at 3:31 pm, 11/16/18

REVIEWED
By HMK at 9:04 am, 11/19/18

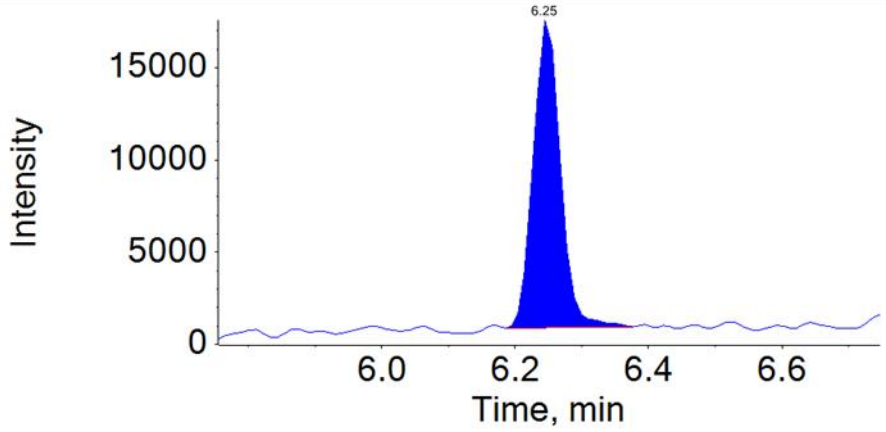
Results Table Name: 18319003
Results Table Date: 11/16/2018 3:25:03 PM
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

Component Name:
PFUnDA
RT (min.):
5.83
Peak Area:
56764.1
Mass Range:
563.0 / 519.0
File Name:
18NOV15D-14.wiff
Sample Name:
9885063MS



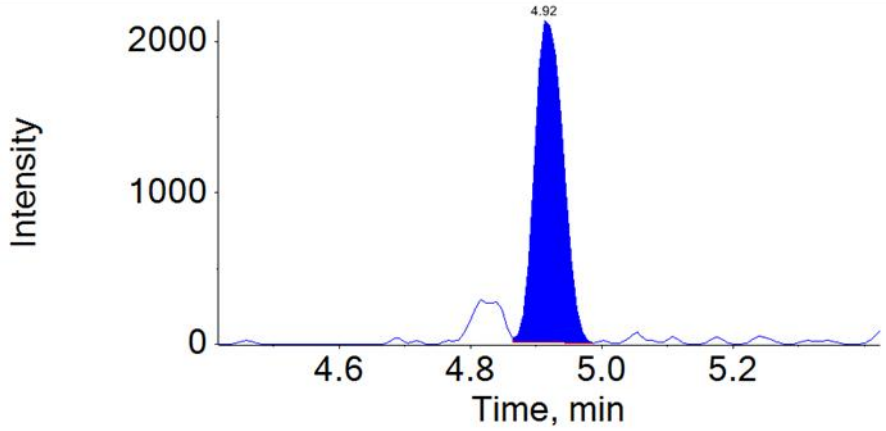
Integration Comment: incorrect integration

Component Name:
PFTrDA
RT (min.):
6.25
Peak Area:
47315.4
Mass Range:
663.0 / 619.0
File Name:
18NOV15D-14.wiff
Sample Name:
9885063MS



Integration Comment: incorrect integration

Component Name:
PFOA_2
RT (min.):
4.92
Peak Area:
6442.9
Mass Range:
413.0 / 169.0
File Name:
18NOV15D-14.wiff
Sample Name:
9885063MS



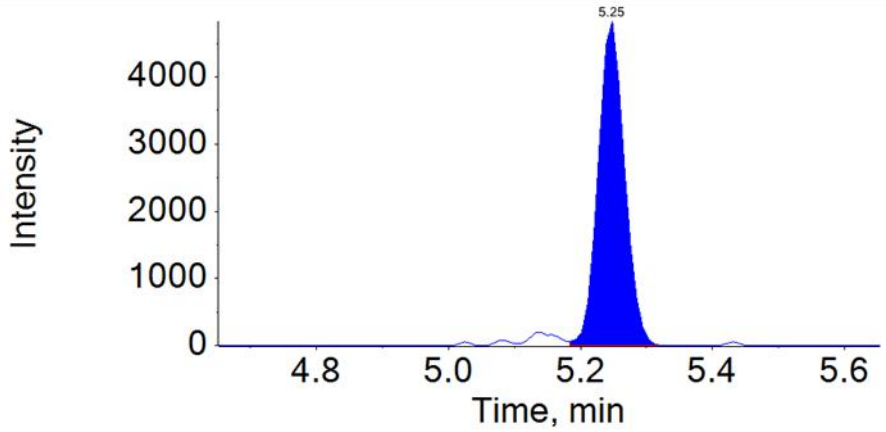
Integration Comment: incorrect integration

APPROVED
By JPT at 3:31 pm, 11/16/18

REVIEWED
By HMK at 9:04 am, 11/19/18

Results Table Name: 18319003
Results Table Date: 11/16/2018 3:25:03 PM
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

Component Name:
PFOS_2
RT (min.):
5.25
Peak Area:
13444.7
Mass Range:
499.0 / 99.0
File Name:
18NOV15D-14.wiff
Sample Name:
9885063MS



Integration Comment: incorrect integration

APPROVED
By JPT at 3:31 pm, 11/16/18

REVIEWED
By HMK at 9:04 am, 11/19/18

Results Table Name: 18319003
Results Table Date: 11/16/2018 3:25:03 PM

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

APPROVED
By JPT at 3:31 pm, 11/16/18

REVIEWED
By HMK at 9:04 am, 11/19/18

Ion Ratio Report

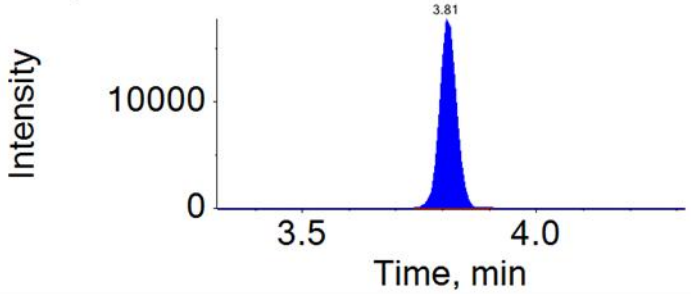
Sample Name: 9885063MS **Instrument Name:** LM27631 **File Name:** 18NOV15D-14.wiff

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	44546.0	A	N/A	1.0000			
PFBS_2	3.81	1.00	16354.4	A	N/A	0.3671	1	50	
PFHxA	4.16	1.00	96621.2	A	N/A	1.0000			
PFHxA_2	4.16	1.00	1372.6	A	N/A	0.0142	21	50	
PFHpA	4.55	1.00	98125.5	M	N/A	1.0000			
PFHpA_2	4.55	1.00	5770.7	A	N/A	0.0588	4	50	
PFHxS	4.55	1.00	39852.2	A	N/A	1.0000			
PFHxS_2	4.55	1.00	15597.7	A	N/A	0.3914	14	50	
PFOA	4.92	1.00	126687.4	A	N/A	1.0000			
PFOA_2	4.92	1.00	7503.6	M	N/A	0.0592	4	50	
PFOS	5.25	1.00	43296.8	M	N/A	1.0000			
PFOS_2	5.25	1.00	14212.6	M	N/A	0.3283	11	50	
PFNA	5.26	1.00	79770.6	A	N/A	1.0000			
PFNA_2	5.27	1.00	1635.8	A	N/A	0.0205	-9	50	
PFDA	5.57	1.00	66759.4	M	N/A	1.0000			
PFDA_2	5.58	1.00	516.7	A	N/A	0.0077	-2	50	
NMeFOSAA	5.71	1.00	6120.3	A	N/A	1.0000			
NMeFOSAA_2	5.72	1.00	1386.9	A	N/A	0.2266	-12	50	
PFUnDA	5.83	1.00	56526.9	M	N/A	1.0000			
PFUnDA_2	5.83	1.00	454.8	A	N/A	0.0080	45	50	
NEtFOSAA	5.85	1.00	5949.2	A	N/A	1.0000			
NEtFOSAA_2	5.84	1.00	3427.9	A	N/A	0.5762	-20	50	
PFDoDA	6.05	1.00	55906.2	A	N/A	1.0000			
PFDoDA_2	6.05	1.00	980.1	A	N/A	0.0175	14	50	
PFTrDA	6.25	1.03	46624.6	M	N/A	1.0000			
PFTrDA_2	6.26	1.03	367.4	A	N/A	0.0079	-8	50	
PFTeDA	6.43	1.00	39790.1	A	N/A	1.0000			
PFTeDA_2	6.42	1.00	319.1	A	N/A	0.0080	29	50	

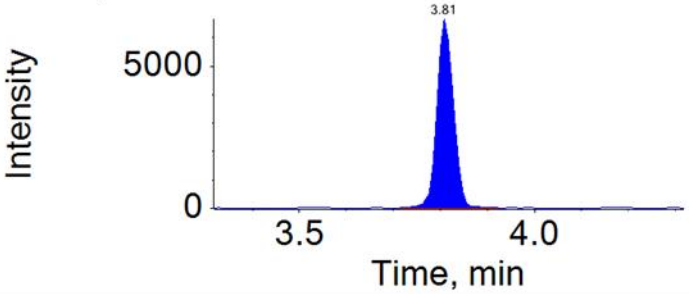
APPROVED
By JPT at 3:31 pm, 11/16/18

REVIEWED
By HMK at 9:04 am, 11/19/18

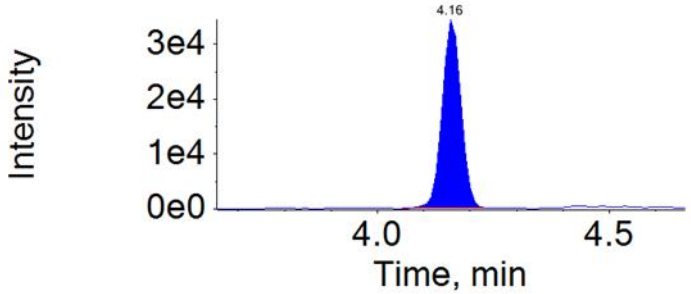
Component: PFBS
Primary Mass: 299.0 / 80.0



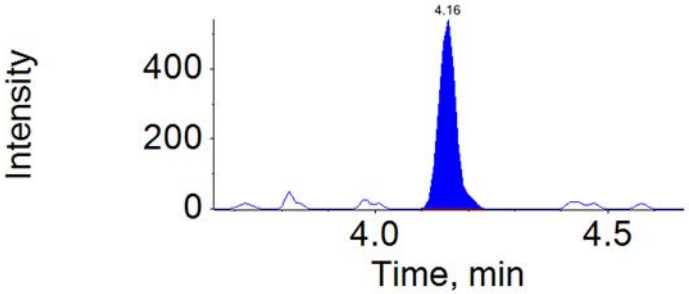
Component: PFBS_2
Secondary Mass: 299.0 / 99.0



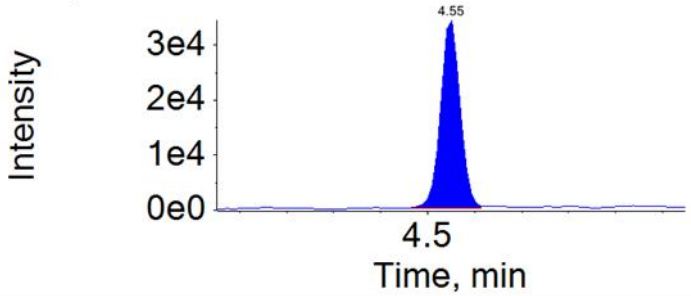
Component: PFHxA
Primary Mass: 313.0 / 269.0



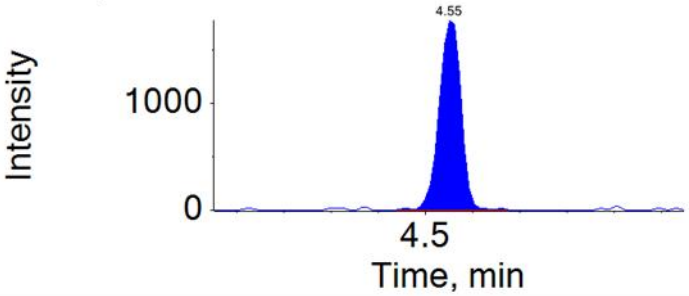
Component: PFHxA_2
Secondary Mass: 313.0 / 119.0



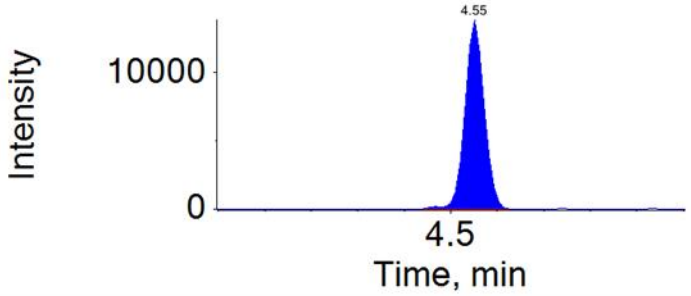
Component: PFHpA
Primary Mass: 363.0 / 319.0



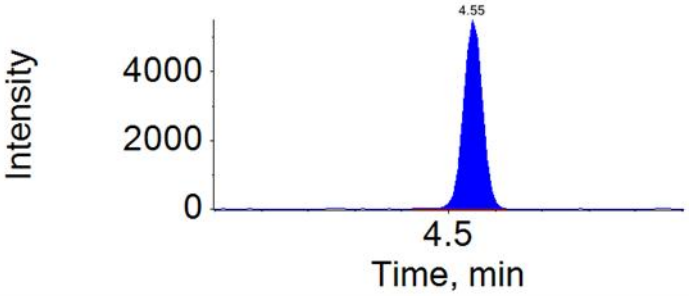
Component: PFHpA_2
Secondary Mass: 363.0 / 169.0



Component: PFHxS
Primary Mass: 399.0 / 80.0



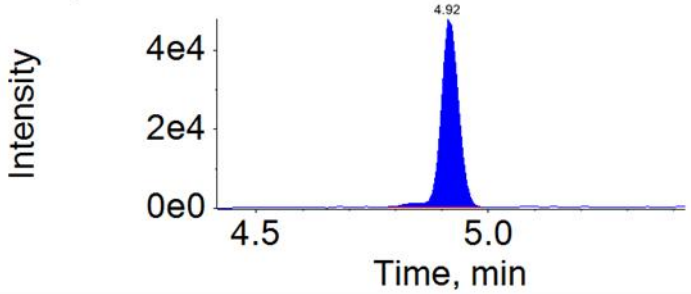
Component: PFHxS_2
Secondary Mass: 399.0 / 99.0



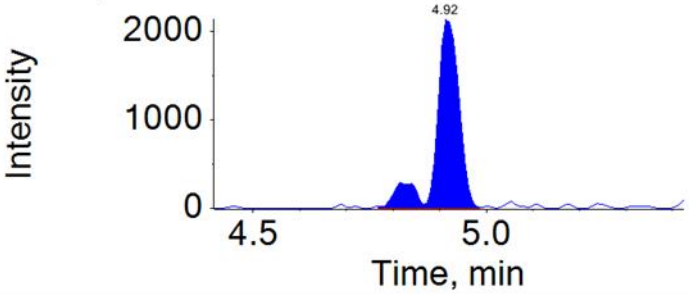
APPROVED
By JPT at 3:31 pm, 11/16/18

REVIEWED
By HMK at 9:04 am, 11/19/18

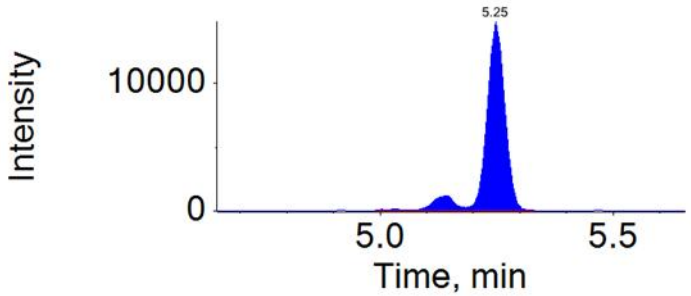
Component: PFOA
Primary Mass: 413.0 / 369.0



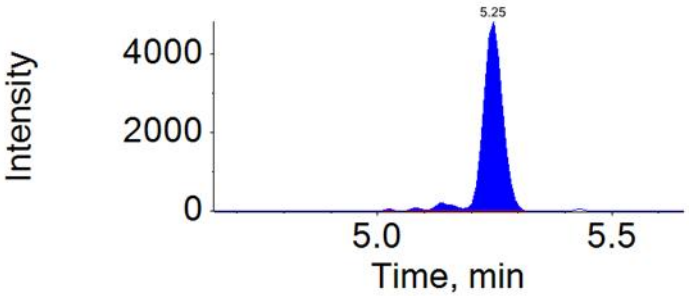
Component: PFOA_2
Secondary Mass: 413.0 / 169.0



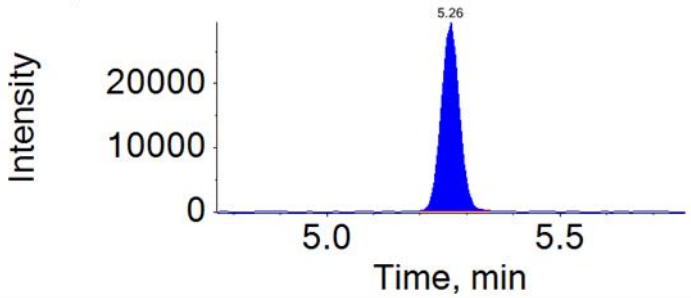
Component: PFOS
Primary Mass: 499.0 / 80.0



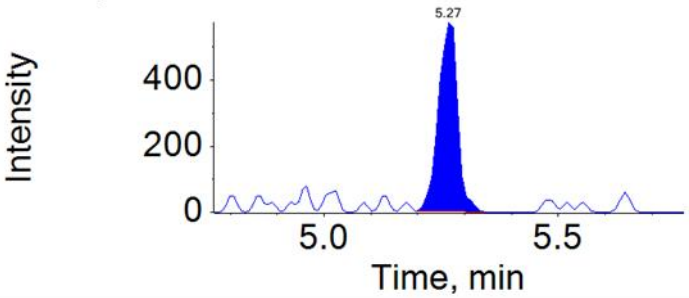
Component: PFOS_2
Secondary Mass: 499.0 / 99.0



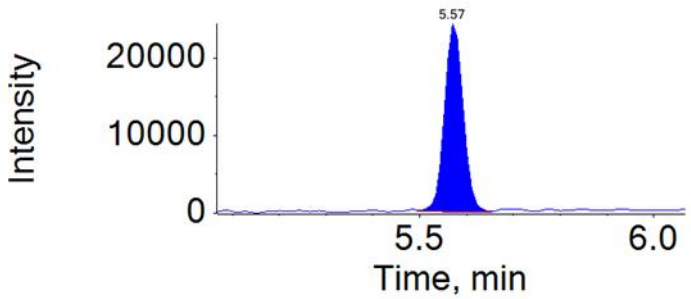
Component: PFNA
Primary Mass: 463.0 / 419.0



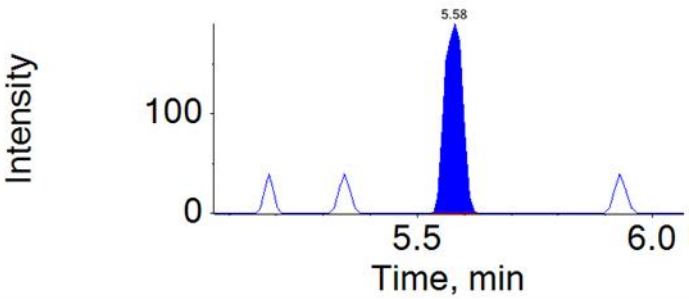
Component: PFNA_2
Secondary Mass: 463.0 / 169.0



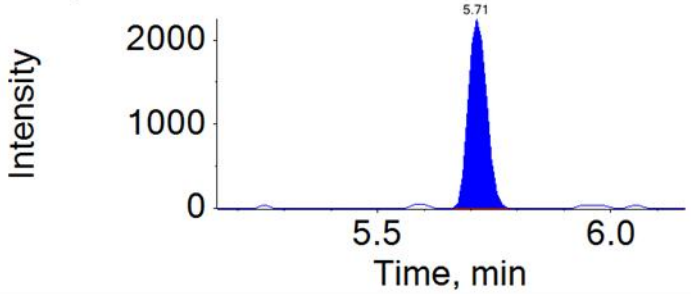
Component: PFDA
Primary Mass: 513.0 / 469.0



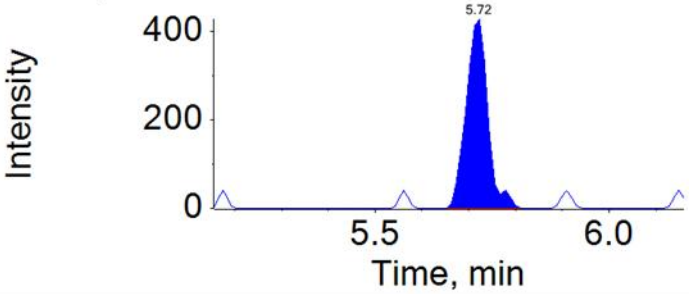
Component: PFDA_2
Secondary Mass: 513.0 / 169.0



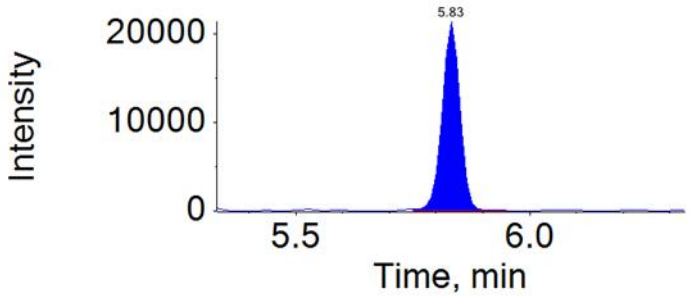
Component: NMeFOSAA
Primary Mass: 570.0 / 419.0



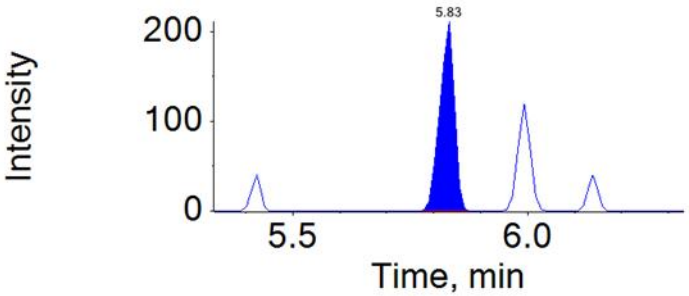
Component: NMeFOSAA_2
Secondary Mass: 570.0 / 483.0



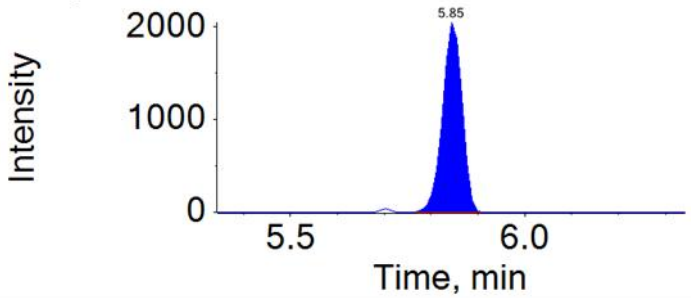
Component: PFUnDA
Primary Mass: 563.0 / 519.0



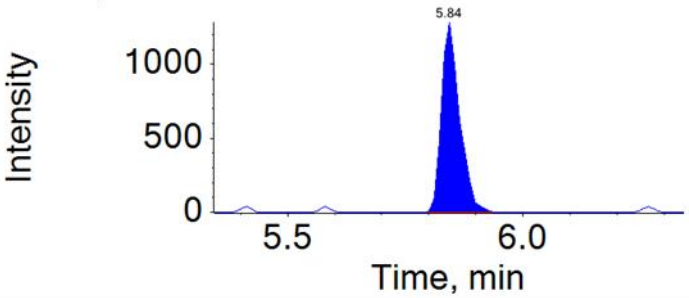
Component: PFUnDA_2
Secondary Mass: 563.0 / 169.0



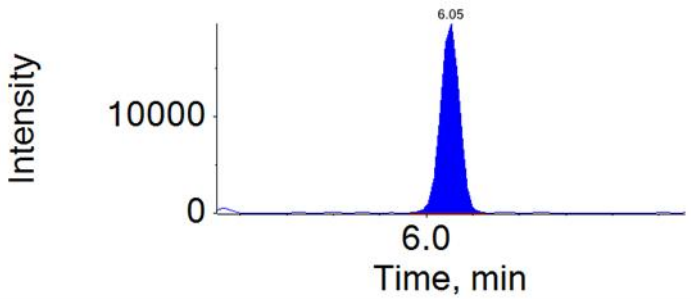
Component: NEtFOSAA
Primary Mass: 584.0 / 419.0



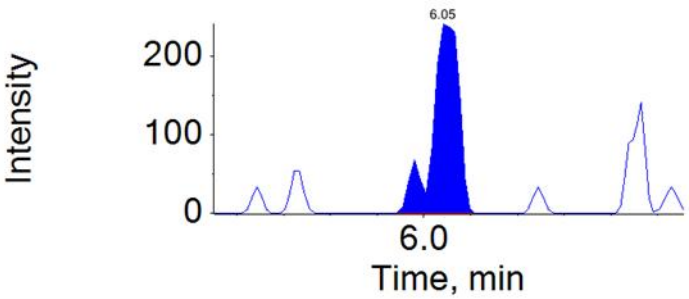
Component: NEtFOSAA_2
Secondary Mass: 584.0 / 526.0



Component: PFDoDA
Primary Mass: 613.0 / 569.0



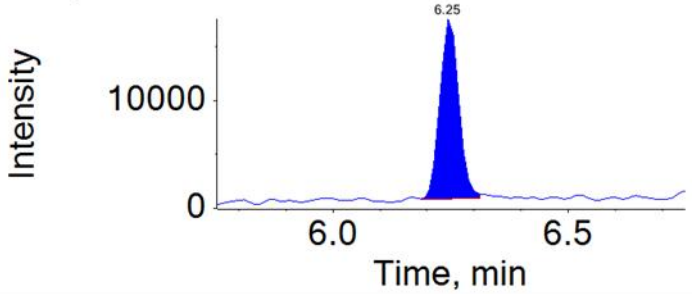
Component: PFDoDA_2
Secondary Mass: 613.0 / 169.0



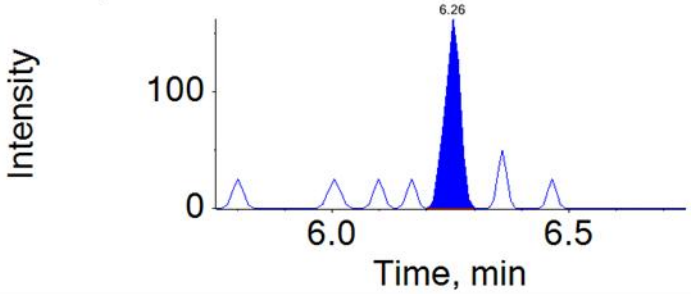
APPROVED
By JPT at 3:31 pm, 11/16/18

REVIEWED
By HMK at 9:04 am, 11/19/18

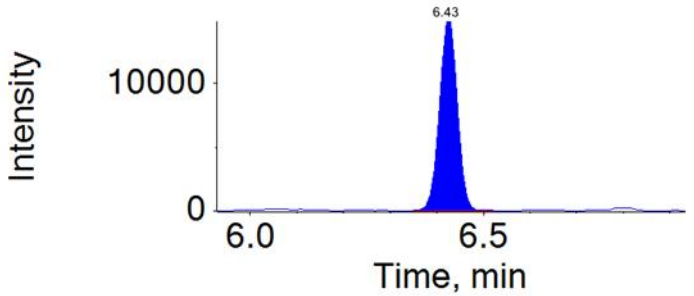
Component: PFTrDA
Primary Mass: 663.0 / 619.0



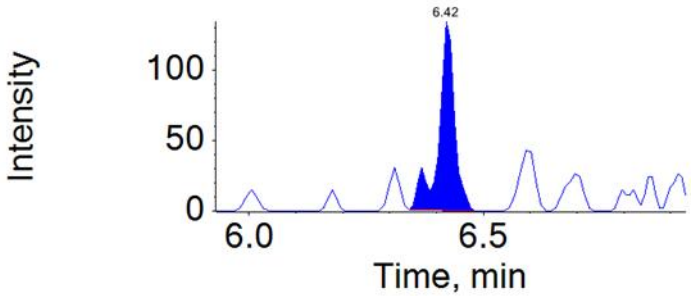
Component: PFTrDA_2
Secondary Mass: 663.0 / 169.0



Component: PFTeDA
Primary Mass: 713.0 / 669.0



Component: PFTeDA_2
Secondary Mass: 713.0 / 169.0



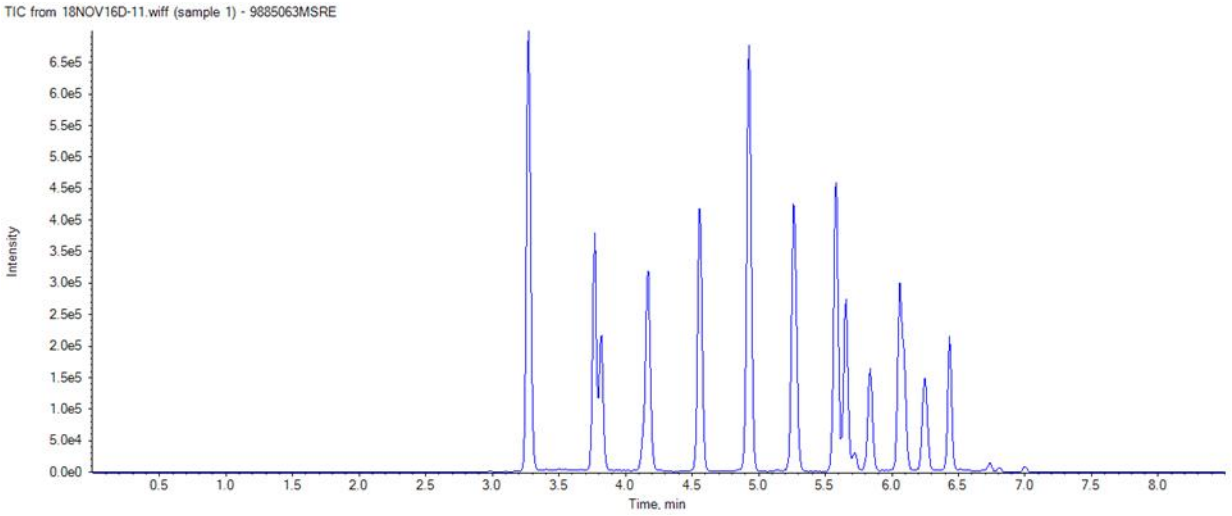
APPROVED
By JPT at 3:31 pm, 11/16/18

REVIEWED
By HMK at 9:04 am, 11/19/18

Matrix Spike Recovery

ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM
Result Table: 18311021 11/16/2018 3:49:12 PM
Acquisition Method: 18AUG13_3uL.dam

Instrument Name:	Sample Name:	Sample ID:	Sample File:	Acquisition Date:
LM27631	9885063MSRE	EPA 537 mod QSM 5.1 table B-15 18311021 OU1-GCI-S-01-01 MS Grab Soil	18NOV16D-11.wiff	2018-11-16T11:44:19



Injection Standard Area Reference File**:** 18NOV16D-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	758530.9	707280.6	7	50	
13C2-PFOA	5.00	525364.7	484265.4	8	50	
13C4-PFOS	4.78	271792.5	256987.3	6	50	
13C2-PFDA	5.00	345738.0	302418.6	14	50	

APPROVED
By JPT at 4:01 pm, 11/16/18

REVIEWED
By HMK at 9:07 am, 11/19/18

Matrix Spike Recovery

ICAL Name: 18NOV12DCAL **Result Table:** 18311021 11/16/2018 3:49:12 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Instrument Name:	Sample Name:	Sample ID:	Sample File:	Acquisition Date:
LM27631	9885063MSRE	EPA 537 mod QSM 5.1 table B-15 18311021 OU1-GCI-S-01-01 MS Grab Soil	18NOV16D-11.wiff	2018-11-16T11:44:19

Analyte Name	Analyte Area	Ext Std Area	Area Ratio	Adj Actual Conc	Sample Result	%REC	% REC Limit	%REC OOS
PFBS	56676.5	372062.5	0.152	1.115	1.342	120	70-130	
PFHxA	120877.5	598613.0	0.202	1.259	1.561	124	70-130	
PFHpA	133012.1	494004.2	0.269	1.259	1.653	131	70-130	OOS
PFHxS	50711.8	291413.0	0.174	1.191	1.563	131	70-130	OOS
PFOA	153025.1	786512.7	0.195	1.259	1.924	153	70-130	OOS
PFOS	54814.4	256978.7	0.213	1.204	1.727	144	70-130	OOS
PFNA	99142.7	429434.9	0.231	1.259	1.542	122	70-130	
PFDA	92455.2	568444.5	0.163	1.259	1.597	127	70-130	
NMeFOSAA	7275.8	63249.0	0.115	1.259	1.204	96	70-130	
PFUnDA	67233.8	245042.2	0.274	1.259	1.328	105	70-130	
NEtFOSAA	7366.0	46164.4	0.160	1.259	1.549	123	70-130	
PFDoDA	73280.5	503376.5	0.146	1.259	1.373	109	70-130	
PFTrDA	63159.2	503376.5	0.125	1.259	1.467	116	70-130	
PFTeDA	53549.2	378006.9	0.142	1.259	1.471	117	70-130	

APPROVED
By JPT at 4:01 pm, 11/16/18

REVIEWED
By HMK at 9:07 am, 11/19/18

Matrix Spike Recovery

ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM
Result Table: 18311021 11/16/2018 3:49:12 PM
Acquisition Method: 18AUG13_3uL.dam

APPROVED
By JPT at 4:01 pm, 11/16/18

REVIEWED
By HMK at 9:07 am, 11/19/18

ICAL Name: 18NOV12DCAL **Result Table:** 18311021 11/16/2018 3:49:12 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Sample Name:	9885063MSRE			**Data File:**		18NOV16D-11.wiff
Sample ID:	EPA 537 mod QSM 5.1 table B-15 18311021 OU1-GCI-S-01-01 MS Grab Soil			**Acquis Date:**		2018-11-16T11:44:19
Sample Type:	Quality Control			**Instrument:**		LM27631
Vial Position:	43			**Acquis Method:**		18AUG13_3uL.dam
Injection Vol:	3.00			**Result Table:**		18311021
QMethod File:	18AUG20QM			**ICAL Name:**		18NOV12DCAL
Batch Number:	18311021			**Operator:**		JPT12262
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: 18NOV16D-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	758530.9	707280.6	7	50	
13C2-PFOA	5.0	525364.7	484265.4	8	50	
13C4-PFOS	4.8	271792.5	256987.3	6	50	
13C2-PFDA	5.0	345738.0	302418.6	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
E13C3-PFBS	372062.5	13C3-PFBA	758530.9	0.491	8.611	6.412	74	50-150	
E13C5-PFHxA	598613.0	13C2-PFOA	525364.7	1.139	9.259	7.622	82	50-150	
E13C3-PFHxS	291413.0	13C2-PFOA	525364.7	0.555	8.759	7.048	80	50-150	
E13C4-PFHpA	494004.2	13C2-PFOA	525364.7	0.940	9.259	7.845	85	50-150	
E13C8-PFOA	786512.7	13C2-PFOA	525364.7	1.497	9.259	7.638	82	50-150	
E13C8-PFOS	256978.7	13C4-PFOS	271792.5	0.945	8.852	7.758	88	50-150	
E13C9-PFNA	429434.9	13C4-PFOS	271792.5	1.580	9.259	8.158	88	50-150	
E13C6-PFDA	568444.5	13C2-PFDA	345738.0	1.644	9.259	7.105	77	50-150	
Ed3-NMeFOSAA	63249.0	13C2-PFDA	345738.0	0.183	9.259	6.115	66	50-150	
E13C7-PFUnDA	245042.2	13C2-PFDA	345738.0	0.709	9.259	7.620	82	50-150	
Ed5-NEtFOSAA	46164.4	13C2-PFDA	345738.0	0.134	9.259	5.231	56	50-150	
E13C2-PFDoDA	503376.5	13C2-PFDA	345738.0	1.456	9.259	7.000	76	50-150	
E13C2-PFTeDA	378006.9	13C2-PFDA	345738.0	1.093	9.259	7.108	77	50-150	

APPROVED
By JPT at 4:01 pm, 11/16/18

REVIEWED
By HMK at 9:07 am, 11/19/18

ICAL Name: 18NOV12DCAL **Result Table:** 18311021 11/16/2018 3:49:12 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

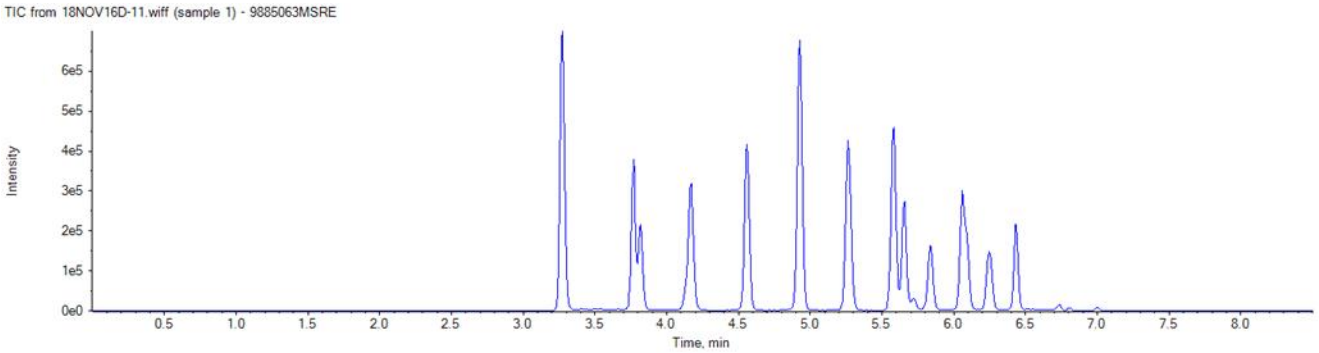
Analyte Quantitation Peak Table

Sample Name: 9885063MSRE **Instrument Name:** LM27631 **File Name:** 18NOV16D-11.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	3.82	1.000	56676.5		A	13C3-PFBS	3.82	372062.5	0.152	1.342
PFHxA	4.17	1.000	120877.5		A	13C5-PFHxA	4.17	598613.0	0.202	1.561
PFHpA	4.56	1.000	133012.1		A	13C4-PFHpA	4.56	494004.2	0.269	1.653
PFHxS	4.56	1.000	50711.8		A	13C3-PFHxS	4.56	291413.0	0.174	1.563
PFOA	4.93	1.000	153025.1		M	13C8-PFOA	4.93	786512.7	0.195	1.924
PFOS	5.26	1.000	54814.4		M	13C8-PFOS	5.26	256978.7	0.213	1.727
PFNA	5.28	1.000	99142.7		A	13C9-PFNA	5.27	429434.9	0.231	1.542
PFDA	5.58	1.000	92455.2		A	13C6-PFDA	5.58	568444.5	0.163	1.597
NMeFOSAA	5.72	1.000	7275.8		M	d3-NMeFOSAA	5.72	63249.0	0.115	1.204
PFUnDA	5.84	1.000	67233.8		A	13C7-PFUnDA	5.84	245042.2	0.274	1.328
NEtFOSAA	5.85	1.000	7366.0		A	d5-NEtFOSAA	5.85	46164.4	0.160	1.549
PFDoDA	6.06	1.000	73280.5		A	13C2-PFDoDA	6.06	503376.5	0.146	1.373
PFTrDA	6.26	1.030	63159.2		A	13C2-PFDoDA	6.06	503376.5	0.125	1.467
PFTeDA	6.43	1.000	53549.2		A	13C2-PFTeDA	6.43	378006.9	0.142	1.471

Total Ion Chromatogram

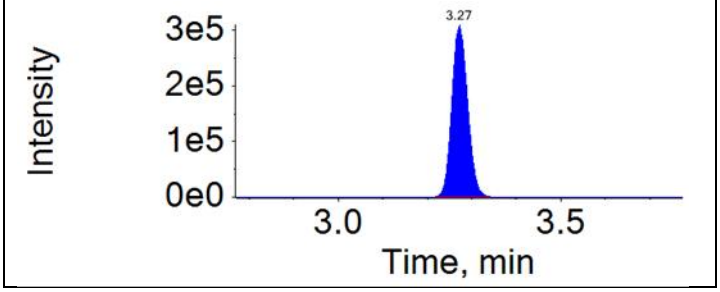


APPROVED
By JPT at 4:01 pm, 11/16/18

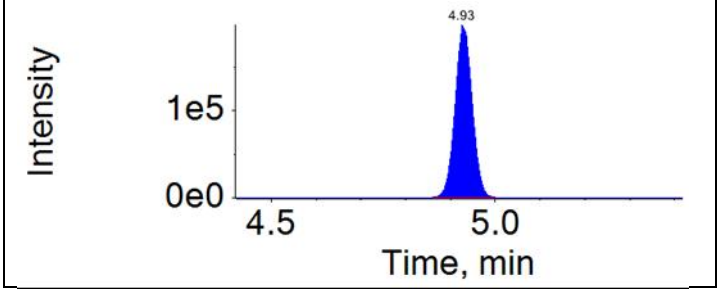
REVIEWED
By HMK at 9:07 am, 11/19/18

ICAL Name: 18NOV12DCAL **Result Table:** 18311021 11/16/2018 3:49:12 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

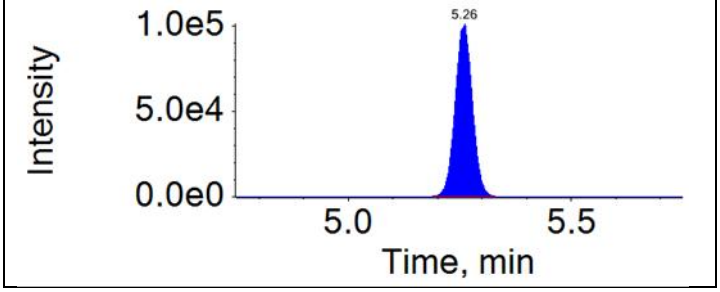
Injection Standard: 13C3-PFBA
216.0 / 172.0



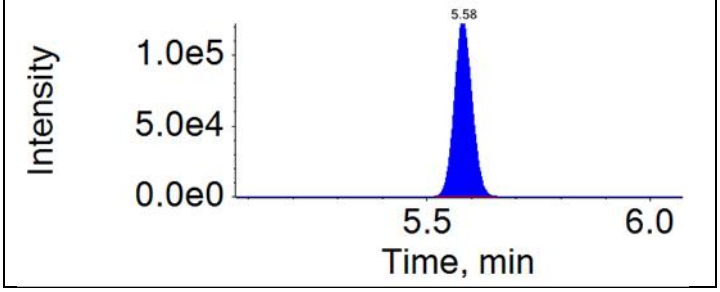
Injection Standard: 13C2-PFOA
415.0 / 370.0



Injection Standard: 13C4-PFOS
503.0 / 80.0



Injection Standard: 13C2-PFDA
515.0 / 470.0

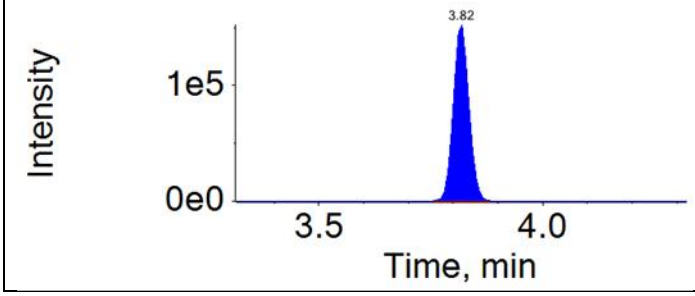


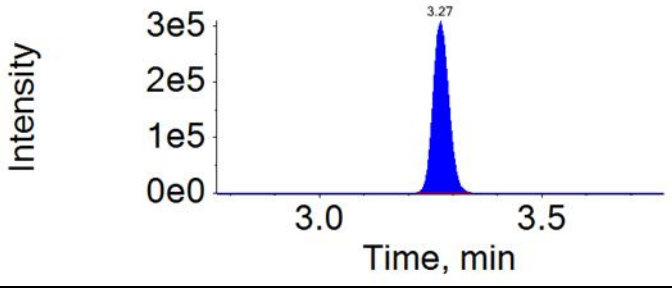
APPROVED
By JPT at 4:01 pm, 11/16/18

REVIEWED
By HMK at 9:07 am, 11/19/18

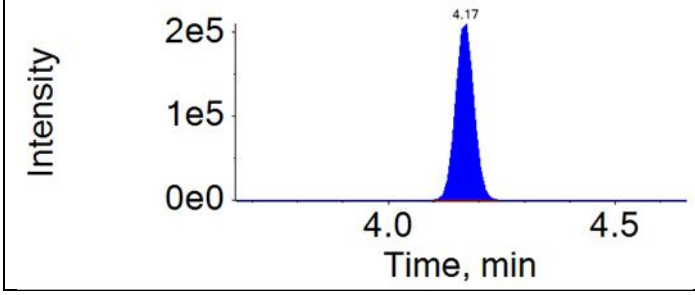
ICAL Name: 18NOV12DCAL **Result Table:** 18311021 11/16/2018 3:49:12 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

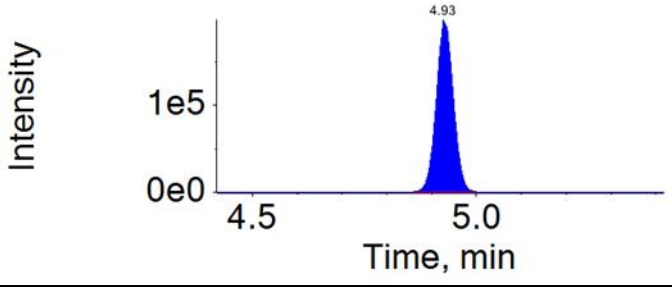
Extraction Standard: E13C3-PFBS	Injection Standard: 13C3-PFBA
302.0 / 80.0	216.0 / 172.0



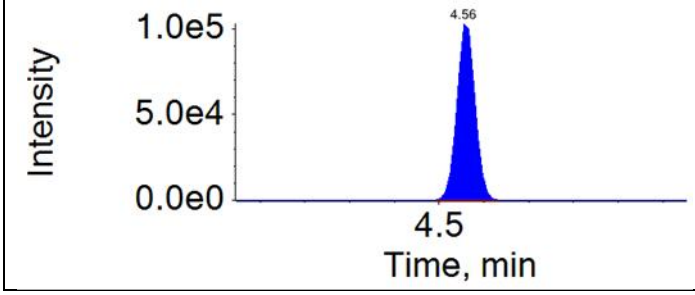


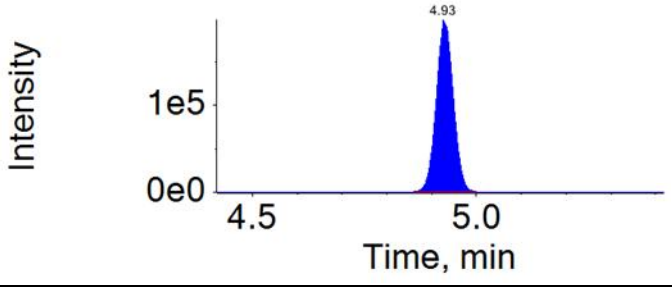
Extraction Standard: E13C5-PFHxA	Injection Standard: 13C2-PFOA
318.0 / 273.0	415.0 / 370.0



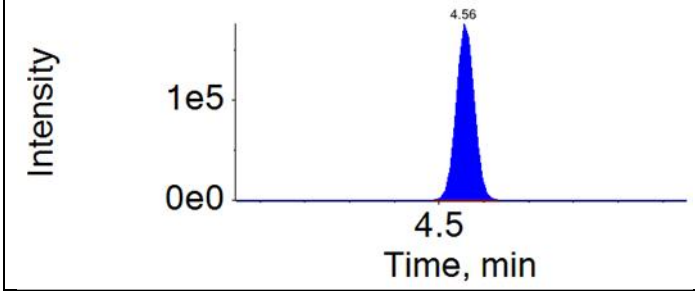


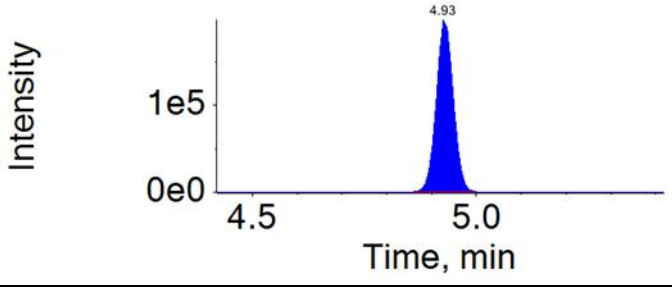
Extraction Standard: E13C3-PFHxS	Injection Standard: 13C2-PFOA
402.0 / 80.0	415.0 / 370.0





Extraction Standard: E13C4-PFHpA	Injection Standard: 13C2-PFOA
367.0 / 322.0	415.0 / 370.0

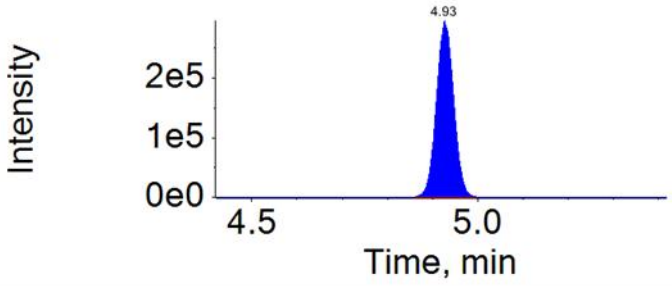
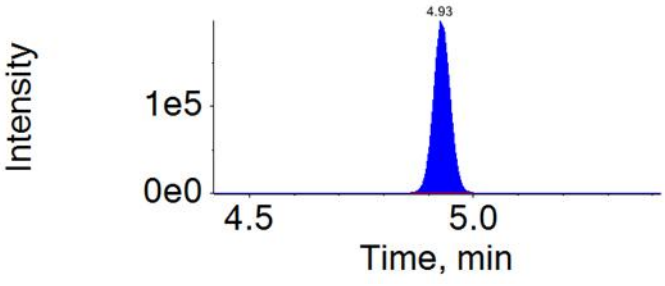


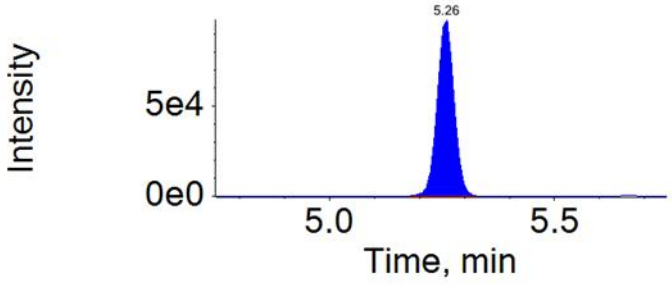
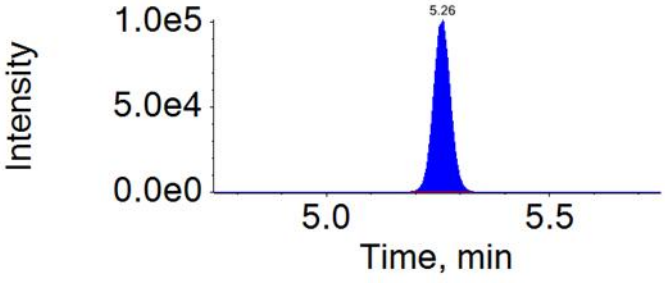


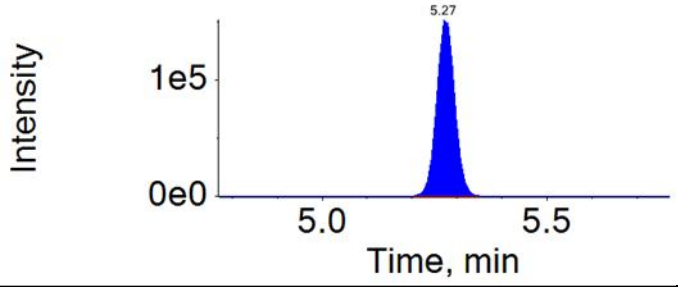
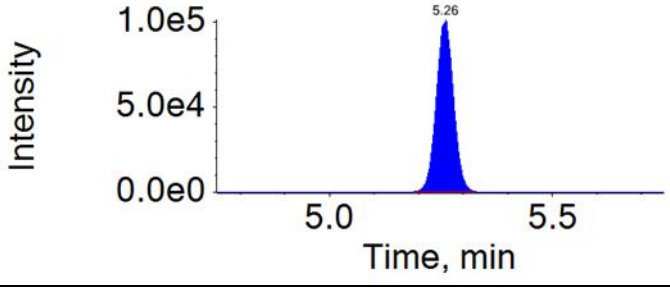
APPROVED
By JPT at 4:01 pm, 11/16/18

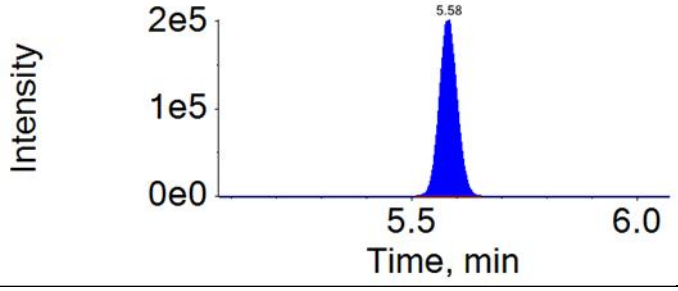
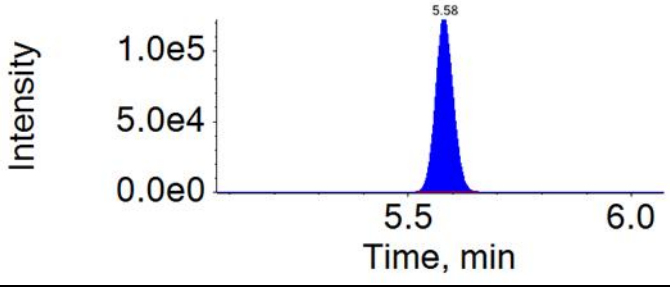
REVIEWED
By HMK at 9:07 am, 11/19/18

ICAL Name: 18NOV12DCAL **Result Table:** 18311021 11/16/2018 3:49:12 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
	

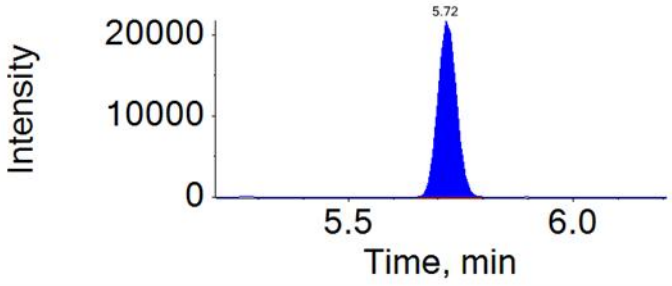
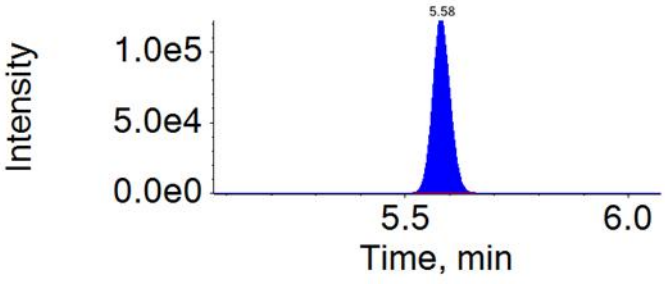
Extraction Standard: E13C9-PFNA	Injection Standard: 13C4-PFOS
472.0 / 427.0	503.0 / 80.0
	

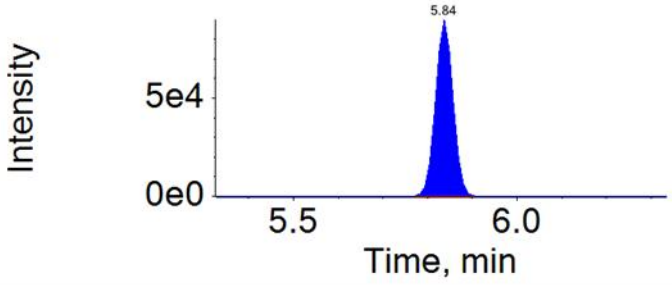
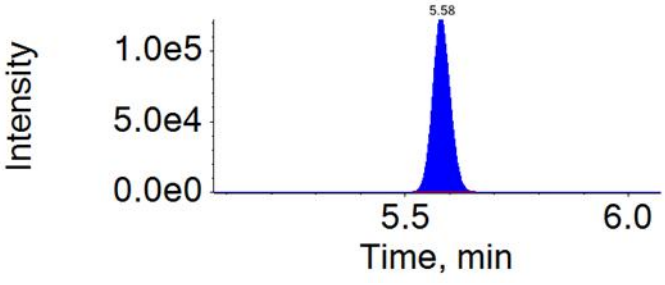
Extraction Standard: E13C6-PFDA	Injection Standard: 13C2-PFDA
519.0 / 474.0	515.0 / 470.0
	

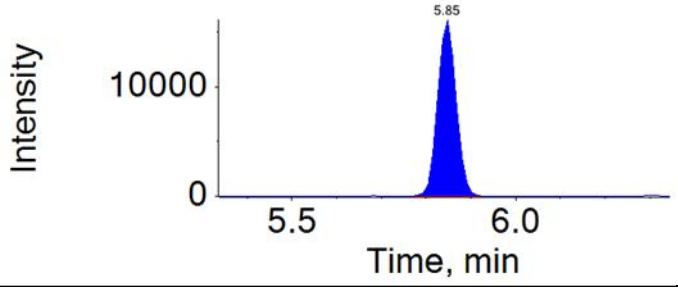
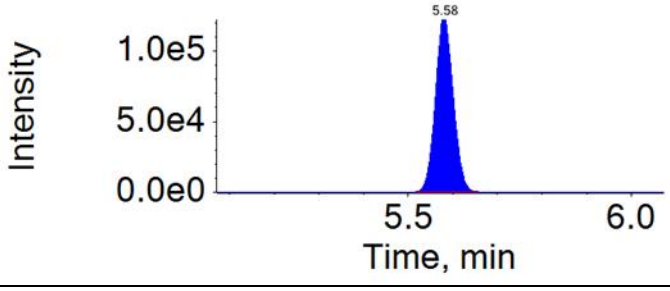
APPROVED
By JPT at 4:01 pm, 11/16/18

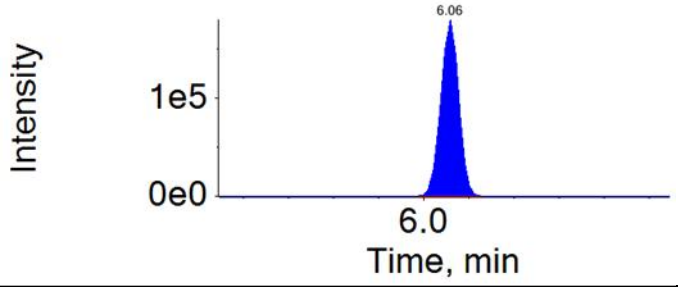
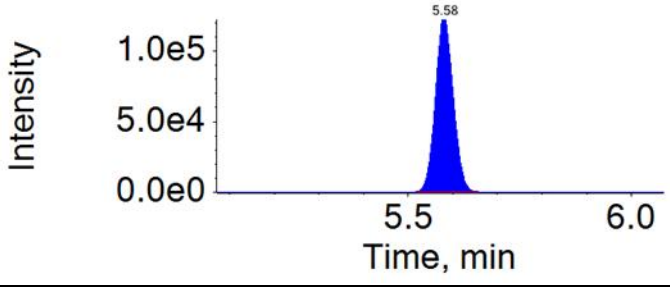
REVIEWED
By HMK at 9:07 am, 11/19/18

ICAL Name: 18NOV12DCAL **Result Table:** 18311021 11/16/2018 3:49:12 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
	

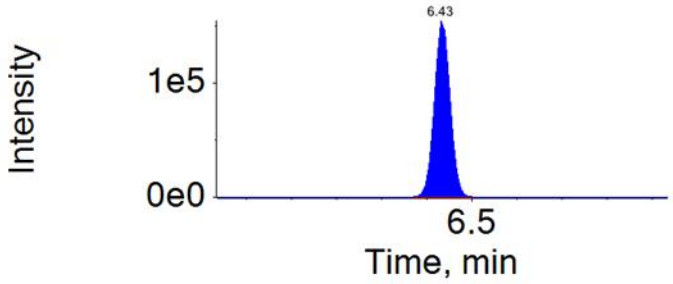
Extraction Standard: E13C2-PFDoDA	Injection Standard: 13C2-PFDA
615.0 / 570.0	515.0 / 470.0
	

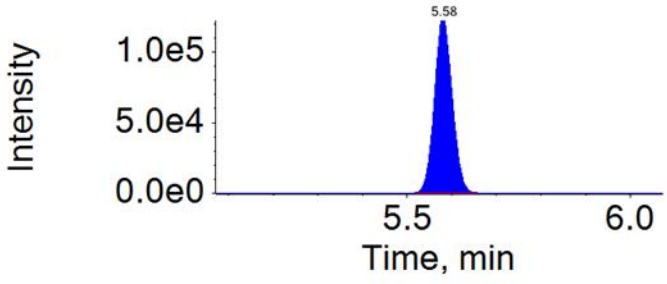
APPROVED
By JPT at 4:01 pm, 11/16/18

REVIEWED
By HMK at 9:07 am, 11/19/18

ICAL Name: 18NOV12DCAL **Result Table:** 18311021 11/16/2018 3:49:12 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



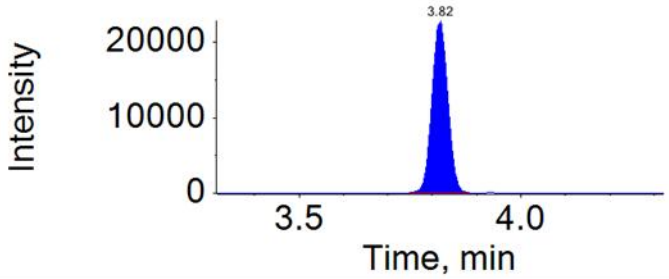


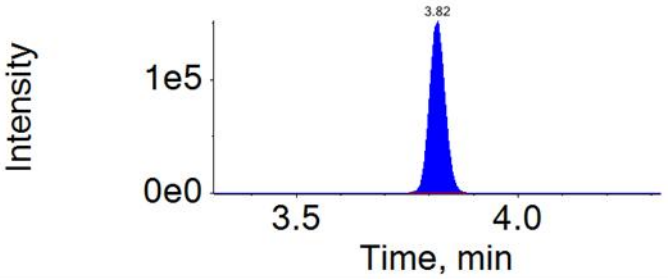
APPROVED
By JPT at 4:01 pm, 11/16/18

REVIEWED
By HMK at 9:07 am, 11/19/18

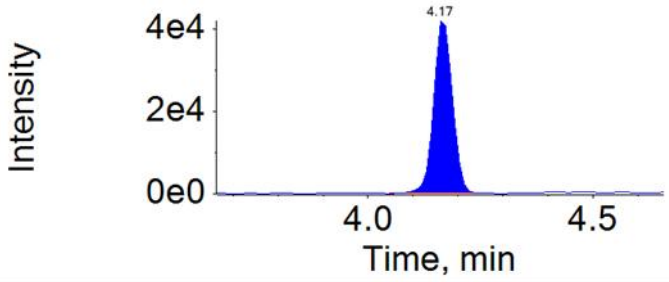
ICAL Name: 18NOV12DCAL **Result Table:** 18311021 11/16/2018 3:49:12 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

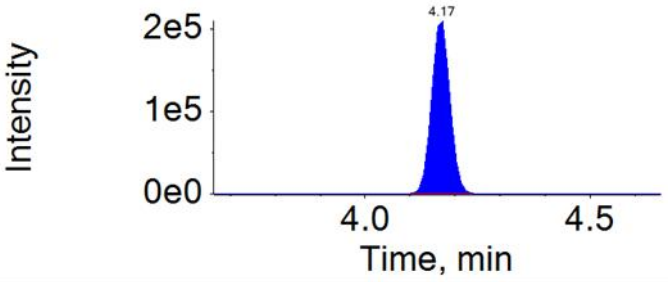
Analyte: PFBS	Extraction Standard: 13C3-PFBS
299.0 / 80.0	302.0 / 80.0



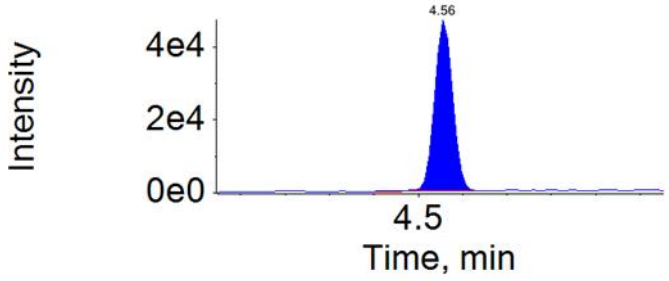


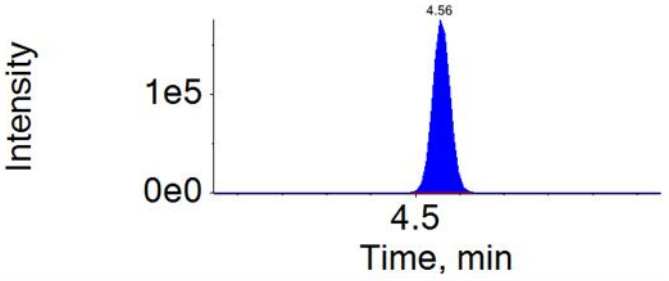
Analyte: PFHxA	Extraction Standard: 13C5-PFHxA
313.0 / 269.0	318.0 / 273.0



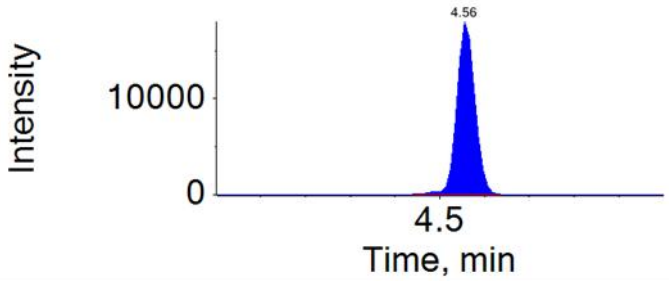


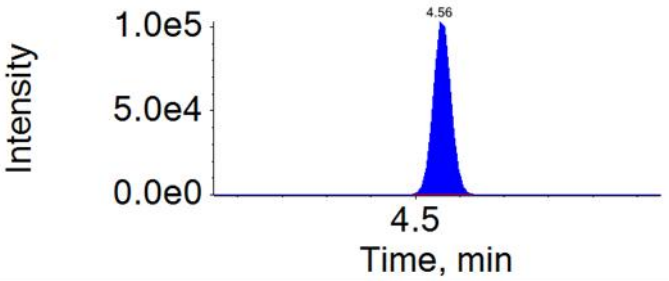
Analyte: PFHpA	Extraction Standard: 13C4-PFHpA
363.0 / 319.0	367.0 / 322.0





Analyte: PFHxS	Extraction Standard: 13C3-PFHxS
399.0 / 80.0	402.0 / 80.0



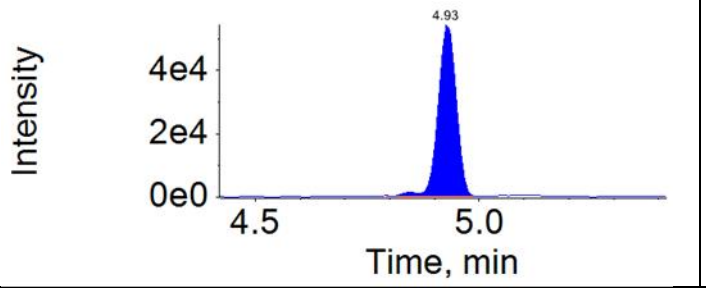


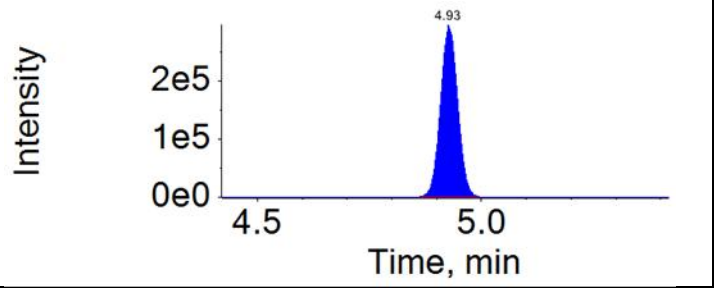
APPROVED
By JPT at 4:01 pm, 11/16/18

REVIEWED
By HMK at 9:07 am, 11/19/18

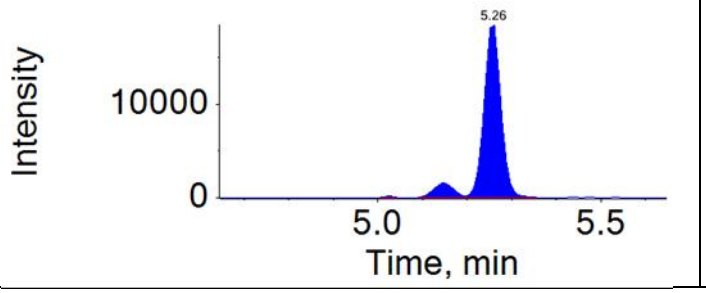
ICAL Name: 18NOV12DCAL **Result Table:** 18311021 11/16/2018 3:49:12 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

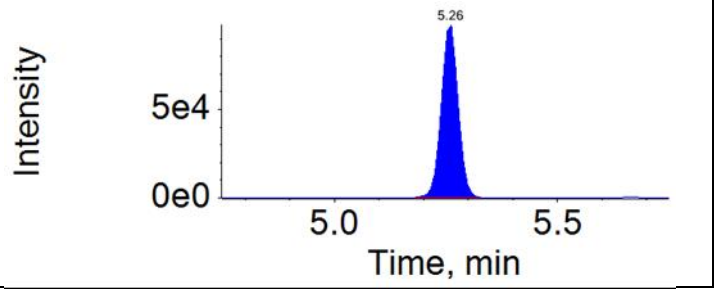
Analyte: PFOA	Extraction Standard: 13C8-PFOA
413.0 / 369.0	421.0 / 376.0



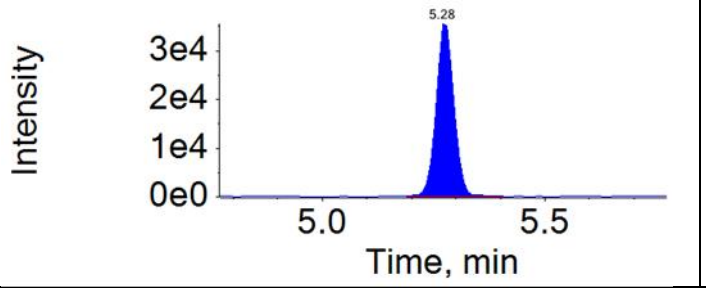


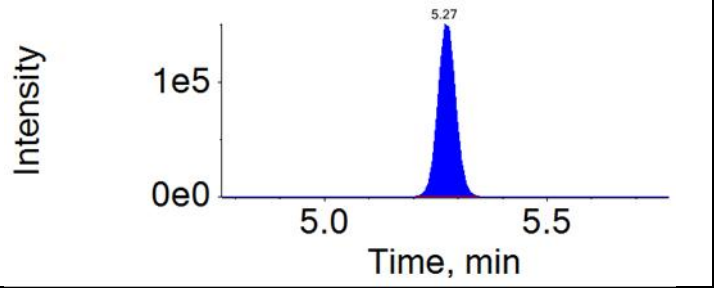
Analyte: PFOS	Extraction Standard: 13C8-PFOS
499.0 / 80.0	507.0 / 80.0



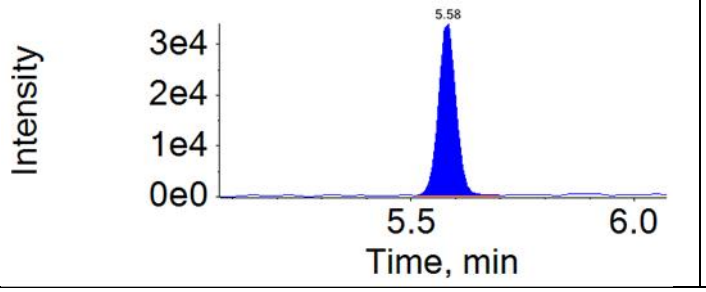


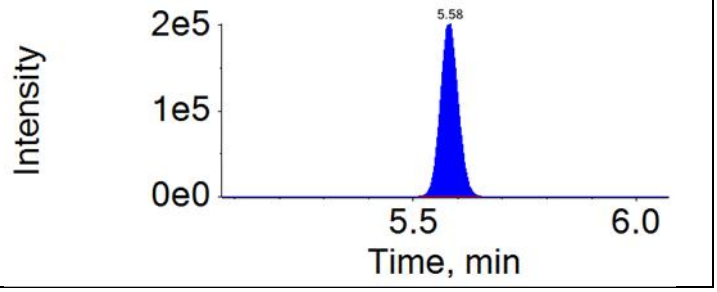
Analyte: PFNA	Extraction Standard: 13C9-PFNA
463.0 / 419.0	472.0 / 427.0





Analyte: PFDA	Extraction Standard: 13C6-PFDA
513.0 / 469.0	519.0 / 474.0



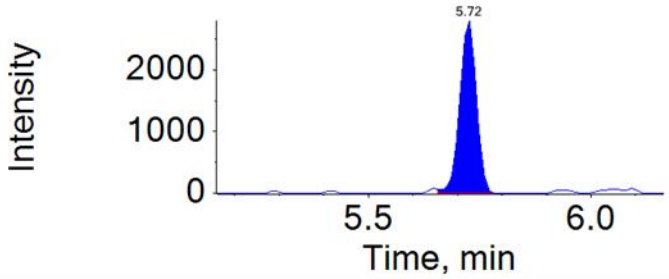


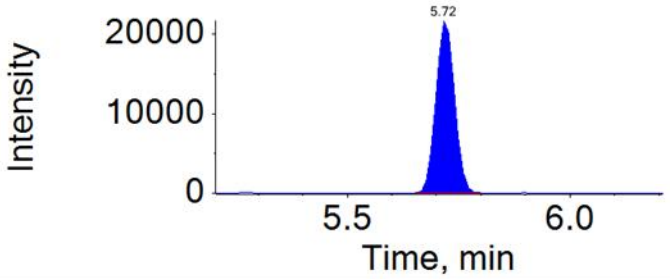
APPROVED
By JPT at 4:01 pm, 11/16/18

REVIEWED
By HMK at 9:07 am, 11/19/18

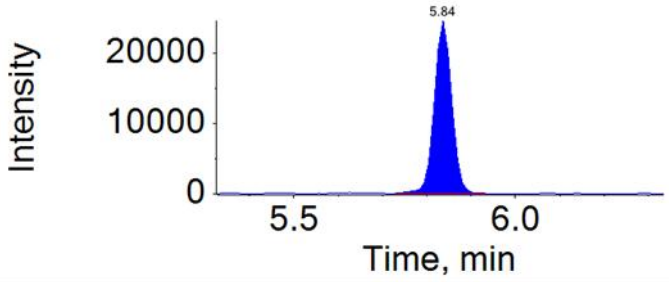
ICAL Name: 18NOV12DCAL **Result Table:** 18311021 11/16/2018 3:49:12 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

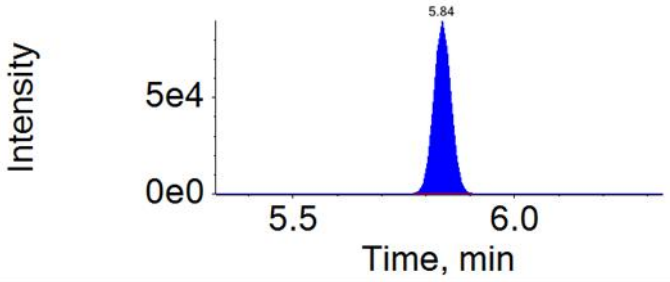
Analyte: NMeFOSAA	Extraction Standard: d3-NMeFOSAA
570.0 / 419.0	573.0 / 419.0



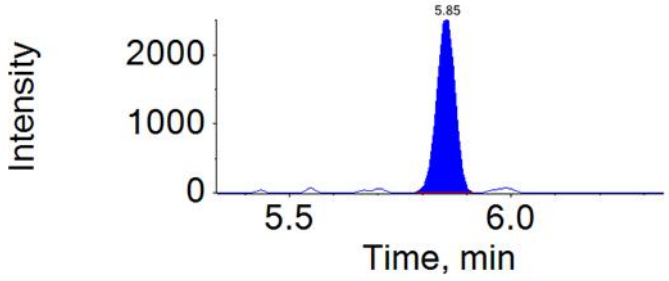


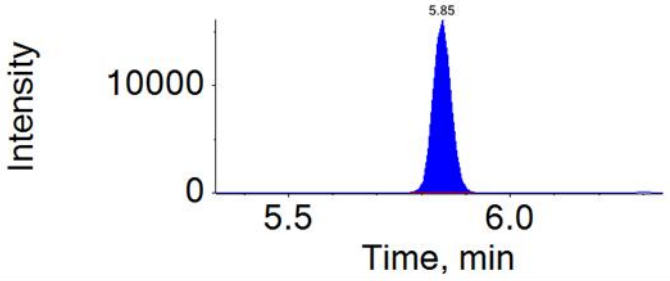
Analyte: PFUnDA	Extraction Standard: 13C7-PFUnDA
563.0 / 519.0	570.0 / 525.0



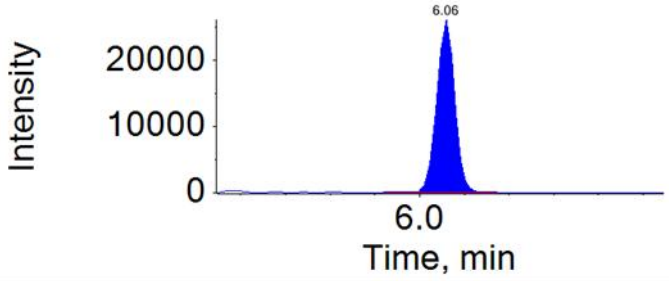


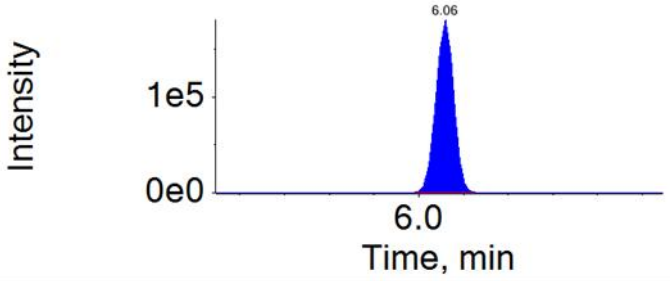
Analyte: NEtFOSAA	Extraction Standard: d5-NEtFOSAA
584.0 / 419.0	589.0 / 419.0





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



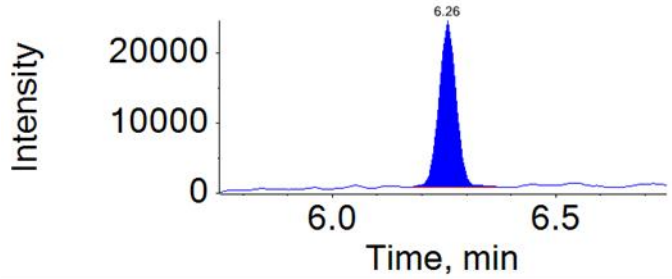


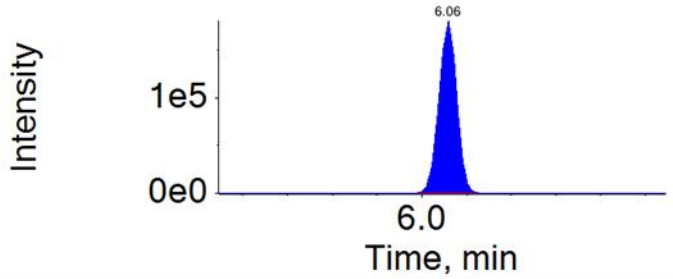
APPROVED
By JPT at 4:01 pm, 11/16/18

REVIEWED
By HMK at 9:07 am, 11/19/18

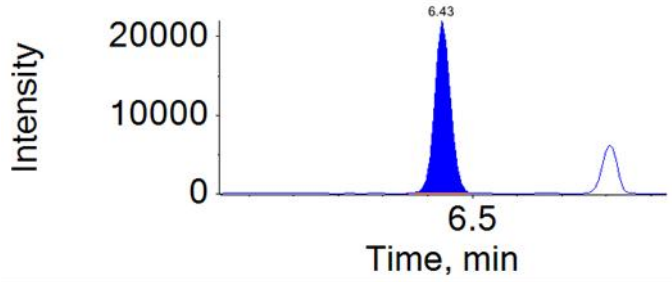
ICAL Name: 18NOV12DCAL **Result Table:** 18311021 11/16/2018 3:49:12 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

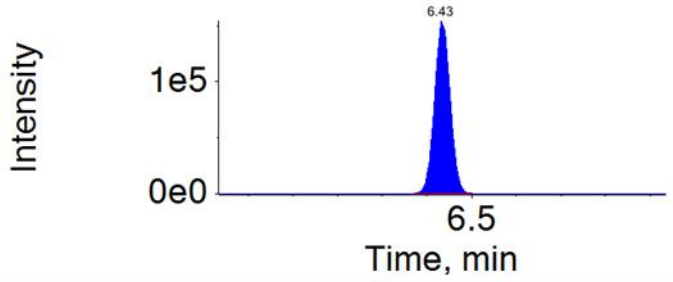
Analyte: PFTrDA	Extraction Standard: 13C2-PFDoDA
663.0 / 619.0	615.0 / 570.0





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



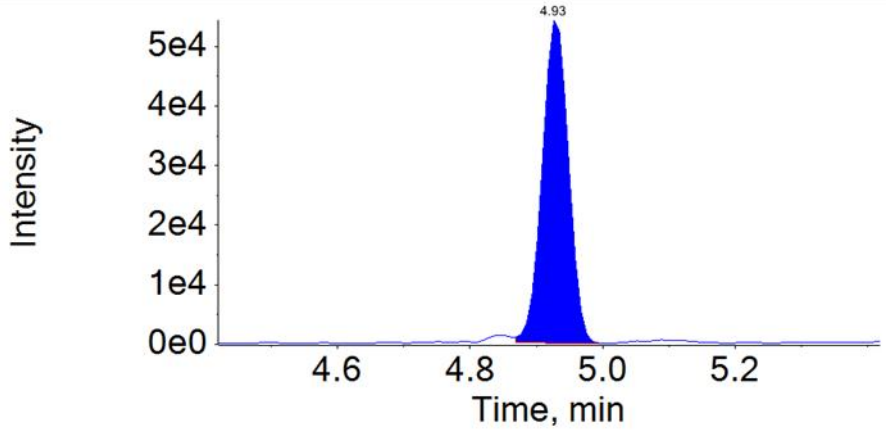


APPROVED
By JPT at 4:01 pm, 11/16/18

REVIEWED
By HMK at 9:07 am, 11/19/18

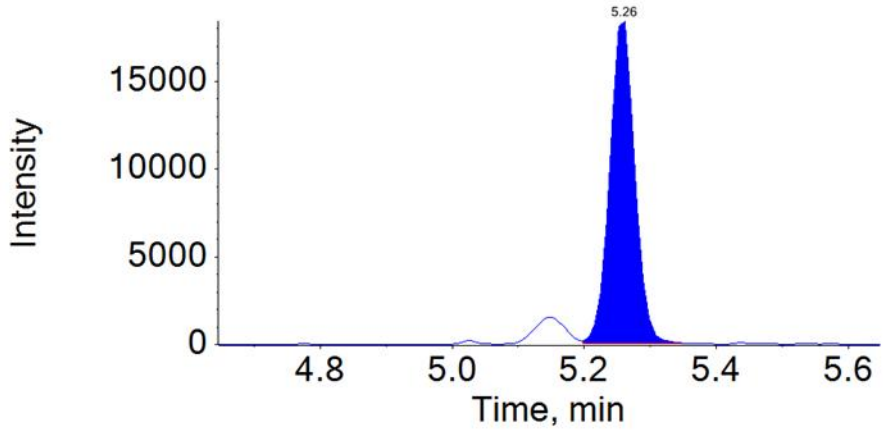
Results Table Name: 18311021
Results Table Date: 11/16/2018 3:49:12 PM
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

Component Name:
PFOA
RT (min.):
4.93
Peak Area:
149238.7
Mass Range:
413.0 / 369.0
File Name:
18NOV16D-11.wiff
Sample Name:
9885063MSRE



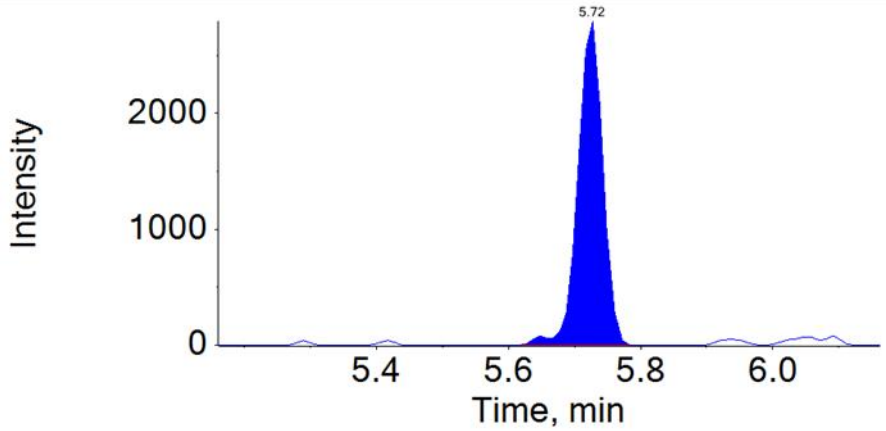
Integration Comment: incorrect integration

Component Name:
PFOS
RT (min.):
5.26
Peak Area:
48833.6
Mass Range:
499.0 / 80.0
File Name:
18NOV16D-11.wiff
Sample Name:
9885063MSRE



Integration Comment: incorrect integration

Component Name:
NMeFOSAA
RT (min.):
5.72
Peak Area:
7379.4
Mass Range:
570.0 / 419.0
File Name:
18NOV16D-11.wiff
Sample Name:
9885063MSRE



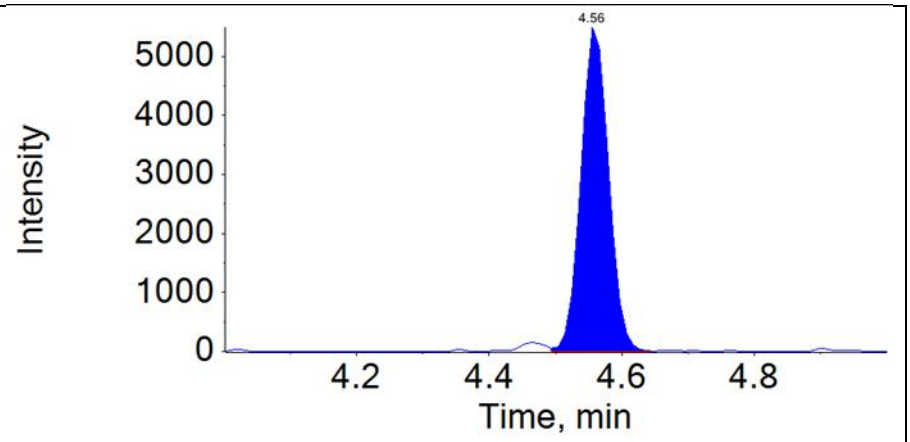
Integration Comment: incorrect integration

APPROVED
By JPT at 4:01 pm, 11/16/18

REVIEWED
By HMK at 9:07 am, 11/19/18

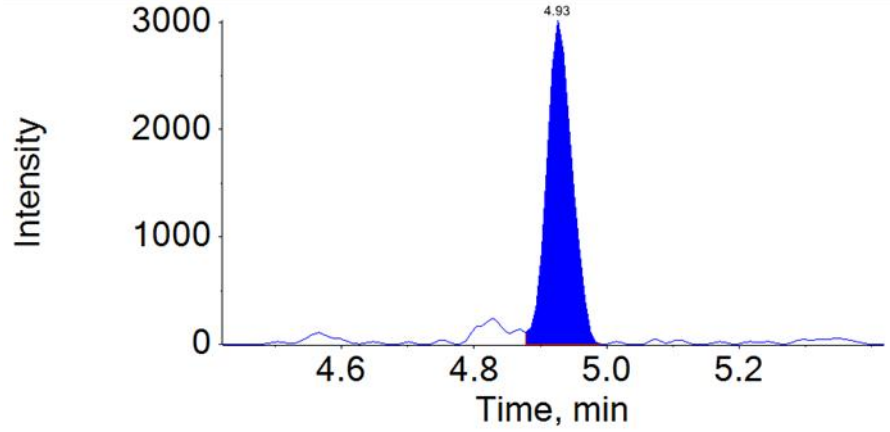
Results Table Name: 18311021
Results Table Date: 11/16/2018 3:49:12 PM
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

Component Name: PFHxS_2
RT (min.): 4.56
Peak Area: 15949.0
Mass Range: 399.0 / 99.0
File Name: 18NOV16D-11.wiff
Sample Name: 9885063MSRE



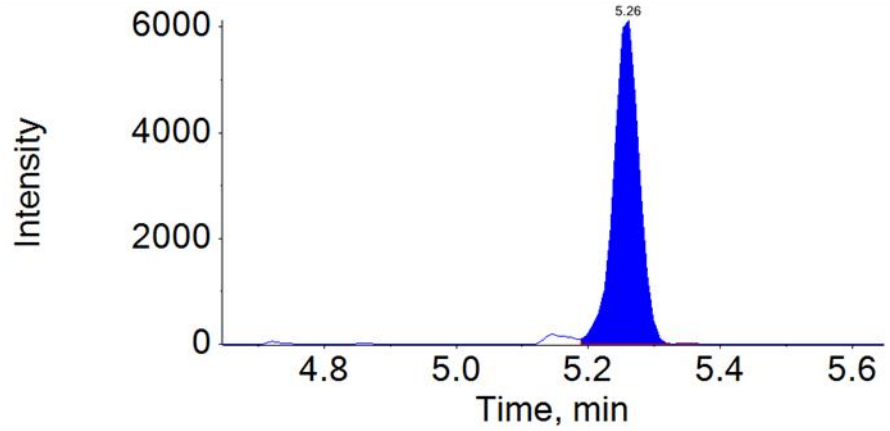
Integration Comment: incorrect integration

Component Name: PFOA_2
RT (min.): 4.93
Peak Area: 7986.2
Mass Range: 413.0 / 169.0
File Name: 18NOV16D-11.wiff
Sample Name: 9885063MSRE



Integration Comment: incorrect integration

Component Name: PFOS_2
RT (min.): 5.26
Peak Area: 16715.2
Mass Range: 499.0 / 99.0
File Name: 18NOV16D-11.wiff
Sample Name: 9885063MSRE



Integration Comment: incorrect integration

APPROVED
By JPT at 4:01 pm, 11/16/18

REVIEWED
By HMK at 9:07 am, 11/19/18

Results Table Name: 18311021
Results Table Date: 11/16/2018 3:49:12 PM

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

APPROVED
By JPT at 4:01 pm, 11/16/18

REVIEWED
By HMK at 9:07 am, 11/19/18

Ion Ratio Report

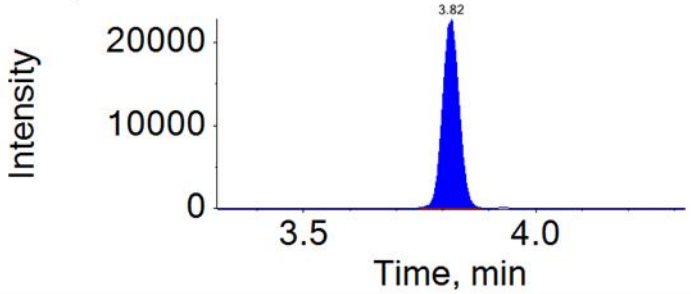
Sample Name: 9885063MSRE **Instrument Name:** LM27631 **File Name:** 18NOV16D-11.wiff

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	56676.5	A	N/A	1.0000			
PFBS_2	3.82	1.00	21337.7	A	N/A	0.3765	3	50	
PFHxA	4.17	1.00	120877.5	A	N/A	1.0000			
PFHxA_2	4.16	1.00	1030.2	A	N/A	0.0085	-28	50	
PFHpA	4.56	1.00	133012.1	A	N/A	1.0000			
PFHpA_2	4.56	1.00	5850.7	A	N/A	0.0440	-22	50	
PFHxS	4.56	1.00	50711.8	A	N/A	1.0000			
PFHxS_2	4.56	1.00	16374.1	M	N/A	0.3229	-6	50	
PFOA	4.93	1.00	153025.1	M	N/A	1.0000			
PFOA_2	4.93	1.00	8811.3	M	N/A	0.0576	1	50	
PFOS	5.26	1.00	54814.4	M	N/A	1.0000			
PFOS_2	5.26	1.00	17187.1	M	N/A	0.3136	6	50	
PFNA	5.28	1.00	99142.7	A	N/A	1.0000			
PFNA_2	5.27	1.00	2143.3	A	N/A	0.0216	-5	50	
PFDA	5.58	1.00	92455.2	A	N/A	1.0000			
PFDA_2	5.57	1.00	804.4	A	N/A	0.0087	10	50	
NMeFOSAA	5.72	1.00	7275.8	M	N/A	1.0000			
NMeFOSAA_2	5.72	1.00	2490.7	A	N/A	0.3423	32	50	
PFUnDA	5.84	1.00	67233.8	A	N/A	1.0000			
PFUnDA_2	5.83	1.00	518.9	A	N/A	0.0077	40	50	
NEtFOSAA	5.85	1.00	7366.0	A	N/A	1.0000			
NEtFOSAA_2	5.85	1.00	5108.5	A	N/A	0.6935	-4	50	
PFDoDA	6.06	1.00	73280.5	A	N/A	1.0000			
PFDoDA_2	6.06	1.00	1719.8	A	N/A	0.0235	52	50	OOS
PFTrDA	6.26	1.03	63159.2	A	N/A	1.0000			
PFTrDA_2	6.27	1.03	249.3	A	N/A	0.0039	-54	50	OOS
PFTeDA	6.43	1.00	53549.2	A	N/A	1.0000			
PFTeDA_2	6.44	1.00	279.5	A	N/A	0.0052	-16	50	

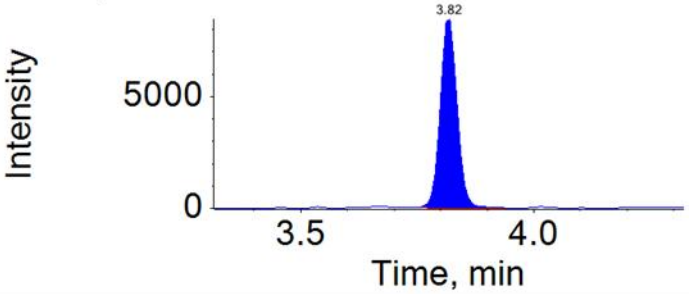
APPROVED
By JPT at 4:01 pm, 11/16/18

REVIEWED
By HMK at 9:07 am, 11/19/18

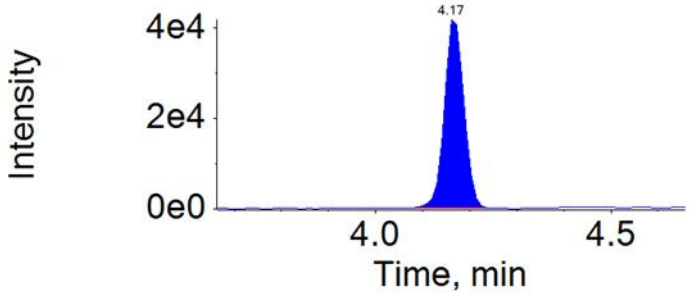
Component: PFBS
Primary Mass: 299.0 / 80.0



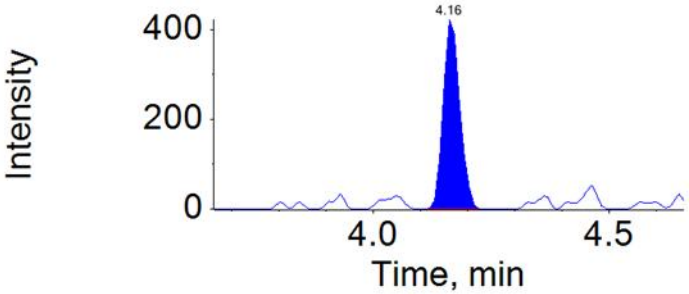
Component: PFBS_2
Secondary Mass: 299.0 / 99.0



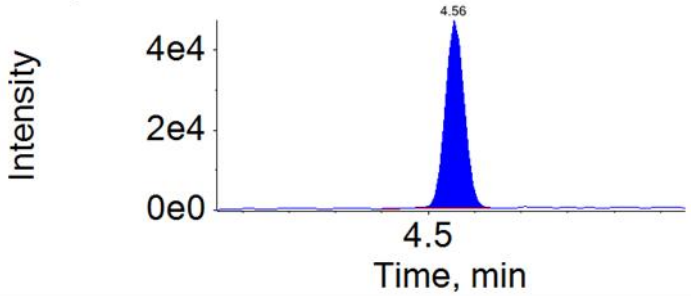
Component: PFHxA
Primary Mass: 313.0 / 269.0



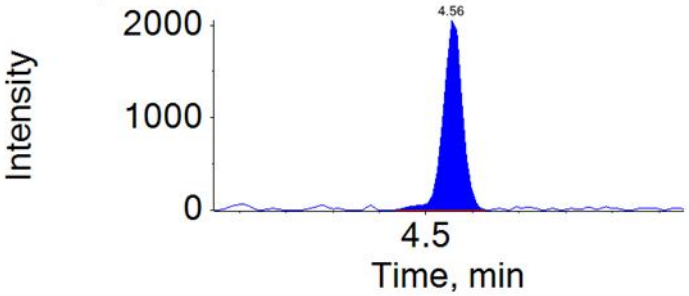
Component: PFHxA_2
Secondary Mass: 313.0 / 119.0



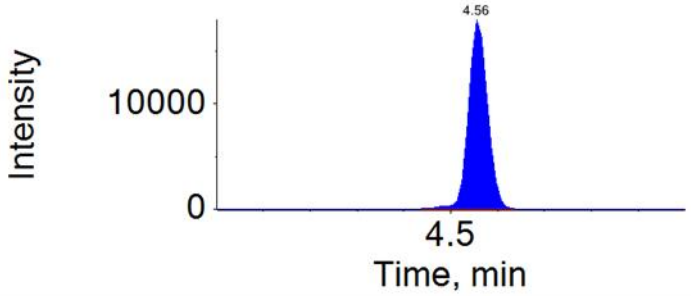
Component: PFHpA
Primary Mass: 363.0 / 319.0



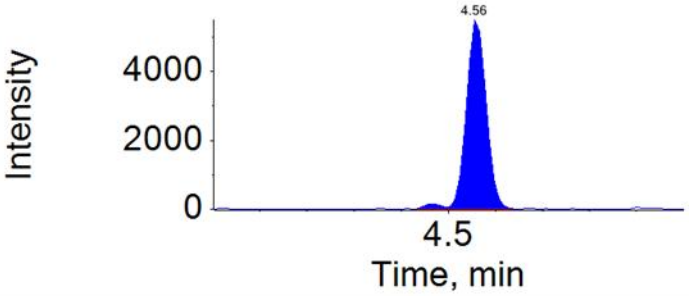
Component: PFHpA_2
Secondary Mass: 363.0 / 169.0



Component: PFHxS
Primary Mass: 399.0 / 80.0



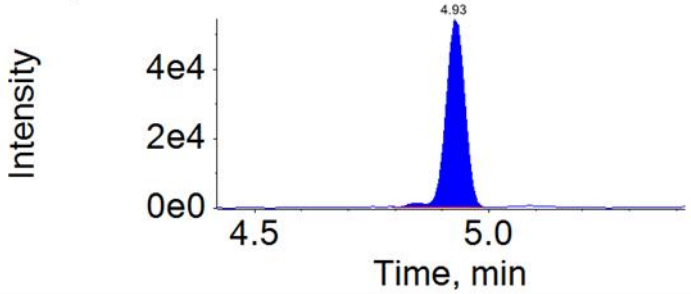
Component: PFHxS_2
Secondary Mass: 399.0 / 99.0



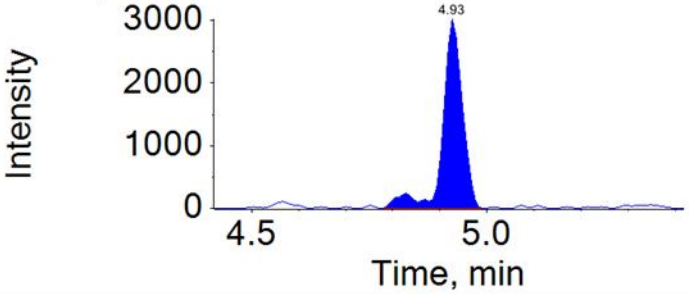
APPROVED
By JPT at 4:01 pm, 11/16/18

REVIEWED
By HMK at 9:07 am, 11/19/18

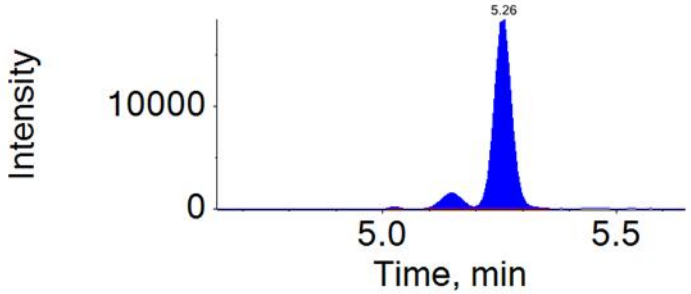
Component: PFOA
Primary Mass: 413.0 / 369.0



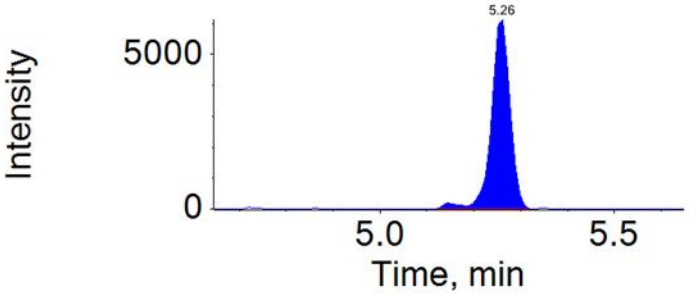
Component: PFOA_2
Secondary Mass: 413.0 / 169.0



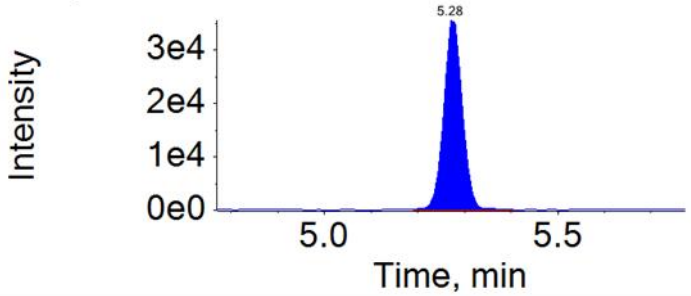
Component: PFOS
Primary Mass: 499.0 / 80.0



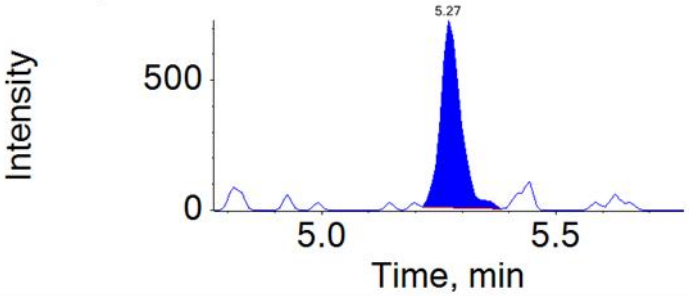
Component: PFOS_2
Secondary Mass: 499.0 / 99.0



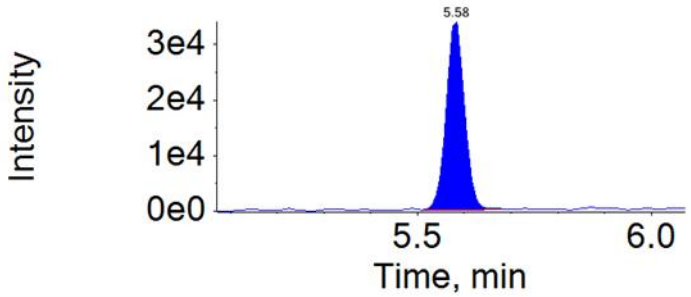
Component: PFNA
Primary Mass: 463.0 / 419.0



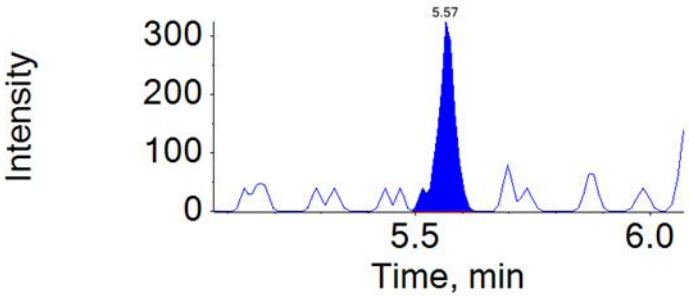
Component: PFNA_2
Secondary Mass: 463.0 / 169.0



Component: PFDA
Primary Mass: 513.0 / 469.0



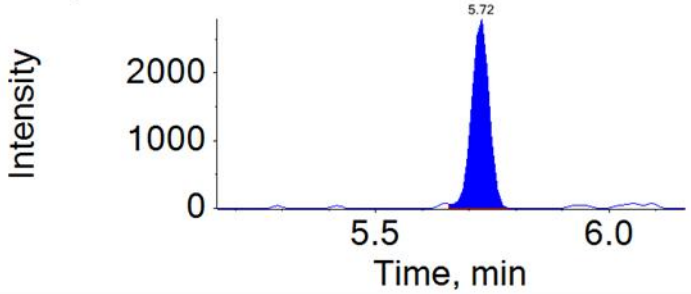
Component: PFDA_2
Secondary Mass: 513.0 / 169.0



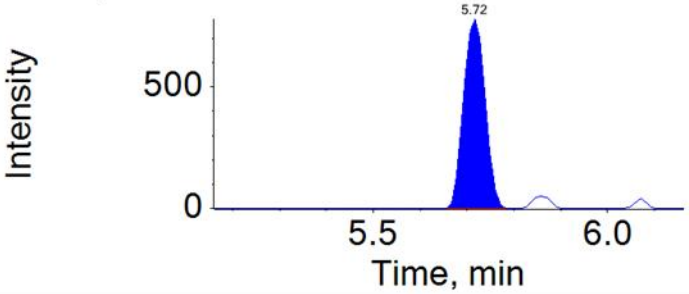
APPROVED
By JPT at 4:01 pm, 11/16/18

REVIEWED
By HMK at 9:07 am, 11/19/18

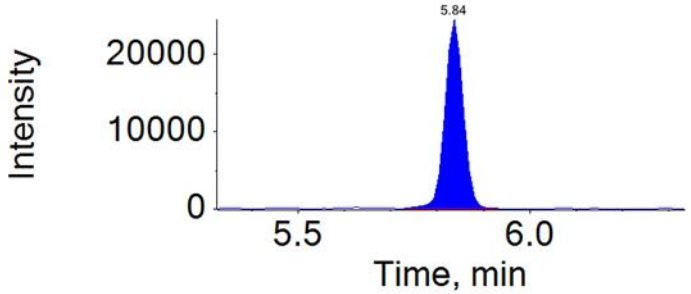
Component: NMeFOSAA
Primary Mass: 570.0 / 419.0



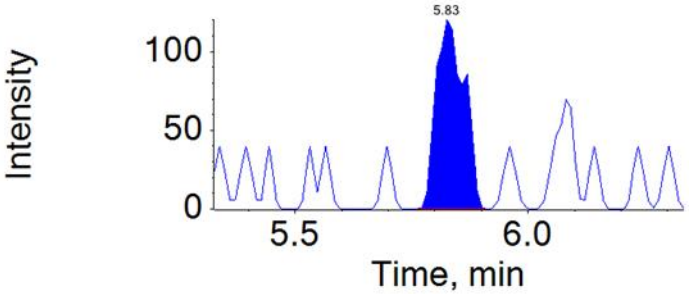
Component: NMeFOSAA_2
Secondary Mass: 570.0 / 483.0



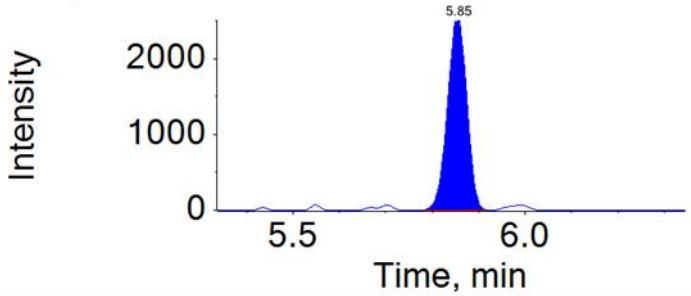
Component: PFUnDA
Primary Mass: 563.0 / 519.0



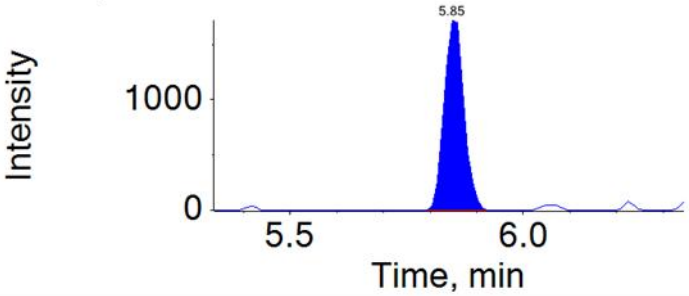
Component: PFUnDA_2
Secondary Mass: 563.0 / 169.0



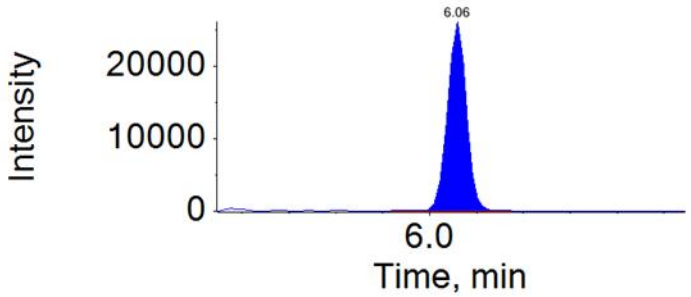
Component: NEtFOSAA
Primary Mass: 584.0 / 419.0



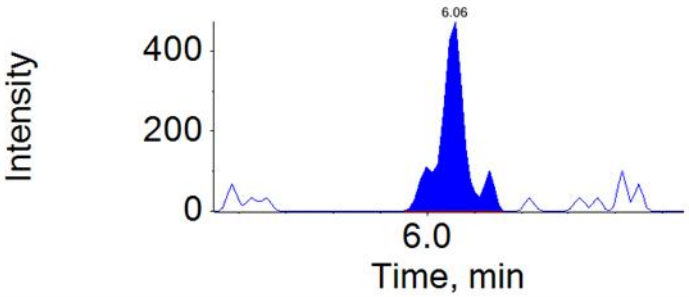
Component: NEtFOSAA_2
Secondary Mass: 584.0 / 526.0



Component: PFDoDA
Primary Mass: 613.0 / 569.0



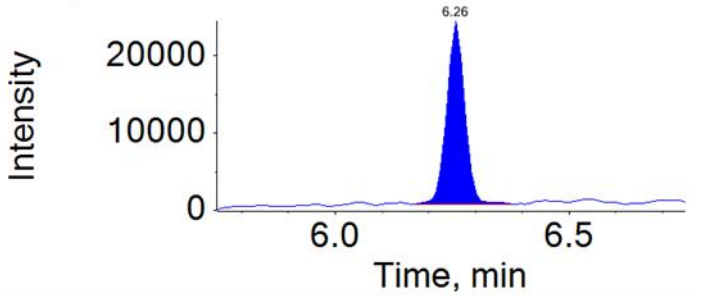
Component: PFDoDA_2
Secondary Mass: 613.0 / 169.0



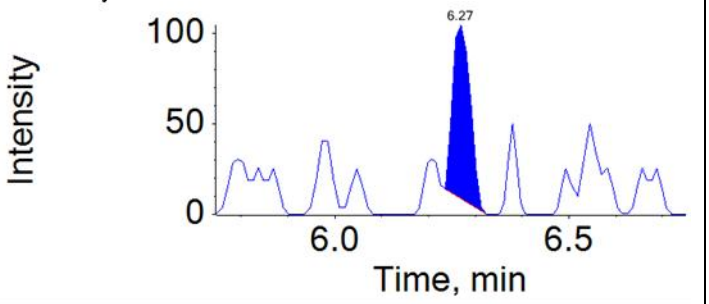
APPROVED
By JPT at 4:01 pm, 11/16/18

REVIEWED
By HMK at 9:07 am, 11/19/18

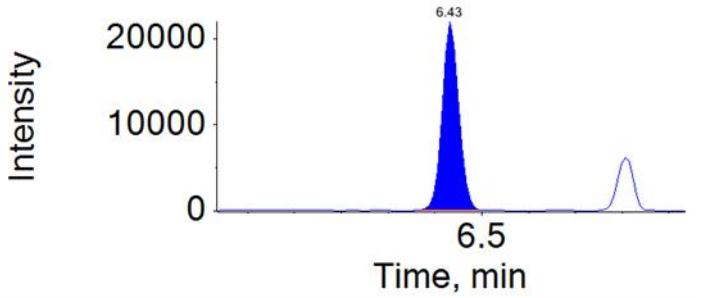
Component: PFTrDA
Primary Mass: 663.0 / 619.0



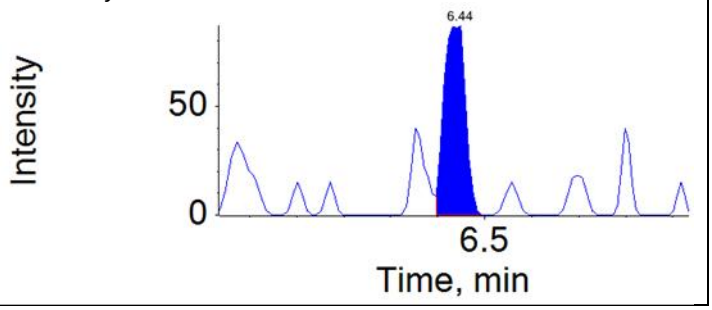
Component: PFTrDA_2
Secondary Mass: 663.0 / 169.0



Component: PFTeDA
Primary Mass: 713.0 / 669.0



Component: PFTeDA_2
Secondary Mass: 713.0 / 169.0



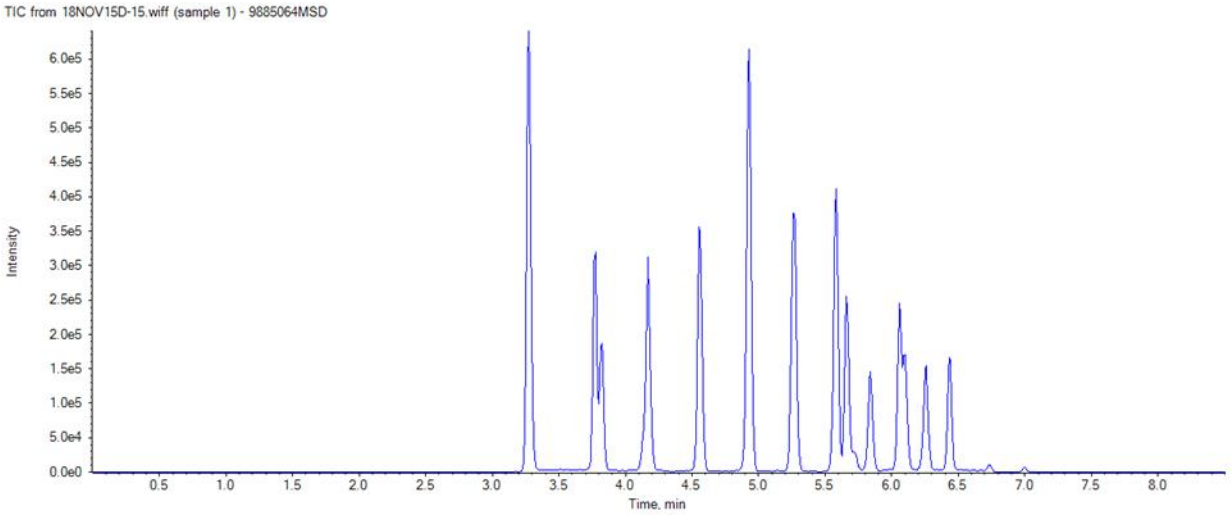
APPROVED
By JPT at 4:01 pm, 11/16/18

REVIEWED
By HMK at 9:07 am, 11/19/18

Matrix Spike Recovery

ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM
Result Table: 18319003 11/16/2018 11:16:11 AM
Acquisition Method: 18AUG13_3uL.dam

Instrument Name:	Sample Name:	Sample ID:	Sample File:	Acquisition Date:
LM27631	9885064MSD	EPA 537 mod QSM 5.1 table B-15 18319003 OU1-GCI-S-01-01 MSD Grab Soil	18NOV15D-15.wiff	2018-11-15T14:09:27



Injection Standard Area Reference File**:** 18NOV15D-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	743432.1	732179.1	2	50	
13C2-PFOA	5.00	506159.1	479663.2	6	50	
13C4-PFOS	4.78	284448.7	269685.3	5	50	
13C2-PFDA	5.00	316777.1	302309.9	5	50	

APPROVED
By JPT at 3:31 pm, 11/16/18

REVIEWED
By HMK at 9:04 am, 11/19/18

Matrix Spike Recovery

ICAL Name: 18NOV12DCAL **Result Table:** 18319003 11/16/2018 11:16:11 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Instrument Name:	Sample Name:	Sample ID:	Sample File:	Acquisition Date:
LM27631	9885064MSD	EPA 537 mod QSM 5.1 table B-15 18319003 OU1-GCI-S-01-01 MSD Grab Soil	18NOV15D-15.wiff	2018-11-15T14:09:27

Analyte Name	Analyte Area	Ext Std Area	Area Ratio	Adj Actual Conc	Sample Result	%REC	% REC Limit	%REC OOS
PFBS	43145.0	331225.1	0.130	1.115	1.147	103	70-130	
PFHxA	96316.7	523267.2	0.184	1.259	1.423	113	70-130	
PFHpA	102137.5	433968.4	0.235	1.259	1.445	115	70-130	
PFHxS	38660.9	253561.8	0.152	1.191	1.369	115	70-130	
PFOA	116176.1	712605.5	0.163	1.259	1.612	128	70-130	
PFOS	38291.4	239821.9	0.160	1.204	1.293	107	70-130	
PFNA	76371.9	386922.5	0.197	1.259	1.318	105	70-130	
PFDA	62819.3	524916.9	0.120	1.259	1.175	93	70-130	
NMeFOSAA	5917.5	62422.2	0.095	1.259	0.992	79	70-130	
PFUnDA	52945.6	211892.4	0.250	1.259	1.210	96	70-130	
NEtFOSAA	4849.9	42866.9	0.113	1.259	1.098	87	70-130	
PFDoDA	56524.9	436450.3	0.130	1.259	1.221	97	70-130	
PFTrDA	45950.9	436450.3	0.105	1.259	1.231	98	70-130	
PFTeDA	39384.3	316951.5	0.124	1.259	1.290	102	70-130	

APPROVED
By JPT at 3:31 pm, 11/16/18

REVIEWED
By HMK at 9:04 am, 11/19/18

Matrix Spike Recovery

ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM
Result Table: 18319003 11/16/2018 11:16:11 AM
Acquisition Method: 18AUG13_3uL.dam

ICAL Name: 18NOV12DCAL **Result Table:** 18319003 11/16/2018 11:16:11 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Sample Name:	9885064MSD			**Data File:**		18NOV15D-15.wiff
Sample ID:	EPA 537 mod QSM 5.1 table B-15 18319003 OU1-GCI-S-01-01 MSD Grab Soil			**Acquis Date:**		2018-11-15T14:09:27
Sample Type:	Quality Control			**Instrument:**		LM27631
Vial Position:	33			**Acquis Method:**		18AUG13_3uL.dam
Injection Vol:	3.00			**Result Table:**		18319003
QMethod File:	18AUG20QM			**ICAL Name:**		18NOV12DCAL
Batch Number:	18319003			**Operator:**		JPT12262
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: 18NOV15D-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	743432.1	732179.1	2	50	
13C2-PFOA	5.0	506159.1	479663.2	6	50	
13C4-PFOS	4.8	284448.7	269685.3	5	50	
13C2-PFDA	5.0	316777.1	302309.9	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
E13C3-PFBS	331225.1	13C3-PFBA	743432.1	0.446	8.611	5.824	68	50-150	
E13C5-PFHxA	523267.2	13C2-PFOA	506159.1	1.034	9.259	6.916	75	50-150	
E13C3-PFHxS	253561.8	13C2-PFOA	506159.1	0.501	8.759	6.366	73	50-150	
E13C4-PFHpA	433968.4	13C2-PFOA	506159.1	0.857	9.259	7.153	77	50-150	
E13C8-PFOA	712605.5	13C2-PFOA	506159.1	1.408	9.259	7.183	78	50-150	
E13C8-PFOS	239821.9	13C4-PFOS	284448.7	0.843	8.852	6.918	78	50-150	
E13C9-PFNA	386922.5	13C4-PFOS	284448.7	1.360	9.259	7.023	76	50-150	
E13C6-PFDA	524916.9	13C2-PFDA	316777.1	1.657	9.259	7.161	77	50-150	
Ed3-NMeFOSAA	62422.2	13C2-PFDA	316777.1	0.197	9.259	6.587	71	50-150	
E13C7-PFUnDA	211892.4	13C2-PFDA	316777.1	0.669	9.259	7.192	78	50-150	
Ed5-NEtFOSAA	42866.9	13C2-PFDA	316777.1	0.135	9.259	5.302	57	50-150	
E13C2-PFDoDA	436450.3	13C2-PFDA	316777.1	1.378	9.259	6.624	72	50-150	
E13C2-PFTeDA	316951.5	13C2-PFDA	316777.1	1.001	9.259	6.505	70	50-150	

APPROVED
By JPT at 3:31 pm, 11/16/18

REVIEWED
By HMK at 9:04 am, 11/19/18

ICAL Name: 18NOV12DCAL **Result Table:** 18319003 11/16/2018 11:16:11 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

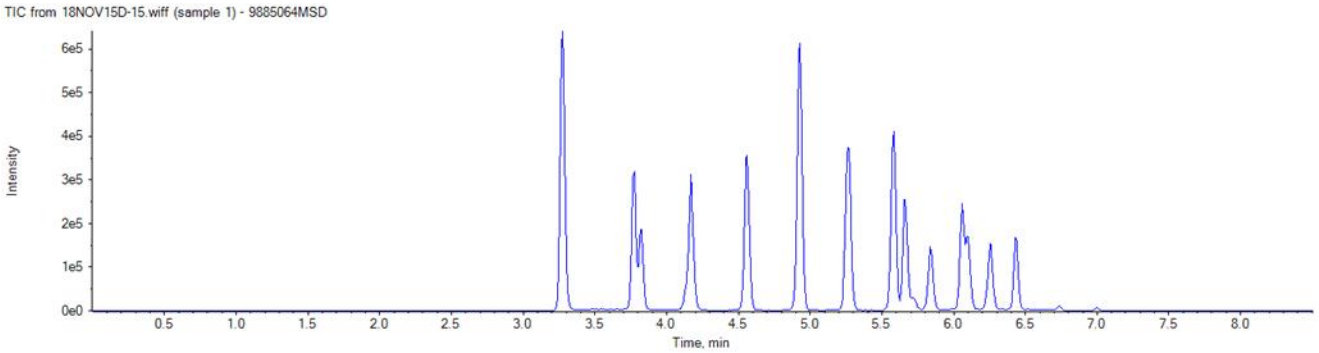
Analyte Quantitation Peak Table

Sample Name: 9885064MSD **Instrument Name:** LM27631 **File Name:** 18NOV15D-15.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	3.82	1.000	43145.0		A	13C3-PFBS	3.82	331225.1	0.130	1.147
PFHxA	4.17	1.000	96316.7		A	13C5-PFHxA	4.17	523267.2	0.184	1.423
PFHpA	4.56	1.000	102137.5		M	13C4-PFHpA	4.56	433968.4	0.235	1.445
PFHxS	4.56	1.000	38660.9		A	13C3-PFHxS	4.56	253561.8	0.152	1.369
PFOA	4.93	1.000	116176.1		A	13C8-PFOA	4.93	712605.5	0.163	1.612
PFOS	5.26	1.000	38291.4		M	13C8-PFOS	5.26	239821.9	0.160	1.293
PFNA	5.27	1.000	76371.9		A	13C9-PFNA	5.27	386922.5	0.197	1.318
PFDA	5.58	1.000	62819.3		A	13C6-PFDA	5.58	524916.9	0.120	1.175
NMeFOSAA	5.72	1.000	5917.5		A	d3-NMeFOSAA	5.72	62422.2	0.095	0.992
PFUnDA	5.84	1.000	52945.6		A	13C7-PFUnDA	5.84	211892.4	0.250	1.210
NEtFOSAA	5.85	1.000	4849.9		A	d5-NEtFOSAA	5.85	42866.9	0.113	1.098
PFDoDA	6.06	1.000	56524.9		A	13C2-PFDoDA	6.06	436450.3	0.130	1.221
PFTrDA	6.26	1.030	45950.9		A	13C2-PFDoDA	6.06	436450.3	0.105	1.231
PFTeDA	6.43	1.000	39384.3		M	13C2-PFTeDA	6.43	316951.5	0.124	1.290

Total Ion Chromatogram

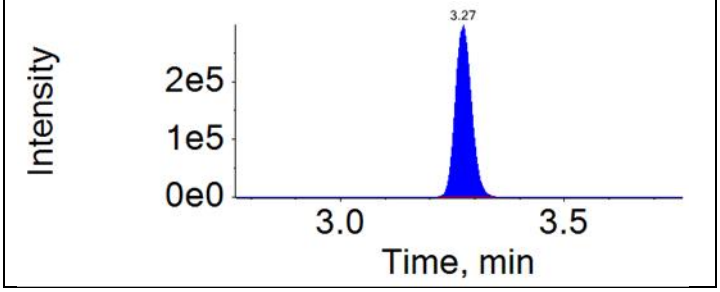


APPROVED
By JPT at 3:31 pm, 11/16/18

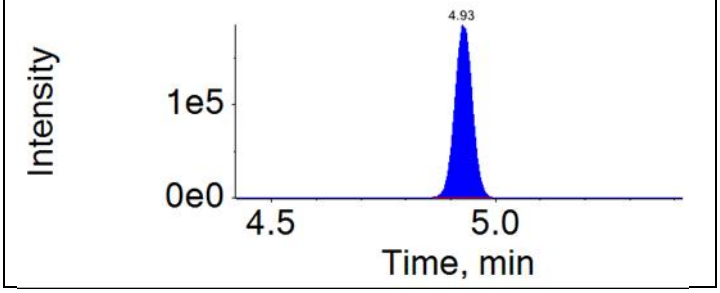
REVIEWED
By HMK at 9:04 am, 11/19/18

ICAL Name: 18NOV12DCAL **Result Table:** 18319003 11/16/2018 11:16:11 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

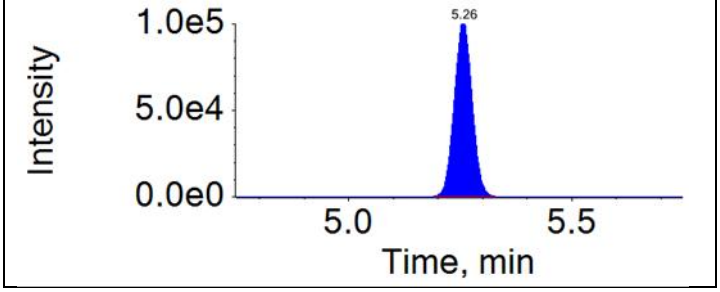
Injection Standard: 13C3-PFBA
216.0 / 172.0



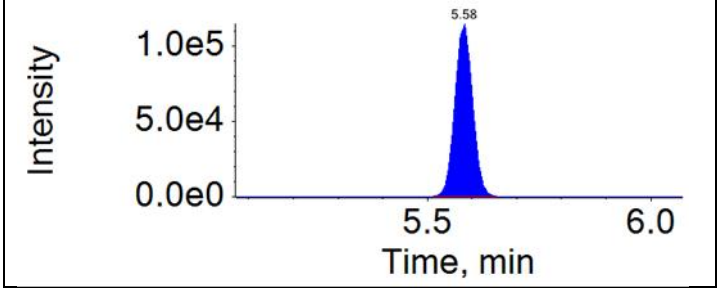
Injection Standard: 13C2-PFOA
415.0 / 370.0



Injection Standard: 13C4-PFOS
503.0 / 80.0



Injection Standard: 13C2-PFDA
515.0 / 470.0

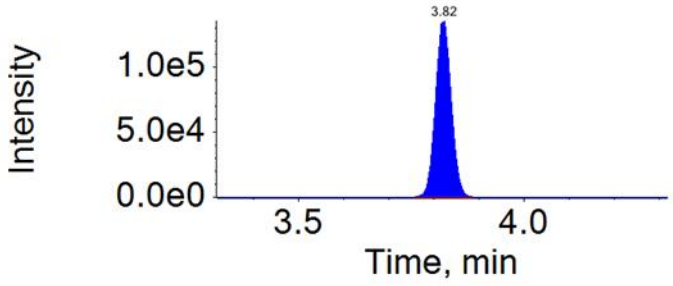


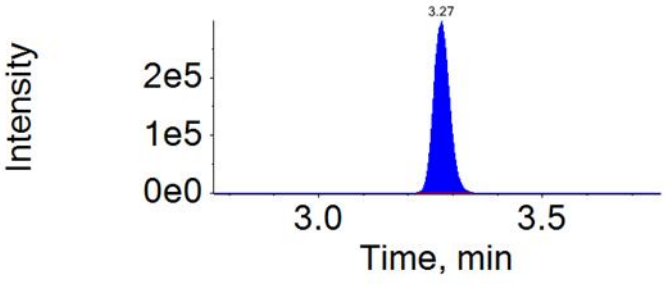
APPROVED
By JPT at 3:31 pm, 11/16/18

REVIEWED
By HMK at 9:04 am, 11/19/18

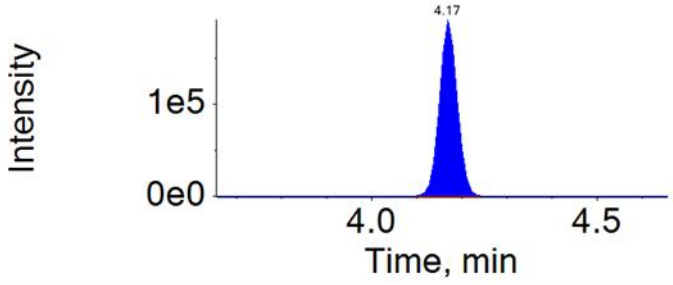
ICAL Name: 18NOV12DCAL **Result Table:** 18319003 11/16/2018 11:16:11 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

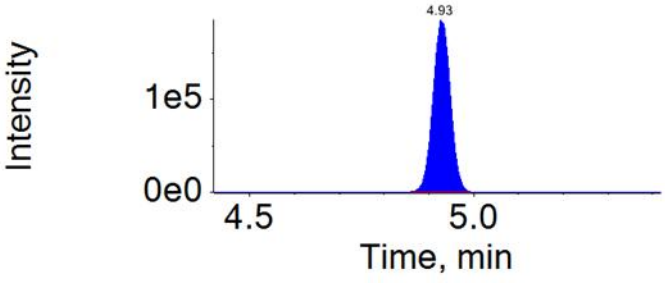
Extraction Standard: E13C3-PFBS	Injection Standard: 13C3-PFBA
302.0 / 80.0	216.0 / 172.0



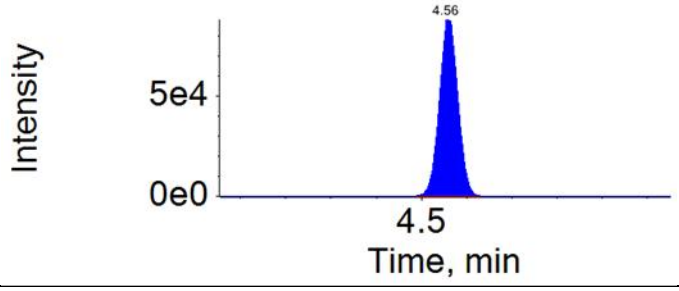


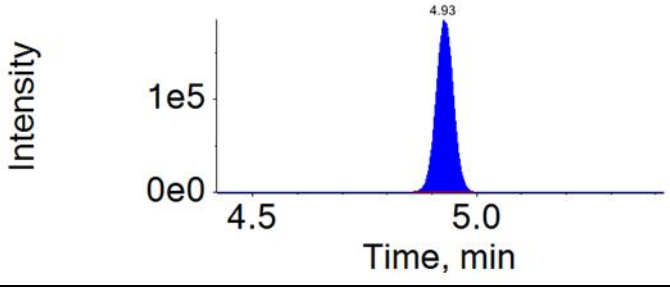
Extraction Standard: E13C5-PFHxA	Injection Standard: 13C2-PFOA
318.0 / 273.0	415.0 / 370.0



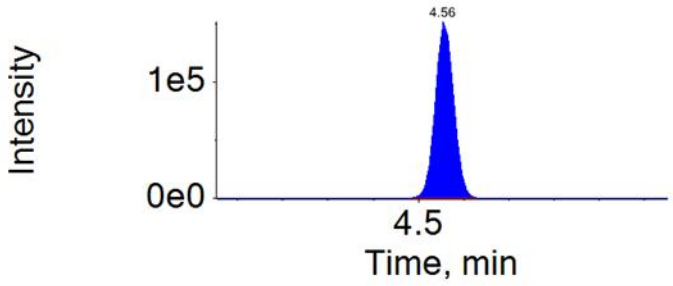


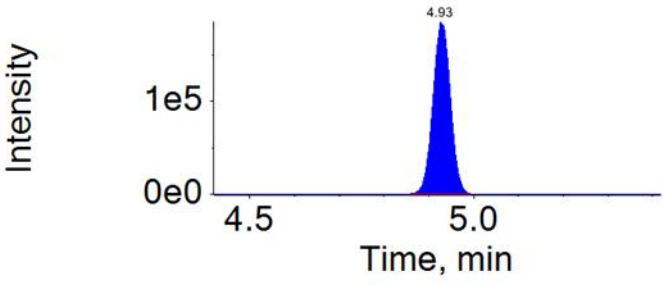
Extraction Standard: E13C3-PFHxS	Injection Standard: 13C2-PFOA
402.0 / 80.0	415.0 / 370.0





Extraction Standard: E13C4-PFHpA	Injection Standard: 13C2-PFOA
367.0 / 322.0	415.0 / 370.0



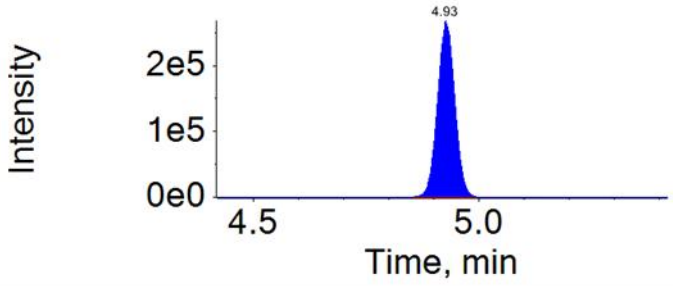


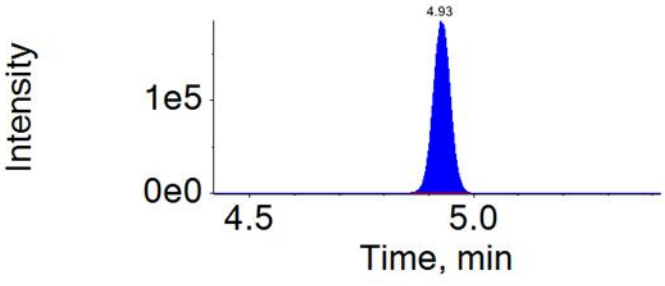
APPROVED
By JPT at 3:31 pm, 11/16/18

REVIEWED
By HMK at 9:04 am, 11/19/18

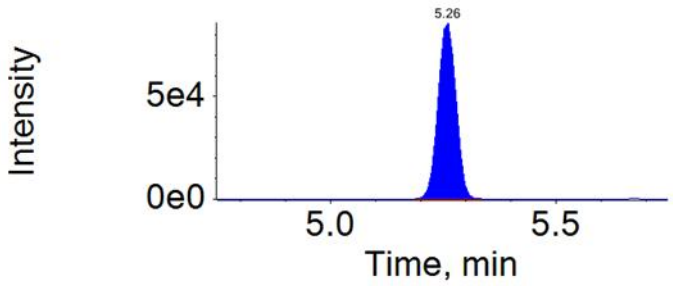
ICAL Name: 18NOV12DCAL **Result Table:** 18319003 11/16/2018 11:16:11 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

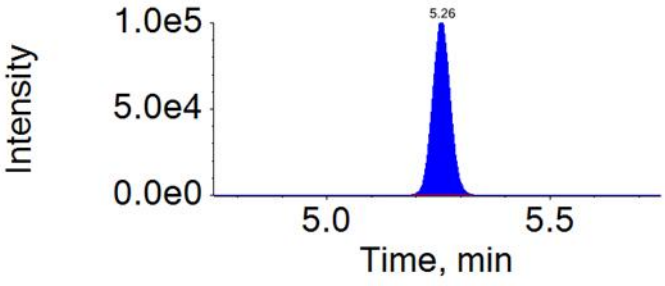
Extraction Standard: E13C8-PFOA	Injection Standard: 13C2-PFOA
421.0 / 376.0	415.0 / 370.0



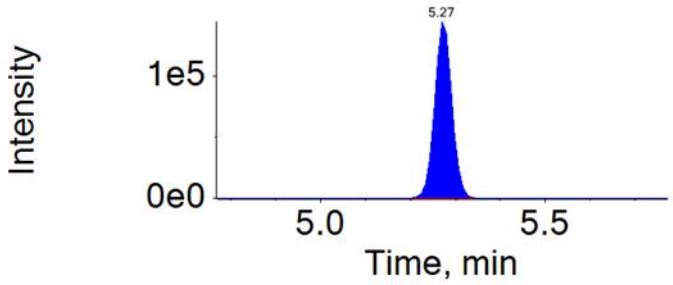


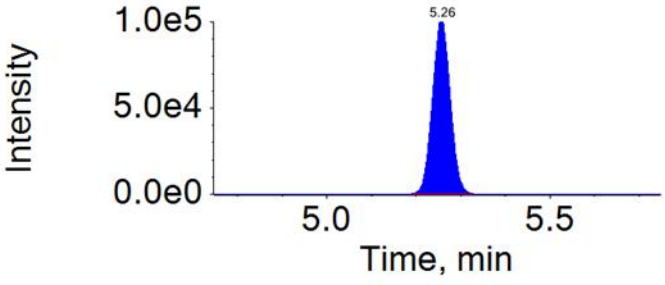
Extraction Standard: E13C8-PFOS	Injection Standard: 13C4-PFOS
507.0 / 80.0	503.0 / 80.0



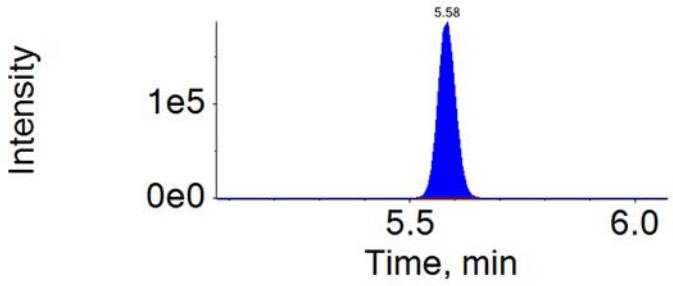


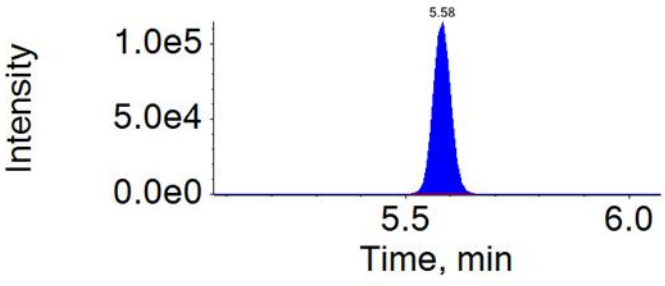
Extraction Standard: E13C9-PFNA	Injection Standard: 13C4-PFOS
472.0 / 427.0	503.0 / 80.0





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

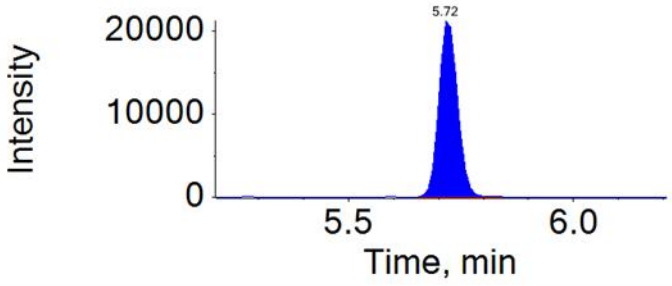
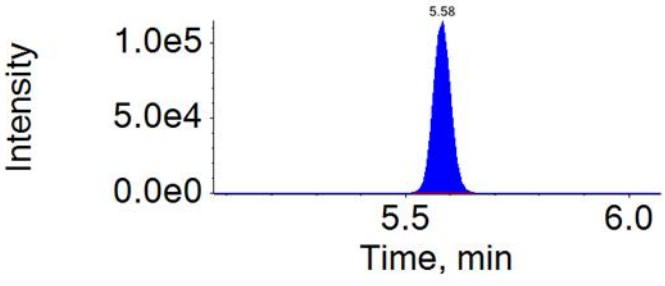


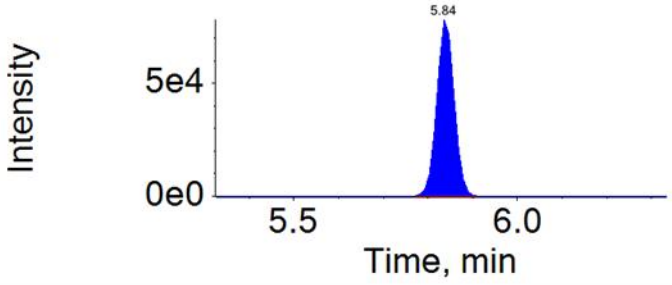
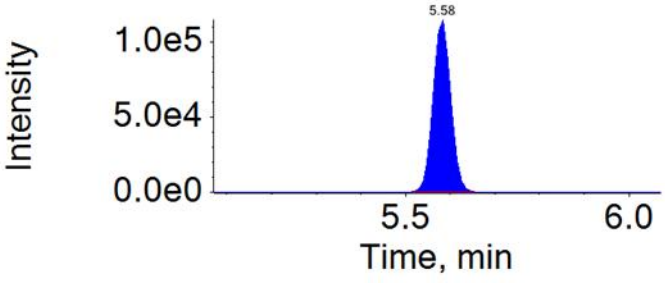


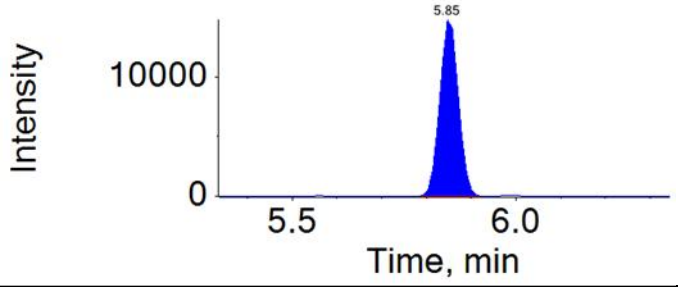
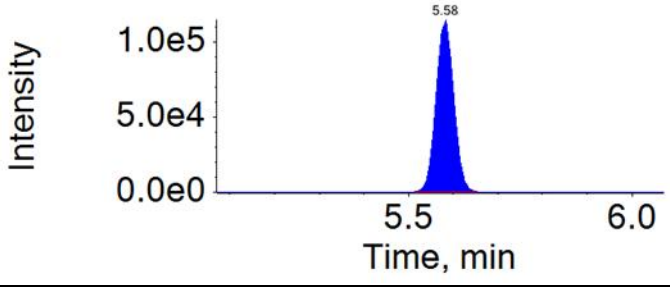
APPROVED
By JPT at 3:31 pm, 11/16/18

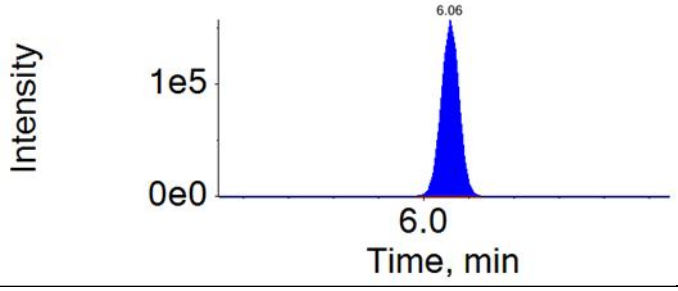
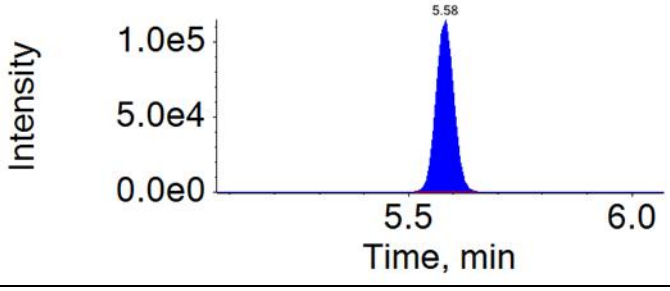
REVIEWED
By HMK at 9:04 am, 11/19/18

ICAL Name: 18NOV12DCAL **Result Table:** 18319003 11/16/2018 11:16:11 AM
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
	

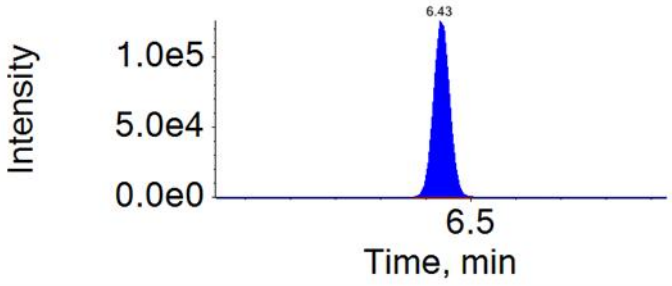
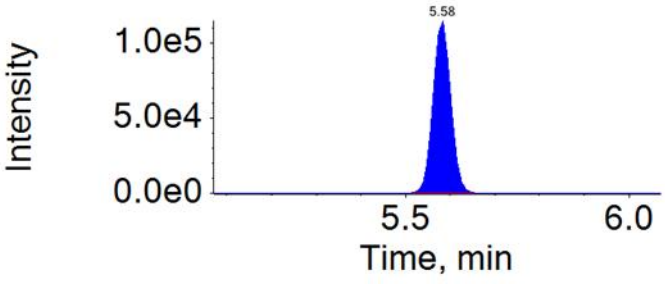
Extraction Standard: Ed5-NEtFOSAA	Injection Standard: 13C2-PFDA
589.0 / 419.0	515.0 / 470.0
	

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

APPROVED
By JPT at 3:31 pm, 11/16/18

REVIEWED
By HMK at 9:04 am, 11/19/18

ICAL Name: 18NOV12DCAL **Result Table:** 18319003 11/16/2018 11:16:11 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

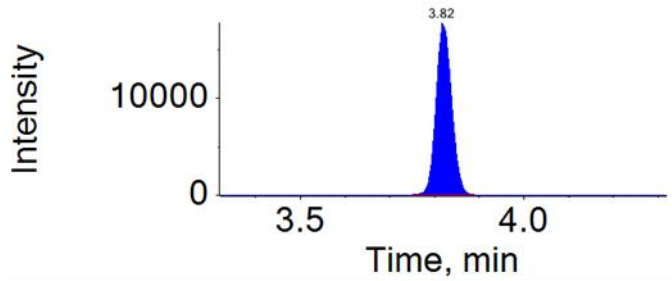
Extraction Standard: E13C2-PFTeDA	Injection Standard: 13C2-PFDA
715.0 / 670.0	515.0 / 470.0
	

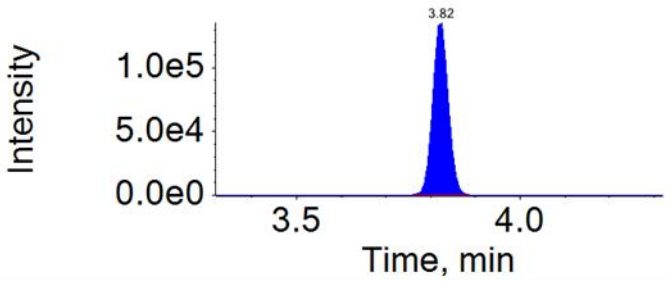
APPROVED
By JPT at 3:31 pm, 11/16/18

REVIEWED
By HMK at 9:04 am, 11/19/18

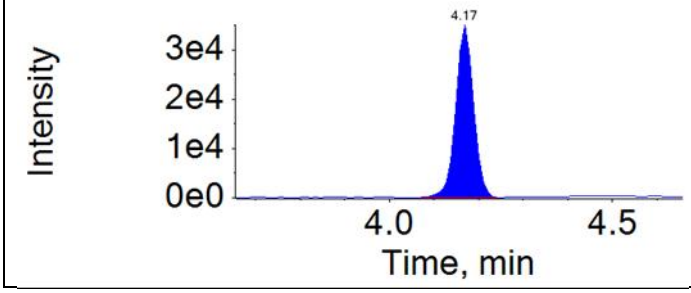
ICAL Name: 18NOV12DCAL **Result Table:** 18319003 11/16/2018 11:16:11 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

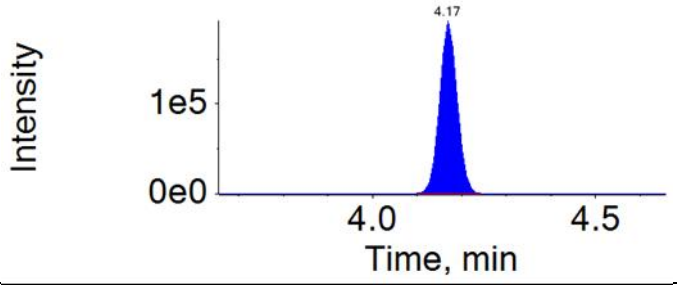
Analyte: PFBS	Extraction Standard: 13C3-PFBS
299.0 / 80.0	302.0 / 80.0



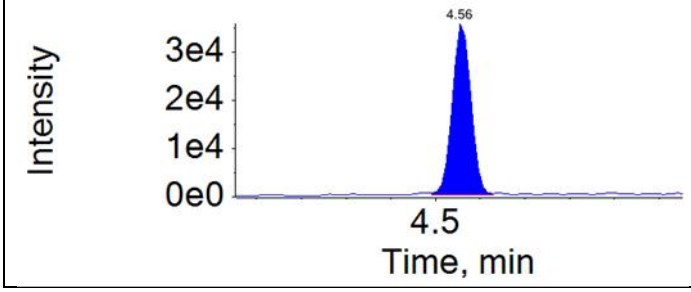


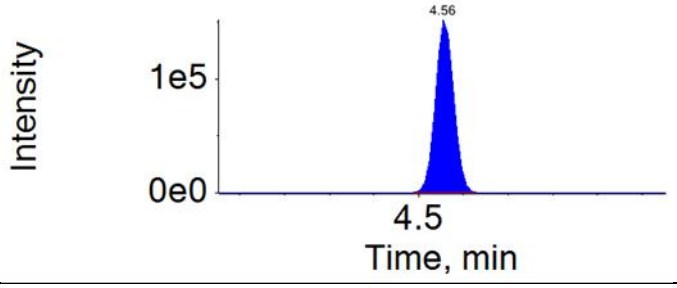
Analyte: PFHxA	Extraction Standard: 13C5-PFHxA
313.0 / 269.0	318.0 / 273.0



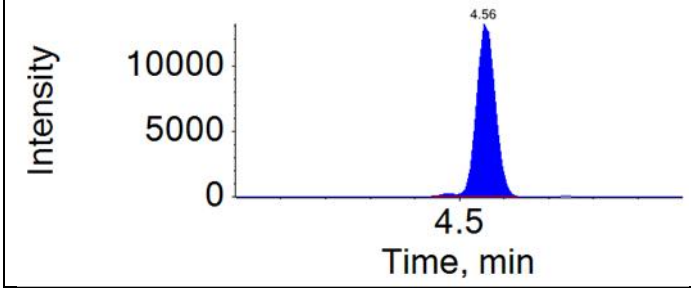


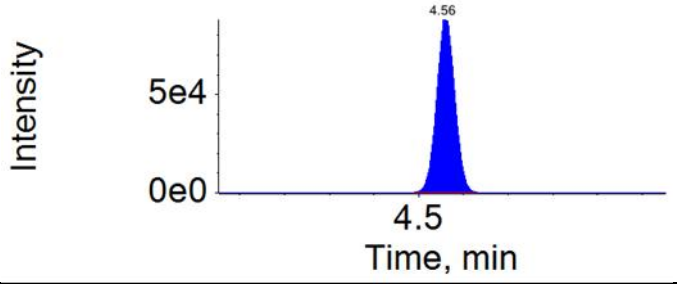
Analyte: PFHpA	Extraction Standard: 13C4-PFHpA
363.0 / 319.0	367.0 / 322.0





Analyte: PFHxS	Extraction Standard: 13C3-PFHxS
399.0 / 80.0	402.0 / 80.0



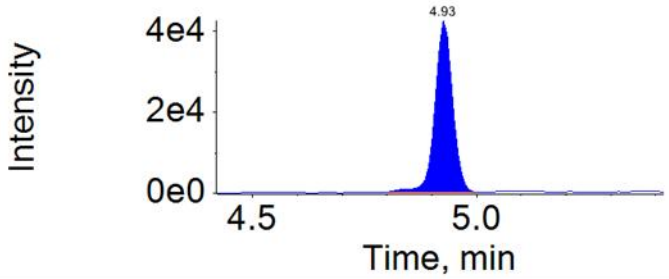


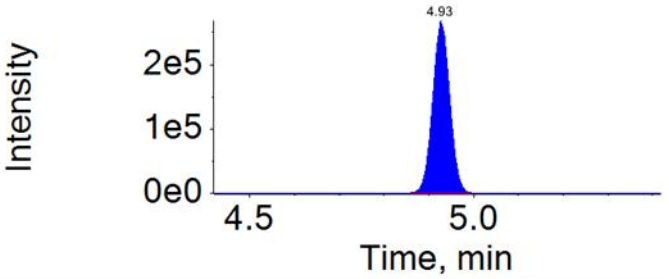
APPROVED
By JPT at 3:31 pm, 11/16/18

REVIEWED
By HMK at 9:04 am, 11/19/18

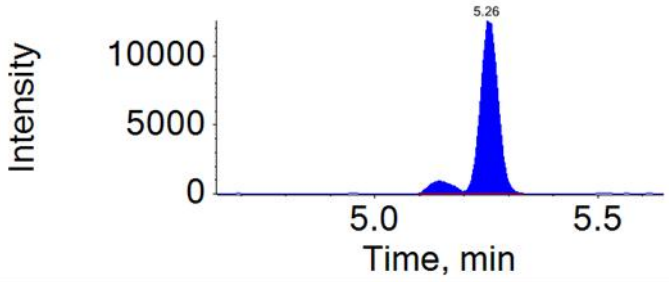
ICAL Name: 18NOV12DCAL **Result Table:** 18319003 11/16/2018 11:16:11 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

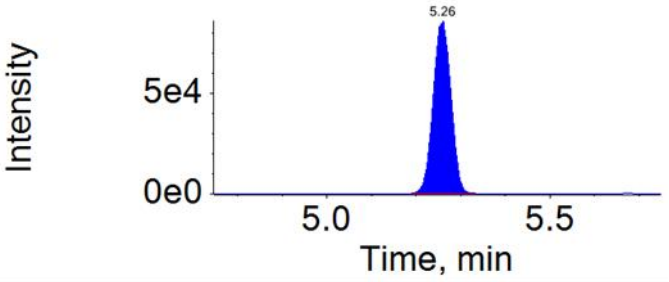
Analyte: PFOA	Extraction Standard: 13C8-PFOA
413.0 / 369.0	421.0 / 376.0



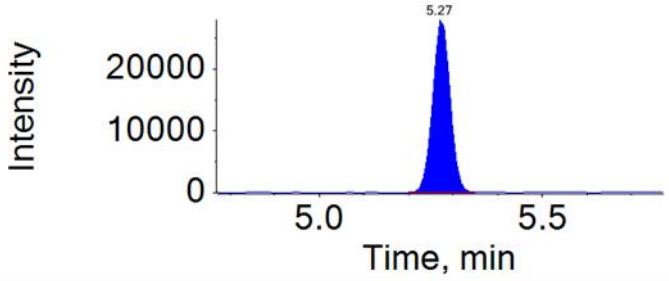


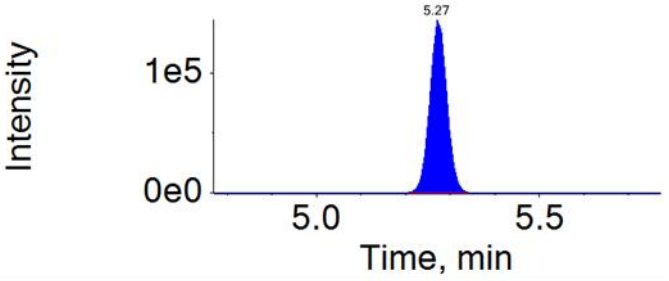
Analyte: PFOS	Extraction Standard: 13C8-PFOS
499.0 / 80.0	507.0 / 80.0



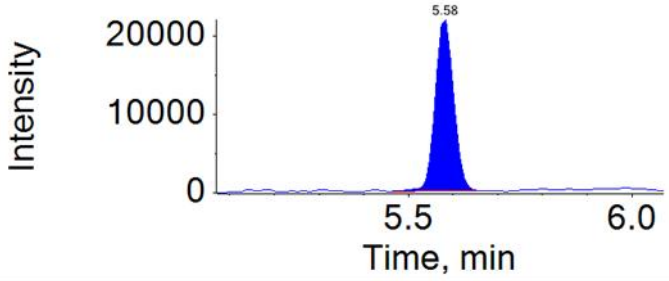


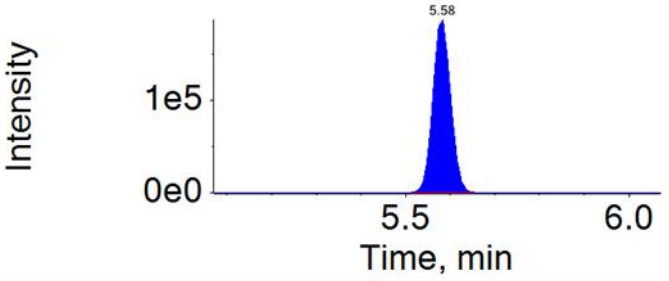
Analyte: PFNA	Extraction Standard: 13C9-PFNA
463.0 / 419.0	472.0 / 427.0





Analyte: PFDA	Extraction Standard: 13C6-PFDA
513.0 / 469.0	519.0 / 474.0



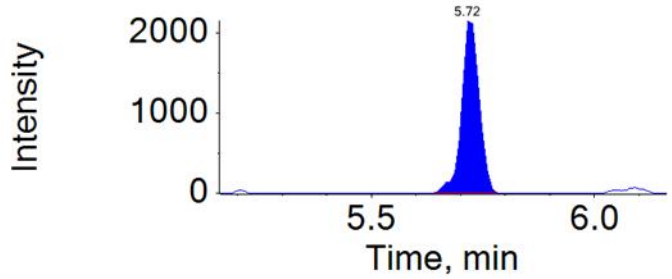


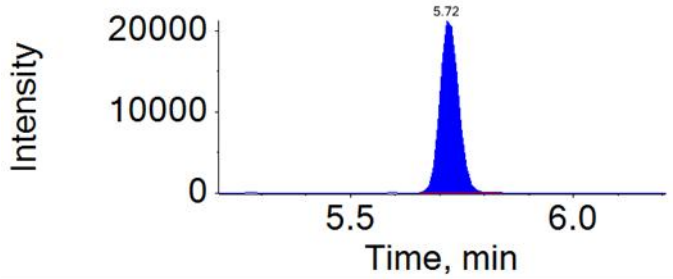
APPROVED
By JPT at 3:31 pm, 11/16/18

REVIEWED
By HMK at 9:04 am, 11/19/18

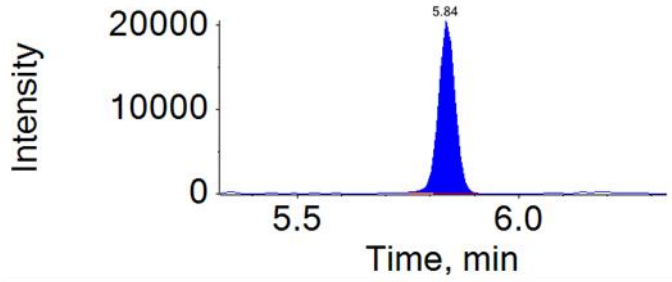
ICAL Name: 18NOV12DCAL **Result Table:** 18319003 11/16/2018 11:16:11 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

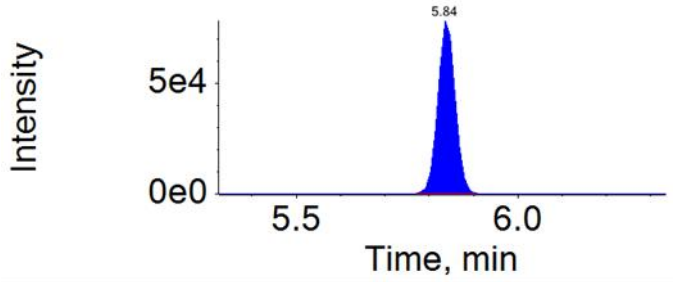
Analyte: NMeFOSAA	Extraction Standard: d3-NMeFOSAA
570.0 / 419.0	573.0 / 419.0



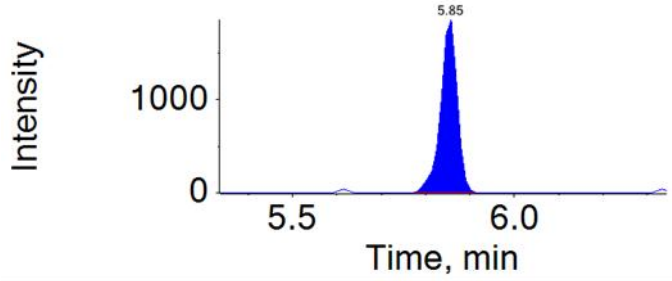


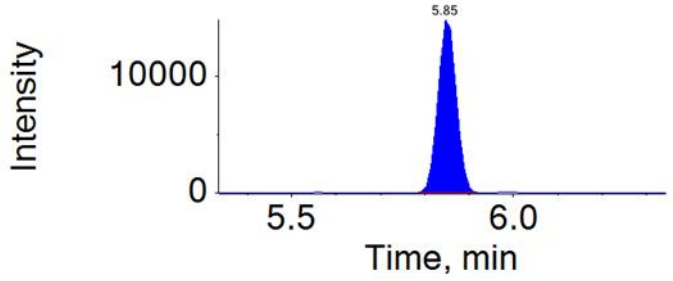
Analyte: PFUnDA	Extraction Standard: 13C7-PFUnDA
563.0 / 519.0	570.0 / 525.0



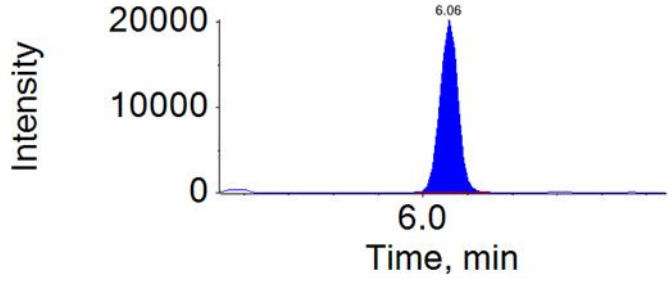


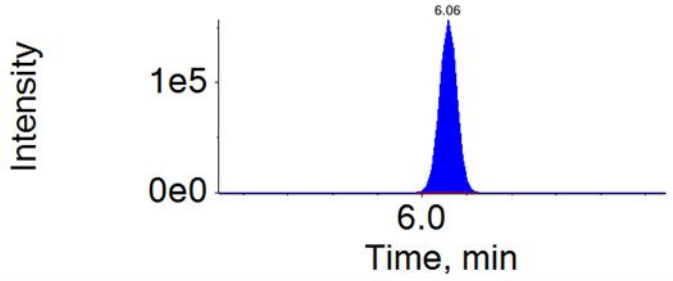
Analyte: NEtFOSAA	Extraction Standard: d5-NEtFOSAA
584.0 / 419.0	589.0 / 419.0





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



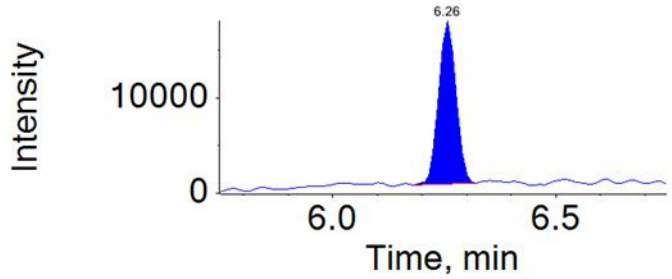


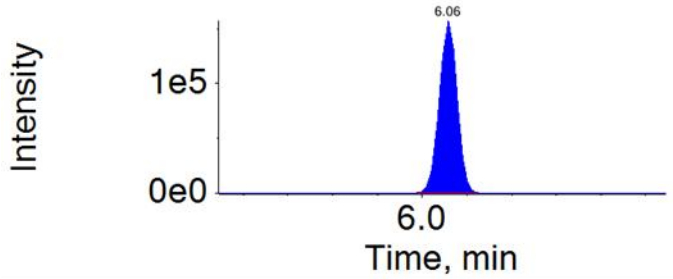
APPROVED
By JPT at 3:31 pm, 11/16/18

REVIEWED
By HMK at 9:04 am, 11/19/18

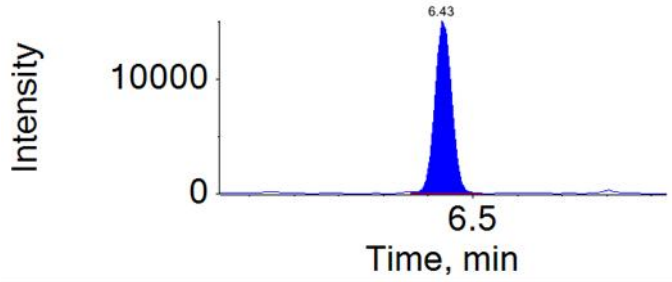
ICAL Name: 18NOV12DCAL **Result Table:** 18319003 11/16/2018 11:16:11 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

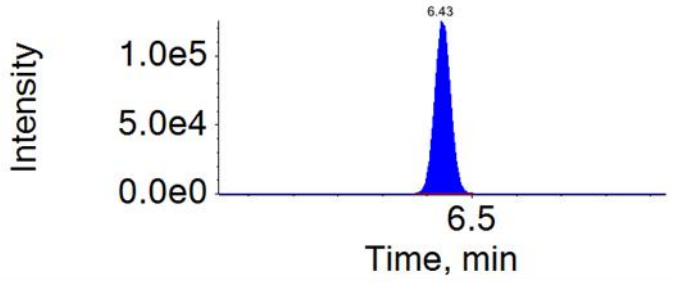
Analyte: PFTrDA	Extraction Standard: 13C2-PFDoDA
663.0 / 619.0	615.0 / 570.0





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



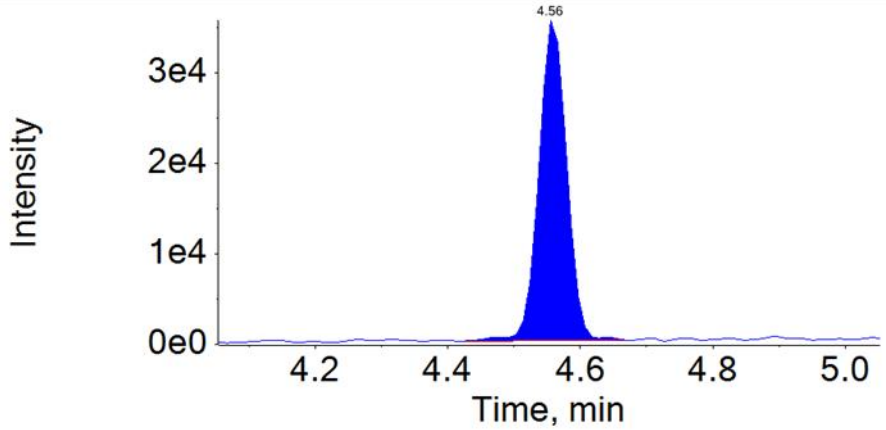


APPROVED
By JPT at 3:31 pm, 11/16/18

REVIEWED
By HMK at 9:04 am, 11/19/18

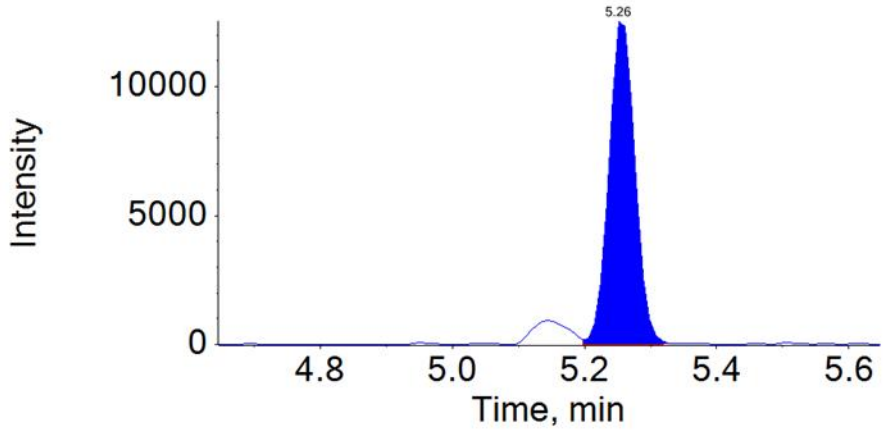
Results Table Name: 18319003
Results Table Date: 11/16/2018 3:25:03 PM
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

Component Name:
PFHpA
RT (min.):
4.56
Peak Area:
103756.0
Mass Range:
363.0 / 319.0
File Name:
18NOV15D-15.wiff
Sample Name:
9885064MSD



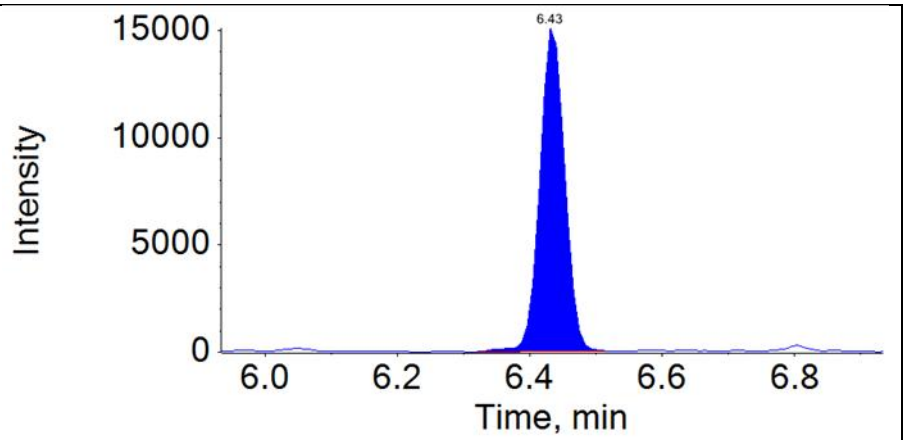
Integration Comment: incorrect integration

Component Name:
PFOS
RT (min.):
5.26
Peak Area:
34504.4
Mass Range:
499.0 / 80.0
File Name:
18NOV15D-15.wiff
Sample Name:
9885064MSD



Integration Comment: incorrect integration

Component Name:
PFTeDA
RT (min.):
6.43
Peak Area:
39585.9
Mass Range:
713.0 / 669.0
File Name:
18NOV15D-15.wiff
Sample Name:
9885064MSD

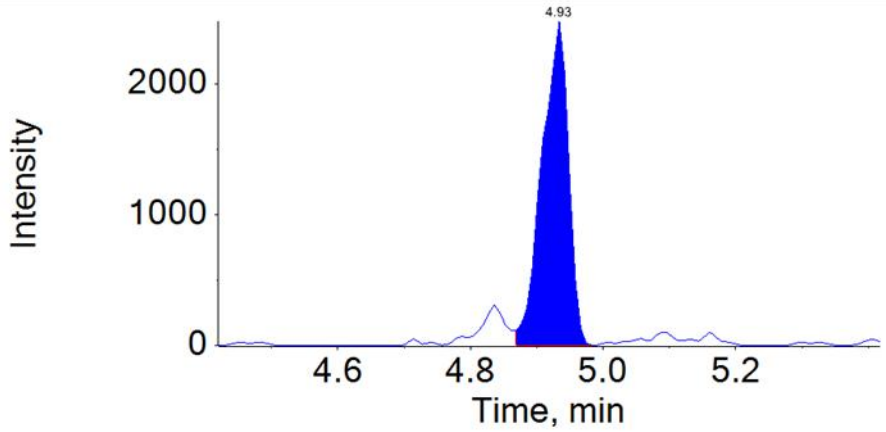


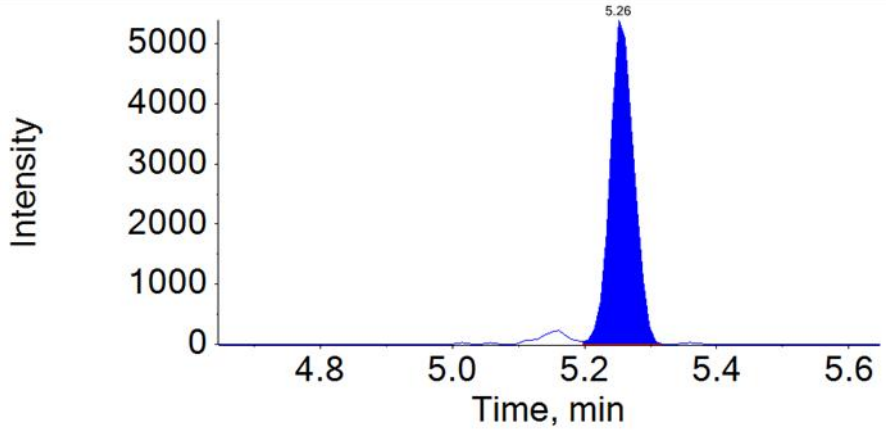
Integration Comment: incorrect integration

APPROVED
By JPT at 3:31 pm, 11/16/18

REVIEWED
By HMK at 9:04 am, 11/19/18

Results Table Name: 18319003
Results Table Date: 11/16/2018 3:25:03 PM
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

Component Name: PFOA_2 **RT (min.):** 4.93 **Peak Area:** 6896.2 **Mass Range:** 413.0 / 169.0 **File Name:** 18NOV15D-15.wiff **Sample Name:** 9885064MSD	 **Integration Comment:** incorrect integration

Component Name: PFOS_2 **RT (min.):** 5.26 **Peak Area:** 13553.1 **Mass Range:** 499.0 / 99.0 **File Name:** 18NOV15D-15.wiff **Sample Name:** 9885064MSD	 **Integration Comment:** incorrect integration

APPROVED
By JPT at 3:31 pm, 11/16/18

REVIEWED
By HMK at 9:04 am, 11/19/18

Results Table Name: 18319003
Results Table Date: 11/16/2018 3:25:03 PM

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

APPROVED
By JPT at 3:31 pm, 11/16/18

REVIEWED
By HMK at 9:04 am, 11/19/18

Ion Ratio Report

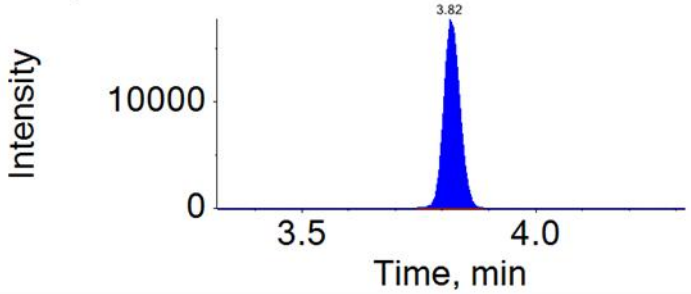
Sample Name: 9885064MSD **Instrument Name:** LM27631 **File Name:** 18NOV15D-15.wiff

Component Name	RT	RRT	Analyte Area Response	Int Typ	Expected Ion Ratio	Ion Ratio	Ion Ratio % Diff	Ion Ratio Limit	Ion Ratio OOS
PFBS	3.82	1.00	43145.0	A	N/A	1.0000			
PFBS_2	3.82	1.00	15327.3	A	N/A	0.3553	-3	50	
PFHxA	4.17	1.00	96316.7	A	N/A	1.0000			
PFHxA_2	4.17	1.00	558.0	A	N/A	0.0058	-51	50	OOS
PFHpA	4.56	1.00	102137.5	M	N/A	1.0000			
PFHpA_2	4.56	1.00	5079.9	A	N/A	0.0497	-12	50	
PFHxS	4.56	1.00	38660.9	A	N/A	1.0000			
PFHxS_2	4.56	1.00	13195.2	A	N/A	0.3413	-1	50	
PFOA	4.93	1.00	116176.1	A	N/A	1.0000			
PFOA_2	4.93	1.00	7742.2	M	N/A	0.0666	17	50	
PFOS	5.26	1.00	38291.4	M	N/A	1.0000			
PFOS_2	5.26	1.00	14275.0	M	N/A	0.3728	26	50	
PFNA	5.27	1.00	76371.9	A	N/A	1.0000			
PFNA_2	5.27	1.00	1862.1	A	N/A	0.0244	8	50	
PFDA	5.58	1.00	62819.3	A	N/A	1.0000			
PFDA_2	5.59	1.00	237.3	A	N/A	0.0038	-52	50	OOS
NMeFOSAA	5.72	1.00	5917.5	A	N/A	1.0000			
NMeFOSAA_2	5.73	1.00	1903.4	A	N/A	0.3217	24	50	
PFUnDA	5.84	1.00	52945.6	A	N/A	1.0000			
PFUnDA_2	5.82	1.00	259.4	A	N/A	0.0049	-11	50	
NEtFOSAA	5.85	1.00	4849.9	A	N/A	1.0000			
NEtFOSAA_2	5.85	1.00	3041.4	A	N/A	0.6271	-13	50	
PFDoDA	6.06	1.00	56524.9	A	N/A	1.0000			
PFDoDA_2	6.06	1.00	1458.0	A	N/A	0.0258	67	50	OOS
PFTrDA	6.26	1.03	45950.9	A	N/A	1.0000			
PFTrDA_2	6.26	1.03	854.1	A	N/A	0.0186	118	50	OOS
PFTeDA	6.43	1.00	39384.3	M	N/A	1.0000			
PFTeDA_2	6.43	1.00	310.5	A	N/A	0.0079	27	50	

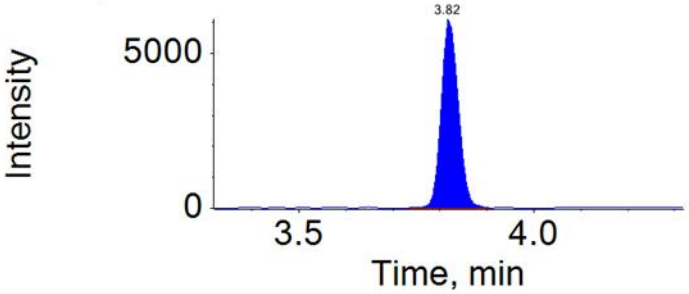
APPROVED
By JPT at 3:31 pm, 11/16/18

REVIEWED
By HMK at 9:04 am, 11/19/18

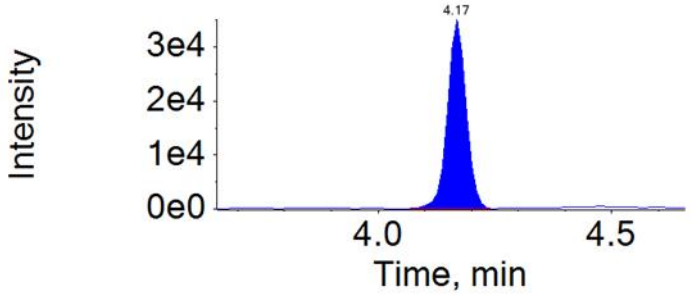
Component: PFBS
Primary Mass: 299.0 / 80.0



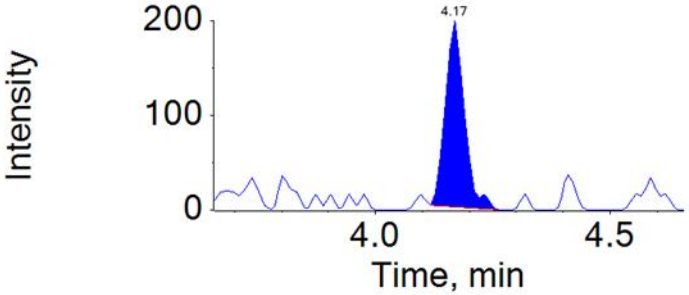
Component: PFBS_2
Secondary Mass: 299.0 / 99.0



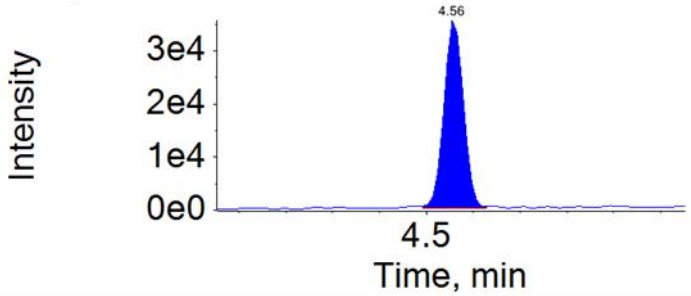
Component: PFHxA
Primary Mass: 313.0 / 269.0



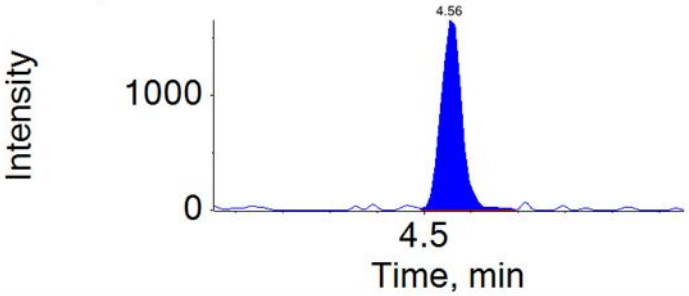
Component: PFHxA_2
Secondary Mass: 313.0 / 119.0



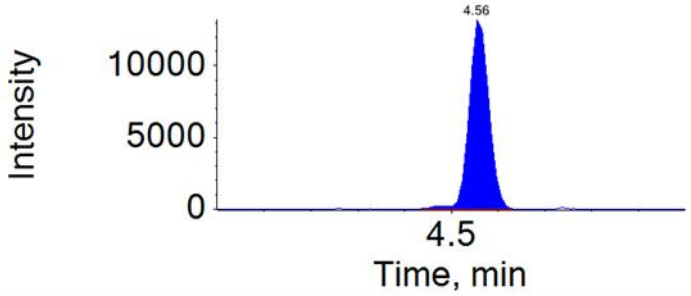
Component: PFHpA
Primary Mass: 363.0 / 319.0



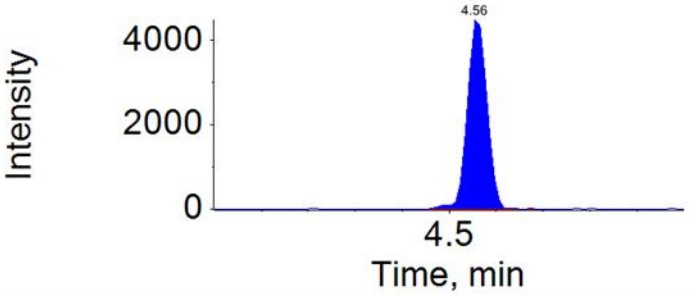
Component: PFHpA_2
Secondary Mass: 363.0 / 169.0



Component: PFHxS
Primary Mass: 399.0 / 80.0



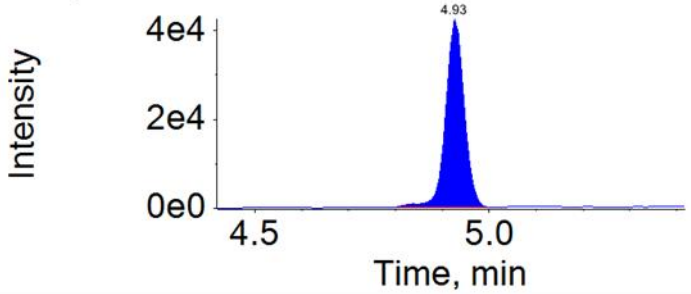
Component: PFHxS_2
Secondary Mass: 399.0 / 99.0



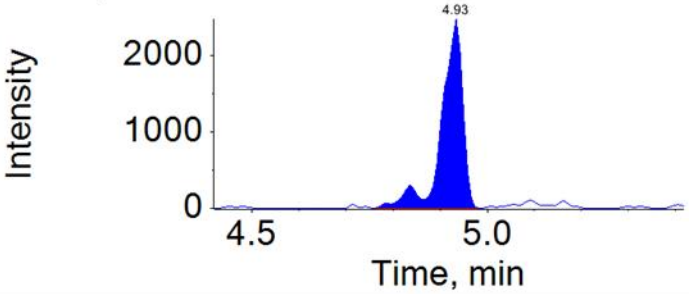
APPROVED
By JPT at 3:31 pm, 11/16/18

REVIEWED
By HMK at 9:04 am, 11/19/18

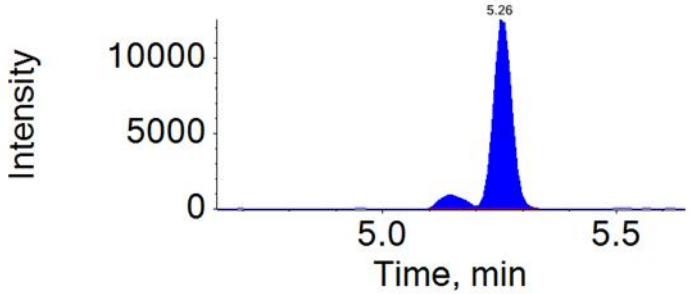
Component: PFOA
Primary Mass: 413.0 / 369.0



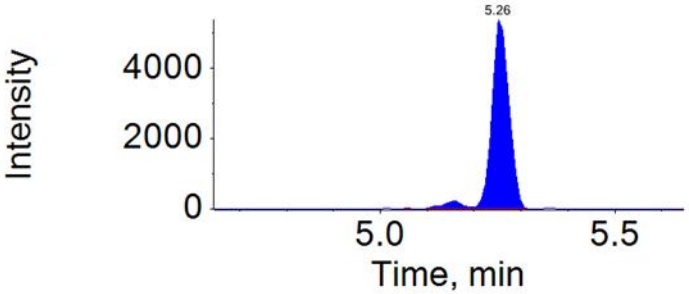
Component: PFOA_2
Secondary Mass: 413.0 / 169.0



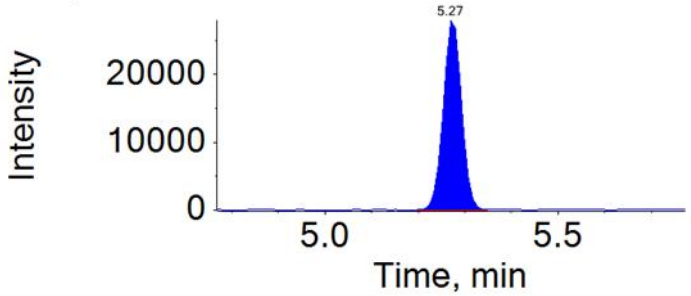
Component: PFOS
Primary Mass: 499.0 / 80.0



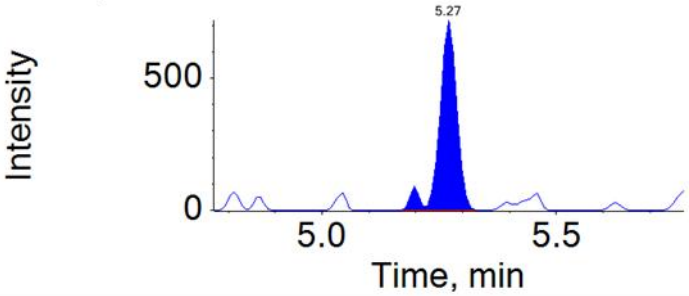
Component: PFOS_2
Secondary Mass: 499.0 / 99.0



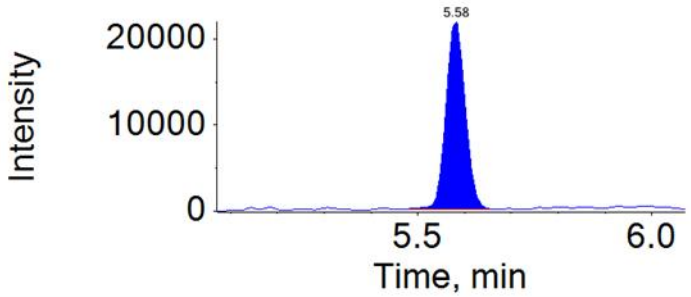
Component: PFNA
Primary Mass: 463.0 / 419.0



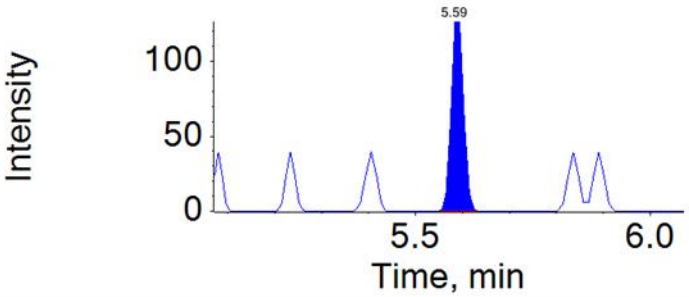
Component: PFNA_2
Secondary Mass: 463.0 / 169.0



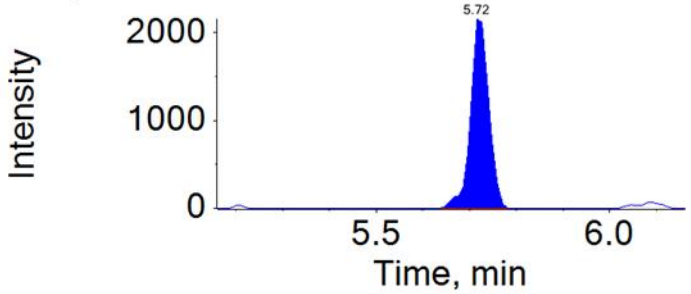
Component: PFDA
Primary Mass: 513.0 / 469.0



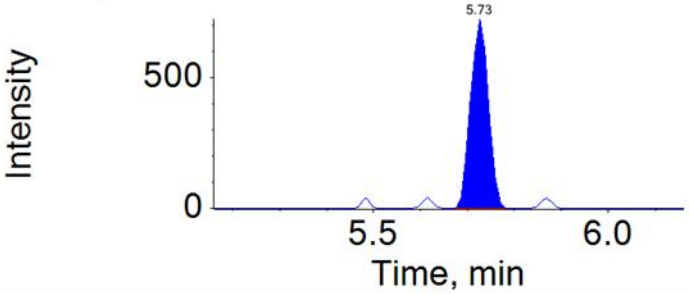
Component: PFDA_2
Secondary Mass: 513.0 / 169.0



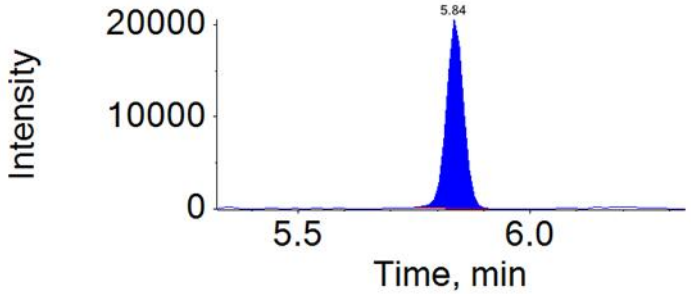
Component: NMeFOSAA
Primary Mass: 570.0 / 419.0



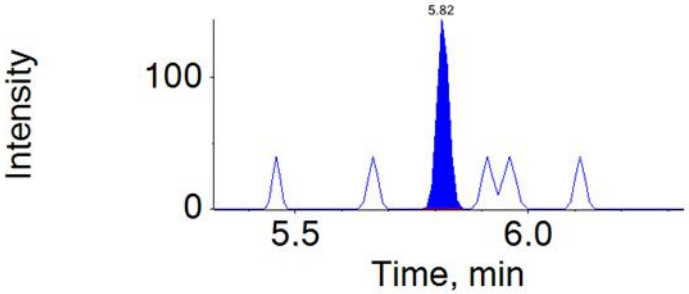
Component: NMeFOSAA_2
Secondary Mass: 570.0 / 483.0



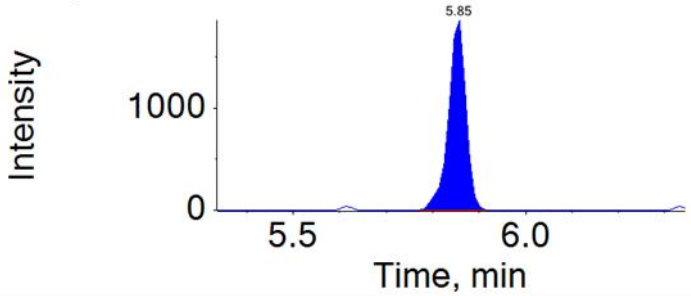
Component: PFUnDA
Primary Mass: 563.0 / 519.0



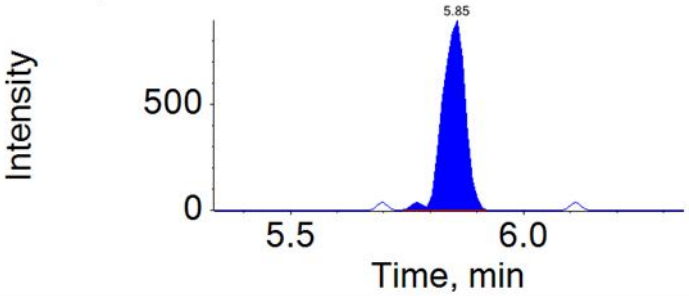
Component: PFUnDA_2
Secondary Mass: 563.0 / 169.0



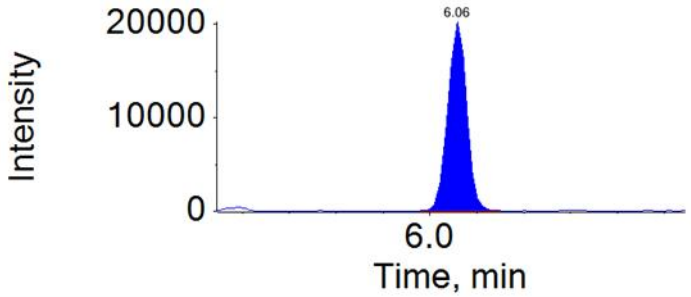
Component: NEtFOSAA
Primary Mass: 584.0 / 419.0



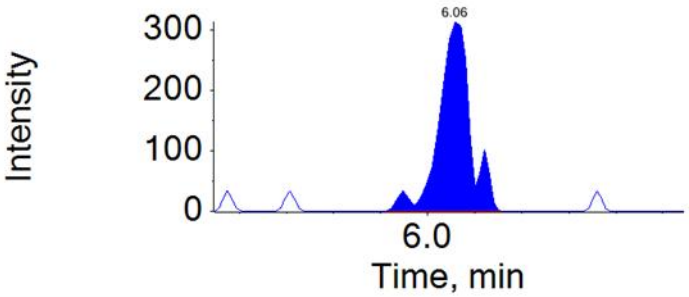
Component: NEtFOSAA_2
Secondary Mass: 584.0 / 526.0



Component: PFDoDA
Primary Mass: 613.0 / 569.0



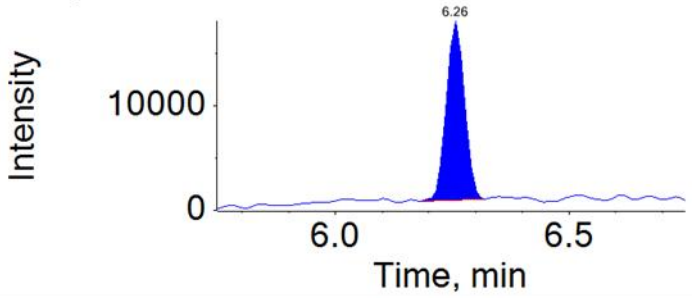
Component: PFDoDA_2
Secondary Mass: 613.0 / 169.0



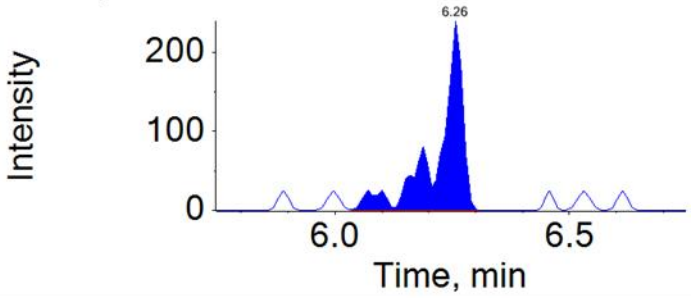
APPROVED
By JPT at 3:31 pm, 11/16/18

REVIEWED
By HMK at 9:04 am, 11/19/18

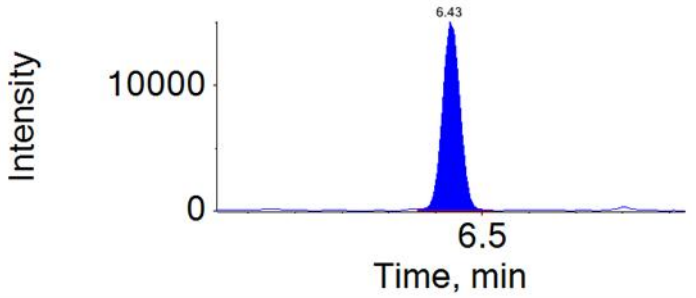
Component: PFTrDA
Primary Mass: 663.0 / 619.0



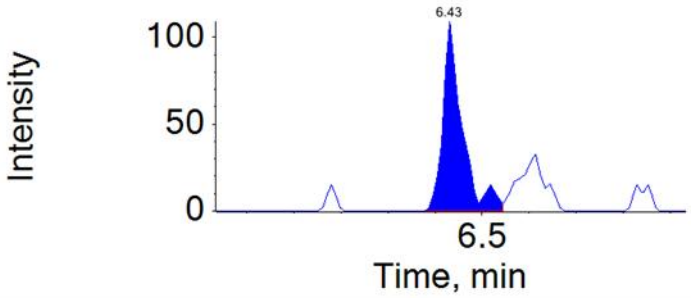
Component: PFTrDA_2
Secondary Mass: 663.0 / 169.0



Component: PFTeDA
Primary Mass: 713.0 / 669.0



Component: PFTeDA_2
Secondary Mass: 713.0 / 169.0



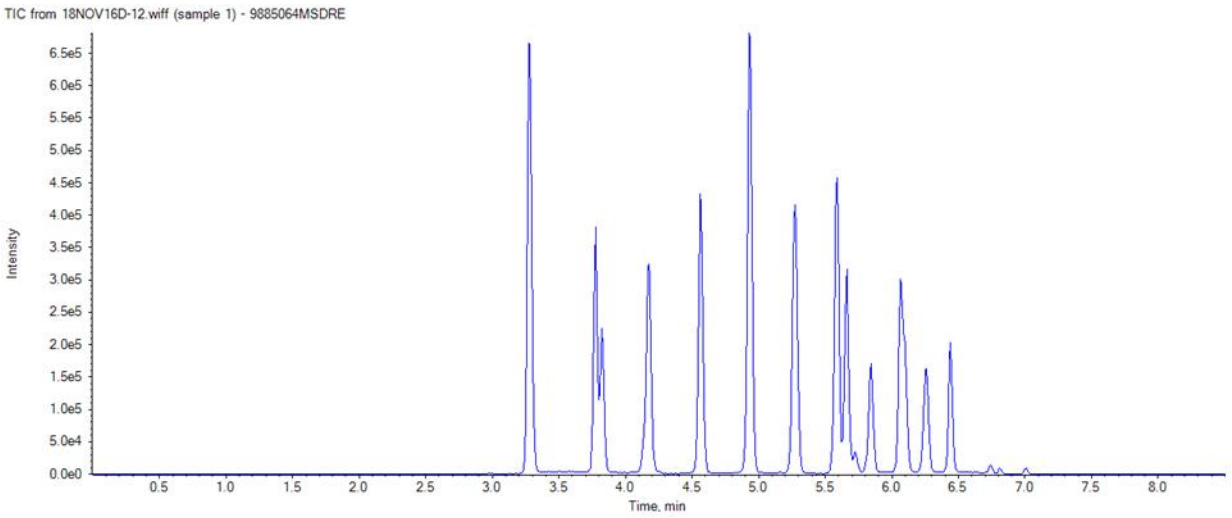
APPROVED
By JPT at 3:31 pm, 11/16/18

REVIEWED
By HMK at 9:04 am, 11/19/18

Matrix Spike Recovery

ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM
Result Table: 18311021 11/16/2018 3:49:12 PM
Acquisition Method: 18AUG13_3uL.dam

Instrument Name:	Sample Name:	Sample ID:	Sample File:	Acquisition Date:
LM27631	9885064MSDRE	EPA 537 mod QSM 5.1 table B-15 18311021 OU1-GCI-S-01-01 MSD Grab Soil	18NOV16D-12.wiff	2018-11-16T11:53:22



Injection Standard Area Reference File**:** 18NOV16D-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	753909.5	707280.6	7	50	
13C2-PFOA	5.00	540864.5	484265.4	12	50	
13C4-PFOS	4.78	270466.8	256987.3	5	50	
13C2-PFDA	5.00	357681.1	302418.6	18	50	

APPROVED
By JPT at 4:01 pm, 11/16/18

REVIEWED
By HMK at 9:07 am, 11/19/18

Matrix Spike Recovery

ICAL Name: 18NOV12DCAL **Result Table:** 18311021 11/16/2018 3:49:12 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Instrument Name:	Sample Name:	Sample ID:	Sample File:	Acquisition Date:
LM27631	9885064MSDRE	EPA 537 mod QSM 5.1 table B-15 18311021 OU1-GCI-S-01-01 MSD Grab Soil	18NOV16D-12.wiff	2018-11-16T11:53:22

Analyte Name	Analyte Area	Ext Std Area	Area Ratio	Adj Actual Conc	Sample Result	%REC	% REC Limit	%REC OOS
PFBS	55900.0	371710.9	0.150	1.204	1.431	119	70-130	
PFHxA	116985.8	617965.3	0.189	1.360	1.581	116	70-130	
PFHpA	126738.4	484383.7	0.262	1.360	1.735	128	70-130	
PFHxS	49212.7	287597.5	0.171	1.286	1.659	129	70-130	
PFOA	137251.8	795047.3	0.173	1.360	1.844	136	70-130	OOS
PFOS	50980.6	242615.4	0.210	1.300	1.838	141	70-130	OOS
PFNA	103378.4	442194.3	0.234	1.360	1.686	124	70-130	
PFDA	83574.6	566452.6	0.148	1.360	1.564	115	70-130	
NMeFOSAA	9106.4	66178.2	0.138	1.360	1.555	114	70-130	
PFUnDA	71533.3	236984.4	0.302	1.360	1.578	116	70-130	
NEtFOSAA	8084.1	47433.3	0.170	1.360	1.787	131	70-130	OOS
PFDoDA	76930.9	491324.8	0.157	1.360	1.595	117	70-130	
PFTrDA	61956.3	491324.8	0.126	1.360	1.592	117	70-130	
PFTeDA	49619.7	352821.9	0.141	1.360	1.577	116	70-130	

APPROVED
By JPT at 4:01 pm, 11/16/18

REVIEWED
By HMK at 9:07 am, 11/19/18

Matrix Spike Recovery

ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM
Result Table: 18311021 11/16/2018 3:49:12 PM
Acquisition Method: 18AUG13_3uL.dam

APPROVED
By JPT at 4:01 pm, 11/16/18

REVIEWED
By HMK at 9:07 am, 11/19/18

ICAL Name: 18NOV12DCAL **Result Table:** 18311021 11/16/2018 3:49:12 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Sample Name:	9885064MSDRE			**Data File:**		18NOV16D-12.wiff
Sample ID:	EPA 537 mod QSM 5.1 table B-15 18311021 OU1-GCI-S-01-01 MSD Grab Soil			**Acquis Date:**		2018-11-16T11:53:22
Sample Type:	Quality Control			**Instrument:**		LM27631
Vial Position:	44			**Acquis Method:**		18AUG13_3uL.dam
Injection Vol:	3.00			**Result Table:**		18311021
QMethod File:	18AUG20QM			**ICAL Name:**		18NOV12DCAL
Batch Number:	18311021			**Operator:**		JPT12262
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: 18NOV16D-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	753909.5	707280.6	7	50	
13C2-PFOA	5.0	540864.5	484265.4	12	50	
13C4-PFOS	4.8	270466.8	256987.3	5	50	
13C2-PFDA	5.0	357681.1	302418.6	18	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	371710.9	13C3-PFBA	753909.5	0.493	9.300	6.961	75	50-150	
E13C5-PFHxA	617965.3	13C2-PFOA	540864.5	1.143	10.000	8.255	83	50-150	
E13C3-PFHxS	287597.5	13C2-PFOA	540864.5	0.532	9.460	7.297	77	50-150	
E13C4-PFHpA	484383.7	13C2-PFOA	540864.5	0.896	10.000	8.069	81	50-150	
E13C8-PFOA	795047.3	13C2-PFOA	540864.5	1.470	10.000	8.100	81	50-150	
E13C8-PFOS	242615.4	13C4-PFOS	270466.8	0.897	9.560	7.949	83	50-150	
E13C9-PFNA	442194.3	13C4-PFOS	270466.8	1.635	10.000	9.117	91	50-150	
E13C6-PFDA	566452.6	13C2-PFDA	357681.1	1.584	10.000	7.391	74	50-150	
Ed3-NMeFOSAA	66178.2	13C2-PFDA	357681.1	0.185	10.000	6.679	67	50-150	
E13C7-PFUnDA	236984.4	13C2-PFDA	357681.1	0.663	10.000	7.694	77	50-150	
Ed5-NEtFOSAA	47433.3	13C2-PFDA	357681.1	0.133	10.000	5.611	56	50-150	
E13C2-PFDoDA	491324.8	13C2-PFDA	357681.1	1.374	10.000	7.133	71	50-150	
E13C2-PFTeDA	352821.9	13C2-PFDA	357681.1	0.986	10.000	6.926	69	50-150	

APPROVED
By JPT at 4:01 pm, 11/16/18

REVIEWED
By HMK at 9:07 am, 11/19/18

ICAL Name: 18NOV12DCAL **Result Table:** 18311021 11/16/2018 3:49:12 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

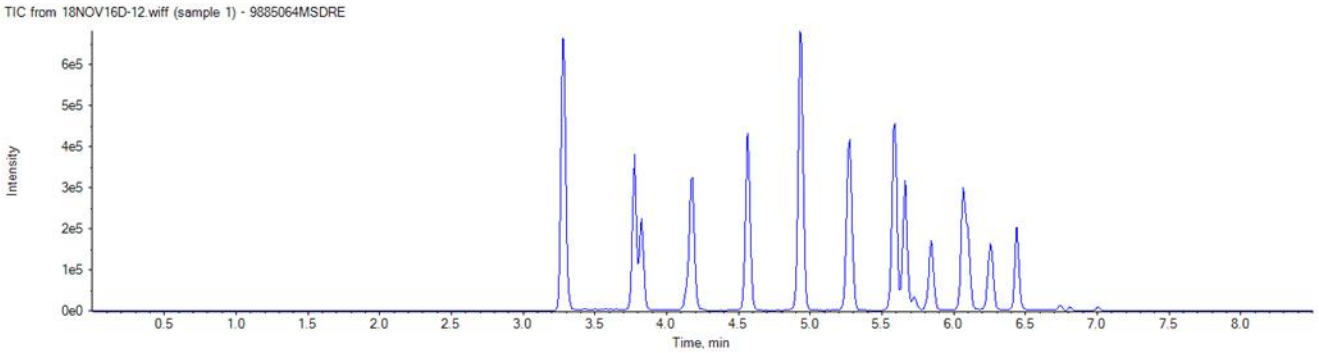
Analyte Quantitation Peak Table

Sample Name: 9885064MSDRE **Instrument Name:** LM27631 **File Name:** 18NOV16D-12.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)
PFBS	3.82	1.000	55900.0		A	13C3-PFBS	3.82	371710.9	0.150	1.431
PFHxA	4.17	1.000	116985.8		A	13C5-PFHxA	4.17	617965.3	0.189	1.581
PFHpA	4.56	1.000	126738.4		A	13C4-PFHpA	4.56	484383.7	0.262	1.735
PFHxS	4.57	1.000	49212.7		A	13C3-PFHxS	4.57	287597.5	0.171	1.659
PFOA	4.93	1.000	137251.8		A	13C8-PFOA	4.93	795047.3	0.173	1.844
PFOS	5.26	1.000	50980.6		M	13C8-PFOS	5.26	242615.4	0.210	1.838
PFNA	5.28	1.000	103378.4		A	13C9-PFNA	5.28	442194.3	0.234	1.686
PFDA	5.59	1.000	83574.6		A	13C6-PFDA	5.59	566452.6	0.148	1.564
NMeFOSAA	5.72	1.000	9106.4		A	d3-NMeFOSAA	5.72	66178.2	0.138	1.555
PFUnDA	5.84	1.000	71533.3		A	13C7-PFUnDA	5.84	236984.4	0.302	1.578
NEtFOSAA	5.85	1.000	8084.1		M	d5-NEtFOSAA	5.85	47433.3	0.170	1.787
PFDoDA	6.06	1.000	76930.9		A	13C2-PFDoDA	6.07	491324.8	0.157	1.595
PFTrDA	6.27	1.030	61956.3		A	13C2-PFDoDA	6.07	491324.8	0.126	1.592
PFTeDA	6.44	1.000	49619.7		A	13C2-PFTeDA	6.44	352821.9	0.141	1.577

Total Ion Chromatogram

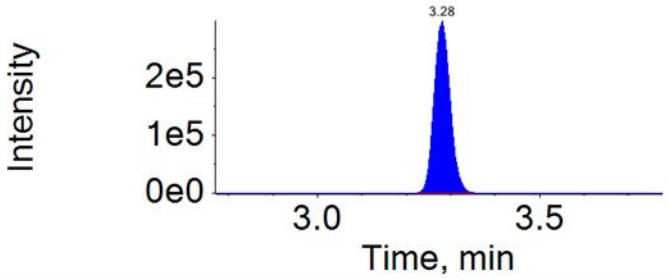


APPROVED
By JPT at 4:01 pm, 11/16/18

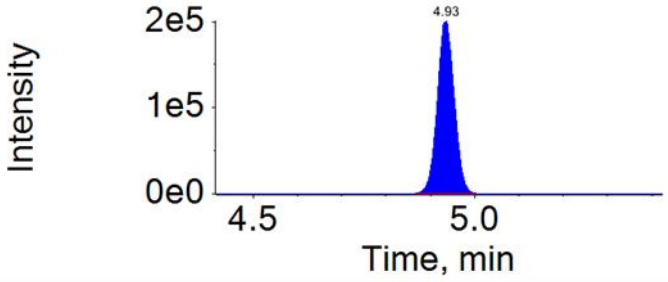
REVIEWED
By HMK at 9:07 am, 11/19/18

ICAL Name: 18NOV12DCAL **Result Table:** 18311021 11/16/2018 3:49:12 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

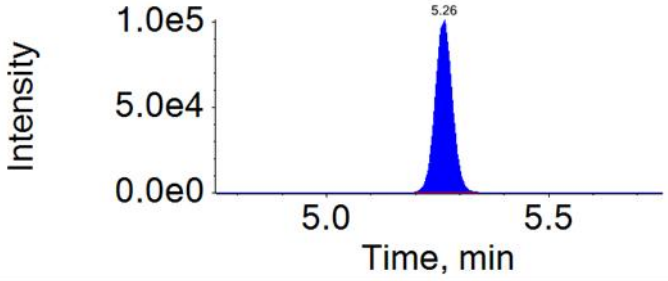
Injection Standard: 13C3-PFBA
216.0 / 172.0



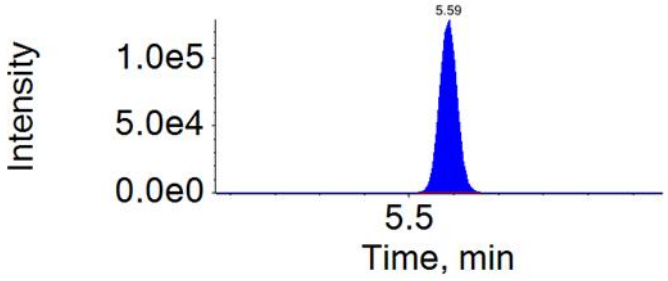
Injection Standard: 13C2-PFOA
415.0 / 370.0



Injection Standard: 13C4-PFOS
503.0 / 80.0



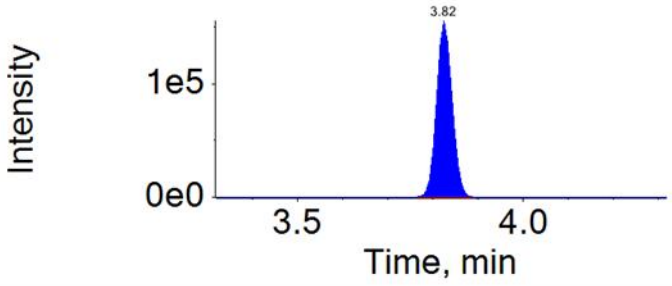
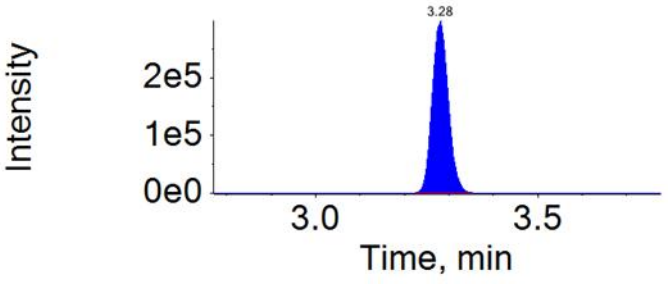
Injection Standard: 13C2-PFDA
515.0 / 470.0

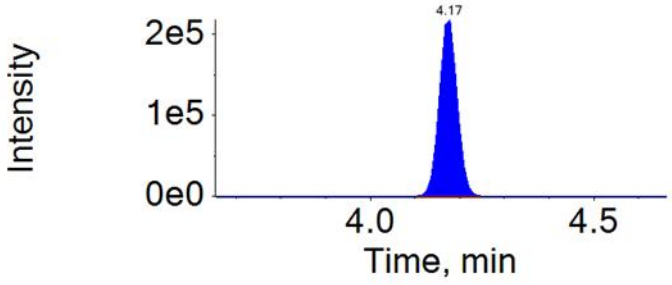
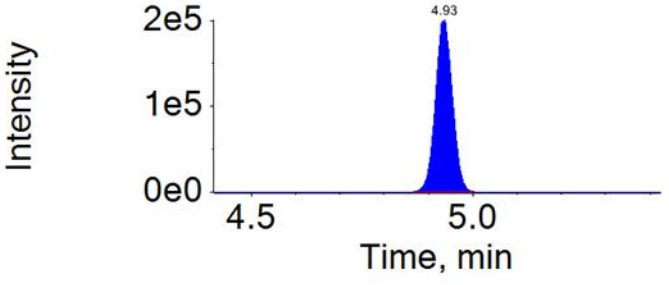


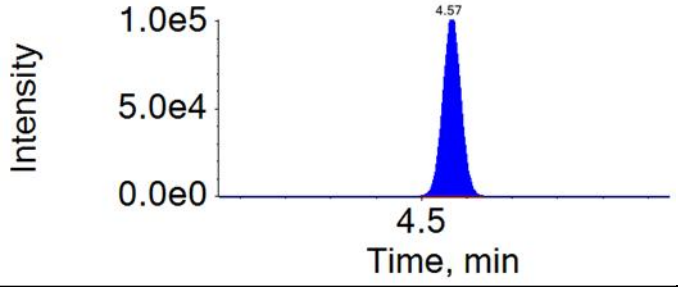
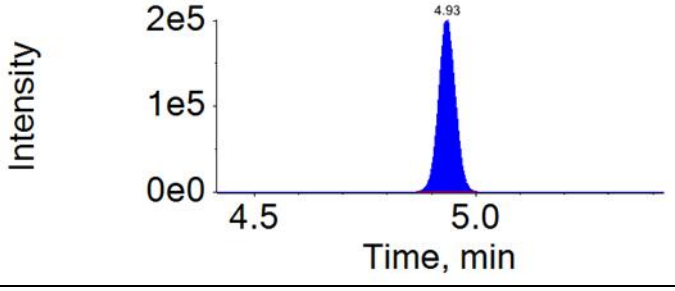
APPROVED
By JPT at 4:01 pm, 11/16/18

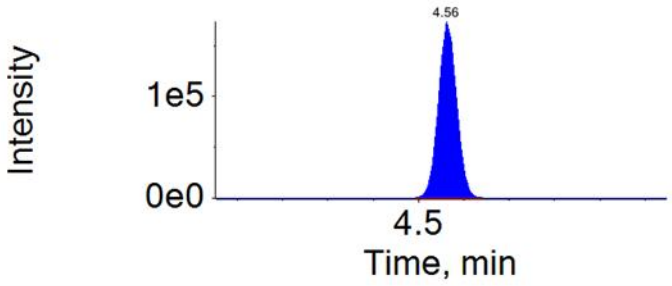
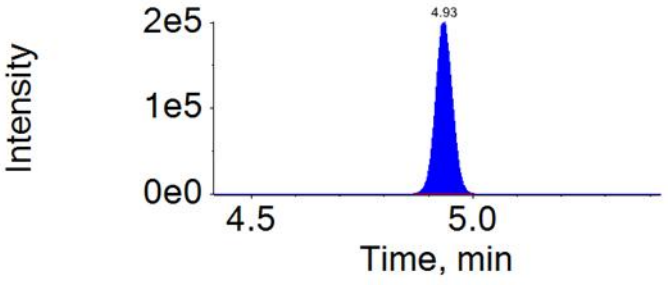
REVIEWED
By HMK at 9:07 am, 11/19/18

ICAL Name: 18NOV12DCAL **Result Table:** 18311021 11/16/2018 3:49:12 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
	

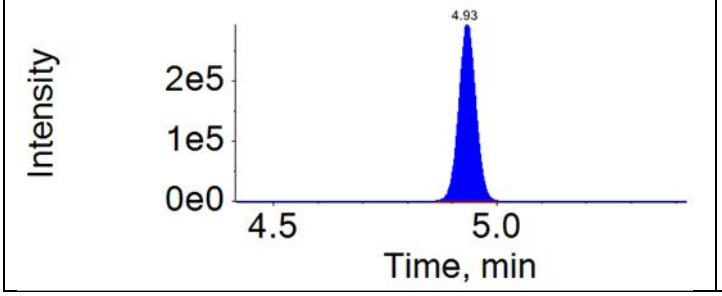
Extraction Standard: E13C4-PFHpA	Injection Standard: 13C2-PFOA
367.0 / 322.0	415.0 / 370.0
	

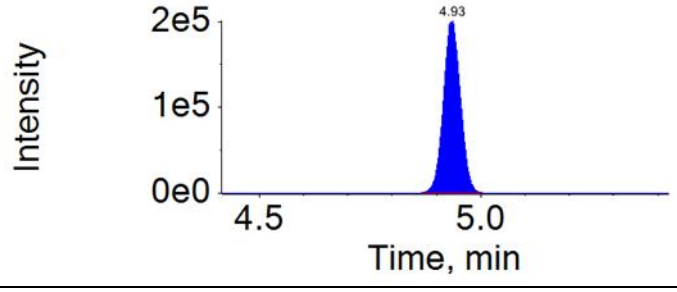
APPROVED
By JPT at 4:01 pm, 11/16/18

REVIEWED
By HMK at 9:07 am, 11/19/18

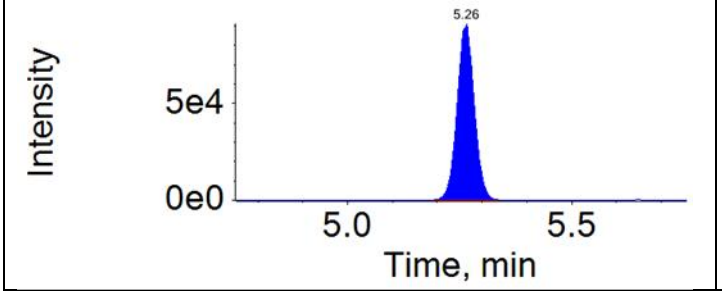
ICAL Name: 18NOV12DCAL **Result Table:** 18311021 11/16/2018 3:49:12 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

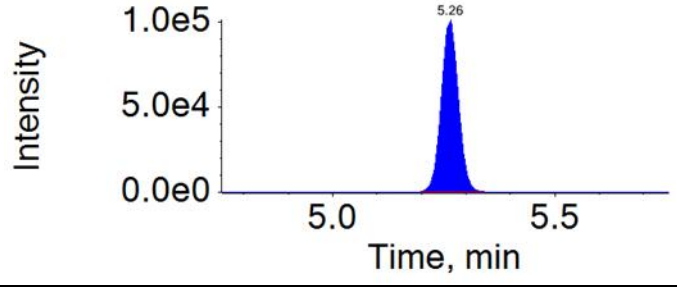
Extraction Standard: E13C8-PFOA	Injection Standard: 13C2-PFOA
421.0 / 376.0	415.0 / 370.0



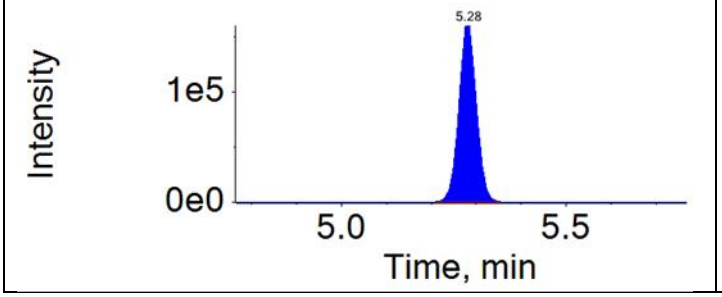


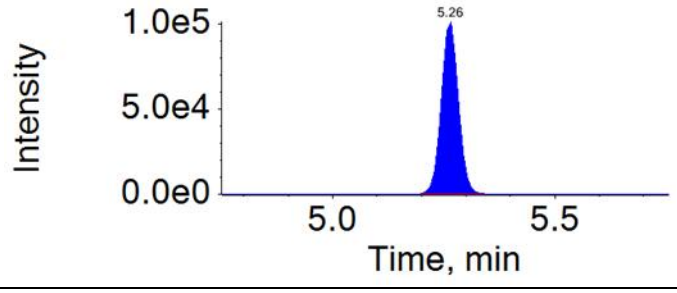
Extraction Standard: E13C8-PFOS	Injection Standard: 13C4-PFOS
507.0 / 80.0	503.0 / 80.0



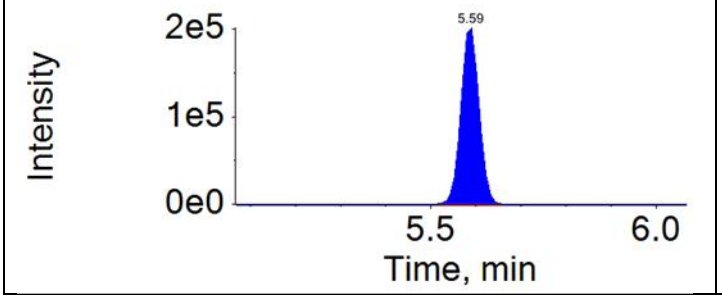


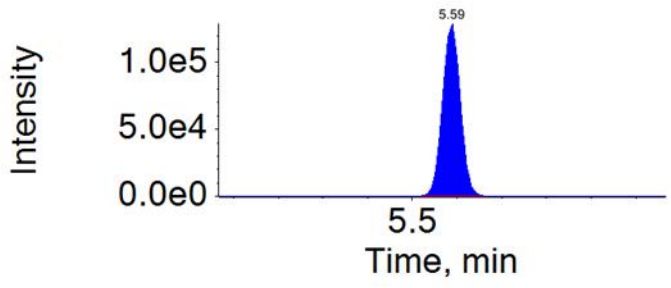
Extraction Standard: E13C9-PFNA	Injection Standard: 13C4-PFOS
472.0 / 427.0	503.0 / 80.0





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

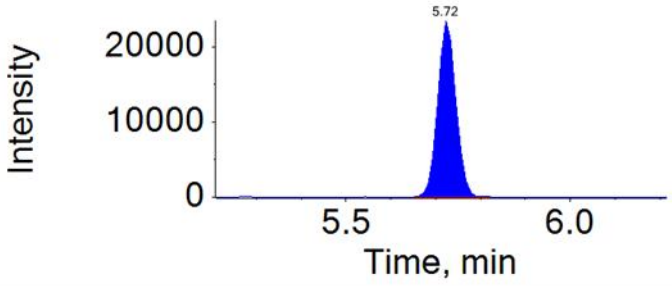
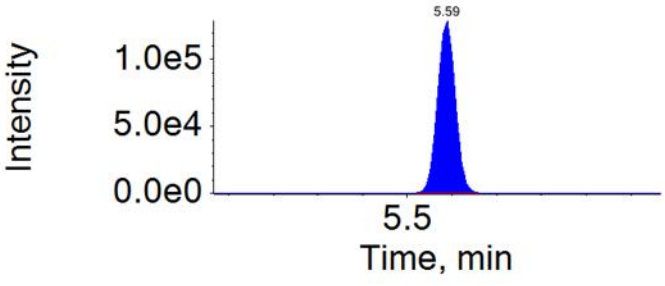


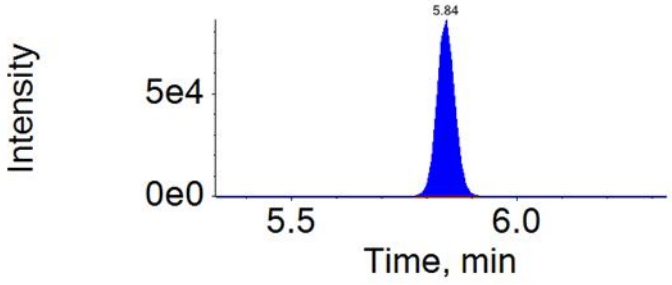
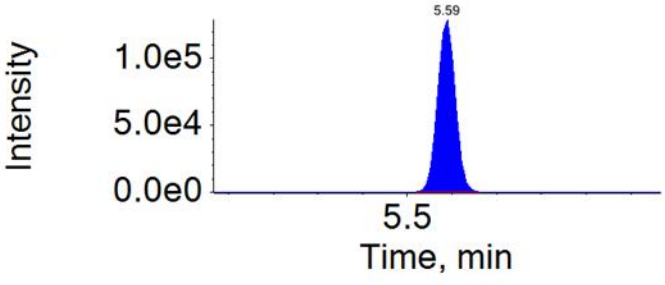


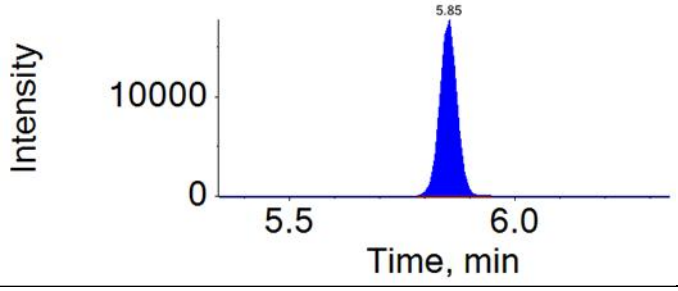
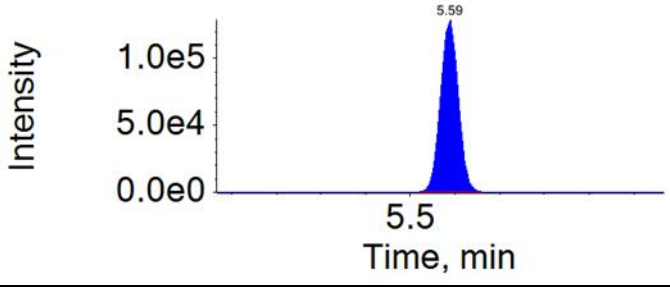
APPROVED
By JPT at 4:01 pm, 11/16/18

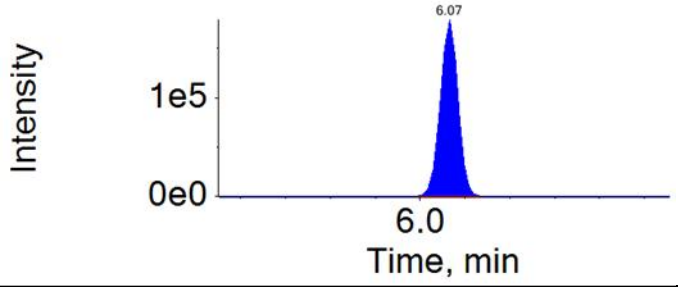
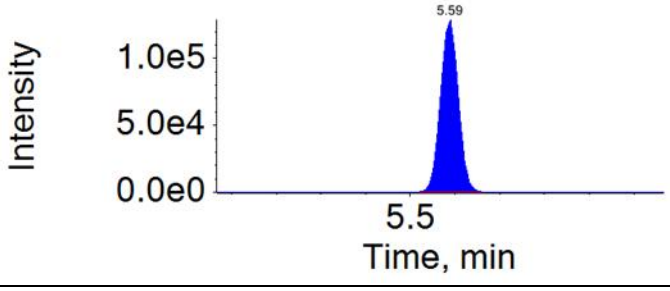
REVIEWED
By HMK at 9:07 am, 11/19/18

ICAL Name: 18NOV12DCAL **Result Table:** 18311021 11/16/2018 3:49:12 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
	

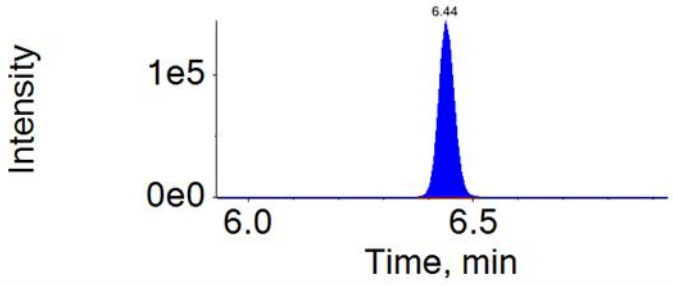
Extraction Standard: E13C2-PFDoDA	Injection Standard: 13C2-PFDA
615.0 / 570.0	515.0 / 470.0
	

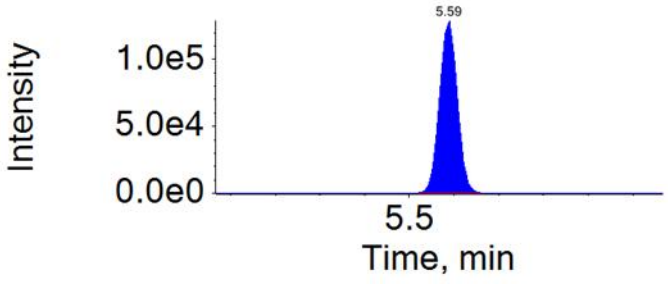
APPROVED
By JPT at 4:01 pm, 11/16/18

REVIEWED
By HMK at 9:07 am, 11/19/18

ICAL Name: 18NOV12DCAL **Result Table:** 18311021 11/16/2018 3:49:12 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



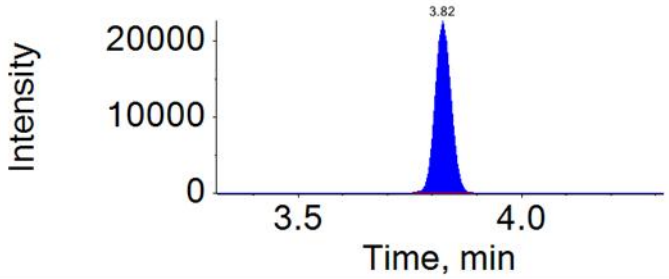


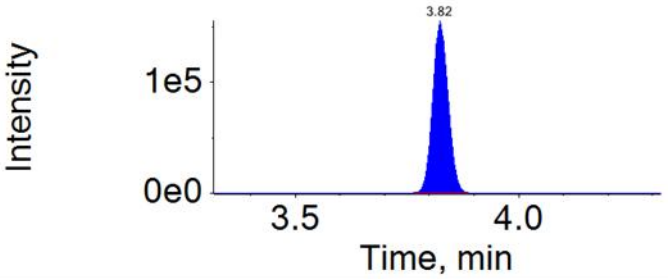
APPROVED
By JPT at 4:01 pm, 11/16/18

REVIEWED
By HMK at 9:07 am, 11/19/18

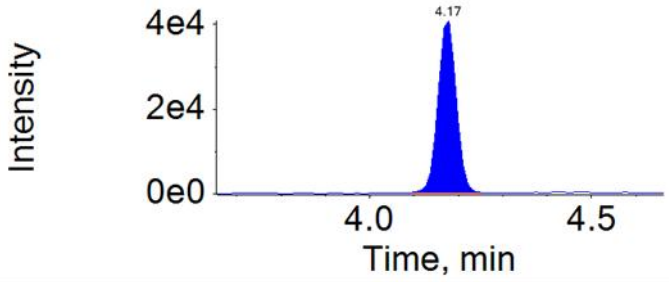
ICAL Name: 18NOV12DCAL **Result Table:** 18311021 11/16/2018 3:49:12 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

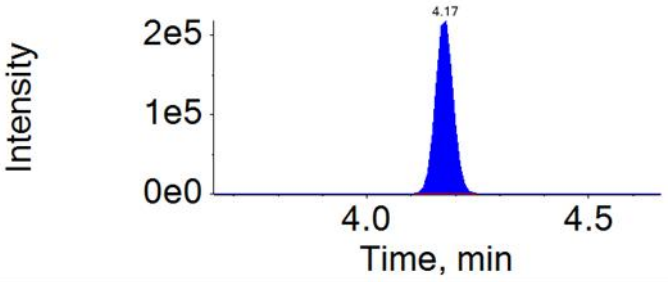
Analyte: PFBS	Extraction Standard: 13C3-PFBS
299.0 / 80.0	302.0 / 80.0



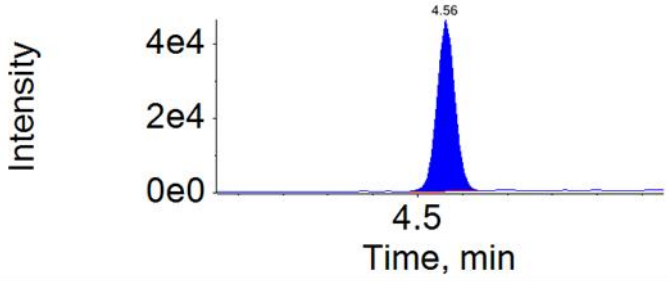


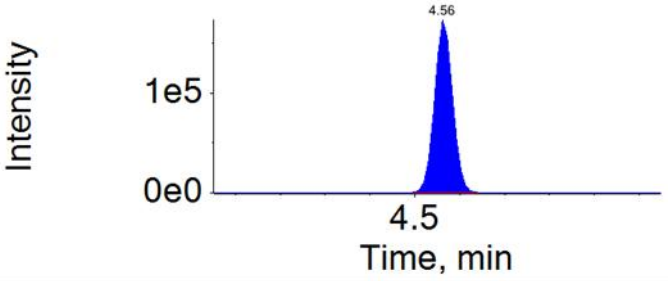
Analyte: PFHxA	Extraction Standard: 13C5-PFHxA
313.0 / 269.0	318.0 / 273.0



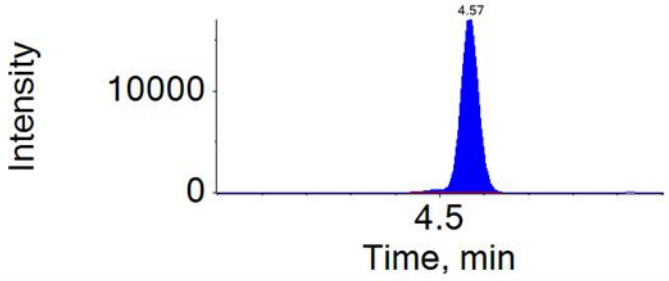


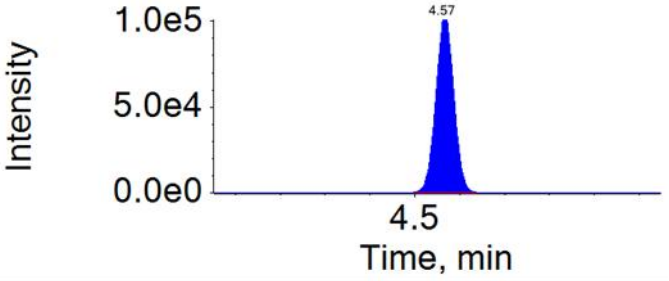
Analyte: PFHpA	Extraction Standard: 13C4-PFHpA
363.0 / 319.0	367.0 / 322.0





Analyte: PFHxS	Extraction Standard: 13C3-PFHxS
399.0 / 80.0	402.0 / 80.0



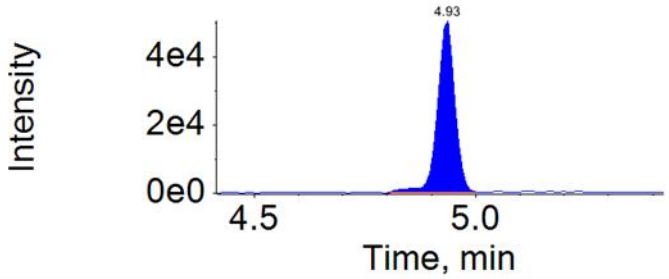


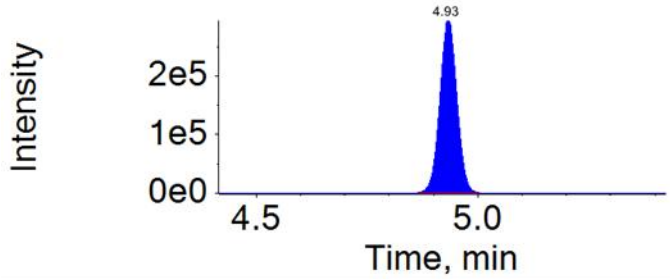
APPROVED
By JPT at 4:01 pm, 11/16/18

REVIEWED
By HMK at 9:07 am, 11/19/18

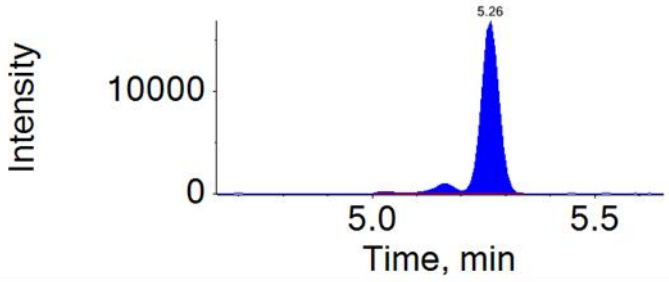
ICAL Name: 18NOV12DCAL **Result Table:** 18311021 11/16/2018 3:49:12 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

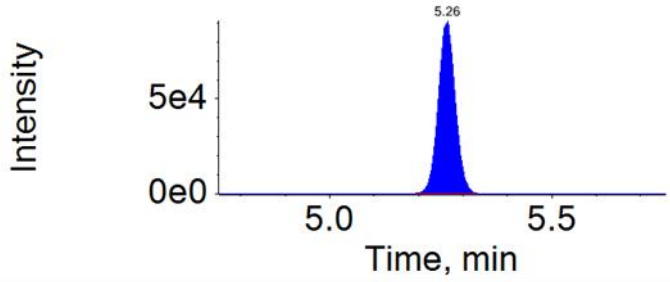
Analyte: PFOA	Extraction Standard: 13C8-PFOA
413.0 / 369.0	421.0 / 376.0



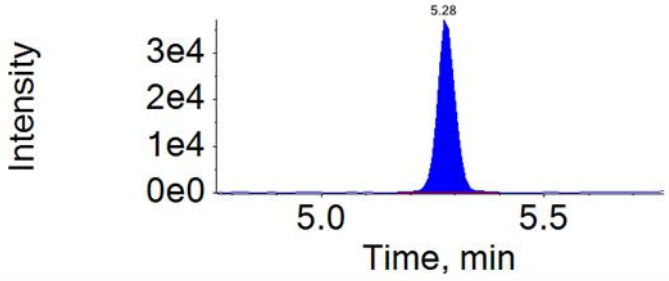


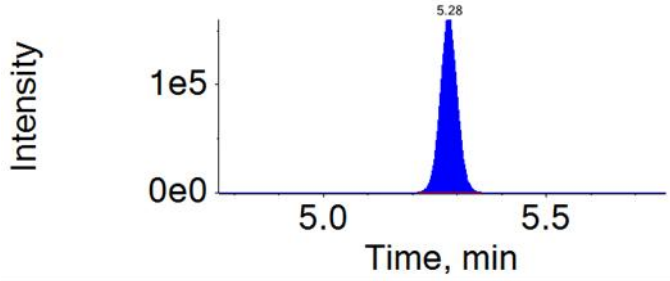
Analyte: PFOS	Extraction Standard: 13C8-PFOS
499.0 / 80.0	507.0 / 80.0



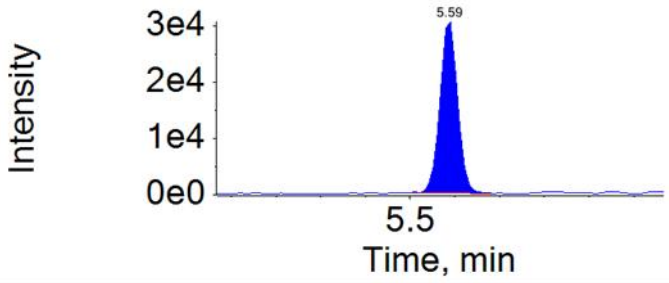


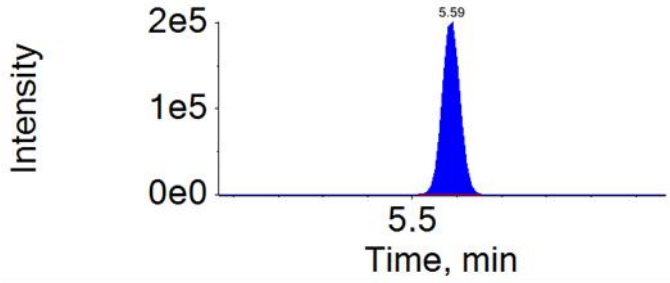
Analyte: PFNA	Extraction Standard: 13C9-PFNA
463.0 / 419.0	472.0 / 427.0





Analyte: PFDA	Extraction Standard: 13C6-PFDA
513.0 / 469.0	519.0 / 474.0



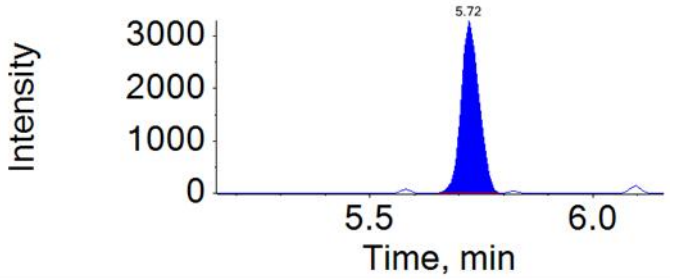


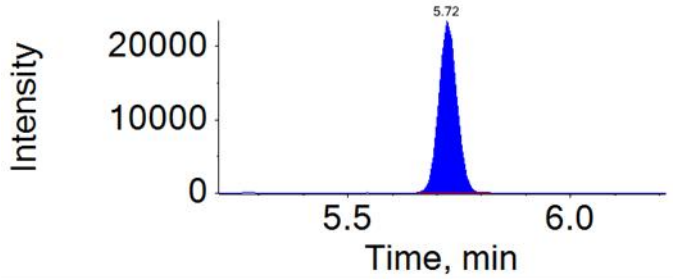
APPROVED
By JPT at 4:01 pm, 11/16/18

REVIEWED
By HMK at 9:07 am, 11/19/18

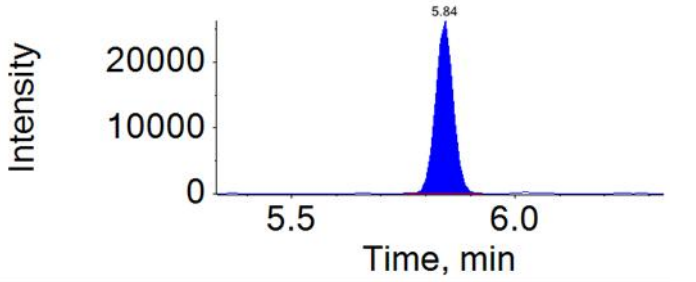
ICAL Name: 18NOV12DCAL **Result Table:** 18311021 11/16/2018 3:49:12 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

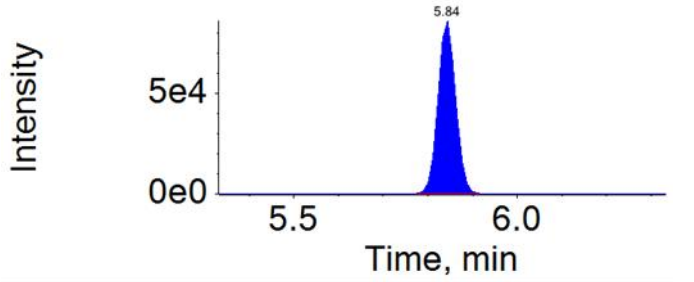
Analyte: NMeFOSAA	Extraction Standard: d3-NMeFOSAA
570.0 / 419.0	573.0 / 419.0



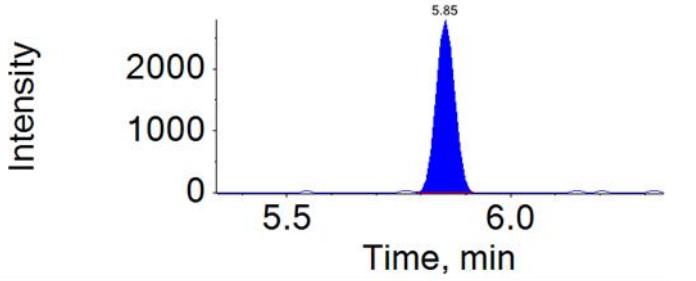


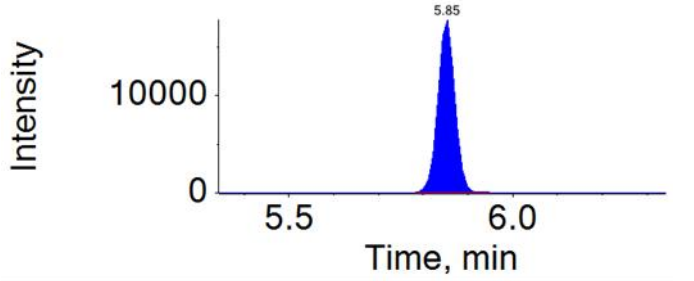
Analyte: PFUnDA	Extraction Standard: 13C7-PFUnDA
563.0 / 519.0	570.0 / 525.0



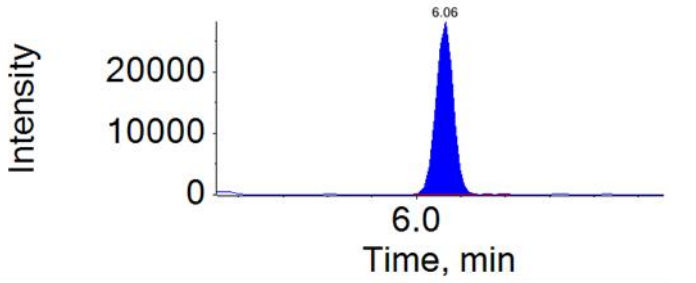


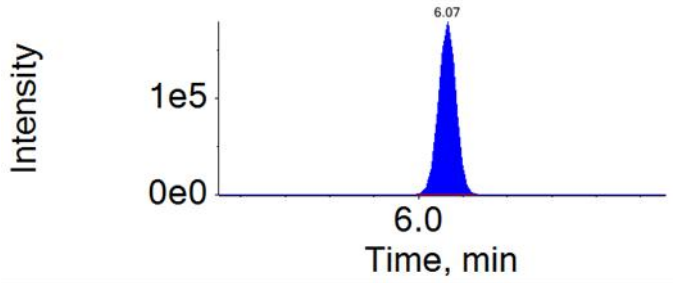
Analyte: NEtFOSAA	Extraction Standard: d5-NEtFOSAA
584.0 / 419.0	589.0 / 419.0





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

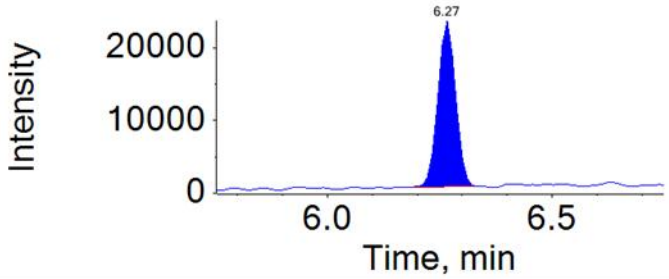
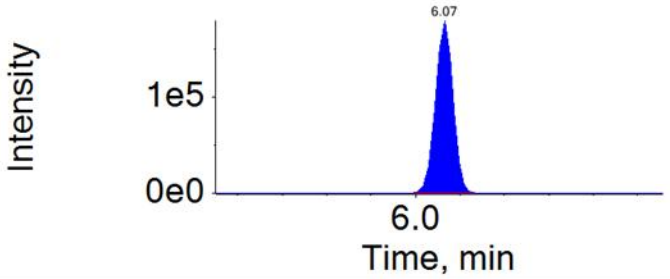


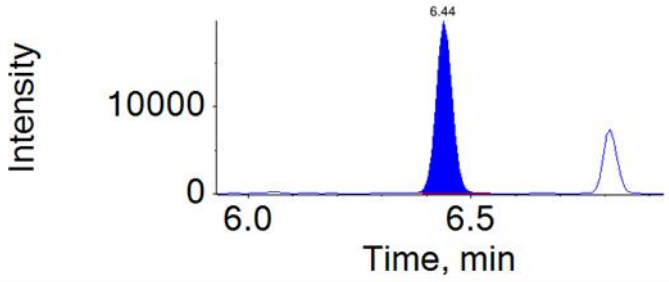
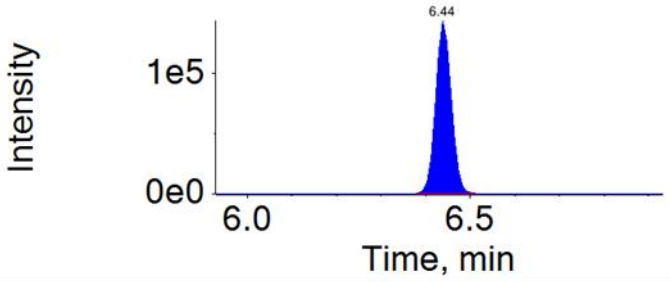


APPROVED
By JPT at 4:01 pm, 11/16/18

REVIEWED
By HMK at 9:07 am, 11/19/18

ICAL Name: 18NOV12DCAL **Result Table:** 18311021 11/16/2018 3:49:12 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

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

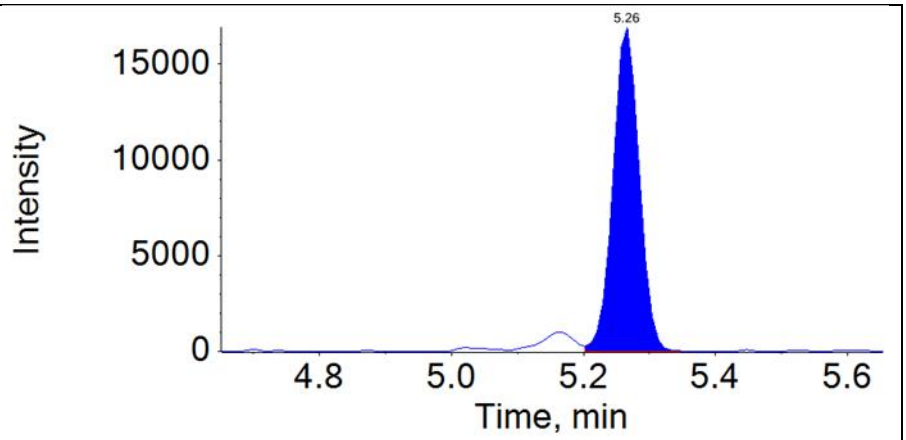
Analyte: PFTeDA	Extraction Standard: 13C2-PFTeDA
713.0 / 669.0	715.0 / 670.0
	

APPROVED
By JPT at 4:01 pm, 11/16/18

REVIEWED
By HMK at 9:07 am, 11/19/18

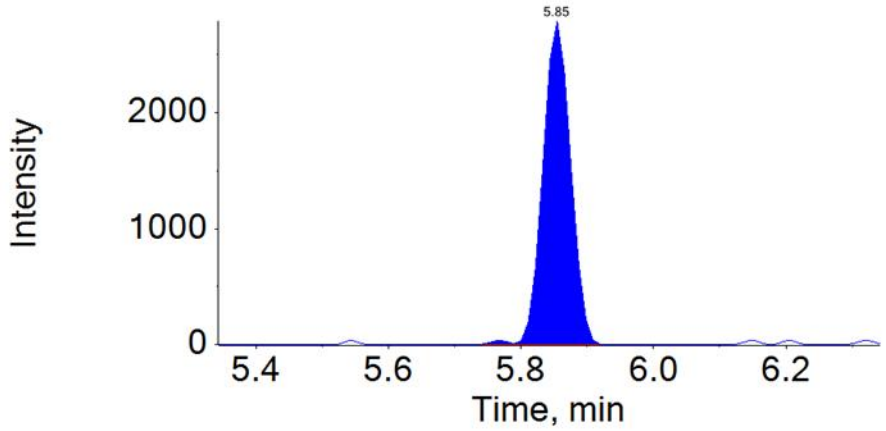
Results Table Name: 18311021
Results Table Date: 11/16/2018 3:49:12 PM
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

Component Name:
PFOS
RT (min.):
5.26
Peak Area:
46765.9
Mass Range:
499.0 / 80.0
File Name:
18NOV16D-12.wiff
Sample Name:
9885064MSDRE



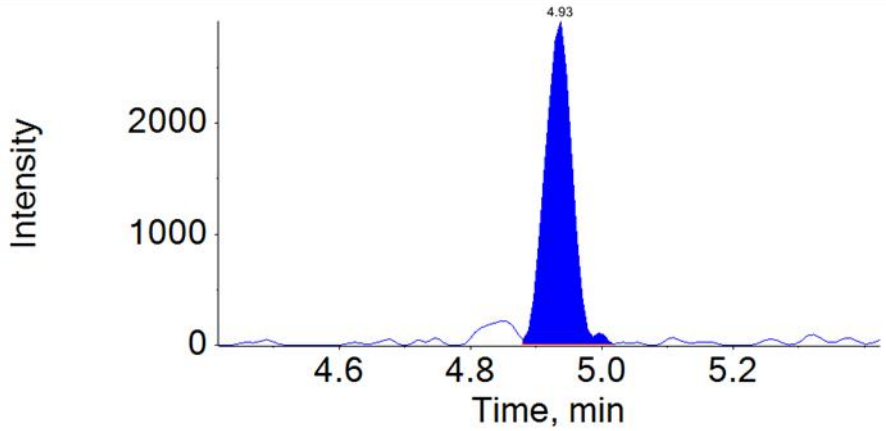
Integration Comment: incorrect integration

Component Name:
NEtFOSAA
RT (min.):
5.85
Peak Area:
8150.6
Mass Range:
584.0 / 419.0
File Name:
18NOV16D-12.wiff
Sample Name:
9885064MSDRE



Integration Comment: incorrect integration

Component Name:
PFOA_2
RT (min.):
4.93
Peak Area:
8331.1
Mass Range:
413.0 / 169.0
File Name:
18NOV16D-12.wiff
Sample Name:
9885064MSDRE



Integration Comment: incorrect integration

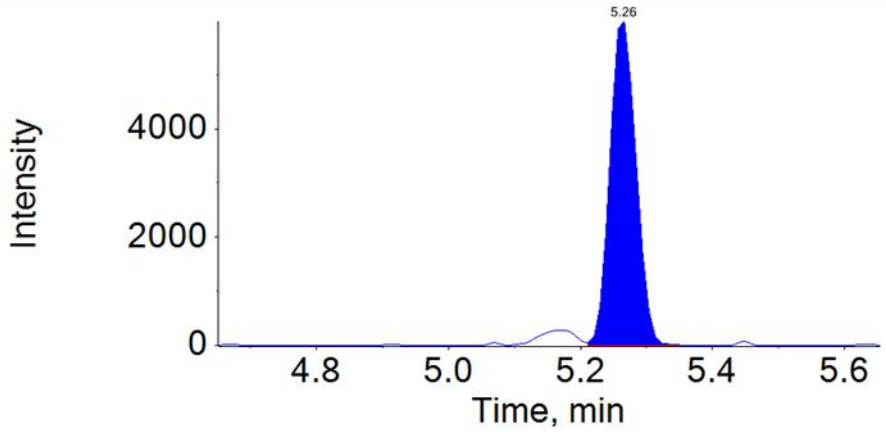
APPROVED
By JPT at 4:01 pm, 11/16/18

REVIEWED
By HMK at 9:07 am, 11/19/18

Results Table Name: 18311021
Results Table Date: 11/16/2018 3:49:12 PM

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

Component Name:
PFOS_2
RT (min.):
5.26
Peak Area:
16593.1
Mass Range:
499.0 / 99.0
File Name:
18NOV16D-12.wiff
Sample Name:
9885064MSDRE



Integration Comment: incorrect integration

APPROVED
By JPT at 4:01 pm, 11/16/18

REVIEWED
By HMK at 9:07 am, 11/19/18

Results Table Name: 18311021
Results Table Date: 11/16/2018 3:49:12 PM

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

APPROVED
By JPT at 4:01 pm, 11/16/18

REVIEWED
By HMK at 9:07 am, 11/19/18

Ion Ratio Report

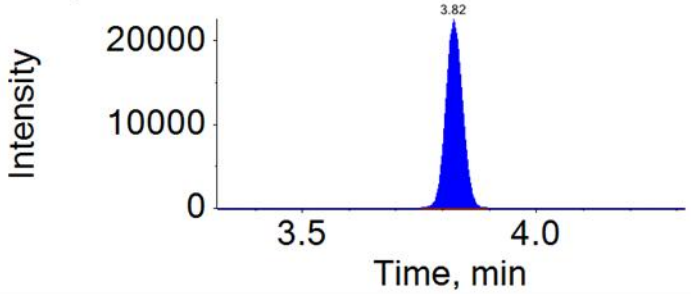
Sample Name: 9885064MSDRE **Instrument Name:** LM27631 **File Name:** 18NOV16D-12.wiff

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	55900.0	A	N/A	1.0000			
PFBS_2	3.82	1.00	18398.8	A	N/A	0.3291	-10	50	
PFHxA	4.17	1.00	116985.8	A	N/A	1.0000			
PFHxA_2	4.17	1.00	1376.3	A	N/A	0.0118	0	50	
PFHpA	4.56	1.00	126738.4	A	N/A	1.0000			
PFHpA_2	4.56	1.00	7401.3	A	N/A	0.0584	4	50	
PFHxS	4.57	1.00	49212.7	A	N/A	1.0000			
PFHxS_2	4.57	1.00	17814.0	A	N/A	0.3620	5	50	
PFOA	4.93	1.00	137251.8	A	N/A	1.0000			
PFOA_2	4.93	1.00	9056.6	M	N/A	0.0660	16	50	
PFOS	5.26	1.00	50980.6	M	N/A	1.0000			
PFOS_2	5.26	1.00	17760.0	M	N/A	0.3484	17	50	
PFNA	5.28	1.00	103378.4	A	N/A	1.0000			
PFNA_2	5.28	1.00	2275.0	A	N/A	0.0220	-3	50	
PFDA	5.59	1.00	83574.6	A	N/A	1.0000			
PFDA_2	5.61	1.00	247.1	A	N/A	0.0030	-63	50	OOS
NMeFOSAA	5.72	1.00	9106.4	A	N/A	1.0000			
NMeFOSAA_2	5.74	1.00	2293.5	A	N/A	0.2519	-3	50	
PFUnDA	5.84	1.00	71533.3	A	N/A	1.0000			
PFUnDA_2	5.85	1.00	64.9	A	N/A	0.0009	-84	50	OOS
NEtFOSAA	5.85	1.00	8084.1	M	N/A	1.0000			
NEtFOSAA_2	5.85	1.00	4143.0	A	N/A	0.5125	-29	50	
PFDoDA	6.06	1.00	76930.9	A	N/A	1.0000			
PFDoDA_2	6.06	1.00	1181.8	A	N/A	0.0154	0	50	
PFTrDA	6.27	1.03	61956.3	A	N/A	1.0000			
PFTrDA_2	6.26	1.03	831.2	A	N/A	0.0134	57	50	OOS
PFTeDA	6.44	1.00	49619.7	A	N/A	1.0000			
PFTeDA_2	6.44	1.00	430.0	A	N/A	0.0087	40	50	

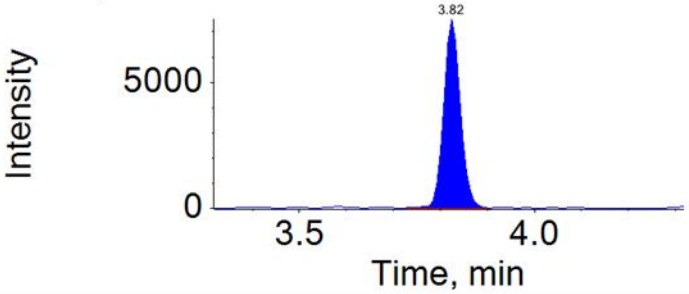
APPROVED
By JPT at 4:01 pm, 11/16/18

REVIEWED
By HMK at 9:07 am, 11/19/18

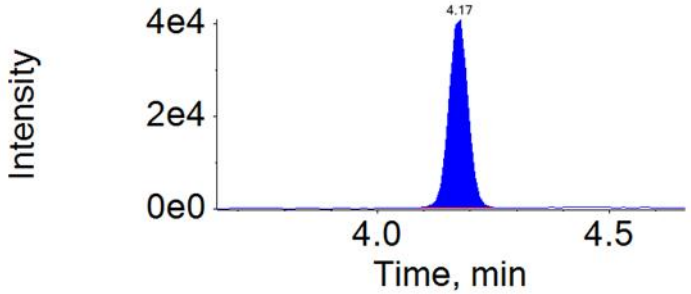
Component: PFBS
Primary Mass: 299.0 / 80.0



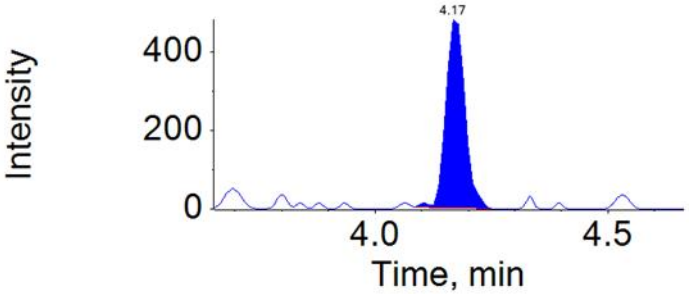
Component: PFBS_2
Secondary Mass: 299.0 / 99.0



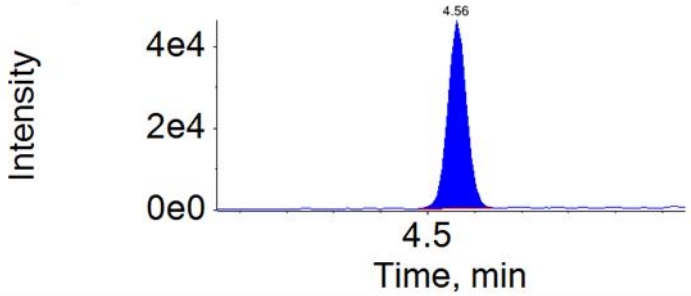
Component: PFHxA
Primary Mass: 313.0 / 269.0



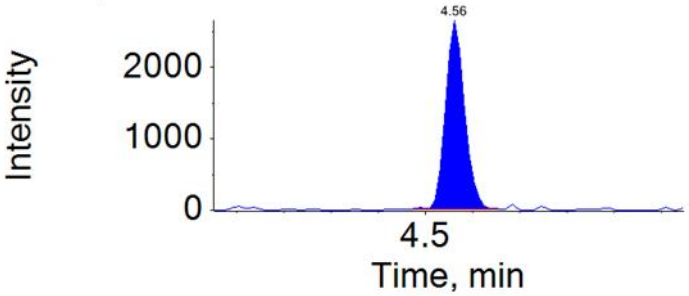
Component: PFHxA_2
Secondary Mass: 313.0 / 119.0



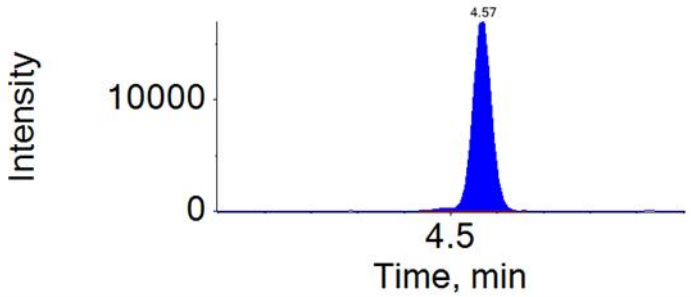
Component: PFHpA
Primary Mass: 363.0 / 319.0



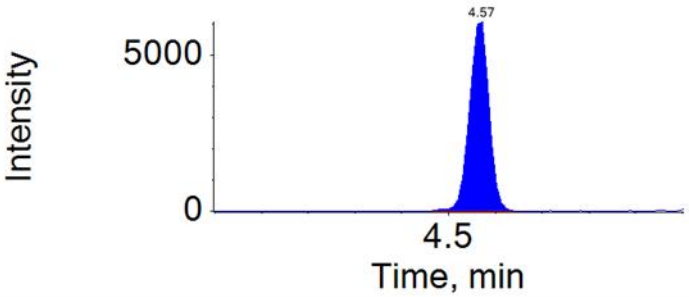
Component: PFHpA_2
Secondary Mass: 363.0 / 169.0



Component: PFHxS
Primary Mass: 399.0 / 80.0



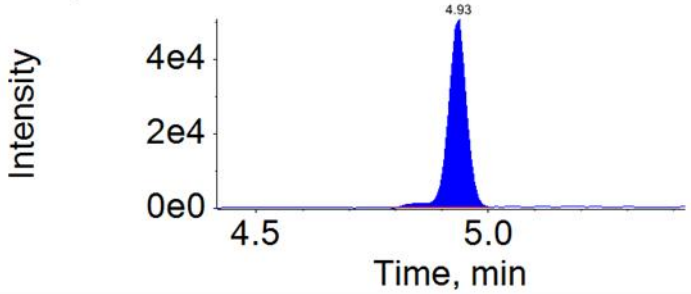
Component: PFHxS_2
Secondary Mass: 399.0 / 99.0



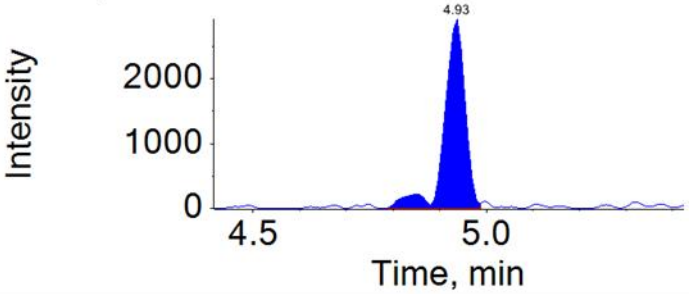
APPROVED
By JPT at 4:01 pm, 11/16/18

REVIEWED
By HMK at 9:07 am, 11/19/18

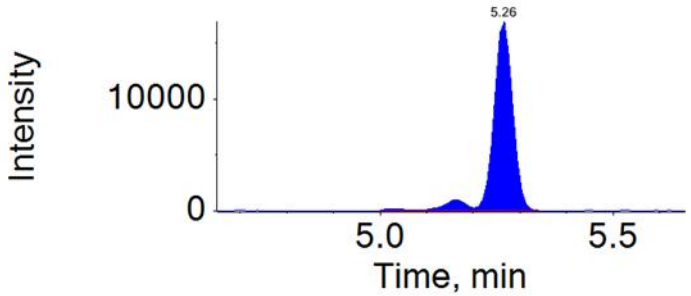
Component: PFOA
Primary Mass: 413.0 / 369.0



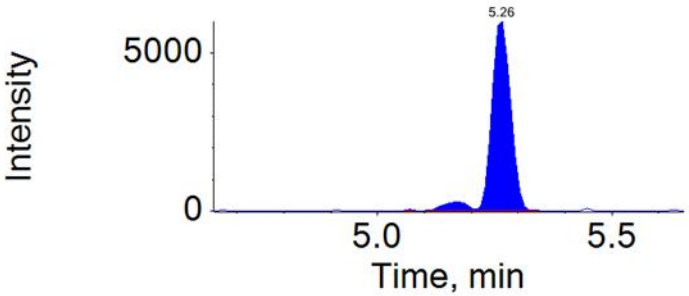
Component: PFOA_2
Secondary Mass: 413.0 / 169.0



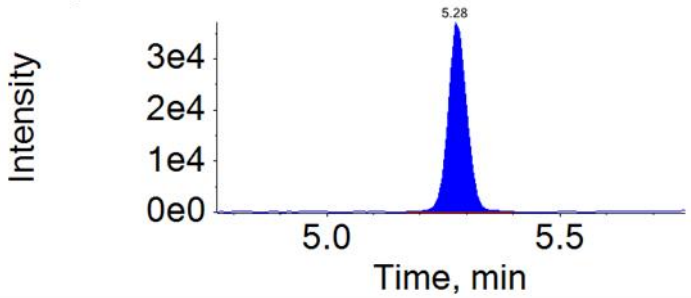
Component: PFOS
Primary Mass: 499.0 / 80.0



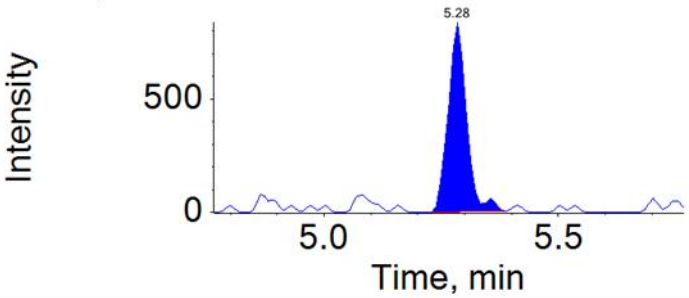
Component: PFOS_2
Secondary Mass: 499.0 / 99.0



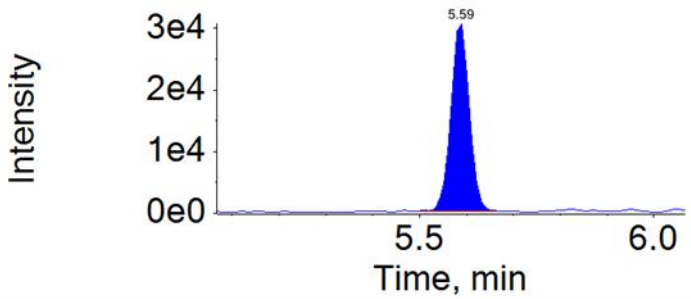
Component: PFNA
Primary Mass: 463.0 / 419.0



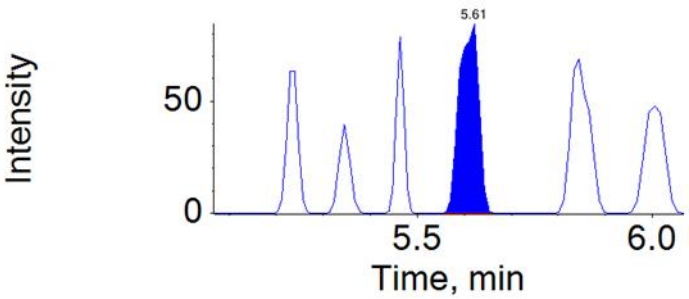
Component: PFNA_2
Secondary Mass: 463.0 / 169.0



Component: PFDA
Primary Mass: 513.0 / 469.0



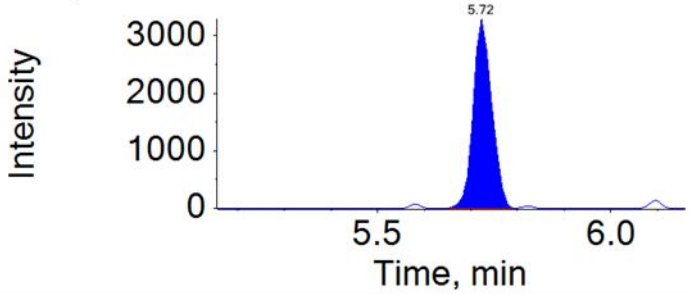
Component: PFDA_2
Secondary Mass: 513.0 / 169.0



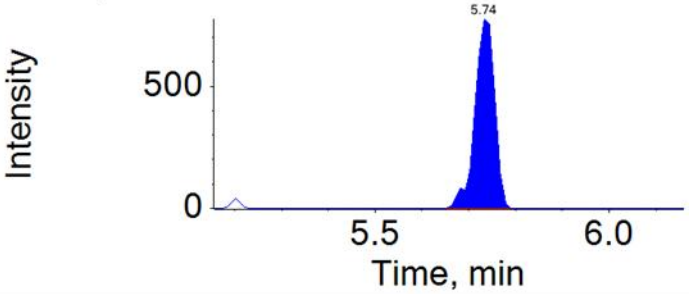
APPROVED
By JPT at 4:01 pm, 11/16/18

REVIEWED
By HMK at 9:07 am, 11/19/18

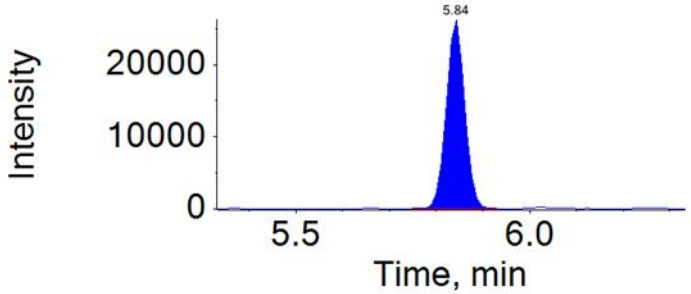
Component: NMeFOSAA
Primary Mass: 570.0 / 419.0



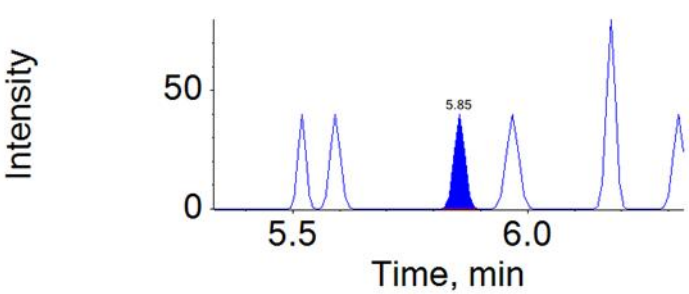
Component: NMeFOSAA_2
Secondary Mass: 570.0 / 483.0



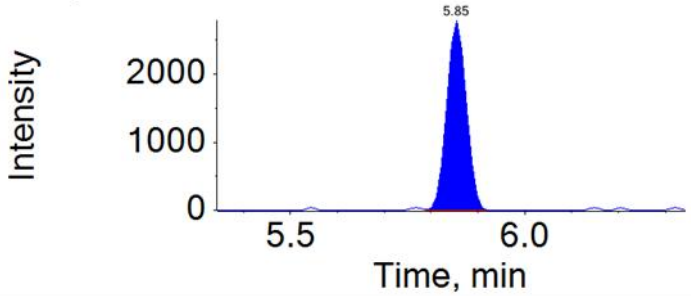
Component: PFUnDA
Primary Mass: 563.0 / 519.0



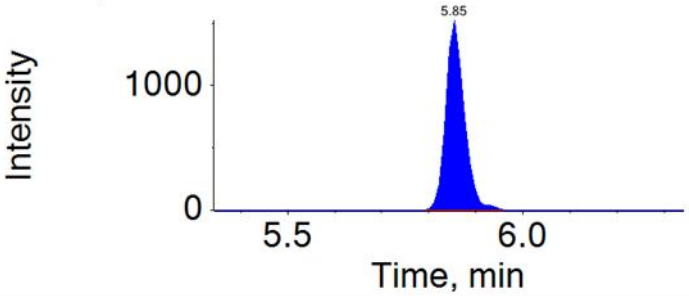
Component: PFUnDA_2
Secondary Mass: 563.0 / 169.0



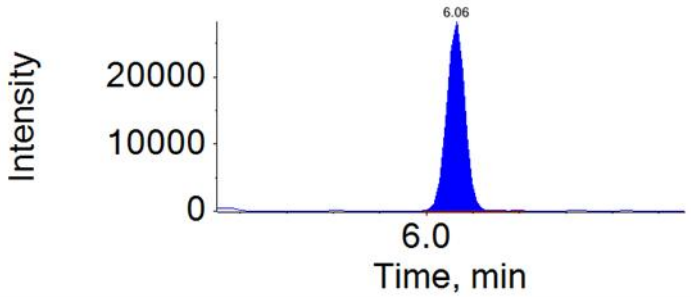
Component: NEtFOSAA
Primary Mass: 584.0 / 419.0



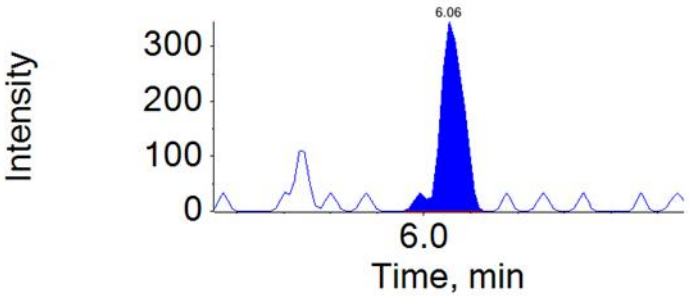
Component: NEtFOSAA_2
Secondary Mass: 584.0 / 526.0



Component: PFDoDA
Primary Mass: 613.0 / 569.0



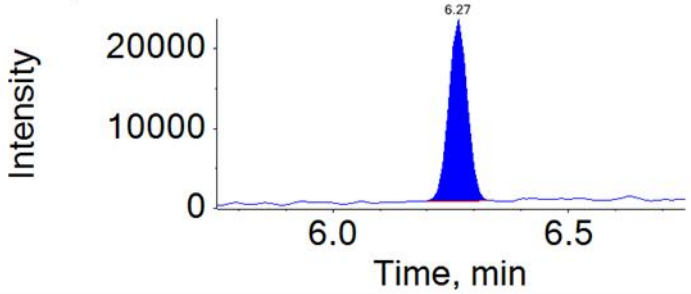
Component: PFDoDA_2
Secondary Mass: 613.0 / 169.0



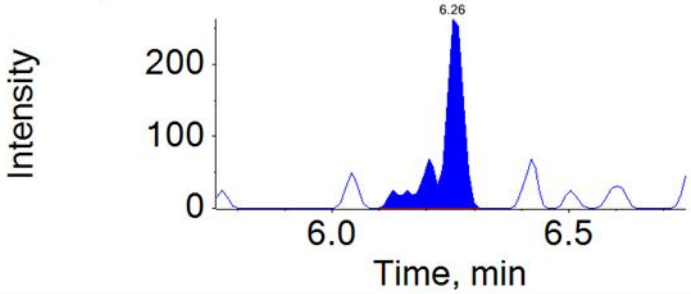
APPROVED
By JPT at 4:01 pm, 11/16/18

REVIEWED
By HMK at 9:07 am, 11/19/18

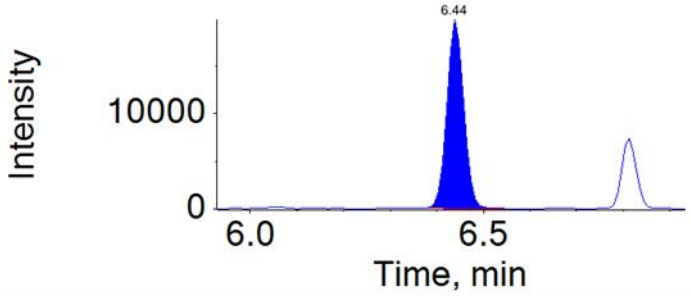
Component: PFTrDA
Primary Mass: 663.0 / 619.0



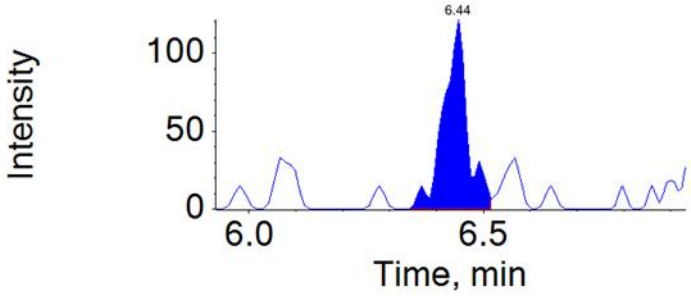
Component: PFTrDA_2
Secondary Mass: 663.0 / 169.0



Component: PFTeDA
Primary Mass: 713.0 / 669.0



Component: PFTeDA_2
Secondary Mass: 713.0 / 169.0



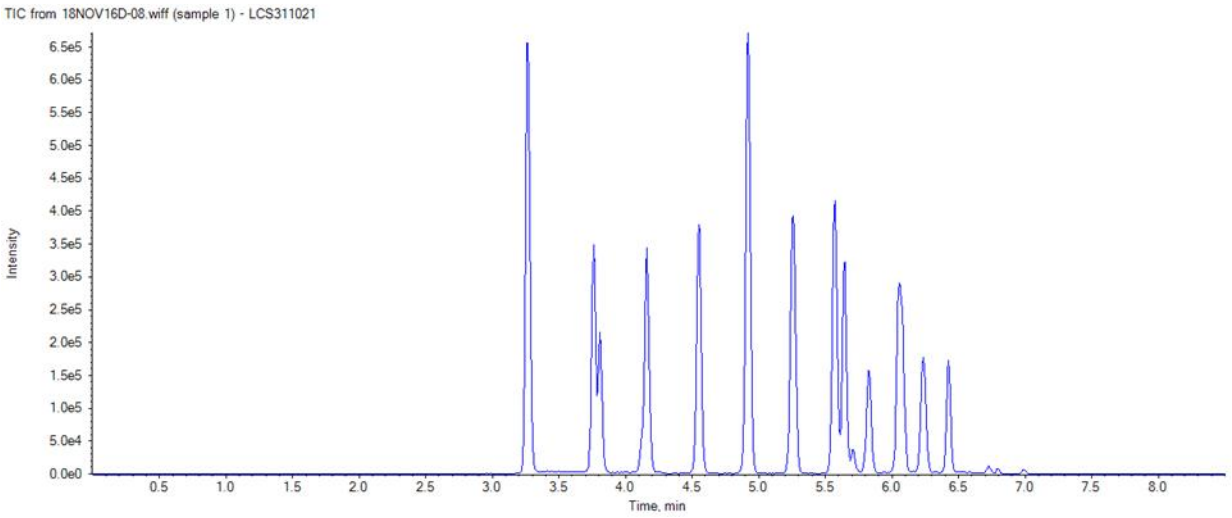
APPROVED
By JPT at 4:01 pm, 11/16/18

REVIEWED
By HMK at 9:07 am, 11/19/18

Lab Control Sample Recovery

ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM
Result Table: 18311021 11/16/2018 3:49:12 PM
Acquisition Method: 18AUG13_3uL.dam

Instrument Name:	Sample Name:	Sample ID:	Sample File:	Acquisition Date:
LM27631	LCS311021	EPA 537 mod QSM 5.1 table B-15 18311021	18NOV16D-08.wiff	2018-11-16T11:17:16



Injection Standard Area Reference File**:** 18NOV16D-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	751669.2	707280.6	6	50	
13C2-PFOA	5.00	557637.6	484265.4	15	50	
13C4-PFOS	4.78	267937.7	256987.3	4	50	
13C2-PFDA	5.00	336022.8	302418.6	11	50	

APPROVED
By JPT at 4:01 pm, 11/16/18

REVIEWED
By HMK at 9:07 am, 11/19/18

Lab Control Sample Recovery

ICAL Name: 18NOV12DCAL **Result Table:** 18311021 11/16/2018 3:49:12 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Instrument Name:	Sample Name:	Sample ID:	Sample File:	Acquisition Date:
LM27631	LCS311021	EPA 537 mod QSM 5.1 table B-15 18311021	18NOV16D-08.wiff	2018-11-16T11:17:16

Analyte Name	Analyte Area	Ext Std Area	Area Ratio	Adj Actual Conc	Sample Result	%REC	% REC Limit	%REC OOS
PFBA	106064.9	670928.7	0.158	1.360	1.752	129	70-130	
PFPeA	91664.2	645071.9	0.142	1.360	1.645	121	70-130	
PFBS	54361.6	364366.8	0.149	1.204	1.419	118	70-130	
4:2-FTS	33246.0	44312.5	0.750	3.736	4.074	109	70-130	
PFHxA	114578.9	604476.2	0.190	1.360	1.583	116	70-130	
PFPeS	26183.0	364366.8	0.072	1.276	1.395	109	70-130	
PFHpA	115030.0	480399.9	0.239	1.360	1.587	117	70-130	
PFHxS	39941.4	261915.9	0.152	1.286	1.479	115	70-130	
6:2-FTS	27956.7	29652.5	0.943	3.792	4.563	120	70-130	
PFHpS	37507.5	261915.9	0.143	1.294	1.508	117	70-130	
PFOA	118079.8	799907.2	0.148	1.360	1.577	116	70-130	
PFOS	35308.7	237000.1	0.149	1.300	1.303	100	70-130	
PFNA	93397.3	431460.1	0.216	1.360	1.561	115	70-130	
PFNS	23161.7	237000.1	0.098	1.306	1.367	105	70-130	
PFDA	86182.5	530101.2	0.163	1.360	1.724	127	70-130	
8:2-FTS	19899.9	25565.7	0.778	3.832	3.630	95	70-130	
PFOSA	97315.0	637726.2	0.153	1.360	1.491	110	70-130	
NMeFOSAA	8792.4	69613.0	0.126	1.360	1.428	105	70-130	
PFDS	18873.7	237000.1	0.080	1.310	1.443	110	70-130	
PFUnDA	65772.4	232978.4	0.282	1.360	1.476	109	70-130	
NEtFOSAA	7764.3	53366.1	0.145	1.360	1.525	112	70-130	
PFDoDA	69241.9	472597.0	0.147	1.360	1.492	110	70-130	
10:2-FTS	13023.8	25565.7	0.509	3.856	3.394	88	70-130	
NMePFOSAE	60087.1	321859.0	0.187	1.360	1.554	114	70-130	
NMePFOSA	10924.2	72595.9	0.150	1.360	1.485	109	70-130	
PFDoS	10505.7	237000.1	0.044	1.316	1.553	118	70-130	
NEtPFOSAE	65523.7	285868.8	0.229	1.360	1.471	108	70-130	
NEtPFOSA	9051.6	57334.0	0.158	1.360	1.450	107	70-130	
PFTrDA	57682.1	472597.0	0.122	1.360	1.541	113	70-130	
PFTeDA	46653.1	322030.7	0.145	1.360	1.624	119	70-130	
PFHxDA	19200.6	322030.7	0.060	1.360	1.421	104	70-130	
PFODA	13978.5	322030.7	0.043	1.360	1.209	89	70-130	

APPROVED
By JPT at 4:01 pm, 11/16/18

REVIEWED
By HMK at 9:07 am, 11/19/18

Lab Control Sample Recovery

ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM
Result Table: 18311021 11/16/2018 3:49:12 PM
Acquisition Method: 18AUG13_3uL.dam

ICAL Name: 18NOV12DCAL **Result Table:** 18311021 11/16/2018 3:49:12 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Sample Name:	LCS311021			**Data File:**		18NOV16D-08.wiff
Sample ID:	EPA 537 mod QSM 5.1 table B-15 18311021			**Acquis Date:**		2018-11-16T11:17:16
Sample Type:	Quality Control			**Instrument:**		LM27631
Vial Position:	40			**Acquis Method:**		18AUG13_3uL.dam
Injection Vol:	3.00			**Result Table:**		18311021
QMethod File:	18AUG20QM			**ICAL Name:**		18NOV12DCAL
Batch Number:	18311021			**Operator:**		JPT12262
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: 18NOV16D-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	751669.2	707280.6	6	50	
13C2-PFOA	5.0	557637.6	484265.4	15	50	
13C4-PFOS	4.8	267937.7	256987.3	4	50	
13C2-PFDA	5.0	336022.8	302418.6	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	670928.7	13C3-PFBA	751669.2	0.893	10.000	8.004	80	50-150	
E13C5-PFPeA	645071.9	13C3-PFBA	751669.2	0.858	10.000	7.698	77	50-150	
E13C3-PFBS	364366.8	13C3-PFBA	751669.2	0.485	9.300	6.844	74	50-150	
E13C2-4:2-FTS	44312.5	13C2-PFOA	557637.6	0.079	9.340	7.078	76	50-150	
E13C5-PFHxA	604476.2	13C2-PFOA	557637.6	1.084	10.000	7.831	78	50-150	
E13C3-PFHxS	261915.9	13C2-PFOA	557637.6	0.470	9.460	6.446	68	50-150	
E13C4-PFHpA	480399.9	13C2-PFOA	557637.6	0.861	10.000	7.762	78	50-150	
E13C2-6:2-FTS	29652.5	13C2-PFOA	557637.6	0.053	9.500	7.115	75	50-150	
E13C8-PFOA	799907.2	13C2-PFOA	557637.6	1.434	10.000	7.904	79	50-150	
E13C8-PFOS	237000.1	13C4-PFOS	267937.7	0.885	9.560	7.838	82	50-150	
E13C9-PFNA	431460.1	13C4-PFOS	267937.7	1.610	10.000	8.979	90	50-150	
E13C6-PFDA	530101.2	13C2-PFDA	336022.8	1.578	10.000	7.363	74	50-150	
E13C2-8:2-FTS	25565.7	13C2-PFDA	336022.8	0.076	9.580	7.589	79	50-150	
E13C8-PFOSA	637726.2	13C2-PFDA	336022.8	1.898	10.000	8.415	84	50-150	
Ed3-NMeFOSAA	69613.0	13C2-PFDA	336022.8	0.207	10.000	7.479	75	50-150	
E13C7-PFUnDA	232978.4	13C2-PFDA	336022.8	0.693	10.000	8.051	81	50-150	
Ed5-NEtFOSAA	53366.1	13C2-PFDA	336022.8	0.159	10.000	6.720	67	50-150	
E13C2-PFDoDA	472597.0	13C2-PFDA	336022.8	1.406	10.000	7.303	73	50-150	
Ed7-NMePFOSAE	321859.0	13C2-PFDA	336022.8	0.958	10.000	8.290	83	50-150	
Ed3-NMePFOSA	72595.9	13C2-PFDA	336022.8	0.216	10.000	7.850	79	50-150	
Ed9-NEtPFOSAE	285868.8	13C2-PFDA	336022.8	0.851	10.000	8.850	88	50-150	
Ed5-NEtPFOSA	57334.0	13C2-PFDA	336022.8	0.171	10.000	8.005	80	50-150	
E13C2-PFTeDA	322030.7	13C2-PFDA	336022.8	0.958	10.000	6.729	67	50-150	

APPROVED
By JPT at 4:01 pm, 11/16/18

REVIEWED
By HMK at 9:07 am, 11/19/18

ICAL Name: 18NOV12DCAL **Result Table:** 18311021 11/16/2018 3:49:12 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

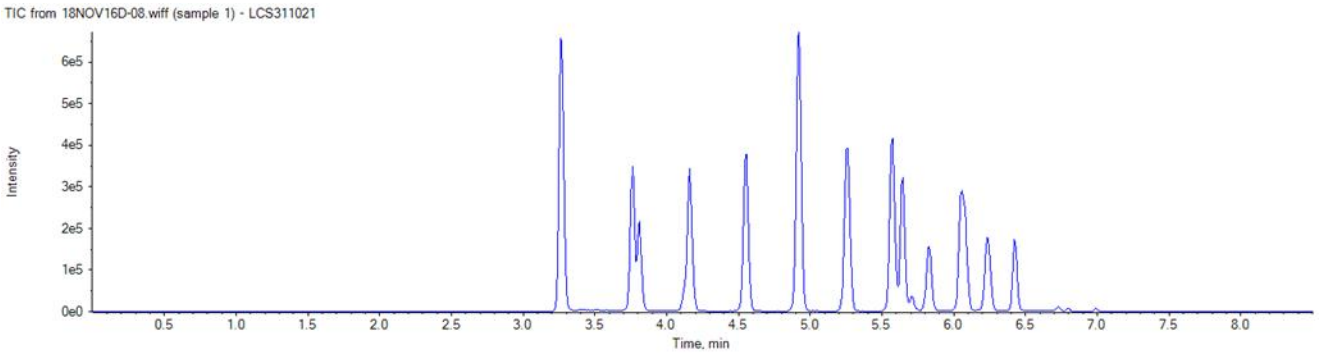
Analyte Quantitation Peak Table

Sample Name: LCS311021 **Instrument Name:** LM27631 **File Name:** 18NOV16D-08.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	3.26	1.000	106064.9		A	13C4-PFBA	3.26	670928.7	0.158	1.752
PFPeA	3.76	1.000	91664.2		A	13C5-PFPeA	3.76	645071.9	0.142	1.645
PFBS	3.81	1.000	54361.6		A	13C3-PFBS	3.81	364366.8	0.149	1.419
4:2-FTS	4.12	1.000	33246.0		A	13C2-4:2-FTS	4.12	44312.5	0.750	4.074
PFHxA	4.16	1.000	114578.9		A	13C5-PFHxA	4.16	604476.2	0.190	1.583
PFPeS	4.18	1.100	26183.0		A	13C3-PFBS	3.81	364366.8	0.072	1.395
PFHpA	4.55	1.000	115030.0		A	13C4-PFHpA	4.55	480399.9	0.239	1.587
PFHxS	4.55	1.000	39941.4		A	13C3-PFHxS	4.55	261915.9	0.152	1.479
6:2-FTS	4.91	1.000	27956.7		A	13C2-6:2-FTS	4.91	29652.5	0.943	4.563
PFHpS	4.91	1.080	37507.5		A	13C3-PFHxS	4.55	261915.9	0.143	1.508
PFOA	4.92	1.000	118079.8		A	13C8-PFOA	4.92	799907.2	0.148	1.577
PFOS	5.25	1.000	35308.7		A	13C8-PFOS	5.25	237000.1	0.149	1.303
PFNA	5.27	1.000	93397.3		A	13C9-PFNA	5.27	431460.1	0.216	1.561
PFNS	5.55	1.060	23161.7		A	13C8-PFOS	5.25	237000.1	0.098	1.367
PFDA	5.57	1.000	86182.5		A	13C6-PFDA	5.57	530101.2	0.163	1.724
8:2-FTS	5.57	1.000	19899.9		A	13C2-8:2-FTS	5.58	25565.7	0.778	3.630
PFOSA	5.64	1.000	97315.0		A	13C8-PFOSA	5.64	637726.2	0.153	1.491
NMeFOSAA	5.71	1.000	8792.4		A	d3-NMeFOSAA	5.71	69613.0	0.126	1.428
PFDS	5.80	1.110	18873.7		A	13C8-PFOS	5.25	237000.1	0.080	1.443
PFUnDA	5.83	1.000	65772.4		A	13C7-PFUnDA	5.83	232978.4	0.282	1.476
NEtFOSAA	5.84	1.000	7764.3		M	d5-NEtFOSAA	5.84	53366.1	0.145	1.525
PFDoDA	6.05	1.000	69241.9		A	13C2-PFDoDA	6.05	472597.0	0.147	1.492
10:2-FTS	6.07	1.090	13023.8		A	13C2-8:2-FTS	5.58	25565.7	0.509	3.394
NMePFOSAE	6.08	1.000	60087.1		A	d7-NMePFOSAE	6.08	321859.0	0.187	1.554
NMePFOSA	6.09	1.000	10924.2		A	d3-NMePFOSA	6.09	72595.9	0.150	1.485
PFDoS	6.22	1.190	10505.7		A	13C8-PFOS	5.25	237000.1	0.044	1.553
NEtPFOSAE	6.24	1.000	65523.7		A	d9-NEtPFOSAE	6.23	285868.8	0.229	1.471
NEtPFOSA	6.26	1.000	9051.6		A	d5-NEtPFOSA	6.25	57334.0	0.158	1.450
PFTrDA	6.25	1.030	57682.1		A	13C2-PFDoDA	6.05	472597.0	0.122	1.541
PFTeDA	6.42	1.000	46653.1		A	13C2-PFTeDA	6.43	322030.7	0.145	1.624
PFHxDA	6.73	1.050	19200.6		A	13C2-PFTeDA	6.43	322030.7	0.060	1.421
PFODA	6.99	1.090	13978.5		A	13C2-PFTeDA	6.43	322030.7	0.043	1.209

Total Ion Chromatogram

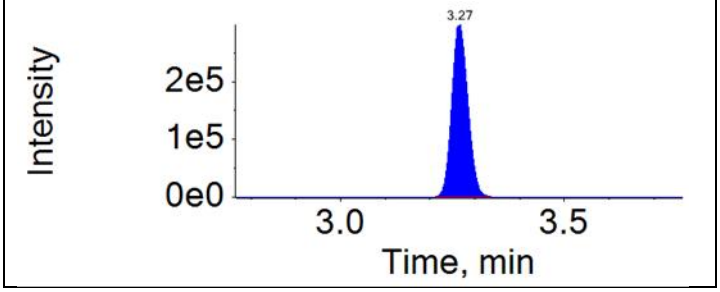


APPROVED
By JPT at 4:01 pm, 11/16/18

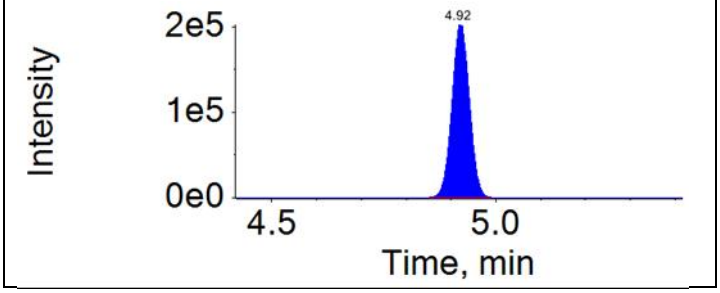
REVIEWED
By HMK at 9:07 am, 11/19/18

ICAL Name: 18NOV12DCAL **Result Table:** 18311021 11/16/2018 3:49:12 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

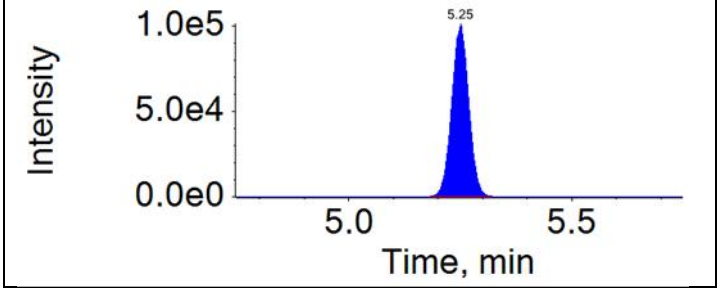
Injection Standard: 13C3-PFBA
216.0 / 172.0



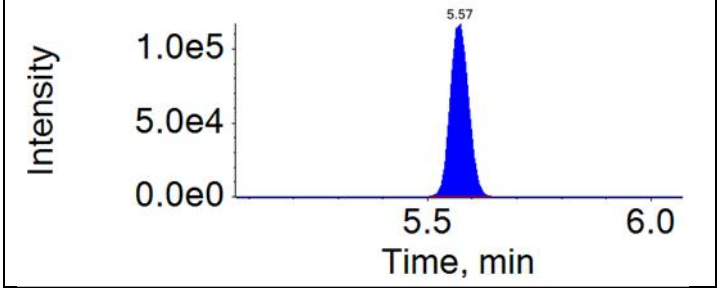
Injection Standard: 13C2-PFOA
415.0 / 370.0



Injection Standard: 13C4-PFOS
503.0 / 80.0



Injection Standard: 13C2-PFDA
515.0 / 470.0

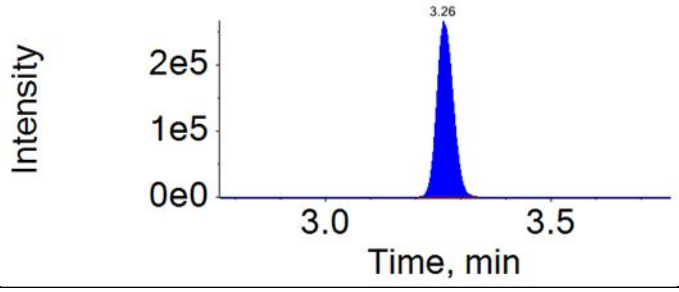


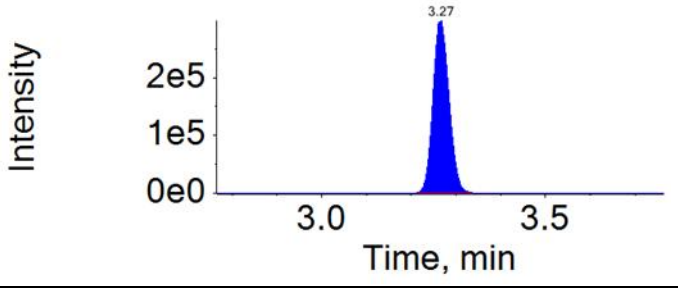
APPROVED
By JPT at 4:01 pm, 11/16/18

REVIEWED
By HMK at 9:07 am, 11/19/18

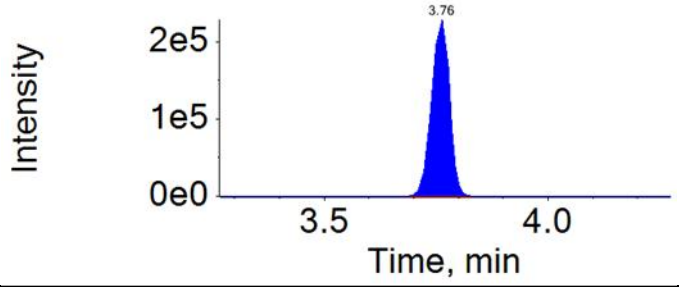
ICAL Name: 18NOV12DCAL **Result Table:** 18311021 11/16/2018 3:49:12 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

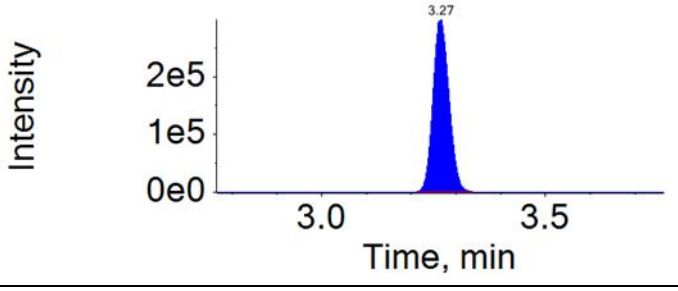
Extraction Standard: E13C4-PFBA	Injection Standard: 13C3-PFBA
217.0 / 172.0	216.0 / 172.0



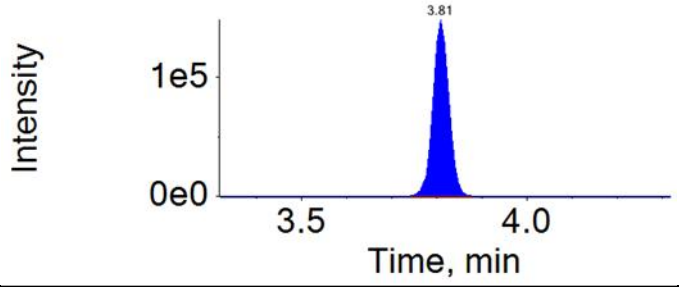


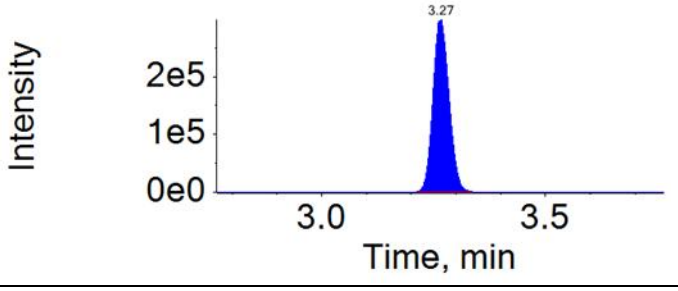
Extraction Standard: E13C5-PFPeA	Injection Standard: 13C3-PFBA
268.0 / 223.0	216.0 / 172.0



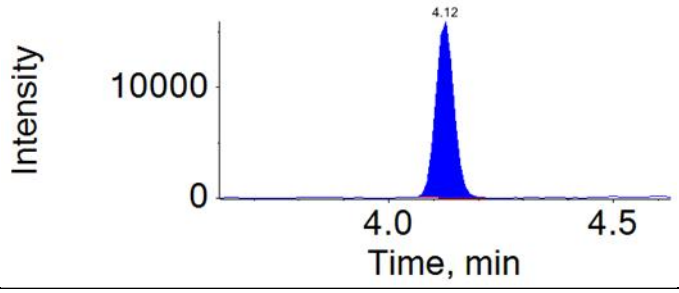


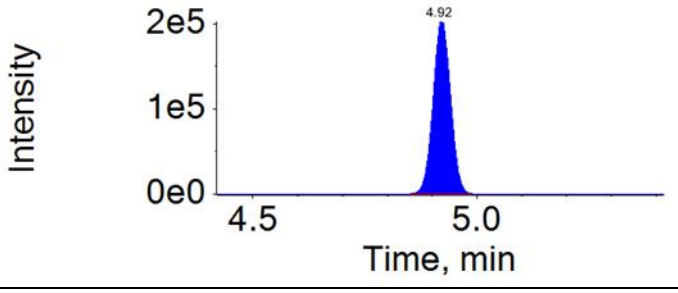
Extraction Standard: E13C3-PFBS	Injection Standard: 13C3-PFBA
302.0 / 80.0	216.0 / 172.0





Extraction Standard: E13C2-4:2-FTS	Injection Standard: 13C2-PFOA
329.0 / 81.0	415.0 / 370.0



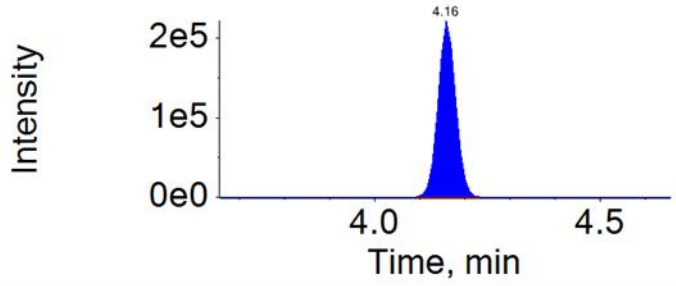


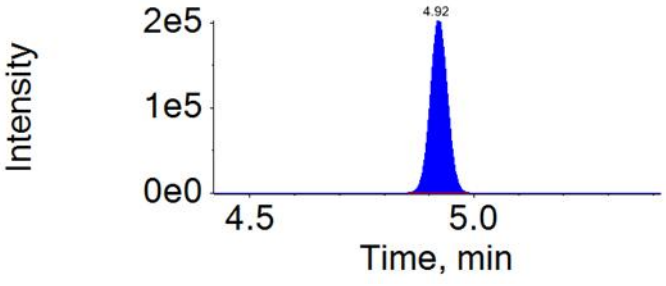
APPROVED
By JPT at 4:01 pm, 11/16/18

REVIEWED
By HMK at 9:07 am, 11/19/18

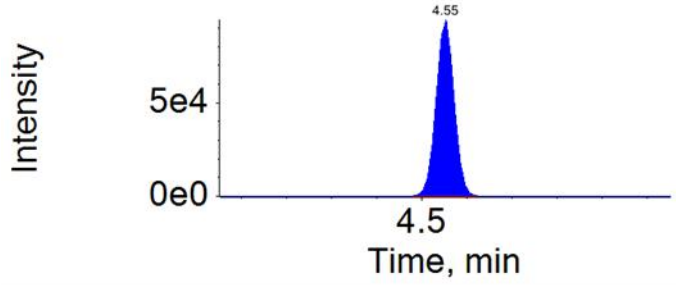
ICAL Name: 18NOV12DCAL **Result Table:** 18311021 11/16/2018 3:49:12 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

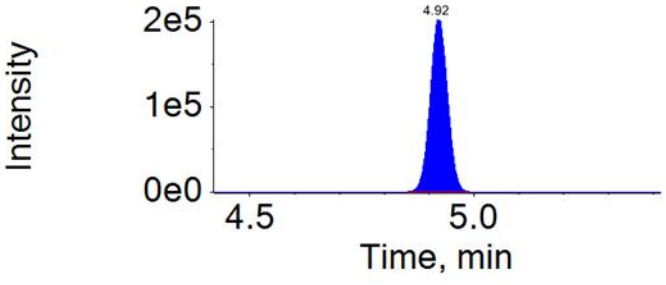
Extraction Standard: E13C5-PFHxA	Injection Standard: 13C2-PFOA
318.0 / 273.0	415.0 / 370.0



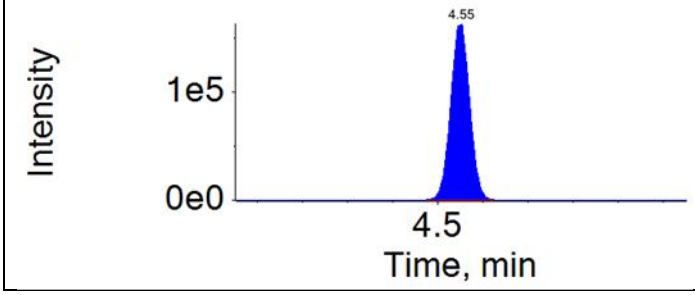


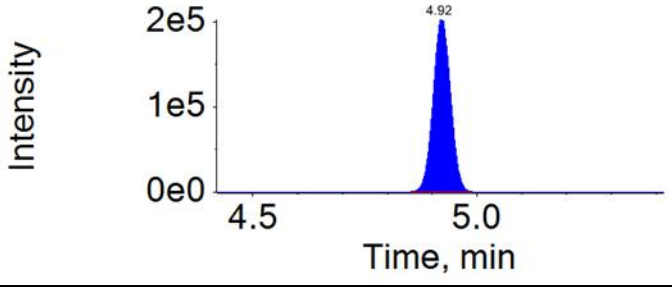
Extraction Standard: E13C3-PFHxS	Injection Standard: 13C2-PFOA
402.0 / 80.0	415.0 / 370.0



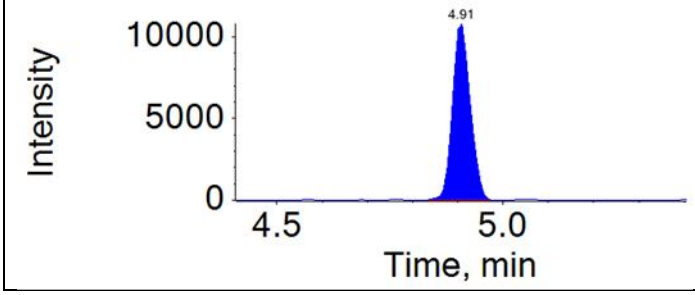


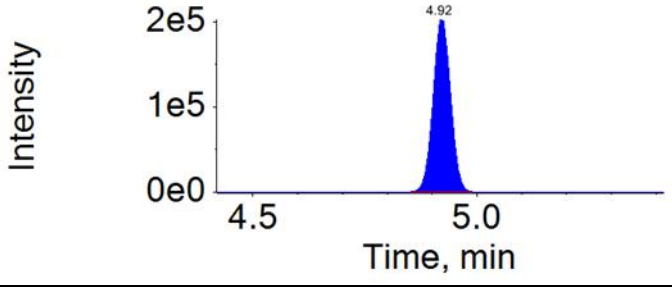
Extraction Standard: E13C4-PFHpA	Injection Standard: 13C2-PFOA
367.0 / 322.0	415.0 / 370.0





Extraction Standard: E13C2-6:2-FTS	Injection Standard: 13C2-PFOA
429.0 / 81.0	415.0 / 370.0

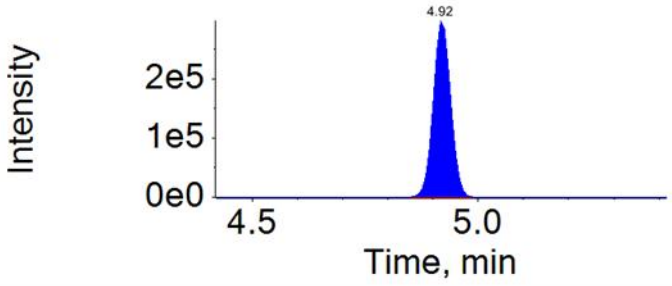
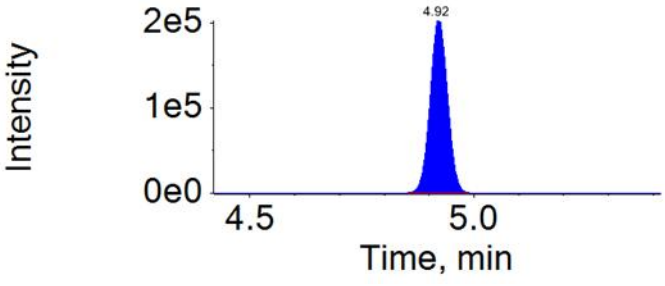


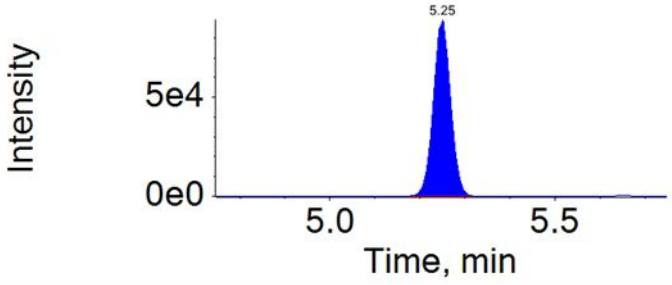
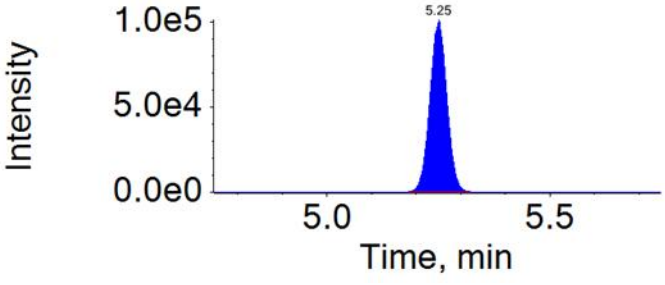


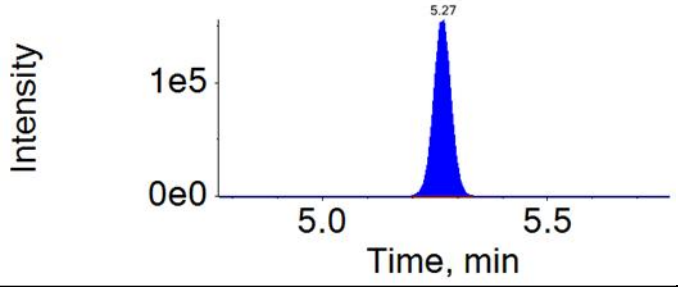
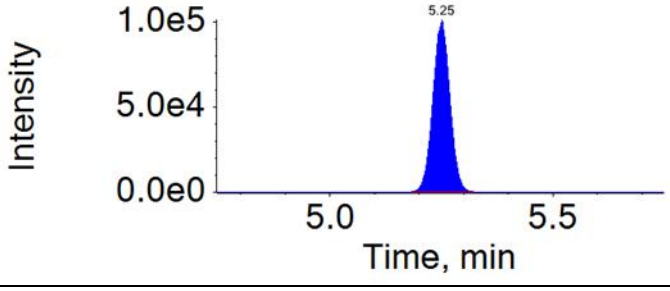
APPROVED
By JPT at 4:01 pm, 11/16/18

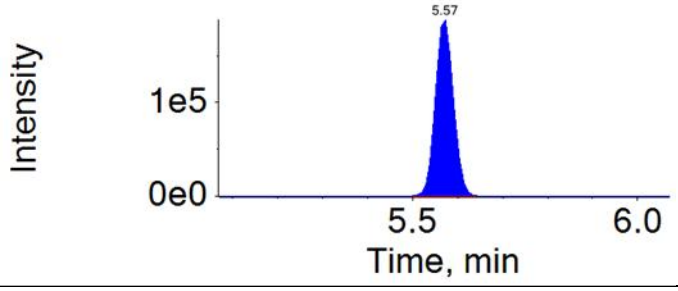
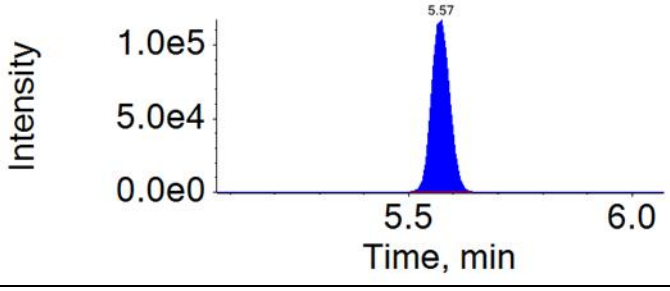
REVIEWED
By HMK at 9:07 am, 11/19/18

ICAL Name: 18NOV12DCAL **Result Table:** 18311021 11/16/2018 3:49:12 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
	

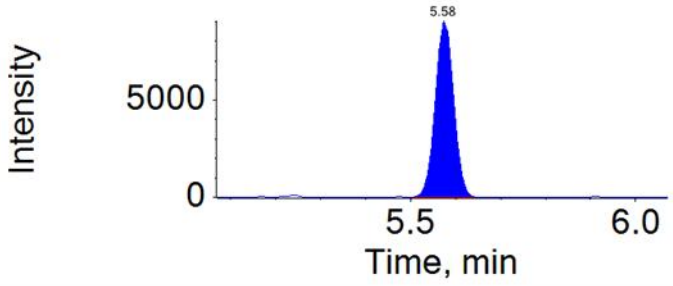
Extraction Standard: E13C6-PFDA	Injection Standard: 13C2-PFDA
519.0 / 474.0	515.0 / 470.0
	

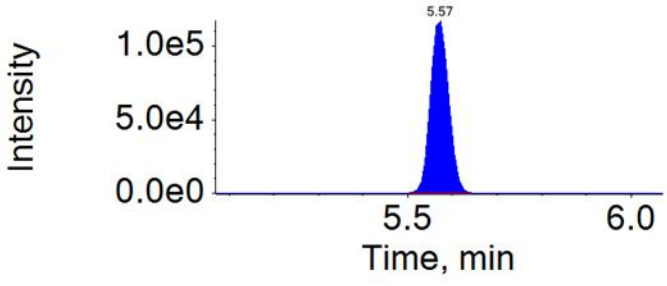
APPROVED
By JPT at 4:01 pm, 11/16/18

REVIEWED
By HMK at 9:07 am, 11/19/18

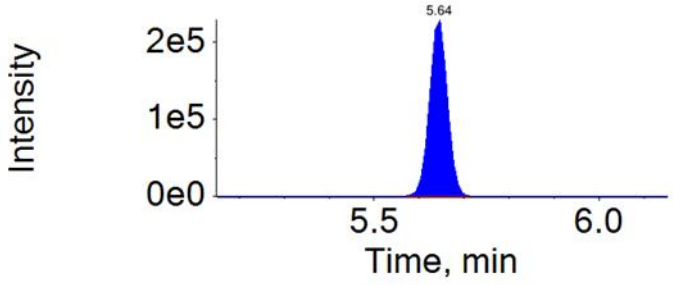
ICAL Name: 18NOV12DCAL **Result Table:** 18311021 11/16/2018 3:49:12 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

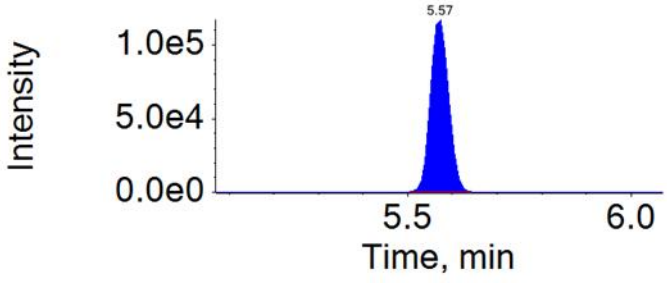
Extraction Standard: E13C2-8:2-FTS	Injection Standard: 13C2-PFDA
529.0 / 81.0	515.0 / 470.0



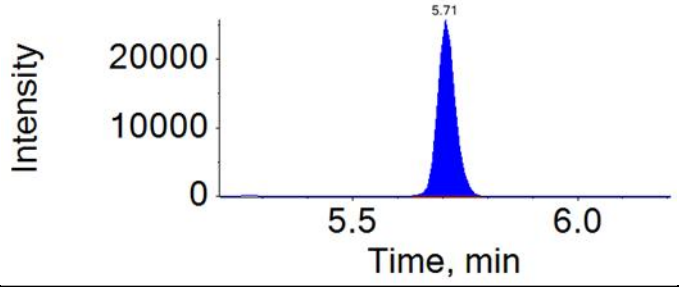


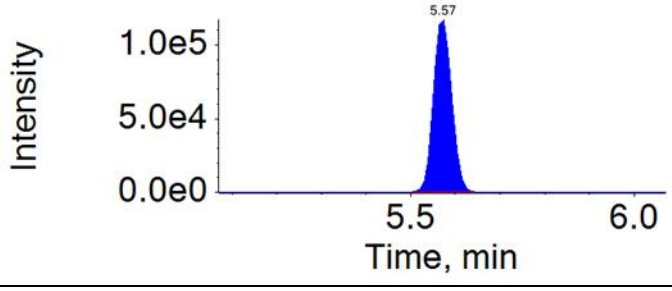
Extraction Standard: E13C8-PFOSA	Injection Standard: 13C2-PFDA
506.0 / 78.0	515.0 / 470.0



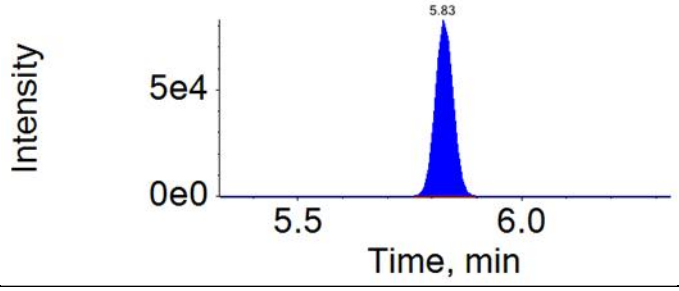


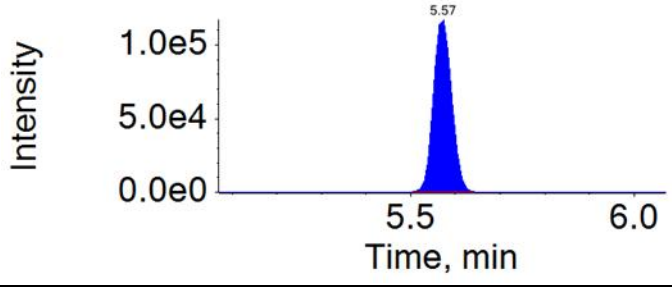
Extraction Standard: Ed3-NMeFOSAA	Injection Standard: 13C2-PFDA
573.0 / 419.0	515.0 / 470.0





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

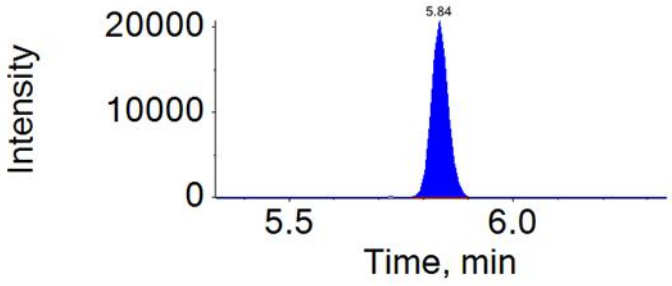
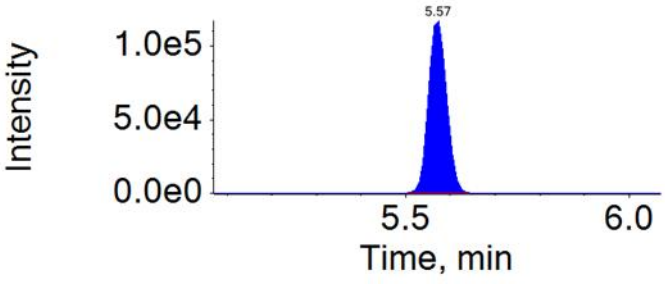


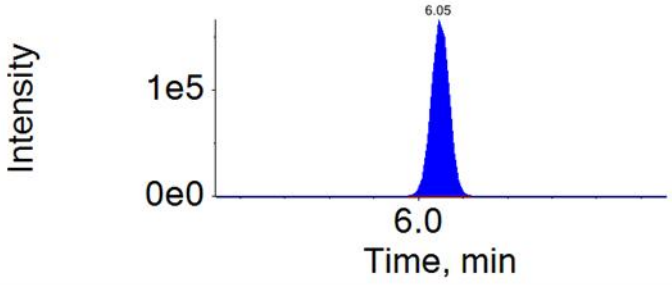
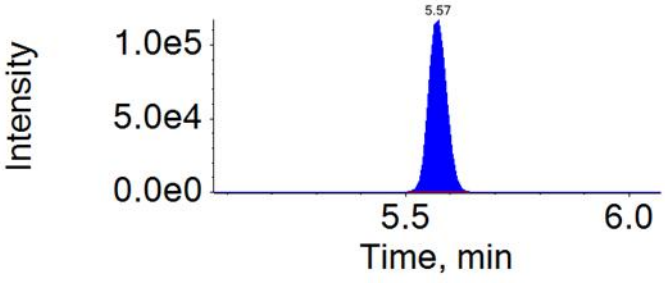


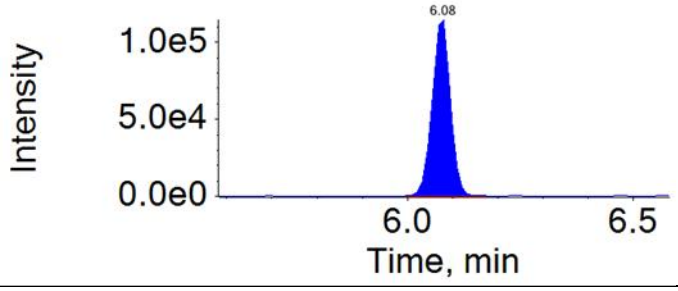
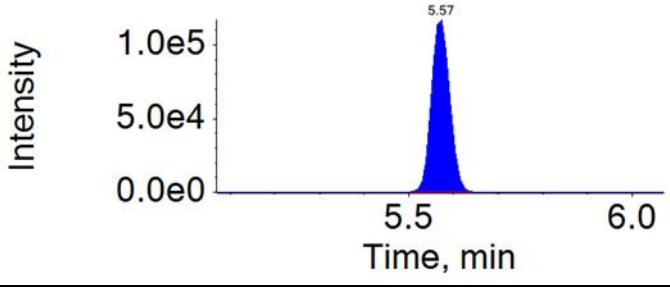
APPROVED
By JPT at 4:01 pm, 11/16/18

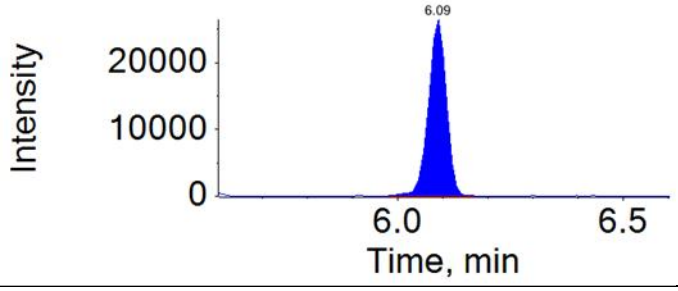
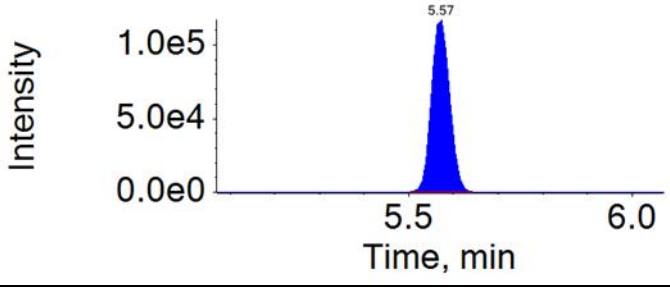
REVIEWED
By HMK at 9:07 am, 11/19/18

ICAL Name: 18NOV12DCAL **Result Table:** 18311021 11/16/2018 3:49:12 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
	

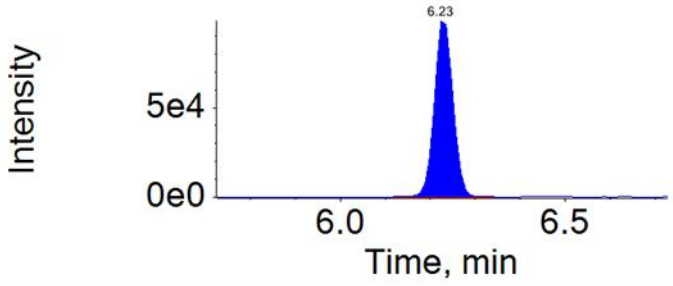
Extraction Standard: E13C2-PFDoDA	Injection Standard: 13C2-PFDA
615.0 / 570.0	515.0 / 470.0
	

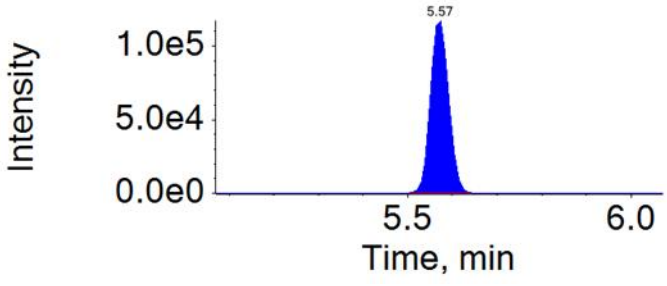
Extraction Standard: Ed7-NMePFOSAE	Injection Standard: 13C2-PFDA
623.0 / 59.0	515.0 / 470.0
	

Extraction Standard: Ed3-NMePFOSA	Injection Standard: 13C2-PFDA
515.0 / 169.0	515.0 / 470.0
	

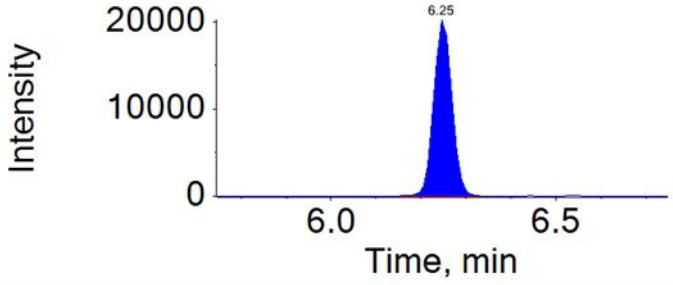
ICAL Name: 18NOV12DCAL **Result Table:** 18311021 11/16/2018 3:49:12 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

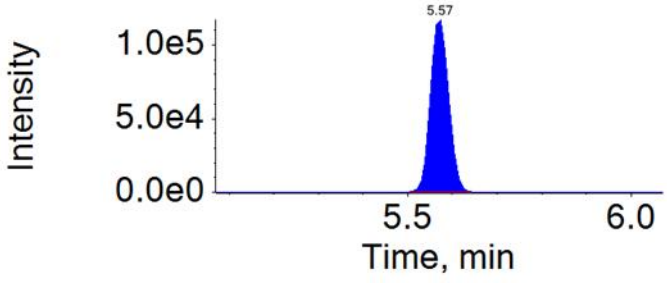
Extraction Standard: Ed9-NEtPFOSAE	Injection Standard: 13C2-PFDA
639.0 / 59.0	515.0 / 470.0



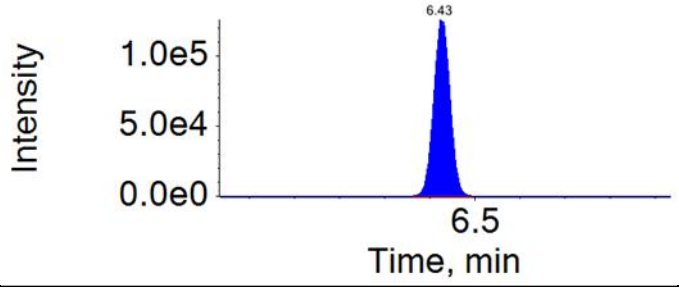


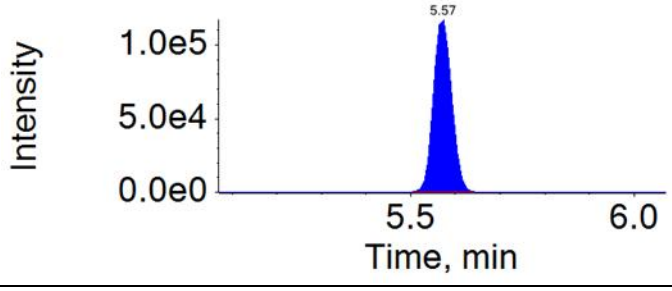
Extraction Standard: Ed5-NEtPFOSA	Injection Standard: 13C2-PFDA
531.0 / 169.0	515.0 / 470.0





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



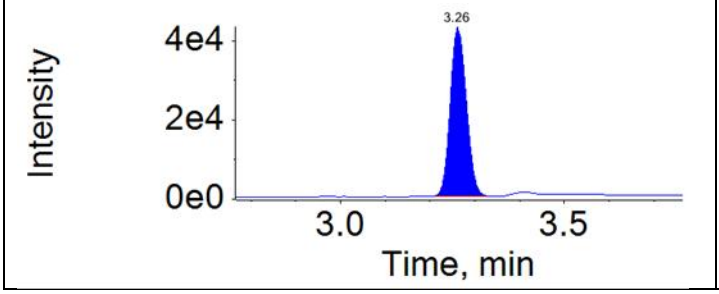


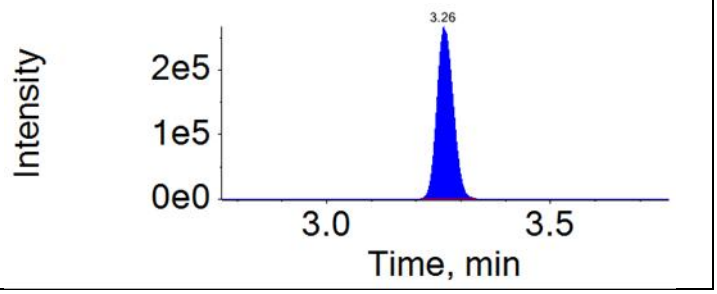
APPROVED
By JPT at 4:01 pm, 11/16/18

REVIEWED
By HMK at 9:07 am, 11/19/18

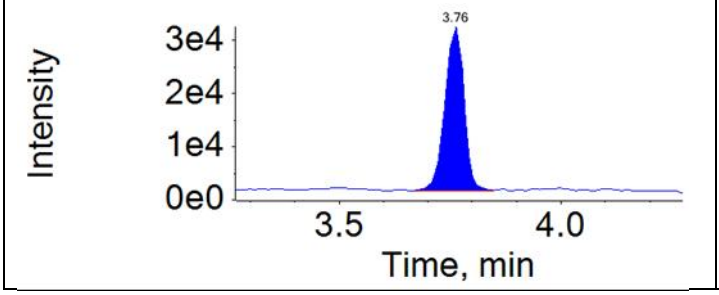
ICAL Name: 18NOV12DCAL **Result Table:** 18311021 11/16/2018 3:49:12 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

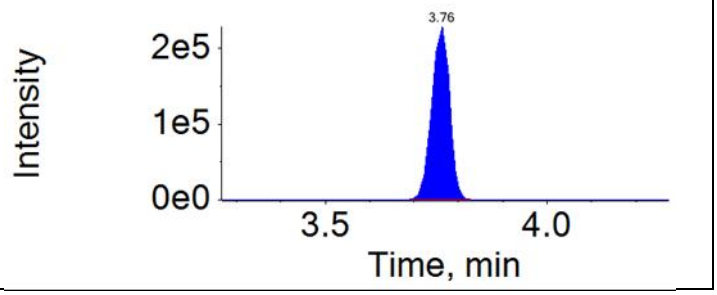
Analyte: PFBA	Extraction Standard: 13C4-PFBA
213.0 / 169.0	217.0 / 172.0



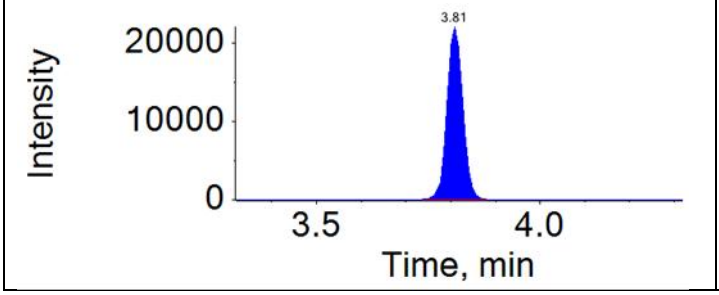


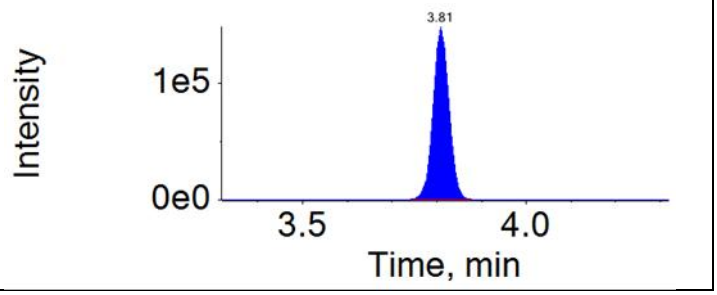
Analyte: PFPeA	Extraction Standard: 13C5-PFPeA
263.0 / 219.0	268.0 / 223.0



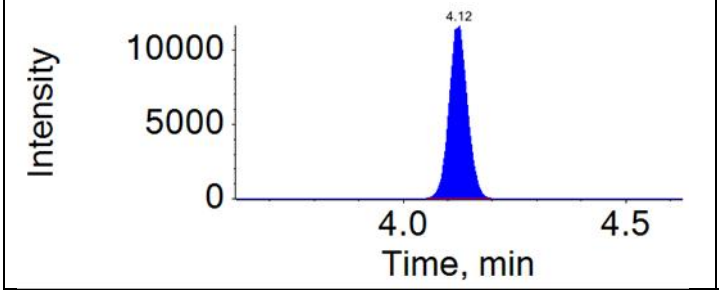


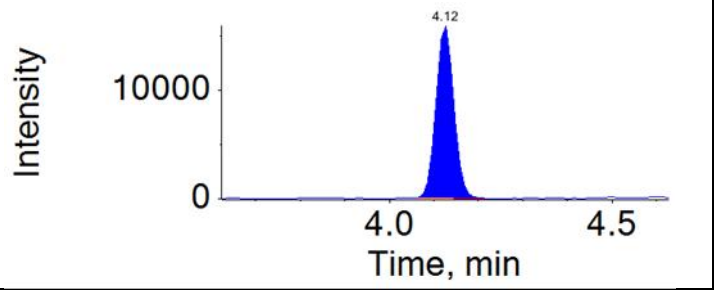
Analyte: PFBS	Extraction Standard: 13C3-PFBS
299.0 / 80.0	302.0 / 80.0





Analyte: 4:2-FTS	Extraction Standard: 13C2-4:2-FTS
327.0 / 307.0	329.0 / 81.0



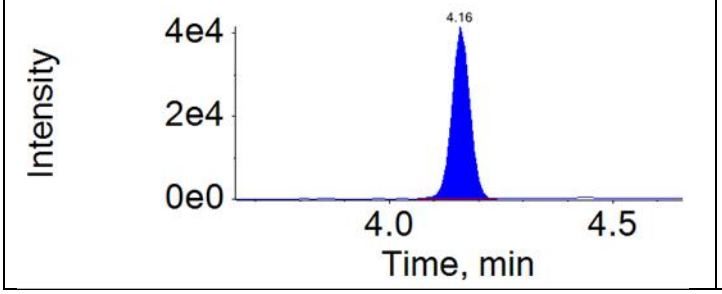


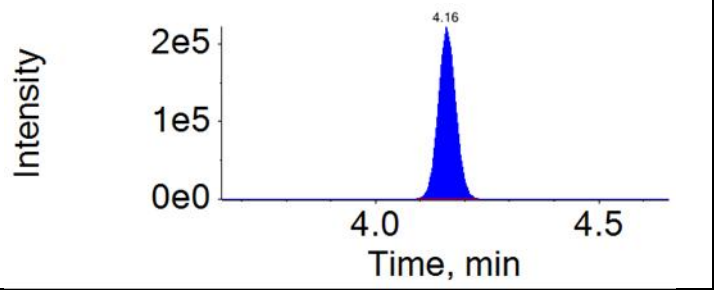
APPROVED
By JPT at 4:01 pm, 11/16/18

REVIEWED
By HMK at 9:07 am, 11/19/18

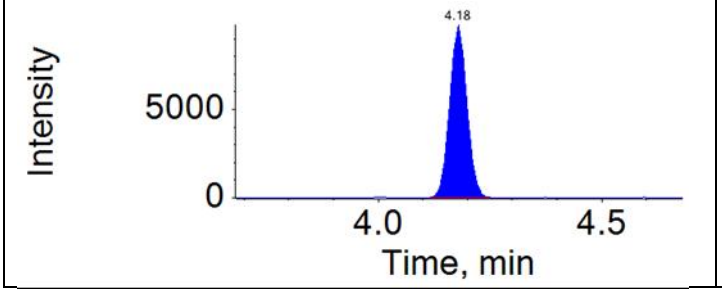
ICAL Name: 18NOV12DCAL **Result Table:** 18311021 11/16/2018 3:49:12 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

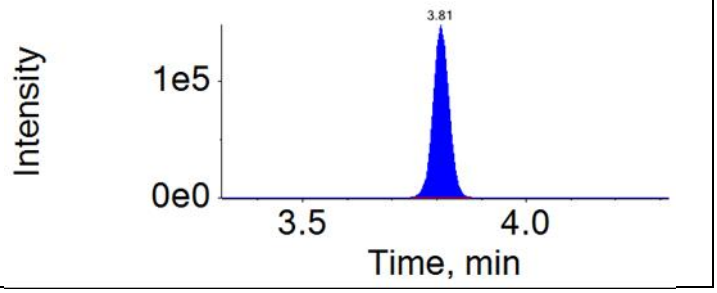
Analyte: PFHxA	Extraction Standard: 13C5-PFHxA
313.0 / 269.0	318.0 / 273.0



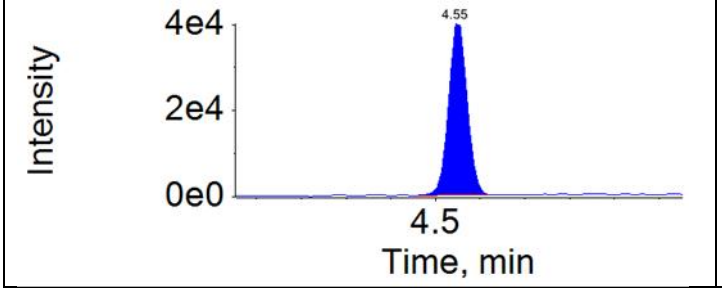


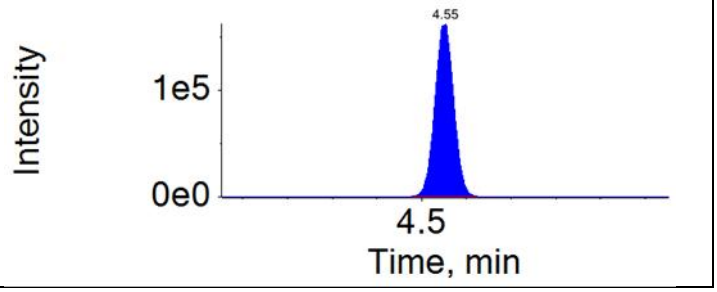
Analyte: PFPeS	Extraction Standard: 13C3-PFBS
349.0 / 80.0	302.0 / 80.0



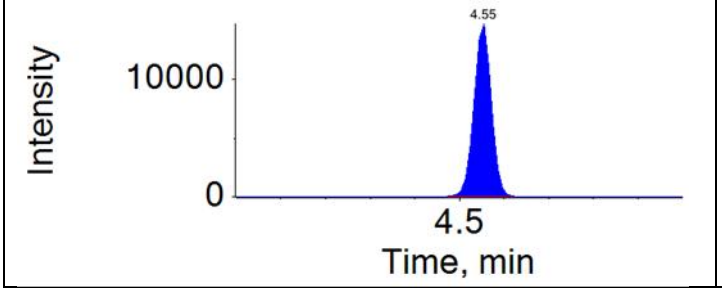


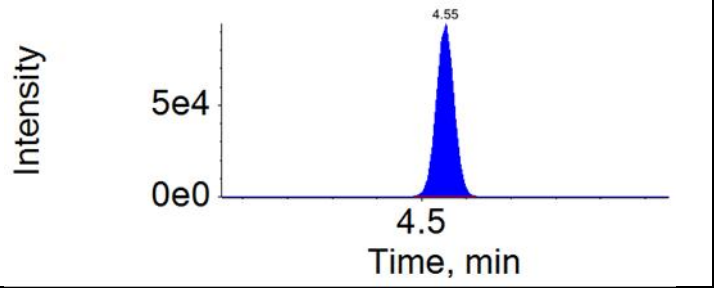
Analyte: PFHpA	Extraction Standard: 13C4-PFHpA
363.0 / 319.0	367.0 / 322.0





Analyte: PFHxS	Extraction Standard: 13C3-PFHxS
399.0 / 80.0	402.0 / 80.0

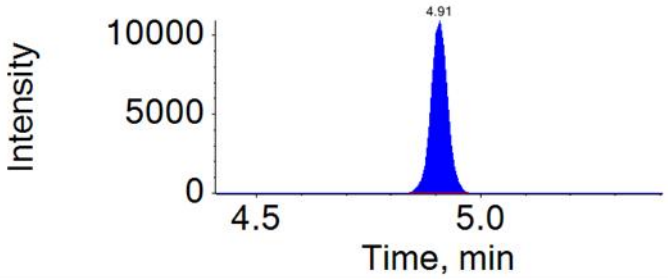
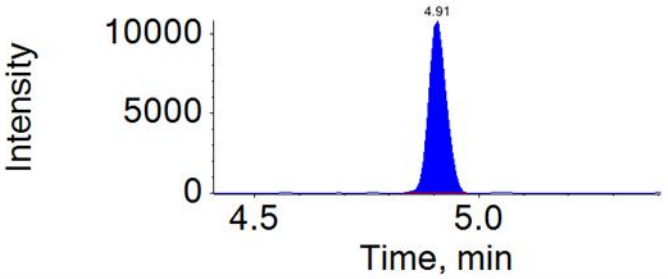


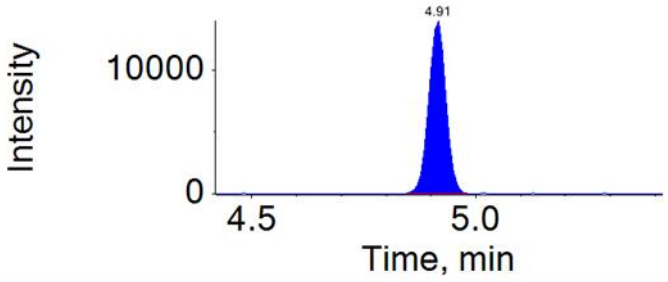
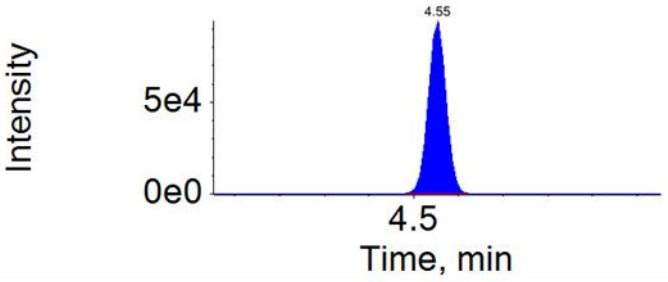


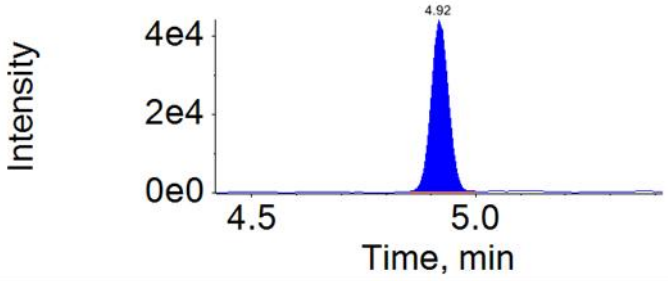
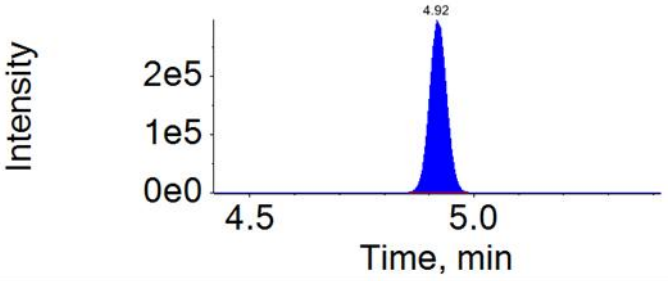
APPROVED
By JPT at 4:01 pm, 11/16/18

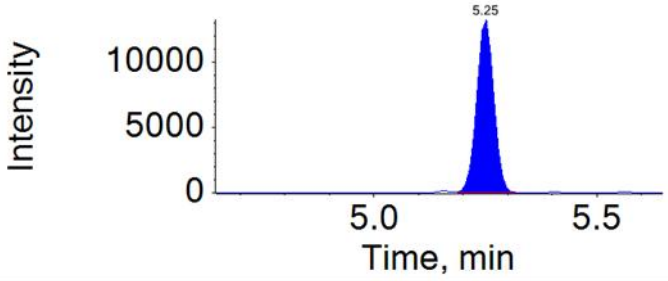
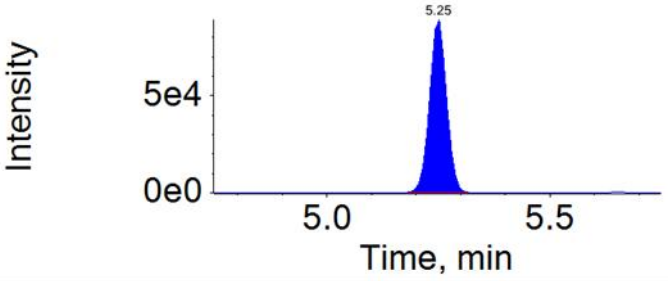
REVIEWED
By HMK at 9:07 am, 11/19/18

ICAL Name: 18NOV12DCAL **Result Table:** 18311021 11/16/2018 3:49:12 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Analyte: 6:2-FTS	Extraction Standard: 13C2-6:2-FTS
427.0 / 407.0	429.0 / 81.0
	

Analyte: PFHpS	Extraction Standard: 13C3-PFHxS
449.0 / 80.0	402.0 / 80.0
	

Analyte: PFOA	Extraction Standard: 13C8-PFOA
413.0 / 369.0	421.0 / 376.0
	

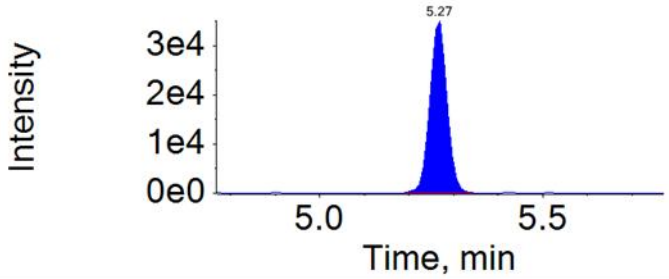
Analyte: PFOS	Extraction Standard: 13C8-PFOS
499.0 / 80.0	507.0 / 80.0
	

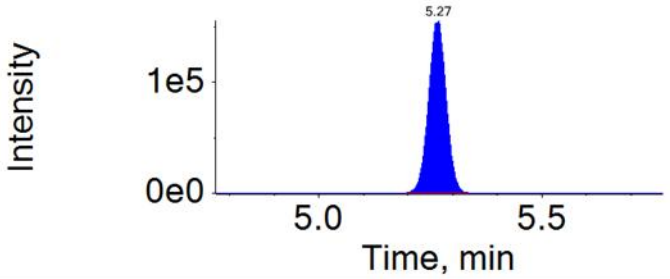
APPROVED
By JPT at 4:01 pm, 11/16/18

REVIEWED
By HMK at 9:07 am, 11/19/18

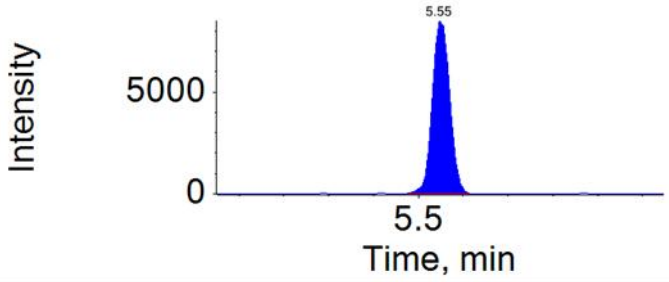
ICAL Name: 18NOV12DCAL **Result Table:** 18311021 11/16/2018 3:49:12 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

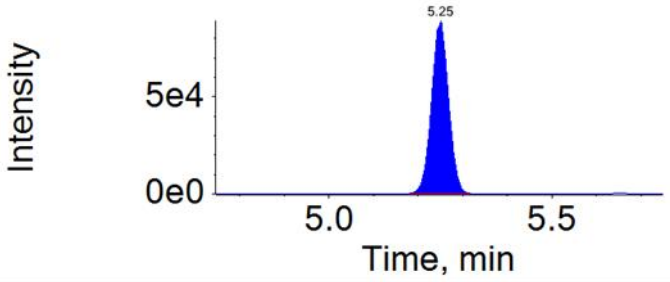
Analyte: PFNA	Extraction Standard: 13C9-PFNA
463.0 / 419.0	472.0 / 427.0



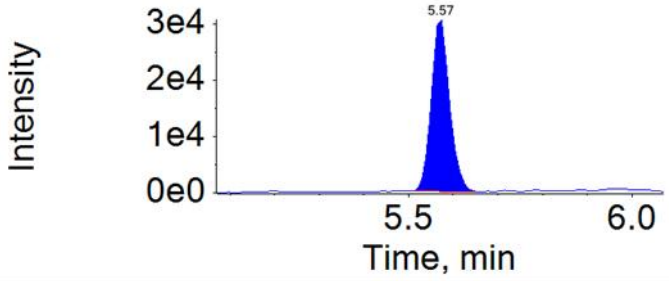


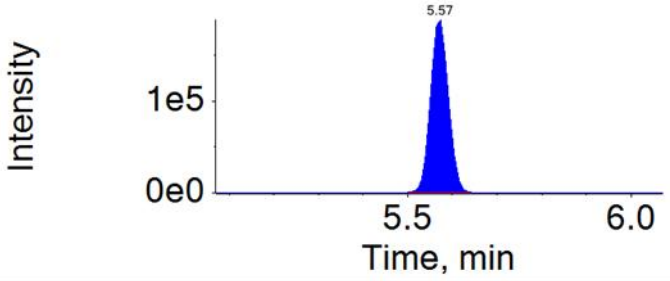
Analyte: PFNS	Extraction Standard: 13C8-PFOS
549.0 / 80.0	507.0 / 80.0



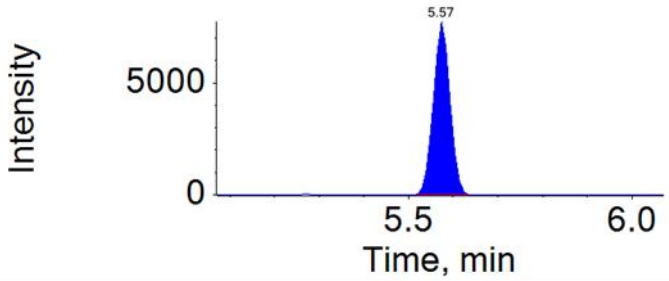


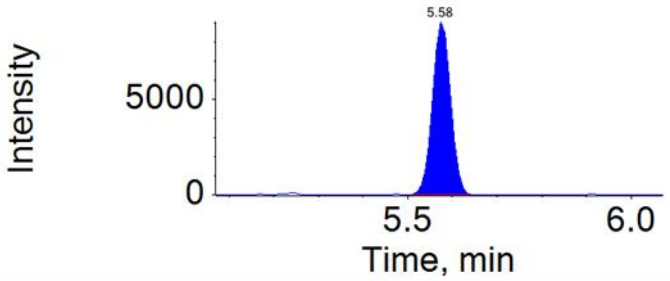
Analyte: PFDA	Extraction Standard: 13C6-PFDA
513.0 / 469.0	519.0 / 474.0





Analyte: 8:2-FTS	Extraction Standard: 13C2-8:2-FTS
527.0 / 507.0	529.0 / 81.0



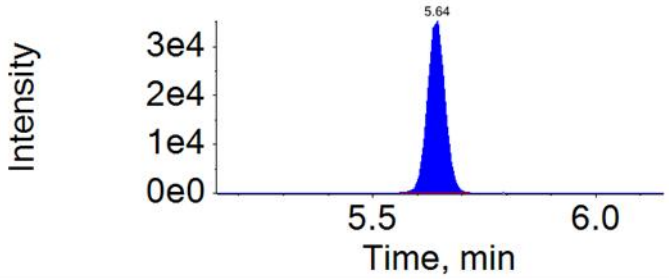


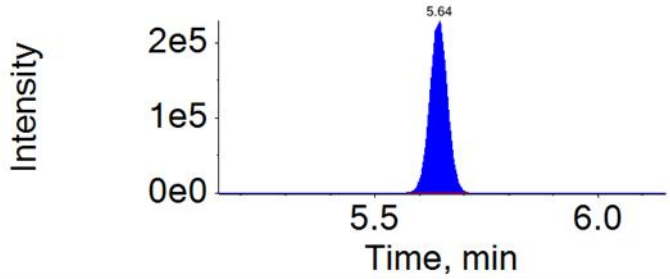
APPROVED
By JPT at 4:01 pm, 11/16/18

REVIEWED
By HMK at 9:07 am, 11/19/18

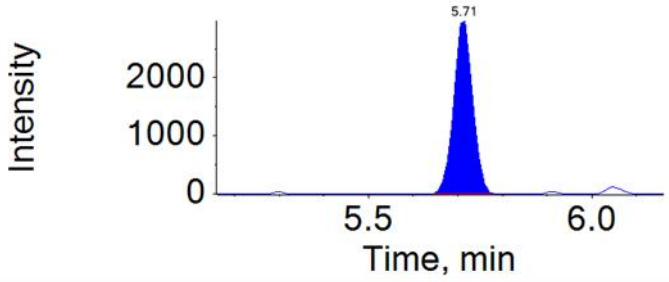
ICAL Name: 18NOV12DCAL **Result Table:** 18311021 11/16/2018 3:49:12 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

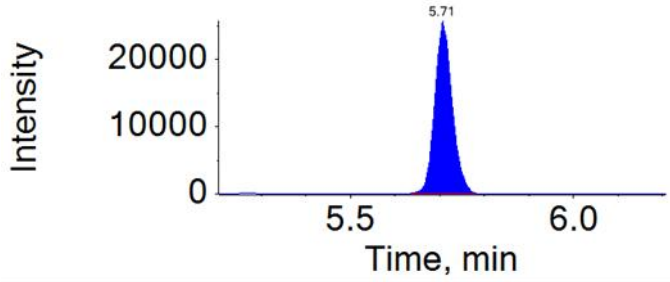
Analyte: PFOSA	Extraction Standard: 13C8-PFOSA
498.0 / 78.0	506.0 / 78.0



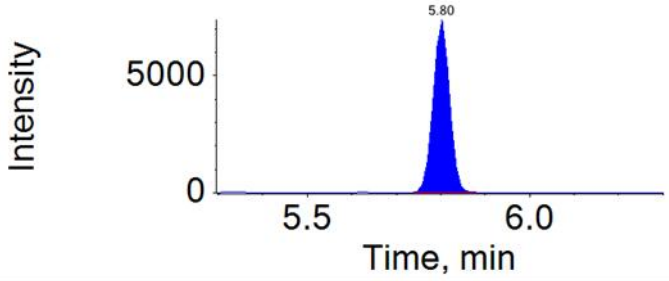


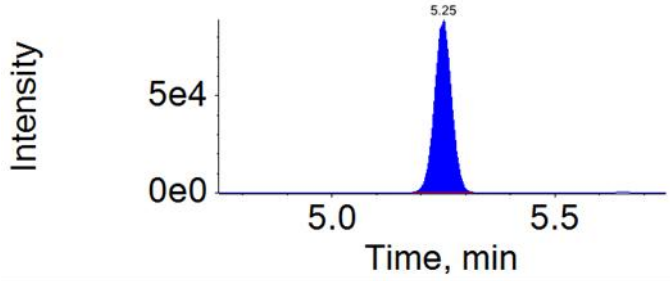
Analyte: NMeFOSAA	Extraction Standard: d3-NMeFOSAA
570.0 / 419.0	573.0 / 419.0



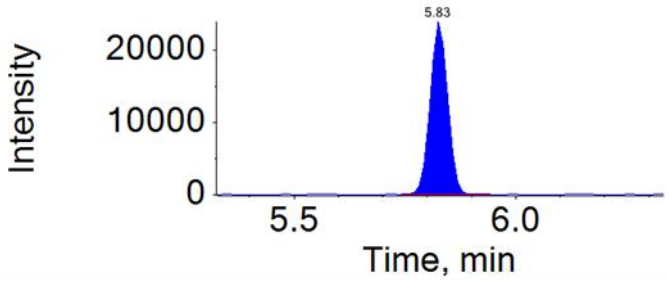


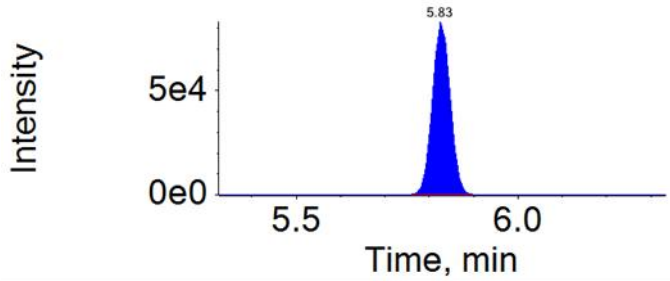
Analyte: PFDS	Extraction Standard: 13C8-PFOS
599.0 / 80.0	507.0 / 80.0





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



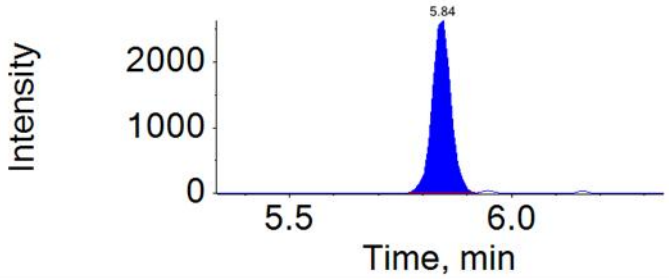


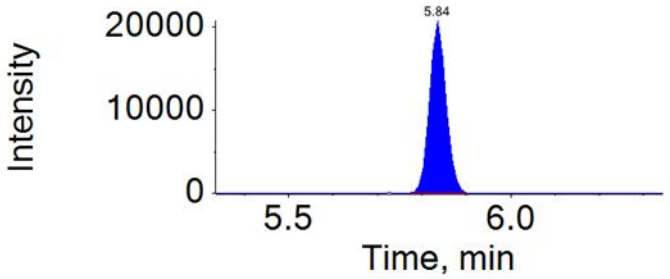
APPROVED
By JPT at 4:01 pm, 11/16/18

REVIEWED
By HMK at 9:07 am, 11/19/18

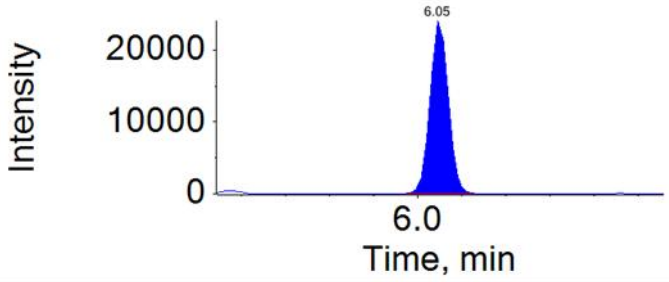
ICAL Name: 18NOV12DCAL **Result Table:** 18311021 11/16/2018 3:49:12 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

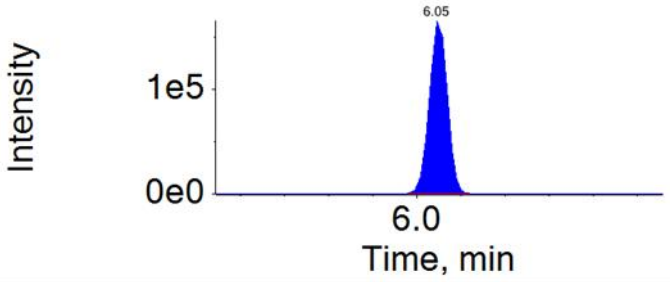
Analyte: NEtFOSAA	Extraction Standard: d5-NEtFOSAA
584.0 / 419.0	589.0 / 419.0



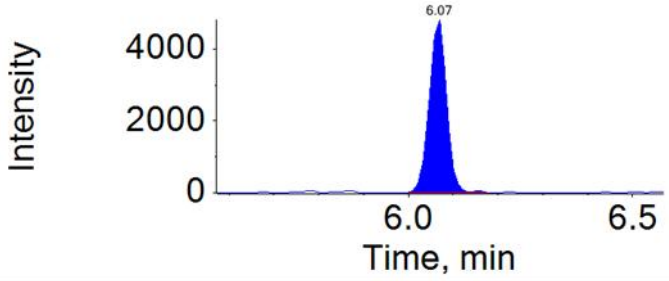


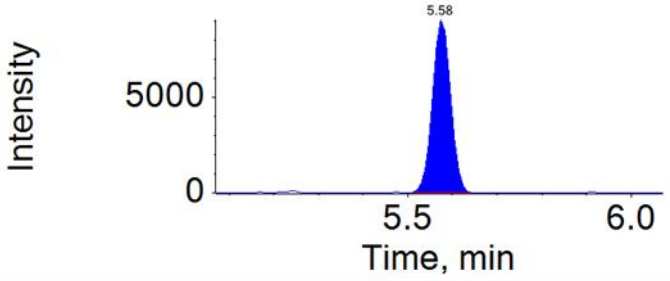
Analyte: PFDoDA	Extraction Standard: 13C2-PFDoDA
613.0 / 569.0	615.0 / 570.0



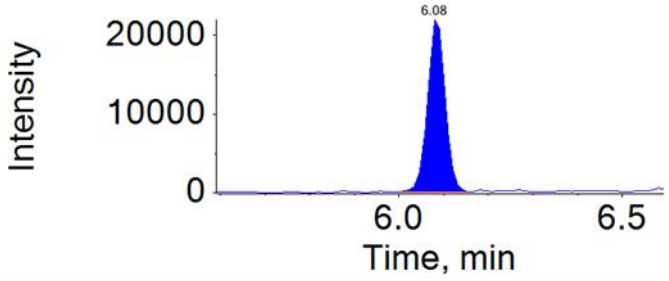


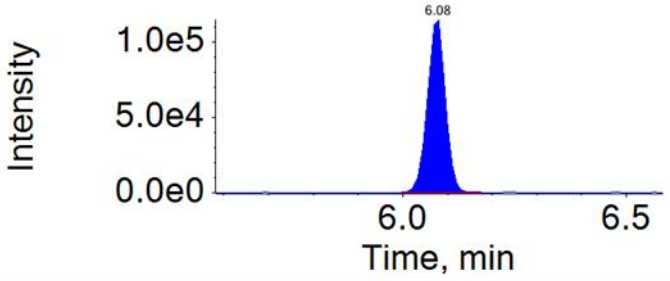
Analyte: 10:2-FTS	Extraction Standard: 13C2-8:2-FTS
627.0 / 607.0	529.0 / 81.0





Analyte: NMePFOSAE	Extraction Standard: d7-NMePFOSAE
616.0 / 59.0	623.0 / 59.0



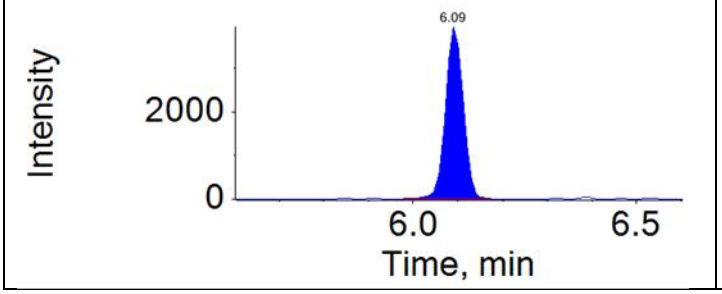


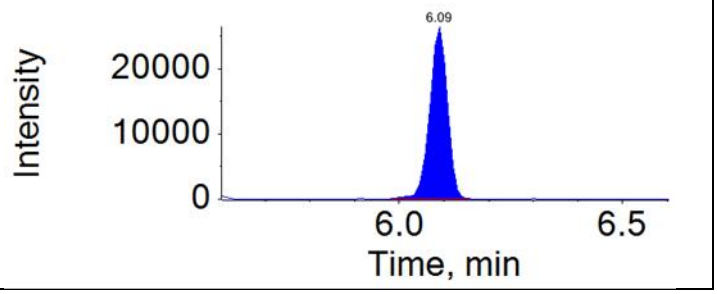
APPROVED
By JPT at 4:01 pm, 11/16/18

REVIEWED
By HMK at 9:07 am, 11/19/18

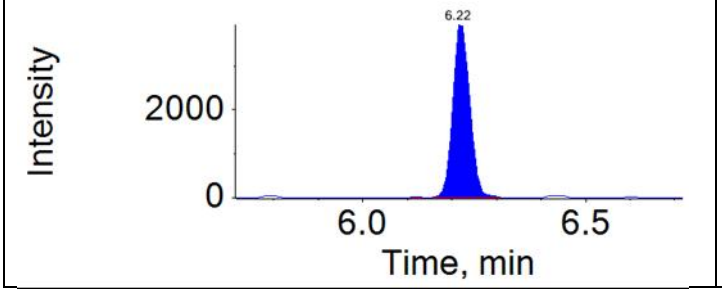
ICAL Name: 18NOV12DCAL **Result Table:** 18311021 11/16/2018 3:49:12 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

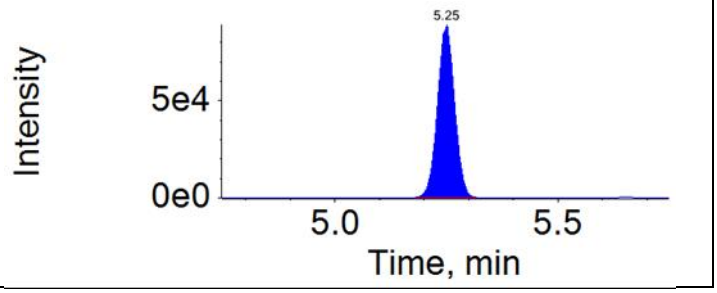
Analyte: NMePFOSA	Extraction Standard: d3-NMePFOSA
512.0 / 169.0	515.0 / 169.0



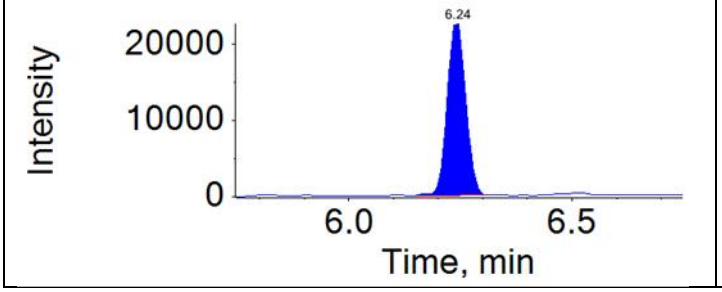


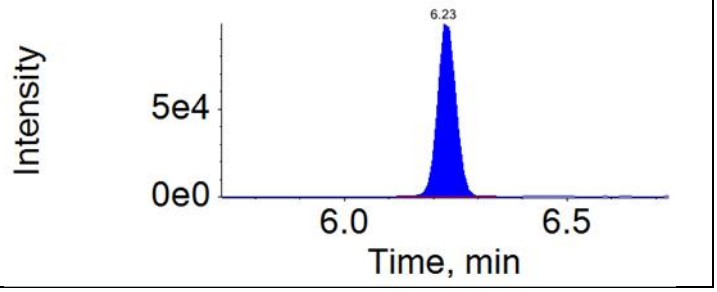
Analyte: PFDoS	Extraction Standard: 13C8-PFOS
699.0 / 80.0	507.0 / 80.0



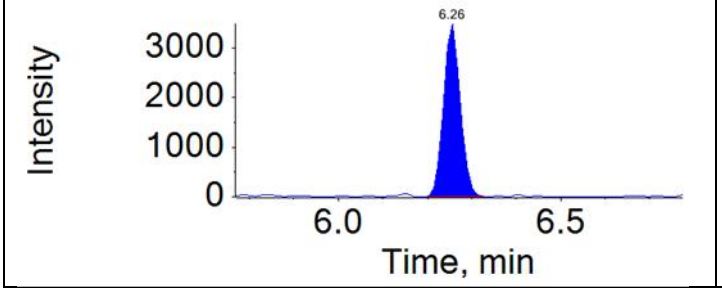


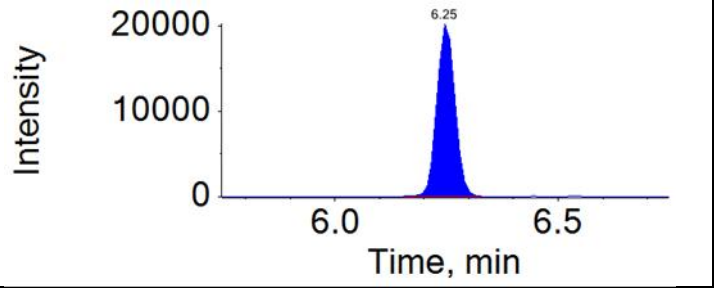
Analyte: NEtPFOSAE	Extraction Standard: d9-NEtPFOSAE
630.0 / 59.0	639.0 / 59.0





Analyte: NEtPFOSA	Extraction Standard: d5-NEtPFOSA
526.0 / 169.0	531.0 / 169.0



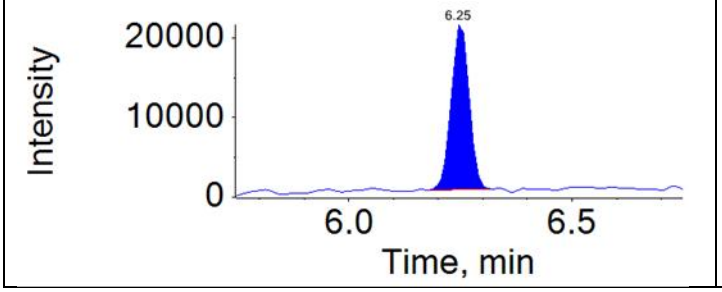


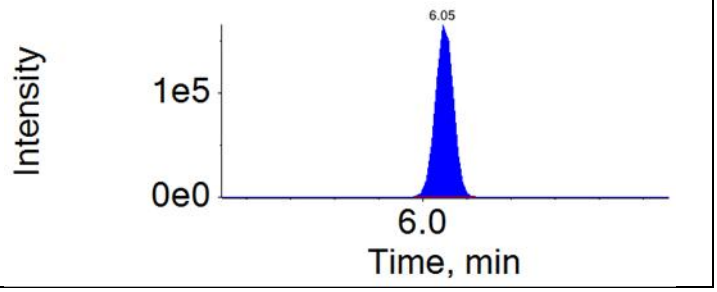
APPROVED
By JPT at 4:01 pm, 11/16/18

REVIEWED
By HMK at 9:07 am, 11/19/18

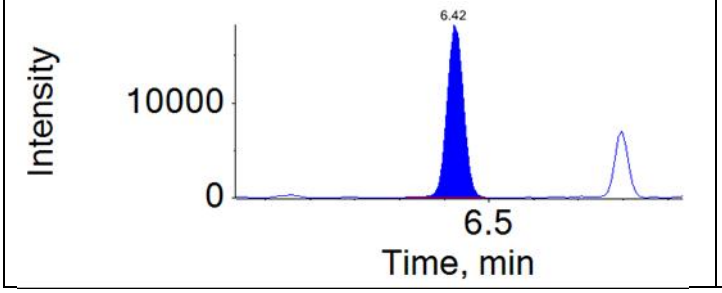
ICAL Name: 18NOV12DCAL **Result Table:** 18311021 11/16/2018 3:49:12 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

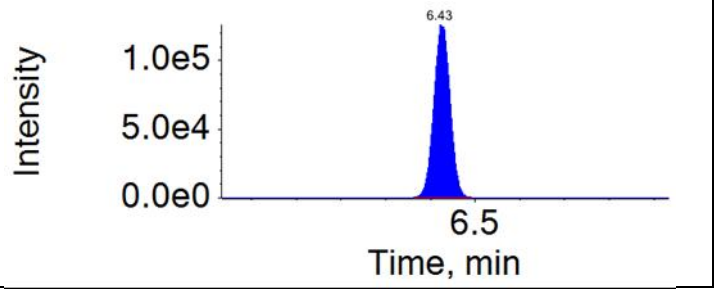
Analyte: PFTrDA	Extraction Standard: 13C2-PFDoDA
663.0 / 619.0	615.0 / 570.0



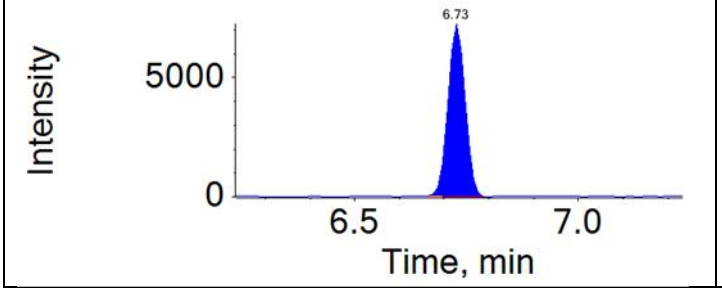


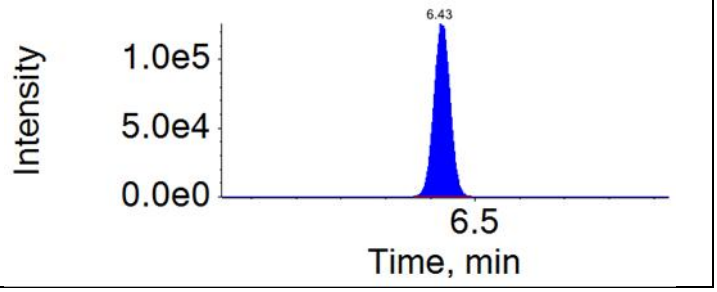
Analyte: PFTeDA	Extraction Standard: 13C2-PFTeDA
713.0 / 669.0	715.0 / 670.0



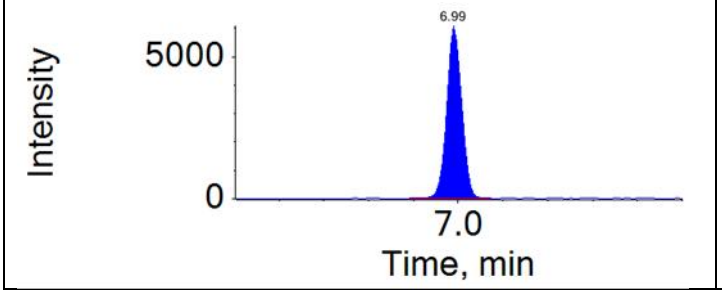


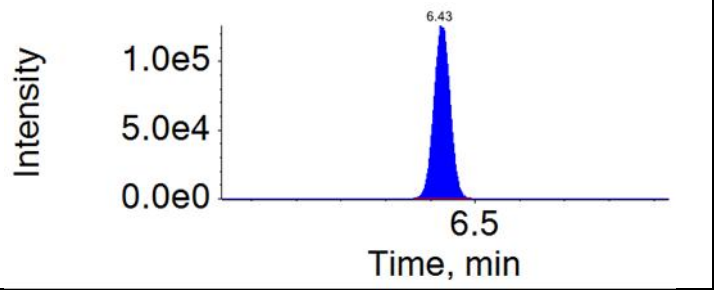
Analyte: PFHxDA	Extraction Standard: 13C2-PFTeDA
813.0 / 769.0	715.0 / 670.0





Analyte: PFODA	Extraction Standard: 13C2-PFTeDA
913.0 / 869.0	715.0 / 670.0



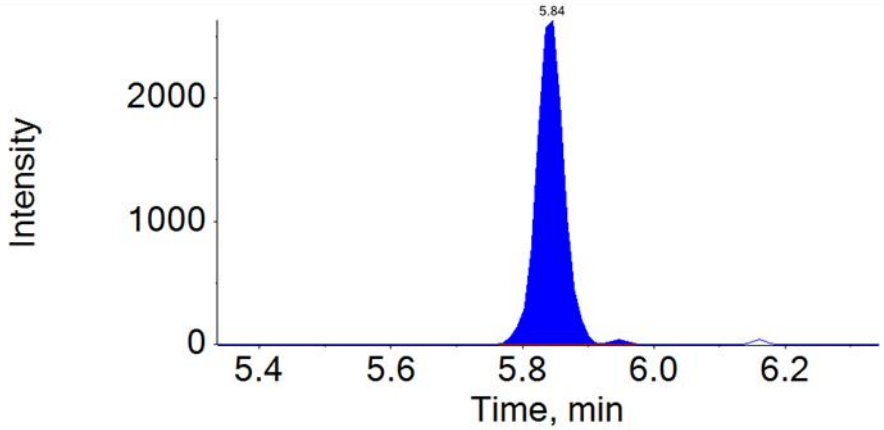


APPROVED
By JPT at 4:01 pm, 11/16/18

REVIEWED
By HMK at 9:07 am, 11/19/18

Results Table Name: 18311021
Results Table Date: 11/16/2018 3:49:12 PM
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

Component Name:
NEtFOSAA
RT (min.):
5.84
Peak Area:
7835.8
Mass Range:
584.0 / 419.0
File Name:
18NOV16D-08.wiff
Sample Name:
LCS311021



Integration Comment: incorrect integration

APPROVED
By JPT at 4:01 pm, 11/16/18

REVIEWED
By HMK at 9:07 am, 11/19/18

Results Table Name: 18311021
Results Table Date: 11/16/2018 3:49:12 PM

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

APPROVED
By JPT at 4:01 pm, 11/16/18

REVIEWED
By HMK at 9:07 am, 11/19/18

Ion Ratio Report

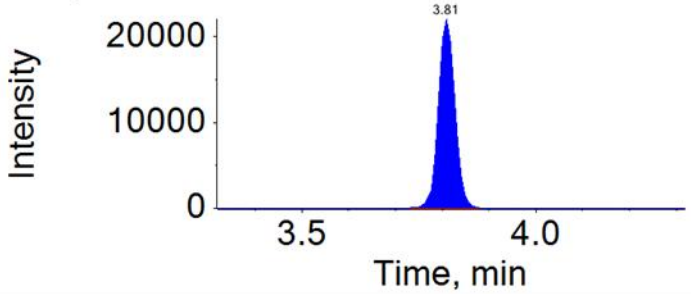
Sample Name: LCS311021 **Instrument Name:** LM27631 **File Name:** 18NOV16D-08.wiff

Component Name	RT	RRT	Analyte Area Response	Int Typ	Expected Ion Ratio	Ion Ratio	Ion Ratio % Diff	Ion Ratio Limit	Ion Ratio OOS
PFBS	3.81	1.00	54361.6	A	N/A	1.0000			
PFBS_2	3.81	1.00	19520.0	A	N/A	0.3591	-1	50	
4:2-FTS	4.12	1.00	33246.0	A	N/A	1.0000			
4:2 FTS_2	4.12	1.00	21860.4	A	N/A	0.6575		#NA!	
PFHxA	4.16	1.00	114578.9	A	N/A	1.0000			
PFHxA_2	4.16	1.00	1346.7	A	N/A	0.0118	0	50	
PFPeS	4.18	1.10	26183.0	A	N/A	1.0000			
PFPeS_2	4.18	1.10	14095.6	A	N/A	0.5383	4	50	
PFHpA	4.55	1.00	115030.0	A	N/A	1.0000			
PFHpA_2	4.55	1.00	6025.4	A	N/A	0.0524	-7	50	
PFHxS	4.55	1.00	39941.4	A	N/A	1.0000			
PFHxS_2	4.55	1.00	14416.5	A	N/A	0.3609	5	50	
6:2-FTS	4.91	1.00	27956.7	A	N/A	1.0000			
6:2 FTS_2	4.91	1.00	17061.8	A	N/A	0.6103		#NA!	
PFHpS	4.91	1.08	37507.5	A	N/A	1.0000			
PFHpS_2	4.91	1.08	14980.7	A	N/A	0.3994	-2	50	
PFOA	4.92	1.00	118079.8	A	N/A	1.0000			
PFOA_2	4.92	1.00	7034.2	A	N/A	0.0596	5	50	
PFOS	5.25	1.00	35308.7	A	N/A	1.0000			
PFOS_2	5.25	1.00	11915.4	A	N/A	0.3375	14	50	
PFNA	5.27	1.00	93397.3	A	N/A	1.0000			
PFNA_2	5.27	1.00	1609.7	A	N/A	0.0172	-24	50	
PFNS	5.55	1.06	23161.7	A	N/A	1.0000			
PFNS_2	5.55	1.06	11472.8	A	N/A	0.4953	4	50	
PFDA	5.57	1.00	86182.5	A	N/A	1.0000			
PFDA_2	5.56	1.00	370.9	A	N/A	0.0043	-46	50	
8:2-FTS	5.57	1.00	19899.9	A	N/A	1.0000			
8:2 FTS_2	5.57	1.00	13326.5	A	N/A	0.6697		#NA!	
NMeFOSAA	5.71	1.00	8792.4	A	N/A	1.0000			
NMeFOSAA_2	5.71	1.00	2536.2	A	N/A	0.2885	12	50	
PFDS	5.80	1.11	18873.7	A	N/A	1.0000			
PFDS_2	5.80	1.11	10275.6	A	N/A	0.5444	7	50	
PFUnDA	5.83	1.00	65772.4	A	N/A	1.0000			
PFUnDA_2	5.83	1.00	454.5	A	N/A	0.0069	25	50	
NEtFOSAA	5.84	1.00	7764.3	M	N/A	1.0000			
NEtFOSAA_2	5.84	1.00	6016.8	A	N/A	0.7749	8	50	
PFDoDA	6.05	1.00	69241.9	A	N/A	1.0000			
PFDoDA_2	6.05	1.00	1082.3	A	N/A	0.0156	1	50	
10:2-FTS	6.07	1.09	13023.8	A	N/A	1.0000			
10:2 FTS_2	6.06	1.09	8904.2	A	N/A	0.6837		#NA!	
PFTrDA	6.25	1.03	57682.1	A	N/A	1.0000			
PFTrDA_2	6.25	1.03	640.8	A	N/A	0.0111	30	50	
PFTeDA	6.42	1.00	46653.1	A	N/A	1.0000			
PFTeDA_2	6.44	1.00	264.7	A	N/A	0.0057	-9	50	
PFHxDA	6.73	1.05	19200.6	A	N/A	1.0000			
PFHxDA_2	6.72	1.05	1247.3	A	N/A	0.0650	-4	50	
PFODA	6.99	1.09	13978.5	A	N/A	1.0000			
PFODA_2	6.99	1.09	263.0	A	N/A	0.0188	-32	50	

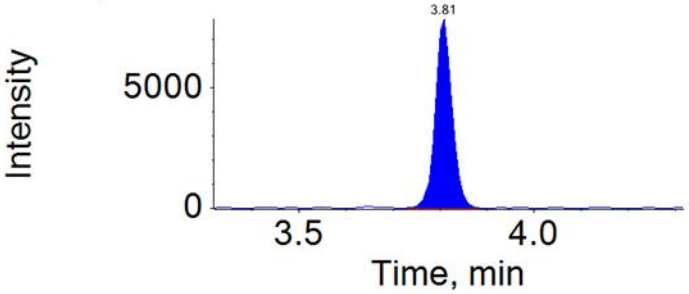
APPROVED
By JPT at 4:01 pm, 11/16/18

REVIEWED
By HMK at 9:07 am, 11/19/18

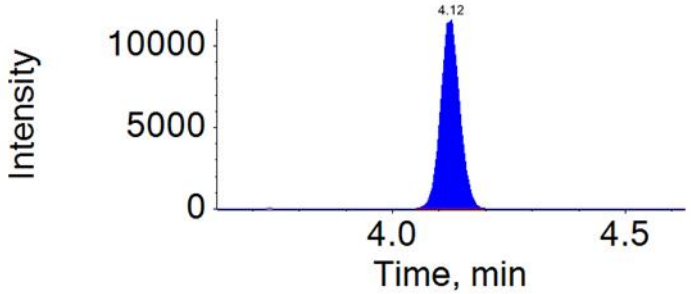
Component: PFBS
Primary Mass: 299.0 / 80.0



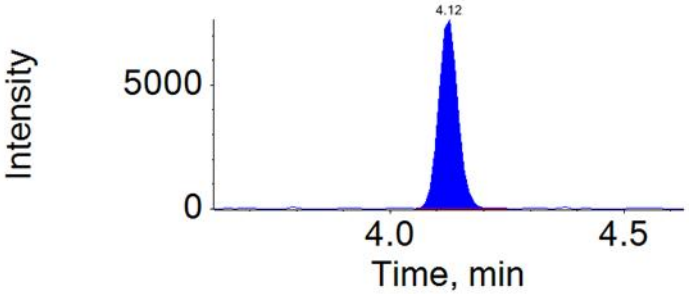
Component: PFBS_2
Secondary Mass: 299.0 / 99.0



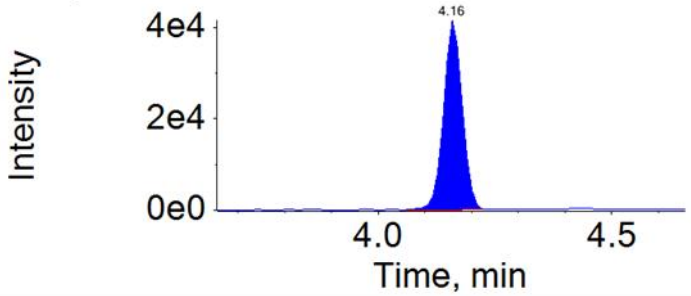
Component: 4:2-FTS
Primary Mass: 327.0 / 307.0



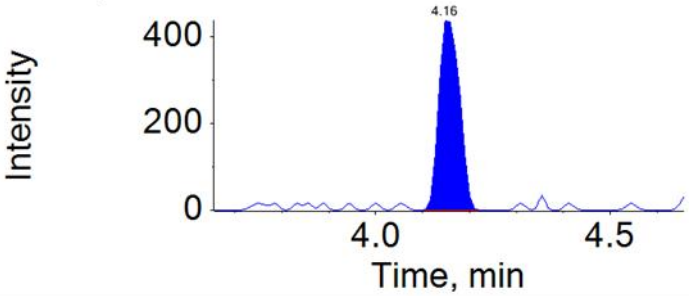
Component: 4:2 FTS_2
Secondary Mass: 327.0 / 81.0



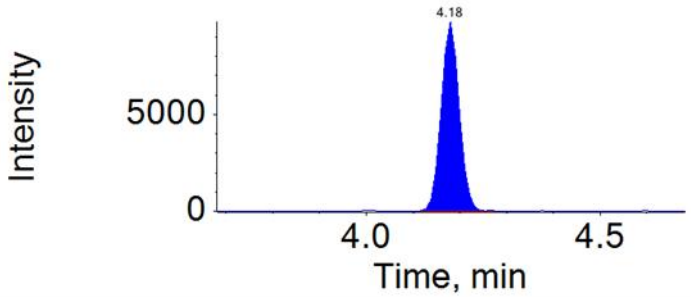
Component: PFHxA
Primary Mass: 313.0 / 269.0



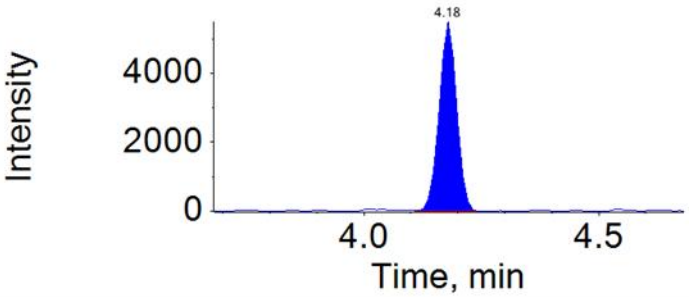
Component: PFHxA_2
Secondary Mass: 313.0 / 119.0



Component: PFPeS
Primary Mass: 349.0 / 80.0



Component: PFPeS_2
Secondary Mass: 349.0 / 99.0



APPROVED
By JPT at 4:01 pm, 11/16/18

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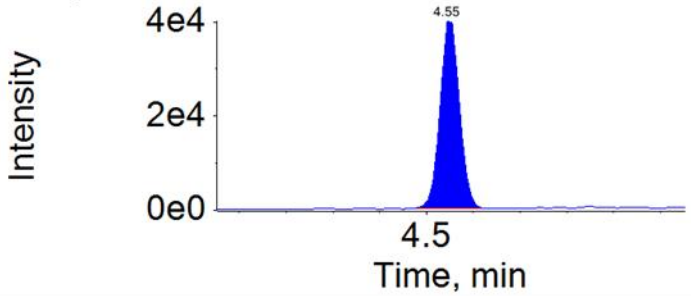
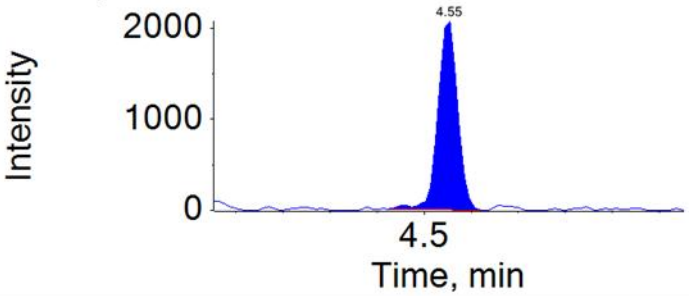
By HMK at 9:07 am, 11/19/18

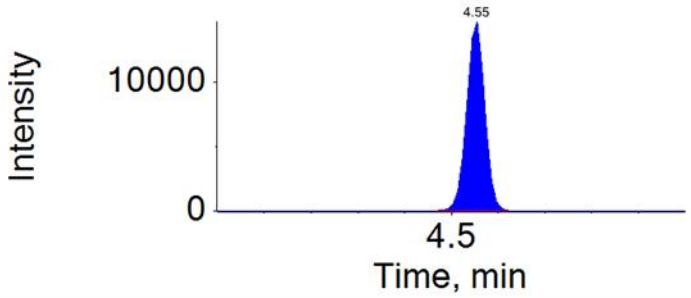
Component: PFHpA
Primary Mass: 363.0 / 319.0



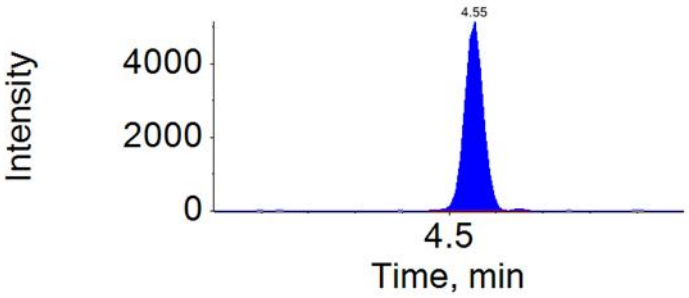
Component: PFHpA_2
Secondary Mass: 363.0 / 169.0



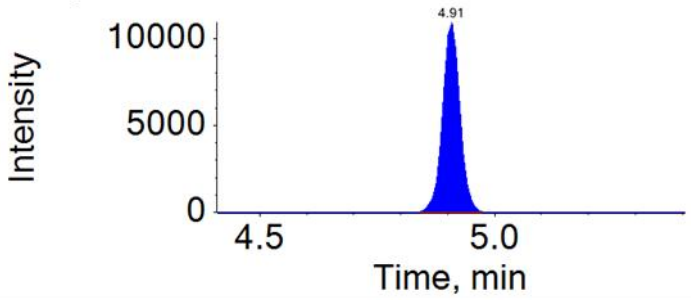
Component: PFHxS
Primary Mass: 399.0 / 80.0



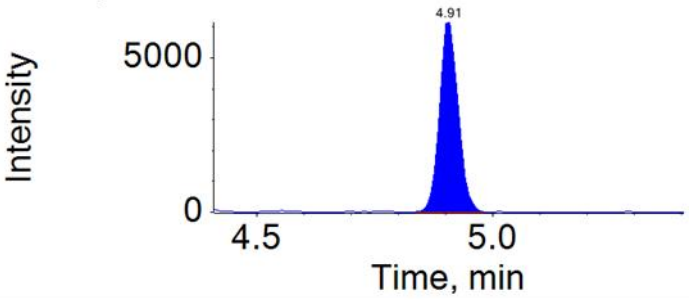
Component: PFHxS_2
Secondary Mass: 399.0 / 99.0



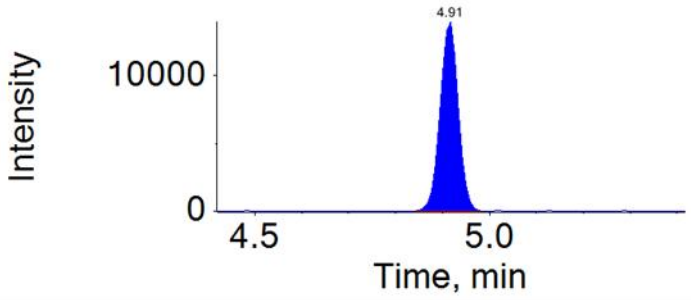
Component: 6:2-FTS
Primary Mass: 427.0 / 407.0



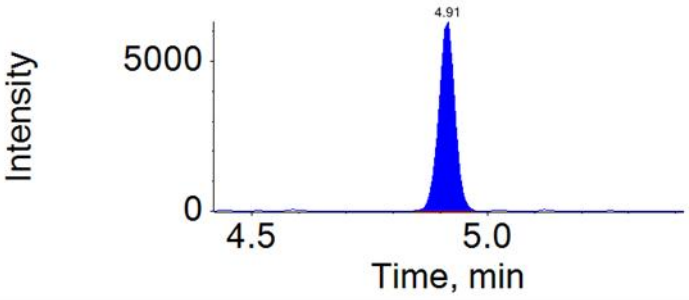
Component: 6:2 FTS_2
Secondary Mass: 427.0 / 81.0



Component: PFHpS
Primary Mass: 449.0 / 80.0



Component: PFHpS_2
Secondary Mass: 449.0 / 99.0



APPROVED
By JPT at 4:01 pm, 11/16/18

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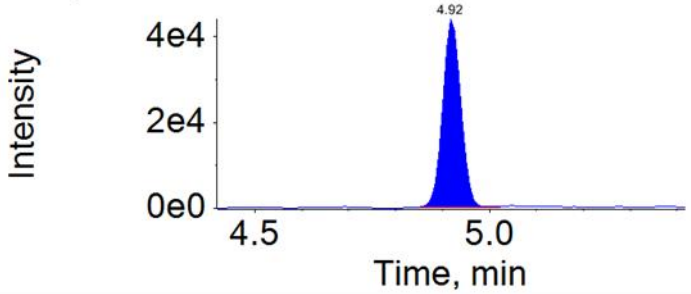
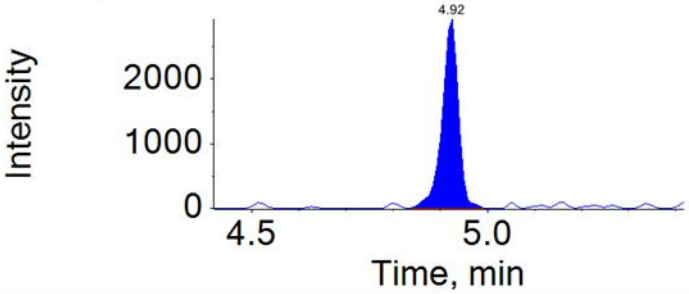
By HMK at 9:07 am, 11/19/18

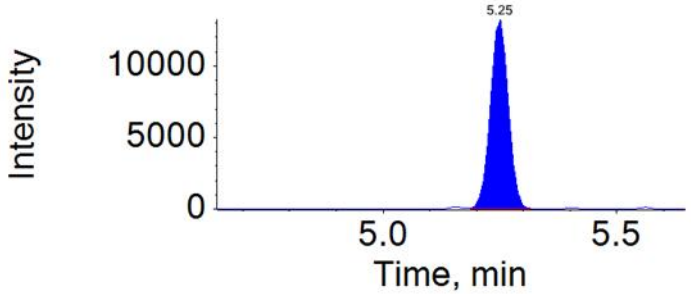
Component: PFOA
Primary Mass: 413.0 / 369.0



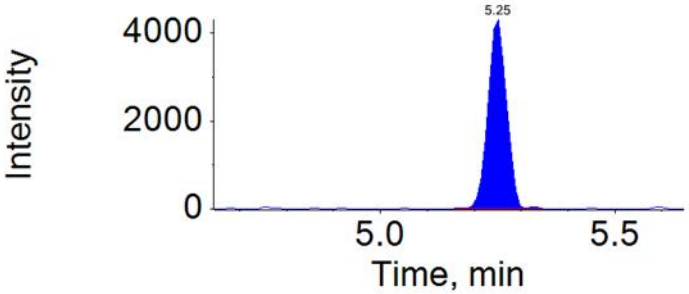
Component: PFOA_2
Secondary Mass: 413.0 / 169.0



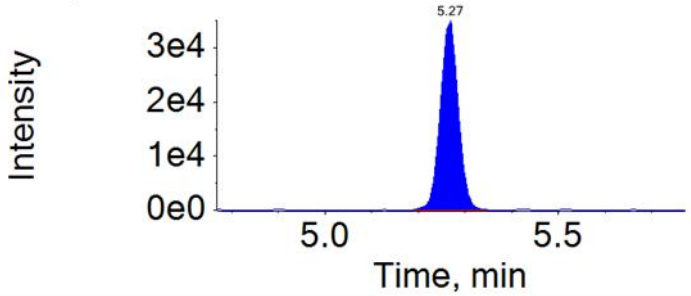
Component: PFOS
Primary Mass: 499.0 / 80.0



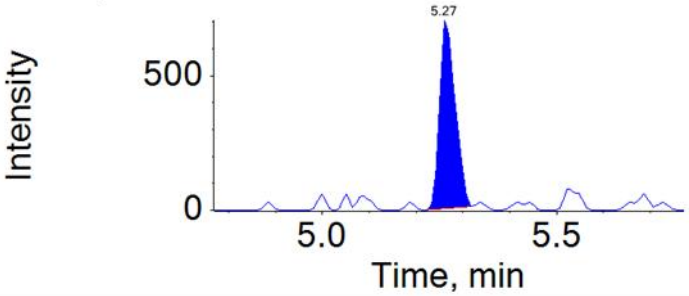
Component: PFOS_2
Secondary Mass: 499.0 / 99.0



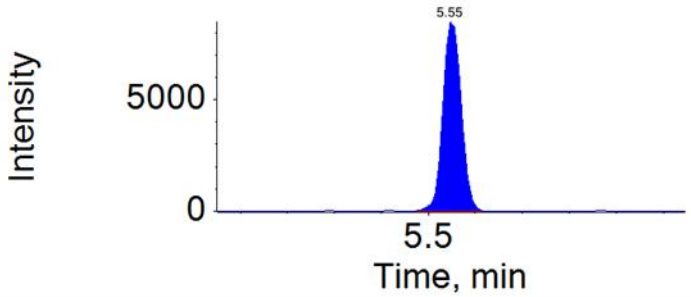
Component: PFNA
Primary Mass: 463.0 / 419.0



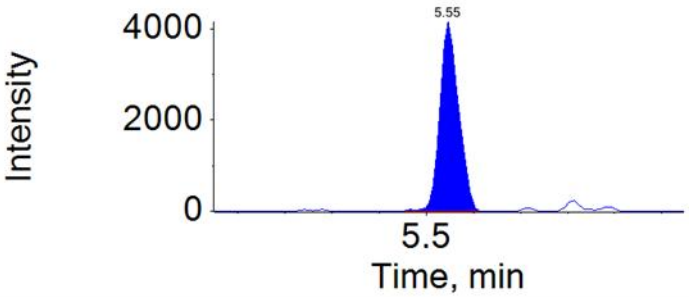
Component: PFNA_2
Secondary Mass: 463.0 / 169.0



Component: PFNS
Primary Mass: 549.0 / 80.0



Component: PFNS_2
Secondary Mass: 549.0 / 99.0



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By JPT at 4:01 pm, 11/16/18

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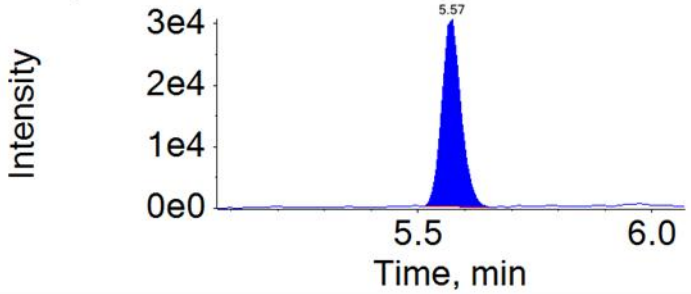
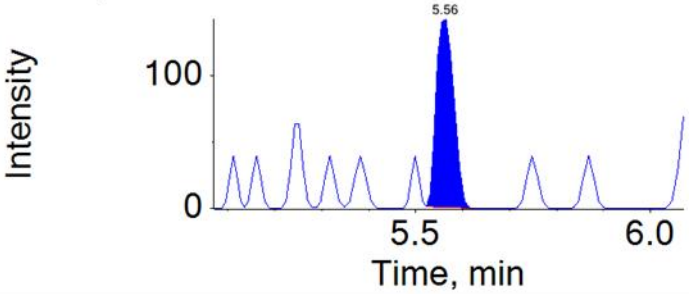
By HMK at 9:07 am, 11/19/18

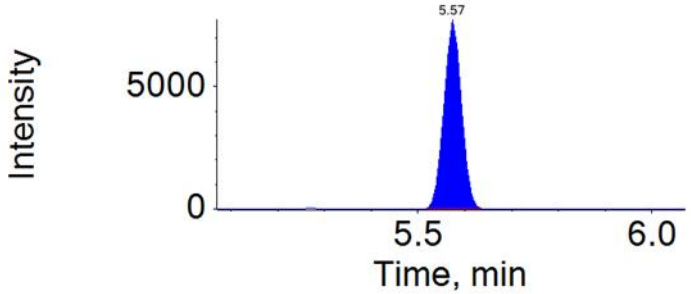
Component: PFDA
Primary Mass: 513.0 / 469.0



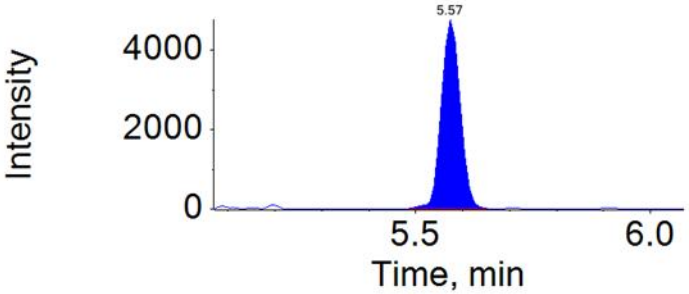
Component: PFDA_2
Secondary Mass: 513.0 / 169.0



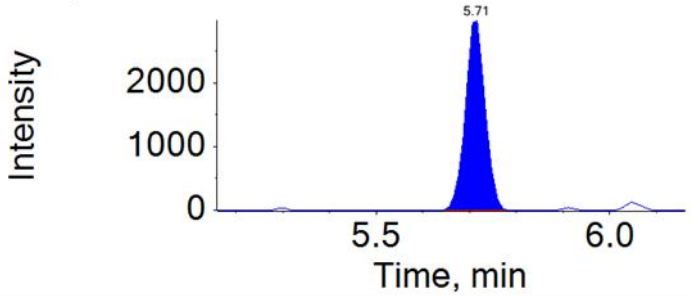
Component: 8:2-FTS
Primary Mass: 527.0 / 507.0



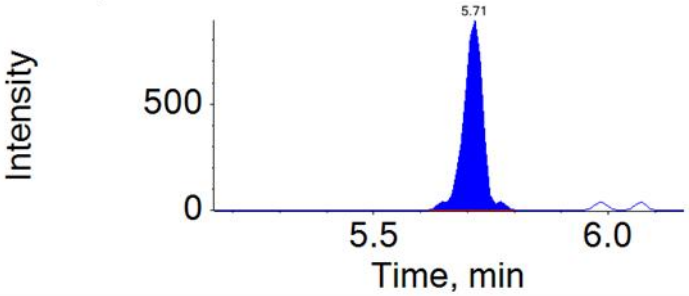
Component: 8:2 FTS_2
Secondary Mass: 527.0 / 81.0



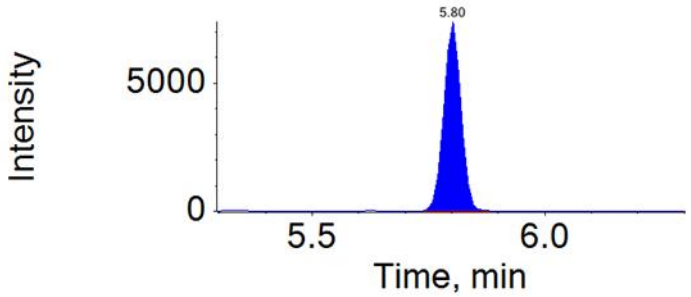
Component: NMeFOSAA
Primary Mass: 570.0 / 419.0



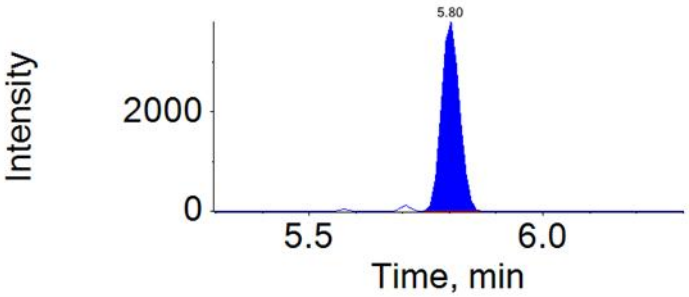
Component: NMeFOSAA_2
Secondary Mass: 570.0 / 483.0



Component: PFDS
Primary Mass: 599.0 / 80.0



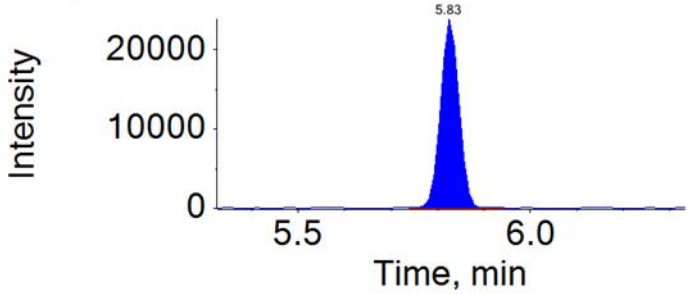
Component: PFDS_2
Secondary Mass: 599.0 / 99.0



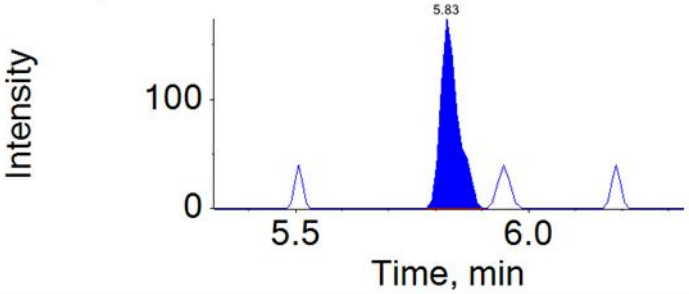
APPROVED
By JPT at 4:01 pm, 11/16/18

REVIEWED
By HMK at 9:07 am, 11/19/18

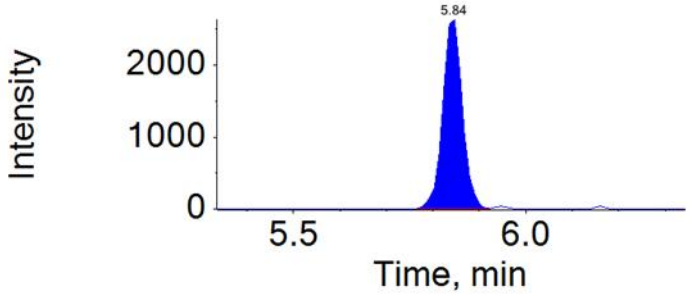
Component: PFUnDA
Primary Mass: 563.0 / 519.0



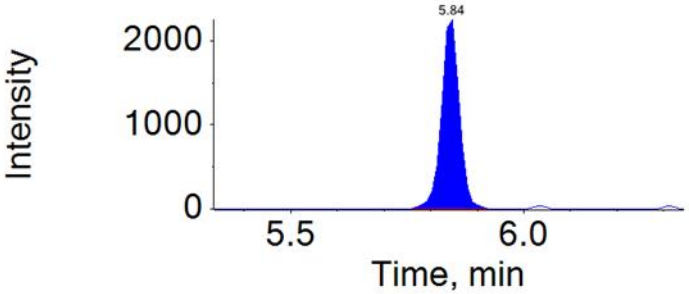
Component: PFUnDA_2
Secondary Mass: 563.0 / 169.0



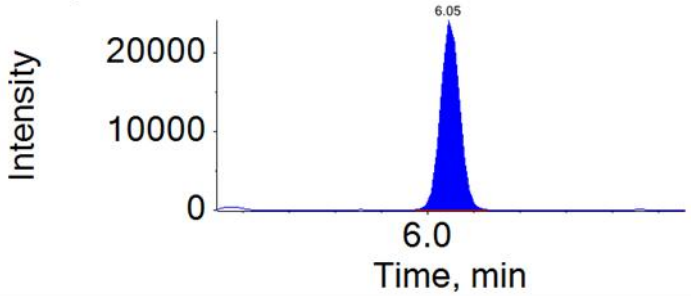
Component: NEtFOSAA
Primary Mass: 584.0 / 419.0



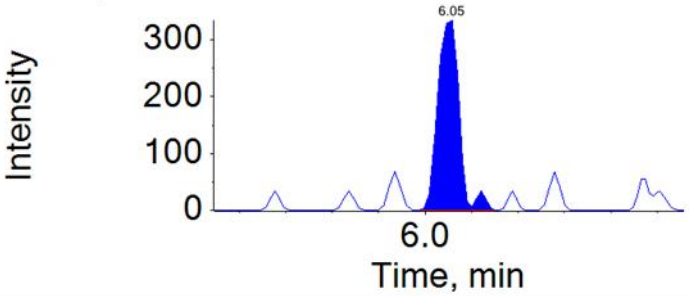
Component: NEtFOSAA_2
Secondary Mass: 584.0 / 526.0



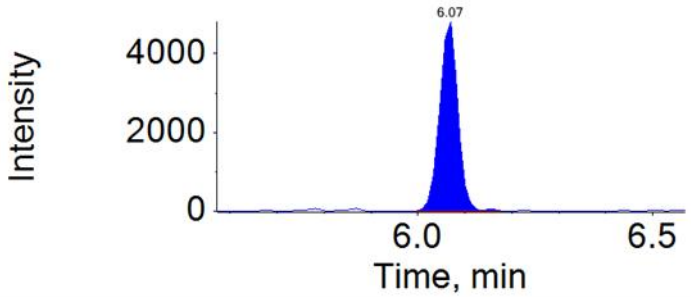
Component: PFDoDA
Primary Mass: 613.0 / 569.0



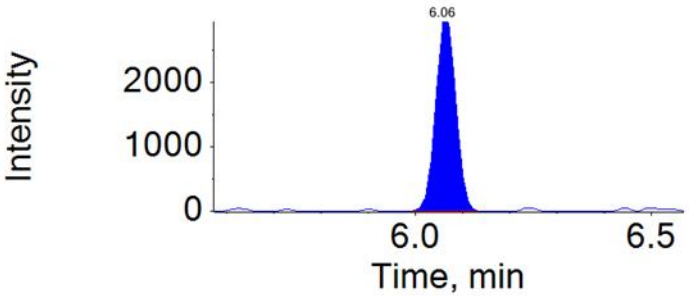
Component: PFDoDA_2
Secondary Mass: 613.0 / 169.0



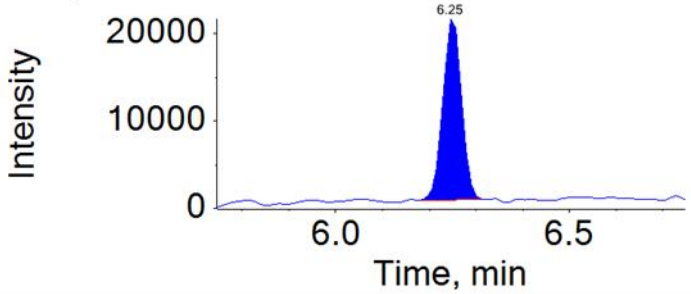
Component: 10:2-FTS
Primary Mass: 627.0 / 607.0



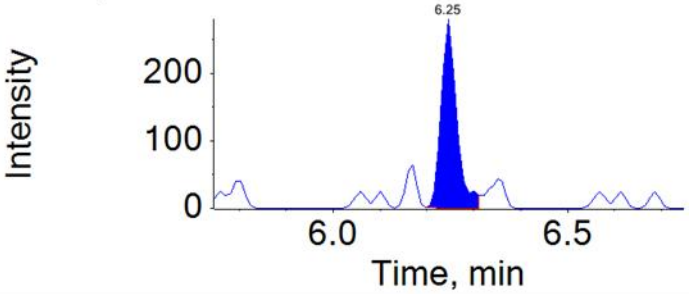
Component: 10:2 FTS_2
Secondary Mass: 627.0 / 81.0



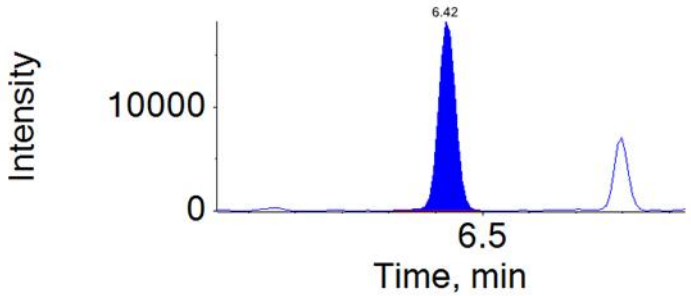
Component: PFTrDA
Primary Mass: 663.0 / 619.0



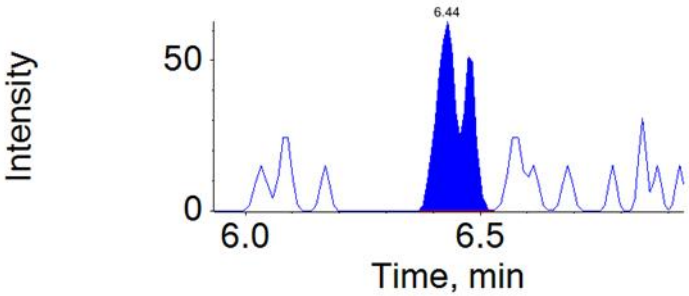
Component: PFTrDA_2
Secondary Mass: 663.0 / 169.0



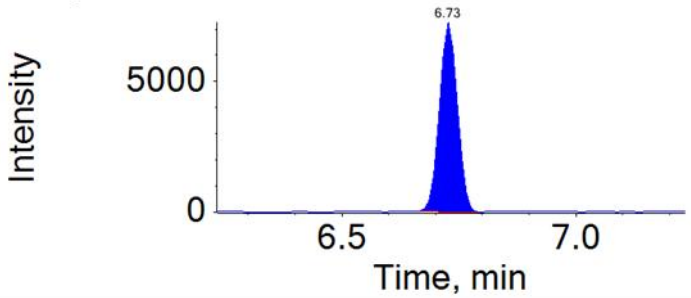
Component: PFTeDA
Primary Mass: 713.0 / 669.0



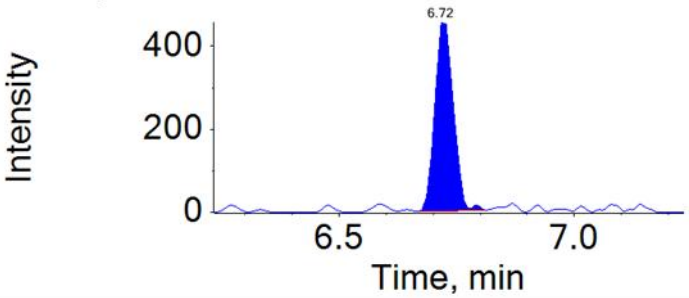
Component: PFTeDA_2
Secondary Mass: 713.0 / 169.0



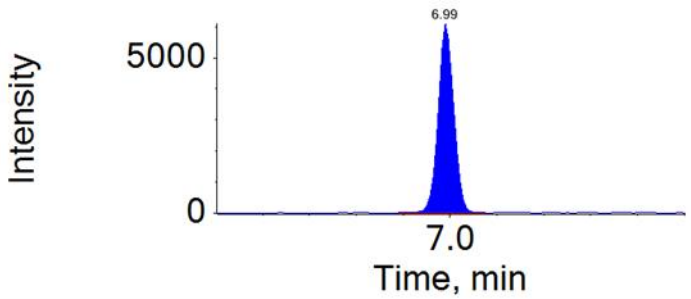
Component: PFHxDA
Primary Mass: 813.0 / 769.0



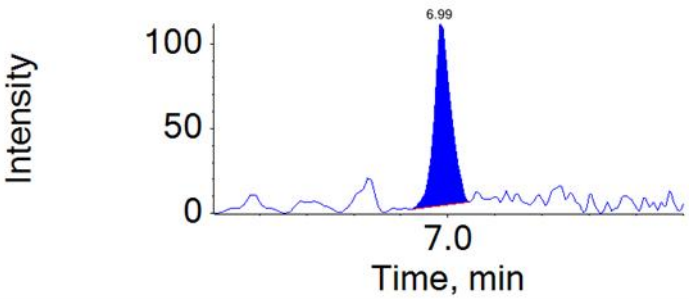
Component: PFHxDA_2
Secondary Mass: 813.0 / 169.0



Component: PFODA
Primary Mass: 913.0 / 869.0



Component: PFODA_2
Secondary Mass: 913.0 / 169.0



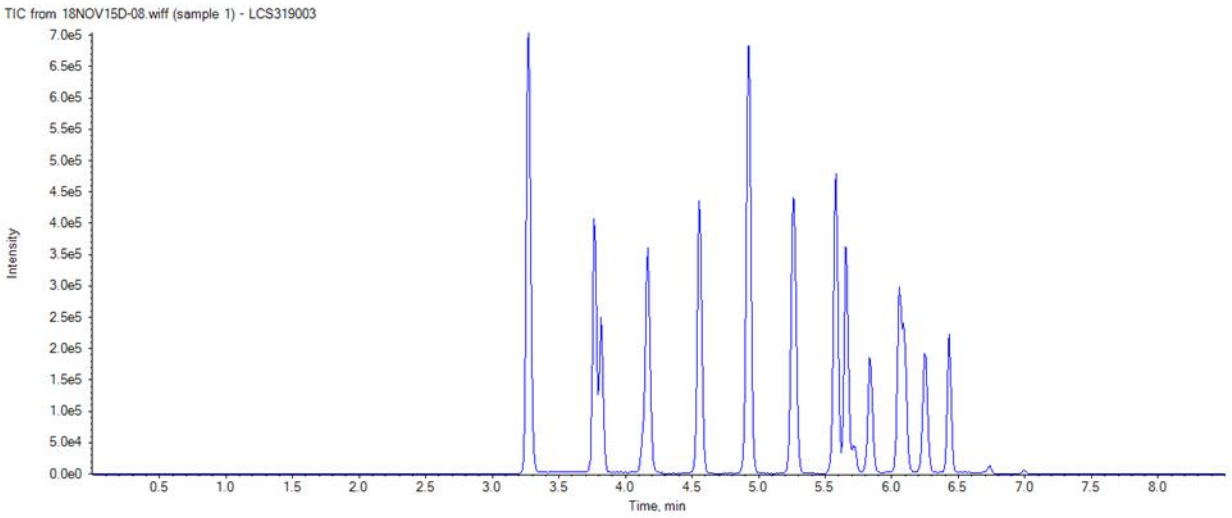
APPROVED
By JPT at 4:01 pm, 11/16/18

REVIEWED
By HMK at 9:07 am, 11/19/18

Lab Control Sample Recovery

ICAL Name: 18NOV12DCAL **Result Table:** 18319003 11/16/2018 11:16:11 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Instrument Name:	Sample Name:	Sample ID:	Sample File:	Acquisition Date:
LM27631	LCS319003	EPA 537 mod QSM 5.1 table B-15 18319003	18NOV15D-08.wiff	2018-11-15T13:06:11



Injection Standard Area Reference File**:** 18NOV15D-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	756224.3	732179.1	3	50	
13C2-PFOA	5.00	502285.0	479663.2	5	50	
13C4-PFOS	4.78	282772.9	269685.3	5	50	
13C2-PFDA	5.00	329902.7	302309.9	9	50	

APPROVED
By JPT at 3:32 pm, 11/16/18

REVIEWED
By HMK at 9:05 am, 11/19/18

Lab Control Sample Recovery

ICAL Name: 18NOV12DCAL **Result Table:** 18319003 11/16/2018 11:16:11 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Instrument Name:	Sample Name:	Sample ID:	Sample File:	Acquisition Date:
LM27631	LCS319003	EPA 537 mod QSM 5.1 table B-15 18319003	18NOV15D-08.wiff	2018-11-15T13:06:11

Analyte Name	Analyte Area	Ext Std Area	Area Ratio	Adj Actual Conc	Sample Result	%REC	% REC Limit	%REC OOS
PFBA	97875.0	788006.6	0.124	1.360	1.376	101	70-130	
PFPeA	94816.7	753516.0	0.126	1.360	1.457	107	70-130	
PFBS	53803.5	413205.2	0.130	1.204	1.239	103	70-130	
4:2-FTS	34785.2	56747.2	0.613	3.736	3.329	89	70-130	
PFHxA	115450.6	681052.3	0.170	1.360	1.416	104	70-130	
PFPeS	28041.6	413205.2	0.068	1.276	1.318	103	70-130	
PFHpA	116528.3	534203.2	0.218	1.360	1.446	106	70-130	
PFHxS	40913.0	319083.2	0.128	1.286	1.243	97	70-130	
6:2-FTS	23078.1	42954.7	0.537	3.792	2.600	69	70-130	OOS
PFHpS	38823.1	319083.2	0.122	1.294	1.281	99	70-130	
PFOA	116200.1	913960.0	0.127	1.360	1.358	100	70-130	
PFOS	38126.7	276190.7	0.138	1.300	1.207	93	70-130	
PFNA	95101.2	490105.2	0.194	1.360	1.399	103	70-130	
PFNS	23860.4	276190.7	0.086	1.306	1.209	93	70-130	
PFDA	86587.1	619069.1	0.140	1.360	1.483	109	70-130	
8:2-FTS	25748.7	29681.0	0.868	3.832	4.045	106	70-130	
PFOSA	82146.1	720978.4	0.114	1.360	1.113	82	70-130	
NMeFOSAA	10024.7	93620.3	0.107	1.360	1.210	89	70-130	
PFDS	18153.9	276190.7	0.066	1.310	1.191	91	70-130	
PFUnDA	63237.5	279986.9	0.226	1.360	1.181	87	70-130	
NEtFOSAA	8923.3	66993.9	0.133	1.360	1.396	103	70-130	
PFDoDA	70480.1	564024.4	0.125	1.360	1.273	94	70-130	
10:2-FTS	16623.2	29681.0	0.560	3.856	3.731	97	70-130	
NMePFOSAE	50545.1	356644.7	0.142	1.360	1.180	87	70-130	
NMePFOSA	7949.0	79924.1	0.099	1.360	0.981	72	70-130	
PFDoS	9445.0	276190.7	0.034	1.316	1.198	91	70-130	
NEtPFOSAE	51976.9	296606.9	0.175	1.360	1.124	83	70-130	
NEtPFOSA	8376.7	66129.7	0.127	1.360	1.163	86	70-130	
PFTrDA	57256.2	564024.4	0.102	1.360	1.281	94	70-130	
PFTeDA	47809.8	394599.0	0.121	1.360	1.358	100	70-130	
PFHxDA	20634.2	394599.0	0.052	1.360	1.246	92	70-130	
PFODA	12388.9	394599.0	0.031	1.360	0.875	64	70-130	OOS

APPROVED
By JPT at 3:32 pm, 11/16/18

REVIEWED
By HMK at 9:05 am, 11/19/18

Lab Control Sample Recovery

ICAL Name: 18NOV12DCAL
QMethod Name: 18AUG20QM
Result Table: 18319003 11/16/2018 11:16:11 AM
Acquisition Method: 18AUG13_3uL.dam

ICAL Name: 18NOV12DCAL **Result Table:** 18319003 11/16/2018 11:16:11 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Sample Name:	LCS319003			**Data File:**		18NOV15D-08.wiff
Sample ID:	EPA 537 mod QSM 5.1 table B-15 18319003			**Acquis Date:**		2018-11-15T13:06:11
Sample Type:	Quality Control			**Instrument:**		LM27631
Vial Position:	26			**Acquis Method:**		18AUG13_3uL.dam
Injection Vol:	3.00			**Result Table:**		18319003
QMethod File:	18AUG20QM			**ICAL Name:**		18NOV12DCAL
Batch Number:	18319003			**Operator:**		JPT12262
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: 18NOV15D-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	756224.3	732179.1	3	50	
13C2-PFOA	5.0	502285.0	479663.2	5	50	
13C4-PFOS	4.8	282772.9	269685.3	5	50	
13C2-PFDA	5.0	329902.7	302309.9	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	788006.6	13C3-PFBA	756224.3	1.042	10.000	9.344	93	50-150	
E13C5-PFPeA	753516.0	13C3-PFBA	756224.3	0.996	10.000	8.938	89	50-150	
E13C3-PFBS	413205.2	13C3-PFBA	756224.3	0.546	9.300	7.714	83	50-150	
E13C2-4:2-FTS	56747.2	13C2-PFOA	502285.0	0.113	9.340	10.064	108	50-150	
E13C5-PFHxA	681052.3	13C2-PFOA	502285.0	1.356	10.000	9.796	98	50-150	
E13C3-PFHxS	319083.2	13C2-PFOA	502285.0	0.635	9.460	8.718	92	50-150	
E13C4-PFHpA	534203.2	13C2-PFOA	502285.0	1.064	10.000	9.583	96	50-150	
E13C2-6:2-FTS	42954.7	13C2-PFOA	502285.0	0.086	9.500	11.443	120	50-150	
E13C8-PFOA	913960.0	13C2-PFOA	502285.0	1.820	10.000	10.027	100	50-150	
E13C8-PFOS	276190.7	13C4-PFOS	282772.9	0.977	9.560	8.655	91	50-150	
E13C9-PFNA	490105.2	13C4-PFOS	282772.9	1.733	10.000	9.665	97	50-150	
E13C6-PFDA	619069.1	13C2-PFDA	329902.7	1.877	10.000	8.758	88	50-150	
E13C2-8:2-FTS	29681.0	13C2-PFDA	329902.7	0.090	9.580	8.974	94	50-150	
E13C8-PFOSA	720978.4	13C2-PFDA	329902.7	2.185	10.000	9.690	97	50-150	
Ed3-NMeFOSAA	93620.3	13C2-PFDA	329902.7	0.284	10.000	10.245	102	50-150	
E13C7-PFUnDA	279986.9	13C2-PFDA	329902.7	0.849	10.000	9.855	99	50-150	
Ed5-NEtFOSAA	66993.9	13C2-PFDA	329902.7	0.203	10.000	8.593	86	50-150	
E13C2-PFDoDA	564024.4	13C2-PFDA	329902.7	1.710	10.000	8.878	89	50-150	
Ed7-NMePFOSAE	356644.7	13C2-PFDA	329902.7	1.081	10.000	9.356	94	50-150	
Ed3-NMePFOSA	79924.1	13C2-PFDA	329902.7	0.242	10.000	8.803	88	50-150	
Ed9-NEtPFOSAE	296606.9	13C2-PFDA	329902.7	0.899	10.000	9.352	94	50-150	
Ed5-NEtPFOSA	66129.7	13C2-PFDA	329902.7	0.200	10.000	9.404	94	50-150	
E13C2-PFTeDA	394599.0	13C2-PFDA	329902.7	1.196	10.000	8.398	84	50-150	

APPROVED
By JPT at 3:32 pm, 11/16/18

REVIEWED
By HMK at 9:05 am, 11/19/18

ICAL Name: 18NOV12DCAL **Result Table:** 18319003 11/16/2018 11:16:11 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

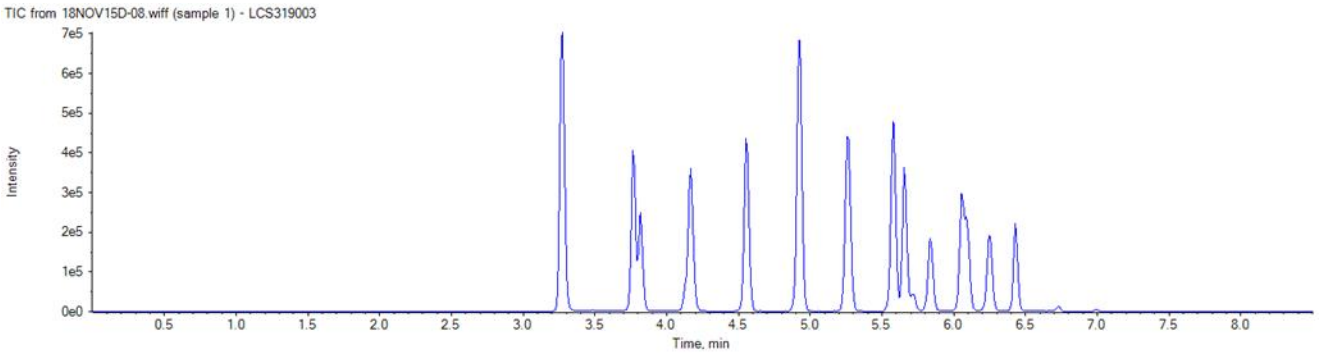
Analyte Quantitation Peak Table

Sample Name: LCS319003 **Instrument Name:** LM27631 **File Name:** 18NOV15D-08.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	97875.0		A	13C4-PFBA	3.27	788006.6	0.124	1.376
PFPeA	3.77	1.000	94816.7		M	13C5-PFPeA	3.77	753516.0	0.126	1.457
PFBS	3.82	1.000	53803.5		A	13C3-PFBS	3.82	413205.2	0.130	1.239
4:2-FTS	4.13	1.000	34785.2		A	13C2-4:2-FTS	4.13	56747.2	0.613	3.329
PFHxA	4.17	1.000	115450.6		A	13C5-PFHxA	4.17	681052.3	0.170	1.416
PFPeS	4.19	1.100	28041.6		A	13C3-PFBS	3.82	413205.2	0.068	1.318
PFHpA	4.56	1.000	116528.3		A	13C4-PFHpA	4.56	534203.2	0.218	1.446
PFHxS	4.56	1.000	40913.0		A	13C3-PFHxS	4.56	319083.2	0.128	1.243
6:2-FTS	4.91	1.000	23078.1		A	13C2-6:2-FTS	4.91	42954.7	0.537	2.600
PFHpS	4.92	1.080	38823.1		A	13C3-PFHxS	4.56	319083.2	0.122	1.281
PFOA	4.93	1.000	116200.1		A	13C8-PFOA	4.93	913960.0	0.127	1.358
PFOS	5.25	1.000	38126.7		A	13C8-PFOS	5.25	276190.7	0.138	1.207
PFNA	5.27	1.000	95101.2		A	13C9-PFNA	5.27	490105.2	0.194	1.399
PFNS	5.56	1.060	23860.4		A	13C8-PFOS	5.25	276190.7	0.086	1.209
PFDA	5.58	1.000	86587.1		A	13C6-PFDA	5.58	619069.1	0.140	1.483
8:2-FTS	5.58	1.000	25748.7		A	13C2-8:2-FTS	5.58	29681.0	0.868	4.045
PFOSA	5.66	1.000	82146.1		A	13C8-PFOSA	5.66	720978.4	0.114	1.113
NMeFOSAA	5.72	1.000	10024.7		A	d3-NMeFOSAA	5.72	93620.3	0.107	1.210
PFDS	5.81	1.110	18153.9		A	13C8-PFOS	5.25	276190.7	0.066	1.191
PFUnDA	5.84	1.000	63237.5		A	13C7-PFUnDA	5.84	279986.9	0.226	1.181
NEtFOSAA	5.85	1.000	8923.3		A	d5-NEtFOSAA	5.85	66993.9	0.133	1.396
PFDoDA	6.06	1.000	70480.1		A	13C2-PFDoDA	6.06	564024.4	0.125	1.273
10:2-FTS	6.07	1.090	16623.2		A	13C2-8:2-FTS	5.58	29681.0	0.560	3.731
NMePFOSAE	6.10	1.000	50545.1		A	d7-NMePFOSAE	6.09	356644.7	0.142	1.180
NMePFOSA	6.11	1.000	7949.0		M	d3-NMePFOSA	6.10	79924.1	0.099	0.981
PFDoS	6.23	1.190	9445.0		A	13C8-PFOS	5.25	276190.7	0.034	1.198
NEtPFOSAE	6.26	1.000	51976.9		A	d9-NEtPFOSAE	6.25	296606.9	0.175	1.124
NEtPFOSA	6.27	1.000	8376.7		M	d5-NEtPFOSA	6.26	66129.7	0.127	1.163
PFTrDA	6.25	1.030	57256.2		A	13C2-PFDoDA	6.06	564024.4	0.102	1.281
PFTeDA	6.43	1.000	47809.8		A	13C2-PFTeDA	6.43	394599.0	0.121	1.358
PFHxDA	6.73	1.050	20634.2		A	13C2-PFTeDA	6.43	394599.0	0.052	1.246
PFODA	6.99	1.090	12388.9		A	13C2-PFTeDA	6.43	394599.0	0.031	0.875

Total Ion Chromatogram

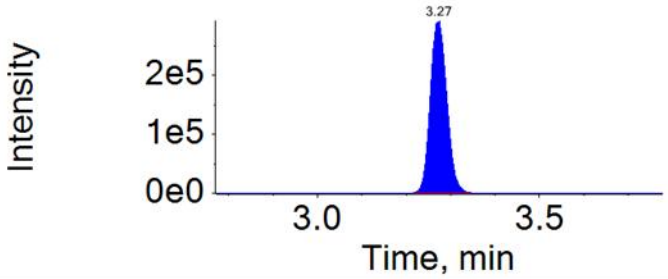


APPROVED
By JPT at 3:32 pm, 11/16/18

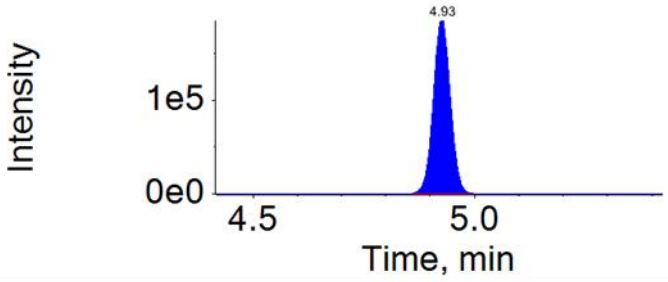
REVIEWED
By HMK at 9:05 am, 11/19/18

ICAL Name: 18NOV12DCAL **Result Table:** 18319003 11/16/2018 11:16:11 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

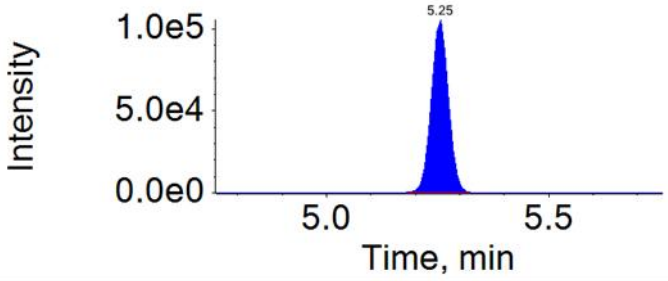
Injection Standard: 13C3-PFBA
216.0 / 172.0



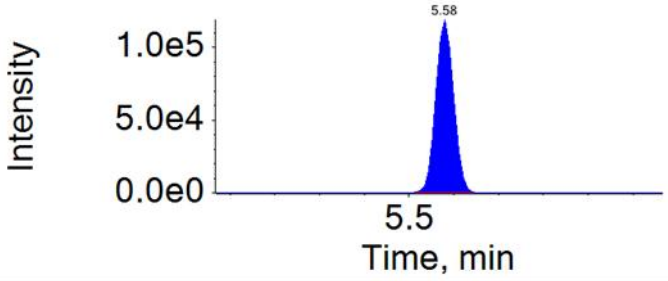
Injection Standard: 13C2-PFOA
415.0 / 370.0



Injection Standard: 13C4-PFOS
503.0 / 80.0



Injection Standard: 13C2-PFDA
515.0 / 470.0

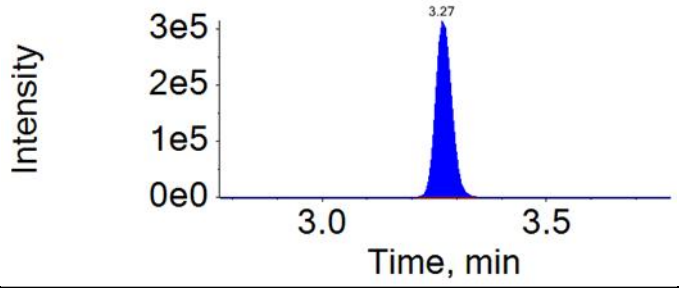


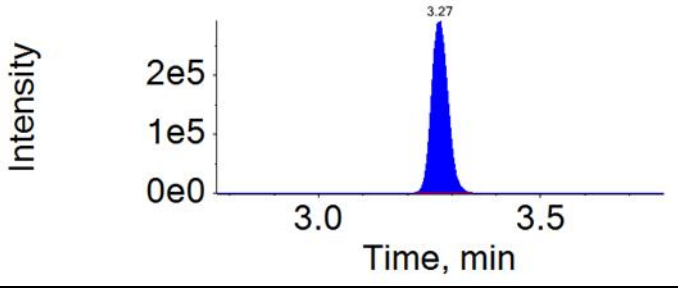
APPROVED
By JPT at 3:32 pm, 11/16/18

REVIEWED
By HMK at 9:05 am, 11/19/18

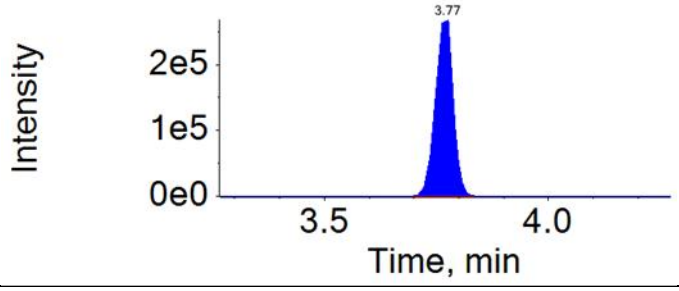
ICAL Name: 18NOV12DCAL **Result Table:** 18319003 11/16/2018 11:16:11 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

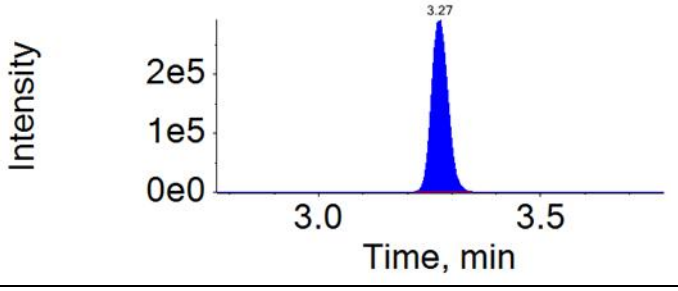
Extraction Standard: E13C4-PFBA	Injection Standard: 13C3-PFBA
217.0 / 172.0	216.0 / 172.0



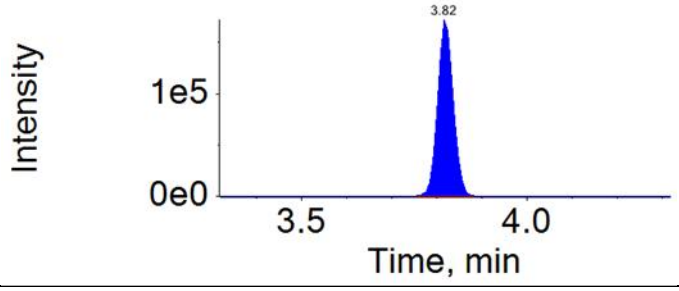


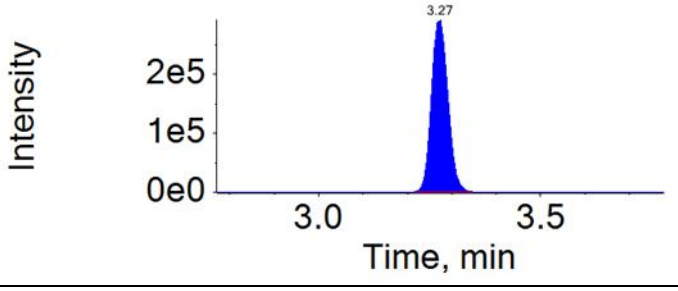
Extraction Standard: E13C5-PFPeA	Injection Standard: 13C3-PFBA
268.0 / 223.0	216.0 / 172.0



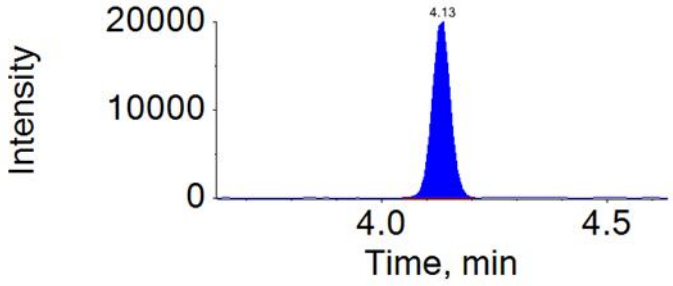


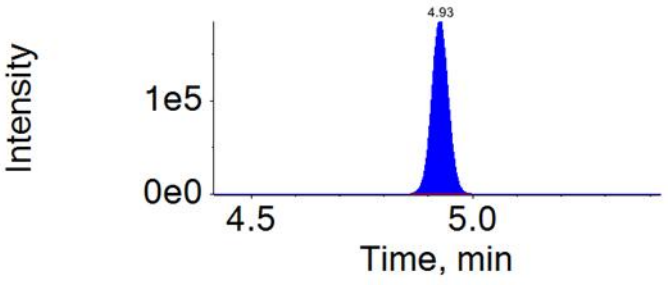
Extraction Standard: E13C3-PFBS	Injection Standard: 13C3-PFBA
302.0 / 80.0	216.0 / 172.0





Extraction Standard: E13C2-4:2-FTS	Injection Standard: 13C2-PFOA
329.0 / 81.0	415.0 / 370.0



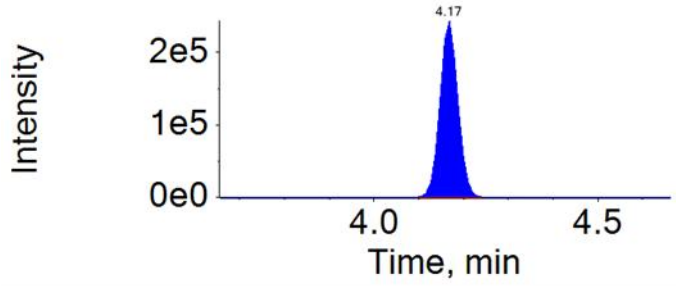


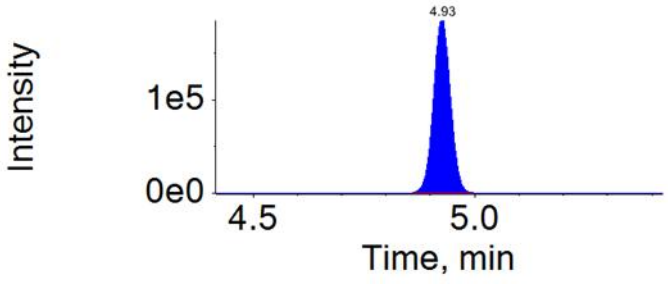
APPROVED
By JPT at 3:32 pm, 11/16/18

REVIEWED
By HMK at 9:05 am, 11/19/18

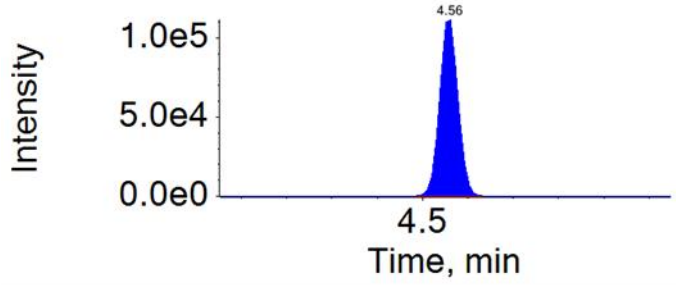
ICAL Name: 18NOV12DCAL **Result Table:** 18319003 11/16/2018 11:16:11 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

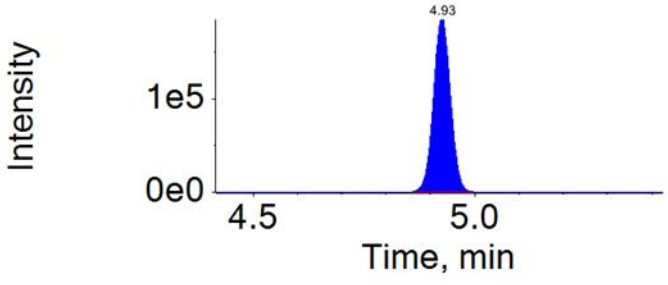
Extraction Standard: E13C5-PFHxA	Injection Standard: 13C2-PFOA
318.0 / 273.0	415.0 / 370.0



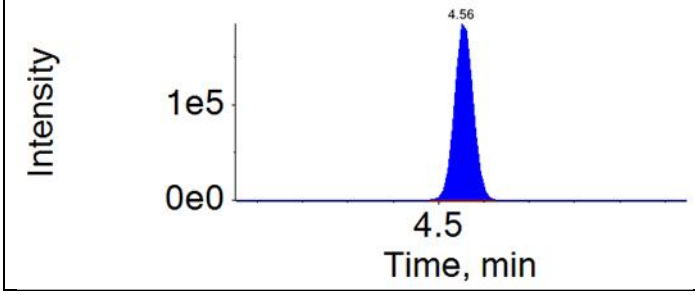


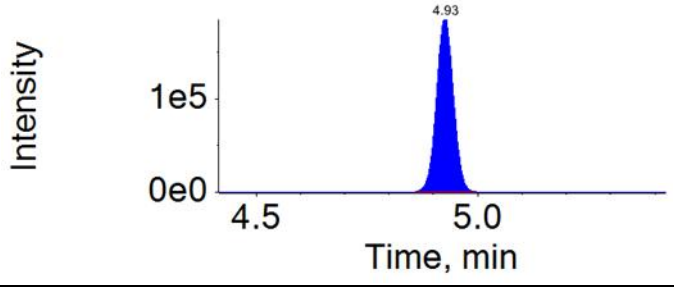
Extraction Standard: E13C3-PFHxS	Injection Standard: 13C2-PFOA
402.0 / 80.0	415.0 / 370.0



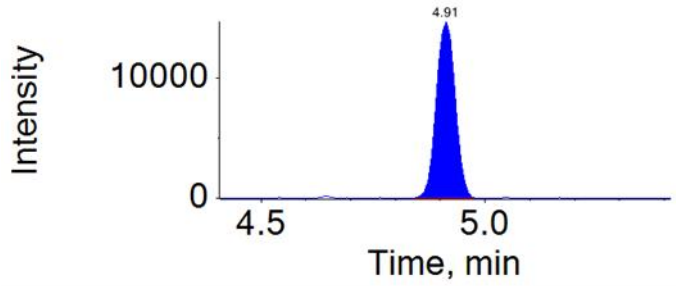


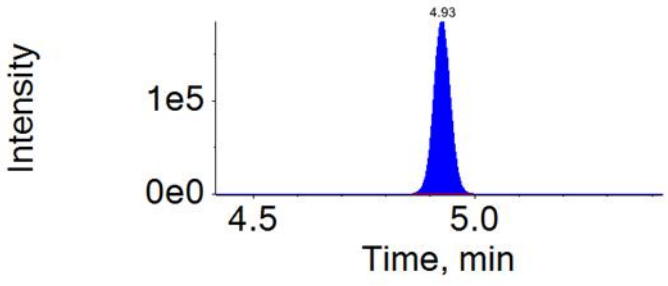
Extraction Standard: E13C4-PFHpA	Injection Standard: 13C2-PFOA
367.0 / 322.0	415.0 / 370.0





Extraction Standard: E13C2-6:2-FTS	Injection Standard: 13C2-PFOA
429.0 / 81.0	415.0 / 370.0

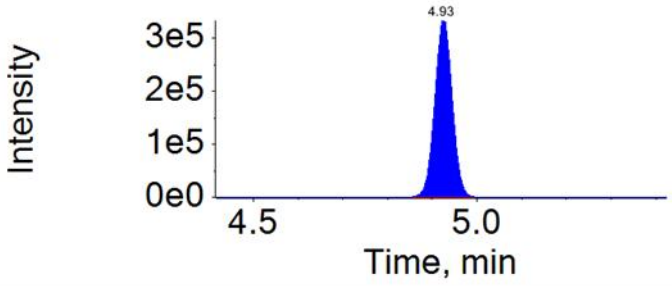
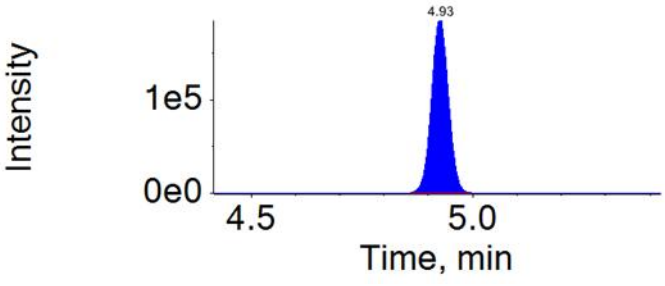


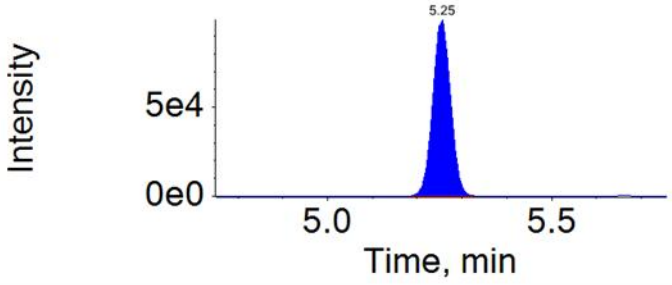
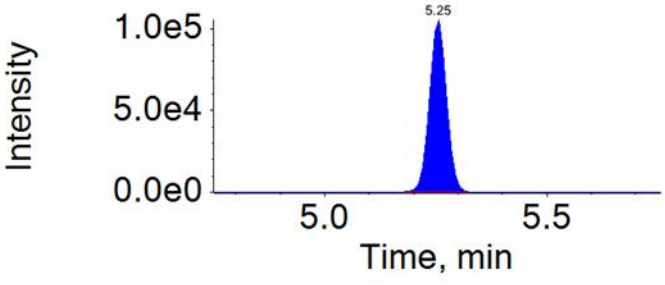


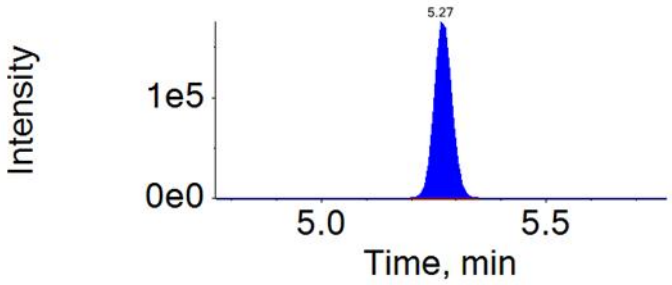
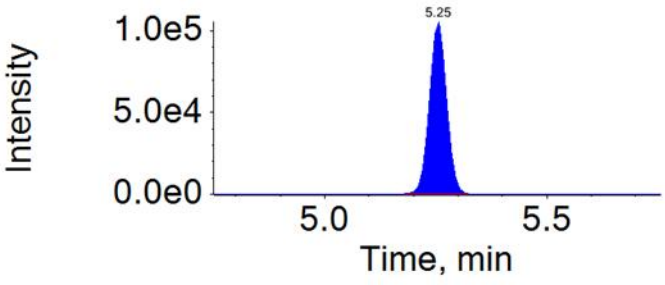
APPROVED
By JPT at 3:32 pm, 11/16/18

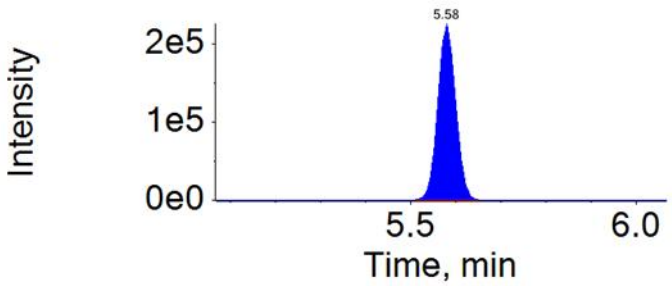
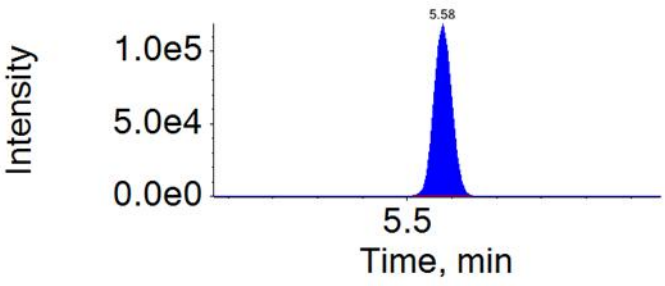
REVIEWED
By HMK at 9:05 am, 11/19/18

ICAL Name: 18NOV12DCAL **Result Table:** 18319003 11/16/2018 11:16:11 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
	

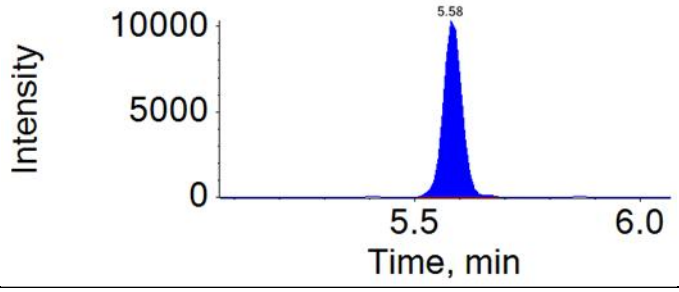
Extraction Standard: E13C6-PFDA	Injection Standard: 13C2-PFDA
519.0 / 474.0	515.0 / 470.0
	

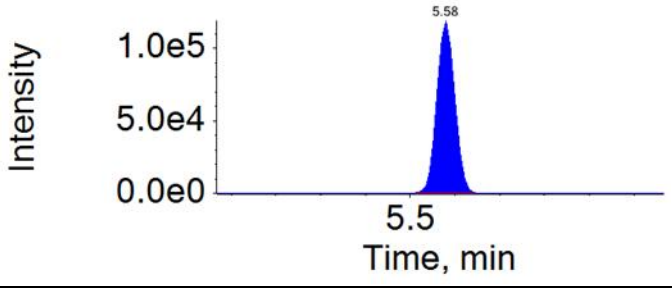
APPROVED
By JPT at 3:32 pm, 11/16/18

REVIEWED
By HMK at 9:05 am, 11/19/18

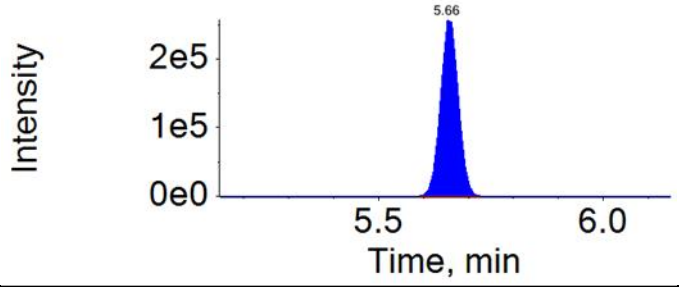
ICAL Name: 18NOV12DCAL **Result Table:** 18319003 11/16/2018 11:16:11 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

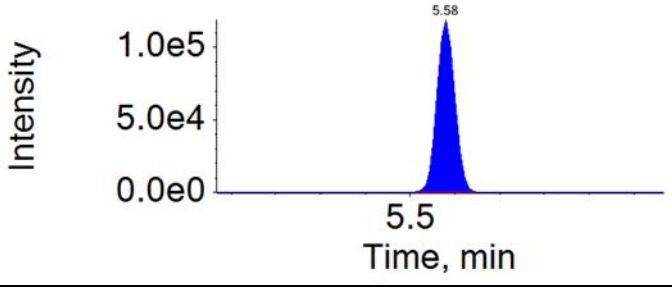
Extraction Standard: E13C2-8:2-FTS	Injection Standard: 13C2-PFDA
529.0 / 81.0	515.0 / 470.0



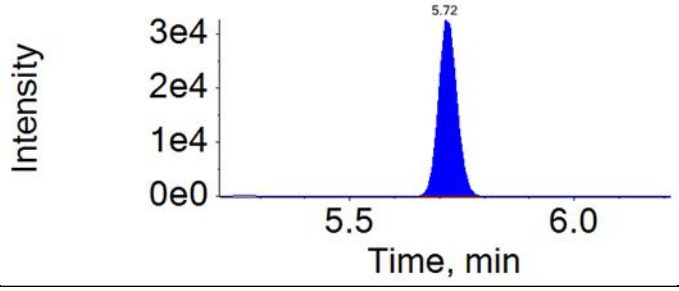


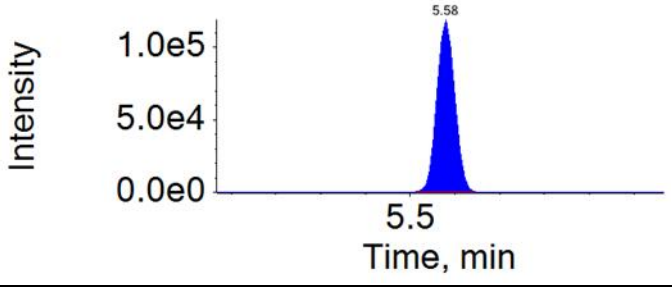
Extraction Standard: E13C8-PFOSA	Injection Standard: 13C2-PFDA
506.0 / 78.0	515.0 / 470.0



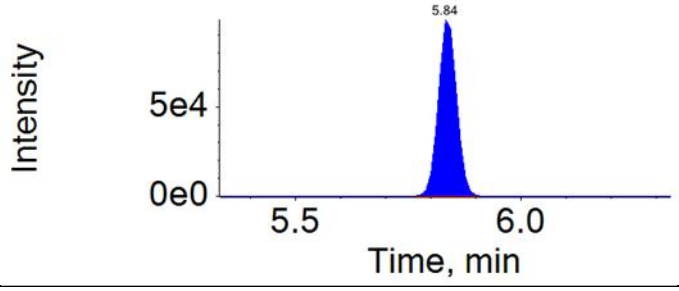


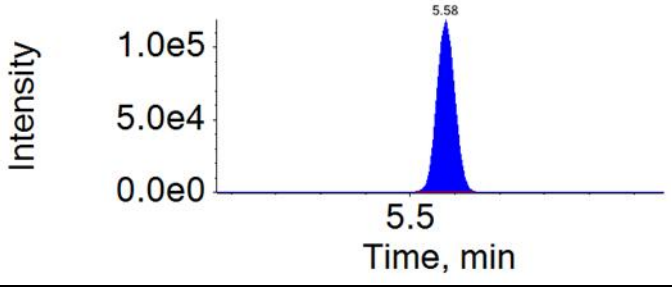
Extraction Standard: Ed3-NMeFOSAA	Injection Standard: 13C2-PFDA
573.0 / 419.0	515.0 / 470.0





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

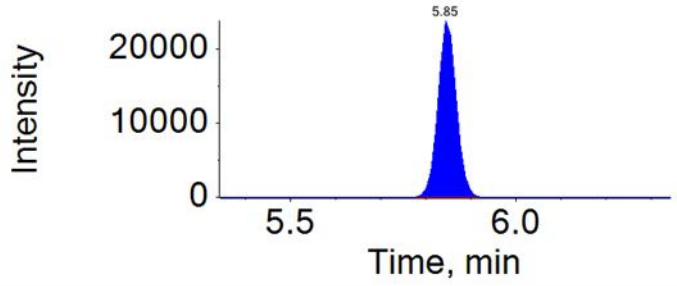
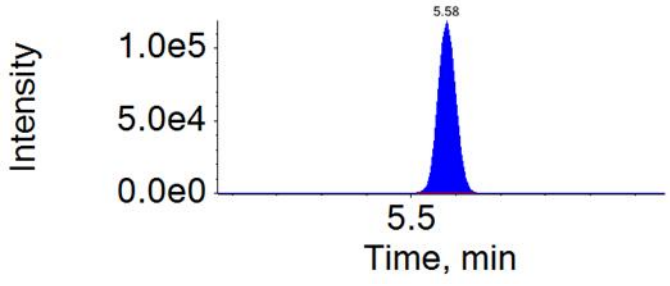


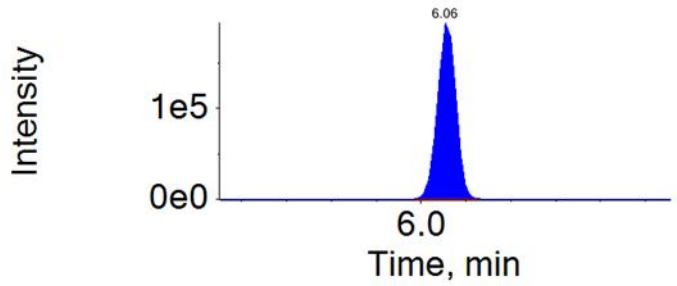
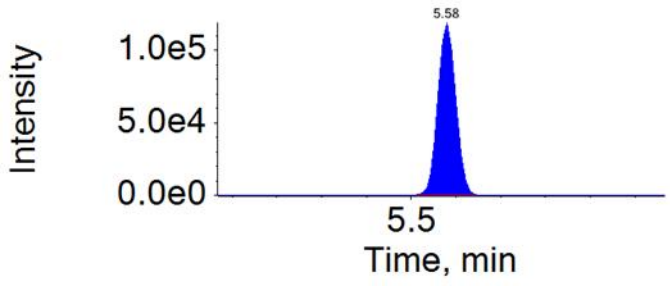


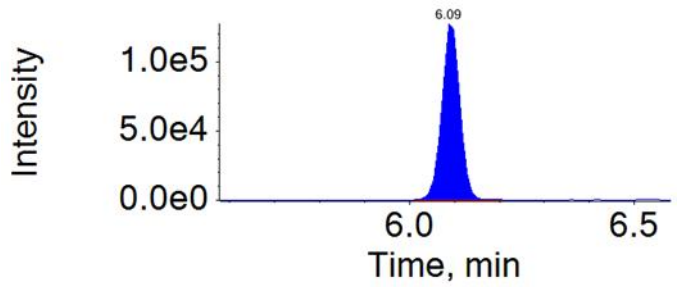
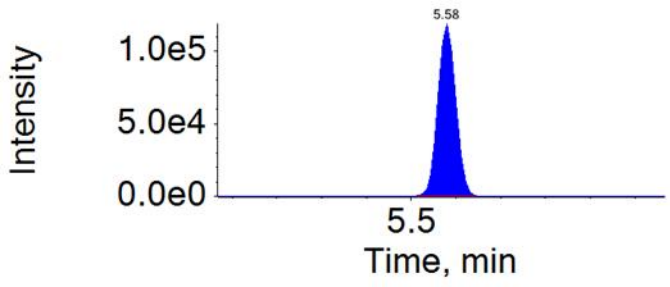
APPROVED
By JPT at 3:32 pm, 11/16/18

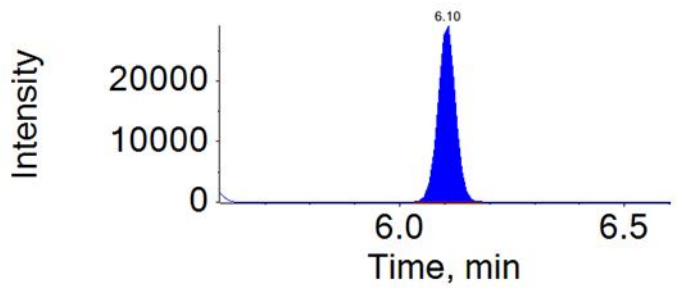
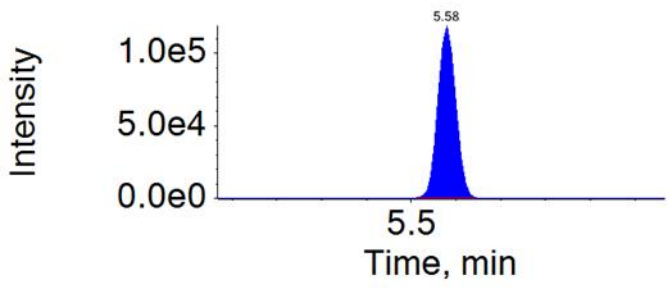
REVIEWED
By HMK at 9:05 am, 11/19/18

ICAL Name: 18NOV12DCAL **Result Table:** 18319003 11/16/2018 11:16:11 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
	

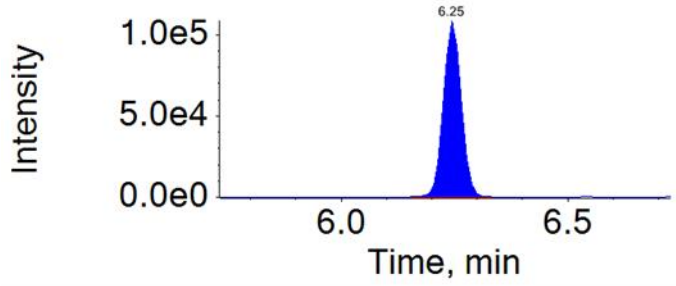
Extraction Standard: E13C2-PFDoDA	Injection Standard: 13C2-PFDA
615.0 / 570.0	515.0 / 470.0
	

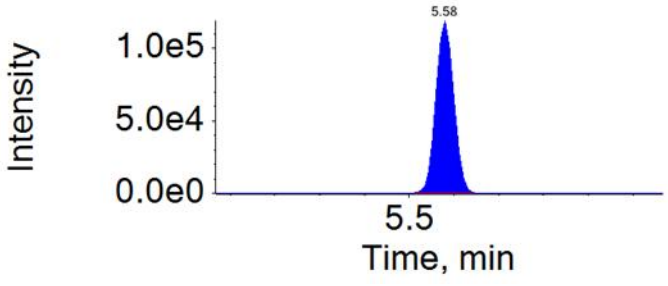
Extraction Standard: Ed7-NMePFOSAE	Injection Standard: 13C2-PFDA
623.0 / 59.0	515.0 / 470.0
	

Extraction Standard: Ed3-NMePFOSA	Injection Standard: 13C2-PFDA
515.0 / 169.0	515.0 / 470.0
	

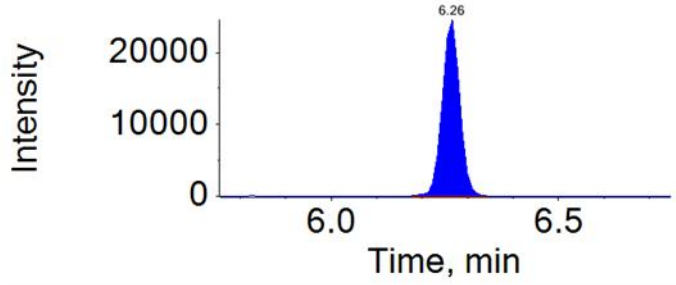
ICAL Name: 18NOV12DCAL **Result Table:** 18319003 11/16/2018 11:16:11 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

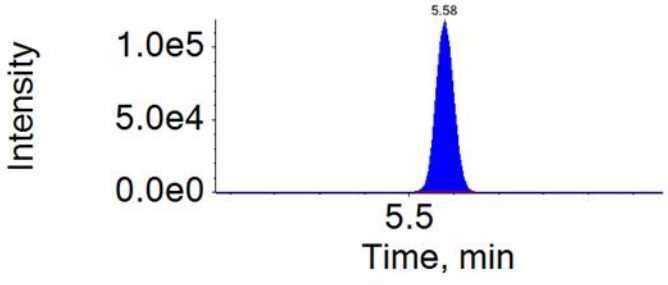
Extraction Standard: Ed9-NEtPFOSAE	Injection Standard: 13C2-PFDA
639.0 / 59.0	515.0 / 470.0



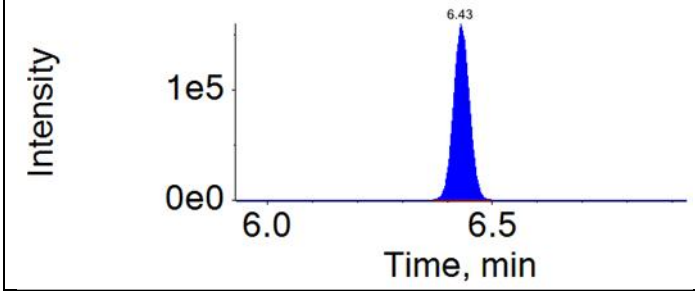


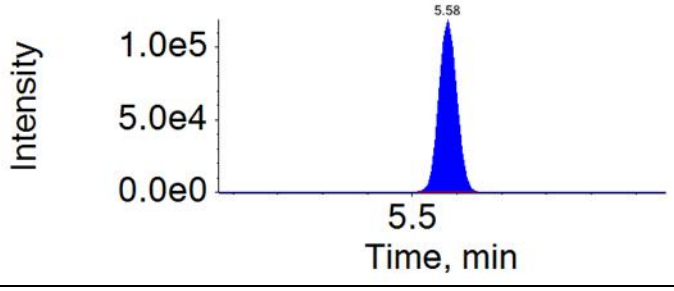
Extraction Standard: Ed5-NEtPFOSA	Injection Standard: 13C2-PFDA
531.0 / 169.0	515.0 / 470.0





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



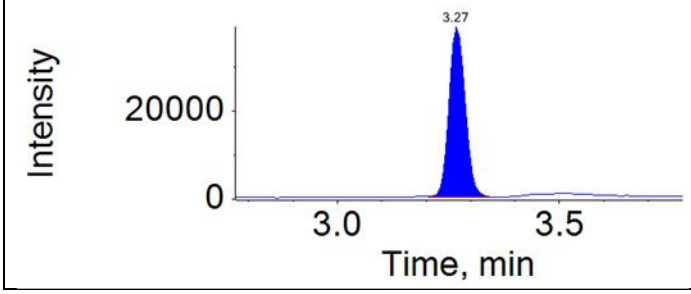


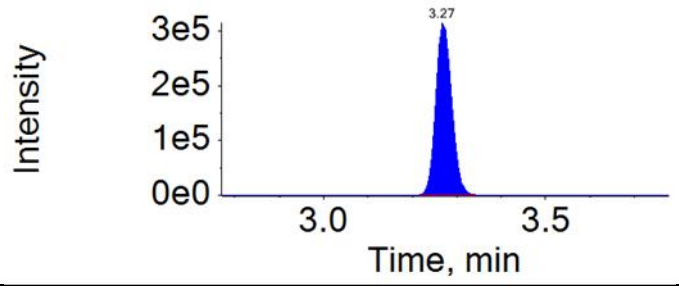
APPROVED
By JPT at 3:32 pm, 11/16/18

REVIEWED
By HMK at 9:05 am, 11/19/18

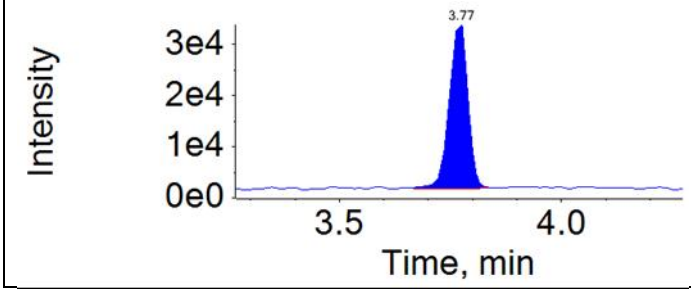
ICAL Name: 18NOV12DCAL **Result Table:** 18319003 11/16/2018 11:16:11 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

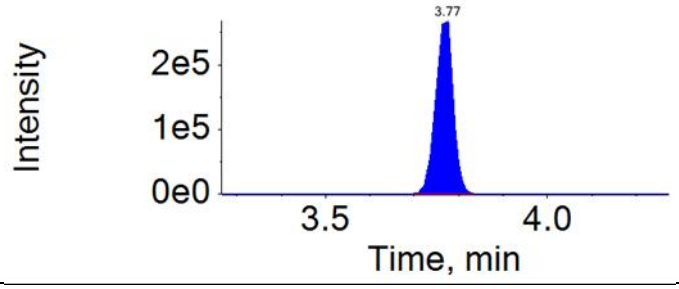
Analyte: PFBA	Extraction Standard: 13C4-PFBA
213.0 / 169.0	217.0 / 172.0



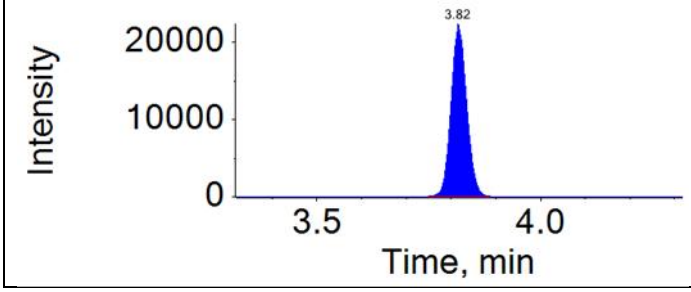


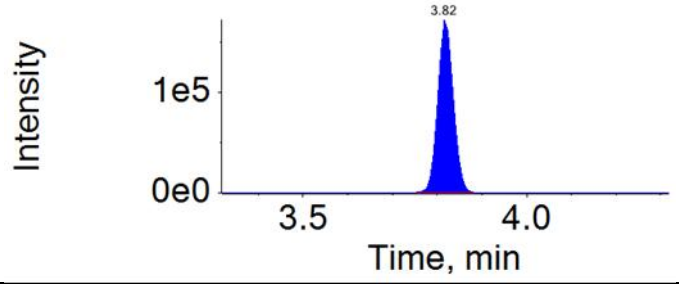
Analyte: PFPeA	Extraction Standard: 13C5-PFPeA
263.0 / 219.0	268.0 / 223.0



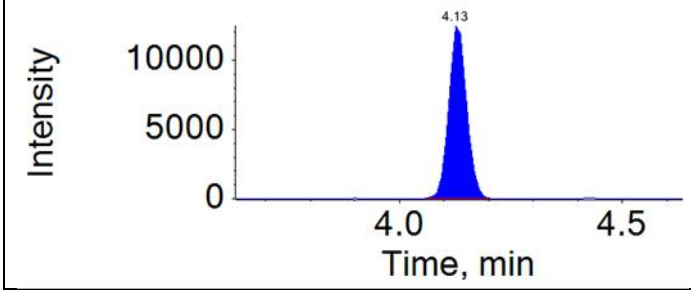


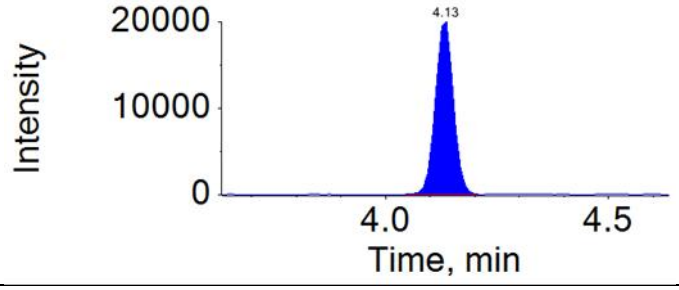
Analyte: PFBS	Extraction Standard: 13C3-PFBS
299.0 / 80.0	302.0 / 80.0





Analyte: 4:2-FTS	Extraction Standard: 13C2-4:2-FTS
327.0 / 307.0	329.0 / 81.0



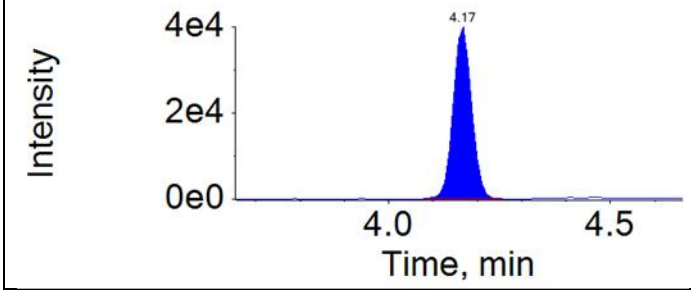


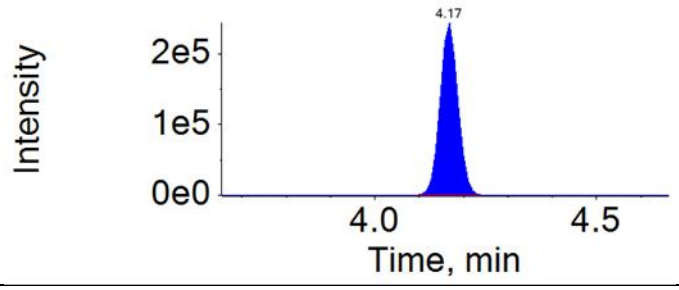
APPROVED
By JPT at 3:32 pm, 11/16/18

REVIEWED
By HMK at 9:05 am, 11/19/18

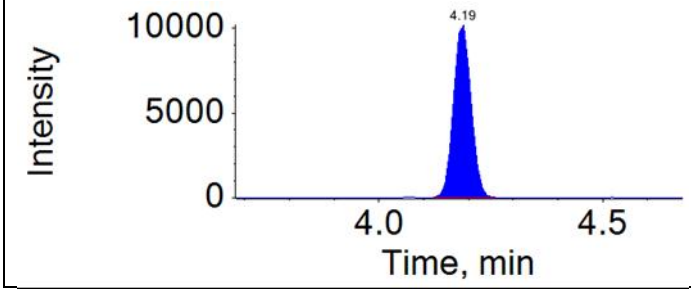
ICAL Name: 18NOV12DCAL **Result Table:** 18319003 11/16/2018 11:16:11 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

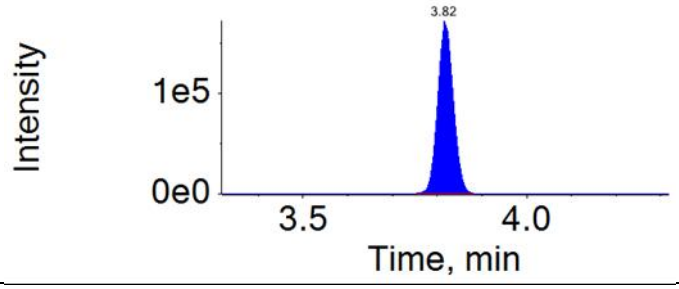
Analyte: PFHxA	Extraction Standard: 13C5-PFHxA
313.0 / 269.0	318.0 / 273.0



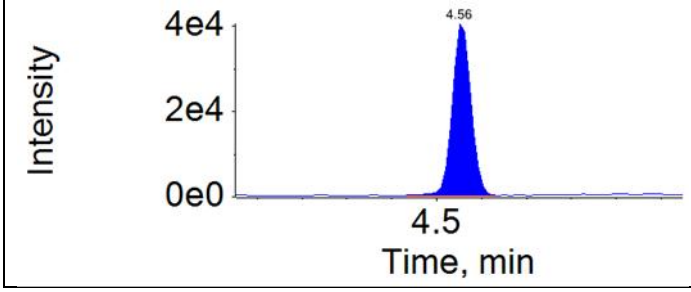


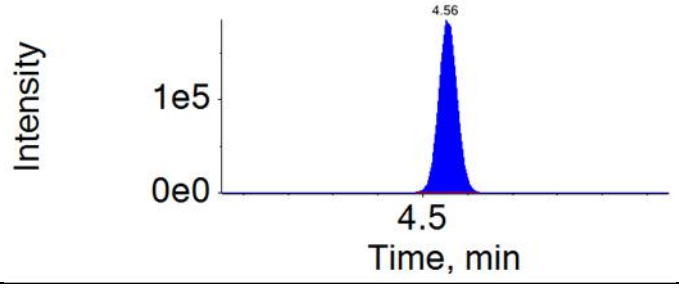
Analyte: PFPeS	Extraction Standard: 13C3-PFBS
349.0 / 80.0	302.0 / 80.0



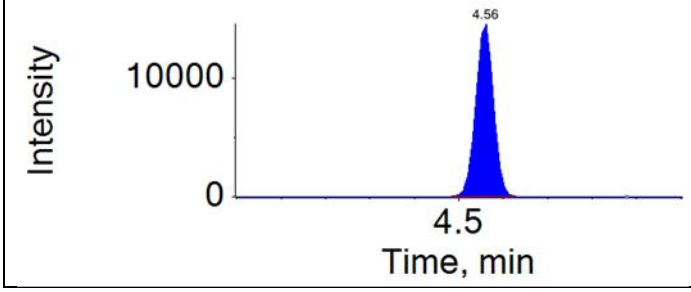


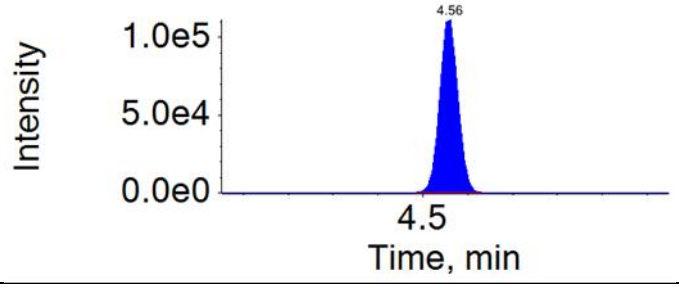
Analyte: PFHpA	Extraction Standard: 13C4-PFHpA
363.0 / 319.0	367.0 / 322.0





Analyte: PFHxS	Extraction Standard: 13C3-PFHxS
399.0 / 80.0	402.0 / 80.0

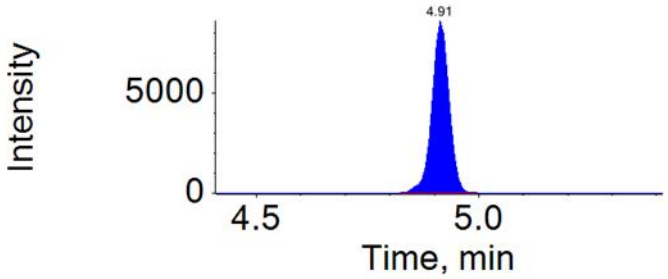
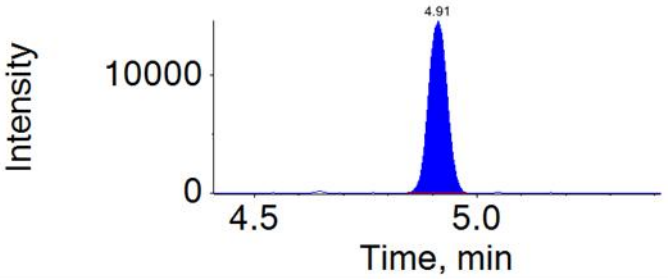


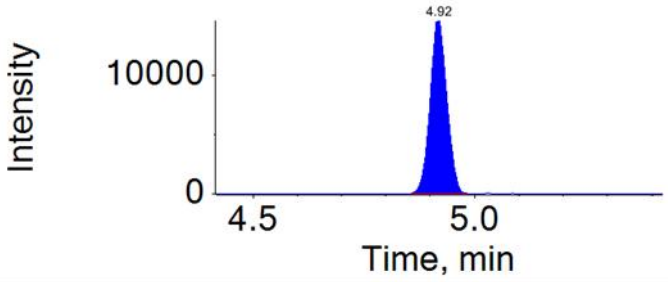
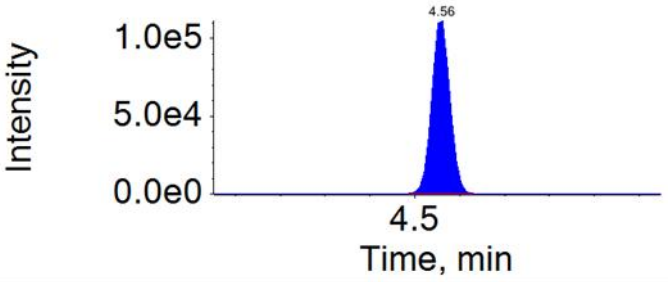


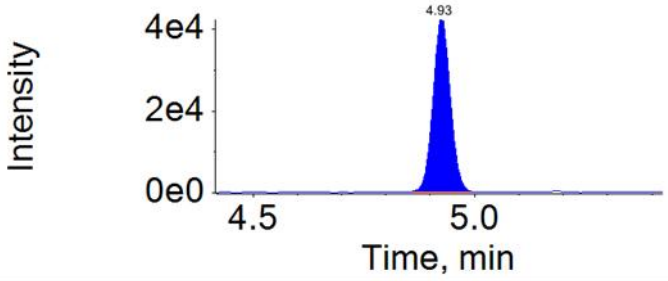
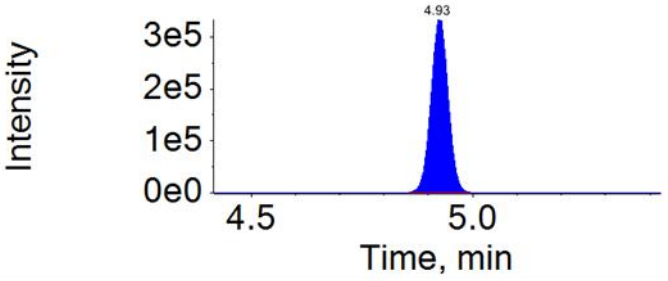
APPROVED
By JPT at 3:32 pm, 11/16/18

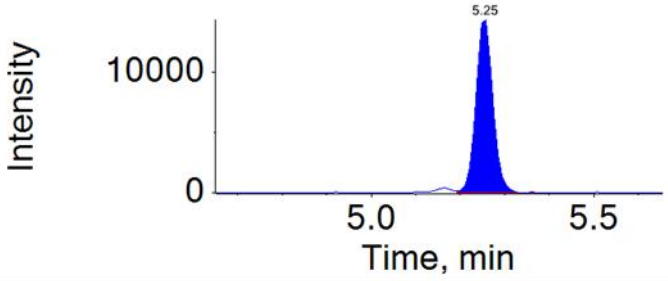
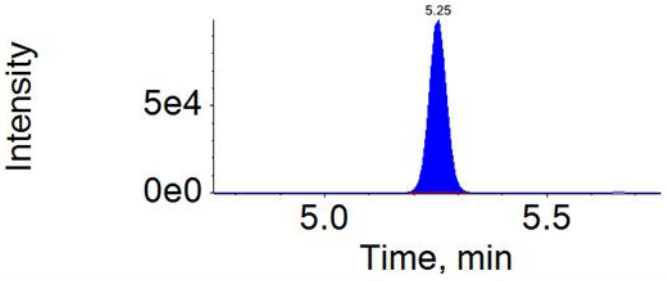
REVIEWED
By HMK at 9:05 am, 11/19/18

ICAL Name: 18NOV12DCAL **Result Table:** 18319003 11/16/2018 11:16:11 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Analyte: 6:2-FTS	Extraction Standard: 13C2-6:2-FTS
427.0 / 407.0	429.0 / 81.0
	

Analyte: PFHpS	Extraction Standard: 13C3-PFHxS
449.0 / 80.0	402.0 / 80.0
	

Analyte: PFOA	Extraction Standard: 13C8-PFOA
413.0 / 369.0	421.0 / 376.0
	

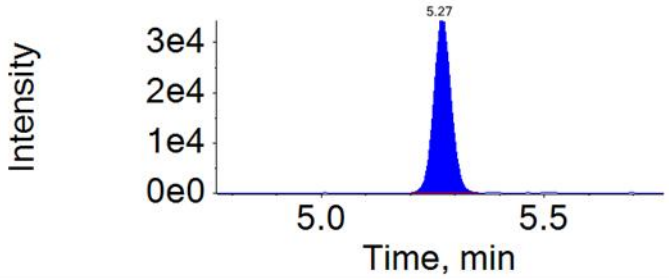
Analyte: PFOS	Extraction Standard: 13C8-PFOS
499.0 / 80.0	507.0 / 80.0
	

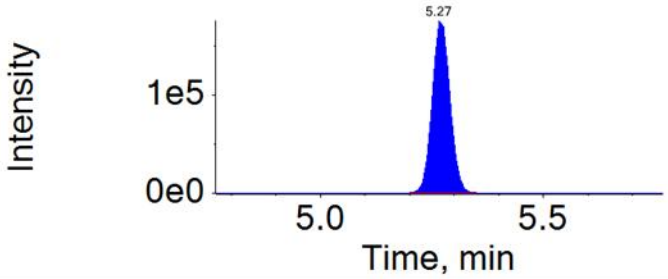
APPROVED
By JPT at 3:32 pm, 11/16/18

REVIEWED
By HMK at 9:05 am, 11/19/18

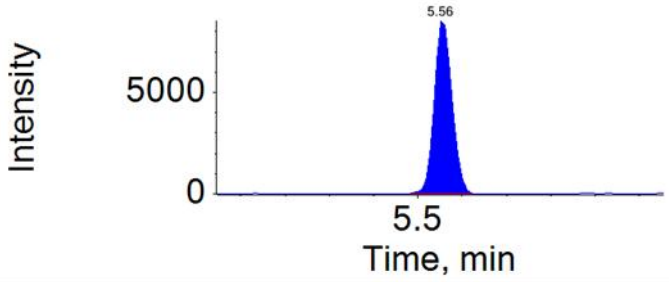
ICAL Name: 18NOV12DCAL **Result Table:** 18319003 11/16/2018 11:16:11 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

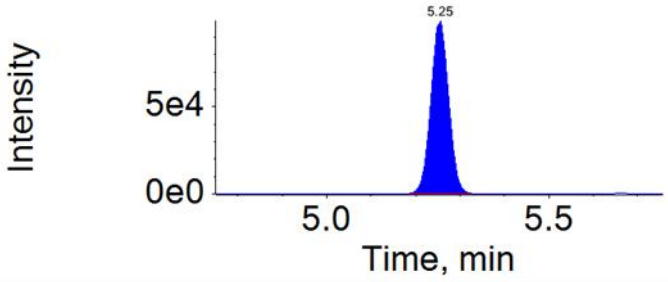
Analyte: PFNA	Extraction Standard: 13C9-PFNA
463.0 / 419.0	472.0 / 427.0



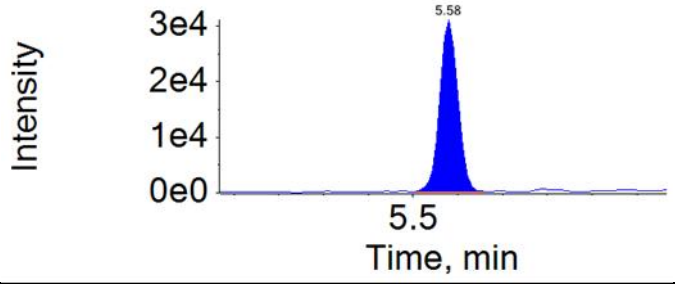


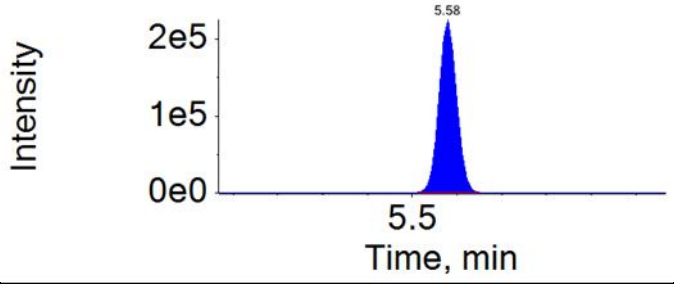
Analyte: PFNS	Extraction Standard: 13C8-PFOS
549.0 / 80.0	507.0 / 80.0



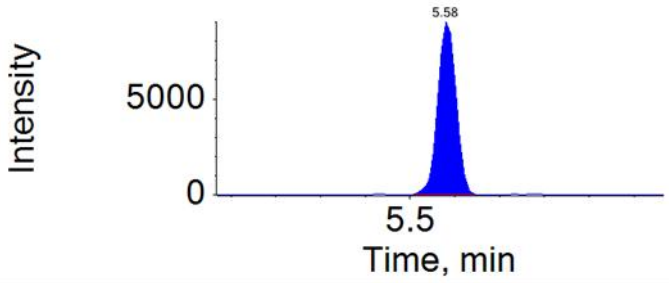


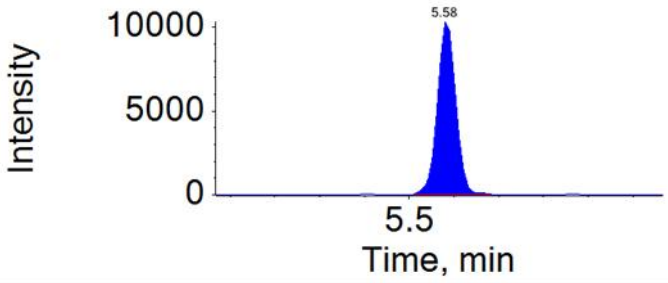
Analyte: PFDA	Extraction Standard: 13C6-PFDA
513.0 / 469.0	519.0 / 474.0





Analyte: 8:2-FTS	Extraction Standard: 13C2-8:2-FTS
527.0 / 507.0	529.0 / 81.0



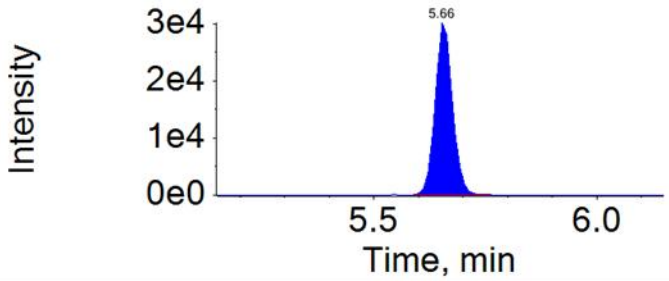


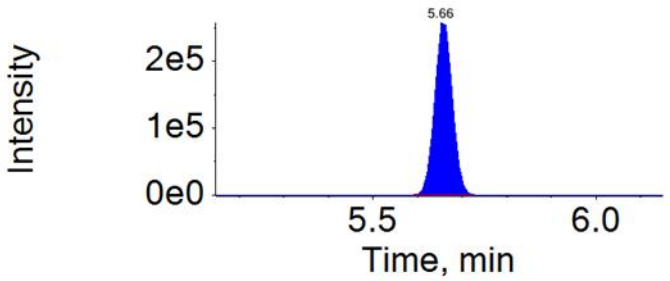
APPROVED
By JPT at 3:32 pm, 11/16/18

REVIEWED
By HMK at 9:05 am, 11/19/18

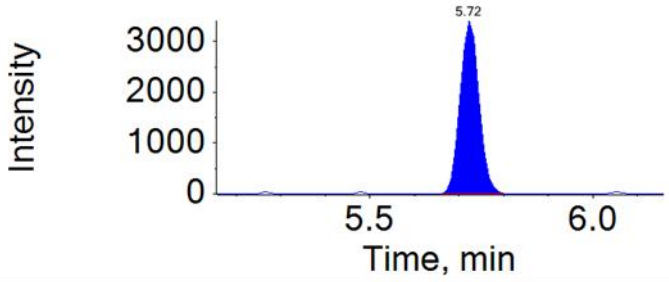
ICAL Name: 18NOV12DCAL **Result Table:** 18319003 11/16/2018 11:16:11 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

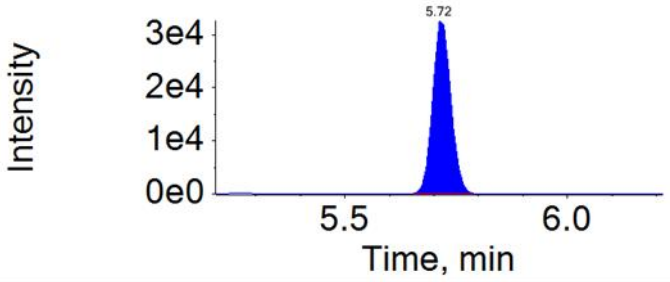
Analyte: PFOSA	Extraction Standard: 13C8-PFOSA
498.0 / 78.0	506.0 / 78.0



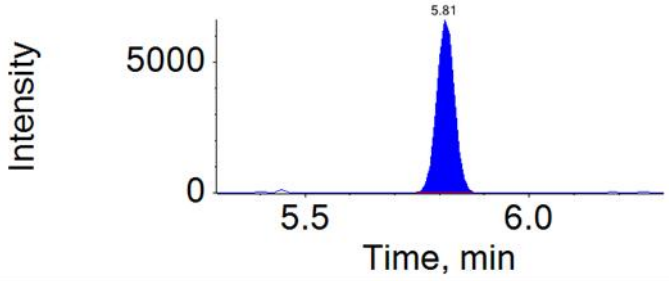


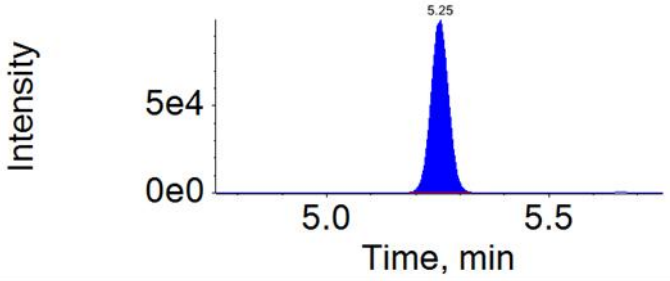
Analyte: NMeFOSAA	Extraction Standard: d3-NMeFOSAA
570.0 / 419.0	573.0 / 419.0



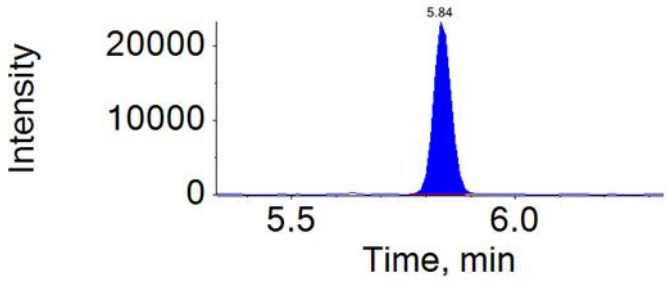


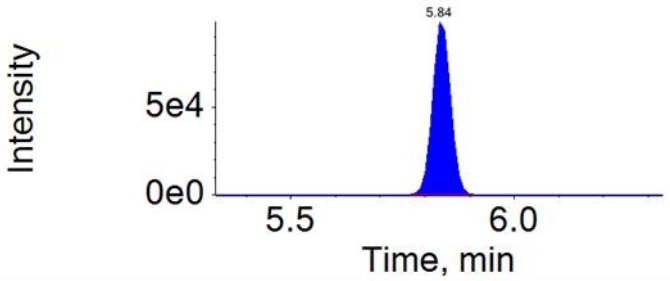
Analyte: PFDS	Extraction Standard: 13C8-PFOS
599.0 / 80.0	507.0 / 80.0





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



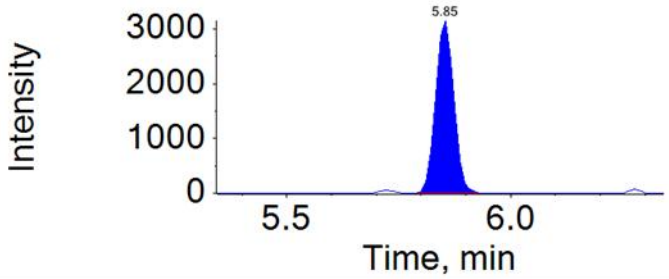


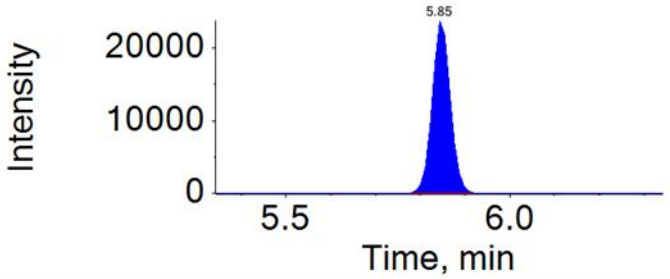
APPROVED
By JPT at 3:32 pm, 11/16/18

REVIEWED
By HMK at 9:05 am, 11/19/18

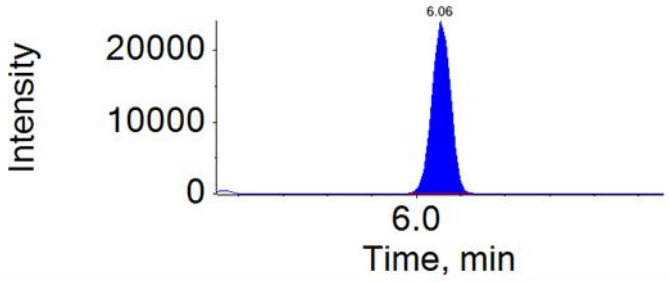
ICAL Name: 18NOV12DCAL **Result Table:** 18319003 11/16/2018 11:16:11 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

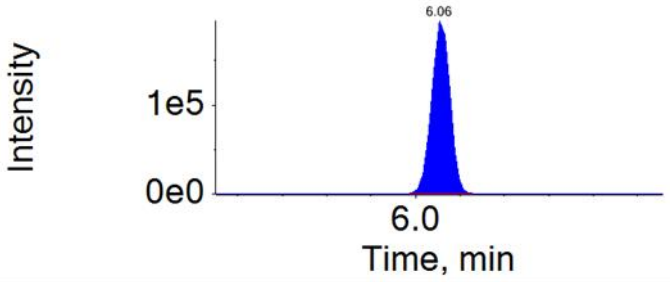
Analyte: NEtFOSAA	Extraction Standard: d5-NEtFOSAA
584.0 / 419.0	589.0 / 419.0



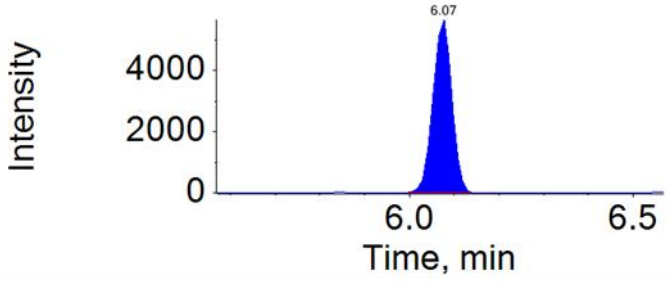


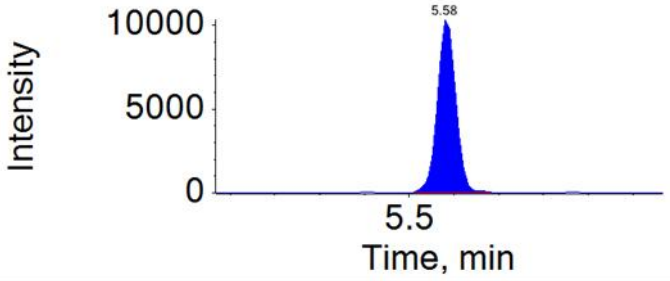
Analyte: PFDoDA	Extraction Standard: 13C2-PFDoDA
613.0 / 569.0	615.0 / 570.0



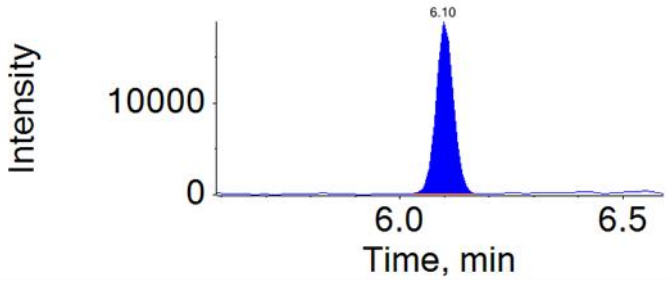


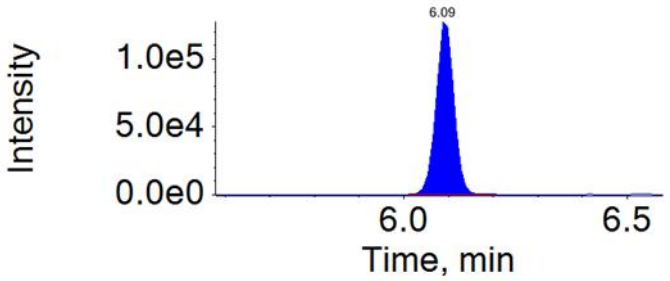
Analyte: 10:2-FTS	Extraction Standard: 13C2-8:2-FTS
627.0 / 607.0	529.0 / 81.0





Analyte: NMePFOSAE	Extraction Standard: d7-NMePFOSAE
616.0 / 59.0	623.0 / 59.0



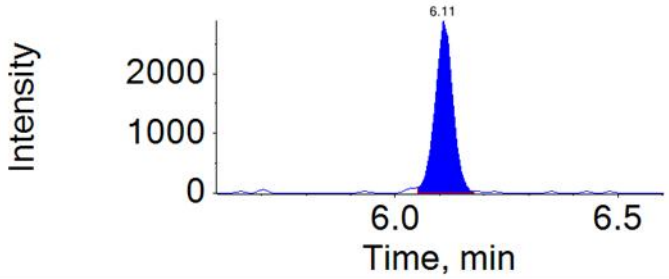


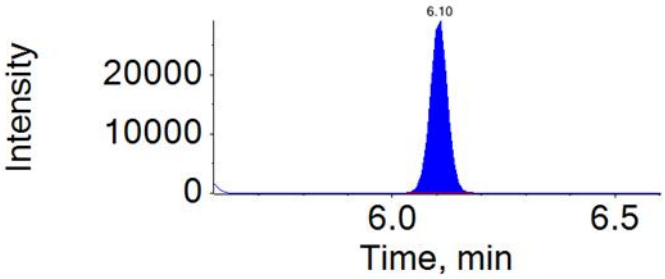
APPROVED
By JPT at 3:32 pm, 11/16/18

REVIEWED
By HMK at 9:05 am, 11/19/18

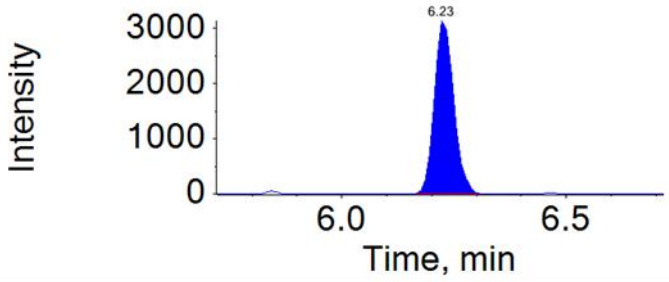
ICAL Name: 18NOV12DCAL **Result Table:** 18319003 11/16/2018 11:16:11 AM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

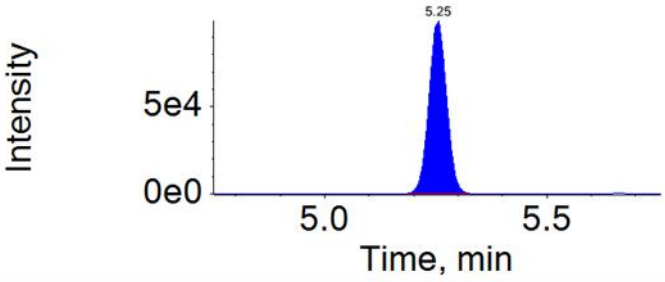
Analyte: NMePFOSA	Extraction Standard: d3-NMePFOSA
512.0 / 169.0	515.0 / 169.0



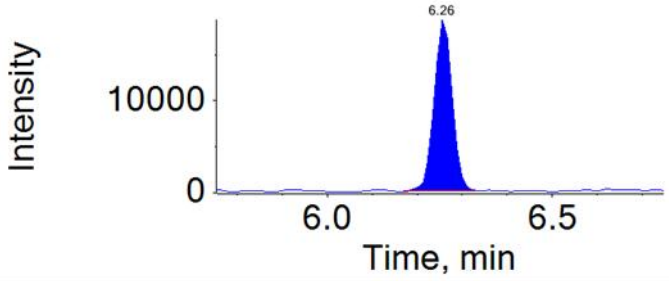


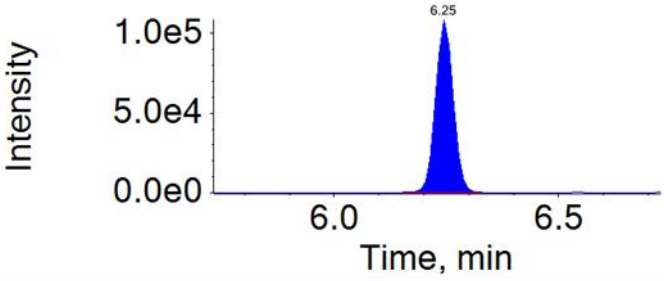
Analyte: PFDoS	Extraction Standard: 13C8-PFOS
699.0 / 80.0	507.0 / 80.0



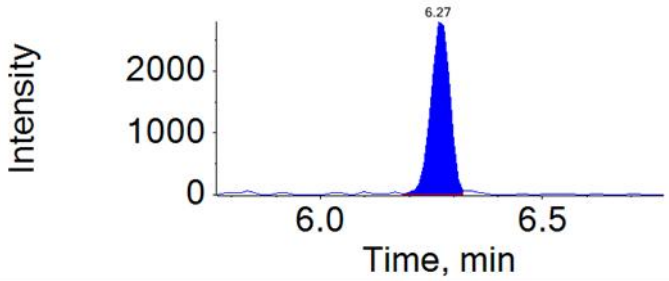


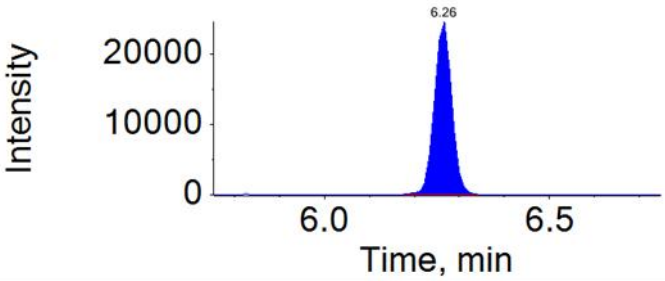
Analyte: NEtPFOSAE	Extraction Standard: d9-NEtPFOSAE
630.0 / 59.0	639.0 / 59.0





Analyte: NEtPFOSA	Extraction Standard: d5-NEtPFOSA
526.0 / 169.0	531.0 / 169.0

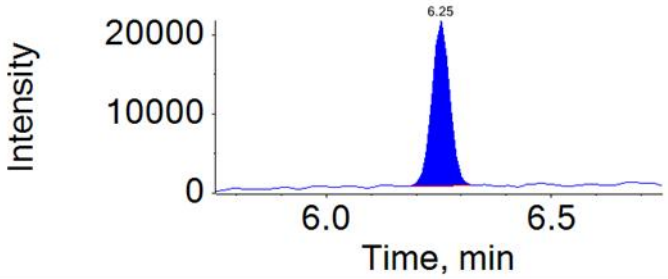
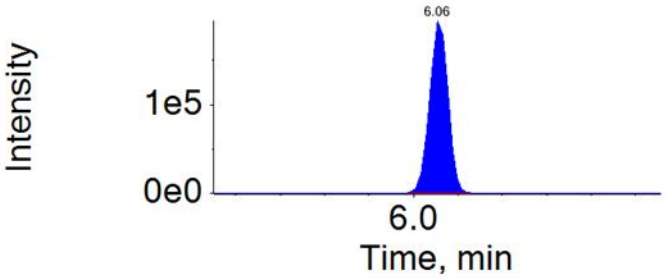


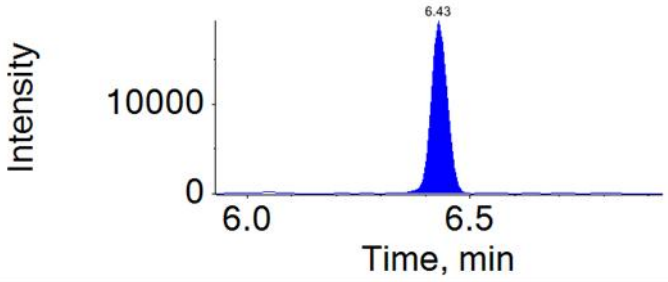
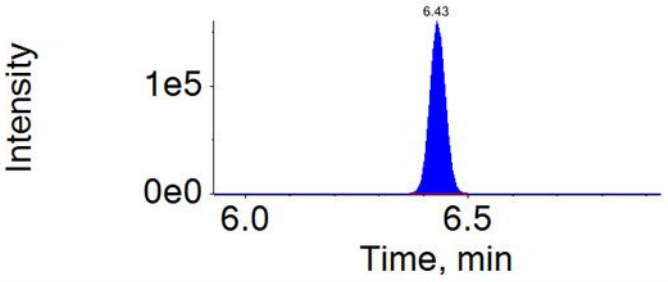


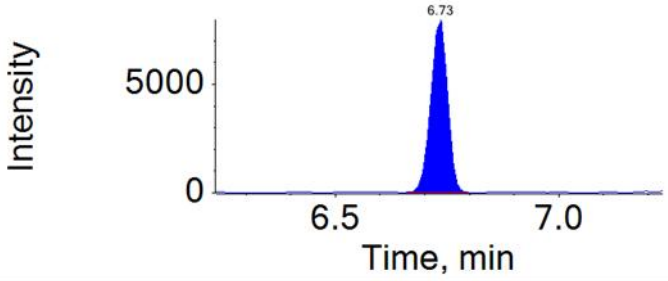
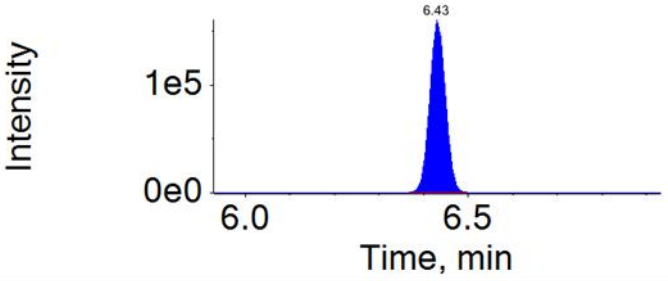
APPROVED
By JPT at 3:32 pm, 11/16/18

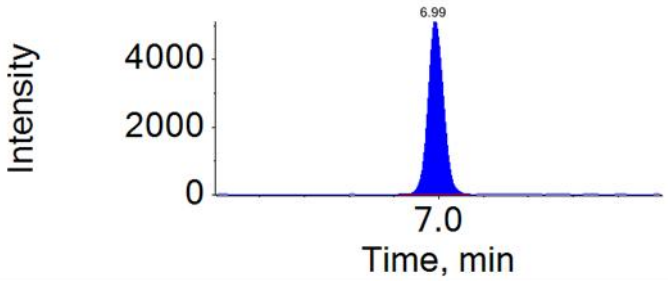
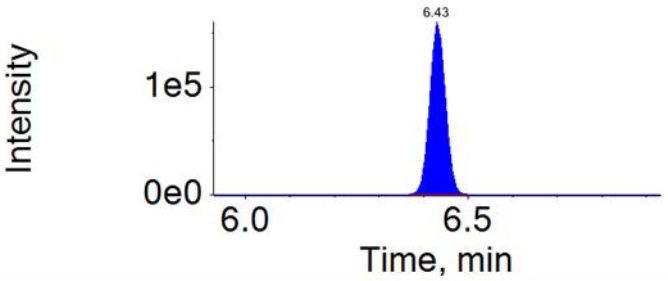
REVIEWED
By HMK at 9:05 am, 11/19/18

ICAL Name: 18NOV12DCAL **Result Table:** 18319003 11/16/2018 11:16:11 AM
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
	

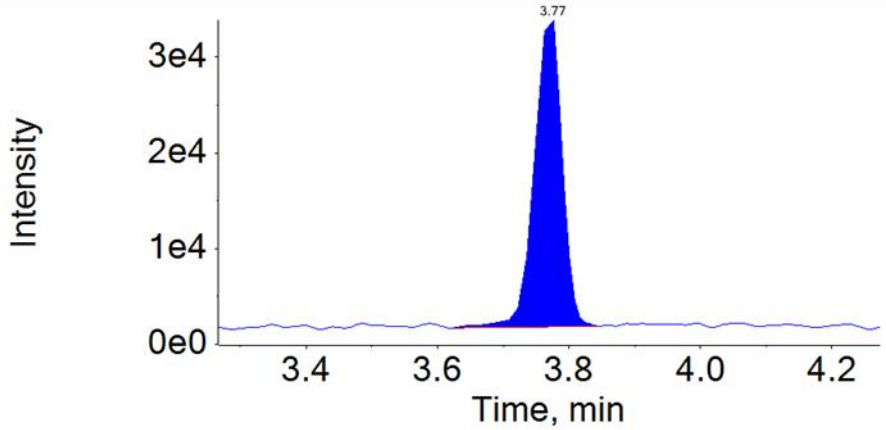
Analyte: PFODA	Extraction Standard: 13C2-PFTeDA
913.0 / 869.0	715.0 / 670.0
	

APPROVED
By JPT at 3:32 pm, 11/16/18

REVIEWED
By HMK at 9:05 am, 11/19/18

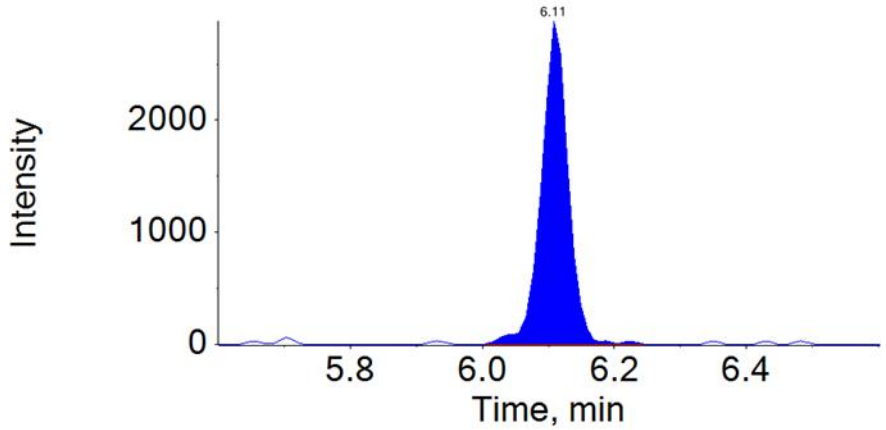
Results Table Name: 18319003
Results Table Date: 11/16/2018 3:25:03 PM
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

Component Name:
PFPeA
RT (min.):
3.77
Peak Area:
95187.2
Mass Range:
263.0 / 219.0
File Name:
18NOV15D-08.wiff
Sample Name:
LCS319003



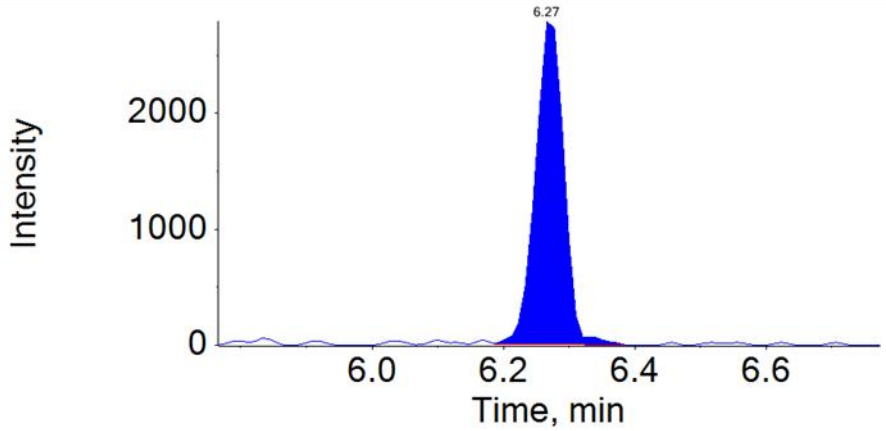
Integration Comment: incorrect integration

Component Name:
NMePFOSA
RT (min.):
6.11
Peak Area:
8201.5
Mass Range:
512.0 / 169.0
File Name:
18NOV15D-08.wiff
Sample Name:
LCS319003



Integration Comment: incorrect integration

Component Name:
NEtPFOSA
RT (min.):
6.27
Peak Area:
8482.5
Mass Range:
526.0 / 169.0
File Name:
18NOV15D-08.wiff
Sample Name:
LCS319003



Integration Comment: incorrect integration

APPROVED
By JPT at 3:32 pm, 11/16/18

REVIEWED
By HMK at 9:05 am, 11/19/18

Results Table Name: 18319003
Results Table Date: 11/16/2018 3:25:03 PM

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

APPROVED
By JPT at 3:32 pm, 11/16/18

REVIEWED
By HMK at 9:05 am, 11/19/18

Ion Ratio Report

Sample Name: LCS319003 **Instrument Name:** LM27631 **File Name:** 18NOV15D-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	53803.5	A	N/A	1.0000			
PFBS_2	3.82	1.00	19363.3	A	N/A	0.3599	-1	50	
4:2-FTS	4.13	1.00	34785.2	A	N/A	1.0000			
4:2 FTS_2	4.13	1.00	23678.5	A	N/A	0.6807		#NA!	
PFHxA	4.17	1.00	115450.6	A	N/A	1.0000			
PFHxA_2	4.17	1.00	1074.1	A	N/A	0.0093	-21	50	
PFPeS	4.19	1.10	28041.6	A	N/A	1.0000			
PFPeS_2	4.19	1.10	13855.5	A	N/A	0.4941	-5	50	
PFHpA	4.56	1.00	116528.3	A	N/A	1.0000			
PFHpA_2	4.55	1.00	5194.4	A	N/A	0.0446	-21	50	
PFHxS	4.56	1.00	40913.0	A	N/A	1.0000			
PFHxS_2	4.56	1.00	14829.9	A	N/A	0.3625	5	50	
6:2-FTS	4.91	1.00	23078.1	A	N/A	1.0000			
6:2 FTS_2	4.91	1.00	15608.5	A	N/A	0.6763		#NA!	
PFHpS	4.92	1.08	38823.1	A	N/A	1.0000			
PFHpS_2	4.91	1.08	17913.2	A	N/A	0.4614	13	50	
PFOA	4.93	1.00	116200.1	A	N/A	1.0000			
PFOA_2	4.92	1.00	6524.2	A	N/A	0.0561	-1	50	
PFOS	5.25	1.00	38126.7	A	N/A	1.0000			
PFOS_2	5.25	1.00	12747.5	A	N/A	0.3343	13	50	
PFNA	5.27	1.00	95101.2	A	N/A	1.0000			
PFNA_2	5.27	1.00	1914.9	A	N/A	0.0201	-11	50	
PFNS	5.56	1.06	23860.4	A	N/A	1.0000			
PFNS_2	5.56	1.06	11783.1	A	N/A	0.4938	4	50	
PFDA	5.58	1.00	86587.1	A	N/A	1.0000			
PFDA_2	5.58	1.00	231.4	A	N/A	0.0027	-66	50	OOS
8:2-FTS	5.58	1.00	25748.7	A	N/A	1.0000			
8:2 FTS_2	5.58	1.00	11850.3	A	N/A	0.4602		#NA!	
NMeFOSAA	5.72	1.00	10024.7	A	N/A	1.0000			
NMeFOSAA_2	5.72	1.00	2221.6	A	N/A	0.2216	-14	50	
PFDS	5.81	1.11	18153.9	A	N/A	1.0000			
PFDS_2	5.81	1.11	9495.9	A	N/A	0.5231	3	50	
PFUnDA	5.84	1.00	63237.5	A	N/A	1.0000			
PFUnDA_2	5.85	1.00	324.4	A	N/A	0.0051	-7	50	
NEtFOSAA	5.85	1.00	8923.3	A	N/A	1.0000			
NEtFOSAA_2	5.85	1.00	4462.8	A	N/A	0.5001	-30	50	
PFDoDA	6.06	1.00	70480.1	A	N/A	1.0000			
PFDoDA_2	6.06	1.00	1143.2	A	N/A	0.0162	5	50	
10:2-FTS	6.07	1.09	16623.2	A	N/A	1.0000			
10:2 FTS_2	6.08	1.09	9758.7	A	N/A	0.5871		#NA!	
PFTrDA	6.25	1.03	57256.2	A	N/A	1.0000			
PFTrDA_2	6.25	1.03	568.0	A	N/A	0.0099	16	50	
PFTeDA	6.43	1.00	47809.8	A	N/A	1.0000			
PFTeDA_2	6.44	1.00	417.0	A	N/A	0.0087	40	50	
PFHxDA	6.73	1.05	20634.2	A	N/A	1.0000			
PFHxDA_2	6.73	1.05	1200.4	A	N/A	0.0582	-14	50	
PFODA	6.99	1.09	12388.9	A	N/A	1.0000			
PFODA_2	7.00	1.09	445.4	A	N/A	0.0360	30	50	

APPROVED
By JPT at 3:32 pm, 11/16/18

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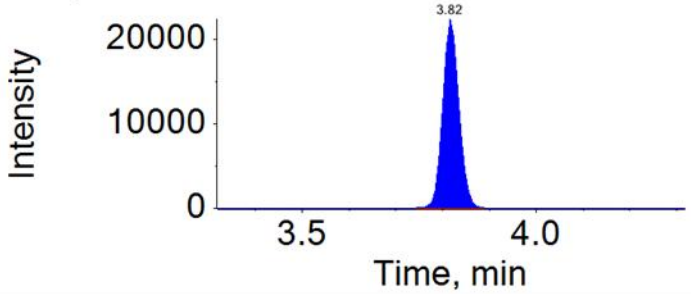
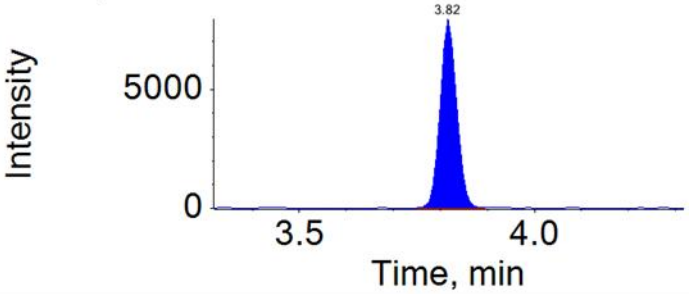
By HMK at 9:05 am, 11/19/18

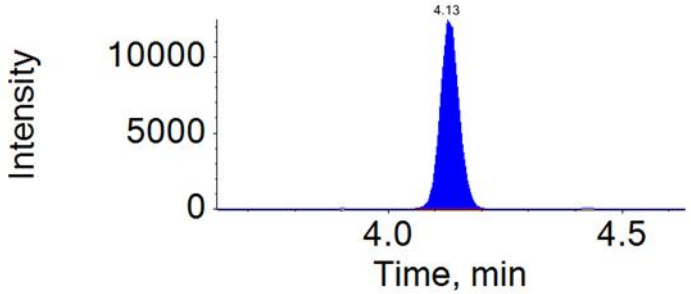
Component: PFBS
Primary Mass: 299.0 / 80.0



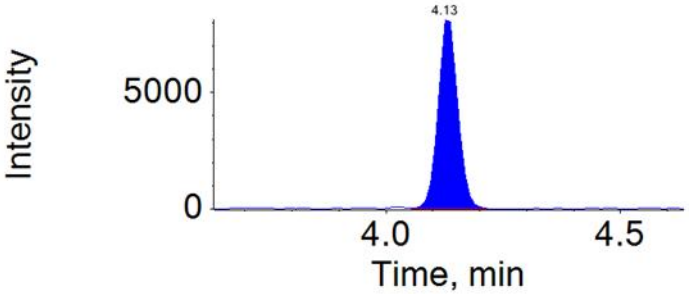
Component: PFBS_2
Secondary Mass: 299.0 / 99.0



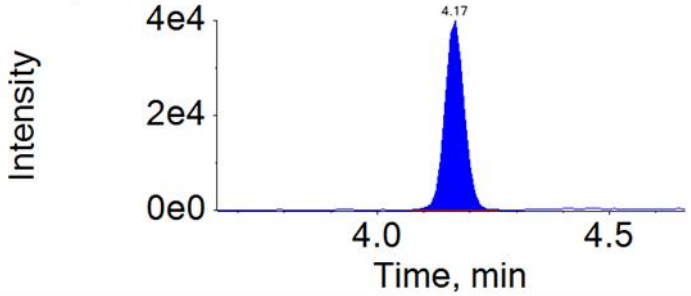
Component: 4:2-FTS
Primary Mass: 327.0 / 307.0



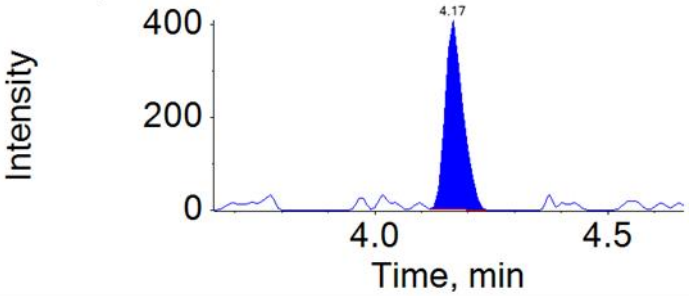
Component: 4:2 FTS_2
Secondary Mass: 327.0 / 81.0



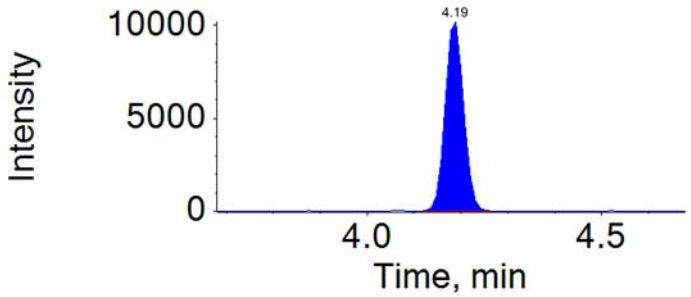
Component: PFHxA
Primary Mass: 313.0 / 269.0



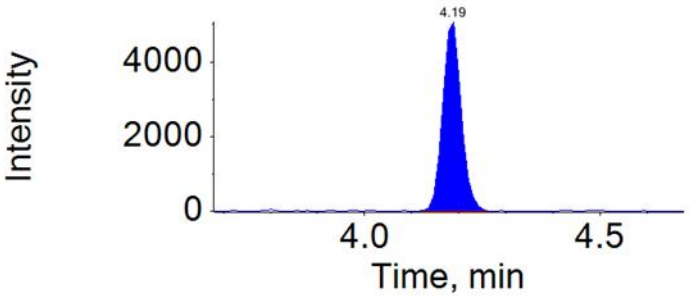
Component: PFHxA_2
Secondary Mass: 313.0 / 119.0



Component: PFPeS
Primary Mass: 349.0 / 80.0



Component: PFPeS_2
Secondary Mass: 349.0 / 99.0



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By JPT at 3:32 pm, 11/16/18

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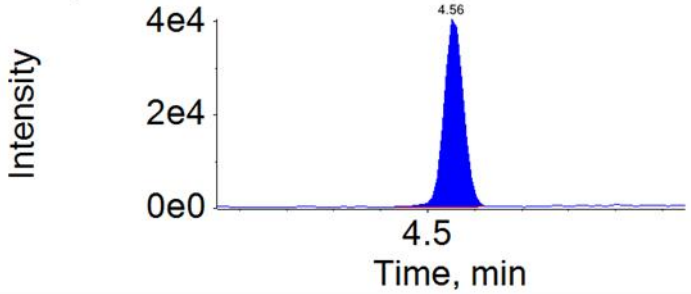
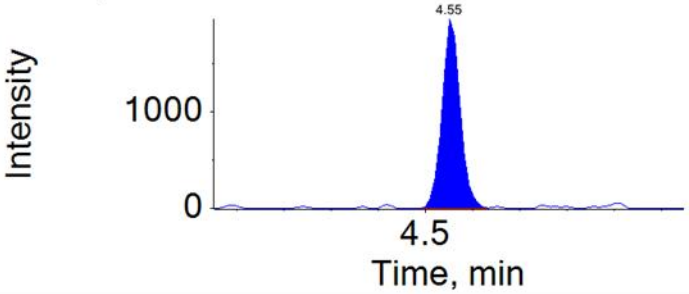
By HMK at 9:05 am, 11/19/18

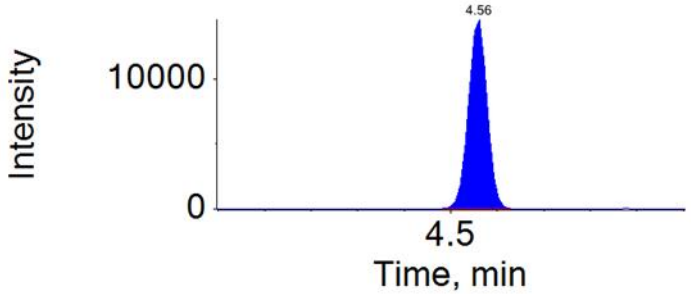
Component: PFHpA
Primary Mass: 363.0 / 319.0



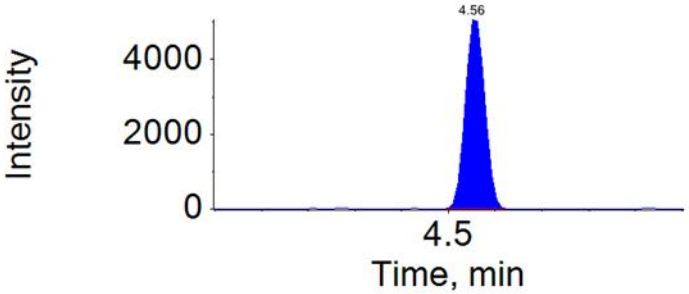
Component: PFHpA_2
Secondary Mass: 363.0 / 169.0



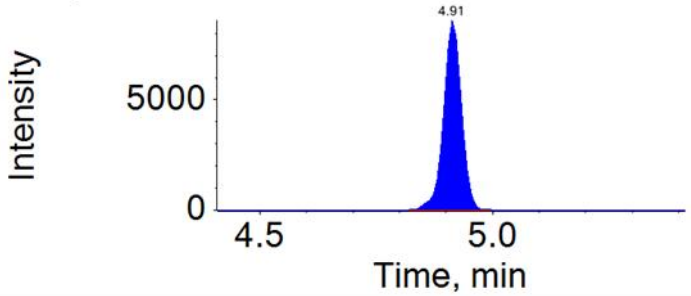
Component: PFHxS
Primary Mass: 399.0 / 80.0



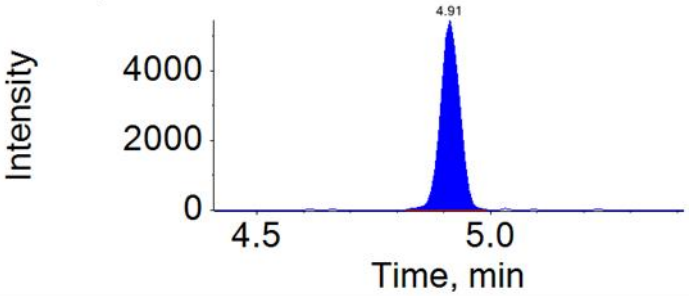
Component: PFHxS_2
Secondary Mass: 399.0 / 99.0



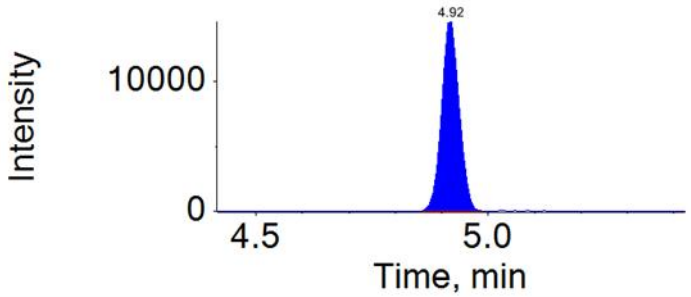
Component: 6:2-FTS
Primary Mass: 427.0 / 407.0



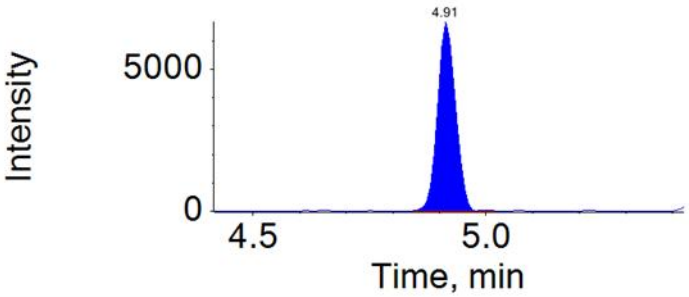
Component: 6:2 FTS_2
Secondary Mass: 427.0 / 81.0



Component: PFHpS
Primary Mass: 449.0 / 80.0



Component: PFHpS_2
Secondary Mass: 449.0 / 99.0



APPROVED
By JPT at 3:32 pm, 11/16/18

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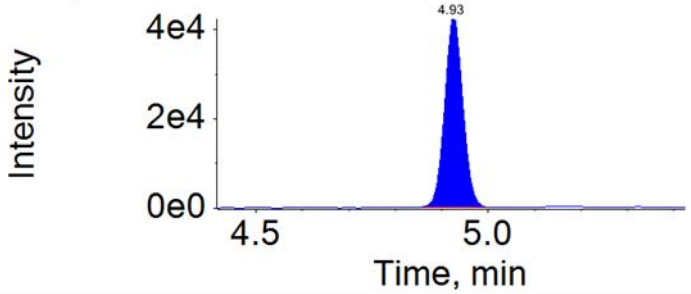
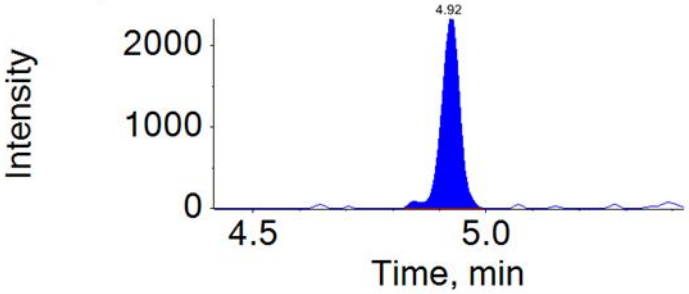
By HMK at 9:05 am, 11/19/18

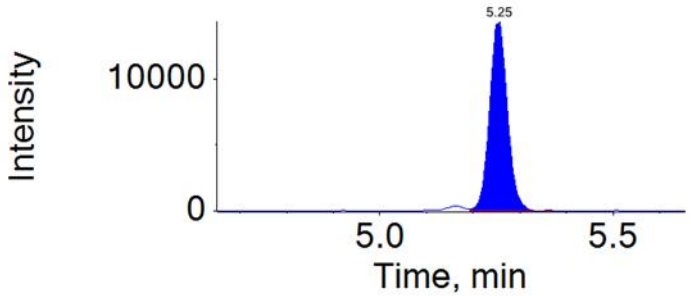
Component: PFOA
Primary Mass: 413.0 / 369.0



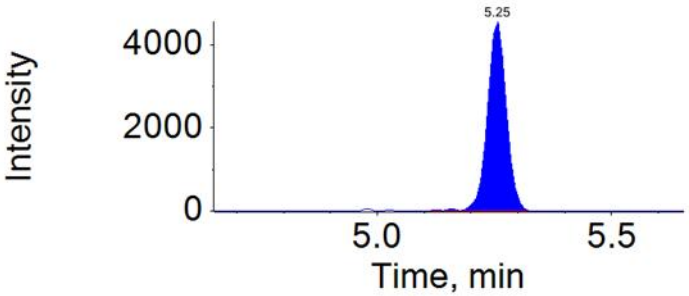
Component: PFOA_2
Secondary Mass: 413.0 / 169.0



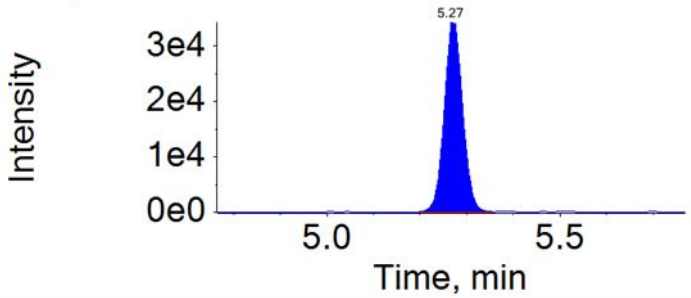
Component: PFOS
Primary Mass: 499.0 / 80.0



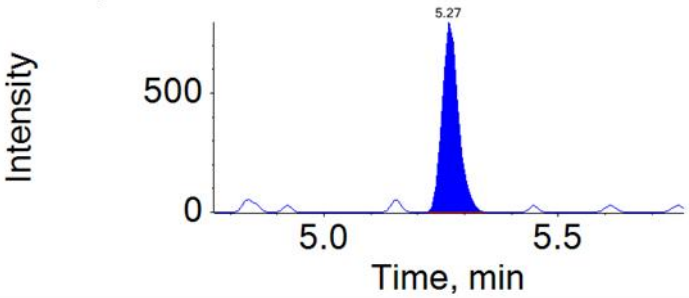
Component: PFOS_2
Secondary Mass: 499.0 / 99.0



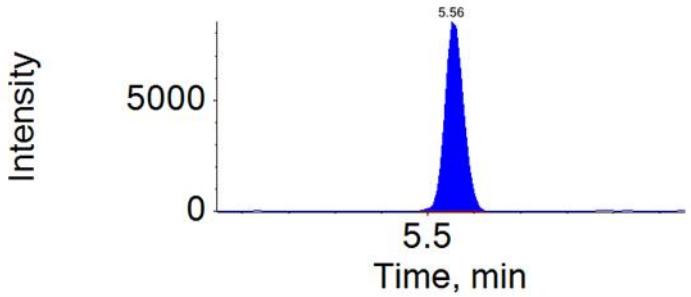
Component: PFNA
Primary Mass: 463.0 / 419.0



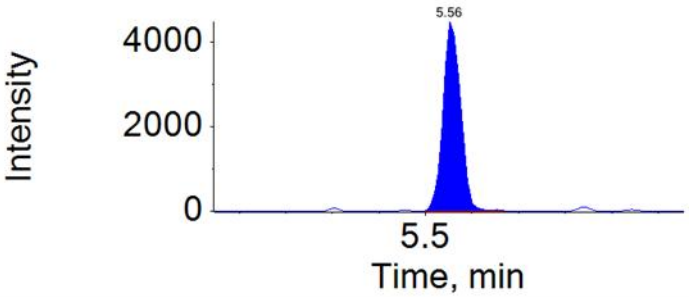
Component: PFNA_2
Secondary Mass: 463.0 / 169.0



Component: PFNS
Primary Mass: 549.0 / 80.0



Component: PFNS_2
Secondary Mass: 549.0 / 99.0



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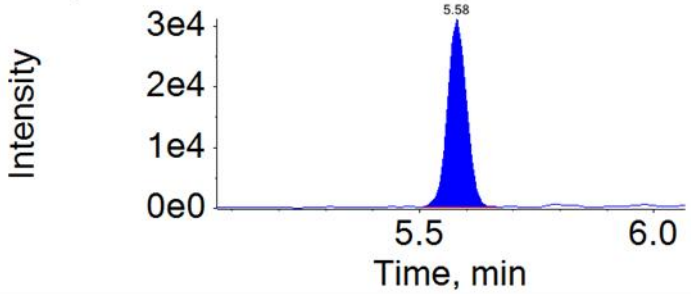
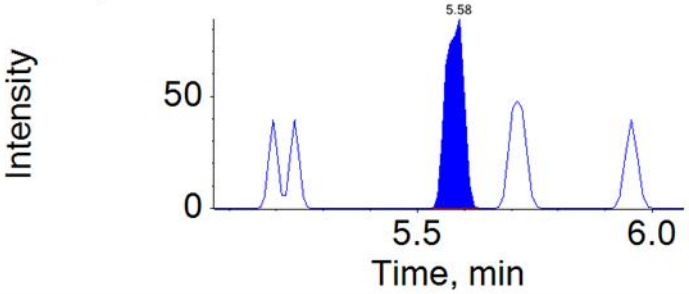
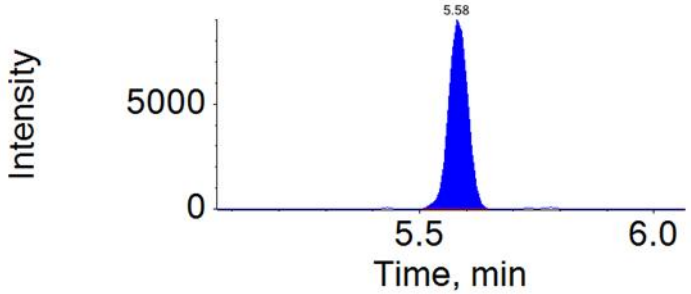
Component: PFDA
Primary Mass: 513.0 / 469.0



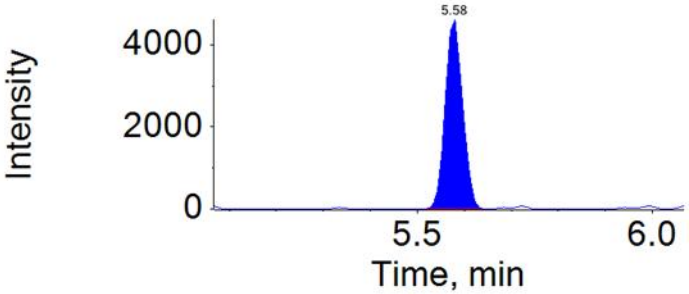
Component: PFDA_2
Secondary Mass: 513.0 / 169.0



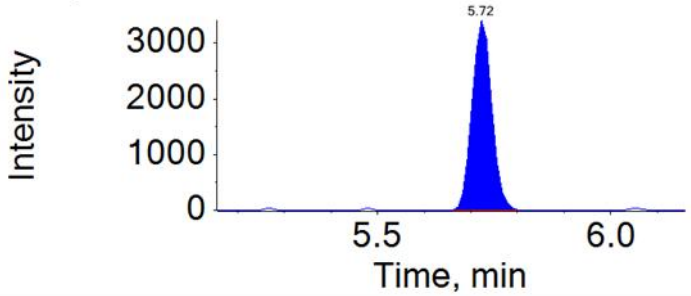
Component: 8:2-FTS
Primary Mass: 527.0 / 507.0



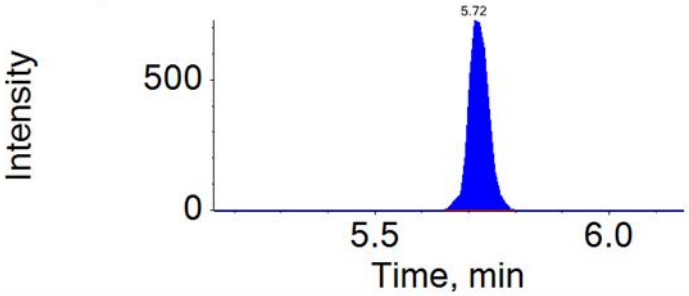
Component: 8:2 FTS_2
Secondary Mass: 527.0 / 81.0



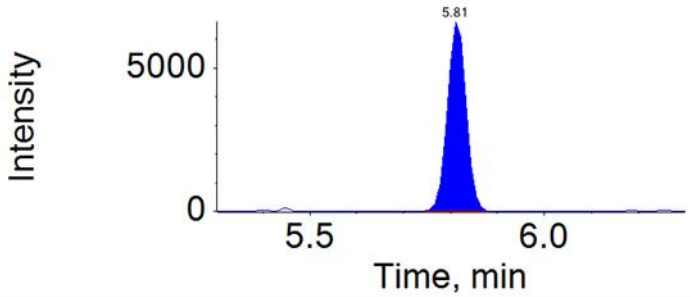
Component: NMeFOSAA
Primary Mass: 570.0 / 419.0



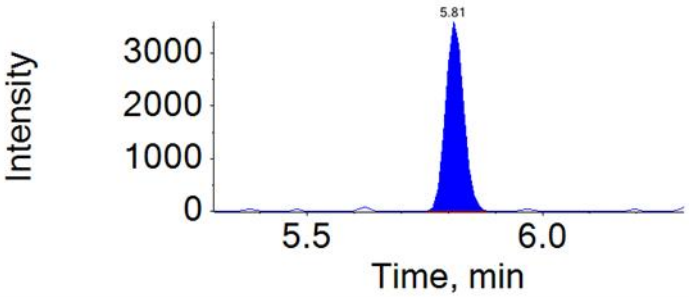
Component: NMeFOSAA_2
Secondary Mass: 570.0 / 483.0



Component: PFDS
Primary Mass: 599.0 / 80.0



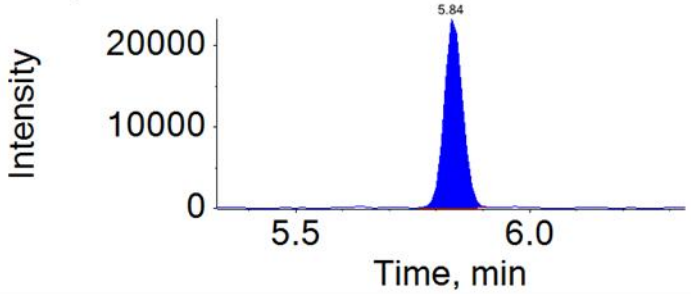
Component: PFDS_2
Secondary Mass: 599.0 / 99.0



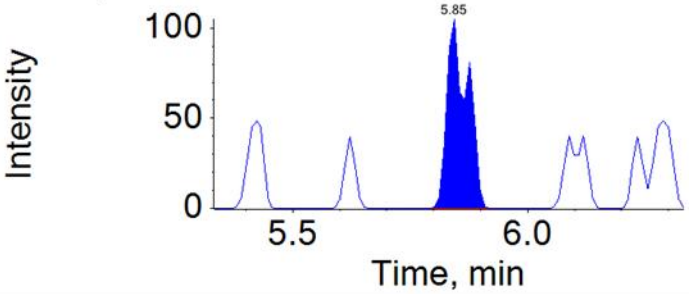
APPROVED
By JPT at 3:32 pm, 11/16/18

REVIEWED
By HMK at 9:05 am, 11/19/18

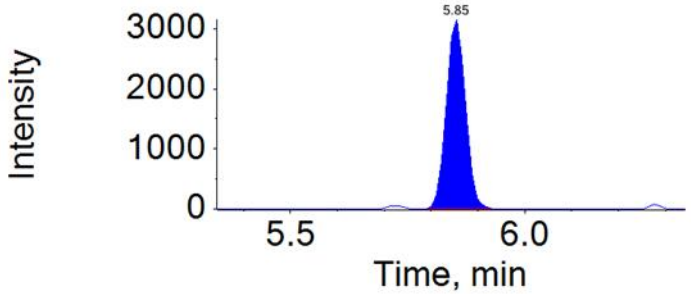
Component: PFUnDA
Primary Mass: 563.0 / 519.0



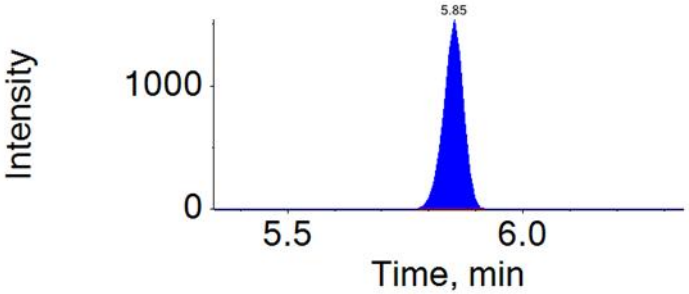
Component: PFUnDA_2
Secondary Mass: 563.0 / 169.0



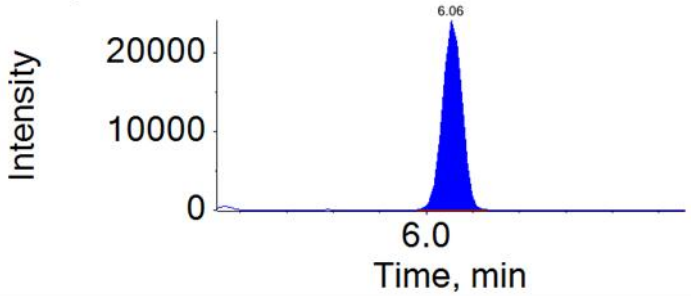
Component: NEtFOSAA
Primary Mass: 584.0 / 419.0



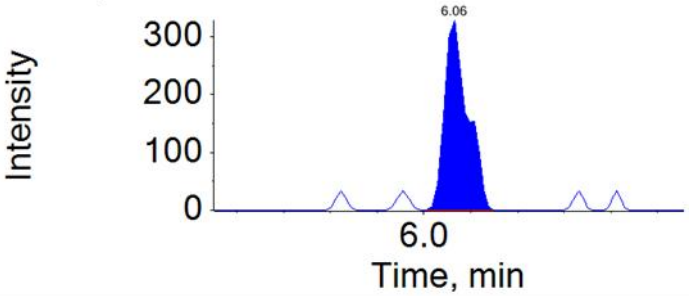
Component: NEtFOSAA_2
Secondary Mass: 584.0 / 526.0



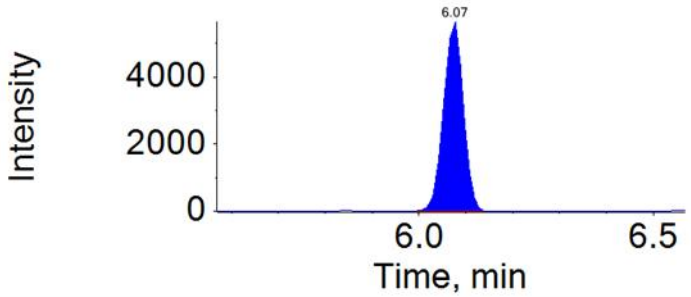
Component: PFDoDA
Primary Mass: 613.0 / 569.0



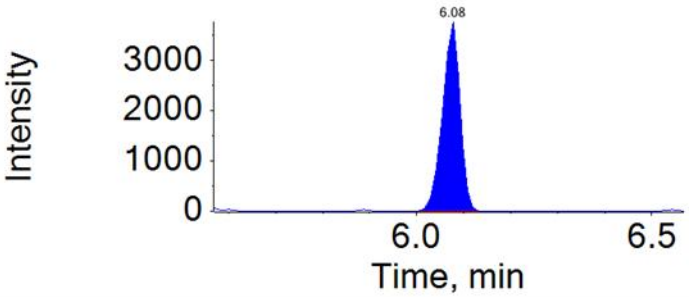
Component: PFDoDA_2
Secondary Mass: 613.0 / 169.0



Component: 10:2-FTS
Primary Mass: 627.0 / 607.0



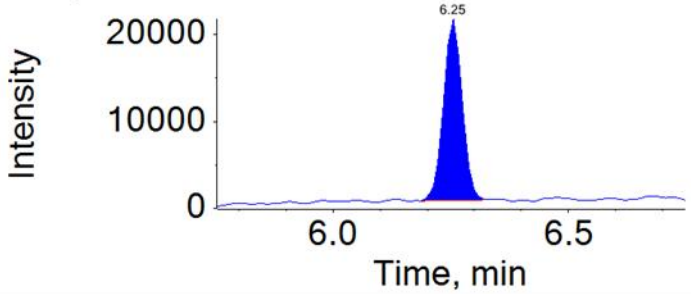
Component: 10:2 FTS_2
Secondary Mass: 627.0 / 81.0



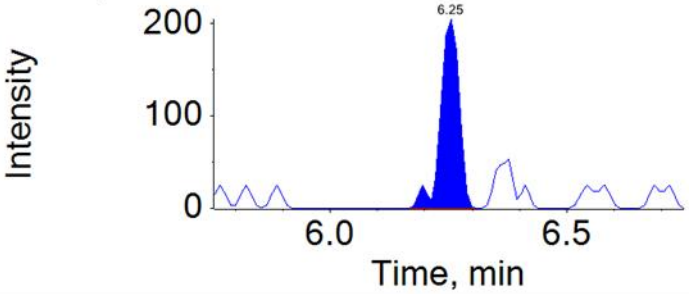
APPROVED
By JPT at 3:32 pm, 11/16/18

REVIEWED
By HMK at 9:05 am, 11/19/18

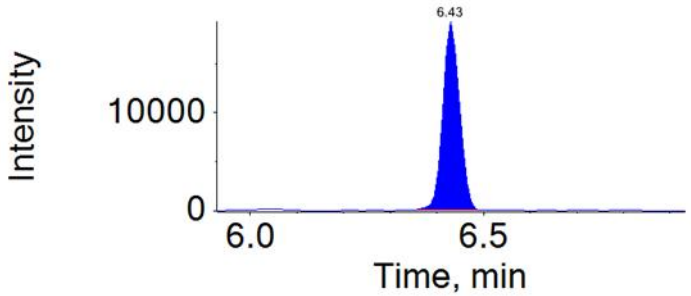
Component: PFTrDA
Primary Mass: 663.0 / 619.0



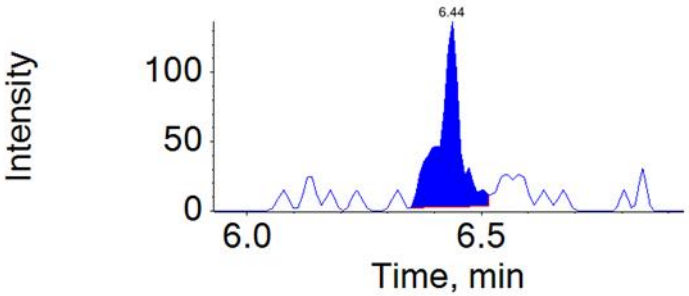
Component: PFTrDA_2
Secondary Mass: 663.0 / 169.0



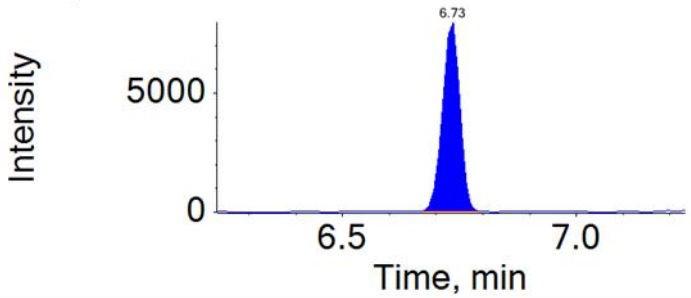
Component: PFTeDA
Primary Mass: 713.0 / 669.0



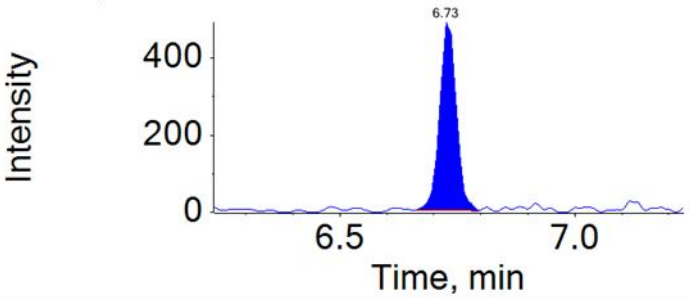
Component: PFTeDA_2
Secondary Mass: 713.0 / 169.0



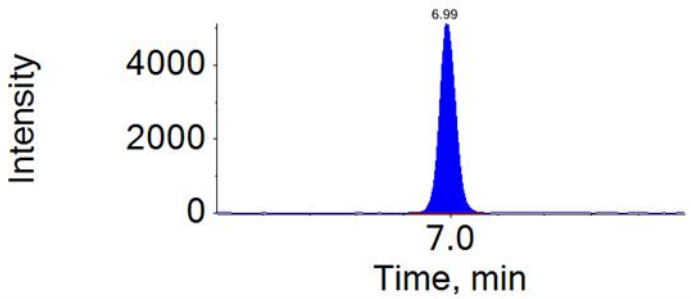
Component: PFHxDA
Primary Mass: 813.0 / 769.0



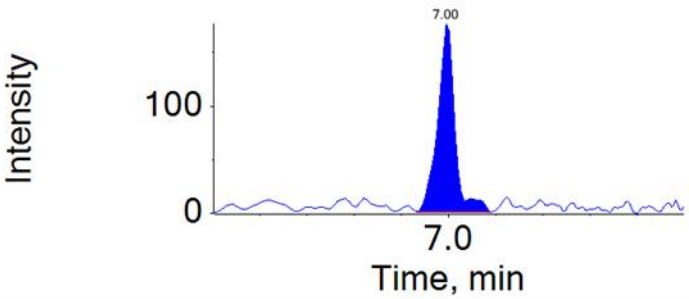
Component: PFHxDA_2
Secondary Mass: 813.0 / 169.0



Component: PFODA
Primary Mass: 913.0 / 869.0



Component: PFODA_2
Secondary Mass: 913.0 / 169.0



Preparation Logs

PFAS by LC/MS/MS

Organic Extraction Batchlog Assigned to: 12698 Courtney Fatta Reviewed by: JPT12262 Start Date: 11/15/18 Start time: 8:50

18319003 Tech 1: CF12698 Tech 2: CF12698

Analyses on Batch: PFAS in Soil by LC/MS/MS-DoD

③ CF12698 11/15/18

Dept: 33 Prep Analysis: 14510 PFAS Solid Prep - DoD

③ mL ~~CF~~ CF12698 11/15/18

Port #	QC	Sample Code	Amt (g)	SS/IS Sol.	Amt (mL)	MS Sol.	Amt (mL)	FV ~~(uL)~~	IS Amt (uL)	BC	Comments
7	9885063MS	22013	1.06	SSMODX1833CB	.05	MSMODX1833AR	.04	1.0	20	170A	
	9885064MSD	22013	1.08	SSMODX1833CB	.05	MSMODX1833AR	.04	1.0	↓	170A	
	BLANKA	BLK319003	1.0	SSMODX1833CB	.05	N/A	N/A	1.0	↓	Z	
	LCSA	LCS319003	1.0	SSMODX1833CB	.05	MSMODX1833AR	.04	1.0	↓	Z	

Spike Solutions: Witness: PJR9213 Instrument: LM27631

MSMODX1833AR PFAS 537 Native Spike

SSMODX1833CB PFAS 537 Modified Extraction/Surrogate Spik Sequence: 18NOV12DOD - 18NOV15D

③ mL

Port#		Sample #	Sample Code	Amt (g)	SS/IS Sol.	Amt (mL)	FV ~~(uL)~~	IS Amt (uL)	BC	Comments	Analyses	Due	Pri
7	1	9885056 R	22006	1.04	SSMODX1833CE	.05	1.0	20	170a		14478	11/15/2018	N
	2	9885057 R	22007	1.05	SSMODX1833CE	.05	1.0	↓	170a		14478	11/15/2018	N
	3	9885058 R	22008	1.07	SSMODX1833CE	.05	1.0		170a		14478	11/15/2018	N
	4	9885059 R	22009	1.09	SSMODX1833CE	.05	1.0		170a		14478	11/15/2018	N
	5	9885062 R	BKG 22013	1.03	SSMODX1833CE	.05	1.0		170a		14478	11/15/2018	N
	6	9885065 R	22014	1.02	SSMODX1833CE	.05	1.0		170a		14478	11/15/2018	N
	7	9885075 R	22049	1.08	SSMODX1833CE	.05	1.0		170a		14478	11/15/2018	N
	8	9885147 R	82290	1.03	SSMODX1833CE	.05	1.0		170a		14478	11/15/2018	N
	9	9885152 R	82293	1.08	SSMODX1833CE	.05	1.0	↓	170a		14478	11/15/2018	N

N/A JPT12262 11/16/18

18319003

Organic Extraction Batchlog **18319003**

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	176981117.1833A
Auto-pipette (dilutions)	N/A JPT12262 11/16/18
Auto-pipette (extract vialin	P1000-1
Envi-Carb	1075563
Internal Standard	IS18318334
Methanol	DV013-US
Sand	MKBW7349V
Syringe (IS)	PFAS 11
Syringe (MS)	PFAS 10
Syringe (SS)	PFAS 13

N/A JPT12262 11/16/18

CF12698 11/15/18

Balance #	B629764122	Sonic Bath ID	3800A	N-evap	C	26°C	SPE Manifold	N/A

18319003

DF = Dilution Factor FV = Final Volume

Documented temps are NIST corrected.

N/A JPT12262 11/16/18

Organic Extraction Batchlog Assigned to: 26543 Anthony Polaski Reviewed by: MCD7824 Start Date: 11/7/18 Start time: 16:00

18311021 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 11/7/18

Port #	QC	Sample Code	Amt (g)	SS/IS Sol.	Amt (mL)	MS Sol.	Amt (mL)	FV (3) (uL)	IS Amt (uL)	BC	Comments
	9885063MS	22013	1.08	SSMODX1833BY	.05	~~MSMODX1833AQ~~	.04	1ml.	20	170a	(8)
	9885064MSD	22013	1.00	SSMODX1833BY	.05	~~MSMODX1833AQ~~	.04	1ml.		170a	(8)
	BLANKA	BLK311021	1.00	SSMODX1833BY	.05	N/A	N/A	1ml.			(8)
	LCSA	LCS311021	↓	SSMODX1833BY	.05	~~MSMODX1833AQ~~ (8)	.04	1ml.	↓		(8)

(8) MSMODX1833AP was used DDM28478 11/7/18

Spike Solutions: Witness: DDM28478 Instrument: LM27631 LM27631

~~MSMODX1833AQ~~ PFAS 537 Native Spike

SSMODX1833BY PFAS 537 Modified Extraction/Surrogate Spik Sequence: 18NOV07DOD/18NOV09D 18NOV12DOD-18NOV16D

Port#		Sample #	Sample Code	Amt (g)	SS/IS Sol.	Amt (mL)	FV ~~(uL)~~ (3)	IS Amt (uL)	BC	Comments	Analyses	Due	Pri
	1	9885056	22006	1.06	SSMODX1833BY	.05	1ml.	20	170a	(8)	14478	11/15/2018	N
	2	9885057	22007	1.09	SSMODX1833BY	.05	1ml.		170a		14478	11/15/2018	N
	3	9885058	22008	1.08	SSMODX1833BY	.05	1ml.		170a		14478	11/15/2018	N
	4	9885059	22009	1.00	SSMODX1833BY	.05	1ml.		170a		14478	11/15/2018	N
	5	9885062	BKG 22013	1.10	SSMODX1833BY	.05	1ml.		170a	(8)	14478	11/15/2018	N
	6	9885065	22014	1.00	SSMODX1833BY	.05	1ml.		170a		14478	11/15/2018	N
	7	9885118	82259	1.00	SSMODX1833BY	.05	1ml.		170a		14478	11/15/2018	N
	8	9885119	82260	1.01	SSMODX1833BY	.05	1ml.		170a		14478	11/15/2018	N

(8) Sample mixed with internal IS1831833A on 11/16/18. JPT12262 11/16/18

N/A JPT12262 11/16/18

Organic Extraction Batchlog **18311021**

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	265431102183 3B
Auto-pipette (dilutions)	—
Auto-pipette (extract vialin	P1000-1
Envi-Carb	97224
Internal Standard	IS1831233A
Methanol	DV013-US
Sand	MKBW7349V
Syringe (IS)	PFAS 17
Syringe (MS)	PFAS 10
Syringe (SS)	PFAS 13

IS1831833A

N/A JST12262 11/16/18

ACP26543 11/7/18

Balance #	B629764122	Sonic Bath ID	3800 A	N-evap	A	31 C	SPE Manifold	NA

18311021

DF = Dilution Factor FV = Final Volume

Documented temps are NIST corrected.

N/A JST12262 11/16/18

Moisture Data

MOISTURE

SAMPLE NUMBERS:

Sample #	Sample Code
9885056	22006
9885057	22007
9885058	22008
9885059	22009
9885062	22013BKG
9885063	22013MS
9885064	22013MSD
9885065	22014

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: 18312820008A	Sample number(s): 9885056-9885059, 9885062-9885065				
Moisture	100		99-101		
Moisture	100		99-101		
Moisture Duplicate	100		99-101		

Sample Matrix Quality Control

Analysis Name	BKG Conc	DUP Conc	RPD	RPD Max
Batch number: 18312820008A	Sample number(s): 9885056-9885059, 9885062-9885065			
Moisture	7.0	7.2	2	5
Moisture	7.0	7.2	2	5
Moisture Duplicate	7.0	7.2	2	5

* - Outside of specification

(1) - The result for one or both determinations was less than five times the LOQ.

Moisture Data Report

Batch #: 18312820008

Sample ID	Batch ID	Analysis#	Tare Wt	Sample Wt	Dry Wt	%Moisture	Analysis Date (Emp#)	Verified Date (Emp#)
9885056	A	00111	1.0820	5.3199	6.2858	2.18	11/ 8/18 (835/LEB)	11/ 9/18 (236/CW)
9885057	A	00111	1.0812	5.2751	6.0088	6.59	11/ 8/18 (835/LEB)	11/ 9/18 (236/CW)
9885058	A	00111	1.0786	5.5696	5.9771	12.05	11/ 8/18 (835/LEB)	11/ 9/18 (236/CW)
9885059	A	00111	1.0693	5.1568	5.4453	15.14	11/ 8/18 (835/LEB)	11/ 9/18 (236/CW)
9885062BKG	A	00111	1.0531	5.4490	6.1193	7.03	11/ 8/18 (835/LEB)	11/ 9/18 (236/CW)
9885063MS	A	00118				7.03	11/ 8/18 (835/LEB)	11/ 9/18 (236/CW)
9885064MSD	A	00118				7.03	11/ 8/18 (835/LEB)	11/ 9/18 (236/CW)
9885064MSD	A	00121	1.0690	5.4337	6.1133	7.17	11/ 8/18 (835/LEB)	11/ 9/18 (236/CW)
9885065	A	00111	1.0938	5.4506	6.2016	6.29	11/ 8/18 (835/LEB)	11/ 9/18 (236/CW)
LCS 89.5% Std.		00111	1.1482	5.0574	1.6860	89.37	11/ 8/18 (835/LEB)	11/ 9/18 (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-WWTPW-S-02-01 Calculation EUROFINS NA NONE Wet NONE 000 S UNK 20181108 13:57:00 9885056 20190118 2006156 0.00 1 1 2.2 -86 2.2 2.2 PCT Y TRG 0.50 0.50 0.50 0.50 0.50 BSI13 18312820008A 18312820008A 18312820008A Y

N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-WWTPW-S-02-01 537_MOD EUROFINS NA NONE Dry METHOD 000 S UNK 20181107 16:00:00 20181116 11:26:00 9885056 20190118 2006156 0.00 1 1 2.2 335-67-1 2.3 2.3 NG_G Y TRG 0.19 0.19 0.19 0.66 0.77 BSI13 18311021 18311021 18311021 18311021 Y

N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-WWTPW-S-02-01 537_MOD EUROFINS NA NONE Dry METHOD 000 S UNK 20181107 16:00:00 20181116 11:26:00 9885056 20190118 2006156 0.00 1 1 2.2 375-95-1 0.66 0 NG_G U N TRG 0.19 0.19 0.19 0.66 0.77 BSI13 18311021 18311021 18311021 18311021 Y

N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-WWTPW-S-02-01 537_MOD EUROFINS NA NONE Dry METHOD 000 S UNK 20181107 16:00:00 20181116 11:26:00 9885056 20190118 2006156 0.00 1 1 2.2 335-76-2 0.66 0 NG_G U N TRG 0.29 0.29 0.29 0.66 0.96 BSI13 18311021 18311021 18311021 18311021 Y

N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-WWTPW-S-02-01 537_MOD EUROFINS NA NONE Dry METHOD 000 S UNK 20181107 16:00:00 20181116 11:26:00 9885056 20190118 2006156 0.00 1 1 2.2 2058-94-8 0.66 0 NG_G U N TRG 0.19 0.19 0.19 0.66 0.77 BSI13 18311021 18311021 18311021 18311021 Y

N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-WWTPW-S-02-01 537_MOD EUROFINS NA NONE Dry METHOD 000 S UNK 20181107 16:00:00 20181116 11:26:00 9885056 20190118 2006156 0.00 1 1 2.2 307-55-1 0.66 0 NG_G U N TRG 0.19 0.19 0.19 0.66 0.77 BSI13 18311021 18311021 18311021 18311021 Y

N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-WWTPW-S-02-01 537_MOD EUROFINS NA NONE Dry METHOD 000 S UNK 20181107 16:00:00 20181116 11:26:00 9885056 20190118 2006156 0.00 1 1 2.2 72629-94-8 0.66 0 NG_G U N TRG 0.19 0.19 0.19 0.66 0.77 BSI13 18311021 18311021 18311021 18311021 Y

N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-WWTPW-S-02-01 537_MOD EUROFINS NA NONE Dry METHOD 000 S UNK 20181107 16:00:00 20181116 11:26:00 9885056 20190118 2006156 0.00 1 1 2.2 376-06-7 0.66 0 NG_G U N TRG 0.19 0.19 0.19 0.66 0.77 BSI13 18311021 18311021 18311021 18311021 Y

N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-WWTPW-S-02-01 537_MOD EUROFINS NA NONE Dry METHOD 000 S UNK 20181107 16:00:00 20181116 11:26:00 9885056 20190118 2006156 0.00 1 1 2.2 307-24-4 0.23 0.23 NG_G J Y TRG 0.19 0.19 0.19 0.66 0.77 BSI13 18311021 18311021 18311021 18311021 Y

N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-WWTPW-S-02-01 537_MOD EUROFINS NA NONE Dry METHOD 000 S UNK 20181107 16:00:00 20181116 11:26:00 9885056 20190118 2006156 0.00 1 1 2.2 375-85-9 0.27 0.27 NG_G J Y TRG 0.19 0.19 0.19 0.66 0.77 BSI13 18311021

18311021 18311021 18311021 Y
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UNK 20181107 16:00:00 20181116 11:26:00 9885056 20190118 2006156 0.00 1 1 2.2 375-73-5 0.58 0 NG_G
U N TRG 0.19 0.19 0.19 0.58 0.77 BSI13 18311021
18311021 18311021 18311021 Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-WWTPW-S-02-01 537_MOD EUROFINS NA NONE Dry METHOD 000 S
UNK 20181107 16:00:00 20181116 11:26:00 9885056 20190118 2006156 0.00 1 1 2.2 355-46-4 0.62 0 NG_G
U N TRG 0.19 0.19 0.19 0.62 0.77 BSI13 18311021
18311021 18311021 18311021 Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-WWTPW-S-02-01 537_MOD EUROFINS NA NONE Dry METHOD 000 S
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Y TRG 0.19 0.19 0.19 0.63 0.77 BSI13 18311021 18311021
18311021 18311021 Y
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18311021 18311021 18311021 Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-WWTPW-S-02-01 537_MOD EUROFINS NA NONE Dry METHOD 000 S
UNK 20181107 16:00:00 20181116 11:26:00 9885056 20190118 2006156 0.00 1 1 2.2 2355-31-9 1.9 0 NG_G
U N TRG 0.48 0.48 0.48 1.9 2.9 BSI13 18311021
18311021 18311021 18311021 Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-WWTPW-S-02-03 Calculation EUROFINS NA NONE Wet NONE 000 S
UNK 20181108 13:57:00 9885057 20190118 2006156 0.00 1 1 6.6 -86 6.6 6.6 PCT Y
TRG 0.50 0.50 0.50 0.50 0.50 BSI13 18312820008A 18312820008A
18312820008A Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-WWTPW-S-02-03 537_MOD EUROFINS NA NONE Dry METHOD 000 S
UNK 20181115 08:50:00 20181115 13:24:00 9885057 20190118 2006156 0.00 1 1 6.6 335-67-1 0.69 0 NG_G
U N TRG 0.20 0.20 0.20 0.69 0.82 BSI13 18319003
18319003 18319003 18319003 Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-WWTPW-S-02-03 537_MOD EUROFINS NA NONE Dry METHOD 000 S
UNK 20181115 08:50:00 20181115 13:24:00 9885057 20190118 2006156 0.00 1 1 6.6 375-95-1 0.69 0 NG_G
U N TRG 0.20 0.20 0.20 0.69 0.82 BSI13 18319003
18319003 18319003 18319003 Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-WWTPW-S-02-03 537_MOD EUROFINS NA NONE Dry METHOD 000 S
UNK 20181115 08:50:00 20181115 13:24:00 9885057 20190118 2006156 0.00 1 1 6.6 335-76-2 0.69 0 NG_G
U N TRG 0.31 0.31 0.31 0.69 1.0 BSI13 18319003
18319003 18319003 18319003 Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-WWTPW-S-02-03 537_MOD EUROFINS NA NONE Dry METHOD 000 S
UNK 20181115 08:50:00 20181115 13:24:00 9885057 20190118 2006156 0.00 1 1 6.6 2058-94-8 0.69 0 NG_G
U N TRG 0.20 0.20 0.20 0.69 0.82 BSI13 18319003
18319003 18319003 18319003 Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-WWTPW-S-02-03 537_MOD EUROFINS NA NONE Dry METHOD 000 S
UNK 20181115 08:50:00 20181115 13:24:00 9885057 20190118 2006156 0.00 1 1 6.6 307-55-1 0.69 0 NG_G
U N TRG 0.20 0.20 0.20 0.69 0.82 BSI13 18319003
18319003 18319003 18319003 Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-WWTPW-S-02-03 537_MOD EUROFINS NA NONE Dry METHOD 000 S
UNK 20181115 08:50:00 20181115 13:24:00 9885057 20190118 2006156 0.00 1 1 6.6 72629-94-8 0.69 0 NG_G
U N TRG 0.20 0.20 0.20 0.69 0.82 BSI13 18319003
18319003 18319003 18319003 Y

N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-WWTPW-S-02-03 537_MOD EUROFINS NA NONE Dry METHOD 000 S
UNK 20181115 08:50:00 20181115 13:24:00 9885057 20190118 2006156 0.00 1 1 6.6 376-06-7 0.69 0 NG_G
U N TRG 0.20 0.20 0.20 0.69 0.82 BSI13 18319003
18319003 18319003 18319003 Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-WWTPW-S-02-03 537_MOD EUROFINS NA NONE Dry METHOD 000 S
UNK 20181115 08:50:00 20181115 13:24:00 9885057 20190118 2006156 0.00 1 1 6.6 307-24-4 0.69 0 NG_G
U N TRG 0.20 0.20 0.20 0.69 0.82 BSI13 18319003
18319003 18319003 18319003 Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-WWTPW-S-02-03 537_MOD EUROFINS NA NONE Dry METHOD 000 S
UNK 20181115 08:50:00 20181115 13:24:00 9885057 20190118 2006156 0.00 1 1 6.6 375-85-9 0.69 0 NG_G
U N TRG 0.20 0.20 0.20 0.69 0.82 BSI13 18319003
18319003 18319003 18319003 Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-WWTPW-S-02-03 537_MOD EUROFINS NA NONE Dry METHOD 000 S
UNK 20181115 08:50:00 20181115 13:24:00 9885057 20190118 2006156 0.00 1 1 6.6 375-73-5 0.61 0 NG_G
U N TRG 0.20 0.20 0.20 0.61 0.82 BSI13 18319003
18319003 18319003 18319003 Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-WWTPW-S-02-03 537_MOD EUROFINS NA NONE Dry METHOD 000 S
UNK 20181115 08:50:00 20181115 13:24:00 9885057 20190118 2006156 0.00 1 1 6.6 355-46-4 0.65 0 NG_G
U N TRG 0.20 0.20 0.20 0.65 0.82 BSI13 18319003
18319003 18319003 18319003 Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-WWTPW-S-02-03 537_MOD EUROFINS NA NONE Dry METHOD 000 S
UNK 20181115 08:50:00 20181115 13:24:00 9885057 20190118 2006156 0.00 1 1 6.6 1763-23-1 0.66 0 NG_G
U N TRG 0.20 0.20 0.20 0.66 0.82 BSI13 18319003
18319003 18319003 18319003 Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-WWTPW-S-02-03 537_MOD EUROFINS NA NONE Dry METHOD 000 S
UNK 20181115 08:50:00 20181115 13:24:00 9885057 20190118 2006156 0.00 1 1 6.6 2991-50-6 2.0 0 NG_G
U N TRG 0.51 0.51 0.51 2.0 3.1 BSI13 18319003
18319003 18319003 18319003 Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-WWTPW-S-02-03 537_MOD EUROFINS NA NONE Dry METHOD 000 S
UNK 20181115 08:50:00 20181115 13:24:00 9885057 20190118 2006156 0.00 1 1 6.6 2355-31-9 2.0 0 NG_G
U N TRG 0.51 0.51 0.51 2.0 3.1 BSI13 18319003
18319003 18319003 18319003 Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-WWTPW-S-02-05 Calculation EUROFINS NA NONE Wet NONE 000 S
UNK 20181108 13:57:00 9885058 20190118 2006156 0.00 1 1 12 -86 12.0 12.0 PCT Y
TRG 0.50 0.50 0.50 0.50 0.50 BSI13 18312820008A 18312820008A
18312820008A Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-WWTPW-S-02-05 537_MOD EUROFINS NA NONE Dry METHOD 000 S
UNK 20181115 08:50:00 20181115 13:33:00 9885058 20190118 2006156 0.00 1 1 12 335-67-1 0.72 0 NG_G
U N TRG 0.21 0.21 0.21 0.72 0.85 BSI13 18319003
18319003 18319003 18319003 Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-WWTPW-S-02-05 537_MOD EUROFINS NA NONE Dry METHOD 000 S
UNK 20181115 08:50:00 20181115 13:33:00 9885058 20190118 2006156 0.00 1 1 12 375-95-1 0.72 0 NG_G
U N TRG 0.21 0.21 0.21 0.72 0.85 BSI13 18319003
18319003 18319003 18319003 Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-WWTPW-S-02-05 537_MOD EUROFINS NA NONE Dry METHOD 000 S
UNK 20181115 08:50:00 20181115 13:33:00 9885058 20190118 2006156 0.00 1 1 12 335-76-2 0.72 0 NG_G
U N TRG 0.32 0.32 0.32 0.72 1.1 BSI13 18319003
18319003 18319003 18319003 Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-WWTPW-S-02-05 537_MOD EUROFINS NA NONE Dry METHOD 000 S

UNK 20181115 08:50:00 20181115 13:33:00 9885058 20190118 2006156 0.00 1 1 12 2058-94-8 0.72 0 NG_G
U N TRG 0.21 0.21 0.21 0.72 0.85 BSI13 18319003
18319003 18319003 18319003 Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-WWTPW-S-02-05 537_MOD EUROFINS NA NONE Dry METHOD 000 S
UNK 20181115 08:50:00 20181115 13:33:00 9885058 20190118 2006156 0.00 1 1 12 307-55-1 0.72 0 NG_G
U N TRG 0.21 0.21 0.21 0.72 0.85 BSI13 18319003
18319003 18319003 18319003 Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-WWTPW-S-02-05 537_MOD EUROFINS NA NONE Dry METHOD 000 S
UNK 20181115 08:50:00 20181115 13:33:00 9885058 20190118 2006156 0.00 1 1 12 72629-94-8 0.72 0 NG_G
U N TRG 0.21 0.21 0.21 0.72 0.85 BSI13 18319003
18319003 18319003 18319003 Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-WWTPW-S-02-05 537_MOD EUROFINS NA NONE Dry METHOD 000 S
UNK 20181115 08:50:00 20181115 13:33:00 9885058 20190118 2006156 0.00 1 1 12 376-06-7 0.72 0 NG_G
U N TRG 0.21 0.21 0.21 0.72 0.85 BSI13 18319003
18319003 18319003 18319003 Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-WWTPW-S-02-05 537_MOD EUROFINS NA NONE Dry METHOD 000 S
UNK 20181115 08:50:00 20181115 13:33:00 9885058 20190118 2006156 0.00 1 1 12 307-24-4 0.72 0 NG_G
U N TRG 0.21 0.21 0.21 0.72 0.85 BSI13 18319003
18319003 18319003 18319003 Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-WWTPW-S-02-05 537_MOD EUROFINS NA NONE Dry METHOD 000 S
UNK 20181115 08:50:00 20181115 13:33:00 9885058 20190118 2006156 0.00 1 1 12 375-85-9 0.72 0 NG_G
U N TRG 0.21 0.21 0.21 0.72 0.85 BSI13 18319003
18319003 18319003 18319003 Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-WWTPW-S-02-05 537_MOD EUROFINS NA NONE Dry METHOD 000 S
UNK 20181115 08:50:00 20181115 13:33:00 9885058 20190118 2006156 0.00 1 1 12 375-73-5 0.64 0 NG_G
U N TRG 0.21 0.21 0.21 0.64 0.85 BSI13 18319003
18319003 18319003 18319003 Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-WWTPW-S-02-05 537_MOD EUROFINS NA NONE Dry METHOD 000 S
UNK 20181115 08:50:00 20181115 13:33:00 9885058 20190118 2006156 0.00 1 1 12 355-46-4 0.68 0 NG_G
U N TRG 0.21 0.21 0.21 0.68 0.85 BSI13 18319003
18319003 18319003 18319003 Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-WWTPW-S-02-05 537_MOD EUROFINS NA NONE Dry METHOD 000 S
UNK 20181115 08:50:00 20181115 13:33:00 9885058 20190118 2006156 0.00 1 1 12 1763-23-1 0.69 0 NG_G
U N TRG 0.21 0.21 0.21 0.69 0.85 BSI13 18319003
18319003 18319003 18319003 Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-WWTPW-S-02-05 537_MOD EUROFINS NA NONE Dry METHOD 000 S
UNK 20181115 08:50:00 20181115 13:33:00 9885058 20190118 2006156 0.00 1 1 12 2991-50-6 2.1 0 NG_G
U N TRG 0.53 0.53 0.53 2.1 3.2 BSI13 18319003
18319003 18319003 18319003 Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-WWTPW-S-02-05 537_MOD EUROFINS NA NONE Dry METHOD 000 S
UNK 20181115 08:50:00 20181115 13:33:00 9885058 20190118 2006156 0.00 1 1 12 2355-31-9 2.1 0 NG_G
U N TRG 0.53 0.53 0.53 2.1 3.2 BSI13 18319003
18319003 18319003 18319003 Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-WWTPW-S-02-08 Calculation EUROFINS NA NONE Wet NONE 000 S
UNK 20181108 13:57:00 9885059 20190118 2006156 0.00 1 1 15.1 -86 15.1 15.1 PCT Y
TRG 0.50 0.50 0.50 0.50 0.50 BSI13 18312820008A 18312820008A
18312820008A Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-WWTPW-S-02-08 537_MOD EUROFINS NA NONE Dry METHOD 000 S
UNK 20181115 08:50:00 20181115 13:42:00 9885059 20190118 2006156 0.00 1 1 15.1 335-67-1 0.73 0 NG_G

U N TRG 0.22 0.22 0.22 0.73 0.86 BSI13 18319003
18319003 18319003 18319003 Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-WWTPW-S-02-08 537_MOD EUROFINS NA NONE Dry METHOD 000 S
UNK 20181115 08:50:00 20181115 13:42:00 9885059 20190118 2006156 0.00 1 1 15.1 375-95-1 0.73 0 NG_G
U N TRG 0.22 0.22 0.22 0.73 0.86 BSI13 18319003
18319003 18319003 18319003 Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-WWTPW-S-02-08 537_MOD EUROFINS NA NONE Dry METHOD 000 S
UNK 20181115 08:50:00 20181115 13:42:00 9885059 20190118 2006156 0.00 1 1 15.1 335-76-2 0.73 0 NG_G
U N TRG 0.32 0.32 0.32 0.73 1.1 BSI13 18319003
18319003 18319003 18319003 Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-WWTPW-S-02-08 537_MOD EUROFINS NA NONE Dry METHOD 000 S
UNK 20181115 08:50:00 20181115 13:42:00 9885059 20190118 2006156 0.00 1 1 15.1 2058-94-8 0.73 0 NG_G
U N TRG 0.22 0.22 0.22 0.73 0.86 BSI13 18319003
18319003 18319003 18319003 Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-WWTPW-S-02-08 537_MOD EUROFINS NA NONE Dry METHOD 000 S
UNK 20181115 08:50:00 20181115 13:42:00 9885059 20190118 2006156 0.00 1 1 15.1 307-55-1 0.73 0 NG_G U
N TRG 0.22 0.22 0.22 0.73 0.86 BSI13 18319003 18319003
18319003 18319003 Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-WWTPW-S-02-08 537_MOD EUROFINS NA NONE Dry METHOD 000 S
UNK 20181115 08:50:00 20181115 13:42:00 9885059 20190118 2006156 0.00 1 1 15.1 72629-94-8 0.73 0 NG_G U
N TRG 0.22 0.22 0.22 0.73 0.86 BSI13 18319003 18319003
18319003 18319003 Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-WWTPW-S-02-08 537_MOD EUROFINS NA NONE Dry METHOD 000 S
UNK 20181115 08:50:00 20181115 13:42:00 9885059 20190118 2006156 0.00 1 1 15.1 376-06-7 0.73 0 NG_G U
N TRG 0.22 0.22 0.22 0.73 0.86 BSI13 18319003 18319003
18319003 18319003 Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-WWTPW-S-02-08 537_MOD EUROFINS NA NONE Dry METHOD 000 S
UNK 20181115 08:50:00 20181115 13:42:00 9885059 20190118 2006156 0.00 1 1 15.1 307-24-4 0.73 0 NG_G U
N TRG 0.22 0.22 0.22 0.73 0.86 BSI13 18319003 18319003
18319003 18319003 Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-WWTPW-S-02-08 537_MOD EUROFINS NA NONE Dry METHOD 000 S
UNK 20181115 08:50:00 20181115 13:42:00 9885059 20190118 2006156 0.00 1 1 15.1 375-85-9 0.73 0 NG_G U
N TRG 0.22 0.22 0.22 0.73 0.86 BSI13 18319003 18319003
18319003 18319003 Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-WWTPW-S-02-08 537_MOD EUROFINS NA NONE Dry METHOD 000 S
UNK 20181115 08:50:00 20181115 13:42:00 9885059 20190118 2006156 0.00 1 1 15.1 375-73-5 0.65 0 NG_G U
N TRG 0.22 0.22 0.22 0.65 0.86 BSI13 18319003 18319003
18319003 18319003 Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-WWTPW-S-02-08 537_MOD EUROFINS NA NONE Dry METHOD 000 S
UNK 20181115 08:50:00 20181115 13:42:00 9885059 20190118 2006156 0.00 1 1 15.1 355-46-4 0.69 0 NG_G U
N TRG 0.22 0.22 0.22 0.69 0.86 BSI13 18319003 18319003
18319003 18319003 Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-WWTPW-S-02-08 537_MOD EUROFINS NA NONE Dry METHOD 000 S
UNK 20181115 08:50:00 20181115 13:42:00 9885059 20190118 2006156 0.00 1 1 15.1 1763-23-1 0.70 0 NG_G U
N TRG 0.22 0.22 0.22 0.70 0.86 BSI13 18319003 18319003
18319003 18319003 Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-WWTPW-S-02-08 537_MOD EUROFINS NA NONE Dry METHOD 000 S
UNK 20181115 08:50:00 20181115 13:42:00 9885059 20190118 2006156 0.00 1 1 15.1 2991-50-6 2.2 0 NG_G U
N TRG 0.54 0.54 0.54 2.2 3.2 BSI13 18319003 18319003

18319003 18319003 Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-WWTPW-S-02-08 537_MOD EUROFINS NA NONE Dry METHOD 000 S
UNK 20181115 08:50:00 20181115 13:42:00 9885059 20190118 2006156 0.00 1 1 15.1 2355-31-9 2.2 0 NG_G U
N TRG 0.54 0.54 0.54 2.2 3.2 BSI13 18319003 18319003
18319003 18319003 Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-GCI-S-01-01 Calculation EUROFINS NA NONE Wet NONE 000 S UNK
20181108 13:57:00 9885062 20190118 2006156 0.00 1 1 7 -86 7.0 7.0 PCT Y TRG
0.50 0.50 0.50 0.50 0.50 BSI13 18312820008A 18312820008A 18312820008A Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-GCI-S-01-01 537_MOD EUROFINS NA NONE Dry METHOD 000 S
UNK 20181115 08:50:00 20181115 13:51:00 9885062 20190118 2006156 0.00 1 1 7 335-67-1 0.45 0.45 NG_G J
Y TRG 0.21 0.21 0.21 0.71 0.84 BSI13 18319003 18319003
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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_UNITS DATUM_MLLW DATUM_DESC
START_DEPTH END_DEPTH DEPTH_UNITS REMOVED REMOVED_DATE AMBIENT_BLANK EQUIPMENT_BLANK SOURCE_BLANK
TRIP_BLANK SAMPLE_NARRATIVE
OU1-WWTPW-S-02-01 <<< CONTRACT_ID NEEDED >>> <<< DO_CTO_Number NEEDED >>> BARSTOW_MCLB 00000 WWTPW-S-02-01
SO N N 20181102 12:29:00 01 FT
OU1-WWTPW-S-02-03 <<< CONTRACT_ID NEEDED >>> <<< DO_CTO_Number NEEDED >>> BARSTOW_MCLB 00000 WWTPW-S-02-03
SO N N 20181102 12:47:00 03 FT
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SO N N 20181102 12:52:00 08 FT
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OU1-GCI-S-01-01 SO SD N 20181102 13:23:00 01 FT
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SO LB N
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BS N
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BS N