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DoD Type I Data Package

Prepared for:

EA Engineering, Science & Tech
Suite 515
615 Piikoi Street
Honolulu HI 96814

Project: Moose Creek Drinking Water
Groundwater Samples
Collected on 04/28/17-05/01/17

SDG# MCR35

GROUP	SAMPLE NUMBERS
1796497	8971782-8971787

A2LA (DoD) Cert. # 0001.01
PA Cert. # 36-00037
NY Cert. # 10670
NJ Cert. # PA011
NC Cert. # 521
TX Cert. # T104704194-13-10
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: 05/23/2017**

Dana M. Kauffman
Manager

Any questions or concerns you might have regarding this data package should be directed to your client representative, Kay Hower at (717) 556-7364.

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Sample Reference List for SDG Number MCR35 with a Data Package Type of I-DOD

30098 - EA Engineering, Science & Tech

Project: Moose Creek Drinking Water

Lab Sample Number	Client Sample ID	Collection Date	Date Received
8971782	17MC-PW121-P1-0428	04/28/2017 13:15	05/03/2017 09:40
8971783	17MC-PW121-P4-0428	04/28/2017 13:16	05/03/2017 09:40
8971784	17MC-PW114-P7-0501	05/01/2017 09:43	05/03/2017 09:40
8971785	17MC-PW018-P3-0501	05/01/2017 10:22	05/03/2017 09:40
8971786	17MC-PW021-P10-0501	05/01/2017 10:53	05/03/2017 09:40
8971787	17MC-PW113-P7-0501	05/01/2017 11:20	05/03/2017 09:40

Sample pH Log

SDG: MCR35

LLI Sample Number	Bottle Code	Actual pH	Exp. pH	pH Check Code	Adj. pH	Adjusted Date	Adjusted Time	Preservative Added	Preservative Lot #	LLI Supplied Bottle?	Sulfide Present?	Corrective Substance	CS Lot #	Res. Cl. Present?	Corrective Substance	CS Lot #	Record Date	Employee
8971782	201A		N/A	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	N	NA	NA	5/4/2017 2:15:43AM	1201
8971783	201A		N/A	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	N	NA	NA	5/4/2017 2:25:03AM	1201
8971784	201A		N/A	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	N	NA	NA	5/4/2017 2:25:03AM	1201
8971785	201A		N/A	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	N	NA	NA	5/4/2017 2:25:00AM	1201
8971786	201A		N/A	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	N	NA	NA	5/4/2017 2:15:42AM	1201
8971787	201A		N/A	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	N	NA	NA	5/4/2017 2:25:02AM	1201

Check Code Key
PK = Original container checked - pH is within the correct range. (No preservative was added)
PA = Original container checked - pH adjusted to correct range. (Preservative was added)
PV = Volatile container checked
PC = pH checked (unpreserved container)
SPK = Subsampled from an original container. Original container checked - pH is within correct range
SPA = Subsampled from an original container. Subsample container checked - pH adjusted to correct range.
SPC = Subsampled from an original container. pH checked (unpreserved container).
SUP = Subsampled from original container. Unable to be preserved due to the matrix of the sample.
UP = Unable to preserve due to matrix of the sample.
NA = Not applicable

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10954 PFAS in Water by LC/MS/MS
14091 PFAS Water Prep

A 100 ml sample of water is extracted using a solid phase extraction (SPE) cartridge. The resulting 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), Version 1.1, September 2009.

Analysis Reports / Field Chain of Custody

ANALYTICAL RESULTS

Prepared by:

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

Prepared for:

EA Engineering, Science & Tech
Suite 515
615 Piikoi Street
Honolulu HI 96814

Report Date: May 21, 2017

Project: Moose Creek Drinking Water

Submittal Date: 05/03/2017
Group Number: 1796497
SDG: MCR35
PO Number: 14218
State of Sample Origin: AK

Client Sample Description	Lancaster Labs (LL) #
17MC-PW121-P1-0428 Grab Groundwater	8971782
17MC-PW121-P4-0428 Grab Groundwater	8971783
17MC-PW114-P7-0501 Grab Groundwater	8971784
17MC-PW018-P3-0501 Grab Groundwater	8971785
17MC-PW021-P10-0501 Grab Groundwater	8971786
17MC-PW113-P7-0501 Grab Groundwater	8971787

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

Regulatory agencies do not accredit laboratories for all methods, analytes, and matrices. Our current scopes of accreditation can be viewed at http://www.eurofinsus.com/environment-testing/laboratories/eurofins-lancaster-laboratories-environmental/resources/certifications/ . To request copies of prior scopes of accreditation, contact your project manager.

Electronic Copy To	EA Engineering, Science & Tech	Attn: PacificChem Mailbox
Electronic Copy To	EA Engineering, Science & Tech	Attn: Brenda Nuding

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Respectfully Submitted,

Kay Hower

Kay Hower

(717) 556-7364

Project Name: Moose Creek Drinking Water
LL Group #: 1796497

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 not 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 Rev. 1.1 modified, Misc. Organics

Sample #s: 8971782, 8971783, 8971784, 8971785, 8971786, 8971787

The stated QC limits are advisory only until sufficient data points can be obtained to calculate statistical limits.

Batch #: 17129008 (Sample number(s): 8971782-8971787 UNSPK: 8971782)

The recovery(ies) for the following analyte(s) in the MS exceeded the acceptance window indicating a positive bias: Perfluoro-octanesulfonate

The recovery(ies) for one or more surrogates were below the acceptance window for sample(s) 8971783, 8971784, 8971785, 8971786, LCS

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Analysis Report

Sample Description: 17MC-PW121-P1-0428 Grab Groundwater
Moose Creek Drinking Water

LL Sample # PW 8971782
LL Group # 1796497
Account # 30098

Project Name: Moose Creek Drinking Water

Collected: 04/28/2017 13:15 by NS

Submitted: 05/03/2017 09:40
Reported: 05/21/2017 21:29

EA Engineering, Science & Tech
Suite 515
615 Piikoi Street
Honolulu HI 96814

121P1 SDG#: MCR35-01

CAT No.	Analysis Name	CAS Number	Result	Detection Limit*	Limit of Detection	Limit of Quantitation	DF
Misc. Organics	**EPA 537 Rev. 1.1 modified**		**ng/l**	**ng/l**	**ng/l**	**ng/l**	
10954	Perfluorooctanoic acid	335-67-1	9	0.6	2	2	1
10954	Perfluoro-octanesulfonate	1763-23-1	110	2	6	6	1

The stated QC limits are advisory only until sufficient data points can be obtained to calculate statistical limits.

Sample Comments

State of Alaska Lab Certification No. UST-061

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10954	PFOA/PFOS DoD	EPA 537 Rev. 1.1 modified	1	17129008	05/17/2017 11:57	Devon M Whooley	1
14091	PFAS Water Prep	EPA 537 Rev. 1.1 modified	1	17129008	05/10/2017 08:25	Pamela Rothharpt	1

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

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Analysis Report

Sample Description: 17MC-PW121-P4-0428 Grab Groundwater
Moose Creek Drinking Water

LL Sample # PW 8971783
LL Group # 1796497
Account # 30098

Project Name: Moose Creek Drinking Water

Collected: 04/28/2017 13:16 by NS

Submitted: 05/03/2017 09:40
Reported: 05/21/2017 21:29

EA Engineering, Science & Tech
Suite 515
615 Piikoi Street
Honolulu HI 96814

121P4 SDG#: MCR35-02

CAT No.	Analysis Name	CAS Number	Result		Detection Limit*	Limit of Detection	Limit of Quantitation	DF
Misc. Organics	**EPA 537 Rev. 1.1 modified**		**ng/l**		**ng/l**	**ng/l**	**ng/l**	
10954	Perfluorooctanoic acid	335-67-1	2	U	0.6	2	2	1
10954	Perfluoro-octanesulfonate	1763-23-1	6	U	2	6	6	1

The stated QC limits are advisory only until sufficient data points can be obtained to calculate statistical limits.

Sample Comments

State of Alaska Lab Certification No. UST-061

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10954	PFOA/PFOS DoD	EPA 537 Rev. 1.1 modified	1	17129008	05/17/2017 12:18	Devon M Whooley	1
14091	PFAS Water Prep	EPA 537 Rev. 1.1 modified	1	17129008	05/10/2017 08:25	Pamela Rothharpt	1

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

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Analysis Report

Sample Description: 17MC-PW114-P7-0501 Grab Groundwater
Moose Creek Drinking Water

LL Sample # PW 8971784
LL Group # 1796497
Account # 30098

Project Name: Moose Creek Drinking Water

Collected: 05/01/2017 09:43 by NS

Submitted: 05/03/2017 09:40
Reported: 05/21/2017 21:29

EA Engineering, Science & Tech
Suite 515
615 Piikoi Street
Honolulu HI 96814

114P7 SDG#: MCR35-03

CAT No.	Analysis Name	CAS Number	Result		Detection Limit*	Limit of Detection	Limit of Quantitation	DF
Misc. Organics	**EPA 537 Rev. 1.1 modified**		**ng/l**		**ng/l**	**ng/l**	**ng/l**	
10954	Perfluorooctanoic acid	335-67-1	2	U	0.6	2	2	1
10954	Perfluoro-octanesulfonate	1763-23-1	6	U	2	6	6	1

The stated QC limits are advisory only until sufficient data points can be obtained to calculate statistical limits.

Sample Comments

State of Alaska Lab Certification No. UST-061

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10954	PFOA/PFOS DoD	EPA 537 Rev. 1.1 modified	1	17129008	05/17/2017 12:38	Devon M Whooley	1
14091	PFAS Water Prep	EPA 537 Rev. 1.1 modified	1	17129008	05/10/2017 08:25	Pamela Rothharpt	1

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

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Analysis Report

Sample Description: 17MC-PW018-P3-0501 Grab Groundwater
Moose Creek Drinking Water

LL Sample # PW 8971785
LL Group # 1796497
Account # 30098

Project Name: Moose Creek Drinking Water

Collected: 05/01/2017 10:22 by NS

Submitted: 05/03/2017 09:40
Reported: 05/21/2017 21:29

EA Engineering, Science & Tech
Suite 515
615 Piikoi Street
Honolulu HI 96814

018P3 SDG#: MCR35-04

CAT No.	Analysis Name	CAS Number	Result		Detection Limit*	Limit of Detection	Limit of Quantitation	DF
Misc. Organics	**EPA 537 Rev. 1.1 modified**		**ng/l**		**ng/l**	**ng/l**	**ng/l**	
10954	Perfluorooctanoic acid	335-67-1	2	U	0.6	2	2	1
10954	Perfluoro-octanesulfonate	1763-23-1	6	U	2	6	6	1

The stated QC limits are advisory only until sufficient data points can be obtained to calculate statistical limits.

Sample Comments

State of Alaska Lab Certification No. UST-061

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10954	PFOA/PFOS DoD	EPA 537 Rev. 1.1 modified	1	17129008	05/17/2017 12:59	Devon M Whooley	1
14091	PFAS Water Prep	EPA 537 Rev. 1.1 modified	1	17129008	05/10/2017 08:25	Pamela Rothharpt	1

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

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Analysis Report

Sample Description: 17MC-PW021-P10-0501 Grab Groundwater
Moose Creek Drinking Water

LL Sample # PW 8971786
LL Group # 1796497
Account # 30098

Project Name: Moose Creek Drinking Water

Collected: 05/01/2017 10:53 by NS

Submitted: 05/03/2017 09:40
Reported: 05/21/2017 21:29

EA Engineering, Science & Tech
Suite 515
615 Piikoi Street
Honolulu HI 96814

21P10 SDG#: MCR35-05

CAT No.	Analysis Name	CAS Number	Result	Detection Limit*	Limit of Detection	Limit of Quantitation	DF
Misc. Organics	**EPA 537 Rev. 1.1 modified**		**ng/l**	**ng/l**	**ng/l**	**ng/l**	
10954	Perfluorooctanoic acid	335-67-1	7	0.6	2	2	1
10954	Perfluoro-octanesulfonate	1763-23-1	38	2	6	6	1

The stated QC limits are advisory only until sufficient data points can be obtained to calculate statistical limits.

Sample Comments

State of Alaska Lab Certification No. UST-061

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10954	PFOA/PFOS DoD	EPA 537 Rev. 1.1 modified	1	17129008	05/17/2017 13:19	Devon M Whooley	1
14091	PFAS Water Prep	EPA 537 Rev. 1.1 modified	1	17129008	05/10/2017 08:25	Pamela Rothharpt	1

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

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Analysis Report

Sample Description: 17MC-PW113-P7-0501 Grab Groundwater
Moose Creek Drinking Water

LL Sample # PW 8971787
LL Group # 1796497
Account # 30098

Project Name: Moose Creek Drinking Water

Collected: 05/01/2017 11:20 by NS

Submitted: 05/03/2017 09:40
Reported: 05/21/2017 21:29

EA Engineering, Science & Tech
Suite 515
615 Piikoi Street
Honolulu HI 96814

113P7 SDG#: MCR35-06

CAT No.	Analysis Name	CAS Number	Result		Detection Limit*	Limit of Detection	Limit of Quantitation	DF
Misc. Organics	**EPA 537 Rev. 1.1 modified**		**ng/l**		**ng/l**	**ng/l**	**ng/l**	
10954	Perfluorooctanoic acid	335-67-1	2	U	0.6	2	2	1
10954	Perfluoro-octanesulfonate	1763-23-1	6	U	2	6	6	1

The stated QC limits are advisory only until sufficient data points can be obtained to calculate statistical limits.

Sample Comments

State of Alaska Lab Certification No. UST-061

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10954	PFOA/PFOS DoD	EPA 537 Rev. 1.1 modified	1	17129008	05/17/2017 14:21	Devon M Whooley	1
14091	PFAS Water Prep	EPA 537 Rev. 1.1 modified	1	17129008	05/10/2017 08:25	Pamela Rothharpt	1

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

Quality Control Summary

Client Name: EA Engineering, Science & Tech
Reported: 05/21/2017 21:29

Group Number: 1796497

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 ng/l		DL** ng/l	LOD ng/l	LOQ ng/l
Batch number: 17129008	Sample number(s): 8971782-8971787				
Perfluorooctanoic acid	2	U	0.6	2	2
Perfluoro-octanesulfonate	6	U	2	6	6

LCS/LCSD

Analysis Name	LCS Spike Added ng/l	LCS Conc ng/l	LCSD Spike Added ng/l	LCSD Conc ng/l	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Batch number: 17129008	Sample number(s): 8971782-8971787								
Perfluorooctanoic acid	200	167.68	200	171.61	84	86	70-130	2	30
Perfluoro-octanesulfonate	191.2	168.83	191.2	167.12	88	87	70-130	1	30

MS/MSD

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

Analysis Name	Unspiked Conc ng/l	MS Spike Added ng/l	MS Conc ng/l	MSD Spike Added ng/l	MSD Conc ng/l	MS %Rec	MSD %Rec	MS/MSD Limits	RPD	RPD Max
Batch number: 17129008	Sample number(s): 8971782-8971787 UNSPK: 8971782									
Perfluorooctanoic acid	9.39	200.58	187.17			89		70-130		
Perfluoro-octanesulfonate	108.79	191.76	394.93			149*		70-130		

*- 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.
P###### is indicative of a Background or Unspiked sample that is batch matrix QC and was not performed using a sample from this submission group.

Quality Control Summary

Client Name: EA Engineering, Science & Tech
Reported: 05/21/2017 21:29

Group Number: 1796497

Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: PFOA/PFOS DoD
Batch number: 17129008

	13C8-PFOA %Rec	LOD (ng/l)	13C8-PFOS %Rec	LOD (ng/l)
8971782	115	20 (3)	121	100 (3)
8971783	66*	20 (3)	72	100 (3)
8971784	67*	20 (3)	71	100 (3)
8971785	74	20 (3)	68*	100 (3)
8971786	68*	20 (3)	62*	100 (3)
8971787	72	20 (3)	76	100 (3)
Blank	71	20 (3)	79	100 (3)
LCS	69*	20 (3)	63*	100 (3)
LCSD	70	20 (3)	88	100 (3)
MS	70	20 (3)	72	100 (3)
Limits:	70-130		70-130	

*- 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.
P###### is indicative of a Background or Unspiked sample that is batch matrix QC and was not performed using a sample from this submission group.

Environmental Analysis Request/Chain of Custody

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Acct. # 30098 Group # 1796497 Sample # 8971782-87 COC# 131 Pg 1 of 1

Client:	EA Engineering, Inc., PBC.
Project Name/#:	Moose Creek Drinking Water
Site ID #:	
Project Manager:	Mark Wilkinson/Brenda Nuding
P.O. #:	14218
Sampler:	N. Stoecklein, G. Manning
PWSID #:	
Phone #:	907-456-4751
Quote #:	
State where sample(s) were collected:	Alaska

For Lab Use Only
SF #: _____
SCR #: _____

Preservation Codes: H = HCl; T = Thiosulfate; N = HNO_3; B = NaOH; S = H_2SO_4; P = H_3PO_4; O = Other - $Na_2S_2O_3$

Sample Identification	Collection Date	Collection Time	Grab	Composite	Sediment	Ground Water	Surface Water	Potable Water	NPDES Water	Soil	Other:	Total # of Containers	Total Organic Carbon (SM5310C) P None	Total Dissolved Solids (SM2540C) N	Metals, Hardness (EPA 200.7/200.8/245.1, SM2340B) O	PFCs (EPA Method 537) None	Total Suspended Solids (SM2540D)	VOCs (EPA 524.2) H,As					Remarks
17MC-PW121-P1-0428	4/28/17	1315	X			X						1				X							
17MC-PW121-P4-0428	4/28/17	1316	X			X						1				X							
17MC-PW114-P7-0501	5/1/17	0943	X			X						1				X							
17MC-PW018-P3-0501	5/1/17	1022	X			X						1				X							
17MC-PW021-P10-0501	5/1/17	1053	X			X						1				X							
17MC-PW113-P7-0501	5/1/17	1120	X			X						1				X							

NS

Turnaround Time Requested (TAT) (please check): Standard ☑ Rush ☐

Date results are needed:

Rush results requested by (please check): E-Mail ☑ Phone ☐

E-mail Address: bnuding@eaest.com, pacificchem@eaest.com

Phone: 808-589-1455 X 102

Data Package Options (please check if required)

Type I (Validation/non-CLP) ☐ MA MCP ☐

Type III (Reduced non-CLP) ☐ CT RCP ☐

Type IV (CLP SOW) ☑ TX TRRP-13 ☐

Type VI (Raw Data Only) ☐

EDD Required? Yes ☑ No ☐ If yes, format: SEDD

Relinquished by:	Date	Time	Received by:	Date	Time
Nicole Stoecklein	5/2/17	0900	UPS		
			Nia Smith	5/3/17	9:40

Relinquished by Commercial Carrier: UPS X

Temperature upon receipt 1.1 °C

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Lancaster Laboratories Environmental

Sample Administration Receipt Documentation Log

Doc Log ID: 182510

Group Number(s): 1796497

Client: EA Engineering, Inc., PBC.

Delivery and Receipt Information

Delivery Method:	UPS	Arrival Timestamp:	05/03/2017 9:40
Number of Packages:	1	Number of Projects:	1
State/Province of Origin:	AK		

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 Nia Smith (12375) at 13:44 on 05/03/2017

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	DT146	1.1	DT	Wet	Y	Bagged	N

2425 New Holland Pike
Lancaster, PA 17601-2425
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Explanation of Symbols and Abbreviations

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

BMQL	Below Minimum Quantitation Level	**mg**	milligram(s)
C	degrees Celsius	**mL**	milliliter(s)
cfu	colony forming units	**MPN**	Most Probable Number
CP Units	cobalt-chloroplatinate units	**N.D.**	none detected
F	degrees Fahrenheit	**ng**	nanogram(s)
g	gram(s)	**NTU**	nephelometric turbidity units
IU	International Units	**pg/L**	picogram/liter
kg	kilogram(s)	**RL**	Reporting Limit
L	liter(s)	**TNTC**	Too Numerous To Count
lb.	pound(s)	**µg**	microgram(s)
m3	cubic meter(s)	**µL**	microliter(s)
meq	milliequivalents	**umhos/cm**	micromhos/cm

< 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.

Laboratory Data Qualifiers:

C - Result confirmed by reanalysis
E - Concentration exceeds the calibration range
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.
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.

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.

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.

PFAS by LC/MS/MS Data

Case Narrative/Conformance Summary

PFAS by LC/MS/MS

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Case Narrative/Conformance Summary

CLIENT: EA Engineering, Science & Tech
SDG: MCR35

PFAS Group

Fraction: PFAS by LC/MS/MS

Sample #	Client ID	Matrix Liquid	Matrix Solid	DF	Comments
8971782	17MC-PW121-P1-0428	X		1	
8971783	17MC-PW121-P4-0428	X		1	
8971784	17MC-PW114-P7-0501	X		1	
8971785	17MC-PW018-P3-0501	X		1	
8971786	17MC-PW021-P10-0501	X		1	
8971787	17MC-PW113-P7-0501	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

Please note that US EPA Methods for organic compounds do not require action by the laboratory based on out-of-specification MS/MSD results.

Batch#: 17129008 (Sample number(s): 8971782-8971787, UNSPK: 8971782)
The recovery(ies) for the following analyte(s) in the MS exceeded the acceptance window indicating a positive bias: Perfluoro-octanesulfonate

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Case Narrative/Conformance Summary

CLIENT: EA Engineering, Science & Tech
SDG: MCR35

PFAS Group

Fraction: PFAS by LC/MS/MS

Surrogate

(Sample number(s): 8971782-8971787: Analysis: 10954)
The stated QC limits are advisory only until sufficient data points can be obtained to calculate statistical limits.

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

QC Summary

PFAS by LC/MS/MS

Lancaster Laboratories Environmental

Quality Control Reference List
PFAS Group

CLIENT: EA Engineering, Science & Tech
SDG: MCR35

Fraction: PFAS by LC/MS/MS

Analysis	Batch Number	Sample Number	Analysis Date
PFOA/PFOS DoD	17129008	BLK129008	05/17/2017 11:37:00
		LCS129008	05/17/2017 10:14:00
		LCSDA129008	05/17/2017 10:35:00
		8971782 MS	05/17/2017 10:55:00
		8971782 UNSPK	05/17/2017 11:57:00
		8971783	05/17/2017 12:18:00
		8971784	05/17/2017 12:38:00
		8971785	05/17/2017 12:59:00
		8971786	05/17/2017 13:19:00
		8971787	05/17/2017 14:21:00

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Quality Control Summary
Method Blank
PFAS Group
SDG: MCR35
Matrix: LIQUID

Fraction: PFAS by LC/MS/MS

17129008 / BLK129008 **Analyte**	**Analysis Date**	**Blank Results**	**Units**	**DL**	**LOD**	**LOQ**
Perfluorooctanoic acid	05/17/17	N.D.	ng/l	0.6	2	2
Perfluoro-octanesulfonate	05/17/17	N.D.	ng/l	2	6	6

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FORM 02A
SURROGATES
LC/MS/MS

SDG No.: MCR35
Matrix: WATER

17129008	13C8-PFOA	13C8-PFOS	Limits
LAB SAMPLE ID	% Recovery	% Recovery	
LCS129008	69 *	63 *	70-130
LCSDA129008	70	88	70-130
8971782MS	70	72	70-130
BLK129008	71	79	70-130
8971782	115	121	70-130
8971783	66 *	72	70-130
8971784	67 *	71	70-130
8971785	74	68 *	70-130
8971786	68 *	62 *	70-130
8971787	72	76	70-130

* = Outside of the QC Limits.

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Quality Control Summary
Matrix Spike/Matrix Spike Duplicate

SDG: MCR35
Matrix: LIQUID

PFAS Group
Fraction: PFAS by LC/MS/MS

UNSPK: 8971782 MS: 8971782	Batch: **17129008** (Sample number(s): 8971782-8971787)								
Analyte	**Spike Added ng/l**	**Unspiked Conc ng/l**	**MS Conc ng/l**	**MSD Conc ng/l**	**MS %Rec**	**MSD %Rec**	**%Rec Limits**	**%RPD**	**%RPD Limits**
Perfluorooctanoic acid	200.58	9.39	187.17	NA	89	NA	70-130	NA	NA
Perfluoro-octanesulfonate	191.76	108.79	394.93	NA	149 *	NA	70-130	NA	NA

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

Results are being reported on an as received basis.

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

SDG: MCR35
Matrix: LIQUID

PFAS Group
Fraction: PFAS by LC/MS/MS

LCS: LCS129008 LCSD: LCSDA129008 **Analyte**	Batch: **17129008** (Sample number(s): 8971782-8971787)							
	Spike Added ng/l	**LCS Conc ng/l**	**LCSD Conc ng/l**	**LCS %Rec**	**LCSD %Rec**	**%Rec Limits**	**%RPD**	**%RPD Limits**
Perfluorooctanoic acid	200	167.68	171.61	84	86	70-130	2	30
Perfluoro-octanesulfonate	191.2	168.83	167.12	88	87	70-130	1	30

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FORM 06A - EPA 537 Rev. 1.1 modified
INITIAL CALIBRATION AREA SUMMARY
LC/MS/MS

SDG No.: MCR35

Instrument ID: 24960

Init. Calib. Date/Times: 05/11/2017 05:10 05/11/2017 07:13

Lab File Names: CAL1=17MAY10MCAL-30.WIFF; CAL2=17MAY10MCAL-31.WIFF; CAL3=17MAY10MCAL-32.WIFF;
CAL4=17MAY10MCAL-33.WIFF; CAL5=17MAY10MCAL-34.WIFF; CAL6=17MAY10MCAL-35.WIFF;
CAL7=17MAY10MCAL-36.WIFF;

Analyte	Area							Ave Area
	CAL1	CAL2	CAL3	CAL4	CAL5	CAL6	CAL7	
Perfluorobutanoic Acid	35011	96647	305574	1142796	2833375	6432409	11349748	3170794
Perfluoropentanoic Acid	32038	104827	310829	1179637	2990273	6661368	11855631	3304943
Perfluorobutanesulfonate	5085	15933	48090	194986	512671	1185250	2114412	582347
4:2 fluorotelomersulfonate	2939	9478	31960	65813	161677	376815	671115	188542
Perfluorohexanoic acid	32152	88068	273118	1099798	2702480	5846272	10209656	2893078
Perfluoropentanesulfonate	3281	9054	32078	118241	295644	677494	1156708	327500
Perfluorohexanesulfonate	8586	32003	94217	359702	954650	2136784	3656622	1034652
Perfluoroheptanoic acid	25560	78041	232052	921662	2228031	5072728	8535799	2441982
6:2 fluorotelomersulfonate	1742	4629	15383	32302	74864	145357	274557	78405
Perfluoroheptanesulfonate	2175	8236	26770	91143	247466	554198	1010700	277241
Perfluorooctanoic acid	22206	60848	180471	748601	1794826	4005199	6625355	1919644
Perfluoro-octanesulfonate	8212	26585	97999	328983	817838	1960985	3267928	929790
Perfluorononanoic acid	17034	59383	158758	603159	1462102	3687416	5805085	1684705
PFOSA	17827	53164	186462	682083	1587389	3276324	5229730	1576140
Perfluorononanesulfonate	3204	8863	27941	110726	271845	572036	988860	283354
Perfluorodecanoic acid	20784	73321	221742	890817	2046589	4396873	6540612	2027248
8:2 fluorotelomersulfonate	2182	7911	21868	45326	102387	229260	427590	119503
NMeFOSAA	3703	15665	59741	111222	266017	654588	1260741	338811
Perfluorodecanesulfonate	1980	6186	20969	100636	231456	600007	845789	258146
Perfluoroundecanoic acid	18754	59280	182457	953233	1757675	5087310	6422246	2068708
NEtFOSAA	3092	11256	39235	77203	162478	552107	646136	213072
Perfluorododecanoic acid	18334	54504	181556	680205	1489999	3490377	5689783	1657823
10:2-fluorotelomersulfonate	2329	8299	27596	46914	116306	277591	400621	125665
Perfluorododecanesulfonate	1265	2454	8698	34566	85407	207256	313421	93295
Perfluorotridecanoic acid	14533	41140	132228	494176	1235207	2452601	4037765	1201093
Perfluorotetradecanoic acid	9801	33160	107854	409723	970838	2238980	3701644	1067429
Perfluorohexadecanoic acid	8492	26091	83056	304419	758533	1750135	3082969	859099
Perfluorooctadecanoic acid	4723	14968	49284	192917	487118	1222750	2162835	590656

--- Calibration point not used

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

SDG No.: MCR35

Instrument ID: 24960

Init. Calib. Date/Times: 05/11/2017 05:10 05/11/2017 07:13

Lab File Names: CAL1= 17MAY10MCAL-30.WIFF; CAL2= 17MAY10MCAL-31.WIFF; CAL3= 17MAY10MCAL-32.WIFF;
CAL4= 17MAY10MCAL-33.WIFF; CAL5= 17MAY10MCAL-34.WIFF; CAL6= 17MAY10MCAL-35.WIFF;
CAL7= 17MAY10MCAL-36.WIFF;

Perfluorobutanoic Acid	Area Ratio	Specified Amount	Calculated Amount	% Difference	Limit
CAL1	0.043	0.20	0.238	19.1	±30
CAL2	0.117	0.60	0.644	7.4	±25
CAL3	0.379	2.00	2.081	4.1	±25
CAL4	1.386	8.00	7.620	-4.8	±25
CAL5	3.605	20.00	19.825	-0.9	±25
CAL6	8.872	50.00	48.788	-2.4	±25
CAL7	18.476	100.00	101.604	1.6	±25

Perfluoropentanoic Acid	Area Ratio	Specified Amount	Calculated Amount	% Difference	Limit
CAL1	0.042	0.20	0.205	2.3	±30
CAL2	0.133	0.60	0.646	7.7	±25
CAL3	0.404	2.00	1.958	-2.1	±25
CAL4	1.517	8.00	7.347	-8.2	±25
CAL5	4.168	20.00	20.192	1.0	±25
CAL6	10.077	50.00	48.818	-2.4	±25
CAL7	20.980	100.00	101.635	1.6	±25

Perfluorobutanesulfonate	Area Ratio	Specified Amount	Calculated Amount	% Difference	Limit
CAL1	0.038	0.18	0.178	0.7	±30
CAL2	0.117	0.53	0.555	4.7	±25
CAL3	0.367	1.77	1.738	-1.8	±25
CAL4	1.400	7.08	6.626	-6.4	±25
CAL5	4.027	17.70	19.059	7.7	±25
CAL6	9.679	44.20	45.806	3.6	±25
CAL7	18.171	88.50	85.994	-2.8	±25

4:2 fluorotelomersulfonate	Area Ratio	Specified Amount	Calculated Amount	% Difference	Limit
CAL1	0.042	0.19	0.200	6.9	±30
CAL2	0.109	0.56	0.498	-11.1	±25
CAL3	0.397	1.87	1.813	-3.0	±25
CAL4	0.896	3.74	4.183	11.8	±25
CAL5	1.798	9.34	8.837	-5.4	±25
CAL6	3.974	23.35	23.555	0.9	±25
CAL7	6.968	46.70	0		±25

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

SDG No.: MCR35

Instrument ID: 24960

Init. Calib. Date/Times: 05/11/2017 05:10 05/11/2017 07:13

Lab File Names: CAL1= 17MAY10MCAL-30.WIFF; CAL2= 17MAY10MCAL-31.WIFF; CAL3= 17MAY10MCAL-32.WIFF;
CAL4= 17MAY10MCAL-33.WIFF; CAL5= 17MAY10MCAL-34.WIFF; CAL6= 17MAY10MCAL-35.WIFF;
CAL7= 17MAY10MCAL-36.WIFF;

Perfluorohexanoic acid	Area Ratio	Specified Amount	Calculated Amount	% Difference	Limit
CAL1	0.043	0.20	0.225	12.5	±30
CAL2	0.116	0.60	0.617	2.8	±25
CAL3	0.354	2.00	1.875	-6.2	±25
CAL4	1.506	8.00	7.975	-0.3	±25
CAL5	4.005	20.00	21.204	6.0	±25
CAL6	9.349	50.00	49.491	-1.0	±25
CAL7	18.779	100.00	99.413	-0.6	±25

Perfluoropentanesulfonate	Area Ratio	Specified Amount	Calculated Amount	% Difference	Limit
CAL1	0.024	0.19	0.217	15.5	±30
CAL2	0.067	0.56	0.595	5.7	±25
CAL3	0.245	1.88	2.189	16.4	±25
CAL4	0.849	7.50	7.586	1.2	±25
CAL5	2.322	18.76	20.751	10.6	±25
CAL6	5.533	46.90	49.434	5.4	±25
CAL7	9.941	93.80	88.819	-5.3	±25

Perfluorohexanesulfonate	Area Ratio	Specified Amount	Calculated Amount	% Difference	Limit
CAL1	0.112	0.19	0.157	-17.0	±30
CAL2	0.427	0.57	0.599	5.6	±25
CAL3	1.242	1.89	1.741	-7.9	±25
CAL4	4.587	7.56	6.434	-14.9	±25
CAL5	14.050	18.90	19.707	4.3	±25
CAL6	31.797	47.30	44.599	-5.7	±25
CAL7	69.706	94.60	97.770	3.4	±25

Perfluoroheptanoic acid	Area Ratio	Specified Amount	Calculated Amount	% Difference	Limit
CAL1	0.055	0.20	0.221	10.5	±30
CAL2	0.161	0.60	0.648	8.0	±25
CAL3	0.509	2.00	2.048	2.4	±25
CAL4	1.996	8.00	8.039	0.5	±25
CAL5	4.976	20.00	20.043	0.2	±25
CAL6	12.147	50.00	48.928	-2.1	±25
CAL7	25.042	100.00	100.872	0.9	±25

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

SDG No.: MCR35

Instrument ID: 24960

Init. Calib. Date/Times: 05/11/2017 05:10 05/11/2017 07:13

Lab File Names: CAL1= 17MAY10MCAL-30.WIFF; CAL2= 17MAY10MCAL-31.WIFF; CAL3= 17MAY10MCAL-32.WIFF;
CAL4= 17MAY10MCAL-33.WIFF; CAL5= 17MAY10MCAL-34.WIFF; CAL6= 17MAY10MCAL-35.WIFF;
CAL7= 17MAY10MCAL-36.WIFF;

6:2 fluorotelomersulfonate	Area Ratio	Specified Amount	Calculated Amount	% Difference	Limit
CAL1	0.040	0.19	0.164	-13.5	±30
CAL2	0.111	0.57	0.565	-0.8	±25
CAL3	0.342	1.90	1.884	-0.8	±25
CAL4	0.790	3.79	4.501	18.8	±25
CAL5	1.640	9.48	9.698	2.3	±25
CAL6	3.400	23.70	21.727	-8.3	±25
CAL7	6.301	47.40	48.801	3.0	±25

Perfluoroheptanesulfonate	Area Ratio	Specified Amount	Calculated Amount	% Difference	Limit
CAL1	0.028	0.19	0.149	-21.8	±30
CAL2	0.110	0.57	0.576	0.9	±25
CAL3	0.353	1.90	1.850	-2.6	±25
CAL4	1.162	7.61	6.096	-19.9	±25
CAL5	3.642	19.00	19.101	0.5	±25
CAL6	8.247	47.60	43.252	-9.1	±25
CAL7	19.267	95.20	101.048	6.1	±25

Perfluorooctanoic acid	Area Ratio	Specified Amount	Calculated Amount	% Difference	Limit
CAL1	0.050	0.20	0.228	14.2	±30
CAL2	0.137	0.60	0.624	4.0	±25
CAL3	0.407	2.00	1.856	-7.2	±25
CAL4	1.772	8.00	8.074	0.9	±25
CAL5	4.900	20.00	22.326	11.6	±25
CAL6	11.027	50.00	50.246	0.5	±25
CAL7	21.386	100.00	97.445	-2.6	±25

Perfluoro-octanesulfonate	Area Ratio	Specified Amount	Calculated Amount	% Difference	Limit
CAL1	0.117	0.19	0.163	-14.9	±30
CAL2	0.401	0.57	0.558	-2.8	±25
CAL3	1.571	1.91	2.184	14.4	±25
CAL4	5.007	7.65	6.964	-9.0	±25
CAL5	15.490	19.10	21.544	12.8	±25
CAL6	34.479	47.80	47.954	0.3	±25
CAL7	67.196	95.60	93.458	-2.2	±25

* Outside QC Limits.

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

SDG No.: MCR35

Instrument ID: 24960

Init. Calib. Date/Times: 05/11/2017 05:10 05/11/2017 07:13

Lab File Names: CAL1= 17MAY10MCAL-30.WIFF; CAL2= 17MAY10MCAL-31.WIFF; CAL3= 17MAY10MCAL-32.WIFF;
CAL4= 17MAY10MCAL-33.WIFF; CAL5= 17MAY10MCAL-34.WIFF; CAL6= 17MAY10MCAL-35.WIFF;
CAL7= 17MAY10MCAL-36.WIFF;

Perfluorononanoic acid	Area Ratio	Specified Amount	Calculated Amount	% Difference	Limit
CAL1	0.052	0.20	0.211	5.5	±30
CAL2	0.179	0.60	0.732	22.0	±25
CAL3	0.501	2.00	2.046	2.3	±25
CAL4	1.815	8.00	7.413	-7.3	±25
CAL5	4.535	20.00	18.519	-7.4	±25
CAL6	12.527	50.00	51.159	2.3	±25
CAL7	24.662	100.00	100.719	0.7	±25

PFOSA	Area Ratio	Specified Amount	Calculated Amount	% Difference	Limit
CAL1	0.044	0.20	0.203	1.5	±30
CAL2	0.129	0.60	0.590	-1.6	±25
CAL3	0.458	2.00	2.093	4.6	±25
CAL4	1.759	8.00	8.034	0.4	±25
CAL5	4.226	20.00	19.307	-3.5	±25
CAL6	10.576	50.00	48.314	-3.4	±25
CAL7	22.384	100.00	102.260	2.3	±25

Perfluorononanesulfonate	Area Ratio	Specified Amount	Calculated Amount	% Difference	Limit
CAL1	0.046	0.19	0.209	8.9	±30
CAL2	0.134	0.58	0.613	6.4	±25
CAL3	0.448	1.92	2.053	6.9	±25
CAL4	1.685	7.68	7.727	0.6	±25
CAL5	5.149	19.20	23.610	23.0	±25
CAL6	10.058	48.00	46.119	-3.9	±25
CAL7	20.333	96.00	93.236	-2.9	±25

Perfluorodecanoic acid	Area Ratio	Specified Amount	Calculated Amount	% Difference	Limit
CAL1	0.036	0.20	0.194	-3.0	±30
CAL2	0.114	0.60	0.621	3.4	±25
CAL3	0.353	2.00	1.927	-3.6	±25
CAL4	1.424	8.00	7.773	-2.8	±25
CAL5	3.927	20.00	21.432	7.2	±25
CAL6	9.482	50.00	51.742	3.5	±25
CAL7	17.796	100.00	97.111	-2.9	±25

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

SDG No.: MCR35

Instrument ID: 24960

Init. Calib. Date/Times: 05/11/2017 05:10 05/11/2017 07:13

Lab File Names: CAL1= 17MAY10MCAL-30.WIFF; CAL2= 17MAY10MCAL-31.WIFF; CAL3= 17MAY10MCAL-32.WIFF;
CAL4= 17MAY10MCAL-33.WIFF; CAL5= 17MAY10MCAL-34.WIFF; CAL6= 17MAY10MCAL-35.WIFF;
CAL7= 17MAY10MCAL-36.WIFF;

8:2 fluorotelomersulfonate	Area Ratio	Specified Amount	Calculated Amount	% Difference	Limit
CAL1	0.038	0.19	0.185	-3.5	±30
CAL2	0.133	0.58	0.647	12.4	±25
CAL3	0.324	1.92	1.584	-17.5	±25
CAL4	0.835	3.83	4.209	9.9	±25
CAL5	1.756	9.58	9.465	-1.2	±25
CAL6	3.588	24.00	24.012	0.0	±25
CAL7	8.674	47.90	0		±25

NMeFOSAA	Area Ratio	Specified Amount	Calculated Amount	% Difference	Limit
CAL1	0.028	0.20	0.132	-34.0*	±30
CAL2	0.129	0.60	0.605	0.9	±25
CAL3	0.421	2.00	1.976	-1.2	±25
CAL4	0.885	4.00	4.159	4.0	±25
CAL5	1.906	10.00	8.953	-10.5	±25
CAL6	4.902	25.00	23.028	-7.9	±25
CAL7	11.271	50.00	52.947	5.9	±25

Perfluorodecanesulfonate	Area Ratio	Specified Amount	Calculated Amount	% Difference	Limit
CAL1	0.028	0.19	0.143	-25.9	±30
CAL2	0.093	0.58	0.474	-18.1	±25
CAL3	0.336	1.93	1.706	-11.6	±25
CAL4	1.532	7.70	7.776	1.0	±25
CAL5	4.384	19.30	22.256	15.3	±25
CAL6	10.549	48.20	53.557	11.1	±25
CAL7	17.391	96.30	88.290	-8.3	±25

Perfluoroundecanoic acid	Area Ratio	Specified Amount	Calculated Amount	% Difference	Limit
CAL1	0.052	0.20	0.201	0.6	±30
CAL2	0.148	0.60	0.576	-4.1	±25
CAL3	0.548	2.00	2.133	6.6	±25
CAL4	2.081	8.00	8.107	1.3	±25
CAL5	5.262	20.00	20.496	2.5	±25
CAL6	13.138	50.00	51.174	2.3	±25
CAL7	25.190	100.00	98.114	-1.9	±25

* Outside QC Limits.

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

SDG No.: MCR35

Instrument ID: 24960

Init. Calib. Date/Times: 05/11/2017 05:10 05/11/2017 07:13

Lab File Names: CAL1= 17MAY10MCAL-30.WIFF; CAL2= 17MAY10MCAL-31.WIFF; CAL3= 17MAY10MCAL-32.WIFF;
CAL4= 17MAY10MCAL-33.WIFF; CAL5= 17MAY10MCAL-34.WIFF; CAL6= 17MAY10MCAL-35.WIFF;
CAL7= 17MAY10MCAL-36.WIFF;

NEtFOSAA	Area Ratio	Specified Amount	Calculated Amount	% Difference	Limit
CAL1	0.035	0.20	0.169	-15.3	±30
CAL2	0.114	0.60	0.557	-7.2	±25
CAL3	0.422	2.00	2.064	3.2	±25
CAL4	0.635	4.00	3.109	-22.3	±25
CAL5	1.963	10.00	9.603	-4.0	±25
CAL6	5.375	25.00	26.298	5.2	±25
CAL7	10.072	50.00	49.279	-1.4	±25

Perfluorododecanoic acid	Area Ratio	Specified Amount	Calculated Amount	% Difference	Limit
CAL1	0.036	0.20	0.195	-2.7	±30
CAL2	0.110	0.60	0.588	-2.1	±25
CAL3	0.344	2.00	1.840	-8.0	±25
CAL4	1.415	8.00	7.571	-5.4	±25
CAL5	3.385	20.00	18.117	-9.4	±25
CAL6	9.611	50.00	51.431	2.9	±25
CAL7	18.885	100.00	101.059	1.1	±25

10:2-fluorotelomersulfonate	Area Ratio	Specified Amount	Calculated Amount	% Difference	Limit
CAL1	0.040	0.19	0.160	-16.9	±30
CAL2	0.140	0.58	0.636	10.1	±25
CAL3	0.409	1.93	1.933	0.1	±25
CAL4	0.864	3.86	4.161	7.8	±25
CAL5	1.994	9.64	9.889	2.6	±25
CAL6	4.344	24.10	22.907	-5.0	±25
CAL7	8.127	48.20	48.896	1.4	±25

Perfluorododecanesulfonate	Area Ratio	Specified Amount	Calculated Amount	% Difference	Limit
CAL1	0.018	0.19	0.254	30.7*	±30
CAL2	0.037	0.58	0.521	-10.2	±25
CAL3	0.139	1.94	1.964	1.2	±25
CAL4	0.526	7.74	7.411	-4.3	±25
CAL5	1.618	19.40	22.788	17.5	±25
CAL6	3.644	48.40	51.333	6.1	±25
CAL7	6.445	96.80	90.785	-6.2	±25

* Outside QC Limits.

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

SDG No.: MCR35

Instrument ID: 24960

Init. Calib. Date/Times: 05/11/2017 05:10 05/11/2017 07:13

Lab File Names: CAL1= 17MAY10MCAL-30.WIFF; CAL2= 17MAY10MCAL-31.WIFF; CAL3= 17MAY10MCAL-32.WIFF;
CAL4= 17MAY10MCAL-33.WIFF; CAL5= 17MAY10MCAL-34.WIFF; CAL6= 17MAY10MCAL-35.WIFF;
CAL7= 17MAY10MCAL-36.WIFF;

Perfluorotridecanoic acid	Area Ratio	Specified Amount	Calculated Amount	% Difference	Limit
CAL1	0.029	0.20	0.214	7.0	±30
CAL2	0.083	0.60	0.615	2.6	±25
CAL3	0.250	2.00	1.860	-7.0	±25
CAL4	1.028	8.00	7.631	-4.6	±25
CAL5	2.807	20.00	20.838	4.2	±25
CAL6	6.753	50.00	50.140	0.3	±25
CAL7	13.402	100.00	99.502	-0.5	±25

Perfluorotetradecanoic acid	Area Ratio	Specified Amount	Calculated Amount	% Difference	Limit
CAL1	0.037	0.20	0.188	-6.2	±30
CAL2	0.119	0.60	0.609	1.5	±25
CAL3	0.406	2.00	2.072	3.6	±25
CAL4	1.596	8.00	8.140	1.8	±25
CAL5	3.767	20.00	19.221	-3.9	±25
CAL6	9.731	50.00	49.648	-0.7	±25
CAL7	19.781	100.00	100.922	0.9	±25

Perfluorohexadecanoic acid	Area Ratio	Specified Amount	Calculated Amount	% Difference	Limit
CAL1	0.032	0.20	0.201	0.5	±30
CAL2	0.094	0.60	0.593	-1.2	±25
CAL3	0.313	2.00	1.974	-1.3	±25
CAL4	1.185	8.00	7.481	-6.5	±25
CAL5	2.944	20.00	18.576	-7.1	±25
CAL6	7.606	50.00	48.004	-4.0	±25
CAL7	16.475	100.00	103.971	4.0	±25

Perfluorooctadecanoic acid	Area Ratio	Specified Amount	Calculated Amount	% Difference	Limit
CAL1	0.018	0.20	0.162	-19.0	±30
CAL2	0.054	0.60	0.493	-17.9	±25
CAL3	0.186	2.00	1.697	-15.2	±25
CAL4	0.751	8.00	6.870	-14.1	±25
CAL5	1.890	20.00	17.286	-13.6	±25
CAL6	5.314	50.00	48.598	-2.8	±25
CAL7	11.558	100.00	105.694	5.7	±25

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FORM 07
CALIBRATION VERIFICATION SUMMARY
LC/MS/MS

SDG No.: MCR35

Instrument ID: 24960 Lab File ID: 17MAY10MCAL-38.WIFF

Date/Time Analyzed: 05/11/2017 07:54 Lab Sample ID: CCV1

Init. Calib. Date/Times: 05/11/2017 05:10 05/11/2017 07:13

Analytes	Average ICAL Area	CCV Area	Specified Amount	Calculated Amount	% Difference	Limit
Perfluorobutanoic Acid	3170794	310395	2.00	2.18	8.92	±30
Perfluoropentanoic Acid	3304943	310679	2.00	1.92	-3.81	±30
Perfluorobutanesulfonate	582347	51038	1.77	1.81	2.02	±40
4:2 fluorotelomersulfonate	188542	35305	1.87	1.99	6.53	±30
Perfluorohexanoic acid	2893078	311427	2.00	2.16	8.12	±30
Perfluoropentanesulfonate	327500	32218	1.88	2.15	14.47	±30
Perfluorohexanesulfonate	1034652	89824	1.89	1.77	-6.56	±30
Perfluoroheptanoic acid	2441982	234363	2.00	2.10	4.98	±30
6:2 fluorotelomersulfonate	78405	16550	1.90	2.12	11.46	±30
Perfluoroheptanesulfonate	277241	25040	1.90	1.84	-3.12	±30
Perfluorooctanoic acid	1919644	204897	2.00	2.06	3.04	±30
Perfluoro-octanesulfonate	929790	85862	1.91	1.69	-11.26	±30
Perfluorononanoic acid	1684705	170711	2.00	1.96	-1.84	±30
PFOSA	1576140	185022	2.00	1.82	-8.89	±30
Perfluorononanesulfonate	283354	29283	1.92	1.91	-0.74	±30
Perfluorodecanoic acid	2027248	244062	2.00	2.12	6.04	±30
8:2 fluorotelomersulfonate	119503	28283	1.92	2.11	9.88	±30
NMeFOSAA	338811	70352	2.00	2.36	18.12	±30
Perfluorodecanesulfonate	258146	19974	1.93	1.44	-25.43	±30
Perfluoroundecanoic acid	2068708	203025	2.00	2.08	4.04	±30

* Outside QC Limits.

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FORM 07
CALIBRATION VERIFICATION SUMMARY
LC/MS/MS

SDG No.: MCR35

Instrument ID: 24960 Lab File ID: 17MAY10MCAL-38.WIFF

Date/Time Analyzed: 05/11/2017 07:54 Lab Sample ID: CCV1

Init. Calib. Date/Times: 05/11/2017 05:10 05/11/2017 07:13

Analytes	Average ICAL Area	CCV Area	Specified Amount	Calculated Amount	% Difference	Limit
NEtFOSAA	213072	37027	2.00	1.83	-8.65	±30
Perfluorododecanoic acid	1657823	184883	2.00	2.04	2.00	±30
10:2-fluorotelomersulfonate	125665	26948	1.93	1.93	0.15	±30
Perfluorododecanesulfonate	93295	9109	1.94	1.82	-6.13	±30
Perfluorotridecanoic acid	1201093	134417	2.00	2.06	2.89	±40
Perfluorotetradecanoic acid	1067429	111397	2.00	2.11	5.51	±40
Perfluorohexadecanoic acid	859099	80038	2.00	1.88	-6.23	±30
Perfluorooctadecanoic acid	590656	48657	2.00	1.65	-17.39	±30

* Outside QC Limits.

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FORM 07
CALIBRATION VERIFICATION SUMMARY
LC/MS/MS

SDG No.: MCR35

Instrument ID: 24960 Lab File ID: 17MAY17-39.WIFF

Date/Time Analyzed: 05/17/2017 13:40 Lab Sample ID: CCV4-CAL4

Init. Calib. Date/Times: 05/11/2017 05:10 05/11/2017 07:13

Analytes	Average ICAL Area	CCV Area	Specified Amount	Calculated Amount	% Difference	Limit
Perfluorobutanoic Acid	3170794	1221455	8.00	7.90	-1.24	±30
Perfluoropentanoic Acid	3304943	1203129	8.00	7.84	-1.97	±30
Perfluorobutanesulfonate	582347	202945	7.08	7.28	2.89	±40
4:2 fluorotelomersulfonate	188542	78199	3.74	4.94	32.00 *	±30
Perfluorohexanoic acid	2893078	1081505	8.00	8.34	4.25	±30
Perfluoropentanesulfonate	327500	108384	7.50	7.34	-2.07	±30
Perfluorohexanesulfonate	1034652	342065	7.56	7.12	-5.77	±30
Perfluoroheptanoic acid	2441982	821402	8.00	7.66	-4.20	±30
6:2 fluorotelomersulfonate	78405	29576	3.79	4.53	19.47	±30
Perfluoroheptanesulfonate	277241	96108	7.61	7.48	-1.65	±30
Perfluorooctanoic acid	1919644	662670	8.00	7.90	-1.27	±30
Perfluoro-octanesulfonate	929790	344362	7.65	8.29	8.33	±30
Perfluorononanoic acid	1684705	599160	8.00	8.55	6.82	±30
PFOSA	1576140	593623	8.00	8.36	4.46	±30
Perfluorononanesulfonate	283354	84515	7.68	6.71	-12.69	±30
Perfluorodecanoic acid	2027248	810481	8.00	8.40	4.95	±30
8:2 fluorotelomersulfonate	119503	38741	3.83	3.73	-2.53	±30
NMeFOSAA	338811	120415	4.00	4.03	0.86	±30
Perfluorodecanesulfonate	258146	98986	7.70	8.70	12.93	±30
Perfluoroundecanoic acid	2068708	827453	8.00	7.64	-4.44	±30

* Outside QC Limits.

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FORM 07
CALIBRATION VERIFICATION SUMMARY
LC/MS/MS

SDG No.: MCR35

Instrument ID: 24960 Lab File ID: 17MAY17-39.WIFF

Date/Time Analyzed: 05/17/2017 13:40 Lab Sample ID: CCV4-CAL4

Init. Calib. Date/Times: 05/11/2017 05:10 05/11/2017 07:13

Analytes	Average ICAL Area	CCV Area	Specified Amount	Calculated Amount	% Difference	Limit
NEtFOSAA	213072	102540	4.00	4.48	12.02	±30
Perfluorododecanoic acid	1657823	656676	8.00	7.62	-4.74	±30
10:2-fluorotelomersulfonate	125665	44887	3.86	4.16	7.66	±30
Perfluorododecanesulfonate	93295	33379	7.74	8.14	5.12	±30
Perfluorotridecanoic acid	1201093	499908	8.00	8.05	0.61	±40
Perfluorotetradecanoic acid	1067429	345508	8.00	7.74	-3.28	±40
Perfluorohexadecanoic acid	859099	291309	8.00	8.07	0.87	±30
Perfluorooctadecanoic acid	590656	178114	8.00	7.15	-10.63	±30

* Outside QC Limits.

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FORM 07
CALIBRATION VERIFICATION SUMMARY
LC/MS/MS

SDG No.: MCR35

Instrument ID: 24960 Lab File ID: 17MAY17-46.WIFF

Date/Time Analyzed: 05/17/2017 16:04 Lab Sample ID: CCV5-CAL4

Init. Calib. Date/Times: 05/11/2017 05:10 05/11/2017 07:13

Analytes	Average ICAL Area	CCV Area	Specified Amount	Calculated Amount	% Difference	Limit
Perfluorobutanoic Acid	3170794	1197839	8.00	7.70	-3.74	±30
Perfluoropentanoic Acid	3304943	1302067	8.00	7.76	-3.06	±30
Perfluorobutanesulfonate	582347	199237	7.08	7.17	1.22	±40
4:2 fluorotelomersulfonate	188542	66399	3.74	3.71	-0.86	±30
Perfluorohexanoic acid	2893078	1094625	8.00	8.15	1.88	±30
Perfluoropentanesulfonate	327500	116686	7.50	7.92	5.65	±30
Perfluorohexanesulfonate	1034652	377859	7.56	7.23	-4.32	±30
Perfluoroheptanoic acid	2441982	865101	8.00	8.13	1.67	±30
6:2 fluorotelomersulfonate	78405	35196	3.79	5.53	45.80 *	±30
Perfluoroheptanesulfonate	277241	101181	7.61	7.24	-4.83	±30
Perfluorooctanoic acid	1919644	711904	8.00	7.81	-2.40	±30
Perfluoro-octanesulfonate	929790	350751	7.65	7.21	-5.82	±30
Perfluorononanoic acid	1684705	624466	8.00	8.63	7.93	±30
PFOSA	1576140	658669	8.00	8.95	11.85	±30
Perfluorononanesulfonate	283354	99852	7.68	6.76	-11.95	±30
Perfluorodecanoic acid	2027248	803325	8.00	8.99	12.42	±30
8:2 fluorotelomersulfonate	119503	45712	3.83	4.27	11.58	±30
NMeFOSAA	338811	125469	4.00	4.15	3.72	±30
Perfluorodecanesulfonate	258146	107498	7.70	8.06	4.68	±30
Perfluoroundecanoic acid	2068708	938156	8.00	8.02	0.28	±30

* Outside QC Limits.

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FORM 07
CALIBRATION VERIFICATION SUMMARY
LC/MS/MS

SDG No.: MCR35

Instrument ID: 24960 Lab File ID: 17MAY17-46.WIFF

Date/Time Analyzed: 05/17/2017 16:04 Lab Sample ID: CCV5-CAL4

Init. Calib. Date/Times: 05/11/2017 05:10 05/11/2017 07:13

Analytes	Average ICAL Area	CCV Area	Specified Amount	Calculated Amount	% Difference	Limit
NEtFOSAA	213072	114452	4.00	4.22	5.55	±30
Perfluorododecanoic acid	1657823	690495	8.00	7.84	-1.94	±30
10:2-fluorotelomersulfonate	125665	48395	3.86	4.32	11.98	±30
Perfluorododecanesulfonate	93295	35299	7.74	7.34	-5.11	±30
Perfluorotridecanoic acid	1201093	496479	8.00	7.83	-2.18	±40
Perfluorotetradecanoic acid	1067429	399881	8.00	8.00	-0.05	±40
Perfluorohexadecanoic acid	859099	289549	8.00	7.16	-10.48	±30
Perfluorooctadecanoic acid	590656	182311	8.00	6.53	-18.32	±30

* Outside QC Limits.

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FORM 07
CALIBRATION VERIFICATION SUMMARY
LC/MS/MS

SDG No.: MCR35

Instrument ID: 24960 Lab File ID: 17MAY17-26.WIFF

Date/Time Analyzed: 05/17/2017 09:13 Lab Sample ID: CCV3_CAL4

Init. Calib. Date/Times: 05/11/2017 05:10 05/11/2017 07:13

Analytes	Average ICAL Area	CCV Area	Specified Amount	Calculated Amount	% Difference	Limit
Perfluorobutanoic Acid	3170794	1233592	8.00	7.82	-2.31	±30
Perfluoropentanoic Acid	3304943	1279245	8.00	7.67	-4.13	±30
Perfluorobutanesulfonate	582347	196181	7.08	7.02	-0.79	±40
4:2 fluorotelomersulfonate	188542	71518	3.74	4.31	15.11	±30
Perfluorohexanoic acid	2893078	1012536	8.00	7.21	-9.84	±30
Perfluoropentanesulfonate	327500	112443	7.50	7.60	1.35	±30
Perfluorohexanesulfonate	1034652	344589	7.56	7.05	-6.71	±30
Perfluoroheptanoic acid	2441982	806677	8.00	7.70	-3.75	±30
6:2 fluorotelomersulfonate	78405	28394	3.79	4.14	9.11	±30
Perfluoroheptanesulfonate	277241	97799	7.61	7.48	-1.65	±30
Perfluorooctanoic acid	1919644	647366	8.00	7.27	-9.17	±30
Perfluoro-octanesulfonate	929790	340136	7.65	6.60	-13.77	±30
Perfluorononanoic acid	1684705	594976	8.00	7.87	-1.64	±30
PFOSA	1576140	601390	8.00	7.64	-4.53	±30
Perfluorononanesulfonate	283354	104450	7.68	6.68	-13.04	±30
Perfluorodecanoic acid	2027248	877679	8.00	8.66	8.19	±30
8:2 fluorotelomersulfonate	119503	40484	3.83	4.14	8.03	±30
NMeFOSAA	338811	99023	4.00	4.53	13.21	±30
Perfluorodecanesulfonate	258146	69465	7.70	4.92	-36.14 *	±30
Perfluoroundecanoic acid	2068708	658132	8.00	8.00	0.04	±30

* Outside QC Limits.

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FORM 07
CALIBRATION VERIFICATION SUMMARY
LC/MS/MS

SDG No.: MCR35

Instrument ID: 24960 Lab File ID: 17MAY17-26.WIFF

Date/Time Analyzed: 05/17/2017 09:13 Lab Sample ID: CCV3_CAL4

Init. Calib. Date/Times: 05/11/2017 05:10 05/11/2017 07:13

Analytes	Average ICAL Area	CCV Area	Specified Amount	Calculated Amount	% Difference	Limit
NEtFOSAA	213072	87389	4.00	4.26	6.39	±30
Perfluorododecanoic acid	1657823	598077	8.00	7.04	-11.97	±30
10:2-fluorotelomersulfonate	125665	43976	3.86	4.30	11.41	±30
Perfluorododecanesulfonate	93295	37081	7.74	7.28	-5.90	±30
Perfluorotridecanoic acid	1201093	497132	8.00	8.12	1.53	±40
Perfluorotetradecanoic acid	1067429	376775	8.00	7.66	-4.19	±40
Perfluorohexadecanoic acid	859099	295404	8.00	7.43	-7.09	±30
Perfluorooctadecanoic acid	590656	177691	8.00	6.48	-19.01	±30

* Outside QC Limits.

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FORM 08A
INTERNAL STANDARDS
LC/MS/MS

SDG No.: MCR35
Matrix: WATER

17129008	13C2-PFDA	13C2-PFOA	13C3-PFBA	13C4-PFOS
	Area	Area	Area	Area
Average ICAL Response	384099	342185	669117	70132
UPPER LIMIT	576149	513278	1003676	105198
LOWER LIMIT	192050	171093	334559	35066
LAB SAMPLE ID				
LCS129008	394197	387247	751208	86455
LCSDA129008	372171	398300	737274	64650
8971782MS	437679	397482	656893	69022
BLK129008	453245	411478	819783	77565
8971782	487956	388267	685089	77990
8971783	484667	404972	771460	76261
8971784	450312	390696	782933	80531
8971785	453984	397600	779058	82461
8971786	539424	431675	786765	86836
8971787	441895	408608	788329	70928

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

* = Outside of the QC Limits.

Sample Data

PFAS by LC/MS/MS

Lancaster Laboratories Environmental

LOQ/MDL Summary
PFAS Group

SDG: MCR35

Fraction: PFAS by LC/MS/MS

10954: PFOA/PFOS DoD Analyte Name	Default DL	Default LOD	Default LOQ	Units
Perfluorooctanoic acid	.6	2	2	ng/l
Perfluoro-octanesulfonate	2	6	6	ng/l

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LC-MS/MS Analysis Report

Printed: 5/17/2017 7:55:00 PM
Template: MQ-Sample-16Nov21.docx

ICAL Name: 17MAY10MCAL
QMethod Name: PFCMOD-17JAN28
Result Table: 17129008 5/17/2017 7:53:11 PM
Acquisition Method: PFC-32-16NOV02.dam

Sample Name:	8971782BKG			**Data File:**		17MAY17-34.wiff
Sample ID:	EPA 537 Rev. 1.1 modified 17129008 17MC-PW121-P1-0428 Grab Groundwater			**Acquis Date:**		2017-05-17T11:57:35
Sample Type:	Unknown			**Instrument:**		LM24960
Vial Position:	75			**Acquis Method:**		PFC-32-16NOV02.dam
Injection Vol:	5.00			**Result Table:**		17129008
QMethod File:	PFCMOD-17JAN28			**ICAL Name:**		17MAY10MCAL
Batch Number:	17129008			**Operator:**		Not calculated
Sample Wt.:	0.10040			**Dilution Factor:**		1.00
Sample Vol.:	1.000			**Prep Factor:**		1.000

Injection Standard Peak Table

Injection Standard Name	Inj Std Conc	Injection Std Peak Area	ICAL Injection Standard AVG	Injection Std %Diff	Injection Std %Diff Limit	Injection Std %Diff OOS
I13C3-PFBA	1.0	685089.1	669117.3	2.4	50.0	
I13C2-PFOA	1.0	388266.8	342184.6	13.5	50.0	
I13C4-PFOS	1.0	77990.1	70131.6	11.2	50.0	
I13C2-PFDA	1.0	487956.3	384098.7	27.0	50.0	

Extraction Standard Peak Table

Extraction Standard Name	Ext Std Area	Inj Std Name	Inj Std Area	Area Ratio	AVG Area Ratio	Ext Std Conc	Ext Std Result	Ext Std %REC	Ext Std %REC Limit	Ext Std OOS
E13C8-PFOA	518904.7	13C2-PFOA	388266.8	1.336	1.163	9.960	11.442	114.9	70.0-130.0	
E13C8-PFOS	81794.6	13C4-PFOS	77990.1	1.049	0.865	9.960	12.070	121.2	70.0-130.0	

APPROVED
By DMW at 8:00 pm, 5/17/17

REVIEWED
By UMJS at 8:50 pm, 5/21/17

ICAL Name: 17MAY10MCAL **Result Table:** 17129008 5/17/2017 7:53:11 PM
QMethod Name: PFCMOD-17JAN28 **Acquisition Method:** PFC-32-16NOV02.dam

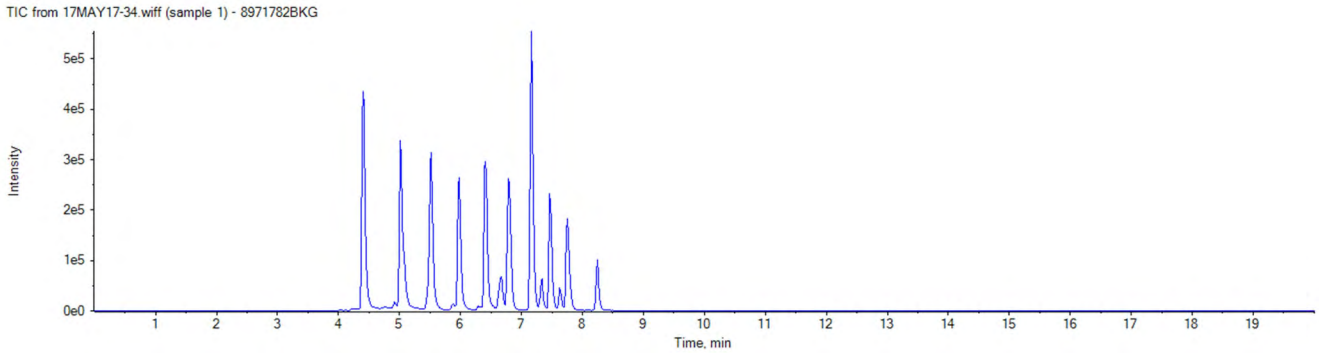
Analyte Quantitation Peak Table

Sample Name: 8971782BKG **Instrument Name:** LM24960 **File Name:** 17MAY17-34.wiff

Sample Wt	Sample Vol	Dilution Factor	PrepFactor
0.10040	1.000	1.00	1.000

Analytet Name	RT	RRT	Analyte Area Response	Int Typ	ES Name	ES RT	ES Area Response	Area Ratio	Sample Result (ng/L)
PFOA	6.41	1.000	107309.9	A	13C8-PFOA	6.41	518904.7	0.207	9.385
PFOS	6.76	1.000	642367.1	M	13C8-PFOS	6.78	81794.6	7.853	108.793

Total Ion Chromatogram



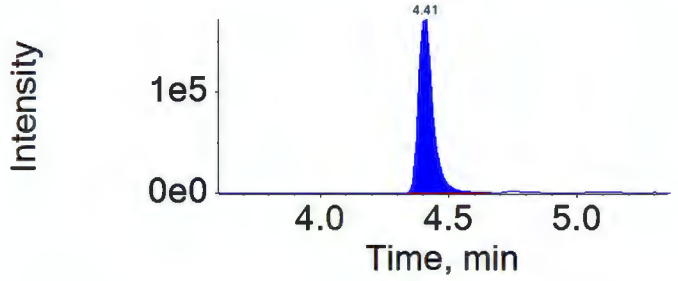
APPROVED
By DMW at 8:00 pm, 5/17/17

REVIEWED
By UMJS at 8:50 pm, 5/21/17

ICAL Name: 17MAY10MCAL
QMethod Name: PFCMOD-17JAN28
Result Table: 17129008 5/17/2017 7:53:11 PM
Acquisition Method: PFC-32-16NOV02.dam

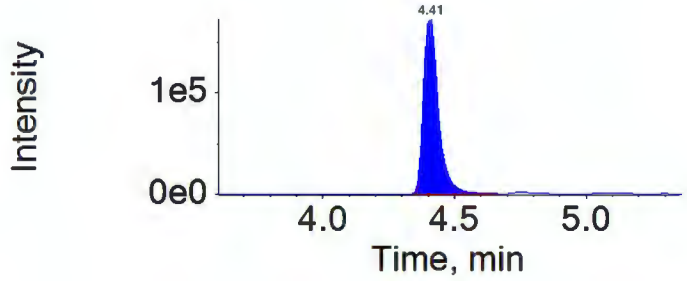
Injection Standard: I13C3-PFBA

216.0 / 172.0



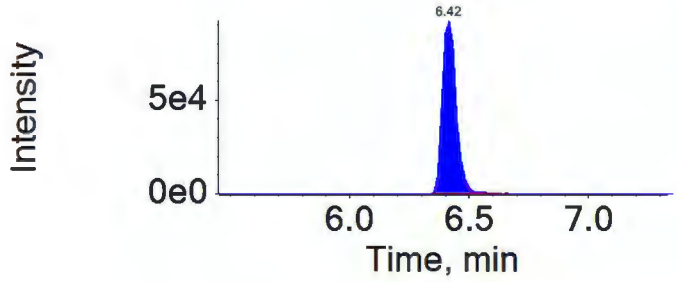
Injection Standard: 13C3-PFBA

216.0 / 172.0



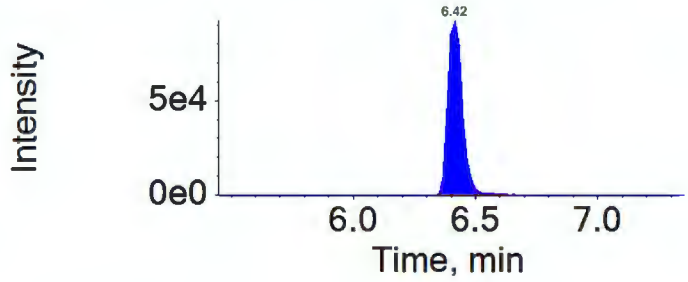
Injection Standard: I13C2-PFOA

415.0 / 370.0



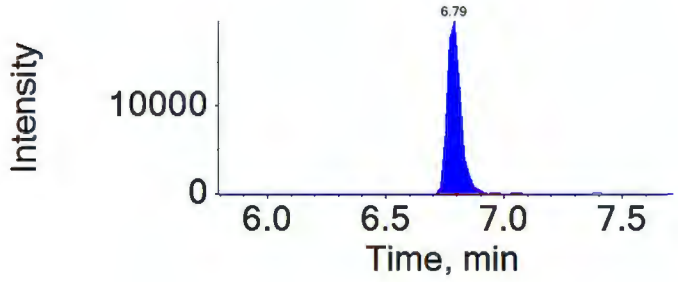
Injection Standard: 13C2-PFOA

415.0 / 370.0



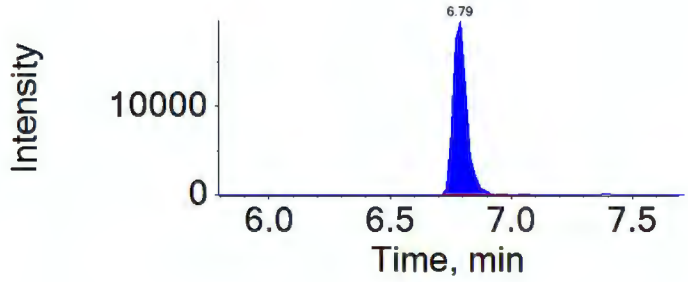
Injection Standard: I13C4-PFOS

503.0 / 99.0



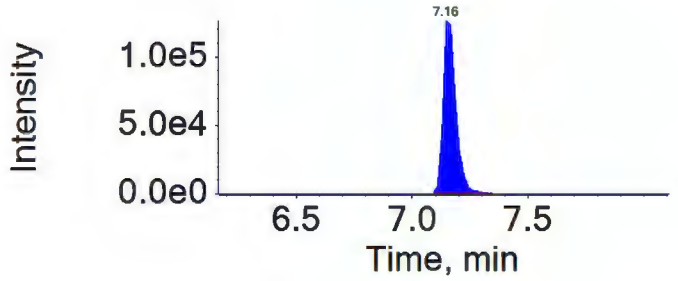
Injection Standard: 13C4-PFOS

503.0 / 99.0



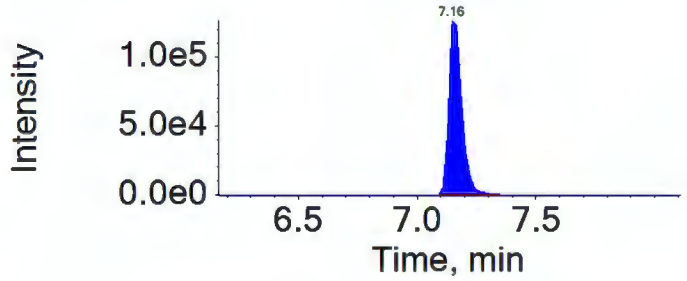
Injection Standard: I13C2-PFDA

515.0 / 470.0



Injection Standard: 13C2-PFDA

515.0 / 470.0



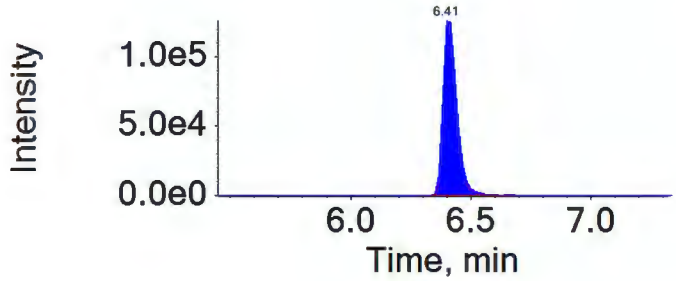
APPROVED
By DMW at 8:00 pm, 5/17/17

REVIEWED
By UMJS at 8:50 pm, 5/21/17

ICAL Name: 17MAY10MCAL **Result Table:** 17129008 5/17/2017 7:53:11 PM
QMethod Name: PFCMOD-17JAN28 **Acquisition Method:** PFC-32-16NOV02.dam

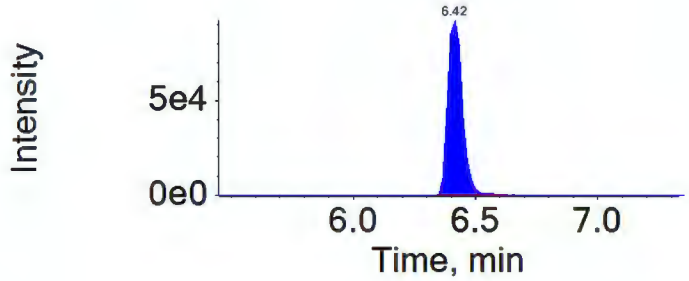
Extraction Standard: E13C8-PFOA

421.0 /
376.0



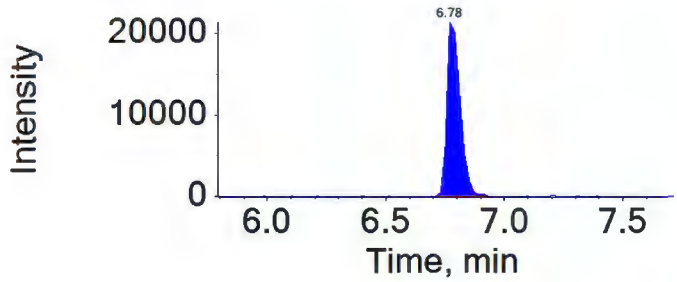
Injection Standard: 13C2-PFOA

415.0 /
370.0



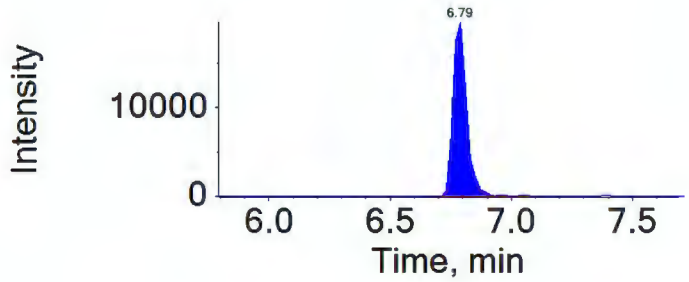
Extraction Standard: E13C8-PFOS

507.0 /
99.0



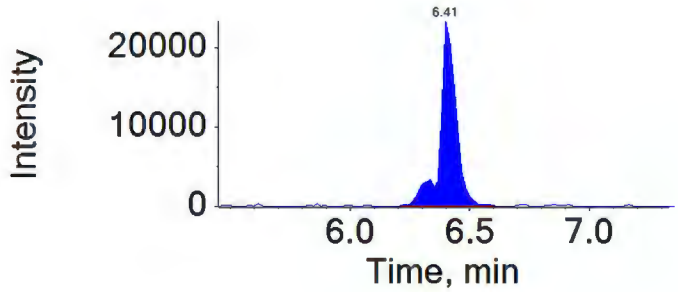
Injection Standard: 13C4-PFOS

503.0 /
99.0



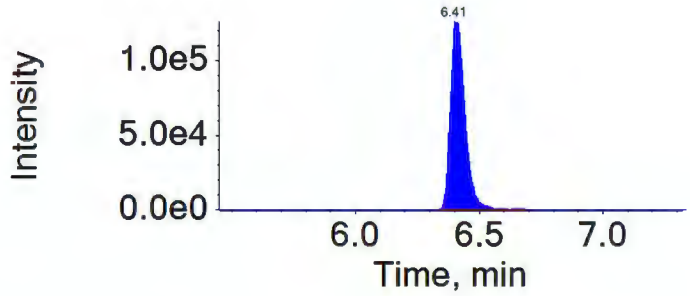
Analyte: PFOA

413.0 /
369.0



Extraction Standard: 13C8-PFOA

421.0 /
376.0

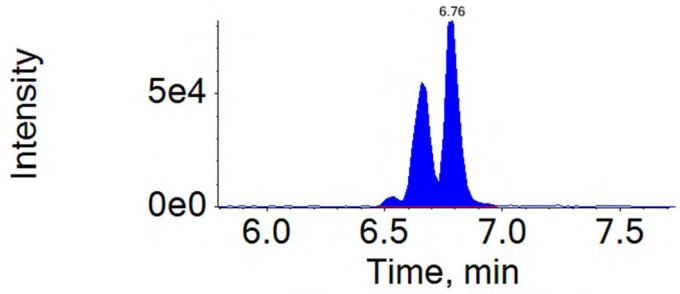


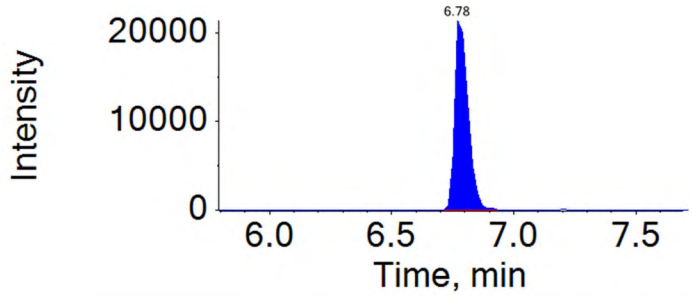
APPROVED
By DMW at 8:00 pm, 5/17/17

REVIEWED
By UMJS at 8:50 pm, 5/21/17

ICAL Name: 17MAY10MCAL **Result Table:** 17129008 5/17/2017 7:53:11 PM
QMethod Name: PFCMOD-17JAN28 **Acquisition Method:** PFC-32-16NOV02.dam

Analyte: PFOS	Extraction Standard: 13C8-PFOS
499.0 / 80.0	507.0 / 99.0





APPROVED
By DMW at 8:00 pm, 5/17/17

REVIEWED
By UMJS at 8:50 pm, 5/21/17

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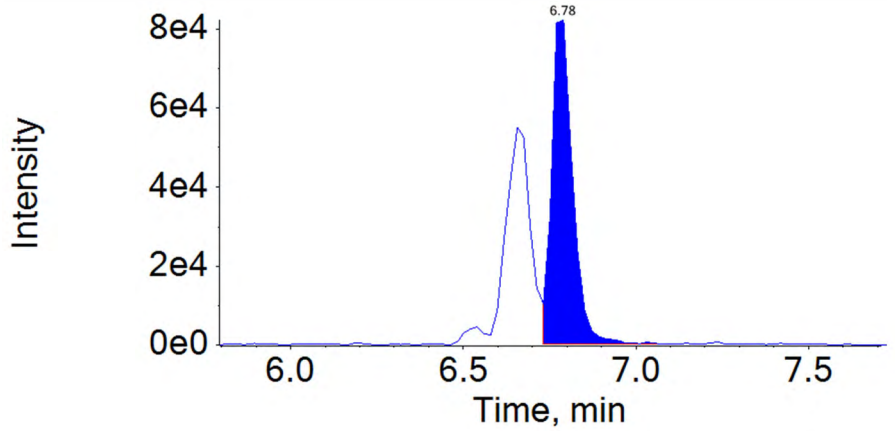
Auto Integrations prior to Manual Integration

Print Date: 05/17/2017 7:57 PM
Template: MQ-OrigInteg-16NOV21.docx

Results Table Name: 17129008
Results Table Date: 5/17/2017 7:53:11 PM

Acquisition Method: PFC-32-16NOV02.dam
QMethod File: PFCMOD-17JAN28

Component Name:
PFOS
RT (min.):
6.78
Peak Area:
352425.7
Mass Range:
499.0 / 80.0
File Name:
17MAY17-34.wiff
Sample Name:
8971782BKG



Integration Comment: incorrect integration

APPROVED
By DMW at 8:00 pm, 5/17/17

REVIEWED
By UMJS at 8:50 pm, 5/21/17

Results Table Name: 17129008
Results Table Date: 5/17/2017 7:53:11 PM

Acquisition Method: PFC-32-16NOV02.dam
QMethod File: PFCMOD-17JAN28

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LC-MS/MS Analysis Report

Printed: 5/17/2017 7:55:00 PM
Template: MQ-Sample-16Nov21.docx

ICAL Name: 17MAY10MCAL
QMethod Name: PFCMOD-17JAN28
Result Table: 17129008 5/17/2017 7:53:11 PM
Acquisition Method: PFC-32-16NOV02.dam

Sample Name:	8971783			**Data File:**		17MAY17-35.wiff
Sample ID:	EPA 537 Rev. 1.1 modified 17129008 17MC-PW121-P4-0428 Grab Groundwater			**Acquis Date:**		2017-05-17T12:18:08
Sample Type:	Unknown			**Instrument:**		LM24960
Vial Position:	76			**Acquis Method:**		PFC-32-16NOV02.dam
Injection Vol:	5.00			**Result Table:**		17129008
QMethod File:	PFCMOD-17JAN28			**ICAL Name:**		17MAY10MCAL
Batch Number:	17129008			**Operator:**		Not calculated
Sample Wt.:	0.10025			**Dilution Factor:**		1.00
Sample Vol.:	1.000			**Prep Factor:**		1.000

Injection Standard Peak Table

Injection Standard Name	Inj Std Conc	Injection Std Peak Area	ICAL Injection Standard AVG	Injection Std %Diff	Injection Std %Diff Limit	Injection Std %Diff OOS
I13C3-PFBA	1.0	771459.8	669117.3	15.3	50.0	
I13C2-PFOA	1.0	404972.0	342184.6	18.3	50.0	
I13C4-PFOS	1.0	76260.9	70131.6	8.7	50.0	
I13C2-PFDA	1.0	484666.6	384098.7	26.2	50.0	

Extraction Standard Peak Table

Extraction Standard Name	Ext Std Area	Inj Std Name	Inj Std Area	Area Ratio	AVG Area Ratio	Ext Std Conc	Ext Std Result	Ext Std %REC	Ext Std %REC Limit	Ext Std OOS
E13C8-PFOA	310625.7	13C2-PFOA	404972.0	0.767	1.163	9.975	6.576	65.9	70.0-130.0	OOS
E13C8-PFOS	47608.6	13C4-PFOS	76260.9	0.624	0.865	9.975	7.195	72.1	70.0-130.0	

APPROVED
By DMW at 8:00 pm, 5/17/17

REVIEWED
By UMJS at 8:50 pm, 5/21/17

ICAL Name: 17MAY10MCAL **Result Table:** 17129008 5/17/2017 7:53:11 PM
QMethod Name: PFCMOD-17JAN28 **Acquisition Method:** PFC-32-16NOV02.dam

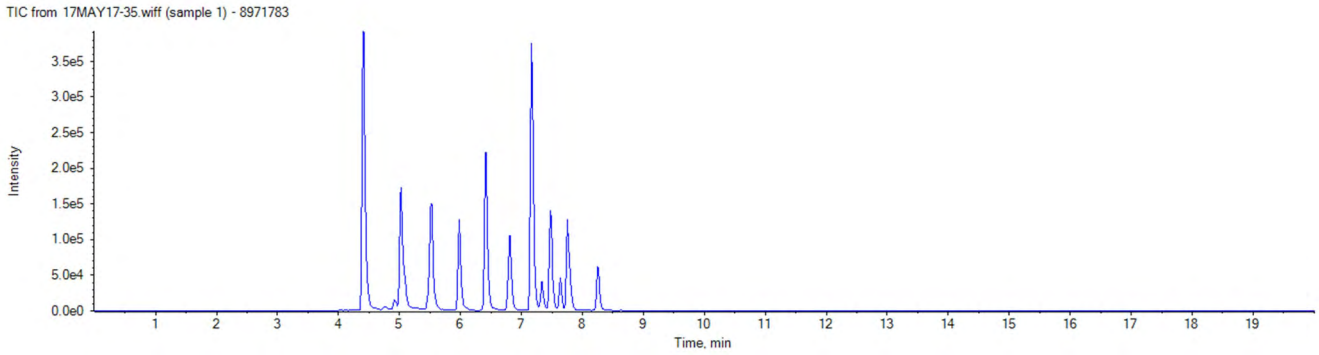
Analyte Quantitation Peak Table

Sample Name: 8971783 **Instrument Name:** LM24960 **File Name:** 17MAY17-35.wiff

Sample Wt	Sample Vol	Dilution Factor	PrepFactor
0.10025	1.000	1.00	1.000

Analytet Name	RT	RRT	Analyte Area Response	Int Typ	ES Name	ES RT	ES Area Response	Area Ratio	Sample Result (ng/L)
PFOA	N/A	N/A	N/A	A	13C8-PFOA	6.42	310625.7	N/A	
PFOS	N/A	N/A	N/A	A	13C8-PFOS	6.79	47608.6	N/A	

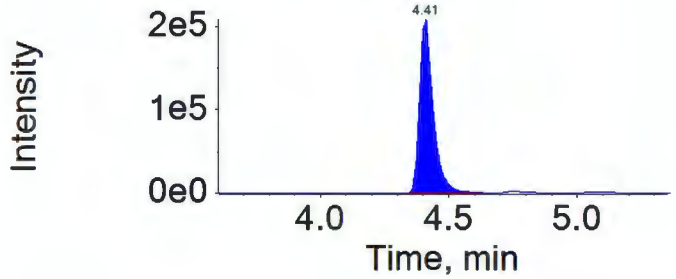
Total Ion Chromatogram



ICAL Name: 17MAY10MCAL
QMethod Name: PFCMOD-17JAN28
Result Table: 17129008 5/17/2017 7:53:11 PM
Acquisition Method: PFC-32-16NOV02.dam

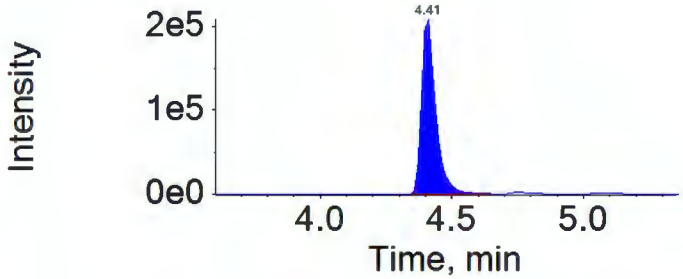
Injection Standard: I13C3-PFBA

216.0 / 172.0



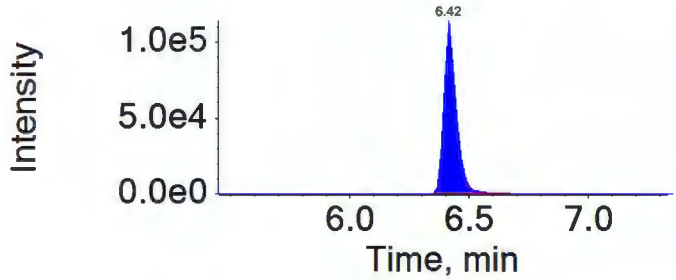
Injection Standard: 13C3-PFBA

216.0 / 172.0



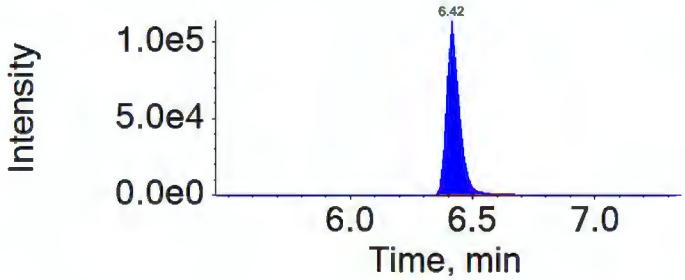
Injection Standard: I13C2-PFOA

415.0 / 370.0



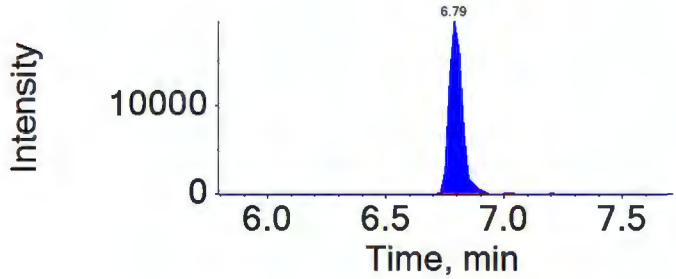
Injection Standard: 13C2-PFOA

415.0 / 370.0



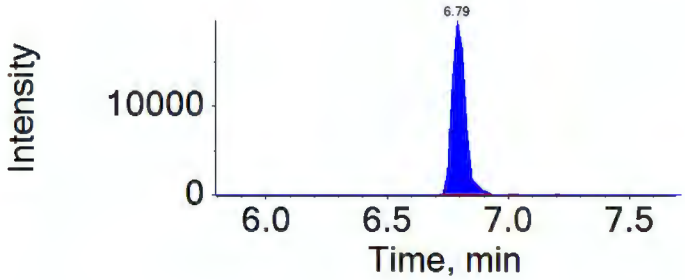
Injection Standard: I13C4-PFOS

503.0 / 99.0



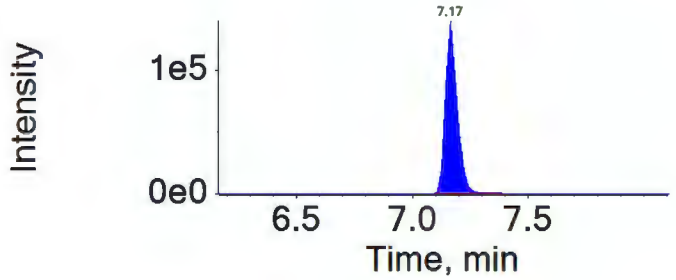
Injection Standard: 13C4-PFOS

503.0 / 99.0



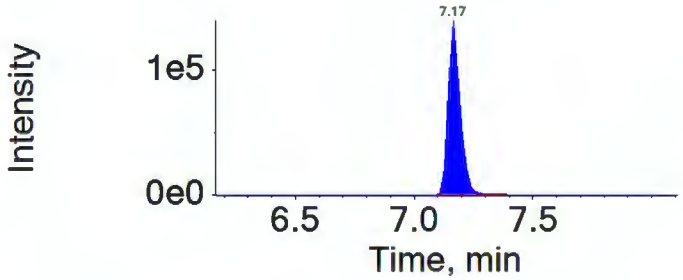
Injection Standard: I13C2-PFDA

515.0 / 470.0



Injection Standard: 13C2-PFDA

515.0 / 470.0



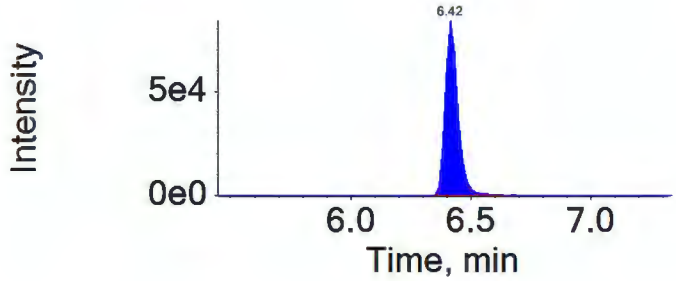
APPROVED
By DMW at 8:00 pm, 5/17/17

REVIEWED
By UMJS at 8:50 pm, 5/21/17

ICAL Name: 17MAY10MCAL **Result Table:** 17129008 5/17/2017 7:53:11 PM
QMethod Name: PFCMOD-17JAN28 **Acquisition Method:** PFC-32-16NOV02.dam

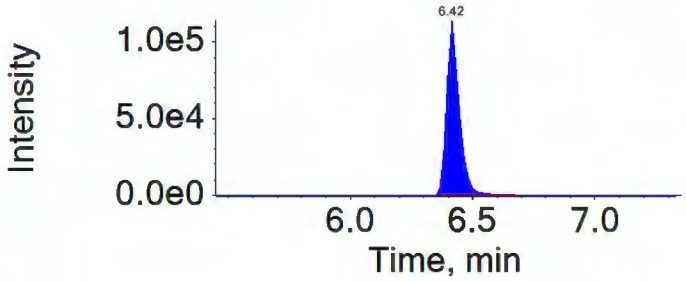
Extraction Standard: E13C8-PFOA

421.0 /
376.0



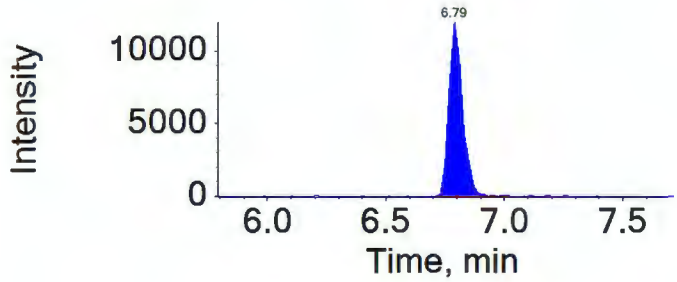
Injection Standard: 13C2-PFOA

415.0 /
370.0



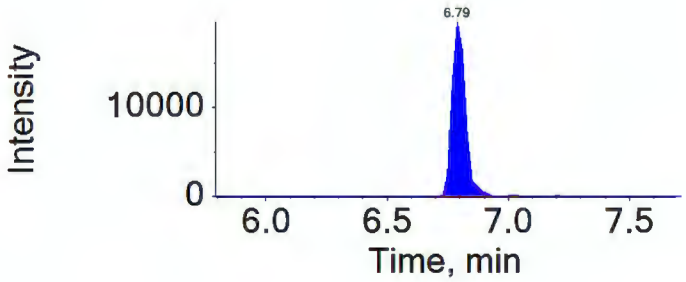
Extraction Standard: E13C8-PFOS

507.0 /
99.0



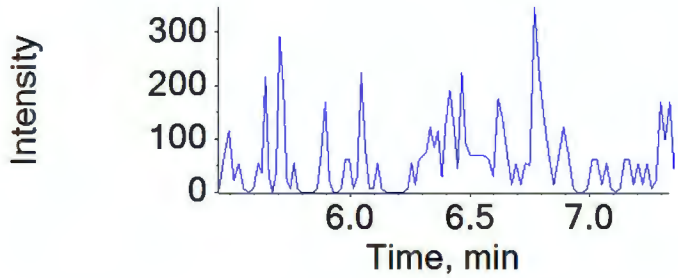
Injection Standard: 13C4-PFOS

503.0 /
99.0



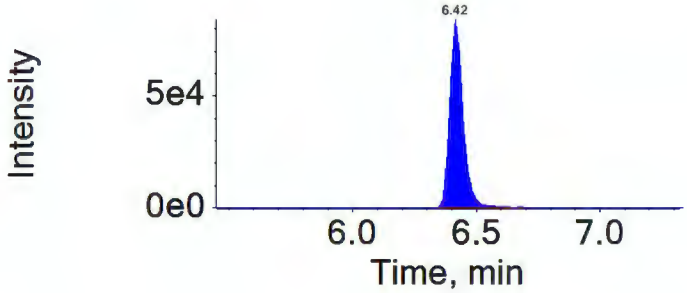
Analyte: PFOA

413.0 /
369.0



Extraction Standard: 13C8-PFOA

421.0 /
376.0

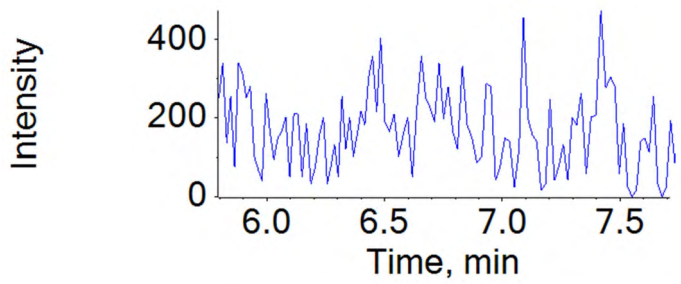


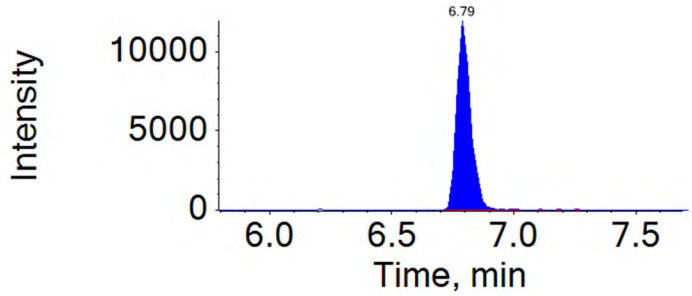
APPROVED
By DMW at 8:00 pm, 5/17/17

REVIEWED
By UMJS at 8:50 pm, 5/21/17

ICAL Name: 17MAY10MCAL **Result Table:** 17129008 5/17/2017 7:53:11 PM
QMethod Name: PFCMOD-17JAN28 **Acquisition Method:** PFC-32-16NOV02.dam

Analyte: PFOS	Extraction Standard: 13C8-PFOS
499.0 / 80.0	507.0 / 99.0





APPROVED
By DMW at 8:00 pm, 5/17/17

REVIEWED
By UMJS at 8:50 pm, 5/21/17

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LC-MS/MS Analysis Report

Printed: 5/17/2017 7:55:00 PM
Template: MQ-Sample-16Nov21.docx

ICAL Name: 17MAY10MCAL
QMethod Name: PFCMOD-17JAN28
Result Table: 17129008 5/17/2017 7:53:11 PM
Acquisition Method: PFC-32-16NOV02.dam

Sample Name:	8971784			**Data File:**		17MAY17-36.wiff
Sample ID:	EPA 537 Rev. 1.1 modified 17129008 17MC-PW114-P7-0501 Grab Groundwater			**Acquis Date:**		2017-05-17T12:38:41
Sample Type:	Unknown			**Instrument:**		LM24960
Vial Position:	77			**Acquis Method:**		PFC-32-16NOV02.dam
Injection Vol:	5.00			**Result Table:**		17129008
QMethod File:	PFCMOD-17JAN28			**ICAL Name:**		17MAY10MCAL
Batch Number:	17129008			**Operator:**		Not calculated
Sample Wt.:	0.09996			**Dilution Factor:**		1.00
Sample Vol.:	1.000			**Prep Factor:**		1.000

Injection Standard Peak Table

Injection Standard Name	Inj Std Conc	Injection Std Peak Area	ICAL Injection Standard AVG	Injection Std %Diff	Injection Std %Diff Limit	Injection Std %Diff OOS
I13C3-PFBA	1.0	782933.0	669117.3	17.0	50.0	
I13C2-PFOA	1.0	390696.3	342184.6	14.2	50.0	
I13C4-PFOS	1.0	80530.7	70131.6	14.8	50.0	
I13C2-PFDA	1.0	450311.8	384098.7	17.2	50.0	

Extraction Standard Peak Table

Extraction Standard Name	Ext Std Area	Inj Std Name	Inj Std Area	Area Ratio	AVG Area Ratio	Ext Std Conc	Ext Std Result	Ext Std %REC	Ext Std %REC Limit	Ext Std OOS
E13C8-PFOA	305547.1	13C2-PFOA	390696.3	0.782	1.163	10.004	6.725	67.2	70.0-130.0	OOS
E13C8-PFOS	49257.2	13C4-PFOS	80530.7	0.612	0.865	10.004	7.070	70.7	70.0-130.0	

APPROVED
By DMW at 8:00 pm, 5/17/17

REVIEWED
By UMJS at 8:50 pm, 5/21/17

ICAL Name: 17MAY10MCAL **Result Table:** 17129008 5/17/2017 7:53:11 PM
QMethod Name: PFCMOD-17JAN28 **Acquisition Method:** PFC-32-16NOV02.dam

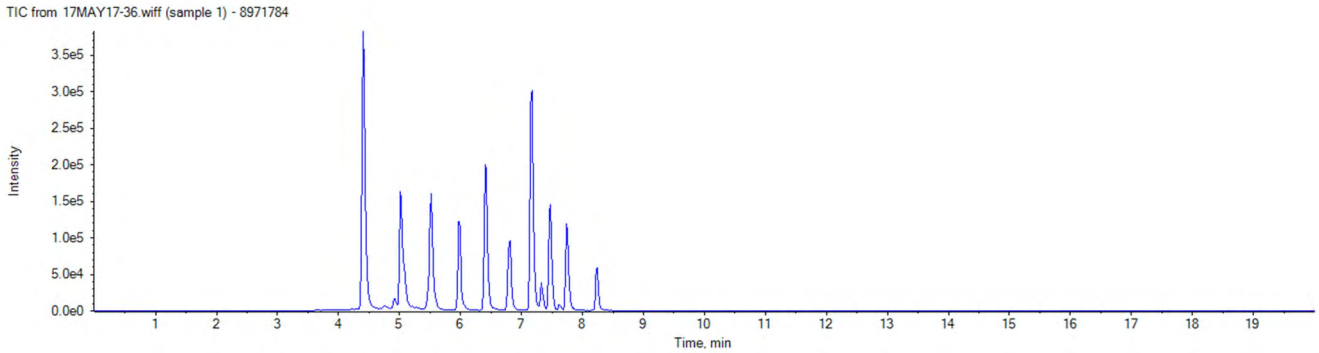
Analyte Quantitation Peak Table

Sample Name: 8971784 **Instrument Name:** LM24960 **File Name:** 17MAY17-36.wiff

Sample Wt	Sample Vol	Dilution Factor	PrepFactor
0.09996	1.000	1.00	1.000

Analytet Name	RT	RRT	Analyte Area Response	Int Typ	ES Name	ES RT	ES Area Response	Area Ratio	Sample Result (ng/L)
PFOA	N/A	N/A	N/A	A	13C8-PFOA	6.42	305547.1	N/A	
PFOS	N/A	N/A	N/A	A	13C8-PFOS	6.79	49257.2	N/A	

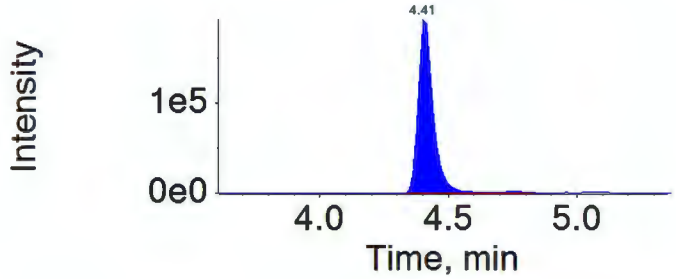
Total Ion Chromatogram



ICAL Name: 17MAY10MCAL
QMethod Name: PFCMOD-17JAN28
Result Table: 17129008 5/17/2017 7:53:11 PM
Acquisition Method: PFC-32-16NOV02.dam

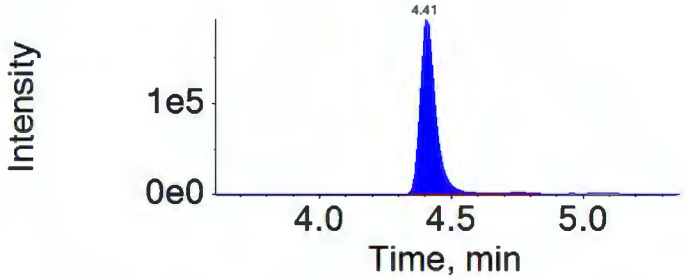
Injection Standard: I13C3-PFBA

216.0 / 172.0



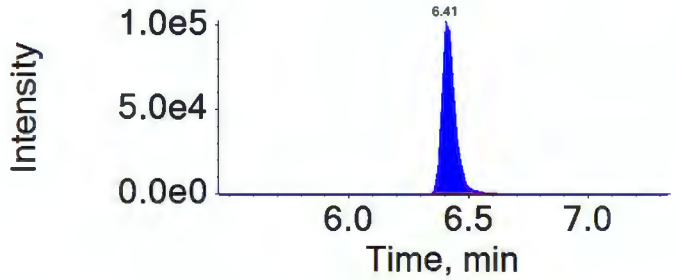
Injection Standard: 13C3-PFBA

216.0 / 172.0



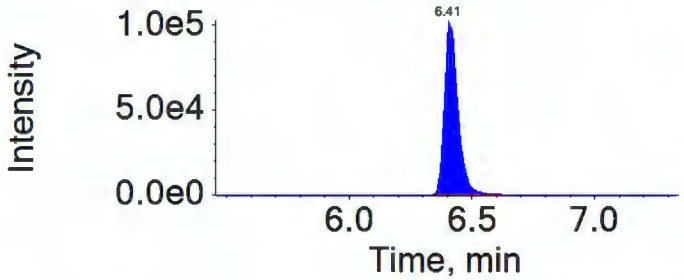
Injection Standard: I13C2-PFOA

415.0 / 370.0



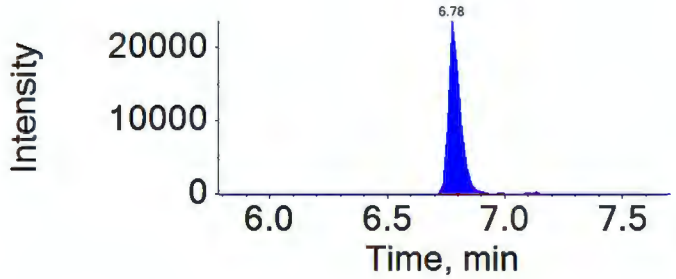
Injection Standard: 13C2-PFOA

415.0 / 370.0



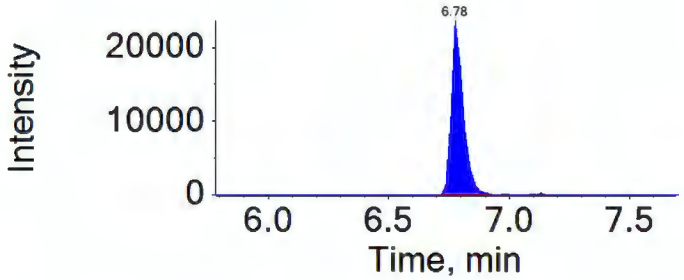
Injection Standard: I13C4-PFOS

503.0 / 99.0



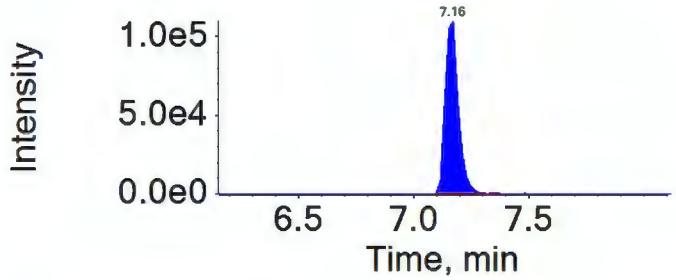
Injection Standard: 13C4-PFOS

503.0 / 99.0



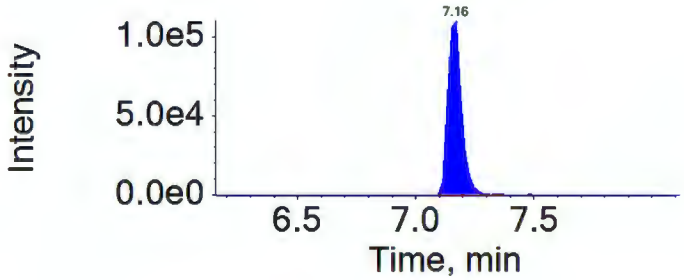
Injection Standard: I13C2-PFDA

515.0 / 470.0



Injection Standard: 13C2-PFDA

515.0 / 470.0



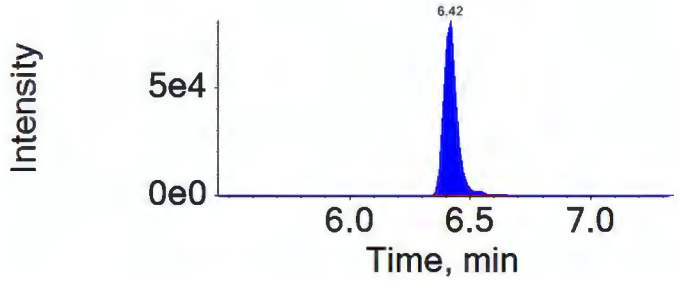
APPROVED
By DMW at 8:00 pm, 5/17/17

REVIEWED
By UMJS at 8:50 pm, 5/21/17

ICAL Name: 17MAY10MCAL **Result Table:** 17129008 5/17/2017 7:53:11 PM
QMethod Name: PFCMOD-17JAN28 **Acquisition Method:** PFC-32-16NOV02.dam

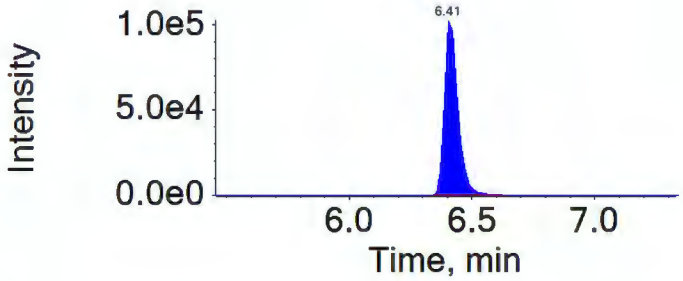
Extraction Standard: E13C8-PFOA

421.0 /
376.0



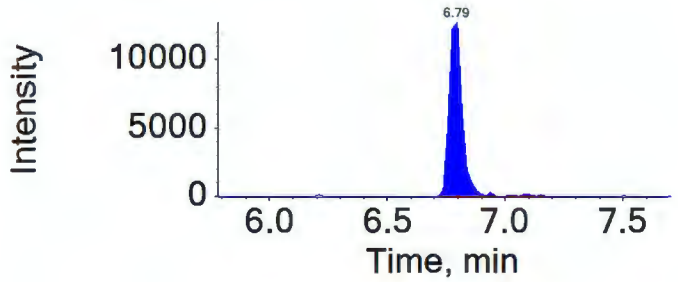
Injection Standard: 13C2-PFOA

415.0 /
370.0



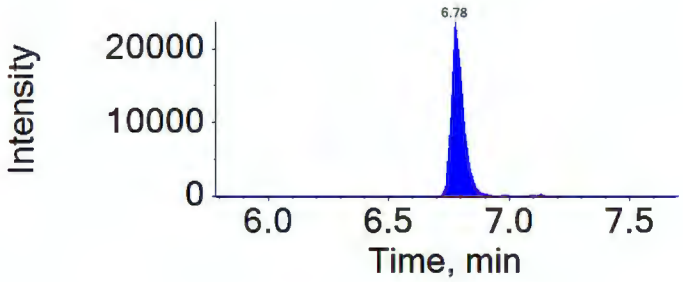
Extraction Standard: E13C8-PFOS

507.0 /
99.0



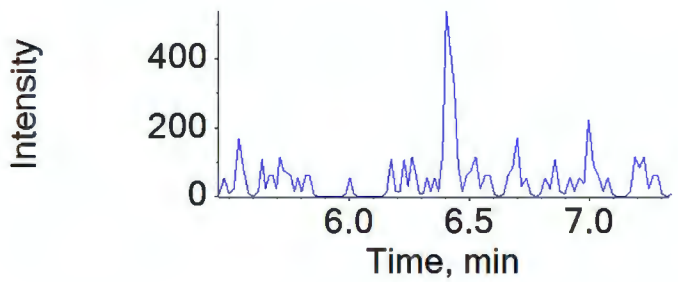
Injection Standard: 13C4-PFOS

503.0 /
99.0



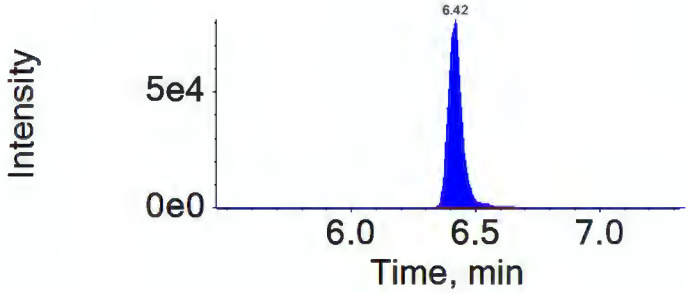
Analyte: PFOA

413.0 /
369.0



Extraction Standard: 13C8-PFOA

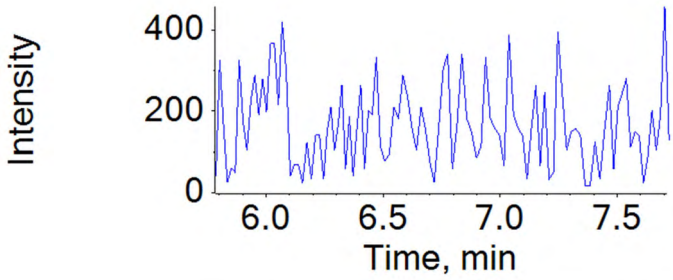
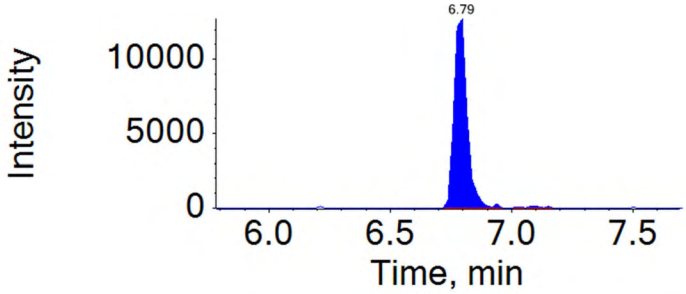
421.0 /
376.0



APPROVED
By DMW at 8:00 pm, 5/17/17

REVIEWED
By UMJS at 8:50 pm, 5/21/17

ICAL Name: 17MAY10MCAL **Result Table:** 17129008 5/17/2017 7:53:11 PM
QMethod Name: PFCMOD-17JAN28 **Acquisition Method:** PFC-32-16NOV02.dam

Analyte: PFOS	Extraction Standard: 13C8-PFOS
499.0 / 80.0 	507.0 / 99.0 

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LC-MS/MS Analysis Report

Printed: 5/17/2017 7:55:00 PM
Template: MQ-Sample-16Nov21.docx

ICAL Name: 17MAY10MCAL
QMethod Name: PFCMOD-17JAN28
Result Table: 17129008 5/17/2017 7:53:11 PM
Acquisition Method: PFC-32-16NOV02.dam

Sample Name:	8971785			**Data File:**		17MAY17-37.wiff
Sample ID:	EPA 537 Rev. 1.1 modified 17129008 17MC-PW018-P3-0501 Grab Groundwater			**Acquis Date:**		2017-05-17T12:59:14
Sample Type:	Unknown			**Instrument:**		LM24960
Vial Position:	78			**Acquis Method:**		PFC-32-16NOV02.dam
Injection Vol:	5.00			**Result Table:**		17129008
QMethod File:	PFCMOD-17JAN28			**ICAL Name:**		17MAY10MCAL
Batch Number:	17129008			**Operator:**		Not calculated
Sample Wt.:	0.09964			**Dilution Factor:**		1.00
Sample Vol.:	1.000			**Prep Factor:**		1.000

Injection Standard Peak Table

Injection Standard Name	Inj Std Conc	Injection Std Peak Area	ICAL Injection Standard AVG	Injection Std %Diff	Injection Std %Diff Limit	Injection Std %Diff OOS
I13C3-PFBA	1.0	779058.2	669117.3	16.4	50.0	
I13C2-PFOA	1.0	397600.4	342184.6	16.2	50.0	
I13C4-PFOS	1.0	82460.9	70131.6	17.6	50.0	
I13C2-PFDA	1.0	453984.1	384098.7	18.2	50.0	

Extraction Standard Peak Table

Extraction Standard Name	Ext Std Area	Inj Std Name	Inj Std Area	Area Ratio	AVG Area Ratio	Ext Std Conc	Ext Std Result	Ext Std %REC	Ext Std %REC Limit	Ext Std OOS
E13C8-PFOA	341778.7	13C2-PFOA	397600.4	0.860	1.163	10.036	7.415	73.9	70.0-130.0	
E13C8-PFOS	48542.0	13C4-PFOS	82460.9	0.589	0.865	10.036	6.826	68.0	70.0-130.0	OOS

APPROVED
By DMW at 8:00 pm, 5/17/17

REVIEWED
By UMJS at 8:50 pm, 5/21/17

ICAL Name: 17MAY10MCAL **Result Table:** 17129008 5/17/2017 7:53:11 PM
QMethod Name: PFCMOD-17JAN28 **Acquisition Method:** PFC-32-16NOV02.dam

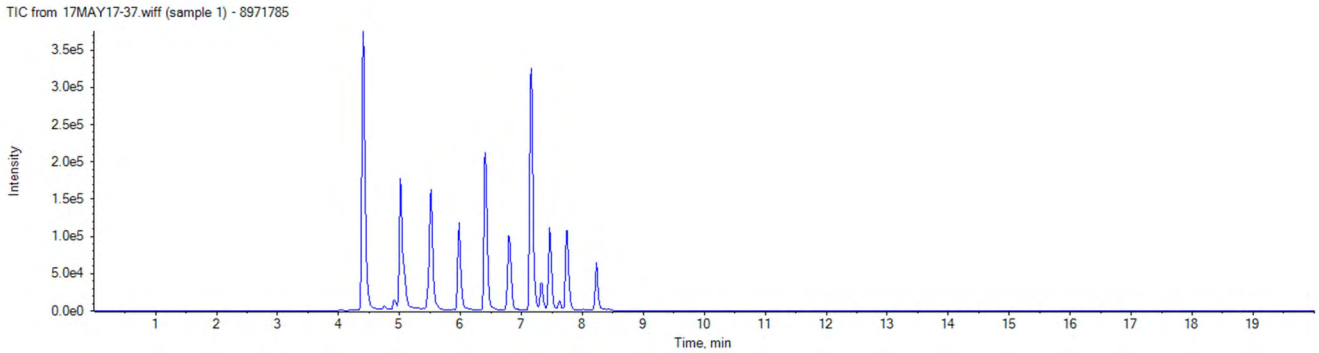
Analyte Quantitation Peak Table

Sample Name: 8971785 **Instrument Name:** LM24960 **File Name:** 17MAY17-37.wiff

Sample Wt	Sample Vol	Dilution Factor	PrepFactor
0.09964	1.000	1.00	1.000

Analytet Name	RT	RRT	Analyte Area Response	Int Typ	ES Name	ES RT	ES Area Response	Area Ratio	Sample Result (ng/L)
PFOA	N/A	N/A	N/A	A	13C8-PFOA	6.41	341778.7	N/A	
PFOS	N/A	N/A	N/A	A	13C8-PFOS	6.78	48542.0	N/A	

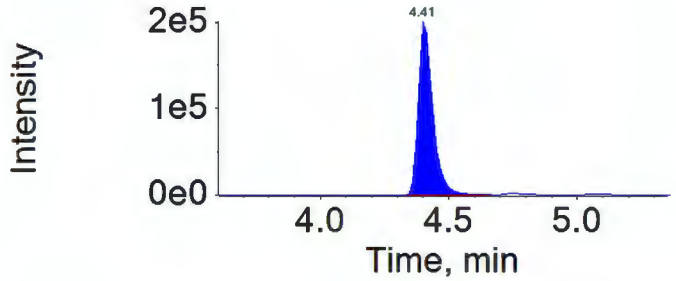
Total Ion Chromatogram



ICAL Name: 17MAY10MCAL
QMethod Name: PFCMOD-17JAN28
Result Table: 17129008 5/17/2017 7:53:11 PM
Acquisition Method: PFC-32-16NOV02.dam

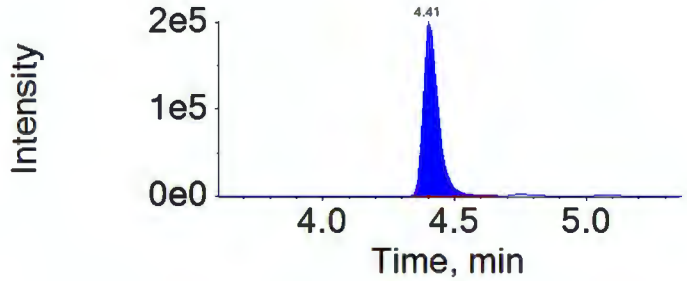
Injection Standard: I13C3-PFBA

216.0 / 172.0



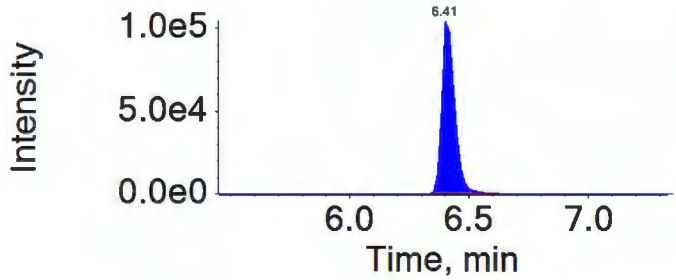
Injection Standard: 13C3-PFBA

216.0 / 172.0



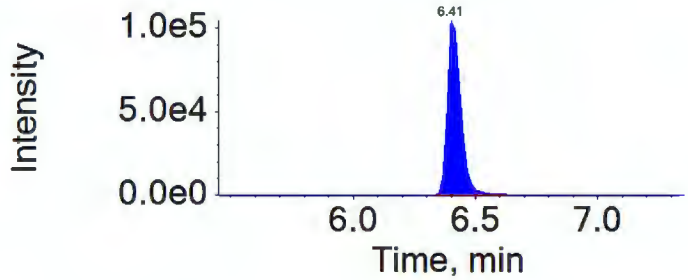
Injection Standard: I13C2-PFOA

415.0 / 370.0



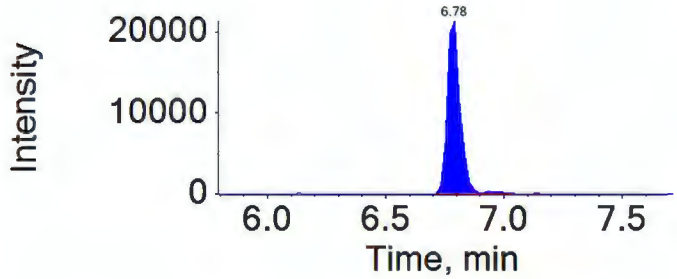
Injection Standard: 13C2-PFOA

415.0 / 370.0



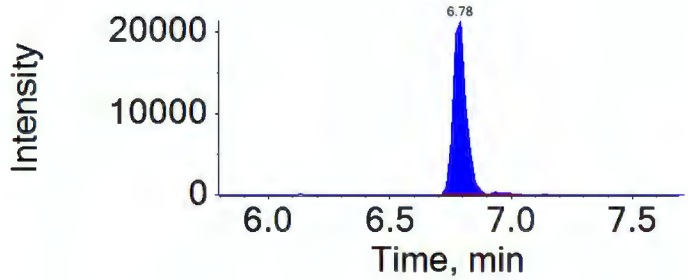
Injection Standard: I13C4-PFOS

503.0 / 99.0



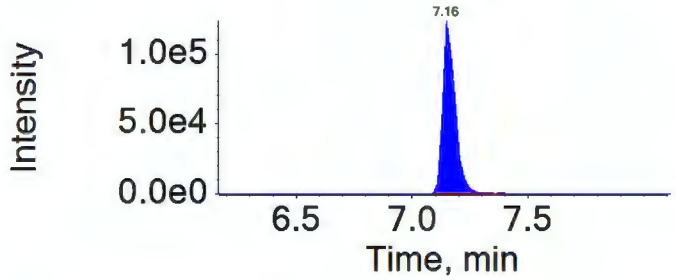
Injection Standard: 13C4-PFOS

503.0 / 99.0



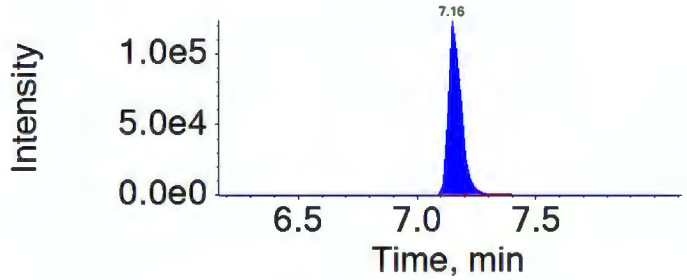
Injection Standard: I13C2-PFDA

515.0 / 470.0



Injection Standard: 13C2-PFDA

515.0 / 470.0



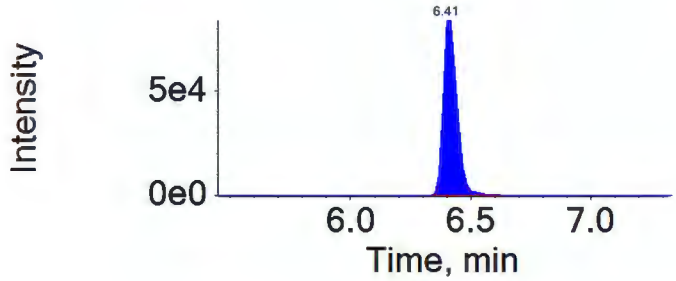
APPROVED
By DMW at 8:00 pm, 5/17/17

REVIEWED
By UMJS at 8:50 pm, 5/21/17

ICAL Name: 17MAY10MCAL **Result Table:** 17129008 5/17/2017 7:53:11 PM
QMethod Name: PFCMOD-17JAN28 **Acquisition Method:** PFC-32-16NOV02.dam

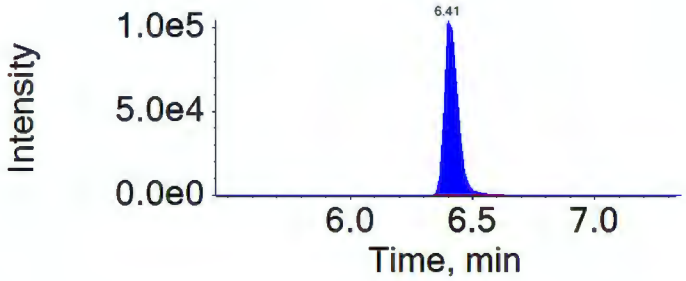
Extraction Standard: E13C8-PFOA

421.0 /
376.0



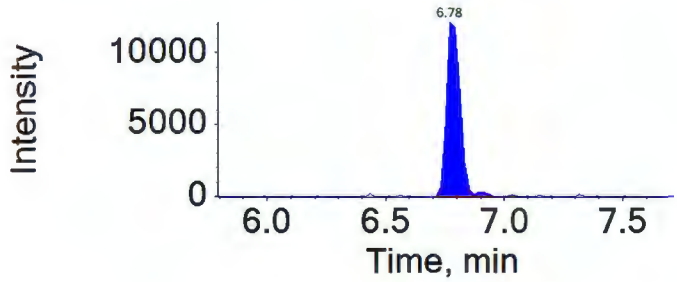
Injection Standard: 13C2-PFOA

415.0 /
370.0



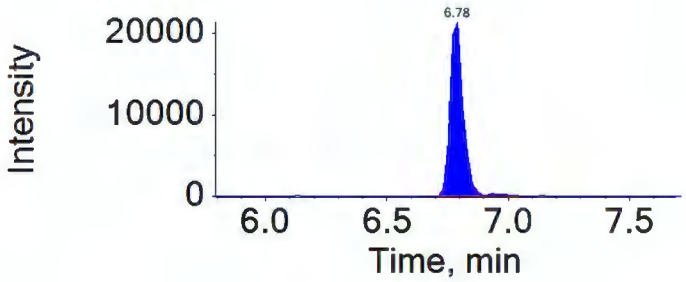
Extraction Standard: E13C8-PFOS

507.0 /
99.0



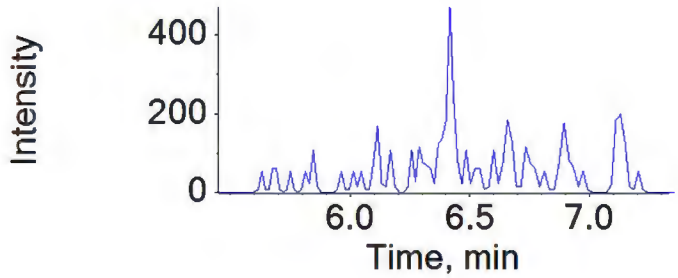
Injection Standard: 13C4-PFOS

503.0 /
99.0



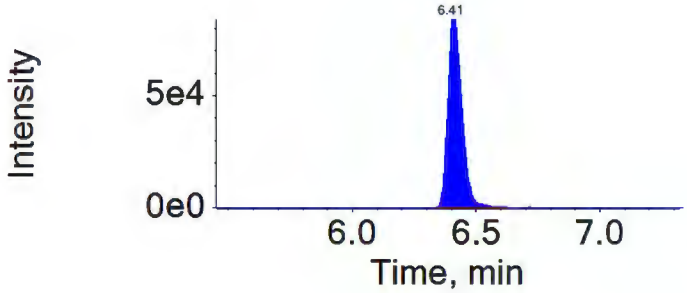
Analyte: PFOA

413.0 /
369.0



Extraction Standard: 13C8-PFOA

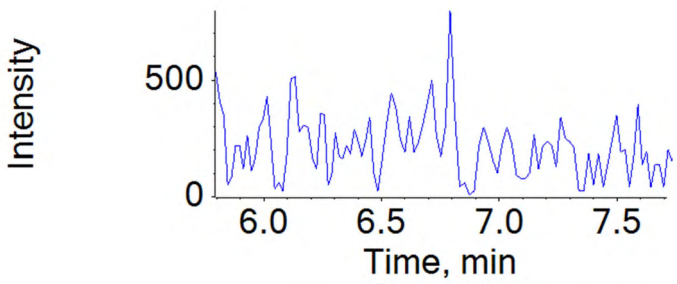
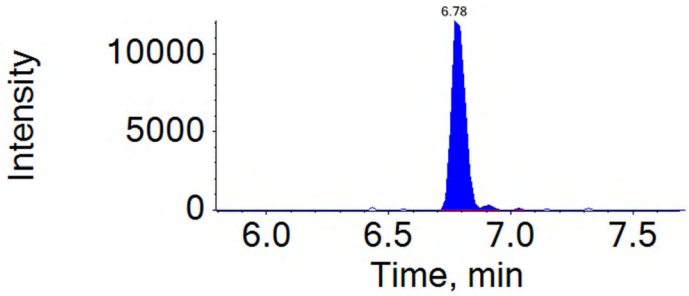
421.0 /
376.0



APPROVED
By DMW at 8:00 pm, 5/17/17

REVIEWED
By UMJS at 8:50 pm, 5/21/17

ICAL Name: 17MAY10MCAL **Result Table:** 17129008 5/17/2017 7:53:11 PM
QMethod Name: PFCMOD-17JAN28 **Acquisition Method:** PFC-32-16NOV02.dam

Analyte: PFOS	Extraction Standard: 13C8-PFOS
499.0 / 80.0 	507.0 / 99.0 

APPROVED
By DMW at 8:00 pm, 5/17/17

REVIEWED
By UMJS at 8:50 pm, 5/21/17

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LC-MS/MS Analysis Report

Printed: 5/17/2017 7:55:00 PM
Template: MQ-Sample-16Nov21.docx

ICAL Name: 17MAY10MCAL
QMethod Name: PFCMOD-17JAN28
Result Table: 17129008 5/17/2017 7:53:11 PM
Acquisition Method: PFC-32-16NOV02.dam

Sample Name:	8971786			**Data File:**		17MAY17-38.wiff
Sample ID:	EPA 537 Rev. 1.1 modified 17129008 17MC-PW021-P10-0501 Grab Groundwater			**Acquis Date:**		2017-05-17T13:19:47
Sample Type:	Unknown			**Instrument:**		LM24960
Vial Position:	79			**Acquis Method:**		PFC-32-16NOV02.dam
Injection Vol:	5.00			**Result Table:**		17129008
QMethod File:	PFCMOD-17JAN28			**ICAL Name:**		17MAY10MCAL
Batch Number:	17129008			**Operator:**		Not calculated
Sample Wt.:	0.10041			**Dilution Factor:**		1.00
Sample Vol.:	1.000			**Prep Factor:**		1.000

Injection Standard Peak Table

Injection Standard Name	Inj Std Conc	Injection Std Peak Area	ICAL Injection Standard AVG	Injection Std %Diff	Injection Std %Diff Limit	Injection Std %Diff OOS
I13C3-PFBA	1.0	786765.3	669117.3	17.6	50.0	
I13C2-PFOA	1.0	431675.1	342184.6	26.2	50.0	
I13C4-PFOS	1.0	86836.3	70131.6	23.8	50.0	
I13C2-PFDA	1.0	539423.7	384098.7	40.4	50.0	

Extraction Standard Peak Table

Extraction Standard Name	Ext Std Area	Inj Std Name	Inj Std Area	Area Ratio	AVG Area Ratio	Ext Std Conc	Ext Std Result	Ext Std %REC	Ext Std %REC Limit	Ext Std OOS
E13C8-PFOA	341575.4	13C2-PFOA	431675.1	0.791	1.163	9.959	6.774	68.0	70.0-130.0	OOS
E13C8-PFOS	46765.9	13C4-PFOS	86836.3	0.539	0.865	9.959	6.197	62.2	70.0-130.0	OOS

APPROVED
By DMW at 8:00 pm, 5/17/17

REVIEWED
By UMJS at 8:50 pm, 5/21/17

ICAL Name: 17MAY10MCAL **Result Table:** 17129008 5/17/2017 7:53:11 PM
QMethod Name: PFCMOD-17JAN28 **Acquisition Method:** PFC-32-16NOV02.dam

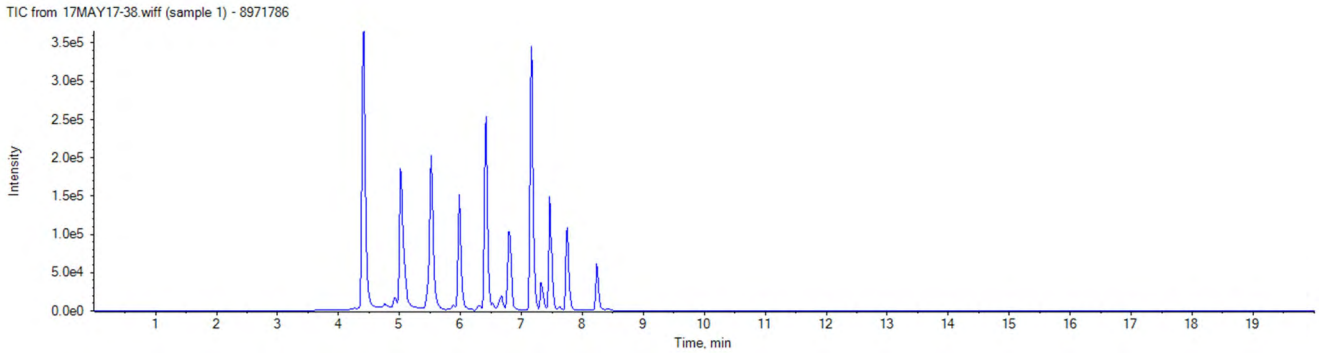
Analyte Quantitation Peak Table

Sample Name: 8971786 **Instrument Name:** LM24960 **File Name:** 17MAY17-38.wiff

Sample Wt	Sample Vol	Dilution Factor	PrepFactor
0.10041	1.000	1.00	1.000

Analytet Name	RT	RRT	Analyte Area Response	Int Typ	ES Name	ES RT	ES Area Response	Area Ratio	Sample Result (ng/L)
PFOA	6.42	1.000	52129.7	A	13C8-PFOA	6.42	341575.4	0.153	6.925
PFOS	6.69	0.990	127525.4	M	13C8-PFOS	6.79	46765.9	2.727	37.772

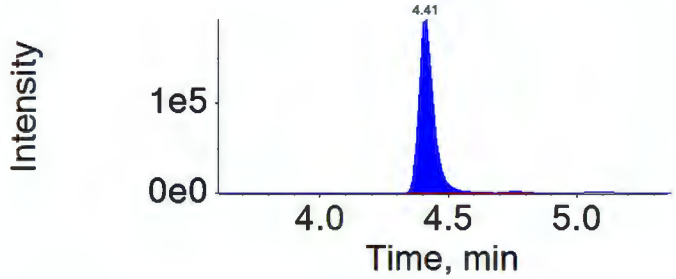
Total Ion Chromatogram



ICAL Name: 17MAY10MCAL
QMethod Name: PFCMOD-17JAN28
Result Table: 17129008 5/17/2017 7:53:11 PM
Acquisition Method: PFC-32-16NOV02.dam

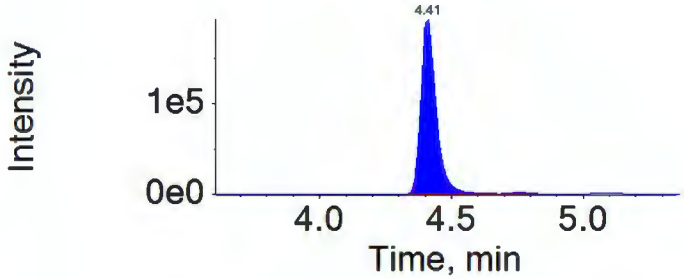
Injection Standard: I13C3-PFBA

216.0 / 172.0



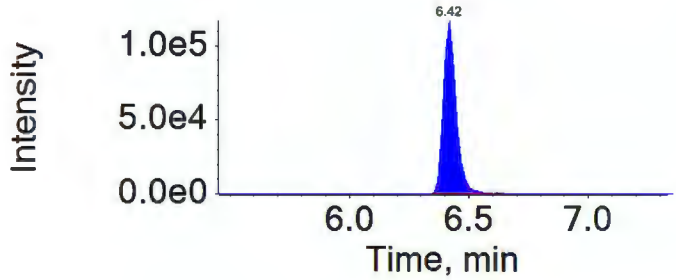
Injection Standard: 13C3-PFBA

216.0 / 172.0



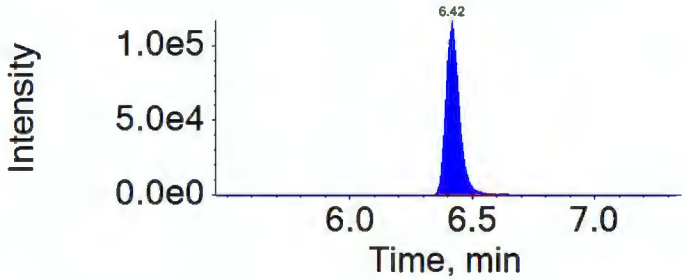
Injection Standard: I13C2-PFOA

415.0 / 370.0



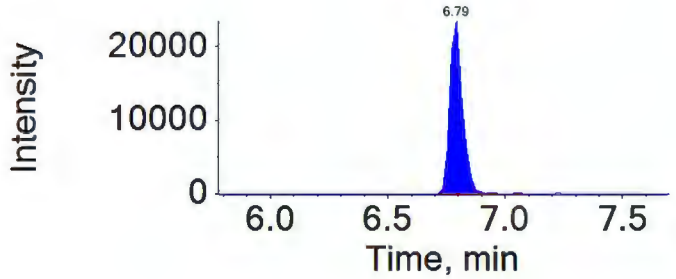
Injection Standard: 13C2-PFOA

415.0 / 370.0



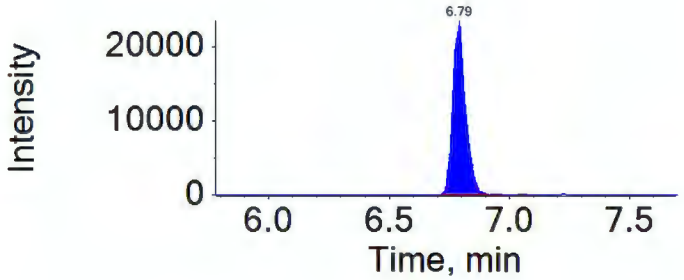
Injection Standard: I13C4-PFOS

503.0 / 99.0



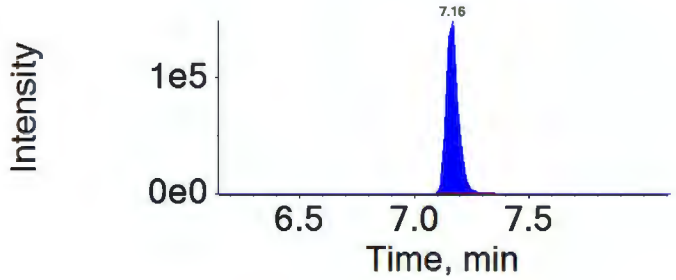
Injection Standard: 13C4-PFOS

503.0 / 99.0



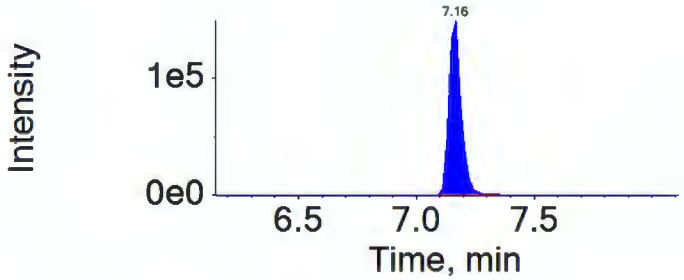
Injection Standard: I13C2-PFDA

515.0 / 470.0



Injection Standard: 13C2-PFDA

515.0 / 470.0



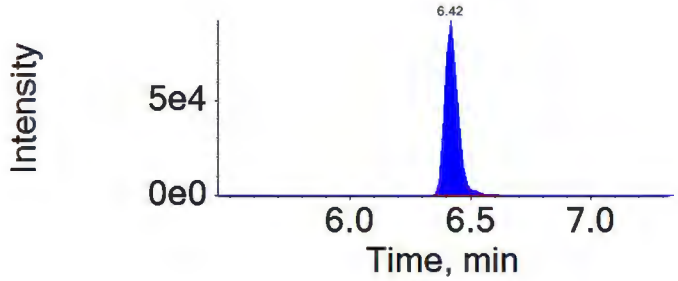
APPROVED
By DMW at 8:00 pm, 5/17/17

REVIEWED
By UMJS at 8:50 pm, 5/21/17

ICAL Name: 17MAY10MCAL **Result Table:** 17129008 5/17/2017 7:53:11 PM
QMethod Name: PFCMOD-17JAN28 **Acquisition Method:** PFC-32-16NOV02.dam

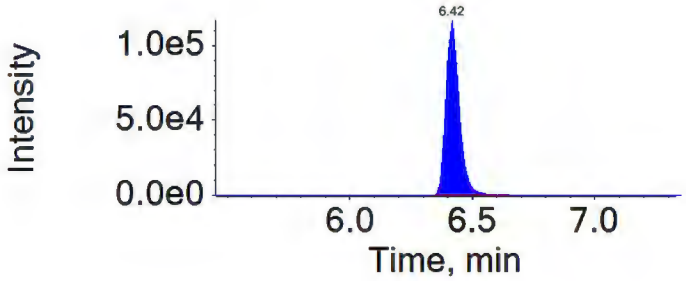
Extraction Standard: E13C8-PFOA

421.0 /
376.0



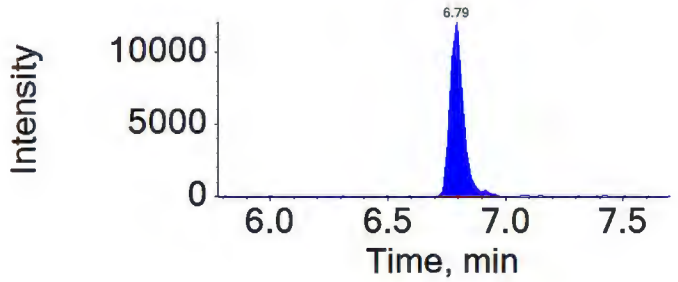
Injection Standard: 13C2-PFOA

415.0 /
370.0



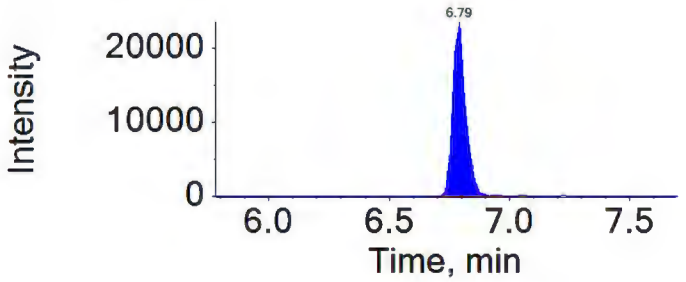
Extraction Standard: E13C8-PFOS

507.0 /
99.0



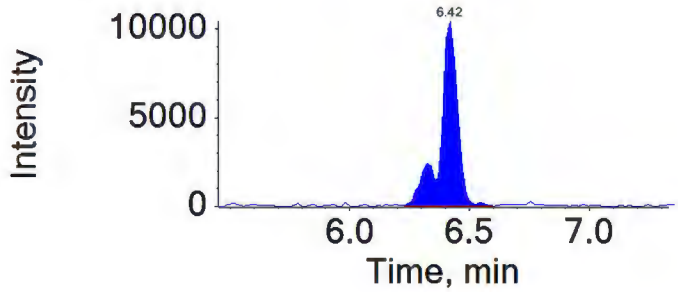
Injection Standard: 13C4-PFOS

503.0 /
99.0



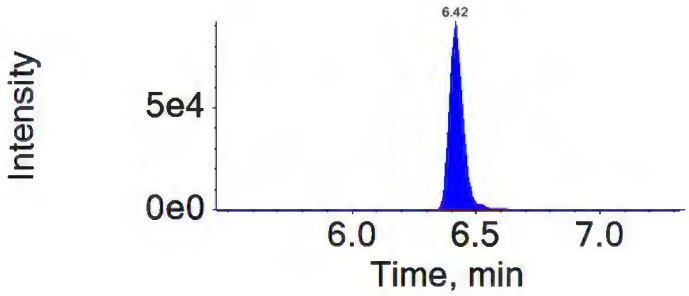
Analyte: PFOA

413.0 /
369.0



Extraction Standard: 13C8-PFOA

421.0 /
376.0

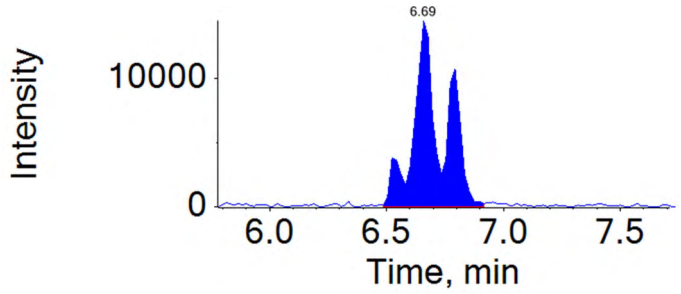


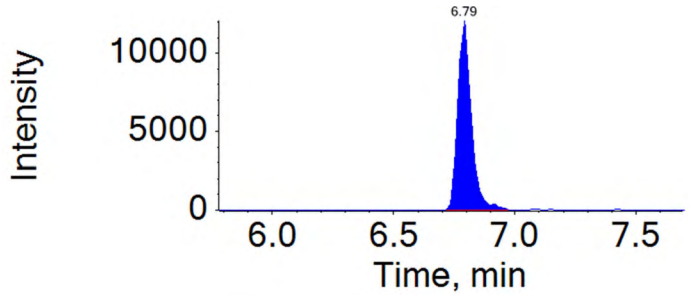
APPROVED
By DMW at 8:00 pm, 5/17/17

REVIEWED
By UMJS at 8:50 pm, 5/21/17

ICAL Name: 17MAY10MCAL **Result Table:** 17129008 5/17/2017 7:53:11 PM
QMethod Name: PFCMOD-17JAN28 **Acquisition Method:** PFC-32-16NOV02.dam

Analyte: PFOS	Extraction Standard: 13C8-PFOS
499.0 / 80.0	507.0 / 99.0





APPROVED
By DMW at 8:00 pm, 5/17/17

REVIEWED
By UMJS at 8:50 pm, 5/21/17

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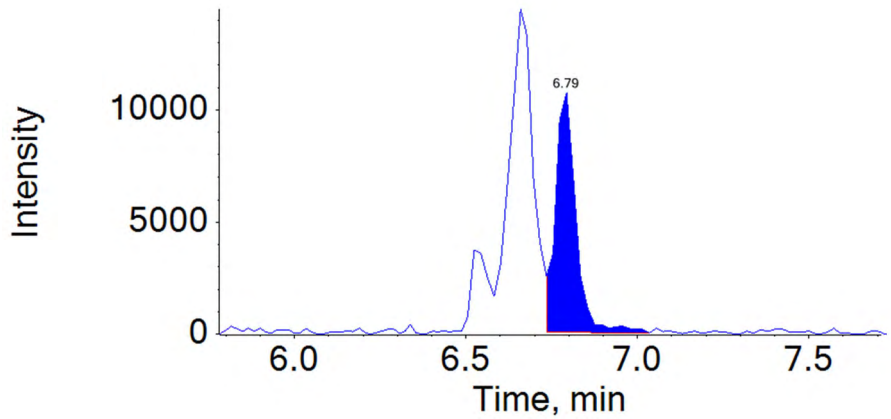
Auto Integrations prior to Manual Integration

Print Date: 05/17/2017 7:57 PM
Template: MQ-OrigInteg-16NOV21.docx

Results Table Name: 17129008
Results Table Date: 5/17/2017 7:53:11 PM

Acquisition Method: PFC-32-16NOV02.dam
QMethod File: PFCMOD-17JAN28

Component Name:
PFOS
RT (min.):
6.79
Peak Area:
44778.1
Mass Range:
499.0 / 80.0
File Name:
17MAY17-38.wiff
Sample Name:
8971786



Integration Comment: incorrect integration

APPROVED
By DMW at 8:00 pm, 5/17/17

REVIEWED
By UMJS at 8:50 pm, 5/21/17

Results Table Name: 17129008
Results Table Date: 5/17/2017 7:53:11 PM

Acquisition Method: PFC-32-16NOV02.dam
QMethod File: PFCMOD-17JAN28

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LC-MS/MS Analysis Report

Printed: 5/17/2017 7:55:00 PM
Template: MQ-Sample-16Nov21.docx

ICAL Name: 17MAY10MCAL
QMethod Name: PFCMOD-17JAN28
Result Table: 17129008 5/17/2017 7:53:11 PM
Acquisition Method: PFC-32-16NOV02.dam

Sample Name:	8971787			**Data File:**		17MAY17-41.wiff
Sample ID:	EPA 537 Rev. 1.1 modified 17129008 17MC-PW113-P7-0501 Grab Groundwater			**Acquis Date:**		2017-05-17T14:21:21
Sample Type:	Unknown			**Instrument:**		LM24960
Vial Position:	80			**Acquis Method:**		PFC-32-16NOV02.dam
Injection Vol:	5.00			**Result Table:**		17129008
QMethod File:	PFCMOD-17JAN28			**ICAL Name:**		17MAY10MCAL
Batch Number:	17129008			**Operator:**		Not calculated
Sample Wt.:	0.10010			**Dilution Factor:**		1.00
Sample Vol.:	1.000			**Prep Factor:**		1.000

Injection Standard Peak Table

Injection Standard Name	Inj Std Conc	Injection Std Peak Area	ICAL Injection Standard AVG	Injection Std %Diff	Injection Std %Diff Limit	Injection Std %Diff OOS
I13C3-PFBA	1.0	788328.9	669117.3	17.8	50.0	
I13C2-PFOA	1.0	408608.2	342184.6	19.4	50.0	
I13C4-PFOS	1.0	70928.1	70131.6	1.1	50.0	
I13C2-PFDA	1.0	441894.9	384098.7	15.0	50.0	

Extraction Standard Peak Table

Extraction Standard Name	Ext Std Area	Inj Std Name	Inj Std Area	Area Ratio	AVG Area Ratio	Ext Std Conc	Ext Std Result	Ext Std %REC	Ext Std %REC Limit	Ext Std OOS
E13C8-PFOA	340520.9	13C2-PFOA	408608.2	0.833	1.163	9.990	7.156	71.6	70.0-130.0	
E13C8-PFOS	46436.3	13C4-PFOS	70928.1	0.655	0.865	9.990	7.557	75.6	70.0-130.0	

APPROVED
By DMW at 8:00 pm, 5/17/17

REVIEWED
By UMJS at 8:51 pm, 5/21/17

ICAL Name: 17MAY10MCAL **Result Table:** 17129008 5/17/2017 7:53:11 PM
QMethod Name: PFCMOD-17JAN28 **Acquisition Method:** PFC-32-16NOV02.dam

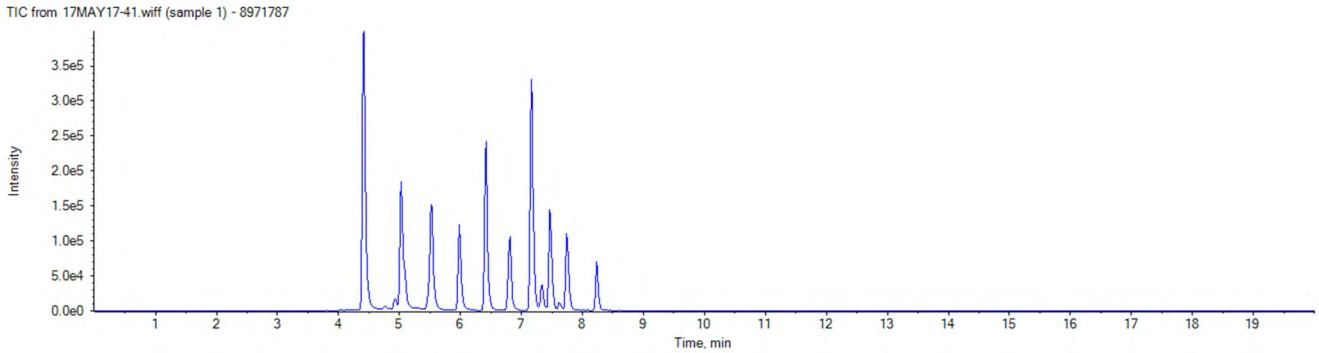
Analyte Quantitation Peak Table

Sample Name: 8971787 **Instrument Name:** LM24960 **File Name:** 17MAY17-41.wiff

Sample Wt	Sample Vol	Dilution Factor	PrepFactor
0.10010	1.000	1.00	1.000

Analytet Name	RT	RRT	Analyte Area Response	Int Typ	ES Name	ES RT	ES Area Response	Area Ratio	Sample Result (ng/L)
PFOA	N/A	N/A	N/A	A	13C8-PFOA	6.42	340520.9	N/A	
PFOS	N/A	N/A	N/A	A	13C8-PFOS	6.79	46436.3	N/A	

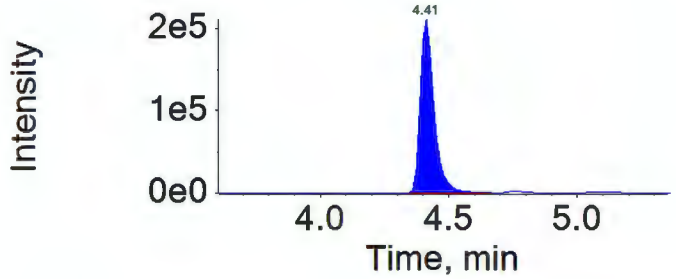
Total Ion Chromatogram



ICAL Name: 17MAY10MCAL
QMethod Name: PFCMOD-17JAN28
Result Table: 17129008 5/17/2017 7:53:11 PM
Acquisition Method: PFC-32-16NOV02.dam

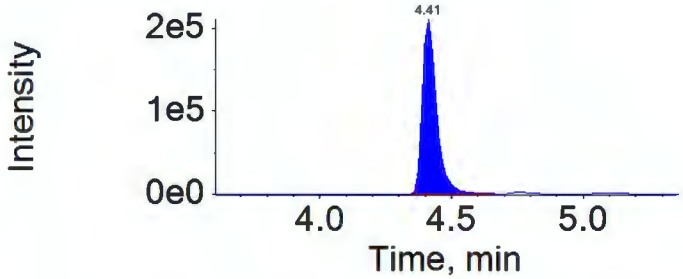
Injection Standard: I13C3-PFBA

216.0 / 172.0



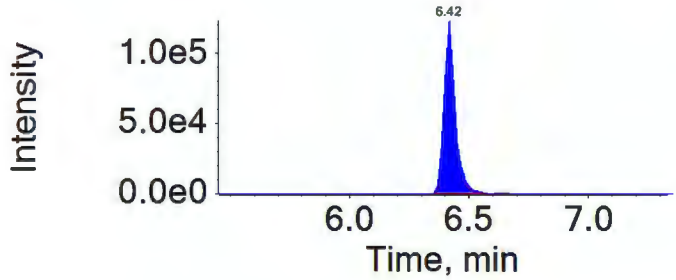
Injection Standard: 13C3-PFBA

216.0 / 172.0



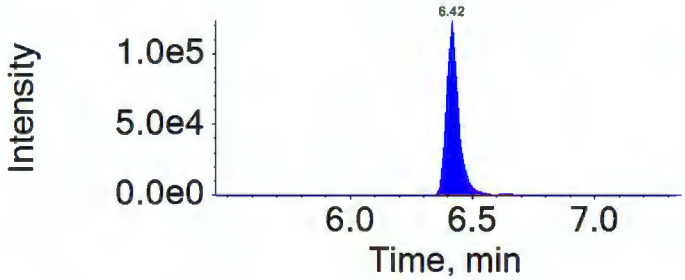
Injection Standard: I13C2-PFOA

415.0 / 370.0



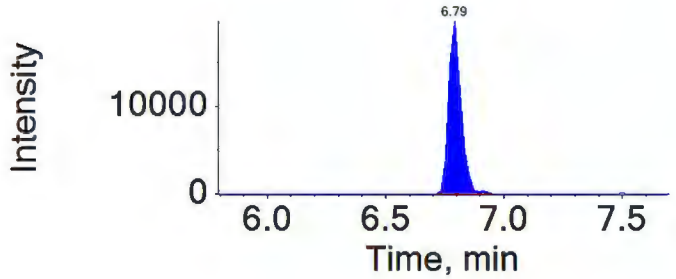
Injection Standard: 13C2-PFOA

415.0 / 370.0



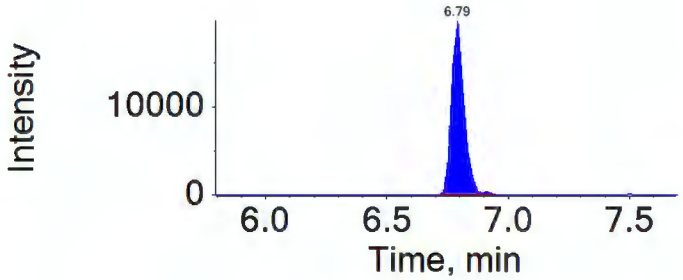
Injection Standard: I13C4-PFOS

503.0 / 99.0



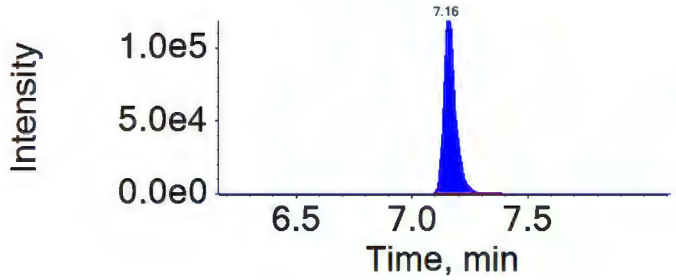
Injection Standard: 13C4-PFOS

503.0 / 99.0



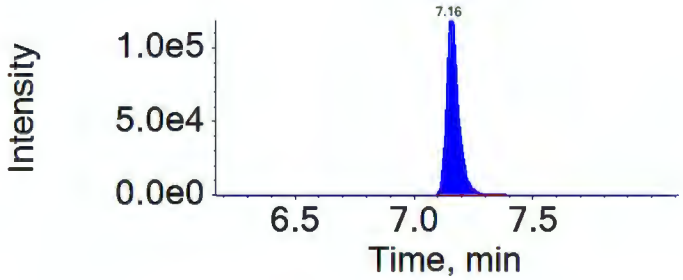
Injection Standard: I13C2-PFDA

515.0 / 470.0



Injection Standard: 13C2-PFDA

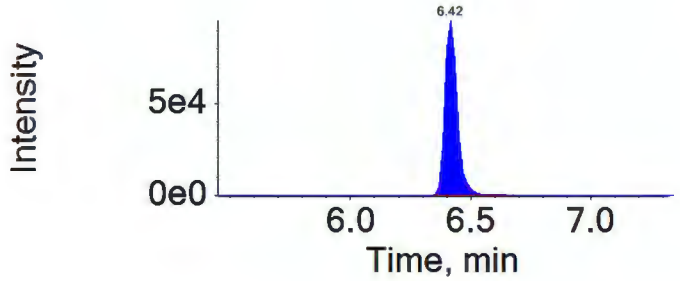
515.0 / 470.0



ICAL Name: 17MAY10MCAL **Result Table:** 17129008 5/17/2017 7:53:11 PM
QMethod Name: PFCMOD-17JAN28 **Acquisition Method:** PFC-32-16NOV02.dam

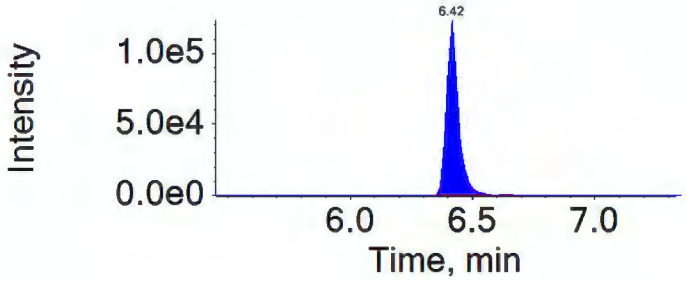
Extraction Standard: E13C8-PFOA

421.0 /
376.0



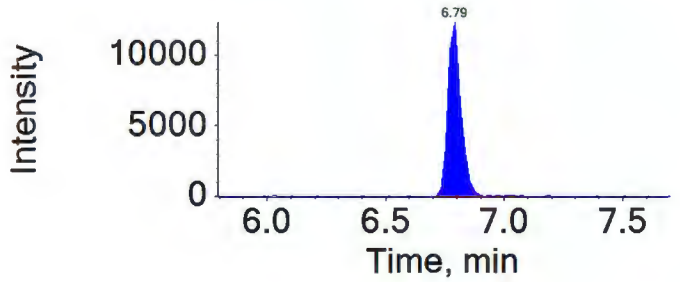
Injection Standard: 13C2-PFOA

415.0 /
370.0



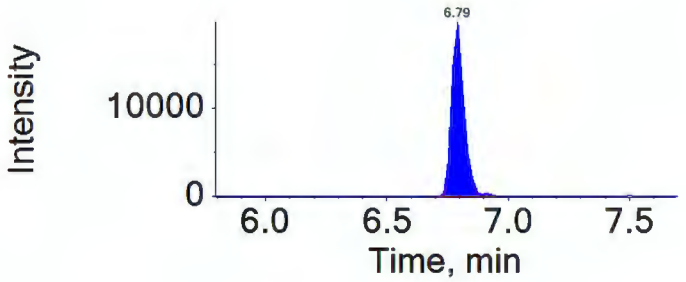
Extraction Standard: E13C8-PFOS

507.0 /
99.0



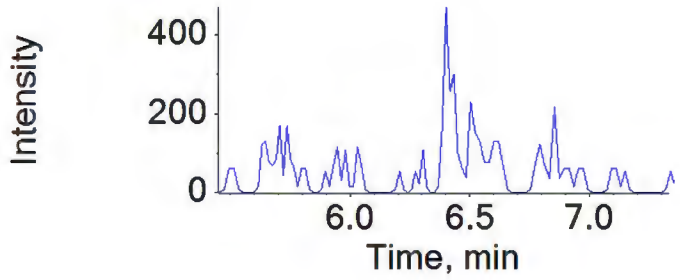
Injection Standard: 13C4-PFOS

503.0 /
99.0



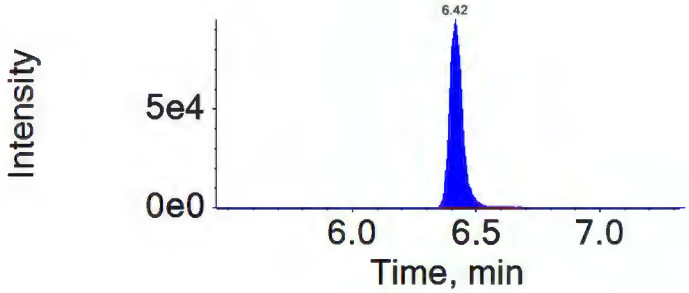
Analyte: PFOA

413.0 /
369.0



Extraction Standard: 13C8-PFOA

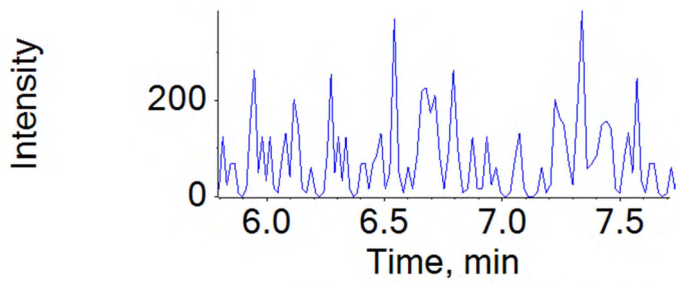
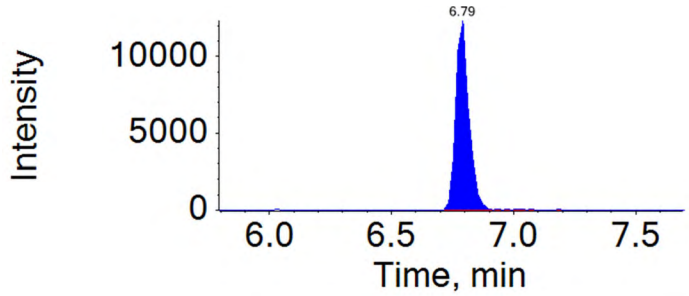
421.0 /
376.0



APPROVED
By DMW at 8:00 pm, 5/17/17

REVIEWED
By UMJS at 8:51 pm, 5/21/17

ICAL Name: 17MAY10MCAL **Result Table:** 17129008 5/17/2017 7:53:11 PM
QMethod Name: PFCMOD-17JAN28 **Acquisition Method:** PFC-32-16NOV02.dam

Analyte: PFOS	Extraction Standard: 13C8-PFOS
499.0 / 80.0 	507.0 / 99.0 

APPROVED
By DMW at 8:00 pm, 5/17/17

REVIEWED
By UMJS at 8:51 pm, 5/21/17

Standards Data

PFAS by LC/MS/MS

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LC-MS/MS Analysis Report

Printed: 5/11/2017 12:11:00 PM
Template: MQ-ICAL-16NOV21.docx

Initial Calibration Verification

Instrument ID: LM24960 **ICAL Name:** 17MAY10MCAL **QMethod Name:** PFCMOD - 17JAN28
Result Table: 17MAY10MCAL5/11/2017 12:08:01 PM **Acquisition Method:** PFC-32-16NOV02.dam

Sample File Name	Acquisition Date	Sample ID	Sample Name
17MAY10MCAL-30.wiff	5/11/2017 5:10:00 AM	CALPFC1712533B	CAL1
17MAY10MCAL-31.wiff	5/11/2017 5:30:33 AM	CALPFC1712533C	CAL2
17MAY10MCAL-32.wiff	5/11/2017 5:51:06 AM	CALPFC1712533D	CAL3
17MAY10MCAL-33.wiff	5/11/2017 6:11:39 AM	CALPFC1712533E	CAL4
17MAY10MCAL-34.wiff	5/11/2017 6:32:12 AM	CALPFC1712533F	CAL5
17MAY10MCAL-35.wiff	5/11/2017 6:52:45 AM	CALPFC1712533G	CAL6
17MAY10MCAL-36.wiff	5/11/2017 7:13:18 AM	CALPFC1712533H	CAL7

Injection Standard Averages

Sample Name	Injection Std Name	Use	Injection Std Area	AVG Area
CAL1	I13C3-PFBA	True	710384.6	669117.3
CAL2	I13C3-PFBA	True	715587.0	669117.3
CAL3	I13C3-PFBA	True	709867.2	669117.3
CAL4	I13C3-PFBA	True	693717.5	669117.3
CAL5	I13C3-PFBA	True	685309.8	669117.3
CAL6	I13C3-PFBA	True	622942.3	669117.3
CAL7	I13C3-PFBA	True	546012.6	669117.3
CAL1	I13C2-PFOA	True	348600.7	342184.6
CAL2	I13C2-PFOA	True	368771.6	342184.6
CAL3	I13C2-PFOA	True	386909.3	342184.6
CAL4	I13C2-PFOA	True	366383.9	342184.6
CAL5	I13C2-PFOA	True	325224.6	342184.6
CAL6	I13C2-PFOA	True	319261.8	342184.6
CAL7	I13C2-PFOA	True	280140.4	342184.6
CAL1	I13C4-PFOS	True	78176.0	70131.6
CAL2	I13C4-PFOS	True	79549.8	70131.6
CAL3	I13C4-PFOS	True	74874.4	70131.6
CAL4	I13C4-PFOS	True	70481.2	70131.6
CAL5	I13C4-PFOS	True	70793.3	70131.6
CAL6	I13C4-PFOS	True	66043.7	70131.6
CAL7	I13C4-PFOS	True	51002.5	70131.6
CAL1	I13C2-PFDA	True	434947.2	384098.7
CAL2	I13C2-PFDA	True	440729.8	384098.7
CAL3	I13C2-PFDA	True	424678.3	384098.7
CAL4	I13C2-PFDA	True	377735.1	384098.7
CAL5	I13C2-PFDA	True	406529.6	384098.7
CAL6	I13C2-PFDA	True	322967.2	384098.7
CAL7	I13C2-PFDA	True	281103.7	384098.7

APPROVED
By JWK at 12:34 pm, 5/11/17

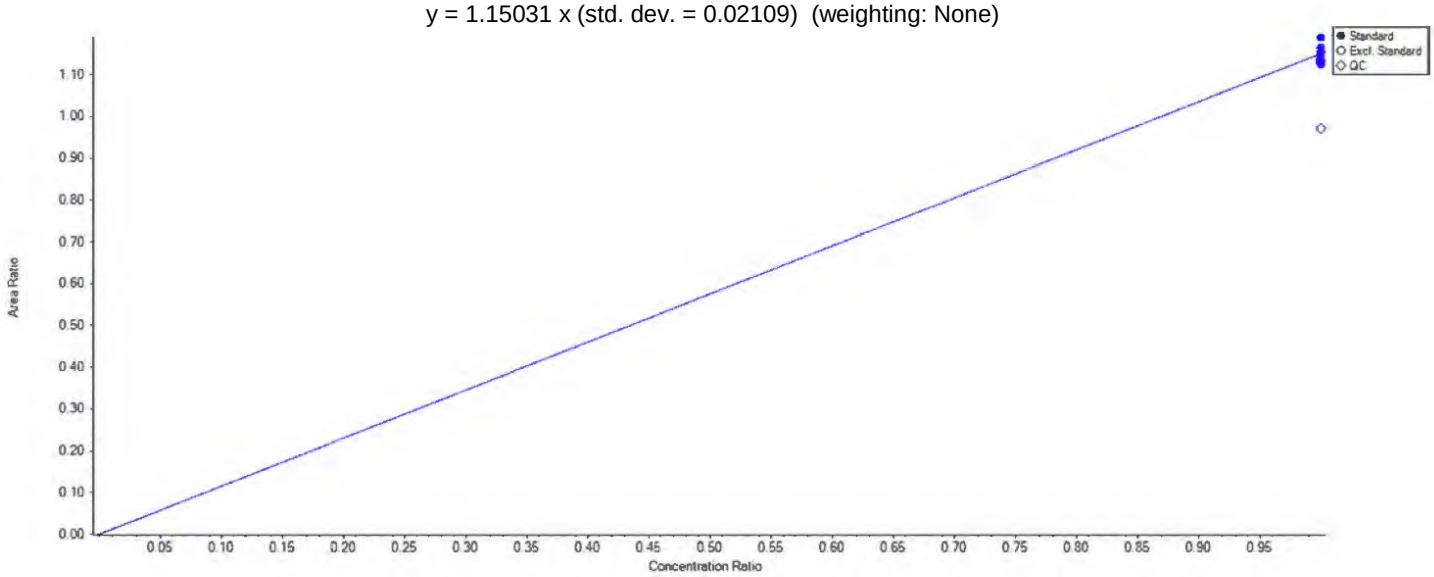
REVIEWED
By UMJS at 9:13 am, 5/15/17

Initial Calibration Verification

Instrument ID: LM24960 **ICAL Name:** 17MAY10MCAL **QMethod Name:** PFCMOD - 17JAN28
Result Table: 17MAY10MCAL5/11/2017 12:08:01 PM **Acquisition Method:** PFC-32-16NOV02.dam

E13C4-PFBA

y = 1.15031 x (std. dev. = 0.02109) (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	807995.3	710384.6	True	1.00	1.137	4.41	1.000	1.000	0.989	-1.1	50.0	
CAL2	824905.9	715587.0	True	1.00	1.153	4.40	1.000	1.000	1.002	0.2	30.0	
CAL3	807325.5	709867.2	True	1.00	1.137	4.40	1.000	1.000	0.989	-1.1	30.0	
CAL4	824776.5	693717.5	True	1.00	1.189	4.40	1.000	1.000	1.034	3.4	30.0	
CAL5	785937.4	685309.8	True	1.00	1.147	4.40	1.000	1.000	0.997	-0.3	30.0	
CAL6	725029.6	622942.3	True	1.00	1.164	4.41	1.000	1.000	1.012	1.2	30.0	
CAL7	614286.8	546012.6	True	1.00	1.125	4.40	1.000	1.000	0.978	-2.2	30.0	

APPROVED
By JWK at 12:34 pm, 5/11/17

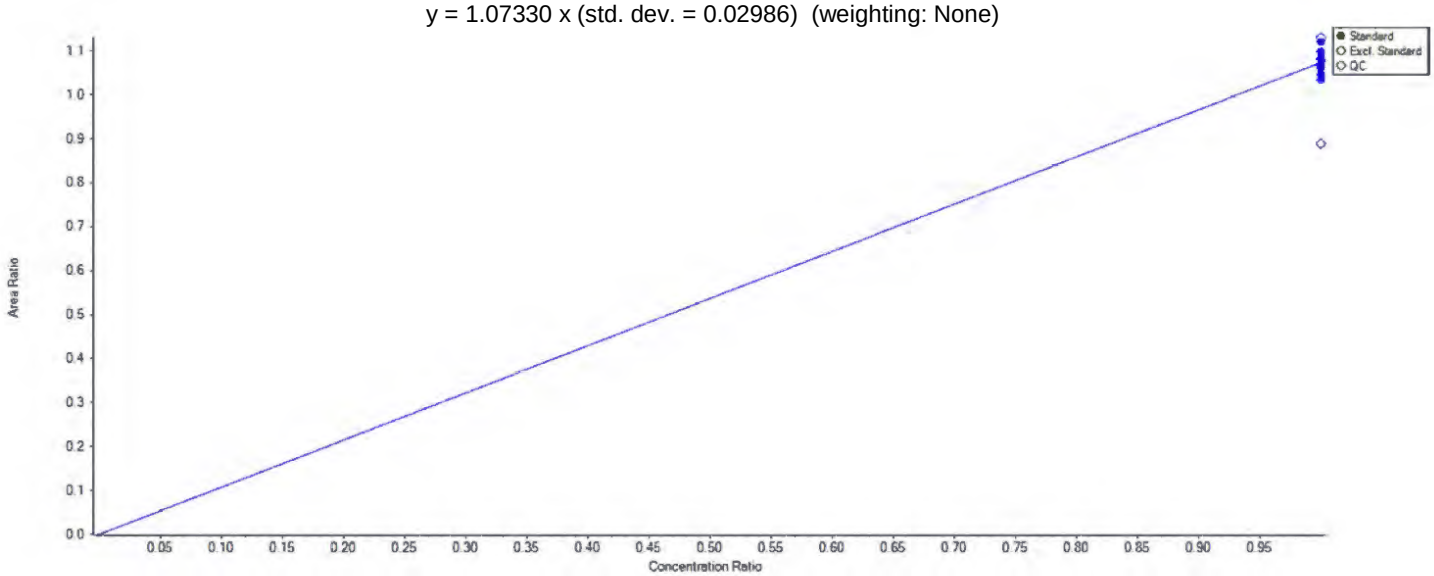
REVIEWED
By UMJS at 9:13 am, 5/15/17

Initial Calibration Verification

Instrument ID: LM24960 **ICAL Name:** 17MAY10MCAL **QMethod Name:** PFCMOD - 17JAN28
Result Table: 17MAY10MCAL5/11/2017 12:08:01 PM **Acquisition Method:** PFC-32-16NOV02.dam

E13C5-PFPeA

y = 1.07330 x (std. dev. = 0.02986) (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	758571.2	710384.6	True	1.00	1.068	5.02	1.140	1.000	0.995	-0.5	50.0	
CAL2	785581.8	715587.0	True	1.00	1.098	5.02	1.140	1.000	1.023	2.3	30.0	
CAL3	768966.1	709867.2	True	1.00	1.083	5.02	1.140	1.000	1.009	0.9	30.0	
CAL4	777844.4	693717.5	True	1.00	1.121	5.02	1.140	1.000	1.045	4.5	30.0	
CAL5	717415.2	685309.8	True	1.00	1.047	5.02	1.140	1.000	0.975	-2.5	30.0	
CAL6	661028.3	622942.3	True	1.00	1.061	5.02	1.140	1.000	0.989	-1.1	30.0	
CAL7	565090.9	546012.6	True	1.00	1.035	5.01	1.140	1.000	0.964	-3.6	30.0	

APPROVED
By JWK at 12:34 pm, 5/11/17

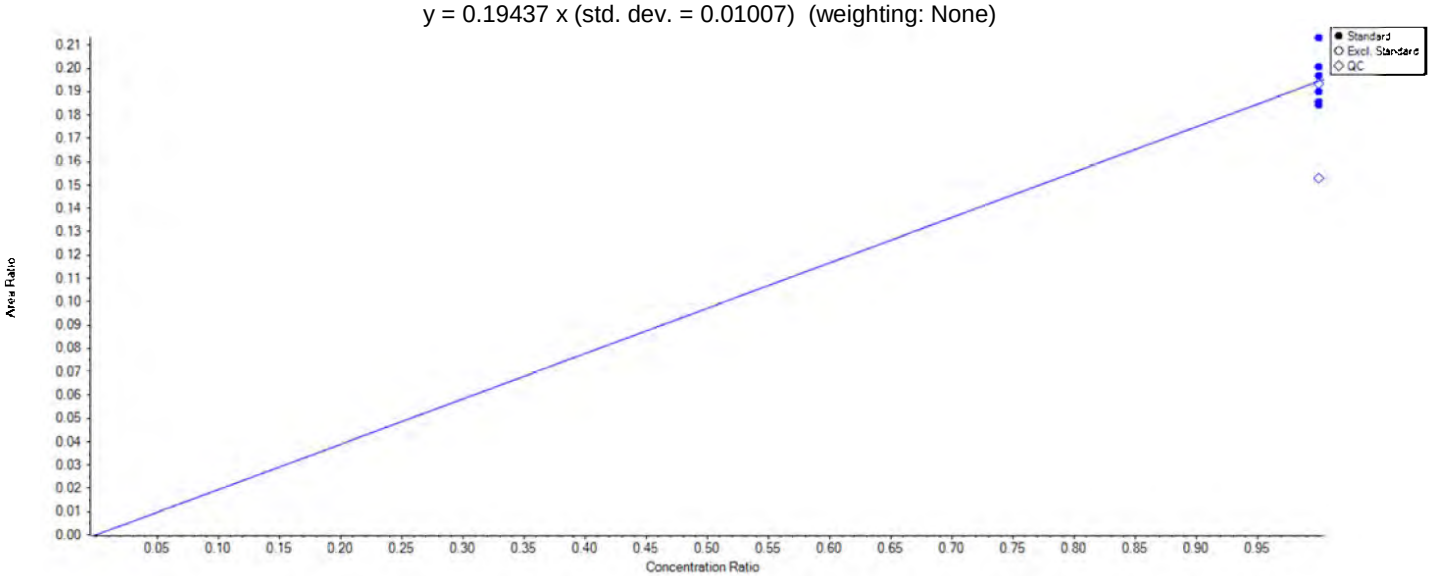
REVIEWED
By UMJS at 9:13 am, 5/15/17

Initial Calibration Verification

Instrument ID: LM24960 **ICAL Name:** 17MAY10MCAL **QMethod Name:** PFCMOD - 17JAN28
Result Table: 17MAY10MCAL5/11/2017 12:08:01 PM **Acquisition Method:** PFC-32-16NOV02.dam

E13C3-PFBS

y = 0.19437 x (std. dev. = 0.01007) (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	135038.0	710384.6	True	1.00	0.190	5.08	1.150	1.000	0.978	-2.2	50.0	
CAL2	135873.4	715587.0	True	1.00	0.190	5.08	1.150	1.000	0.977	-2.3	30.0	
CAL3	130928.4	709867.2	True	1.00	0.184	5.08	1.150	1.000	0.949	-5.1	30.0	
CAL4	139258.7	693717.5	True	1.00	0.201	5.08	1.150	1.000	1.033	3.3	30.0	
CAL5	127299.1	685309.8	True	1.00	0.186	5.08	1.150	1.000	0.956	-4.4	30.0	
CAL6	122452.7	622942.3	True	1.00	0.197	5.09	1.150	1.000	1.011	1.1	30.0	
CAL7	116360.4	546012.6	True	1.00	0.213	5.08	1.150	1.000	1.096	9.6	30.0	

APPROVED
By JWK at 12:34 pm, 5/11/17

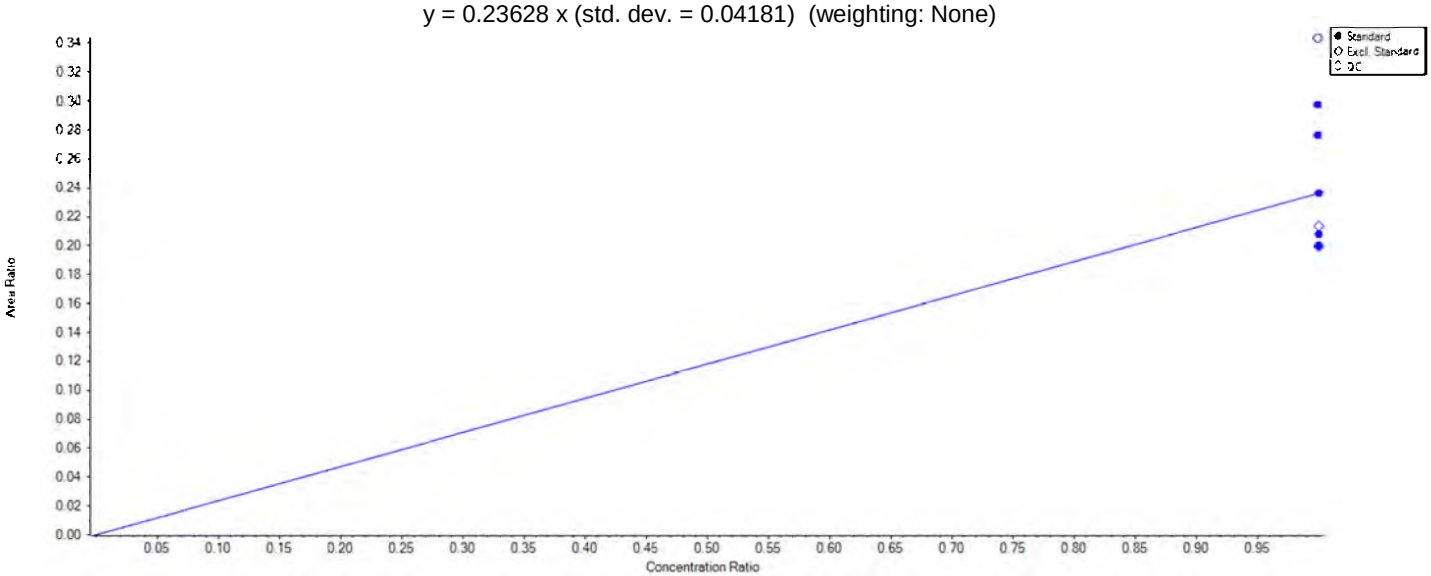
REVIEWED
By UMJS at 9:13 am, 5/15/17

Initial Calibration Verification

Instrument ID: LM24960 **ICAL Name:** 17MAY10MCAL **QMethod Name:** PFCMOD - 17JAN28
Result Table: 17MAY10MCAL5/11/2017 12:08:01 PM **Acquisition Method:** PFC-32-16NOV02.dam

E13C2-4:2-FTS

y = 0.23628 x (std. dev. = 0.04181) (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	69544.1	348600.7	True	1.00	0.200	5.47	0.850	1.000	0.844	-15.6	50.0	
CAL2	87132.1	368771.6	True	1.00	0.236	5.47	0.850	1.000	1.000	0.0	30.0	
CAL3	80474.0	386909.3	True	1.00	0.208	5.46	0.850	1.000	0.880	-12.0	30.0	
CAL4	73440.6	366383.9	True	1.00	0.200	5.47	0.850	1.000	0.848	-15.2	30.0	
CAL5	89903.3	325224.6	True	1.00	0.276	5.46	0.850	1.000	1.170	17.0	30.0	
CAL6	94831.8	319261.8	True	1.00	0.297	5.47	0.850	1.000	1.257	25.7	30.0	
CAL7	96312.2	280140.4	False	1.00	0.344	5.46	0.850	1.000	1.455	45.5	30.0	OOS

APPROVED
By JWK at 12:34 pm, 5/11/17

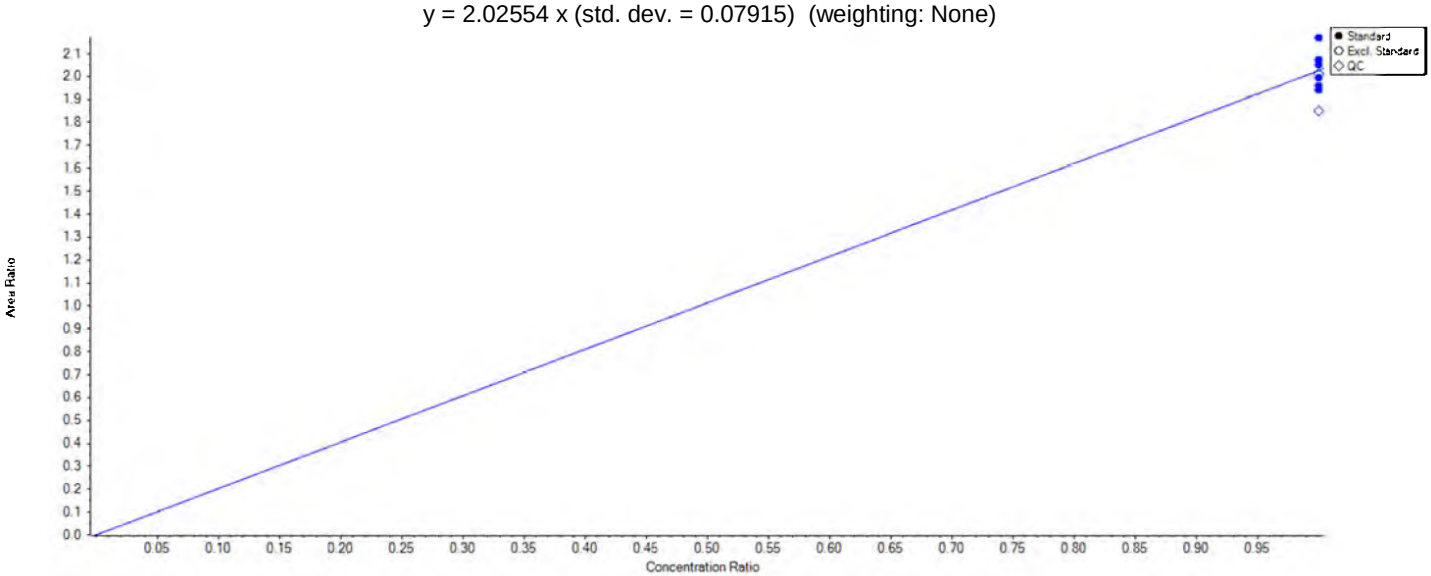
REVIEWED
By UMJS at 9:13 am, 5/15/17

Initial Calibration Verification

Instrument ID: LM24960 **ICAL Name:** 17MAY10MCAL **QMethod Name:** PFCMOD - 17JAN28
Result Table: 17MAY10MCAL5/11/2017 12:08:01 PM **Acquisition Method:** PFC-32-16NOV02.dam

E13C5-PFHxA

y = 2.02554 x (std. dev. = 0.07915) (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	756275.7	348600.7	True	1.00	2.170	5.52	0.860	1.000	1.071	7.1	50.0	
CAL2	756116.1	368771.6	True	1.00	2.050	5.51	0.860	1.000	1.012	1.2	30.0	
CAL3	770911.2	386909.3	True	1.00	1.993	5.51	0.860	1.000	0.984	-1.6	30.0	
CAL4	730037.4	366383.9	True	1.00	1.993	5.51	0.860	1.000	0.984	-1.6	30.0	
CAL5	674694.4	325224.6	True	1.00	2.075	5.51	0.860	1.000	1.024	2.4	30.0	
CAL6	625332.8	319261.8	True	1.00	1.959	5.52	0.860	1.000	0.967	-3.3	30.0	
CAL7	543660.8	280140.4	True	1.00	1.941	5.51	0.860	1.000	0.958	-4.2	30.0	

APPROVED
By JWK at 12:34 pm, 5/11/17

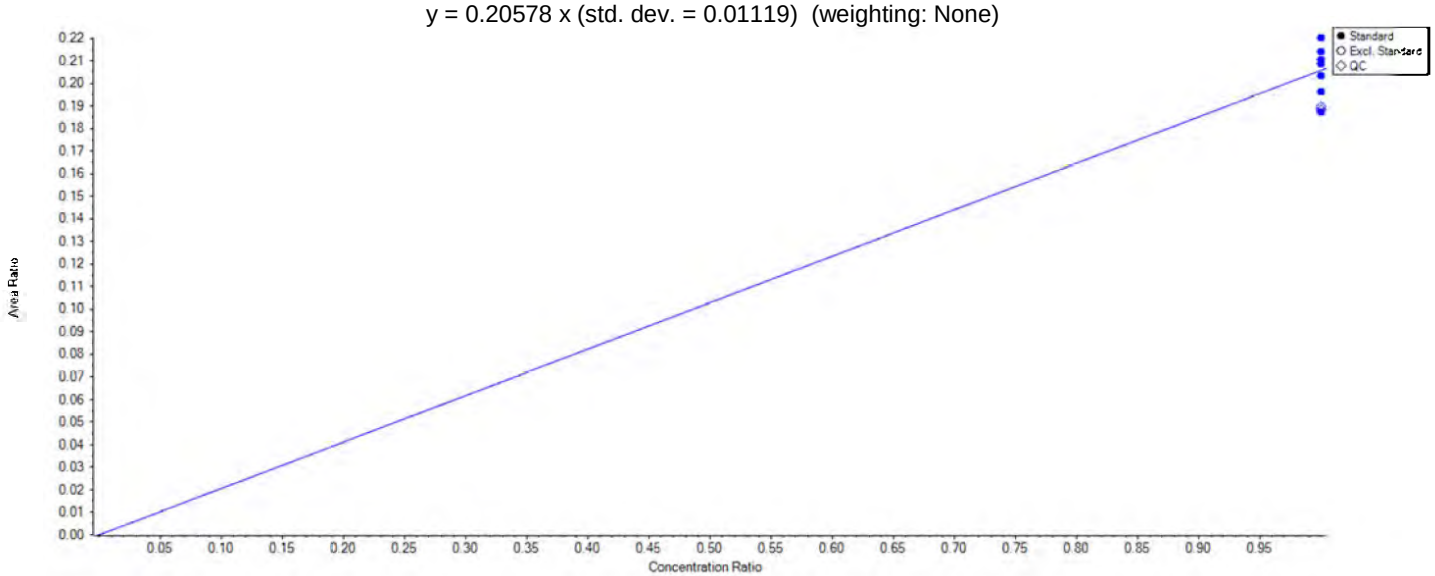
REVIEWED
By UMJS at 9:13 am, 5/15/17

Initial Calibration Verification

Instrument ID: LM24960 **ICAL Name:** 17MAY10MCAL **QMethod Name:** PFCMOD - 17JAN28
Result Table: 17MAY10MCAL5/11/2017 12:08:01 PM **Acquisition Method:** PFC-32-16NOV02.dam

E13C3-PFHxS

y = 0.20578 x (std. dev. = 0.01119) (weighting: None)



Extraction Standard Calibration Verification

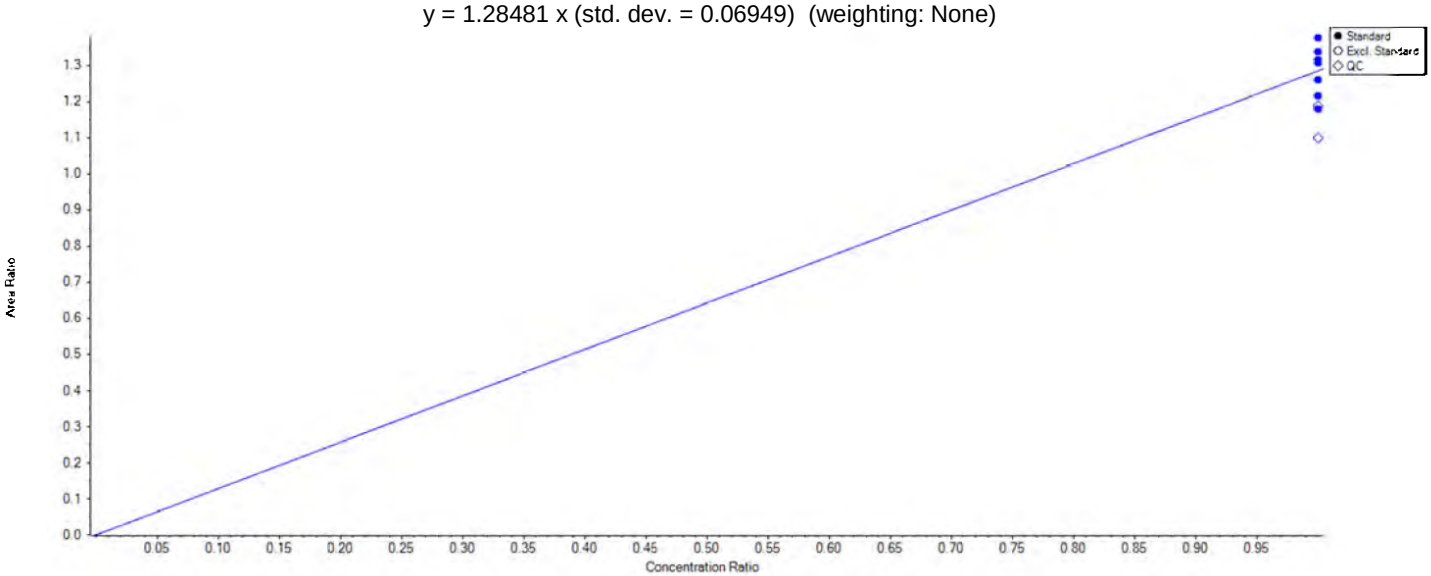
Sample Name	E13C3-PFHxS Area	13C2-PFOA Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	76785.4	348600.7	True	1.00	0.220	5.98	0.930	1.000	1.070	7.0	50.0	
CAL2	74996.3	368771.6	True	1.00	0.203	5.97	0.930	1.000	0.988	-1.2	30.0	
CAL3	75886.9	386909.3	True	1.00	0.196	5.97	0.930	1.000	0.953	-4.7	30.0	
CAL4	78417.1	366383.9	True	1.00	0.214	5.97	0.930	1.000	1.040	4.0	30.0	
CAL5	67946.0	325224.6	True	1.00	0.209	5.97	0.930	1.000	1.015	1.5	30.0	
CAL6	67201.2	319261.8	True	1.00	0.211	5.98	0.930	1.000	1.023	2.3	30.0	
CAL7	52457.9	280140.4	True	1.00	0.187	5.97	0.930	1.000	0.910	-9.0	30.0	

Initial Calibration Verification

Instrument ID: LM24960 **ICAL Name:** 17MAY10MCAL **QMethod Name:** PFCMOD - 17JAN28
Result Table: 17MAY10MCAL5/11/2017 12:08:01 PM **Acquisition Method:** PFC-32-16NOV02.dam

E13C4-PFHpA

y = 1.28481 x (std. dev. = 0.06949) (weighting: None)



Extraction Standard Calibration Verification

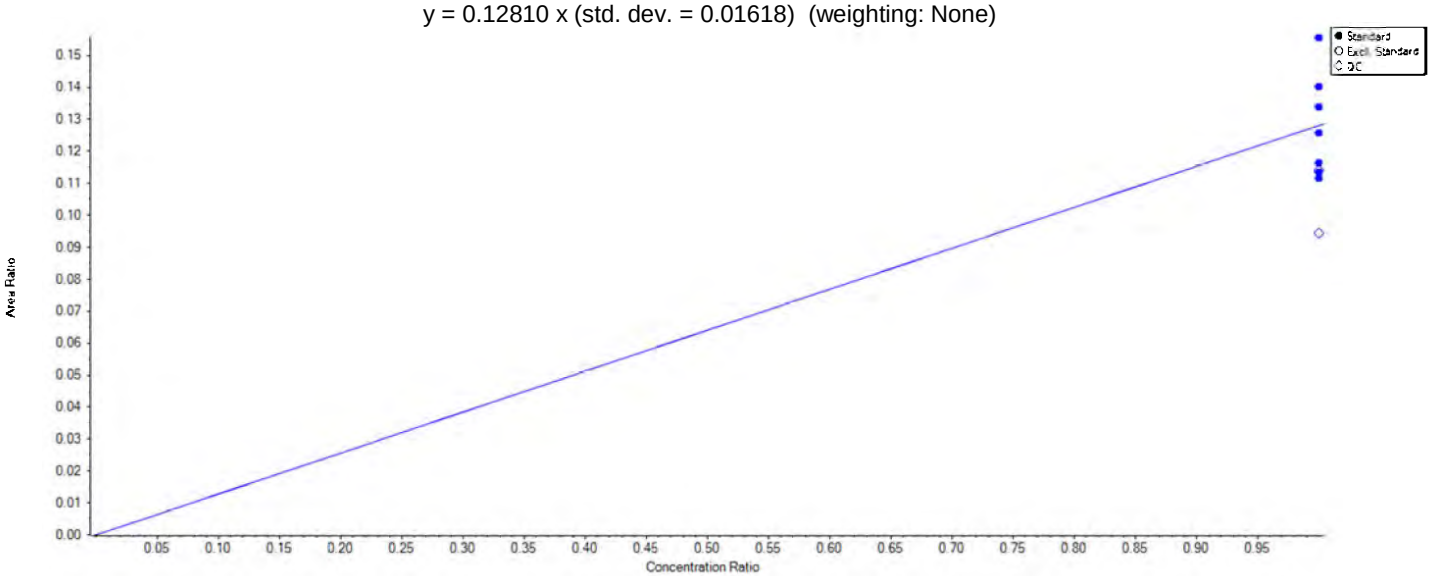
Sample Name	E13C4-PFHpA Area	13C2-PFOA Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	465938.1	348600.7	True	1.00	1.337	5.98	0.930	1.000	1.040	4.0	50.0	
CAL2	485135.8	368771.6	True	1.00	1.316	5.97	0.930	1.000	1.024	2.4	30.0	
CAL3	456311.0	386909.3	True	1.00	1.179	5.98	0.930	1.000	0.918	-8.2	30.0	
CAL4	461833.4	366383.9	True	1.00	1.261	5.98	0.930	1.000	0.981	-1.9	30.0	
CAL5	447767.8	325224.6	True	1.00	1.377	5.98	0.930	1.000	1.072	7.2	30.0	
CAL6	417619.8	319261.8	True	1.00	1.308	5.98	0.930	1.000	1.018	1.8	30.0	
CAL7	340857.4	280140.4	True	1.00	1.217	5.98	0.930	1.000	0.947	-5.3	30.0	

Initial Calibration Verification

Instrument ID: LM24960 **ICAL Name:** 17MAY10MCAL **QMethod Name:** PFCMOD - 17JAN28
Result Table: 17MAY10MCAL5/11/2017 12:08:01 PM **Acquisition Method:** PFC-32-16NOV02.dam

E13C2-6:2-FTS

y = 0.12810 x (std. dev. = 0.01618) (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	43818.7	348600.7	True	1.00	0.126	6.40	1.000	1.000	0.981	-1.9	50.0	
CAL2	41844.9	368771.6	True	1.00	0.114	6.40	1.000	1.000	0.886	-11.4	30.0	
CAL3	44976.1	386909.3	True	1.00	0.116	6.39	1.000	1.000	0.907	-9.3	30.0	
CAL4	40867.3	366383.9	True	1.00	0.112	6.40	1.000	1.000	0.871	-12.9	30.0	
CAL5	45637.2	325224.6	True	1.00	0.140	6.39	1.000	1.000	1.095	9.5	30.0	
CAL6	42747.8	319261.8	True	1.00	0.134	6.40	1.000	1.000	1.045	4.5	30.0	
CAL7	43576.0	280140.4	True	1.00	0.156	6.39	1.000	1.000	1.214	21.4	30.0	

APPROVED
By JWK at 12:34 pm, 5/11/17

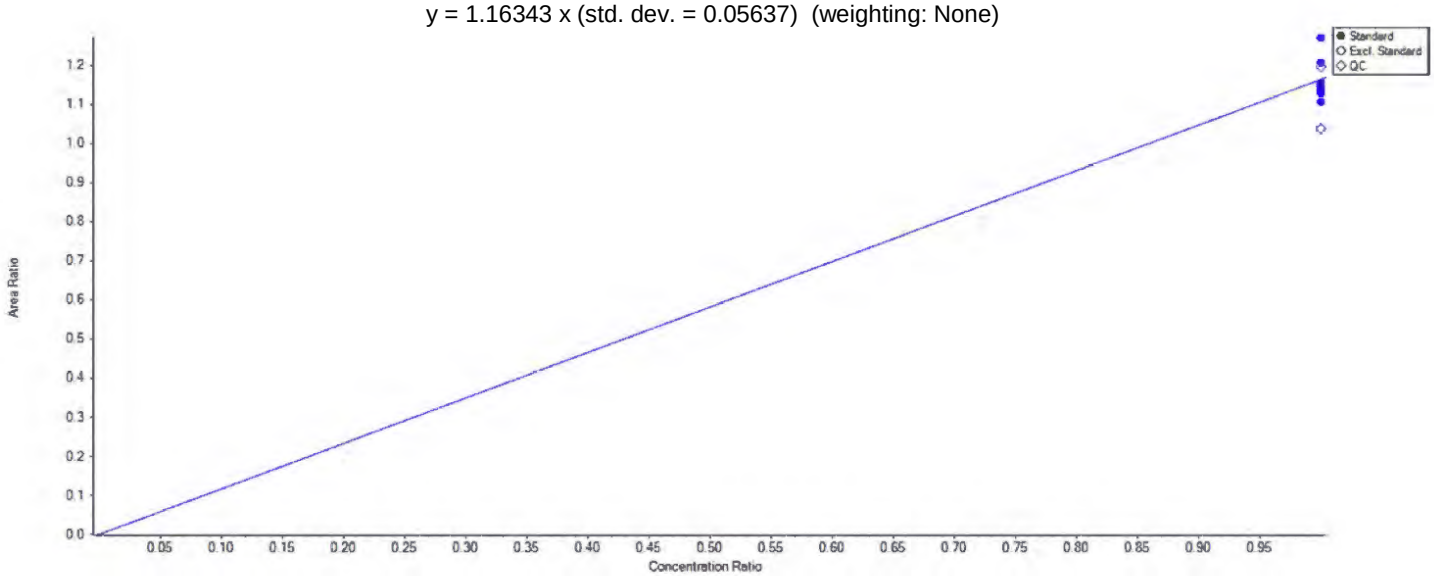
REVIEWED
By UMJS at 9:13 am, 5/15/17

Initial Calibration Verification

Instrument ID: LM24960 **ICAL Name:** 17MAY10MCAL **QMethod Name:** PFCMOD - 17JAN28
Result Table: 17MAY10MCAL5/11/2017 12:08:01 PM **Acquisition Method:** PFC-32-16NOV02.dam

E13C8-PFOA

y = 1.16343 x (std. dev. = 0.05637) (weighting: None)



Extraction Standard Calibration Verification

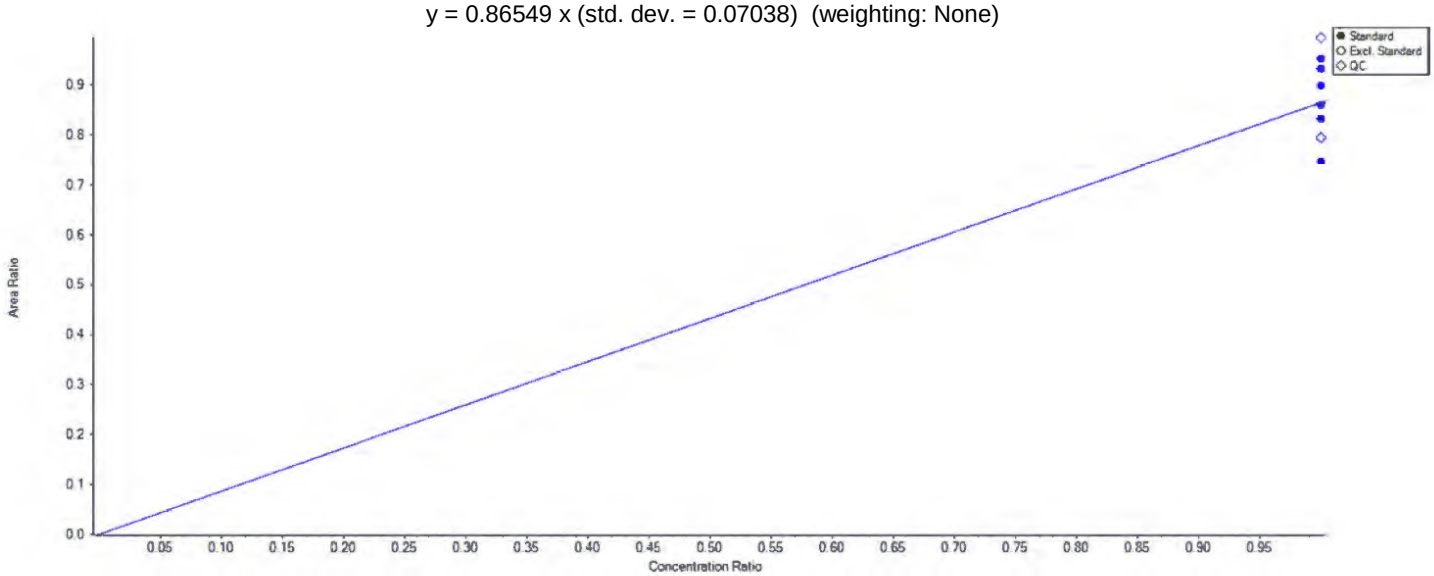
Sample Name	E13C8-PFOA Area	13C2-PFOA Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	442961.3	348600.7	True	1.00	1.271	6.42	1.000	1.000	1.092	9.2	50.0	
CAL2	444514.8	368771.6	True	1.00	1.205	6.41	1.000	1.000	1.036	3.6	30.0	
CAL3	443036.8	386909.3	True	1.00	1.145	6.42	1.000	1.000	0.984	-1.6	30.0	
CAL4	422454.6	366383.9	True	1.00	1.153	6.42	1.000	1.000	0.991	-0.9	30.0	
CAL5	366305.0	325224.6	True	1.00	1.126	6.41	1.000	1.000	0.968	-3.2	30.0	
CAL6	363201.5	319261.8	True	1.00	1.138	6.42	1.000	1.000	0.978	-2.2	30.0	
CAL7	309797.0	280140.4	True	1.00	1.106	6.41	1.000	1.000	0.951	-4.9	30.0	

Initial Calibration Verification

Instrument ID: LM24960 **ICAL Name:** 17MAY10MCAL **QMethod Name:** PFCMOD - 17JAN28
Result Table: 17MAY10MCAL5/11/2017 12:08:01 PM **Acquisition Method:** PFC-32-16NOV02.dam

E13C8-PFOS

y = 0.86549 x (std. dev. = 0.07038) (weighting: None)



Extraction Standard Calibration Verification

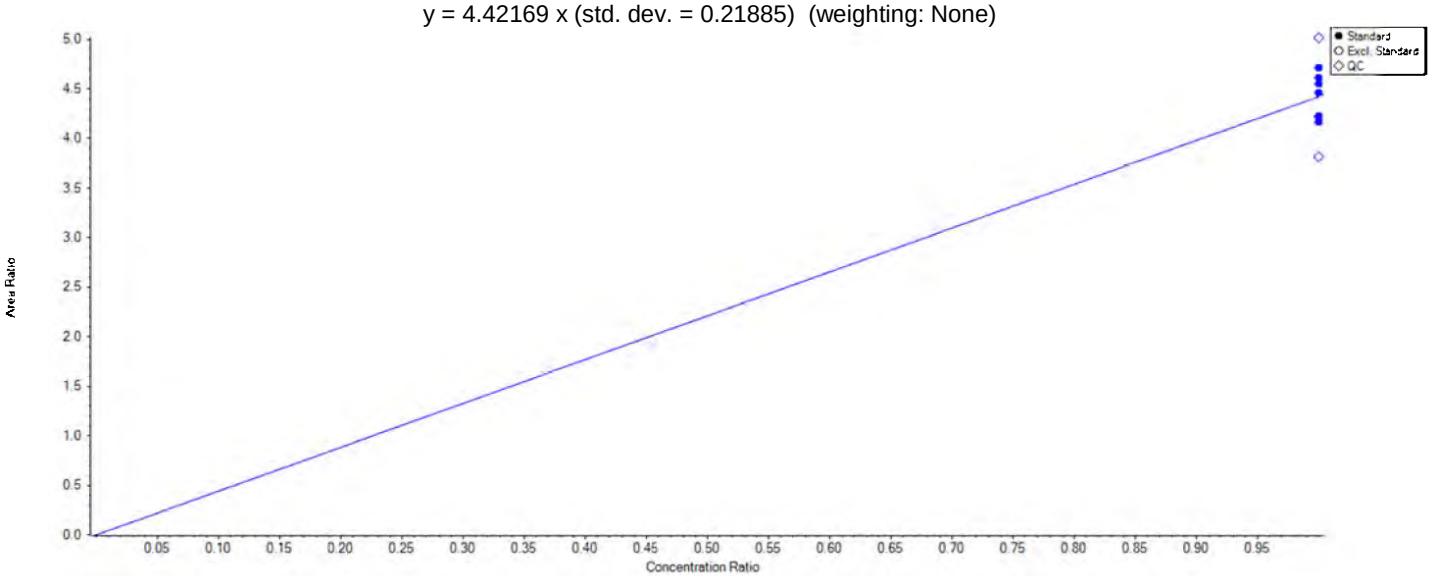
Sample Name	E13C8-PFOS Area	13C4-PFOS Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	70263.7	78176.0	True	1.00	0.899	6.79	1.000	1.000	1.039	3.8	50.0	
CAL2	66304.8	79549.8	True	1.00	0.834	6.79	1.000	1.000	0.963	-3.7	30.0	
CAL3	62397.3	74874.4	True	1.00	0.833	6.79	1.000	1.000	0.963	-3.7	30.0	
CAL4	65705.8	70481.2	True	1.00	0.932	6.79	1.000	1.000	1.077	7.7	30.0	
CAL5	52797.1	70793.3	True	1.00	0.746	6.79	1.000	1.000	0.862	-13.8	30.0	
CAL6	56875.5	66043.7	True	1.00	0.861	6.79	1.000	1.000	0.995	-0.5	30.0	
CAL7	48633.0	51002.5	True	1.00	0.954	6.78	1.000	1.000	1.102	10.2	30.0	

Initial Calibration Verification

Instrument ID: LM24960 **ICAL Name:** 17MAY10MCAL **QMethod Name:** PFCMOD - 17JAN28
Result Table: 17MAY10MCAL5/11/2017 12:08:01 PM **Acquisition Method:** PFC-32-16NOV02.dam

E13C9-PFNA

y = 4.42169 x (std. dev. = 0.21885) (weighting: None)



Extraction Standard Calibration Verification

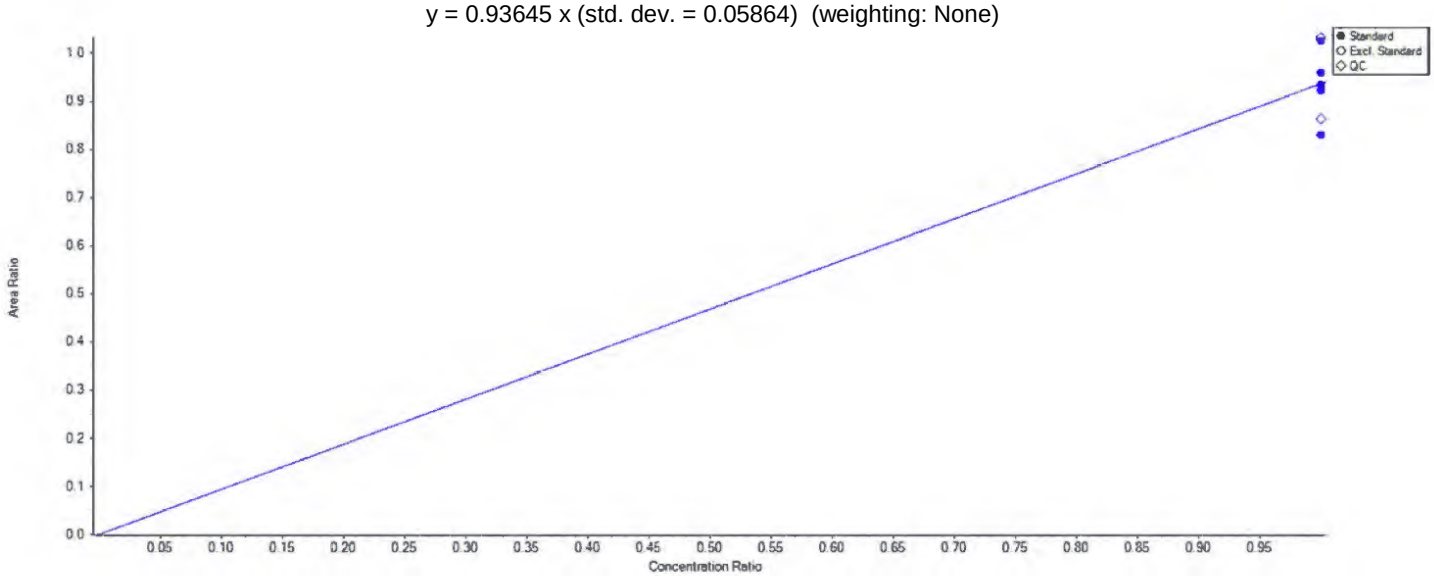
Sample Name	E13C9-PFNA Area	13C4-PFOS Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	329582.5	78176.0	True	1.00	4.216	6.82	1.000	1.000	0.954	-4.7	50.0	
CAL2	331176.8	79549.8	True	1.00	4.163	6.81	1.000	1.000	0.942	-5.8	30.0	
CAL3	316838.7	74874.4	True	1.00	4.232	6.82	1.000	1.000	0.957	-4.3	30.0	
CAL4	332286.1	70481.2	True	1.00	4.715	6.81	1.000	1.000	1.066	6.6	30.0	
CAL5	322425.9	70793.3	True	1.00	4.555	6.82	1.000	1.000	1.030	3.0	30.0	
CAL6	294361.8	66043.7	True	1.00	4.457	6.82	1.000	1.000	1.008	0.8	30.0	
CAL7	235381.6	51002.5	True	1.00	4.615	6.81	1.000	1.000	1.044	4.4	30.0	

Initial Calibration Verification

Instrument ID: LM24960 **ICAL Name:** 17MAY10MCAL **QMethod Name:** PFCMOD - 17JAN28
Result Table: 17MAY10MCAL5/11/2017 12:08:01 PM **Acquisition Method:** PFC-32-16NOV02.dam

E13C8-PFOSA

y = 0.93645 x (std. dev. = 0.05864) (weighting: None)



Extraction Standard Calibration Verification

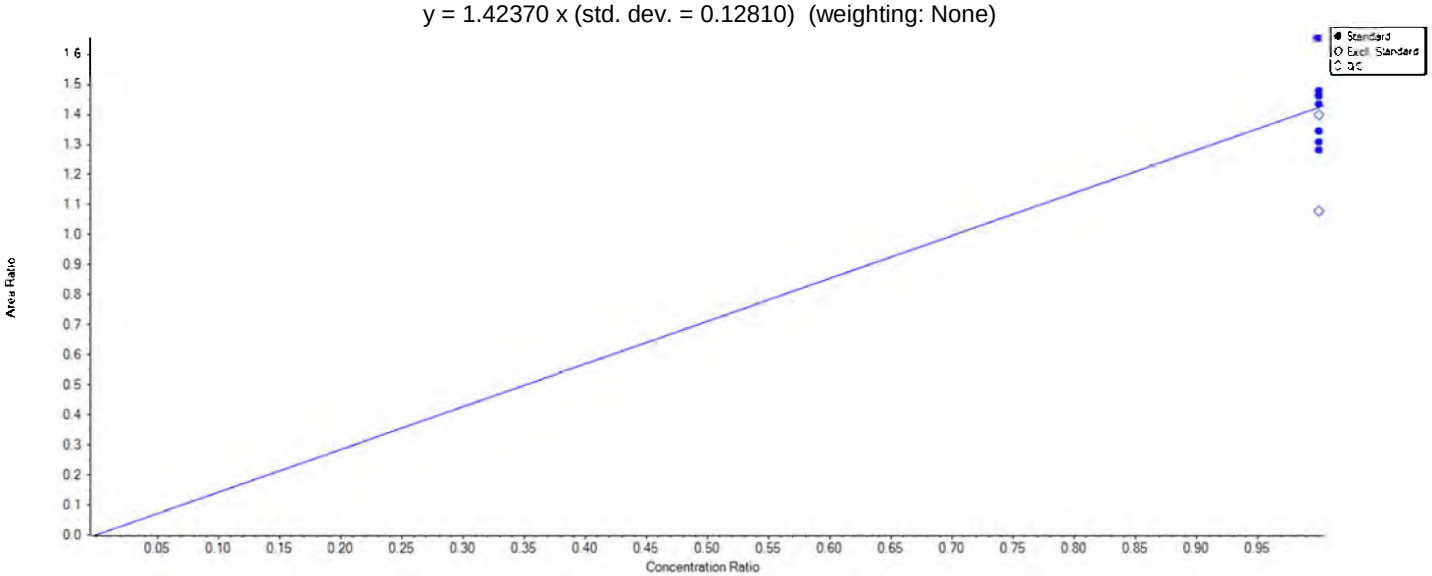
Sample Name	E13C8-PFOSA Area	13C2-PFDA Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	401009.9	434947.2	True	1.00	0.922	7.17	1.000	1.000	0.985	-1.5	50.0	
CAL2	411448.7	440729.8	True	1.00	0.934	7.17	1.000	1.000	0.997	-0.3	30.0	
CAL3	407054.3	424678.3	True	1.00	0.959	7.17	1.000	1.000	1.024	2.4	30.0	
CAL4	387858.6	377735.1	True	1.00	1.027	7.17	1.000	1.000	1.097	9.6	30.0	
CAL5	375612.3	406529.6	True	1.00	0.924	7.17	1.000	1.000	0.987	-1.3	30.0	
CAL6	309795.4	322967.2	True	1.00	0.959	7.18	1.000	1.000	1.024	2.4	30.0	
CAL7	233633.6	281103.7	True	1.00	0.831	7.17	1.000	1.000	0.888	-11.2	30.0	

Initial Calibration Verification

Instrument ID: LM24960 **ICAL Name:** 17MAY10MCAL **QMethod Name:** PFCMOD - 17JAN28
Result Table: 17MAY10MCAL5/11/2017 12:08:01 PM **Acquisition Method:** PFC-32-16NOV02.dam

E13C6-PFDA

y = 1.42370 x (std. dev. = 0.12810) (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	584542.0	434947.2	True	1.00	1.344	7.17	1.000	1.000	0.944	-5.6	50.0	
CAL2	644676.4	440729.8	True	1.00	1.463	7.17	1.000	1.000	1.027	2.7	30.0	
CAL3	627905.1	424678.3	True	1.00	1.479	7.17	1.000	1.000	1.039	3.9	30.0	
CAL4	625379.3	377735.1	True	1.00	1.656	7.17	1.000	1.000	1.163	16.3	30.0	
CAL5	521092.6	406529.6	True	1.00	1.282	7.17	1.000	1.000	0.900	-10.0	30.0	
CAL6	463714.1	322967.2	True	1.00	1.436	7.18	1.000	1.000	1.009	0.8	30.0	
CAL7	367535.0	281103.7	True	1.00	1.308	7.17	1.000	1.000	0.918	-8.2	30.0	

APPROVED
By JWK at 12:34 pm, 5/11/17

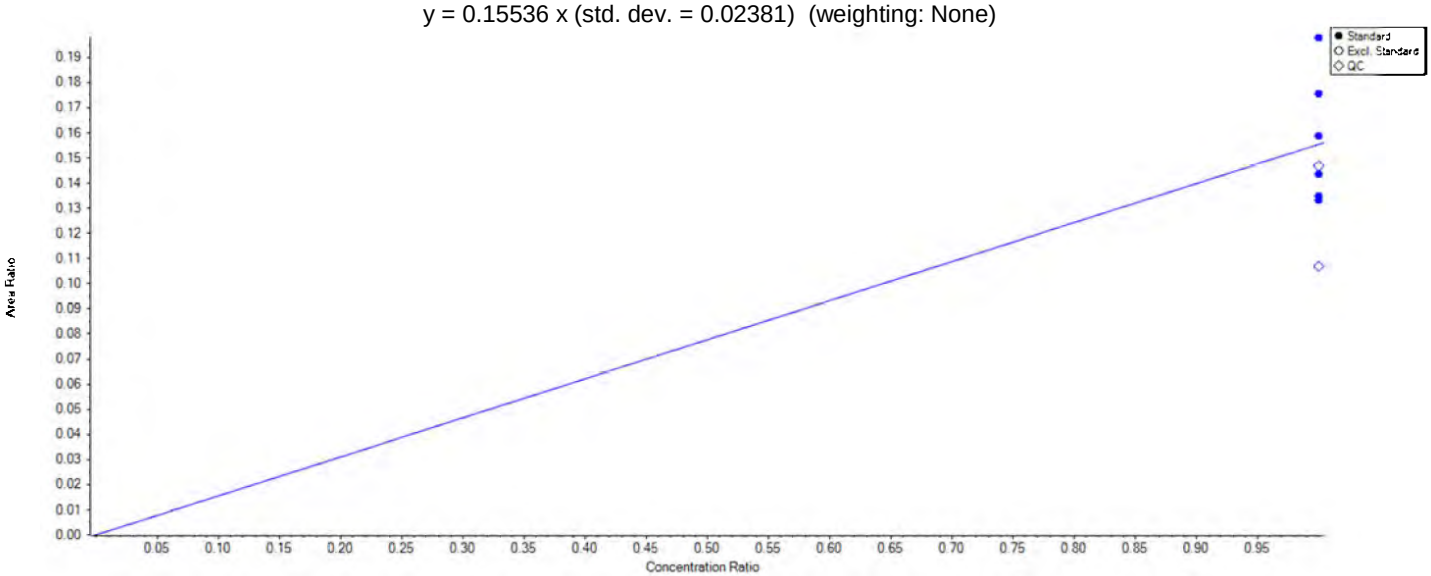
REVIEWED
By UMJS at 9:13 am, 5/15/17

Initial Calibration Verification

Instrument ID: LM24960 **ICAL Name:** 17MAY10MCAL **QMethod Name:** PFCMOD - 17JAN28
Result Table: 17MAY10MCAL5/11/2017 12:08:01 PM **Acquisition Method:** PFC-32-16NOV02.dam

E13C2-8:2-FTS

y = 0.15536 x (std. dev. = 0.02381) (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	58014.4	434947.2	True	1.00	0.133	7.18	1.000	1.000	0.859	-14.1	50.0	
CAL2	59422.8	440729.8	True	1.00	0.135	7.18	1.000	1.000	0.868	-13.2	30.0	
CAL3	67507.2	424678.3	True	1.00	0.159	7.18	1.000	1.000	1.023	2.3	30.0	
CAL4	54282.2	377735.1	True	1.00	0.144	7.18	1.000	1.000	0.925	-7.5	30.0	
CAL5	58320.7	406529.6	True	1.00	0.144	7.18	1.000	1.000	0.923	-7.7	30.0	
CAL6	63902.5	322967.2	True	1.00	0.198	7.19	1.000	1.000	1.274	27.4	30.0	
CAL7	49293.7	281103.7	True	1.00	0.175	7.18	1.000	1.000	1.129	12.9	30.0	

APPROVED
By JWK at 12:34 pm, 5/11/17

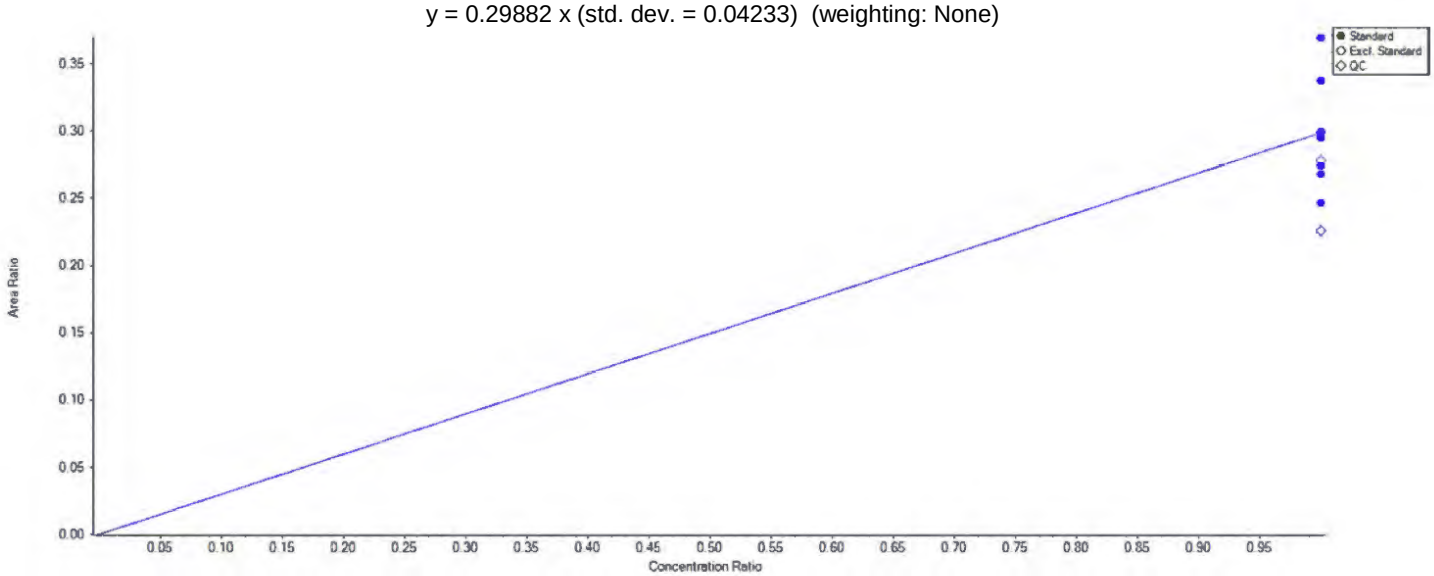
REVIEWED
By UMJS at 9:13 am, 5/15/17

Initial Calibration Verification

Instrument ID: LM24960 **ICAL Name:** 17MAY10MCAL **QMethod Name:** PFCMOD - 17JAN28
Result Table: 17MAY10MCAL5/11/2017 12:08:01 PM **Acquisition Method:** PFC-32-16NOV02.dam

Ed7-NMePFOSAE

y = 0.29882 x (std. dev. = 0.04233) (weighting: None)



Extraction Standard Calibration Verification

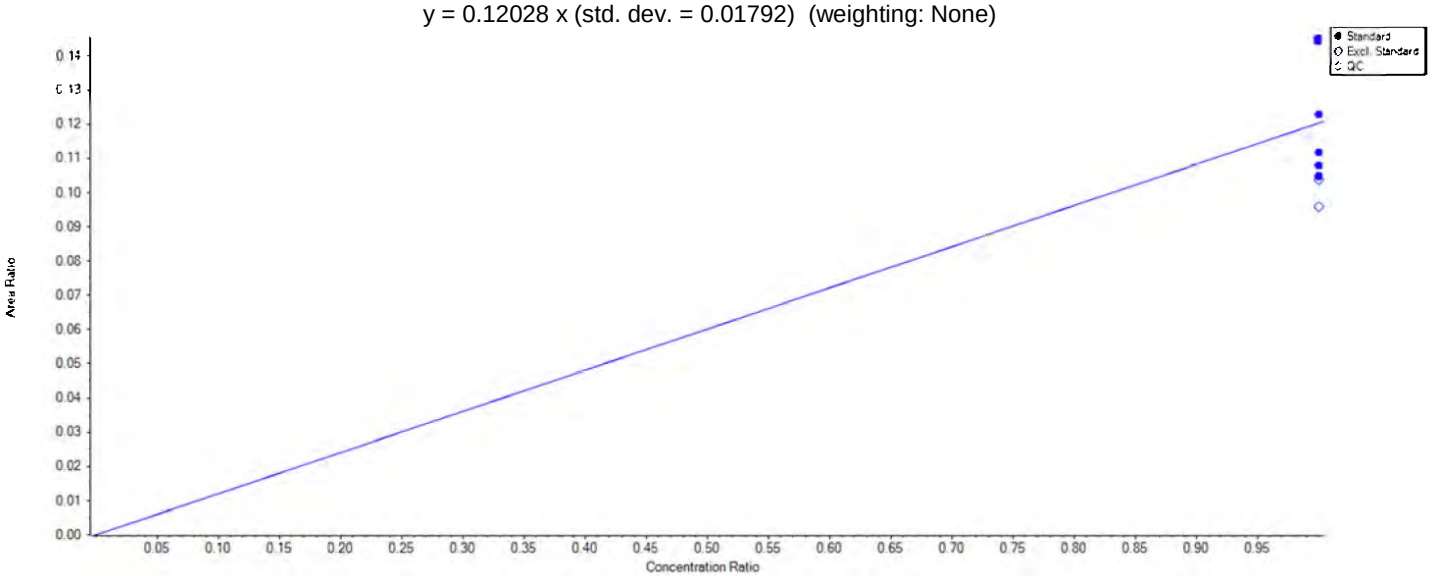
Sample Name	Ed7-NMePFOSAE Area	13C2-PFDA Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	107402.7	434947.2	True	1.00	0.247	7.62	1.060	1.000	0.826	-17.4	50.0	
CAL2	118120.3	440729.8	True	1.00	0.268	7.61	1.060	1.000	0.897	-10.3	30.0	
CAL3	116590.7	424678.3	True	1.00	0.275	7.62	1.060	1.000	0.919	-8.1	30.0	
CAL4	113263.4	377735.1	True	1.00	0.300	7.62	1.060	1.000	1.003	0.3	30.0	
CAL5	120050.6	406529.6	True	1.00	0.295	7.62	1.060	1.000	0.988	-1.2	30.0	
CAL6	109014.5	322967.2	True	1.00	0.338	7.62	1.060	1.000	1.130	13.0	30.0	
CAL7	103890.5	281103.7	True	1.00	0.370	7.62	1.060	1.000	1.237	23.7	30.0	

Initial Calibration Verification

Instrument ID: LM24960 **ICAL Name:** 17MAY10MCAL **QMethod Name:** PFCMOD - 17JAN28
Result Table: 17MAY10MCAL5/11/2017 12:08:01 PM **Acquisition Method:** PFC-32-16NOV02.dam

Ed3-NMePFOSA

y = 0.12028 x (std. dev. = 0.01792) (weighting: None)



Extraction Standard Calibration Verification

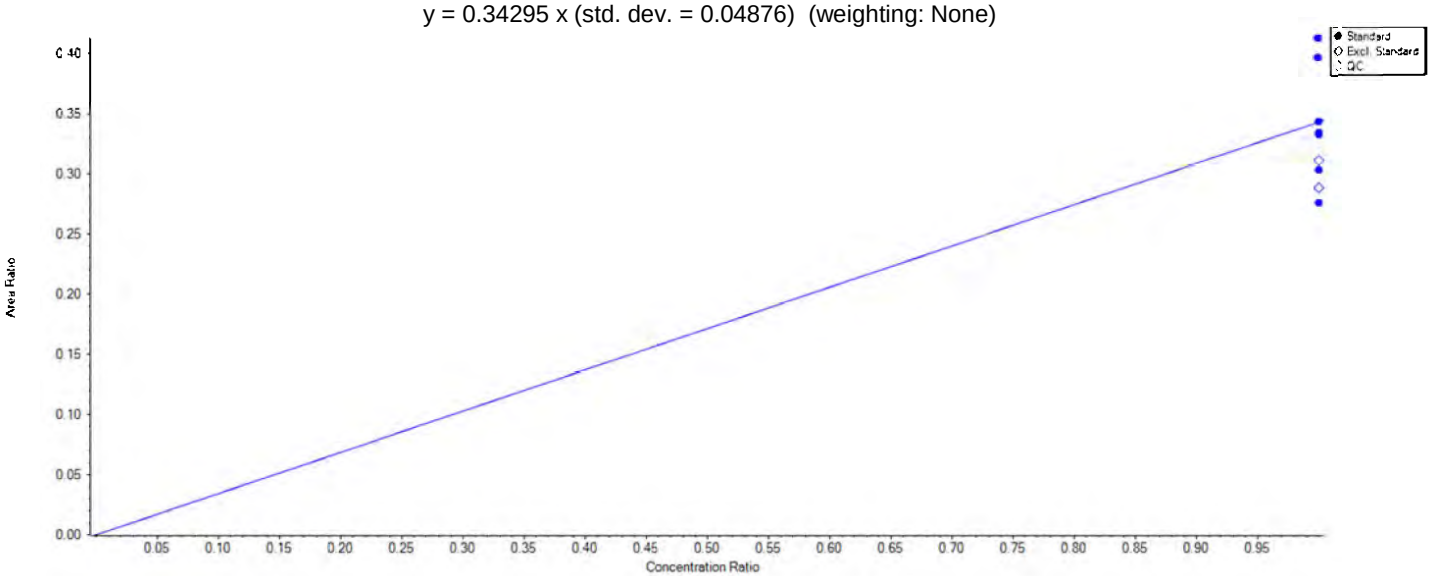
Sample Name	Ed3-NMePFOSA Area	13C2-PFDA Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	45510.5	434947.2	True	1.00	0.105	7.65	1.070	1.000	0.870	-13.0	50.0	
CAL2	47494.6	440729.8	True	1.00	0.108	7.64	1.070	1.000	0.896	-10.4	30.0	
CAL3	44611.2	424678.3	True	1.00	0.105	7.64	1.070	1.000	0.873	-12.7	30.0	
CAL4	46434.4	377735.1	True	1.00	0.123	7.65	1.070	1.000	1.022	2.2	30.0	
CAL5	45430.7	406529.6	True	1.00	0.112	7.64	1.070	1.000	0.929	-7.1	30.0	
CAL6	46961.4	322967.2	True	1.00	0.145	7.65	1.070	1.000	1.209	20.9	30.0	
CAL7	40596.0	281103.7	True	1.00	0.144	7.64	1.070	1.000	1.201	20.1	30.0	

Initial Calibration Verification

Instrument ID: LM24960 **ICAL Name:** 17MAY10MCAL **QMethod Name:** PFCMOD - 17JAN28
Result Table: 17MAY10MCAL5/11/2017 12:08:01 PM **Acquisition Method:** PFC-32-16NOV02.dam

Ed3-NMeFOSAA

y = 0.34295 x (std. dev. = 0.04876) (weighting: None)



Extraction Standard Calibration Verification

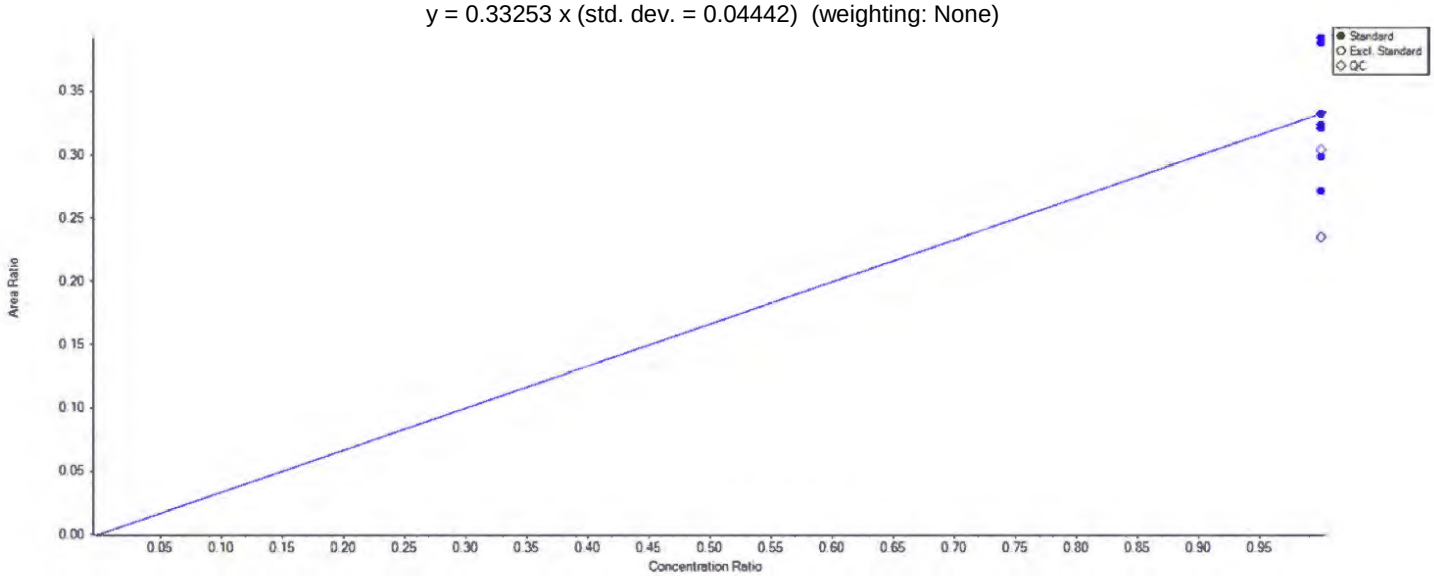
Sample Name	Ed3-NMeFOSAA Area	13C2-PFDA Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	131817.0	434947.2	True	1.00	0.303	7.35	1.020	1.000	0.884	-11.6	50.0	
CAL2	121565.7	440729.8	True	1.00	0.276	7.35	1.020	1.000	0.804	-19.6	30.0	
CAL3	142053.1	424678.3	True	1.00	0.335	7.34	1.020	1.000	0.975	-2.5	30.0	
CAL4	125622.3	377735.1	True	1.00	0.333	7.35	1.030	1.000	0.970	-3.0	30.0	
CAL5	139575.1	406529.6	True	1.00	0.343	7.35	1.020	1.000	1.001	0.1	30.0	
CAL6	133529.4	322967.2	True	1.00	0.413	7.35	1.020	1.000	1.206	20.6	30.0	
CAL7	111855.8	281103.7	True	1.00	0.398	7.35	1.020	1.000	1.160	16.0	30.0	

Initial Calibration Verification

Instrument ID: LM24960 **ICAL Name:** 17MAY10MCAL **QMethod Name:** PFCMOD - 17JAN28
Result Table: 17MAY10MCAL5/11/2017 12:08:01 PM **Acquisition Method:** PFC-32-16NOV02.dam

Ed9-NEtPFOSAE

y = 0.33253 x (std. dev. = 0.04442) (weighting: None)



Extraction Standard Calibration Verification

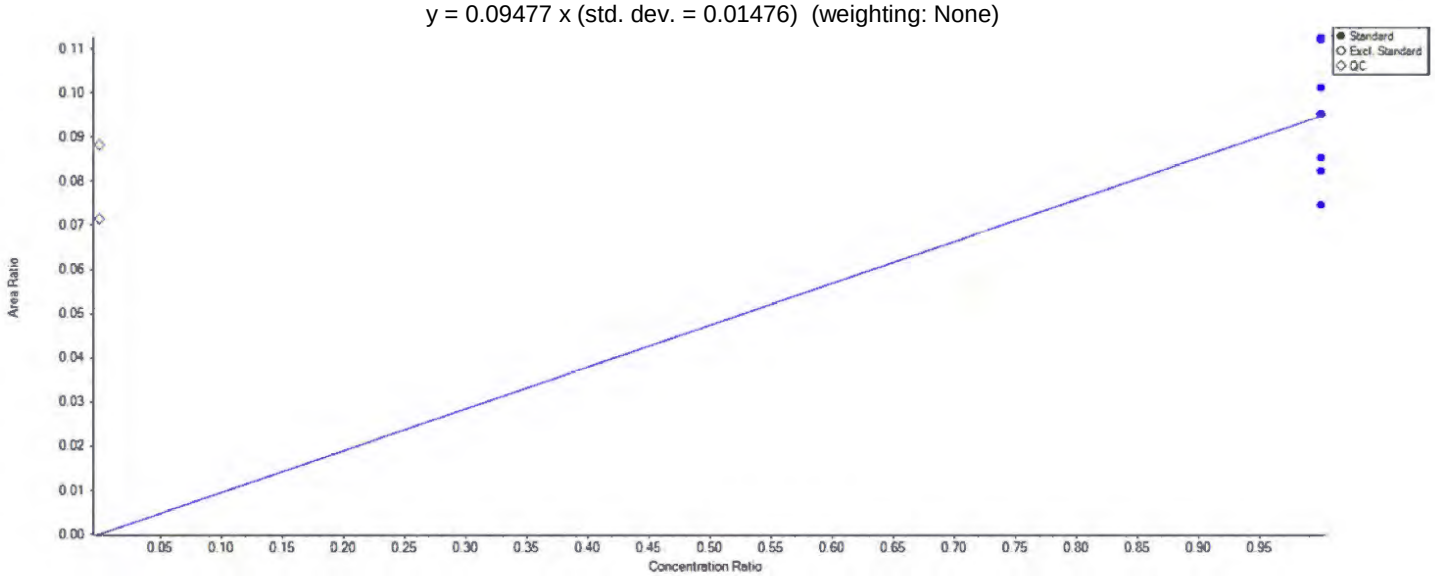
Sample Name	Ed9-NEtPFOSAE Area	13C2-PFDA Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	117976.8	434947.2	True	1.00	0.271	7.78	1.080	1.000	0.816	-18.4	50.0	
CAL2	131500.0	440729.8	True	1.00	0.298	7.78	1.080	1.000	0.897	-10.3	30.0	
CAL3	141148.6	424678.3	True	1.00	0.332	7.78	1.080	1.000	1.000	-0.1	30.0	
CAL4	122362.7	377735.1	True	1.00	0.324	7.78	1.090	1.000	0.974	-2.6	30.0	
CAL5	130499.7	406529.6	True	1.00	0.321	7.78	1.080	1.000	0.965	-3.5	30.0	
CAL6	125385.8	322967.2	True	1.00	0.388	7.79	1.080	1.000	1.168	16.7	30.0	
CAL7	110356.0	281103.7	True	1.00	0.393	7.78	1.080	1.000	1.181	18.1	30.0	

Initial Calibration Verification

Instrument ID: LM24960 **ICAL Name:** 17MAY10MCAL **QMethod Name:** PFCMOD - 17JAN28
Result Table: 17MAY10MCAL5/11/2017 12:08:01 PM **Acquisition Method:** PFC-32-16NOV02.dam

Ed5-NEtPFOSA

y = 0.09477 x (std. dev. = 0.01476) (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	32501.1	434947.2	True	1.00	0.075	7.81	1.090	1.000	0.789	-21.2	50.0	
CAL2	37591.4	440729.8	True	1.00	0.085	7.80	1.090	1.000	0.900	-10.0	30.0	
CAL3	40459.4	424678.3	True	1.00	0.095	7.81	1.090	1.000	1.005	0.5	30.0	
CAL4	38229.1	377735.1	True	1.00	0.101	7.80	1.090	1.000	1.068	6.8	30.0	
CAL5	33431.2	406529.6	True	1.00	0.082	7.81	1.090	1.000	0.868	-13.2	30.0	
CAL6	36340.5	322967.2	True	1.00	0.113	7.81	1.090	1.000	1.187	18.7	30.0	
CAL7	31528.3	281103.7	True	1.00	0.112	7.80	1.090	1.000	1.183	18.3	30.0	

APPROVED
By JWK at 12:34 pm, 5/11/17

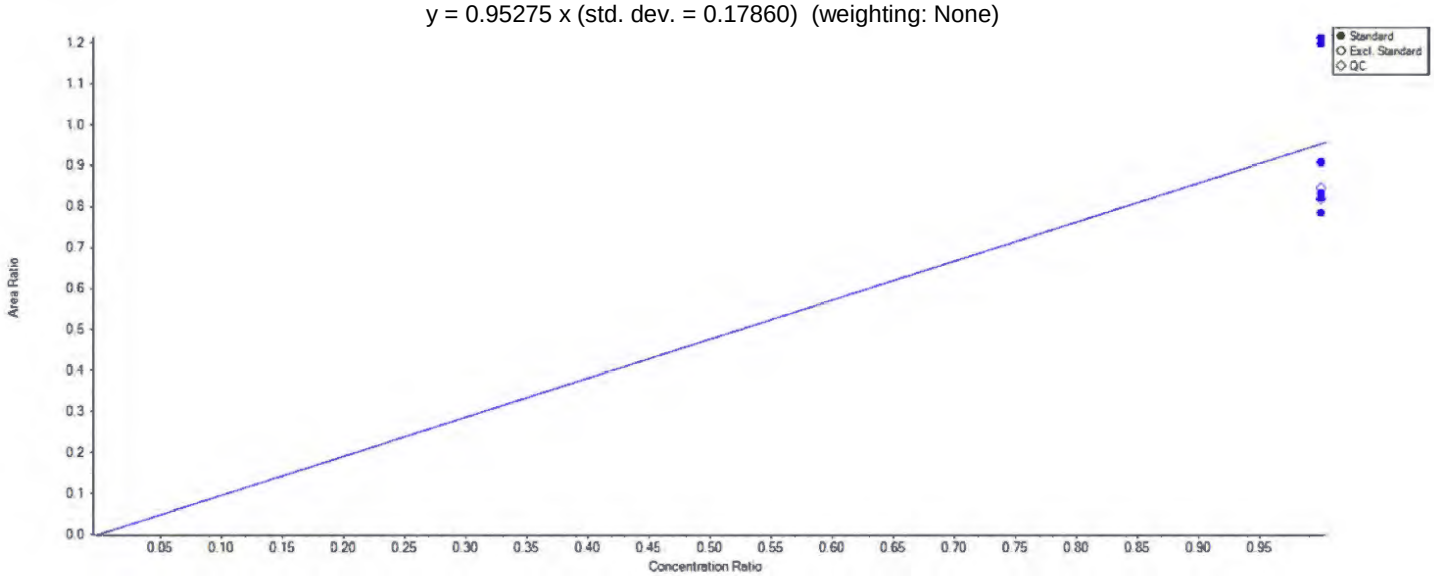
REVIEWED
By UMJS at 9:13 am, 5/15/17

Initial Calibration Verification

Instrument ID: LM24960 **ICAL Name:** 17MAY10MCAL **QMethod Name:** PFCMOD - 17JAN28
Result Table: 17MAY10MCAL5/11/2017 12:08:01 PM **Acquisition Method:** PFC-32-16NOV02.dam

E13C7-PFUnDA

y = 0.95275 x (std. dev. = 0.17860) (weighting: None)



Extraction Standard Calibration Verification

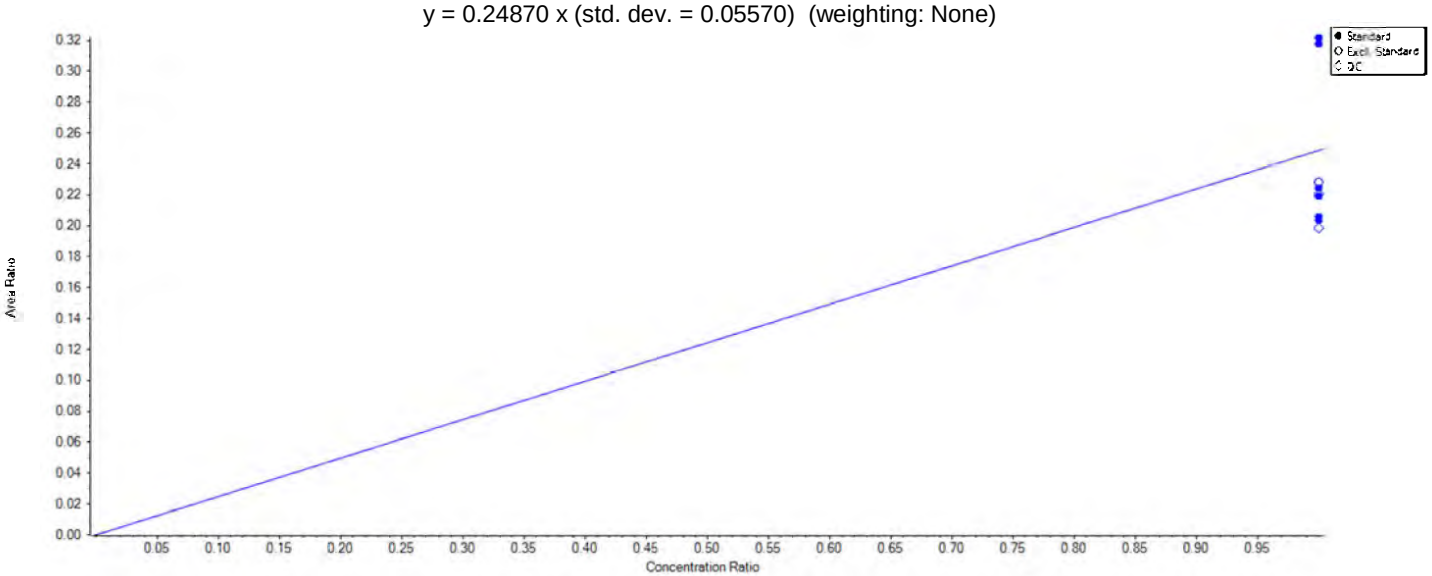
Sample Name	E13C7-PFUnDA Area	13C2-PFDA Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	362904.7	434947.2	True	1.00	0.834	7.49	1.040	1.000	0.876	-12.4	50.0	
CAL2	401155.1	440729.8	True	1.00	0.910	7.49	1.040	1.000	0.955	-4.5	30.0	
CAL3	333230.9	424678.3	True	1.00	0.785	7.48	1.040	1.000	0.824	-17.6	30.0	
CAL4	457980.0	377735.1	True	1.00	1.212	7.49	1.040	1.000	1.273	27.3	30.0	
CAL5	334025.9	406529.6	True	1.00	0.822	7.48	1.040	1.000	0.862	-13.8	30.0	
CAL6	387212.5	322967.2	True	1.00	1.199	7.49	1.040	1.000	1.258	25.8	30.0	
CAL7	254956.6	281103.7	True	1.00	0.907	7.48	1.040	1.000	0.952	-4.8	30.0	

Initial Calibration Verification

Instrument ID: LM24960 **ICAL Name:** 17MAY10MCAL **QMethod Name:** PFCMOD - 17JAN28
Result Table: 17MAY10MCAL5/11/2017 12:08:01 PM **Acquisition Method:** PFC-32-16NOV02.dam

Ed5-NEtFOSAA

y = 0.24870 x (std. dev. = 0.05570) (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	89281.1	434947.2	True	1.00	0.205	7.51	1.050	1.000	0.825	-17.5	50.0	
CAL2	98964.4	440729.8	True	1.00	0.225	7.50	1.050	1.000	0.903	-9.7	30.0	
CAL3	93010.6	424678.3	True	1.00	0.219	7.50	1.050	1.000	0.881	-11.9	30.0	
CAL4	121502.1	377735.1	True	1.00	0.322	7.51	1.050	1.000	1.293	29.3	30.0	
CAL5	82785.5	406529.6	True	1.00	0.204	7.50	1.050	1.000	0.819	-18.1	30.0	
CAL6	102721.8	322967.2	True	1.00	0.318	7.52	1.050	1.000	1.279	27.9	30.0	
CAL7	64153.9	281103.7	False	1.00	0.228	7.50	1.050	1.000	0.918	-8.2	30.0	

APPROVED
By JWK at 12:34 pm, 5/11/17

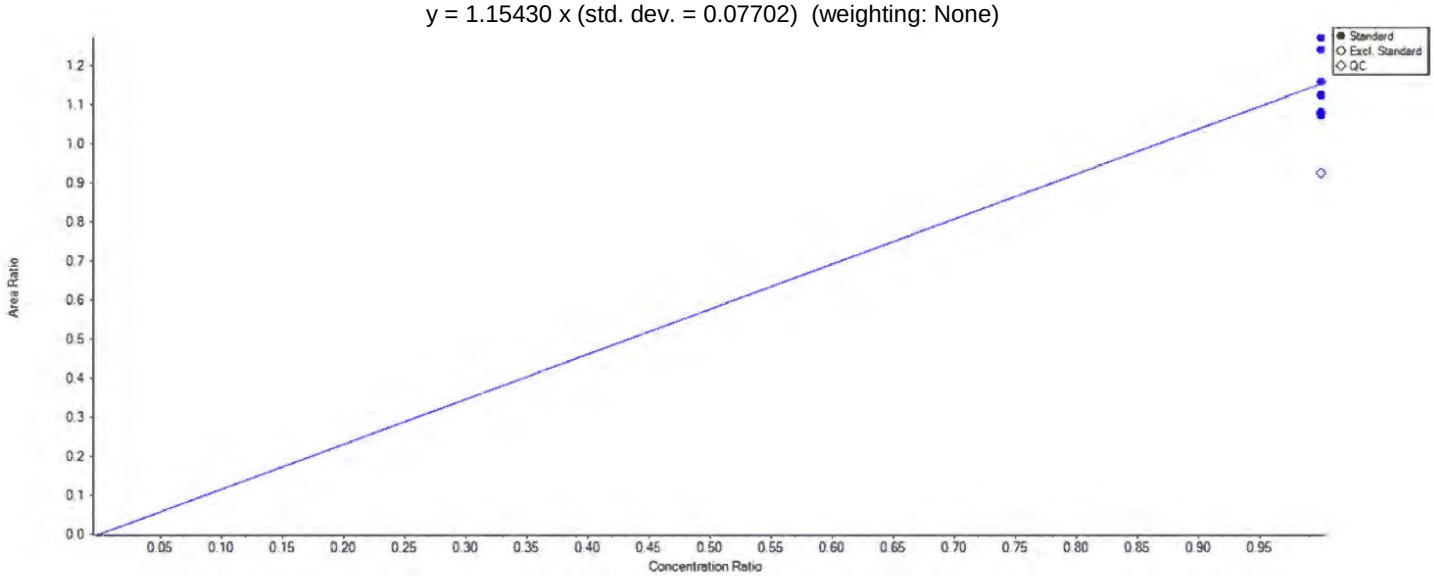
REVIEWED
By UMJS at 9:13 am, 5/15/17

Initial Calibration Verification

Instrument ID: LM24960 **ICAL Name:** 17MAY10MCAL **QMethod Name:** PFCMOD - 17JAN28
Result Table: 17MAY10MCAL5/11/2017 12:08:01 PM **Acquisition Method:** PFC-32-16NOV02.dam

E13C2-PFDoDA

y = 1.15430 x (std. dev. = 0.07702) (weighting: None)



Extraction Standard Calibration Verification

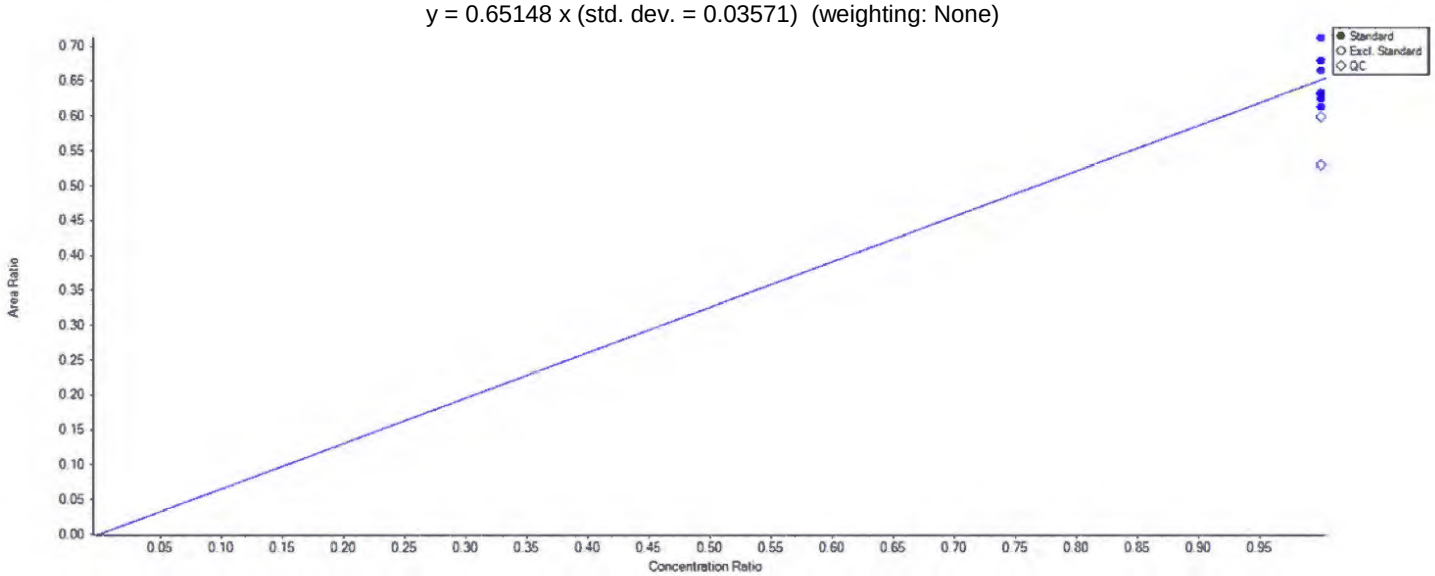
Sample Name	E13C2-PFDoDA Area	13C2-PFDA Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	504077.0	434947.2	True	1.00	1.159	7.78	1.080	1.000	1.004	0.4	50.0	
CAL2	496372.0	440729.8	True	1.00	1.126	7.77	1.080	1.000	0.976	-2.4	30.0	
CAL3	527941.3	424678.3	True	1.00	1.243	7.78	1.080	1.000	1.077	7.7	30.0	
CAL4	480796.7	377735.1	True	1.00	1.273	7.78	1.080	1.000	1.103	10.3	30.0	
CAL5	440113.2	406529.6	True	1.00	1.083	7.78	1.080	1.000	0.938	-6.2	30.0	
CAL6	363174.3	322967.2	True	1.00	1.125	7.78	1.080	1.000	0.974	-2.6	30.0	
CAL7	301289.5	281103.7	True	1.00	1.072	7.77	1.080	1.000	0.929	-7.1	30.0	

Initial Calibration Verification

Instrument ID: LM24960 **ICAL Name:** 17MAY10MCAL **QMethod Name:** PFCMOD - 17JAN28
Result Table: 17MAY10MCAL5/11/2017 12:08:01 PM **Acquisition Method:** PFC-32-16NOV02.dam

E13C2-PFTeDA

y = 0.65148 x (std. dev. = 0.03571) (weighting: None)



Extraction Standard Calibration Verification

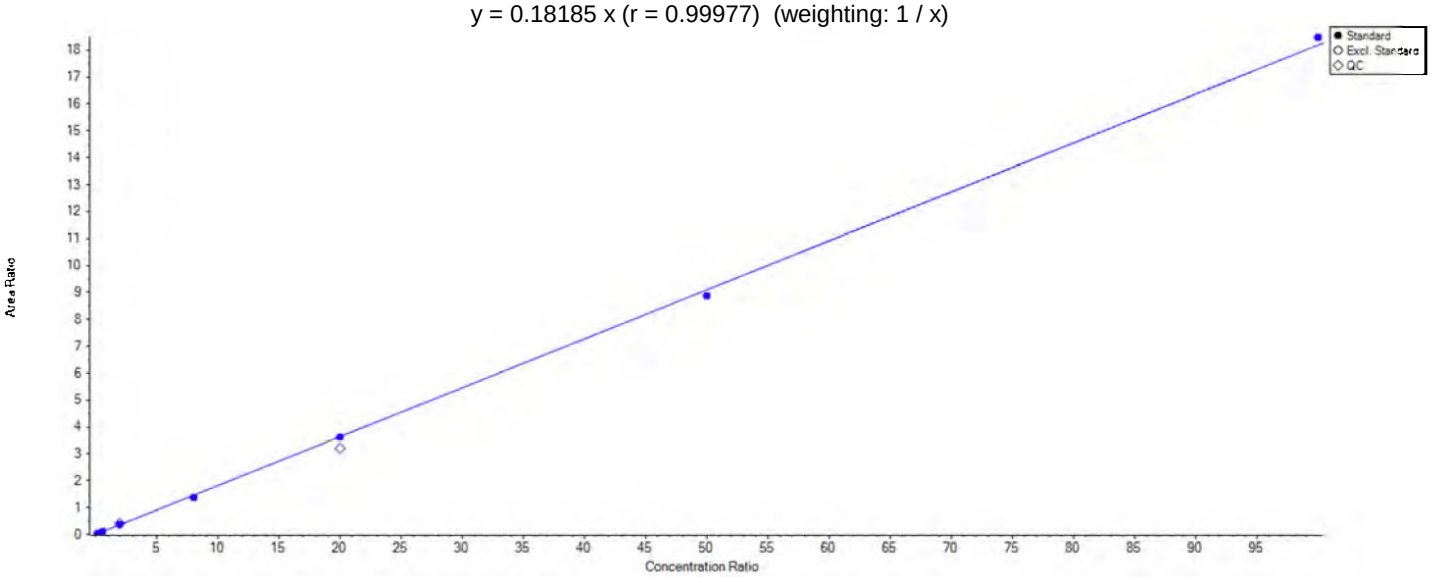
Sample Name	E13C2-PFTeDA Area	13C2-PFDA Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	266563.7	434947.2	True	1.00	0.613	8.30	1.160	1.000	0.941	-5.9	50.0	
CAL2	277785.3	440729.8	True	1.00	0.630	8.29	1.160	1.000	0.968	-3.3	30.0	
CAL3	265583.2	424678.3	True	1.00	0.625	8.29	1.160	1.000	0.960	-4.0	30.0	
CAL4	256797.9	377735.1	True	1.00	0.680	8.29	1.160	1.000	1.044	4.4	30.0	
CAL5	257696.7	406529.6	True	1.00	0.634	8.29	1.160	1.000	0.973	-2.7	30.0	
CAL6	230087.1	322967.2	True	1.00	0.712	8.29	1.160	1.000	1.094	9.4	30.0	
CAL7	187133.4	281103.7	True	1.00	0.666	8.29	1.160	1.000	1.022	2.2	30.0	

Initial Calibration Verification

Instrument ID: LM24960 **ICAL Name:** 17MAY10MCAL **QMethod Name:** PFCMOD - 17JAN28
Result Table: 17MAY10MCAL5/11/2017 12:08:01 PM **Acquisition Method:** PFC-32-16NOV02.dam

PFBA

y = 0.18185 x (r = 0.99977) (weighting: 1 / x)



Component Calibration Verification

Sample Name	PFBA Area	13C4-PFBA Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	35010.7	807995.3	True	1.00	0.043	4.41	1.000	0.200	0.238	19.1	50.0	
CAL2	96646.9	824905.9	True	1.00	0.117	4.40	1.000	0.600	0.644	7.4	30.0	
CAL3	305574.0	807325.5	True	1.00	0.379	4.40	1.000	2.000	2.081	4.1	30.0	
CAL4	1142796.1	824776.5	True	1.00	1.386	4.40	1.000	8.000	7.620	-4.8	30.0	
CAL5	2833374.9	785937.4	True	1.00	3.605	4.40	1.000	20.000	19.825	-0.9	30.0	
CAL6	6432409.0	725029.6	True	1.00	8.872	4.41	1.000	50.000	48.788	-2.4	30.0	
CAL7	11349747.7	614286.8	True	1.00	18.476	4.40	1.000	100.000	101.604	1.6	30.0	

APPROVED
By JWK at 12:34 pm, 5/11/17

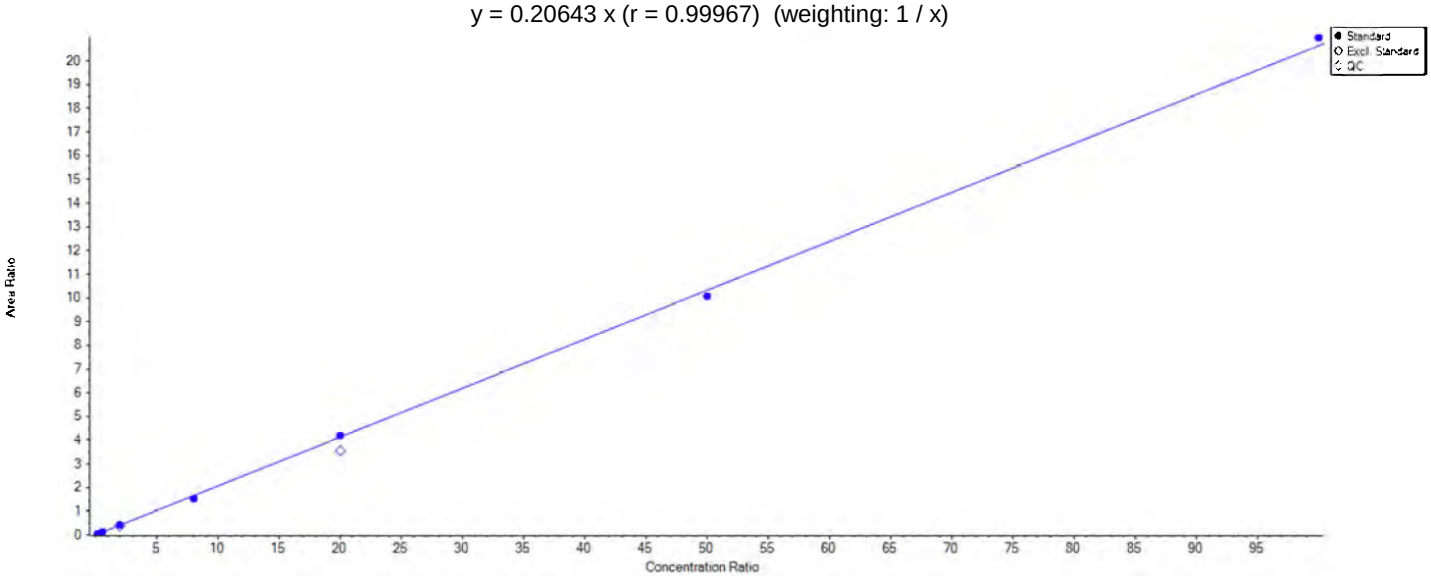
REVIEWED
By UMJS at 9:13 am, 5/15/17

Initial Calibration Verification

Instrument ID: LM24960 **ICAL Name:** 17MAY10MCAL **QMethod Name:** PFCMOD - 17JAN28
Result Table: 17MAY10MCAL5/11/2017 12:08:01 PM **Acquisition Method:** PFC-32-16NOV02.dam

PFPeA

y = 0.20643 x (r = 0.99967) (weighting: 1 / x)



Component Calibration Verification

Sample Name	PFPeA Area	13C5-PFPeA Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	32038.3	758571.2	True	1.00	0.042	5.02	1.000	0.200	0.205	2.3	50.0	
CAL2	104826.5	785581.8	True	1.00	0.133	5.02	1.000	0.600	0.646	7.7	30.0	
CAL3	310828.7	768966.1	True	1.00	0.404	5.02	1.000	2.000	1.958	-2.1	30.0	
CAL4	1179637.1	777844.4	True	1.00	1.517	5.02	1.000	8.000	7.347	-8.2	30.0	
CAL5	2990272.9	717415.2	True	1.00	4.168	5.02	1.000	20.000	20.192	1.0	30.0	
CAL6	6661368.1	661028.3	True	1.00	10.077	5.02	1.000	50.000	48.818	-2.4	30.0	
CAL7	11855631.2	565090.9	True	1.00	20.980	5.01	1.000	100.000	101.635	1.6	30.0	

APPROVED
By JWK at 12:34 pm, 5/11/17

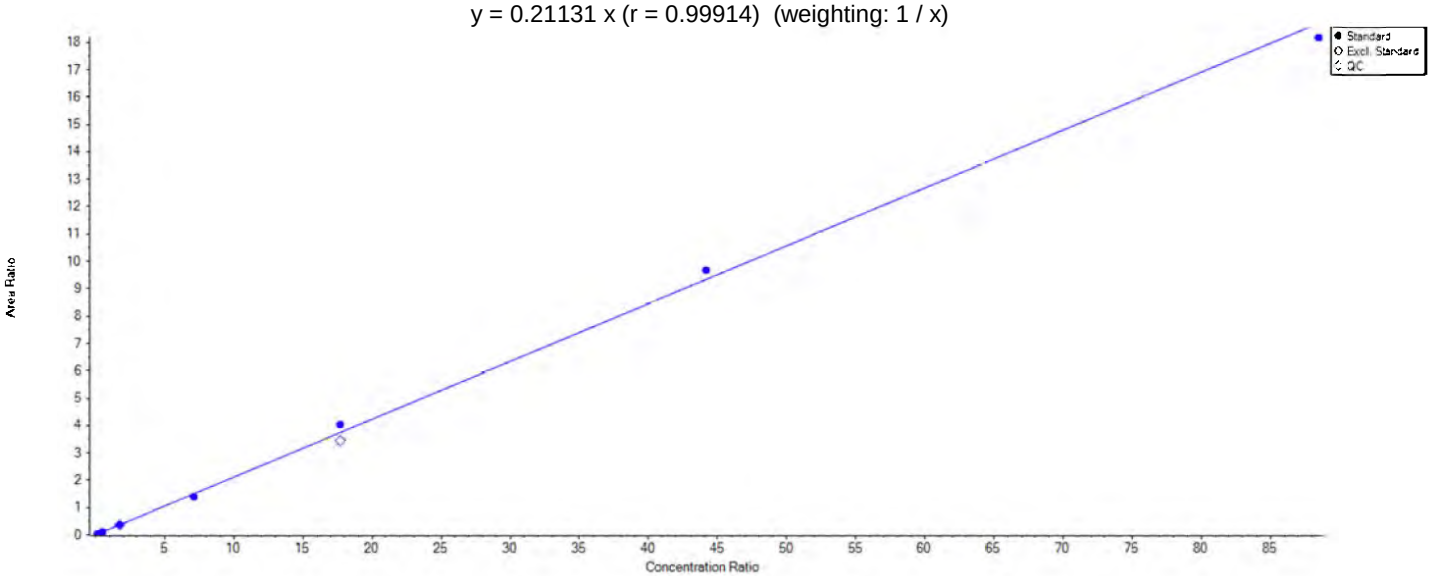
REVIEWED
By UMJS at 9:13 am, 5/15/17

Initial Calibration Verification

Instrument ID: LM24960 **ICAL Name:** 17MAY10MCAL **QMethod Name:** PFCMOD - 17JAN28
Result Table: 17MAY10MCAL5/11/2017 12:08:01 PM **Acquisition Method:** PFC-32-16NOV02.dam

PFBS

y = 0.21131 x (r = 0.99914) (weighting: 1 / x)



Component Calibration Verification

Sample Name	PFBS Area	13C3-PFBS Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	5085.0	135038.0	True	1.00	0.038	5.08	1.000	0.177	0.178	0.7	50.0	
CAL2	15932.6	135873.4	True	1.00	0.117	5.08	1.000	0.530	0.555	4.7	30.0	
CAL3	48089.7	130928.4	True	1.00	0.367	5.08	1.000	1.770	1.738	-1.8	30.0	
CAL4	194986.5	139258.7	True	1.00	1.400	5.08	1.000	7.080	6.626	-6.4	30.0	
CAL5	512670.8	127299.1	True	1.00	4.027	5.08	1.000	17.700	19.059	7.7	30.0	
CAL6	1185249.6	122452.7	True	1.00	9.679	5.09	1.000	44.200	45.806	3.6	30.0	
CAL7	2114412.0	116360.4	True	1.00	18.171	5.08	1.000	88.500	85.994	-2.8	30.0	

APPROVED
By JWK at 12:34 pm, 5/11/17

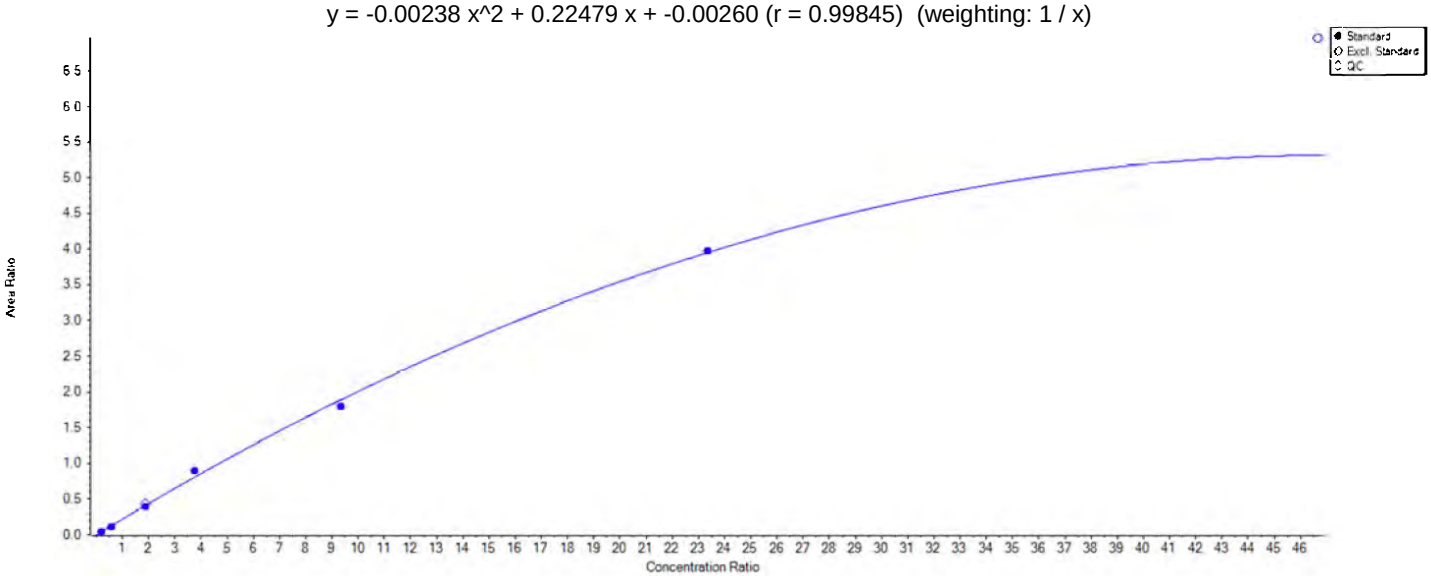
REVIEWED
By UMJS at 9:13 am, 5/15/17

Initial Calibration Verification

Instrument ID: LM24960 **ICAL Name:** 17MAY10MCAL **QMethod Name:** PFCMOD - 17JAN28
Result Table: 17MAY10MCAL5/11/2017 12:08:01 PM **Acquisition Method:** PFC-32-16NOV02.dam

4:2-FTS

y = -0.00238 x^2 + 0.22479 x + -0.00260 (r = 0.99845) (weighting: 1 / x)



Component Calibration Verification

Sample Name	4:2-FTS Area	13C2-4:2-FTS Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	2939.1	69544.1	True	1.00	0.042	5.47	1.000	0.187	0.200	6.9	50.0	
CAL2	9477.8	87132.1	True	1.00	0.109	5.47	1.000	0.560	0.498	-11.1	30.0	
CAL3	31960.0	80474.0	True	1.00	0.397	5.46	1.000	1.870	1.813	-3.0	30.0	
CAL4	65813.0	73440.6	True	1.00	0.896	5.46	1.000	3.740	4.183	11.8	30.0	
CAL5	161677.3	89903.3	True	1.00	1.798	5.46	1.000	9.340	8.837	-5.4	30.0	
CAL6	376815.3	94831.8	True	1.00	3.974	5.47	1.000	23.350	23.555	0.9	30.0	
CAL7	671115.3	96312.2	False	1.00	6.968	5.46	1.000	46.700	no root		30.0	

APPROVED
By JWK at 12:34 pm, 5/11/17

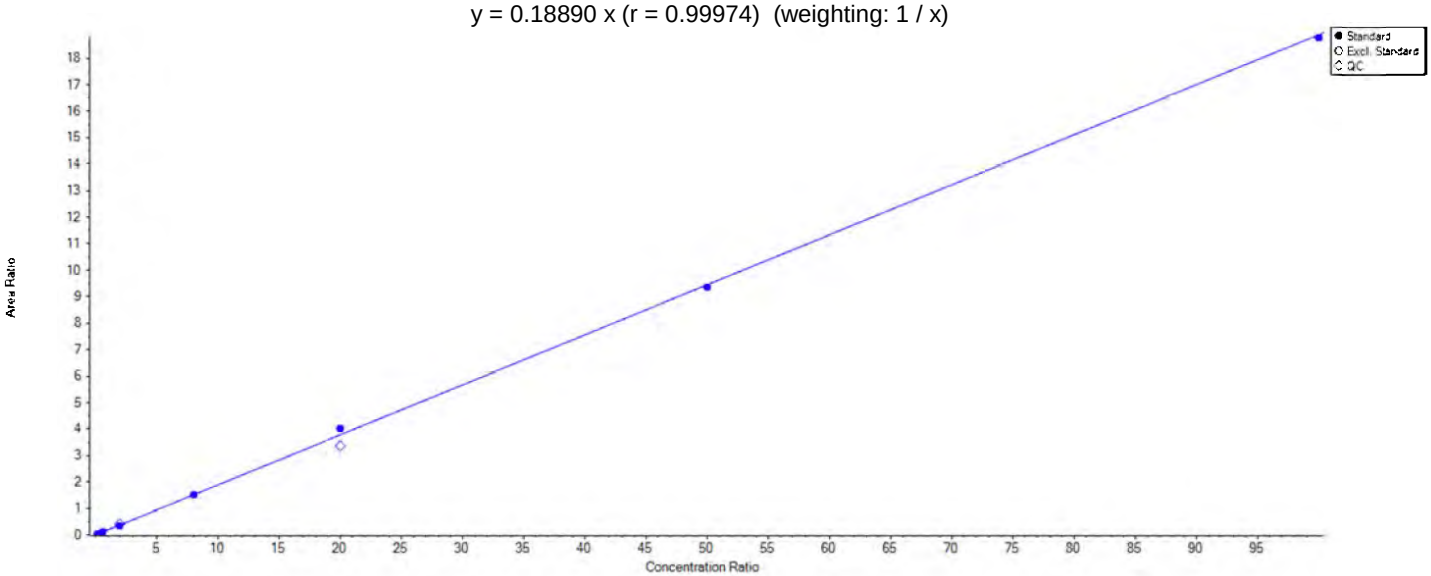
REVIEWED
By UMJS at 9:13 am, 5/15/17

Initial Calibration Verification

Instrument ID: LM24960 **ICAL Name:** 17MAY10MCAL **QMethod Name:** PFCMOD - 17JAN28
Result Table: 17MAY10MCAL5/11/2017 12:08:01 PM **Acquisition Method:** PFC-32-16NOV02.dam

PFHxA

y = 0.18890 x (r = 0.99974) (weighting: 1 / x)



Component Calibration Verification

Sample Name	PFHxA Area	13C5-PFHxA Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	32152.5	756275.7	True	1.00	0.043	5.52	1.000	0.200	0.225	12.5	50.0	
CAL2	88067.9	756116.1	True	1.00	0.117	5.51	1.000	0.600	0.617	2.8	30.0	
CAL3	273118.2	770911.2	True	1.00	0.354	5.51	1.000	2.000	1.876	-6.2	30.0	
CAL4	1099797.8	730037.4	True	1.00	1.507	5.51	1.000	8.000	7.975	-0.3	30.0	
CAL5	2702479.6	674694.4	True	1.00	4.006	5.51	1.000	20.000	21.204	6.0	30.0	
CAL6	5846272.0	625332.8	True	1.00	9.349	5.52	1.000	50.000	49.491	-1.0	30.0	
CAL7	10209656.2	543660.8	True	1.00	18.780	5.51	1.000	100.000	99.413	-0.6	30.0	

APPROVED
By JWK at 12:34 pm, 5/11/17

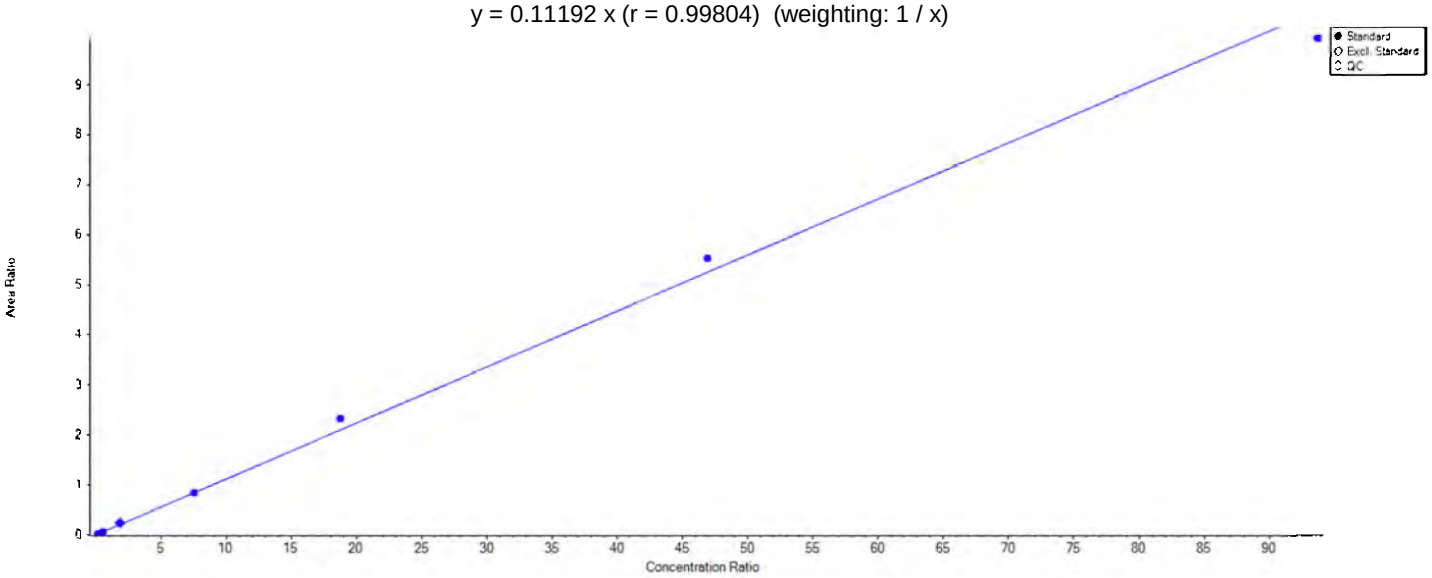
REVIEWED
By UMJS at 9:13 am, 5/15/17

Initial Calibration Verification

Instrument ID: LM24960 **ICAL Name:** 17MAY10MCAL **QMethod Name:** PFCMOD - 17JAN28
Result Table: 17MAY10MCAL5/11/2017 12:08:01 PM **Acquisition Method:** PFC-32-16NOV02.dam

PFPeS

y = 0.11192 x (r = 0.99804) (weighting: 1 / x)



Component Calibration Verification

Sample Name	PFPeS Area	13C3-PFBS Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	3280.7	135038.0	True	1.00	0.024	5.54	1.090	0.188	0.217	15.5	50.0	
CAL2	9053.8	135873.4	True	1.00	0.067	5.53	1.090	0.563	0.595	5.7	30.0	
CAL3	32077.7	130928.4	True	1.00	0.245	5.53	1.090	1.880	2.189	16.4	30.0	
CAL4	118241.1	139258.7	True	1.00	0.849	5.54	1.090	7.500	7.586	1.2	30.0	
CAL5	295643.6	127299.1	True	1.00	2.322	5.53	1.090	18.760	20.751	10.6	30.0	
CAL6	677494.1	122452.7	True	1.00	5.533	5.54	1.090	46.900	49.434	5.4	30.0	
CAL7	1156708.4	116360.4	True	1.00	9.941	5.53	1.090	93.800	88.819	-5.3	30.0	

APPROVED
By JWK at 12:34 pm, 5/11/17

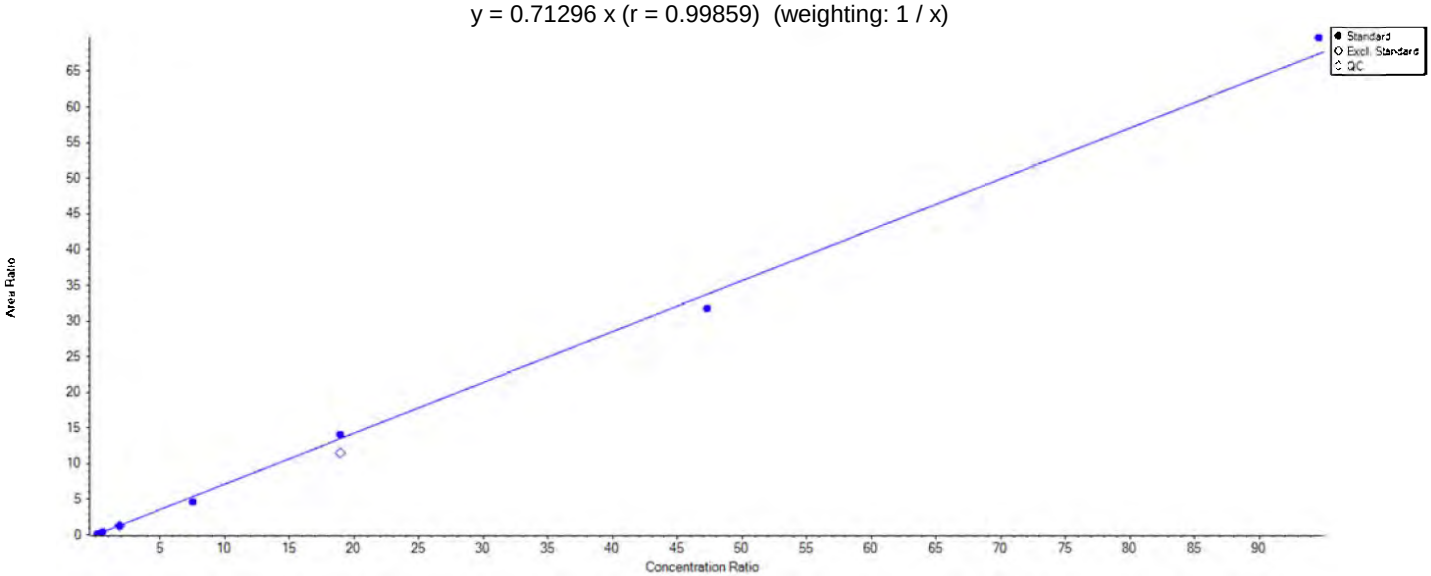
REVIEWED
By UMJS at 9:13 am, 5/15/17

Initial Calibration Verification

Instrument ID: LM24960 **ICAL Name:** 17MAY10MCAL **QMethod Name:** PFCMOD - 17JAN28
Result Table: 17MAY10MCAL5/11/2017 12:08:01 PM **Acquisition Method:** PFC-32-16NOV02.dam

PFHxS

y = 0.71296 x (r = 0.99859) (weighting: 1 / x)



Component Calibration Verification

Sample Name	PFHxS Area	13C3-PFHxS Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	8586.0	76785.4	True	1.00	0.112	5.98	1.000	0.189	0.157	-17.0	50.0	
CAL2	32003.0	74996.3	True	1.00	0.427	5.97	1.000	0.567	0.599	5.6	30.0	
CAL3	94217.2	75886.9	True	1.00	1.242	5.97	1.000	1.890	1.741	-7.9	30.0	
CAL4	359701.9	78417.1	True	1.00	4.587	5.97	1.000	7.560	6.434	-14.9	30.0	
CAL5	954650.3	67946.0	True	1.00	14.050	5.97	1.000	18.900	19.707	4.3	30.0	
CAL6	2136783.8	67201.2	True	1.00	31.797	5.98	1.000	47.300	44.599	-5.7	30.0	
CAL7	3656621.9	52457.9	True	1.00	69.706	5.97	1.000	94.600	97.770	3.4	30.0	

APPROVED
By JWK at 12:34 pm, 5/11/17

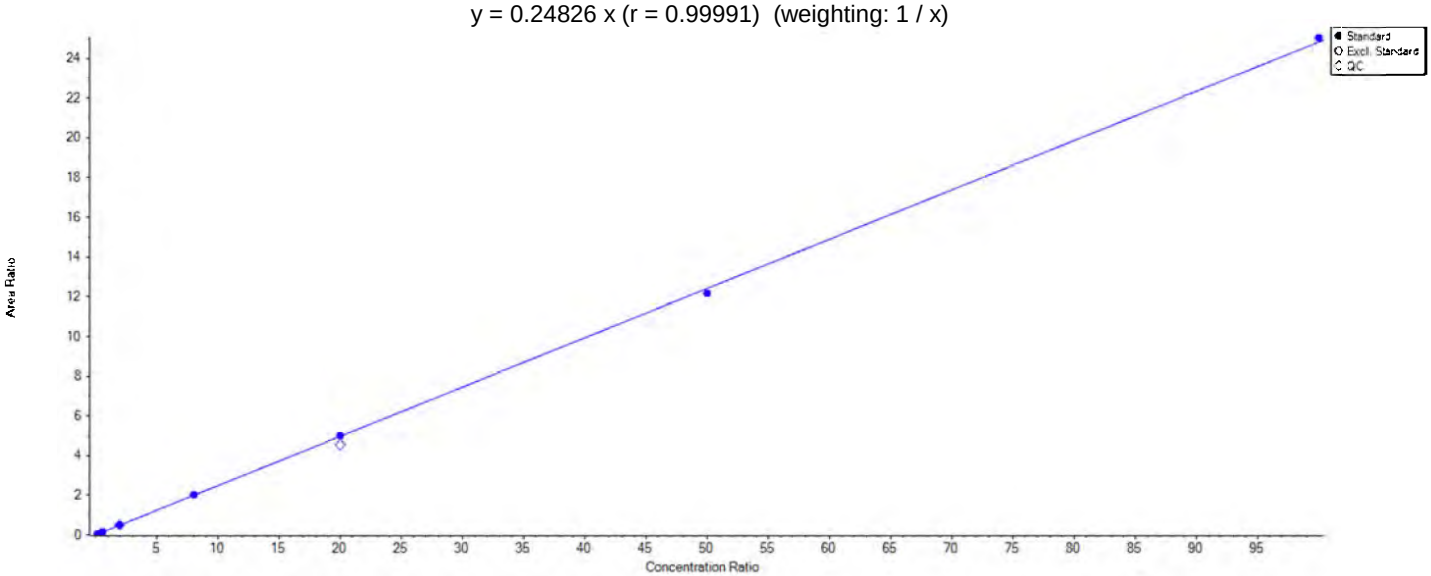
REVIEWED
By UMJS at 9:13 am, 5/15/17

Initial Calibration Verification

Instrument ID: LM24960 **ICAL Name:** 17MAY10MCAL **QMethod Name:** PFCMOD - 17JAN28
Result Table: 17MAY10MCAL5/11/2017 12:08:01 PM **Acquisition Method:** PFC-32-16NOV02.dam

PFHpA

y = 0.24826 x (r = 0.99991) (weighting: 1 / x)



Component Calibration Verification

Sample Name	PFHpA Area	13C4-PFHpA Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	25559.7	465938.1	True	1.00	0.055	5.98	1.000	0.200	0.221	10.5	50.0	
CAL2	78041.4	485135.8	True	1.00	0.161	5.98	1.000	0.600	0.648	8.0	30.0	
CAL3	232051.7	456311.0	True	1.00	0.509	5.97	1.000	2.000	2.048	2.4	30.0	
CAL4	921662.1	461833.4	True	1.00	1.996	5.98	1.000	8.000	8.039	0.5	30.0	
CAL5	2228030.9	447767.8	True	1.00	4.976	5.98	1.000	20.000	20.043	0.2	30.0	
CAL6	5072728.3	417619.8	True	1.00	12.147	5.98	1.000	50.000	48.928	-2.1	30.0	
CAL7	8535799.4	340857.4	True	1.00	25.042	5.98	1.000	100.000	100.872	0.9	30.0	

APPROVED
By JWK at 12:34 pm, 5/11/17

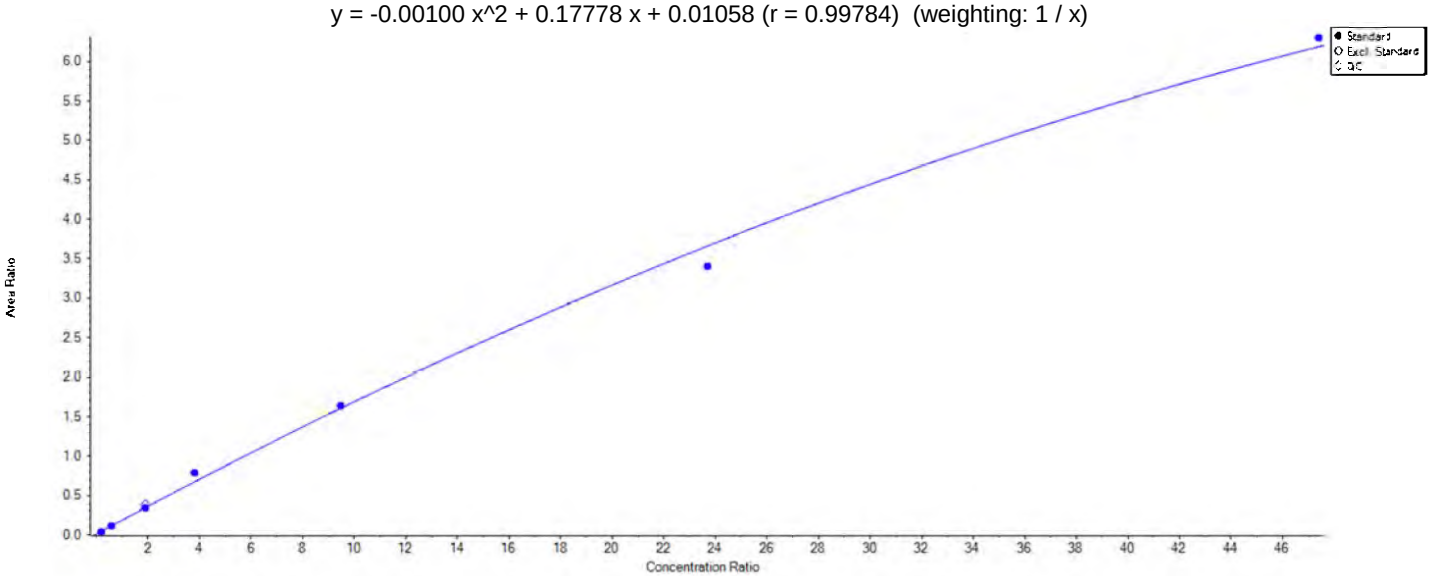
REVIEWED
By UMJS at 9:13 am, 5/15/17

Initial Calibration Verification

Instrument ID: LM24960 **ICAL Name:** 17MAY10MCAL **QMethod Name:** PFCMOD - 17JAN28
Result Table: 17MAY10MCAL5/11/2017 12:08:01 PM **Acquisition Method:** PFC-32-16NOV02.dam

6:2-FTS

y = -0.00100 x^2 + 0.17778 x + 0.01058 (r = 0.99784) (weighting: 1 / x)



Component Calibration Verification

Sample Name	6:2-FTS Area	13C2-6:2-FTS Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	1742.2	43818.7	True	1.00	0.040	6.40	1.000	0.190	0.164	-13.5	50.0	
CAL2	4629.0	41844.9	True	1.00	0.111	6.40	1.000	0.569	0.565	-0.8	30.0	
CAL3	15382.8	44976.1	True	1.00	0.342	6.40	1.000	1.900	1.884	-0.8	30.0	
CAL4	32302.3	40867.3	True	1.00	0.790	6.40	1.000	3.790	4.501	18.8	30.0	
CAL5	74863.9	45637.2	True	1.00	1.640	6.39	1.000	9.480	9.698	2.3	30.0	
CAL6	145356.7	42747.8	True	1.00	3.400	6.40	1.000	23.700	21.727	-8.3	30.0	
CAL7	274557.2	43576.0	True	1.00	6.301	6.39	1.000	47.400	48.802	3.0	30.0	

APPROVED
By JWK at 12:34 pm, 5/11/17

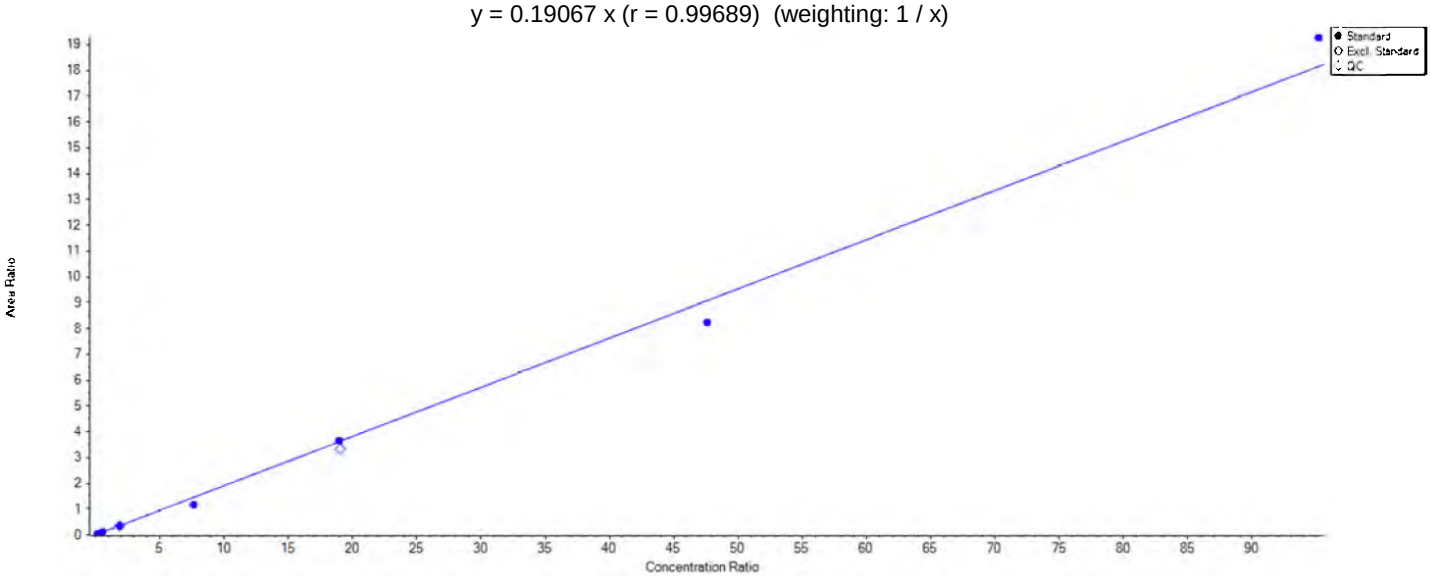
REVIEWED
By UMJS at 9:13 am, 5/15/17

Initial Calibration Verification

Instrument ID: LM24960 **ICAL Name:** 17MAY10MCAL **QMethod Name:** PFCMOD - 17JAN28
Result Table: 17MAY10MCAL5/11/2017 12:08:01 PM **Acquisition Method:** PFC-32-16NOV02.dam

PFHpS

y = 0.19067 x (r = 0.99689) (weighting: 1 / x)



Component Calibration Verification

Sample Name	PFHpS Area	13C3-PFHxS Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	2174.7	76785.4	True	1.00	0.028	6.40	1.070	0.190	0.149	-21.8	50.0	
CAL2	8235.9	74996.3	True	1.00	0.110	6.39	1.070	0.571	0.576	0.9	30.0	
CAL3	26770.3	75886.9	True	1.00	0.353	6.40	1.070	1.900	1.850	-2.6	30.0	
CAL4	91142.7	78417.1	True	1.00	1.162	6.40	1.070	7.610	6.096	-19.9	30.0	
CAL5	247466.4	67946.0	True	1.00	3.642	6.40	1.070	19.000	19.102	0.5	30.0	
CAL6	554198.1	67201.2	True	1.00	8.247	6.40	1.070	47.600	43.252	-9.1	30.0	
CAL7	1010700.2	52457.9	True	1.00	19.267	6.39	1.070	95.200	101.048	6.1	30.0	

APPROVED
By JWK at 12:34 pm, 5/11/17

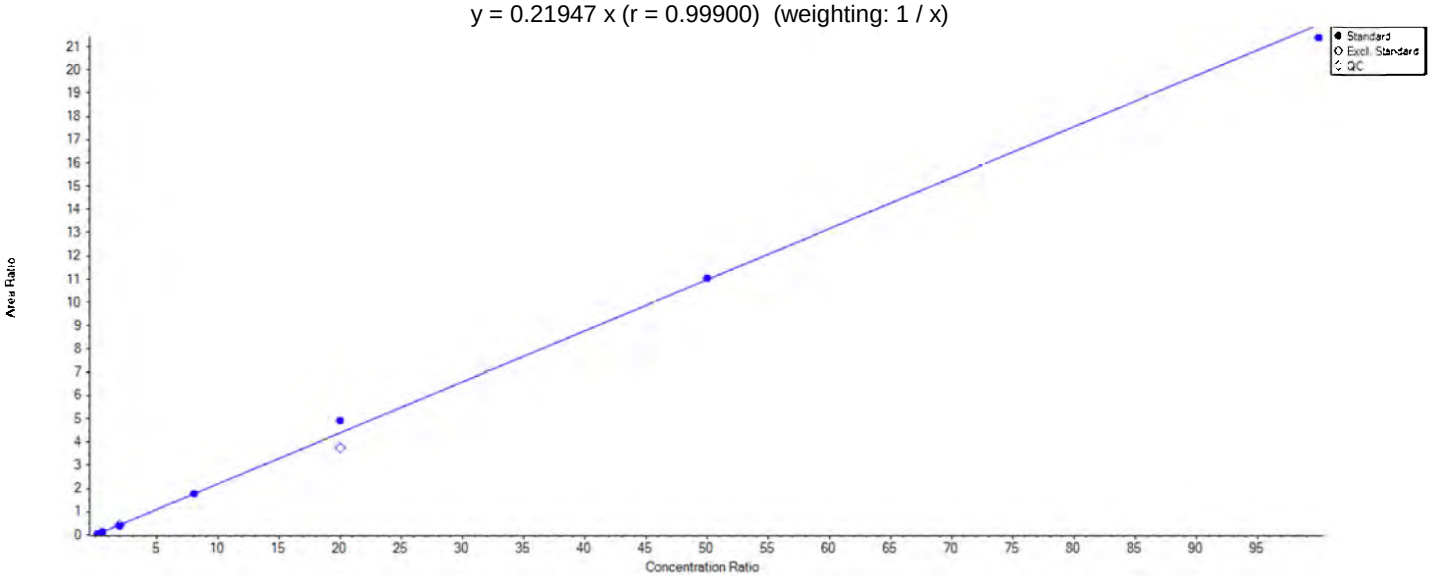
REVIEWED
By UMJS at 9:13 am, 5/15/17

Initial Calibration Verification

Instrument ID: LM24960 **ICAL Name:** 17MAY10MCAL **QMethod Name:** PFCMOD - 17JAN28
Result Table: 17MAY10MCAL5/11/2017 12:08:01 PM **Acquisition Method:** PFC-32-16NOV02.dam

PFOA

y = 0.21947 x (r = 0.99900) (weighting: 1 / x)



Component Calibration Verification

Sample Name	PFOA Area	13C8-PFOA Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	22206.5	442961.3	True	1.00	0.050	6.42	1.000	0.200	0.228	14.2	50.0	
CAL2	60848.2	444514.8	True	1.00	0.137	6.42	1.000	0.600	0.624	4.0	30.0	
CAL3	180470.9	443036.8	True	1.00	0.407	6.41	1.000	2.000	1.856	-7.2	30.0	
CAL4	748601.0	422454.6	True	1.00	1.772	6.41	1.000	8.000	8.074	0.9	30.0	
CAL5	1794825.5	366305.0	True	1.00	4.900	6.41	1.000	20.000	22.326	11.6	30.0	
CAL6	4005198.7	363201.5	True	1.00	11.028	6.42	1.000	50.000	50.246	0.5	30.0	
CAL7	6625355.2	309797.0	True	1.00	21.386	6.41	1.000	100.000	97.445	-2.6	30.0	

APPROVED
By JWK at 12:34 pm, 5/11/17

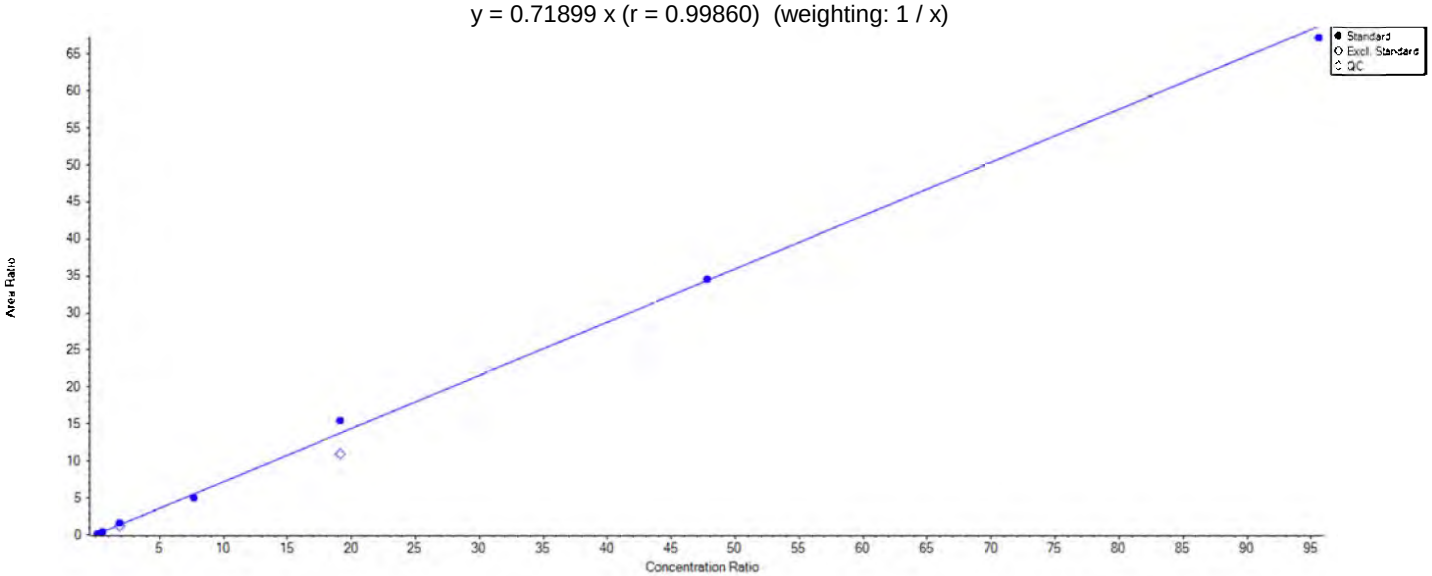
REVIEWED
By UMJS at 9:13 am, 5/15/17

Initial Calibration Verification

Instrument ID: LM24960 **ICAL Name:** 17MAY10MCAL **QMethod Name:** PFCMOD - 17JAN28
Result Table: 17MAY10MCAL5/11/2017 12:08:01 PM **Acquisition Method:** PFC-32-16NOV02.dam

PFOS

y = 0.71899 x (r = 0.99860) (weighting: 1 / x)



Component Calibration Verification

Sample Name	PFOS Area	13C8-PFOS Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	8212.5	70263.7	True	1.00	0.117	6.80	1.000	0.191	0.163	-14.9	50.0	
CAL2	26585.2	66304.8	True	1.00	0.401	6.79	1.000	0.574	0.558	-2.8	30.0	
CAL3	97999.0	62397.3	True	1.00	1.571	6.79	1.000	1.910	2.184	14.4	30.0	
CAL4	328983.0	65705.8	True	1.00	5.007	6.79	1.000	7.650	6.964	-9.0	30.0	
CAL5	817837.5	52797.1	True	1.00	15.490	6.79	1.000	19.100	21.544	12.8	30.0	
CAL6	1960984.9	56875.5	True	1.00	34.479	6.79	1.000	47.800	47.954	0.3	30.0	
CAL7	3267927.9	48633.0	True	1.00	67.196	6.78	1.000	95.600	93.458	-2.2	30.0	

APPROVED
By JWK at 12:34 pm, 5/11/17

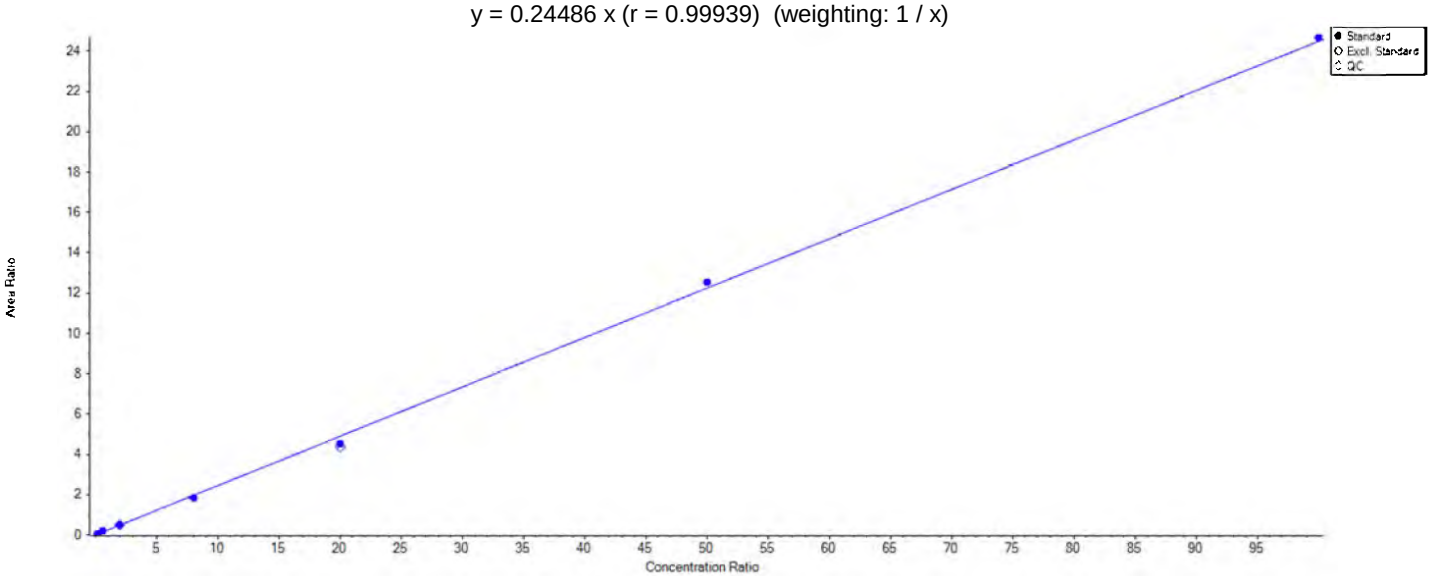
REVIEWED
By UMJS at 9:13 am, 5/15/17

Initial Calibration Verification

Instrument ID: LM24960 **ICAL Name:** 17MAY10MCAL **QMethod Name:** PFCMOD - 17JAN28
Result Table: 17MAY10MCAL5/11/2017 12:08:01 PM **Acquisition Method:** PFC-32-16NOV02.dam

PFNA

y = 0.24486 x (r = 0.99939) (weighting: 1 / x)



Component Calibration Verification

Sample Name	PFNA Area	13C9-PFNA Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	17034.1	329582.5	True	1.00	0.052	6.82	1.000	0.200	0.211	5.5	50.0	
CAL2	59382.7	331176.8	True	1.00	0.179	6.82	1.000	0.600	0.732	22.0	30.0	
CAL3	158758.2	316838.7	True	1.00	0.501	6.82	1.000	2.000	2.046	2.3	30.0	
CAL4	603159.3	332286.1	True	1.00	1.815	6.81	1.000	8.000	7.413	-7.3	30.0	
CAL5	1462102.2	322425.9	True	1.00	4.535	6.82	1.000	20.000	18.519	-7.4	30.0	
CAL6	3687416.1	294361.8	True	1.00	12.527	6.82	1.000	50.000	51.159	2.3	30.0	
CAL7	5805085.4	235381.6	True	1.00	24.662	6.81	1.000	100.000	100.719	0.7	30.0	

APPROVED
By JWK at 12:34 pm, 5/11/17

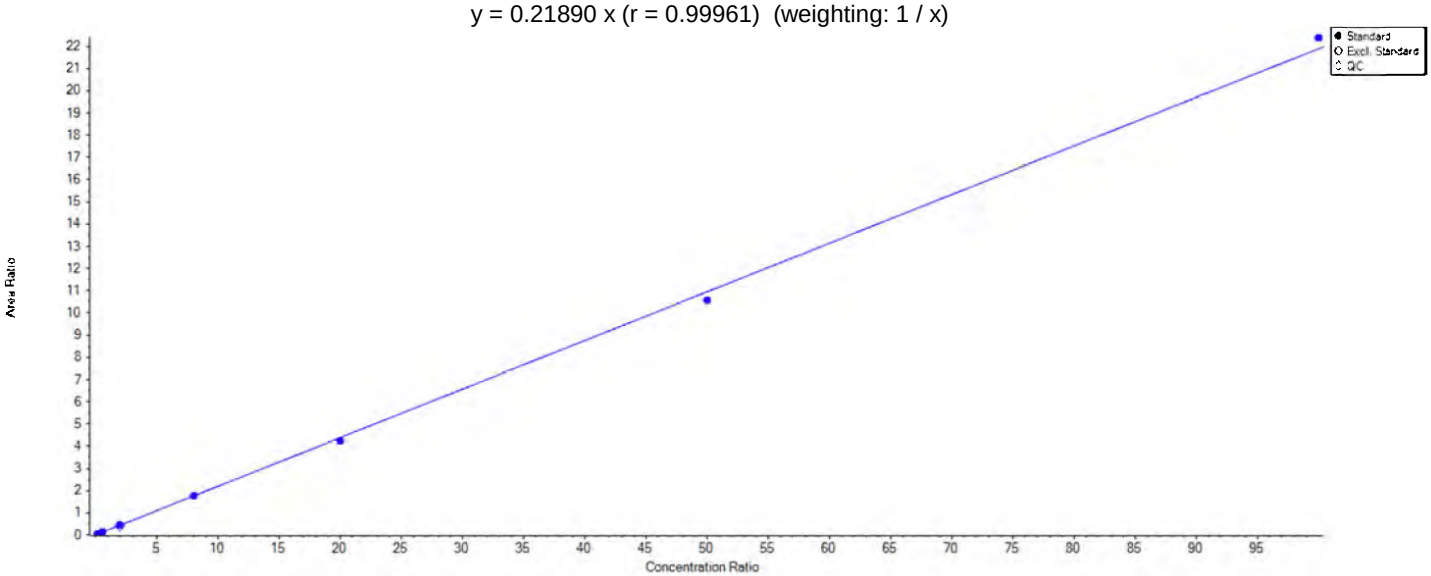
REVIEWED
By UMJS at 9:13 am, 5/15/17

Initial Calibration Verification

Instrument ID: LM24960 **ICAL Name:** 17MAY10MCAL **QMethod Name:** PFCMOD - 17JAN28
Result Table: 17MAY10MCAL5/11/2017 12:08:01 PM **Acquisition Method:** PFC-32-16NOV02.dam

PFOSA

y = 0.21890 x (r = 0.99961) (weighting: 1 / x)



Component Calibration Verification

Sample Name	PFOSA Area	13C8-PFOSA Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	17826.6	401009.9	True	1.00	0.045	7.18	1.000	0.200	0.203	1.5	50.0	
CAL2	53164.2	411448.7	True	1.00	0.129	7.16	1.000	0.600	0.590	-1.6	30.0	
CAL3	186462.0	407054.3	True	1.00	0.458	7.17	1.000	2.000	2.093	4.6	30.0	
CAL4	682083.4	387858.6	True	1.00	1.759	7.17	1.000	8.000	8.034	0.4	30.0	
CAL5	1587389.3	375612.3	True	1.00	4.226	7.17	1.000	20.000	19.307	-3.5	30.0	
CAL6	3276324.5	309795.4	True	1.00	10.576	7.18	1.000	50.000	48.314	-3.4	30.0	
CAL7	5229729.5	233633.6	True	1.00	22.384	7.17	1.000	100.000	102.260	2.3	30.0	

APPROVED
By JWK at 12:34 pm, 5/11/17

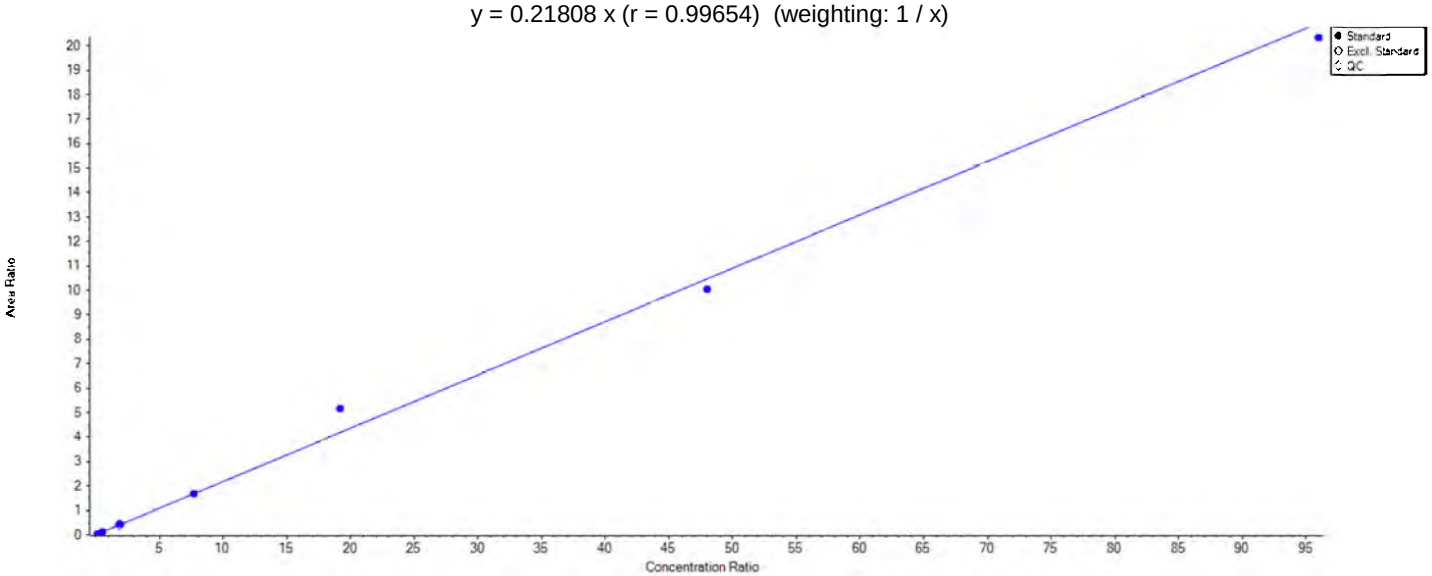
REVIEWED
By UMJS at 9:13 am, 5/15/17

Initial Calibration Verification

Instrument ID: LM24960 **ICAL Name:** 17MAY10MCAL **QMethod Name:** PFCMOD - 17JAN28
Result Table: 17MAY10MCAL5/11/2017 12:08:01 PM **Acquisition Method:** PFC-32-16NOV02.dam

PFNS

y = 0.21808 x (r = 0.99654) (weighting: 1 / x)



Component Calibration Verification

Sample Name	PFNS Area	13C8-PFOS Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	3203.7	70263.7	True	1.00	0.046	7.15	1.050	0.192	0.209	8.9	50.0	
CAL2	8862.8	66304.8	True	1.00	0.134	7.14	1.050	0.576	0.613	6.4	30.0	
CAL3	27941.1	62397.3	True	1.00	0.448	7.14	1.050	1.920	2.053	6.9	30.0	
CAL4	110726.2	65705.8	True	1.00	1.685	7.14	1.050	7.680	7.727	0.6	30.0	
CAL5	271845.0	52797.1	True	1.00	5.149	7.14	1.050	19.200	23.610	23.0	30.0	
CAL6	572036.3	56875.5	True	1.00	10.058	7.14	1.050	48.000	46.119	-3.9	30.0	
CAL7	988860.2	48633.0	True	1.00	20.333	7.13	1.050	96.000	93.236	-2.9	30.0	

APPROVED
By JWK at 12:34 pm, 5/11/17

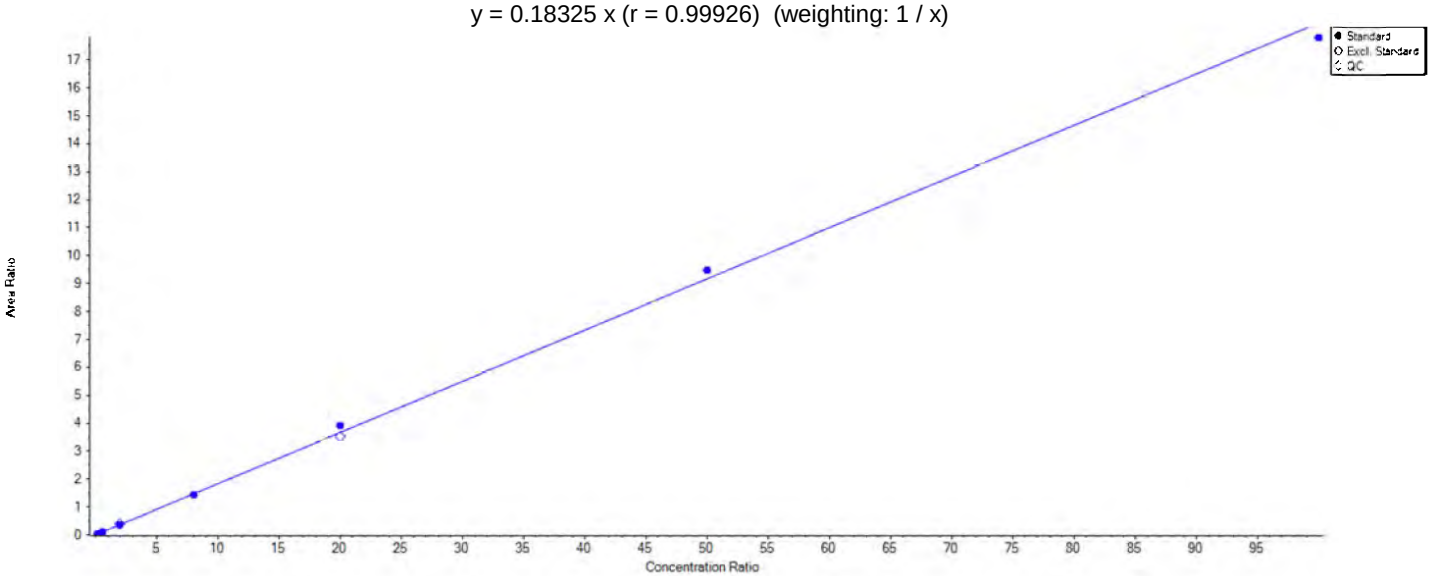
REVIEWED
By UMJS at 9:13 am, 5/15/17

Initial Calibration Verification

Instrument ID: LM24960 **ICAL Name:** 17MAY10MCAL **QMethod Name:** PFCMOD - 17JAN28
Result Table: 17MAY10MCAL5/11/2017 12:08:01 PM **Acquisition Method:** PFC-32-16NOV02.dam

PFDA

y = 0.18325 x (r = 0.99926) (weighting: 1 / x)



Component Calibration Verification

Sample Name	PFDA Area	13C6-PFDA Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	20784.4	584542.0	True	1.00	0.036	7.18	1.000	0.200	0.194	-3.0	50.0	
CAL2	73321.1	644676.4	True	1.00	0.114	7.17	1.000	0.600	0.621	3.4	30.0	
CAL3	221742.3	627905.1	True	1.00	0.353	7.17	1.000	2.000	1.927	-3.6	30.0	
CAL4	890817.2	625379.3	True	1.00	1.424	7.17	1.000	8.000	7.773	-2.8	30.0	
CAL5	2046588.9	521092.6	True	1.00	3.928	7.17	1.000	20.000	21.432	7.2	30.0	
CAL6	4396872.9	463714.1	True	1.00	9.482	7.18	1.000	50.000	51.742	3.5	30.0	
CAL7	6540611.9	367535.0	True	1.00	17.796	7.17	1.000	100.000	97.111	-2.9	30.0	

APPROVED
By JWK at 12:34 pm, 5/11/17

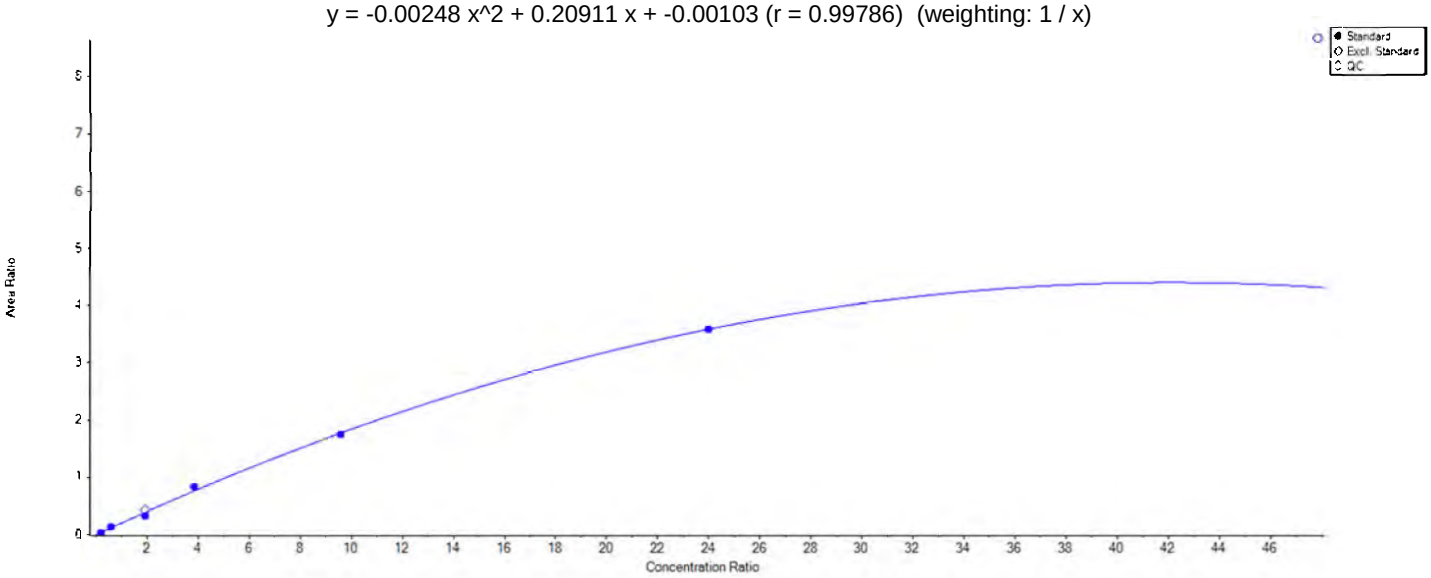
REVIEWED
By UMJS at 9:13 am, 5/15/17

Initial Calibration Verification

Instrument ID: LM24960 **ICAL Name:** 17MAY10MCAL **QMethod Name:** PFCMOD - 17JAN28
Result Table: 17MAY10MCAL5/11/2017 12:08:01 PM **Acquisition Method:** PFC-32-16NOV02.dam

8:2-FTS

y = -0.00248 x^2 + 0.20911 x + -0.00103 (r = 0.99786) (weighting: 1 / x)



Component Calibration Verification

Sample Name	8:2-FTS Area	13C2-8:2-FTS Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	2182.5	58014.4	True	1.00	0.038	7.19	1.000	0.192	0.185	-3.5	50.0	
CAL2	7911.1	59422.8	True	1.00	0.133	7.19	1.000	0.575	0.647	12.4	30.0	
CAL3	21867.6	67507.2	True	1.00	0.324	7.18	1.000	1.920	1.584	-17.5	30.0	
CAL4	45326.4	54282.2	True	1.00	0.835	7.18	1.000	3.830	4.209	9.9	30.0	
CAL5	102387.3	58320.7	True	1.00	1.756	7.18	1.000	9.580	9.465	-1.2	30.0	
CAL6	229260.2	63902.5	True	1.00	3.588	7.19	1.000	24.000	24.012	0.0	30.0	
CAL7	427590.1	49293.7	False	1.00	8.674	7.18	1.000	47.900	no root		30.0	

APPROVED
By JWK at 12:34 pm, 5/11/17

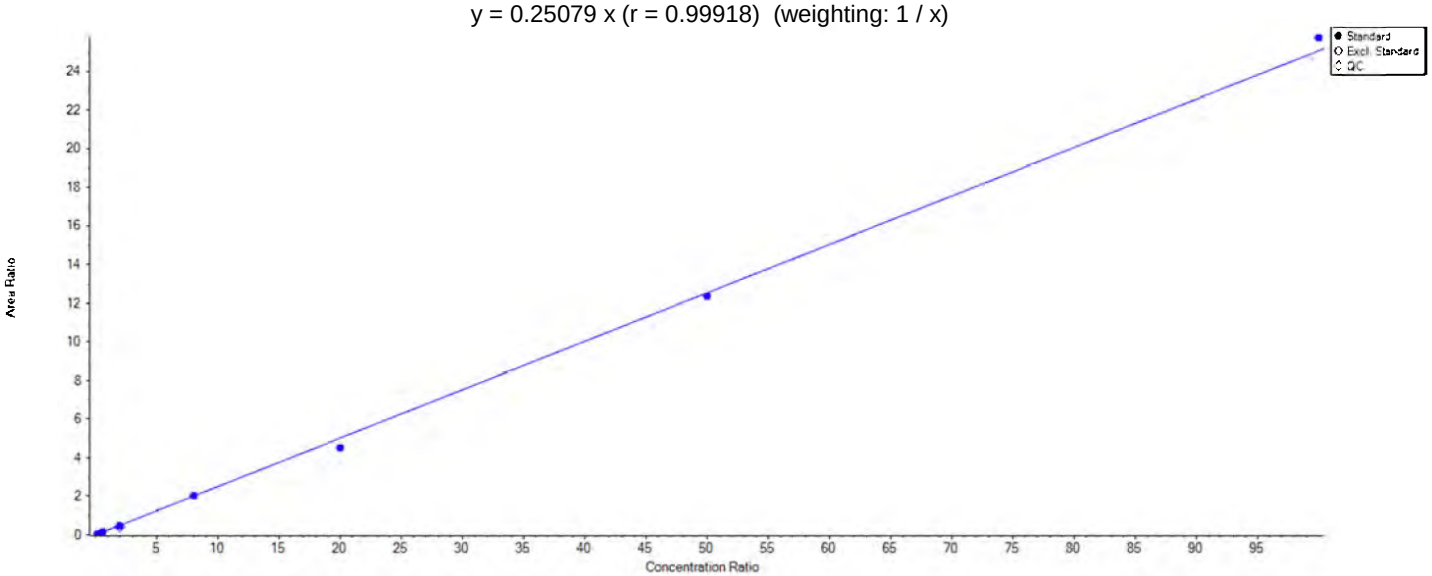
REVIEWED
By UMJS at 9:13 am, 5/15/17

Initial Calibration Verification

Instrument ID: LM24960 **ICAL Name:** 17MAY10MCAL **QMethod Name:** PFCMOD - 17JAN28
Result Table: 17MAY10MCAL5/11/2017 12:08:01 PM **Acquisition Method:** PFC-32-16NOV02.dam

NMePFOSAE

y = 0.25079 x (r = 0.99918) (weighting: 1 / x)



Component Calibration Verification

Sample Name	NMePFOSAE Area	d7-NMePFOSAE Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	6401.0	107402.7	True	1.00	0.060	7.63	1.000	0.200	0.238	18.8	50.0	
CAL2	17502.5	118120.3	True	1.00	0.148	7.63	1.000	0.600	0.591	-1.5	30.0	
CAL3	54490.4	116590.7	True	1.00	0.467	7.63	1.000	2.000	1.864	-6.8	30.0	
CAL4	229733.0	113263.4	True	1.00	2.028	7.63	1.000	8.000	8.088	1.1	30.0	
CAL5	544260.9	120050.6	True	1.00	4.534	7.63	1.000	20.000	18.077	-9.6	30.0	
CAL6	1346503.3	109014.5	True	1.00	12.352	7.63	1.000	50.000	49.251	-1.5	30.0	
CAL7	2675647.4	103890.5	True	1.00	25.755	7.63	1.000	100.000	102.693	2.7	30.0	

APPROVED
By JWK at 12:34 pm, 5/11/17

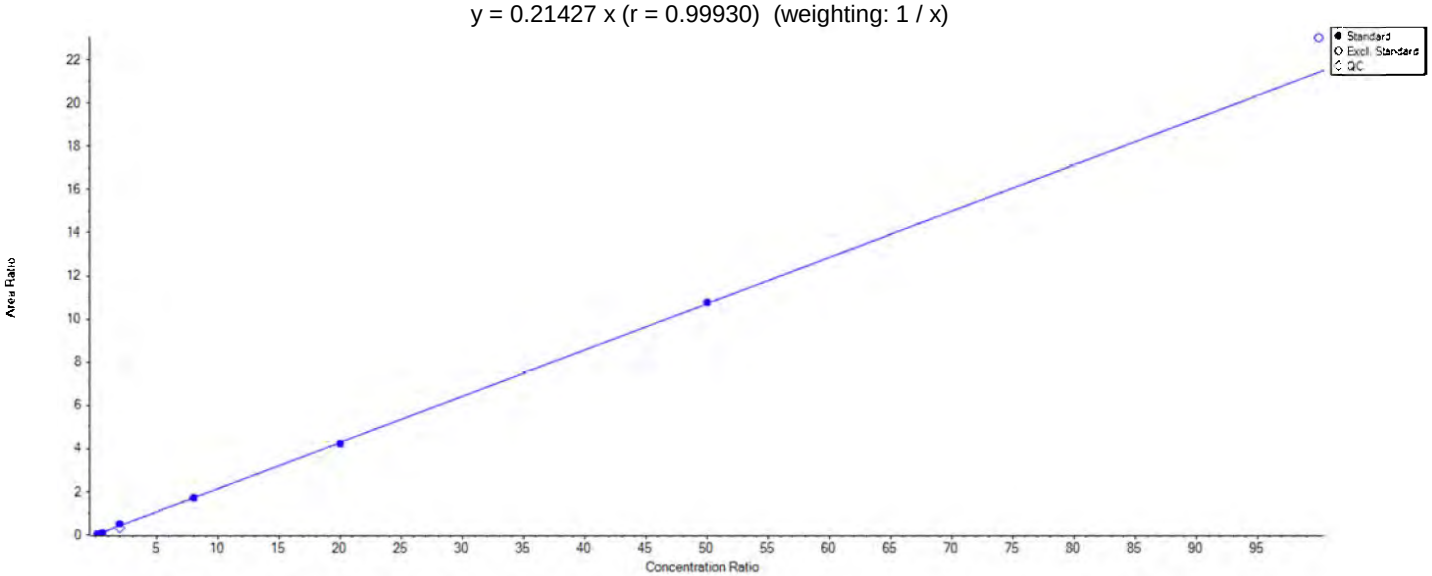
REVIEWED
By UMJS at 9:13 am, 5/15/17

Initial Calibration Verification

Instrument ID: LM24960 **ICAL Name:** 17MAY10MCAL **QMethod Name:** PFCMOD - 17JAN28
Result Table: 17MAY10MCAL5/11/2017 12:08:01 PM **Acquisition Method:** PFC-32-16NOV02.dam

NMePFOSA

y = 0.21427 x (r = 0.99930) (weighting: 1 / x)



Component Calibration Verification

Sample Name	NMePFOSA Area	d3-NMePFOSA Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	2216.0	45510.5	True	1.00	0.049	7.65	1.000	0.200	0.227	13.6	50.0	
CAL2	4358.6	47494.6	True	1.00	0.092	7.64	1.000	0.600	0.428	-28.6	30.0	
CAL3	21999.0	44611.2	True	1.00	0.493	7.65	1.000	2.000	2.302	15.1	30.0	
CAL4	79171.4	46434.4	True	1.00	1.705	7.65	1.000	8.000	7.958	-0.5	30.0	
CAL5	191194.8	45430.7	True	1.00	4.209	7.65	1.000	20.000	19.642	-1.8	30.0	
CAL6	505564.3	46961.4	True	1.00	10.766	7.65	1.000	50.000	50.244	0.5	30.0	
CAL7	934989.6	40596.0	False	1.00	23.032	7.65	1.000	100.000	107.491	7.5	30.0	

APPROVED
By JWK at 12:34 pm, 5/11/17

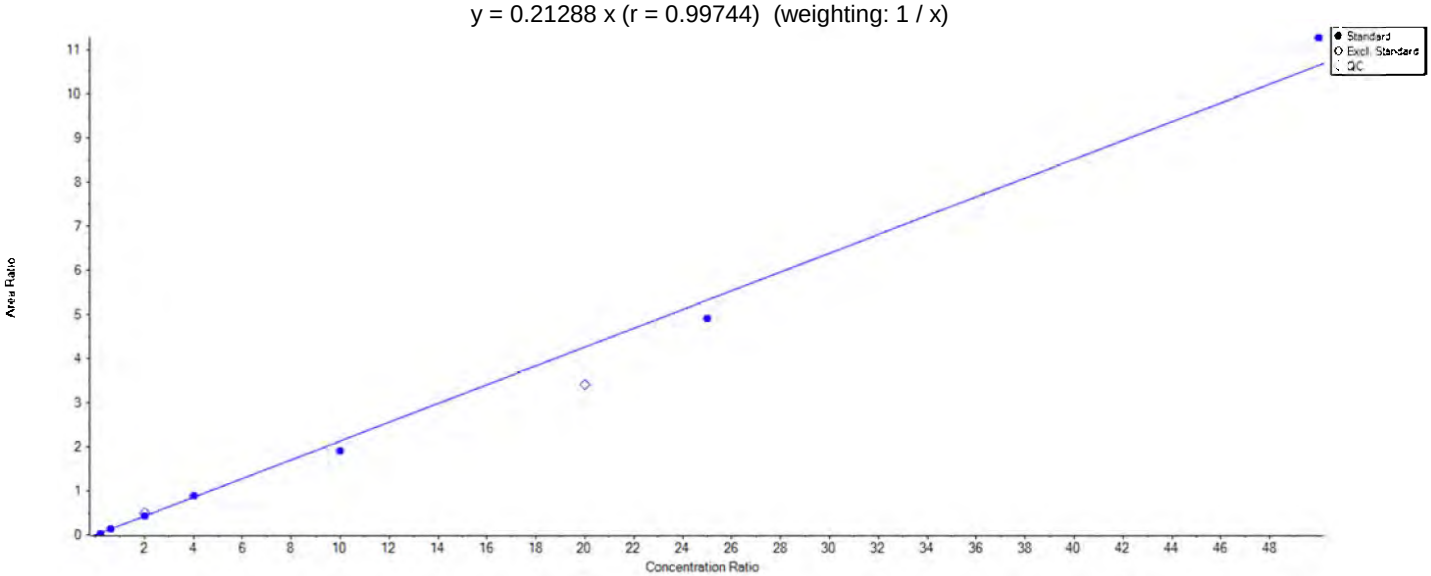
REVIEWED
By UMJS at 9:13 am, 5/15/17

Initial Calibration Verification

Instrument ID: LM24960 **ICAL Name:** 17MAY10MCAL **QMethod Name:** PFCMOD - 17JAN28
Result Table: 17MAY10MCAL5/11/2017 12:08:01 PM **Acquisition Method:** PFC-32-16NOV02.dam

NMeFOSAA

y = 0.21288 x (r = 0.99744) (weighting: 1 / x)



Component Calibration Verification

Sample Name	NMeFOSAA Area	d3-NMeFOSAA Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	3702.9	131817.0	True	1.00	0.028	7.37	1.000	0.200	0.132	-34.0	50.0	
CAL2	15665.3	121565.7	True	1.00	0.129	7.36	1.000	0.600	0.605	0.9	30.0	
CAL3	59740.9	142053.1	True	1.00	0.421	7.34	1.000	2.000	1.976	-1.2	30.0	
CAL4	111221.7	125622.3	True	1.00	0.885	7.35	1.000	4.000	4.159	4.0	30.0	
CAL5	266017.3	139575.1	True	1.00	1.906	7.35	1.000	10.000	8.953	-10.5	30.0	
CAL6	654587.8	133529.4	True	1.00	4.902	7.36	1.000	25.000	23.028	-7.9	30.0	
CAL7	1260741.0	111855.8	True	1.00	11.271	7.35	1.000	50.000	52.947	5.9	30.0	

APPROVED
By JWK at 12:34 pm, 5/11/17

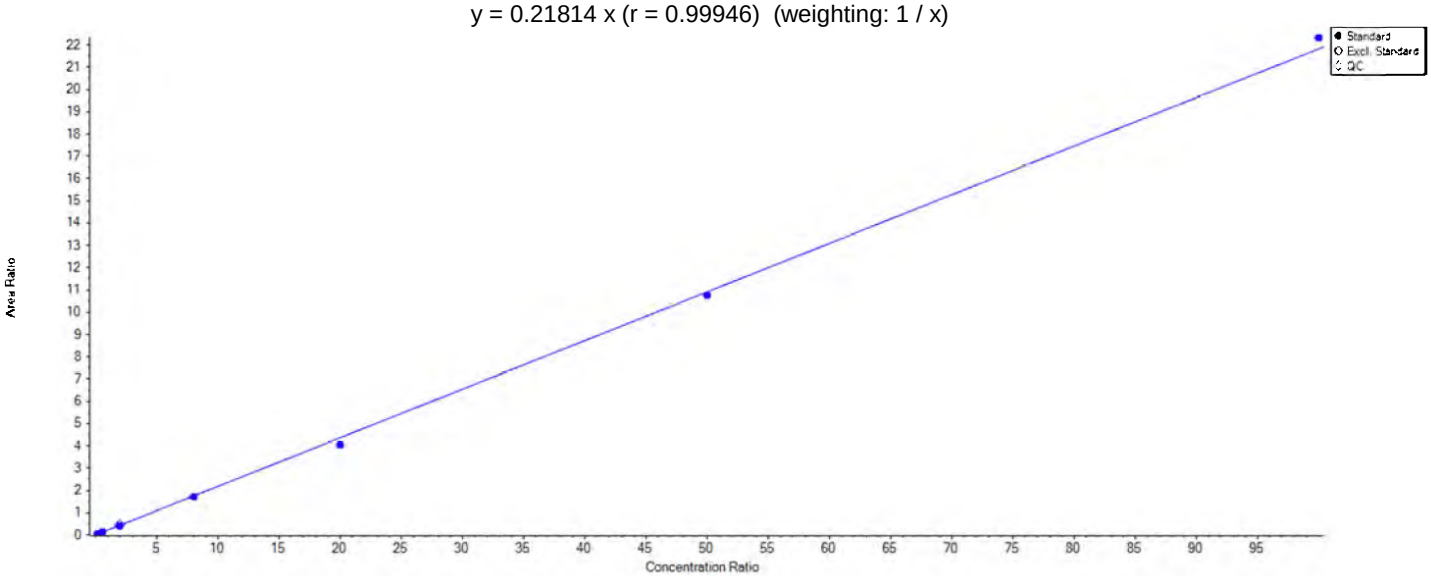
REVIEWED
By UMJS at 9:13 am, 5/15/17

Initial Calibration Verification

Instrument ID: LM24960 **ICAL Name:** 17MAY10MCAL **QMethod Name:** PFCMOD - 17JAN28
Result Table: 17MAY10MCAL5/11/2017 12:08:01 PM **Acquisition Method:** PFC-32-16NOV02.dam

NEtPFOSAE

y = 0.21814 x (r = 0.99946) (weighting: 1 / x)



Component Calibration Verification

Sample Name	NEtPFOSAE Area	d9-NEtPFOSAE Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	6238.4	117976.8	True	1.00	0.053	7.80	1.000	0.200	0.242	21.2	50.0	
CAL2	18784.9	131500.0	True	1.00	0.143	7.79	1.000	0.600	0.655	9.1	30.0	
CAL3	57408.7	141148.6	True	1.00	0.407	7.79	1.000	2.000	1.865	-6.8	30.0	
CAL4	207401.6	122362.7	True	1.00	1.695	7.79	1.000	8.000	7.770	-2.9	30.0	
CAL5	528891.2	130499.7	True	1.00	4.053	7.79	1.000	20.000	18.579	-7.1	30.0	
CAL6	1350643.2	125385.8	True	1.00	10.772	7.80	1.000	50.000	49.380	-1.2	30.0	
CAL7	2462924.2	110356.0	True	1.00	22.318	7.79	1.000	100.000	102.309	2.3	30.0	

APPROVED
By JWK at 12:34 pm, 5/11/17

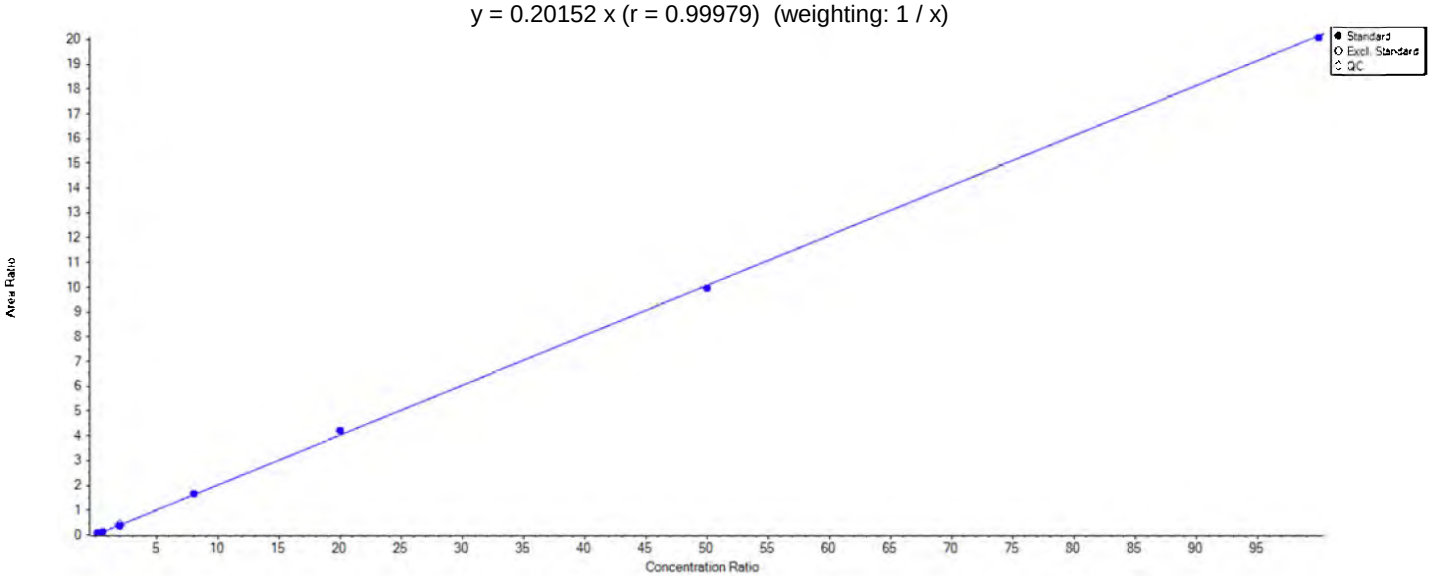
REVIEWED
By UMJS at 9:13 am, 5/15/17

Initial Calibration Verification

Instrument ID: LM24960 **ICAL Name:** 17MAY10MCAL **QMethod Name:** PFCMOD - 17JAN28
Result Table: 17MAY10MCAL5/11/2017 12:08:01 PM **Acquisition Method:** PFC-32-16NOV02.dam

NEtPFOSA

y = 0.20152 x (r = 0.99979) (weighting: 1 / x)



Component Calibration Verification

Sample Name	NEtPFOSA Area	d5-NEtPFOSA Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	2149.3	32501.1	True	1.00	0.066	7.82	1.000	0.200	0.328	64.1	50.0	OOS
CAL2	4808.0	37591.4	True	1.00	0.128	7.81	1.000	0.600	0.635	5.8	30.0	
CAL3	15355.2	40459.4	True	1.00	0.380	7.81	1.000	2.000	1.883	-5.8	30.0	
CAL4	63224.9	38229.1	True	1.00	1.654	7.81	1.000	8.000	8.207	2.6	30.0	
CAL5	140113.2	33431.2	True	1.00	4.191	7.81	1.000	20.000	20.798	4.0	30.0	
CAL6	361280.2	36340.5	True	1.00	9.942	7.82	1.000	50.000	49.334	-1.3	30.0	
CAL7	632902.7	31528.3	True	1.00	20.074	7.81	1.000	100.000	99.615	-0.4	30.0	

APPROVED
By JWK at 12:34 pm, 5/11/17

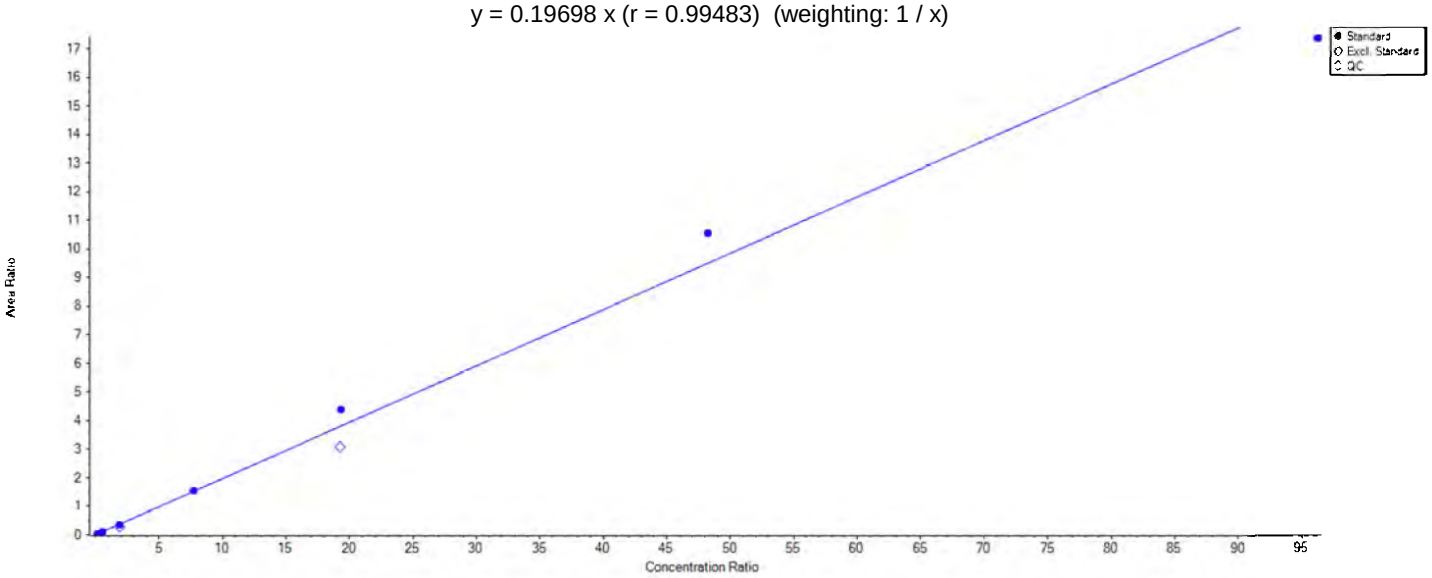
REVIEWED
By UMJS at 9:13 am, 5/15/17

Initial Calibration Verification

Instrument ID: LM24960 **ICAL Name:** 17MAY10MCAL **QMethod Name:** PFCMOD - 17JAN28
Result Table: 17MAY10MCAL5/11/2017 12:08:01 PM **Acquisition Method:** PFC-32-16NOV02.dam

PFDS

y = 0.19698 x (r = 0.99483) (weighting: 1 / x)



Component Calibration Verification

Sample Name	PFDS Area	13C8-PFOS Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	1980.3	70263.7	True	1.00	0.028	7.46	1.100	0.193	0.143	-25.9	50.0	
CAL2	6185.8	66304.8	True	1.00	0.093	7.46	1.100	0.578	0.474	-18.1	30.0	
CAL3	20969.1	62397.3	True	1.00	0.336	7.45	1.100	1.930	1.706	-11.6	30.0	
CAL4	100636.0	65705.8	True	1.00	1.532	7.45	1.100	7.700	7.776	1.0	30.0	
CAL5	231456.3	52797.1	True	1.00	4.384	7.45	1.100	19.300	22.256	15.3	30.0	
CAL6	600007.1	56875.5	True	1.00	10.550	7.45	1.100	48.200	53.557	11.1	30.0	
CAL7	845789.0	48633.0	True	1.00	17.391	7.45	1.100	96.300	88.290	-8.3	30.0	

APPROVED
By JWK at 12:34 pm, 5/11/17

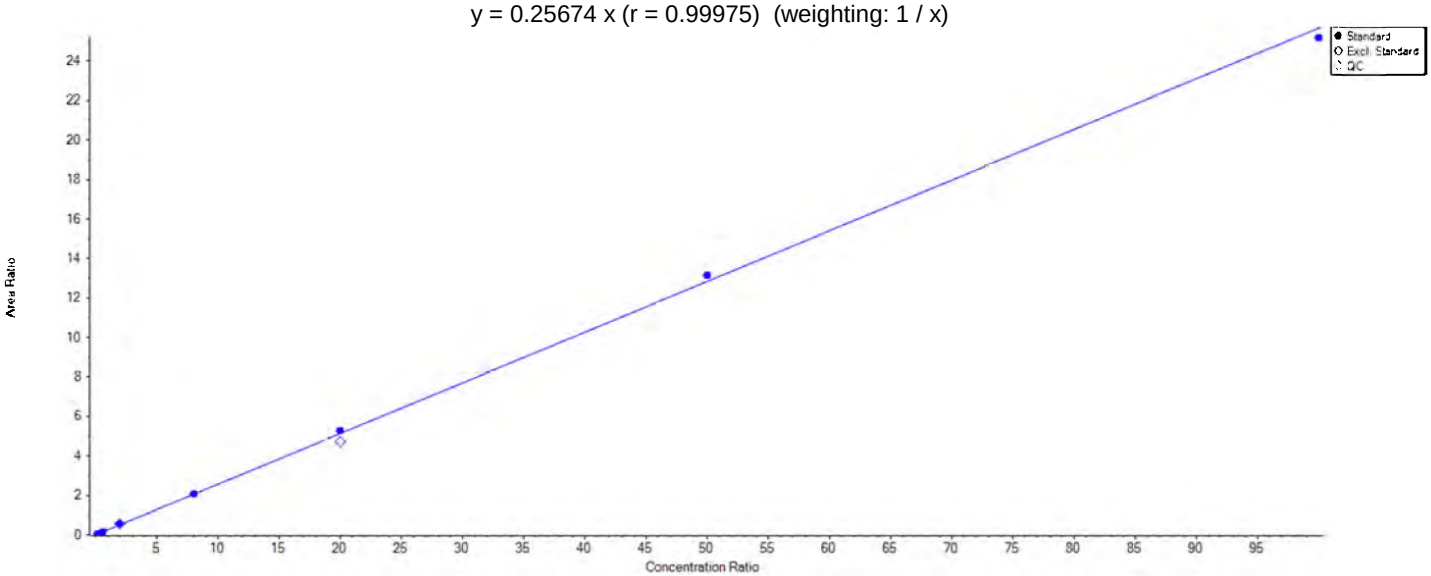
REVIEWED
By UMJS at 9:13 am, 5/15/17

Initial Calibration Verification

Instrument ID: LM24960 **ICAL Name:** 17MAY10MCAL **QMethod Name:** PFCMOD - 17JAN28
Result Table: 17MAY10MCAL5/11/2017 12:08:01 PM **Acquisition Method:** PFC-32-16NOV02.dam

PFUnDA

y = 0.25674 x (r = 0.99975) (weighting: 1 / x)



Component Calibration Verification

Sample Name	PFUnDA Area	13C7-PFUnDA Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	18754.4	362904.7	True	1.00	0.052	7.49	1.000	0.200	0.201	0.6	50.0	
CAL2	59280.3	401155.1	True	1.00	0.148	7.48	1.000	0.600	0.576	-4.1	30.0	
CAL3	182457.4	333230.9	True	1.00	0.548	7.49	1.000	2.000	2.133	6.6	30.0	
CAL4	953232.6	457980.0	True	1.00	2.081	7.49	1.000	8.000	8.107	1.3	30.0	
CAL5	1757674.6	334025.9	True	1.00	5.262	7.48	1.000	20.000	20.496	2.5	30.0	
CAL6	5087310.4	387212.5	True	1.00	13.138	7.49	1.000	50.000	51.174	2.3	30.0	
CAL7	6422246.2	254956.6	True	1.00	25.190	7.48	1.000	100.000	98.114	-1.9	30.0	

APPROVED
By JWK at 12:34 pm, 5/11/17

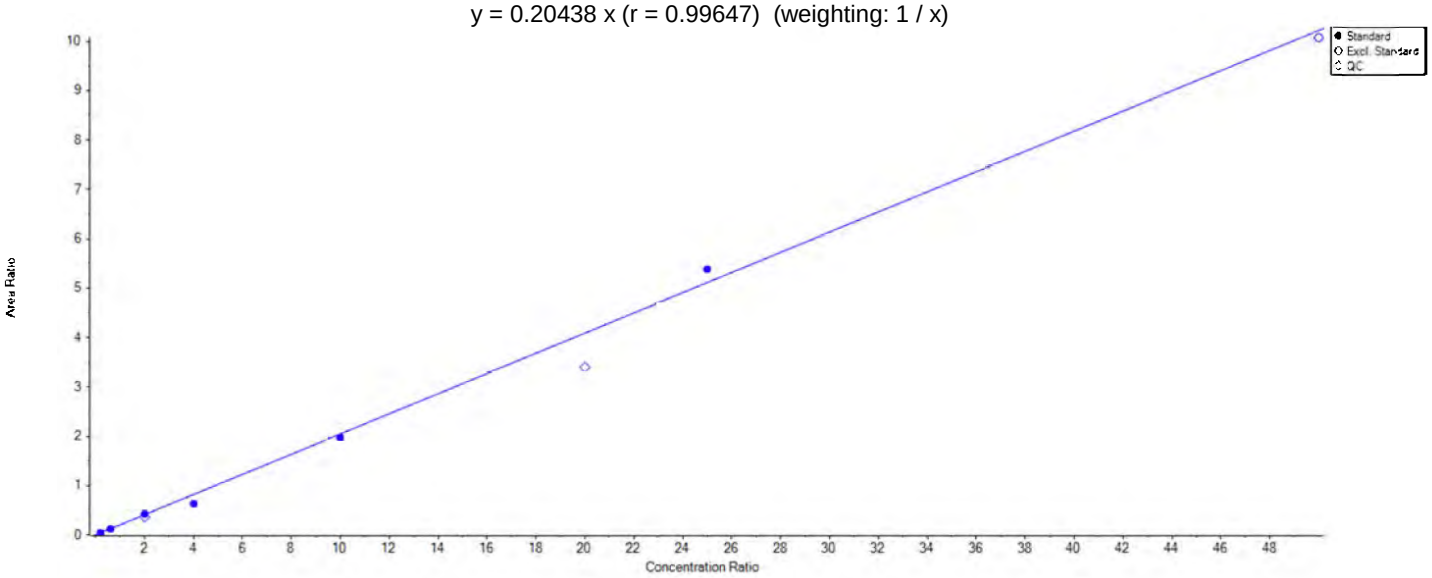
REVIEWED
By UMJS at 9:13 am, 5/15/17

Initial Calibration Verification

Instrument ID: LM24960 **ICAL Name:** 17MAY10MCAL **QMethod Name:** PFCMOD - 17JAN28
Result Table: 17MAY10MCAL5/11/2017 12:08:01 PM **Acquisition Method:** PFC-32-16NOV02.dam

NEtFOSAA

y = 0.20438 x (r = 0.99647) (weighting: 1 / x)



Component Calibration Verification

Sample Name	NEtFOSAA Area	d5-NEtFOSAA Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	3092.5	89281.1	True	1.00	0.035	7.51	1.000	0.200	0.170	-15.3	50.0	
CAL2	11256.0	98964.4	True	1.00	0.114	7.51	1.000	0.600	0.557	-7.2	30.0	
CAL3	39234.5	93010.6	True	1.00	0.422	7.51	1.000	2.000	2.064	3.2	30.0	
CAL4	77203.5	121502.1	True	1.00	0.635	7.51	1.000	4.000	3.109	-22.3	30.0	
CAL5	162478.0	82785.5	True	1.00	1.963	7.51	1.000	10.000	9.603	-4.0	30.0	
CAL6	552107.2	102721.8	True	1.00	5.375	7.52	1.000	25.000	26.298	5.2	30.0	
CAL7	646136.3	64153.9	False	1.00	10.072	7.51	1.000	50.000	49.279	-1.4	30.0	

APPROVED
By JWK at 12:34 pm, 5/11/17

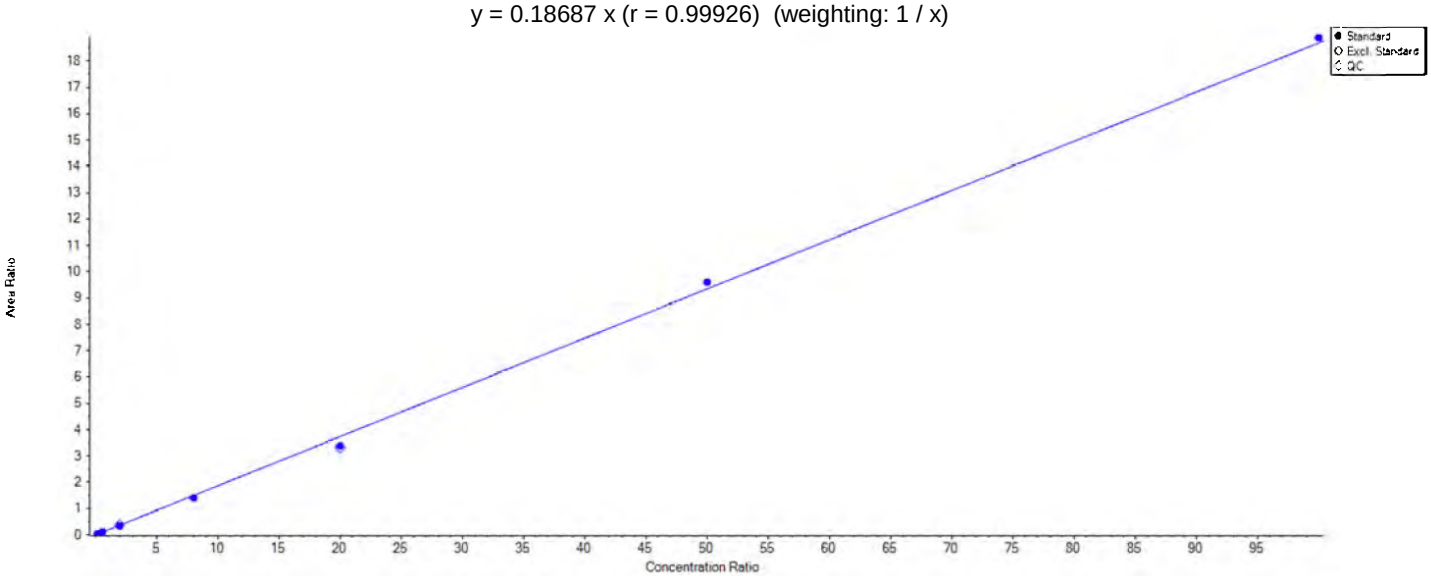
REVIEWED
By UMJS at 9:13 am, 5/15/17

Initial Calibration Verification

Instrument ID: LM24960 **ICAL Name:** 17MAY10MCAL **QMethod Name:** PFCMOD - 17JAN28
Result Table: 17MAY10MCAL5/11/2017 12:08:01 PM **Acquisition Method:** PFC-32-16NOV02.dam

PFDoDA

y = 0.18687 x (r = 0.99926) (weighting: 1 / x)



Component Calibration Verification

Sample Name	PFDoDA Area	13C2-PFDoDA Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	18334.2	504077.0	True	1.00	0.036	7.78	1.000	0.200	0.195	-2.7	50.0	
CAL2	54504.4	496372.0	True	1.00	0.110	7.77	1.000	0.600	0.588	-2.1	30.0	
CAL3	181555.8	527941.3	True	1.00	0.344	7.77	1.000	2.000	1.840	-8.0	30.0	
CAL4	680205.1	480796.7	True	1.00	1.415	7.77	1.000	8.000	7.571	-5.4	30.0	
CAL5	1489998.6	440113.2	True	1.00	3.386	7.77	1.000	20.000	18.117	-9.4	30.0	
CAL6	3490377.1	363174.3	True	1.00	9.611	7.78	1.000	50.000	51.431	2.9	30.0	
CAL7	5689783.3	301289.5	True	1.00	18.885	7.77	1.000	100.000	101.059	1.1	30.0	

APPROVED
By JWK at 12:34 pm, 5/11/17

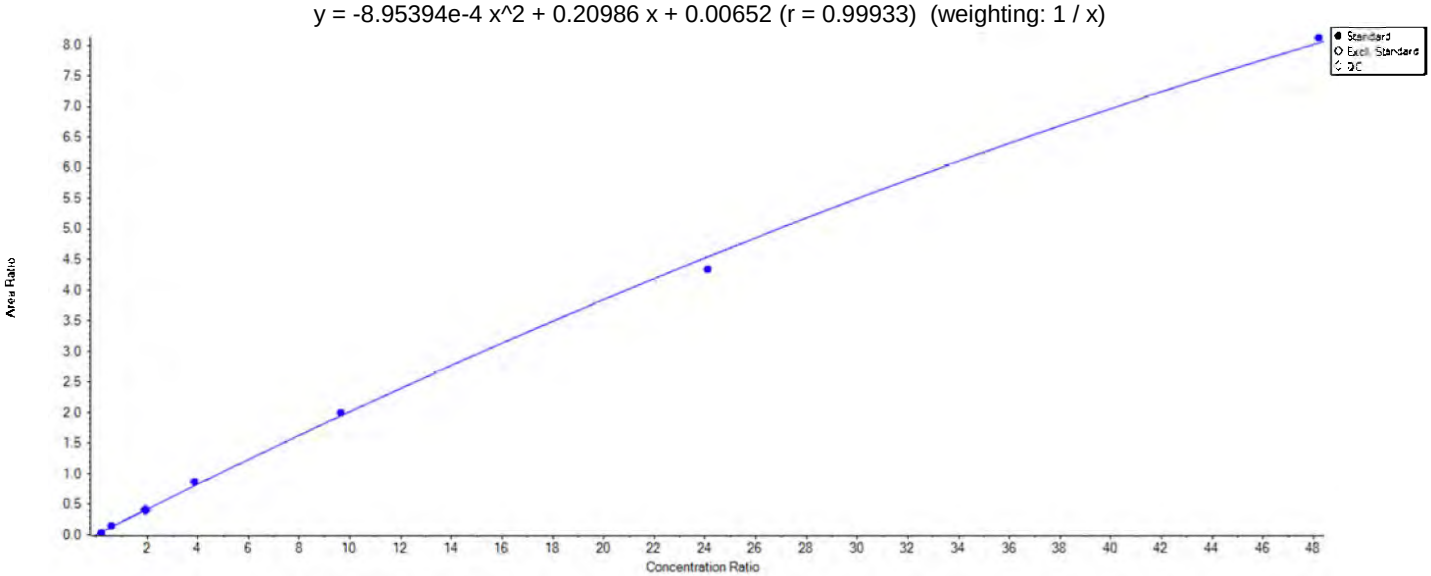
REVIEWED
By UMJS at 9:13 am, 5/15/17

Initial Calibration Verification

Instrument ID: LM24960 **ICAL Name:** 17MAY10MCAL **QMethod Name:** PFCMOD - 17JAN28
Result Table: 17MAY10MCAL5/11/2017 12:08:01 PM **Acquisition Method:** PFC-32-16NOV02.dam

10:2-FTS

y = -8.95394e-4 x^2 + 0.20986 x + 0.00652 (r = 0.99933) (weighting: 1 / x)



Component Calibration Verification

Sample Name	10:2-FTS Area	13C2-8:2-FTS Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	2328.5	58014.4	True	1.00	0.040	7.81	1.090	0.193	0.160	-16.9	50.0	
CAL2	8298.6	59422.8	True	1.00	0.140	7.81	1.090	0.578	0.636	10.1	30.0	
CAL3	27595.7	67507.2	True	1.00	0.409	7.80	1.090	1.930	1.933	0.1	30.0	
CAL4	46913.6	54282.2	True	1.00	0.864	7.81	1.090	3.860	4.161	7.8	30.0	
CAL5	116306.1	58320.7	True	1.00	1.994	7.81	1.090	9.640	9.889	2.6	30.0	
CAL6	277591.2	63902.5	True	1.00	4.344	7.81	1.090	24.100	22.907	-5.0	30.0	
CAL7	400620.9	49293.7	True	1.00	8.127	7.80	1.090	48.200	48.896	1.4	30.0	

APPROVED
By JWK at 12:34 pm, 5/11/17

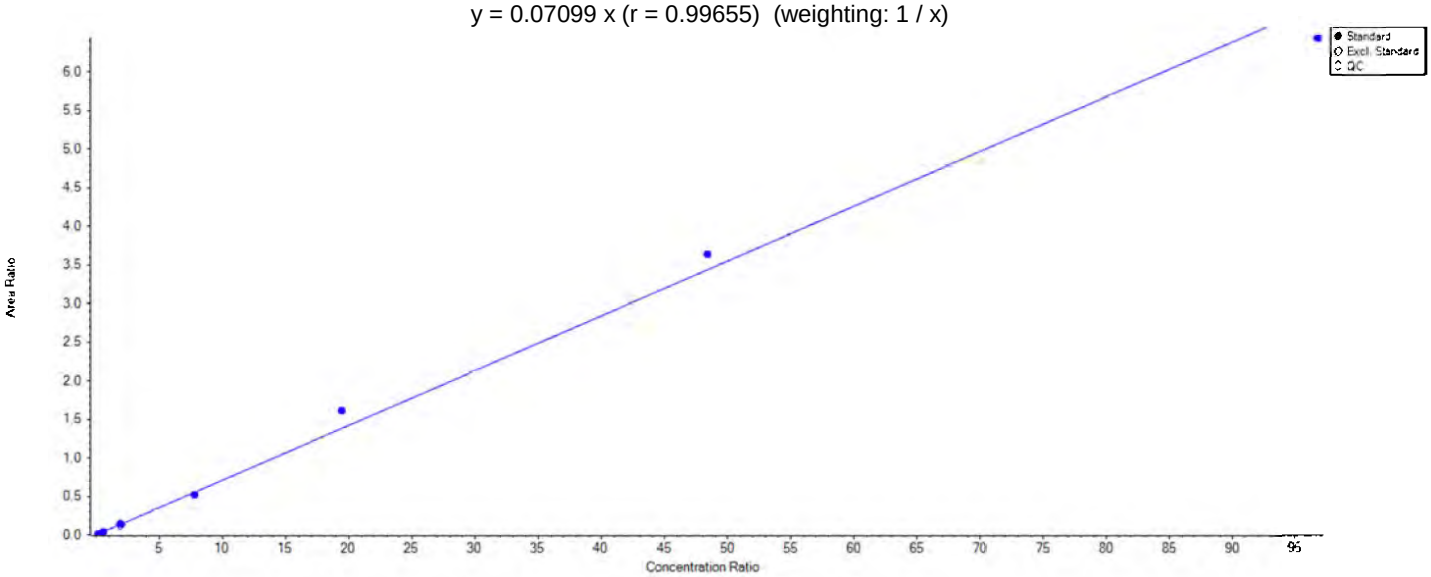
REVIEWED
By UMJS at 9:13 am, 5/15/17

Initial Calibration Verification

Instrument ID: LM24960 **ICAL Name:** 17MAY10MCAL **QMethod Name:** PFCMOD - 17JAN28
Result Table: 17MAY10MCAL5/11/2017 12:08:01 PM **Acquisition Method:** PFC-32-16NOV02.dam

PFDoS

y = 0.07099 x (r = 0.99655) (weighting: 1 / x)



Component Calibration Verification

Sample Name	PFDoS Area	13C8-PFOS Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	1265.2	70263.7	True	1.00	0.018	7.99	1.180	0.194	0.254	30.7	50.0	
CAL2	2454.5	66304.8	True	1.00	0.037	7.98	1.180	0.581	0.522	-10.2	30.0	
CAL3	8698.1	62397.3	True	1.00	0.139	7.99	1.180	1.940	1.964	1.2	30.0	
CAL4	34566.3	65705.8	True	1.00	0.526	7.99	1.180	7.740	7.411	-4.3	30.0	
CAL5	85406.7	52797.1	True	1.00	1.618	7.99	1.180	19.400	22.788	17.5	30.0	
CAL6	207255.8	56875.5	True	1.00	3.644	8.00	1.180	48.400	51.333	6.1	30.0	
CAL7	313420.7	48633.0	True	1.00	6.445	7.99	1.180	96.800	90.785	-6.2	30.0	

APPROVED
By JWK at 12:34 pm, 5/11/17

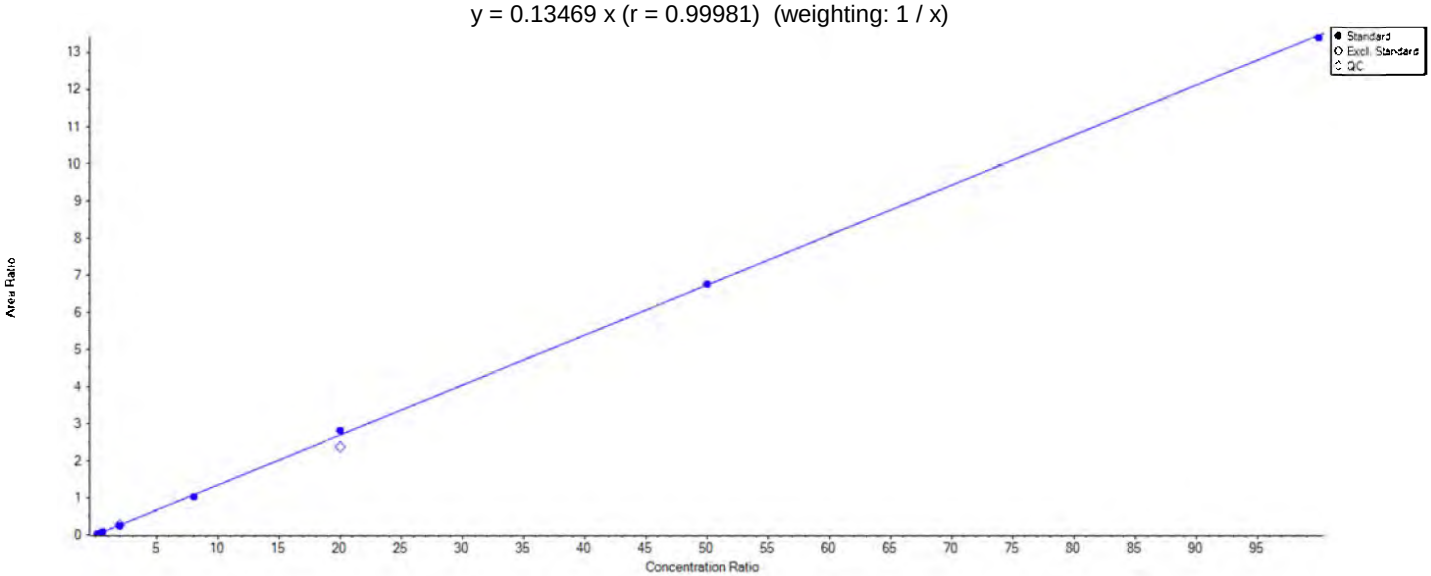
REVIEWED
By UMJS at 9:13 am, 5/15/17

Initial Calibration Verification

Instrument ID: LM24960 **ICAL Name:** 17MAY10MCAL **QMethod Name:** PFCMOD - 17JAN28
Result Table: 17MAY10MCAL5/11/2017 12:08:01 PM **Acquisition Method:** PFC-32-16NOV02.dam

PFTrDA

y = 0.13469 x (r = 0.99981) (weighting: 1 / x)



Component Calibration Verification

Sample Name	PFTrDA Area	13C2-PFDoDA Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	14532.9	504077.0	True	1.00	0.029	8.05	1.030	0.200	0.214	7.0	50.0	
CAL2	41139.6	496372.0	True	1.00	0.083	8.04	1.030	0.600	0.615	2.6	30.0	
CAL3	132228.3	527941.3	True	1.00	0.251	8.04	1.030	2.000	1.860	-7.0	30.0	
CAL4	494176.0	480796.7	True	1.00	1.028	8.04	1.030	8.000	7.631	-4.6	30.0	
CAL5	1235207.4	440113.2	True	1.00	2.807	8.04	1.030	20.000	20.838	4.2	30.0	
CAL6	2452600.7	363174.3	True	1.00	6.753	8.04	1.030	50.000	50.140	0.3	30.0	
CAL7	4037764.5	301289.5	True	1.00	13.402	8.04	1.030	100.000	99.502	-0.5	30.0	

APPROVED
By JWK at 12:34 pm, 5/11/17

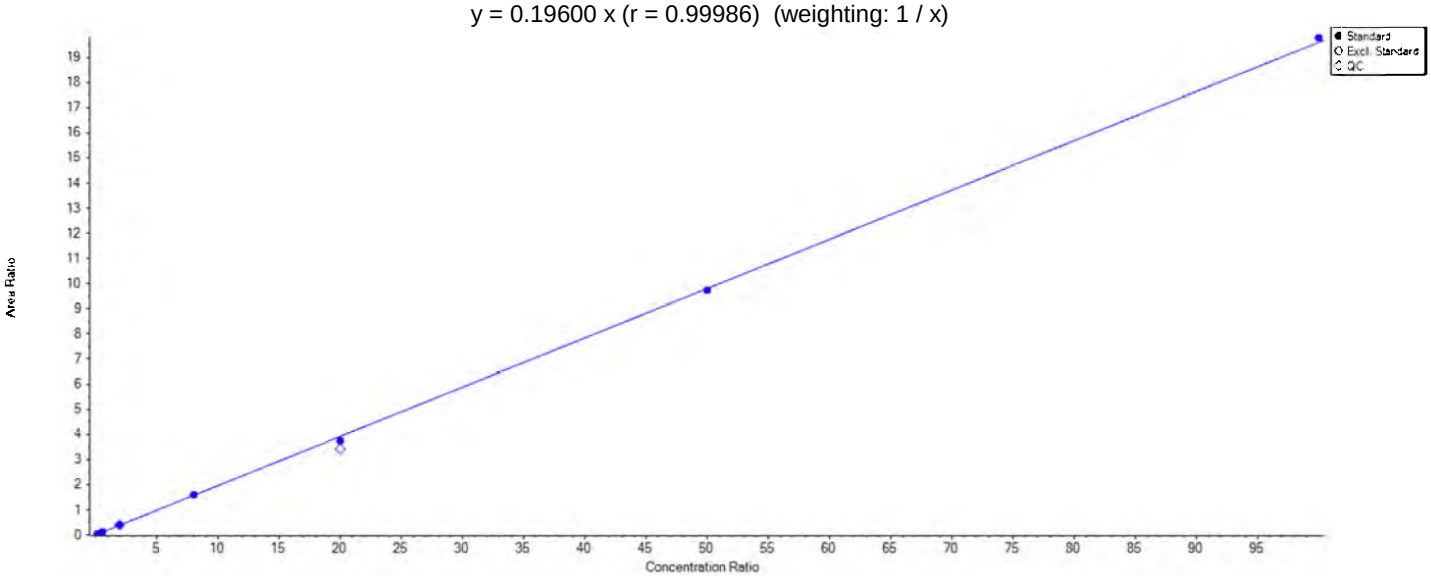
REVIEWED
By UMJS at 9:13 am, 5/15/17

Initial Calibration Verification

Instrument ID: LM24960 **ICAL Name:** 17MAY10MCAL **QMethod Name:** PFCMOD - 17JAN28
Result Table: 17MAY10MCAL5/11/2017 12:08:01 PM **Acquisition Method:** PFC-32-16NOV02.dam

PFTeDA

y = 0.19600 x (r = 0.99986) (weighting: 1 / x)



Component Calibration Verification

Sample Name	PFTeDA Area	13C2-PFTeDA Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	9800.8	266563.7	True	1.00	0.037	8.30	1.000	0.200	0.188	-6.2	50.0	
CAL2	33159.8	277785.3	True	1.00	0.119	8.29	1.000	0.600	0.609	1.5	30.0	
CAL3	107853.7	265583.2	True	1.00	0.406	8.29	1.000	2.000	2.072	3.6	30.0	
CAL4	409722.5	256797.9	True	1.00	1.596	8.29	1.000	8.000	8.140	1.8	30.0	
CAL5	970838.4	257696.7	True	1.00	3.767	8.29	1.000	20.000	19.221	-3.9	30.0	
CAL6	2238979.6	230087.1	True	1.00	9.731	8.29	1.000	50.000	49.648	-0.7	30.0	
CAL7	3701644.2	187133.4	True	1.00	19.781	8.28	1.000	100.000	100.922	0.9	30.0	

APPROVED
By JWK at 12:34 pm, 5/11/17

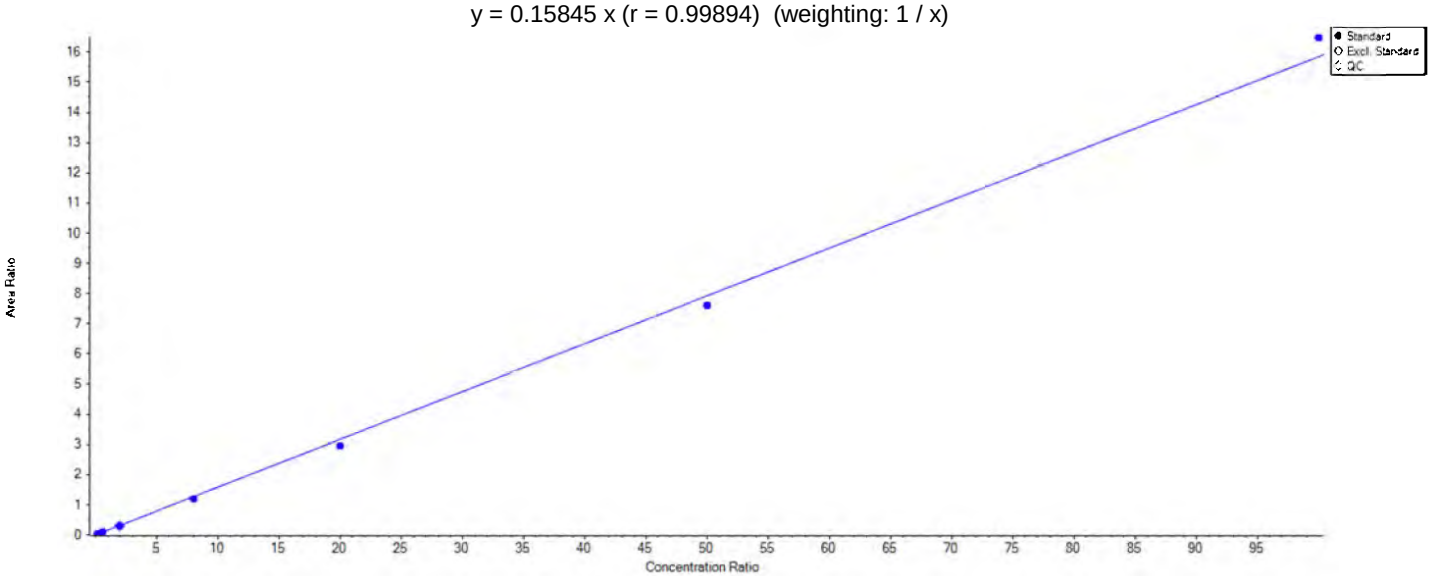
REVIEWED
By UMJS at 9:13 am, 5/15/17

Initial Calibration Verification

Instrument ID: LM24960 **ICAL Name:** 17MAY10MCAL **QMethod Name:** PFCMOD - 17JAN28
Result Table: 17MAY10MCAL5/11/2017 12:08:01 PM **Acquisition Method:** PFC-32-16NOV02.dam

PFHxDA

y = 0.15845 x (r = 0.99894) (weighting: 1 / x)



Component Calibration Verification

Sample Name	PFHxDA Area	13C2-PFTeDA Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	8492.2	266563.7	True	1.00	0.032	8.83	1.060	0.200	0.201	0.5	50.0	
CAL2	26090.9	277785.3	True	1.00	0.094	8.82	1.060	0.600	0.593	-1.2	30.0	
CAL3	83055.9	265583.2	True	1.00	0.313	8.82	1.060	2.000	1.974	-1.3	30.0	
CAL4	304418.6	256797.9	True	1.00	1.185	8.82	1.060	8.000	7.481	-6.5	30.0	
CAL5	758532.8	257696.7	True	1.00	2.944	8.82	1.060	20.000	18.576	-7.1	30.0	
CAL6	1750134.7	230087.1	True	1.00	7.606	8.82	1.060	50.000	48.004	-4.0	30.0	
CAL7	3082968.5	187133.4	True	1.00	16.475	8.81	1.060	100.000	103.971	4.0	30.0	

APPROVED
By JWK at 12:34 pm, 5/11/17

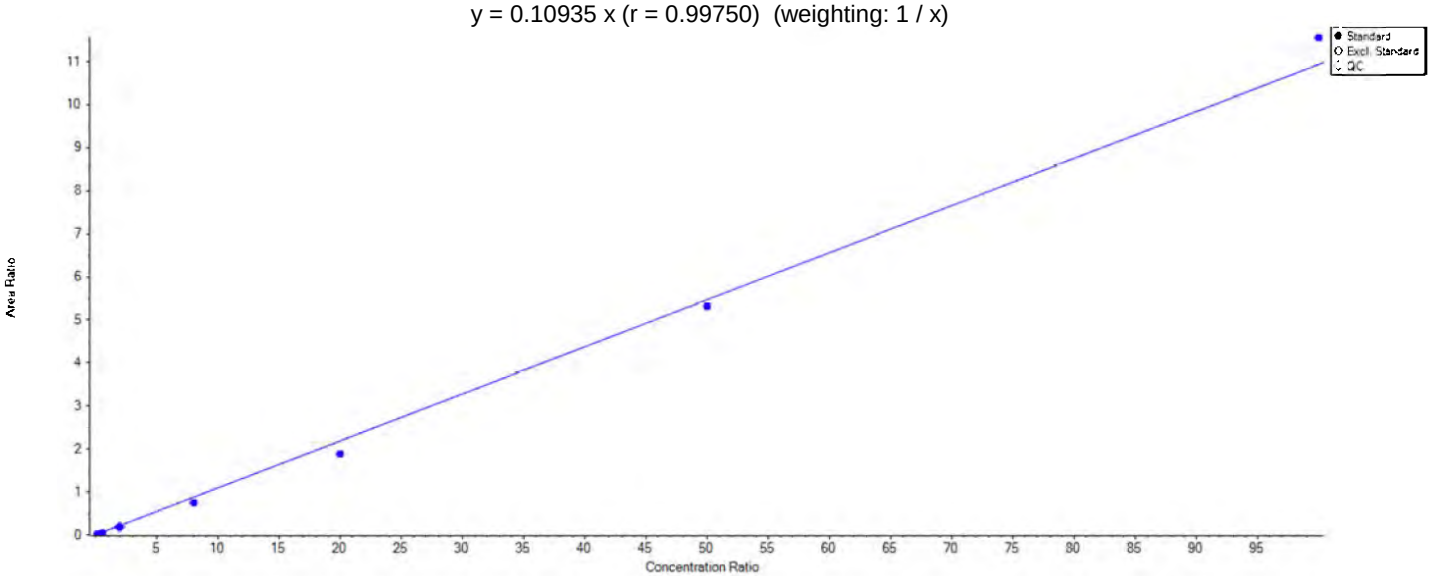
REVIEWED
By UMJS at 9:13 am, 5/15/17

Initial Calibration Verification

Instrument ID: LM24960 **ICAL Name:** 17MAY10MCAL **QMethod Name:** PFCMOD - 17JAN28
Result Table: 17MAY10MCAL5/11/2017 12:08:01 PM **Acquisition Method:** PFC-32-16NOV02.dam

PFODA

y = 0.10935 x (r = 0.99750) (weighting: 1 / x)



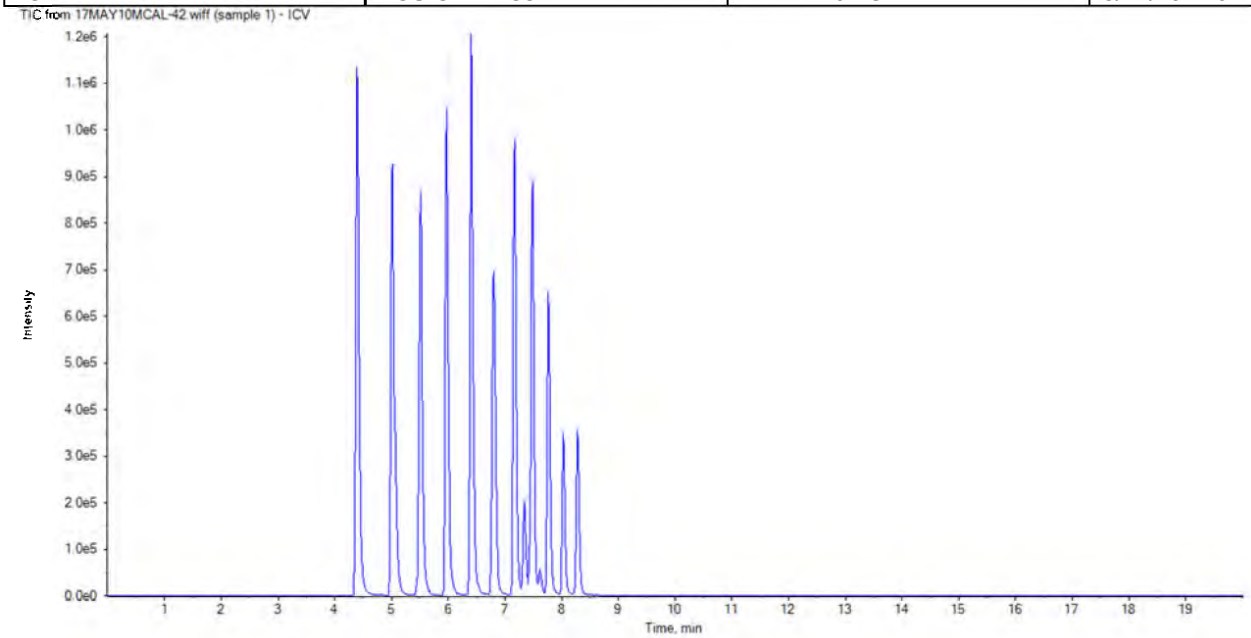
Component Calibration Verification

Sample Name	PFODA Area	13C2-PFTeDA Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	4722.9	266563.7	True	1.00	0.018	9.46	1.140	0.200	0.162	-19.0	50.0	
CAL2	14968.0	277785.3	True	1.00	0.054	9.44	1.140	0.600	0.493	-17.9	30.0	
CAL3	49283.8	265583.2	True	1.00	0.186	9.44	1.140	2.000	1.697	-15.2	30.0	
CAL4	192917.2	256797.9	True	1.00	0.751	9.45	1.140	8.000	6.870	-14.1	30.0	
CAL5	487117.7	257696.7	True	1.00	1.890	9.44	1.140	20.000	17.286	-13.6	30.0	
CAL6	1222749.9	230087.1	True	1.00	5.314	9.44	1.140	50.000	48.598	-2.8	30.0	
CAL7	2162835.5	187133.4	True	1.00	11.558	9.43	1.140	100.000	105.694	5.7	30.0	

Initial Calibration Verification

Instrument ID: LM24960 **ICAL Name:** 17MAY10MCAL **QMethod Name:** PFCMOD - 17JAN28
Result Table: 17MAY10MCAL5/11/2017 12:08:01 PM **Acquisition Method:** PFC-32-16NOV02.dam

Sample Name	Sample ID:	Sample File:	Acquisition Date:
ICV	LCSICVX1733A	17MAY10MCAL-42.wiff	5/11/2017 9:16:39 AM



Injection Standard Name	Inj Std Conc	Injection Std Peak Area	ICAL Injection Standard AVG	Injection Std %Diff	Injection Std %Diff Limit	Injection Std %Diff OOS
I13C3-PFBA	1.00	890980.0	669117.3	33.2	50.0	
I13C2-PFOA	1.00	427029.8	342184.6	24.8	50.0	
I13C4-PFOS	1.00	89827.1	70131.6	28.1	50.0	
I13C2-PFDA	1.00	541670.3	384098.7	41.0	50.0	

APPROVED
By JWK at 12:34 pm, 5/11/17

REVIEWED
By UMJS at 9:13 am, 5/15/17

Initial Calibration Verification

Instrument ID: LM24960 **ICAL Name:** 17MAY10MCAL **QMethod Name:** PFCMOD - 17JAN28
Result Table: 17MAY10MCAL5/11/2017 12:08:01 PM **Acquisition Method:** PFC-32-16NOV02.dam

Sample Name	Sample ID:	Sample File:	Acquisition Date:
ICV	LCSICVX1733A	17MAY10MCAL-42.wiff	5/11/2017 9:16:39 AM

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	2769238.0	13C4-PFBA	864498.9	1.00	3.203	4.39	1.00	20.000	17.615	-11.9	30.0	
PFPeA	2815543.7	13C5-PFPeA	791898.3	1.00	3.555	5.01	1.00	20.000	17.224	-13.9	30.0	
PFBS	471895.9	13C3-PFBS	136455.1	1.00	3.458	5.07	1.00	17.680	16.366	-7.4	30.0	
4:2-FTS	N/A	13C2-4:2-FTS	85294.2	1.00	N/A	N/A	N/A	18.680	N/A		30.0	
PFHxA	2662676.0	13C5-PFHxA	789527.8	1.00	3.373	5.51	1.00	20.000	17.853	-10.7	30.0	
PFPeS	N/A	13C3-PFBS	136455.1	1.00	N/A	N/A	N/A	18.760	N/A		30.0	
PFHxS	930700.9	13C3-PFHxS	81040.0	1.00	11.485	5.97	1.00	18.920	16.108	-14.9	30.0	
PFHpA	2139359.8	13C4-PFHpA	469246.3	1.00	4.559	5.97	1.00	20.000	18.365	-8.2	30.0	
6:2-FTS	N/A	13C2-6:2-FTS	40318.1	1.00	N/A	N/A	N/A	18.960	N/A		30.0	
PFHpS	272282.8	13C3-PFHxS	81040.0	1.00	3.360	6.39	1.07	19.030	17.621	-7.4	30.0	
PFOA	1654458.2	13C8-PFOA	442675.2	1.00	3.737	6.41	1.00	20.000	17.029	-14.9	30.0	
PFOS	782876.8	13C8-PFOS	71287.8	1.00	10.982	6.79	1.00	19.120	15.274	-20.1	30.0	
PFNA	1489986.1	13C9-PFNA	342236.4	1.00	4.354	6.81	1.00	20.000	17.780	-11.1	30.0	
PFOSA	N/A	13C8-PFOSA	467475.5	1.00	N/A	N/A	N/A	20.000	N/A		30.0	
PFNS	N/A	13C8-PFOS	71287.8	1.00	N/A	N/A	N/A	19.200	N/A		30.0	
PFDA	2059917.5	13C6-PFDA	583715.2	1.00	3.529	7.17	1.00	20.000	19.257	-3.7	30.0	
8:2-FTS	N/A	13C2-8:2-FTS	57870.5	1.00	N/A	N/A	N/A	19.160	N/A		30.0	
NMePFOSAE	N/A	d7-NMePFOSAE	122356.5	1.00	N/A	N/A	N/A	20.000	N/A		30.0	
NMePFOSA	N/A	d3-NMePFOSA	51955.8	1.00	N/A	N/A	N/A	20.000	N/A		30.0	
NMeFOSAA	532987.3	d3-NMeFOSAA	156242.1	1.00	3.411	7.34	1.00	20.000	16.025	-19.9	30.0	
NEtPFOSAE	N/A	d9-NEtPFOSAE	127497.3	1.00	N/A	N/A	N/A	20.000	N/A		30.0	
NEtPFOSA	N/A	d5-NEtPFOSA	38738.2	1.00	N/A	N/A	N/A	20.000	N/A		30.0	
PFDS	220261.2	13C8-PFOS	71287.8	1.00	3.090	7.44	1.10	19.260	15.686	-18.6	30.0	
PFUnDA	2089667.1	13C7-PFUnDA	443187.8	1.00	4.715	7.48	1.00	20.000	18.365	-8.2	30.0	
NEtFOSAA	363643.5	d5-NEtFOSAA	107430.6	1.00	3.385	7.50	1.00	20.000	16.562	-17.2	30.0	
PFDoDA	1672277.7	13C2-PFDoDA	502456.6	1.00	3.328	7.77	1.00	20.000	17.810	-10.9	30.0	
10:2-FTS	N/A	13C2-8:2-FTS	57870.5	1.00	N/A	N/A	N/A	19.280	N/A		30.0	
PFDoS	N/A	13C8-PFOS	71287.8	1.00	N/A	N/A	N/A	19.360	N/A		30.0	
PFTrDA	1190612.6	13C2-PFDoDA	502456.6	1.00	2.370	8.03	1.03	20.000	17.593	-12.0	30.0	
PFTeDA	983720.2	13C2-PFTeDA	286942.8	1.00	3.428	8.28	1.00	20.000	17.491	-12.5	30.0	
PFHxDA	N/A	13C2-PFTeDA	286942.8	1.00	N/A	N/A	N/A	20.000	N/A		30.0	
PFODA	N/A	13C2-PFTeDA	286942.8	1.00	N/A	N/A	N/A	20.000	N/A		30.0	

APPROVED
By JWK at 12:34 pm, 5/11/17

REVIEWED
By UMJS at 9:13 am, 5/15/17

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LC-MS/MS Analysis Report

Printed: 5/11/2017 12:14:00 PM
Template: MQ-Sample-16Nov21.docx

ICAL Name: 17MAY10MCAL
QMethod Name: PFCMOD - 17JAN28
Result Table: 17MAY10MCAL 5/11/2017 12:08:01 PM
Acquisition Method: PFC-32-16NOV02.dam

Sample Name:	CAL1			**Data File:**		17MAY10MCAL-30.wiff
Sample ID:	CALPFC1712533B			**Acquis Date:**		2017-05-11T05:10:00
Sample Type:	Standard			**Instrument:**		LM24960
Vial Position:	3			**Acquis Method:**		PFC-32-16NOV02.dam
Injection Vol:	5.00			**Result Table:**		17MAY10MCAL
QMethod File:	PFCMOD - 17JAN28			**ICAL Name:**		17MAY10MCAL
Batch Number:	MODICAL			**Operator:**		Not calculated
Sample Wt.:	1.00000			**Dilution Factor:**		1.00
Sample Vol.:	1.000			**Prep Factor:**		1.000

Injection Standard Peak Table

Injection Standard Name	Inj Std Conc	Injection Std Peak Area	ICAL Injection Standard AVG	Injection Std %Diff	Injection Std %Diff Limit	Injection Std %Diff OOS
I13C3-PFBA	1.0	710384.6	669117.3	6.2	50.0	
I13C2-PFOA	1.0	348600.7	342184.6	1.9	50.0	
I13C4-PFOS	1.0	78176.0	70131.6	11.5	50.0	
I13C2-PFDA	1.0	434947.2	384098.7	13.2	50.0	

Extraction Standard Peak Table

Extraction Standard Name	Ext Std Area	Inj Std Name	Inj Std Area	Area Ratio	AVG Area Ratio	Ext Std Conc	Ext Std Result	Ext Std %REC	Ext Std %REC Limit	Ext Std OOS
E13C4-PFBA	807995.3	13C3-PFBA	710384.6	1.137	1.150	1.000	0.989		-	
E13C5-PFPeA	758571.2	13C3-PFBA	710384.6	1.068	1.073	1.000	0.995		-	
E13C3-PFBS	135038.0	13C3-PFBA	710384.6	0.190	0.194	1.000	0.978		-	
E13C2-4:2-FTS	69544.1	13C2-PFOA	348600.7	0.200	0.236	1.000	0.844		-	
E13C5-PFHxA	756275.7	13C2-PFOA	348600.7	2.170	2.026	1.000	1.071		-	
E13C3-PFHxS	76785.4	13C2-PFOA	348600.7	0.220	0.206	1.000	1.070		-	
E13C4-PFHpA	465938.1	13C2-PFOA	348600.7	1.337	1.285	1.000	1.040		-	
E13C2-6:2-FTS	43818.7	13C2-PFOA	348600.7	0.126	0.128	1.000	0.981		-	
E13C8-PFOA	442961.3	13C2-PFOA	348600.7	1.271	1.163	1.000	1.092		-	
E13C8-PFOS	70263.7	13C4-PFOS	78176.0	0.899	0.865	1.000	1.038		-	
E13C9-PFNA	329582.5	13C4-PFOS	78176.0	4.216	4.422	1.000	0.953		-	
E13C8-PFOSA	401009.9	13C2-PFDA	434947.2	0.922	0.936	1.000	0.985		-	
E13C6-PFDA	584542.0	13C2-PFDA	434947.2	1.344	1.424	1.000	0.944		-	
E13C2-8:2-FTS	58014.4	13C2-PFDA	434947.2	0.133	0.155	1.000	0.859		-	
Ed7-NMePFOSAE	107402.7	13C2-PFDA	434947.2	0.247	0.299	1.000	0.826		-	
Ed3-NMePFOSA	45510.5	13C2-PFDA	434947.2	0.105	0.120	1.000	0.870		-	
Ed3-NMeFOSAA	131817.0	13C2-PFDA	434947.2	0.303	0.343	1.000	0.884		-	
Ed9-NEtPFOSAE	117976.8	13C2-PFDA	434947.2	0.271	0.333	1.000	0.816		-	
Ed5-NEtPFOSA	32501.1	13C2-PFDA	434947.2	0.075	0.095	1.000	0.788		-	
E13C7-PFUnDA	362904.7	13C2-PFDA	434947.2	0.834	0.953	1.000	0.876		-	
Ed5-NEtFOSAA	89281.1	13C2-PFDA	434947.2	0.205	0.249	1.000	0.825		-	
E13C2-PFDoDA	504077.0	13C2-PFDA	434947.2	1.159	1.154	1.000	1.004		-	
E13C2-PFTeDA	266563.7	13C2-PFDA	434947.2	0.613	0.651	1.000	0.941		-	

APPROVED
By JWK at 12:34 pm, 5/11/17

REVIEWED
By UMJS at 9:12 am, 5/15/17

ICAL Name: 17MAY10MCAL **Result Table:** 17MAY10MCAL 5/11/2017 12:08:01 PM
QMethod Name: PFCMOD - 17JAN28 **Acquisition Method:** PFC-32-16NOV02.dam

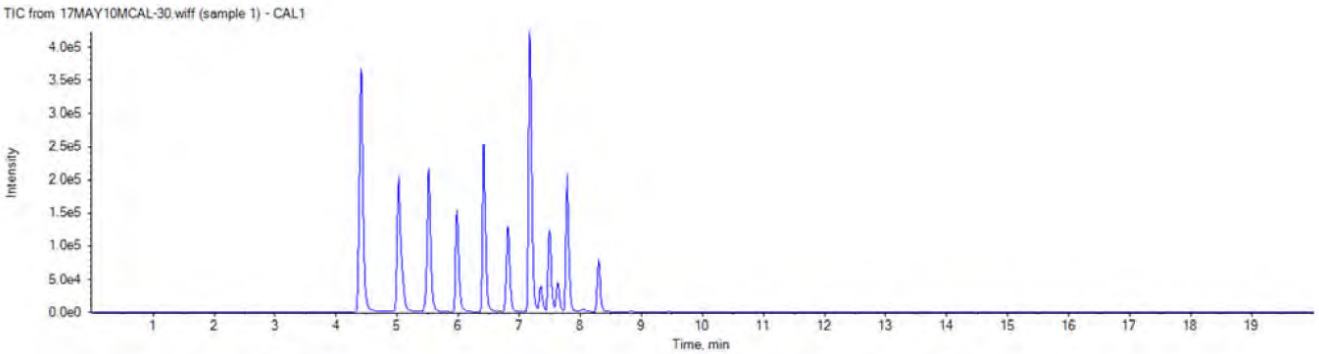
Analyte Quantitation Peak Table

Sample Name: CAL1 **Instrument Name:** LM24960 **File Name:** 17MAY10MCAL-30.wiff

Sample Wt	Sample Vol	Dilution Factor	PrepFactor
1.00000	1.000	1.00	1.000

Analytet Name	RT	RRT	Analyte Area Response	Int Typ	ES Name	ES RT	ES Area Response	Area Ratio	Sample Result (ng/g)
PFBA	4.41	1.000	35010.7	A	13C4-PFBA	4.41	807995.3	0.043	0.238
PFPeA	5.02	1.000	32038.3	M	13C5-PFPeA	5.02	758571.2	0.042	0.205
PFBS	5.08	1.000	5085.0	M	13C3-PFBS	5.08	135038.0	0.038	0.178
4:2-FTS	5.47	1.000	2939.1	M	13C2-4:2-FTS	5.47	69544.1	0.042	0.200
PFHxA	5.52	1.000	32152.5	M	13C5-PFHxA	5.52	756275.7	0.043	0.225
PFPeS	5.54	1.090	3280.7	M	13C3-PFBS	5.08	135038.0	0.024	0.217
PFHxS	5.98	1.000	8586.0	A	13C3-PFHxS	5.98	76785.4	0.112	0.157
PFHpA	5.98	1.000	25559.7	A	13C4-PFHpA	5.98	465938.1	0.055	0.221
6:2-FTS	6.40	1.000	1742.2	M	13C2-6:2-FTS	6.40	43818.7	0.040	0.164
PFHpS	6.40	1.070	2174.7	M	13C3-PFHxS	5.98	76785.4	0.028	0.149
PFOA	6.42	1.000	22206.5	A	13C8-PFOA	6.42	442961.3	0.050	0.228
PFOS	6.80	1.000	8212.5	M	13C8-PFOS	6.79	70263.7	0.117	0.163
PFNA	6.82	1.000	17034.1	M	13C9-PFNA	6.82	329582.5	0.052	0.211
PFOSA	7.18	1.000	17826.6	M	13C8-PFOSA	7.17	401009.9	0.045	0.203
PFNS	7.15	1.050	3203.7	M	13C8-PFOS	6.79	70263.7	0.046	0.209
PFDA	7.18	1.000	20784.4	A	13C6-PFDA	7.17	584542.0	0.036	0.194
8:2-FTS	7.19	1.000	2182.5	M	13C2-8:2-FTS	7.18	58014.4	0.038	0.185
NMePFOSAE	7.63	1.000	6401.0	M	d7-NMePFOSAE	7.62	107402.7	0.060	0.238
NMePFOSA	7.65	1.000	2216.0	A	d3-NMePFOSA	7.65	45510.5	0.049	0.227
NMeFOSAA	7.37	1.000	3702.9	M	d3-NMeFOSAA	7.35	131817.0	0.028	0.132
NEtPFOSAE	7.80	1.000	6238.4	M	d9-NEtPFOSAE	7.78	117976.8	0.053	0.242
NEtPFOSA	7.82	1.000	2149.3	M	d5-NEtPFOSA	7.81	32501.1	0.066	0.328
PFDS	7.46	1.100	1980.3	A	13C8-PFOS	6.79	70263.7	0.028	0.143
PFUnDA	7.49	1.000	18754.4	A	13C7-PFUnDA	7.49	362904.7	0.052	0.201
NEtFOSAA	7.51	1.000	3092.5	M	d5-NEtFOSAA	7.51	89281.1	0.035	0.169
PFDoDA	7.78	1.000	18334.2	A	13C2-PFDoDA	7.78	504077.0	0.036	0.195
10:2-FTS	7.81	1.090	2328.5	M	13C2-8:2-FTS	7.18	58014.4	0.040	0.160
PFDoS	7.99	1.180	1265.2	M	13C8-PFOS	6.79	70263.7	0.018	0.254
PFTrDA	8.05	1.030	14532.9	M	13C2-PFDoDA	7.78	504077.0	0.029	0.214
PFTeDA	8.30	1.000	9800.8	M	13C2-PFTeDA	8.30	266563.7	0.037	0.188
PFHxDA	8.83	1.060	8492.2	A	13C2-PFTeDA	8.30	266563.7	0.032	0.201
PFODA	9.46	1.140	4722.9	A	13C2-PFTeDA	8.30	266563.7	0.018	0.162

Total Ion Chromatogram



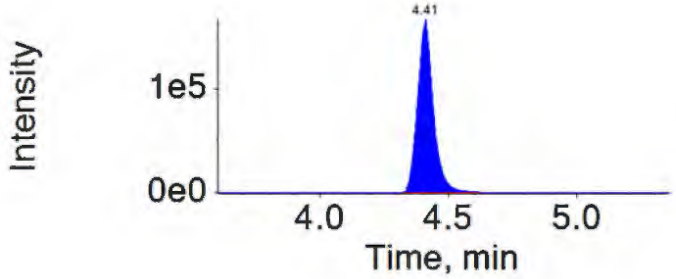
APPROVED
By JWK at 12:34 pm, 5/11/17

REVIEWED
By UMJS at 9:12 am, 5/15/17

ICAL Name: 17MAY10MCAL
QMethod Name: PFCMOD - 17JAN28
Result Table: 17MAY10MCAL 5/11/2017 12:08:01 PM
Acquisition Method: PFC-32-16NOV02.dam

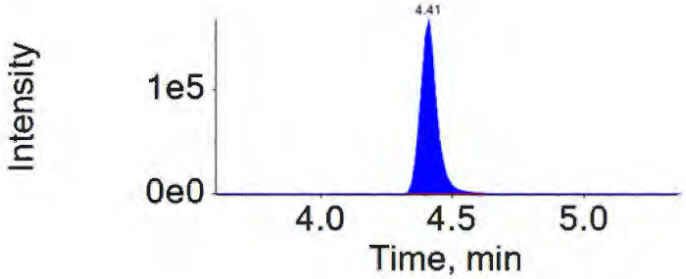
Injection Standard: I13C3-PFBA

216.0 / 172.0



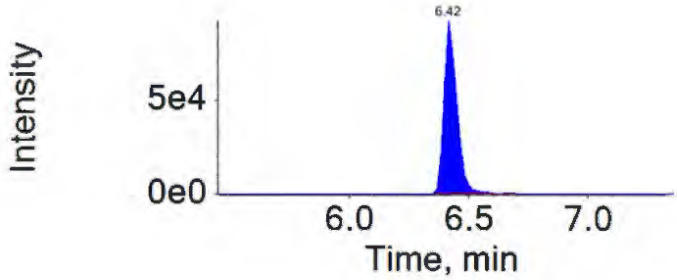
Injection Standard: 13C3-PFBA

216.0 / 172.0



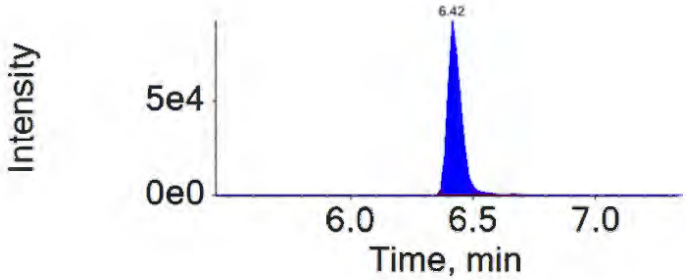
Injection Standard: I13C2-PFOA

415.0 / 370.0



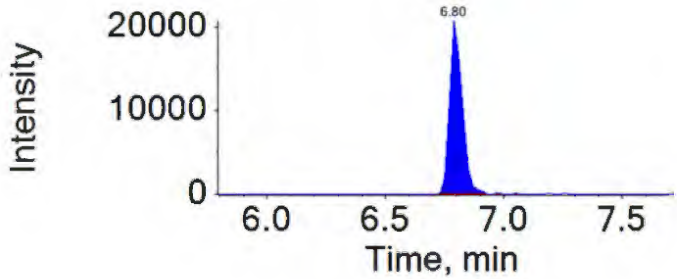
Injection Standard: 13C2-PFOA

415.0 / 370.0



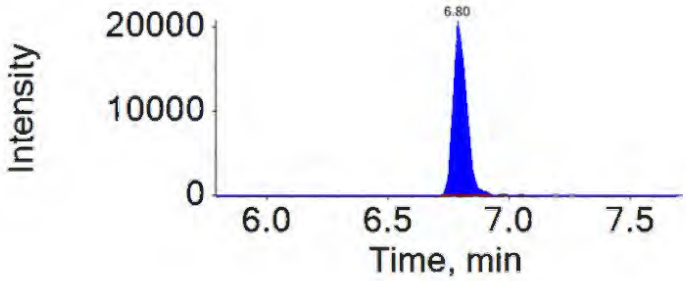
Injection Standard: I13C4-PFOS

503.0 / 99.0



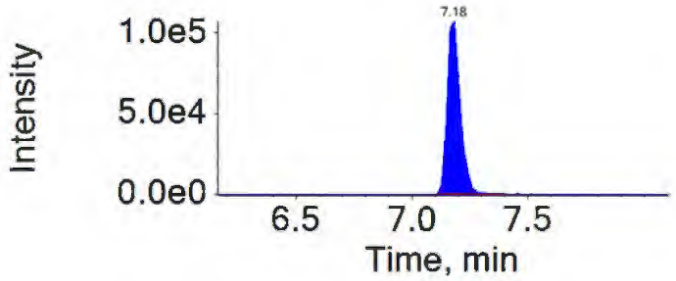
Injection Standard: 13C4-PFOS

503.0 / 99.0



Injection Standard: I13C2-PFDA

515.0 / 470.0



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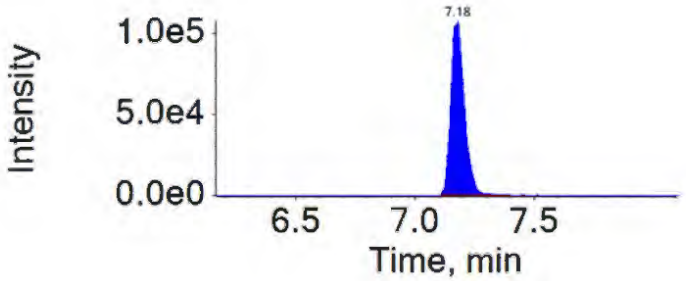
515.0 / 470.0



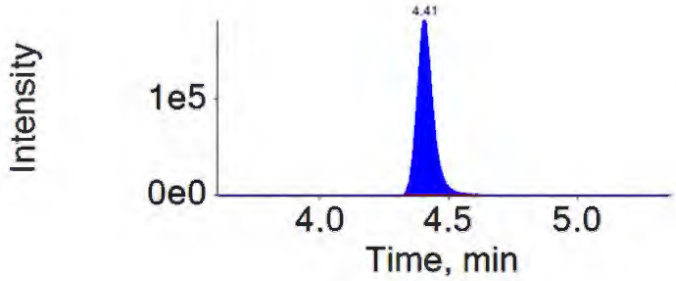
APPROVED
By JWK at 12:34 pm, 5/11/17

REVIEWED
By UMJS at 9:12 am, 5/15/17

ICAL Name: 17MAY10MCAL **Result Table:** 17MAY10MCAL 5/11/2017 12:08:01 PM
QMethod Name: PFCMOD - 17JAN28 **Acquisition Method:** PFC-32-16NOV02.dam

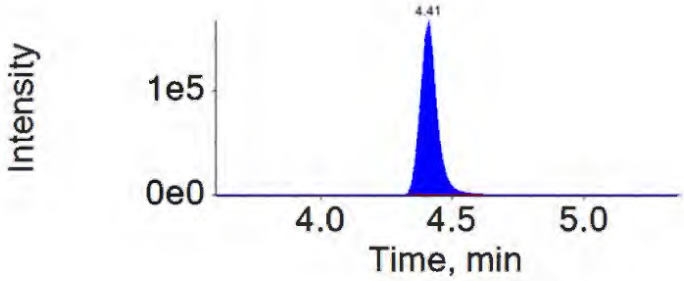
Extraction Standard: E13C4-PFBA

217.0 /
172.0



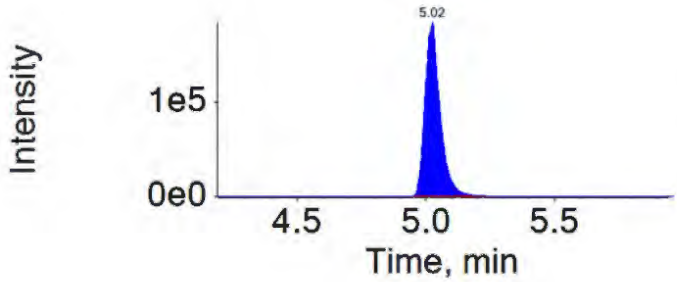
Injection Standard: 13C3-PFBA

216.0 /
172.0



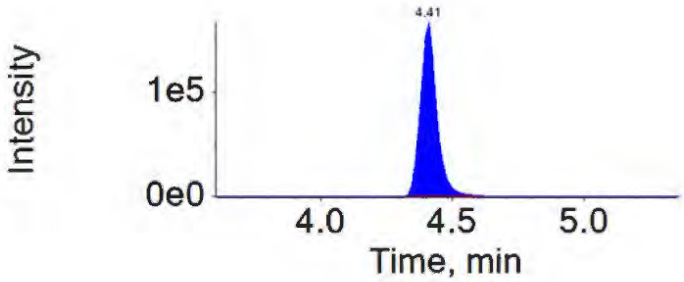
Extraction Standard: E13C5-PFPeA

268.0 /
223.0



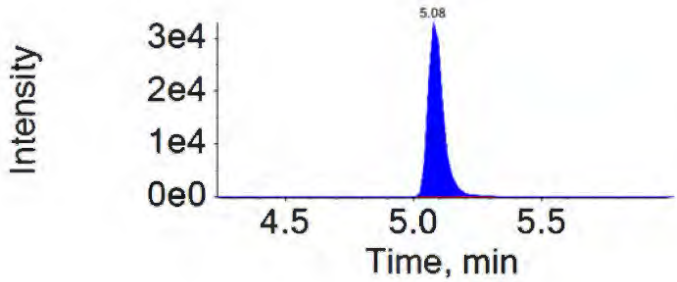
Injection Standard: 13C3-PFBA

216.0 /
172.0



Extraction Standard: E13C3-PFBS

302.0 /
99.0



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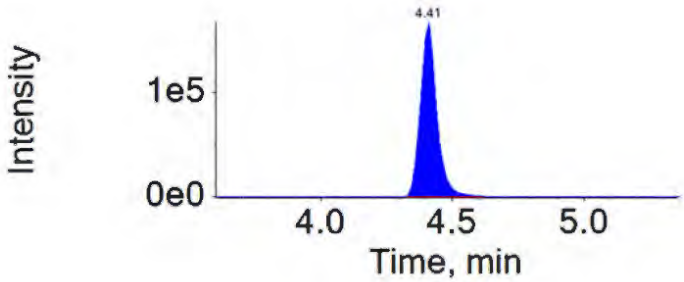
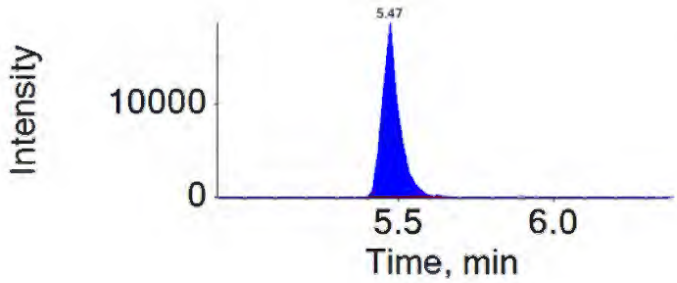
216.0 /
172.0



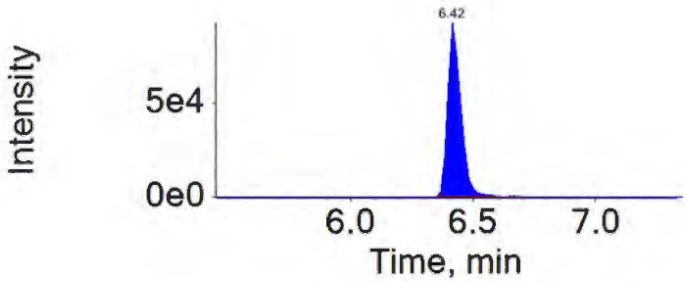
Extraction Standard: E13C2-4:2-FTS

329.0 /
309.0



Injection Standard: 13C2-PFOA

415.0 /
370.0



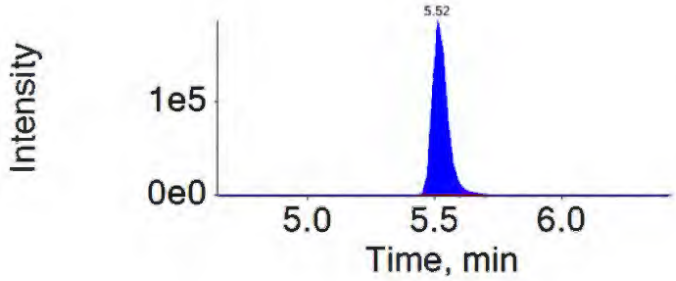
APPROVED
By JWK at 12:34 pm, 5/11/17

REVIEWED
By UMJS at 9:12 am, 5/15/17

ICAL Name: 17MAY10MCAL **Result Table:** 17MAY10MCAL 5/11/2017 12:08:01 PM
QMethod Name: PFCMOD - 17JAN28 **Acquisition Method:** PFC-32-16NOV02.dam

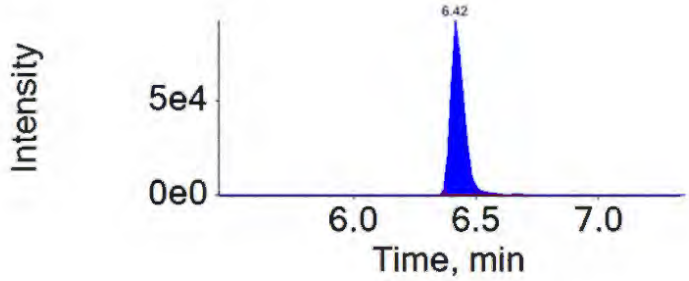
Extraction Standard: E13C5-PFHxA

318.0 /
273.0



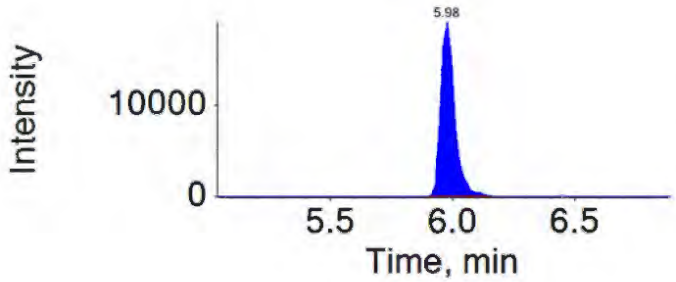
Injection Standard: 13C2-PFOA

415.0 /
370.0



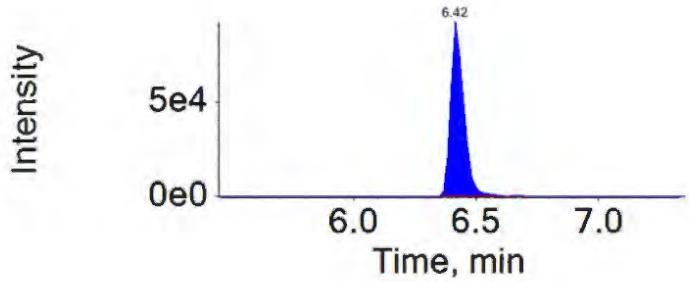
Extraction Standard: E13C3-PFHxS

402.0 /
99.0



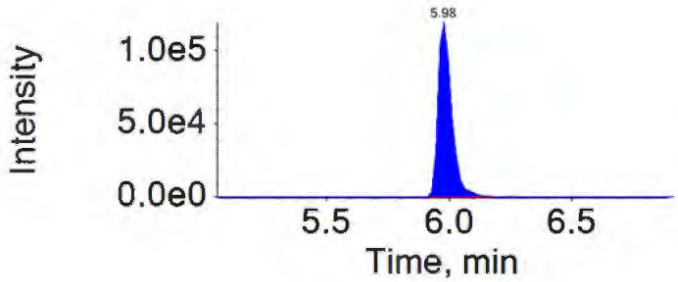
Injection Standard: 13C2-PFOA

415.0 /
370.0



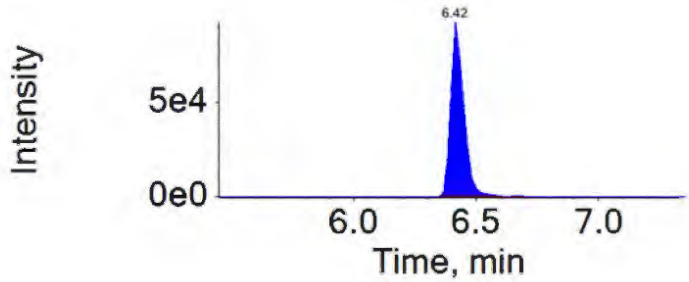
Extraction Standard: E13C4-PFHpA

367.0 /
322.0



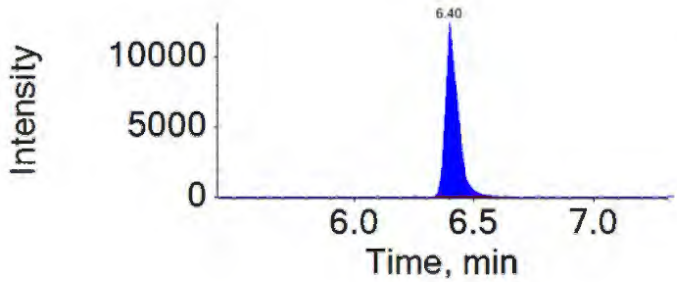
Injection Standard: 13C2-PFOA

415.0 /
370.0



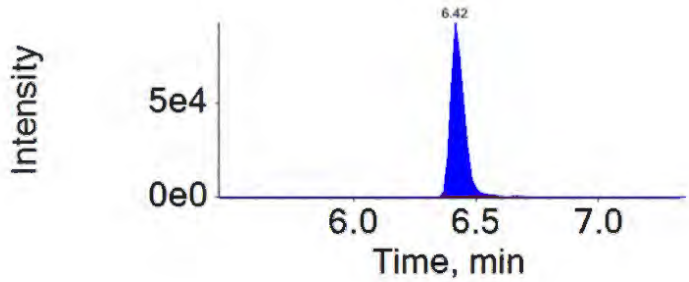
Extraction Standard: E13C2-6:2-FTS

429.0 /
409.0



Injection Standard: 13C2-PFOA

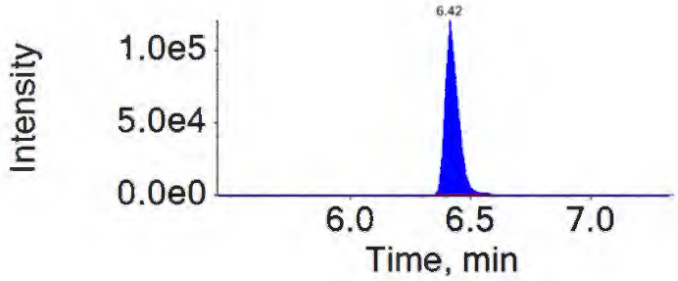
415.0 /
370.0



ICAL Name: 17MAY10MCAL **Result Table:** 17MAY10MCAL 5/11/2017 12:08:01 PM
QMethod Name: PFCMOD - 17JAN28 **Acquisition Method:** PFC-32-16NOV02.dam

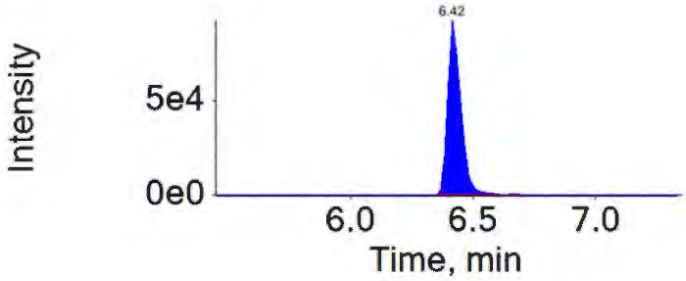
Extraction Standard: E13C8-PFOA

421.0 / 376.0



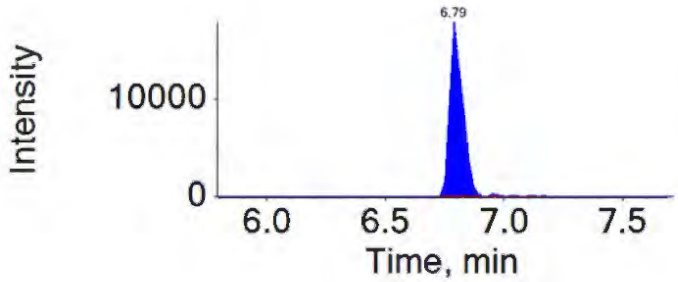
Injection Standard: 13C2-PFOA

415.0 / 370.0



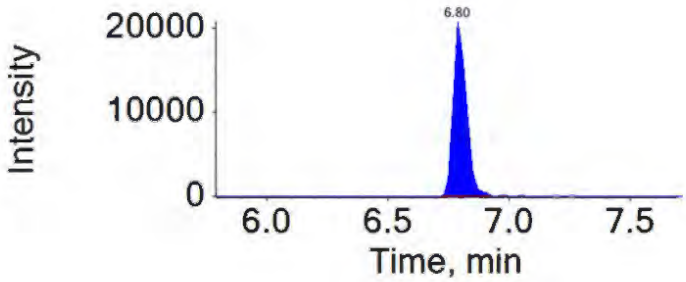
Extraction Standard: E13C8-PFOS

507.0 / 99.0



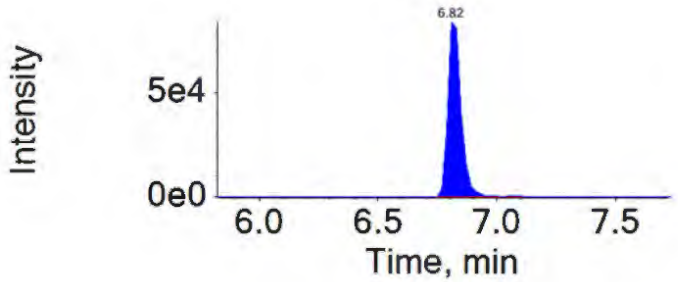
Injection Standard: 13C4-PFOS

503.0 / 99.0



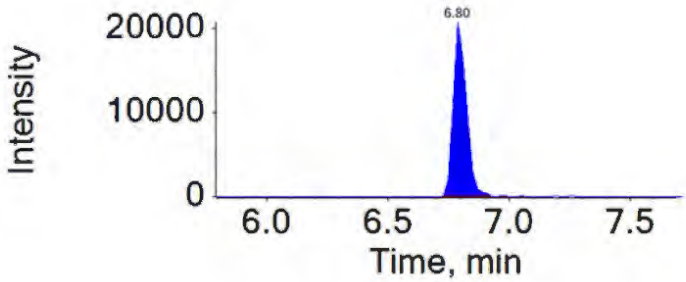
Extraction Standard: E13C9-PFNA

472.0 / 427.0



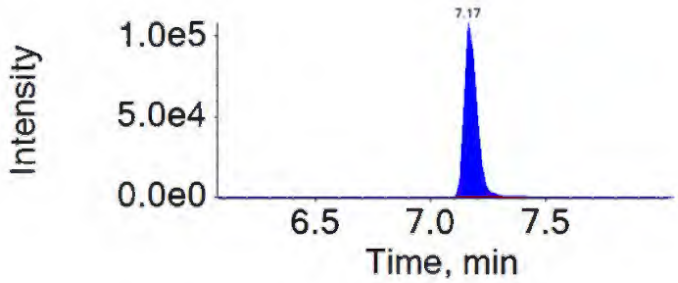
Injection Standard: 13C4-PFOS

503.0 / 99.0



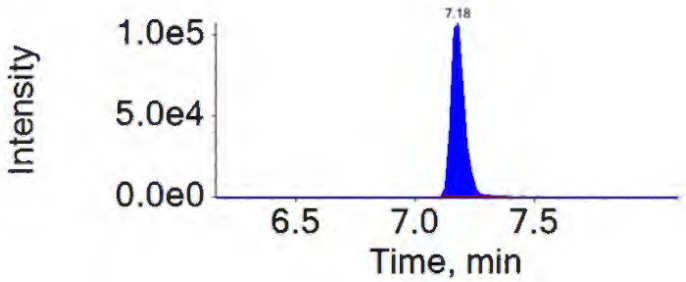
Extraction Standard: E13C8-PFOSA

506.0 / 78.0



Injection Standard: 13C2-PFDA

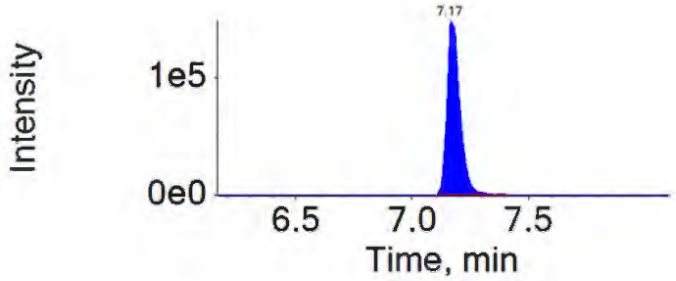
515.0 / 470.0



ICAL Name: 17MAY10MCAL **Result Table:** 17MAY10MCAL 5/11/2017 12:08:01 PM
QMethod Name: PFCMOD - 17JAN28 **Acquisition Method:** PFC-32-16NOV02.dam

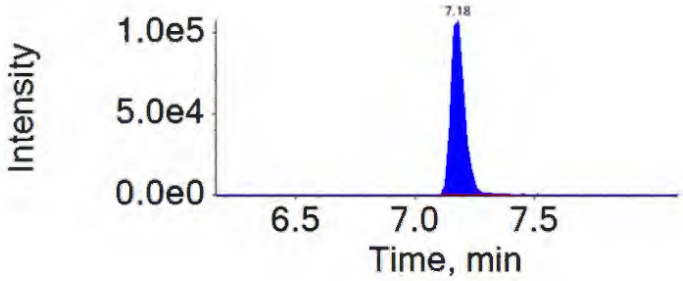
Extraction Standard: E13C6-PFDA

519.0 / 474.0



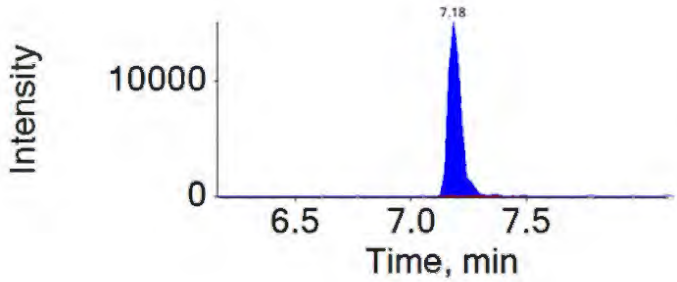
Injection Standard: 13C2-PFDA

515.0 / 470.0



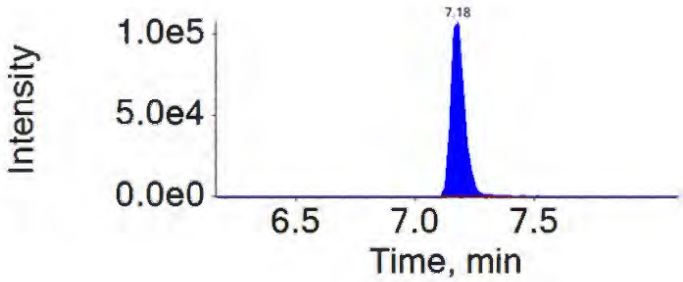
Extraction Standard: E13C2-8:2-FTS

529.0 / 509.0



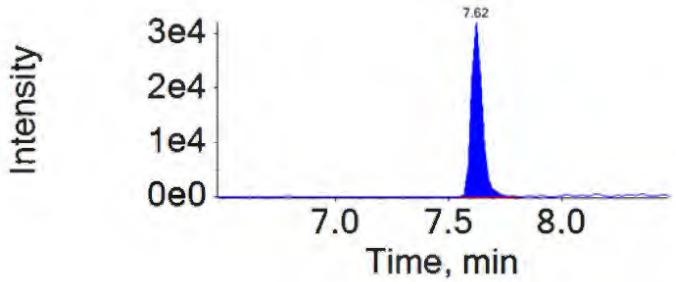
Injection Standard: 13C2-PFDA

515.0 / 470.0



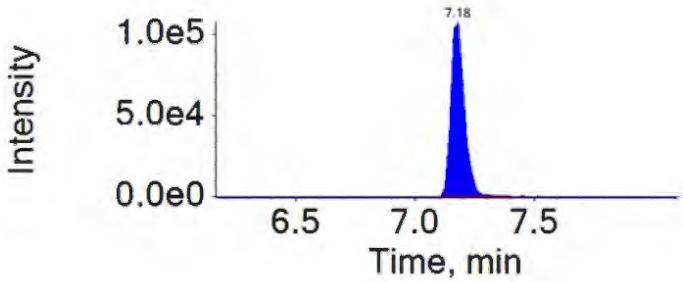
Extraction Standard: Ed7-NMePFOSAE

623.0 / 59.0



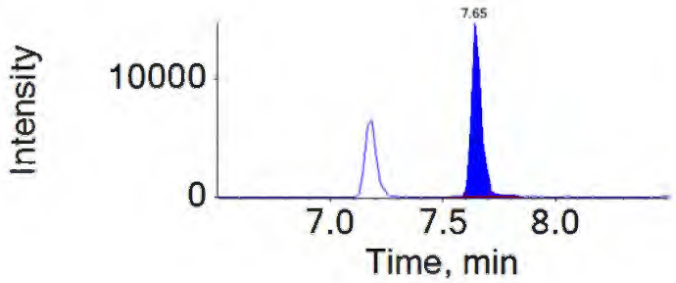
Injection Standard: 13C2-PFDA

515.0 / 470.0



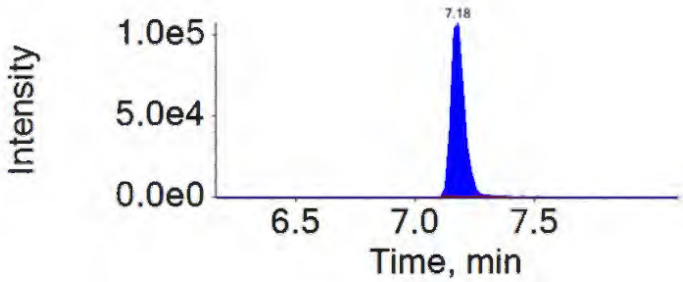
Extraction Standard: Ed3-NMePFOSA

515.0 / 169.0



Injection Standard: 13C2-PFDA

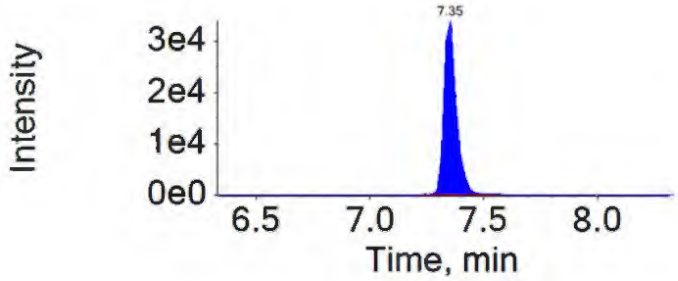
515.0 / 470.0



ICAL Name: 17MAY10MCAL **Result Table:** 17MAY10MCAL 5/11/2017 12:08:01 PM
QMethod Name: PFCMOD - 17JAN28 **Acquisition Method:** PFC-32-16NOV02.dam

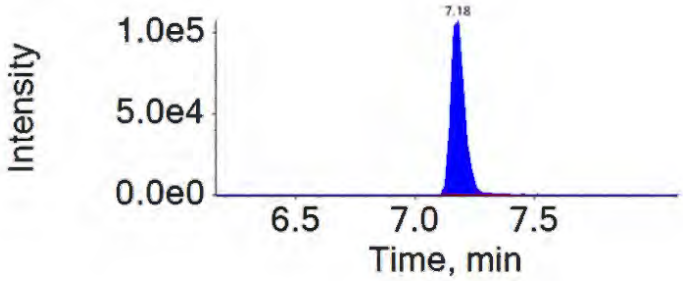
Extraction Standard: Ed3-NMeFOSAA

573.0 / 419.0



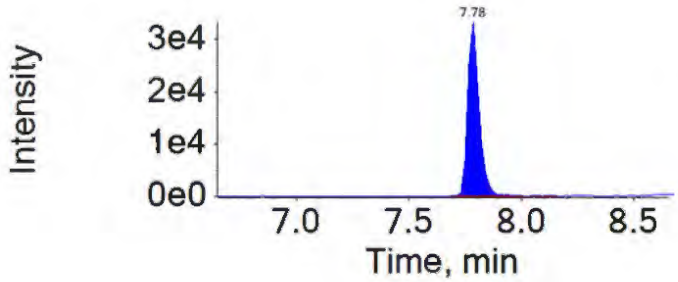
Injection Standard: 13C2-PFDA

515.0 / 470.0



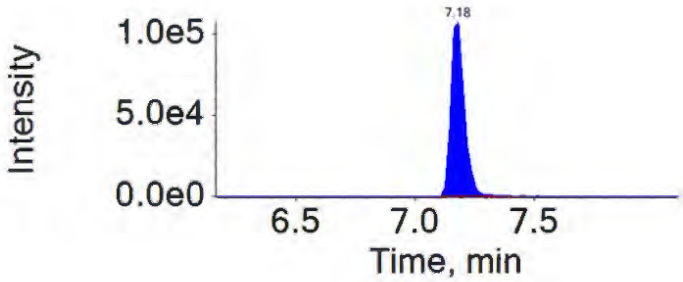
Extraction Standard: Ed9-NEtPFOSAE

639.0 / 59.0



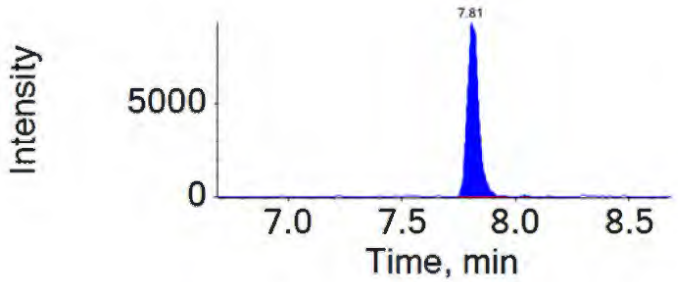
Injection Standard: 13C2-PFDA

515.0 / 470.0



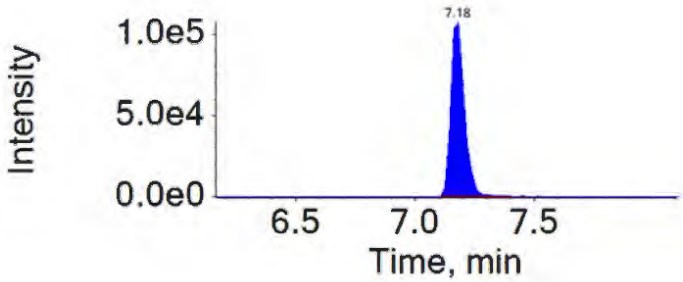
Extraction Standard: Ed5-NEtPFOSA

531.0 / 169.0



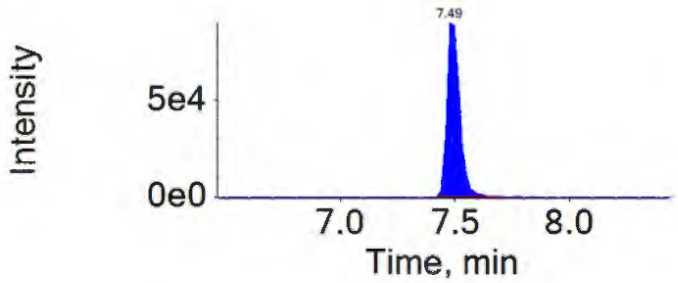
Injection Standard: 13C2-PFDA

515.0 / 470.0



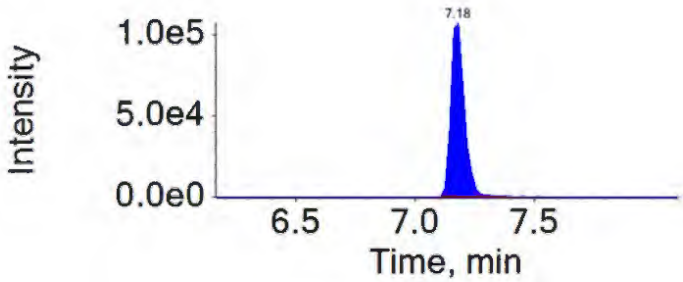
Extraction Standard: E13C7-PFUnDA

570.0 / 525.0



Injection Standard: 13C2-PFDA

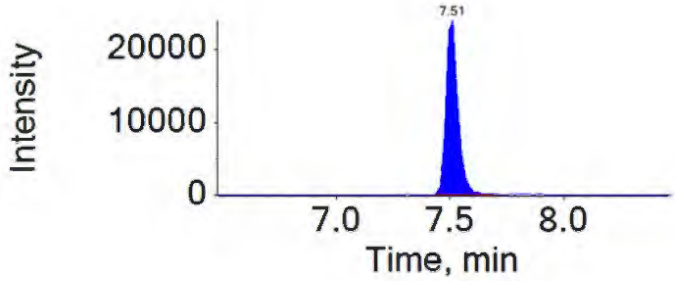
515.0 / 470.0



ICAL Name: 17MAY10MCAL **Result Table:** 17MAY10MCAL 5/11/2017 12:08:01 PM
QMethod Name: PFCMOD - 17JAN28 **Acquisition Method:** PFC-32-16NOV02.dam

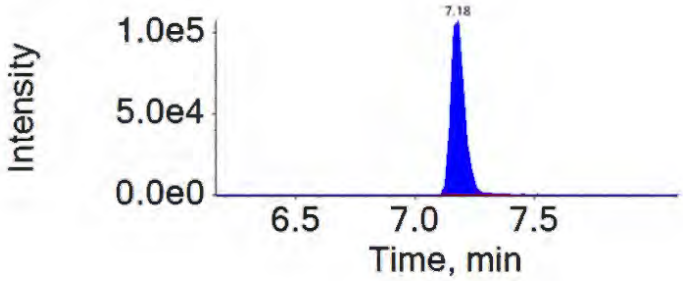
Extraction Standard: Ed5-NEtFOSAA

589.0 / 419.0



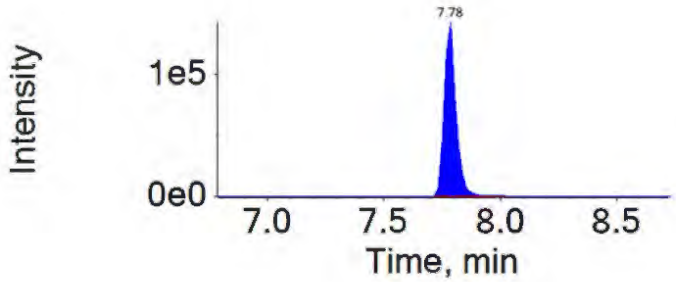
Injection Standard: 13C2-PFDA

515.0 / 470.0



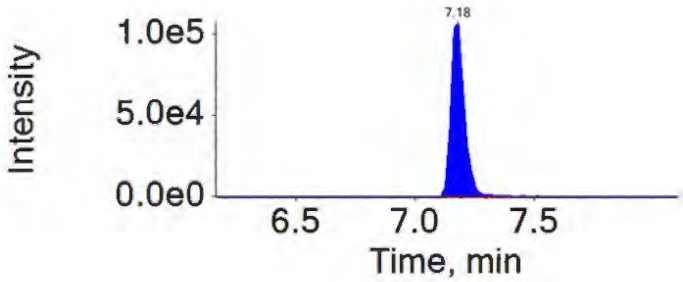
Extraction Standard: E13C2-PFDoDA

615.0 / 570.0



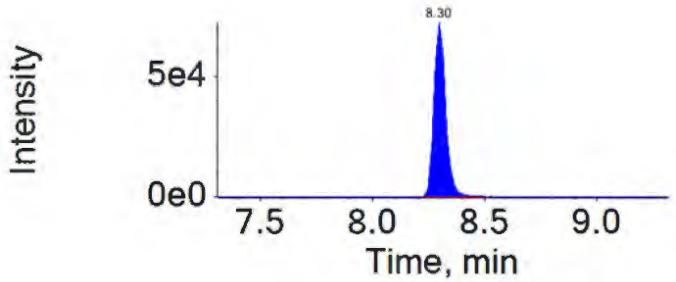
Injection Standard: 13C2-PFDA

515.0 / 470.0



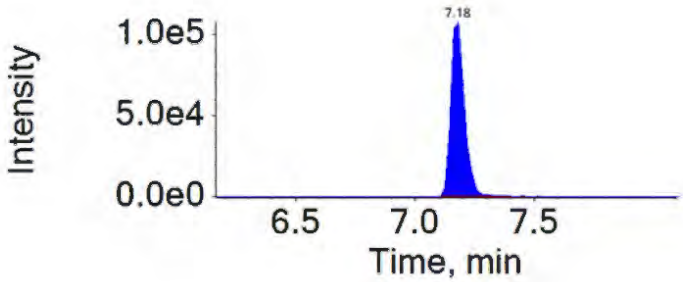
Extraction Standard: E13C2-PFTeDA

715.0 / 670.0



Injection Standard: 13C2-PFDA

515.0 / 470.0



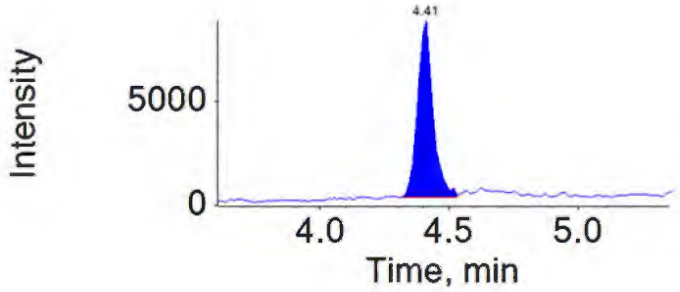
APPROVED
By JWK at 12:34 pm, 5/11/17

REVIEWED
By UMJS at 9:12 am, 5/15/17

ICAL Name: 17MAY10MCAL **Result Table:** 17MAY10MCAL 5/11/2017 12:08:01 PM
QMethod Name: PFCMOD - 17JAN28 **Acquisition Method:** PFC-32-16NOV02.dam

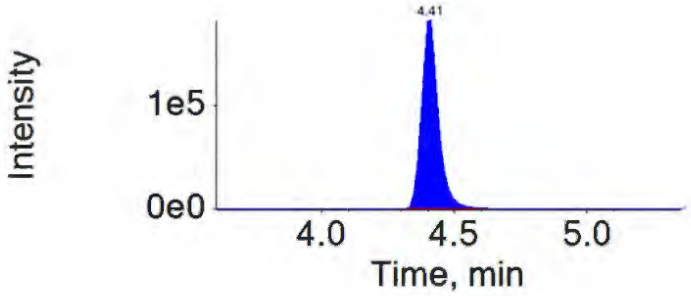
Analyte: PFBA

213.0 / 169.0



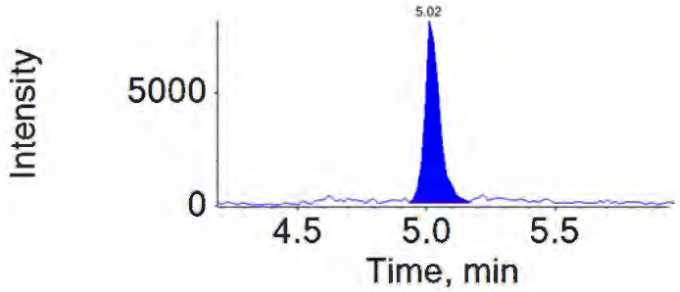
Extraction Standard: 13C4-PFBA

217.0 / 172.0



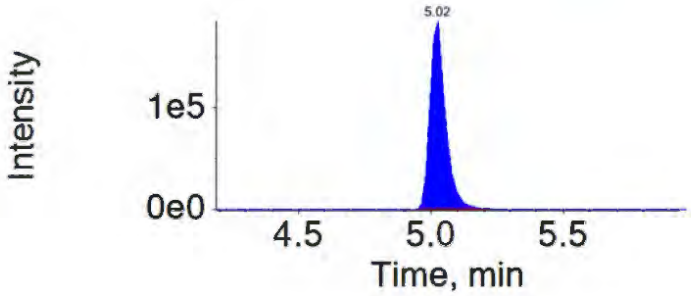
Analyte: PFPeA

263.0 / 219.0



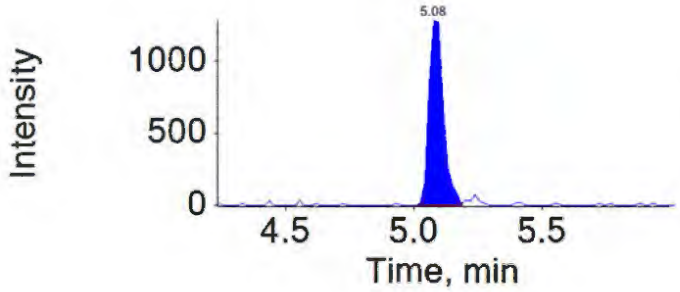
Extraction Standard: 13C5-PFPeA

268.0 / 223.0



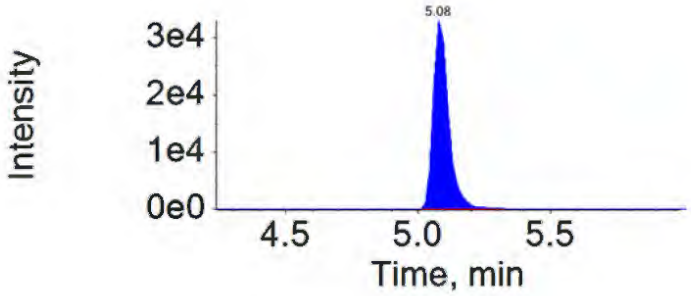
Analyte: PFBS

299.0 / 99.0



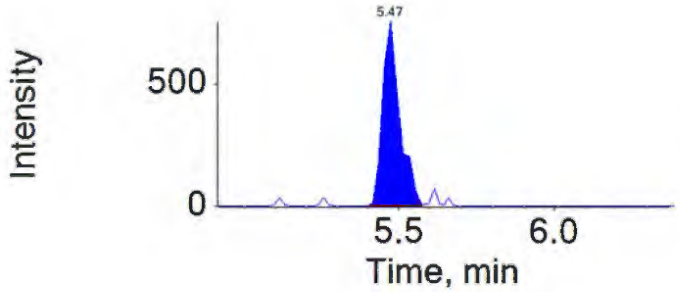
Extraction Standard: 13C3-PFBS

302.0 / 99.0



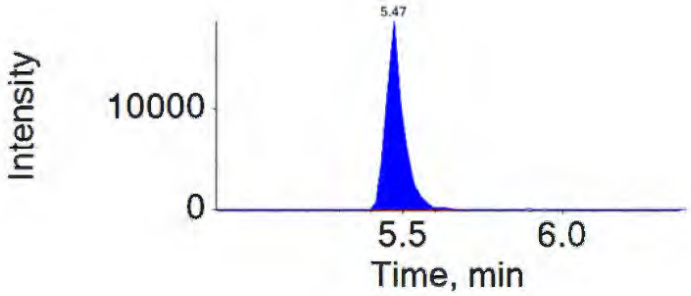
Analyte: 4:2-FTS

327.0 / 307.0



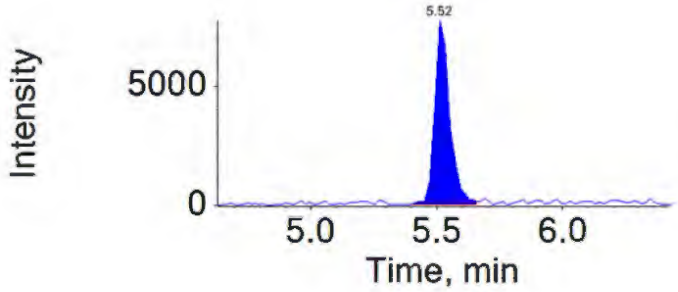
Extraction Standard: 13C2-4:2-FTS

329.0 / 309.0

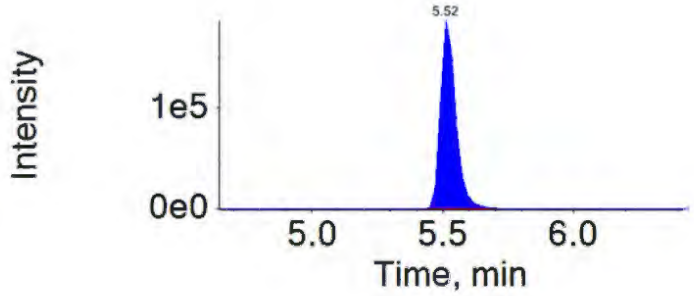


ICAL Name: 17MAY10MCAL **Result Table:** 17MAY10MCAL 5/11/2017 12:08:01 PM
QMethod Name: PFCMOD - 17JAN28 **Acquisition Method:** PFC-32-16NOV02.dam

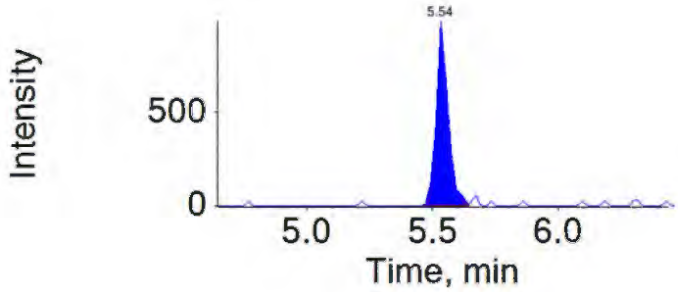
Analyte: PFHxA
313.0 / 269.0



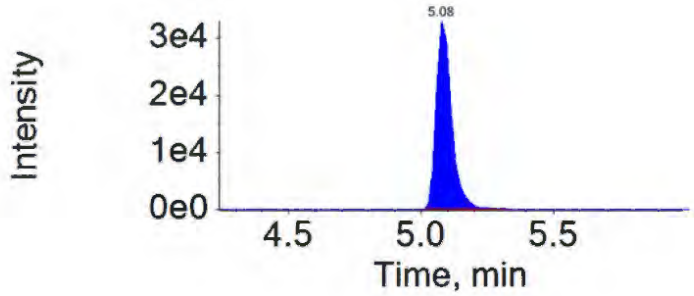
Extraction Standard: 13C5-PFHxA
318.0 / 273.0



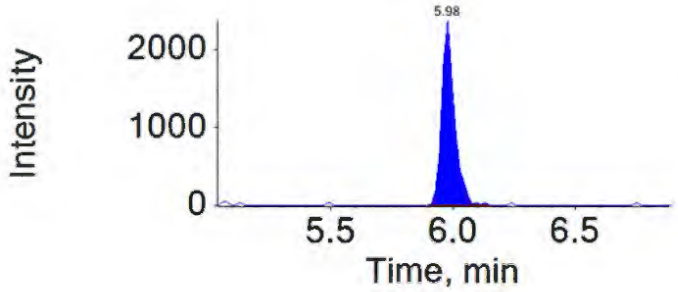
Analyte: PFPeS
349.0 / 99.0



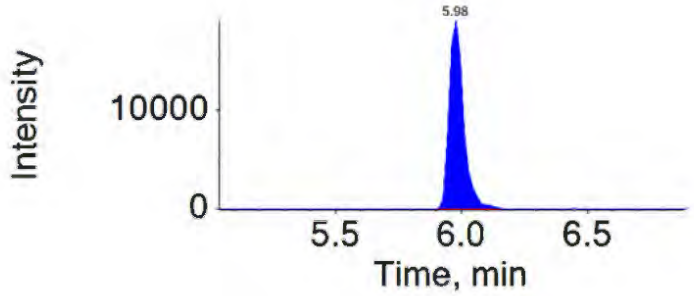
Extraction Standard: 13C3-PFBS
302.0 / 99.0



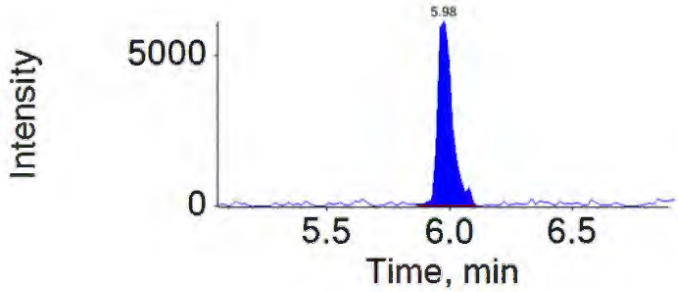
Analyte: PFHxS
399.0 / 80.0



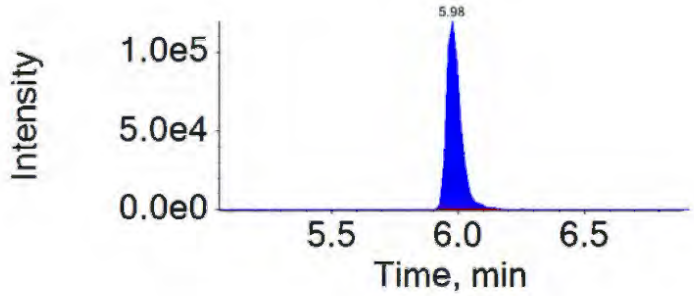
Extraction Standard: 13C3-PFHxS
402.0 / 99.0



Analyte: PFHpA
363.0 / 319.0



Extraction Standard: 13C4-PFHpA
367.0 / 322.0



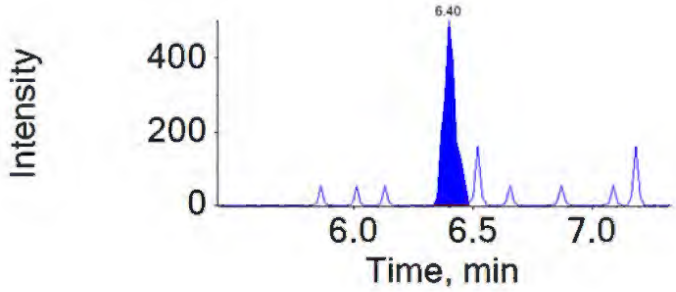
APPROVED
By JWK at 12:34 pm, 5/11/17

REVIEWED
By UMJS at 9:12 am, 5/15/17

ICAL Name: 17MAY10MCAL **Result Table:** 17MAY10MCAL 5/11/2017 12:08:01 PM
QMethod Name: PFCMOD - 17JAN28 **Acquisition Method:** PFC-32-16NOV02.dam

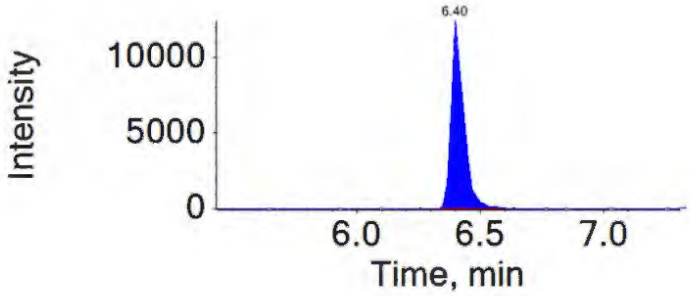
Analyte: 6:2-FTS

427.0 /
407.0



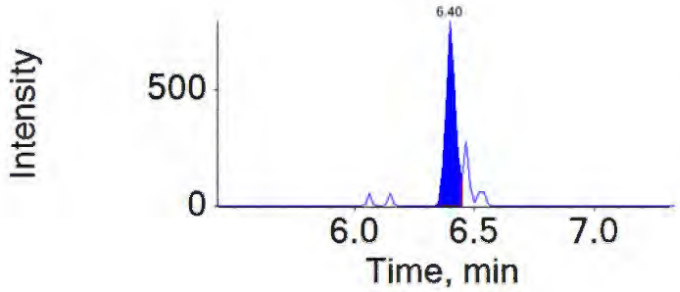
Extraction Standard: 13C2-6:2-FTS

429.0 /
409.0



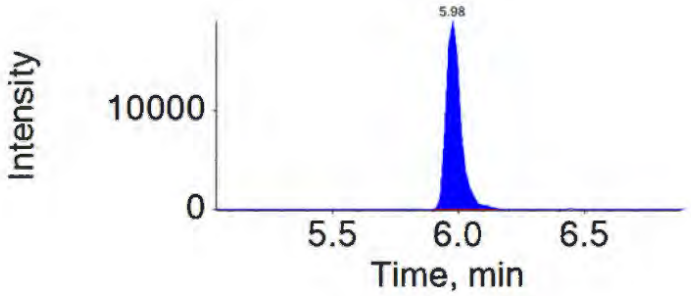
Analyte: PFHpS

449.0 /
99.0



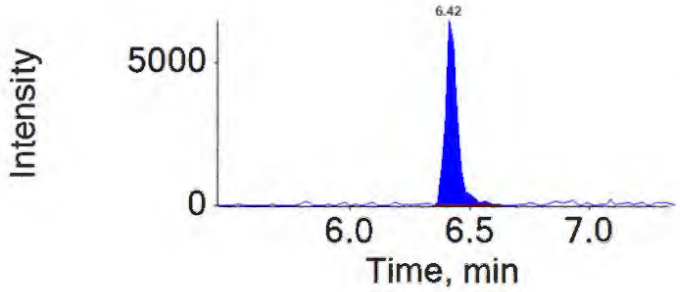
Extraction Standard: 13C3-PFHxS

402.0 /
99.0



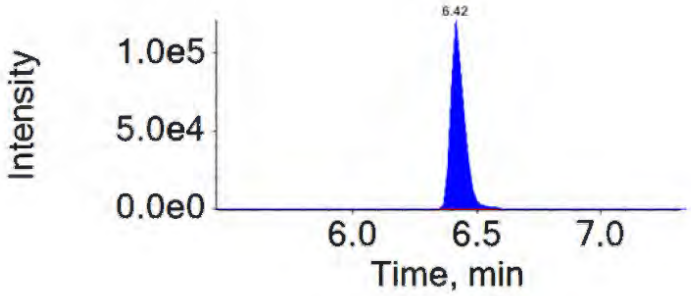
Analyte: PFOA

413.0 /
369.0



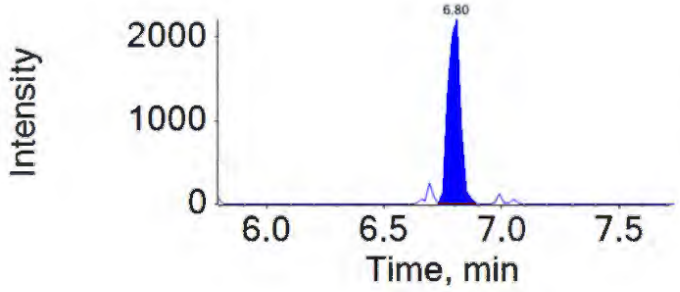
Extraction Standard: 13C8-PFOA

421.0 /
376.0



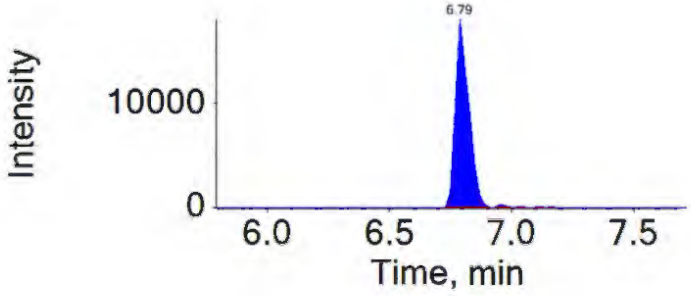
Analyte: PFOS

499.0 /
80.0



Extraction Standard: 13C8-PFOS

507.0 /
99.0



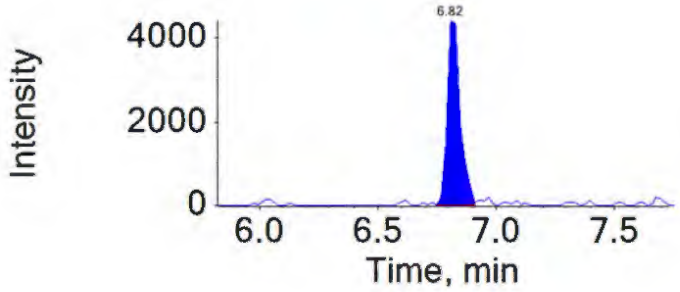
APPROVED
By JWK at 12:34 pm, 5/11/17

REVIEWED
By UMJS at 9:12 am, 5/15/17

ICAL Name: 17MAY10MCAL **Result Table:** 17MAY10MCAL 5/11/2017 12:08:01 PM
QMethod Name: PFCMOD - 17JAN28 **Acquisition Method:** PFC-32-16NOV02.dam

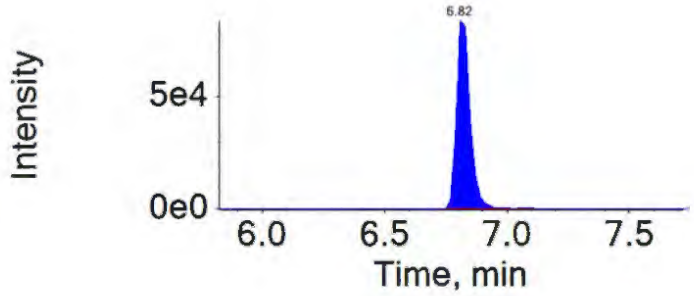
Analyte: PFNA

463.0 /
419.0



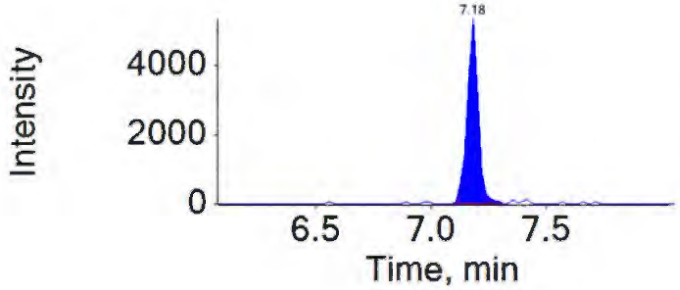
Extraction Standard: 13C9-PFNA

472.0 /
427.0



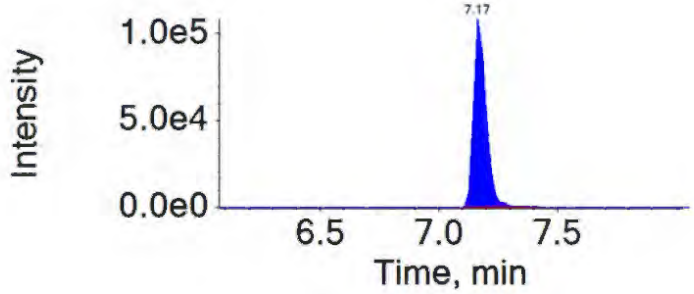
Analyte: PFOSA

498.0 /
78.0



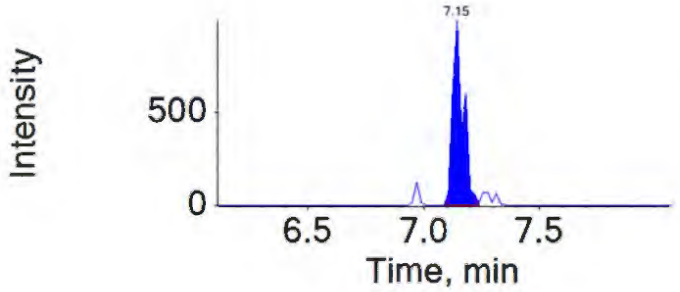
Extraction Standard: 13C8-PFOSA

506.0 /
78.0



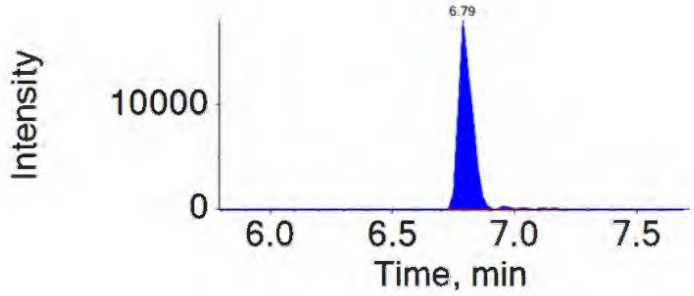
Analyte: PFNS

549.0 /
99.0



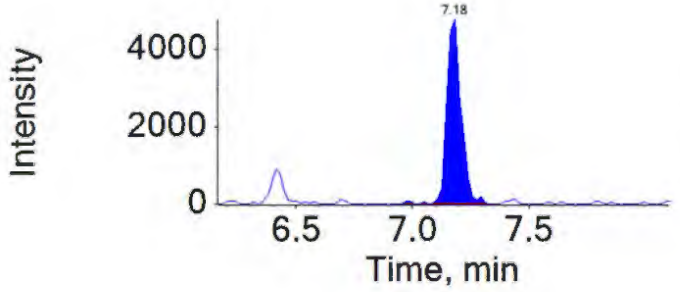
Extraction Standard: 13C8-PFOS

507.0 /
99.0



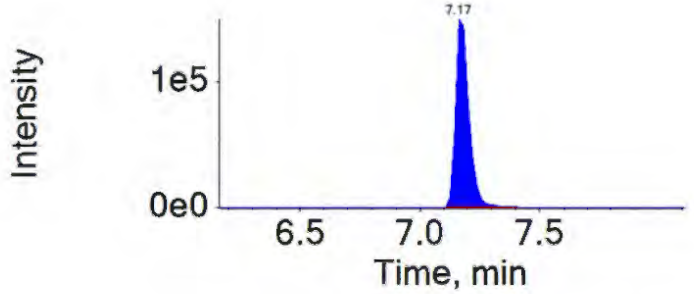
Analyte: PFDA

513.0 /
469.0



Extraction Standard: 13C6-PFDA

519.0 /
474.0



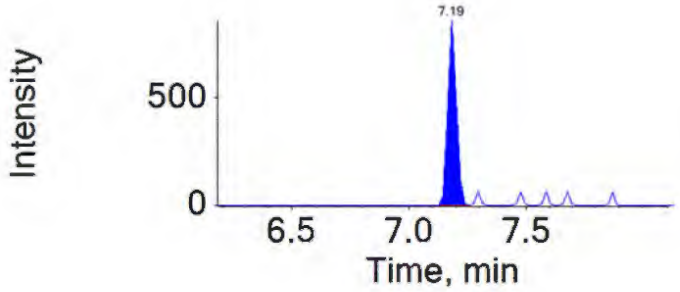
APPROVED
By JWK at 12:34 pm, 5/11/17

REVIEWED
By UMJS at 9:12 am, 5/15/17

ICAL Name: 17MAY10MCAL **Result Table:** 17MAY10MCAL 5/11/2017 12:08:01 PM
QMethod Name: PFCMOD - 17JAN28 **Acquisition Method:** PFC-32-16NOV02.dam

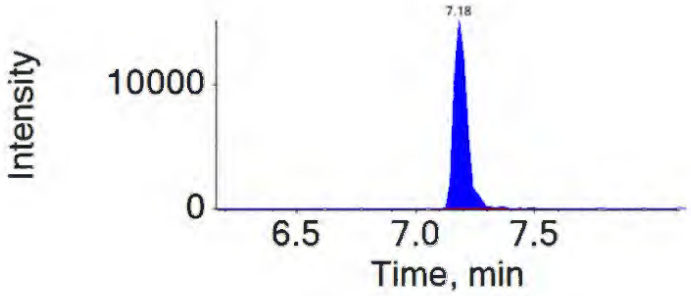
Analyte: 8:2-FTS

527.0 /
507.0



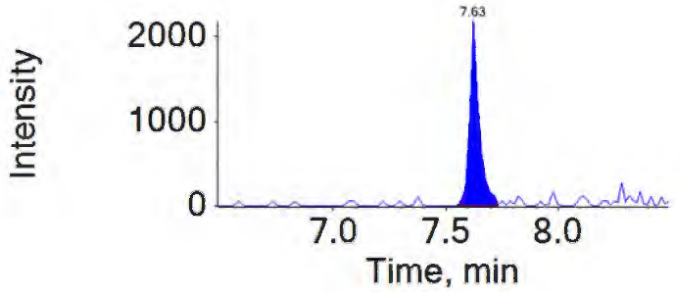
Extraction Standard: 13C2-8:2-FTS

529.0 /
509.0



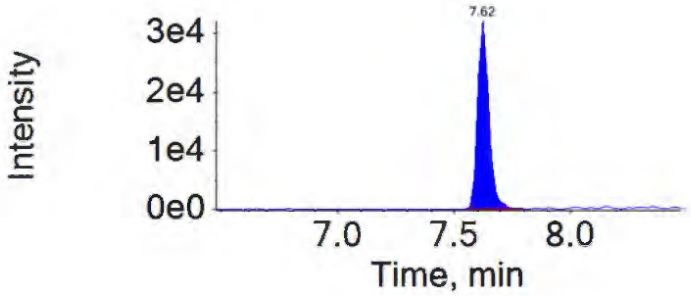
Analyte: NMePFOSAE

616.0 /
59.0



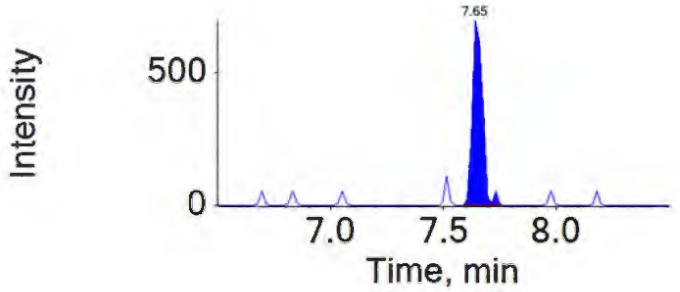
Extraction Standard: d7-NMePFOSAE

623.0 /
59.0



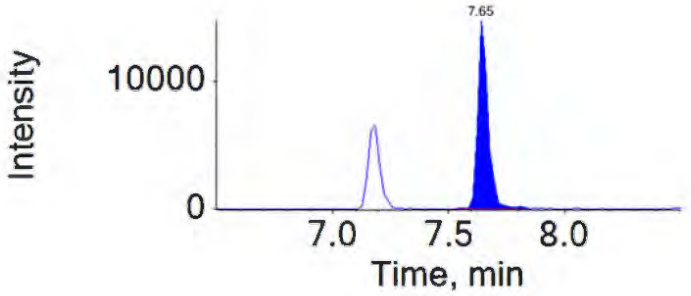
Analyte: NMePFOSA

512.0 /
169.0



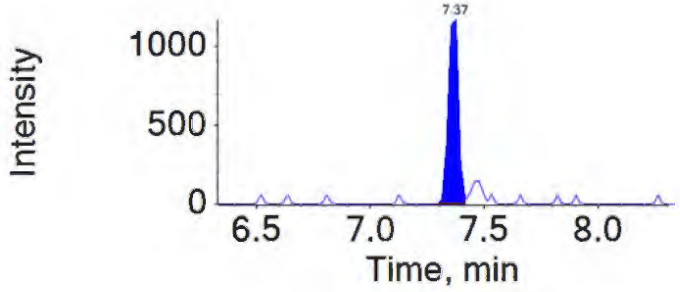
Extraction Standard: d3-NMePFOSA

515.0 /
169.0



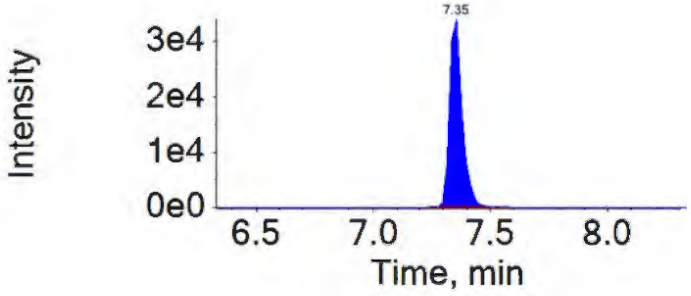
Analyte: NMeFOSAA

570.0 /
419.0



Extraction Standard: d3-NMeFOSAA

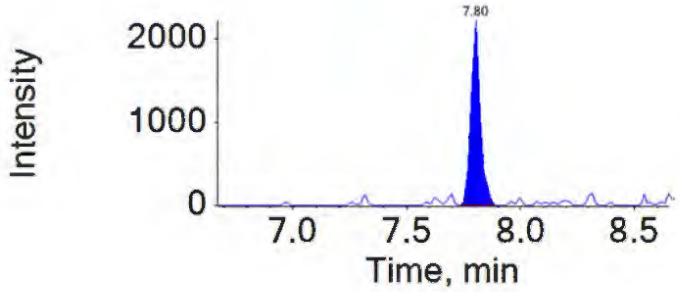
573.0 /
419.0



ICAL Name: 17MAY10MCAL **Result Table:** 17MAY10MCAL 5/11/2017 12:08:01 PM
QMethod Name: PFCMOD - 17JAN28 **Acquisition Method:** PFC-32-16NOV02.dam

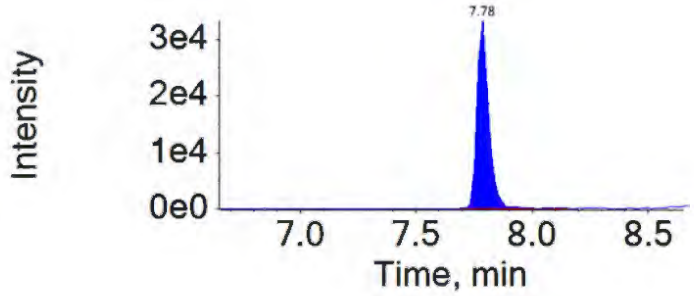
Analyte: NEtPFOSAE

630.0 /
59.0



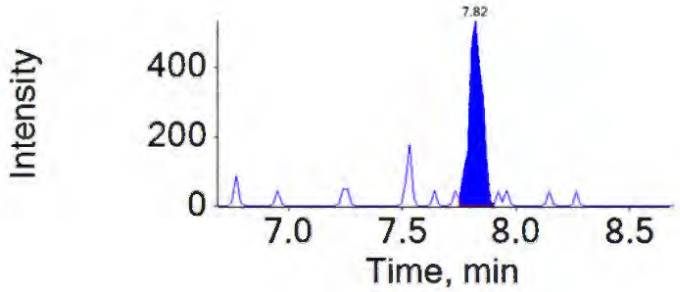
Extraction Standard: d9-NEtPFOSAE

639.0 /
59.0



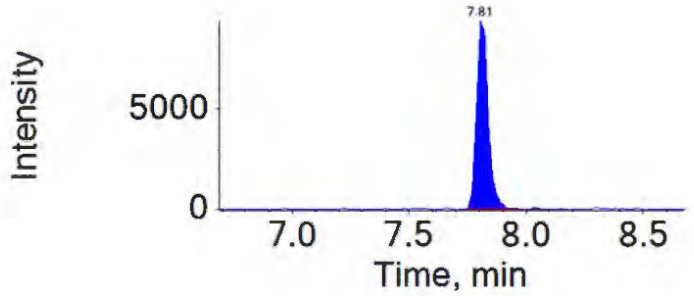
Analyte: NEtPFOSA

526.0 /
169.0



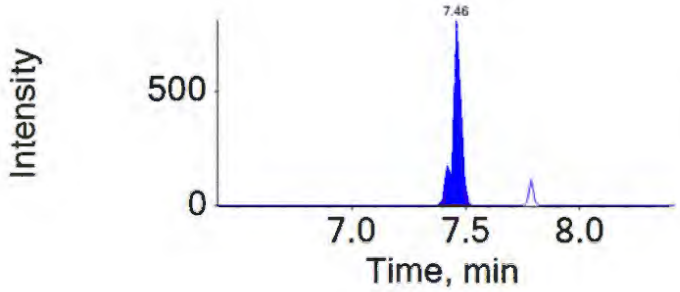
Extraction Standard: d5-NEtPFOSA

531.0 /
169.0



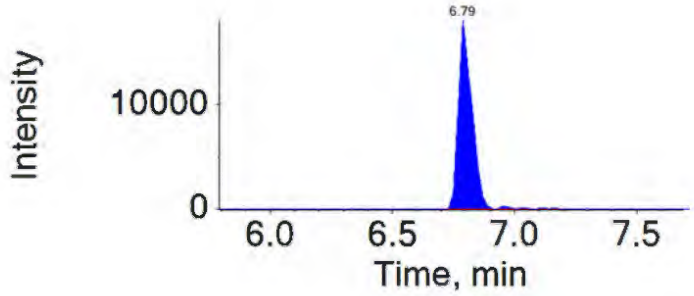
Analyte: PFDS

599.0 /
99.0



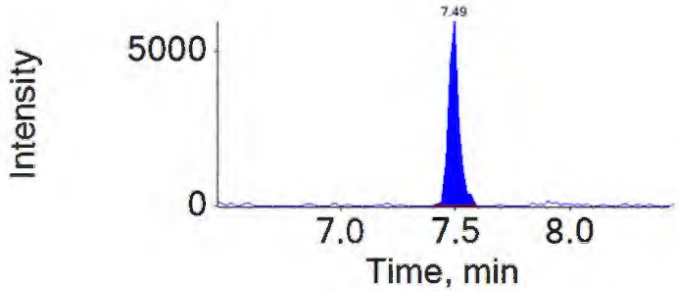
Extraction Standard: 13C8-PFOS

507.0 /
99.0



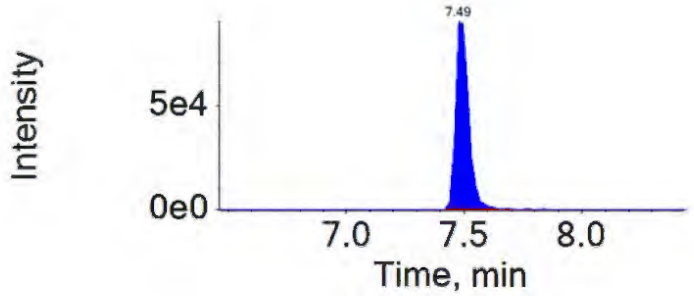
Analyte: PFUnDA

563.0 /
519.0



Extraction Standard: 13C7-PFUnDA

570.0 /
525.0



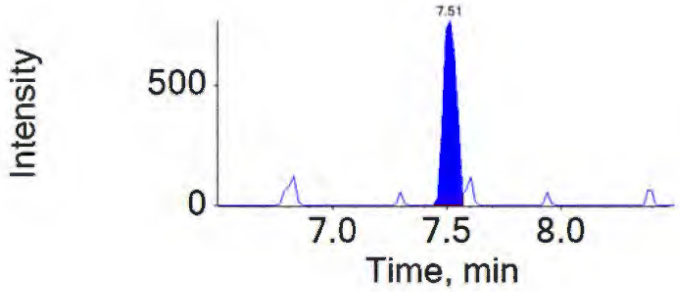
APPROVED
By JWK at 12:34 pm, 5/11/17

REVIEWED
By UMJS at 9:12 am, 5/15/17

ICAL Name: 17MAY10MCAL **Result Table:** 17MAY10MCAL 5/11/2017 12:08:01 PM
QMethod Name: PFCMOD - 17JAN28 **Acquisition Method:** PFC-32-16NOV02.dam

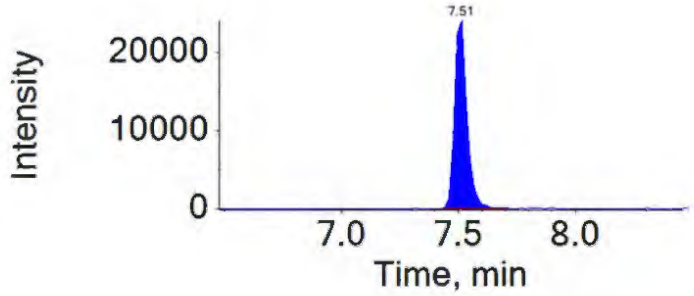
Analyte: NEtFOSAA

584.0 / 419.0



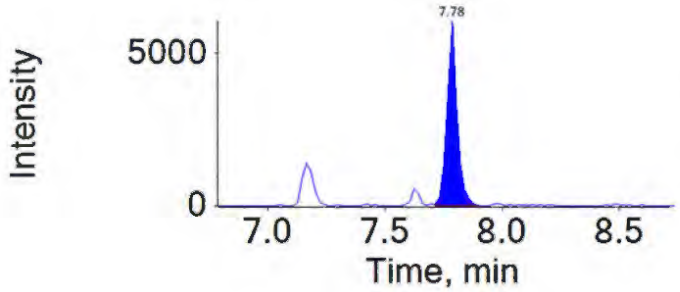
Extraction Standard: d5-NEtFOSAA

589.0 / 419.0



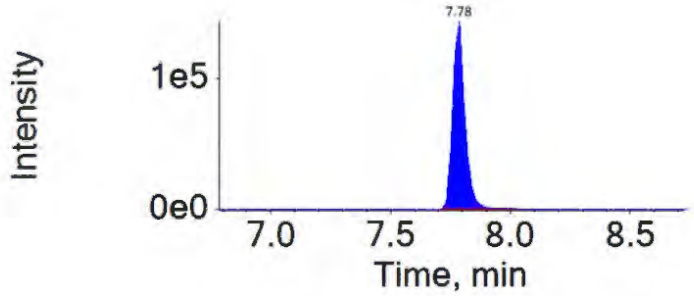
Analyte: PFDoDA

613.0 / 569.0



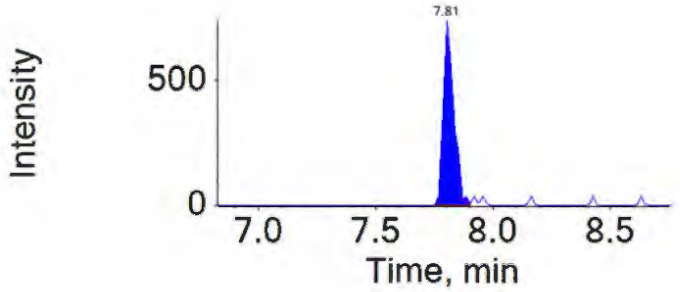
Extraction Standard: 13C2-PFDoDA

615.0 / 570.0



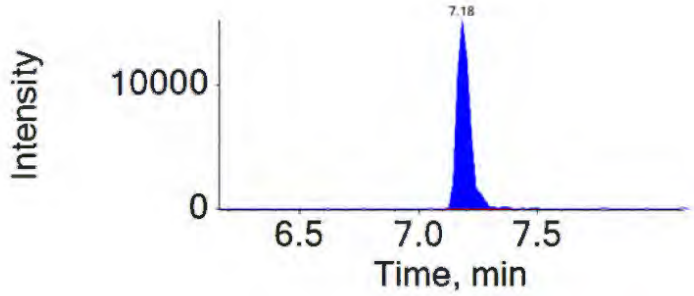
Analyte: 10:2-FTS

627.0 / 607.0



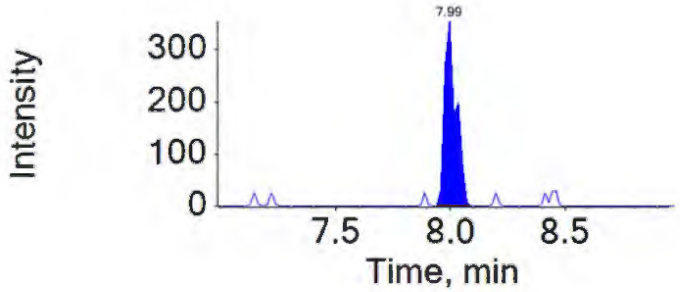
Extraction Standard: 13C2-8:2-FTS

529.0 / 509.0



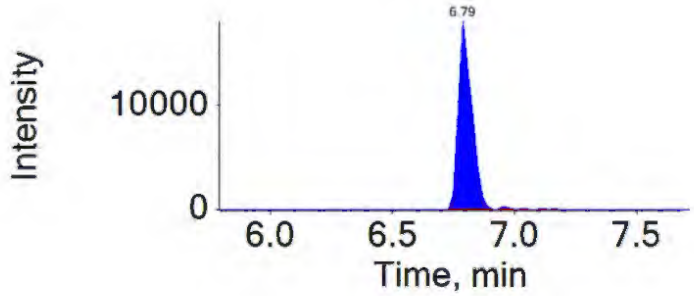
Analyte: PFDoS

699.0 / 99.0



Extraction Standard: 13C8-PFOS

507.0 / 99.0

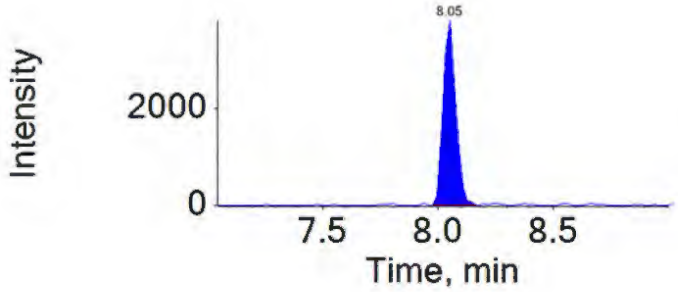


APPROVED
By JWK at 12:34 pm, 5/11/17

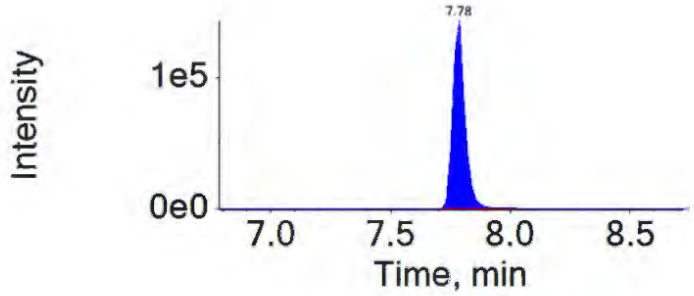
REVIEWED
By UMJS at 9:12 am, 5/15/17

ICAL Name: 17MAY10MCAL **Result Table:** 17MAY10MCAL 5/11/2017 12:08:01 PM
QMethod Name: PFCMOD - 17JAN28 **Acquisition Method:** PFC-32-16NOV02.dam

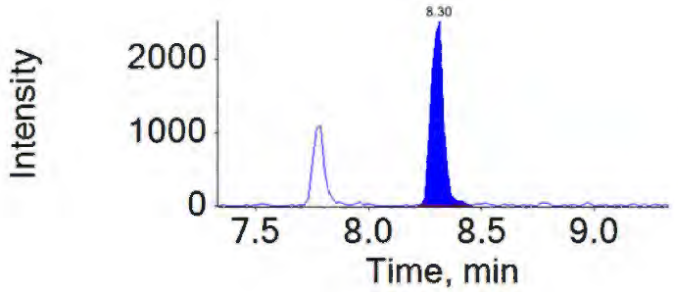
Analyte: PFTrDA
663.0 / 619.0



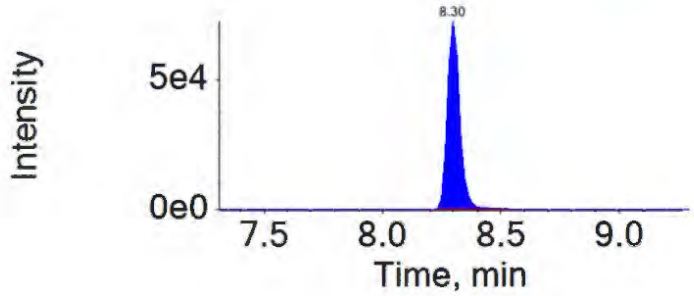
Extraction Standard: 13C2-PFDoDA
615.0 / 570.0



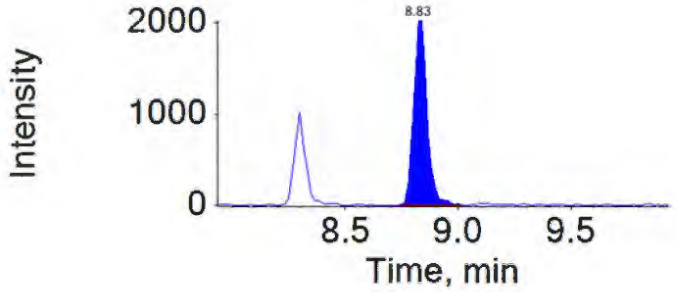
Analyte: PFTeDA
713.0 / 669.0



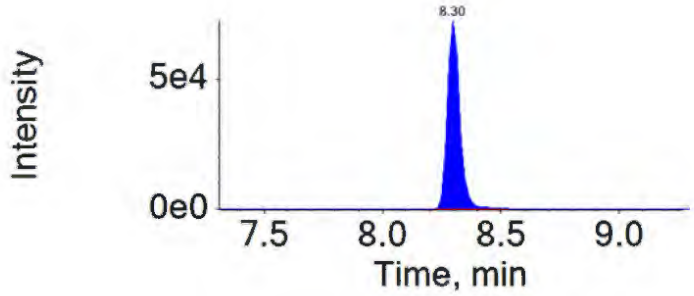
Extraction Standard: 13C2-PFTeDA
715.0 / 670.0



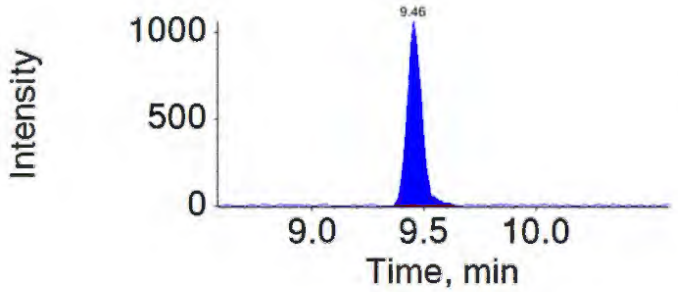
Analyte: PFHxDA
813.0 / 769.0



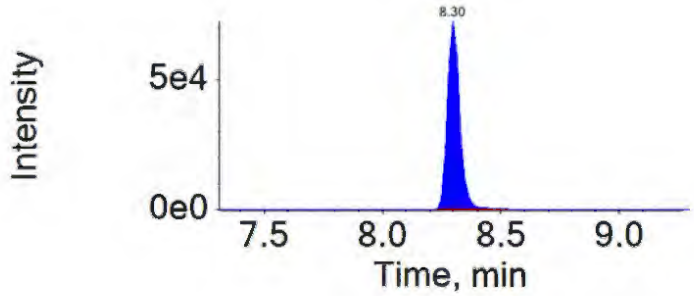
Extraction Standard: 13C2-PFTeDA
715.0 / 670.0



Analyte: PFODA
913.0 / 869.0



Extraction Standard: 13C2-PFTeDA
715.0 / 670.0



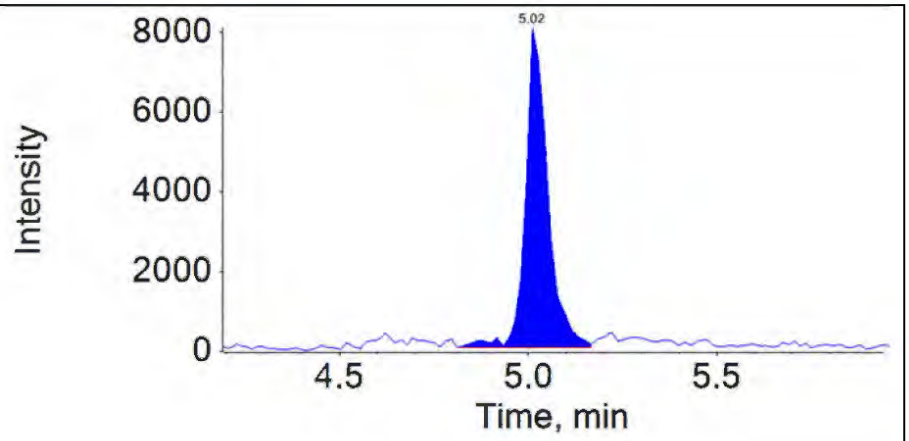
APPROVED
By JWK at 12:34 pm, 5/11/17

REVIEWED
By UMJS at 9:12 am, 5/15/17

Results Table Name: 17MAY10MCAL
Results Table Date: 5/11/2017 12:08:01 PM

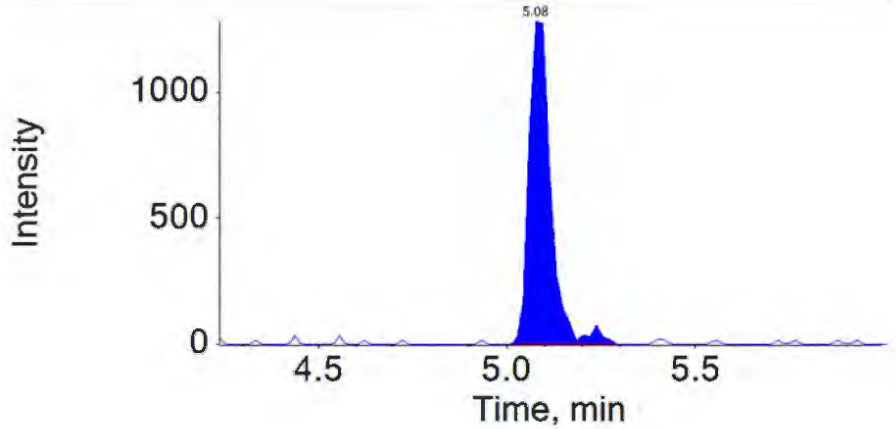
Acquisition Method: PFC-32-16NOV02.dam
QMethod File: PFCMOD - 17JAN28

Component Name:
PFPeA
RT (min.):
5.02
Peak Area:
33128.0
Mass Range:
263.0 / 219.0
File Name:
17MAY10MCAL-30.wiff
Sample Name:
CAL1



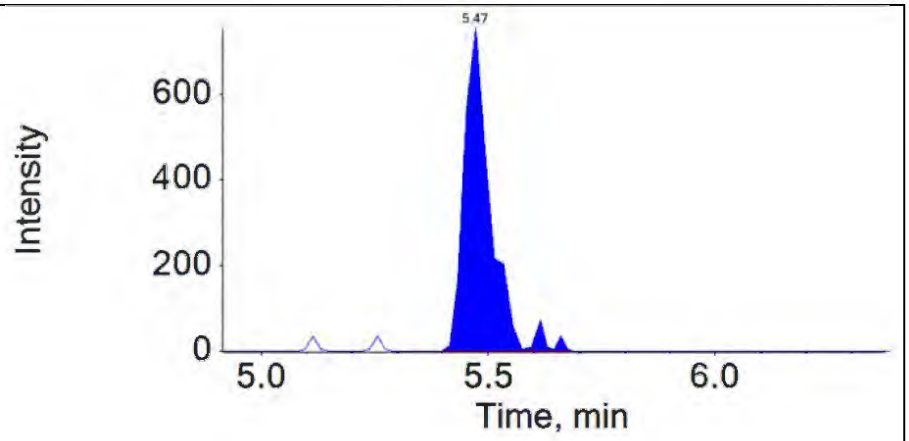
Integration Comment: incorrect integration

Component Name:
PFBS
RT (min.):
5.08
Peak Area:
5300.3
Mass Range:
299.0 / 99.0
File Name:
17MAY10MCAL-30.wiff
Sample Name:
CAL1



Integration Comment: incorrect integration

Component Name:
4:2-FTS
RT (min.):
5.47
Peak Area:
3082.5
Mass Range:
327.0 / 307.0
File Name:
17MAY10MCAL-30.wiff
Sample Name:
CAL1



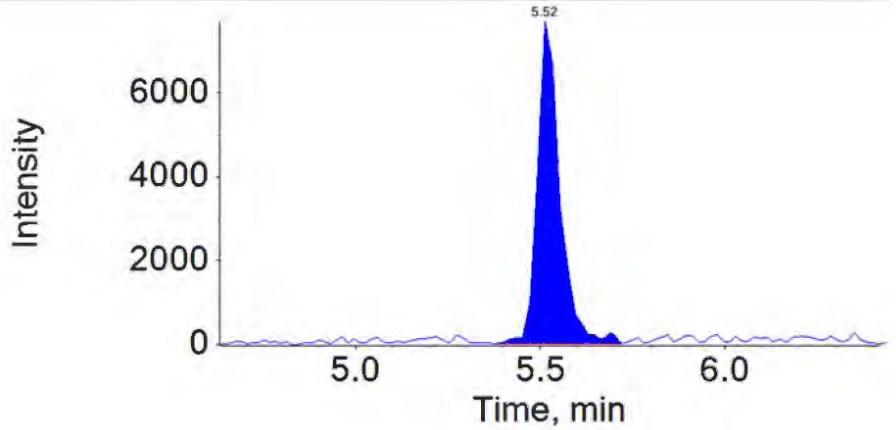
Integration Comment: incorrect integration

APPROVED
By JWK at 12:34 pm, 5/11/17

REVIEWED
By UMJS at 9:12 am, 5/15/17

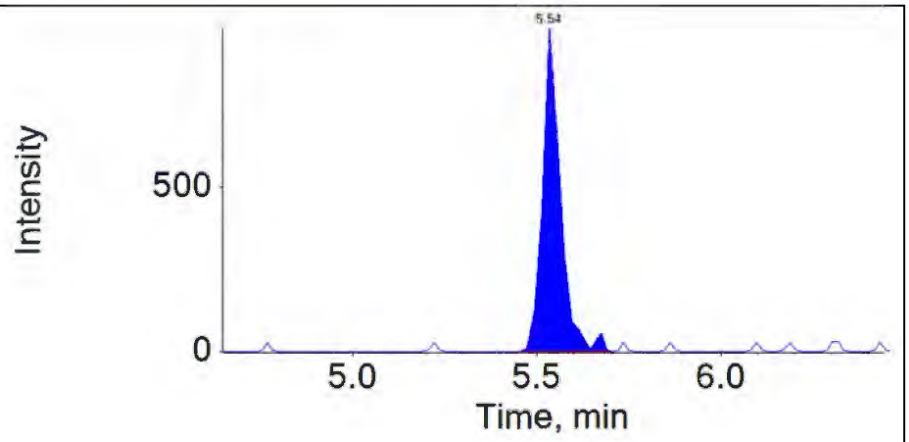
Results Table Name: 17MAY10MCAL
Results Table Date: 5/11/2017 12:08:01 PM
Acquisition Method: PFC-32-16NOV02.dam
QMethod File: PFCMOD - 17JAN28

Component Name:
PFHxA
RT (min.):
5.52
Peak Area:
32608.2
Mass Range:
313.0 / 269.0
File Name:
17MAY10MCAL-30.wiff
Sample Name:
CAL1



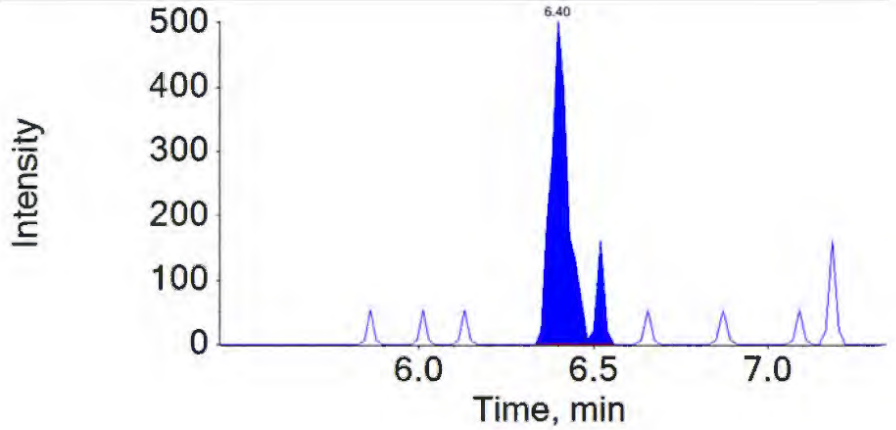
Integration Comment: incorrect integration

Component Name:
PFPeS
RT (min.):
5.54
Peak Area:
3374.9
Mass Range:
349.0 / 99.0
File Name:
17MAY10MCAL-30.wiff
Sample Name:
CAL1



Integration Comment: incorrect integration

Component Name:
6:2-FTS
RT (min.):
6.40
Peak Area:
1984.0
Mass Range:
427.0 / 407.0
File Name:
17MAY10MCAL-30.wiff
Sample Name:
CAL1



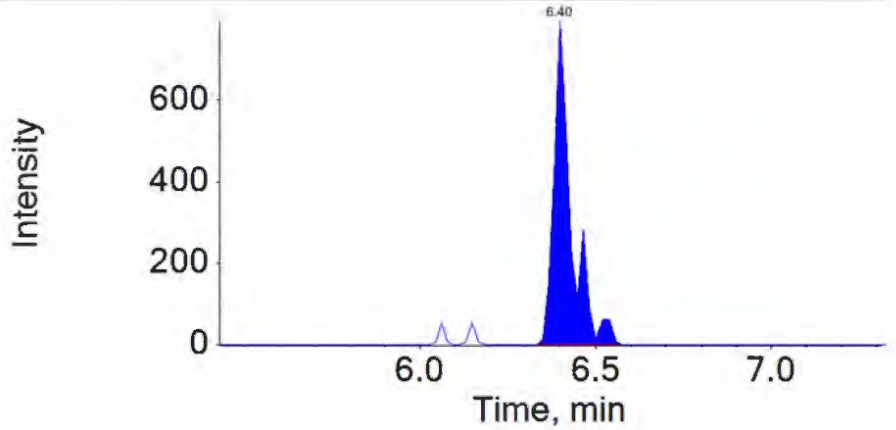
Integration Comment: incorrect integration

APPROVED
By JWK at 12:34 pm, 5/11/17

REVIEWED
By UMJS at 9:12 am, 5/15/17

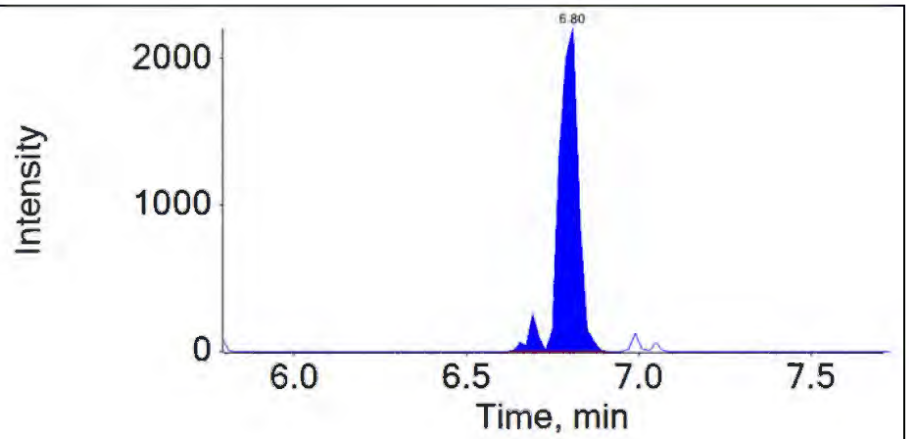
Results Table Name: 17MAY10MCAL
Results Table Date: 5/11/2017 12:08:01 PM
Acquisition Method: PFC-32-16NOV02.dam
QMethod File: PFCMOD - 17JAN28

Component Name:
PFHpS
RT (min.):
6.40
Peak Area:
2768.5
Mass Range:
449.0 / 99.0
File Name:
17MAY10MCAL-30.wiff
Sample Name:
CAL1



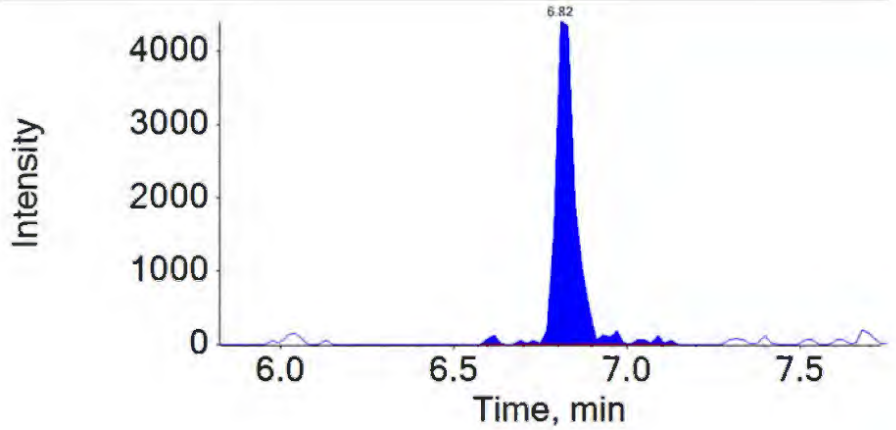
Integration Comment: incorrect integration

Component Name:
PFOS
RT (min.):
6.80
Peak Area:
8742.2
Mass Range:
499.0 / 80.0
File Name:
17MAY10MCAL-30.wiff
Sample Name:
CAL1



Integration Comment: incorrect integration

Component Name:
PFNA
RT (min.):
6.82
Peak Area:
18520.8
Mass Range:
463.0 / 419.0
File Name:
17MAY10MCAL-30.wiff
Sample Name:
CAL1



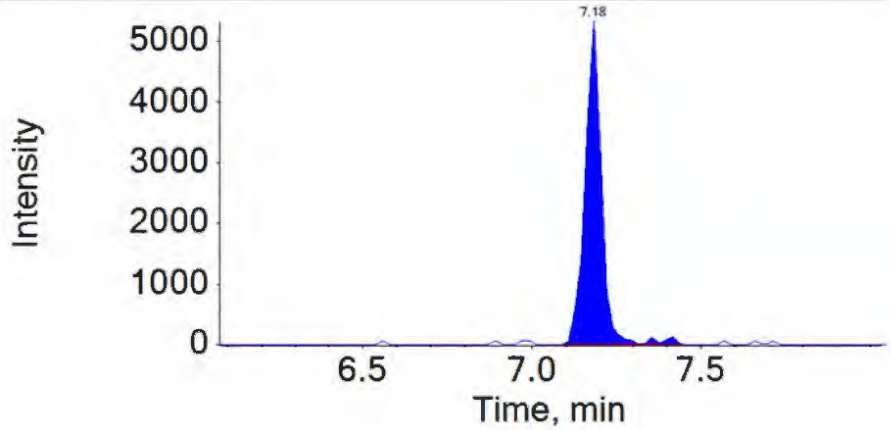
Integration Comment: incorrect integration

APPROVED
By JWK at 12:34 pm, 5/11/17

REVIEWED
By UMJS at 9:12 am, 5/15/17

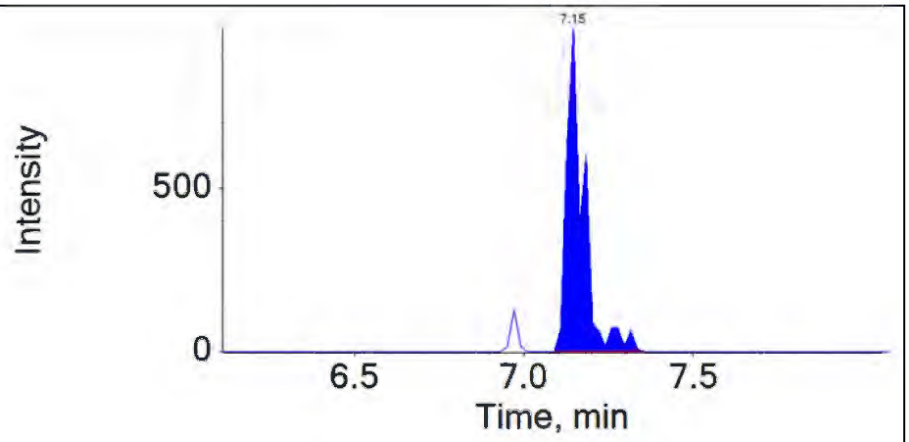
Results Table Name: 17MAY10MCAL
Results Table Date: 5/11/2017 12:08:01 PM
Acquisition Method: PFC-32-16NOV02.dam
QMethod File: PFCMOD - 17JAN28

Component Name:
PFOSA
RT (min.):
7.18
Peak Area:
18345.4
Mass Range:
498.0 / 78.0
File Name:
17MAY10MCAL-30.wiff
Sample Name:
CAL1



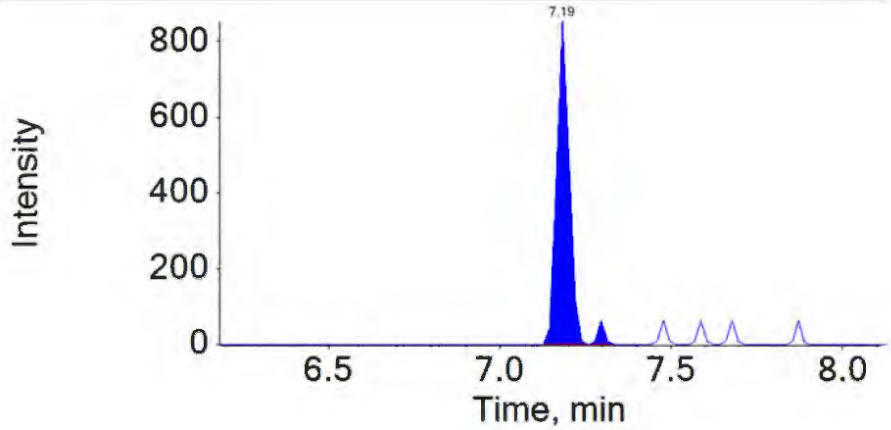
Integration Comment: incorrect integration

Component Name:
PFNS
RT (min.):
7.15
Peak Area:
3478.5
Mass Range:
549.0 / 99.0
File Name:
17MAY10MCAL-30.wiff
Sample Name:
CAL1



Integration Comment: incorrect integration

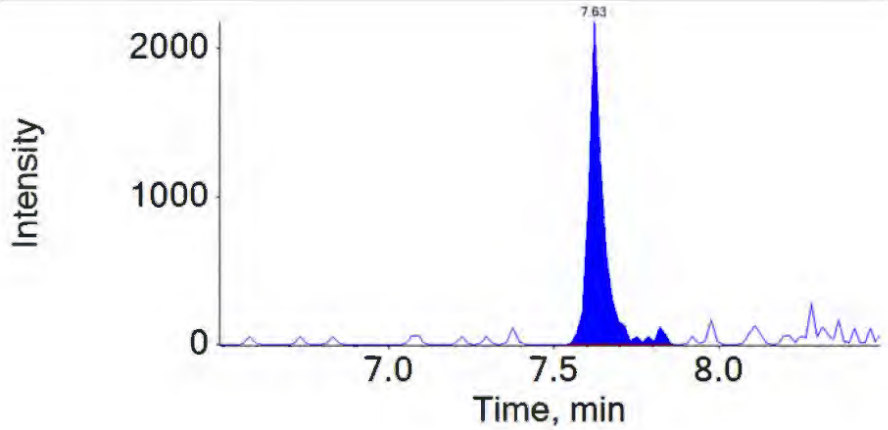
Component Name:
8:2-FTS
RT (min.):
7.19
Peak Area:
2274.4
Mass Range:
527.0 / 507.0
File Name:
17MAY10MCAL-30.wiff
Sample Name:
CAL1



Integration Comment: incorrect integration

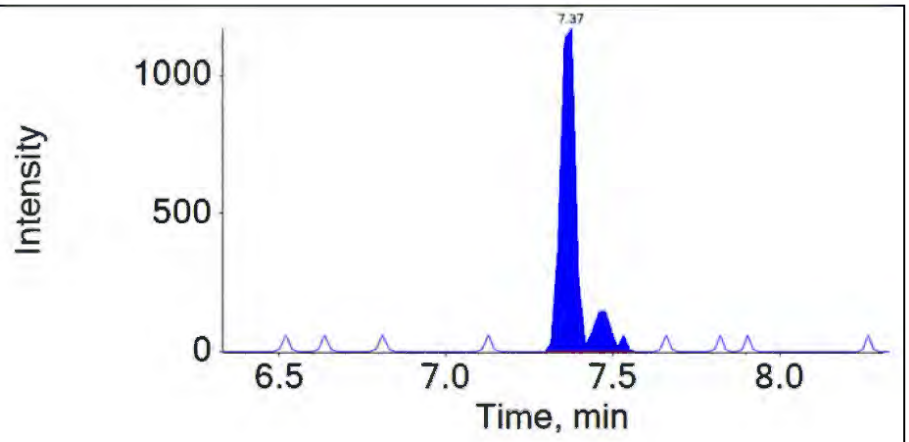
Results Table Name: 17MAY10MCAL
Results Table Date: 5/11/2017 12:08:01 PM
Acquisition Method: PFC-32-16NOV02.dam
QMethod File: PFCMOD - 17JAN28

Component Name:
NMePFOSAE
RT (min.):
7.63
Peak Area:
6776.9
Mass Range:
616.0 / 59.0
File Name:
17MAY10MCAL-30.wiff
Sample Name:
CAL1



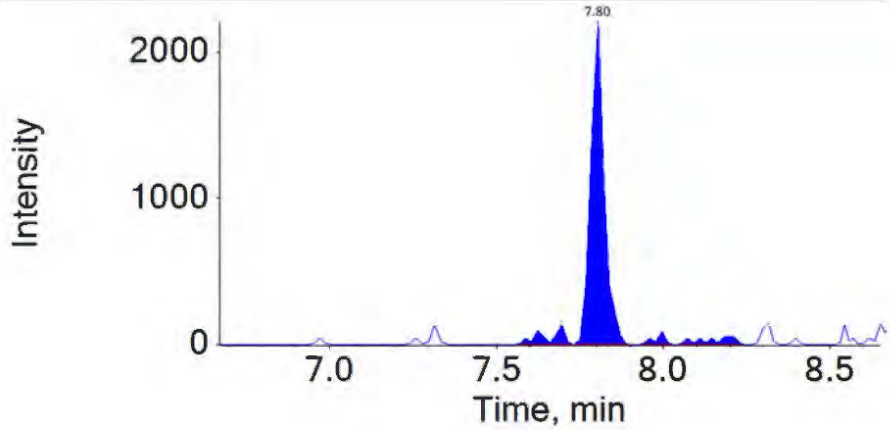
Integration Comment: incorrect integration

Component Name:
NMeFOSAA
RT (min.):
7.37
Peak Area:
4316.5
Mass Range:
570.0 / 419.0
File Name:
17MAY10MCAL-30.wiff
Sample Name:
CAL1



Integration Comment: incorrect integration

Component Name:
NEtPFOSAE
RT (min.):
7.80
Peak Area:
7296.1
Mass Range:
630.0 / 59.0
File Name:
17MAY10MCAL-30.wiff
Sample Name:
CAL1



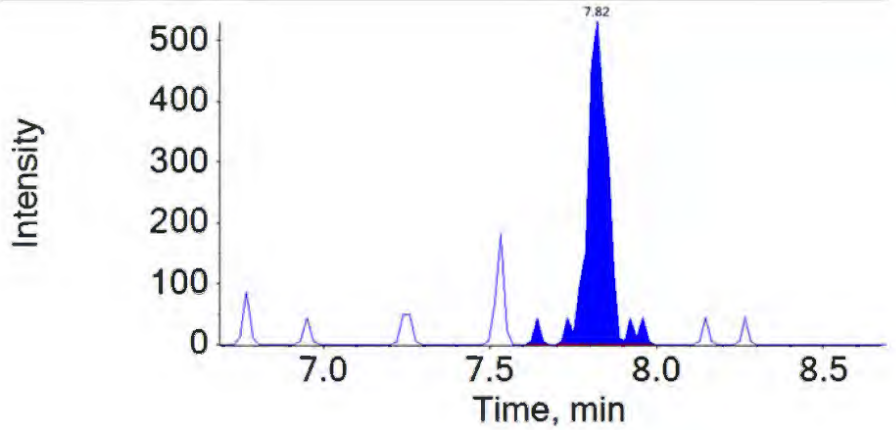
Integration Comment: incorrect integration

APPROVED
By JWK at 12:34 pm, 5/11/17

REVIEWED
By UMJS at 9:12 am, 5/15/17

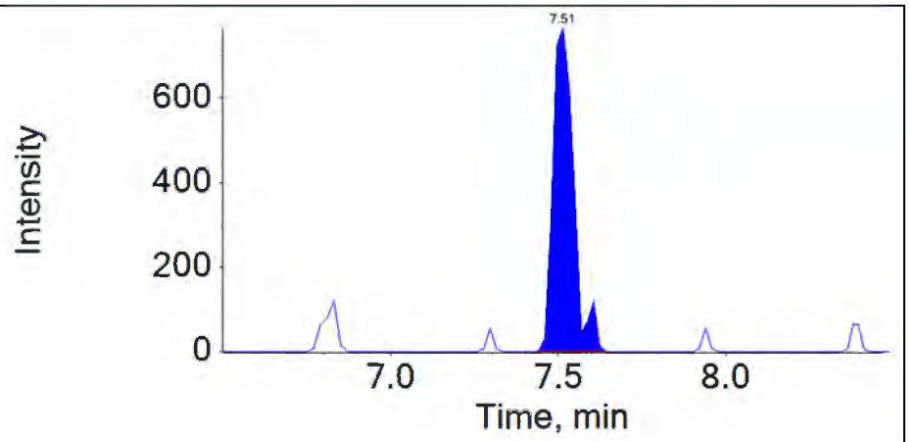
Results Table Name: 17MAY10MCAL
Results Table Date: 5/11/2017 12:08:01 PM
Acquisition Method: PFC-32-16NOV02.dam
QMethod File: PFCMOD - 17JAN28

Component Name:
NEtPFOSA
RT (min.):
7.82
Peak Area:
2392.3
Mass Range:
526.0 / 169.0
File Name:
17MAY10MCAL-30.wiff
Sample Name:
CAL1



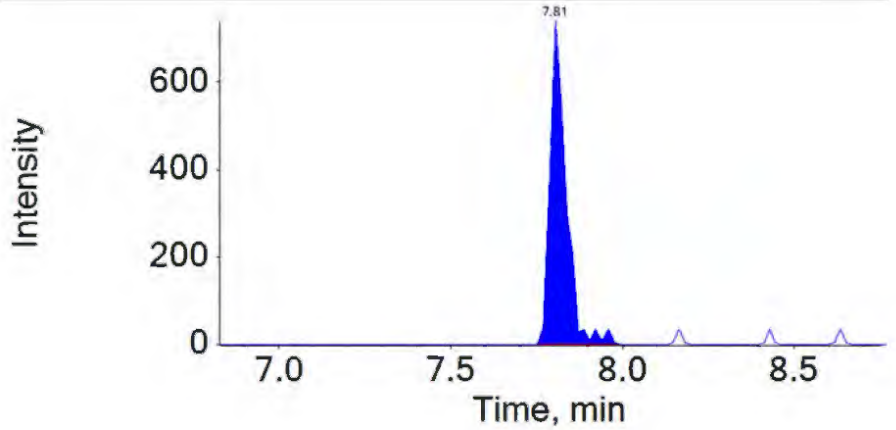
Integration Comment: incorrect integration

Component Name:
NEtFOSAA
RT (min.):
7.51
Peak Area:
3333.9
Mass Range:
584.0 / 419.0
File Name:
17MAY10MCAL-30.wiff
Sample Name:
CAL1



Integration Comment: incorrect integration

Component Name:
10:2-FTS
RT (min.):
7.81
Peak Area:
2428.5
Mass Range:
627.0 / 607.0
File Name:
17MAY10MCAL-30.wiff
Sample Name:
CAL1



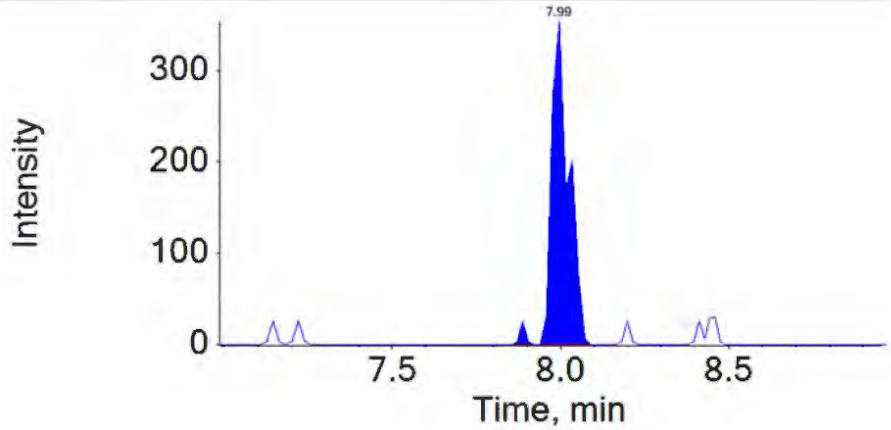
Integration Comment: incorrect integration

APPROVED
By JWK at 12:34 pm, 5/11/17

REVIEWED
By UMJS at 9:12 am, 5/15/17

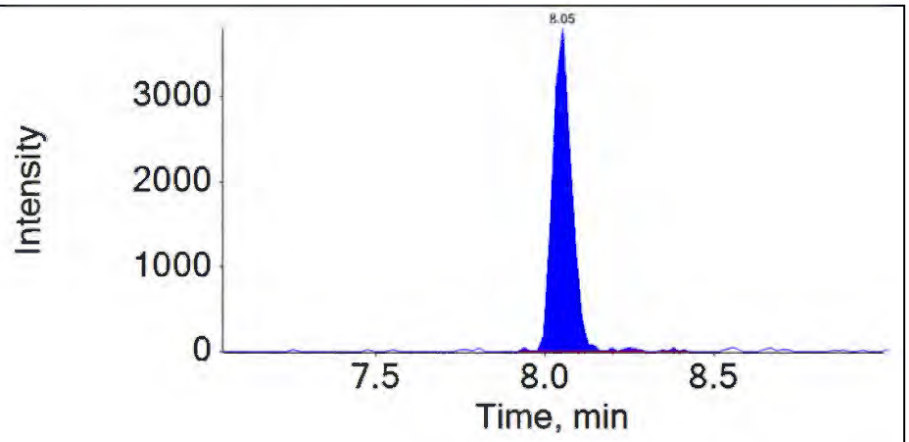
Results Table Name: 17MAY10MCAL
Results Table Date: 5/11/2017 12:08:01 PM
Acquisition Method: PFC-32-16NOV02.dam
QMethod File: PFCMOD - 17JAN28

Component Name:
PFDoS
RT (min.):
7.99
Peak Area:
1297.8
Mass Range:
699.0 / 99.0
File Name:
17MAY10MCAL-30.wiff
Sample Name:
CAL1



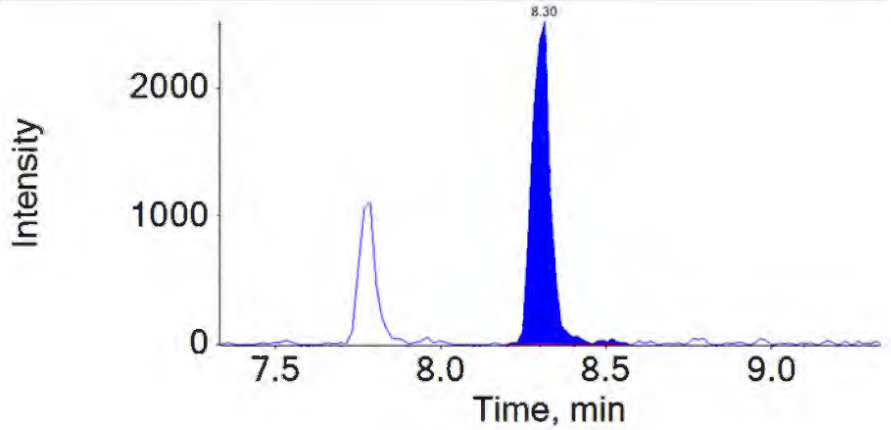
Integration Comment: incorrect integration

Component Name:
PFTrDA
RT (min.):
8.05
Peak Area:
14922.3
Mass Range:
663.0 / 619.0
File Name:
17MAY10MCAL-30.wiff
Sample Name:
CAL1



Integration Comment: incorrect integration

Component Name:
PFTeDA
RT (min.):
8.30
Peak Area:
9941.0
Mass Range:
713.0 / 669.0
File Name:
17MAY10MCAL-30.wiff
Sample Name:
CAL1



Integration Comment: incorrect integration

APPROVED
By JWK at 12:34 pm, 5/11/17

REVIEWED
By UMJS at 9:12 am, 5/15/17

Results Table Name: 17MAY10MCAL
Results Table Date: 5/11/2017 12:08:01 PM

Acquisition Method: PFC-32-16NOV02.dam
QMethod File: PFCMOD - 17JAN28

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LC-MS/MS Analysis Report

Printed: 5/11/2017 12:15:00 PM
Template: MQ-Sample-16Nov21.docx

ICAL Name: 17MAY10MCAL
QMethod Name: PFCMOD - 17JAN28
Result Table: 17MAY10MCAL 5/11/2017 12:08:01 PM
Acquisition Method: PFC-32-16NOV02.dam

Sample Name:	CAL2			**Data File:**		17MAY10MCAL-31.wiff
Sample ID:	CALPFC1712533C			**Acquis Date:**		2017-05-11T05:30:33
Sample Type:	Standard			**Instrument:**		LM24960
Vial Position:	4			**Acquis Method:**		PFC-32-16NOV02.dam
Injection Vol:	5.00			**Result Table:**		17MAY10MCAL
QMethod File:	PFCMOD - 17JAN28			**ICAL Name:**		17MAY10MCAL
Batch Number:	MODICAL			**Operator:**		Not calculated
Sample Wt.:	1.00000			**Dilution Factor:**		1.00
Sample Vol.:	1.000			**Prep Factor:**		1.000

Injection Standard Peak Table

Injection Standard Name	Inj Std Conc	Injection Std Peak Area	ICAL Injection Standard AVG	Injection Std %Diff	Injection Std %Diff Limit	Injection Std %Diff OOS
I13C3-PFBA	1.0	715587.0	669117.3	6.9	50.0	
I13C2-PFOA	1.0	368771.6	342184.6	7.8	50.0	
I13C4-PFOS	1.0	79549.8	70131.6	13.4	50.0	
I13C2-PFDA	1.0	440729.8	384098.7	14.7	50.0	

Extraction Standard Peak Table

Extraction Standard Name	Ext Std Area	Inj Std Name	Inj Std Area	Area Ratio	AVG Area Ratio	Ext Std Conc	Ext Std Result	Ext Std %REC	Ext Std %REC Limit	Ext Std OOS
E13C4-PFBA	824905.9	13C3-PFBA	715587.0	1.153	1.150	1.000	1.002		-	
E13C5-PFPeA	785581.8	13C3-PFBA	715587.0	1.098	1.073	1.000	1.023		-	
E13C3-PFBS	135873.4	13C3-PFBA	715587.0	0.190	0.194	1.000	0.977		-	
E13C2-4:2-FTS	87132.1	13C2-PFOA	368771.6	0.236	0.236	1.000	1.000		-	
E13C5-PFHxA	756116.1	13C2-PFOA	368771.6	2.050	2.026	1.000	1.012		-	
E13C3-PFHxS	74996.3	13C2-PFOA	368771.6	0.203	0.206	1.000	0.988		-	
E13C4-PFHpA	485135.8	13C2-PFOA	368771.6	1.316	1.285	1.000	1.024		-	
E13C2-6:2-FTS	41844.9	13C2-PFOA	368771.6	0.114	0.128	1.000	0.886		-	
E13C8-PFOA	444514.8	13C2-PFOA	368771.6	1.205	1.163	1.000	1.036		-	
E13C8-PFOS	66304.8	13C4-PFOS	79549.8	0.834	0.865	1.000	0.963		-	
E13C9-PFNA	331176.8	13C4-PFOS	79549.8	4.163	4.422	1.000	0.942		-	
E13C8-PFOSA	411448.7	13C2-PFDA	440729.8	0.934	0.936	1.000	0.997		-	
E13C6-PFDA	644676.4	13C2-PFDA	440729.8	1.463	1.424	1.000	1.027		-	
E13C2-8:2-FTS	59422.8	13C2-PFDA	440729.8	0.135	0.155	1.000	0.868		-	
Ed7-NMePFOSAE	118120.3	13C2-PFDA	440729.8	0.268	0.299	1.000	0.897		-	
Ed3-NMePFOSA	47494.6	13C2-PFDA	440729.8	0.108	0.120	1.000	0.896		-	
Ed3-NMeFOSAA	121565.7	13C2-PFDA	440729.8	0.276	0.343	1.000	0.804		-	
Ed9-NEtPFOSAE	131500.0	13C2-PFDA	440729.8	0.298	0.333	1.000	0.897		-	
Ed5-NEtPFOSA	37591.4	13C2-PFDA	440729.8	0.085	0.095	1.000	0.900		-	
E13C7-PFUnDA	401155.1	13C2-PFDA	440729.8	0.910	0.953	1.000	0.955		-	
Ed5-NEtFOSAA	98964.4	13C2-PFDA	440729.8	0.225	0.249	1.000	0.903		-	
E13C2-PFDoDA	496372.0	13C2-PFDA	440729.8	1.126	1.154	1.000	0.976		-	
E13C2-PFTeDA	277785.3	13C2-PFDA	440729.8	0.630	0.651	1.000	0.967		-	

APPROVED
By JWK at 12:34 pm, 5/11/17

REVIEWED
By UMJS at 9:12 am, 5/15/17

ICAL Name: 17MAY10MCAL **Result Table:** 17MAY10MCAL 5/11/2017 12:08:01 PM
QMethod Name: PFCMOD - 17JAN28 **Acquisition Method:** PFC-32-16NOV02.dam

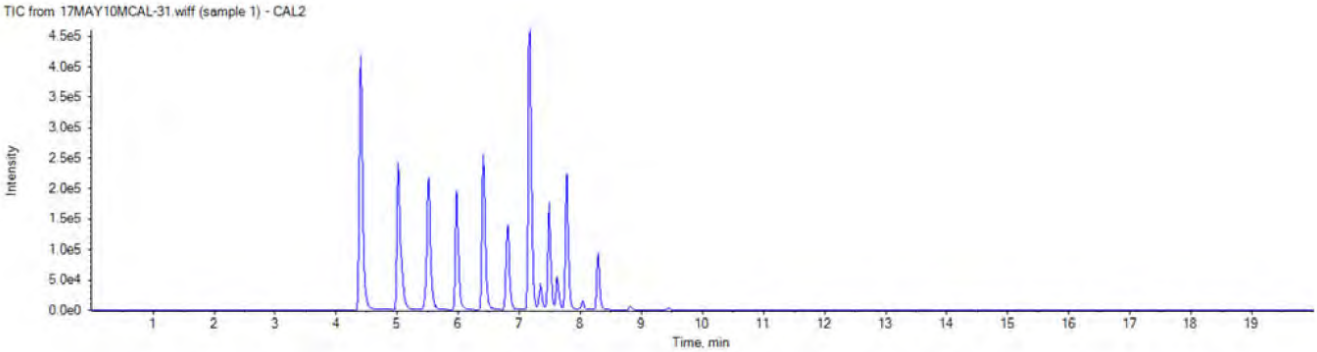
Analyte Quantitation Peak Table

Sample Name: CAL2 **Instrument Name:** LM24960 **File Name:** 17MAY10MCAL-31.wiff

Sample Wt	Sample Vol	Dilution Factor	PrepFactor
1.00000	1.000	1.00	1.000

Analytet Name	RT	RRT	Analyte Area Response	Int Typ	ES Name	ES RT	ES Area Response	Area Ratio	Sample Result (ng/g)
PFBA	4.40	1.000	96646.9	A	13C4-PFBA	4.40	824905.9	0.117	0.644
PFPeA	5.02	1.000	104826.5	A	13C5-PFPeA	5.02	785581.8	0.133	0.646
PFBS	5.08	1.000	15932.6	A	13C3-PFBS	5.08	135873.4	0.117	0.555
4:2-FTS	5.47	1.000	9477.8	M	13C2-4:2-FTS	5.47	87132.1	0.109	0.498
PFHxA	5.51	1.000	88067.9	M	13C5-PFHxA	5.51	756116.1	0.117	0.617
PFPeS	5.53	1.090	9053.8	M	13C3-PFBS	5.08	135873.4	0.067	0.595
PFHxS	5.97	1.000	32003.0	A	13C3-PFHxS	5.97	74996.3	0.427	0.599
PFHpA	5.98	1.000	78041.4	A	13C4-PFHpA	5.97	485135.8	0.161	0.648
6:2-FTS	6.40	1.000	4629.0	M	13C2-6:2-FTS	6.40	41844.9	0.111	0.565
PFHpS	6.39	1.070	8235.9	M	13C3-PFHxS	5.97	74996.3	0.110	0.576
PFOA	6.42	1.000	60848.2	A	13C8-PFOA	6.41	444514.8	0.137	0.624
PFOS	6.79	1.000	26585.2	A	13C8-PFOS	6.79	66304.8	0.401	0.558
PFNA	6.82	1.000	59382.7	A	13C9-PFNA	6.81	331176.8	0.179	0.732
PFOSA	7.16	1.000	53164.2	A	13C8-PFOSA	7.17	411448.7	0.129	0.590
PFNS	7.14	1.050	8862.8	M	13C8-PFOS	6.79	66304.8	0.134	0.613
PFDA	7.17	1.000	73321.1	A	13C6-PFDA	7.17	644676.4	0.114	0.621
8:2-FTS	7.19	1.000	7911.1	A	13C2-8:2-FTS	7.18	59422.8	0.133	0.647
NMePFOSAE	7.63	1.000	17502.5	M	d7-NMePFOSAE	7.61	118120.3	0.148	0.591
NMePFOSA	7.64	1.000	4358.6	M	d3-NMePFOSA	7.64	47494.6	0.092	0.428
NMeFOSAA	7.36	1.000	15665.3	M	d3-NMeFOSAA	7.35	121565.7	0.129	0.605
NEtPFOSAE	7.79	1.000	18784.9	A	d9-NEtPFOSAE	7.78	131500.0	0.143	0.655
NEtPFOSA	7.81	1.000	4808.0	M	d5-NEtPFOSA	7.80	37591.4	0.128	0.635
PFDS	7.46	1.100	6185.8	A	13C8-PFOS	6.79	66304.8	0.093	0.474
PFUnDA	7.48	1.000	59280.3	A	13C7-PFUnDA	7.49	401155.1	0.148	0.576
NEtFOSAA	7.51	1.000	11256.0	A	d5-NEtFOSAA	7.50	98964.4	0.114	0.557
PFDoDA	7.77	1.000	54504.4	A	13C2-PFDoDA	7.77	496372.0	0.110	0.588
10:2-FTS	7.81	1.090	8298.6	M	13C2-8:2-FTS	7.18	59422.8	0.140	0.636
PFDoS	7.98	1.180	2454.5	A	13C8-PFOS	6.79	66304.8	0.037	0.521
PFTrDA	8.04	1.030	41139.6	M	13C2-PFDoDA	7.77	496372.0	0.083	0.615
PFTeDA	8.29	1.000	33159.8	A	13C2-PFTeDA	8.29	277785.3	0.119	0.609
PFHxDA	8.82	1.060	26090.9	A	13C2-PFTeDA	8.29	277785.3	0.094	0.593
PFODA	9.44	1.140	14968.0	A	13C2-PFTeDA	8.29	277785.3	0.054	0.493

Total Ion Chromatogram



APPROVED
By JWK at 12:34 pm, 5/11/17

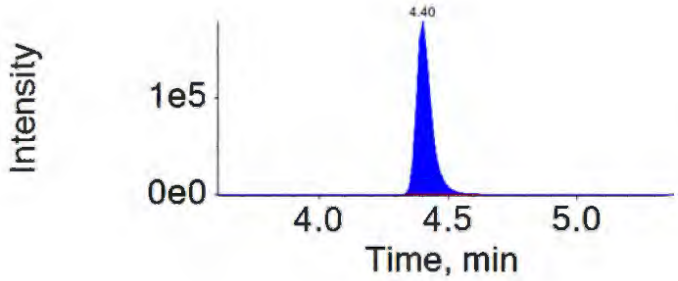
REVIEWED
By UMJS at 9:12 am, 5/15/17

ICAL Name: 17MAY10MCAL
QMethod Name: PFCMOD - 17JAN28

Result Table: 17MAY10MCAL 5/11/2017 12:08:01 PM
Acquisition Method: PFC-32-16NOV02.dam

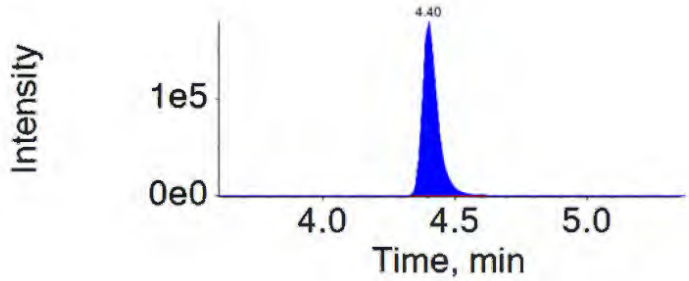
Injection Standard: I13C3-PFBA

216.0 / 172.0



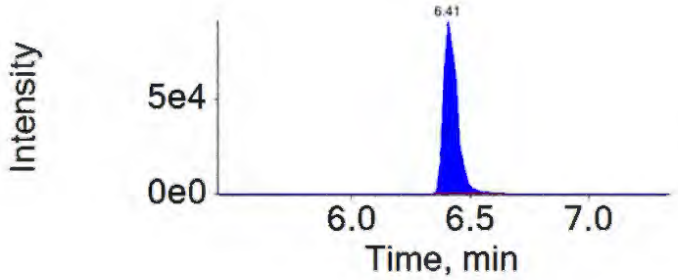
Injection Standard: 13C3-PFBA

216.0 / 172.0



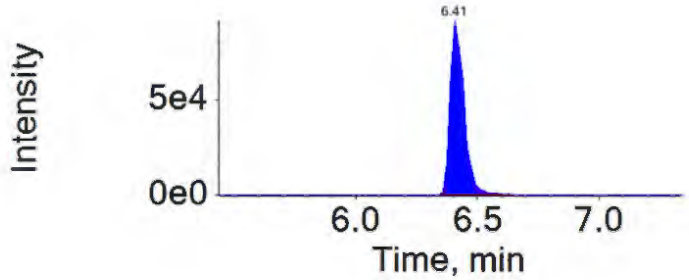
Injection Standard: I13C2-PFOA

415.0 / 370.0



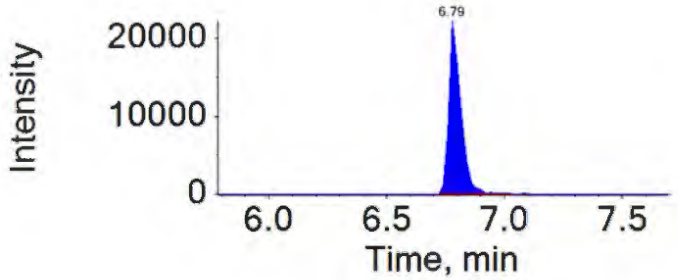
Injection Standard: 13C2-PFOA

415.0 / 370.0



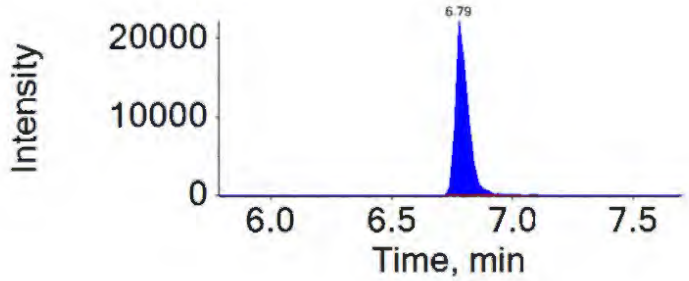
Injection Standard: I13C4-PFOS

503.0 / 99.0



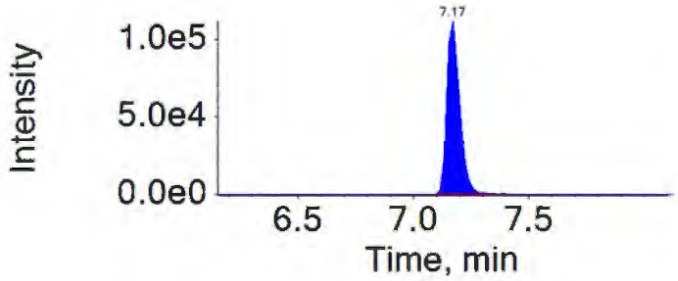
Injection Standard: 13C4-PFOS

503.0 / 99.0



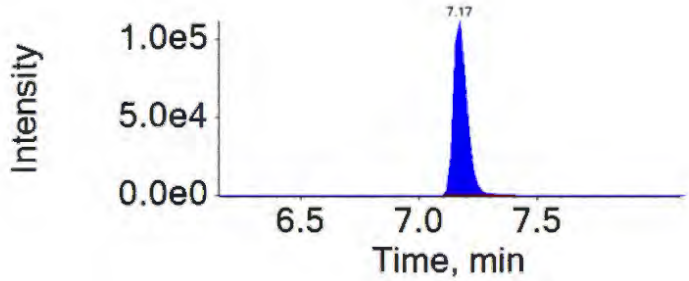
Injection Standard: I13C2-PFDA

515.0 / 470.0



Injection Standard: 13C2-PFDA

515.0 / 470.0



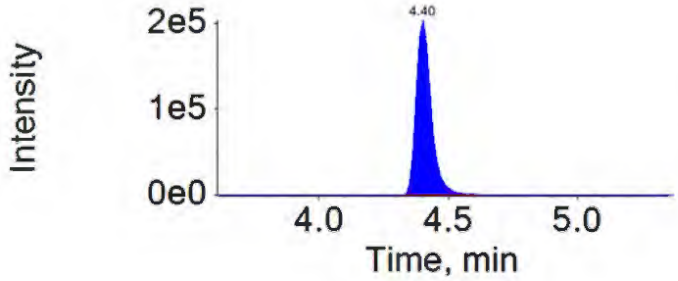
APPROVED
By JWK at 12:34 pm, 5/11/17

REVIEWED
By UMJS at 9:12 am, 5/15/17

ICAL Name: 17MAY10MCAL **Result Table:** 17MAY10MCAL 5/11/2017 12:08:01 PM
QMethod Name: PFCMOD - 17JAN28 **Acquisition Method:** PFC-32-16NOV02.dam

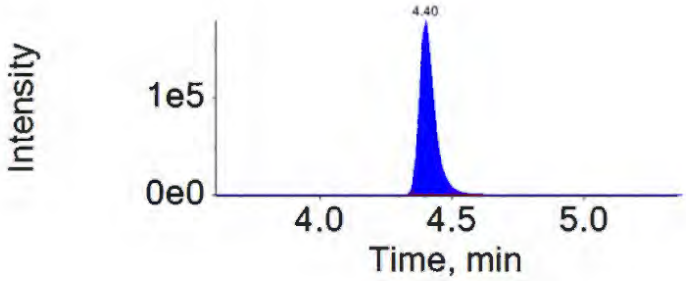
Extraction Standard: E13C4-PFBA

217.0 / 172.0



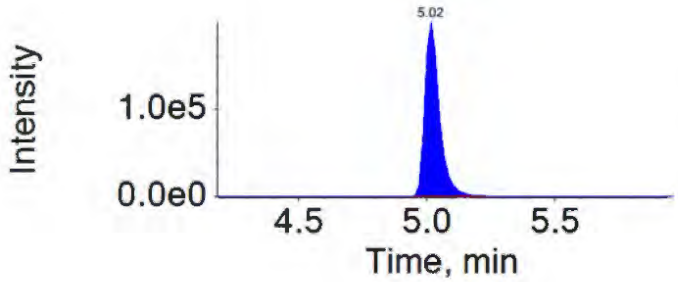
Injection Standard: 13C3-PFBA

216.0 / 172.0



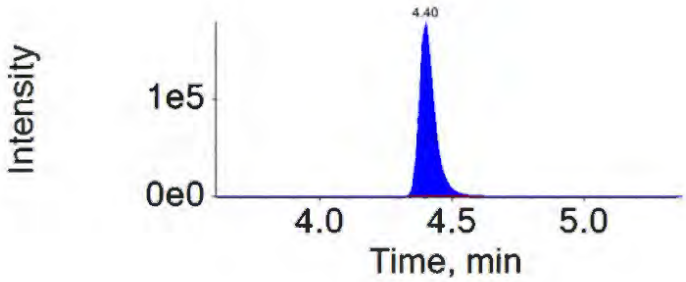
Extraction Standard: E13C5-PFPeA

268.0 / 223.0



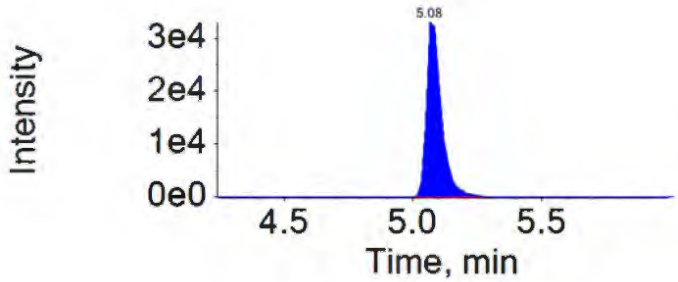
Injection Standard: 13C3-PFBA

216.0 / 172.0



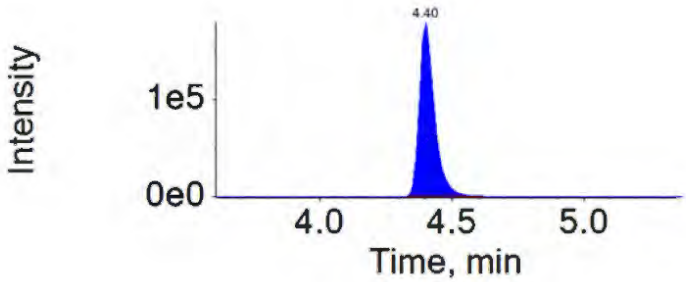
Extraction Standard: E13C3-PFBS

302.0 / 99.0



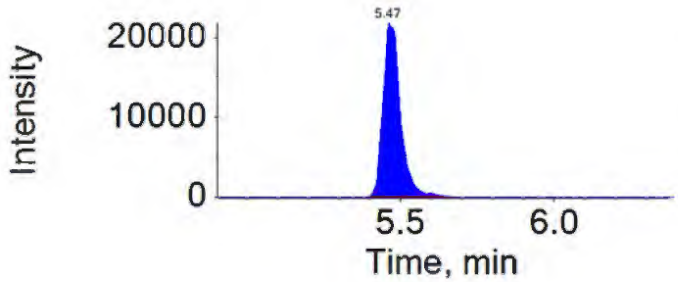
Injection Standard: 13C3-PFBA

216.0 / 172.0



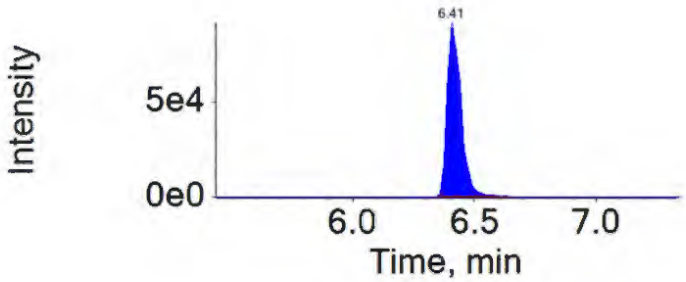
Extraction Standard: E13C2-4:2-FTS

329.0 / 309.0



Injection Standard: 13C2-PFOA

415.0 / 370.0



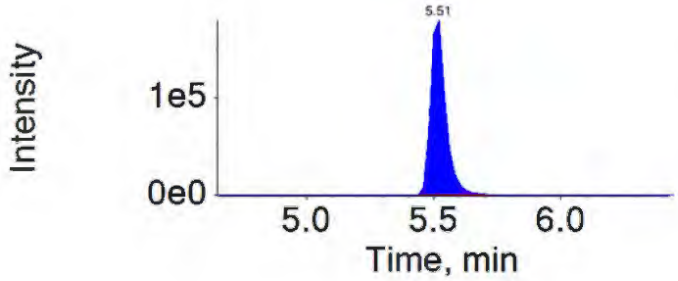
APPROVED
By JWK at 12:34 pm, 5/11/17

REVIEWED
By UMJS at 9:12 am, 5/15/17

ICAL Name: 17MAY10MCAL **Result Table:** 17MAY10MCAL 5/11/2017 12:08:01 PM
QMethod Name: PFCMOD - 17JAN28 **Acquisition Method:** PFC-32-16NOV02.dam

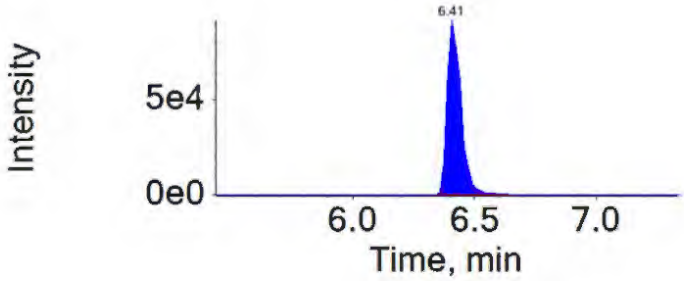
Extraction Standard: E13C5-PFHxA

318.0 /
273.0



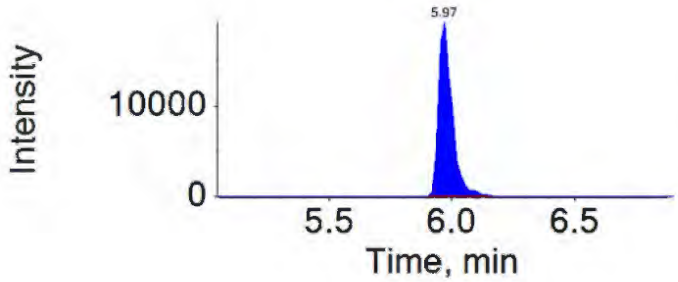
Injection Standard: 13C2-PFOA

415.0 /
370.0



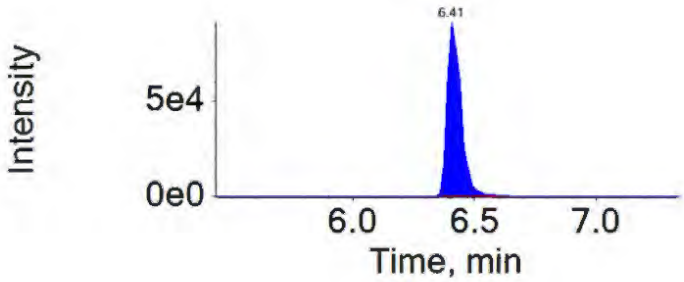
Extraction Standard: E13C3-PFHxS

402.0 /
99.0



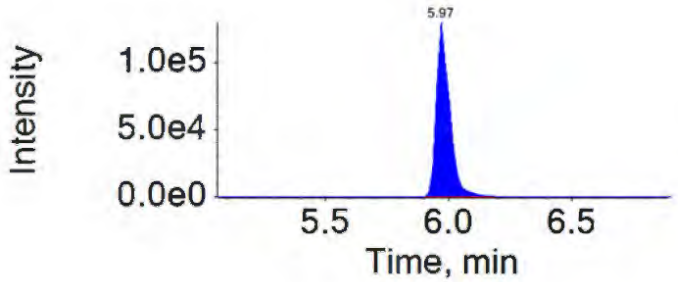
Injection Standard: 13C2-PFOA

415.0 /
370.0



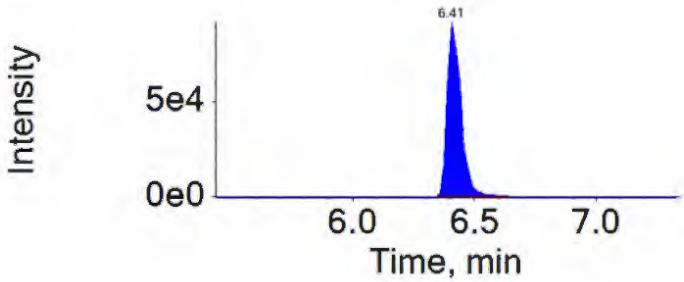
Extraction Standard: E13C4-PFHpA

367.0 /
322.0



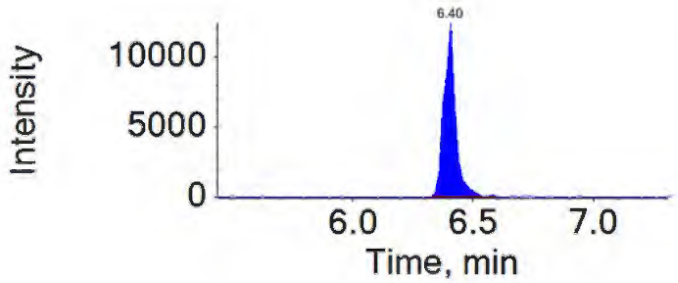
Injection Standard: 13C2-PFOA

415.0 /
370.0



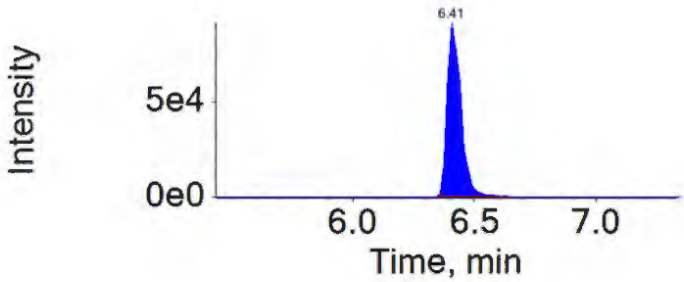
Extraction Standard: E13C2-6:2-FTS

429.0 /
409.0



Injection Standard: 13C2-PFOA

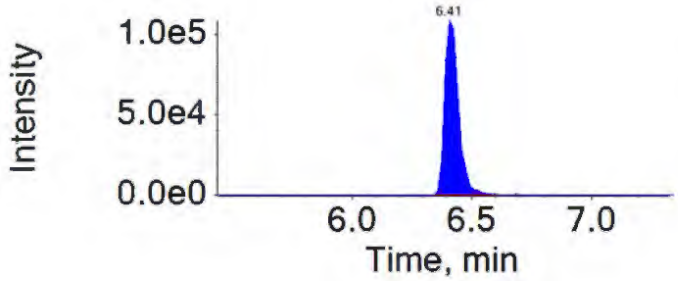
415.0 /
370.0



ICAL Name: 17MAY10MCAL **Result Table:** 17MAY10MCAL 5/11/2017 12:08:01 PM
QMethod Name: PFCMOD - 17JAN28 **Acquisition Method:** PFC-32-16NOV02.dam

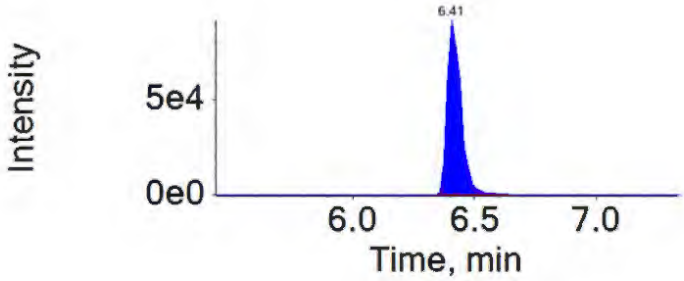
Extraction Standard: E13C8-PFOA

421.0 / 376.0



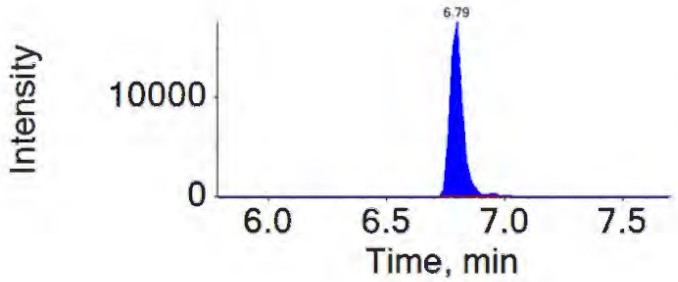
Injection Standard: 13C2-PFOA

415.0 / 370.0



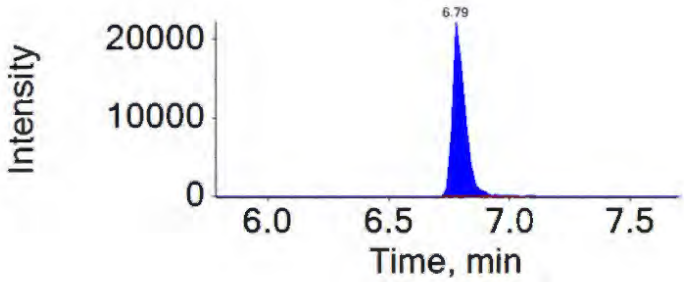
Extraction Standard: E13C8-PFOS

507.0 / 99.0



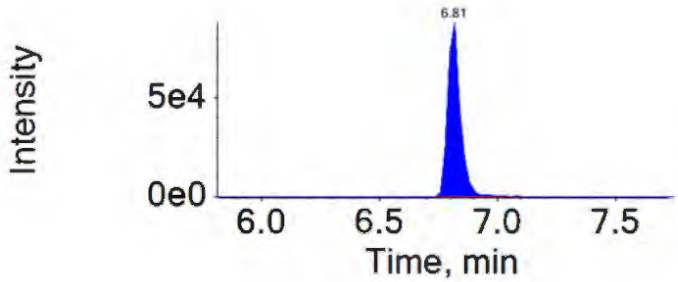
Injection Standard: 13C4-PFOS

503.0 / 99.0



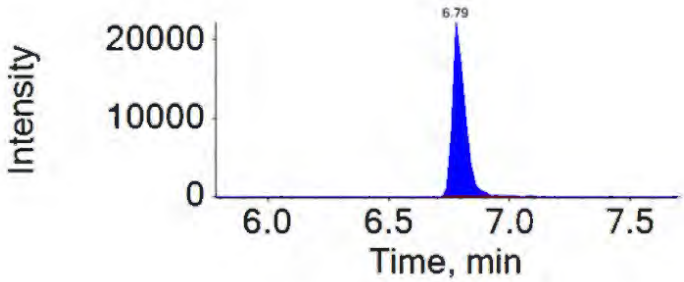
Extraction Standard: E13C9-PFNA

472.0 / 427.0



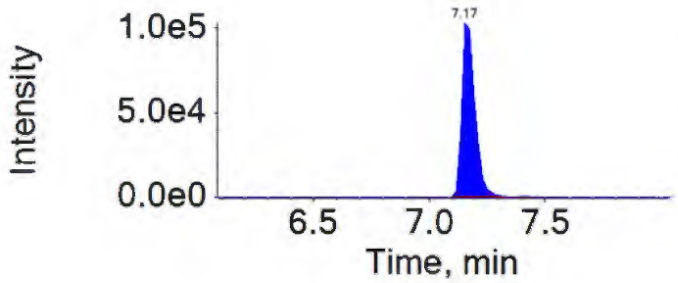
Injection Standard: 13C4-PFOS

503.0 / 99.0



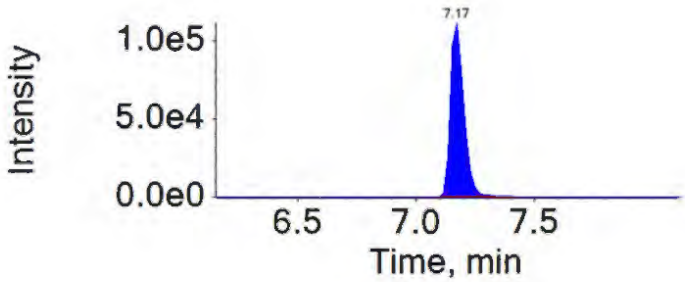
Extraction Standard: E13C8-PFOSA

506.0 / 78.0



Injection Standard: 13C2-PFDA

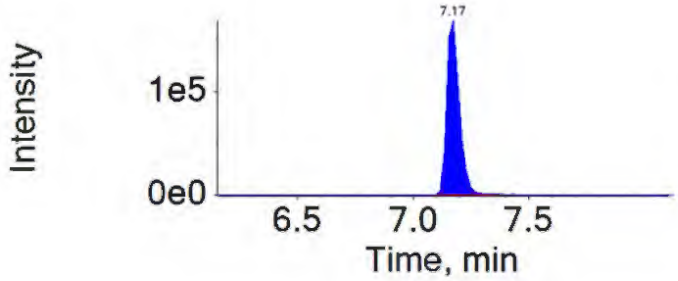
515.0 / 470.0



ICAL Name: 17MAY10MCAL **Result Table:** 17MAY10MCAL 5/11/2017 12:08:01 PM
QMethod Name: PFCMOD - 17JAN28 **Acquisition Method:** PFC-32-16NOV02.dam

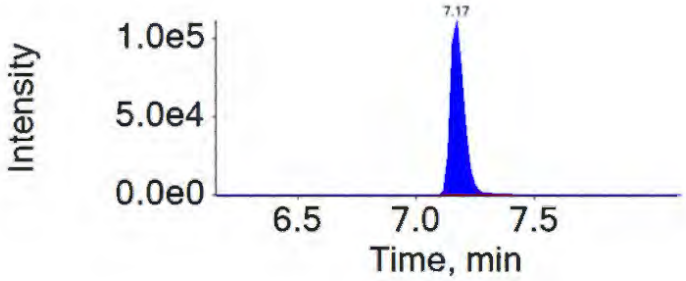
Extraction Standard: E13C6-PFDA

519.0 / 474.0



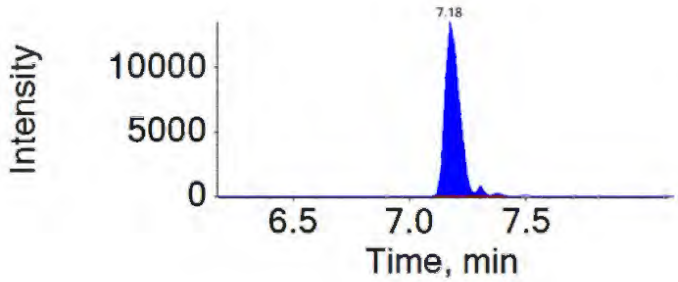
Injection Standard: 13C2-PFDA

515.0 / 470.0



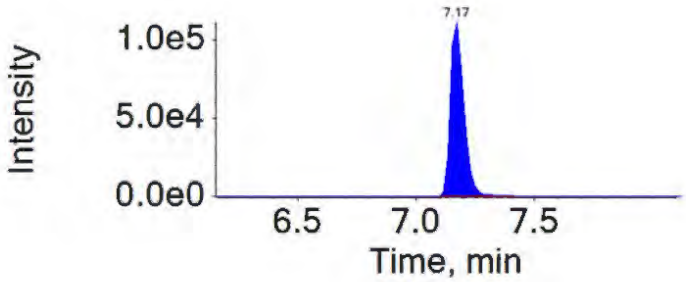
Extraction Standard: E13C2-8:2-FTS

529.0 / 509.0



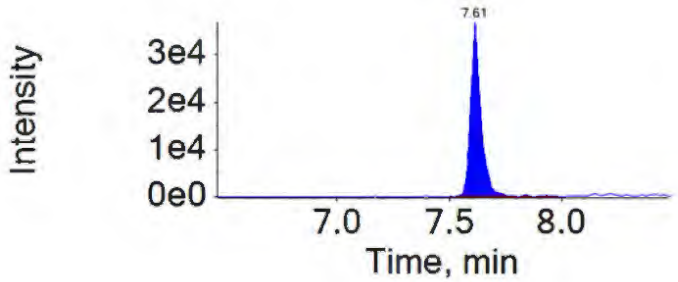
Injection Standard: 13C2-PFDA

515.0 / 470.0



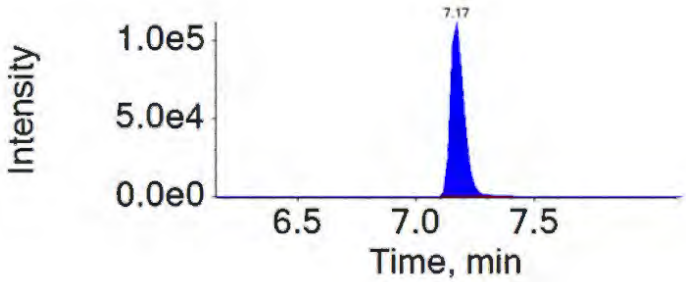
Extraction Standard: Ed7-NMePFOSAE

623.0 / 59.0



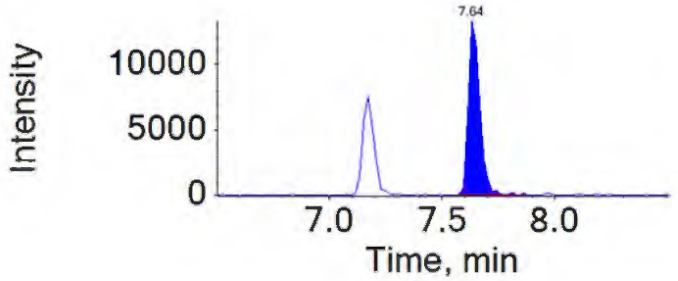
Injection Standard: 13C2-PFDA

515.0 / 470.0



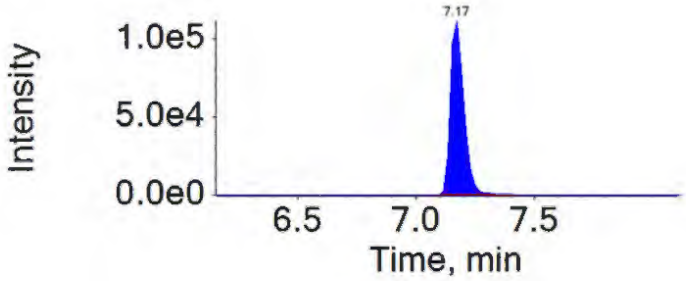
Extraction Standard: Ed3-NMePFOSA

515.0 / 169.0



Injection Standard: 13C2-PFDA

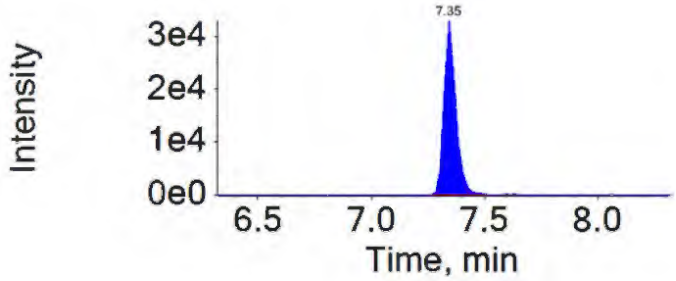
515.0 / 470.0



ICAL Name: 17MAY10MCAL **Result Table:** 17MAY10MCAL 5/11/2017 12:08:01 PM
QMethod Name: PFCMOD - 17JAN28 **Acquisition Method:** PFC-32-16NOV02.dam

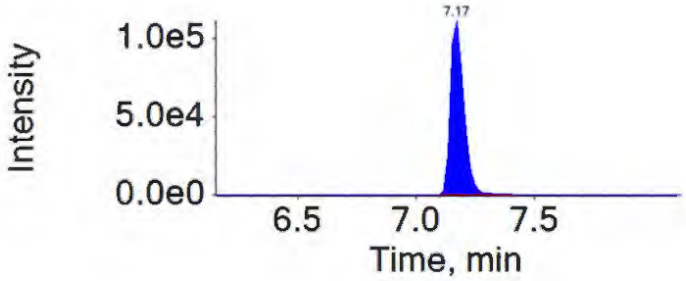
Extraction Standard: Ed3-NMeFOSAA

573.0 /
419.0



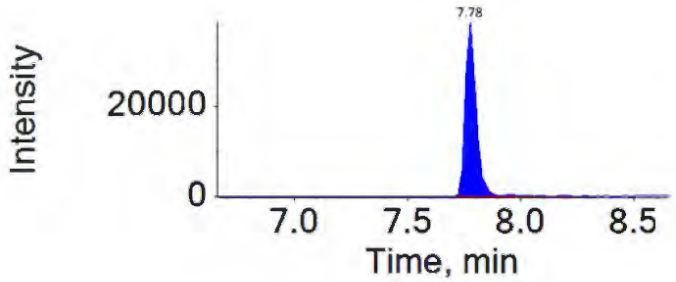
Injection Standard: 13C2-PFDA

515.0 /
470.0



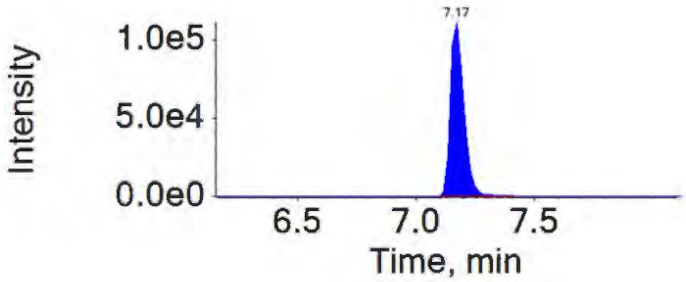
Extraction Standard: Ed9-NEtPFOSAE

639.0 /
59.0



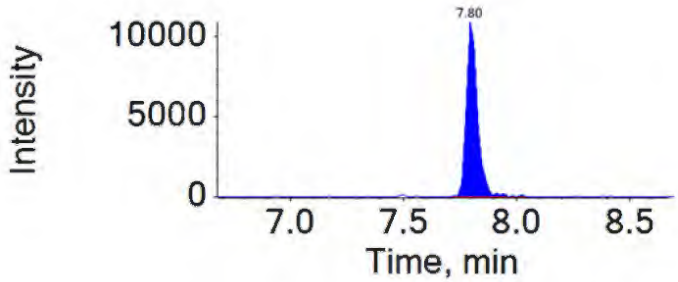
Injection Standard: 13C2-PFDA

515.0 /
470.0



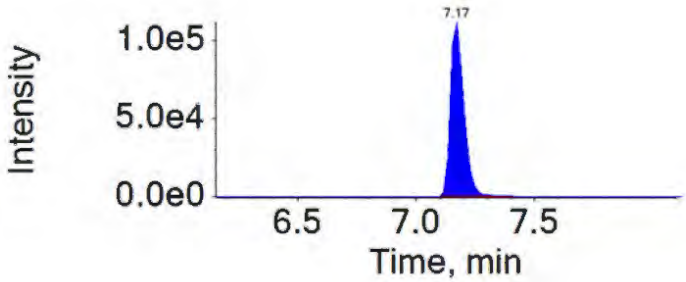
Extraction Standard: Ed5-NEtPFOSA

531.0 /
169.0



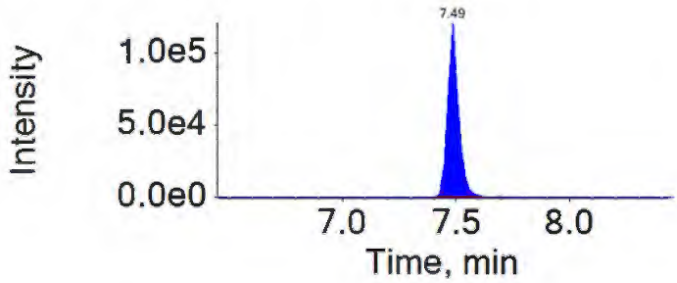
Injection Standard: 13C2-PFDA

515.0 /
470.0



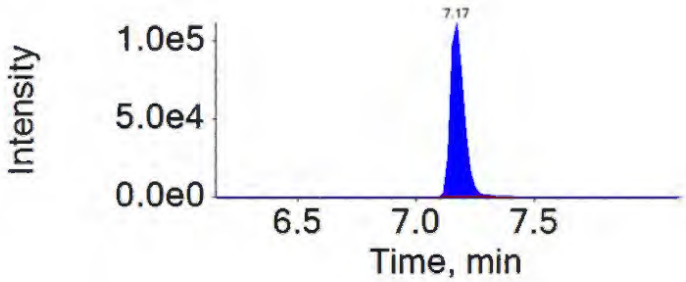
Extraction Standard: E13C7-PFUnDA

570.0 /
525.0



Injection Standard: 13C2-PFDA

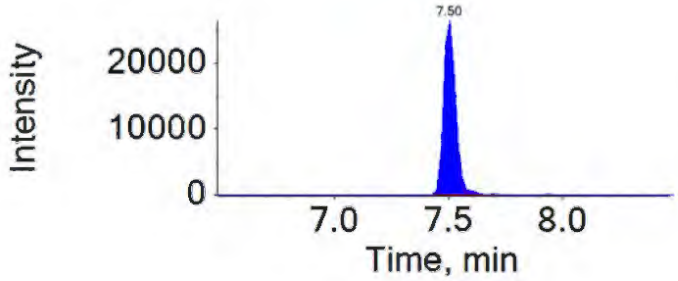
515.0 /
470.0



ICAL Name: 17MAY10MCAL **Result Table:** 17MAY10MCAL 5/11/2017 12:08:01 PM
QMethod Name: PFCMOD - 17JAN28 **Acquisition Method:** PFC-32-16NOV02.dam

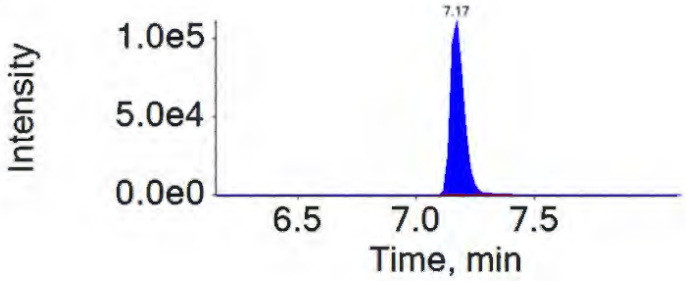
Extraction Standard: Ed5-NEtFOSAA

589.0 / 419.0



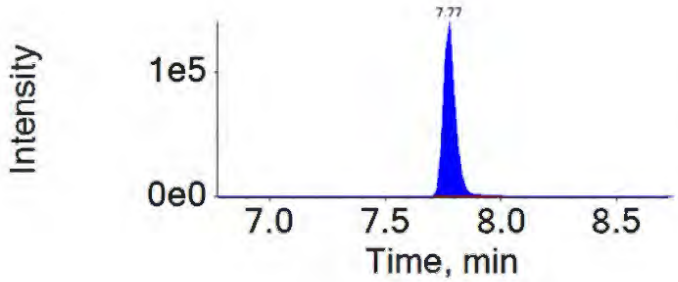
Injection Standard: 13C2-PFDA

515.0 / 470.0



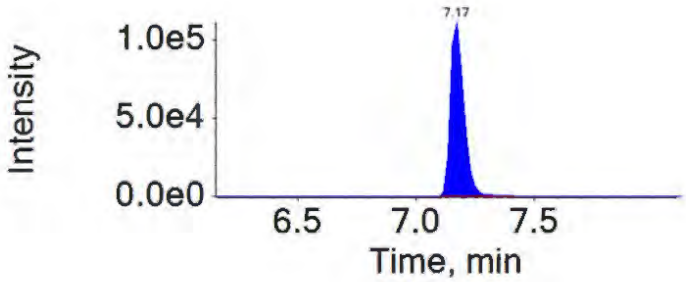
Extraction Standard: E13C2-PFDoDA

615.0 / 570.0



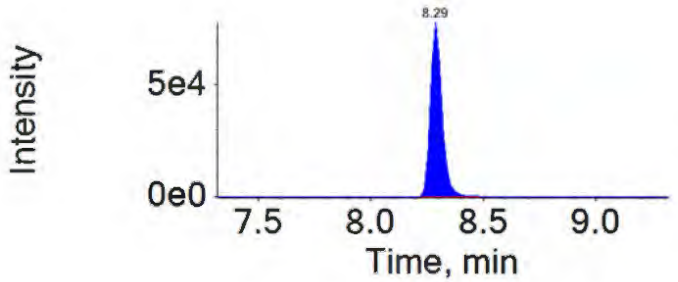
Injection Standard: 13C2-PFDA

515.0 / 470.0



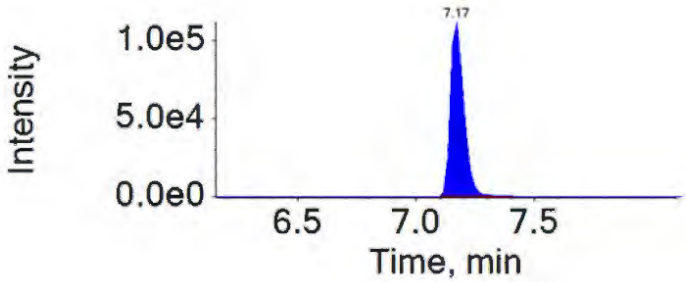
Extraction Standard: E13C2-PFTeDA

715.0 / 670.0



Injection Standard: 13C2-PFDA

515.0 / 470.0



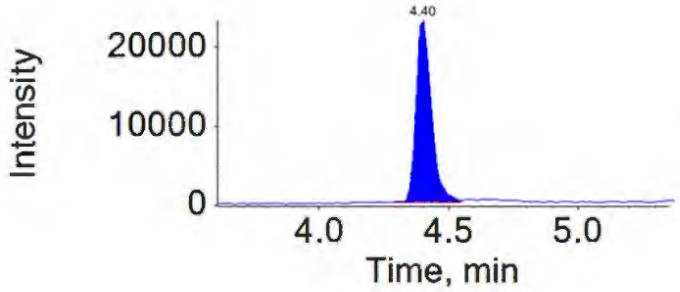
APPROVED
By JWK at 12:34 pm, 5/11/17

REVIEWED
By UMJS at 9:12 am, 5/15/17

ICAL Name: 17MAY10MCAL **Result Table:** 17MAY10MCAL 5/11/2017 12:08:01 PM
QMethod Name: PFCMOD - 17JAN28 **Acquisition Method:** PFC-32-16NOV02.dam

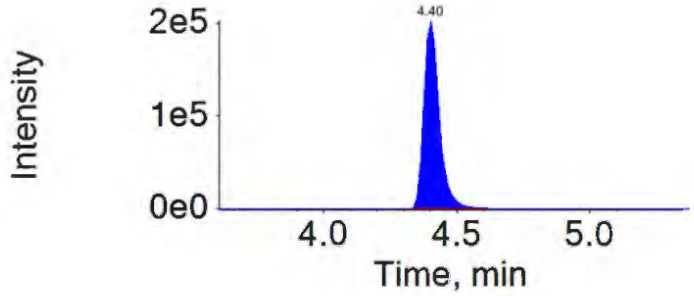
Analyte: PFBA

213.0 / 169.0



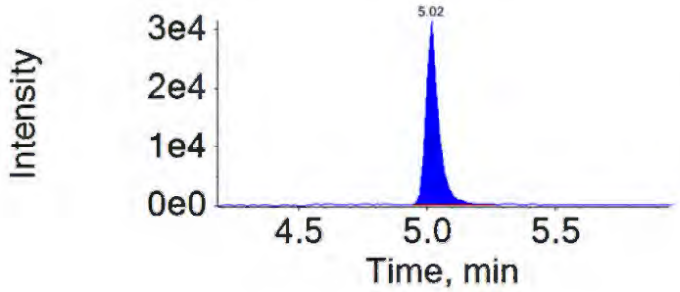
Extraction Standard: 13C4-PFBA

217.0 / 172.0



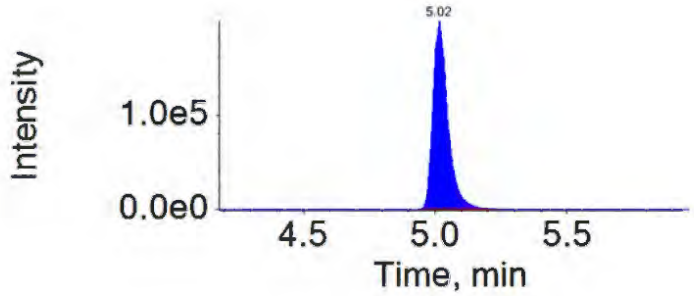
Analyte: PFPeA

263.0 / 219.0



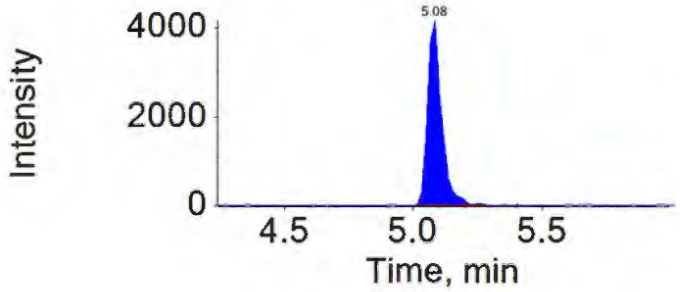
Extraction Standard: 13C5-PFPeA

268.0 / 223.0



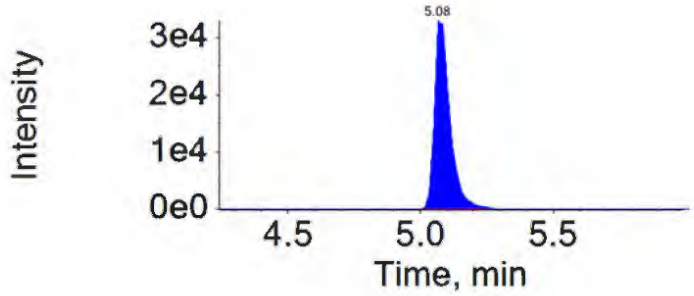
Analyte: PFBS

299.0 / 99.0



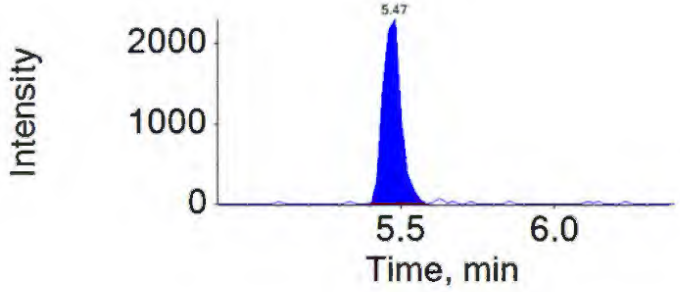
Extraction Standard: 13C3-PFBS

302.0 / 99.0



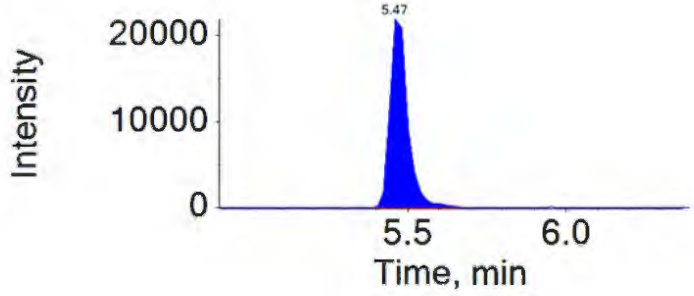
Analyte: 4:2-FTS

327.0 / 307.0



Extraction Standard: 13C2-4:2-FTS

329.0 / 309.0



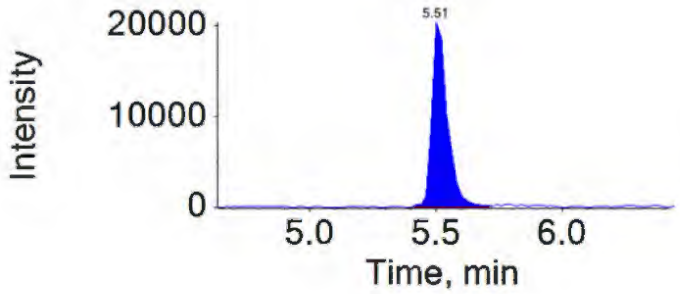
APPROVED
By JWK at 12:34 pm, 5/11/17

REVIEWED
By UMJS at 9:12 am, 5/15/17

ICAL Name: 17MAY10MCAL **Result Table:** 17MAY10MCAL 5/11/2017 12:08:01 PM
QMethod Name: PFCMOD - 17JAN28 **Acquisition Method:** PFC-32-16NOV02.dam

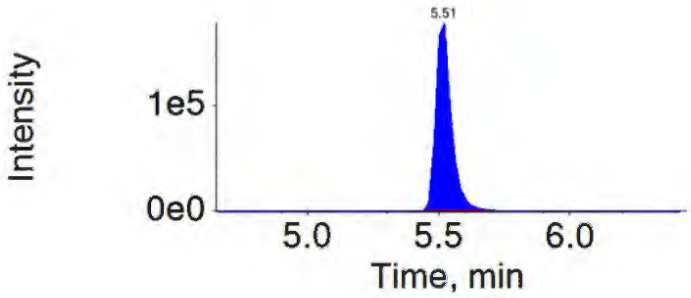
Analyte: PFHxA

313.0 / 269.0



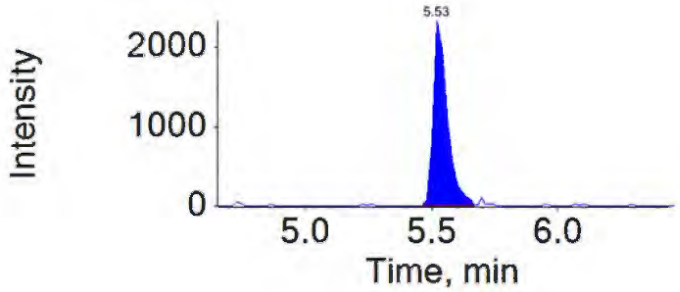
Extraction Standard: 13C5-PFHxA

318.0 / 273.0



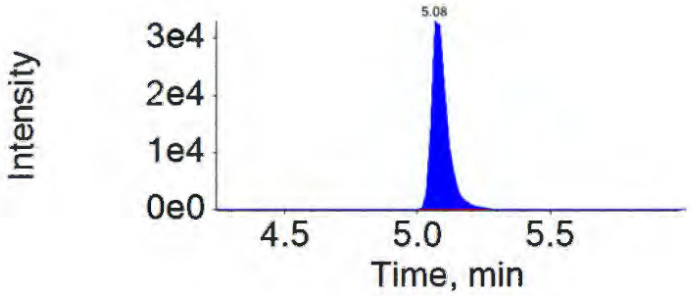
Analyte: PFPeS

349.0 / 99.0



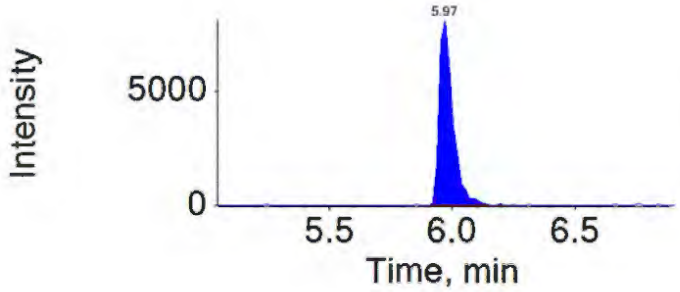
Extraction Standard: 13C3-PFBS

302.0 / 99.0



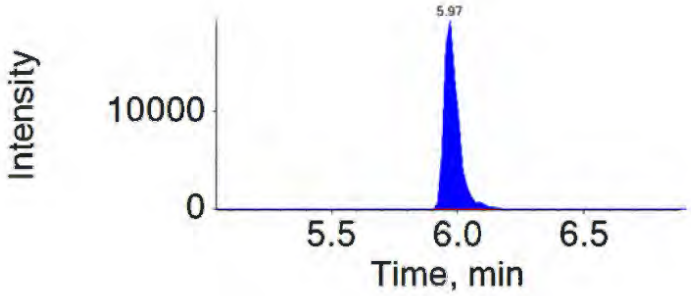
Analyte: PFHxS

399.0 / 80.0



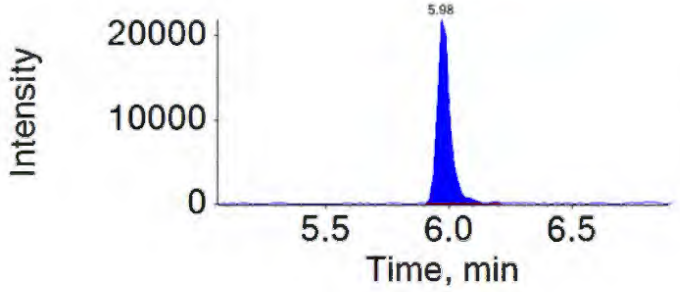
Extraction Standard: 13C3-PFHxS

402.0 / 99.0



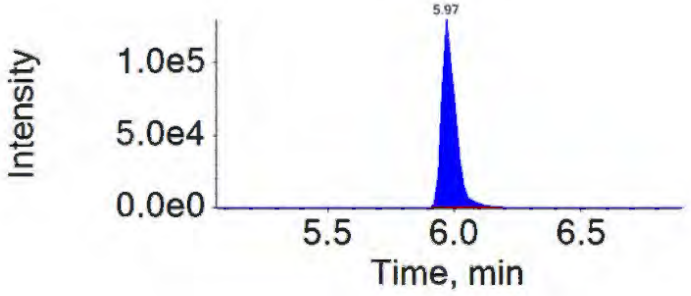
Analyte: PFHpA

363.0 / 319.0



Extraction Standard: 13C4-PFHpA

367.0 / 322.0



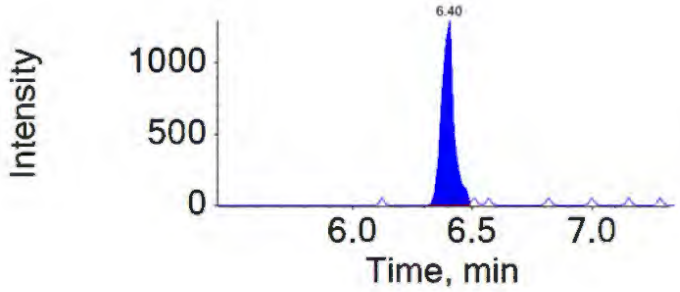
APPROVED
By JWK at 12:34 pm, 5/11/17

REVIEWED
By UMJS at 9:12 am, 5/15/17

ICAL Name: 17MAY10MCAL **Result Table:** 17MAY10MCAL 5/11/2017 12:08:01 PM
QMethod Name: PFCMOD - 17JAN28 **Acquisition Method:** PFC-32-16NOV02.dam

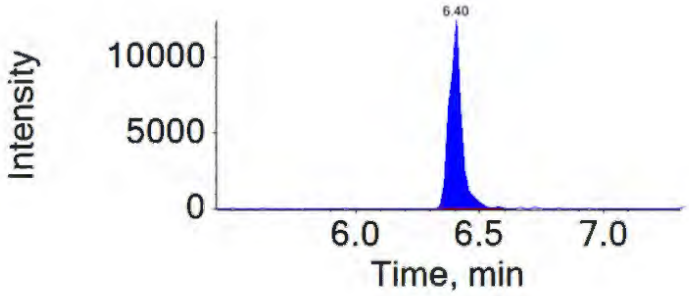
Analyte: 6:2-FTS

427.0 /
407.0



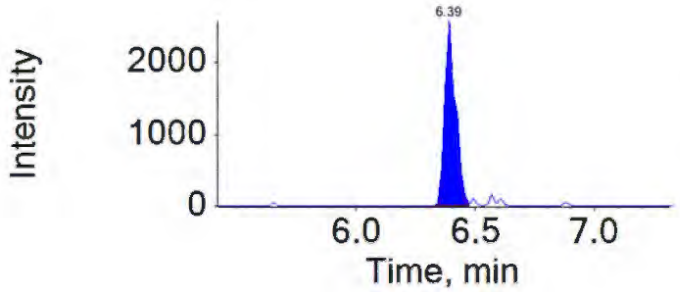
Extraction Standard: 13C2-6:2-FTS

429.0 /
409.0



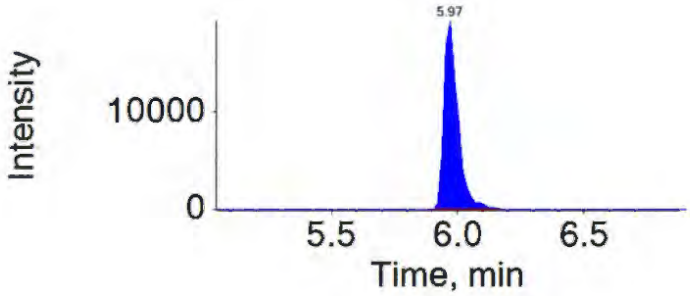
Analyte: PFHpS

449.0 /
99.0



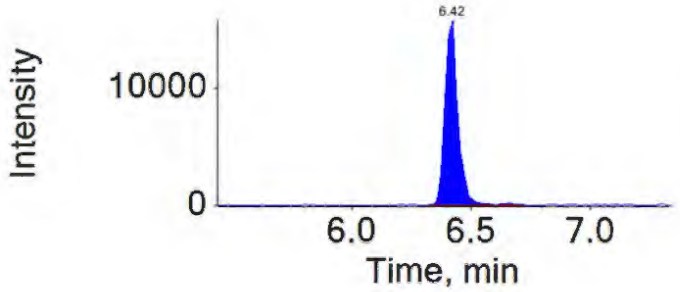
Extraction Standard: 13C3-PFHxS

402.0 /
99.0



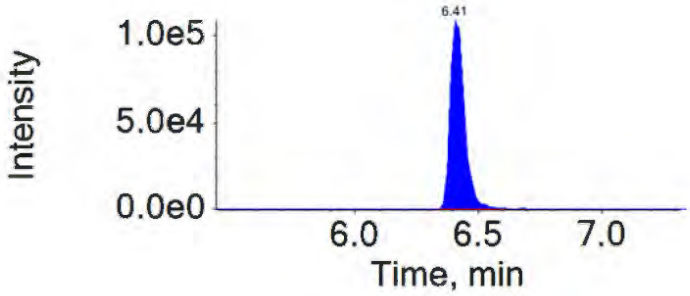
Analyte: PFOA

413.0 /
369.0



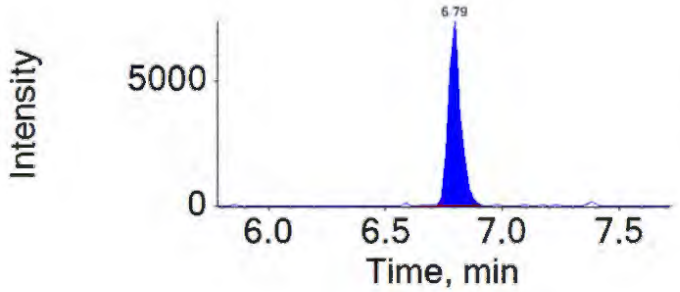
Extraction Standard: 13C8-PFOA

421.0 /
376.0



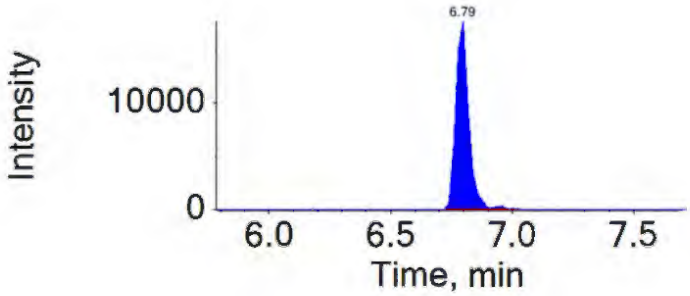
Analyte: PFOS

499.0 /
80.0



Extraction Standard: 13C8-PFOS

507.0 /
99.0



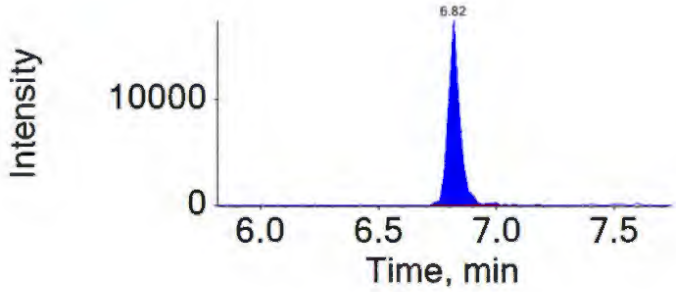
APPROVED
By JWK at 12:34 pm, 5/11/17

REVIEWED
By UMJS at 9:12 am, 5/15/17

ICAL Name: 17MAY10MCAL **Result Table:** 17MAY10MCAL 5/11/2017 12:08:01 PM
QMethod Name: PFCMOD - 17JAN28 **Acquisition Method:** PFC-32-16NOV02.dam

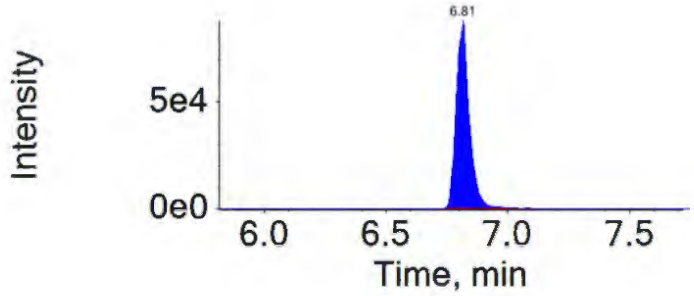
Analyte: PFNA

463.0 /
419.0



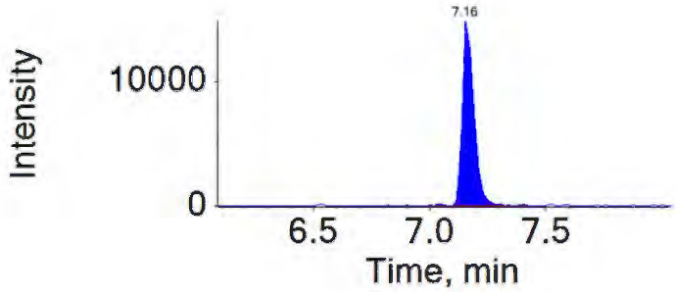
Extraction Standard: 13C9-PFNA

472.0 /
427.0



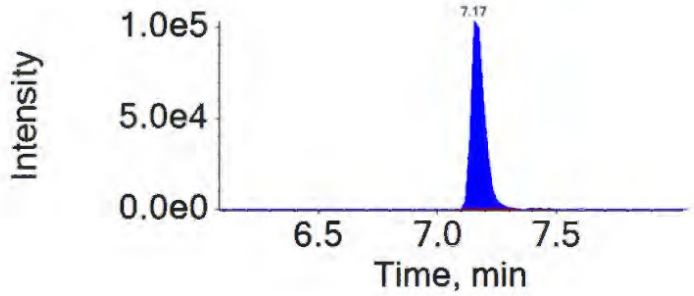
Analyte: PFOSA

498.0 /
78.0



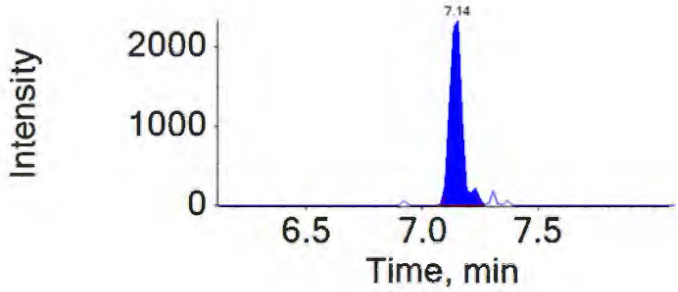
Extraction Standard: 13C8-PFOSA

506.0 /
78.0



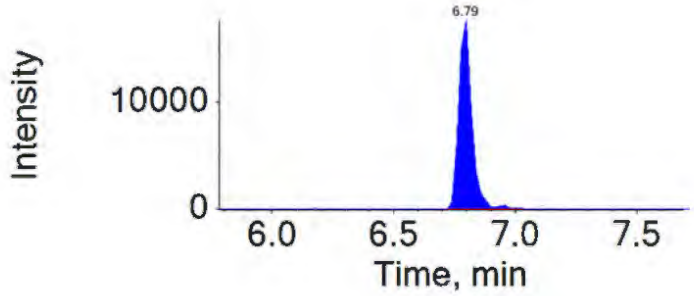
Analyte: PFNS

549.0 /
99.0



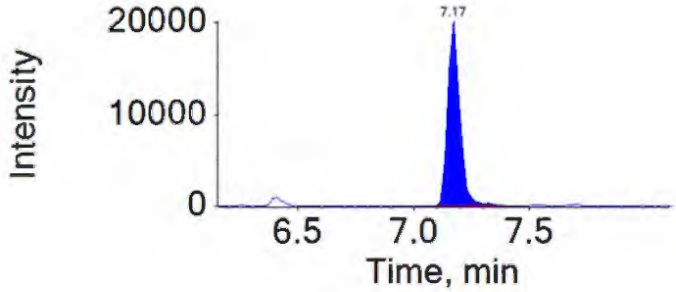
Extraction Standard: 13C8-PFOS

507.0 /
99.0



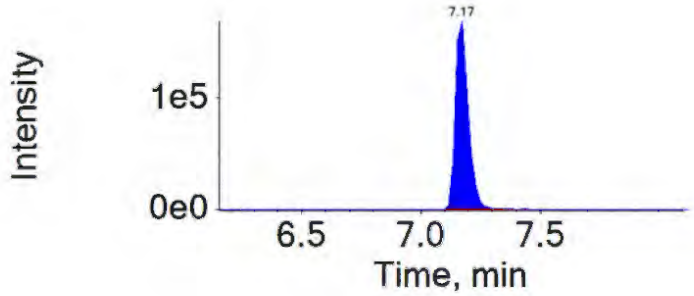
Analyte: PFDA

513.0 /
469.0



Extraction Standard: 13C6-PFDA

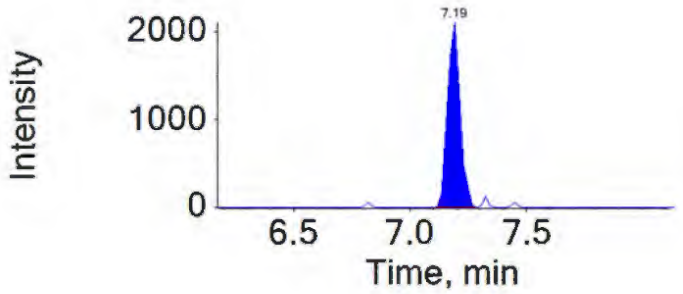
519.0 /
474.0



ICAL Name: 17MAY10MCAL **Result Table:** 17MAY10MCAL 5/11/2017 12:08:01 PM
QMethod Name: PFCMOD - 17JAN28 **Acquisition Method:** PFC-32-16NOV02.dam

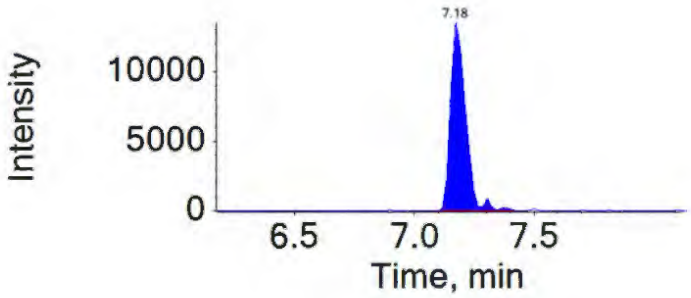
Analyte: 8:2-FTS

527.0 /
507.0



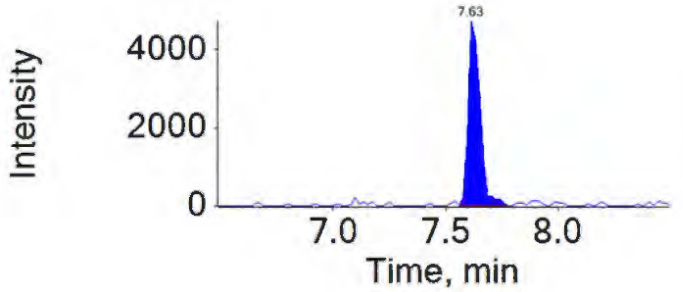
Extraction Standard: 13C2-8:2-FTS

529.0 /
509.0



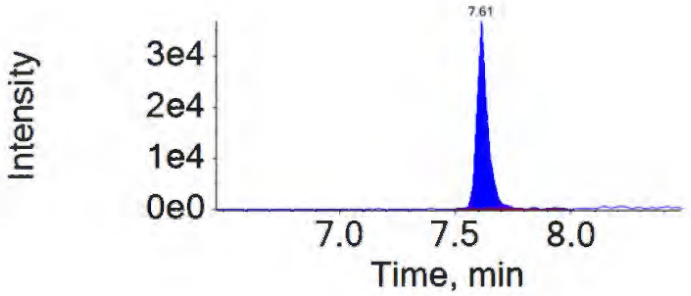
Analyte: NMePFOSAE

616.0 /
59.0



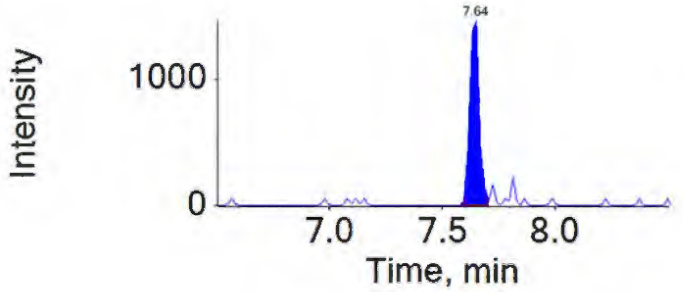
Extraction Standard: d7-NMePFOSAE

623.0 /
59.0



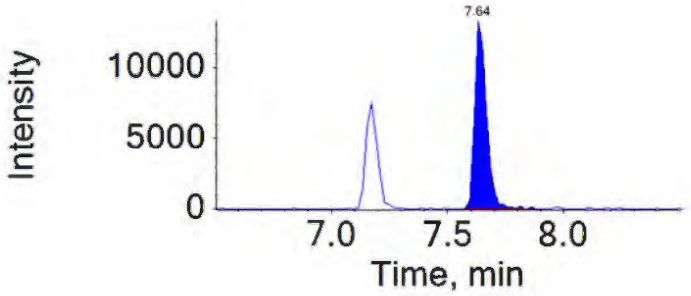
Analyte: NMePFOSA

512.0 /
169.0



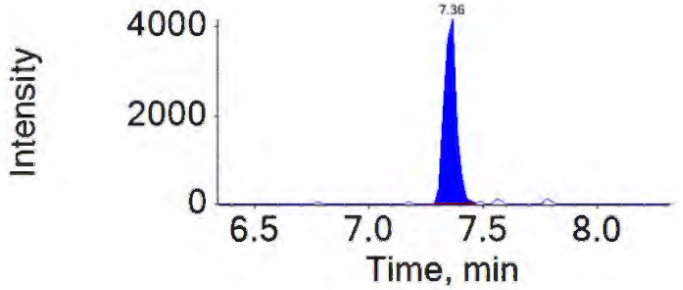
Extraction Standard: d3-NMePFOSA

515.0 /
169.0



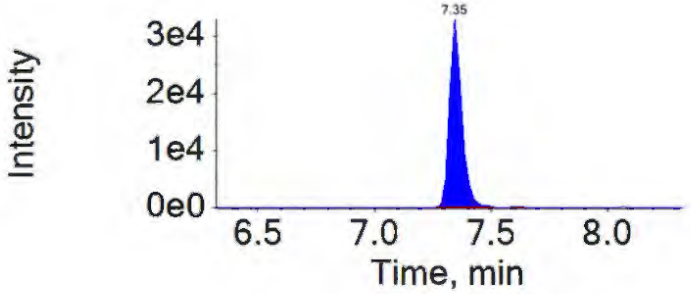
Analyte: NMeFOSAA

570.0 /
419.0



Extraction Standard: d3-NMeFOSAA

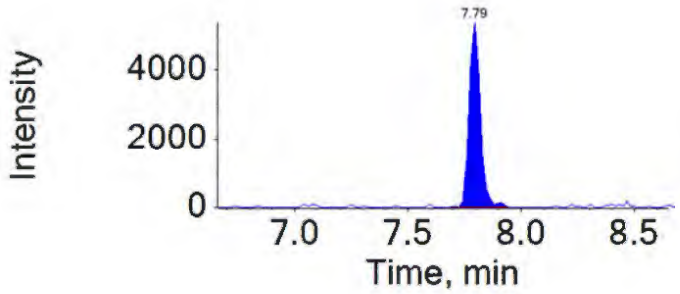
573.0 /
419.0



ICAL Name: 17MAY10MCAL **Result Table:** 17MAY10MCAL 5/11/2017 12:08:01 PM
QMethod Name: PFCMOD - 17JAN28 **Acquisition Method:** PFC-32-16NOV02.dam

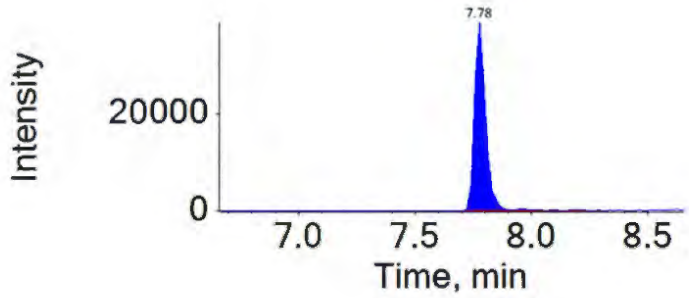
Analyte: NEtPFOSAE

630.0 /
59.0



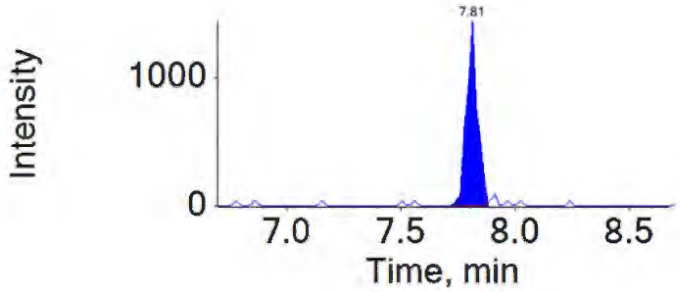
Extraction Standard: d9-NEtPFOSAE

639.0 /
59.0



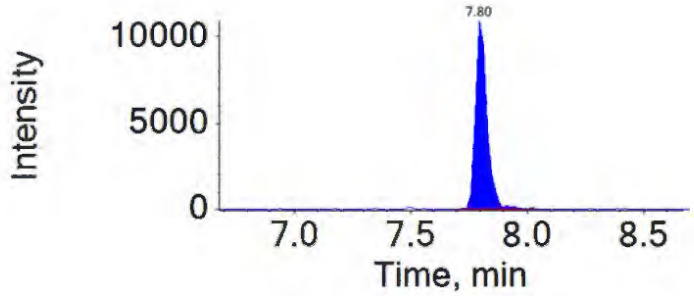
Analyte: NEtPFOSA

526.0 /
169.0



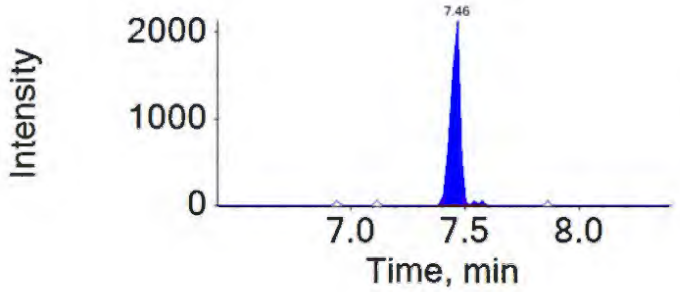
Extraction Standard: d5-NEtPFOSA

531.0 /
169.0



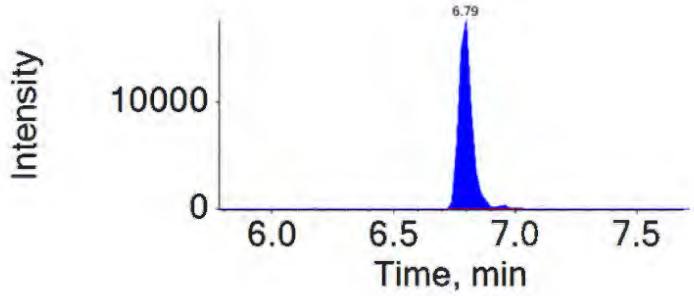
Analyte: PFDS

599.0 /
99.0



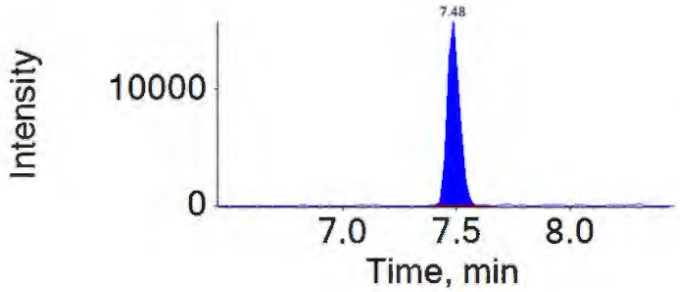
Extraction Standard: 13C8-PFOS

507.0 /
99.0



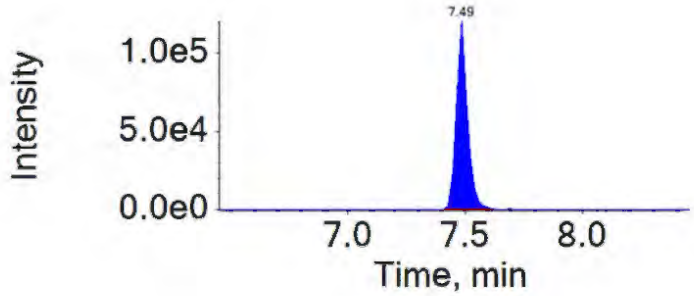
Analyte: PFUnDA

563.0 /
519.0



Extraction Standard: 13C7-PFUnDA

570.0 /
525.0



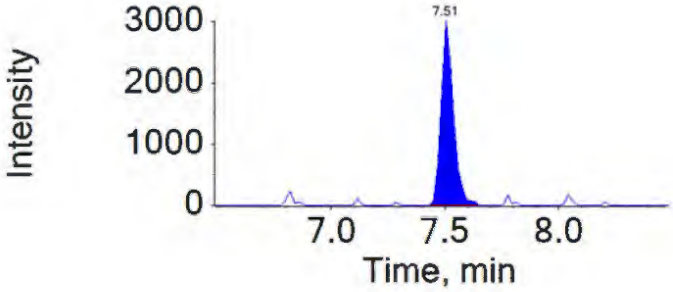
APPROVED
By JWK at 12:34 pm, 5/11/17

REVIEWED
By UMJS at 9:12 am, 5/15/17

ICAL Name: 17MAY10MCAL **Result Table:** 17MAY10MCAL 5/11/2017 12:08:01 PM
QMethod Name: PFCMOD - 17JAN28 **Acquisition Method:** PFC-32-16NOV02.dam

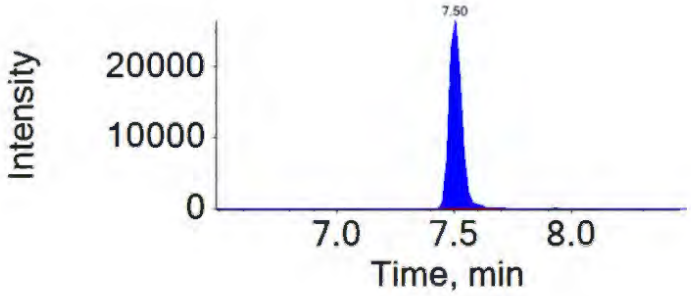
Analyte: NEtFOSAA

584.0 / 419.0



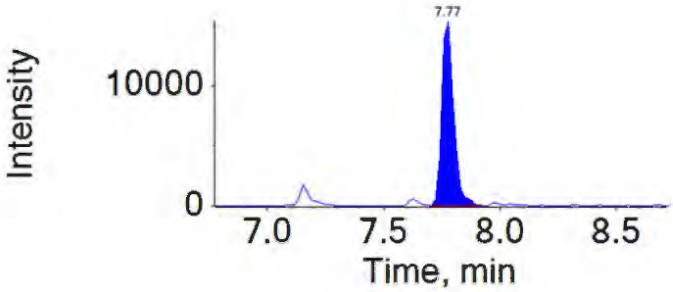
Extraction Standard: d5-NEtFOSAA

589.0 / 419.0



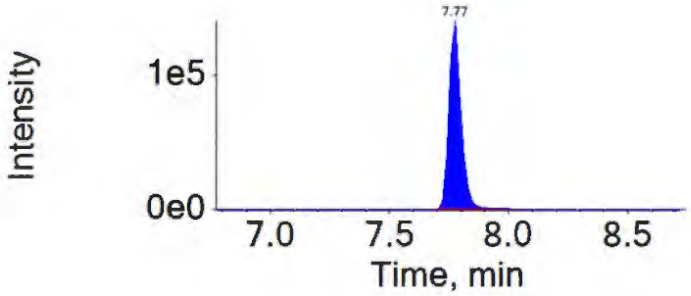
Analyte: PFDoDA

613.0 / 569.0



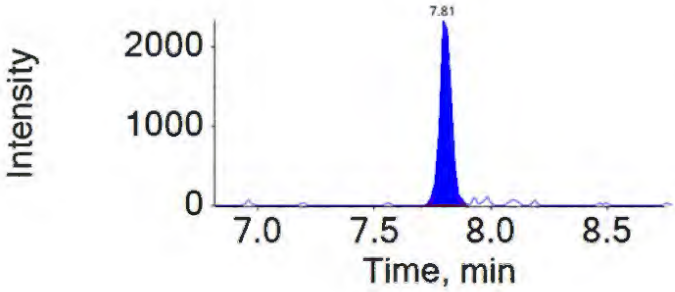
Extraction Standard: 13C2-PFDoDA

615.0 / 570.0



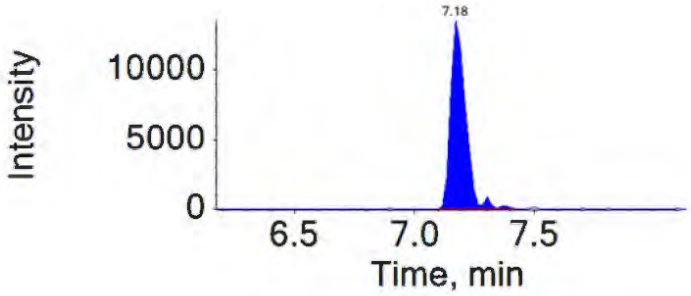
Analyte: 10:2-FTS

627.0 / 607.0



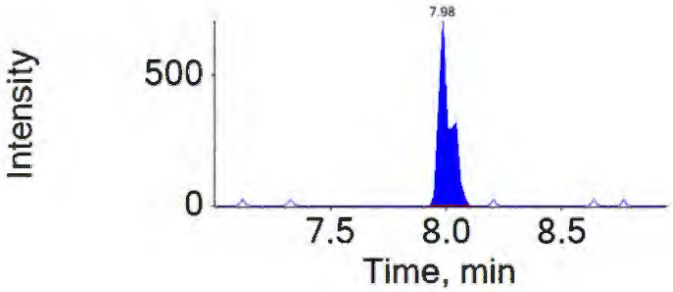
Extraction Standard: 13C2-8:2-FTS

529.0 / 509.0



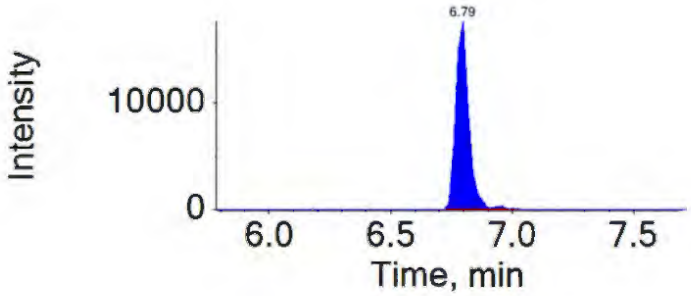
Analyte: PFDoS

699.0 / 99.0



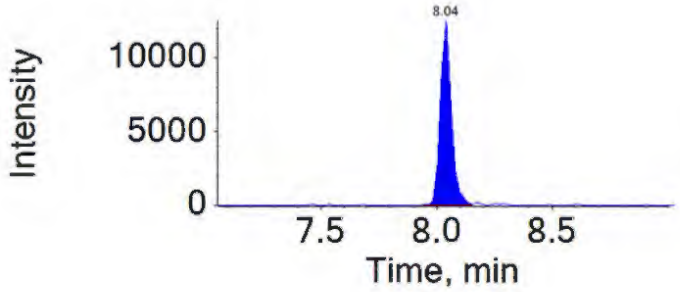
Extraction Standard: 13C8-PFOS

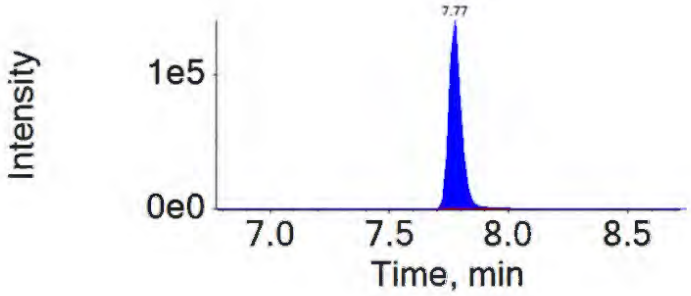
507.0 / 99.0



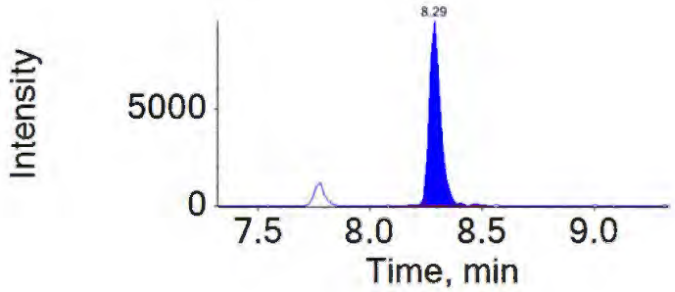
ICAL Name: 17MAY10MCAL **Result Table:** 17MAY10MCAL 5/11/2017 12:08:01 PM
QMethod Name: PFCMOD - 17JAN28 **Acquisition Method:** PFC-32-16NOV02.dam

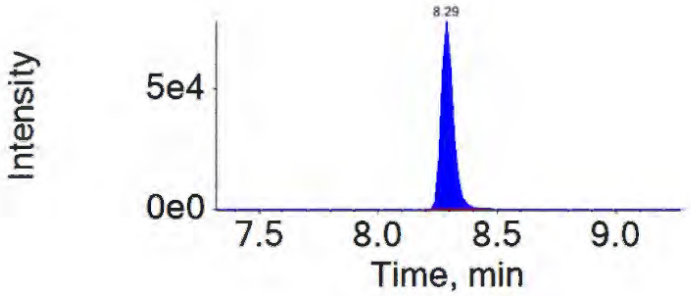
Analyte: PFTrDA	Extraction Standard: 13C2-PFDoDA
663.0 / 619.0	615.0 / 570.0



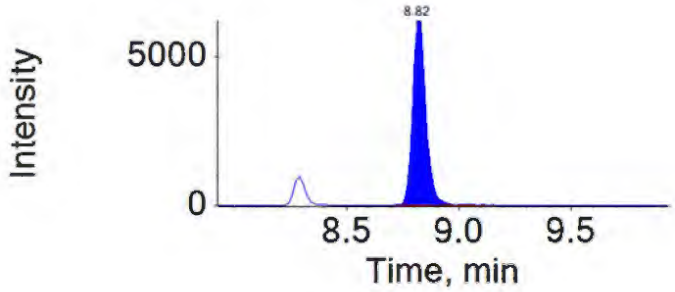


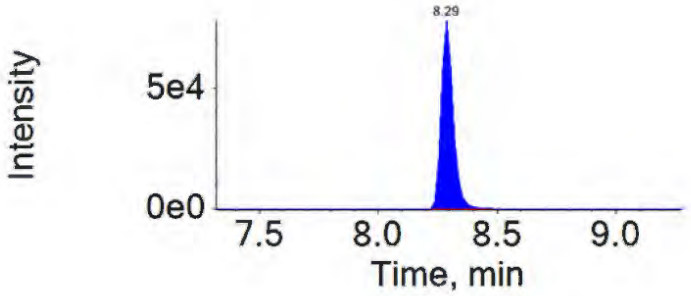
Analyte: PFTeDA	Extraction Standard: 13C2-PFTeDA
713.0 / 669.0	715.0 / 670.0



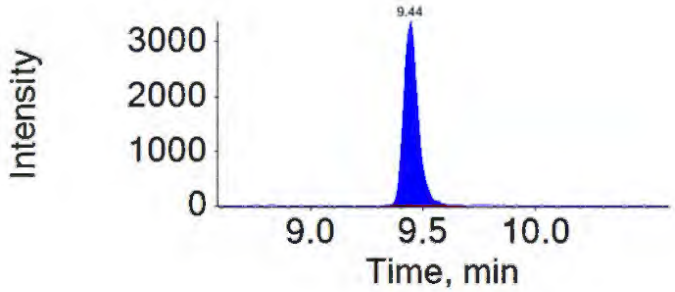


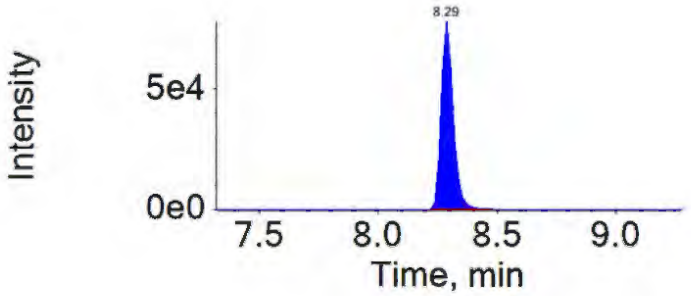
Analyte: PFHxDA	Extraction Standard: 13C2-PFTeDA
813.0 / 769.0	715.0 / 670.0





Analyte: PFODA	Extraction Standard: 13C2-PFTeDA
913.0 / 869.0	715.0 / 670.0





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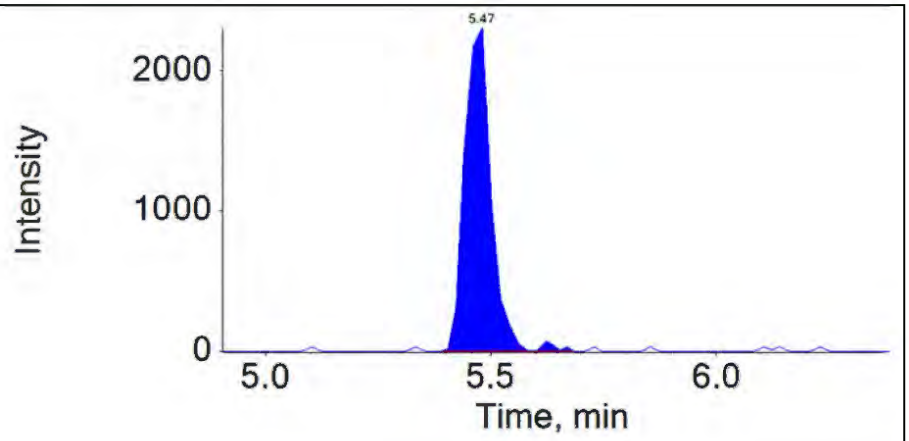
Auto Integrations prior to Manual Integration

Print Date: 05/11/2017 12:22 PM
Template: MQ-OrigInteg-16NOV21.docx

Results Table Name: 17MAY10MCAL
Results Table Date: 5/11/2017 12:08:01 PM

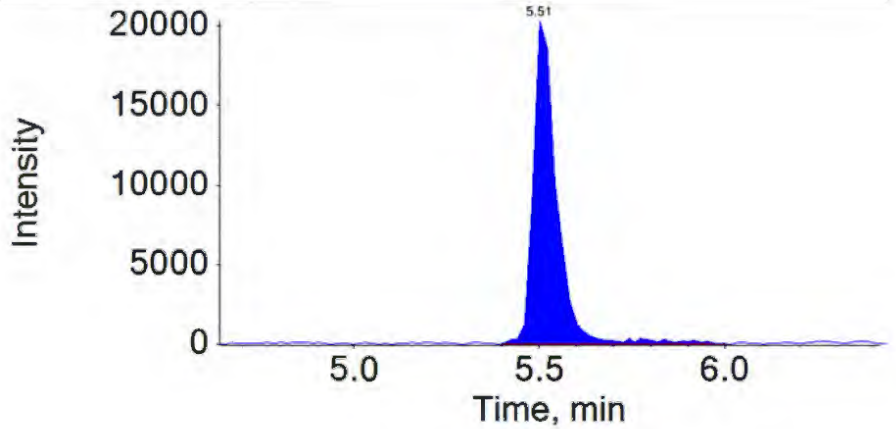
Acquisition Method: PFC-32-16NOV02.dam
QMethod File: PFCMOD - 17JAN28

Component Name:
4:2-FTS
RT (min.):
5.47
Peak Area:
9658.4
Mass Range:
327.0 / 307.0
File Name:
17MAY10MCAL-31.wiff
Sample Name:
CAL2



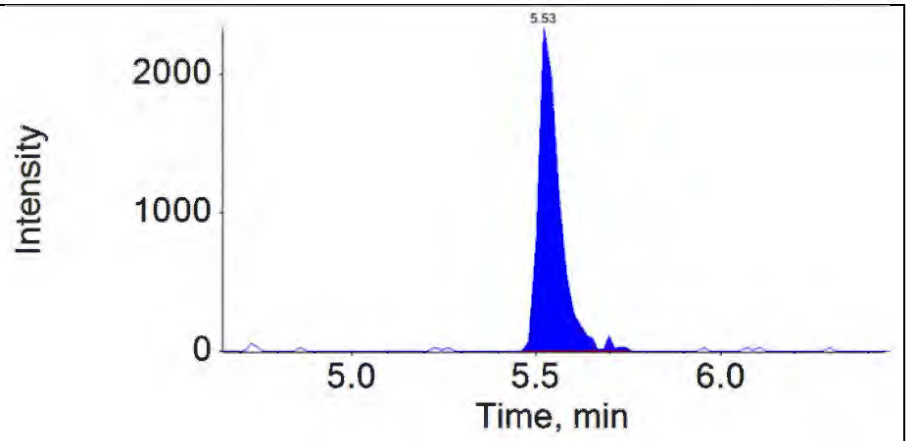
Integration Comment: incorrect integration

Component Name:
PFHxA
RT (min.):
5.51
Peak Area:
90917.0
Mass Range:
313.0 / 269.0
File Name:
17MAY10MCAL-31.wiff
Sample Name:
CAL2



Integration Comment: incorrect integration

Component Name:
PFPeS
RT (min.):
5.53
Peak Area:
9245.0
Mass Range:
349.0 / 99.0
File Name:
17MAY10MCAL-31.wiff
Sample Name:
CAL2



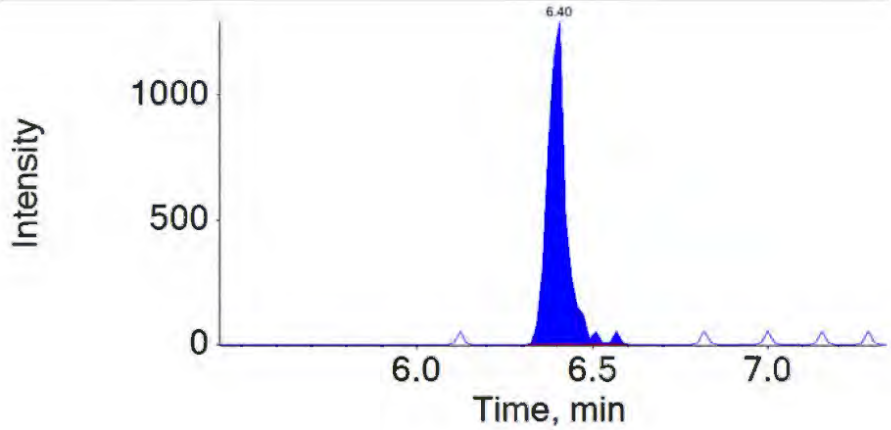
Integration Comment: incorrect integration

APPROVED
By JWK at 12:34 pm, 5/11/17

REVIEWED
By UMJS at 9:12 am, 5/15/17

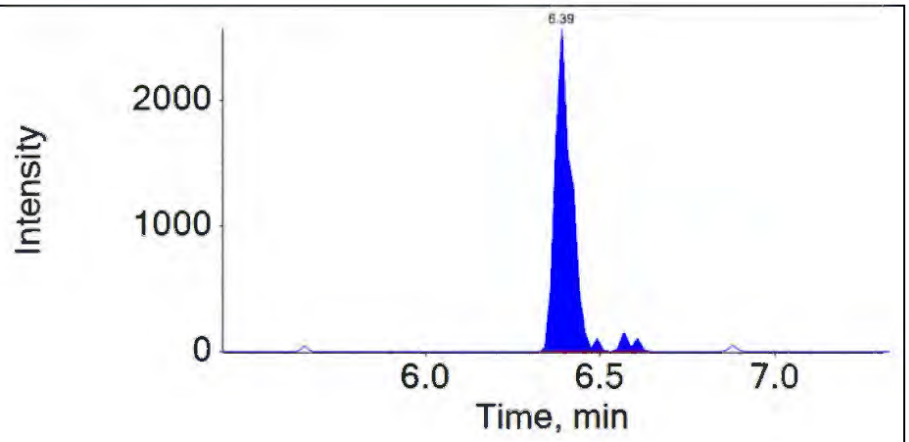
Results Table Name: 17MAY10MCAL
Results Table Date: 5/11/2017 12:08:01 PM
Acquisition Method: PFC-32-16NOV02.dam
QMethod File: PFCMOD - 17JAN28

Component Name:
6:2-FTS
RT (min.):
6.40
Peak Area:
4789.9
Mass Range:
427.0 / 407.0
File Name:
17MAY10MCAL-31.wiff
Sample Name:
CAL2



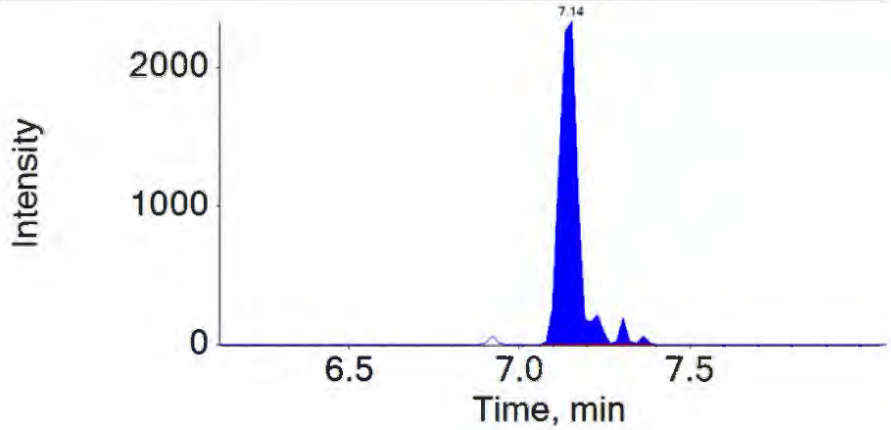
Integration Comment: incorrect integration

Component Name:
PFHpS
RT (min.):
6.39
Peak Area:
8778.0
Mass Range:
449.0 / 99.0
File Name:
17MAY10MCAL-31.wiff
Sample Name:
CAL2



Integration Comment: incorrect integration

Component Name:
PFNS
RT (min.):
7.14
Peak Area:
9253.6
Mass Range:
549.0 / 99.0
File Name:
17MAY10MCAL-31.wiff
Sample Name:
CAL2



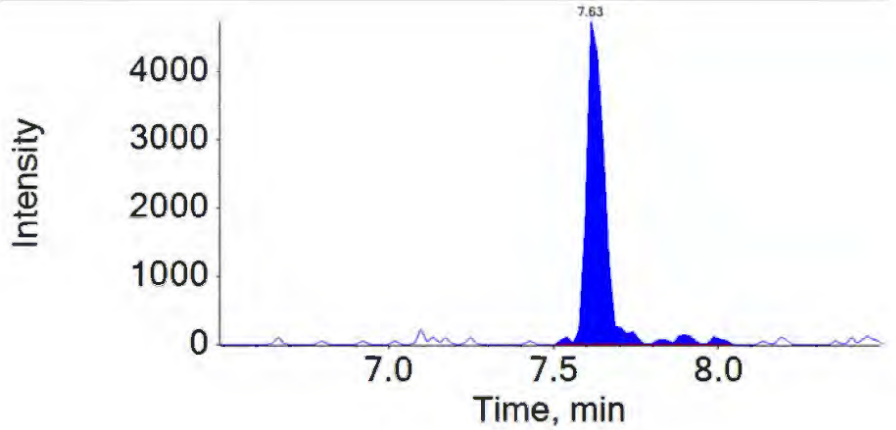
Integration Comment: incorrect integration

APPROVED
By JWK at 12:34 pm, 5/11/17

REVIEWED
By UMJS at 9:12 am, 5/15/17

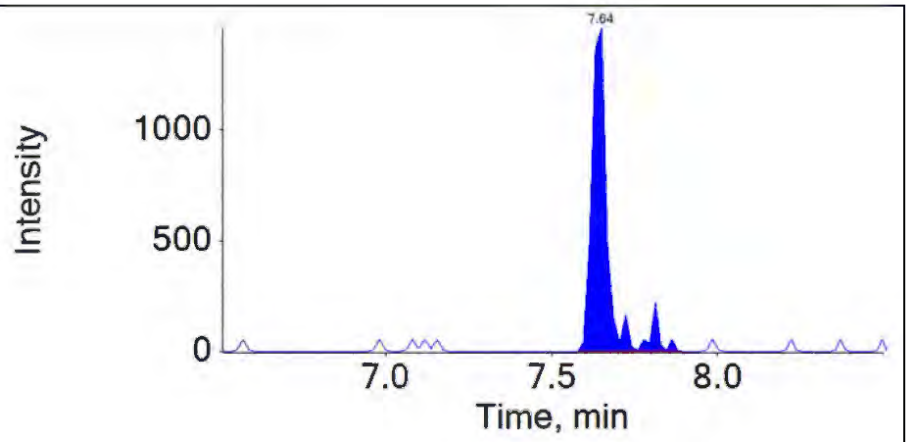
Results Table Name: 17MAY10MCAL
Results Table Date: 5/11/2017 12:08:01 PM
Acquisition Method: PFC-32-16NOV02.dam
QMethod File: PFCMOD - 17JAN28

Component Name:
NMePFOSAE
RT (min.):
7.63
Peak Area:
18781.5
Mass Range:
616.0 / 59.0
File Name:
17MAY10MCAL-31.wiff
Sample Name:
CAL2



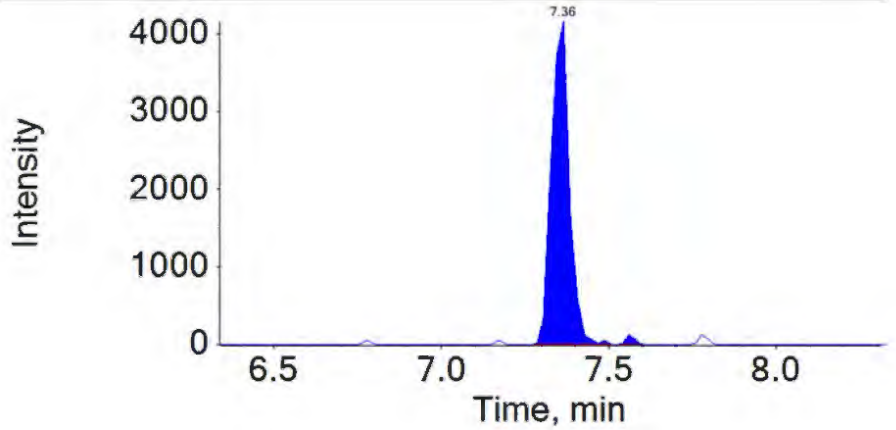
Integration Comment: incorrect integration

Component Name:
NMePFOSA
RT (min.):
7.64
Peak Area:
5016.9
Mass Range:
512.0 / 169.0
File Name:
17MAY10MCAL-31.wiff
Sample Name:
CAL2



Integration Comment: incorrect integration

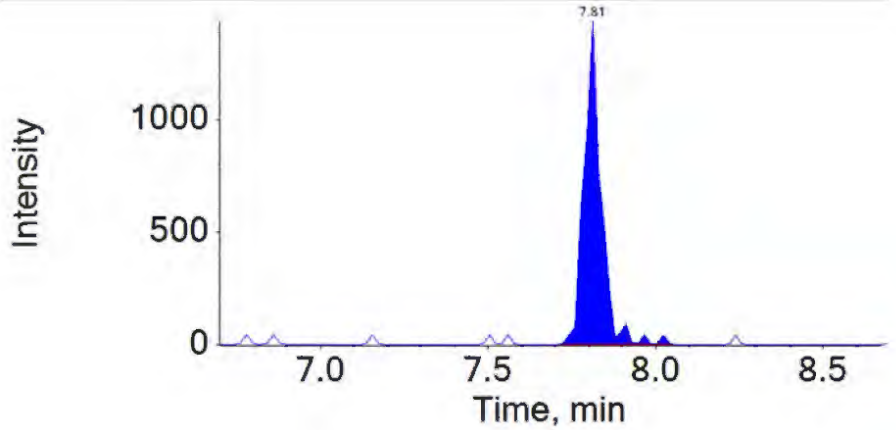
Component Name:
NMeFOSAA
RT (min.):
7.36
Peak Area:
16013.0
Mass Range:
570.0 / 419.0
File Name:
17MAY10MCAL-31.wiff
Sample Name:
CAL2



Integration Comment: incorrect integration

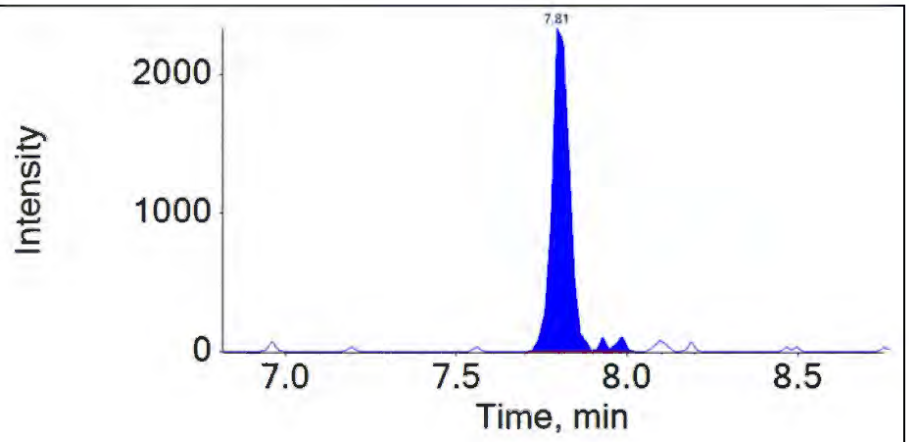
Results Table Name: 17MAY10MCAL
Results Table Date: 5/11/2017 12:08:01 PM
Acquisition Method: PFC-32-16NOV02.dam
QMethod File: PFCMOD - 17JAN28

Component Name:
NEtPFOSA
RT (min.):
7.81
Peak Area:
5108.3
Mass Range:
526.0 / 169.0
File Name:
17MAY10MCAL-31.wiff
Sample Name:
CAL2



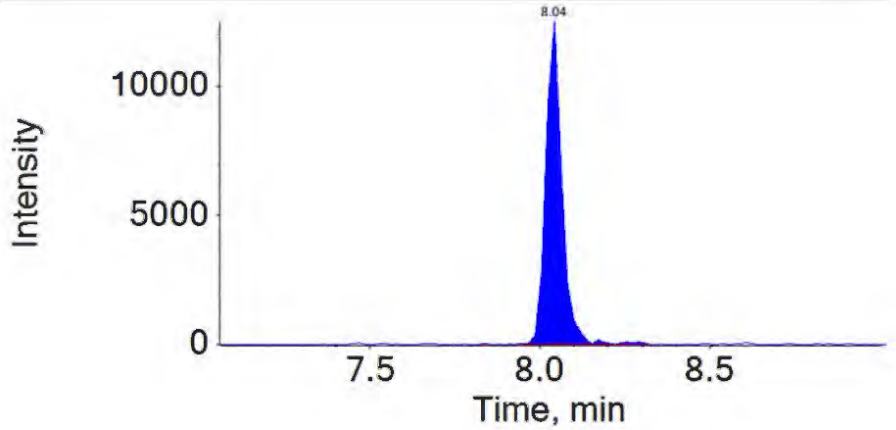
Integration Comment: incorrect integration

Component Name:
10:2-FTS
RT (min.):
7.81
Peak Area:
8666.6
Mass Range:
627.0 / 607.0
File Name:
17MAY10MCAL-31.wiff
Sample Name:
CAL2



Integration Comment: incorrect integration

Component Name:
PFTrDA
RT (min.):
8.04
Peak Area:
42077.4
Mass Range:
663.0 / 619.0
File Name:
17MAY10MCAL-31.wiff
Sample Name:
CAL2



Integration Comment: incorrect integration

APPROVED
By JWK at 12:34 pm, 5/11/17

REVIEWED
By UMJS at 9:12 am, 5/15/17

Results Table Name: 17MAY10MCAL
Results Table Date: 5/11/2017 12:08:01 PM

Acquisition Method: PFC-32-16NOV02.dam
QMethod File: PFCMOD - 17JAN28

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LC-MS/MS Analysis Report

Printed: 5/11/2017 12:15:00 PM
Template: MQ-Sample-16Nov21.docx

ICAL Name: 17MAY10MCAL
QMethod Name: PFCMOD - 17JAN28
Result Table: 17MAY10MCAL 5/11/2017 12:08:01 PM
Acquisition Method: PFC-32-16NOV02.dam

Sample Name:	CAL3			**Data File:**		17MAY10MCAL-32.wiff
Sample ID:	CALPFC1712533D			**Acquis Date:**		2017-05-11T05:51:06
Sample Type:	Standard			**Instrument:**		LM24960
Vial Position:	5			**Acquis Method:**		PFC-32-16NOV02.dam
Injection Vol:	5.00			**Result Table:**		17MAY10MCAL
QMethod File:	PFCMOD - 17JAN28			**ICAL Name:**		17MAY10MCAL
Batch Number:	MODICAL			**Operator:**		Not calculated
Sample Wt.:	1.00000			**Dilution Factor:**		1.00
Sample Vol.:	1.000			**Prep Factor:**		1.000

Injection Standard Peak Table

Injection Standard Name	Inj Std Conc	Injection Std Peak Area	ICAL Injection Standard AVG	Injection Std %Diff	Injection Std %Diff Limit	Injection Std %Diff OOS
I13C3-PFBA	1.0	709867.2	669117.3	6.1	50.0	
I13C2-PFOA	1.0	386909.3	342184.6	13.1	50.0	
I13C4-PFOS	1.0	74874.4	70131.6	6.8	50.0	
I13C2-PFDA	1.0	424678.3	384098.7	10.6	50.0	

Extraction Standard Peak Table

Extraction Standard Name	Ext Std Area	Inj Std Name	Inj Std Area	Area Ratio	AVG Area Ratio	Ext Std Conc	Ext Std Result	Ext Std %REC	Ext Std %REC Limit	Ext Std OOS
E13C4-PFBA	807325.5	13C3-PFBA	709867.2	1.137	1.150	1.000	0.989		-	
E13C5-PFPeA	768966.1	13C3-PFBA	709867.2	1.083	1.073	1.000	1.009		-	
E13C3-PFBS	130928.4	13C3-PFBA	709867.2	0.184	0.194	1.000	0.949		-	
E13C2-4:2-FTS	80474.0	13C2-PFOA	386909.3	0.208	0.236	1.000	0.880		-	
E13C5-PFHxA	770911.2	13C2-PFOA	386909.3	1.993	2.026	1.000	0.984		-	
E13C3-PFHxS	75886.9	13C2-PFOA	386909.3	0.196	0.206	1.000	0.953		-	
E13C4-PFHpA	456311.0	13C2-PFOA	386909.3	1.179	1.285	1.000	0.918		-	
E13C2-6:2-FTS	44976.1	13C2-PFOA	386909.3	0.116	0.128	1.000	0.907		-	
E13C8-PFOA	443036.8	13C2-PFOA	386909.3	1.145	1.163	1.000	0.984		-	
E13C8-PFOS	62397.3	13C4-PFOS	74874.4	0.833	0.865	1.000	0.963		-	
E13C9-PFNA	316838.7	13C4-PFOS	74874.4	4.232	4.422	1.000	0.957		-	
E13C8-PFOSA	407054.3	13C2-PFDA	424678.3	0.959	0.936	1.000	1.024		-	
E13C6-PFDA	627905.1	13C2-PFDA	424678.3	1.479	1.424	1.000	1.039		-	
E13C2-8:2-FTS	67507.2	13C2-PFDA	424678.3	0.159	0.155	1.000	1.023		-	
Ed7-NMePFOSAE	116590.7	13C2-PFDA	424678.3	0.275	0.299	1.000	0.919		-	
Ed3-NMePFOSA	44611.2	13C2-PFDA	424678.3	0.105	0.120	1.000	0.873		-	
Ed3-NMeFOSAA	142053.1	13C2-PFDA	424678.3	0.335	0.343	1.000	0.975		-	
Ed9-NEtPFOSAE	141148.6	13C2-PFDA	424678.3	0.332	0.333	1.000	0.999		-	
Ed5-NEtPFOSA	40459.4	13C2-PFDA	424678.3	0.095	0.095	1.000	1.005		-	
E13C7-PFUnDA	333230.9	13C2-PFDA	424678.3	0.785	0.953	1.000	0.824		-	
Ed5-NEtFOSAA	93010.6	13C2-PFDA	424678.3	0.219	0.249	1.000	0.881		-	
E13C2-PFDoDA	527941.3	13C2-PFDA	424678.3	1.243	1.154	1.000	1.077		-	
E13C2-PFTeDA	265583.2	13C2-PFDA	424678.3	0.625	0.651	1.000	0.960		-	

APPROVED
By JWK at 12:34 pm, 5/11/17

REVIEWED
By UMJS at 9:12 am, 5/15/17

ICAL Name: 17MAY10MCAL **Result Table:** 17MAY10MCAL 5/11/2017 12:08:01 PM
QMethod Name: PFCMOD - 17JAN28 **Acquisition Method:** PFC-32-16NOV02.dam

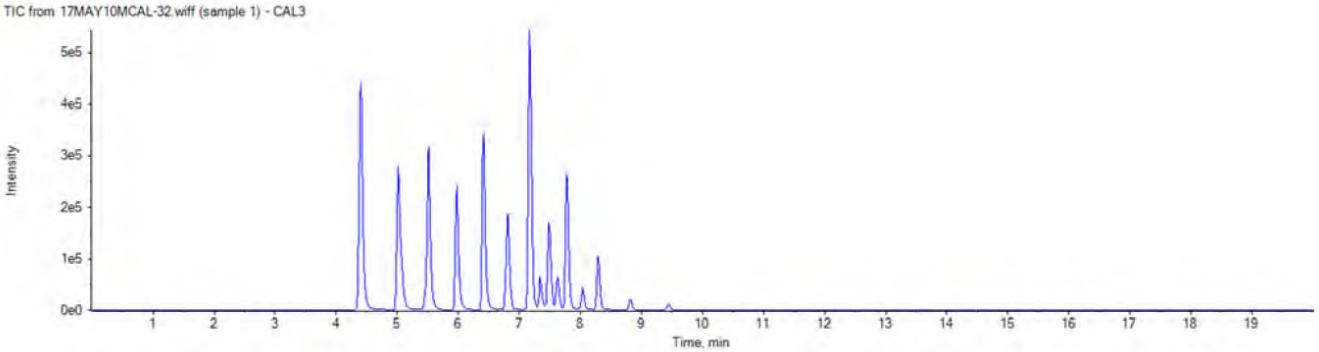
Analyte Quantitation Peak Table

Sample Name: CAL3 **Instrument Name:** LM24960 **File Name:** 17MAY10MCAL-32.wiff

Sample Wt	Sample Vol	Dilution Factor	PrepFactor
1.00000	1.000	1.00	1.000

Analytet Name	RT	RRT	Analyte Area Response	Int Typ	ES Name	ES RT	ES Area Response	Area Ratio	Sample Result (ng/g)
PFBA	4.40	1.000	305574.0	A	13C4-PFBA	4.40	807325.5	0.379	2.081
PFPeA	5.02	1.000	310828.7	A	13C5-PFPeA	5.02	768966.1	0.404	1.958
PFBS	5.08	1.000	48089.7	A	13C3-PFBS	5.08	130928.4	0.367	1.738
4:2-FTS	5.46	1.000	31960.0	A	13C2-4:2-FTS	5.46	80474.0	0.397	1.813
PFHxA	5.51	1.000	273118.2	A	13C5-PFHxA	5.51	770911.2	0.354	1.875
PFPeS	5.53	1.090	32077.7	A	13C3-PFBS	5.08	130928.4	0.245	2.189
PFHxS	5.97	1.000	94217.2	A	13C3-PFHxS	5.97	75886.9	1.242	1.741
PFHpA	5.97	1.000	232051.7	A	13C4-PFHpA	5.98	456311.0	0.509	2.048
6:2-FTS	6.40	1.000	15382.8	A	13C2-6:2-FTS	6.39	44976.1	0.342	1.884
PFHpS	6.40	1.070	26770.3	A	13C3-PFHxS	5.97	75886.9	0.353	1.850
PFOA	6.41	1.000	180470.9	A	13C8-PFOA	6.42	443036.8	0.407	1.856
PFOS	6.79	1.000	97999.0	A	13C8-PFOS	6.79	62397.3	1.571	2.184
PFNA	6.82	1.000	158758.2	A	13C9-PFNA	6.82	316838.7	0.501	2.046
PFOSA	7.17	1.000	186462.0	A	13C8-PFOSA	7.17	407054.3	0.458	2.093
PFNS	7.14	1.050	27941.1	A	13C8-PFOS	6.79	62397.3	0.448	2.053
PFDA	7.17	1.000	221742.3	A	13C6-PFDA	7.17	627905.1	0.353	1.927
8:2-FTS	7.18	1.000	21867.6	M	13C2-8:2-FTS	7.18	67507.2	0.324	1.584
NMePFOSAE	7.63	1.000	54490.4	A	d7-NMePFOSAE	7.62	116590.7	0.467	1.864
NMePFOSA	7.65	1.000	21999.0	A	d3-NMePFOSA	7.64	44611.2	0.493	2.301
NMeFOSAA	7.34	1.000	59740.9	A	d3-NMeFOSAA	7.34	142053.1	0.421	1.976
NEtPFOSAE	7.79	1.000	57408.7	A	d9-NEtPFOSAE	7.78	141148.6	0.407	1.864
NEtPFOSA	7.81	1.000	15355.2	A	d5-NEtPFOSA	7.81	40459.4	0.380	1.883
PFDS	7.45	1.100	20969.1	A	13C8-PFOS	6.79	62397.3	0.336	1.706
PFUnDA	7.49	1.000	182457.4	A	13C7-PFUnDA	7.48	333230.9	0.548	2.133
NEtFOSAA	7.51	1.000	39234.5	A	d5-NEtFOSAA	7.50	93010.6	0.422	2.064
PFDoDA	7.77	1.000	181555.8	A	13C2-PFDoDA	7.78	527941.3	0.344	1.840
10:2-FTS	7.80	1.090	27595.7	A	13C2-8:2-FTS	7.18	67507.2	0.409	1.933
PFDoS	7.99	1.180	8698.1	A	13C8-PFOS	6.79	62397.3	0.139	1.964
PFTrDA	8.04	1.030	132228.3	A	13C2-PFDoDA	7.78	527941.3	0.251	1.860
PFTeDA	8.29	1.000	107853.7	A	13C2-PFTeDA	8.29	265583.2	0.406	2.072
PFHxDA	8.82	1.060	83055.9	A	13C2-PFTeDA	8.29	265583.2	0.313	1.974
PFODA	9.44	1.140	49283.8	A	13C2-PFTeDA	8.29	265583.2	0.186	1.697

Total Ion Chromatogram

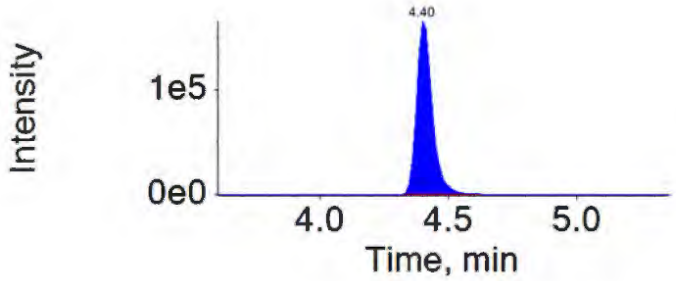


ICAL Name: 17MAY10MCAL
QMethod Name: PFCMOD - 17JAN28

Result Table: 17MAY10MCAL 5/11/2017 12:08:01 PM
Acquisition Method: PFC-32-16NOV02.dam

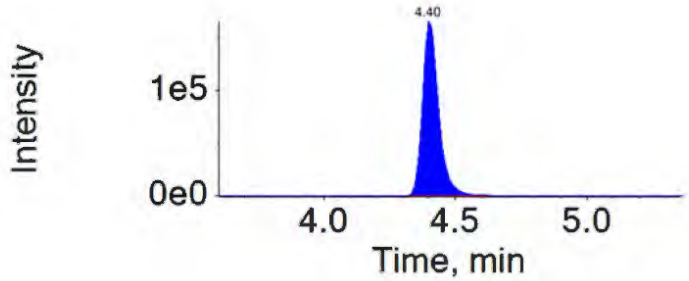
Injection Standard: I13C3-PFBA

216.0 / 172.0



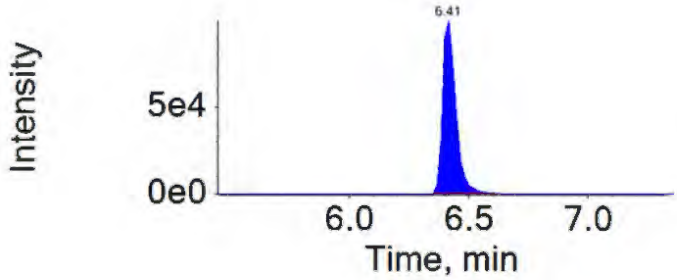
Injection Standard: 13C3-PFBA

216.0 / 172.0



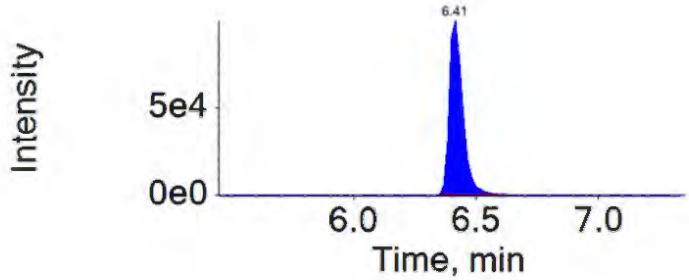
Injection Standard: I13C2-PFOA

415.0 / 370.0



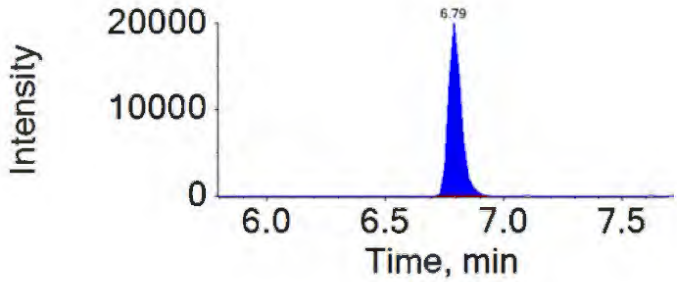
Injection Standard: 13C2-PFOA

415.0 / 370.0



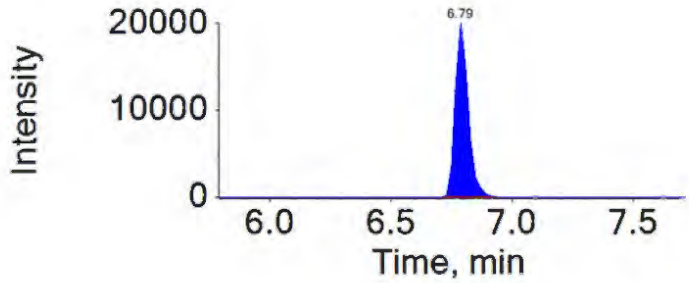
Injection Standard: I13C4-PFOS

503.0 / 99.0



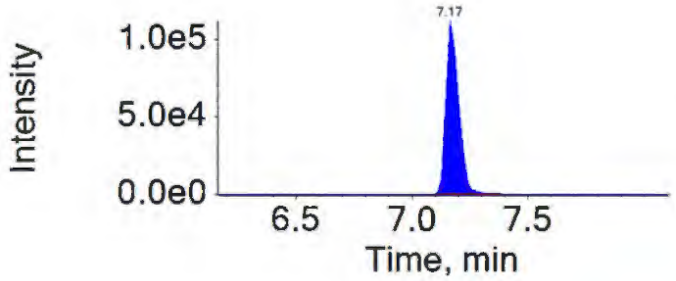
Injection Standard: 13C4-PFOS

503.0 / 99.0



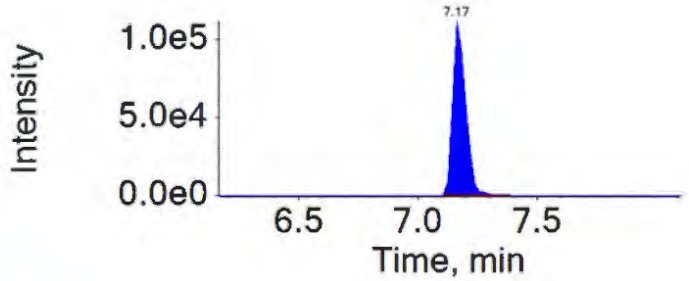
Injection Standard: I13C2-PFDA

515.0 / 470.0



Injection Standard: 13C2-PFDA

515.0 / 470.0



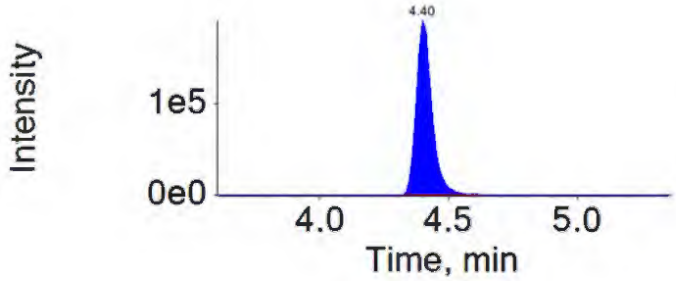
APPROVED
By JWK at 12:34 pm, 5/11/17

REVIEWED
By UMJS at 9:12 am, 5/15/17

ICAL Name: 17MAY10MCAL **Result Table:** 17MAY10MCAL 5/11/2017 12:08:01 PM
QMethod Name: PFCMOD - 17JAN28 **Acquisition Method:** PFC-32-16NOV02.dam

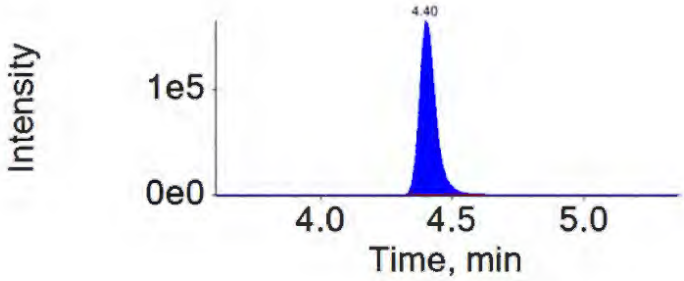
Extraction Standard: E13C4-PFBA

217.0 /
172.0



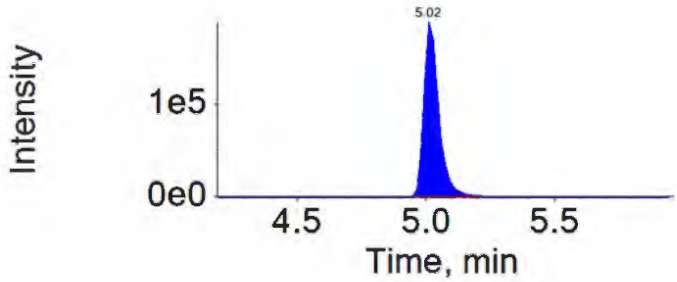
Injection Standard: 13C3-PFBA

216.0 /
172.0



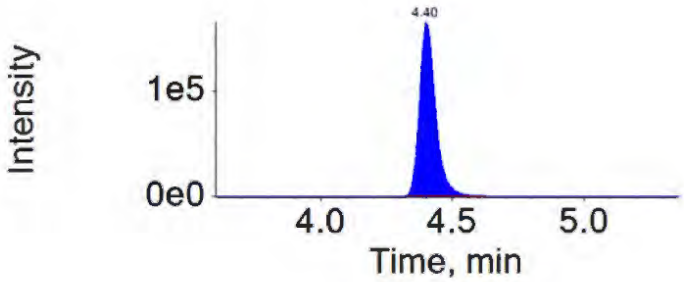
Extraction Standard: E13C5-PFPeA

268.0 /
223.0



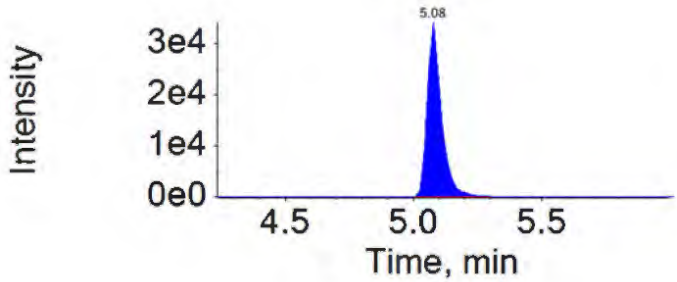
Injection Standard: 13C3-PFBA

216.0 /
172.0



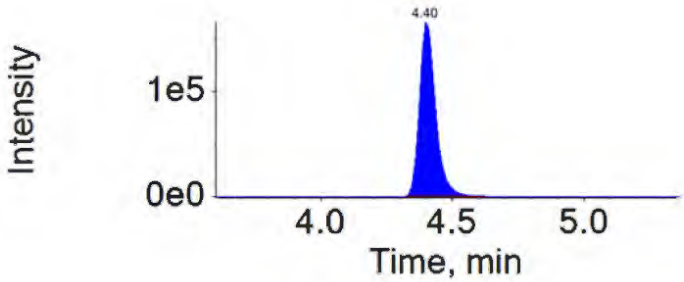
Extraction Standard: E13C3-PFBS

302.0 /
99.0



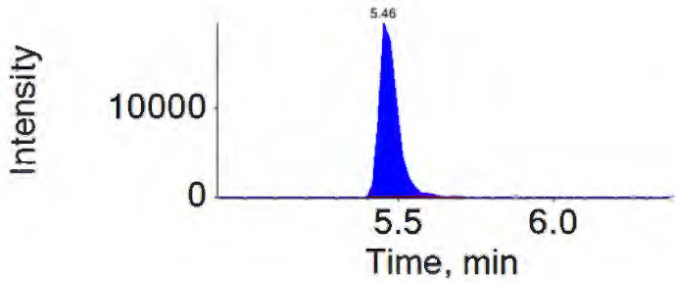
Injection Standard: 13C3-PFBA

216.0 /
172.0



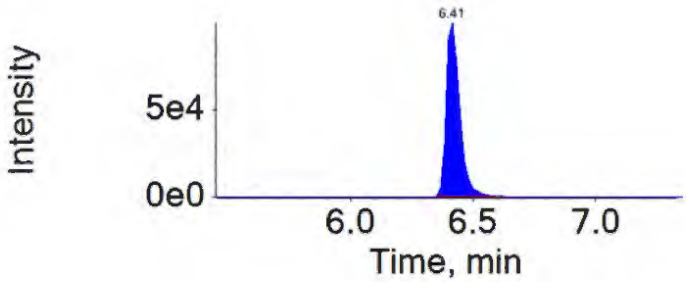
Extraction Standard: E13C2-4:2-FTS

329.0 /
309.0



Injection Standard: 13C2-PFOA

415.0 /
370.0



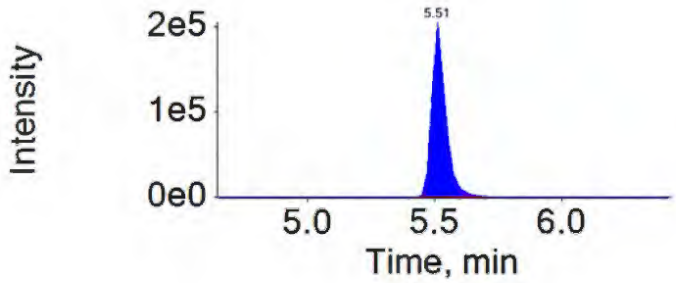
APPROVED
By JWK at 12:34 pm, 5/11/17

REVIEWED
By UMJS at 9:12 am, 5/15/17

ICAL Name: 17MAY10MCAL **Result Table:** 17MAY10MCAL 5/11/2017 12:08:01 PM
QMethod Name: PFCMOD - 17JAN28 **Acquisition Method:** PFC-32-16NOV02.dam

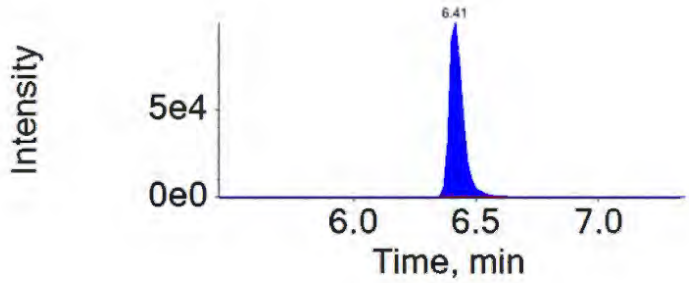
Extraction Standard: E13C5-PFHxA

318.0 / 273.0



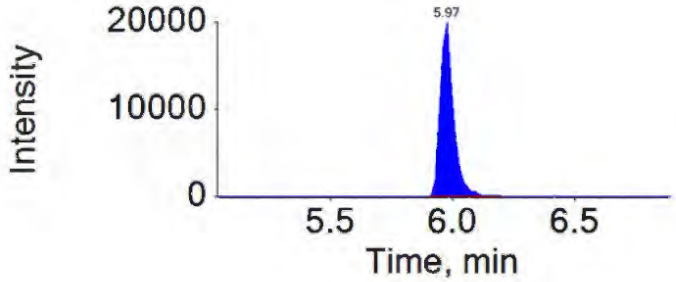
Injection Standard: 13C2-PFOA

415.0 / 370.0



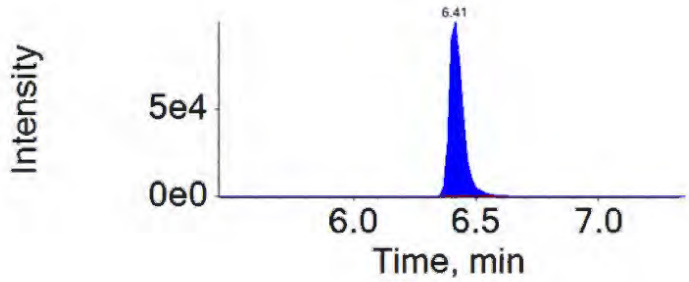
Extraction Standard: E13C3-PFHxS

402.0 / 99.0



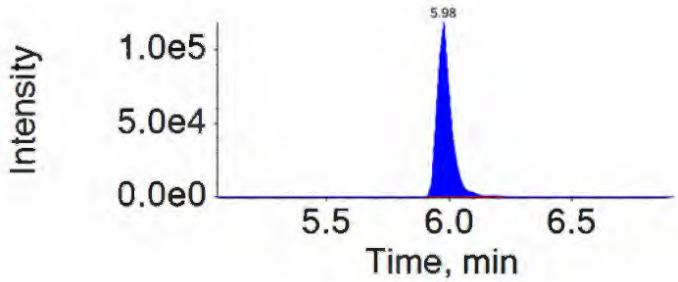
Injection Standard: 13C2-PFOA

415.0 / 370.0



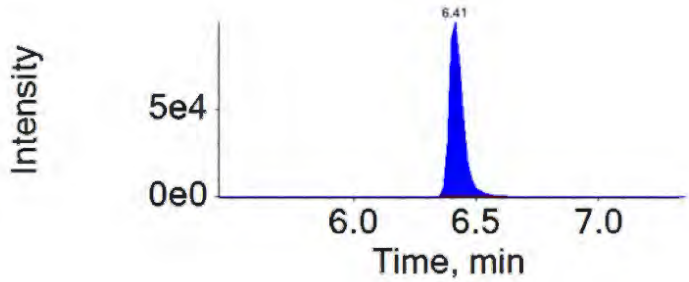
Extraction Standard: E13C4-PFHpA

367.0 / 322.0



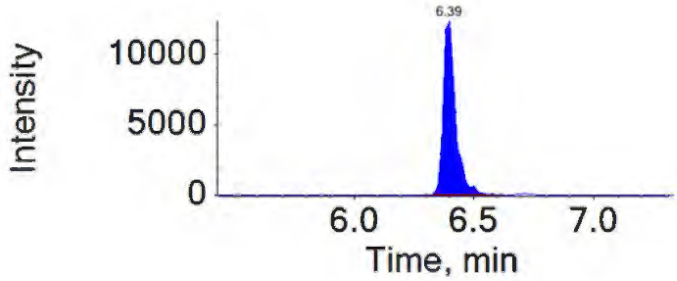
Injection Standard: 13C2-PFOA

415.0 / 370.0



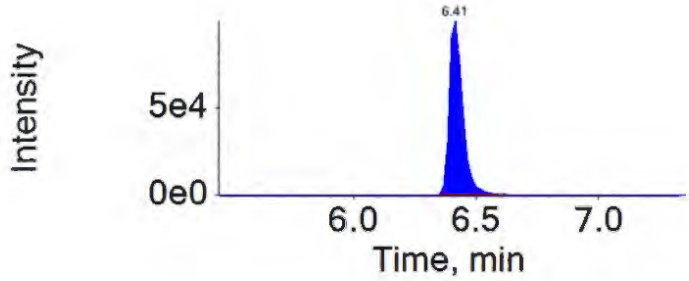
Extraction Standard: E13C2-6:2-FTS

429.0 / 409.0



Injection Standard: 13C2-PFOA

415.0 / 370.0



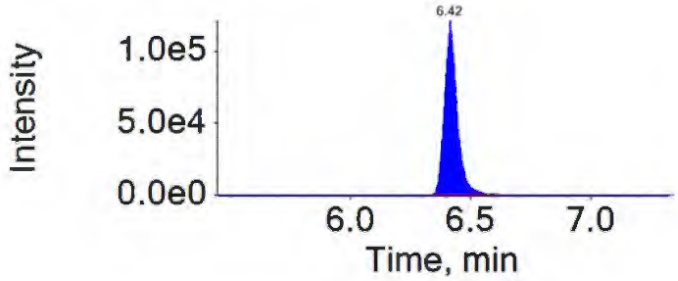
APPROVED
By JWK at 12:34 pm, 5/11/17

REVIEWED
By UMJS at 9:12 am, 5/15/17

ICAL Name: 17MAY10MCAL **Result Table:** 17MAY10MCAL 5/11/2017 12:08:01 PM
QMethod Name: PFCMOD - 17JAN28 **Acquisition Method:** PFC-32-16NOV02.dam

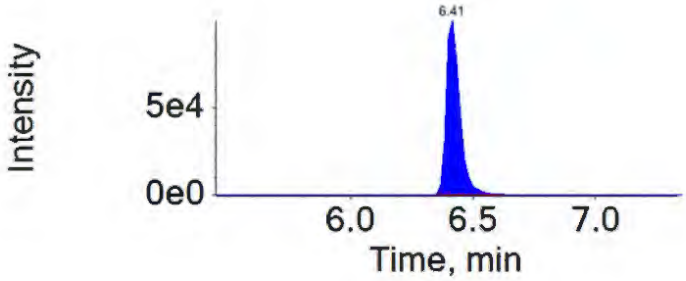
Extraction Standard: E13C8-PFOA

421.0 / 376.0



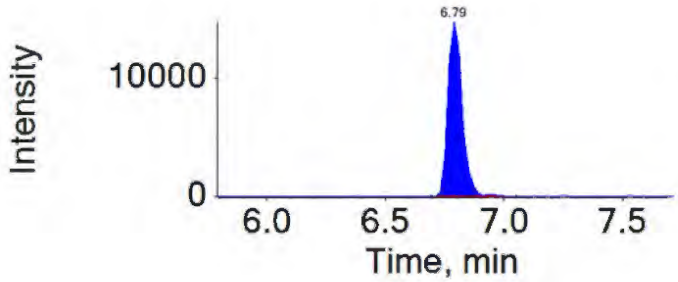
Injection Standard: 13C2-PFOA

415.0 / 370.0



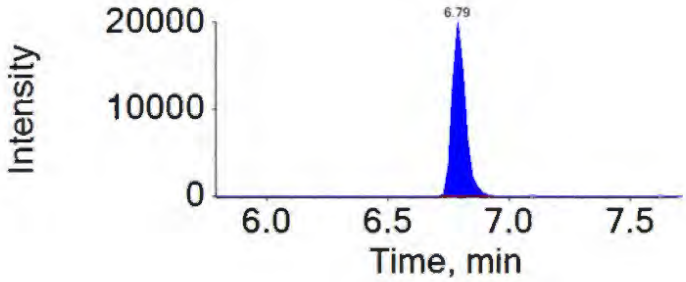
Extraction Standard: E13C8-PFOS

507.0 / 99.0



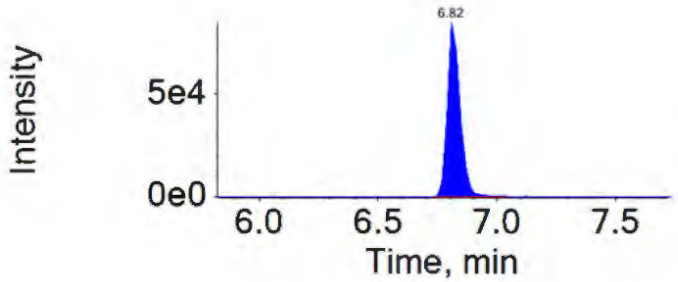
Injection Standard: 13C4-PFOS

503.0 / 99.0



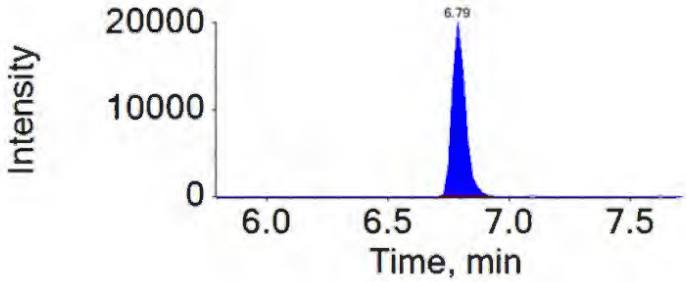
Extraction Standard: E13C9-PFNA

472.0 / 427.0



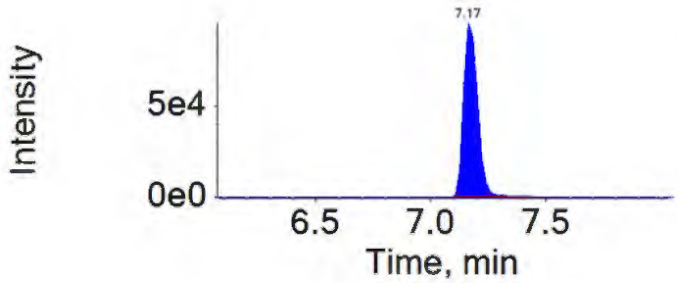
Injection Standard: 13C4-PFOS

503.0 / 99.0



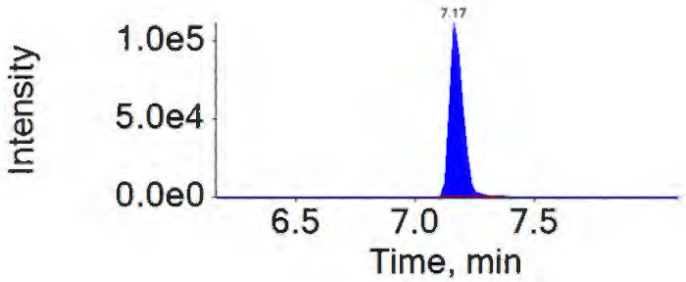
Extraction Standard: E13C8-PFOSA

506.0 / 78.0



Injection Standard: 13C2-PFDA

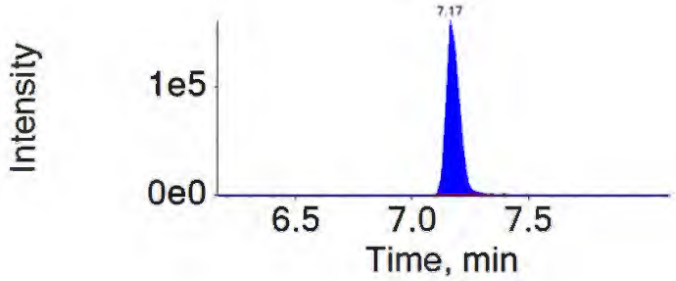
515.0 / 470.0



ICAL Name: 17MAY10MCAL **Result Table:** 17MAY10MCAL 5/11/2017 12:08:01 PM
QMethod Name: PFCMOD - 17JAN28 **Acquisition Method:** PFC-32-16NOV02.dam

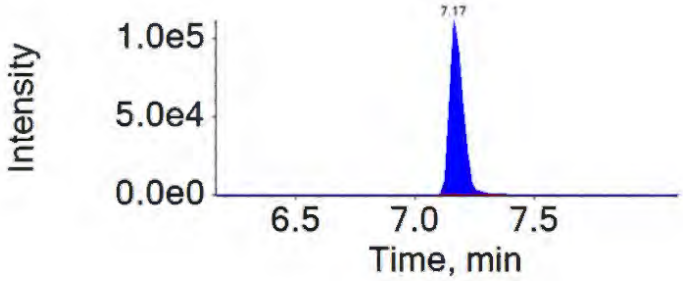
Extraction Standard: E13C6-PFDA

519.0 / 474.0



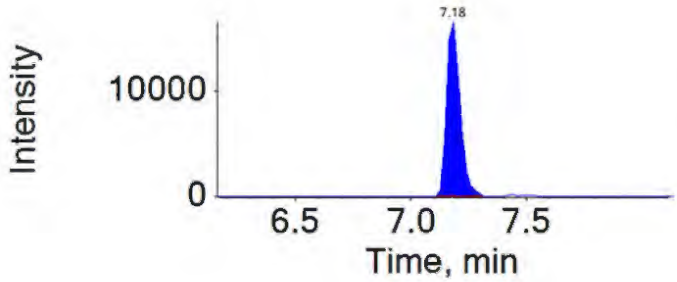
Injection Standard: 13C2-PFDA

515.0 / 470.0



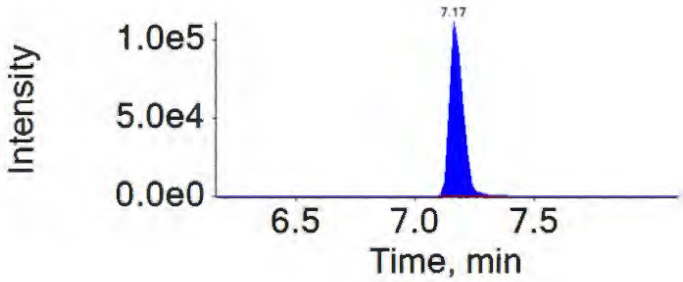
Extraction Standard: E13C2-8:2-FTS

529.0 / 509.0



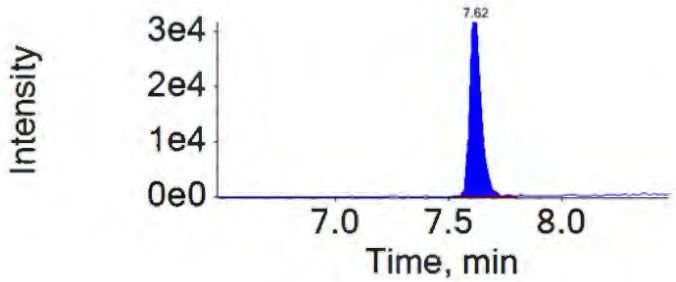
Injection Standard: 13C2-PFDA

515.0 / 470.0



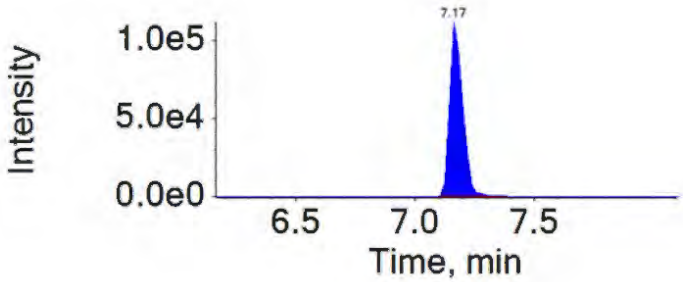
Extraction Standard: Ed7-NMePFOSAE

623.0 / 59.0



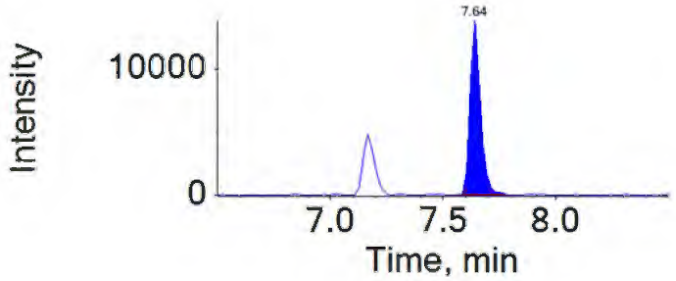
Injection Standard: 13C2-PFDA

515.0 / 470.0



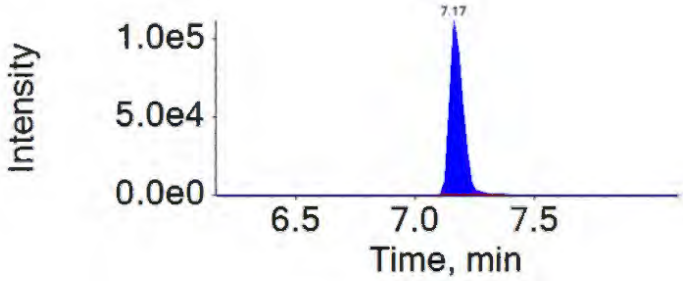
Extraction Standard: Ed3-NMePFOSA

515.0 / 169.0



Injection Standard: 13C2-PFDA

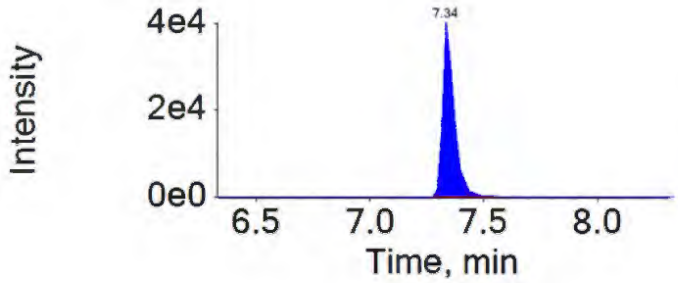
515.0 / 470.0



ICAL Name: 17MAY10MCAL **Result Table:** 17MAY10MCAL 5/11/2017 12:08:01 PM
QMethod Name: PFCMOD - 17JAN28 **Acquisition Method:** PFC-32-16NOV02.dam

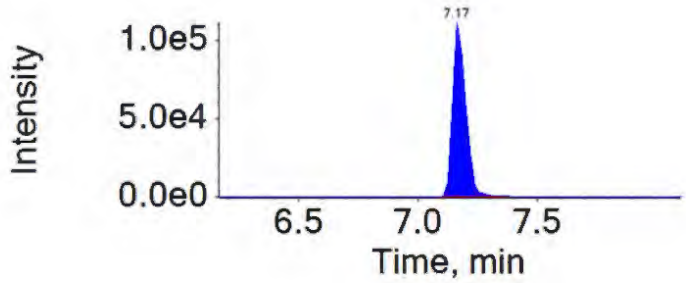
Extraction Standard: Ed3-NMeFOSAA

573.0 / 419.0



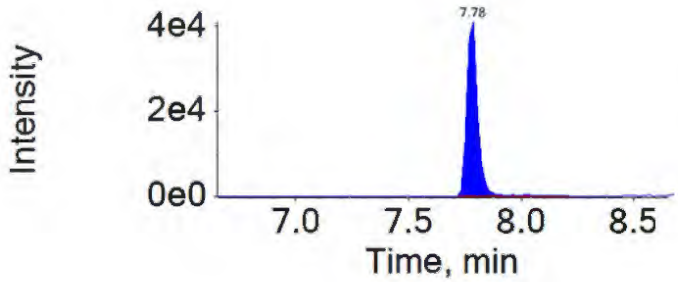
Injection Standard: 13C2-PFDA

515.0 / 470.0



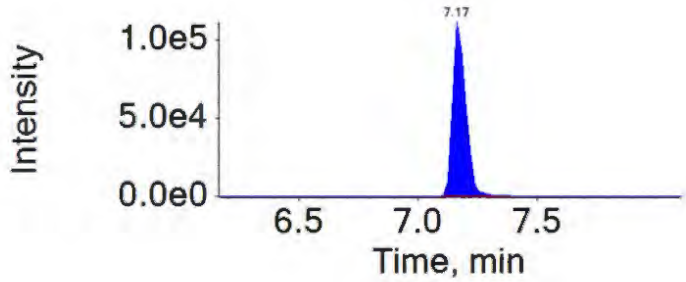
Extraction Standard: Ed9-NEtPFOSAE

639.0 / 59.0



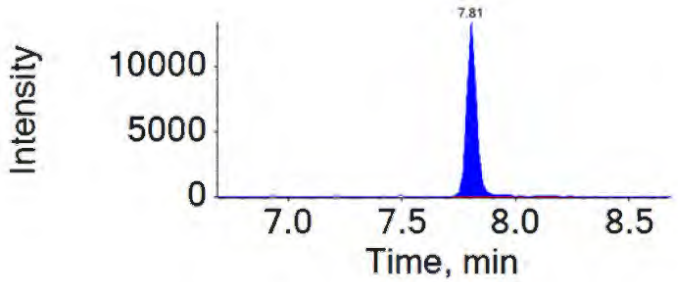
Injection Standard: 13C2-PFDA

515.0 / 470.0



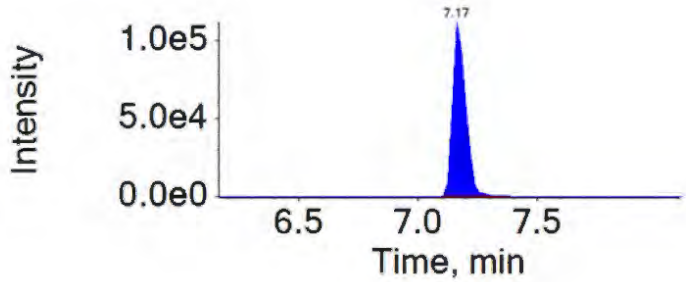
Extraction Standard: Ed5-NEtPFOSA

531.0 / 169.0



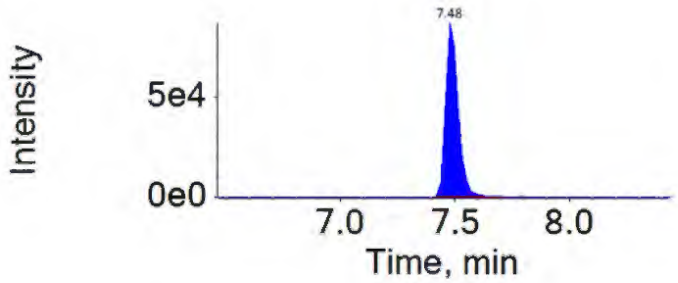
Injection Standard: 13C2-PFDA

515.0 / 470.0



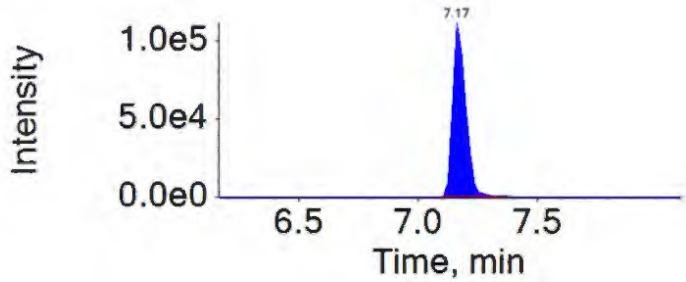
Extraction Standard: E13C7-PFUnDA

570.0 / 525.0



Injection Standard: 13C2-PFDA

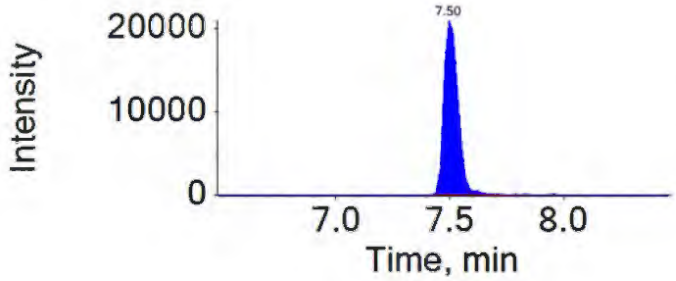
515.0 / 470.0



ICAL Name: 17MAY10MCAL **Result Table:** 17MAY10MCAL 5/11/2017 12:08:01 PM
QMethod Name: PFCMOD - 17JAN28 **Acquisition Method:** PFC-32-16NOV02.dam

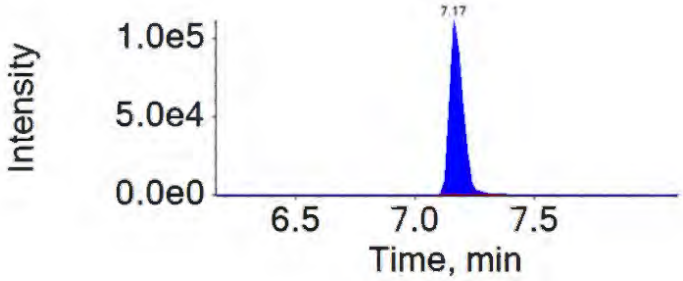
Extraction Standard: Ed5-NEtFOSAA

589.0 / 419.0



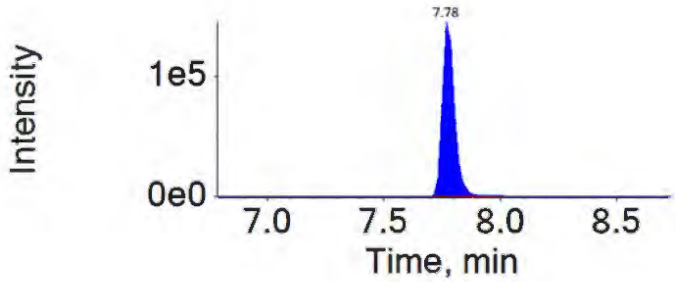
Injection Standard: 13C2-PFDA

515.0 / 470.0



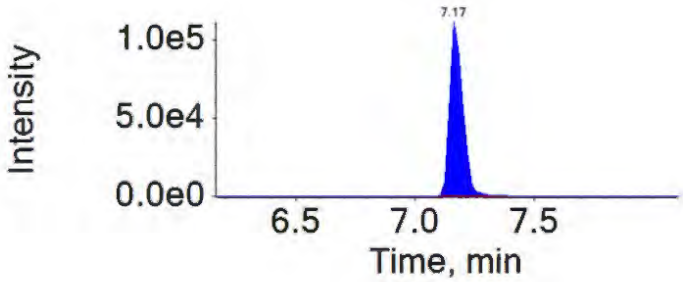
Extraction Standard: E13C2-PFDoDA

615.0 / 570.0



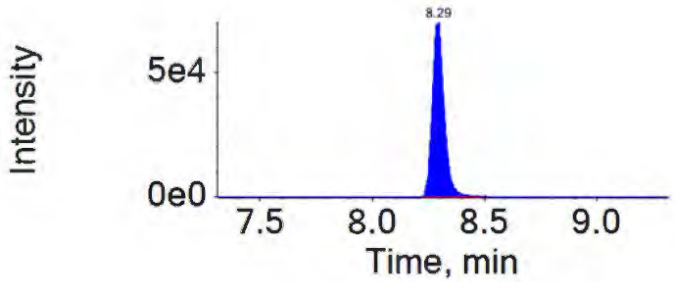
Injection Standard: 13C2-PFDA

515.0 / 470.0



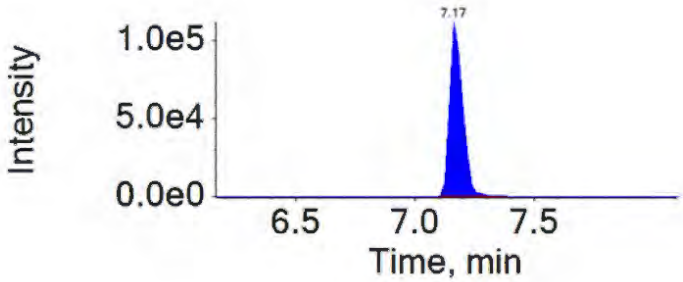
Extraction Standard: E13C2-PFTeDA

715.0 / 670.0



Injection Standard: 13C2-PFDA

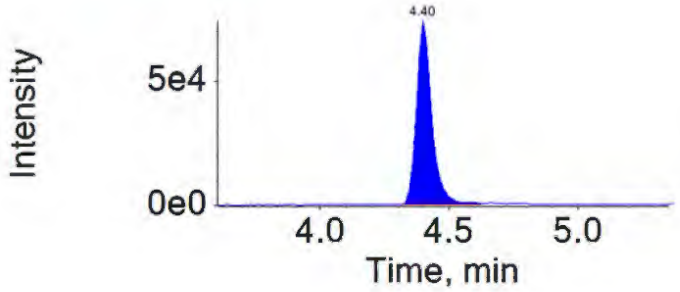
515.0 / 470.0



ICAL Name: 17MAY10MCAL **Result Table:** 17MAY10MCAL 5/11/2017 12:08:01 PM
QMethod Name: PFCMOD - 17JAN28 **Acquisition Method:** PFC-32-16NOV02.dam

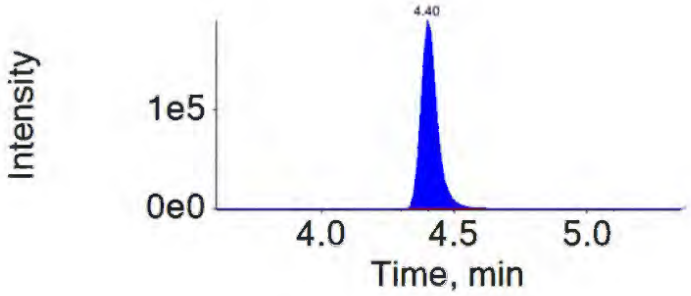
Analyte: PFBA

213.0 / 169.0



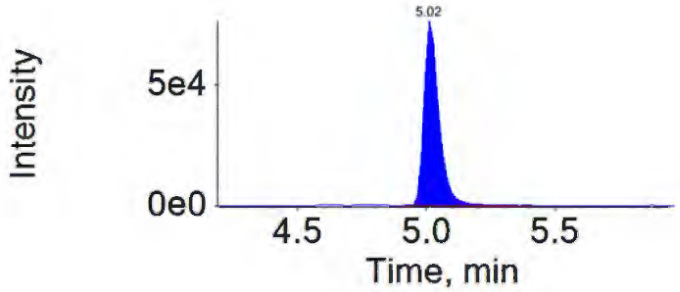
Extraction Standard: 13C4-PFBA

217.0 / 172.0



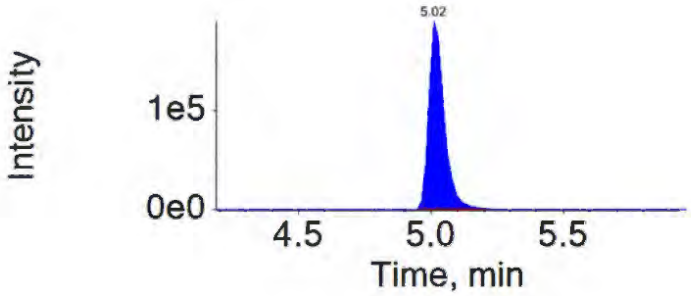
Analyte: PFPeA

263.0 / 219.0



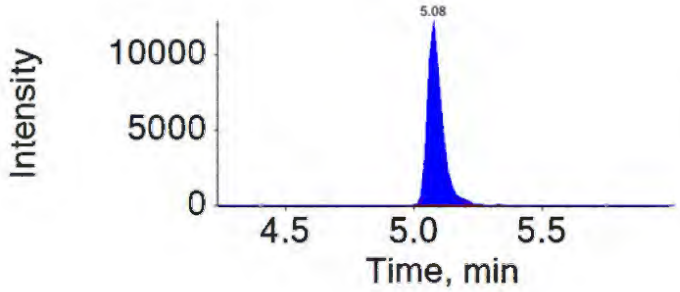
Extraction Standard: 13C5-PFPeA

268.0 / 223.0



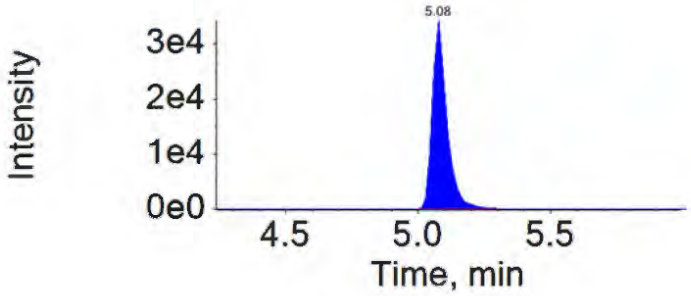
Analyte: PFBS

299.0 / 99.0



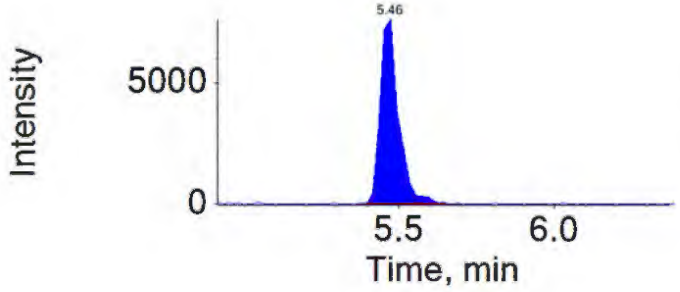
Extraction Standard: 13C3-PFBS

302.0 / 99.0



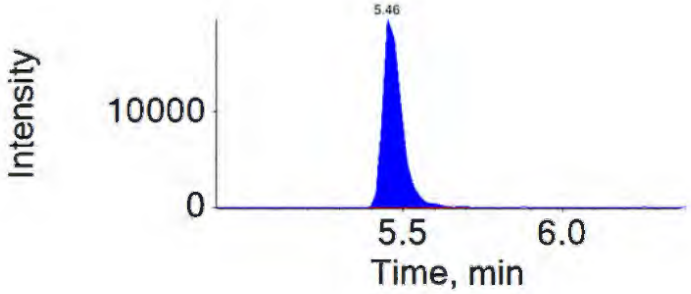
Analyte: 4:2-FTS

327.0 / 307.0



Extraction Standard: 13C2-4:2-FTS

329.0 / 309.0



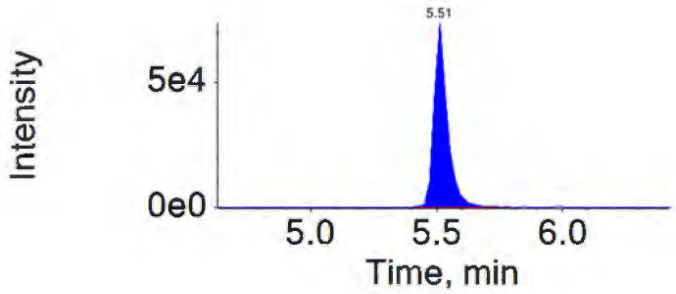
APPROVED
By JWK at 12:34 pm, 5/11/17

REVIEWED
By UMJS at 9:12 am, 5/15/17

ICAL Name: 17MAY10MCAL **Result Table:** 17MAY10MCAL 5/11/2017 12:08:01 PM
QMethod Name: PFCMOD - 17JAN28 **Acquisition Method:** PFC-32-16NOV02.dam

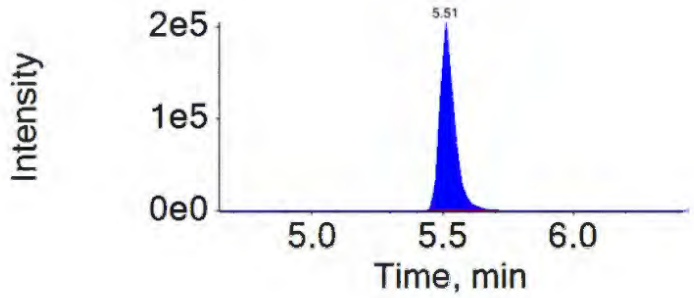
Analyte: PFHxA

313.0 /
269.0



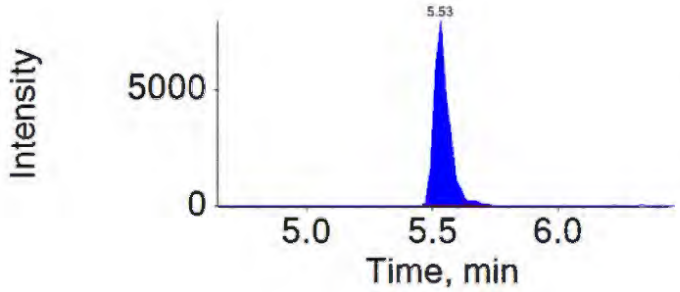
Extraction Standard: 13C5-PFHxA

318.0 /
273.0



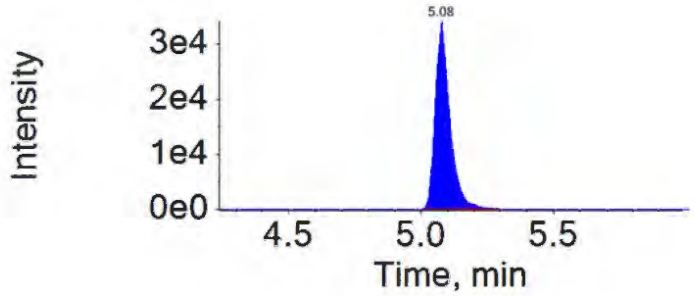
Analyte: PFPeS

349.0 /
99.0



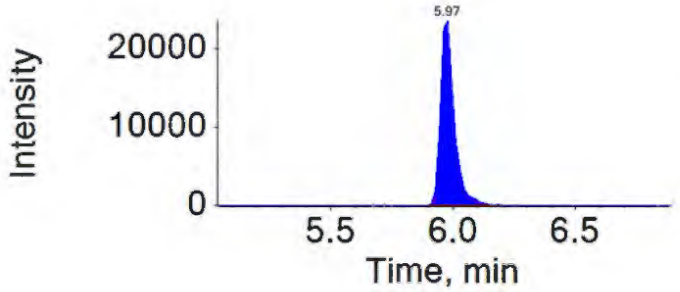
Extraction Standard: 13C3-PFBS

302.0 /
99.0



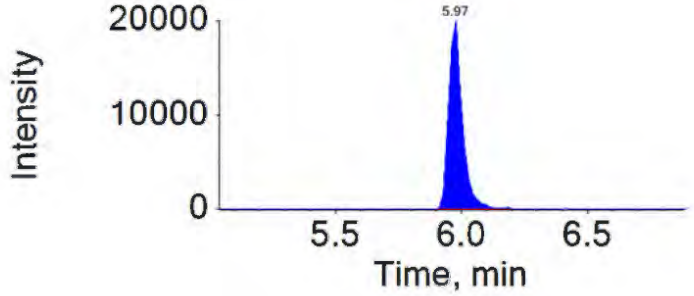
Analyte: PFHxS

399.0 /
80.0



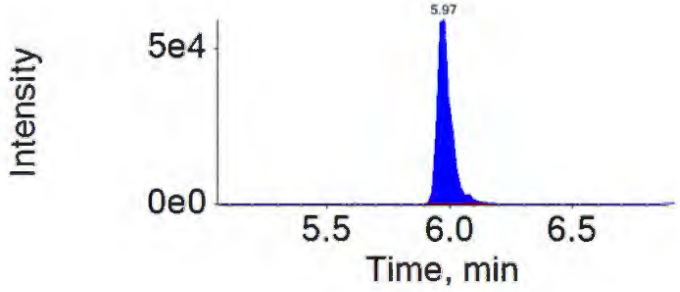
Extraction Standard: 13C3-PFHxS

402.0 /
99.0



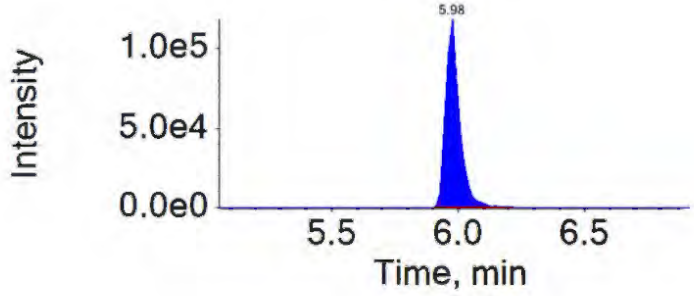
Analyte: PFHpA

363.0 /
319.0



Extraction Standard: 13C4-PFHpA

367.0 /
322.0



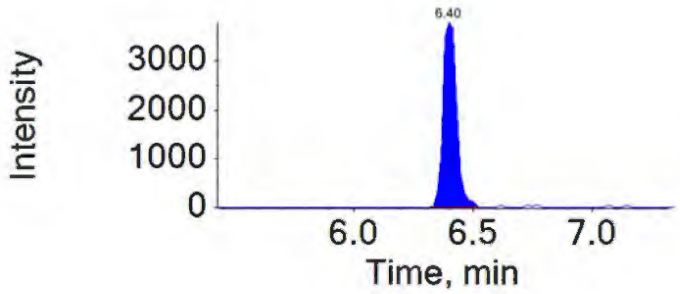
APPROVED
By JWK at 12:34 pm, 5/11/17

REVIEWED
By UMJS at 9:12 am, 5/15/17

ICAL Name: 17MAY10MCAL **Result Table:** 17MAY10MCAL 5/11/2017 12:08:01 PM
QMethod Name: PFCMOD - 17JAN28 **Acquisition Method:** PFC-32-16NOV02.dam

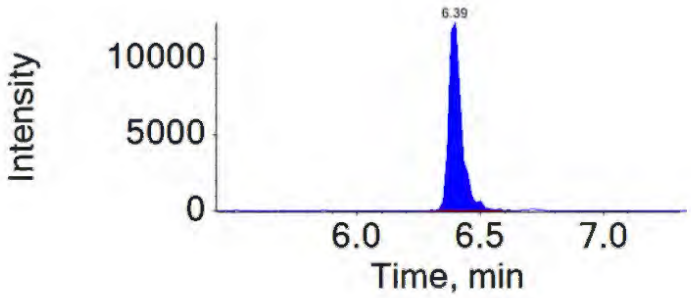
Analyte: 6:2-FTS

427.0 /
407.0



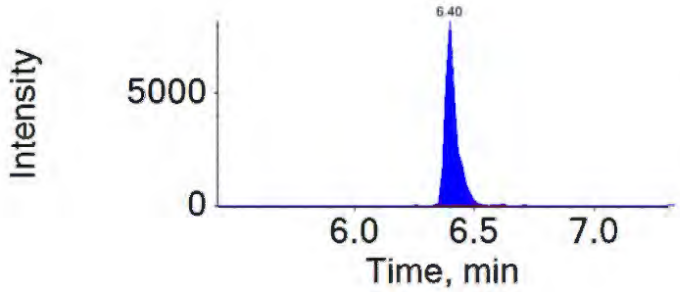
Extraction Standard: 13C2-6:2-FTS

429.0 /
409.0



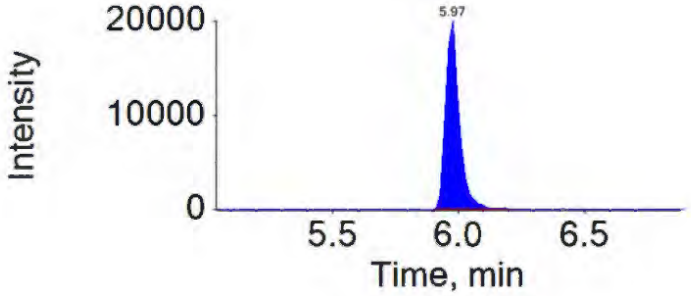
Analyte: PFHpS

449.0 /
99.0



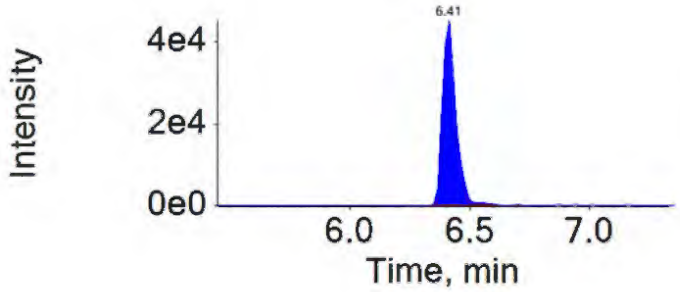
Extraction Standard: 13C3-PFHxS

402.0 /
99.0



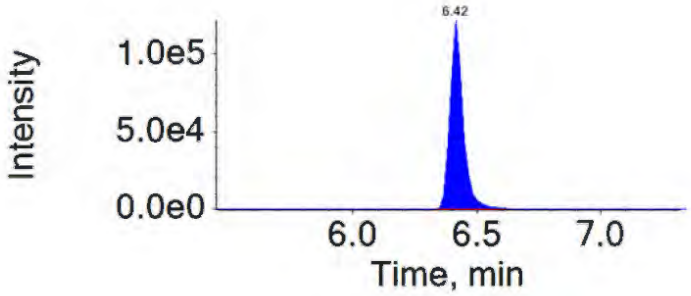
Analyte: PFOA

413.0 /
369.0



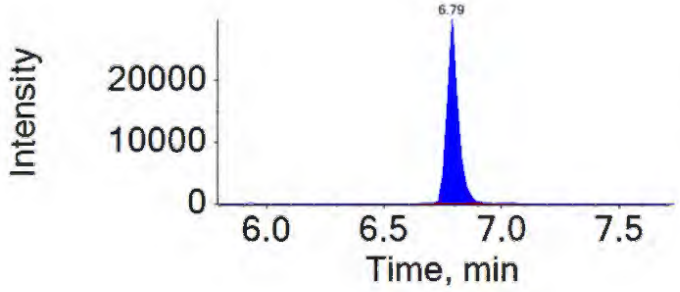
Extraction Standard: 13C8-PFOA

421.0 /
376.0



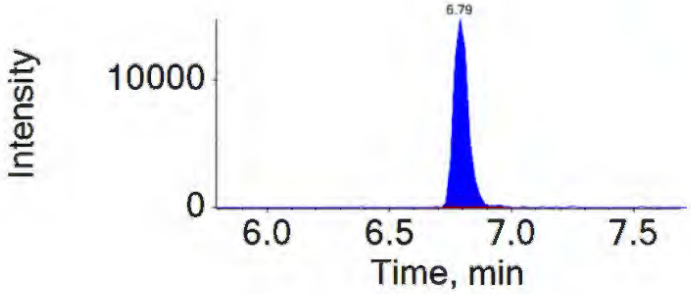
Analyte: PFOS

499.0 /
80.0



Extraction Standard: 13C8-PFOS

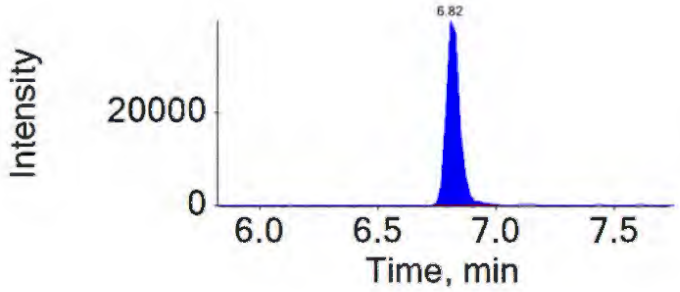
507.0 /
99.0



ICAL Name: 17MAY10MCAL **Result Table:** 17MAY10MCAL 5/11/2017 12:08:01 PM
QMethod Name: PFCMOD - 17JAN28 **Acquisition Method:** PFC-32-16NOV02.dam

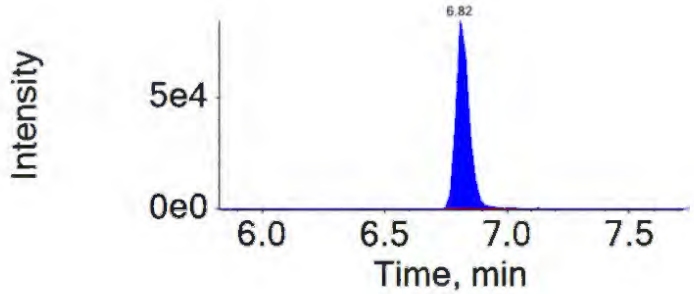
Analyte: PFNA

463.0 /
419.0



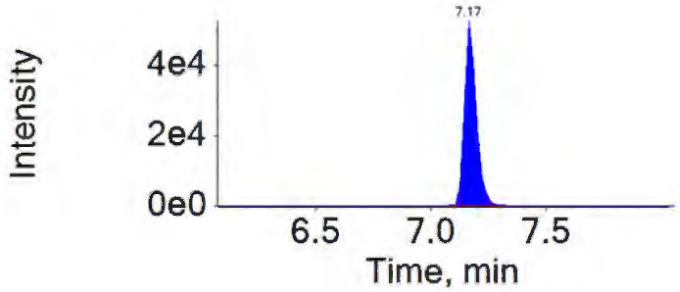
Extraction Standard: 13C9-PFNA

472.0 /
427.0



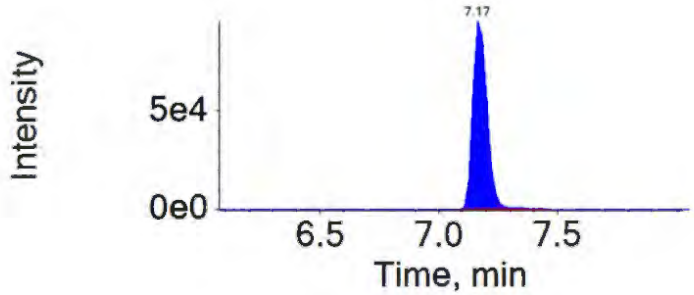
Analyte: PFOSA

498.0 /
78.0



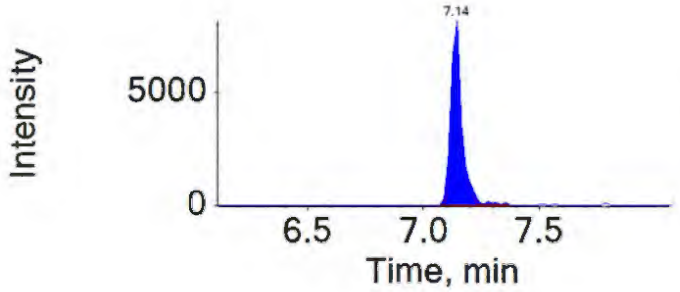
Extraction Standard: 13C8-PFOSA

506.0 /
78.0



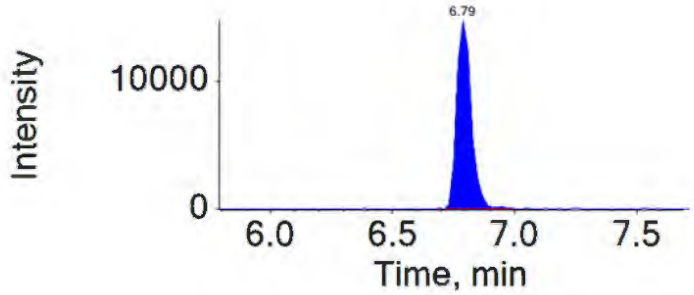
Analyte: PFNS

549.0 /
99.0



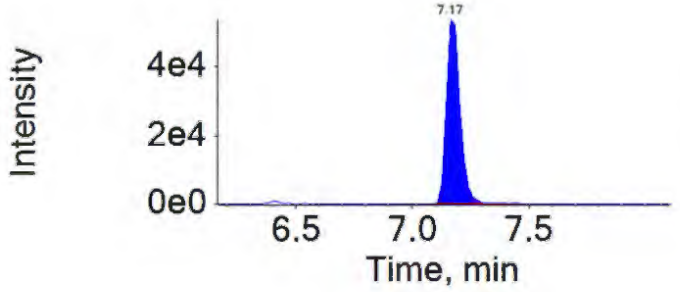
Extraction Standard: 13C8-PFOS

507.0 /
99.0



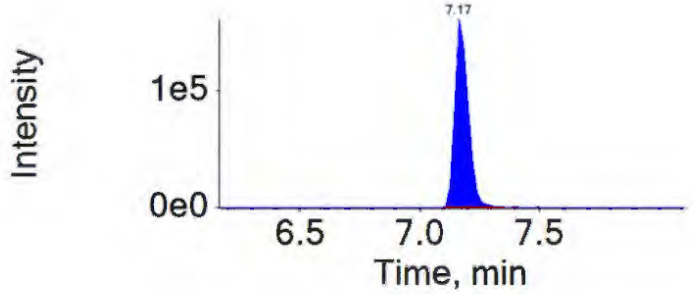
Analyte: PFDA

513.0 /
469.0



Extraction Standard: 13C6-PFDA

519.0 /
474.0



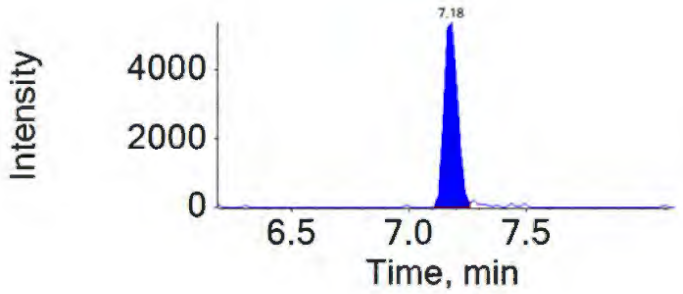
APPROVED
By JWK at 12:34 pm, 5/11/17

REVIEWED
By UMJS at 9:12 am, 5/15/17

ICAL Name: 17MAY10MCAL **Result Table:** 17MAY10MCAL 5/11/2017 12:08:01 PM
QMethod Name: PFCMOD - 17JAN28 **Acquisition Method:** PFC-32-16NOV02.dam

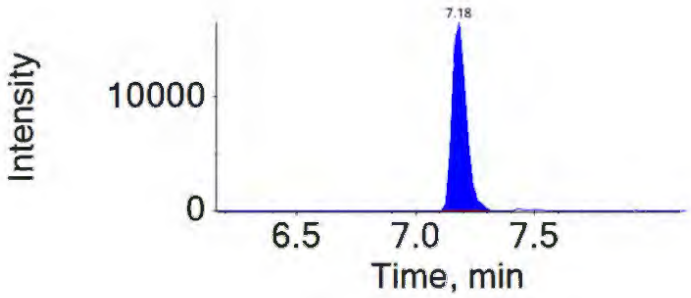
Analyte: 8:2-FTS

527.0 /
507.0



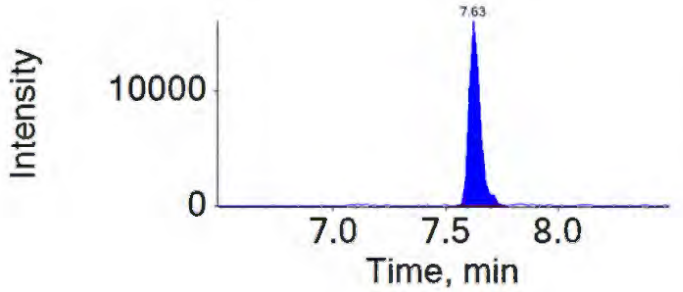
Extraction Standard: 13C2-8:2-FTS

529.0 /
509.0



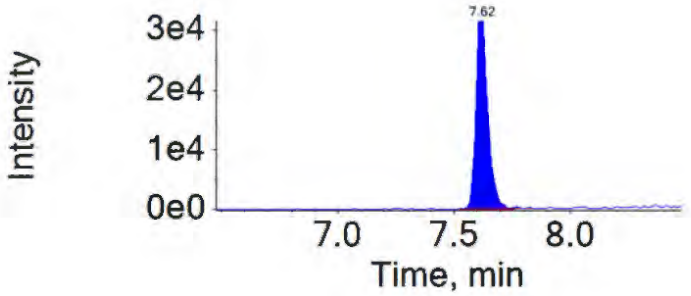
Analyte: NMePFOSAE

616.0 /
59.0



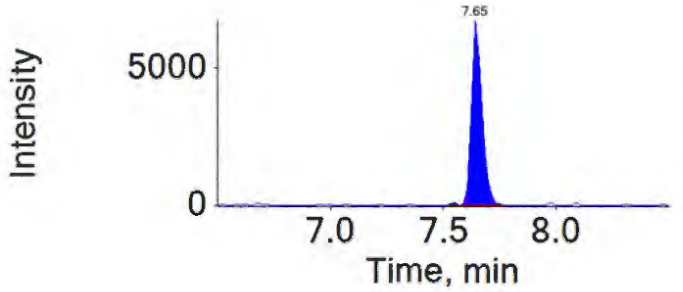
Extraction Standard: d7-NMePFOSAE

623.0 /
59.0



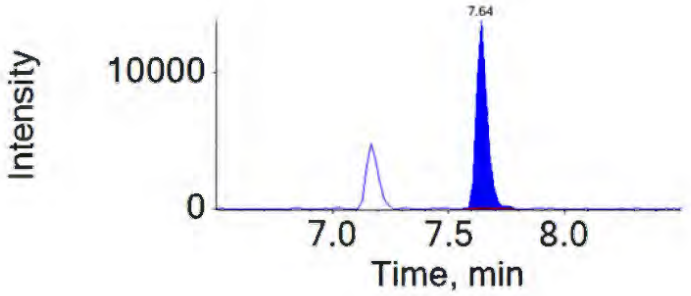
Analyte: NMePFOSA

512.0 /
169.0



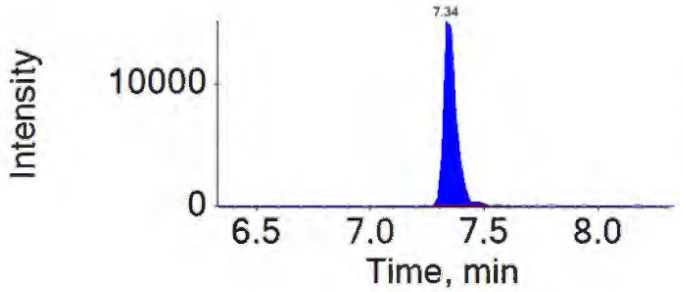
Extraction Standard: d3-NMePFOSA

515.0 /
169.0



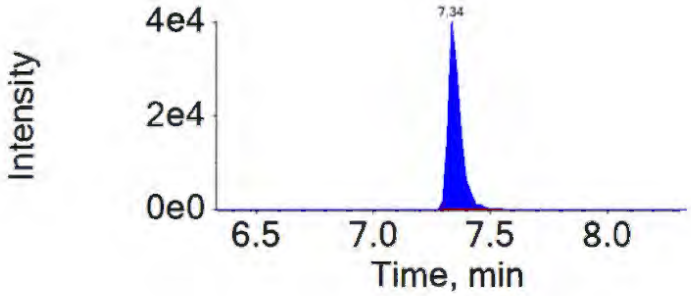
Analyte: NMeFOSAA

570.0 /
419.0



Extraction Standard: d3-NMeFOSAA

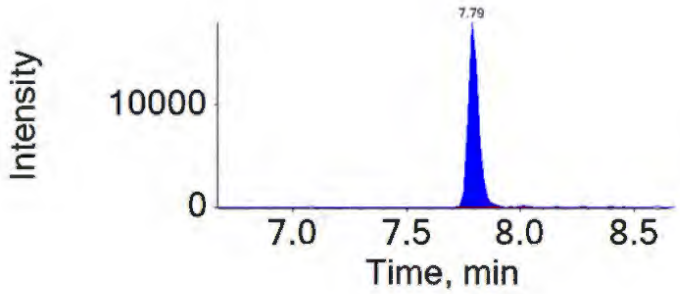
573.0 /
419.0



ICAL Name: 17MAY10MCAL **Result Table:** 17MAY10MCAL 5/11/2017 12:08:01 PM
QMethod Name: PFCMOD - 17JAN28 **Acquisition Method:** PFC-32-16NOV02.dam

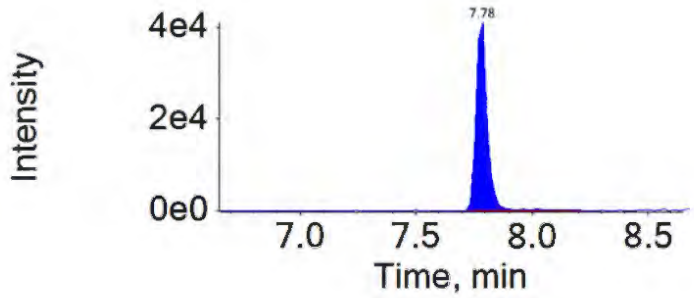
Analyte: NEtPFOSAE

630.0 /
59.0



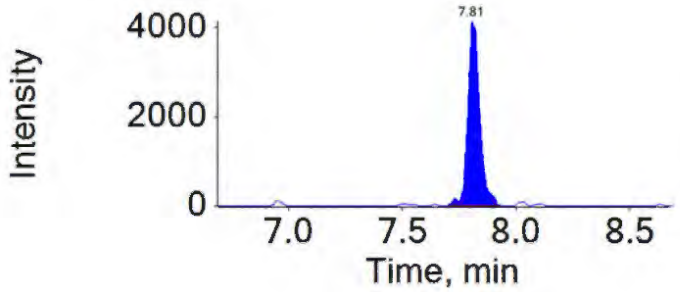
Extraction Standard: d9-NEtPFOSAE

639.0 /
59.0



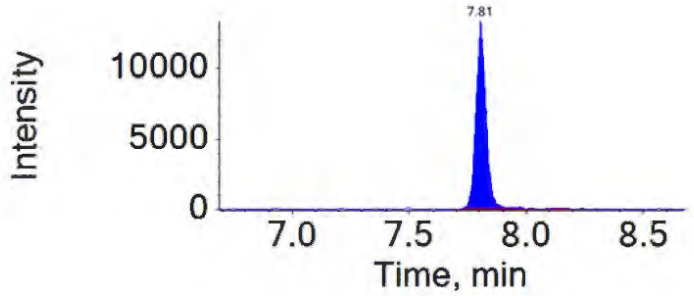
Analyte: NEtPFOSA

526.0 /
169.0



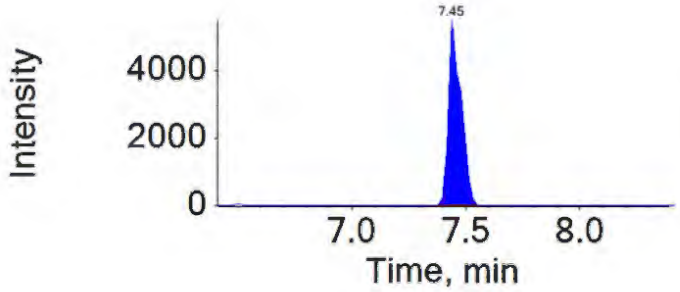
Extraction Standard: d5-NEtPFOSA

531.0 /
169.0



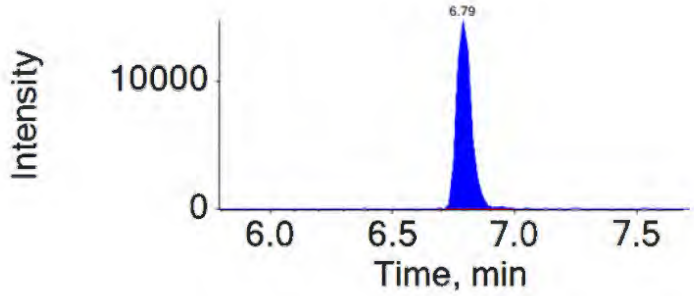
Analyte: PFDS

599.0 /
99.0



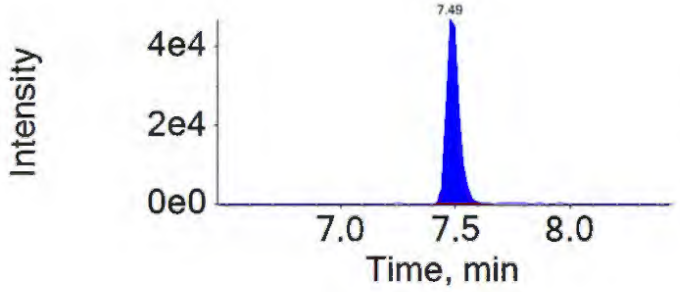
Extraction Standard: 13C8-PFOS

507.0 /
99.0



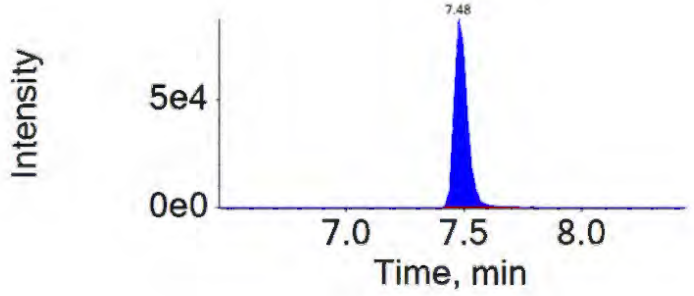
Analyte: PFUnDA

563.0 /
519.0



Extraction Standard: 13C7-PFUnDA

570.0 /
525.0



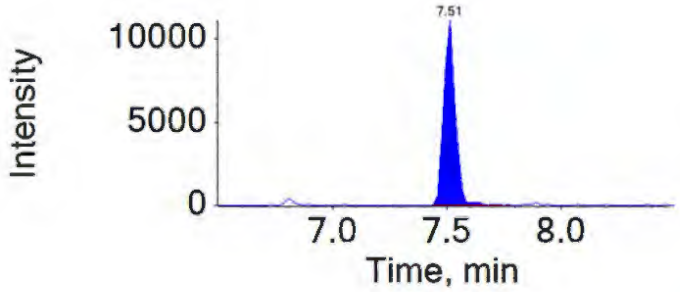
APPROVED
By JWK at 12:34 pm, 5/11/17

REVIEWED
By UMJS at 9:12 am, 5/15/17

ICAL Name: 17MAY10MCAL **Result Table:** 17MAY10MCAL 5/11/2017 12:08:01 PM
QMethod Name: PFCMOD - 17JAN28 **Acquisition Method:** PFC-32-16NOV02.dam

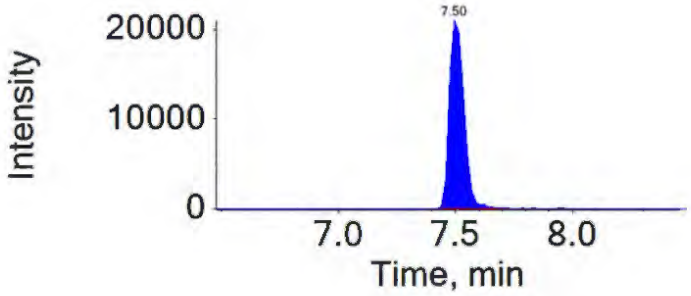
Analyte: NEtFOSAA

584.0 / 419.0



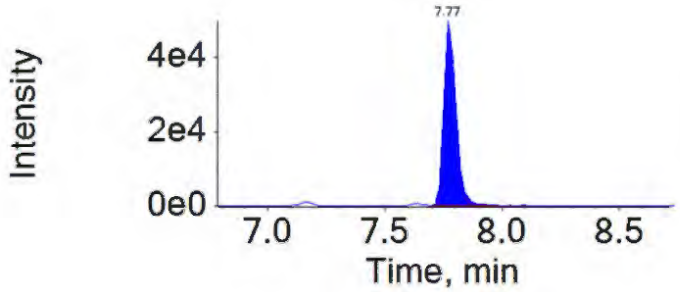
Extraction Standard: d5-NEtFOSAA

589.0 / 419.0



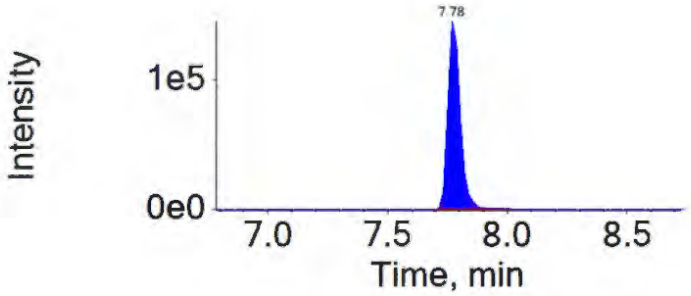
Analyte: PFDoDA

613.0 / 569.0



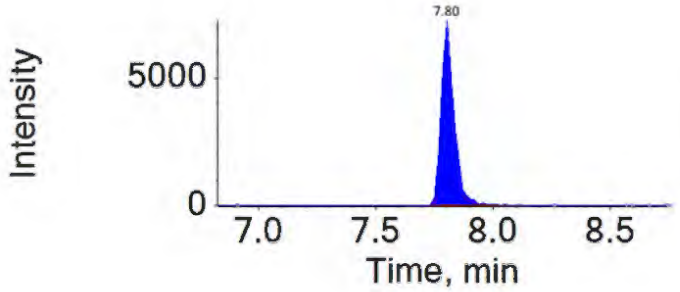
Extraction Standard: 13C2-PFDoDA

615.0 / 570.0



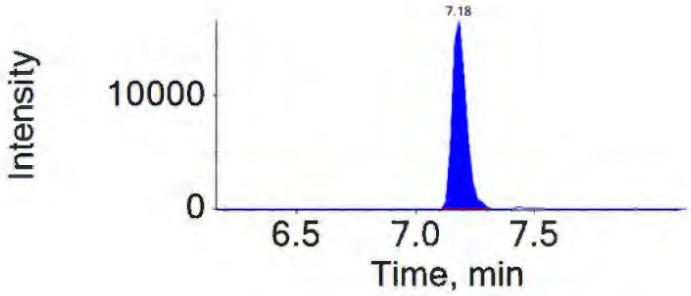
Analyte: 10:2-FTS

627.0 / 607.0



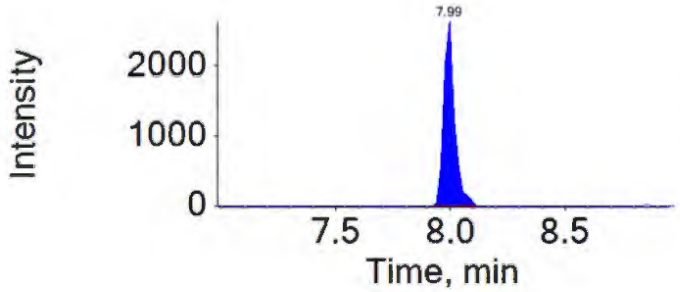
Extraction Standard: 13C2-8:2-FTS

529.0 / 509.0



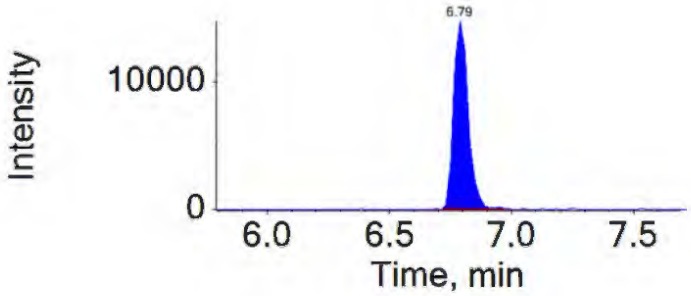
Analyte: PFDoS

699.0 / 99.0



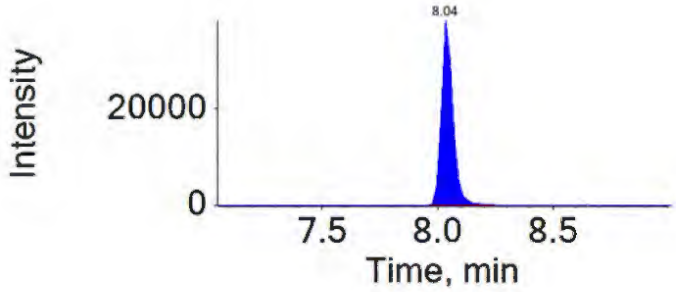
Extraction Standard: 13C8-PFOS

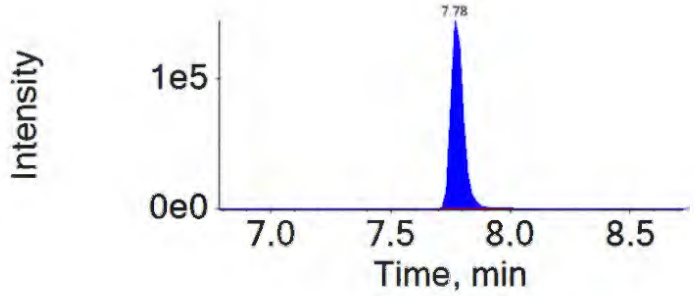
507.0 / 99.0



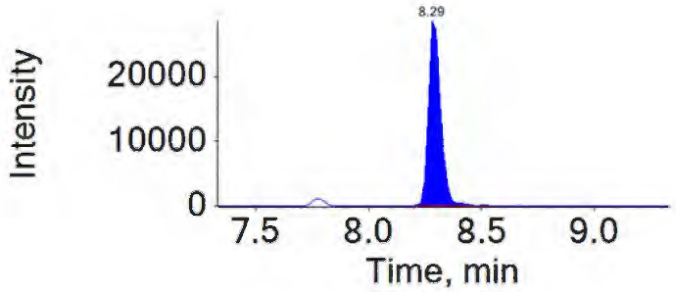
ICAL Name: 17MAY10MCAL **Result Table:** 17MAY10MCAL 5/11/2017 12:08:01 PM
QMethod Name: PFCMOD - 17JAN28 **Acquisition Method:** PFC-32-16NOV02.dam

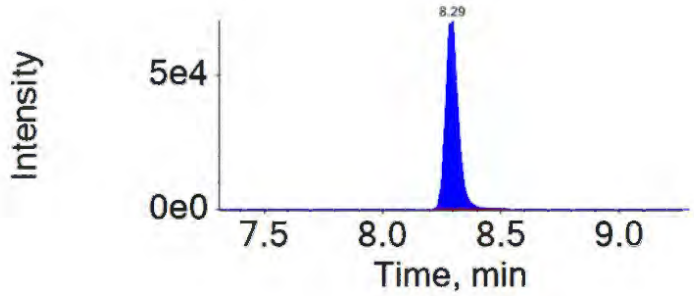
Analyte: PFTrDA	Extraction Standard: 13C2-PFDoDA
663.0 / 619.0	615.0 / 570.0



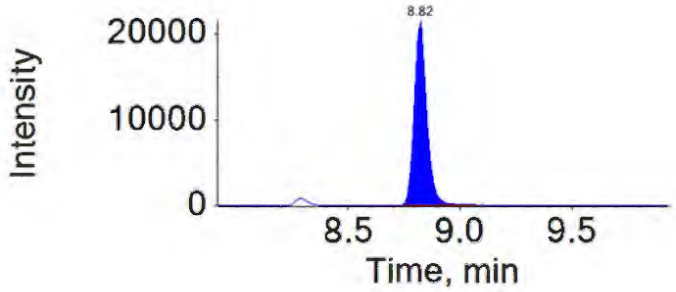


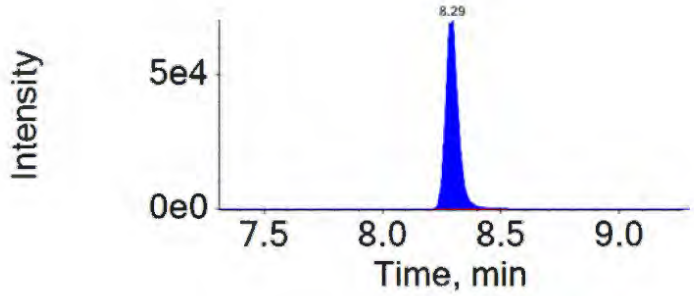
Analyte: PFTeDA	Extraction Standard: 13C2-PFTeDA
713.0 / 669.0	715.0 / 670.0



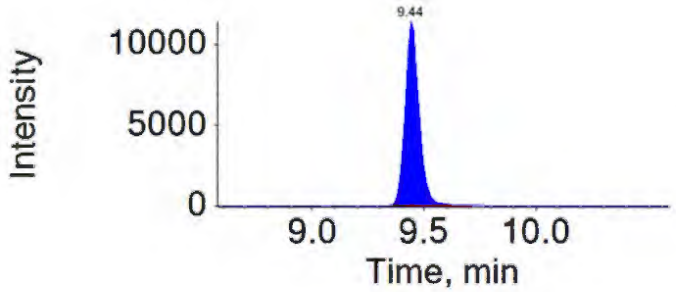


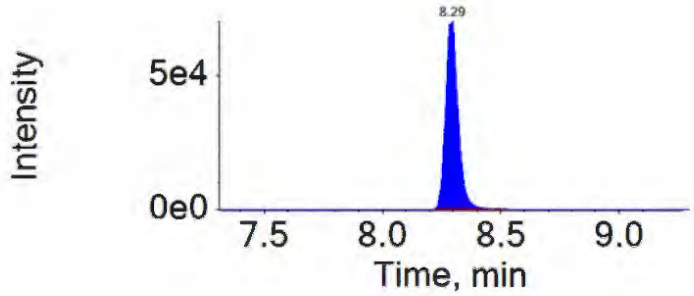
Analyte: PFHxDA	Extraction Standard: 13C2-PFTeDA
813.0 / 769.0	715.0 / 670.0





Analyte: PFODA	Extraction Standard: 13C2-PFTeDA
913.0 / 869.0	715.0 / 670.0





APPROVED
By JWK at 12:34 pm, 5/11/17

REVIEWED
By UMJS at 9:12 am, 5/15/17

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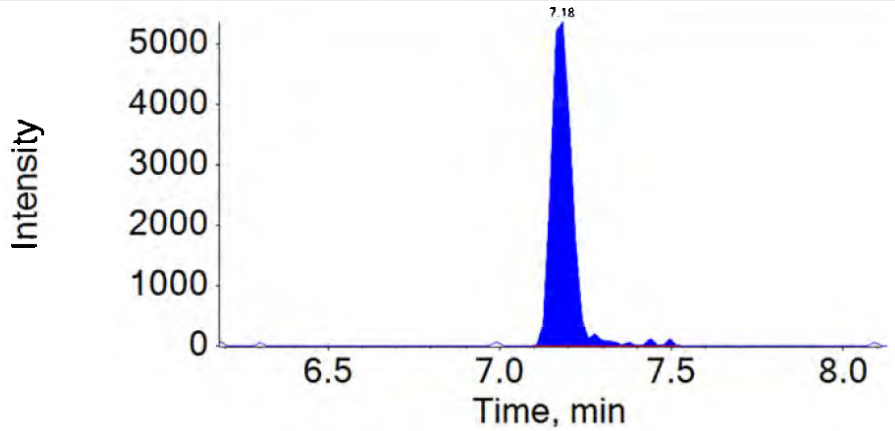
Auto Integrations prior to Manual Integration

Print Date: 05/11/2017 12:22 PM
Template: MQ-OrigInteg-16NOV21.docx

Results Table Name: 17MAY10MCAL
Results Table Date: 5/11/2017 12:08:01 PM

Acquisition Method: PFC-32-16NOV02.dam
QMethod File: PFCMOD - 17JAN28

Component Name:
8:2-FTS
RT (min.):
7.18
Peak Area:
22945.6
Mass Range:
527.0 / 507.0
File Name:
17MAY10MCAL-32.wiff
Sample Name:
CAL3



Integration Comment: incorrect integration

APPROVED
By JWK at 12:34 pm, 5/11/17

REVIEWED
By UMJS at 9:12 am, 5/15/17

Results Table Name: 17MAY10MCAL
Results Table Date: 5/11/2017 12:08:01 PM

Acquisition Method: PFC-32-16NOV02.dam
QMethod File: PFCMOD - 17JAN28

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LC-MS/MS Analysis Report

Printed: 5/11/2017 12:16:00 PM
Template: MQ-Sample-16Nov21.docx

ICAL Name: 17MAY10MCAL
QMethod Name: PFCMOD - 17JAN28
Result Table: 17MAY10MCAL 5/11/2017 12:08:01 PM
Acquisition Method: PFC-32-16NOV02.dam

Sample Name:	CAL4			**Data File:**		17MAY10MCAL-33.wiff
Sample ID:	CALPFC1712533E			**Acquis Date:**		2017-05-11T06:11:39
Sample Type:	Standard			**Instrument:**		LM24960
Vial Position:	6			**Acquis Method:**		PFC-32-16NOV02.dam
Injection Vol:	5.00			**Result Table:**		17MAY10MCAL
QMethod File:	PFCMOD - 17JAN28			**ICAL Name:**		17MAY10MCAL
Batch Number:	MODICAL			**Operator:**		Not calculated
Sample Wt.:	1.00000			**Dilution Factor:**		1.00
Sample Vol.:	1.000			**Prep Factor:**		1.000

Injection Standard Peak Table

Injection Standard Name	Inj Std Conc	Injection Std Peak Area	ICAL Injection Standard AVG	Injection Std %Diff	Injection Std %Diff Limit	Injection Std %Diff OOS
I13C3-PFBA	1.0	693717.5	669117.3	3.7	50.0	
I13C2-PFOA	1.0	366383.9	342184.6	7.1	50.0	
I13C4-PFOS	1.0	70481.2	70131.6	0.5	50.0	
I13C2-PFDA	1.0	377735.1	384098.7	-1.7	50.0	

Extraction Standard Peak Table

Extraction Standard Name	Ext Std Area	Inj Std Name	Inj Std Area	Area Ratio	AVG Area Ratio	Ext Std Conc	Ext Std Result	Ext Std %REC	Ext Std %REC Limit	Ext Std OOS
E13C4-PFBA	824776.5	13C3-PFBA	693717.5	1.189	1.150	1.000	1.034		-	
E13C5-PFPeA	777844.4	13C3-PFBA	693717.5	1.121	1.073	1.000	1.045		-	
E13C3-PFBS	139258.7	13C3-PFBA	693717.5	0.201	0.194	1.000	1.033		-	
E13C2-4:2-FTS	73440.6	13C2-PFOA	366383.9	0.200	0.236	1.000	0.848		-	
E13C5-PFHxA	730037.4	13C2-PFOA	366383.9	1.993	2.026	1.000	0.984		-	
E13C3-PFHxS	78417.1	13C2-PFOA	366383.9	0.214	0.206	1.000	1.040		-	
E13C4-PFHpA	461833.4	13C2-PFOA	366383.9	1.261	1.285	1.000	0.981		-	
E13C2-6:2-FTS	40867.3	13C2-PFOA	366383.9	0.112	0.128	1.000	0.871		-	
E13C8-PFOA	422454.6	13C2-PFOA	366383.9	1.153	1.163	1.000	0.991		-	
E13C8-PFOS	65705.8	13C4-PFOS	70481.2	0.932	0.865	1.000	1.077		-	
E13C9-PFNA	332286.1	13C4-PFOS	70481.2	4.715	4.422	1.000	1.066		-	
E13C8-PFOSA	387858.6	13C2-PFDA	377735.1	1.027	0.936	1.000	1.096		-	
E13C6-PFDA	625379.3	13C2-PFDA	377735.1	1.656	1.424	1.000	1.163		-	
E13C2-8:2-FTS	54282.2	13C2-PFDA	377735.1	0.144	0.155	1.000	0.925		-	
Ed7-NMePFOSAE	113263.4	13C2-PFDA	377735.1	0.300	0.299	1.000	1.003		-	
Ed3-NMePFOSA	46434.4	13C2-PFDA	377735.1	0.123	0.120	1.000	1.022		-	
Ed3-NMeFOSAA	125622.3	13C2-PFDA	377735.1	0.333	0.343	1.000	0.970		-	
Ed9-NEtPFOSAE	122362.7	13C2-PFDA	377735.1	0.324	0.333	1.000	0.974		-	
Ed5-NEtPFOSA	38229.1	13C2-PFDA	377735.1	0.101	0.095	1.000	1.068		-	
E13C7-PFUnDA	457980.0	13C2-PFDA	377735.1	1.212	0.953	1.000	1.273		-	
Ed5-NEtFOSAA	121502.1	13C2-PFDA	377735.1	0.322	0.249	1.000	1.293		-	
E13C2-PFDoDA	480796.7	13C2-PFDA	377735.1	1.273	1.154	1.000	1.103		-	
E13C2-PFTeDA	256797.9	13C2-PFDA	377735.1	0.680	0.651	1.000	1.044		-	

APPROVED
By JWK at 12:34 pm, 5/11/17

REVIEWED
By UMJS at 9:12 am, 5/15/17

ICAL Name: 17MAY10MCAL **Result Table:** 17MAY10MCAL 5/11/2017 12:08:01 PM
QMethod Name: PFCMOD - 17JAN28 **Acquisition Method:** PFC-32-16NOV02.dam

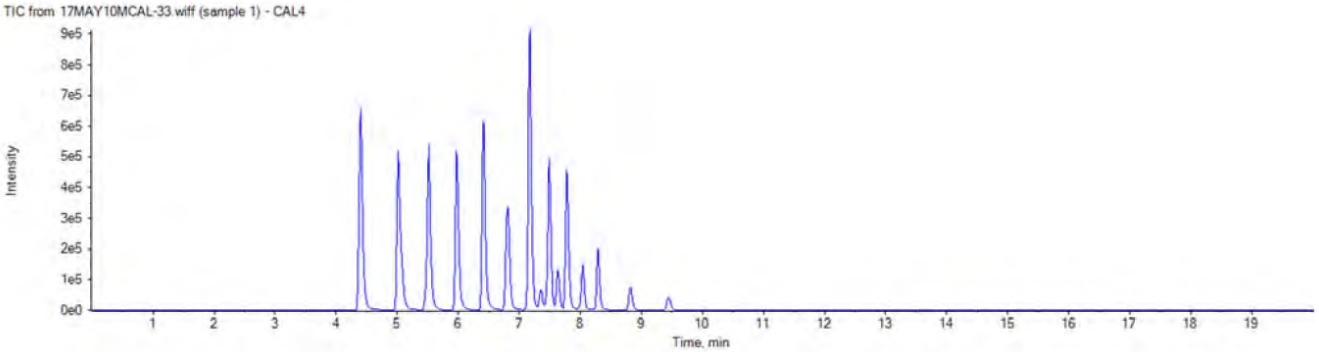
Analyte Quantitation Peak Table

Sample Name: CAL4 **Instrument Name:** LM24960 **File Name:** 17MAY10MCAL-33.wiff

Sample Wt	Sample Vol	Dilution Factor	PrepFactor
1.00000	1.000	1.00	1.000

Analytet Name	RT	RRT	Analyte Area Response	Int Typ	ES Name	ES RT	ES Area Response	Area Ratio	Sample Result (ng/g)
PFBA	4.40	1.000	1142796.1	A	13C4-PFBA	4.40	824776.5	1.386	7.620
PFPeA	5.02	1.000	1179637.1	A	13C5-PFPeA	5.02	777844.4	1.517	7.347
PFBS	5.08	1.000	194986.5	A	13C3-PFBS	5.08	139258.7	1.400	6.626
4:2-FTS	5.46	1.000	65813.0	A	13C2-4:2-FTS	5.47	73440.6	0.896	4.183
PFHxA	5.51	1.000	1099797.8	A	13C5-PFHxA	5.51	730037.4	1.507	7.975
PFPeS	5.54	1.090	118241.1	A	13C3-PFBS	5.08	139258.7	0.849	7.586
PFHxS	5.97	1.000	359701.9	A	13C3-PFHxS	5.97	78417.1	4.587	6.434
PFHpA	5.98	1.000	921662.1	A	13C4-PFHpA	5.98	461833.4	1.996	8.039
6:2-FTS	6.40	1.000	32302.3	A	13C2-6:2-FTS	6.40	40867.3	0.790	4.501
PFHpS	6.40	1.070	91142.7	A	13C3-PFHxS	5.97	78417.1	1.162	6.096
PFOA	6.41	1.000	748601.0	A	13C8-PFOA	6.42	422454.6	1.772	8.074
PFOS	6.79	1.000	328983.0	A	13C8-PFOS	6.79	65705.8	5.007	6.964
PFNA	6.81	1.000	603159.3	A	13C9-PFNA	6.81	332286.1	1.815	7.413
PFOSA	7.17	1.000	682083.4	A	13C8-PFOSA	7.17	387858.6	1.759	8.034
PFNS	7.14	1.050	110726.2	A	13C8-PFOS	6.79	65705.8	1.685	7.727
PFDA	7.17	1.000	890817.2	A	13C6-PFDA	7.17	625379.3	1.424	7.773
8:2-FTS	7.18	1.000	45326.4	A	13C2-8:2-FTS	7.18	54282.2	0.835	4.209
NMePFOSAE	7.63	1.000	229733.0	A	d7-NMePFOSAE	7.62	113263.4	2.028	8.088
NMePFOSA	7.65	1.000	79171.4	A	d3-NMePFOSA	7.65	46434.4	1.705	7.958
NMeFOSAA	7.35	1.000	111221.7	A	d3-NMeFOSAA	7.35	125622.3	0.885	4.159
NEtPFOSAE	7.79	1.000	207401.6	A	d9-NEtPFOSAE	7.78	122362.7	1.695	7.770
NEtPFOSA	7.81	1.000	63224.9	A	d5-NEtPFOSA	7.80	38229.1	1.654	8.207
PFDS	7.45	1.100	100636.0	A	13C8-PFOS	6.79	65705.8	1.532	7.776
PFUnDA	7.49	1.000	953232.6	A	13C7-PFUnDA	7.49	457980.0	2.081	8.107
NEtFOSAA	7.51	1.000	77203.5	A	d5-NEtFOSAA	7.51	121502.1	0.635	3.109
PFDoDA	7.77	1.000	680205.1	A	13C2-PFDoDA	7.78	480796.7	1.415	7.571
10:2-FTS	7.81	1.090	46913.6	A	13C2-8:2-FTS	7.18	54282.2	0.864	4.161
PFDoS	7.99	1.180	34566.3	A	13C8-PFOS	6.79	65705.8	0.526	7.411
PFTrDA	8.04	1.030	494176.0	A	13C2-PFDoDA	7.78	480796.7	1.028	7.631
PFTeDA	8.29	1.000	409722.5	A	13C2-PFTeDA	8.29	256797.9	1.596	8.140
PFHxDA	8.82	1.060	304418.6	A	13C2-PFTeDA	8.29	256797.9	1.185	7.481
PFODA	9.45	1.140	192917.2	A	13C2-PFTeDA	8.29	256797.9	0.751	6.870

Total Ion Chromatogram



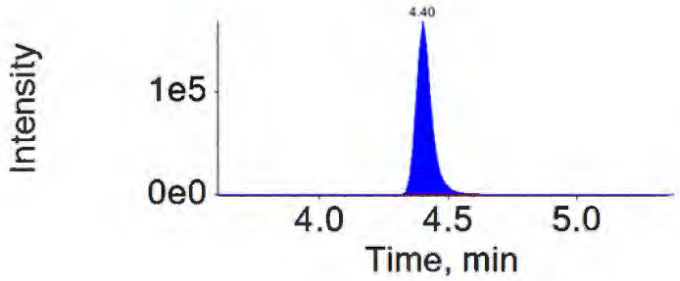
APPROVED
By JWK at 12:34 pm, 5/11/17

REVIEWED
By UMJS at 9:12 am, 5/15/17

ICAL Name: 17MAY10MCAL
QMethod Name: PFCMOD - 17JAN28
Result Table: 17MAY10MCAL 5/11/2017 12:08:01 PM
Acquisition Method: PFC-32-16NOV02.dam

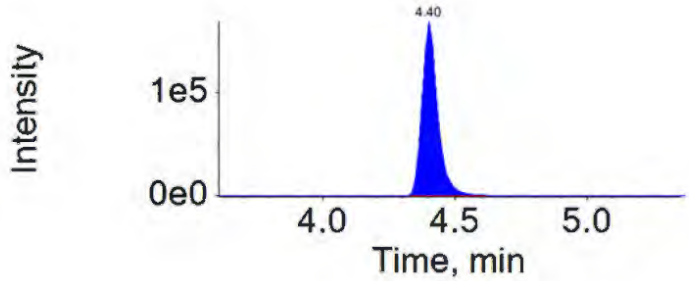
Injection Standard: I13C3-PFBA

216.0 / 172.0



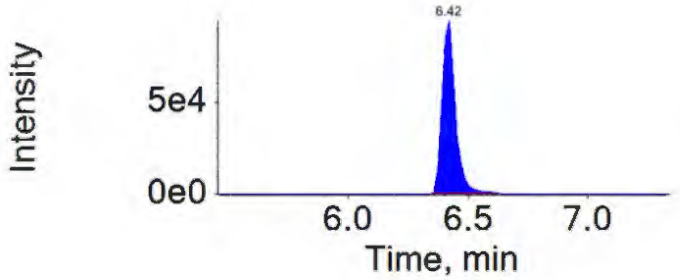
Injection Standard: 13C3-PFBA

216.0 / 172.0



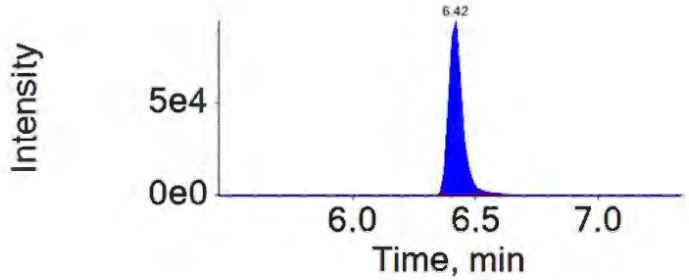
Injection Standard: I13C2-PFOA

415.0 / 370.0



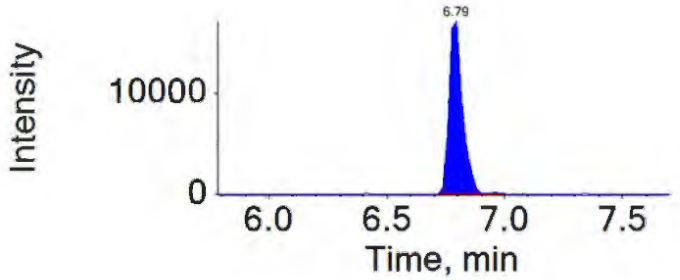
Injection Standard: 13C2-PFOA

415.0 / 370.0



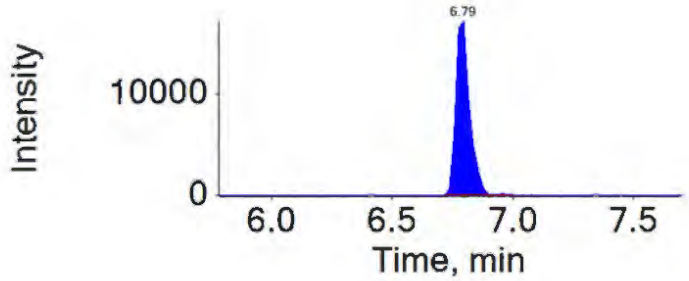
Injection Standard: I13C4-PFOS

503.0 / 99.0



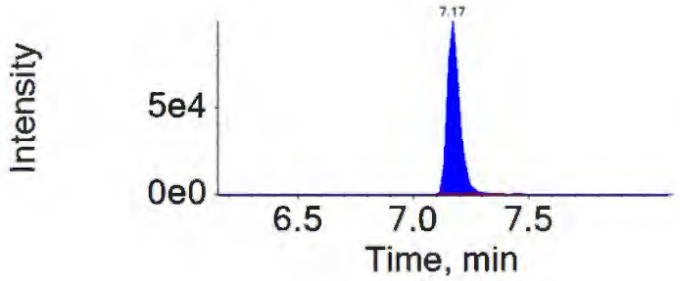
Injection Standard: 13C4-PFOS

503.0 / 99.0



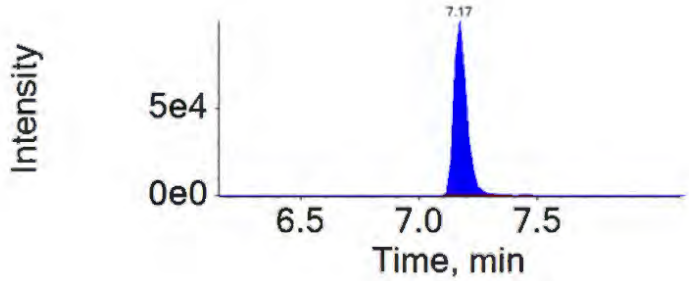
Injection Standard: I13C2-PFDA

515.0 / 470.0



Injection Standard: 13C2-PFDA

515.0 / 470.0



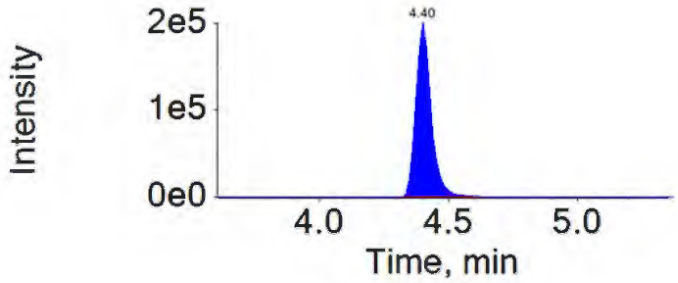
APPROVED
By JWK at 12:34 pm, 5/11/17

REVIEWED
By UMJS at 9:12 am, 5/15/17

ICAL Name: 17MAY10MCAL **Result Table:** 17MAY10MCAL 5/11/2017 12:08:01 PM
QMethod Name: PFCMOD - 17JAN28 **Acquisition Method:** PFC-32-16NOV02.dam

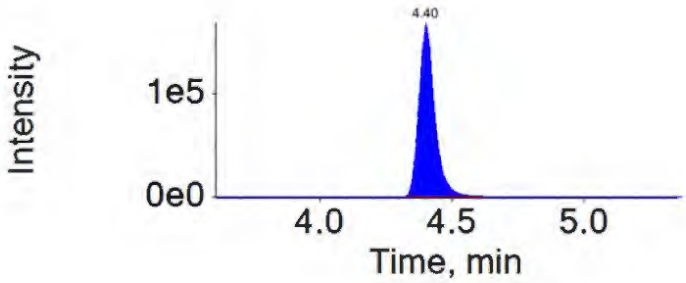
Extraction Standard: E13C4-PFBA

217.0 /
172.0



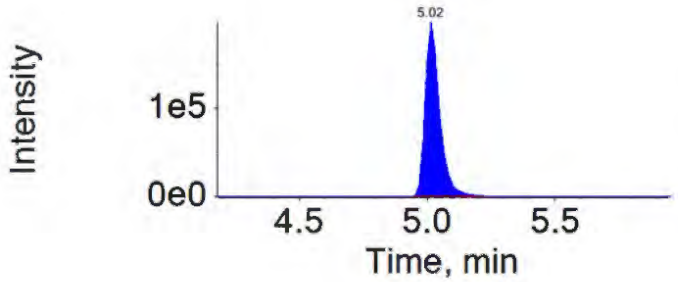
Injection Standard: 13C3-PFBA

216.0 /
172.0



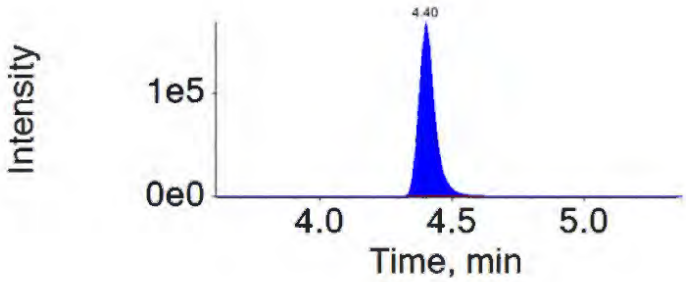
Extraction Standard: E13C5-PFPeA

268.0 /
223.0



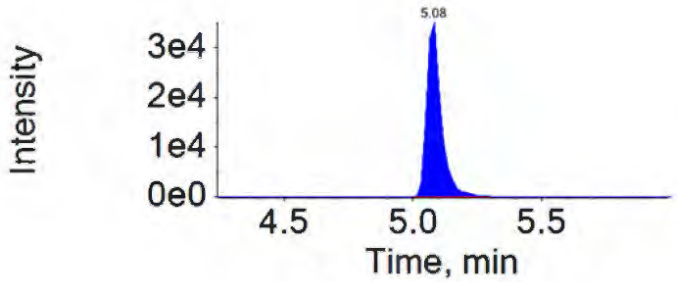
Injection Standard: 13C3-PFBA

216.0 /
172.0



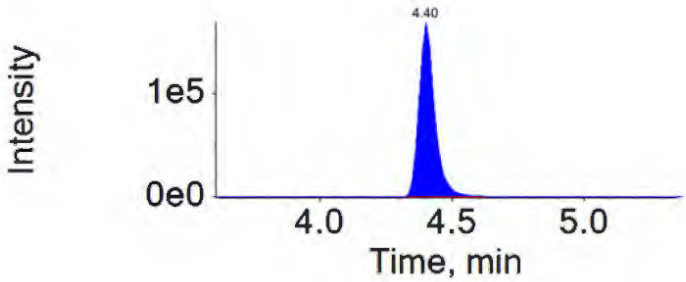
Extraction Standard: E13C3-PFBS

302.0 /
99.0



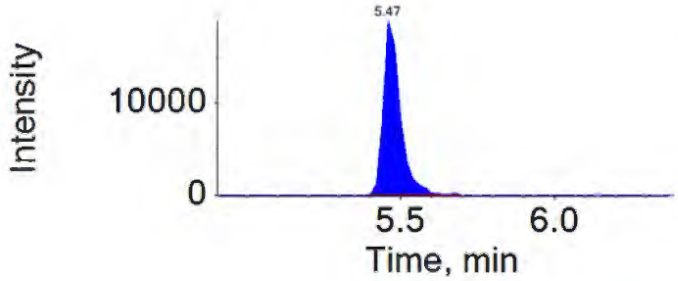
Injection Standard: 13C3-PFBA

216.0 /
172.0



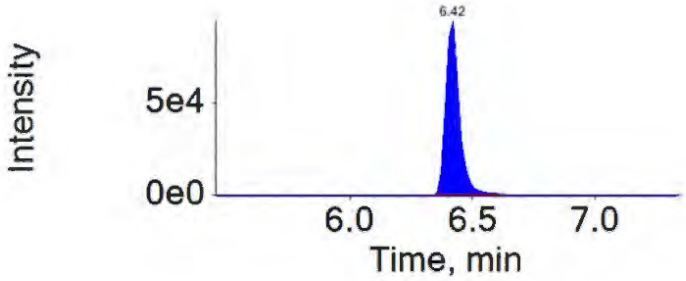
Extraction Standard: E13C2-4:2-FTS

329.0 /
309.0



Injection Standard: 13C2-PFOA

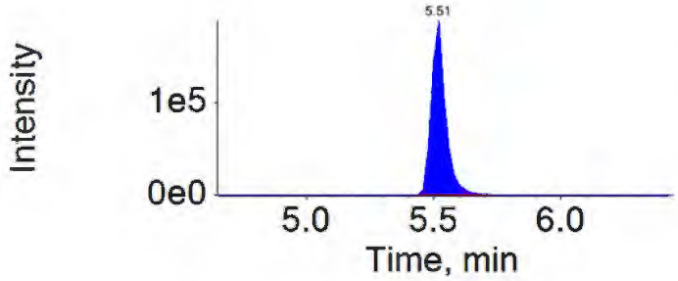
415.0 /
370.0



ICAL Name: 17MAY10MCAL **Result Table:** 17MAY10MCAL 5/11/2017 12:08:01 PM
QMethod Name: PFCMOD - 17JAN28 **Acquisition Method:** PFC-32-16NOV02.dam

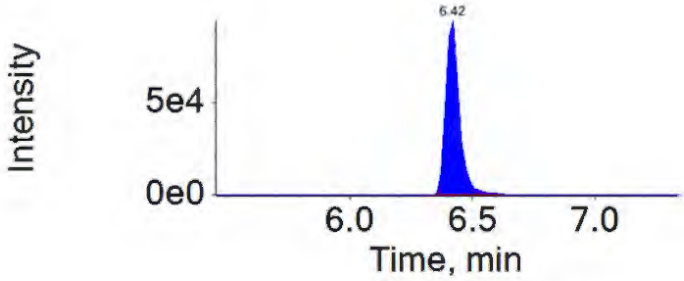
Extraction Standard: E13C5-PFHxA

318.0 /
273.0



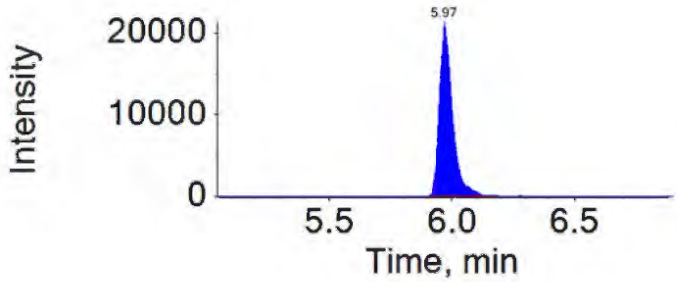
Injection Standard: 13C2-PFOA

415.0 /
370.0



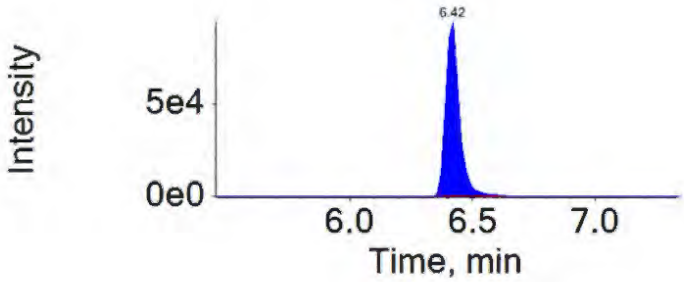
Extraction Standard: E13C3-PFHxS

402.0 /
99.0



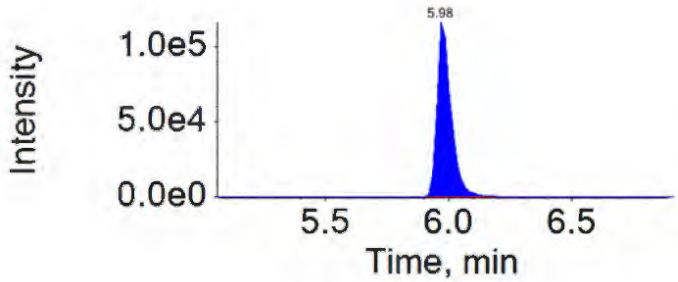
Injection Standard: 13C2-PFOA

415.0 /
370.0



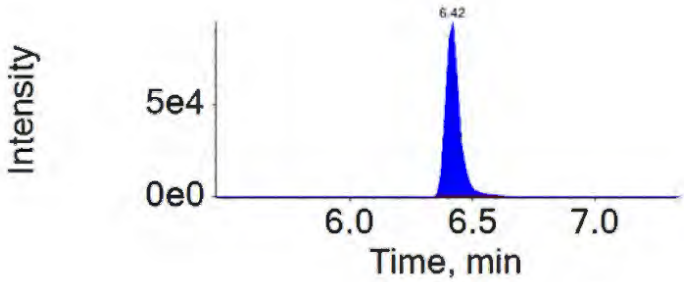
Extraction Standard: E13C4-PFHpA

367.0 /
322.0



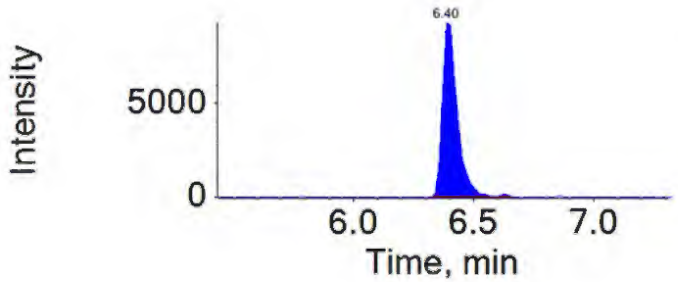
Injection Standard: 13C2-PFOA

415.0 /
370.0



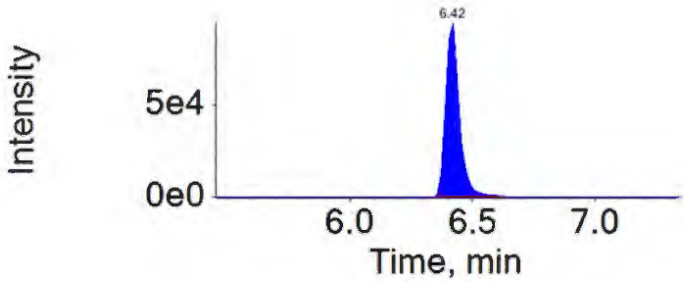
Extraction Standard: E13C2-6:2-FTS

429.0 /
409.0



Injection Standard: 13C2-PFOA

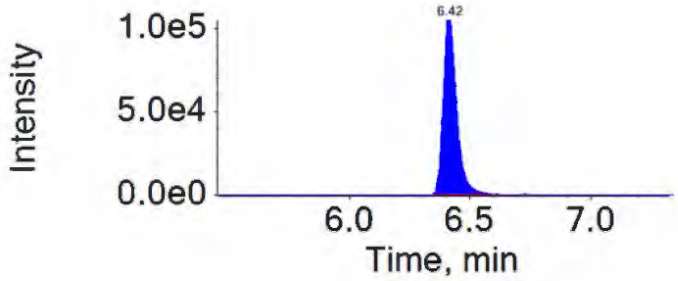
415.0 /
370.0



ICAL Name: 17MAY10MCAL **Result Table:** 17MAY10MCAL 5/11/2017 12:08:01 PM
QMethod Name: PFCMOD - 17JAN28 **Acquisition Method:** PFC-32-16NOV02.dam

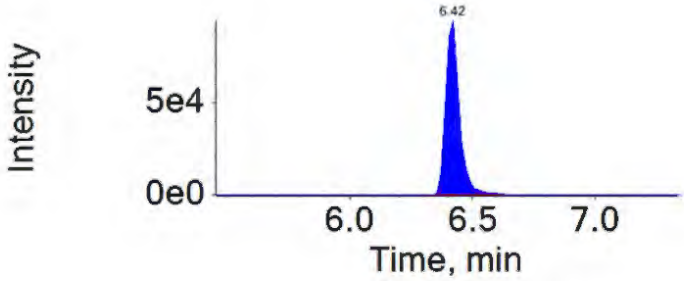
Extraction Standard: E13C8-PFOA

421.0 / 376.0



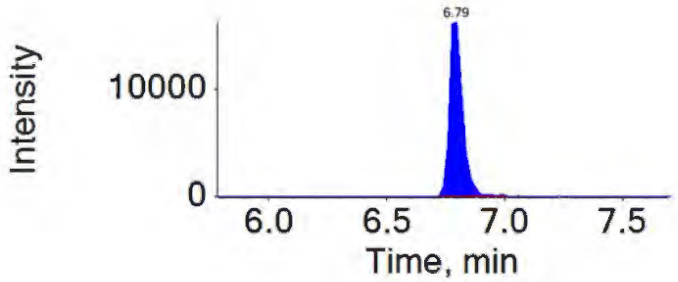
Injection Standard: 13C2-PFOA

415.0 / 370.0



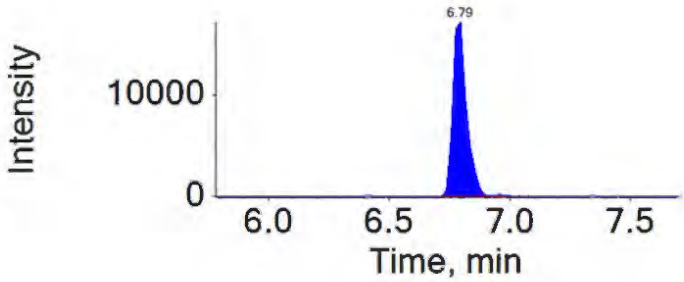
Extraction Standard: E13C8-PFOS

507.0 / 99.0



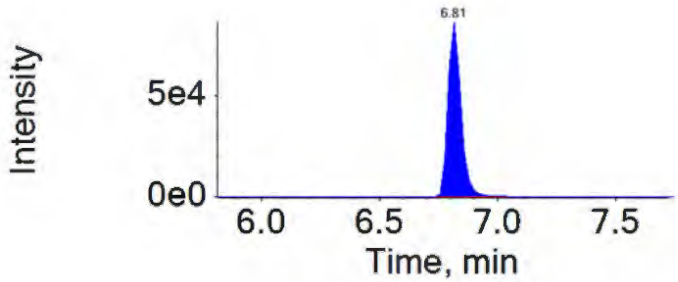
Injection Standard: 13C4-PFOS

503.0 / 99.0



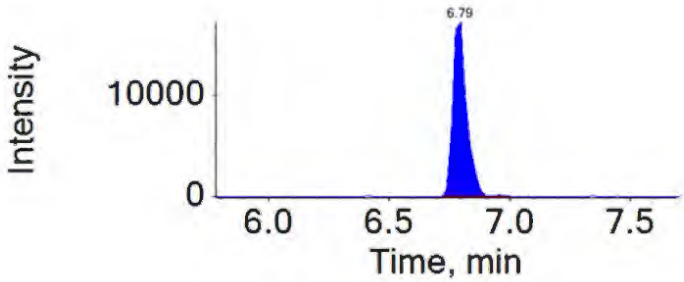
Extraction Standard: E13C9-PFNA

472.0 / 427.0



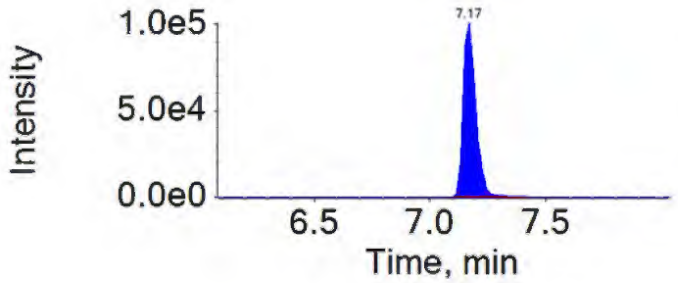
Injection Standard: 13C4-PFOS

503.0 / 99.0



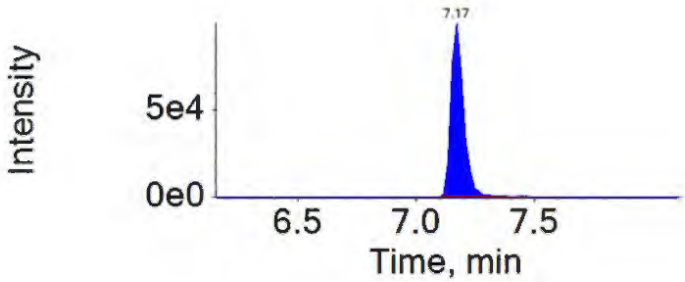
Extraction Standard: E13C8-PFOSA

506.0 / 78.0



Injection Standard: 13C2-PFDA

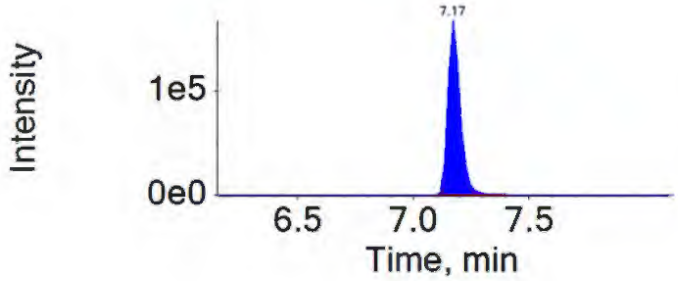
515.0 / 470.0



ICAL Name: 17MAY10MCAL **Result Table:** 17MAY10MCAL 5/11/2017 12:08:01 PM
QMethod Name: PFCMOD - 17JAN28 **Acquisition Method:** PFC-32-16NOV02.dam

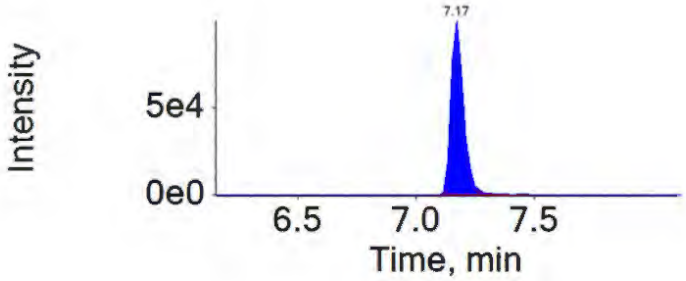
Extraction Standard: E13C6-PFDA

519.0 / 474.0



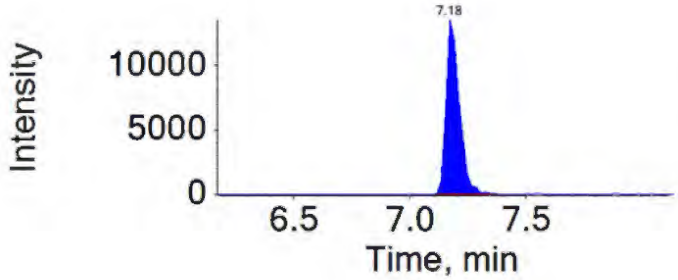
Injection Standard: 13C2-PFDA

515.0 / 470.0



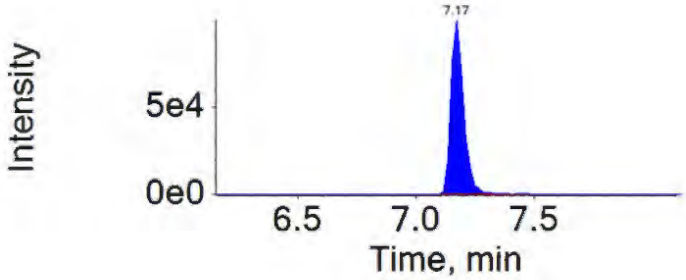
Extraction Standard: E13C2-8:2-FTS

529.0 / 509.0



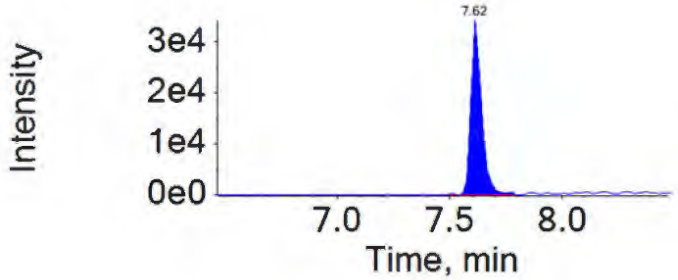
Injection Standard: 13C2-PFDA

515.0 / 470.0



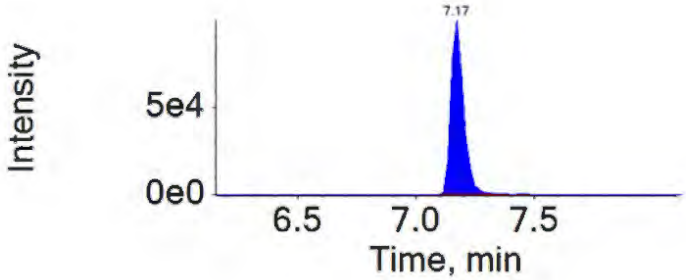
Extraction Standard: Ed7-NMePFOSAE

623.0 / 59.0



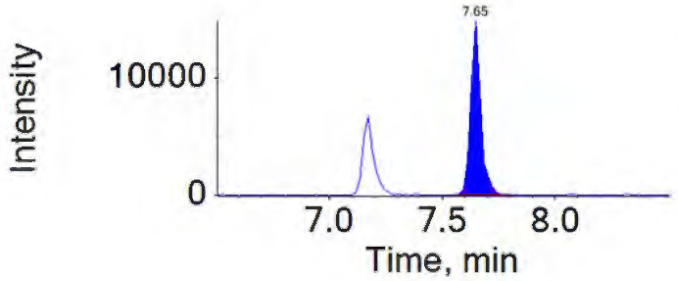
Injection Standard: 13C2-PFDA

515.0 / 470.0



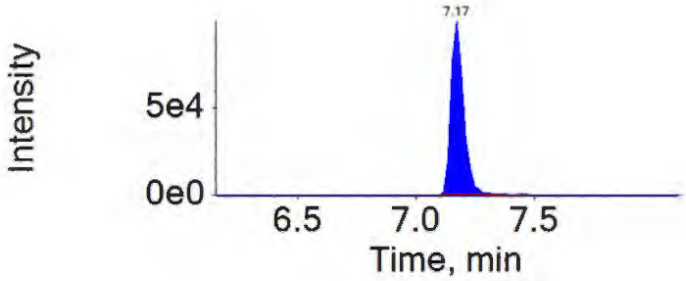
Extraction Standard: Ed3-NMePFOSA

515.0 / 169.0



Injection Standard: 13C2-PFDA

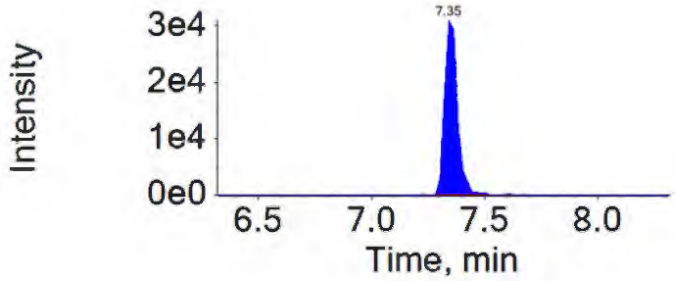
515.0 / 470.0



ICAL Name: 17MAY10MCAL **Result Table:** 17MAY10MCAL 5/11/2017 12:08:01 PM
QMethod Name: PFCMOD - 17JAN28 **Acquisition Method:** PFC-32-16NOV02.dam

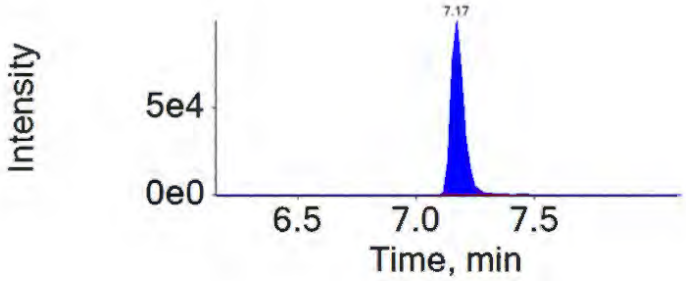
Extraction Standard: Ed3-NMeFOSAA

573.0 / 419.0



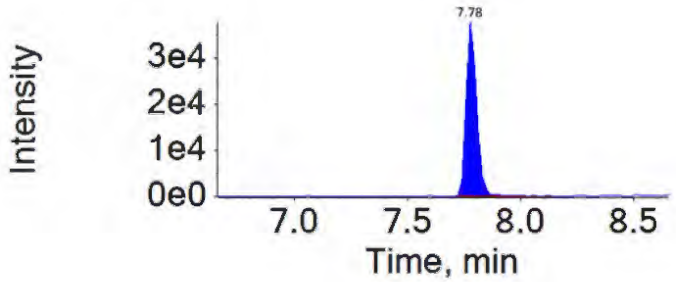
Injection Standard: 13C2-PFDA

515.0 / 470.0



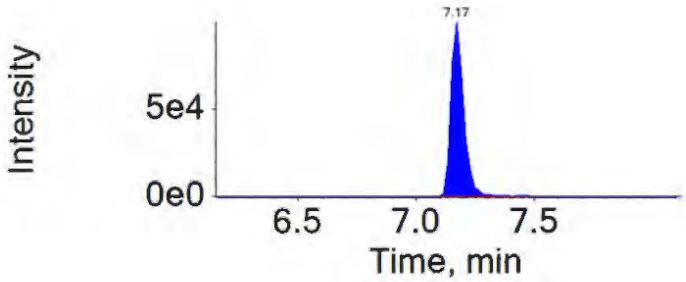
Extraction Standard: Ed9-NEtPFOSAE

639.0 / 59.0



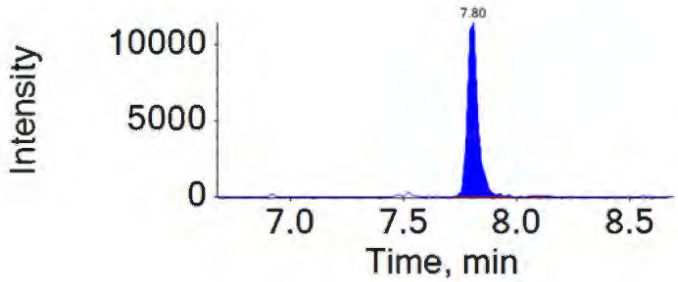
Injection Standard: 13C2-PFDA

515.0 / 470.0



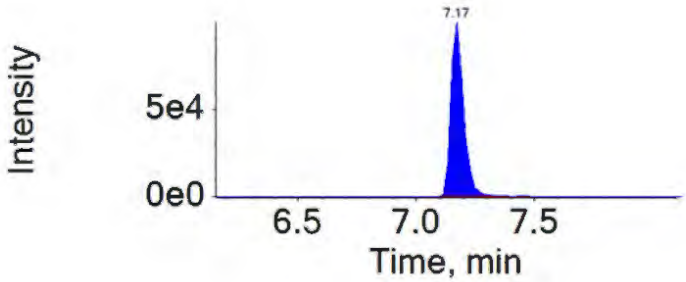
Extraction Standard: Ed5-NEtPFOSA

531.0 / 169.0



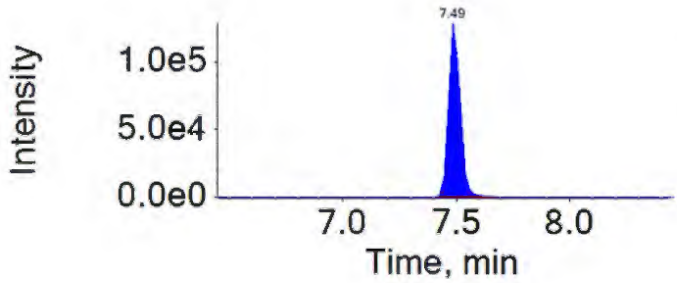
Injection Standard: 13C2-PFDA

515.0 / 470.0



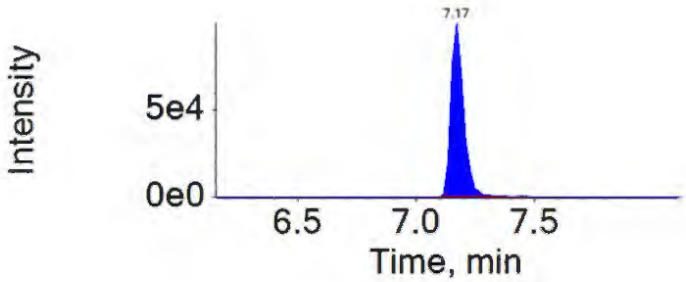
Extraction Standard: E13C7-PFUnDA

570.0 / 525.0



Injection Standard: 13C2-PFDA

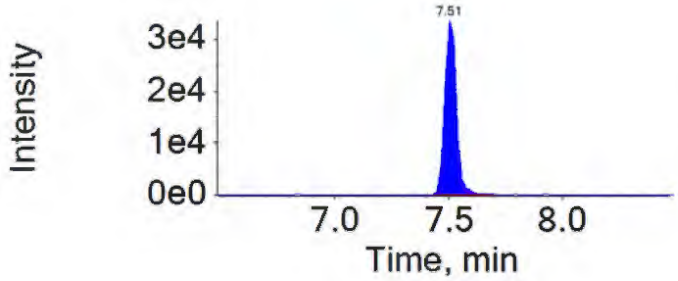
515.0 / 470.0



ICAL Name: 17MAY10MCAL **Result Table:** 17MAY10MCAL 5/11/2017 12:08:01 PM
QMethod Name: PFCMOD - 17JAN28 **Acquisition Method:** PFC-32-16NOV02.dam

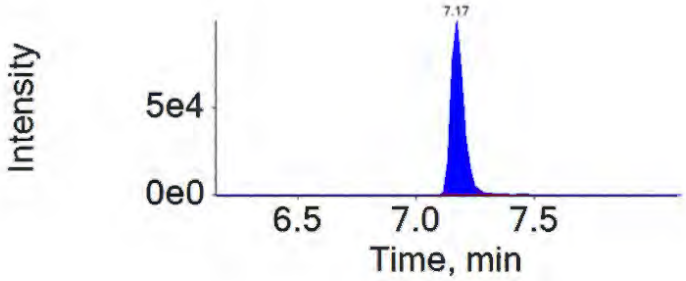
Extraction Standard: Ed5-NEtFOSAA

589.0 / 419.0



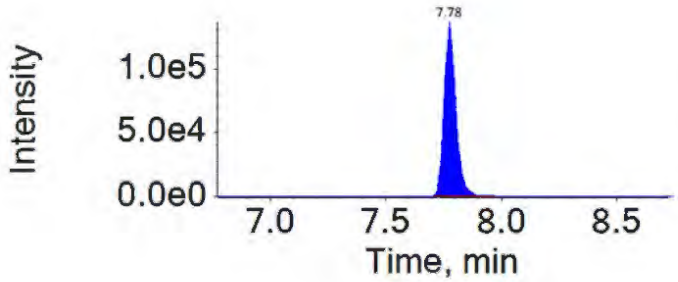
Injection Standard: 13C2-PFDA

515.0 / 470.0



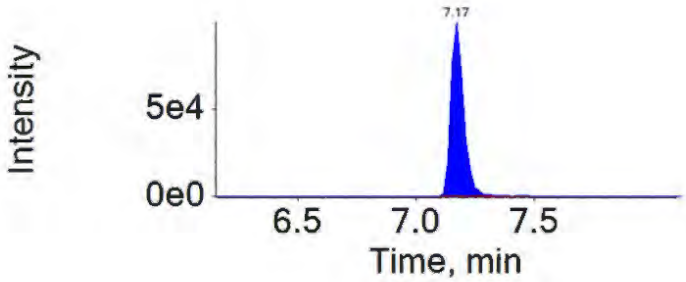
Extraction Standard: E13C2-PFDoDA

615.0 / 570.0



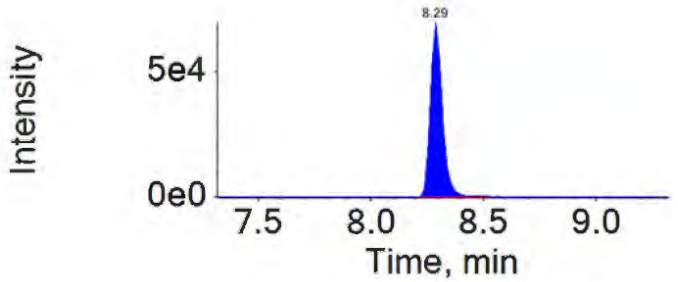
Injection Standard: 13C2-PFDA

515.0 / 470.0



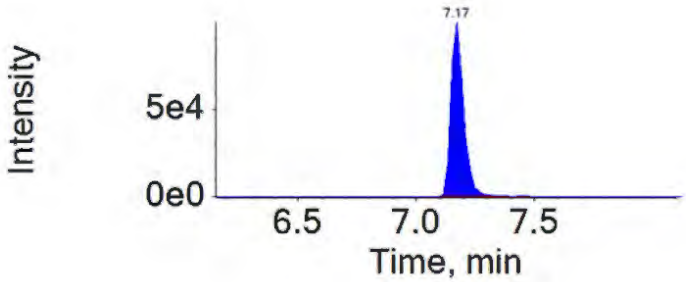
Extraction Standard: E13C2-PFTeDA

715.0 / 670.0



Injection Standard: 13C2-PFDA

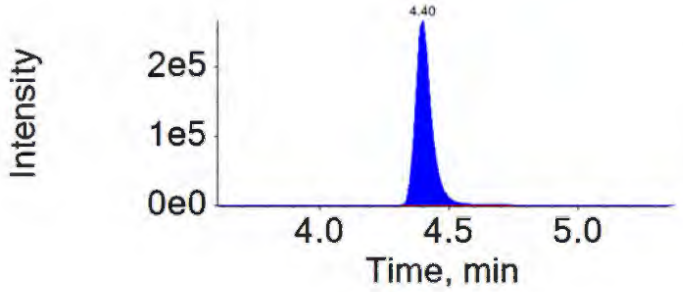
515.0 / 470.0



ICAL Name: 17MAY10MCAL **Result Table:** 17MAY10MCAL 5/11/2017 12:08:01 PM
QMethod Name: PFCMOD - 17JAN28 **Acquisition Method:** PFC-32-16NOV02.dam

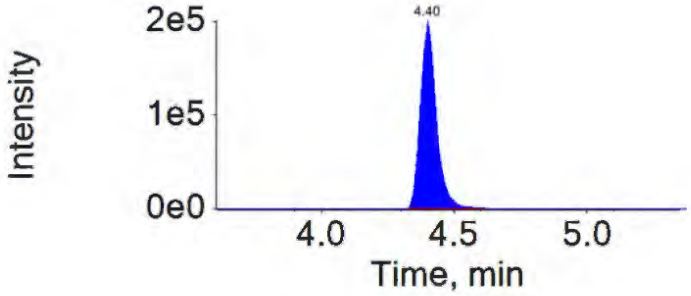
Analyte: PFBA

213.0 /
169.0



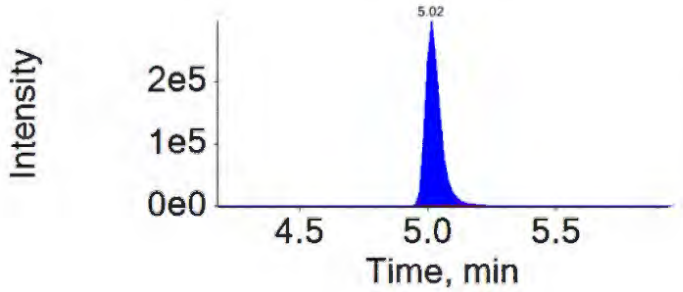
Extraction Standard: 13C4-PFBA

217.0 /
172.0



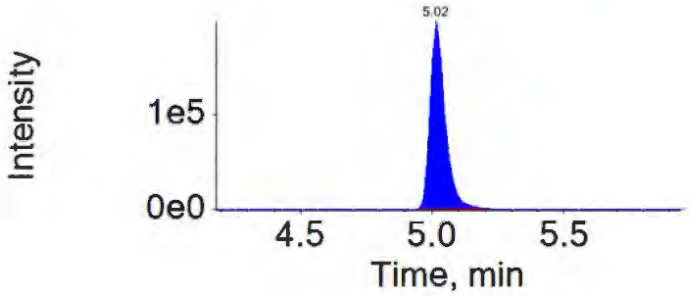
Analyte: PFPeA

263.0 /
219.0



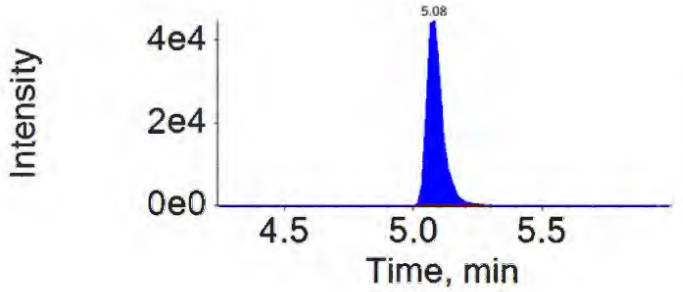
Extraction Standard: 13C5-PFPeA

268.0 /
223.0



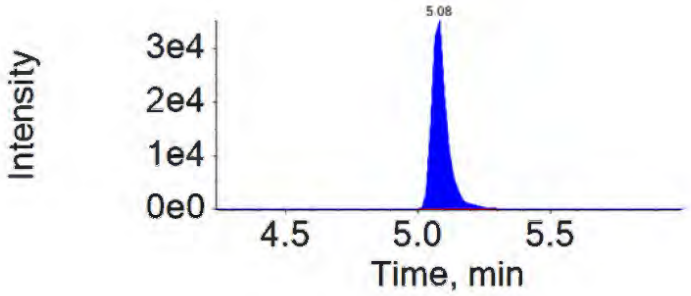
Analyte: PFBS

299.0 /
99.0



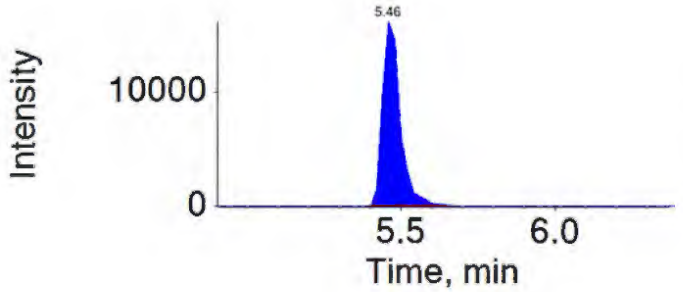
Extraction Standard: 13C3-PFBS

302.0 /
99.0



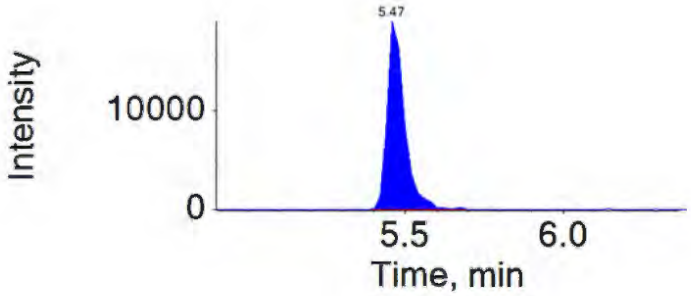
Analyte: 4:2-FTS

327.0 /
307.0



Extraction Standard: 13C2-4:2-FTS

329.0 /
309.0



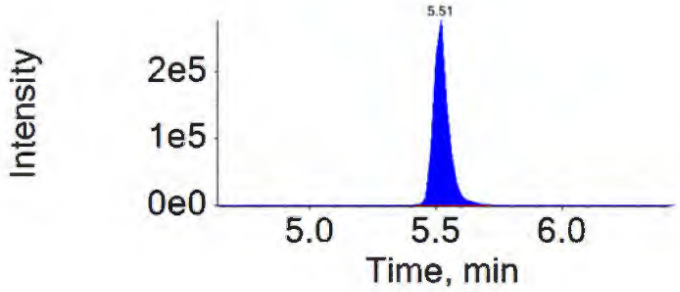
APPROVED
By JWK at 12:34 pm, 5/11/17

REVIEWED
By UMJS at 9:12 am, 5/15/17

ICAL Name: 17MAY10MCAL **Result Table:** 17MAY10MCAL 5/11/2017 12:08:01 PM
QMethod Name: PFCMOD - 17JAN28 **Acquisition Method:** PFC-32-16NOV02.dam

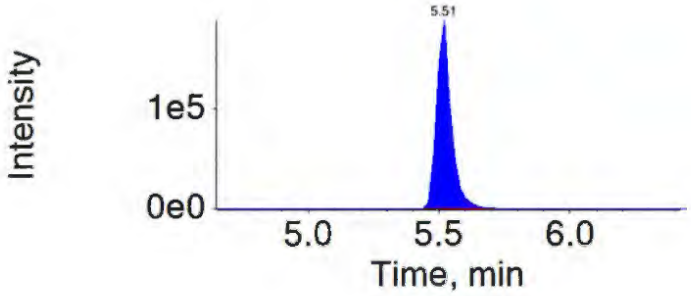
Analyte: PFHxA

313.0 /
269.0



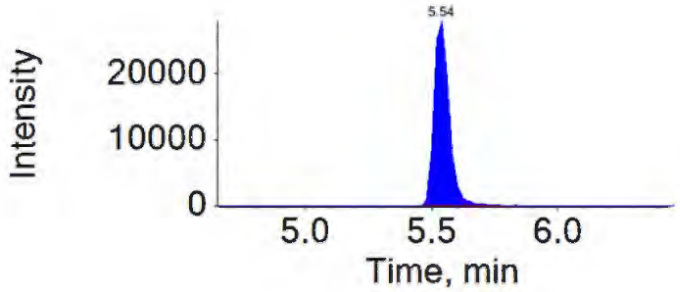
Extraction Standard: 13C5-PFHxA

318.0 /
273.0



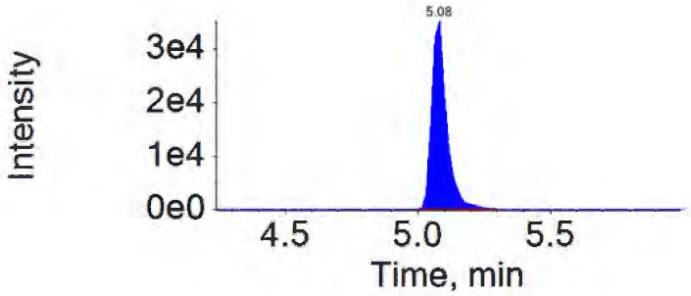
Analyte: PFPeS

349.0 /
99.0



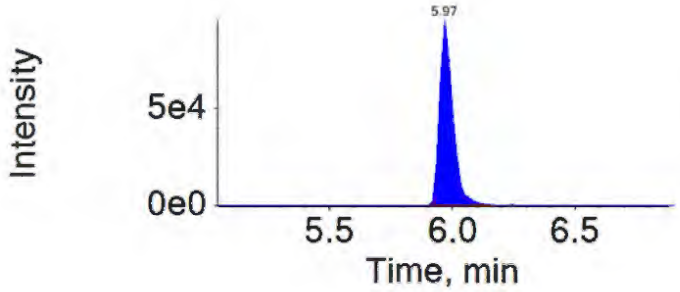
Extraction Standard: 13C3-PFBS

302.0 /
99.0



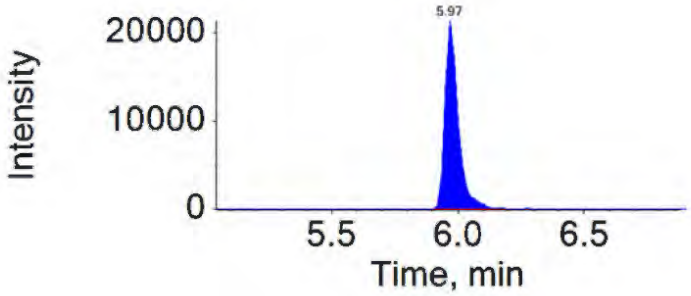
Analyte: PFHxS

399.0 /
80.0



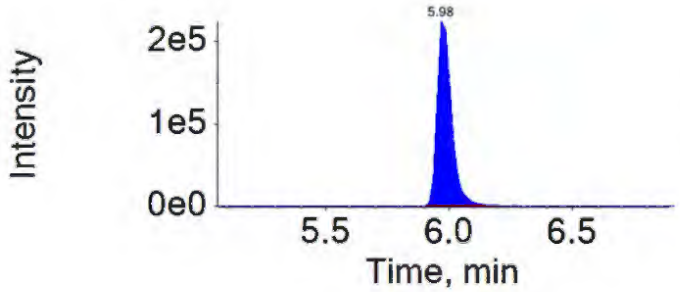
Extraction Standard: 13C3-PFHxS

402.0 /
99.0



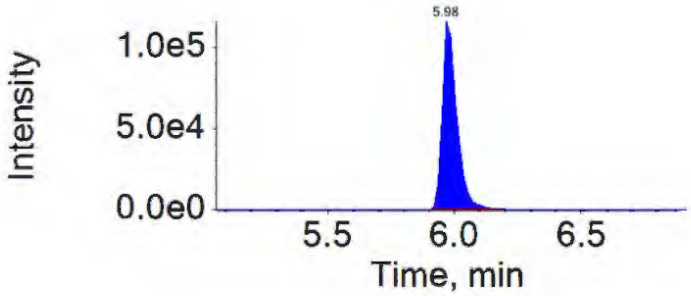
Analyte: PFHpA

363.0 /
319.0



Extraction Standard: 13C4-PFHpA

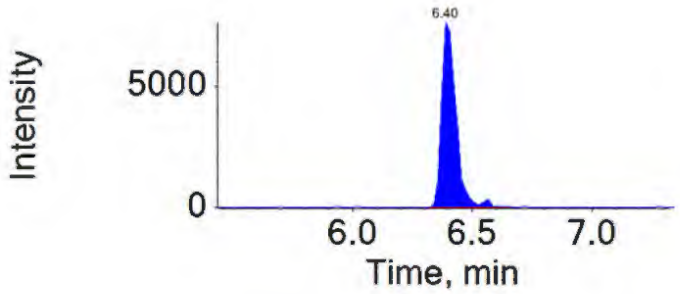
367.0 /
322.0



ICAL Name: 17MAY10MCAL **Result Table:** 17MAY10MCAL 5/11/2017 12:08:01 PM
QMethod Name: PFCMOD - 17JAN28 **Acquisition Method:** PFC-32-16NOV02.dam

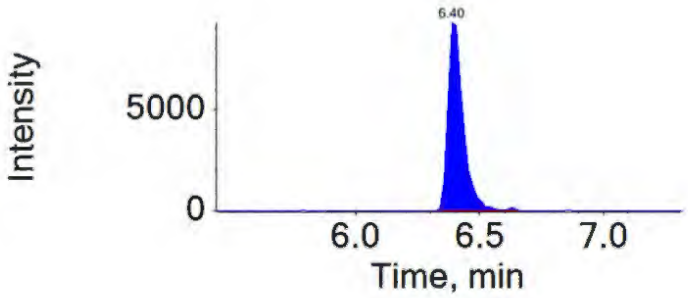
Analyte: 6:2-FTS

427.0 /
407.0



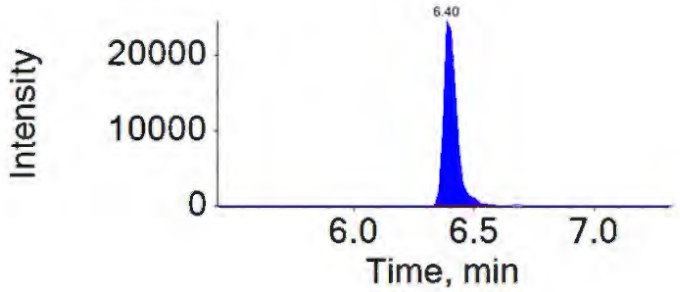
Extraction Standard: 13C2-6:2-FTS

429.0 /
409.0



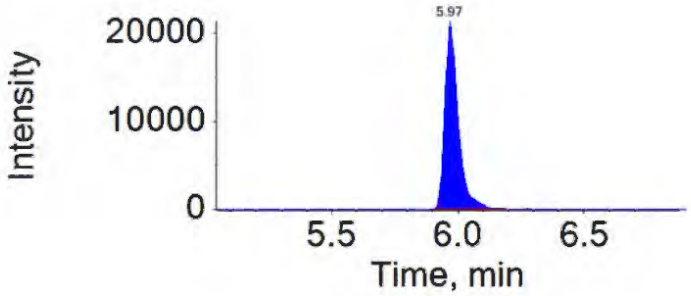
Analyte: PFHpS

449.0 /
99.0



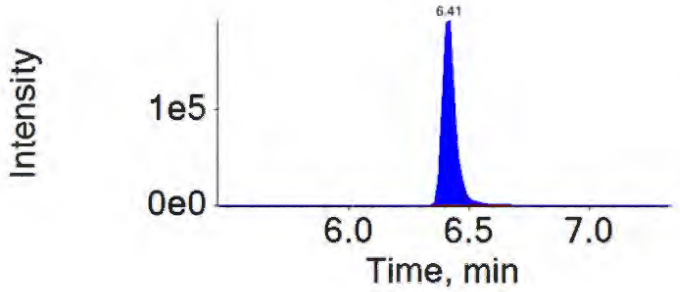
Extraction Standard: 13C3-PFHxS

402.0 /
99.0



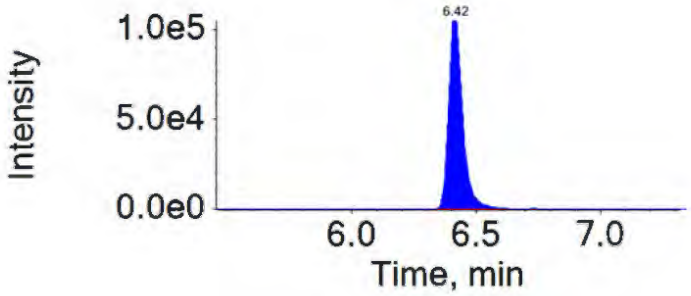
Analyte: PFOA

413.0 /
369.0



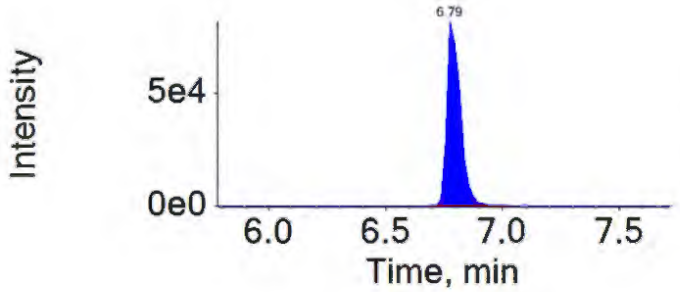
Extraction Standard: 13C8-PFOA

421.0 /
376.0



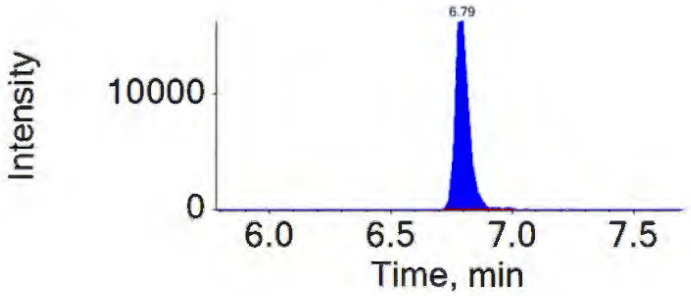
Analyte: PFOS

499.0 /
80.0



Extraction Standard: 13C8-PFOS

507.0 /
99.0



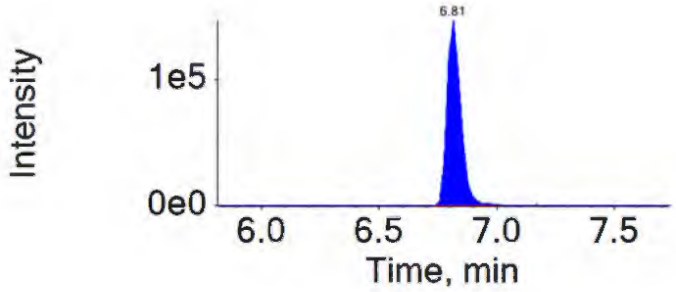
APPROVED
By JWK at 12:34 pm, 5/11/17

REVIEWED
By UMJS at 9:12 am, 5/15/17

ICAL Name: 17MAY10MCAL **Result Table:** 17MAY10MCAL 5/11/2017 12:08:01 PM
QMethod Name: PFCMOD - 17JAN28 **Acquisition Method:** PFC-32-16NOV02.dam

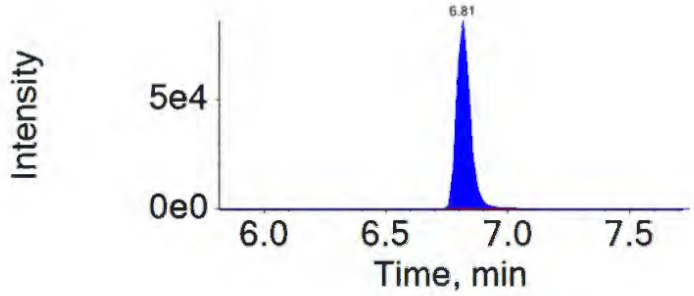
Analyte: PFNA

463.0 /
419.0



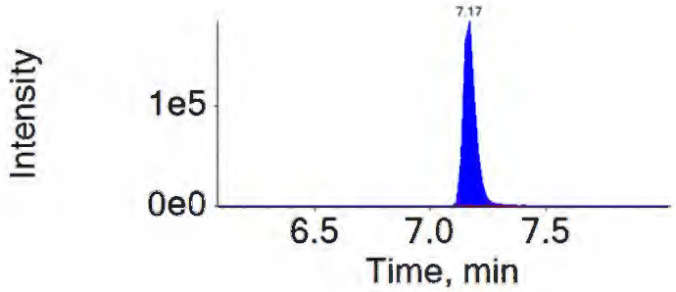
Extraction Standard: 13C9-PFNA

472.0 /
427.0



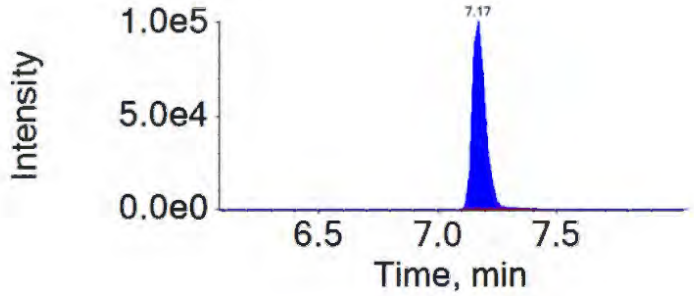
Analyte: PFOSA

498.0 /
78.0



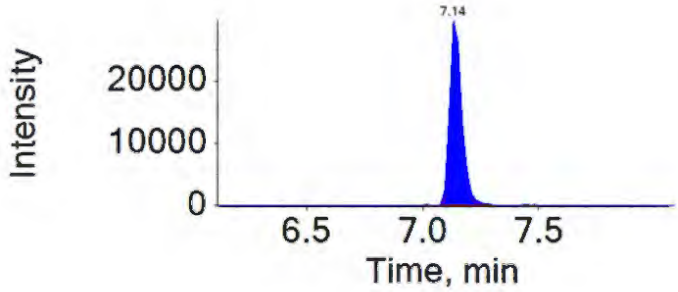
Extraction Standard: 13C8-PFOSA

506.0 /
78.0



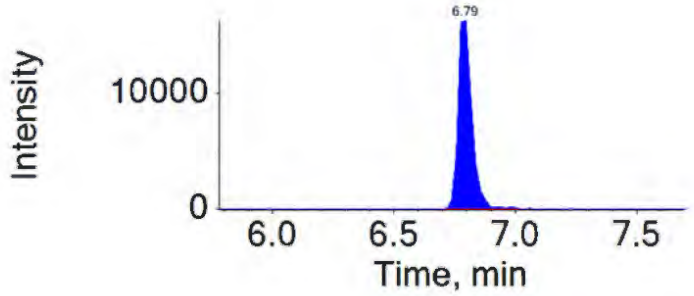
Analyte: PFNS

549.0 /
99.0



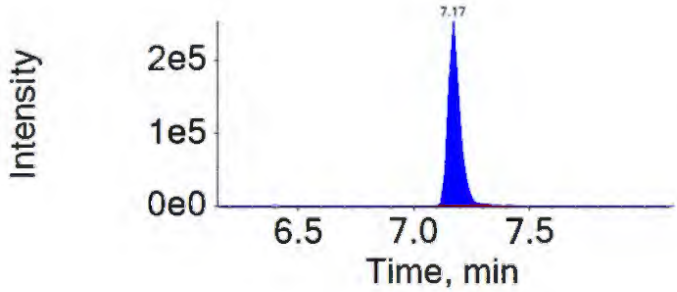
Extraction Standard: 13C8-PFOS

507.0 /
99.0



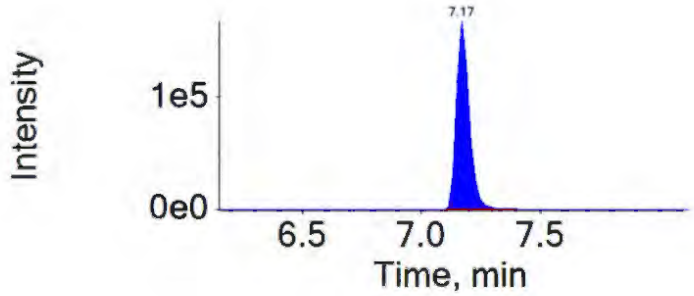
Analyte: PFDA

513.0 /
469.0



Extraction Standard: 13C6-PFDA

519.0 /
474.0



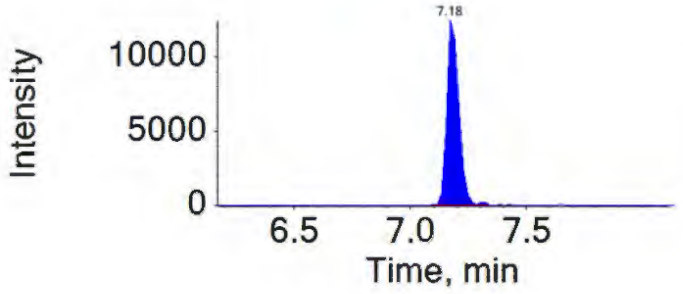
APPROVED
By JWK at 12:34 pm, 5/11/17

REVIEWED
By UMJS at 9:12 am, 5/15/17

ICAL Name: 17MAY10MCAL **Result Table:** 17MAY10MCAL 5/11/2017 12:08:01 PM
QMethod Name: PFCMOD - 17JAN28 **Acquisition Method:** PFC-32-16NOV02.dam

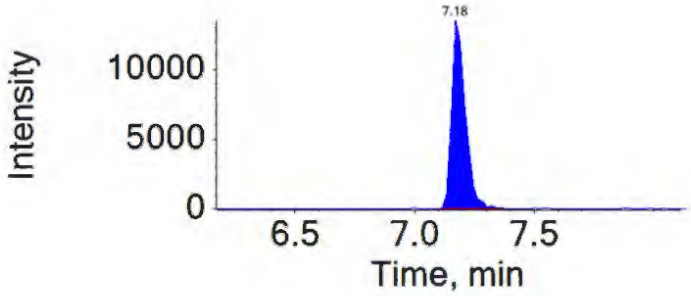
Analyte: 8:2-FTS

527.0 /
507.0



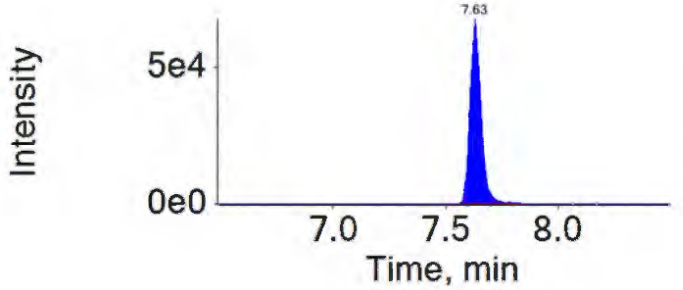
Extraction Standard: 13C2-8:2-FTS

529.0 /
509.0



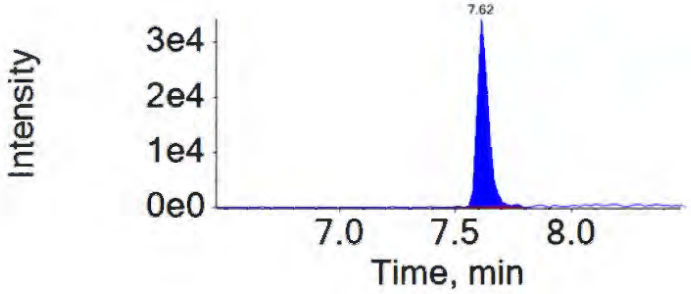
Analyte: NMePFOSAE

616.0 /
59.0



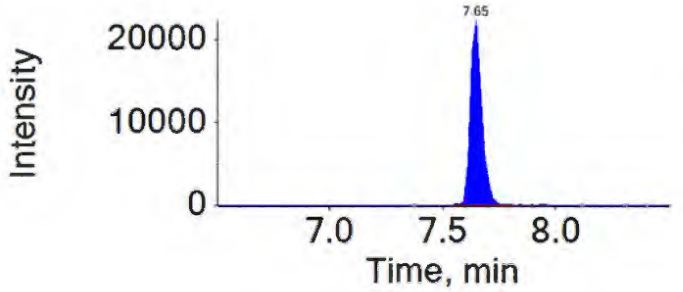
Extraction Standard: d7-NMePFOSAE

623.0 /
59.0



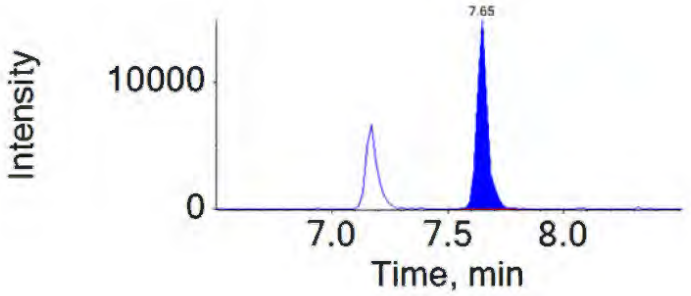
Analyte: NMePFOSA

512.0 /
169.0



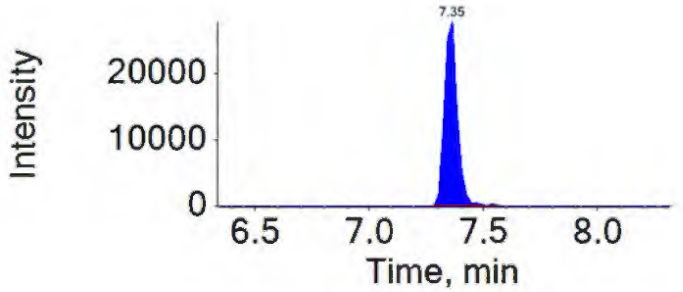
Extraction Standard: d3-NMePFOSA

515.0 /
169.0



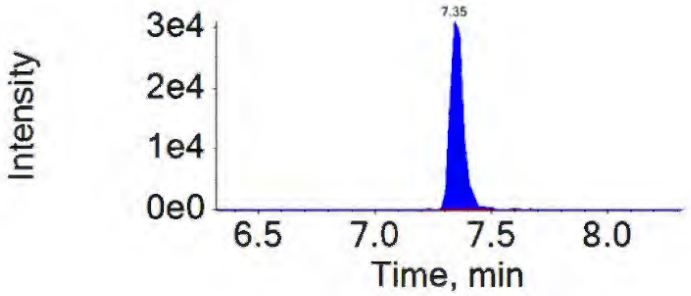
Analyte: NMeFOSAA

570.0 /
419.0



Extraction Standard: d3-NMeFOSAA

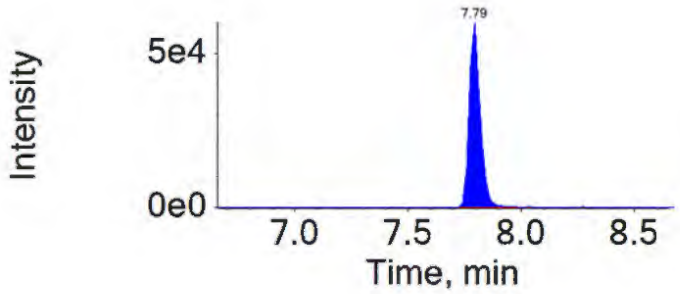
573.0 /
419.0



ICAL Name: 17MAY10MCAL **Result Table:** 17MAY10MCAL 5/11/2017 12:08:01 PM
QMethod Name: PFCMOD - 17JAN28 **Acquisition Method:** PFC-32-16NOV02.dam

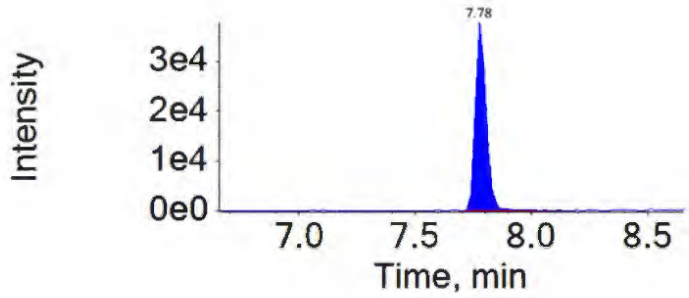
Analyte: NEtPFOSAE

630.0 /
59.0



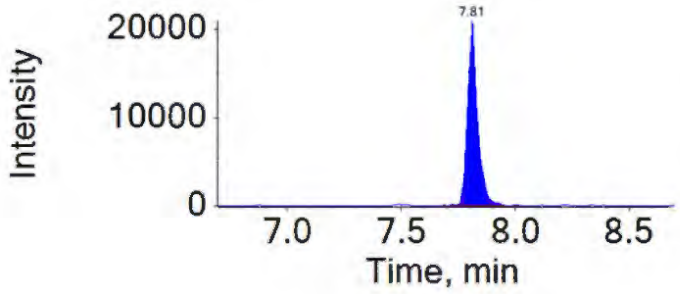
Extraction Standard: d9-NEtPFOSAE

639.0 /
59.0



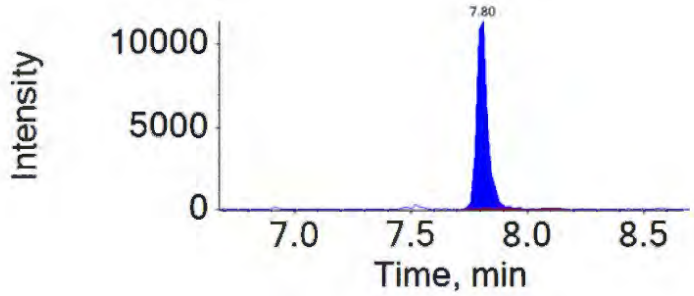
Analyte: NEtPFOSA

526.0 /
169.0



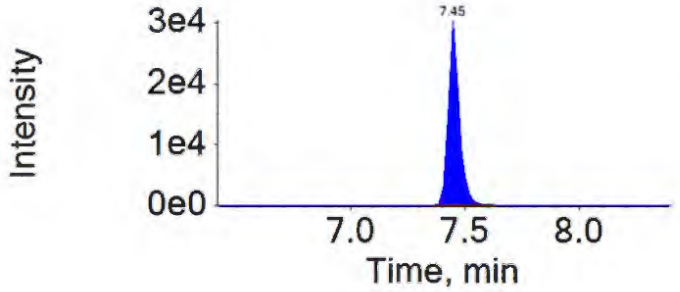
Extraction Standard: d5-NEtPFOSA

531.0 /
169.0



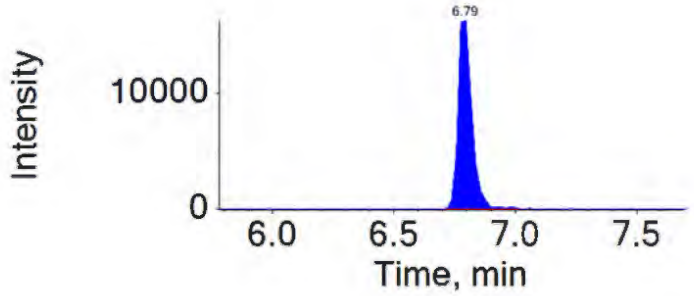
Analyte: PFDS

599.0 /
99.0



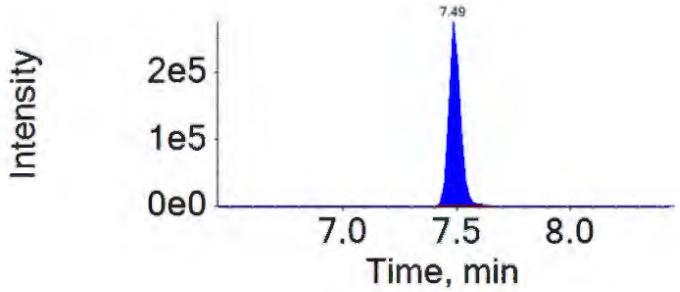
Extraction Standard: 13C8-PFOS

507.0 /
99.0



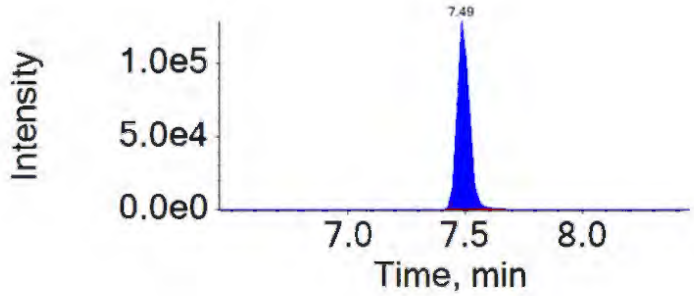
Analyte: PFUnDA

563.0 /
519.0



Extraction Standard: 13C7-PFUnDA

570.0 /
525.0



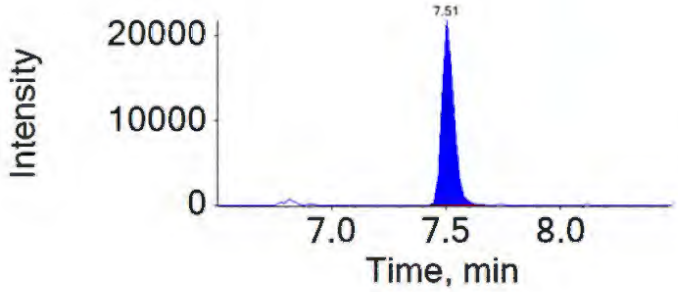
APPROVED
By JWK at 12:34 pm, 5/11/17

REVIEWED
By UMJS at 9:12 am, 5/15/17

ICAL Name: 17MAY10MCAL **Result Table:** 17MAY10MCAL 5/11/2017 12:08:01 PM
QMethod Name: PFCMOD - 17JAN28 **Acquisition Method:** PFC-32-16NOV02.dam

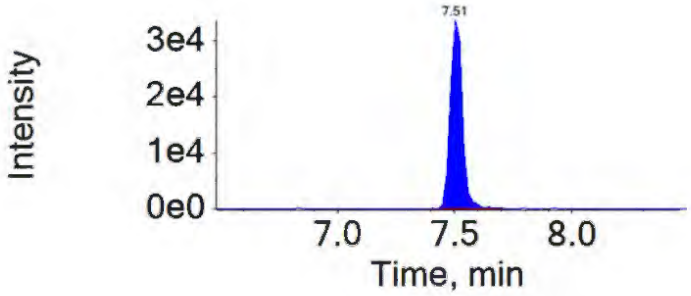
Analyte: NEtFOSAA

584.0 / 419.0



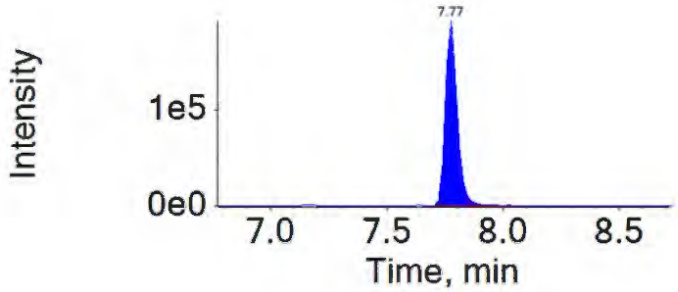
Extraction Standard: d5-NEtFOSAA

589.0 / 419.0



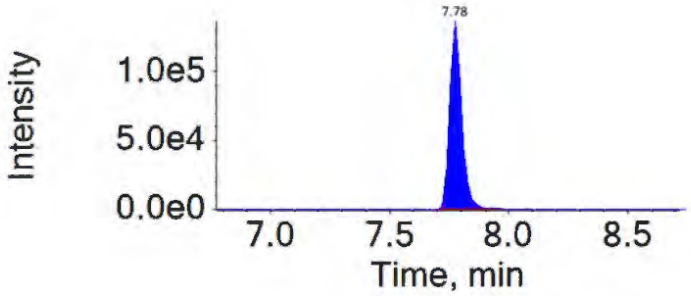
Analyte: PFDoDA

613.0 / 569.0



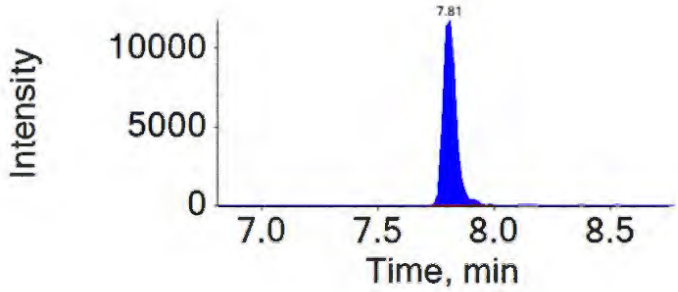
Extraction Standard: 13C2-PFDoDA

615.0 / 570.0



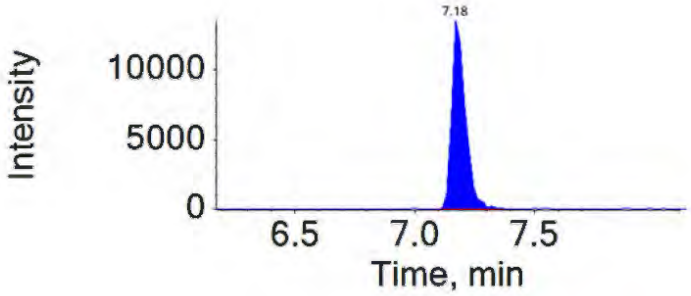
Analyte: 10:2-FTS

627.0 / 607.0



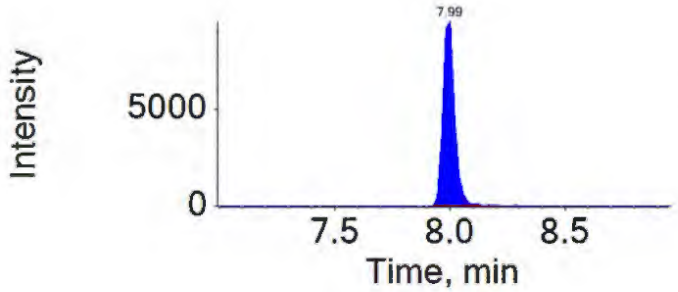
Extraction Standard: 13C2-8:2-FTS

529.0 / 509.0



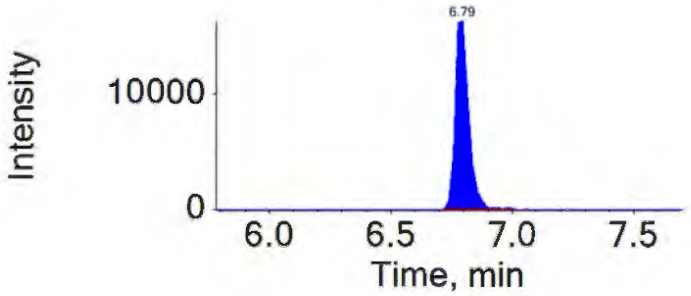
Analyte: PFDoS

699.0 / 99.0



Extraction Standard: 13C8-PFOS

507.0 / 99.0

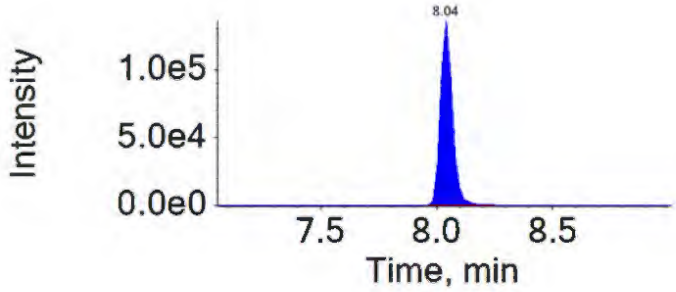


APPROVED
By JWK at 12:34 pm, 5/11/17

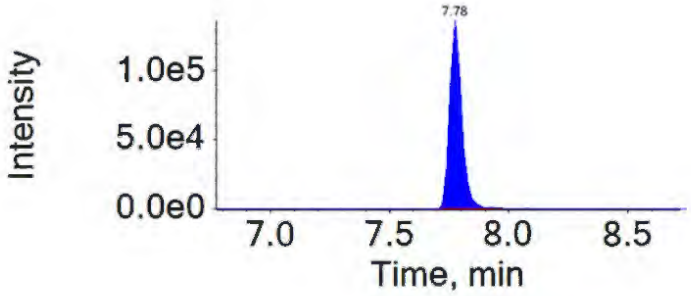
REVIEWED
By UMJS at 9:12 am, 5/15/17

ICAL Name: 17MAY10MCAL **Result Table:** 17MAY10MCAL 5/11/2017 12:08:01 PM
QMethod Name: PFCMOD - 17JAN28 **Acquisition Method:** PFC-32-16NOV02.dam

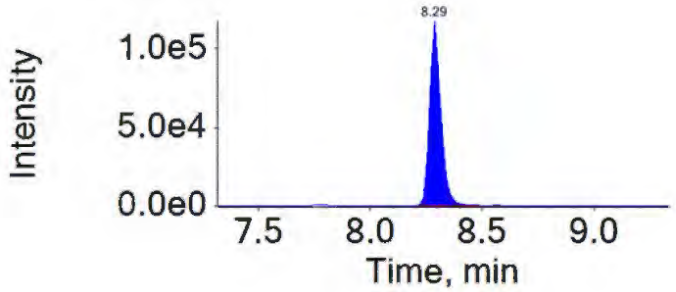
Analyte: PFTrDA
663.0 / 619.0



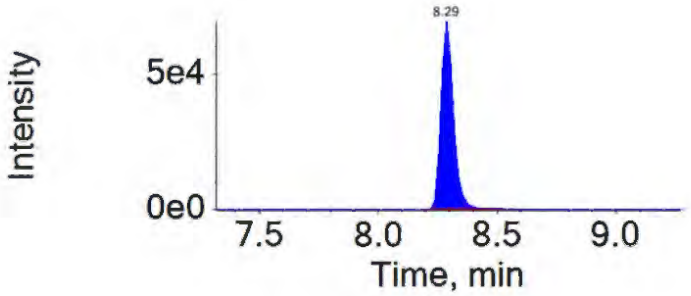
Extraction Standard: 13C2-PFDoDA
615.0 / 570.0



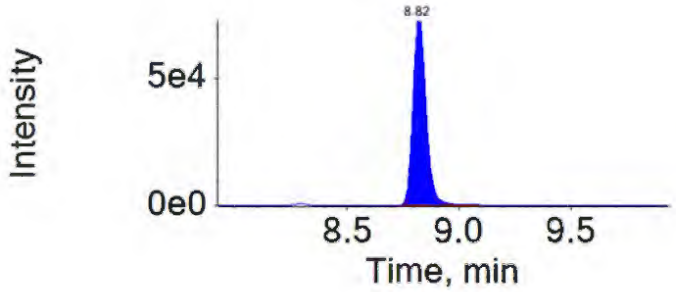
Analyte: PFTeDA
713.0 / 669.0



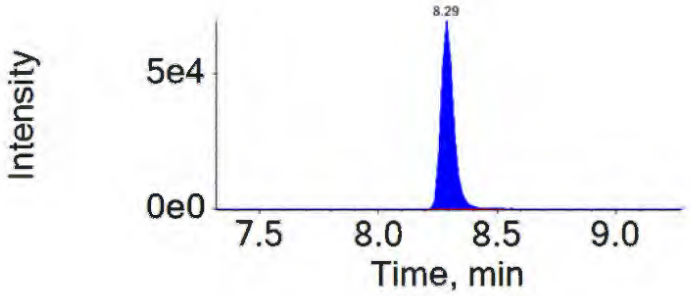
Extraction Standard: 13C2-PFTeDA
715.0 / 670.0



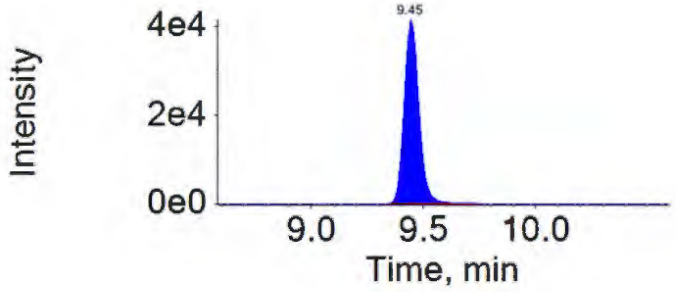
Analyte: PFHxDA
813.0 / 769.0



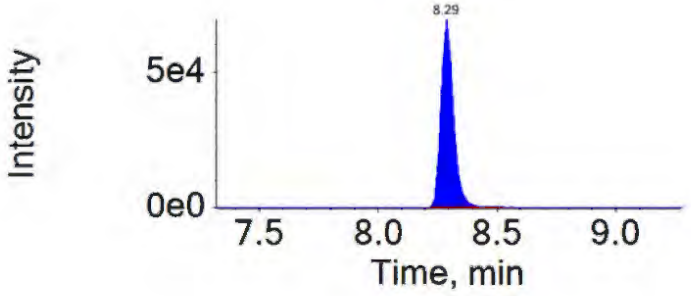
Extraction Standard: 13C2-PFTeDA
715.0 / 670.0



Analyte: PFODA
913.0 / 869.0



Extraction Standard: 13C2-PFTeDA
715.0 / 670.0



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LC-MS/MS Analysis Report

Printed: 5/11/2017 12:16:00 PM
Template: MQ-Sample-16Nov21.docx

ICAL Name: 17MAY10MCAL
QMethod Name: PFCMOD - 17JAN28
Result Table: 17MAY10MCAL 5/11/2017 12:08:01 PM
Acquisition Method: PFC-32-16NOV02.dam

Sample Name:	CAL5			**Data File:**		17MAY10MCAL-34.wiff
Sample ID:	CALPFC1712533F			**Acquis Date:**		2017-05-11T06:32:12
Sample Type:	Standard			**Instrument:**		LM24960
Vial Position:	7			**Acquis Method:**		PFC-32-16NOV02.dam
Injection Vol:	5.00			**Result Table:**		17MAY10MCAL
QMethod File:	PFCMOD - 17JAN28			**ICAL Name:**		17MAY10MCAL
Batch Number:	MODICAL			**Operator:**		Not calculated
Sample Wt.:	1.00000			**Dilution Factor:**		1.00
Sample Vol.:	1.000			**Prep Factor:**		1.000

Injection Standard Peak Table

Injection Standard Name	Inj Std Conc	Injection Std Peak Area	ICAL Injection Standard AVG	Injection Std %Diff	Injection Std %Diff Limit	Injection Std %Diff OOS
I13C3-PFBA	1.0	685309.8	669117.3	2.4	50.0	
I13C2-PFOA	1.0	325224.6	342184.6	-5.0	50.0	
I13C4-PFOS	1.0	70793.3	70131.6	0.9	50.0	
I13C2-PFDA	1.0	406529.6	384098.7	5.8	50.0	

Extraction Standard Peak Table

Extraction Standard Name	Ext Std Area	Inj Std Name	Inj Std Area	Area Ratio	AVG Area Ratio	Ext Std Conc	Ext Std Result	Ext Std %REC	Ext Std %REC Limit	Ext Std OOS
E13C4-PFBA	785937.4	13C3-PFBA	685309.8	1.147	1.150	1.000	0.997		-	
E13C5-PFPeA	717415.2	13C3-PFBA	685309.8	1.047	1.073	1.000	0.975		-	
E13C3-PFBS	127299.1	13C3-PFBA	685309.8	0.186	0.194	1.000	0.956		-	
E13C2-4:2-FTS	89903.3	13C2-PFOA	325224.6	0.276	0.236	1.000	1.170		-	
E13C5-PFHxA	674694.4	13C2-PFOA	325224.6	2.075	2.026	1.000	1.024		-	
E13C3-PFHxS	67946.0	13C2-PFOA	325224.6	0.209	0.206	1.000	1.015		-	
E13C4-PFHpA	447767.8	13C2-PFOA	325224.6	1.377	1.285	1.000	1.072		-	
E13C2-6:2-FTS	45637.2	13C2-PFOA	325224.6	0.140	0.128	1.000	1.095		-	
E13C8-PFOA	366305.0	13C2-PFOA	325224.6	1.126	1.163	1.000	0.968		-	
E13C8-PFOS	52797.1	13C4-PFOS	70793.3	0.746	0.865	1.000	0.862		-	
E13C9-PFNA	322425.9	13C4-PFOS	70793.3	4.555	4.422	1.000	1.030		-	
E13C8-PFOSA	375612.3	13C2-PFDA	406529.6	0.924	0.936	1.000	0.987		-	
E13C6-PFDA	521092.6	13C2-PFDA	406529.6	1.282	1.424	1.000	0.900		-	
E13C2-8:2-FTS	58320.7	13C2-PFDA	406529.6	0.144	0.155	1.000	0.923		-	
Ed7-NMePFOSAE	120050.6	13C2-PFDA	406529.6	0.295	0.299	1.000	0.988		-	
Ed3-NMePFOSA	45430.7	13C2-PFDA	406529.6	0.112	0.120	1.000	0.929		-	
Ed3-NMeFOSAA	139575.1	13C2-PFDA	406529.6	0.343	0.343	1.000	1.001		-	
Ed9-NEtPFOSAE	130499.7	13C2-PFDA	406529.6	0.321	0.333	1.000	0.965		-	
Ed5-NEtPFOSA	33431.2	13C2-PFDA	406529.6	0.082	0.095	1.000	0.868		-	
E13C7-PFUnDA	334025.9	13C2-PFDA	406529.6	0.822	0.953	1.000	0.862		-	
Ed5-NEtFOSAA	82785.5	13C2-PFDA	406529.6	0.204	0.249	1.000	0.819		-	
E13C2-PFDoDA	440113.2	13C2-PFDA	406529.6	1.083	1.154	1.000	0.938		-	
E13C2-PFTeDA	257696.7	13C2-PFDA	406529.6	0.634	0.651	1.000	0.973		-	

APPROVED
By JWK at 12:34 pm, 5/11/17

REVIEWED
By UMJS at 9:12 am, 5/15/17

ICAL Name: 17MAY10MCAL **Result Table:** 17MAY10MCAL 5/11/2017 12:08:01 PM
QMethod Name: PFCMOD - 17JAN28 **Acquisition Method:** PFC-32-16NOV02.dam

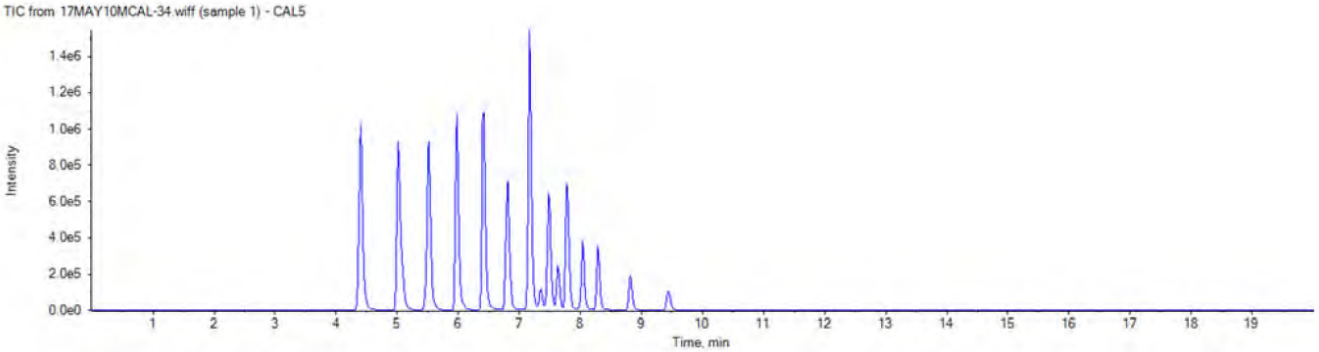
Analyte Quantitation Peak Table

Sample Name: CAL5 **Instrument Name:** LM24960 **File Name:** 17MAY10MCAL-34.wiff

Sample Wt	Sample Vol	Dilution Factor	PrepFactor
1.00000	1.000	1.00	1.000

Analytet Name	RT	RRT	Analyte Area Response	Int Typ	ES Name	ES RT	ES Area Response	Area Ratio	Sample Result (ng/g)
PFBA	4.40	1.000	2833374.9	A	13C4-PFBA	4.40	785937.4	3.605	19.825
PFPeA	5.02	1.000	2990272.9	A	13C5-PFPeA	5.02	717415.2	4.168	20.192
PFBS	5.08	1.000	512670.8	A	13C3-PFBS	5.08	127299.1	4.027	19.059
4:2-FTS	5.46	1.000	161677.3	A	13C2-4:2-FTS	5.46	89903.3	1.798	8.837
PFHxA	5.51	1.000	2702479.6	A	13C5-PFHxA	5.51	674694.4	4.006	21.204
PFPeS	5.53	1.090	295643.6	A	13C3-PFBS	5.08	127299.1	2.322	20.751
PFHxS	5.97	1.000	954650.3	A	13C3-PFHxS	5.97	67946.0	14.050	19.707
PFHpA	5.98	1.000	2228030.9	A	13C4-PFHpA	5.98	447767.8	4.976	20.043
6:2-FTS	6.39	1.000	74863.9	A	13C2-6:2-FTS	6.39	45637.2	1.640	9.698
PFHpS	6.40	1.070	247466.4	A	13C3-PFHxS	5.97	67946.0	3.642	19.101
PFOA	6.41	1.000	1794825.5	A	13C8-PFOA	6.41	366305.0	4.900	22.326
PFOS	6.79	1.000	817837.5	A	13C8-PFOS	6.79	52797.1	15.490	21.544
PFNA	6.82	1.000	1462102.2	A	13C9-PFNA	6.82	322425.9	4.535	18.519
PFOSA	7.17	1.000	1587389.3	A	13C8-PFOSA	7.17	375612.3	4.226	19.307
PFNS	7.14	1.050	271845.0	A	13C8-PFOS	6.79	52797.1	5.149	23.610
PFDA	7.17	1.000	2046588.9	A	13C6-PFDA	7.17	521092.6	3.928	21.432
8:2-FTS	7.18	1.000	102387.3	A	13C2-8:2-FTS	7.18	58320.7	1.756	9.465
NMePFOSAE	7.63	1.000	544260.9	A	d7-NMePFOSAE	7.62	120050.6	4.534	18.077
NMePFOSA	7.65	1.000	191194.8	A	d3-NMePFOSA	7.64	45430.7	4.209	19.642
NMeFOSAA	7.35	1.000	266017.3	A	d3-NMeFOSAA	7.35	139575.1	1.906	8.953
NEtPFOSAE	7.79	1.000	528891.2	A	d9-NEtPFOSAE	7.78	130499.7	4.053	18.579
NEtPFOSA	7.81	1.000	140113.2	A	d5-NEtPFOSA	7.81	33431.2	4.191	20.798
PFDS	7.45	1.100	231456.3	A	13C8-PFOS	6.79	52797.1	4.384	22.256
PFUnDA	7.48	1.000	1757674.6	A	13C7-PFUnDA	7.48	334025.9	5.262	20.496
NEtFOSAA	7.51	1.000	162478.0	A	d5-NEtFOSAA	7.50	82785.5	1.963	9.603
PFDoDA	7.77	1.000	1489998.6	A	13C2-PFDoDA	7.78	440113.2	3.386	18.117
10:2-FTS	7.81	1.090	116306.1	A	13C2-8:2-FTS	7.18	58320.7	1.994	9.889
PFDoS	7.99	1.180	85406.7	A	13C8-PFOS	6.79	52797.1	1.618	22.788
PFTrDA	8.04	1.030	1235207.4	A	13C2-PFDoDA	7.78	440113.2	2.807	20.838
PFTeDA	8.29	1.000	970838.4	A	13C2-PFTeDA	8.29	257696.7	3.767	19.221
PFHxDA	8.82	1.060	758532.8	A	13C2-PFTeDA	8.29	257696.7	2.944	18.576
PFODA	9.44	1.140	487117.7	A	13C2-PFTeDA	8.29	257696.7	1.890	17.286

Total Ion Chromatogram



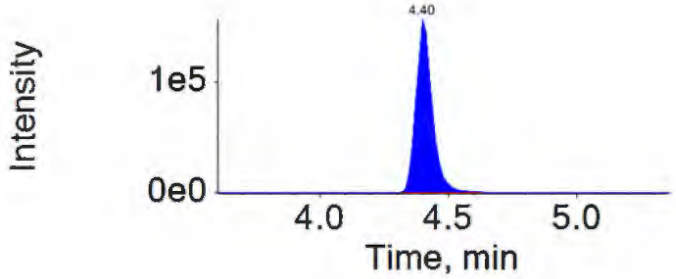
APPROVED
By JWK at 12:34 pm, 5/11/17

REVIEWED
By UMJS at 9:12 am, 5/15/17

ICAL Name: 17MAY10MCAL
QMethod Name: PFCMOD - 17JAN28
Result Table: 17MAY10MCAL 5/11/2017 12:08:01 PM
Acquisition Method: PFC-32-16NOV02.dam

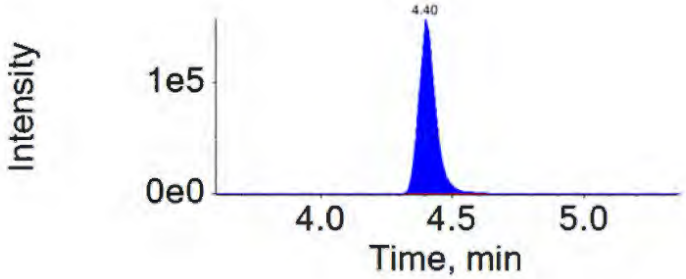
Injection Standard: I13C3-PFBA

216.0 / 172.0



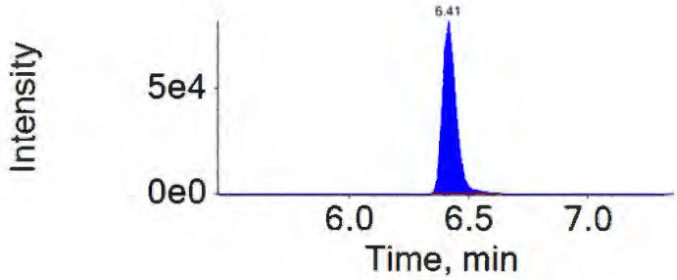
Injection Standard: 13C3-PFBA

216.0 / 172.0



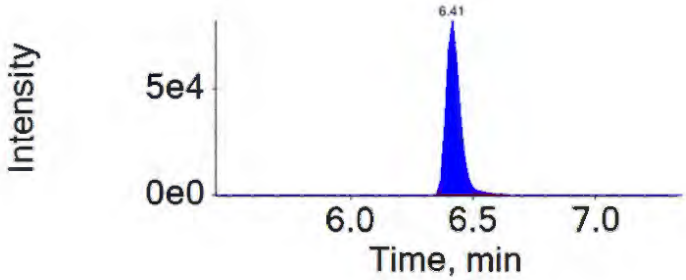
Injection Standard: I13C2-PFOA

415.0 / 370.0



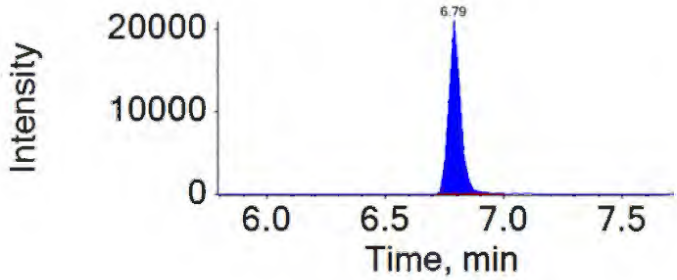
Injection Standard: 13C2-PFOA

415.0 / 370.0



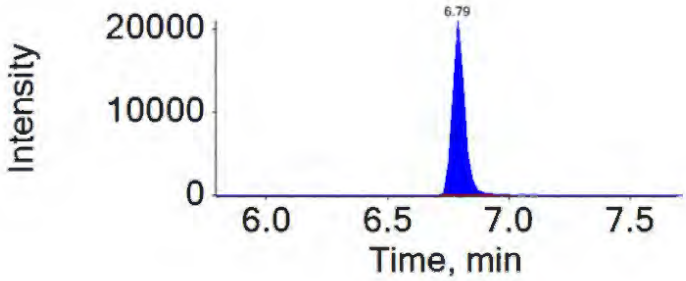
Injection Standard: I13C4-PFOS

503.0 / 99.0



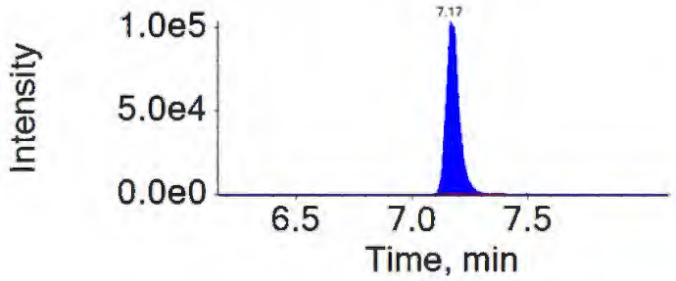
Injection Standard: 13C4-PFOS

503.0 / 99.0



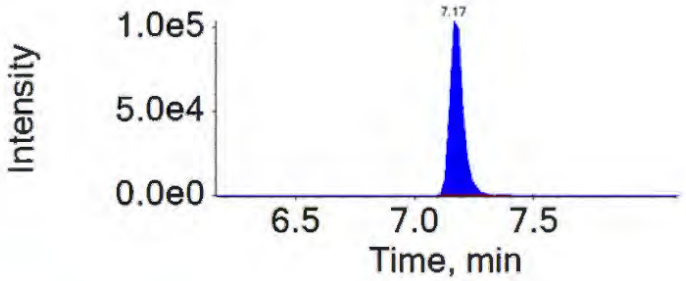
Injection Standard: I13C2-PFDA

515.0 / 470.0



Injection Standard: 13C2-PFDA

515.0 / 470.0



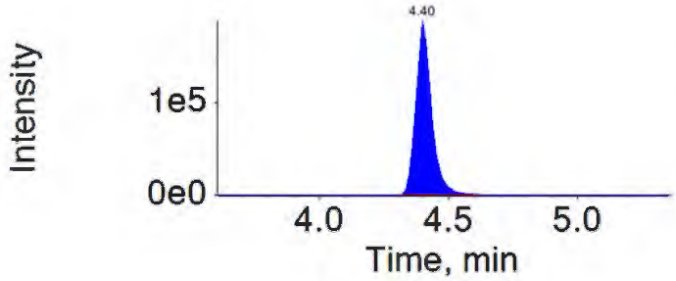
APPROVED
By JWK at 12:34 pm, 5/11/17

REVIEWED
By UMJS at 9:12 am, 5/15/17

ICAL Name: 17MAY10MCAL **Result Table:** 17MAY10MCAL 5/11/2017 12:08:01 PM
QMethod Name: PFCMOD - 17JAN28 **Acquisition Method:** PFC-32-16NOV02.dam

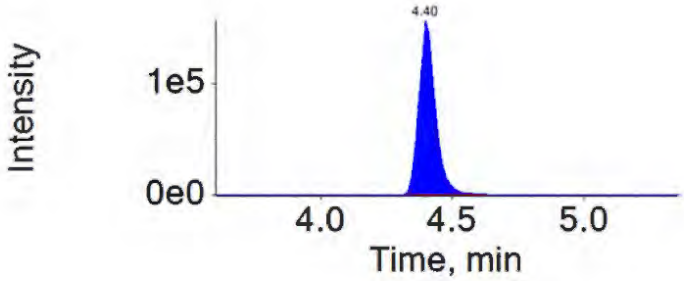
Extraction Standard: E13C4-PFBA

217.0 /
172.0



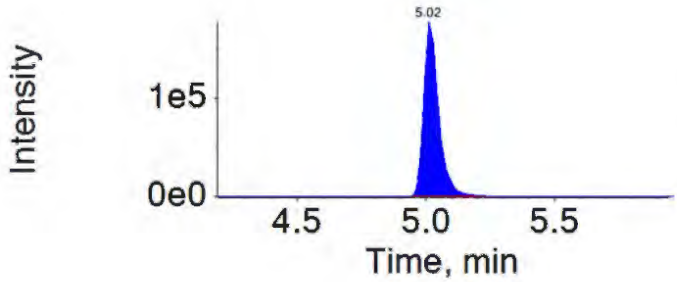
Injection Standard: 13C3-PFBA

216.0 /
172.0



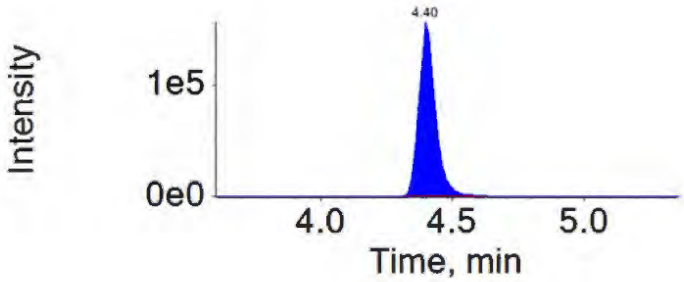
Extraction Standard: E13C5-PFPeA

268.0 /
223.0



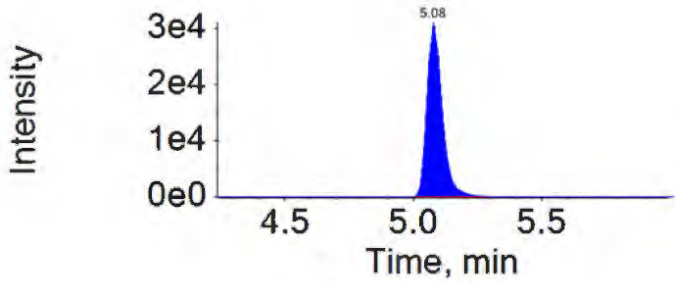
Injection Standard: 13C3-PFBA

216.0 /
172.0



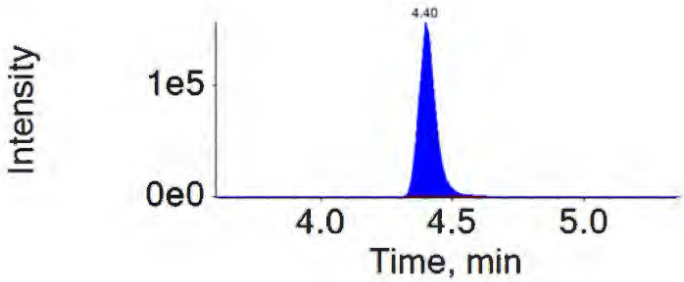
Extraction Standard: E13C3-PFBS

302.0 /
99.0



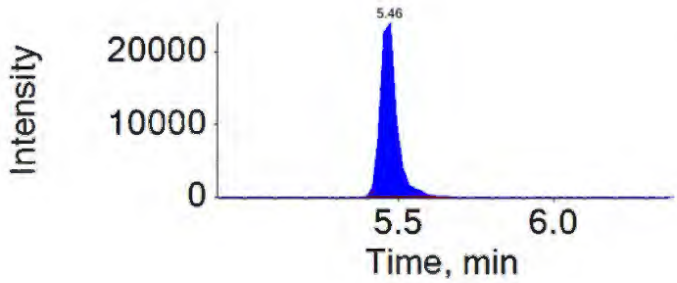
Injection Standard: 13C3-PFBA

216.0 /
172.0



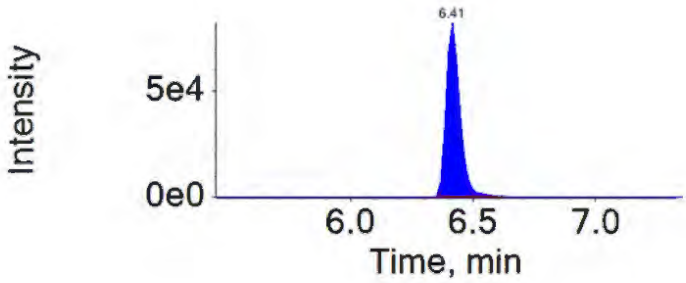
Extraction Standard: E13C2-4:2-FTS

329.0 /
309.0



Injection Standard: 13C2-PFOA

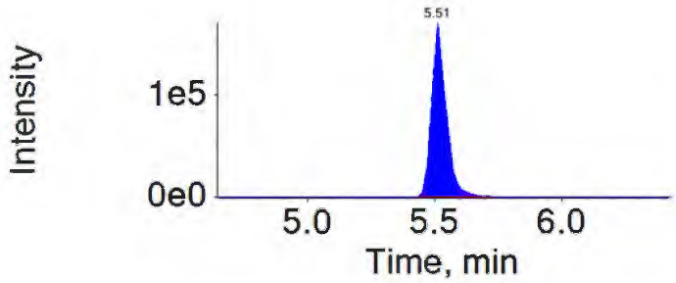
415.0 /
370.0



ICAL Name: 17MAY10MCAL **Result Table:** 17MAY10MCAL 5/11/2017 12:08:01 PM
QMethod Name: PFCMOD - 17JAN28 **Acquisition Method:** PFC-32-16NOV02.dam

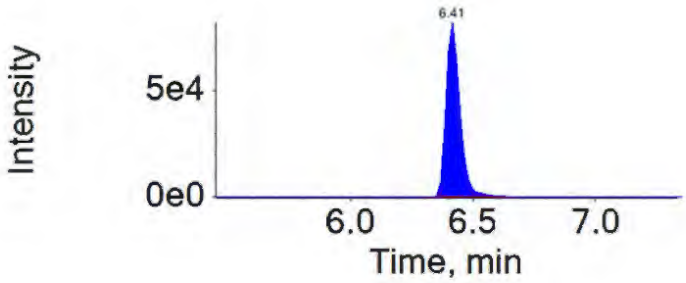
Extraction Standard: E13C5-PFHxA

318.0 /
273.0



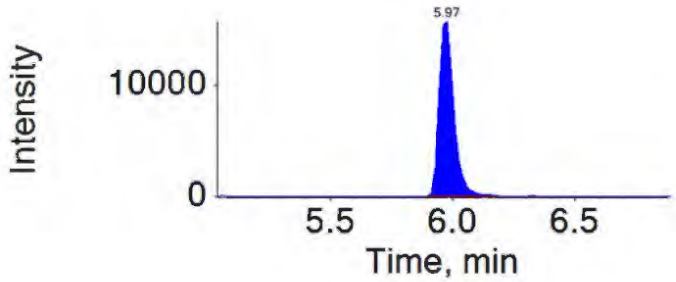
Injection Standard: 13C2-PFOA

415.0 /
370.0



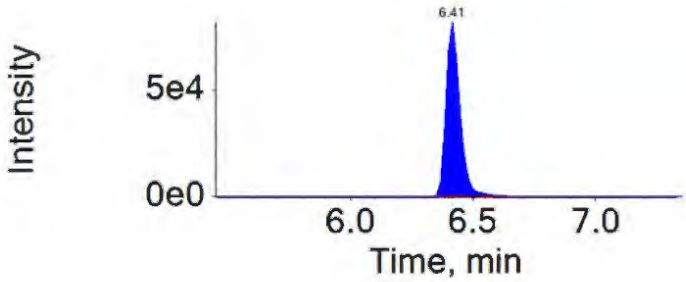
Extraction Standard: E13C3-PFHxS

402.0 /
99.0



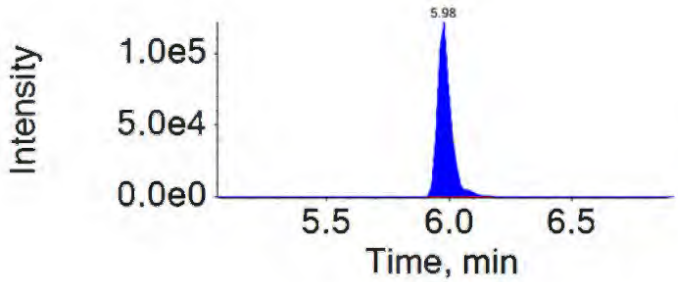
Injection Standard: 13C2-PFOA

415.0 /
370.0



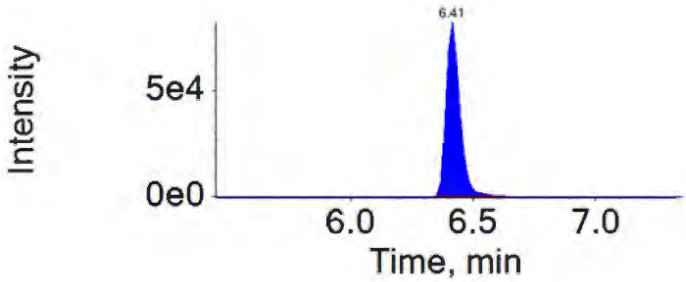
Extraction Standard: E13C4-PFHpA

367.0 /
322.0



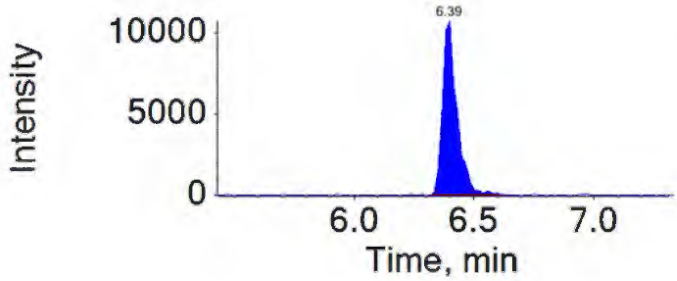
Injection Standard: 13C2-PFOA

415.0 /
370.0



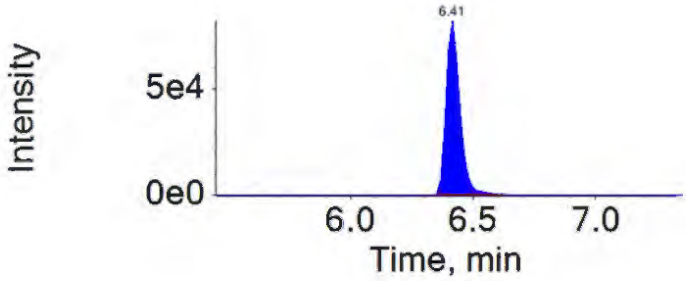
Extraction Standard: E13C2-6:2-FTS

429.0 /
409.0



Injection Standard: 13C2-PFOA

415.0 /
370.0



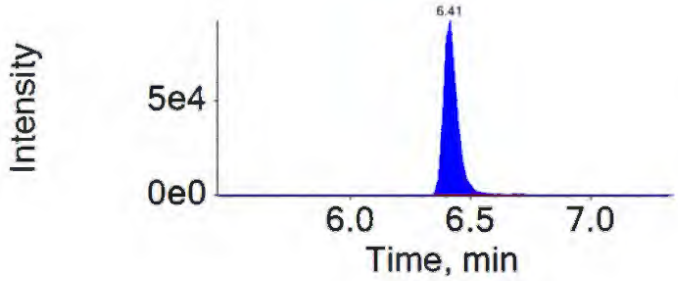
APPROVED
By JWK at 12:34 pm, 5/11/17

REVIEWED
By UMJS at 9:12 am, 5/15/17

ICAL Name: 17MAY10MCAL **Result Table:** 17MAY10MCAL 5/11/2017 12:08:01 PM
QMethod Name: PFCMOD - 17JAN28 **Acquisition Method:** PFC-32-16NOV02.dam

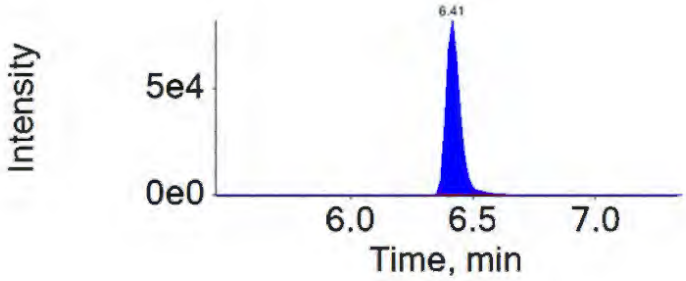
Extraction Standard: E13C8-PFOA

421.0 / 376.0



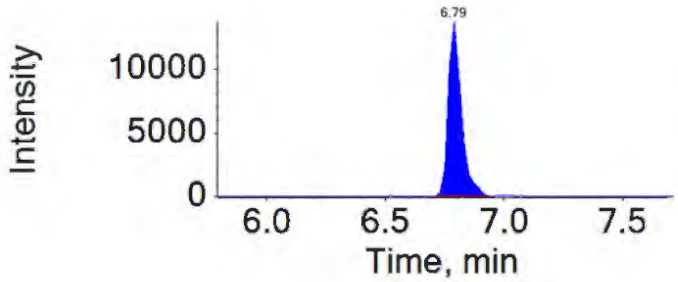
Injection Standard: 13C2-PFOA

415.0 / 370.0



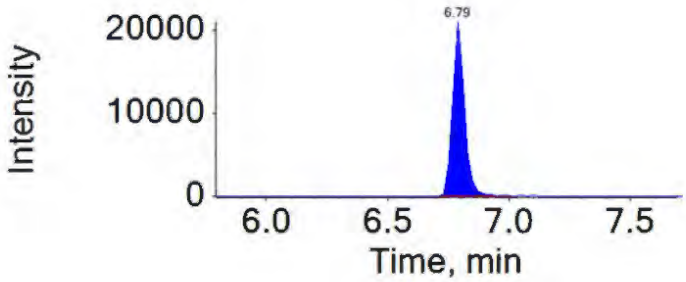
Extraction Standard: E13C8-PFOS

507.0 / 99.0



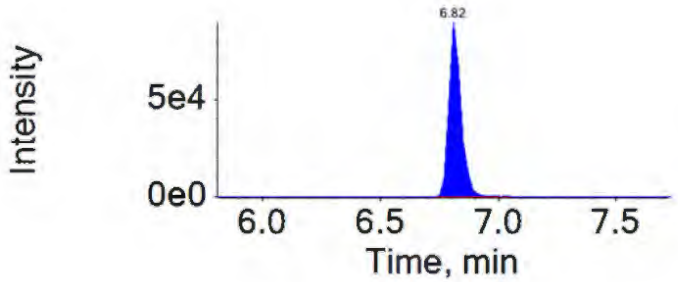
Injection Standard: 13C4-PFOS

503.0 / 99.0



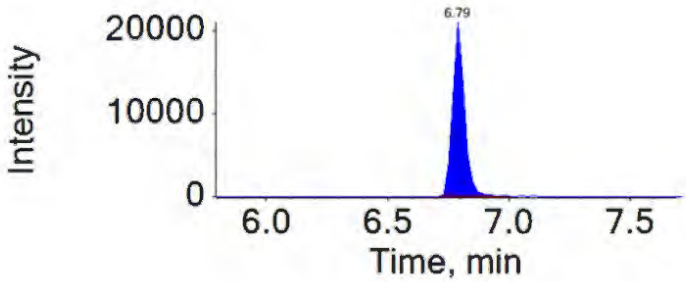
Extraction Standard: E13C9-PFNA

472.0 / 427.0



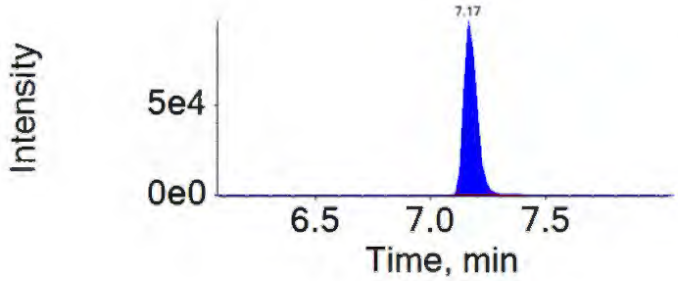
Injection Standard: 13C4-PFOS

503.0 / 99.0



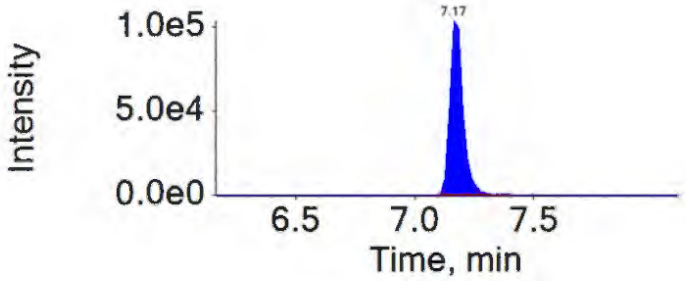
Extraction Standard: E13C8-PFOSA

506.0 / 78.0



Injection Standard: 13C2-PFDA

515.0 / 470.0



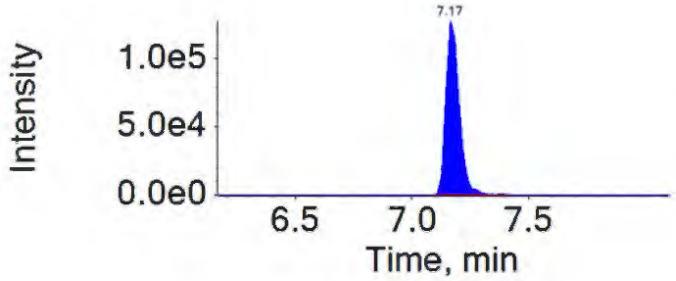
APPROVED
By JWK at 12:34 pm, 5/11/17

REVIEWED
By UMJS at 9:12 am, 5/15/17

ICAL Name: 17MAY10MCAL **Result Table:** 17MAY10MCAL 5/11/2017 12:08:01 PM
QMethod Name: PFCMOD - 17JAN28 **Acquisition Method:** PFC-32-16NOV02.dam

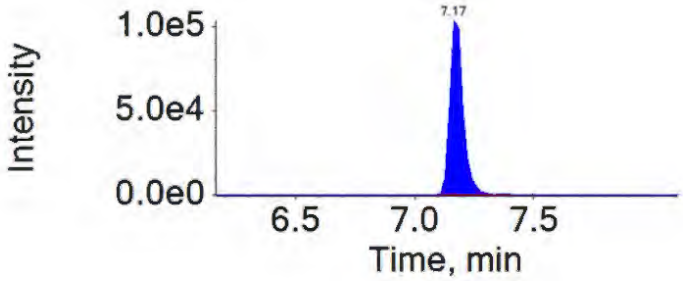
Extraction Standard: E13C6-PFDA

519.0 / 474.0



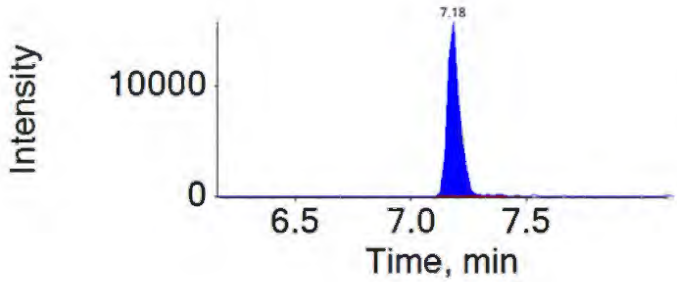
Injection Standard: 13C2-PFDA

515.0 / 470.0



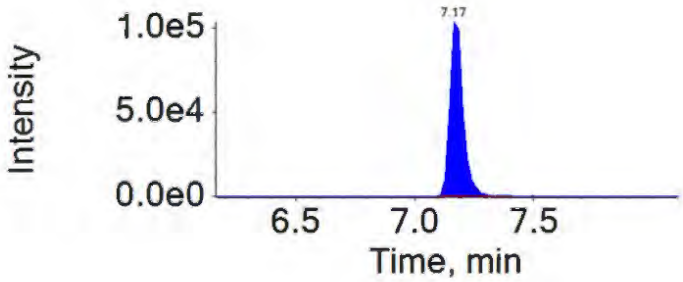
Extraction Standard: E13C2-8:2-FTS

529.0 / 509.0



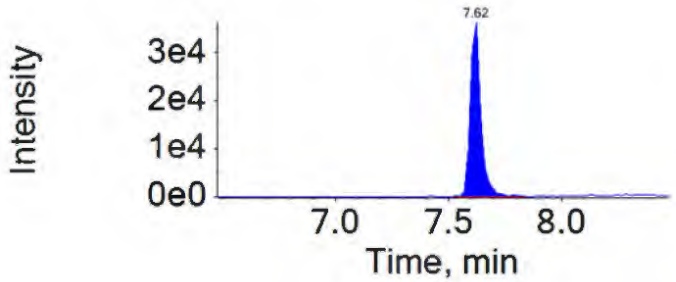
Injection Standard: 13C2-PFDA

515.0 / 470.0



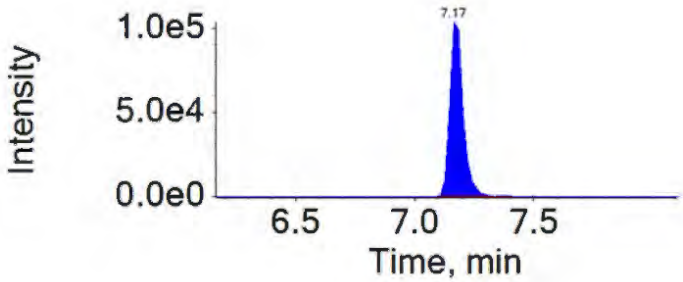
Extraction Standard: Ed7-NMePFOSAE

623.0 / 59.0



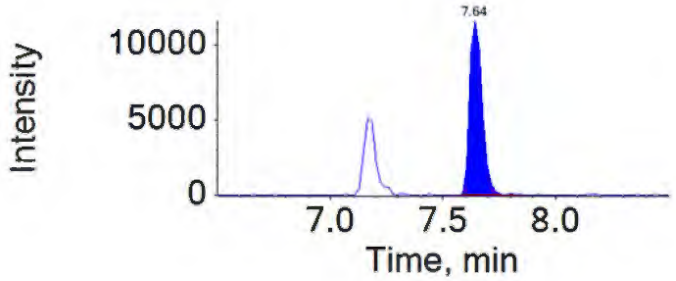
Injection Standard: 13C2-PFDA

515.0 / 470.0



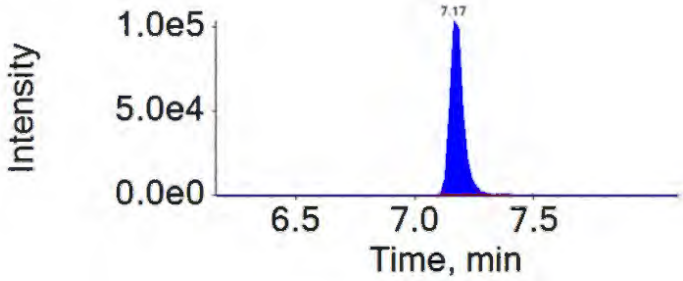
Extraction Standard: Ed3-NMePFOSA

515.0 / 169.0



Injection Standard: 13C2-PFDA

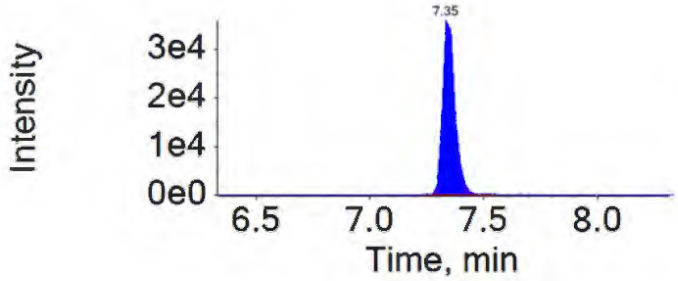
515.0 / 470.0



ICAL Name: 17MAY10MCAL **Result Table:** 17MAY10MCAL 5/11/2017 12:08:01 PM
QMethod Name: PFCMOD - 17JAN28 **Acquisition Method:** PFC-32-16NOV02.dam

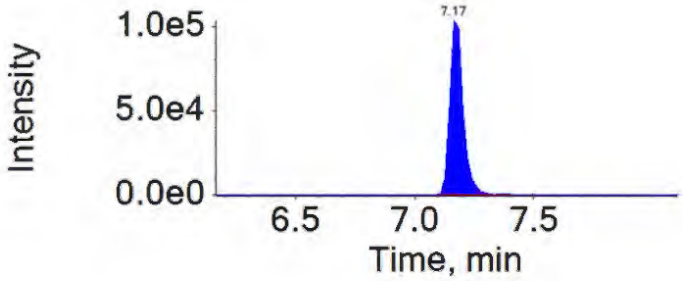
Extraction Standard: Ed3-NMeFOSAA

573.0 / 419.0



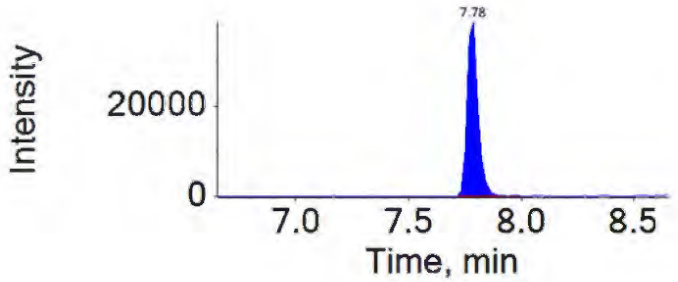
Injection Standard: 13C2-PFDA

515.0 / 470.0



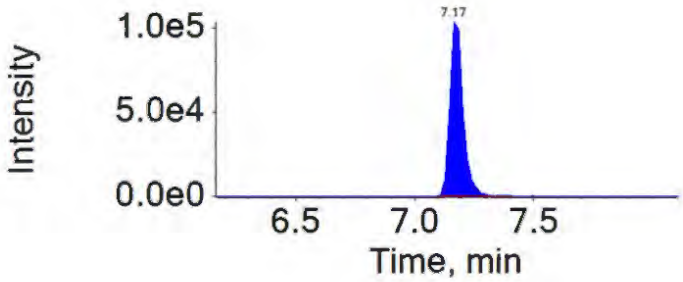
Extraction Standard: Ed9-NEtPFOSAE

639.0 / 59.0



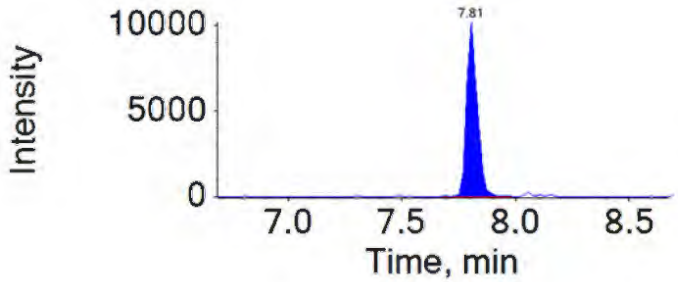
Injection Standard: 13C2-PFDA

515.0 / 470.0



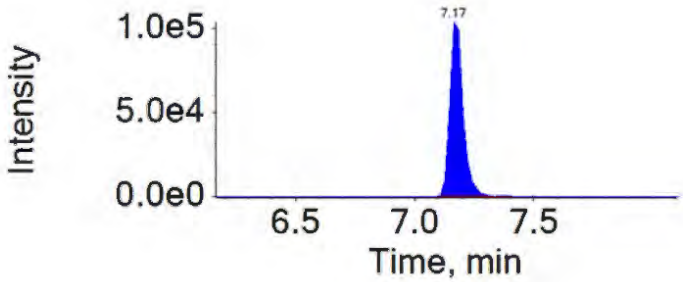
Extraction Standard: Ed5-NEtPFOSA

531.0 / 169.0



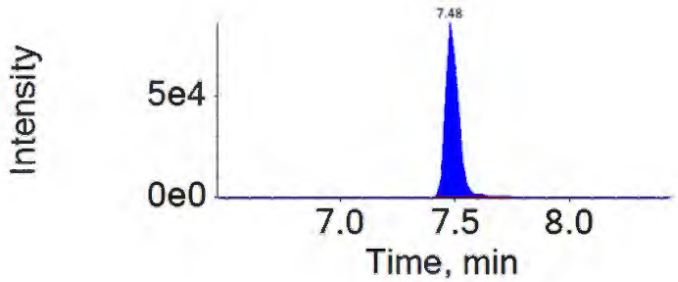
Injection Standard: 13C2-PFDA

515.0 / 470.0



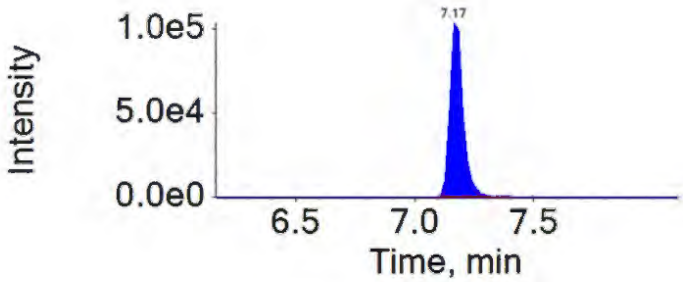
Extraction Standard: E13C7-PFUnDA

570.0 / 525.0



Injection Standard: 13C2-PFDA

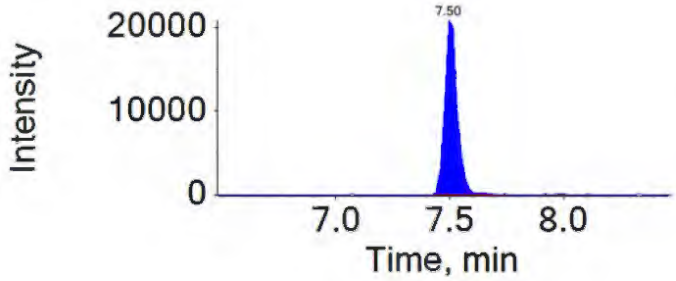
515.0 / 470.0



ICAL Name: 17MAY10MCAL **Result Table:** 17MAY10MCAL 5/11/2017 12:08:01 PM
QMethod Name: PFCMOD - 17JAN28 **Acquisition Method:** PFC-32-16NOV02.dam

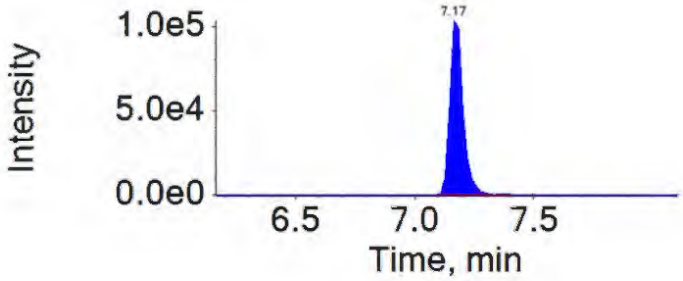
Extraction Standard: Ed5-NEtFOSAA

589.0 / 419.0



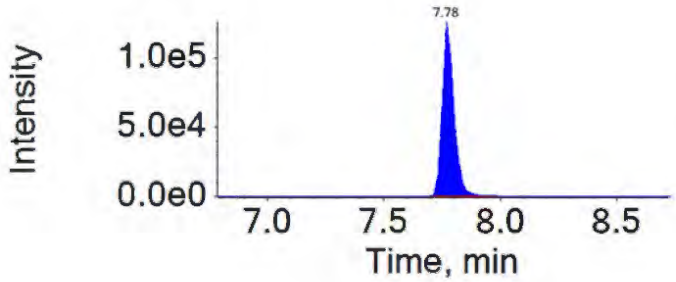
Injection Standard: 13C2-PFDA

515.0 / 470.0



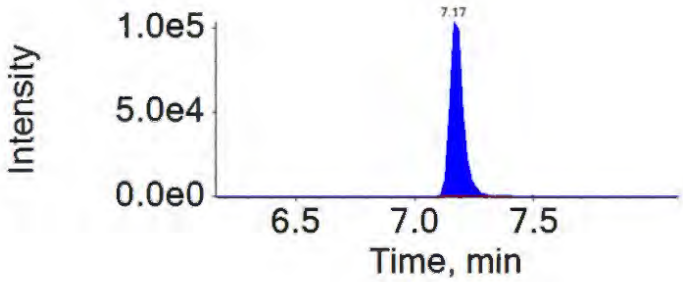
Extraction Standard: E13C2-PFDoDA

615.0 / 570.0



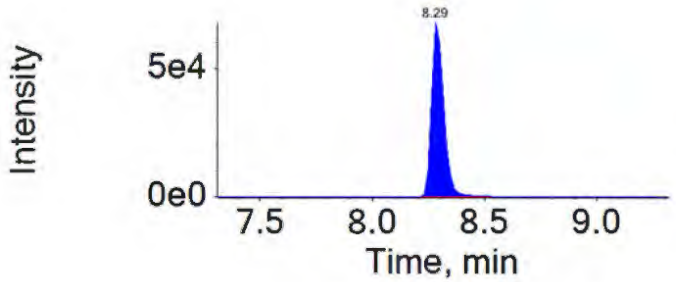
Injection Standard: 13C2-PFDA

515.0 / 470.0



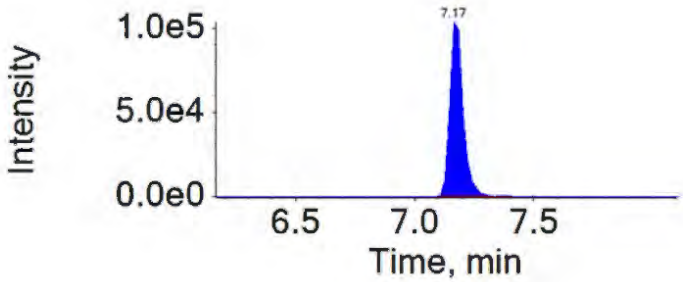
Extraction Standard: E13C2-PFTeDA

715.0 / 670.0



Injection Standard: 13C2-PFDA

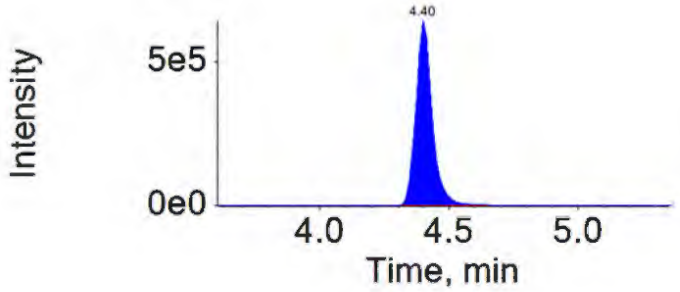
515.0 / 470.0



ICAL Name: 17MAY10MCAL **Result Table:** 17MAY10MCAL 5/11/2017 12:08:01 PM
QMethod Name: PFCMOD - 17JAN28 **Acquisition Method:** PFC-32-16NOV02.dam

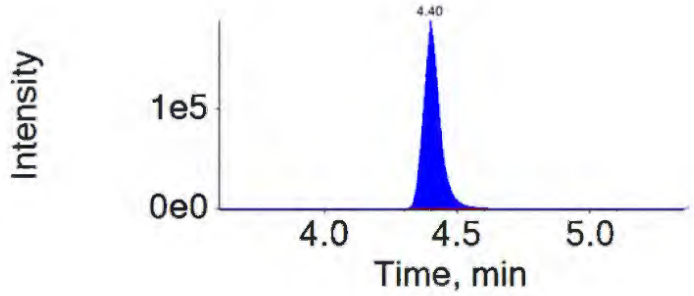
Analyte: PFBA

213.0 / 169.0



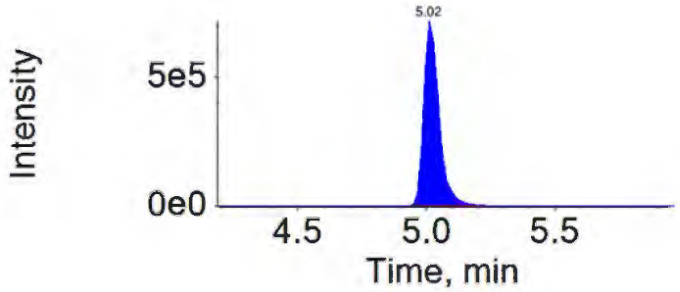
Extraction Standard: 13C4-PFBA

217.0 / 172.0



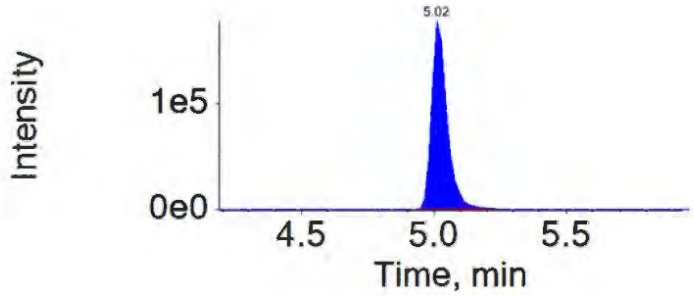
Analyte: PFPeA

263.0 / 219.0



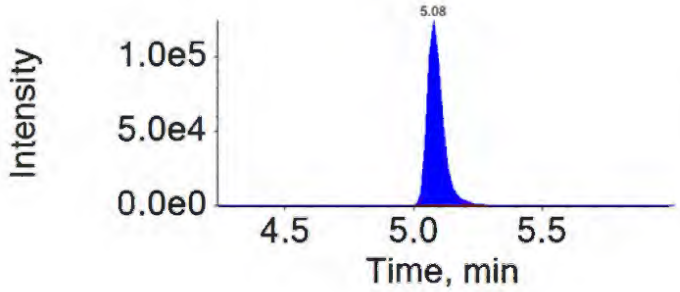
Extraction Standard: 13C5-PFPeA

268.0 / 223.0



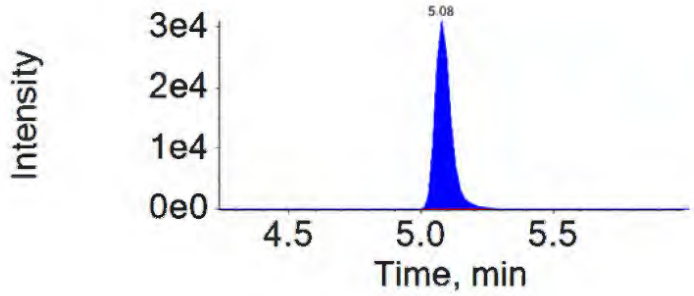
Analyte: PFBS

299.0 / 99.0



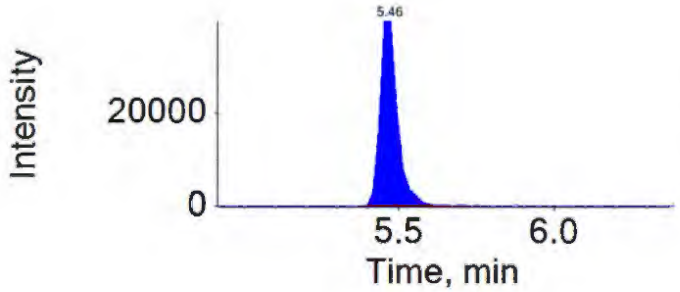
Extraction Standard: 13C3-PFBS

302.0 / 99.0



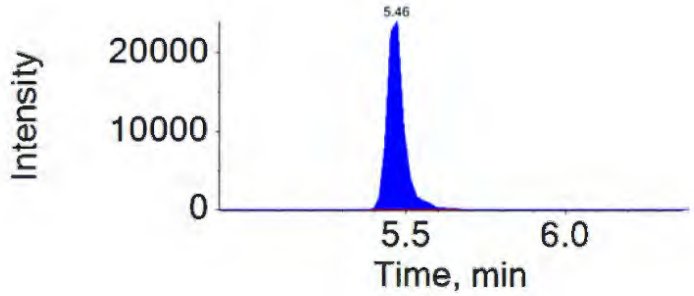
Analyte: 4:2-FTS

327.0 / 307.0



Extraction Standard: 13C2-4:2-FTS

329.0 / 309.0



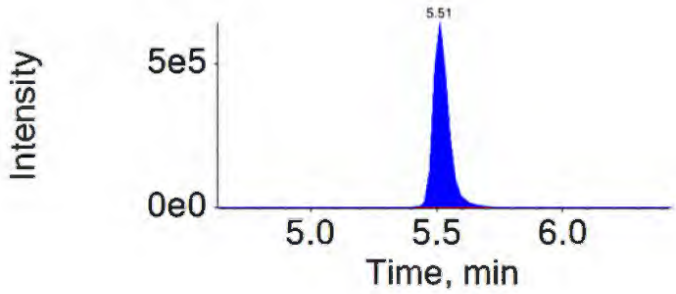
APPROVED
By JWK at 12:34 pm, 5/11/17

REVIEWED
By UMJS at 9:12 am, 5/15/17

ICAL Name: 17MAY10MCAL **Result Table:** 17MAY10MCAL 5/11/2017 12:08:01 PM
QMethod Name: PFCMOD - 17JAN28 **Acquisition Method:** PFC-32-16NOV02.dam

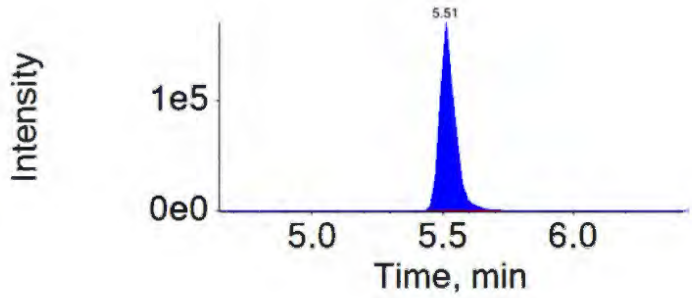
Analyte: PFHxA

313.0 /
269.0



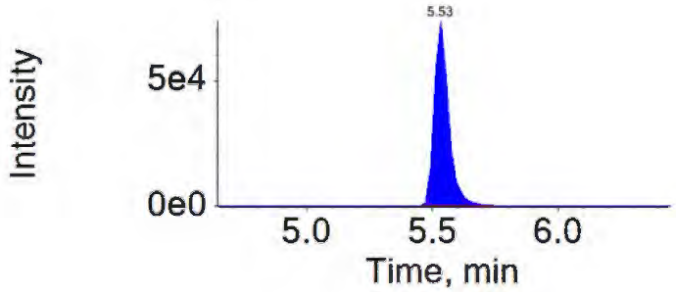
Extraction Standard: 13C5-PFHxA

318.0 /
273.0



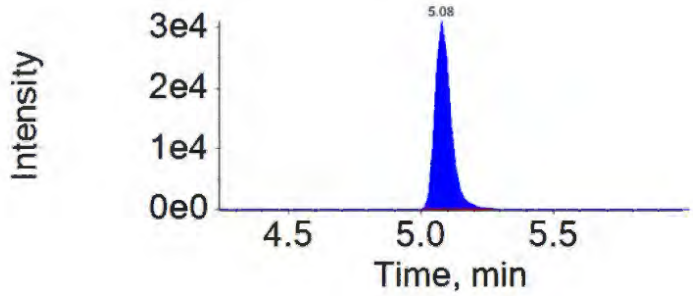
Analyte: PFPeS

349.0 /
99.0



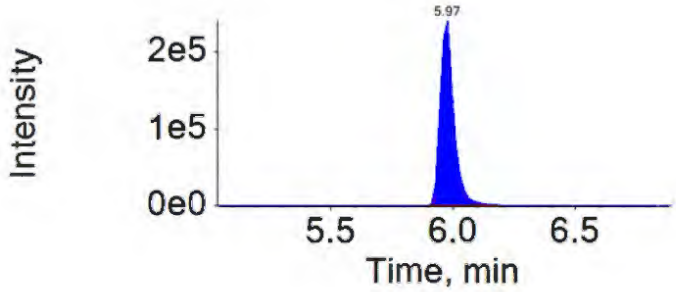
Extraction Standard: 13C3-PFBS

302.0 /
99.0



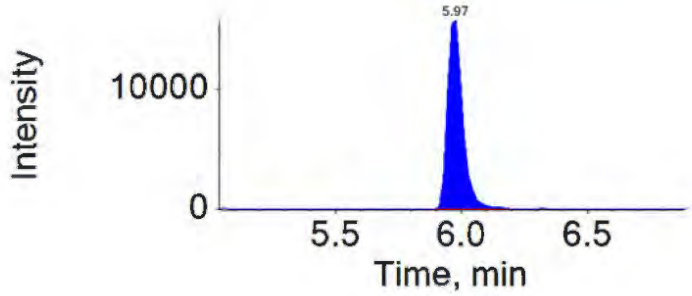
Analyte: PFHxS

399.0 /
80.0



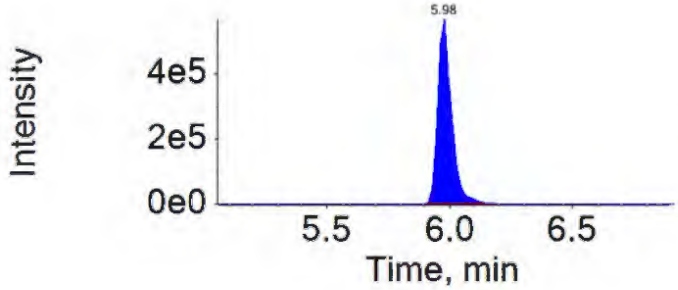
Extraction Standard: 13C3-PFHxS

402.0 /
99.0



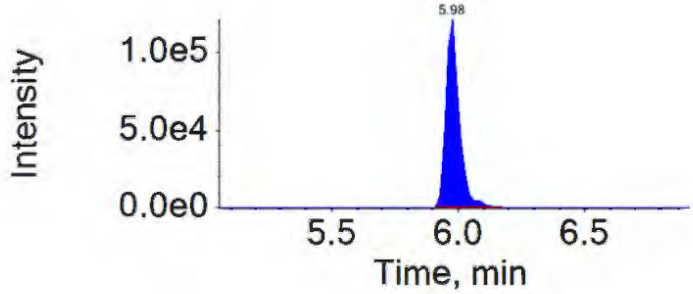
Analyte: PFHpA

363.0 /
319.0



Extraction Standard: 13C4-PFHpA

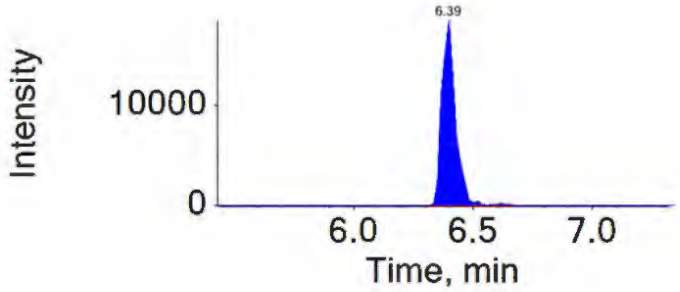
367.0 /
322.0



ICAL Name: 17MAY10MCAL **Result Table:** 17MAY10MCAL 5/11/2017 12:08:01 PM
QMethod Name: PFCMOD - 17JAN28 **Acquisition Method:** PFC-32-16NOV02.dam

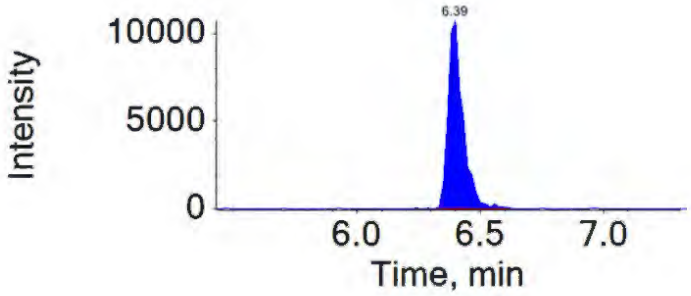
Analyte: 6:2-FTS

427.0 /
407.0



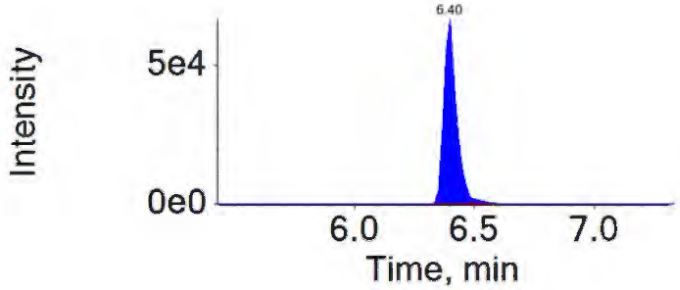
Extraction Standard: 13C2-6:2-FTS

429.0 /
409.0



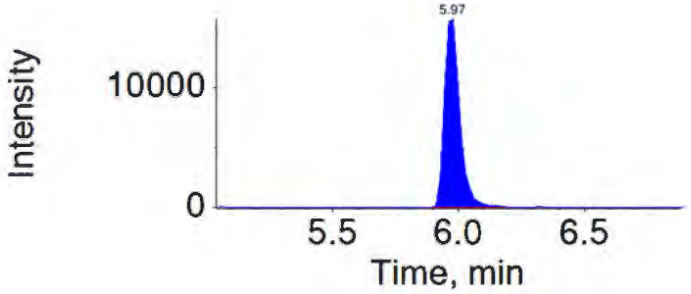
Analyte: PFHpS

449.0 /
99.0



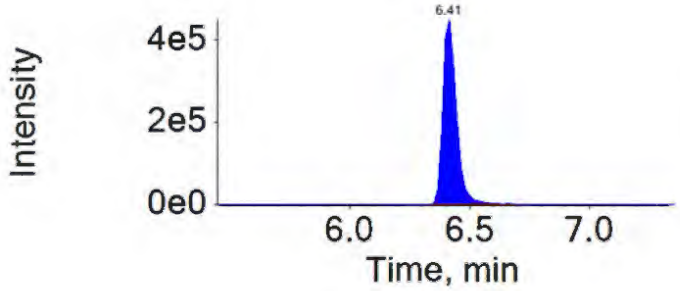
Extraction Standard: 13C3-PFHxS

402.0 /
99.0



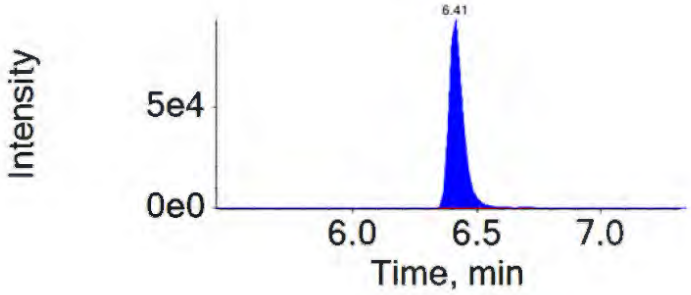
Analyte: PFOA

413.0 /
369.0



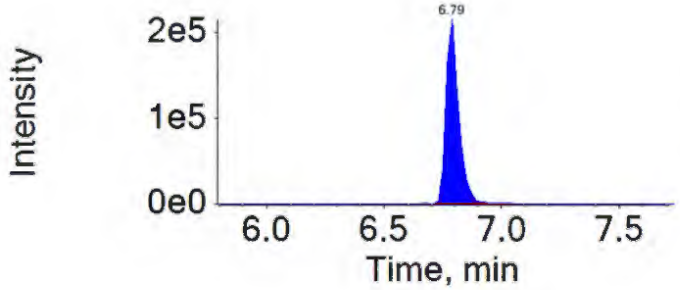
Extraction Standard: 13C8-PFOA

421.0 /
376.0



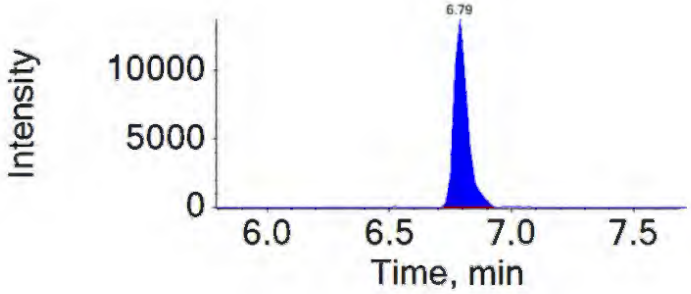
Analyte: PFOS

499.0 /
80.0



Extraction Standard: 13C8-PFOS

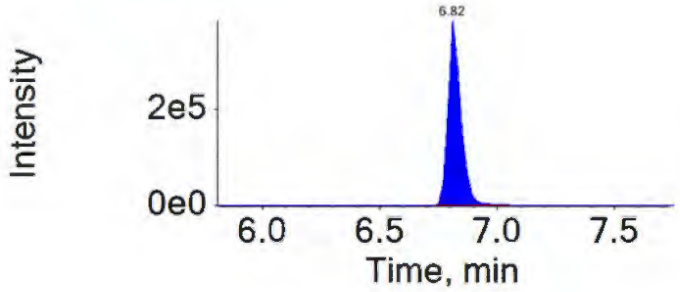
507.0 /
99.0



ICAL Name: 17MAY10MCAL **Result Table:** 17MAY10MCAL 5/11/2017 12:08:01 PM
QMethod Name: PFCMOD - 17JAN28 **Acquisition Method:** PFC-32-16NOV02.dam

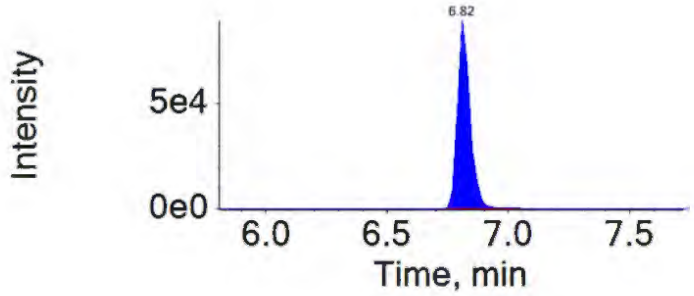
Analyte: PFNA

463.0 / 419.0



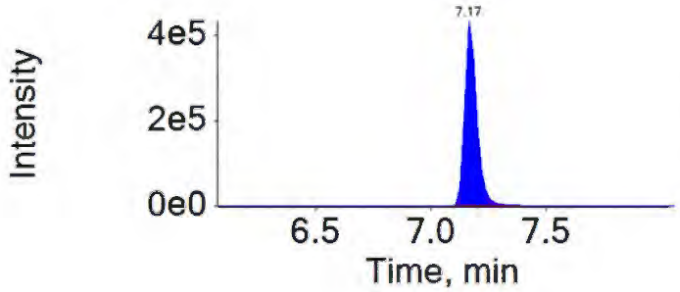
Extraction Standard: 13C9-PFNA

472.0 / 427.0



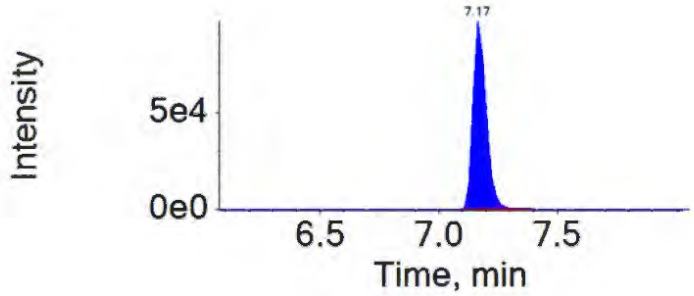
Analyte: PFOSA

498.0 / 78.0



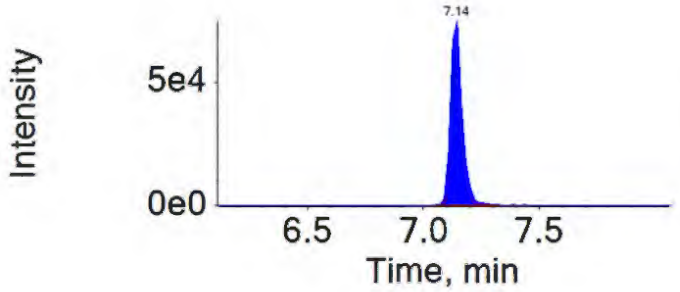
Extraction Standard: 13C8-PFOSA

506.0 / 78.0



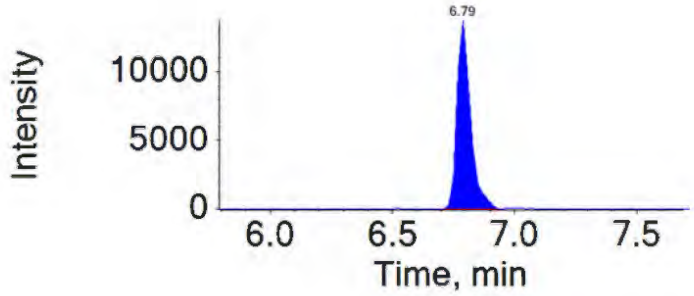
Analyte: PFNS

549.0 / 99.0



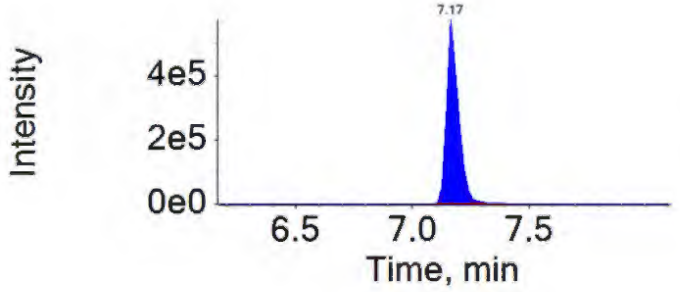
Extraction Standard: 13C8-PFOS

507.0 / 99.0



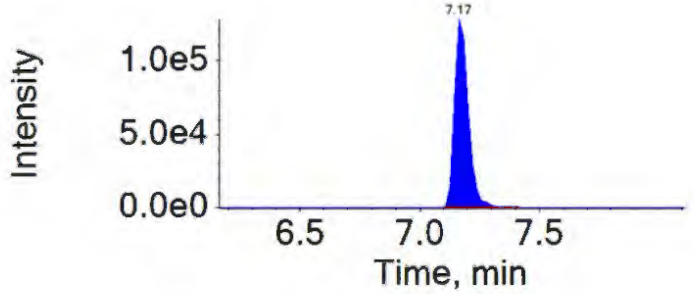
Analyte: PFDA

513.0 / 469.0



Extraction Standard: 13C6-PFDA

519.0 / 474.0



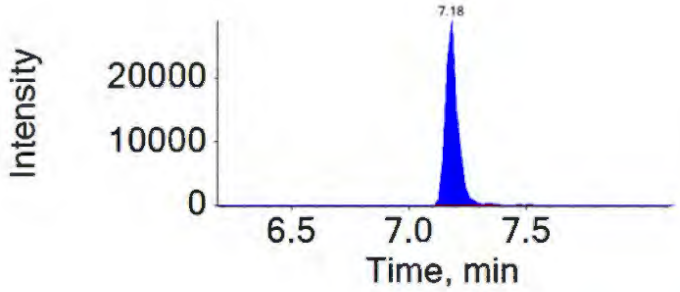
APPROVED
By JWK at 12:34 pm, 5/11/17

REVIEWED
By UMJS at 9:12 am, 5/15/17

ICAL Name: 17MAY10MCAL **Result Table:** 17MAY10MCAL 5/11/2017 12:08:01 PM
QMethod Name: PFCMOD - 17JAN28 **Acquisition Method:** PFC-32-16NOV02.dam

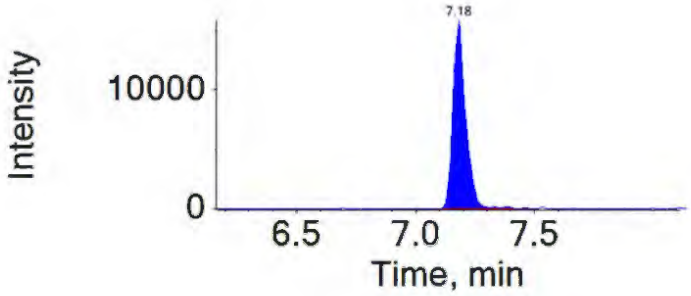
Analyte: 8:2-FTS

527.0 /
507.0



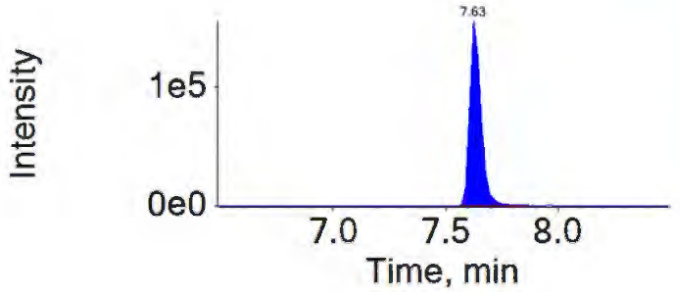
Extraction Standard: 13C2-8:2-FTS

529.0 /
509.0



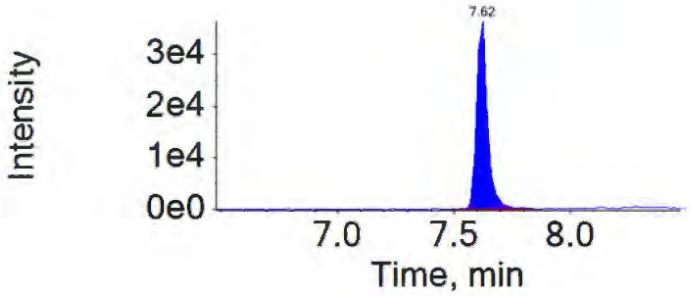
Analyte: NMePFOSAE

616.0 /
59.0



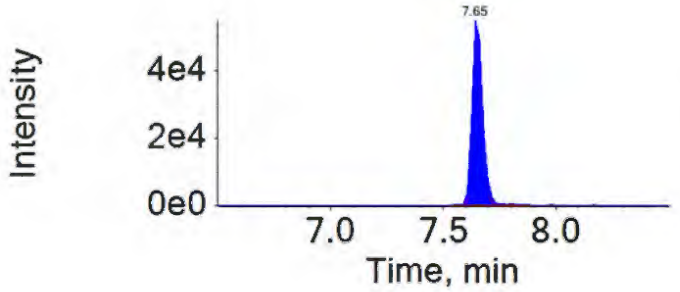
Extraction Standard: d7-NMePFOSAE

623.0 /
59.0



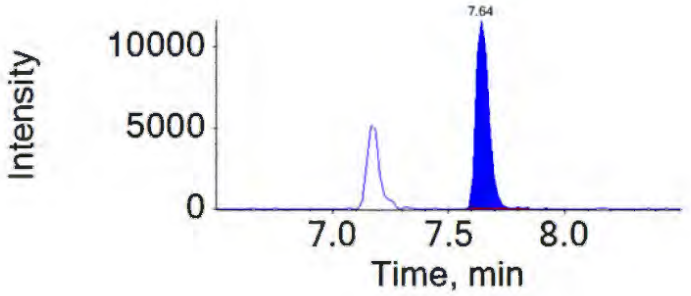
Analyte: NMePFOSA

512.0 /
169.0



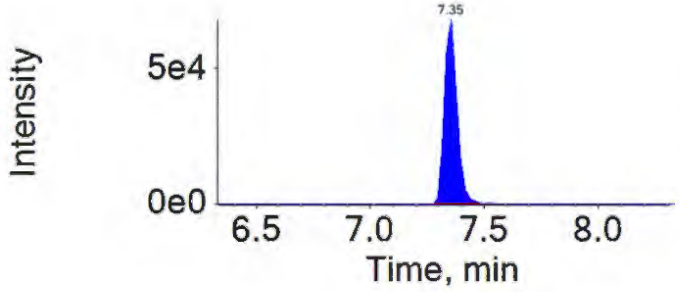
Extraction Standard: d3-NMePFOSA

515.0 /
169.0



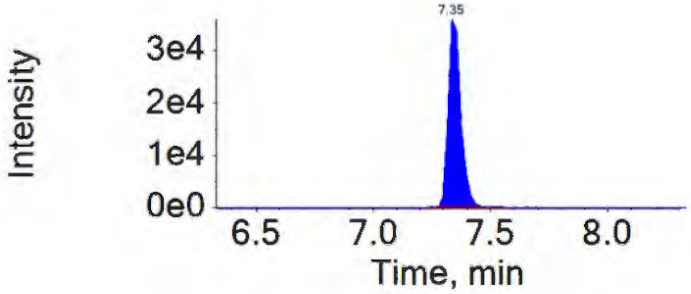
Analyte: NMeFOSAA

570.0 /
419.0



Extraction Standard: d3-NMeFOSAA

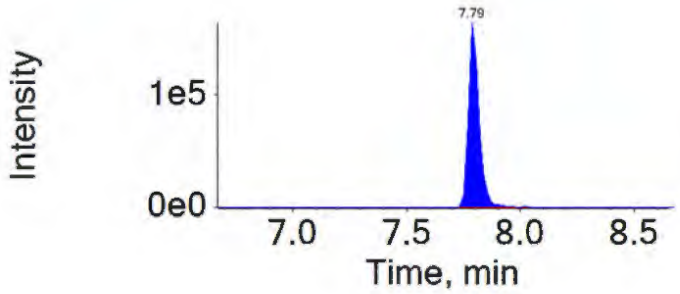
573.0 /
419.0



ICAL Name: 17MAY10MCAL **Result Table:** 17MAY10MCAL 5/11/2017 12:08:01 PM
QMethod Name: PFCMOD - 17JAN28 **Acquisition Method:** PFC-32-16NOV02.dam

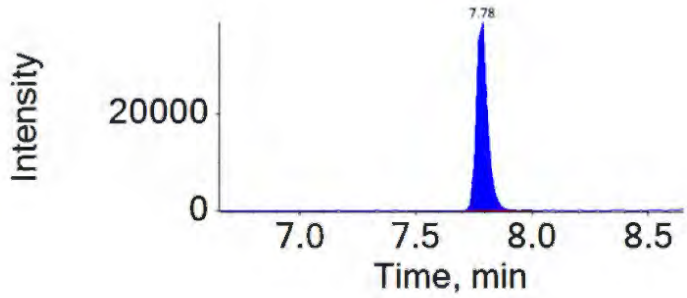
Analyte: NEtPFOSAE

630.0 /
59.0



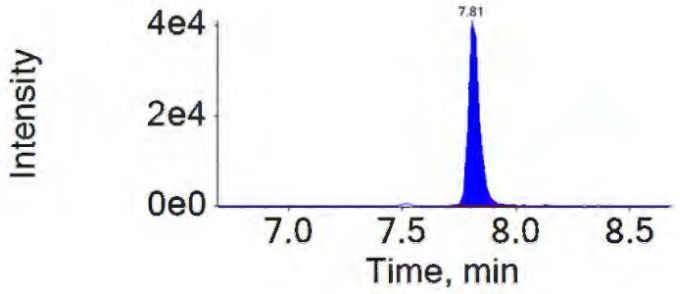
Extraction Standard: d9-NEtPFOSAE

639.0 /
59.0



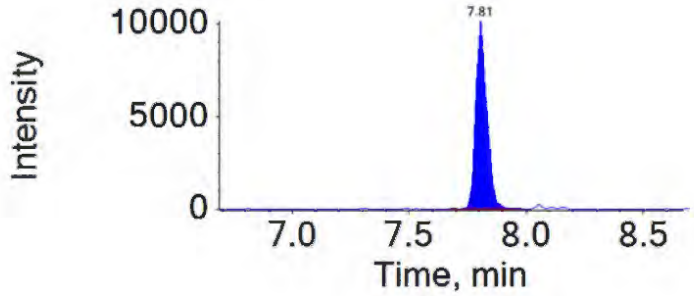
Analyte: NEtPFOSA

526.0 /
169.0



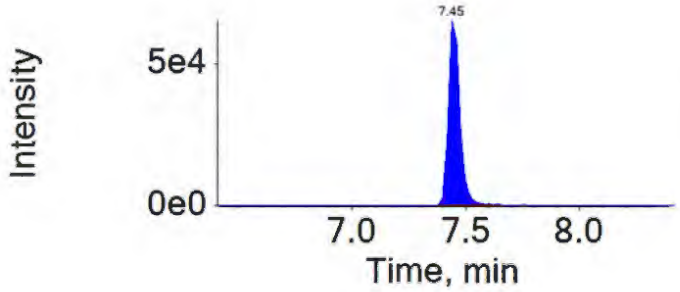
Extraction Standard: d5-NEtPFOSA

531.0 /
169.0



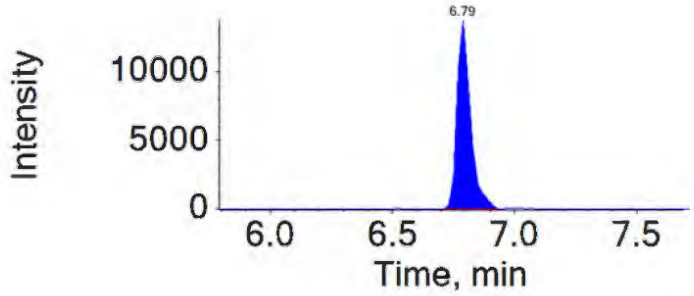
Analyte: PFDS

599.0 /
99.0



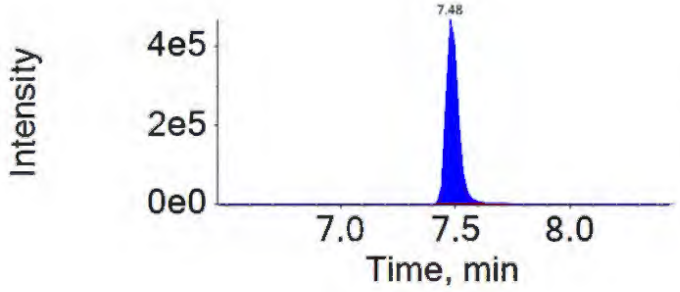
Extraction Standard: 13C8-PFOS

507.0 /
99.0



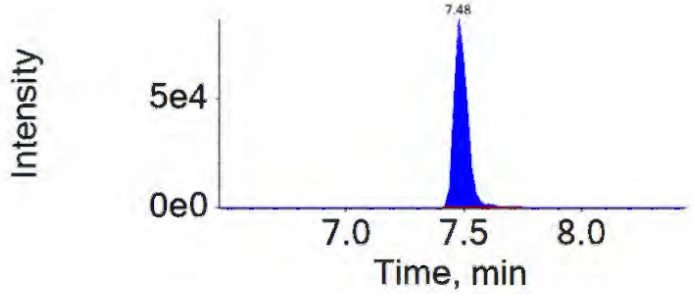
Analyte: PFUnDA

563.0 /
519.0



Extraction Standard: 13C7-PFUnDA

570.0 /
525.0



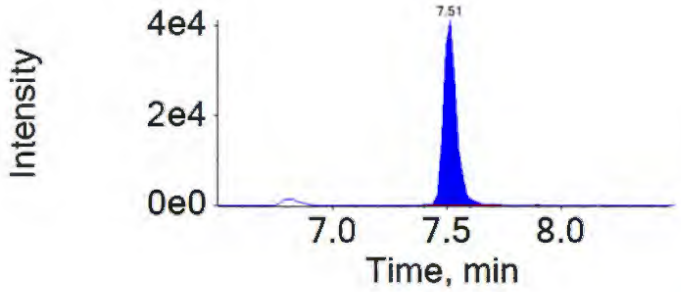
APPROVED
By JWK at 12:34 pm, 5/11/17

REVIEWED
By UMJS at 9:12 am, 5/15/17

ICAL Name: 17MAY10MCAL **Result Table:** 17MAY10MCAL 5/11/2017 12:08:01 PM
QMethod Name: PFCMOD - 17JAN28 **Acquisition Method:** PFC-32-16NOV02.dam

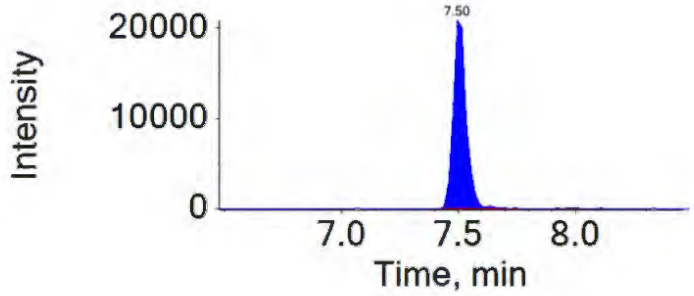
Analyte: NEtFOSAA

584.0 / 419.0



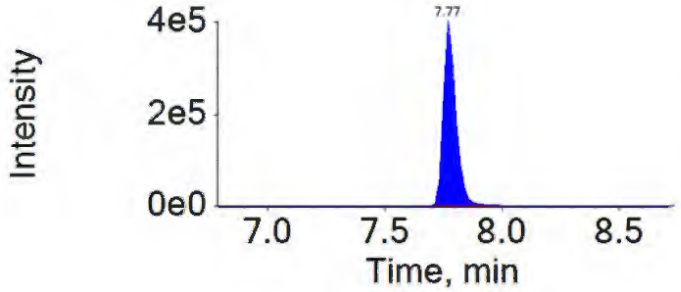
Extraction Standard: d5-NEtFOSAA

589.0 / 419.0



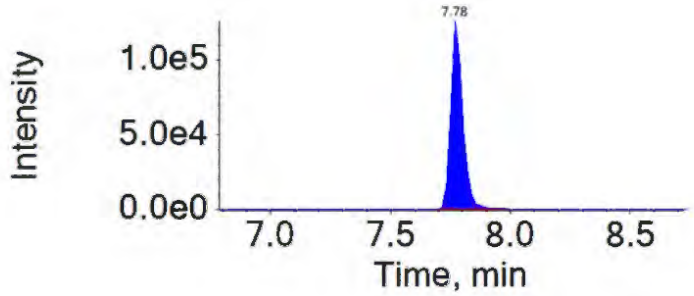
Analyte: PFDoDA

613.0 / 569.0



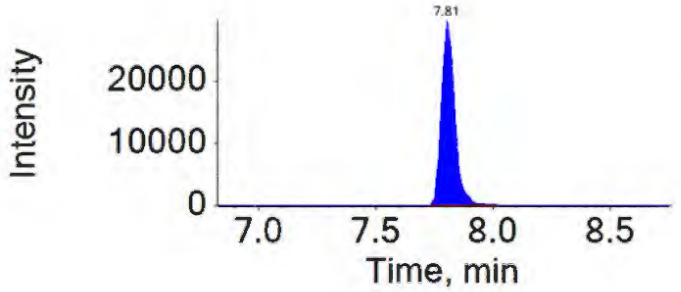
Extraction Standard: 13C2-PFDoDA

615.0 / 570.0



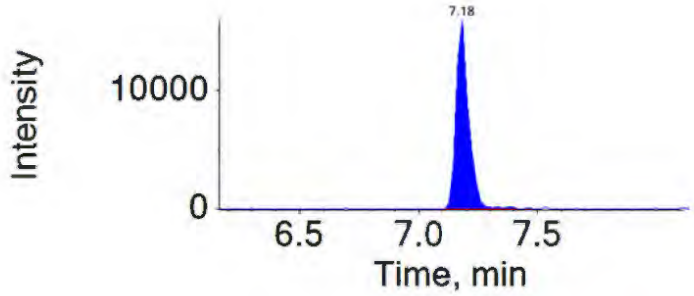
Analyte: 10:2-FTS

627.0 / 607.0



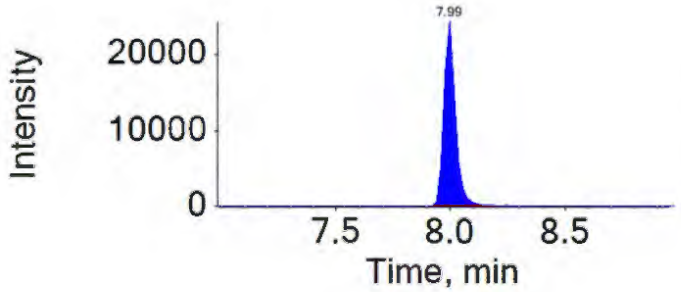
Extraction Standard: 13C2-8:2-FTS

529.0 / 509.0



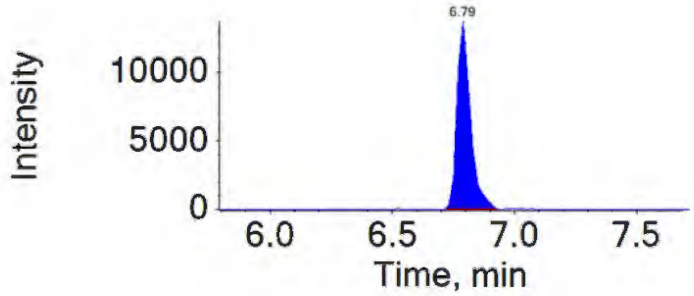
Analyte: PFDoS

699.0 / 99.0



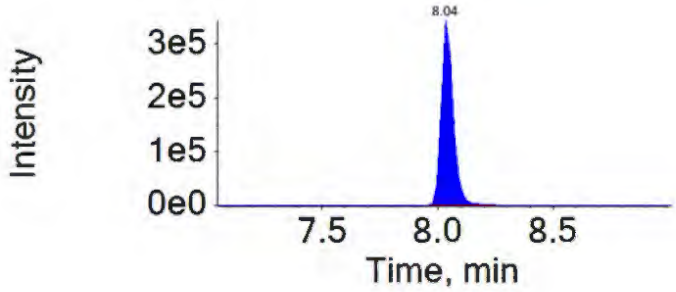
Extraction Standard: 13C8-PFOS

507.0 / 99.0

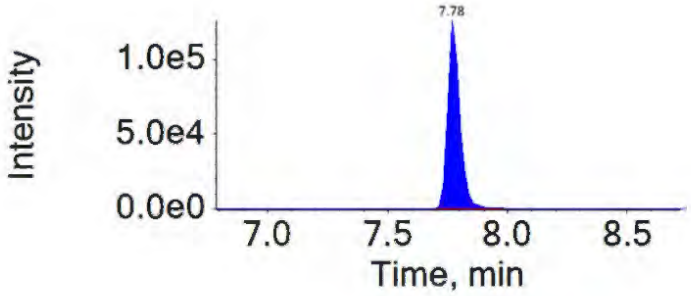


ICAL Name: 17MAY10MCAL **Result Table:** 17MAY10MCAL 5/11/2017 12:08:01 PM
QMethod Name: PFCMOD - 17JAN28 **Acquisition Method:** PFC-32-16NOV02.dam

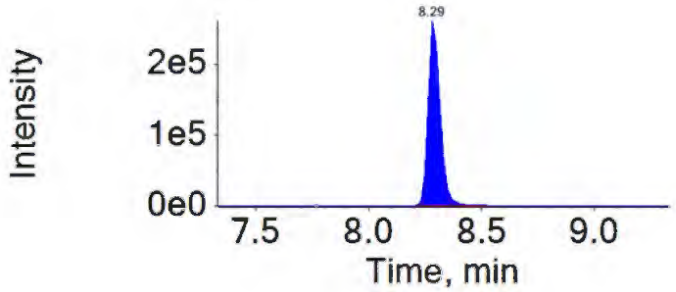
Analyte: PFTrDA
663.0 / 619.0



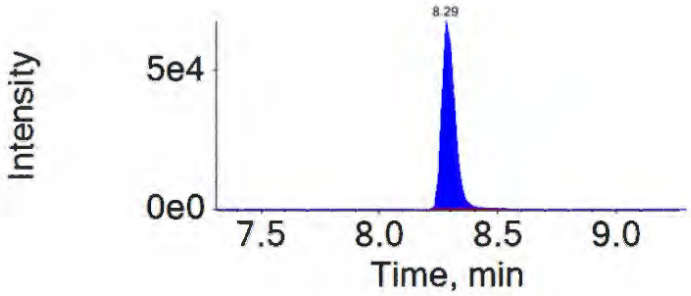
Extraction Standard: 13C2-PFDoDA
615.0 / 570.0



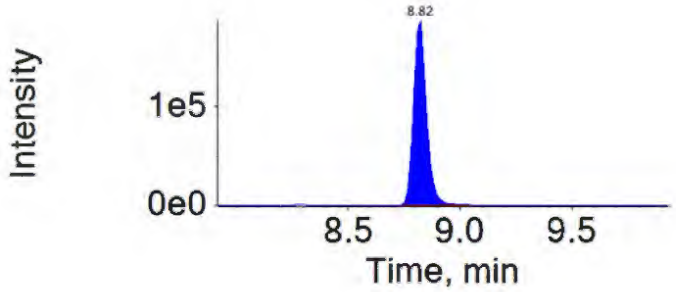
Analyte: PFTeDA
713.0 / 669.0



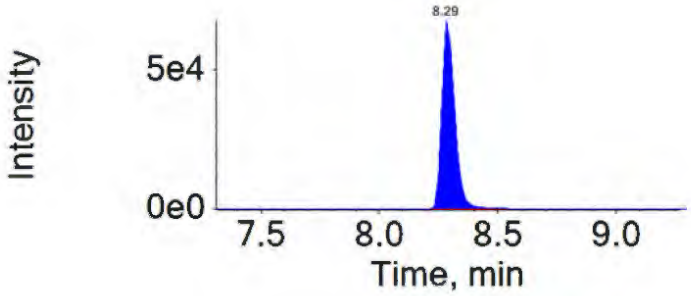
Extraction Standard: 13C2-PFTeDA
715.0 / 670.0



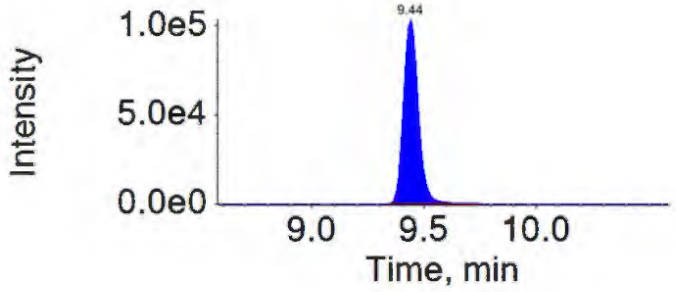
Analyte: PFHxDA
813.0 / 769.0



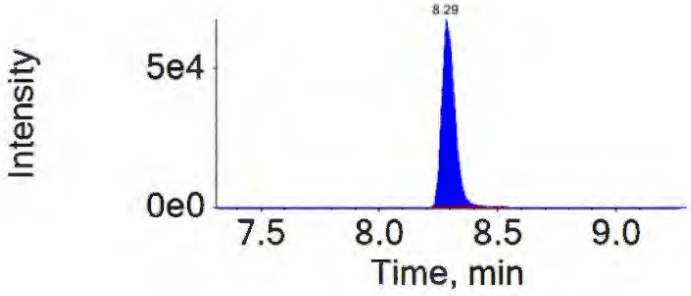
Extraction Standard: 13C2-PFTeDA
715.0 / 670.0



Analyte: PFODA
913.0 / 869.0



Extraction Standard: 13C2-PFTeDA
715.0 / 670.0



APPROVED
By JWK at 12:34 pm, 5/11/17

REVIEWED
By UMJS at 9:12 am, 5/15/17

eurofins | Lancaster Laboratories

LC-MS/MS Analysis Report

Printed: 5/11/2017 12:16:00 PM
Template: MQ-Sample-16Nov21.docx

ICAL Name: 17MAY10MCAL
QMethod Name: PFCMOD - 17JAN28
Result Table: 17MAY10MCAL 5/11/2017 12:08:01 PM
Acquisition Method: PFC-32-16NOV02.dam

Sample Name:	CAL6			**Data File:**		17MAY10MCAL-35.wiff
Sample ID:	CALPFC1712533G			**Acquis Date:**		2017-05-11T06:52:45
Sample Type:	Standard			**Instrument:**		LM24960
Vial Position:	8			**Acquis Method:**		PFC-32-16NOV02.dam
Injection Vol:	5.00			**Result Table:**		17MAY10MCAL
QMethod File:	PFCMOD - 17JAN28			**ICAL Name:**		17MAY10MCAL
Batch Number:	MODICAL			**Operator:**		Not calculated
Sample Wt.:	1.00000			**Dilution Factor:**		1.00
Sample Vol.:	1.000			**Prep Factor:**		1.000

Injection Standard Peak Table

Injection Standard Name	Inj Std Conc	Injection Std Peak Area	ICAL Injection Standard AVG	Injection Std %Diff	Injection Std %Diff Limit	Injection Std %Diff OOS
I13C3-PFBA	1.0	622942.3	669117.3	-6.9	50.0	
I13C2-PFOA	1.0	319261.8	342184.6	-6.7	50.0	
I13C4-PFOS	1.0	66043.7	70131.6	-5.8	50.0	
I13C2-PFDA	1.0	322967.2	384098.7	-15.9	50.0	

Extraction Standard Peak Table

Extraction Standard Name	Ext Std Area	Inj Std Name	Inj Std Area	Area Ratio	AVG Area Ratio	Ext Std Conc	Ext Std Result	Ext Std %REC	Ext Std %REC Limit	Ext Std OOS
E13C4-PFBA	725029.6	13C3-PFBA	622942.3	1.164	1.150	1.000	1.012		-	
E13C5-PFPeA	661028.3	13C3-PFBA	622942.3	1.061	1.073	1.000	0.989		-	
E13C3-PFBS	122452.7	13C3-PFBA	622942.3	0.197	0.194	1.000	1.011		-	
E13C2-4:2-FTS	94831.8	13C2-PFOA	319261.8	0.297	0.236	1.000	1.257		-	
E13C5-PFHxA	625332.8	13C2-PFOA	319261.8	1.959	2.026	1.000	0.967		-	
E13C3-PFHxS	67201.2	13C2-PFOA	319261.8	0.211	0.206	1.000	1.023		-	
E13C4-PFHpA	417619.8	13C2-PFOA	319261.8	1.308	1.285	1.000	1.018		-	
E13C2-6:2-FTS	42747.8	13C2-PFOA	319261.8	0.134	0.128	1.000	1.045		-	
E13C8-PFOA	363201.5	13C2-PFOA	319261.8	1.138	1.163	1.000	0.978		-	
E13C8-PFOS	56875.5	13C4-PFOS	66043.7	0.861	0.865	1.000	0.995		-	
E13C9-PFNA	294361.8	13C4-PFOS	66043.7	4.457	4.422	1.000	1.008		-	
E13C8-PFOSA	309795.4	13C2-PFDA	322967.2	0.959	0.936	1.000	1.024		-	
E13C6-PFDA	463714.1	13C2-PFDA	322967.2	1.436	1.424	1.000	1.008		-	
E13C2-8:2-FTS	63902.5	13C2-PFDA	322967.2	0.198	0.155	1.000	1.274		-	
Ed7-NMePFOSAE	109014.5	13C2-PFDA	322967.2	0.338	0.299	1.000	1.130		-	
Ed3-NMePFOSA	46961.4	13C2-PFDA	322967.2	0.145	0.120	1.000	1.209		-	
Ed3-NMeFOSAA	133529.4	13C2-PFDA	322967.2	0.413	0.343	1.000	1.206		-	
Ed9-NEtPFOSAE	125385.8	13C2-PFDA	322967.2	0.388	0.333	1.000	1.167		-	
Ed5-NEtPFOSA	36340.5	13C2-PFDA	322967.2	0.113	0.095	1.000	1.187		-	
E13C7-PFUnDA	387212.5	13C2-PFDA	322967.2	1.199	0.953	1.000	1.258		-	
Ed5-NEtFOSAA	102721.8	13C2-PFDA	322967.2	0.318	0.249	1.000	1.279		-	
E13C2-PFDoDA	363174.3	13C2-PFDA	322967.2	1.125	1.154	1.000	0.974		-	
E13C2-PFTeDA	230087.1	13C2-PFDA	322967.2	0.712	0.651	1.000	1.094		-	

APPROVED
By JWK at 12:34 pm, 5/11/17

REVIEWED
By UMJS at 9:13 am, 5/15/17

ICAL Name: 17MAY10MCAL **Result Table:** 17MAY10MCAL 5/11/2017 12:08:01 PM
QMethod Name: PFCMOD - 17JAN28 **Acquisition Method:** PFC-32-16NOV02.dam

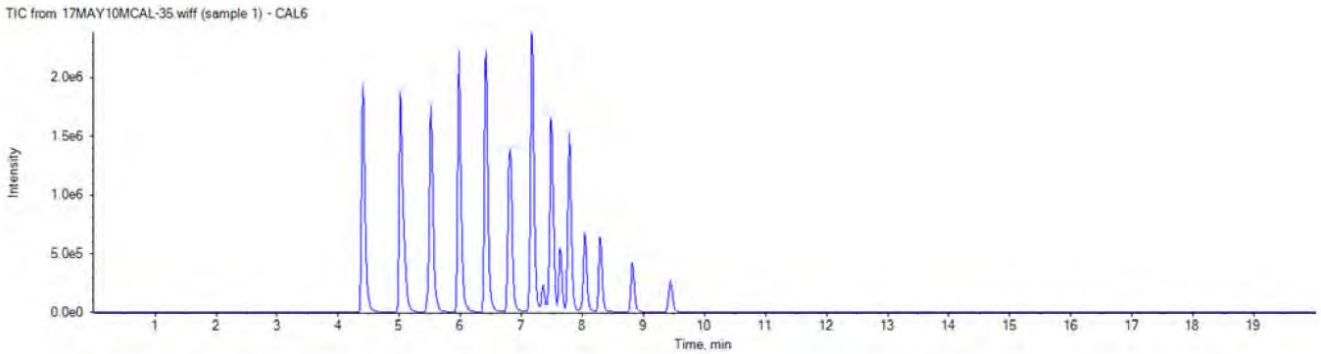
Analyte Quantitation Peak Table

Sample Name: CAL6 **Instrument Name:** LM24960 **File Name:** 17MAY10MCAL-35.wiff

Sample Wt	Sample Vol	Dilution Factor	PrepFactor
1.00000	1.000	1.00	1.000

Analytet Name	RT	RRT	Analyte Area Response	Int Typ	ES Name	ES RT	ES Area Response	Area Ratio	Sample Result (ng/g)
PFBA	4.41	1.000	6432409.0	A	13C4-PFBA	4.41	725029.6	8.872	48.788
PFPeA	5.02	1.000	6661368.1	A	13C5-PFPeA	5.02	661028.3	10.077	48.818
PFBS	5.09	1.000	1185249.6	A	13C3-PFBS	5.09	122452.7	9.679	45.806
4:2-FTS	5.47	1.000	376815.3	A	13C2-4:2-FTS	5.47	94831.8	3.974	23.555
PFHxA	5.52	1.000	5846272.0	A	13C5-PFHxA	5.52	625332.8	9.349	49.491
PFPeS	5.54	1.090	677494.1	A	13C3-PFBS	5.09	122452.7	5.533	49.434
PFHxS	5.98	1.000	2136783.8	A	13C3-PFHxS	5.98	67201.2	31.797	44.599
PFHpA	5.98	1.000	5072728.3	A	13C4-PFHpA	5.98	417619.8	12.147	48.928
6:2-FTS	6.40	1.000	145356.7	A	13C2-6:2-FTS	6.40	42747.8	3.400	21.727
PFHpS	6.40	1.070	554198.1	A	13C3-PFHxS	5.98	67201.2	8.247	43.252
PFOA	6.42	1.000	4005198.7	A	13C8-PFOA	6.42	363201.5	11.028	50.246
PFOS	6.79	1.000	1960984.9	A	13C8-PFOS	6.79	56875.5	34.479	47.954
PFNA	6.82	1.000	3687416.1	A	13C9-PFNA	6.82	294361.8	12.527	51.159
PFOSA	7.18	1.000	3276324.5	A	13C8-PFOSA	7.18	309795.4	10.576	48.314
PFNS	7.14	1.050	572036.3	A	13C8-PFOS	6.79	56875.5	10.058	46.119
PFDA	7.18	1.000	4396872.9	A	13C6-PFDA	7.18	463714.1	9.482	51.742
8:2-FTS	7.19	1.000	229260.2	A	13C2-8:2-FTS	7.19	63902.5	3.588	24.012
NMePFOSAE	7.63	1.000	1346503.3	A	d7-NMePFOSAE	7.62	109014.5	12.352	49.250
NMePFOSA	7.65	1.000	505564.3	A	d3-NMePFOSA	7.65	46961.4	10.766	50.244
NMeFOSAA	7.36	1.000	654587.8	A	d3-NMeFOSAA	7.35	133529.4	4.902	23.028
NEtPFOSAE	7.80	1.000	1350643.2	A	d9-NEtPFOSAE	7.79	125385.8	10.772	49.380
NEtPFOSA	7.82	1.000	361280.2	A	d5-NEtPFOSA	7.81	36340.5	9.942	49.334
PFDS	7.45	1.100	600007.1	A	13C8-PFOS	6.79	56875.5	10.550	53.557
PFUnDA	7.49	1.000	5087310.4	A	13C7-PFUnDA	7.49	387212.5	13.138	51.174
NEtFOSAA	7.52	1.000	552107.2	A	d5-NEtFOSAA	7.52	102721.8	5.375	26.298
PFDoDA	7.78	1.000	3490377.1	A	13C2-PFDoDA	7.78	363174.3	9.611	51.431
10:2-FTS	7.81	1.090	277591.2	A	13C2-8:2-FTS	7.19	63902.5	4.344	22.907
PFDoS	8.00	1.180	207255.8	A	13C8-PFOS	6.79	56875.5	3.644	51.333
PFTrDA	8.04	1.030	2452600.7	A	13C2-PFDoDA	7.78	363174.3	6.753	50.140
PFTeDA	8.29	1.000	2238979.6	A	13C2-PFTeDA	8.29	230087.1	9.731	49.648
PFHxDA	8.82	1.060	1750134.7	A	13C2-PFTeDA	8.29	230087.1	7.606	48.004
PFODA	9.44	1.140	1222749.9	A	13C2-PFTeDA	8.29	230087.1	5.314	48.598

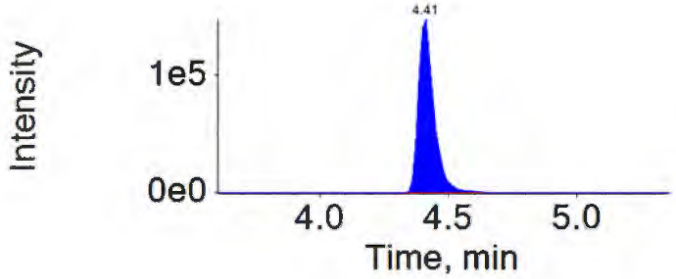
Total Ion Chromatogram



ICAL Name: 17MAY10MCAL
QMethod Name: PFCMOD - 17JAN28
Result Table: 17MAY10MCAL 5/11/2017 12:08:01 PM
Acquisition Method: PFC-32-16NOV02.dam

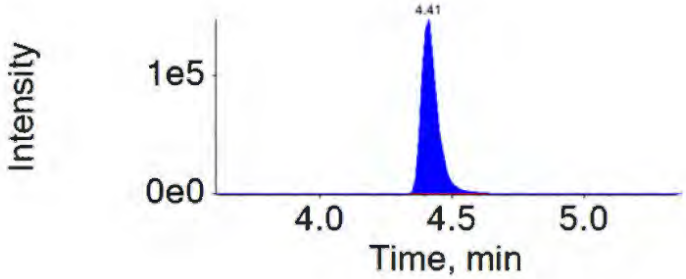
Injection Standard: I13C3-PFBA

216.0 / 172.0



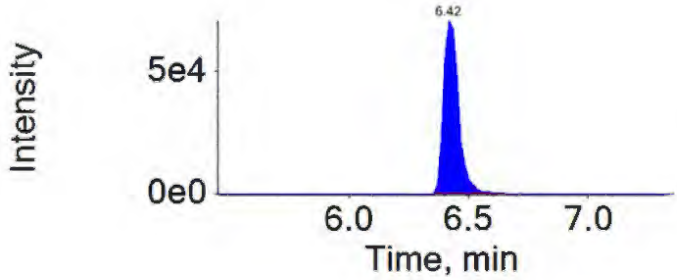
Injection Standard: 13C3-PFBA

216.0 / 172.0



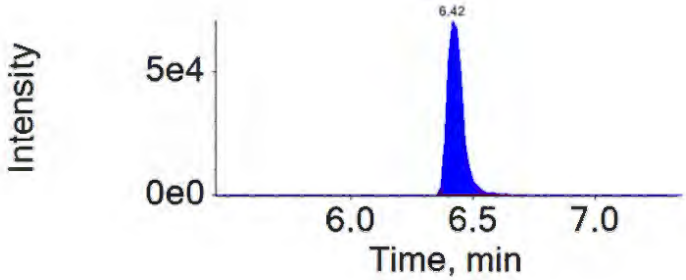
Injection Standard: I13C2-PFOA

415.0 / 370.0



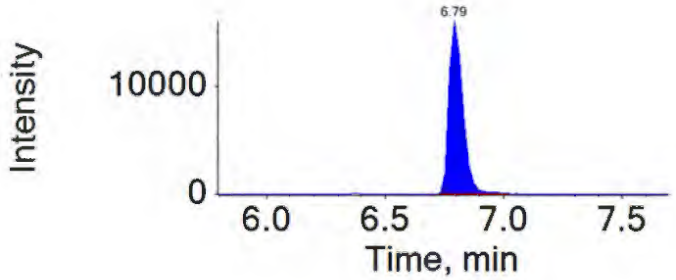
Injection Standard: 13C2-PFOA

415.0 / 370.0



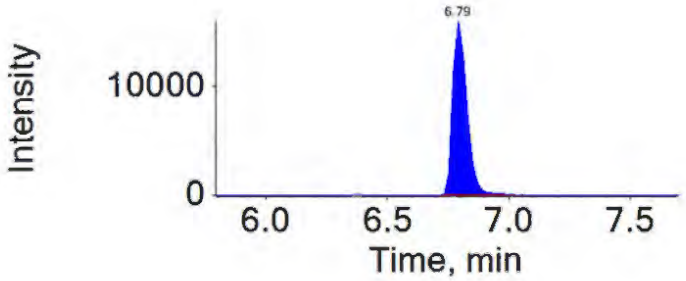
Injection Standard: I13C4-PFOS

503.0 / 99.0



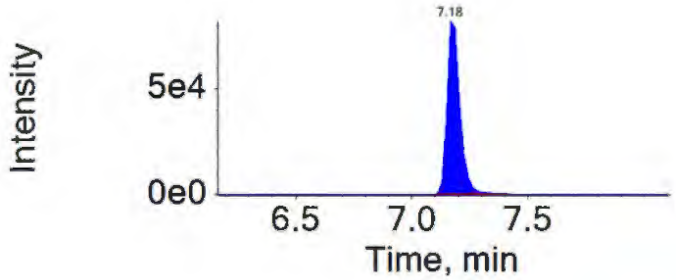
Injection Standard: 13C4-PFOS

503.0 / 99.0



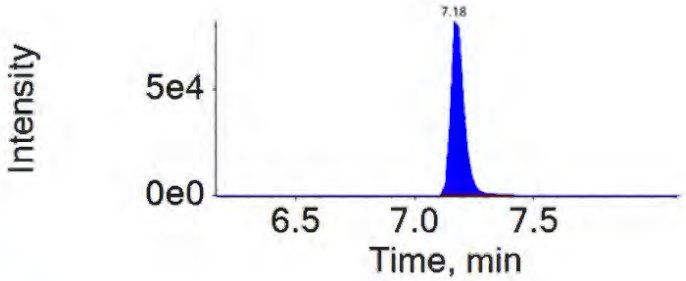
Injection Standard: I13C2-PFDA

515.0 / 470.0



Injection Standard: 13C2-PFDA

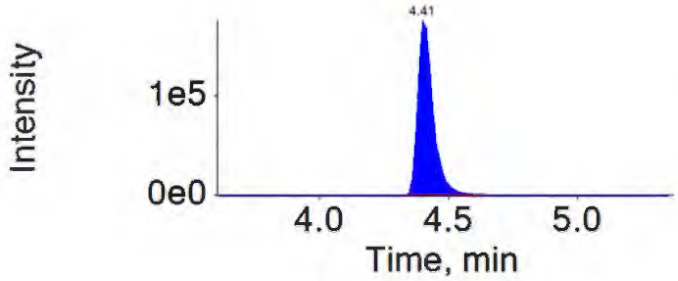
515.0 / 470.0



ICAL Name: 17MAY10MCAL **Result Table:** 17MAY10MCAL 5/11/2017 12:08:01 PM
QMethod Name: PFCMOD - 17JAN28 **Acquisition Method:** PFC-32-16NOV02.dam

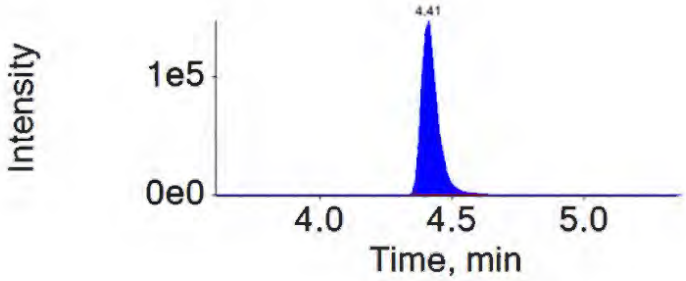
Extraction Standard: E13C4-PFBA

217.0 /
172.0



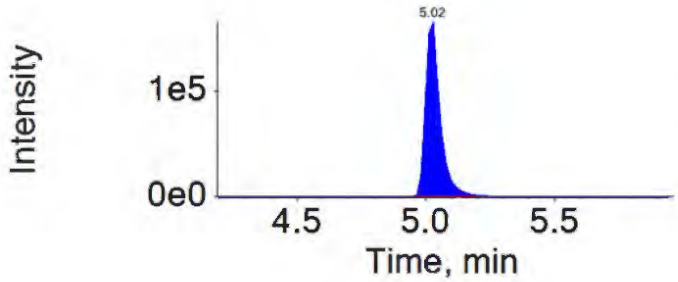
Injection Standard: 13C3-PFBA

216.0 /
172.0



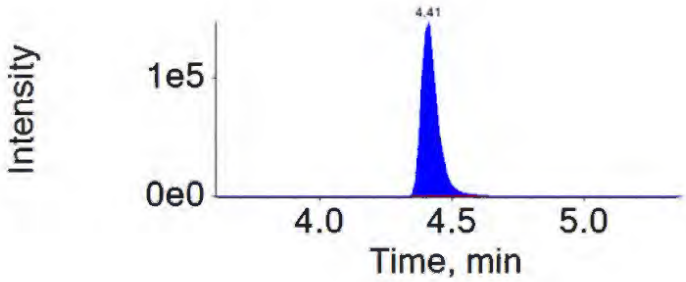
Extraction Standard: E13C5-PFPeA

268.0 /
223.0



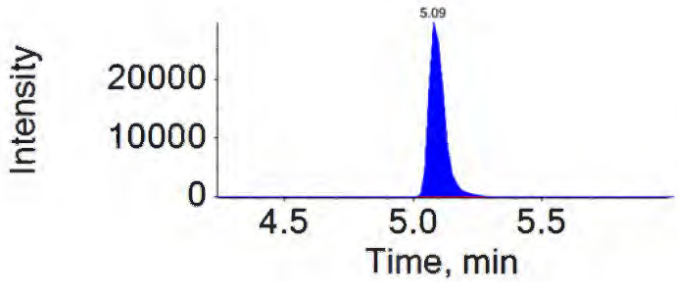
Injection Standard: 13C3-PFBA

216.0 /
172.0



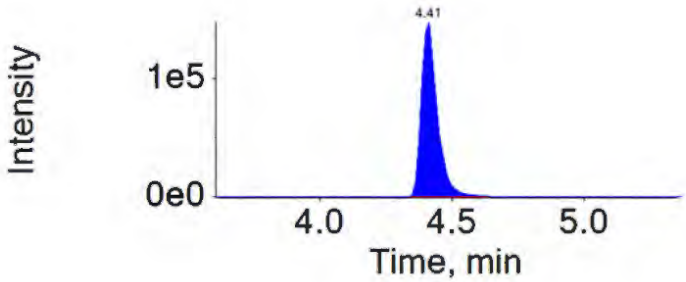
Extraction Standard: E13C3-PFBS

302.0 /
99.0



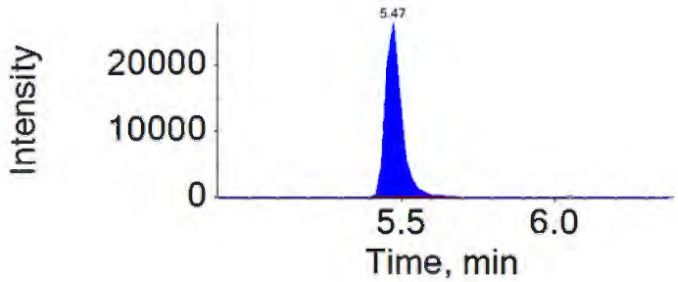
Injection Standard: 13C3-PFBA

216.0 /
172.0



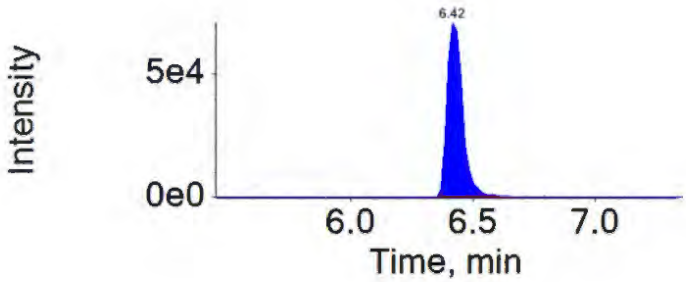
Extraction Standard: E13C2-4:2-FTS

329.0 /
309.0



Injection Standard: 13C2-PFOA

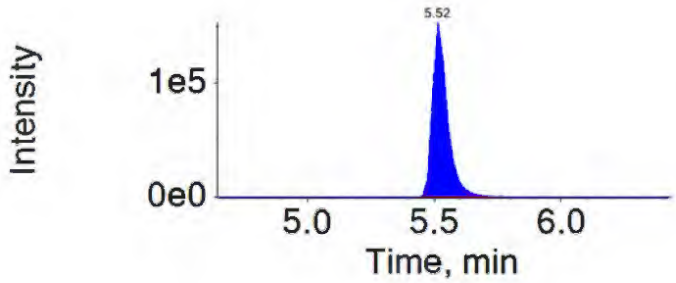
415.0 /
370.0



ICAL Name: 17MAY10MCAL **Result Table:** 17MAY10MCAL 5/11/2017 12:08:01 PM
QMethod Name: PFCMOD - 17JAN28 **Acquisition Method:** PFC-32-16NOV02.dam

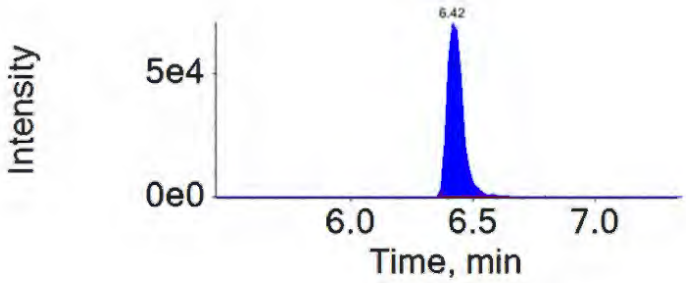
Extraction Standard: E13C5-PFHxA

318.0 /
273.0



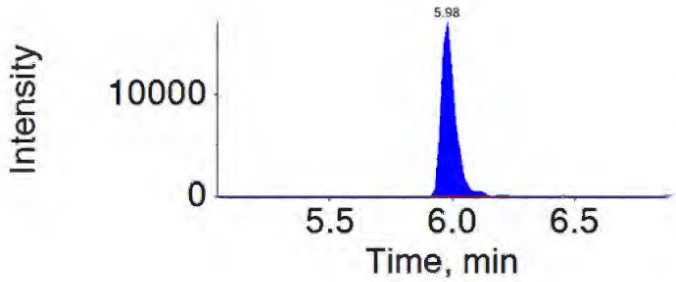
Injection Standard: 13C2-PFOA

415.0 /
370.0



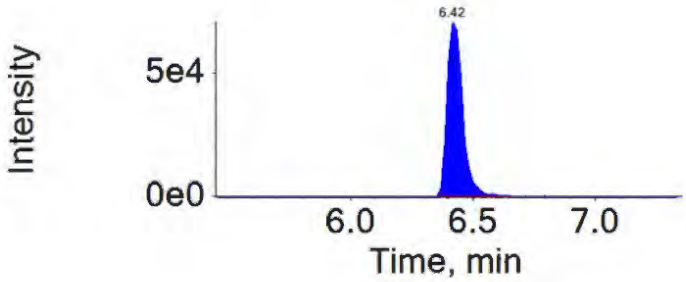
Extraction Standard: E13C3-PFHxS

402.0 /
99.0



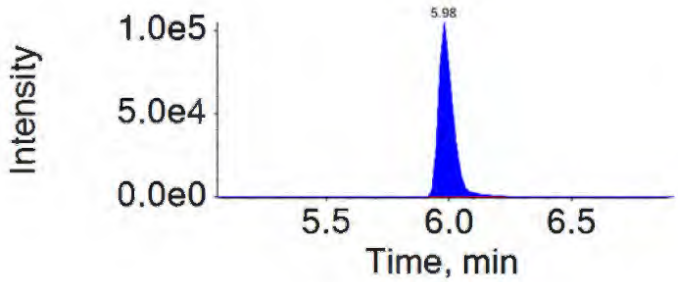
Injection Standard: 13C2-PFOA

415.0 /
370.0



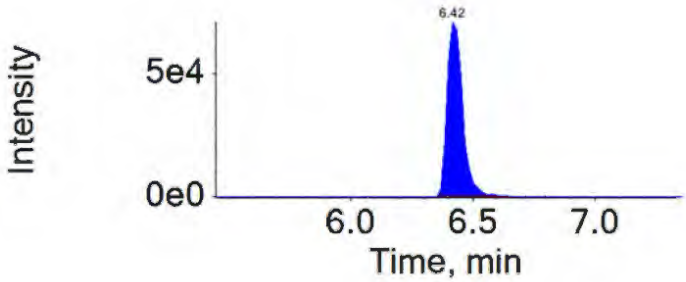
Extraction Standard: E13C4-PFHpA

367.0 /
322.0



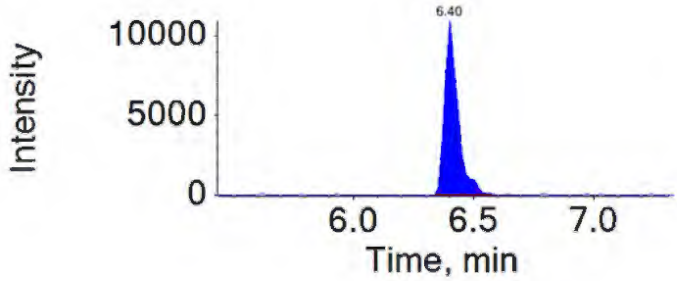
Injection Standard: 13C2-PFOA

415.0 /
370.0



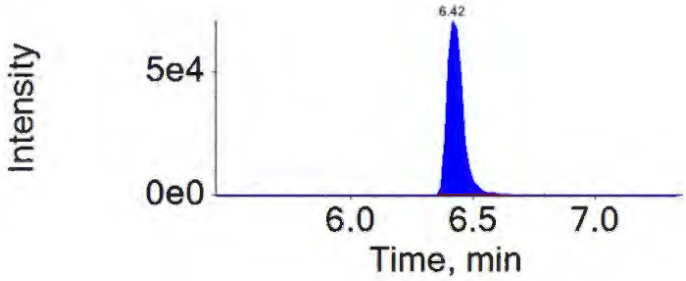
Extraction Standard: E13C2-6:2-FTS

429.0 /
409.0



Injection Standard: 13C2-PFOA

415.0 /
370.0



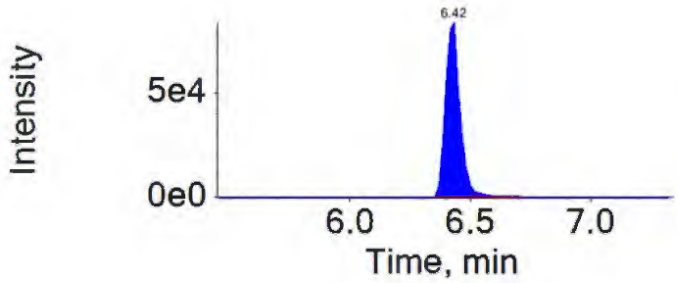
APPROVED
By JWK at 12:34 pm, 5/11/17

REVIEWED
By UMJS at 9:13 am, 5/15/17

ICAL Name: 17MAY10MCAL **Result Table:** 17MAY10MCAL 5/11/2017 12:08:01 PM
QMethod Name: PFCMOD - 17JAN28 **Acquisition Method:** PFC-32-16NOV02.dam

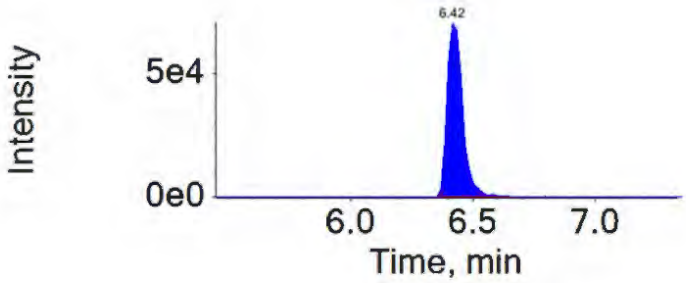
Extraction Standard: E13C8-PFOA

421.0 /
376.0



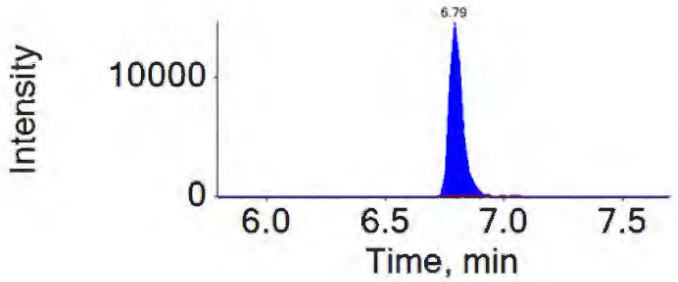
Injection Standard: 13C2-PFOA

415.0 /
370.0



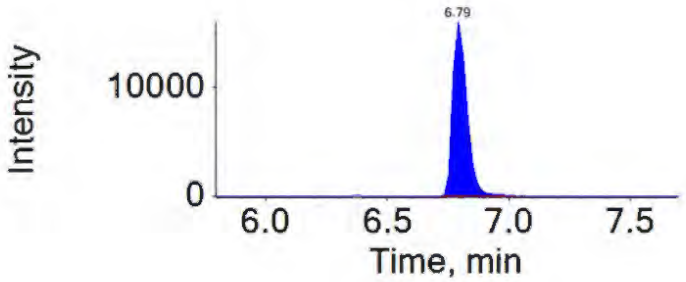
Extraction Standard: E13C8-PFOS

507.0 /
99.0



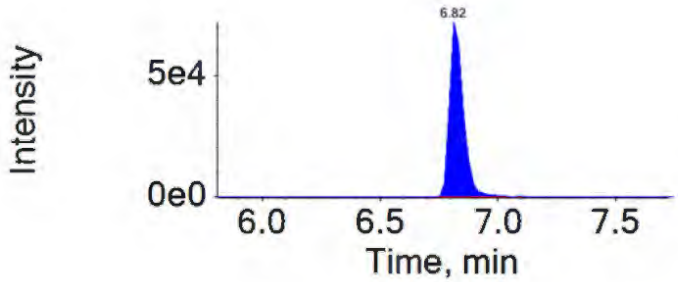
Injection Standard: 13C4-PFOS

503.0 /
99.0



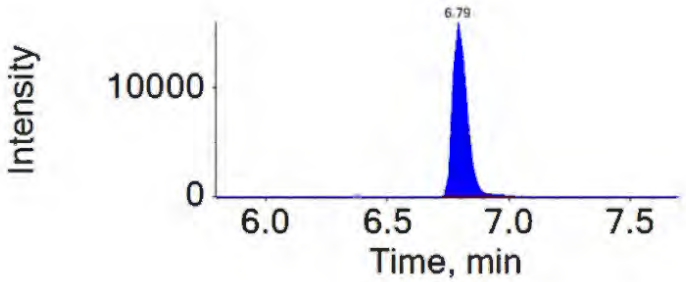
Extraction Standard: E13C9-PFNA

472.0 /
427.0



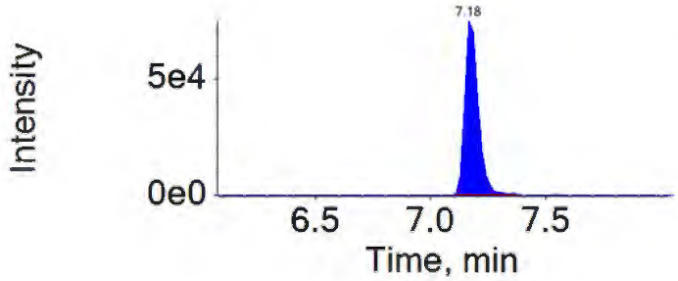
Injection Standard: 13C4-PFOS

503.0 /
99.0



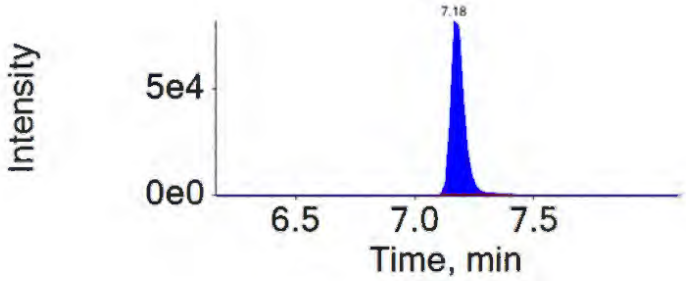
Extraction Standard: E13C8-PFOSA

506.0 /
78.0



Injection Standard: 13C2-PFDA

515.0 /
470.0



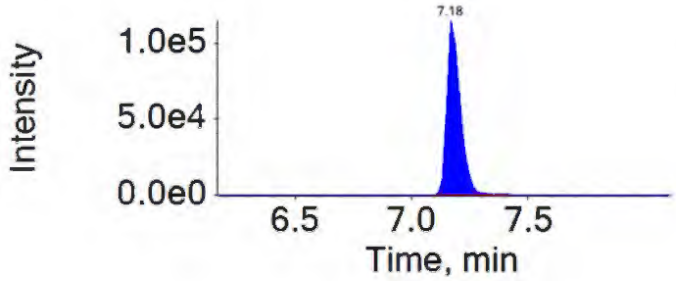
APPROVED
By JWK at 12:34 pm, 5/11/17

REVIEWED
By UMJS at 9:13 am, 5/15/17

ICAL Name: 17MAY10MCAL **Result Table:** 17MAY10MCAL 5/11/2017 12:08:01 PM
QMethod Name: PFCMOD - 17JAN28 **Acquisition Method:** PFC-32-16NOV02.dam

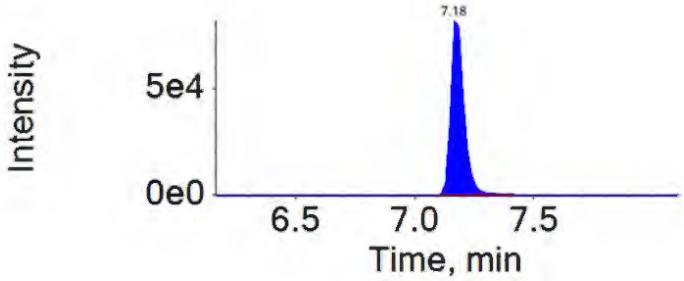
Extraction Standard: E13C6-PFDA

519.0 / 474.0



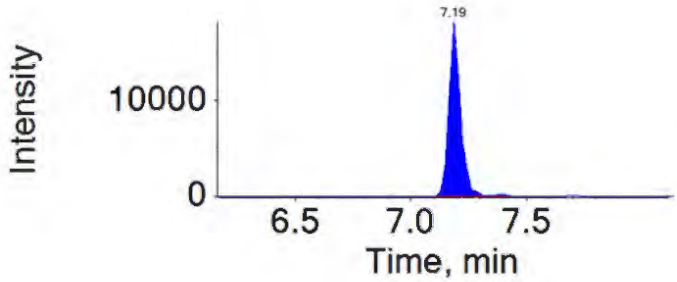
Injection Standard: 13C2-PFDA

515.0 / 470.0



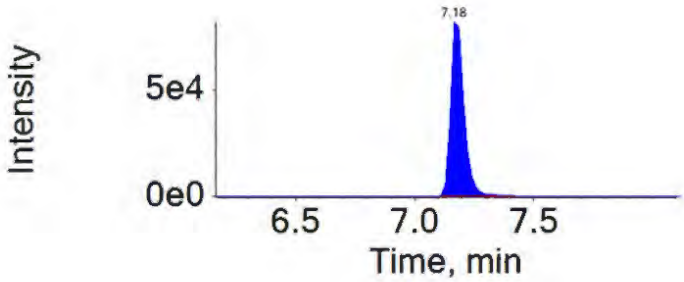
Extraction Standard: E13C2-8:2-FTS

529.0 / 509.0



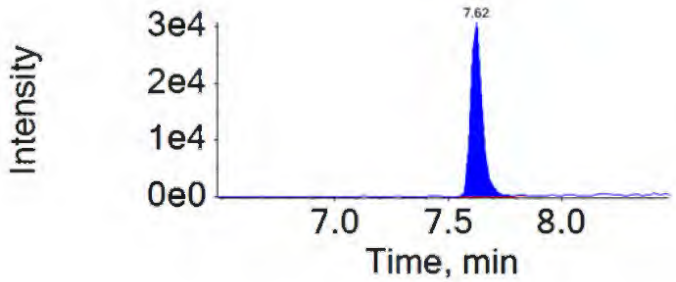
Injection Standard: 13C2-PFDA

515.0 / 470.0



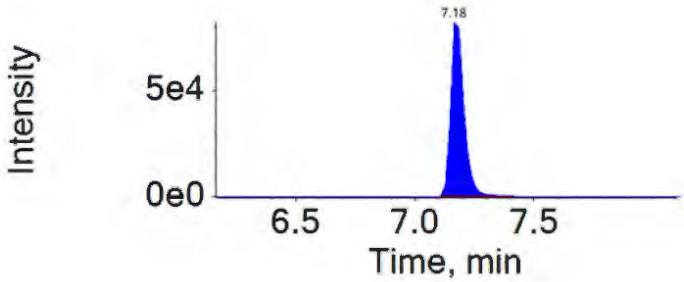
Extraction Standard: Ed7-NMePFOSAE

623.0 / 59.0



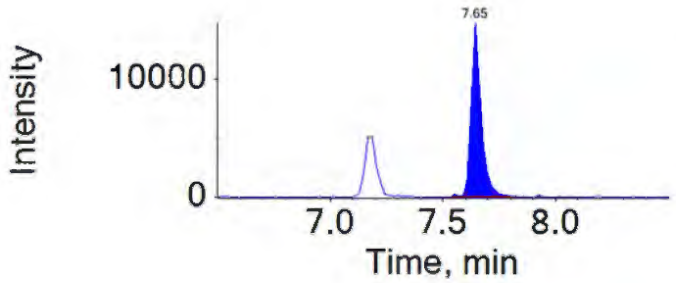
Injection Standard: 13C2-PFDA

515.0 / 470.0



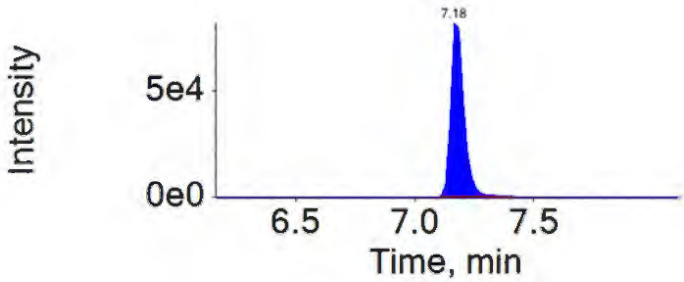
Extraction Standard: Ed3-NMePFOSA

515.0 / 169.0



Injection Standard: 13C2-PFDA

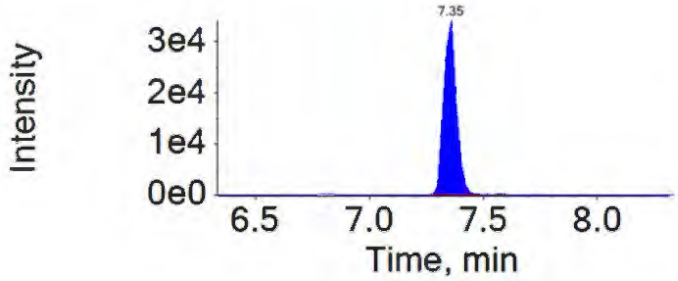
515.0 / 470.0



ICAL Name: 17MAY10MCAL **Result Table:** 17MAY10MCAL 5/11/2017 12:08:01 PM
QMethod Name: PFCMOD - 17JAN28 **Acquisition Method:** PFC-32-16NOV02.dam

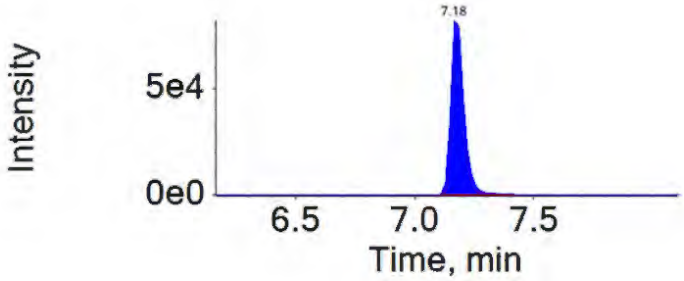
Extraction Standard: Ed3-NMeFOSAA

573.0 / 419.0



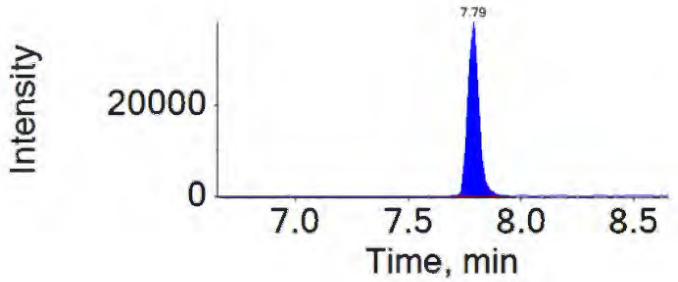
Injection Standard: 13C2-PFDA

515.0 / 470.0



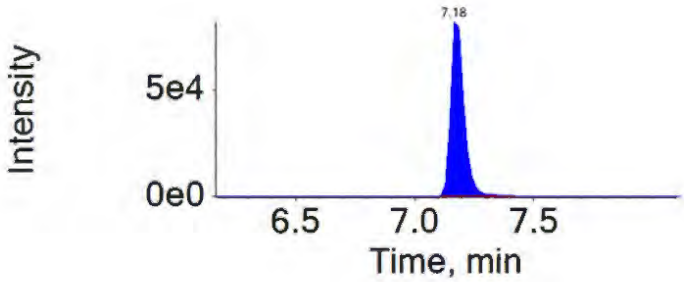
Extraction Standard: Ed9-NEtPFOSAE

639.0 / 59.0



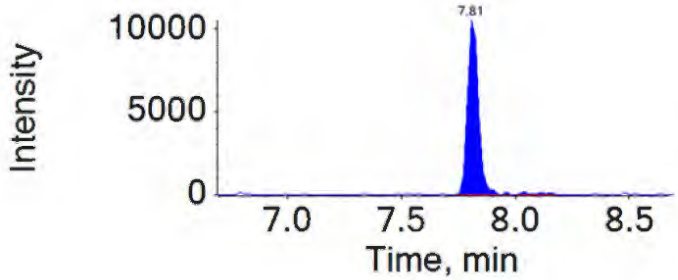
Injection Standard: 13C2-PFDA

515.0 / 470.0



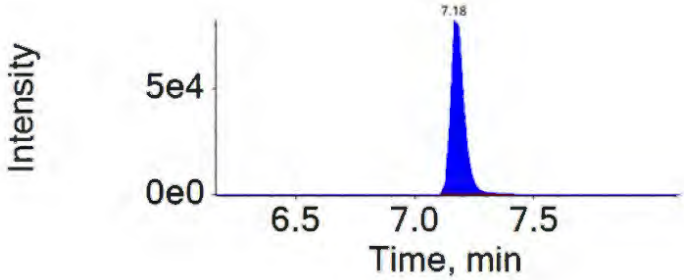
Extraction Standard: Ed5-NEtPFOSA

531.0 / 169.0



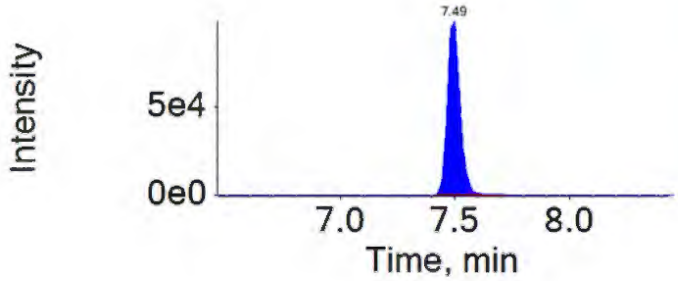
Injection Standard: 13C2-PFDA

515.0 / 470.0



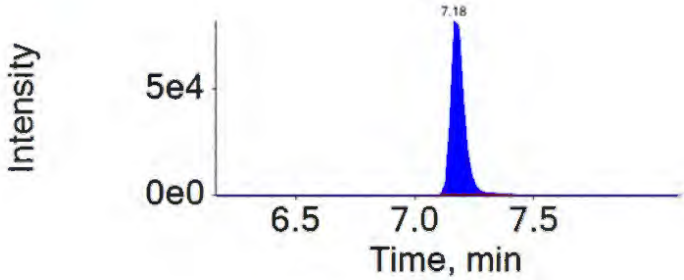
Extraction Standard: E13C7-PFUnDA

570.0 / 525.0



Injection Standard: 13C2-PFDA

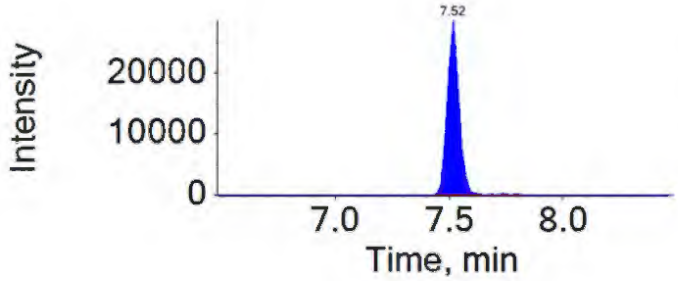
515.0 / 470.0



ICAL Name: 17MAY10MCAL **Result Table:** 17MAY10MCAL 5/11/2017 12:08:01 PM
QMethod Name: PFCMOD - 17JAN28 **Acquisition Method:** PFC-32-16NOV02.dam

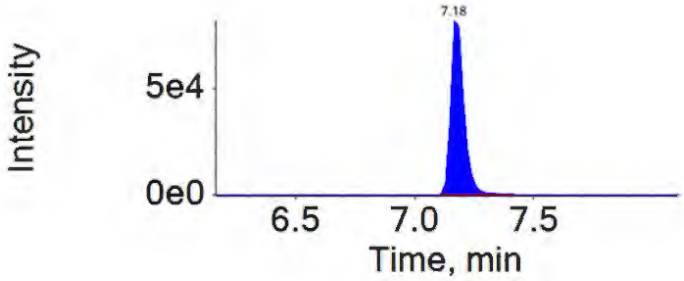
Extraction Standard: Ed5-NEtFOSAA

589.0 / 419.0



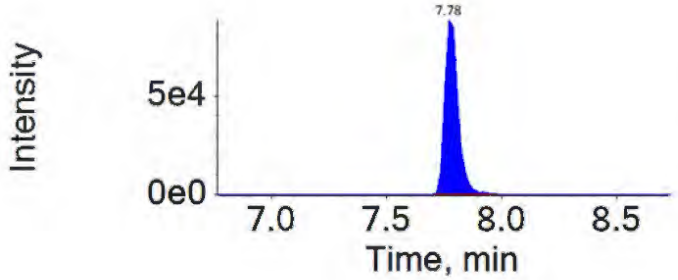
Injection Standard: 13C2-PFDA

515.0 / 470.0



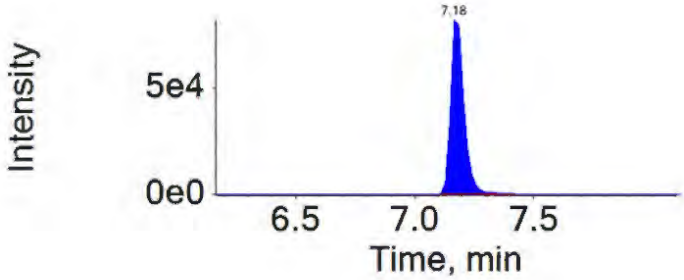
Extraction Standard: E13C2-PFDoDA

615.0 / 570.0



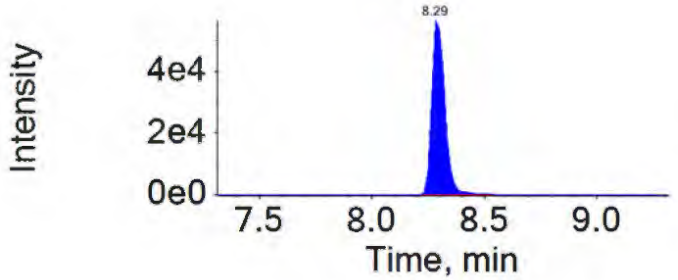
Injection Standard: 13C2-PFDA

515.0 / 470.0



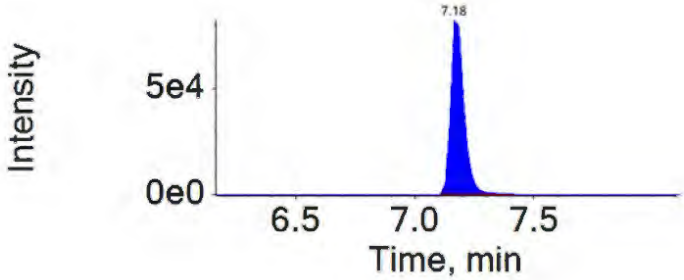
Extraction Standard: E13C2-PFTeDA

715.0 / 670.0



Injection Standard: 13C2-PFDA

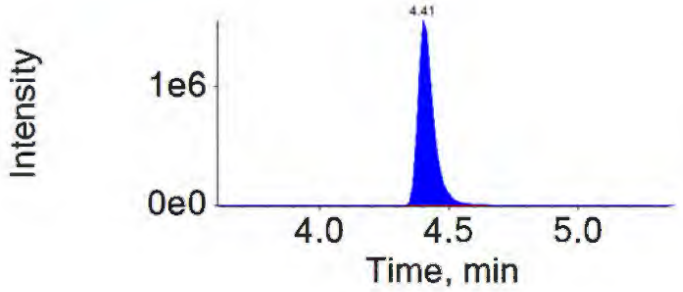
515.0 / 470.0



ICAL Name: 17MAY10MCAL **Result Table:** 17MAY10MCAL 5/11/2017 12:08:01 PM
QMethod Name: PFCMOD - 17JAN28 **Acquisition Method:** PFC-32-16NOV02.dam

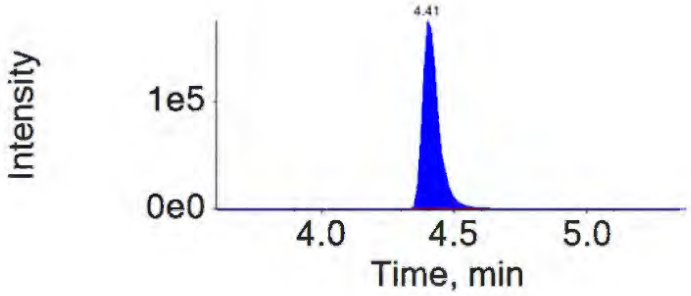
Analyte: PFBA

213.0 /
169.0



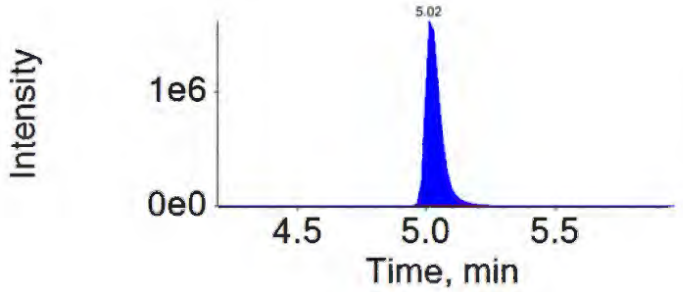
Extraction Standard: 13C4-PFBA

217.0 /
172.0



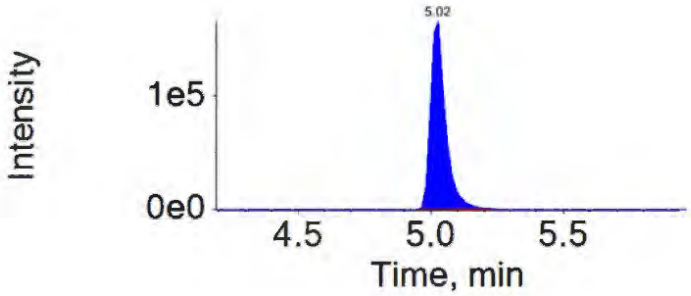
Analyte: PFPeA

263.0 /
219.0



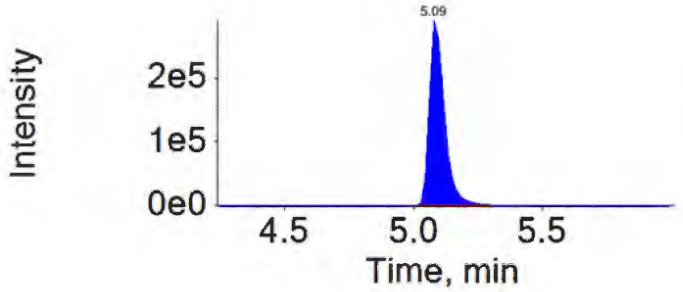
Extraction Standard: 13C5-PFPeA

268.0 /
223.0



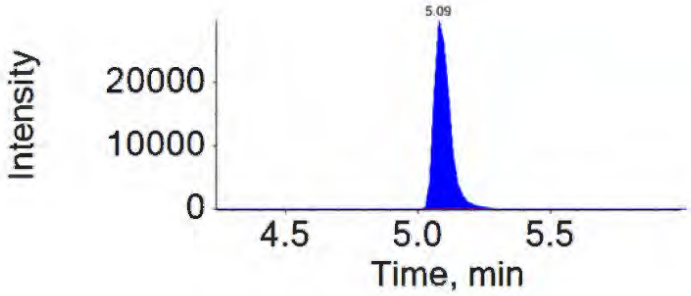
Analyte: PFBS

299.0 /
99.0



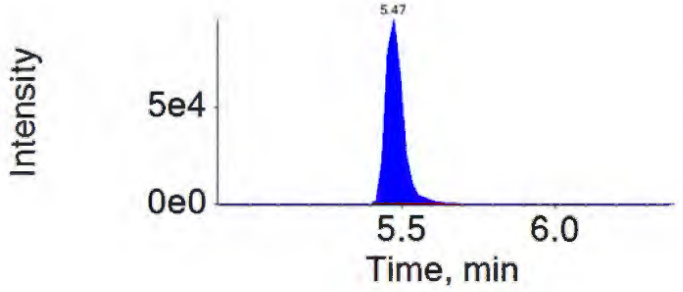
Extraction Standard: 13C3-PFBS

302.0 /
99.0



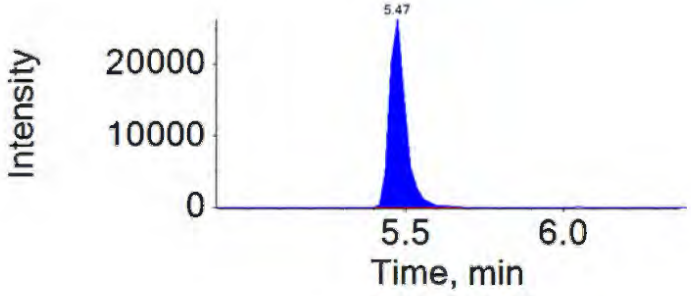
Analyte: 4:2-FTS

327.0 /
307.0



Extraction Standard: 13C2-4:2-FTS

329.0 /
309.0



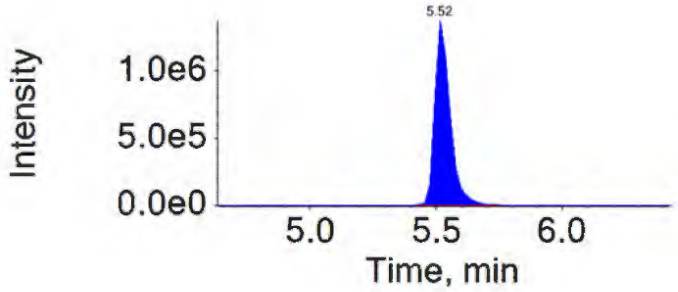
APPROVED
By JWK at 12:34 pm, 5/11/17

REVIEWED
By UMJS at 9:13 am, 5/15/17

ICAL Name: 17MAY10MCAL **Result Table:** 17MAY10MCAL 5/11/2017 12:08:01 PM
QMethod Name: PFCMOD - 17JAN28 **Acquisition Method:** PFC-32-16NOV02.dam

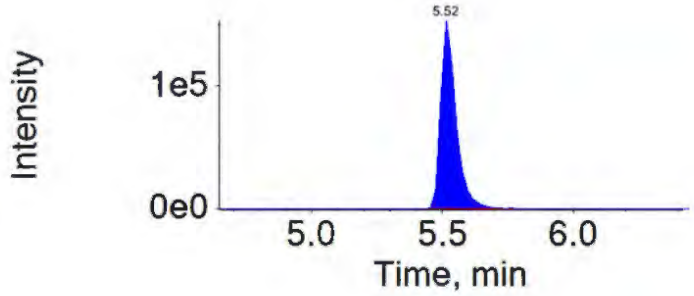
Analyte: PFHxA

313.0 /
269.0



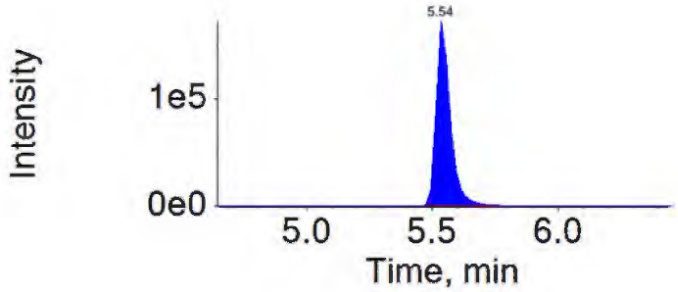
Extraction Standard: 13C5-PFHxA

318.0 /
273.0



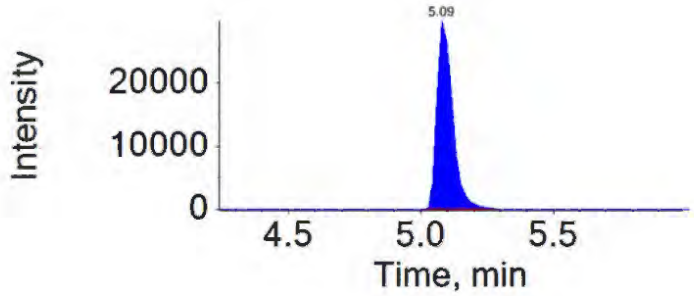
Analyte: PFPeS

349.0 /
99.0



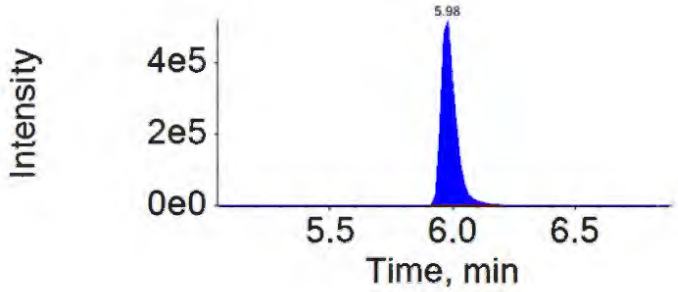
Extraction Standard: 13C3-PFBS

302.0 /
99.0



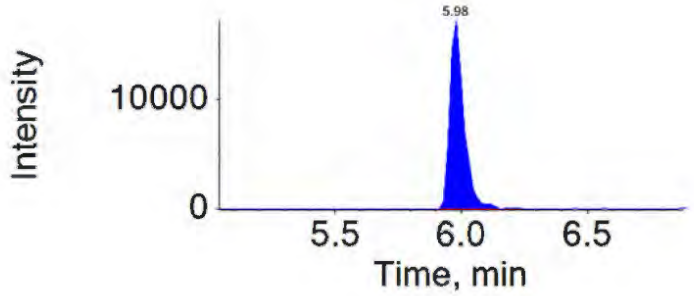
Analyte: PFHxS

399.0 /
80.0



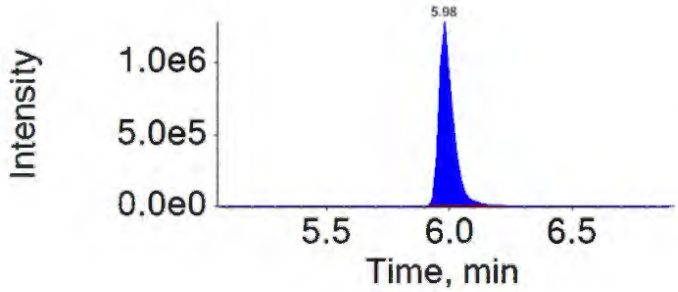
Extraction Standard: 13C3-PFHxS

402.0 /
99.0



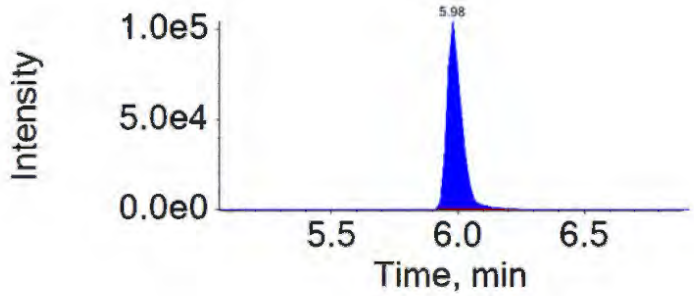
Analyte: PFHpA

363.0 /
319.0



Extraction Standard: 13C4-PFHpA

367.0 /
322.0



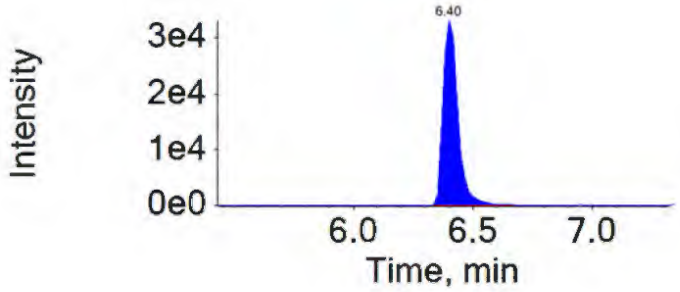
APPROVED
By JWK at 12:34 pm, 5/11/17

REVIEWED
By UMJS at 9:13 am, 5/15/17

ICAL Name: 17MAY10MCAL **Result Table:** 17MAY10MCAL 5/11/2017 12:08:01 PM
QMethod Name: PFCMOD - 17JAN28 **Acquisition Method:** PFC-32-16NOV02.dam

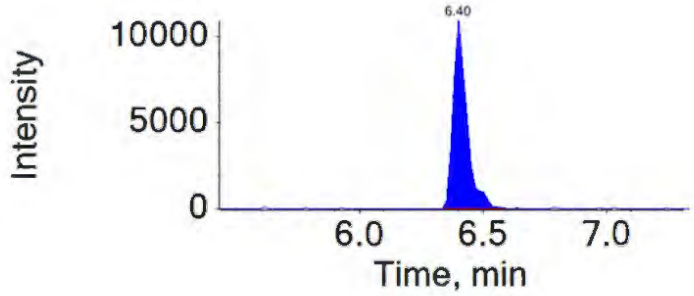
Analyte: 6:2-FTS

427.0 /
407.0



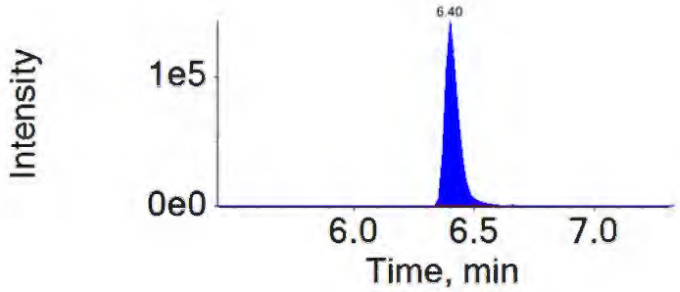
Extraction Standard: 13C2-6:2-FTS

429.0 /
409.0



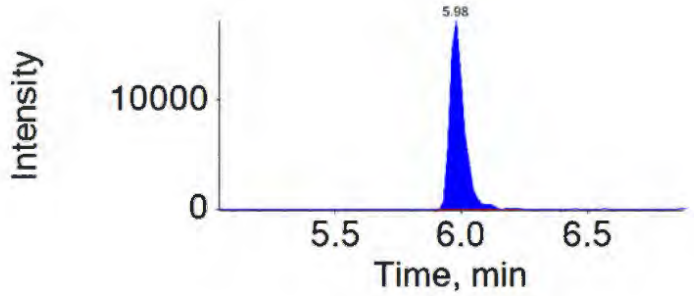
Analyte: PFHpS

449.0 /
99.0



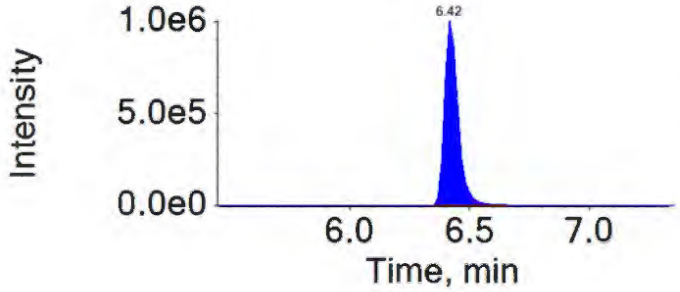
Extraction Standard: 13C3-PFHxS

402.0 /
99.0



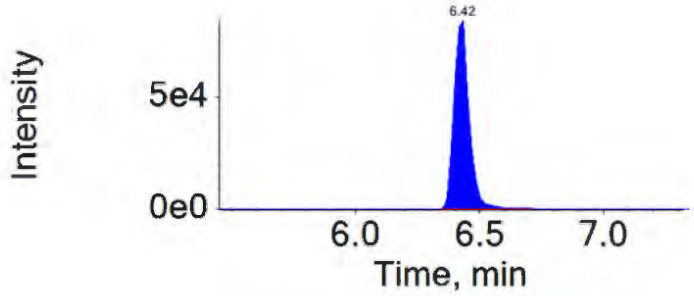
Analyte: PFOA

413.0 /
369.0



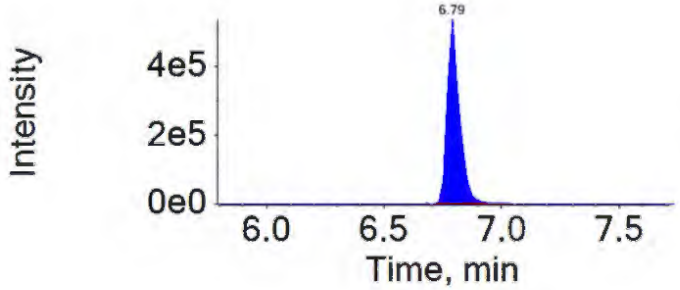
Extraction Standard: 13C8-PFOA

421.0 /
376.0



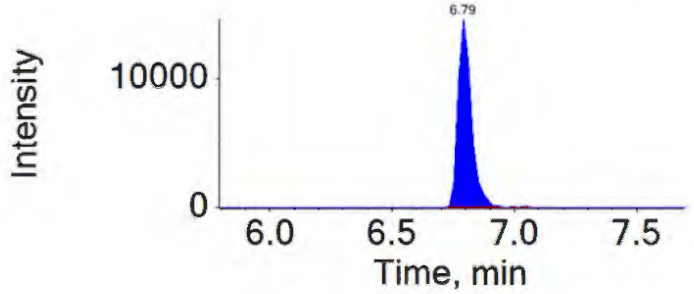
Analyte: PFOS

499.0 /
80.0



Extraction Standard: 13C8-PFOS

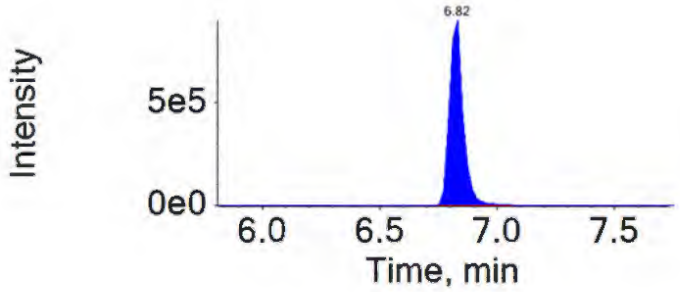
507.0 /
99.0



ICAL Name: 17MAY10MCAL **Result Table:** 17MAY10MCAL 5/11/2017 12:08:01 PM
QMethod Name: PFCMOD - 17JAN28 **Acquisition Method:** PFC-32-16NOV02.dam

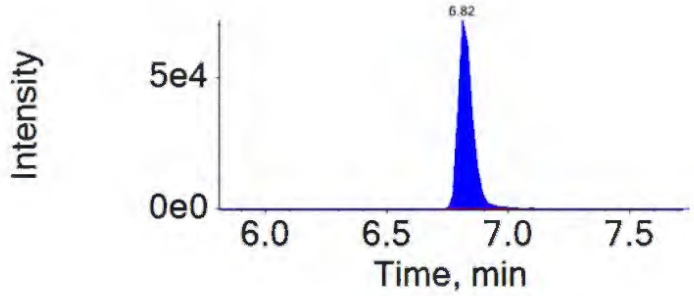
Analyte: PFNA

463.0 /
419.0



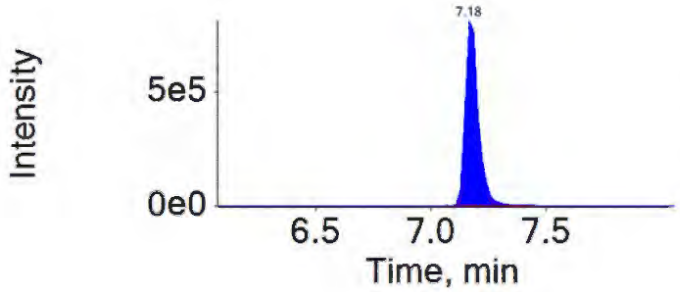
Extraction Standard: 13C9-PFNA

472.0 /
427.0



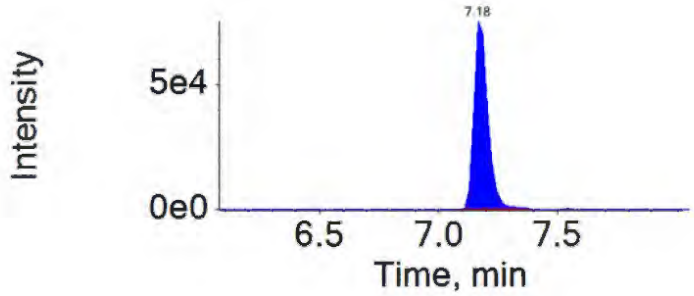
Analyte: PFOSA

498.0 /
78.0



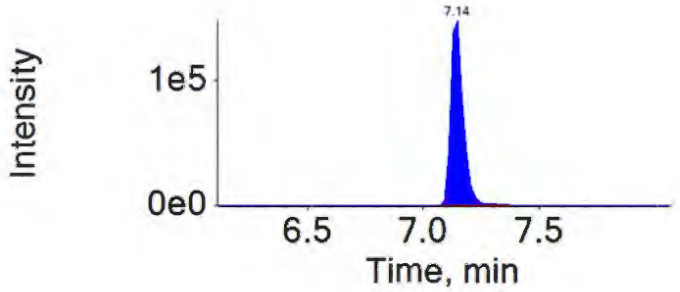
Extraction Standard: 13C8-PFOSA

506.0 /
78.0



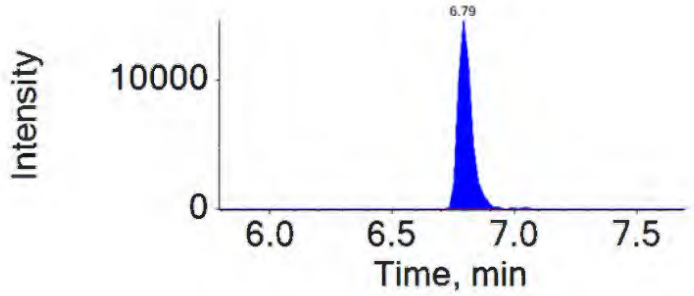
Analyte: PFNS

549.0 /
99.0



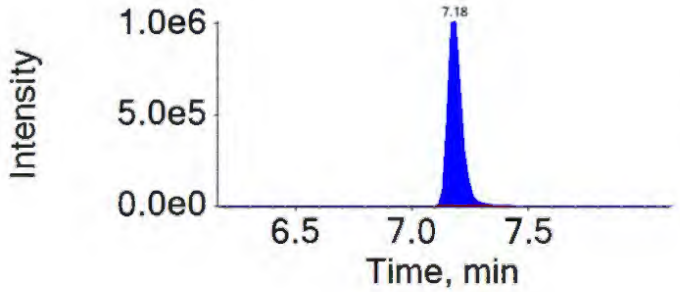
Extraction Standard: 13C8-PFOS

507.0 /
99.0



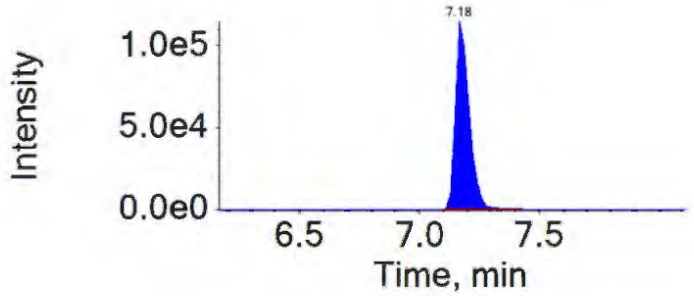
Analyte: PFDA

513.0 /
469.0



Extraction Standard: 13C6-PFDA

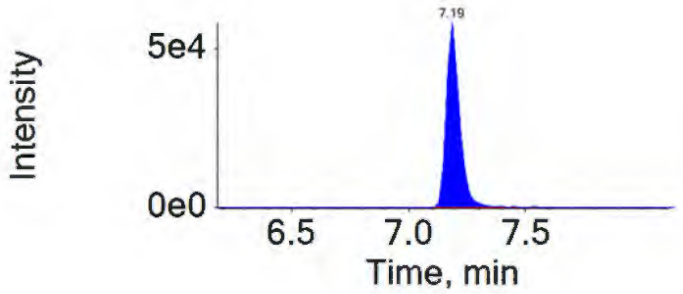
519.0 /
474.0



ICAL Name: 17MAY10MCAL **Result Table:** 17MAY10MCAL 5/11/2017 12:08:01 PM
QMethod Name: PFCMOD - 17JAN28 **Acquisition Method:** PFC-32-16NOV02.dam

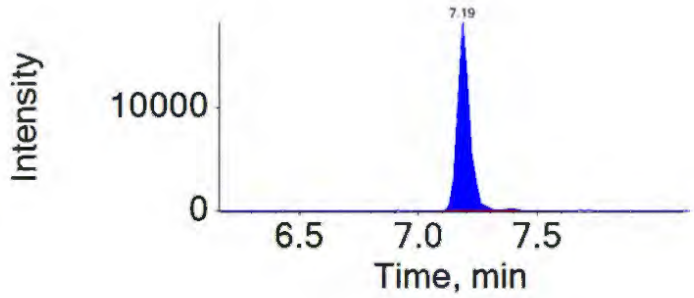
Analyte: 8:2-FTS

527.0 /
507.0



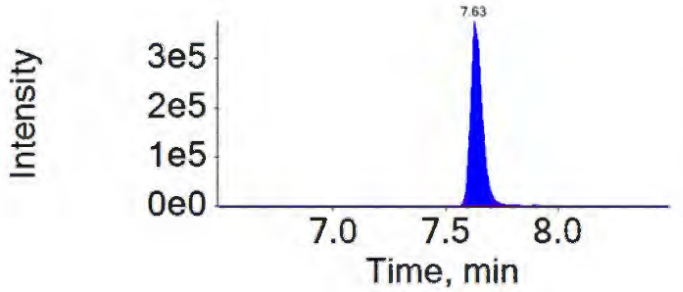
Extraction Standard: 13C2-8:2-FTS

529.0 /
509.0



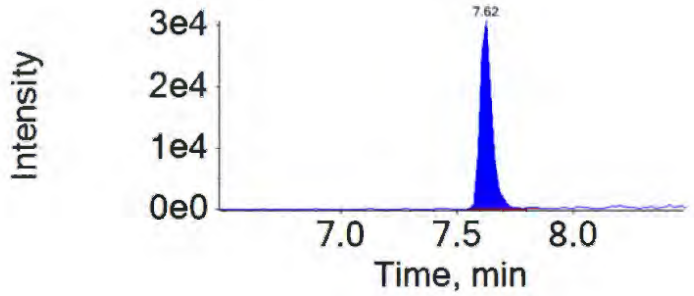
Analyte: NMePFOSAE

616.0 /
59.0



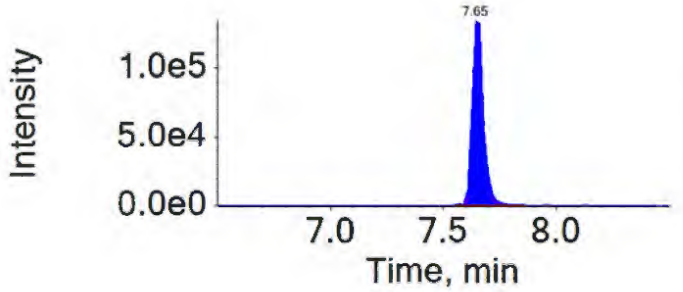
Extraction Standard: d7-NMePFOSAE

623.0 /
59.0



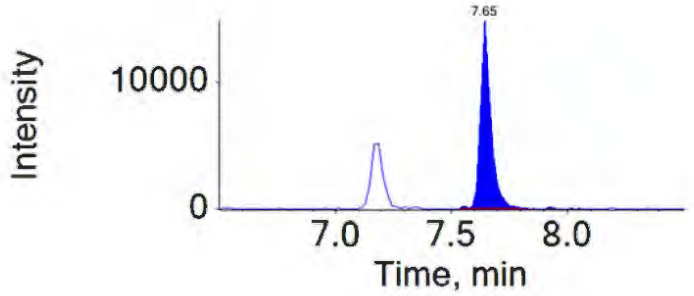
Analyte: NMePFOSA

512.0 /
169.0



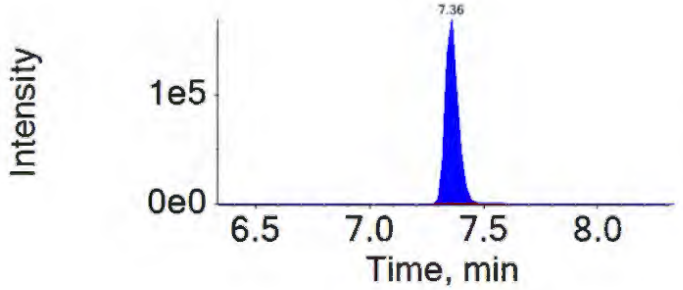
Extraction Standard: d3-NMePFOSA

515.0 /
169.0



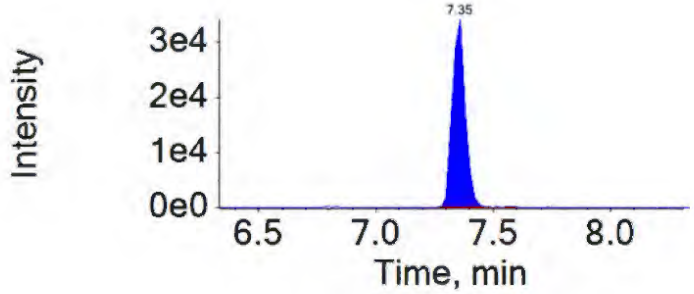
Analyte: NMeFOSAA

570.0 /
419.0



Extraction Standard: d3-NMeFOSAA

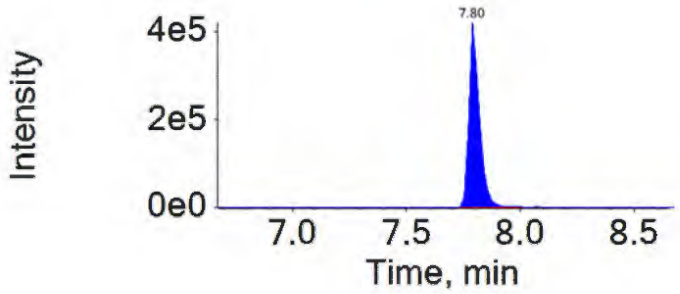
573.0 /
419.0



ICAL Name: 17MAY10MCAL **Result Table:** 17MAY10MCAL 5/11/2017 12:08:01 PM
QMethod Name: PFCMOD - 17JAN28 **Acquisition Method:** PFC-32-16NOV02.dam

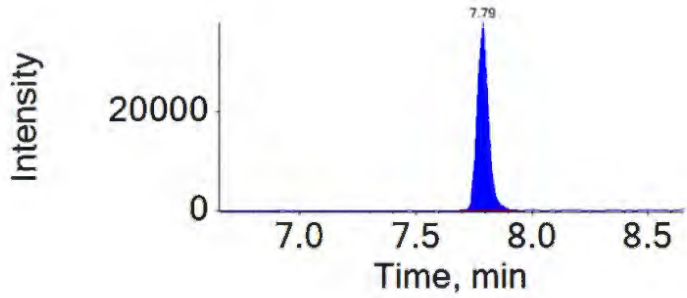
Analyte: NEtPFOSAE

630.0 /
59.0



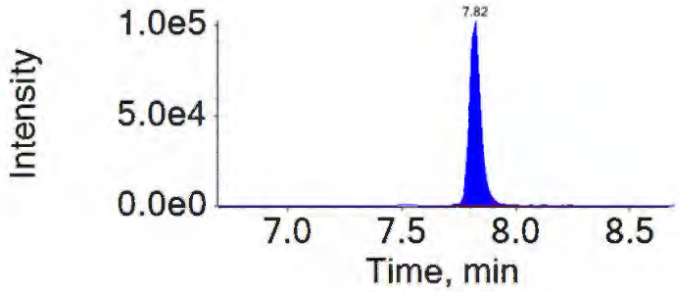
Extraction Standard: d9-NEtPFOSAE

639.0 /
59.0



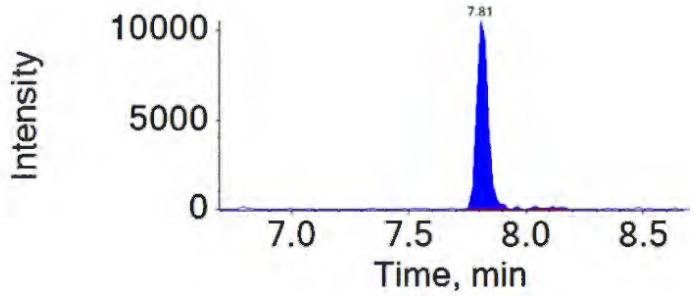
Analyte: NEtPFOSA

526.0 /
169.0



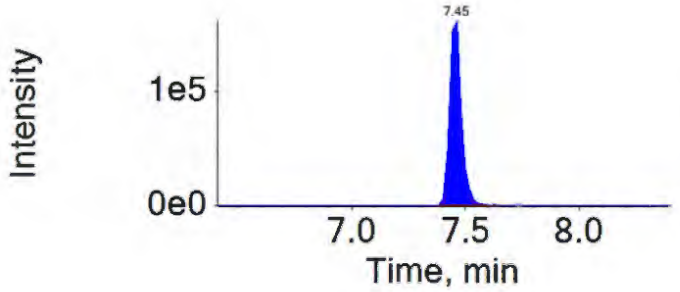
Extraction Standard: d5-NEtPFOSA

531.0 /
169.0



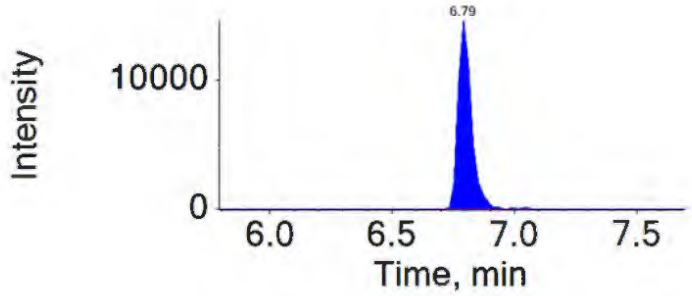
Analyte: PFDS

599.0 /
99.0



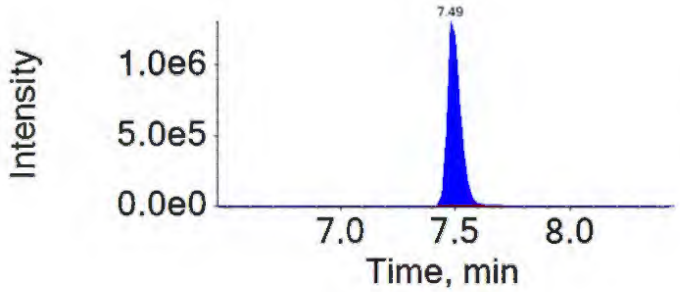
Extraction Standard: 13C8-PFOS

507.0 /
99.0



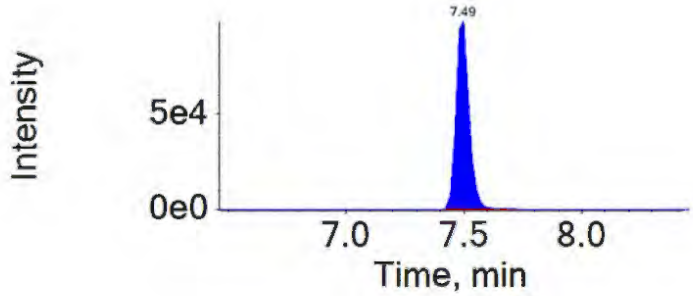
Analyte: PFUnDA

563.0 /
519.0



Extraction Standard: 13C7-PFUnDA

570.0 /
525.0



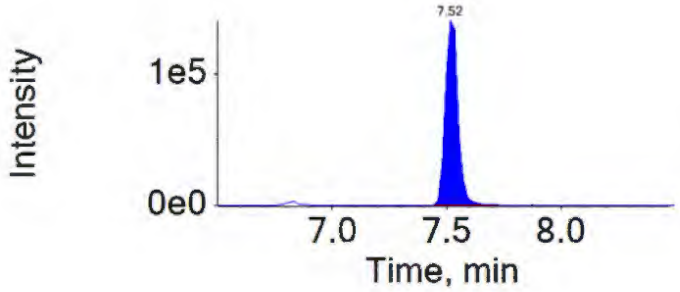
APPROVED
By JWK at 12:34 pm, 5/11/17

REVIEWED
By UMJS at 9:13 am, 5/15/17

ICAL Name: 17MAY10MCAL **Result Table:** 17MAY10MCAL 5/11/2017 12:08:01 PM
QMethod Name: PFCMOD - 17JAN28 **Acquisition Method:** PFC-32-16NOV02.dam

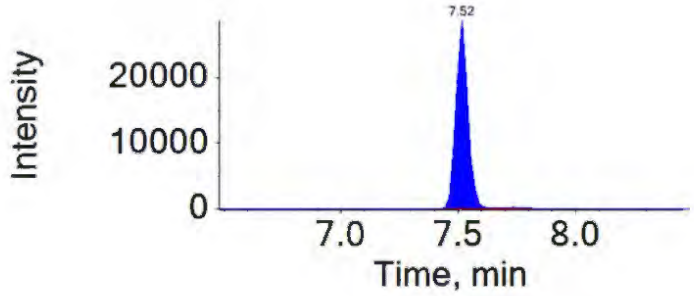
Analyte: NEtFOSAA

584.0 / 419.0



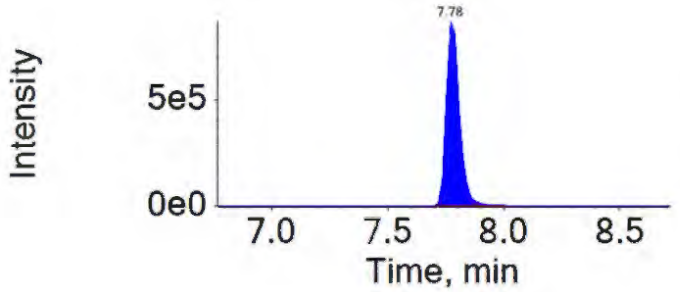
Extraction Standard: d5-NEtFOSAA

589.0 / 419.0



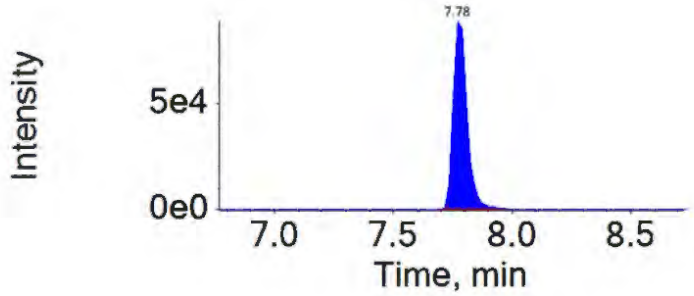
Analyte: PFDoDA

613.0 / 569.0



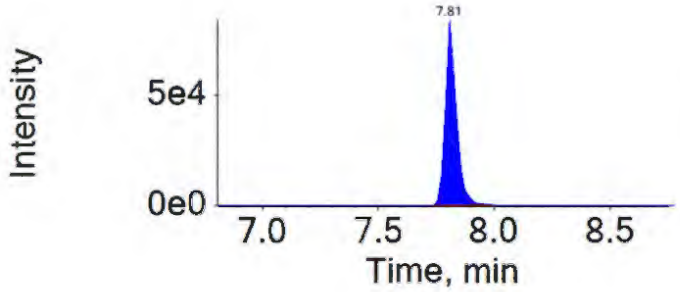
Extraction Standard: 13C2-PFDoDA

615.0 / 570.0



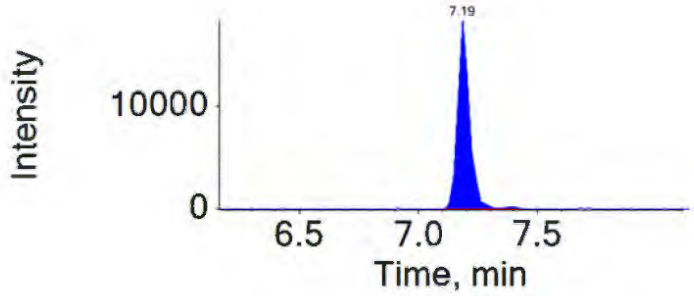
Analyte: 10:2-FTS

627.0 / 607.0



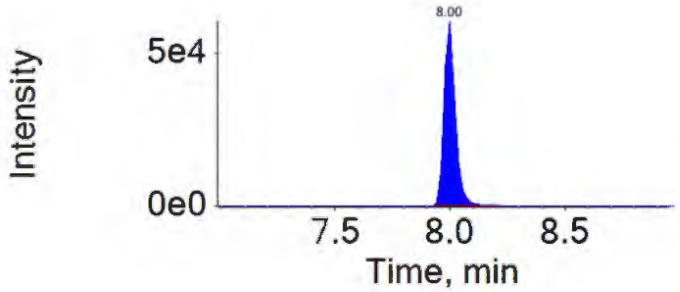
Extraction Standard: 13C2-8:2-FTS

529.0 / 509.0



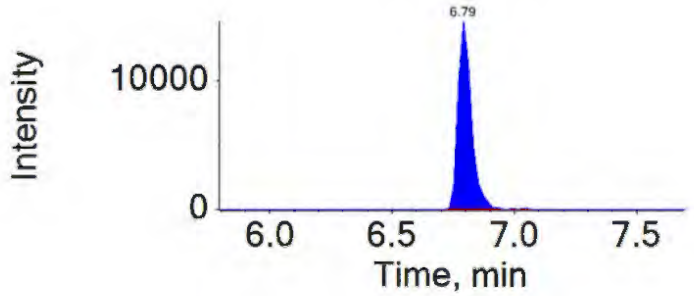
Analyte: PFDoS

699.0 / 99.0



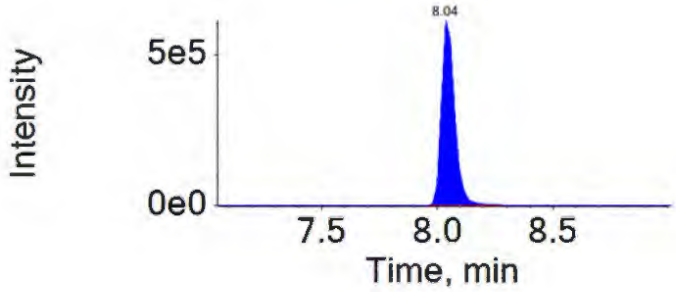
Extraction Standard: 13C8-PFOS

507.0 / 99.0

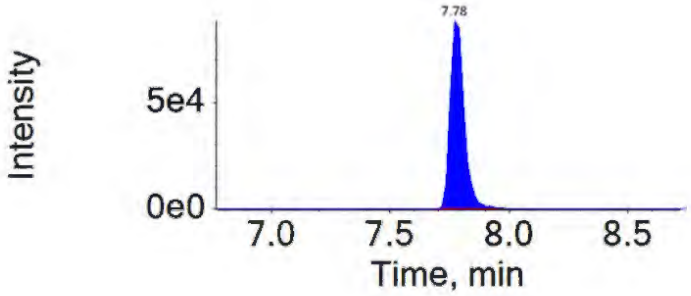


ICAL Name: 17MAY10MCAL **Result Table:** 17MAY10MCAL 5/11/2017 12:08:01 PM
QMethod Name: PFCMOD - 17JAN28 **Acquisition Method:** PFC-32-16NOV02.dam

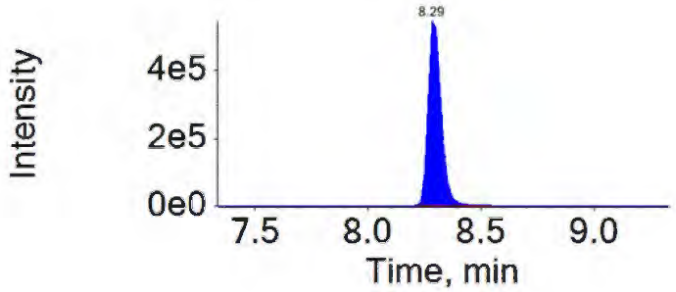
Analyte: PFTrDA
663.0 / 619.0



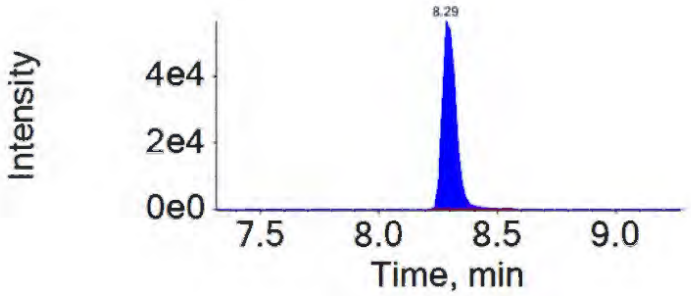
Extraction Standard: 13C2-PFDoDA
615.0 / 570.0



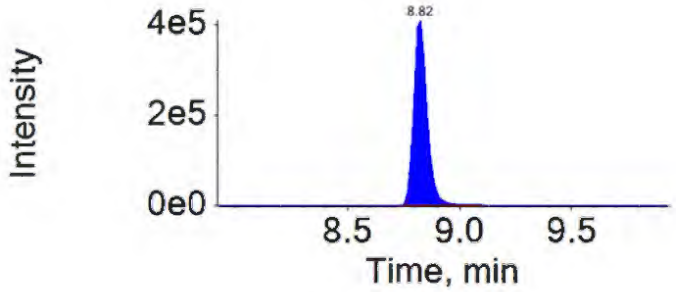
Analyte: PFTeDA
713.0 / 669.0



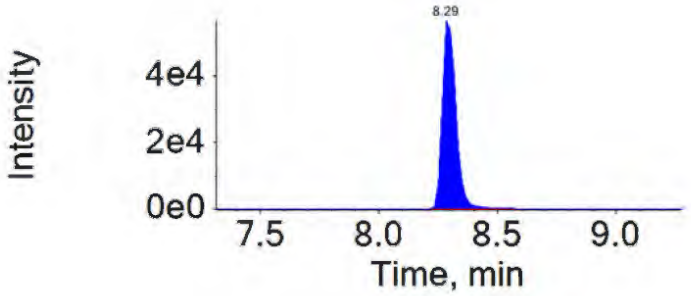
Extraction Standard: 13C2-PFTeDA
715.0 / 670.0



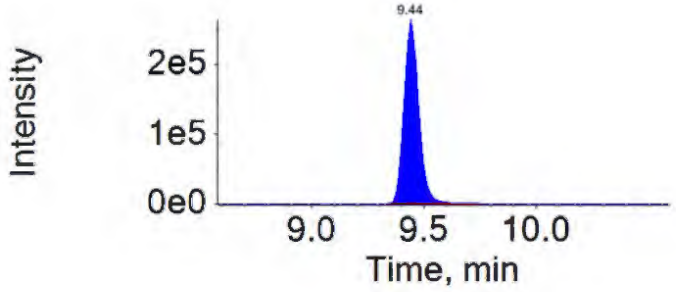
Analyte: PFHxDA
813.0 / 769.0



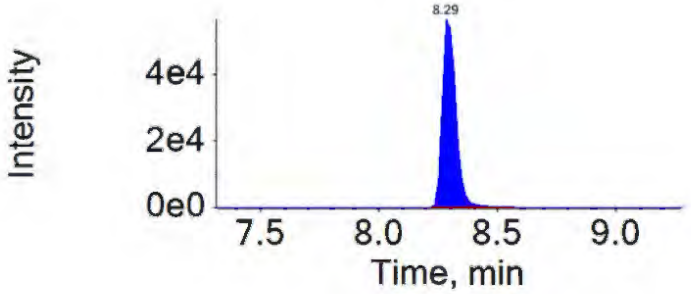
Extraction Standard: 13C2-PFTeDA
715.0 / 670.0



Analyte: PFODA
913.0 / 869.0



Extraction Standard: 13C2-PFTeDA
715.0 / 670.0



APPROVED
By JWK at 12:34 pm, 5/11/17

REVIEWED
By UMJS at 9:13 am, 5/15/17

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LC-MS/MS Analysis Report

Printed: 5/11/2017 12:17:00 PM
Template: MQ-Sample-16Nov21.docx

ICAL Name: 17MAY10MCAL
QMethod Name: PFCMOD - 17JAN28
Result Table: 17MAY10MCAL 5/11/2017 12:08:01 PM
Acquisition Method: PFC-32-16NOV02.dam

Sample Name:	CAL7			**Data File:**		17MAY10MCAL-36.wiff
Sample ID:	CALPFC1712533H			**Acquis Date:**		2017-05-11T07:13:18
Sample Type:	Standard			**Instrument:**		LM24960
Vial Position:	9			**Acquis Method:**		PFC-32-16NOV02.dam
Injection Vol:	5.00			**Result Table:**		17MAY10MCAL
QMethod File:	PFCMOD - 17JAN28			**ICAL Name:**		17MAY10MCAL
Batch Number:	MODICAL			**Operator:**		Not calculated
Sample Wt.:	1.00000			**Dilution Factor:**		1.00
Sample Vol.:	1.000			**Prep Factor:**		1.000

Injection Standard Peak Table

Injection Standard Name	Inj Std Conc	Injection Std Peak Area	ICAL Injection Standard AVG	Injection Std %Diff	Injection Std %Diff Limit	Injection Std %Diff OOS
I13C3-PFBA	1.0	546012.6	669117.3	-18.4	50.0	
I13C2-PFOA	1.0	280140.4	342184.6	-18.1	50.0	
I13C4-PFOS	1.0	51002.5	70131.6	-27.3	50.0	
I13C2-PFDA	1.0	281103.7	384098.7	-26.8	50.0	

Extraction Standard Peak Table

Extraction Standard Name	Ext Std Area	Inj Std Name	Inj Std Area	Area Ratio	AVG Area Ratio	Ext Std Conc	Ext Std Result	Ext Std %REC	Ext Std %REC Limit	Ext Std OOS
E13C4-PFBA	614286.8	13C3-PFBA	546012.6	1.125	1.150	1.000	0.978		-	
E13C5-PFPeA	565090.9	13C3-PFBA	546012.6	1.035	1.073	1.000	0.964		-	
E13C3-PFBS	116360.4	13C3-PFBA	546012.6	0.213	0.194	1.000	1.096		-	
E13C2-4:2-FTS	96312.2	13C2-PFOA	280140.4	0.344	0.236	1.000	1.455		-	
E13C5-PFHxA	543660.8	13C2-PFOA	280140.4	1.941	2.026	1.000	0.958		-	
E13C3-PFHxS	52457.9	13C2-PFOA	280140.4	0.187	0.206	1.000	0.910		-	
E13C4-PFHpA	340857.4	13C2-PFOA	280140.4	1.217	1.285	1.000	0.947		-	
E13C2-6:2-FTS	43576.0	13C2-PFOA	280140.4	0.156	0.128	1.000	1.214		-	
E13C8-PFOA	309797.0	13C2-PFOA	280140.4	1.106	1.163	1.000	0.951		-	
E13C8-PFOS	48633.0	13C4-PFOS	51002.5	0.954	0.865	1.000	1.102		-	
E13C9-PFNA	235381.6	13C4-PFOS	51002.5	4.615	4.422	1.000	1.044		-	
E13C8-PFOSA	233633.6	13C2-PFDA	281103.7	0.831	0.936	1.000	0.888		-	
E13C6-PFDA	367535.0	13C2-PFDA	281103.7	1.308	1.424	1.000	0.918		-	
E13C2-8:2-FTS	49293.7	13C2-PFDA	281103.7	0.175	0.155	1.000	1.129		-	
Ed7-NMePFOSAE	103890.5	13C2-PFDA	281103.7	0.370	0.299	1.000	1.237		-	
Ed3-NMePFOSA	40596.0	13C2-PFDA	281103.7	0.144	0.120	1.000	1.201		-	
Ed3-NMeFOSAA	111855.8	13C2-PFDA	281103.7	0.398	0.343	1.000	1.160		-	
Ed9-NEtPFOSAE	110356.0	13C2-PFDA	281103.7	0.393	0.333	1.000	1.181		-	
Ed5-NEtPFOSA	31528.3	13C2-PFDA	281103.7	0.112	0.095	1.000	1.183		-	
E13C7-PFUnDA	254956.6	13C2-PFDA	281103.7	0.907	0.953	1.000	0.952		-	
Ed5-NEtFOSAA	64153.9	13C2-PFDA	281103.7	0.228	0.249	1.000	0.918		-	
E13C2-PFDoDA	301289.5	13C2-PFDA	281103.7	1.072	1.154	1.000	0.929		-	
E13C2-PFTeDA	187133.4	13C2-PFDA	281103.7	0.666	0.651	1.000	1.022		-	

APPROVED
By JWK at 12:34 pm, 5/11/17

REVIEWED
By UMJS at 9:13 am, 5/15/17

ICAL Name: 17MAY10MCAL **Result Table:** 17MAY10MCAL 5/11/2017 12:08:01 PM
QMethod Name: PFCMOD - 17JAN28 **Acquisition Method:** PFC-32-16NOV02.dam

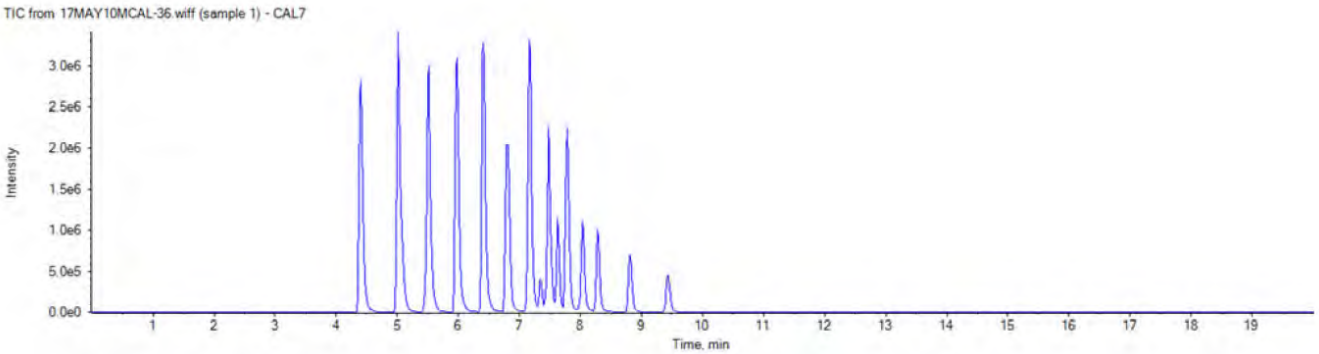
Analyte Quantitation Peak Table

Sample Name: CAL7 **Instrument Name:** LM24960 **File Name:** 17MAY10MCAL-36.wiff

Sample Wt	Sample Vol	Dilution Factor	PrepFactor
1.00000	1.000	1.00	1.000

Analytet Name	RT	RRT	Analyte Area Response	Int Typ	ES Name	ES RT	ES Area Response	Area Ratio	Sample Result (ng/g)
PFBA	4.40	1.000	11349747.7	A	13C4-PFBA	4.40	614286.8	18.476	101.604
PFPeA	5.01	1.000	11855631.2	A	13C5-PFPeA	5.01	565090.9	20.980	101.635
PFBS	5.08	1.000	2114412.0	A	13C3-PFBS	5.08	116360.4	18.171	85.994
4:2-FTS	5.46	1.000	671115.3	A	13C2-4:2-FTS	5.46	96312.2	6.968	
PFHxA	5.51	1.000	10209656.2	A	13C5-PFHxA	5.51	543660.8	18.780	99.413
PFPeS	5.53	1.090	1156708.4	A	13C3-PFBS	5.08	116360.4	9.941	88.819
PFHxS	5.97	1.000	3656621.9	A	13C3-PFHxS	5.97	52457.9	69.706	97.770
PFHpA	5.98	1.000	8535799.4	A	13C4-PFHpA	5.98	340857.4	25.042	100.872
6:2-FTS	6.39	1.000	274557.2	A	13C2-6:2-FTS	6.39	43576.0	6.301	48.801
PFHpS	6.39	1.070	1010700.2	A	13C3-PFHxS	5.97	52457.9	19.267	101.048
PFOA	6.41	1.000	6625355.2	A	13C8-PFOA	6.41	309797.0	21.386	97.445
PFOS	6.78	1.000	3267927.9	A	13C8-PFOS	6.78	48633.0	67.196	93.458
PFNA	6.81	1.000	5805085.4	A	13C9-PFNA	6.81	235381.6	24.662	100.719
PFOSA	7.17	1.000	5229729.5	A	13C8-PFOSA	7.17	233633.6	22.384	102.260
PFNS	7.13	1.050	988860.2	A	13C8-PFOS	6.78	48633.0	20.333	93.236
PFDA	7.17	1.000	6540611.9	A	13C6-PFDA	7.17	367535.0	17.796	97.111
8:2-FTS	7.18	1.000	427590.1	A	13C2-8:2-FTS	7.18	49293.7	8.674	
NMePFOSAE	7.63	1.000	2675647.4	A	d7-NMePFOSAE	7.62	103890.5	25.755	102.693
NMePFOSA	7.65	1.000	934989.6	A	d3-NMePFOSA	7.64	40596.0	23.032	107.491
NMeFOSAA	7.35	1.000	1260741.0	A	d3-NMeFOSAA	7.35	111855.8	11.271	52.947
NEtPFOSAE	7.79	1.000	2462924.2	A	d9-NEtPFOSAE	7.78	110356.0	22.318	102.309
NEtPFOSA	7.81	1.000	632902.7	A	d5-NEtPFOSA	7.80	31528.3	20.074	99.615
PFDS	7.45	1.100	845789.0	A	13C8-PFOS	6.78	48633.0	17.391	88.290
PFUnDA	7.48	1.000	6422246.2	A	13C7-PFUnDA	7.48	254956.6	25.190	98.114
NEtFOSAA	7.51	1.000	646136.3	A	d5-NEtFOSAA	7.50	64153.9	10.072	49.279
PFDoDA	7.77	1.000	5689783.3	A	13C2-PFDoDA	7.77	301289.5	18.885	101.059
10:2-FTS	7.80	1.090	400620.9	A	13C2-8:2-FTS	7.18	49293.7	8.127	48.896
PFDoS	7.99	1.180	313420.7	A	13C8-PFOS	6.78	48633.0	6.445	90.785
PFTrDA	8.04	1.030	4037764.5	A	13C2-PFDoDA	7.77	301289.5	13.402	99.502
PFTeDA	8.28	1.000	3701644.2	A	13C2-PFTeDA	8.29	187133.4	19.781	100.922
PFHxDA	8.81	1.060	3082968.5	A	13C2-PFTeDA	8.29	187133.4	16.475	103.971
PFODA	9.43	1.140	2162835.5	A	13C2-PFTeDA	8.29	187133.4	11.558	105.694

Total Ion Chromatogram



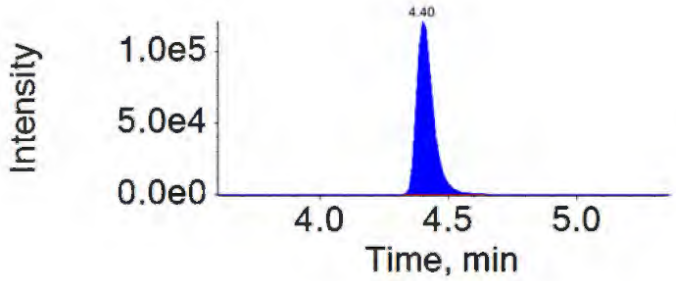
APPROVED
By JWK at 12:34 pm, 5/11/17

REVIEWED
By UMJS at 9:13 am, 5/15/17

ICAL Name: 17MAY10MCAL
QMethod Name: PFCMOD - 17JAN28
Result Table: 17MAY10MCAL 5/11/2017 12:08:01 PM
Acquisition Method: PFC-32-16NOV02.dam

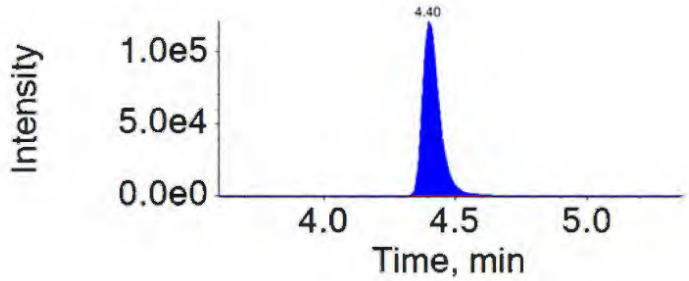
Injection Standard: I13C3-PFBA

216.0 / 172.0



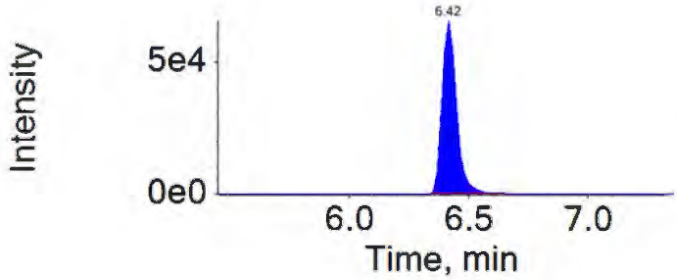
Injection Standard: 13C3-PFBA

216.0 / 172.0



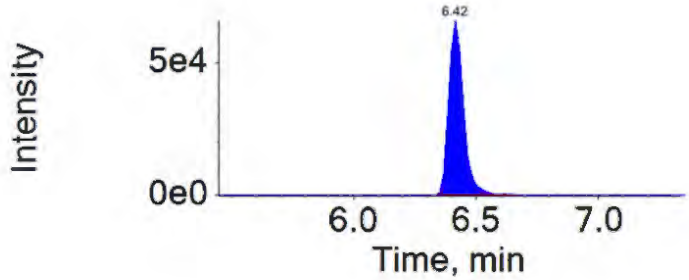
Injection Standard: I13C2-PFOA

415.0 / 370.0



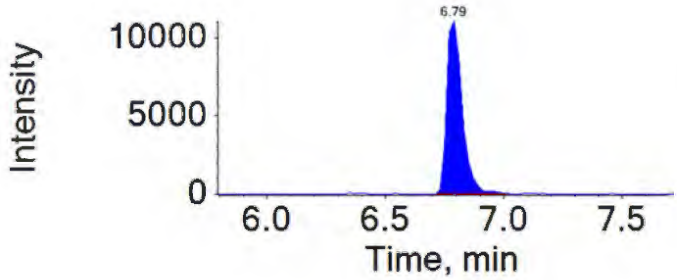
Injection Standard: 13C2-PFOA

415.0 / 370.0



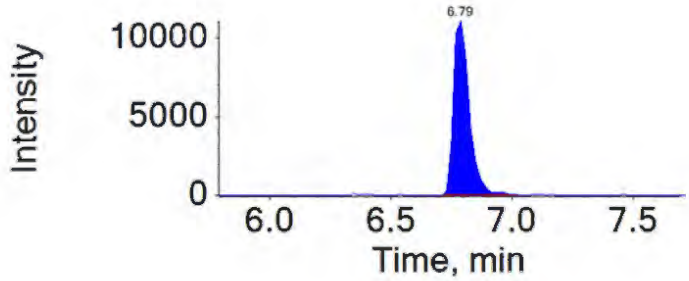
Injection Standard: I13C4-PFOS

503.0 / 99.0



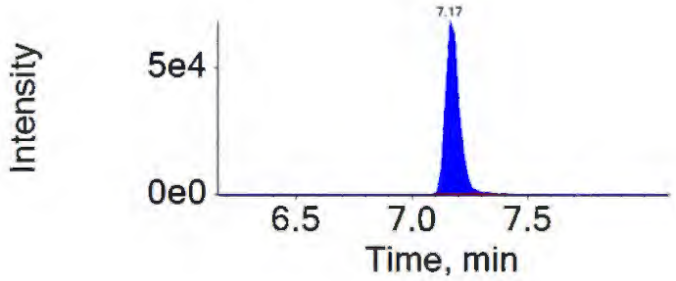
Injection Standard: 13C4-PFOS

503.0 / 99.0



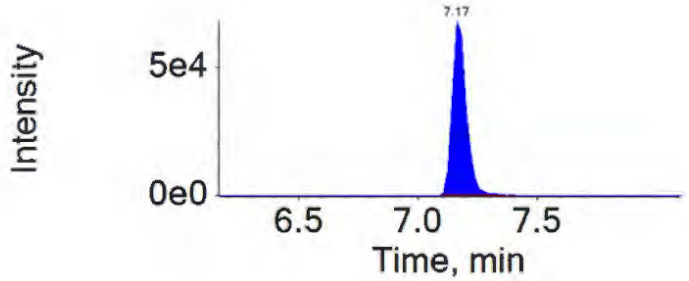
Injection Standard: I13C2-PFDA

515.0 / 470.0



Injection Standard: 13C2-PFDA

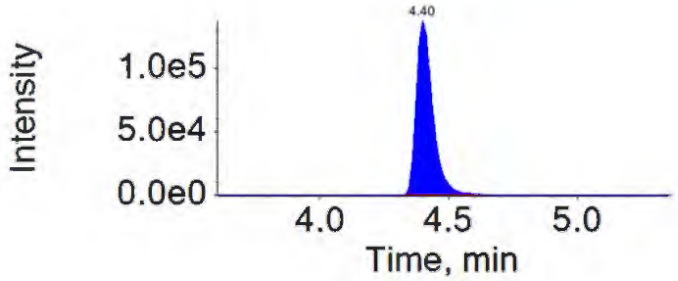
515.0 / 470.0



ICAL Name: 17MAY10MCAL **Result Table:** 17MAY10MCAL 5/11/2017 12:08:01 PM
QMethod Name: PFCMOD - 17JAN28 **Acquisition Method:** PFC-32-16NOV02.dam

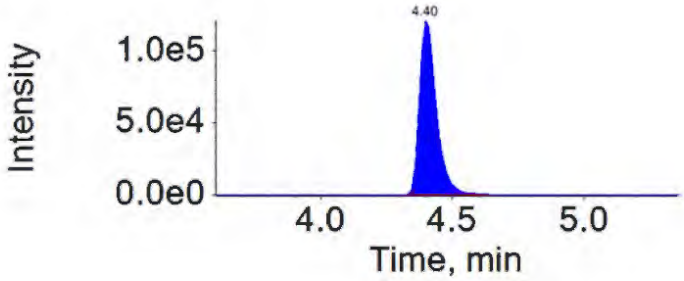
Extraction Standard: E13C4-PFBA

217.0 /
172.0



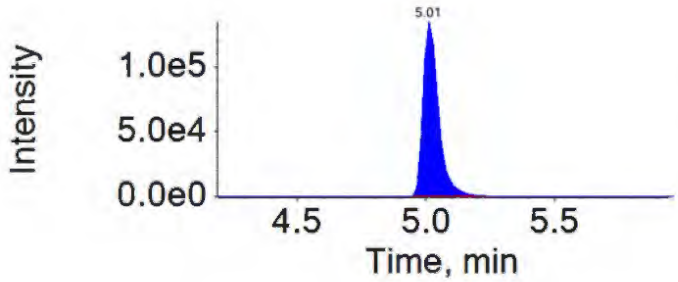
Injection Standard: 13C3-PFBA

216.0 /
172.0



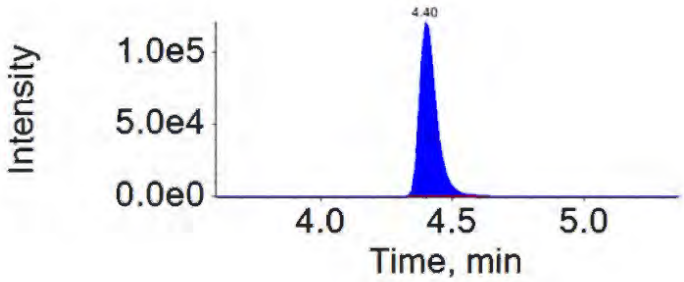
Extraction Standard: E13C5-PFPeA

268.0 /
223.0



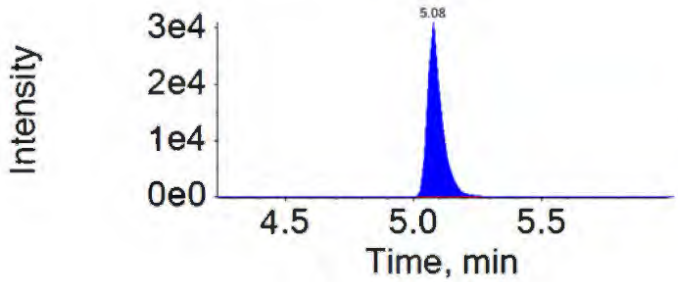
Injection Standard: 13C3-PFBA

216.0 /
172.0



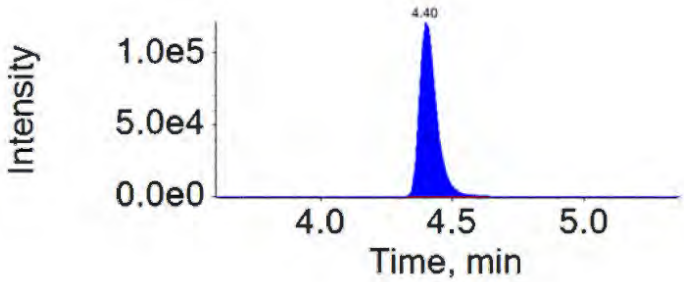
Extraction Standard: E13C3-PFBS

302.0 /
99.0



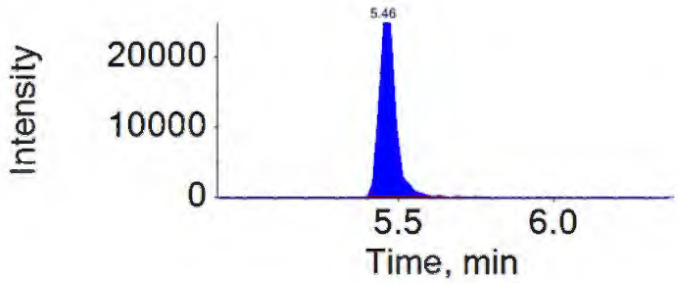
Injection Standard: 13C3-PFBA

216.0 /
172.0



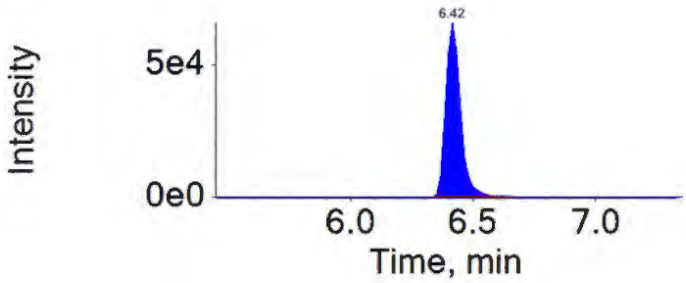
Extraction Standard: E13C2-4:2-FTS

329.0 /
309.0



Injection Standard: 13C2-PFOA

415.0 /
370.0



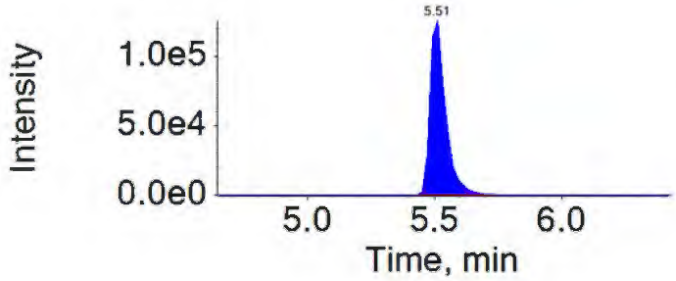
APPROVED
By JWK at 12:34 pm, 5/11/17

REVIEWED
By UMJS at 9:13 am, 5/15/17

ICAL Name: 17MAY10MCAL **Result Table:** 17MAY10MCAL 5/11/2017 12:08:01 PM
QMethod Name: PFCMOD - 17JAN28 **Acquisition Method:** PFC-32-16NOV02.dam

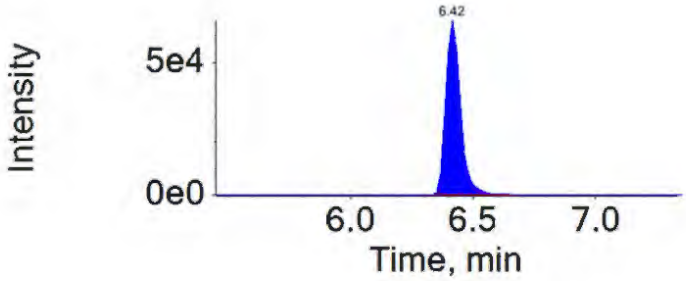
Extraction Standard: E13C5-PFHxA

318.0 /
273.0



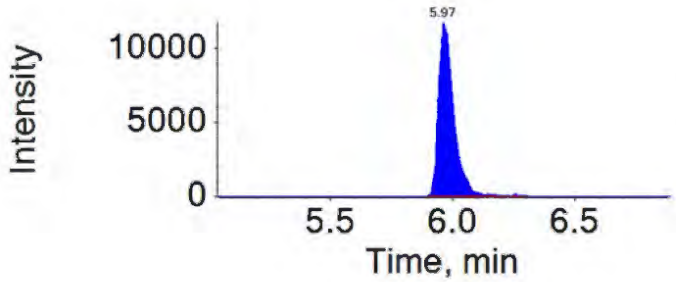
Injection Standard: 13C2-PFOA

415.0 /
370.0



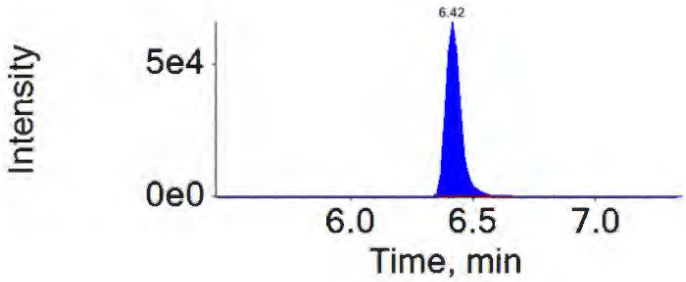
Extraction Standard: E13C3-PFHxS

402.0 /
99.0



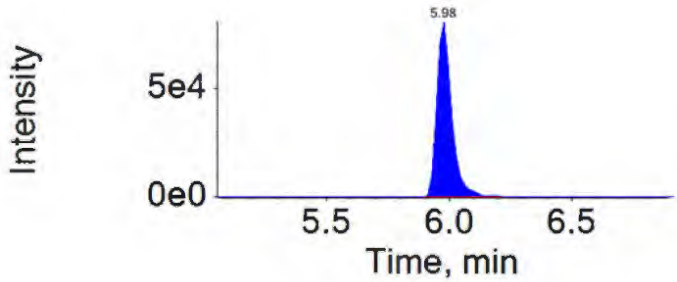
Injection Standard: 13C2-PFOA

415.0 /
370.0



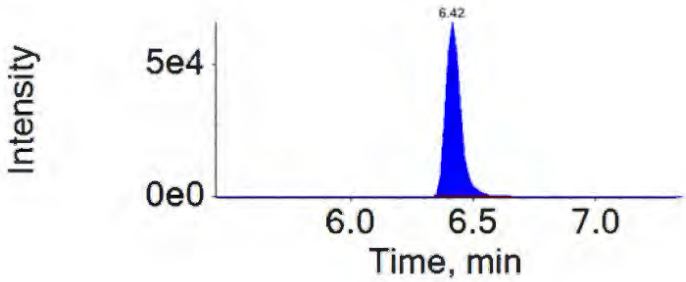
Extraction Standard: E13C4-PFHpA

367.0 /
322.0



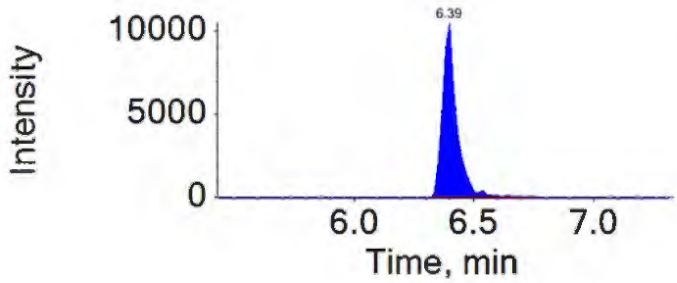
Injection Standard: 13C2-PFOA

415.0 /
370.0



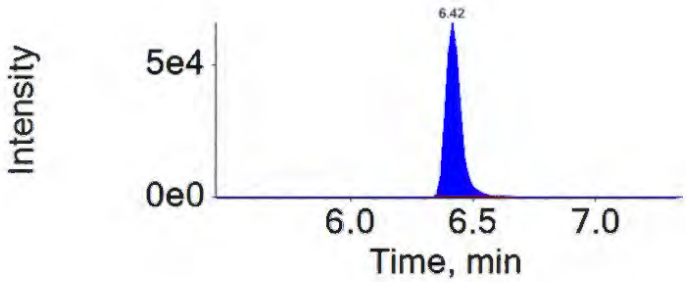
Extraction Standard: E13C2-6:2-FTS

429.0 /
409.0



Injection Standard: 13C2-PFOA

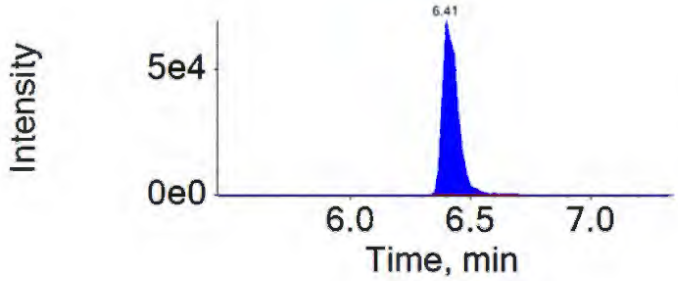
415.0 /
370.0



ICAL Name: 17MAY10MCAL **Result Table:** 17MAY10MCAL 5/11/2017 12:08:01 PM
QMethod Name: PFCMOD - 17JAN28 **Acquisition Method:** PFC-32-16NOV02.dam

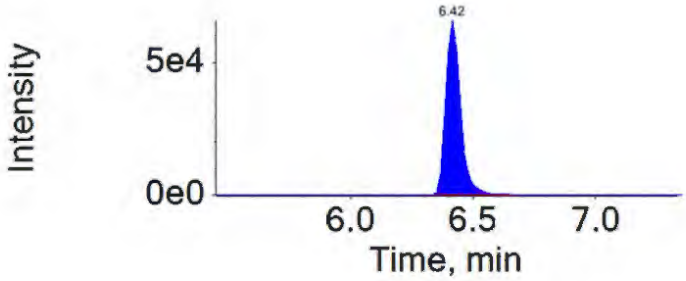
Extraction Standard: E13C8-PFOA

421.0 /
376.0



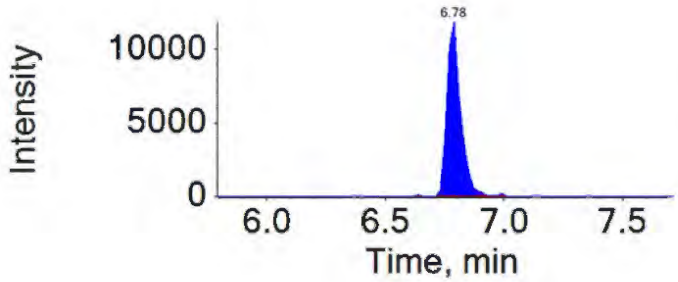
Injection Standard: 13C2-PFOA

415.0 /
370.0



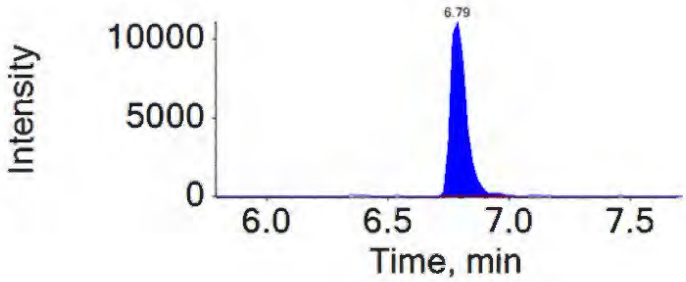
Extraction Standard: E13C8-PFOS

507.0 /
99.0



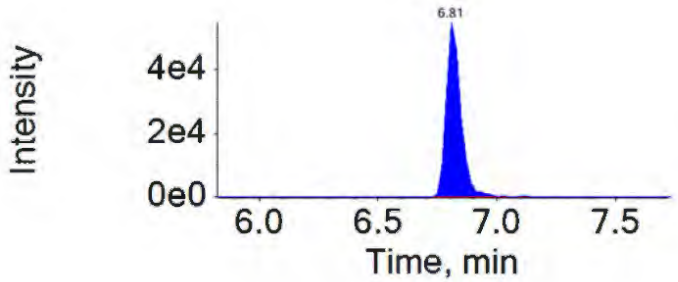
Injection Standard: 13C4-PFOS

503.0 /
99.0



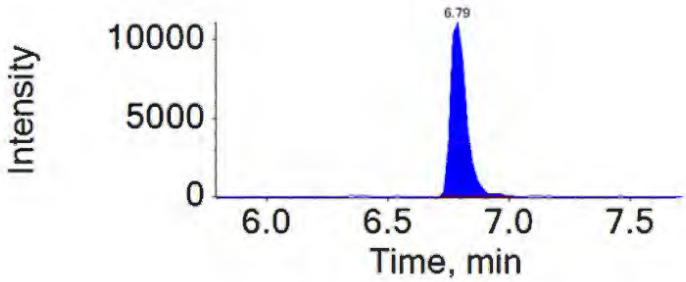
Extraction Standard: E13C9-PFNA

472.0 /
427.0



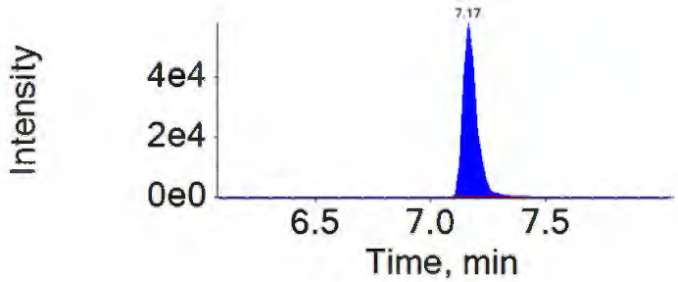
Injection Standard: 13C4-PFOS

503.0 /
99.0



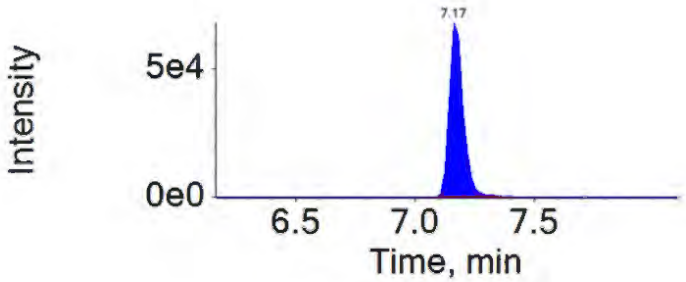
Extraction Standard: E13C8-PFOSA

506.0 /
78.0



Injection Standard: 13C2-PFDA

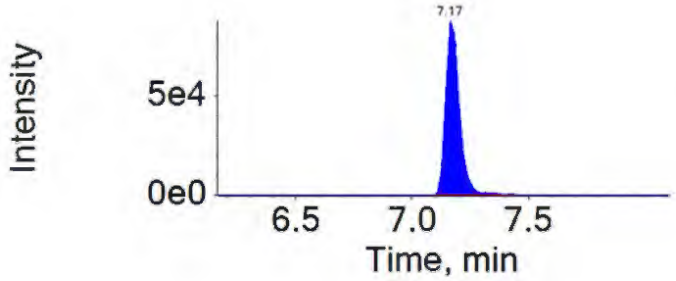
515.0 /
470.0



ICAL Name: 17MAY10MCAL **Result Table:** 17MAY10MCAL 5/11/2017 12:08:01 PM
QMethod Name: PFCMOD - 17JAN28 **Acquisition Method:** PFC-32-16NOV02.dam

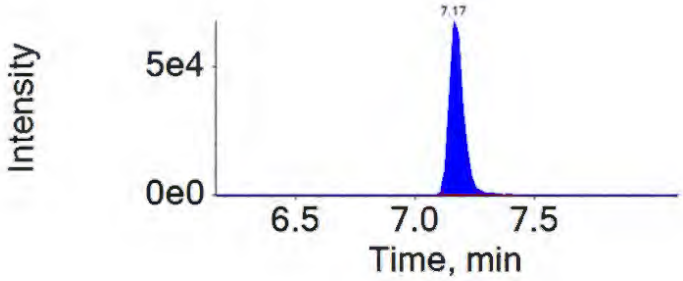
Extraction Standard: E13C6-PFDA

519.0 / 474.0



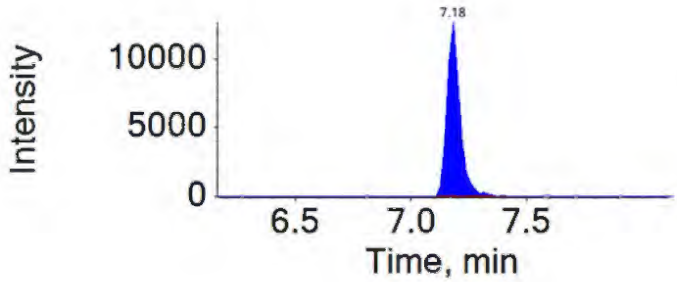
Injection Standard: 13C2-PFDA

515.0 / 470.0



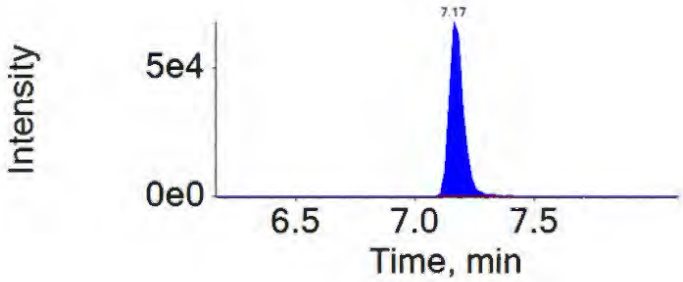
Extraction Standard: E13C2-8:2-FTS

529.0 / 509.0



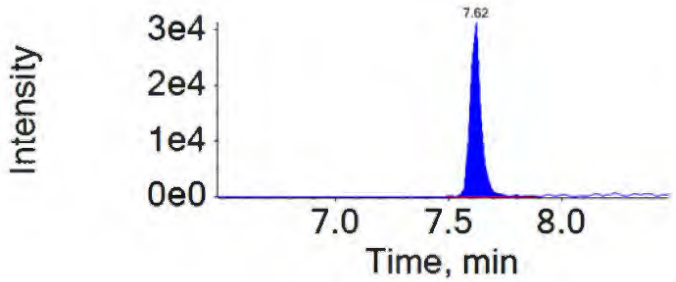
Injection Standard: 13C2-PFDA

515.0 / 470.0



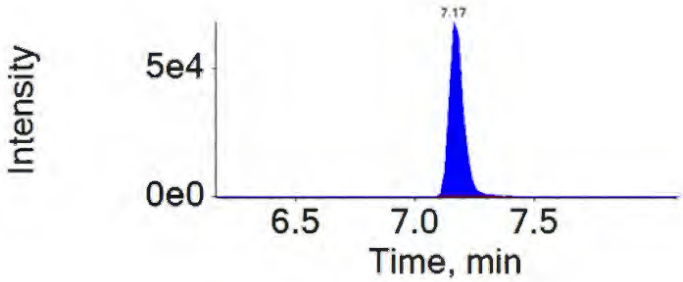
Extraction Standard: Ed7-NMePFOSAE

623.0 / 59.0



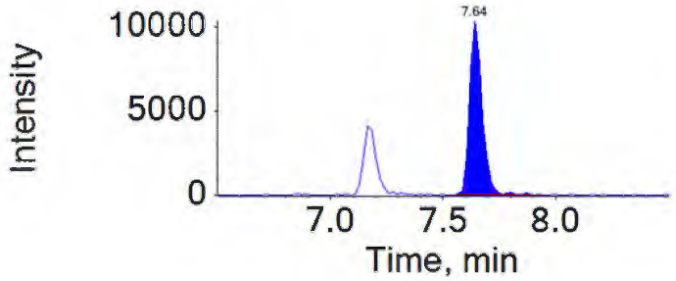
Injection Standard: 13C2-PFDA

515.0 / 470.0



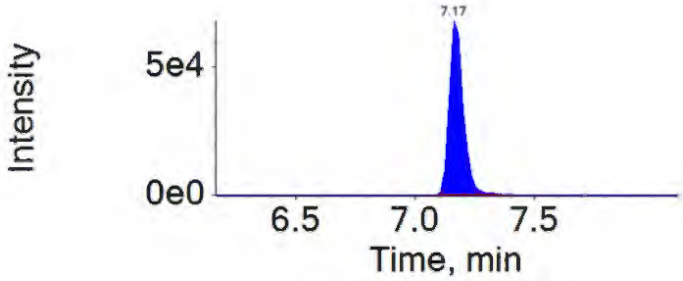
Extraction Standard: Ed3-NMePFOSA

515.0 / 169.0



Injection Standard: 13C2-PFDA

515.0 / 470.0



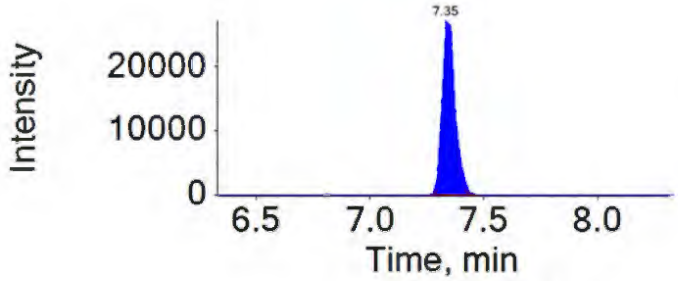
APPROVED
By JWK at 12:34 pm, 5/11/17

REVIEWED
By UMJS at 9:13 am, 5/15/17

ICAL Name: 17MAY10MCAL **Result Table:** 17MAY10MCAL 5/11/2017 12:08:01 PM
QMethod Name: PFCMOD - 17JAN28 **Acquisition Method:** PFC-32-16NOV02.dam

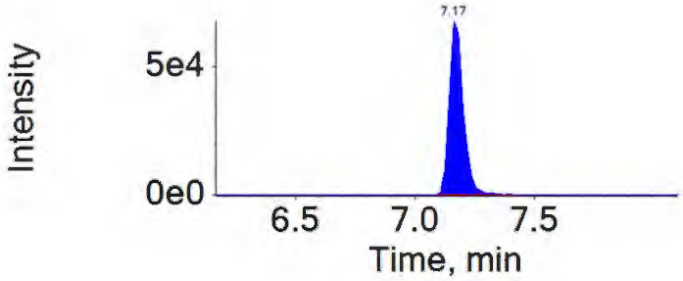
Extraction Standard: Ed3-NMeFOSAA

573.0 / 419.0



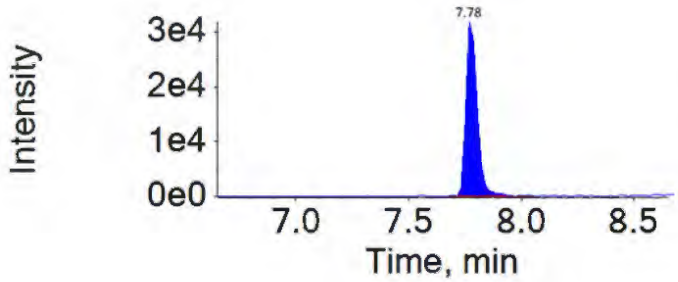
Injection Standard: 13C2-PFDA

515.0 / 470.0



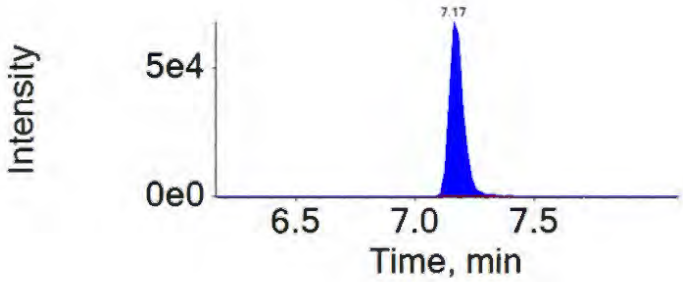
Extraction Standard: Ed9-NEtPFOSAE

639.0 / 59.0



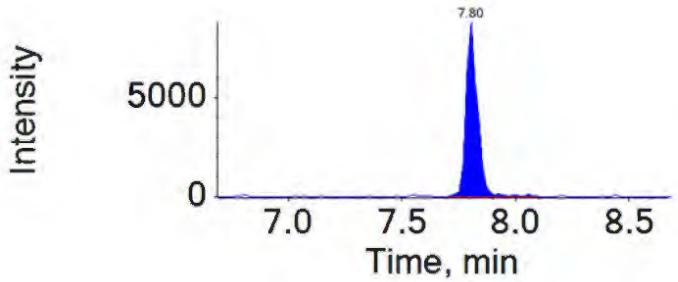
Injection Standard: 13C2-PFDA

515.0 / 470.0



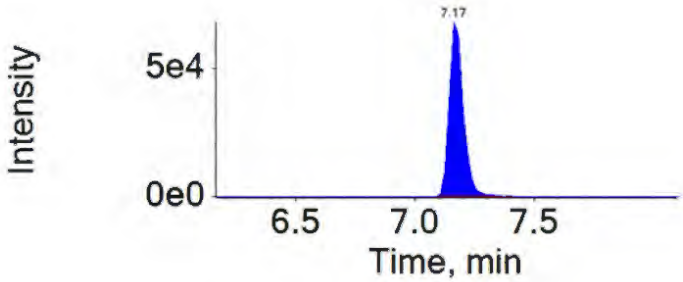
Extraction Standard: Ed5-NEtPFOSA

531.0 / 169.0



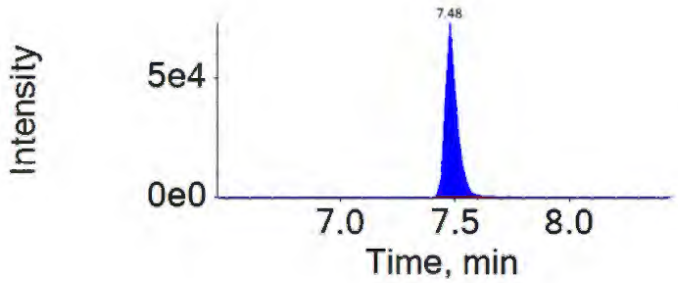
Injection Standard: 13C2-PFDA

515.0 / 470.0



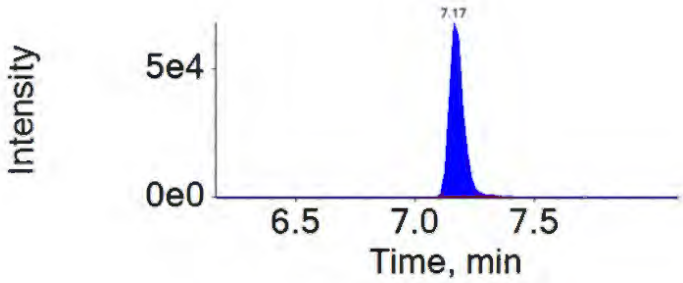
Extraction Standard: E13C7-PFUnDA

570.0 / 525.0



Injection Standard: 13C2-PFDA

515.0 / 470.0



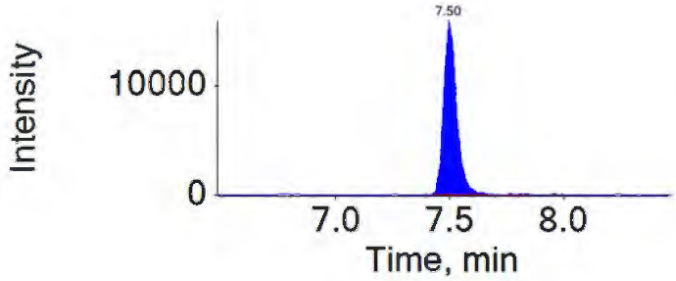
APPROVED
By JWK at 12:34 pm, 5/11/17

REVIEWED
By UMJS at 9:13 am, 5/15/17

ICAL Name: 17MAY10MCAL **Result Table:** 17MAY10MCAL 5/11/2017 12:08:01 PM
QMethod Name: PFCMOD - 17JAN28 **Acquisition Method:** PFC-32-16NOV02.dam

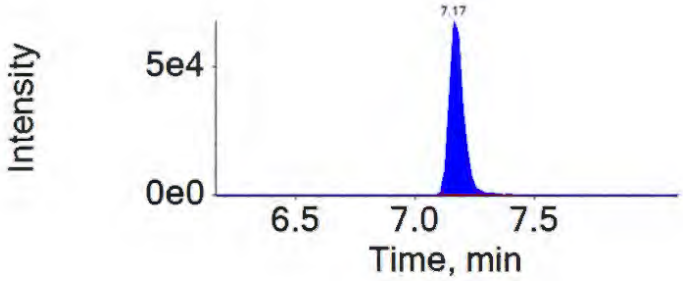
Extraction Standard: Ed5-NEtFOSAA

589.0 / 419.0



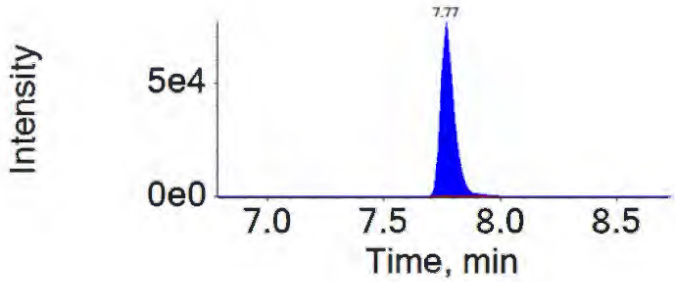
Injection Standard: 13C2-PFDA

515.0 / 470.0



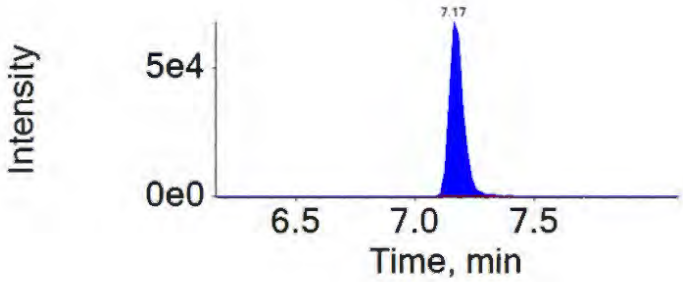
Extraction Standard: E13C2-PFDoDA

615.0 / 570.0



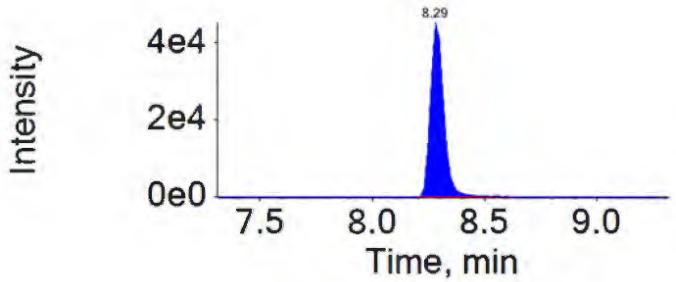
Injection Standard: 13C2-PFDA

515.0 / 470.0



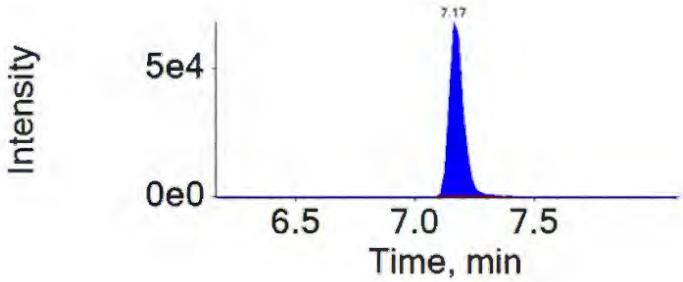
Extraction Standard: E13C2-PFTeDA

715.0 / 670.0



Injection Standard: 13C2-PFDA

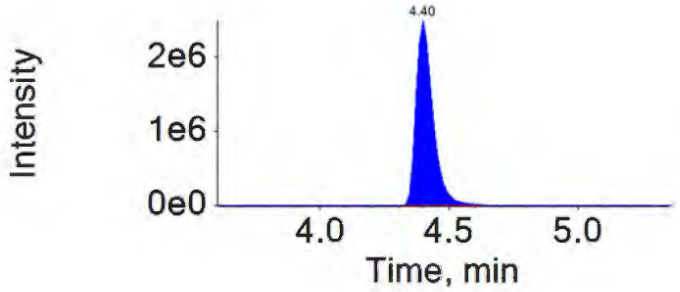
515.0 / 470.0



ICAL Name: 17MAY10MCAL **Result Table:** 17MAY10MCAL 5/11/2017 12:08:01 PM
QMethod Name: PFCMOD - 17JAN28 **Acquisition Method:** PFC-32-16NOV02.dam

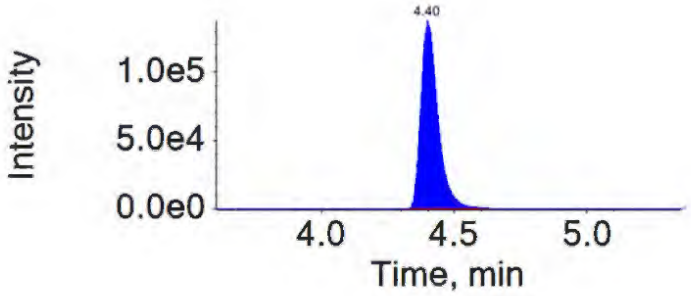
Analyte: PFBA

213.0 / 169.0



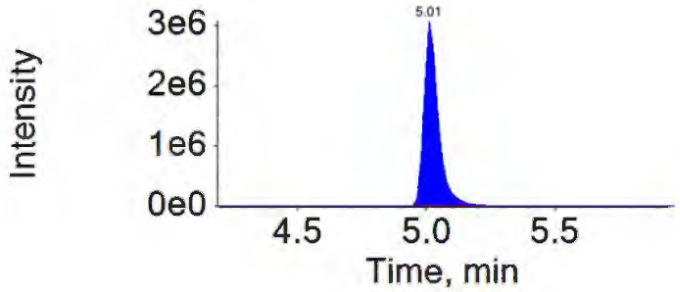
Extraction Standard: 13C4-PFBA

217.0 / 172.0



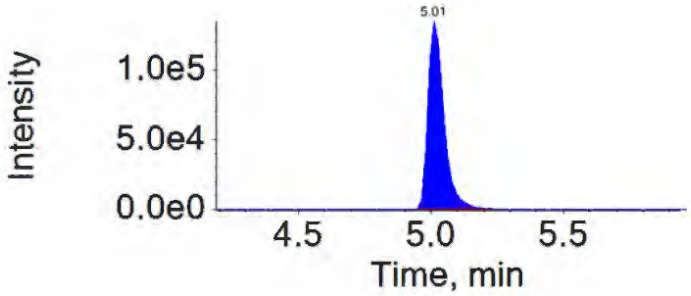
Analyte: PFPeA

263.0 / 219.0



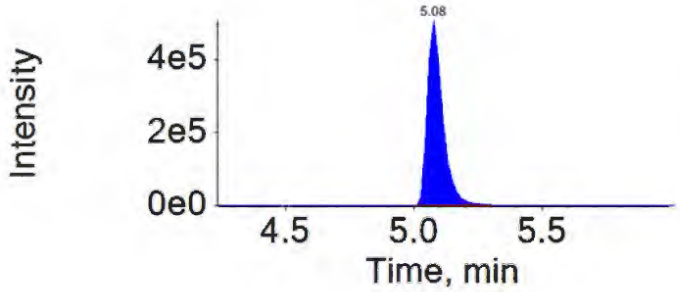
Extraction Standard: 13C5-PFPeA

268.0 / 223.0



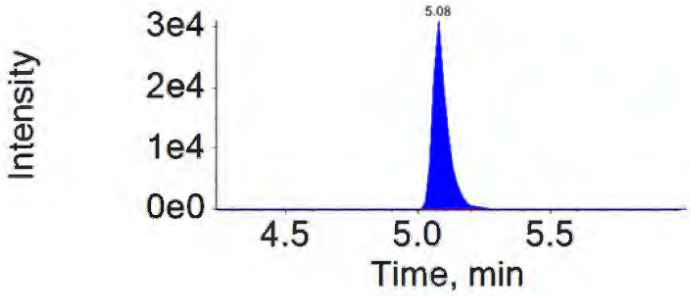
Analyte: PFBS

299.0 / 99.0



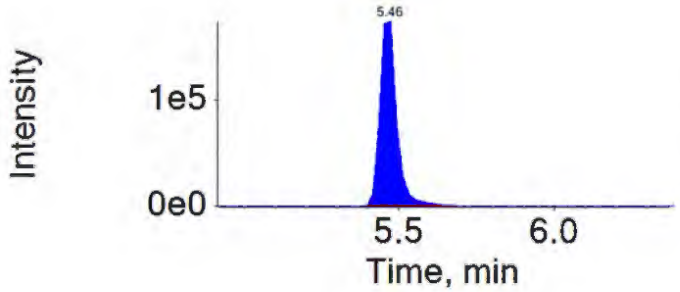
Extraction Standard: 13C3-PFBS

302.0 / 99.0



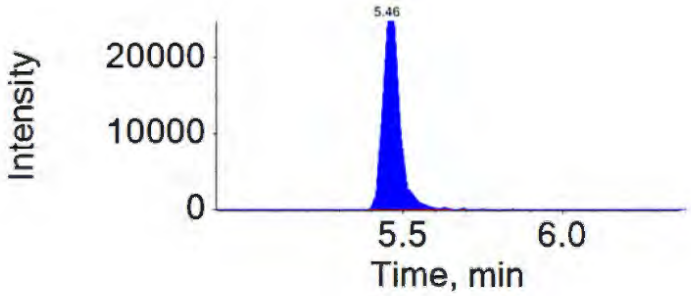
Analyte: 4:2-FTS

327.0 / 307.0



Extraction Standard: 13C2-4:2-FTS

329.0 / 309.0



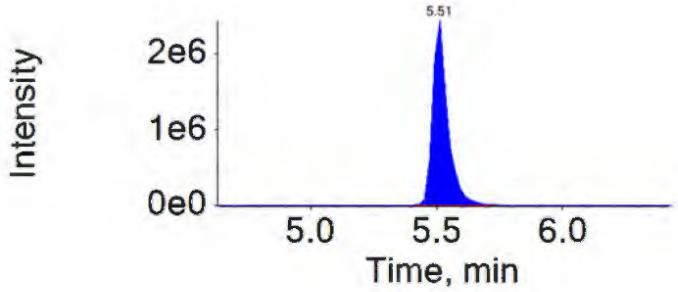
APPROVED
By JWK at 12:34 pm, 5/11/17

REVIEWED
By UMJS at 9:13 am, 5/15/17

ICAL Name: 17MAY10MCAL **Result Table:** 17MAY10MCAL 5/11/2017 12:08:01 PM
QMethod Name: PFCMOD - 17JAN28 **Acquisition Method:** PFC-32-16NOV02.dam

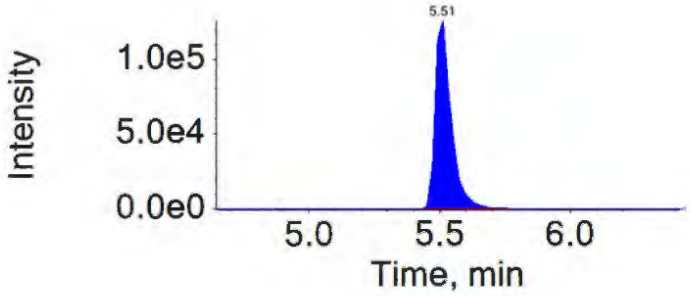
Analyte: PFHxA

313.0 /
269.0



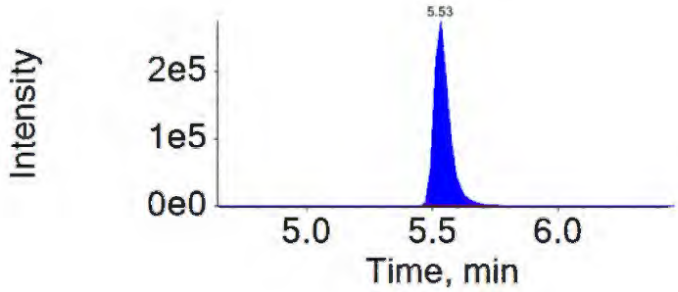
Extraction Standard: 13C5-PFHxA

318.0 /
273.0



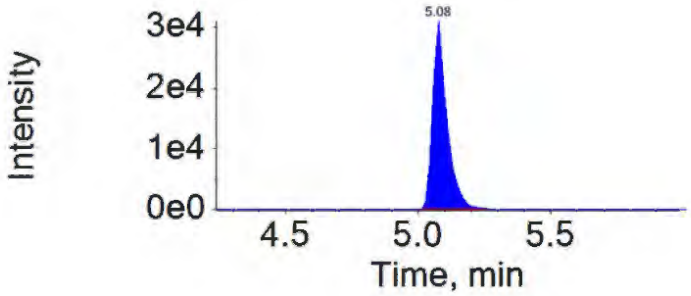
Analyte: PFPeS

349.0 /
99.0



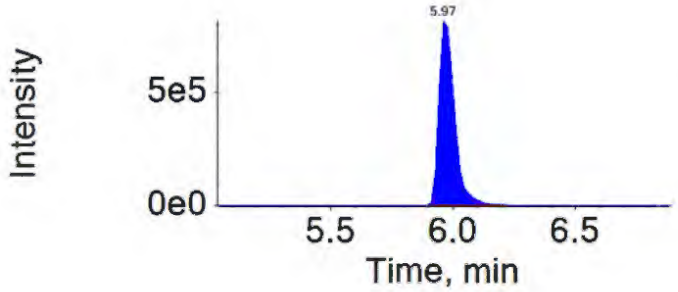
Extraction Standard: 13C3-PFBS

302.0 /
99.0



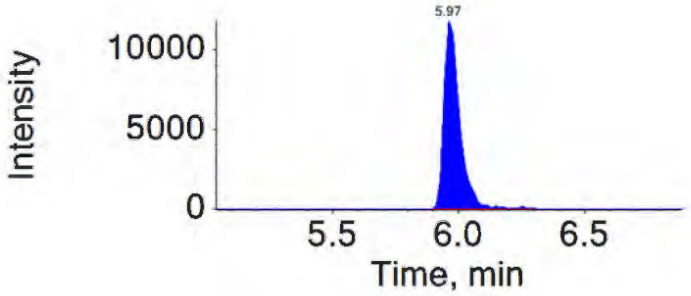
Analyte: PFHxS

399.0 /
80.0



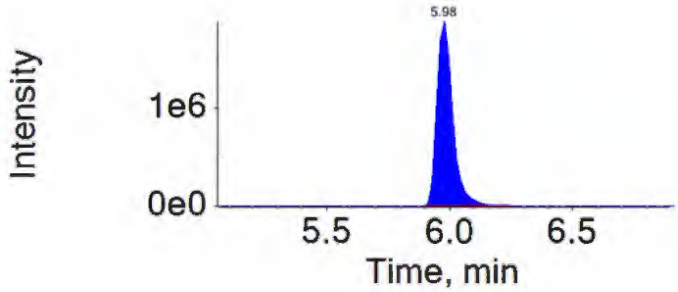
Extraction Standard: 13C3-PFHxS

402.0 /
99.0



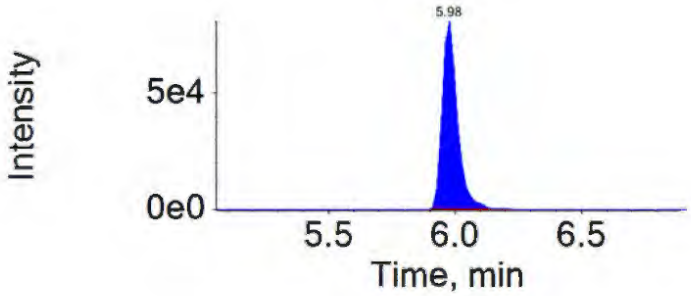
Analyte: PFHpA

363.0 /
319.0



Extraction Standard: 13C4-PFHpA

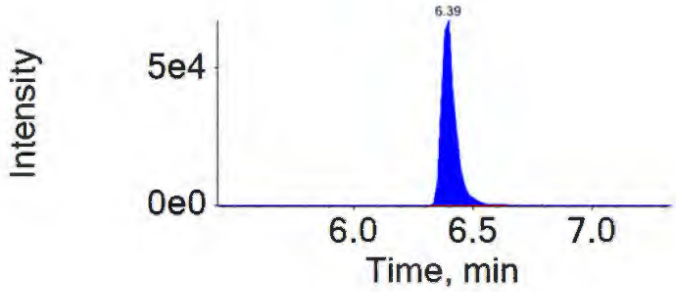
367.0 /
322.0



ICAL Name: 17MAY10MCAL **Result Table:** 17MAY10MCAL 5/11/2017 12:08:01 PM
QMethod Name: PFCMOD - 17JAN28 **Acquisition Method:** PFC-32-16NOV02.dam

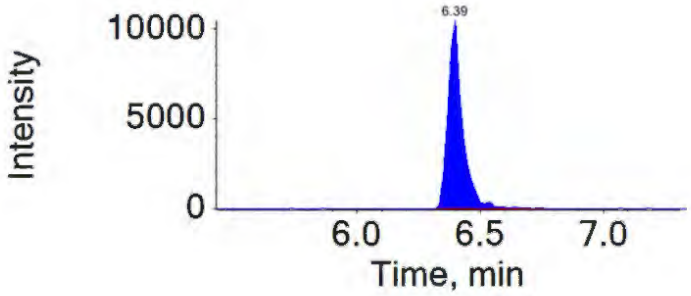
Analyte: 6:2-FTS

427.0 /
407.0



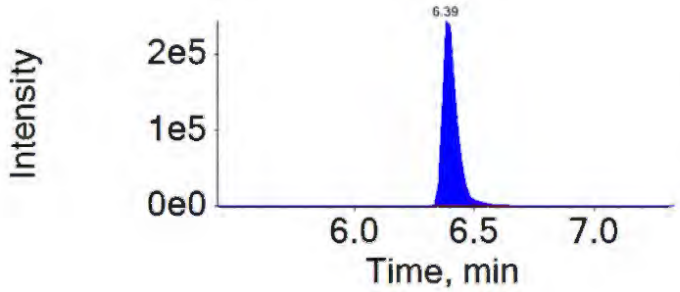
Extraction Standard: 13C2-6:2-FTS

429.0 /
409.0



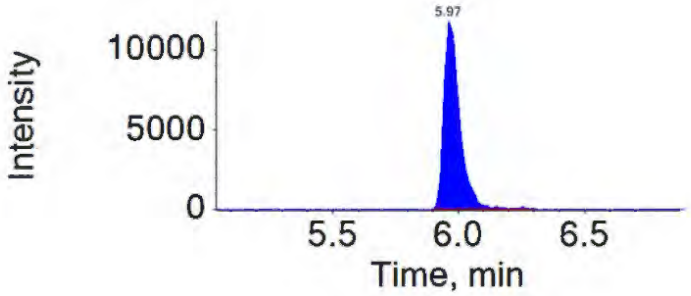
Analyte: PFHpS

449.0 /
99.0



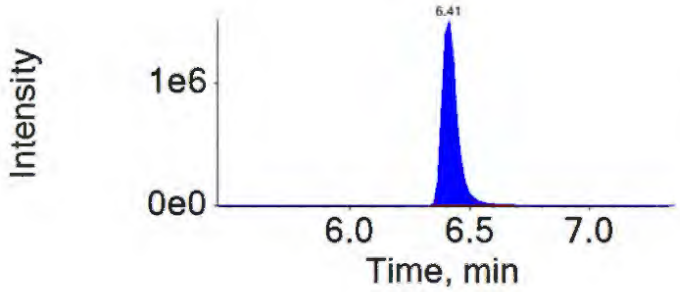
Extraction Standard: 13C3-PFHxS

402.0 /
99.0



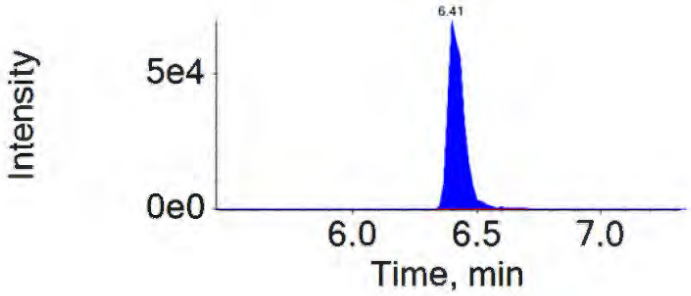
Analyte: PFOA

413.0 /
369.0



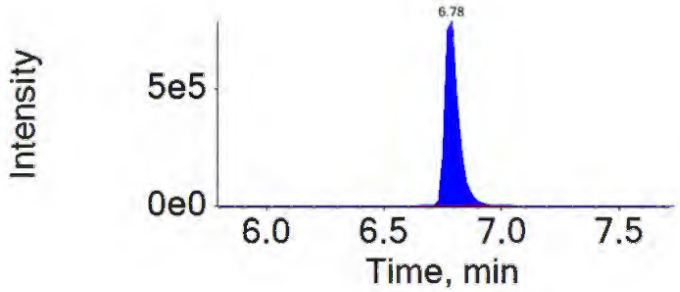
Extraction Standard: 13C8-PFOA

421.0 /
376.0



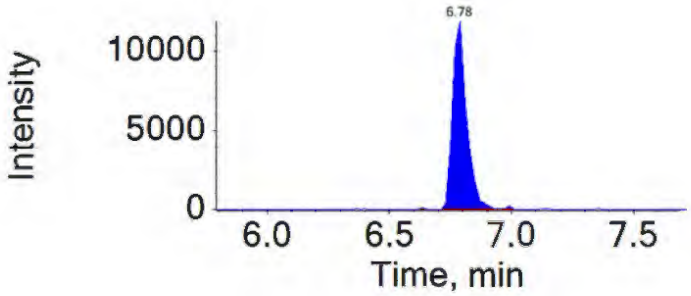
Analyte: PFOS

499.0 /
80.0



Extraction Standard: 13C8-PFOS

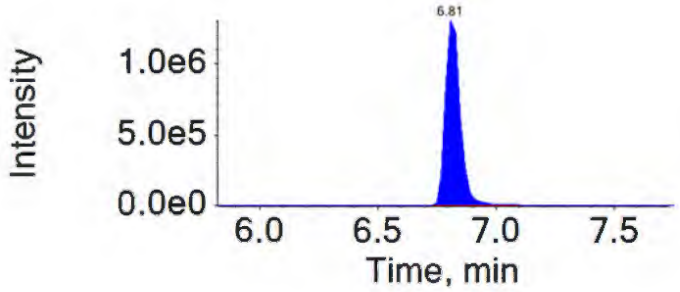
507.0 /
99.0



ICAL Name: 17MAY10MCAL **Result Table:** 17MAY10MCAL 5/11/2017 12:08:01 PM
QMethod Name: PFCMOD - 17JAN28 **Acquisition Method:** PFC-32-16NOV02.dam

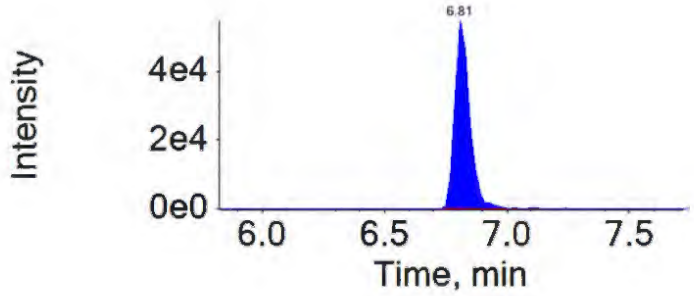
Analyte: PFNA

463.0 /
419.0



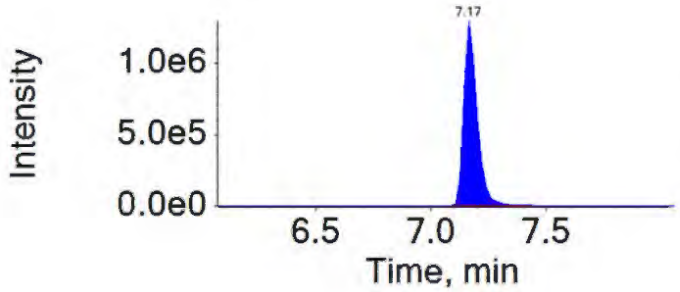
Extraction Standard: 13C9-PFNA

472.0 /
427.0



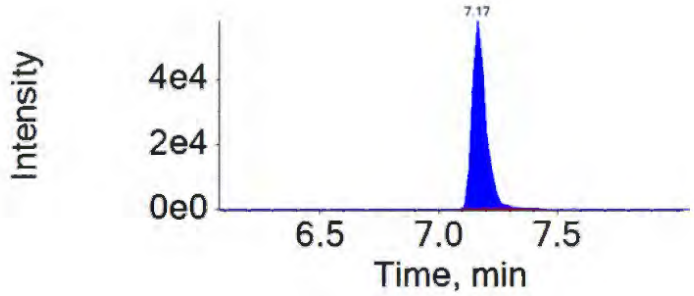
Analyte: PFOSA

498.0 /
78.0



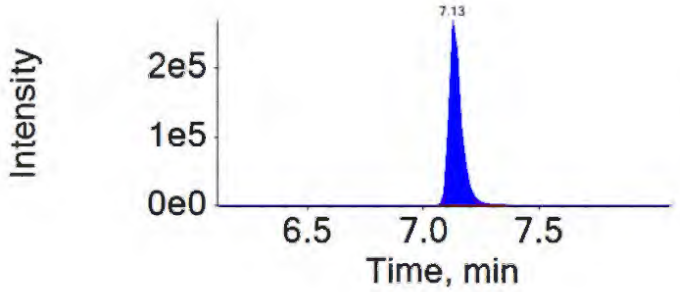
Extraction Standard: 13C8-PFOSA

506.0 /
78.0



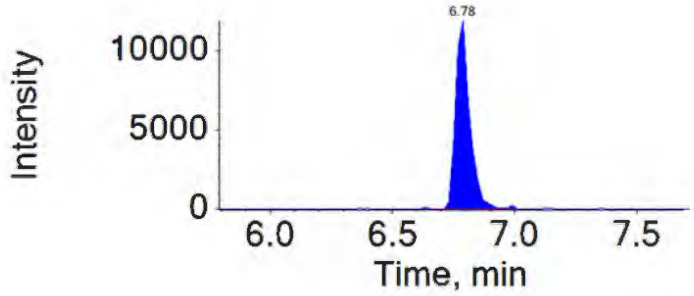
Analyte: PFNS

549.0 /
99.0



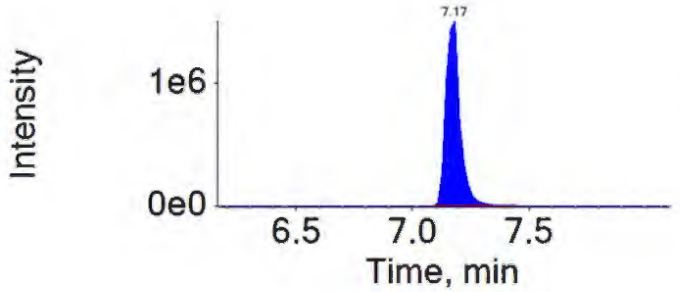
Extraction Standard: 13C8-PFOS

507.0 /
99.0



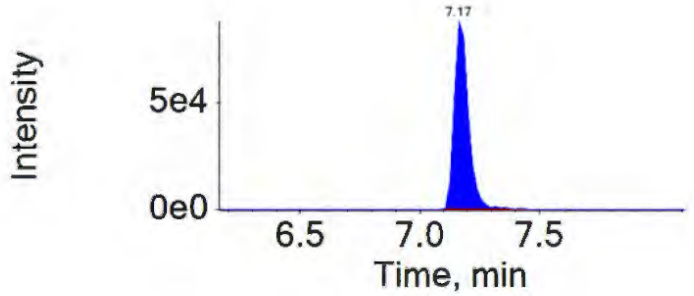
Analyte: PFDA

513.0 /
469.0



Extraction Standard: 13C6-PFDA

519.0 /
474.0



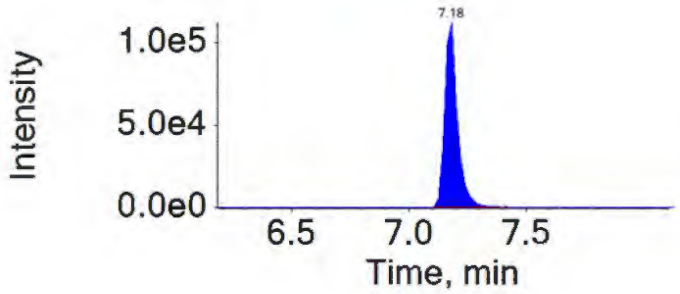
APPROVED
By JWK at 12:34 pm, 5/11/17

REVIEWED
By UMJS at 9:13 am, 5/15/17

ICAL Name: 17MAY10MCAL **Result Table:** 17MAY10MCAL 5/11/2017 12:08:01 PM
QMethod Name: PFCMOD - 17JAN28 **Acquisition Method:** PFC-32-16NOV02.dam

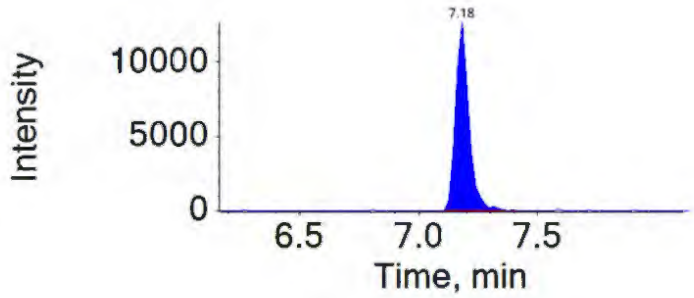
Analyte: 8:2-FTS

527.0 /
507.0



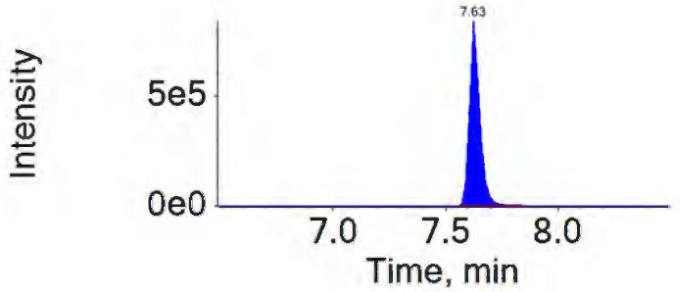
Extraction Standard: 13C2-8:2-FTS

529.0 /
509.0



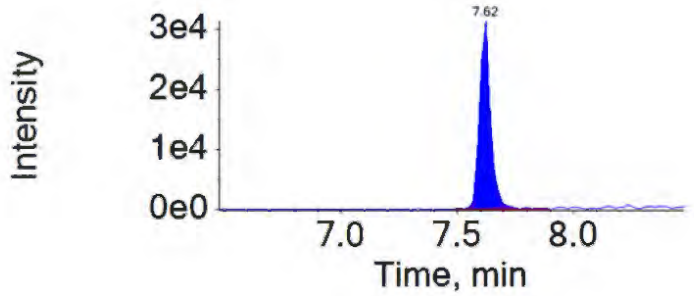
Analyte: NMePFOSAE

616.0 /
59.0



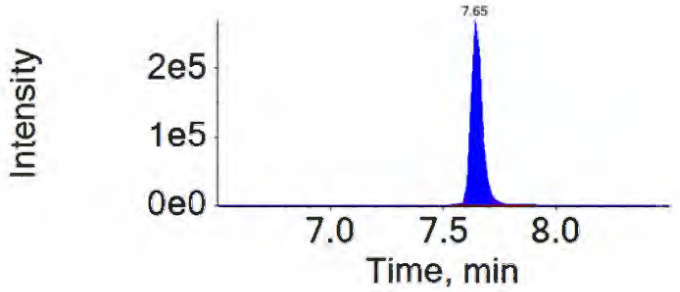
Extraction Standard: d7-NMePFOSAE

623.0 /
59.0



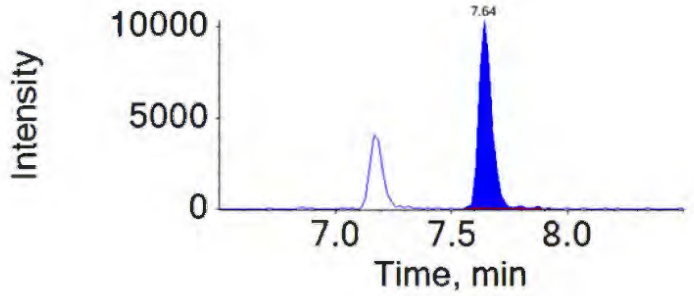
Analyte: NMePFOSA

512.0 /
169.0



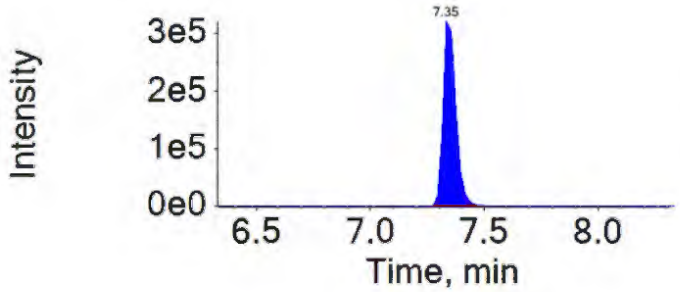
Extraction Standard: d3-NMePFOSA

515.0 /
169.0



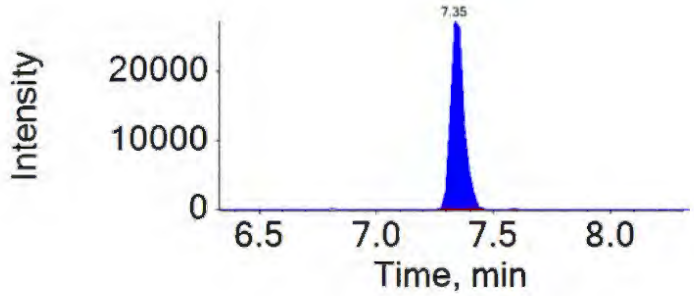
Analyte: NMeFOSAA

570.0 /
419.0



Extraction Standard: d3-NMeFOSAA

573.0 /
419.0



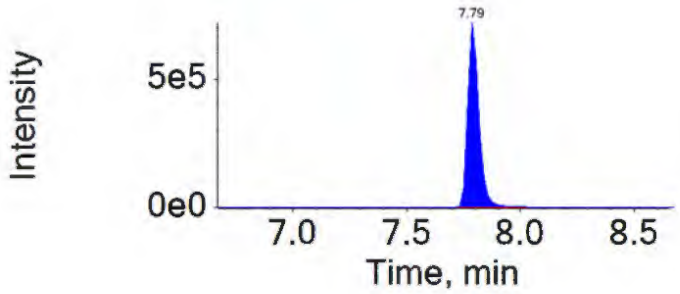
APPROVED
By JWK at 12:34 pm, 5/11/17

REVIEWED
By UMJS at 9:13 am, 5/15/17

ICAL Name: 17MAY10MCAL **Result Table:** 17MAY10MCAL 5/11/2017 12:08:01 PM
QMethod Name: PFCMOD - 17JAN28 **Acquisition Method:** PFC-32-16NOV02.dam

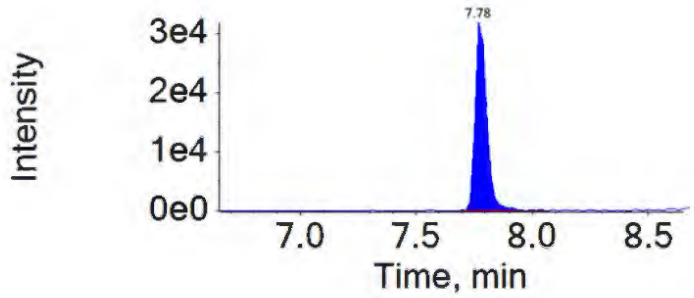
Analyte: NEtPFOSAE

630.0 /
59.0



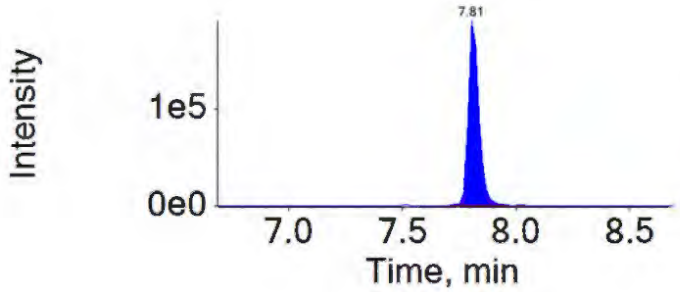
Extraction Standard: d9-NEtPFOSAE

639.0 /
59.0



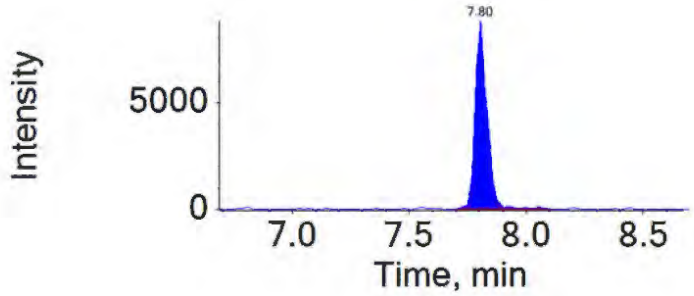
Analyte: NEtPFOSA

526.0 /
169.0



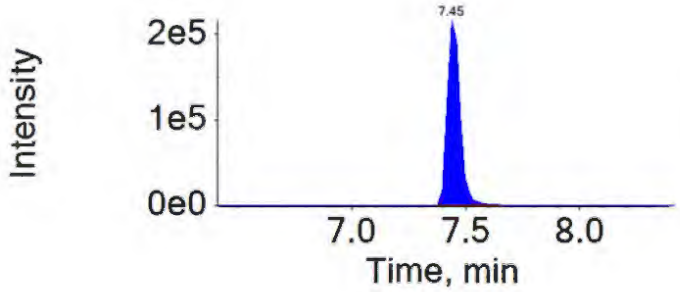
Extraction Standard: d5-NEtPFOSA

531.0 /
169.0



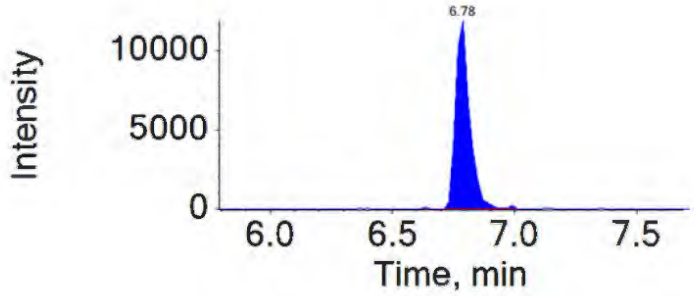
Analyte: PFDS

599.0 /
99.0



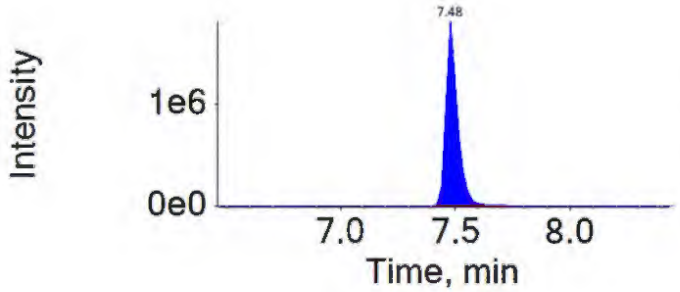
Extraction Standard: 13C8-PFOS

507.0 /
99.0



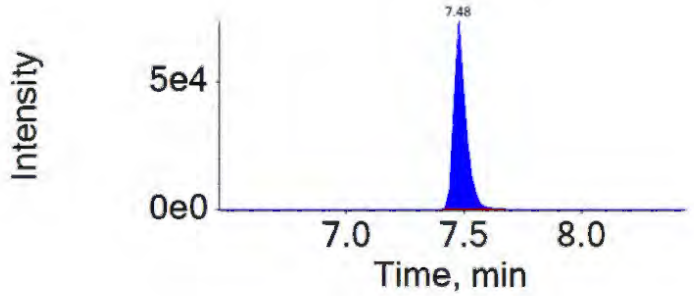
Analyte: PFUnDA

563.0 /
519.0



Extraction Standard: 13C7-PFUnDA

570.0 /
525.0



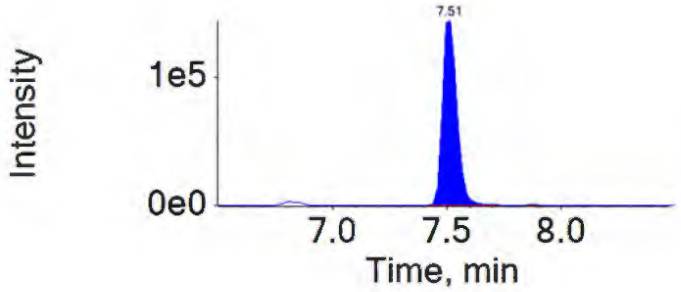
APPROVED
By JWK at 12:34 pm, 5/11/17

REVIEWED
By UMJS at 9:13 am, 5/15/17

ICAL Name: 17MAY10MCAL **Result Table:** 17MAY10MCAL 5/11/2017 12:08:01 PM
QMethod Name: PFCMOD - 17JAN28 **Acquisition Method:** PFC-32-16NOV02.dam

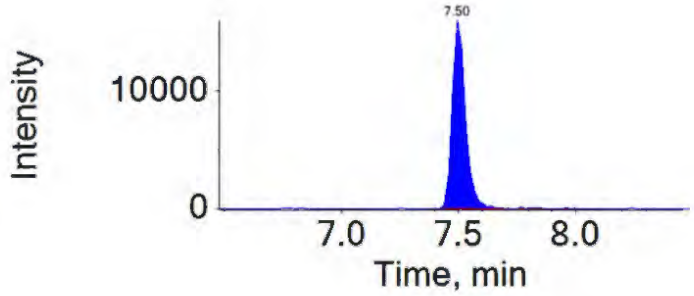
Analyte: NEtFOSAA

584.0 / 419.0



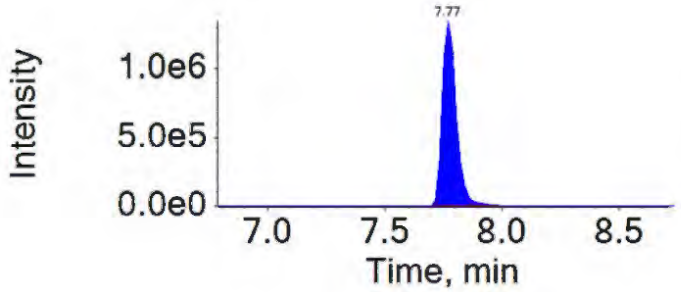
Extraction Standard: d5-NEtFOSAA

589.0 / 419.0



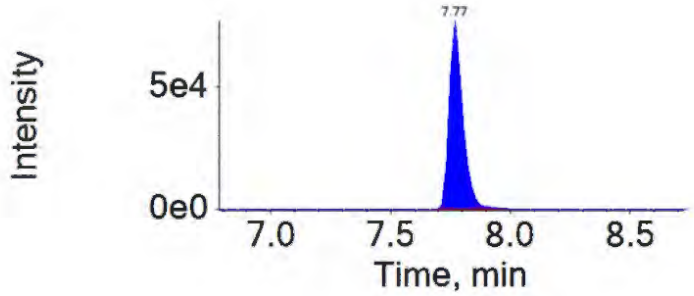
Analyte: PFDoDA

613.0 / 569.0



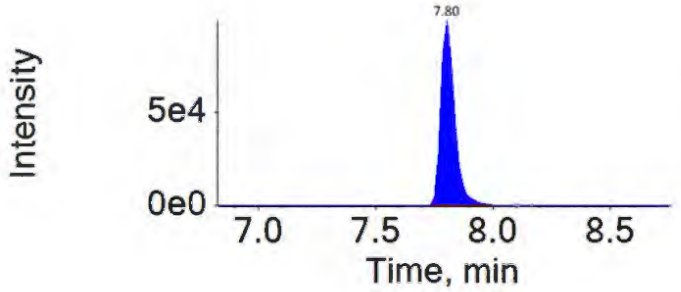
Extraction Standard: 13C2-PFDoDA

615.0 / 570.0



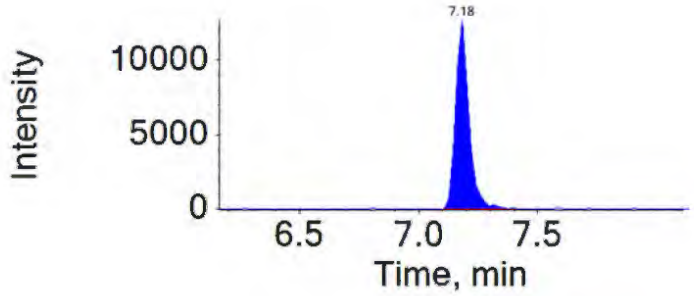
Analyte: 10:2-FTS

627.0 / 607.0



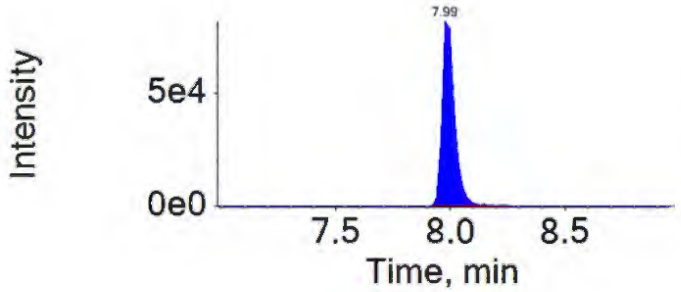
Extraction Standard: 13C2-8:2-FTS

529.0 / 509.0



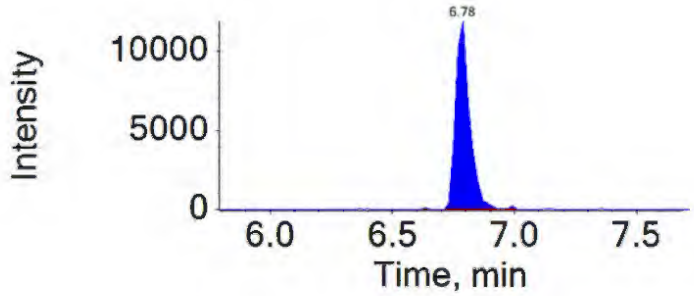
Analyte: PFDoS

699.0 / 99.0



Extraction Standard: 13C8-PFOS

507.0 / 99.0

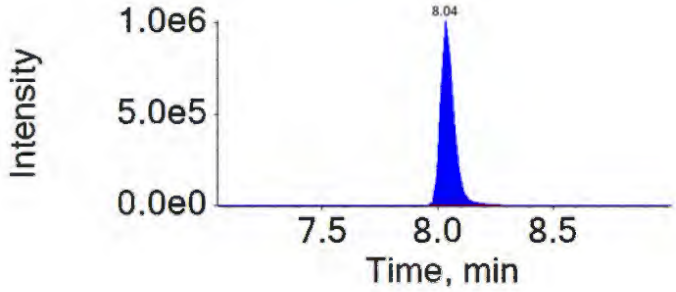


APPROVED
By JWK at 12:34 pm, 5/11/17

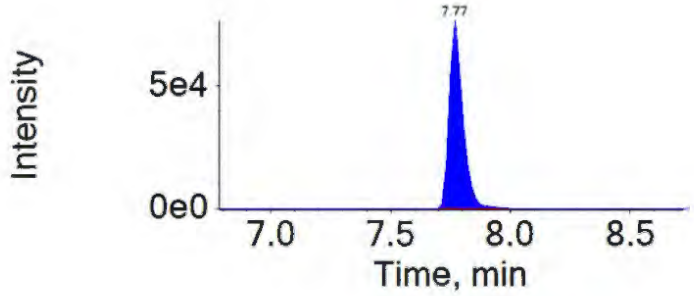
REVIEWED
By UMJS at 9:13 am, 5/15/17

ICAL Name: 17MAY10MCAL **Result Table:** 17MAY10MCAL 5/11/2017 12:08:01 PM
QMethod Name: PFCMOD - 17JAN28 **Acquisition Method:** PFC-32-16NOV02.dam

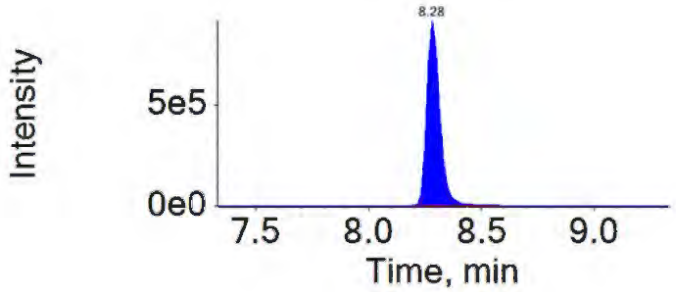
Analyte: PFTrDA
663.0 / 619.0



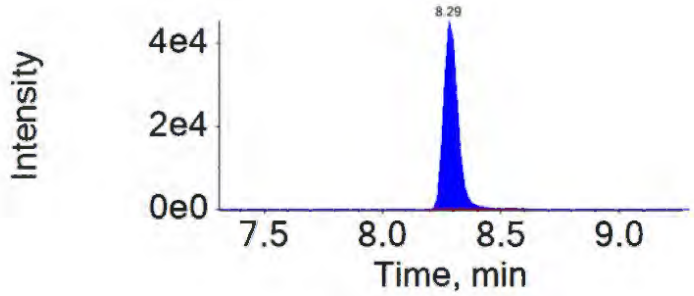
Extraction Standard: 13C2-PFDoDA
615.0 / 570.0



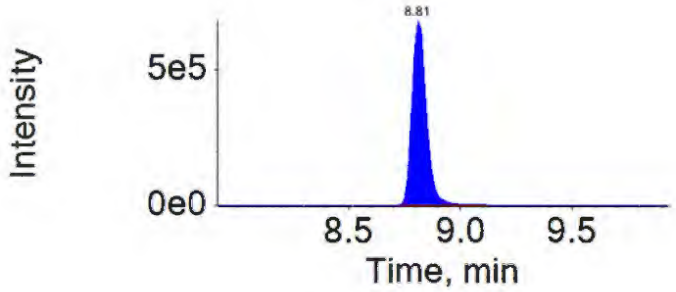
Analyte: PFTeDA
713.0 / 669.0



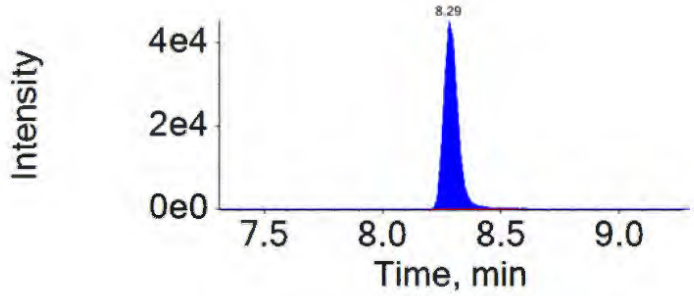
Extraction Standard: 13C2-PFTeDA
715.0 / 670.0



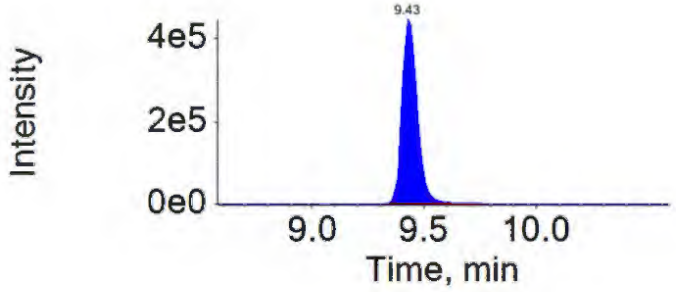
Analyte: PFHxDA
813.0 / 769.0



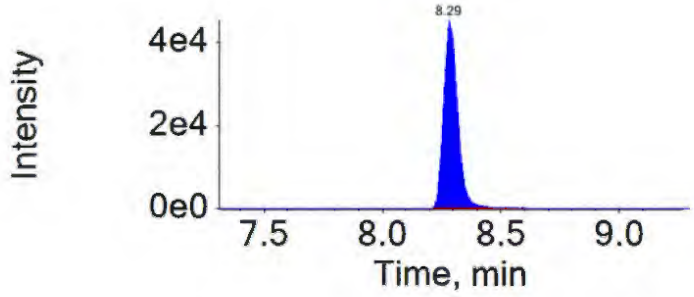
Extraction Standard: 13C2-PFTeDA
715.0 / 670.0



Analyte: PFODA
913.0 / 869.0



Extraction Standard: 13C2-PFTeDA
715.0 / 670.0



APPROVED
By JWK at 12:34 pm, 5/11/17

REVIEWED
By UMJS at 9:13 am, 5/15/17

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LC-MS/MS Analysis Report

Printed: 5/11/2017 12:14:00 PM
Template: MQ-Sample-16Nov21.docx

ICAL Name: 17MAY10MCAL
QMethod Name: PFCMOD - 17JAN28
Result Table: 17MAY10MCAL 5/11/2017 12:08:01 PM
Acquisition Method: PFC-32-16NOV02.dam

Sample Name:	MDL			**Data File:**		17MAY10MCAL-29.wiff
Sample ID:	PFCMDLX1712533A			**Acquis Date:**		2017-05-11T04:49:27
Sample Type:	Unknown			**Instrument:**		LM24960
Vial Position:	2			**Acquis Method:**		PFC-32-16NOV02.dam
Injection Vol:	5.00			**Result Table:**		17MAY10MCAL
QMethod File:	PFCMOD - 17JAN28			**ICAL Name:**		17MAY10MCAL
Batch Number:	MODICAL			**Operator:**		Not calculated
Sample Wt.:	1.00000			**Dilution Factor:**		1.00
Sample Vol.:	1.000			**Prep Factor:**		1.000

Injection Standard Peak Table

Injection Standard Name	Inj Std Conc	Injection Std Peak Area	ICAL Injection Standard AVG	Injection Std %Diff	Injection Std %Diff Limit	Injection Std %Diff OOS
I13C3-PFBA	1.0	714531.4	669117.3	6.8	50.0	
I13C2-PFOA	1.0	374401.3	342184.6	9.4	50.0	
I13C4-PFOS	1.0	72262.2	70131.6	3.0	50.0	
I13C2-PFDA	1.0	418252.9	384098.7	8.9	50.0	

Extraction Standard Peak Table

Extraction Standard Name	Ext Std Area	Inj Std Name	Inj Std Area	Area Ratio	AVG Area Ratio	Ext Std Conc	Ext Std Result	Ext Std %REC	Ext Std %REC Limit	Ext Std OOS
E13C4-PFBA	828547.3	13C3-PFBA	714531.4	1.160	1.150	1.000	1.008	100.8	70.0-130.0	
E13C5-PFPeA	760167.0	13C3-PFBA	714531.4	1.064	1.073	1.000	0.991	99.1	70.0-130.0	
E13C3-PFBS	141763.3	13C3-PFBA	714531.4	0.198	0.194	1.000	1.021	102.1	70.0-130.0	
E13C2-4:2-FTS	77600.0	13C2-PFOA	374401.3	0.207	0.236	1.000	0.877	87.7	70.0-130.0	
E13C5-PFHxA	766951.1	13C2-PFOA	374401.3	2.049	2.026	1.000	1.011	101.1	70.0-130.0	
E13C3-PFHxS	74518.7	13C2-PFOA	374401.3	0.199	0.206	1.000	0.967	96.7	70.0-130.0	
E13C4-PFHpA	459410.0	13C2-PFOA	374401.3	1.227	1.285	1.000	0.955	95.5	70.0-130.0	
E13C2-6:2-FTS	40304.9	13C2-PFOA	374401.3	0.108	0.128	1.000	0.840	84.0	70.0-130.0	
E13C8-PFOA	436975.1	13C2-PFOA	374401.3	1.167	1.163	1.000	1.003	100.3	70.0-130.0	
E13C8-PFOS	65918.4	13C4-PFOS	72262.2	0.912	0.865	1.000	1.054	105.4	70.0-130.0	
E13C9-PFNA	313679.8	13C4-PFOS	72262.2	4.341	4.422	1.000	0.982	98.2	70.0-130.0	
E13C8-PFOSA	445920.1	13C2-PFDA	418252.9	1.066	0.936	1.000	1.139	113.9	70.0-130.0	
E13C6-PFDA	617619.7	13C2-PFDA	418252.9	1.477	1.424	1.000	1.037	103.7	70.0-130.0	
E13C2-8:2-FTS	61645.8	13C2-PFDA	418252.9	0.147	0.155	1.000	0.949	94.9	70.0-130.0	
Ed7-NMePFOSAE	112701.5	13C2-PFDA	418252.9	0.270	0.299	1.000	0.902	90.2	70.0-130.0	
Ed3-NMePFOSA	39004.9	13C2-PFDA	418252.9	0.093	0.120	1.000	0.775	77.5	70.0-130.0	
Ed3-NMeFOSAA	130782.5	13C2-PFDA	418252.9	0.313	0.343	1.000	0.912	91.2	70.0-130.0	
Ed9-NEtPFOSAE	120290.1	13C2-PFDA	418252.9	0.288	0.333	1.000	0.865	86.5	70.0-130.0	
Ed5-NEtPFOSA	36279.0	13C2-PFDA	418252.9	0.087	0.095	1.000	0.915	91.5	70.0-130.0	
E13C7-PFUnDA	527029.2	13C2-PFDA	418252.9	1.260	0.953	1.000	1.323	132.3	70.0-130.0	OOS
Ed5-NEtFOSAA	120009.4	13C2-PFDA	418252.9	0.287	0.249	1.000	1.154	115.4	70.0-130.0	
E13C2-PFDoDA	516302.9	13C2-PFDA	418252.9	1.234	1.154	1.000	1.069	106.9	70.0-130.0	
E13C2-PFTeDA	273502.8	13C2-PFDA	418252.9	0.654	0.651	1.000	1.004	100.4	70.0-130.0	

APPROVED
By JWK at 12:35 pm, 5/11/17

REVIEWED
By UMJS at 9:13 am, 5/15/17

ICAL Name: 17MAY10MCAL **Result Table:** 17MAY10MCAL 5/11/2017 12:08:01 PM
QMethod Name: PFCMOD - 17JAN28 **Acquisition Method:** PFC-32-16NOV02.dam

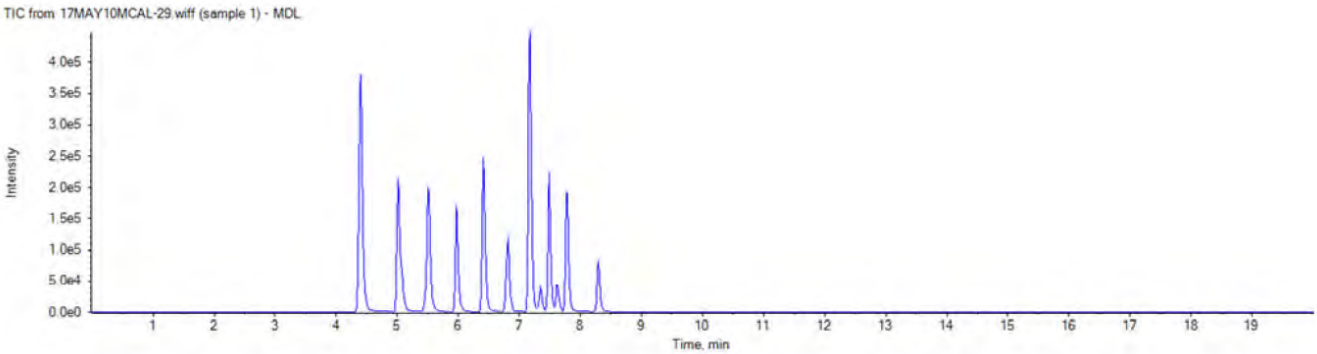
Analyte Quantitation Peak Table

Sample Name: MDL **Instrument Name:** LM24960 **File Name:** 17MAY10MCAL-29.wiff

Sample Wt	Sample Vol	Dilution Factor	PrepFactor
1.00000	1.000	1.00	1.000

Analytet Name	RT	RRT	Analyte Area Response	Int Typ	ES Name	ES RT	ES Area Response	Area Ratio	Sample Result (ng/g)
PFBA	4.40	1.000	13835.0	M	13C4-PFBA	4.40	828547.3	0.017	0.092
PFPeA	5.01	1.000	9739.5	M	13C5-PFPeA	5.01	760167.0	0.013	0.062
PFBS	5.06	1.000	1437.2	M	13C3-PFBS	5.08	141763.3	0.010	0.048
4:2-FTS	5.48	1.000	1473.3	M	13C2-4:2-FTS	5.46	77600.0	0.019	0.096
PFHxA	5.51	1.000	8062.1	M	13C5-PFHxA	5.51	766951.1	0.011	0.056
PFPeS	5.55	1.090	679.7	A	13C3-PFBS	5.08	141763.3	0.005	0.043
PFHxS	5.98	1.000	2294.3	A	13C3-PFHxS	5.97	74518.7	0.031	0.043
PFHpA	5.97	1.000	6116.0	M	13C4-PFHpA	5.97	459410.0	0.013	0.054
6:2-FTS	6.41	1.000	402.5	M	13C2-6:2-FTS	6.40	40304.9	0.010	
PFHpS	6.38	1.070	727.3	A	13C3-PFHxS	5.97	74518.7	0.010	0.051
PFOA	6.42	1.000	5901.9	M	13C8-PFOA	6.41	436975.1	0.014	0.062
PFOS	6.79	1.000	2475.9	M	13C8-PFOS	6.79	65918.4	0.038	0.052
PFNA	6.82	1.000	5635.6	M	13C9-PFNA	6.81	313679.8	0.018	0.073
PFOSA	7.16	1.000	4758.9	A	13C8-PFOSA	7.16	445920.1	0.011	0.049
PFNS	7.13	1.050	731.7	A	13C8-PFOS	6.79	65918.4	0.011	0.051
PFDA	7.17	1.000	8565.4	A	13C6-PFDA	7.17	617619.7	0.014	0.076
8:2-FTS	7.17	1.000	728.6	A	13C2-8:2-FTS	7.18	61645.8	0.012	0.061
NMePFOSAE	7.62	1.000	1016.0	M	d7-NMePFOSAE	7.62	112701.5	0.009	0.036
NMePFOSA	7.65	1.000	531.7	M	d3-NMePFOSA	7.64	39004.9	0.014	0.064
NMeFOSAA	7.34	1.000	1136.4	A	d3-NMeFOSAA	7.35	130782.5	0.009	0.041
NEtPFOSAE	7.79	1.000	1555.7	M	d9-NEtPFOSAE	7.78	120290.1	0.013	0.059
NEtPFOSA	7.80	1.000	406.3	M	d5-NEtPFOSA	7.80	36279.0	0.011	0.056
PFDS	7.44	1.090	632.8	A	13C8-PFOS	6.79	65918.4	0.010	0.049
PFUnDA	7.48	1.000	9831.7	A	13C7-PFUnDA	7.49	527029.2	0.019	0.073
NEtFOSAA	7.51	1.000	1626.6	A	d5-NEtFOSAA	7.50	120009.4	0.014	0.066
PFDoDA	7.77	1.000	4348.9	A	13C2-PFDoDA	7.78	516302.9	0.008	0.045
10:2-FTS	7.80	1.090	568.3	M	13C2-8:2-FTS	7.18	61645.8	0.009	0.013
PFDoS	8.02	1.180	185.7	A	13C8-PFOS	6.79	65918.4	0.003	0.040
PFTrDA	8.04	1.030	4088.5	M	13C2-PFDoDA	7.78	516302.9	0.008	0.059
PFTeDA	8.29	1.000	2881.4	M	13C2-PFTeDA	8.29	273502.8	0.011	0.054
PFHxDA	8.83	1.060	2687.9	A	13C2-PFTeDA	8.29	273502.8	0.010	0.062
PFODA	9.45	1.140	1385.6	A	13C2-PFTeDA	8.29	273502.8	0.005	0.046

Total Ion Chromatogram



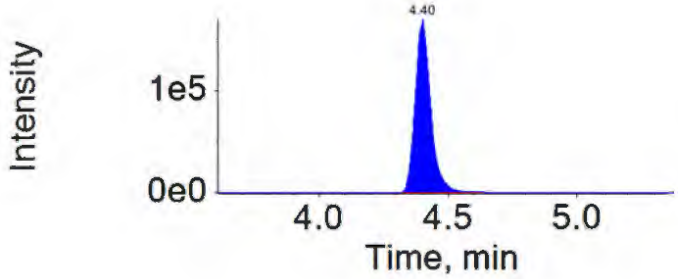
APPROVED
By JWK at 12:35 pm, 5/11/17

REVIEWED
By UMJS at 9:13 am, 5/15/17

ICAL Name: 17MAY10MCAL
QMethod Name: PFCMOD - 17JAN28
Result Table: 17MAY10MCAL 5/11/2017 12:08:01 PM
Acquisition Method: PFC-32-16NOV02.dam

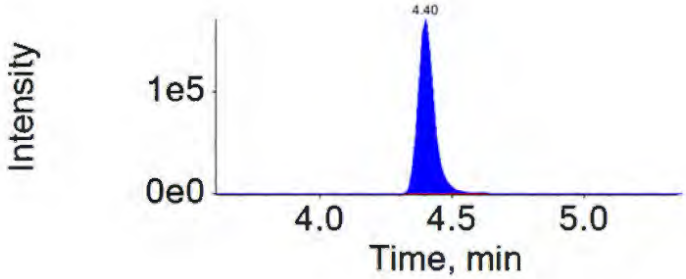
Injection Standard: I13C3-PFBA

216.0 / 172.0



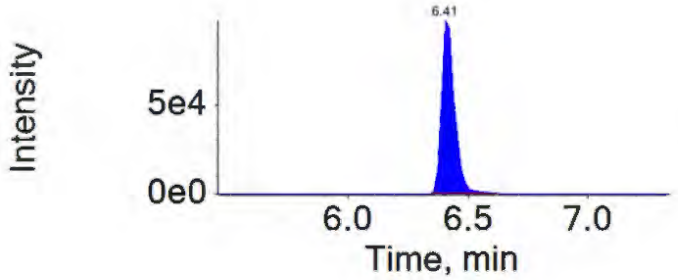
Injection Standard: 13C3-PFBA

216.0 / 172.0



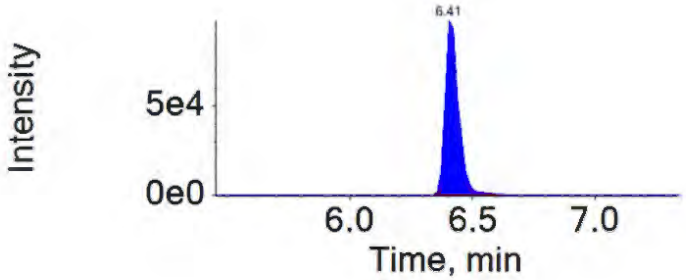
Injection Standard: I13C2-PFOA

415.0 / 370.0



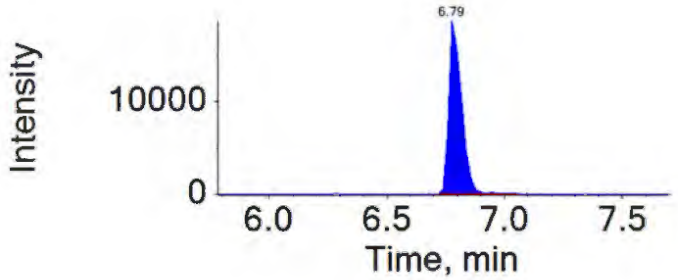
Injection Standard: 13C2-PFOA

415.0 / 370.0



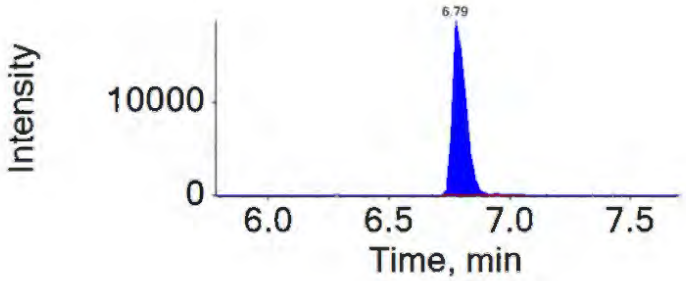
Injection Standard: I13C4-PFOS

503.0 / 99.0



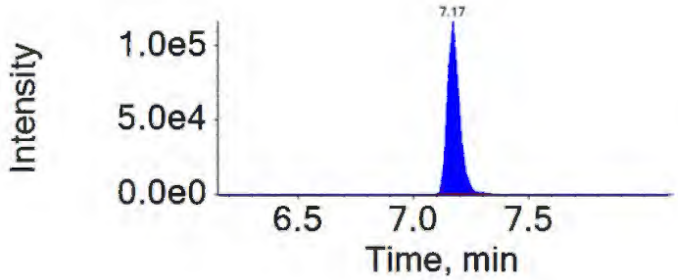
Injection Standard: 13C4-PFOS

503.0 / 99.0



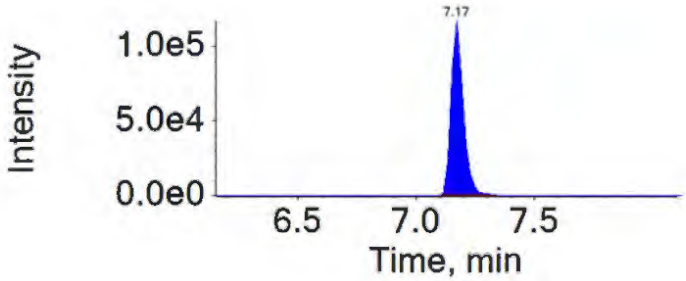
Injection Standard: I13C2-PFDA

515.0 / 470.0



Injection Standard: 13C2-PFDA

515.0 / 470.0



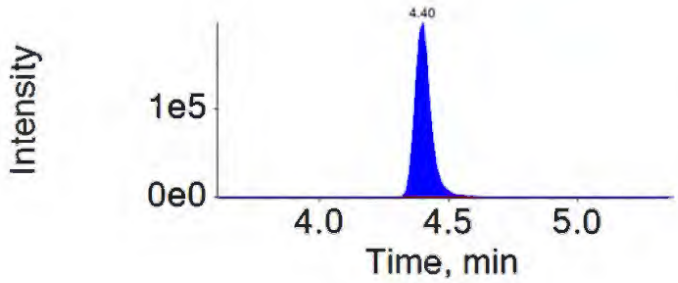
APPROVED
By JWK at 12:35 pm, 5/11/17

REVIEWED
By UMJS at 9:13 am, 5/15/17

ICAL Name: 17MAY10MCAL **Result Table:** 17MAY10MCAL 5/11/2017 12:08:01 PM
QMethod Name: PFCMOD - 17JAN28 **Acquisition Method:** PFC-32-16NOV02.dam

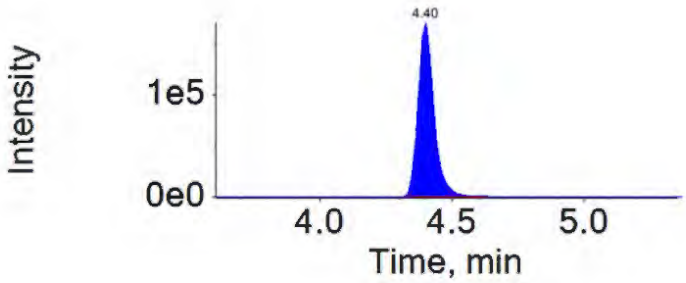
Extraction Standard: E13C4-PFBA

217.0 /
172.0



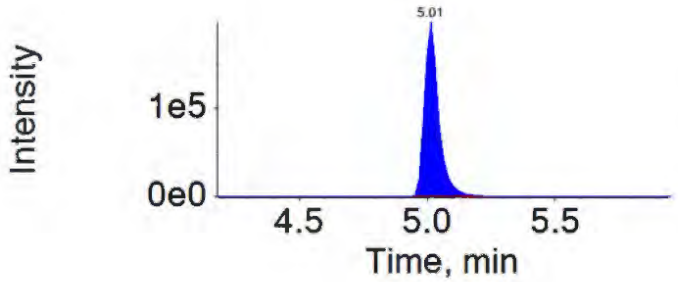
Injection Standard: 13C3-PFBA

216.0 /
172.0



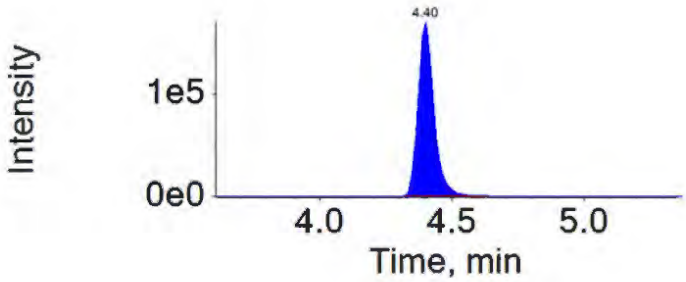
Extraction Standard: E13C5-PFPeA

268.0 /
223.0



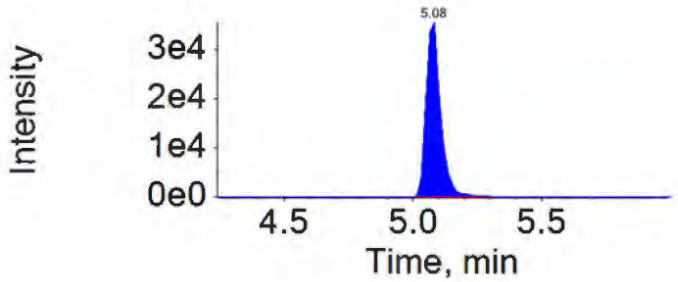
Injection Standard: 13C3-PFBA

216.0 /
172.0



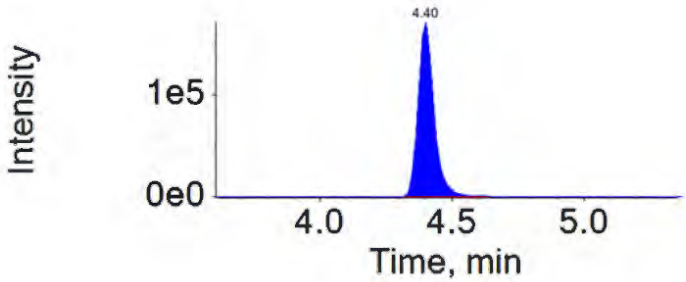
Extraction Standard: E13C3-PFBS

302.0 /
99.0



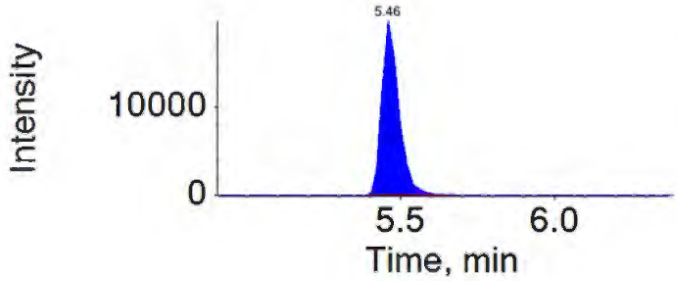
Injection Standard: 13C3-PFBA

216.0 /
172.0



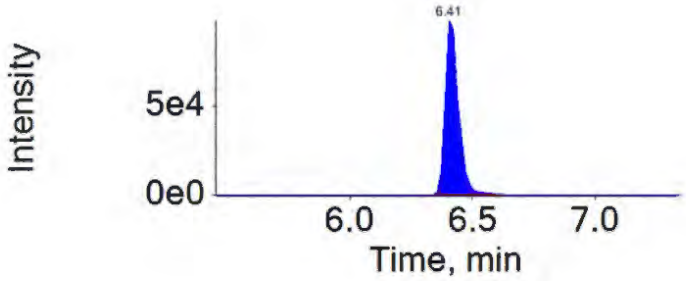
Extraction Standard: E13C2-4:2-FTS

329.0 /
309.0



Injection Standard: 13C2-PFOA

415.0 /
370.0



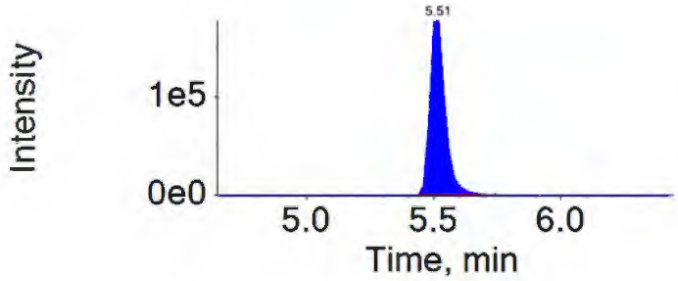
APPROVED
By JWK at 12:35 pm, 5/11/17

REVIEWED
By UMJS at 9:13 am, 5/15/17

ICAL Name: 17MAY10MCAL **Result Table:** 17MAY10MCAL 5/11/2017 12:08:01 PM
QMethod Name: PFCMOD - 17JAN28 **Acquisition Method:** PFC-32-16NOV02.dam

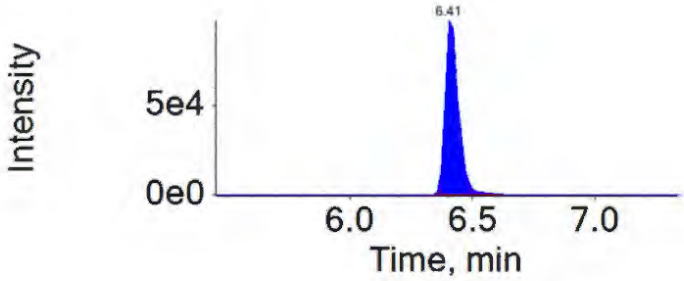
Extraction Standard: E13C5-PFHxA

318.0 /
273.0



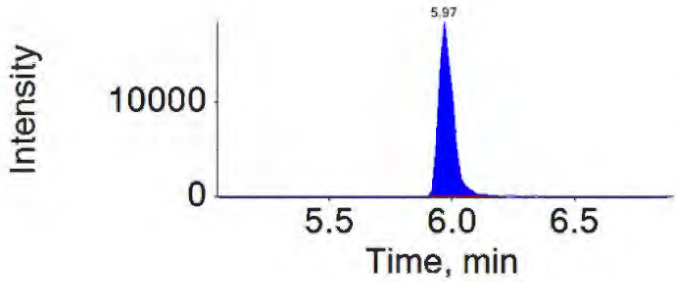
Injection Standard: 13C2-PFOA

415.0 /
370.0



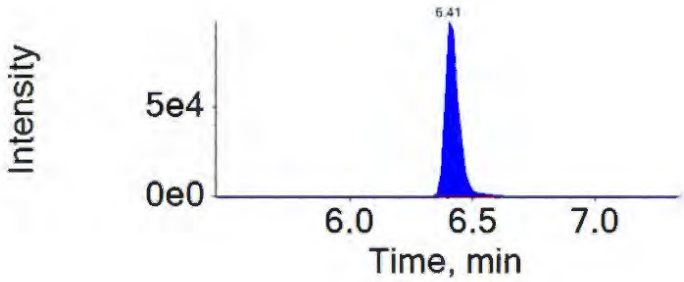
Extraction Standard: E13C3-PFHxS

402.0 /
99.0



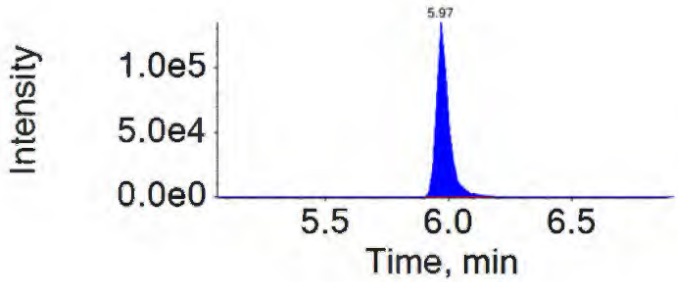
Injection Standard: 13C2-PFOA

415.0 /
370.0



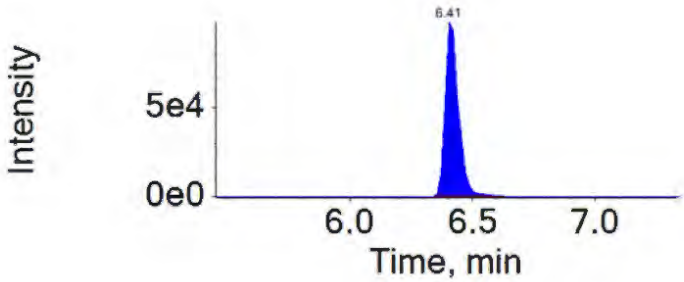
Extraction Standard: E13C4-PFHpA

367.0 /
322.0



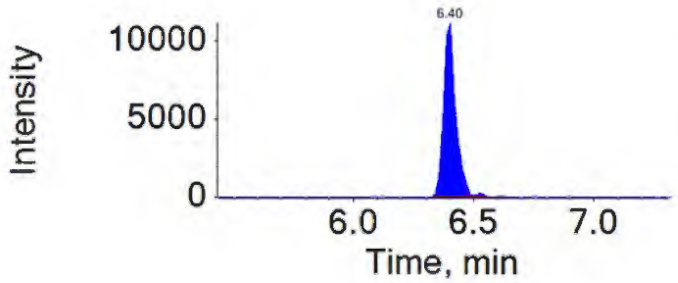
Injection Standard: 13C2-PFOA

415.0 /
370.0



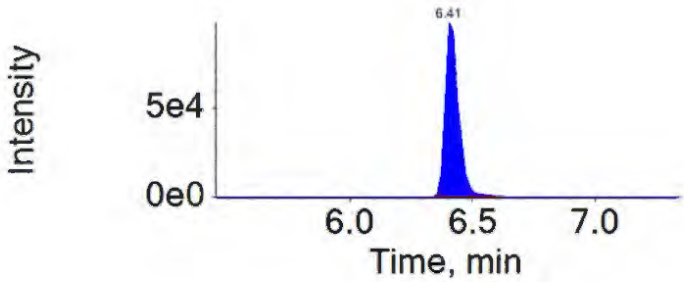
Extraction Standard: E13C2-6:2-FTS

429.0 /
409.0



Injection Standard: 13C2-PFOA

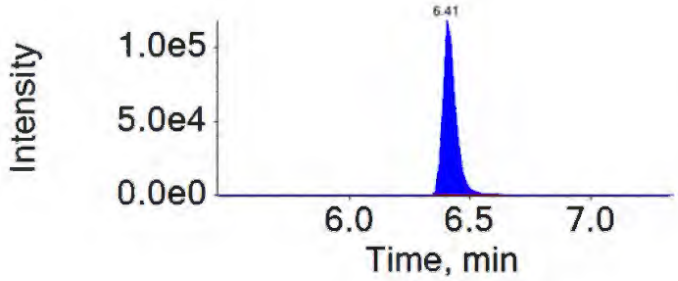
415.0 /
370.0



ICAL Name: 17MAY10MCAL **Result Table:** 17MAY10MCAL 5/11/2017 12:08:01 PM
QMethod Name: PFCMOD - 17JAN28 **Acquisition Method:** PFC-32-16NOV02.dam

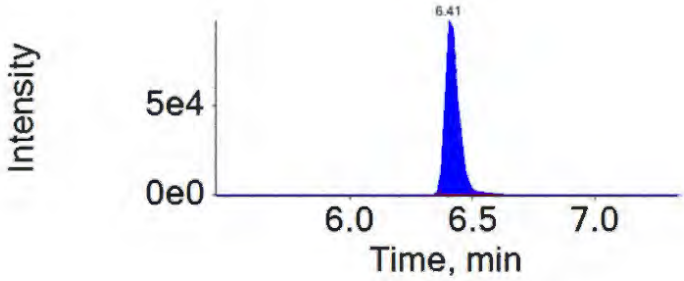
Extraction Standard: E13C8-PFOA

421.0 /
376.0



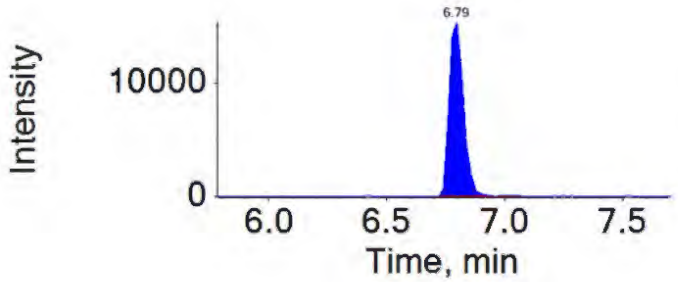
Injection Standard: 13C2-PFOA

415.0 /
370.0



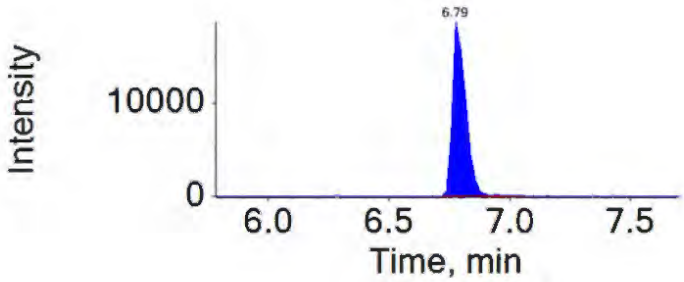
Extraction Standard: E13C8-PFOS

507.0 /
99.0



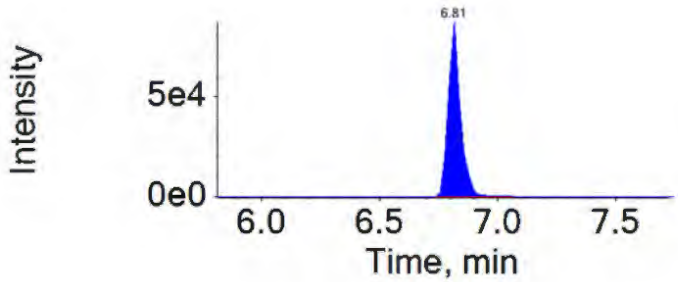
Injection Standard: 13C4-PFOS

503.0 /
99.0



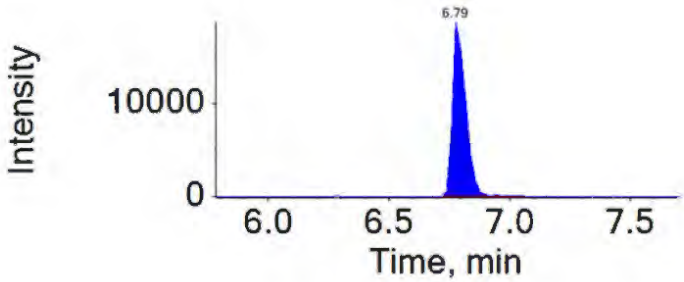
Extraction Standard: E13C9-PFNA

472.0 /
427.0



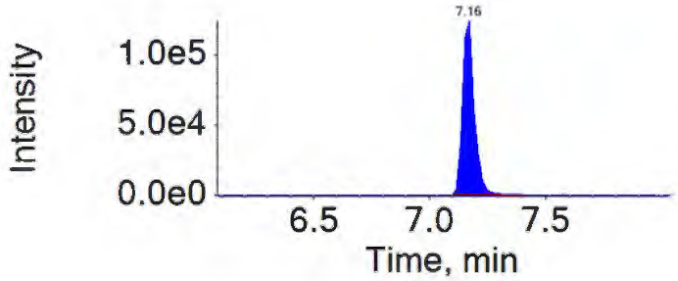
Injection Standard: 13C4-PFOS

503.0 /
99.0



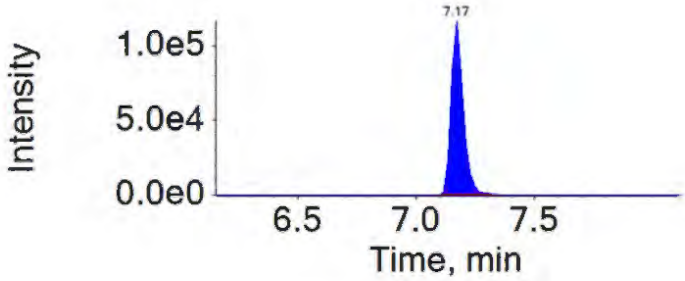
Extraction Standard: E13C8-PFOSA

506.0 /
78.0



Injection Standard: 13C2-PFDA

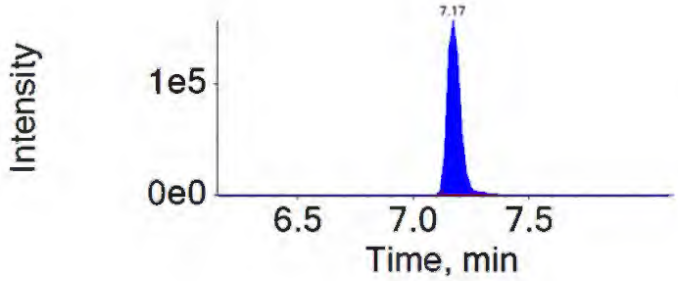
515.0 /
470.0



ICAL Name: 17MAY10MCAL **Result Table:** 17MAY10MCAL 5/11/2017 12:08:01 PM
QMethod Name: PFCMOD - 17JAN28 **Acquisition Method:** PFC-32-16NOV02.dam

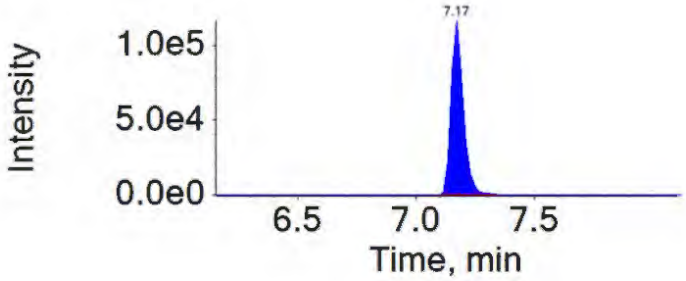
Extraction Standard: E13C6-PFDA

519.0 / 474.0



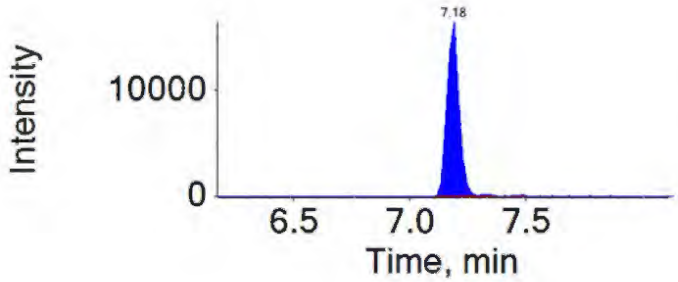
Injection Standard: 13C2-PFDA

515.0 / 470.0



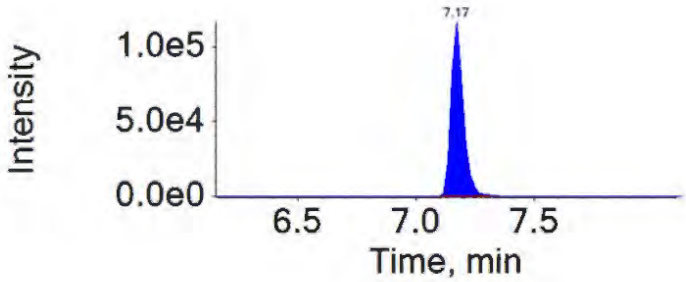
Extraction Standard: E13C2-8:2-FTS

529.0 / 509.0



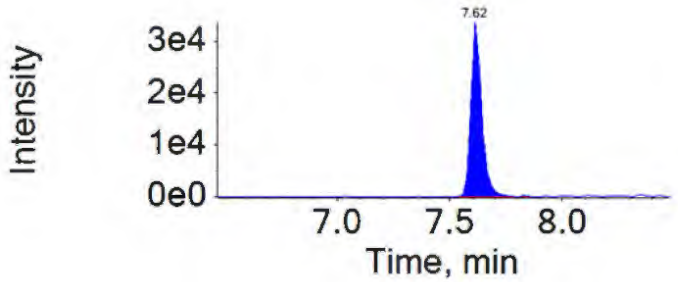
Injection Standard: 13C2-PFDA

515.0 / 470.0



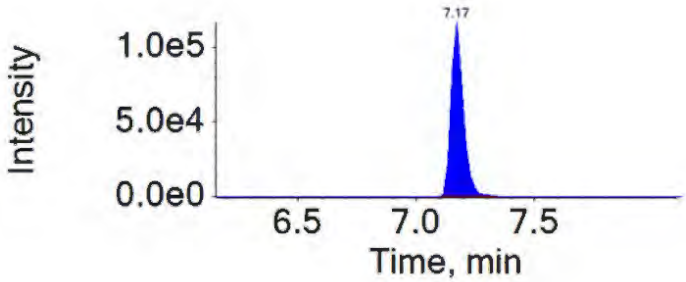
Extraction Standard: Ed7-NMePFOSAE

623.0 / 59.0



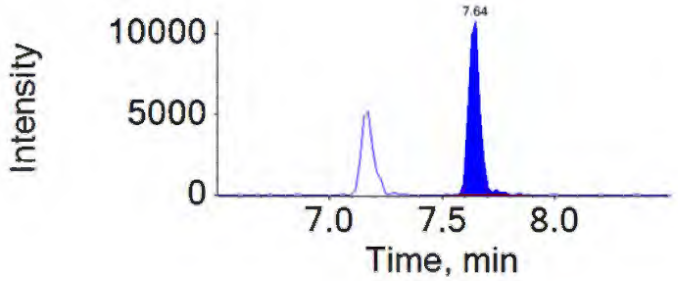
Injection Standard: 13C2-PFDA

515.0 / 470.0



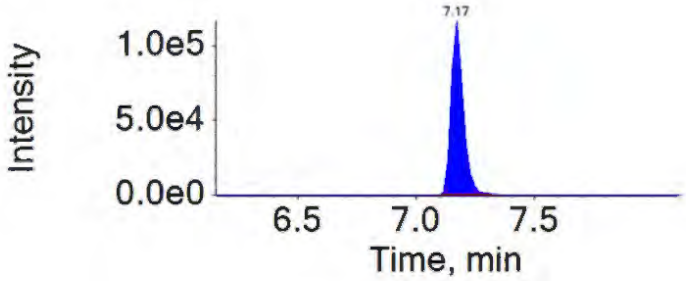
Extraction Standard: Ed3-NMePFOSA

515.0 / 169.0



Injection Standard: 13C2-PFDA

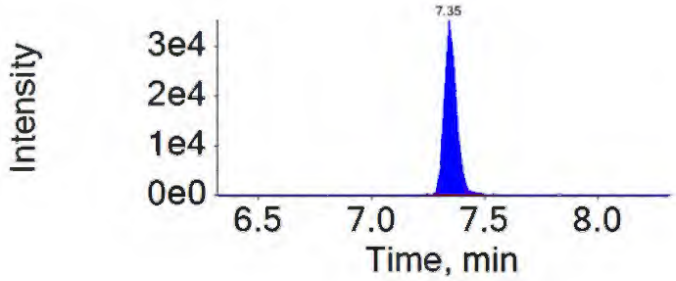
515.0 / 470.0



ICAL Name: 17MAY10MCAL **Result Table:** 17MAY10MCAL 5/11/2017 12:08:01 PM
QMethod Name: PFCMOD - 17JAN28 **Acquisition Method:** PFC-32-16NOV02.dam

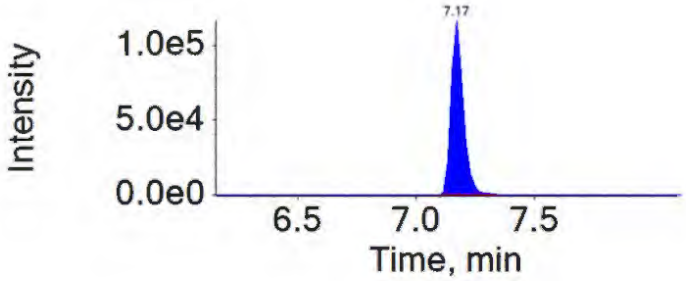
Extraction Standard: Ed3-NMeFOSAA

573.0 / 419.0



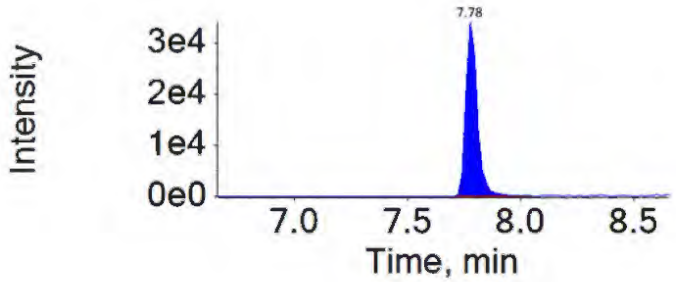
Injection Standard: 13C2-PFDA

515.0 / 470.0



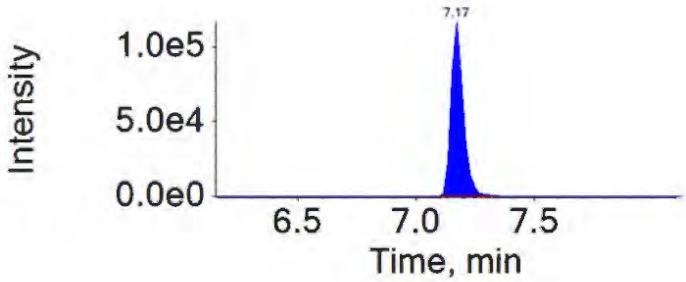
Extraction Standard: Ed9-NEtPFOSAE

639.0 / 59.0



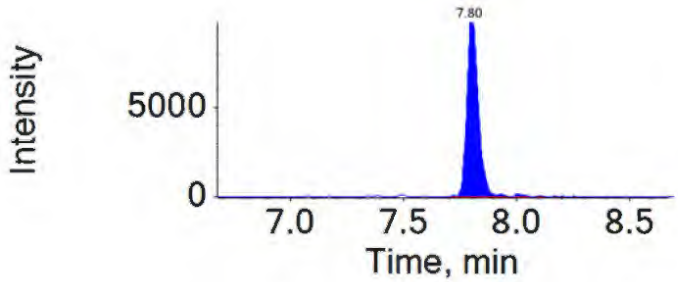
Injection Standard: 13C2-PFDA

515.0 / 470.0



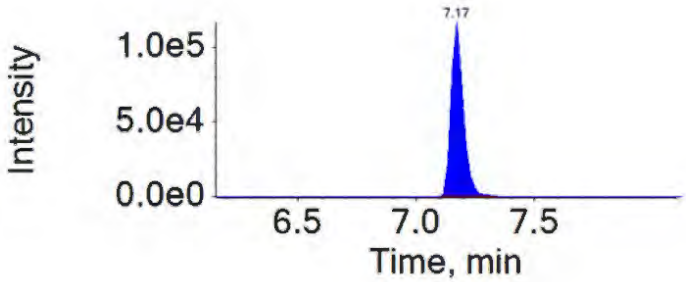
Extraction Standard: Ed5-NEtPFOSA

531.0 / 169.0



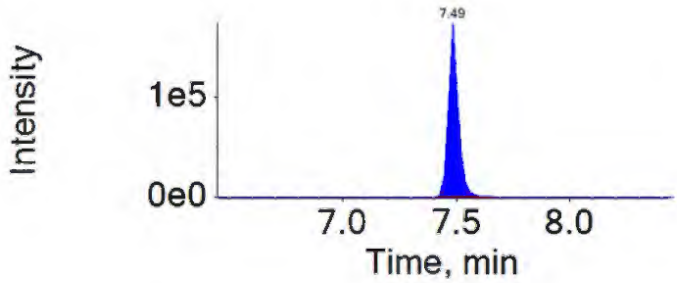
Injection Standard: 13C2-PFDA

515.0 / 470.0



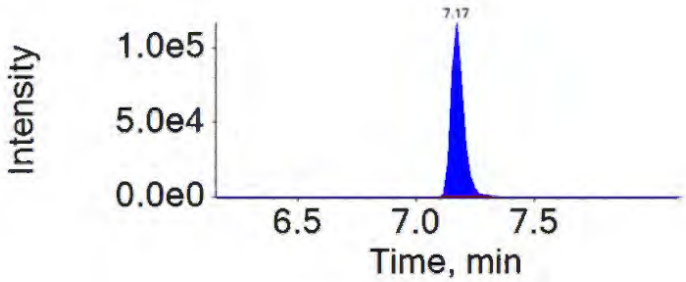
Extraction Standard: E13C7-PFUnDA

570.0 / 525.0



Injection Standard: 13C2-PFDA

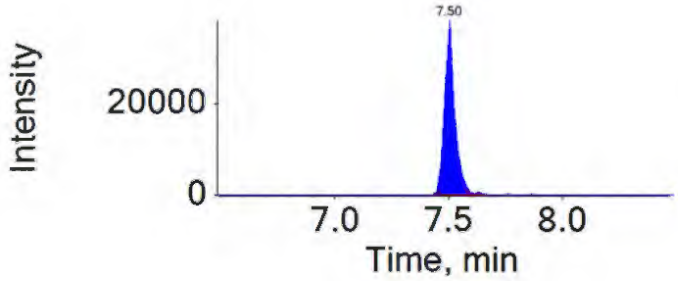
515.0 / 470.0



ICAL Name: 17MAY10MCAL **Result Table:** 17MAY10MCAL 5/11/2017 12:08:01 PM
QMethod Name: PFCMOD - 17JAN28 **Acquisition Method:** PFC-32-16NOV02.dam

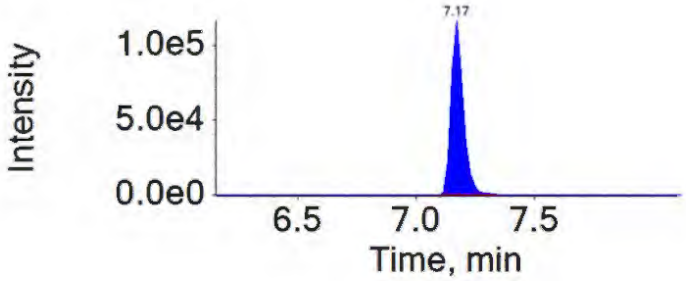
Extraction Standard: Ed5-NEtFOSAA

589.0 / 419.0



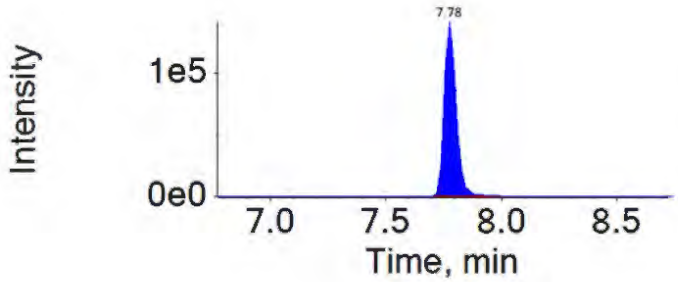
Injection Standard: 13C2-PFDA

515.0 / 470.0



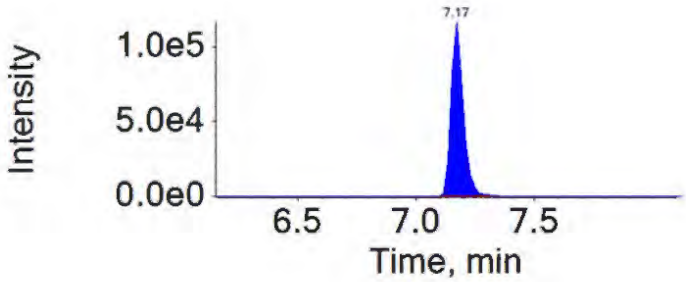
Extraction Standard: E13C2-PFDoDA

615.0 / 570.0



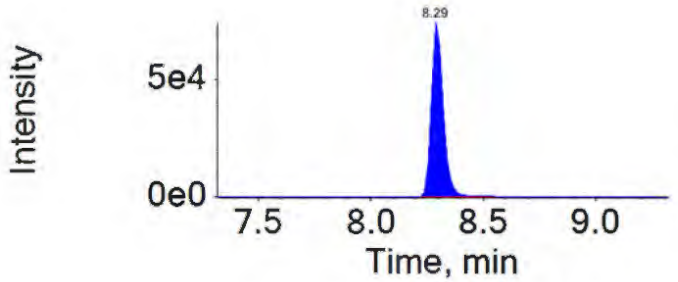
Injection Standard: 13C2-PFDA

515.0 / 470.0



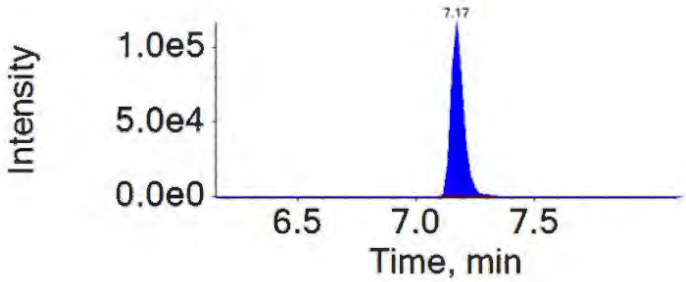
Extraction Standard: E13C2-PFTeDA

715.0 / 670.0



Injection Standard: 13C2-PFDA

515.0 / 470.0



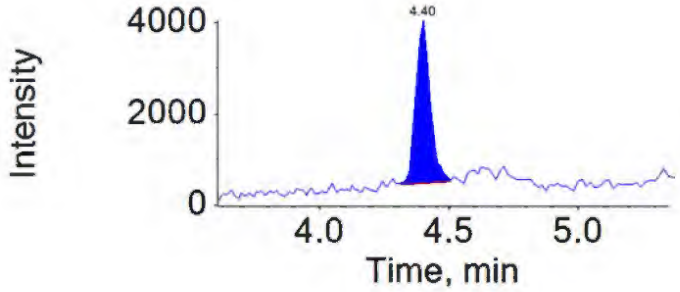
APPROVED
By JWK at 12:35 pm, 5/11/17

REVIEWED
By UMJS at 9:13 am, 5/15/17

ICAL Name: 17MAY10MCAL **Result Table:** 17MAY10MCAL 5/11/2017 12:08:01 PM
QMethod Name: PFCMOD - 17JAN28 **Acquisition Method:** PFC-32-16NOV02.dam

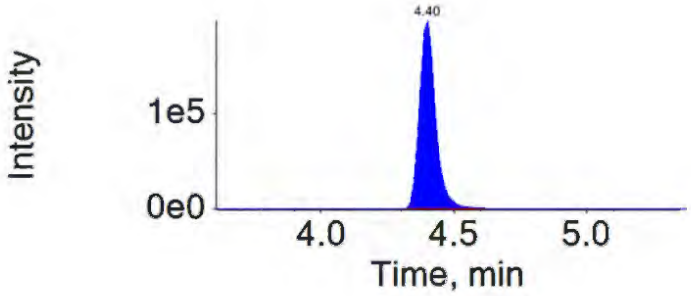
Analyte: PFBA

213.0 / 169.0



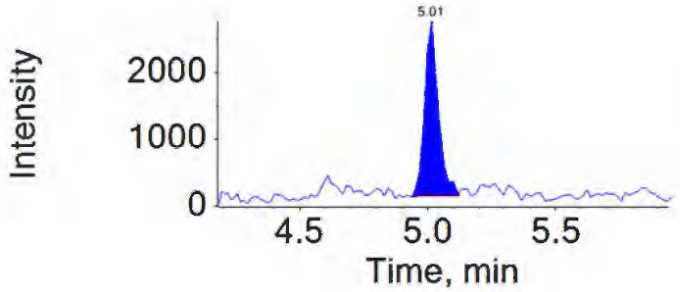
Extraction Standard: 13C4-PFBA

217.0 / 172.0



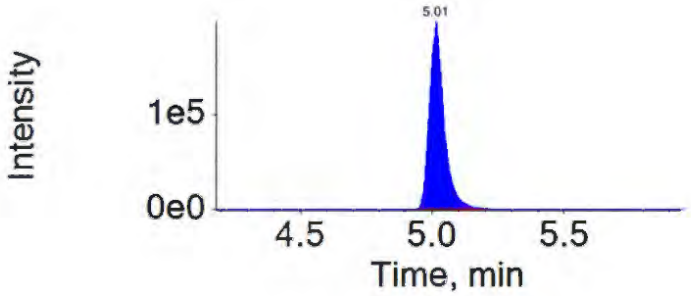
Analyte: PFPeA

263.0 / 219.0



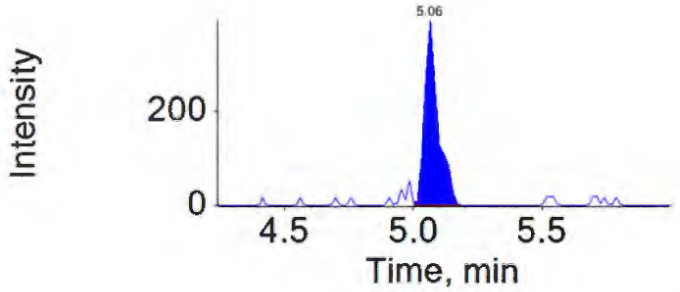
Extraction Standard: 13C5-PFPeA

268.0 / 223.0



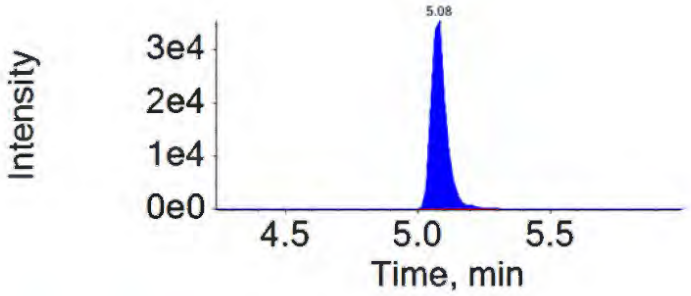
Analyte: PFBS

299.0 / 99.0



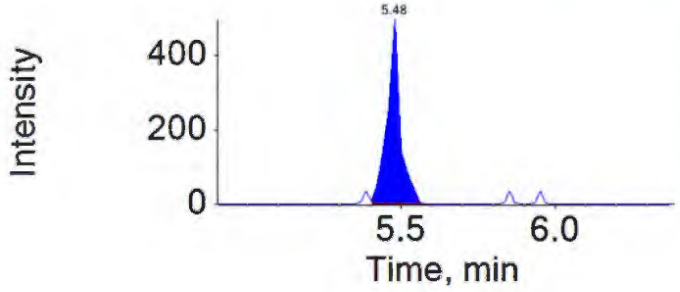
Extraction Standard: 13C3-PFBS

302.0 / 99.0



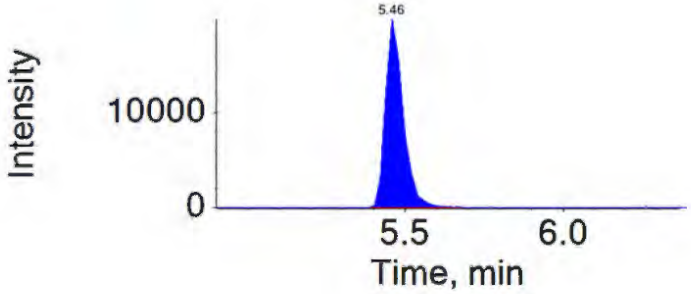
Analyte: 4:2-FTS

327.0 / 307.0



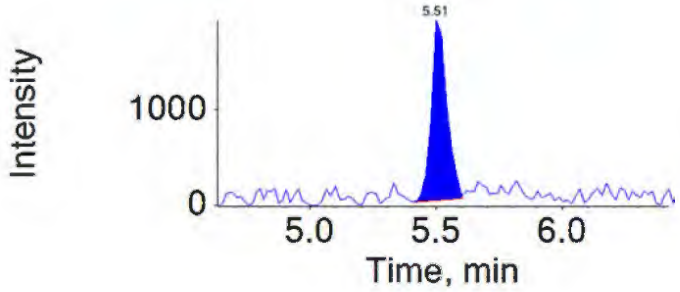
Extraction Standard: 13C2-4:2-FTS

329.0 / 309.0

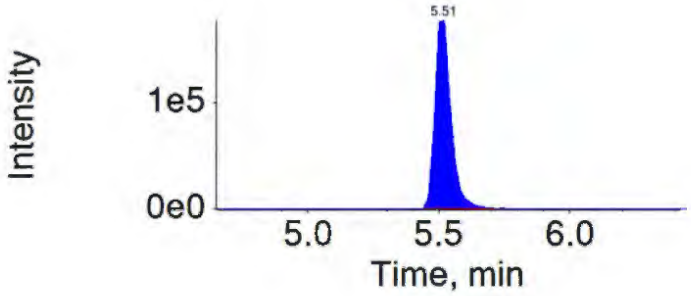


ICAL Name: 17MAY10MCAL **Result Table:** 17MAY10MCAL 5/11/2017 12:08:01 PM
QMethod Name: PFCMOD - 17JAN28 **Acquisition Method:** PFC-32-16NOV02.dam

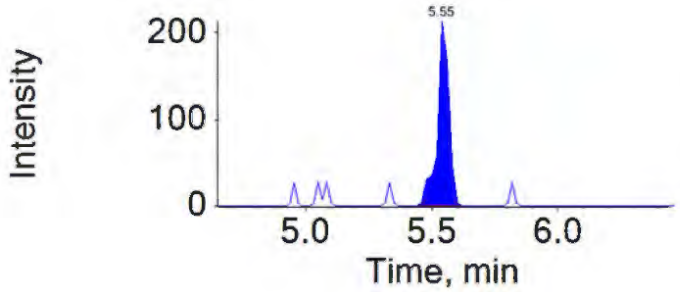
Analyte: PFHxA
313.0 / 269.0



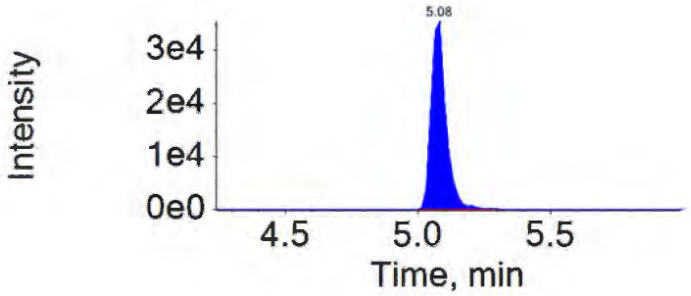
Extraction Standard: 13C5-PFHxA
318.0 / 273.0



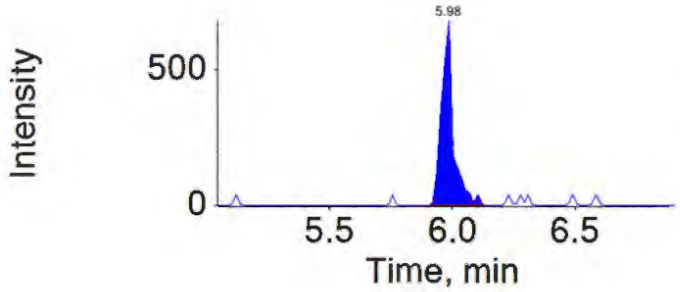
Analyte: PFPeS
349.0 / 99.0



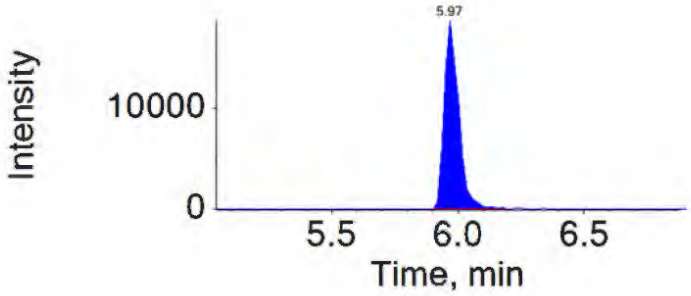
Extraction Standard: 13C3-PFBS
302.0 / 99.0



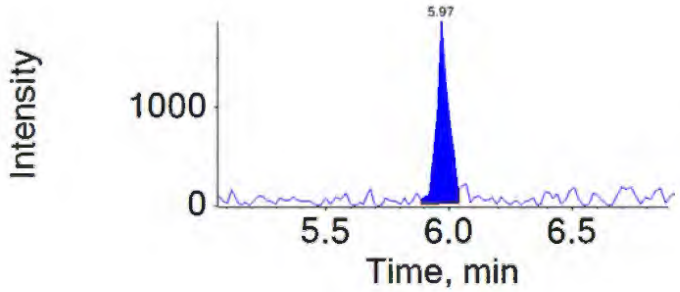
Analyte: PFHxS
399.0 / 80.0



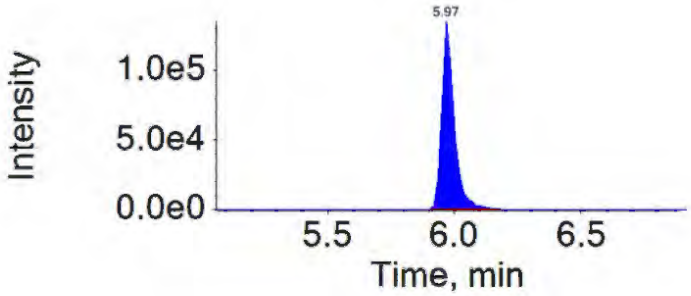
Extraction Standard: 13C3-PFHxS
402.0 / 99.0



Analyte: PFHpA
363.0 / 319.0



Extraction Standard: 13C4-PFHpA
367.0 / 322.0



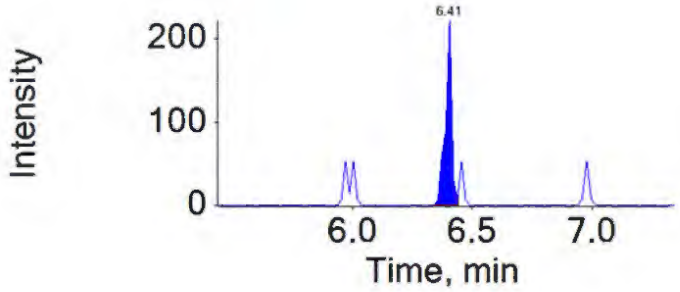
APPROVED
By JWK at 12:35 pm, 5/11/17

REVIEWED
By UMJS at 9:13 am, 5/15/17

ICAL Name: 17MAY10MCAL **Result Table:** 17MAY10MCAL 5/11/2017 12:08:01 PM
QMethod Name: PFCMOD - 17JAN28 **Acquisition Method:** PFC-32-16NOV02.dam

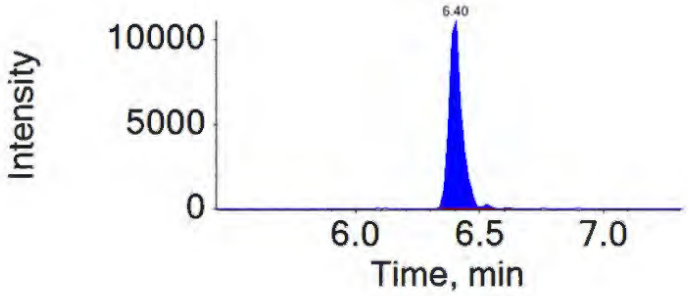
Analyte: 6:2-FTS

427.0 /
407.0



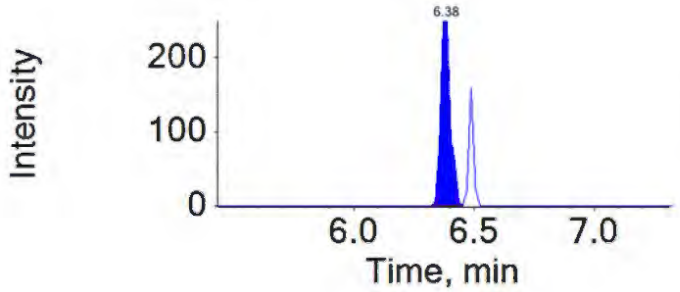
Extraction Standard: 13C2-6:2-FTS

429.0 /
409.0



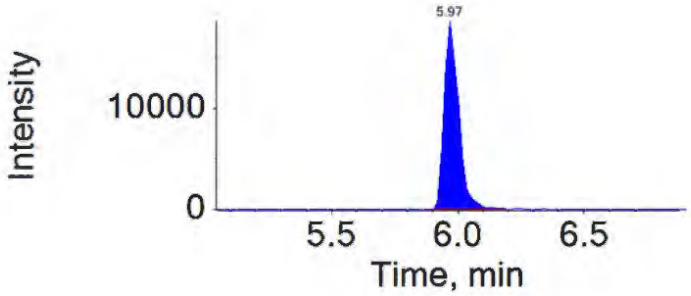
Analyte: PFHpS

449.0 /
99.0



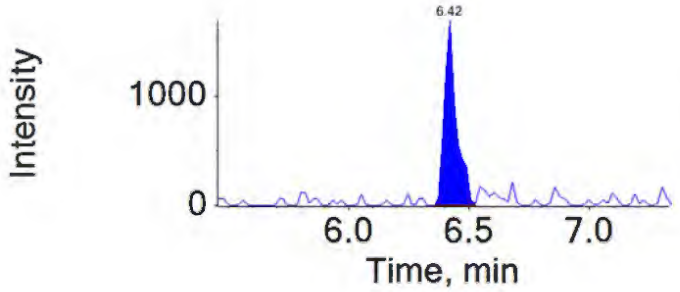
Extraction Standard: 13C3-PFHxS

402.0 /
99.0



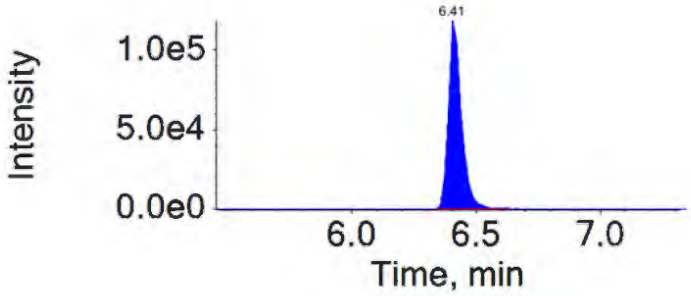
Analyte: PFOA

413.0 /
369.0



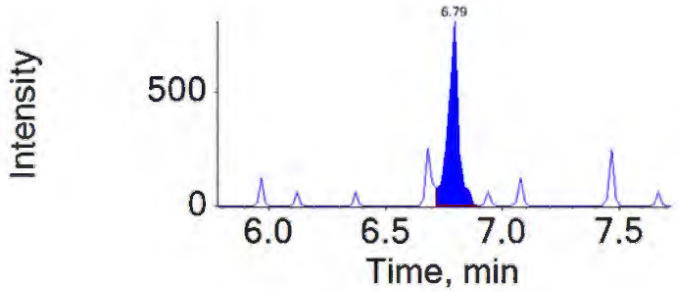
Extraction Standard: 13C8-PFOA

421.0 /
376.0



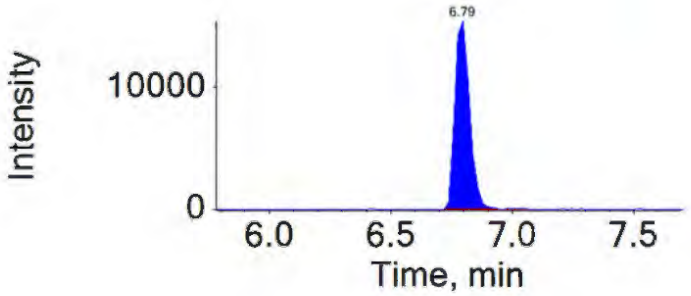
Analyte: PFOS

499.0 /
80.0



Extraction Standard: 13C8-PFOS

507.0 /
99.0



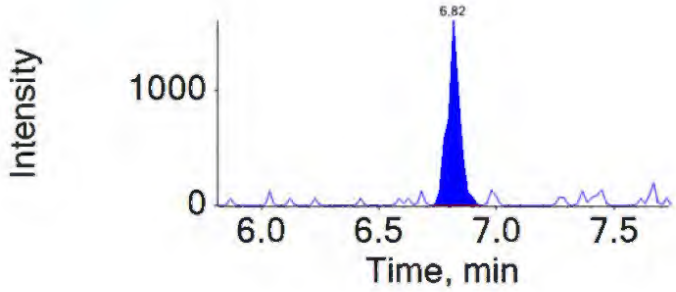
APPROVED
By JWK at 12:35 pm, 5/11/17

REVIEWED
By UMJS at 9:13 am, 5/15/17

ICAL Name: 17MAY10MCAL **Result Table:** 17MAY10MCAL 5/11/2017 12:08:01 PM
QMethod Name: PFCMOD - 17JAN28 **Acquisition Method:** PFC-32-16NOV02.dam

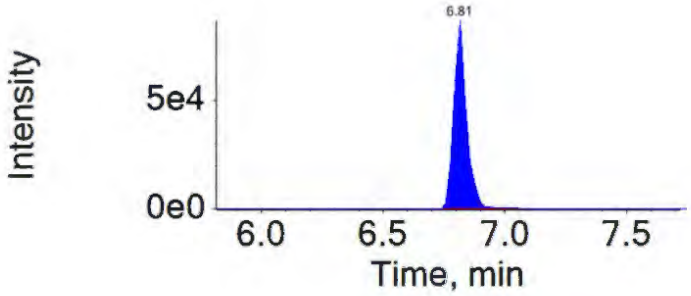
Analyte: PFNA

463.0 /
419.0



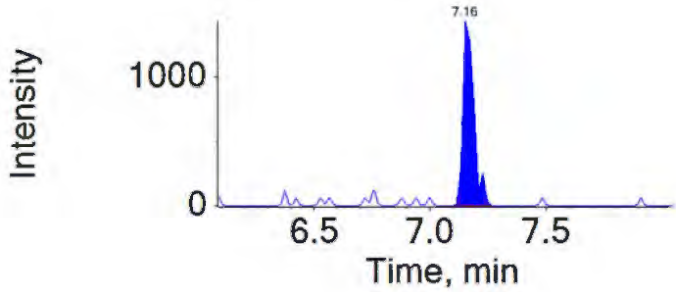
Extraction Standard: 13C9-PFNA

472.0 /
427.0



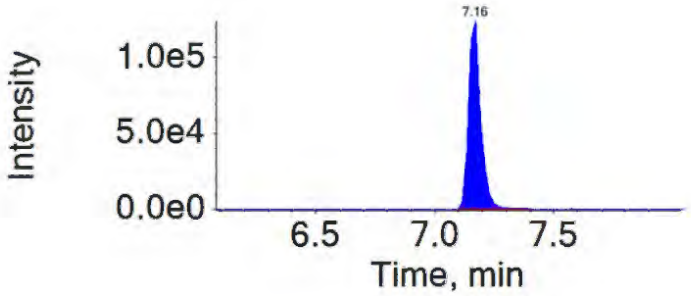
Analyte: PFOSA

498.0 /
78.0



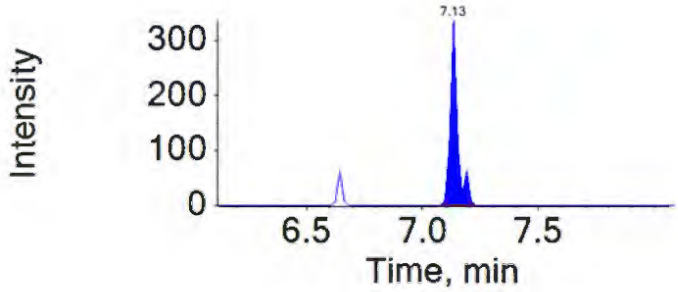
Extraction Standard: 13C8-PFOSA

506.0 /
78.0



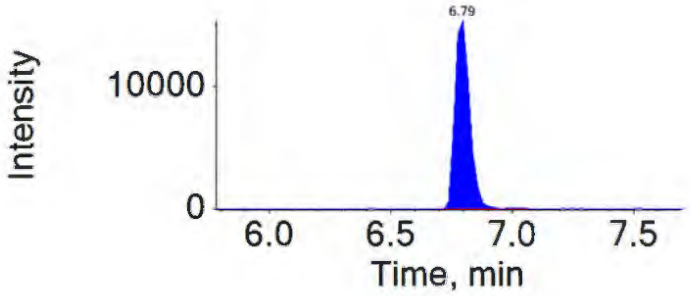
Analyte: PFNS

549.0 /
99.0



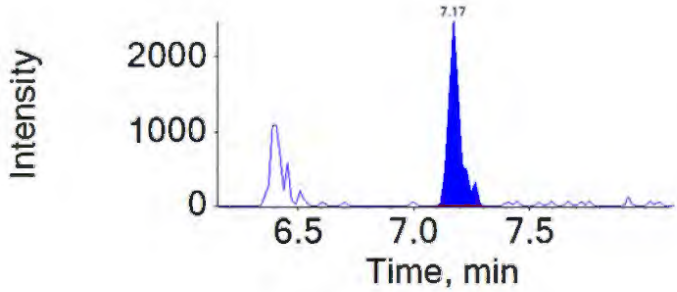
Extraction Standard: 13C8-PFOS

507.0 /
99.0



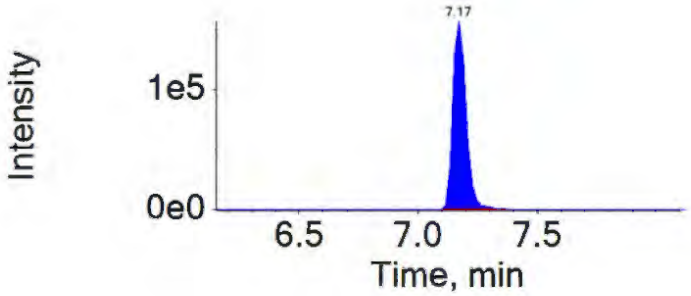
Analyte: PFDA

513.0 /
469.0



Extraction Standard: 13C6-PFDA

519.0 /
474.0



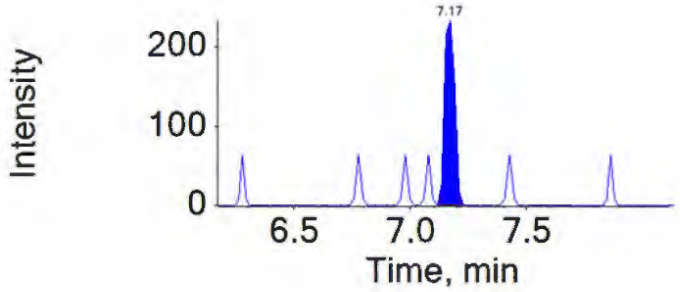
APPROVED
By JWK at 12:35 pm, 5/11/17

REVIEWED
By UMJS at 9:13 am, 5/15/17

ICAL Name: 17MAY10MCAL **Result Table:** 17MAY10MCAL 5/11/2017 12:08:01 PM
QMethod Name: PFCMOD - 17JAN28 **Acquisition Method:** PFC-32-16NOV02.dam

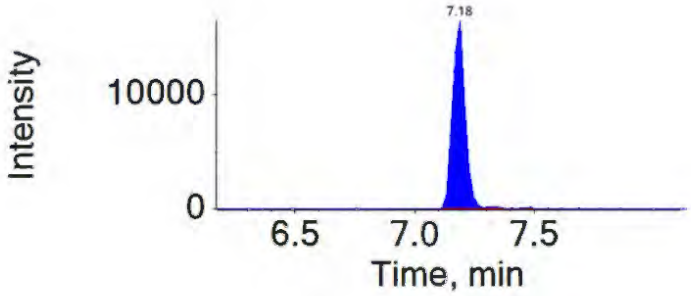
Analyte: 8:2-FTS

527.0 /
507.0



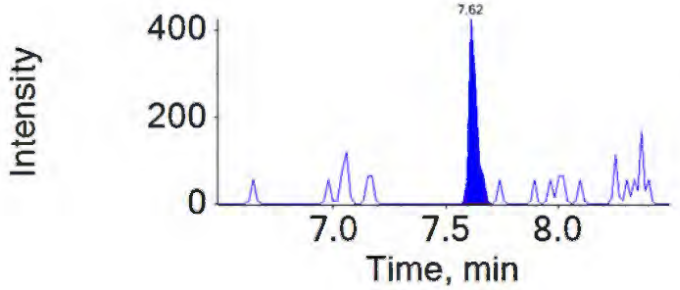
Extraction Standard: 13C2-8:2-FTS

529.0 /
509.0



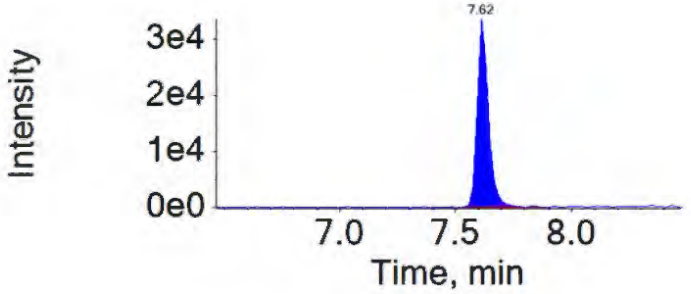
Analyte: NMePFOSAE

616.0 /
59.0



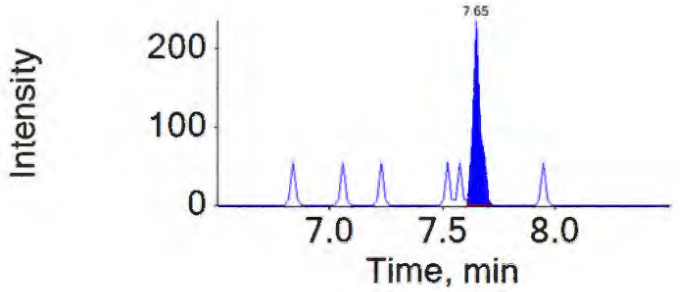
Extraction Standard: d7-NMePFOSAE

623.0 /
59.0



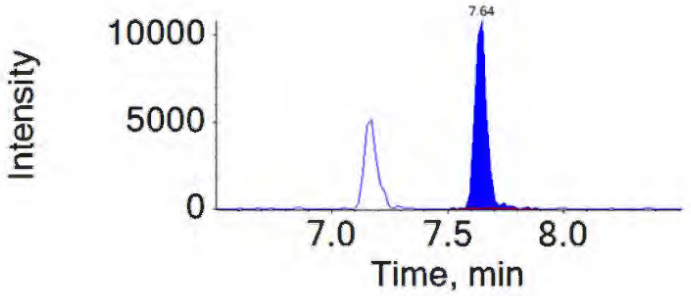
Analyte: NMePFOSA

512.0 /
169.0



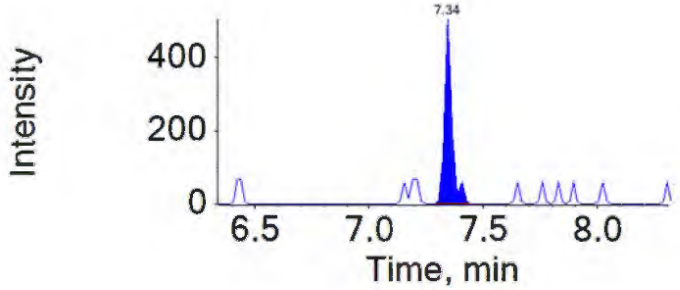
Extraction Standard: d3-NMePFOSA

515.0 /
169.0



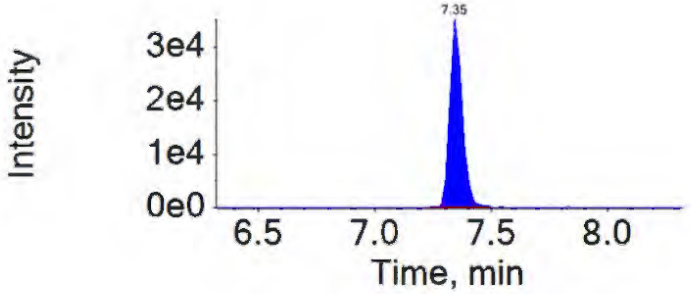
Analyte: NMeFOSAA

570.0 /
419.0



Extraction Standard: d3-NMeFOSAA

573.0 /
419.0



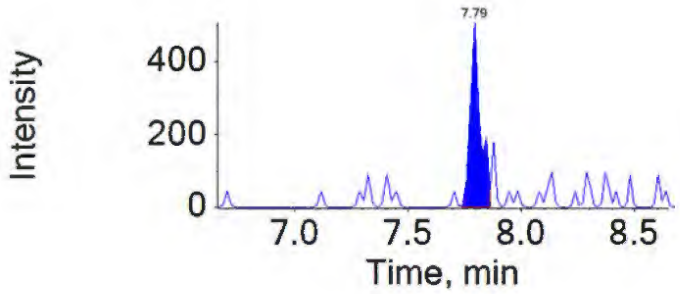
APPROVED
By JWK at 12:35 pm, 5/11/17

REVIEWED
By UMJS at 9:13 am, 5/15/17

ICAL Name: 17MAY10MCAL **Result Table:** 17MAY10MCAL 5/11/2017 12:08:01 PM
QMethod Name: PFCMOD - 17JAN28 **Acquisition Method:** PFC-32-16NOV02.dam

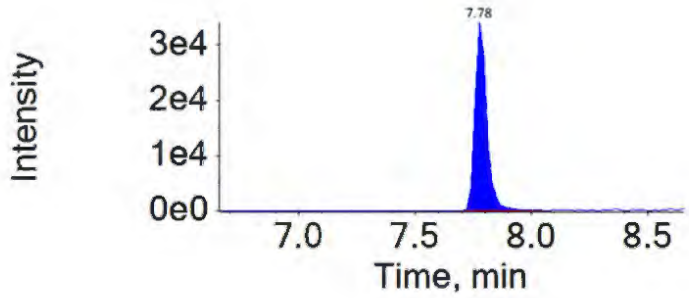
Analyte: NEtPFOSAE

630.0 /
59.0



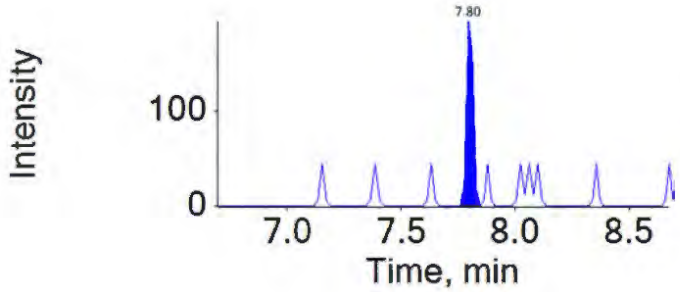
Extraction Standard: d9-NEtPFOSAE

639.0 /
59.0



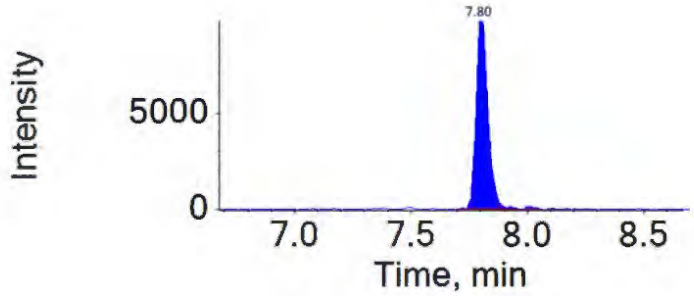
Analyte: NEtPFOSA

526.0 /
169.0



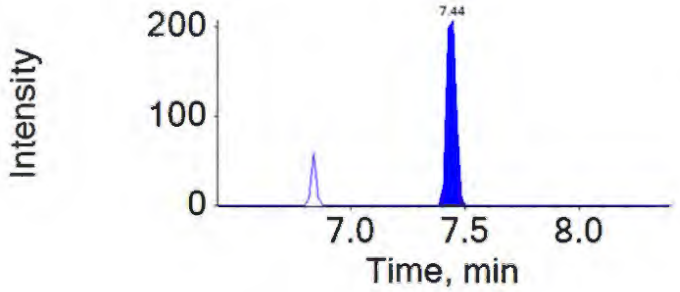
Extraction Standard: d5-NEtPFOSA

531.0 /
169.0



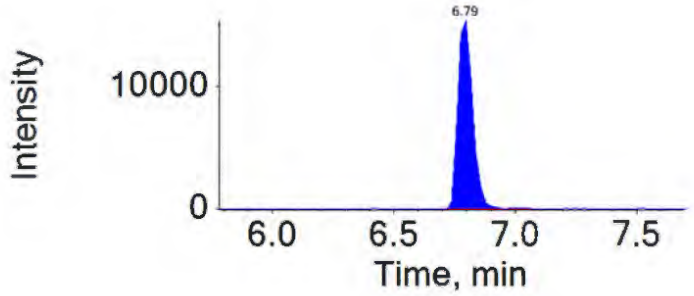
Analyte: PFDS

599.0 /
99.0



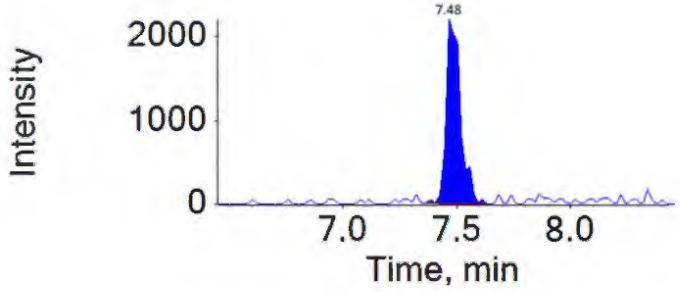
Extraction Standard: 13C8-PFOS

507.0 /
99.0



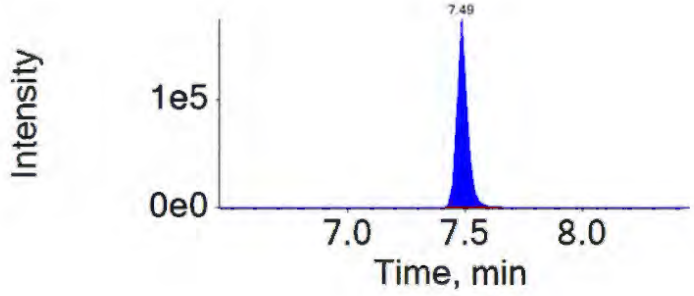
Analyte: PFUnDA

563.0 /
519.0



Extraction Standard: 13C7-PFUnDA

570.0 /
525.0



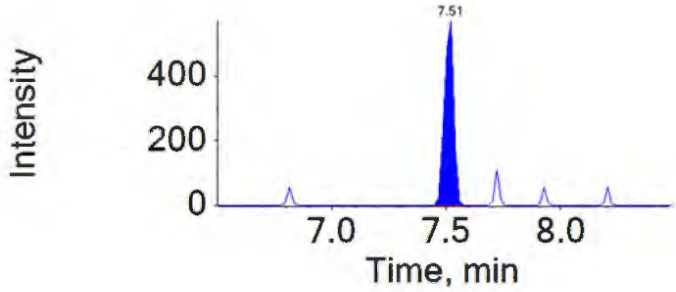
APPROVED
By JWK at 12:35 pm, 5/11/17

REVIEWED
By UMJS at 9:13 am, 5/15/17

ICAL Name: 17MAY10MCAL **Result Table:** 17MAY10MCAL 5/11/2017 12:08:01 PM
QMethod Name: PFCMOD - 17JAN28 **Acquisition Method:** PFC-32-16NOV02.dam

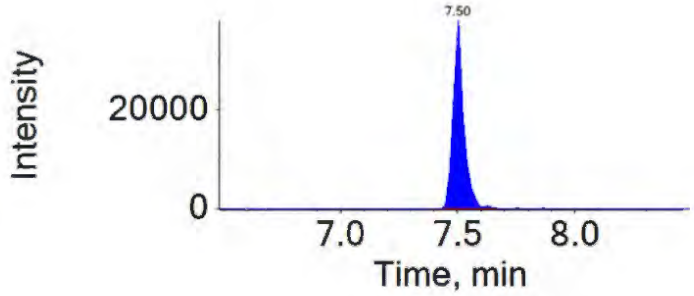
Analyte: NEtFOSAA

584.0 / 419.0



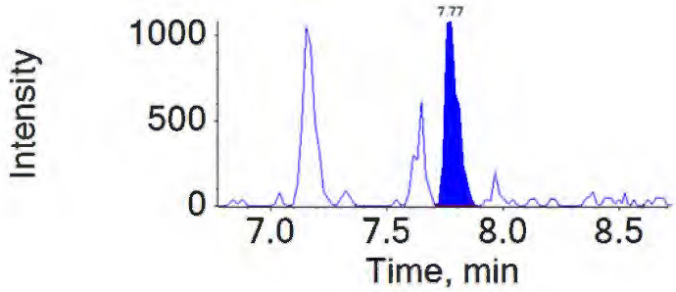
Extraction Standard: d5-NEtFOSAA

589.0 / 419.0



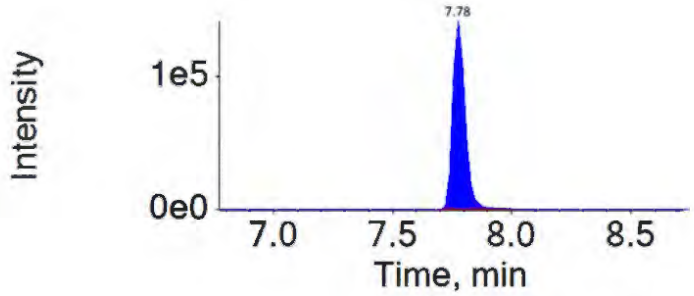
Analyte: PFDoDA

613.0 / 569.0



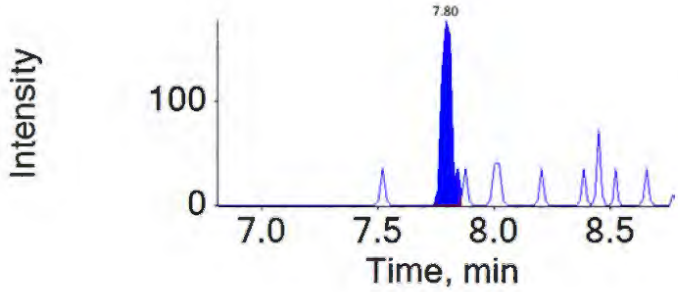
Extraction Standard: 13C2-PFDoDA

615.0 / 570.0



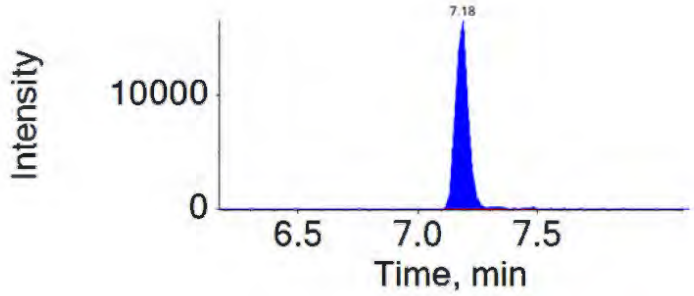
Analyte: 10:2-FTS

627.0 / 607.0



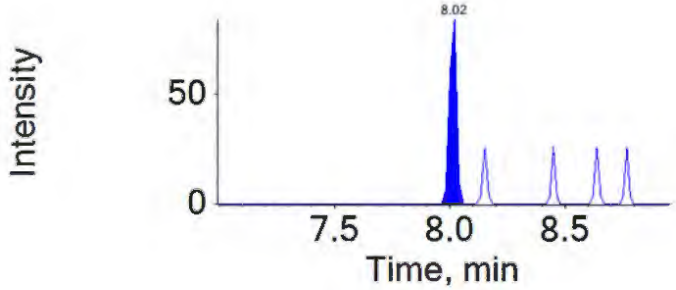
Extraction Standard: 13C2-8:2-FTS

529.0 / 509.0



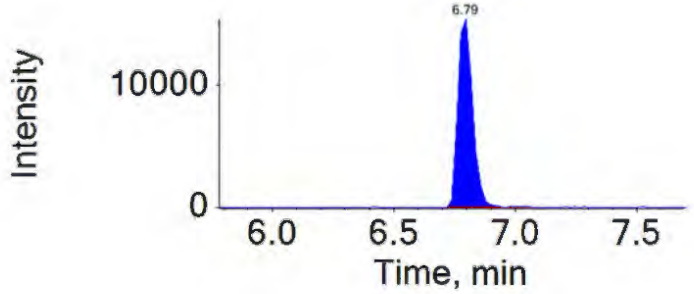
Analyte: PFDoS

699.0 / 99.0



Extraction Standard: 13C8-PFOS

507.0 / 99.0

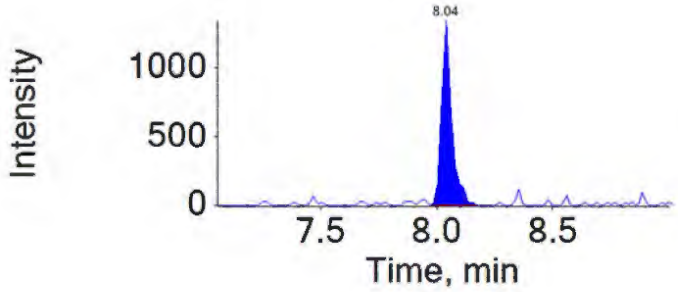


APPROVED
By JWK at 12:35 pm, 5/11/17

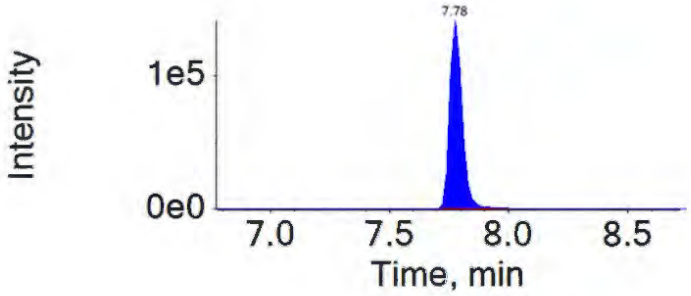
REVIEWED
By UMJS at 9:13 am, 5/15/17

ICAL Name: 17MAY10MCAL **Result Table:** 17MAY10MCAL 5/11/2017 12:08:01 PM
QMethod Name: PFCMOD - 17JAN28 **Acquisition Method:** PFC-32-16NOV02.dam

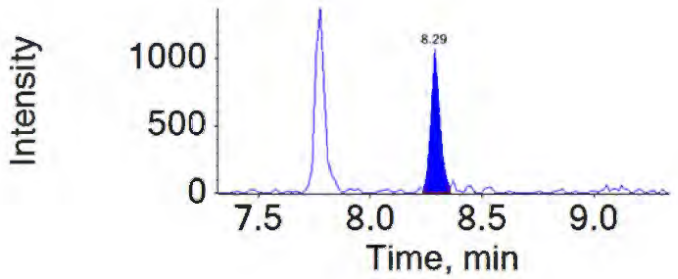
Analyte: PFTrDA
663.0 / 619.0



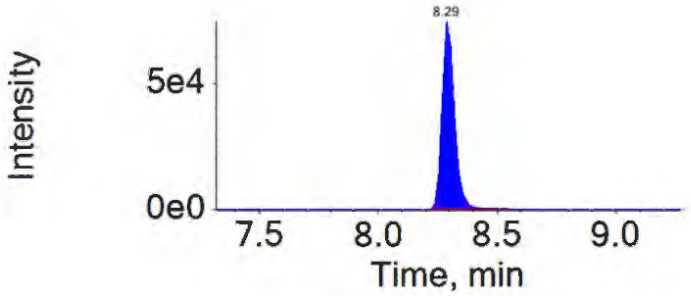
Extraction Standard: 13C2-PFDoDA
615.0 / 570.0



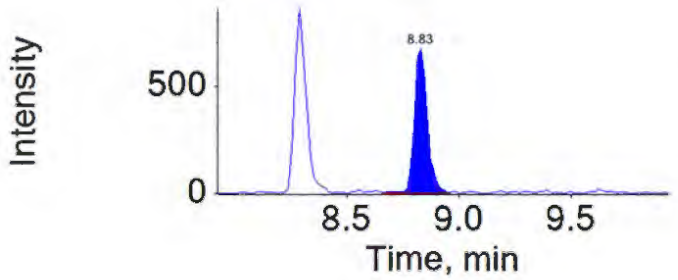
Analyte: PFTeDA
713.0 / 669.0



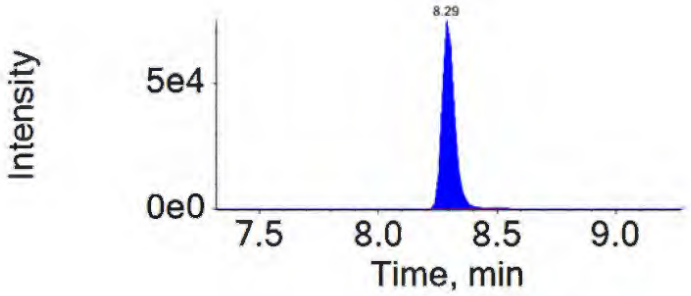
Extraction Standard: 13C2-PFTeDA
715.0 / 670.0



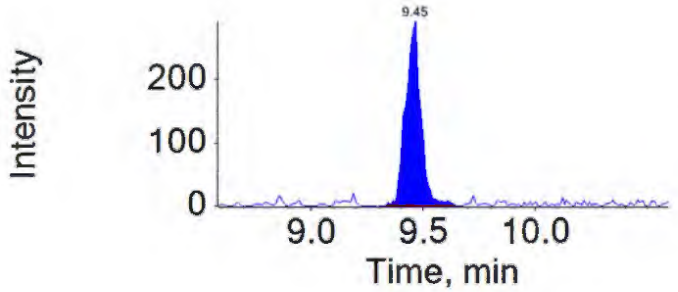
Analyte: PFHxDA
813.0 / 769.0



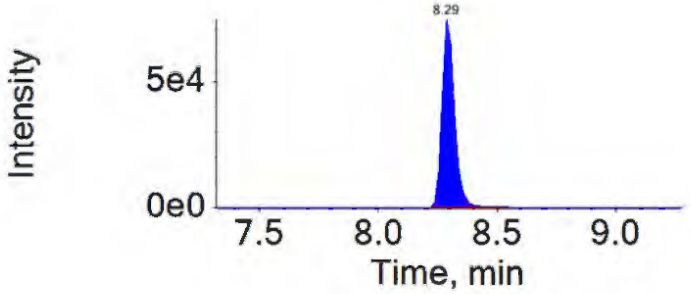
Extraction Standard: 13C2-PFTeDA
715.0 / 670.0



Analyte: PFODA
913.0 / 869.0



Extraction Standard: 13C2-PFTeDA
715.0 / 670.0



APPROVED
By JWK at 12:35 pm, 5/11/17

REVIEWED
By UMJS at 9:13 am, 5/15/17

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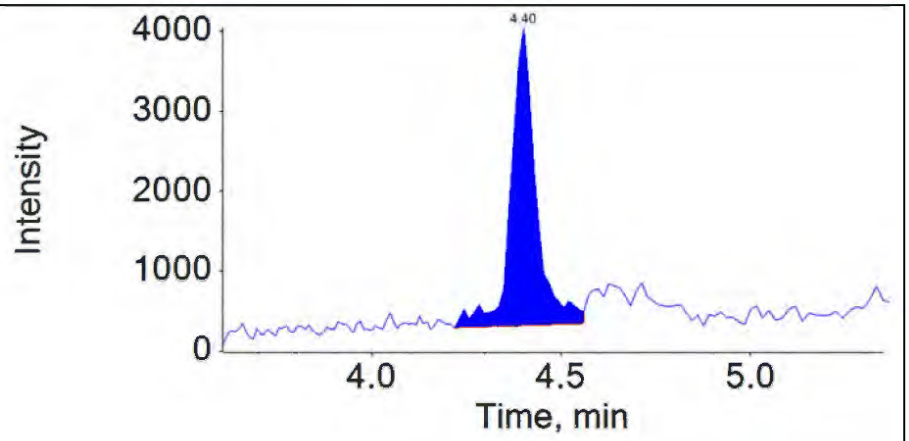
Auto Integrations prior to Manual Integration

Print Date: 05/11/2017 12:22 PM
Template: MQ-OrigInteg-16NOV21.docx

Results Table Name: 17MAY10MCAL
Results Table Date: 5/11/2017 12:08:01 PM

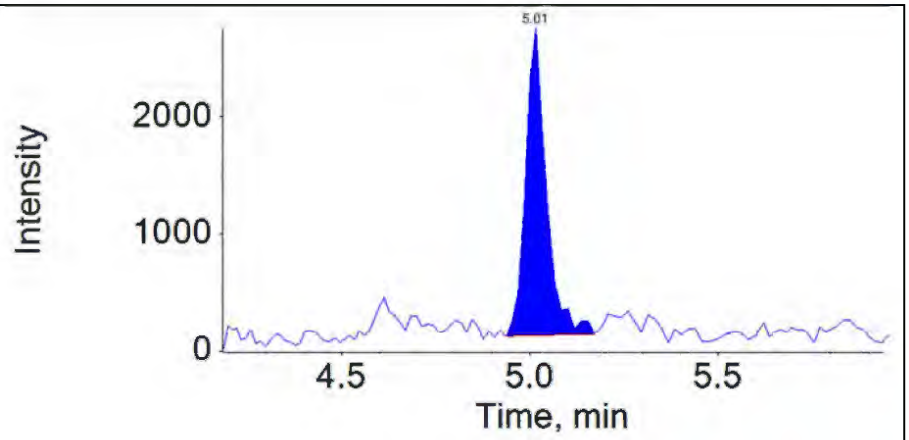
Acquisition Method: PFC-32-16NOV02.dam
QMethod File: PFCMOD - 17JAN28

Component Name:
PFBA
RT (min.):
4.40
Peak Area:
17402.5
Mass Range:
213.0 / 169.0
File Name:
17MAY10MCAL-29.wiff
Sample Name:
MDL



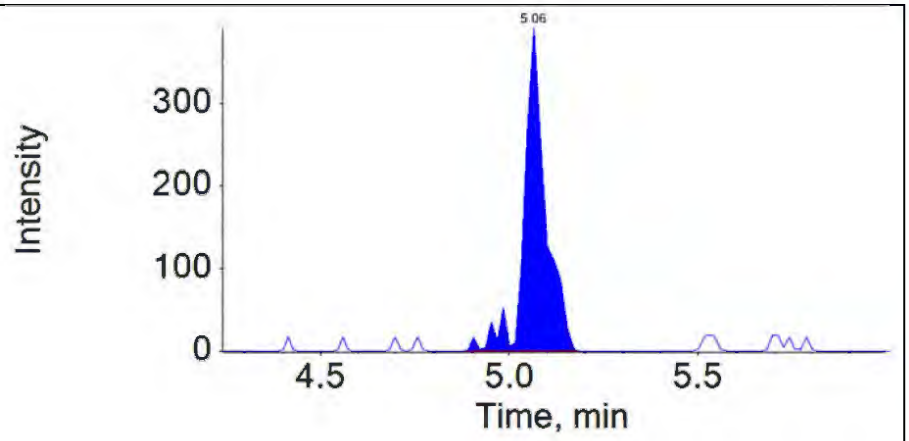
Integration Comment: incorrect integration

Component Name:
PFPeA
RT (min.):
5.01
Peak Area:
10069.9
Mass Range:
263.0 / 219.0
File Name:
17MAY10MCAL-29.wiff
Sample Name:
MDL



Integration Comment: incorrect integration

Component Name:
PFBS
RT (min.):
5.06
Peak Area:
1560.4
Mass Range:
299.0 / 99.0
File Name:
17MAY10MCAL-29.wiff
Sample Name:
MDL



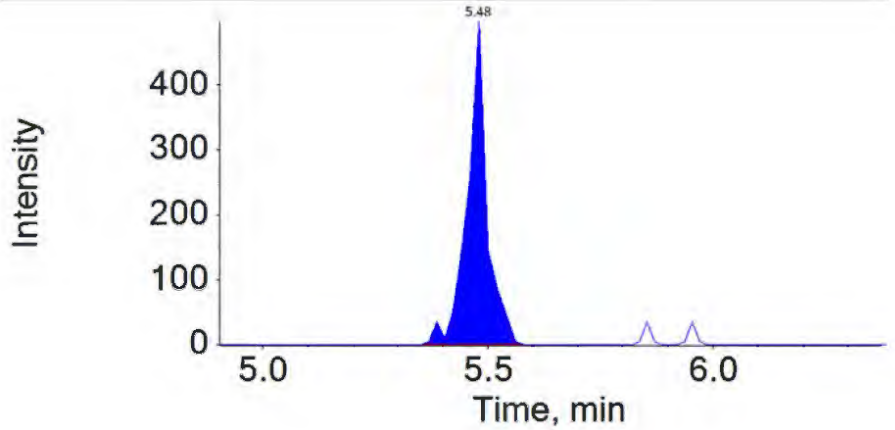
Integration Comment: incorrect integration

APPROVED
By JWK at 12:35 pm, 5/11/17

REVIEWED
By UMJS at 9:13 am, 5/15/17

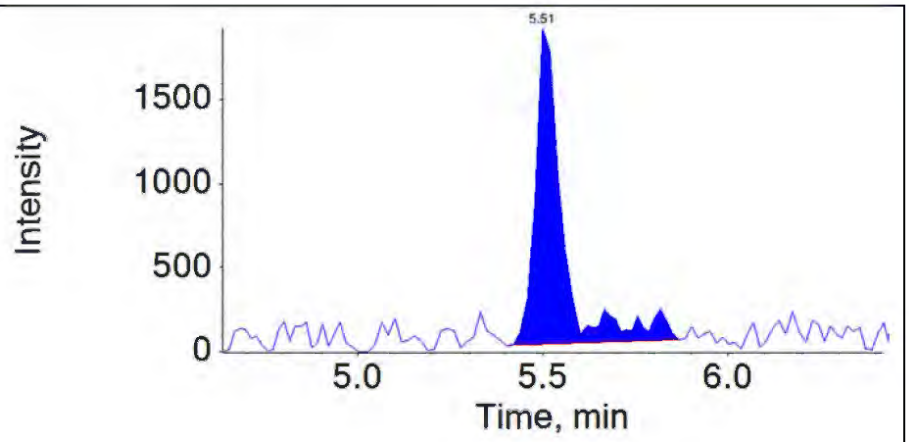
Results Table Name: 17MAY10MCAL
Results Table Date: 5/11/2017 12:08:01 PM
Acquisition Method: PFC-32-16NOV02.dam
QMethod File: PFCMOD - 17JAN28

Component Name:
4:2-FTS
RT (min.):
5.48
Peak Area:
1525.2
Mass Range:
327.0 / 307.0
File Name:
17MAY10MCAL-29.wiff
Sample Name:
MDL



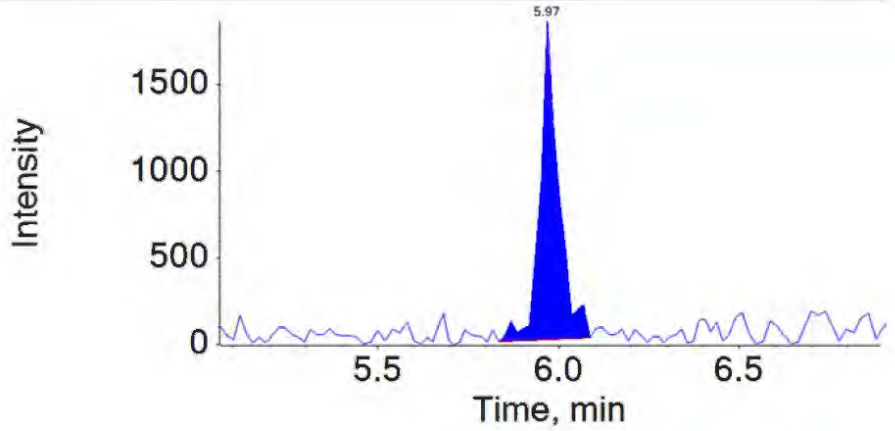
Integration Comment: incorrect integration

Component Name:
PFHxA
RT (min.):
5.51
Peak Area:
9777.6
Mass Range:
313.0 / 269.0
File Name:
17MAY10MCAL-29.wiff
Sample Name:
MDL



Integration Comment: incorrect integration

Component Name:
PFHpA
RT (min.):
5.97
Peak Area:
6664.6
Mass Range:
363.0 / 319.0
File Name:
17MAY10MCAL-29.wiff
Sample Name:
MDL



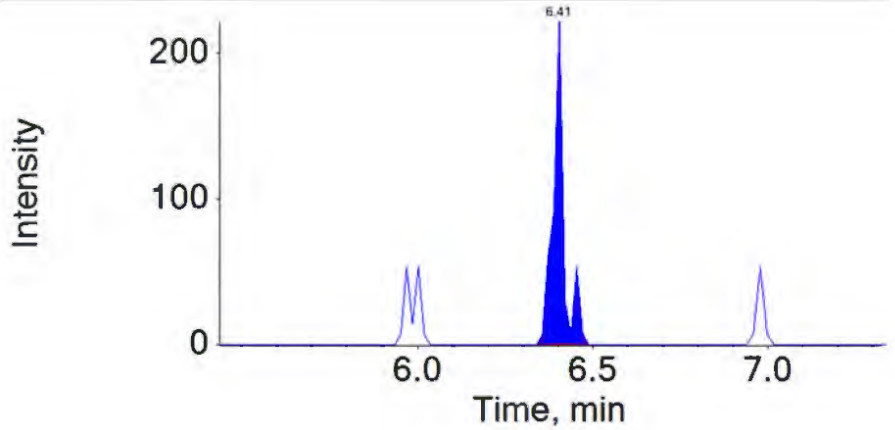
Integration Comment: incorrect integration

APPROVED
By JWK at 12:35 pm, 5/11/17

REVIEWED
By UMJS at 9:13 am, 5/15/17

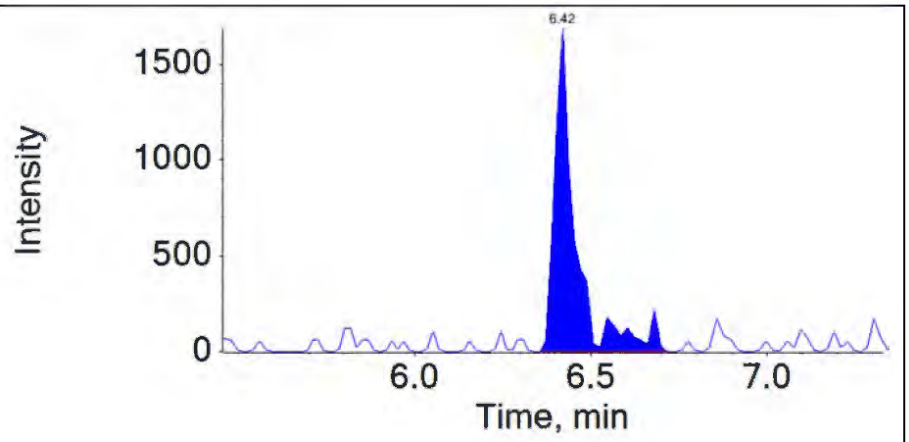
Results Table Name: 17MAY10MCAL
Results Table Date: 5/11/2017 12:08:01 PM
Acquisition Method: PFC-32-16NOV02.dam
QMethod File: PFCMOD - 17JAN28

Component Name:
6:2-FTS
RT (min.):
6.41
Peak Area:
467.6
Mass Range:
427.0 / 407.0
File Name:
17MAY10MCAL-29.wiff
Sample Name:
MDL



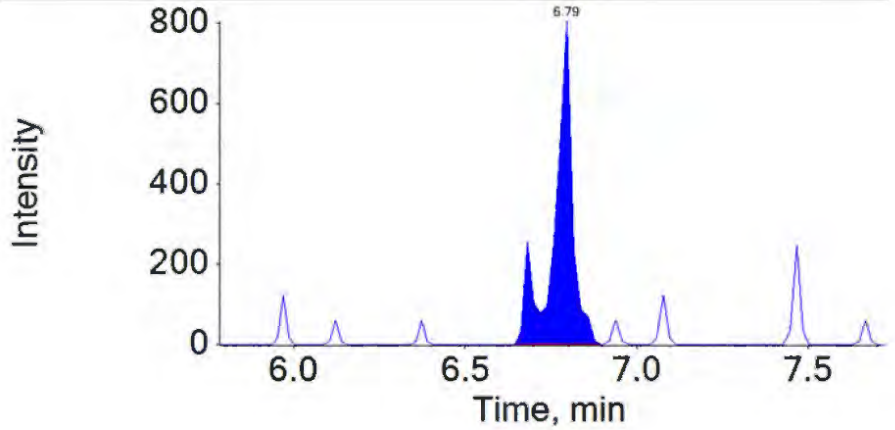
Integration Comment: incorrect integration

Component Name:
PFOA
RT (min.):
6.42
Peak Area:
6996.6
Mass Range:
413.0 / 369.0
File Name:
17MAY10MCAL-29.wiff
Sample Name:
MDL



Integration Comment: incorrect integration

Component Name:
PFOS
RT (min.):
6.79
Peak Area:
2955.5
Mass Range:
499.0 / 80.0
File Name:
17MAY10MCAL-29.wiff
Sample Name:
MDL



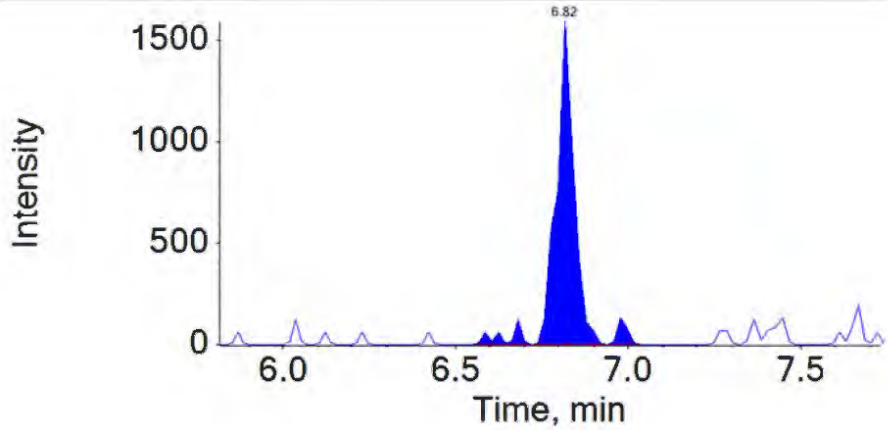
Integration Comment: incorrect integration

APPROVED
By JWK at 12:35 pm, 5/11/17

REVIEWED
By UMJS at 9:13 am, 5/15/17

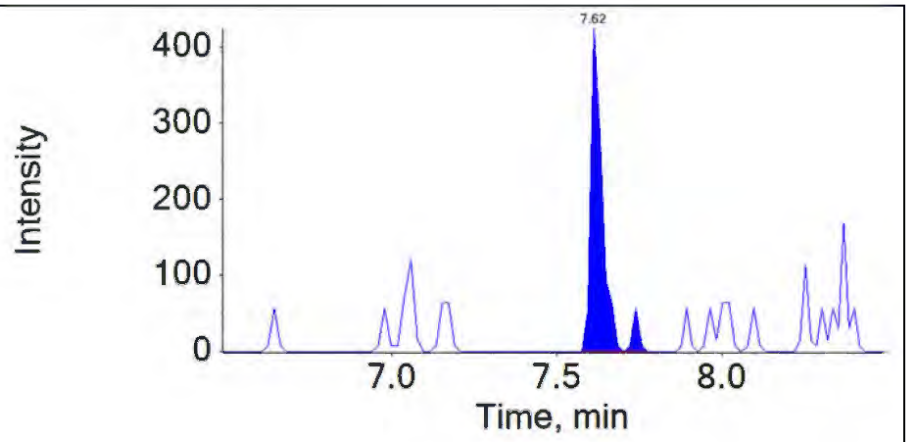
Results Table Name: 17MAY10MCAL
Results Table Date: 5/11/2017 12:08:01 PM
Acquisition Method: PFC-32-16NOV02.dam
QMethod File: PFCMOD - 17JAN28

Component Name:
PFNA
RT (min.):
6.82
Peak Area:
6280.0
Mass Range:
463.0 / 419.0
File Name:
17MAY10MCAL-29.wiff
Sample Name:
MDL



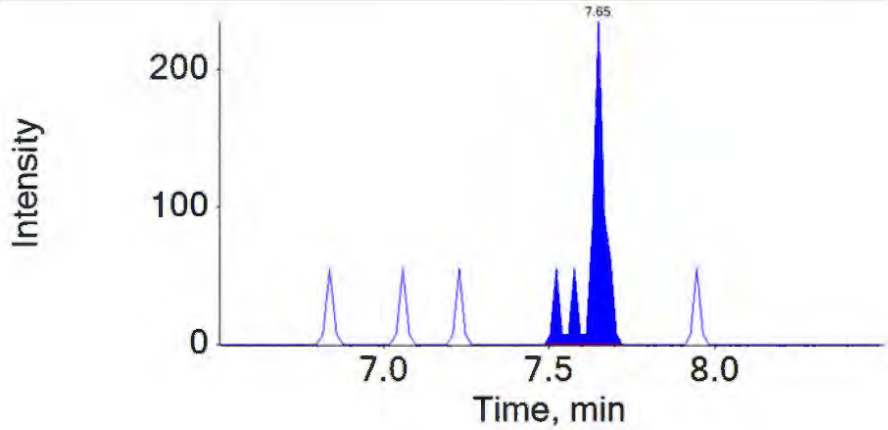
Integration Comment: incorrect integration

Component Name:
NMePFOSAE
RT (min.):
7.62
Peak Area:
1094.7
Mass Range:
616.0 / 59.0
File Name:
17MAY10MCAL-29.wiff
Sample Name:
MDL



Integration Comment: incorrect integration

Component Name:
NMePFOSA
RT (min.):
7.65
Peak Area:
687.4
Mass Range:
512.0 / 169.0
File Name:
17MAY10MCAL-29.wiff
Sample Name:
MDL



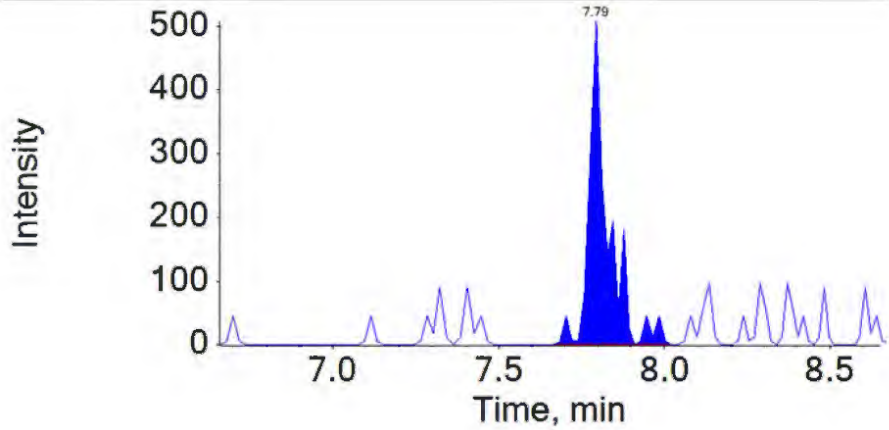
Integration Comment: incorrect integration

APPROVED
By JWK at 12:35 pm, 5/11/17

REVIEWED
By UMJS at 9:13 am, 5/15/17

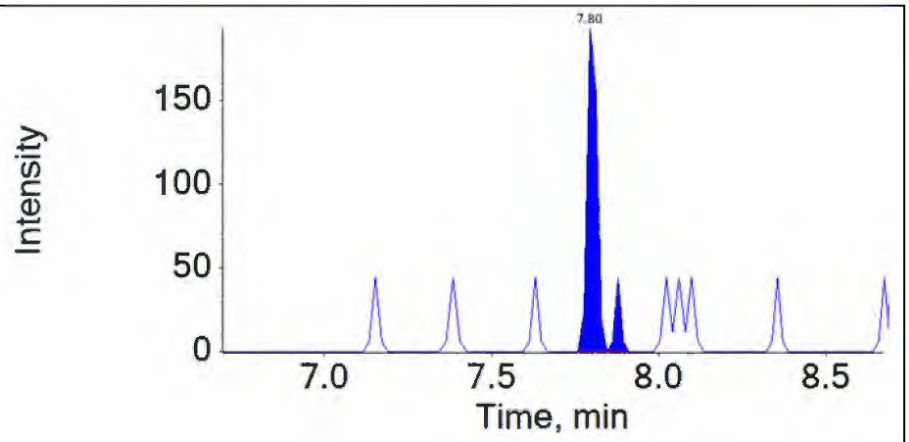
Results Table Name: 17MAY10MCAL
Results Table Date: 5/11/2017 12:08:01 PM
Acquisition Method: PFC-32-16NOV02.dam
QMethod File: PFCMOD - 17JAN28

Component Name:
NEtPFOSAE
RT (min.):
7.79
Peak Area:
1977.1
Mass Range:
630.0 / 59.0
File Name:
17MAY10MCAL-29.wiff
Sample Name:
MDL



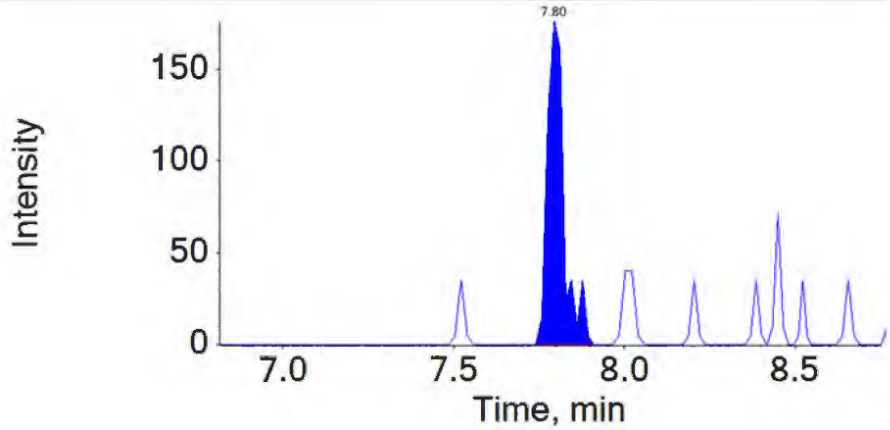
Integration Comment: incorrect integration

Component Name:
NEtPFOSA
RT (min.):
7.80
Peak Area:
461.5
Mass Range:
526.0 / 169.0
File Name:
17MAY10MCAL-29.wiff
Sample Name:
MDL



Integration Comment: incorrect integration

Component Name:
10:2-FTS
RT (min.):
7.80
Peak Area:
612.9
Mass Range:
627.0 / 607.0
File Name:
17MAY10MCAL-29.wiff
Sample Name:
MDL



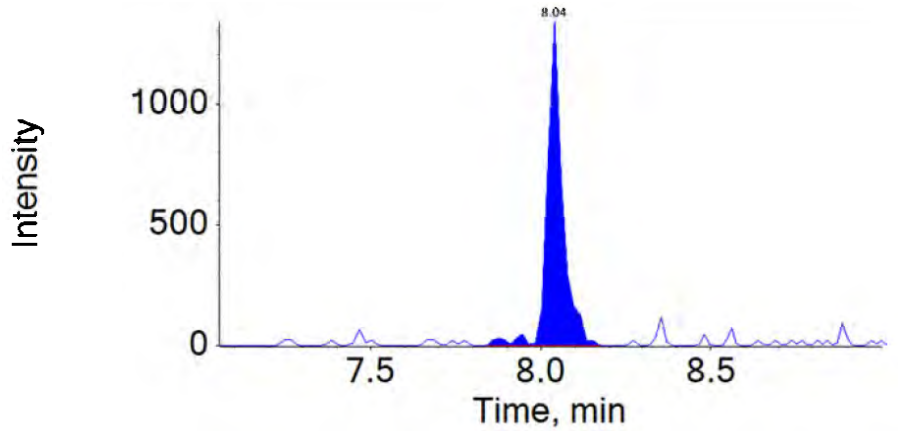
Integration Comment: incorrect integration

APPROVED
By JWK at 12:35 pm, 5/11/17

REVIEWED
By UMJS at 9:13 am, 5/15/17

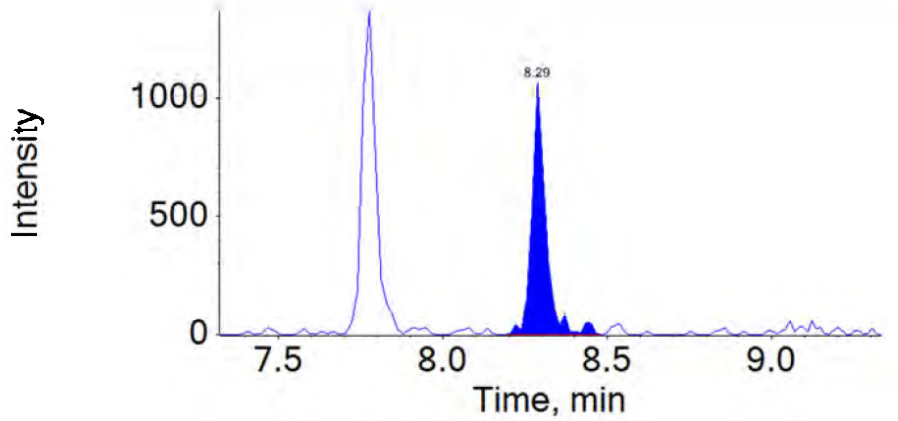
Results Table Name: 17MAY10MCAL
Results Table Date: 5/11/2017 12:08:01 PM
Acquisition Method: PFC-32-16NOV02.dam
QMethod File: PFCMOD - 17JAN28

Component Name:
PFTrDA
RT (min.):
8.04
Peak Area:
4272.6
Mass Range:
663.0 / 619.0
File Name:
17MAY10MCAL-29.wiff
Sample Name:
MDL



Integration Comment: incorrect integration

Component Name:
PFTeDA
RT (min.):
8.29
Peak Area:
3171.5
Mass Range:
713.0 / 669.0
File Name:
17MAY10MCAL-29.wiff
Sample Name:
MDL



Integration Comment: incorrect integration

APPROVED
By JWK at 12:35 pm, 5/11/17

REVIEWED
By UMJS at 9:13 am, 5/15/17

Results Table Name: 17MAY10MCAL
Results Table Date: 5/11/2017 12:08:01 PM

Acquisition Method: PFC-32-16NOV02.dam
QMethod File: PFCMOD - 17JAN28

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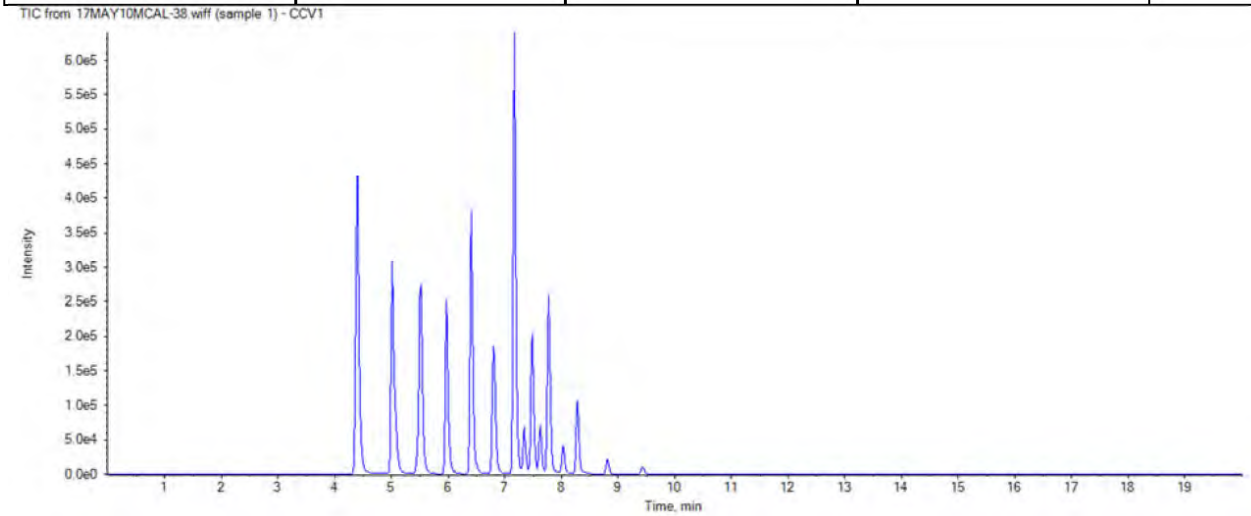
LC-MS/MS Analysis Report

Printed: 5/11/2017 12:13:00 PM
Template: MQ-CCV-16NOV21.docx

Continuing Calibration Verfication

ICAL Name: 17MAY10MCAL **Result Table:** 17MAY10MCAL 5/11/2017 12:08:01 PM
QMethod Name: PFCMOD - 17JAN28 **Acquisition Method:** PFC-32-16NOV02.dam

Instrument Name:	Sample Name:	Sample ID:	Sample File:	Acquisition Date:
LM24960	CCV1	CALPFC1712533D	17MAY10MCAL-38.wiff	2017-05-11T07:54:24



Injection Standard Name	Inj Std Conc	Injection Std Peak Area	ICAL Injection Standard AVG	Injection Std %Diff	Injection Std %Diff Limit	Injection Std %Diff OOS
I13C3-PFBA	1.00	692328.2	669117.3	3.5	50.0	
I13C2-PFOA	1.00	378901.8	342184.6	10.7	50.0	
I13C4-PFOS	1.00	70798.7	70131.6	1.0	50.0	
I13C2-PFDA	1.00	449373.0	384098.7	17.0	50.0	

APPROVED
By JWK at 12:34 pm, 5/11/17

REVIEWED
By UMJS at 9:13 am, 5/15/17

Continuing Calibration Verfication

ICAL Name: 17MAY10MCAL **Result Table:** 17MAY10MCAL 5/11/2017 12:08:01 PM
QMethod Name: PFCMOD - 17JAN28 **Acquisition Method:** PFC-32-16NOV02.dam

Instrument Name:	Sample Name:	Sample ID:	Sample File:	Acquisition Date:
LM24960	CCV1	CALPFC1712533D	17MAY10MCAL-38.wiff	2017-05-11T07:54:24

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	310395.0	13C4-PFBA	783546.1	1.0	0.396	4.40	1.000	2.000	2.178	8.9	30.0	
PFPeA	310679.4	13C5-PFPeA	782346.5	1.0	0.397	5.01	1.000	2.000	1.924	-3.8	30.0	
PFBS	51038.2	13C3-PFBS	133763.3	1.0	0.382	5.08	1.000	1.770	1.806	2.0	30.0	
4:2-FTS	35305.0	13C2-4:2-FTS	81015.7	1.0	0.436	5.47	1.000	1.870	1.992	6.5	30.0	
PFHxA	311427.2	13C5-PFHxA	762422.1	1.0	0.409	5.51	1.000	2.000	2.162	8.1	30.0	
PFPeS	32217.8	13C3-PFBS	133763.3	1.0	0.241	5.54	1.090	1.880	2.152	14.5	30.0	
PFHxS	89824.5	13C3-PFHxS	71342.8	1.0	1.259	5.97	1.000	1.890	1.766	-6.6	30.0	
PFHpA	234363.1	13C4-PFHpA	449631.2	1.0	0.521	5.98	1.000	2.000	2.100	5.0	30.0	
6:2-FTS	16550.1	13C2-6:2-FTS	43258.6	1.0	0.383	6.39	1.000	1.900	2.118	11.5	30.0	
PFHpS	25040.2	13C3-PFHxS	71342.8	1.0	0.351	6.39	1.070	1.900	1.841	-3.1	30.0	
PFOA	204897.5	13C8-PFOA	453019.2	1.0	0.452	6.41	1.000	2.000	2.061	3.0	30.0	
PFOS	85862.2	13C8-PFOS	70461.0	1.0	1.219	6.79	1.000	1.910	1.695	-11.3	30.0	
PFNA	170711.4	13C9-PFNA	355115.0	1.0	0.481	6.81	1.000	2.000	1.963	-1.8	30.0	
PFOSA	185021.8	13C8-PFOSA	463858.6	1.0	0.399	7.17	1.000	2.000	1.822	-8.9	30.0	
PFNS	29283.5	13C8-PFOS	70461.0	1.0	0.416	7.14	1.050	1.920	1.906	-0.7	30.0	
PFDA	244061.9	13C6-PFDA	627965.6	1.0	0.389	7.17	1.000	2.000	2.121	6.0	30.0	
8:2-FTS	28282.7	13C2-8:2-FTS	65915.7	1.0	0.429	7.18	1.000	1.920	2.110	9.9	30.0	
NMePFOSAE	53073.4	d7-NMePFOSAE	124950.1	1.0	0.425	7.63	1.000	2.000	1.694	-15.3	30.0	
NMePFOSA	16119.9	d3-NMePFOSA	46650.4	1.0	0.346	7.64	1.000	2.000	1.613	-19.4	30.0	
NMeFOSAA	70352.3	d3-NMeFOSAA	139895.6	1.0	0.503	7.34	1.000	2.000	2.362	18.1	30.0	
NEtPFOSAE	59968.3	d9-NEtPFOSAE	136700.6	1.0	0.439	7.79	1.000	2.000	2.011	0.6	30.0	
NEtPFOSA	16078.6	d5-NEtPFOSA	39635.0	1.0	0.406	7.81	1.000	2.000	2.013	0.7	30.0	
PFDS	19974.0	13C8-PFOS	70461.0	1.0	0.284	7.45	1.100	1.930	1.439	-25.4	30.0	
PFUnDA	203025.2	13C7-PFUnDA	380051.6	1.0	0.534	7.48	1.000	2.000	2.081	4.0	30.0	
NEtFOSAA	37027.0	d5-NEtFOSAA	99161.1	1.0	0.373	7.51	1.000	2.000	1.827	-8.6	30.0	
PFDoDA	184883.1	13C2-PFDoDA	484971.7	1.0	0.381	7.77	1.000	2.000	2.040	2.0	30.0	
10:2-FTS	26948.0	13C2-8:2-FTS	65915.7	1.0	0.409	7.80	1.090	1.930	1.933	0.2	30.0	
PFDoS	9109.0	13C8-PFOS	70461.0	1.0	0.129	7.99	1.180	1.940	1.821	-6.1	30.0	
PFTrDA	134416.6	13C2-PFDoDA	484971.7	1.0	0.277	8.03	1.030	2.000	2.058	2.9	30.0	
PFTeDA	111397.0	13C2-PFTeDA	269325.1	1.0	0.414	8.28	1.000	2.000	2.110	5.5	30.0	
PFHxDA	80037.8	13C2-PFTeDA	269325.1	1.0	0.297	8.81	1.060	2.000	1.876	-6.2	30.0	
PFODA	48656.8	13C2-PFTeDA	269325.1	1.0	0.181	9.43	1.140	2.000	1.652	-17.4	30.0	

APPROVED
By JWK at 12:34 pm, 5/11/17

REVIEWED
By UMJS at 9:13 am, 5/15/17

Continuing Calibration Verfication

ICAL Name: 17MAY10MCAL **Result Table:** 17MAY10MCAL 5/11/2017 12:08:01 PM
QMethod Name: PFCMOD - 17JAN28 **Acquisition Method:** PFC-32-16NOV02.dam

APPROVED
By JWK at 12:34 pm, 5/11/17

REVIEWED
By UMJS at 9:13 am, 5/15/17

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LC-MS/MS Analysis Report

Printed: 5/11/2017 12:17:00 PM
Template: MQ-Sample-16Nov21.docx

ICAL Name: 17MAY10MCAL
QMethod Name: PFCMOD - 17JAN28
Result Table: 17MAY10MCAL 5/11/2017 12:08:01 PM
Acquisition Method: PFC-32-16NOV02.dam

Sample Name:	CCV1			**Data File:**		17MAY10MCAL-38.wiff
Sample ID:	CALPFC1712533D			**Acquis Date:**		2017-05-11T07:54:24
Sample Type:	Quality Control			**Instrument:**		LM24960
Vial Position:	5			**Acquis Method:**		PFC-32-16NOV02.dam
Injection Vol:	5.00			**Result Table:**		17MAY10MCAL
QMethod File:	PFCMOD - 17JAN28			**ICAL Name:**		17MAY10MCAL
Batch Number:	MODICAL			**Operator:**		Not calculated
Sample Wt.:	1.00000			**Dilution Factor:**		1.00
Sample Vol.:	1.000			**Prep Factor:**		1.000

Injection Standard Peak Table

Injection Standard Name	Inj Std Conc	Injection Std Peak Area	ICAL Injection Standard AVG	Injection Std %Diff	Injection Std %Diff Limit	Injection Std %Diff OOS
I13C3-PFBA	1.0	692328.2	669117.3	3.5	50.0	
I13C2-PFOA	1.0	378901.8	342184.6	10.7	50.0	
I13C4-PFOS	1.0	70798.7	70131.6	1.0	50.0	
I13C2-PFDA	1.0	449373.0	384098.7	17.0	50.0	

Extraction Standard Peak Table

Extraction Standard Name	Ext Std Area	Inj Std Name	Inj Std Area	Area Ratio	AVG Area Ratio	Ext Std Conc	Ext Std Result	Ext Std %REC	Ext Std %REC Limit	Ext Std OOS
E13C4-PFBA	783546.1	13C3-PFBA	692328.2	1.132	1.150	1.000	0.984	98.4	70.0-130.0	
E13C5-PFPeA	782346.5	13C3-PFBA	692328.2	1.130	1.073	1.000	1.053	105.3	70.0-130.0	
E13C3-PFBS	133763.3	13C3-PFBA	692328.2	0.193	0.194	1.000	0.994	99.4	70.0-130.0	
E13C2-4:2-FTS	81015.7	13C2-PFOA	378901.8	0.214	0.236	1.000	0.905	90.5	70.0-130.0	
E13C5-PFHxA	762422.1	13C2-PFOA	378901.8	2.012	2.026	1.000	0.993	99.3	70.0-130.0	
E13C3-PFHxS	71342.8	13C2-PFOA	378901.8	0.188	0.206	1.000	0.915	91.5	70.0-130.0	
E13C4-PFHpA	449631.2	13C2-PFOA	378901.8	1.187	1.285	1.000	0.924	92.4	70.0-130.0	
E13C2-6:2-FTS	43258.6	13C2-PFOA	378901.8	0.114	0.128	1.000	0.891	89.1	70.0-130.0	
E13C8-PFOA	453019.2	13C2-PFOA	378901.8	1.196	1.163	1.000	1.028	102.8	70.0-130.0	
E13C8-PFOS	70461.0	13C4-PFOS	70798.7	0.995	0.865	1.000	1.150	115.0	70.0-130.0	
E13C9-PFNA	355115.0	13C4-PFOS	70798.7	5.016	4.422	1.000	1.134	113.4	70.0-130.0	
E13C8-PFOSA	463858.6	13C2-PFDA	449373.0	1.032	0.936	1.000	1.102	110.2	70.0-130.0	
E13C6-PFDA	627965.6	13C2-PFDA	449373.0	1.397	1.424	1.000	0.982	98.2	70.0-130.0	
E13C2-8:2-FTS	65915.7	13C2-PFDA	449373.0	0.147	0.155	1.000	0.944	94.4	70.0-130.0	
Ed7-NMePFOSAE	124950.1	13C2-PFDA	449373.0	0.278	0.299	1.000	0.930	93.1	70.0-130.0	
Ed3-NMePFOSA	46650.4	13C2-PFDA	449373.0	0.104	0.120	1.000	0.863	86.3	70.0-130.0	
Ed3-NMeFOSAA	139895.6	13C2-PFDA	449373.0	0.311	0.343	1.000	0.908	90.8	70.0-130.0	
Ed9-NEtPFOSAE	136700.6	13C2-PFDA	449373.0	0.304	0.333	1.000	0.915	91.5	70.0-130.0	
Ed5-NEtPFOSA	39635.0	13C2-PFDA	449373.0	0.088	0.095	1.000	0.931	93.1	70.0-130.0	
E13C7-PFUnDA	380051.6	13C2-PFDA	449373.0	0.846	0.953	1.000	0.888	88.8	70.0-130.0	
Ed5-NEtFOSAA	99161.1	13C2-PFDA	449373.0	0.221	0.249	1.000	0.887	88.7	70.0-130.0	
E13C2-PFDoDA	484971.7	13C2-PFDA	449373.0	1.079	1.154	1.000	0.935	93.5	70.0-130.0	
E13C2-PFTeDA	269325.1	13C2-PFDA	449373.0	0.599	0.651	1.000	0.920	92.0	70.0-130.0	

APPROVED
By JWK at 12:34 pm, 5/11/17

REVIEWED
By UMJS at 9:13 am, 5/15/17

ICAL Name: 17MAY10MCAL **Result Table:** 17MAY10MCAL 5/11/2017 12:08:01 PM
QMethod Name: PFCMOD - 17JAN28 **Acquisition Method:** PFC-32-16NOV02.dam

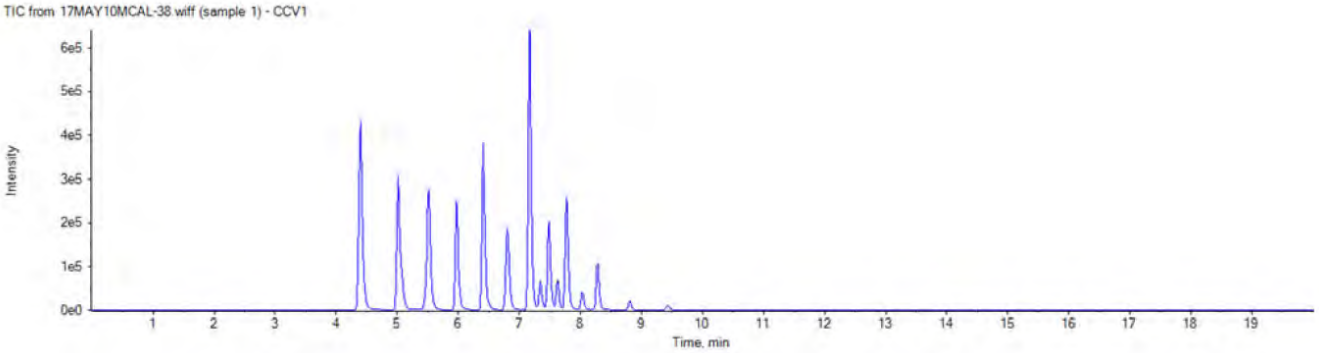
Analyte Quantitation Peak Table

Sample Name: CCV1 **Instrument Name:** LM24960 **File Name:** 17MAY10MCAL-38.wiff

Sample Wt	Sample Vol	Dilution Factor	PrepFactor
1.00000	1.000	1.00	1.000

Analytet Name	RT	RRT	Analyte Area Response	Int Typ	ES Name	ES RT	ES Area Response	Area Ratio	Sample Result (ng/g)
PFBA	4.40	1.000	310395.0	A	13C4-PFBA	4.40	783546.1	0.396	2.178
PFPeA	5.01	1.000	310679.4	A	13C5-PFPeA	5.01	782346.5	0.397	1.924
PFBS	5.08	1.000	51038.2	A	13C3-PFBS	5.08	133763.3	0.382	1.806
4:2-FTS	5.47	1.000	35305.0	A	13C2-4:2-FTS	5.46	81015.7	0.436	1.992
PFHxA	5.51	1.000	311427.2	A	13C5-PFHxA	5.51	762422.1	0.409	2.162
PFPeS	5.54	1.090	32217.8	A	13C3-PFBS	5.08	133763.3	0.241	2.152
PFHxS	5.97	1.000	89824.5	A	13C3-PFHxS	5.97	71342.8	1.259	1.766
PFHpA	5.98	1.000	234363.1	A	13C4-PFHpA	5.97	449631.2	0.521	2.100
6:2-FTS	6.39	1.000	16550.1	A	13C2-6:2-FTS	6.40	43258.6	0.383	2.118
PFHpS	6.39	1.070	25040.2	A	13C3-PFHxS	5.97	71342.8	0.351	1.841
PFOA	6.41	1.000	204897.5	A	13C8-PFOA	6.41	453019.2	0.452	2.061
PFOS	6.79	1.000	85862.2	A	13C8-PFOS	6.79	70461.0	1.219	1.695
PFNA	6.81	1.000	170711.4	A	13C9-PFNA	6.81	355115.0	0.481	1.963
PFOSA	7.17	1.000	185021.8	A	13C8-PFOSA	7.16	463858.6	0.399	1.822
PFNS	7.14	1.050	29283.5	A	13C8-PFOS	6.79	70461.0	0.416	1.906
PFDA	7.17	1.000	244061.9	A	13C6-PFDA	7.17	627965.6	0.389	2.121
8:2-FTS	7.18	1.000	28282.7	A	13C2-8:2-FTS	7.18	65915.7	0.429	2.110
NMePFOSAE	7.63	1.000	53073.4	A	d7-NMePFOSAE	7.62	124950.1	0.425	1.694
NMePFOSA	7.64	1.000	16119.9	A	d3-NMePFOSA	7.64	46650.4	0.346	1.613
NMeFOSAA	7.34	1.000	70352.3	A	d3-NMeFOSAA	7.34	139895.6	0.503	2.362
NEtPFOSAE	7.79	1.000	59968.3	A	d9-NEtPFOSAE	7.78	136700.6	0.439	2.011
NEtPFOSA	7.81	1.000	16078.6	A	d5-NEtPFOSA	7.80	39635.0	0.406	2.013
PFDS	7.45	1.100	19974.0	A	13C8-PFOS	6.79	70461.0	0.284	1.439
PFUnDA	7.48	1.000	203025.2	A	13C7-PFUnDA	7.48	380051.6	0.534	2.081
NEtFOSAA	7.51	1.000	37027.0	A	d5-NEtFOSAA	7.50	99161.1	0.373	1.827
PFDoDA	7.77	1.000	184883.1	A	13C2-PFDoDA	7.77	484971.7	0.381	2.040
10:2-FTS	7.80	1.090	26948.0	A	13C2-8:2-FTS	7.18	65915.7	0.409	1.933
PFDoS	7.99	1.180	9109.0	A	13C8-PFOS	6.79	70461.0	0.129	1.821
PFTrDA	8.03	1.030	134416.6	A	13C2-PFDoDA	7.77	484971.7	0.277	2.058
PFTeDA	8.28	1.000	111397.0	A	13C2-PFTeDA	8.28	269325.1	0.414	2.110
PFHxDA	8.81	1.060	80037.8	A	13C2-PFTeDA	8.28	269325.1	0.297	1.875
PFODA	9.43	1.140	48656.8	A	13C2-PFTeDA	8.28	269325.1	0.181	1.652

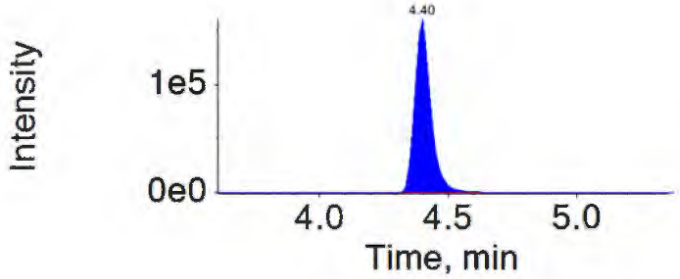
Total Ion Chromatogram



ICAL Name: 17MAY10MCAL
QMethod Name: PFCMOD - 17JAN28
Result Table: 17MAY10MCAL 5/11/2017 12:08:01 PM
Acquisition Method: PFC-32-16NOV02.dam

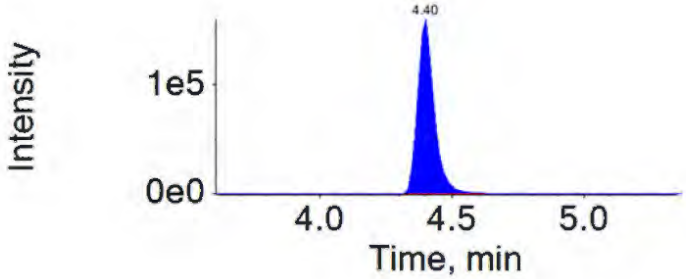
Injection Standard: I13C3-PFBA

216.0 / 172.0



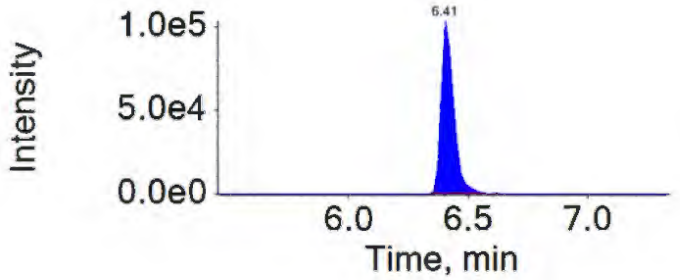
Injection Standard: 13C3-PFBA

216.0 / 172.0



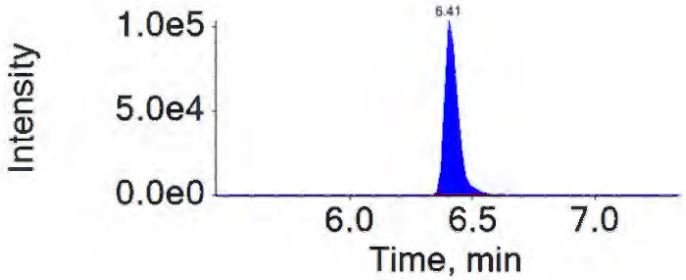
Injection Standard: I13C2-PFOA

415.0 / 370.0



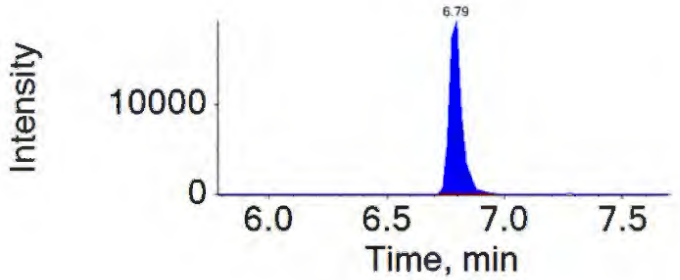
Injection Standard: 13C2-PFOA

415.0 / 370.0



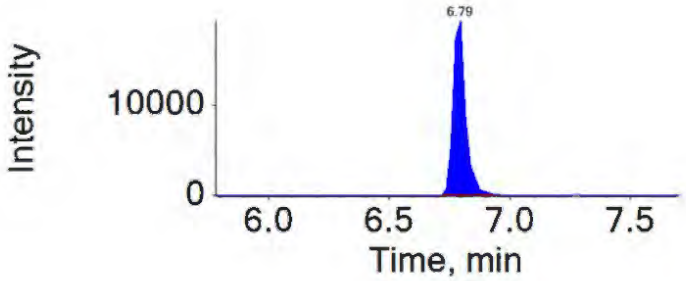
Injection Standard: I13C4-PFOS

503.0 / 99.0



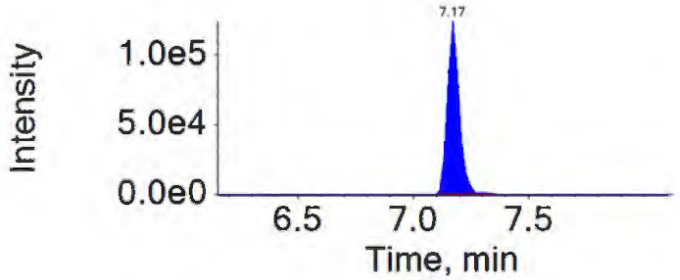
Injection Standard: 13C4-PFOS

503.0 / 99.0



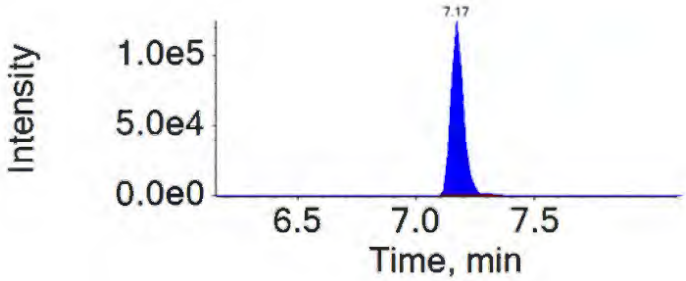
Injection Standard: I13C2-PFDA

515.0 / 470.0



Injection Standard: 13C2-PFDA

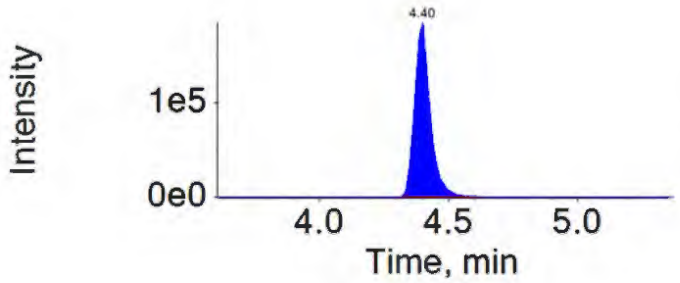
515.0 / 470.0



ICAL Name: 17MAY10MCAL **Result Table:** 17MAY10MCAL 5/11/2017 12:08:01 PM
QMethod Name: PFCMOD - 17JAN28 **Acquisition Method:** PFC-32-16NOV02.dam

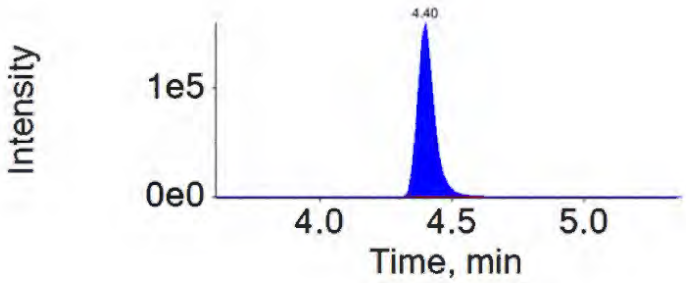
Extraction Standard: E13C4-PFBA

217.0 /
172.0



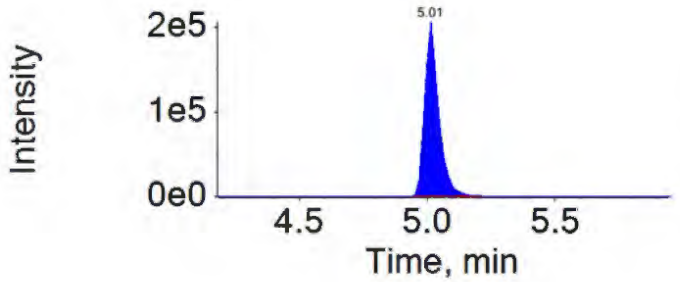
Injection Standard: 13C3-PFBA

216.0 /
172.0



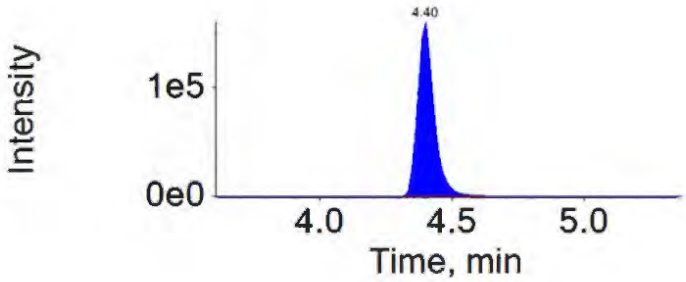
Extraction Standard: E13C5-PFPeA

268.0 /
223.0



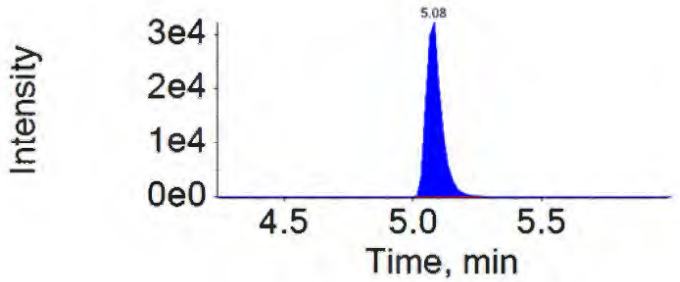
Injection Standard: 13C3-PFBA

216.0 /
172.0



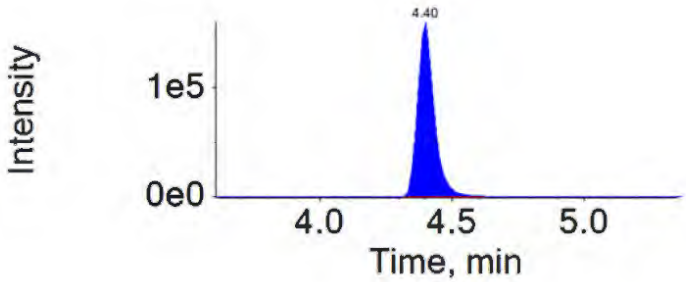
Extraction Standard: E13C3-PFBS

302.0 /
99.0



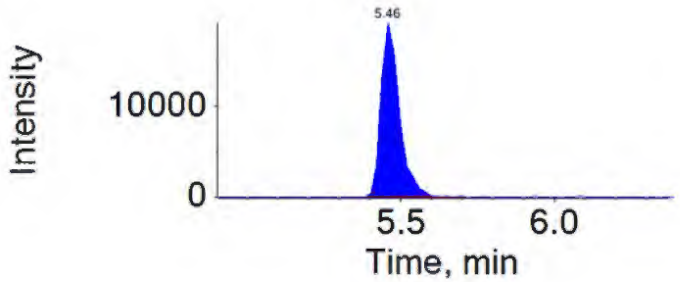
Injection Standard: 13C3-PFBA

216.0 /
172.0



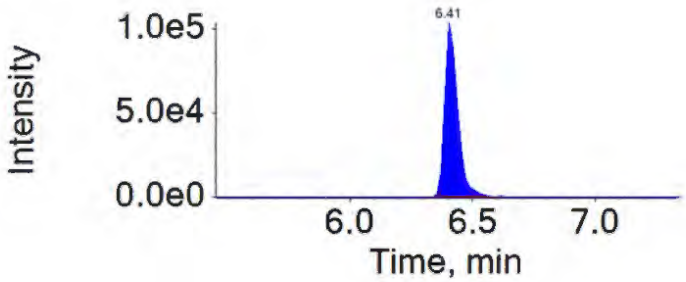
Extraction Standard: E13C2-4:2-FTS

329.0 /
309.0



Injection Standard: 13C2-PFOA

415.0 /
370.0



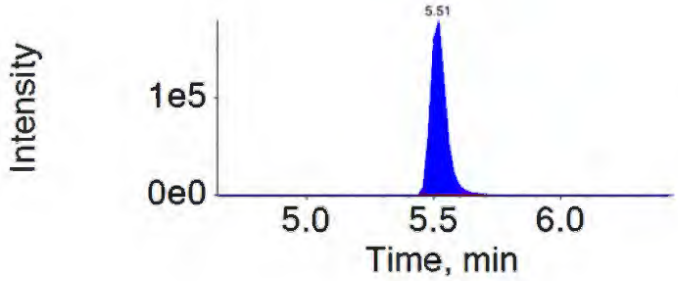
APPROVED
By JWK at 12:34 pm, 5/11/17

REVIEWED
By UMJS at 9:13 am, 5/15/17

ICAL Name: 17MAY10MCAL **Result Table:** 17MAY10MCAL 5/11/2017 12:08:01 PM
QMethod Name: PFCMOD - 17JAN28 **Acquisition Method:** PFC-32-16NOV02.dam

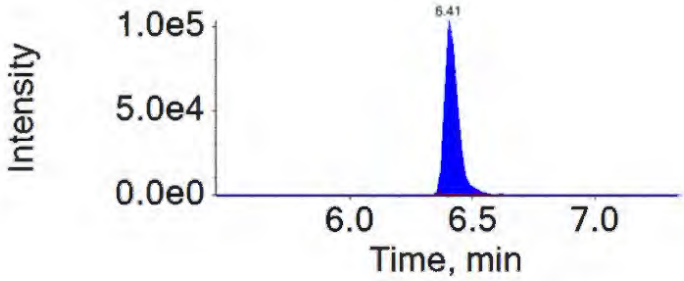
Extraction Standard: E13C5-PFHxA

318.0 /
273.0



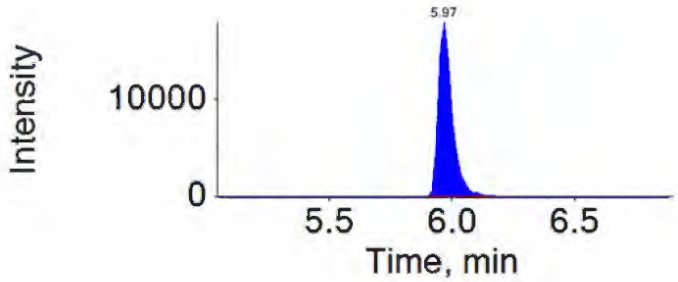
Injection Standard: 13C2-PFOA

415.0 /
370.0



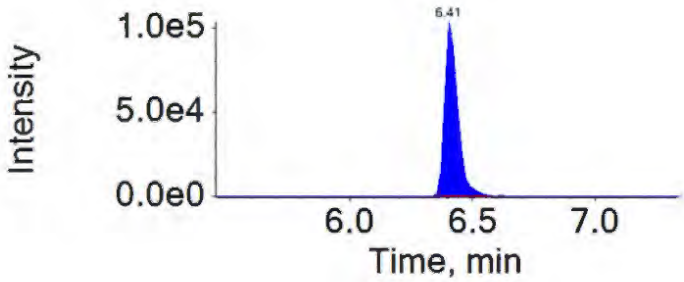
Extraction Standard: E13C3-PFHxS

402.0 /
99.0



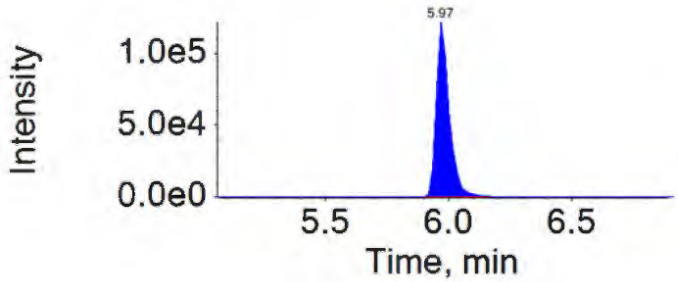
Injection Standard: 13C2-PFOA

415.0 /
370.0



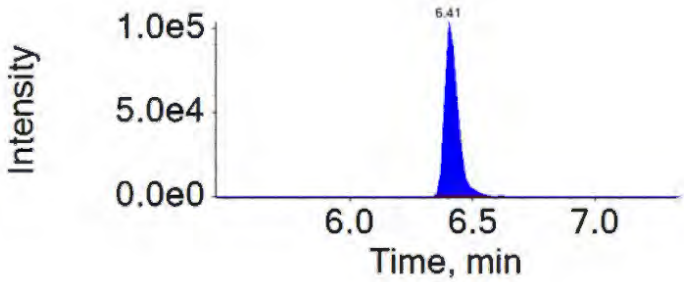
Extraction Standard: E13C4-PFHpA

367.0 /
322.0



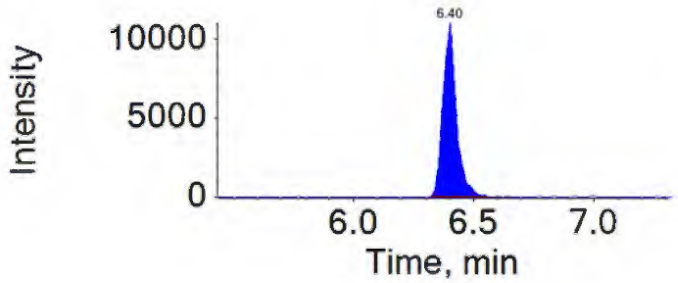
Injection Standard: 13C2-PFOA

415.0 /
370.0



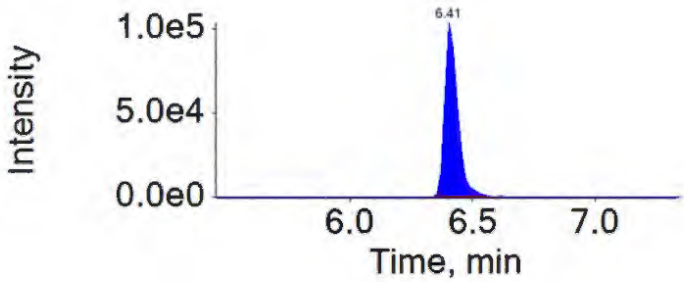
Extraction Standard: E13C2-6:2-FTS

429.0 /
409.0



Injection Standard: 13C2-PFOA

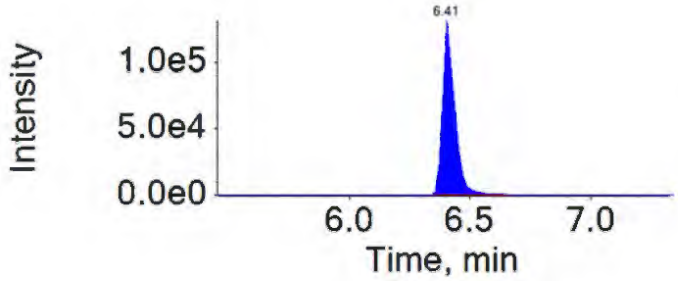
415.0 /
370.0



ICAL Name: 17MAY10MCAL **Result Table:** 17MAY10MCAL 5/11/2017 12:08:01 PM
QMethod Name: PFCMOD - 17JAN28 **Acquisition Method:** PFC-32-16NOV02.dam

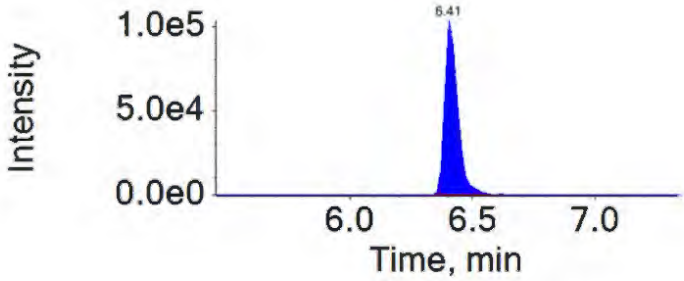
Extraction Standard: E13C8-PFOA

421.0 / 376.0



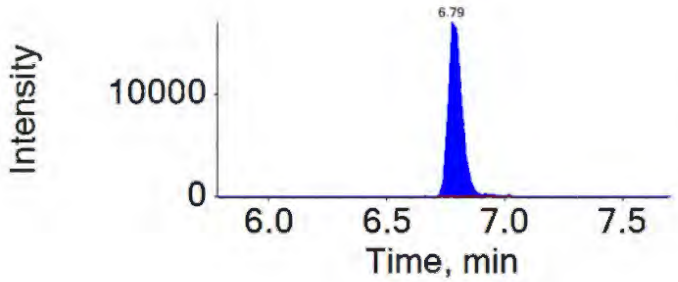
Injection Standard: 13C2-PFOA

415.0 / 370.0



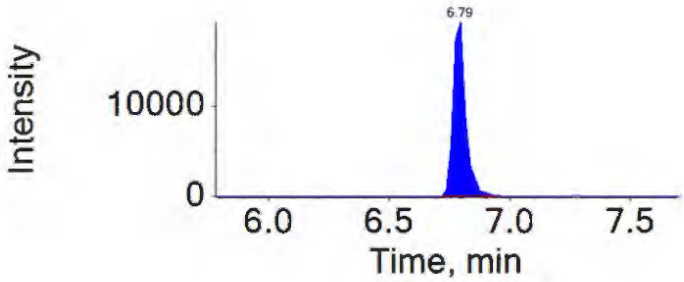
Extraction Standard: E13C8-PFOS

507.0 / 99.0



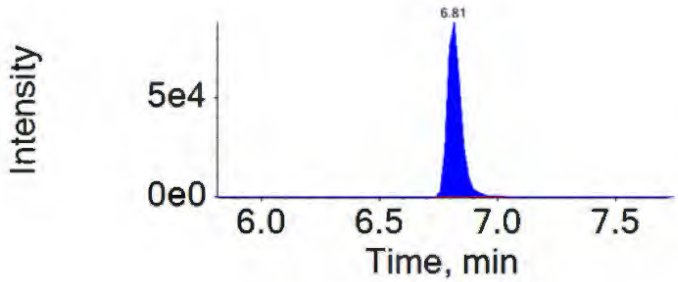
Injection Standard: 13C4-PFOS

503.0 / 99.0



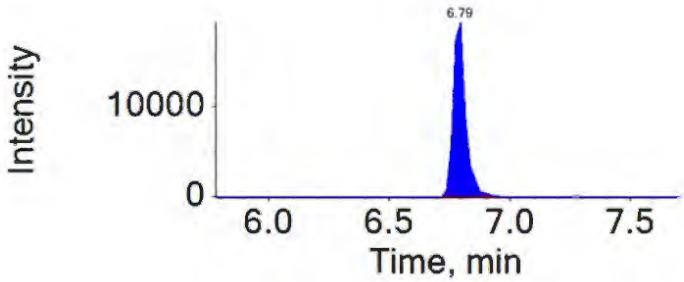
Extraction Standard: E13C9-PFNA

472.0 / 427.0



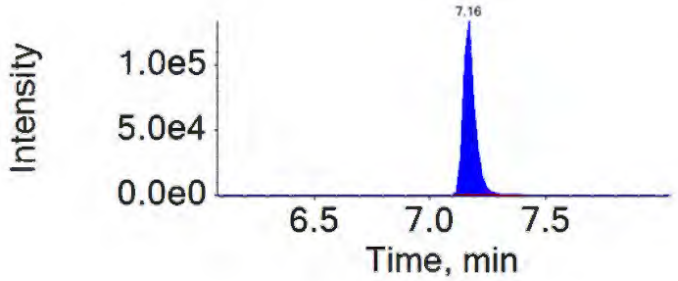
Injection Standard: 13C4-PFOS

503.0 / 99.0



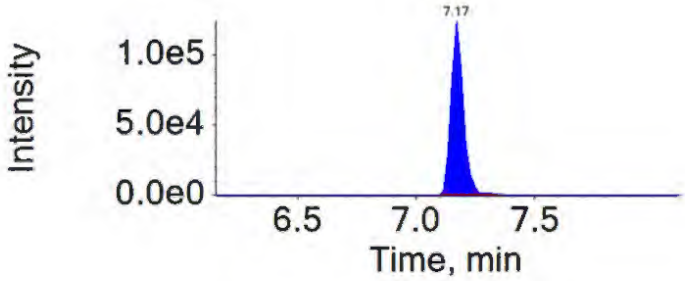
Extraction Standard: E13C8-PFOSA

506.0 / 78.0



Injection Standard: 13C2-PFDA

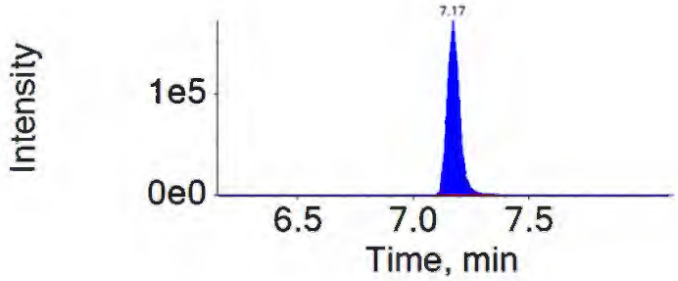
515.0 / 470.0



ICAL Name: 17MAY10MCAL **Result Table:** 17MAY10MCAL 5/11/2017 12:08:01 PM
QMethod Name: PFCMOD - 17JAN28 **Acquisition Method:** PFC-32-16NOV02.dam

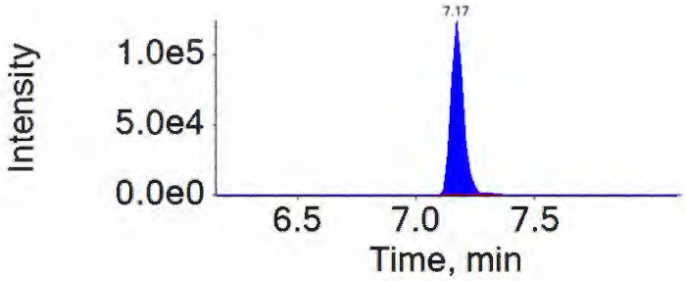
Extraction Standard: E13C6-PFDA

519.0 / 474.0



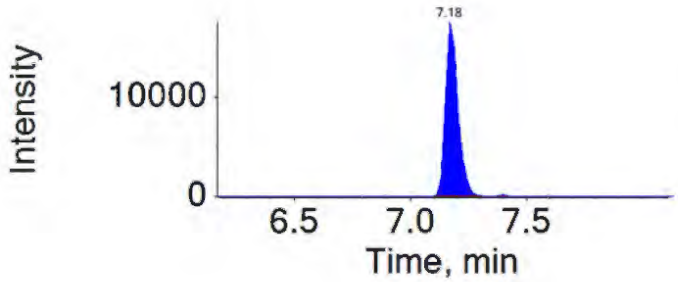
Injection Standard: 13C2-PFDA

515.0 / 470.0



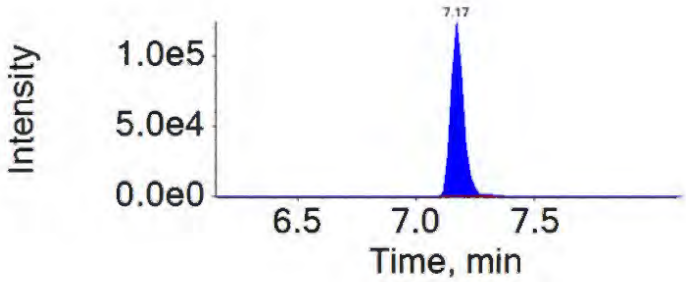
Extraction Standard: E13C2-8:2-FTS

529.0 / 509.0



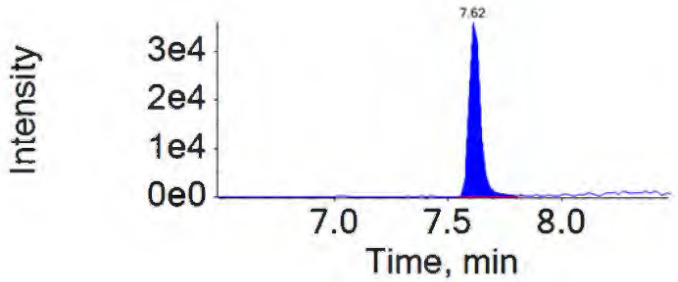
Injection Standard: 13C2-PFDA

515.0 / 470.0



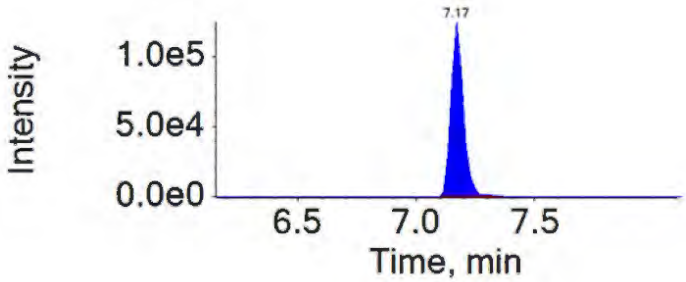
Extraction Standard: Ed7-NMePFOSAE

623.0 / 59.0



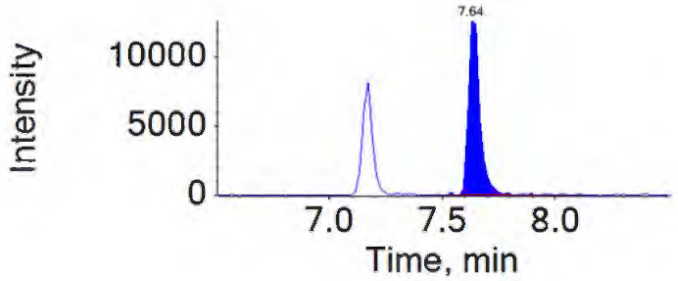
Injection Standard: 13C2-PFDA

515.0 / 470.0



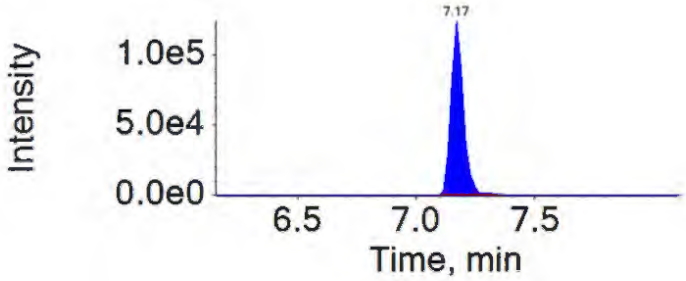
Extraction Standard: Ed3-NMePFOSA

515.0 / 169.0



Injection Standard: 13C2-PFDA

515.0 / 470.0

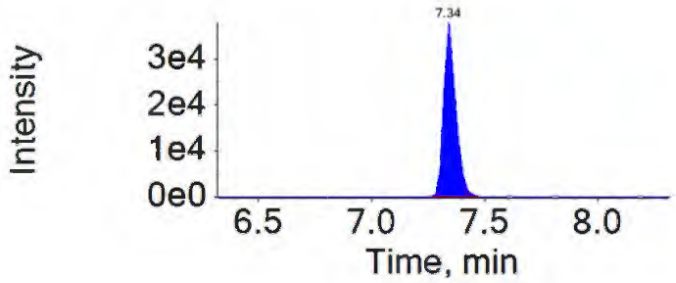


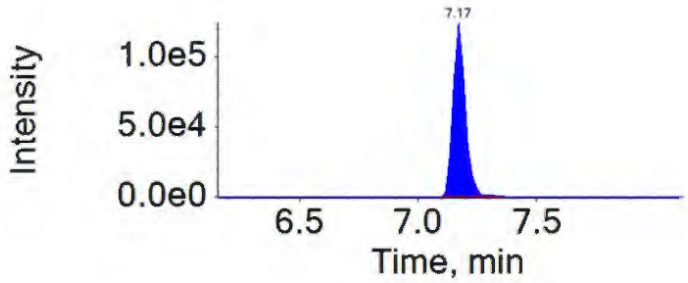
APPROVED
By JWK at 12:34 pm, 5/11/17

REVIEWED
By UMJS at 9:13 am, 5/15/17

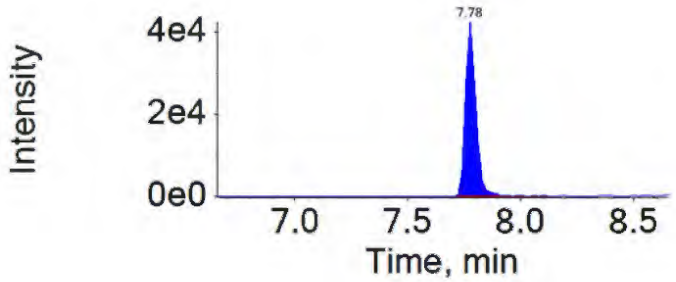
ICAL Name: 17MAY10MCAL **Result Table:** 17MAY10MCAL 5/11/2017 12:08:01 PM
QMethod Name: PFCMOD - 17JAN28 **Acquisition Method:** PFC-32-16NOV02.dam

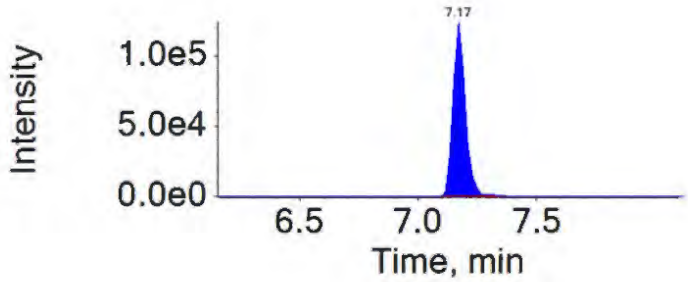
Extraction Standard: Ed3-NMeFOSAA	Injection Standard: 13C2-PFDA
573.0 / 419.0	515.0 / 470.0



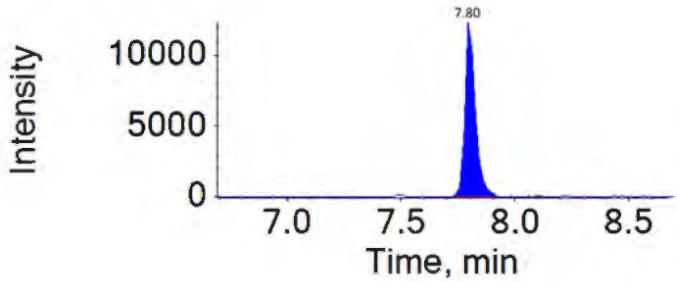


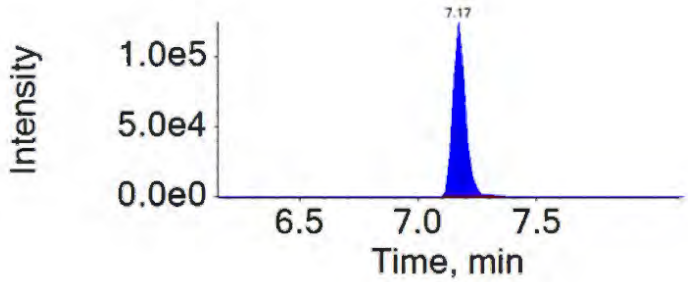
Extraction Standard: Ed9-NEtPFOSAE	Injection Standard: 13C2-PFDA
639.0 / 59.0	515.0 / 470.0



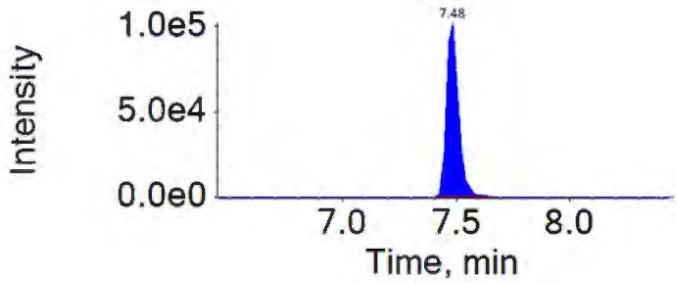


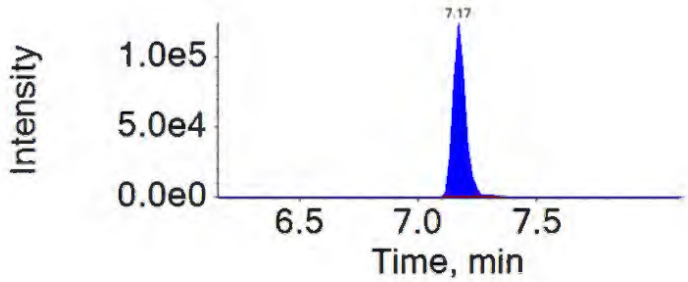
Extraction Standard: Ed5-NEtPFOSA	Injection Standard: 13C2-PFDA
531.0 / 169.0	515.0 / 470.0





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

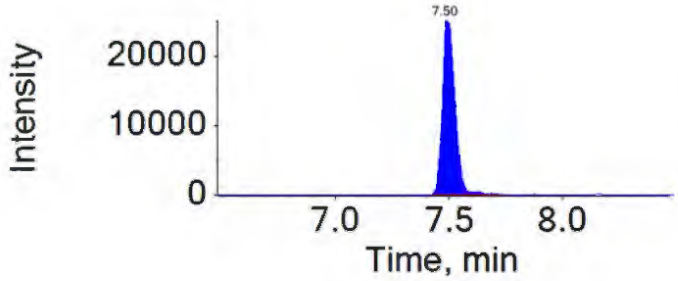




ICAL Name: 17MAY10MCAL **Result Table:** 17MAY10MCAL 5/11/2017 12:08:01 PM
QMethod Name: PFCMOD - 17JAN28 **Acquisition Method:** PFC-32-16NOV02.dam

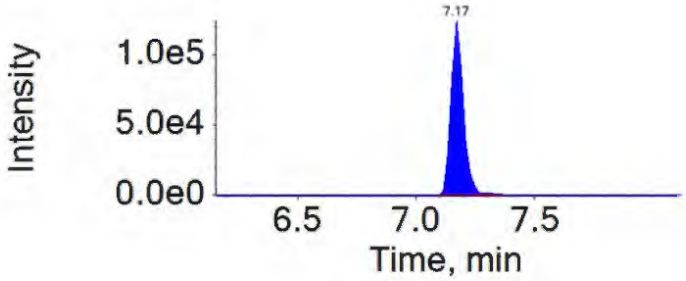
Extraction Standard: Ed5-NEtFOSAA

589.0 / 419.0



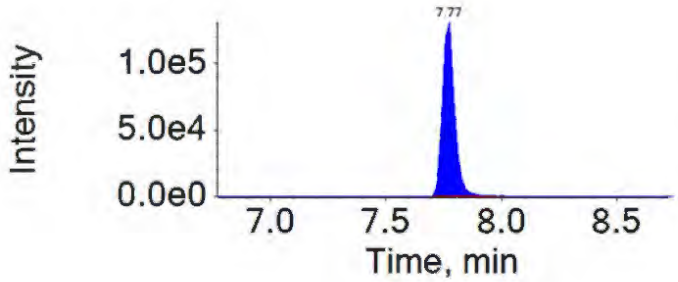
Injection Standard: 13C2-PFDA

515.0 / 470.0



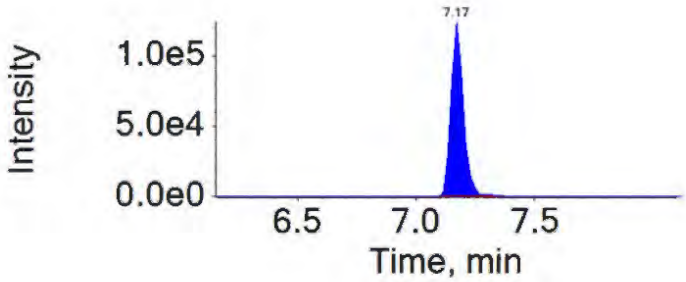
Extraction Standard: E13C2-PFDoDA

615.0 / 570.0



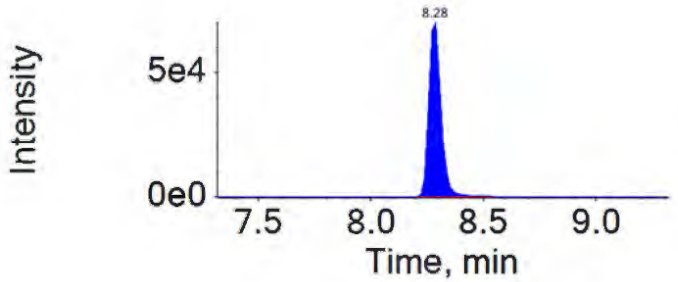
Injection Standard: 13C2-PFDA

515.0 / 470.0



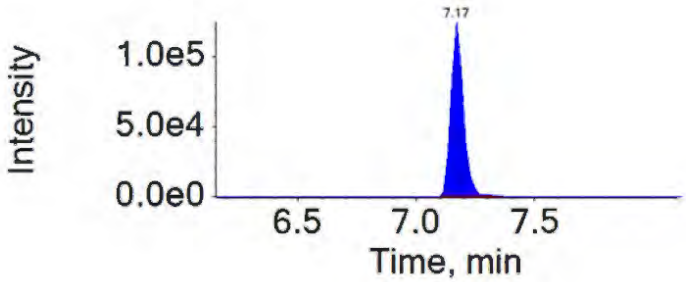
Extraction Standard: E13C2-PFTeDA

715.0 / 670.0



Injection Standard: 13C2-PFDA

515.0 / 470.0



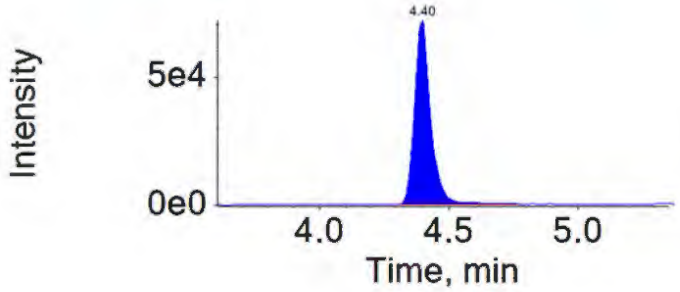
APPROVED
By JWK at 12:34 pm, 5/11/17

REVIEWED
By UMJS at 9:13 am, 5/15/17

ICAL Name: 17MAY10MCAL **Result Table:** 17MAY10MCAL 5/11/2017 12:08:01 PM
QMethod Name: PFCMOD - 17JAN28 **Acquisition Method:** PFC-32-16NOV02.dam

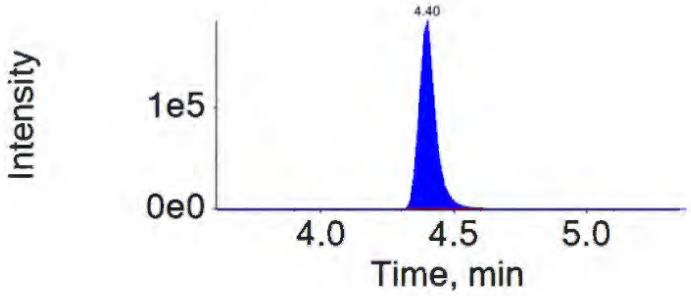
Analyte: PFBA

213.0 / 169.0



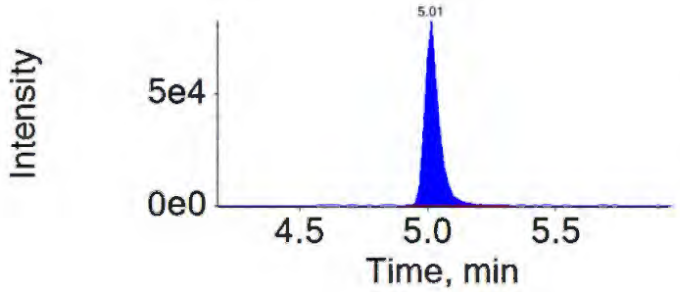
Extraction Standard: 13C4-PFBA

217.0 / 172.0



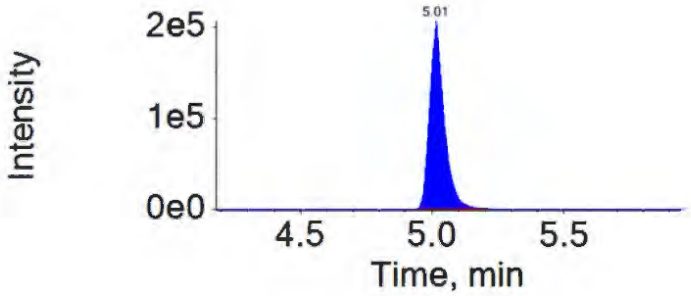
Analyte: PFPeA

263.0 / 219.0



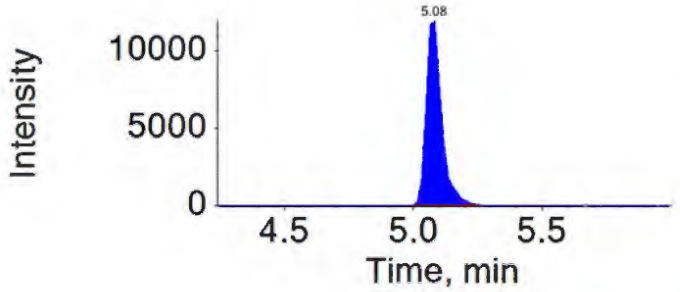
Extraction Standard: 13C5-PFPeA

268.0 / 223.0



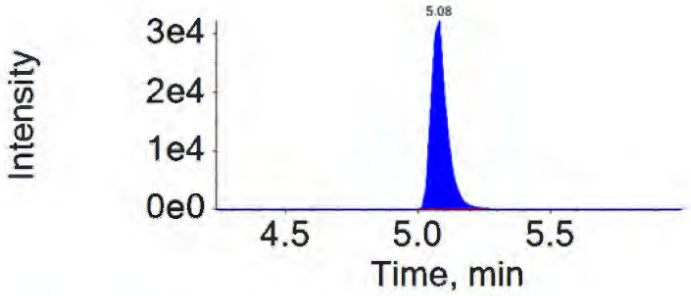
Analyte: PFBS

299.0 / 99.0



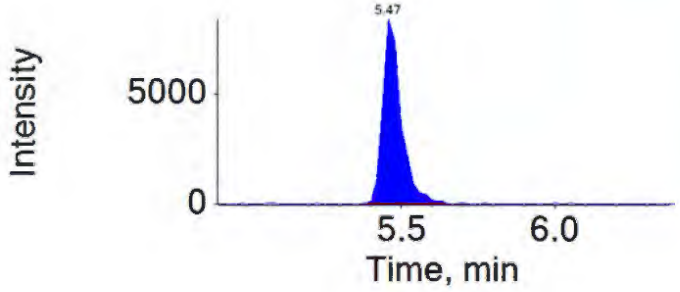
Extraction Standard: 13C3-PFBS

302.0 / 99.0



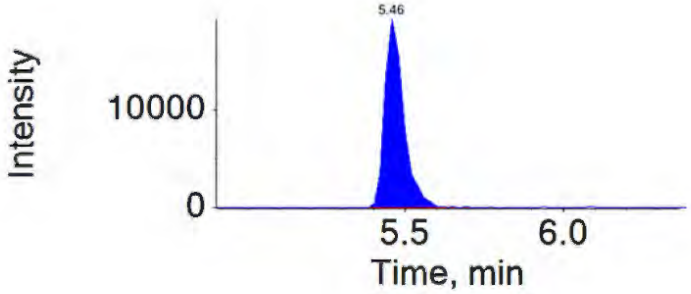
Analyte: 4:2-FTS

327.0 / 307.0



Extraction Standard: 13C2-4:2-FTS

329.0 / 309.0



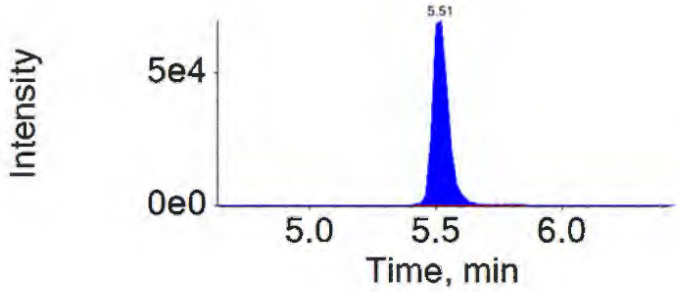
APPROVED
By JWK at 12:34 pm, 5/11/17

REVIEWED
By UMJS at 9:13 am, 5/15/17

ICAL Name: 17MAY10MCAL **Result Table:** 17MAY10MCAL 5/11/2017 12:08:01 PM
QMethod Name: PFCMOD - 17JAN28 **Acquisition Method:** PFC-32-16NOV02.dam

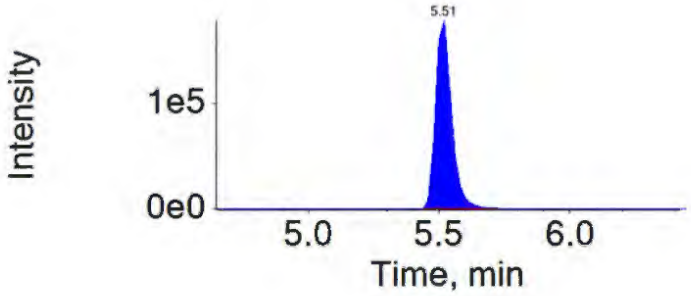
Analyte: PFHxA

313.0 /
269.0



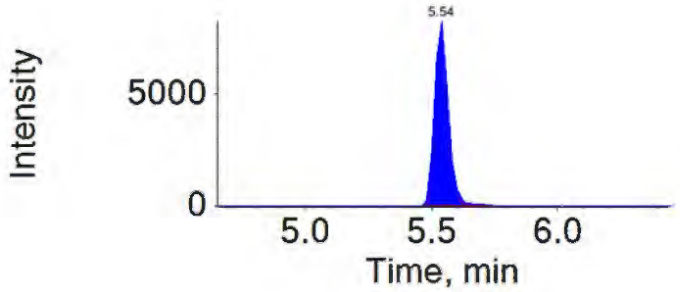
Extraction Standard: 13C5-PFHxA

318.0 /
273.0



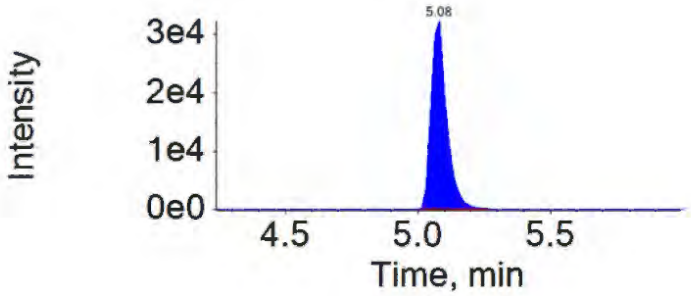
Analyte: PFPeS

349.0 /
99.0



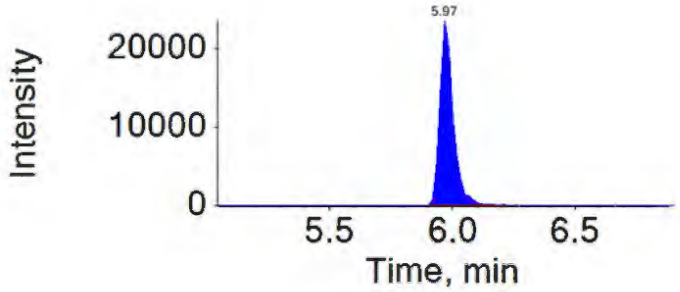
Extraction Standard: 13C3-PFBS

302.0 /
99.0



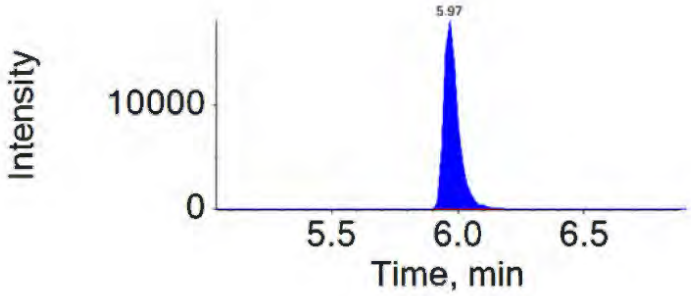
Analyte: PFHxS

399.0 /
80.0



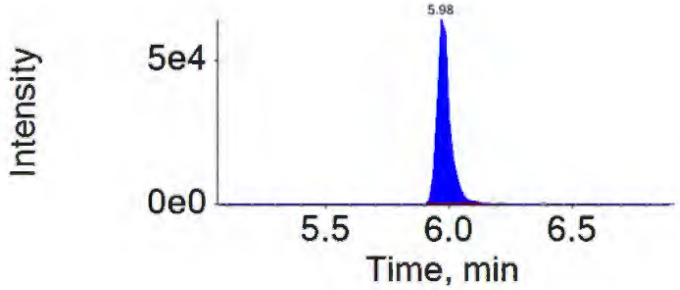
Extraction Standard: 13C3-PFHxS

402.0 /
99.0



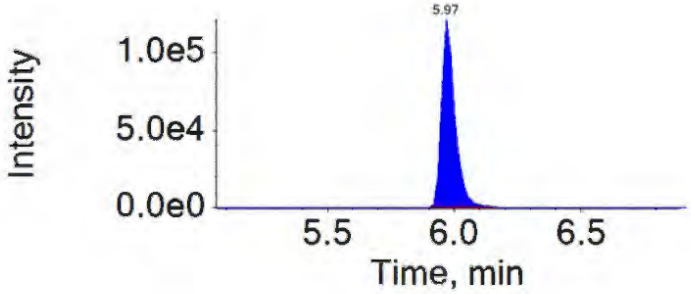
Analyte: PFHpA

363.0 /
319.0



Extraction Standard: 13C4-PFHpA

367.0 /
322.0



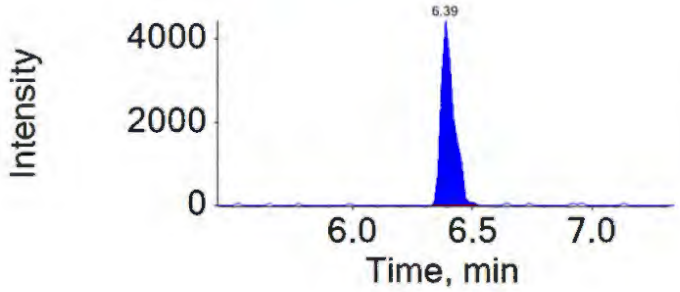
APPROVED
By JWK at 12:34 pm, 5/11/17

REVIEWED
By UMJS at 9:13 am, 5/15/17

ICAL Name: 17MAY10MCAL **Result Table:** 17MAY10MCAL 5/11/2017 12:08:01 PM
QMethod Name: PFCMOD - 17JAN28 **Acquisition Method:** PFC-32-16NOV02.dam

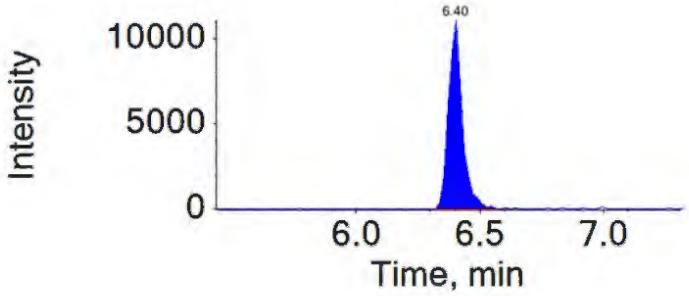
Analyte: 6:2-FTS

427.0 /
407.0



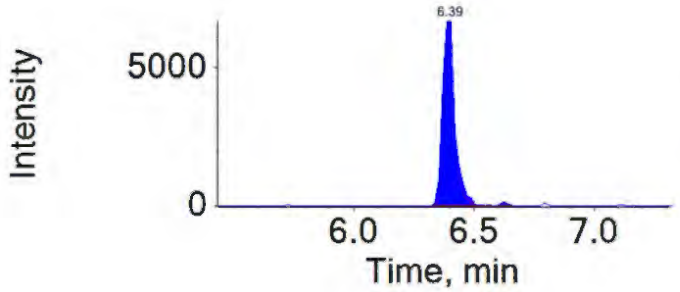
Extraction Standard: 13C2-6:2-FTS

429.0 /
409.0



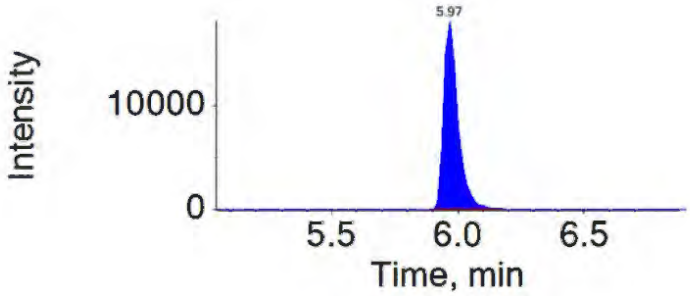
Analyte: PFHpS

449.0 /
99.0



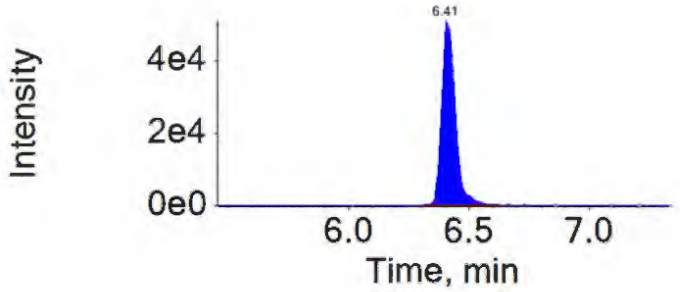
Extraction Standard: 13C3-PFHxS

402.0 /
99.0



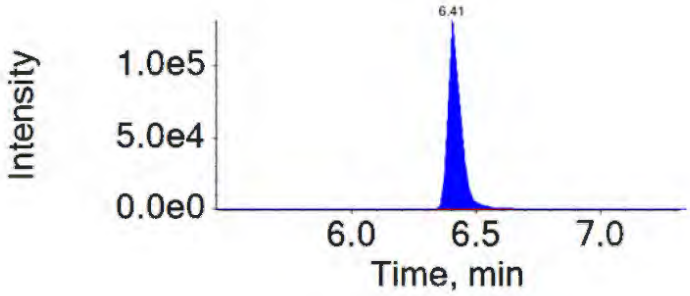
Analyte: PFOA

413.0 /
369.0



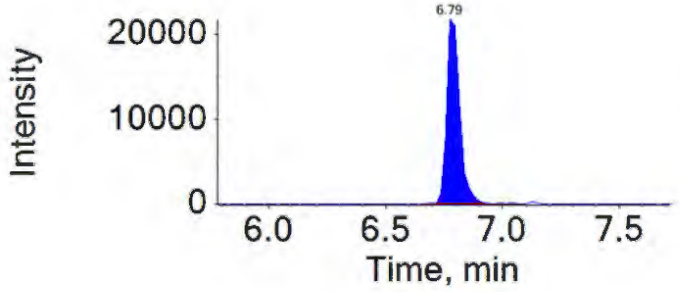
Extraction Standard: 13C8-PFOA

421.0 /
376.0



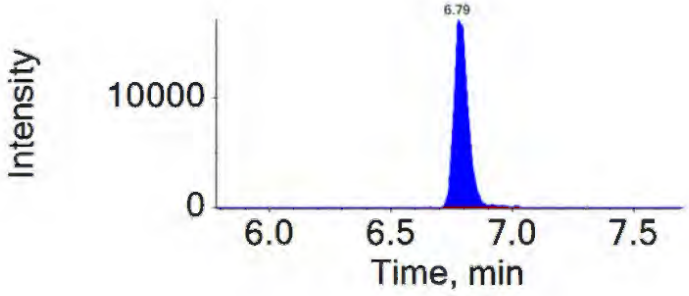
Analyte: PFOS

499.0 /
80.0



Extraction Standard: 13C8-PFOS

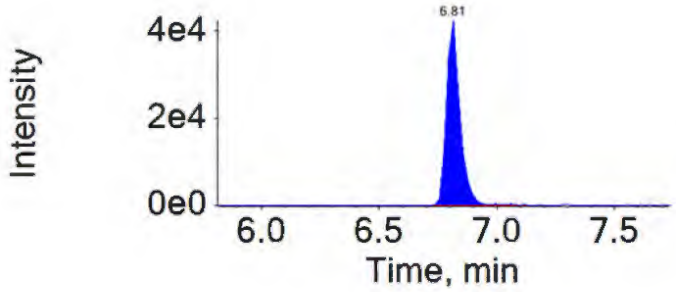
507.0 /
99.0



ICAL Name: 17MAY10MCAL **Result Table:** 17MAY10MCAL 5/11/2017 12:08:01 PM
QMethod Name: PFCMOD - 17JAN28 **Acquisition Method:** PFC-32-16NOV02.dam

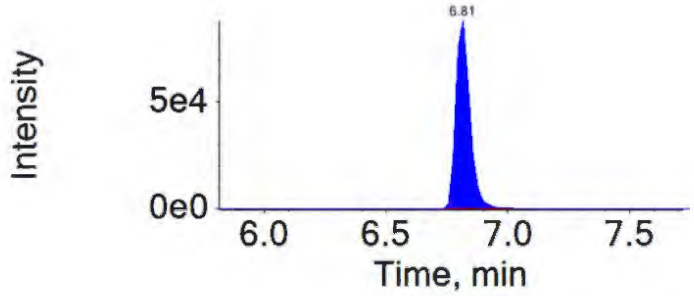
Analyte: PFNA

463.0 / 419.0



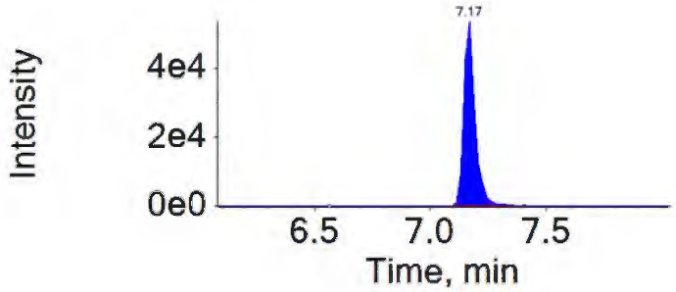
Extraction Standard: 13C9-PFNA

472.0 / 427.0



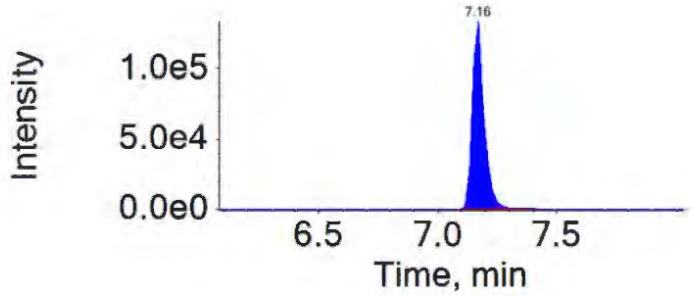
Analyte: PFOSA

498.0 / 78.0



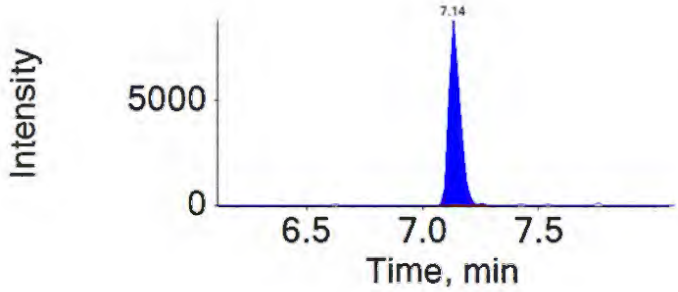
Extraction Standard: 13C8-PFOSA

506.0 / 78.0



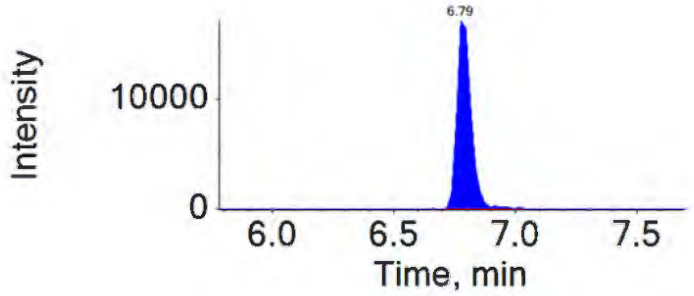
Analyte: PFNS

549.0 / 99.0



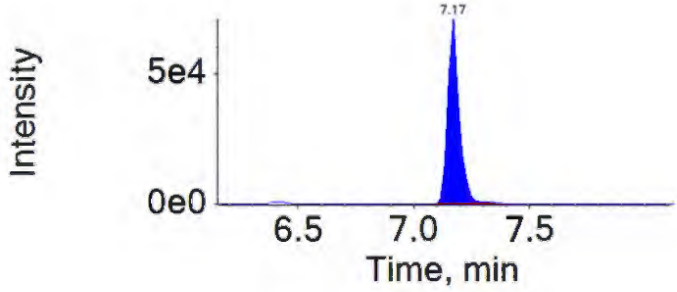
Extraction Standard: 13C8-PFOS

507.0 / 99.0



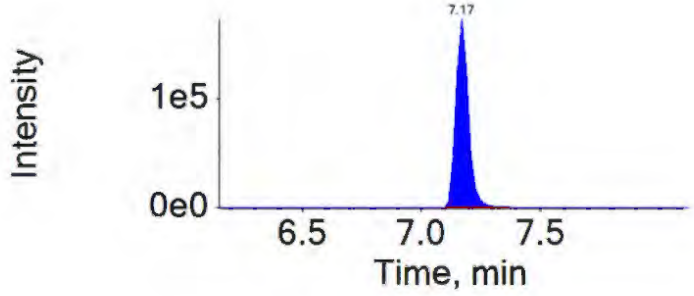
Analyte: PFDA

513.0 / 469.0



Extraction Standard: 13C6-PFDA

519.0 / 474.0



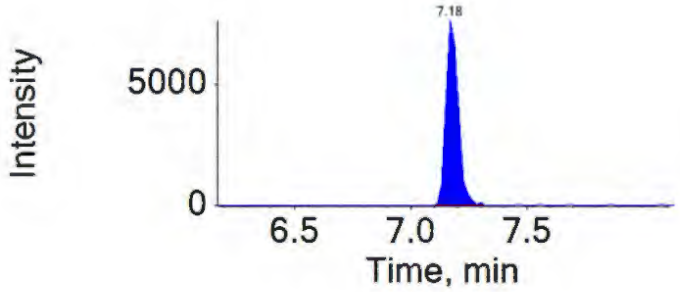
APPROVED
By JWK at 12:34 pm, 5/11/17

REVIEWED
By UMJS at 9:13 am, 5/15/17

ICAL Name: 17MAY10MCAL **Result Table:** 17MAY10MCAL 5/11/2017 12:08:01 PM
QMethod Name: PFCMOD - 17JAN28 **Acquisition Method:** PFC-32-16NOV02.dam

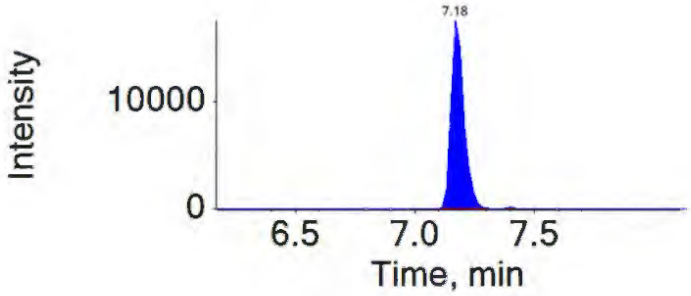
Analyte: 8:2-FTS

527.0 /
507.0



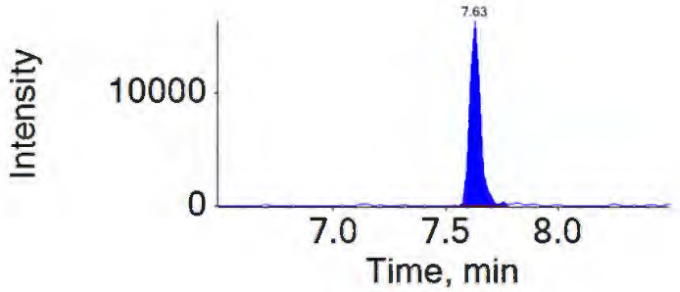
Extraction Standard: 13C2-8:2-FTS

529.0 /
509.0



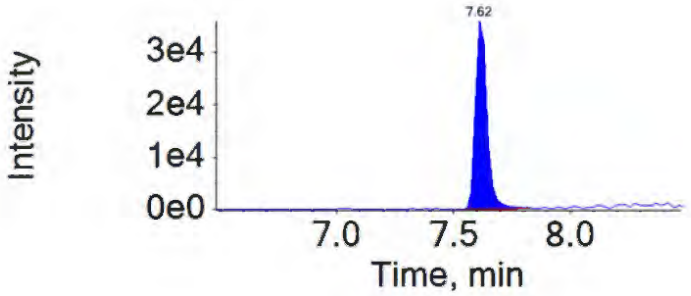
Analyte: NMePFOSAE

616.0 /
59.0



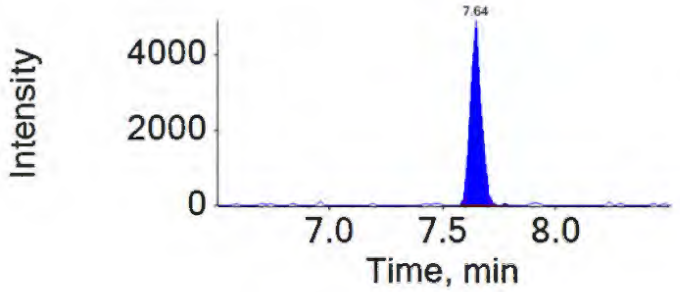
Extraction Standard: d7-NMePFOSAE

623.0 /
59.0



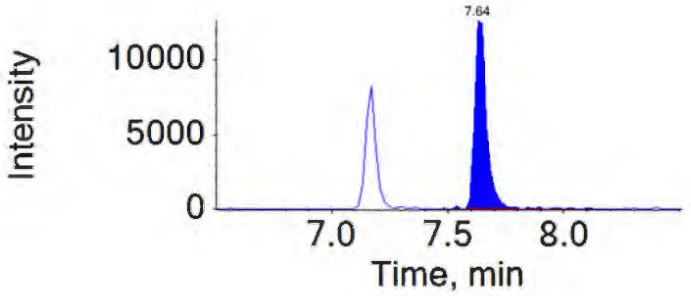
Analyte: NMePFOSA

512.0 /
169.0



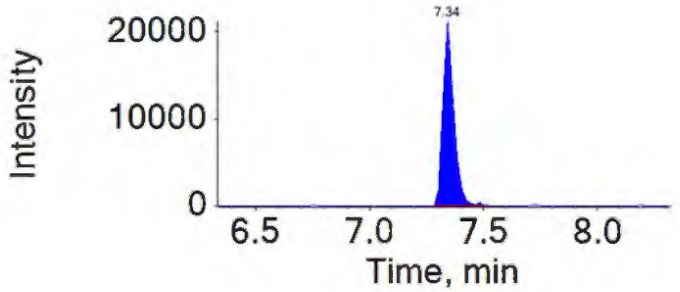
Extraction Standard: d3-NMePFOSA

515.0 /
169.0



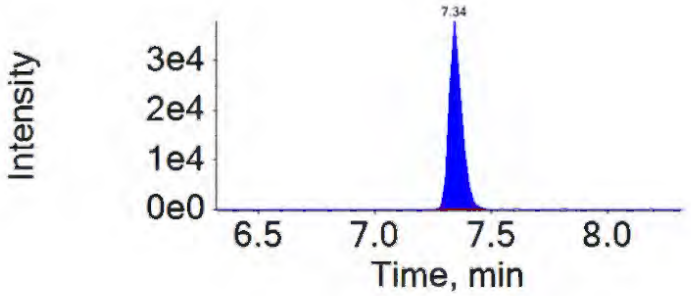
Analyte: NMeFOSAA

570.0 /
419.0



Extraction Standard: d3-NMeFOSAA

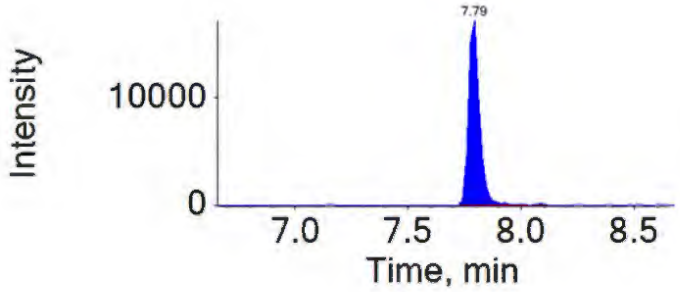
573.0 /
419.0



ICAL Name: 17MAY10MCAL **Result Table:** 17MAY10MCAL 5/11/2017 12:08:01 PM
QMethod Name: PFCMOD - 17JAN28 **Acquisition Method:** PFC-32-16NOV02.dam

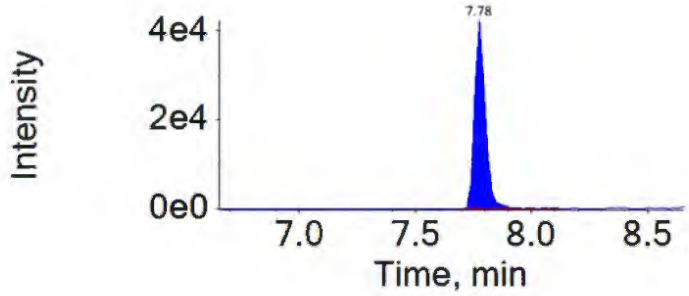
Analyte: NEtPFOSAE

630.0 /
59.0



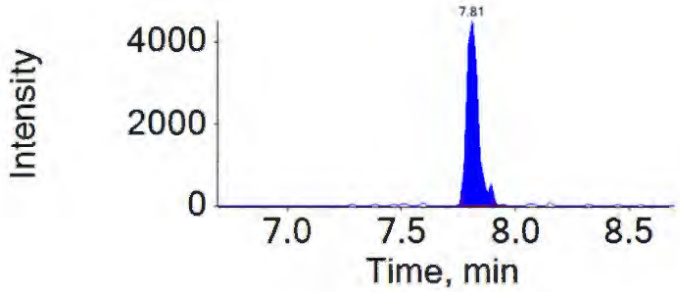
Extraction Standard: d9-NEtPFOSAE

639.0 /
59.0



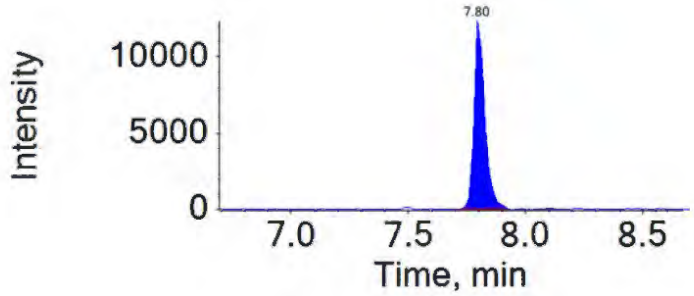
Analyte: NEtPFOSA

526.0 /
169.0



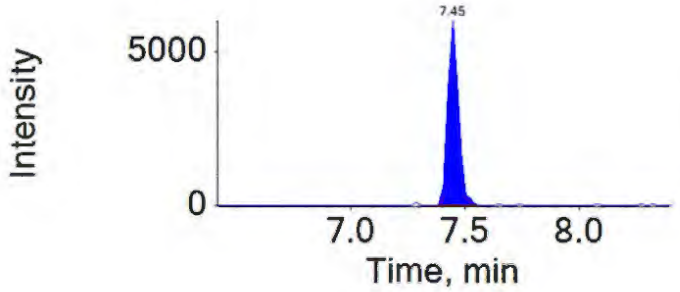
Extraction Standard: d5-NEtPFOSA

531.0 /
169.0



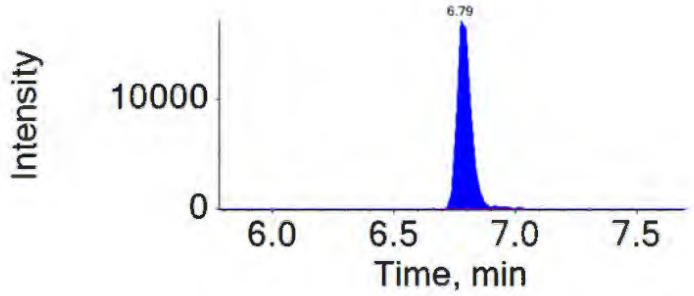
Analyte: PFDS

599.0 /
99.0



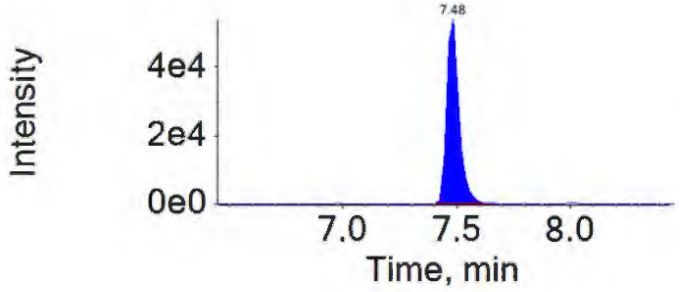
Extraction Standard: 13C8-PFOS

507.0 /
99.0



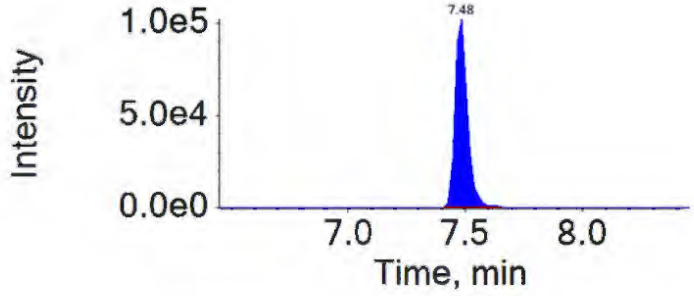
Analyte: PFUnDA

563.0 /
519.0



Extraction Standard: 13C7-PFUnDA

570.0 /
525.0



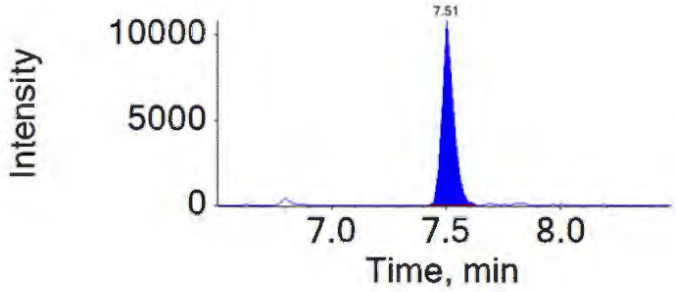
APPROVED
By JWK at 12:34 pm, 5/11/17

REVIEWED
By UMJS at 9:13 am, 5/15/17

ICAL Name: 17MAY10MCAL **Result Table:** 17MAY10MCAL 5/11/2017 12:08:01 PM
QMethod Name: PFCMOD - 17JAN28 **Acquisition Method:** PFC-32-16NOV02.dam

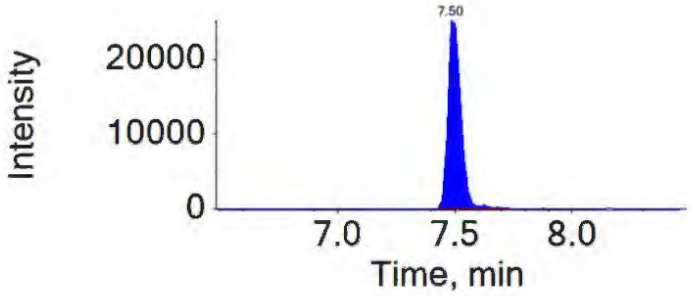
Analyte: NEtFOSAA

584.0 / 419.0



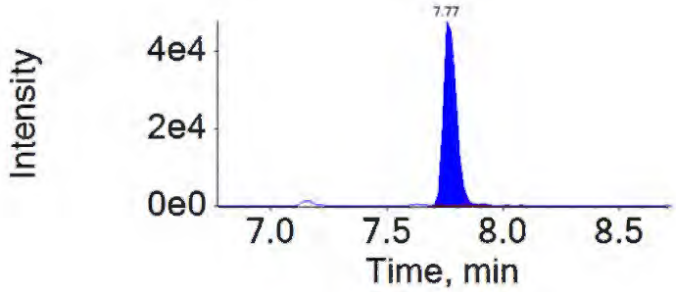
Extraction Standard: d5-NEtFOSAA

589.0 / 419.0



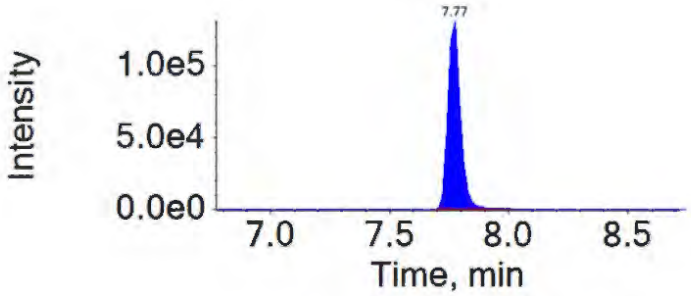
Analyte: PFDoDA

613.0 / 569.0



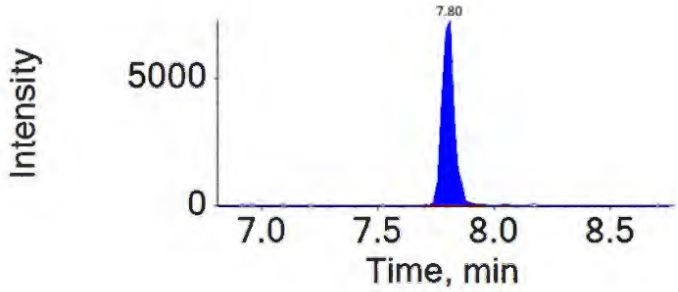
Extraction Standard: 13C2-PFDoDA

615.0 / 570.0



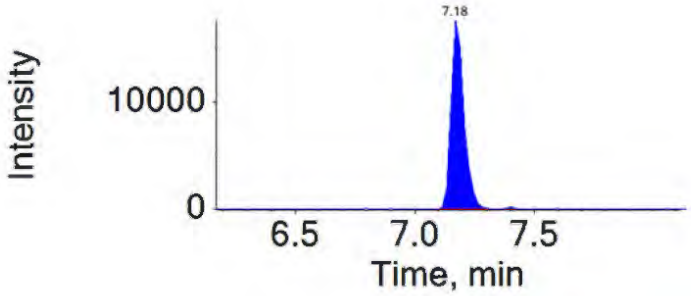
Analyte: 10:2-FTS

627.0 / 607.0



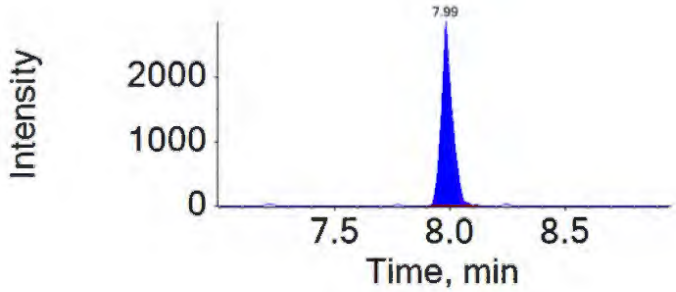
Extraction Standard: 13C2-8:2-FTS

529.0 / 509.0



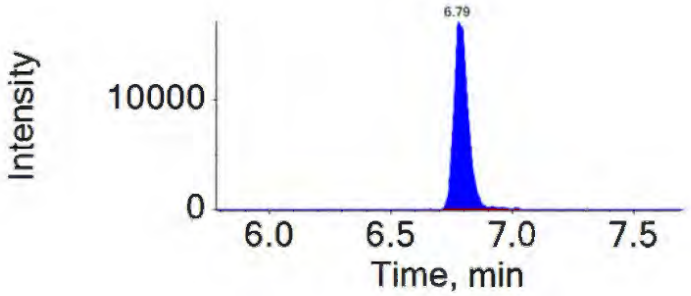
Analyte: PFDoS

699.0 / 99.0



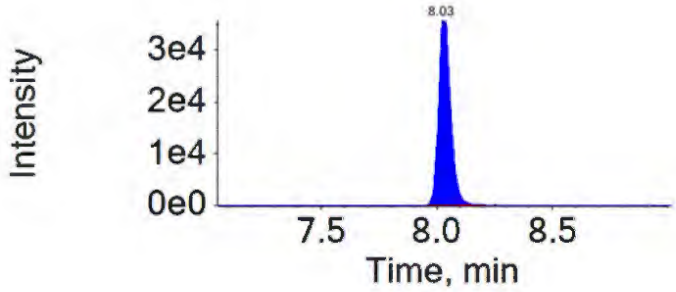
Extraction Standard: 13C8-PFOS

507.0 / 99.0

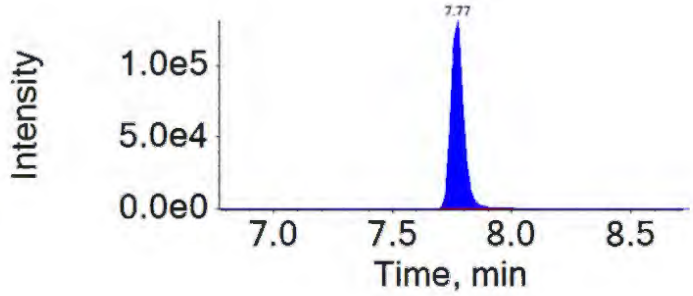


ICAL Name: 17MAY10MCAL **Result Table:** 17MAY10MCAL 5/11/2017 12:08:01 PM
QMethod Name: PFCMOD - 17JAN28 **Acquisition Method:** PFC-32-16NOV02.dam

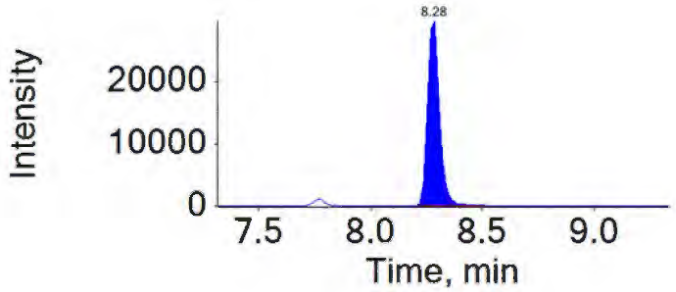
Analyte: PFTrDA
663.0 / 619.0



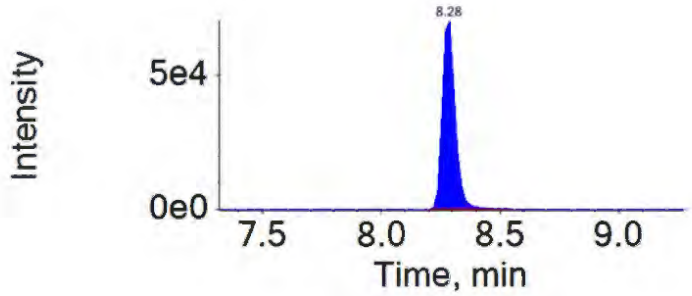
Extraction Standard: 13C2-PFDoDA
615.0 / 570.0



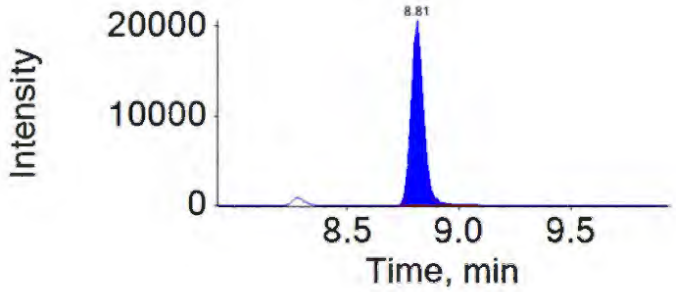
Analyte: PFTeDA
713.0 / 669.0



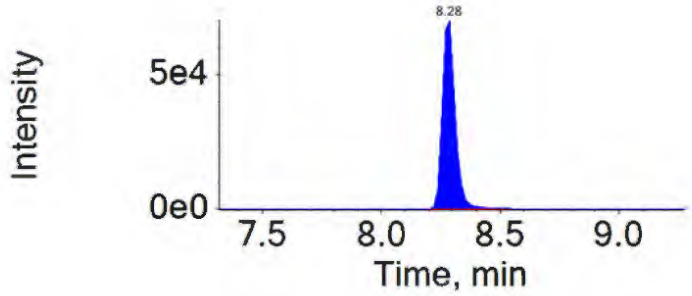
Extraction Standard: 13C2-PFTeDA
715.0 / 670.0



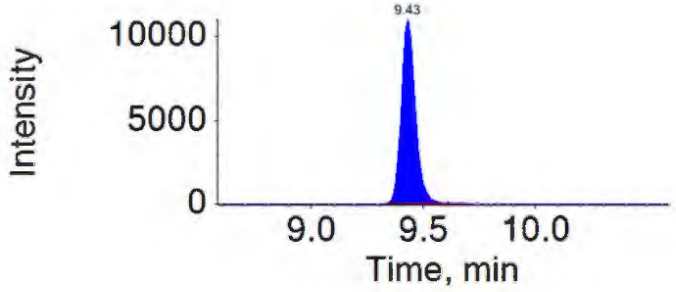
Analyte: PFHxDA
813.0 / 769.0



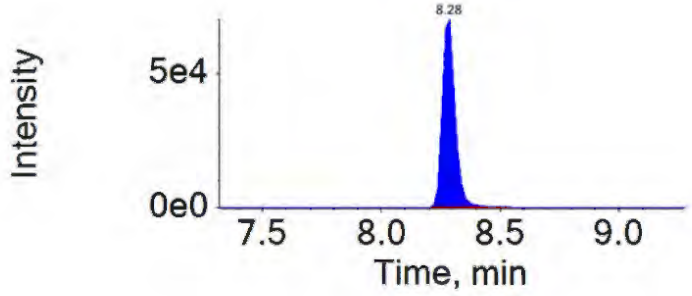
Extraction Standard: 13C2-PFTeDA
715.0 / 670.0



Analyte: PFODA
913.0 / 869.0



Extraction Standard: 13C2-PFTeDA
715.0 / 670.0



APPROVED
By JWK at 12:34 pm, 5/11/17

REVIEWED
By UMJS at 9:13 am, 5/15/17

eurofins | Lancaster Laboratories

LC-MS/MS Analysis Report

Printed: 5/11/2017 12:18:00 PM
Template: MQ-Sample-16Nov21.docx

ICAL Name: 17MAY10MCAL
QMethod Name: PFCMOD - 17JAN28
Result Table: 17MAY10MCAL 5/11/2017 12:08:01 PM
Acquisition Method: PFC-32-16NOV02.dam

Sample Name:	L+B CAL3			**Data File:**		17MAY10MCAL-40.wiff
Sample ID:	L+B CAL3			**Acquis Date:**		2017-05-11T08:35:27
Sample Type:	Unknown			**Instrument:**		LM24960
Vial Position:	11			**Acquis Method:**		PFC-32-16NOV02.dam
Injection Vol:	5.00			**Result Table:**		17MAY10MCAL
QMethod File:	PFCMOD - 17JAN28			**ICAL Name:**		17MAY10MCAL
Batch Number:	MODICAL			**Operator:**		Not calculated
Sample Wt.:	1.00000			**Dilution Factor:**		1.00
Sample Vol.:	1.000			**Prep Factor:**		1.000

Injection Standard Peak Table

Injection Standard Name	Inj Std Conc	Injection Std Peak Area	ICAL Injection Standard AVG	Injection Std %Diff	Injection Std %Diff Limit	Injection Std %Diff OOS
I13C3-PFBA	1.0	876597.2	669117.3	31.0	50.0	
I13C2-PFOA	1.0	458598.3	342184.6	34.0	50.0	
I13C4-PFOS	1.0	87516.6	70131.6	24.8	50.0	
I13C2-PFDA	1.0	549165.0	384098.7	43.0	50.0	

Extraction Standard Peak Table

Extraction Standard Name	Ext Std Area	Inj Std Name	Inj Std Area	Area Ratio	AVG Area Ratio	Ext Std Conc	Ext Std Result	Ext Std %REC	Ext Std %REC Limit	Ext Std OOS
E13C4-PFBA	870042.3	13C3-PFBA	876597.2	0.993	1.150	1.000	0.863	86.3	70.0-130.0	
E13C5-PFPeA	818444.5	13C3-PFBA	876597.2	0.934	1.073	1.000	0.870	87.0	70.0-130.0	
E13C3-PFBS	138468.6	13C3-PFBA	876597.2	0.158	0.194	1.000	0.813	81.3	70.0-130.0	
E13C2-4:2-FTS	74451.1	13C2-PFOA	458598.3	0.162	0.236	1.000	0.687	68.7	70.0-130.0	OOS
E13C5-PFHxA	763443.6	13C2-PFOA	458598.3	1.665	2.026	1.000	0.822	82.2	70.0-130.0	
E13C3-PFHxS	70296.7	13C2-PFOA	458598.3	0.153	0.206	1.000	0.745	74.5	70.0-130.0	
E13C4-PFHpA	494008.8	13C2-PFOA	458598.3	1.077	1.285	1.000	0.838	83.8	70.0-130.0	
E13C2-6:2-FTS	42112.4	13C2-PFOA	458598.3	0.092	0.128	1.000	0.717	71.7	70.0-130.0	
E13C8-PFOA	430313.2	13C2-PFOA	458598.3	0.938	1.163	1.000	0.807	80.7	70.0-130.0	
E13C8-PFOS	75891.0	13C4-PFOS	87516.6	0.867	0.865	1.000	1.002	100.2	70.0-130.0	
E13C9-PFNA	342191.3	13C4-PFOS	87516.6	3.910	4.422	1.000	0.884	88.4	70.0-130.0	
E13C8-PFOSA	417229.6	13C2-PFDA	549165.0	0.760	0.936	1.000	0.811	81.1	70.0-130.0	
E13C6-PFDA	613159.4	13C2-PFDA	549165.0	1.117	1.424	1.000	0.784	78.4	70.0-130.0	
E13C2-8:2-FTS	67038.8	13C2-PFDA	549165.0	0.122	0.155	1.000	0.786	78.6	70.0-130.0	
Ed7-NMePFOSAE	111020.9	13C2-PFDA	549165.0	0.202	0.299	1.000	0.677	67.7	70.0-130.0	OOS
Ed3-NMePFOSA	42461.3	13C2-PFDA	549165.0	0.077	0.120	1.000	0.643	64.3	70.0-130.0	OOS
Ed3-NMeFOSAA	138567.9	13C2-PFDA	549165.0	0.252	0.343	1.000	0.736	73.6	70.0-130.0	
Ed9-NEtPFOSAE	119314.4	13C2-PFDA	549165.0	0.217	0.333	1.000	0.653	65.3	70.0-130.0	OOS
Ed5-NEtPFOSA	39503.8	13C2-PFDA	549165.0	0.072	0.095	1.000	0.759	75.9	70.0-130.0	
E13C7-PFUnDA	397838.3	13C2-PFDA	549165.0	0.724	0.953	1.000	0.760	76.0	70.0-130.0	
Ed5-NEtFOSAA	90618.0	13C2-PFDA	549165.0	0.165	0.249	1.000	0.663	66.4	70.0-130.0	OOS
E13C2-PFDoDA	497535.1	13C2-PFDA	549165.0	0.906	1.154	1.000	0.785	78.5	70.0-130.0	
E13C2-PFTeDA	271533.5	13C2-PFDA	549165.0	0.494	0.651	1.000	0.759	75.9	70.0-130.0	

APPROVED
By JWK at 12:35 pm, 5/11/17

REVIEWED
By UMJS at 9:13 am, 5/15/17

ICAL Name: 17MAY10MCAL **Result Table:** 17MAY10MCAL 5/11/2017 12:08:01 PM
QMethod Name: PFCMOD - 17JAN28 **Acquisition Method:** PFC-32-16NOV02.dam

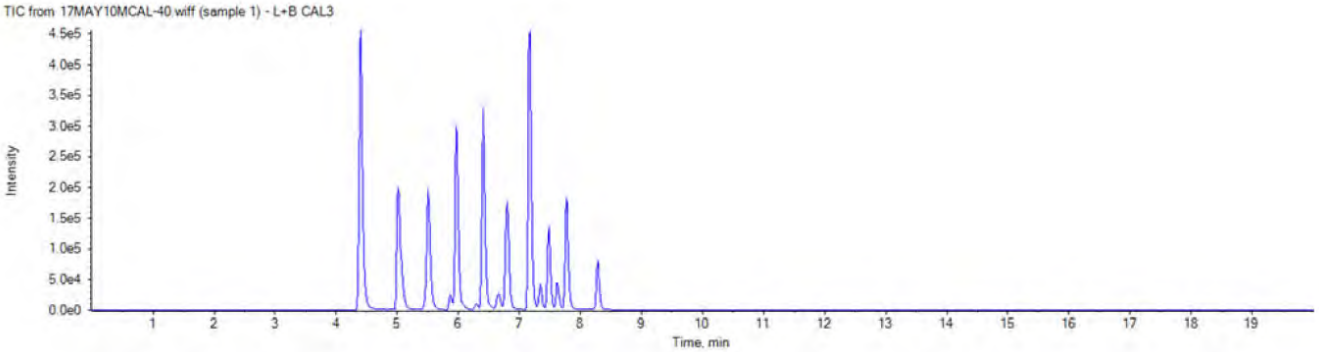
Analyte Quantitation Peak Table

Sample Name: L+B CAL3 **Instrument Name:** LM24960 **File Name:** 17MAY10MCAL-40.wiff

Sample Wt	Sample Vol	Dilution Factor	PrepFactor
1.00000	1.000	1.00	1.000

Analytet Name	RT	RRT	Analyte Area Response	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	4.40	870042.3	N/A	
PFPeA	N/A	N/A	N/A	A	13C5-PFPeA	5.01	818444.5	N/A	
PFBS	N/A	N/A	N/A	A	13C3-PFBS	5.08	138468.6	N/A	
4:2-FTS	N/A	N/A	N/A	A	13C2-4:2-FTS	5.47	74451.1	N/A	
PFHxA	N/A	N/A	N/A	A	13C5-PFHxA	5.51	763443.6	N/A	
PFPeS	N/A	N/A	N/A	A	13C3-PFBS	5.08	138468.6	N/A	
PFHxS	5.97	1.000	495812.1	A	13C3-PFHxS	5.97	70296.7	7.053	9.893
PFHpA	N/A	N/A	N/A	A	13C4-PFHpA	5.97	494008.8	N/A	
6:2-FTS	N/A	N/A	N/A	A	13C2-6:2-FTS	6.40	42112.4	N/A	
PFHpS	N/A	N/A	N/A	A	13C3-PFHxS	5.97	70296.7	N/A	
PFOA	6.41	1.000	122725.6	A	13C8-PFOA	6.41	430313.2	0.285	1.300
PFOS	6.79	1.000	300758.7	M	13C8-PFOS	6.79	75891.0	3.963	5.512
PFNA	N/A	N/A	N/A	A	13C9-PFNA	6.81	342191.3	N/A	
PFOSA	N/A	N/A	N/A	A	13C8-PFOSA	7.17	417229.6	N/A	
PFNS	N/A	N/A	N/A	A	13C8-PFOS	6.79	75891.0	N/A	
PFDA	N/A	N/A	N/A	A	13C6-PFDA	7.17	613159.4	N/A	
8:2-FTS	N/A	N/A	N/A	A	13C2-8:2-FTS	7.18	67038.8	N/A	
NMePFOSAE	N/A	N/A	N/A	A	d7-NMePFOSAE	7.62	111020.9	N/A	
NMePFOSA	N/A	N/A	N/A	A	d3-NMePFOSA	7.64	42461.3	N/A	
NMeFOSAA	N/A	N/A	N/A	A	d3-NMeFOSAA	7.34	138567.9	N/A	
NEtPFOSAE	N/A	N/A	N/A	A	d9-NEtPFOSAE	7.78	119314.4	N/A	
NEtPFOSA	N/A	N/A	N/A	A	d5-NEtPFOSA	7.80	39503.8	N/A	
PFDS	N/A	N/A	N/A	A	13C8-PFOS	6.79	75891.0	N/A	
PFUnDA	N/A	N/A	N/A	A	13C7-PFUnDA	7.48	397838.3	N/A	
NEtFOSAA	N/A	N/A	N/A	A	d5-NEtFOSAA	7.49	90618.0	N/A	
PFDoDA	N/A	N/A	N/A	A	13C2-PFDoDA	7.77	497535.1	N/A	
10:2-FTS	N/A	N/A	N/A	A	13C2-8:2-FTS	7.18	67038.8	N/A	
PFDoS	N/A	N/A	N/A	A	13C8-PFOS	6.79	75891.0	N/A	
PFTrDA	N/A	N/A	N/A	A	13C2-PFDoDA	7.77	497535.1	N/A	
PFTeDA	N/A	N/A	N/A	A	13C2-PFTeDA	8.28	271533.5	N/A	
PFHxDA	N/A	N/A	N/A	A	13C2-PFTeDA	8.28	271533.5	N/A	
PFODA	N/A	N/A	N/A	A	13C2-PFTeDA	8.28	271533.5	N/A	

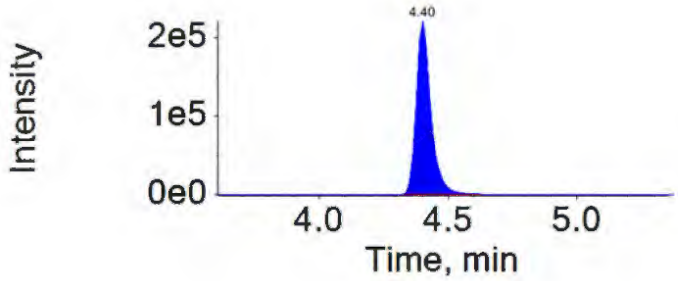
Total Ion Chromatogram



ICAL Name: 17MAY10MCAL
QMethod Name: PFCMOD - 17JAN28
Result Table: 17MAY10MCAL 5/11/2017 12:08:01 PM
Acquisition Method: PFC-32-16NOV02.dam

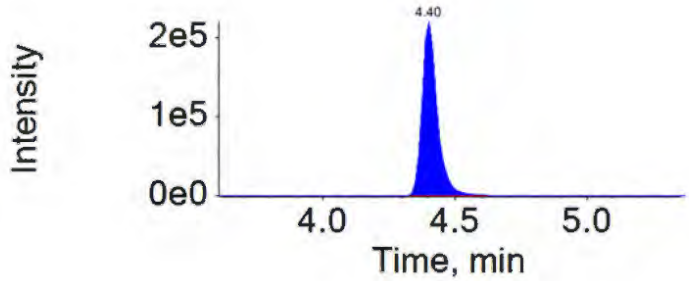
Injection Standard: I13C3-PFBA

216.0 / 172.0



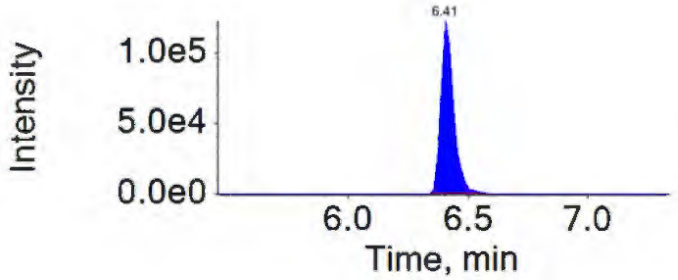
Injection Standard: 13C3-PFBA

216.0 / 172.0



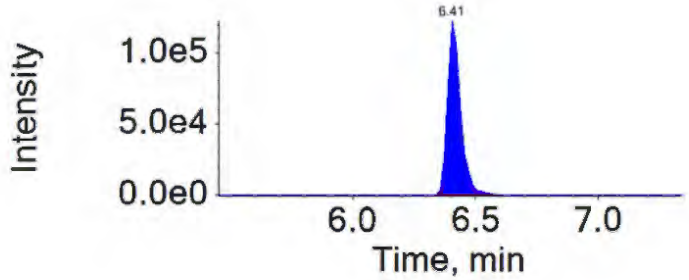
Injection Standard: I13C2-PFOA

415.0 / 370.0



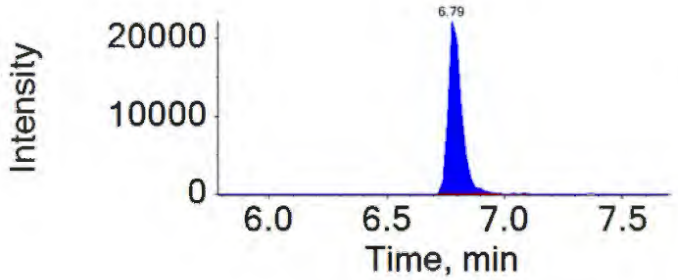
Injection Standard: 13C2-PFOA

415.0 / 370.0



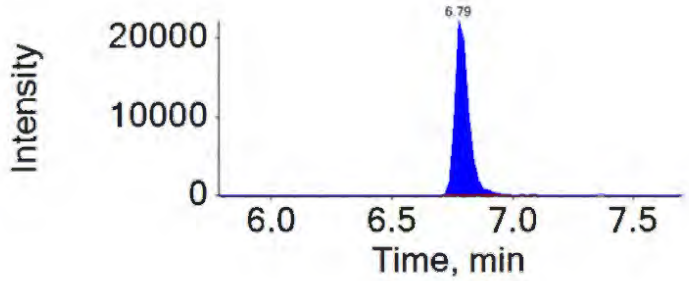
Injection Standard: I13C4-PFOS

503.0 / 99.0



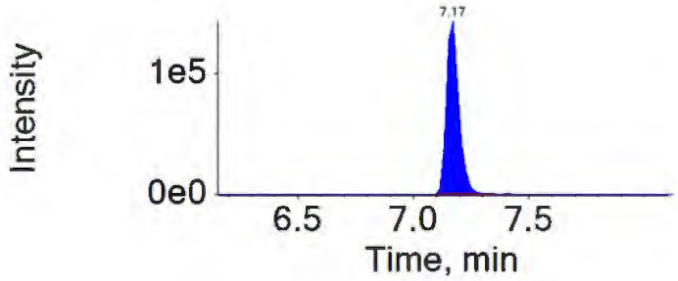
Injection Standard: 13C4-PFOS

503.0 / 99.0



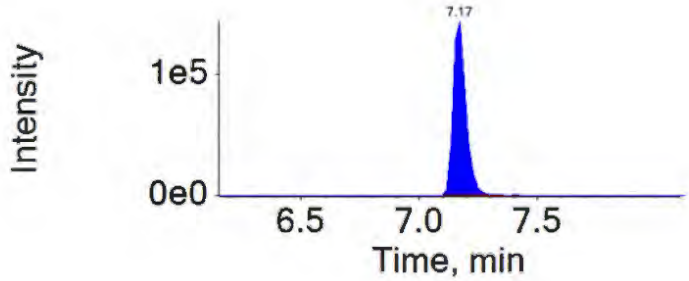
Injection Standard: I13C2-PFDA

515.0 / 470.0



Injection Standard: 13C2-PFDA

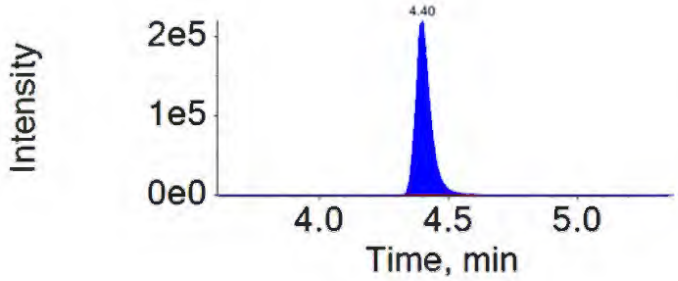
515.0 / 470.0



ICAL Name: 17MAY10MCAL **Result Table:** 17MAY10MCAL 5/11/2017 12:08:01 PM
QMethod Name: PFCMOD - 17JAN28 **Acquisition Method:** PFC-32-16NOV02.dam

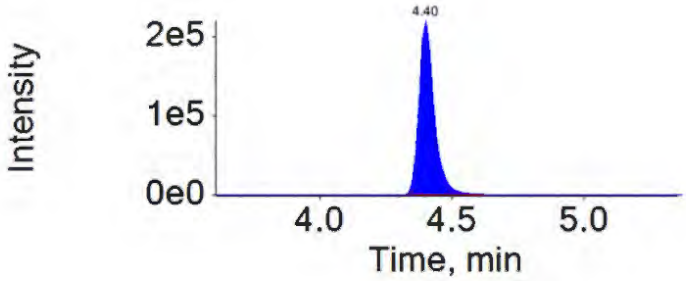
Extraction Standard: E13C4-PFBA

217.0 /
172.0



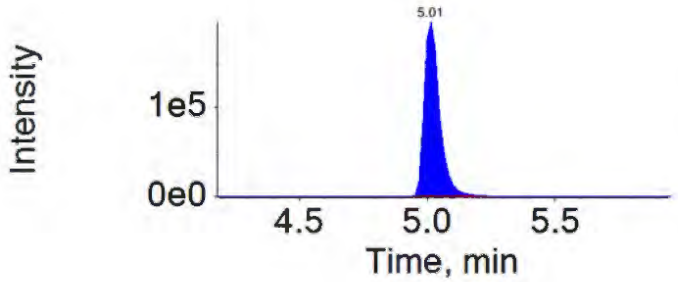
Injection Standard: 13C3-PFBA

216.0 /
172.0



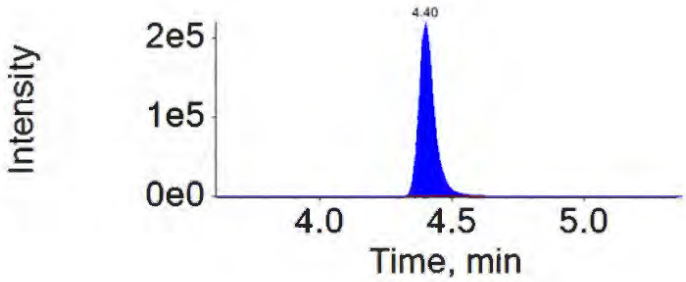
Extraction Standard: E13C5-PFPeA

268.0 /
223.0



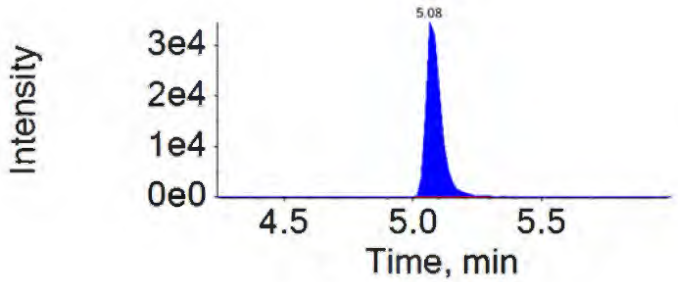
Injection Standard: 13C3-PFBA

216.0 /
172.0



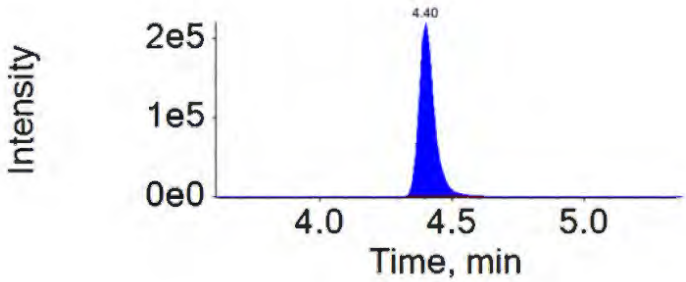
Extraction Standard: E13C3-PFBS

302.0 /
99.0



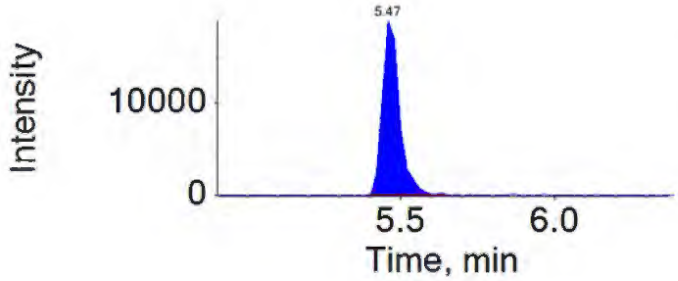
Injection Standard: 13C3-PFBA

216.0 /
172.0



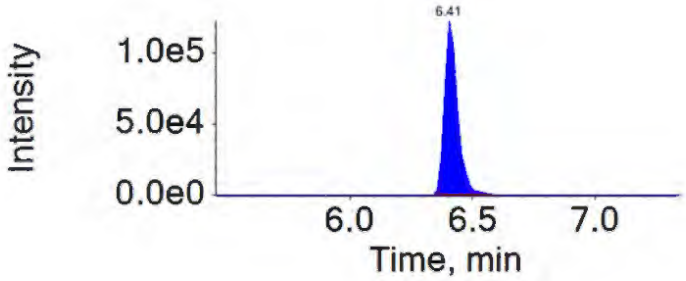
Extraction Standard: E13C2-4:2-FTS

329.0 /
309.0



Injection Standard: 13C2-PFOA

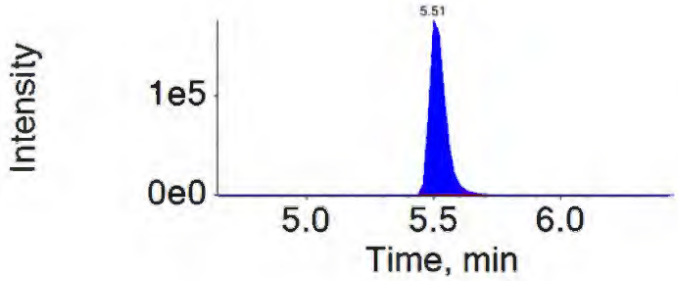
415.0 /
370.0



ICAL Name: 17MAY10MCAL **Result Table:** 17MAY10MCAL 5/11/2017 12:08:01 PM
QMethod Name: PFCMOD - 17JAN28 **Acquisition Method:** PFC-32-16NOV02.dam

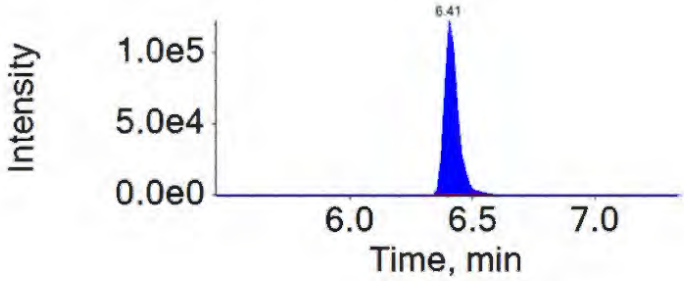
Extraction Standard: E13C5-PFHxA

318.0 /
273.0



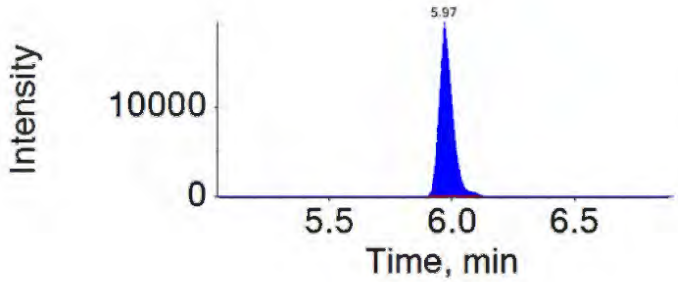
Injection Standard: 13C2-PFOA

415.0 /
370.0



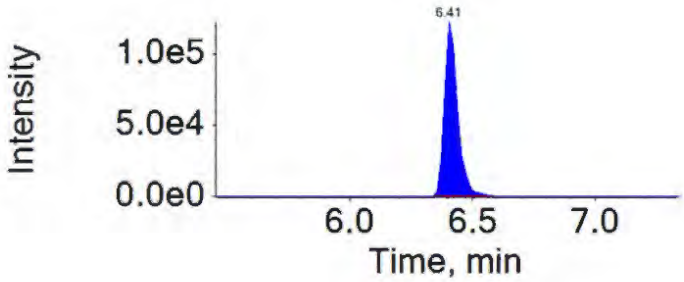
Extraction Standard: E13C3-PFHxS

402.0 /
99.0



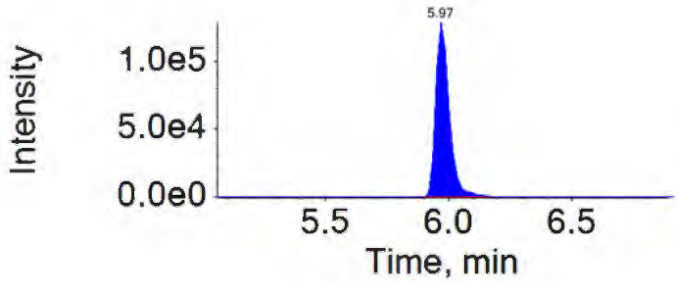
Injection Standard: 13C2-PFOA

415.0 /
370.0



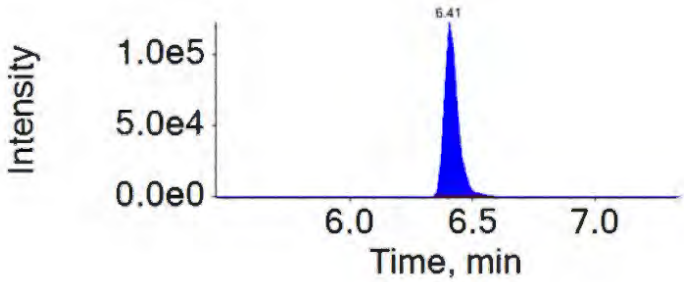
Extraction Standard: E13C4-PFHpA

367.0 /
322.0



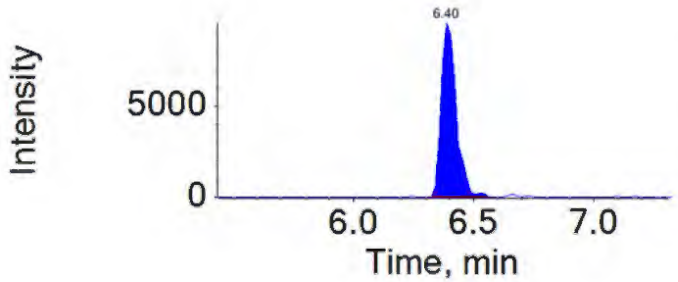
Injection Standard: 13C2-PFOA

415.0 /
370.0



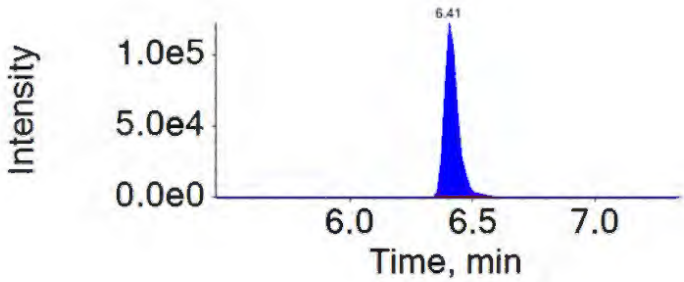
Extraction Standard: E13C2-6:2-FTS

429.0 /
409.0



Injection Standard: 13C2-PFOA

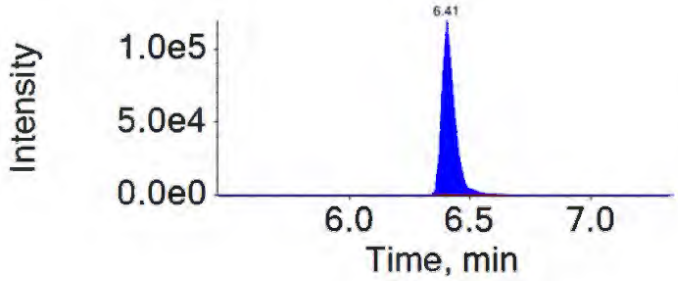
415.0 /
370.0



ICAL Name: 17MAY10MCAL **Result Table:** 17MAY10MCAL 5/11/2017 12:08:01 PM
QMethod Name: PFCMOD - 17JAN28 **Acquisition Method:** PFC-32-16NOV02.dam

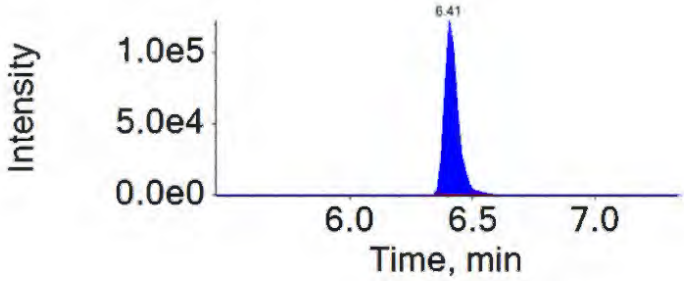
Extraction Standard: E13C8-PFOA

421.0 / 376.0



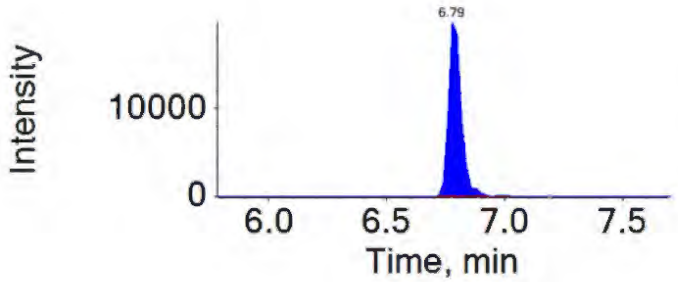
Injection Standard: 13C2-PFOA

415.0 / 370.0



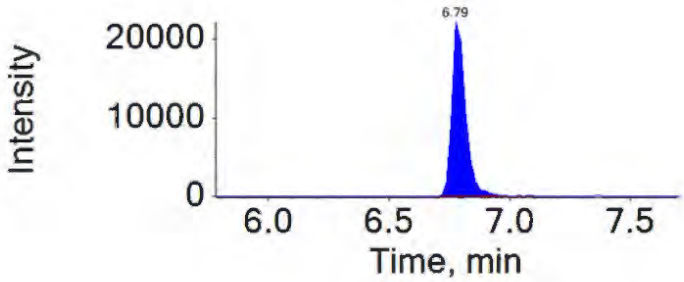
Extraction Standard: E13C8-PFOS

507.0 / 99.0



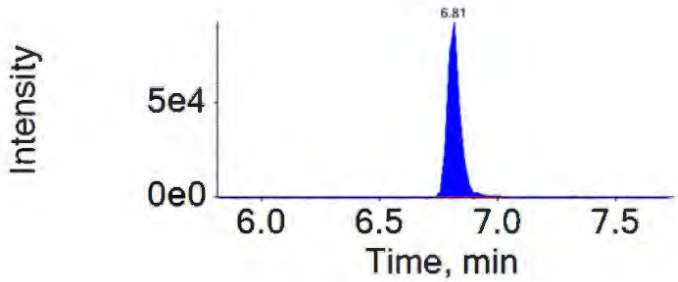
Injection Standard: 13C4-PFOS

503.0 / 99.0



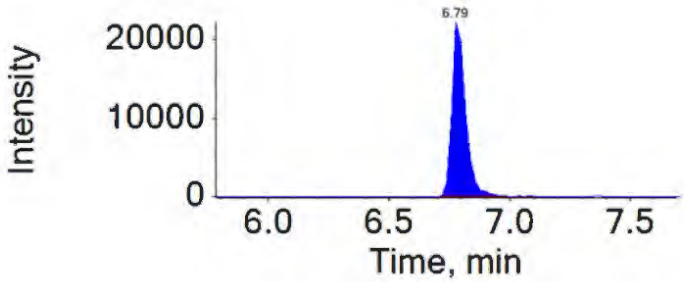
Extraction Standard: E13C9-PFNA

472.0 / 427.0



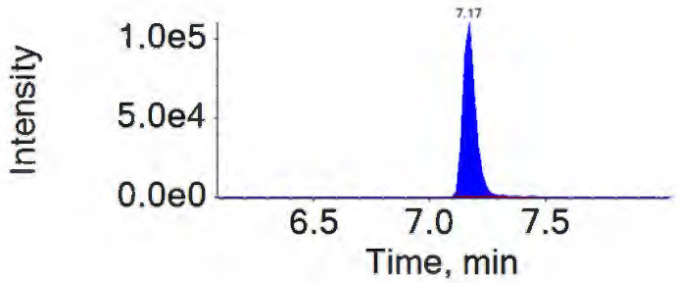
Injection Standard: 13C4-PFOS

503.0 / 99.0



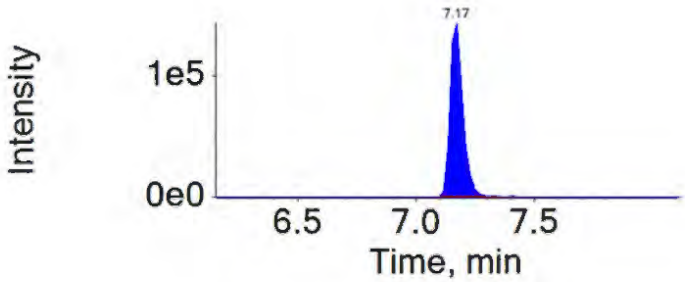
Extraction Standard: E13C8-PFOSA

506.0 / 78.0



Injection Standard: 13C2-PFDA

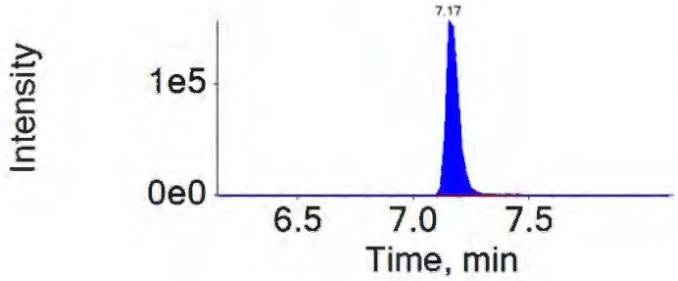
515.0 / 470.0



ICAL Name: 17MAY10MCAL **Result Table:** 17MAY10MCAL 5/11/2017 12:08:01 PM
QMethod Name: PFCMOD - 17JAN28 **Acquisition Method:** PFC-32-16NOV02.dam

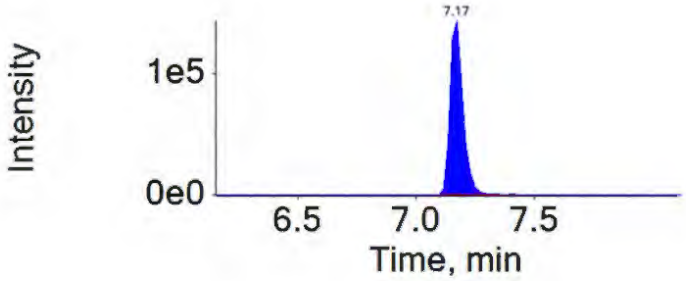
Extraction Standard: E13C6-PFDA

519.0 / 474.0



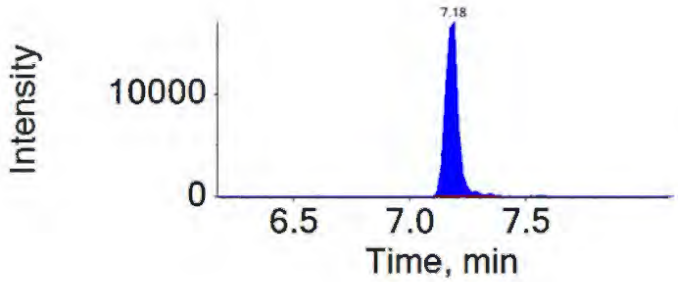
Injection Standard: 13C2-PFDA

515.0 / 470.0



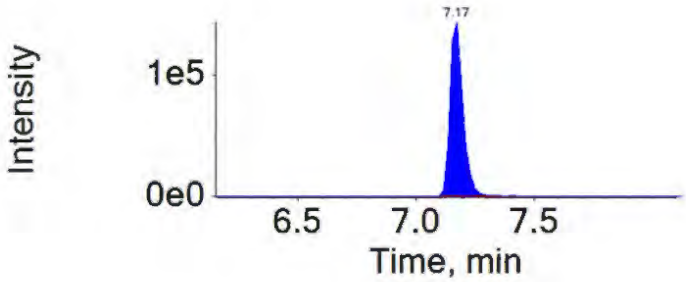
Extraction Standard: E13C2-8:2-FTS

529.0 / 509.0



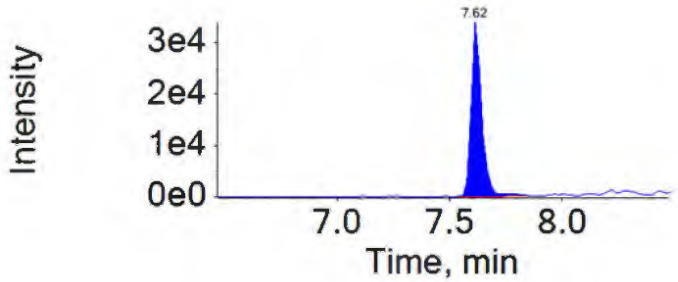
Injection Standard: 13C2-PFDA

515.0 / 470.0



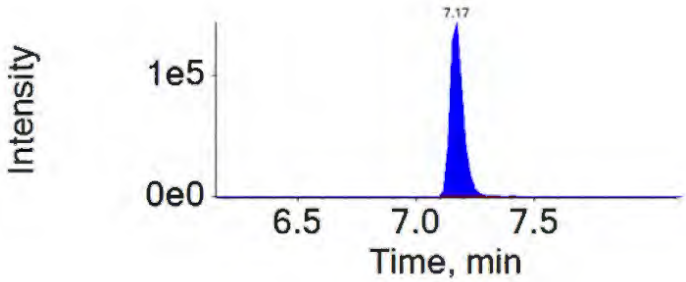
Extraction Standard: Ed7-NMePFOSAE

623.0 / 59.0



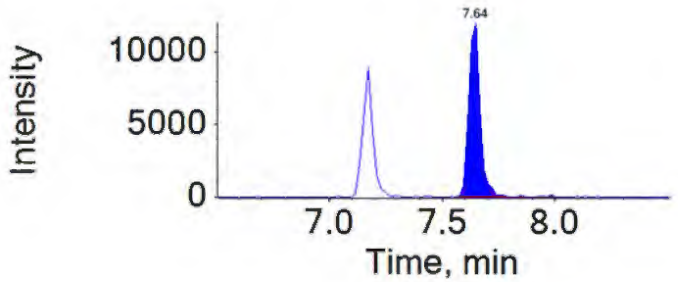
Injection Standard: 13C2-PFDA

515.0 / 470.0



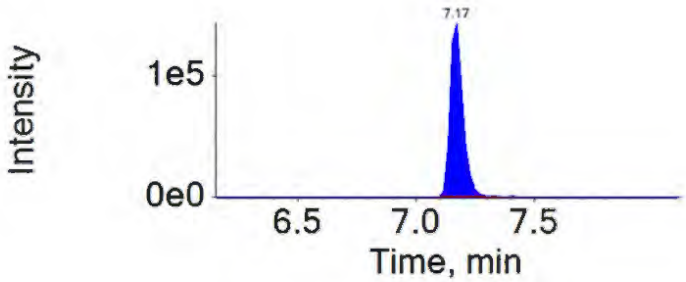
Extraction Standard: Ed3-NMePFOSA

515.0 / 169.0



Injection Standard: 13C2-PFDA

515.0 / 470.0

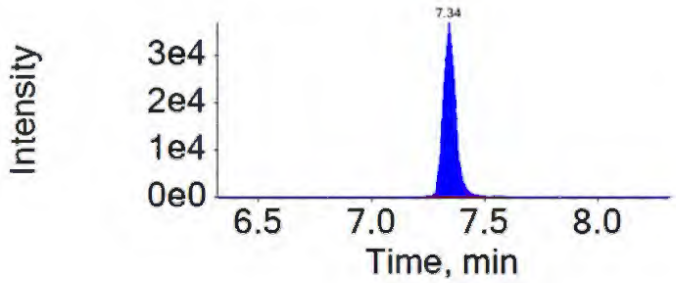


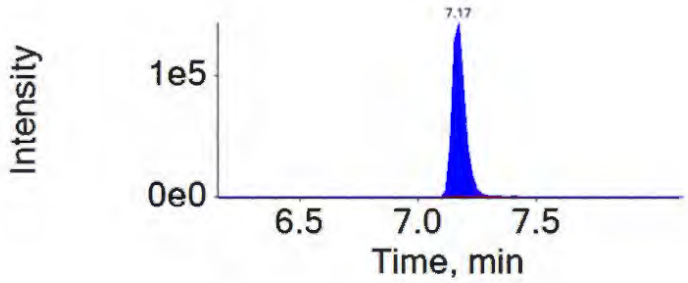
APPROVED
By JWK at 12:35 pm, 5/11/17

REVIEWED
By UMJS at 9:13 am, 5/15/17

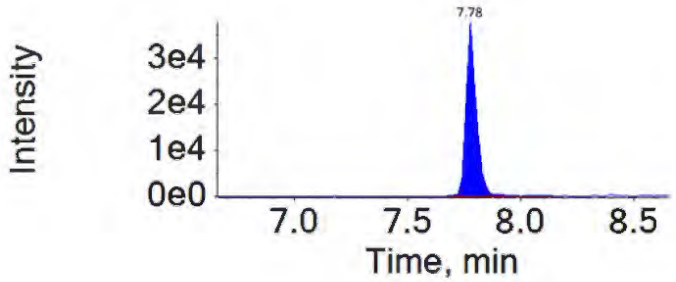
ICAL Name: 17MAY10MCAL **Result Table:** 17MAY10MCAL 5/11/2017 12:08:01 PM
QMethod Name: PFCMOD - 17JAN28 **Acquisition Method:** PFC-32-16NOV02.dam

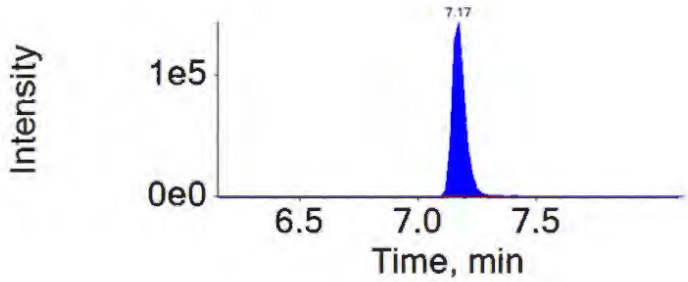
Extraction Standard: Ed3-NMeFOSAA	Injection Standard: 13C2-PFDA
573.0 / 419.0	515.0 / 470.0



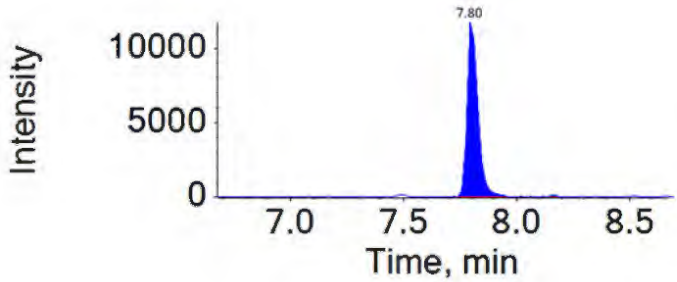


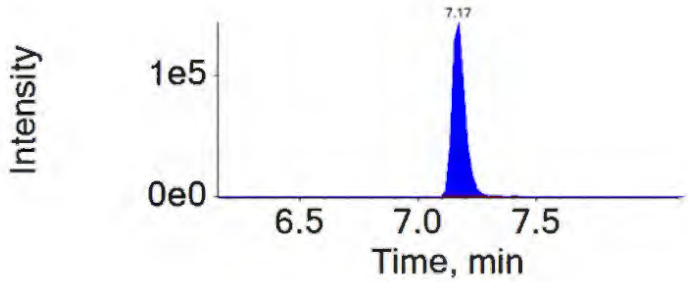
Extraction Standard: Ed9-NEtPFOSAE	Injection Standard: 13C2-PFDA
639.0 / 59.0	515.0 / 470.0



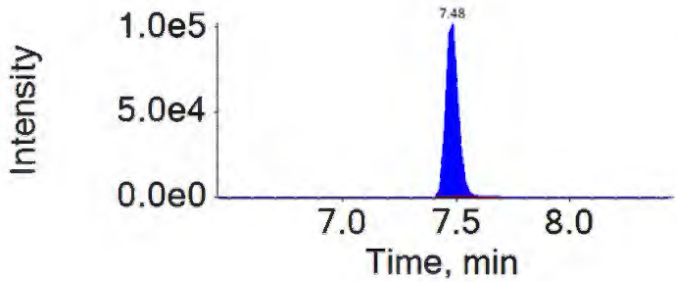


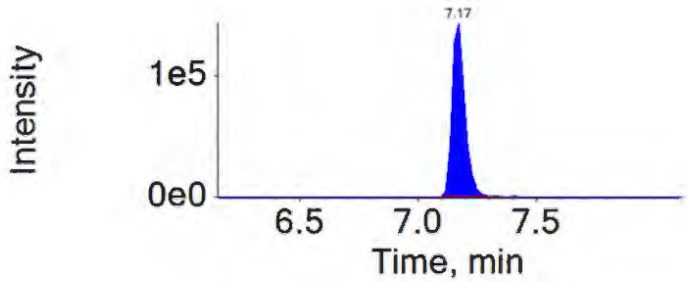
Extraction Standard: Ed5-NEtPFOSA	Injection Standard: 13C2-PFDA
531.0 / 169.0	515.0 / 470.0





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

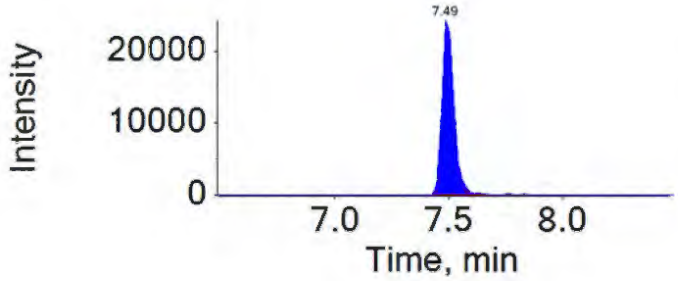




ICAL Name: 17MAY10MCAL **Result Table:** 17MAY10MCAL 5/11/2017 12:08:01 PM
QMethod Name: PFCMOD - 17JAN28 **Acquisition Method:** PFC-32-16NOV02.dam

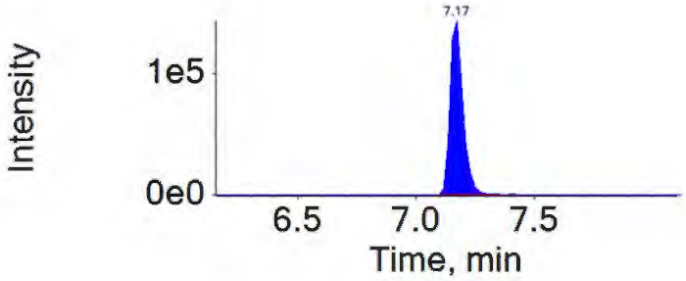
Extraction Standard: Ed5-NEtFOSAA

589.0 / 419.0



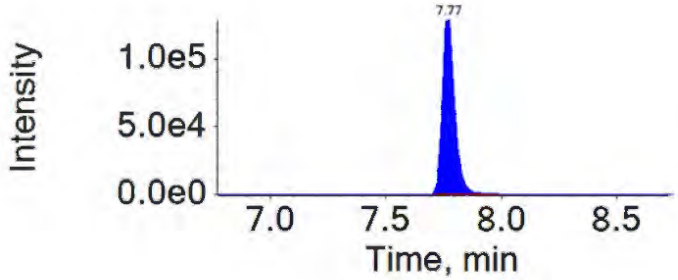
Injection Standard: 13C2-PFDA

515.0 / 470.0



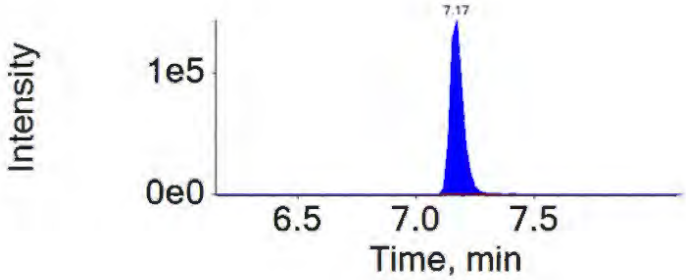
Extraction Standard: E13C2-PFDoDA

615.0 / 570.0



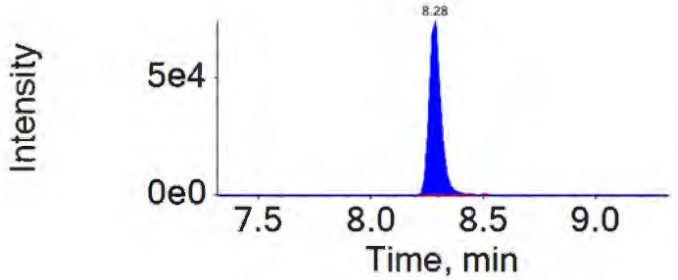
Injection Standard: 13C2-PFDA

515.0 / 470.0



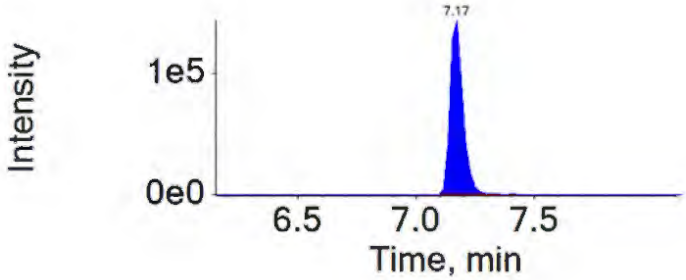
Extraction Standard: E13C2-PFTeDA

715.0 / 670.0



Injection Standard: 13C2-PFDA

515.0 / 470.0



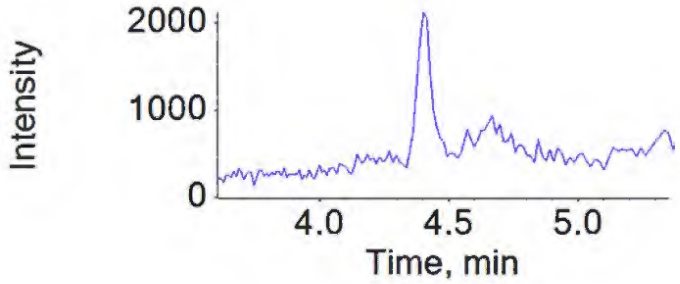
APPROVED
By JWK at 12:35 pm, 5/11/17

REVIEWED
By UMJS at 9:13 am, 5/15/17

ICAL Name: 17MAY10MCAL **Result Table:** 17MAY10MCAL 5/11/2017 12:08:01 PM
QMethod Name: PFCMOD - 17JAN28 **Acquisition Method:** PFC-32-16NOV02.dam

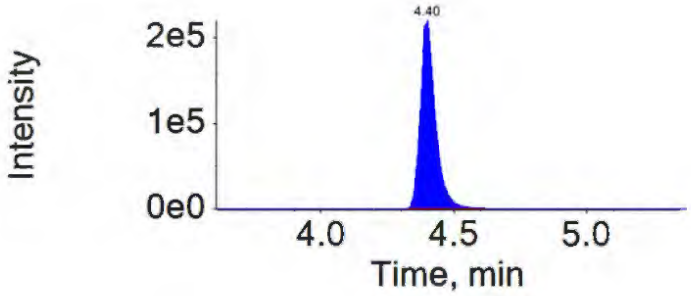
Analyte: PFBA

213.0 / 169.0



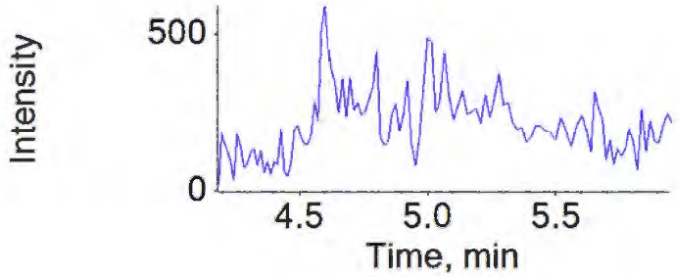
Extraction Standard: 13C4-PFBA

217.0 / 172.0



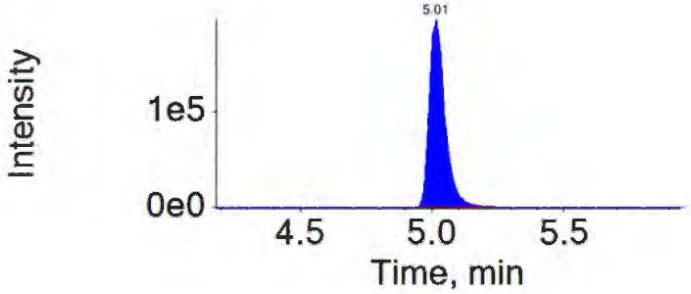
Analyte: PFPeA

263.0 / 219.0



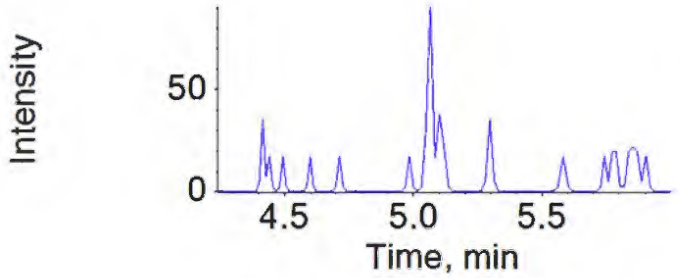
Extraction Standard: 13C5-PFPeA

268.0 / 223.0



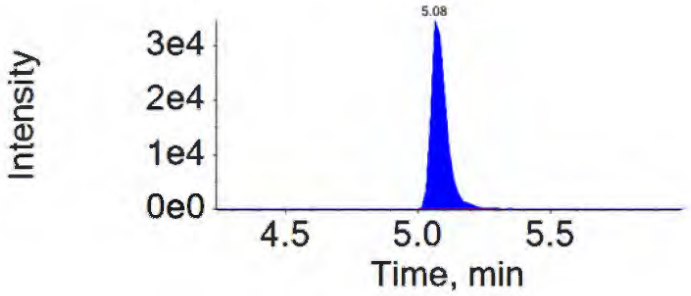
Analyte: PFBS

299.0 / 99.0



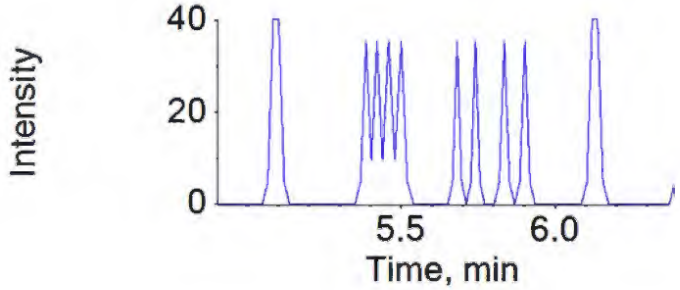
Extraction Standard: 13C3-PFBS

302.0 / 99.0



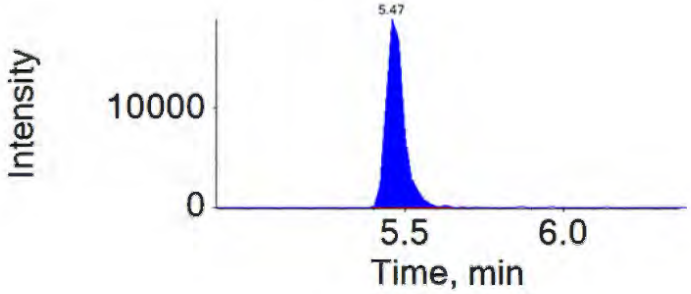
Analyte: 4:2-FTS

327.0 / 307.0



Extraction Standard: 13C2-4:2-FTS

329.0 / 309.0



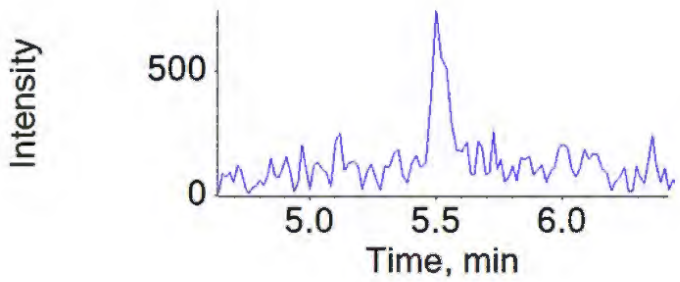
APPROVED
By JWK at 12:35 pm, 5/11/17

REVIEWED
By UMJS at 9:13 am, 5/15/17

ICAL Name: 17MAY10MCAL **Result Table:** 17MAY10MCAL 5/11/2017 12:08:01 PM
QMethod Name: PFCMOD - 17JAN28 **Acquisition Method:** PFC-32-16NOV02.dam

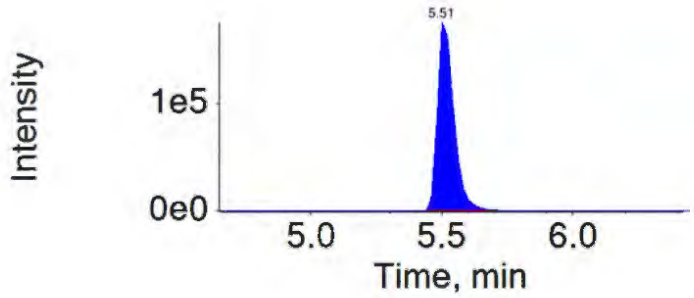
Analyte: PFHxA

313.0 /
269.0



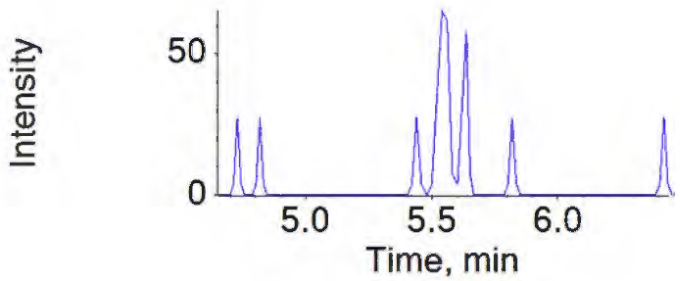
Extraction Standard: 13C5-PFHxA

318.0 /
273.0



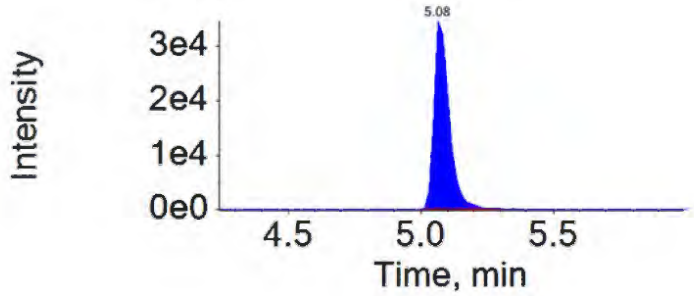
Analyte: PFPeS

349.0 /
99.0



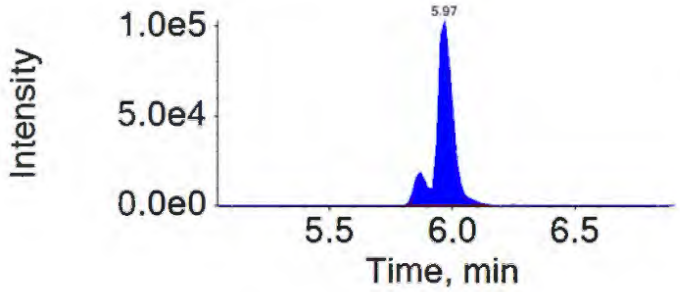
Extraction Standard: 13C3-PFBS

302.0 /
99.0



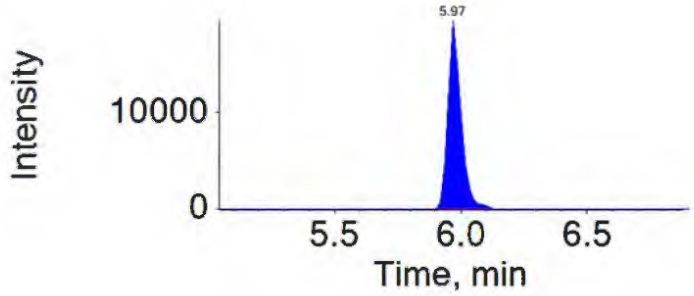
Analyte: PFHxS

399.0 /
80.0



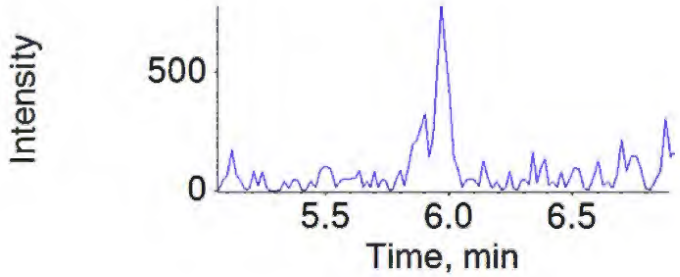
Extraction Standard: 13C3-PFHxS

402.0 /
99.0



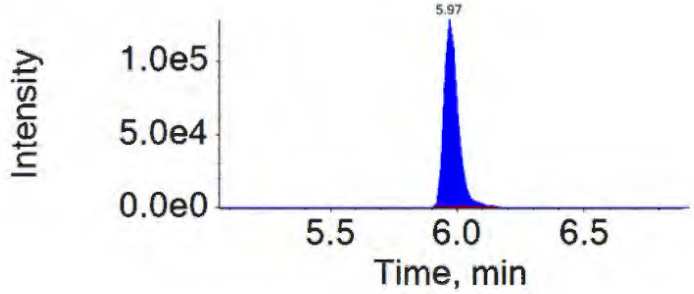
Analyte: PFHpA

363.0 /
319.0



Extraction Standard: 13C4-PFHpA

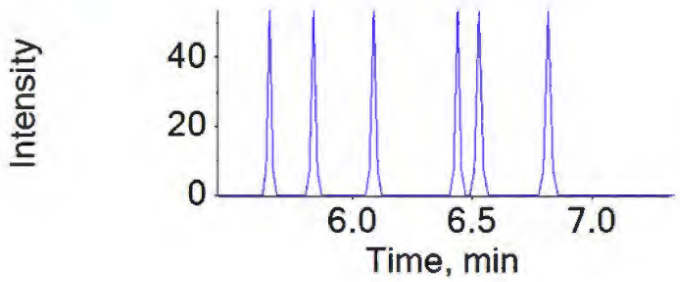
367.0 /
322.0



ICAL Name: 17MAY10MCAL **Result Table:** 17MAY10MCAL 5/11/2017 12:08:01 PM
QMethod Name: PFCMOD - 17JAN28 **Acquisition Method:** PFC-32-16NOV02.dam

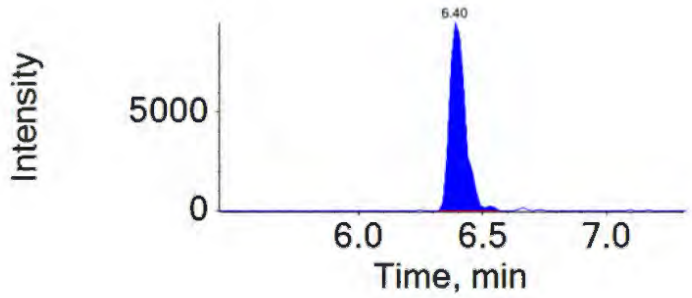
Analyte: 6:2-FTS

427.0 /
407.0



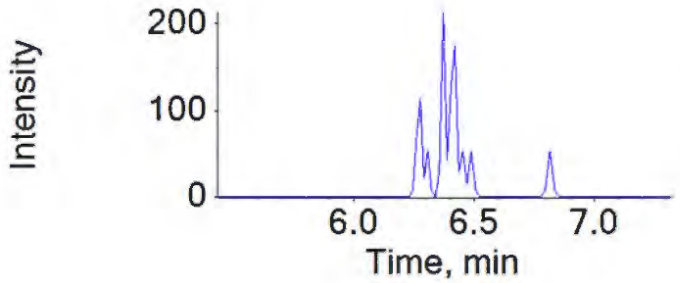
Extraction Standard: 13C2-6:2-FTS

429.0 /
409.0



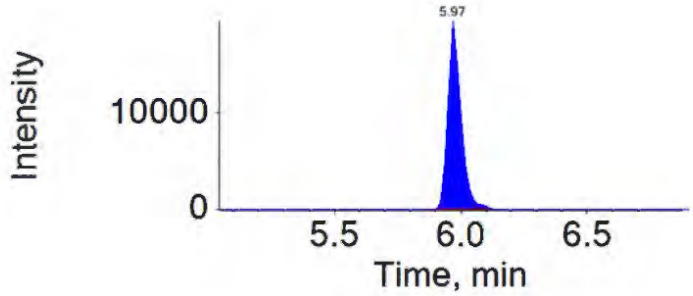
Analyte: PFHpS

449.0 /
99.0



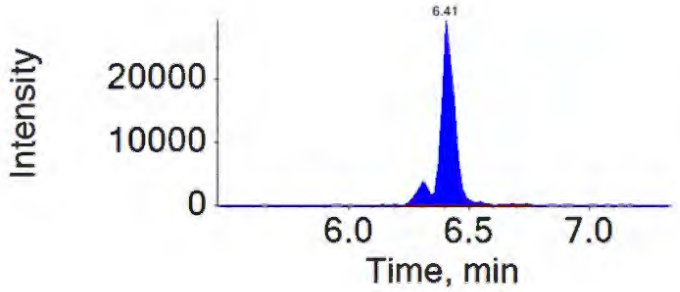
Extraction Standard: 13C3-PFHxS

402.0 /
99.0



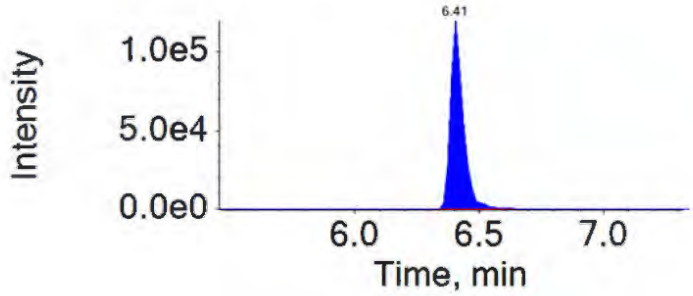
Analyte: PFOA

413.0 /
369.0



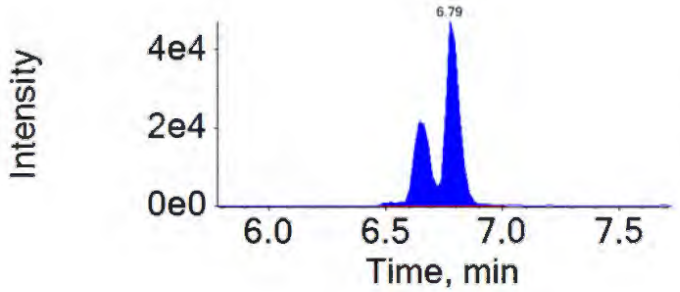
Extraction Standard: 13C8-PFOA

421.0 /
376.0



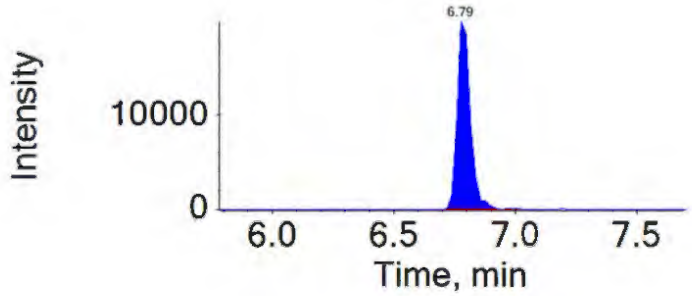
Analyte: PFOS

499.0 /
80.0



Extraction Standard: 13C8-PFOS

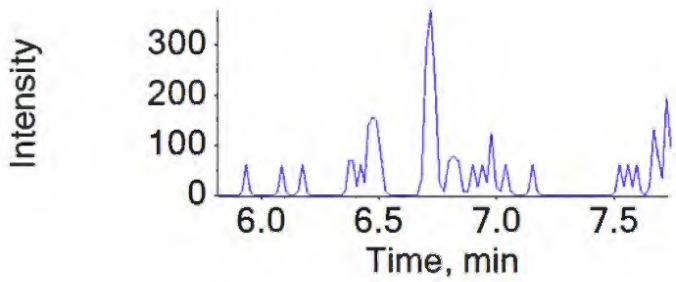
507.0 /
99.0



ICAL Name: 17MAY10MCAL **Result Table:** 17MAY10MCAL 5/11/2017 12:08:01 PM
QMethod Name: PFCMOD - 17JAN28 **Acquisition Method:** PFC-32-16NOV02.dam

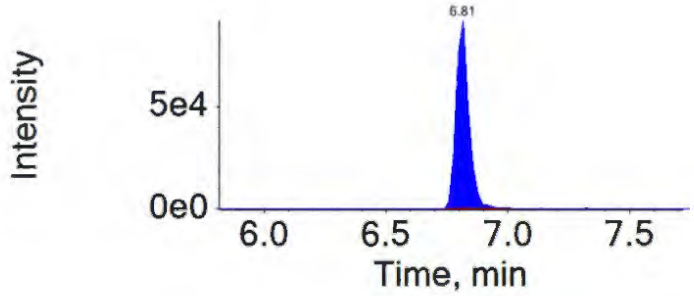
Analyte: PFNA

463.0 /
419.0



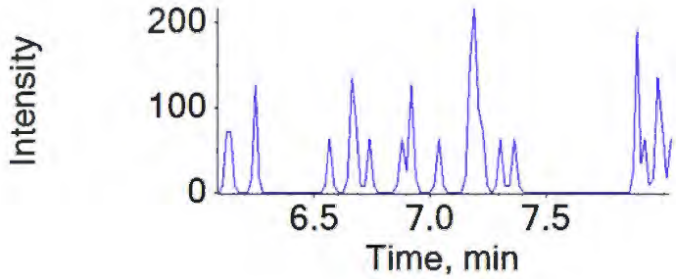
Extraction Standard: 13C9-PFNA

472.0 /
427.0



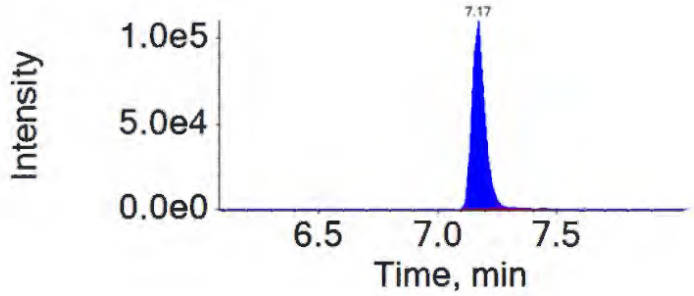
Analyte: PFOSA

498.0 /
78.0



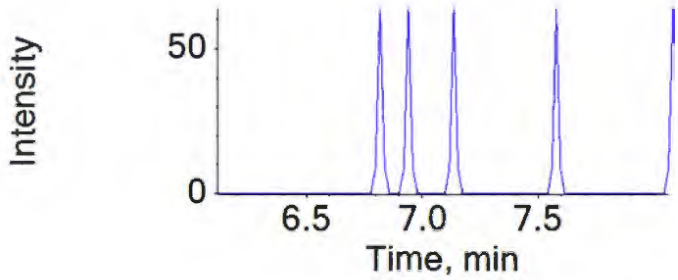
Extraction Standard: 13C8-PFOSA

506.0 /
78.0



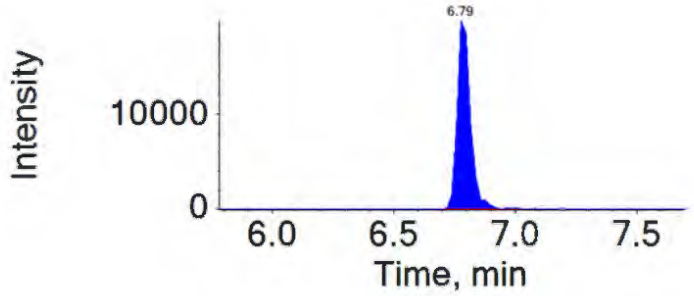
Analyte: PFNS

549.0 /
99.0



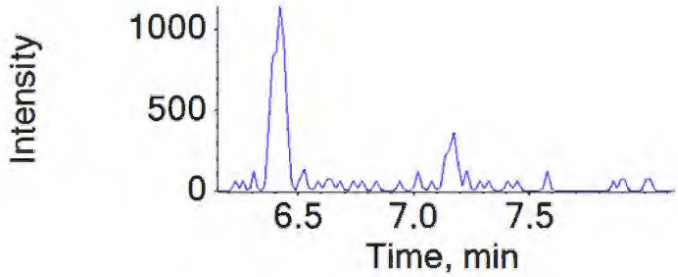
Extraction Standard: 13C8-PFOS

507.0 /
99.0



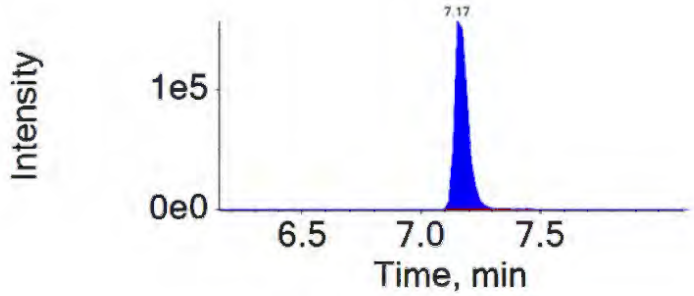
Analyte: PFDA

513.0 /
469.0



Extraction Standard: 13C6-PFDA

519.0 /
474.0



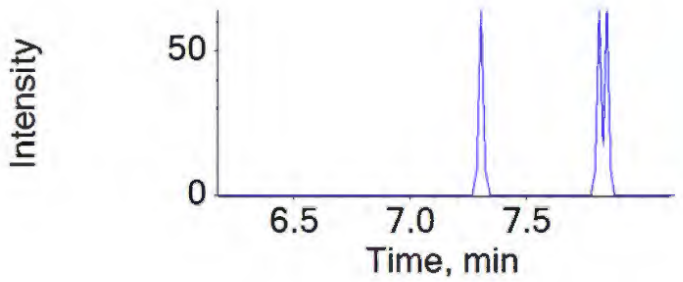
APPROVED
By JWK at 12:35 pm, 5/11/17

REVIEWED
By UMJS at 9:13 am, 5/15/17

ICAL Name: 17MAY10MCAL **Result Table:** 17MAY10MCAL 5/11/2017 12:08:01 PM
QMethod Name: PFCMOD - 17JAN28 **Acquisition Method:** PFC-32-16NOV02.dam

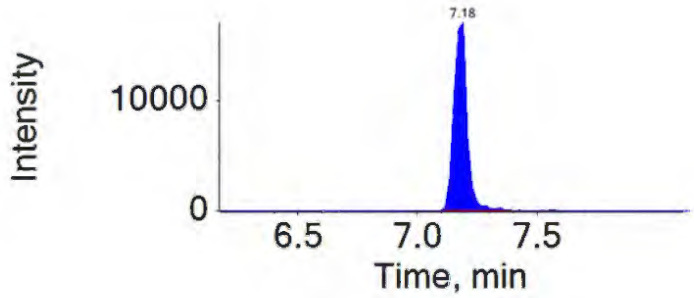
Analyte: 8:2-FTS

527.0 /
507.0



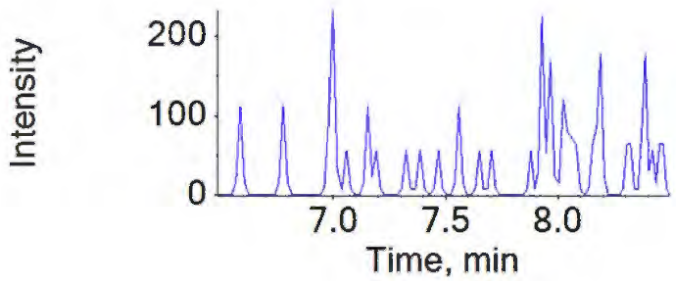
Extraction Standard: 13C2-8:2-FTS

529.0 /
509.0



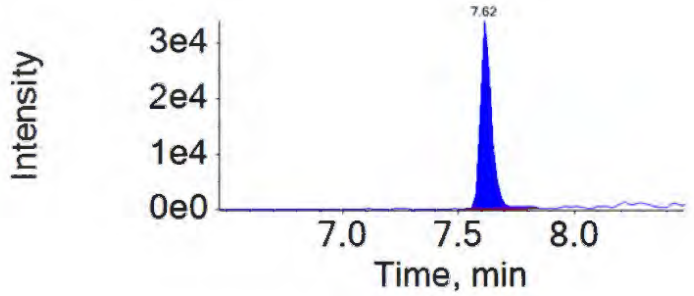
Analyte: NMePFOSAE

616.0 /
59.0



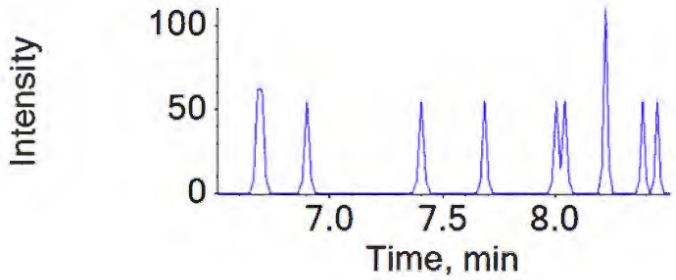
Extraction Standard: d7-NMePFOSAE

623.0 /
59.0



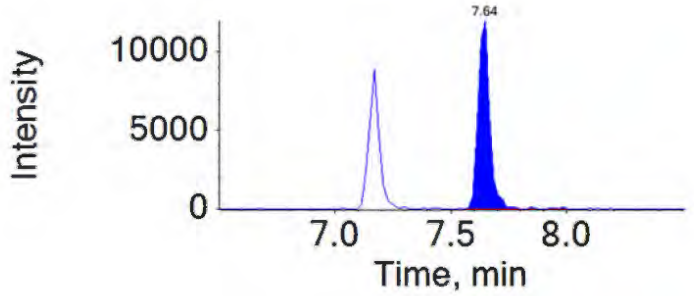
Analyte: NMePFOSA

512.0 /
169.0



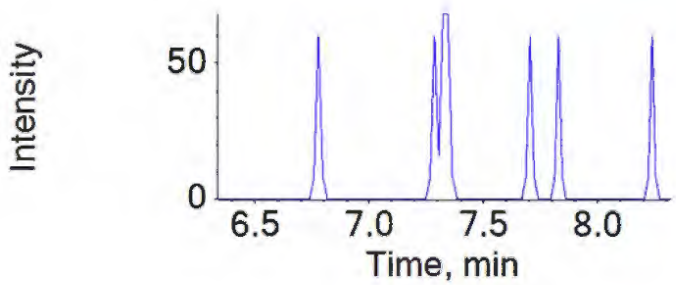
Extraction Standard: d3-NMePFOSA

515.0 /
169.0



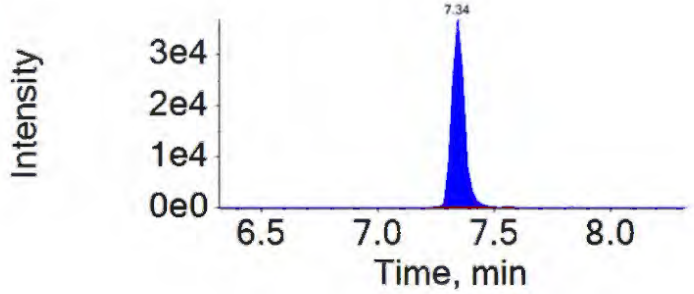
Analyte: NMeFOSAA

570.0 /
419.0



Extraction Standard: d3-NMeFOSAA

573.0 /
419.0



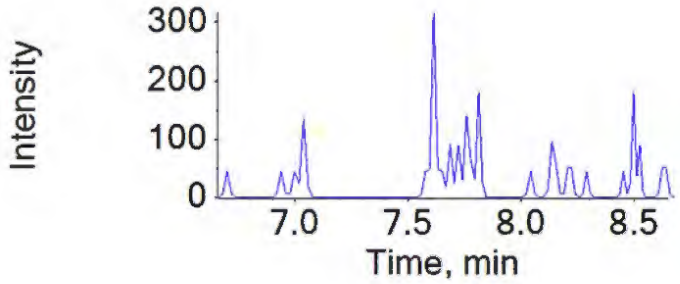
APPROVED
By JWK at 12:35 pm, 5/11/17

REVIEWED
By UMJS at 9:13 am, 5/15/17

ICAL Name: 17MAY10MCAL **Result Table:** 17MAY10MCAL 5/11/2017 12:08:01 PM
QMethod Name: PFCMOD - 17JAN28 **Acquisition Method:** PFC-32-16NOV02.dam

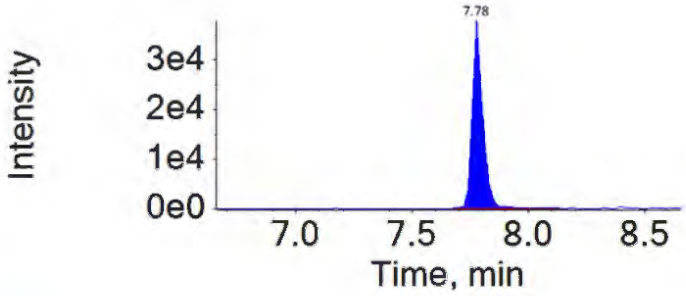
Analyte: NEtPFOSAE

630.0 /
59.0



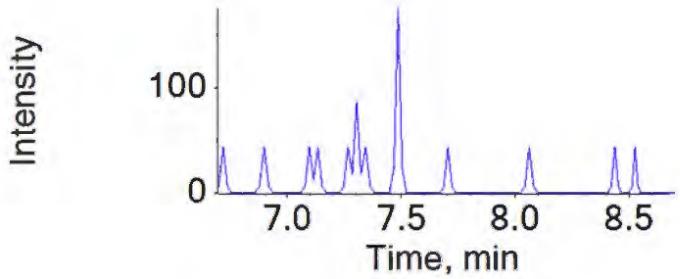
Extraction Standard: d9-NEtPFOSAE

639.0 /
59.0



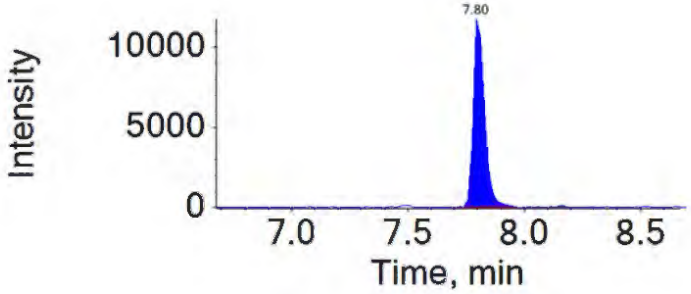
Analyte: NEtPFOSA

526.0 /
169.0



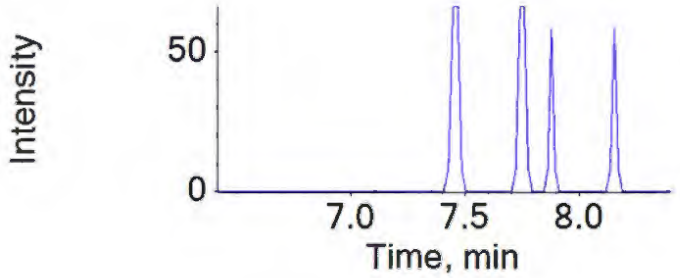
Extraction Standard: d5-NEtPFOSA

531.0 /
169.0



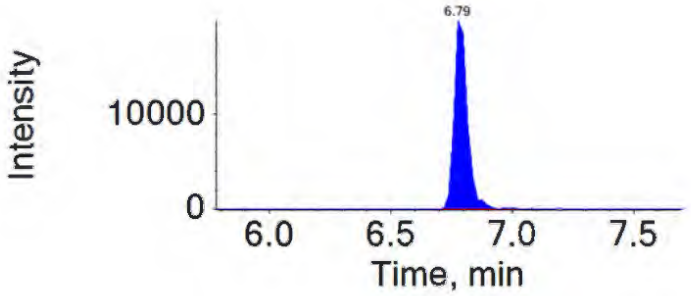
Analyte: PFDS

599.0 /
99.0



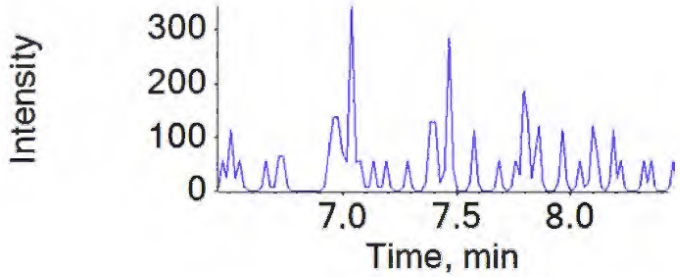
Extraction Standard: 13C8-PFOS

507.0 /
99.0



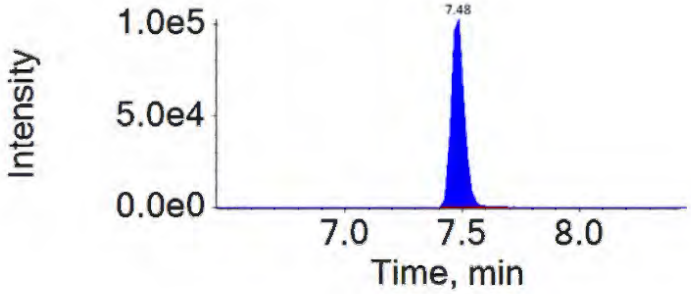
Analyte: PFUnDA

563.0 /
519.0



Extraction Standard: 13C7-PFUnDA

570.0 /
525.0



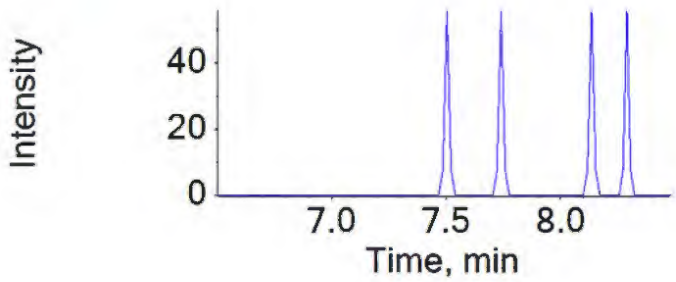
APPROVED
By JWK at 12:35 pm, 5/11/17

REVIEWED
By UMJS at 9:13 am, 5/15/17

ICAL Name: 17MAY10MCAL **Result Table:** 17MAY10MCAL 5/11/2017 12:08:01 PM
QMethod Name: PFCMOD - 17JAN28 **Acquisition Method:** PFC-32-16NOV02.dam

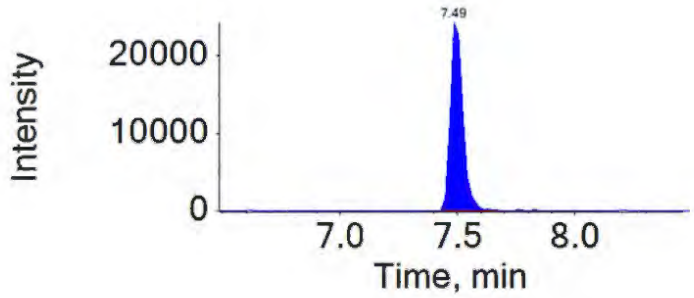
Analyte: NEtFOSAA

584.0 /
419.0



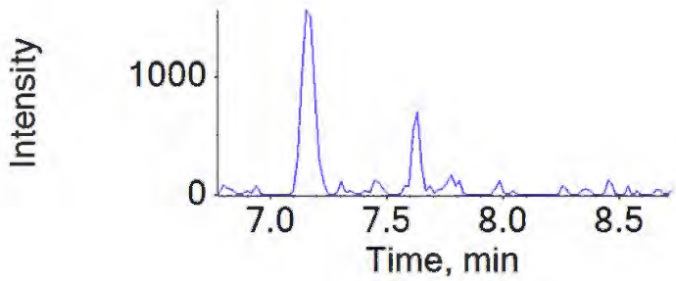
Extraction Standard: d5-NEtFOSAA

589.0 /
419.0



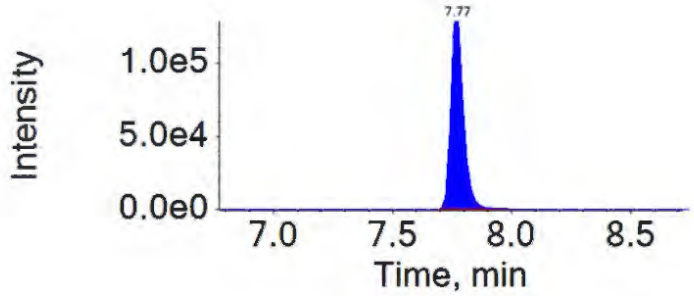
Analyte: PFDoDA

613.0 /
569.0



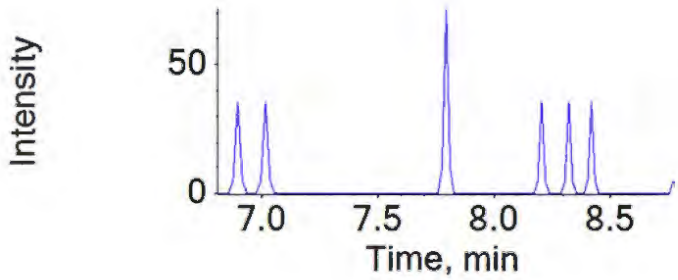
Extraction Standard: 13C2-PFDoDA

615.0 /
570.0



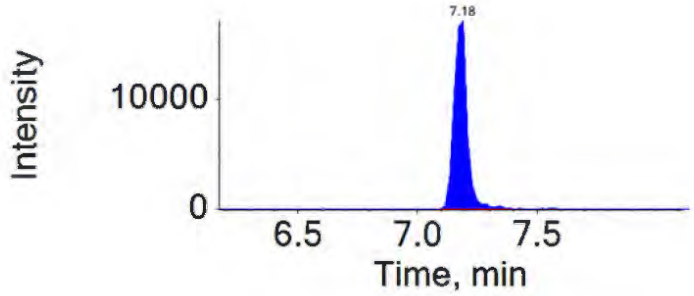
Analyte: 10:2-FTS

627.0 /
607.0



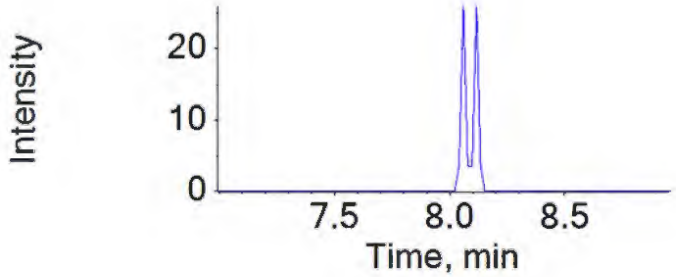
Extraction Standard: 13C2-8:2-FTS

529.0 /
509.0



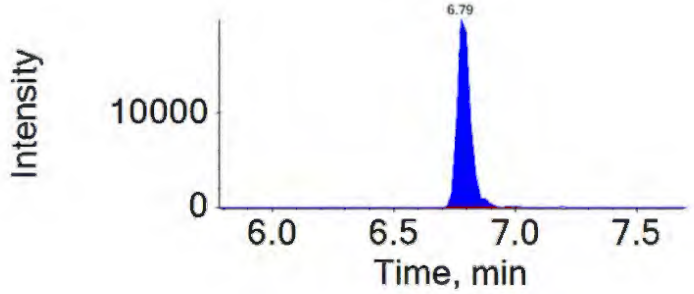
Analyte: PFDoS

699.0 /
99.0



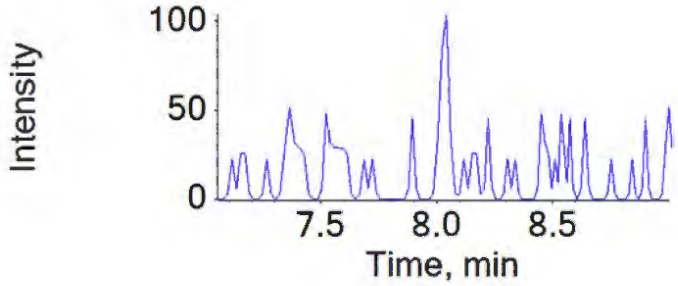
Extraction Standard: 13C8-PFOS

507.0 /
99.0

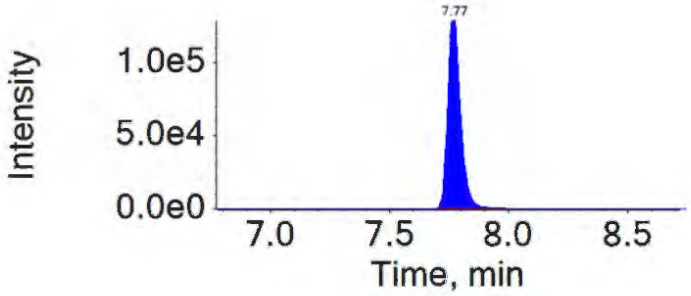


ICAL Name: 17MAY10MCAL **Result Table:** 17MAY10MCAL 5/11/2017 12:08:01 PM
QMethod Name: PFCMOD - 17JAN28 **Acquisition Method:** PFC-32-16NOV02.dam

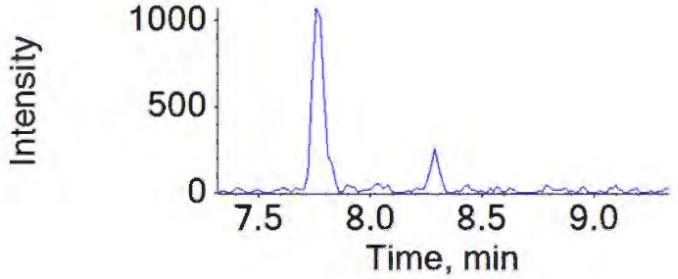
Analyte: PFTrDA
663.0 / 619.0



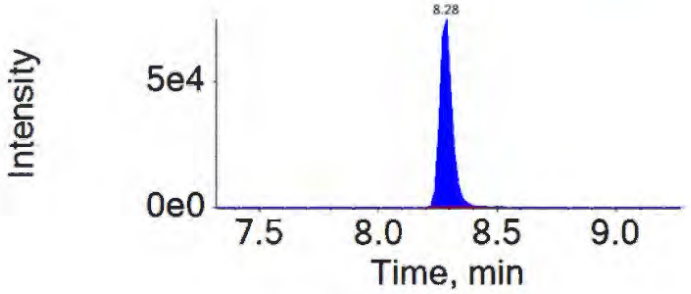
Extraction Standard: 13C2-PFDoDA
615.0 / 570.0



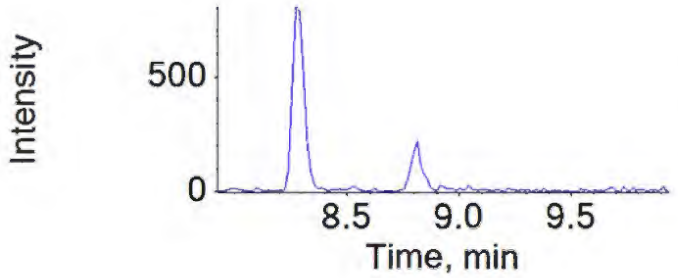
Analyte: PFTeDA
713.0 / 669.0



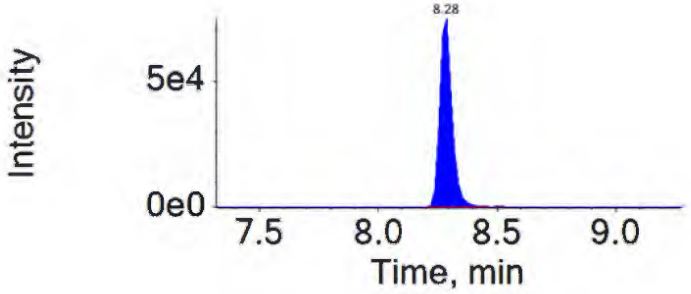
Extraction Standard: 13C2-PFTeDA
715.0 / 670.0



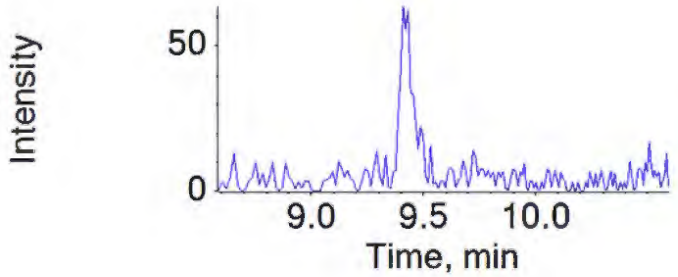
Analyte: PFHxDA
813.0 / 769.0



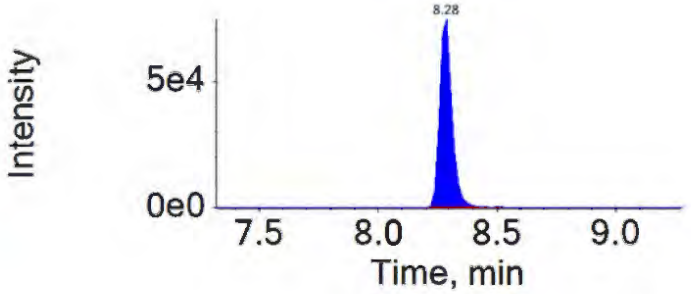
Extraction Standard: 13C2-PFTeDA
715.0 / 670.0



Analyte: PFODA
913.0 / 869.0



Extraction Standard: 13C2-PFTeDA
715.0 / 670.0



APPROVED
By JWK at 12:35 pm, 5/11/17

REVIEWED
By UMJS at 9:13 am, 5/15/17

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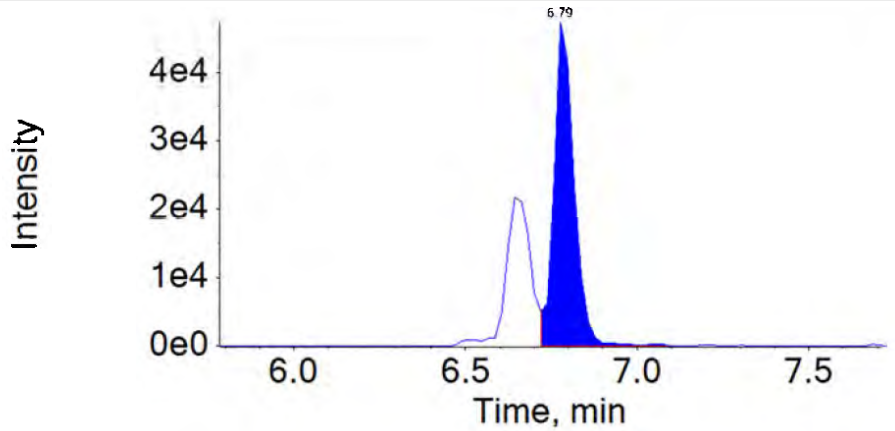
Auto Integrations prior to Manual Integration

Print Date: 05/11/2017 12:22 PM
Template: MQ-OrigInteg-16NOV21.docx

Results Table Name: 17MAY10MCAL
Results Table Date: 5/11/2017 12:08:01 PM

Acquisition Method: PFC-32-16NOV02.dam
QMethod File: PFCMOD - 17JAN28

Component Name:
PFOS
RT (min.):
6.79
Peak Area:
193919.2
Mass Range:
499.0 / 80.0
File Name:
17MAY10MCAL-40.wiff
Sample Name:
L+B CAL3



Integration Comment: incorrect integration

APPROVED
By JWK at 12:35 pm, 5/11/17

REVIEWED
By UMJS at 9:13 am, 5/15/17

Results Table Name: 17MAY10MCAL
Results Table Date: 5/11/2017 12:08:01 PM

Acquisition Method: PFC-32-16NOV02.dam
QMethod File: PFCMOD - 17JAN28

APPROVED
By JWK at 12:35 pm, 5/11/17

REVIEWED
By UMJS at 9:13 am, 5/15/17

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LC-MS/MS Analysis Report

Printed: 5/11/2017 12:18:00 PM
Template: MQ-Sample-16Nov21.docx

ICAL Name: 17MAY10MCAL
QMethod Name: PFCMOD - 17JAN28
Result Table: 17MAY10MCAL 5/11/2017 12:08:01 PM
Acquisition Method: PFC-32-16NOV02.dam

Sample Name:	ICV			**Data File:**		17MAY10MCAL-42.wiff
Sample ID:	LCSICVX1733A			**Acquis Date:**		2017-05-11T09:16:39
Sample Type:	Quality Control			**Instrument:**		LM24960
Vial Position:	10			**Acquis Method:**		PFC-32-16NOV02.dam
Injection Vol:	5.00			**Result Table:**		17MAY10MCAL
QMethod File:	PFCMOD - 17JAN28			**ICAL Name:**		17MAY10MCAL
Batch Number:	MODICAL			**Operator:**		Not calculated
Sample Wt.:	1.00000			**Dilution Factor:**		1.00
Sample Vol.:	1.000			**Prep Factor:**		1.000

Injection Standard Peak Table

Injection Standard Name	Inj Std Conc	Injection Std Peak Area	ICAL Injection Standard AVG	Injection Std %Diff	Injection Std %Diff Limit	Injection Std %Diff OOS
I13C3-PFBA	1.0	890980.0	669117.3	33.2	50.0	
I13C2-PFOA	1.0	427029.8	342184.6	24.8	50.0	
I13C4-PFOS	1.0	89827.1	70131.6	28.1	50.0	
I13C2-PFDA	1.0	541670.3	384098.7	41.0	50.0	

Extraction Standard Peak Table

Extraction Standard Name	Ext Std Area	Inj Std Name	Inj Std Area	Area Ratio	AVG Area Ratio	Ext Std Conc	Ext Std Result	Ext Std %REC	Ext Std %REC Limit	Ext Std OOS
E13C4-PFBA	864498.9	13C3-PFBA	890980.0	0.970	1.150	1.000	0.843	84.4	70.0-130.0	
E13C5-PFPeA	791898.3	13C3-PFBA	890980.0	0.889	1.073	1.000	0.828	82.8	70.0-130.0	
E13C3-PFBS	136455.1	13C3-PFBA	890980.0	0.153	0.194	1.000	0.788	78.8	70.0-130.0	
E13C2-4:2-FTS	85294.2	13C2-PFOA	427029.8	0.200	0.236	1.000	0.845	84.5	70.0-130.0	
E13C5-PFHxA	789527.8	13C2-PFOA	427029.8	1.849	2.026	1.000	0.913	91.3	70.0-130.0	
E13C3-PFHxS	81040.0	13C2-PFOA	427029.8	0.190	0.206	1.000	0.922	92.2	70.0-130.0	
E13C4-PFHpA	469246.3	13C2-PFOA	427029.8	1.099	1.285	1.000	0.855	85.5	70.0-130.0	
E13C2-6:2-FTS	40318.1	13C2-PFOA	427029.8	0.094	0.128	1.000	0.737	73.7	70.0-130.0	
E13C8-PFOA	442675.2	13C2-PFOA	427029.8	1.037	1.163	1.000	0.891	89.1	70.0-130.0	
E13C8-PFOS	71287.8	13C4-PFOS	89827.1	0.794	0.865	1.000	0.917	91.7	70.0-130.0	
E13C9-PFNA	342236.4	13C4-PFOS	89827.1	3.810	4.422	1.000	0.862	86.2	70.0-130.0	
E13C8-PFOSA	467475.5	13C2-PFDA	541670.3	0.863	0.936	1.000	0.922	92.2	70.0-130.0	
E13C6-PFDA	583715.2	13C2-PFDA	541670.3	1.078	1.424	1.000	0.757	75.7	70.0-130.0	
E13C2-8:2-FTS	57870.5	13C2-PFDA	541670.3	0.107	0.155	1.000	0.688	68.8	70.0-130.0	OOS
Ed7-NMePFOSAE	122356.5	13C2-PFDA	541670.3	0.226	0.299	1.000	0.756	75.6	70.0-130.0	
Ed3-NMePFOSA	51955.8	13C2-PFDA	541670.3	0.096	0.120	1.000	0.797	79.7	70.0-130.0	
Ed3-NMeFOSAA	156242.1	13C2-PFDA	541670.3	0.288	0.343	1.000	0.841	84.1	70.0-130.0	
Ed9-NEtPFOSAE	127497.3	13C2-PFDA	541670.3	0.235	0.333	1.000	0.708	70.8	70.0-130.0	
Ed5-NEtPFOSA	38738.2	13C2-PFDA	541670.3	0.072	0.095	1.000	0.755	75.5	70.0-130.0	
E13C7-PFUnDA	443187.8	13C2-PFDA	541670.3	0.818	0.953	1.000	0.859	85.9	70.0-130.0	
Ed5-NEtFOSAA	107430.6	13C2-PFDA	541670.3	0.198	0.249	1.000	0.797	79.7	70.0-130.0	
E13C2-PFDoDA	502456.6	13C2-PFDA	541670.3	0.928	1.154	1.000	0.804	80.4	70.0-130.0	
E13C2-PFTeDA	286942.8	13C2-PFDA	541670.3	0.530	0.651	1.000	0.813	81.3	70.0-130.0	

APPROVED
By JWK at 12:35 pm, 5/11/17

REVIEWED
By UMJS at 9:13 am, 5/15/17

ICAL Name: 17MAY10MCAL **Result Table:** 17MAY10MCAL 5/11/2017 12:08:01 PM
QMethod Name: PFCMOD - 17JAN28 **Acquisition Method:** PFC-32-16NOV02.dam

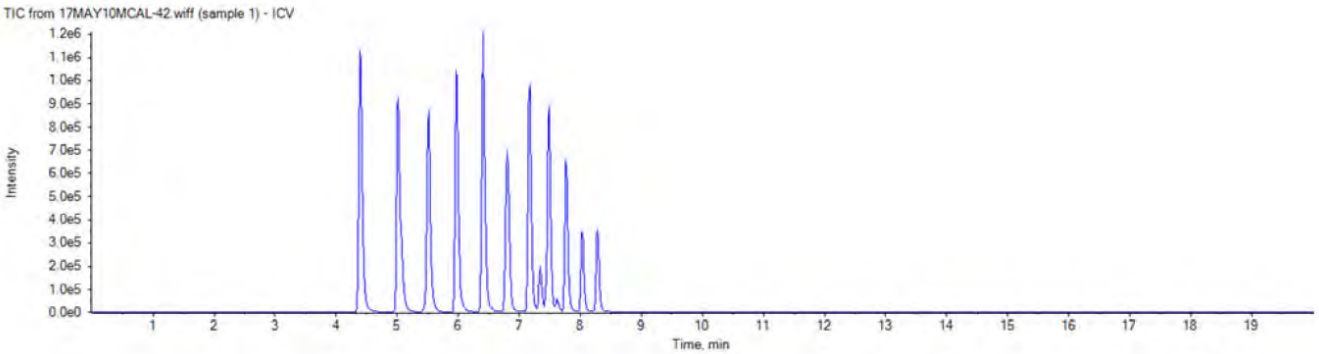
Analyte Quantitation Peak Table

Sample Name: ICV **Instrument Name:** LM24960 **File Name:** 17MAY10MCAL-42.wiff

Sample Wt	Sample Vol	Dilution Factor	PrepFactor
1.00000	1.000	1.00	1.000

Analytet Name	RT	RRT	Analyte Area Response	Int Typ	ES Name	ES RT	ES Area Response	Area Ratio	Sample Result (ng/g)
PFBA	4.39	1.000	2769238.0	A	13C4-PFBA	4.40	864498.9	3.203	17.615
PFPeA	5.01	1.000	2815543.7	A	13C5-PFPeA	5.01	791898.3	3.555	17.224
PFBS	5.07	1.000	471895.9	A	13C3-PFBS	5.07	136455.1	3.458	16.366
4:2-FTS	N/A	N/A	N/A	A	13C2-4:2-FTS	5.46	85294.2	N/A	
PFHxA	5.51	1.000	2662676.0	A	13C5-PFHxA	5.51	789527.8	3.373	17.853
PFPeS	N/A	N/A	N/A	A	13C3-PFBS	5.07	136455.1	N/A	
PFHxS	5.97	1.000	930700.9	A	13C3-PFHxS	5.97	81040.0	11.485	16.108
PFHpA	5.97	1.000	2139359.8	A	13C4-PFHpA	5.97	469246.3	4.559	18.365
6:2-FTS	N/A	N/A	N/A	A	13C2-6:2-FTS	6.39	40318.1	N/A	
PFHpS	6.39	1.070	272282.8	A	13C3-PFHxS	5.97	81040.0	3.360	17.621
PFOA	6.41	1.000	1654458.2	A	13C8-PFOA	6.41	442675.2	3.737	17.029
PFOS	6.79	1.000	782876.8	A	13C8-PFOS	6.79	71287.8	10.982	15.274
PFNA	6.81	1.000	1489986.1	A	13C9-PFNA	6.81	342236.4	4.354	17.780
PFOSA	N/A	N/A	N/A	A	13C8-PFOSA	7.17	467475.5	N/A	
PFNS	N/A	N/A	N/A	A	13C8-PFOS	6.79	71287.8	N/A	
PFDA	7.17	1.000	2059917.5	A	13C6-PFDA	7.17	583715.2	3.529	19.257
8:2-FTS	N/A	N/A	N/A	A	13C2-8:2-FTS	7.17	57870.5	N/A	
NMePFOSAE	N/A	N/A	N/A	A	d7-NMePFOSAE	7.62	122356.5	N/A	
NMePFOSA	N/A	N/A	N/A	A	d3-NMePFOSA	7.64	51955.8	N/A	
NMeFOSAA	7.34	1.000	532987.3	A	d3-NMeFOSAA	7.34	156242.1	3.411	16.025
NEtPFOSAE	N/A	N/A	N/A	A	d9-NEtPFOSAE	7.78	127497.3	N/A	
NEtPFOSA	N/A	N/A	N/A	A	d5-NEtPFOSA	7.81	38738.2	N/A	
PFDS	7.44	1.100	220261.2	A	13C8-PFOS	6.79	71287.8	3.090	15.686
PFUnDA	7.48	1.000	2089667.1	A	13C7-PFUnDA	7.48	443187.8	4.715	18.365
NEtFOSAA	7.50	1.000	363643.5	A	d5-NEtFOSAA	7.49	107430.6	3.385	16.562
PFDoDA	7.77	1.000	1672277.7	A	13C2-PFDoDA	7.77	502456.6	3.328	17.810
10:2-FTS	N/A	N/A	N/A	A	13C2-8:2-FTS	7.17	57870.5	N/A	
PFDoS	N/A	N/A	N/A	A	13C8-PFOS	6.79	71287.8	N/A	
PFTrDA	8.03	1.030	1190612.6	A	13C2-PFDoDA	7.77	502456.6	2.370	17.593
PFTeDA	8.28	1.000	983720.2	A	13C2-PFTeDA	8.28	286942.8	3.428	17.491
PFHxDA	N/A	N/A	N/A	A	13C2-PFTeDA	8.28	286942.8	N/A	
PFODA	N/A	N/A	N/A	A	13C2-PFTeDA	8.28	286942.8	N/A	

Total Ion Chromatogram

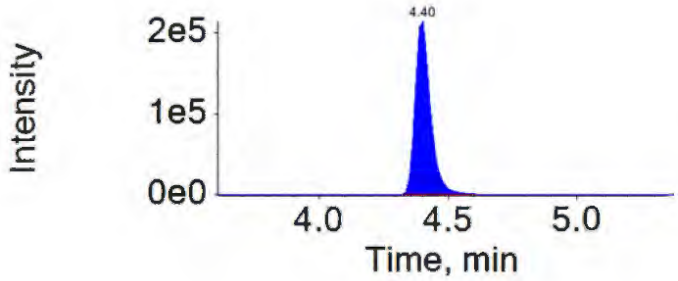


ICAL Name: 17MAY10MCAL
QMethod Name: PFCMOD - 17JAN28

Result Table: 17MAY10MCAL 5/11/2017 12:08:01 PM
Acquisition Method: PFC-32-16NOV02.dam

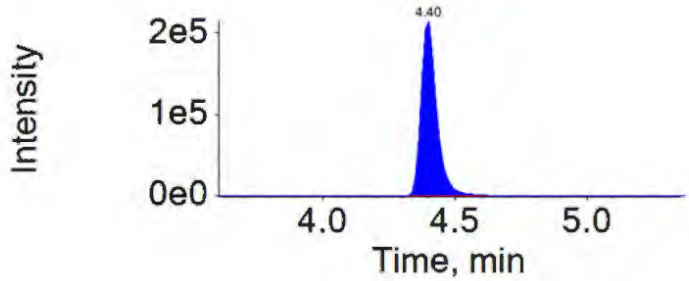
Injection Standard: I13C3-PFBA

216.0 / 172.0



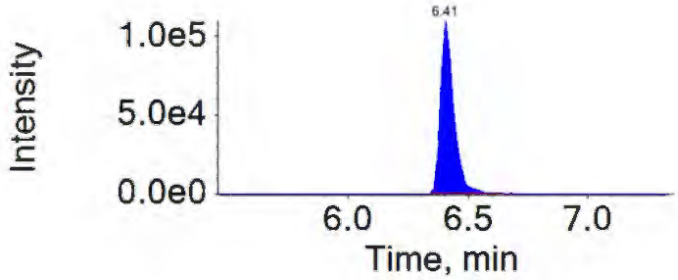
Injection Standard: 13C3-PFBA

216.0 / 172.0



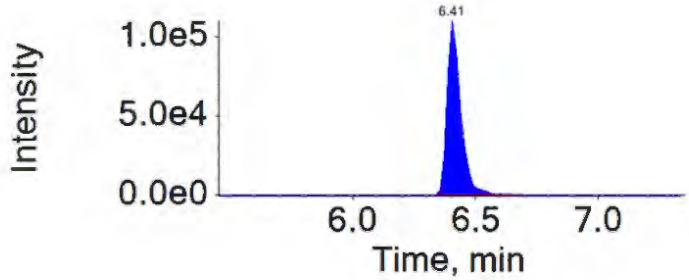
Injection Standard: I13C2-PFOA

415.0 / 370.0



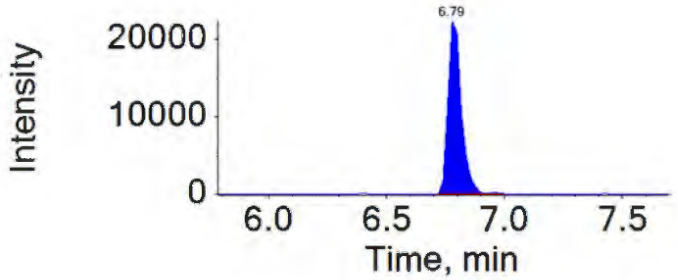
Injection Standard: 13C2-PFOA

415.0 / 370.0



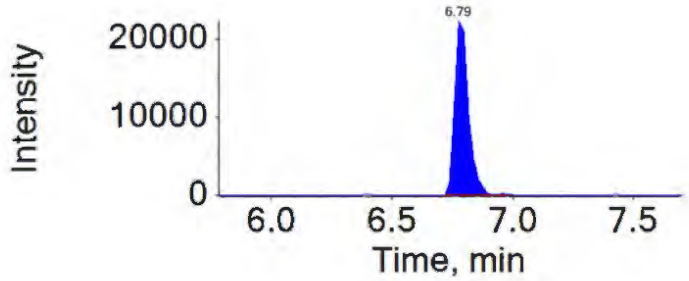
Injection Standard: I13C4-PFOS

503.0 / 99.0



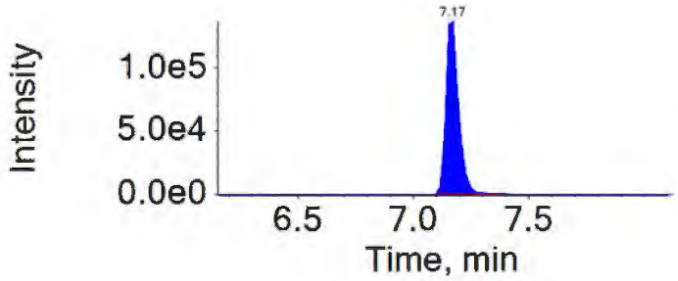
Injection Standard: 13C4-PFOS

503.0 / 99.0



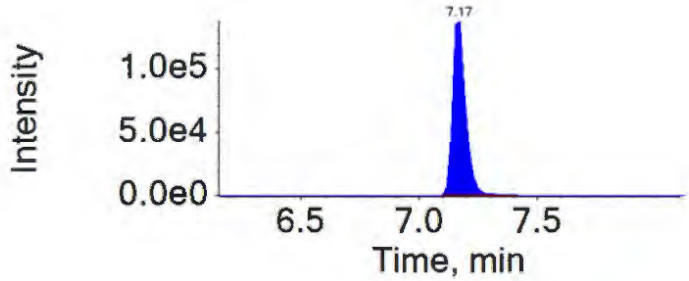
Injection Standard: I13C2-PFDA

515.0 / 470.0



Injection Standard: 13C2-PFDA

515.0 / 470.0



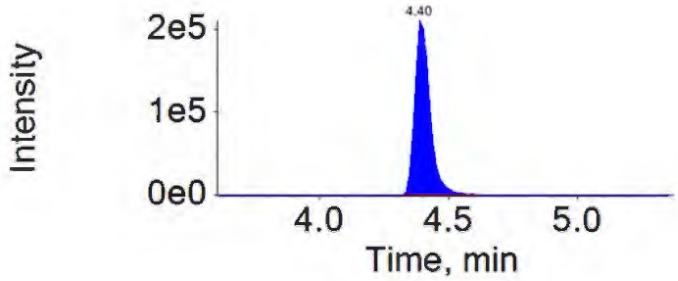
APPROVED
By JWK at 12:35 pm, 5/11/17

REVIEWED
By UMJS at 9:13 am, 5/15/17

ICAL Name: 17MAY10MCAL **Result Table:** 17MAY10MCAL 5/11/2017 12:08:01 PM
QMethod Name: PFCMOD - 17JAN28 **Acquisition Method:** PFC-32-16NOV02.dam

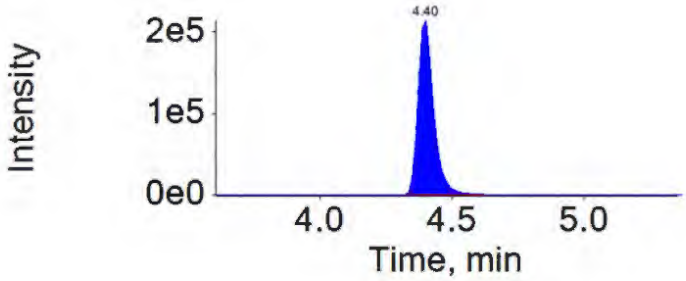
Extraction Standard: E13C4-PFBA

217.0 / 172.0



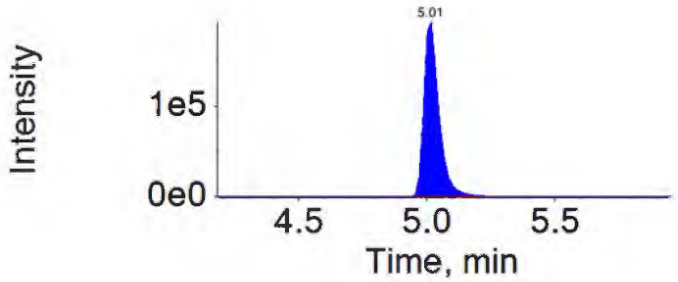
Injection Standard: 13C3-PFBA

216.0 / 172.0



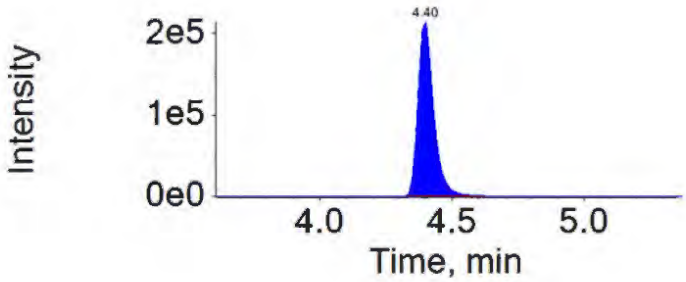
Extraction Standard: E13C5-PFPeA

268.0 / 223.0



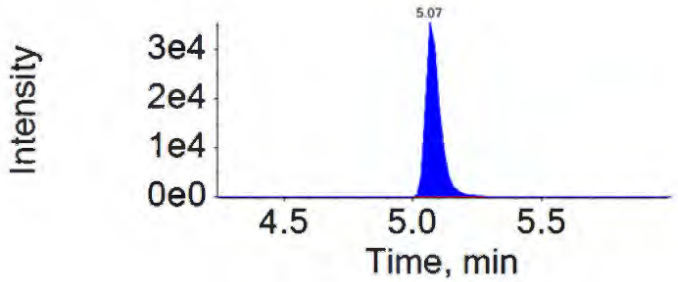
Injection Standard: 13C3-PFBA

216.0 / 172.0



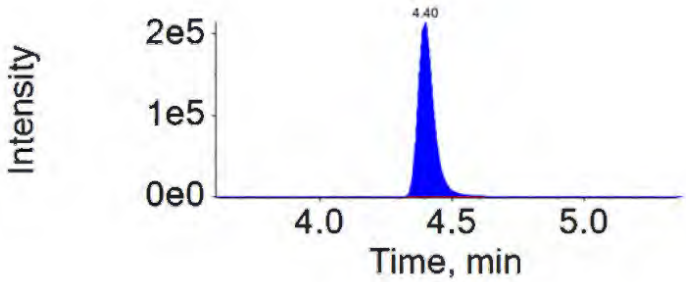
Extraction Standard: E13C3-PFBS

302.0 / 99.0



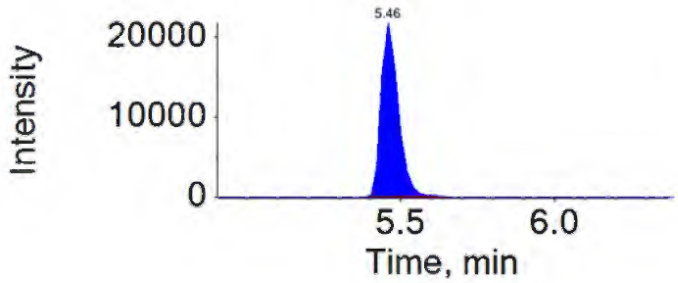
Injection Standard: 13C3-PFBA

216.0 / 172.0



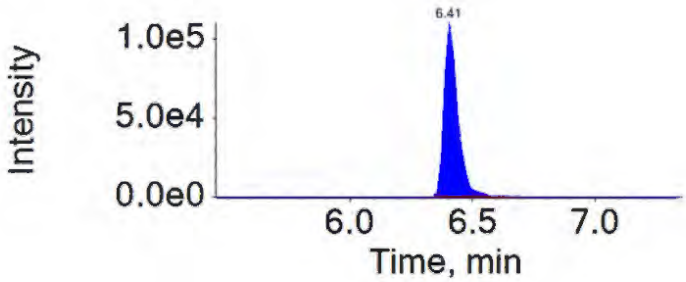
Extraction Standard: E13C2-4:2-FTS

329.0 / 309.0



Injection Standard: 13C2-PFOA

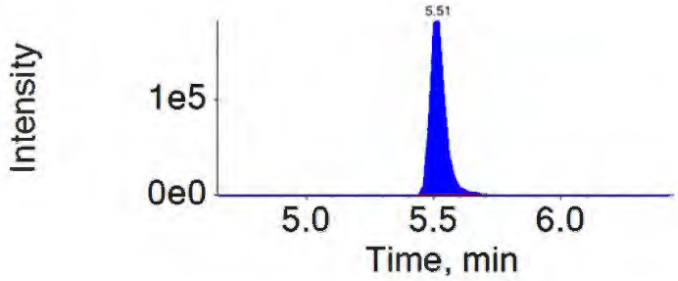
415.0 / 370.0



ICAL Name: 17MAY10MCAL **Result Table:** 17MAY10MCAL 5/11/2017 12:08:01 PM
QMethod Name: PFCMOD - 17JAN28 **Acquisition Method:** PFC-32-16NOV02.dam

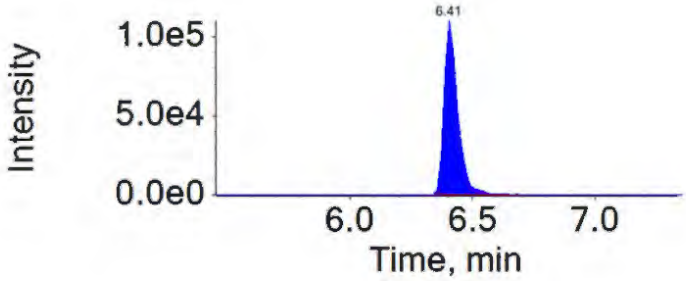
Extraction Standard: E13C5-PFHxA

318.0 /
273.0



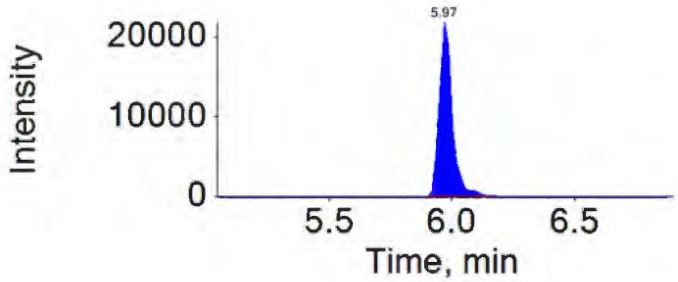
Injection Standard: 13C2-PFOA

415.0 /
370.0



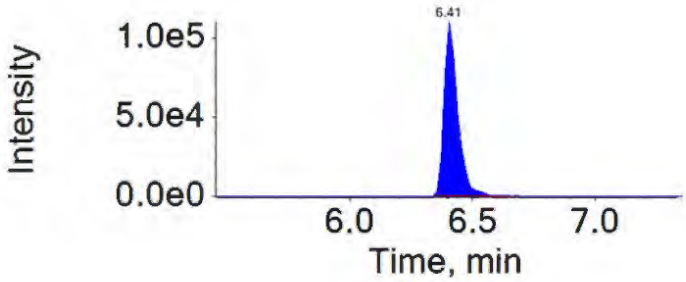
Extraction Standard: E13C3-PFHxS

402.0 /
99.0



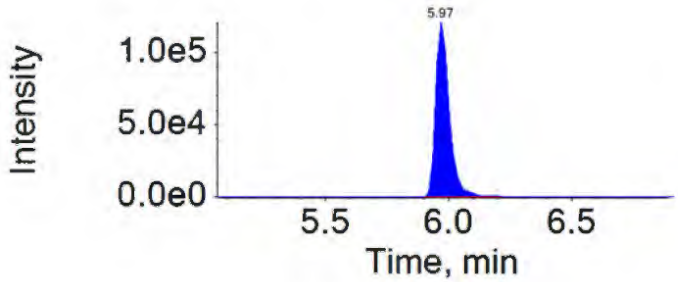
Injection Standard: 13C2-PFOA

415.0 /
370.0



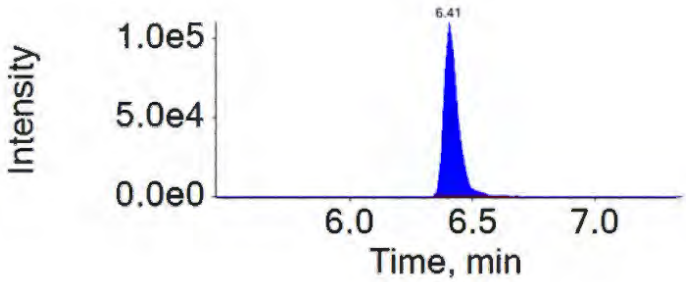
Extraction Standard: E13C4-PFHpA

367.0 /
322.0



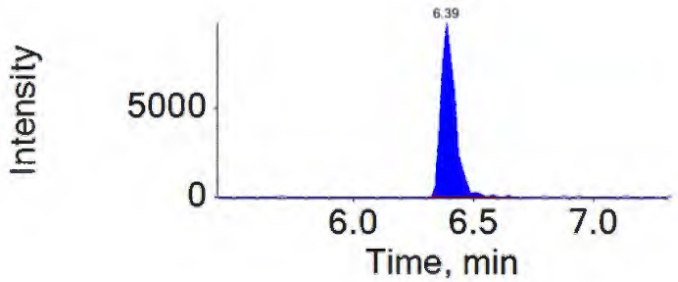
Injection Standard: 13C2-PFOA

415.0 /
370.0



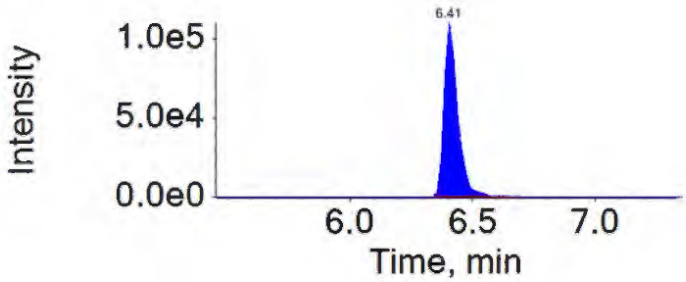
Extraction Standard: E13C2-6:2-FTS

429.0 /
409.0



Injection Standard: 13C2-PFOA

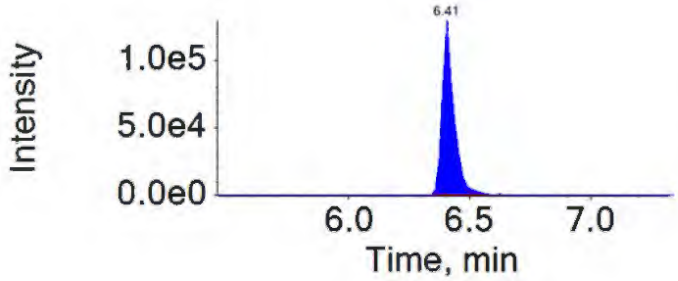
415.0 /
370.0



ICAL Name: 17MAY10MCAL **Result Table:** 17MAY10MCAL 5/11/2017 12:08:01 PM
QMethod Name: PFCMOD - 17JAN28 **Acquisition Method:** PFC-32-16NOV02.dam

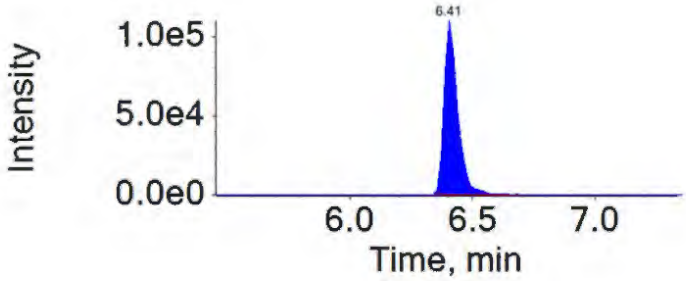
Extraction Standard: E13C8-PFOA

421.0 / 376.0



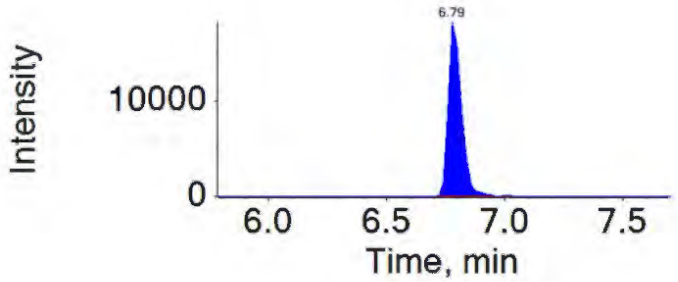
Injection Standard: 13C2-PFOA

415.0 / 370.0



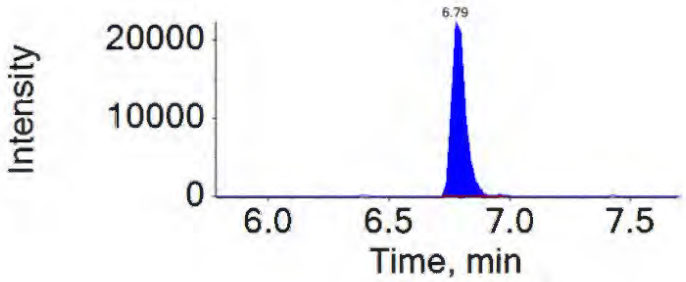
Extraction Standard: E13C8-PFOS

507.0 / 99.0



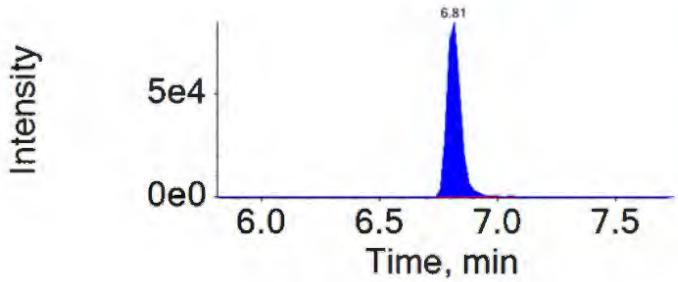
Injection Standard: 13C4-PFOS

503.0 / 99.0



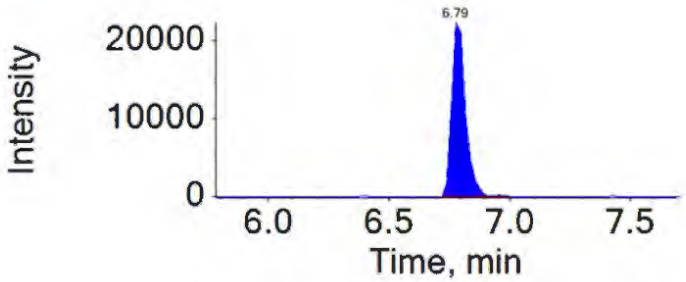
Extraction Standard: E13C9-PFNA

472.0 / 427.0



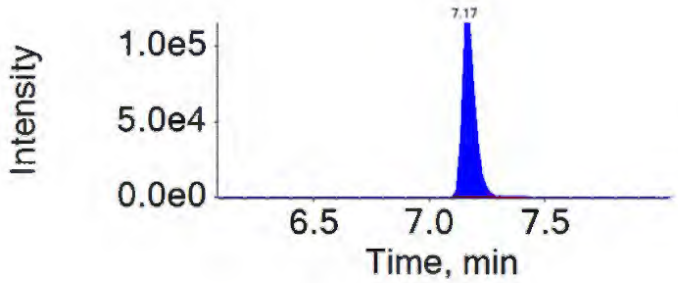
Injection Standard: 13C4-PFOS

503.0 / 99.0



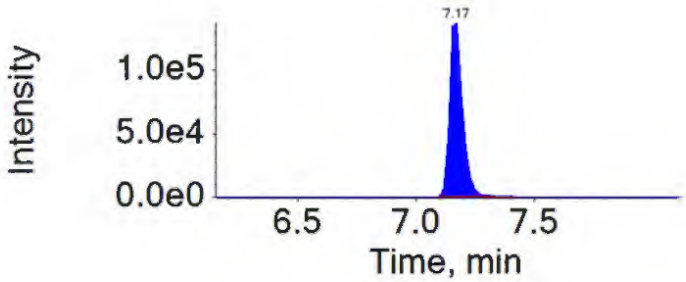
Extraction Standard: E13C8-PFOSA

506.0 / 78.0



Injection Standard: 13C2-PFDA

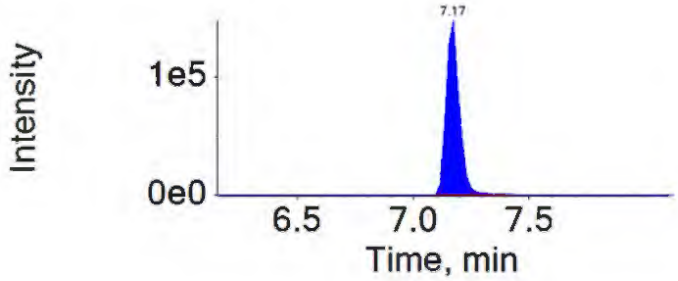
515.0 / 470.0



ICAL Name: 17MAY10MCAL **Result Table:** 17MAY10MCAL 5/11/2017 12:08:01 PM
QMethod Name: PFCMOD - 17JAN28 **Acquisition Method:** PFC-32-16NOV02.dam

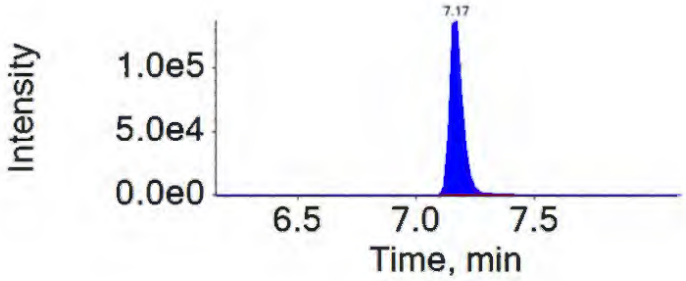
Extraction Standard: E13C6-PFDA

519.0 / 474.0



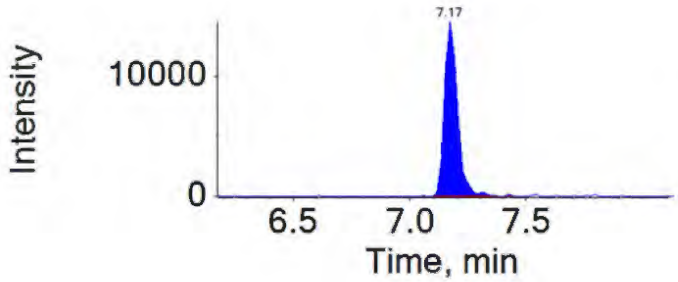
Injection Standard: 13C2-PFDA

515.0 / 470.0



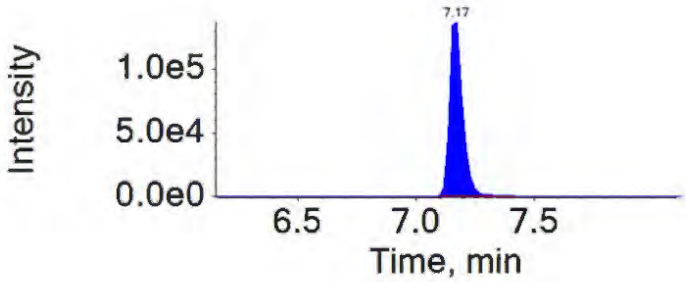
Extraction Standard: E13C2-8:2-FTS

529.0 / 509.0



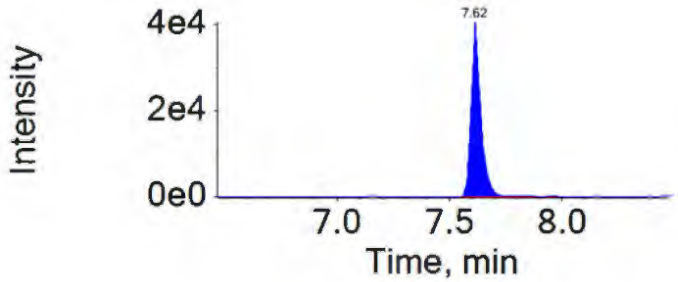
Injection Standard: 13C2-PFDA

515.0 / 470.0



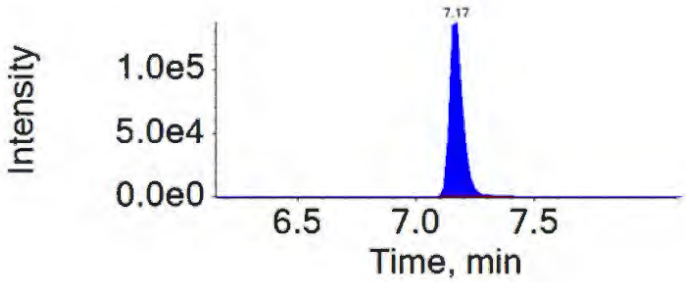
Extraction Standard: Ed7-NMePFOSAE

623.0 / 59.0



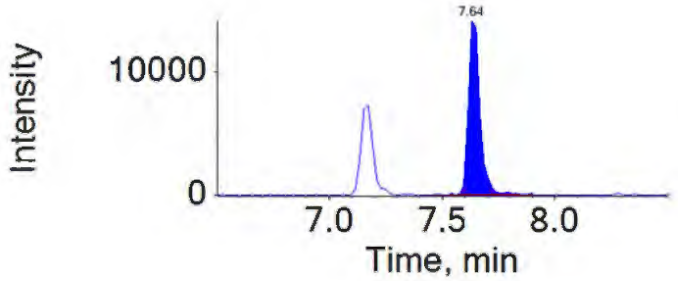
Injection Standard: 13C2-PFDA

515.0 / 470.0



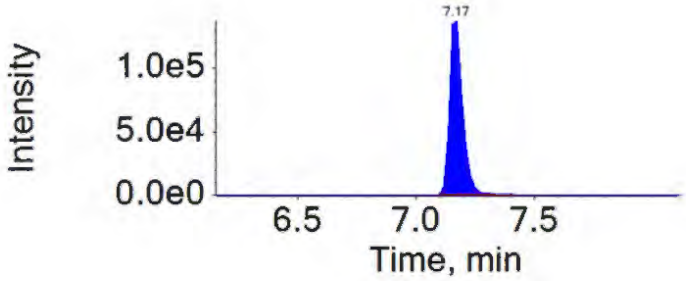
Extraction Standard: Ed3-NMePFOSA

515.0 / 169.0



Injection Standard: 13C2-PFDA

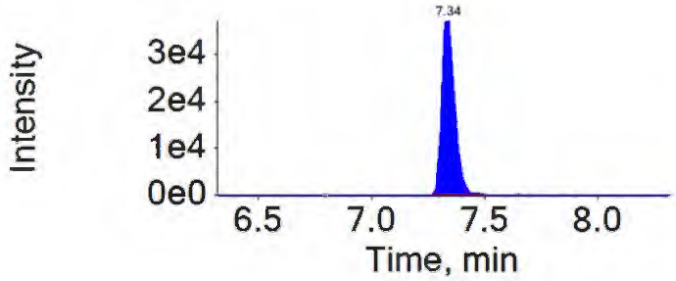
515.0 / 470.0



ICAL Name: 17MAY10MCAL **Result Table:** 17MAY10MCAL 5/11/2017 12:08:01 PM
QMethod Name: PFCMOD - 17JAN28 **Acquisition Method:** PFC-32-16NOV02.dam

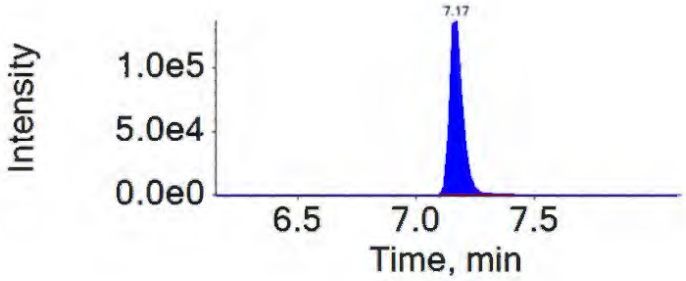
Extraction Standard: Ed3-NMeFOSAA

573.0 / 419.0



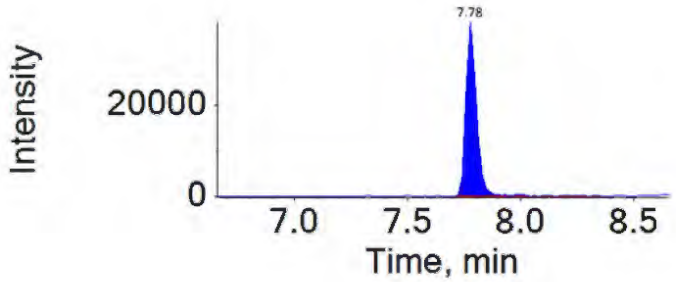
Injection Standard: 13C2-PFDA

515.0 / 470.0



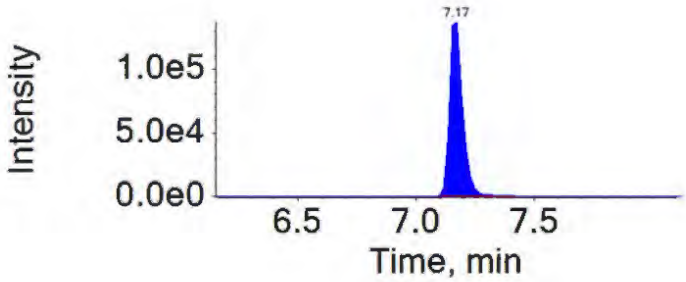
Extraction Standard: Ed9-NEtPFOSAE

639.0 / 59.0



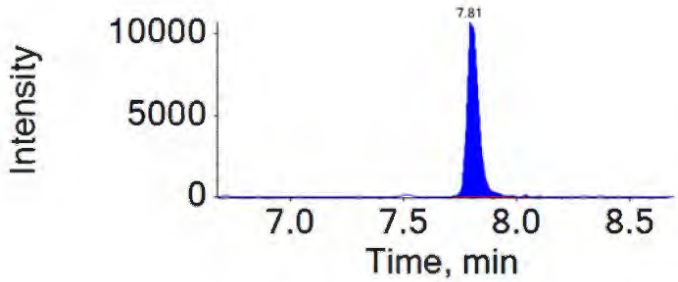
Injection Standard: 13C2-PFDA

515.0 / 470.0



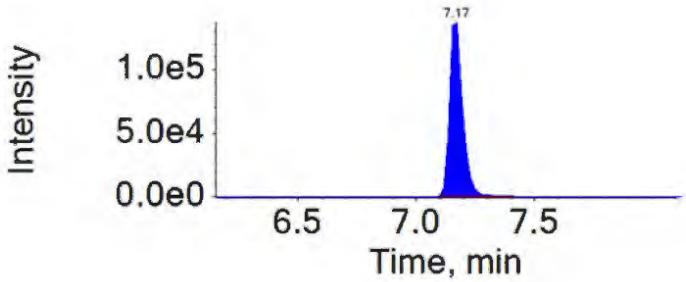
Extraction Standard: Ed5-NEtPFOSA

531.0 / 169.0



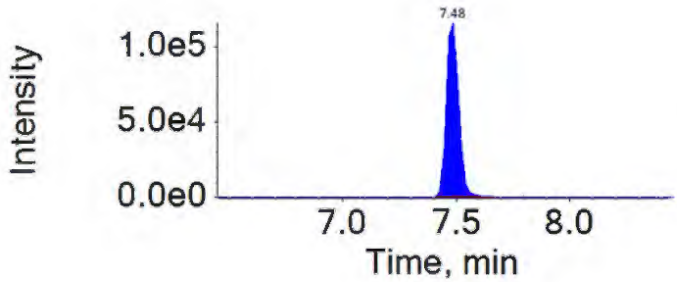
Injection Standard: 13C2-PFDA

515.0 / 470.0



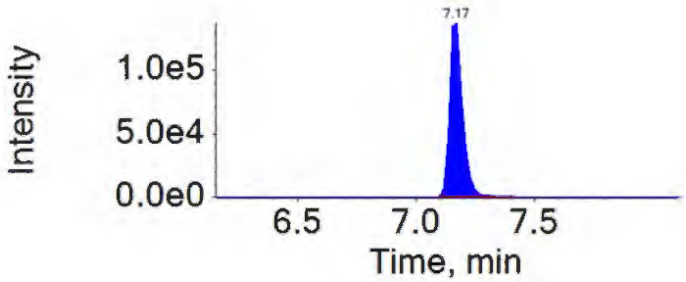
Extraction Standard: E13C7-PFUnDA

570.0 / 525.0



Injection Standard: 13C2-PFDA

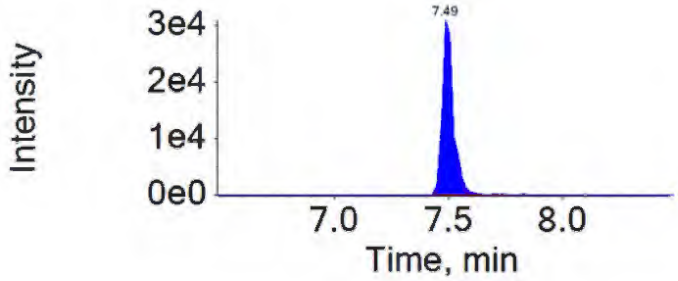
515.0 / 470.0



ICAL Name: 17MAY10MCAL **Result Table:** 17MAY10MCAL 5/11/2017 12:08:01 PM
QMethod Name: PFCMOD - 17JAN28 **Acquisition Method:** PFC-32-16NOV02.dam

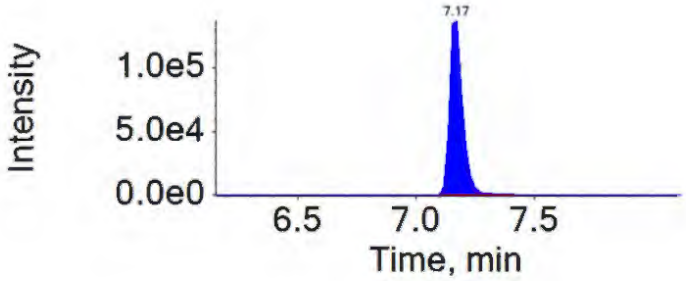
Extraction Standard: Ed5-NEtFOSAA

589.0 / 419.0



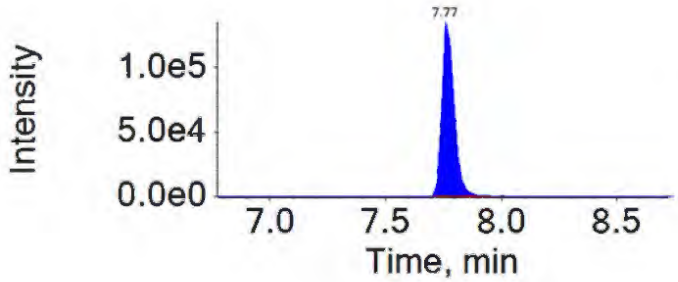
Injection Standard: 13C2-PFDA

515.0 / 470.0



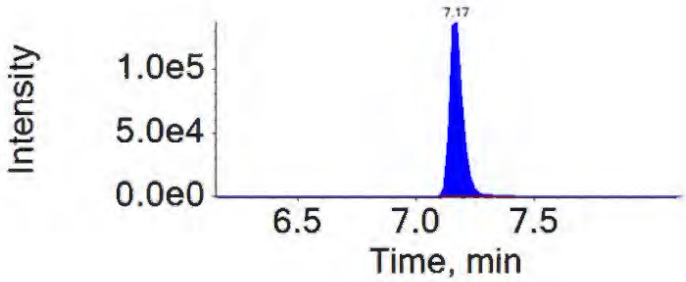
Extraction Standard: E13C2-PFDoDA

615.0 / 570.0



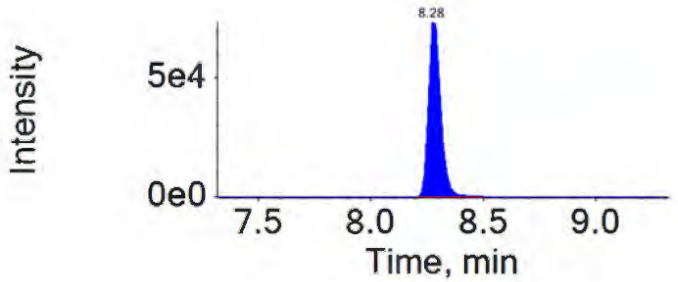
Injection Standard: 13C2-PFDA

515.0 / 470.0



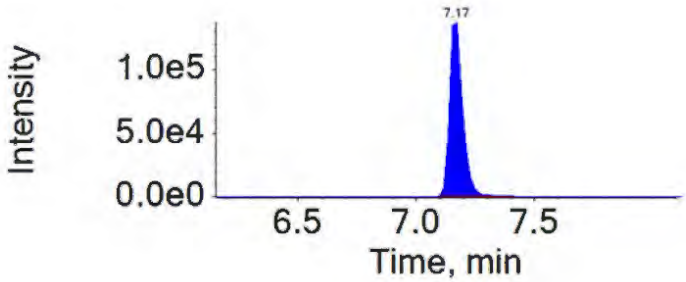
Extraction Standard: E13C2-PFTeDA

715.0 / 670.0



Injection Standard: 13C2-PFDA

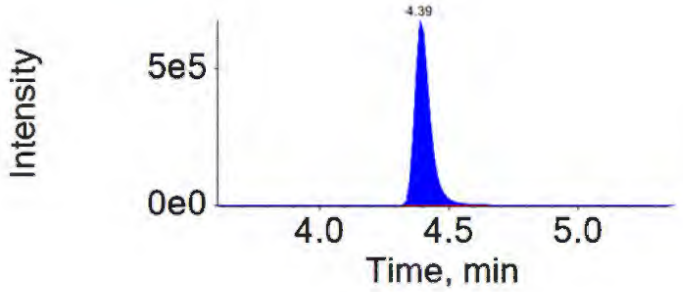
515.0 / 470.0



ICAL Name: 17MAY10MCAL **Result Table:** 17MAY10MCAL 5/11/2017 12:08:01 PM
QMethod Name: PFCMOD - 17JAN28 **Acquisition Method:** PFC-32-16NOV02.dam

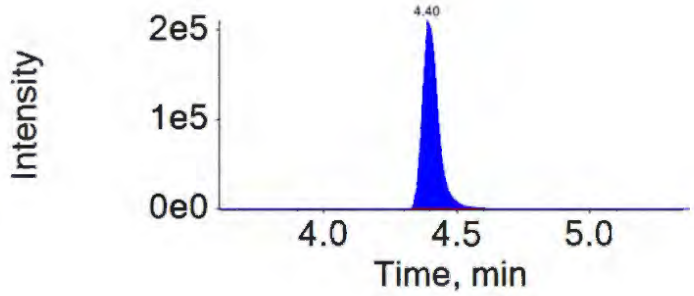
Analyte: PFBA

213.0 /
169.0



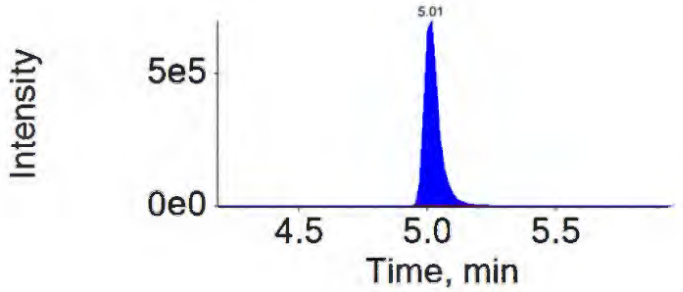
Extraction Standard: 13C4-PFBA

217.0 /
172.0



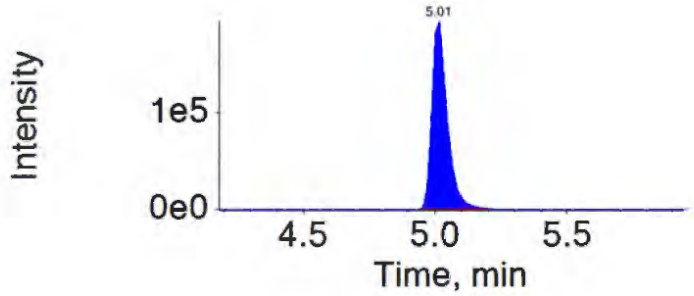
Analyte: PFPeA

263.0 /
219.0



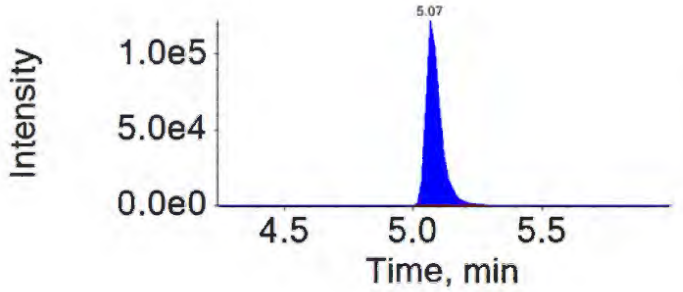
Extraction Standard: 13C5-PFPeA

268.0 /
223.0



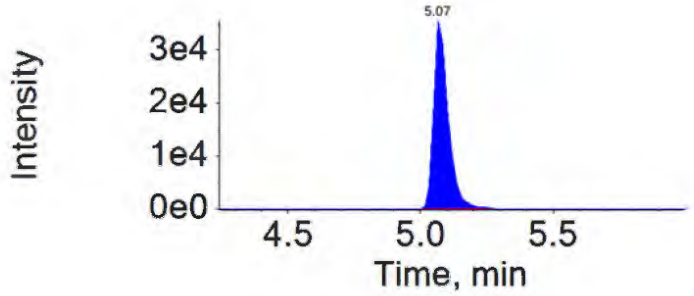
Analyte: PFBS

299.0 /
99.0



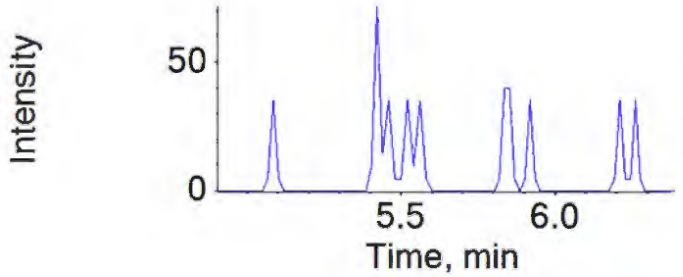
Extraction Standard: 13C3-PFBS

302.0 /
99.0



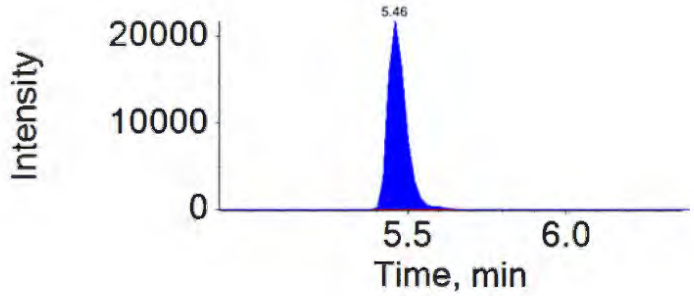
Analyte: 4:2-FTS

327.0 /
307.0



Extraction Standard: 13C2-4:2-FTS

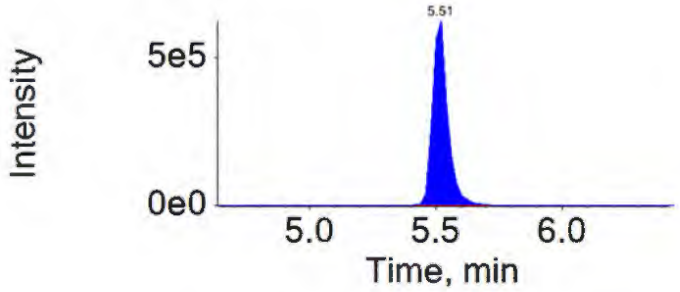
329.0 /
309.0



ICAL Name: 17MAY10MCAL **Result Table:** 17MAY10MCAL 5/11/2017 12:08:01 PM
QMethod Name: PFCMOD - 17JAN28 **Acquisition Method:** PFC-32-16NOV02.dam

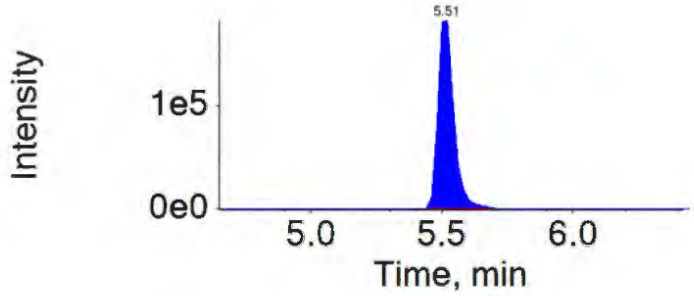
Analyte: PFHxA

313.0 /
269.0



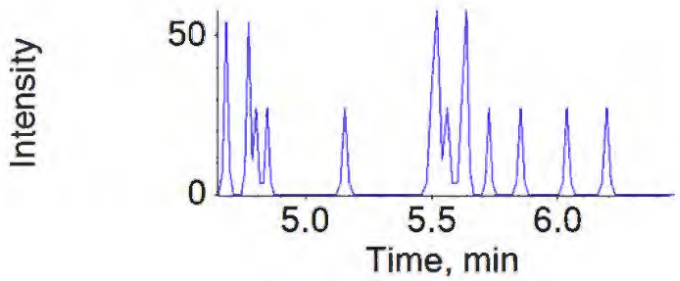
Extraction Standard: 13C5-PFHxA

318.0 /
273.0



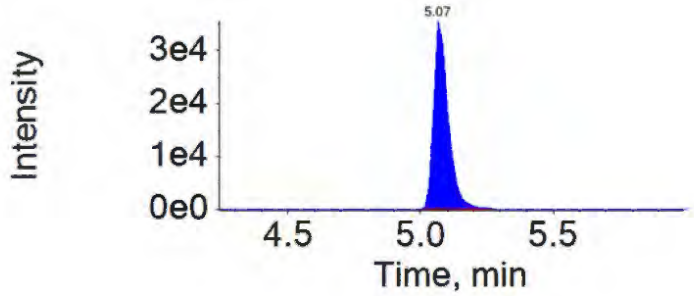
Analyte: PFPeS

349.0 /
99.0



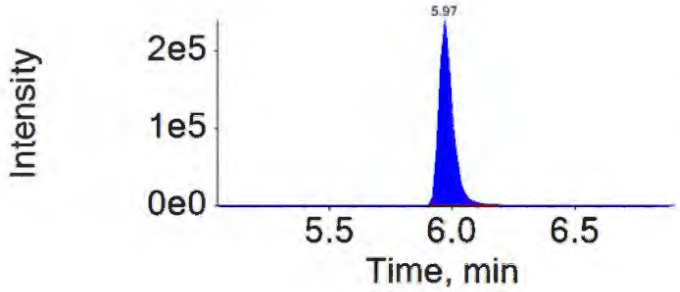
Extraction Standard: 13C3-PFBS

302.0 /
99.0



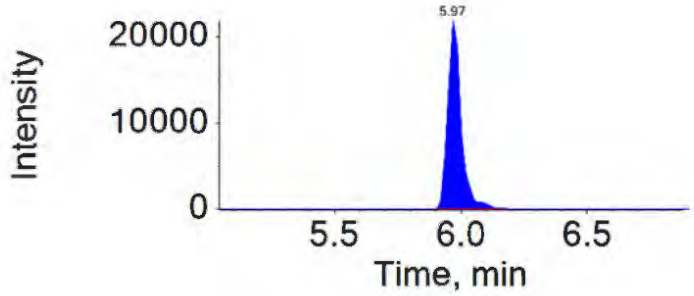
Analyte: PFHxS

399.0 /
80.0



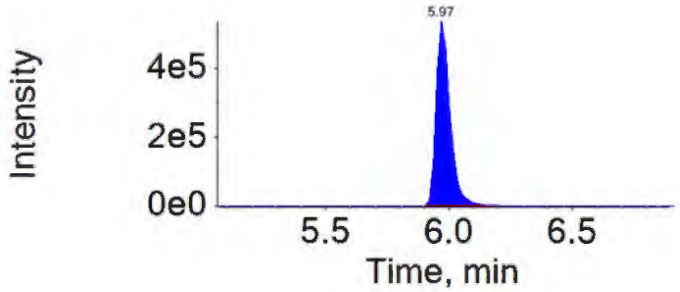
Extraction Standard: 13C3-PFHxS

402.0 /
99.0



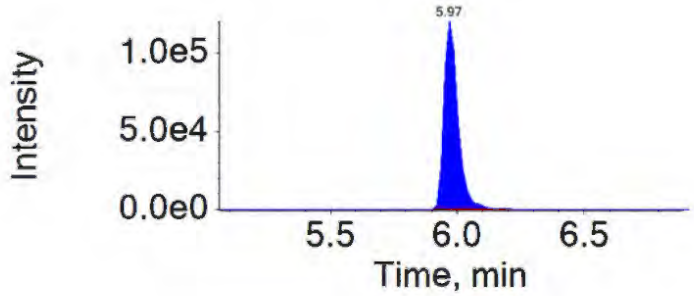
Analyte: PFHpA

363.0 /
319.0



Extraction Standard: 13C4-PFHpA

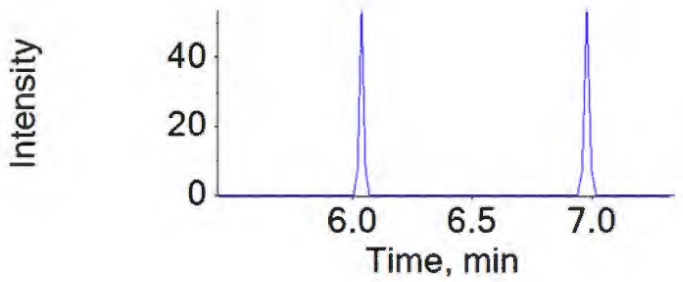
367.0 /
322.0



ICAL Name: 17MAY10MCAL **Result Table:** 17MAY10MCAL 5/11/2017 12:08:01 PM
QMethod Name: PFCMOD - 17JAN28 **Acquisition Method:** PFC-32-16NOV02.dam

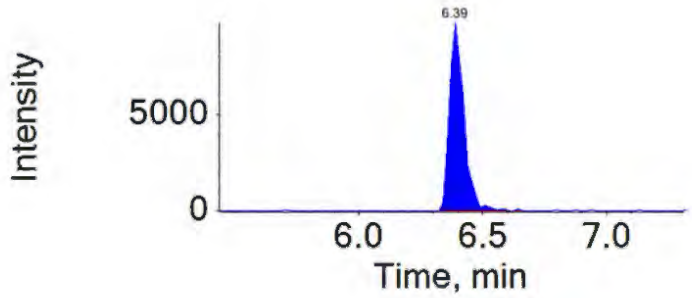
Analyte: 6:2-FTS

427.0 /
407.0



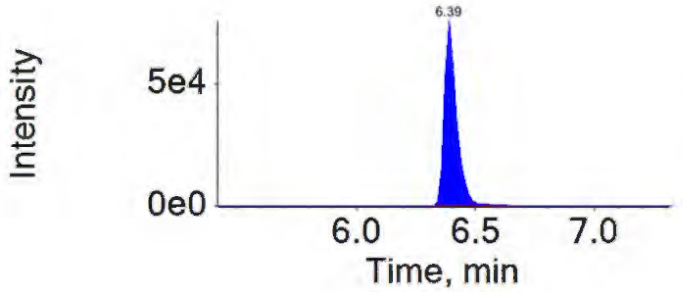
Extraction Standard: 13C2-6:2-FTS

429.0 /
409.0



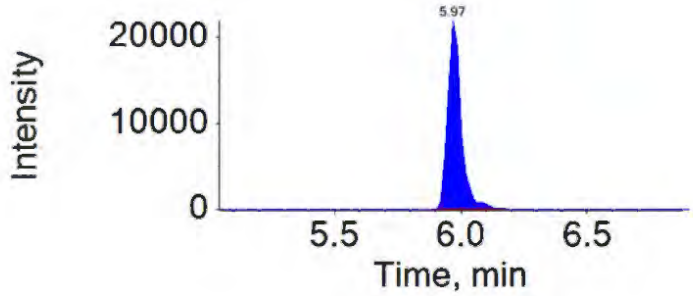
Analyte: PFHpS

449.0 /
99.0



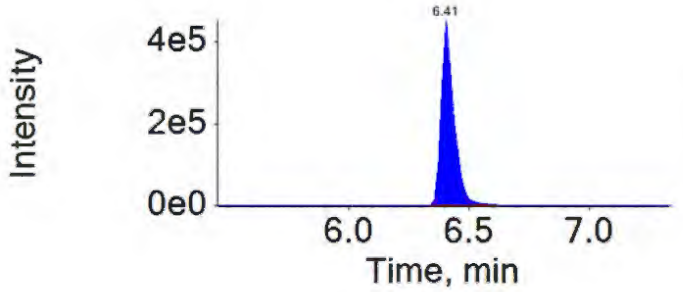
Extraction Standard: 13C3-PFHxS

402.0 /
99.0



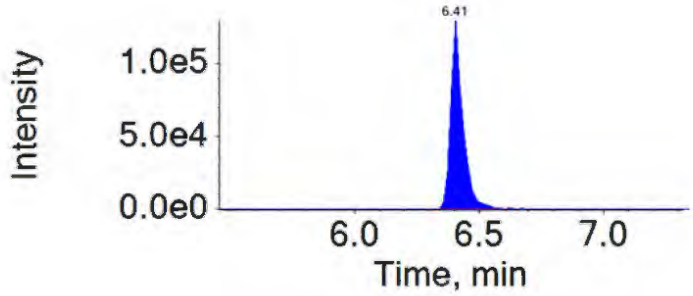
Analyte: PFOA

413.0 /
369.0



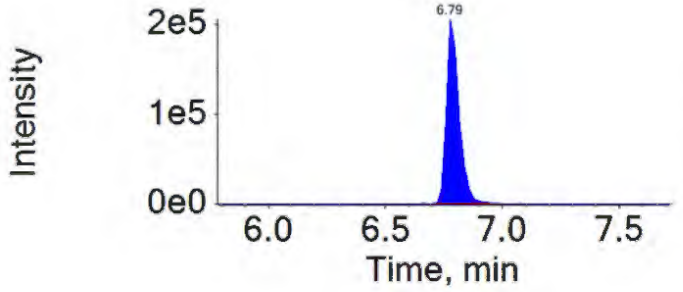
Extraction Standard: 13C8-PFOA

421.0 /
376.0



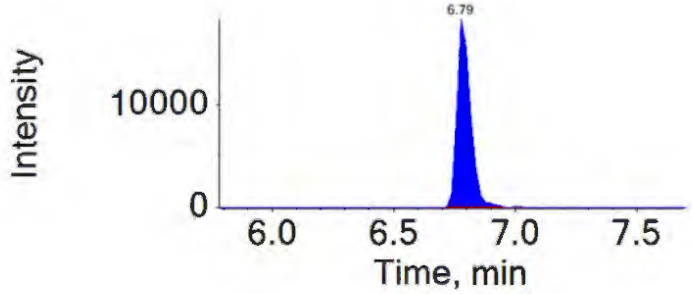
Analyte: PFOS

499.0 /
80.0



Extraction Standard: 13C8-PFOS

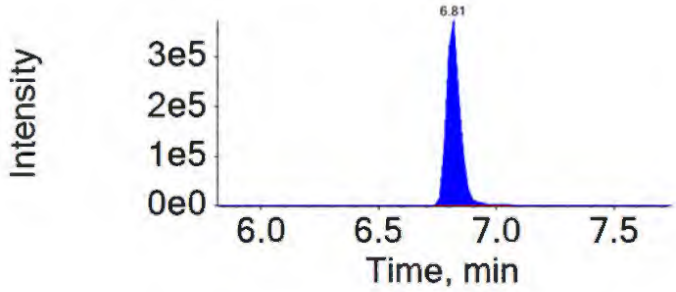
507.0 /
99.0



ICAL Name: 17MAY10MCAL **Result Table:** 17MAY10MCAL 5/11/2017 12:08:01 PM
QMethod Name: PFCMOD - 17JAN28 **Acquisition Method:** PFC-32-16NOV02.dam

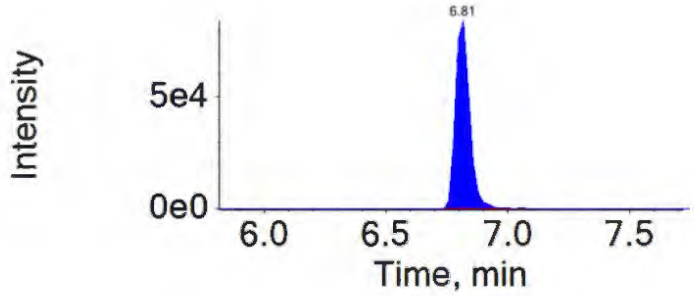
Analyte: PFNA

463.0 /
419.0



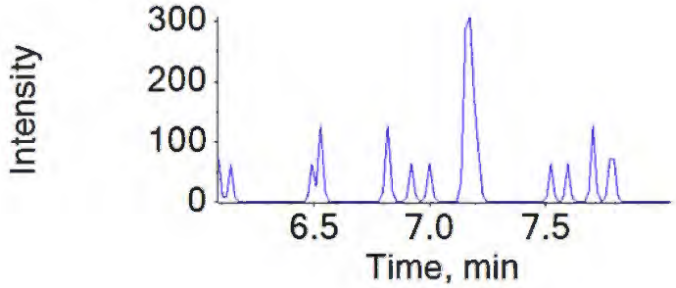
Extraction Standard: 13C9-PFNA

472.0 /
427.0



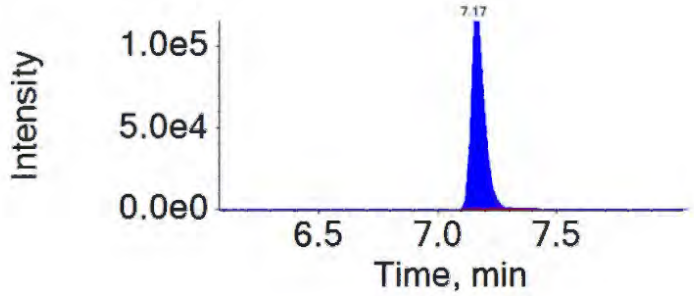
Analyte: PFOSA

498.0 /
78.0



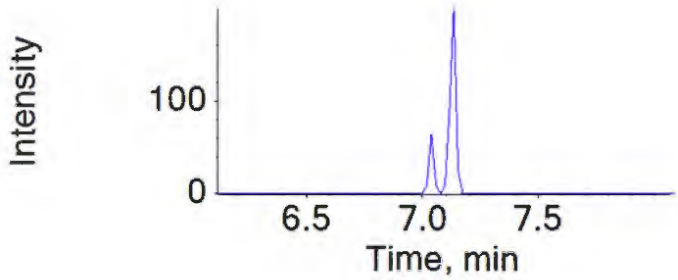
Extraction Standard: 13C8-PFOSA

506.0 /
78.0



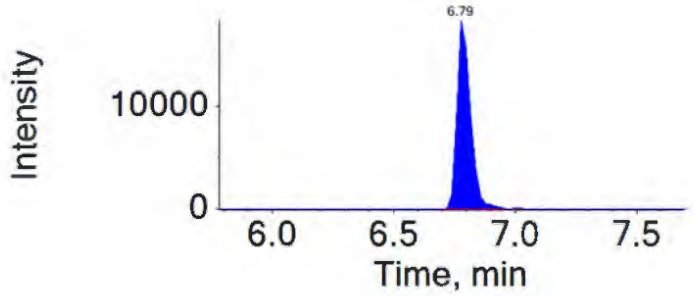
Analyte: PFNS

549.0 /
99.0



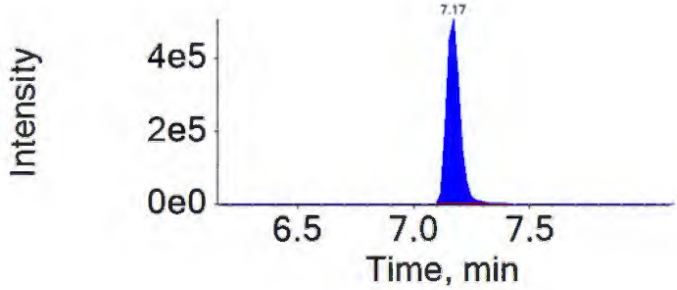
Extraction Standard: 13C8-PFOS

507.0 /
99.0



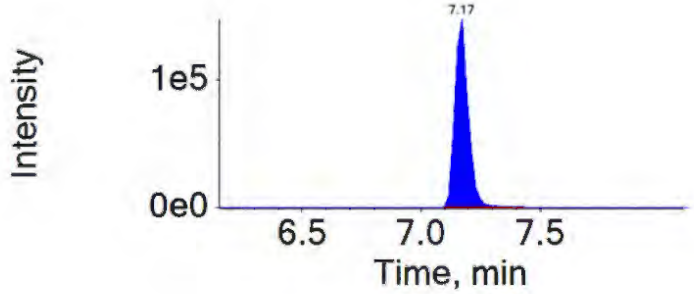
Analyte: PFDA

513.0 /
469.0



Extraction Standard: 13C6-PFDA

519.0 /
474.0



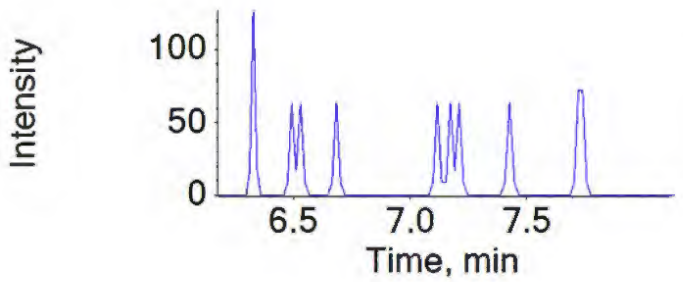
APPROVED
By JWK at 12:35 pm, 5/11/17

REVIEWED
By UMJS at 9:13 am, 5/15/17

ICAL Name: 17MAY10MCAL **Result Table:** 17MAY10MCAL 5/11/2017 12:08:01 PM
QMethod Name: PFCMOD - 17JAN28 **Acquisition Method:** PFC-32-16NOV02.dam

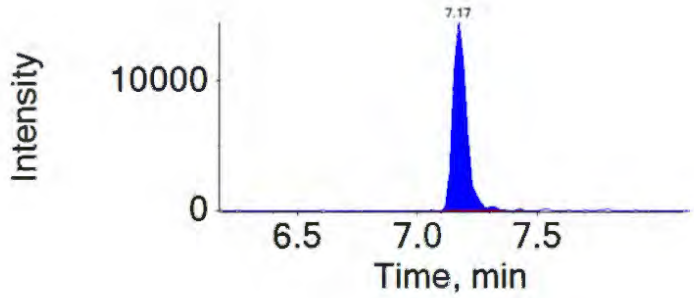
Analyte: 8:2-FTS

527.0 /
507.0



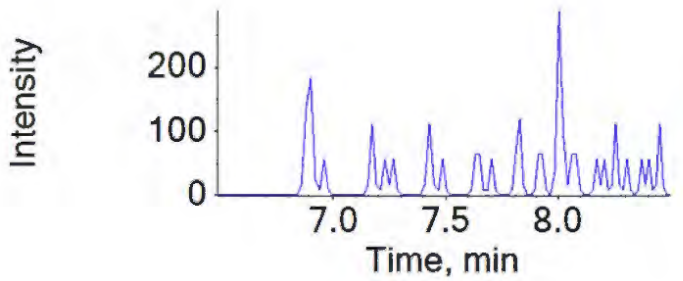
Extraction Standard: 13C2-8:2-FTS

529.0 /
509.0



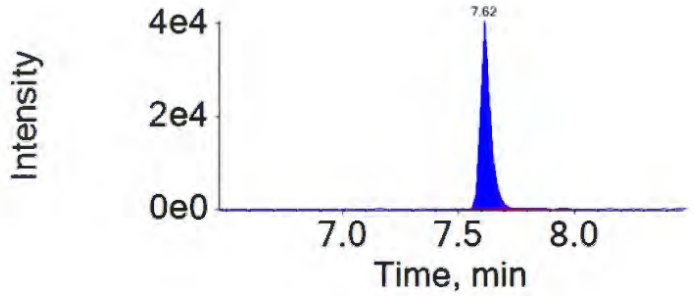
Analyte: NMePFOSAE

616.0 /
59.0



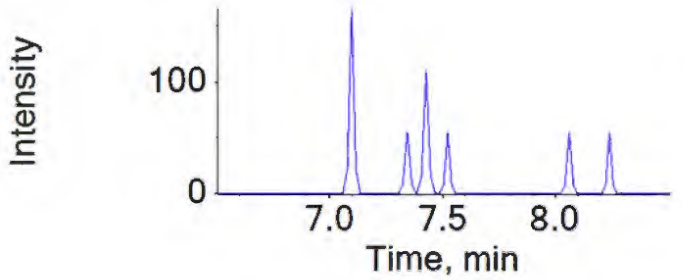
Extraction Standard: d7-NMePFOSAE

623.0 /
59.0



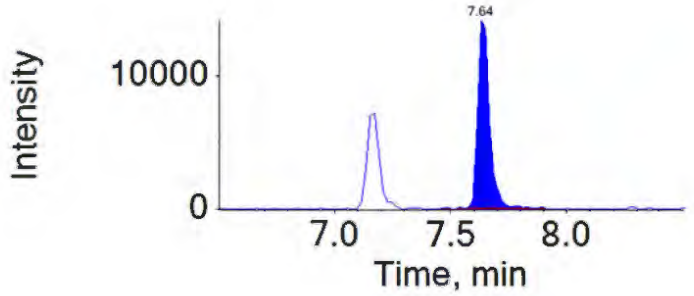
Analyte: NMePFOSA

512.0 /
169.0



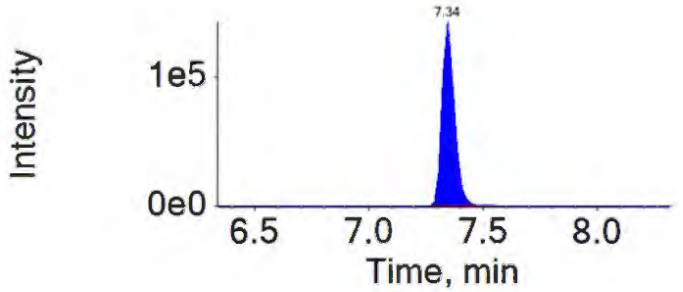
Extraction Standard: d3-NMePFOSA

515.0 /
169.0



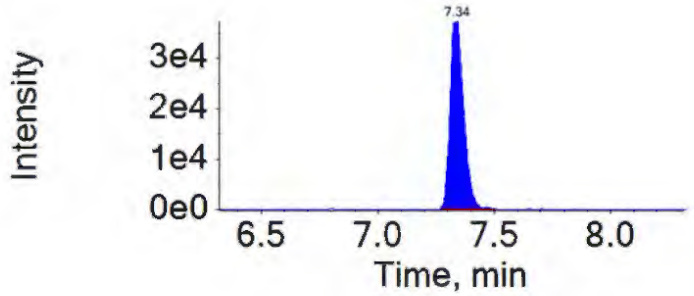
Analyte: NMeFOSAA

570.0 /
419.0



Extraction Standard: d3-NMeFOSAA

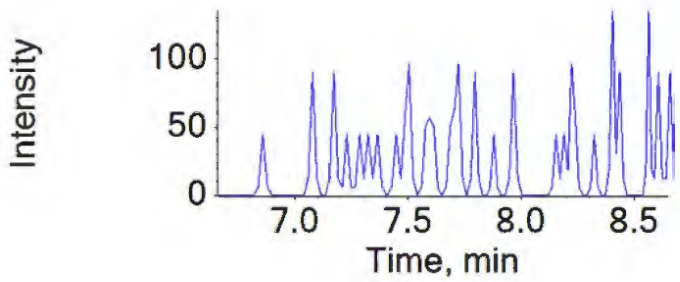
573.0 /
419.0



ICAL Name: 17MAY10MCAL **Result Table:** 17MAY10MCAL 5/11/2017 12:08:01 PM
QMethod Name: PFCMOD - 17JAN28 **Acquisition Method:** PFC-32-16NOV02.dam

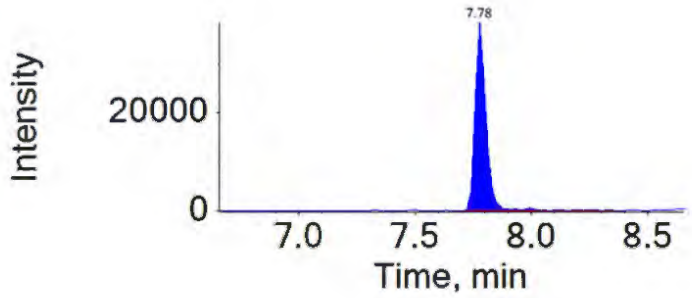
Analyte: NEtPFOSAE

630.0 /
59.0



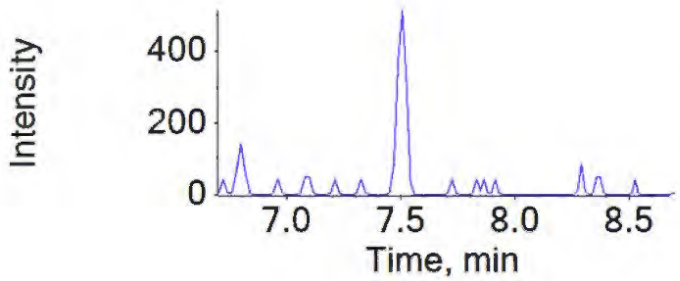
Extraction Standard: d9-NEtPFOSAE

639.0 /
59.0



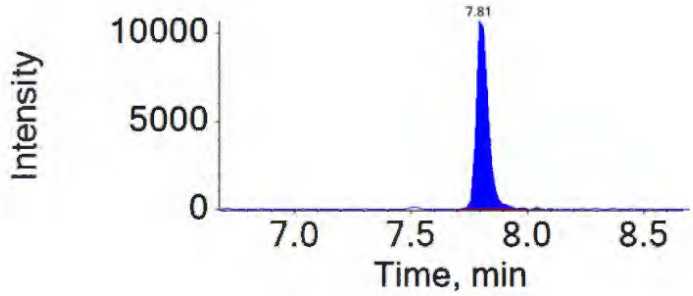
Analyte: NEtPFOSA

526.0 /
169.0



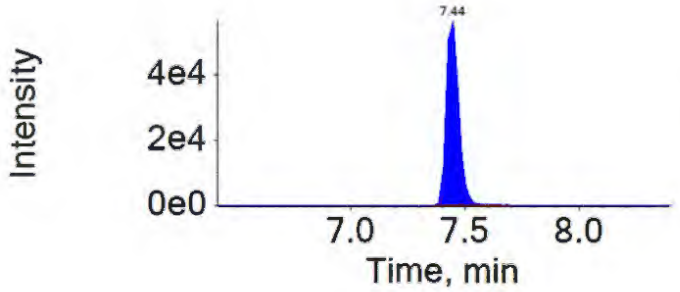
Extraction Standard: d5-NEtPFOSA

531.0 /
169.0



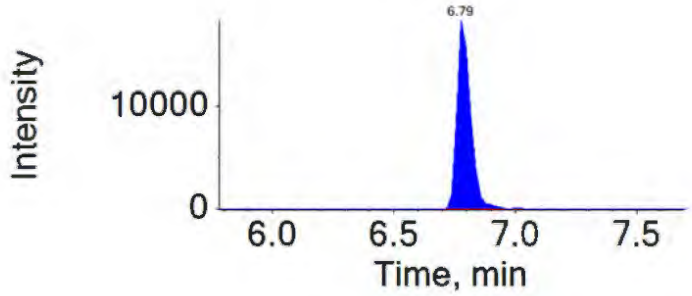
Analyte: PFDS

599.0 /
99.0



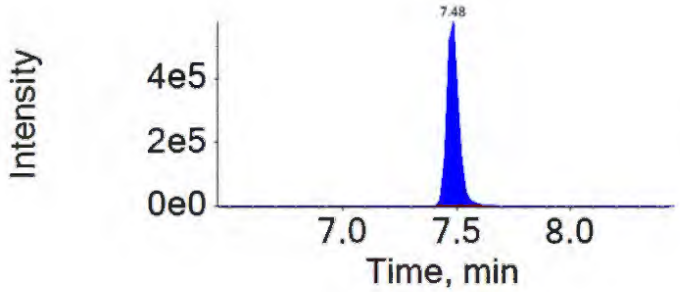
Extraction Standard: 13C8-PFOS

507.0 /
99.0



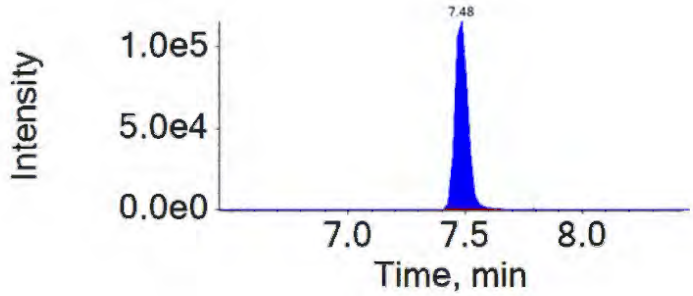
Analyte: PFUnDA

563.0 /
519.0



Extraction Standard: 13C7-PFUnDA

570.0 /
525.0



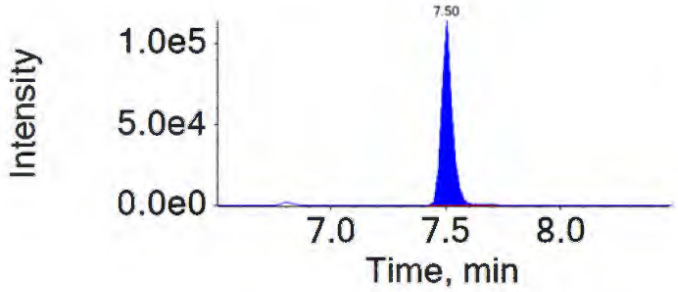
APPROVED
By JWK at 12:35 pm, 5/11/17

REVIEWED
By UMJS at 9:13 am, 5/15/17

ICAL Name: 17MAY10MCAL **Result Table:** 17MAY10MCAL 5/11/2017 12:08:01 PM
QMethod Name: PFCMOD - 17JAN28 **Acquisition Method:** PFC-32-16NOV02.dam

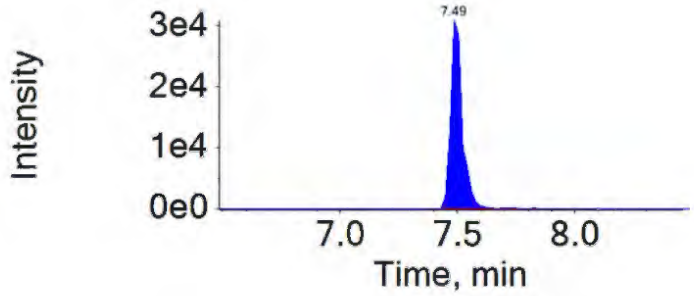
Analyte: NEtFOSAA

584.0 / 419.0



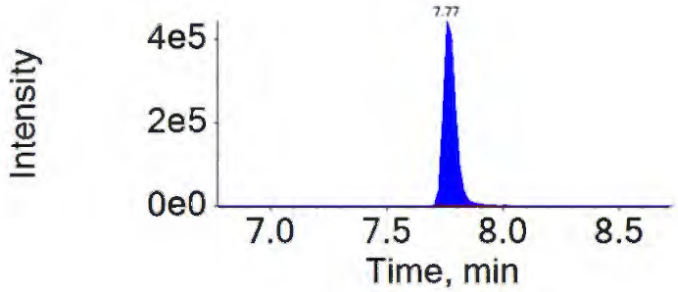
Extraction Standard: d5-NEtFOSAA

589.0 / 419.0



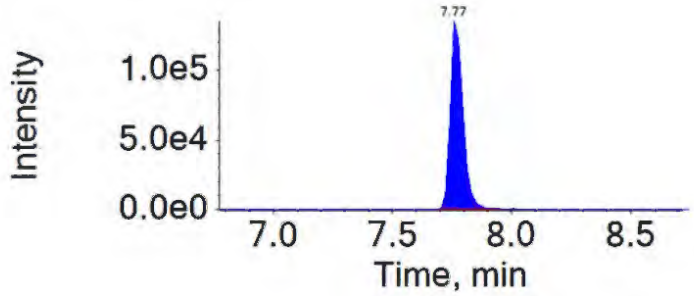
Analyte: PFDoDA

613.0 / 569.0



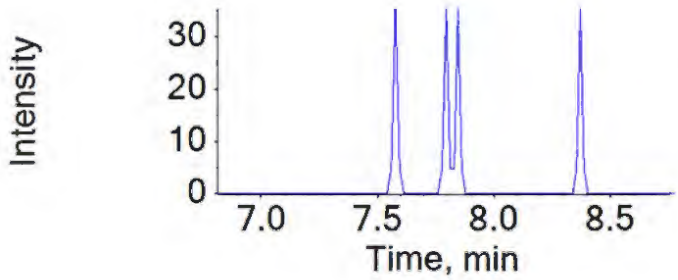
Extraction Standard: 13C2-PFDoDA

615.0 / 570.0



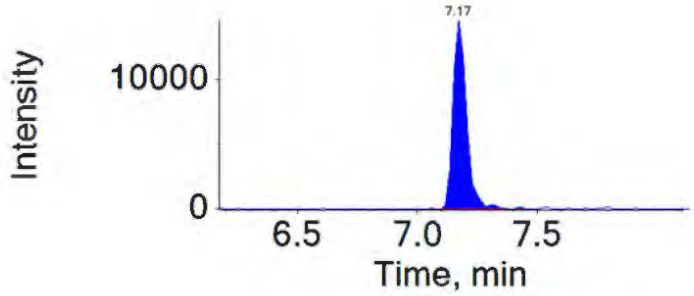
Analyte: 10:2-FTS

627.0 / 607.0



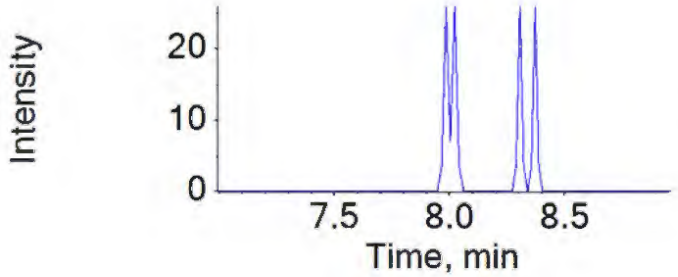
Extraction Standard: 13C2-8:2-FTS

529.0 / 509.0



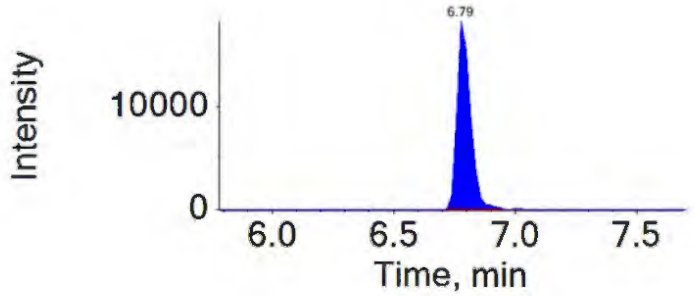
Analyte: PFDoS

699.0 / 99.0



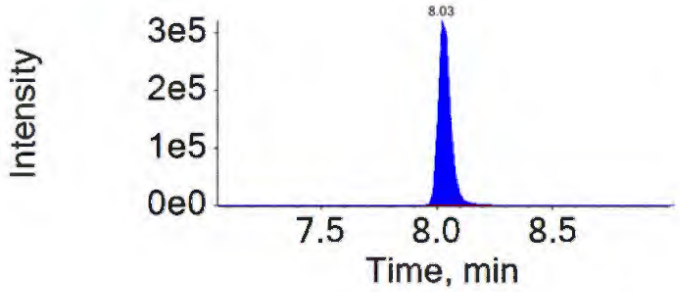
Extraction Standard: 13C8-PFOS

507.0 / 99.0

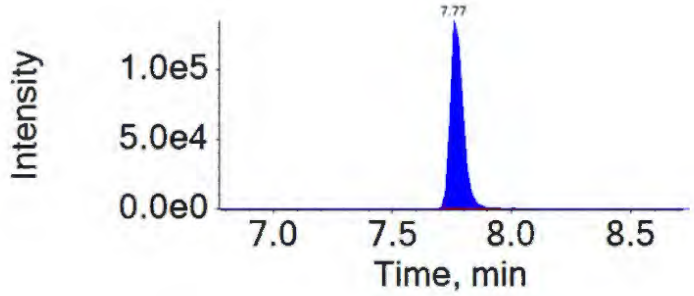


ICAL Name: 17MAY10MCAL **Result Table:** 17MAY10MCAL 5/11/2017 12:08:01 PM
QMethod Name: PFCMOD - 17JAN28 **Acquisition Method:** PFC-32-16NOV02.dam

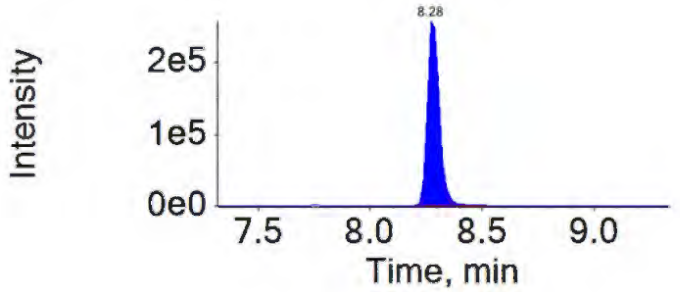
Analyte: PFTrDA
663.0 / 619.0



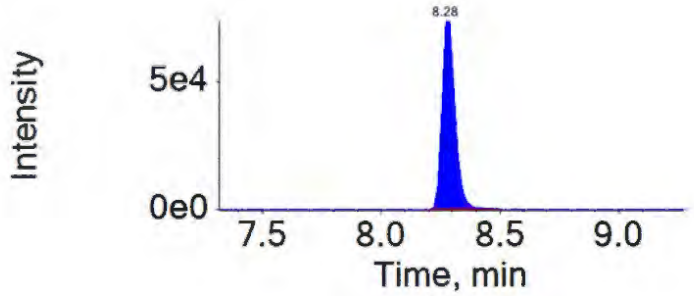
Extraction Standard: 13C2-PFDoDA
615.0 / 570.0



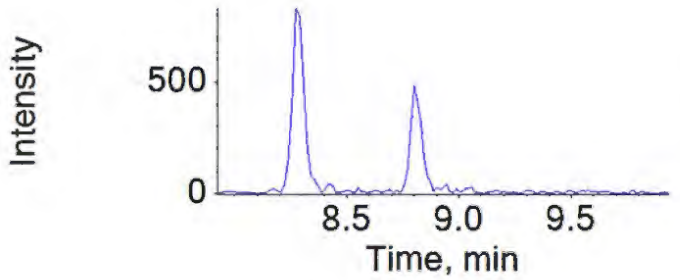
Analyte: PFTeDA
713.0 / 669.0



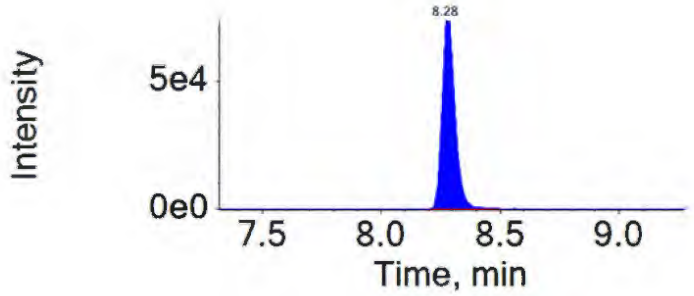
Extraction Standard: 13C2-PFTeDA
715.0 / 670.0



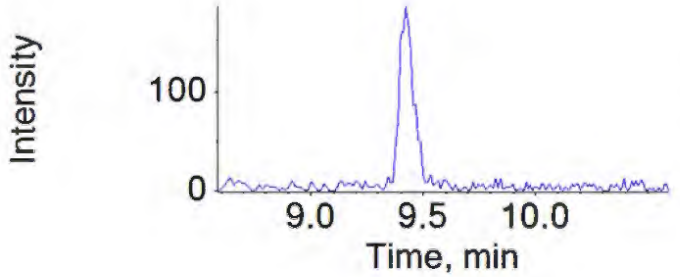
Analyte: PFHxDA
813.0 / 769.0



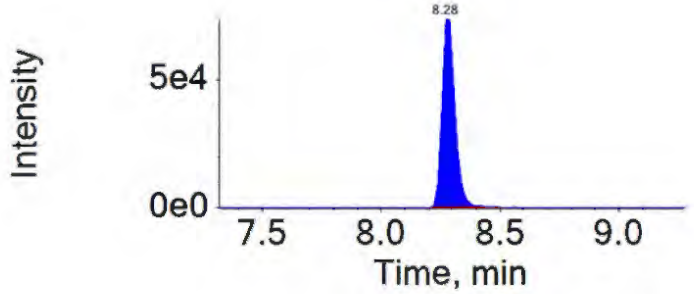
Extraction Standard: 13C2-PFTeDA
715.0 / 670.0



Analyte: PFODA
913.0 / 869.0



Extraction Standard: 13C2-PFTeDA
715.0 / 670.0



APPROVED
By JWK at 12:35 pm, 5/11/17

REVIEWED
By UMJS at 9:13 am, 5/15/17

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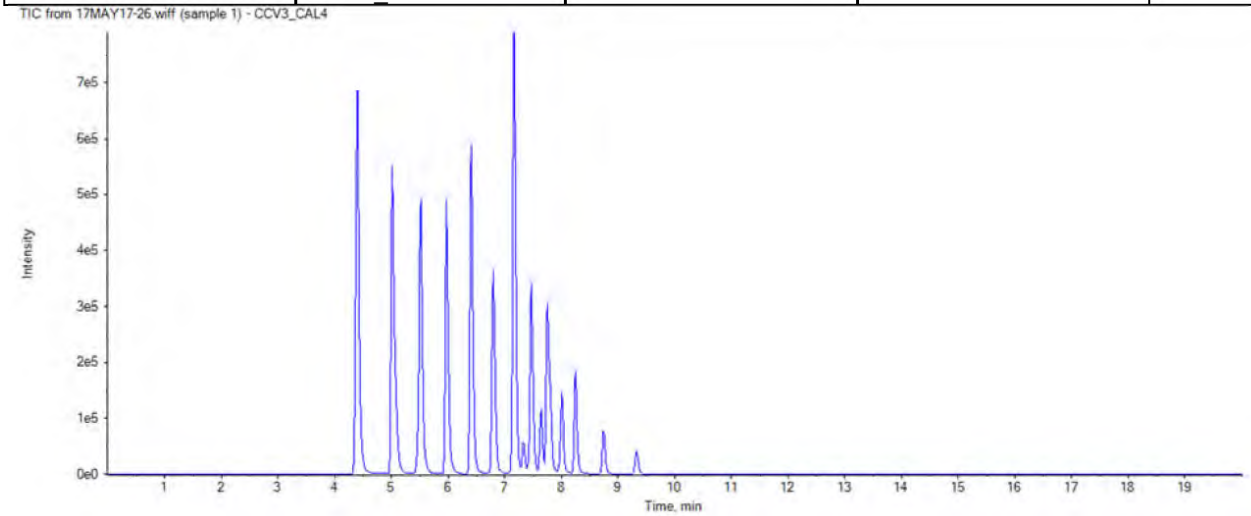
LC-MS/MS Analysis Report

Printed: 5/17/2017 10:44:00 AM
Template: MQ-CCV-16NOV21.docx

Continuing Calibration Verfication

ICAL Name: 17MAY10MCAL **Result Table:** 17MAY17CCV1-3 5/17/2017 10:34:32 AM
QMethod Name: PFCMOD - 17JAN28 **Acquisition Method:** PFC-32-16NOV02.dam

Instrument Name:	Sample Name:	Sample ID:	Sample File:	Acquisition Date:
LM24960	CCV3_CAL4	CALPFC1712533E	17MAY17-26.wiff	2017-05-17T09:13:11



Injection Standard Name	Inj Std Conc	Injection Std Peak Area	ICAL Injection Standard AVG	Injection Std %Diff	Injection Std %Diff Limit	Injection Std %Diff OOS
I13C3-PFBA	1.00	749131.2	669117.279	12.0	50.0	
I13C2-PFOA	1.00	354090.7	342184.630	3.5	50.0	
I13C4-PFOS	1.00	65331.1	70131.551	-6.8	50.0	
I13C2-PFDA	1.00	430299.3	384098.708	12.0	50.0	

APPROVED
By JWK at 11:46 am, 5/17/17

REVIEWED
By UMJS at 9:33 am, 5/19/17

Continuing Calibration Verfication

ICAL Name: 17MAY10MCAL **Result Table:** 17MAY17CCV1-3 5/17/2017 10:34:32 AM
QMethod Name: PFCMOD - 17JAN28 **Acquisition Method:** PFC-32-16NOV02.dam

Instrument Name:	Sample Name:	Sample ID:	Sample File:	Acquisition Date:
LM24960	CCV3_CAL4	CALPFC1712533E	17MAY17-26.wiff	2017-05-17T09:13:11

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	1233592.4	13C4-PFBA	868021.3	1.0	1.421	4.40	1.000	8.000	7.815	-2.3	30.0	
PFPeA	1279245.0	13C5-PFPeA	808002.8	1.0	1.583	5.01	1.000	8.000	7.670	-4.1	30.0	
PFBS	196180.9	13C3-PFBS	132174.9	1.0	1.484	5.08	1.000	7.080	7.024	-0.8	30.0	
4:2-FTS	71518.0	13C2-4:2-FTS	77643.9	1.0	0.921	5.47	1.000	3.740	4.305	15.1	30.0	
PFHxA	1012535.6	13C5-PFHxA	743108.9	1.0	1.363	5.51	1.000	8.000	7.213	-9.8	30.0	
PFPeS	112442.6	13C3-PFBS	132174.9	1.0	0.851	5.53	1.090	7.500	7.601	1.3	30.0	
PFHxS	344589.2	13C3-PFHxS	68531.4	1.0	5.028	5.97	1.000	7.560	7.053	-6.7	30.0	
PFHpA	806676.9	13C4-PFHpA	422006.4	1.0	1.912	5.98	1.000	8.000	7.700	-3.8	30.0	
6:2-FTS	28394.4	13C2-6:2-FTS	38969.7	1.0	0.729	6.39	1.000	3.790	4.135	9.1	30.0	
PFHpS	97799.1	13C3-PFHxS	68531.4	1.0	1.427	6.40	1.070	7.610	7.484	-1.6	30.0	
PFOA	647365.6	13C8-PFOA	405941.3	1.0	1.595	6.41	1.000	8.000	7.266	-9.2	30.0	
PFOS	340135.9	13C8-PFOS	71717.0	1.0	4.743	6.78	1.000	7.650	6.596	-13.8	30.0	
PFNA	594976.0	13C9-PFNA	308779.7	1.0	1.927	6.81	1.000	8.000	7.869	-1.6	30.0	
PFOSA	601390.3	13C8-PFOSA	359721.8	1.0	1.672	7.17	1.000	8.000	7.637	-4.5	30.0	
PFNS	104450.3	13C8-PFOS	71717.0	1.0	1.456	7.13	1.050	7.680	6.678	-13.0	30.0	
PFDA	877678.9	13C6-PFDA	553345.6	1.0	1.586	7.16	1.000	8.000	8.655	8.2	30.0	
8:2-FTS	40484.1	13C2-8:2-FTS	49272.7	1.0	0.822	7.17	1.000	3.830	4.138	8.0	30.0	
NMePFOSAE	187207.4	d7-NMePFOSAE	103090.8	1.0	1.816	7.64	1.000	8.000	7.241	-9.5	30.0	
NMePFOSA	78969.5	d3-NMePFOSA	42710.9	1.0	1.849	7.65	1.000	8.000	8.629	7.9	30.0	
NMeFOSAA	99023.4	d3-NMeFOSAA	102722.3	1.0	0.964	7.33	1.000	4.000	4.528	13.2	30.0	
NEtPFOSAE	176494.5	d9-NEtPFOSAE	106639.2	1.0	1.655	7.80	1.000	8.000	7.587	-5.2	30.0	
NEtPFOSA	55236.3	d5-NEtPFOSA	33501.8	1.0	1.649	7.82	1.000	8.000	8.182	2.3	30.0	
PFDS	69464.8	13C8-PFOS	71717.0	1.0	0.969	7.43	1.100	7.700	4.917	-36.1	30.0	OOS
PFUnDA	658132.2	13C7-PFUnDA	320293.2	1.0	2.055	7.47	1.000	8.000	8.003	0.0	30.0	
NEtFOSAA	87388.9	d5-NEtFOSAA	100478.1	1.0	0.870	7.49	1.000	4.000	4.255	6.4	30.0	
PFDoDA	598077.0	13C2-PFDoDA	454443.3	1.0	1.316	7.75	1.000	8.000	7.043	-12.0	30.0	
10:2-FTS	43975.9	13C2-8:2-FTS	49272.7	1.0	0.893	7.79	1.090	3.860	4.301	11.4	30.0	
PFDoS	37081.4	13C8-PFOS	71717.0	1.0	0.517	7.97	1.170	7.740	7.284	-5.9	30.0	
PFTrDA	497131.8	13C2-PFDoDA	454443.3	1.0	1.094	8.01	1.030	8.000	8.122	1.5	30.0	
PFTeDA	376774.8	13C2-PFTeDA	250807.1	1.0	1.502	8.25	1.000	8.000	7.665	-4.2	30.0	
PFHxDA	295404.1	13C2-PFTeDA	250807.1	1.0	1.178	8.75	1.060	8.000	7.433	-7.1	30.0	
PFODA	177690.5	13C2-PFTeDA	250807.1	1.0	0.708	9.33	1.130	8.000	6.479	-19.0	30.0	

APPROVED
By JWK at 11:46 am, 5/17/17

REVIEWED
By UMJS at 9:33 am, 5/19/17

Continuing Calibration Verfication

ICAL Name: 17MAY10MCAL **Result Table:** 17MAY17CCV1-3 5/17/2017 10:34:32 AM
QMethod Name: PFCMOD - 17JAN28 **Acquisition Method:** PFC-32-16NOV02.dam

APPROVED
By JWK at 11:46 am, 5/17/17

REVIEWED
By UMJS at 9:33 am, 5/19/17

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LC-MS/MS Analysis Report

Printed: 5/17/2017 10:47:00 AM
Template: MQ-Sample-16Nov21.docx

ICAL Name: 17MAY10MCAL
QMethod Name: PFCMOD - 17JAN28
Result Table: 17MAY17CCV1-3 5/17/2017 10:34:32 AM
Acquisition Method: PFC-32-16NOV02.dam

Sample Name:	CCV3_CAL4			**Data File:**		17MAY17-26.wiff
Sample ID:	CALPFC1712533E			**Acquis Date:**		2017-05-17T09:13:11
Sample Type:	Quality Control			**Instrument:**		LM24960
Vial Position:	6			**Acquis Method:**		PFC-32-16NOV02.dam
Injection Vol:	5.00			**Result Table:**		17MAY17CCV1-3
QMethod File:	PFCMOD - 17JAN28			**ICAL Name:**		17MAY10MCAL
Batch Number:	NA			**Operator:**		Not calculated
Sample Wt.:	1.00000			**Dilution Factor:**		1.00
Sample Vol.:	1.000			**Prep Factor:**		1.000

Injection Standard Peak Table

Injection Standard Name	Inj Std Conc	Injection Std Peak Area	ICAL Injection Standard AVG	Injection Std %Diff	Injection Std %Diff Limit	Injection Std %Diff OOS
I13C3-PFBA	1.0	749131.2	669117.3	12.0	50.0	
I13C2-PFOA	1.0	354090.7	342184.6	3.5	50.0	
I13C4-PFOS	1.0	65331.1	70131.6	-6.8	50.0	
I13C2-PFDA	1.0	430299.3	384098.7	12.0	50.0	

Extraction Standard Peak Table

Extraction Standard Name	Ext Std Area	Inj Std Name	Inj Std Area	Area Ratio	AVG Area Ratio	Ext Std Conc	Ext Std Result	Ext Std %REC	Ext Std %REC Limit	Ext Std OOS
E13C4-PFBA	868021.3	13C3-PFBA	749131.2	1.159	1.150	1.000	1.007	100.7	70.0-130.0	
E13C5-PFPeA	808002.8	13C3-PFBA	749131.2	1.079	1.073	1.000	1.005	100.5	70.0-130.0	
E13C3-PFBS	132174.9	13C3-PFBA	749131.2	0.176	0.194	1.000	0.908	90.8	70.0-130.0	
E13C2-4:2-FTS	77643.9	13C2-PFOA	354090.7	0.219	0.236	1.000	0.928	92.8	70.0-130.0	
E13C5-PFHxA	743108.9	13C2-PFOA	354090.7	2.099	2.026	1.000	1.036	103.6	70.0-130.0	
E13C3-PFHxS	68531.4	13C2-PFOA	354090.7	0.194	0.206	1.000	0.941	94.1	70.0-130.0	
E13C4-PFHpA	422006.4	13C2-PFOA	354090.7	1.192	1.285	1.000	0.928	92.8	70.0-130.0	
E13C2-6:2-FTS	38969.7	13C2-PFOA	354090.7	0.110	0.128	1.000	0.859	85.9	70.0-130.0	
E13C8-PFOA	405941.3	13C2-PFOA	354090.7	1.146	1.163	1.000	0.985	98.5	70.0-130.0	
E13C8-PFOS	71717.0	13C4-PFOS	65331.1	1.098	0.865	1.000	1.268	126.8	70.0-130.0	
E13C9-PFNA	308779.7	13C4-PFOS	65331.1	4.726	4.422	1.000	1.069	106.9	70.0-130.0	
E13C8-PFOSA	359721.8	13C2-PFDA	430299.3	0.836	0.936	1.000	0.893	89.3	70.0-130.0	
E13C6-PFDA	553345.6	13C2-PFDA	430299.3	1.286	1.424	1.000	0.903	90.3	70.0-130.0	
E13C2-8:2-FTS	49272.7	13C2-PFDA	430299.3	0.115	0.155	1.000	0.737	73.7	70.0-130.0	
Ed7-NMePFOSAE	103090.8	13C2-PFDA	430299.3	0.240	0.299	1.000	0.802	80.2	70.0-130.0	
Ed3-NMePFOSA	42710.9	13C2-PFDA	430299.3	0.099	0.120	1.000	0.825	82.5	70.0-130.0	
Ed3-NMeFOSAA	102722.3	13C2-PFDA	430299.3	0.239	0.343	1.000	0.696	69.6	70.0-130.0	OOS
Ed9-NEtPFOSAE	106639.2	13C2-PFDA	430299.3	0.248	0.333	1.000	0.745	74.5	70.0-130.0	
Ed5-NEtPFOSA	33501.8	13C2-PFDA	430299.3	0.078	0.095	1.000	0.822	82.2	70.0-130.0	
E13C7-PFUnDA	320293.2	13C2-PFDA	430299.3	0.744	0.953	1.000	0.781	78.1	70.0-130.0	
Ed5-NEtFOSAA	100478.1	13C2-PFDA	430299.3	0.234	0.249	1.000	0.939	93.9	70.0-130.0	
E13C2-PFDoDA	454443.3	13C2-PFDA	430299.3	1.056	1.154	1.000	0.915	91.5	70.0-130.0	
E13C2-PFTeDA	250807.1	13C2-PFDA	430299.3	0.583	0.651	1.000	0.895	89.5	70.0-130.0	

APPROVED
By JWK at 11:46 am, 5/17/17

REVIEWED
By UMJS at 9:33 am, 5/19/17

ICAL Name: 17MAY10MCAL **Result Table:** 17MAY17CCV1-3 5/17/2017 10:34:32 AM
QMethod Name: PFCMOD - 17JAN28 **Acquisition Method:** PFC-32-16NOV02.dam

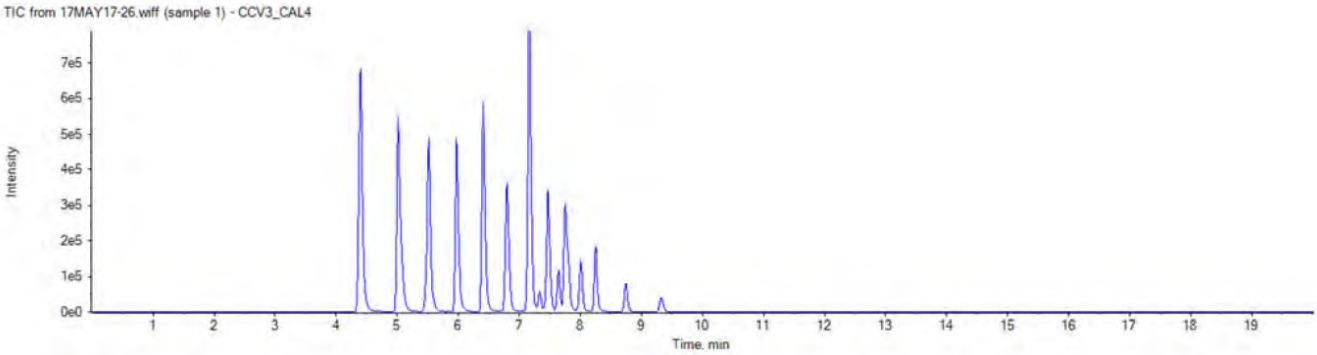
Analyte Quantitation Peak Table

Sample Name: CCV3_CAL4 **Instrument Name:** LM24960 **File Name:** 17MAY17-26.wiff

Sample Wt	Sample Vol	Dilution Factor	PrepFactor
1.00000	1.000	1.00	1.000

Analytet Name	RT	RRT	Analyte Area Response	Int Typ	ES Name	ES RT	ES Area Response	Area Ratio	Sample Result (ng/g)
PFBA	4.40	1.000	1233592.4	A	13C4-PFBA	4.40	868021.3	1.421	7.815
PFPeA	5.01	1.000	1279245.0	A	13C5-PFPeA	5.02	808002.8	1.583	7.670
PFBS	5.08	1.000	196180.9	A	13C3-PFBS	5.08	132174.9	1.484	7.024
4:2-FTS	5.47	1.000	71518.0	A	13C2-4:2-FTS	5.47	77643.9	0.921	4.305
PFHxA	5.51	1.000	1012535.6	A	13C5-PFHxA	5.51	743108.9	1.363	7.213
PFPeS	5.53	1.090	112442.6	A	13C3-PFBS	5.08	132174.9	0.851	7.601
PFHxS	5.97	1.000	344589.2	A	13C3-PFHxS	5.97	68531.4	5.028	7.053
PFHpA	5.98	1.000	806676.9	A	13C4-PFHpA	5.97	422006.4	1.912	7.700
6:2-FTS	6.39	1.000	28394.4	A	13C2-6:2-FTS	6.39	38969.7	0.729	4.135
PFHpS	6.40	1.070	97799.1	A	13C3-PFHxS	5.97	68531.4	1.427	7.484
PFOA	6.41	1.000	647365.6	A	13C8-PFOA	6.41	405941.3	1.595	7.266
PFOS	6.78	1.000	340135.9	A	13C8-PFOS	6.78	71717.0	4.743	6.596
PFNA	6.81	1.000	594976.0	A	13C9-PFNA	6.80	308779.7	1.927	7.869
PFOSA	7.17	1.000	601390.3	A	13C8-PFOSA	7.17	359721.8	1.672	7.637
PFNS	7.13	1.050	104450.3	A	13C8-PFOS	6.78	71717.0	1.456	6.678
PFDA	7.16	1.000	877678.9	A	13C6-PFDA	7.16	553345.6	1.586	8.655
8:2-FTS	7.17	1.000	40484.1	A	13C2-8:2-FTS	7.17	49272.7	0.822	4.138
NMePFOSAE	7.64	1.000	187207.4	A	d7-NMePFOSAE	7.63	103090.8	1.816	7.241
NMePFOSA	7.65	1.000	78969.5	A	d3-NMePFOSA	7.65	42710.9	1.849	8.629
NMeFOSAA	7.33	1.000	99023.4	A	d3-NMeFOSAA	7.33	102722.3	0.964	4.528
NEtPFOSAE	7.80	1.000	176494.5	A	d9-NEtPFOSAE	7.79	106639.2	1.655	7.587
NEtPFOSA	7.82	1.000	55236.3	A	d5-NEtPFOSA	7.82	33501.8	1.649	8.182
PFDS	7.43	1.100	69464.8	A	13C8-PFOS	6.78	71717.0	0.969	4.917
PFUnDA	7.47	1.000	658132.2	A	13C7-PFUnDA	7.47	320293.2	2.055	8.003
NEtFOSAA	7.49	1.000	87388.9	A	d5-NEtFOSAA	7.49	100478.1	0.870	4.255
PFDoDA	7.75	1.000	598077.0	A	13C2-PFDoDA	7.75	454443.3	1.316	7.043
10:2-FTS	7.79	1.090	43975.9	A	13C2-8:2-FTS	7.17	49272.7	0.893	4.301
PFDoS	7.97	1.170	37081.4	A	13C8-PFOS	6.78	71717.0	0.517	7.284
PFTrDA	8.01	1.030	497131.8	A	13C2-PFDoDA	7.75	454443.3	1.094	8.122
PFTeDA	8.25	1.000	376774.8	A	13C2-PFTeDA	8.25	250807.1	1.502	7.665
PFHxDA	8.75	1.060	295404.1	A	13C2-PFTeDA	8.25	250807.1	1.178	7.433
PFODA	9.33	1.130	177690.5	A	13C2-PFTeDA	8.25	250807.1	0.708	6.479

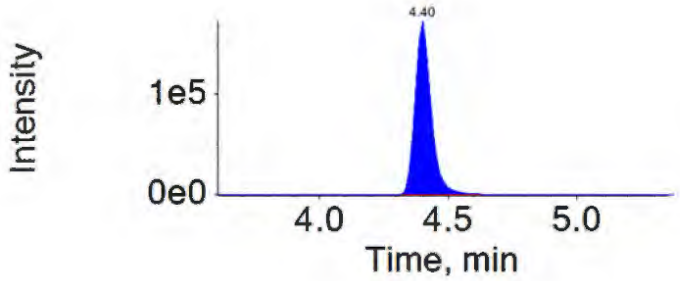
Total Ion Chromatogram



ICAL Name: 17MAY10MCAL
QMethod Name: PFCMOD - 17JAN28
Result Table: 17MAY17CCV1-3 5/17/2017 10:34:32 AM
Acquisition Method: PFC-32-16NOV02.dam

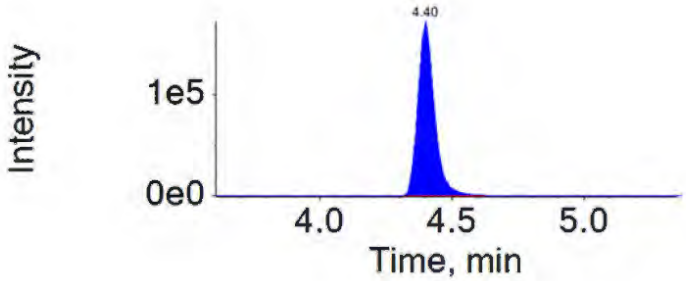
Injection Standard: I13C3-PFBA

216.0 / 172.0



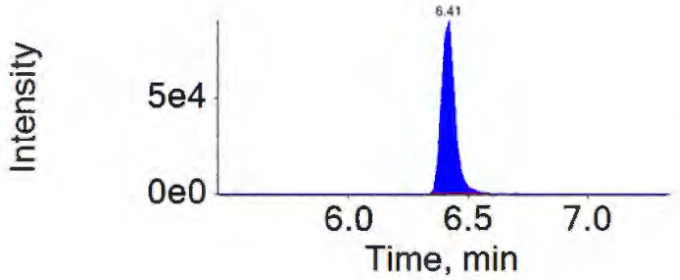
Injection Standard: 13C3-PFBA

216.0 / 172.0



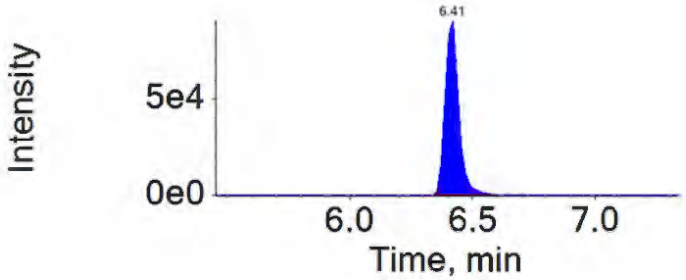
Injection Standard: I13C2-PFOA

415.0 / 370.0



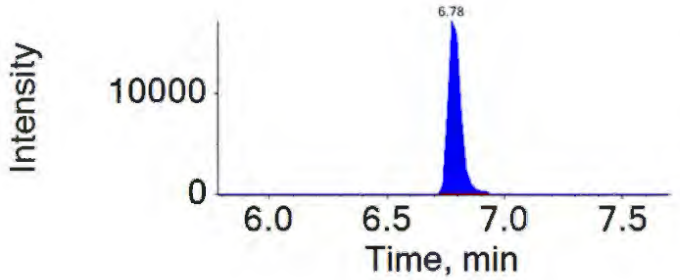
Injection Standard: 13C2-PFOA

415.0 / 370.0



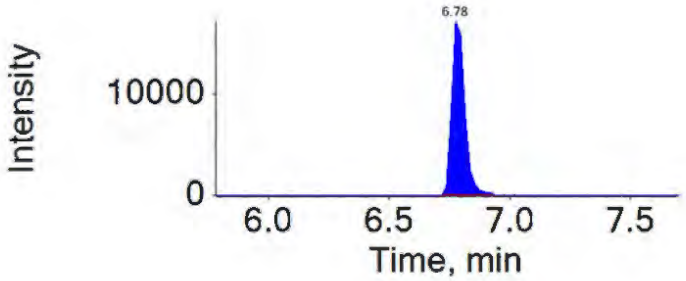
Injection Standard: I13C4-PFOS

503.0 / 99.0



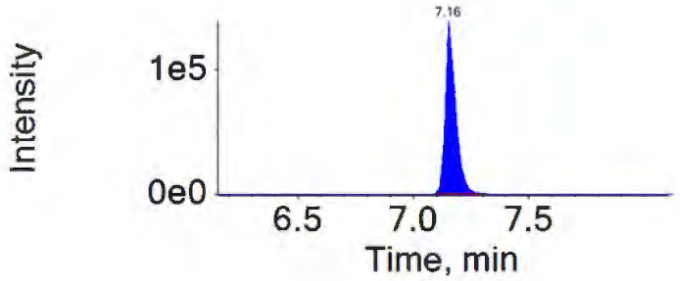
Injection Standard: 13C4-PFOS

503.0 / 99.0



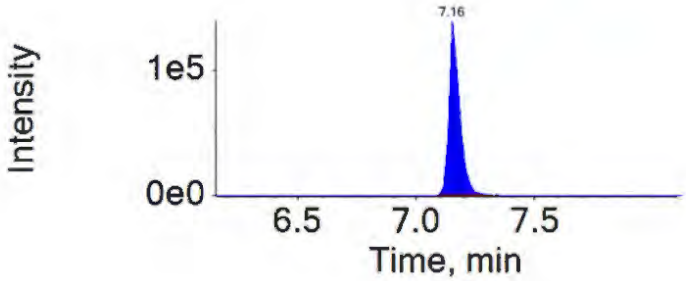
Injection Standard: I13C2-PFDA

515.0 / 470.0



Injection Standard: 13C2-PFDA

515.0 / 470.0



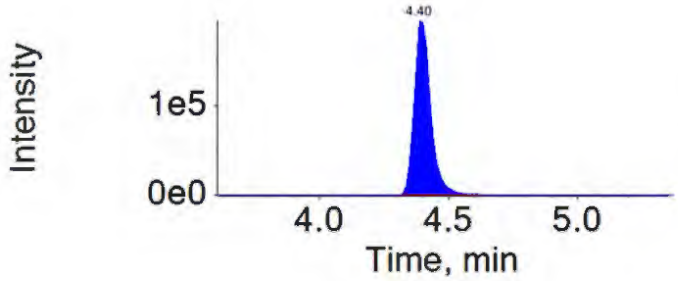
APPROVED
By JWK at 11:46 am, 5/17/17

REVIEWED
By UMJS at 9:33 am, 5/19/17

ICAL Name: 17MAY10MCAL **Result Table:** 17MAY17CCV1-3 5/17/2017 10:34:32 AM
QMethod Name: PFCMOD - 17JAN28 **Acquisition Method:** PFC-32-16NOV02.dam

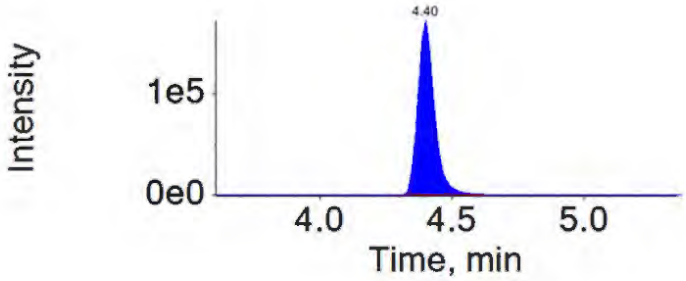
Extraction Standard: E13C4-PFBA

217.0 /
172.0



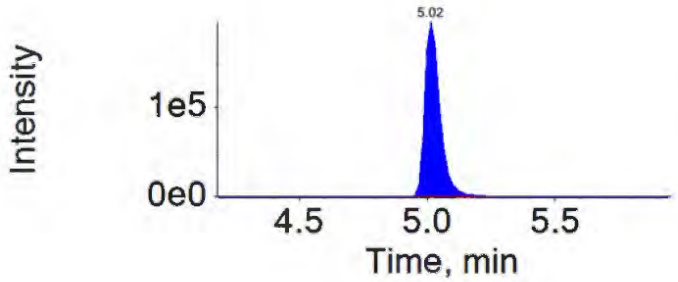
Injection Standard: 13C3-PFBA

216.0 /
172.0



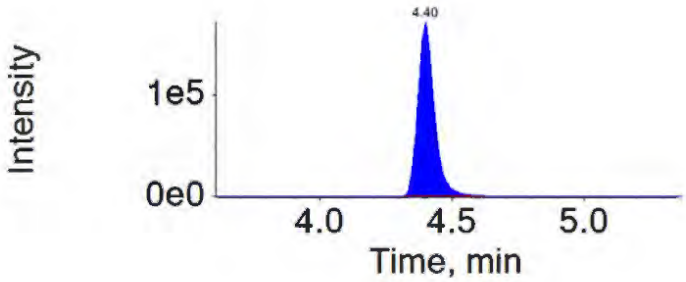
Extraction Standard: E13C5-PFPeA

268.0 /
223.0



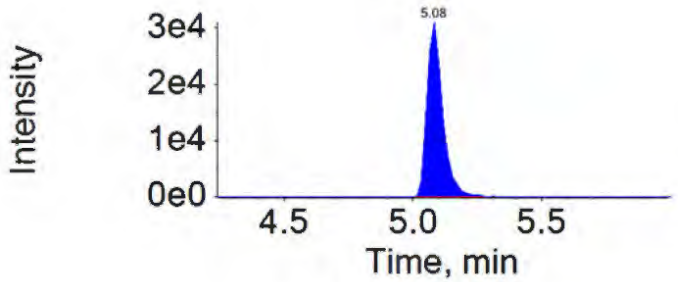
Injection Standard: 13C3-PFBA

216.0 /
172.0



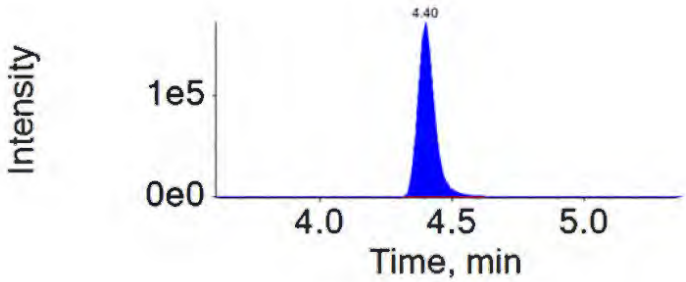
Extraction Standard: E13C3-PFBS

302.0 /
99.0



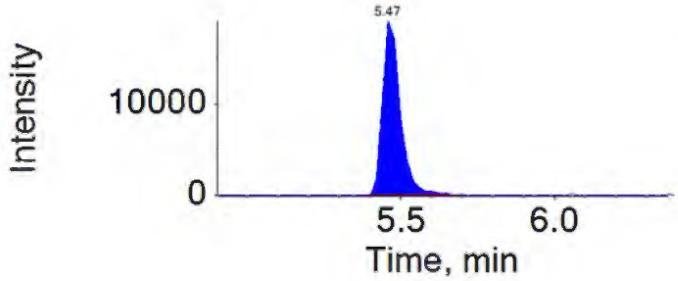
Injection Standard: 13C3-PFBA

216.0 /
172.0



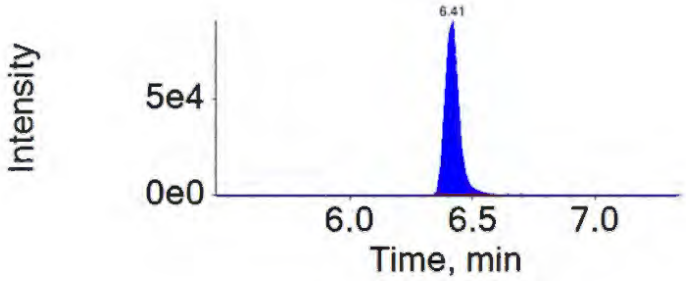
Extraction Standard: E13C2-4:2-FTS

329.0 /
309.0



Injection Standard: 13C2-PFOA

415.0 /
370.0



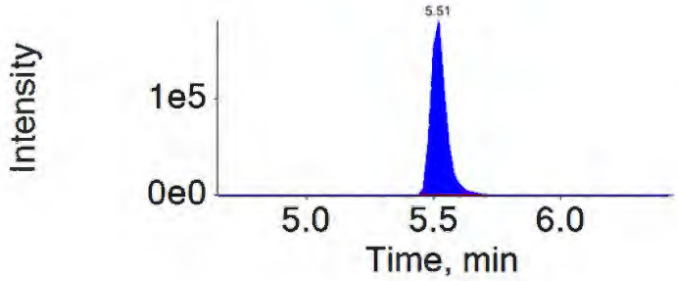
APPROVED
By JWK at 11:46 am, 5/17/17

REVIEWED
By UMJS at 9:33 am, 5/19/17

ICAL Name: 17MAY10MCAL **Result Table:** 17MAY17CCV1-3 5/17/2017 10:34:32 AM
QMethod Name: PFCMOD - 17JAN28 **Acquisition Method:** PFC-32-16NOV02.dam

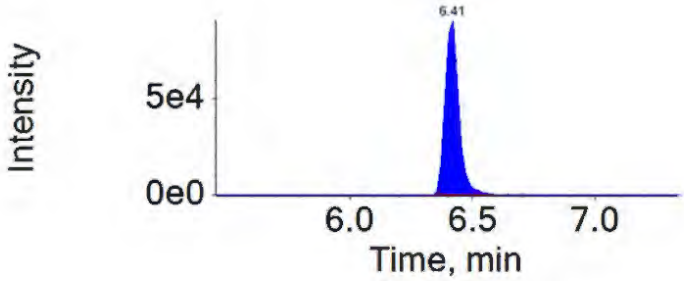
Extraction Standard: E13C5-PFHxA

318.0 /
273.0



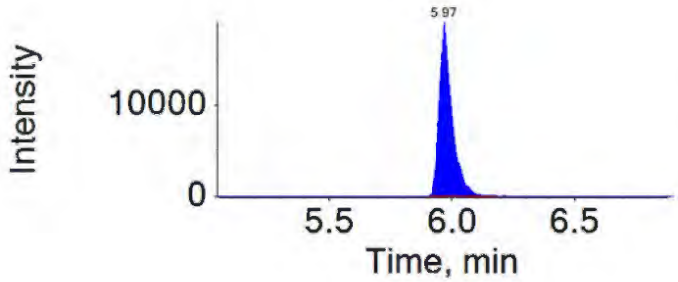
Injection Standard: 13C2-PFOA

415.0 /
370.0



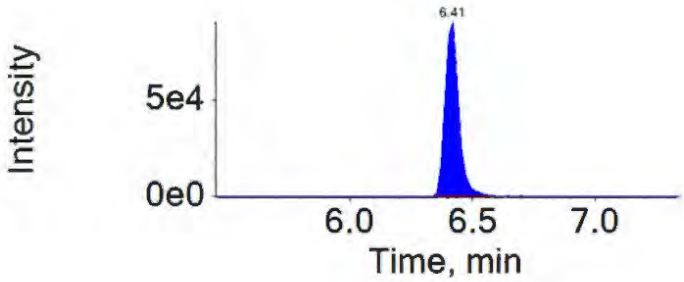
Extraction Standard: E13C3-PFHxS

402.0 /
99.0



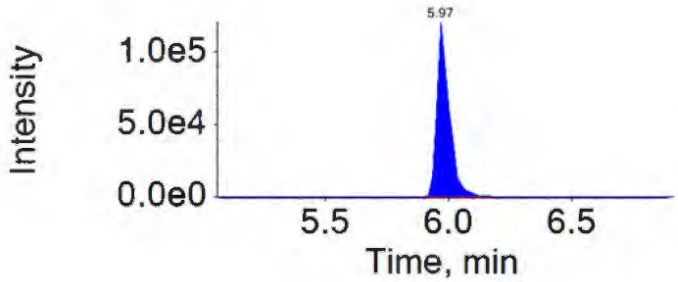
Injection Standard: 13C2-PFOA

415.0 /
370.0



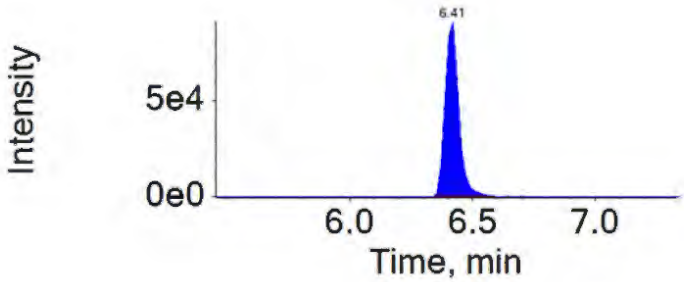
Extraction Standard: E13C4-PFHpA

367.0 /
322.0



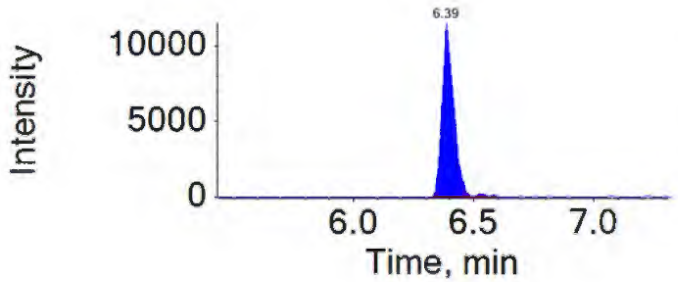
Injection Standard: 13C2-PFOA

415.0 /
370.0



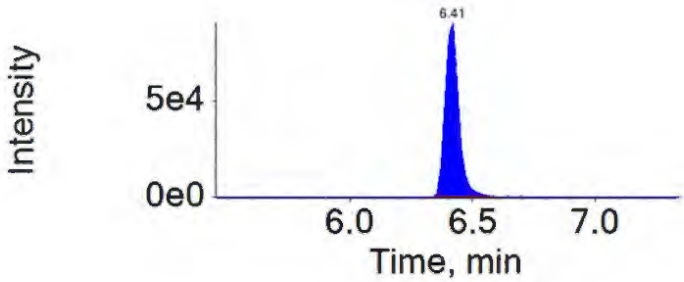
Extraction Standard: E13C2-6:2-FTS

429.0 /
409.0



Injection Standard: 13C2-PFOA

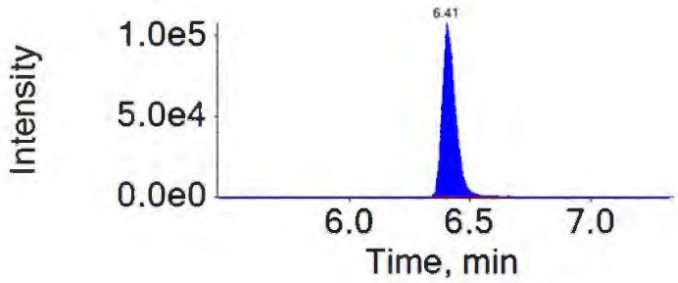
415.0 /
370.0



ICAL Name: 17MAY10MCAL **Result Table:** 17MAY17CCV1-3 5/17/2017 10:34:32 AM
QMethod Name: PFCMOD - 17JAN28 **Acquisition Method:** PFC-32-16NOV02.dam

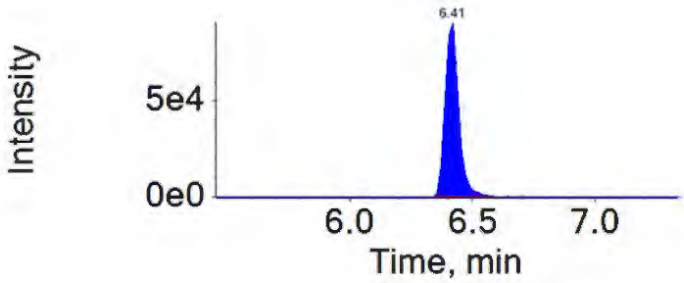
Extraction Standard: E13C8-PFOA

421.0 /
376.0



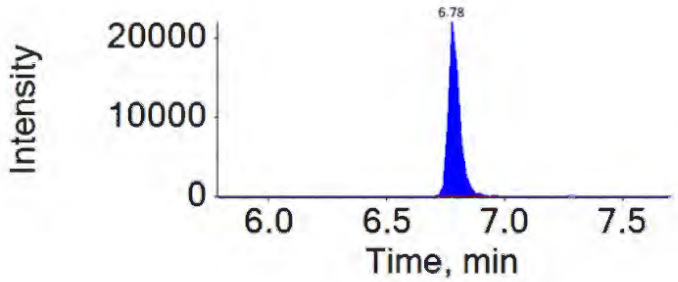
Injection Standard: 13C2-PFOA

415.0 /
370.0



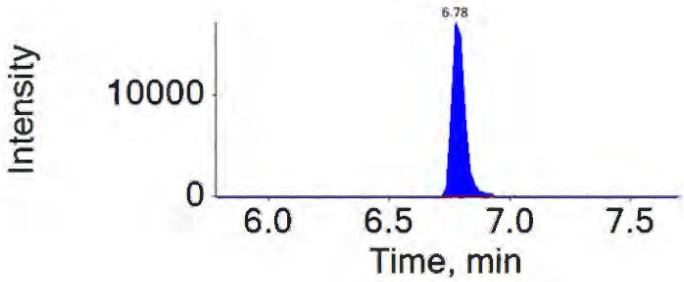
Extraction Standard: E13C8-PFOS

507.0 /
99.0



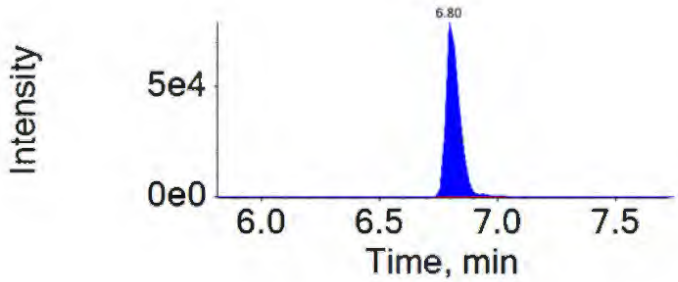
Injection Standard: 13C4-PFOS

503.0 /
99.0



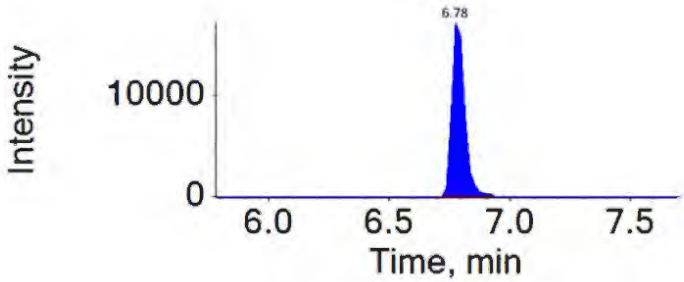
Extraction Standard: E13C9-PFNA

472.0 /
427.0



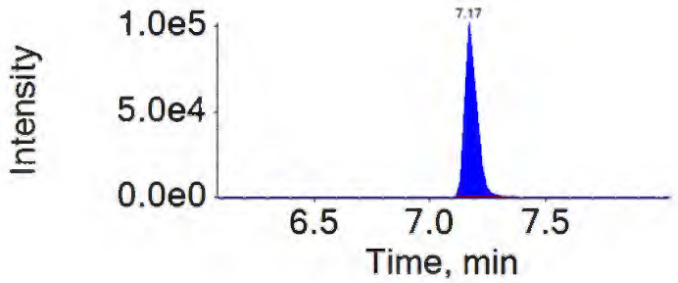
Injection Standard: 13C4-PFOS

503.0 /
99.0



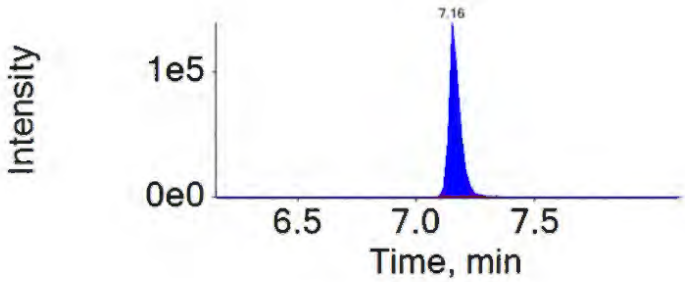
Extraction Standard: E13C8-PFOSA

506.0 /
78.0



Injection Standard: 13C2-PFDA

515.0 /
470.0



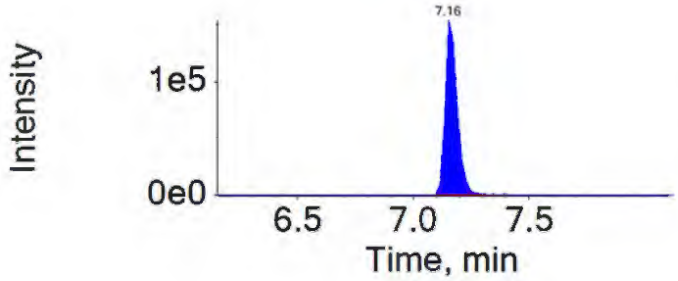
APPROVED
By JWK at 11:46 am, 5/17/17

REVIEWED
By UMJS at 9:33 am, 5/19/17

ICAL Name: 17MAY10MCAL **Result Table:** 17MAY17CCV1-3 5/17/2017 10:34:32 AM
QMethod Name: PFCMOD - 17JAN28 **Acquisition Method:** PFC-32-16NOV02.dam

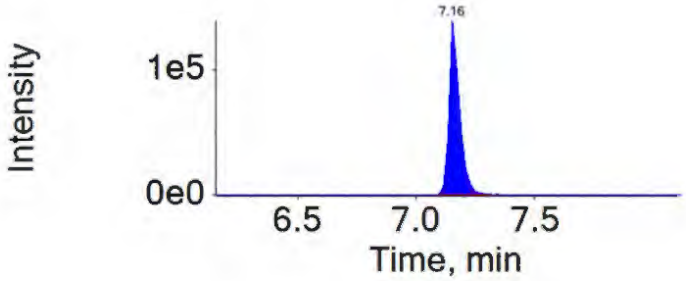
Extraction Standard: E13C6-PFDA

519.0 / 474.0



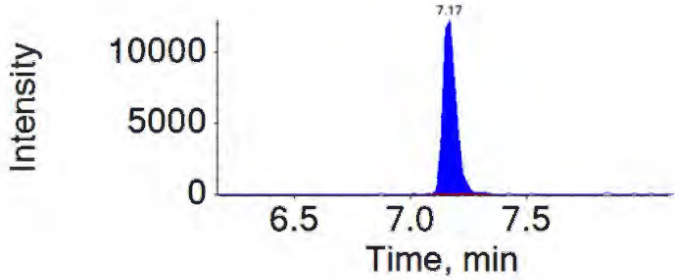
Injection Standard: 13C2-PFDA

515.0 / 470.0



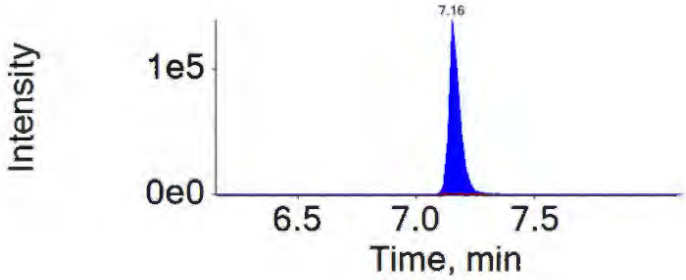
Extraction Standard: E13C2-8:2-FTS

529.0 / 509.0



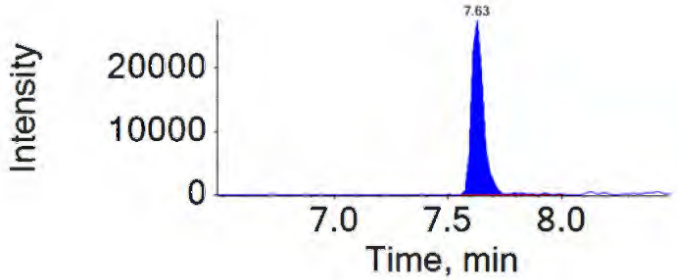
Injection Standard: 13C2-PFDA

515.0 / 470.0



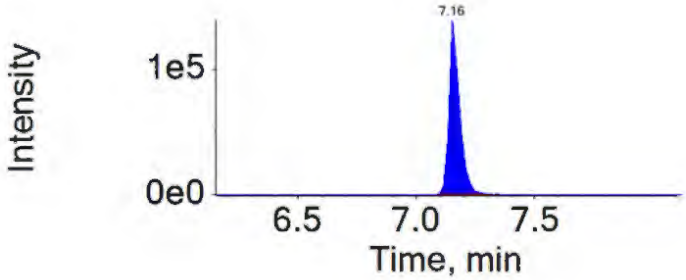
Extraction Standard: Ed7-NMePFOSAE

623.0 / 59.0



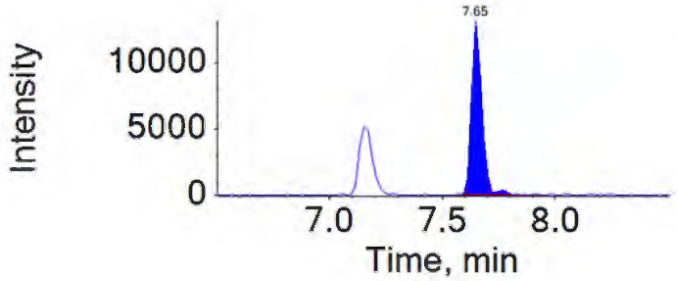
Injection Standard: 13C2-PFDA

515.0 / 470.0



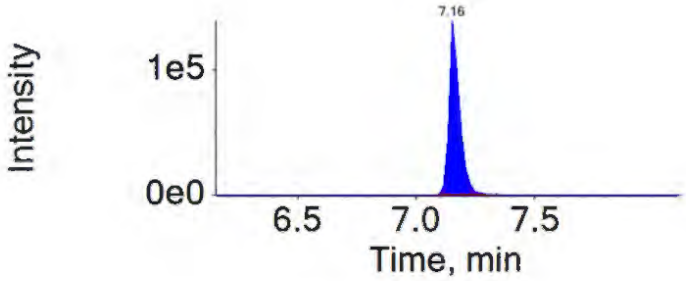
Extraction Standard: Ed3-NMePFOSA

515.0 / 169.0



Injection Standard: 13C2-PFDA

515.0 / 470.0



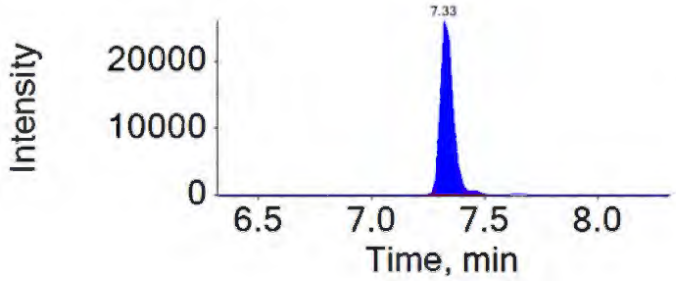
APPROVED
By JWK at 11:46 am, 5/17/17

REVIEWED
By UMJS at 9:33 am, 5/19/17

ICAL Name: 17MAY10MCAL **Result Table:** 17MAY17CCV1-3 5/17/2017 10:34:32 AM
QMethod Name: PFCMOD - 17JAN28 **Acquisition Method:** PFC-32-16NOV02.dam

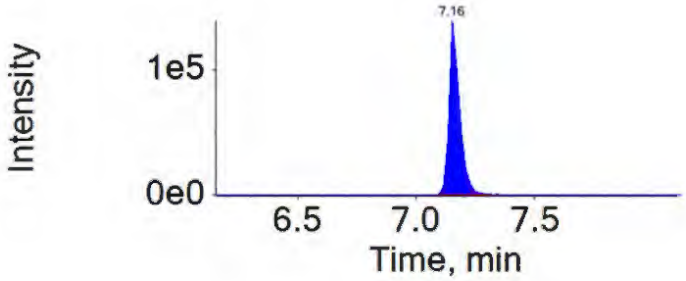
Extraction Standard: Ed3-NMeFOSAA

573.0 / 419.0



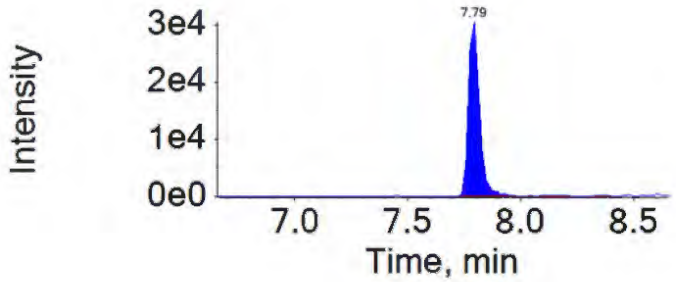
Injection Standard: 13C2-PFDA

515.0 / 470.0



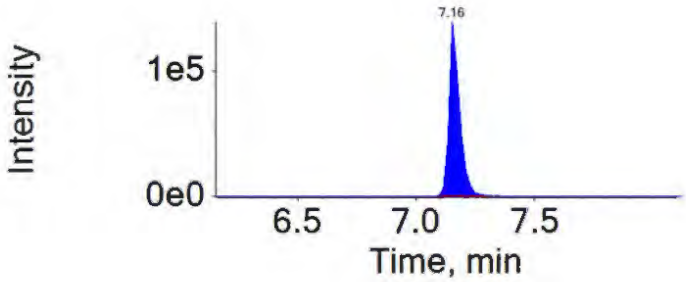
Extraction Standard: Ed9-NEtPFOSAE

639.0 / 59.0



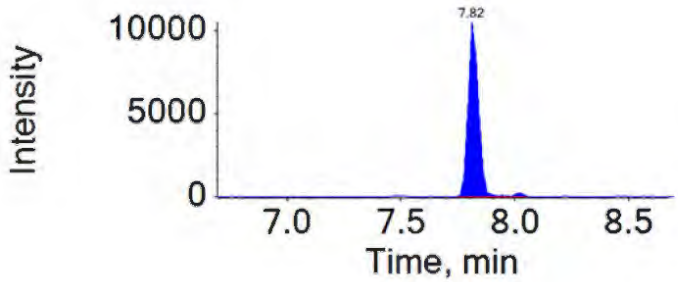
Injection Standard: 13C2-PFDA

515.0 / 470.0



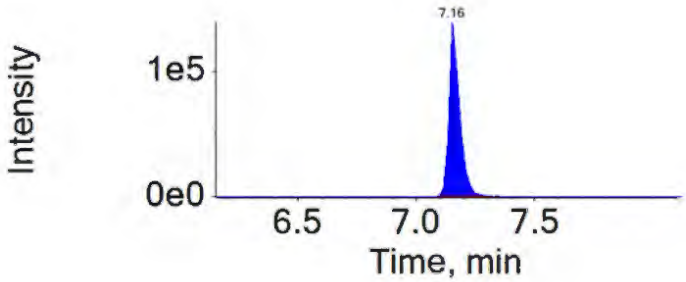
Extraction Standard: Ed5-NEtPFOSA

531.0 / 169.0



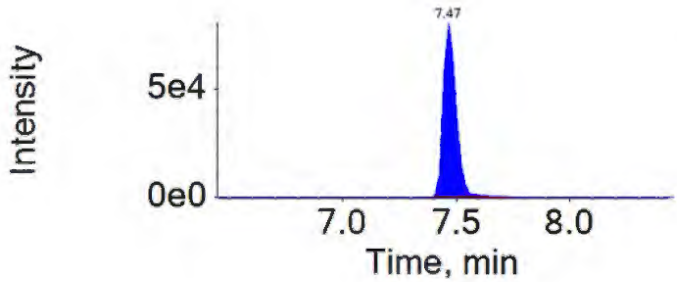
Injection Standard: 13C2-PFDA

515.0 / 470.0



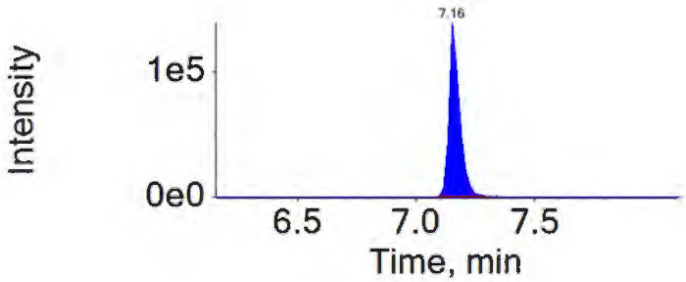
Extraction Standard: E13C7-PFUnDA

570.0 / 525.0



Injection Standard: 13C2-PFDA

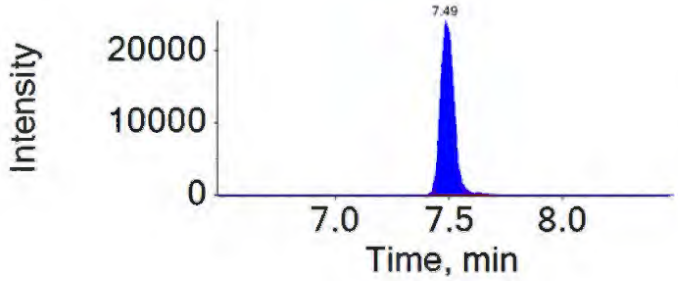
515.0 / 470.0



ICAL Name: 17MAY10MCAL **Result Table:** 17MAY17CCV1-3 5/17/2017 10:34:32 AM
QMethod Name: PFCMOD - 17JAN28 **Acquisition Method:** PFC-32-16NOV02.dam

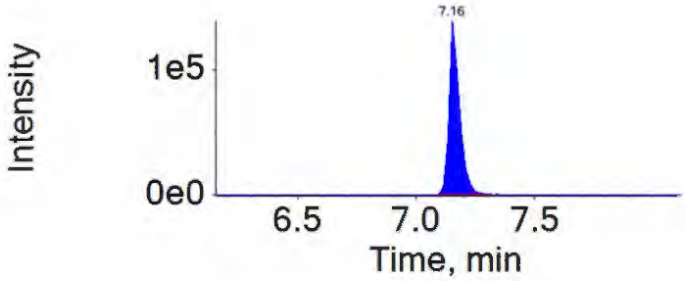
Extraction Standard: Ed5-NEtFOSAA

589.0 / 419.0



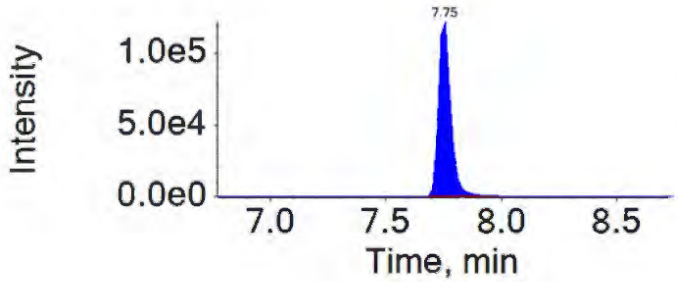
Injection Standard: 13C2-PFDA

515.0 / 470.0



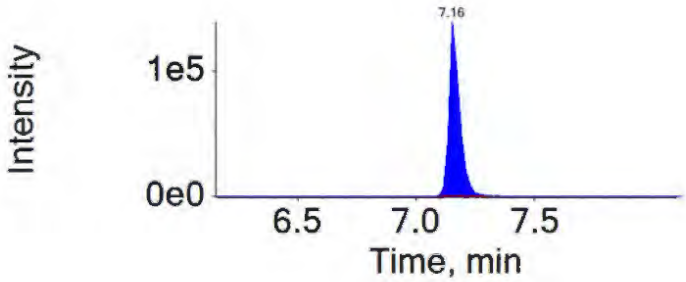
Extraction Standard: E13C2-PFDoDA

615.0 / 570.0



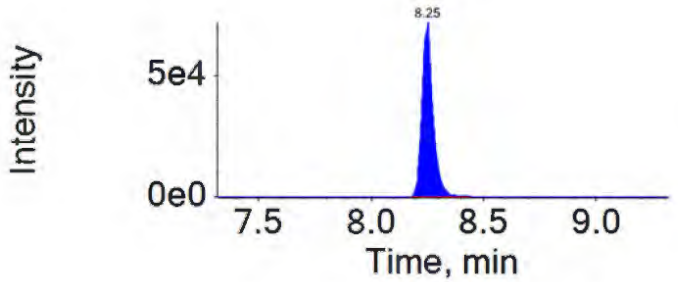
Injection Standard: 13C2-PFDA

515.0 / 470.0



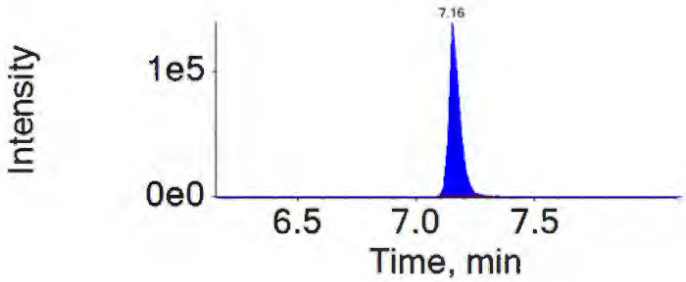
Extraction Standard: E13C2-PFTeDA

715.0 / 670.0



Injection Standard: 13C2-PFDA

515.0 / 470.0

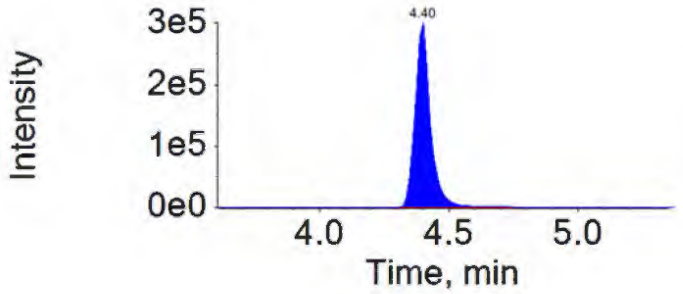


APPROVED
By JWK at 11:46 am, 5/17/17

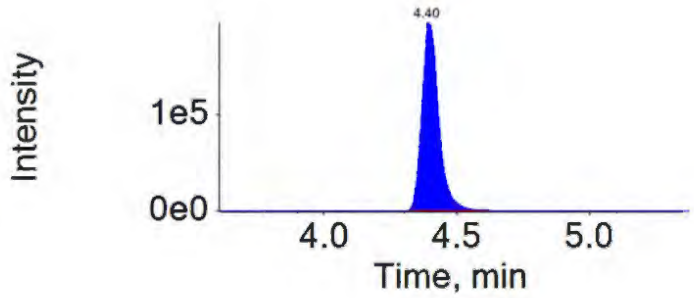
REVIEWED
By UMJS at 9:33 am, 5/19/17

ICAL Name: 17MAY10MCAL **Result Table:** 17MAY17CCV1-3 5/17/2017 10:34:32 AM
QMethod Name: PFCMOD - 17JAN28 **Acquisition Method:** PFC-32-16NOV02.dam

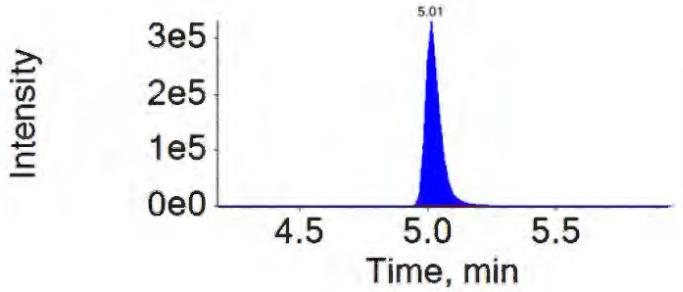
Analyte: PFBA
213.0 / 169.0



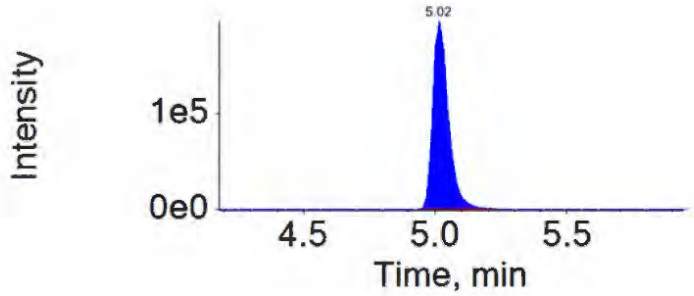
Extraction Standard: 13C4-PFBA
217.0 / 172.0



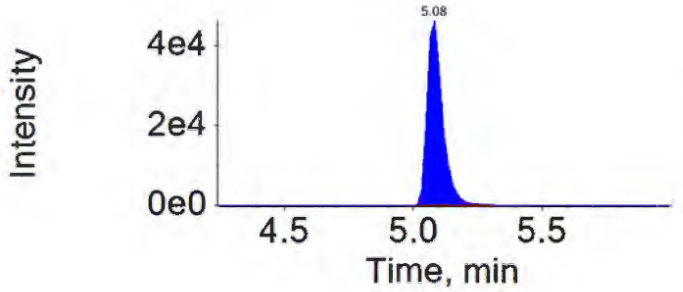
Analyte: PFPeA
263.0 / 219.0



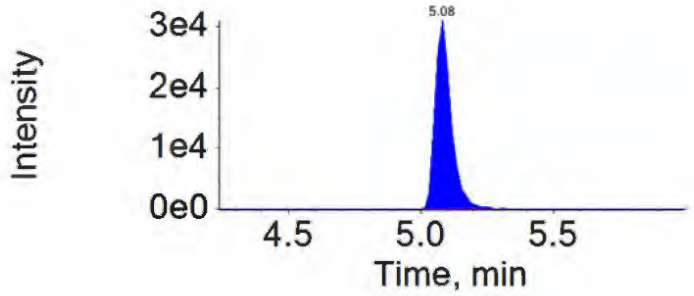
Extraction Standard: 13C5-PFPeA
268.0 / 223.0



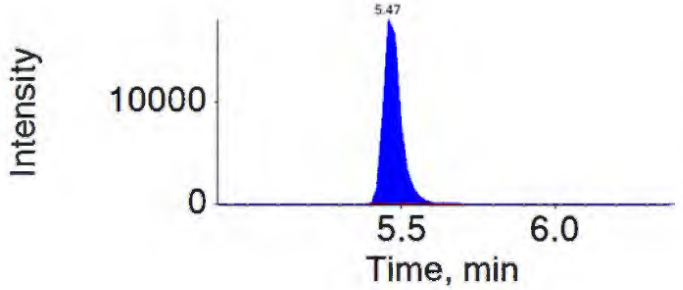
Analyte: PFBS
299.0 / 99.0



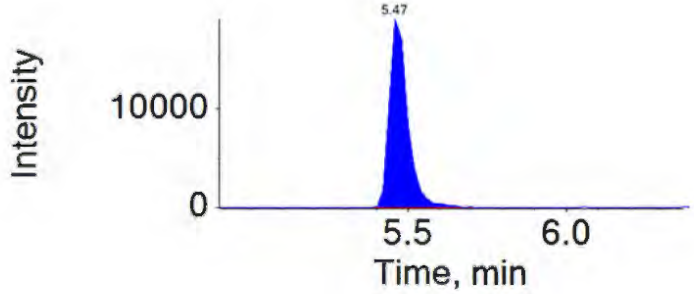
Extraction Standard: 13C3-PFBS
302.0 / 99.0



Analyte: 4:2-FTS
327.0 / 307.0



Extraction Standard: 13C2-4:2-FTS
329.0 / 309.0



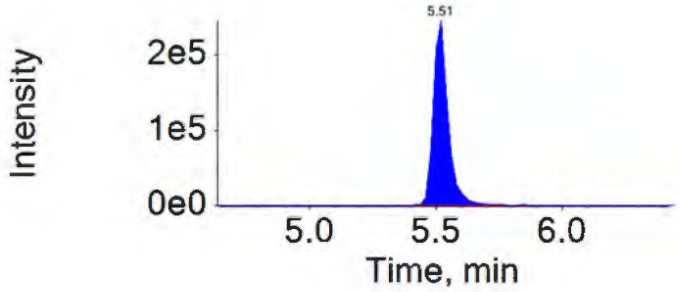
APPROVED
By JWK at 11:46 am, 5/17/17

REVIEWED
By UMJS at 9:33 am, 5/19/17

ICAL Name: 17MAY10MCAL **Result Table:** 17MAY17CCV1-3 5/17/2017 10:34:32 AM
QMethod Name: PFCMOD - 17JAN28 **Acquisition Method:** PFC-32-16NOV02.dam

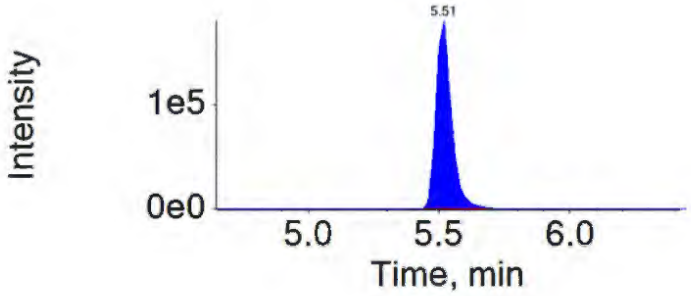
Analyte: PFHxA

313.0 /
269.0



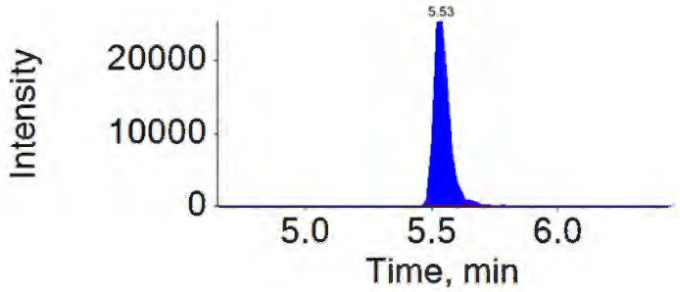
Extraction Standard: 13C5-PFHxA

318.0 /
273.0



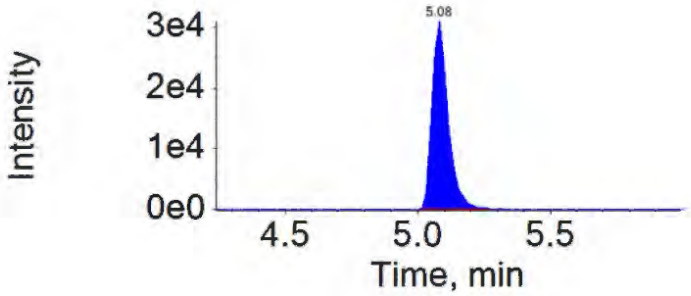
Analyte: PFPeS

349.0 /
99.0



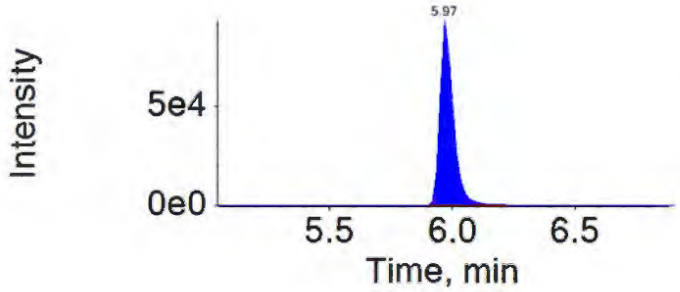
Extraction Standard: 13C3-PFBS

302.0 /
99.0



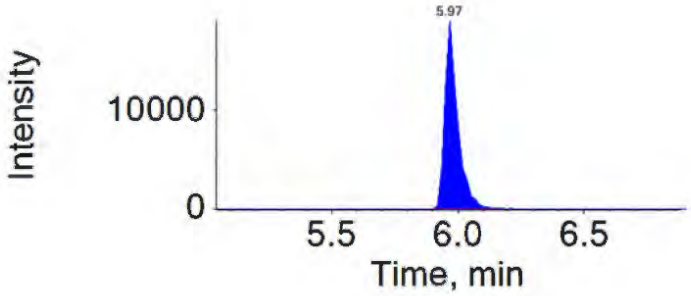
Analyte: PFHxS

399.0 /
80.0



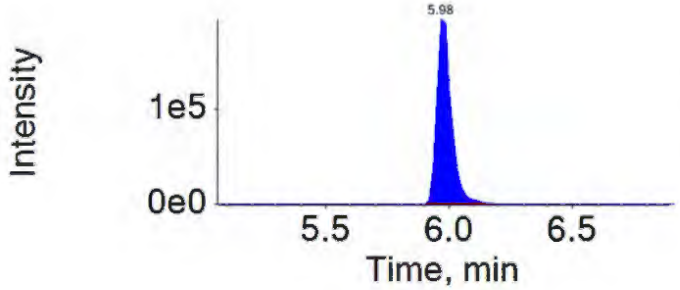
Extraction Standard: 13C3-PFHxS

402.0 /
99.0



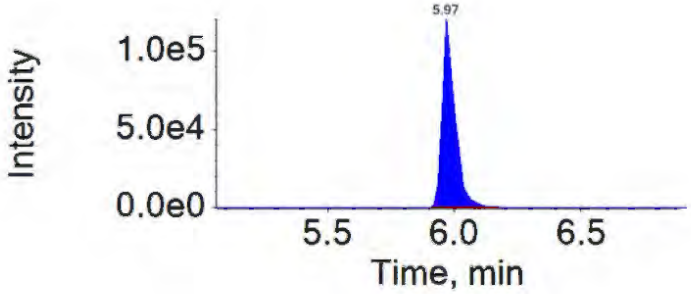
Analyte: PFHpA

363.0 /
319.0



Extraction Standard: 13C4-PFHpA

367.0 /
322.0



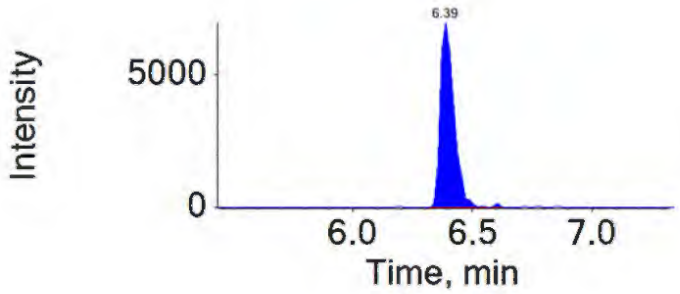
APPROVED
By JWK at 11:46 am, 5/17/17

REVIEWED
By UMJS at 9:33 am, 5/19/17

ICAL Name: 17MAY10MCAL **Result Table:** 17MAY17CCV1-3 5/17/2017 10:34:32 AM
QMethod Name: PFCMOD - 17JAN28 **Acquisition Method:** PFC-32-16NOV02.dam

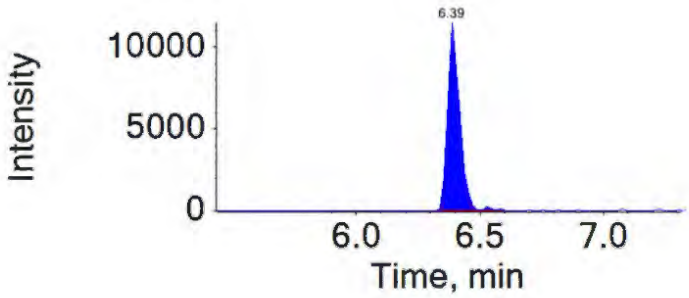
Analyte: 6:2-FTS

427.0 /
407.0



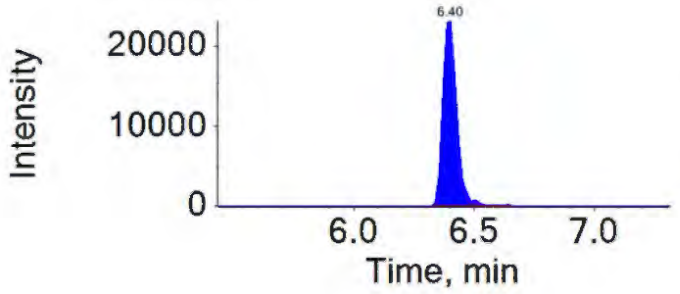
Extraction Standard: 13C2-6:2-FTS

429.0 /
409.0



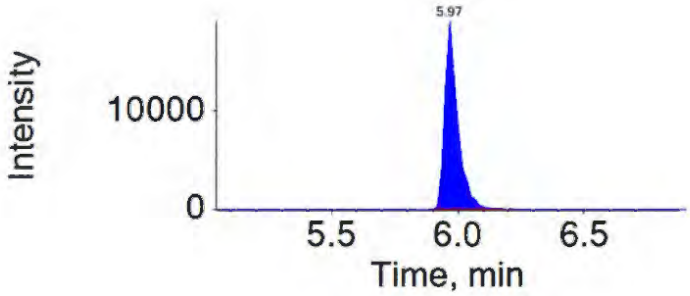
Analyte: PFHpS

449.0 /
99.0



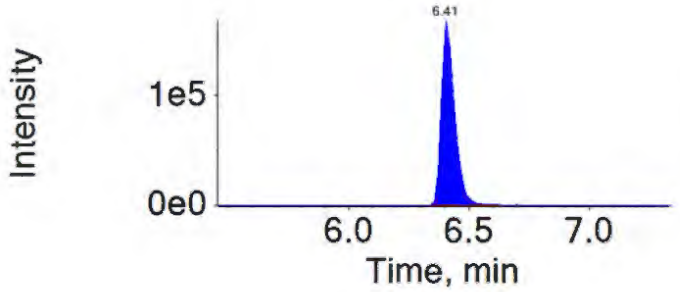
Extraction Standard: 13C3-PFHxS

402.0 /
99.0



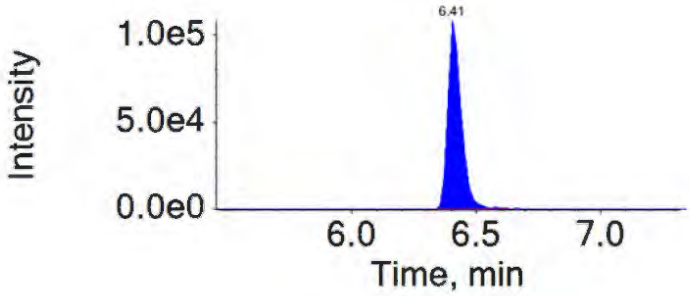
Analyte: PFOA

413.0 /
369.0



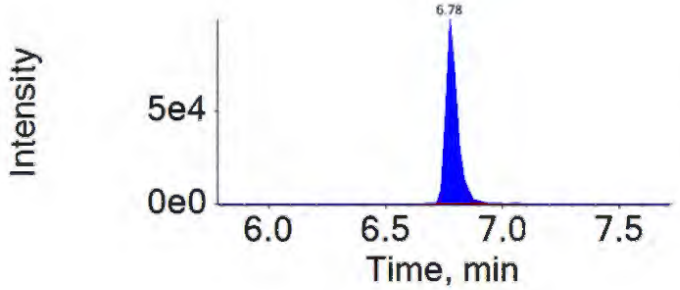
Extraction Standard: 13C8-PFOA

421.0 /
376.0



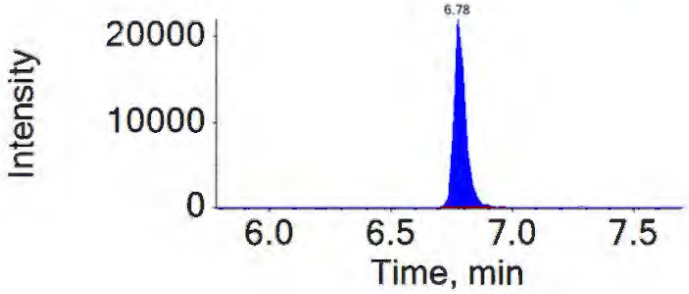
Analyte: PFOS

499.0 /
80.0



Extraction Standard: 13C8-PFOS

507.0 /
99.0

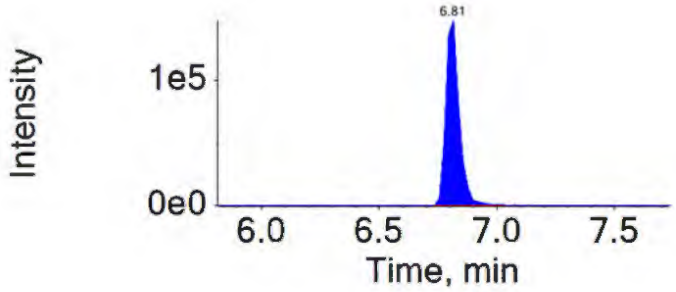


APPROVED
By JWK at 11:46 am, 5/17/17

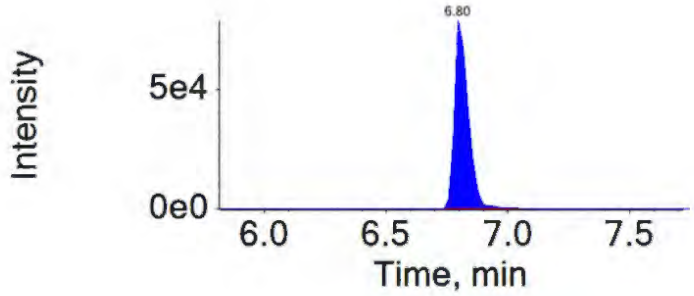
REVIEWED
By UMJS at 9:33 am, 5/19/17

ICAL Name: 17MAY10MCAL **Result Table:** 17MAY17CCV1-3 5/17/2017 10:34:32 AM
QMethod Name: PFCMOD - 17JAN28 **Acquisition Method:** PFC-32-16NOV02.dam

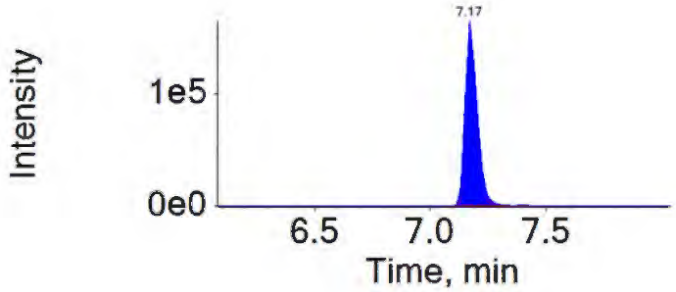
Analyte: PFNA
463.0 /
419.0



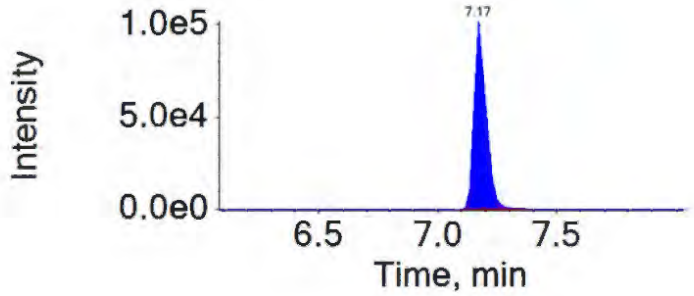
Extraction Standard: 13C9-PFNA
472.0 /
427.0



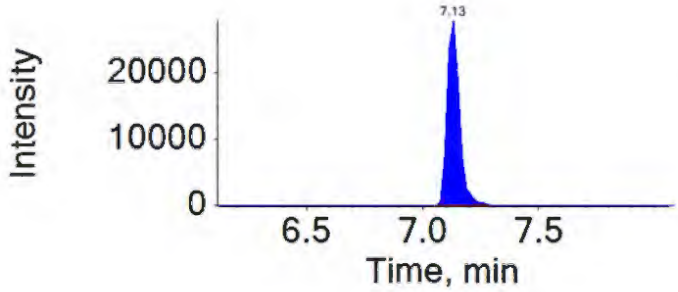
Analyte: PFOSA
498.0 /
78.0



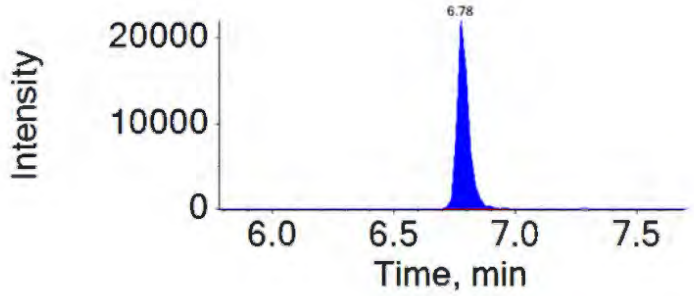
Extraction Standard: 13C8-PFOSA
506.0 /
78.0



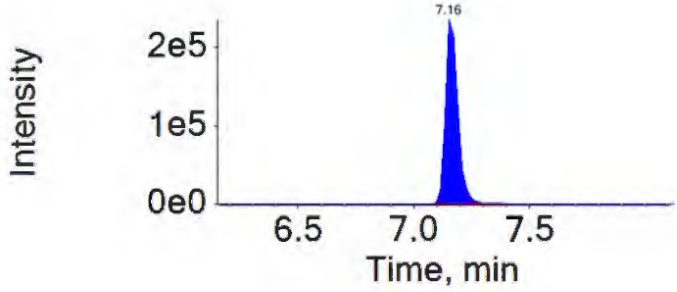
Analyte: PFNS
549.0 /
99.0



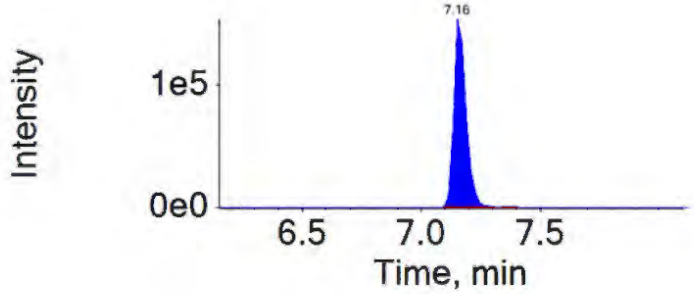
Extraction Standard: 13C8-PFOS
507.0 /
99.0



Analyte: PFDA
513.0 /
469.0



Extraction Standard: 13C6-PFDA
519.0 /
474.0

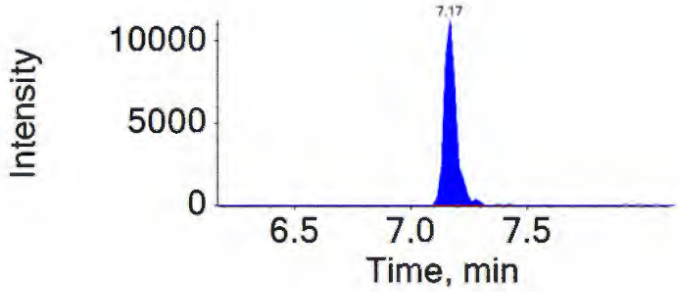


APPROVED
By JWK at 11:46 am, 5/17/17

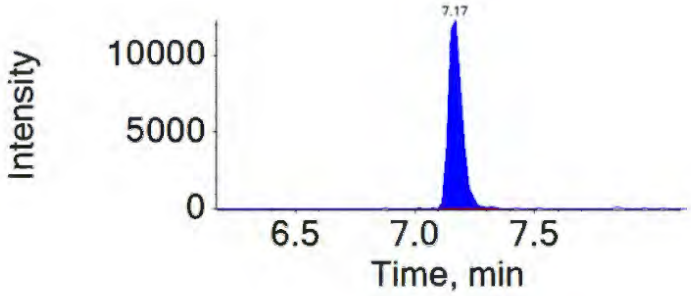
REVIEWED
By UMJS at 9:33 am, 5/19/17

ICAL Name: 17MAY10MCAL **Result Table:** 17MAY17CCV1-3 5/17/2017 10:34:32 AM
QMethod Name: PFCMOD - 17JAN28 **Acquisition Method:** PFC-32-16NOV02.dam

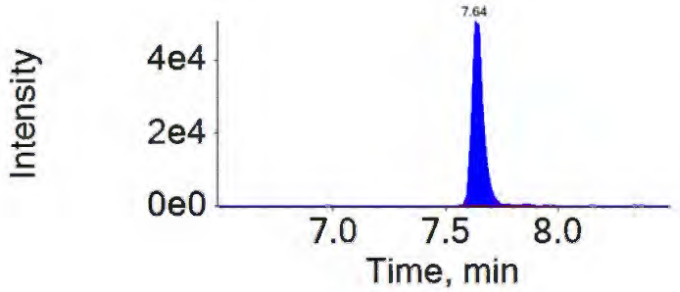
Analyte: 8:2-FTS
527.0 /
507.0



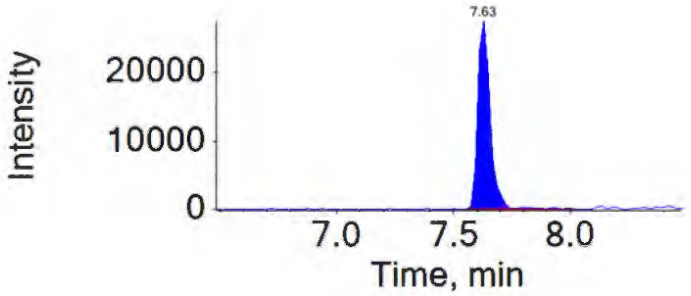
Extraction Standard: 13C2-8:2-FTS
529.0 /
509.0



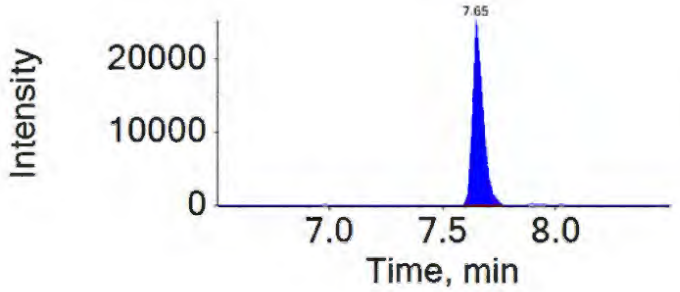
Analyte: NMePFOSAE
616.0 /
59.0



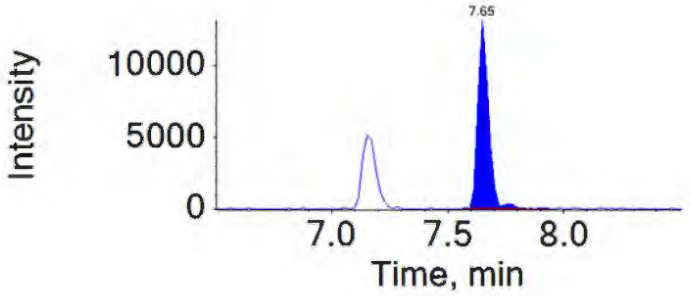
Extraction Standard: d7-NMePFOSAE
623.0 /
59.0



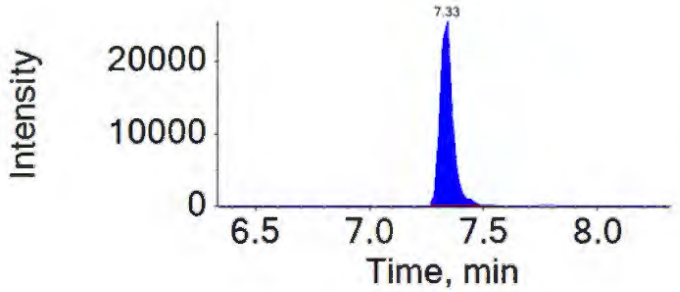
Analyte: NMePFOSA
512.0 /
169.0



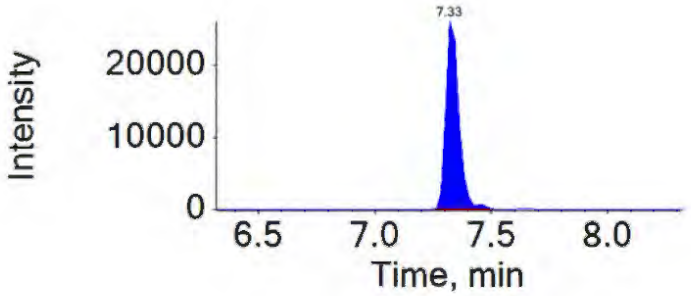
Extraction Standard: d3-NMePFOSA
515.0 /
169.0



Analyte: NMeFOSAA
570.0 /
419.0



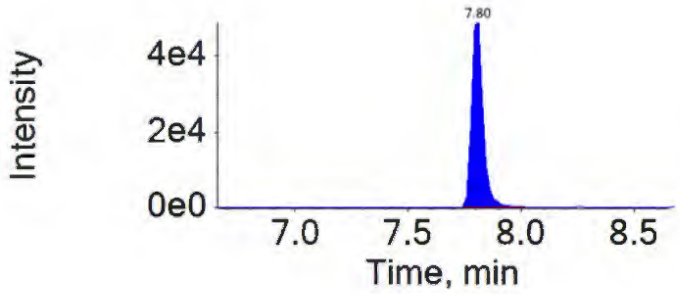
Extraction Standard: d3-NMeFOSAA
573.0 /
419.0



ICAL Name: 17MAY10MCAL **Result Table:** 17MAY17CCV1-3 5/17/2017 10:34:32 AM
QMethod Name: PFCMOD - 17JAN28 **Acquisition Method:** PFC-32-16NOV02.dam

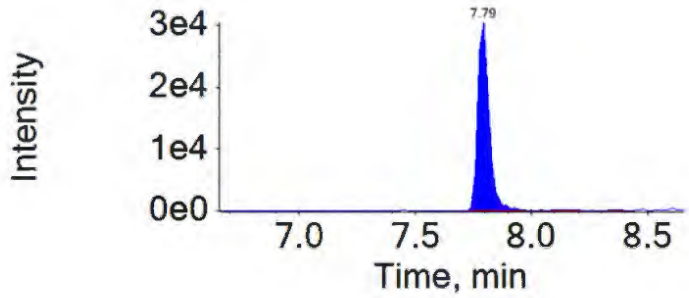
Analyte: NEtPFOSAE

630.0 /
59.0



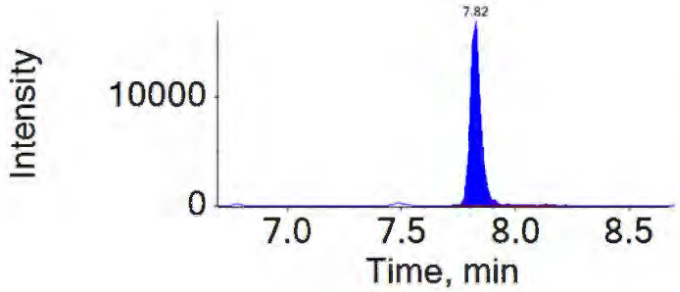
Extraction Standard: d9-NEtPFOSAE

639.0 /
59.0



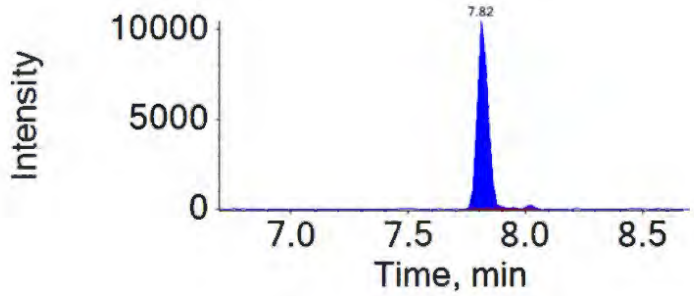
Analyte: NEtPFOSA

526.0 /
169.0



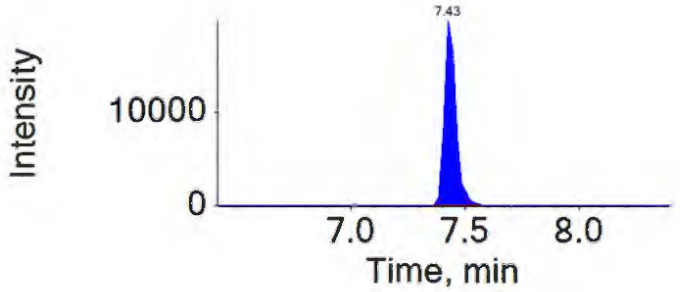
Extraction Standard: d5-NEtPFOSA

531.0 /
169.0



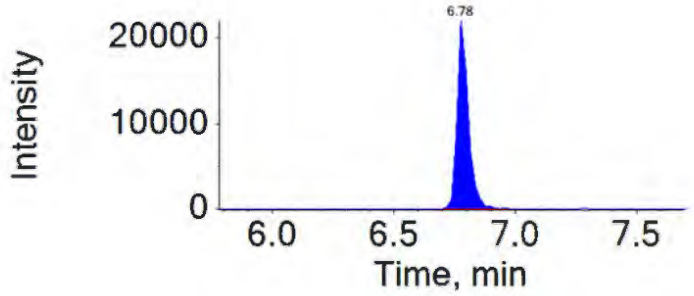
Analyte: PFDS

599.0 /
99.0



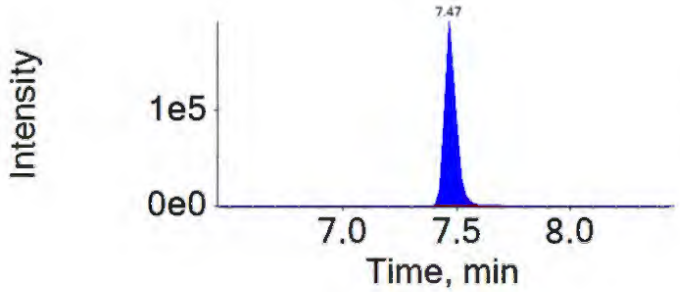
Extraction Standard: 13C8-PFOS

507.0 /
99.0



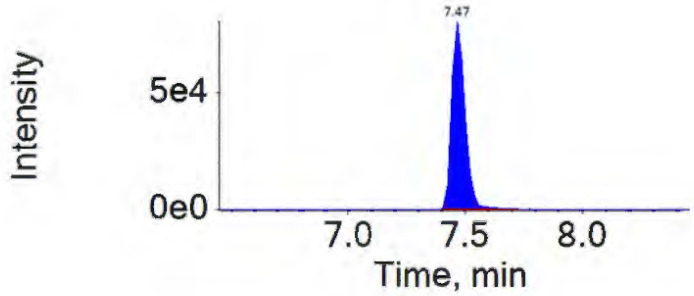
Analyte: PFUnDA

563.0 /
519.0



Extraction Standard: 13C7-PFUnDA

570.0 /
525.0



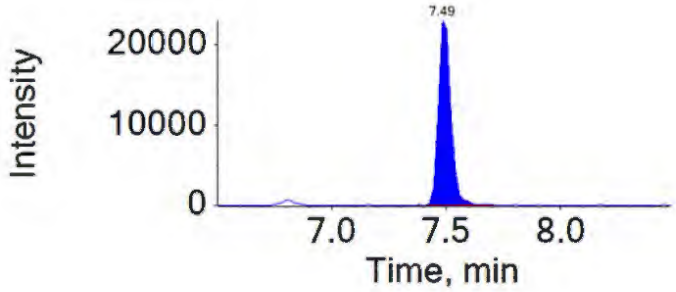
APPROVED
By JWK at 11:46 am, 5/17/17

REVIEWED
By UMJS at 9:33 am, 5/19/17

ICAL Name: 17MAY10MCAL **Result Table:** 17MAY17CCV1-3 5/17/2017 10:34:32 AM
QMethod Name: PFCMOD - 17JAN28 **Acquisition Method:** PFC-32-16NOV02.dam

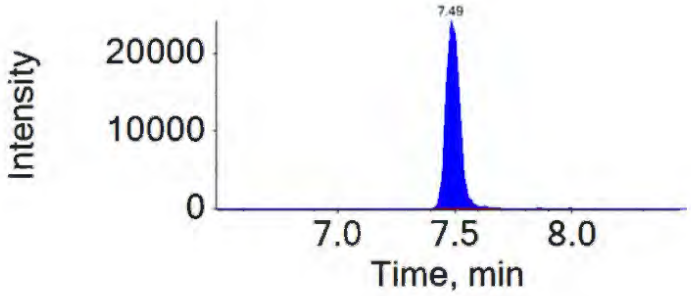
Analyte: NEtFOSAA

584.0 / 419.0



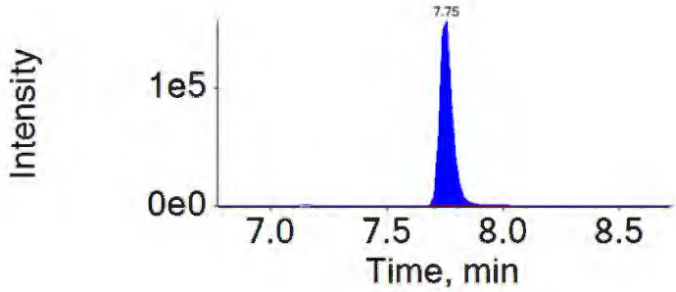
Extraction Standard: d5-NEtFOSAA

589.0 / 419.0



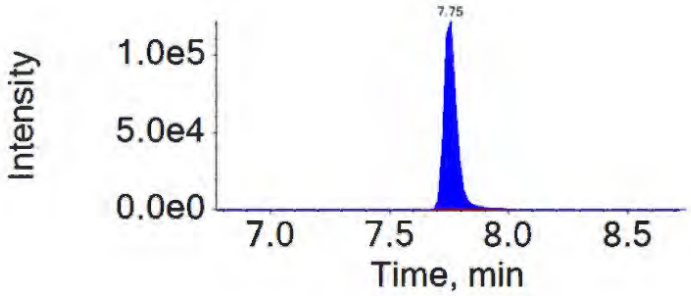
Analyte: PFDoDA

613.0 / 569.0



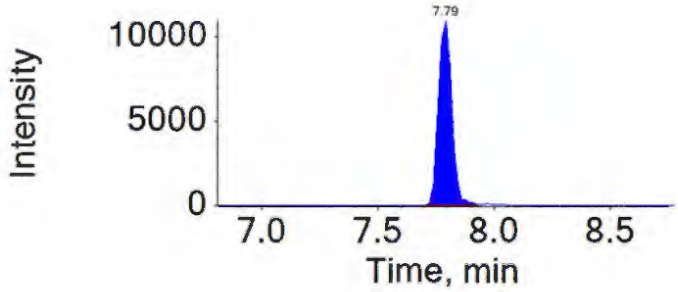
Extraction Standard: 13C2-PFDoDA

615.0 / 570.0



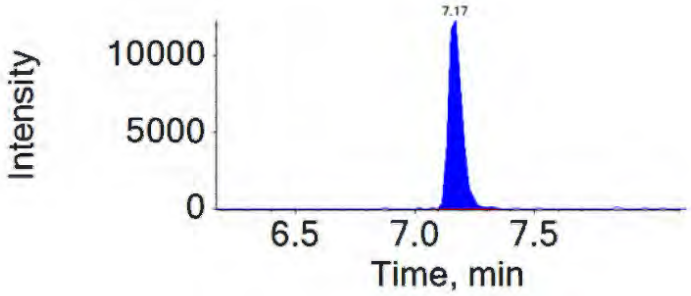
Analyte: 10:2-FTS

627.0 / 607.0



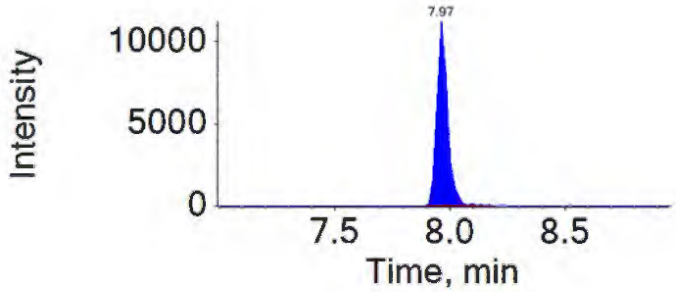
Extraction Standard: 13C2-8:2-FTS

529.0 / 509.0



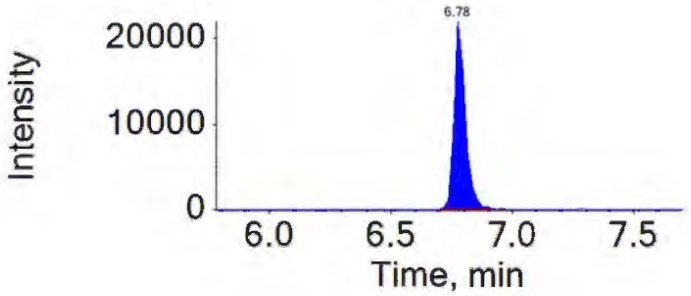
Analyte: PFDoS

699.0 / 99.0



Extraction Standard: 13C8-PFOS

507.0 / 99.0

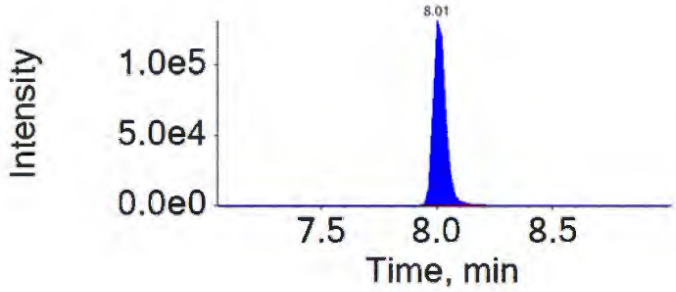


APPROVED
By JWK at 11:46 am, 5/17/17

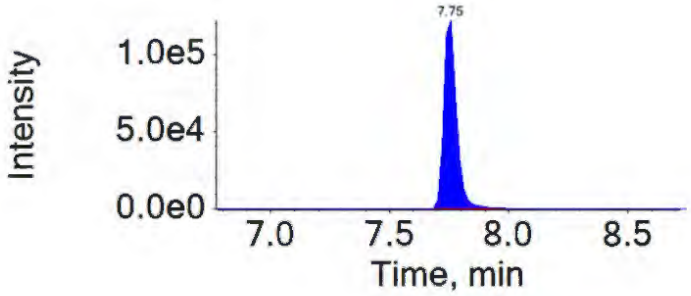
REVIEWED
By UMJS at 9:33 am, 5/19/17

ICAL Name: 17MAY10MCAL **Result Table:** 17MAY17CCV1-3 5/17/2017 10:34:32 AM
QMethod Name: PFCMOD - 17JAN28 **Acquisition Method:** PFC-32-16NOV02.dam

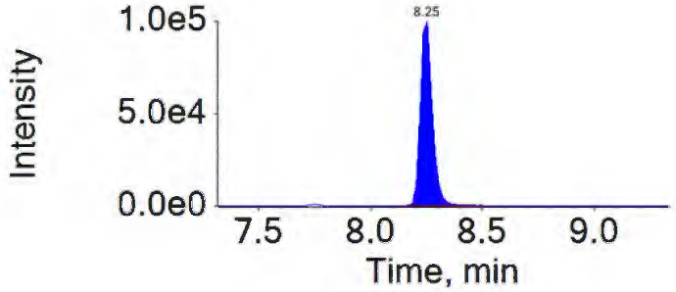
Analyte: PFTrDA
663.0 / 619.0



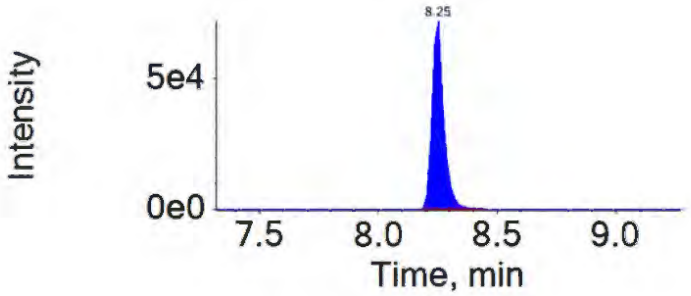
Extraction Standard: 13C2-PFDoDA
615.0 / 570.0



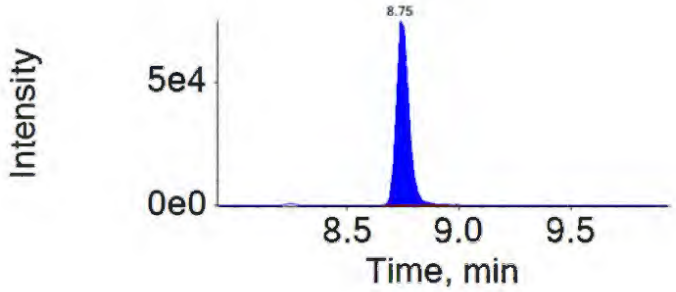
Analyte: PFTeDA
713.0 / 669.0



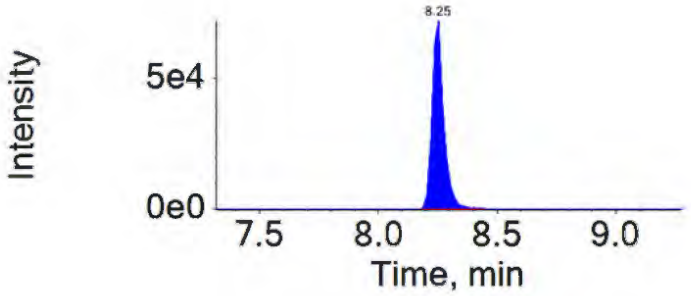
Extraction Standard: 13C2-PFTeDA
715.0 / 670.0



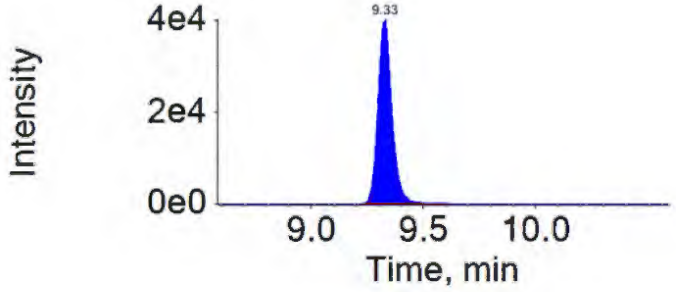
Analyte: PFHxDA
813.0 / 769.0



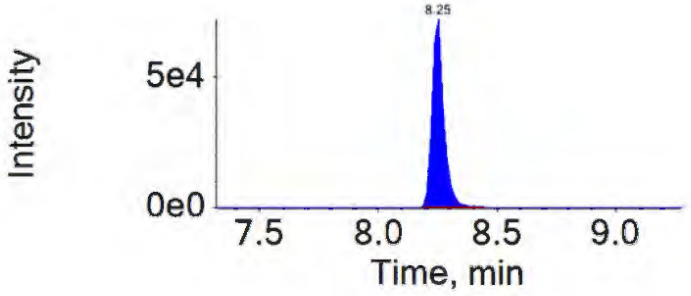
Extraction Standard: 13C2-PFTeDA
715.0 / 670.0



Analyte: PFODA
913.0 / 869.0



Extraction Standard: 13C2-PFTeDA
715.0 / 670.0



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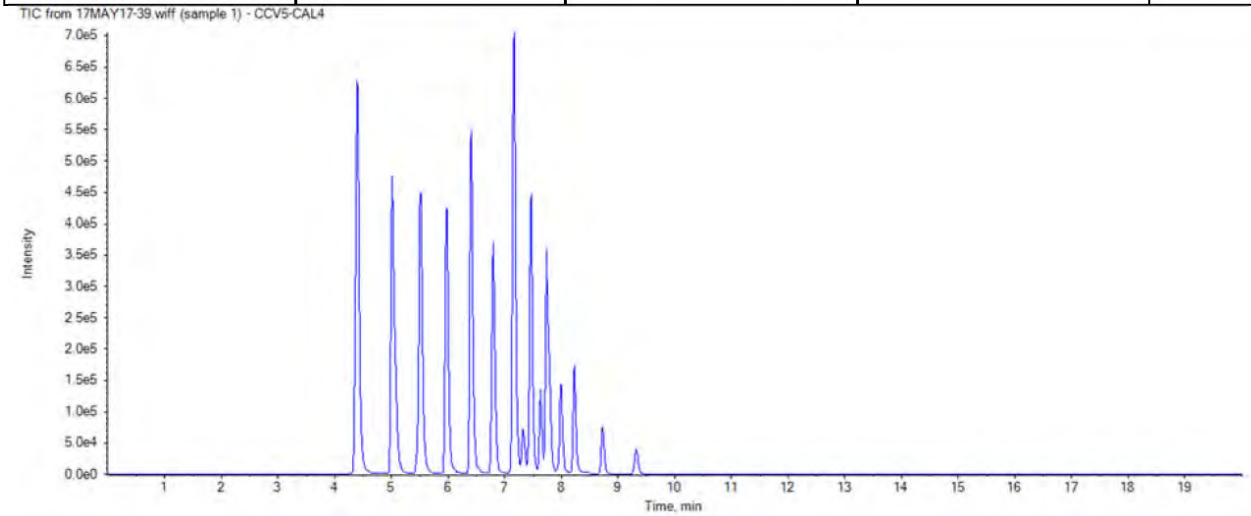
LC-MS/MS Analysis Report

Printed: 5/17/2017 7:42:00 PM
Template: MQ-CCV-16NOV21.docx

Continuing Calibration Verfication

ICAL Name: 17MAY10MCAL **Result Table:** 17MAY17CCV4-5 5/17/2017 7:40:13 PM
QMethod Name: PFCMOD-17JAN28 **Acquisition Method:** PFC-32-16NOV02.dam

Instrument Name:	Sample Name:	Sample ID:	Sample File:	Acquisition Date:
LM24960	CCV4-CAL4	CALPFC1712533E	17MAY17-39.wiff	2017-05-17T13:40:18



Injection Standard Name	Inj Std Conc	Injection Std Peak Area	ICAL Injection Standard AVG	Injection Std %Diff	Injection Std %Diff Limit	Injection Std %Diff OOS
I13C3-PFBA	1.00	733145.5	669117.279	9.6	50.0	
I13C2-PFOA	1.00	293402.6	342184.630	-14.3	50.0	
I13C4-PFOS	1.00	63024.4	70131.551	-10.1	50.0	
I13C2-PFDA	1.00	374744.9	384098.708	-2.4	50.0	

APPROVED
By DMW at 7:44 pm, 5/17/17

REVIEWED
By UMJS at 8:38 pm, 5/21/17

Continuing Calibration Verfication

ICAL Name: 17MAY10MCAL **Result Table:** 17MAY17CCV4-5 5/17/2017 7:40:13 PM
QMethod Name: PFCMOD-17JAN28 **Acquisition Method:** PFC-32-16NOV02.dam

Instrument Name:	Sample Name:	Sample ID:	Sample File:	Acquisition Date:
LM24960	CCV4-CAL4	CALPFC1712533E	17MAY17-39.wiff	2017-05-17T13:40:18

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	1221455.0	13C4-PFBA	850169.0	1.0	1.437	4.40	1.000	8.000	7.901	-1.2	30.0	
PFPeA	1203129.1	13C5-PFPeA	743164.1	1.0	1.619	5.01	1.000	8.000	7.843	-2.0	30.0	
PFBS	202944.9	13C3-PFBS	131845.6	1.0	1.539	5.08	1.000	7.080	7.284	2.9	30.0	
4:2-FTS	78199.2	13C2-4:2-FTS	74528.5	1.0	1.049	5.47	1.000	3.740	4.937	32.0	30.0	OOS
PFHxA	1081504.7	13C5-PFHxA	686496.2	1.0	1.575	5.51	1.000	8.000	8.340	4.2	30.0	
PFPeS	108383.6	13C3-PFBS	131845.6	1.0	0.822	5.53	1.090	7.500	7.345	-2.1	30.0	
PFHxS	342065.5	13C3-PFHxS	67346.8	1.0	5.079	5.97	1.000	7.560	7.124	-5.8	30.0	
PFHpA	821402.1	13C4-PFHpA	431723.3	1.0	1.903	5.98	1.000	8.000	7.664	-4.2	30.0	
6:2-FTS	29576.4	13C2-6:2-FTS	37200.9	1.0	0.795	6.39	1.000	3.790	4.528	19.5	30.0	
PFHpS	96107.9	13C3-PFHxS	67346.8	1.0	1.427	6.40	1.070	7.610	7.484	-1.7	30.0	
PFOA	662670.2	13C8-PFOA	382297.6	1.0	1.733	6.41	1.000	8.000	7.898	-1.3	30.0	
PFOS	344362.0	13C8-PFOS	57792.0	1.0	5.959	6.78	1.000	7.650	8.288	8.3	30.0	
PFNA	599160.1	13C9-PFNA	286333.2	1.0	2.093	6.81	1.000	8.000	8.546	6.8	30.0	
PFOSA	593623.0	13C8-PFOSA	324526.6	1.0	1.829	7.17	1.000	8.000	8.356	4.5	30.0	
PFNS	84515.3	13C8-PFOS	57792.0	1.0	1.462	7.13	1.050	7.680	6.706	-12.7	30.0	
PFDA	810481.2	13C6-PFDA	526745.1	1.0	1.539	7.16	1.000	8.000	8.396	5.0	30.0	
8:2-FTS	38740.6	13C2-8:2-FTS	52003.8	1.0	0.745	7.16	1.000	3.830	3.733	-2.5	30.0	
NMePFOSAE	216736.7	d7-NMePFOSAE	112103.0	1.0	1.933	7.63	1.000	8.000	7.709	-3.6	30.0	
NMePFOSA	77832.4	d3-NMePFOSA	43911.7	1.0	1.772	7.65	1.000	8.000	8.272	3.4	30.0	
NMeFOSAA	120415.3	d3-NMeFOSAA	140204.7	1.0	0.859	7.33	1.000	4.000	4.035	0.9	30.0	
NEtPFOSAE	184262.8	d9-NEtPFOSAE	107507.5	1.0	1.714	7.79	1.000	8.000	7.857	-1.8	30.0	
NEtPFOSA	59786.3	d5-NEtPFOSA	34667.2	1.0	1.725	7.81	1.000	8.000	8.558	7.0	30.0	
PFDS	98986.0	13C8-PFOS	57792.0	1.0	1.713	7.43	1.100	7.700	8.695	12.9	30.0	
PFUnDA	827452.8	13C7-PFUnDA	421601.9	1.0	1.963	7.46	1.000	8.000	7.645	-4.4	30.0	
NEtFOSAA	102539.9	d5-NEtFOSAA	111969.3	1.0	0.916	7.48	1.000	4.000	4.481	12.0	30.0	
PFDoDA	656676.3	13C2-PFDoDA	461122.4	1.0	1.424	7.74	1.000	8.000	7.621	-4.7	30.0	
10:2-FTS	44887.3	13C2-8:2-FTS	52003.8	1.0	0.863	7.78	1.080	3.860	4.156	7.7	30.0	
PFDoS	33379.1	13C8-PFOS	57792.0	1.0	0.578	7.95	1.170	7.740	8.136	5.1	30.0	
PFTrDA	499907.9	13C2-PFDoDA	461122.4	1.0	1.084	7.99	1.030	8.000	8.049	0.6	30.0	
PFTeDA	345508.1	13C2-PFTeDA	227819.5	1.0	1.517	8.23	1.000	8.000	7.738	-3.3	30.0	
PFHxDA	291309.4	13C2-PFTeDA	227819.5	1.0	1.279	8.73	1.060	8.000	8.070	0.9	30.0	
PFODA	178114.3	13C2-PFTeDA	227819.5	1.0	0.782	9.32	1.130	8.000	7.150	-10.6	30.0	

APPROVED
By DMW at 7:44 pm, 5/17/17

REVIEWED
By UMJS at 8:38 pm, 5/21/17

Continuing Calibration Verfication

ICAL Name: 17MAY10MCAL **Result Table:** 17MAY17CCV4-5 5/17/2017 7:40:13 PM
QMethod Name: PFCMOD-17JAN28 **Acquisition Method:** PFC-32-16NOV02.dam

APPROVED
By DMW at 7:44 pm, 5/17/17

REVIEWED
By UMJS at 8:38 pm, 5/21/17

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LC-MS/MS Analysis Report

Printed: 5/17/2017 7:42:00 PM
Template: MQ-Sample-16Nov21.docx

ICAL Name: 17MAY10MCAL
QMethod Name: PFCMOD-17JAN28
Result Table: 17MAY17CCV4-5 5/17/2017 7:40:13 PM
Acquisition Method: PFC-32-16NOV02.dam

Sample Name:	CCV4-CAL4			**Data File:**		17MAY17-39.wiff
Sample ID:	CALPFC1712533E			**Acquis Date:**		2017-05-17T13:40:18
Sample Type:	Quality Control			**Instrument:**		LM24960
Vial Position:	6			**Acquis Method:**		PFC-32-16NOV02.dam
Injection Vol:	5.00			**Result Table:**		17MAY17CCV4-5
QMethod File:	PFCMOD-17JAN28			**ICAL Name:**		17MAY10MCAL
Batch Number:	N\A			**Operator:**		Not calculated
Sample Wt.:	1.00000			**Dilution Factor:**		1.00
Sample Vol.:	1.000			**Prep Factor:**		1.000

Injection Standard Peak Table

Injection Standard Name	Inj Std Conc	Injection Std Peak Area	ICAL Injection Standard AVG	Injection Std %Diff	Injection Std %Diff Limit	Injection Std %Diff OOS
I13C3-PFBA	1.0	733145.5	669117.3	9.6	50.0	
I13C2-PFOA	1.0	293402.6	342184.6	-14.3	50.0	
I13C4-PFOS	1.0	63024.4	70131.6	-10.1	50.0	
I13C2-PFDA	1.0	374744.9	384098.7	-2.4	50.0	

Extraction Standard Peak Table

Extraction Standard Name	Ext Std Area	Inj Std Name	Inj Std Area	Area Ratio	AVG Area Ratio	Ext Std Conc	Ext Std Result	Ext Std %REC	Ext Std %REC Limit	Ext Std OOS
E13C4-PFBA	850169.0	13C3-PFBA	733145.5	1.160	1.150	1.000	1.008	100.8	70.0-130.0	
E13C5-PFPeA	743164.1	13C3-PFBA	733145.5	1.014	1.073	1.000	0.944	94.4	70.0-130.0	
E13C3-PFBS	131845.6	13C3-PFBA	733145.5	0.180	0.194	1.000	0.925	92.5	70.0-130.0	
E13C2-4:2-FTS	74528.5	13C2-PFOA	293402.6	0.254	0.236	1.000	1.075	107.5	70.0-130.0	
E13C5-PFHxA	686496.2	13C2-PFOA	293402.6	2.340	2.026	1.000	1.155	115.5	70.0-130.0	
E13C3-PFHxS	67346.8	13C2-PFOA	293402.6	0.230	0.206	1.000	1.115	111.5	70.0-130.0	
E13C4-PFHpA	431723.3	13C2-PFOA	293402.6	1.471	1.285	1.000	1.145	114.5	70.0-130.0	
E13C2-6:2-FTS	37200.9	13C2-PFOA	293402.6	0.127	0.128	1.000	0.990	99.0	70.0-130.0	
E13C8-PFOA	382297.6	13C2-PFOA	293402.6	1.303	1.163	1.000	1.120	112.0	70.0-130.0	
E13C8-PFOS	57792.0	13C4-PFOS	63024.4	0.917	0.865	1.000	1.059	105.9	70.0-130.0	
E13C9-PFNA	286333.2	13C4-PFOS	63024.4	4.543	4.422	1.000	1.027	102.7	70.0-130.0	
E13C8-PFOSA	324526.6	13C2-PFDA	374744.9	0.866	0.936	1.000	0.925	92.5	70.0-130.0	
E13C6-PFDA	526745.1	13C2-PFDA	374744.9	1.406	1.424	1.000	0.987	98.7	70.0-130.0	
E13C2-8:2-FTS	52003.8	13C2-PFDA	374744.9	0.139	0.155	1.000	0.893	89.3	70.0-130.0	
Ed7-NMePFOSAE	112103.0	13C2-PFDA	374744.9	0.299	0.299	1.000	1.001	100.1	70.0-130.0	
Ed3-NMePFOSA	43911.7	13C2-PFDA	374744.9	0.117	0.120	1.000	0.974	97.4	70.0-130.0	
Ed3-NMeFOSAA	140204.7	13C2-PFDA	374744.9	0.374	0.343	1.000	1.091	109.1	70.0-130.0	
Ed9-NEtPFOSAE	107507.5	13C2-PFDA	374744.9	0.287	0.333	1.000	0.863	86.3	70.0-130.0	
Ed5-NEtPFOSA	34667.2	13C2-PFDA	374744.9	0.093	0.095	1.000	0.976	97.6	70.0-130.0	
E13C7-PFUnDA	421601.9	13C2-PFDA	374744.9	1.125	0.953	1.000	1.181	118.1	70.0-130.0	
Ed5-NEtFOSAA	111969.3	13C2-PFDA	374744.9	0.299	0.249	1.000	1.201	120.1	70.0-130.0	
E13C2-PFDoDA	461122.4	13C2-PFDA	374744.9	1.230	1.154	1.000	1.066	106.6	70.0-130.0	
E13C2-PFTeDA	227819.5	13C2-PFDA	374744.9	0.608	0.651	1.000	0.933	93.3	70.0-130.0	

APPROVED
By DMW at 7:44 pm, 5/17/17

REVIEWED
By UMJS at 8:38 pm, 5/21/17

ICAL Name: 17MAY10MCAL **Result Table:** 17MAY17CCV4-5 5/17/2017 7:40:13 PM
QMethod Name: PFCMOD-17JAN28 **Acquisition Method:** PFC-32-16NOV02.dam

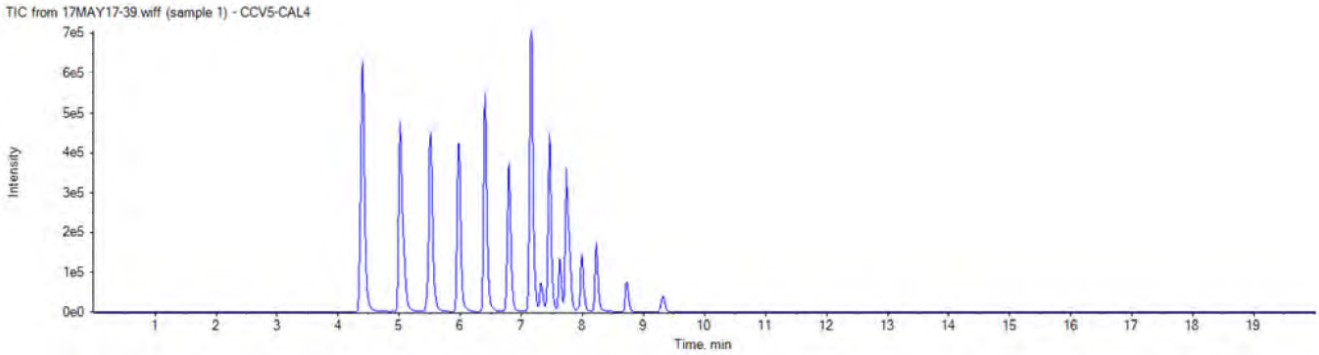
Analyte Quantitation Peak Table

Sample Name: CCV4-CAL4 **Instrument Name:** LM24960 **File Name:** 17MAY17-39.wiff

Sample Wt	Sample Vol	Dilution Factor	PrepFactor
1.00000	1.000	1.00	1.000

Analytet Name	RT	RRT	Analyte Area Response	Int Typ	ES Name	ES RT	ES Area Response	Area Ratio	Sample Result (ng/g)
PFBA	4.40	1.000	1221455.0	A	13C4-PFBA	4.40	850169.0	1.437	7.901
PFPeA	5.01	1.000	1203129.1	A	13C5-PFPeA	5.02	743164.1	1.619	7.843
PFBS	5.08	1.000	202944.9	A	13C3-PFBS	5.08	131845.6	1.539	7.284
4:2-FTS	5.47	1.000	78199.2	A	13C2-4:2-FTS	5.46	74528.5	1.049	4.937
PFHxA	5.51	1.000	1081504.7	A	13C5-PFHxA	5.51	686496.2	1.575	8.340
PFPeS	5.53	1.090	108383.6	A	13C3-PFBS	5.08	131845.6	0.822	7.345
PFHxS	5.97	1.000	342065.5	A	13C3-PFHxS	5.97	67346.8	5.079	7.124
PFHpA	5.98	1.000	821402.1	A	13C4-PFHpA	5.98	431723.3	1.903	7.664
6:2-FTS	6.39	1.000	29576.4	A	13C2-6:2-FTS	6.39	37200.9	0.795	4.528
PFHpS	6.40	1.070	96107.9	A	13C3-PFHxS	5.97	67346.8	1.427	7.484
PFOA	6.41	1.000	662670.2	A	13C8-PFOA	6.41	382297.6	1.733	7.898
PFOS	6.78	1.000	344362.0	A	13C8-PFOS	6.78	57792.0	5.959	8.288
PFNA	6.81	1.000	599160.1	A	13C9-PFNA	6.80	286333.2	2.093	8.546
PFOSA	7.17	1.000	593623.0	A	13C8-PFOSA	7.17	324526.6	1.829	8.356
PFNS	7.13	1.050	84515.3	A	13C8-PFOS	6.78	57792.0	1.462	6.706
PFDA	7.16	1.000	810481.2	A	13C6-PFDA	7.15	526745.1	1.539	8.396
8:2-FTS	7.16	1.000	38740.6	A	13C2-8:2-FTS	7.17	52003.8	0.745	3.733
NMePFOSAE	7.63	1.000	216736.7	A	d7-NMePFOSAE	7.62	112103.0	1.933	7.709
NMePFOSA	7.65	1.000	77832.4	A	d3-NMePFOSA	7.64	43911.7	1.772	8.272
NMeFOSAA	7.33	1.000	120415.3	A	d3-NMeFOSAA	7.32	140204.7	0.859	4.035
NEtPFOSAE	7.79	1.000	184262.8	A	d9-NEtPFOSAE	7.78	107507.5	1.714	7.857
NEtPFOSA	7.81	1.000	59786.3	A	d5-NEtPFOSA	7.80	34667.2	1.725	8.558
PFDS	7.43	1.100	98986.0	A	13C8-PFOS	6.78	57792.0	1.713	8.695
PFUnDA	7.46	1.000	827452.8	A	13C7-PFUnDA	7.46	421601.9	1.963	7.645
NEtFOSAA	7.48	1.000	102539.9	A	d5-NEtFOSAA	7.48	111969.3	0.916	4.481
PFDoDA	7.74	1.000	656676.3	A	13C2-PFDoDA	7.74	461122.4	1.424	7.621
10:2-FTS	7.78	1.080	44887.3	A	13C2-8:2-FTS	7.17	52003.8	0.863	4.156
PFDoS	7.95	1.170	33379.1	A	13C8-PFOS	6.78	57792.0	0.578	8.136
PFTrDA	7.99	1.030	499907.9	A	13C2-PFDoDA	7.74	461122.4	1.084	8.049
PFTeDA	8.23	1.000	345508.1	A	13C2-PFTeDA	8.23	227819.5	1.517	7.738
PFHxDA	8.73	1.060	291309.4	A	13C2-PFTeDA	8.23	227819.5	1.279	8.070
PFODA	9.32	1.130	178114.3	A	13C2-PFTeDA	8.23	227819.5	0.782	7.150

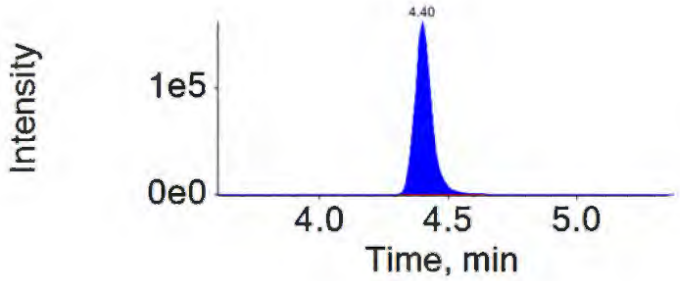
Total Ion Chromatogram



ICAL Name: 17MAY10MCAL
QMethod Name: PFCMOD-17JAN28
Result Table: 17MAY17CCV4-5 5/17/2017 7:40:13 PM
Acquisition Method: PFC-32-16NOV02.dam

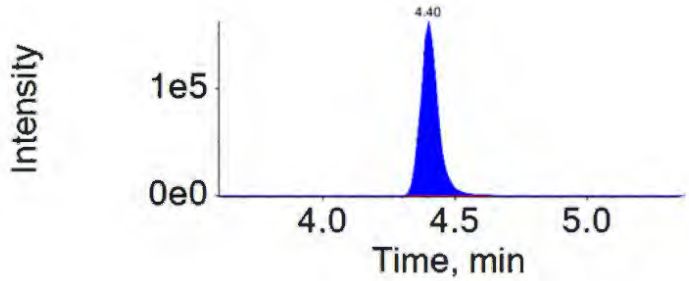
Injection Standard: I13C3-PFBA

216.0 / 172.0



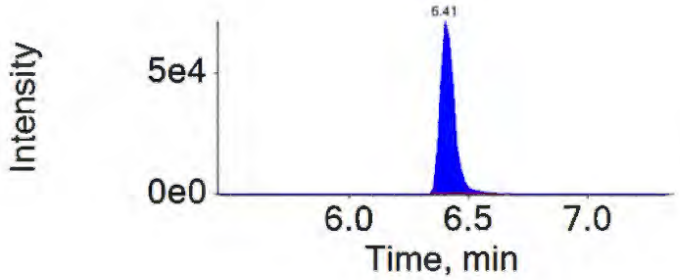
Injection Standard: 13C3-PFBA

216.0 / 172.0



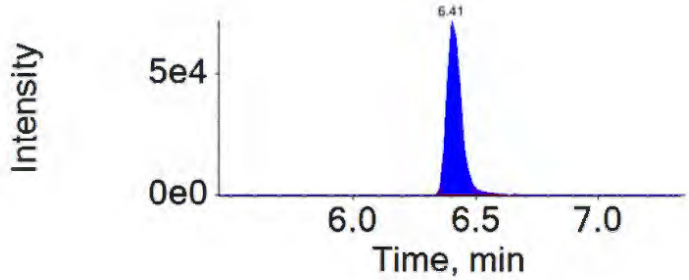
Injection Standard: I13C2-PFOA

415.0 / 370.0



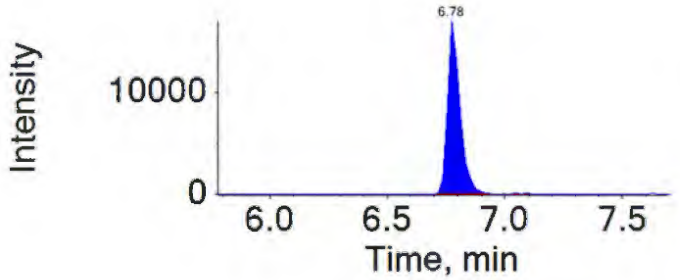
Injection Standard: 13C2-PFOA

415.0 / 370.0



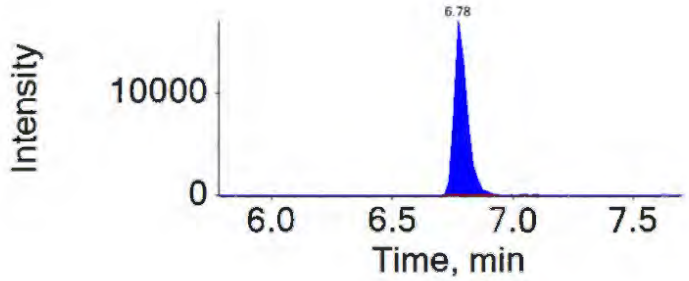
Injection Standard: I13C4-PFOS

503.0 / 99.0



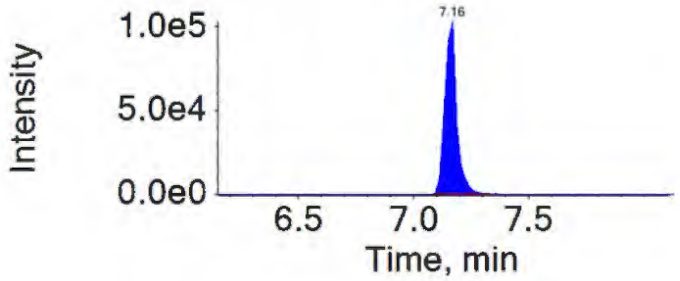
Injection Standard: 13C4-PFOS

503.0 / 99.0



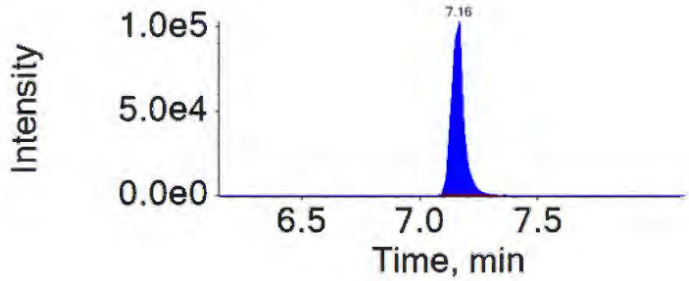
Injection Standard: I13C2-PFDA

515.0 / 470.0



Injection Standard: 13C2-PFDA

515.0 / 470.0



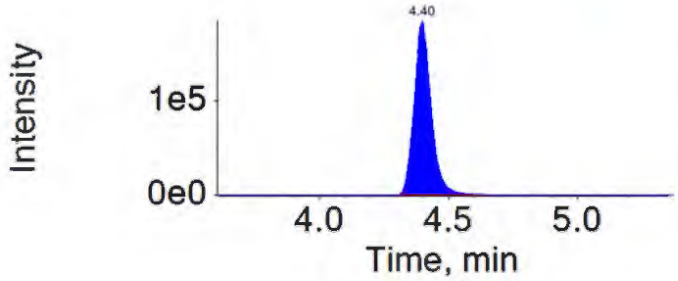
APPROVED
By DMW at 7:44 pm, 5/17/17

REVIEWED
By UMJS at 8:38 pm, 5/21/17

ICAL Name: 17MAY10MCAL **Result Table:** 17MAY17CCV4-5 5/17/2017 7:40:13 PM
QMethod Name: PFCMOD-17JAN28 **Acquisition Method:** PFC-32-16NOV02.dam

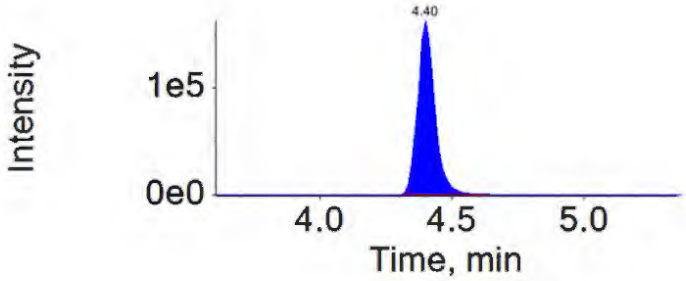
Extraction Standard: E13C4-PFBA

217.0 /
172.0



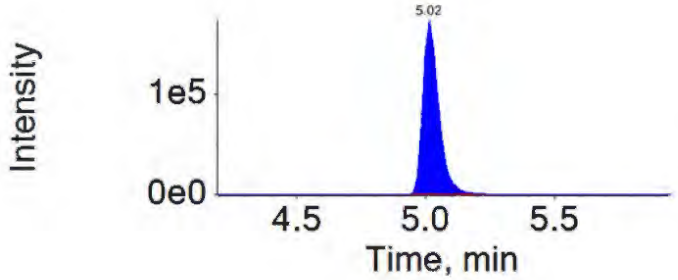
Injection Standard: 13C3-PFBA

216.0 /
172.0



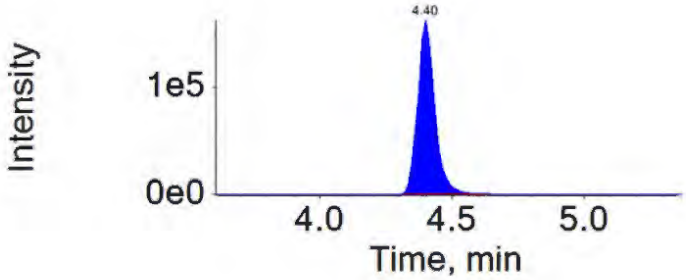
Extraction Standard: E13C5-PFPeA

268.0 /
223.0



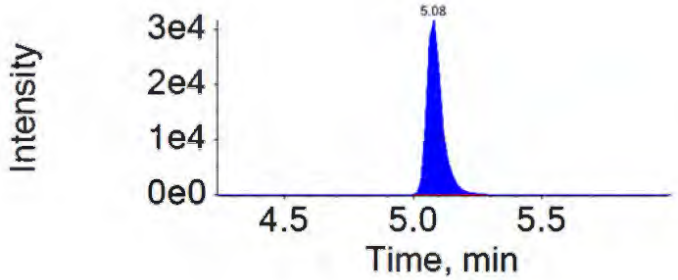
Injection Standard: 13C3-PFBA

216.0 /
172.0



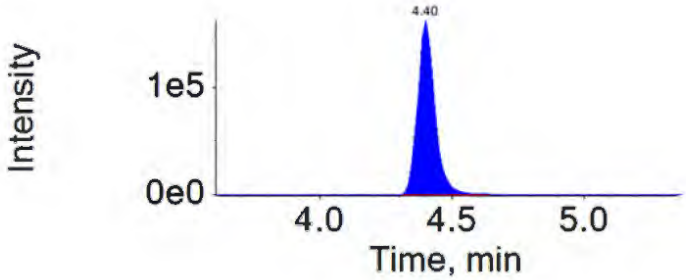
Extraction Standard: E13C3-PFBS

302.0 /
99.0



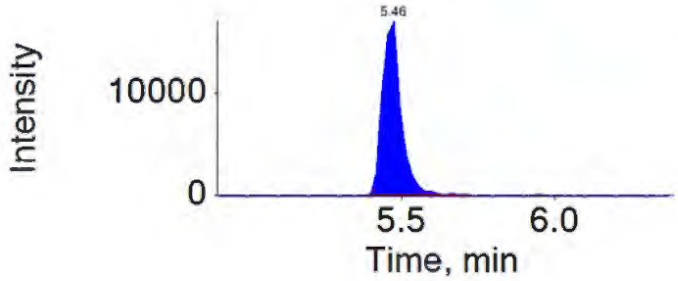
Injection Standard: 13C3-PFBA

216.0 /
172.0



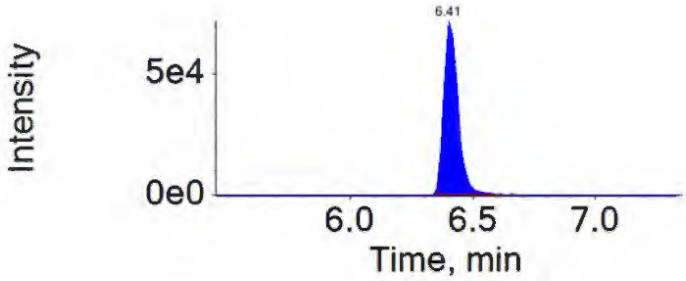
Extraction Standard: E13C2-4:2-FTS

329.0 /
309.0



Injection Standard: 13C2-PFOA

415.0 /
370.0



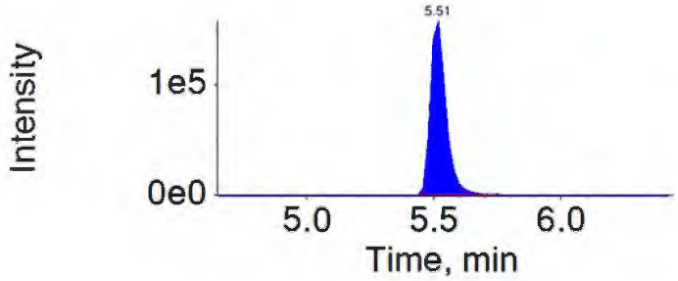
APPROVED
By DMW at 7:44 pm, 5/17/17

REVIEWED
By UMJS at 8:38 pm, 5/21/17

ICAL Name: 17MAY10MCAL **Result Table:** 17MAY17CCV4-5 5/17/2017 7:40:13 PM
QMethod Name: PFCMOD-17JAN28 **Acquisition Method:** PFC-32-16NOV02.dam

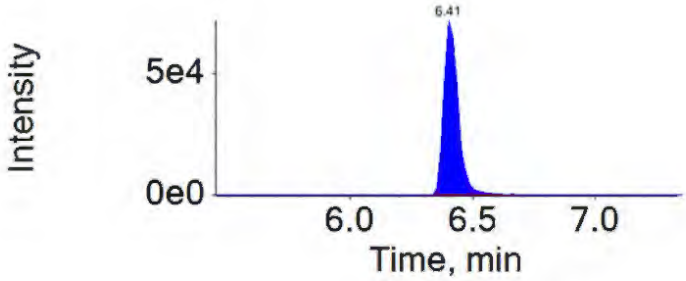
Extraction Standard: E13C5-PFHxA

318.0 /
273.0



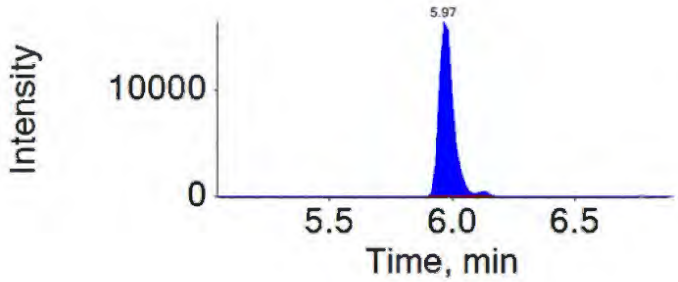
Injection Standard: 13C2-PFOA

415.0 /
370.0



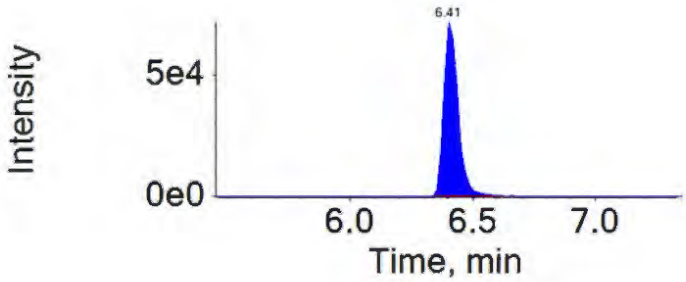
Extraction Standard: E13C3-PFHxS

402.0 /
99.0



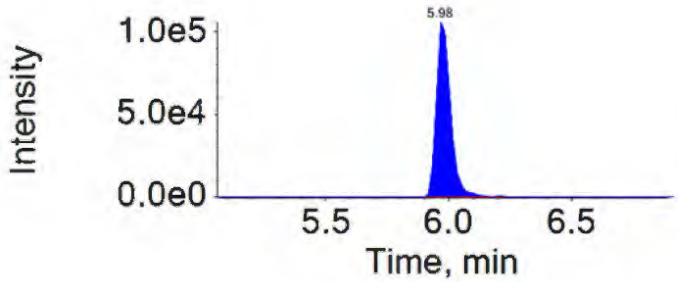
Injection Standard: 13C2-PFOA

415.0 /
370.0



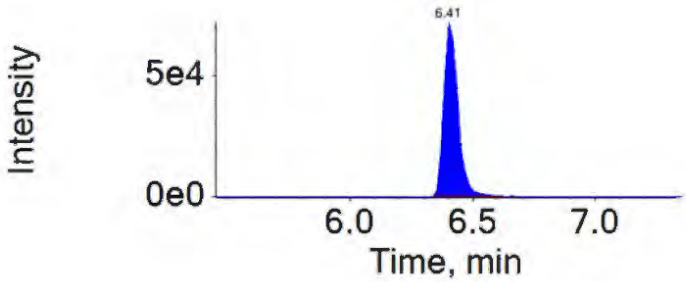
Extraction Standard: E13C4-PFHpA

367.0 /
322.0



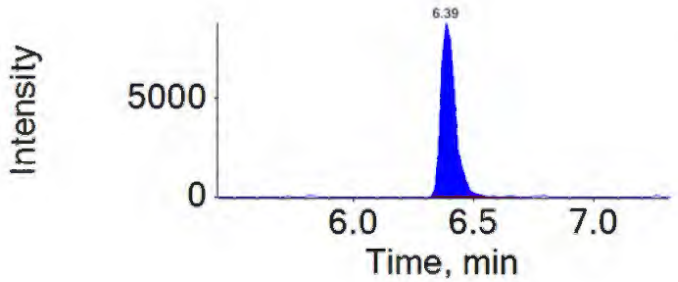
Injection Standard: 13C2-PFOA

415.0 /
370.0



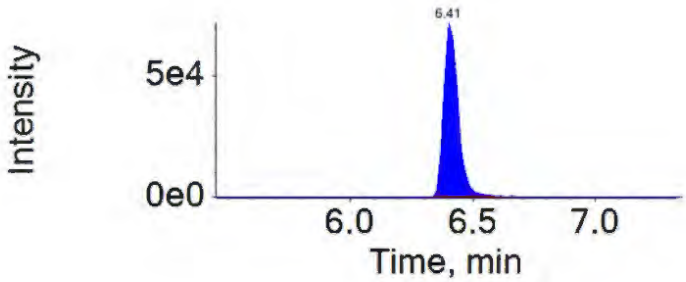
Extraction Standard: E13C2-6:2-FTS

429.0 /
409.0



Injection Standard: 13C2-PFOA

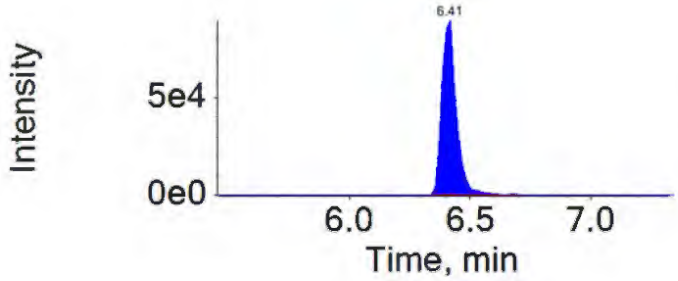
415.0 /
370.0



ICAL Name: 17MAY10MCAL **Result Table:** 17MAY17CCV4-5 5/17/2017 7:40:13 PM
QMethod Name: PFCMOD-17JAN28 **Acquisition Method:** PFC-32-16NOV02.dam

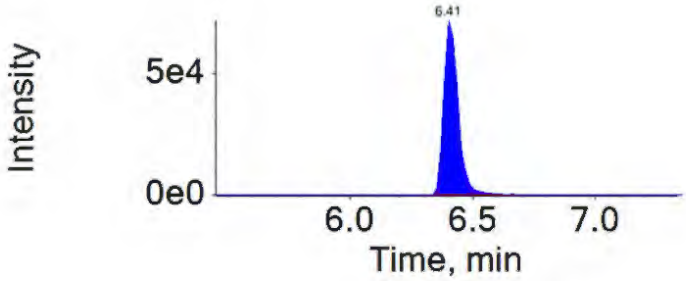
Extraction Standard: E13C8-PFOA

421.0 / 376.0



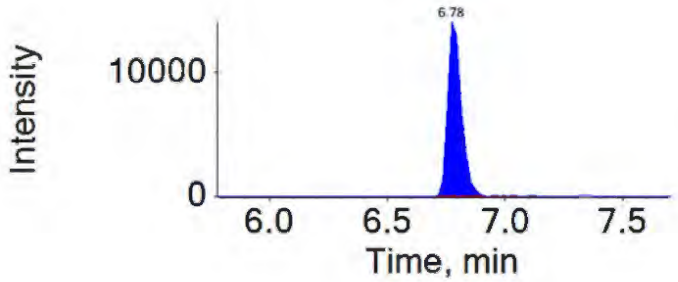
Injection Standard: 13C2-PFOA

415.0 / 370.0



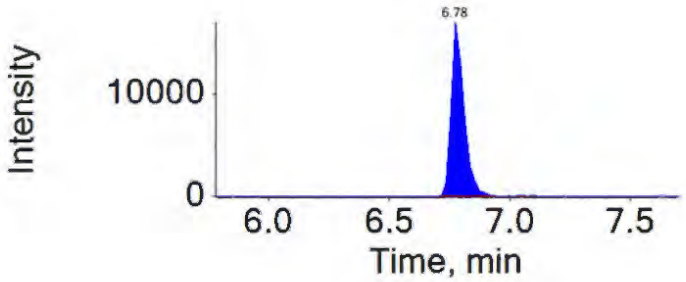
Extraction Standard: E13C8-PFOS

507.0 / 99.0



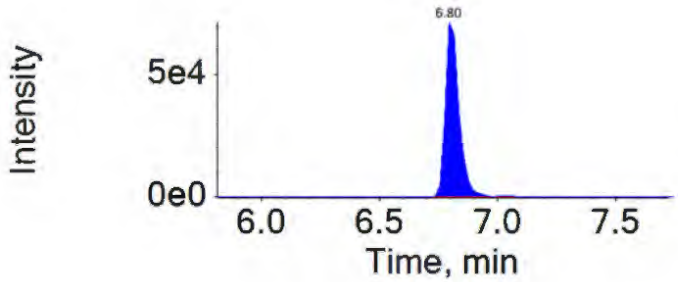
Injection Standard: 13C4-PFOS

503.0 / 99.0



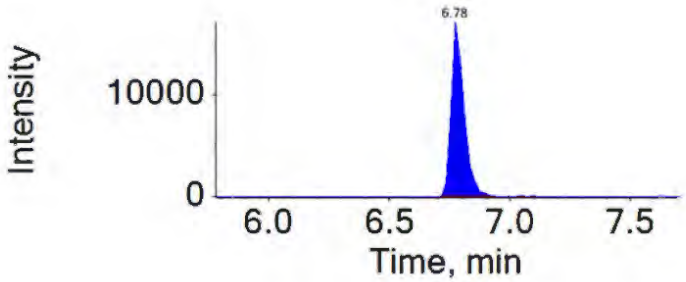
Extraction Standard: E13C9-PFNA

472.0 / 427.0



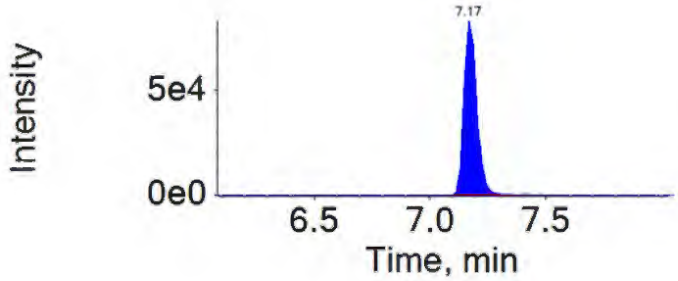
Injection Standard: 13C4-PFOS

503.0 / 99.0



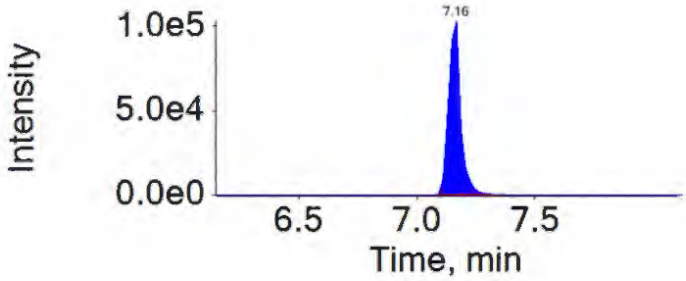
Extraction Standard: E13C8-PFOSA

506.0 / 78.0



Injection Standard: 13C2-PFDA

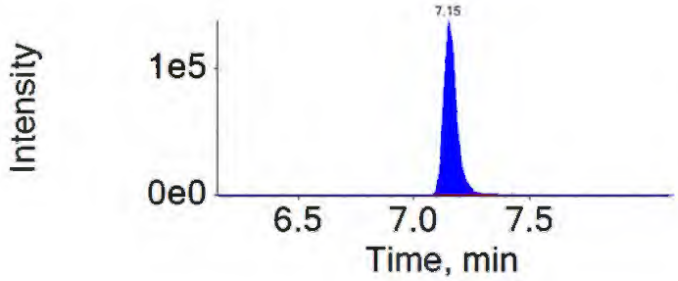
515.0 / 470.0



ICAL Name: 17MAY10MCAL **Result Table:** 17MAY17CCV4-5 5/17/2017 7:40:13 PM
QMethod Name: PFCMOD-17JAN28 **Acquisition Method:** PFC-32-16NOV02.dam

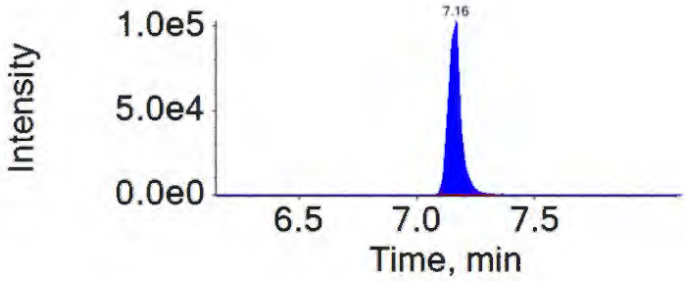
Extraction Standard: E13C6-PFDA

519.0 / 474.0



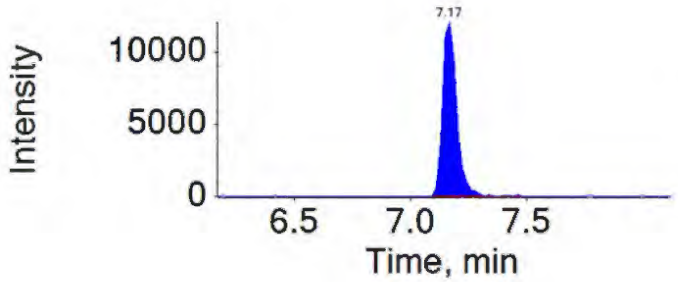
Injection Standard: 13C2-PFDA

515.0 / 470.0



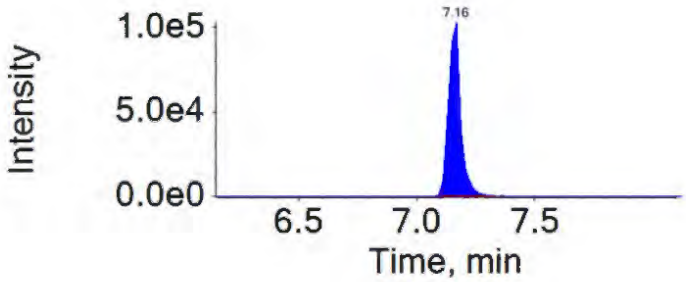
Extraction Standard: E13C2-8:2-FTS

529.0 / 509.0



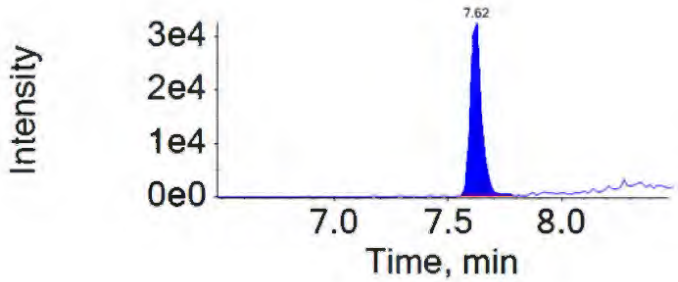
Injection Standard: 13C2-PFDA

515.0 / 470.0



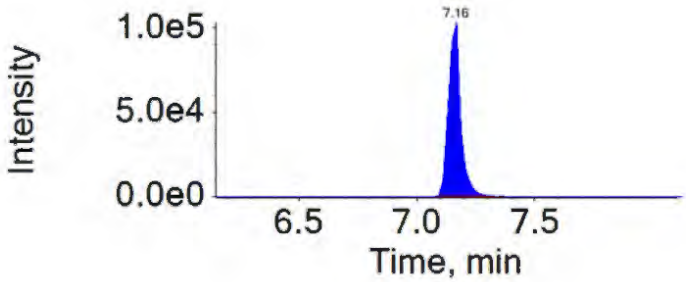
Extraction Standard: Ed7-NMePFOSAE

623.0 / 59.0



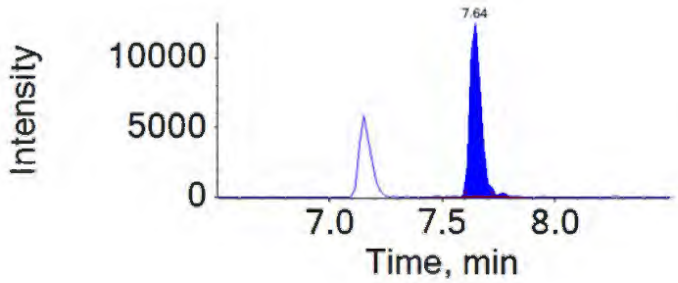
Injection Standard: 13C2-PFDA

515.0 / 470.0



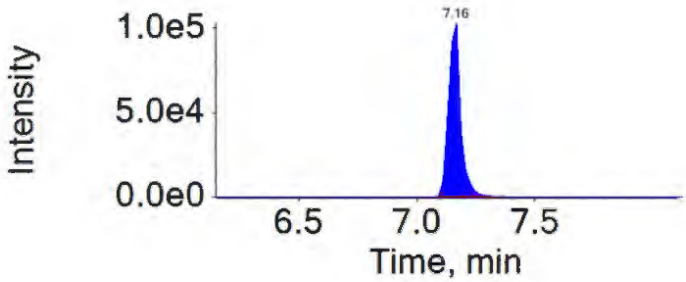
Extraction Standard: Ed3-NMePFOSA

515.0 / 169.0



Injection Standard: 13C2-PFDA

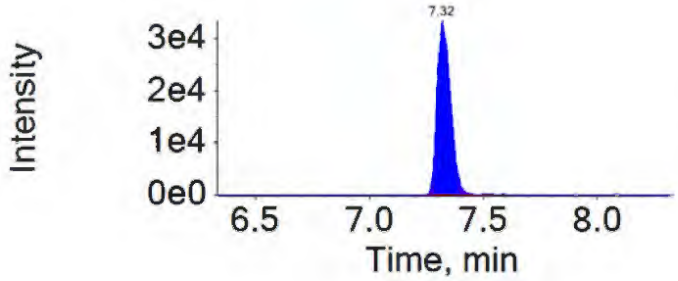
515.0 / 470.0



ICAL Name: 17MAY10MCAL **Result Table:** 17MAY17CCV4-5 5/17/2017 7:40:13 PM
QMethod Name: PFCMOD-17JAN28 **Acquisition Method:** PFC-32-16NOV02.dam

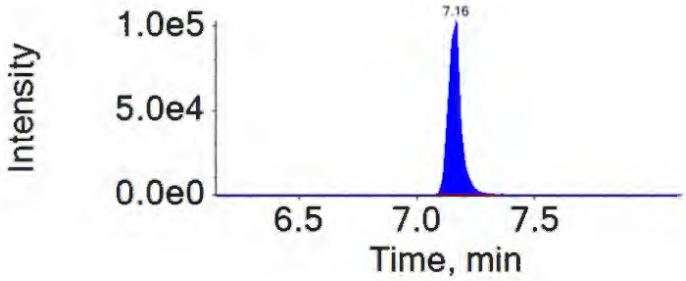
Extraction Standard: Ed3-NMeFOSAA

573.0 / 419.0



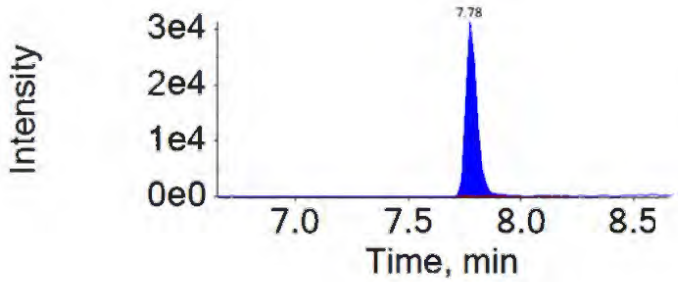
Injection Standard: 13C2-PFDA

515.0 / 470.0



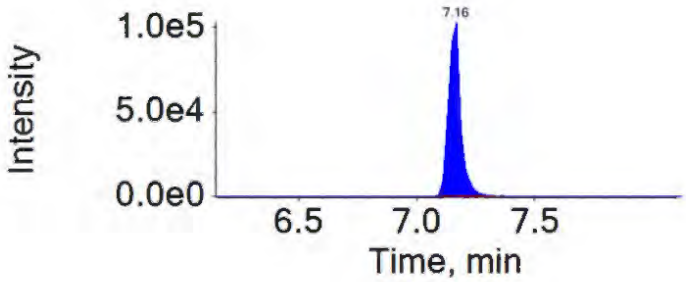
Extraction Standard: Ed9-NEtPFOSAE

639.0 / 59.0



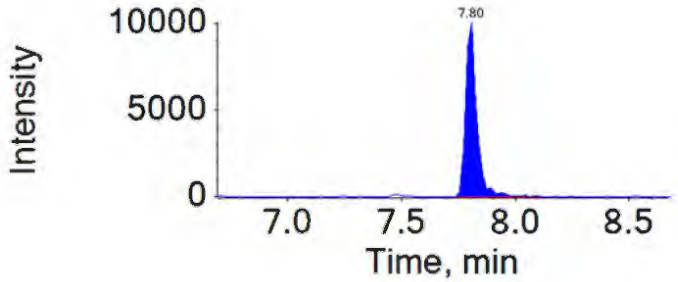
Injection Standard: 13C2-PFDA

515.0 / 470.0



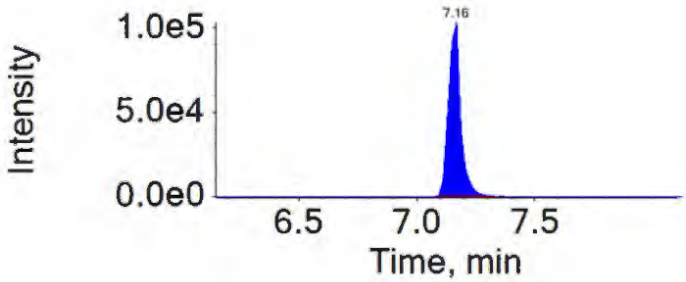
Extraction Standard: Ed5-NEtPFOSA

531.0 / 169.0



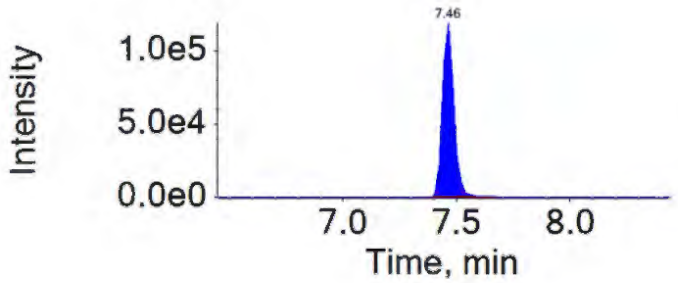
Injection Standard: 13C2-PFDA

515.0 / 470.0



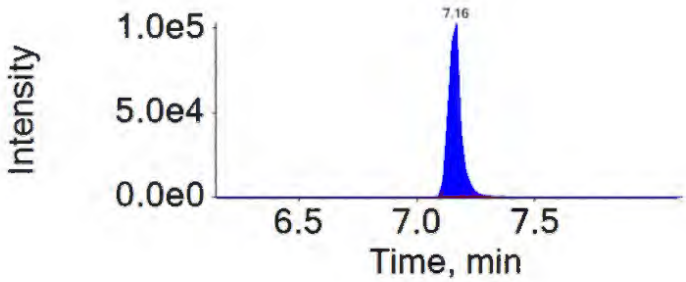
Extraction Standard: E13C7-PFUnDA

570.0 / 525.0



Injection Standard: 13C2-PFDA

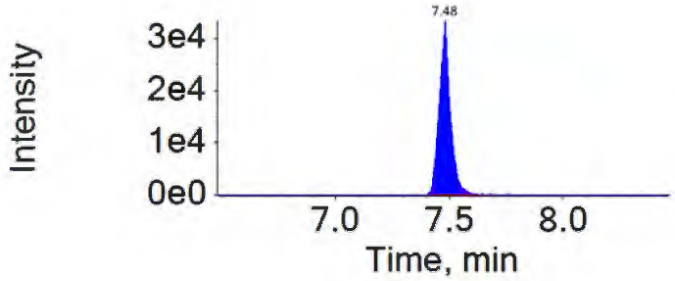
515.0 / 470.0



ICAL Name: 17MAY10MCAL **Result Table:** 17MAY17CCV4-5 5/17/2017 7:40:13 PM
QMethod Name: PFCMOD-17JAN28 **Acquisition Method:** PFC-32-16NOV02.dam

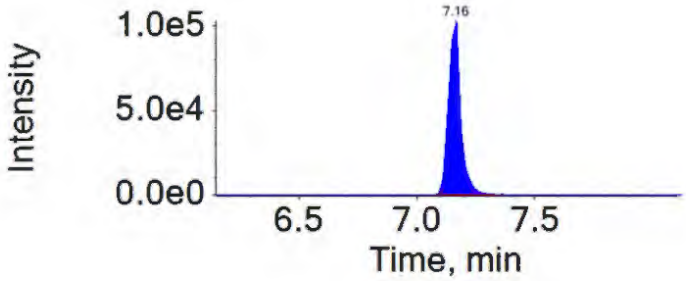
Extraction Standard: Ed5-NEtFOSAA

589.0 / 419.0



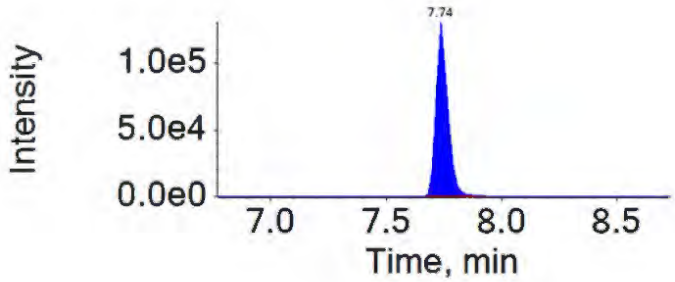
Injection Standard: 13C2-PFDA

515.0 / 470.0



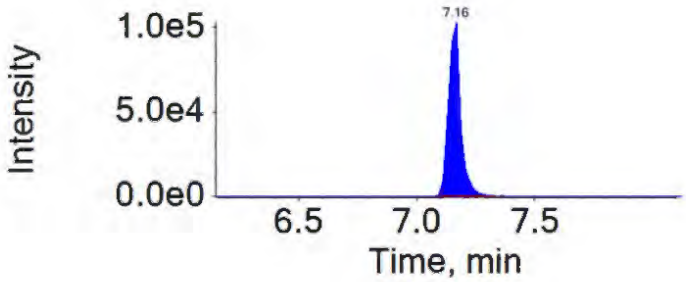
Extraction Standard: E13C2-PFDoDA

615.0 / 570.0



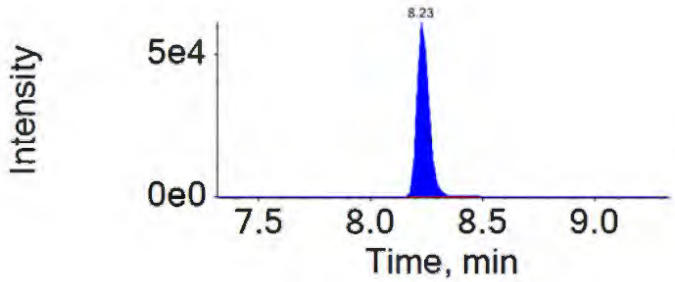
Injection Standard: 13C2-PFDA

515.0 / 470.0



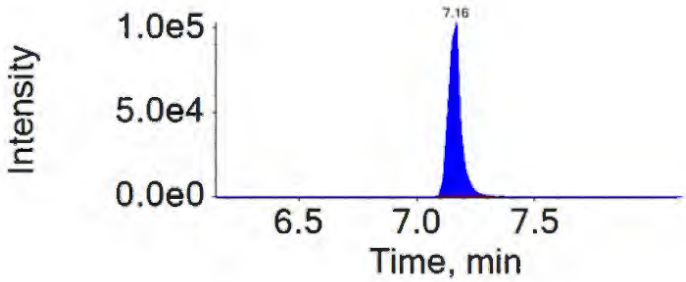
Extraction Standard: E13C2-PFTeDA

715.0 / 670.0



Injection Standard: 13C2-PFDA

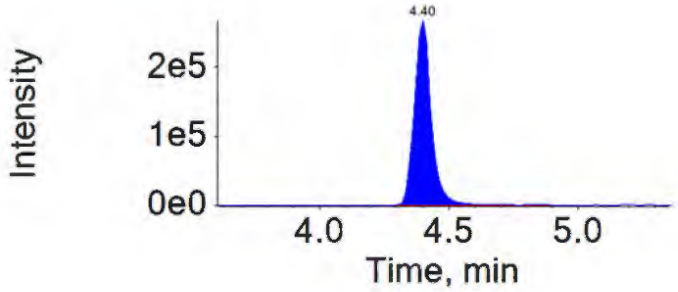
515.0 / 470.0



ICAL Name: 17MAY10MCAL **Result Table:** 17MAY17CCV4-5 5/17/2017 7:40:13 PM
QMethod Name: PFCMOD-17JAN28 **Acquisition Method:** PFC-32-16NOV02.dam

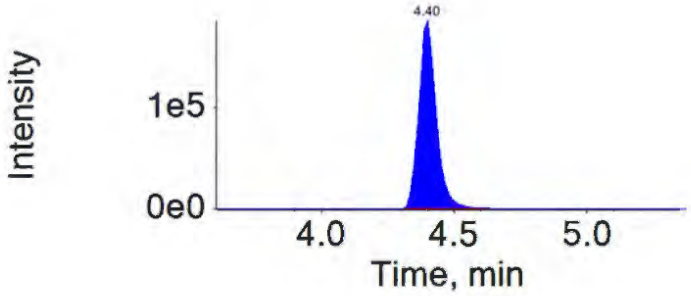
Analyte: PFBA

213.0 / 169.0



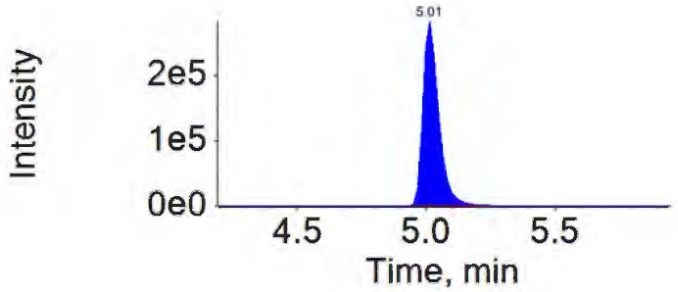
Extraction Standard: 13C4-PFBA

217.0 / 172.0



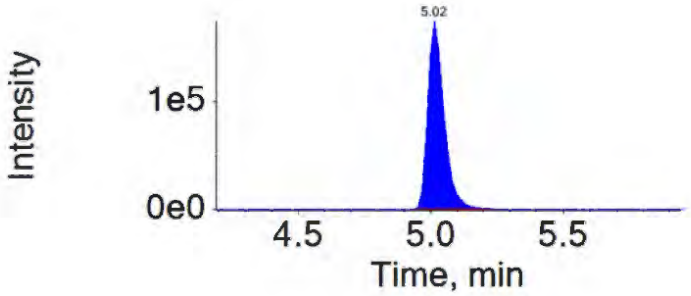
Analyte: PFPeA

263.0 / 219.0



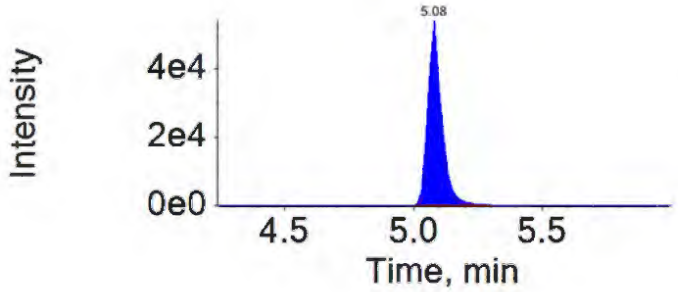
Extraction Standard: 13C5-PFPeA

268.0 / 223.0



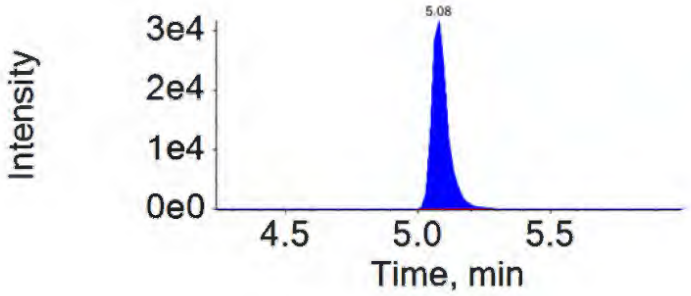
Analyte: PFBS

299.0 / 99.0



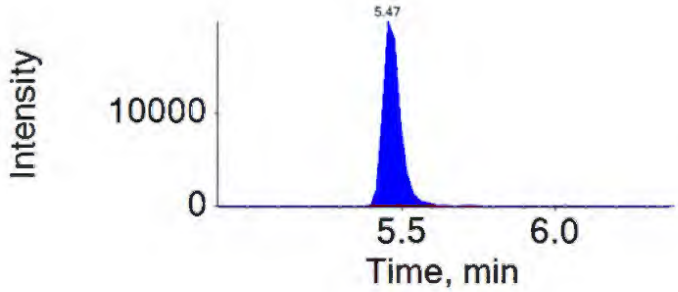
Extraction Standard: 13C3-PFBS

302.0 / 99.0



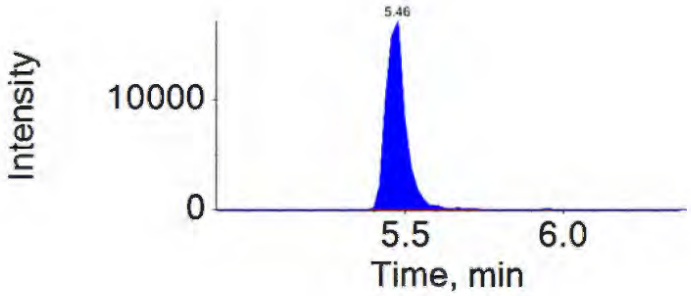
Analyte: 4:2-FTS

327.0 / 307.0



Extraction Standard: 13C2-4:2-FTS

329.0 / 309.0



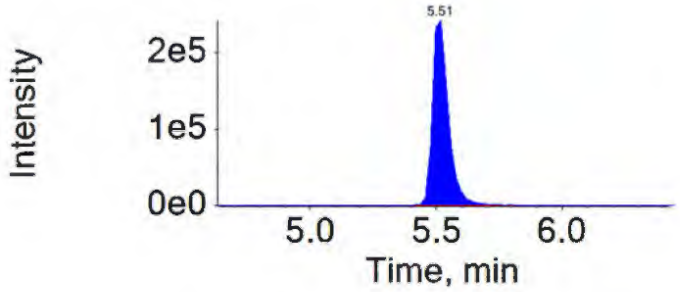
APPROVED
By DMW at 7:44 pm, 5/17/17

REVIEWED
By UMJS at 8:38 pm, 5/21/17

ICAL Name: 17MAY10MCAL **Result Table:** 17MAY17CCV4-5 5/17/2017 7:40:13 PM
QMethod Name: PFCMOD-17JAN28 **Acquisition Method:** PFC-32-16NOV02.dam

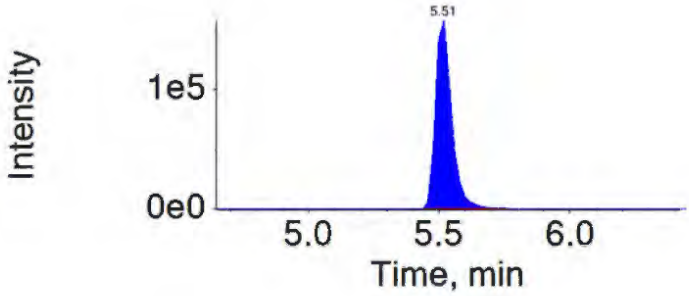
Analyte: PFHxA

313.0 /
269.0



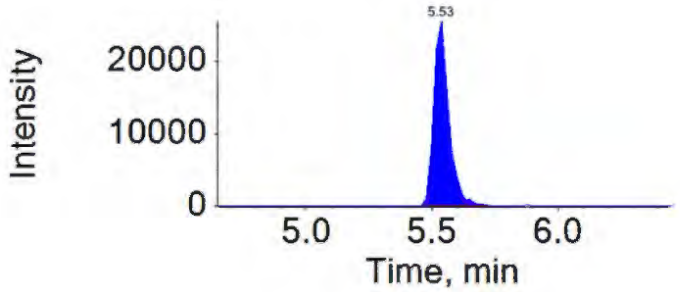
Extraction Standard: 13C5-PFHxA

318.0 /
273.0



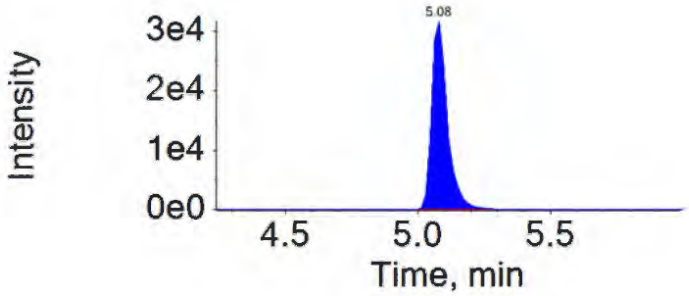
Analyte: PFPeS

349.0 /
99.0



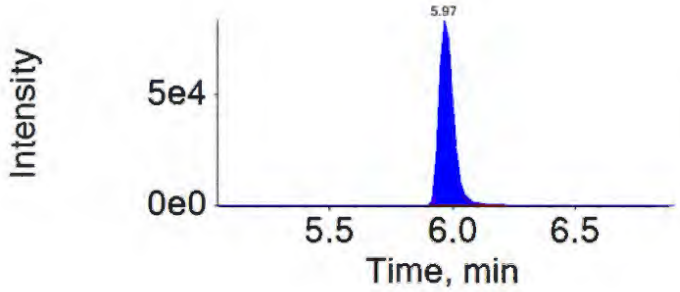
Extraction Standard: 13C3-PFBS

302.0 /
99.0



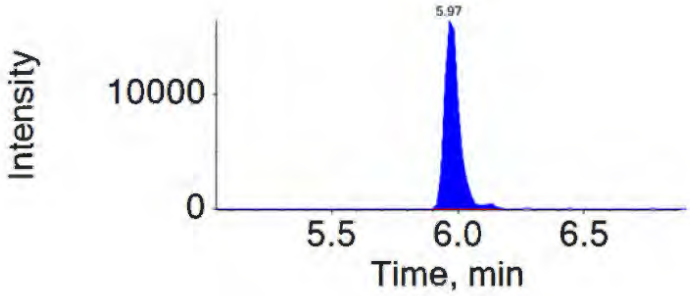
Analyte: PFHxS

399.0 /
80.0



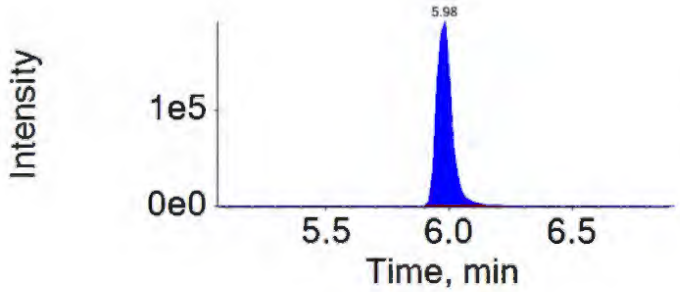
Extraction Standard: 13C3-PFHxS

402.0 /
99.0



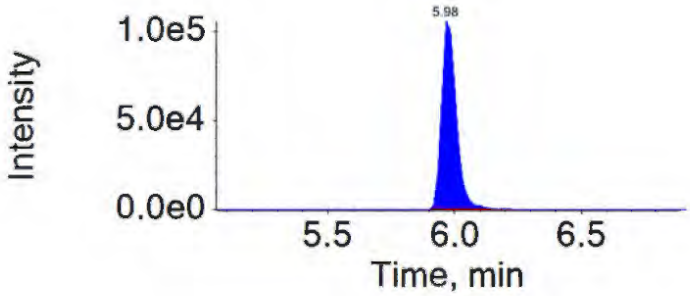
Analyte: PFHpA

363.0 /
319.0



Extraction Standard: 13C4-PFHpA

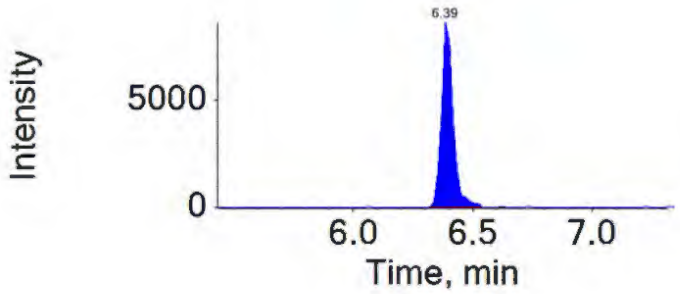
367.0 /
322.0



ICAL Name: 17MAY10MCAL **Result Table:** 17MAY17CCV4-5 5/17/2017 7:40:13 PM
QMethod Name: PFCMOD-17JAN28 **Acquisition Method:** PFC-32-16NOV02.dam

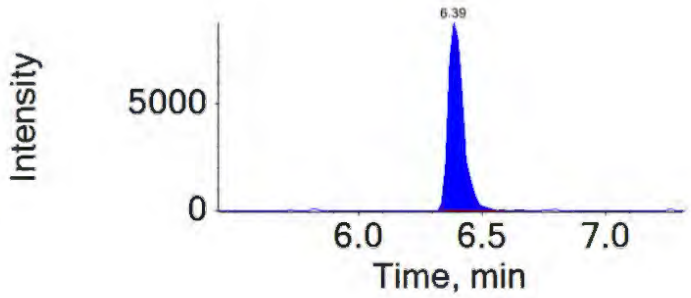
Analyte: 6:2-FTS

427.0 /
407.0



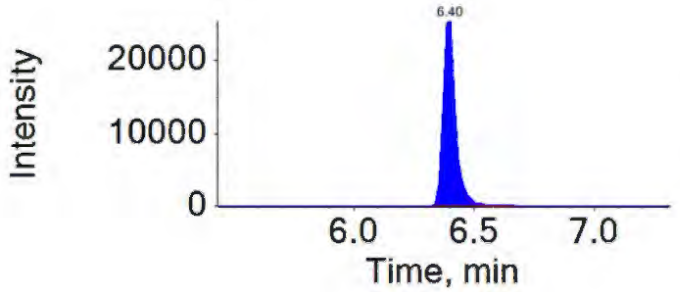
Extraction Standard: 13C2-6:2-FTS

429.0 /
409.0



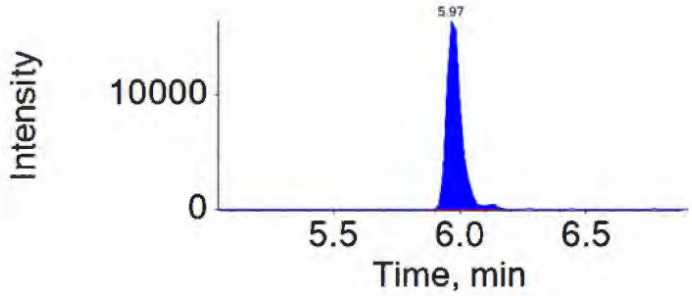
Analyte: PFHpS

449.0 /
99.0



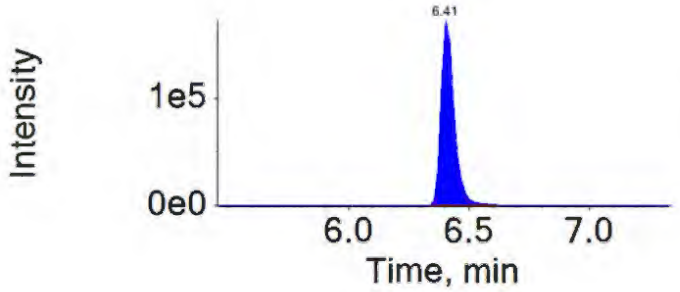
Extraction Standard: 13C3-PFHxS

402.0 /
99.0



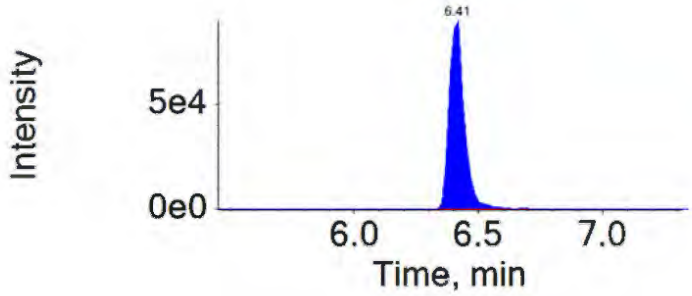
Analyte: PFOA

413.0 /
369.0



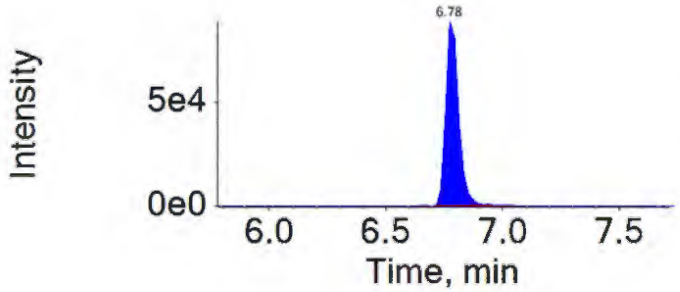
Extraction Standard: 13C8-PFOA

421.0 /
376.0



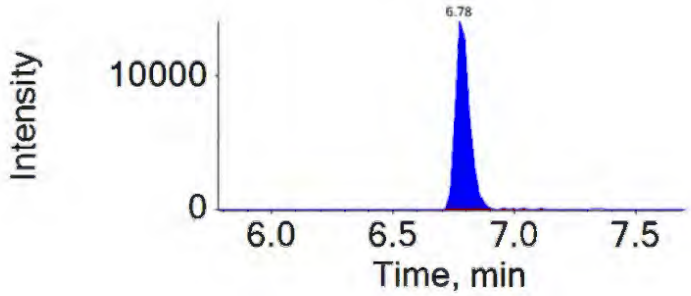
Analyte: PFOS

499.0 /
80.0



Extraction Standard: 13C8-PFOS

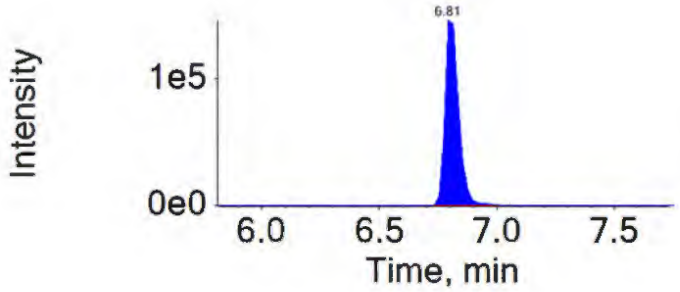
507.0 /
99.0



ICAL Name: 17MAY10MCAL **Result Table:** 17MAY17CCV4-5 5/17/2017 7:40:13 PM
QMethod Name: PFCMOD-17JAN28 **Acquisition Method:** PFC-32-16NOV02.dam

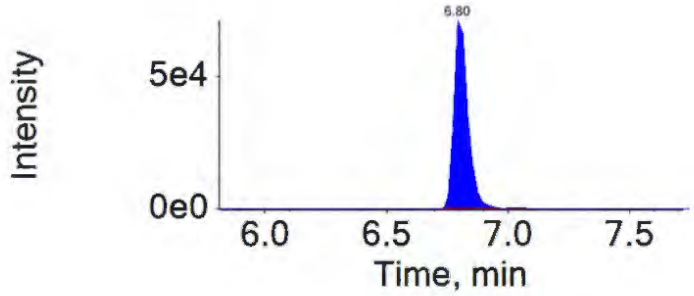
Analyte: PFNA

463.0 /
419.0



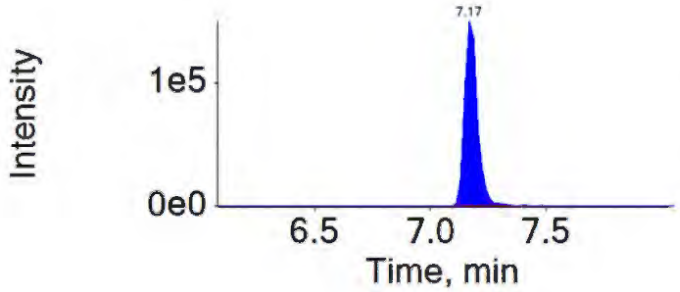
Extraction Standard: 13C9-PFNA

472.0 /
427.0



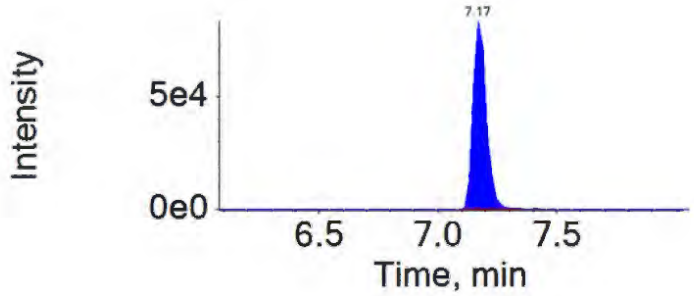
Analyte: PFOSA

498.0 /
78.0



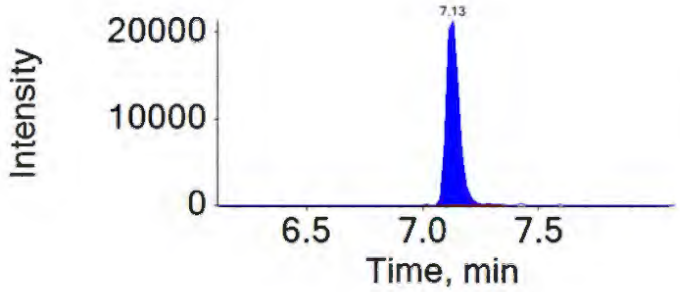
Extraction Standard: 13C8-PFOSA

506.0 /
78.0



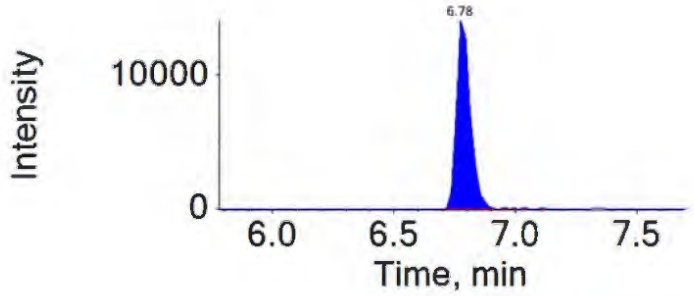
Analyte: PFNS

549.0 /
99.0



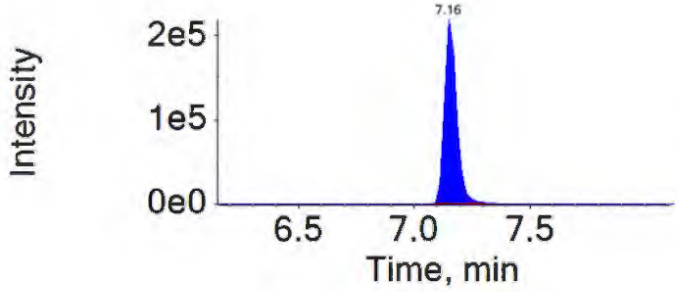
Extraction Standard: 13C8-PFOS

507.0 /
99.0



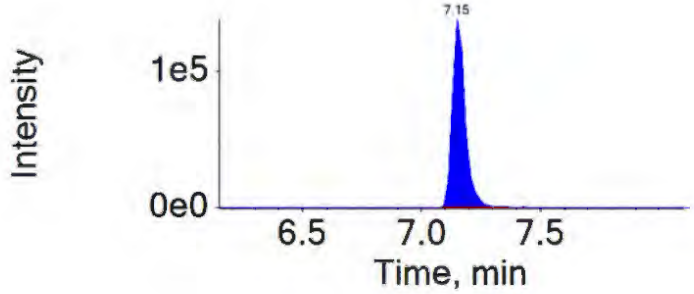
Analyte: PFDA

513.0 /
469.0



Extraction Standard: 13C6-PFDA

519.0 /
474.0

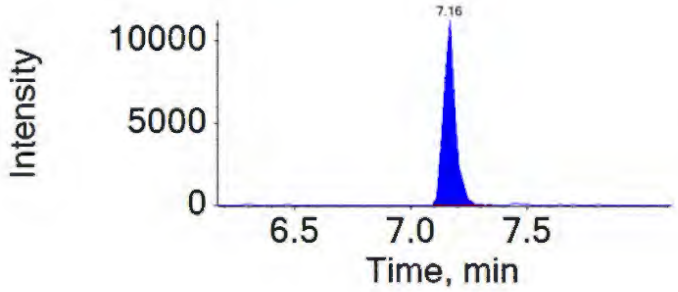


APPROVED
By DMW at 7:44 pm, 5/17/17

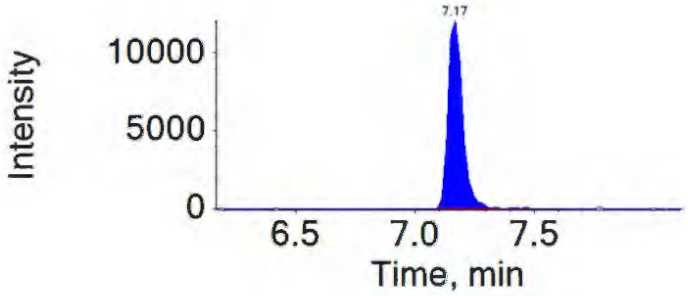
REVIEWED
By UMJS at 8:38 pm, 5/21/17

ICAL Name: 17MAY10MCAL **Result Table:** 17MAY17CCV4-5 5/17/2017 7:40:13 PM
QMethod Name: PFCMOD-17JAN28 **Acquisition Method:** PFC-32-16NOV02.dam

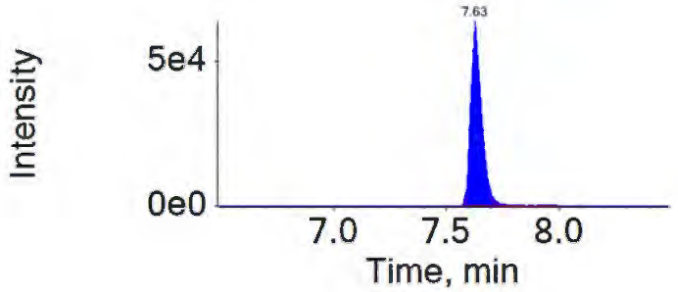
Analyte: 8:2-FTS
527.0 / 507.0



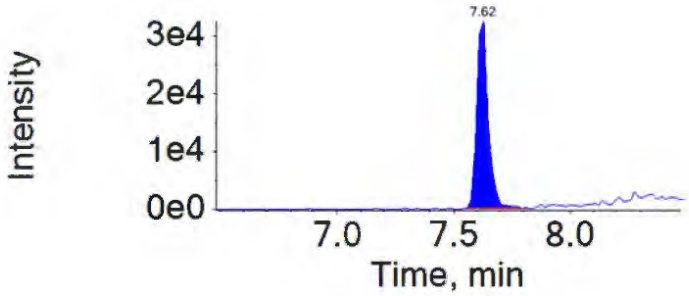
Extraction Standard: 13C2-8:2-FTS
529.0 / 509.0



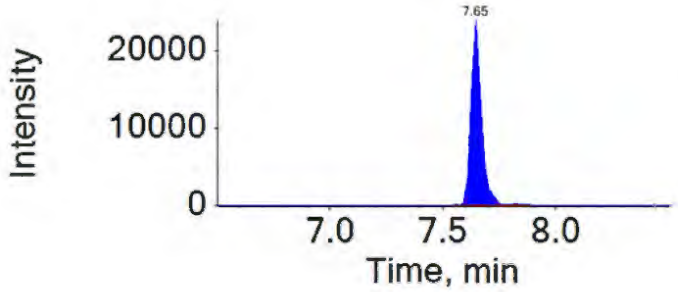
Analyte: NMePFOSAE
616.0 / 59.0



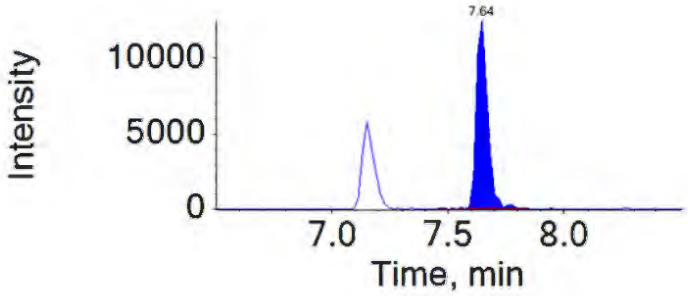
Extraction Standard: d7-NMePFOSAE
623.0 / 59.0



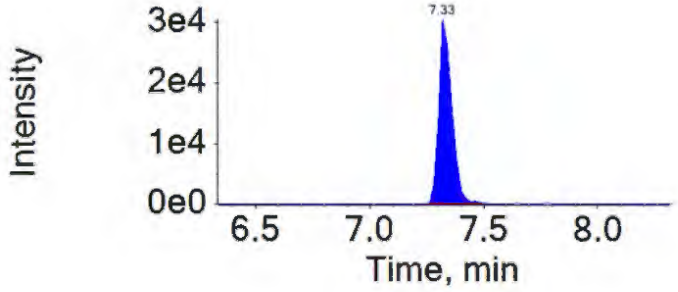
Analyte: NMePFOSA
512.0 / 169.0



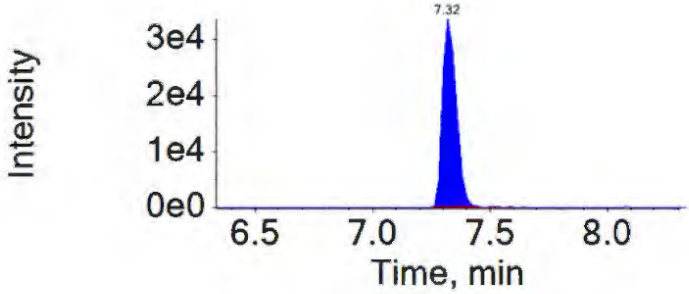
Extraction Standard: d3-NMePFOSA
515.0 / 169.0



Analyte: NMeFOSAA
570.0 / 419.0



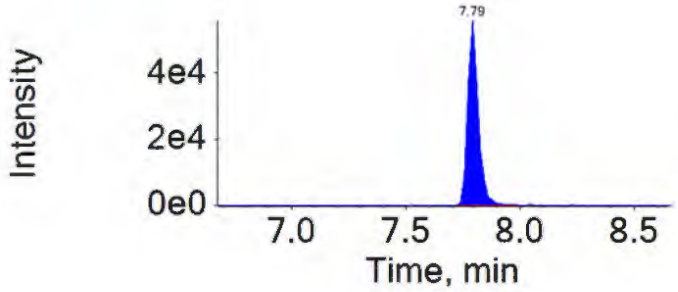
Extraction Standard: d3-NMeFOSAA
573.0 / 419.0



ICAL Name: 17MAY10MCAL **Result Table:** 17MAY17CCV4-5 5/17/2017 7:40:13 PM
QMethod Name: PFCMOD-17JAN28 **Acquisition Method:** PFC-32-16NOV02.dam

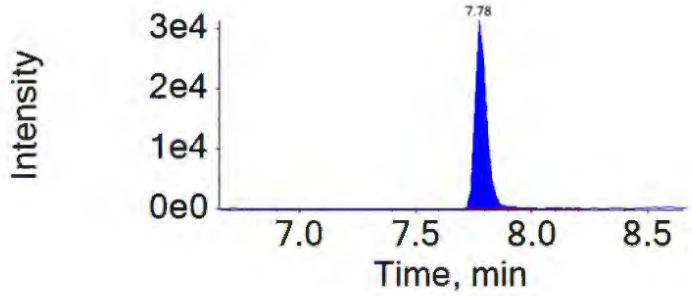
Analyte: NEtPFOSAE

630.0 /
59.0



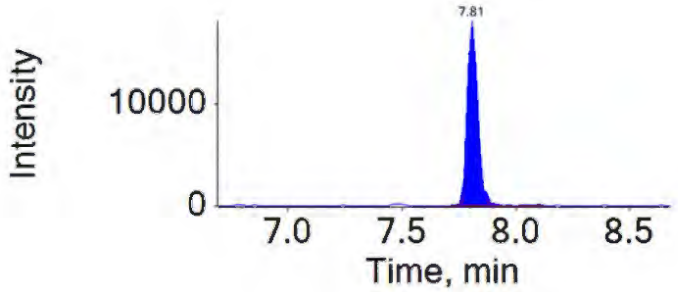
Extraction Standard: d9-NEtPFOSAE

639.0 /
59.0



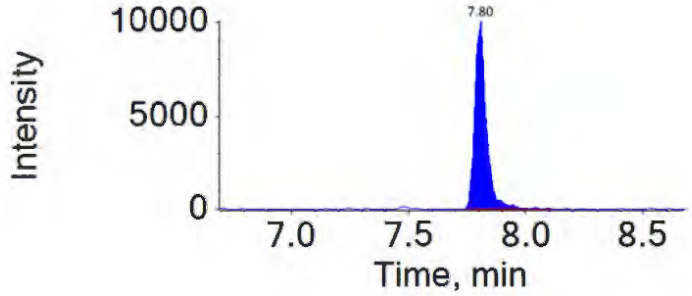
Analyte: NEtPFOSA

526.0 /
169.0



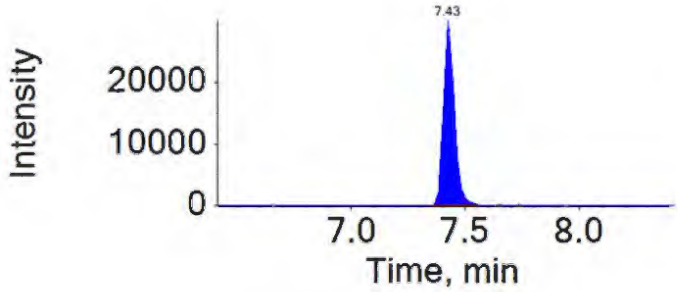
Extraction Standard: d5-NEtPFOSA

531.0 /
169.0



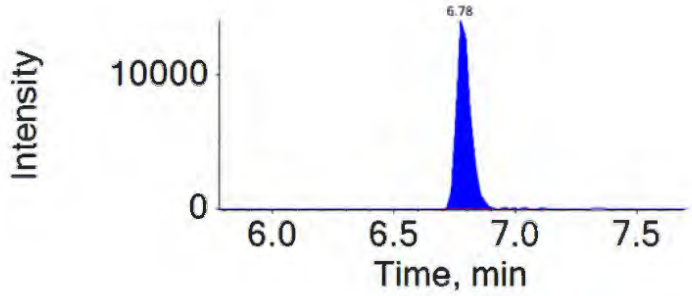
Analyte: PFDS

599.0 /
99.0



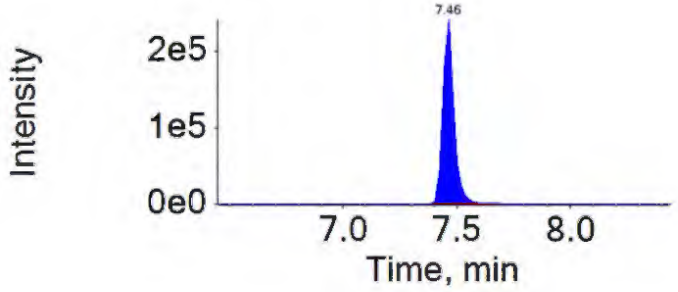
Extraction Standard: 13C8-PFOS

507.0 /
99.0



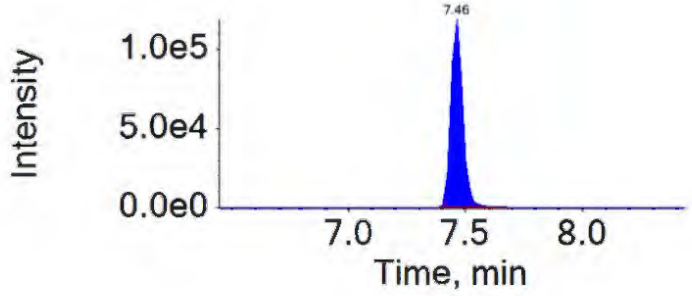
Analyte: PFUnDA

563.0 /
519.0



Extraction Standard: 13C7-PFUnDA

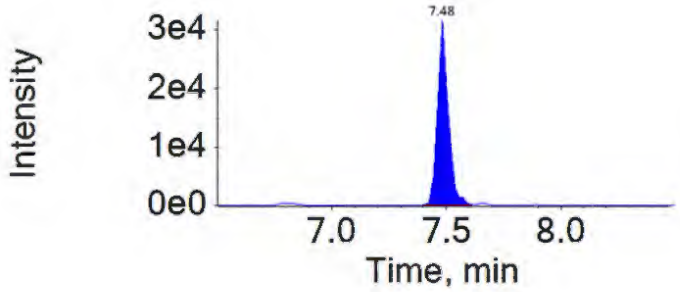
570.0 /
525.0



ICAL Name: 17MAY10MCAL **Result Table:** 17MAY17CCV4-5 5/17/2017 7:40:13 PM
QMethod Name: PFCMOD-17JAN28 **Acquisition Method:** PFC-32-16NOV02.dam

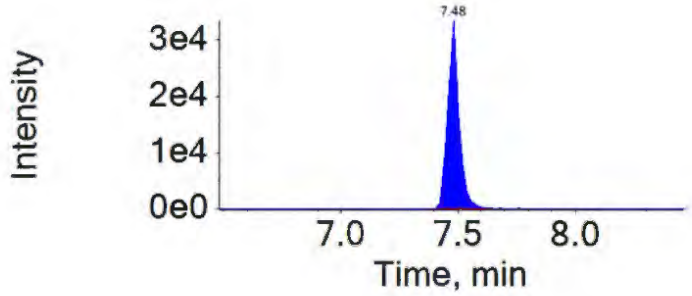
Analyte: NEtFOSAA

584.0 / 419.0



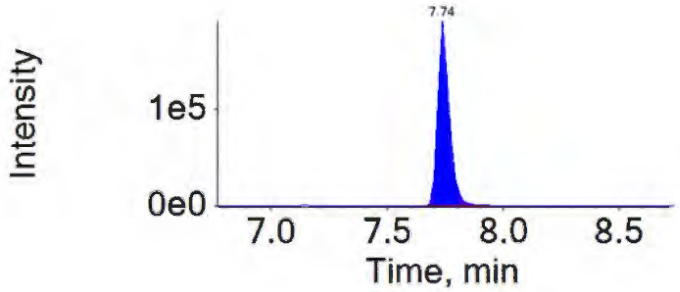
Extraction Standard: d5-NEtFOSAA

589.0 / 419.0



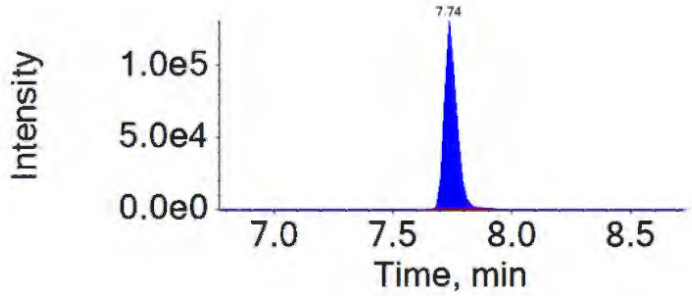
Analyte: PFDoDA

613.0 / 569.0



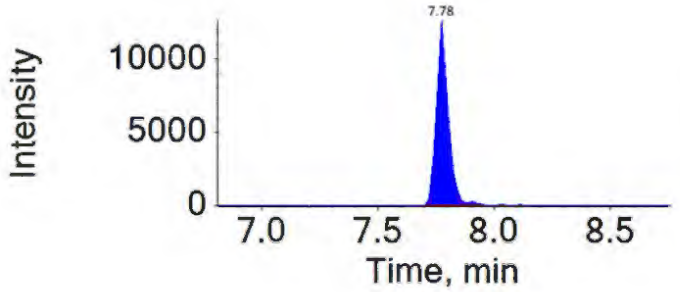
Extraction Standard: 13C2-PFDoDA

615.0 / 570.0



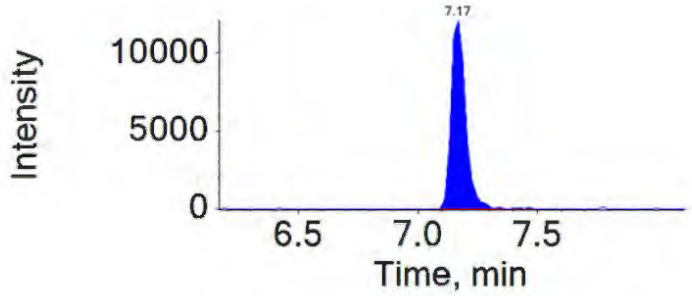
Analyte: 10:2-FTS

627.0 / 607.0



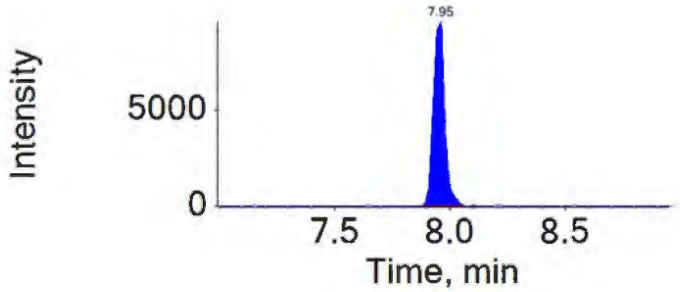
Extraction Standard: 13C2-8:2-FTS

529.0 / 509.0



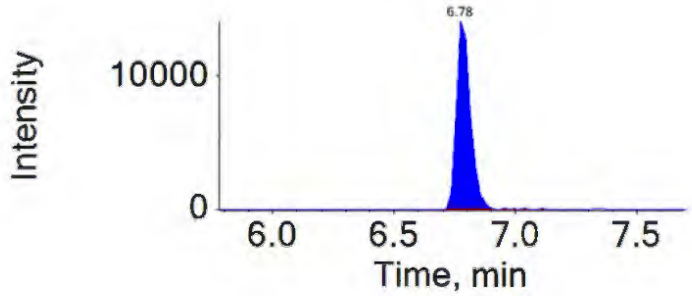
Analyte: PFDoS

699.0 / 99.0



Extraction Standard: 13C8-PFOS

507.0 / 99.0

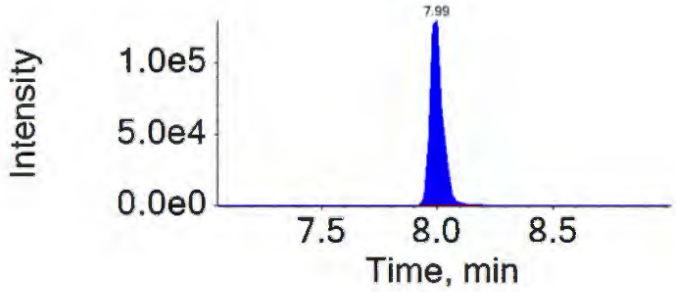


APPROVED
By DMW at 7:44 pm, 5/17/17

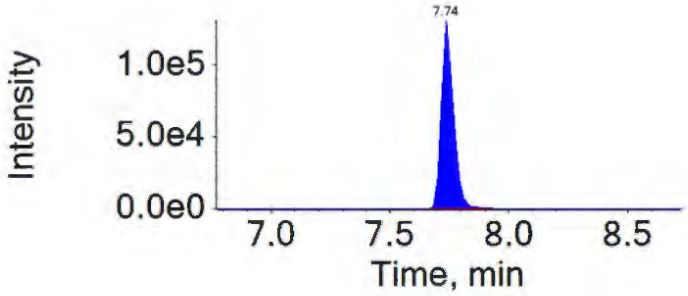
REVIEWED
By UMJS at 8:38 pm, 5/21/17

ICAL Name: 17MAY10MCAL **Result Table:** 17MAY17CCV4-5 5/17/2017 7:40:13 PM
QMethod Name: PFCMOD-17JAN28 **Acquisition Method:** PFC-32-16NOV02.dam

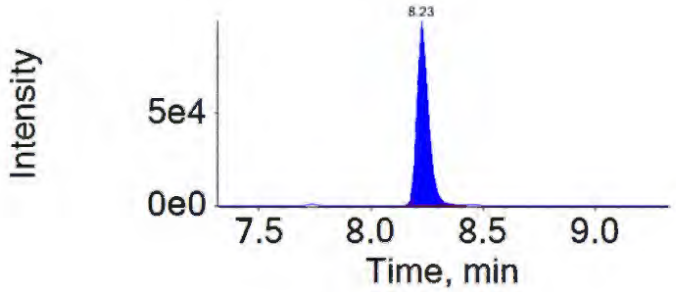
Analyte: PFTrDA
663.0 / 619.0



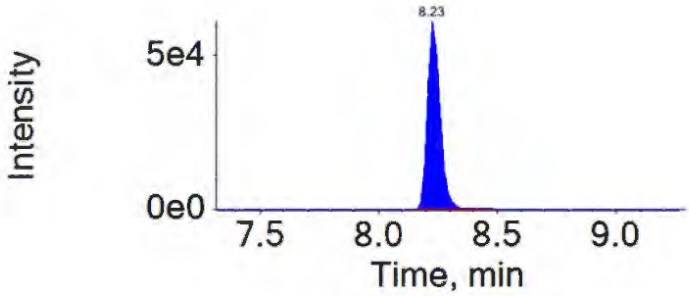
Extraction Standard: 13C2-PFDoDA
615.0 / 570.0



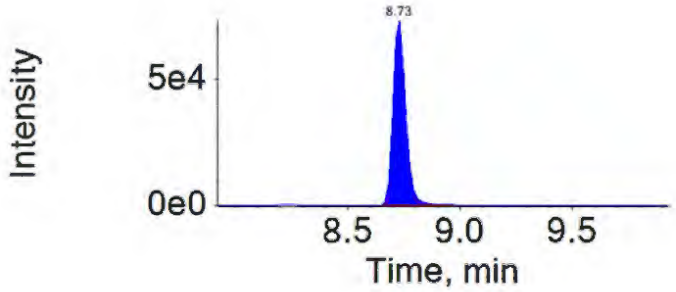
Analyte: PFTeDA
713.0 / 669.0



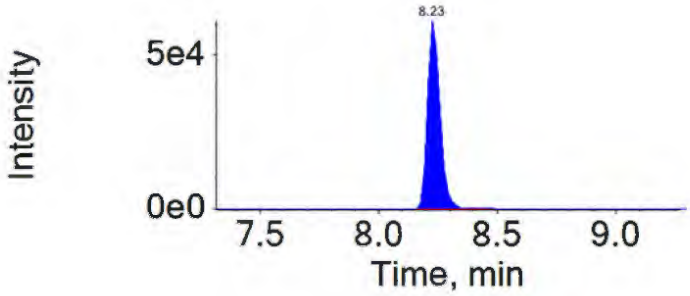
Extraction Standard: 13C2-PFTeDA
715.0 / 670.0



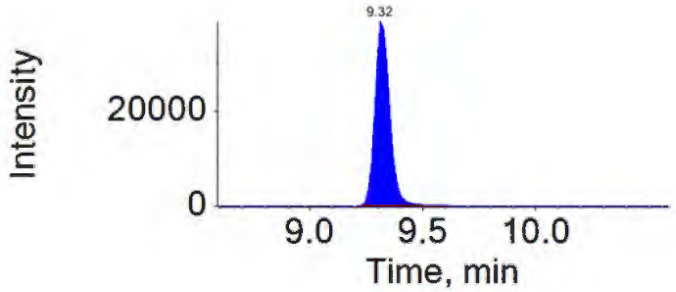
Analyte: PFHxDA
813.0 / 769.0



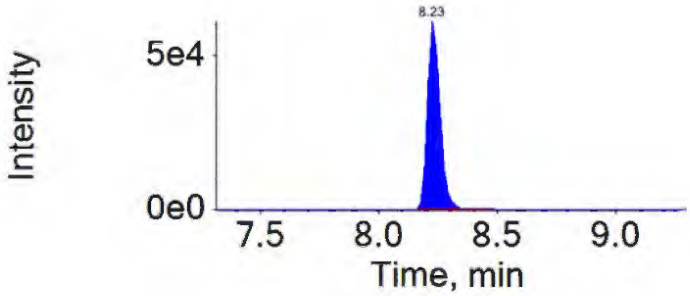
Extraction Standard: 13C2-PFTeDA
715.0 / 670.0



Analyte: PFODA
913.0 / 869.0



Extraction Standard: 13C2-PFTeDA
715.0 / 670.0



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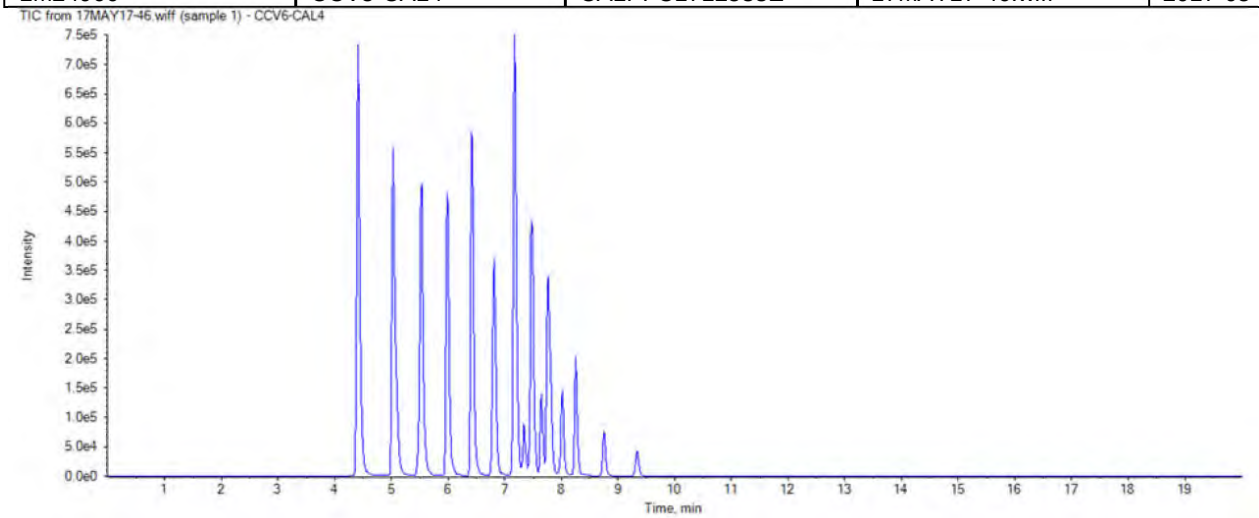
LC-MS/MS Analysis Report

Printed: 5/17/2017 7:42:00 PM
Template: MQ-CCV-16NOV21.docx

Continuing Calibration Verfication

ICAL Name: 17MAY10MCAL **Result Table:** 17MAY17CCV4-5 5/17/2017 7:40:13 PM
QMethod Name: PFCMOD-17JAN28 **Acquisition Method:** PFC-32-16NOV02.dam

Instrument Name:	Sample Name:	Sample ID:	Sample File:	Acquisition Date:
LM24960	CCV5-CAL4	CALPFC1712533E	17MAY17-46.wiff	2017-05-17T16:04:00



Injection Standard Name	Inj Std Conc	Injection Std Peak Area	ICAL Injection Standard AVG	Injection Std %Diff	Injection Std %Diff Limit	Injection Std %Diff OOS
I13C3-PFBA	1.00	770199.2	669117.279	15.1	50.0	
I13C2-PFOA	1.00	337743.6	342184.630	-1.3	50.0	
I13C4-PFOS	1.00	69570.6	70131.551	-0.8	50.0	
I13C2-PFDA	1.00	373800.5	384098.708	-2.7	50.0	

APPROVED
By DMW at 7:44 pm, 5/17/17

REVIEWED
By UMJS at 8:59 am, 5/19/17

Continuing Calibration Verfication

ICAL Name: 17MAY10MCAL **Result Table:** 17MAY17CCV4-5 5/17/2017 7:40:13 PM
QMethod Name: PFCMOD-17JAN28 **Acquisition Method:** PFC-32-16NOV02.dam

Instrument Name:	Sample Name:	Sample ID:	Sample File:	Acquisition Date:
LM24960	CCV5-CAL4	CALPFC1712533E	17MAY17-46.wiff	2017-05-17T16:04:00

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	1197838.9	13C4-PFBA	855354.3	1.0	1.400	4.41	1.000	8.000	7.701	-3.7	30.0	
PFPeA	1302067.2	13C5-PFPeA	813359.6	1.0	1.601	5.03	1.000	8.000	7.755	-3.1	30.0	
PFBS	199237.5	13C3-PFBS	131573.1	1.0	1.514	5.09	1.000	7.080	7.166	1.2	30.0	
4:2-FTS	66398.6	13C2-4:2-FTS	83184.5	1.0	0.798	5.48	1.000	3.740	3.708	-0.9	30.0	
PFHxA	1094624.7	13C5-PFHxA	710931.6	1.0	1.540	5.53	1.000	8.000	8.151	1.9	30.0	
PFPeS	116685.6	13C3-PFBS	131573.1	1.0	0.887	5.55	1.090	7.500	7.924	5.7	30.0	
PFHxS	377858.6	13C3-PFHxS	73270.6	1.0	5.157	5.99	1.000	7.560	7.233	-4.3	30.0	
PFHpA	865101.4	13C4-PFHpA	428423.9	1.0	2.019	5.99	1.000	8.000	8.134	1.7	30.0	
6:2-FTS	35195.7	13C2-6:2-FTS	36572.6	1.0	0.962	6.41	1.000	3.790	5.526	45.8	30.0	OOS
PFHpS	101181.4	13C3-PFHxS	73270.6	1.0	1.381	6.41	1.070	7.610	7.242	-4.8	30.0	
PFOA	711903.7	13C8-PFOA	415459.1	1.0	1.714	6.42	1.000	8.000	7.808	-2.4	30.0	
PFOS	350751.5	13C8-PFOS	67706.8	1.0	5.180	6.80	1.000	7.650	7.205	-5.8	30.0	
PFNA	624465.9	13C9-PFNA	295361.3	1.0	2.114	6.82	1.000	8.000	8.634	7.9	30.0	
PFOSA	658669.4	13C8-PFOSA	336281.8	1.0	1.959	7.18	1.000	8.000	8.948	11.8	30.0	
PFNS	99852.5	13C8-PFOS	67706.8	1.0	1.475	7.14	1.050	7.680	6.763	-11.9	30.0	
PFDA	803325.1	13C6-PFDA	487402.6	1.0	1.648	7.17	1.000	8.000	8.994	12.4	30.0	
8:2-FTS	45711.9	13C2-8:2-FTS	53955.5	1.0	0.847	7.18	1.000	3.830	4.273	11.6	30.0	
NMePFOSAE	235348.6	d7-NMePFOSAE	125444.6	1.0	1.876	7.65	1.000	8.000	7.481	-6.5	30.0	
NMePFOSA	77194.2	d3-NMePFOSA	43412.4	1.0	1.778	7.67	1.000	8.000	8.299	3.7	30.0	
NMeFOSAA	125469.0	d3-NMeFOSAA	142066.1	1.0	0.883	7.34	1.000	4.000	4.149	3.7	30.0	
NEtPFOSAE	204948.4	d9-NEtPFOSAE	137134.7	1.0	1.495	7.81	1.000	8.000	6.851	-14.4	30.0	
NEtPFOSA	62961.0	d5-NEtPFOSA	38777.5	1.0	1.624	7.83	1.000	8.000	8.057	0.7	30.0	
PFDS	107497.6	13C8-PFOS	67706.8	1.0	1.588	7.45	1.100	7.700	8.060	4.7	30.0	
PFUnDA	938155.7	13C7-PFUnDA	455470.6	1.0	2.060	7.48	1.000	8.000	8.023	0.3	30.0	
NEtFOSAA	114451.6	d5-NEtFOSAA	132644.2	1.0	0.863	7.50	1.000	4.000	4.222	5.5	30.0	
PFDoDA	690494.7	13C2-PFDoDA	471029.8	1.0	1.466	7.76	1.000	8.000	7.845	-1.9	30.0	
10:2-FTS	48394.6	13C2-8:2-FTS	53955.5	1.0	0.897	7.79	1.090	3.860	4.323	12.0	30.0	
PFDoS	35299.4	13C8-PFOS	67706.8	1.0	0.521	7.97	1.170	7.740	7.344	-5.1	30.0	
PFTrDA	496478.6	13C2-PFDoDA	471029.8	1.0	1.054	8.01	1.030	8.000	7.826	-2.2	30.0	
PFTeDA	399881.3	13C2-PFTeDA	255157.9	1.0	1.567	8.25	1.000	8.000	7.996	-0.1	30.0	
PFHxDA	289549.2	13C2-PFTeDA	255157.9	1.0	1.135	8.75	1.060	8.000	7.162	-10.5	30.0	
PFODA	182310.7	13C2-PFTeDA	255157.9	1.0	0.715	9.33	1.130	8.000	6.534	-18.3	30.0	

APPROVED
By DMW at 7:44 pm, 5/17/17

REVIEWED
By UMJS at 8:59 am, 5/19/17

Continuing Calibration Verfication

ICAL Name: 17MAY10MCAL **Result Table:** 17MAY17CCV4-5 5/17/2017 7:40:13 PM
QMethod Name: PFCMOD-17JAN28 **Acquisition Method:** PFC-32-16NOV02.dam

APPROVED
By DMW at 7:44 pm, 5/17/17

REVIEWED
By UMJS at 8:59 am, 5/19/17

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LC-MS/MS Analysis Report

Printed: 5/17/2017 7:43:00 PM
Template: MQ-Sample-16Nov21.docx

ICAL Name: 17MAY10MCAL
QMethod Name: PFCMOD-17JAN28
Result Table: 17MAY17CCV4-5 5/17/2017 7:40:13 PM
Acquisition Method: PFC-32-16NOV02.dam

Sample Name:	CCV5-CAL4			**Data File:**		17MAY17-46.wiff
Sample ID:	CALPFC1712533E			**Acquis Date:**		2017-05-17T16:04:00
Sample Type:	Quality Control			**Instrument:**		LM24960
Vial Position:	6			**Acquis Method:**		PFC-32-16NOV02.dam
Injection Vol:	5.00			**Result Table:**		17MAY17CCV4-5
QMethod File:	PFCMOD-17JAN28			**ICAL Name:**		17MAY10MCAL
Batch Number:	N\A			**Operator:**		Not calculated
Sample Wt.:	1.00000			**Dilution Factor:**		1.00
Sample Vol.:	1.000			**Prep Factor:**		1.000

Injection Standard Peak Table

Injection Standard Name	Inj Std Conc	Injection Std Peak Area	ICAL Injection Standard AVG	Injection Std %Diff	Injection Std %Diff Limit	Injection Std %Diff OOS
I13C3-PFBA	1.0	770199.2	669117.3	15.1	50.0	
I13C2-PFOA	1.0	337743.6	342184.6	-1.3	50.0	
I13C4-PFOS	1.0	69570.6	70131.6	-0.8	50.0	
I13C2-PFDA	1.0	373800.5	384098.7	-2.7	50.0	

Extraction Standard Peak Table

Extraction Standard Name	Ext Std Area	Inj Std Name	Inj Std Area	Area Ratio	AVG Area Ratio	Ext Std Conc	Ext Std Result	Ext Std %REC	Ext Std %REC Limit	Ext Std OOS
E13C4-PFBA	855354.3	13C3-PFBA	770199.2	1.111	1.150	1.000	0.965	96.5	70.0-130.0	
E13C5-PFPeA	813359.6	13C3-PFBA	770199.2	1.056	1.073	1.000	0.984	98.4	70.0-130.0	
E13C3-PFBS	131573.1	13C3-PFBA	770199.2	0.171	0.194	1.000	0.879	87.9	70.0-130.0	
E13C2-4:2-FTS	83184.5	13C2-PFOA	337743.6	0.246	0.236	1.000	1.042	104.2	70.0-130.0	
E13C5-PFHxA	710931.6	13C2-PFOA	337743.6	2.105	2.026	1.000	1.039	103.9	70.0-130.0	
E13C3-PFHxS	73270.6	13C2-PFOA	337743.6	0.217	0.206	1.000	1.054	105.4	70.0-130.0	
E13C4-PFHpA	428423.9	13C2-PFOA	337743.6	1.268	1.285	1.000	0.987	98.7	70.0-130.0	
E13C2-6:2-FTS	36572.6	13C2-PFOA	337743.6	0.108	0.128	1.000	0.845	84.5	70.0-130.0	
E13C8-PFOA	415459.1	13C2-PFOA	337743.6	1.230	1.163	1.000	1.057	105.7	70.0-130.0	
E13C8-PFOS	67706.8	13C4-PFOS	69570.6	0.973	0.865	1.000	1.124	112.4	70.0-130.0	
E13C9-PFNA	295361.3	13C4-PFOS	69570.6	4.245	4.422	1.000	0.960	96.0	70.0-130.0	
E13C8-PFOSA	336281.8	13C2-PFDA	373800.5	0.900	0.936	1.000	0.961	96.1	70.0-130.0	
E13C6-PFDA	487402.6	13C2-PFDA	373800.5	1.304	1.424	1.000	0.916	91.6	70.0-130.0	
E13C2-8:2-FTS	53955.5	13C2-PFDA	373800.5	0.144	0.155	1.000	0.929	92.9	70.0-130.0	
Ed7-NMePFOSAE	125444.6	13C2-PFDA	373800.5	0.336	0.299	1.000	1.123	112.3	70.0-130.0	
Ed3-NMePFOSA	43412.4	13C2-PFDA	373800.5	0.116	0.120	1.000	0.966	96.6	70.0-130.0	
Ed3-NMeFOSAA	142066.1	13C2-PFDA	373800.5	0.380	0.343	1.000	1.108	110.8	70.0-130.0	
Ed9-NEtPFOSAE	137134.7	13C2-PFDA	373800.5	0.367	0.333	1.000	1.103	110.3	70.0-130.0	
Ed5-NEtPFOSA	38777.5	13C2-PFDA	373800.5	0.104	0.095	1.000	1.095	109.5	70.0-130.0	
E13C7-PFUnDA	455470.6	13C2-PFDA	373800.5	1.218	0.953	1.000	1.279	127.9	70.0-130.0	
Ed5-NEtFOSAA	132644.2	13C2-PFDA	373800.5	0.355	0.249	1.000	1.427	142.7	70.0-130.0	OOS
E13C2-PFDoDA	471029.8	13C2-PFDA	373800.5	1.260	1.154	1.000	1.092	109.2	70.0-130.0	
E13C2-PFTeDA	255157.9	13C2-PFDA	373800.5	0.683	0.651	1.000	1.048	104.8	70.0-130.0	

APPROVED
By DMW at 7:44 pm, 5/17/17

REVIEWED
By UMJS at 8:59 am, 5/19/17

ICAL Name: 17MAY10MCAL **Result Table:** 17MAY17CCV4-5 5/17/2017 7:40:13 PM
QMethod Name: PFCMOD-17JAN28 **Acquisition Method:** PFC-32-16NOV02.dam

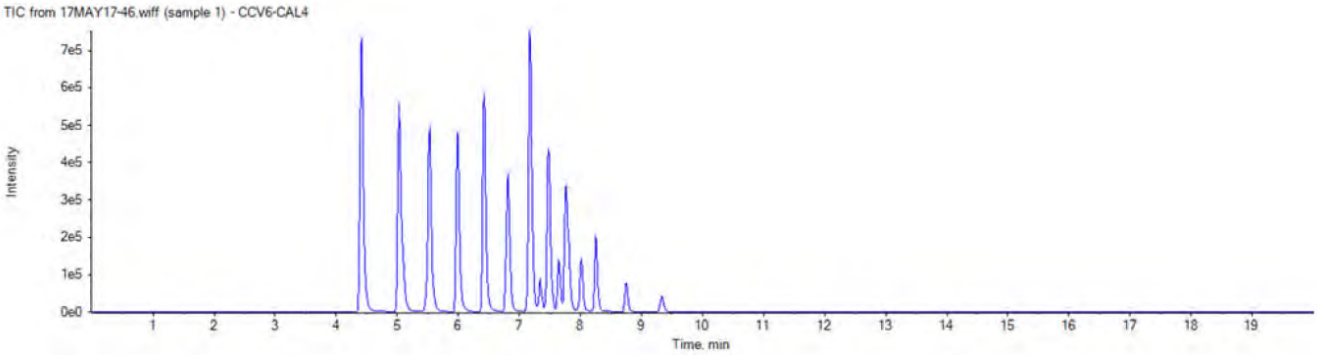
Analyte Quantitation Peak Table

Sample Name: CCV5-CAL4 **Instrument Name:** LM24960 **File Name:** 17MAY17-46.wiff

Sample Wt	Sample Vol	Dilution Factor	PrepFactor
1.00000	1.000	1.00	1.000

Analytet Name	RT	RRT	Analyte Area Response	Int Typ	ES Name	ES RT	ES Area Response	Area Ratio	Sample Result (ng/g)
PFBA	4.41	1.000	1197838.9	A	13C4-PFBA	4.41	855354.3	1.400	7.701
PFPeA	5.03	1.000	1302067.2	A	13C5-PFPeA	5.03	813359.6	1.601	7.755
PFBS	5.09	1.000	199237.5	A	13C3-PFBS	5.09	131573.1	1.514	7.166
4:2-FTS	5.48	1.000	66398.6	A	13C2-4:2-FTS	5.48	83184.5	0.798	3.708
PFHxA	5.53	1.000	1094624.7	A	13C5-PFHxA	5.53	710931.6	1.540	8.151
PFPeS	5.55	1.090	116685.6	A	13C3-PFBS	5.09	131573.1	0.887	7.924
PFHxS	5.99	1.000	377858.6	A	13C3-PFHxS	5.98	73270.6	5.157	7.233
PFHpA	5.99	1.000	865101.4	A	13C4-PFHpA	5.99	428423.9	2.019	8.134
6:2-FTS	6.41	1.000	35195.7	A	13C2-6:2-FTS	6.40	36572.6	0.962	5.526
PFHpS	6.41	1.070	101181.4	A	13C3-PFHxS	5.98	73270.6	1.381	7.242
PFOA	6.42	1.000	711903.7	A	13C8-PFOA	6.42	415459.1	1.714	7.808
PFOS	6.80	1.000	350751.5	A	13C8-PFOS	6.79	67706.8	5.180	7.205
PFNA	6.82	1.000	624465.9	A	13C9-PFNA	6.82	295361.3	2.114	8.634
PFOSA	7.18	1.000	658669.4	A	13C8-PFOSA	7.18	336281.8	1.959	8.948
PFNS	7.14	1.050	99852.5	A	13C8-PFOS	6.79	67706.8	1.475	6.763
PFDA	7.17	1.000	803325.1	A	13C6-PFDA	7.17	487402.6	1.648	8.994
8:2-FTS	7.18	1.000	45711.9	A	13C2-8:2-FTS	7.18	53955.5	0.847	4.273
NMePFOSAE	7.65	1.000	235348.6	A	d7-NMePFOSAE	7.63	125444.6	1.876	7.481
NMePFOSA	7.67	1.000	77194.2	A	d3-NMePFOSA	7.66	43412.4	1.778	8.299
NMeFOSAA	7.34	1.000	125469.0	A	d3-NMeFOSAA	7.34	142066.1	0.883	4.149
NEtPFOSAE	7.81	1.000	204948.4	A	d9-NEtPFOSAE	7.80	137134.7	1.495	6.851
NEtPFOSA	7.83	1.000	62961.0	A	d5-NEtPFOSA	7.82	38777.5	1.624	8.057
PFDS	7.45	1.100	107497.6	A	13C8-PFOS	6.79	67706.8	1.588	8.060
PFUnDA	7.48	1.000	938155.7	A	13C7-PFUnDA	7.47	455470.6	2.060	8.023
NEtFOSAA	7.50	1.000	114451.6	A	d5-NEtFOSAA	7.49	132644.2	0.863	4.222
PFDoDA	7.76	1.000	690494.7	A	13C2-PFDoDA	7.76	471029.8	1.466	7.845
10:2-FTS	7.79	1.090	48394.6	A	13C2-8:2-FTS	7.18	53955.5	0.897	4.323
PFDoS	7.97	1.170	35299.4	A	13C8-PFOS	6.79	67706.8	0.521	7.344
PFTrDA	8.01	1.030	496478.6	A	13C2-PFDoDA	7.76	471029.8	1.054	7.826
PFTeDA	8.25	1.000	399881.3	A	13C2-PFTeDA	8.25	255157.9	1.567	7.996
PFHxDA	8.75	1.060	289549.2	A	13C2-PFTeDA	8.25	255157.9	1.135	7.162
PFODA	9.33	1.130	182310.7	A	13C2-PFTeDA	8.25	255157.9	0.715	6.534

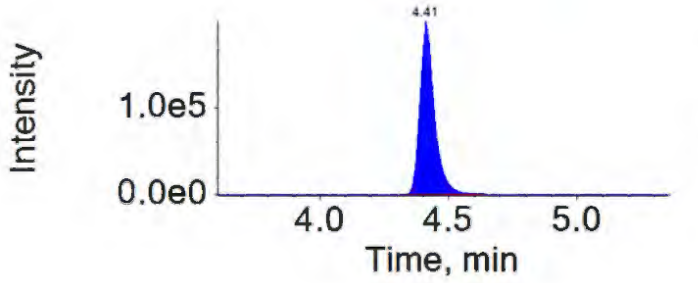
Total Ion Chromatogram



ICAL Name: 17MAY10MCAL
QMethod Name: PFCMOD-17JAN28
Result Table: 17MAY17CCV4-5 5/17/2017 7:40:13 PM
Acquisition Method: PFC-32-16NOV02.dam

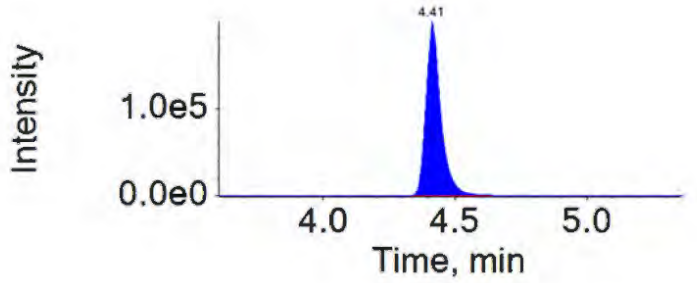
Injection Standard: I13C3-PFBA

216.0 / 172.0



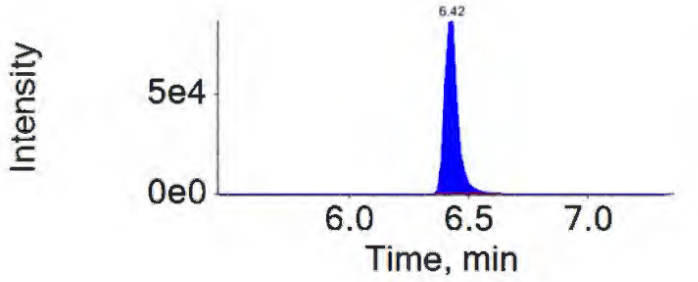
Injection Standard: 13C3-PFBA

216.0 / 172.0



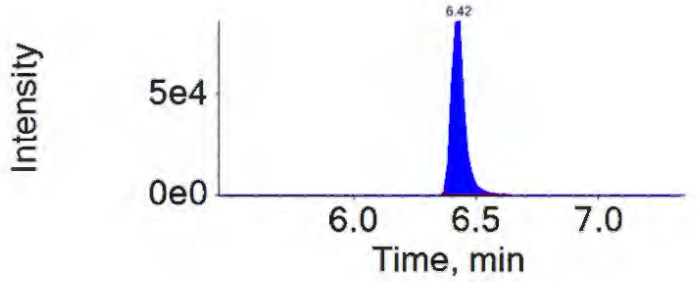
Injection Standard: I13C2-PFOA

415.0 / 370.0



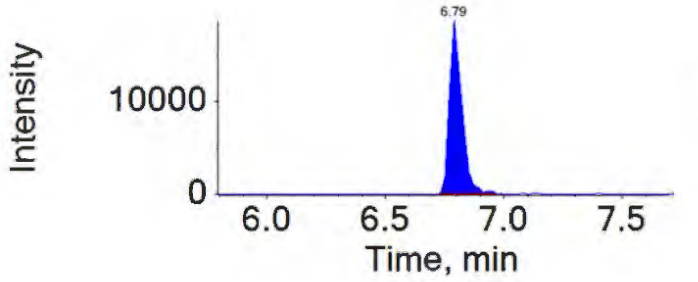
Injection Standard: 13C2-PFOA

415.0 / 370.0



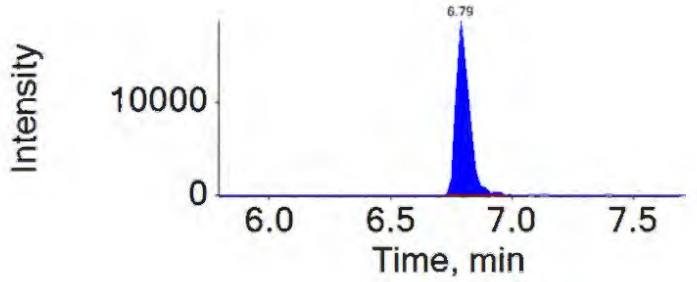
Injection Standard: I13C4-PFOS

503.0 / 99.0



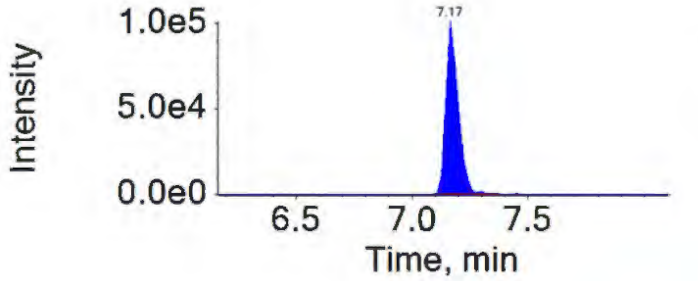
Injection Standard: 13C4-PFOS

503.0 / 99.0



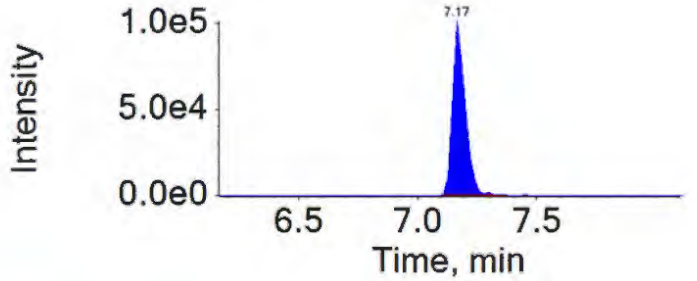
Injection Standard: I13C2-PFDA

515.0 / 470.0



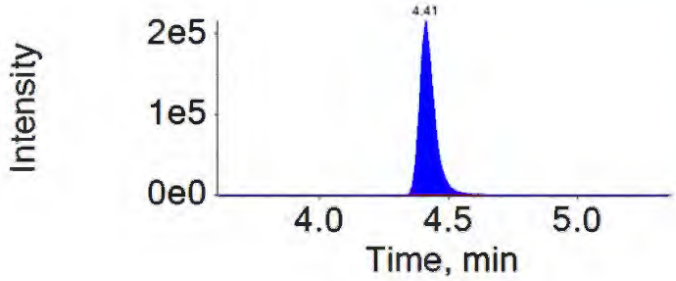
Injection Standard: 13C2-PFDA

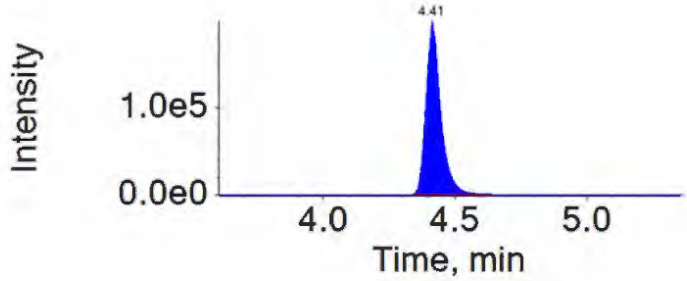
515.0 / 470.0



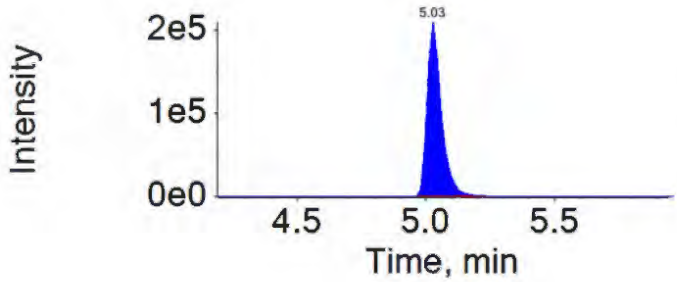
ICAL Name: 17MAY10MCAL **Result Table:** 17MAY17CCV4-5 5/17/2017 7:40:13 PM
QMethod Name: PFCMOD-17JAN28 **Acquisition Method:** PFC-32-16NOV02.dam

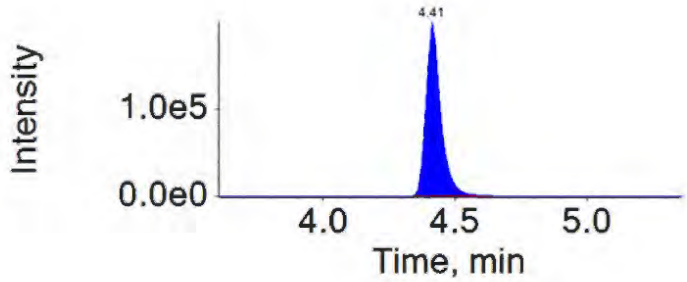
Extraction Standard: E13C4-PFBA	Injection Standard: 13C3-PFBA
217.0 / 172.0	216.0 / 172.0



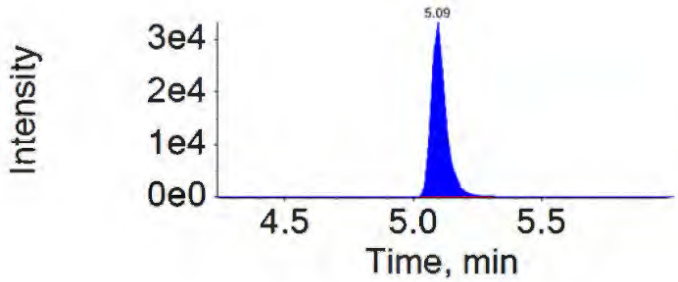


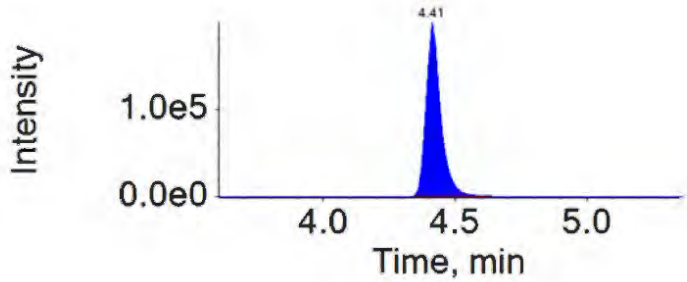
Extraction Standard: E13C5-PFPeA	Injection Standard: 13C3-PFBA
268.0 / 223.0	216.0 / 172.0



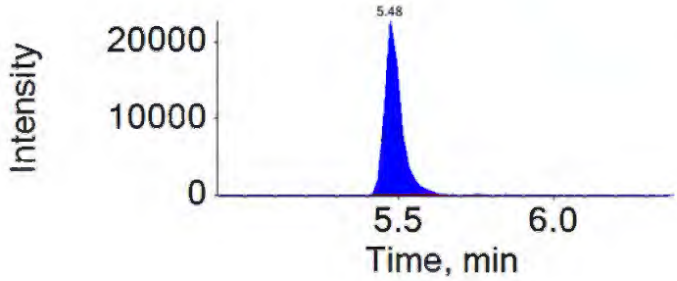


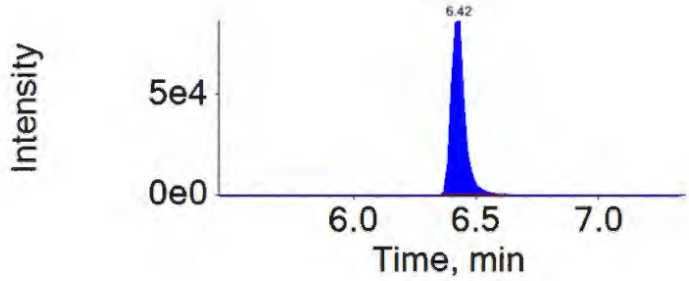
Extraction Standard: E13C3-PFBS	Injection Standard: 13C3-PFBA
302.0 / 99.0	216.0 / 172.0





Extraction Standard: E13C2-4:2-FTS	Injection Standard: 13C2-PFOA
329.0 / 309.0	415.0 / 370.0

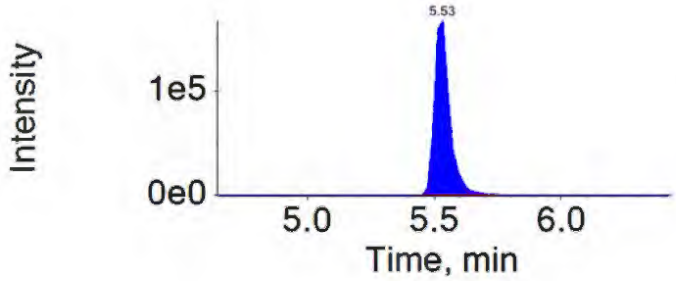




ICAL Name: 17MAY10MCAL **Result Table:** 17MAY17CCV4-5 5/17/2017 7:40:13 PM
QMethod Name: PFCMOD-17JAN28 **Acquisition Method:** PFC-32-16NOV02.dam

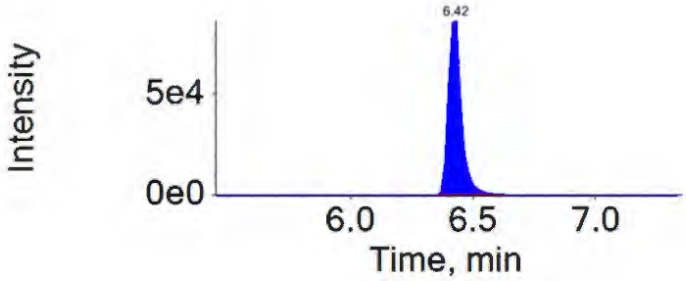
Extraction Standard: E13C5-PFHxA

318.0 /
273.0



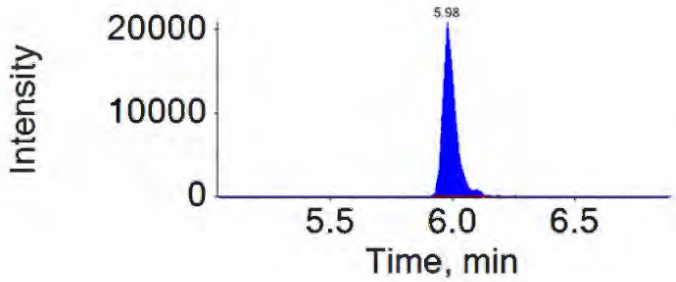
Injection Standard: 13C2-PFOA

415.0 /
370.0



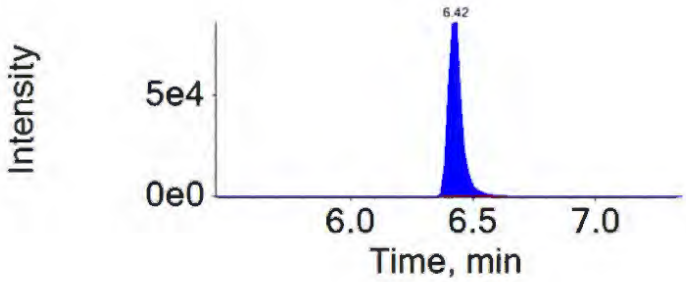
Extraction Standard: E13C3-PFHxS

402.0 /
99.0



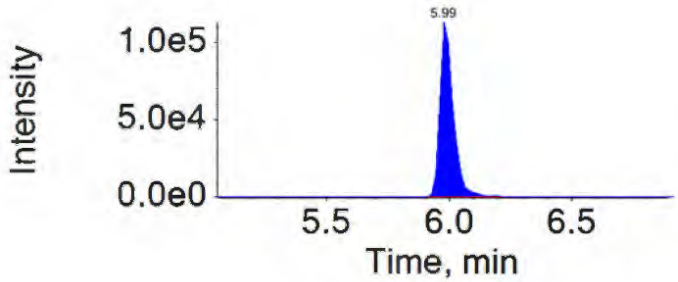
Injection Standard: 13C2-PFOA

415.0 /
370.0



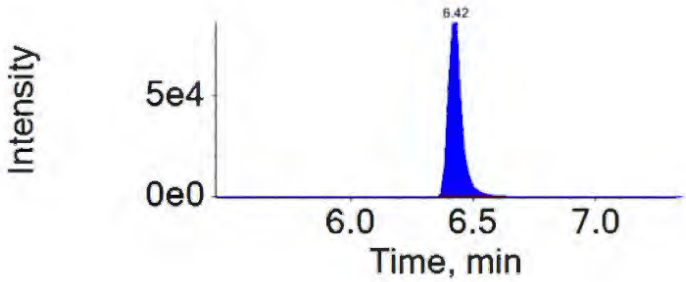
Extraction Standard: E13C4-PFHpA

367.0 /
322.0



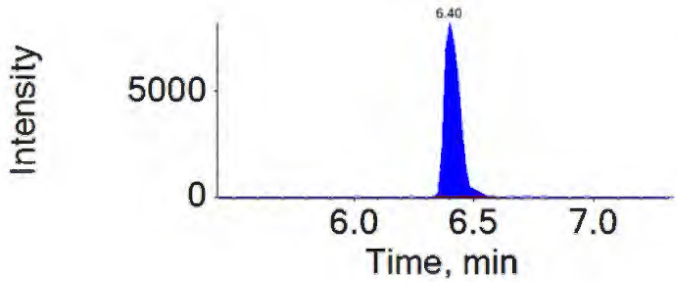
Injection Standard: 13C2-PFOA

415.0 /
370.0



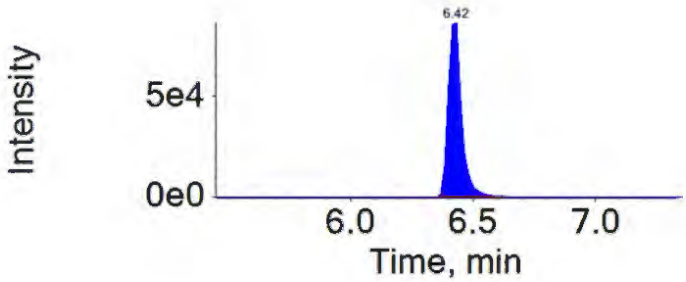
Extraction Standard: E13C2-6:2-FTS

429.0 /
409.0



Injection Standard: 13C2-PFOA

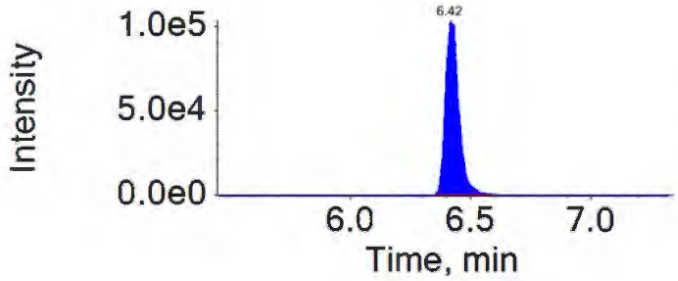
415.0 /
370.0



ICAL Name: 17MAY10MCAL **Result Table:** 17MAY17CCV4-5 5/17/2017 7:40:13 PM
QMethod Name: PFCMOD-17JAN28 **Acquisition Method:** PFC-32-16NOV02.dam

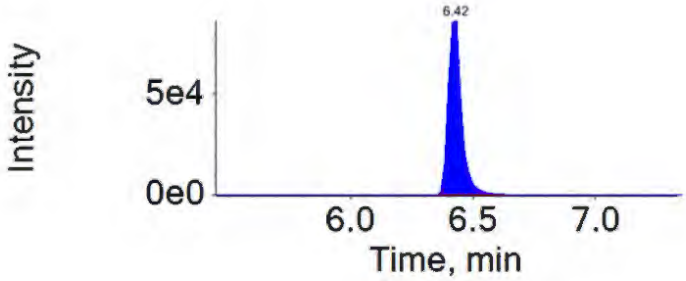
Extraction Standard: E13C8-PFOA

421.0 / 376.0



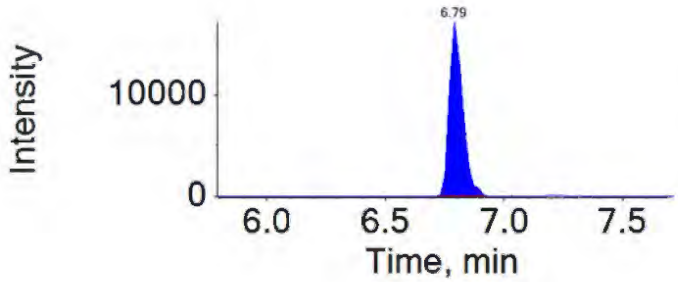
Injection Standard: 13C2-PFOA

415.0 / 370.0



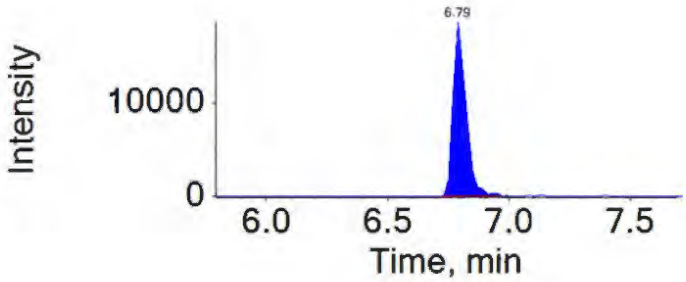
Extraction Standard: E13C8-PFOS

507.0 / 99.0



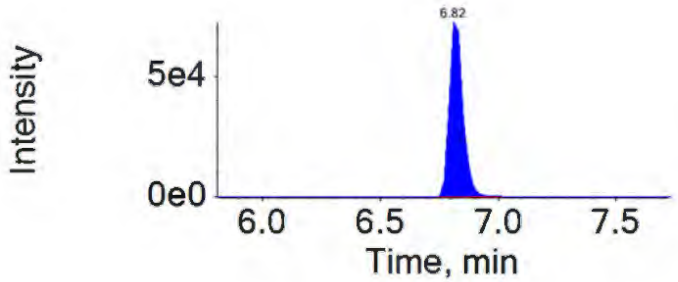
Injection Standard: 13C4-PFOS

503.0 / 99.0



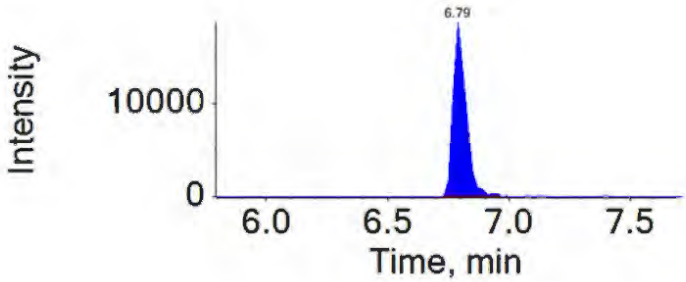
Extraction Standard: E13C9-PFNA

472.0 / 427.0



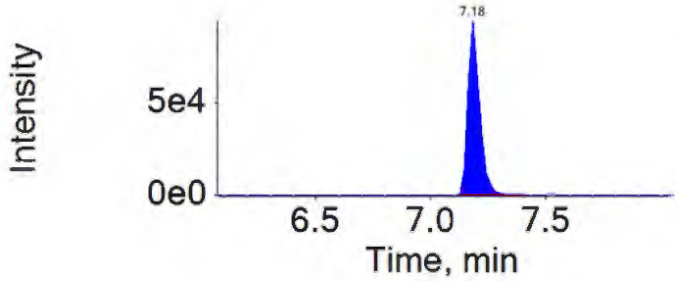
Injection Standard: 13C4-PFOS

503.0 / 99.0



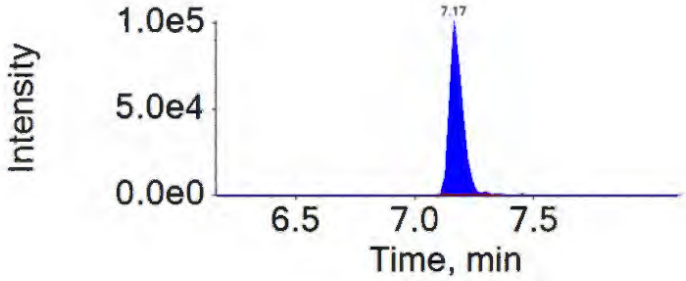
Extraction Standard: E13C8-PFOSA

506.0 / 78.0



Injection Standard: 13C2-PFDA

515.0 / 470.0



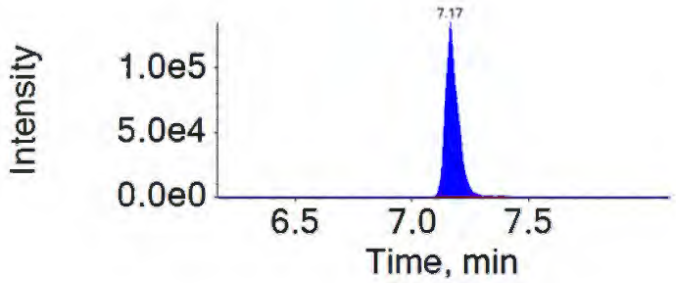
APPROVED
By DMW at 7:44 pm, 5/17/17

REVIEWED
By UMJS at 8:59 am, 5/19/17

ICAL Name: 17MAY10MCAL **Result Table:** 17MAY17CCV4-5 5/17/2017 7:40:13 PM
QMethod Name: PFCMOD-17JAN28 **Acquisition Method:** PFC-32-16NOV02.dam

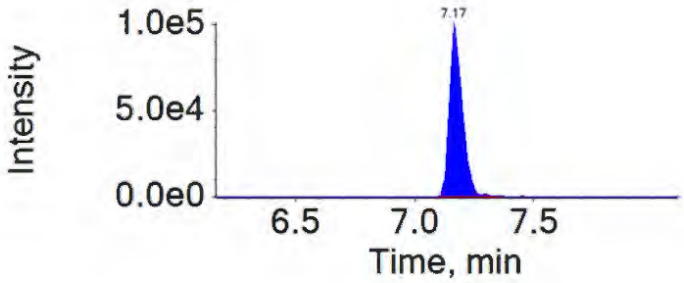
Extraction Standard: E13C6-PFDA

519.0 / 474.0



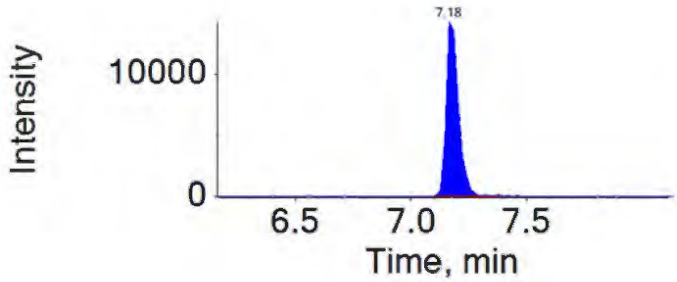
Injection Standard: 13C2-PFDA

515.0 / 470.0



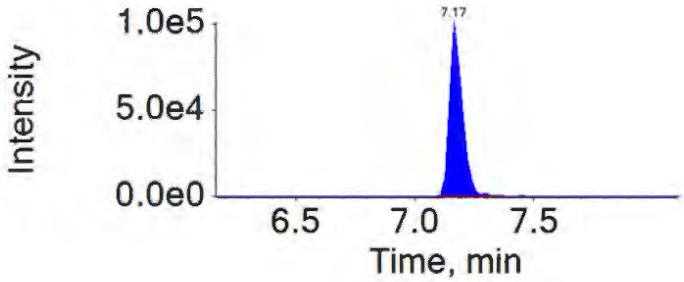
Extraction Standard: E13C2-8:2-FTS

529.0 / 509.0



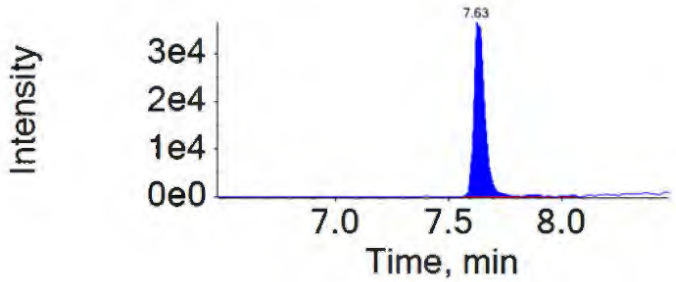
Injection Standard: 13C2-PFDA

515.0 / 470.0



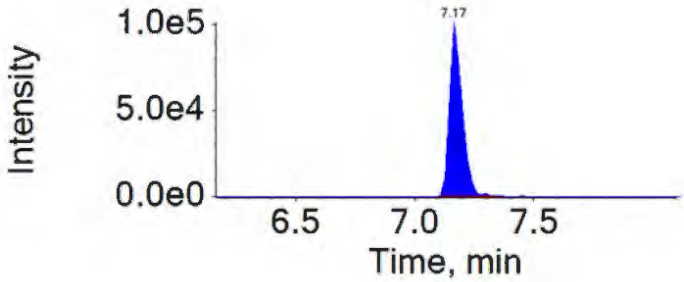
Extraction Standard: Ed7-NMePFOSAE

623.0 / 59.0



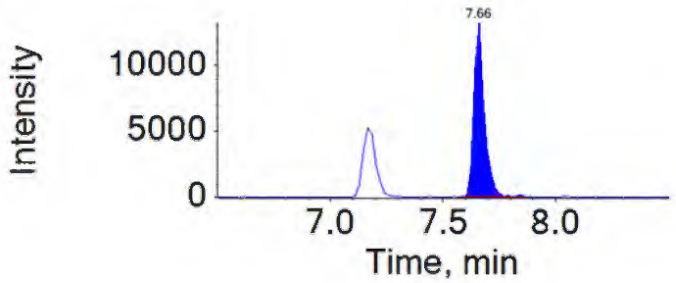
Injection Standard: 13C2-PFDA

515.0 / 470.0



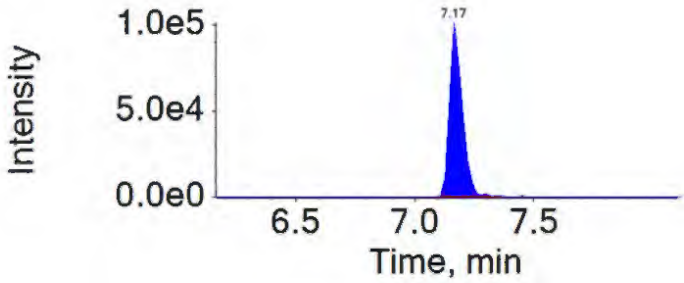
Extraction Standard: Ed3-NMePFOSA

515.0 / 169.0



Injection Standard: 13C2-PFDA

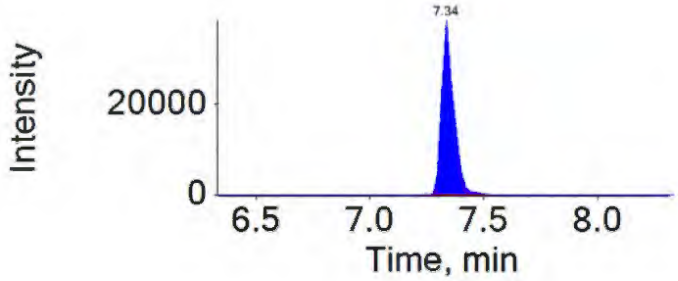
515.0 / 470.0



ICAL Name: 17MAY10MCAL **Result Table:** 17MAY17CCV4-5 5/17/2017 7:40:13 PM
QMethod Name: PFCMOD-17JAN28 **Acquisition Method:** PFC-32-16NOV02.dam

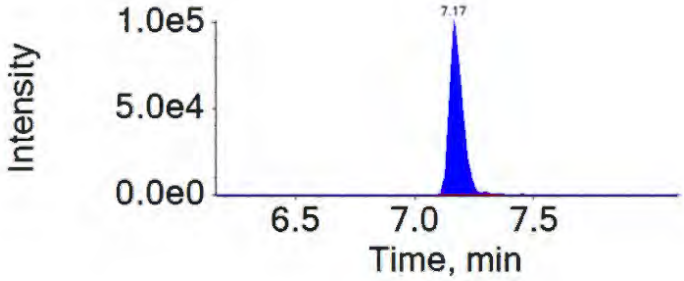
Extraction Standard: Ed3-NMeFOSAA

573.0 / 419.0



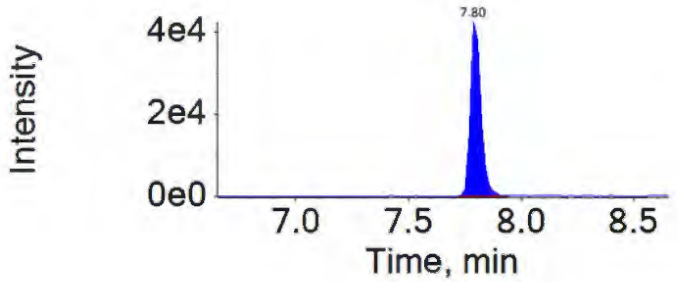
Injection Standard: 13C2-PFDA

515.0 / 470.0



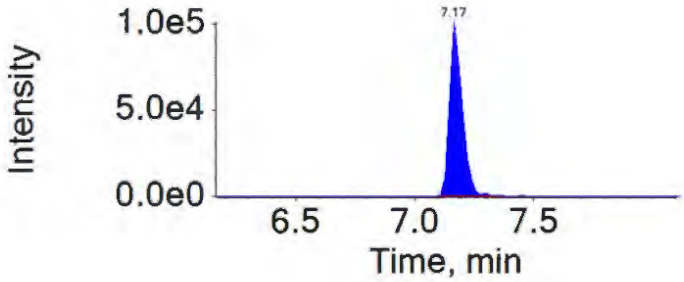
Extraction Standard: Ed9-NEtPFOSAE

639.0 / 59.0



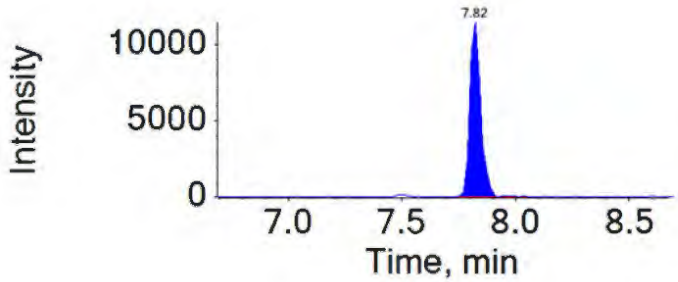
Injection Standard: 13C2-PFDA

515.0 / 470.0



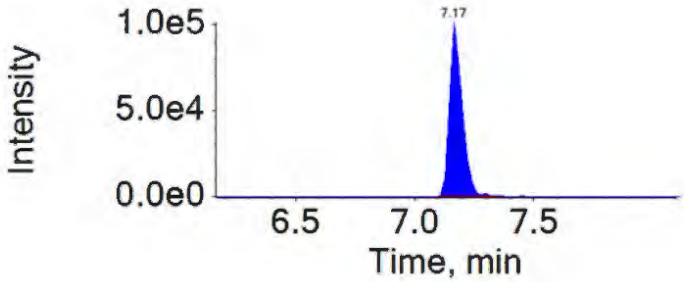
Extraction Standard: Ed5-NEtPFOSA

531.0 / 169.0



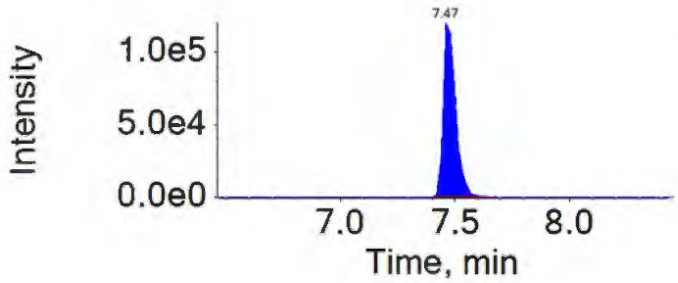
Injection Standard: 13C2-PFDA

515.0 / 470.0



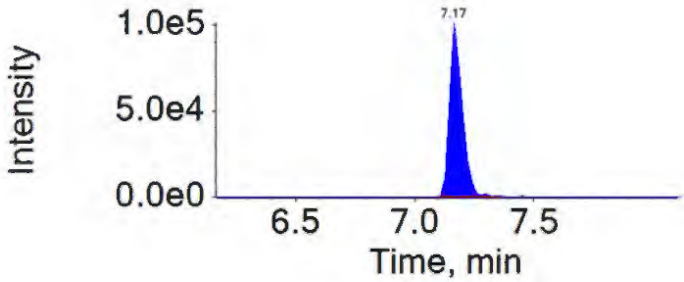
Extraction Standard: E13C7-PFUnDA

570.0 / 525.0



Injection Standard: 13C2-PFDA

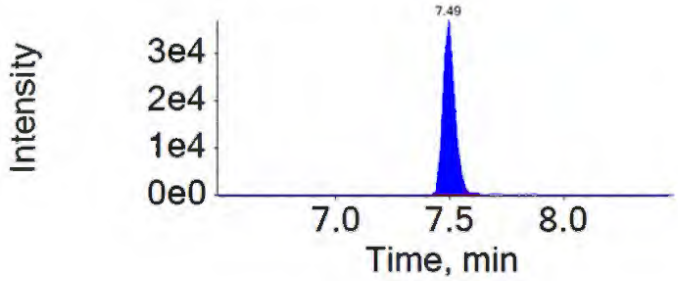
515.0 / 470.0



ICAL Name: 17MAY10MCAL **Result Table:** 17MAY17CCV4-5 5/17/2017 7:40:13 PM
QMethod Name: PFCMOD-17JAN28 **Acquisition Method:** PFC-32-16NOV02.dam

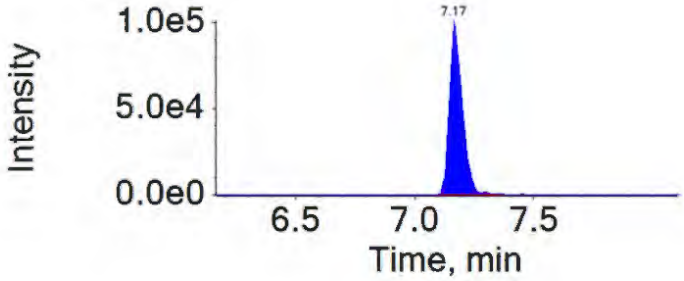
Extraction Standard: Ed5-NEtFOSAA

589.0 / 419.0



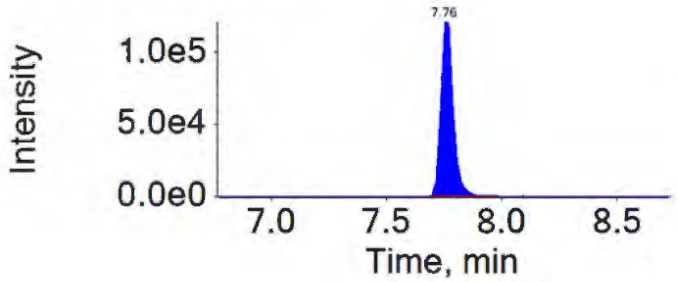
Injection Standard: 13C2-PFDA

515.0 / 470.0



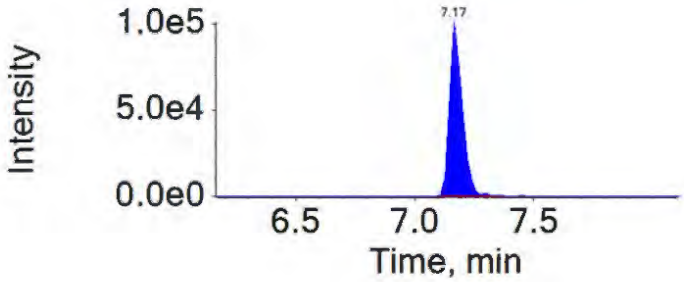
Extraction Standard: E13C2-PFDoDA

615.0 / 570.0



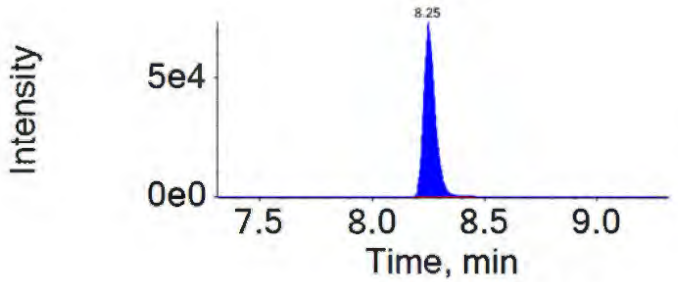
Injection Standard: 13C2-PFDA

515.0 / 470.0



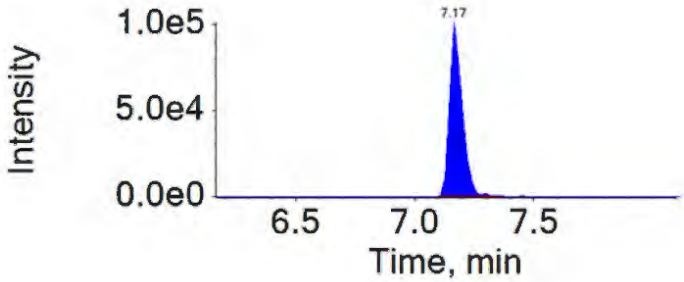
Extraction Standard: E13C2-PFTeDA

715.0 / 670.0



Injection Standard: 13C2-PFDA

515.0 / 470.0



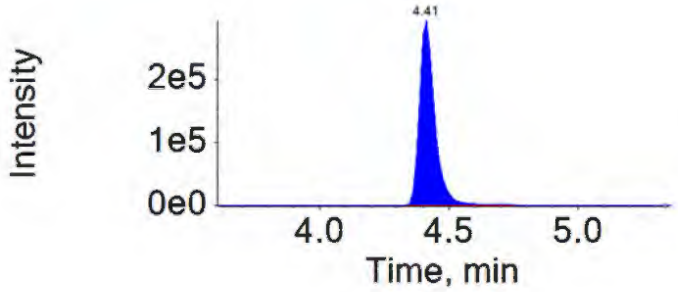
APPROVED
By DMW at 7:44 pm, 5/17/17

REVIEWED
By UMJS at 8:59 am, 5/19/17

ICAL Name: 17MAY10MCAL **Result Table:** 17MAY17CCV4-5 5/17/2017 7:40:13 PM
QMethod Name: PFCMOD-17JAN28 **Acquisition Method:** PFC-32-16NOV02.dam

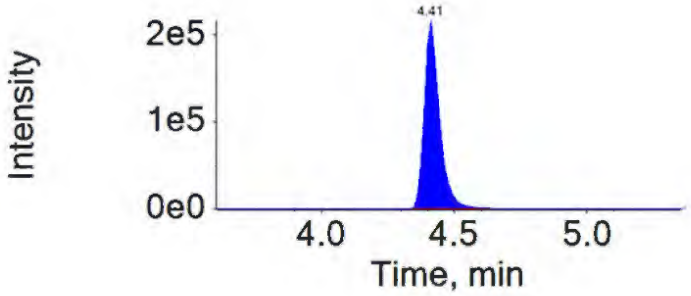
Analyte: PFBA

213.0 /
169.0



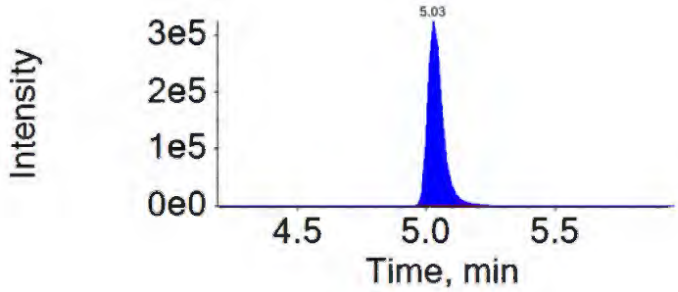
Extraction Standard: 13C4-PFBA

217.0 /
172.0



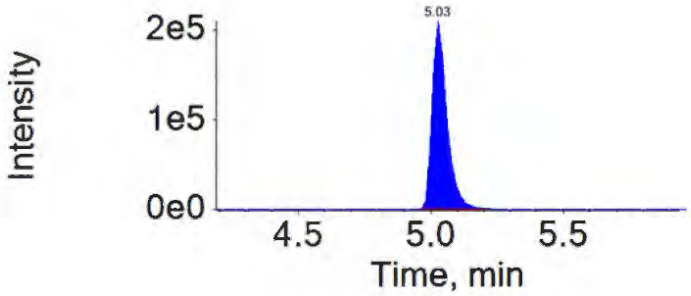
Analyte: PFPeA

263.0 /
219.0



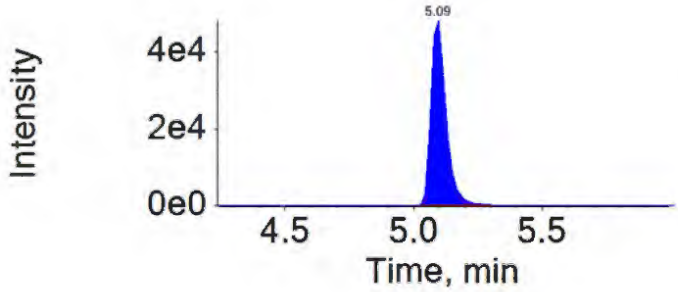
Extraction Standard: 13C5-PFPeA

268.0 /
223.0



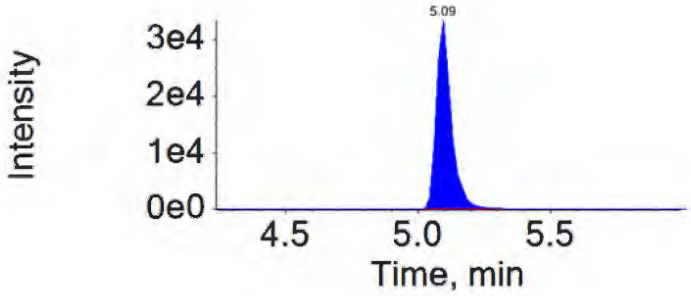
Analyte: PFBS

299.0 /
99.0



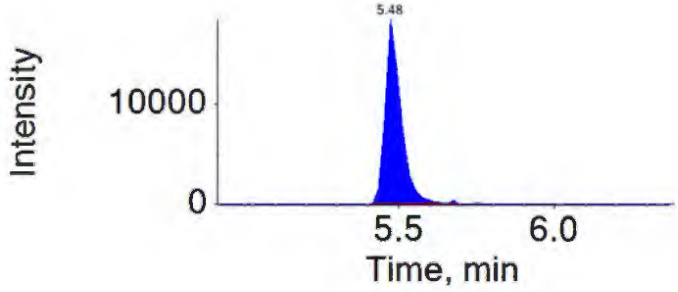
Extraction Standard: 13C3-PFBS

302.0 /
99.0



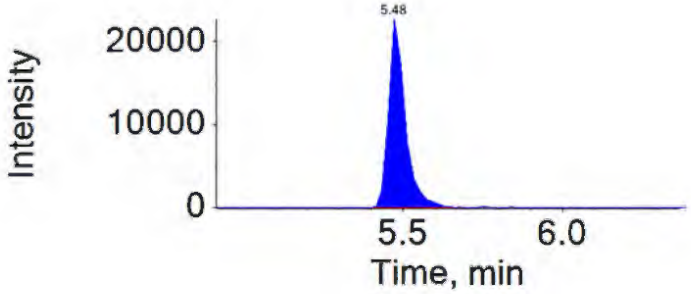
Analyte: 4:2-FTS

327.0 /
307.0



Extraction Standard: 13C2-4:2-FTS

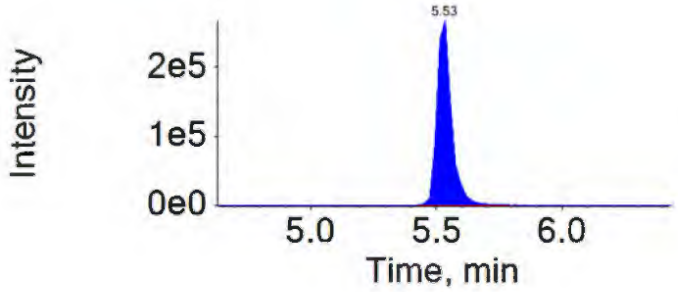
329.0 /
309.0



ICAL Name: 17MAY10MCAL **Result Table:** 17MAY17CCV4-5 5/17/2017 7:40:13 PM
QMethod Name: PFCMOD-17JAN28 **Acquisition Method:** PFC-32-16NOV02.dam

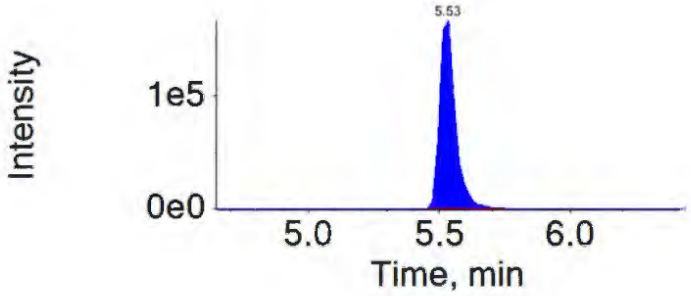
Analyte: PFHxA

313.0 /
269.0



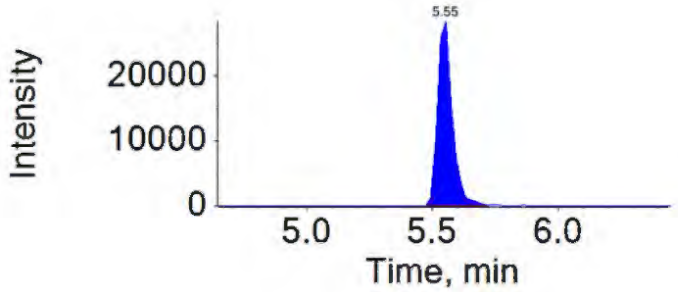
Extraction Standard: 13C5-PFHxA

318.0 /
273.0



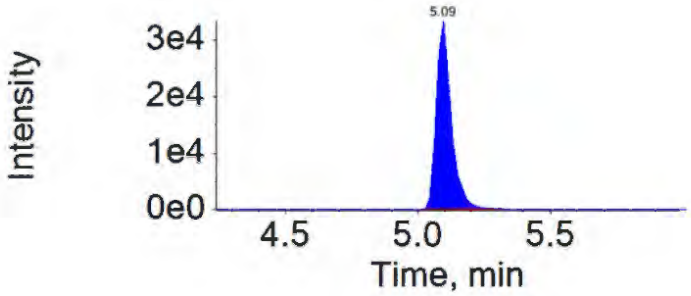
Analyte: PFPeS

349.0 /
99.0



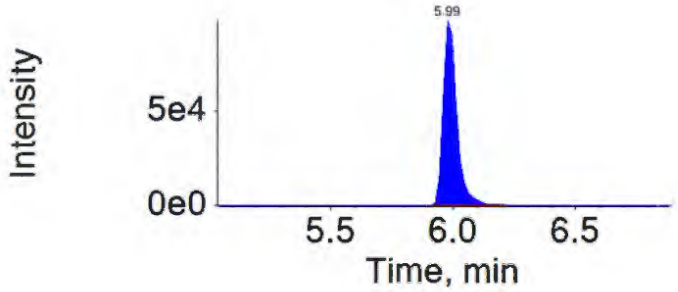
Extraction Standard: 13C3-PFBS

302.0 /
99.0



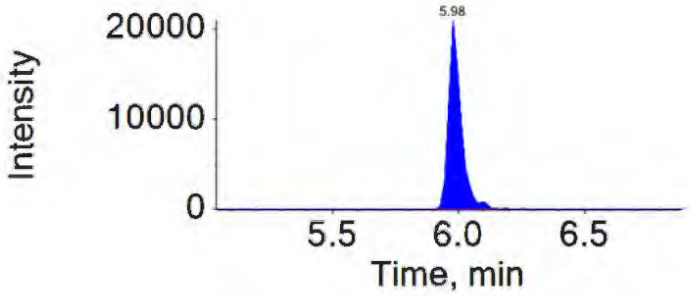
Analyte: PFHxS

399.0 /
80.0



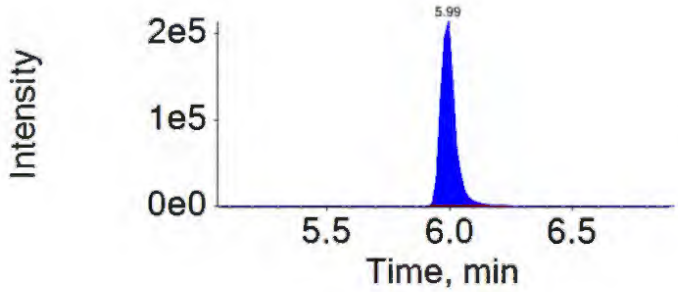
Extraction Standard: 13C3-PFHxS

402.0 /
99.0



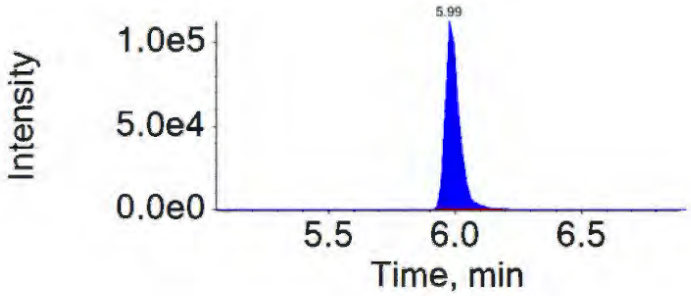
Analyte: PFHpA

363.0 /
319.0



Extraction Standard: 13C4-PFHpA

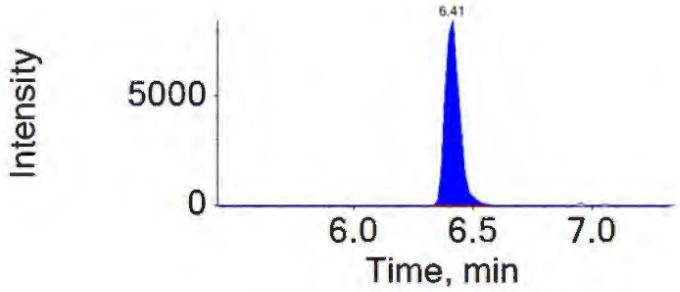
367.0 /
322.0



ICAL Name: 17MAY10MCAL **Result Table:** 17MAY17CCV4-5 5/17/2017 7:40:13 PM
QMethod Name: PFCMOD-17JAN28 **Acquisition Method:** PFC-32-16NOV02.dam

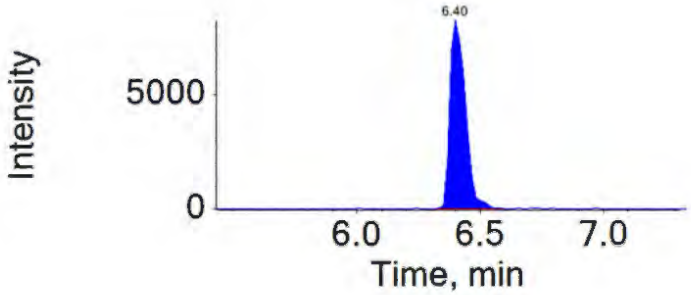
Analyte: 6:2-FTS

427.0 /
407.0



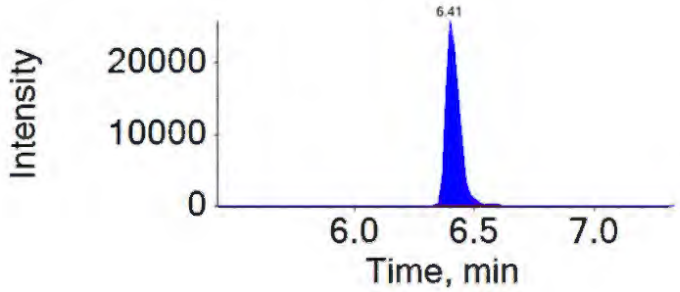
Extraction Standard: 13C2-6:2-FTS

429.0 /
409.0



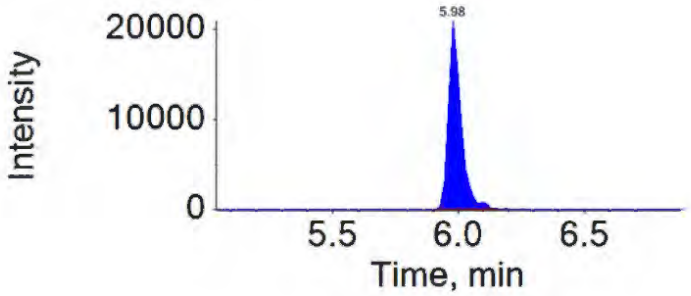
Analyte: PFHpS

449.0 /
99.0



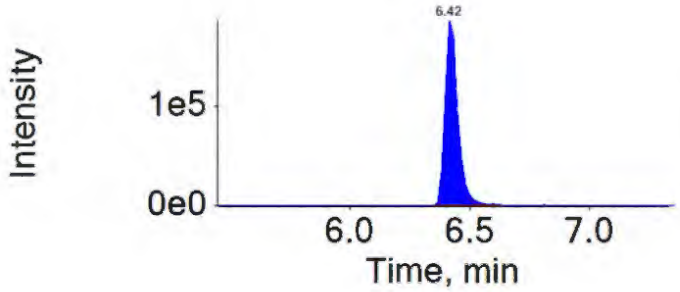
Extraction Standard: 13C3-PFHxS

402.0 /
99.0



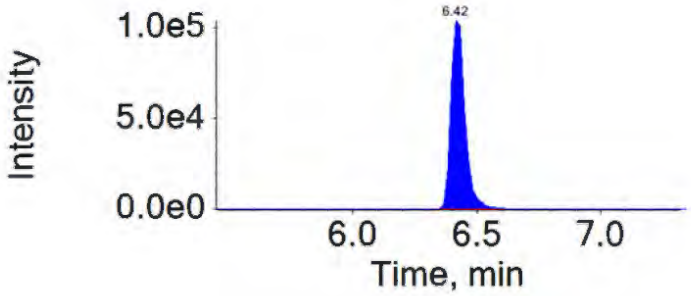
Analyte: PFOA

413.0 /
369.0



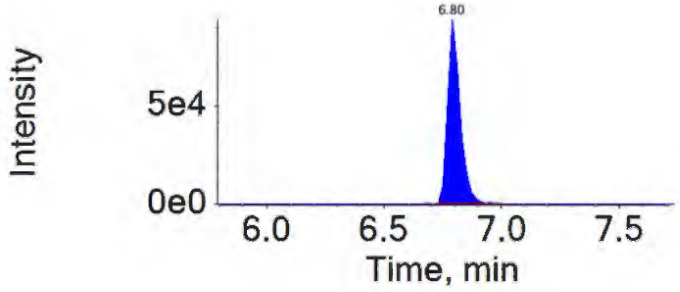
Extraction Standard: 13C8-PFOA

421.0 /
376.0



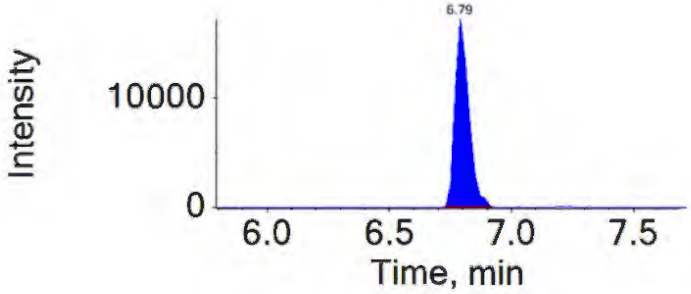
Analyte: PFOS

499.0 /
80.0



Extraction Standard: 13C8-PFOS

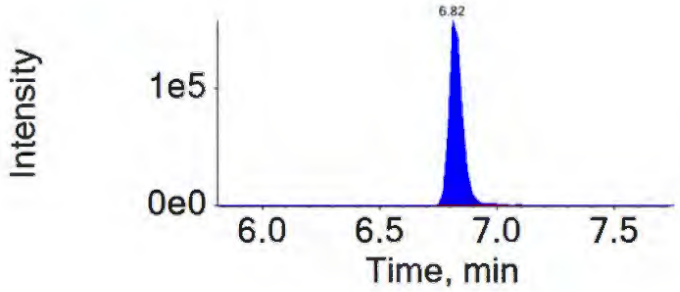
507.0 /
99.0



ICAL Name: 17MAY10MCAL **Result Table:** 17MAY17CCV4-5 5/17/2017 7:40:13 PM
QMethod Name: PFCMOD-17JAN28 **Acquisition Method:** PFC-32-16NOV02.dam

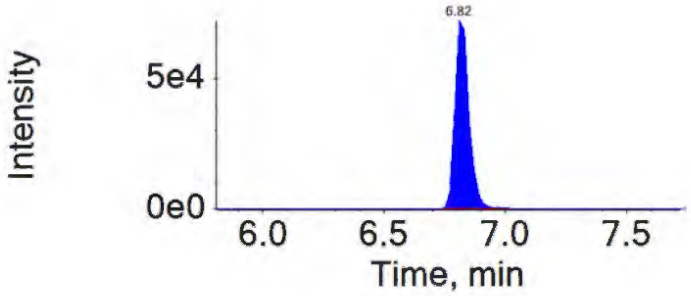
Analyte: PFNA

463.0 /
419.0



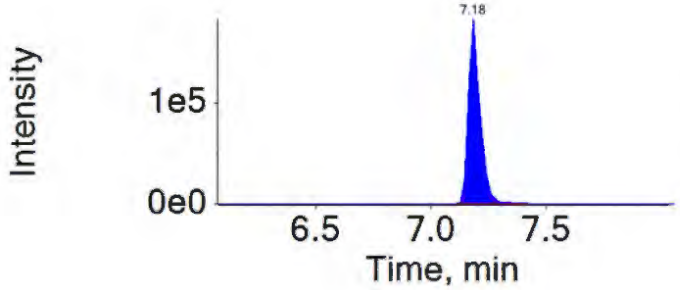
Extraction Standard: 13C9-PFNA

472.0 /
427.0



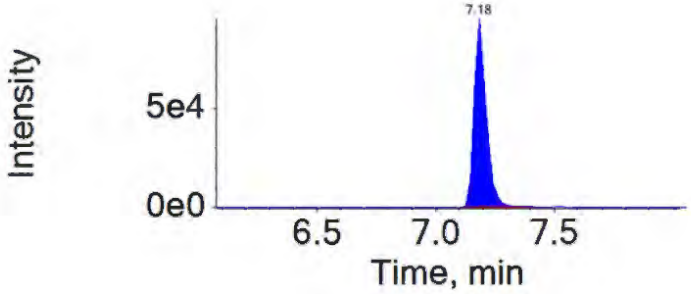
Analyte: PFOSA

498.0 /
78.0



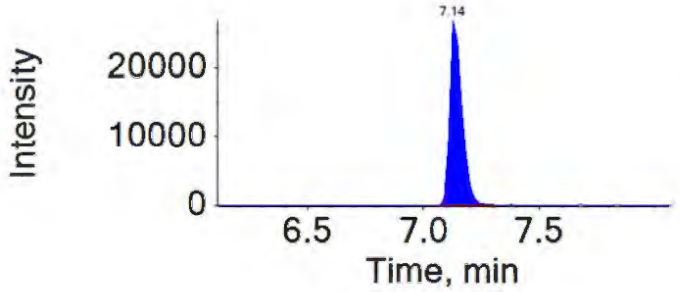
Extraction Standard: 13C8-PFOSA

506.0 /
78.0



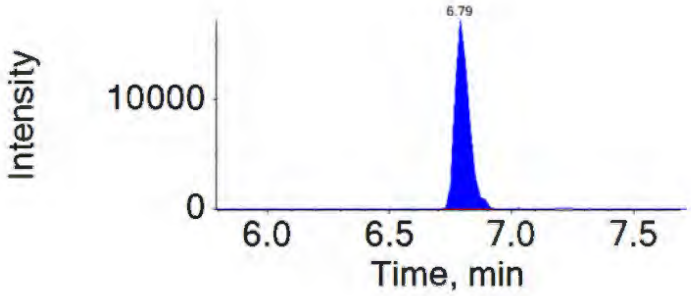
Analyte: PFNS

549.0 /
99.0



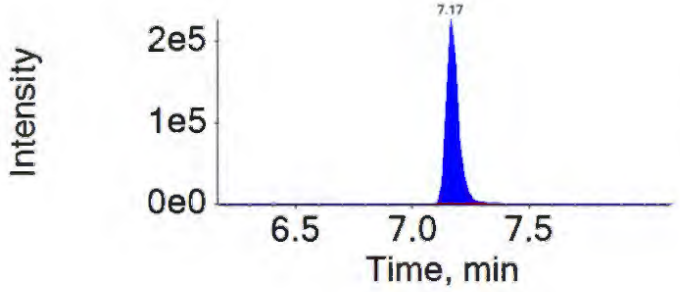
Extraction Standard: 13C8-PFOS

507.0 /
99.0



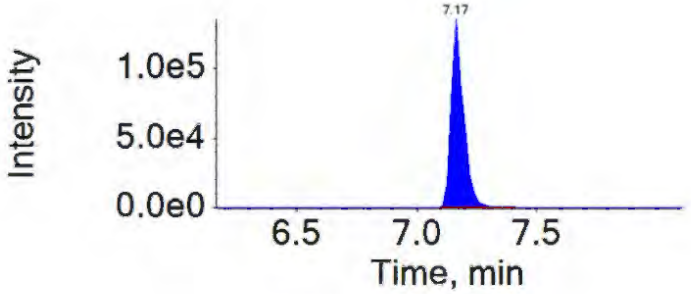
Analyte: PFDA

513.0 /
469.0



Extraction Standard: 13C6-PFDA

519.0 /
474.0



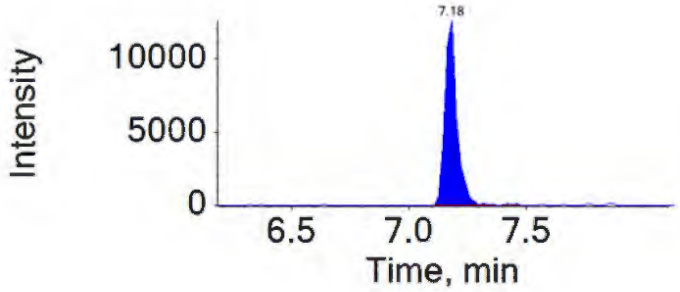
APPROVED
By DMW at 7:44 pm, 5/17/17

REVIEWED
By UMJS at 8:59 am, 5/19/17

ICAL Name: 17MAY10MCAL **Result Table:** 17MAY17CCV4-5 5/17/2017 7:40:13 PM
QMethod Name: PFCMOD-17JAN28 **Acquisition Method:** PFC-32-16NOV02.dam

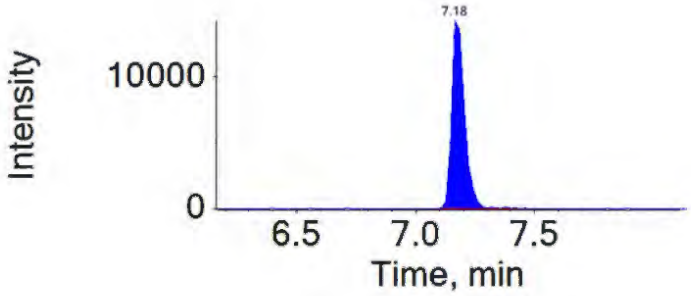
Analyte: 8:2-FTS

527.0 /
507.0



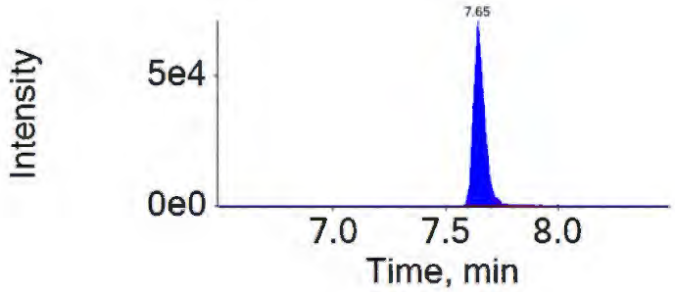
Extraction Standard: 13C2-8:2-FTS

529.0 /
509.0



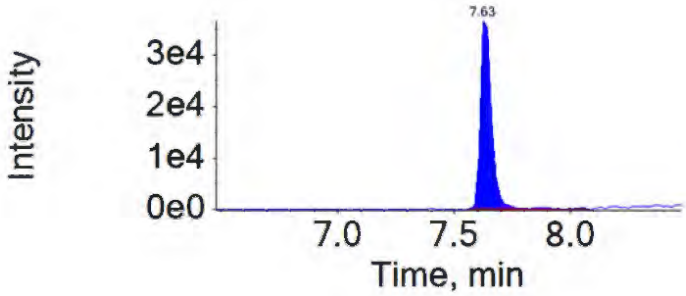
Analyte: NMePFOSAE

616.0 /
59.0



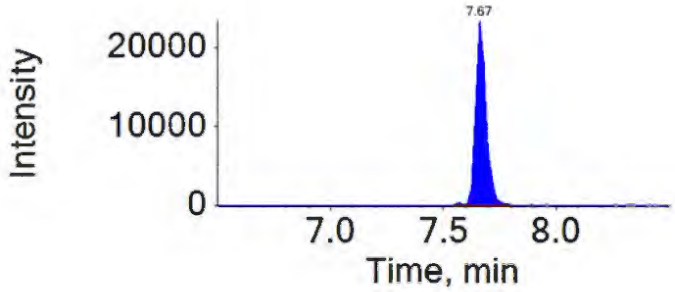
Extraction Standard: d7-NMePFOSAE

623.0 /
59.0



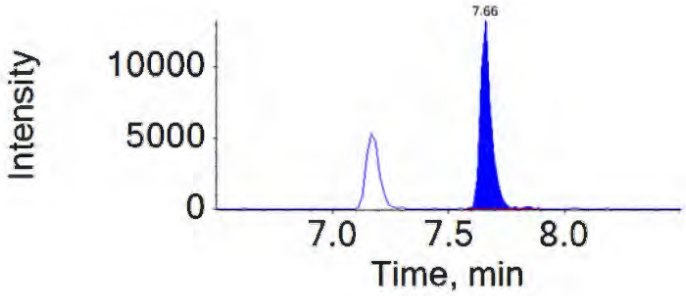
Analyte: NMePFOSA

512.0 /
169.0



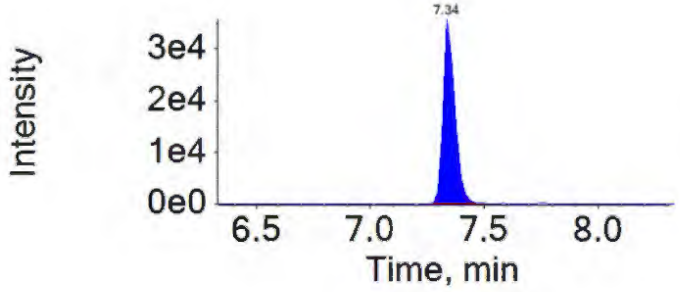
Extraction Standard: d3-NMePFOSA

515.0 /
169.0



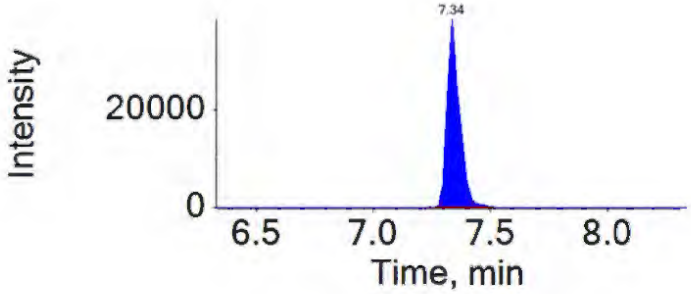
Analyte: NMeFOSAA

570.0 /
419.0



Extraction Standard: d3-NMeFOSAA

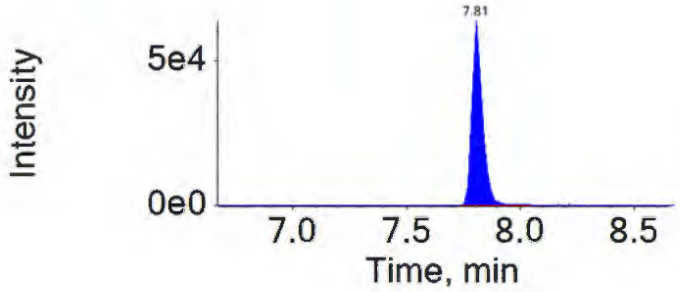
573.0 /
419.0



ICAL Name: 17MAY10MCAL **Result Table:** 17MAY17CCV4-5 5/17/2017 7:40:13 PM
QMethod Name: PFCMOD-17JAN28 **Acquisition Method:** PFC-32-16NOV02.dam

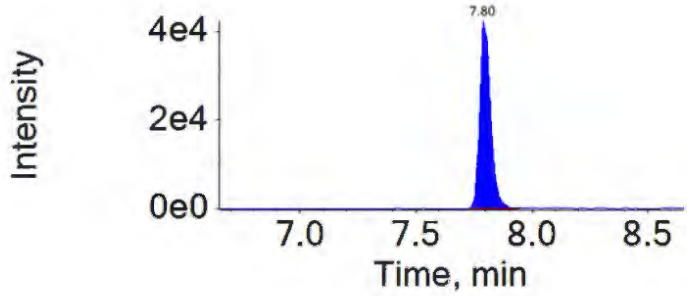
Analyte: NEtPFOSAE

630.0 /
59.0



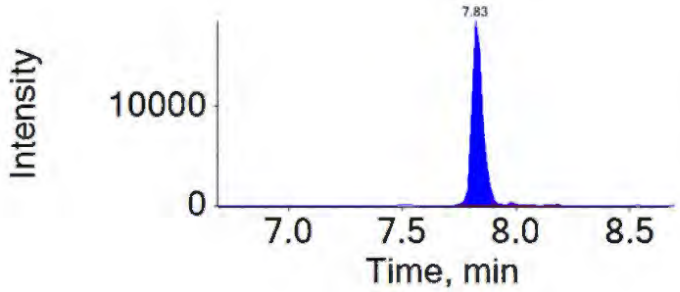
Extraction Standard: d9-NEtPFOSAE

639.0 /
59.0



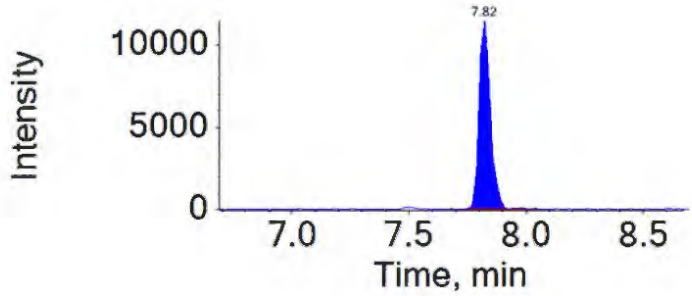
Analyte: NEtPFOSA

526.0 /
169.0



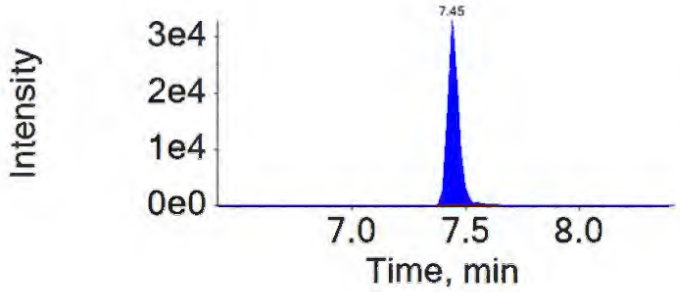
Extraction Standard: d5-NEtPFOSA

531.0 /
169.0



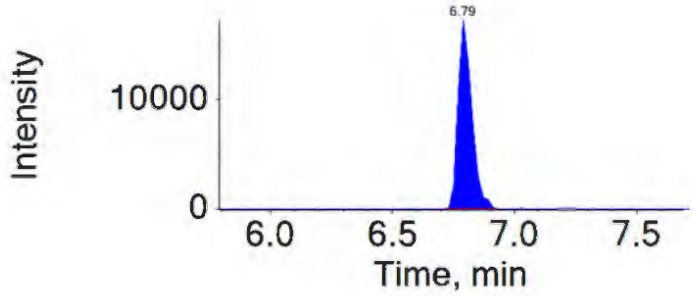
Analyte: PFDS

599.0 /
99.0



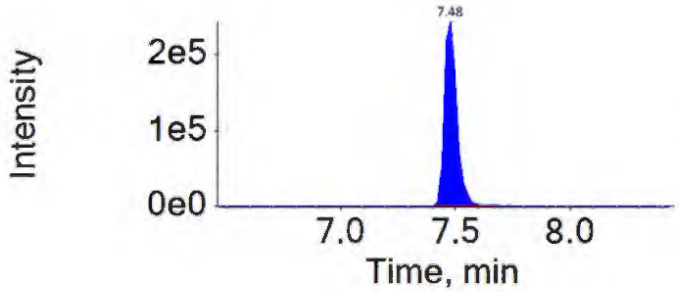
Extraction Standard: 13C8-PFOS

507.0 /
99.0



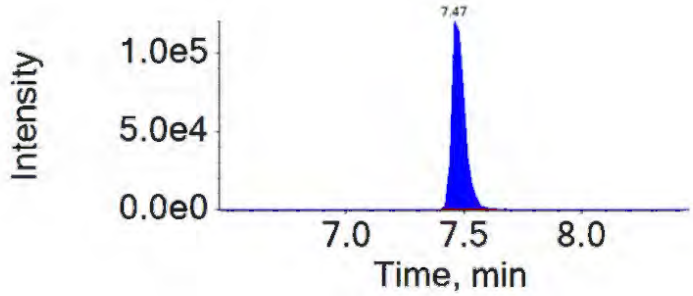
Analyte: PFUnDA

563.0 /
519.0



Extraction Standard: 13C7-PFUnDA

570.0 /
525.0



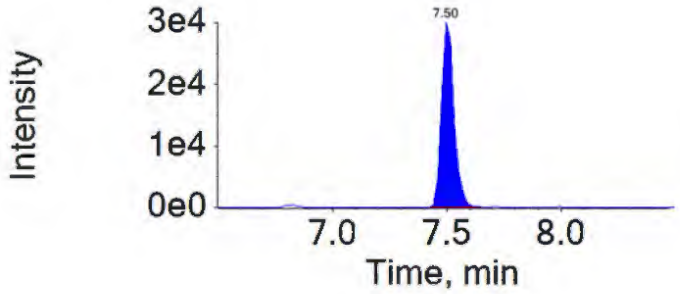
APPROVED
By DMW at 7:44 pm, 5/17/17

REVIEWED
By UMJS at 8:59 am, 5/19/17

ICAL Name: 17MAY10MCAL **Result Table:** 17MAY17CCV4-5 5/17/2017 7:40:13 PM
QMethod Name: PFCMOD-17JAN28 **Acquisition Method:** PFC-32-16NOV02.dam

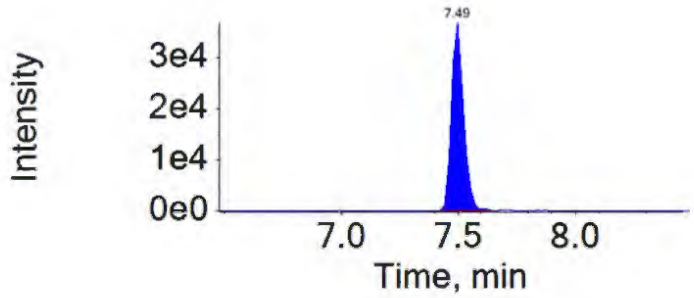
Analyte: NEtFOSAA

584.0 / 419.0



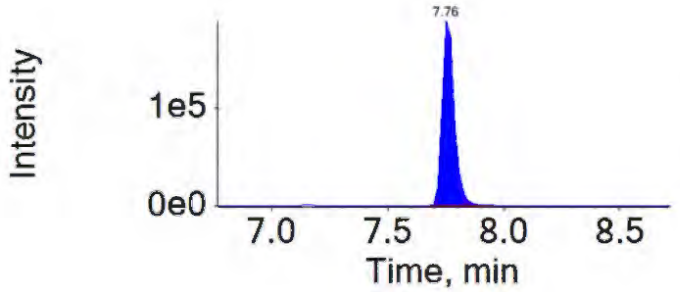
Extraction Standard: d5-NEtFOSAA

589.0 / 419.0



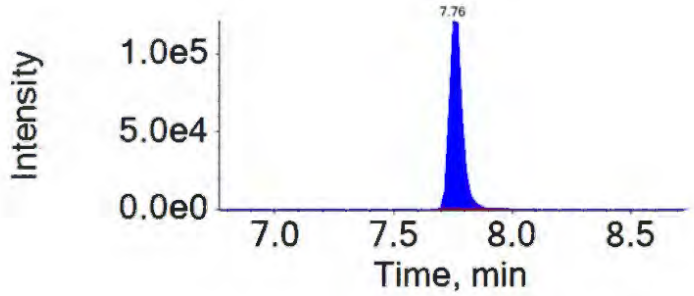
Analyte: PFDoDA

613.0 / 569.0



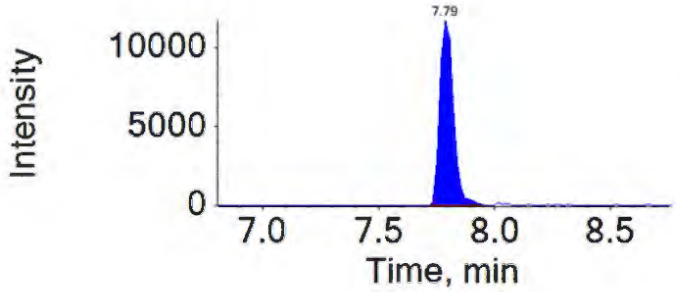
Extraction Standard: 13C2-PFDoDA

615.0 / 570.0



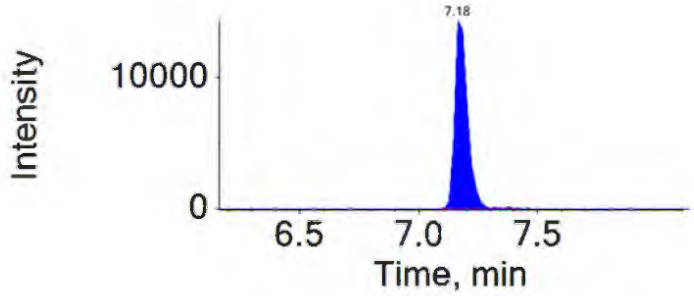
Analyte: 10:2-FTS

627.0 / 607.0



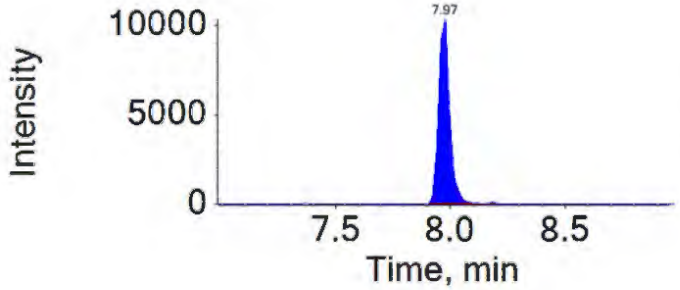
Extraction Standard: 13C2-8:2-FTS

529.0 / 509.0



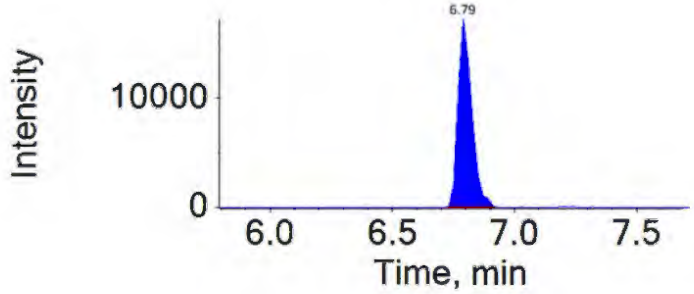
Analyte: PFDoS

699.0 / 99.0



Extraction Standard: 13C8-PFOS

507.0 / 99.0

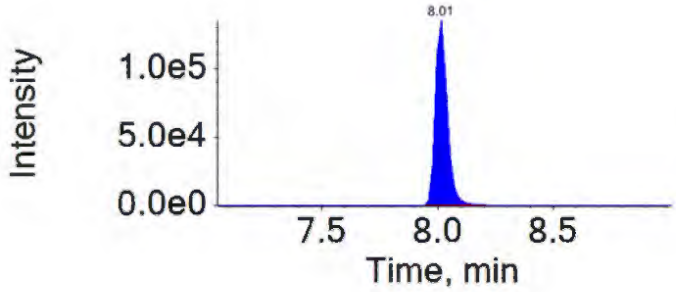


APPROVED
By DMW at 7:44 pm, 5/17/17

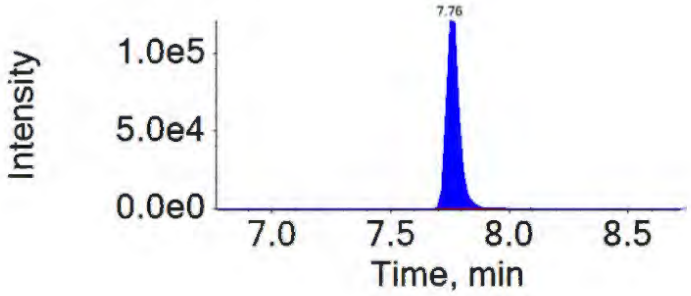
REVIEWED
By UMJS at 8:59 am, 5/19/17

ICAL Name: 17MAY10MCAL **Result Table:** 17MAY17CCV4-5 5/17/2017 7:40:13 PM
QMethod Name: PFCMOD-17JAN28 **Acquisition Method:** PFC-32-16NOV02.dam

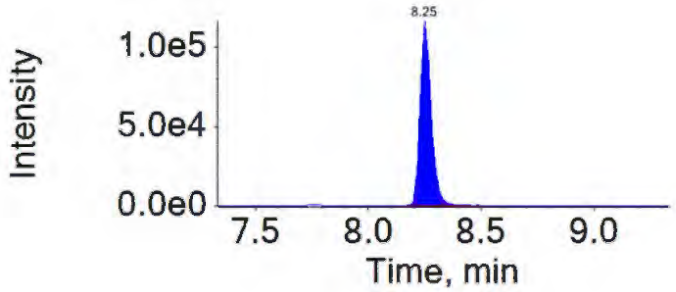
Analyte: PFTrDA
663.0 / 619.0



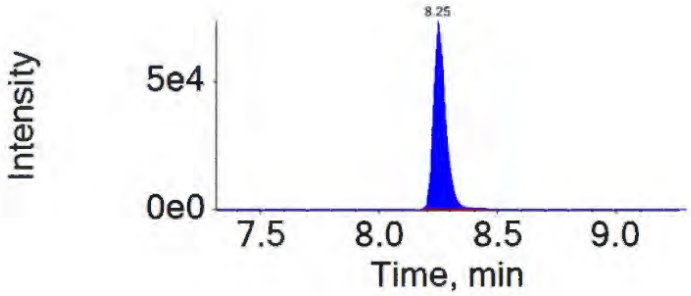
Extraction Standard: 13C2-PFDoDA
615.0 / 570.0



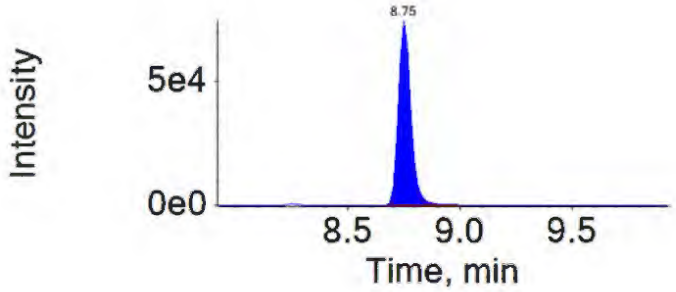
Analyte: PFTeDA
713.0 / 669.0



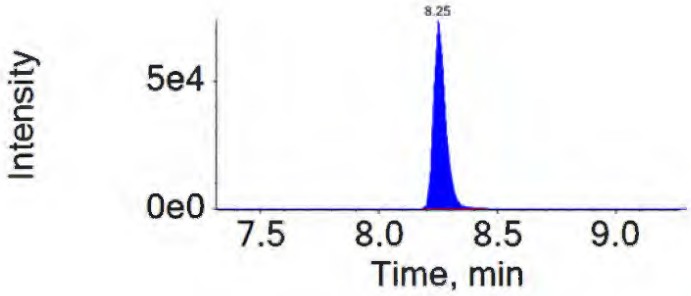
Extraction Standard: 13C2-PFTeDA
715.0 / 670.0



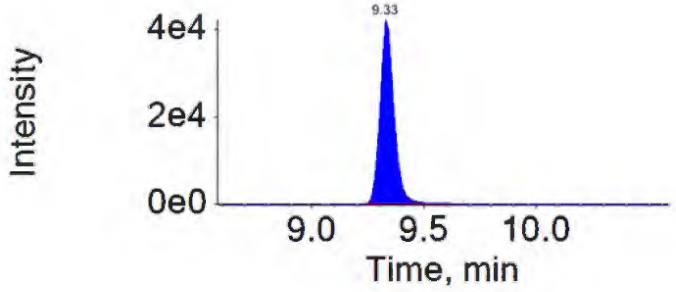
Analyte: PFHxDA
813.0 / 769.0



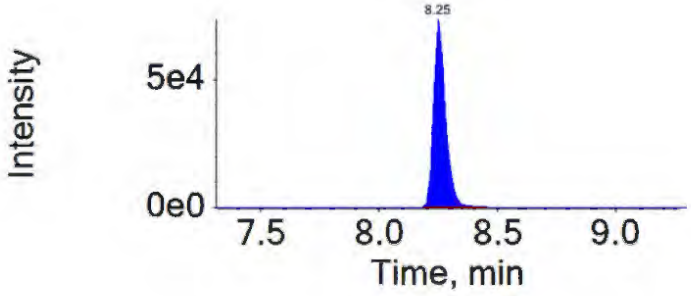
Extraction Standard: 13C2-PFTeDA
715.0 / 670.0



Analyte: PFODA
913.0 / 869.0



Extraction Standard: 13C2-PFTeDA
715.0 / 670.0



5/5/2017

Traceability Report for **PFCMDLX171253** **PFAS ICAL MDL Standard**

Prepped by 7824 on 05/05/17 Expires 08/05/17

Compound		Conc. (ppb)	Stock	Aliquot	Vol.(mL)	Solution	Final Conc. (ppb)	Solvent (Lot#)
120226-60-0	10:2-FTS	19.28	IN1712533D	0.0250	10.00	PFCMDLX1712	0.0482	0% DI Water (N/A) Methanol (DR018-US)
		964.00	IN1712533A	0.2000	10.00	IN1712533D	19.280001	Methanol (DR018-US)
		48200.00	ST1705137A	0.0400	2.00	IN1712533A	964	Methanol (DR018-US)
757124-72-4L	13C2-4:2-FTS	1868.00	IN1712533C	0.0250	10.00	PFCMDLX1712	4.67	0% DI Water (N/A) Methanol (DR018-US)
		46700.00	ST1705137Q	0.0800	2.00	IN1712533C	1868	Methanol (DR018-US)
27619-97-2L	13C2-6:2-FTS	1900.00	IN1712533C	0.0250	10.00	PFCMDLX1712	4.75	0% DI Water (N/A) Methanol (DR018-US)
		47500.00	ST1710833C	0.0800	2.00	IN1712533C	1900	Methanol (DR018-US)
39108-34-4L	13C2-8:2-FTS	1916.00	IN1712533C	0.0250	10.00	PFCMDLX1712	4.79	0% DI Water (N/A) Methanol (DR018-US)
		47900.00	ST1705137S	0.0800	2.00	IN1712533C	1916	Methanol (DR018-US)
335-76-2L	13C2-PFDA	2000.00	ST1711533A	0.0250	10.00	PFCMDLX1712	5	0% DI Water (N/A) Methanol (DR018-US)
307-55-1L	13C2-PFDoDA	2000.00	ST1712533A	0.0250	10.00	PFCMDLX1712	5	0% DI Water (N/A) Methanol (DR018-US)
335-67-1LC2	13C2-PFOA	2000.00	ST1711533A	0.0250	10.00	PFCMDLX1712	5	0% DI Water (N/A) Methanol (DR018-US)
376-06-7L	13C2-PFTeDA	2000.00	ST1712533A	0.0250	10.00	PFCMDLX1712	5	0% DI Water (N/A) Methanol (DR018-US)
375-22-4LC3	13C3-PFBA	2000.00	ST1711533A	0.0250	10.00	PFCMDLX1712	5	0% DI Water (N/A) Methanol (DR018-US)
375-73-5L	13C3-PFBS	1859.00	ST1712533A	0.0250	10.00	PFCMDLX1712	4.6475	0% DI Water (N/A) Methanol (DR018-US)
355-46-4LC3	13C3-PFHxS	1892.00	ST1712533A	0.0250	10.00	PFCMDLX1712	4.73	0% DI Water (N/A) Methanol (DR018-US)
375-22-4L	13C4-PFBA	2000.00	ST1712533A	0.0250	10.00	PFCMDLX1712	5	0% DI Water (N/A) Methanol (DR018-US)
375-85-9L	13C4-PFHpA	2000.00	ST1712533A	0.0250	10.00	PFCMDLX1712	5	0% DI Water (N/A) Methanol (DR018-US)
1763-23-1LC	13C4-PFOS	1913.00	ST1711533A	0.0250	10.00	PFCMDLX1712	4.7825	0% DI Water (N/A) Methanol (DR018-US)
307-24-4LC5	13C5-PFHxA	2000.00	ST1712533A	0.0250	10.00	PFCMDLX1712	5	0% DI Water (N/A) Methanol (DR018-US)
2706-90-3L	13C5-PFPA	2000.00	ST1712533A	0.0250	10.00	PFCMDLX1712	5	0% DI Water (N/A) Methanol (DR018-US)
335-76-2LC6	13C6-PFDA	2000.00	ST1712533A	0.0250	10.00	PFCMDLX1712	5	0% DI Water (N/A) Methanol (DR018-US)
2058-94-8LC	13C7-PFUnDA	2000.00	ST1712533A	0.0250	10.00	PFCMDLX1712	5	0% DI Water (N/A) Methanol (DR018-US)
335-67-1LC8	13C8-PFOA	2000.00	ST1712533A	0.0250	10.00	PFCMDLX1712	5	0% DI Water (N/A) Methanol (DR018-US)
1763-23-1LC	13C8-PFOS	1913.00	ST1712533A	0.0250	10.00	PFCMDLX1712	4.7825	0% DI Water (N/A) Methanol (DR018-US)
754-91-6L	13C8-PFOSA	2000.00	IN1712533C	0.0250	10.00	PFCMDLX1712	5	0% DI Water (N/A) Methanol (DR018-US)
		50000.00	ST1705137T	0.0800	2.00	IN1712533C	2000	Methanol (DR018-US)
375-95-1LC9	13C9-PFNA	2000.00	ST1712533A	0.0250	10.00	PFCMDLX1712	5	0% DI Water (N/A) Methanol (DR018-US)
757124-72-4	4:2-FTS	18.68	IN1712533D	0.0250	10.00	PFCMDLX1712	0.0467	0% DI Water (N/A) Methanol (DR018-US)
		934.00	IN1712533A	0.2000	10.00	IN1712533D	18.68	Methanol (DR018-US)

5/5/2017

Traceability Report for **PFCMDLX171253** **PFAS ICAL MDL Standard**

Prepped by 7824 on 05/05/17 Expires 08/05/17

Compound		Conc. (ppb)	Stock	Aliquot	Vol.(mL)	Solution	Final Conc. (ppb)	Solvent (Lot#)
757124-72-4	4:2-FTS	46700.00	ST1705137B	0.0400	2.00	IN1712533A	934	Methanol (DR018-US)
27619-97-2	6:2-FTS	18.96	IN1712533D	0.0250	10.00	PFCMDLX1712	0.0474	0% DI Water (N/A) Methanol (DR018-US)
		948.00	IN1712533A	0.2000	10.00	IN1712533D	18.960001	Methanol (DR018-US)
		47400.00	ST1705137C	0.0400	2.00	IN1712533A	948	Methanol (DR018-US)
39108-34-4	8:2-FTS	19.16	IN1712533D	0.0250	10.00	PFCMDLX1712	0.0479	0% DI Water (N/A) Methanol (DR018-US)
		958.00	IN1712533A	0.2000	10.00	IN1712533D	19.16	Methanol (DR018-US)
		47900.00	ST1705237A	0.0400	2.00	IN1712533A	958	Methanol (DR018-US)
2355-31-9L	d3-NMeFOSAA	2000.00	IN1712533C	0.0250	10.00	PFCMDLX1712	5	0% DI Water (N/A) Methanol (DR018-US)
		50000.00	ST1705137N	0.0800	2.00	IN1712533C	2000	Methanol (DR018-US)
31506-32-8L	d3-NMePFOSA	2000.00	IN1712533C	0.0250	10.00	PFCMDLX1712	5	0% DI Water (N/A) Methanol (DR018-US)
		50000.00	ST1705137L	0.0800	2.00	IN1712533C	2000	Methanol (DR018-US)
2991-50-6L	d5-NEtFOSAA	2000.00	IN1712533C	0.0250	10.00	PFCMDLX1712	5	0% DI Water (N/A) Methanol (DR018-US)
		50000.00	ST1705137M	0.0800	2.00	IN1712533C	2000	Methanol (DR018-US)
4151-50-2L	d5-NEtPFOSA	2000.00	IN1712533C	0.0250	10.00	PFCMDLX1712	5	0% DI Water (N/A) Methanol (DR018-US)
		50000.00	ST1705137K	0.0800	2.00	IN1712533C	2000	Methanol (DR018-US)
24448-09-7L	d7-NMePFOSAE	2000.00	IN1712533C	0.0250	10.00	PFCMDLX1712	5	0% DI Water (N/A) Methanol (DR018-US)
		50000.00	ST1710833A	0.0800	2.00	IN1712533C	2000	Methanol (DR018-US)
1691-99-2L	d9-NEtPFOSAE	2000.00	IN1712533C	0.0250	10.00	PFCMDLX1712	5	0% DI Water (N/A) Methanol (DR018-US)
		50000.00	ST1710833B	0.0800	2.00	IN1712533C	2000	Methanol (DR018-US)
2991-50-6	NEtFOSAA	20.00	IN1712533D	0.0250	10.00	PFCMDLX1712	0.05	0% DI Water (N/A) Methanol (DR018-US)
		1000.00	IN1712533A	0.2000	10.00	IN1712533D	20	Methanol (DR018-US)
		50000.00	ST1705137I	0.0400	2.00	IN1712533A	1000	Methanol (DR018-US)
4151-50-2	NEtPFOSA	20.00	IN1712533D	0.0250	10.00	PFCMDLX1712	0.05	0% DI Water (N/A) Methanol (DR018-US)
		2000.00	IN1712533B	0.1000	10.00	IN1712533D	20	Methanol (DR018-US)
		50000.00	ST1705137H	0.0800	2.00	IN1712533B	2000	Methanol (DR018-US)
1691-99-2	NEtPFOSAE	20.00	IN1712533D	0.0250	10.00	PFCMDLX1712	0.05	0% DI Water (N/A) Methanol (DR018-US)
		2000.00	IN1712533B	0.1000	10.00	IN1712533D	20	Methanol (DR018-US)
		50000.00	ST1705137J	0.0800	2.00	IN1712533B	2000	Methanol (DR018-US)
2355-31-9	NMeFOSAA	20.00	IN1712533D	0.0250	10.00	PFCMDLX1712	0.05	0% DI Water (N/A) Methanol (DR018-US)
		1000.00	IN1712533A	0.2000	10.00	IN1712533D	20	Methanol (DR018-US)
		50000.00	ST1705137F	0.0400	2.00	IN1712533A	1000	Methanol (DR018-US)
31506-32-8	NMePFOSA	20.00	IN1712533D	0.0250	10.00	PFCMDLX1712	0.05	0% DI Water (N/A) Methanol (DR018-US)
		2000.00	IN1712533B	0.1000	10.00	IN1712533D	20	Methanol (DR018-US)
		50000.00	ST1705137E	0.0800	2.00	IN1712533B	2000	Methanol (DR018-US)

5/5/2017

Traceability Report for **PFCMDLX171253** **PFAS ICAL MDL Standard**

Prepped by 7824 on 05/05/17 Expires 08/05/17

Compound		Conc. (ppb)	Stock	Aliquot	Vol.(mL)	Solution	Final Conc. (ppb)	Solvent (Lot#)
24448-09-7	NMePFOSAE	20.00	IN1712533D	0.0250	10.00	PFCMDLX1712	0.05	0% DI Water (N/A) Methanol (DR018-US)
		2000.00	IN1712533B	0.1000	10.00	IN1712533D	20	Methanol (DR018-US)
		50000.00	ST1705137G	0.0800	2.00	IN1712533B	2000	Methanol (DR018-US)
375-22-4	PFBA	20.00	IN1712533D	0.0250	10.00	PFCMDLX1712	0.05	0% DI Water (N/A) Methanol (DR018-US)
		2000.00	ST1712433A	0.1000	10.00	IN1712533D	20	Methanol (DR018-US)
375-73-5	PFBS	17.69	IN1712533D	0.0250	10.00	PFCMDLX1712	0.044225	0% DI Water (N/A) Methanol (DR018-US)
		1769.00	ST1712433A	0.1000	10.00	IN1712533D	17.690001	Methanol (DR018-US)
335-76-2	PFDA	20.00	IN1712533D	0.0250	10.00	PFCMDLX1712	0.05	0% DI Water (N/A) Methanol (DR018-US)
		2000.00	ST1712433A	0.1000	10.00	IN1712533D	20	Methanol (DR018-US)
307-55-1	PFDoDA	20.00	IN1712533D	0.0250	10.00	PFCMDLX1712	0.05	0% DI Water (N/A) Methanol (DR018-US)
		2000.00	ST1712433A	0.1000	10.00	IN1712533D	20	Methanol (DR018-US)
79780-39-5	PFDoDS	19.36	IN1712533D	0.0250	10.00	PFCMDLX1712	0.0484	0% DI Water (N/A) Methanol (DR018-US)
		1936.00	ST1712433A	0.1000	10.00	IN1712533D	19.360001	Methanol (DR018-US)
335-77-3	PFDS	19.26	IN1712533D	0.0250	10.00	PFCMDLX1712	0.04815	0% DI Water (N/A) Methanol (DR018-US)
		1926.00	ST1712433A	0.1000	10.00	IN1712533D	19.26	Methanol (DR018-US)
375-85-9	PFHpA	20.00	IN1712533D	0.0250	10.00	PFCMDLX1712	0.05	0% DI Water (N/A) Methanol (DR018-US)
		2000.00	ST1712433A	0.1000	10.00	IN1712533D	20	Methanol (DR018-US)
375-92-8	PFHpS	19.03	IN1712533D	0.0250	10.00	PFCMDLX1712	0.047575	0% DI Water (N/A) Methanol (DR018-US)
		1903.00	ST1712433A	0.1000	10.00	IN1712533D	19.030001	Methanol (DR018-US)
307-24-4	PFHxA	20.00	IN1712533D	0.0250	10.00	PFCMDLX1712	0.05	0% DI Water (N/A) Methanol (DR018-US)
		2000.00	ST1712433A	0.1000	10.00	IN1712533D	20	Methanol (DR018-US)
67905-19-5	PFHxDA	20.00	IN1712533D	0.0250	10.00	PFCMDLX1712	0.05	0% DI Water (N/A) Methanol (DR018-US)
		2000.00	ST1712433A	0.1000	10.00	IN1712533D	20	Methanol (DR018-US)
355-46-4	PFHxS	18.91	IN1712533D	0.0250	10.00	PFCMDLX1712	0.047275	0% DI Water (N/A) Methanol (DR018-US)
		1891.00	ST1712433A	0.1000	10.00	IN1712533D	18.91	Methanol (DR018-US)
375-95-1	PFNA	20.00	IN1712533D	0.0250	10.00	PFCMDLX1712	0.05	0% DI Water (N/A) Methanol (DR018-US)
		2000.00	ST1712433A	0.1000	10.00	IN1712533D	20	Methanol (DR018-US)
474511-07-4	PFNS	19.20	IN1712533D	0.0250	10.00	PFCMDLX1712	0.048	0% DI Water (N/A) Methanol (DR018-US)
		1920.00	ST1712433A	0.1000	10.00	IN1712533D	19.200001	Methanol (DR018-US)
335-67-1	PFOA	20.00	IN1712533D	0.0250	10.00	PFCMDLX1712	0.05	0% DI Water (N/A) Methanol (DR018-US)
		2000.00	ST1712433A	0.1000	10.00	IN1712533D	20	Methanol (DR018-US)
16517-11-6	PFODA	20.00	IN1712533D	0.0250	10.00	PFCMDLX1712	0.05	0% DI Water (N/A) Methanol (DR018-US)
		2000.00	ST1712433A	0.1000	10.00	IN1712533D	20	Methanol (DR018-US)

5/5/2017

Traceability Report for **PFCMDLX171253** **PFAS ICAL MDL Standard**

Prepped by 7824 on 05/05/17 Expires 08/05/17

Compound		Conc. (ppb)	Stock	Aliquot	Vol.(mL)	Solution	Final Conc. (ppb)	Solvent (Lot#)
1763-23-1	PFOS	19.12	IN1712533D	0.0250	10.00	PFCMDLX1712	0.0478	0% DI Water (N/A) Methanol (DR018-US)
		1912.00	ST1712433A	0.1000	10.00	IN1712533D	19.119999	Methanol (DR018-US)
754-91-6	PFOSA	20.00	IN1712533D	0.0250	10.00	PFCMDLX1712	0.05	0% DI Water (N/A) Methanol (DR018-US)
		2000.00	IN1712533B	0.1000	10.00	IN1712533D	20	Methanol (DR018-US)
		50000.00	ST1705137D	0.0800	2.00	IN1712533B	2000	Methanol (DR018-US)
2706-90-3	PFPA	20.00	IN1712533D	0.0250	10.00	PFCMDLX1712	0.05	0% DI Water (N/A) Methanol (DR018-US)
		2000.00	ST1712433A	0.1000	10.00	IN1712533D	20	Methanol (DR018-US)
2706-91-4	PFPeS	18.76	IN1712533D	0.0250	10.00	PFCMDLX1712	0.0469	0% DI Water (N/A) Methanol (DR018-US)
		1876.00	ST1712433A	0.1000	10.00	IN1712533D	18.76	Methanol (DR018-US)
376-06-7	PFTeDA	20.00	IN1712533D	0.0250	10.00	PFCMDLX1712	0.05	0% DI Water (N/A) Methanol (DR018-US)
		2000.00	ST1712433A	0.1000	10.00	IN1712533D	20	Methanol (DR018-US)
72629-94-8	PFTrDA	20.00	IN1712533D	0.0250	10.00	PFCMDLX1712	0.05	0% DI Water (N/A) Methanol (DR018-US)
		2000.00	ST1712433A	0.1000	10.00	IN1712533D	20	Methanol (DR018-US)
2058-94-8	PFUnDA	20.00	IN1712533D	0.0250	10.00	PFCMDLX1712	0.05	0% DI Water (N/A) Methanol (DR018-US)
		2000.00	ST1712433A	0.1000	10.00	IN1712533D	20	Methanol (DR018-US)

5/5/2017

Traceability Report for **CALPFC1712533E** **PFC Calib Std (Level 1)**

Prepped by 7824 on 05/05/17 Expires 08/05/17

Compound		Conc. (ppb)	Stock	Aliquot	Vol.(mL)	Solution	Final Conc. (ppb)	Solvent (Lot#)
120226-60-0	10:2-FTS	19.28	IN1712533D	0.1000	10.00	CALPFC171253	0.1928	Methanol (DR018-US)
		964.00	IN1712533A	0.2000	10.00	IN1712533D	19.280001	Methanol (DR018-US)
		48200.00	ST1705137A	0.0400	2.00	IN1712533A	964	Methanol (DR018-US)
757124-72-4L	13C2-4:2-FTS	1868.00	IN1712533C	0.0250	10.00	CALPFC171253	4.67	Methanol (DR018-US)
		46700.00	ST1705137Q	0.0800	2.00	IN1712533C	1868	Methanol (DR018-US)
27619-97-2L	13C2-6:2-FTS	1900.00	IN1712533C	0.0250	10.00	CALPFC171253	4.75	Methanol (DR018-US)
		47500.00	ST1710833C	0.0800	2.00	IN1712533C	1900	Methanol (DR018-US)
39108-34-4L	13C2-8:2-FTS	1916.00	IN1712533C	0.0250	10.00	CALPFC171253	4.79	Methanol (DR018-US)
		47900.00	ST1705137S	0.0800	2.00	IN1712533C	1916	Methanol (DR018-US)
335-76-2L	13C2-PFDA	2000.00	ST1711533A	0.0250	10.00	CALPFC171253	5	Methanol (DR018-US)
307-55-1L	13C2-PFDoDA	2000.00	ST1712533A	0.0250	10.00	CALPFC171253	5	Methanol (DR018-US)
335-67-1LC2	13C2-PFOA	2000.00	ST1711533A	0.0250	10.00	CALPFC171253	5	Methanol (DR018-US)
376-06-7L	13C2-PFTeDA	2000.00	ST1712533A	0.0250	10.00	CALPFC171253	5	Methanol (DR018-US)
375-22-4LC3	13C3-PFBA	2000.00	ST1711533A	0.0250	10.00	CALPFC171253	5	Methanol (DR018-US)
375-73-5L	13C3-PFBS	1859.00	ST1712533A	0.0250	10.00	CALPFC171253	4.6475	Methanol (DR018-US)
355-46-4LC3	13C3-PFHxS	1892.00	ST1712533A	0.0250	10.00	CALPFC171253	4.73	Methanol (DR018-US)
375-22-4L	13C4-PFBA	2000.00	ST1712533A	0.0250	10.00	CALPFC171253	5	Methanol (DR018-US)
375-85-9L	13C4-PFHpA	2000.00	ST1712533A	0.0250	10.00	CALPFC171253	5	Methanol (DR018-US)
1763-23-1LC4	13C4-PFOS	1913.00	ST1711533A	0.0250	10.00	CALPFC171253	4.7825	Methanol (DR018-US)
307-24-4LC5	13C5-PFHxA	2000.00	ST1712533A	0.0250	10.00	CALPFC171253	5	Methanol (DR018-US)
2706-90-3L	13C5-PFPA	2000.00	ST1712533A	0.0250	10.00	CALPFC171253	5	Methanol (DR018-US)
335-76-2LC6	13C6-PFDA	2000.00	ST1712533A	0.0250	10.00	CALPFC171253	5	Methanol (DR018-US)
2058-94-8LC7	13C7-PFUnDA	2000.00	ST1712533A	0.0250	10.00	CALPFC171253	5	Methanol (DR018-US)
335-67-1LC8	13C8-PFOA	2000.00	ST1712533A	0.0250	10.00	CALPFC171253	5	Methanol (DR018-US)
1763-23-1LC8	13C8-PFOS	1913.00	ST1712533A	0.0250	10.00	CALPFC171253	4.7825	Methanol (DR018-US)
754-91-6L	13C8-PFOSA	2000.00	IN1712533C	0.0250	10.00	CALPFC171253	5	Methanol (DR018-US)
		50000.00	ST1705137T	0.0800	2.00	IN1712533C	2000	Methanol (DR018-US)
375-95-1LC9	13C9-PFNA	2000.00	ST1712533A	0.0250	10.00	CALPFC171253	5	Methanol (DR018-US)
757124-72-4	4:2-FTS	18.68	IN1712533D	0.1000	10.00	CALPFC171253	0.1868	Methanol (DR018-US)
		934.00	IN1712533A	0.2000	10.00	IN1712533D	18.68	Methanol (DR018-US)
		46700.00	ST1705137B	0.0400	2.00	IN1712533A	934	Methanol (DR018-US)
27619-97-2	6:2-FTS	18.96	IN1712533D	0.1000	10.00	CALPFC171253	0.1896	Methanol (DR018-US)
		948.00	IN1712533A	0.2000	10.00	IN1712533D	18.960001	Methanol (DR018-US)
		47400.00	ST1705137C	0.0400	2.00	IN1712533A	948	Methanol (DR018-US)
39108-34-4	8:2-FTS	19.16	IN1712533D	0.1000	10.00	CALPFC171253	0.1916	Methanol (DR018-US)
		958.00	IN1712533A	0.2000	10.00	IN1712533D	19.16	Methanol (DR018-US)
		47900.00	ST1705237A	0.0400	2.00	IN1712533A	958	Methanol (DR018-US)
2355-31-9L	d3-NMeFOSAA	2000.00	IN1712533C	0.0250	10.00	CALPFC171253	5	Methanol (DR018-US)
		50000.00	ST1705137N	0.0800	2.00	IN1712533C	2000	Methanol (DR018-US)

5/5/2017

Traceability Report for CALPFC1712533E PFC Calib Std (Level 1)

Prepped by 7824 on 05/05/17 Expires 08/05/17

Compound		Conc. (ppb)	Stock	Aliquot	Vol.(mL)	Solution	Final Conc. (ppb)	Solvent (Lot#)
31506-32-8L	d3-NMePFOSA	2000.00	IN1712533C	0.0250	10.00	CALPFC171253	5	Methanol (DR018-US)
		50000.00	ST1705137L	0.0800	2.00	IN1712533C	2000	Methanol (DR018-US)
2991-50-6L	d5-NEtFOSAA	2000.00	IN1712533C	0.0250	10.00	CALPFC171253	5	Methanol (DR018-US)
		50000.00	ST1705137M	0.0800	2.00	IN1712533C	2000	Methanol (DR018-US)
4151-50-2L	d5-NEtPFOSA	2000.00	IN1712533C	0.0250	10.00	CALPFC171253	5	Methanol (DR018-US)
		50000.00	ST1705137K	0.0800	2.00	IN1712533C	2000	Methanol (DR018-US)
24448-09-7L	d7-NMePFOSAE	2000.00	IN1712533C	0.0250	10.00	CALPFC171253	5	Methanol (DR018-US)
		50000.00	ST1710833A	0.0800	2.00	IN1712533C	2000	Methanol (DR018-US)
1691-99-2L	d9-NEtPFOSAE	2000.00	IN1712533C	0.0250	10.00	CALPFC171253	5	Methanol (DR018-US)
		50000.00	ST1710833B	0.0800	2.00	IN1712533C	2000	Methanol (DR018-US)
2991-50-6	NEtFOSAA	20.00	IN1712533D	0.1000	10.00	CALPFC171253	0.2	Methanol (DR018-US)
		1000.00	IN1712533A	0.2000	10.00	IN1712533D	20	Methanol (DR018-US)
		50000.00	ST1705137I	0.0400	2.00	IN1712533A	1000	Methanol (DR018-US)
4151-50-2	NEtPFOSA	20.00	IN1712533D	0.1000	10.00	CALPFC171253	0.2	Methanol (DR018-US)
		2000.00	IN1712533B	0.1000	10.00	IN1712533D	20	Methanol (DR018-US)
		50000.00	ST1705137H	0.0800	2.00	IN1712533B	2000	Methanol (DR018-US)
1691-99-2	NEtPFOSAE	20.00	IN1712533D	0.1000	10.00	CALPFC171253	0.2	Methanol (DR018-US)
		2000.00	IN1712533B	0.1000	10.00	IN1712533D	20	Methanol (DR018-US)
		50000.00	ST1705137J	0.0800	2.00	IN1712533B	2000	Methanol (DR018-US)
2355-31-9	NMeFOSAA	20.00	IN1712533D	0.1000	10.00	CALPFC171253	0.2	Methanol (DR018-US)
		1000.00	IN1712533A	0.2000	10.00	IN1712533D	20	Methanol (DR018-US)
		50000.00	ST1705137F	0.0400	2.00	IN1712533A	1000	Methanol (DR018-US)
31506-32-8	NMePFOSA	20.00	IN1712533D	0.1000	10.00	CALPFC171253	0.2	Methanol (DR018-US)
		2000.00	IN1712533B	0.1000	10.00	IN1712533D	20	Methanol (DR018-US)
		50000.00	ST1705137E	0.0800	2.00	IN1712533B	2000	Methanol (DR018-US)
24448-09-7	NMePFOSAE	20.00	IN1712533D	0.1000	10.00	CALPFC171253	0.2	Methanol (DR018-US)
		2000.00	IN1712533B	0.1000	10.00	IN1712533D	20	Methanol (DR018-US)
		50000.00	ST1705137G	0.0800	2.00	IN1712533B	2000	Methanol (DR018-US)
375-22-4	PFBA	20.00	IN1712533D	0.1000	10.00	CALPFC171253	0.2	Methanol (DR018-US)
		2000.00	ST1712433A	0.1000	10.00	IN1712533D	20	Methanol (DR018-US)
375-73-5	PFBS	17.69	IN1712533D	0.1000	10.00	CALPFC171253	0.1769	Methanol (DR018-US)
		1769.00	ST1712433A	0.1000	10.00	IN1712533D	17.690001	Methanol (DR018-US)
335-76-2	PFDA	20.00	IN1712533D	0.1000	10.00	CALPFC171253	0.2	Methanol (DR018-US)
		2000.00	ST1712433A	0.1000	10.00	IN1712533D	20	Methanol (DR018-US)
307-55-1	PFDoDA	20.00	IN1712533D	0.1000	10.00	CALPFC171253	0.2	Methanol (DR018-US)
		2000.00	ST1712433A	0.1000	10.00	IN1712533D	20	Methanol (DR018-US)
79780-39-5	PFDoDS	19.36	IN1712533D	0.1000	10.00	CALPFC171253	0.1936	Methanol (DR018-US)
		1936.00	ST1712433A	0.1000	10.00	IN1712533D	19.360001	Methanol (DR018-US)
335-77-3	PFDS	19.26	IN1712533D	0.1000	10.00	CALPFC171253	0.1926	Methanol (DR018-US)

5/5/2017

Traceability Report for **CALPFC1712533E** **PFC Calib Std (Level 1)**

Prepped by 7824 on 05/05/17 Expires 08/05/17

Compound		Conc. (ppb)	Stock	Aliquot	Vol.(mL)	Solution	Final Conc. (ppb)	Solvent (Lot#)
335-77-3	PFDS	1926.00	ST1712433A	0.1000	10.00	IN1712533D	19.26	Methanol (DR018-US)
375-85-9	PFHpA	20.00	IN1712533D	0.1000	10.00	CALPFC171253	0.2	Methanol (DR018-US)
		2000.00	ST1712433A	0.1000	10.00	IN1712533D	20	Methanol (DR018-US)
375-92-8	PFHpS	19.03	IN1712533D	0.1000	10.00	CALPFC171253	0.1903	Methanol (DR018-US)
		1903.00	ST1712433A	0.1000	10.00	IN1712533D	19.030001	Methanol (DR018-US)
307-24-4	PFHxA	20.00	IN1712533D	0.1000	10.00	CALPFC171253	0.2	Methanol (DR018-US)
		2000.00	ST1712433A	0.1000	10.00	IN1712533D	20	Methanol (DR018-US)
67905-19-5	PFHxDA	20.00	IN1712533D	0.1000	10.00	CALPFC171253	0.2	Methanol (DR018-US)
		2000.00	ST1712433A	0.1000	10.00	IN1712533D	20	Methanol (DR018-US)
355-46-4	PFHxS	18.91	IN1712533D	0.1000	10.00	CALPFC171253	0.1891	Methanol (DR018-US)
		1891.00	ST1712433A	0.1000	10.00	IN1712533D	18.91	Methanol (DR018-US)
375-95-1	PFNA	20.00	IN1712533D	0.1000	10.00	CALPFC171253	0.2	Methanol (DR018-US)
		2000.00	ST1712433A	0.1000	10.00	IN1712533D	20	Methanol (DR018-US)
474511-07-4	PFNS	19.20	IN1712533D	0.1000	10.00	CALPFC171253	0.192	Methanol (DR018-US)
		1920.00	ST1712433A	0.1000	10.00	IN1712533D	19.200001	Methanol (DR018-US)
335-67-1	PFOA	20.00	IN1712533D	0.1000	10.00	CALPFC171253	0.2	Methanol (DR018-US)
		2000.00	ST1712433A	0.1000	10.00	IN1712533D	20	Methanol (DR018-US)
16517-11-6	PFODA	20.00	IN1712533D	0.1000	10.00	CALPFC171253	0.2	Methanol (DR018-US)
		2000.00	ST1712433A	0.1000	10.00	IN1712533D	20	Methanol (DR018-US)
1763-23-1	PFOS	19.12	IN1712533D	0.1000	10.00	CALPFC171253	0.1912	Methanol (DR018-US)
		1912.00	ST1712433A	0.1000	10.00	IN1712533D	19.119999	Methanol (DR018-US)
754-91-6	PFOSA	20.00	IN1712533D	0.1000	10.00	CALPFC171253	0.2	Methanol (DR018-US)
		2000.00	IN1712533B	0.1000	10.00	IN1712533D	20	Methanol (DR018-US)
		50000.00	ST1705137D	0.0800	2.00	IN1712533B	2000	Methanol (DR018-US)
2706-90-3	PFPA	20.00	IN1712533D	0.1000	10.00	CALPFC171253	0.2	Methanol (DR018-US)
		2000.00	ST1712433A	0.1000	10.00	IN1712533D	20	Methanol (DR018-US)
2706-91-4	PFPeS	18.76	IN1712533D	0.1000	10.00	CALPFC171253	0.1876	Methanol (DR018-US)
		1876.00	ST1712433A	0.1000	10.00	IN1712533D	18.76	Methanol (DR018-US)
376-06-7	PFTeDA	20.00	IN1712533D	0.1000	10.00	CALPFC171253	0.2	Methanol (DR018-US)
		2000.00	ST1712433A	0.1000	10.00	IN1712533D	20	Methanol (DR018-US)
72629-94-8	PFTrDA	20.00	IN1712533D	0.1000	10.00	CALPFC171253	0.2	Methanol (DR018-US)
		2000.00	ST1712433A	0.1000	10.00	IN1712533D	20	Methanol (DR018-US)
2058-94-8	PFUnDA	20.00	IN1712533D	0.1000	10.00	CALPFC171253	0.2	Methanol (DR018-US)
		2000.00	ST1712433A	0.1000	10.00	IN1712533D	20	Methanol (DR018-US)

5/5/2017

Traceability Report for **CALPFC1712533(** **PFC Calib Std (Level 2)**

Prepped by 7824 on 05/05/17 Expires 08/05/17

Compound		Conc. (ppb)	Stock	Aliquot	Vol.(mL)	Solution	Final Conc. (ppb)	Solvent (Lot#)
120226-60-0	10:2-FTS	19.28	IN1712533D	0.3000	10.00	CALPFC171253	0.5784	Methanol (DR018-US)
		964.00	IN1712533A	0.2000	10.00	IN1712533D	19.280001	Methanol (DR018-US)
		48200.00	ST1705137A	0.0400	2.00	IN1712533A	964	Methanol (DR018-US)
757124-72-4l	13C2-4:2-FTS	1868.00	IN1712533C	0.0250	10.00	CALPFC171253	4.67	Methanol (DR018-US)
		46700.00	ST1705137Q	0.0800	2.00	IN1712533C	1868	Methanol (DR018-US)
27619-97-2L	13C2-6:2-FTS	1900.00	IN1712533C	0.0250	10.00	CALPFC171253	4.75	Methanol (DR018-US)
		47500.00	ST1710833C	0.0800	2.00	IN1712533C	1900	Methanol (DR018-US)
39108-34-4L	13C2-8:2-FTS	1916.00	IN1712533C	0.0250	10.00	CALPFC171253	4.79	Methanol (DR018-US)
		47900.00	ST1705137S	0.0800	2.00	IN1712533C	1916	Methanol (DR018-US)
335-76-2L	13C2-PFDA	2000.00	ST1711533A	0.0250	10.00	CALPFC171253	5	Methanol (DR018-US)
307-55-1L	13C2-PFDoDA	2000.00	ST1712533A	0.0250	10.00	CALPFC171253	5	Methanol (DR018-US)
335-67-1LC2	13C2-PFOA	2000.00	ST1711533A	0.0250	10.00	CALPFC171253	5	Methanol (DR018-US)
376-06-7L	13C2-PFTeDA	2000.00	ST1712533A	0.0250	10.00	CALPFC171253	5	Methanol (DR018-US)
375-22-4LC3	13C3-PFBA	2000.00	ST1711533A	0.0250	10.00	CALPFC171253	5	Methanol (DR018-US)
375-73-5L	13C3-PFBS	1859.00	ST1712533A	0.0250	10.00	CALPFC171253	4.6475	Methanol (DR018-US)
355-46-4LC3	13C3-PFHxS	1892.00	ST1712533A	0.0250	10.00	CALPFC171253	4.73	Methanol (DR018-US)
375-22-4L	13C4-PFBA	2000.00	ST1712533A	0.0250	10.00	CALPFC171253	5	Methanol (DR018-US)
375-85-9L	13C4-PFHpA	2000.00	ST1712533A	0.0250	10.00	CALPFC171253	5	Methanol (DR018-US)
1763-23-1LC	13C4-PFOS	1913.00	ST1711533A	0.0250	10.00	CALPFC171253	4.7825	Methanol (DR018-US)
307-24-4LC5	13C5-PFHxA	2000.00	ST1712533A	0.0250	10.00	CALPFC171253	5	Methanol (DR018-US)
2706-90-3L	13C5-PFPA	2000.00	ST1712533A	0.0250	10.00	CALPFC171253	5	Methanol (DR018-US)
335-76-2LC6	13C6-PFDA	2000.00	ST1712533A	0.0250	10.00	CALPFC171253	5	Methanol (DR018-US)
2058-94-8LC	13C7-PFUnDA	2000.00	ST1712533A	0.0250	10.00	CALPFC171253	5	Methanol (DR018-US)
335-67-1LC8	13C8-PFOA	2000.00	ST1712533A	0.0250	10.00	CALPFC171253	5	Methanol (DR018-US)
1763-23-1LC	13C8-PFOS	1913.00	ST1712533A	0.0250	10.00	CALPFC171253	4.7825	Methanol (DR018-US)
754-91-6L	13C8-PFOSA	2000.00	IN1712533C	0.0250	10.00	CALPFC171253	5	Methanol (DR018-US)
		50000.00	ST1705137T	0.0800	2.00	IN1712533C	2000	Methanol (DR018-US)
375-95-1LC9	13C9-PFNA	2000.00	ST1712533A	0.0250	10.00	CALPFC171253	5	Methanol (DR018-US)
757124-72-4	4:2-FTS	18.68	IN1712533D	0.3000	10.00	CALPFC171253	0.5604	Methanol (DR018-US)
		934.00	IN1712533A	0.2000	10.00	IN1712533D	18.68	Methanol (DR018-US)
		46700.00	ST1705137B	0.0400	2.00	IN1712533A	934	Methanol (DR018-US)
27619-97-2	6:2-FTS	18.96	IN1712533D	0.3000	10.00	CALPFC171253	0.5688	Methanol (DR018-US)
		948.00	IN1712533A	0.2000	10.00	IN1712533D	18.960001	Methanol (DR018-US)
		47400.00	ST1705137C	0.0400	2.00	IN1712533A	948	Methanol (DR018-US)
39108-34-4	8:2-FTS	19.16	IN1712533D	0.3000	10.00	CALPFC171253	0.5748	Methanol (DR018-US)
		958.00	IN1712533A	0.2000	10.00	IN1712533D	19.16	Methanol (DR018-US)
		47900.00	ST1705237A	0.0400	2.00	IN1712533A	958	Methanol (DR018-US)
2355-31-9L	d3-NMeFOSAA	2000.00	IN1712533C	0.0250	10.00	CALPFC171253	5	Methanol (DR018-US)
		50000.00	ST1705137N	0.0800	2.00	IN1712533C	2000	Methanol (DR018-US)

5/5/2017

Traceability Report for **CALPFC1712533(** **PFC Calib Std (Level 2)**

Prepped by 7824 on 05/05/17 Expires 08/05/17

Compound		Conc. (ppb)	Stock	Aliquot	Vol.(mL)	Solution	Final Conc. (ppb)	Solvent (Lot#)
31506-32-8L	d3-NMePFOSA	2000.00	IN1712533C	0.0250	10.00	CALPFC171253	5	Methanol (DR018-US)
		50000.00	ST1705137L	0.0800	2.00	IN1712533C	2000	Methanol (DR018-US)
2991-50-6L	d5-NEtFOSAA	2000.00	IN1712533C	0.0250	10.00	CALPFC171253	5	Methanol (DR018-US)
		50000.00	ST1705137M	0.0800	2.00	IN1712533C	2000	Methanol (DR018-US)
4151-50-2L	d5-NEtPFOSA	2000.00	IN1712533C	0.0250	10.00	CALPFC171253	5	Methanol (DR018-US)
		50000.00	ST1705137K	0.0800	2.00	IN1712533C	2000	Methanol (DR018-US)
24448-09-7L	d7-NMePFOSAE	2000.00	IN1712533C	0.0250	10.00	CALPFC171253	5	Methanol (DR018-US)
		50000.00	ST1710833A	0.0800	2.00	IN1712533C	2000	Methanol (DR018-US)
1691-99-2L	d9-NEtPFOSAE	2000.00	IN1712533C	0.0250	10.00	CALPFC171253	5	Methanol (DR018-US)
		50000.00	ST1710833B	0.0800	2.00	IN1712533C	2000	Methanol (DR018-US)
2991-50-6	NEtFOSAA	20.00	IN1712533D	0.3000	10.00	CALPFC171253	0.6	Methanol (DR018-US)
		1000.00	IN1712533A	0.2000	10.00	IN1712533D	20	Methanol (DR018-US)
		50000.00	ST1705137I	0.0400	2.00	IN1712533A	1000	Methanol (DR018-US)
4151-50-2	NEtPFOSA	20.00	IN1712533D	0.3000	10.00	CALPFC171253	0.6	Methanol (DR018-US)
		2000.00	IN1712533B	0.1000	10.00	IN1712533D	20	Methanol (DR018-US)
		50000.00	ST1705137H	0.0800	2.00	IN1712533B	2000	Methanol (DR018-US)
1691-99-2	NEtPFOSAE	20.00	IN1712533D	0.3000	10.00	CALPFC171253	0.6	Methanol (DR018-US)
		2000.00	IN1712533B	0.1000	10.00	IN1712533D	20	Methanol (DR018-US)
		50000.00	ST1705137J	0.0800	2.00	IN1712533B	2000	Methanol (DR018-US)
2355-31-9	NMeFOSAA	20.00	IN1712533D	0.3000	10.00	CALPFC171253	0.6	Methanol (DR018-US)
		1000.00	IN1712533A	0.2000	10.00	IN1712533D	20	Methanol (DR018-US)
		50000.00	ST1705137F	0.0400	2.00	IN1712533A	1000	Methanol (DR018-US)
31506-32-8	NMePFOSA	20.00	IN1712533D	0.3000	10.00	CALPFC171253	0.6	Methanol (DR018-US)
		2000.00	IN1712533B	0.1000	10.00	IN1712533D	20	Methanol (DR018-US)
		50000.00	ST1705137E	0.0800	2.00	IN1712533B	2000	Methanol (DR018-US)
24448-09-7	NMePFOSAE	20.00	IN1712533D	0.3000	10.00	CALPFC171253	0.6	Methanol (DR018-US)
		2000.00	IN1712533B	0.1000	10.00	IN1712533D	20	Methanol (DR018-US)
		50000.00	ST1705137G	0.0800	2.00	IN1712533B	2000	Methanol (DR018-US)
375-22-4	PFBA	20.00	IN1712533D	0.3000	10.00	CALPFC171253	0.6	Methanol (DR018-US)
		2000.00	ST1712433A	0.1000	10.00	IN1712533D	20	Methanol (DR018-US)
375-73-5	PFBS	17.69	IN1712533D	0.3000	10.00	CALPFC171253	0.5307	Methanol (DR018-US)
		1769.00	ST1712433A	0.1000	10.00	IN1712533D	17.690001	Methanol (DR018-US)
335-76-2	PFDA	20.00	IN1712533D	0.3000	10.00	CALPFC171253	0.6	Methanol (DR018-US)
		2000.00	ST1712433A	0.1000	10.00	IN1712533D	20	Methanol (DR018-US)
307-55-1	PFDoDA	20.00	IN1712533D	0.3000	10.00	CALPFC171253	0.6	Methanol (DR018-US)
		2000.00	ST1712433A	0.1000	10.00	IN1712533D	20	Methanol (DR018-US)
79780-39-5	PFDoDS	19.36	IN1712533D	0.3000	10.00	CALPFC171253	0.5808	Methanol (DR018-US)
		1936.00	ST1712433A	0.1000	10.00	IN1712533D	19.360001	Methanol (DR018-US)
335-77-3	PFDS	19.26	IN1712533D	0.3000	10.00	CALPFC171253	0.5778	Methanol (DR018-US)

5/5/2017

Traceability Report for **CALPFC1712533(** **PFC Calib Std (Level 2)**

Prepped by 7824 on 05/05/17 Expires 08/05/17

Compound		Conc. (ppb)	Stock	Aliquot	Vol.(mL)	Solution	Final Conc. (ppb)	Solvent (Lot#)
335-77-3	PFDS	1926.00	ST1712433A	0.1000	10.00	IN1712533D	19.26	Methanol (DR018-US)
375-85-9	PFHpA	20.00	IN1712533D	0.3000	10.00	CALPFC171253	0.6	Methanol (DR018-US)
		2000.00	ST1712433A	0.1000	10.00	IN1712533D	20	Methanol (DR018-US)
375-92-8	PFHpS	19.03	IN1712533D	0.3000	10.00	CALPFC171253	0.5709	Methanol (DR018-US)
		1903.00	ST1712433A	0.1000	10.00	IN1712533D	19.030001	Methanol (DR018-US)
307-24-4	PFHxA	20.00	IN1712533D	0.3000	10.00	CALPFC171253	0.6	Methanol (DR018-US)
		2000.00	ST1712433A	0.1000	10.00	IN1712533D	20	Methanol (DR018-US)
67905-19-5	PFHxDA	20.00	IN1712533D	0.3000	10.00	CALPFC171253	0.6	Methanol (DR018-US)
		2000.00	ST1712433A	0.1000	10.00	IN1712533D	20	Methanol (DR018-US)
355-46-4	PFHxS	18.91	IN1712533D	0.3000	10.00	CALPFC171253	0.5673	Methanol (DR018-US)
		1891.00	ST1712433A	0.1000	10.00	IN1712533D	18.91	Methanol (DR018-US)
375-95-1	PFNA	20.00	IN1712533D	0.3000	10.00	CALPFC171253	0.6	Methanol (DR018-US)
		2000.00	ST1712433A	0.1000	10.00	IN1712533D	20	Methanol (DR018-US)
474511-07-4	PFNS	19.20	IN1712533D	0.3000	10.00	CALPFC171253	0.576	Methanol (DR018-US)
		1920.00	ST1712433A	0.1000	10.00	IN1712533D	19.200001	Methanol (DR018-US)
335-67-1	PFOA	20.00	IN1712533D	0.3000	10.00	CALPFC171253	0.6	Methanol (DR018-US)
		2000.00	ST1712433A	0.1000	10.00	IN1712533D	20	Methanol (DR018-US)
16517-11-6	PFODA	20.00	IN1712533D	0.3000	10.00	CALPFC171253	0.6	Methanol (DR018-US)
		2000.00	ST1712433A	0.1000	10.00	IN1712533D	20	Methanol (DR018-US)
1763-23-1	PFOS	19.12	IN1712533D	0.3000	10.00	CALPFC171253	0.5736	Methanol (DR018-US)
		1912.00	ST1712433A	0.1000	10.00	IN1712533D	19.119999	Methanol (DR018-US)
754-91-6	PFOSA	20.00	IN1712533D	0.3000	10.00	CALPFC171253	0.6	Methanol (DR018-US)
		2000.00	IN1712533B	0.1000	10.00	IN1712533D	20	Methanol (DR018-US)
		50000.00	ST1705137D	0.0800	2.00	IN1712533B	2000	Methanol (DR018-US)
2706-90-3	PFPA	20.00	IN1712533D	0.3000	10.00	CALPFC171253	0.6	Methanol (DR018-US)
		2000.00	ST1712433A	0.1000	10.00	IN1712533D	20	Methanol (DR018-US)
2706-91-4	PFPeS	18.76	IN1712533D	0.3000	10.00	CALPFC171253	0.5628	Methanol (DR018-US)
		1876.00	ST1712433A	0.1000	10.00	IN1712533D	18.76	Methanol (DR018-US)
376-06-7	PFTeDA	20.00	IN1712533D	0.3000	10.00	CALPFC171253	0.6	Methanol (DR018-US)
		2000.00	ST1712433A	0.1000	10.00	IN1712533D	20	Methanol (DR018-US)
72629-94-8	PFTrDA	20.00	IN1712533D	0.3000	10.00	CALPFC171253	0.6	Methanol (DR018-US)
		2000.00	ST1712433A	0.1000	10.00	IN1712533D	20	Methanol (DR018-US)
2058-94-8	PFUnDA	20.00	IN1712533D	0.3000	10.00	CALPFC171253	0.6	Methanol (DR018-US)
		2000.00	ST1712433A	0.1000	10.00	IN1712533D	20	Methanol (DR018-US)

5/5/2017

Traceability Report for **CALPFC1712533D** **PFC Calib Std (Level 3)**

Prepped by 7824 on 05/05/17 Expires 08/05/17

Compound		Conc. (ppb)	Stock	Aliquot	Vol.(mL)	Solution	Final Conc. (ppb)	Solvent (Lot#)
120226-60-0	10:2-FTS	19.28	IN1712533D	1.0000	10.00	CALPFC171253	1.928	Methanol (DR018-US)
		964.00	IN1712533A	0.2000	10.00	IN1712533D	19.280001	Methanol (DR018-US)
		48200.00	ST1705137A	0.0400	2.00	IN1712533A	964	Methanol (DR018-US)
757124-72-4L	13C2-4:2-FTS	1868.00	IN1712533C	0.0250	10.00	CALPFC171253	4.67	Methanol (DR018-US)
		46700.00	ST1705137Q	0.0800	2.00	IN1712533C	1868	Methanol (DR018-US)
27619-97-2L	13C2-6:2-FTS	1900.00	IN1712533C	0.0250	10.00	CALPFC171253	4.75	Methanol (DR018-US)
		47500.00	ST1710833C	0.0800	2.00	IN1712533C	1900	Methanol (DR018-US)
39108-34-4L	13C2-8:2-FTS	1916.00	IN1712533C	0.0250	10.00	CALPFC171253	4.79	Methanol (DR018-US)
		47900.00	ST1705137S	0.0800	2.00	IN1712533C	1916	Methanol (DR018-US)
335-76-2L	13C2-PFDA	2000.00	ST1711533A	0.0250	10.00	CALPFC171253	5	Methanol (DR018-US)
307-55-1L	13C2-PFDoDA	2000.00	ST1712533A	0.0250	10.00	CALPFC171253	5	Methanol (DR018-US)
335-67-1LC2	13C2-PFOA	2000.00	ST1711533A	0.0250	10.00	CALPFC171253	5	Methanol (DR018-US)
376-06-7L	13C2-PFTeDA	2000.00	ST1712533A	0.0250	10.00	CALPFC171253	5	Methanol (DR018-US)
375-22-4LC3	13C3-PFBA	2000.00	ST1711533A	0.0250	10.00	CALPFC171253	5	Methanol (DR018-US)
375-73-5L	13C3-PFBS	1859.00	ST1712533A	0.0250	10.00	CALPFC171253	4.6475	Methanol (DR018-US)
355-46-4LC3	13C3-PFHxS	1892.00	ST1712533A	0.0250	10.00	CALPFC171253	4.73	Methanol (DR018-US)
375-22-4L	13C4-PFBA	2000.00	ST1712533A	0.0250	10.00	CALPFC171253	5	Methanol (DR018-US)
375-85-9L	13C4-PFHpA	2000.00	ST1712533A	0.0250	10.00	CALPFC171253	5	Methanol (DR018-US)
1763-23-1LC4	13C4-PFOS	1913.00	ST1711533A	0.0250	10.00	CALPFC171253	4.7825	Methanol (DR018-US)
307-24-4LC5	13C5-PFHxA	2000.00	ST1712533A	0.0250	10.00	CALPFC171253	5	Methanol (DR018-US)
2706-90-3L	13C5-PFPA	2000.00	ST1712533A	0.0250	10.00	CALPFC171253	5	Methanol (DR018-US)
335-76-2LC6	13C6-PFDA	2000.00	ST1712533A	0.0250	10.00	CALPFC171253	5	Methanol (DR018-US)
2058-94-8LC7	13C7-PFUnDA	2000.00	ST1712533A	0.0250	10.00	CALPFC171253	5	Methanol (DR018-US)
335-67-1LC8	13C8-PFOA	2000.00	ST1712533A	0.0250	10.00	CALPFC171253	5	Methanol (DR018-US)
1763-23-1LC8	13C8-PFOS	1913.00	ST1712533A	0.0250	10.00	CALPFC171253	4.7825	Methanol (DR018-US)
754-91-6L	13C8-PFOSA	2000.00	IN1712533C	0.0250	10.00	CALPFC171253	5	Methanol (DR018-US)
		50000.00	ST1705137T	0.0800	2.00	IN1712533C	2000	Methanol (DR018-US)
375-95-1LC9	13C9-PFNA	2000.00	ST1712533A	0.0250	10.00	CALPFC171253	5	Methanol (DR018-US)
757124-72-4	4:2-FTS	18.68	IN1712533D	1.0000	10.00	CALPFC171253	1.868	Methanol (DR018-US)
		934.00	IN1712533A	0.2000	10.00	IN1712533D	18.68	Methanol (DR018-US)
		46700.00	ST1705137B	0.0400	2.00	IN1712533A	934	Methanol (DR018-US)
27619-97-2	6:2-FTS	18.96	IN1712533D	1.0000	10.00	CALPFC171253	1.896	Methanol (DR018-US)
		948.00	IN1712533A	0.2000	10.00	IN1712533D	18.960001	Methanol (DR018-US)
		47400.00	ST1705137C	0.0400	2.00	IN1712533A	948	Methanol (DR018-US)
39108-34-4	8:2-FTS	19.16	IN1712533D	1.0000	10.00	CALPFC171253	1.916	Methanol (DR018-US)
		958.00	IN1712533A	0.2000	10.00	IN1712533D	19.16	Methanol (DR018-US)
		47900.00	ST1705237A	0.0400	2.00	IN1712533A	958	Methanol (DR018-US)
2355-31-9L	d3-NMeFOSAA	2000.00	IN1712533C	0.0250	10.00	CALPFC171253	5	Methanol (DR018-US)
		50000.00	ST1705137N	0.0800	2.00	IN1712533C	2000	Methanol (DR018-US)

5/5/2017

Traceability Report for CALPFC1712533I PFC Calib Std (Level 3)

Prepped by 7824 on 05/05/17 Expires 08/05/17

Compound		Conc. (ppb)	Stock	Aliquot	Vol.(mL)	Solution	Final Conc. (ppb)	Solvent (Lot#)
31506-32-8L	d3-NMePFOSA	2000.00	IN1712533C	0.0250	10.00	CALPFC171253	5	Methanol (DR018-US)
		50000.00	ST1705137L	0.0800	2.00	IN1712533C	2000	Methanol (DR018-US)
2991-50-6L	d5-NEtFOSAA	2000.00	IN1712533C	0.0250	10.00	CALPFC171253	5	Methanol (DR018-US)
		50000.00	ST1705137M	0.0800	2.00	IN1712533C	2000	Methanol (DR018-US)
4151-50-2L	d5-NEtPFOSA	2000.00	IN1712533C	0.0250	10.00	CALPFC171253	5	Methanol (DR018-US)
		50000.00	ST1705137K	0.0800	2.00	IN1712533C	2000	Methanol (DR018-US)
24448-09-7L	d7-NMePFOSAE	2000.00	IN1712533C	0.0250	10.00	CALPFC171253	5	Methanol (DR018-US)
		50000.00	ST1710833A	0.0800	2.00	IN1712533C	2000	Methanol (DR018-US)
1691-99-2L	d9-NEtPFOSAE	2000.00	IN1712533C	0.0250	10.00	CALPFC171253	5	Methanol (DR018-US)
		50000.00	ST1710833B	0.0800	2.00	IN1712533C	2000	Methanol (DR018-US)
2991-50-6	NEtFOSAA	20.00	IN1712533D	1.0000	10.00	CALPFC171253	2	Methanol (DR018-US)
		1000.00	IN1712533A	0.2000	10.00	IN1712533D	20	Methanol (DR018-US)
		50000.00	ST1705137I	0.0400	2.00	IN1712533A	1000	Methanol (DR018-US)
4151-50-2	NEtPFOSA	20.00	IN1712533D	1.0000	10.00	CALPFC171253	2	Methanol (DR018-US)
		2000.00	IN1712533B	0.1000	10.00	IN1712533D	20	Methanol (DR018-US)
		50000.00	ST1705137H	0.0800	2.00	IN1712533B	2000	Methanol (DR018-US)
1691-99-2	NEtPFOSAE	20.00	IN1712533D	1.0000	10.00	CALPFC171253	2	Methanol (DR018-US)
		2000.00	IN1712533B	0.1000	10.00	IN1712533D	20	Methanol (DR018-US)
		50000.00	ST1705137J	0.0800	2.00	IN1712533B	2000	Methanol (DR018-US)
2355-31-9	NMeFOSAA	20.00	IN1712533D	1.0000	10.00	CALPFC171253	2	Methanol (DR018-US)
		1000.00	IN1712533A	0.2000	10.00	IN1712533D	20	Methanol (DR018-US)
		50000.00	ST1705137F	0.0400	2.00	IN1712533A	1000	Methanol (DR018-US)
31506-32-8	NMePFOSA	20.00	IN1712533D	1.0000	10.00	CALPFC171253	2	Methanol (DR018-US)
		2000.00	IN1712533B	0.1000	10.00	IN1712533D	20	Methanol (DR018-US)
		50000.00	ST1705137E	0.0800	2.00	IN1712533B	2000	Methanol (DR018-US)
24448-09-7	NMePFOSAE	20.00	IN1712533D	1.0000	10.00	CALPFC171253	2	Methanol (DR018-US)
		2000.00	IN1712533B	0.1000	10.00	IN1712533D	20	Methanol (DR018-US)
		50000.00	ST1705137G	0.0800	2.00	IN1712533B	2000	Methanol (DR018-US)
375-22-4	PFBA	20.00	IN1712533D	1.0000	10.00	CALPFC171253	2	Methanol (DR018-US)
		2000.00	ST1712433A	0.1000	10.00	IN1712533D	20	Methanol (DR018-US)
375-73-5	PFBS	17.69	IN1712533D	1.0000	10.00	CALPFC171253	1.769	Methanol (DR018-US)
		1769.00	ST1712433A	0.1000	10.00	IN1712533D	17.690001	Methanol (DR018-US)
335-76-2	PFDA	20.00	IN1712533D	1.0000	10.00	CALPFC171253	2	Methanol (DR018-US)
		2000.00	ST1712433A	0.1000	10.00	IN1712533D	20	Methanol (DR018-US)
307-55-1	PFDoDA	20.00	IN1712533D	1.0000	10.00	CALPFC171253	2	Methanol (DR018-US)
		2000.00	ST1712433A	0.1000	10.00	IN1712533D	20	Methanol (DR018-US)
79780-39-5	PFDoDS	19.36	IN1712533D	1.0000	10.00	CALPFC171253	1.936	Methanol (DR018-US)
		1936.00	ST1712433A	0.1000	10.00	IN1712533D	19.360001	Methanol (DR018-US)
335-77-3	PFDS	19.26	IN1712533D	1.0000	10.00	CALPFC171253	1.926	Methanol (DR018-US)

5/5/2017

Traceability Report for **CALPFC1712533I** **PFC Calib Std (Level 3)**

Prepped by 7824 on 05/05/17 Expires 08/05/17

Compound		Conc. (ppb)	Stock	Aliquot	Vol.(mL)	Solution	Final Conc. (ppb)	Solvent (Lot#)
335-77-3	PFDS	1926.00	ST1712433A	0.1000	10.00	IN1712533D	19.26	Methanol (DR018-US)
375-85-9	PFHpA	20.00	IN1712533D	1.0000	10.00	CALPFC171253	2	Methanol (DR018-US)
		2000.00	ST1712433A	0.1000	10.00	IN1712533D	20	Methanol (DR018-US)
375-92-8	PFHpS	19.03	IN1712533D	1.0000	10.00	CALPFC171253	1.903	Methanol (DR018-US)
		1903.00	ST1712433A	0.1000	10.00	IN1712533D	19.030001	Methanol (DR018-US)
307-24-4	PFHxA	20.00	IN1712533D	1.0000	10.00	CALPFC171253	2	Methanol (DR018-US)
		2000.00	ST1712433A	0.1000	10.00	IN1712533D	20	Methanol (DR018-US)
67905-19-5	PFHxDA	20.00	IN1712533D	1.0000	10.00	CALPFC171253	2	Methanol (DR018-US)
		2000.00	ST1712433A	0.1000	10.00	IN1712533D	20	Methanol (DR018-US)
355-46-4	PFHxS	18.91	IN1712533D	1.0000	10.00	CALPFC171253	1.891	Methanol (DR018-US)
		1891.00	ST1712433A	0.1000	10.00	IN1712533D	18.91	Methanol (DR018-US)
375-95-1	PFNA	20.00	IN1712533D	1.0000	10.00	CALPFC171253	2	Methanol (DR018-US)
		2000.00	ST1712433A	0.1000	10.00	IN1712533D	20	Methanol (DR018-US)
474511-07-4	PFNS	19.20	IN1712533D	1.0000	10.00	CALPFC171253	1.92	Methanol (DR018-US)
		1920.00	ST1712433A	0.1000	10.00	IN1712533D	19.200001	Methanol (DR018-US)
335-67-1	PFOA	20.00	IN1712533D	1.0000	10.00	CALPFC171253	2	Methanol (DR018-US)
		2000.00	ST1712433A	0.1000	10.00	IN1712533D	20	Methanol (DR018-US)
16517-11-6	PFODA	20.00	IN1712533D	1.0000	10.00	CALPFC171253	2	Methanol (DR018-US)
		2000.00	ST1712433A	0.1000	10.00	IN1712533D	20	Methanol (DR018-US)
1763-23-1	PFOS	19.12	IN1712533D	1.0000	10.00	CALPFC171253	1.912	Methanol (DR018-US)
		1912.00	ST1712433A	0.1000	10.00	IN1712533D	19.119999	Methanol (DR018-US)
754-91-6	PFOSA	20.00	IN1712533D	1.0000	10.00	CALPFC171253	2	Methanol (DR018-US)
		2000.00	IN1712533B	0.1000	10.00	IN1712533D	20	Methanol (DR018-US)
		50000.00	ST1705137D	0.0800	2.00	IN1712533B	2000	Methanol (DR018-US)
2706-90-3	PFPA	20.00	IN1712533D	1.0000	10.00	CALPFC171253	2	Methanol (DR018-US)
		2000.00	ST1712433A	0.1000	10.00	IN1712533D	20	Methanol (DR018-US)
2706-91-4	PFPeS	18.76	IN1712533D	1.0000	10.00	CALPFC171253	1.876	Methanol (DR018-US)
		1876.00	ST1712433A	0.1000	10.00	IN1712533D	18.76	Methanol (DR018-US)
376-06-7	PFTeDA	20.00	IN1712533D	1.0000	10.00	CALPFC171253	2	Methanol (DR018-US)
		2000.00	ST1712433A	0.1000	10.00	IN1712533D	20	Methanol (DR018-US)
72629-94-8	PFTrDA	20.00	IN1712533D	1.0000	10.00	CALPFC171253	2	Methanol (DR018-US)
		2000.00	ST1712433A	0.1000	10.00	IN1712533D	20	Methanol (DR018-US)
2058-94-8	PFUnDA	20.00	IN1712533D	1.0000	10.00	CALPFC171253	2	Methanol (DR018-US)
		2000.00	ST1712433A	0.1000	10.00	IN1712533D	20	Methanol (DR018-US)

5/5/2017

Traceability Report for **CALPFC1712533E** **PFC Calib Std (Level 4)**

Prepped by 7824 on 05/05/17 Expires 08/05/17

Compound		Conc. (ppb)	Stock	Aliquot	Vol.(mL)	Solution	Final Conc. (ppb)	Solvent (Lot#)
120226-60-0	10:2-FTS	964.00	IN1712533A	0.0400	10.00	CALPFC171253	3.856	Methanol (DR018-US)
		48200.00	ST1705137A	0.0400	2.00	IN1712533A	964	Methanol (DR018-US)
757124-72-4L	13C2-4:2-FTS	1868.00	IN1712533C	0.0250	10.00	CALPFC171253	4.67	Methanol (DR018-US)
		46700.00	ST1705137Q	0.0800	2.00	IN1712533C	1868	Methanol (DR018-US)
27619-97-2L	13C2-6:2-FTS	1900.00	IN1712533C	0.0250	10.00	CALPFC171253	4.75	Methanol (DR018-US)
		47500.00	ST1710833C	0.0800	2.00	IN1712533C	1900	Methanol (DR018-US)
39108-34-4L	13C2-8:2-FTS	1916.00	IN1712533C	0.0250	10.00	CALPFC171253	4.79	Methanol (DR018-US)
		47900.00	ST1705137S	0.0800	2.00	IN1712533C	1916	Methanol (DR018-US)
335-76-2L	13C2-PFDA	2000.00	ST1711533A	0.0250	10.00	CALPFC171253	5	Methanol (DR018-US)
307-55-1L	13C2-PFDoDA	2000.00	ST1712533A	0.0250	10.00	CALPFC171253	5	Methanol (DR018-US)
335-67-1LC2	13C2-PFOA	2000.00	ST1711533A	0.0250	10.00	CALPFC171253	5	Methanol (DR018-US)
376-06-7L	13C2-PFTeDA	2000.00	ST1712533A	0.0250	10.00	CALPFC171253	5	Methanol (DR018-US)
375-22-4LC3	13C3-PFBA	2000.00	ST1711533A	0.0250	10.00	CALPFC171253	5	Methanol (DR018-US)
375-73-5L	13C3-PFBS	1859.00	ST1712533A	0.0250	10.00	CALPFC171253	4.6475	Methanol (DR018-US)
355-46-4LC3	13C3-PFHxS	1892.00	ST1712533A	0.0250	10.00	CALPFC171253	4.73	Methanol (DR018-US)
375-22-4L	13C4-PFBA	2000.00	ST1712533A	0.0250	10.00	CALPFC171253	5	Methanol (DR018-US)
375-85-9L	13C4-PFHpA	2000.00	ST1712533A	0.0250	10.00	CALPFC171253	5	Methanol (DR018-US)
1763-23-1LC	13C4-PFOS	1913.00	ST1711533A	0.0250	10.00	CALPFC171253	4.7825	Methanol (DR018-US)
307-24-4LC5	13C5-PFHxA	2000.00	ST1712533A	0.0250	10.00	CALPFC171253	5	Methanol (DR018-US)
2706-90-3L	13C5-PFPA	2000.00	ST1712533A	0.0250	10.00	CALPFC171253	5	Methanol (DR018-US)
335-76-2LC6	13C6-PFDA	2000.00	ST1712533A	0.0250	10.00	CALPFC171253	5	Methanol (DR018-US)
2058-94-8LC	13C7-PFUnDA	2000.00	ST1712533A	0.0250	10.00	CALPFC171253	5	Methanol (DR018-US)
335-67-1LC8	13C8-PFOA	2000.00	ST1712533A	0.0250	10.00	CALPFC171253	5	Methanol (DR018-US)
1763-23-1LC	13C8-PFOS	1913.00	ST1712533A	0.0250	10.00	CALPFC171253	4.7825	Methanol (DR018-US)
754-91-6L	13C8-PFOSA	2000.00	IN1712533C	0.0250	10.00	CALPFC171253	5	Methanol (DR018-US)
		50000.00	ST1705137T	0.0800	2.00	IN1712533C	2000	Methanol (DR018-US)
375-95-1LC9	13C9-PFNA	2000.00	ST1712533A	0.0250	10.00	CALPFC171253	5	Methanol (DR018-US)
757124-72-4	4:2-FTS	934.00	IN1712533A	0.0400	10.00	CALPFC171253	3.736	Methanol (DR018-US)
		46700.00	ST1705137B	0.0400	2.00	IN1712533A	934	Methanol (DR018-US)
27619-97-2	6:2-FTS	948.00	IN1712533A	0.0400	10.00	CALPFC171253	3.792	Methanol (DR018-US)
		47400.00	ST1705137C	0.0400	2.00	IN1712533A	948	Methanol (DR018-US)
39108-34-4	8:2-FTS	958.00	IN1712533A	0.0400	10.00	CALPFC171253	3.832	Methanol (DR018-US)
		47900.00	ST1705237A	0.0400	2.00	IN1712533A	958	Methanol (DR018-US)
2355-31-9L	d3-NMeFOSAA	2000.00	IN1712533C	0.0250	10.00	CALPFC171253	5	Methanol (DR018-US)
		50000.00	ST1705137N	0.0800	2.00	IN1712533C	2000	Methanol (DR018-US)
31506-32-8L	d3-NMePFOSA	2000.00	IN1712533C	0.0250	10.00	CALPFC171253	5	Methanol (DR018-US)
		50000.00	ST1705137L	0.0800	2.00	IN1712533C	2000	Methanol (DR018-US)
2991-50-6L	d5-NEtFOSAA	2000.00	IN1712533C	0.0250	10.00	CALPFC171253	5	Methanol (DR018-US)
		50000.00	ST1705137M	0.0800	2.00	IN1712533C	2000	Methanol (DR018-US)

5/5/2017

Traceability Report for CALPFC1712533E PFC Calib Std (Level 4)

Prepped by 7824 on 05/05/17 Expires 08/05/17

Compound		Conc. (ppb)	Stock	Aliquot	Vol.(mL)	Solution	Final Conc. (ppb)	Solvent (Lot#)
4151-50-2L	d5-NEtPFOSA	2000.00	IN1712533C	0.0250	10.00	CALPFC171253	5	Methanol (DR018-US)
		50000.00	ST1705137K	0.0800	2.00	IN1712533C	2000	Methanol (DR018-US)
24448-09-7L	d7-NMePFOSAE	2000.00	IN1712533C	0.0250	10.00	CALPFC171253	5	Methanol (DR018-US)
		50000.00	ST1710833A	0.0800	2.00	IN1712533C	2000	Methanol (DR018-US)
1691-99-2L	d9-NEtPFOSAE	2000.00	IN1712533C	0.0250	10.00	CALPFC171253	5	Methanol (DR018-US)
		50000.00	ST1710833B	0.0800	2.00	IN1712533C	2000	Methanol (DR018-US)
2991-50-6	NEtFOSAA	1000.00	IN1712533A	0.0400	10.00	CALPFC171253	4	Methanol (DR018-US)
		50000.00	ST1705137I	0.0400	2.00	IN1712533A	1000	Methanol (DR018-US)
4151-50-2	NEtPFOSA	2000.00	IN1712533B	0.0400	10.00	CALPFC171253	8	Methanol (DR018-US)
		50000.00	ST1705137H	0.0800	2.00	IN1712533B	2000	Methanol (DR018-US)
1691-99-2	NEtPFOSAE	2000.00	IN1712533B	0.0400	10.00	CALPFC171253	8	Methanol (DR018-US)
		50000.00	ST1705137J	0.0800	2.00	IN1712533B	2000	Methanol (DR018-US)
2355-31-9	NMeFOSAA	1000.00	IN1712533A	0.0400	10.00	CALPFC171253	4	Methanol (DR018-US)
		50000.00	ST1705137F	0.0400	2.00	IN1712533A	1000	Methanol (DR018-US)
31506-32-8	NMePFOSA	2000.00	IN1712533B	0.0400	10.00	CALPFC171253	8	Methanol (DR018-US)
		50000.00	ST1705137E	0.0800	2.00	IN1712533B	2000	Methanol (DR018-US)
24448-09-7	NMePFOSAE	2000.00	IN1712533B	0.0400	10.00	CALPFC171253	8	Methanol (DR018-US)
		50000.00	ST1705137G	0.0800	2.00	IN1712533B	2000	Methanol (DR018-US)
375-22-4	PFBA	2000.00	ST1712433A	0.0400	10.00	CALPFC171253	8	Methanol (DR018-US)
375-73-5	PFBS	1769.00	ST1712433A	0.0400	10.00	CALPFC171253	7.076	Methanol (DR018-US)
335-76-2	PFDA	2000.00	ST1712433A	0.0400	10.00	CALPFC171253	8	Methanol (DR018-US)
307-55-1	PFDoDA	2000.00	ST1712433A	0.0400	10.00	CALPFC171253	8	Methanol (DR018-US)
79780-39-5	PFDoDS	1936.00	ST1712433A	0.0400	10.00	CALPFC171253	7.743999	Methanol (DR018-US)
335-77-3	PFDS	1926.00	ST1712433A	0.0400	10.00	CALPFC171253	7.704	Methanol (DR018-US)
375-85-9	PFHpA	2000.00	ST1712433A	0.0400	10.00	CALPFC171253	8	Methanol (DR018-US)
375-92-8	PFHpS	1903.00	ST1712433A	0.0400	10.00	CALPFC171253	7.612	Methanol (DR018-US)
307-24-4	PFHxA	2000.00	ST1712433A	0.0400	10.00	CALPFC171253	8	Methanol (DR018-US)
67905-19-5	PFHxDA	2000.00	ST1712433A	0.0400	10.00	CALPFC171253	8	Methanol (DR018-US)
355-46-4	PFHxS	1891.00	ST1712433A	0.0400	10.00	CALPFC171253	7.564	Methanol (DR018-US)
375-95-1	PFNA	2000.00	ST1712433A	0.0400	10.00	CALPFC171253	8	Methanol (DR018-US)
474511-07-4	PFNS	1920.00	ST1712433A	0.0400	10.00	CALPFC171253	7.679999	Methanol (DR018-US)
335-67-1	PFOA	2000.00	ST1712433A	0.0400	10.00	CALPFC171253	8	Methanol (DR018-US)
16517-11-6	PFODA	2000.00	ST1712433A	0.0400	10.00	CALPFC171253	8	Methanol (DR018-US)
1763-23-1	PFOS	1912.00	ST1712433A	0.0400	10.00	CALPFC171253	7.648	Methanol (DR018-US)
754-91-6	PFOSA	2000.00	IN1712533B	0.0400	10.00	CALPFC171253	8	Methanol (DR018-US)
		50000.00	ST1705137D	0.0800	2.00	IN1712533B	2000	Methanol (DR018-US)
2706-90-3	PFPA	2000.00	ST1712433A	0.0400	10.00	CALPFC171253	8	Methanol (DR018-US)
2706-91-4	PFPeS	1876.00	ST1712433A	0.0400	10.00	CALPFC171253	7.504	Methanol (DR018-US)
376-06-7	PFTeDA	2000.00	ST1712433A	0.0400	10.00	CALPFC171253	8	Methanol (DR018-US)

5/5/2017

Traceability Report for **CALPFC1712533E** **PFC Calib Std (Level 4)**

Prepped by 7824 on 05/05/17 Expires 08/05/17

Compound		Conc. (ppb)	Stock	Aliquot	Vol.(mL)	Solution	Final Conc. (ppb)	Solvent (Lot#)
72629-94-8	PFTrDA	2000.00	ST1712433A	0.0400	10.00	CALPFC171253	8	Methanol (DR018-US)
2058-94-8	PFUnDA	2000.00	ST1712433A	0.0400	10.00	CALPFC171253	8	Methanol (DR018-US)

5/5/2017

Traceability Report for **CALPFC1712533F** **PFC Calib Std (Level 5)**

Prepped by 7824 on 05/05/17 Expires 08/05/17

Compound		Conc. (ppb)	Stock	Aliquot	Vol.(mL)	Solution	Final Conc. (ppb)	Solvent (Lot#)
120226-60-0	10:2-FTS	964.00	IN1712533A	0.1000	10.00	CALPFC171253	9.64	Methanol (DR018-US)
		48200.00	ST1705137A	0.0400	2.00	IN1712533A	964	Methanol (DR018-US)
757124-72-4L	13C2-4:2-FTS	1868.00	IN1712533C	0.0250	10.00	CALPFC171253	4.67	Methanol (DR018-US)
		46700.00	ST1705137Q	0.0800	2.00	IN1712533C	1868	Methanol (DR018-US)
27619-97-2L	13C2-6:2-FTS	1900.00	IN1712533C	0.0250	10.00	CALPFC171253	4.75	Methanol (DR018-US)
		47500.00	ST1710833C	0.0800	2.00	IN1712533C	1900	Methanol (DR018-US)
39108-34-4L	13C2-8:2-FTS	1916.00	IN1712533C	0.0250	10.00	CALPFC171253	4.79	Methanol (DR018-US)
		47900.00	ST1705137S	0.0800	2.00	IN1712533C	1916	Methanol (DR018-US)
335-76-2L	13C2-PFDA	2000.00	ST1711533A	0.0250	10.00	CALPFC171253	5	Methanol (DR018-US)
307-55-1L	13C2-PFDoDA	2000.00	ST1712533A	0.0250	10.00	CALPFC171253	5	Methanol (DR018-US)
335-67-1LC2	13C2-PFOA	2000.00	ST1711533A	0.0250	10.00	CALPFC171253	5	Methanol (DR018-US)
376-06-7L	13C2-PFTeDA	2000.00	ST1712533A	0.0250	10.00	CALPFC171253	5	Methanol (DR018-US)
375-22-4LC3	13C3-PFBA	2000.00	ST1711533A	0.0250	10.00	CALPFC171253	5	Methanol (DR018-US)
375-73-5L	13C3-PFBS	1859.00	ST1712533A	0.0250	10.00	CALPFC171253	4.6475	Methanol (DR018-US)
355-46-4LC3	13C3-PFHxS	1892.00	ST1712533A	0.0250	10.00	CALPFC171253	4.73	Methanol (DR018-US)
375-22-4L	13C4-PFBA	2000.00	ST1712533A	0.0250	10.00	CALPFC171253	5	Methanol (DR018-US)
375-85-9L	13C4-PFHpA	2000.00	ST1712533A	0.0250	10.00	CALPFC171253	5	Methanol (DR018-US)
1763-23-1LC4	13C4-PFOS	1913.00	ST1711533A	0.0250	10.00	CALPFC171253	4.7825	Methanol (DR018-US)
307-24-4LC5	13C5-PFHxA	2000.00	ST1712533A	0.0250	10.00	CALPFC171253	5	Methanol (DR018-US)
2706-90-3L	13C5-PFPA	2000.00	ST1712533A	0.0250	10.00	CALPFC171253	5	Methanol (DR018-US)
335-76-2LC6	13C6-PFDA	2000.00	ST1712533A	0.0250	10.00	CALPFC171253	5	Methanol (DR018-US)
2058-94-8LC7	13C7-PFUnDA	2000.00	ST1712533A	0.0250	10.00	CALPFC171253	5	Methanol (DR018-US)
335-67-1LC8	13C8-PFOA	2000.00	ST1712533A	0.0250	10.00	CALPFC171253	5	Methanol (DR018-US)
1763-23-1LC8	13C8-PFOS	1913.00	ST1712533A	0.0250	10.00	CALPFC171253	4.7825	Methanol (DR018-US)
754-91-6L	13C8-PFOSA	2000.00	IN1712533C	0.0250	10.00	CALPFC171253	5	Methanol (DR018-US)
		50000.00	ST1705137T	0.0800	2.00	IN1712533C	2000	Methanol (DR018-US)
375-95-1LC9	13C9-PFNA	2000.00	ST1712533A	0.0250	10.00	CALPFC171253	5	Methanol (DR018-US)
757124-72-4	4:2-FTS	934.00	IN1712533A	0.1000	10.00	CALPFC171253	9.34	Methanol (DR018-US)
		46700.00	ST1705137B	0.0400	2.00	IN1712533A	934	Methanol (DR018-US)
27619-97-2	6:2-FTS	948.00	IN1712533A	0.1000	10.00	CALPFC171253	9.48	Methanol (DR018-US)
		47400.00	ST1705137C	0.0400	2.00	IN1712533A	948	Methanol (DR018-US)
39108-34-4	8:2-FTS	958.00	IN1712533A	0.1000	10.00	CALPFC171253	9.58	Methanol (DR018-US)
		47900.00	ST1705237A	0.0400	2.00	IN1712533A	958	Methanol (DR018-US)
2355-31-9L	d3-NMeFOSAA	2000.00	IN1712533C	0.0250	10.00	CALPFC171253	5	Methanol (DR018-US)
		50000.00	ST1705137N	0.0800	2.00	IN1712533C	2000	Methanol (DR018-US)
31506-32-8L	d3-NMePFOSA	2000.00	IN1712533C	0.0250	10.00	CALPFC171253	5	Methanol (DR018-US)
		50000.00	ST1705137L	0.0800	2.00	IN1712533C	2000	Methanol (DR018-US)
2991-50-6L	d5-NEtFOSAA	2000.00	IN1712533C	0.0250	10.00	CALPFC171253	5	Methanol (DR018-US)
		50000.00	ST1705137M	0.0800	2.00	IN1712533C	2000	Methanol (DR018-US)

5/5/2017

Traceability Report for **CALPFC1712533F** **PFC Calib Std (Level 5)**

Prepped by 7824 on 05/05/17 Expires 08/05/17

Compound		Conc. (ppb)	Stock	Aliquot	Vol.(mL)	Solution	Final Conc. (ppb)	Solvent (Lot#)
4151-50-2L	d5-NEtPFOSA	2000.00	IN1712533C	0.0250	10.00	CALPFC171253	5	Methanol (DR018-US)
		50000.00	ST1705137K	0.0800	2.00	IN1712533C	2000	Methanol (DR018-US)
24448-09-7L	d7-NMePFOSAE	2000.00	IN1712533C	0.0250	10.00	CALPFC171253	5	Methanol (DR018-US)
		50000.00	ST1710833A	0.0800	2.00	IN1712533C	2000	Methanol (DR018-US)
1691-99-2L	d9-NEtPFOSAE	2000.00	IN1712533C	0.0250	10.00	CALPFC171253	5	Methanol (DR018-US)
		50000.00	ST1710833B	0.0800	2.00	IN1712533C	2000	Methanol (DR018-US)
2991-50-6	NEtFOSAA	1000.00	IN1712533A	0.1000	10.00	CALPFC171253	10	Methanol (DR018-US)
		50000.00	ST1705137I	0.0400	2.00	IN1712533A	1000	Methanol (DR018-US)
4151-50-2	NEtPFOSA	2000.00	IN1712533B	0.1000	10.00	CALPFC171253	20	Methanol (DR018-US)
		50000.00	ST1705137H	0.0800	2.00	IN1712533B	2000	Methanol (DR018-US)
1691-99-2	NEtPFOSAE	2000.00	IN1712533B	0.1000	10.00	CALPFC171253	20	Methanol (DR018-US)
		50000.00	ST1705137J	0.0800	2.00	IN1712533B	2000	Methanol (DR018-US)
2355-31-9	NMeFOSAA	1000.00	IN1712533A	0.1000	10.00	CALPFC171253	10	Methanol (DR018-US)
		50000.00	ST1705137F	0.0400	2.00	IN1712533A	1000	Methanol (DR018-US)
31506-32-8	NMePFOSA	2000.00	IN1712533B	0.1000	10.00	CALPFC171253	20	Methanol (DR018-US)
		50000.00	ST1705137E	0.0800	2.00	IN1712533B	2000	Methanol (DR018-US)
24448-09-7	NMePFOSAE	2000.00	IN1712533B	0.1000	10.00	CALPFC171253	20	Methanol (DR018-US)
		50000.00	ST1705137G	0.0800	2.00	IN1712533B	2000	Methanol (DR018-US)
375-22-4	PFBA	2000.00	ST1712433A	0.1000	10.00	CALPFC171253	20	Methanol (DR018-US)
375-73-5	PFBS	1769.00	ST1712433A	0.1000	10.00	CALPFC171253	17.690001	Methanol (DR018-US)
335-76-2	PFDA	2000.00	ST1712433A	0.1000	10.00	CALPFC171253	20	Methanol (DR018-US)
307-55-1	PFDoDA	2000.00	ST1712433A	0.1000	10.00	CALPFC171253	20	Methanol (DR018-US)
79780-39-5	PFDoDS	1936.00	ST1712433A	0.1000	10.00	CALPFC171253	19.360001	Methanol (DR018-US)
335-77-3	PFDS	1926.00	ST1712433A	0.1000	10.00	CALPFC171253	19.26	Methanol (DR018-US)
375-85-9	PFHpA	2000.00	ST1712433A	0.1000	10.00	CALPFC171253	20	Methanol (DR018-US)
375-92-8	PFHpS	1903.00	ST1712433A	0.1000	10.00	CALPFC171253	19.030001	Methanol (DR018-US)
307-24-4	PFHxA	2000.00	ST1712433A	0.1000	10.00	CALPFC171253	20	Methanol (DR018-US)
67905-19-5	PFHxDA	2000.00	ST1712433A	0.1000	10.00	CALPFC171253	20	Methanol (DR018-US)
355-46-4	PFHxS	1891.00	ST1712433A	0.1000	10.00	CALPFC171253	18.91	Methanol (DR018-US)
375-95-1	PFNA	2000.00	ST1712433A	0.1000	10.00	CALPFC171253	20	Methanol (DR018-US)
474511-07-4	PFNS	1920.00	ST1712433A	0.1000	10.00	CALPFC171253	19.200001	Methanol (DR018-US)
335-67-1	PFOA	2000.00	ST1712433A	0.1000	10.00	CALPFC171253	20	Methanol (DR018-US)
16517-11-6	PFODA	2000.00	ST1712433A	0.1000	10.00	CALPFC171253	20	Methanol (DR018-US)
1763-23-1	PFOS	1912.00	ST1712433A	0.1000	10.00	CALPFC171253	19.119999	Methanol (DR018-US)
754-91-6	PFOSA	2000.00	IN1712533B	0.1000	10.00	CALPFC171253	20	Methanol (DR018-US)
		50000.00	ST1705137D	0.0800	2.00	IN1712533B	2000	Methanol (DR018-US)
2706-90-3	PFPA	2000.00	ST1712433A	0.1000	10.00	CALPFC171253	20	Methanol (DR018-US)
2706-91-4	PFPeS	1876.00	ST1712433A	0.1000	10.00	CALPFC171253	18.76	Methanol (DR018-US)
376-06-7	PFTeDA	2000.00	ST1712433A	0.1000	10.00	CALPFC171253	20	Methanol (DR018-US)

5/5/2017

Traceability Report for **CALPFC1712533F** **PFC Calib Std (Level 5)**

Prepped by 7824 on 05/05/17 Expires 08/05/17

Compound		Conc. (ppb)	Stock	Aliquot	Vol.(mL)	Solution	Final Conc. (ppb)	Solvent (Lot#)
72629-94-8	PFTrDA	2000.00	ST1712433A	0.1000	10.00	CALPFC171253	20	Methanol (DR018-US)
2058-94-8	PFUnDA	2000.00	ST1712433A	0.1000	10.00	CALPFC171253	20	Methanol (DR018-US)

5/5/2017

Traceability Report for **CALPFC1712533(** **PFC Calib Std (Level 6)**

Prepped by 7824 on 05/05/17 Expires 08/05/17

Compound		Conc. (ppb)	Stock	Aliquot	Vol.(mL)	Solution	Final Conc. (ppb)	Solvent (Lot#)
120226-60-0	10:2-FTS	964.00	IN1712533A	0.2500	10.00	CALPFC171253	24.1	Methanol (DR018-US)
		48200.00	ST1705137A	0.0400	2.00	IN1712533A	964	Methanol (DR018-US)
757124-72-4L	13C2-4:2-FTS	1868.00	IN1712533C	0.0250	10.00	CALPFC171253	4.67	Methanol (DR018-US)
		46700.00	ST1705137Q	0.0800	2.00	IN1712533C	1868	Methanol (DR018-US)
27619-97-2L	13C2-6:2-FTS	1900.00	IN1712533C	0.0250	10.00	CALPFC171253	4.75	Methanol (DR018-US)
		47500.00	ST1710833C	0.0800	2.00	IN1712533C	1900	Methanol (DR018-US)
39108-34-4L	13C2-8:2-FTS	1916.00	IN1712533C	0.0250	10.00	CALPFC171253	4.79	Methanol (DR018-US)
		47900.00	ST1705137S	0.0800	2.00	IN1712533C	1916	Methanol (DR018-US)
335-76-2L	13C2-PFDA	2000.00	ST1711533A	0.0250	10.00	CALPFC171253	5	Methanol (DR018-US)
307-55-1L	13C2-PFDoDA	2000.00	ST1712533A	0.0250	10.00	CALPFC171253	5	Methanol (DR018-US)
335-67-1LC2	13C2-PFOA	2000.00	ST1711533A	0.0250	10.00	CALPFC171253	5	Methanol (DR018-US)
376-06-7L	13C2-PFTeDA	2000.00	ST1712533A	0.0250	10.00	CALPFC171253	5	Methanol (DR018-US)
375-22-4LC3	13C3-PFBA	2000.00	ST1711533A	0.0250	10.00	CALPFC171253	5	Methanol (DR018-US)
375-73-5L	13C3-PFBS	1859.00	ST1712533A	0.0250	10.00	CALPFC171253	4.6475	Methanol (DR018-US)
355-46-4LC3	13C3-PFHxS	1892.00	ST1712533A	0.0250	10.00	CALPFC171253	4.73	Methanol (DR018-US)
375-22-4L	13C4-PFBA	2000.00	ST1712533A	0.0250	10.00	CALPFC171253	5	Methanol (DR018-US)
375-85-9L	13C4-PFHpA	2000.00	ST1712533A	0.0250	10.00	CALPFC171253	5	Methanol (DR018-US)
1763-23-1LC4	13C4-PFOS	1913.00	ST1711533A	0.0250	10.00	CALPFC171253	4.7825	Methanol (DR018-US)
307-24-4LC5	13C5-PFHxA	2000.00	ST1712533A	0.0250	10.00	CALPFC171253	5	Methanol (DR018-US)
2706-90-3L	13C5-PFPA	2000.00	ST1712533A	0.0250	10.00	CALPFC171253	5	Methanol (DR018-US)
335-76-2LC6	13C6-PFDA	2000.00	ST1712533A	0.0250	10.00	CALPFC171253	5	Methanol (DR018-US)
2058-94-8LC7	13C7-PFUnDA	2000.00	ST1712533A	0.0250	10.00	CALPFC171253	5	Methanol (DR018-US)
335-67-1LC8	13C8-PFOA	2000.00	ST1712533A	0.0250	10.00	CALPFC171253	5	Methanol (DR018-US)
1763-23-1LC8	13C8-PFOS	1913.00	ST1712533A	0.0250	10.00	CALPFC171253	4.7825	Methanol (DR018-US)
754-91-6L	13C8-PFOSA	2000.00	IN1712533C	0.0250	10.00	CALPFC171253	5	Methanol (DR018-US)
		50000.00	ST1705137T	0.0800	2.00	IN1712533C	2000	Methanol (DR018-US)
375-95-1LC9	13C9-PFNA	2000.00	ST1712533A	0.0250	10.00	CALPFC171253	5	Methanol (DR018-US)
757124-72-4	4:2-FTS	934.00	IN1712533A	0.2500	10.00	CALPFC171253	23.35	Methanol (DR018-US)
		46700.00	ST1705137B	0.0400	2.00	IN1712533A	934	Methanol (DR018-US)
27619-97-2	6:2-FTS	948.00	IN1712533A	0.2500	10.00	CALPFC171253	23.700001	Methanol (DR018-US)
		47400.00	ST1705137C	0.0400	2.00	IN1712533A	948	Methanol (DR018-US)
39108-34-4	8:2-FTS	958.00	IN1712533A	0.2500	10.00	CALPFC171253	23.950001	Methanol (DR018-US)
		47900.00	ST1705237A	0.0400	2.00	IN1712533A	958	Methanol (DR018-US)
2355-31-9L	d3-NMeFOSAA	2000.00	IN1712533C	0.0250	10.00	CALPFC171253	5	Methanol (DR018-US)
		50000.00	ST1705137N	0.0800	2.00	IN1712533C	2000	Methanol (DR018-US)
31506-32-8L	d3-NMePFOSA	2000.00	IN1712533C	0.0250	10.00	CALPFC171253	5	Methanol (DR018-US)
		50000.00	ST1705137L	0.0800	2.00	IN1712533C	2000	Methanol (DR018-US)
2991-50-6L	d5-NEtFOSAA	2000.00	IN1712533C	0.0250	10.00	CALPFC171253	5	Methanol (DR018-US)
		50000.00	ST1705137M	0.0800	2.00	IN1712533C	2000	Methanol (DR018-US)

5/5/2017

Traceability Report for CALPFC1712533(PFC Calib Std (Level 6)

Prepped by 7824 on 05/05/17 Expires 08/05/17

Compound		Conc. (ppb)	Stock	Aliquot	Vol.(mL)	Solution	Final Conc. (ppb)	Solvent (Lot#)
4151-50-2L	d5-NEtPFOSA	2000.00	IN1712533C	0.0250	10.00	CALPFC171253	5	Methanol (DR018-US)
		50000.00	ST1705137K	0.0800	2.00	IN1712533C	2000	Methanol (DR018-US)
24448-09-7L	d7-NMePFOSAE	2000.00	IN1712533C	0.0250	10.00	CALPFC171253	5	Methanol (DR018-US)
		50000.00	ST1710833A	0.0800	2.00	IN1712533C	2000	Methanol (DR018-US)
1691-99-2L	d9-NEtPFOSAE	2000.00	IN1712533C	0.0250	10.00	CALPFC171253	5	Methanol (DR018-US)
		50000.00	ST1710833B	0.0800	2.00	IN1712533C	2000	Methanol (DR018-US)
2991-50-6	NEtFOSAA	1000.00	IN1712533A	0.2500	10.00	CALPFC171253	25	Methanol (DR018-US)
		50000.00	ST1705137I	0.0400	2.00	IN1712533A	1000	Methanol (DR018-US)
4151-50-2	NEtPFOSA	2000.00	IN1712533B	0.2500	10.00	CALPFC171253	50	Methanol (DR018-US)
		50000.00	ST1705137H	0.0800	2.00	IN1712533B	2000	Methanol (DR018-US)
1691-99-2	NEtPFOSAE	2000.00	IN1712533B	0.2500	10.00	CALPFC171253	50	Methanol (DR018-US)
		50000.00	ST1705137J	0.0800	2.00	IN1712533B	2000	Methanol (DR018-US)
2355-31-9	NMeFOSAA	1000.00	IN1712533A	0.2500	10.00	CALPFC171253	25	Methanol (DR018-US)
		50000.00	ST1705137F	0.0400	2.00	IN1712533A	1000	Methanol (DR018-US)
31506-32-8	NMePFOSA	2000.00	IN1712533B	0.2500	10.00	CALPFC171253	50	Methanol (DR018-US)
		50000.00	ST1705137E	0.0800	2.00	IN1712533B	2000	Methanol (DR018-US)
24448-09-7	NMePFOSAE	2000.00	IN1712533B	0.2500	10.00	CALPFC171253	50	Methanol (DR018-US)
		50000.00	ST1705137G	0.0800	2.00	IN1712533B	2000	Methanol (DR018-US)
375-22-4	PFBA	2000.00	ST1712433A	0.2500	10.00	CALPFC171253	50	Methanol (DR018-US)
375-73-5	PFBS	1769.00	ST1712433A	0.2500	10.00	CALPFC171253	44.224998	Methanol (DR018-US)
335-76-2	PFDA	2000.00	ST1712433A	0.2500	10.00	CALPFC171253	50	Methanol (DR018-US)
307-55-1	PFDoDA	2000.00	ST1712433A	0.2500	10.00	CALPFC171253	50	Methanol (DR018-US)
79780-39-5	PFDoDS	1936.00	ST1712433A	0.2500	10.00	CALPFC171253	48.400002	Methanol (DR018-US)
335-77-3	PFDS	1926.00	ST1712433A	0.2500	10.00	CALPFC171253	48.150002	Methanol (DR018-US)
375-85-9	PFHpA	2000.00	ST1712433A	0.2500	10.00	CALPFC171253	50	Methanol (DR018-US)
375-92-8	PFHpS	1903.00	ST1712433A	0.2500	10.00	CALPFC171253	47.575001	Methanol (DR018-US)
307-24-4	PFHxA	2000.00	ST1712433A	0.2500	10.00	CALPFC171253	50	Methanol (DR018-US)
67905-19-5	PFHxDA	2000.00	ST1712433A	0.2500	10.00	CALPFC171253	50	Methanol (DR018-US)
355-46-4	PFHxS	1891.00	ST1712433A	0.2500	10.00	CALPFC171253	47.275002	Methanol (DR018-US)
375-95-1	PFNA	2000.00	ST1712433A	0.2500	10.00	CALPFC171253	50	Methanol (DR018-US)
474511-07-4	PFNS	1920.00	ST1712433A	0.2500	10.00	CALPFC171253	48	Methanol (DR018-US)
335-67-1	PFOA	2000.00	ST1712433A	0.2500	10.00	CALPFC171253	50	Methanol (DR018-US)
16517-11-6	PFODA	2000.00	ST1712433A	0.2500	10.00	CALPFC171253	50	Methanol (DR018-US)
1763-23-1	PFOS	1912.00	ST1712433A	0.2500	10.00	CALPFC171253	47.799999	Methanol (DR018-US)
754-91-6	PFOSA	2000.00	IN1712533B	0.2500	10.00	CALPFC171253	50	Methanol (DR018-US)
		50000.00	ST1705137D	0.0800	2.00	IN1712533B	2000	Methanol (DR018-US)
2706-90-3	PFPA	2000.00	ST1712433A	0.2500	10.00	CALPFC171253	50	Methanol (DR018-US)
2706-91-4	PFPeS	1876.00	ST1712433A	0.2500	10.00	CALPFC171253	46.900002	Methanol (DR018-US)
376-06-7	PFTeDA	2000.00	ST1712433A	0.2500	10.00	CALPFC171253	50	Methanol (DR018-US)

5/5/2017

Traceability Report for **CALPFC1712533(** **PFC Calib Std (Level 6)**

Prepped by 7824 on 05/05/17 Expires 08/05/17

Compound		Conc. (ppb)	Stock	Aliquot	Vol.(mL)	Solution	Final Conc. (ppb)	Solvent (Lot#)
72629-94-8	PFTrDA	2000.00	ST1712433A	0.2500	10.00	CALPFC171253	50	Methanol (DR018-US)
2058-94-8	PFUnDA	2000.00	ST1712433A	0.2500	10.00	CALPFC171253	50	Methanol (DR018-US)

5/5/2017

Traceability Report for **CALPFC1712533I** **PFC Calib Std (Level 7)**

Prepped by 7824 on 05/05/17 Expires 08/05/17

Compound		Conc. (ppb)	Stock	Aliquot	Vol.(mL)	Solution	Final Conc. (ppb)	Solvent (Lot#)
120226-60-0	10:2-FTS	964.00	IN1712533A	0.5000	10.00	CALPFC171253	48.200001	Methanol (DR018-US)
		48200.00	ST1705137A	0.0400	2.00	IN1712533A	964	Methanol (DR018-US)
757124-72-4L	13C2-4:2-FTS	1868.00	IN1712533C	0.0250	10.00	CALPFC171253	4.67	Methanol (DR018-US)
		46700.00	ST1705137Q	0.0800	2.00	IN1712533C	1868	Methanol (DR018-US)
27619-97-2L	13C2-6:2-FTS	1900.00	IN1712533C	0.0250	10.00	CALPFC171253	4.75	Methanol (DR018-US)
		47500.00	ST1710833C	0.0800	2.00	IN1712533C	1900	Methanol (DR018-US)
39108-34-4L	13C2-8:2-FTS	1916.00	IN1712533C	0.0250	10.00	CALPFC171253	4.79	Methanol (DR018-US)
		47900.00	ST1705137S	0.0800	2.00	IN1712533C	1916	Methanol (DR018-US)
335-76-2L	13C2-PFDA	2000.00	ST1711533A	0.0250	10.00	CALPFC171253	5	Methanol (DR018-US)
307-55-1L	13C2-PFDoDA	2000.00	ST1712533A	0.0250	10.00	CALPFC171253	5	Methanol (DR018-US)
335-67-1LC2	13C2-PFOA	2000.00	ST1711533A	0.0250	10.00	CALPFC171253	5	Methanol (DR018-US)
376-06-7L	13C2-PFTeDA	2000.00	ST1712533A	0.0250	10.00	CALPFC171253	5	Methanol (DR018-US)
375-22-4LC3	13C3-PFBA	2000.00	ST1711533A	0.0250	10.00	CALPFC171253	5	Methanol (DR018-US)
375-73-5L	13C3-PFBS	1859.00	ST1712533A	0.0250	10.00	CALPFC171253	4.6475	Methanol (DR018-US)
355-46-4LC3	13C3-PFHxS	1892.00	ST1712533A	0.0250	10.00	CALPFC171253	4.73	Methanol (DR018-US)
375-22-4L	13C4-PFBA	2000.00	ST1712533A	0.0250	10.00	CALPFC171253	5	Methanol (DR018-US)
375-85-9L	13C4-PFHpA	2000.00	ST1712533A	0.0250	10.00	CALPFC171253	5	Methanol (DR018-US)
1763-23-1LC4	13C4-PFOS	1913.00	ST1711533A	0.0250	10.00	CALPFC171253	4.7825	Methanol (DR018-US)
307-24-4LC5	13C5-PFHxA	2000.00	ST1712533A	0.0250	10.00	CALPFC171253	5	Methanol (DR018-US)
2706-90-3L	13C5-PFPA	2000.00	ST1712533A	0.0250	10.00	CALPFC171253	5	Methanol (DR018-US)
335-76-2LC6	13C6-PFDA	2000.00	ST1712533A	0.0250	10.00	CALPFC171253	5	Methanol (DR018-US)
2058-94-8LC7	13C7-PFUnDA	2000.00	ST1712533A	0.0250	10.00	CALPFC171253	5	Methanol (DR018-US)
335-67-1LC8	13C8-PFOA	2000.00	ST1712533A	0.0250	10.00	CALPFC171253	5	Methanol (DR018-US)
1763-23-1LC8	13C8-PFOS	1913.00	ST1712533A	0.0250	10.00	CALPFC171253	4.7825	Methanol (DR018-US)
754-91-6L	13C8-PFOSA	2000.00	IN1712533C	0.0250	10.00	CALPFC171253	5	Methanol (DR018-US)
		50000.00	ST1705137T	0.0800	2.00	IN1712533C	2000	Methanol (DR018-US)
375-95-1LC9	13C9-PFNA	2000.00	ST1712533A	0.0250	10.00	CALPFC171253	5	Methanol (DR018-US)
757124-72-4	4:2-FTS	934.00	IN1712533A	0.5000	10.00	CALPFC171253	46.700001	Methanol (DR018-US)
		46700.00	ST1705137B	0.0400	2.00	IN1712533A	934	Methanol (DR018-US)
27619-97-2	6:2-FTS	948.00	IN1712533A	0.5000	10.00	CALPFC171253	47.400002	Methanol (DR018-US)
		47400.00	ST1705137C	0.0400	2.00	IN1712533A	948	Methanol (DR018-US)
39108-34-4	8:2-FTS	958.00	IN1712533A	0.5000	10.00	CALPFC171253	47.900002	Methanol (DR018-US)
		47900.00	ST1705237A	0.0400	2.00	IN1712533A	958	Methanol (DR018-US)
2355-31-9L	d3-NMeFOSAA	2000.00	IN1712533C	0.0250	10.00	CALPFC171253	5	Methanol (DR018-US)
		50000.00	ST1705137N	0.0800	2.00	IN1712533C	2000	Methanol (DR018-US)
31506-32-8L	d3-NMePFOSA	2000.00	IN1712533C	0.0250	10.00	CALPFC171253	5	Methanol (DR018-US)
		50000.00	ST1705137L	0.0800	2.00	IN1712533C	2000	Methanol (DR018-US)
2991-50-6L	d5-NEtFOSAA	2000.00	IN1712533C	0.0250	10.00	CALPFC171253	5	Methanol (DR018-US)
		50000.00	ST1705137M	0.0800	2.00	IN1712533C	2000	Methanol (DR018-US)

5/5/2017

Traceability Report for **CALPFC1712533I** **PFC Calib Std (Level 7)**

Prepped by 7824 on 05/05/17 Expires 08/05/17

Compound		Conc. (ppb)	Stock	Aliquot	Vol.(mL)	Solution	Final Conc. (ppb)	Solvent (Lot#)
4151-50-2L	d5-NEtPFOSA	2000.00	IN1712533C	0.0250	10.00	CALPFC171253	5	Methanol (DR018-US)
		50000.00	ST1705137K	0.0800	2.00	IN1712533C	2000	Methanol (DR018-US)
24448-09-7L	d7-NMePFOSAE	2000.00	IN1712533C	0.0250	10.00	CALPFC171253	5	Methanol (DR018-US)
		50000.00	ST1710833A	0.0800	2.00	IN1712533C	2000	Methanol (DR018-US)
1691-99-2L	d9-NEtPFOSAE	2000.00	IN1712533C	0.0250	10.00	CALPFC171253	5	Methanol (DR018-US)
		50000.00	ST1710833B	0.0800	2.00	IN1712533C	2000	Methanol (DR018-US)
2991-50-6	NEtFOSAA	1000.00	IN1712533A	0.5000	10.00	CALPFC171253	50	Methanol (DR018-US)
		50000.00	ST1705137I	0.0400	2.00	IN1712533A	1000	Methanol (DR018-US)
4151-50-2	NEtPFOSA	2000.00	IN1712533B	0.5000	10.00	CALPFC171253	100	Methanol (DR018-US)
		50000.00	ST1705137H	0.0800	2.00	IN1712533B	2000	Methanol (DR018-US)
1691-99-2	NEtPFOSAE	2000.00	IN1712533B	0.5000	10.00	CALPFC171253	100	Methanol (DR018-US)
		50000.00	ST1705137J	0.0800	2.00	IN1712533B	2000	Methanol (DR018-US)
2355-31-9	NMeFOSAA	1000.00	IN1712533A	0.5000	10.00	CALPFC171253	50	Methanol (DR018-US)
		50000.00	ST1705137F	0.0400	2.00	IN1712533A	1000	Methanol (DR018-US)
31506-32-8	NMePFOSA	2000.00	IN1712533B	0.5000	10.00	CALPFC171253	100	Methanol (DR018-US)
		50000.00	ST1705137E	0.0800	2.00	IN1712533B	2000	Methanol (DR018-US)
24448-09-7	NMePFOSAE	2000.00	IN1712533B	0.5000	10.00	CALPFC171253	100	Methanol (DR018-US)
		50000.00	ST1705137G	0.0800	2.00	IN1712533B	2000	Methanol (DR018-US)
375-22-4	PFBA	2000.00	ST1712433A	0.5000	10.00	CALPFC171253	100	Methanol (DR018-US)
375-73-5	PFBS	1769.00	ST1712433A	0.5000	10.00	CALPFC171253	88.449997	Methanol (DR018-US)
335-76-2	PFDA	2000.00	ST1712433A	0.5000	10.00	CALPFC171253	100	Methanol (DR018-US)
307-55-1	PFDoDA	2000.00	ST1712433A	0.5000	10.00	CALPFC171253	100	Methanol (DR018-US)
79780-39-5	PFDoDS	1936.00	ST1712433A	0.5000	10.00	CALPFC171253	96.800003	Methanol (DR018-US)
335-77-3	PFDS	1926.00	ST1712433A	0.5000	10.00	CALPFC171253	96.300003	Methanol (DR018-US)
375-85-9	PFHpA	2000.00	ST1712433A	0.5000	10.00	CALPFC171253	100	Methanol (DR018-US)
375-92-8	PFHpS	1903.00	ST1712433A	0.5000	10.00	CALPFC171253	95.150002	Methanol (DR018-US)
307-24-4	PFHxA	2000.00	ST1712433A	0.5000	10.00	CALPFC171253	100	Methanol (DR018-US)
67905-19-5	PFHxDA	2000.00	ST1712433A	0.5000	10.00	CALPFC171253	100	Methanol (DR018-US)
355-46-4	PFHxS	1891.00	ST1712433A	0.5000	10.00	CALPFC171253	94.550003	Methanol (DR018-US)
375-95-1	PFNA	2000.00	ST1712433A	0.5000	10.00	CALPFC171253	100	Methanol (DR018-US)
474511-07-4	PFNS	1920.00	ST1712433A	0.5000	10.00	CALPFC171253	96	Methanol (DR018-US)
335-67-1	PFOA	2000.00	ST1712433A	0.5000	10.00	CALPFC171253	100	Methanol (DR018-US)
16517-11-6	PFODA	2000.00	ST1712433A	0.5000	10.00	CALPFC171253	100	Methanol (DR018-US)
1763-23-1	PFOS	1912.00	ST1712433A	0.5000	10.00	CALPFC171253	95.599998	Methanol (DR018-US)
754-91-6	PFOSA	2000.00	IN1712533B	0.5000	10.00	CALPFC171253	100	Methanol (DR018-US)
		50000.00	ST1705137D	0.0800	2.00	IN1712533B	2000	Methanol (DR018-US)
2706-90-3	PFPA	2000.00	ST1712433A	0.5000	10.00	CALPFC171253	100	Methanol (DR018-US)
2706-91-4	PFPeS	1876.00	ST1712433A	0.5000	10.00	CALPFC171253	93.800003	Methanol (DR018-US)
376-06-7	PFTeDA	2000.00	ST1712433A	0.5000	10.00	CALPFC171253	100	Methanol (DR018-US)

5/5/2017

Traceability Report for **CALPFC1712533I** **PFC Calib Std (Level 7)**

Prepped by 7824 on 05/05/17 Expires 08/05/17

Compound		Conc. (ppb)	Stock	Aliquot	Vol.(mL)	Solution	Final Conc. (ppb)	Solvent (Lot#)
72629-94-8	PFTrDA	2000.00	ST1712433A	0.5000	10.00	CALPFC171253	100	Methanol (DR018-US)
2058-94-8	PFUnDA	2000.00	ST1712433A	0.5000	10.00	CALPFC171253	100	Methanol (DR018-US)

4/3/2017

Traceability Report for **LCSICVX1733A** **PFAS ICAL ICV Spike**

Prepped by 9524 on 04/03/17 Expires 07/03/17

Compound		Conc. (ppb)	Stock	Aliquot	Vol.(mL)	Solution	Final Conc. (ppb)	Solvent (Lot#)
2991-50-6	NEtFOSAA	50000.00	ST1705837B	0.0500	5.00	LCSICVX1733A	500	Methanol (DRO18-US)
2355-31-9	NMEFOSAA	50000.00	ST1705837A	0.0500	5.00	LCSICVX1733A	500	Methanol (DRO18-US)
335-77-3	PERFLUORODECANESULFONATE	2000.00	ST1623537B	1.2500	5.00	LCSICVX1733A	500	Methanol (DRO18-US)
375-92-8	PERFLUOROHEPTANESULFONATE	2000.00	ST1623537B	1.2500	5.00	LCSICVX1733A	500	Methanol (DRO18-US)
375-22-4	PFBA	2000.00	ST1623537A	1.2500	5.00	LCSICVX1733A	500	Methanol (DRO18-US)
375-73-5	PFBS	2000.00	ST1623537B	1.2500	5.00	LCSICVX1733A	500	Methanol (DRO18-US)
335-76-2	PFDA	2000.00	ST1623537A	1.2500	5.00	LCSICVX1733A	500	Methanol (DRO18-US)
307-55-1	PFDoDA	2000.00	ST1623537A	1.2500	5.00	LCSICVX1733A	500	Methanol (DRO18-US)
375-85-9	PFHpA	2000.00	ST1623537A	1.2500	5.00	LCSICVX1733A	500	Methanol (DRO18-US)
307-24-4	PFHxA	2000.00	ST1623537A	1.2500	5.00	LCSICVX1733A	500	Methanol (DRO18-US)
355-46-4	PFHxS	2000.00	ST1623537B	1.2500	5.00	LCSICVX1733A	500	Methanol (DRO18-US)
375-95-1	PFNA	2000.00	ST1623537A	1.2500	5.00	LCSICVX1733A	500	Methanol (DRO18-US)
335-67-1	PFOA	2000.00	ST1623537A	1.2500	5.00	LCSICVX1733A	500	Methanol (DRO18-US)
1763-23-1	PFOS	2000.00	ST1623537B	1.2500	5.00	LCSICVX1733A	500	Methanol (DRO18-US)
2706-90-3	PFPA	2000.00	ST1623537A	1.2500	5.00	LCSICVX1733A	500	Methanol (DRO18-US)
376-06-7	PFTeDA	2000.00	ST1623537A	1.2500	5.00	LCSICVX1733A	500	Methanol (DRO18-US)
72629-94-8	PFTrDA	2000.00	ST1623537A	1.2500	5.00	LCSICVX1733A	500	Methanol (DRO18-US)
2058-94-8	PFUnDA	2000.00	ST1623537A	1.2500	5.00	LCSICVX1733A	500	Methanol (DRO18-US)

5/4/2017

Traceability Report for SS1712433A **PFAS Labeled Extraction Spike**

Prepped by 7824 on 05/04/17 Expires 06/04/17

Compound		Conc. (ppb)	Stock	Aliquot	Vol.(mL)	Solution	Final Conc. (ppb)	Solvent (Lot#)
757124-72-4L	13C2-4:2-FTS	3736.00	IN1712233A	0.5000	10.00	SS1712433A	186.800003	Methanol (DRO18-US)
		46700.00	ST1705137Q	0.1600	2.00	IN1712233A	3736	Methanol (DRO18-US)
27619-97-2L	13C2-6:2-FTS	3800.00	IN1712233A	0.5000	10.00	SS1712433A	190	Methanol (DRO18-US)
		47500.00	ST1710833C	0.1600	2.00	IN1712233A	3800	Methanol (DRO18-US)
39108-34-4L	13C2-8:2-FTS	3832.00	IN1712233A	0.5000	10.00	SS1712433A	191.600006	Methanol (DRO18-US)
		47900.00	ST1705137S	0.1600	2.00	IN1712233A	3832	Methanol (DRO18-US)
307-55-1L	13C2-PFDoDA	2000.00	ST1712433B	1.0000	10.00	SS1712433A	200	Methanol (DRO18-US)
376-06-7L	13C2-PFTeDA	2000.00	ST1712433B	1.0000	10.00	SS1712433A	200	Methanol (DRO18-US)
375-73-5L	13C3-PFBS	1859.00	ST1712433B	1.0000	10.00	SS1712433A	185.899994	Methanol (DRO18-US)
355-46-4LC3	13C3-PFHxS	1892.00	ST1712433B	1.0000	10.00	SS1712433A	189.199997	Methanol (DRO18-US)
375-22-4L	13C4-PFBA	2000.00	ST1712433B	1.0000	10.00	SS1712433A	200	Methanol (DRO18-US)
375-85-9L	13C4-PFHpA	2000.00	ST1712433B	1.0000	10.00	SS1712433A	200	Methanol (DRO18-US)
307-24-4LC5	13C5-PFHxA	2000.00	ST1712433B	1.0000	10.00	SS1712433A	200	Methanol (DRO18-US)
2706-90-3L	13C5-PFPA	2000.00	ST1712433B	1.0000	10.00	SS1712433A	200	Methanol (DRO18-US)
335-76-2LC6	13C6-PFDA	2000.00	ST1712433B	1.0000	10.00	SS1712433A	200	Methanol (DRO18-US)
2058-94-8LC	13C7-PFUnDA	2000.00	ST1712433B	1.0000	10.00	SS1712433A	200	Methanol (DRO18-US)
335-67-1LC8	13C8-PFOA	2000.00	ST1712433B	1.0000	10.00	SS1712433A	200	Methanol (DRO18-US)
1763-23-1LC	13C8-PFOS	1913.00	ST1712433B	1.0000	10.00	SS1712433A	191.300003	Methanol (DRO18-US)
754-91-6L	13C8-PFOSA	4000.00	IN1712233A	0.5000	10.00	SS1712433A	200	Methanol (DRO18-US)
		50000.00	ST1705137T	0.1600	2.00	IN1712233A	4000	Methanol (DRO18-US)
375-95-1LC9	13C9-PFNA	2000.00	ST1712433B	1.0000	10.00	SS1712433A	200	Methanol (DRO18-US)
2355-31-9L	d3-NMeFOSAA	4000.00	IN1712233A	0.5000	10.00	SS1712433A	200	Methanol (DRO18-US)
		50000.00	ST1705137N	0.1600	2.00	IN1712233A	4000	Methanol (DRO18-US)
31506-32-8L	d3-NMePFOSA	4000.00	IN1712233A	0.5000	10.00	SS1712433A	200	Methanol (DRO18-US)
		50000.00	ST1705137L	0.1600	2.00	IN1712233A	4000	Methanol (DRO18-US)
2991-50-6L	d5-NEtFOSAA	4000.00	IN1712233A	0.5000	10.00	SS1712433A	200	Methanol (DRO18-US)
		50000.00	ST1705137M	0.1600	2.00	IN1712233A	4000	Methanol (DRO18-US)
4151-50-2L	d5-NEtPFOSA	4000.00	IN1712233A	0.5000	10.00	SS1712433A	200	Methanol (DRO18-US)
		50000.00	ST1705137K	0.1600	2.00	IN1712233A	4000	Methanol (DRO18-US)
24448-09-7L	d7-NMePFOSAE	4000.00	IN1712233A	0.5000	10.00	SS1712433A	200	Methanol (DRO18-US)
		50000.00	ST1710833A	0.1600	2.00	IN1712233A	4000	Methanol (DRO18-US)
1691-99-2L	d9-NEtPFOSAE	4000.00	IN1712233A	0.5000	10.00	SS1712433A	200	Methanol (DRO18-US)
		50000.00	ST1710833B	0.1600	2.00	IN1712233A	4000	Methanol (DRO18-US)

5/11/2017

Traceability Report for SS1713133A **PFAS Labeled Extraction Spike**

Prepped by 9524 on 05/11/17 Expires 06/11/17

Compound		Conc. (ppb)	Stock	Aliquot	Vol.(mL)	Solution	Final Conc. (ppb)	Solvent (Lot#)
757124-72-4L	13C2-4:2-FTS	3736.00	IN1712233A	0.5000	10.00	SS1713133A	186.800003	Methanol (DR336-US)
		46700.00	ST1705137Q	0.1600	2.00	IN1712233A	3736	Methanol (DRO18-US)
27619-97-2L	13C2-6:2-FTS	3800.00	IN1712233A	0.5000	10.00	SS1713133A	190	Methanol (DR336-US)
		47500.00	ST1710833C	0.1600	2.00	IN1712233A	3800	Methanol (DRO18-US)
39108-34-4L	13C2-8:2-FTS	3832.00	IN1712233A	0.5000	10.00	SS1713133A	191.600006	Methanol (DR336-US)
		47900.00	ST1705137S	0.1600	2.00	IN1712233A	3832	Methanol (DRO18-US)
307-55-1L	13C2-PFDoDA	2000.00	ST1712533A	1.0000	10.00	SS1713133A	200	Methanol (DR336-US)
376-06-7L	13C2-PFTeDA	2000.00	ST1712533A	1.0000	10.00	SS1713133A	200	Methanol (DR336-US)
375-73-5L	13C3-PFBS	1859.00	ST1712533A	1.0000	10.00	SS1713133A	185.899994	Methanol (DR336-US)
355-46-4LC3	13C3-PFHxS	1892.00	ST1712533A	1.0000	10.00	SS1713133A	189.199997	Methanol (DR336-US)
375-22-4L	13C4-PFBA	2000.00	ST1712533A	1.0000	10.00	SS1713133A	200	Methanol (DR336-US)
375-85-9L	13C4-PFHpA	2000.00	ST1712533A	1.0000	10.00	SS1713133A	200	Methanol (DR336-US)
307-24-4LC5	13C5-PFHxA	2000.00	ST1712533A	1.0000	10.00	SS1713133A	200	Methanol (DR336-US)
2706-90-3L	13C5-PFPA	2000.00	ST1712533A	1.0000	10.00	SS1713133A	200	Methanol (DR336-US)
335-76-2LC6	13C6-PFDA	2000.00	ST1712533A	1.0000	10.00	SS1713133A	200	Methanol (DR336-US)
2058-94-8LC	13C7-PFUnDA	2000.00	ST1712533A	1.0000	10.00	SS1713133A	200	Methanol (DR336-US)
335-67-1LC8	13C8-PFOA	2000.00	ST1712533A	1.0000	10.00	SS1713133A	200	Methanol (DR336-US)
1763-23-1LC	13C8-PFOS	1913.00	ST1712533A	1.0000	10.00	SS1713133A	191.300003	Methanol (DR336-US)
754-91-6L	13C8-PFOSA	4000.00	IN1712233A	0.5000	10.00	SS1713133A	200	Methanol (DR336-US)
		50000.00	ST1705137T	0.1600	2.00	IN1712233A	4000	Methanol (DRO18-US)
375-95-1LC9	13C9-PFNA	2000.00	ST1712533A	1.0000	10.00	SS1713133A	200	Methanol (DR336-US)
2355-31-9L	d3-NMeFOSAA	4000.00	IN1712233A	0.5000	10.00	SS1713133A	200	Methanol (DR336-US)
		50000.00	ST1705137N	0.1600	2.00	IN1712233A	4000	Methanol (DRO18-US)
31506-32-8L	d3-NMePFOSA	4000.00	IN1712233A	0.5000	10.00	SS1713133A	200	Methanol (DR336-US)
		50000.00	ST1705137L	0.1600	2.00	IN1712233A	4000	Methanol (DRO18-US)
2991-50-6L	d5-NEtFOSAA	4000.00	IN1712233A	0.5000	10.00	SS1713133A	200	Methanol (DR336-US)
		50000.00	ST1705137M	0.1600	2.00	IN1712233A	4000	Methanol (DRO18-US)
4151-50-2L	d5-NEtPFOSA	4000.00	IN1712233A	0.5000	10.00	SS1713133A	200	Methanol (DR336-US)
		50000.00	ST1705137K	0.1600	2.00	IN1712233A	4000	Methanol (DRO18-US)
24448-09-7L	d7-NMePFOSAE	4000.00	IN1712233A	0.5000	10.00	SS1713133A	200	Methanol (DR336-US)
		50000.00	ST1710833A	0.1600	2.00	IN1712233A	4000	Methanol (DRO18-US)
1691-99-2L	d9-NEtPFOSAE	4000.00	IN1712233A	0.5000	10.00	SS1713133A	200	Methanol (DR336-US)
		50000.00	ST1710833B	0.1600	2.00	IN1712233A	4000	Methanol (DRO18-US)

5/7/2017

Traceability Report for **LCSPFCX1733P** **PFAS Native Spike**

Prepped by 10262 on 05/07/17 Expires 08/07/17

Compound		Conc. (ppb)	Stock	Aliquot	Vol.(mL)	Solution	Final Conc. (ppb)	Solvent (Lot#)
120226-60-0	10:2-FTS	1928.00	IN1709333C	0.5000	2.00	LCSPFCX1733F	482	Methanol (DRO18-US)
		48200.00	ST1705137A	0.0800	2.00	IN1709333C	1928	Methanol (DRO18-US)
757124-72-4	4:2-FTS	1868.00	IN1709333C	0.5000	2.00	LCSPFCX1733F	467	Methanol (DRO18-US)
		46700.00	ST1705137B	0.0800	2.00	IN1709333C	1868	Methanol (DRO18-US)
27619-97-2	6:2-FTS	1896.00	IN1709333C	0.5000	2.00	LCSPFCX1733F	474	Methanol (DRO18-US)
		47400.00	ST1705137C	0.0800	2.00	IN1709333C	1896	Methanol (DRO18-US)
39108-34-4	8:2-FTS	1916.00	IN1709333C	0.5000	2.00	LCSPFCX1733F	479	Methanol (DRO18-US)
		47900.00	ST1705237A	0.0800	2.00	IN1709333C	1916	Methanol (DRO18-US)
2991-50-6	NEtFOSAA	2000.00	IN1709333C	0.5000	2.00	LCSPFCX1733F	500	Methanol (DRO18-US)
		50000.00	ST1705137I	0.0800	2.00	IN1709333C	2000	Methanol (DRO18-US)
4151-50-2	NEtPFOSA	2000.00	IN1709333D	0.5000	2.00	LCSPFCX1733F	500	Methanol (DRO18-US)
		50000.00	ST1705137H	0.0800	2.00	IN1709333D	2000	Methanol (DRO18-US)
1691-99-2	NEtPFOSAE	2000.00	IN1709333D	0.5000	2.00	LCSPFCX1733F	500	Methanol (DRO18-US)
		50000.00	ST1705137J	0.0800	2.00	IN1709333D	2000	Methanol (DRO18-US)
2355-31-9	NMeFOSAA	2000.00	IN1709333C	0.5000	2.00	LCSPFCX1733F	500	Methanol (DRO18-US)
		50000.00	ST1705137F	0.0800	2.00	IN1709333C	2000	Methanol (DRO18-US)
31506-32-8	NMePFOSA	2000.00	IN1709333D	0.5000	2.00	LCSPFCX1733F	500	Methanol (DRO18-US)
		50000.00	ST1705137E	0.0800	2.00	IN1709333D	2000	Methanol (DRO18-US)
24448-09-7	NMePFOSAE	2000.00	IN1709333D	0.5000	2.00	LCSPFCX1733F	500	Methanol (DRO18-US)
		50000.00	ST1705137G	0.0800	2.00	IN1709333D	2000	Methanol (DRO18-US)
375-22-4	PFBA	2000.00	ST1709433B	0.5000	2.00	LCSPFCX1733F	500	Methanol (DRO18-US)
375-73-5	PFBS	1769.00	ST1709433B	0.5000	2.00	LCSPFCX1733F	442.25	Methanol (DRO18-US)
335-76-2	PFDA	2000.00	ST1709433B	0.5000	2.00	LCSPFCX1733F	500	Methanol (DRO18-US)
307-55-1	PFDoDA	2000.00	ST1709433B	0.5000	2.00	LCSPFCX1733F	500	Methanol (DRO18-US)
79780-39-5	PFDoDS	1936.00	ST1709433B	0.5000	2.00	LCSPFCX1733F	484	Methanol (DRO18-US)
335-77-3	PFDS	1926.00	ST1709433B	0.5000	2.00	LCSPFCX1733F	481.5	Methanol (DRO18-US)
375-85-9	PFHpA	2000.00	ST1709433B	0.5000	2.00	LCSPFCX1733F	500	Methanol (DRO18-US)
375-92-8	PFHpS	1903.00	ST1709433B	0.5000	2.00	LCSPFCX1733F	475.75	Methanol (DRO18-US)
307-24-4	PFHxA	2000.00	ST1709433B	0.5000	2.00	LCSPFCX1733F	500	Methanol (DRO18-US)
67905-19-5	PFHxDA	2000.00	ST1709433B	0.5000	2.00	LCSPFCX1733F	500	Methanol (DRO18-US)
355-46-4	PFHxS	1891.00	ST1709433B	0.5000	2.00	LCSPFCX1733F	472.75	Methanol (DRO18-US)
375-95-1	PFNA	2000.00	ST1709433B	0.5000	2.00	LCSPFCX1733F	500	Methanol (DRO18-US)
474511-07-4	PFNS	1920.00	ST1709433B	0.5000	2.00	LCSPFCX1733F	480	Methanol (DRO18-US)
335-67-1	PFOA	2000.00	ST1709433B	0.5000	2.00	LCSPFCX1733F	500	Methanol (DRO18-US)
16517-11-6	PFODA	2000.00	ST1709433B	0.5000	2.00	LCSPFCX1733F	500	Methanol (DRO18-US)
1763-23-1	PFOS	1912.00	ST1709433B	0.5000	2.00	LCSPFCX1733F	478	Methanol (DRO18-US)
754-91-6	PFOSA	2000.00	IN1709333D	0.5000	2.00	LCSPFCX1733F	500	Methanol (DRO18-US)
		50000.00	ST1705137D	0.0800	2.00	IN1709333D	2000	Methanol (DRO18-US)
2706-90-3	PFPA	2000.00	ST1709433B	0.5000	2.00	LCSPFCX1733F	500	Methanol (DRO18-US)

5/7/2017

Traceability Report for **LCSPFCX1733P** **PFAS Native Spike**

Prepped by 10262 on 05/07/17 Expires 08/07/17

Compound		Conc. (ppb)	Stock	Aliquot	Vol.(mL)	Solution	Final Conc. (ppb)	Solvent (Lot#)
2706-91-4	PFPeS	1876.00	ST1709433B	0.5000	2.00	LCSPFCX1733F	469	Methanol (DRO18-US)
376-06-7	PFTeDA	2000.00	ST1709433B	0.5000	2.00	LCSPFCX1733F	500	Methanol (DRO18-US)
72629-94-8	PFTrDA	2000.00	ST1709433B	0.5000	2.00	LCSPFCX1733F	500	Methanol (DRO18-US)
2058-94-8	PFUnDA	2000.00	ST1709433B	0.5000	2.00	LCSPFCX1733F	500	Methanol (DRO18-US)

5/15/2017

Traceability Report for **IS1713533A** **PFAS Labeled Injection Spike/Internal Std.**

Prepped by 70 on 05/15/17 Expires 06/15/17

Compound		Conc. (ppb)	Stock	Aliquot	Vol.(mL)	Solution	Final Conc. (ppb)	Solvent (Lot#)
335-76-2L	13C2-PFDA	2000.00	ST1626537B	0.2000	4.00	IS1713533A	100	Methanol (DR018-US)
335-67-1LC2	13C2-PFOA	2000.00	ST1626537B	0.2000	4.00	IS1713533A	100	Methanol (DR018-US)
375-22-4LC3	13C3-PFBA	2000.00	ST1626537B	0.2000	4.00	IS1713533A	100	Methanol (DR018-US)
1763-23-1LC	13C4-PFOS	1913.00	ST1626537B	0.2000	4.00	IS1713533A	95.650002	Methanol (DR018-US)

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Department 4037 Free Form Notebook

Title: PFC Linear/Branched Std

From Page No.: N/A

PFC Linear and Branched Standard in Methanol

store @ room temp

Intermediate

	Std Conc (ng/mL)	Stock Conc (ng/mL)	Prep Vol (mL)	Final Volume (mL)
T-PFOS	2000.000	50000.000	0.400	10.000
br-PFHxSK	2000.000	50000.000	0.400	
T-PFOA	500.000	50000.000	0.100	

***Prepared at CAL3 Level**

	Std Conc (ng/mL)	SS Vol (mL)	Prep Vol (mL)	Vol of Methanol (mL)
T-PFOS	200.000	0.025	0.050	0.925
br-PFHxSK	200.000			
T-PFOA	50.000			

Final volume (mL)	1.000

Pipettes used:
P100-2
P1000-1

*10 uL of injection internal standard is added to 200 uL of above solution prior to running on a system

	Wellington Labs Lot#	Expiration Date
T-PFOS	TPFOS0805	9/2/2020
br-PFHxSK	brPFHxSK0615	7/3/2020
T-PFOA	TPFOA0216	2/12/2021

HoneyWell methanol used-Lot# DR018-US (chromasolv LC-MS grade)
SS1712233A
IS1712233A

Prep: MCD7824 5/5/2017
Exp: 8/5/2017

MCD 7824 5/5/17

To Page No.: N/A

REVIEWED:	PAGES:	DATE:
Lynn Dodd	23-30	5/16/17

30 242417

Raw QC Data

PFAS by LC/MS/MS

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LC-MS/MS Analysis Report

Printed: 5/17/2017 7:55:00 PM
Template: MQ-Sample-16Nov21.docx

ICAL Name: 17MAY10MCAL
QMethod Name: PFCMOD-17JAN28
Result Table: 17129008 5/17/2017 7:53:11 PM
Acquisition Method: PFC-32-16NOV02.dam

Sample Name:	BLK129008			**Data File:**		17MAY17-33.wiff
Sample ID:	17129008			**Acquis Date:**		2017-05-17T11:37:02
Sample Type:	Unknown			**Instrument:**		LM24960
Vial Position:	74			**Acquis Method:**		PFC-32-16NOV02.dam
Injection Vol:	5.00			**Result Table:**		17129008
QMethod File:	PFCMOD-17JAN28			**ICAL Name:**		17MAY10MCAL
Batch Number:	17129008			**Operator:**		Not calculated
Sample Wt.:	0.10000			**Dilution Factor:**		1.00
Sample Vol.:	1.000			**Prep Factor:**		1.000

Injection Standard Peak Table

Injection Standard Name	Inj Std Conc	Injection Std Peak Area	ICAL Injection Standard AVG	Injection Std %Diff	Injection Std %Diff Limit	Injection Std %Diff OOS
I13C3-PFBA	1.0	819782.5	669117.3	22.5	50.0	
I13C2-PFOA	1.0	411478.5	342184.6	20.3	50.0	
I13C4-PFOS	1.0	77564.7	70131.6	10.6	50.0	
I13C2-PFDA	1.0	453245.3	384098.7	18.0	50.0	

Extraction Standard Peak Table

Extraction Standard Name	Ext Std Area	Inj Std Name	Inj Std Area	Area Ratio	AVG Area Ratio	Ext Std Conc	Ext Std Result	Ext Std %REC	Ext Std %REC Limit	Ext Std OOS
E13C8-PFOA	341904.9	13C2-PFOA	411478.5	0.831	1.163	10.000	7.142	71.4	70.0-130.0	
E13C8-PFOS	52731.2	13C4-PFOS	77564.7	0.680	0.865	10.000	7.855	78.5	70.0-130.0	

APPROVED
By DMW at 8:00 pm, 5/17/17

REVIEWED
By UMJS at 8:51 pm, 5/21/17

ICAL Name: 17MAY10MCAL **Result Table:** 17129008 5/17/2017 7:53:11 PM
QMethod Name: PFCMOD-17JAN28 **Acquisition Method:** PFC-32-16NOV02.dam

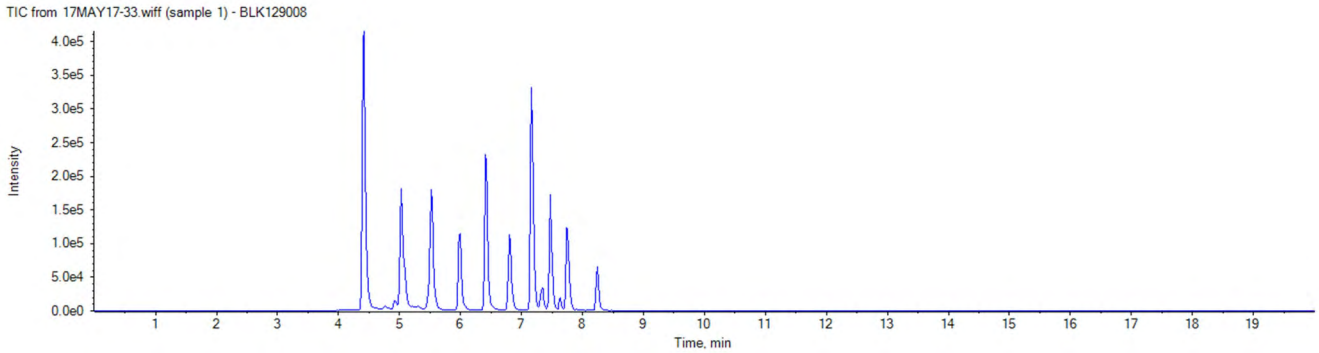
Analyte Quantitation Peak Table

Sample Name: BLK129008 **Instrument Name:** LM24960 **File Name:** 17MAY17-33.wiff

Sample Wt	Sample Vol	Dilution Factor	PrepFactor
0.10000	1.000	1.00	1.000

Analytet Name	RT	RRT	Analyte Area Response	Int Typ	ES Name	ES RT	ES Area Response	Area Ratio	Sample Result (ng/L)
PFOA	N/A	N/A	N/A	A	13C8-PFOA	6.42	341904.9	N/A	
PFOS	6.78	1.000	2041.8	M	13C8-PFOS	6.79	52731.2	0.039	0.539

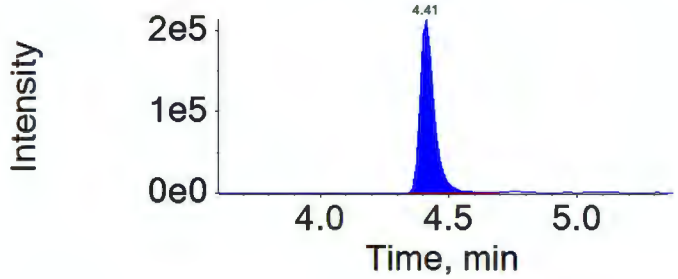
Total Ion Chromatogram



ICAL Name: 17MAY10MCAL
QMethod Name: PFCMOD-17JAN28
Result Table: 17129008 5/17/2017 7:53:11 PM
Acquisition Method: PFC-32-16NOV02.dam

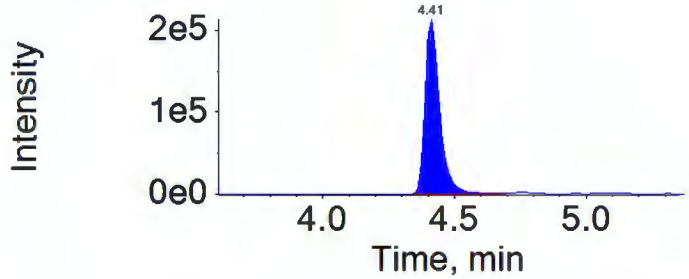
Injection Standard: I13C3-PFBA

216.0 / 172.0



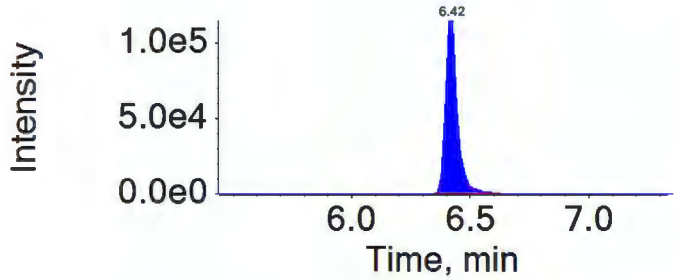
Injection Standard: 13C3-PFBA

216.0 / 172.0



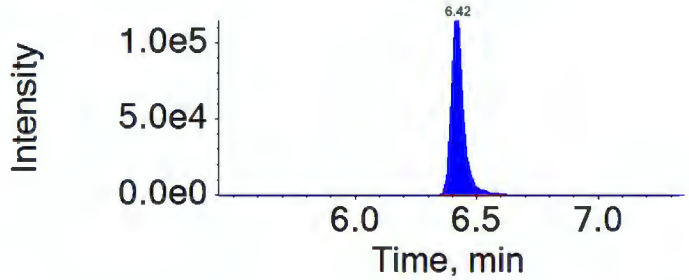
Injection Standard: I13C2-PFOA

415.0 / 370.0



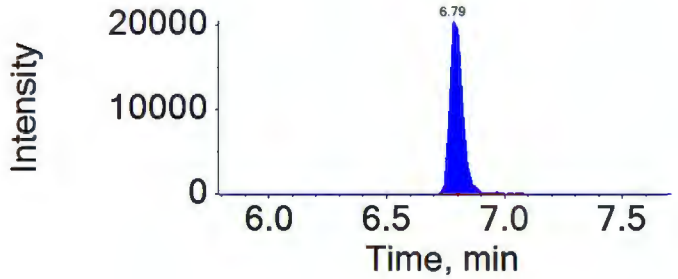
Injection Standard: 13C2-PFOA

415.0 / 370.0



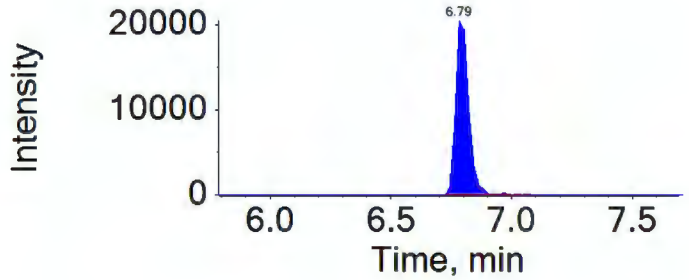
Injection Standard: I13C4-PFOS

503.0 / 99.0



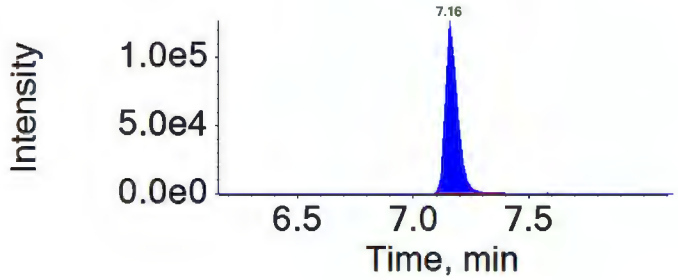
Injection Standard: 13C4-PFOS

503.0 / 99.0



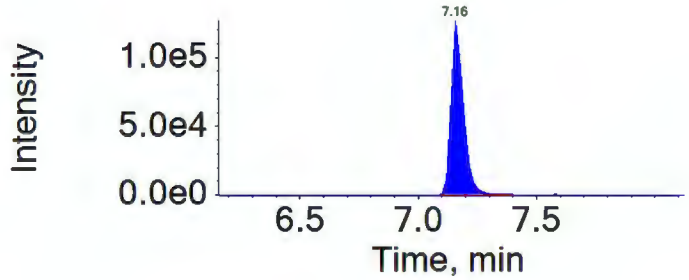
Injection Standard: I13C2-PFDA

515.0 / 470.0



Injection Standard: 13C2-PFDA

515.0 / 470.0



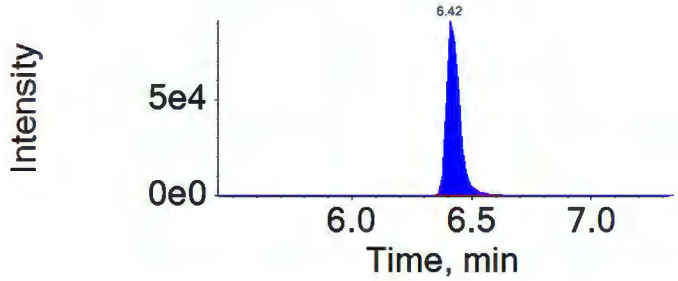
APPROVED
By DMW at 8:00 pm, 5/17/17

REVIEWED
By UMJS at 8:51 pm, 5/21/17

ICAL Name: 17MAY10MCAL **Result Table:** 17129008 5/17/2017 7:53:11 PM
QMethod Name: PFCMOD-17JAN28 **Acquisition Method:** PFC-32-16NOV02.dam

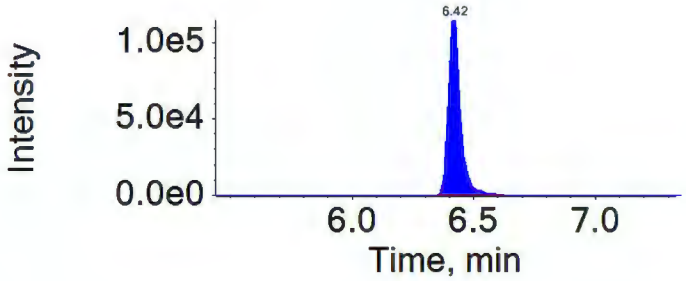
Extraction Standard: E13C8-PFOA

421.0 /
376.0



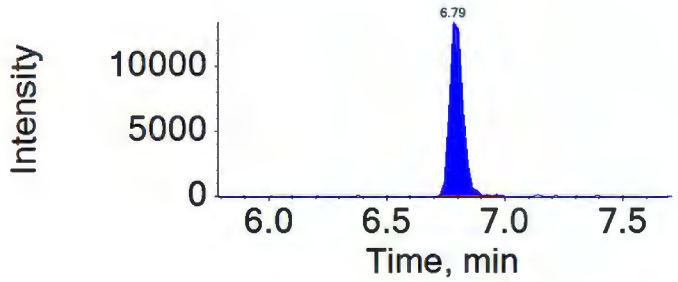
Injection Standard: 13C2-PFOA

415.0 /
370.0



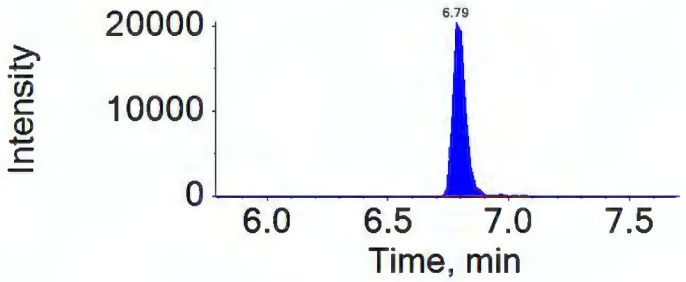
Extraction Standard: E13C8-PFOS

507.0 /
99.0



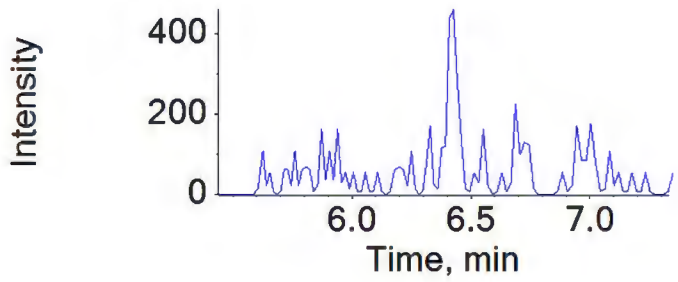
Injection Standard: 13C4-PFOS

503.0 /
99.0



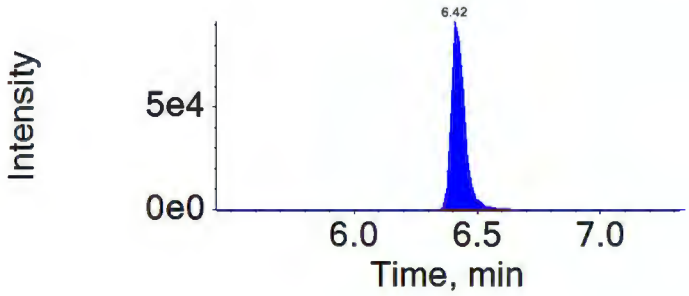
Analyte: PFOA

413.0 /
369.0



Extraction Standard: 13C8-PFOA

421.0 /
376.0

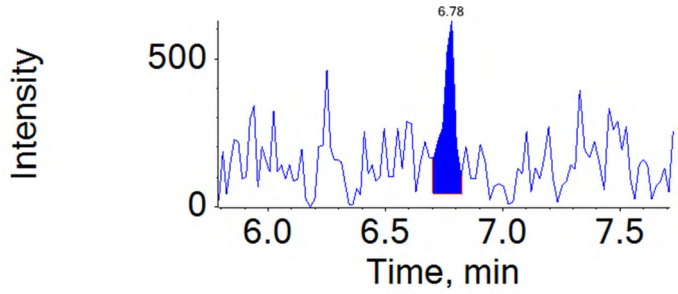


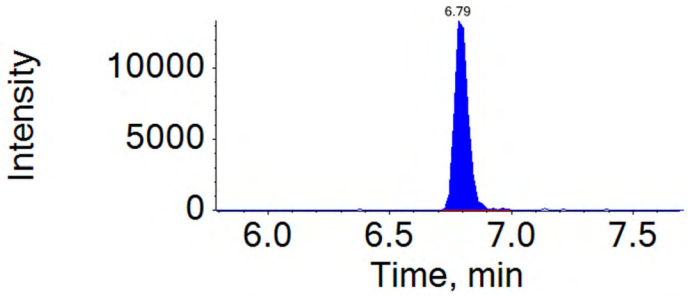
APPROVED
By DMW at 8:00 pm, 5/17/17

REVIEWED
By UMJS at 8:51 pm, 5/21/17

ICAL Name: 17MAY10MCAL **Result Table:** 17129008 5/17/2017 7:53:11 PM
QMethod Name: PFCMOD-17JAN28 **Acquisition Method:** PFC-32-16NOV02.dam

Analyte: PFOS	Extraction Standard: 13C8-PFOS
499.0 / 80.0	507.0 / 99.0





APPROVED
By DMW at 8:00 pm, 5/17/17

REVIEWED
By UMJS at 8:51 pm, 5/21/17

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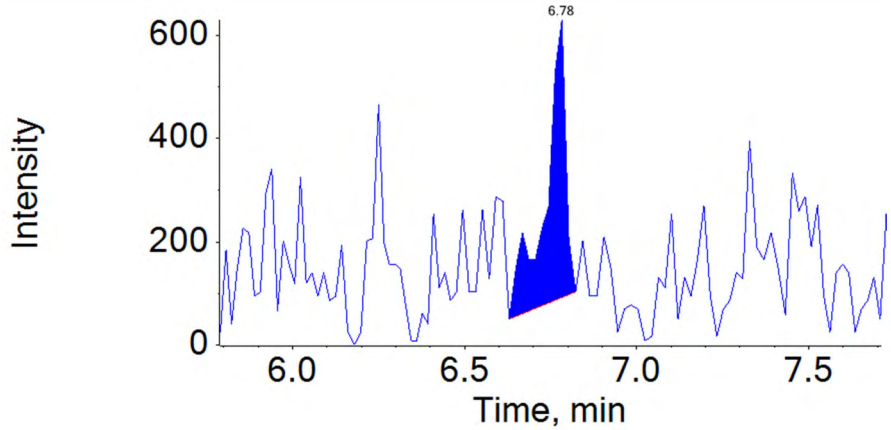
Auto Integrations prior to Manual Integration

Print Date: 05/17/2017 7:57 PM
Template: MQ-OrigInteg-16NOV21.docx

Results Table Name: 17129008
Results Table Date: 5/17/2017 7:53:11 PM

Acquisition Method: PFC-32-16NOV02.dam
QMethod File: PFCMOD-17JAN28

Component Name:
PFOS
RT (min.):
6.78
Peak Area:
2169.6
Mass Range:
499.0 / 80.0
File Name:
17MAY17-33.wiff
Sample Name:
BLK129008



Integration Comment: incorrect integration

APPROVED
By DMW at 8:00 pm, 5/17/17

REVIEWED
By UMJS at 8:51 pm, 5/21/17

Results Table Name: 17129008
Results Table Date: 5/17/2017 7:53:11 PM

Acquisition Method: PFC-32-16NOV02.dam
QMethod File: PFCMOD-17JAN28

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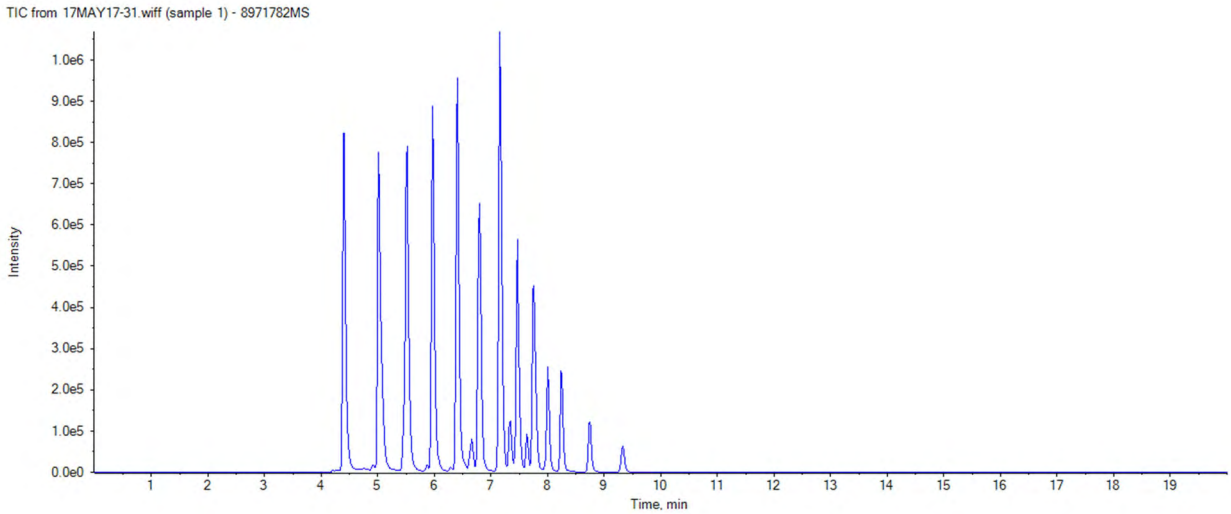
LC-MS/MS Analysis Report

Printed: 5/17/2017 7:54:00 PM
Template: MQ-LCSMS-16NOV21.docx

LCS/MS Recovery

ICAL Name: 17MAY10MCAL
QMethod Name: PFCMOD-17JAN28
Result Table: 17129008 5/17/2017 7:53:11 PM
Acquisition Method: PFC-32-16NOV02.dam

Instrument Name:	Sample Name:	Sample ID:	Sample File:	Acquisition Date:
LM24960	8971782MS	EPA 537 Rev. 1.1 modified 17129008 17MC-PW121-P1-0428 Grab Groundwater	17MAY17-31.wiff	2017-05-17T10:55:56



Injection Standard Name	Inj Std Conc	Injection Std Peak Area	ICAL Injection Standard AVG	Injection Std %Diff	Injection Std %Diff Limit	Injection Std %Diff OOS
I13C3-PFBA	1.00	656892.8	669117.279	-1.8	50.0	
I13C2-PFOA	1.00	397481.9	342184.630	16.2	50.0	
I13C4-PFOS	1.00	69022.4	70131.551	-1.6	50.0	
I13C2-PFDA	1.00	437679.5	384098.708	14.0	50.0	

APPROVED
By DMW at 8:00 pm, 5/17/17

REVIEWED
By UMJS at 8:50 pm, 5/21/17

LCS/MS Recovery

ICAL Name: 17MAY10MCAL **Result Table:** 17129008 5/17/2017 7:53:11 PM
QMethod Name: PFCMOD-17JAN28 **Acquisition Method:** PFC-32-16NOV02.dam

Instrument Name:	Sample Name:	Sample ID:	Sample File:	Acquisition Date:
LM24960	8971782MS	EPA 537 Rev. 1.1 modified 17129008 17MC-PW121-P1-0428 Grab Groundwater	17MAY17-31.wiff	2017-05-17T10:55:56

Analyte Name	Analyte Area	Ext Std Name	Ext Std Area	Area Ratio	Adj Actual Conc	Sample Result	%REC	% REC Limit	%REC OOS
PFOA	1316775.3	13C8-PFOA	321495.9	4.096	200.582	187.166	93.3	70.0-130.0	
PFOS	1225453.8	13C8-PFOS	43282.9	28.313	191.756	394.928	206.0	70.0-130.0	OOS

APPROVED
By DMW at 8:00 pm, 5/17/17

REVIEWED
By UMJS at 8:50 pm, 5/21/17

LCS/MS Recovery

ICAL Name: 17MAY10MCAL
QMethod Name: PFCMOD-17JAN28
Result Table: 17129008 5/17/2017 7:53:11 PM
Acquisition Method: PFC-32-16NOV02.dam

APPROVED
By DMW at 8:00 pm, 5/17/17

REVIEWED
By UMJS at 8:50 pm, 5/21/17

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LC-MS/MS Analysis Report

Printed: 5/17/2017 7:55:00 PM
Template: MQ-Sample-16Nov21.docx

ICAL Name: 17MAY10MCAL
QMethod Name: PFCMOD-17JAN28
Result Table: 17129008 5/17/2017 7:53:11 PM
Acquisition Method: PFC-32-16NOV02.dam

Sample Name:	8971782MS			**Data File:**		17MAY17-31.wiff
Sample ID:	EPA 537 Rev. 1.1 modified 17129008 17MC-PW121-P1-0428 Grab Groundwater			**Acquis Date:**		2017-05-17T10:55:56
Sample Type:	Quality Control			**Instrument:**		LM24960
Vial Position:	73			**Acquis Method:**		PFC-32-16NOV02.dam
Injection Vol:	5.00			**Result Table:**		17129008
QMethod File:	PFCMOD-17JAN28			**ICAL Name:**		17MAY10MCAL
Batch Number:	17129008			**Operator:**		Not calculated
Sample Wt.:	0.09971			**Dilution Factor:**		1.00
Sample Vol.:	1.000			**Prep Factor:**		1.000

Injection Standard Peak Table

Injection Standard Name	Inj Std Conc	Injection Std Peak Area	ICAL Injection Standard AVG	Injection Std %Diff	Injection Std %Diff Limit	Injection Std %Diff OOS
I13C3-PFBA	1.0	656892.8	669117.3	-1.8	50.0	
I13C2-PFOA	1.0	397481.9	342184.6	16.2	50.0	
I13C4-PFOS	1.0	69022.4	70131.6	-1.6	50.0	
I13C2-PFDA	1.0	437679.5	384098.7	14.0	50.0	

Extraction Standard Peak Table

Extraction Standard Name	Ext Std Area	Inj Std Name	Inj Std Area	Area Ratio	AVG Area Ratio	Ext Std Conc	Ext Std Result	Ext Std %REC	Ext Std %REC Limit	Ext Std OOS
E13C8-PFOA	321495.9	13C2-PFOA	397481.9	0.809	1.163	10.029	6.972	69.5	70.0-130.0	OOS
E13C8-PFOS	43282.9	13C4-PFOS	69022.4	0.627	0.865	10.029	7.267	72.5	70.0-130.0	

APPROVED
By DMW at 8:00 pm, 5/17/17

REVIEWED
By UMJS at 8:50 pm, 5/21/17

ICAL Name: 17MAY10MCAL **Result Table:** 17129008 5/17/2017 7:53:11 PM
QMethod Name: PFCMOD-17JAN28 **Acquisition Method:** PFC-32-16NOV02.dam

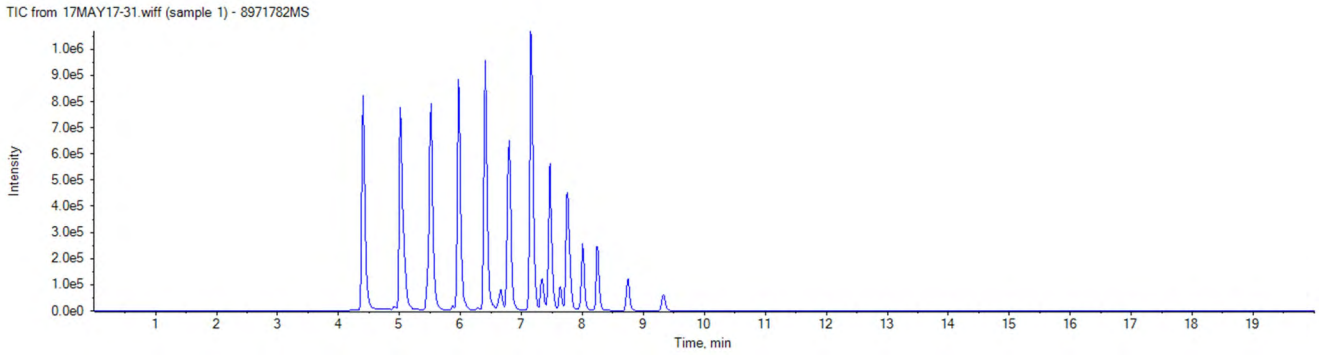
Analyte Quantitation Peak Table

Sample Name: 8971782MS **Instrument Name:** LM24960 **File Name:** 17MAY17-31.wiff

Sample Wt	Sample Vol	Dilution Factor	PrepFactor
0.09971	1.000	1.00	1.000

Analytet Name	RT	RRT	Analyte Area Response	Int Typ	ES Name	ES RT	ES Area Response	Area Ratio	Sample Result (ng/L)
PFOA	6.41	1.000	1316775.3	A	13C8-PFOA	6.41	321495.9	4.096	187.166
PFOS	6.78	1.000	1225453.8	M	13C8-PFOS	6.78	43282.9	28.313	394.928

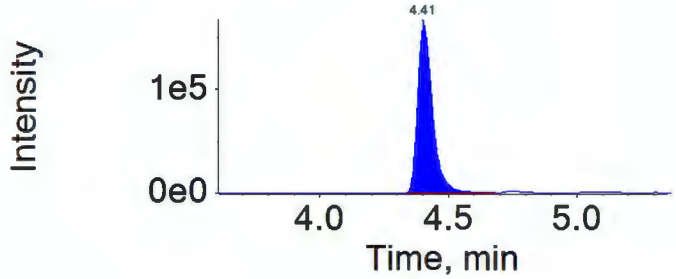
Total Ion Chromatogram



ICAL Name: 17MAY10MCAL
QMethod Name: PFCMOD-17JAN28
Result Table: 17129008 5/17/2017 7:53:11 PM
Acquisition Method: PFC-32-16NOV02.dam

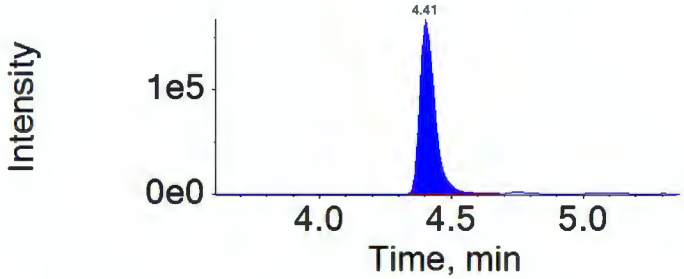
Injection Standard: I13C3-PFBA

216.0 / 172.0



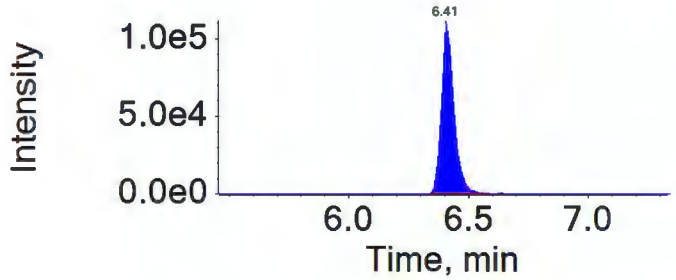
Injection Standard: 13C3-PFBA

216.0 / 172.0



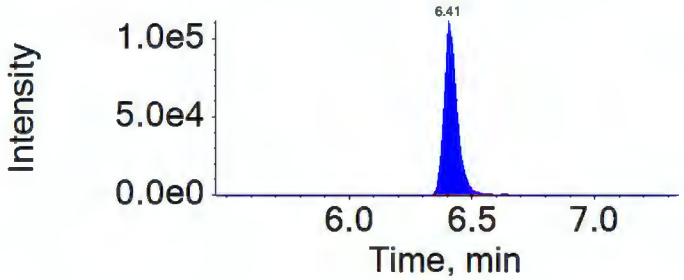
Injection Standard: I13C2-PFOA

415.0 / 370.0



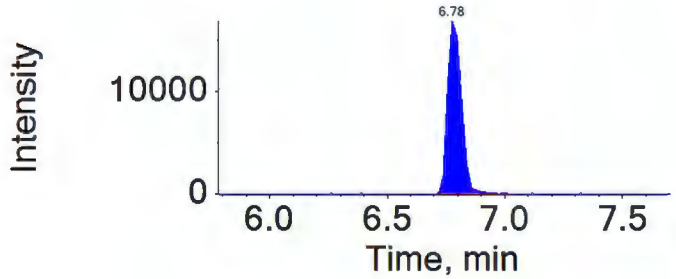
Injection Standard: 13C2-PFOA

415.0 / 370.0



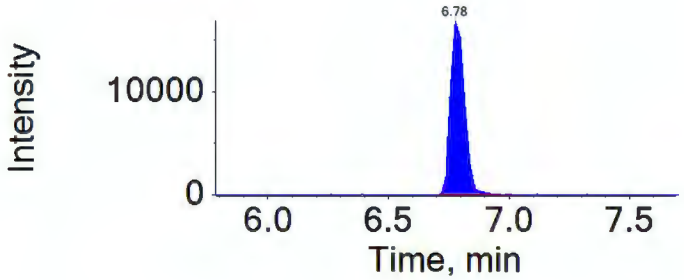
Injection Standard: I13C4-PFOS

503.0 / 99.0



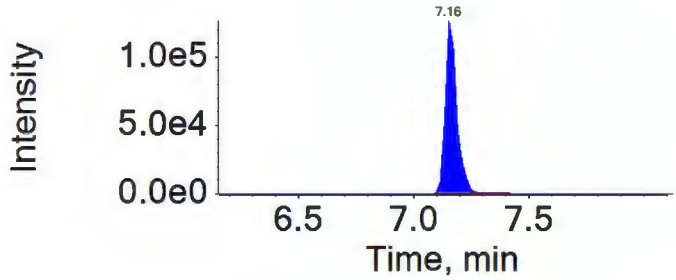
Injection Standard: 13C4-PFOS

503.0 / 99.0



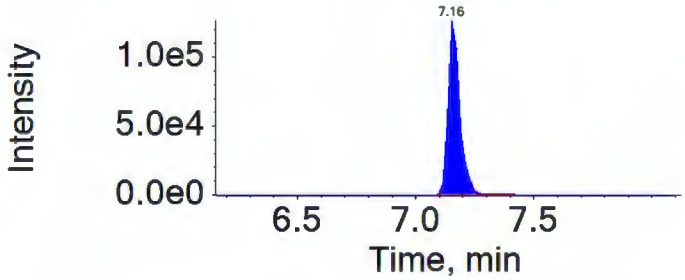
Injection Standard: I13C2-PFDA

515.0 / 470.0



Injection Standard: 13C2-PFDA

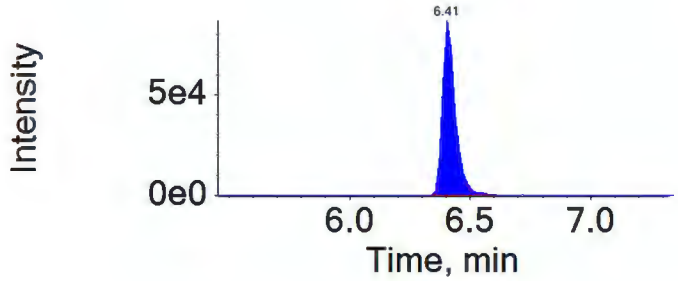
515.0 / 470.0



ICAL Name: 17MAY10MCAL **Result Table:** 17129008 5/17/2017 7:53:11 PM
QMethod Name: PFCMOD-17JAN28 **Acquisition Method:** PFC-32-16NOV02.dam

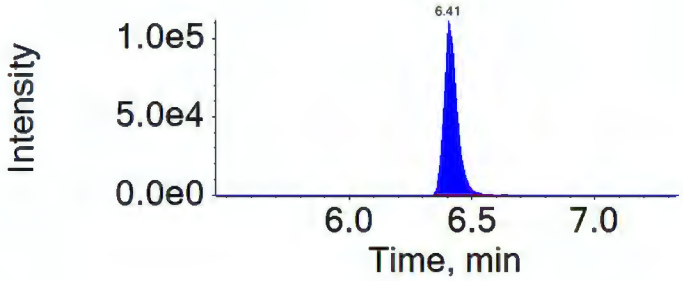
Extraction Standard: E13C8-PFOA

421.0 /
376.0



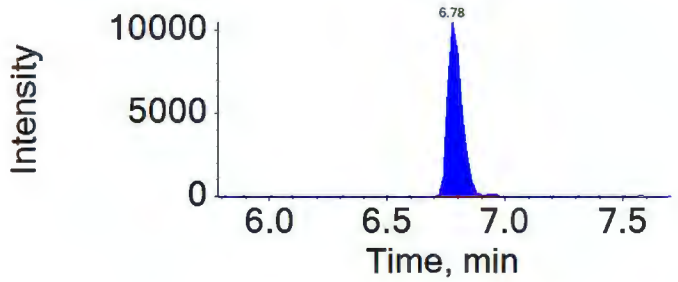
Injection Standard: 13C2-PFOA

415.0 /
370.0



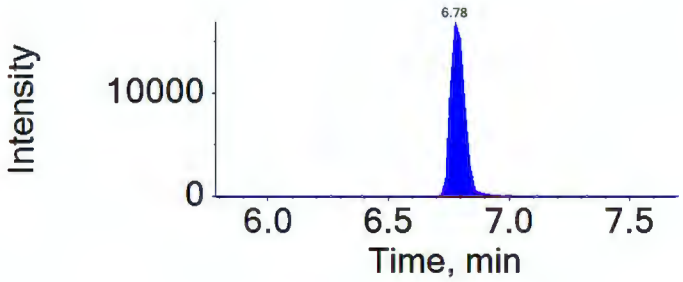
Extraction Standard: E13C8-PFOS

507.0 /
99.0



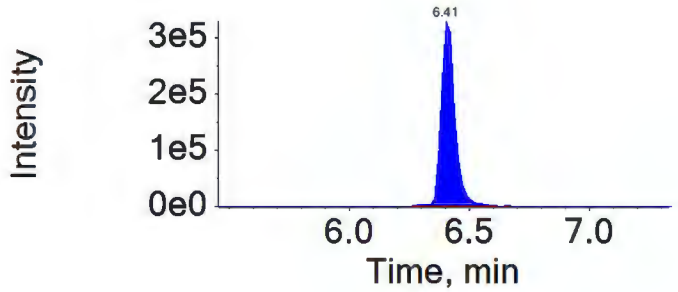
Injection Standard: 13C4-PFOS

503.0 /
99.0



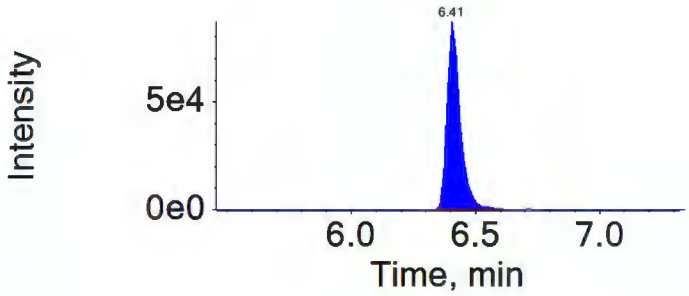
Analyte: PFOA

413.0 /
369.0



Extraction Standard: 13C8-PFOA

421.0 /
376.0

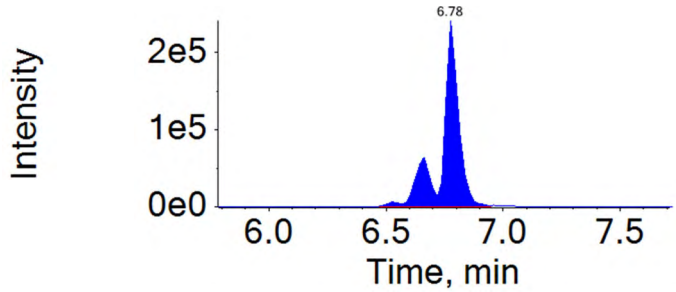


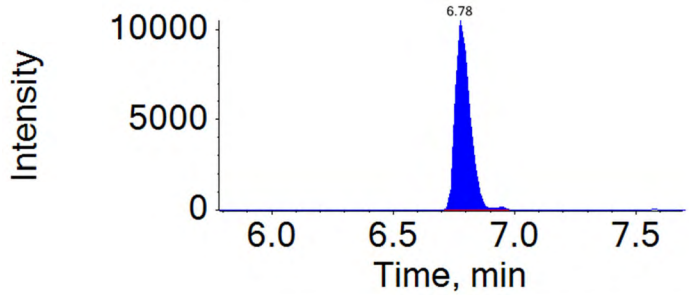
APPROVED
By DMW at 8:00 pm, 5/17/17

REVIEWED
By UMJS at 8:50 pm, 5/21/17

ICAL Name: 17MAY10MCAL **Result Table:** 17129008 5/17/2017 7:53:11 PM
QMethod Name: PFCMOD-17JAN28 **Acquisition Method:** PFC-32-16NOV02.dam

Analyte: PFOS	Extraction Standard: 13C8-PFOS
499.0 / 80.0	507.0 / 99.0





APPROVED
By DMW at 8:00 pm, 5/17/17

REVIEWED
By UMJS at 8:50 pm, 5/21/17

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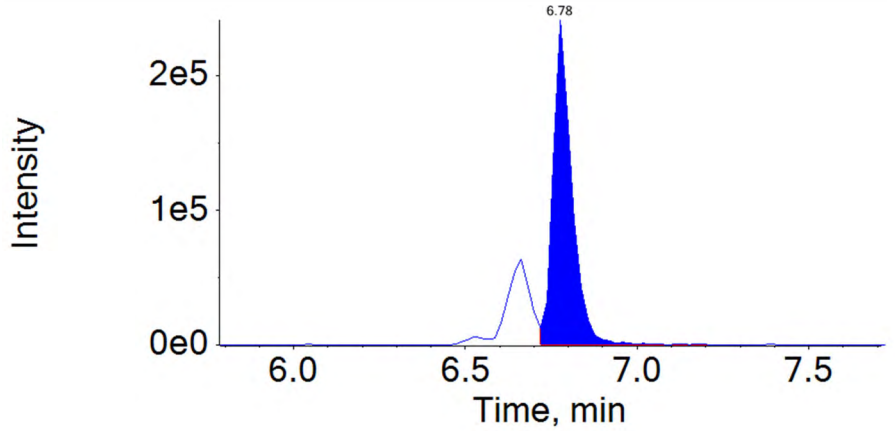
Auto Integrations prior to Manual Integration

Print Date: 05/17/2017 7:57 PM
Template: MQ-OrigInteg-16NOV21.docx

Results Table Name: 17129008
Results Table Date: 5/17/2017 7:53:11 PM

Acquisition Method: PFC-32-16NOV02.dam
QMethod File: PFCMOD-17JAN28

Component Name:
PFOS
RT (min.):
6.78
Peak Area:
921938.7
Mass Range:
499.0 / 80.0
File Name:
17MAY17-31.wiff
Sample Name:
8971782MS



Integration Comment: incorrect integration

APPROVED
By DMW at 8:00 pm, 5/17/17

REVIEWED
By UMJS at 8:50 pm, 5/21/17

Results Table Name: 17129008
Results Table Date: 5/17/2017 7:53:11 PM

Acquisition Method: PFC-32-16NOV02.dam
QMethod File: PFCMOD-17JAN28

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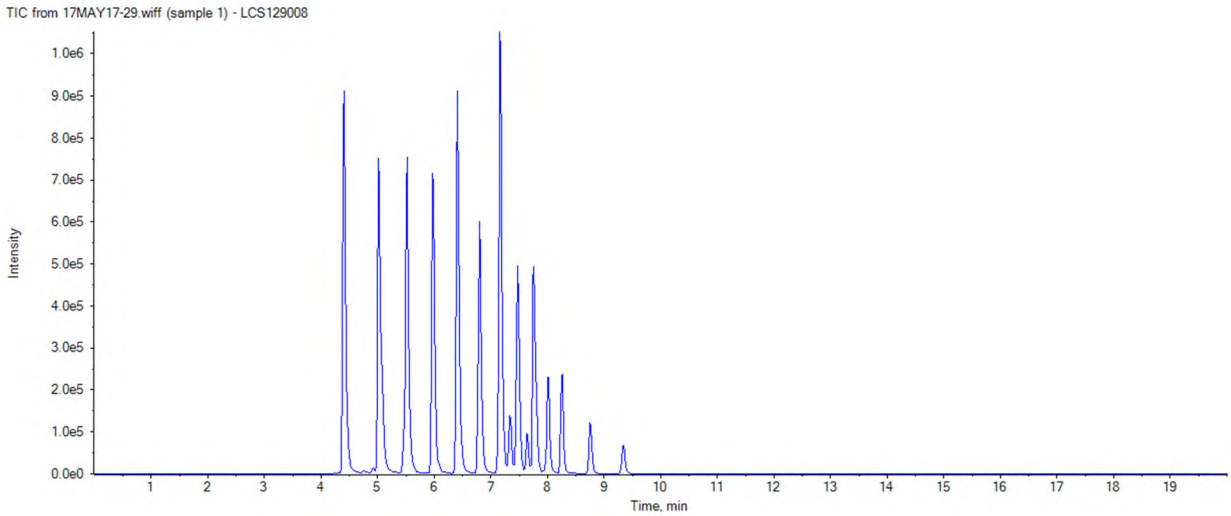
LC-MS/MS Analysis Report

Printed: 5/17/2017 7:54:00 PM
Template: MQ-LCSMS-16NOV21.docx

LCS/MS Recovery

ICAL Name: 17MAY10MCAL
QMethod Name: PFCMOD-17JAN28
Result Table: 17129008 5/17/2017 7:53:11 PM
Acquisition Method: PFC-32-16NOV02.dam

Instrument Name:	Sample Name:	Sample ID:	Sample File:	Acquisition Date:
LM24960	LCS129008	17129008	17MAY17-29.wiff	2017-05-17T10:14:50



Injection Standard Name	Inj Std Conc	Injection Std Peak Area	ICAL Injection Standard AVG	Injection Std %Diff	Injection Std %Diff Limit	Injection Std %Diff OOS
I13C3-PFBA	1.00	751207.5	669117.279	12.3	50.0	
I13C2-PFOA	1.00	387246.7	342184.630	13.2	50.0	
I13C4-PFOS	1.00	86455.2	70131.551	23.3	50.0	
I13C2-PFDA	1.00	394197.4	384098.708	2.6	50.0	

APPROVED
By DMW at 8:00 pm, 5/17/17

REVIEWED
By UMJS at 8:51 pm, 5/21/17

LCS/MS Recovery

ICAL Name: 17MAY10MCAL **Result Table:** 17129008 5/17/2017 7:53:11 PM
QMethod Name: PFCMOD-17JAN28 **Acquisition Method:** PFC-32-16NOV02.dam

Instrument Name:	Sample Name:	Sample ID:	Sample File:	Acquisition Date:
LM24960	LCS129008	17129008	17MAY17-29.wiff	2017-05-17T10:14:50

Analyte Name	Analyte Area	Ext Std Name	Ext Std Area	Area Ratio	Adj Actual Conc	Sample Result	%REC	% REC Limit	%REC OOS
PFOA	1146324.5	13C8-PFOA	311504.8	3.680	200.000	167.676	83.8	70.0-130.0	
PFOS	569873.8	13C8-PFOS	46947.4	12.139	191.200	168.828	88.3	70.0-130.0	

APPROVED
By DMW at 8:00 pm, 5/17/17

REVIEWED
By UMJS at 8:51 pm, 5/21/17

LCS/MS Recovery

ICAL Name: 17MAY10MCAL
QMethod Name: PFCMOD-17JAN28
Result Table: 17129008 5/17/2017 7:53:11 PM
Acquisition Method: PFC-32-16NOV02.dam

APPROVED
By DMW at 8:00 pm, 5/17/17

REVIEWED
By UMJS at 8:51 pm, 5/21/17

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LC-MS/MS Analysis Report

Printed: 5/17/2017 7:55:00 PM
Template: MQ-Sample-16Nov21.docx

ICAL Name: 17MAY10MCAL
QMethod Name: PFCMOD-17JAN28
Result Table: 17129008 5/17/2017 7:53:11 PM
Acquisition Method: PFC-32-16NOV02.dam

Sample Name:	LCS129008			**Data File:**		17MAY17-29.wiff
Sample ID:	17129008			**Acquis Date:**		2017-05-17T10:14:50
Sample Type:	Quality Control			**Instrument:**		LM24960
Vial Position:	71			**Acquis Method:**		PFC-32-16NOV02.dam
Injection Vol:	5.00			**Result Table:**		17129008
QMethod File:	PFCMOD-17JAN28			**ICAL Name:**		17MAY10MCAL
Batch Number:	17129008			**Operator:**		Not calculated
Sample Wt.:	0.10000			**Dilution Factor:**		1.00
Sample Vol.:	1.000			**Prep Factor:**		1.000

Injection Standard Peak Table

Injection Standard Name	Inj Std Conc	Injection Std Peak Area	ICAL Injection Standard AVG	Injection Std %Diff	Injection Std %Diff Limit	Injection Std %Diff OOS
I13C3-PFBA	1.0	751207.5	669117.3	12.3	50.0	
I13C2-PFOA	1.0	387246.7	342184.6	13.2	50.0	
I13C4-PFOS	1.0	86455.2	70131.6	23.3	50.0	
I13C2-PFDA	1.0	394197.4	384098.7	2.6	50.0	

Extraction Standard Peak Table

Extraction Standard Name	Ext Std Area	Inj Std Name	Inj Std Area	Area Ratio	AVG Area Ratio	Ext Std Conc	Ext Std Result	Ext Std %REC	Ext Std %REC Limit	Ext Std OOS
E13C8-PFOA	311504.8	13C2-PFOA	387246.7	0.804	1.163	10.000	6.914	69.1	70.0-130.0	OOS
E13C8-PFOS	46947.4	13C4-PFOS	86455.2	0.543	0.865	10.000	6.274	62.7	70.0-130.0	OOS

APPROVED
By DMW at 8:00 pm, 5/17/17

REVIEWED
By UMJS at 8:51 pm, 5/21/17

ICAL Name: 17MAY10MCAL **Result Table:** 17129008 5/17/2017 7:53:11 PM
QMethod Name: PFCMOD-17JAN28 **Acquisition Method:** PFC-32-16NOV02.dam

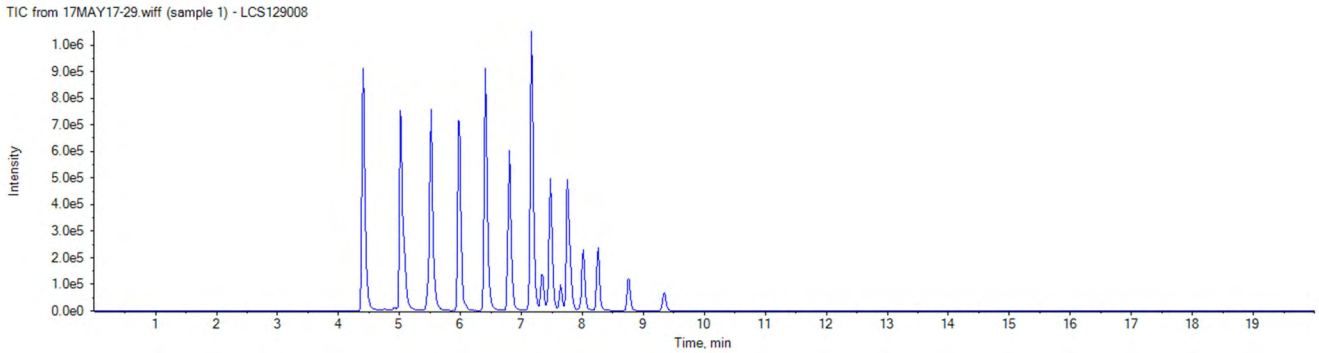
Analyte Quantitation Peak Table

Sample Name: LCS129008 **Instrument Name:** LM24960 **File Name:** 17MAY17-29.wiff

Sample Wt	Sample Vol	Dilution Factor	PrepFactor
0.10000	1.000	1.00	1.000

Analytet Name	RT	RRT	Analyte Area Response	Int Typ	ES Name	ES RT	ES Area Response	Area Ratio	Sample Result (ng/L)
PFOA	6.41	1.000	1146324.5	A	13C8-PFOA	6.41	311504.8	3.680	167.676
PFOS	6.79	1.000	569873.8	A	13C8-PFOS	6.78	46947.4	12.139	168.828

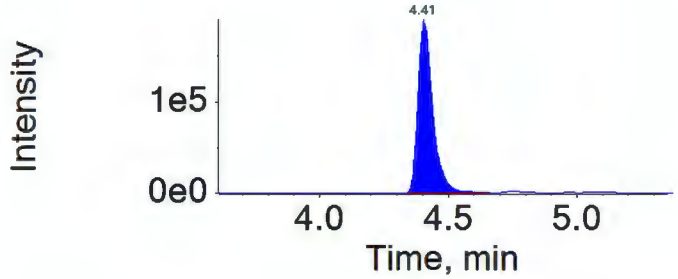
Total Ion Chromatogram



ICAL Name: 17MAY10MCAL
QMethod Name: PFCMOD-17JAN28
Result Table: 17129008 5/17/2017 7:53:11 PM
Acquisition Method: PFC-32-16NOV02.dam

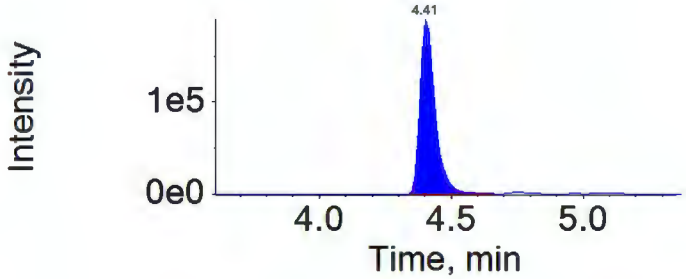
Injection Standard: I13C3-PFBA

216.0 / 172.0



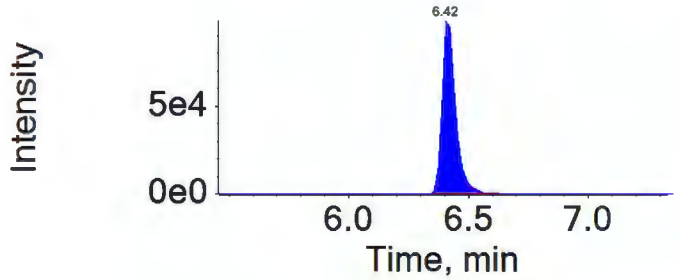
Injection Standard: 13C3-PFBA

216.0 / 172.0



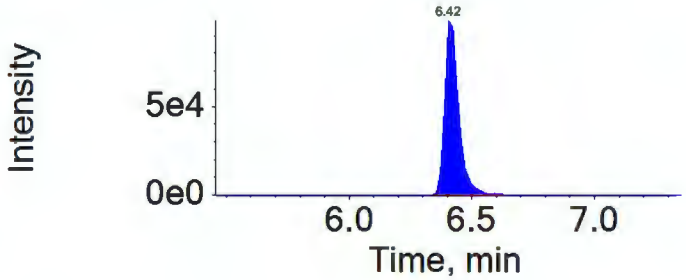
Injection Standard: I13C2-PFOA

415.0 / 370.0



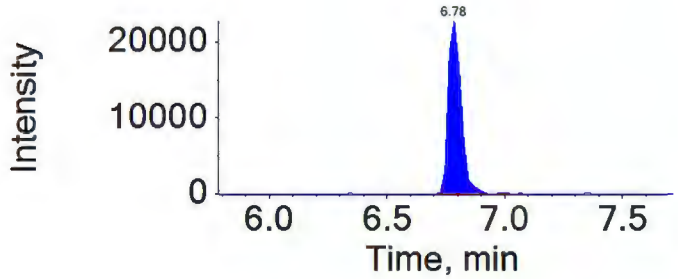
Injection Standard: 13C2-PFOA

415.0 / 370.0



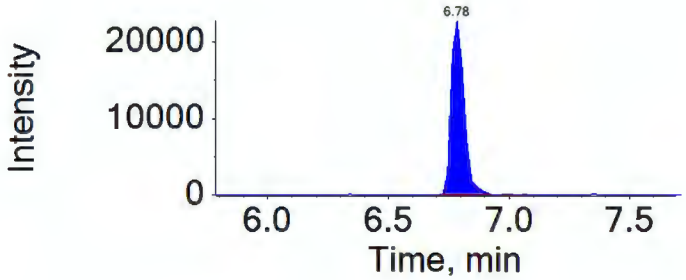
Injection Standard: I13C4-PFOS

503.0 / 99.0



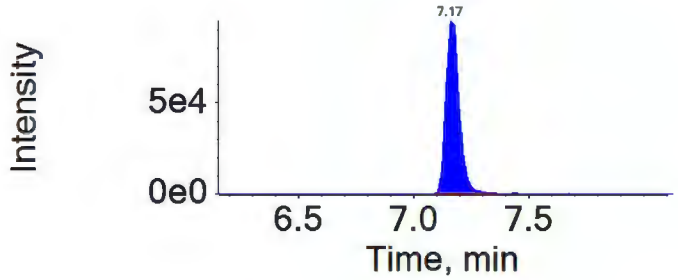
Injection Standard: 13C4-PFOS

503.0 / 99.0



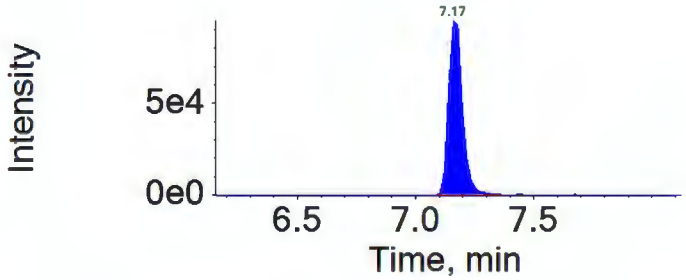
Injection Standard: I13C2-PFDA

515.0 / 470.0



Injection Standard: 13C2-PFDA

515.0 / 470.0



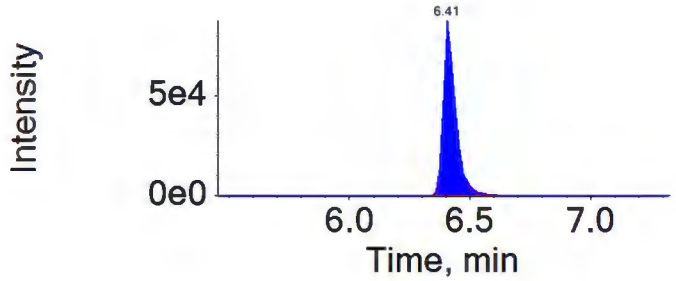
APPROVED
By DMW at 8:00 pm, 5/17/17

REVIEWED
By UMJS at 8:51 pm, 5/21/17

ICAL Name: 17MAY10MCAL **Result Table:** 17129008 5/17/2017 7:53:11 PM
QMethod Name: PFCMOD-17JAN28 **Acquisition Method:** PFC-32-16NOV02.dam

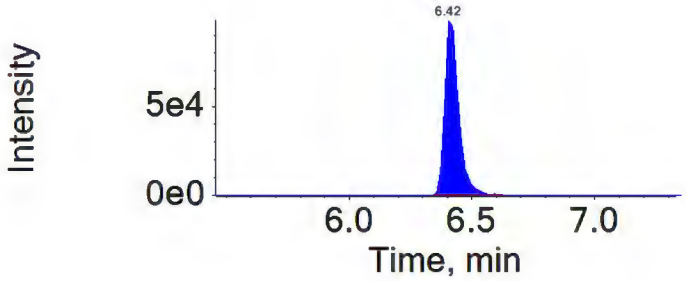
Extraction Standard: E13C8-PFOA

421.0 /
376.0



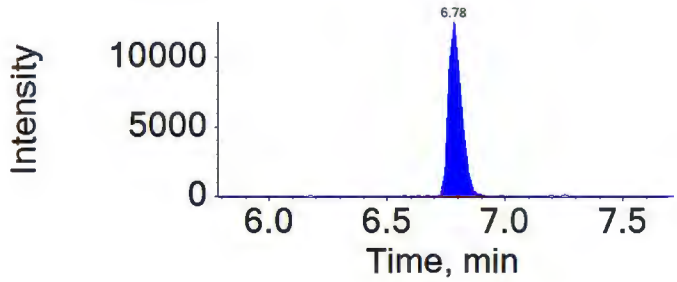
Injection Standard: 13C2-PFOA

415.0 /
370.0



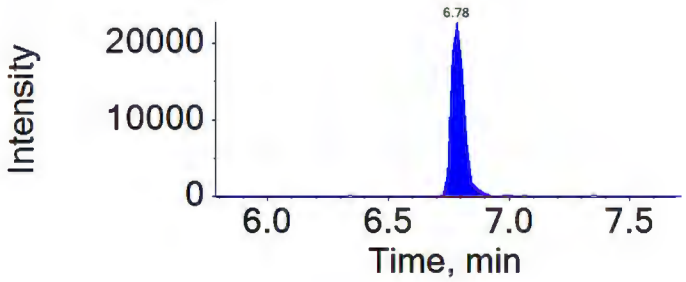
Extraction Standard: E13C8-PFOS

507.0 /
99.0



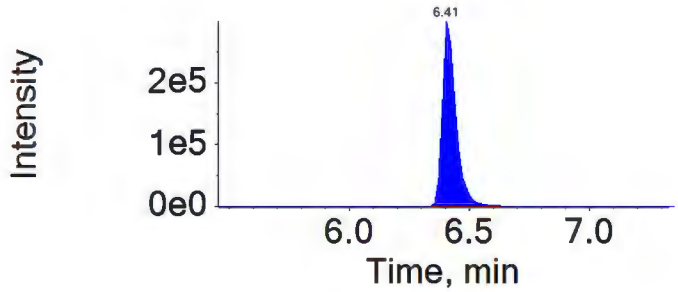
Injection Standard: 13C4-PFOS

503.0 /
99.0



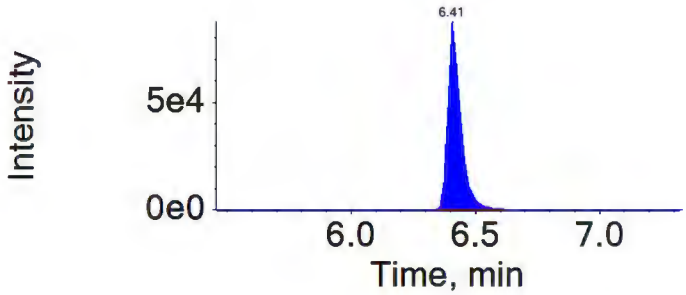
Analyte: PFOA

413.0 /
369.0



Extraction Standard: 13C8-PFOA

421.0 /
376.0

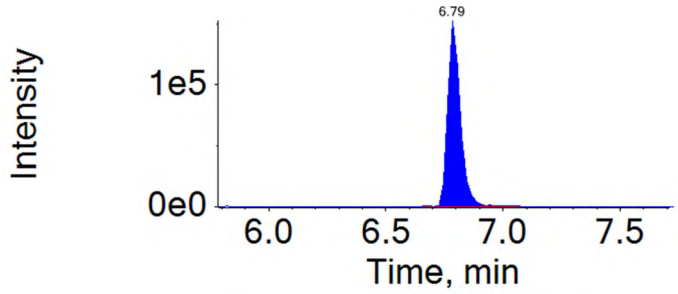


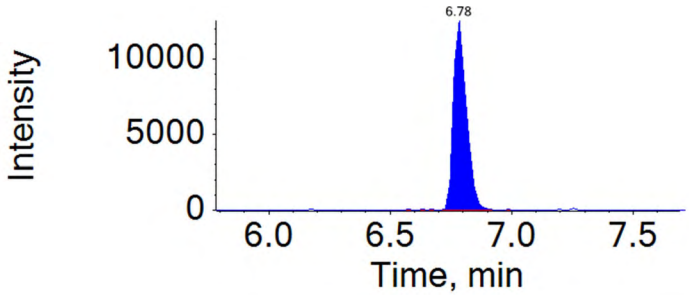
APPROVED
By DMW at 8:00 pm, 5/17/17

REVIEWED
By UMJS at 8:51 pm, 5/21/17

ICAL Name: 17MAY10MCAL **Result Table:** 17129008 5/17/2017 7:53:11 PM
QMethod Name: PFCMOD-17JAN28 **Acquisition Method:** PFC-32-16NOV02.dam

Analyte: PFOS	Extraction Standard: 13C8-PFOS
499.0 / 80.0	507.0 / 99.0





APPROVED
By DMW at 8:00 pm, 5/17/17

REVIEWED
By UMJS at 8:51 pm, 5/21/17

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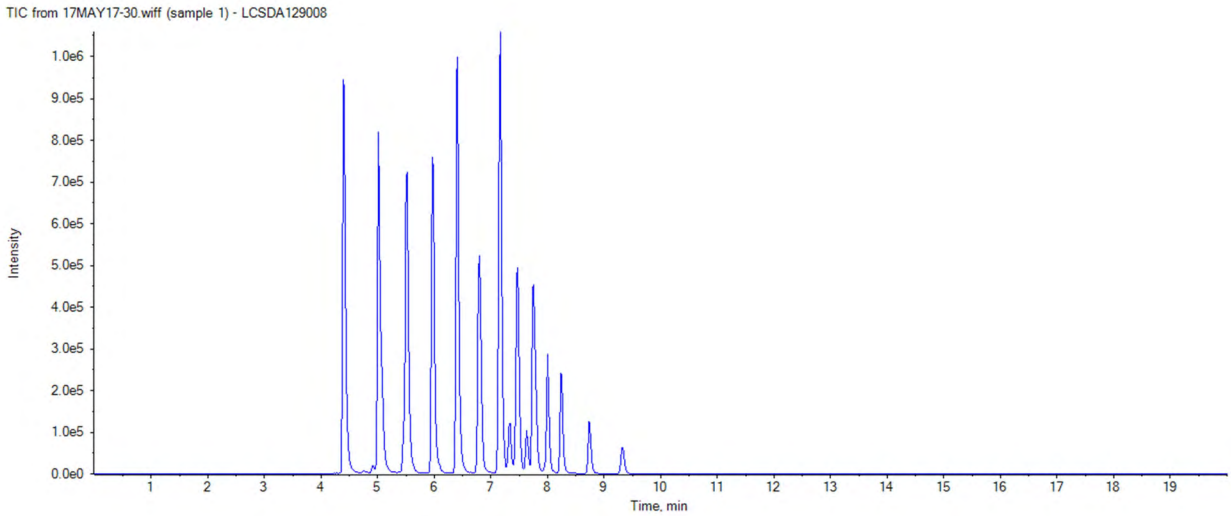
LC-MS/MS Analysis Report

Printed: 5/17/2017 7:54:00 PM
Template: MQ-LCSMS-16NOV21.docx

LCS/MS Recovery

ICAL Name: 17MAY10MCAL
QMethod Name: PFCMOD-17JAN28
Result Table: 17129008 5/17/2017 7:53:11 PM
Acquisition Method: PFC-32-16NOV02.dam

Instrument Name:	Sample Name:	Sample ID:	Sample File:	Acquisition Date:
LM24960	LCSDA129008	17129008	17MAY17-30.wiff	2017-05-17T10:35:23



Injection Standard Name	Inj Std Conc	Injection Std Peak Area	ICAL Injection Standard AVG	Injection Std %Diff	Injection Std %Diff Limit	Injection Std %Diff OOS
I13C3-PFBA	1.00	737274.3	669117.279	10.2	50.0	
I13C2-PFOA	1.00	398300.4	342184.630	16.4	50.0	
I13C4-PFOS	1.00	64650.0	70131.551	-7.8	50.0	
I13C2-PFDA	1.00	372171.2	384098.708	-3.1	50.0	

APPROVED
By DMW at 8:00 pm, 5/17/17

REVIEWED
By UMJS at 8:51 pm, 5/21/17

LCS/MS Recovery

ICAL Name: 17MAY10MCAL **Result Table:** 17129008 5/17/2017 7:53:11 PM
QMethod Name: PFCMOD-17JAN28 **Acquisition Method:** PFC-32-16NOV02.dam

Instrument Name:	Sample Name:	Sample ID:	Sample File:	Acquisition Date:
LM24960	LCSDA129008	17129008	17MAY17-30.wiff	2017-05-17T10:35:23

Analyte Name	Analyte Area	Ext Std Name	Ext Std Area	Area Ratio	Adj Actual Conc	Sample Result	%REC	% REC Limit	%REC OOS
PFOA	1223644.1	13C8-PFOA	324898.2	3.766	200.000	171.608	85.8	70.0-130.0	
PFOS	591867.9	13C8-PFOS	49257.4	12.016	191.200	167.120	87.4	70.0-130.0	

APPROVED
By DMW at 8:00 pm, 5/17/17

REVIEWED
By UMJS at 8:51 pm, 5/21/17

LCS/MS Recovery

ICAL Name: 17MAY10MCAL
QMethod Name: PFCMOD-17JAN28
Result Table: 17129008 5/17/2017 7:53:11 PM
Acquisition Method: PFC-32-16NOV02.dam

APPROVED
By DMW at 8:00 pm, 5/17/17

REVIEWED
By UMJS at 8:51 pm, 5/21/17

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LC-MS/MS Analysis Report

Printed: 5/17/2017 7:55:00 PM
Template: MQ-Sample-16Nov21.docx

ICAL Name: 17MAY10MCAL
QMethod Name: PFCMOD-17JAN28
Result Table: 17129008 5/17/2017 7:53:11 PM
Acquisition Method: PFC-32-16NOV02.dam

Sample Name:	LCSDA129008			**Data File:**		17MAY17-30.wiff
Sample ID:	17129008			**Acquis Date:**		2017-05-17T10:35:23
Sample Type:	Quality Control			**Instrument:**		LM24960
Vial Position:	72			**Acquis Method:**		PFC-32-16NOV02.dam
Injection Vol:	5.00			**Result Table:**		17129008
QMethod File:	PFCMOD-17JAN28			**ICAL Name:**		17MAY10MCAL
Batch Number:	17129008			**Operator:**		Not calculated
Sample Wt.:	0.10000			**Dilution Factor:**		1.00
Sample Vol.:	1.000			**Prep Factor:**		1.000

Injection Standard Peak Table

Injection Standard Name	Inj Std Conc	Injection Std Peak Area	ICAL Injection Standard AVG	Injection Std %Diff	Injection Std %Diff Limit	Injection Std %Diff OOS
I13C3-PFBA	1.0	737274.3	669117.3	10.2	50.0	
I13C2-PFOA	1.0	398300.4	342184.6	16.4	50.0	
I13C4-PFOS	1.0	64650.0	70131.6	-7.8	50.0	
I13C2-PFDA	1.0	372171.2	384098.7	-3.1	50.0	

Extraction Standard Peak Table

Extraction Standard Name	Ext Std Area	Inj Std Name	Inj Std Area	Area Ratio	AVG Area Ratio	Ext Std Conc	Ext Std Result	Ext Std %REC	Ext Std %REC Limit	Ext Std OOS
E13C8-PFOA	324898.2	13C2-PFOA	398300.4	0.816	1.163	10.000	7.011	70.1	70.0-130.0	
E13C8-PFOS	49257.4	13C4-PFOS	64650.0	0.762	0.865	10.000	8.803	88.0	70.0-130.0	

APPROVED
By DMW at 8:00 pm, 5/17/17

REVIEWED
By UMJS at 8:51 pm, 5/21/17

ICAL Name: 17MAY10MCAL **Result Table:** 17129008 5/17/2017 7:53:11 PM
QMethod Name: PFCMOD-17JAN28 **Acquisition Method:** PFC-32-16NOV02.dam

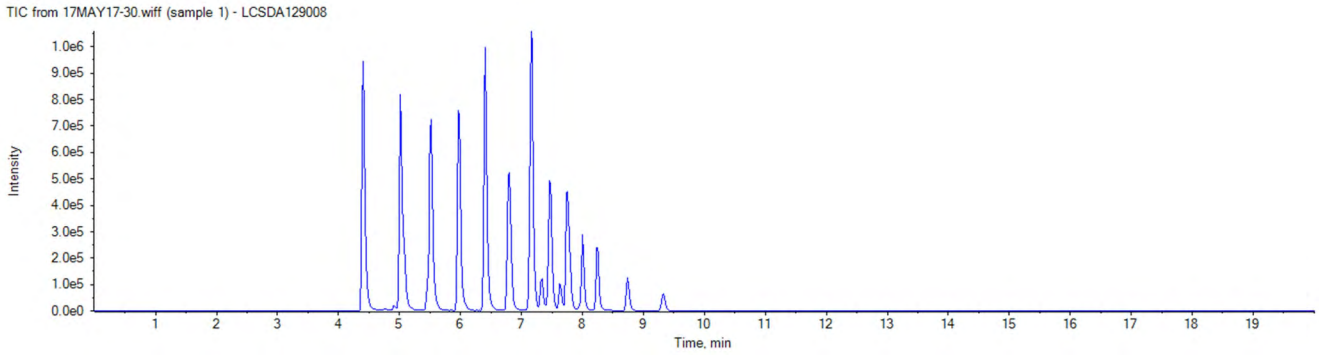
Analyte Quantitation Peak Table

Sample Name: LCSDA129008 **Instrument Name:** LM24960 **File Name:** 17MAY17-30.wiff

Sample Wt	Sample Vol	Dilution Factor	PrepFactor
0.10000	1.000	1.00	1.000

Analytet Name	RT	RRT	Analyte Area Response	Int Typ	ES Name	ES RT	ES Area Response	Area Ratio	Sample Result (ng/L)
PFOA	6.41	1.000	1223644.1	A	13C8-PFOA	6.41	324898.2	3.766	171.608
PFOS	6.78	1.000	591867.9	A	13C8-PFOS	6.78	49257.4	12.016	167.120

Total Ion Chromatogram



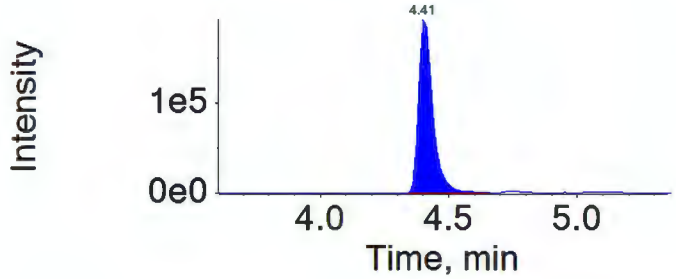
APPROVED
By DMW at 8:00 pm, 5/17/17

REVIEWED
By UMJS at 8:51 pm, 5/21/17

ICAL Name: 17MAY10MCAL
QMethod Name: PFCMOD-17JAN28
Result Table: 17129008 5/17/2017 7:53:11 PM
Acquisition Method: PFC-32-16NOV02.dam

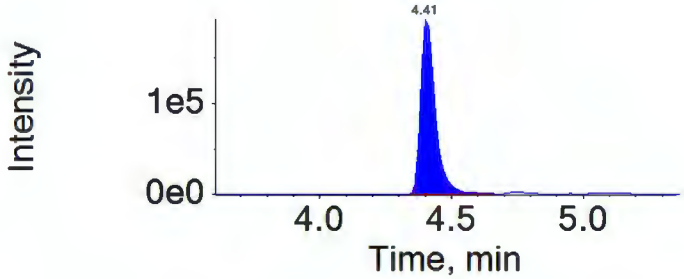
Injection Standard: I13C3-PFBA

216.0 / 172.0



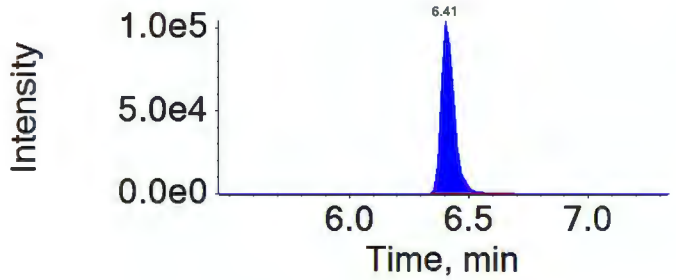
Injection Standard: 13C3-PFBA

216.0 / 172.0



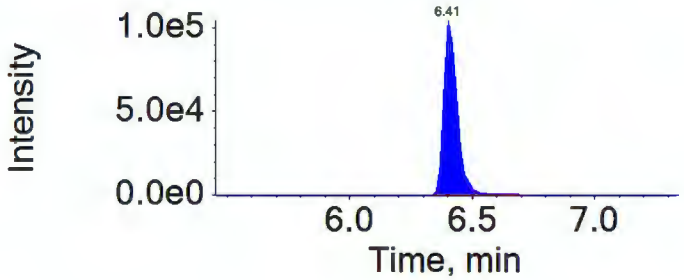
Injection Standard: I13C2-PFOA

415.0 / 370.0



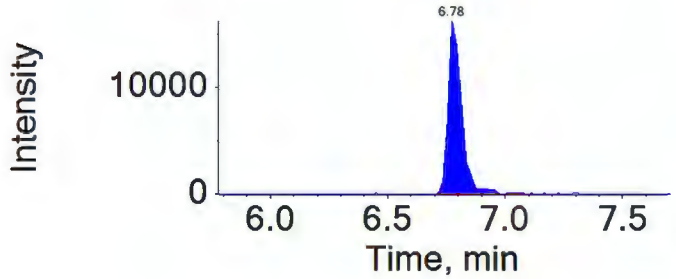
Injection Standard: 13C2-PFOA

415.0 / 370.0



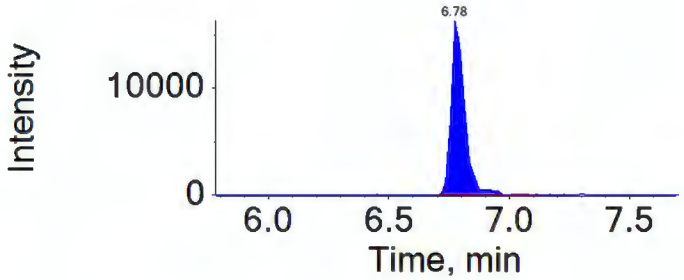
Injection Standard: I13C4-PFOS

503.0 / 99.0



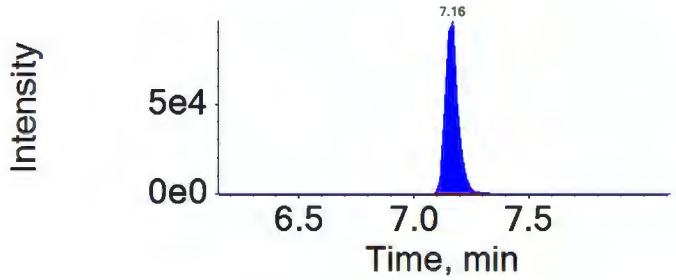
Injection Standard: 13C4-PFOS

503.0 / 99.0



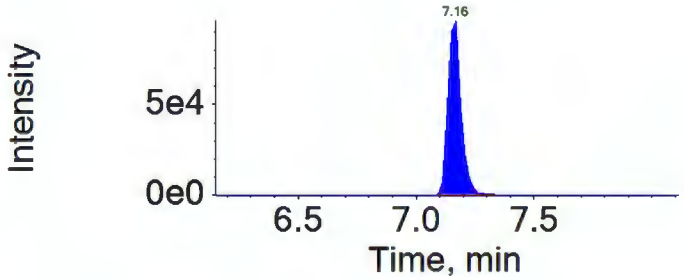
Injection Standard: I13C2-PFDA

515.0 / 470.0



Injection Standard: 13C2-PFDA

515.0 / 470.0



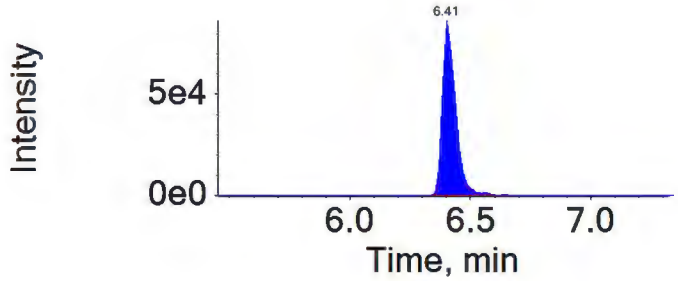
APPROVED
By DMW at 8:00 pm, 5/17/17

REVIEWED
By UMJS at 8:51 pm, 5/21/17

ICAL Name: 17MAY10MCAL **Result Table:** 17129008 5/17/2017 7:53:11 PM
QMethod Name: PFCMOD-17JAN28 **Acquisition Method:** PFC-32-16NOV02.dam

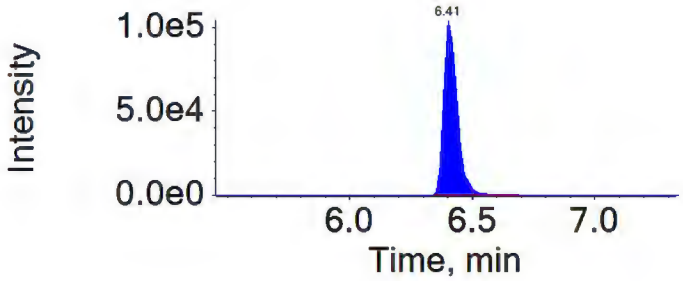
Extraction Standard: E13C8-PFOA

421.0 /
376.0



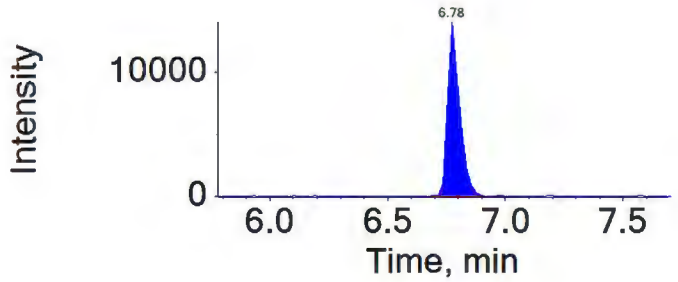
Injection Standard: 13C2-PFOA

415.0 /
370.0



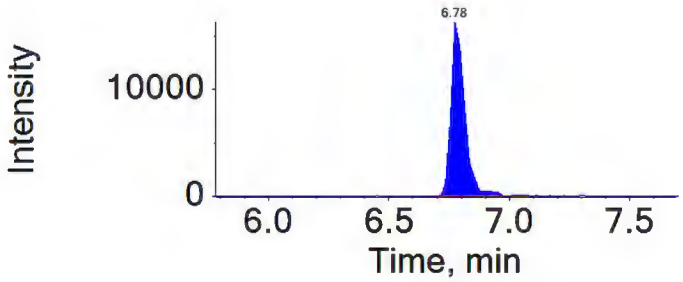
Extraction Standard: E13C8-PFOS

507.0 /
99.0



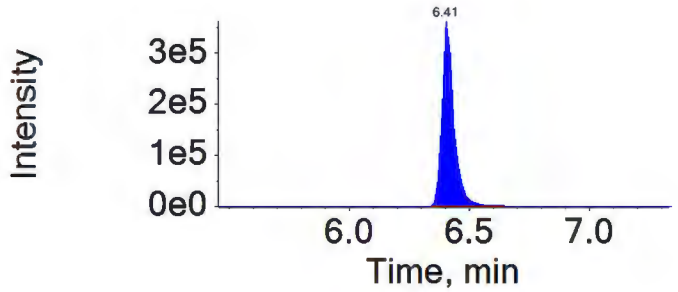
Injection Standard: 13C4-PFOS

503.0 /
99.0



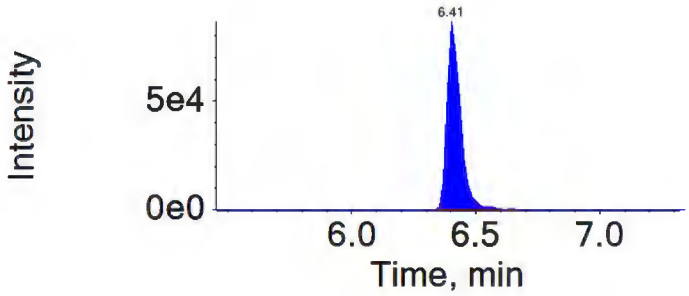
Analyte: PFOA

413.0 /
369.0



Extraction Standard: 13C8-PFOA

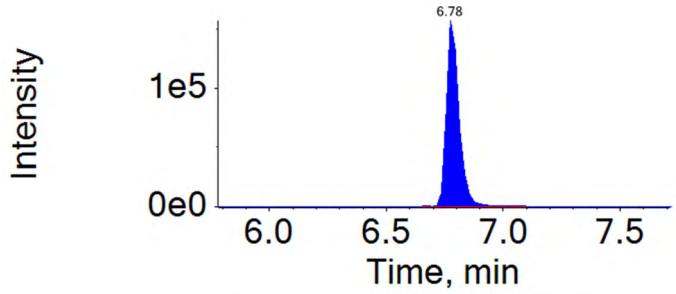
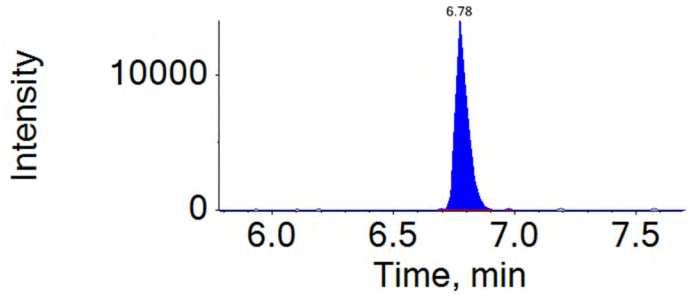
421.0 /
376.0



APPROVED
By DMW at 8:00 pm, 5/17/17

REVIEWED
By UMJS at 8:51 pm, 5/21/17

ICAL Name: 17MAY10MCAL **Result Table:** 17129008 5/17/2017 7:53:11 PM
QMethod Name: PFCMOD-17JAN28 **Acquisition Method:** PFC-32-16NOV02.dam

Analyte: PFOS	Extraction Standard: 13C8-PFOS
499.0 / 80.0 	507.0 / 99.0 

APPROVED
By DMW at 8:00 pm, 5/17/17

REVIEWED
By UMJS at 8:51 pm, 5/21/17

Preparation Logs

PFAS by LC/MS/MS

Organic Extraction Batchlog Assigned to: 9213 Pamela Rothharpt Reviewed by: DW10262 Start Date: 5/10/17 Start time: 8:25

17129008 Tech 1: PJR9213 Tech 2: _____

Analyses on Batch: PFAS in Water by LC/MS/MS

Dept: 33 Prep Analysis: 14091 PFAS Water Prep

	QC	Sample Code	Amt (g)	SS/IS Sol.	Amt (mL)	MS Sol.	Amt (mL)	FV (uL)	IS amt (uL)	BC	Comments
3	8971782MS	121P1MS	99.71	SS171243 3A	.025	LCSPFCX1733P	.04	1mL	10	201a	
11	BLANKA	BLK129008	100	↓	.025	—	—	↓	↓	—	
12	LCSA	LCS129008	100	↓	.025	LCSPFCX1733P	.04	↓	↓	—	
1	LCSDA	LCSD129008	100	↓	.025	↓	.04	↓	↓	—	

DF100 for all samples. 965 ul MeOH (DR018-US) added to 10 ul sample & 25 ul alt. std SS171313 3A → 200 ul this sol^n added to 10 ul internal IS171353 3A DW 5/15/17

→ not needed, Re-inject samples straight DW 5/16/17

Reagent/Material/Equip	Lot No./ID No.
96% MeOH:H2O	—
Acetate Buffer	27047226
Auto-pipette (IS)	DFS 5
Auto-pipette (LCS)	PFAS 5
Auto-pipette (SS)	PFAS 4
Auto-pipette (dilutions)	
Auto-pipette (extract vialing	P1000-1
Internal Standard	IS171353 3A
Methanol	DR336-US
Milli-Q H2O	HOUSE A223
NH4OH:H2O	921305091733A
NH4OH:MeOH	921305091733B
SPE Cartridge	6362300-01
Sodium Thiosulfate	375012417 37A
Trizma	—

Spike Solutions: Witness: JWK9524 Instrument: LM24960

Sequence: 17MAY10MOD-17MAY17

	Sample #	Sample Code	Amt (g)	SS/IS Sol.	Amt (mL)	FV (uL)	IS Amt (uL)	BC	Comments	Analyses	Due Date	Prio
2	1 8971782	121P1	100.40	SS171243 3A	.025	1mL	10	201a		10954	05/15/2017	N
4	2 8971783	121P4	100.25	↓	.025	↓	↓	201a		10954	05/15/2017	N
5	3 8971784	114P7	99.96	↓	.025	↓	↓	201a		10954	05/15/2017	N
6	4 8971785	018P3	99.64	↓	.025	↓	↓	201a		10954	05/15/2017	N
7	5 8971786	21P10	100.41	↓	.025	↓	↓	201a		10954	05/15/2017	N
8	6 8971787	113P7	100.10	↓	.025	↓	↓	201a		10954	05/15/2017	N
9	7 8978191	053WT	99.54	↓	.025	↓	↓	201a		10954	05/17/2017	N

Balance #	B6297 44122	SPE Manifold	*~~2,1~~ 2,3	Vacuum Port		N-evap	C	17129008

* @ PJR9213 5/10/17

DF = Dilution Factor FV = Final Volume

Documented temps are NIST corrected.