

## ANALYTICAL REPORT

Eurofins Chicago  
2417 Bond Street  
University Park, IL 60484  
Tel: (708)534-5200

Laboratory Job ID: 500-210361-1  
Client Project/Site: PFAS Testing

For:  
City of Eau Claire  
1000 Ferry Street  
Eau Claire, Wisconsin 54703

Attn: Ty Fadness



Authorized for release by:  
1/5/2022 1:06:43 PM

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*The test results in this report meet all 2003 NELAC, 2009 TNI, and 2016 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.*

*This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.*

*Results relate only to the items tested and the sample(s) as received by the laboratory.*

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# Case Narrative

Client: City of Eau Claire  
Project/Site: PFAS Testing

Job ID: 500-210361-1

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**Job ID: 500-210361-1**

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**Laboratory: Eurofins Chicago**

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**Narrative**

**Job Narrative  
500-210361-1**

**Comments**

No additional comments.

**Receipt**

The samples were received on 12/30/2021 10:30 AM. Unless otherwise noted below, the samples arrived in good condition, and where required, properly preserved and on ice. The temperature of the cooler at receipt was 3.2° C.

**Receipt Exceptions**

Sample#1 Trizma lot differ from one another. 1 Container Trizma lot:19310137, and 1 container Trizma lot:19410205. WW Outfall (500-210361-1)

**LCMS**

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

**Organic Prep**

Method 3535: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with preparation batch 320-555644. Method code: 3535\_PFC\_28D Matrix: Aqueous

Method 3535: The following sample was yellow prior to extraction: Well 6 (500-210361-2). preparation batch 320-555644. Method code: 3535\_PFC\_28D Matrix: Aqueous

Method 3535: The following samples were preserved with trizma: WW Outfall (500-210361-1) and Well 6 (500-210361-2). Thus, the MB, LCS and LCSD also contain trizma. preparation batch 320-555644. Method code: 3535\_PFC\_28D Matrix: Aqueous

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

# Detection Summary

Client: City of Eau Claire  
Project/Site: PFAS Testing

Job ID: 500-210361-1

## Client Sample ID: WW Outfall

## Lab Sample ID: 500-210361-1

Analyte	Result	Qualifier	LOQ	LOD	Unit	Dil Fac	D	Method	Prep Type
Perfluorobutanoic acid (PFBA)	6.6		4.8	2.3	ng/L	1		537 (modified)	Total/NA
Perfluoropentanoic acid (PFPeA)	11		1.9	0.47	ng/L	1		537 (modified)	Total/NA
Perfluorohexanoic acid (PFHxA)	10		1.9	0.56	ng/L	1		537 (modified)	Total/NA
Perfluoroheptanoic acid (PFHpA)	2.6		1.9	0.24	ng/L	1		537 (modified)	Total/NA
Perfluorooctanoic acid (PFOA)	4.6		1.9	0.82	ng/L	1		537 (modified)	Total/NA
Perfluorobutanesulfonic acid (PFBS)	5.6		1.9	0.19	ng/L	1		537 (modified)	Total/NA
Perfluoropentanesulfonic acid (PFPeS)	5.6		1.9	0.29	ng/L	1		537 (modified)	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	48		1.9	0.55	ng/L	1		537 (modified)	Total/NA
Perfluoroheptanesulfonic Acid (PFHpS)	0.91	J	1.9	0.18	ng/L	1		537 (modified)	Total/NA
Perfluorooctanesulfonic acid (PFOS)	18		1.9	0.52	ng/L	1		537 (modified)	Total/NA
6:2 FTS	9.2		4.8	2.4	ng/L	1		537 (modified)	Total/NA

## Client Sample ID: Well 6

## Lab Sample ID: 500-210361-2

Analyte	Result	Qualifier	LOQ	LOD	Unit	Dil Fac	D	Method	Prep Type
Perfluorobutanoic acid (PFBA)	3.1	J	5.0	2.4	ng/L	1		537 (modified)	Total/NA
Perfluoropentanoic acid (PFPeA)	1.4	J	2.0	0.49	ng/L	1		537 (modified)	Total/NA
Perfluorohexanoic acid (PFHxA)	1.6	J	2.0	0.58	ng/L	1		537 (modified)	Total/NA
Perfluoroheptanoic acid (PFHpA)	0.52	J	2.0	0.25	ng/L	1		537 (modified)	Total/NA
Perfluorooctanoic acid (PFOA)	1.6	J	2.0	0.85	ng/L	1		537 (modified)	Total/NA
Perfluorobutanesulfonic acid (PFBS)	1.8	J	2.0	0.20	ng/L	1		537 (modified)	Total/NA
Perfluoropentanesulfonic acid (PFPeS)	1.9	J	2.0	0.30	ng/L	1		537 (modified)	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	14		2.0	0.57	ng/L	1		537 (modified)	Total/NA
Perfluoroheptanesulfonic Acid (PFHpS)	0.21	J	2.0	0.19	ng/L	1		537 (modified)	Total/NA
Perfluorooctanesulfonic acid (PFOS)	4.2		2.0	0.54	ng/L	1		537 (modified)	Total/NA

This Detection Summary does not include radiochemical test results.

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# Method Summary

Client: City of Eau Claire  
Project/Site: PFAS Testing

Job ID: 500-210361-1

Method	Method Description	Protocol	Laboratory
537 (modified)	Fluorinated Alkyl Substances	EPA	TAL SAC
3535	Solid-Phase Extraction (SPE)	SW846	TAL SAC

**Protocol References:**

EPA = US Environmental Protection Agency

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

**Laboratory References:**

TAL SAC = Eurofins Sacramento, 880 Riverside Parkway, West Sacramento, CA 95605, TEL (916)373-5600



# Sample Summary

Client: City of Eau Claire  
Project/Site: PFAS Testing

Job ID: 500-210361-1

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Lab Sample ID	Client Sample ID	Matrix	Collected	Received
500-210361-1	WW Outfall	Water	12/29/21 12:09	12/29/21 15:12
500-210361-2	Well 6	Water	12/29/21 12:33	12/29/21 15:12

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- 2
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# Client Sample Results

Client: City of Eau Claire  
Project/Site: PFAS Testing

Job ID: 500-210361-1

**Client Sample ID: WW Outfall**

**Lab Sample ID: 500-210361-1**

Date Collected: 12/29/21 12:09

Matrix: Water

Date Received: 12/29/21 15:12

**Method: 537 (modified) - Fluorinated Alkyl Substances**

Analyte	Result	Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	6.6		4.8	2.3	ng/L		01/03/22 13:03	01/04/22 15:31	1
Perfluoropentanoic acid (PFPeA)	11		1.9	0.47	ng/L		01/03/22 13:03	01/04/22 15:31	1
Perfluorohexanoic acid (PFHxA)	10		1.9	0.56	ng/L		01/03/22 13:03	01/04/22 15:31	1
Perfluoroheptanoic acid (PFHpA)	2.6		1.9	0.24	ng/L		01/03/22 13:03	01/04/22 15:31	1
Perfluorooctanoic acid (PFOA)	4.6		1.9	0.82	ng/L		01/03/22 13:03	01/04/22 15:31	1
Perfluorononanoic acid (PFNA)	<0.26		1.9	0.26	ng/L		01/03/22 13:03	01/04/22 15:31	1
Perfluorodecanoic acid (PFDA)	<0.30		1.9	0.30	ng/L		01/03/22 13:03	01/04/22 15:31	1
Perfluoroundecanoic acid (PFUnA)	<1.1		1.9	1.1	ng/L		01/03/22 13:03	01/04/22 15:31	1
Perfluorododecanoic acid (PFDoA)	<0.53		1.9	0.53	ng/L		01/03/22 13:03	01/04/22 15:31	1
Perfluorotridecanoic acid (PFTrDA)	<1.3		1.9	1.3	ng/L		01/03/22 13:03	01/04/22 15:31	1
Perfluorotetradecanoic acid (PFTeA)	<0.71		1.9	0.71	ng/L		01/03/22 13:03	01/04/22 15:31	1
Perfluoro-n-hexadecanoic acid (PFHxDA)	<0.86		1.9	0.86	ng/L		01/03/22 13:03	01/04/22 15:31	1
Perfluoro-n-octadecanoic acid (PFODA)	<0.91		1.9	0.91	ng/L		01/03/22 13:03	01/04/22 15:31	1
Perfluorobutanesulfonic acid (PFBS)	5.6		1.9	0.19	ng/L		01/03/22 13:03	01/04/22 15:31	1
Perfluoropentanesulfonic acid (PFPeS)	5.6		1.9	0.29	ng/L		01/03/22 13:03	01/04/22 15:31	1
Perfluorohexanesulfonic acid (PFHxS)	48		1.9	0.55	ng/L		01/03/22 13:03	01/04/22 15:31	1
Perfluoroheptanesulfonic Acid (PFHpS)	0.91 J		1.9	0.18	ng/L		01/03/22 13:03	01/04/22 15:31	1
Perfluorooctanesulfonic acid (PFOS)	18		1.9	0.52	ng/L		01/03/22 13:03	01/04/22 15:31	1
Perfluorononanesulfonic acid (PFNS)	<0.36		1.9	0.36	ng/L		01/03/22 13:03	01/04/22 15:31	1
Perfluorodecanesulfonic acid (PFDS)	<0.31		1.9	0.31	ng/L		01/03/22 13:03	01/04/22 15:31	1
Perfluorododecanesulfonic acid (PFDoS)	<0.94		1.9	0.94	ng/L		01/03/22 13:03	01/04/22 15:31	1
Perfluorooctanesulfonamide (FOSA)	<0.95		1.9	0.95	ng/L		01/03/22 13:03	01/04/22 15:31	1
NEtFOSA	<0.84		1.9	0.84	ng/L		01/03/22 13:03	01/04/22 15:31	1
NMeFOSA	<0.42		1.9	0.42	ng/L		01/03/22 13:03	01/04/22 15:31	1
NMeFOSAA	<1.2		4.8	1.2	ng/L		01/03/22 13:03	01/04/22 15:31	1
NEtFOSAA	<1.3		4.8	1.3	ng/L		01/03/22 13:03	01/04/22 15:31	1
NMeFOSE	<1.4		3.9	1.4	ng/L		01/03/22 13:03	01/04/22 15:31	1
NEtFOSE	<0.82		1.9	0.82	ng/L		01/03/22 13:03	01/04/22 15:31	1
4:2 FTS	<0.23		1.9	0.23	ng/L		01/03/22 13:03	01/04/22 15:31	1
6:2 FTS	9.2		4.8	2.4	ng/L		01/03/22 13:03	01/04/22 15:31	1
8:2 FTS	<0.44		1.9	0.44	ng/L		01/03/22 13:03	01/04/22 15:31	1
10:2 FTS	<0.65		1.9	0.65	ng/L		01/03/22 13:03	01/04/22 15:31	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<0.39		1.9	0.39	ng/L		01/03/22 13:03	01/04/22 15:31	1
HFPO-DA (GenX)	<1.5		3.9	1.5	ng/L		01/03/22 13:03	01/04/22 15:31	1
9Cl-PF3ONS	<0.23		1.9	0.23	ng/L		01/03/22 13:03	01/04/22 15:31	1
11Cl-PF3OUdS	<0.31		1.9	0.31	ng/L		01/03/22 13:03	01/04/22 15:31	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C4 PFBA	99		25 - 150				01/03/22 13:03	01/04/22 15:31	1
13C5 PFPeA	108		25 - 150				01/03/22 13:03	01/04/22 15:31	1
13C2 PFHxA	107		25 - 150				01/03/22 13:03	01/04/22 15:31	1
13C4 PFHpA	104		25 - 150				01/03/22 13:03	01/04/22 15:31	1
13C4 PFOA	110		25 - 150				01/03/22 13:03	01/04/22 15:31	1

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# Client Sample Results

Client: City of Eau Claire  
Project/Site: PFAS Testing

Job ID: 500-210361-1

**Client Sample ID: WW Outfall**

**Lab Sample ID: 500-210361-1**

Date Collected: 12/29/21 12:09

Matrix: Water

Date Received: 12/29/21 15:12

**Method: 537 (modified) - Fluorinated Alkyl Substances (Continued)**

<i>Isotope Dilution</i>	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>	<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
13C5 PFNA	108		25 - 150	01/03/22 13:03	01/04/22 15:31	1
13C2 PFDA	107		25 - 150	01/03/22 13:03	01/04/22 15:31	1
13C2 PFUnA	101		25 - 150	01/03/22 13:03	01/04/22 15:31	1
13C2 PFDoA	94		25 - 150	01/03/22 13:03	01/04/22 15:31	1
13C2 PFTeDA	98		25 - 150	01/03/22 13:03	01/04/22 15:31	1
13C2 PFHxDA	88		25 - 150	01/03/22 13:03	01/04/22 15:31	1
13C3 PFBS	108		25 - 150	01/03/22 13:03	01/04/22 15:31	1
18O2 PFHxS	99		25 - 150	01/03/22 13:03	01/04/22 15:31	1
13C4 PFOS	98		25 - 150	01/03/22 13:03	01/04/22 15:31	1
13C8 FOSA	92		10 - 150	01/03/22 13:03	01/04/22 15:31	1
d3-NMeFOSAA	88		25 - 150	01/03/22 13:03	01/04/22 15:31	1
d5-NEtFOSAA	94		25 - 150	01/03/22 13:03	01/04/22 15:31	1
d-N-MeFOSA-M	71		10 - 150	01/03/22 13:03	01/04/22 15:31	1
d-N-EtFOSA-M	68		10 - 150	01/03/22 13:03	01/04/22 15:31	1
d7-N-MeFOSE-M	79		10 - 150	01/03/22 13:03	01/04/22 15:31	1
d9-N-EtFOSE-M	79		10 - 150	01/03/22 13:03	01/04/22 15:31	1
M2-4:2 FTS	117		25 - 150	01/03/22 13:03	01/04/22 15:31	1
M2-6:2 FTS	116		25 - 150	01/03/22 13:03	01/04/22 15:31	1
M2-8:2 FTS	102		25 - 150	01/03/22 13:03	01/04/22 15:31	1
13C3 HFPO-DA	103		25 - 150	01/03/22 13:03	01/04/22 15:31	1
13C2 10:2 FTS	100		25 - 150	01/03/22 13:03	01/04/22 15:31	1



# Client Sample Results

Client: City of Eau Claire  
Project/Site: PFAS Testing

Job ID: 500-210361-1

**Client Sample ID: Well 6**

**Lab Sample ID: 500-210361-2**

Date Collected: 12/29/21 12:33

Matrix: Water

Date Received: 12/29/21 15:12

**Method: 537 (modified) - Fluorinated Alkyl Substances**

Analyte	Result	Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	3.1	J	5.0	2.4	ng/L		01/03/22 13:03	01/04/22 15:41	1
Perfluoropentanoic acid (PFPeA)	1.4	J	2.0	0.49	ng/L		01/03/22 13:03	01/04/22 15:41	1
Perfluorohexanoic acid (PFHxA)	1.6	J	2.0	0.58	ng/L		01/03/22 13:03	01/04/22 15:41	1
Perfluoroheptanoic acid (PFHpA)	0.52	J	2.0	0.25	ng/L		01/03/22 13:03	01/04/22 15:41	1
Perfluorooctanoic acid (PFOA)	1.6	J	2.0	0.85	ng/L		01/03/22 13:03	01/04/22 15:41	1
Perfluorononanoic acid (PFNA)	<0.27		2.0	0.27	ng/L		01/03/22 13:03	01/04/22 15:41	1
Perfluorodecanoic acid (PFDA)	<0.31		2.0	0.31	ng/L		01/03/22 13:03	01/04/22 15:41	1
Perfluoroundecanoic acid (PFUnA)	<1.1		2.0	1.1	ng/L		01/03/22 13:03	01/04/22 15:41	1
Perfluorododecanoic acid (PFDoA)	<0.55		2.0	0.55	ng/L		01/03/22 13:03	01/04/22 15:41	1
Perfluorotridecanoic acid (PFTrDA)	<1.3		2.0	1.3	ng/L		01/03/22 13:03	01/04/22 15:41	1
Perfluorotetradecanoic acid (PFTeA)	<0.73		2.0	0.73	ng/L		01/03/22 13:03	01/04/22 15:41	1
Perfluoro-n-hexadecanoic acid (PFHxDA)	<0.89		2.0	0.89	ng/L		01/03/22 13:03	01/04/22 15:41	1
Perfluoro-n-octadecanoic acid (PFODA)	<0.94		2.0	0.94	ng/L		01/03/22 13:03	01/04/22 15:41	1
Perfluorobutanesulfonic acid (PFBS)	1.8	J	2.0	0.20	ng/L		01/03/22 13:03	01/04/22 15:41	1
Perfluoropentanesulfonic acid (PFPeS)	1.9	J	2.0	0.30	ng/L		01/03/22 13:03	01/04/22 15:41	1
Perfluorohexanesulfonic acid (PFHxS)	14		2.0	0.57	ng/L		01/03/22 13:03	01/04/22 15:41	1
Perfluoroheptanesulfonic Acid (PFHpS)	0.21	J	2.0	0.19	ng/L		01/03/22 13:03	01/04/22 15:41	1
Perfluorooctanesulfonic acid (PFOS)	4.2		2.0	0.54	ng/L		01/03/22 13:03	01/04/22 15:41	1
Perfluorononanesulfonic acid (PFNS)	<0.37		2.0	0.37	ng/L		01/03/22 13:03	01/04/22 15:41	1
Perfluorodecanesulfonic acid (PFDS)	<0.32		2.0	0.32	ng/L		01/03/22 13:03	01/04/22 15:41	1
Perfluorododecanesulfonic acid (PFDoS)	<0.97		2.0	0.97	ng/L		01/03/22 13:03	01/04/22 15:41	1
Perfluorooctanesulfonamide (FOSA)	<0.98		2.0	0.98	ng/L		01/03/22 13:03	01/04/22 15:41	1
NEtFOSA	<0.87		2.0	0.87	ng/L		01/03/22 13:03	01/04/22 15:41	1
NMeFOSA	<0.43		2.0	0.43	ng/L		01/03/22 13:03	01/04/22 15:41	1
NMeFOSAA	<1.2		5.0	1.2	ng/L		01/03/22 13:03	01/04/22 15:41	1
NEtFOSAA	<1.3		5.0	1.3	ng/L		01/03/22 13:03	01/04/22 15:41	1
NMeFOSE	<1.4		4.0	1.4	ng/L		01/03/22 13:03	01/04/22 15:41	1
NEtFOSE	<0.85		2.0	0.85	ng/L		01/03/22 13:03	01/04/22 15:41	1
4:2 FTS	<0.24		2.0	0.24	ng/L		01/03/22 13:03	01/04/22 15:41	1
6:2 FTS	<2.5		5.0	2.5	ng/L		01/03/22 13:03	01/04/22 15:41	1
8:2 FTS	<0.46		2.0	0.46	ng/L		01/03/22 13:03	01/04/22 15:41	1
10:2 FTS	<0.67		2.0	0.67	ng/L		01/03/22 13:03	01/04/22 15:41	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<0.40		2.0	0.40	ng/L		01/03/22 13:03	01/04/22 15:41	1
HFPO-DA (GenX)	<1.5		4.0	1.5	ng/L		01/03/22 13:03	01/04/22 15:41	1
9Cl-PF3ONS	<0.24		2.0	0.24	ng/L		01/03/22 13:03	01/04/22 15:41	1
11Cl-PF3OUdS	<0.32		2.0	0.32	ng/L		01/03/22 13:03	01/04/22 15:41	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C4 PFBA	93		25 - 150				01/03/22 13:03	01/04/22 15:41	1
13C5 PFPeA	107		25 - 150				01/03/22 13:03	01/04/22 15:41	1
13C2 PFHxA	104		25 - 150				01/03/22 13:03	01/04/22 15:41	1
13C4 PFHpA	107		25 - 150				01/03/22 13:03	01/04/22 15:41	1
13C4 PFOA	104		25 - 150				01/03/22 13:03	01/04/22 15:41	1

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# Client Sample Results

Client: City of Eau Claire  
Project/Site: PFAS Testing

Job ID: 500-210361-1

**Client Sample ID: Well 6**

**Lab Sample ID: 500-210361-2**

**Date Collected: 12/29/21 12:33**

**Matrix: Water**

**Date Received: 12/29/21 15:12**

**Method: 537 (modified) - Fluorinated Alkyl Substances (Continued)**

<i>Isotope Dilution</i>	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>	<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
13C5 PFNA	101		25 - 150	01/03/22 13:03	01/04/22 15:41	1
13C2 PFDA	107		25 - 150	01/03/22 13:03	01/04/22 15:41	1
13C2 PFUnA	103		25 - 150	01/03/22 13:03	01/04/22 15:41	1
13C2 PFDoA	95		25 - 150	01/03/22 13:03	01/04/22 15:41	1
13C2 PFTeDA	95		25 - 150	01/03/22 13:03	01/04/22 15:41	1
13C2 PFHxDA	74		25 - 150	01/03/22 13:03	01/04/22 15:41	1
13C3 PFBS	107		25 - 150	01/03/22 13:03	01/04/22 15:41	1
18O2 PFHxS	95		25 - 150	01/03/22 13:03	01/04/22 15:41	1
13C4 PFOS	95		25 - 150	01/03/22 13:03	01/04/22 15:41	1
13C8 FOSA	91		10 - 150	01/03/22 13:03	01/04/22 15:41	1
d3-NMeFOSAA	88		25 - 150	01/03/22 13:03	01/04/22 15:41	1
d5-NEtFOSAA	101		25 - 150	01/03/22 13:03	01/04/22 15:41	1
d-N-MeFOSA-M	81		10 - 150	01/03/22 13:03	01/04/22 15:41	1
d-N-EtFOSA-M	78		10 - 150	01/03/22 13:03	01/04/22 15:41	1
d7-N-MeFOSE-M	84		10 - 150	01/03/22 13:03	01/04/22 15:41	1
d9-N-EtFOSE-M	83		10 - 150	01/03/22 13:03	01/04/22 15:41	1
M2-4:2 FTS	117		25 - 150	01/03/22 13:03	01/04/22 15:41	1
M2-6:2 FTS	123		25 - 150	01/03/22 13:03	01/04/22 15:41	1
M2-8:2 FTS	111		25 - 150	01/03/22 13:03	01/04/22 15:41	1
13C3 HFPO-DA	103		25 - 150	01/03/22 13:03	01/04/22 15:41	1
13C2 10:2 FTS	99		25 - 150	01/03/22 13:03	01/04/22 15:41	1

# Definitions/Glossary

Client: City of Eau Claire  
Project/Site: PFAS Testing

Job ID: 500-210361-1

## Qualifiers

### LCMS

Qualifier	Qualifier Description
J	Reported value was between the limit of detection and the limit of quantitation.

## Glossary

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

# QC Association Summary

Client: City of Eau Claire  
Project/Site: PFAS Testing

Job ID: 500-210361-1

## LCMS

### Prep Batch: 555644

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-210361-1	WW Outfall	Total/NA	Water	3535	
500-210361-2	Well 6	Total/NA	Water	3535	
MB 320-555644/1-A	Method Blank	Total/NA	Water	3535	
LCS 320-555644/2-A	Lab Control Sample	Total/NA	Water	3535	
LCSD 320-555644/3-A	Lab Control Sample Dup	Total/NA	Water	3535	

### Analysis Batch: 555940

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-210361-1	WW Outfall	Total/NA	Water	537 (modified)	555644
500-210361-2	Well 6	Total/NA	Water	537 (modified)	555644
MB 320-555644/1-A	Method Blank	Total/NA	Water	537 (modified)	555644
LCS 320-555644/2-A	Lab Control Sample	Total/NA	Water	537 (modified)	555644
LCSD 320-555644/3-A	Lab Control Sample Dup	Total/NA	Water	537 (modified)	555644

# QC Sample Results

Client: City of Eau Claire  
Project/Site: PFAS Testing

Job ID: 500-210361-1

## Method: 537 (modified) - Fluorinated Alkyl Substances

**Lab Sample ID: MB 320-555644/1-A**  
**Matrix: Water**  
**Analysis Batch: 555940**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 555644**

Analyte	MB	MB	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Perfluorobutanoic acid (PFBA)	<2.4		5.0	2.4	ng/L		01/03/22 13:03	01/04/22 14:30	1
Perfluoropentanoic acid (PFPeA)	<0.49		2.0	0.49	ng/L		01/03/22 13:03	01/04/22 14:30	1
Perfluorohexanoic acid (PFHxA)	<0.58		2.0	0.58	ng/L		01/03/22 13:03	01/04/22 14:30	1
Perfluoroheptanoic acid (PFHpA)	<0.25		2.0	0.25	ng/L		01/03/22 13:03	01/04/22 14:30	1
Perfluorooctanoic acid (PFOA)	<0.85		2.0	0.85	ng/L		01/03/22 13:03	01/04/22 14:30	1
Perfluorononanoic acid (PFNA)	<0.27		2.0	0.27	ng/L		01/03/22 13:03	01/04/22 14:30	1
Perfluorodecanoic acid (PFDA)	<0.31		2.0	0.31	ng/L		01/03/22 13:03	01/04/22 14:30	1
Perfluoroundecanoic acid (PFUnA)	<1.1		2.0	1.1	ng/L		01/03/22 13:03	01/04/22 14:30	1
Perfluorododecanoic acid (PFDoA)	<0.55		2.0	0.55	ng/L		01/03/22 13:03	01/04/22 14:30	1
Perfluorotridecanoic acid (PFTrDA)	<1.3		2.0	1.3	ng/L		01/03/22 13:03	01/04/22 14:30	1
Perfluorotetradecanoic acid (PFTeA)	<0.73		2.0	0.73	ng/L		01/03/22 13:03	01/04/22 14:30	1
Perfluoro-n-hexadecanoic acid (PFHxDA)	<0.89		2.0	0.89	ng/L		01/03/22 13:03	01/04/22 14:30	1
Perfluoro-n-octadecanoic acid (PFODA)	<0.94		2.0	0.94	ng/L		01/03/22 13:03	01/04/22 14:30	1
Perfluorobutanesulfonic acid (PFBS)	<0.20		2.0	0.20	ng/L		01/03/22 13:03	01/04/22 14:30	1
Perfluoropentanesulfonic acid (PFPeS)	<0.30		2.0	0.30	ng/L		01/03/22 13:03	01/04/22 14:30	1
Perfluorohexanesulfonic acid (PFHxS)	<0.57		2.0	0.57	ng/L		01/03/22 13:03	01/04/22 14:30	1
Perfluoroheptanesulfonic Acid (PFHpS)	<0.19		2.0	0.19	ng/L		01/03/22 13:03	01/04/22 14:30	1
Perfluorooctanesulfonic acid (PFOS)	<0.54		2.0	0.54	ng/L		01/03/22 13:03	01/04/22 14:30	1
Perfluorononanesulfonic acid (PFNS)	<0.37		2.0	0.37	ng/L		01/03/22 13:03	01/04/22 14:30	1
Perfluorodecanesulfonic acid (PFDS)	<0.32		2.0	0.32	ng/L		01/03/22 13:03	01/04/22 14:30	1
Perfluorododecanesulfonic acid (PFDoS)	<0.97		2.0	0.97	ng/L		01/03/22 13:03	01/04/22 14:30	1
Perfluorooctanesulfonamide (FOSA)	<0.98		2.0	0.98	ng/L		01/03/22 13:03	01/04/22 14:30	1
NEtFOSA	<0.87		2.0	0.87	ng/L		01/03/22 13:03	01/04/22 14:30	1
NMeFOSA	<0.43		2.0	0.43	ng/L		01/03/22 13:03	01/04/22 14:30	1
NMeFOSAA	<1.2		5.0	1.2	ng/L		01/03/22 13:03	01/04/22 14:30	1
NEtFOSAA	<1.3		5.0	1.3	ng/L		01/03/22 13:03	01/04/22 14:30	1
NMeFOSE	<1.4		4.0	1.4	ng/L		01/03/22 13:03	01/04/22 14:30	1
NEtFOSE	<0.85		2.0	0.85	ng/L		01/03/22 13:03	01/04/22 14:30	1
4:2 FTS	<0.24		2.0	0.24	ng/L		01/03/22 13:03	01/04/22 14:30	1
6:2 FTS	<2.5		5.0	2.5	ng/L		01/03/22 13:03	01/04/22 14:30	1
8:2 FTS	<0.46		2.0	0.46	ng/L		01/03/22 13:03	01/04/22 14:30	1
10:2 FTS	<0.67		2.0	0.67	ng/L		01/03/22 13:03	01/04/22 14:30	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<0.40		2.0	0.40	ng/L		01/03/22 13:03	01/04/22 14:30	1
HFPO-DA (GenX)	<1.5		4.0	1.5	ng/L		01/03/22 13:03	01/04/22 14:30	1
9Cl-PF3ONS	<0.24		2.0	0.24	ng/L		01/03/22 13:03	01/04/22 14:30	1
11Cl-PF3OUdS	<0.32		2.0	0.32	ng/L		01/03/22 13:03	01/04/22 14:30	1
Isotope Dilution	MB	MB	Limits	Prepared	Analyzed	Dil Fac			
	%Recovery	Qualifier							
13C4 PFBA	95		25 - 150	01/03/22 13:03	01/04/22 14:30	1			
13C5 PFPeA	107		25 - 150	01/03/22 13:03	01/04/22 14:30	1			
13C2 PFHxA	98		25 - 150	01/03/22 13:03	01/04/22 14:30	1			
13C4 PFHpA	102		25 - 150	01/03/22 13:03	01/04/22 14:30	1			
13C4 PFOA	103		25 - 150	01/03/22 13:03	01/04/22 14:30	1			
13C5 PFNA	100		25 - 150	01/03/22 13:03	01/04/22 14:30	1			

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# QC Sample Results

Client: City of Eau Claire  
Project/Site: PFAS Testing

Job ID: 500-210361-1

## Method: 537 (modified) - Fluorinated Alkyl Substances (Continued)

**Lab Sample ID: MB 320-555644/1-A**  
**Matrix: Water**  
**Analysis Batch: 555940**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 555644**

Isotope Dilution	MB MB		Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
13C2 PFDA	103		25 - 150	01/03/22 13:03	01/04/22 14:30	1
13C2 PFUnA	97		25 - 150	01/03/22 13:03	01/04/22 14:30	1
13C2 PFDoA	96		25 - 150	01/03/22 13:03	01/04/22 14:30	1
13C2 PFTeDA	96		25 - 150	01/03/22 13:03	01/04/22 14:30	1
13C2 PFHxDA	89		25 - 150	01/03/22 13:03	01/04/22 14:30	1
13C3 PFBS	110		25 - 150	01/03/22 13:03	01/04/22 14:30	1
18O2 PFHxS	99		25 - 150	01/03/22 13:03	01/04/22 14:30	1
13C4 PFOS	95		25 - 150	01/03/22 13:03	01/04/22 14:30	1
13C8 FOSA	93		10 - 150	01/03/22 13:03	01/04/22 14:30	1
d3-NMeFOSAA	90		25 - 150	01/03/22 13:03	01/04/22 14:30	1
d5-NEtFOSAA	98		25 - 150	01/03/22 13:03	01/04/22 14:30	1
d-N-MeFOSA-M	83		10 - 150	01/03/22 13:03	01/04/22 14:30	1
d-N-EtFOSA-M	78		10 - 150	01/03/22 13:03	01/04/22 14:30	1
d7-N-MeFOSE-M	80		10 - 150	01/03/22 13:03	01/04/22 14:30	1
d9-N-EtFOSE-M	79		10 - 150	01/03/22 13:03	01/04/22 14:30	1
M2-4:2 FTS	107		25 - 150	01/03/22 13:03	01/04/22 14:30	1
M2-6:2 FTS	125		25 - 150	01/03/22 13:03	01/04/22 14:30	1
M2-8:2 FTS	109		25 - 150	01/03/22 13:03	01/04/22 14:30	1
13C3 HFPO-DA	100		25 - 150	01/03/22 13:03	01/04/22 14:30	1
13C2 10:2 FTS	97		25 - 150	01/03/22 13:03	01/04/22 14:30	1

**Lab Sample ID: LCS 320-555644/2-A**  
**Matrix: Water**  
**Analysis Batch: 555940**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 555644**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Perfluorobutanoic acid (PFBA)	40.0	38.6		ng/L		96	60 - 135
Perfluoropentanoic acid (PFPeA)	40.0	37.6		ng/L		94	60 - 135
Perfluorohexanoic acid (PFHxA)	40.0	37.1		ng/L		93	60 - 135
Perfluoroheptanoic acid (PFHpA)	40.0	36.9		ng/L		92	60 - 135
Perfluorooctanoic acid (PFOA)	40.0	36.0		ng/L		90	60 - 135
Perfluorononanoic acid (PFNA)	40.0	41.3		ng/L		103	60 - 135
Perfluorodecanoic acid (PFDA)	40.0	38.2		ng/L		95	60 - 135
Perfluoroundecanoic acid (PFUnA)	40.0	40.5		ng/L		101	60 - 135
Perfluorododecanoic acid (PFDoA)	40.0	39.1		ng/L		98	60 - 135
Perfluorotridecanoic acid (PFTTrDA)	40.0	41.4		ng/L		104	60 - 135
Perfluorotetradecanoic acid (PFTeA)	40.0	36.8		ng/L		92	60 - 135
Perfluoro-n-hexadecanoic acid (PFHxDA)	40.0	40.0		ng/L		100	60 - 135
Perfluoro-n-octadecanoic acid (PFODA)	40.0	28.9		ng/L		72	60 - 135
Perfluorobutanesulfonic acid (PFBS)	35.4	29.7		ng/L		84	60 - 135
Perfluoropentanesulfonic acid (PFPeS)	37.5	33.1		ng/L		88	60 - 135
Perfluorohexanesulfonic acid (PFHxS)	36.4	33.2		ng/L		91	60 - 135

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# QC Sample Results

Client: City of Eau Claire  
Project/Site: PFAS Testing

Job ID: 500-210361-1

## Method: 537 (modified) - Fluorinated Alkyl Substances (Continued)

**Lab Sample ID: LCS 320-555644/2-A**  
**Matrix: Water**  
**Analysis Batch: 555940**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 555644**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Perfluoroheptanesulfonic Acid (PFHpS)	38.1	39.1		ng/L		103	60 - 135
Perfluorooctanesulfonic acid (PFOS)	37.1	36.3		ng/L		98	60 - 135
Perfluorononanesulfonic acid (PFNS)	38.4	38.8		ng/L		101	60 - 135
Perfluorodecanesulfonic acid (PFDS)	38.6	36.8		ng/L		95	60 - 135
Perfluorododecanesulfonic acid (PFDoS)	38.7	35.6		ng/L		92	60 - 135
Perfluorooctanesulfonamide (FOSA)	40.0	39.5		ng/L		99	60 - 135
NEtFOSA	40.0	41.7		ng/L		104	60 - 135
NMeFOSA	40.0	39.9		ng/L		100	60 - 135
NMeFOSAA	40.0	43.0		ng/L		107	60 - 135
NEtFOSAA	40.0	38.5		ng/L		96	60 - 135
NMeFOSE	40.0	41.2		ng/L		103	60 - 135
NEtFOSE	40.0	40.0		ng/L		100	60 - 135
4:2 FTS	37.4	40.2		ng/L		108	60 - 135
6:2 FTS	37.9	39.1		ng/L		103	60 - 135
8:2 FTS	38.3	37.2		ng/L		97	60 - 135
10:2 FTS	38.6	38.2		ng/L		99	60 - 135
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	37.7	41.7		ng/L		111	60 - 135
HFPO-DA (GenX)	40.0	40.7		ng/L		102	60 - 135
9Cl-PF3ONS	37.3	36.5		ng/L		98	60 - 135
11Cl-PF3OUdS	37.7	39.1		ng/L		104	60 - 135

Isotope Dilution	LCS LCS		Limits
	%Recovery	Qualifier	
13C4 PFBA	94		25 - 150
13C5 PFPeA	95		25 - 150
13C2 PFHxA	98		25 - 150
13C4 PFHpA	100		25 - 150
13C4 PFOA	100		25 - 150
13C5 PFNA	92		25 - 150
13C2 PFDA	96		25 - 150
13C2 PFUnA	95		25 - 150
13C2 PFDoA	92		25 - 150
13C2 PFTeDA	95		25 - 150
13C2 PFHxDA	83		25 - 150
13C3 PFBS	101		25 - 150
18O2 PFHxS	92		25 - 150
13C4 PFOS	88		25 - 150
13C8 FOSA	87		10 - 150
d3-NMeFOSAA	86		25 - 150
d5-NEtFOSAA	93		25 - 150
d-N-MeFOSA-M	78		10 - 150
d-N-EtFOSA-M	75		10 - 150
d7-N-MeFOSE-M	80		10 - 150
d9-N-EtFOSE-M	76		10 - 150

# QC Sample Results

Client: City of Eau Claire  
Project/Site: PFAS Testing

Job ID: 500-210361-1

## Method: 537 (modified) - Fluorinated Alkyl Substances (Continued)

**Lab Sample ID: LCS 320-555644/2-A**  
**Matrix: Water**  
**Analysis Batch: 555940**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 555644**

<i>Isotope Dilution</i>	<i>LCS</i>	<i>LCS</i>	<i>Limits</i>
	<i>%Recovery</i>	<i>Qualifier</i>	
M2-4:2 FTS	96		25 - 150
M2-6:2 FTS	105		25 - 150
M2-8:2 FTS	104		25 - 150
13C3 HFPO-DA	95		25 - 150
13C2 10:2 FTS	99		25 - 150

**Lab Sample ID: LCSD 320-555644/3-A**  
**Matrix: Water**  
**Analysis Batch: 555940**

**Client Sample ID: Lab Control Sample Dup**  
**Prep Type: Total/NA**  
**Prep Batch: 555644**

<i>Analyte</i>	<i>Spike</i>	<i>LCSD</i>	<i>LCSD</i>	<i>Unit</i>	<i>D</i>	<i>%Rec</i>	<i>%Rec.</i>	<i>RPD</i>	<i>RPD</i>	<i>Limit</i>
	<i>Added</i>	<i>Result</i>	<i>Qualifier</i>				<i>Limits</i>			
Perfluorobutanoic acid (PFBA)	40.0	38.4		ng/L		96	60 - 135	0	30	
Perfluoropentanoic acid (PFPeA)	40.0	35.0		ng/L		87	60 - 135	7	30	
Perfluorohexanoic acid (PFHxA)	40.0	39.2		ng/L		98	60 - 135	5	30	
Perfluoroheptanoic acid (PFHpA)	40.0	39.6		ng/L		99	60 - 135	7	30	
Perfluorooctanoic acid (PFOA)	40.0	37.6		ng/L		94	60 - 135	4	30	
Perfluorononanoic acid (PFNA)	40.0	37.6		ng/L		94	60 - 135	9	30	
Perfluorodecanoic acid (PFDA)	40.0	39.9		ng/L		100	60 - 135	5	30	
Perfluoroundecanoic acid (PFUnA)	40.0	40.5		ng/L		101	60 - 135	0	30	
Perfluorododecanoic acid (PFDoA)	40.0	39.0		ng/L		98	60 - 135	0	30	
Perfluorotridecanoic acid (PFTrDA)	40.0	42.2		ng/L		106	60 - 135	2	30	
Perfluorotetradecanoic acid (PFTeA)	40.0	38.0		ng/L		95	60 - 135	3	30	
Perfluoro-n-hexadecanoic acid (PFHxDA)	40.0	39.3		ng/L		98	60 - 135	2	30	
Perfluoro-n-octadecanoic acid (PFODA)	40.0	28.3		ng/L		71	60 - 135	2	30	
Perfluorobutanesulfonic acid (PFBS)	35.4	31.2		ng/L		88	60 - 135	5	30	
Perfluoropentanesulfonic acid (PFPeS)	37.5	33.5		ng/L		89	60 - 135	1	30	
Perfluorohexanesulfonic acid (PFHxS)	36.4	34.3		ng/L		94	60 - 135	3	30	
Perfluoroheptanesulfonic Acid (PFHpS)	38.1	36.9		ng/L		97	60 - 135	6	30	
Perfluorooctanesulfonic acid (PFOS)	37.1	33.8		ng/L		91	60 - 135	7	30	
Perfluorononanesulfonic acid (PFNS)	38.4	36.5		ng/L		95	60 - 135	6	30	
Perfluorodecanesulfonic acid (PFDS)	38.6	36.1		ng/L		94	60 - 135	2	30	
Perfluorododecanesulfonic acid (PFDoS)	38.7	33.1		ng/L		86	60 - 135	7	30	
Perfluorooctanesulfonamide (FOSA)	40.0	39.2		ng/L		98	60 - 135	1	30	
NEtFOSA	40.0	43.0		ng/L		107	60 - 135	3	30	
NMeFOSA	40.0	40.7		ng/L		102	60 - 135	2	30	
NMeFOSAA	40.0	38.2		ng/L		96	60 - 135	12	30	
NEtFOSAA	40.0	41.6		ng/L		104	60 - 135	8	30	
NMeFOSE	40.0	42.2		ng/L		106	60 - 135	2	30	

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# QC Sample Results

Client: City of Eau Claire  
Project/Site: PFAS Testing

Job ID: 500-210361-1

## Method: 537 (modified) - Fluorinated Alkyl Substances (Continued)

**Lab Sample ID: LCSD 320-555644/3-A**  
**Matrix: Water**  
**Analysis Batch: 555940**

**Client Sample ID: Lab Control Sample Dup**  
**Prep Type: Total/NA**  
**Prep Batch: 555644**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
NETFOSE	40.0	38.4		ng/L		96	60 - 135	4	30
4:2 FTS	37.4	36.7		ng/L		98	60 - 135	9	30
6:2 FTS	37.9	40.1		ng/L		106	60 - 135	2	30
8:2 FTS	38.3	36.7		ng/L		96	60 - 135	1	30
10:2 FTS	38.6	39.8		ng/L		103	60 - 135	4	30
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	37.7	38.3		ng/L		102	60 - 135	8	30
HFPO-DA (GenX)	40.0	40.2		ng/L		101	60 - 135	1	30
9CI-PF3ONS	37.3	34.4		ng/L		92	60 - 135	6	30
11CI-PF3OUdS	37.7	35.6		ng/L		95	60 - 135	9	30

Isotope Dilution	LCSD %Recovery	LCSD Qualifier	LCSD Limits
13C4 PFBA	103		25 - 150
13C5 PFPeA	113		25 - 150
13C2 PFHxA	110		25 - 150
13C4 PFHpA	109		25 - 150
13C4 PFOA	107		25 - 150
13C5 PFNA	106		25 - 150
13C2 PFDA	108		25 - 150
13C2 PFUnA	102		25 - 150
13C2 PFDaA	101		25 - 150
13C2 PFTeDA	103		25 - 150
13C2 PFHxDA	95		25 - 150
13C3 PFBS	112		25 - 150
18O2 PFHxS	104		25 - 150
13C4 PFOS	102		25 - 150
13C8 FOSA	99		10 - 150
d3-NMeFOSAA	96		25 - 150
d5-NEtFOSAA	94		25 - 150
d-N-MeFOSA-M	84		10 - 150
d-N-EtFOSA-M	85		10 - 150
d7-N-MeFOSE-M	86		10 - 150
d9-N-EtFOSE-M	88		10 - 150
M2-4:2 FTS	115		25 - 150
M2-6:2 FTS	110		25 - 150
M2-8:2 FTS	117		25 - 150
13C3 HFPO-DA	105		25 - 150
13C2 10:2 FTS	95		25 - 150

# Lab Chronicle

Client: City of Eau Claire  
Project/Site: PFAS Testing

Job ID: 500-210361-1

## Client Sample ID: WW Outfall

Lab Sample ID: 500-210361-1

Date Collected: 12/29/21 12:09

Matrix: Water

Date Received: 12/29/21 15:12

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3535			555644	01/03/22 13:03	KJW	TAL SAC
Total/NA	Analysis	537 (modified)		1	555940	01/04/22 15:31	S1M	TAL SAC

## Client Sample ID: Well 6

Lab Sample ID: 500-210361-2

Date Collected: 12/29/21 12:33

Matrix: Water

Date Received: 12/29/21 15:12

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3535			555644	01/03/22 13:03	KJW	TAL SAC
Total/NA	Analysis	537 (modified)		1	555940	01/04/22 15:41	S1M	TAL SAC

### Laboratory References:

TAL SAC = Eurofins Sacramento, 880 Riverside Parkway, West Sacramento, CA 95605, TEL (916)373-5600

# Accreditation/Certification Summary

Client: City of Eau Claire  
Project/Site: PFAS Testing

Job ID: 500-210361-1

## Laboratory: Eurofins Sacramento

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

Authority	Program	Identification Number	Expiration Date
Wisconsin	State	998204680	08-31-22

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14
- 15
- 16

**Eurofins TestAmerica, Sacramento**

880 Riverside Parkway  
West Sacramento, CA 95605  
Phone: 916-373 5600 Fax: 916-372 1059

**Chain of Custody Record**

**eurofins** Environment Testing America

<b>Client Information</b> Client Contact: Ty Fadness Company: Ty Fadness City of Eau Claire Address: 203 S Farwell City: Eau Claire State, Zip: WI 54701 Phone: 500-210361 COC Email: Tyler.Fadness@EauClaireWI.Gov Project Name: PFAS Testing Site:		Sampler: Ty Fadness Phone: 715-839-6121 FWSID:	Lab PM: Fredrick Sandie E-Mail: sandra.frednck@eurofinset.com	Carrier Tracking No(s): State of Origin:	COC No: 320-42610-10138 1 Page: Page 1 of 1 Job #: <b>500-210361</b>
Due Date Requested: 1/5/21 TAT Requested (days): 7-Day TAT Compliance Project: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No PO #: 50210879-00 WO #:			<b>Analysis Requested</b> Preservation Codes: A HCL M Hexane B NaOH N None C Zn Acetate O -AsNaO2 D Nitric Acid P Na2O4S E NaHSO4 Q Na2SO3 F MeOH R Na2S2O3 G Amchlor S H2SO4 H Ascorbic Acid T TSP Dodecahydrate I Ice U Acetone J DI Water V MCAA K EDTA W - pH 4-5 L EDA Z other (specify)		
<b>Sample Identification</b> Sample Date Sample Time Sample Type (C=Comp, G=grab) Matrix (W=water, S=solid, O=waste/soil) DT=Tissue, A=Air Preservation Code			Field Filtered Sample (Yes/No) Performed MS/MS? (Yes/No) PFC IDA - PFAS, Extended List (88 Analytes) PFC IDA - 104 - 8848-Standard List (38 Analytes)		
WH Outfall Well 6 12/29/21 1209 G Water 12/29/21 1233 G Water			Total Number of Containers: Special Instructions/Note:		
<b>Possible Hazard Identification</b> <input type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison B <input type="checkbox"/> Unknown <input type="checkbox"/> Radiological			<b>Sample Disposal</b> (A fee may be assessed if samples are retained longer than 1 month) <input type="checkbox"/> Return To Client <input type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months		
Deliverable Requested I, II, III, IV Other (specify)			Special Instructions/QC Requirements:		
Empty Kit Relinquished by:		Date:	Time:	Method of Shipment:	
Relinquished by: <i>Tyler Fadness</i>	Date/Time: 12/29/21 1330	Company: C.A.F.E.C.	Received by:	Date/Time:	Company:
Relinquished by:	Date/Time:	Company:	Received by:	Date/Time:	Company:
Relinquished by:	Date/Time:	Company:	Received by:	Date/Time:	Company:
Cooler Temperature(s) °C and Other Remarks:			Ver 06/08/2021		
Custody Seals Intact: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		Custody Seal No			

880 Riverside Parkway  
 West Sacramento, CA 95605  
 Phone: 916-373-5600 Fax: 916-372-1059

**Chain of Custody Record**



Environment Testing  
 America

<b>Client Information</b> Client Contact: Ty Fadness Company: Ty Fadness City of Eau Claire Address: 203 S Farwell City: Eau Claire State, Zip: WI, 54701 Phone: 50210879-00 Email: Tyler.Fadness@EauClaireWI.Gov Project Name: PFAS Testing Site:		Sampler: Ty Fadness Phone: 715-839-6121 Lab P.M.: Fredrick, Sandie E-Mail: sandra.fredrick@eurofinset.com Camper Tracking Note: State of Origin:		COC No: 320-42810-10138-1 Page: Page 1 of 1 Job #:	
Due Date Requested: 1/5/21 TAT Requested (days): 7-Day TAT Compliance Project: <input type="checkbox"/> Yes <input type="checkbox"/> No PO #: 50210879-00 WC #: 32012617 Project #: 32012617 SSOW#:		Analysis Requested			
Sample Identification WH Outfall Well G		Sample Date 12/29/21 12/29/21	Sample Time 1709 1233	Sample Type (C=Comp, G=grab) G G	Matrix (Water, Sewage, Wastewater, Other) Water Water
Possible Hazard Identification <input type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison B <input type="checkbox"/> Unknown <input type="checkbox"/> Radiological		Sample Disposal (A fee may be assessed if samples are retained longer than 1 month) <input type="checkbox"/> Return To Client <input type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months			
Deliverable Requested: I, II, III, IV, Other (specify)		Special Instructions/QC Requirements:			
Empty Kit Relinquished by: <i>tyfadness</i>		Method of Shipment:			
Relinquished by:		Date: 12/29/21 1330		Received by: Company	
Relinquished by:		Date/Time:		Received by: Company	
Relinquished by:		Date/Time:		Received by: Company	
Custody Seals Intact: <input type="checkbox"/> Yes <input type="checkbox"/> No Custody Seal No.:		Cooler Temperature(s) °C and Other Remarks:			



# Login Sample Receipt Checklist

Client: City of Eau Claire

Job Number: 500-210361-1

**Login Number: 210361**

**List Number: 1**

**Creator: Scott, Sherri L**

**List Source: Eurofins Chicago**

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	



## Login Sample Receipt Checklist

Client: City of Eau Claire

Job Number: 500-210361-1

**Login Number: 210361**

**List Number: 2**

**Creator: Her, David A**

**List Source: Eurofins Sacramento**

**List Creation: 12/30/21 11:06 AM**

Question	Answer	Comment
Radioactivity wasn't checked or is <math>\leq</math> background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	N/A	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	3.2 c
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <math><6\text{mm}</math> (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	



500-210361 Field Sheet

Tracking #: 7756 2425 9903

SO /  PO / FO / SAT / 2-Day / Ground / UPS / CDO / Courier  
GSO / OnTrac / Goldstreak / USPS / Other \_\_\_\_\_

Job: \_\_\_\_\_

Use this form to record Sample Custody Seal, Cooler Custody Seal, Temperature & corrected Temperature & other observations. File in the job folder with the COC.

Therm. ID: L01 Corr. Factor: ( + / - ) \_\_\_\_\_ °C  
Ice  Wet  Gel \_\_\_\_\_ Other \_\_\_\_\_  
Cooler Custody Seal: -  
Cooler ID: -  
Temp Observed: 3.2 °C Corrected: 3.2 °C  
From: Temp Blank  Sample

Opening/Processing The Shipment	Yes	No	NA
Cooler compromised/tampered with?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Cooler Temperature is acceptable?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Frozen samples show signs of thaw?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Initials: DK Date: 12/30/20

Unpacking/Labeling The Samples	Yes	No	NA
CoC is complete w/o discrepancies?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Samples compromised/tampered with?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Sample containers have legible labels?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Sample custody seal?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Containers are not broken or leaking?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Sample date/times are provided?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Appropriate containers are used?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Sample bottles are completely filled?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Sample preservatives verified?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Samples w/o discrepancies?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Zero headspace?*	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Alkalinity has no headspace?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Perchlorate has headspace? (Methods 314, 331, 6850)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Multiphasic samples are not present?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

\*Containers requiring zero headspace have no headspace, or bubble < 6 mm (1/4")

Initials: DK Date: 12/30/20

Notes: \_\_\_\_\_  
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\_\_\_\_\_

Trizma Lot #(s): 19310137  
#1 1022 19410205

Login Completion	Yes	No	NA
Receipt Temperature on COC?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Samples received within hold time?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
NCM Filed?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Log Release checked in TALS?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Initials: DK Date: 12/30/20



ORIGIN ID:EAUA (715) 838-6121  
TYLER FADNESS  
CITY OF EAU CLAIRE WASTEWATER  
1000 FERRY ST

SHIP DATE: 20111231  
ACTWGT: 20.00 LB  
CAD: 1140000010NET4400

EAU CLAIRE, WI 54703  
UNITED STATES US

BILL SENDER

TO PER: SANDIE FREDRICK  
EUROFINS TESTAMERICA, SACRAMENTO  
880 RIVERSIDE PARKWAY

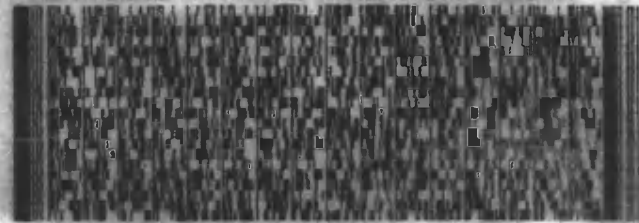
WEST SACRAMENTO CA 95605

(916) 373-5800

REF: PFAS 0027052 0450 100000

INV

DEPT



THU - 30 DEC 11:38A

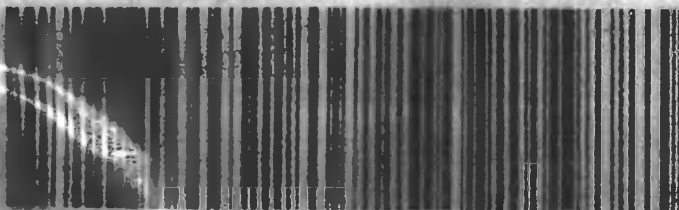
PRIORITY OVERNIGHT

7756 2425 9903

XW BLUA

95605

CA-US SMF



RT 362

1 11:30

F

FZ

9903  
12.30

# Isotope Dilution Summary

Client: City of Eau Claire  
Project/Site: PFAS Testing

Job ID: 500-210361-1

## Method: 537 (modified) - Fluorinated Alkyl Substances

Matrix: Water

Prep Type: Total/NA

		Percent Isotope Dilution Recovery (Acceptance Limits)							
Lab Sample ID	Client Sample ID	PFBA (25-150)	PFPeA (25-150)	PFHxA (25-150)	C4PFHA (25-150)	PFOA (25-150)	PFNA (25-150)	PFDA (25-150)	PFA (25-150)
500-210361-1	WW Outfall	99	108	107	104	110	108	107	101
500-210361-2	Well 6	93	107	104	107	104	101	107	103
LCS 320-555644/2-A	Lab Control Sample	94	95	98	100	100	92	96	95
LCS 320-555644/3-A	Lab Control Sample Dup	103	113	110	109	107	106	108	102
MB 320-555644/1-A	Method Blank	95	107	98	102	103	100	103	97

		Percent Isotope Dilution Recovery (Acceptance Limits)							
Lab Sample ID	Client Sample ID	PFDaA (25-150)	PFTDA (25-150)	PFHxDA (25-150)	C3PFBS (25-150)	PFHxS (25-150)	PFOS (25-150)	PFOSA (10-150)	d3NMFOS (25-150)
500-210361-1	WW Outfall	94	98	88	108	99	98	92	88
500-210361-2	Well 6	95	95	74	107	95	95	91	88
LCS 320-555644/2-A	Lab Control Sample	92	95	83	101	92	88	87	86
LCS 320-555644/3-A	Lab Control Sample Dup	101	103	95	112	104	102	99	96
MB 320-555644/1-A	Method Blank	96	96	89	110	99	95	93	90

		Percent Isotope Dilution Recovery (Acceptance Limits)							
Lab Sample ID	Client Sample ID	d5NEFOS (25-150)	dMeFOSA (10-150)	dEtFOSA (10-150)	NMFM (10-150)	NEFM (10-150)	M242FTS (25-150)	M262FTS (25-150)	M282FTS (25-150)
500-210361-1	WW Outfall	94	71	68	79	79	117	116	102
500-210361-2	Well 6	101	81	78	84	83	117	123	111
LCS 320-555644/2-A	Lab Control Sample	93	78	75	80	76	96	105	104
LCS 320-555644/3-A	Lab Control Sample Dup	94	84	85	86	88	115	110	117
MB 320-555644/1-A	Method Blank	98	83	78	80	79	107	125	109

		Percent Isotope Dilution Recovery (Acceptance Limits)	
Lab Sample ID	Client Sample ID	HFPODA (25-150)	M102FTS (25-150)
500-210361-1	WW Outfall	103	100
500-210361-2	Well 6	103	99
LCS 320-555644/2-A	Lab Control Sample	95	99
LCS 320-555644/3-A	Lab Control Sample Dup	105	95
MB 320-555644/1-A	Method Blank	100	97

### Surrogate Legend

- PFBA = 13C4 PFBA
- PFPeA = 13C5 PFPeA
- PFHxA = 13C2 PFHxA
- C4PFHA = 13C4 PFHpA
- PFOA = 13C4 PFOA
- PFNA = 13C5 PFNA
- PFDA = 13C2 PFDA
- PFA = 13C2 PFA
- PFTDA = 13C2 PFTeDA
- PFHxDA = 13C2 PFHxDA
- C3PFBS = 13C3 PFBS
- PFHxS = 18O2 PFHxS
- PFOS = 13C4 PFOS
- PFOSA = 13C8 FOSA
- d3NMFOS = d3-NMeFOSAA
- d5NEFOS = d5-NEtFOSAA
- dMeFOSA = d-N-MeFOSA-M

# Isotope Dilution Summary

Job ID: 500-210361-1

Client: City of Eau Claire  
Project/Site: PFAS Testing

dEtFOSA = d-N-EtFOSA-M  
NMFM = d7-N-MeFOSE-M  
NEFM = d9-N-EtFOSE-M  
M242FTS = M2-4:2 FTS  
M262FTS = M2-6:2 FTS  
M282FTS = M2-8:2 FTS  
HFPODA = 13C3 HFPO-DA  
M102FTS = 13C2 10:2 FTS

- 1
- 2
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- 8
- 9
- 10
- 11
- 12
- 13
- 14
- 15
- 16