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# ANALYTICAL REPORT

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

Laboratory Job ID: 500-218153-1
Client Project/Site: PFAS Testing

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

Attn: Ty Fadness

*Authorized for release by:*
*7/1/2022 5:12:06 PM*

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# Case Narrative

Client: City of Eau Claire
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## Job ID: 500-218153-1

### Laboratory: Eurofins Chicago

**Narrative**

**Job Narrative**
**500-218153-1**

**Comments**
No additional comments.

**Receipt**
The sample was received on 6/16/2022 9:15 AM. Unless otherwise noted below, the sample arrived in good condition, and where required, properly preserved and on ice. The temperature of the cooler at receipt was 1.5º C.

**LCMS**
Method 537 (modified): The closing continuing calibration verification (CCV) standard associated with batch 320-599315 failed to meet acceptance limits for Perfluoro-n-octadecanoic acid (PFODA). This analyte is not a state regulated analyte; therefore, the data have been reported.

No additional analytical or quality issues were noted, other than those described above or 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 320-598242.
Method: 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: 500-218153-1

## Client Sample ID: WW Outfall

## Lab Sample ID: 500-218153-1

| Analyte | Result | Qualifier | LOQ | LOD | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Perfluorobutanoic acid (PFBA) | 6.5 | | 4.7 | 2.2 | ng/L | 1 | | 537 (modified) | Total/NA |
| Perfluoropentanoic acid (PFPeA) | 11 | | 1.9 | 0.46 | ng/L | 1 | | 537 (modified) | Total/NA |
| Perfluorohexanoic acid (PFHxA) | 9.6 | | 1.9 | 0.54 | ng/L | 1 | | 537 (modified) | Total/NA |
| Perfluoroheptanoic acid (PFHpA) | 2.0 | | 1.9 | 0.23 | ng/L | 1 | | 537 (modified) | Total/NA |
| Perfluorooctanoic acid (PFOA) | 2.7 | | 1.9 | 0.79 | ng/L | 1 | | 537 (modified) | Total/NA |
| Perfluorobutanesulfonic acid (PFBS) | 6.6 | | 1.9 | 0.19 | ng/L | 1 | | 537 (modified) | Total/NA |
| Perfluoropentanesulfonic acid (PFPeS) | 6.0 | | 1.9 | 0.28 | ng/L | 1 | | 537 (modified) | Total/NA |
| Perfluorohexanesulfonic acid (PFHxS) | 32 | | 1.9 | 0.53 | ng/L | 1 | | 537 (modified) | Total/NA |
| Perfluoroheptanesulfonic acid (PFHpS) | 0.65 | J | 1.9 | 0.18 | ng/L | 1 | | 537 (modified) | Total/NA |
| Perfluorooctanesulfonic acid (PFOS) | 10 | | 1.9 | 0.50 | ng/L | 1 | | 537 (modified) | Total/NA |

This Detection Summary does not include radiochemical test results.

# Method Summary

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

Job ID: 500-218153-1

| 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: 500-218153-1

| Lab Sample ID | Client Sample ID | Matrix | Collected | Received |
|---|---|---|---|---|
| 500-218153-1 | WW Outfall | Water | 06/15/22 11:04 | 06/16/22 09:15 |

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

Job ID: 500-218153-1

## Client Sample ID: WW Outfall

**Date Collected: 06/15/22 11:04**
**Date Received: 06/16/22 09:15**

## Lab Sample ID: 500-218153-1

**Matrix: Water**

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

| Analyte | Result | Qualifier | LOQ | LOD | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Perfluorobutanoic acid (PFBA)** | **6.5** | | 4.7 | 2.2 | ng/L | | 06/24/22 07:05 | 06/28/22 17:32 | 1 |
| **Perfluoropentanoic acid (PFPeA)** | **11** | | 1.9 | 0.46 | ng/L | | 06/24/22 07:05 | 06/28/22 17:32 | 1 |
| **Perfluorohexanoic acid (PFHxA)** | **9.6** | | 1.9 | 0.54 | ng/L | | 06/24/22 07:05 | 06/28/22 17:32 | 1 |
| **Perfluoroheptanoic acid (PFHpA)** | **2.0** | | 1.9 | 0.23 | ng/L | | 06/24/22 07:05 | 06/28/22 17:32 | 1 |
| **Perfluorooctanoic acid (PFOA)** | **2.7** | | 1.9 | 0.79 | ng/L | | 06/24/22 07:05 | 06/28/22 17:32 | 1 |
| Perfluorononanoic acid (PFNA) | <0.25 | | 1.9 | 0.25 | ng/L | | 06/24/22 07:05 | 06/28/22 17:32 | 1 |
| Perfluorodecanoic acid (PFDA) | <0.29 | | 1.9 | 0.29 | ng/L | | 06/24/22 07:05 | 06/28/22 17:32 | 1 |
| Perfluoroundecanoic acid (PFUnA) | <1.0 | | 1.9 | 1.0 | ng/L | | 06/24/22 07:05 | 06/28/22 17:32 | 1 |
| Perfluorododecanoic acid (PFDoA) | <0.51 | | 1.9 | 0.51 | ng/L | | 06/24/22 07:05 | 06/28/22 17:32 | 1 |
| Perfluorotridecanoic acid (PFTrDA) | <1.2 | | 1.9 | 1.2 | ng/L | | 06/24/22 07:05 | 06/28/22 17:32 | 1 |
| Perfluorotetradecanoic acid (PFTeA) | <0.68 | | 1.9 | 0.68 | ng/L | | 06/24/22 07:05 | 06/28/22 17:32 | 1 |
| Perfluoro-n-hexadecanoic acid (PFHxDA) | <0.83 | | 1.9 | 0.83 | ng/L | | 06/24/22 07:05 | 06/28/22 17:32 | 1 |
| Perfluoro-n-octadecanoic acid (PFODA) | <0.87 | ^c | 1.9 | 0.87 | ng/L | | 06/24/22 07:05 | 06/28/22 17:32 | 1 |
| **Perfluorobutanesulfonic acid (PFBS)** | **6.6** | | 1.9 | 0.19 | ng/L | | 06/24/22 07:05 | 06/28/22 17:32 | 1 |
| **Perfluoropentanesulfonic acid (PFPeS)** | **6.0** | | 1.9 | 0.28 | ng/L | | 06/24/22 07:05 | 06/28/22 17:32 | 1 |
| **Perfluorohexanesulfonic acid (PFHxS)** | **32** | | 1.9 | 0.53 | ng/L | | 06/24/22 07:05 | 06/28/22 17:32 | 1 |
| **Perfluoroheptanesulfonic acid (PFHpS)** | **0.65** | **J** | 1.9 | 0.18 | ng/L | | 06/24/22 07:05 | 06/28/22 17:32 | 1 |
| **Perfluorooctanesulfonic acid (PFOS)** | **10** | | 1.9 | 0.50 | ng/L | | 06/24/22 07:05 | 06/28/22 17:32 | 1 |
| Perfluorononanesulfonic acid (PFNS) | <0.34 | | 1.9 | 0.34 | ng/L | | 06/24/22 07:05 | 06/28/22 17:32 | 1 |
| Perfluorodecanesulfonic acid (PFDS) | <0.30 | | 1.9 | 0.30 | ng/L | | 06/24/22 07:05 | 06/28/22 17:32 | 1 |
| Perfluorododecanesulfonic acid (PFDoS) | <0.90 | | 1.9 | 0.90 | ng/L | | 06/24/22 07:05 | 06/28/22 17:32 | 1 |
| Perfluorooctanesulfonamide (FOSA) | <0.91 | | 1.9 | 0.91 | ng/L | | 06/24/22 07:05 | 06/28/22 17:32 | 1 |
| NEtFOSA | <0.81 | | 1.9 | 0.81 | ng/L | | 06/24/22 07:05 | 06/28/22 17:32 | 1 |
| NMeFOSA | <0.40 | | 1.9 | 0.40 | ng/L | | 06/24/22 07:05 | 06/28/22 17:32 | 1 |
| NMeFOSAA | <1.1 | | 4.7 | 1.1 | ng/L | | 06/24/22 07:05 | 06/28/22 17:32 | 1 |
| NEtFOSAA | <1.2 | | 4.7 | 1.2 | ng/L | | 06/24/22 07:05 | 06/28/22 17:32 | 1 |
| NMeFOSE | <1.3 | | 3.7 | 1.3 | ng/L | | 06/24/22 07:05 | 06/28/22 17:32 | 1 |
| NEtFOSE | <0.79 | | 1.9 | 0.79 | ng/L | | 06/24/22 07:05 | 06/28/22 17:32 | 1 |
| 4:2 FTS | <0.22 | | 1.9 | 0.22 | ng/L | | 06/24/22 07:05 | 06/28/22 17:32 | 1 |
| 6:2 FTS | <2.3 | | 4.7 | 2.3 | ng/L | | 06/24/22 07:05 | 06/28/22 17:32 | 1 |
| 8:2 FTS | <0.43 | | 1.9 | 0.43 | ng/L | | 06/24/22 07:05 | 06/28/22 17:32 | 1 |
| 10:2 FTS | <0.62 | | 1.9 | 0.62 | ng/L | | 06/24/22 07:05 | 06/28/22 17:32 | 1 |
| 4,8-Dioxa-3H-perfluorononanoic acid (ADONA) | <0.37 | | 1.9 | 0.37 | ng/L | | 06/24/22 07:05 | 06/28/22 17:32 | 1 |
| HFPO-DA (GenX) | <1.4 | | 3.7 | 1.4 | ng/L | | 06/24/22 07:05 | 06/28/22 17:32 | 1 |
| 9Cl-PF3ONS | <0.22 | | 1.9 | 0.22 | ng/L | | 06/24/22 07:05 | 06/28/22 17:32 | 1 |
| 11Cl-PF3OUdS | <0.30 | | 1.9 | 0.30 | ng/L | | 06/24/22 07:05 | 06/28/22 17:32 | 1 |

| *Isotope Dilution* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *13C4 PFBA* | *108* | | *25 - 150* | *06/24/22 07:05* | *06/28/22 17:32* | *1* |
| *13C5 PFPeA* | *103* | | *25 - 150* | *06/24/22 07:05* | *06/28/22 17:32* | *1* |
| *13C2 PFHxA* | *105* | | *25 - 150* | *06/24/22 07:05* | *06/28/22 17:32* | *1* |
| *13C4 PFHpA* | *107* | | *25 - 150* | *06/24/22 07:05* | *06/28/22 17:32* | *1* |
| *13C4 PFOA* | *108* | | *25 - 150* | *06/24/22 07:05* | *06/28/22 17:32* | *1* |

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

Job ID: 500-218153-1

**Client Sample ID: WW Outfall**
**Date Collected: 06/15/22 11:04**
**Date Received: 06/16/22 09:15**

**Lab Sample ID: 500-218153-1**
**Matrix: Water**

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

| Isotope Dilution | %Recovery | Qualifier | Limits | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|
| 13C5 PFNA | 104 | | 25 - 150 | 06/24/22 07:05 | 06/28/22 17:32 | 1 |
| 13C2 PFDA | 100 | | 25 - 150 | 06/24/22 07:05 | 06/28/22 17:32 | 1 |
| 13C2 PFUnA | 106 | | 25 - 150 | 06/24/22 07:05 | 06/28/22 17:32 | 1 |
| 13C2 PFDoA | 94 | | 25 - 150 | 06/24/22 07:05 | 06/28/22 17:32 | 1 |
| 13C2 PFTeDA | 95 | | 25 - 150 | 06/24/22 07:05 | 06/28/22 17:32 | 1 |
| 13C2 PFHxDA | 98 | | 25 - 150 | 06/24/22 07:05 | 06/28/22 17:32 | 1 |
| 13C3 PFBS | 100 | | 25 - 150 | 06/24/22 07:05 | 06/28/22 17:32 | 1 |
| 18O2 PFHxS | 96 | | 25 - 150 | 06/24/22 07:05 | 06/28/22 17:32 | 1 |
| 13C4 PFOS | 95 | | 25 - 150 | 06/24/22 07:05 | 06/28/22 17:32 | 1 |
| 13C8 FOSA | 95 | | 10 - 150 | 06/24/22 07:05 | 06/28/22 17:32 | 1 |
| d3-NMeFOSAA | 91 | | 25 - 150 | 06/24/22 07:05 | 06/28/22 17:32 | 1 |
| d5-NEtFOSAA | 94 | | 25 - 150 | 06/24/22 07:05 | 06/28/22 17:32 | 1 |
| d-N-MeFOSA-M | 80 | | 10 - 150 | 06/24/22 07:05 | 06/28/22 17:32 | 1 |
| d-N-EtFOSA-M | 80 | | 10 - 150 | 06/24/22 07:05 | 06/28/22 17:32 | 1 |
| d7-N-MeFOSE-M | 91 | | 10 - 150 | 06/24/22 07:05 | 06/28/22 17:32 | 1 |
| d9-N-EtFOSE-M | 92 | | 10 - 150 | 06/24/22 07:05 | 06/28/22 17:32 | 1 |
| M2-4:2 FTS | 92 | | 25 - 150 | 06/24/22 07:05 | 06/28/22 17:32 | 1 |
| M2-6:2 FTS | 93 | | 25 - 150 | 06/24/22 07:05 | 06/28/22 17:32 | 1 |
| M2-8:2 FTS | 91 | | 25 - 150 | 06/24/22 07:05 | 06/28/22 17:32 | 1 |
| 13C3 HFPO-DA | 103 | | 25 - 150 | 06/24/22 07:05 | 06/28/22 17:32 | 1 |
| 13C2 10:2 FTS | 98 | | 25 - 150 | 06/24/22 07:05 | 06/28/22 17:32 | 1 |

# Definitions/Glossary

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

Job ID: 500-218153-1

## Qualifiers

### LCMS

| Qualifier | Qualifier Description |
|---|---|
| ^c | CCV Recovery is outside acceptance limits. |
| 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. |
|---|---|
| ¤ | 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: 500-218153-1

## LCMS

### Prep Batch: 598242

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-218153-1 | WW Outfall | Total/NA | Water | 3535 | |
| MB 320-598242/1-A | Method Blank | Total/NA | Water | 3535 | |
| LCS 320-598242/2-A | Lab Control Sample | Total/NA | Water | 3535 | |
| LCSD 320-598242/3-A | Lab Control Sample Dup | Total/NA | Water | 3535 | |

### Analysis Batch: 599315

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-218153-1 | WW Outfall | Total/NA | Water | 537 (modified) | 598242 |
| MB 320-598242/1-A | Method Blank | Total/NA | Water | 537 (modified) | 598242 |
| LCS 320-598242/2-A | Lab Control Sample | Total/NA | Water | 537 (modified) | 598242 |
| LCSD 320-598242/3-A | Lab Control Sample Dup | Total/NA | Water | 537 (modified) | 598242 |

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

**Lab Sample ID: MB 320-598242/1-A**
**Matrix: Water**
**Analysis Batch: 599315**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**
**Prep Batch: 598242**

| Analyte | MB Result | MB Qualifier | LOQ | LOD | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Perfluorobutanoic acid (PFBA) | <2.4 | | 5.0 | 2.4 | ng/L | | 06/24/22 07:05 | 06/28/22 14:42 | 1 |
| Perfluoropentanoic acid (PFPeA) | <0.49 | | 2.0 | 0.49 | ng/L | | 06/24/22 07:05 | 06/28/22 14:42 | 1 |
| Perfluorohexanoic acid (PFHxA) | <0.58 | | 2.0 | 0.58 | ng/L | | 06/24/22 07:05 | 06/28/22 14:42 | 1 |
| Perfluoroheptanoic acid (PFHpA) | <0.25 | | 2.0 | 0.25 | ng/L | | 06/24/22 07:05 | 06/28/22 14:42 | 1 |
| Perfluorooctanoic acid (PFOA) | <0.85 | | 2.0 | 0.85 | ng/L | | 06/24/22 07:05 | 06/28/22 14:42 | 1 |
| Perfluorononanoic acid (PFNA) | <0.27 | | 2.0 | 0.27 | ng/L | | 06/24/22 07:05 | 06/28/22 14:42 | 1 |
| Perfluorodecanoic acid (PFDA) | <0.31 | | 2.0 | 0.31 | ng/L | | 06/24/22 07:05 | 06/28/22 14:42 | 1 |
| Perfluoroundecanoic acid (PFUnA) | <1.1 | | 2.0 | 1.1 | ng/L | | 06/24/22 07:05 | 06/28/22 14:42 | 1 |
| Perfluorododecanoic acid (PFDoA) | <0.55 | | 2.0 | 0.55 | ng/L | | 06/24/22 07:05 | 06/28/22 14:42 | 1 |
| Perfluorotridecanoic acid (PFTrDA) | <1.3 | | 2.0 | 1.3 | ng/L | | 06/24/22 07:05 | 06/28/22 14:42 | 1 |
| Perfluorotetradecanoic acid (PFTeA) | <0.73 | | 2.0 | 0.73 | ng/L | | 06/24/22 07:05 | 06/28/22 14:42 | 1 |
| Perfluoro-n-hexadecanoic acid (PFHxDA) | <0.89 | | 2.0 | 0.89 | ng/L | | 06/24/22 07:05 | 06/28/22 14:42 | 1 |
| Perfluoro-n-octadecanoic acid (PFODA) | <0.94 | | 2.0 | 0.94 | ng/L | | 06/24/22 07:05 | 06/28/22 14:42 | 1 |
| Perfluorobutanesulfonic acid (PFBS) | <0.20 | | 2.0 | 0.20 | ng/L | | 06/24/22 07:05 | 06/28/22 14:42 | 1 |
| Perfluoropentanesulfonic acid (PFPeS) | <0.30 | | 2.0 | 0.30 | ng/L | | 06/24/22 07:05 | 06/28/22 14:42 | 1 |
| Perfluorohexanesulfonic acid (PFHxS) | <0.57 | | 2.0 | 0.57 | ng/L | | 06/24/22 07:05 | 06/28/22 14:42 | 1 |
| Perfluoroheptanesulfonic acid (PFHpS) | <0.19 | | 2.0 | 0.19 | ng/L | | 06/24/22 07:05 | 06/28/22 14:42 | 1 |
| Perfluorooctanesulfonic acid (PFOS) | <0.54 | | 2.0 | 0.54 | ng/L | | 06/24/22 07:05 | 06/28/22 14:42 | 1 |
| Perfluorononanesulfonic acid (PFNS) | <0.37 | | 2.0 | 0.37 | ng/L | | 06/24/22 07:05 | 06/28/22 14:42 | 1 |
| Perfluorodecanesulfonic acid (PFDS) | <0.32 | | 2.0 | 0.32 | ng/L | | 06/24/22 07:05 | 06/28/22 14:42 | 1 |
| Perfluorododecanesulfonic acid (PFDoS) | <0.97 | | 2.0 | 0.97 | ng/L | | 06/24/22 07:05 | 06/28/22 14:42 | 1 |
| Perfluorooctanesulfonamide (FOSA) | <0.98 | | 2.0 | 0.98 | ng/L | | 06/24/22 07:05 | 06/28/22 14:42 | 1 |
| NEtFOSA | <0.87 | | 2.0 | 0.87 | ng/L | | 06/24/22 07:05 | 06/28/22 14:42 | 1 |
| NMeFOSA | <0.43 | | 2.0 | 0.43 | ng/L | | 06/24/22 07:05 | 06/28/22 14:42 | 1 |
| NMeFOSAA | <1.2 | | 5.0 | 1.2 | ng/L | | 06/24/22 07:05 | 06/28/22 14:42 | 1 |
| NEtFOSAA | <1.3 | | 5.0 | 1.3 | ng/L | | 06/24/22 07:05 | 06/28/22 14:42 | 1 |
| NMeFOSE | <1.4 | | 4.0 | 1.4 | ng/L | | 06/24/22 07:05 | 06/28/22 14:42 | 1 |
| NEtFOSE | <0.85 | | 2.0 | 0.85 | ng/L | | 06/24/22 07:05 | 06/28/22 14:42 | 1 |
| 4:2 FTS | <0.24 | | 2.0 | 0.24 | ng/L | | 06/24/22 07:05 | 06/28/22 14:42 | 1 |
| 6:2 FTS | <2.5 | | 5.0 | 2.5 | ng/L | | 06/24/22 07:05 | 06/28/22 14:42 | 1 |
| 8:2 FTS | <0.46 | | 2.0 | 0.46 | ng/L | | 06/24/22 07:05 | 06/28/22 14:42 | 1 |
| 10:2 FTS | <0.67 | | 2.0 | 0.67 | ng/L | | 06/24/22 07:05 | 06/28/22 14:42 | 1 |
| 4,8-Dioxa-3H-perfluorononanoic acid (ADONA) | <0.40 | | 2.0 | 0.40 | ng/L | | 06/24/22 07:05 | 06/28/22 14:42 | 1 |
| HFPO-DA (GenX) | <1.5 | | 4.0 | 1.5 | ng/L | | 06/24/22 07:05 | 06/28/22 14:42 | 1 |
| 9Cl-PF3ONS | <0.24 | | 2.0 | 0.24 | ng/L | | 06/24/22 07:05 | 06/28/22 14:42 | 1 |
| 11Cl-PF3OUdS | <0.32 | | 2.0 | 0.32 | ng/L | | 06/24/22 07:05 | 06/28/22 14:42 | 1 |

| *Isotope Dilution* | *MB %Recovery* | *MB Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *13C4 PFBA* | *101* | | *25 - 150* | *06/24/22 07:05* | *06/28/22 14:42* | *1* |
| *13C5 PFPeA* | *99* | | *25 - 150* | *06/24/22 07:05* | *06/28/22 14:42* | *1* |
| *13C2 PFHxA* | *100* | | *25 - 150* | *06/24/22 07:05* | *06/28/22 14:42* | *1* |
| *13C4 PFHpA* | *100* | | *25 - 150* | *06/24/22 07:05* | *06/28/22 14:42* | *1* |
| *13C4 PFOA* | *105* | | *25 - 150* | *06/24/22 07:05* | *06/28/22 14:42* | *1* |
| *13C5 PFNA* | *97* | | *25 - 150* | *06/24/22 07:05* | *06/28/22 14:42* | *1* |

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

**Lab Sample ID: MB 320-598242/1-A**
**Matrix: Water**
**Analysis Batch: 599315**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**
**Prep Batch: 598242**

| Isotope Dilution | MB %Recovery | MB Qualifier | Limits | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|
| 13C2 PFDA | 98 | | 25 - 150 | 06/24/22 07:05 | 06/28/22 14:42 | 1 |
| 13C2 PFUnA | 102 | | 25 - 150 | 06/24/22 07:05 | 06/28/22 14:42 | 1 |
| 13C2 PFDoA | 89 | | 25 - 150 | 06/24/22 07:05 | 06/28/22 14:42 | 1 |
| 13C2 PFTeDA | 88 | | 25 - 150 | 06/24/22 07:05 | 06/28/22 14:42 | 1 |
| 13C2 PFHxDA | 83 | | 25 - 150 | 06/24/22 07:05 | 06/28/22 14:42 | 1 |
| 13C3 PFBS | 101 | | 25 - 150 | 06/24/22 07:05 | 06/28/22 14:42 | 1 |
| 18O2 PFHxS | 101 | | 25 - 150 | 06/24/22 07:05 | 06/28/22 14:42 | 1 |
| 13C4 PFOS | 90 | | 25 - 150 | 06/24/22 07:05 | 06/28/22 14:42 | 1 |
| 13C8 FOSA | 85 | | 10 - 150 | 06/24/22 07:05 | 06/28/22 14:42 | 1 |
| d3-NMeFOSAA | 78 | | 25 - 150 | 06/24/22 07:05 | 06/28/22 14:42 | 1 |
| d5-NEtFOSAA | 73 | | 25 - 150 | 06/24/22 07:05 | 06/28/22 14:42 | 1 |
| d-N-MeFOSA-M | 77 | | 10 - 150 | 06/24/22 07:05 | 06/28/22 14:42 | 1 |
| d-N-EtFOSA-M | 81 | | 10 - 150 | 06/24/22 07:05 | 06/28/22 14:42 | 1 |
| d7-N-MeFOSE-M | 90 | | 10 - 150 | 06/24/22 07:05 | 06/28/22 14:42 | 1 |
| d9-N-EtFOSE-M | 90 | | 10 - 150 | 06/24/22 07:05 | 06/28/22 14:42 | 1 |
| M2-4:2 FTS | 79 | | 25 - 150 | 06/24/22 07:05 | 06/28/22 14:42 | 1 |
| M2-6:2 FTS | 84 | | 25 - 150 | 06/24/22 07:05 | 06/28/22 14:42 | 1 |
| M2-8:2 FTS | 85 | | 25 - 150 | 06/24/22 07:05 | 06/28/22 14:42 | 1 |
| 13C3 HFPO-DA | 92 | | 25 - 150 | 06/24/22 07:05 | 06/28/22 14:42 | 1 |
| 13C2 10:2 FTS | 88 | | 25 - 150 | 06/24/22 07:05 | 06/28/22 14:42 | 1 |

**Lab Sample ID: LCS 320-598242/2-A**
**Matrix: Water**
**Analysis Batch: 599315**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**
**Prep Batch: 598242**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec Limits |
|---|---|---|---|---|---|---|---|
| Perfluorobutanoic acid (PFBA) | 40.0 | 45.1 | | ng/L | | 113 | 60 - 135 |
| Perfluoropentanoic acid (PFPeA) | 40.0 | 40.4 | | ng/L | | 101 | 60 - 135 |
| Perfluorohexanoic acid (PFHxA) | 40.0 | 41.2 | | ng/L | | 103 | 60 - 135 |
| Perfluoroheptanoic acid (PFHpA) | 40.0 | 39.2 | | ng/L | | 98 | 60 - 135 |
| Perfluorooctanoic acid (PFOA) | 40.0 | 39.0 | | ng/L | | 98 | 60 - 135 |
| Perfluorononanoic acid (PFNA) | 40.0 | 41.5 | | ng/L | | 104 | 60 - 135 |
| Perfluorodecanoic acid (PFDA) | 40.0 | 43.1 | | ng/L | | 108 | 60 - 135 |
| Perfluoroundecanoic acid (PFUnA) | 40.0 | 37.4 | | ng/L | | 94 | 60 - 135 |
| Perfluorododecanoic acid (PFDoA) | 40.0 | 41.1 | | ng/L | | 103 | 60 - 135 |
| Perfluorotridecanoic acid (PFTrDA) | 40.0 | 38.6 | | ng/L | | 97 | 60 - 135 |
| Perfluorotetradecanoic acid (PFTeA) | 40.0 | 46.0 | | ng/L | | 115 | 60 - 135 |
| Perfluoro-n-hexadecanoic acid (PFHxDA) | 40.0 | 42.0 | | ng/L | | 105 | 60 - 135 |
| Perfluoro-n-octadecanoic acid (PFODA) | 40.0 | 40.5 | | ng/L | | 101 | 60 - 135 |
| Perfluorobutanesulfonic acid (PFBS) | 35.5 | 36.9 | | ng/L | | 104 | 60 - 135 |
| Perfluoropentanesulfonic acid (PFPeS) | 37.5 | 37.8 | | ng/L | | 101 | 60 - 135 |
| Perfluorohexanesulfonic acid (PFHxS) | 36.5 | 37.4 | | ng/L | | 103 | 60 - 135 |

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

**Lab Sample ID: LCS 320-598242/2-A**
**Matrix: Water**
**Analysis Batch: 599315**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**
**Prep Batch: 598242**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec Limits |
|---|---|---|---|---|---|---|---|
| Perfluoroheptanesulfonic acid (PFHpS) | 38.2 | 42.8 | | ng/L | | 112 | 60 - 135 |
| Perfluorooctanesulfonic acid (PFOS) | 37.2 | 40.8 | | ng/L | | 110 | 60 - 135 |
| Perfluorononanesulfonic acid (PFNS) | 38.5 | 40.9 | | ng/L | | 106 | 60 - 135 |
| Perfluorodecanesulfonic acid (PFDS) | 38.6 | 43.7 | | ng/L | | 113 | 60 - 135 |
| Perfluorododecanesulfonic acid (PFDoS) | 38.8 | 44.4 | | ng/L | | 115 | 60 - 135 |
| Perfluorooctanesulfonamide (FOSA) | 40.0 | 44.0 | | ng/L | | 110 | 60 - 135 |
| NEtFOSA | 40.0 | 40.7 | | ng/L | | 102 | 60 - 135 |
| NMeFOSA | 40.0 | 43.7 | | ng/L | | 109 | 60 - 135 |
| NMeFOSAA | 40.0 | 41.0 | | ng/L | | 103 | 60 - 135 |
| NEtFOSAA | 40.0 | 44.0 | | ng/L | | 110 | 60 - 135 |
| NMeFOSE | 40.0 | 39.4 | | ng/L | | 99 | 60 - 135 |
| NEtFOSE | 40.0 | 44.6 | | ng/L | | 111 | 60 - 135 |
| 4:2 FTS | 37.5 | 42.5 | | ng/L | | 113 | 60 - 135 |
| 6:2 FTS | 38.1 | 43.0 | | ng/L | | 113 | 60 - 135 |
| 8:2 FTS | 38.4 | 44.9 | | ng/L | | 117 | 60 - 135 |
| 10:2 FTS | 38.6 | 43.3 | | ng/L | | 112 | 60 - 135 |
| 4,8-Dioxa-3H-perfluorononanoic acid (ADONA) | 37.8 | 44.2 | | ng/L | | 117 | 60 - 135 |
| HFPO-DA (GenX) | 40.0 | 42.2 | | ng/L | | 105 | 60 - 135 |
| 9Cl-PF3ONS | 37.4 | 41.4 | | ng/L | | 111 | 60 - 135 |
| 11Cl-PF3OUdS | 37.8 | 41.7 | | ng/L | | 110 | 60 - 135 |

| *Isotope Dilution* | *LCS %Recovery* | *LCS Qualifier* | *Limits* |
|---|---|---|---|
| *13C4 PFBA* | *99* | | *25 - 150* |
| *13C5 PFPeA* | *96* | | *25 - 150* |
| *13C2 PFHxA* | *92* | | *25 - 150* |
| *13C4 PFHpA* | *103* | | *25 - 150* |
| *13C4 PFOA* | *102* | | *25 - 150* |
| *13C5 PFNA* | *96* | | *25 - 150* |
| *13C2 PFDA* | *94* | | *25 - 150* |
| *13C2 PFUnA* | *106* | | *25 - 150* |
| *13C2 PFDoA* | *95* | | *25 - 150* |
| *13C2 PFTeDA* | *89* | | *25 - 150* |
| *13C2 PFHxDA* | *95* | | *25 - 150* |
| *13C3 PFBS* | *97* | | *25 - 150* |
| *18O2 PFHxS* | *97* | | *25 - 150* |
| *13C4 PFOS* | *91* | | *25 - 150* |
| *13C8 FOSA* | *87* | | *10 - 150* |
| *d3-NMeFOSAA* | *83* | | *25 - 150* |
| *d5-NEtFOSAA* | *80* | | *25 - 150* |
| *d-N-MeFOSA-M* | *73* | | *10 - 150* |
| *d-N-EtFOSA-M* | *81* | | *10 - 150* |
| *d7-N-MeFOSE-M* | *93* | | *10 - 150* |
| *d9-N-EtFOSE-M* | *86* | | *10 - 150* |

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

**Lab Sample ID: LCS 320-598242/2-A**
**Matrix: Water**
**Analysis Batch: 599315**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**
**Prep Batch: 598242**

| *Isotope Dilution* | *LCS %Recovery* | *LCS Qualifier* | *Limits* |
|---|---|---|---|
| *M2-4:2 FTS* | *77* | | *25 - 150* |
| *M2-6:2 FTS* | *83* | | *25 - 150* |
| *M2-8:2 FTS* | *80* | | *25 - 150* |
| *13C3 HFPO-DA* | *102* | | *25 - 150* |
| *13C2 10:2 FTS* | *82* | | *25 - 150* |

**Lab Sample ID: LCSD 320-598242/3-A**
**Matrix: Water**
**Analysis Batch: 599315**

**Client Sample ID: Lab Control Sample Dup**
**Prep Type: Total/NA**
**Prep Batch: 598242**

| Analyte | | | Spike Added | LCSD Result | LCSD Qualifier | Unit | D | %Rec | %Rec Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Perfluorobutanoic acid (PFBA) | | | 40.0 | 48.4 | | ng/L | | 121 | 60 - 135 | 7 | 30 |
| Perfluoropentanoic acid (PFPeA) | | | 40.0 | 41.6 | | ng/L | | 104 | 60 - 135 | 3 | 30 |
| Perfluorohexanoic acid (PFHxA) | | | 40.0 | 40.2 | | ng/L | | 100 | 60 - 135 | 3 | 30 |
| Perfluoroheptanoic acid (PFHpA) | | | 40.0 | 39.2 | | ng/L | | 98 | 60 - 135 | 0 | 30 |
| Perfluorooctanoic acid (PFOA) | | | 40.0 | 38.3 | | ng/L | | 96 | 60 - 135 | 2 | 30 |
| Perfluorononanoic acid (PFNA) | | | 40.0 | 41.6 | | ng/L | | 104 | 60 - 135 | 0 | 30 |
| Perfluorodecanoic acid (PFDA) | | | 40.0 | 43.5 | | ng/L | | 109 | 60 - 135 | 1 | 30 |
| Perfluoroundecanoic acid (PFUnA) | | | 40.0 | 43.1 | | ng/L | | 108 | 60 - 135 | 14 | 30 |
| Perfluorododecanoic acid (PFDoA) | | | 40.0 | 41.7 | | ng/L | | 104 | 60 - 135 | 1 | 30 |
| Perfluorotridecanoic acid (PFTrDA) | | | 40.0 | 40.6 | | ng/L | | 101 | 60 - 135 | 5 | 30 |
| Perfluorotetradecanoic acid (PFTeA) | | | 40.0 | 41.4 | | ng/L | | 103 | 60 - 135 | 11 | 30 |
| Perfluoro-n-hexadecanoic acid (PFHxDA) | | | 40.0 | 46.7 | | ng/L | | 117 | 60 - 135 | 10 | 30 |
| Perfluoro-n-octadecanoic acid (PFODA) | | | 40.0 | 40.7 | | ng/L | | 102 | 60 - 135 | 1 | 30 |
| Perfluorobutanesulfonic acid (PFBS) | | | 35.5 | 38.1 | | ng/L | | 107 | 60 - 135 | 3 | 30 |
| Perfluoropentanesulfonic acid (PFPeS) | | | 37.5 | 37.7 | | ng/L | | 100 | 60 - 135 | 0 | 30 |
| Perfluorohexanesulfonic acid (PFHxS) | | | 36.5 | 38.7 | | ng/L | | 106 | 60 - 135 | 3 | 30 |
| Perfluoroheptanesulfonic acid (PFHpS) | | | 38.2 | 42.9 | | ng/L | | 112 | 60 - 135 | 0 | 30 |
| Perfluorooctanesulfonic acid (PFOS) | | | 37.2 | 43.5 | | ng/L | | 117 | 60 - 135 | 6 | 30 |
| Perfluorononanesulfonic acid (PFNS) | | | 38.5 | 45.4 | | ng/L | | 118 | 60 - 135 | 10 | 30 |
| Perfluorodecanesulfonic acid (PFDS) | | | 38.6 | 48.4 | | ng/L | | 126 | 60 - 135 | 10 | 30 |
| Perfluorododecanesulfonic acid (PFDoS) | | | 38.8 | 44.2 | | ng/L | | 114 | 60 - 135 | 0 | 30 |
| Perfluorooctanesulfonamide (FOSA) | | | 40.0 | 42.0 | | ng/L | | 105 | 60 - 135 | 5 | 30 |
| NEtFOSA | | | 40.0 | 43.2 | | ng/L | | 108 | 60 - 135 | 6 | 30 |
| NMeFOSA | | | 40.0 | 43.8 | | ng/L | | 110 | 60 - 135 | 0 | 30 |
| NMeFOSAA | | | 40.0 | 43.1 | | ng/L | | 108 | 60 - 135 | 5 | 30 |
| NEtFOSAA | | | 40.0 | 43.9 | | ng/L | | 110 | 60 - 135 | 0 | 30 |
| NMeFOSE | | | 40.0 | 40.1 | | ng/L | | 100 | 60 - 135 | 2 | 30 |

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

**Lab Sample ID: LCSD 320-598242/3-A**
**Matrix: Water**
**Analysis Batch: 599315**

**Client Sample ID: Lab Control Sample Dup**
**Prep Type: Total/NA**
**Prep Batch: 598242**

| Analyte | | | Spike Added | LCSD Result | LCSD Qualifier | Unit | D | %Rec | %Rec Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| NEtFOSE | | | 40.0 | 44.1 | | ng/L | | 110 | 60 - 135 | 1 | 30 |
| 4:2 FTS | | | 37.5 | 40.4 | | ng/L | | 108 | 60 - 135 | 5 | 30 |
| 6:2 FTS | | | 38.1 | 40.6 | | ng/L | | 107 | 60 - 135 | 6 | 30 |
| 8:2 FTS | | | 38.4 | 42.0 | | ng/L | | 109 | 60 - 135 | 7 | 30 |
| 10:2 FTS | | | 38.6 | 39.5 | | ng/L | | 102 | 60 - 135 | 9 | 30 |
| 4,8-Dioxa-3H-perfluorononanoic acid (ADONA) | | | 37.8 | 44.8 | | ng/L | | 119 | 60 - 135 | 1 | 30 |
| HFPO-DA (GenX) | | | 40.0 | 46.7 | | ng/L | | 117 | 60 - 135 | 10 | 30 |
| 9Cl-PF3ONS | | | 37.4 | 44.6 | | ng/L | | 119 | 60 - 135 | 7 | 30 |
| 11Cl-PF3OUdS | | | 37.8 | 43.4 | | ng/L | | 115 | 60 - 135 | 4 | 30 |

| *Isotope Dilution* | *LCSD %Recovery* | *LCSD Qualifier* | *Limits* |
|---|---|---|---|
| *13C4 PFBA* | *110* | | *25 - 150* |
| *13C5 PFPeA* | *108* | | *25 - 150* |
| *13C2 PFHxA* | *100* | | *25 - 150* |
| *13C4 PFHpA* | *108* | | *25 - 150* |
| *13C4 PFOA* | *109* | | *25 - 150* |
| *13C5 PFNA* | *101* | | *25 - 150* |
| *13C2 PFDA* | *95* | | *25 - 150* |
| *13C2 PFUnA* | *103* | | *25 - 150* |
| *13C2 PFDoA* | *99* | | *25 - 150* |
| *13C2 PFTeDA* | *96* | | *25 - 150* |
| *13C2 PFHxDA* | *93* | | *25 - 150* |
| *13C3 PFBS* | *102* | | *25 - 150* |
| *18O2 PFHxS* | *102* | | *25 - 150* |
| *13C4 PFOS* | *92* | | *25 - 150* |
| *13C8 FOSA* | *94* | | *10 - 150* |
| *d3-NMeFOSAA* | *80* | | *25 - 150* |
| *d5-NEtFOSAA* | *79* | | *25 - 150* |
| *d-N-MeFOSA-M* | *82* | | *10 - 150* |
| *d-N-EtFOSA-M* | *84* | | *10 - 150* |
| *d7-N-MeFOSE-M* | *95* | | *10 - 150* |
| *d9-N-EtFOSE-M* | *94* | | *10 - 150* |
| *M2-4:2 FTS* | *85* | | *25 - 150* |
| *M2-6:2 FTS* | *94* | | *25 - 150* |
| *M2-8:2 FTS* | *81* | | *25 - 150* |
| *13C3 HFPO-DA* | *95* | | *25 - 150* |
| *13C2 10:2 FTS* | *90* | | *25 - 150* |

# Lab Chronicle

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

Job ID: 500-218153-1

## Client Sample ID: WW Outfall

**Date Collected: 06/15/22 11:04**
**Date Received: 06/16/22 09:15**

## Lab Sample ID: 500-218153-1

**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | 3535 | | | 598242 | 06/24/22 07:05 | EFG | TAL SAC |
| Total/NA | Analysis | 537 (modified) | | 1 | 599315 | 06/28/22 17:32 | D1R | 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: 500-218153-1

## 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 |

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

# Chain of Custody Record

eurofins | Environment Testing America

500-218153 COC

**Client Information**

| | | | |
|---|---|---|---|
| Client Contact: Ty Fadness | Sampler: Tyler Fadness | Lab PM: Fredrick, Sandie | Carrier Tracking No(s): |
| Company: City of Eau Claire | Phone: 715-839-6121 | E-Mail: Sandra.Fredrick@et.eurofinsus.com | State of Origin: |
| Address: 1000 Ferry Street | PWSID: | Due Date Requested: 6/27/22 | COC No: 500-100727-43338.2 |
| City: Eau Claire | | TAT Requested (days): 10-Day TAT | Page: Page 2 of 2 |
| State, Zip: WI, 54703 | | Compliance Project: Δ Yes Δ No | Job #: 500-218153 |
| Phone: | | PO #: 50220192-00 | |
| Email: Tyler Fadness@EauclaireWi Gov | | WO #: | |
| Project Name: PFAS Testing | | Project #: 50019745 | |
| Site: | | SSOW#: | |

**Analysis Requested**

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) |

Other:

| Sample Identification | Sample Date | Sample Time | Sample Type (C=Comp, G=grab) | Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air) | Field Filtered Sample (Yes or No) | Perform MS/MSD (Yes or No) | PFC_IDA_WI - PFAS, Extended List (36 Analytes) | Total Number of containers | Special Instructions/Note: |
|---|---|---|---|---|---|---|---|---|---|
| | | | Preservation Code: | | | | N | | |
| WW Outfall | 6/15/22 | 1104 | G | Water | | | X | | |
| | | | | Water | | | | | |
| | | | | Water | | | | | |
| | | | | Water | | | | | |
| | | | | Water | | | | | |
| | | | | Water | | | | | |
| | | | | Water | | | | | |
| | | | | Water | | | | | |
| | | | | Water | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |

**Possible Hazard Identification**
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

**Sample Disposal ( A fee may be assessed if samples are retained longer than 1 month)**
☐ Return To Client ☐ Disposal By Lab ☐ Archive For ____ Months

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Empty Kit Relinquished by: | | Date: | | Time: | | Method of Shipment: | |
| Relinquished by: | Date/Time: 6/15/22 1200 | Company: GTS-EC | 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 |
| Custody Seals Intact: Δ Yes Δ No | Custody Seal No.: | | Cooler Temperature(s) °C and Other Remarks: | | | | |

Ver: 06/08/2021

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

# Chain of Custody Record

eurofins | Environment Testing America

| Client Information | Sampler: Tyler Fadness | Lab PM: Fredrick, Sandie | Carrier Tracking No(s): | COC No: 500-100727-43338.2 |
|---|---|---|---|---|
| Client Contact: Ty Fadness | Phone: 715-839-6121 | E-Mail: Sandra.Fredrick@et.eurofinsus.com | State of Origin: | Page: Page 2 of 2 |
| Company: City of Eau Claire | PWSID: | | | Job #: |
| Address: 1000 Ferry Street | Due Date Requested: 6/27/22 | | | |
| City: Eau Claire | TAT Requested (days): 10-Day TAT | | | |
| State, Zip: WI, 54703 | Compliance Project: Δ Yes Δ No | | | |
| Phone: | PO #: 50220192-00 | | | |
| Email: Tyler.Fadness@EauclaireWi.Gov | WO #: | | | |
| Project Name: PFAS Testing | Project #: 50019745 | | | |
| Site: | SSOW#: | | | |

**Analysis Requested**

Preservation Codes:
A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Z - other (specify)
Other:

| Sample Identification | Sample Date | Sample Time | Sample Type (C=comp, G=grab) | Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air) | Field Filtered Sample (Yes or No) | Perform MS/MSD (Yes or No) | PFC_IDA_WI - PFAS, Extended List (36 Analytes) | Total Number of containers | Special Instructions/Note: |
|---|---|---|---|---|---|---|---|---|---|
| | | | Preservation Code | | | | N | | |
| WD Outfall | 6/15/22 | 1104 | G | Water | | | X | | |
| | | | | Water | | | | | |
| | | | | Water | | | | | |
| | | | | Water | | | | | |
| | | | | Water | | | | | |
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| | | | | Water | | | | | |
| | | | | Water | | | | | |
| | | | | Water | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |

500-218153 Chain of Custody

**Possible Hazard Identification**
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

**Sample Disposal ( A fee may be assessed if samples are retained longer than 1 month)**
☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

| Empty Kit Relinquished by: | Date: | Time: | Method of Shipment: |
|---|---|---|---|

| | Relinquished by: | Date/Time: | Company | Received by: | Date/Time: | Company |
|---|---|---|---|---|---|---|
| 1 | [signature] | 6/15/22 1200 | C.T. EC | [signature] | 6-16-22 0915 | ET-SAC |
| 2 | Relinquished by: | Date/Time: | Company | Received by: | Date/Time: | Company |
| 3 | Relinquished by: | Date/Time: | Company | Received by: | Date/Time: | Company |

Custody Seals Intact: Δ Yes Δ No | Custody Seal No.: 1955478

Cooler Temperature(s) °C and Other Remarks: 1.5°C

Ver: 06/08/2021

# Login Sample Receipt Checklist

Client: City of Eau Claire

Job Number: 500-218153-1

**Login Number: 218153**
**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: 500-218153-1

**Login Number: 218153**
**List Number: 2**
**Creator: Oropeza, Salvador**

**List Source: Eurofins Sacramento**
**List Creation: 06/16/22 06:37 PM**

| 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 | 1955478 |
| 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 | 1.5C |
| 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 <6mm (1/4"). | True | |
| Multiphasic samples are not present. | True | |
| Samples do not require splitting or compositing. | True | |
| Residual Chlorine Checked. | N/A | |

eurofins | Environment Testing TestAmerica

# Sacramento Sample Receiving Notes

500-218153 Field Sheet

Tracking # : 5776 0597 5576

Job: _____

SO / PO / FO / SAT / 2-Day / Ground / UPS / CDO / Courier

GSO / OnTrac / Goldstreak / USPS / Other _____

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: Lab Corr. Factor: ( + / - ) N/A °C

Ice ✓ Wet ✓ Gel _____ Other _____

Cooler Custody Seal: 1955478

Cooler ID: _____

Temp Observed: 1.5 °C Corrected: 1.5 °C

From: Temp Blank ☒ Sample ☐

| Opening/Processing The Shipment | Yes | No | NA |
|---|---|---|---|
| Cooler compromised/tampered with? | ☐ | ☒ | ☐ |
| Cooler Temperature is acceptable? | ☒ | ☐ | ☐ |
| Frozen samples show signs of thaw? | ☐ | ☐ | ☒ |

Initials: SO Date: 6-16-22

| Unpacking/Labeling The Samples | Yes | No | NA |
|---|---|---|---|
| COC is complete w/o discrepancies? | ☒ | ☐ | ☐ |
| Samples compromised/tampered with? | ☐ | ☒ | ☐ |
| Containers are not broken or leaking? | ☒ | ☐ | ☐ |
| Sample custody seal? | ☐ | ☐ | ☒ |
| Sample containers have legible labels? | ☒ | ☐ | ☐ |
| Sample date/times are provided? | ☒ | ☐ | ☐ |
| Appropriate containers are used? | ☒ | ☐ | ☐ |
| Sample bottles are completely filled? | ☒ | ☐ | ☐ |
| Sample preservatives verified? | ☐ | ☐ | ☒ |
| Is the Field Sampler's name on COC? | ☒ | ☐ | ☐ |
| Samples require splitting/compositing? | ☐ | ☐ | ☒ |
| Samples w/o discrepancies? | ☒ | ☐ | ☐ |
| Zero headspace?* | ☐ | ☐ | ☒ |
| Alkalinity has no headspace? | ☐ | ☐ | ☒ |
| Perchlorate has headspace? (Methods 314, 331, 6850) | ☐ | ☐ | ☒ |
| Multiphasic samples are not present? | ☒ | ☐ | ☐ |

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

Initials: SO Date: 6-16-22

Notes: _____

Trizma Lot #(s): _____

| Login Completion | Yes | No | NA |
|---|---|---|---|
| Receipt Temperature on COC? | ☒ | ☐ | ☐ |
| Samples received within hold time? | ☒ | ☐ | ☐ |
| NCM Filed? | ☐ | ☐ | ☒ |
| Log Release checked in TALS? | ☐ | ☐ | ☒ |

Initials: SO Date: 6-16-22

# Isotope Dilution Summary

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

Job ID: 500-218153-1

## 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) | PFUnA (25-150) |
| 500-218153-1 | WW Outfall | 108 | 103 | 105 | 107 | 108 | 104 | 100 | 106 |
| LCS 320-598242/2-A | Lab Control Sample | 99 | 96 | 92 | 103 | 102 | 96 | 94 | 106 |
| LCSD 320-598242/3-A | Lab Control Sample Dup | 110 | 108 | 100 | 108 | 109 | 101 | 95 | 103 |
| MB 320-598242/1-A | Method Blank | 101 | 99 | 100 | 100 | 105 | 97 | 98 | 102 |

| | | Percent Isotope Dilution Recovery (Acceptance Limits) | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Lab Sample ID | Client Sample ID | PFDoA (25-150) | PFTDA (25-150) | PFHxDA (25-150) | C3PFBS (25-150) | PFHxS (25-150) | PFOS (25-150) | PFOSA (10-150) | d3NMFOS (25-150) |
| 500-218153-1 | WW Outfall | 94 | 95 | 98 | 100 | 96 | 95 | 95 | 91 |
| LCS 320-598242/2-A | Lab Control Sample | 95 | 89 | 95 | 97 | 97 | 91 | 87 | 83 |
| LCSD 320-598242/3-A | Lab Control Sample Dup | 99 | 96 | 93 | 102 | 102 | 92 | 94 | 80 |
| MB 320-598242/1-A | Method Blank | 89 | 88 | 83 | 101 | 101 | 90 | 85 | 78 |

| | | 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) |
| 500-218153-1 | WW Outfall | 94 | 80 | 80 | 91 | 92 | 92 | 93 | 91 |
| LCS 320-598242/2-A | Lab Control Sample | 80 | 73 | 81 | 93 | 86 | 77 | 83 | 80 |
| LCSD 320-598242/3-A | Lab Control Sample Dup | 79 | 82 | 84 | 95 | 94 | 85 | 94 | 81 |
| MB 320-598242/1-A | Method Blank | 73 | 77 | 81 | 90 | 90 | 79 | 84 | 85 |

| | | Percent Isotope Dilution Recovery (Acceptance Limits) | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Lab Sample ID | Client Sample ID | HFPODA (25-150) | M102FTS (25-150) | | | | | | |
| 500-218153-1 | WW Outfall | 103 | 98 | | | | | | |
| LCS 320-598242/2-A | Lab Control Sample | 102 | 82 | | | | | | |
| LCSD 320-598242/3-A | Lab Control Sample Dup | 95 | 90 | | | | | | |
| MB 320-598242/1-A | Method Blank | 92 | 88 | | | | | | |

**Surrogate Legend**

PFBA = 13C4 PFBA
PFPeA = 13C5 PFPeA
PFHxA = 13C2 PFHxA
C4PFHA = 13C4 PFHpA
PFOA = 13C4 PFOA
PFNA = 13C5 PFNA
PFDA = 13C2 PFDA
PFUnA = 13C2 PFUnA
PFDoA = 13C2 PFDoA
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
dEtFOSA = d-N-EtFOSA-M
NMFM = d7-N-MeFOSE-M
NEFM = d9-N-EtFOSE-M
M242FTS = M2-4:2 FTS

# Isotope Dilution Summary

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

Job ID: 500-218153-1

M262FTS = M2-6:2 FTS
M282FTS = M2-8:2 FTS
HFPODA = 13C3 HFPO-DA
M102FTS = 13C2 10:2 FTS