

DATA PACKAGE

SUB - DATA

PROJECT NAME : FT MEADE TIPTON AIRFIELD PARCEL RI - PO 0111169

WESTON SOLUTIONS

1400 Weston Way

PO Box 2653

West Chester, PA - 19380

Phone No: 610-701-7400

ORDER ID : Q1107

ATTENTION : Nathan Fretz



Cover Page

Order ID : Q1107

Project ID : Ft Meade Tipton Airfield Parcel RI - PO 0111169

Client : Weston Solutions

Lab Sample Number

Q1107-01

Client Sample Number

TAPIAL1-MW04S-011525-00-T2

I certify that the data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hard copy data package has been authorized by the laboratory manager or his designee, as verified by the following signature.

Signature : _____

APPROVED

By Nimisha Pandya, QA/QC Supervisor at 9:52 am, Jan 30, 2025

Date: 1/29/2025

NYDOH CERTIFICATION NO - 11376

NJDEP CERTIFICATION NO - 20012

 ANALYTICAL REPORT**PREPARED FOR**

Attn: Yazmeen Gomez
Chemtech Consulting Group Inc.
284 Sheffield Street
Mountainside NJ 07092

Generated 01/29/2025

JOB DESCRIPTION

Q1107

JOB NUMBER

410-204706-1

Eurofins Lancaster Laboratories Environment Testing, LLC

Job Notes

This report may not be reproduced except in full, and with written approval from the laboratory. The results relate only to the samples tested. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

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

Authorization



Generated
01/29/2025

Authorized for release by
Barbara Weyandt, Project Manager
Barbara.Weyandt@et.eurofinsus.com
Designee for
Barbara A Weyandt, Project Manager
Barbara.Weyandt@et.eurofinsus.com
717 556-7264

Compliance Statement

Analytical test results meet all requirements of the associated regulatory program (e.g., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis. Data qualifiers are applied to note exceptions. Noncompliant quality control (QC) is further explained in narrative comments.

- QC results that exceed the upper limits and are associated with non-detect samples are qualified but further narration is not required since the bias is high and does not change a non-detect result. Further narration is also not required with QC blank detection when the associated sample concentration is non-detect or more than ten times the level in the blank.

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

- Surrogate and/or isotope dilution analyte recoveries (if applicable) which are outside of the QC window are confirmed unless attributed to a dilution or otherwise noted in the narrative.

Regulated compliance samples (e.g. SDWA, NPDES) must comply with the associated agency requirements/permits.

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

Test results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff. Times are local to the area of activity. Parameters listed in the 40 CFR Part 136 Table II as "analyze immediately" and tested in the laboratory are not performed within 15 minutes of collection.

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

WARRANTY AND LIMITS OF LIABILITY - In accepting analytical work, we warrant the accuracy of test results for the sample as submitted. The foregoing express warranty is exclusive and is given in lieu of all other warranties, expressed or implied, except as otherwise agreed. We disclaim any other warranties, expressed or implied, including a warranty of fitness for particular purpose and warranty of merchantability. In no event shall Eurofins Lancaster Laboratories Environmental, LLC be liable for indirect, special, consequential, or incidental damages including, but not limited to, damages for loss of profit or goodwill regardless of (A) the negligence (either sole or concurrent) of Eurofins Lancaster Laboratories Environmental and (B) whether Eurofins Lancaster Laboratories Environmental has been informed of the possibility of such damages. We accept no legal responsibility for the purposes for which the client uses the test results. Except as otherwise agreed, no purchase order or other order for work shall be accepted by Eurofins Lancaster Laboratories Environmental which includes any conditions that vary from the Standard Terms and Conditions, and Eurofins Lancaster Laboratories Environmental hereby objects to any conflicting terms contained in any acceptance or order submitted by client.

Barb Weyandt

Table of Contents

Cover Page	1
Data Summaries	5
Definitions	5
Case Narrative	6
Detection Summary	7
Client Sample Results	8
Default Detection Limits	9
QC Sample Results	10
QC Association	11
Chronicle	12
Certification Summary	13
Method Summary	14
Sample Summary	15
Reagent Traceability	16
COAs	17
Organic Sample Data	26
LCMS	26
6850_DOD6	26
6850_DOD6 QC Summary	27
6850_DOD6 Sample Data	32
Standards Data	35
6850_DOD6 ICAL Data	35
6850_DOD6 CCAL Data	51
Raw QC Data	63
6850_DOD6 Blank Data	63
6850_DOD6 LCS/LCSD Data	66
6850_DOD6 Run Logs	75
6850_DOD6 Prep Data	77
Shipping and Receiving Documents	79
Client Chain of Custody	80
Sample Receipt Checklist	81

Definitions/Glossary

Client: Chemtech Consulting Group Inc.
Project/Site: Q1107

Job ID: 410-204706-1

Qualifiers

LCMS

Qualifier	Qualifier Description
J	Estimated: The analyte was positively identified; the quantitation is an estimation

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

**Job Narrative
410-204706-1**

Analytical test results meet all requirements of the associated regulatory program listed on the Accreditation/Certification Summary Page unless otherwise noted under the individual analysis. Data qualifiers and/or narrative comments are included to explain any exceptions, if applicable.

- Matrix QC may not be reported if insufficient sample is provided or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD may be performed, unless otherwise specified in the method.
- Surrogate and/or isotope dilution analyte recoveries (if applicable) which are outside of the QC window are confirmed unless attributed to a dilution or otherwise noted in the narrative.

Regulated compliance samples (e.g. SDWA, NPDES) must comply with the associated agency requirements/permits.

Receipt

The sample was received on 1/17/2025 9:50 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 time was -0.1°C.

LCMS

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

Detection Summary

Client: Chemtech Consulting Group Inc.
Project/Site: Q1107

Job ID: 410-204706-1

Client Sample ID: TAPIAL1-MW04S-011525-00-T2

Lab Sample ID: 410-204706-1

Analyte	Result	Qualifier	LOQ	DL	Unit	Dil Fac	D	Method	Prep Type
Perchlorate	0.35	J	1.0	0.20	ug/L	1		6850	Total/NA

Client Sample Results

Client: Chemtech Consulting Group Inc.
Project/Site: Q1107

Job ID: 410-204706-1

Client Sample ID: TAPIAL1-MW04S-011525-00-T2
Date Collected: 01/15/25 12:20
Date Received: 01/17/25 09:50

Lab Sample ID: 410-204706-1
Matrix: Water

Method: EPA 6850 - Perchlorate by LC/MS or LC/MS/MS									
Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Perchlorate	0.35	J	1.0	0.20	ug/L		01/27/25 08:32	01/28/25 17:36	1

Default Detection Limits

Client: Chemtech Consulting Group Inc.
Project/Site: Q1107

Job ID: 410-204706-1

Method: 6850 - Perchlorate by LC/MS or LC/MS/MS

Prep: 6850 Prep

Analyte	LOQ	DL	Bias	Precision	Spike Value	N
Perchlorate	1.0 ug/L	0.20 ug/L	102.3	7.0 %	0.4 ug/L	16

QC Sample Results

Client: Chemtech Consulting Group Inc.
Project/Site: Q1107

Job ID: 410-204706-1

Method: 6850 - Perchlorate by LC/MS or LC/MS/MS

Lab Sample ID: MB 410-599365/1-A
Matrix: Water
Analysis Batch: 599506

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 599365

Analyte	MB Result	MB Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Perchlorate	ND		1.0	0.20	ug/L		01/27/25 08:32	01/28/25 16:44	1

Lab Sample ID: LCS 410-599365/2-A
Matrix: Water
Analysis Batch: 599506

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 599365

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Perchlorate	1.00	0.988	J	ug/L		99	84 - 119

Lab Sample ID: LCSD 410-599365/3-A
Matrix: Water
Analysis Batch: 599506

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 599365

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Perchlorate	1.00	0.967	J	ug/L		97	84 - 119	2	15

Lab Sample ID: INF 410-599365/4-A
Matrix: Water
Analysis Batch: 599506

Client Sample ID: Lab Control Sample
Prep Batch: 599365

Analyte	Spike Added	INF Result	INF Qualifier	Unit	D	%Rec	%Rec Limits
Perchlorate	1.00	1.01		ug/L		100	80 - 120

QC Association Summary

Client: Chemtech Consulting Group Inc.
Project/Site: Q1107

Job ID: 410-204706-1

LCMS

Prep Batch: 599365

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-204706-1	TAPIAL1-MW04S-011525-00-T2	Total/NA	Water	6850 Prep	
MB 410-599365/1-A	Method Blank	Total/NA	Water	6850 Prep	
INF 410-599365/4-A	Lab Control Sample		Water	6850 Prep	
LCS 410-599365/2-A	Lab Control Sample	Total/NA	Water	6850 Prep	
LCSD 410-599365/3-A	Lab Control Sample Dup	Total/NA	Water	6850 Prep	

Analysis Batch: 599506

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-204706-1	TAPIAL1-MW04S-011525-00-T2	Total/NA	Water	6850	599365
MB 410-599365/1-A	Method Blank	Total/NA	Water	6850	599365
INF 410-599365/4-A	Lab Control Sample		Water	6850	599365
LCS 410-599365/2-A	Lab Control Sample	Total/NA	Water	6850	599365
LCSD 410-599365/3-A	Lab Control Sample Dup	Total/NA	Water	6850	599365

Lab Chronicle

Client: Chemtech Consulting Group Inc.
Project/Site: Q1107

Job ID: 410-204706-1

Client Sample ID: TAPIAL1-MW04S-011525-00-T2
Date Collected: 01/15/25 12:20
Date Received: 01/17/25 09:50

Lab Sample ID: 410-204706-1
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	6850 Prep			599365	VVE5	ELLE	01/27/25 08:32
Total/NA	Analysis	6850		1	599506	VVE5	ELLE	01/28/25 17:36

Laboratory References:

ELLE = Eurofins Lancaster Laboratories Environment Testing, LLC, 2425 New Holland Pike, Lancaster, PA 17601, TEL (717)656-2300

Accreditation/Certification Summary

Client: Chemtech Consulting Group Inc.
Project/Site: Q1107

Job ID: 410-204706-1

Laboratory: Eurofins Lancaster Laboratories Environment Testing, LLC

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

Authority	Program	Identification Number	Expiration Date
A2LA	Dept. of Defense ELAP	0001.01	11-30-26
Rhode Island	State	LAO00338	12-30-25
The following analytes are included in this report, but the laboratory is not certified by Rhode Island State LAO00338. This list may include analytes for which the agency does not offer certification :			
Analysis Method	Prep Method	Matrix	Analyte
6850	6850 Prep	Water	Perchlorate

Method Summary

Client: Chemtech Consulting Group Inc.
Project/Site: Q1107

Job ID: 410-204706-1

Method	Method Description	Protocol	Laboratory
6850	Perchlorate by LC/MS or LC/MS/MS	EPA	ELLE
6850 Prep	Perchlorate Water Prep	EPA	ELLE

Protocol References:

EPA = US Environmental Protection Agency

Laboratory References:

ELLE = Eurofins Lancaster Laboratories Environment Testing, LLC, 2425 New Holland Pike, Lancaster, PA 17601, TEL (717)656-2300

Sample Summary

Client: Chemtech Consulting Group Inc.
Project/Site: Q1107

Job ID: 410-204706-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
410-204706-1	TAPIAL1-MW04S-011525-00-T2	Water	01/15/25 12:20	01/17/25 09:50

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins Lancaster Laboratories Environment
Testing, LLC

Job No.: 410-204706-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
gcs_icvperc2_00004	02/28/25	02/28/24	DI Water, Lot in house	100 mL	GCS_PERICVINT_00012	0.04 mL	Perchlorate	0.4004 ug/L
.GCS_PERICVINT_00012	02/28/25	02/28/24	DI Water, Lot in house	100 mL	GCS_perc2nd_00005	0.1 mL	Perchlorate	1001 ug/L
..GCS_perc2nd_00005	08/31/26		Agilent, Lot 0006689952		(Purchased Reagent)		Perchlorate	1001 ug/mL
gcs_icvperc5_00004	02/28/25	02/28/24	DI Water, Lot in house	100 mL	GCS_PERICVINT_00012	0.4 mL	Perchlorate	4.004 ug/L
.GCS_PERICVINT_00012	02/28/25	02/28/24	DI Water, Lot in house	100 mL	GCS_perc2nd_00005	0.1 mL	Perchlorate	1001 ug/L
..GCS_perc2nd_00005	08/31/26		Agilent, Lot 0006689952		(Purchased Reagent)		Perchlorate	1001 ug/mL
gcs_perc2_00010	02/28/25	02/28/24	DI Water, Lot in house	100 mL	GCS_percalint_00007	0.04 mL	Perchlorate	0.4 ug/L
.GCS_percalint_00007	02/28/25	02/28/24	DI Water, Lot in house	100 mL	GCS_PercCal_00004	0.1 mL	Perchlorate	1000 ug/L
..GCS_PercCal_00004	10/18/25		Accustandard, Lot 223095075		(Purchased Reagent)		Perchlorate	1000 ug/mL
gcs_perc3_00006	02/28/25	02/28/24	DI Water, Lot in house	100 mL	GCS_percalint_00007	0.1 mL	Perchlorate	1 ug/L
.GCS_percalint_00007	02/28/25	02/28/24	DI Water, Lot in house	100 mL	GCS_PercCal_00004	0.1 mL	Perchlorate	1000 ug/L
..GCS_PercCal_00004	10/18/25		Accustandard, Lot 223095075		(Purchased Reagent)		Perchlorate	1000 ug/mL
gcs_perc4_00006	02/28/25	02/28/24	DI Water, Lot in house	100 mL	GCS_percalint_00007	0.2 mL	Perchlorate	2 ug/L
.GCS_percalint_00007	02/28/25	02/28/24	DI Water, Lot in house	100 mL	GCS_PercCal_00004	0.1 mL	Perchlorate	1000 ug/L
..GCS_PercCal_00004	10/18/25		Accustandard, Lot 223095075		(Purchased Reagent)		Perchlorate	1000 ug/mL
gcs_perc5_00006	02/28/25	02/28/24	DI Water, Lot in house	100 mL	GCS_percalint_00007	0.4 mL	Perchlorate	4 ug/L
.GCS_percalint_00007	02/28/25	02/28/24	DI Water, Lot in house	100 mL	GCS_PercCal_00004	0.1 mL	Perchlorate	1000 ug/L
..GCS_PercCal_00004	10/18/25		Accustandard, Lot 223095075		(Purchased Reagent)		Perchlorate	1000 ug/mL
gcs_perc6_00006	02/28/25	02/28/24	DI Water, Lot in house	100 mL	GCS_percalint_00007	1 mL	Perchlorate	10 ug/L
.GCS_percalint_00007	02/28/25	02/28/24	DI Water, Lot in house	100 mL	GCS_PercCal_00004	0.1 mL	Perchlorate	1000 ug/L
..GCS_PercCal_00004	10/18/25		Accustandard, Lot 223095075		(Purchased Reagent)		Perchlorate	1000 ug/mL
gcs_perc7_00006	02/28/25	02/28/24	DI Water, Lot in house	100 mL	GCS_percalint_00007	2.5 mL	Perchlorate	25 ug/L
.GCS_percalint_00007	02/28/25	02/28/24	DI Water, Lot in house	100 mL	GCS_PercCal_00004	0.1 mL	Perchlorate	1000 ug/L
..GCS_PercCal_00004	10/18/25		Accustandard, Lot 223095075		(Purchased Reagent)		Perchlorate	1000 ug/mL
GCS_percIS_00009	07/08/25	07/08/24	DI Water, Lot in house	700 mL	GCS_percO18_00006	0.7 mL	18-O Perchlorate	100.9 ug/L
.GCS_percO18_00006	03/16/33		Cambridge Isotope, Lot SECL-026		(Purchased Reagent)		18-O Perchlorate	100.9 ug/mL
GCS_percIS_00010	10/16/25	10/16/24	DI Water, Lot in house	1000 mL	GCS_percO18_00005	1 mL	18-O Perchlorate	100.6 ug/L
.GCS_percO18_00005	04/23/31		Cambridge Isotope, Lot SEBB-006		(Purchased Reagent)		18-O Perchlorate	100.6 ug/mL
GCS_PERICVINT_00016	01/16/26	01/16/25	DI Water, Lot in house	100 mL	GCS_perc2nd_00005	0.1 mL	Perchlorate	1001 ug/L
.GCS_perc2nd_00005	08/31/26		Agilent, Lot 0006689952		(Purchased Reagent)		Perchlorate	1001 ug/mL

Reagent

GCS_perc2nd_00005

Agilent

Trusted Answers

Reference Material Certificate

ISO 17034

Product Name:

Perchlorate Standard

Product Number:

IC-013

Lot Number:

0006689952

Lot Issue Date:

13-Jul-2022

Expiration Date:

31-Aug-2026

Storage Conditions:

Store at Room Temperature (15° to 30°C).

CERTIFIED VALUES			
Component Name	CAS#	Analyte Lot	
potassium perchlorate (as perchlorate)	007778-74-7	RM07987	
			1001 ± 5 µg/mL

Matrix: water (low TOC, < 50 ppb)

410-5493649

Description: This document is prepared in accordance with ISO 17034 and Guide 31. This analytical reference material (RM) was manufactured and verified in accordance with an ISO 9001 registered quality system. The analyte concentration(s) were prepared and verified by an ISO 17034 / ISO 17025 accredited laboratory and compared to calibration standards independently prepared using NIST SRM(s) when available. The certified value and uncertainty level for each analyte is determined gravimetrically.

Traceability: The balances used for these measurements are calibrated with weights traceable to NIST in compliance with ANSI/NCSL Z540.3, ISO 9001, ISO 17025, and ISO 17034. Calibrated Class A glassware is used for volumetric measurements. Thermometers are calibrated against a NIST traceable thermometer in accordance with NIST Special Publication 1088.

Homogeneity: This analytical reference standard was unitized according to an in-house procedure and is guaranteed to be homogeneous. There is no minimum sub-sample size required.

Instructions for Use: Sample aliquots for analysis should be withdrawn at 20°C to 25°C immediately after opening the container and should be processed without delay for the certified values to be valid within the stated uncertainties.

Safety: Refer to the Safety Data Sheet on www.agilent.com for information regarding this analytical reference material.

Intended Use: This analytical reference standard is intended for the preparation of working reference samples for use in routine laboratory analyses, calibration of instruments, validation of analytical methods, assessments of measurement methods, and continuing calibration verification.

Expiration of Certification: The certification of this analytical reference standard is valid until the expiration date specified above, provided the material is handled and stored in accordance with the instructions given in this certificate. This certification is nullified if the material is damaged, contaminated, or otherwise modified.

ISO 17034 Cert
No. AR-1936



www.agilent.com/quality/
CSD-QA-040.1

RM was produced in accordance with the TUV/SUD registered ISO 9001:2015
Quality Management System. Cert# 951215321
Page: 2 of 2

ISO 17025 Cert
No. AT-1937



Monica Bourgeois
QMS Representative

Sample lot approver:

Maintenance of Certification:
If substantive changes are noted that affect the certification before the expiration of this certificate, Agilent will notify the purchaser.

Trusted Answers

Agilent



ISO 17034

Reagent

GCS_PercCal_00004

CERTIFICATE OF ANALYSIS

AccuTrace™ Reference Standard

410-5493648



Date Certified: Sep 18, 2023
Expiration: Oct 18, 2025
Sample Size: 100 mL
Components: 1
Storage Condition: Ambient (>5 °C)

Certified Reference Material



Catalog No: IC-PER-10X-1
Description: Perchlorate Standard
Element: Perchlorate (ClO₄)
SRM: Ind. Std.
Lot: 223095075
Matrix: Water
Hazards: Refer to SDS for complete safety information
Signal Word: None



Component	SRM #	Certified Concentration (µg/mL)	Ind. Std.
ClO ₄		1000	Perchlorate

This Certified Reference Material was verified in accordance with ISO/IEC 17025 (AT-1339) and ISO 17034 (AR-1463)
A product with a suffix (-1A, -2B, etc. or -01, -02, etc.) on its lot number has had its expiration date extended and is identical to the same lot number without the suffix.
The gravimetric uncertainty for this product is ±0.24%. The CRM uncertainty is ±2.4%.
The final solution was checked against an independent standard to verify its concentration.
We use the highest purity raw materials available to minimize impurity levels in the final solution. Typically 99.999%+ pure starting materials are used as well as ASTM Type I 18 megohm deionized water.
All glassware used in preparation is Class A.
All weights are traceable through NIST, Test No. 684/291344-18 & 684/292805-19
All bottles are triple rinsed with deionized water prior to use.
Shake bottle prior to use and do not pipette directly out of the bottle. Use only cleaned Class A volumetric glassware. Keep bottle tightly capped.

Certified By: Meaghan O'Leary, Inorganic QC Manager

For use in routine laboratory analysis.

Reagent

GCS_perc018_00005



Cambridge Isotope Laboratories, Inc. Certificate of Analysis

Product Name: PERCHLORIC ACID, SODIUM SALT (18O4, 90%+) 100 UG/ML IN WATER

(Isotopic Label & Enrichment Specification)

Lot Number: SEBB-006

Catalog Number: OLM-7310-S

Product Information

Chemical Purity Specification: ≥ 98%

MW*: 130.44

*For isotopically labeled compounds, MW listed is for the fully enriched product.

Labeled CAS Number: 1173022-22-4

Unlabeled CAS Number: 7601-89-0

Chemical Formula: NaCl*O4

Storage:

Stability:

Intended Use:

For Research Use Only. Not for use in diagnostic procedures.

Store at room temperature away from light and moisture.

See storage and expiration date.

Certification

Cambridge Isotope Laboratories, Inc. guarantees that this material meets or exceeds the specifications stated. Absolute identity as well as chemical and isotopic purities are assured by the use of unambiguous synthetic routes and multiple chemical analyses whenever possible. Results are representative of QC testing at time of release from Quality Control unless otherwise stated. CIL Certificates of Analysis are occasionally updated with new data following recertification. We recommend checking the website for the latest version.

Volume measurements were made with Class A glassware. Gravimetry is traceable to the NIST through calibrated balances and certified, calibrated, standard weights. The calibrations are traceable to the NIST under Test No. 822/270236-04. The calibrations also meet specifications outlined in ISO 9001, ISO/IEC 17025, ANSI/NSCL Z540-1-1994, NCR Document 10CFR50 Appendix B, and applicable subdocuments.

This COA references the bulk catalog number before packaging. The COA also applies to the CIL finished good catalog number. Some possible packaging sizes and their corresponding suffix are -1.2, -1, -0.5, -10, or -0.1.

Approved by: Martina Klionsky

Martina Klionsky, Quality Review

QC Release Date 4/23/2021

Expiration Date 4/23/2031

(continued on next page)

CIL subscribes to the following standards for different products: ISO Guide 34, ISO/IEC 17025, ISO 13485 and cGMP as appropriate.

Reagent

GCS_perc018_00006

Rec'd 6/17/24



Cambridge Isotope Laboratories, Inc.

Certificate of Analysis

Product Name: Perchloric acid, sodium salt ($^{18}\text{O}_4$, 98%)
(Isotopic Label & Enrichment Specification) 100 $\mu\text{g/mL}$ in water

Lot Number: SECL-026

Catalog Number: OLM-7310-S

Product Information

Chemical Purity Specification: $\geq 98\%$

MW*: 130.44
* For isotopically labeled compounds, MW listed is for the fully enriched product.

Labeled CAS Number: 1173022-22-4

Unlabeled CAS Number: 7601-89-0

Chemical Formula: NaCl^*O_4

Storage: Store at room temperature away from light and moisture.

Stability: See storage and expiration date.

Intended Use: For Research Use Only. Not for use in diagnostic procedures.



410-6122059



410-6122060

Certification

Cambridge Isotope Laboratories, Inc. guarantees that this material meets or exceeds the specifications stated. Absolute identity as well as chemical and isotopic purities are assured by the use of unambiguous synthetic routes and multiple chemical analyses whenever possible. Results are representative of QC testing at time of release from Quality Control unless otherwise stated. CIL Certificates of Analysis are occasionally updated with new data following recertification. We recommend checking the website for the latest version.

Gravimetric concentrations are compensated for the measured Chemical Purity of the neat material. Gravimetry is traceable to the NIST through calibrated balances and certified, calibrated, standard weights. The calibrations are traceable to the SI through NIST. The calibrations also meet specifications outlined in ISO 17034, ISO/IEC 17025, and applicable subdocuments.

This COA references the bulk catalog number before packaging. The COA also applies to the CIL finished good catalog number. Some possible packaging sizes and their corresponding suffix are -1.2, -1, -0.5, -10, or -0.1.

Approved by: Sashi Sivendran-Basak

Sashi Sivendran-Basak, Ph.D., Quality Review

Quality Control Tests and Results

QC Release Date 3/16/2023

Expiration Date 3/16/2033

(continued on next page)

6850_DOD6

Perchlorate by LC/MS or LC/MS/MS

FORM III

Lab Name: Eurofins Lancaster Laboratories

Job No.: 410-204706-1

SDG No. :

Matrix: Water

Level: Low

Lab File ID: 25Jan28-104.d

Lab ID: LCS 410-599365/2-A

Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
Perchlorate	1.00	0.988 J	99	84-119	

```
# Column to be used to flag recovery and RPD values
```

FORM III 6850

FORM III

LCMS LAB CONTROL SAMPLE DUPLICATE RECOVERY

Lab Name: Eurofins Lancaster Laboratories
Environment Testing, LLC

Job No.: 410-204706-1

SDG No.:

Matrix: Water Level: Low Lab File ID: 25Jan28-105.d

Lab ID: LCSD 410-599365/3-A Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCSD CONCENTRATION (ug/L)	LCSD % REC	% RPD	QC LIMITS		#
					RPD	REC	
Perchlorate	1.00	0.967 J	97	2	15	84-119	

```
# Column to be used to flag recovery and RPD values
```

FORM III 6850

Lab Name: Eurofins Lancaster Laboratories Job No.: 410-204706-1
 Environment Testing, LLC
SDG No.:
Matrix: Water Level: Low Lab File ID: 25Jan28-106.d
Lab ID: INF 410-599365/4-A Client ID:

COMPOUND	SPIKE ADDED (ug/L)	INF CONCENTRATION (ug/L)	INF % REC	QC LIMITS REC	#
Perchlorate	1.00	1.01	100	80-120	

31 of 84 01/29/2025

FORM IV
LCMS METHOD BLANK SUMMARY

Lab Name: Eurofins Lancaster Laboratories
Environment Testing, LLC

Job No.: 410-204706-1

SDG No.:

Lab File ID: 25Jan28-103.d

Lab Sample ID: MB 410-599365/1-A

Matrix: Water

Date Extracted: 01/27/2025 08:32

Instrument ID: 26719

Date Analyzed: 01/28/2025 16:44

Level: (Low/Med) Low

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
	LCS 410-599365/2-A	25Jan28-104 .d	01/28/2025 16:54
	LCSD 410-599365/3-A	25Jan28-105 .d	01/28/2025 17:05
TAPIAL1-MW04S-011525-00-T2	410-204706-1	25Jan28-108 .d	01/28/2025 17:36

FORM VIII
LCMS INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: Eurofins Lancaster Laboratories Job No.: 410-204706-1
Environment Testing, LLC

SDG No.: _____

Instrument ID 26719 Calibration Start Date: 01/28/2025 14:59

GC Column: SIELC Obelisc R ID: 2.1 (mm) Calibration End Date: 01/28/2025 15:51

Calibration ID: 69208

		18OP					
		AREA #	RT #	#	RT #	#	RT #
INITIAL CALIBRATION MEAN AREA AND MEAN RT		55755	1.55				
UPPER LIMIT		83633	4.55				
LOWER LIMIT		27878	-1.45				
LAB SAMPLE ID	CLIENT SAMPLE ID						
ICVL 410-599999/8		63247	1.55				
ICV 410-599999/9		51568	1.55				
CCVIS 410-599506/2		63737	1.55				
MB 410-599365/1-A		52485	1.55				
LCS 410-599365/2-A		60534	1.55				
LCSD 410-599365/3-A		57177	1.55				
INF 410-599365/4-A		36252	1.55				
410-204706-1	TAPIAL1-MW04S-01152 5-00-T2	44580	1.55				
CCV 410-599506/19		63777	1.55				

18OP = 18-O Perchlorate

Area Limit = 50%-150% of internal standard area

RT Limit = ± 3 minutes of internal standard RT

Column used to flag values outside QC limits

FORM I
LCMS ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Lancaster Laboratories
Environment Testing, LLC

Job No.: 410-204706-1

SDG No. :

Client Sample ID: TAPIAL1-MW04S-011525-00-T
2

Lab Sample ID: 410-204706-1

Matrix: Water

Lab File ID: 25Jan28-108.d

Analysis Method: 6850

Date Collected: 01/15/2025 12:20

Extraction Method: 6850 Prep

Date Extracted: 01/27/2025 08:32

Sample wt/vol: 10.0 (mL)

Date Analyzed: 01/28/2025 17:36

Con. Extract Vol.: 10.0 (mL)

Dilution Factor: 1

Injection Volume: 10 (uL)

GC Column: Sielc Obelisc R ID: 2.1 (mm)

% Moisture: % Solids:

GPC Cleanup: (Y/N) N

Cleanup Factor:

Analysis Batch No.: 599506

Units: ug/L

Preparation Batch No.: 599365

Instrument ID: 26719

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
14797-73-0	Perchlorate	0.35	J	1.0	0.40	0.20

Eurofins Lancaster Laboratories Environment Testing, LLC
Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\26719\20250127-136579.b\25Jan28-108.d
 Lims ID: 410-204706-B-1-A
 Client ID: TAPIAL1-MW04S-011525-00-T2
 Sample Type: Client
 Inject. Date: 28-Jan-2025 17:36:27 ALS Bottle#: 56 Worklist Smp#: 8
 Injection Vol: 10.0 ul Dil. Factor: 1.0000
 Sample Info: 410-204706-B-1-A
 Misc. Info.: Plate: 1 Rack: 1 410-0136579-008
 Operator ID: ETUS023_USR_INS00047 Instrument ID: 26719
 Method: \\chromfs\Lancaster\ChromData\26719\20250127-136579.b\perchlorate_26719.m
 Limit Group: LC - 6850 DOD
 Last Update: 29-Jan-2025 09:50:14 Calib Date: 28-Jan-2025 15:51:56
 Integrator: Picker
 Quant Method: Isotopic Dilution Quant By: Initial Calibration
 Last ICal File: \\chromfs\Lancaster\ChromData\26719\20250128-136709.b\25jan28-007.d
 Column 1 : Sielc Obelisc R (2.10 mm) Det: EXP1
 Process Host: CTX1653

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ug/l	Ratio(Limits)	S/N	Flags
--------	----	-----------	-----------	-----------	----------	----------------	---------------	-----	-------

* 2 18-O Perchlorate

107.00 > 89.00 1.549 1.549 0.0 44580 1.01 1405

1 Perchlorate

99.00 > 83.00 1.554 1.554 0.0 1.003 19762 0.3509 Target=0.00 21.1

101.00 > 85.00 1.549 1.554 -0.005 1.000 6574 3.01(0.00-0.00) 16.2

Eurofins Lancaster Laboratories Environment Testing, LLC

Data File: \\chromfs\Lancaster\ChromData\26719\20250127-136579.b\25Jan28-108.d

Injection Date: 28-Jan-2025 17:36:27

Instrument ID: 26719

Lims ID: 410-204706-B-1-A

Lab Sample ID: 410-204706-1

Client ID: TAPIAL1-MW04S-011525-00-T2

Operator ID: ETUS023_USR_INS00047

ALS Bottle#: 56

Worklist Smp#: 8

Injection Vol: 10.0 ul

Dil. Factor: 1.0000

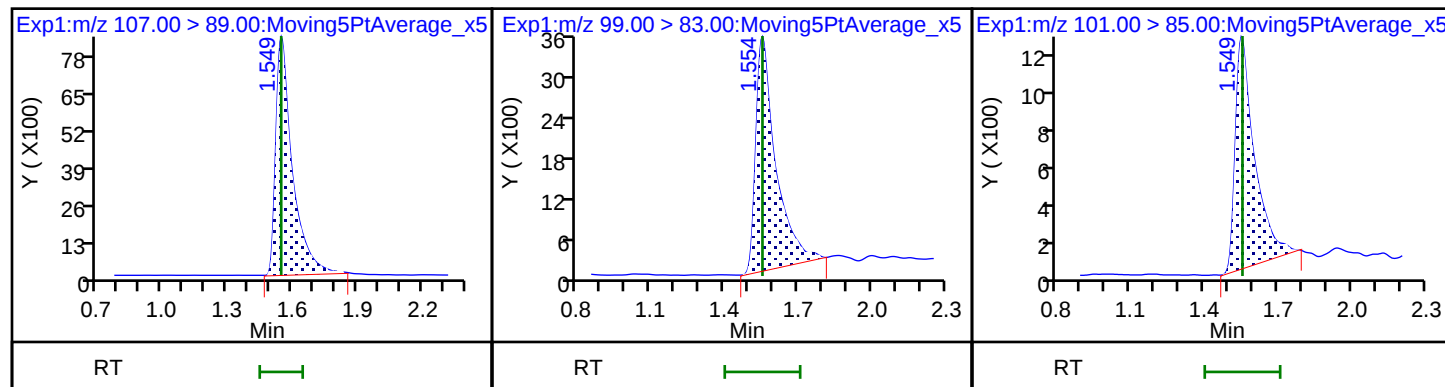
Method: perchlorate_26719

Limit Group: LC - 6850 DOD

* 2 18-O Perchlorate

1 Perchlorate

1 Perchlorate



FORM VI
LCMS BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: Eurofins Lancaster Laboratories Job No.: 410-204706-1 Analy Batch No.: 599999
Environment Testing, LLC

SDG No.: _____

Instrument ID: 26719 GC Column: SIELC Obelis ID: 2.1(mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/28/2025 14:59 Calibration End Date: 01/28/2025 15:51 Calibration ID: 69208

Calibration Files

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 410-599999/2	25jan28-002.d
Level 2	IC 410-599999/3	25jan28-003.d
Level 3	IC 410-599999/4	25jan28-004.d
Level 4	ICISAV 410-599999/5	25jan28-005.d
Level 5	IC 410-599999/6	25jan28-006.d
Level 6	IC 410-599999/7	25jan28-007.d

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD /RSE	#	MAX %RSD /RSE	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
Perchlorate	1.2969 1.2178	1.2138	1.2025	1.2340	1.2125	Lin1	0.019 6	1.215 2							1.0000		0.9900

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type. RSD is calculated for Ave curve types. RSE is used for all other types.

FORM VI
LCMS BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: Eurofins Lancaster Laboratories Job No.: 410-204706-1 Analy Batch No.: 599999
Environment Testing, LLC

SDG No.:

Instrument ID: 26719 GC Column: SIELC Obeli ID: 2.1(mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/28/2025 14:59 Calibration End Date: 01/28/2025 15:51 Calibration ID: 69208

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 410-599999/2	25jan28-002.d
Level 2	IC 410-599999/3	25jan28-003.d
Level 3	IC 410-599999/4	25jan28-004.d
Level 4	ICISAV 410-599999/5	25jan28-005.d
Level 5	IC 410-599999/6	25jan28-006.d
Level 6	IC 410-599999/7	25jan28-007.d

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5
Perchlorate	18OP	Lin1	27207 1760569	61958	141623	309255	602244	0.400 25.0	1.00	2.00	4.00	10.0

Curve Type Legend:

Lin1 = Linear 1/conc ISTD

FORM VI
LCMS BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
READBACK PERCENT ERROR

Lab Name: Eurofins Lancaster Laboratories Job No.: 410-204706-1 Analy Batch No.: 599999
Environment Testing, LLC

SDG No.:

Instrument ID: 26719 GC Column: Sielc Obelis ID: 2.1(mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/28/2025 14:59 Calibration End Date: 01/28/2025 15:51 Calibration ID: 69208

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 410-599999/2	25jan28-002.d
Level 2	IC 410-599999/3	25jan28-003.d
Level 3	IC 410-599999/4	25jan28-004.d
Level 4	ICISAV 410-599999/5	25jan28-005.d
Level 5	IC 410-599999/6	25jan28-006.d
Level 6	IC 410-599999/7	25jan28-007.d

ANALYTE	PERCENT ERROR						PERCENT ERROR LIMIT					
	LVL 1 #	LVL 2 #	LVL 3 #	LVL 4 #	LVL 5 #	LVL 6 #	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 6
Perchlorate	2.7	-1.7	-1.9	1.1	-0.4	0.1	50	30	30	30	30	30

Eurofins Lancaster Laboratories Environment Testing, LLC
Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\26719\20250128-136709.b\25jan28-002.d
 Lims ID: IC perc2
 Client ID:
 Sample Type: IC Calib Level: 1
 Inject. Date: 28-Jan-2025 14:59:38 ALS Bottle#: 2 Worklist Smp#: 2
 Injection Vol: 10.0 ul Dil. Factor: 1.0000
 Sample Info: IC perc2
 Misc. Info.: Plate: 1 Rack: 1 410-0136709-002
 Operator ID: ETUS023_USR_INS00047 Instrument ID: 26719
 Sublist: chrom-perchlorate_26719*sub1
 Method: \\chromfs\Lancaster\ChromData\26719\20250128-136709.b\perchlorate_26719.m
 Limit Group: LC - 6850 DOD
 Last Update: 28-Jan-2025 17:12:11 Calib Date: 28-Jan-2025 15:51:56
 Integrator: Picker
 Quant Method: Isotopic Dilution Quant By: Initial Calibration
 Last ICal File: \\chromfs\Lancaster\ChromData\26719\20250128-136709.b\25jan28-007.d
 Column 1 : Sielc Obelisc R (2.10 mm) Det: EXP1
 Process Host: CTX1687

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ug/l	Ratio(Limits)	S/N	Flags
--------	----	-----------	-----------	-----------	----------	----------------	---------------	-----	-------

* 2 18-O Perchlorate

107.00 > 89.00	1.549	1.549	0.0		52762	1.01		1030	
----------------	-------	-------	-----	--	-------	------	--	------	--

1 Perchlorate

99.00 > 83.00	1.549	1.554	-0.005	1.000	27207	0.4108	Target=0.00	25.2	
101.00 > 85.00	1.549	1.554	-0.005	1.000	9387		2.90(0.00-0.00)	19.7	

Reagents:

gcs_perc2_00010	Amount Added: 1.00	Units: mL
GCS_percIS_00010	Amount Added: 0.01	Units: mL

Data File: \\chromfs\Lancaster\ChromData\26719\20250128-136709.b\25jan28-002.d

Injection Date: 28-Jan-2025 14:59:38

Instrument ID: 26719

Lims ID: IC perc2

Client ID:

Operator ID: ETUS023_USR_INS00047

ALS Bottle#: 2

Worklist Smp#: 2

Injection Vol: 10.0 ul

Dil. Factor: 1.0000

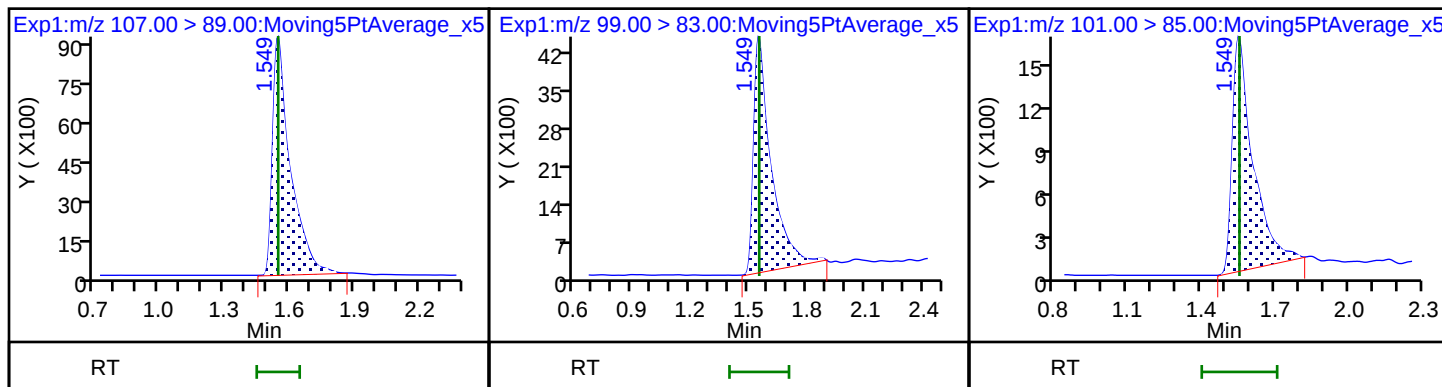
Method: perchlorate_26719

Limit Group: LC - 6850 DOD

* 2 18-O Perchlorate

1 Perchlorate

1 Perchlorate



Eurofins Lancaster Laboratories Environment Testing, LLC
Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\26719\20250128-136709.b\25jan28-003.d
 Lims ID: IC perc3
 Client ID:
 Sample Type: IC Calib Level: 2
 Inject. Date: 28-Jan-2025 15:10:07 ALS Bottle#: 3 Worklist Smp#: 3
 Injection Vol: 10.0 ul Dil. Factor: 1.0000
 Sample Info: IC perc3
 Misc. Info.: Plate: 1 Rack: 1 410-0136709-003
 Operator ID: ETUS023_USR_INS00047 Instrument ID: 26719
 Sublist: chrom-perchlorate_26719*sub1
 Method: \\chromfs\Lancaster\ChromData\26719\20250128-136709.b\perchlorate_26719.m
 Limit Group: LC - 6850 DOD
 Last Update: 28-Jan-2025 17:12:11 Calib Date: 28-Jan-2025 15:51:56
 Integrator: Picker
 Quant Method: Isotopic Dilution Quant By: Initial Calibration
 Last ICal File: \\chromfs\Lancaster\ChromData\26719\20250128-136709.b\25jan28-007.d
 Column 1 : Sielc Obelisc R (2.10 mm) Det: EXP1
 Process Host: CTX1687

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ug/l	Ratio(Limits)	S/N	Flags
--------	----	-----------	-----------	-----------	----------	----------------	---------------	-----	-------

* 2 18-O Perchlorate

107.00 > 89.00	1.549	1.549	0.0		51352	1.01		1444	
----------------	-------	-------	-----	--	-------	------	--	------	--

1 Perchlorate

99.00 > 83.00	1.554	1.554	0.0	1.003	61958	0.9827	Target=0.00	59.3	
101.00 > 85.00	1.554	1.554	0.0	1.003	22568		2.75(0.00-0.00)	44.8	

Reagents:

gcs_perc3_00006	Amount Added: 1.00	Units: mL
GCS_percIS_00010	Amount Added: 0.01	Units: mL

Data File: \\chromfs\Lancaster\ChromData\26719\20250128-136709.b\25jan28-003.d

Injection Date: 28-Jan-2025 15:10:07

Instrument ID: 26719

Lims ID: IC perc3

Client ID:

Operator ID: ETUS023_USR_INS00047

ALS Bottle#: 3

Worklist Smp#: 3

Injection Vol: 10.0 ul

Dil. Factor: 1.0000

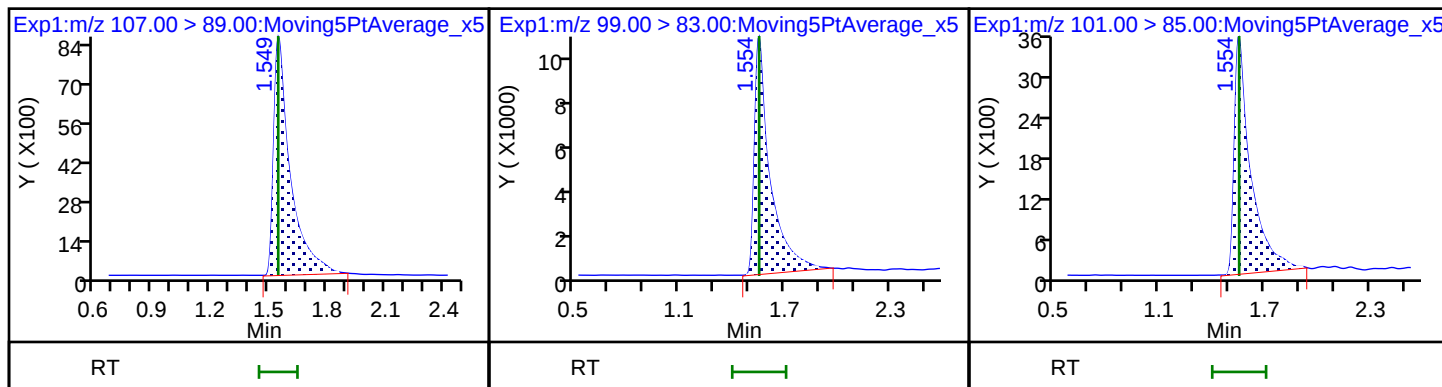
Method: perchlorate_26719

Limit Group: LC - 6850 DOD

* 2 18-O Perchlorate

1 Perchlorate

1 Perchlorate



Eurofins Lancaster Laboratories Environment Testing, LLC
Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\26719\20250128-136709.b\25jan28-004.d
 Lims ID: IC perc4
 Client ID:
 Sample Type: IC Calib Level: 3
 Inject. Date: 28-Jan-2025 15:20:35 ALS Bottle#: 4 Worklist Smp#: 4
 Injection Vol: 10.0 ul Dil. Factor: 1.0000
 Sample Info: IC perc4
 Misc. Info.: Plate: 1 Rack: 1 410-0136709-004
 Operator ID: ETUS023_USR_INS00047 Instrument ID: 26719
 Sublist: chrom-perchlorate_26719*sub1
 Method: \\chromfs\Lancaster\ChromData\26719\20250128-136709.b\perchlorate_26719.m
 Limit Group: LC - 6850 DOD
 Last Update: 28-Jan-2025 17:12:12 Calib Date: 28-Jan-2025 15:51:56
 Integrator: Picker
 Quant Method: Isotopic Dilution Quant By: Initial Calibration
 Last ICal File: \\chromfs\Lancaster\ChromData\26719\20250128-136709.b\25jan28-007.d
 Column 1 : Sielc Obelisc R (2.10 mm) Det: EXP1
 Process Host: CTX1687

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ug/l	Ratio(Limits)	S/N	Flags
--------	----	-----------	-----------	-----------	----------	----------------	---------------	-----	-------

* 2 18-O Perchlorate

107.00 > 89.00	1.549	1.549	0.0		59241	1.01		543	
----------------	-------	-------	-----	--	-------	------	--	-----	--

1 Perchlorate

99.00 > 83.00	1.554	1.554	0.0	1.003	141623	1.96	Target=0.00	124	
101.00 > 85.00	1.549	1.554	-0.005	1.000	53541		2.65(0.00-0.00)	104	

Reagents:

gcs_perc4_00006	Amount Added: 1.00	Units: mL
GCS_percIS_00010	Amount Added: 0.01	Units: mL

Data File: \\chromfs\Lancaster\ChromData\26719\20250128-136709.b\25jan28-004.d

Injection Date: 28-Jan-2025 15:20:35

Instrument ID: 26719

Lims ID: IC perc4

Client ID:

Operator ID: ETUS023_USR_INS00047

ALS Bottle#: 4

Worklist Smp#: 4

Injection Vol: 10.0 ul

Dil. Factor: 1.0000

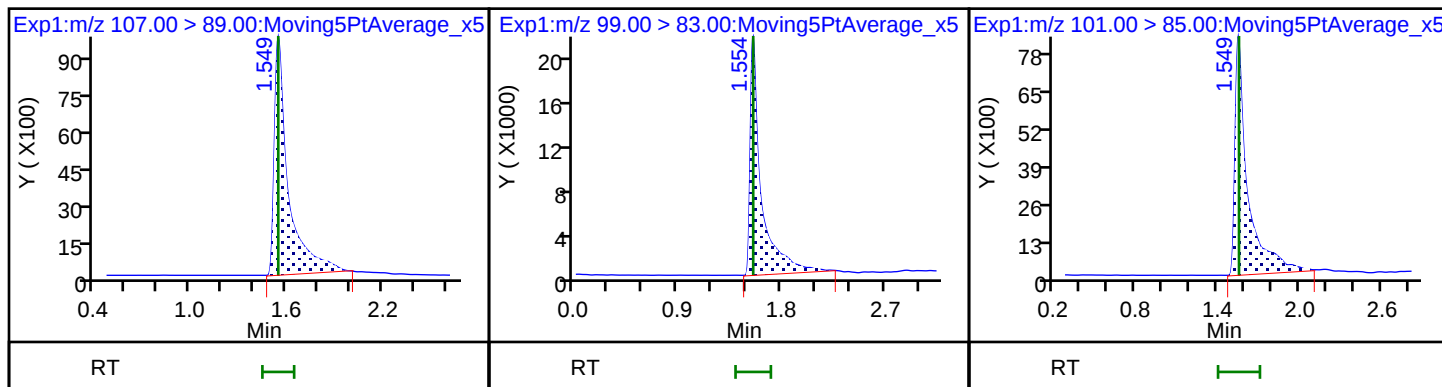
Method: perchlorate_26719

Limit Group: LC - 6850 DOD

* 2 18-O Perchlorate

1 Perchlorate

1 Perchlorate



Eurofins Lancaster Laboratories Environment Testing, LLC
Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\26719\20250128-136709.b\25jan28-005.d
 Lims ID: ICISAV perc5
 Client ID:
 Sample Type: ICISAV Calib Level: 4
 Inject. Date: 28-Jan-2025 15:31:01 ALS Bottle#: 5 Worklist Smp#: 5
 Injection Vol: 10.0 ul Dil. Factor: 1.0000
 Sample Info: ICISAV perc5
 Misc. Info.: Plate: 1 Rack: 1 410-0136709-005
 Operator ID: ETUS023_USR_INS00047 Instrument ID: 26719
 Sublist: chrom-perchlorate_26719*sub1
 Method: \\chromfs\Lancaster\ChromData\26719\20250128-136709.b\perchlorate_26719.m
 Limit Group: LC - 6850 DOD
 Last Update: 28-Jan-2025 17:12:13 Calib Date: 28-Jan-2025 15:51:56
 Integrator: Picker
 Quant Method: Isotopic Dilution Quant By: Initial Calibration
 Last ICal File: \\chromfs\Lancaster\ChromData\26719\20250128-136709.b\25jan28-007.d
 Column 1 : Sielc Obelisc R (2.10 mm) Det: EXP1
 Process Host: CTX1687

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ug/l	Ratio(Limits)	S/N	Flags
--------	----	-----------	-----------	-----------	----------	----------------	---------------	-----	-------

* 2 18-O Perchlorate

107.00 > 89.00	1.549	1.549	0.0		63031	1.01		793	
----------------	-------	-------	-----	--	-------	------	--	-----	--

1 Perchlorate

99.00 > 83.00	1.554	1.554	0.0	1.003	309255	4.05	Target=0.00	286	
101.00 > 85.00	1.554	1.554	0.0	1.003	118667		2.61(0.00-0.00)	241	

Reagents:

gcs_perc5_00006	Amount Added: 1.00	Units: mL
GCS_percIS_00010	Amount Added: 0.01	Units: mL

Data File: \\chromfs\Lancaster\ChromData\26719\20250128-136709.b\25jan28-005.d

Injection Date: 28-Jan-2025 15:31:01

Instrument ID: 26719

Lims ID: ICISAV perc5

Client ID:

Operator ID: ETUS023_USR_INS00047

ALS Bottle#: 5

Worklist Smp#: 5

Injection Vol: 10.0 ul

Dil. Factor: 1.0000

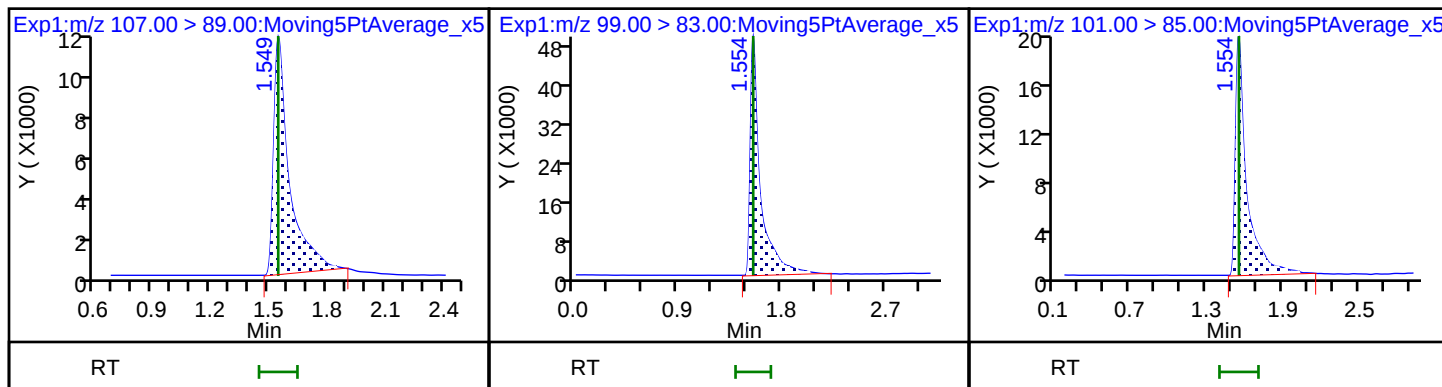
Method: perchlorate_26719

Limit Group: LC - 6850 DOD

* 2 18-O Perchlorate

1 Perchlorate

1 Perchlorate



Eurofins Lancaster Laboratories Environment Testing, LLC
Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\26719\20250128-136709.b\25jan28-006.d
 Lims ID: IC perc6
 Client ID:
 Sample Type: IC Calib Level: 5
 Inject. Date: 28-Jan-2025 15:41:30 ALS Bottle#: 6 Worklist Smp#: 6
 Injection Vol: 10.0 ul Dil. Factor: 1.0000
 Sample Info: IC perc6
 Misc. Info.: Plate: 1 Rack: 1 410-0136709-006
 Operator ID: ETUS023_USR_INS00047 Instrument ID: 26719
 Sublist: chrom-perchlorate_26719*sub1
 Method: \\chromfs\Lancaster\ChromData\26719\20250128-136709.b\perchlorate_26719.m
 Limit Group: LC - 6850 DOD
 Last Update: 28-Jan-2025 17:12:14 Calib Date: 28-Jan-2025 15:51:56
 Integrator: Picker
 Quant Method: Isotopic Dilution Quant By: Initial Calibration
 Last ICal File: \\chromfs\Lancaster\ChromData\26719\20250128-136709.b\25jan28-007.d
 Column 1 : Sielc Obelisc R (2.10 mm) Det: EXP1
 Process Host: CTX1687

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ug/l	Ratio(Limits)	S/N	Flags
--------	----	-----------	-----------	-----------	----------	----------------	---------------	-----	-------

* 2 18-O Perchlorate

107.00 > 89.00	1.549	1.549	0.0		49969	1.01		1130	
----------------	-------	-------	-----	--	-------	------	--	------	--

1 Perchlorate

99.00 > 83.00	1.549	1.554	-0.005	1.000	602244	9.96	Target=0.00	512	
101.00 > 85.00	1.549	1.554	-0.005	1.000	222313		2.71(0.00-0.00)	423	

Reagents:

gcs_perc6_00006	Amount Added: 1.00	Units: mL
GCS_percIS_00010	Amount Added: 0.01	Units: mL

Data File: \\chromfs\Lancaster\ChromData\26719\20250128-136709.b\25jan28-006.d

Injection Date: 28-Jan-2025 15:41:30

Instrument ID: 26719

Lims ID: IC perc6

Client ID:

Operator ID: ETUS023_USR_INS00047

ALS Bottle#: 6

Worklist Smp#: 6

Injection Vol: 10.0 ul

Dil. Factor: 1.0000

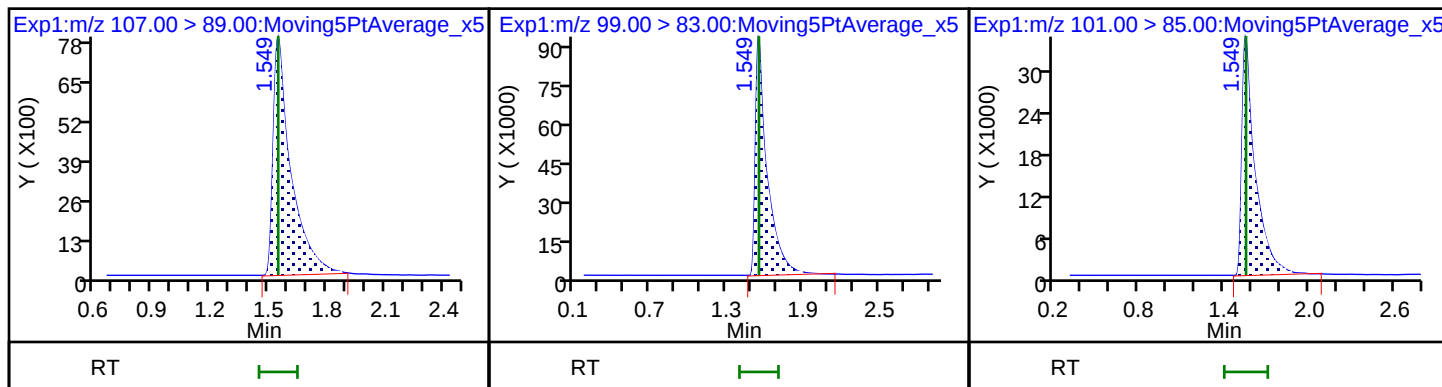
Method: perchlorate_26719

Limit Group: LC - 6850 DOD

* 2 18-O Perchlorate

1 Perchlorate

1 Perchlorate



Eurofins Lancaster Laboratories Environment Testing, LLC
Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\26719\20250128-136709.b\25jan28-007.d
 Lims ID: IC perc7
 Client ID:
 Sample Type: IC Calib Level: 6
 Inject. Date: 28-Jan-2025 15:51:56 ALS Bottle#: 7 Worklist Smp#: 7
 Injection Vol: 10.0 ul Dil. Factor: 1.0000
 Sample Info: IC perc7
 Misc. Info.: Plate: 1 Rack: 1 410-0136709-007
 Operator ID: ETUS023_USR_INS00047 Instrument ID: 26719
 Sublist: chrom-perchlorate_26719*sub1
 Method: \\chromfs\Lancaster\ChromData\26719\20250128-136709.b\perchlorate_26719.m
 Limit Group: LC - 6850 DOD
 Last Update: 28-Jan-2025 17:12:10 Calib Date: 28-Jan-2025 15:51:56
 Integrator: Picker
 Quant Method: Isotopic Dilution Quant By: Initial Calibration
 Last ICal File: \\chromfs\Lancaster\ChromData\26719\20250128-136709.b\25jan28-007.d
 Column 1 : Sielc Obelisc R (2.10 mm) Det: EXP1
 Process Host: CTX1687

First Level Reviewer: UAD3

Date: 28-Jan-2025 17:12:10

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ug/l	Ratio(Limits)	S/N	Flags
--------	----	-----------	-----------	-----------	----------	----------------	---------------	-----	-------

* 2 18-O Perchlorate

107.00 > 89.00 1.549 1.549 0.0 58173 1.01 1515

1 Perchlorate

99.00 > 83.00 1.554 1.554 0.0 1.003 1760569 25.0 Target=0.00 1781

101.00 > 85.00 1.554 1.554 0.0 1.003 628761 2.80(0.00-0.00) 1410

QC Flag Legend

Processing Flags

Reagents:

gcs_perc7_00006 Amount Added: 1.00 Units: mL

GCS_percIS_00010 Amount Added: 0.01 Units: mL

Data File: \\chromfs\Lancaster\ChromData\26719\20250128-136709.b\25jan28-007.d

Injection Date: 28-Jan-2025 15:51:56

Instrument ID: 26719

Lims ID: IC perc7

Client ID:

Operator ID: ETUS023_USR_INS00047

ALS Bottle#: 7

Worklist Smp#: 7

Injection Vol: 10.0 ul

Dil. Factor: 1.0000

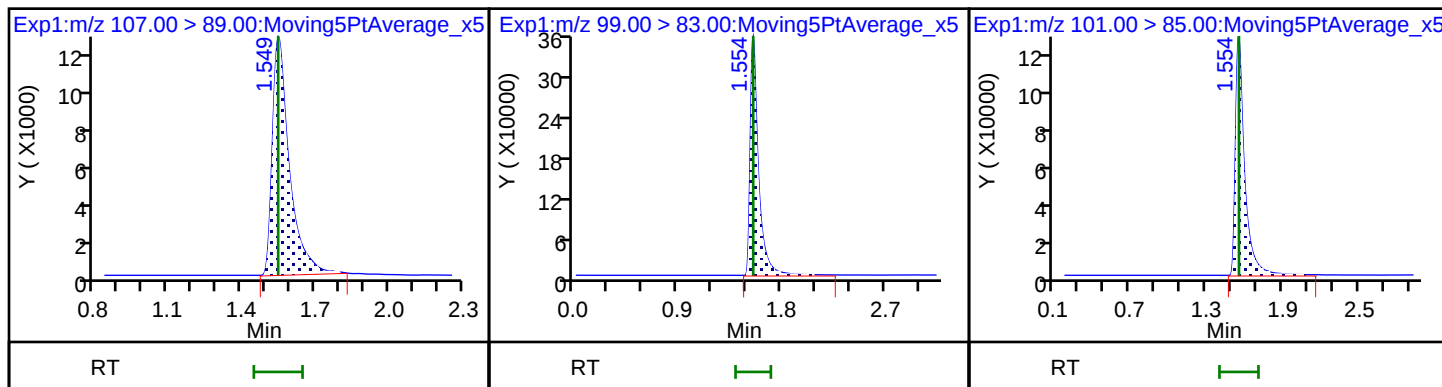
Method: perchlorate_26719

Limit Group: LC - 6850 DOD

* 2 18-O Perchlorate

1 Perchlorate

1 Perchlorate



Calibration

/ Perchlorate

Curve Type: Linear
Weighting: Conc
Origin: None
Dependency: Response
Calib Mode: ISTD
Response Base: AREA
RF Rounding: 0

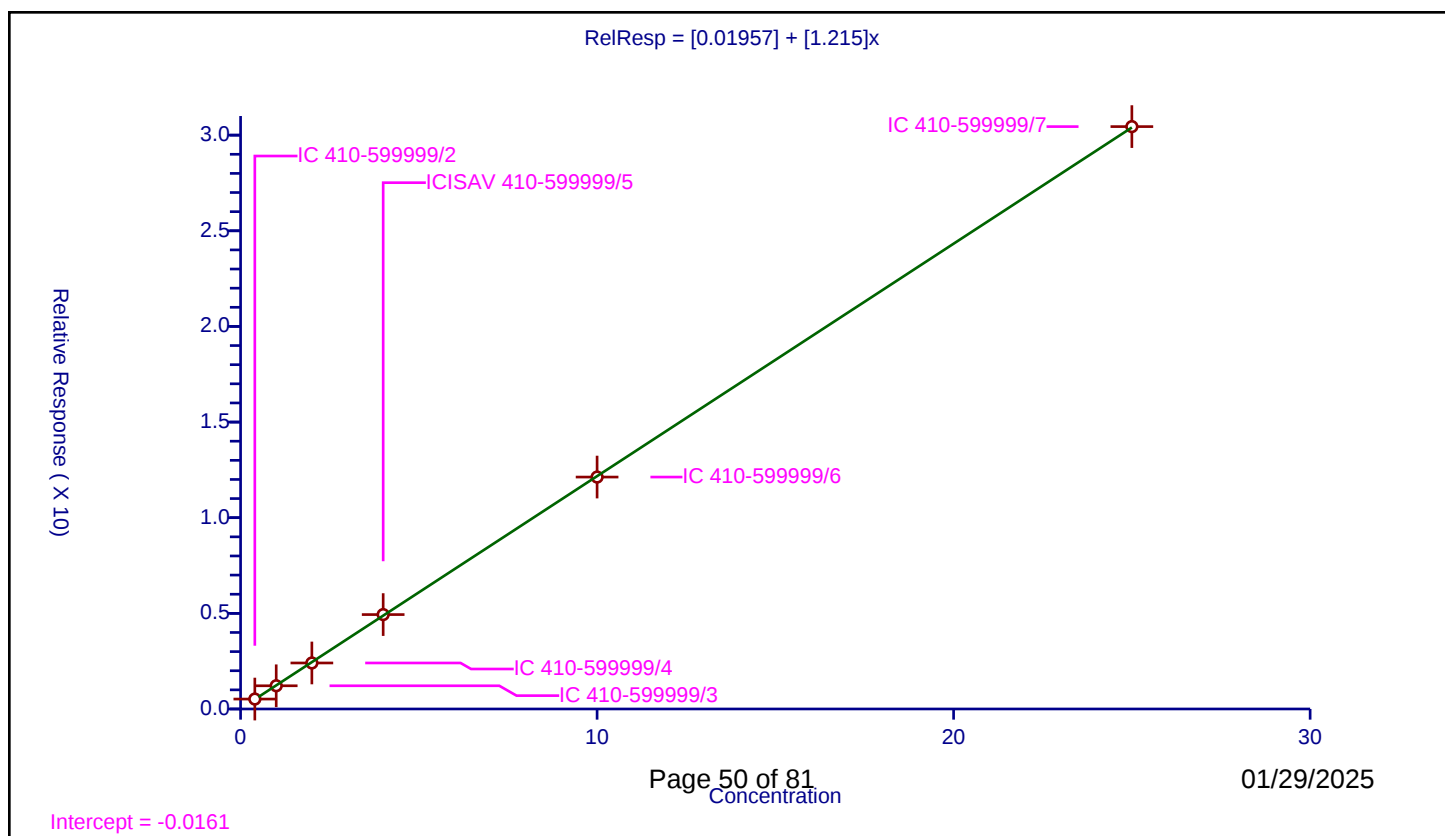
Curve Coefficients

Intercept: 0.01957
Slope: 1.215

Error Coefficients

Relative Standard Deviation: 1.9

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-599999/2	0.4	0.518749	1.006	52762.0	1.296873	Y
2	IC 410-599999/3	1.0	1.213774	1.006	51352.0	1.213774	Y
3	IC 410-599999/4	2.0	2.404968	1.006	59241.0	1.202484	Y
4	ICISAV 410-599999/5	4.0	4.935834	1.006	63031.0	1.233958	Y
5	IC 410-599999/6	10.0	12.124667	1.006	49969.0	1.212467	Y
6	IC 410-599999/7	25.0	30.445953	1.006	58173.0	1.217838	Y



FORM VII
LCMS CONTINUING CALIBRATION DATA

Lab Name: Eurofins Lancaster Laboratories
Environment Testing, LLC

Job No.: 410-204706-1

SDG No.:

Lab Sample ID: ICVL 410-5999999/8 Calibration Date: 01/28/2025 16:02

Instrument ID: 26719 Calib Start Date: 01/28/2025 14:59

GC Column: Sielc Obelisc R ID: 2.10 (mm) Calib End Date: 01/28/2025 15:51

Lab File ID: 25jan28-008.d Conc. Units: ug/L

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%REC	%REC LIMITS
Perchlorate	Lin1				0.435	0.400	109	

Eurofins Lancaster Laboratories Environment Testing, LLC
Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\26719\20250128-136709.b\25jan28-008.d
 Lims ID: ICVL iper2
 Client ID:
 Sample Type: ICVL
 Inject. Date: 28-Jan-2025 16:02:25 ALS Bottle#: 8 Worklist Smp#: 8
 Injection Vol: 10.0 ul Dil. Factor: 1.0000
 Sample Info: ICVL iper2
 Misc. Info.: Plate: 1 Rack: 1 410-0136709-008
 Operator ID: ETUS023_USR_INS00047 Instrument ID: 26719
 Sublist:
 Method: \\chromfs\Lancaster\ChromData\26719\20250128-136709.b\perchlorate_26719.m
 Limit Group: LC - 6850 DOD
 Last Update: 28-Jan-2025 17:12:14 Calib Date: 28-Jan-2025 15:51:56
 Integrator: Picker
 Quant Method: Isotopic Dilution Quant By: Initial Calibration
 Last ICal File: \\chromfs\Lancaster\ChromData\26719\20250128-136709.b\25jan28-007.d
 Column 1 : Sielc Obelisc R (2.10 mm) Det: EXP1
 Process Host: CTX1687

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ug/l	Ratio(Limits)	S/N	Flags
--------	----	-----------	-----------	-----------	----------	----------------	---------------	-----	-------

* 2 18-O Perchlorate

107.00 > 89.00	1.549	1.549	0.0		63247	1.01		1568	
----------------	-------	-------	-----	--	-------	------	--	------	--

1 Perchlorate

99.00 > 83.00	1.554	1.554	0.0	1.003	34460	0.4349	Target=0.00	37.8	
101.00 > 85.00	1.549	1.554	-0.005	1.000	12334		2.79(0.00-0.00)	31.9	

Reagents:

GCS_percIS_00010	Amount Added: 0.01	Units: mL
gcs_icvperc2_00004	Amount Added: 1.00	Units: mL

Data File: \\chromfs\Lancaster\ChromData\26719\20250128-136709.b\25jan28-008.d

Injection Date: 28-Jan-2025 16:02:25

Instrument ID: 26719

Lims ID: ICVL iper2

Client ID:

Operator ID: ETUS023_USR_INS00047

ALS Bottle#: 8

Worklist Smp#: 8

Injection Vol: 10.0 ul

Dil. Factor: 1.0000

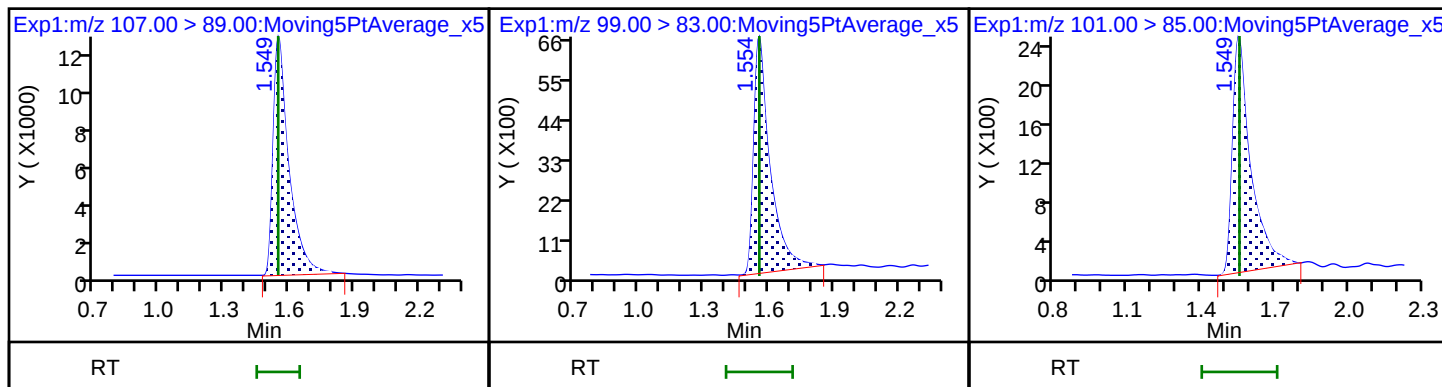
Method: perchlorate_26719

Limit Group: LC - 6850 DOD

* 2 18-O Perchlorate

1 Perchlorate

1 Perchlorate



FORM VII
LCMS CONTINUING CALIBRATION DATA

Lab Name: Eurofins Lancaster Laboratories
Environment Testing, LLC

Job No.: 410-204706-1

SDG No.:

Lab Sample ID: ICV 410-5999999/9

Calibration Date: 01/28/2025 16:12

Instrument ID: 26719

Calib Start Date: 01/28/2025 14:59

GC Column: Sielc Obelisc R ID: 2.10 (mm)

Calib End Date: 01/28/2025 15:51

Lab File ID: 25jan28-009.d

Conc. Units: ug/L

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Perchlorate	Lin1		1.259		4.13	4.00	3.2	15.0

Eurofins Lancaster Laboratories Environment Testing, LLC
Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\26719\20250128-136709.b\25jan28-009.d
 Lims ID: ICV iper5
 Client ID:
 Sample Type: ICV
 Inject. Date: 28-Jan-2025 16:12:53 ALS Bottle#: 9 Worklist Smp#: 9
 Injection Vol: 10.0 ul Dil. Factor: 1.0000
 Sample Info: ICV iper5
 Misc. Info.: Plate: 1 Rack: 1 410-0136709-009
 Operator ID: ETUS023_USR_INS00047 Instrument ID: 26719
 Sublist:
 Method: \\chromfs\Lancaster\ChromData\26719\20250128-136709.b\perchlorate_26719.m
 Limit Group: LC - 6850 DOD
 Last Update: 28-Jan-2025 17:12:24 Calib Date: 28-Jan-2025 15:51:56
 Integrator: Picker
 Quant Method: Isotopic Dilution Quant By: Initial Calibration
 Last ICal File: \\chromfs\Lancaster\ChromData\26719\20250128-136709.b\25jan28-007.d
 Column 1 : SIELC Obelisc R (2.10 mm) Det: EXP1
 Process Host: CTX1687

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ug/l	Ratio(Limits)	S/N	Flags
--------	----	-----------	-----------	-----------	----------	----------------	---------------	-----	-------

* 2 18-O Perchlorate

107.00 > 89.00	1.549	1.549	0.0		51568	1.01		1417	
----------------	-------	-------	-----	--	-------	------	--	------	--

1 Perchlorate

99.00 > 83.00	1.554	1.554	0.0	1.003	258315	4.13	Target=0.00	273	
101.00 > 85.00	1.549	1.554	-0.005	1.000	89832		2.88(0.00-0.00)	208	

Reagents:

GCS_percIS_00010	Amount Added: 0.01	Units: mL
gcs_icvperc5_00004	Amount Added: 1.00	Units: mL

Data File: \\chromfs\Lancaster\ChromData\26719\20250128-136709.b\25jan28-009.d

Injection Date: 28-Jan-2025 16:12:53

Instrument ID: 26719

Lims ID: ICV iper5

Client ID:

Operator ID: ETUS023_USR_INS00047

ALS Bottle#: 9

Worklist Smp#: 9

Injection Vol: 10.0 ul

Dil. Factor: 1.0000

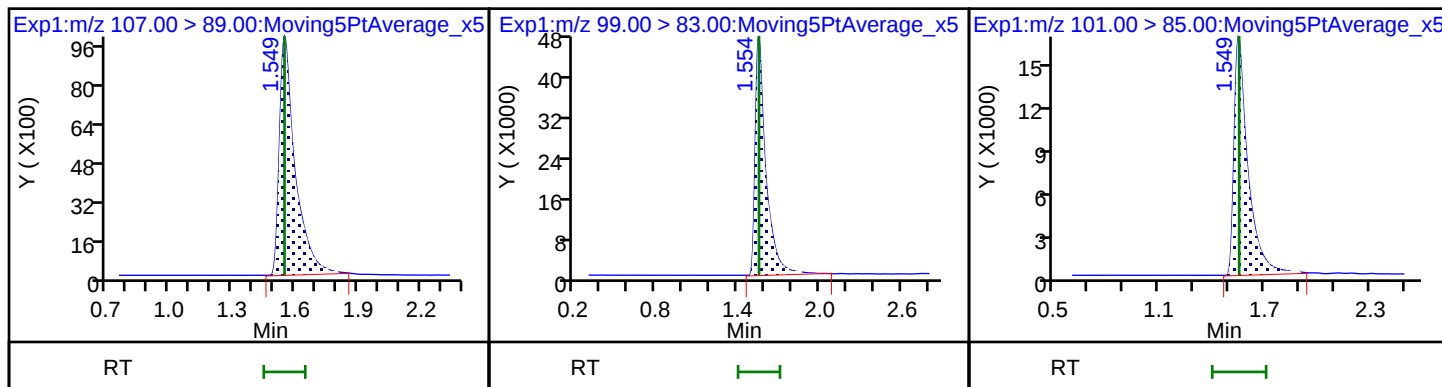
Method: perchlorate_26719

Limit Group: LC - 6850 DOD

* 2 18-O Perchlorate

1 Perchlorate

1 Perchlorate



FORM VII
LCMS CONTINUING CALIBRATION DATA

Lab Name: Eurofins Lancaster Laboratories
Environment Testing, LLC

Job No.: 410-204706-1

SDG No.:

Lab Sample ID: CCVIS 410-599506/2

Calibration Date: 01/28/2025 16:33

Instrument ID: 26719

Calib Start Date: 01/28/2025 14:59

GC Column: Sielc Obelisc R ID: 2.10 (mm)

Calib End Date: 01/28/2025 15:51

Lab File ID: 25Jan28-102.d

Conc. Units: ug/L

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Perchlorate	Lin1		1.192		3.91	4.00	-2.3	15.0

Eurofins Lancaster Laboratories Environment Testing, LLC
Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\26719\20250127-136579.b\25Jan28-102.d
 Lims ID: CCVIS PERC5
 Client ID:
 Sample Type: CCV
 Inject. Date: 28-Jan-2025 16:33:50 ALS Bottle#: 5 Worklist Smp#: 2
 Injection Vol: 10.0 ul Dil. Factor: 1.0000
 Sample Info: CCVIS PERC5
 Misc. Info.: Plate: 1 Rack: 1 410-0136579-002
 Operator ID: ETUS023_USR_INS00047 Instrument ID: 26719
 Sublist: chrom-perchlorate_26719*sub1
 Method: \\chromfs\Lancaster\ChromData\26719\20250127-136579.b\perchlorate_26719.m
 Limit Group: LC - 6850 DOD
 Last Update: 29-Jan-2025 09:50:14 Calib Date: 28-Jan-2025 15:51:56
 Integrator: Picker
 Quant Method: Isotopic Dilution Quant By: Initial Calibration
 Last ICal File: \\chromfs\Lancaster\ChromData\26719\20250128-136709.b\25jan28-007.d
 Column 1 : Sielc Obelisc R (2.10 mm) Det: EXP1
 Process Host: CTX1653

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ug/l	Ratio(Limits)	S/N	Flags
--------	----	-----------	-----------	-----------	----------	----------------	---------------	-----	-------

* 2 18-O Perchlorate

107.00 > 89.00	1.549	1.549	0.0		63737	1.01		1535	
----------------	-------	-------	-----	--	-------	------	--	------	--

1 Perchlorate

99.00 > 83.00	1.554	1.554	0.0	1.003	301401	3.91	Target=0.00	280	
101.00 > 85.00	1.549	1.554	-0.005	1.000	111230		2.71(0.00-0.00)	229	

Reagents:

gcs_icvperc5_00004	Amount Added: 1.00	Units: mL
GCS_percIS_00009	Amount Added: 0.01	Units: mL

Data File: \\chromfs\Lancaster\ChromData\26719\20250127-136579.b\25Jan28-102.d

Injection Date: 28-Jan-2025 16:33:50

Instrument ID: 26719

Lims ID: CCVIS PERC5

Client ID:

Operator ID: ETUS023_USR_INS00047

ALS Bottle#:

5

Worklist Smp#:

2

Injection Vol: 10.0 ul

Dil. Factor:

1.0000

Method: perchlorate_26719

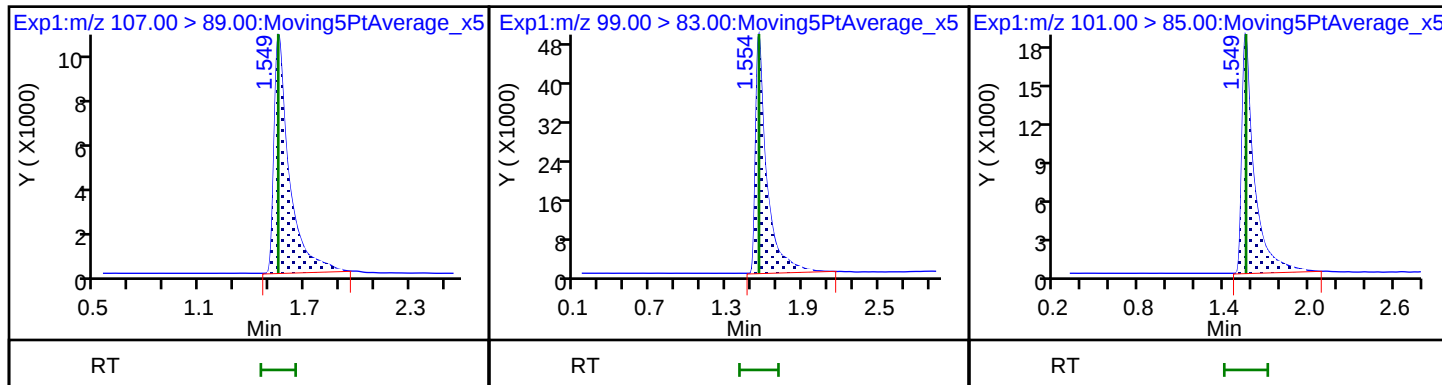
Limit Group:

LC - 6850 DOD

* 2 18-O Perchlorate

1 Perchlorate

1 Perchlorate



FORM VII
LCMS CONTINUING CALIBRATION DATA

Lab Name: Eurofins Lancaster Laboratories
Environment Testing, LLC

Job No.: 410-204706-1

SDG No.:

Lab Sample ID: CCV 410-599506/19

Calibration Date: 01/28/2025 19:31

Instrument ID: 26719

Calib Start Date: 01/28/2025 14:59

GC Column: Sielc Obelisc R ID: 2.10 (mm)

Calib End Date: 01/28/2025 15:51

Lab File ID: 25Jan28-119.d

Conc. Units: ug/L

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Perchlorate	Lin1		1.188		3.90	4.00	-2.6	15.0

Eurofins Lancaster Laboratories Environment Testing, LLC
Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\26719\20250127-136579.b\25Jan28-119.d
 Lims ID: CCV 2 PERC5
 Client ID:
 Sample Type: CCV
 Inject. Date: 28-Jan-2025 19:31:29 ALS Bottle#: 5 Worklist Smp#: 19
 Injection Vol: 10.0 ul Dil. Factor: 1.0000
 Sample Info: CCV 2 PERC5
 Misc. Info.: Plate: 1 Rack: 1 410-0136579-019
 Operator ID: ETUS023_USR_INS00047 Instrument ID: 26719
 Sublist: chrom-perchlorate_26719*sub1
 Method: \\chromfs\Lancaster\ChromData\26719\20250127-136579.b\perchlorate_26719.m
 Limit Group: LC - 6850 DOD
 Last Update: 29-Jan-2025 09:50:19 Calib Date: 28-Jan-2025 15:51:56
 Integrator: Picker
 Quant Method: Isotopic Dilution Quant By: Initial Calibration
 Last ICal File: \\chromfs\Lancaster\ChromData\26719\20250128-136709.b\25jan28-007.d
 Column 1 : Sielc Obelisc R (2.10 mm) Det: EXP1
 Process Host: CTX1653

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ug/l	Ratio(Limits)	S/N	Flags
--------	----	-----------	-----------	-----------	----------	----------------	---------------	-----	-------

* 2 18-O Perchlorate

107.00 > 89.00	1.549	1.549	0.0		63777	1.01		2148	
----------------	-------	-------	-----	--	-------	------	--	------	--

1 Perchlorate

99.00 > 83.00	1.554	1.554	0.0	1.003	300662	3.90	Target=0.00	285	
101.00 > 85.00	1.554	1.554	0.0	1.003	110425		2.72(0.00-0.00)	233	

Reagents:

gcs_icvperc5_00004	Amount Added: 1.00	Units: mL
GCS_percIS_00009	Amount Added: 0.01	Units: mL

Data File: \\chromfs\Lancaster\ChromData\26719\20250127-136579.b\25Jan28-119.d

Injection Date: 28-Jan-2025 19:31:29

Instrument ID: 26719

Lims ID: CCV 2 PERC5

Client ID:

Operator ID: ETUS023_USR_INS00047

ALS Bottle#:

5

Worklist Smp#:

19

Injection Vol: 10.0 ul

Dil. Factor:

1.0000

Method: perchlorate_26719

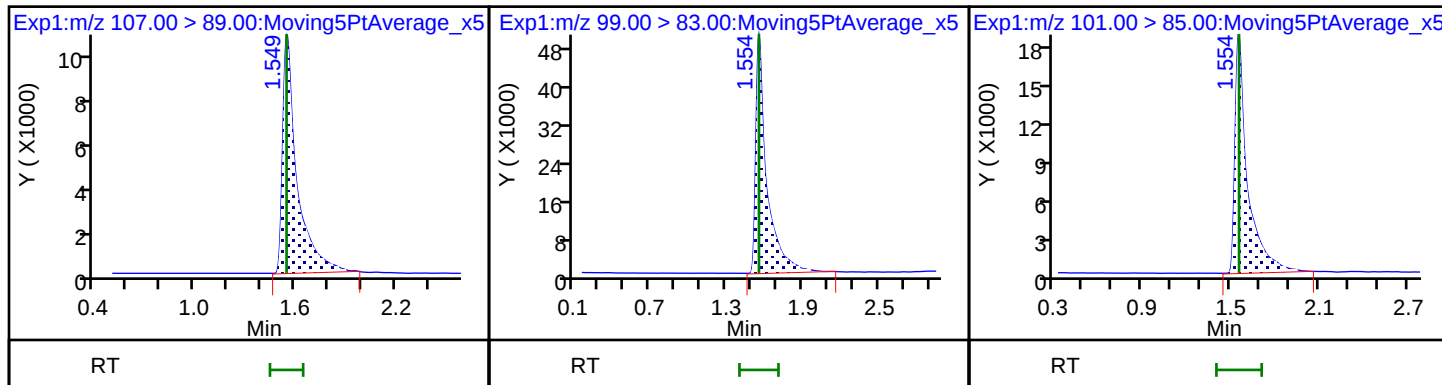
Limit Group:

LC - 6850 DOD

* 2 18-O Perchlorate

1 Perchlorate

1 Perchlorate



FORM I
LCMS ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Lancaster Laboratories
Environment Testing, LLC

Job No.: 410-204706-1

SDG No. :

Client Sample ID:

Lab Sample ID: MB 410-599365/1-A

Matrix: Water

Lab File ID: 25Jan28-103.d

Analysis Method: 6850

Date Collected:

Extraction Method: 6850 Prep

Date Extracted: 01/27/2025 08:32

Sample wt/vol: 10.0 (mL)

Date Analyzed: 01/28/2025 16:44

Con. Extract Vol.: 10.0 (mL)

Dilution Factor: 1

Injection Volume: 10 (uL)

GC Column: Sielc Obelisc R ID: 2.1 (mm)

% Moisture: % Solids:

GPC Cleanup: (Y/N) N

Cleanup Factor:

Analysis Batch No.: 599506

Units: ug/L

Preparation Batch No.: 599365

Instrument ID: 26719

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
14797-73-0	Perchlorate	ND		1.0	0.40	0.20

Eurofins Lancaster Laboratories Environment Testing, LLC
Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\26719\20250127-136579.b\25Jan28-103.d
 Lims ID: MB 410-599365/1-A
 Client ID:
 Sample Type: MB
 Inject. Date: 28-Jan-2025 16:44:16 ALS Bottle#: 51 Worklist Smp#: 3
 Injection Vol: 10.0 ul Dil. Factor: 1.0000
 Sample Info: MB 410-599365/1-A
 Misc. Info.: Plate: 1 Rack: 1 410-0136579-003
 Operator ID: ETUS023_USR_INS00047 Instrument ID: 26719
 Method: \\chromfs\Lancaster\ChromData\26719\20250127-136579.b\perchlorate_26719.m
 Limit Group: LC - 6850 DOD
 Last Update: 29-Jan-2025 09:50:14 Calib Date: 28-Jan-2025 15:51:56
 Integrator: Picker
 Quant Method: Isotopic Dilution Quant By: Initial Calibration
 Last ICal File: \\chromfs\Lancaster\ChromData\26719\20250128-136709.b\25jan28-007.d
 Column 1 : Sielc Obelisc R (2.10 mm) Det: EXP1
 Process Host: CTX1653

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ug/l	Ratio(Limits)	S/N	Flags
* 2 18-O Perchlorate									
107.00 > 89.00	1.549	1.549	0.0		52485	1.01		1978	
1 Perchlorate									
99.00 > 83.00	1.654	1.554	0.100	1.068	1969	0.0150	Target=0.00	0.9	
101.00 > 85.00	1.644	1.554	0.090	1.061	613		3.21(0.00-0.00)	0.8	

Data File: \\chromfs\Lancaster\ChromData\26719\20250127-136579.b\25Jan28-103.d

Injection Date: 28-Jan-2025 16:44:16

Instrument ID: 26719

Lims ID: MB 410-599365/1-A

Client ID:

Operator ID: ETUS023_USR_INS00047

ALS Bottle#: 51

Worklist Smp#: 3

Injection Vol: 10.0 ul

Dil. Factor: 1.0000

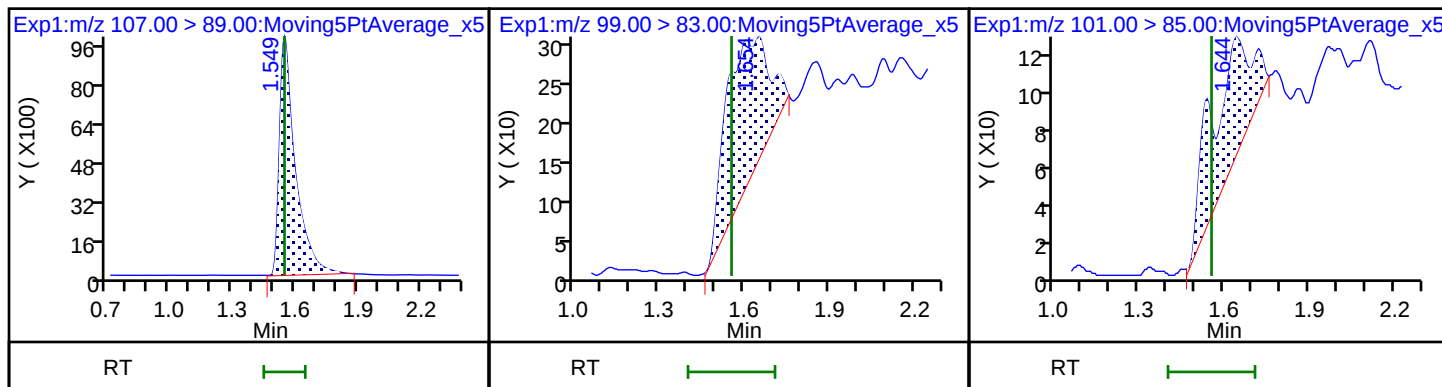
Method: perchlorate_26719

Limit Group: LC - 6850 DOD

* 2 18-O Perchlorate

1 Perchlorate

1 Perchlorate



FORM I
LCMS ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Lancaster Laboratories
Environment Testing, LLC

Job No.: 410-204706-1

SDG No. :

Client Sample ID:

Lab Sample ID: LCS 410-599365/2-A

Matrix: Water

Lab File ID: 25Jan28-104.d

Analysis Method: 6850

Date Collected:

Extraction Method: 6850 Prep

Date Extracted: 01/27/2025 08:32

Sample wt/vol: 10.0 (mL)

Date Analyzed: 01/28/2025 16:54

Con. Extract Vol.: 10.0 (mL)

Dilution Factor: 1

Injection Volume: 10 (uL)

GC Column: Sielc Obelisc R ID: 2.1 (mm)

% Moisture: % Solids:

GPC Cleanup: (Y/N) N

Cleanup Factor:

Analysis Batch No.: 599506

Units: ug/L

Preparation Batch No.: 599365

Instrument ID: 26719

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
14797-73-0	Perchlorate	0.988	J	1.0	0.40	0.20

Eurofins Lancaster Laboratories Environment Testing, LLC
Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\26719\20250127-136579.b\25Jan28-104.d
 Lims ID: LCS 410-599365/2-A
 Client ID:
 Sample Type: LCS
 Inject. Date: 28-Jan-2025 16:54:42 ALS Bottle#: 52 Worklist Smp#: 4
 Injection Vol: 10.0 ul Dil. Factor: 1.0000
 Sample Info: LCS 410-599365/2-A
 Misc. Info.: Plate: 1 Rack: 1 410-0136579-004
 Operator ID: ETUS023_USR_INS00047 Instrument ID: 26719
 Method: \\chromfs\Lancaster\ChromData\26719\20250127-136579.b\perchlorate_26719.m
 Limit Group: LC - 6850 DOD
 Last Update: 29-Jan-2025 09:50:14 Calib Date: 28-Jan-2025 15:51:56
 Integrator: Picker
 Quant Method: Isotopic Dilution Quant By: Initial Calibration
 Last ICal File: \\chromfs\Lancaster\ChromData\26719\20250128-136709.b\25jan28-007.d
 Column 1 : Sielc Obelisc R (2.10 mm) Det: EXP1
 Process Host: CTX1653

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ug/l	Ratio(Limits)	S/N	Flags
* 2 18-O Perchlorate									
107.00 > 89.00	1.554	1.549	0.005		60534	1.01		1938	
1 Perchlorate									
99.00 > 83.00	1.554	1.554	0.0	1.000	73436	0.9881	Target=0.00	78.2	
101.00 > 85.00	1.554	1.554	0.0	1.000	27184		2.70(0.00-0.00)	61.6	

Data File: \\chromfs\Lancaster\ChromData\26719\20250127-136579.b\25Jan28-104.d

Injection Date: 28-Jan-2025 16:54:42

Instrument ID: 26719

Lims ID: LCS 410-599365/2-A

Client ID:

Operator ID: ETUS023_USR_INS00047

ALS Bottle#: 52

Worklist Smp#: 4

Injection Vol: 10.0 ul

Dil. Factor: 1.0000

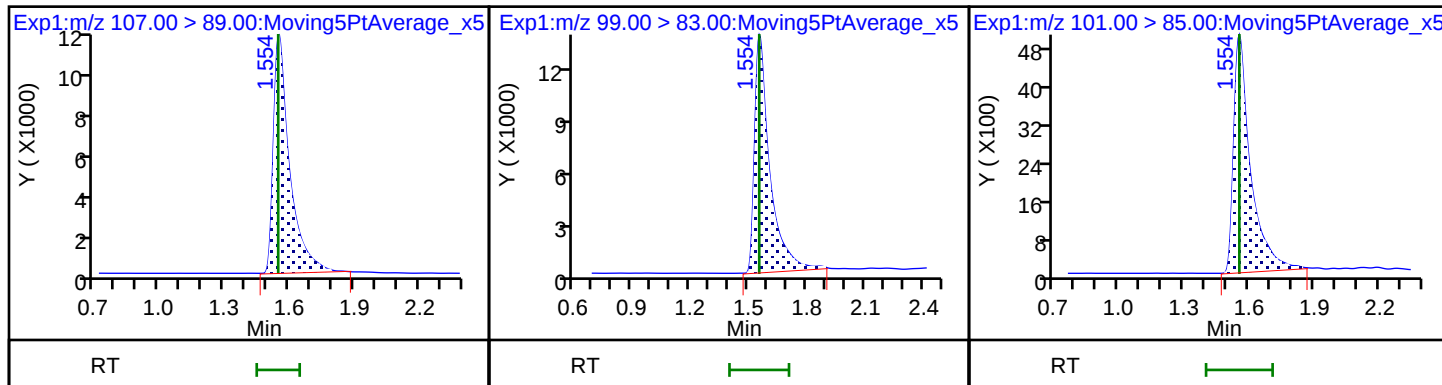
Method: perchlorate_26719

Limit Group: LC - 6850 DOD

* 2 18-O Perchlorate

1 Perchlorate

1 Perchlorate



FORM I
LCMS ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Lancaster Laboratories
Environment Testing, LLC

Job No.: 410-204706-1

SDG No. :

Client Sample ID:

Lab Sample ID: LCSD 410-599365/3-A

Matrix: Water

Lab File ID: 25Jan28-105.d

Analysis Method: 6850

Date Collected:

Extraction Method: 6850 Prep

Date Extracted: 01/27/2025 08:32

Sample wt/vol: 10.0 (mL)

Date Analyzed: 01/28/2025 17:05

Con. Extract Vol.: 10.0 (mL)

Dilution Factor: 1

Injection Volume: 10 (uL)

GC Column: Sielc Obelisc R ID: 2.1 (mm)

% Moisture: % Solids:

GPC Cleanup: (Y/N) N

Cleanup Factor:

Analysis Batch No.: 599506

Units: ug/L

Preparation Batch No.: 599365

Instrument ID: 26719

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
14797-73-0	Perchlorate	0.967	J	1.0	0.40	0.20

Eurofins Lancaster Laboratories Environment Testing, LLC
Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\26719\20250127-136579.b\25Jan28-105.d
 Lims ID: LCSD 410-599365/3-A
 Client ID:
 Sample Type: LCSD
 Inject. Date: 28-Jan-2025 17:05:07 ALS Bottle#: 53 Worklist Smp#: 5
 Injection Vol: 10.0 ul Dil. Factor: 1.0000
 Sample Info: LCSD 410-599365/3-A
 Misc. Info.: Plate: 1 Rack: 1 410-0136579-005
 Operator ID: ETUS023_USR_INS00047 Instrument ID: 26719
 Method: \\chromfs\Lancaster\ChromData\26719\20250127-136579.b\perchlorate_26719.m
 Limit Group: LC - 6850 DOD
 Last Update: 29-Jan-2025 09:50:14 Calib Date: 28-Jan-2025 15:51:56
 Integrator: Picker
 Quant Method: Isotopic Dilution Quant By: Initial Calibration
 Last ICal File: \\chromfs\Lancaster\ChromData\26719\20250128-136709.b\25jan28-007.d
 Column 1 : Sielc Obelisc R (2.10 mm) Det: EXP1
 Process Host: CTX1653

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ug/l	Ratio(Limits)	S/N	Flags
* 2 18-O Perchlorate									
107.00 > 89.00	1.549	1.549	0.0		57177	1.01		1864	
1 Perchlorate									
99.00 > 83.00	1.549	1.554	-0.005	1.000	67890	0.9668	Target=0.00	71.4	
101.00 > 85.00	1.549	1.554	-0.005	1.000	26709		2.54(0.00-0.00)	58.0	

Data File: \\chromfs\Lancaster\ChromData\26719\20250127-136579.b\25Jan28-105.d

Injection Date: 28-Jan-2025 17:05:07

Instrument ID: 26719

Lims ID: LCSD 410-599365/3-A

Client ID:

Operator ID: ETUS023_USR_INS00047

ALS Bottle#: 53

Worklist Smp#: 5

Injection Vol: 10.0 ul

Dil. Factor: 1.0000

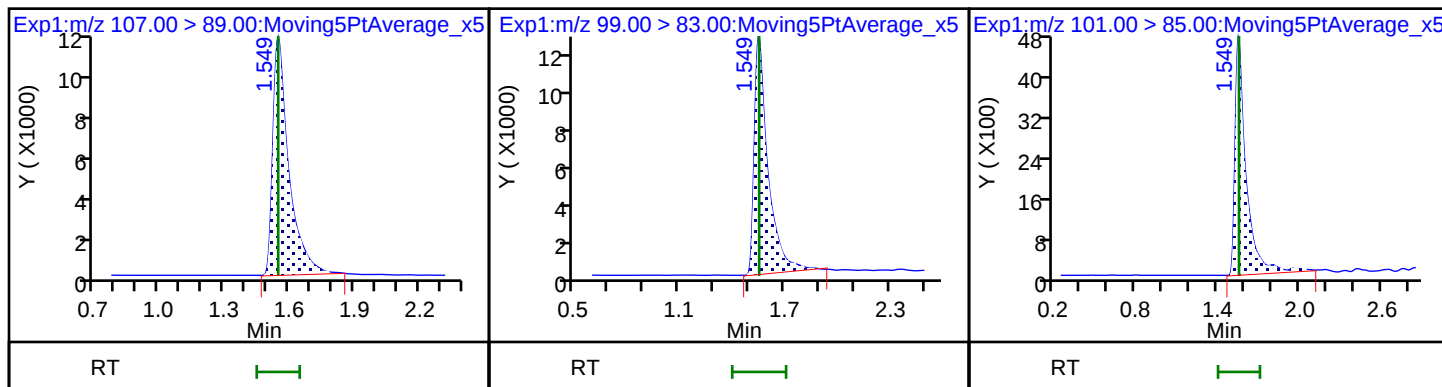
Method: perchlorate_26719

Limit Group: LC - 6850 DOD

* 2 18-O Perchlorate

1 Perchlorate

1 Perchlorate



FORM I
LCMS ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Lancaster Laboratories
Environment Testing, LLC

Job No.: 410-204706-1

SDG No. :

Client Sample ID:

Lab Sample ID: INF 410-599365/4-A

Matrix: Water

Lab File ID: 25Jan28-106.d

Analysis Method: 6850

Date Collected:

Extraction Method: 6850 Prep

Date Extracted: 01/27/2025 08:32

Sample wt/vol: 10.0 (mL)

Date Analyzed: 01/28/2025 17:15

Con. Extract Vol.: 10.0 (mL)

Dilution Factor: 1

Injection Volume: 10 (uL)

GC Column: Sielc Obelisc R ID: 2.1 (mm)

% Moisture: % Solids:

GPC Cleanup: (Y/N) N

Cleanup Factor:

Analysis Batch No.: 599506

Units: ug/L

Preparation Batch No.: 599365

Instrument ID: 26719

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
14797-73-0	Perchlorate	1.01		1.0	0.46	0.23

Eurofins Lancaster Laboratories Environment Testing, LLC
Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\26719\20250127-136579.b\25Jan28-106.d
Lims ID: INF 410-599365/4-A
Client ID:
Sample Type: INF
Inject. Date: 28-Jan-2025 17:15:33 ALS Bottle#: 54 Worklist Smp#: 6
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: INF 410-599365/4-A
Misc. Info.: Plate: 1 Rack: 1 410-0136579-006
Operator ID: ETUS023_USR_INS00047 Instrument ID: 26719
Method: \\chromfs\Lancaster\ChromData\26719\20250127-136579.b\perchlorate_26719.m
Limit Group: LC - 6850 DOD
Last Update: 29-Jan-2025 09:50:14 Calib Date: 28-Jan-2025 15:51:56
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\26719\20250128-136709.b\25jan28-007.d
Column 1 : Sielc Obelisc R (2.10 mm) Det: EXP1
Process Host: CTX1653

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ug/l	Ratio(Limits)	S/N	Flags
* 2 18-O Perchlorate									
107.00 > 89.00	1.549	1.549	0.0		36252	1.01		963	
1 Perchlorate									
99.00 > 83.00	1.554	1.554	0.0	1.003	44728	1.01	Target=0.00	48.3	
101.00 > 85.00	1.554	1.554	0.0	1.003	15995		2.80(0.00-0.00)	37.5	

Data File: \\chromfs\Lancaster\ChromData\26719\20250127-136579.b\25Jan28-106.d

Injection Date: 28-Jan-2025 17:15:33

Instrument ID: 26719

Lims ID: INF 410-599365/4-A

Client ID:

Operator ID: ETUS023_USR_INS00047

ALS Bottle#: 54

Worklist Smp#: 6

Injection Vol: 10.0 ul

Dil. Factor: 1.0000

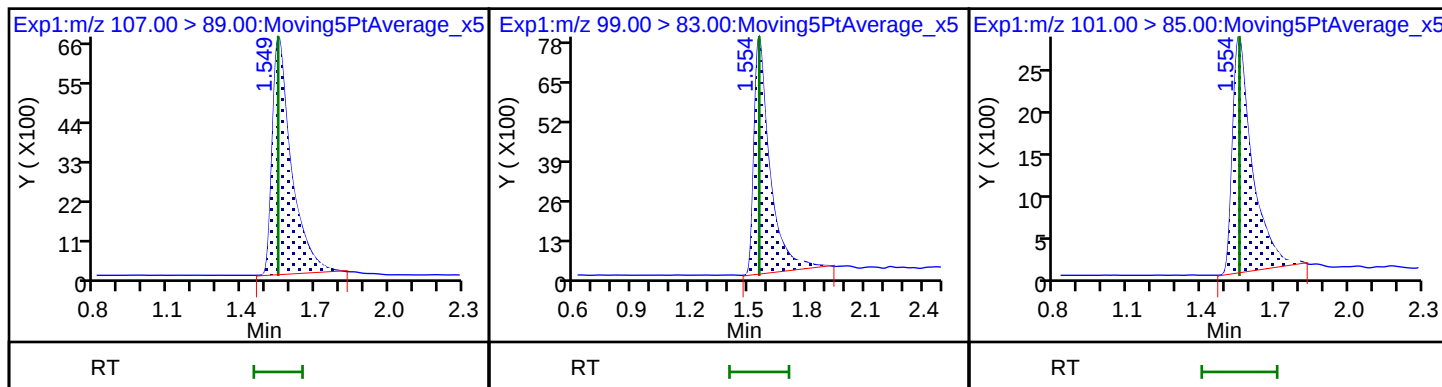
Method: perchlorate_26719

Limit Group: LC - 6850 DOD

* 2 18-O Perchlorate

1 Perchlorate

1 Perchlorate



LCMS ANALYSIS RUN LOG

Lab Name: Eurofins Lancaster Laboratories Environment
Testing, LLC

Job No.: 410-204706-1

SDG No.:

Instrument ID: 26719

Start Date: 01/28/2025 16:33

Analysis Batch Number: 599506

End Date: 01/28/2025 20:23

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
CCVIS 410-599506/2		01/28/2025 16:33	1	25Jan28-102.d	Sielc Obelisc R 2.1(mm)
MB 410-599365/1-A		01/28/2025 16:44	1	25Jan28-103.d	Sielc Obelisc R 2.1(mm)
LCS 410-599365/2-A		01/28/2025 16:54	1	25Jan28-104.d	Sielc Obelisc R 2.1(mm)
LCSD 410-599365/3-A		01/28/2025 17:05	1	25Jan28-105.d	Sielc Obelisc R 2.1(mm)
INF 410-599365/4-A		01/28/2025 17:15	1	25Jan28-106.d	Sielc Obelisc R 2.1(mm)
410-204706-1	TAPIAL1-MW04S-011525- 00-T2	01/28/2025 17:36	1	25Jan28-108.d	Sielc Obelisc R 2.1(mm)
ZZZZZ (Client)		01/28/2025 17:46	1		Sielc Obelisc R 2.1(mm)
ZZZZZ (Client)		01/28/2025 17:57	1		Sielc Obelisc R 2.1(mm)
ZZZZZ (Client)		01/28/2025 18:49	1		Sielc Obelisc R 2.1(mm)
ZZZZZ (Client)		01/28/2025 19:00	1		Sielc Obelisc R 2.1(mm)
CCV 410-599506/19		01/28/2025 19:31	1	25Jan28-119.d	Sielc Obelisc R 2.1(mm)
ZZZZZ (Client)		01/28/2025 19:52	1		Sielc Obelisc R 2.1(mm)
ZZZZZ (Client)		01/28/2025 20:02	1		Sielc Obelisc R 2.1(mm)
CCV 410-599506/24		01/28/2025 20:23	1		Sielc Obelisc R 2.1(mm)

LCMS ANALYSIS RUN LOG

Lab Name: Eurofins Lancaster Laboratories Environment
Testing, LLC

Job No.: 410-204706-1

SDG No.:

Instrument ID: 26719

Start Date: 01/28/2025 14:59

Analysis Batch Number: 599999

End Date: 01/28/2025 16:12

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
IC 410-599999/2		01/28/2025 14:59	1	25jan28-002.d	Sielc Obelisc R 2.1 (mm)
IC 410-599999/3		01/28/2025 15:10	1	25jan28-003.d	Sielc Obelisc R 2.1 (mm)
IC 410-599999/4		01/28/2025 15:20	1	25jan28-004.d	Sielc Obelisc R 2.1 (mm)
ICISAV 410-599999/5		01/28/2025 15:31	1	25jan28-005.d	Sielc Obelisc R 2.1 (mm)
IC 410-599999/6		01/28/2025 15:41	1	25jan28-006.d	Sielc Obelisc R 2.1 (mm)
IC 410-599999/7		01/28/2025 15:51	1	25jan28-007.d	Sielc Obelisc R 2.1 (mm)
ICVL 410-599999/8		01/28/2025 16:02	1	25jan28-008.d	Sielc Obelisc R 2.1 (mm)
ICV 410-599999/9		01/28/2025 16:12	1	25jan28-009.d	Sielc Obelisc R 2.1 (mm)

LCMS BATCH WORKSHEET

Lab Name: Eurofins Lancaster Laboratories Job No.: 410-204706-1

SDG No.: _____

Batch Number: 599365 Batch Start Date: 01/27/25 08:32 Batch Analyst: Wolbach, RebeccaBatch Method: 6850 Prep Batch End Date: _____

Lab Sample ID	Client Sample ID	Method Chain	Matrix	Basis	InitialAmount	FinalAmount	Headspace	GCS_percIS 00010	GCS_PERICVINT 00016	
MB 410-599365/1		6850 Prep, 6850			10.0 mL	10.0 mL	Y	0.1 mL		
LCS 410-599365/2		6850 Prep, 6850			10.0 mL	10.0 mL	Y	0.1 mL	0.01 mL	
LCSD 410-599365/3		6850 Prep, 6850			10.0 mL	10.0 mL	Y	0.1 mL	0.01 mL	
INF 410-599365/4		6850 Prep, 6850			10.0 mL	10.0 mL	Y	0.1 mL	0.01 mL	
410-204706-B-1	TAPIAL1-MW04S-0 11525-00-T2	6850 Prep, 6850	Water	T	10.0 mL	10.0 mL	N	0.1 mL		

Batch Notes	
Pipette/Syringe/Dispenser ID	sp100-3, sp1000-6
Reagent Water ID	10121011212434A
Vial Lot Number	430199
Pipette Tip Lot ID	2F0229M, 22081520

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

LCMS BATCH WORKSHEET

Lab Name: Eurofins Lancaster Laboratories Job No.: 410-204706-1

SDG No.: _____

Batch Number: 599999 Batch Start Date: 01/28/25 14:59 Batch Analyst: Sneeringer, Angela DBatch Method: 6850 Batch End Date: _____

Lab Sample ID	Client Sample ID	Method Chain	Matrix	Basis	FinalAmount	gcs_icvperc2 00004	gcs_icvperc5 00004	gcs_perc2 00010	gcs_perc3 00006	gcs_perc4 00006
IC 410-599999/2		6850			1 mL			1 mL		
IC 410-599999/3		6850			1 mL				1 mL	
IC 410-599999/4		6850			1 mL					1 mL
ICISAV 410-599999/5		6850			1 mL					
IC 410-599999/6		6850			1 mL					
IC 410-599999/7		6850			1 mL					
ICVL 410-599999/8		6850			1 mL	1 mL				
ICV 410-599999/9		6850			1 mL		1 mL			

Lab Sample ID	Client Sample ID	Method Chain	Matrix	Basis	gcs_perc5 00006	gcs_perc6 00006	gcs_perc7 00006	GCS_percIS 00010		
IC 410-599999/2		6850						0.01 mL		
IC 410-599999/3		6850						0.01 mL		
IC 410-599999/4		6850						0.01 mL		
ICISAV 410-599999/5		6850			1 mL			0.01 mL		
IC 410-599999/6		6850				1 mL		0.01 mL		
IC 410-599999/7		6850					1 mL	0.01 mL		
ICVL 410-599999/8		6850						0.01 mL		
ICV 410-599999/9		6850						0.01 mL		

Batch Notes	
Mobil Phase ID	MPA 10121001152534A MPB ACN 234740
Pipette/Syringe/Dispenser ID	SP100-3 SP1000-7

Basis	Basis Description

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

Shipping and Receiving Documents



410-204706 Chain of Custody

284 Sheffield Street, Mountainside, NJ 07092
(908) 789-8900 Fax (908) 789-8922
WWW.CHEMTECH.NET

Sub Lab INFORMATION		CLIENT PROJECT INFORMATION		CLIENT BILLING INFORMATION	
COMPANY : EUROFINS Lancaster Laboratories		ORDER ID : Q1107		BILL TO: CHEMTECH PO# : Q1107	
ADDRESS : 2425 New Holland Pike		PROJECT ID: Ft Meade Tipton Airfield Parcel RI - PO 0111169		ADDRESS : 284, Sheffield Street	
CITY: Lancaster State : PA ZIP : 17601		PROJECT MANAGER Yazmeen		CITY: Mountainside State : NJ ZIP : 07092	
E-mail :		E-mail : YAZMEEN@CHEMTECH.NET		ATTENTION : Yazmeen	
PHONE : 717-693-5814		PHONE : (908) 789 8900	FAX : (908) 789 8922	PHONE : (908) 789 8900 FAX : (908) 789 8922	

EDD : EnviroData

Report : Level 4

Comment : : *DOD (REPORT TO THE LOD AND INCLUDE PRESENTATION FOR THE LOQ AND DL)

ID	CLIENT SAMPLE IDENTIFICATION	SAMPLE MATRIX	ANALYSIS	Preservative	Method	SAMPLE COLLECTION		# OF BOTTLES	TAT DAYS
						DATE	TIME		
01	TAPIAL1-MW04S-011525-00-T2	Water	Wet Chem Group1	1:1 HNO3 to pH < 2	Cal	01/15/2025	12:20:00	2	10

(Perchlorate by EPA 6850 method)

SAMPLE CUSTODY MUST BE DOCUMENTED BELOW EACH TIME SAMPLES CHANGES POSSESSION INCLUDING COURIER DELIVERY					
RELINQUISHED BY SAMPLER: 1.	DATETIME: 1-16-25 1600	RECEIVED BY: 1.	Conditions of bottles or Coolers at receipt: ☐ Compliant ☐ Non Compliant	Cooler Temp _____ Ice or Cooler? _____	
RELINQUISHED BY: 2.	DATETIME:	RECEIVED BY: 2.		R: 0.3 C: -0.1	
RELINQUISHED BY: 3.	DATETIME: 1/17/25 0450	RECEIVED BY: 3.	Page 1 of 1	☐ OVERNIGHT ☐ OVERNIGHT	Shipment Complete: ☐ YES ☐ NO

Q1107

Login Sample Receipt Checklist

Client: Chemtech Consulting Group Inc.

Job Number: 410-204706-1

Login Number: 204706

List Number: 1

Creator: Burkholder, Conrad

List Source: Eurofins Lancaster Laboratories Environment Testing, LLC

Question	Answer	Comment
The cooler's custody seal is 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 acceptable, where thermal pres is required ($\leq 6^{\circ}\text{C}$, not frozen).	True	
Cooler Temperature is recorded.	True	
WV: Container Temp acceptable, where thermal pres is required ($\leq 6^{\circ}\text{C}$, not frozen).	N/A	
WV: Container Temperature is recorded.	N/A	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
There are no discrepancies between the containers received and the COC.	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	
There is sufficient vol. for all requested analyses.	True	
Is the Field Sampler's name present on COC?	True	
Sample custody seals are intact.	N/A	
VOA sample vials do not have headspace $> 6\text{mm}$ in diameter (none, if from WV)?	N/A	