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ANALYTICAL REPORT

PREPARED FOR

Attn: Rita Schmon-Stasik
Leidos, Inc.
Picatinny Arsenal
356 Ninth Avenue
Suite 106
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JOB DESCRIPTION

RVAAP FWGW Spring 2023

JOB NUMBER

280-176864-1

Eurofins Denver
4955 Yarrow Street
Arvada CO 80002

See page two for job notes and contact information.

Eurofins Denver

Job Notes

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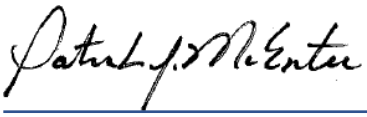

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Authorized for release by
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Table of Contents

Cover Title 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

Manual Integration Summary 16

Reagent Traceability 17

COAs 18

Inorganic Sample Data 36

General Chemistry Data 36

Gen Chem Cover Page 37

Gen Chem Sample Data 38

Gen Chem QC Data 39

Gen Chem ICV/CCV 39

Gen Chem Blanks 42

Gen Chem LCS/LCSD 43

Gen Chem Calibration 46

Gen Chem MDL 49

Table of Contents

Gen Chem Analysis Run Log 53

Gen Chem Prep Data 63

Gen Chem Raw Data 68

Shipping and Receiving Documents 135

Client Chain of Custody 136

Sample Receipt Checklist 137

Qualifiers

General Chemistry

Qualifier	Qualifier Description
J	Estimated: The analyte was positively identified; the quantitation is an estimation
M	Manual integrated compound.
U	Undetected at the Limit of Detection.

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

CASE NARRATIVE

Client: Leidos, Inc.

Project: RVAAP FWGW Spring 2023

Report Number: 280-176864-1

With the exceptions noted as flags or footnotes, standard analytical protocols were followed in the analysis of the samples and no problems were encountered or anomalies observed. In addition all laboratory quality control samples were within established control limits, with any exceptions noted below. Each sample was analyzed to achieve the lowest possible reporting limit within the constraints of the method. In some cases, due to interference or analytes present at high concentrations, samples were diluted. For diluted samples, the reporting limits are adjusted relative to the dilution required.

Calculations are performed before rounding to avoid round-off errors in calculated results.

All holding times were met and proper preservation noted for the methods performed on these samples, unless otherwise detailed in the individual sections below.

RECEIPT
The sample was received on 5/23/2023 9:30 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 1.0º C.

AMMONIA
Sample LL12mw-244-230401-GW (280-176864-1) was analyzed for ammonia in accordance with EPA Method 350.1. The samples were analyzed on 06/01/2023.

Ammonia as N was detected in method blank MB 280-614730/135 at a level that was less than ½ the limit of quantitation (LOQ). The value should be considered an estimate, and has been flagged.

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

ANIONS, ION CHROMATOGRAPHY
Sample LL12mw-244-230401-GW (280-176864-1) was analyzed for Anions, Ion Chromatography in accordance with 9056A (48 Hours). The samples were analyzed on 05/23/2023.

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

Detection Summary

Client: Leidos, Inc.
Project/Site: RVAAP FWGW Spring 2023

Job ID: 280-176864-1

Client Sample ID: LL12mw-244-230401-GW

Lab Sample ID: 280-176864-1

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	Dil Fac	D	Method	Prep Type
Ammonia as N	0.22		0.10	0.050	0.029	mg/L	1		350.1	Total/NA

This Detection Summary does not include radiochemical test results.

General Chemistry

Client Sample ID: LL12mw-244-230401-GW **Lab Sample ID: 280-176864-1**
Date Collected: 05/22/23 11:22 **Matrix: Water**
Date Received: 05/23/23 09:30

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Ammonia as N (EPA 350.1)	**0.22**		0.10	0.050	0.029	mg/L		06/01/23 15:59	1
Nitrate as N (SW846 9056)	0.20	U M	0.50	0.20	0.090	mg/L		05/23/23 15:30	1

Default Detection Limits

Client: Leidos, Inc.
Job ID: 280-176864-1
Project/Site: RVAAP FWGW Spring 2023

General Chemistry

Analyte	LOQ	DL	Units
Ammonia as N	0.10	0.029	mg/L
Nitrate as N	0.50	0.090	mg/L

Method: 350.1 - Nitrogen, Ammonia

Lab Sample ID: MB 280-614730/135
Matrix: Water
Analysis Batch: 614730

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

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Ammonia as N	0.0290	J	0.10	0.050	0.029	mg/L		06/01/23 15:27	1

Lab Sample ID: LCS 280-614730/134
Matrix: Water
Analysis Batch: 614730

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Ammonia as N	2.50	2.58		mg/L		103	90 - 110

Method: 9056 - Anions, Ion Chromatography

Lab Sample ID: MB 280-613474/6
Matrix: Water
Analysis Batch: 613474

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

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Nitrate as N	0.20	U	0.50	0.20	0.090	mg/L		05/23/23 13:23	1

Lab Sample ID: LCS 280-613474/4
Matrix: Water
Analysis Batch: 613474

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Nitrate as N	2.50	2.54		mg/L		102	88 - 111

Lab Sample ID: LCSD 280-613474/5
Matrix: Water
Analysis Batch: 613474

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

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Nitrate as N	2.50	2.54		mg/L		102	88 - 111	0	10

Lab Sample ID: MRL 280-613474/3
Matrix: Water
Analysis Batch: 613474

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

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits
Nitrate as N	0.250	0.230	J M	mg/L		92	50 - 150

QC Association Summary

Client: Leidos, Inc.
Job ID: 280-176864-1
Project/Site: RVAAP FWGW Spring 2023

General Chemistry

Analysis Batch: 613474

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-176864-1	LL12mw-244-230401-GW	Total/NA	Water	9056	
MB 280-613474/6	Method Blank	Total/NA	Water	9056	
LCS 280-613474/4	Lab Control Sample	Total/NA	Water	9056	
LCSD 280-613474/5	Lab Control Sample Dup	Total/NA	Water	9056	
MRL 280-613474/3	Lab Control Sample	Total/NA	Water	9056	

Analysis Batch: 614730

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-176864-1	LL12mw-244-230401-GW	Total/NA	Water	350.1	
MB 280-614730/135	Method Blank	Total/NA	Water	350.1	
LCS 280-614730/134	Lab Control Sample	Total/NA	Water	350.1	

Lab Chronicle

Client: Leidos, Inc.
Job ID: 280-176864-1
Project/Site: RVAAP FWGW Spring 2023

Client Sample ID: LL12mw-244-230401-GW
Lab Sample ID: 280-176864-1

Date Collected: 05/22/23 11:22
Matrix: Water
Date Received: 05/23/23 09:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	350.1		1	10 mL	10 mL	614730	06/01/23 15:59	MMP	EET DEN
Total/NA	Analysis	9056		1	10 mL	10 mL	613474	05/23/23 15:30	MEC	EET DEN

Laboratory References:

EET DEN = Eurofins Denver, 4955 Yarrow Street, Arvada, CO 80002, TEL (303)736-0100

Accreditation/Certification Summary

Client: Leidos, Inc. Job ID: 280-176864-1
Project/Site: RVAAP FWGW Spring 2023

Laboratory: Eurofins Denver

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

Authority	Program	Identification Number	Expiration Date
A2LA	Dept. of Defense ELAP	2907.01	10-31-23

Method Summary

Client: Leidos, Inc.
Job ID: 280-176864-1
Project/Site: RVAAP FWGW Spring 2023

Method	Method Description	Protocol	Laboratory
350.1	Nitrogen, Ammonia	EPA	EET DEN
9056	Anions, Ion Chromatography	SW846	EET DEN

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:

EET DEN = Eurofins Denver, 4955 Yarrow Street, Arvada, CO 80002, TEL (303)736-0100

Sample Summary

Client: Leidos, Inc.
Job ID: 280-176864-1
Project/Site: RVAAP FWGW Spring 2023

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
280-176864-1	LL12mw-244-230401-GW	Water	05/22/23 11:22	05/23/23 09:30

GENERAL CHEMISTRY MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins Denver Job No.: 280-176864-1

SDG No.:

Instrument ID: WC_IonChrom10 Analysis Batch Number: 613474

Lab Sample ID: MRL 280-613474/3 Client Sample ID:

Date Analyzed: 05/23/23 12:38 Lab File ID: Info 2_DENPC179_Anions_20 GC Column: Metrosepp A S ID:

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Nitrate as N	6.94	Baseline Smoothing	LVW8	05/24/23 12:06

Lab Sample ID: 280-176864-1 Client Sample ID: LL12mw-244-230401-GW

Date Analyzed: 05/23/23 15:30 Lab File ID: Info 2_DENPC179_Anions_20 GC Column: Metrosepp A S ID:

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Nitrate as N		Unspecified		

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins Denver Job No.: 280-176864-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
350.1 cal_00585	06/07/23	05/31/23	Di Water, Lot na	100 mL	NH3 CAL STD_00035	10 mL	Ammonia as N	100 mg/L
.NH3 CAL STD_00035	01/31/24		Ricca, Lot 4208D17		(Purchased Reagent)		Ammonia as N	1000 mg/L
350.1 ICV_00566	06/07/23	05/31/23	na, Lot na	100 mL	NH3 ICV STD_00034	10 mL	Ammonia as N	100.2 mg/L
.NH3 ICV STD_00034	01/25/25		Inorganic Ventures, Lot S2-NH700817		(Purchased Reagent)		Ammonia as N	1002 mg/L
IC Cal low_00709	05/24/23	05/18/23	Di Water, Lot NA	100 mL	IC N03 cal_00028	2.5 mL	Nitrate as N	25 mg/L
					IC NO2 Cal_00007	2.5 mL	Nitrite as N	25 mg/L
					IC P04 cal_00030	2.5 mL	Orthophosphate as P	25 mg/L
.IC N03 cal_00028	11/30/23		Ricca, Lot 2205B73		(Purchased Reagent)		Nitrate as N	1000 mg/L
.IC NO2 Cal_00007	06/30/23		Ricca, Lot 2212826		(Purchased Reagent)		Nitrite as N	1000 mg/L
.IC P04 cal_00030	07/31/24		RICCA, Lot 4208152		(Purchased Reagent)		Orthophosphate as P	1000 mg/L
IC ICV 5_00405	05/24/23	05/18/23	Di Water, Lot na	100 mL	IC NO3 ICV_00019	2.5 mL	Nitrate as N	25 mg/L
.IC NO3 ICV_00019	12/01/23		ERA, Lot 011221m		(Purchased Reagent)		Nitrate as N	1000 mg/L
IC LCS_01954	05/24/23	05/18/23	Di Water, Lot 27	200 mL	IC Cal low_00709	20 mL	Nitrate as N	2.5 mg/L
.IC Cal low_00709	05/24/23	05/18/23	Di Water, Lot NA	100 mL	IC N03 cal_00028	2.5 mL	Nitrate as N	25 mg/L
..IC N03 cal_00028	11/30/23		Ricca, Lot 2205B73		(Purchased Reagent)		Nitrate as N	1000 mg/L

Reagent

IC N03 cal_00028

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Certificate of Analysis

Nitrate Nitrogen Standard, 1000 ppm N (4427 ppm NO_3^-)

Lot Number: 2205B73 **Product Number:** 5459

Manufacture Date: MAY 11, 2022
Expiration Date: NOV 2023

The certified value reported is the prepared value based upon the method of preparation of the material. The uncertainty in the prepared value is based upon the volumetric method of preparation.

Name	CAS#	Grade
Water	7732-18-5	ACS/ASTM/USP/EP
Potassium Nitrate	7757-79-1	High Purity
Chloroform	67-66-3	

Test	Specification	Result
Appearance	Colorless liquid	Passed
Nitrogen (N)	995-1005 ppm	1000 ppm

Specification	Reference
Nitrate Solution, Stock (1.0 mL = 1.0 mg NO3-N)	ASTM (D 3867 A)
Nitrate Solution, Stock (1.0 mL = 1.0 mg NO3-N)	ASTM (D 3867 B)
Stock Nitrate Solution: 1 mL = 1.0 mg NO3-N	EPA (353.2)
Stock Nitrate Solution: 1.0 mL = 1.00 mg NO3-N	EPA (353.3)

Volumetric glassware complies with Class A tolerance requirements of ASTM E 288 and NIST Circular 434; it is calibrated before first use and recalibrated regularly in accordance with ASTM E 542 and NIST Procedure NBSIR 74-461. Balances are calibrated regularly with weights certified traceable to the NIST national mass standard. Thermometers and temperature probes are calibrated before first use and recalibrated regularly with a thermometer traceable to NIST standards. All products are prepared according to master documents that assure manufacture according to validated methods. Batch records document raw material traceability and production and testing history for each lot manufactured.

Part Number	Size / Package Type	Shelf Life (Unopened Container)
5459-16	500 mL natural poly	18 months

Recommended Storage: 15°C - 30°C (59°F - 86°F)

Myrlande Gilles (05/11/2022)
Quality Control

This Certificate of Analysis is designed to comply with ISO Guide 31 "Reference Materials -- Contents of Certificates and Labels."

Reagent

IC NO2 Cal_00007

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Certificate of Analysis

Nitrite Nitrogen Standard, 1000 ppm N (3285 ppm NO_2^-)

Lot Number: 2212826 **Product Number:** 5461

Manufacture Date: DEC 08, 2022
Expiration Date: JUN 2023

Name	CAS#	Grade
Water	7732-18-5	ACS/ASTM/USP/EP
Potassium Nitrite	7758-09-0	ACS
Chloroform	67-66-3	

Test	Specification	Result	NIST SRM#
Appearance	Colorless liquid	Passed	
Assay (vs. Potassium Permanganate)	995-1005 ppm N	1005 ppm N	8040

Specification	Reference
Nitrite Solution, Stock (1.0 mL = 1.0 mg NO2-N)	ASTM (D 3867 A)
Nitrite Solution, Stock (1.0 mL = 1.0 mg NO2-N)	ASTM (D 3867 B)
Stock Nitrite Solution: 1 mL = 1.0 mg NO2-N	EPA (353.2)
Stock Nitrite Solution: 1.0 mL = 1.00 mg NO2-N	EPA (353.3)

Volumetric glassware complies with Class A tolerance requirements of ASTM E 288 and NIST Circular 434; it is calibrated before first use and recalibrated regularly in accordance with ASTM E 542 and NIST Procedure NBSIR 74-461. Balances are calibrated regularly with weights certified traceable to the NIST national mass standard. Thermometers and temperature probes are calibrated before first use and recalibrated regularly with a thermometer traceable to NIST standards. All products are prepared according to master documents that assure manufacture according to validated methods. Batch records document raw material traceability and production and testing history for each lot manufactured.

Part Number	Size / Package Type	Shelf Life (Unopened Container)
5461-16	500 mL natural poly	6 months
5461-4	120 mL natural poly	6 months

Recommended Storage: 2°C - 8°C (36°F - 46°F)

Myrlande Gilles (12/08/2022)
Quality Control
This Certificate of Analysis is designed to comply with ISO Guide 31 "Reference Materials -- Contents of Certificates and Labels."

Reagent

IC NO3 ICV_00019

ERA
A Waters Company

Certified Reference Material

▪ Certificate of Analysis ▪

Product:	1000 mg/L Nitrate as N (NO_3-N)
Catalog Number:	052-125mL, 991-500mL
Lot No.	011221m
Starting Material:	Potassium Nitrate (KNO_3)
Matrix:	18 megohm deionized water
Density:	1.0029 ± 0.0005 g/mL 20.2 °C and 749 mm Hg
Verification Method:	Ion Chromatography
Certificate Issue Date:	December 21, 2021
Expiration Date:	December 1, 2023
Revision Number:	Original

CERTIFICATION

Parameter	Certified Value[1]	Uncertainty[2]	NIST Traceability	
	mg/L	%	SRM Number[3]	Recovery %
Nitrate as N (NO_3-N)	1000	1.57	3185	101

16341 Table Mountain Pkwy ▪ Golden, CO 80403 ▪ 800.372.0122 ▪ 303.431.8454 ▪ fax 303.421.0159 ▪ www.eraqc.com

1. The **Certified Value** is the actual gravimetric/volumetric "made-to" concentration confirmed by ERA analytical verification. The certified value is monitored and the purchasers will be notified of any significant changes resulting in recertification or withdrawal of this certified reference material during the period of validity of this certificate.

2. The **Uncertainty** represents an expanded uncertainty and approximates a 95% confidence interval. The uncertainty is based on the characterization, homogeneity and stability characteristics of the product, multiplied by a coverage factor (k=2). The uncertainty applies to the product as supplied and does not take into account any required or optional dilution and/or preparations the laboratory may perform while using this product. The formula used to calculate the expanded uncertainty is:
$U_{expanded} = k * SQRT((U_{char}^2) + (U_{homogen}^2) + (U_{LTS}^2) + (U_{STS}^2) + (U_{RSS}^2))$

Where:

$U_{expanded}$ = Expanded uncertainty.
k = Coverage factor.
U_{char} = Combined standard uncertainty of the manufacturing and/or analytical verification assessment.
$U_{homogen}$ = Standard uncertainty of the homogeneity assessment.
U_{LTS} = Standard uncertainty associated with long-term stability.
U_{STS} = Standard uncertainty associated with short-term (transport) stability.
U_{RSS} = Standard uncertainty associated with repeated sampling of the product (where permitted by product use instructions).

3. Where NIST Standard Reference Materials (SRMs) are available, each analyte has been analytically traced to the NIST SRM listed. **Analytical Traceability Recovery (%)** = [(% recovery ERA certified reference material)/(% recovery NIST SRM)]*100
The traceability data shown were compiled by analyzing this ERA certified reference material and/or it's associated stock solution(s) against the applicable NIST SRMs.

4. **Metrological Traceability.** This certified reference material is metrologically traceable to NIST mass reference materials through an unbroken chain of comparisons.

5. **Storage**: 20-25°C

6. **Intended Use**: This standard is intended to be used to calibrate your analytical process and/or as a quality control check of the entire process for the analytes/matrix included in the standard.

7. **Minimum Sample Size**: ERA suggests that when subsampling this product prior to analysis, you use a minimum sample size of at least 1 mL. Using a smaller sample size may invalidate the assigned value and/or uncertainty shown.

8. **Repeat Sampling**: Repeated Sampling of this product is permitted, provided minimum sample sizes and storage instructions are adhered to.

9. **Safety**: ERA products may be hazardous and are intended for use by professional laboratory personnel trained in the competent handling of such materials. Responsibility for the safe use of these products rests entirely with the buyer and/or user. Safety Data Sheets (SDS) for all ERA products are available through our website: www.eraqc.com

If you have any questions or need technical assistance, please call ERA technical assistance at 1-800-372-0122 or send an email to info@eraqc.com.

Certifying Officer
Brian Miller

Brian Miller

Quality Officer
Matthew Seebeck

ISO 17034:2016 ACCREDITED Reference Material Producer CERT #1529.03

ISO/IEC 17025:2017 ACCREDITED Chemical Testing Laboratory CERT #1539.07

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Reagent

IC P04 cal_00030

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Certificate of Analysis

Phosphorus AA Standard, 1000 ppm P in H_2O

Lot Number: 4208152 **Product Number:** AP1KW

Manufacture Date: AUG 02, 2022
Expiration Date: JUL 2024

This is a single element solution that was prepared volumetrically to contain the certified value reported. The uncertainty associated with the certified value is the sum of the estimated errors due to the purity of the raw material, the volumetric preparation of the solution, and transpiration of the solution through the container wall.
The final solution concentration is confirmed by AA, ICP, or ICP-MS, and is traceable to NIST Standard Reference Material 3139.

Name	CAS#	Grade
Water	7732-18-5	ACS/ASTM/USP/EP
Ammonium Dihydrogen Phosphate	7722-76-1	High Purity

Test	Specification	Result	NIST SRM#
Appearance	Colorless liquid	Passed	
Phosphorus (P)	995-1005 ppm	1000 ppm	3139

Volumetric glassware complies with Class A tolerance requirements of ASTM E 288 and NIST Circular 434; it is calibrated before first use and recalibrated regularly in accordance with ASTM E 542 and NIST Procedure NBSIR 74-461. Balances are calibrated regularly with weights certified traceable to the NIST national mass standard. Thermometers and temperature probes are calibrated before first use and recalibrated regularly with a thermometer traceable to NIST standards. All products are prepared according to master documents that assure manufacture according to validated methods. Batch records document raw material traceability and production and testing history for each lot manufactured.

Part Number	Size / Package Type	Shelf Life (Unopened Container)
AP1KW-500	500 mL natural poly	24 months

Recommended Storage: 15°C - 30°C (59°F - 86°F)

Paul Brandon (08/02/2022)
Production Manager
This Certificate of Analysis is designed to comply with ISO Guide 31 "Reference Materials -- Contents of Certificates and Labels."

Reagent

NH3 CAL STD_00035

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Certificate of Analysis

Ammonia Nitrogen Standard, 1000 ppm N (1216 ppm NH_3)

Lot Number: 4208D17 **Product Number:** 5455

Manufacture Date: AUG 05, 2022
Expiration Date: JAN 2024

The certified value reported is the prepared value based upon the method of preparation of the material. The uncertainty in the prepared value is based upon the volumetric method of preparation.

Name	CAS#	Grade
Water	7732-18-5	ACS/ASTM/USP/EP
Ammonium Chloride	12125-02-9	High Purity

Test	Specification	Result
Appearance	Colorless liquid	Passed
Nitrogen (N)	995-1005 ppm	1000 ppm

Specification	Reference
Ammonia Solution, Stock (1.0 mL = 1.0 mg ammonia nitrogen)	ASTM (D 3590 A)
Ammonia Solution, Stock (1.0 mL = 1.0 mg ammonium nitrogen)	ASTM (D 3590 B)
Stock Ammonium Chloride Solution	APHA (4500-CN- L)
Stock Ammonium Solution	APHA (4500-NH3 C)
Stock Ammonium chloride Solution	APHA (4500-NH3 D)
Stock Ammonium Solution	APHA (4500-NH3 F)
Ammonium Chloride, Stock Solution, 1.0 mL = 1.0 mg NH3-N	EPA (351.2)
Ammonium Chloride, Stock Solution, 1.0 mL = 1.0 mg NH3-N	EPA (350.2)
Ammonium Chloride, Stock Solution, 1.0 mL = 1.0 mg NH3-N	EPA (350.3)
Ammonium Chloride, Stock Solution, 1.0 mL = 1.0 mg NH3-N	EPA (351.4)
Stock Solution, 1.0 mL = 1.0 mg NH3-N	EPA (350.1)
Ammonium Chloride, Stock Solution, 1.0 mL = 1.0 mg NH3-N	EPA (351.3)

Volumetric glassware complies with Class A tolerance requirements of ASTM E 288 and NIST Circular 434; it is calibrated before first use and recalibrated regularly in accordance with ASTM E 542 and NIST Procedure NBSIR 74-461. Balances are calibrated regularly with weights certified traceable to the NIST national mass standard. Thermometers and temperature probes are calibrated before first use and recalibrated regularly with a thermometer traceable to NIST standards. All products are prepared according to master documents that assure manufacture according to validated methods. Batch records document raw material traceability and production and testing history for each lot manufactured.

Part Number	Size / Package Type	Shelf Life (Unopened Container)
5455-16	500 mL natural poly	18 months

Recommended Storage: 15°C - 30°C (59°F - 86°F)

Paul Brandon (08/05/2022)

Production Manager

This Certificate of Analysis is designed to comply with ISO Guide 31 "Reference Materials -- Contents of Certificates and Labels."

Reagent

NH3 ICV STD_00034

300 Technology Drive
Christiansburg, VA 24073 · USA
inorganicventures.com
tel: 800.669.6799 · 540.585.3030
fax: 540.585.3012
info@inorganicventures.com

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Ion Chromatography Solution
Catalog Number:	ICNNH41
Lot Number:	S2-NH700817
Matrix:	H2O
Value / Analyte(s):	1 000 µg/mL ea: Ammonium as N
Starting Material:	Ammonium chloride
Starting Material Lot#:	1736
Starting Material Purity:	99.8500%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 999 ± 4 µg/mL

Density: 0.999 g/mL (measured at 20 ± 4 ºC)

Assay Information:

Assay Method #1 **995 ± 4 µg/mL**
Fajans NIST SRM 999c Lot Number: 999c

Assay Method #2 **1002 ± 4 µg/mL**
IC Assay NIST SRM 194a Lot Number: 194a

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\,(u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)(u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

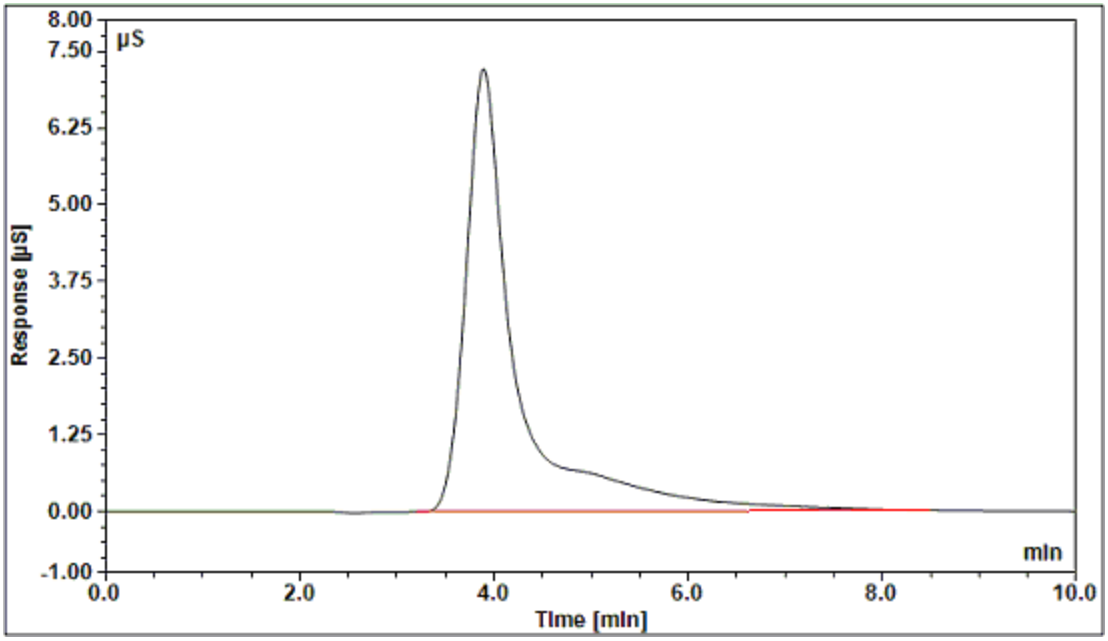
4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 CHROMATOGRAM



Dionex ICS-2000 Ion Chromatograph

Analytical Column:	IonPac CS18 2 x 250 mm	**Eluent:**	10 mM MSA
Guard Column:	IonPac CG18 2 x 50 mm	**Eluent Flow Rate:**	0.25 mL/min
Anion Self Regen Suppressor/ Chemical Suppression:	N/A	**Column Temp:**	30°C
		Cell Temp:	35°C
Cation Self Regen Suppressor/ Chemical Suppression:	CERS 500 2mm	**Scale X-Axis:**	minutes
		Scale Y-Axis:	8 µS/cm
		Concentration:	10 µg/g
Suppressor Current/ Chemical Suppressant:	8 mA		

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

January 25, 2021

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **January 25, 2025**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Prepared By:

Uyen Truong
Supervisor, Product Documentation

Certificate Approved By:

Michael Booth
Director, Quality Control

Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director

GENERAL CHEMISTRY

COVER PAGE
GENERAL CHEMISTRY

Lab Name: Eurofins Denver Job Number: 280-176864-1

SDG No.:

Project: RVAAP FWGW Spring 2023

Client Sample ID	Lab Sample ID
LL12mw-244-230401-GW	280-176864-1

Comments:

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

Client Sample ID: LL12mw-244-230401-GW
Lab Sample ID: 280-176864-1
Lab Name: Eurofins Denver
Job No.: 280-176864-1
SDG ID.:
Matrix: Water
Date Sampled: 05/22/2023 11:22
Reporting Basis: WET
Date Received: 05/23/2023 09:30

Analyte	Result	LOQ	LOD	DL	Units	C	Q	DIL	Method
Ammonia as N	0.22	0.10	0.050	0.029	mg/L			1	350.1
Nitrate as N	0.20	0.50	0.20	0.090	mg/L	U	M	1	9056

2-IN
CALIBRATION QUALITY CONTROL
GENERAL CHEMISTRY

Lab Name: Eurofins Denver Job No.: 280-176864-1

SDG No.:

Analyst: MMP Batch Start Date: 06/01/2023

Reporting Units: mg/L Analytical Batch No.: 614730

Sample Number	QC Type	Time	Analyte	Result	Spike Amount	(%) Recovery	Limits	Qual	Reagent
14	ICV	10:04	Ammonia as N	2.48	2.51	99	90-110		350.1 ICV_00566
15	ICVL	10:07	Ammonia as N	0.504	0.501	101	90-110		350.1 ICV_00566
16	ICB	10:09	Ammonia as N	0.050				U	
124	CCV	14:57	Ammonia as N	2.57	2.50	103	90-110		350.1 cal_00585
125	CCVL	15:00	Ammonia as N	0.519	0.500	104	90-110		350.1 cal_00585
126	CCB	15:03	Ammonia as N	0.050				U	
139	CCV	15:38	Ammonia as N	2.57	2.50	103	90-110		350.1 cal_00585
140	CCVL	15:40	Ammonia as N	0.525	0.500	105	90-110		350.1 cal_00585
141	CCB	15:43	Ammonia as N	0.050				U	
152	CCV	16:12	Ammonia as N	2.63	2.50	105	90-110		350.1 cal_00585
153	CCVL	16:15	Ammonia as N	0.537	0.500	107	90-110		350.1 cal_00585
154	CCB	16:18	Ammonia as N	0.050				U	

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM II-IN

2-IN
CALIBRATION QUALITY CONTROL
GENERAL CHEMISTRY

Lab Name: Eurofins Denver Job No.: 280-176864-1

SDG No.:

Analyst: MEC Batch Start Date: 05/18/2023

Reporting Units: mg/L Analytical Batch No.: 612961

Sample Number	QC Type	Time	Analyte	Result	Spike Amount	(%) Recovery	Limits	Qual	Reagent
7	ICV	13:25	Nitrate as N	1.95	2.00	98	90-110		IC ICV 5_00405
8	ICB	13:40	Nitrate as N	0.20				U	

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM II-IN

2-IN
CALIBRATION QUALITY CONTROL
GENERAL CHEMISTRY

Lab Name: Eurofins Denver Job No.: 280-176864-1

SDG No.:

Analyst: MEC Batch Start Date: 05/23/2023

Reporting Units: mg/L Analytical Batch No.: 613474

Sample Number	QC Type	Time	Analyte	Result	Spike Amount	(%) Recovery	Limits	Qual	Reagent
1	CCV	12:08	Nitrate as N	2.43	2.50	97	90-110		IC LCS_01954
2	CCB	12:23	Nitrate as N	0.20				U	
17	CCV	18:00	Nitrate as N	2.51	2.50	100	90-110		IC LCS_01954
18	CCB	18:15	Nitrate as N	0.20				U	

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM II-IN

3-IN
METHOD BLANK
GENERAL CHEMISTRY

Lab Name: Eurofins Denver Job No.: 280-176864-1

SDG No.:

Method	Lab Sample ID	Analyte	Result	Qual	Units	LOQ	Dil
Batch ID: 614730 Date: 06/01/2023 15:27							
350.1	MB 280-614730/135	Ammonia as N	0.0290	J	mg/L	0.10	1
Batch ID: 613474 Date: 05/23/2023 13:23							
9056	MB 280-613474/6	Nitrate as N	0.20	U	mg/L	0.50	1

7A-IN
LAB CONTROL SAMPLE
GENERAL CHEMISTRY

Lab Name: Eurofins Denver Job No.: 280-176864-1

SDG No.:

Matrix: Water

Method	Lab Sample ID	Analyte	Result	C	Unit	Spike Amount	Pct. Rec.	Limits	RPD	RPD Limit	Q
Batch ID: 614730 Date: 06/01/2023 15:24											
						LCS Source: 350.1 cal_00585					
350.1	LCS 280-614730/134	Ammonia as N	2.58		mg/L	2.50	103	90-110			
Batch ID: 613474 Date: 05/23/2023 12:53											
						LCS Source: IC LCS_01954					
9056	LCS 280-613474/4	Nitrate as N	2.54		mg/L	2.50	102	88-111	0	10	

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIIA-IN

7A-IN
LAB CONTROL SAMPLE DUPLICATE
GENERAL CHEMISTRY

Lab Name: Eurofins Denver Job No.: 280-176864-1

SDG No.:

Matrix: Water

Method	Lab Sample ID	Analyte	Result	C	Unit	Spike Amount	Pct. Rec.	Limits	RPD	RPD Limit	Q
Batch ID: 613474 Date: 05/23/2023 13:08											
						LCSD Source: IC LCS_01954					
9056	LCSD 280-613474/5	Nitrate as N	2.54		mg/L	2.50	102	88-111	0	10	

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIIA-IN

7A-IN
METHOD REPORTING LIMIT CHECK
GENERAL CHEMISTRY

Lab Name: Eurofins Denver Job No.: 280-176864-1

SDG No.:

Matrix: Water

Method	Lab Sample ID	Analyte	Result	C	Unit	Spike Amount	Pct. Rec.	Limits	RPD	RPD Limit	Q
Batch ID: 613474	Date: 05/23/2023 12:38										
						LCS Source: IC Cal low_00709					
9056	MRL 280-613474/3	Nitrate as N	0.230	J	mg/L	0.250	92	50-150			M

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIIA-IN

16A-IN
INITIAL CALIBRATION SUMMARY

Lab Name: Eurofins Denver Job No: 280-176864-1

SDG No.: Analysis Batch No.: 612961

Instrument ID: WC_IonChrom10 Calibration ID: 80543

Start Date: 05/18/2023 11:56 End Date: 05/18/2023 13:10

Analytical Method: 9056

Analyte	Corr. Coeff.	Slope	Intercept	Calib. Type	Weighting
Nitrate as N	0.9995	45000000	-1160000	WLR	Inverse Conc

16B-IN
INITIAL CALIBRATION

Lab Name: Eurofins Denver | Job No: 280-176864-1

SDG No.: | Analysis Batch No.: 612961

Instrument ID: WC_IonChrom10 | Calibration ID: 80543

Start Date: 05/18/2023 11:56 | End Date: 05/18/2023 13:10

Analytical Method: 9056 | Concentration Units: ug/mL

Analyte	True	Found	%D	True	Found	%D	True	Found	%D
Nitrate as N	0.20	0.19	-5	0.50	0.54	7	1.0	0.98	-2

16B-IN
INITIAL CALIBRATION

Lab Name: Eurofins Denver | Job No: 280-176864-1

SDG No.: | Analysis Batch No.: 612961

Instrument ID: WC_IonChrom10 | Calibration ID: 80543

Start Date: 05/18/2023 11:56 | End Date: 05/18/2023 13:10

Analytical Method: 9056 | Concentration Units: ug/mL

Analyte	True	Found	%D	True	Found	%D	True	Found	%D
Nitrate as N	2.5	2.5	-1	5.0	5.0	0			

9-IN
DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: Eurofins Denver Job Number: 280-176864-1

SDG Number:

Matrix: Water Instrument ID: WC_SKALAR_01

Method: 350.1 DL Date: 04/29/2022 13:46

Analyte	Wavelength/ Mass	LOQ (mg/L)	DL (mg/L)
Ammonia as N		0.1	0.029

9-IN
CALIBRATION BLANK DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: Eurofins Denver Job Number: 280-176864-1

SDG Number:

Matrix: Water Instrument ID: WC_SKALAR_01

Method: 350.1 XMDL Date: 03/28/2011 13:26

Analyte	Wavelength/ Mass	XRL (mg/L)	XMDL (mg/L)
Ammonia as N		0.1	0.0225

9-IN
DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: Eurofins Denver Job Number: 280-176864-1

SDG Number:

Matrix: Water Instrument ID: WC_IonChrom10

Method: 9056 DL Date: 06/21/2019 00:00

Analyte	Wavelength/ Mass	LOQ (mg/L)	DL (mg/L)
Nitrate as N		0.5	0.0901

9-IN
CALIBRATION BLANK DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: Eurofins Denver Job Number: 280-176864-1

SDG Number:

Matrix: Water Instrument ID: WC_IonChrom10

Method: 9056 XMDL Date: 06/21/2019 00:00

Analyte	Wavelength/ Mass	XRL (mg/L)	XMDL (mg/L)
Nitrate as N		0.5	0.0901

13-IN
ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: Eurofins Denver Job No.: 280-176864-1

SDG No.:

Instrument ID: WC_SKALAR_01 Analysis Method: 350.1

Start Date: 06/01/2023 09:29 End Date: 06/01/2023 17:23

Lab Sample Id	D/F	Type	Time	Analytes																								
				NH3																								
ZZZZZZ			09:29																									
ZZZZZZ			09:31																									
ZZZZZZ			09:35																									
ZZZZZZ			09:37																									
ZZZZZZ			09:41																									
ZZZZZZ			09:43																									
ZZZZZZ			09:46																									
ZZZZZZ			09:48																									
ZZZZZZ			09:51																									
ZZZZZZ			09:53																									
ZZZZZZ			09:56																									
ZZZZZZ			09:59																									
ZZZZZZ			10:01																									
ICV 280-614730/14	1		10:04	X																								
ICVL 280-614730/15	1		10:07	X																								
ICB 280-614730/16	1		10:09	X																								
ZZZZZZ			10:12																									
ZZZZZZ			10:15																									
ZZZZZZ			10:18																									
ZZZZZZ			10:20																									
ZZZZZZ			10:23																									
ZZZZZZ			10:25																									
ZZZZZZ			10:28																									
ZZZZZZ			10:31																									
ZZZZZZ			10:33																									
ZZZZZZ			10:36																									
CCV 280-614730/27			10:39																									
CCVL 280-614730/28			10:42																									
CCB 280-614730/29			10:44																									
ZZZZZZ			10:47																									
ZZZZZZ			10:49																									
ZZZZZZ			10:52																									
ZZZZZZ			10:55																									
ZZZZZZ			10:58																									
ZZZZZZ			11:00																									
ZZZZZZ			11:03																									
ZZZZZZ			11:06																									
ZZZZZZ			11:08																									
ZZZZZZ			11:11																									
CCV 280-614730/40			11:13																									
CCVL 280-614730/41			11:16																									

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: Eurofins Denver Job No.: 280-176864-1

SDG No.:

Instrument ID: WC_SKALAR_01 Analysis Method: 350.1

Start Date: 06/01/2023 09:29 End Date: 06/01/2023 17:23

Lab Sample Id	D/F	Type	Time	Analytes
				NH3
CCB 280-614730/42			11:19	
ZZZZZZ			11:22	
ZZZZZZ			11:24	
ZZZZZZ			11:28	
ZZZZZZ			11:30	
ZZZZZZ			11:32	
ZZZZZZ			11:35	
ZZZZZZ			11:38	
ZZZZZZ			11:40	
ZZZZZZ			11:43	
ZZZZZZ			11:45	
ZZZZZZ			11:48	
ZZZZZZ			11:51	
CCV 280-614730/55			11:54	
CCVL 280-614730/56			11:56	
CCB 280-614730/57			11:59	
ZZZZZZ			12:02	
ZZZZZZ			12:04	
ZZZZZZ			12:07	
ZZZZZZ			12:10	
ZZZZZZ			12:12	
ZZZZZZ			12:15	
ZZZZZZ			12:18	
ZZZZZZ			12:20	
ZZZZZZ			12:23	
ZZZZZZ			12:25	
CCV 280-614730/68			12:28	
CCVL 280-614730/69			12:31	
CCB 280-614730/70			12:34	
ZZZZZZ			12:36	
ZZZZZZ			12:39	
ZZZZZZ			12:42	
ZZZZZZ			12:44	
ZZZZZZ			12:47	
ZZZZZZ			12:50	
ZZZZZZ			12:52	
ZZZZZZ			12:55	
ZZZZZZ			12:57	
ZZZZZZ			13:00	
ZZZZZZ			13:03	
ZZZZZZ			13:06	

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: Eurofins Denver Job No.: 280-176864-1

SDG No.:

Instrument ID: WC_SKALAR_01 Analysis Method: 350.1

Start Date: 06/01/2023 09:29 End Date: 06/01/2023 17:23

Lab Sample Id	D/F	Type	Time	Analytes																								
				NH3																								
CCV 280-614730/83			13:08																									
CCVL 280-614730/84			13:11																									
CCB 280-614730/85			13:14																									
ZZZZZZ			13:16																									
ZZZZZZ			13:19																									
ZZZZZZ			13:22																									
ZZZZZZ			13:24																									
ZZZZZZ			13:27																									
ZZZZZZ			13:30																									
ZZZZZZ			13:32																									
ZZZZZZ			13:35																									
ZZZZZZ			13:37																									
ZZZZZZ			13:40																									
CCV 280-614730/96			13:43																									
CCVL 280-614730/97			13:46																									
CCB 280-614730/98			13:48																									
ZZZZZZ			13:51																									
ZZZZZZ			13:54																									
ZZZZZZ			13:57																									
ZZZZZZ			13:59																									
ZZZZZZ			14:02																									
ZZZZZZ			14:04																									
ZZZZZZ			14:07																									
ZZZZZZ			14:10																									
ZZZZZZ			14:12																									
ZZZZZZ			14:15																									
ZZZZZZ			14:17																									
ZZZZZZ			14:20																									
CCV 280-614730/111			14:23																									
CCVL 280-614730/112			14:26																									
CCB 280-614730/113			14:28																									
ZZZZZZ			14:31																									
ZZZZZZ			14:34																									
ZZZZZZ			14:36																									
ZZZZZZ			14:39																									
ZZZZZZ			14:42																									
ZZZZZZ			14:44																									
ZZZZZZ			14:47																									
ZZZZZZ			14:50																									
ZZZZZZ			14:52																									
ZZZZZZ			14:55																									

13-IN
ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: Eurofins Denver Job No.: 280-176864-1

SDG No.:

Instrument ID: WC_SKALAR_01 Analysis Method: 350.1

Start Date: 06/01/2023 09:29 End Date: 06/01/2023 17:23

Lab Sample Id	D/F	Type	Time	Analytes
				NH3
CCV 280-614730/124	1		14:57	X
CCVL 280-614730/125	1		15:00	X
CCB 280-614730/126	1		15:03	X
ZZZZZZ			15:06	
ZZZZZZ			15:08	
ZZZZZZ			15:12	
ZZZZZZ			15:14	
ZZZZZZ			15:16	
ZZZZZZ			15:19	
ZZZZZZ			15:22	
LCS 280-614730/134	1	T	15:24	X
MB 280-614730/135	1	T	15:27	X
ZZZZZZ			15:30	
ZZZZZZ			15:32	
ZZZZZZ			15:35	
CCV 280-614730/139	1		15:38	X
CCVL 280-614730/140	1		15:40	X
CCB 280-614730/141	1		15:43	X
ZZZZZZ			15:46	
ZZZZZZ			15:48	
ZZZZZZ			15:51	
ZZZZZZ			15:54	
ZZZZZZ			15:56	
280-176864-1	1	T	15:59	X
ZZZZZZ			16:02	
ZZZZZZ			16:04	
ZZZZZZ			16:07	
ZZZZZZ			16:10	
CCV 280-614730/152	1		16:12	X
CCVL 280-614730/153	1		16:15	X
CCB 280-614730/154	1		16:18	X
ZZZZZZ			16:20	
ZZZZZZ			16:23	
ZZZZZZ			16:26	
ZZZZZZ			16:28	
ZZZZZZ			16:31	
ZZZZZZ			16:34	
ZZZZZZ			16:36	
ZZZZZZ			16:39	
ZZZZZZ			16:42	
ZZZZZZ			16:44	

13-IN
ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: Eurofins Denver Job No.: 280-176864-1

SDG No.:

Instrument ID: WC_SKALAR_01 Analysis Method: 350.1

Start Date: 06/01/2023 09:29 End Date: 06/01/2023 17:23

Lab Sample Id	D/F	Type	Time	Analytes																								
				NH3																								
ZZZZZZ			16:46																									
ZZZZZZ			16:50																									
CCV 280-614730/167			16:52																									
CCVL 280-614730/168			16:55																									
CCB 280-614730/169			16:58																									
ZZZZZZ			17:00																									
ZZZZZZ			17:03																									
ZZZZZZ			17:05																									
CCV 280-614730/173			17:08																									
CCVL 280-614730/174			17:11																									
CCB 280-614730/175			17:14																									
ZZZZZZ			17:16																									
ZZZZZZ			17:19																									
ZZZZZZ			17:23																									

Prep Types:
T = Total/NA

13-IN
ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: Eurofins Denver Job No.: 280-176864-1

SDG No.:

Instrument ID: WC_IonChrom10 Analysis Method: 9056

Start Date: 05/18/2023 11:56 End Date: 05/19/2023 11:12

Lab Sample Id	D/F	Type	Time	Analytes
				NO3
STD 280-612961/1 IC			11:56	X
STD 280-612961/2 IC	1		12:11	X
STD 280-612961/3 IC	1		12:26	X
STD 280-612961/4 IC	1		12:40	X
STD 280-612961/5 IC	1		12:55	X
STD 280-612961/6 IC	1		13:10	X
ICV 280-612961/7	1		13:25	X
ICB 280-612961/8	1		13:40	X
RTC 280-612961/9			13:55	
ZZZZZZ			14:10	
ZZZZZZ			14:25	
ZZZZZZ			14:40	
ZZZZZZ			14:55	
ZZZZZZ			15:10	
ZZZZZZ			15:25	
ZZZZZZ			15:40	
ZZZZZZ			15:56	
ZZZZZZ			16:11	
ZZZZZZ			16:26	
ZZZZZZ			16:41	
ZZZZZZ			16:56	
ZZZZZZ			17:11	
ZZZZZZ			17:26	
CCV 280-612961/24			17:41	
CCB 280-612961/25			17:56	
ZZZZZZ			18:11	
ZZZZZZ			18:26	
ZZZZZZ			18:41	
ZZZZZZ			18:56	
ZZZZZZ			19:11	
ZZZZZZ			19:26	
ZZZZZZ			19:41	
ZZZZZZ			19:56	
ZZZZZZ			20:11	
ZZZZZZ			20:27	
CCV 280-612961/36			20:42	
CCB 280-612961/37			20:57	
ZZZZZZ			21:12	
ZZZZZZ			21:27	
ZZZZZZ			21:42	
ZZZZZZ			21:57	

13-IN
ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: Eurofins Denver Job No.: 280-176864-1

SDG No.:

Instrument ID: WC_IonChrom10 Analysis Method: 9056

Start Date: 05/18/2023 11:56 End Date: 05/19/2023 11:12

Lab Sample Id	D/F	Type	Time	Analytes
				NO3
ZZZZZZ			22:12	
ZZZZZZ			22:27	
ZZZZZZ			22:42	
ZZZZZZ			22:57	
ZZZZZZ			23:12	
ZZZZZZ			23:26	
CCV 280-612961/48			23:41	
CCB 280-612961/49			23:56	
ZZZZZZ			00:11	
ZZZZZZ			00:26	
ZZZZZZ			00:41	
ZZZZZZ			00:56	
ZZZZZZ			01:11	
ZZZZZZ			01:26	
ZZZZZZ			01:41	
ZZZZZZ			01:56	
ZZZZZZ			02:11	
ZZZZZZ			02:26	
CCV 280-612961/60			02:42	
CCB 280-612961/61			02:57	
ZZZZZZ			03:12	
ZZZZZZ			03:27	
ZZZZZZ			03:42	
ZZZZZZ			03:57	
ZZZZZZ			04:12	
ZZZZZZ			04:27	
ZZZZZZ			04:42	
ZZZZZZ			04:57	
ZZZZZZ			05:12	
ZZZZZZ			05:27	
CCV 280-612961/72			05:42	
CCB 280-612961/73			05:57	
ZZZZZZ			06:12	
ZZZZZZ			06:27	
ZZZZZZ			06:42	
ZZZZZZ			06:57	
ZZZZZZ			07:12	
ZZZZZZ			07:27	
ZZZZZZ			07:42	
ZZZZZZ			07:57	
ZZZZZZ			08:12	

13-IN
ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: Eurofins Denver Job No.: 280-176864-1

SDG No.:

Instrument ID: WC_IonChrom10 Analysis Method: 9056

Start Date: 05/18/2023 11:56 End Date: 05/19/2023 11:12

Lab Sample Id	D/F	Type	Time	Analytes																								
				NO3																								
ZZZZZZ			08:27																									
CCV 280-612961/84			08:42																									
CCB 280-612961/85			08:57																									
ZZZZZZ			09:12																									
ZZZZZZ			09:27																									
ZZZZZZ			09:42																									
ZZZZZZ			09:57																									
ZZZZZZ			10:12																									
ZZZZZZ			10:27																									
ZZZZZZ			10:42																									
CCV 280-612961/93			10:57																									
CCB 280-612961/107			11:12																									

Prep Types:
=

13-IN
ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: Eurofins Denver Job No.: 280-176864-1

SDG No.:

Instrument ID: WC_IonChrom10 Analysis Method: 9056

Start Date: 05/23/2023 12:08 End Date: 05/24/2023 00:16

Lab Sample Id	D/F	Type	Time	Analytes																								
				NO3																								
CCV 280-613474/1	1		12:08	X																								
CCB 280-613474/2	1		12:23	X																								
MRL 280-613474/3	1	T	12:38	X																								
LCS 280-613474/4	1	T	12:53	X																								
LCSD 280-613474/5	1	T	13:08	X																								
MB 280-613474/6	1	T	13:23	X																								
280-176864-1	1	T	15:30	X																								
ZZZZZZ			15:45																									
ZZZZZZ			16:00																									
ZZZZZZ			16:15																									
ZZZZZZ			16:30																									
ZZZZZZ			16:45																									
ZZZZZZ			17:00																									
ZZZZZZ			17:15																									
ZZZZZZ			17:30																									
ZZZZZZ			17:45																									
CCV 280-613474/17	1		18:00	X																								
CCB 280-613474/18	1		18:15	X																								
ZZZZZZ			18:30																									
ZZZZZZ			18:45																									
ZZZZZZ			19:00																									
CCV 280-613474/22			19:15																									
CCB 280-613474/23			19:30																									
ZZZZZZ			19:45																									
ZZZZZZ			20:00																									
ZZZZZZ			20:15																									
ZZZZZZ			20:30																									
ZZZZZZ			20:46																									
ZZZZZZ			21:01																									
ZZZZZZ			21:16																									
ZZZZZZ			21:31																									
ZZZZZZ			21:46																									
ZZZZZZ			22:01																									
CCV 280-613474/34			22:16																									
CCB 280-613474/35			22:31																									
ZZZZZZ			22:46																									
ZZZZZZ			23:01																									
ZZZZZZ			23:16																									
ZZZZZZ			23:31																									
ZZZZZZ			23:46																									
CCV 280-613474/41			00:01																									

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: Eurofins Denver Job No.: 280-176864-1

SDG No.:

Instrument ID: WC_IonChrom10 Analysis Method: 9056

Start Date: 05/23/2023 12:08 End Date: 05/24/2023 00:16

Lab Sample Id	D/F	Type	Time	Analytes																								
				NO3																								
CCB 280-613474/42			00:16																									

Prep Types:
T = Total/NA

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: Eurofins Denver Job No.: 280-176864-1

SDG No.:

Batch Number: 614730 Batch Start Date: 06/01/23 09:29 Batch Analyst: Peterson, McKenzy M

Batch Method: 350.1 Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	ClResPres	InitialAmount	FinalAmount	Initial pH	350.1 cal 00585	350.1 ICV 00566
ICV 280-614730/14		350.1		no	100 mL	100 mL	<2 SU		2.5 mL
ICVL 280-614730/15		350.1		no	100 mL	100 mL	<2 SU		0.5 mL
ICB 280-614730/16		350.1		no	30 mL	30 mL	<2 SU		
CCV 280-614730/124		350.1		no	100 mL	100 mL	<2 SU	2.5 mL	
CCVL 280-614730/125		350.1		no	100 mL	100 mL	<2 SU	0.5 mL	
CCB 280-614730/126		350.1		no	10 mL	10 mL	<2 SU		
LCS 280-614730/134		350.1		no	100 mL	100 mL	<2 SU	2.5 mL	
MB 280-614730/135		350.1		no	30 mL	30 mL	<2 SU		
CCV 280-614730/139		350.1		no	100 mL	100 mL	<2 SU	2.5 mL	
CCVL 280-614730/140		350.1		no	100 mL	100 mL	<2 SU	0.5 mL	
CCB 280-614730/141		350.1		no	10 mL	10 mL	<2 SU		
280-176864-B-1	LL12mw-244-230401-GW	350.1	T	no	10 mL	10 mL	<2 SU		
CCV 280-614730/152		350.1		no	100 mL	100 mL	<2 SU	2.5 mL	
CCVL 280-614730/153		350.1		no	100 mL	100 mL	<2 SU	0.5 mL	
CCB 280-614730/154		350.1		no	10 mL	10 mL	<2 SU		

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.

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: Eurofins Denver Job No.: 280-176864-1

SDG No.:

Batch Number: 614730 Batch Start Date: 06/01/23 09:29 Batch Analyst: Peterson, McKenzy M

Batch Method: 350.1 Batch End Date:

Batch Notes	
Residual Chlorine Indicator ID	m/a
pH Indicator ID	HC293086
Acid used for pH adjustment	SulfuricAcid_00288
Sodium Nitroprusside ID	Na Nitro_00051 Na Salicylate_00064
Hypochlorite ID	Na Hypo_00052
EDTA Buffer ID	Buffer A_00040
Potassium Sodium Tartrate ID	Buffer B_00059
Carrier Identification	Ammonia Rinse_00057
Sodium Salicylate ID	Sodium Sal_00028
Pipette/Syringe/Dispenser ID	SAH5000, 1000 INTERCESSOR, BWH 200

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.

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: Eurofins Denver Job No.: 280-176864-1

SDG No.:

Batch Number: 612961 Batch Start Date: 05/18/23 11:56 Batch Analyst: Collins, Michael E

Batch Method: 9056 Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	Cl ICV Std 00006	IC CAL cl/so4 00480	IC Cal low 00709	IC ICV 5 00405
STD 280-612961/2 IC		9056		10 mL	10 mL		0.1 mL	0.08 mL	
STD 280-612961/3 IC		9056		10 mL	10 mL		0.2 mL	0.2 mL	
STD 280-612961/4 IC		9056		10 mL	10 mL		2.4 mL	0.4 mL	
STD 280-612961/5 IC		9056		10 mL	10 mL		4.8 mL	1 mL	
STD 280-612961/6 IC		9056		10 mL	10 mL		8 mL	2 mL	
ICV 280-612961/7		9056		10 mL	10 mL	0.8 mL			0.8 mL
ICB 280-612961/8		9056		10 mL	10 mL				

Lab Sample ID	Client Sample ID	Method Chain	Basis	IC SO4 ICV 00024					
STD 280-612961/2 IC		9056							
STD 280-612961/3 IC		9056							
STD 280-612961/4 IC		9056							
STD 280-612961/5 IC		9056							
STD 280-612961/6 IC		9056							
ICV 280-612961/7		9056		0.8 mL					
ICB 280-612961/8		9056							

Batch Notes	
Filter ID	SF020E
Pipette/Syringe/Dispenser ID	ARM5000, 100HEX, 200CJ, 100IC
Sufficient Volume for Batch QC	yes
Eluent 1 ID	IC10 Eluent_00006
Batch Comment	MEC

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.

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: Eurofins Denver Job No.: 280-176864-1

SDG No.:

Batch Number: 612961 Batch Start Date: 05/18/23 11:56 Batch Analyst: Collins, Michael E

Batch Method: 9056 Batch End Date:

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.

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: Eurofins Denver Job No.: 280-176864-1

SDG No.:

Batch Number: 613474 Batch Start Date: 05/23/23 12:08 Batch Analyst: Collins, Michael E

Batch Method: 9056 Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	IC CAL cl/so4 00480	IC Cal low 00709	IC LCS 01954	
CCV 280-613474/1		9056		10 mL	10 mL			10 mL	
CCB 280-613474/2		9056		10 mL	10 mL				
MRL 280-613474/3		9056		10 mL	10 mL	0.2 mL	0.1 mL		
LCS 280-613474/4		9056		10 mL	10 mL			10 mL	
LCSD 280-613474/5		9056		10 mL	10 mL			10 mL	
MB 280-613474/6		9056		10 mL	10 mL				
280-176864-A-1	LL12mw-244-230401-GW	9056	T	10 mL	10 mL				
CCV 280-613474/17		9056		10 mL	10 mL			10 mL	
CCB 280-613474/18		9056		10 mL	10 mL				

Batch Notes	
Filter ID	SF020E
Pipette/Syringe/Dispenser ID	ARM5000, 1000HEX, 200CJ, 100IC
Sufficient Volume for Batch QC	yes
Eluent 1 ID	IC10 Eluent_00006
Batch Comment	MEC

Basis	Basis Description
T	Total/NA

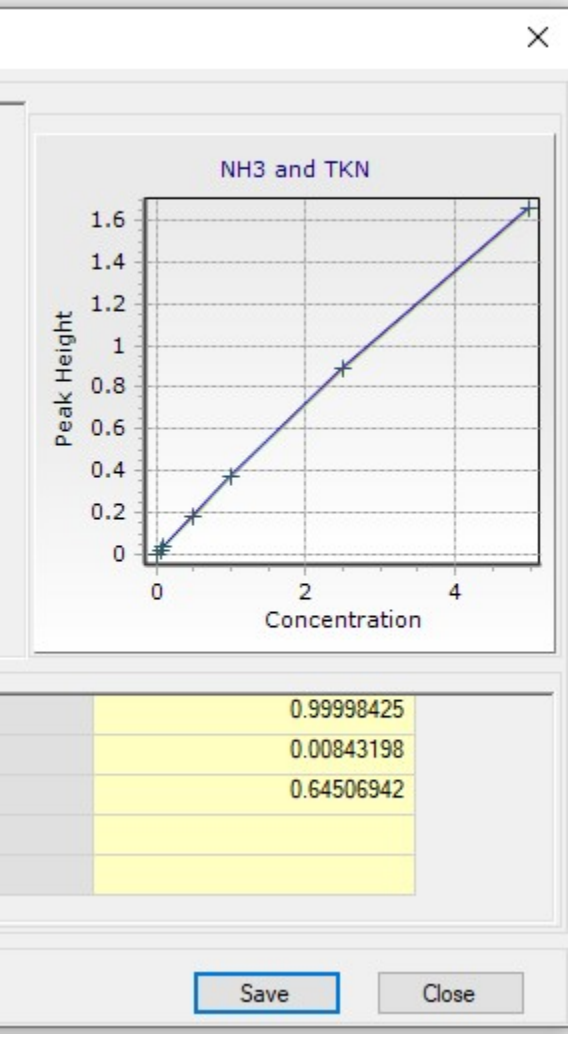
The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

Select/deselect Standards

	SerialNumber	Cup position	Sample Type	Identity	Concentration	Corrected Height	Result	Use this	Y Residuals	Relative Error(%)
1	4	ST1	S1	0 mg/L	0.000	-0.002	0.005	☑		
2	5	ST2	S2	0.05	0.050	0.016	0.054	☑	8.71%	7.44%
3	6	ST3	S3	0.1	0.100	0.035	0.102	☑	2.08%	1.89%
4	7	ST4	S4	0.5	0.500	0.181	0.489	☑	-2.19%	-2.12%
5	8	ST5	S5	1	1.000	0.367	0.993	☑	-0.65%	-0.66%
6	9	ST6	S6	2.5	2.500	0.895	2.509	☑	0.32%	0.34%
7	10	ST7	S7	5	5.000	1.660	4.998	☑	-0.03%	-0.04%

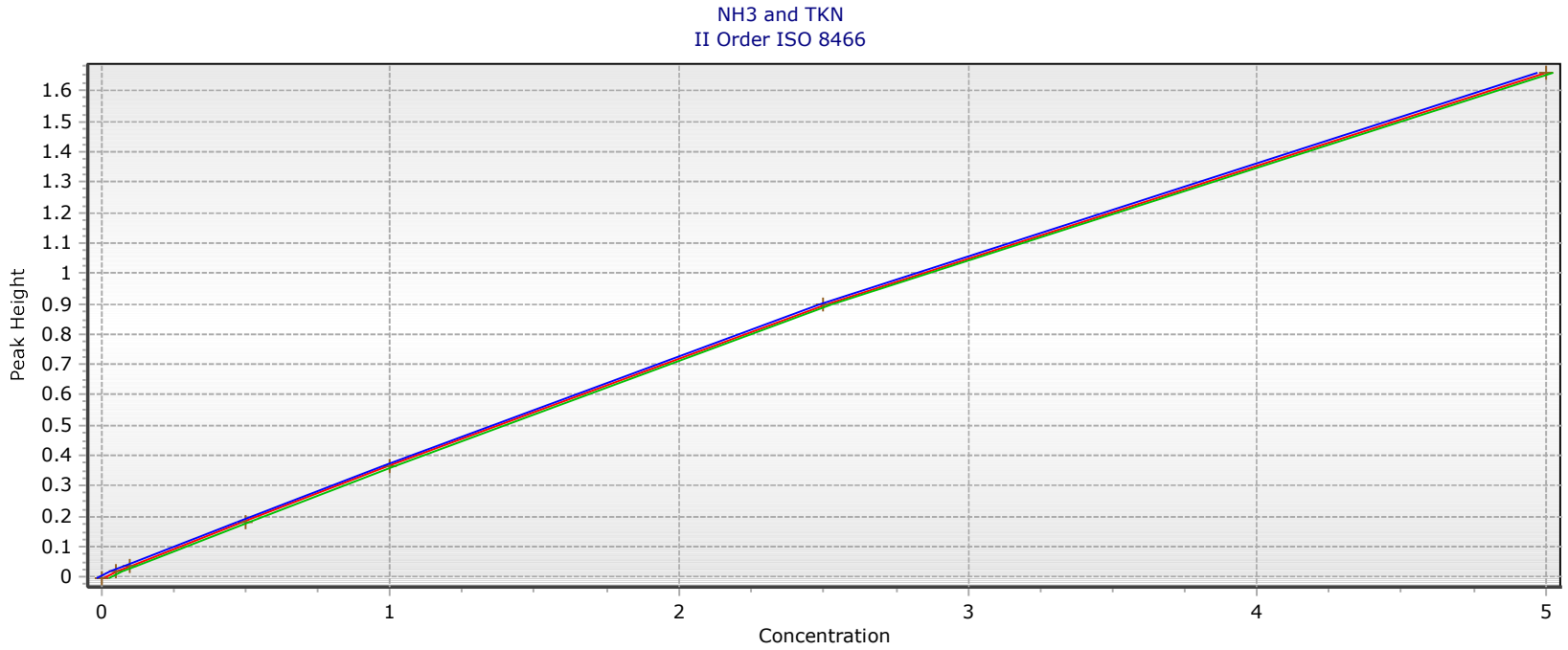
Method Name	Ammonia	a	-0.00423896	R Squared
Module Name	NH3 and TKN	b	0.38423401	Constant Sx0
Calibration Order	II Order ISO 8466	c	-0.01024847	Constant Vx0
Residual Std. Dev. (Sy)	0.00301393988710	d		
		Correlation Coefficient	0.99919962	

Calibration Order: II Order ISO 8466


NH3 and TKN
Peak Height
1.6
1.4
1.2
1
0.8
0.6
0.4
0.2
0
0
2
4
Concentration
0.99998425
0.00843198
0.64506942
Save
Close

FlowAccessV3

Date:Jun 2 2023 2:31PM

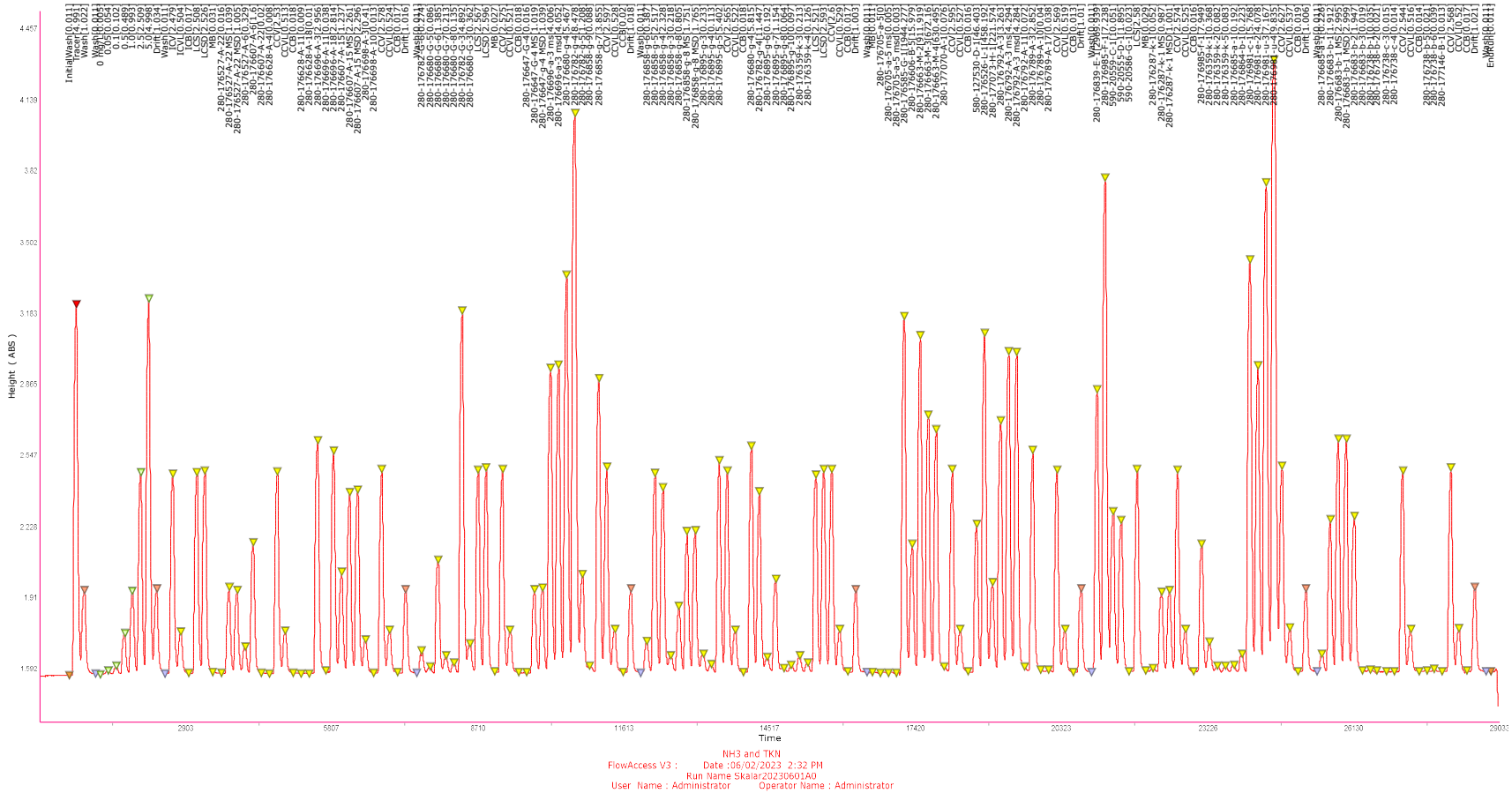


a = -0.0042389573409571 b = 0.3842340075364880 c =-0.0102484669472648 RSD = 0.00301393988710

r =0.99919961570427 R2 = 0.99998424716369

Run Name : Skalar20230601A0

User Name : Administrator Operator Name : Administrator


Height (ABS)
4.457
4.139
3.82
3.502
3.183
2.865
2.547
2.228
1.91
1.592
2903
5807
8710
11613
14517
17420
20323
23226
26130
29033
Time
NH3 and TKN
FlowAccess V3 : Date :06/02/2023 2:32 PM
Run Name Skalar20230601A0
User Name : Administrator Operator Name : Administrator

FlowAccessV3 Results Report

Run Name : Skalar20230601A0
DateTime :Jun 1 2023 9:19AM
User Name : Administrator Operator Name : Administrator

	Position	SampleType	SampleIdentity	Comments	ExternalDilution
1	IW	IW	InitialWash		1.0000
2	ST7	T	Tracer		1.0000
3	ST5	D	Wash		1.0000
4	WT	W	Wash		1.0000
5	ST1	S1	0 mg/L		1.0000
6	ST2	S2	0.05		1.0000
7	ST3	S3	0.1		1.0000
8	ST4	S4	0.5		1.0000
9	ST5	S5	1.0		1.0000
10	ST6	S6	2.5		1.0000
11	ST7	S7	5.0		1.0000
12	ST5	D	Drift		1.0000
13	WT	W	Wash		1.0000
14	ST8	U	ICV		1.0000
15	ST9	U	ICVL		1.0000
16	ST1	U	ICB		1.0000
17	D29	U	LCS		1.0000
18	D30	U	LCSD		1.0000
19	ST1	U	MB		1.0000
20	A1	U	280-176527-A-22		1.0000
21	A2	U	280-176527-A-22 MS		1.0000
22	A3	U	280-176527-A-22 MSD		1.0000
23	A4	U	280-176527-A-6		1.0000
24	A5	U	280-176607-A-6		1.0000
25	A6	U	280-176607-A-22		1.0000
26	A7	U	280-176628-A-4		1.0000
27	ST6	U	CCV		1.0000
28	ST4	U	CCVL		1.0000
29	WT	U	CCB		1.0000
30	A8	U	280-176628-A-11		1.0000
31	A9	U	280-176628-A-18		1.0000
32	A10	U	280-176696-A-3		1.0000
33	A11	U	280-176696-A-11		1.0000
34	A12	U	280-176696-A-18		1.0000
35	A13	U	280-176607-A-15		1.0000
36	A14	U	280-176607-A-15 MS		1.0000
37	A15	U	280-176607-A-15 MSD		1.0000
38	A16	U	280-176698-A-3		1.0000
39	A17	U	280-176698-A-10		1.0000
40	ST6	U	CCV		1.0000

Run Name : Skalar20230601A0
DateTime :Jun 1 2023 9:19AM
User Name : Administrator Operator Name : Administrator

	Position	SampleType	SampleIdentity	Comments	ExternalDilution
41	ST4	U	CCVL		1.0000
42	WT	U	CCB		1.0000
43	ST5	D	Drift		1.0000
44	WT	W	Wash		1.0000
45	A18	U	280-176782-G-6		1.0000
46	A19	U	280-176680-G-5		1.0000
47	A20	U	280-176680-G-6		1.0000
48	A21	U	280-176680-G-7		1.0000
49	A22	U	280-176680-G-8		1.0000
50	A23	U	280-176782-G-3		1.0000
51	A24	U	280-176680-G-3		1.0000
52	D29	U	LCS		1.0000
53	D30	U	LCSD		1.0000
54	ST1	U	MB		1.0000
55	ST6	U	CCV		1.0000
56	ST4	U	CCVL		1.0000
57	WT	U	CCB		1.0000
58	A25	U	280-176647-G-4		1.0000
59	A26	U	280-176647-G-4 MS		1.0000
60	A27	U	280-176647-g-4 MSD		1.0000
61	D1	U	280-176696-a-3 ms	client requested	1.0000
62	D2	U	280-176696-a-3 msd	client requested	1.0000
63	A28	U	280-176680-g-4		1.0000
64	A29	U	280-176782-g-4		1.0000
65	A30	U	280-176782-g-5		1.0000
66	A31	U	280-176858-g-9		1.0000
67	A32	U	280-176858-g-7		1.0000
68	ST6	U	CCV		1.0000
69	ST4	U	CCVL		1.0000
70	WT	U	CCB		1.0000
71	ST5	D	Drift		1.0000
72	WT	W	Wash		1.0000
73	A33	U	280-176858-g-6		1.0000
74	A34	U	280-176858-g-5		1.0000
75	A35	U	280-176858-g-4		1.0000
76	B1	U	280-176858-g-3		1.0000
77	B2	U	280-176858-g-8		1.0000
78	B3	U	280-176858-g-8 MS		1.0000
79	B4	U	280-176858-g-8 MSD		1.0000
80	B5	U	280-176895-g-3		1.0000

Run Name : Skalar20230601A0
DateTime :Jun 1 2023 9:19AM
User Name : Administrator Operator Name : Administrator

	Position	SampleType	SampleIdentity	Comments	ExternalDilution
81	B6	U	280-176895-g-4		1.0000
82	B7	U	280-176895-g-5		2.0000
83	ST6	U	CCV		1.0000
84	ST4	U	CCVL		1.0000
85	WT	U	CCB		1.0000
86	A28	U	280-176680-g-4	rerun @ a dilution	2.0000
87	A29	U	280-176782-g-4	rerun @ a dilution	5.0000
88	B8	U	280-176895-g-6		1.0000
89	B9	U	280-176895-g-7		1.0000
90	B10	U	280-176895-g-8		1.0000
91	B11	U	280-176895-g-10		1.0000
92	B12	U	280-176359-k-3		1.0000
93	B13	U	280-176359-k-4		1.0000
94	D29	U	LCS		1.0000
95	D30	U	LCSD		1.0000
96	ST6	U	CCV		1.0000
97	ST4	U	CCVL		1.0000
98	WT	U	CCB		1.0000
99	ST5	D	Drift		1.0000
100	WT	W	Wash		1.0000
101	ST1	U	MB		1.0000
102	B14	U	280-176705-a-5		1.0000
103	B15	U	280-176705-a-5 ms		1.0000
104	B16	U	280-176705-a-5 msd		1.0000
105	B17	U	280-176585-G-1		400.0000
106	B18	U	280-176606-B-5		10.0000
107	B19	U	280-176663-M-2		200.0000
108	B20	U	280-176663-M-3		200.0000
109	B21	U	280-176663-M-4		200.0000
110	B22	U	280-177070-A-1		1.0000
111	ST6	U	CCV		1.0000
112	ST4	U	CCVL		1.0000
113	WT	U	CCB		1.0000
114	B23	U	580-127530-D-1		25.0000
115	B24	U	280-176526-L-1		100.0000
116	B25	U	280-177073-H-1		200.0000
117	B26	U	280-176792-A-3		1.0000
118	B27	U	280-176792-A-3 ms		1.0000
119	B28	U	280-176792-A-3 msd		1.0000
120	B29	U	280-176792-A-11		1.0000

Run Name : Skalar20230601A0
DateTime :Jun 1 2023 9:19AM
User Name : Administrator Operator Name : Administrator

	Position	SampleType	SampleIdentity	Comments	ExternalDilution
121	B30	U	280-176789-A-3		1.0000
122	B31	U	280-176789-A-10		1.0000
123	B32	U	280-176789-A-17		1.0000
124	ST6	U	CCV		1.0000
125	ST4	U	CCVL		1.0000
126	WT	U	CCB		1.0000
127	ST5	D	Drift		1.0000
128	WT	W	Wash		1.0000
129	B33	U	280-176839-E-1	400x * 400x=	800.0000
130	B34	U	280-176985-F-1		1.0000
131	B35	U	590-20559-C-1		5.0000
132	C1	U	590-20555-D-1		1.0000
133	C2	U	590-20586-G-1		1.0000
134	D29	U	LCS		1.0000
135	ST1	U	MB		1.0000
136	C3	U	280-176287-k-1		1.0000
137	C4	U	280-176287-k-1 MS		1.0000
138	C5	U	280-176287-k-1 MSD		1.0000
139	ST6	U	CCV		1.0000
140	ST4	U	CCVL		1.0000
141	WT	U	CCB		1.0000
142	B34	U	280-176985-f-1	rerun @ a dilution	5.0000
143	C6	U	280-176359-k-1		1.0000
144	C7	U	280-176359-k-2		1.0000
145	C8	U	280-176359-k-5		1.0000
146	C9	U	280-176685-a-1		2.0000
147	C10	U	280-176864-b-1		1.0000
148	C11	U	280-176981-c-1		1.0000
149	C12	U	280-176981-e-2		1.0000
150	C13	U	280-176981-u-3		1.0000
151	C14	U	280-176981-u-4		1.0000
152	ST6	U	CCV		1.0000
153	ST4	U	CCVL		1.0000
154	WT	U	CCB		1.0000
155	ST5	D	Drift		1.0000
156	WT	W	Wash		1.0000
157	C9	U	280-176685-a-1	rerun @ no dilution	1.0000
158	C15	U	280-176683-b-1		1.0000
159	C16	U	280-176683-b-1 MS		1.0000
160	C17	U	280-176683-b-1 MSD		1.0000

Run Name : Skalar20230601A0
DateTime :Jun 1 2023 9:19AM
User Name : Administrator Operator Name : Administrator

	Position	SampleType	SampleIdentity	Comments	ExternalDilution
161	C18	U	280-176683-b-2		1.0000
162	C19	U	280-176683-b-3		1.0000
163	C20	U	280-176738-b-1		1.0000
164	C21	U	280-176738-b-2		1.0000
165	C22	U	280-176738-c-3		1.0000
166	C23	U	280-176738-c-4		1.0000
167	ST6	U	CCV		1.0000
168	ST4	U	CCVL		1.0000
169	WT	U	CCB		1.0000
170	C24	U	280-176738-b-5		1.0000
171	C25	U	280-176738-b-6		1.0000
172	C26	U	280-177146-B-1		1.0000
173	ST6	U	CCV		1.0000
174	ST4	U	CCVL		1.0000
175	WT	U	CCB		1.0000
176	ST5	D	Drift		1.0000
177	WT	W	Wash		1.0000
178	E	E	EndRun		1.0000

Run Name : Skalar20230601A0
DateTime :Jun 1 2023 9:19AM
User Name : Administrator Operator Name : Administrator

	NH3 and TKN- Results	NH3 and TKN-	NH3 and TKN-
1	0.011	0.0000	Jun 1 2023 9:29AM
2	4.991	1.6581	Jun 1 2023 9:31AM
3	1.022	0.3778	Jun 1 2023 9:35AM
4	0.011	0.0000	Jun 1 2023 9:37AM
5	0.005	-0.0023	Jun 1 2023 9:41AM
6	0.054	0.0164	Jun 1 2023 9:43AM
7	0.102	0.0348	Jun 1 2023 9:46AM
8	0.489	0.1813	Jun 1 2023 9:48AM
9	0.993	0.3673	Jun 1 2023 9:51AM
10	2.509	0.8951	Jun 1 2023 9:53AM
11	4.998	1.6601	Jun 1 2023 9:56AM
12	1.034	0.3823	Jun 1 2023 9:59AM
13	0.011	0.0000	Jun 1 2023 10:01AM
14	2.479	0.8853	Jun 1 2023 10:04AM
15	0.504	0.1868	Jun 1 2023 10:07AM
16	0.017	0.0022	Jun 1 2023 10:09AM
17	2.508	0.8951	Jun 1 2023 10:12AM
18	2.526	0.9008	Jun 1 2023 10:15AM
19	0.031	0.0075	Jun 1 2023 10:18AM
20	0.016	0.0018	Jun 1 2023 10:20AM
21	1.039	0.3839	Jun 1 2023 10:23AM
22	1.005	0.3716	Jun 1 2023 10:25AM
23	0.329	0.1211	Jun 1 2023 10:28AM
24	1.600	0.5844	Jun 1 2023 10:31AM
25	0.020	0.0035	Jun 1 2023 10:33AM
26	0.008	-0.0013	Jun 1 2023 10:36AM
27	2.530	0.9024	Jun 1 2023 10:39AM
28	0.513	0.1903	Jun 1 2023 10:42AM
29	0.018	0.0025	Jun 1 2023 10:44AM
30	0.009	-0.0006	Jun 1 2023 10:47AM
31	0.010	-0.0005	Jun 1 2023 10:49AM
32	2.956	1.0420	Jun 1 2023 10:52AM
33	0.038	0.0103	Jun 1 2023 10:55AM
34	2.814	0.9958	Jun 1 2023 10:58AM
35	1.237	0.4554	Jun 1 2023 11:00AM
36	2.261	0.8122	Jun 1 2023 11:03AM
37	2.296	0.8241	Jun 1 2023 11:06AM
38	0.410	0.1517	Jun 1 2023 11:08AM
39	0.013	0.0008	Jun 1 2023 11:11AM
40	2.578	0.9181	Jun 1 2023 11:13AM

Run Name : Skalar20230601A0
DateTime :Jun 1 2023 9:19AM
User Name : Administrator Operator Name : Administrator

	NH3 and TKN- Results	NH3 and TKN-	NH3 and TKN-
41	0.524	0.1944	Jun 1 2023 11:16AM
42	0.017	0.0021	Jun 1 2023 11:19AM
43	1.016	0.3755	Jun 1 2023 11:22AM
44	0.011	0.0000	Jun 1 2023 11:24AM
45	0.274	0.1004	Jun 1 2023 11:28AM
46	0.086	0.0288	Jun 1 2023 11:30AM
47	1.385	0.5082	Jun 1 2023 11:32AM
48	0.213	0.0772	Jun 1 2023 11:35AM
49	0.135	0.0473	Jun 1 2023 11:38AM
50	4.892	1.6301	Jun 1 2023 11:40AM
51	0.362	0.1335	Jun 1 2023 11:43AM
52	2.567	0.9145	Jun 1 2023 11:45AM
53	2.596	0.9240	Jun 1 2023 11:48AM
54	0.027	0.0062	Jun 1 2023 11:51AM
55	2.575	0.9172	Jun 1 2023 11:54AM
56	0.521	0.1931	Jun 1 2023 11:56AM
57	0.018	0.0028	Jun 1 2023 11:59AM
58	0.016	0.0019	Jun 1 2023 12:02PM
59	1.019	0.3768	Jun 1 2023 12:04PM
60	1.039	0.3841	Jun 1 2023 12:07PM
61	4.006	1.3706	Jun 1 2023 12:10PM
62	4.052	1.3845	Jun 1 2023 12:12PM
63	5.467	1.7902	Jun 1 2023 12:15PM
64	8.478	2.5166	Jun 1 2023 12:18PM
65	1.208	0.4450	Jun 1 2023 12:20PM
66	0.088	0.0297	Jun 1 2023 12:23PM
67	3.855	1.3248	Jun 1 2023 12:25PM
68	2.597	0.9246	Jun 1 2023 12:28PM
69	0.528	0.1959	Jun 1 2023 12:31PM
70	0.020	0.0034	Jun 1 2023 12:34PM
71	1.018	0.3763	Jun 1 2023 12:36PM
72	0.011	0.0000	Jun 1 2023 12:39PM
73	0.387	0.1430	Jun 1 2023 12:42PM
74	2.517	0.8981	Jun 1 2023 12:44PM
75	2.328	0.8347	Jun 1 2023 12:47PM
76	0.218	0.0791	Jun 1 2023 12:50PM
77	0.805	0.2985	Jun 1 2023 12:52PM
78	1.751	0.6371	Jun 1 2023 12:55PM
79	1.765	0.6420	Jun 1 2023 12:57PM
80	0.233	0.0848	Jun 1 2023 1:00PM

Run Name : Skalar20230601A0
DateTime :Jun 1 2023 9:19AM
User Name : Administrator Operator Name : Administrator

	NH3 and TKN- Results	NH3 and TKN-	NH3 and TKN-
81	0.113	0.0389	Jun 1 2023 1:03PM
82	5.402	0.9589	Jun 1 2023 1:06PM
83	2.565	0.9137	Jun 1 2023 1:08PM
84	0.522	0.1937	Jun 1 2023 1:11PM
85	0.018	0.0027	Jun 1 2023 1:14PM
86	5.815	1.0262	Jun 1 2023 1:16PM
87	11.447	0.8217	Jun 1 2023 1:19PM
88	0.192	0.0690	Jun 1 2023 1:22PM
89	1.154	0.4254	Jun 1 2023 1:24PM
90	0.064	0.0201	Jun 1 2023 1:27PM
91	0.097	0.0329	Jun 1 2023 1:30PM
92	0.213	0.0771	Jun 1 2023 1:32PM
93	0.126	0.0441	Jun 1 2023 1:35PM
94	2.521	0.8994	Jun 1 2023 1:37PM
95	2.593	0.9230	Jun 1 2023 1:40PM
96	2.600	0.9255	Jun 1 2023 1:43PM
97	0.529	0.1961	Jun 1 2023 1:46PM
98	0.017	0.0022	Jun 1 2023 1:48PM
99	1.003	0.3707	Jun 1 2023 1:51PM
100	0.011	0.0000	Jun 1 2023 1:54PM
101	0.011	0.0000	Jun 1 2023 1:57PM
102	0.000	-0.0041	Jun 1 2023 1:59PM
103	0.005	-0.0024	Jun 1 2023 2:02PM
104	0.003	-0.0031	Jun 1 2023 2:04PM
105	1944.277	1.6213	Jun 1 2023 2:07PM
106	15.979	0.5836	Jun 1 2023 2:10PM
107	911.919	1.5346	Jun 1 2023 2:12PM
108	672.160	1.1713	Jun 1 2023 2:15PM
109	630.495	1.1052	Jun 1 2023 2:17PM
110	0.076	0.0247	Jun 1 2023 2:20PM
111	2.595	0.9239	Jun 1 2023 2:23PM
112	0.527	0.1955	Jun 1 2023 2:26PM
113	0.016	0.0018	Jun 1 2023 2:28PM
114	46.403	0.6736	Jun 1 2023 2:31PM
115	458.192	1.5411	Jun 1 2023 2:34PM
116	221.574	0.4089	Jun 1 2023 2:36PM
117	3.263	1.1403	Jun 1 2023 2:39PM
118	4.294	1.4567	Jun 1 2023 2:42PM
119	4.284	1.4537	Jun 1 2023 2:44PM
120	0.072	0.0232	Jun 1 2023 2:47PM

Run Name : Skalar20230601A0
DateTime :Jun 1 2023 9:19AM
User Name : Administrator Operator Name : Administrator

	NH3 and TKN- Results	NH3 and TKN-	NH3 and TKN-
121	2.852	1.0082	Jun 1 2023 2:50PM
122	0.040	0.0112	Jun 1 2023 2:52PM
123	0.038	0.0102	Jun 1 2023 2:55PM
124	2.569	0.9154	Jun 1 2023 2:57PM
125	0.519	0.1925	Jun 1 2023 3:00PM
126	0.013	0.0009	Jun 1 2023 3:03PM
127	1.010	0.3735	Jun 1 2023 3:06PM
128	0.011	0.0000	Jun 1 2023 3:08PM
129	2969.939	1.2810	Jun 1 2023 3:12PM
130	7.238	2.2399	Jun 1 2023 3:14PM
131	10.051	0.7267	Jun 1 2023 3:16PM
132	1.895	0.6872	Jun 1 2023 3:19PM
133	0.023	0.0045	Jun 1 2023 3:22PM
134	2.580	0.9190	Jun 1 2023 3:24PM
135	0.029	0.0069	Jun 1 2023 3:27PM
136	0.052	0.0158	Jun 1 2023 3:30PM
137	0.987	0.3649	Jun 1 2023 3:32PM
138	1.001	0.3699	Jun 1 2023 3:35PM
139	2.574	0.9168	Jun 1 2023 3:38PM
140	0.525	0.1948	Jun 1 2023 3:40PM
141	0.016	0.0017	Jun 1 2023 3:43PM
142	7.949	0.5807	Jun 1 2023 3:46PM
143	0.368	0.1356	Jun 1 2023 3:48PM
144	0.082	0.0272	Jun 1 2023 3:51PM
145	0.083	0.0276	Jun 1 2023 3:54PM
146	0.192	0.0325	Jun 1 2023 3:56PM
147	0.223	0.0810	Jun 1 2023 3:59PM
148	5.768	1.8711	Jun 1 2023 4:02PM
149	4.078	1.3922	Jun 1 2023 4:04PM
150	7.167	2.2231	Jun 1 2023 4:07PM
151	9.835	2.7835	Jun 1 2023 4:10PM
152	2.627	0.9346	Jun 1 2023 4:12PM
153	0.537	0.1991	Jun 1 2023 4:15PM
154	0.019	0.0031	Jun 1 2023 4:18PM
155	1.006	0.3717	Jun 1 2023 4:20PM
156	0.011	0.0000	Jun 1 2023 4:23PM
157	0.226	0.0822	Jun 1 2023 4:26PM
158	1.912	0.6929	Jun 1 2023 4:28PM
159	2.995	1.0546	Jun 1 2023 4:31PM
160	2.999	1.0560	Jun 1 2023 4:34PM

Run Name : Skalar20230601A0
DateTime :Jun 1 2023 9:19AM
User Name : Administrator Operator Name : Administrator

	NH3 and TKN- Results	NH3 and TKN-	NH3 and TKN-
161	1.947	0.7050	Jun 1 2023 4:36PM
162	0.019	0.0031	Jun 1 2023 4:39PM
163	0.035	0.0091	Jun 1 2023 4:42PM
164	0.021	0.0037	Jun 1 2023 4:44PM
165	0.015	0.0016	Jun 1 2023 4:46PM
166	0.014	0.0012	Jun 1 2023 4:50PM
167	2.544	0.9071	Jun 1 2023 4:52PM
168	0.516	0.1913	Jun 1 2023 4:55PM
169	0.014	0.0011	Jun 1 2023 4:58PM
170	0.021	0.0036	Jun 1 2023 5:00PM
171	0.039	0.0107	Jun 1 2023 5:03PM
172	0.013	0.0008	Jun 1 2023 5:05PM
173	2.568	0.9148	Jun 1 2023 5:08PM
174	0.520	0.1930	Jun 1 2023 5:11PM
175	0.017	0.0022	Jun 1 2023 5:14PM
176	1.021	0.3774	Jun 1 2023 5:16PM
177	0.011	0.0000	Jun 1 2023 5:19PM
178	0.011	0.0000	Jun 1 2023 5:23PM

Run Name : Skalar20230601A0
DateTime :Jun 1 2023 9:19AM
User Name : Administrator Operator Name : Administrator

	NH3 and TKN-
1	0.011
2	4.991
3	1.022
4	0.011
5	0.005
6	0.054
7	0.102
8	0.489
9	0.993
10	2.509
11	4.998
12	1.034
13	0.011
14	2.479
15	0.504
16	0.017
17	2.508
18	2.526
19	0.031
20	0.016
21	1.039
22	1.005
23	0.329
24	1.600
25	0.020
26	0.008
27	2.530
28	0.513
29	0.018
30	0.009
31	0.010
32	2.956
33	0.038
34	2.814
35	1.237
36	2.261
37	2.296
38	0.410
39	0.013
40	2.578

Run Name : Skalar20230601A0
DateTime :Jun 1 2023 9:19AM
User Name : Administrator Operator Name : Administrator

	NH3 and TKN-
41	0.524
42	0.017
43	1.016
44	0.011
45	0.274
46	0.086
47	1.385
48	0.213
49	0.135
50	4.892
51	0.362
52	2.567
53	2.596
54	0.027
55	2.575
56	0.521
57	0.018
58	0.016
59	1.019
60	1.039
61	4.006
62	4.052
63	5.467
64	8.478
65	1.208
66	0.088
67	3.855
68	2.597
69	0.528
70	0.020
71	1.018
72	0.011
73	0.387
74	2.517
75	2.328
76	0.218
77	0.805
78	1.751
79	1.765
80	0.233

Run Name : Skalar20230601A0
DateTime :Jun 1 2023 9:19AM
User Name : Administrator Operator Name : Administrator

	NH3 and TKN-
81	0.113
82	2.701
83	2.565
84	0.522
85	0.018
86	2.907
87	2.289
88	0.192
89	1.154
90	0.064
91	0.097
92	0.213
93	0.126
94	2.521
95	2.593
96	2.600
97	0.529
98	0.017
99	1.003
100	0.011
101	0.011
102	0.000
103	0.005
104	0.003
105	4.861
106	1.598
107	4.560
108	3.361
109	3.152
110	0.076
111	2.595
112	0.527
113	0.016
114	1.856
115	4.582
116	1.108
117	3.263
118	4.294
119	4.284
120	0.072

Run Name : Skalar20230601A0
DateTime :Jun 1 2023 9:19AM
User Name : Administrator Operator Name : Administrator

	NH3 and TKN-
121	2.852
122	0.040
123	0.038
124	2.569
125	0.519
126	0.013
127	1.010
128	0.011
129	3.712
130	7.238
131	2.010
132	1.895
133	0.023
134	2.580
135	0.029
136	0.052
137	0.987
138	1.001
139	2.574
140	0.525
141	0.016
142	1.590
143	0.368
144	0.082
145	0.083
146	0.096
147	0.223
148	5.768
149	4.078
150	7.167
151	9.835
152	2.627
153	0.537
154	0.019
155	1.006
156	0.011
157	0.226
158	1.912
159	2.995
160	2.999

Run Name : Skalar20230601A0
DateTime :Jun 1 2023 9:19AM
User Name : Administrator Operator Name : Administrator

	NH3 and TKN-
161	1.947
162	0.019
163	0.035
164	0.021
165	0.015
166	0.014
167	2.544
168	0.516
169	0.014
170	0.021
171	0.039
172	0.013
173	2.568
174	0.520
175	0.017
176	1.021
177	0.011
178	0.011

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\WC_IonChrom10\20230518-121594.b\Info 2_DENPC179_Anions_20230518-122
Lims ID: STD L2
Client ID:
Sample Type: IC Calib Level: 2
Inject. Date: 18-May-2023 12:11:00 ALS Bottle#: 0 Worklist Smp#: 2
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Sample Info: 280-0121594-002
Misc. Info.: 280-0121594-002
Operator ID: wetchemd Instrument ID: WC_IonChrom10
Sublist: chrom-Anions_IC10*sub5

Method: \\chromfs\Denver\ChromData\WC_IonChrom10\20230518-121594.b\Anions_IC10.m
Limit Group: Wet - Anions
Last Update: 19-May-2023 11:53:46 Calib Date: 18-May-2023 13:10:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\WC_IonChrom10\20230518-121594.b\Info 2_DENPC179_Anions_20230518-132

Column 1 : Det: Info 2_091554_1
Process Host: CTX1603

First Level Reviewer: LVW8 Date: 18-May-2023 12:58:14

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	3.133	3.133	0.000	5835197	NC	NC	Ma
2 Chloride	4.300	4.300	0.000	20218551	NC	NC	
3 Nitrite as N	5.002	5.002	0.000	7062392	0.2000	0.1873	
4 Bromide	6.165	6.165	0.000	2255477	NC	NC	
5 Nitrate as N	6.953	6.953	0.000	7411099	0.2000	0.1905	
6 Orthophosphate as P	9.093	9.093	0.000	8660779	0.2000	0.1157	
7 Sulfate	10.245	10.245	0.000	20026015	NC	NC	

QC Flag Legend

Processing Flags
NC - Not Calibrated
Review Flags
M - Manually Integrated
a - User Assigned ID

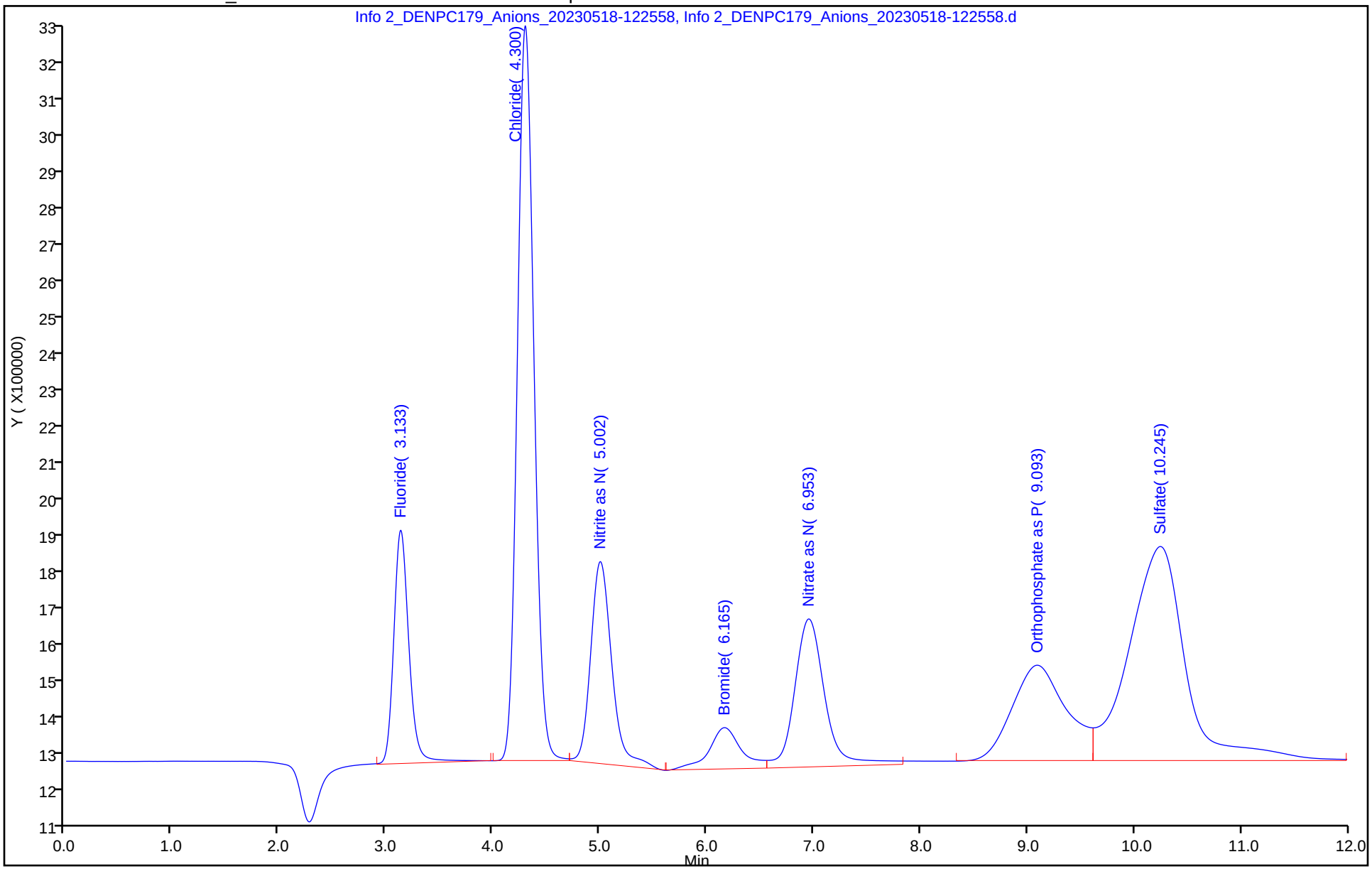
Reagents:

IC CAL cl/so4_00480 Amount Added: 0.10 Units: mL
IC Cal low_00709 Amount Added: 0.08 Units: mL

Report Date: 19-May-2023 11:53:46 Chrom Revision: 2.3 16-May-2023 16:37:30

Eurofins Denver

Data File:	\\chromfs\Denver\ChromData\WC_IonChrom10\20230518-121594.b\Info 2_DENPC179_Anions_20230518-122558.d				
Injection Date:	18-May-2023 12:11:00	Instrument ID:	WC_IonChrom10	Operator ID:	wetchemd
Lims ID:	STD L2			Worklist Smp#:	2
Client ID:					
Injection Vol:	5.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	Anions_IC10	Limit Group:	Wet - Anions		



6/7/2023 3:37 PM

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\WC_IonChrom10\20230518-121594.b\Info 2_DENPC179_Anions_20230518-124
Lims ID: STD L3
Client ID:
Sample Type: IC Calib Level: 3
Inject. Date: 18-May-2023 12:26:00 ALS Bottle#: 0 Worklist Smp#: 3
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Sample Info: 280-0121594-003
Misc. Info.: 280-0121594-003
Operator ID: wetchemd Instrument ID: WC_IonChrom10
Sublist: chrom-Anions_IC10*sub5

Method: \\chromfs\Denver\ChromData\WC_IonChrom10\20230518-121594.b\Anions_IC10.m
Limit Group: Wet - Anions
Last Update: 19-May-2023 11:53:47 Calib Date: 18-May-2023 13:10:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\WC_IonChrom10\20230518-121594.b\Info 2_DENPC179_Anions_20230518-132

Column 1 : Det: Info 2_091554_1
Process Host: CTX1603

First Level Reviewer: LVW8 Date: 18-May-2023 12:58:34

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	3.137	3.137	0.000	18179755	NC	NC	Ma
2 Chloride	4.300	4.300	0.000	48348641	NC	NC	
3 Nitrite as N	5.000	5.000	0.000	21399863	0.5000	0.5218	
4 Bromide	6.162	6.162	0.000	4768597	NC	NC	
5 Nitrate as N	6.938	6.938	0.000	22979043	0.5000	0.5365	
6 Orthophosphate as P	9.075	9.075	0.000	20921591	0.5000	0.6419	
7 Sulfate	10.247	10.247	0.000	43450426	NC	NC	

QC Flag Legend

Processing Flags
NC - Not Calibrated
Review Flags
M - Manually Integrated
a - User Assigned ID

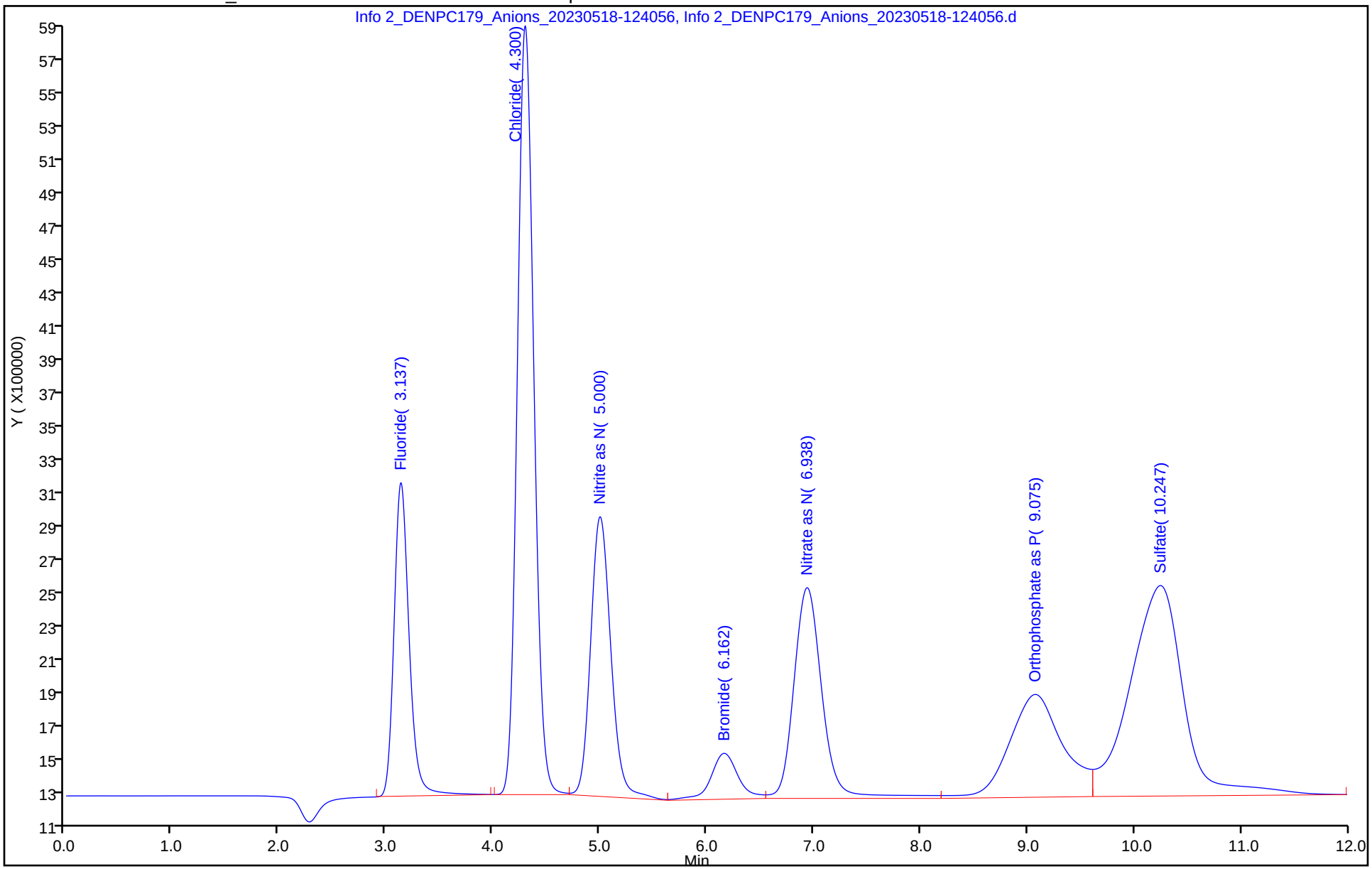
Reagents:

IC CAL cl/so4_00480 Amount Added: 0.20 Units: mL
IC Cal low_00709 Amount Added: 0.20 Units: mL

Report Date: 19-May-2023 11:53:47 Chrom Revision: 2.3 16-May-2023 16:37:30

Eurofins Denver

Data File:	\\chromfs\Denver\ChromData\WC_IonChrom10\20230518-121594.b\Info 2_DENPC179_Anions_20230518-124056.d				
Injection Date:	18-May-2023 12:26:00	Instrument ID:	WC_IonChrom10	Operator ID:	wetchemd
Lims ID:	STD L3			Worklist Smp#:	3
Client ID:					
Injection Vol:	5.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	Anions_IC10	Limit Group:	Wet - Anions		



6/7/2023 3:37 PM

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\WC_IonChrom10\20230518-121594.b\Info 2_DENPC179_Anions_20230518-125
Lims ID: STD L4
Client ID:
Sample Type: IC Calib Level: 4
Inject. Date: 18-May-2023 12:40:00 ALS Bottle#: 0 Worklist Smp#: 4
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Sample Info: 280-0121594-004
Misc. Info.: 280-0121594-004
Operator ID: wetchemd Instrument ID: WC_IonChrom10
Sublist: chrom-Anions_IC10*sub5

Method: \\chromfs\Denver\ChromData\WC_IonChrom10\20230518-121594.b\Anions_IC10.m
Limit Group: Wet - Anions
Last Update: 19-May-2023 11:53:47 Calib Date: 18-May-2023 13:10:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\WC_IonChrom10\20230518-121594.b\Info 2_DENPC179_Anions_20230518-132

Column 1 : Det: Info 2_091554_1
Process Host: CTX1603

First Level Reviewer: LVW8 Date: 18-May-2023 13:29:45

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	3.138	3.138	0.000	39638142	NC	NC	Ma
2 Chloride	4.305	4.305	0.000	570289992	NC	NC	
3 Nitrite as N	5.000	5.000	0.000	43146865	1.00	1.03	
4 Bromide	6.162	6.162	0.000	7900278	NC	NC	
5 Nitrate as N	6.928	6.928	0.000	42854846	1.00	0.9783	
6 Orthophosphate as P	9.068	9.068	0.000	33022328	1.00	1.16	
7 Sulfate	10.242	10.242	0.000	432139991	NC	NC	

QC Flag Legend

Processing Flags
NC - Not Calibrated
Review Flags
M - Manually Integrated
a - User Assigned ID

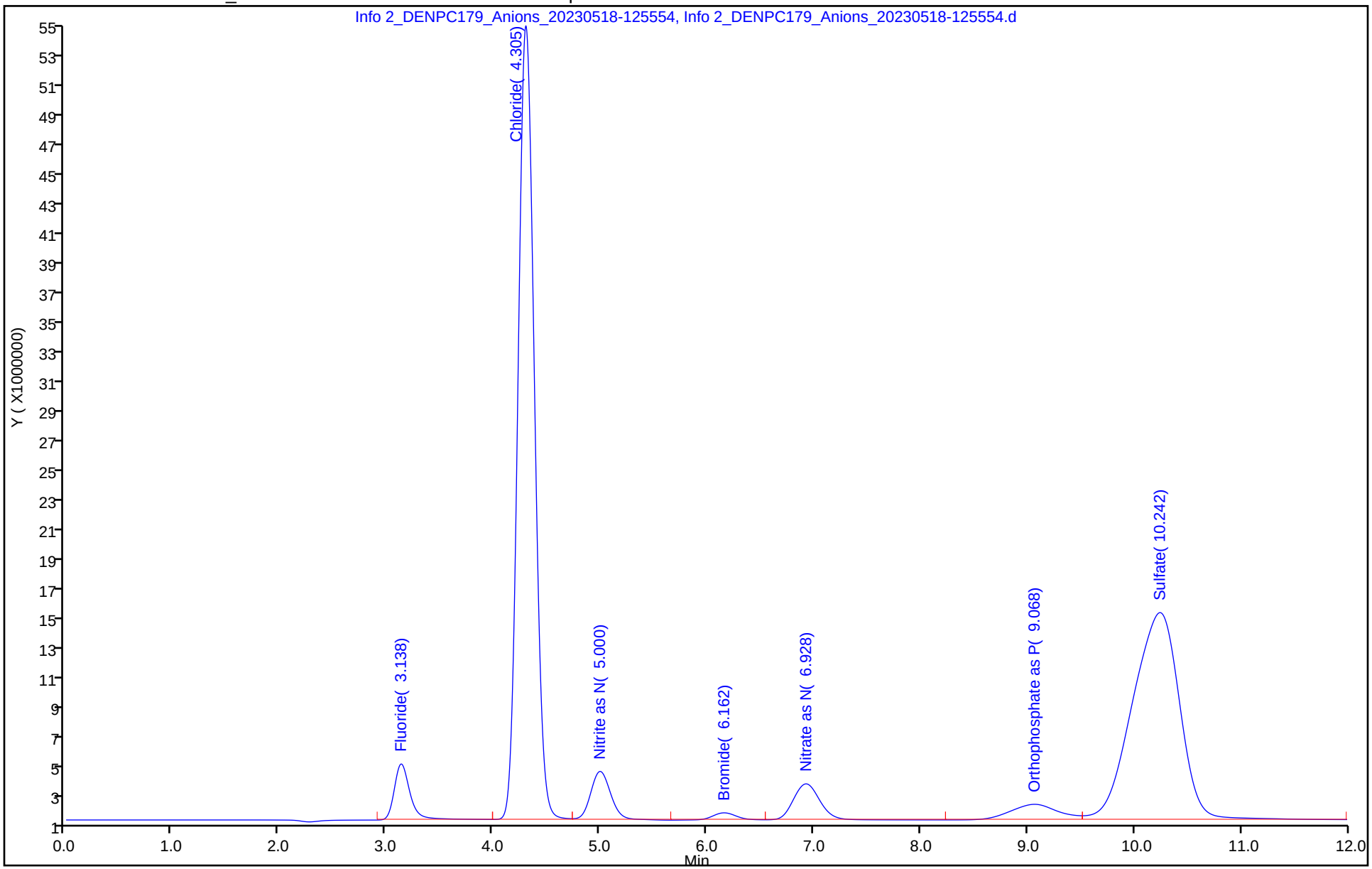
Reagents:

IC CAL cl/so4_00480 Amount Added: 2.40 Units: mL
IC Cal low_00709 Amount Added: 0.40 Units: mL

Report Date: 19-May-2023 11:53:47 Chrom Revision: 2.3 16-May-2023 16:37:30

Eurofins Denver

Data File:	\\chromfs\Denver\ChromData\WC_IonChrom10\20230518-121594.b\Info 2_DENPC179_Anions_20230518-125554.d				
Injection Date:	18-May-2023 12:40:00	Instrument ID:	WC_IonChrom10	Operator ID:	wetchemd
Lims ID:	STD L4			Worklist Smp#:	4
Client ID:					
Injection Vol:	5.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	Anions_IC10	Limit Group:	Wet - Anions		



6/7/2023 3:37 PM

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\WC_IonChrom10\20230518-121594.b\Info 2_DENPC179_Anions_20230518-131
Lims ID: STD L5
Client ID:
Sample Type: IC Calib Level: 5
Inject. Date: 18-May-2023 12:55:00 ALS Bottle#: 0 Worklist Smp#: 5
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Sample Info: 280-0121594-005
Misc. Info.: 280-0121594-005
Operator ID: wetchemd Instrument ID: WC_IonChrom10
Sublist: chrom-Anions_IC10*sub5

Method: \\chromfs\Denver\ChromData\WC_IonChrom10\20230518-121594.b\Anions_IC10.m
Limit Group: Wet - Anions
Last Update: 19-May-2023 11:53:48 Calib Date: 18-May-2023 13:10:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\WC_IonChrom10\20230518-121594.b\Info 2_DENPC179_Anions_20230518-132

Column 1 : Det: Info 2_091554_1
Process Host: CTX1603

First Level Reviewer: LVW8 Date: 18-May-2023 13:30:00

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	3.140	3.140	0.000	102461401	NC	NC	Ma
2 Chloride	4.313	4.313	0.000	1123523133	NC	NC	
3 Nitrite as N	4.995	4.995	0.000	105836223	2.50	2.49	
4 Bromide	6.152	6.152	0.000	18980516	NC	NC	
5 Nitrate as N	6.903	6.903	0.000	110713949	2.50	2.49	
6 Orthophosphate as P	9.043	9.043	0.000	66560323	2.50	2.60	
7 Sulfate	10.227	10.227	0.000	831159688	NC	NC	

QC Flag Legend

Processing Flags
NC - Not Calibrated
Review Flags
M - Manually Integrated
a - User Assigned ID

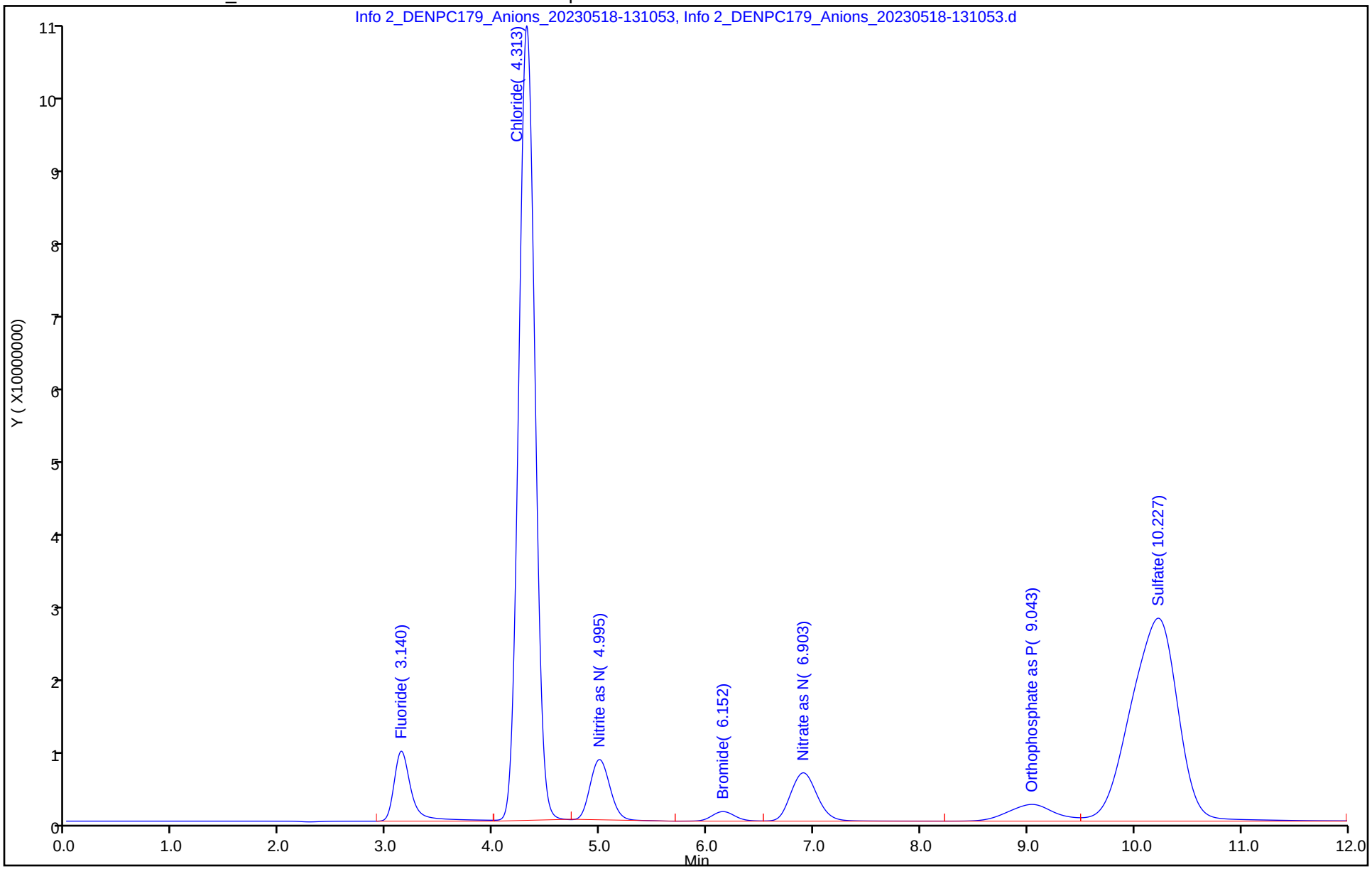
Reagents:

IC CAL cl/so4_00480 Amount Added: 4.80 Units: mL
IC Cal low_00709 Amount Added: 1.00 Units: mL

Report Date: 19-May-2023 11:53:48 Chrom Revision: 2.3 16-May-2023 16:37:30

Eurofins Denver

Data File:	\\chromfs\Denver\ChromData\WC_IonChrom10\20230518-121594.b\Info 2_DENPC179_Anions_20230518-131053.d				
Injection Date:	18-May-2023 12:55:00	Instrument ID:	WC_IonChrom10	Operator ID:	wetchemd
Lims ID:	STD L5			Worklist Smp#:	5
Client ID:					
Injection Vol:	5.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	Anions_IC10	Limit Group:	Wet - Anions		



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Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\WC_IonChrom10\20230518-121594.b\Info 2_DENPC179_Anions_20230518-132
Lims ID: STD L6
Client ID:
Sample Type: IC Calib Level: 6
Inject. Date: 18-May-2023 13:10:00 ALS Bottle#: 0 Worklist Smp#: 6
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Sample Info: 280-0121594-006
Misc. Info.: 280-0121594-006
Operator ID: wetchemd Instrument ID: WC_IonChrom10
Sublist: chrom-Anions_IC10*sub5

Method: \\chromfs\Denver\ChromData\WC_IonChrom10\20230518-121594.b\Anions_IC10.m
Limit Group: Wet - Anions
Last Update: 19-May-2023 11:53:49 Calib Date: 18-May-2023 13:10:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\WC_IonChrom10\20230518-121594.b\Info 2_DENPC179_Anions_20230518-132

Column 1 : Det: Info 2_091554_1
Process Host: CTX1603

First Level Reviewer: LVW8 Date: 18-May-2023 13:42:47

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	3.145	3.145	0.000	200510278	NC	NC	Ma
2 Chloride	4.333	4.333	0.000	1864000362	NC	NC	
3 Nitrite as N	4.997	4.997	0.000	212086804	5.00	4.97	
4 Bromide	6.150	6.150	0.000	38244681	NC	NC	
5 Nitrate as N	6.890	6.890	0.000	224161262	5.00	5.01	
6 Orthophosphate as P	9.035	9.035	0.000	115018456	5.00	4.68	
7 Sulfate	10.220	10.220	0.000	1371227441	NC	NC	

QC Flag Legend

Processing Flags
NC - Not Calibrated
Review Flags
M - Manually Integrated
a - User Assigned ID

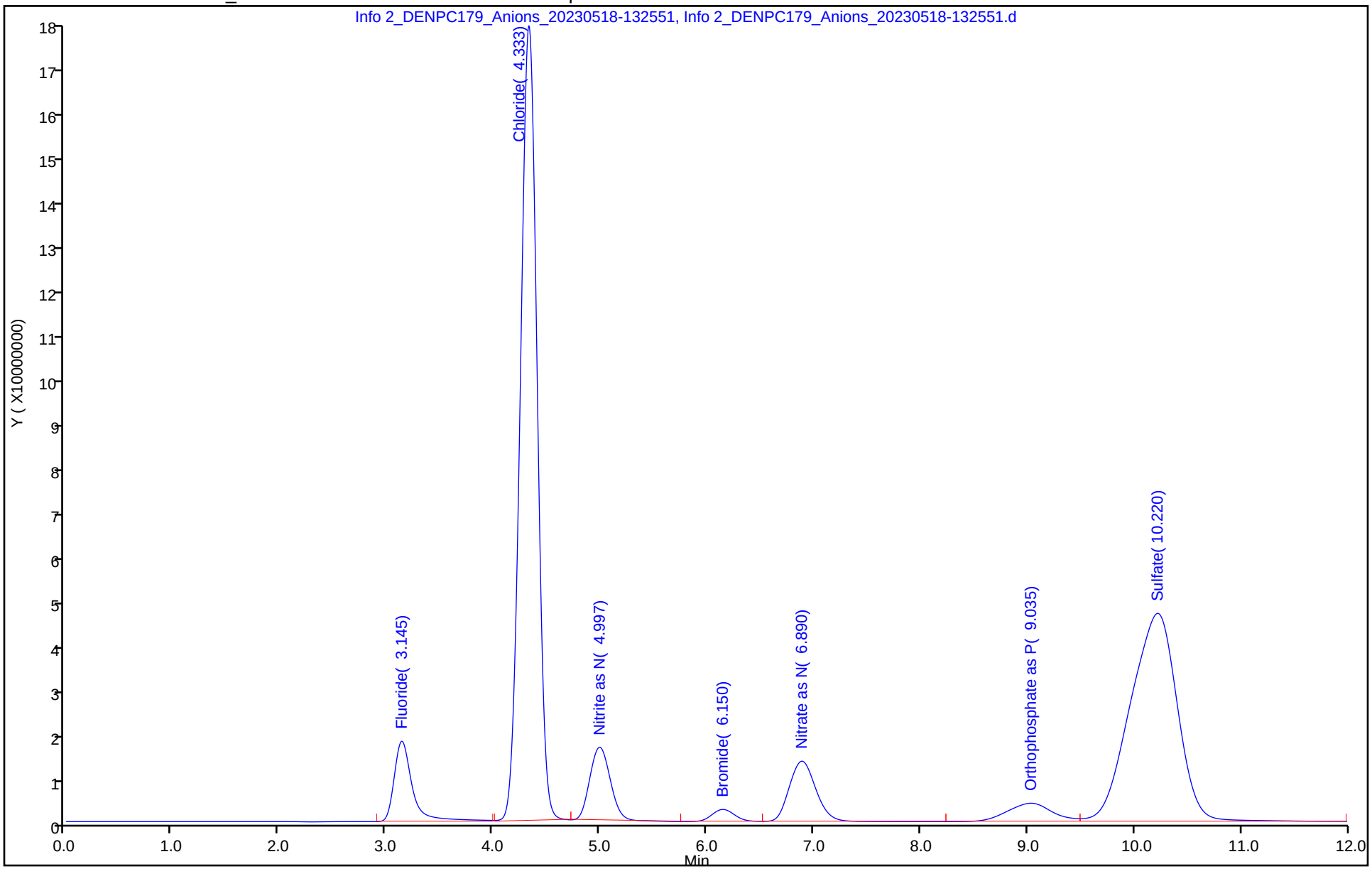
Reagents:

IC CAL cl/so4_00480 Amount Added: 8.00 Units: mL
IC Cal low_00709 Amount Added: 2.00 Units: mL

Report Date: 19-May-2023 11:53:49 Chrom Revision: 2.3 16-May-2023 16:37:30

Eurofins Denver

Data File:	\\chromfs\Denver\ChromData\WC_IonChrom10\20230518-121594.b\Info 2_DENPC179_Anions_20230518-132551.d				
Injection Date:	18-May-2023 13:10:00	Instrument ID:	WC_IonChrom10	Operator ID:	wetchemd
Lims ID:	STD L6			Worklist Smp#:	6
Client ID:					
Injection Vol:	5.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	Anions_IC10	Limit Group:	Wet - Anions		



6/7/2023 3:37 PM

IC Instrument Information

WL: 121594 **Inst ID:** 1010 **Analysis Date:** 5/18/23 **Analyst:** MEC

Rush	Job No.	Samples	Anions	QC Req	HT Exp
☐	176637	1	F Cl NO2 Br (NO3) PO4 SO4	MS/D	
☐	176589	1	F Cl (NO2) Br NO3 PO4 SO4	MS/D	
☐	176670	7	F (Cl) NO2 Br (NO3) PO4 (SO4)	MS/D	
☐	176676	15	(F) (Cl) (NO2) Br (NO3) PO4 (SO4)	MS/D	
☐	176674	4	F Cl (NO2) Br (NO3) PO4 (SO4)	MS/D	
☐	176678	5	F (Cl) (NO2) Br (NO3) PO4 (SO4)	MS/D	
☐	176669	4	F (Cl) NO2 Br (NO3) PO4 (SO4)	MS/D	
☐	176683	3	F (Cl) NO2 Br (NO3) PO4 (SO4)	MS/D	
☐	176668	1	F Cl NO2 Br (NO3) PO4 SO4	MS/D	
☐			F Cl NO2 Br NO3 PO4 SO4	MS/D	
☐			F Cl NO2 Br NO3 PO4 SO4	MS/D	
☐			F Cl NO2 Br NO3 PO4 SO4	MS/D	
☐			F Cl NO2 Br NO3 PO4 SO4	MS/D	
☐			F Cl NO2 Br NO3 PO4 SO4	MS/D	

Dilutions

Job No.	Samples	Anions	Dilution	Reason
		F Cl NO2 Br NO3 PO4 SO4		
		F Cl NO2 Br NO3 PO4 SO4		
		F Cl NO2 Br NO3 PO4 SO4		
		F Cl NO2 Br NO3 PO4 SO4		
		F Cl NO2 Br NO3 PO4 SO4		
		F Cl NO2 Br NO3 PO4 SO4		
		F Cl NO2 Br NO3 PO4 SO4		
		F Cl NO2 Br NO3 PO4 SO4		
		F Cl NO2 Br NO3 PO4 SO4		

Eurofins Environment Testing America
Initial Calibration Report

Method: \\chromfs\Denver\ChromData\WC_IonChrom10\20230519-121638.b\Anions_IC10.m
Instrument: WC_IonChrom10 Lims Location: 280
Lock State: Initial Calib Locked Cpnd Order: Retention Time
Integrator: Falcon Last Modified: 19-May-2023 12:31:06
No.Compounds:7
Sublist: chrom-Anions_IC10*sub5
Limit Group: Wet - Anions

Detectors

Detector: 1, Info 2_091554_1
Data Type: ic Spec Type: none
Supports Extracted Chromatograms: False
Run Time: 0.000-14.900 No. Points: 7196

Calibration File Names

Level: 1 \\chromfs\Denver\ChromData\WC_IonChrom10\20230518-121594.b\Info 2_DENPC179_Anions_20230518-12110
Inj Date: 18-May-2023 11:56:00 Worklist: 121594 Sample#: 1
Level: 2 \\chromfs\Denver\ChromData\WC_IonChrom10\20230518-121594.b\Info 2_DENPC179_Anions_20230518-12255
Inj Date: 18-May-2023 12:11:00 Worklist: 121594 Sample#: 2
Level: 3 \\chromfs\Denver\ChromData\WC_IonChrom10\20230518-121594.b\Info 2_DENPC179_Anions_20230518-12405
Inj Date: 18-May-2023 12:26:00 Worklist: 121594 Sample#: 3
Level: 4 \\chromfs\Denver\ChromData\WC_IonChrom10\20230518-121594.b\Info 2_DENPC179_Anions_20230518-12555
Inj Date: 18-May-2023 12:40:00 Worklist: 121594 Sample#: 4
Level: 5 \\chromfs\Denver\ChromData\WC_IonChrom10\20230518-121594.b\Info 2_DENPC179_Anions_20230518-13105
Inj Date: 18-May-2023 12:55:00 Worklist: 121594 Sample#: 5
Level: 6 \\chromfs\Denver\ChromData\WC_IonChrom10\20230518-121594.b\Info 2_DENPC179_Anions_20230518-13255
Inj Date: 18-May-2023 13:10:00 Worklist: 121594 Sample#: 6

Start Cal Date: 18-May-2023 11:56:00 End Cal Date: 19-May-2023 12:01:00

Individual Compound Calibration Parameters

Quant Method: ESTD RF Calibration: Replace
Rule Name: Linear1 Curve: Linear Weighting: Conc
Origin: None Error: raw_COD Error Limit: 1.00
RF %Dif: 0.0 SPCC Limit: 0.0 CCC Limit: 0.0
Dependent Variable: Resp

Number of Compounds: 3

RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	b	m1	m2	Error

RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	b	m1	m2	Error
3 Nitrite as N				Signal: 1					
35311960	42799726	43146865	42334489	42417361		-967573			1.000
0.200000(2)	0.500000(3)	1.0000 (4)	2.5000 (5)	5.0000 (6)			42866306		
7062392	21399863	43146865	105836223	212086804					
121594(2)	121594(3)	121594(4)	121594(5)	121594(6)					
5 Nitrate as N				Signal: 1					
37055495	45958086	42854846	44285580	44832252		-1159043			0.999
0.200000(2)	0.500000(3)	1.0000 (4)	2.5000 (5)	5.0000 (6)			44990806		
7411099	22979043	42854846	110713949	224161262					
121594(2)	121594(3)	121594(4)	121594(5)	121594(6)					
6 Orthophosphate as P				Signal: 1			R1		
43303895	41843182	33022328	26624129	23003691		5964839			*0.980
0.200000(2)	0.500000(3)	1.0000 (4)	2.5000 (5)	5.0000 (6)			23299922		
8660779	20921591	33022328	66560323	115018456					
121594(2)	121594(3)	121594(4)	121594(5)	121594(6)					

ICalib Error Legend
R1, Curve Fit Fail Error Limit Test

Eurofins Environment Testing America
Initial Calibration Report

Method: \\chromfs\Denver\ChromData\WC_IonChrom10\20230519-121638.b\Anions_IC10.m
Instrument: WC_IonChrom10 Lims Location: 280
Lock State: Initial Calib Locked Cpnd Order: Retention Time
Integrator: Falcon Last Modified: 19-May-2023 12:31:06
No.Compounds:7
Sublist: chrom-Anions_IC10*sub5
Limit Group: Wet - Anions 28D

Detectors

Detector: 1, Info 2_091554_1
Data Type: ic Spec Type: none
Supports Extracted Chromatograms: False
Run Time: 0.000-14.900 No. Points: 7196

Calibration File Names

Level: 1 \\chromfs\Denver\ChromData\WC_IonChrom10\20230518-121594.b\Info 2_DENPC179_Anions_20230518-12110
Inj Date: 18-May-2023 11:56:00 Worklist: 121594 Sample#: 1
Level: 2 \\chromfs\Denver\ChromData\WC_IonChrom10\20230518-121594.b\Info 2_DENPC179_Anions_20230518-12255
Inj Date: 18-May-2023 12:11:00 Worklist: 121594 Sample#: 2
Level: 3 \\chromfs\Denver\ChromData\WC_IonChrom10\20230518-121594.b\Info 2_DENPC179_Anions_20230518-12405
Inj Date: 18-May-2023 12:26:00 Worklist: 121594 Sample#: 3
Level: 4 \\chromfs\Denver\ChromData\WC_IonChrom10\20230518-121594.b\Info 2_DENPC179_Anions_20230518-12555
Inj Date: 18-May-2023 12:40:00 Worklist: 121594 Sample#: 4
Level: 5 \\chromfs\Denver\ChromData\WC_IonChrom10\20230518-121594.b\Info 2_DENPC179_Anions_20230518-13105
Inj Date: 18-May-2023 12:55:00 Worklist: 121594 Sample#: 5
Level: 6 \\chromfs\Denver\ChromData\WC_IonChrom10\20230518-121594.b\Info 2_DENPC179_Anions_20230518-13255
Inj Date: 18-May-2023 13:10:00 Worklist: 121594 Sample#: 6

Start Cal Date: 18-May-2023 11:56:00 End Cal Date: 19-May-2023 12:01:00

Individual Compound Calibration Parameters

Quant Method: ESTD RF Calibration: Replace
Rule Name: Linear1 Curve: Linear Weighting: Conc
Origin: None Error: raw_COD Error Limit: 1.00
RF %Dif: 0.0 SPCC Limit: 0.0 CCC Limit: 0.0
Dependent Variable: Resp

Number of Compounds: 4

RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	b	m1	m2	Error

RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	b	m1	m2	Error
1 Fluoride				Signal: 1					
29175985	36359510	39638142	40984560	40102056		-2208602			1.000
0.200000(2)	0.500000(3)	1.0000 (4)	2.5000 (5)	5.0000 (6)			41050846		
M5835197	M18179755	M39638142	M102461401	M200510278					
121594(2)	121594(3)	121594(4)	121594(5)	121594(6)					
2 Chloride				Signal: 1					
16780722	16174841	19339456	19009666	18725386	18640004	-1171132			1.000
0.500000(1)	1.2500 (2)	2.5000 (3)	30.0 (4)	60.0 (5)	100.0 (6)		18747994		
8390361	20218551	48348641	570289992	1123523133	1864000362				
121594(1)	121594(2)	121594(3)	121594(4)	121594(5)	121594(6)				
4 Bromide				Signal: 1					
11277385	9537194	7900278	7592206	7648936		806494			0.999
0.200000(2)	0.500000(3)	1.0000 (4)	2.5000 (5)	5.0000 (6)			7404030		
2255477	4768597	7900278	18980516	38244681					
121594(2)	121594(3)	121594(4)	121594(5)	121594(6)					
7 Sulfate				Signal: 1					
22625290	16020812	17380170	14404666	13852661	13712274	4654296			0.999
0.500000(1)	1.2500 (2)	2.5000 (3)	30.0 (4)	60.0 (5)	100.0 (6)		13803812		
11312645	20026015	43450426	432139991	831159688	1371227441				
121594(1)	121594(2)	121594(3)	121594(4)	121594(5)	121594(6)				

Preliminary Report

Eurofins Denver
ICV, ICal Verification Report

Data File: \\chromfs\Denver\ChromData\WC_IonChrom10\20230518-121594.b\Info 2_DENPC179_Anions_20230518-13
Lims ID: ICV
Client ID:
Sample Type: ICV
Inject. Date: 18-May-2023 13:25:00 ALS Bottle#: 0 Worklist Smp#: 7
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Sample Info: 280-0121594-007
Misc. Info.: 280-0121594-007
Operator ID: wetchemd Instrument ID: WC_IonChrom10
Sublist: chrom-Anions_IC7*sub4

Method: \\chromfs\Denver\ChromData\WC_IonChrom10\20230518-121594.b\Anions_IC10.m
Limit Group: Wet - Anions 28D
Last Update: 19-May-2023 12:32:45 Calib Date: 18-May-2023 13:10:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\WC_IonChrom10\20230518-121594.b\Info 2_DENPC179_Anions_20230518-13

Column 1 : Det: Info 2_091554_1
Process Host: CTX1603

First Level Reviewer: LVW8 Date: 19-May-2023 12:38:30

Start Cal Date: 18-May-2023 11:56:00
End Cal Date: 18-May-2023 13:10:00

Compound	Amount Added	Amount Detected	%Drift	Max. %Drift	%Rec	%Rec Limits
1 Fluoride	2.00	2.34	* 16.8	10.0	116.8	
2 Chloride	80.0	83.0	3.8	10.0	103.8	
4 Bromide	2.00	1.91	-4.7	10.0	95.3	
7 Sulfate	80.0	81.8	2.3	10.0	102.3	

Preliminary Report

Eurofins Denver
ICV, ICal Verification Report

Data File: \\chromfs\Denver\ChromData\WC_IonChrom10\20230518-121594.b\Info 2_DENPC179_Anions_20230518-13
Lims ID: ICV
Client ID:
Sample Type: ICV
Inject. Date: 18-May-2023 13:25:00 ALS Bottle#: 0 Worklist Smp#: 7
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Sample Info: 280-0121594-007
Misc. Info.: 280-0121594-007
Operator ID: wetchemd Instrument ID: WC_IonChrom10
Sublist: chrom-Anions_IC7*sub4

Method: \\chromfs\Denver\ChromData\WC_IonChrom10\20230518-121594.b\Anions_IC10.m
Limit Group: Wet - Anions
Last Update: 19-May-2023 12:38:46 Calib Date: 18-May-2023 13:10:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\WC_IonChrom10\20230518-121594.b\Info 2_DENPC179_Anions_20230518-13

Column 1 : Det: Info 2_091554_1
Process Host: CTX1603

First Level Reviewer: LVW8 Date: 19-May-2023 12:38:46

Start Cal Date: 18-May-2023 11:56:00
End Cal Date: 18-May-2023 13:10:00

Compound	Amount Added	Amount Detected	%Drift	Max. %Drift	%Rec	%Rec Limits
3 Nitrite as N	2.00	1.99	-0.3	10.0	99.7	
5 Nitrate as N	2.00	1.95	-2.3	10.0	97.7	
6 Orthophosphate as	2.00	2.30	* 14.8	10.0	114.8	

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\WC_IonChrom10\20230518-121594.b\Info 2_DENPC179_Anions_20230518-134
Lims ID: ICV
Client ID:
Sample Type: ICV
Inject. Date: 18-May-2023 13:25:00 ALS Bottle#: 0 Worklist Smp#: 7
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Sample Info: 280-0121594-007
Misc. Info.: 280-0121594-007
Operator ID: wetchemd Instrument ID: WC_IonChrom10
Sublist: chrom-Anions_IC7*sub4

Method: \\chromfs\Denver\ChromData\WC_IonChrom10\20230518-121594.b\Anions_IC10.m
Limit Group: Wet - Anions
Last Update: 19-May-2023 12:38:46 Calib Date: 18-May-2023 13:10:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\WC_IonChrom10\20230518-121594.b\Info 2_DENPC179_Anions_20230518-132

Column 1 : Det: Info 2_091554_1
Process Host: CTX1603

First Level Reviewer: LVW8 Date: 19-May-2023 12:38:46

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	3.145	3.145	0.000	93724806	NC	NC	Ma
2 Chloride	4.328	4.328	0.000	1555403505	NC	NC	
3 Nitrite as N	5.000	5.000	0.000	84485309	2.00	1.99	
4 Bromide	6.162	6.162	0.000	14920856	NC	NC	
5 Nitrate as N	6.917	6.917	0.000	86743393	2.00	1.95	
6 Orthophosphate as P	9.058	9.058	0.000	59448017	2.00	2.30	
7 Sulfate	10.230	10.230	0.000	1134012406	NC	NC	

QC Flag Legend

Processing Flags
NC - Not Calibrated
Review Flags
M - Manually Integrated
a - User Assigned ID

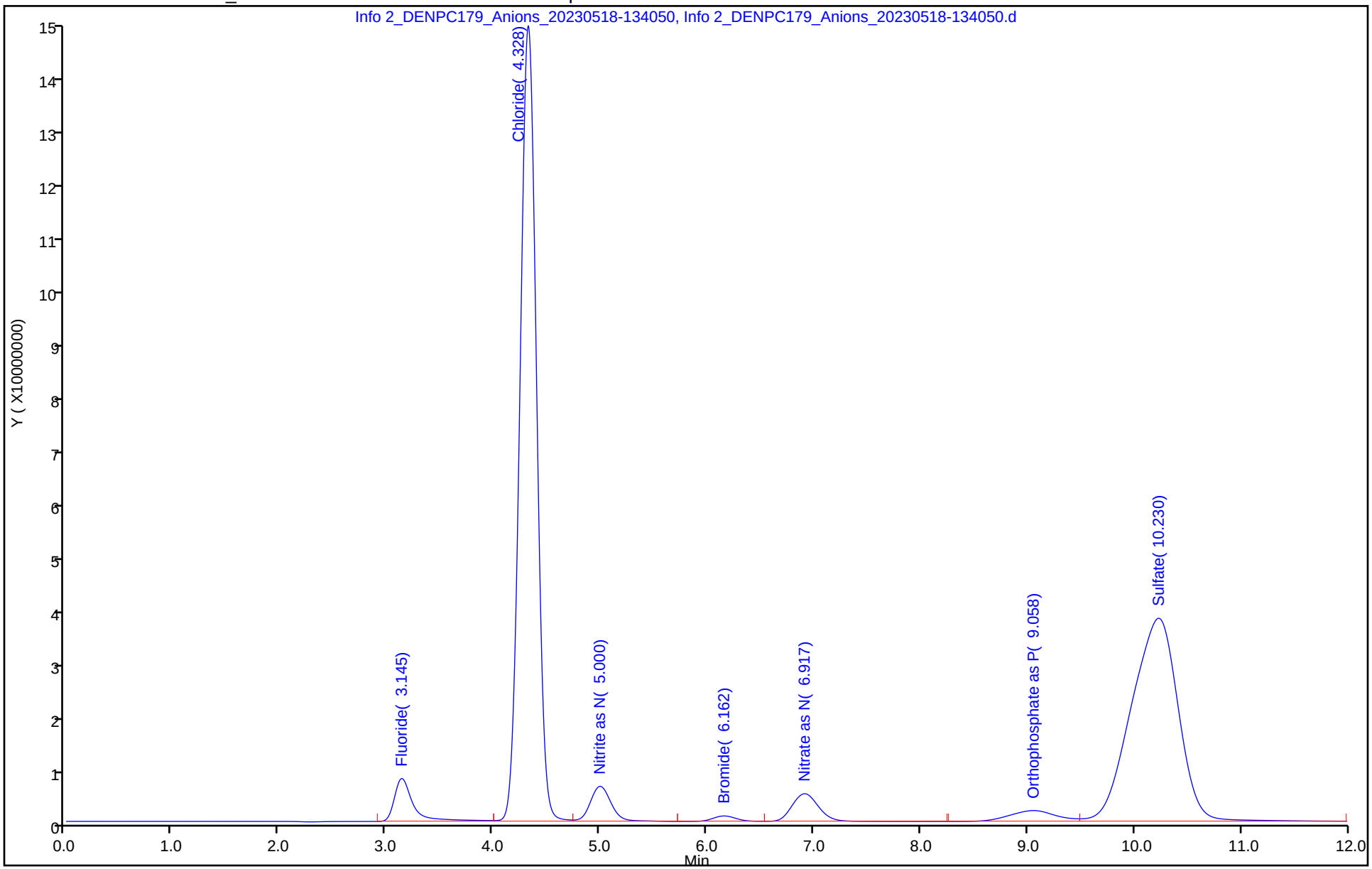
Reagents:

IC SO4 ICV_00024	Amount Added:	0.80	Units: mL
Cl ICV Std_00006	Amount Added:	0.80	Units: mL
IC ICV 5_00405	Amount Added:	0.80	Units: mL

Report Date: 19-May-2023 12:38:46 Chrom Revision: 2.3 16-May-2023 16:37:30

Eurofins Denver

Data File:	\\chromfs\Denver\ChromData\WC_IonChrom10\20230518-121594.b\Info 2_DENPC179_Anions_20230518-134050.d				
Injection Date:	18-May-2023 13:25:00	Instrument ID:	WC_IonChrom10	Operator ID:	wetchemd
Lims ID:	ICV			Worklist Smp#:	7
Client ID:					
Injection Vol:	5.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	Anions_IC10	Limit Group:	Wet - Anions		



6/7/2023 3:37 PM

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\WC_IonChrom10\20230518-121594.b\Info 2_DENPC179_Anions_20230518-135
Lims ID: ICB
Client ID:
Sample Type: ICB
Inject. Date: 18-May-2023 13:40:00 ALS Bottle#: 0 Worklist Smp#: 8
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Sample Info: 280-0121594-008
Misc. Info.: 280-0121594-008
Operator ID: wetchemd Instrument ID: WC_IonChrom10

Method: \\chromfs\Denver\ChromData\WC_IonChrom10\20230518-121594.b\Anions_IC10.m
Limit Group: Wet - Anions
Last Update: 19-May-2023 12:31:30 Calib Date: 18-May-2023 13:10:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\WC_IonChrom10\20230518-121594.b\Info 2_DENPC179_Anions_20230518-132

Column 1 : Det: Info 2_091554_1
Process Host: CTX1603

First Level Reviewer: LVW8 Date: 19-May-2023 11:57:30

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride		3.145				ND	
2 Chloride		4.328				ND	
3 Nitrite as N		5.000				ND	
4 Bromide		6.162				ND	U
5 Nitrate as N		6.917				ND	
6 Orthophosphate as P	9.123	9.058	0.065	12987322		0.3014	
7 Sulfate	10.285	10.230	0.055	1071622		NC	M

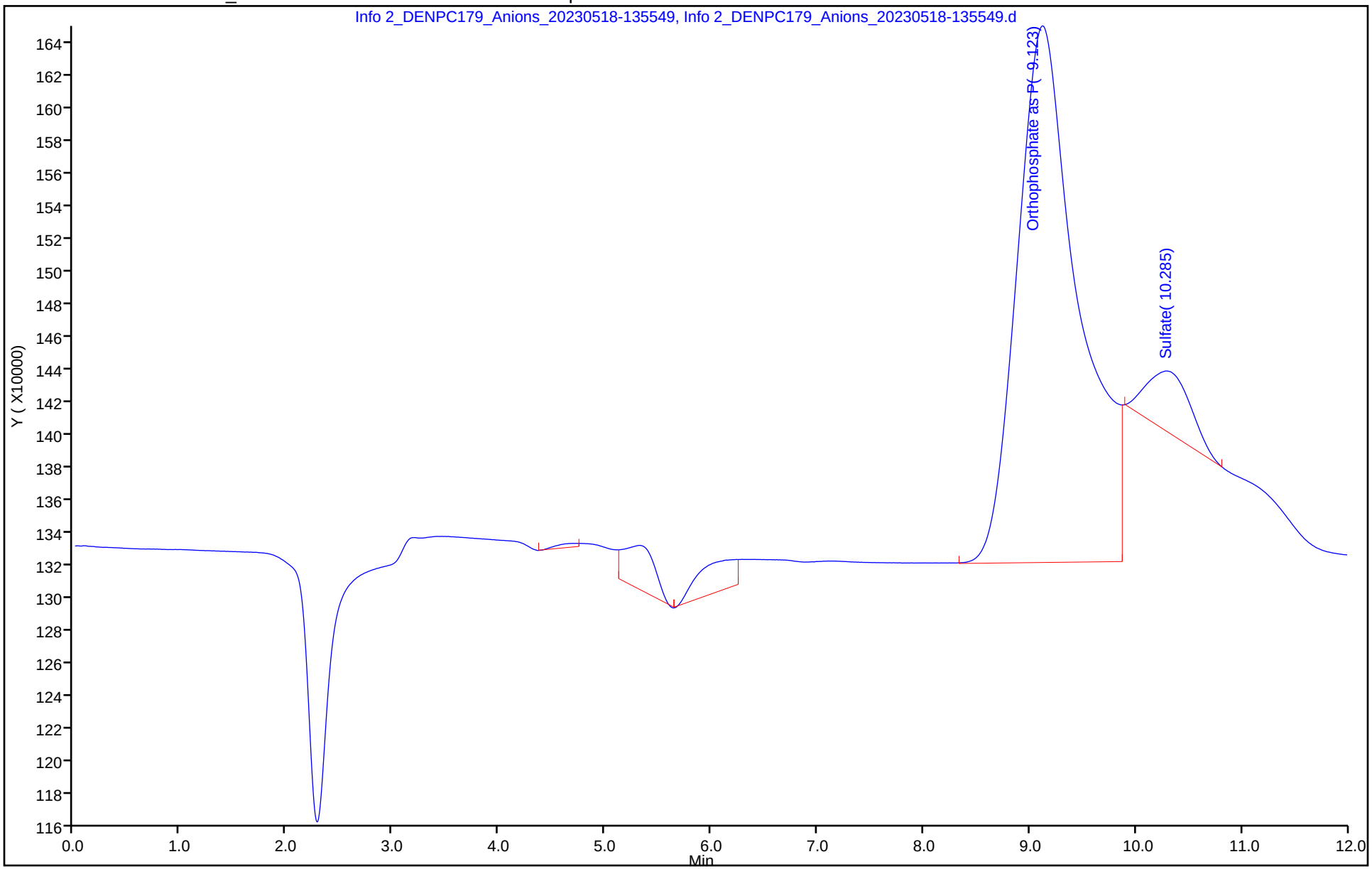
QC Flag Legend

Processing Flags
NC - Not Calibrated
Review Flags
M - Manually Integrated
U - Marked Undetected

Report Date: 19-May-2023 12:31:31 Chrom Revision: 2.3 16-May-2023 16:37:30

Eurofins Denver

Data File:	\\chromfs\Denver\ChromData\WC_IonChrom10\20230518-121594.b\Info 2_DENPC179_Anions_20230518-135549.d				
Injection Date:	18-May-2023 13:40:00	Instrument ID:	WC_IonChrom10	Operator ID:	wetchemd
Lims ID:	ICB			Worklist Smp#:	8
Client ID:					
Injection Vol:	5.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	Anions_IC10	Limit Group:	Wet - Anions		



6/7/2023 3:37 PM

IC Instrument Information

WL: 121736 **Inst ID:** IC10 **Analysis Date:** 5/23/23 **Analyst:** MEC

Rush	Job No.	Samples	Anions	QC Req	HT Exp
☐	176864	1	F Cl NO2 Br (NO3) PO4 SO4	MS/D	
☐	176864	3	F (Cl) NO2 Br (NO3) PO4 (SO4)	MS/D	
☐	176870	2	F Cl (NO2) Br (NO3) PO4 SO4	MS/D	
☐	176869	2	F Cl (NO2) Br (NO3) PO4 SO4	MS/D	
☐	176889	1	F (Cl) (NO2) Br (NO3) PO4 (SO4)	MS/D	
☐	176902	1	F Cl NO2 Br (NO3) PO4 SO4	MS/D	
☐	176903	6	F Cl (NO2) Br (NO3) PO4 SO4	MS/D	
☐			F Cl NO2 Br NO3 PO4 SO4	MS/D	
☐			F Cl NO2 Br NO3 PO4 SO4	MS/D	
☐			F Cl NO2 Br NO3 PO4 SO4	MS/D	
☐			F Cl NO2 Br NO3 PO4 SO4	MS/D	
☐			F Cl NO2 Br NO3 PO4 SO4	MS/D	
☐			F Cl NO2 Br NO3 PO4 SO4	MS/D	
☐			F Cl NO2 Br NO3 PO4 SO4	MS/D	

Dilutions

Job No.	Samples	Anions	Dilution	Reason
		F Cl NO2 Br NO3 PO4 SO4		
		F Cl NO2 Br NO3 PO4 SO4		
		F Cl NO2 Br NO3 PO4 SO4		
		F Cl NO2 Br NO3 PO4 SO4		
		F Cl NO2 Br NO3 PO4 SO4		
		F Cl NO2 Br NO3 PO4 SO4		
		F Cl NO2 Br NO3 PO4 SO4		
		F Cl NO2 Br NO3 PO4 SO4		
		F Cl NO2 Br NO3 PO4 SO4		

Eurofins Environment Testing America
Initial Calibration Report

Method: \\chromfs\Denver\ChromData\WC_IonChrom10\20230519-121638.b\Anions_IC10.m
Instrument: WC_IonChrom10 Lims Location: 280
Lock State: Initial Calib Locked Cpnd Order: Retention Time
Integrator: Falcon Last Modified: 19-May-2023 12:31:06
No.Compounds:7
Sublist: chrom-Anions_IC10*sub5
Limit Group: Wet - Anions

Detectors

Detector: 1, Info 2_091554_1
Data Type: ic Spec Type: none
Supports Extracted Chromatograms: False
Run Time: 0.000-14.900 No. Points: 7196

Calibration File Names

Level: 1 \\chromfs\Denver\ChromData\WC_IonChrom10\20230518-121594.b\Info 2_DENPC179_Anions_20230518-12110
Inj Date: 18-May-2023 11:56:00 Worklist: 121594 Sample#: 1
Level: 2 \\chromfs\Denver\ChromData\WC_IonChrom10\20230518-121594.b\Info 2_DENPC179_Anions_20230518-12255
Inj Date: 18-May-2023 12:11:00 Worklist: 121594 Sample#: 2
Level: 3 \\chromfs\Denver\ChromData\WC_IonChrom10\20230518-121594.b\Info 2_DENPC179_Anions_20230518-12405
Inj Date: 18-May-2023 12:26:00 Worklist: 121594 Sample#: 3
Level: 4 \\chromfs\Denver\ChromData\WC_IonChrom10\20230518-121594.b\Info 2_DENPC179_Anions_20230518-12555
Inj Date: 18-May-2023 12:40:00 Worklist: 121594 Sample#: 4
Level: 5 \\chromfs\Denver\ChromData\WC_IonChrom10\20230518-121594.b\Info 2_DENPC179_Anions_20230518-13105
Inj Date: 18-May-2023 12:55:00 Worklist: 121594 Sample#: 5
Level: 6 \\chromfs\Denver\ChromData\WC_IonChrom10\20230518-121594.b\Info 2_DENPC179_Anions_20230518-13255
Inj Date: 18-May-2023 13:10:00 Worklist: 121594 Sample#: 6

Start Cal Date: 18-May-2023 11:56:00 End Cal Date: 19-May-2023 12:01:00

Individual Compound Calibration Parameters

Quant Method: ESTD RF Calibration: Replace
Rule Name: Linear1 Curve: Linear Weighting: Conc
Origin: None Error: raw_COD Error Limit: 1.00
RF %Dif: 0.0 SPCC Limit: 0.0 CCC Limit: 0.0
Dependent Variable: Resp

Number of Compounds: 3

RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	b	m1	m2	Error

RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	b	m1	m2	Error
3 Nitrite as N				Signal: 1					
35311960	42799726	43146865	42334489	42417361		-967573			1.000
0.200000(2)	0.500000(3)	1.0000 (4)	2.5000 (5)	5.0000 (6)			42866306		
7062392	21399863	43146865	105836223	212086804					
121594(2)	121594(3)	121594(4)	121594(5)	121594(6)					
5 Nitrate as N				Signal: 1					
37055495	45958086	42854846	44285580	44832252		-1159043			0.999
0.200000(2)	0.500000(3)	1.0000 (4)	2.5000 (5)	5.0000 (6)			44990806		
7411099	22979043	42854846	110713949	224161262					
121594(2)	121594(3)	121594(4)	121594(5)	121594(6)					
6 Orthophosphate as P				Signal: 1			R1		
43303895	41843182	33022328	26624129	23003691		5964839			*0.980
0.200000(2)	0.500000(3)	1.0000 (4)	2.5000 (5)	5.0000 (6)			23299922		
8660779	20921591	33022328	66560323	115018456					
121594(2)	121594(3)	121594(4)	121594(5)	121594(6)					

ICalib Error Legend
R1, Curve Fit Fail Error Limit Test

Eurofins Environment Testing America
Initial Calibration Report

Method: \\chromfs\Denver\ChromData\WC_IonChrom10\20230519-121638.b\Anions_IC10.m
Instrument: WC_IonChrom10 Lims Location: 280
Lock State: Initial Calib Locked Cpnd Order: Retention Time
Integrator: Falcon Last Modified: 19-May-2023 12:31:06
No.Compounds:7
Sublist: chrom-Anions_IC10*sub5
Limit Group: Wet - Anions 28D

Detectors

Detector: 1, Info 2_091554_1
Data Type: ic Spec Type: none
Supports Extracted Chromatograms: False
Run Time: 0.000-14.900 No. Points: 7196

Calibration File Names

Level: 1 \\chromfs\Denver\ChromData\WC_IonChrom10\20230518-121594.b\Info 2_DENPC179_Anions_20230518-12110
Inj Date: 18-May-2023 11:56:00 Worklist: 121594 Sample#: 1
Level: 2 \\chromfs\Denver\ChromData\WC_IonChrom10\20230518-121594.b\Info 2_DENPC179_Anions_20230518-12255
Inj Date: 18-May-2023 12:11:00 Worklist: 121594 Sample#: 2
Level: 3 \\chromfs\Denver\ChromData\WC_IonChrom10\20230518-121594.b\Info 2_DENPC179_Anions_20230518-12405
Inj Date: 18-May-2023 12:26:00 Worklist: 121594 Sample#: 3
Level: 4 \\chromfs\Denver\ChromData\WC_IonChrom10\20230518-121594.b\Info 2_DENPC179_Anions_20230518-12555
Inj Date: 18-May-2023 12:40:00 Worklist: 121594 Sample#: 4
Level: 5 \\chromfs\Denver\ChromData\WC_IonChrom10\20230518-121594.b\Info 2_DENPC179_Anions_20230518-13105
Inj Date: 18-May-2023 12:55:00 Worklist: 121594 Sample#: 5
Level: 6 \\chromfs\Denver\ChromData\WC_IonChrom10\20230518-121594.b\Info 2_DENPC179_Anions_20230518-13255
Inj Date: 18-May-2023 13:10:00 Worklist: 121594 Sample#: 6

Start Cal Date: 18-May-2023 11:56:00 End Cal Date: 19-May-2023 12:01:00

Individual Compound Calibration Parameters

Quant Method: ESTD RF Calibration: Replace
Rule Name: Linear1 Curve: Linear Weighting: Conc
Origin: None Error: raw_COD Error Limit: 1.00
RF %Dif: 0.0 SPCC Limit: 0.0 CCC Limit: 0.0
Dependent Variable: Resp

Number of Compounds: 4

RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	b	m1	m2	Error

RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	b	m1	m2	Error
1 Fluoride				Signal: 1					
29175985	36359510	39638142	40984560	40102056		-2208602			1.000
0.200000(2)	0.500000(3)	1.0000 (4)	2.5000 (5)	5.0000 (6)			41050846		
M5835197	M18179755	M39638142	M102461401	M200510278					
121594(2)	121594(3)	121594(4)	121594(5)	121594(6)					
2 Chloride				Signal: 1					
16780722	16174841	19339456	19009666	18725386	18640004	-1171132			1.000
0.500000(1)	1.2500 (2)	2.5000 (3)	30.0 (4)	60.0 (5)	100.0 (6)		18747994		
8390361	20218551	48348641	570289992	1123523133	1864000362				
121594(1)	121594(2)	121594(3)	121594(4)	121594(5)	121594(6)				
4 Bromide				Signal: 1					
11277385	9537194	7900278	7592206	7648936		806494			0.999
0.200000(2)	0.500000(3)	1.0000 (4)	2.5000 (5)	5.0000 (6)			7404030		
2255477	4768597	7900278	18980516	38244681					
121594(2)	121594(3)	121594(4)	121594(5)	121594(6)					
7 Sulfate				Signal: 1					
22625290	16020812	17380170	14404666	13852661	13712274	4654296			0.999
0.500000(1)	1.2500 (2)	2.5000 (3)	30.0 (4)	60.0 (5)	100.0 (6)		13803812		
11312645	20026015	43450426	432139991	831159688	1371227441				
121594(1)	121594(2)	121594(3)	121594(4)	121594(5)	121594(6)				

Preliminary Report

Eurofins Denver
ICV, ICal Verification Report

Data File: \\chromfs\Denver\ChromData\WC_IonChrom10\20230518-121594.b\Info 2_DENPC179_Anions_20230518-13
Lims ID: ICV
Client ID:
Sample Type: ICV
Inject. Date: 18-May-2023 13:25:00 ALS Bottle#: 0 Worklist Smp#: 7
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Sample Info: 280-0121594-007
Misc. Info.: 280-0121594-007
Operator ID: wetchemd Instrument ID: WC_IonChrom10
Sublist: chrom-Anions_IC7*sub4

Method: \\chromfs\Denver\ChromData\WC_IonChrom10\20230518-121594.b\Anions_IC10.m
Limit Group: Wet - Anions 28D
Last Update: 19-May-2023 12:32:45 Calib Date: 18-May-2023 13:10:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\WC_IonChrom10\20230518-121594.b\Info 2_DENPC179_Anions_20230518-13

Column 1 : Det: Info 2_091554_1
Process Host: CTX1603

First Level Reviewer: LVW8 Date: 19-May-2023 12:38:30

Start Cal Date: 18-May-2023 11:56:00
End Cal Date: 18-May-2023 13:10:00

Compound	Amount Added	Amount Detected	%Drift	Max. %Drift	%Rec	%Rec Limits
1 Fluoride	2.00	2.34	* 16.8	10.0	116.8	
2 Chloride	80.0	83.0	3.8	10.0	103.8	
4 Bromide	2.00	1.91	-4.7	10.0	95.3	
7 Sulfate	80.0	81.8	2.3	10.0	102.3	

Preliminary Report

Eurofins Denver
ICV, ICal Verification Report

Data File:	\\chromfs\Denver\ChromData\WC_IonChrom10\20230518-121594.b\Info 2_DENPC179_Anions_20230518-13				
Lims ID:	ICV				
Client ID:					
Sample Type:	ICV				
Inject. Date:	18-May-2023 13:25:00	ALS Bottle#:	0	Worklist Smp#:	7
Injection Vol:	5.0 ul	Dil. Factor:	1.0000		
Sample Info:	280-0121594-007				
Misc. Info.:	280-0121594-007				
Operator ID:	wetchemd	Instrument ID:	WC_IonChrom10		
Sublist:	chrom-Anions_IC7*sub4				
Method:	\\chromfs\Denver\ChromData\WC_IonChrom10\20230518-121594.b\Anions_IC10.m				
Limit Group:	Wet - Anions				
Last Update:	19-May-2023 12:38:46	Calib Date:	18-May-2023 13:10:00		
Integrator:	Falcon				
Quant Method:	External Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromfs\Denver\ChromData\WC_IonChrom10\20230518-121594.b\Info 2_DENPC179_Anions_20230518-13				
Column 1 :			Det: Info 2_091554_1		
Process Host:	CTX1603				
First Level Reviewer: LVW8		Date:	19-May-2023 12:38:46		
Start Cal Date:	18-May-2023 11:56:00				
End Cal Date:	18-May-2023 13:10:00				

Compound	Amount Added	Amount Detected	%Drift	Max. %Drift	%Rec	%Rec Limits
3 Nitrite as N	2.00	1.99	-0.3	10.0	99.7	
5 Nitrate as N	2.00	1.95	-2.3	10.0	97.7	
6 Orthophosphate as	2.00	2.30	* 14.8	10.0	114.8	

Eurofins Denver
Target Compound Quantitation Report

Data File:	\\chromfs\Denver\ChromData\WC_IonChrom10\20230523-121736.b\Info 2_DENPC179_Anions_20230523-122				
Lims ID:	ccv				
Client ID:					
Sample Type:	CCV				
Inject. Date:	23-May-2023 12:08:00	ALS Bottle#:	0	Worklist Smp#:	1
Injection Vol:	5.0 ul	Dil. Factor:	1.0000		
Sample Info:	280-0121736-001				
Misc. Info.:	280-0121736-001				
Operator ID:	wetchemd	Instrument ID:	WC_IonChrom10		
Sublist:	chrom-Anions_IC10*sub5				
Method:	\\chromfs\Denver\ChromData\WC_IonChrom10\20230523-121736.b\Anions_IC10.m				
Limit Group:	Wet - Anions				
Last Update:	24-May-2023 12:15:29	Calib Date:	18-May-2023 13:10:00		
Integrator:	Falcon				
Quant Method:	External Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromfs\Denver\ChromData\WC_IonChrom10\20230518-121594.b\Info 2_DENPC179_Anions_20230518-132				
Column 1 :			Det: Info 2_091554_1		
Process Host:	CTX1672				
First Level Reviewer: LVW8		Date:	23-May-2023 12:28:25		

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride		3.140			ND	ND	
2 Chloride	4.312	4.312	0.000	931633368	NC	NC	
3 Nitrite as N	4.990	4.990	0.000	102614710	2.50	2.42	
4 Bromide	6.128	6.128	0.000	18610045	NC	NC	
5 Nitrate as N	6.877	6.877	0.000	108151643	2.50	2.43	
6 Orthophosphate as P		9.137			ND	ND	
7 Sulfate	10.205	10.205	0.000	715355012	NC	NC	

QC Flag Legend

Processing Flags
NC - Not Calibrated
ND - Not Detected or Marked ND

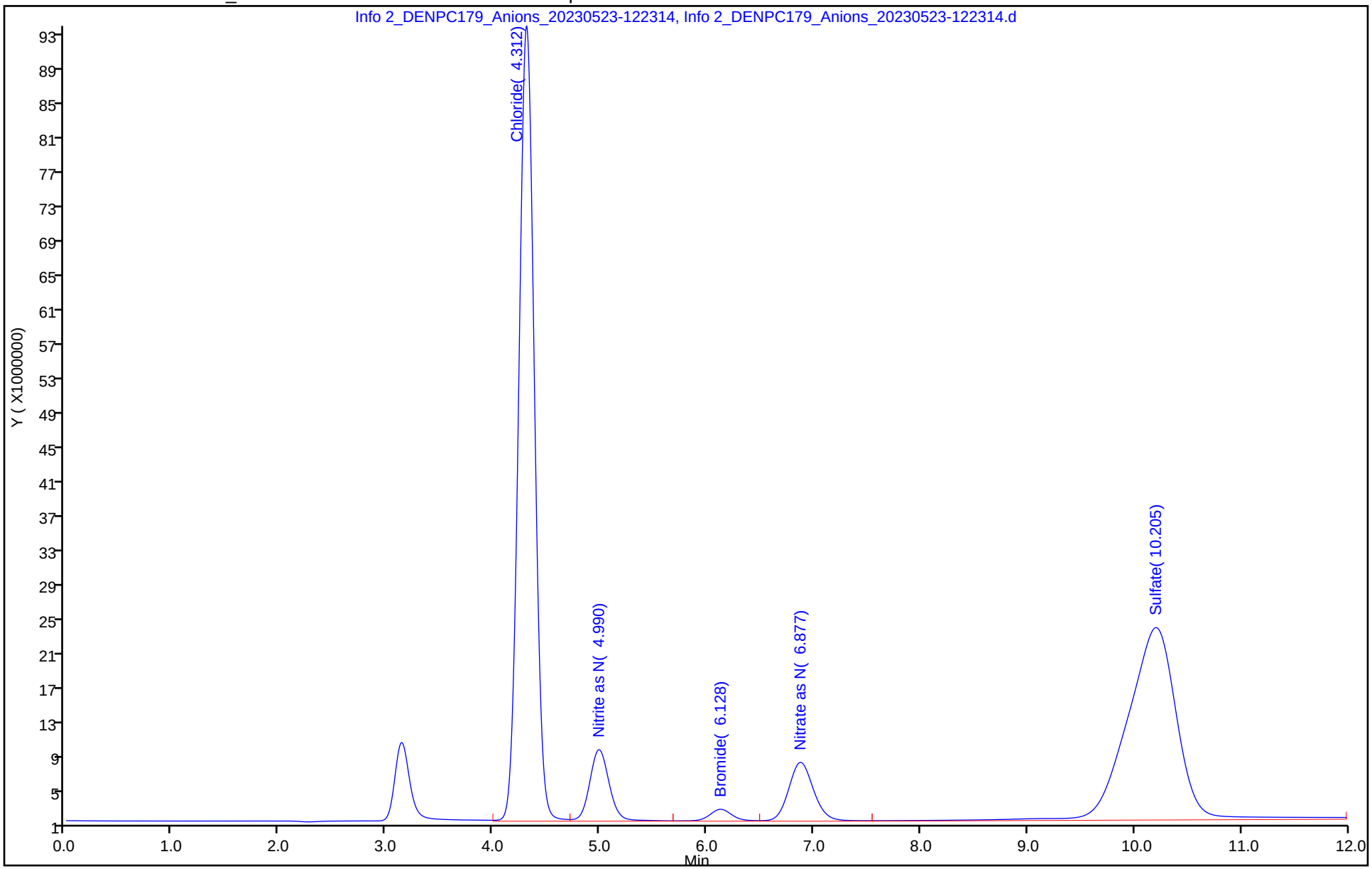
Reagents:

IC LCS_01954 Amount Added: 10.00 Units: mL

Report Date: 24-May-2023 12:15:29 Chrom Revision: 2.3 23-May-2023 13:55:56

Eurofins Denver

Data File:	\\chromfs\Denver\ChromData\WC_IonChrom10\20230523-121736.b\Info 2_DENPC179_Anions_20230523-122314.d				
Injection Date:	23-May-2023 12:08:00	Instrument ID:	WC_IonChrom10	Operator ID:	wetchemd
Lims ID:	ccv			Worklist Smp#:	1
Client ID:					
Injection Vol:	5.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	Anions_IC10	Limit Group:	Wet - Anions		



6/7/2023 3:37 PM

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\WC_IonChrom10\20230523-121736.b\Info 2_DENPC179_Anions_20230523-123
Lims ID: ccb
Client ID:
Sample Type: CCB
Inject. Date: 23-May-2023 12:23:00 ALS Bottle#: 0 Worklist Smp#: 2
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Sample Info: 280-0121736-002
Misc. Info.: 280-0121736-002
Operator ID: wetchemd Instrument ID: WC_IonChrom10

Method: \\chromfs\Denver\ChromData\WC_IonChrom10\20230523-121736.b\Anions_IC10.m
Limit Group: Wet - Anions
Last Update: 24-May-2023 12:15:30 Calib Date: 18-May-2023 13:10:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\WC_IonChrom10\20230518-121594.b\Info 2_DENPC179_Anions_20230518-132

Column 1 : Det: Info 2_091554_1
Process Host: CTX1672

First Level Reviewer: LVW8 Date: 24-May-2023 12:06:07

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride		3.140				ND	
2 Chloride		4.312				ND	
3 Nitrite as N		4.990				ND	U
4 Bromide		6.128				ND	
5 Nitrate as N		6.877				ND	
6 Orthophosphate as P	9.108	9.108	0.000	3346696		-0.1124	
7 Sulfate	10.300	10.300	0.000	1970943		NC	M

QC Flag Legend

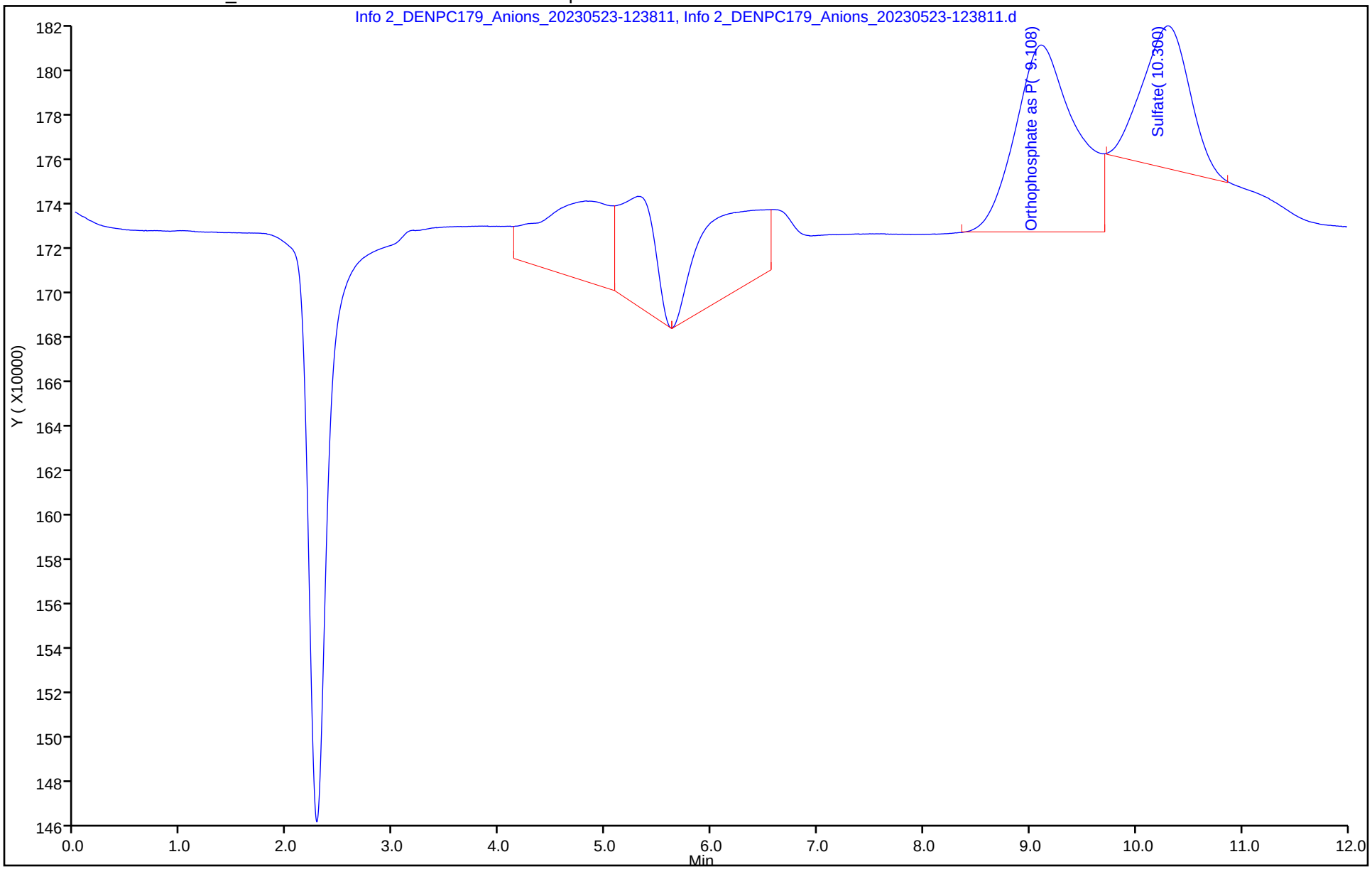
Processing Flags
NC - Not Calibrated
Review Flags
M - Manually Integrated
U - Marked Undetected

Report Date: 24-May-2023 12:15:30 Chrom Revision: 2.3 23-May-2023 13:55:56

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\WC_IonChrom10\20230523-121736.b\Info 2_DENPC179_Anions_20230523-123811.d

Injection Date:	23-May-2023 12:23:00	Instrument ID:	WC_IonChrom10	Operator ID:	wetchemd
Lims ID:	ccb			Worklist Smp#:	2
Client ID:					
Injection Vol:	5.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	Anions_IC10	Limit Group:	Wet - Anions		



6/7/2023 3:37 PM

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\WC_IonChrom10\20230523-121736.b\Info 2_DENPC179_Anions_20230523-125
Lims ID: mrl
Client ID:
Sample Type: MRL
Inject. Date: 23-May-2023 12:38:00 ALS Bottle#: 0 Worklist Smp#: 3
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Sample Info: 280-0121736-003
Misc. Info.: 280-0121736-003
Operator ID: wetchemd Instrument ID: WC_IonChrom10

Method: \\chromfs\Denver\ChromData\WC_IonChrom10\20230523-121736.b\Anions_IC10.m
Limit Group: Wet - Anions
Last Update: 24-May-2023 12:15:31 Calib Date: 18-May-2023 13:10:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\WC_IonChrom10\20230518-121594.b\Info 2_DENPC179_Anions_20230518-132

Column 1 : Det: Info 2_091554_1
Process Host: CTX1672

First Level Reviewer: LVW8 Date: 24-May-2023 12:06:56

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride		3.140			ND	ND	
2 Chloride	4.297	4.297	0.000	46454056	NC	NC	M
3 Nitrite as N	4.995	4.995	0.000	8745075	0.2500	0.2266	M
4 Bromide	6.160	6.160	0.000	2187664	NC	NC	M
5 Nitrate as N	6.940	6.940	0.000	9167597	0.2500	0.2295	M
6 Orthophosphate as P	9.140	9.140	0.000	1777491	0.2500	-0.1797	
7 Sulfate	10.243	10.243	0.000	41532696	NC	NC	M

QC Flag Legend

Processing Flags
NC - Not Calibrated
ND - Not Detected or Marked ND
Review Flags
M - Manually Integrated

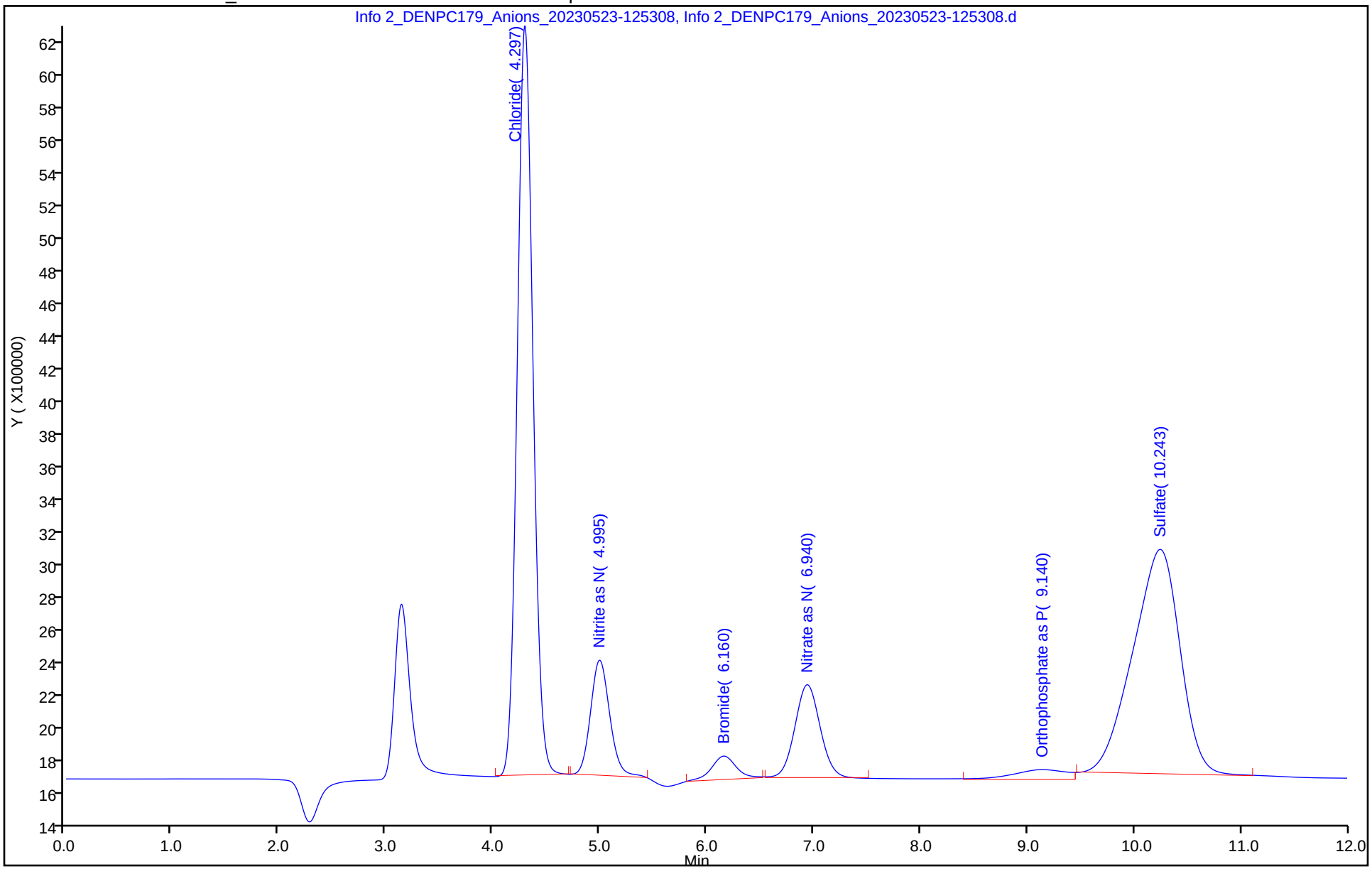
Reagents:

IC CAL cl/so4_00480 Amount Added: 0.20 Units: mL
IC Cal low_00709 Amount Added: 0.10 Units: mL

Report Date: 24-May-2023 12:15:31 Chrom Revision: 2.3 23-May-2023 13:55:56

Eurofins Denver

Data File:	\\chromfs\Denver\ChromData\WC_IonChrom10\20230523-121736.b\Info 2_DENPC179_Anions_20230523-125308.d				
Injection Date:	23-May-2023 12:38:00	Instrument ID:	WC_IonChrom10	Operator ID:	wetchemd
Lims ID:	mrl			Worklist Smp#:	3
Client ID:					
Injection Vol:	5.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	Anions_IC10	Limit Group:	Wet - Anions		



6/7/2023 3:37 PM

Eurofins Denver

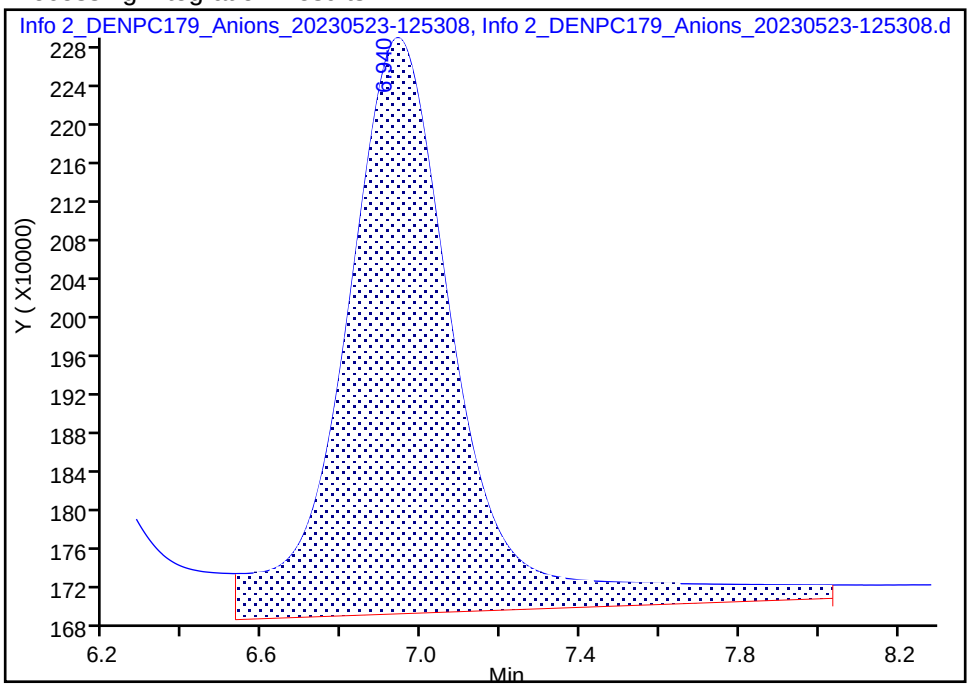
Data File: \\chromfs\Denver\ChromData\WC_IonChrom10\20230523-121736.b\Info 2_DENPC179_Anions_20230523-125
Injection Date: 23-May-2023 12:38:00 Instrument ID: WC_IonChrom10
Lims ID: mrl
Client ID:
Operator ID: wetchemd ALS Bottle#: 0 Worklist Smp#: 3
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Method: Anions_IC10 Limit Group: Wet - Anions
Column: Detector Info 2_091554_1

5 Nitrate as N, CAS: 14797-55-8

Signal: 1

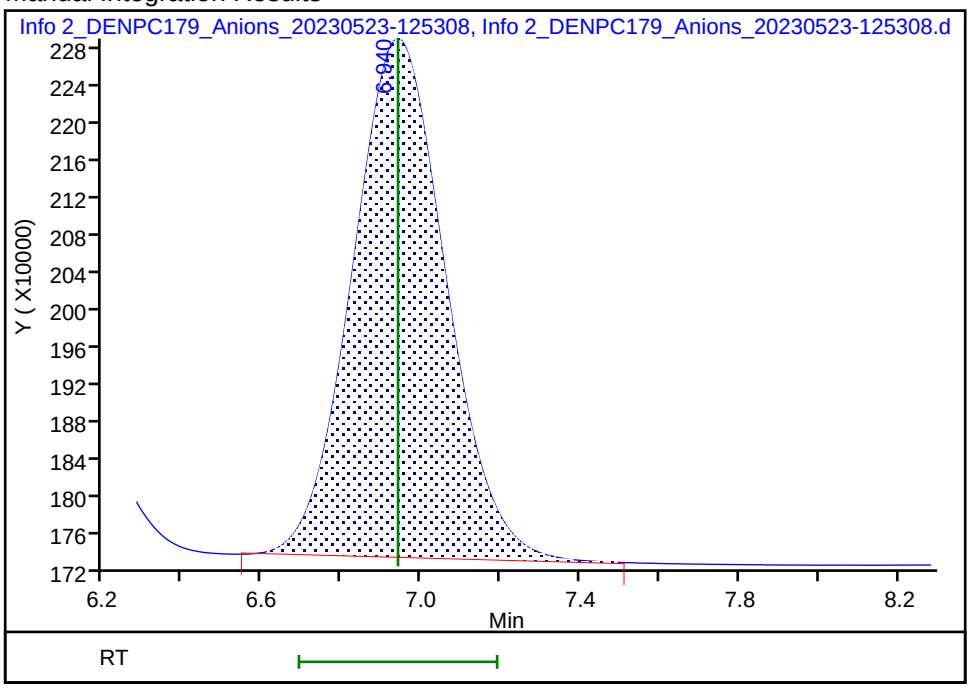
Processing Integration Results

RT: 6.94
Area: 11913220
Amount: 0.290554
Amount Units: ug/ml



Manual Integration Results

RT: 6.94
Area: 9167597
Amount: 0.229528
Amount Units: ug/ml



Reviewer: LVW8, 24-May-2023 12:06:45 -06:00:00 (UTC)
Audit Action: Manually Integrated Audit Reason: Baseline Smoothing

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\WC_IonChrom10\20230523-121736.b\Info 2_DENPC179_Anions_20230523-130
Lims ID: lcs
Client ID:
Sample Type: LCS
Inject. Date: 23-May-2023 12:53:00 ALS Bottle#: 0 Worklist Smp#: 4
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Sample Info: 280-0121736-004
Misc. Info.: 280-0121736-004
Operator ID: wetchemd Instrument ID: WC_IonChrom10

Method: \\chromfs\Denver\ChromData\WC_IonChrom10\20230523-121736.b\Anions_IC10.m
Limit Group: Wet - Anions
Last Update: 24-May-2023 12:15:33 Calib Date: 18-May-2023 13:10:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\WC_IonChrom10\20230518-121594.b\Info 2_DENPC179_Anions_20230518-132

Column 1 : Det: Info 2_091554_1
Process Host: CTX1672

First Level Reviewer: LVW8 Date: 24-May-2023 12:07:06

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride		3.140			ND	ND	
2 Chloride	4.313	4.313	0.000	933016652	NC	NC	
3 Nitrite as N	4.997	4.997	0.000	103113194	2.50	2.43	
4 Bromide	6.147	6.147	0.000	20774409	NC	NC	
5 Nitrate as N	6.898	6.898	0.000	113153208	2.50	2.54	
6 Orthophosphate as P	9.157	9.157	0.000	1472336	2.50	-0.1928	
7 Sulfate	10.237	10.237	0.000	715996149	NC	NC	

QC Flag Legend

Processing Flags
NC - Not Calibrated
ND - Not Detected or Marked ND

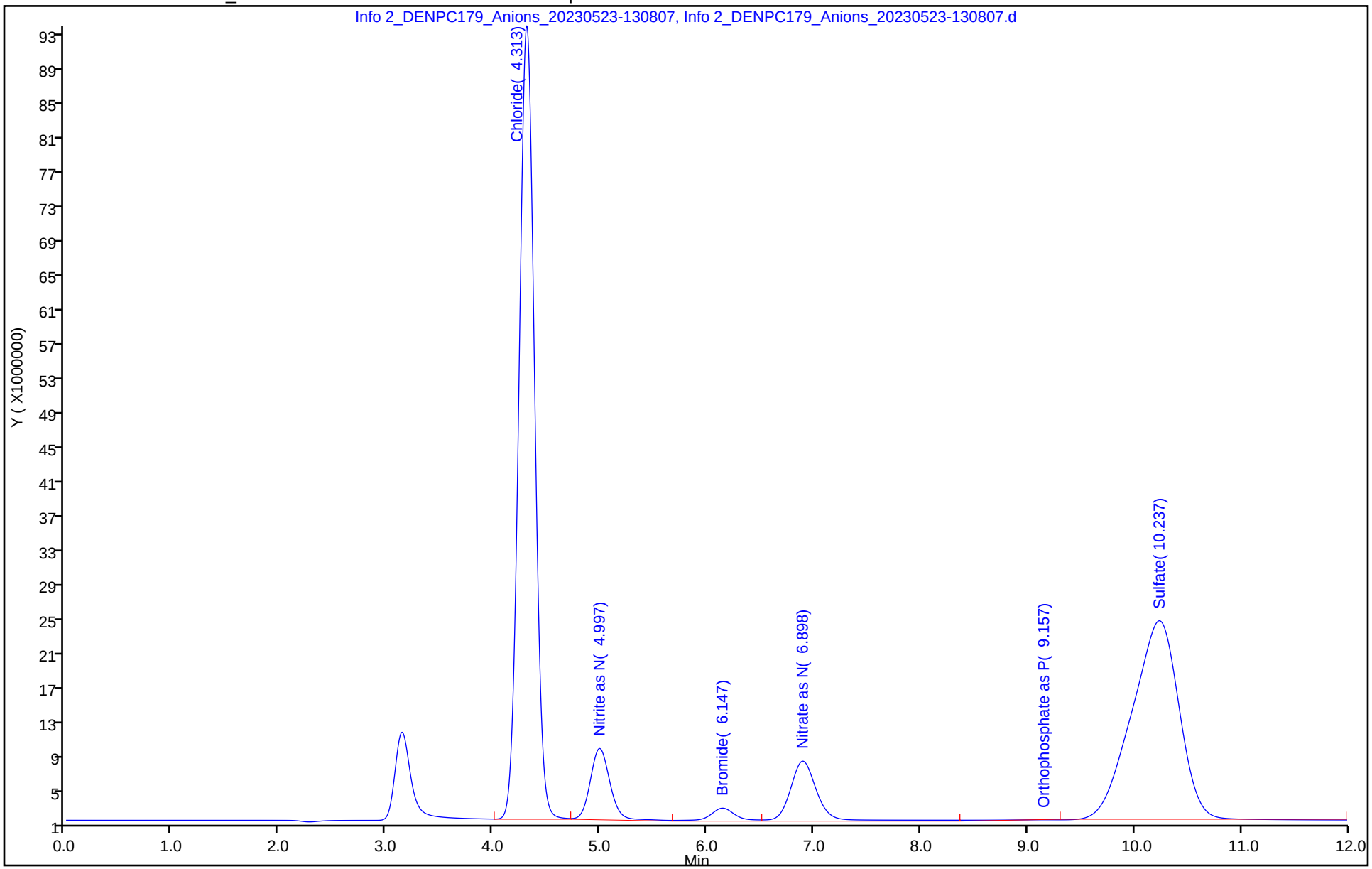
Reagents:

IC LCS_01954 Amount Added: 10.00 Units: mL

Report Date: 24-May-2023 12:15:33 Chrom Revision: 2.3 23-May-2023 13:55:56

Eurofins Denver

Data File:	\\chromfs\Denver\ChromData\WC_IonChrom10\20230523-121736.b\Info 2_DENPC179_Anions_20230523-130807.d				
Injection Date:	23-May-2023 12:53:00	Instrument ID:	WC_IonChrom10	Operator ID:	wetchemd
Lims ID:	lcs			Worklist Smp#:	4
Client ID:					
Injection Vol:	5.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	Anions_IC10	Limit Group:	Wet - Anions		



6/7/2023 3:37 PM

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\WC_IonChrom10\20230523-121736.b\Info 2_DENPC179_Anions_20230523-132
Lims ID: lcsd
Client ID:
Sample Type: LCSD
Inject. Date: 23-May-2023 13:08:00 ALS Bottle#: 0 Worklist Smp#: 5
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Sample Info: 280-0121736-005
Misc. Info.: 280-0121736-005
Operator ID: wetchemd Instrument ID: WC_IonChrom10

Method: \\chromfs\Denver\ChromData\WC_IonChrom10\20230523-121736.b\Anions_IC10.m
Limit Group: Wet - Anions
Last Update: 24-May-2023 12:15:34 Calib Date: 18-May-2023 13:10:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\WC_IonChrom10\20230518-121594.b\Info 2_DENPC179_Anions_20230518-132

Column 1 : Det: Info 2_091554_1
Process Host: CTX1672

First Level Reviewer: LVW8 Date: 23-May-2023 13:29:27

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride		3.140			ND	ND	
2 Chloride	4.317	4.317	0.000	931437746	NC	NC	
3 Nitrite as N	5.000	5.000	0.000	103549807	2.50	2.44	
4 Bromide	6.152	6.152	0.000	20826128	NC	NC	
5 Nitrate as N	6.903	6.903	0.000	113017729	2.50	2.54	
6 Orthophosphate as P	9.152	9.152	0.000	1799613	2.50	-0.1788	
7 Sulfate	10.248	10.248	0.000	701667015	NC	NC	

QC Flag Legend

Processing Flags
NC - Not Calibrated
ND - Not Detected or Marked ND

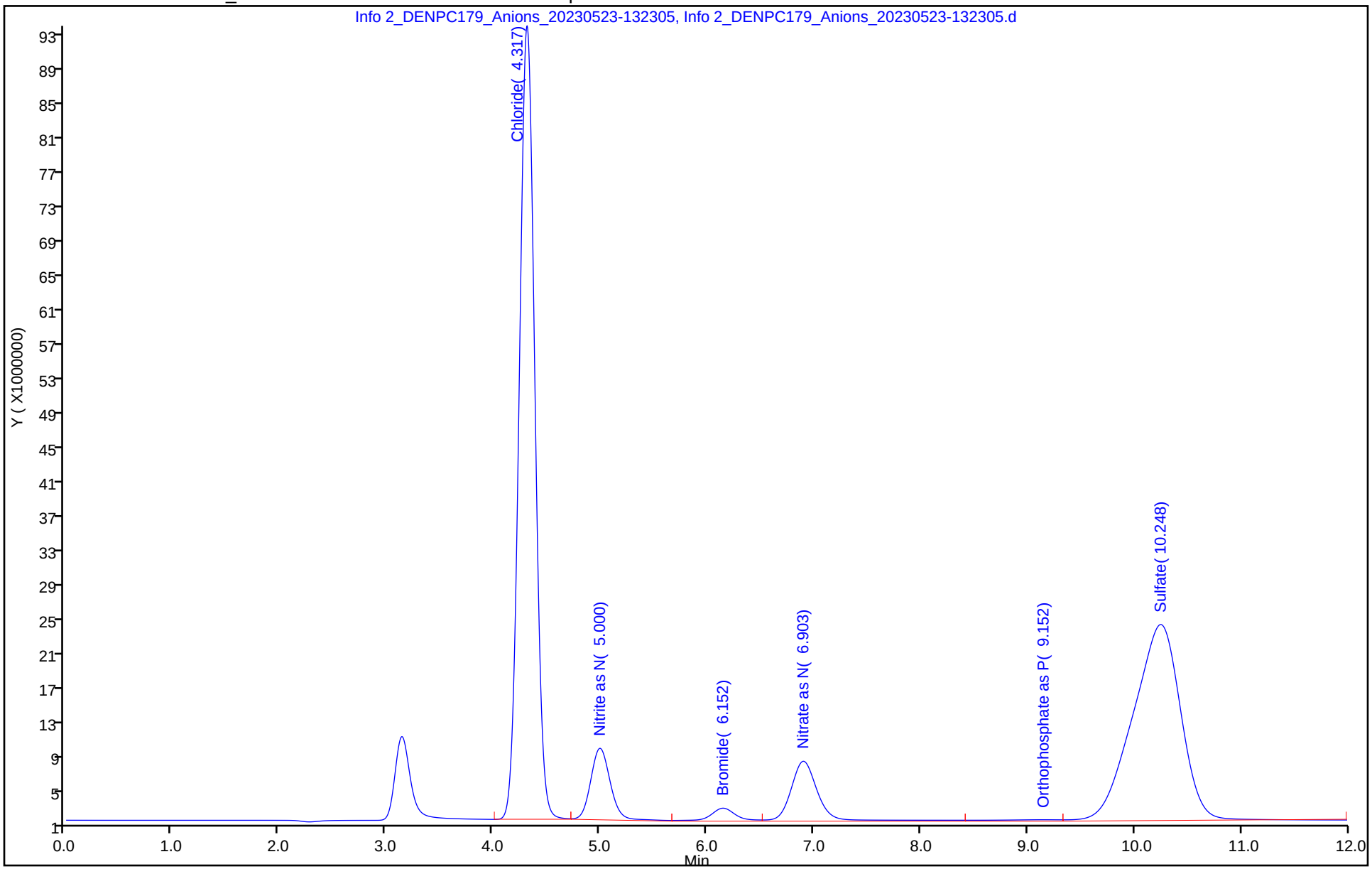
Reagents:

IC LCS_01954 Amount Added: 10.00 Units: mL

Report Date: 24-May-2023 12:15:34 Chrom Revision: 2.3 23-May-2023 13:55:56

Eurofins Denver

Data File:	\\chromfs\Denver\ChromData\WC_IonChrom10\20230523-121736.b\Info 2_DENPC179_Anions_20230523-132305.d				
Injection Date:	23-May-2023 13:08:00	Instrument ID:	WC_IonChrom10	Operator ID:	wetchemd
Lims ID:	lcsd			Worklist Smp#:	5
Client ID:					
Injection Vol:	5.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	Anions_IC10	Limit Group:	Wet - Anions		



6/7/2023 3:37 PM

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\WC_IonChrom10\20230523-121736.b\Info 2_DENPC179_Anions_20230523-133
Lims ID: mb
Client ID:
Sample Type: MB
Inject. Date: 23-May-2023 13:23:00 ALS Bottle#: 0 Worklist Smp#: 6
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Sample Info: 280-0121736-006
Misc. Info.: 280-0121736-006
Operator ID: wetchemd Instrument ID: WC_IonChrom10

Method: \\chromfs\Denver\ChromData\WC_IonChrom10\20230523-121736.b\Anions_IC10.m
Limit Group: Wet - Anions
Last Update: 24-May-2023 12:15:35 Calib Date: 18-May-2023 13:10:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\WC_IonChrom10\20230518-121594.b\Info 2_DENPC179_Anions_20230518-132

Column 1 : Det: Info 2_091554_1
Process Host: CTX1672

First Level Reviewer: LVW8 Date: 24-May-2023 12:07:29

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride		3.140				ND	
2 Chloride		4.317				ND	
3 Nitrite as N		5.000				ND	U
4 Bromide		6.152				ND	
5 Nitrate as N		6.903				ND	
6 Orthophosphate as P	9.137	9.137	0.000	2795568		-0.1360	
7 Sulfate	10.347	10.347	0.000	2366405		NC	M

QC Flag Legend

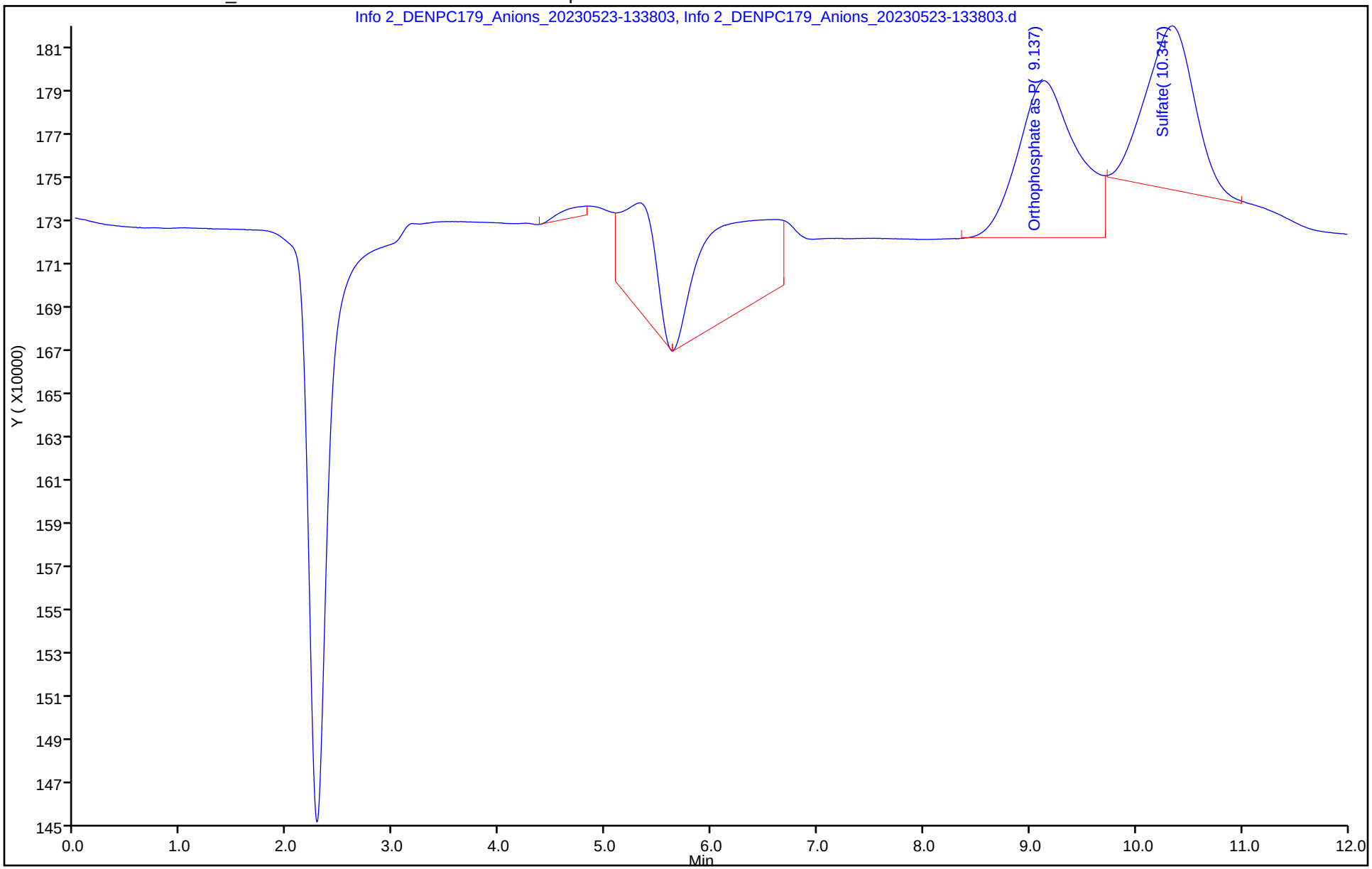
Processing Flags
NC - Not Calibrated
Review Flags
M - Manually Integrated
U - Marked Undetected

Report Date: 24-May-2023 12:15:35 Chrom Revision: 2.3 23-May-2023 13:55:56

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\WC_IonChrom10\20230523-121736.b\Info 2_DENPC179_Anions_20230523-133803.d

Injection Date:	23-May-2023 13:23:00	Instrument ID:	WC_IonChrom10	Operator ID:	wetchemd
Lims ID:	mb			Worklist Smp#:	6
Client ID:					
Injection Vol:	5.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	Anions_IC10	Limit Group:	Wet - Anions		



6/7/2023 3:37 PM

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\WC_IonChrom10\20230523-121736.b\Info 2_DENPC179_Anions_20230523-154
Lims ID: 280-176864-A-1
Client ID: LL12mw-244-230401-GW
Sample Type: Client
Inject. Date: 23-May-2023 15:30:00 ALS Bottle#: 0 Worklist Smp#: 7
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Sample Info: 280-0121736-007
Misc. Info.: 280-0121736-007
Operator ID: wetchemd Instrument ID: WC_IonChrom10

Method: \\chromfs\Denver\ChromData\WC_IonChrom10\20230523-121736.b\Anions_IC10.m
Limit Group: Wet - Anions
Last Update: 24-May-2023 12:15:35 Calib Date: 18-May-2023 13:10:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\WC_IonChrom10\20230518-121594.b\Info 2_DENPC179_Anions_20230518-132

Column 1 : Det: Info 2_091554_1
Process Host: CTX1672

First Level Reviewer: LVW8 Date: 24-May-2023 12:07:48

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/ml	Flags
1 Fluoride		3.140			ND	
2 Chloride	4.310	4.317	-0.007	73388612	NC	
3 Nitrite as N		5.000			ND	
4 Bromide	6.270	6.152	0.118	453769	NC	M
5 Nitrate as N		6.903			ND	U
6 Orthophosphate as P	9.217	9.137	0.080	1359524	-0.1977	
7 Sulfate	10.307	10.347	-0.040	452471191	NC	

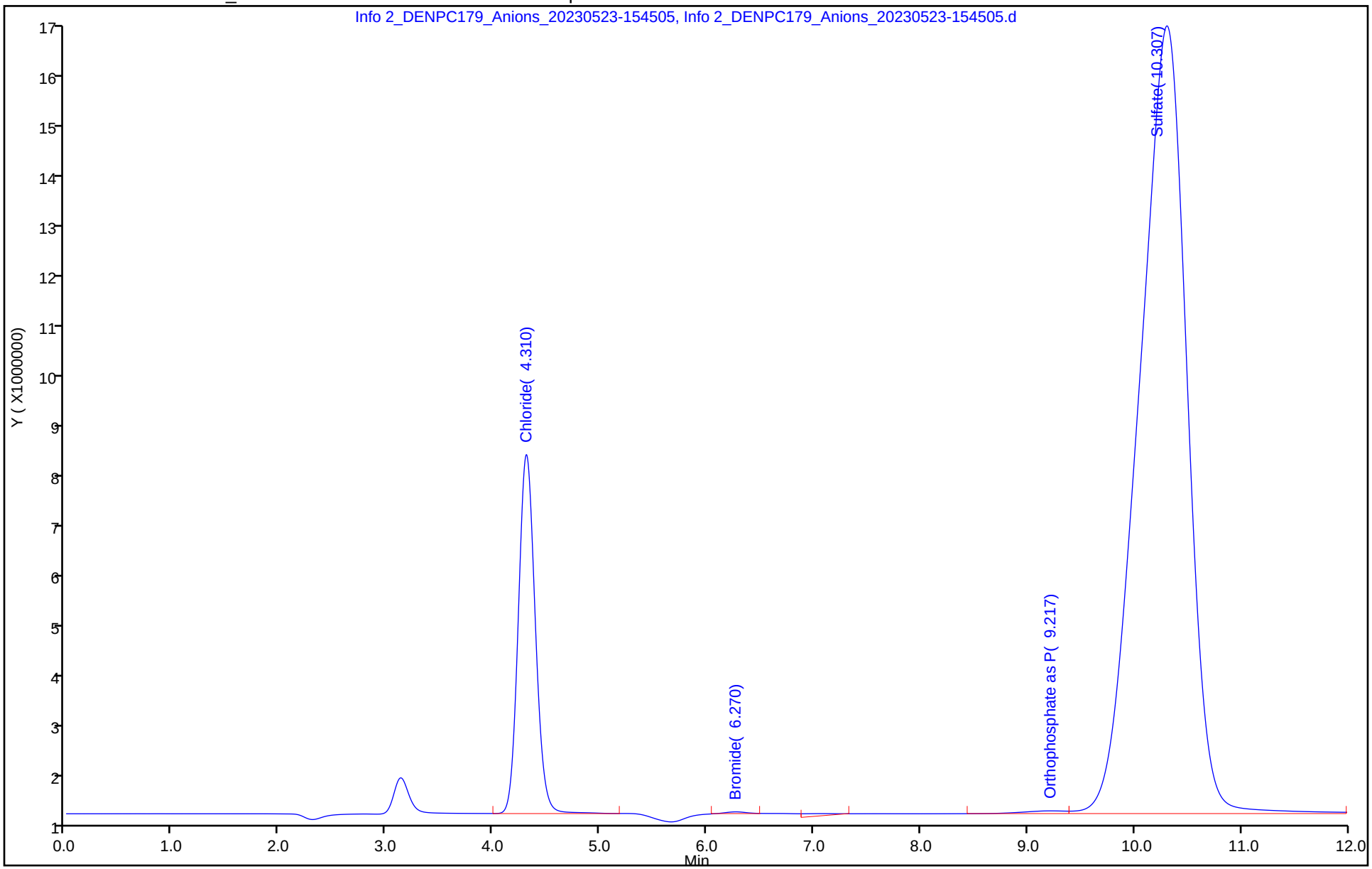
QC Flag Legend

Processing Flags
NC - Not Calibrated
Review Flags
M - Manually Integrated
U - Marked Undetected

Report Date: 24-May-2023 12:15:36 Chrom Revision: 2.3 23-May-2023 13:55:56

Eurofins Denver

Data File:	\\chromfs\Denver\ChromData\WC_IonChrom10\20230523-121736.b\Info 2_DENPC179_Anions_20230523-154505.d				
Injection Date:	23-May-2023 15:30:00	Instrument ID:	WC_IonChrom10	Operator ID:	wetchemd
Lims ID:	280-176864-A-1	Lab Sample ID:	280-176864-1	Worklist Smp#:	7
Client ID:	LL12mw-244-230401-GW				
Injection Vol:	5.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	Anions_IC10	Limit Group:	Wet - Anions		



6/7/2023 3:37 PM

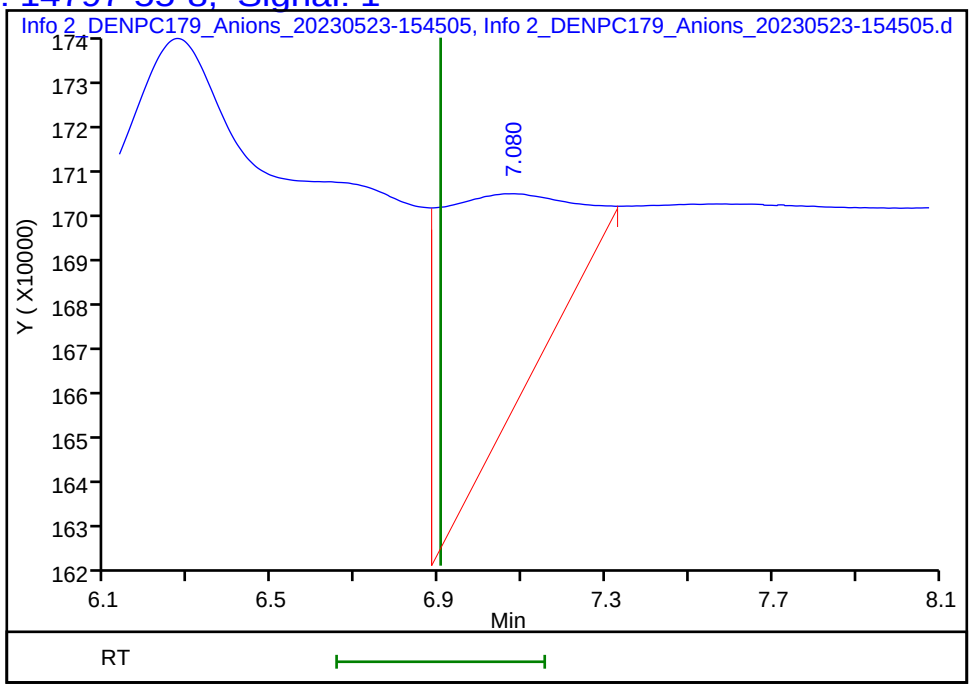
User Disabled Compound Report

Eurofins Denver

Data File:	\\chromfs\Denver\ChromData\WC_IonChrom10\20230523-121736.b\Info 2_DENPC179_Anions_20230523-154				
Injection Date:	23-May-2023 15:30:00	Instrument ID:	WC_IonChrom10		
Lims ID:	280-176864-A-1	Lab Sample ID:	280-176864-1		
Client ID:	LL12mw-244-230401-GW				
Operator ID:	wetchemd	ALS Bottle#:	0	Worklist Smp#:	7
Injection Vol:	5.0 ul	Dil. Factor:	1.0000		
Method:	Anions_IC10	Limit Group:	Wet - Anions		
Column:		Detector	Info 2_091554_1		

5 Nitrate as N, CAS: 14797-55-8, Signal: 1

RT: 7.08
Response: 1044376
Amount: 0



Reviewer: LVW8, 24-May-2023 12:07:48
Audit Action: Manually Integrated Audit Reason: Baseline Smoothing

Eurofins Denver
Target Compound Quantitation Report

Data File:	\\chromfs\Denver\ChromData\WC_IonChrom10\20230523-121736.b\Info 2_DENPC179_Anions_20230523-181				
Lims ID:	ccv				
Client ID:					
Sample Type:	CCV				
Inject. Date:	23-May-2023 18:00:00	ALS Bottle#:	0	Worklist Smp#:	17
Injection Vol:	5.0 ul	Dil. Factor:	1.0000		
Sample Info:	280-0121736-017				
Misc. Info.:	280-0121736-017				
Operator ID:	wetchemd	Instrument ID:	WC_IonChrom10		
Sublist:	chrom-Anions_IC10*sub5				
Method:	\\chromfs\Denver\ChromData\WC_IonChrom10\20230523-121736.b\Anions_IC10.m				
Limit Group:	Wet - Anions				
Last Update:	24-May-2023 12:15:43	Calib Date:	18-May-2023 13:10:00		
Integrator:	Falcon				
Quant Method:	External Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromfs\Denver\ChromData\WC_IonChrom10\20230518-121594.b\Info 2_DENPC179_Anions_20230518-132				
Column 1 :			Det: Info 2_091554_1		
Process Host:	CTX1672				
First Level Reviewer: LVW8		Date:	24-May-2023 09:43:54		

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride		3.140			ND	ND	
2 Chloride	4.320	4.317	0.003	937267761	NC	NC	
3 Nitrite as N	5.005	5.000	0.005	108732924	2.50	2.56	
4 Bromide	6.137	6.152	-0.015	20477517	NC	NC	
5 Nitrate as N	6.898	6.903	-0.005	111816891	2.50	2.51	
6 Orthophosphate as P	9.148	9.137	0.011	3729842	2.50	-0.0959	
7 Sulfate	10.258	10.347	-0.089	678828869	NC	NC	

QC Flag Legend

Processing Flags
NC - Not Calibrated
ND - Not Detected or Marked ND

Reagents:

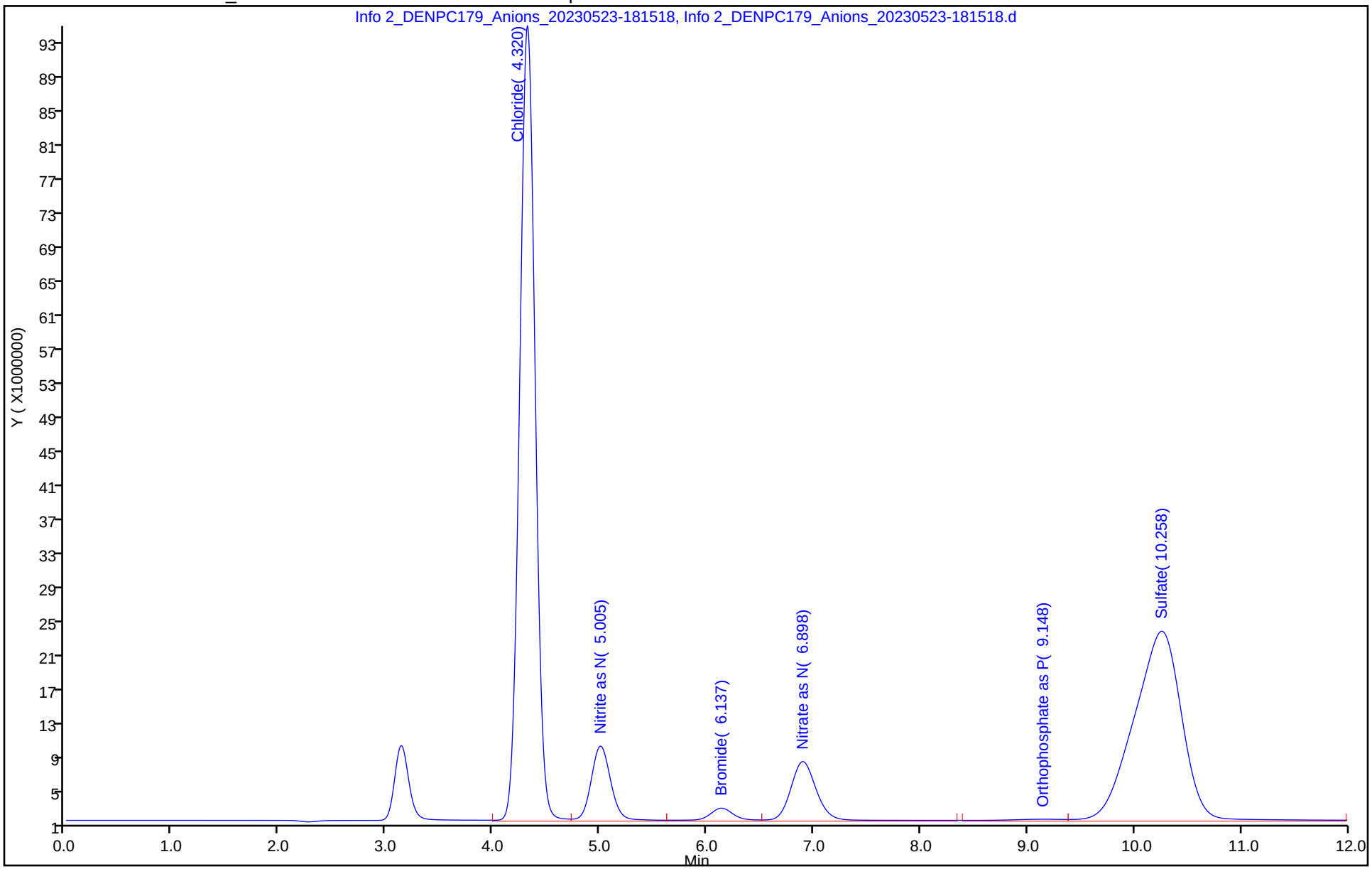
IC LCS_01954 Amount Added: 10.00 Units: mL

Report Date: 24-May-2023 12:15:43 Chrom Revision: 2.3 23-May-2023 13:55:56

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\WC_IonChrom10\20230523-121736.b\Info 2_DENPC179_Anions_20230523-181518.d

Injection Date:	23-May-2023 18:00:00	Instrument ID:	WC_IonChrom10	Operator ID:	wetchemd
Lims ID:	ccv			Worklist Smp#:	17
Client ID:					
Injection Vol:	5.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	Anions_IC10	Limit Group:	Wet - Anions		



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Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\WC_IonChrom10\20230523-121736.b\Info 2_DENPC179_Anions_20230523-183
Lims ID: ccb
Client ID:
Sample Type: CCB
Inject. Date: 23-May-2023 18:15:00 ALS Bottle#: 0 Worklist Smp#: 18
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Sample Info: 280-0121736-018
Misc. Info.: 280-0121736-018
Operator ID: wetchemd Instrument ID: WC_IonChrom10

Method: \\chromfs\Denver\ChromData\WC_IonChrom10\20230523-121736.b\Anions_IC10.m
Limit Group: Wet - Anions
Last Update: 24-May-2023 12:15:43 Calib Date: 18-May-2023 13:10:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\WC_IonChrom10\20230518-121594.b\Info 2_DENPC179_Anions_20230518-132

Column 1 : Det: Info 2_091554_1
Process Host: CTX1672

First Level Reviewer: LVW8 Date: 24-May-2023 12:10:33

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride		3.140				ND	
2 Chloride		4.317				ND	
3 Nitrite as N		5.000				ND	U
4 Bromide		6.152				ND	U
5 Nitrate as N		6.903				ND	
6 Orthophosphate as P	9.155	9.137	0.018	3549826		-0.1036	
7 Sulfate	10.355	10.347	0.008	4831936		NC	

QC Flag Legend

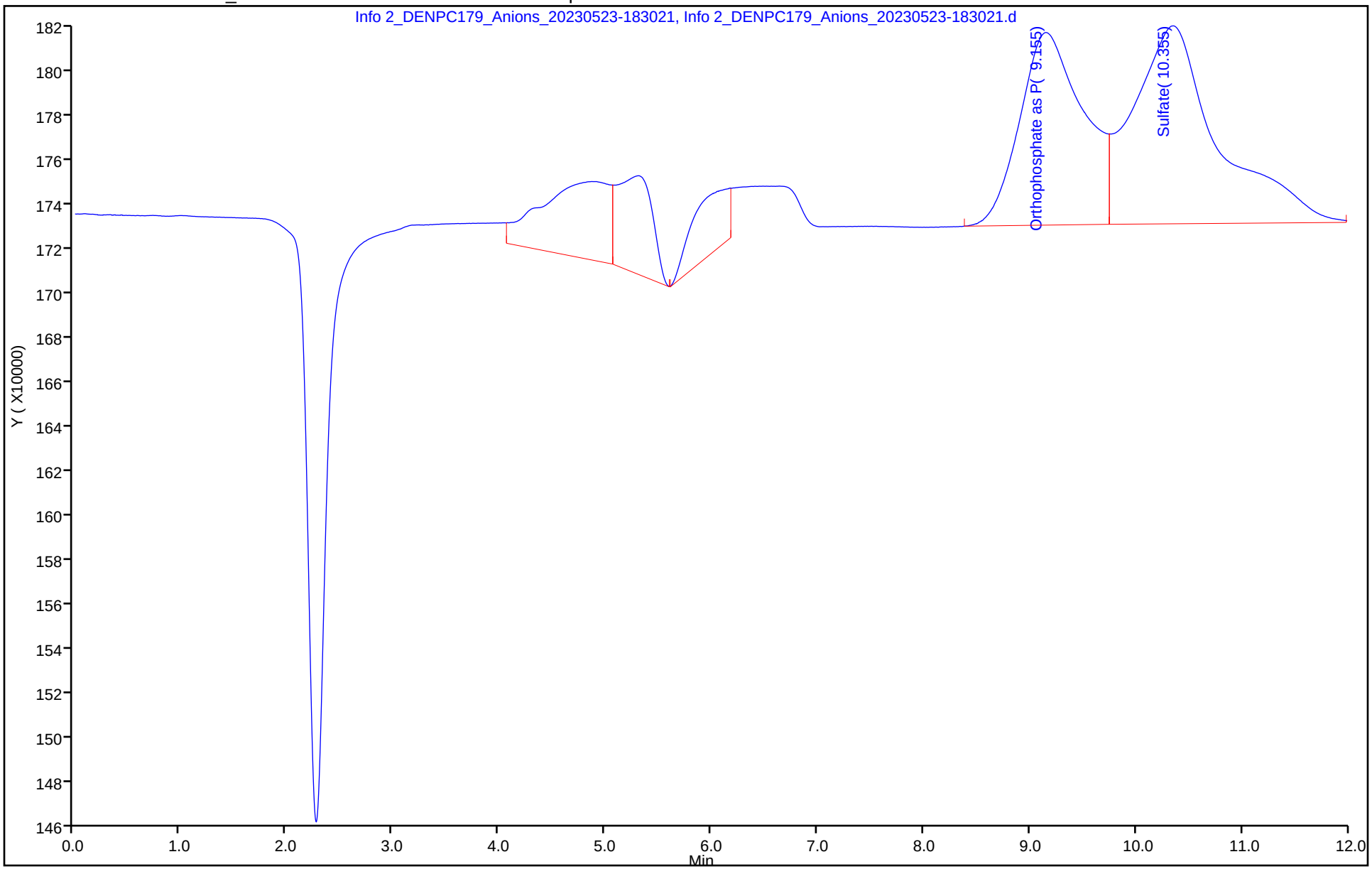
Processing Flags
NC - Not Calibrated
Review Flags
U - Marked Undetected

Report Date: 24-May-2023 12:15:44 Chrom Revision: 2.3 23-May-2023 13:55:56

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\WC_IonChrom10\20230523-121736.b\Info 2_DENPC179_Anions_20230523-183021.d

Injection Date:	23-May-2023 18:15:00	Instrument ID:	WC_IonChrom10	Operator ID:	wetchemd
Lims ID:	ccb			Worklist Smp#:	18
Client ID:					
Injection Vol:	5.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	Anions_IC10	Limit Group:	Wet - Anions		



6/7/2023 3:37 PM

Shipping and Receiving Documents

leidos

Chain of Custody Record

Page 1 of 1

COC No.: RVAAP-347-TA

Date: 5/22/2023

Name Leidos
Address: 8866 Commons Blvd. Suite 201, Twinsburg, OH 44087
Phone Number: (330) 405-5802
Project Manager: Jed Thomas
Project: RVAAP FWGW Sampling Event Spring 2023
Job/P.O. No.: P010216426
Sampler (Signature) Melissa Rego (Printed Name) MelissaRego

Laboratory Name: TA- Denver
Address: 4955 Yarrow Street
Arvada, CO 80002
Phone: 303-736-0107
Contact: Patrick McEntee

Laboratory No.	Sample ID	Site Type	Depth	Date	Time	Matrix	Nitrate (10)(A)	AMMONIA 15 (E)	Temperature Blank	Total Number of Containers	OBSERVATIONS, COMMENTS SPECIAL INSTRUCTIONS
	LL12mw-244-230401-GW	NA	NA	5/22/23	1122	W	1	1		2	

Requested Parameters

VR 5/22/23

280-176864 Chain of Custody

Relinquished by	Date	Received by	Date	Time
Signature	5/22/23	Signature	5/23/23	
Charles Spurr	Time	Charles Cannon	Time	0930
Printed Name	1700	Printed Name		
Leidos		ETADEN		
Company		Company		
Relinquished by	Date	Received by	Date	
Signature		Signature		
	Time		Time	
Printed Name		Printed Name		
Company		Company		

Notes: Total Number of Containers: 2

A. Cool, 4C E. H2SO4
B. HCl, pH<2, Cool, 4C
C. HNO3, pH<2, Cool, 4C
D. NaOH, pH>12, Cool 4C

1. SW 8260B
2. SW 8270D
3. SW 8270D SIM
4. SW 8082A
5. SW 8081B
6. SW 8330
7. SW 6010/6020/7470
8. SW 9012B
9. SW 9034
10. SW 9056/9056A
11. SW 6860
12. EPA 353.2
13. SW 7196
14. SM2320B
15. E350.1

Shipment Method: ~~Courier~~ FedEx CS 5/22/23

818036574434

Temperature Blank

Lab:
Leidos
8866 Commons Drive
Twinsburg, OH 44087
(330) 405-5802

Leidos White Laboratory Pink. Project Manager Yellow Project QAO Goldenrod Field Project Manager

0.9 IR14 CF0.1

Login Sample Receipt Checklist

Client: Leidos, Inc.

Job Number: 280-176864-1

Login Number: 176864
List Number: 1
Creator: Padgett, Dylan T

List Source: Eurofins Denver

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
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	