

**DATA PACKAGE
GENERAL CHEMISTRY**

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

WESTON SOLUTIONS

1400 Weston Way

PO Box 2653

West Chester, PA - 19380

Phone No: 610-701-7400

ORDER ID : Q1539

ATTENTION : Nathan Fretz



Laboratory Certification ID # 20012

Q1539-GENCHEM



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Cover Page

Order ID : Q1539

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

Client : Weston Solutions

Lab Sample Number

Q1539-01
Q1539-02
Q1539-03
Q1539-04

Client Sample Number

TAPIAL3-MW03D-031025-00-T1
TAPFTA-MW01I-031025-00-T2
TAP-TB-03-031025
TAP-TB-04-031025-T2

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

Signature :

APPROVED

By Nimisha Pandya, QA/QC Supervisor at 2:40 pm, Mar 25, 2025

Date: 3/25/2025

NYDOH CERTIFICATION NO - 11376

NJDEP CERTIFICATION NO - 20012



284 Sheffield Street, Mountainside, NJ 07092 Phone: 908 789 8900 Fax: 908 789 8922

CASE NARRATIVE

Weston Solutions

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

Project # N/A

Chemtech Project # Q1539

Test Name: Hexavalent Chromium,Oil and Grease,Anions Group5,TOC,Ammonia

A. Number of Samples and Date of Receipt:

4 Water samples were received on 03/11/2025.

B. Parameters:

According to the Chain of Custody document, the following analyses were requested: Ammonia, Anions Group5, Diesel Range Organics, Gasoline Range Organics, Hardness, Total, Hexavalent Chromium, Mercury, Metals ICP-TAL, METALS-TAL, Oil and Grease, PESTICIDE Group1, SVOC-TCL BNA -20, TOC and VOC-TCLVOA-10. This data package contains results for Hexavalent Chromium,Oil and Grease,Anions Group5,TOC,Ammonia.

C. Analytical Techniques:

The analysis of Oil and Grease was based on method 1664A, The analysis of Hexavalent Chromium was based on method 7196A, The analysis of Anions Group5 was based on method 9056A, The analysis of TOC was based on method 9060A and The analysis of Ammonia was based on method SM4500-NH3.

D. QA/ QC Samples:

The Holding Times were met for all analysis.

Sample TAPIAL3-MW03D-031025-00-T1 was diluted due to high concentrations for Chloride.

The Blank Spike met requirements for all samples.

The Duplicate analysis met criteria for all samples.

The Matrix Spike(TAPIAL3-MW03D-031025-00-T1MS) analysis met criteria for all samples except for TOC, Chloride due to Sample matrix interferences.

The Matrix Spike Duplicate (TAPIAL3-MW03D-031025-00-T1MSD) analysis met criteria for all samples except for TOC, Chloride due to Sample matrix interferences.

The Blank analysis did not indicate the presence of lab contamination.

The Calibration met the requirements.

E. Additional Comments:



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

Signature _____

APPROVED

By Nimisha Pandya, QA/QC Supervisor at 2:41 pm, Mar 25, 2025

DATA REPORTING QUALIFIERS- INORGANIC

For reporting results, the following " Results Qualifiers" are used:

- J** Indicates the reported value was obtained from a reading that was less than the Contract Required Detection Limit (CRDL), but greater than or equal to the Instrument Detection Limit (IDL).
- U** Indicates the analyte was analyzed for, but not detected.
- ND** Indicates the analyte was analyzed for, but not detected
- E** Indicates the reported value is estimated because of the presence of interference
- M** Indicates Duplicate injection precision not met.
- N** Indicates the spiked sample recovery is not within control limits.
- S** Indicates the reported value was determined by the Method of Standard Addition (MSA).
- * Indicates that the duplicate analysis is not within control limits.
- + Indicates the correlation coefficient for the MSA is less than 0.995.
- D** Indicates the reported value is from a secondary analysis with a dilution factor. The original analysis exceeded the calibration range.
- M** Method qualifiers
"P" for ICP instrument
"PM" for ICP when Microwave Digestion is used
"CV" for Manual Cold Vapor AA
"AV" for automated Cold Vapor AA
"CA" for MIDI-Distillation Spectrophotometric
"AS" for Semi -Automated Spectrophotometric
"C" for Manual Spectrophotometric
"T" for Titrimetric
"NR" for analyte not required to be analyzed
- OR** Indicates the analyte's concentration exceeds the calibrated range of the instrument for that specific analysis.
- Q** Indicates the LCS did not meet the control limits requirements
- H** Sample Analysis Out Of Hold Time

ALLIANCE 284 Sheffield Street, Mountainside New Jersey 07092

NEW JERSEY LAB ID#: 20012: NEW YORK LAB ID#: 11376

GENERAL CHEMISTRY CONFORMANCE/NON-CONFORMANCE SUMMARY

CHEMTECH PROJECT NUMBER: Q1539

MATRIX: Water

METHOD: 1664A,7196A,9056A,9060A,SM4500-NH3

- | | NA | NO | YES |
|---|----|----|-----|
| 1. Blank Contamination - If yes, list compounds and concentrations in each blank: | | | ✓ |

2. Matrix Spike Duplicate Recoveries Met Criteria

✓

If not met, list those compounds and their recoveries which fall outside the acceptable range.

The Blank Spike met requirements for all samples. The Matrix Spike(TAPIAL3-MW03D-031025-00-T1MS) analysis met criteria for all samples except for TOC, Chloride due to Sample matrix interferences. The Matrix Spike Duplicate (TAPIAL3-MW03D-031025-00-T1MSD) analysis met criteria for all samples except for TOC, Chloride due to Sample matrix interferences.

3. Sample Duplicate Analysis Met QC Criteria

✓

If not met, list those compounds and their recoveries which fall outside the acceptable range.

4. Digestion Holding Time Met

✓

If not met, list number of days exceeded for each sample:

ADDITIONAL COMMENTS:

APPROVED

QA REVIEW

By Nimisha Pandya, QA/QC Supervisor at 2:41 pm, Mar 25, 2025

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APPENDIX A

QA REVIEW GENERAL DOCUMENTATION

Project #: Q1539

Completed

For thorough review, the report must have the following:

GENERAL:

Are all original paperwork present (chain of custody, record of communication, airbill, sample management lab chronicle, login page) ✓

Check chain-of-custody for proper relinquish/return of samples ✓

Is the chain of custody signed and complete ✓

Check internal chain-of-custody for proper relinquish/return of samples /sample extracts ✓

Collect information for each project id from server. Were all requirements followed ✓

COVER PAGE:

Do numbers of samples correspond to the number of samples in the Chain of Custody on login page ✓

Do lab numbers and client Ids on cover page agree with the Chain of Custody ✓

CHAIN OF CUSTODY:

Do requested analyses on Chain of Custody agree with form I results ✓

Do requested analyses on Chain of Custody agree with the log-in page ✓

Were the correct method log-in for analysis according to the Analytical Request and Chain of Castody ✓

Were the samples received within hold time ✓

Were any problems found with the samples at arrival recorded in the Sample Management Laboratory Chronicle ✓

ANALYTICAL:

Was method requirement followed? ✓

Was client requirement followed? ✓

Does the case narrative summarize all QC failure? ✓

All runlogs and manual integration are reviewed for requirements ✓

All manual calculations and /or hand notations verified ✓

QA Review Signature: MOHAMMAD AHMED

Date: 03/25/2025

LAB CHRONICLE

OrderID:	Q1539	OrderDate:	3/11/2025 10:36:00 AM					
Client:	Weston Solutions	Project:	Ft Meade Tipton Airfield Parcel RI - PO 0111169					
Contact:	Nathan Fretz	Location:	I31,VOA Ref. #3 Water					
<hr/>								
LabID	ClientID	Matrix	Test	Method	Sample Date	Prep Date	Anal Date	Received
Q1539-01	TAPIAL3-MW03D-031 025-00-T1	WATER			03/10/25 11:50			03/11/25
			Ammonia	SM4500-NH3		03/12/25	03/12/25 15:46	
			Anions Group5	9056A			03/11/25 15:02	
			Hexavalent Chromium	7196A			03/11/25 11:29	
			Oil and Grease	1664A			03/14/25 10:00	
			TOC	9060A			03/12/25 12:23	
Q1539-01DL	TAPIAL3-MW03D-031 025-00-T1DL	WATER			03/10/25 11:50			03/11/25
			Anions Group5	9056A			03/11/25 16:29	
Q1539-02	TAPFTA-MW01I-0310 25-00-T2	WATER			03/10/25 15:10			03/11/25
			Ammonia	SM4500-NH3		03/12/25	03/12/25 15:46	
			Anions Group5	9056A			03/11/25 16:07	
			Hexavalent Chromium	7196A			03/11/25 11:30	
			Oil and Grease	1664A			03/14/25 10:00	
			TOC	9060A			03/12/25 14:08	



SAMPLE

DATA

Report of Analysis

Client:	Weston Solutions	Date Collected:	03/10/25 11:50
Project:	Ft Meade Tipton Airfield Parcel RI - PO 0111169	Date Received:	03/11/25
Client Sample ID:	TAPIAL3-MW03D-031025-00-T1	SDG No.:	Q1539
Lab Sample ID:	Q1539-01	Matrix:	WATER
		% Solid:	0

Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
Ammonia as N	0.080	U	1	0.045	0.080	0.10	mg/L	03/12/25 10:05	03/12/25 15:46	SM 4500-NH3 B plus G-11
Bromide	1.00	U	1	0.034	1.00	2.00	mg/L		03/11/25 15:02	9056A
Chloride	56.9	OR	1	0.011	0.30	0.60	mg/L		03/11/25 15:02	9056A
Fluoride	0.12	J	1	0.057	0.20	0.40	mg/L		03/11/25 15:02	9056A
Nitrite	0.30	U	1	0.011	0.30	0.60	mg/L		03/11/25 15:02	9056A
Nitrate	0.25	U	1	0.0034	0.25	0.50	mg/L		03/11/25 15:02	9056A
Sulfate	16.8		1	0.032	1.50	3.00	mg/L		03/11/25 15:02	9056A
Dissolved Hexavalent Chromium	0.0050	U	1	0.0030	0.0050	0.010	mg/L		03/11/25 11:29	7196A
Oil and Grease	0.60	J	1	0.40	2.00	5.00	mg/L		03/14/25 10:00	1664A
TOC	4.00		1	0.19	0.50	1.00	mg/L		03/12/25 12:23	9060A

Comments: _____

U = Not Detected

LOQ = Limit of Quantitation

MDL = Method Detection Limit

LOD = Limit of Detection

D = Dilution

Q = indicates LCS control criteria did not meet requirements

H = Sample Analysis Out Of Hold Time

J = Estimated Value

B = Analyte Found in Associated Method Blank

* = indicates the duplicate analysis is not within control limits.

E = Indicates the reported value is estimated because of the presence of interference.

OR = Over Range

N = Spiked sample recovery not within control limits

Report of Analysis

Client:	Weston Solutions	Date Collected:	03/10/25 11:50
Project:	Ft Meade Tipton Airfield Parcel RI - PO 0111169	Date Received:	03/11/25
Client Sample ID:	TAPIAL3-MW03D-031025-00-T1DL	SDG No.:	Q1539
Lab Sample ID:	Q1539-01DL	Matrix:	WATER
		% Solid:	0

Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
Chloride	46.9	D	10	0.11	3.00	6.00	mg/L		03/11/25 16:29	9056A

Comments: _____

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LOQ = Limit of Quantitation

MDL = Method Detection Limit

LOD = Limit of Detection

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Q = indicates LCS control criteria did not meet requirements

H = Sample Analysis Out Of Hold Time

J = Estimated Value

B = Analyte Found in Associated Method Blank

* = indicates the duplicate analysis is not within control limits.

E = Indicates the reported value is estimated because of the presence of interference.

OR = Over Range

N = Spiked sample recovery not within control limits

Report of Analysis

Client:	Weston Solutions	Date Collected:	03/10/25 15:10
Project:	Ft Meade Tipton Airfield Parcel RI - PO 0111169	Date Received:	03/11/25
Client Sample ID:	TAPFTA-MW01I-031025-00-T2	SDG No.:	Q1539
Lab Sample ID:	Q1539-02	Matrix:	WATER
		% Solid:	0

Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
Ammonia as N	0.23		1	0.045	0.080	0.10	mg/L	03/12/25 10:05	03/12/25 15:46	SM 4500-NH3 B plus G-11
Bromide	1.00	U	1	0.034	1.00	2.00	mg/L		03/11/25 16:07	9056A
Chloride	6.40		1	0.011	0.30	0.60	mg/L		03/11/25 16:07	9056A
Fluoride	0.12	J	1	0.057	0.20	0.40	mg/L		03/11/25 16:07	9056A
Nitrite	0.30	U	1	0.011	0.30	0.60	mg/L		03/11/25 16:07	9056A
Nitrate	0.25	U	1	0.0034	0.25	0.50	mg/L		03/11/25 16:07	9056A
Sulfate	1.00	J	1	0.032	1.50	3.00	mg/L		03/11/25 16:07	9056A
Dissolved Hexavalent Chromium	0.0050	U	1	0.0030	0.0050	0.010	mg/L		03/11/25 11:30	7196A
Oil and Grease	0.40	J	1	0.40	2.00	5.00	mg/L		03/14/25 10:00	1664A
TOC	5.10		1	0.19	0.50	1.00	mg/L		03/12/25 14:08	9060A

Comments: _____

U = Not Detected

LOQ = Limit of Quantitation

MDL = Method Detection Limit

LOD = Limit of Detection

D = Dilution

Q = indicates LCS control criteria did not meet requirements

H = Sample Analysis Out Of Hold Time

J = Estimated Value

B = Analyte Found in Associated Method Blank

* = indicates the duplicate analysis is not within control limits.

E = Indicates the reported value is estimated because of the presence of interference.

OR = Over Range

N = Spiked sample recovery not within control limits



QC RESULT

SUMMARY

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284 Sheffield Street, Mountainside, New Jersey 07092, Phone : 908 789 8900,
Fax : 908 789 8922

Initial and Continuing Calibration Verification

Client: Weston Solutions

SDG No.: Q1539

Project: Ft Meade Tipton Airfield Parcel RI - PO 0111169

RunNo.: LB134983

Analyte	Units	Result	True Value	% Recovery	Acceptance Window (%R)	Analysis Date
Sample ID: ICV Hexavalent Chromium	mg/L	0.502	0.5	100	90-110	03/11/2025
Sample ID: CCV1 Hexavalent Chromium	mg/L	0.505	0.5	101	90-110	03/11/2025
Sample ID: CCV2 Hexavalent Chromium	mg/L	0.500	0.5	100	90-110	03/11/2025

Initial and Continuing Calibration Verification

Client:	Weston Solutions	SDG No.:	Q1539
Project:	Ft Meade Tipton Airfield Parcel RI - PO 0111169	RunNo.:	LB134995

Analyte		Units	Result	True Value	% Recovery	Acceptance Window (%R)	Analysis Date
Sample ID:	ICV1						
TOC		mg/L	9.7	10	97	90-110	03/11/2025
Sample ID:	CCV1						
TOC		mg/L	9.2	10	92	90-110	03/12/2025
Sample ID:	CCV2						
TOC		mg/L	10.8	10	108	90-110	03/12/2025

Initial and Continuing Calibration Verification

Client:	Weston Solutions	SDG No.:	Q1539
Project:	Ft Meade Tipton Airfield Parcel RI - PO 0111169	RunNo.:	LB135005

Analyte	Units	Result	True Value	% Recovery	Acceptance Window (%R)	Analysis Date
Sample ID: ICV1						
Bromide	mg/L	10.2	10	102	90-110	02/21/2025
Chloride	mg/L	3	3	100	90-110	02/21/2025
Fluoride	mg/L	2	2	100	90-110	02/21/2025
Nitrite	mg/L	3	3	100	90-110	02/21/2025
Nitrate	mg/L	2.5	2.5	100	90-110	02/21/2025
Sulfate	mg/L	15.1	15	101	90-110	02/21/2025
Orthophosphate as P	mg/L	5.1	5	102	90-110	02/21/2025
Sample ID: CCV1						
Bromide	mg/L	10.5	10	105	90-110	03/11/2025
Chloride	mg/L	3.1	3	103	90-110	03/11/2025
Fluoride	mg/L	2.1	2	105	90-110	03/11/2025
Nitrite	mg/L	3.1	3	103	90-110	03/11/2025
Nitrate	mg/L	2.6	2.5	104	90-110	03/11/2025
Sulfate	mg/L	15.5	15	103	90-110	03/11/2025
Orthophosphate as P	mg/L	4.6	5	92	90-110	03/11/2025
Sample ID: CCV2						
Bromide	mg/L	10.5	10	105	90-110	03/11/2025
Chloride	mg/L	3.1	3	103	90-110	03/11/2025
Fluoride	mg/L	2.1	2	105	90-110	03/11/2025
Nitrite	mg/L	3.1	3	103	90-110	03/11/2025
Nitrate	mg/L	2.6	2.5	104	90-110	03/11/2025
Sulfate	mg/L	15.5	15	103	90-110	03/11/2025
Orthophosphate as P	mg/L	5.3	5	106	90-110	03/11/2025
Sample ID: CCV3						
Bromide	mg/L	10.5	10	105	90-110	03/11/2025
Chloride	mg/L	3.1	3	103	90-110	03/11/2025
Fluoride	mg/L	2.1	2	105	90-110	03/11/2025
Nitrite	mg/L	3.1	3	103	90-110	03/11/2025
Nitrate	mg/L	2.6	2.5	104	90-110	03/11/2025
Sulfate	mg/L	15.5	15	103	90-110	03/11/2025
Orthophosphate as P	mg/L	5.4	5	108	90-110	03/11/2025

Initial and Continuing Calibration Verification

Client:	Weston Solutions	SDG No.:	Q1539
Project:	Ft Meade Tipton Airfield Parcel RI - PO 0111169	RunNo.:	LB135012

Analyte	Units	Result	True Value	% Recovery	Acceptance Window (%R)	Analysis Date
Sample ID: ICV1 Ammonia as N	mg/L	1	1	100	90-110	03/12/2025
Sample ID: CCV1 Ammonia as N	mg/L	0.95	1	95	90-110	03/12/2025
Sample ID: CCV2 Ammonia as N	mg/L	0.97	1	97	90-110	03/12/2025
Sample ID: CCV3 Ammonia as N	mg/L	0.95	1	95	90-110	03/12/2025

Initial and Continuing Calibration Blank Summary

Client:	Weston Solutions			SDG No.:	Q1539		
Project:	Ft Meade Tipton Airfield Parcel RI - PO 0111169			RunNo.:	LB134983		
<hr/>							
Analyte	Units	Result	Acceptance Limits	Conc Qual	MDL	RDL	Analysis Date
Sample ID: ICB Hexavalent Chromium	mg/L	< 0.0050	0.0050	U	0.0027	0.01	03/11/2025
Sample ID: CCB1 Hexavalent Chromium	mg/L	< 0.0050	0.0050	U	0.0027	0.01	03/11/2025
Sample ID: CCB2 Hexavalent Chromium	mg/L	< 0.0050	0.0050	U	0.0027	0.01	03/11/2025

Initial and Continuing Calibration Blank Summary

Client:	Weston Solutions			SDG No.:	Q1539
Project:	Ft Meade Tipton Airfield Parcel RI - PO 0111169			RunNo.:	LB134995
Analyte		Units	Result	Acceptance Limits	Conc Qual MDL RDL Analysis Date
Sample ID:	ICB1				
TOC		mg/L	0.32	0.5000	J 0.19 1 03/11/2025
Sample ID:	CCB1				
TOC		mg/L	0.44	0.5000	J 0.19 1 03/12/2025
Sample ID:	CCB2				
TOC		mg/L	0.42	0.5000	J 0.19 1 03/12/2025

Initial and Continuing Calibration Blank Summary

Client:	Weston Solutions	SDG No.:	Q1539
Project:	Ft Meade Tipton Airfield Parcel RI - PO 0111169	RunNo.:	LB135005

Analyst		Units	Result	Acceptance Limits	Conc Qual	MDL	RDL	Analysis Date
Sample ID: ICB1								
Bromide	mg/L	< 1.0000	1.0000	U	0.034	2	02/21/2025	
Chloride	mg/L	< 0.3000	0.3000	U	0.011	0.6	02/21/2025	
Fluoride	mg/L	< 0.2000	0.2000	U	0.057	0.4	02/21/2025	
Nitrite	mg/L	< 0.3000	0.3000	U	0.011	0.6	02/21/2025	
Nitrate	mg/L	< 0.2500	0.2500	U	0.0034	0.5	02/21/2025	
Sulfate	mg/L	< 1.5000	1.5000	U	0.032	3	02/21/2025	
Orthophosphate as P	mg/L	< 0.5000	0.5000	U	0.079	1	02/21/2025	
Sample ID: CCB1								
Bromide	mg/L	< 1.0000	1.0000	U	0.034	2	03/11/2025	
Chloride	mg/L	< 0.3000	0.3000	U	0.011	0.6	03/11/2025	
Fluoride	mg/L	< 0.2000	0.2000	U	0.057	0.4	03/11/2025	
Nitrite	mg/L	< 0.3000	0.3000	U	0.011	0.6	03/11/2025	
Nitrate	mg/L	< 0.2500	0.2500	U	0.0034	0.5	03/11/2025	
Sulfate	mg/L	< 1.5000	1.5000	U	0.032	3	03/11/2025	
Orthophosphate as P	mg/L	< 0.5000	0.5000	U	0.079	1	03/11/2025	
Sample ID: CCB2								
Bromide	mg/L	< 1.0000	1.0000	U	0.034	2	03/11/2025	
Chloride	mg/L	< 0.3000	0.3000	U	0.011	0.6	03/11/2025	
Fluoride	mg/L	< 0.2000	0.2000	U	0.057	0.4	03/11/2025	
Nitrite	mg/L	< 0.3000	0.3000	U	0.011	0.6	03/11/2025	
Nitrate	mg/L	< 0.2500	0.2500	U	0.0034	0.5	03/11/2025	
Sulfate	mg/L	< 1.5000	1.5000	U	0.032	3	03/11/2025	
Orthophosphate as P	mg/L	< 0.5000	0.5000	U	0.079	1	03/11/2025	
Sample ID: CCB3								
Bromide	mg/L	< 1.0000	1.0000	U	0.034	2	03/11/2025	
Chloride	mg/L	< 0.3000	0.3000	U	0.011	0.6	03/11/2025	
Fluoride	mg/L	< 0.2000	0.2000	U	0.057	0.4	03/11/2025	
Nitrite	mg/L	< 0.3000	0.3000	U	0.011	0.6	03/11/2025	
Nitrate	mg/L	< 0.2500	0.2500	U	0.0034	0.5	03/11/2025	
Sulfate	mg/L	< 1.5000	1.5000	U	0.032	3	03/11/2025	
Orthophosphate as P	mg/L	< 0.5000	0.5000	U	0.079	1	03/11/2025	

Initial and Continuing Calibration Blank Summary

Client:	Weston Solutions			SDG No.:	Q1539		
Project:	Ft Meade Tipton Airfield Parcel RI - PO 0111169			RunNo.:	LB135012		
<hr/>							
Analyte	Units	Result	Acceptance Limits	Conc Qual	MDL	RDL	Analysis Date
Sample ID: ICB1 Ammonia as N	mg/L	< 0.0500	0.0500	U	0.045	0.1	03/12/2025
Sample ID: CCB1 Ammonia as N	mg/L	< 0.0500	0.0500	U	0.045	0.1	03/12/2025
Sample ID: CCB2 Ammonia as N	mg/L	< 0.0500	0.0500	U	0.045	0.1	03/12/2025
Sample ID: CCB3 Ammonia as N	mg/L	< 0.0500	0.0500	U	0.045	0.1	03/12/2025

Preparation Blank Summary

Client:	Weston Solutions	SDG No.:	Q1539
Project:	Ft Meade Tipton Airfield Parcel RI - PO 0111169		

Analyte	Units	Result	Acceptance Limits	Conc Qual	MDL	RDL	Analysis Date
Sample ID: Ib134983BL							
Hexavalent Chromium	mg/L	< 0.0050	0.0050	U	0.003	0.01	03/11/2025
Sample ID: LB134995BLW							
TOC	mg/L	0.27	0.5000	J	0.19	1	03/12/2025
Sample ID: LB135005BLW							
Bromide	mg/L	< 1.0000	1.0000	U	0.034	2	03/11/2025
Chloride	mg/L	< 0.3000	0.3000	U	0.011	0.6	03/11/2025
Fluoride	mg/L	< 0.2000	0.2000	U	0.057	0.4	03/11/2025
Nitrite	mg/L	< 0.3000	0.3000	U	0.011	0.6	03/11/2025
Nitrate	mg/L	< 0.2500	0.2500	U	0.0034	0.5	03/11/2025
Sulfate	mg/L	< 1.5000	1.5000	U	0.032	3	03/11/2025
Orthophosphate as P	mg/L	< 0.5000	0.5000	U	0.079	1	03/11/2025
Sample ID: LB135027BL							
Oil and Grease	mg/L	< 2.5000	2.5000	U	0.4	5.0	03/14/2025
Sample ID: PB167063BL							
Ammonia as N	mg/L	< 0.0500	0.0500	U	0.045	0.1	03/12/2025

Matrix Spike Summary

Client:	Weston Solutions	SDG No.:	Q1539
Project:	Ft Meade Tipton Airfield Parcel RI - PO 0111169	Sample ID:	Q1539-01
Client ID:	TAPIAL3-MW03D-031025-00-T1MS	Percent Solids for Spike Sample:	0

Analyte	Units	Acceptance Limit %R	Spiked Result	Conc. Qualifier	Sample Result	Conc. Qualifier	Spike Added	Dilution Factor	% Rec	Qual	Analysis Date
TOC	mg/L	75-125	10.6		4.00		10	1	66	*	03/12/2025
Bromide	mg/L	80-120	10.4		0.034	U	10	1	104		03/11/2025
Chloride	mg/L	80-120	57.9	OR	56.9	OR	3	1	33	*	03/11/2025
Fluoride	mg/L	80-120	2.10		0.12	J	2	1	99		03/11/2025
Nitrite	mg/L	80-120	3.00		0.011	U	3	1	100		03/11/2025
Nitrate	mg/L	80-120	2.60		0.0034	U	2.5	1	104		03/11/2025
Sulfate	mg/L	80-120	31.4		16.8		15	1	97		03/11/2025
Orthophosphate as P	mg/L	80-120	2.90		0.079	U	5	1	58	*	03/11/2025

Matrix Spike Summary

Client:	Weston Solutions	SDG No.:	Q1539
Project:	Ft Meade Tipton Airfield Parcel RI - PO 0111169	Sample ID:	Q1539-01
Client ID:	TAPIAL3-MW03D-031025-00-T1MSD	Percent Solids for Spike Sample:	0

Analyte	Units	Acceptance Limit %R	Spiked Result	Conc. Qualifier	Sample Result	Conc. Qualifier	Spike Added	Dilution Factor	% Rec	Qual	Analysis Date
TOC	mg/L	75-125	10.5		4.00		10	1	65	*	03/12/2025
Bromide	mg/L	80-120	9.90		0.034	U	10	1	99		03/11/2025
Chloride	mg/L	80-120	57.9	OR	56.9	OR	3	1	33	*	03/11/2025
Fluoride	mg/L	80-120	2.00		0.12	J	2	1	94		03/11/2025
Nitrite	mg/L	80-120	2.90		0.011	U	3	1	97		03/11/2025
Nitrate	mg/L	80-120	2.50		0.0034	U	2.5	1	100		03/11/2025
Sulfate	mg/L	80-120	30.7		16.8		15	1	93		03/11/2025
Orthophosphate as P	mg/L	80-120	2.70		0.079	U	5	1	54	*	03/11/2025

Matrix Spike Summary

Client:	Weston Solutions	SDG No.:	Q1539
Project:	Ft Meade Tipton Airfield Parcel RI - PO 0111169	Sample ID:	Q1539-02
Client ID:	TAPFTA-MW01I-031025-00-T2MS	Percent Solids for Spike Sample:	0

Analyte	Units	Acceptance Limit %R	Spiked Result	Conc. Qualifier	Sample Result	Conc. Qualifier	Spike Added	Dilution Factor	% Rec	Qual	Analysis Date
Ammonia as N	mg/L	75-125	1.20		0.23		1	1	97		03/12/2025
Hexavalent Chromium	mg/L	90-111	0.96		0.0030	U	1.0	2	96		03/11/2025

Matrix Spike Summary

Client:	Weston Solutions	SDG No.:	Q1539
Project:	Ft Meade Tipton Airfield Parcel RI - PO 0111169	Sample ID:	Q1539-02
Client ID:	TAPFTA-MW01I-031025-00-T2MSD	Percent Solids for Spike Sample:	0

Analyte	Units	Acceptance Limit %R	Spiked Result	Conc. Qualifier	Sample Result	Conc. Qualifier	Spike Added	Dilution Factor	% Rec	Qual	Analysis Date
Ammonia as N	mg/L	75-125	1.20		0.23		1	1	97		03/12/2025
Hexavalent Chromium	mg/L	90-111	0.96		0.0030	U	1.0	2	96		03/11/2025

Matrix Spike Summary

Client:	Weston Solutions	SDG No.:	Q1539
Project:	Ft Meade Tipton Airfield Parcel RI - PO 0111169	Sample ID:	Q1567-01
Client ID:	EFFLUENTMS	Percent Solids for Spike Sample:	0

Analyte	Units	Acceptance Limit %R	Spiked Result	Conc. Qualifier	Sample Result	Conc. Qualifier	Spike Added	Dilution Factor	% Rec	Qual	Analysis Date
Oil and Grease	mg/L	78-114	32.9		12.7		20.0	1	101		03/14/2025

Matrix Spike Summary

Client:	Weston Solutions	SDG No.:	Q1539
Project:	Ft Meade Tipton Airfield Parcel RI - PO 0111169	Sample ID:	Q1567-01
Client ID:	EFFLUENTMSD	Percent Solids for Spike Sample:	0

Analyte	Units	Acceptance Limit %R	Spiked Result	Conc. Qualifier	Sample Result	Conc. Qualifier	Spike Added	Dilution Factor	% Rec	Qual	Analysis Date
Oil and Grease	mg/L	78-114	32.9		12.7		20.0	1	101		03/14/2025

Duplicate Sample Summary

Client:	Weston Solutions	SDG No.:	Q1539
Project:	Ft Meade Tipton Airfield Parcel RI - PO 0111169	Sample ID:	Q1539-01
Client ID:	TAPIAL3-MW03D-031025-00-T1MSD	Percent Solids for Spike Sample:	0

Analyte	Units	Acceptance Limit	Sample Result	Conc. Qualifier	Duplicate Result	Conc. Qualifier	Dilution Factor	RPD/AD	Qual	Analysis Date
TOC	mg/L	+/-20	10.6		10.5		1	1		03/12/2025
Chloride	mg/L	+/-15	57.9	OR	57.9	OR	1	0		03/11/2025
Sulfate	mg/L	+/-15	31.4		30.7		1	2		03/11/2025
Nitrite	mg/L	+/-15	3.00		2.90		1	3		03/11/2025
Nitrate	mg/L	+/-15	2.60		2.50		1	4		03/11/2025
Bromide	mg/L	+/-15	10.4		9.90		1	5		03/11/2025
Fluoride	mg/L	+/-15	2.10		2.00		1	5		03/11/2025
Orthophosphate as P	mg/L	+/-15	2.90		2.70		1	7		03/11/2025

Duplicate Sample Summary

Client:	Weston Solutions	SDG No.:	Q1539
Project:	Ft Meade Tipton Airfield Parcel RI - PO 0111169	Sample ID:	Q1539-02
Client ID:	TAPFTA-MW01I-031025-00-T2DUP	Percent Solids for Spike Sample:	0

Analyte	Units	Acceptance Limit	Sample Result	Conc. Qualifier	Duplicate Result	Conc. Qualifier	Dilution Factor	RPD/ AD	Qual	Analysis Date
Hexavalent Chromium	mg/L	+/-20	0.0030	U	0.0030	U	1	0		03/11/2025
Ammonia as N	mg/L	+/-20	0.23		0.23		1	0		03/12/2025

Duplicate Sample Summary

Client:	Weston Solutions	SDG No.:	Q1539
Project:	Ft Meade Tipton Airfield Parcel RI - PO 0111169	Sample ID:	Q1539-02
Client ID:	TAPFTA-MW01I-031025-00-T2MSD	Percent Solids for Spike Sample:	0

Analyte	Units	Acceptance Limit	Sample Result	Conc. Qualifier	Duplicate Result	Conc. Qualifier	Dilution Factor	RPD/ AD	Qual	Analysis Date
Hexavalent Chromium	mg/L	+/-20	0.96		0.96		2	0.62		03/11/2025
Ammonia as N	mg/L	+/-20	1.20		1.20		1	0		03/12/2025

Duplicate Sample Summary

Client:	Weston Solutions	SDG No.:	Q1539
Project:	Ft Meade Tipton Airfield Parcel RI - PO 0111169	Sample ID:	Q1567-01
Client ID:	EFFLUENTMSD	Percent Solids for Spike Sample:	0

Analyte	Units	Acceptance Limit	Sample Result	Conc. Qualifier	Duplicate Result	Conc. Qualifier	Dilution Factor	RPD/ AD	Qual	Analysis Date
Oil and Grease	mg/L	+/-18	32.9		32.9		1	0		03/14/2025

Laboratory Control Sample Summary

Client:	Weston Solutions			SDG No.:	Q1539				
Project:	Ft Meade Tipton Airfield Parcel RI - PO 0111169			Run No.:	LB134983				
Analyte		Units	True Value	Result	Conc. Qualifier	% Recovery	Dilution Factor	Acceptance Limit %R	Analysis Date
Sample ID	lb134983BS								
Hexavalent Chromium	mg/L	0.5	0.51		102	1	90-111	03/11/2025	

Laboratory Control Sample Summary

Client:	Weston Solutions			SDG No.:	Q1539				
Project:	Ft Meade Tipton Airfield Parcel RI - PO 0111169		Run No.:		LB134995				
Analyte		Units	True Value	Result	Conc. Qualifier	% Recovery	Dilution Factor	Acceptance Limit %R	Analysis Date
Sample ID	LB134995BSW								
TOC		mg/L	10	9.40		94	1	90-110	03/12/2025

Laboratory Control Sample Summary

Client:	Weston Solutions	SDG No.:		Q1539				
Project:	Ft Meade Tipton Airfield Parcel RI - PO 0111169	Run No.:		LB135005				
Analyte	Units	True Value	Result	Conc. Qualifier	% Recovery	Dilution Factor	Acceptance Limit %R	Analysis Date
Sample ID	LB135005BSW							
Bromide	mg/L	10	10.5	105	1	90-110	03/11/2025	
Chloride	mg/L	3	3.10	103	1	90-110	03/11/2025	
Fluoride	mg/L	2	2.10	105	1	90-110	03/11/2025	
Nitrite	mg/L	3	3.10	103	1	90-110	03/11/2025	
Nitrate	mg/L	2.5	2.60	104	1	90-110	03/11/2025	
Sulfate	mg/L	15	15.5	103	1	90-110	03/11/2025	
Orthophosphate as P	mg/L	5	4.70	94	1	90-110	03/11/2025	

Laboratory Control Sample Summary

Client:	Weston Solutions	SDG No.:	Q1539
Project:	Ft Meade Tipton Airfield Parcel RI - PO 0111169	Run No.:	LB135027

Analyte	Sample ID	Units	True Value	Result	Conc. Qualifier	% Recovery	Dilution Factor	Acceptance Limit %R	Analysis Date
	LB135027BS								
Oil and Grease		mg/L	20.0	16.9		84	1	78-114	03/14/2025

Laboratory Control Sample Summary

Client:	Weston Solutions	SDG No.:	Q1539
Project:	Ft Meade Tipton Airfield Parcel RI - PO 0111169	Run No.:	LB135012

Analyte	Sample ID	Units	True Value	Result	Conc. Qualifier	% Recovery	Dilution Factor	Acceptance Limit %R	Analysis Date
Ammonia as N	PB167063BS	mg/L	1	0.98		98	1	90-110	03/12/2025



RAW DATA



Analytical Summary Report

Analysis Method: 7196A
 Parameter: Hexavalent Chromium
 Run Number: LB134983

ANALYST: rubina
 SUPERVISOR REVIEW BY: Iwona
 pH Meter ID: WC pH Meter-1

Reagent/Standard	Lot/Log #
Calibration Std. hexchrome 0.1 ppm	WP112250
Calibration Std. hexchrome 0.05 ppm	WP112249
calibration std. hexchrome 0.01 ppm	WP112247
calibration std. hexchrome 0 ppm	WP112246
hexavalent chromium color reagent	WP112185
5N sulfuric acid	WP110380
Calibration Std Hexachrome 0.025 ppm	WP112248
Hexavalent Chromium ICV-LCS Std	WP112253
Calibration and CCV std HexChrome 0.5PPM	WP112251
Calibration std HexChrome 1.0PPM	WP112252

Intercept: -0.0001

Slope: 0.7803

Regression: 0.999988

Seq	Lab ID	True Value (mg/l)	DF	Initial Vol (ml)	Final Vol (ml)	pH HNO3	pH H2SO4	Absorb. at 540nm		Absorbance Difference	Result (mg/L)	%D	Anal Date	Anal Time
								Backgrnd	Color					
1	CAL1	0	1	100	100		1.78	0.000	0.000	0.000	0.000		03/11/2025	11:15
2	CAL2	0.01	1	100	100		2.01	0.000	0.007	0.007	0.009	-10	03/11/2025	11:16
3	CAL3	0.025	1	100	100		1.90	0.000	0.018	0.018	0.023	-8	03/11/2025	11:17
4	CAL4	0.05	1	100	100		1.93	0.000	0.038	0.038	0.048	-4	03/11/2025	11:18
5	CAL5	0.1	1	100	100		1.88	0.000	0.081	0.081	0.103	3	03/11/2025	11:19
6	CAL6	0.5	1	100	100		1.99	0.000	0.390	0.390	0.499	-0.2	03/11/2025	11:20
7	CAL7	1	1	100	100		1.92	0.000	0.780	0.780	0.999	-0.1	03/11/2025	11:21



Analytical Summary Report

Analysis Method: 7196A

ANALYST:rubina

Parameter: Hexavalent Chromium

SUPERVISOR REVIEW BY:Iwona

Run Number: LB134983

pH Meter ID:WC pH Meter-1

Seq	Lab ID	True Value	DF	Initial Vol (ml/gm)	Final Vol (ml)	pH HNO3	pH H2SO4	Absorb. at 540nm		Absorbance Difference	Intermediate Result (mg/L)	Anal Date	Anal Time
								Backgrnd	Color				
1	ICV	0.5	1	100	100		2.06	0.000	0.392	0.392	0.502	03/11/2025	11:22
2	ICB		1	100	100		1.88	0.000	0.001	0.001	0.001	03/11/2025	11:23
3	CCV1	0.5	1	100	100		1.89	0.000	0.394	0.394	0.505	03/11/2025	11:24
4	CCB1		1	100	100		1.79	0.000	0.000	0.000	0.000	03/11/2025	11:25
5	RL Check	0.01	1	100	100		1.99	0.000	0.008	0.008	0.010	03/11/2025	11:26
6	lb134983BL		1	100	100		2.00	0.000	0.000	0.000	0.000	03/11/2025	11:27
7	lb134983BS	0.5	1	100	100		2.06	0.000	0.398	0.398	0.510	03/11/2025	11:28
8	Q1539-01		1	100	100		1.99	0.000	0.000	0.000	0.000	03/11/2025	11:29
9	Q1539-02		1	100	100		2.10	0.000	0.000	0.000	0.000	03/11/2025	11:30
10	Q1539-02DU		1	100	100		2.17	0.000	0.000	0.000	0.000	03/11/2025	11:31
11	Q1539-02MS	1	2	100	100		2.06	0.000	0.376	0.376	0.482	03/11/2025	11:32
12	Q1539-02MS	1	2	100	100		2.10	0.000	0.374	0.374	0.479	03/11/2025	11:33
13	CCV2	0.5	1	100	100		1.92	0.000	0.390	0.390	0.500	03/11/2025	11:34
14	CCB2		1	100	100		1.94	0.000	0.001	0.001	0.001	03/11/2025	11:35

WORKLIST(Hardcopy Internal Chain)

WorkList Name :	hex w-3-11	WorkList ID :	188200	Department :	Wet-Chemistry	Date :	03-11-2025 10:03:33	
Sample	Customer Sample	Matrix	Test	Preservative	Customer	Raw Sample Storage Location	Collect Date	Method
Q1539-01	TAPIAL3-MW03D-031025-00-T	Water	Hexavalent Chromium	Ammonium sulfate buffer	WEST04	I31	03/10/2025	7196A
Q1539-02	TAPFTA-MW01I-031025-00-T2	Water	Hexavalent Chromium	Ammonium sulfate buffer	WEST04	I31	03/10/2025	7196A

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

Date/Time
Raw Sample Received by:
Raw Sample Relinquished by:

03/11/2025 10:15
Iwona C.
RMA (use)

Date/Time
Raw Sample Received by:
Raw Sample Relinquished by:

Page 1 of 1

Sample ID	Result	Std. Dev.	RSD	Mode	ALT
CCV1	9.1546	0.3339	3.65	TOC	
CCB1	0.4435	0.1578	35.58	TOC	
LB134995BLW	0.2699	0.0650	24.10	TOC	
LB134995BSW.....	9.3518...	0.5006..	5.35....	TOC	..
Q1539-01	4.0007	0.4030	10.07	TOC	
Q1539-01MS	10.6075	0.3228	3.04	TOC	
Q1539-01MSD.....	10.4867...	0.4140..	3.95....	TOC	..
Q1539-02	5.1202	0.1685	3.29	TOC	
CCV2	10.7926	0.7375	6.83	TOC	
CCB2.....	0.4190...	0.0936..	22.34....	TOC	..

1
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13

Method ID	Sample Type	Vial	Timestamp	Message	
TOC 0 - 20 ppmC	Sample	11	2025/03/12 08:29		1
TOC 0 - 20 ppmC	Sample	12	2025/03/12 08:52		2
TOC 0 - 20 ppmC	Sample	13	2025/03/12 09:15	Low Sample Detected	3
TOC 0 - 20 ppmC	...Sample	.. 14..	2025/03/12 09:39	..	4
TOC 0 - 20 ppmC	Sample	15	2025/03/12 12:23		5
TOC 0 - 20 ppmC	Sample	16	2025/03/12 12:48		6
TOC 0 - 20 ppmC	...Sample	.. 16..	2025/03/12 13:13	..	7
TOC 0 - 20 ppmC	Sample	17	2025/03/12 14:08		8
TOC 0 - 20 ppmC	Sample	14	2025/03/12 14:33		9
TOC 0 - 20 ppmC	...Sample	.. 12..	2025/03/12 14:56	..	10

=====

Sample ID: CCV1 Mode: TOC
Method: TOC 0 - 20 ppmC Filename: 03120720
Cal. Curve: TOC WATER 0-20PPM Timestamp: 2025/03/12 08:29
Operator ID: NF IZ Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	9.5798	4.7899	238392	-2.219	-2.020	137
2	9.2622	4.6311	230488	-2.255	-2.056	134
3	8.8824	4.4412	221038	-2.316	-2.119	123
4	8.8940	4.4470	221327	-2.402	-2.203	124

<<<Statistics>>> Mean: 9.1546 Std Dev: 0.3339 RSD: 3.65

=====

Sample ID: CCB1 Mode: TOC
Method: TOC 0 - 20 ppmC Filename: 03120720
Cal. Curve: TOC WATER 0-20PPM Timestamp: 2025/03/12 08:52
Operator ID: NF IZ Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	0.3096	0.1548	7703	-2.592	-2.396	101
2	0.3473	0.1736	8641	-2.631	-2.432	101
3	0.6612	0.3306	16454	-2.677	-2.480	108
4	0.4561	0.2281	11350	-2.674	-2.476	102

<<<Statistics>>> Mean: 0.4435 Std Dev: 0.1578 RSD: 35.58

=====

Sample ID: LB134995BLW Mode: TOC
Method: TOC 0 - 20 ppmC Filename: 03120720
Cal. Curve: TOC WATER 0-20PPM Timestamp: 2025/03/12 09:15
Operator ID: NF IZ Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	0.3018	0.1509	7510	-2.758	-2.560	102
2	0.1802	0.0901	4484	-2.764	-2.803	120
3	0.2677	0.1339	6662	-2.795	-2.814	120
4	0.3301	0.1650	8214	-2.829	-2.632	101

Last Message: Low Sample Detected

<<<Statistics>>> Mean: 0.2699 Std Dev: 0.0650 RSD: 24.10

=====

Sample ID: LB134995BSW Mode: TOC
Method: TOC 0 - 20 ppmC Filename: 03120720
Cal. Curve: TOC WATER 0-20PPM Timestamp: 2025/03/12 09:39
Operator ID: NF IZ Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	9.9238	4.9619	246952	-2.893	-2.694	134
2	9.5808	4.7904	238417	-2.797	-2.600	126
3	9.1115	4.5558	226738	-2.875	-2.677	124
4	8.7911	4.3956	218767	-2.879	-2.681	125

<<<Statistics>>> Mean: 9.3518 Std Dev: 0.5006 RSD: 5.35

Sample ID: Q1539-01 Mode: TOC
 Method: TOC 0 - 20 ppmC Filename: 03121201
 Cal. Curve: TOC WATER 0-20PPM Timestamp: 2025/03/12 12:23
 Operator ID: NF IZ Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	4.5986	2.2993	114435	-3.336	-3.140	126
2	3.8643	1.9321	96162	-3.290	-3.090	121
3	3.7217	1.8608	92614	-3.321	-3.122	119
4	3.8183	1.9092	95019	-3.308	-3.109	120

<<<Statistics>>> Mean: 4.0007 Std Dev: 0.4030 RSD: 10.07

Sample ID: Q1539-01MS Mode: TOC
 Method: TOC 0 - 20 ppmC Filename: 03121201
 Cal. Curve: TOC WATER 0-20PPM Timestamp: 2025/03/12 12:48
 Operator ID: NF IZ Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	10.9104	5.4552	271503	-3.331	-3.132	138
2	10.5837	5.2919	263374	-3.268	-3.068	132
3	10.7690	5.3845	267986	-3.237	-3.039	136
4	10.1668	5.0834	253000	-3.238	-3.041	140

<<<Statistics>>> Mean: 10.6075 Std Dev: 0.3228 RSD: 3.04

Sample ID: Q1539-01MSD Mode: TOC
 Method: TOC 0 - 20 ppmC Filename: 03121249
 Cal. Curve: TOC WATER 0-20PPM Timestamp: 2025/03/12 13:13
 Operator ID: NF IZ Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	10.8283	5.4142	269461	-3.232	-3.033	132
2	9.9701	4.9851	248106	-3.169	-2.971	127
3	10.8142	5.4071	269111	-3.189	-2.989	136
4	10.3342	5.1671	257166	-3.209	-3.011	138

<<<Statistics>>> Mean: 10.4867 Std Dev: 0.4140 RSD: 3.95

Sample ID: Q1539-02 Mode: TOC
 Method: TOC 0 - 20 ppmC Filename: 03121320
 Cal. Curve: TOC WATER 0-20PPM Timestamp: 2025/03/12 14:08
 Operator ID: NF IZ Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	5.0960	2.5480	126813	-2.999	-2.800	125
2	5.3565	2.6782	133295	-3.005	-2.807	126
3	4.9583	2.4792	123387	-2.991	-2.791	128
4	5.0701	2.5350	126168	-2.955	-2.756	124

<<<Statistics>>> Mean: 5.1202 Std Dev: 0.1685 RSD: 3.29

Sample ID: CCV2 Mode: TOC
 Method: TOC 0 - 20 ppmC Filename: 03121320
 Cal. Curve: TOC WATER 0-20PPM Timestamp: 2025/03/12 14:33
 Operator ID: NF IZ Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	11.6913	5.8457	290938	-3.069	-2.870	132
2	11.0919	5.5459	276020	-3.051	-2.854	132
3	10.2846	5.1423	255930	-3.031	-2.832	129
4	10.1025	5.0512	251398	-3.056	-2.856	135

<<<Statistics>>> Mean: 10.7926 Std Dev: 0.7375 RSD: 6.83

Sample ID: CCB2
Method: TOC 0 - 20 ppmC
Cal. Curve: TOC WATER 0-20PPM
Operator ID: NF IZ

Mode: TOC
Filename: 03121320
Timestamp: 2025/03/12 14:56
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	0.5034	0.2517	12527	-3.119	-2.919	105
2	0.3234	0.1617	8049	-3.086	-2.887	103
3	0.4952	0.2476	12324	-3.106	-2.909	105
4	0.3541	0.1771	8813	-3.077	-2.878	104

<<<Statistics>>> Mean: 0.4190 Std Dev: 0.0936 RSD: 22.34

Sample ID	Result	Std. Dev.	RSD	Mode	ALT
0.0PPM	16902	1043	6.17	TOC	
0.5PPM	22431	848	3.78	TOC	
1.0PPM	35488	2369	6.68	TOC	
2.0PPM.....	56030...	2771..	4.95...	TOC	..
5.0PPM	124169	9253	7.45	TOC	
10.0PPM	250507	21350	8.52	TOC	
20.0PPM.....	511831...	21170..	4.14...	TOC	..
ICV1	9.6914	0.5262	5.43	TOC	
ICB1	0.3230	0.0567	17.57	TOC	
IC-20.....	0.3045...	0.0895..	29.40...	TOC	..
IC-R	0.2809	0.1146	40.79	TOC	

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Method ID	Sample Type	Vial	Timestamp	Message
TOC 0 - 20 ppmC	TOC Standard	1	2025/03/11 10:00	
TOC 0 - 20 ppmC	TOC Standard	2	2025/03/11 10:23	
TOC 0 - 20 ppmC	TOC Standard	3	2025/03/11 10:46	
TOC 0 - 20 ppmC	...TOC Standard	.. 4 ..	2025/03/11 11:10	..
TOC 0 - 20 ppmC	TOC Standard	5	2025/03/11 11:33	
TOC 0 - 20 ppmC	TOC Standard	6	2025/03/11 11:58	
TOC 0 - 20 ppmC	...TOC Standard	.. 7 ..	2025/03/11 12:24	..
TOC 0 - 20 ppmC	Sample	11	2025/03/11 12:48	
TOC 0 - 20 ppmC	Sample	12	2025/03/11 13:11	
TOC 0 - 20 ppmC	...Sample	.. 13 ..	2025/03/11 13:34	.. Low Sample Detected
TOC 0 - 20 ppmC	Sample	12	2025/03/11 13:58	Low Sample Detected

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Sample ID: 0.0PPM Mode: TOC
Method: TOC 0 - 20 ppmC Filename: 03110916
Cal. Curve: TOC WATER 0-20PPM Timestamp: 2025/03/11 10:00
Operator ID: NF IZ Sample Type: TOC Standard

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1			15770	-3.724	-3.530	107
2			18047	-3.735	-3.537	106
3			16317	-3.758	-3.559	105
4			17473	-3.776	-3.578	107

<<<Statistics>>> Mean: 16902 Std Dev: 1043 RSD: 6.17

=====

Sample ID: 0.5PPM Mode: TOC
Method: TOC 0 - 20 ppmC Filename: 03110916
Cal. Curve: TOC WATER 0-20PPM Timestamp: 2025/03/11 10:23
Operator ID: NF IZ Sample Type: TOC Standard

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1			22389	-3.756	-3.558	109
2			22818	-3.762	-3.564	109
3			21272	-3.773	-3.574	108
4			23246	-3.780	-3.581	110

<<<Statistics>>> Mean: 22431 Std Dev: 848 RSD: 3.78

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Sample ID: 1.0PPM Mode: TOC
Method: TOC 0 - 20 ppmC Filename: 03110916
Cal. Curve: TOC WATER 0-20PPM Timestamp: 2025/03/11 10:46
Operator ID: NF IZ Sample Type: TOC Standard

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1			36075	-3.662	-3.463	113
2			38546	-3.636	-3.439	115
3			34162	-3.590	-3.392	112
4			33168	-3.564	-3.365	112

<<<Statistics>>> Mean: 35488 Std Dev: 2369 RSD: 6.68

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Sample ID: 2.0PPM Mode: TOC
Method: TOC 0 - 20 ppmC Filename: 03110916
Cal. Curve: TOC WATER 0-20PPM Timestamp: 2025/03/11 11:10
Operator ID: NF IZ Sample Type: TOC Standard

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1			58874	-3.458	-3.264	116
2			53245	-3.407	-3.209	112
3			54103	-3.449	-3.251	113
4			57896	-3.472	-3.273	115

<<<Statistics>>> Mean: 56030 Std Dev: 2771 RSD: 4.95

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Sample ID: 5.0PPM Mode: TOC

Method: TOC 0 - 20 ppmC
Cal. Curve: TOC WATER 0-20PPM
Operator ID: NF IZ

Filename: 03110916
Timestamp: 2025/03/11 11:33
Sample Type: TOC Standard

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1			137395	-3.425	-3.226	123
2			123655	-3.347	-3.150	123
3			118482	-3.370	-3.171	122
4			117145	-3.355	-3.157	118

<<<Statistics>>> Mean: 124169 Std Dev: 9253 RSD: 7.45

Sample ID: 10.0PPM
Method: TOC 0 - 20 ppmC
Cal. Curve: TOC WATER 0-20PPM
Operator ID: NF IZ

Mode: TOC
Filename: 03110916
Timestamp: 2025/03/11 11:58
Sample Type: TOC Standard

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1			272996	-3.363	-3.164	129
2			264433	-3.320	-3.124	126
3			233826	-3.342	-3.144	135
4			230772	-3.324	-3.125	127

<<<Statistics>>> Mean: 250507 Std Dev: 21350 RSD: 8.52

Sample ID: 20.0PPM
Method: TOC 0 - 20 ppmC
Cal. Curve: TOC WATER 0-20PPM
Operator ID: NF IZ

Mode: TOC
Filename: 03110916
Timestamp: 2025/03/11 12:24
Sample Type: TOC Standard

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1			539658	-3.342	-3.142	175
2			516595	-3.311	-3.112	162
3			492673	-3.250	-3.050	148
4			498398	-3.256	-3.057	160

<<<Statistics>>> Mean: 511831 Std Dev: 21170 RSD: 4.14

Sample ID: ICV1
Method: TOC 0 - 20 ppmC
Cal. Curve: TOC WATER 0-20PPM
Operator ID: NF IZ

Mode: TOC
Filename: 03110916
Timestamp: 2025/03/11 12:48
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	10.4159	5.2080	259199	-3.312	-3.113	143
2	9.5215	4.7608	236942	-3.230	-3.032	126
3	9.6620	4.8310	240437	-3.252	-3.055	126
4	9.1661	4.5831	228098	-3.243	-3.044	127

<<<Statistics>>> Mean: 9.6914 Std Dev: 0.5262 RSD: 5.43

Sample ID: ICB1
Method: TOC 0 - 20 ppmC
Cal. Curve: TOC WATER 0-20PPM
Operator ID: NF IZ

Mode: TOC
Filename: 03110916
Timestamp: 2025/03/11 13:11
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	0.2799	0.1400	6965	-3.282	-3.085	98
2	0.3410	0.1705	8485	-3.301	-3.101	99
3	0.3954	0.1977	9840	-3.301	-3.105	99
4	0.2757	0.1379	6861	-3.301	-3.101	98

<<<Statistics>>> Mean: 0.3230 Std Dev: 0.0567 RSD: 17.57

Sample ID: IC-20
Method: TOC 0 - 20 ppmC
Cal. Curve: TOC WATER 0-20PPM
Operator ID: NF IZ

Mode: TOC
Filename: 03110916
Timestamp: 2025/03/11 13:34
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	0.2725	0.1363	6781	-3.248	-3.251	120
2	0.1962	0.0981	4883	-3.227	-3.255	120
3	0.4015	0.2008	9992	-3.264	-3.267	120
4	0.3478	0.1739	8656	-3.271	-3.262	120

Last Message: Low Sample Detected

<<<Statistics>>> Mean: 0.3045 Std Dev: 0.0895 RSD: 29.40

Sample ID: IC-R
Method: TOC 0 - 20 ppmC
Cal. Curve:
TOC WATER 0-20PPM
Operator ID: NF IZ

Mode: TOC
Filename: 03110916
Timestamp: 2025/03/11 13:58
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	0.2726	0.1363	6785	-3.205	-3.239	120
2	0.3188	0.1594	7934	-3.235	-3.235	120
3	0.4030	0.2015	10028	-3.238	-3.218	120
4	0.1293	0.0647	3219	-3.153	-3.181	120

Last Message: Low Sample Detected

<<<Statistics>>> Mean: 0.2809 Std Dev: 0.1146 RSD: 40.79

Calibration Report Print Date/Time: 2025/03/11 12:24:53

Cal. Curve ID: TOC WATER 0-20PPM
 Created: 2025/03/11 12:24
 Calibration Factor (m): 4.977e+04
 Y Intercept (b): 8470
 r-squared: 0.99880

Standard ID	Y	X Expected	Measured	Re Message	Date & Time
	Raw Data	ug C	ug C		
0.0PPM	16902	0.000	0.169	-	2025/03/11 10:00
0.5PPM	22431	0.250	0.281	12.4	2025/03/11 10:23
1.0PPM	35488	0.500	0.543	9.6	2025/03/11 10:46
2.0PPM	56030	1.000	0.956	-4.4	2025/03/11 11:10
5.0PPM	124169	2.500	2.325	-7.0	2025/03/11 11:33
10.0PPM	250507	5.000	4.863	-2.7	2025/03/11 11:58
20.0PPM	511831	10.000	10.114	1.1	2025/03/11 12:24

NF

03.11.2025

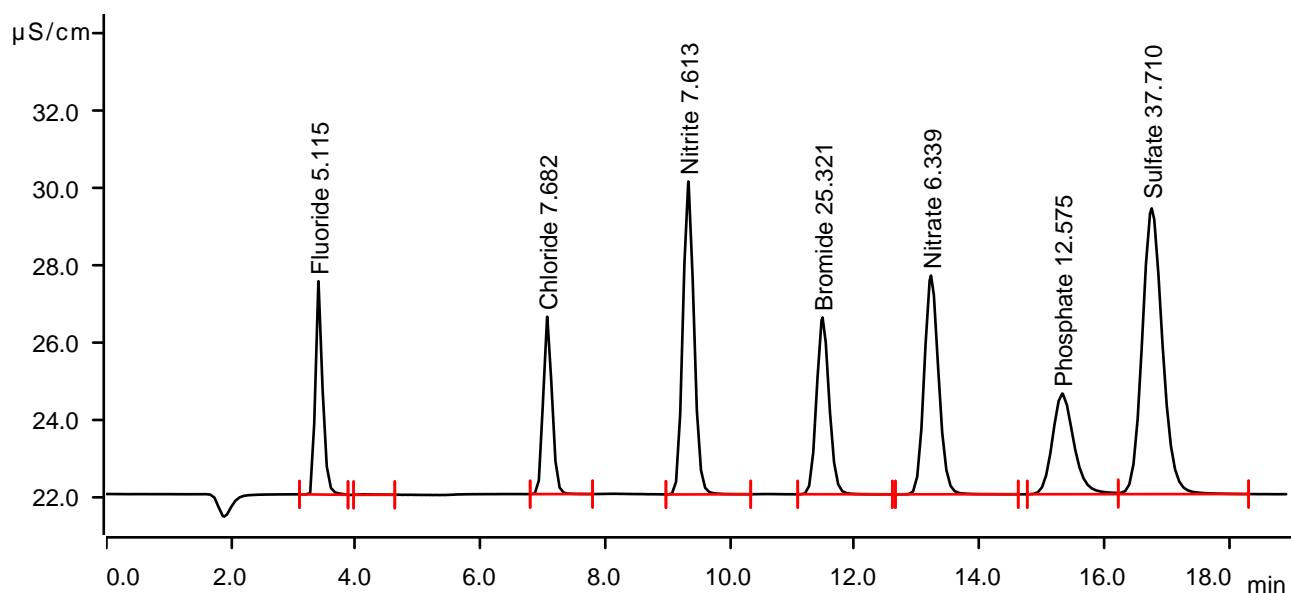
Instrument ID	IC-1	Analyst:	NF	Method:	00.0 / 9056A	date time	vt/Fi	Analyst
Ident	Con F-	Con CL-	Con NO2	Con BR-	Con NO3	Con HPO4	Con SO4	Method name
STD1	0	0	0	0	0	0	0	IC1-022125
STD2	0.448	0.678	0.657	2.152	0.544	1.059	3.319	IC1-022125
STD3	0.821	1.223	1.216	4.052	1.014	2.009	6.104	IC1-022125
STD4	1.013	1.524	1.523	5.08	1.272	2.514	7.612	IC1-022125
STD5	1.919	2.879	2.894	9.683	2.411	4.896	14.423	IC1-022125
STD6	3.884	5.815	5.898	19.712	4.921	9.947	29.333	IC1-022125
STD7	5.115	7.682	7.613	25.321	6.339	12.575	37.71	IC1-022125
ICV	2.008	2.989	3.015	10.228	2.532	5.141	15.146	IC1-022125
ICB	0	0	0	0	0	0	0	IC1-022125
CCV	2.051	3.096	3.083	10.45	2.611	4.63	15.543	IC1-022125
CCB	0	0	0	0	0	0	0	IC1-022125
LB135005BLW	0	0	0	0	0	0	0	IC1-022125
LB135005BSW	2.055	3.102	3.11	10.478	2.617	4.736	15.49	IC1-022125
Q1505-06	2.953	279.297	0	9.129	0	0	97.641	IC1-022125
Q1505-12	0	8.158	0	0	21.249	4.821	0	IC1-022125
Q1505-16	0	0.186	2.238	0	0	0	0	IC1-022125
Q1505-06DLX10	0.355	20.499	0	1.13	0	0	9.034	IC1-022125
Q1505-06DL2X50	0.134	3.852	0	0.426	0	0	2.264	IC1-022125
Q1505-12DLX10	0	0.861	0	0	1.869	0.543	0	IC1-022125
CCV	2.077	3.108	3.1	10.505	2.622	5.312	15.508	IC1-022125
CCB	0	0	0	0	0	0	0	IC1-022125
Q1539-01	0.116	56.865	0	0	0	0	0	IC1-022125
Q1539-01MS	2.084	57.867	3.042	10.355	2.571	2.864	31.391	IC1-022125
Q1539-01MSD	1.982	57.851	2.907	9.9	2.467	2.666	30.716	IC1-022125
Q1539-02	0.117	6.422	0	0	0	0	1.02	IC1-022125
Q1539-01DLX10	0	4.692	0	0	0	0	2.138	IC1-022125
CCV	2.074	3.109	3.095	10.466	2.614	5.364	15.504	IC1-022125
CCB	0	0	0	0	0	0	0	IC1-022125

Clear table

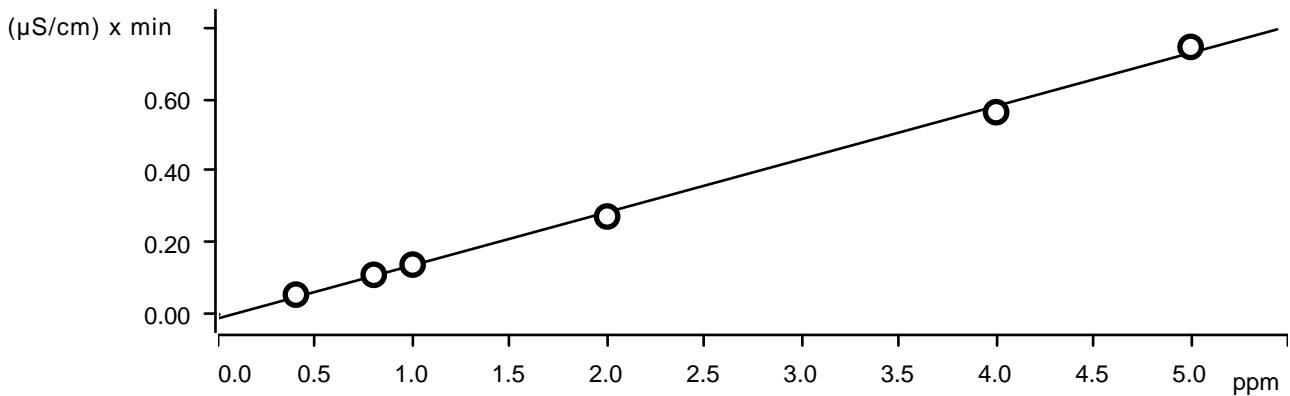
Instrument ID: IC-2 Analyst: IZ Method: 300.0 / 9056A

ident	concentration F-	concentration n CL-	concentration on NO2	concentration on BR-	concentration on NO3	concentration on HPO4	concentration on SO4	file name	date time	Initial wt/ Final	Analyst
STD1	0	0	0	0	0	0	0	IC1-022125	2/21/2025 11:05	10	NF/I2
STD2	0.448	0.678	0.657	2.152	0.544	1.059	3.319	IC1-022125	2/21/2025 11:26	10	NF/I2
STD3	0.821	1.223	1.216	4.052	1.014	2.009	6.104	IC1-022125	2/21/2025 11:48	10	NF/I2
STD4	1.013	1.524	1.523	5.08	1.272	2.514	7.612	IC1-022125	2/21/2025 12:09	10	NF/I2
STD5	1.919	2.879	2.894	9.683	2.411	4.896	14.423	IC1-022125	2/21/2025 12:31	10	NF/I2
STD6	3.884	5.815	5.898	19.712	4.921	9.947	29.333	IC1-022125	2/21/2025 12:52	10	NF/I2
STD7	5.115	7.682	7.613	25.321	6.339	12.575	.37.71	IC1-022125	2/21/2025 13:13	10	NF/I2
ident	True Value F-	True Value CL-	True Value NO2	True Value BR-	True Value NO3	True Value HPO4	True Value SO4				
STD1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000				
STD2	0.4000	0.6000	0.6000	2.0000	0.5000	1.0000	3.0000				
STD3	0.8000	1.2000	1.2000	4.0000	1.0000	2.0000	6.0000				
STD4	1.0000	1.5000	1.5000	5.0000	1.2500	2.5000	7.5000				
STD5	2.0000	3.0000	3.0000	10.0000	2.5000	5.0000	15.0000				
STD6	4.0000	6.0000	6.0000	20.0000	5.0000	10.0000	30.0000				
STD7	5.0000	7.5000	7.5000	25.0000	6.2500	12.5000	37.0000				
ident	Relative Error F-	Relative Error CL-	Relative Error NO2	Relative Error BR-	Relative Error NO3	Relative Error HPO4	Relative Error SO4				
STD1											
STD2	12.0000	13.0000	9.5000	7.6000	8.8000	5.9000	10.6333				
STD3	2.6250	1.9167	1.3333	1.3000	1.4000	0.4500	1.7333				
STD4	1.3000	1.6000	1.5333	1.6000	1.7600	0.5600	1.4933				
STD5	-4.0500	-4.0333	-3.5333	-3.1700	-3.5600	-2.0800	-3.8467				
STD6	-2.9000	-3.0833	-1.7000	-1.4400	-1.5800	-0.5300	-2.2233				
STD7	2.3000	2.4267	1.5067	1.2840	1.4240	0.6000	1.9189				

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Anions

Peak number	Retention time min	Area $(\mu\text{S}/\text{cm}) \times \text{min}$	Height $\mu\text{S}/\text{cm}$	Concentration ppm	Component name
1	3.400	0.7457	5.535	5.115	Fluoride
2	4.197	0.0046	0.012	invalid	
3	7.070	0.7592	4.602	7.682	Chloride
4	9.330	1.6810	8.120	7.613	Nitrite
5	11.483	1.0784	4.588	25.321	Bromide
6	13.222	1.5233	5.678	6.339	Nitrate
7	15.325	1.0441	2.611	12.575	Phosphate
8	16.760	2.7982	7.416	37.710	Sulfate

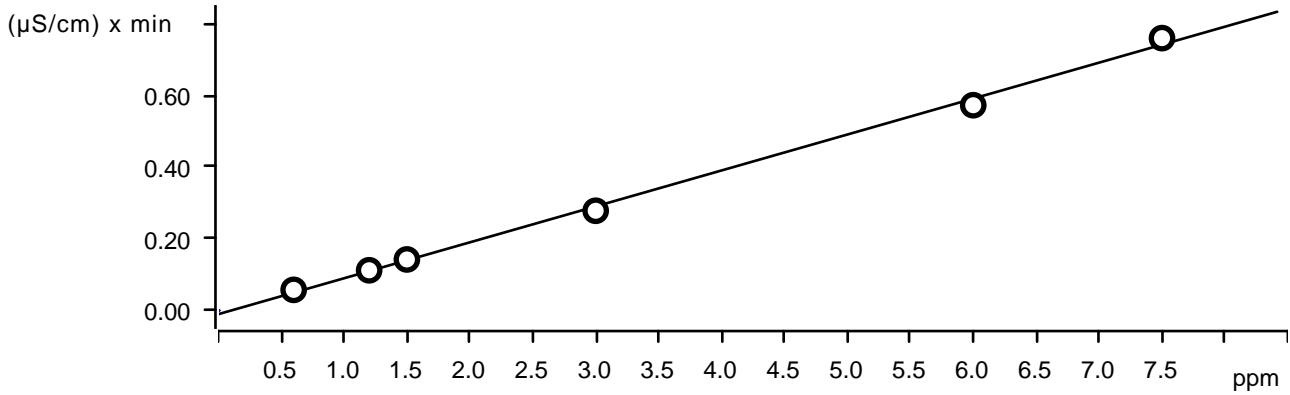
Fluoride (Anions)

Function: $A = -0.0112463 + 0.0147980 \times Q$

Relative standard deviation 4.464159 %

Correlation coefficient 0.998989

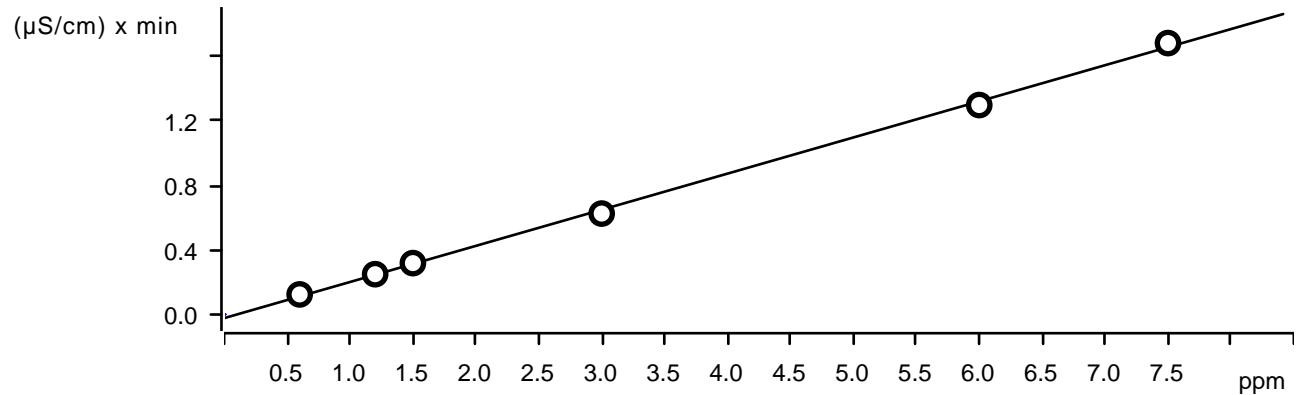
Sample type	Index	Conc.	Volume	Dilution	Sample amount	Area	Ident	Date	Used
Standard 1	1	0.000	10.0	1.0	1.0	n. d.	STD1	2025-02-21 11:05:25 UTC-5	used
Standard 2	1	0.400	10.0	1.0	1.0	0.055	STD2	2025-02-21 11:26:47 UTC-5	used
Standard 3	1	0.800	10.0	1.0	1.0	0.110	STD3	2025-02-21 11:48:11 UTC-5	used
Standard 4	1	1.000	10.0	1.0	1.0	0.139	STD4	2025-02-21 12:09:35 UTC-5	used
Standard 5	1	2.000	10.0	1.0	1.0	0.273	STD5	2025-02-21 12:31:01 UTC-5	used
Standard 6	1	4.000	10.0	1.0	1.0	0.564	STD6	2025-02-21 12:52:27 UTC-5	used
Standard 7	1	5.000	10.0	1.0	1.0	0.746	STD7	2025-02-21 13:13:53 UTC-5	used

Chloride (Anions)

Function: $A = -0.0105167 + 0.0100207 \times Q$

Relative standard deviation 4.669067 %
 Correlation coefficient 0.998888

Sample type	Index	Conc.	Volume	Dilution	Sample amount	Area	Ident	Date	Used
Standard 1	1	0.000	10.0	1.0	1.0	n. d.	STD1	2025-02-21 11:05:25 UTC-5	used
Standard 2	1	0.600	10.0	1.0	1.0	0.057	STD2	2025-02-21 11:26:47 UTC-5	used
Standard 3	1	1.200	10.0	1.0	1.0	0.112	STD3	2025-02-21 11:48:11 UTC-5	used
Standard 4	1	1.500	10.0	1.0	1.0	0.142	STD4	2025-02-21 12:09:35 UTC-5	used
Standard 5	1	3.000	10.0	1.0	1.0	0.278	STD5	2025-02-21 12:31:01 UTC-5	used
Standard 6	1	6.000	10.0	1.0	1.0	0.572	STD6	2025-02-21 12:52:27 UTC-5	used
Standard 7	1	7.500	10.0	1.0	1.0	0.759	STD7	2025-02-21 13:13:53 UTC-5	used

Nitrite (Anions)

Function: $A = -0.0232250 + 0.0223870 \times Q$
 Relative standard deviation 3.068725 %
 Correlation coefficient 0.999519

Sample type	Index	Conc.	Volume	Dilution	Sample amount	Area	Ident	Date	Used
Standard 1	1	0.000	10.0	1.0	1.0	n. d.	STD1	2025-02-21 11:05:25 UTC-5	used
Standard 2	1	0.600	10.0	1.0	1.0	0.124	STD2	2025-02-21 11:26:47 UTC-5	used
Standard 3	1	1.200	10.0	1.0	1.0	0.249	STD3	2025-02-21 11:48:11 UTC-5	used
Standard 4	1	1.500	10.0	1.0	1.0	0.318	STD4	2025-02-21 12:09:35 UTC-5	used
Standard 5	1	3.000	10.0	1.0	1.0	0.625	STD5	2025-02-21 12:31:01 UTC-5	used
Standard 6	1	6.000	10.0	1.0	1.0	1.297	STD6	2025-02-21 12:52:27 UTC-5	used
Standard 7	1	7.500	10.0	1.0	1.0	1.681	STD7	2025-02-21 13:13:53 UTC-5	used

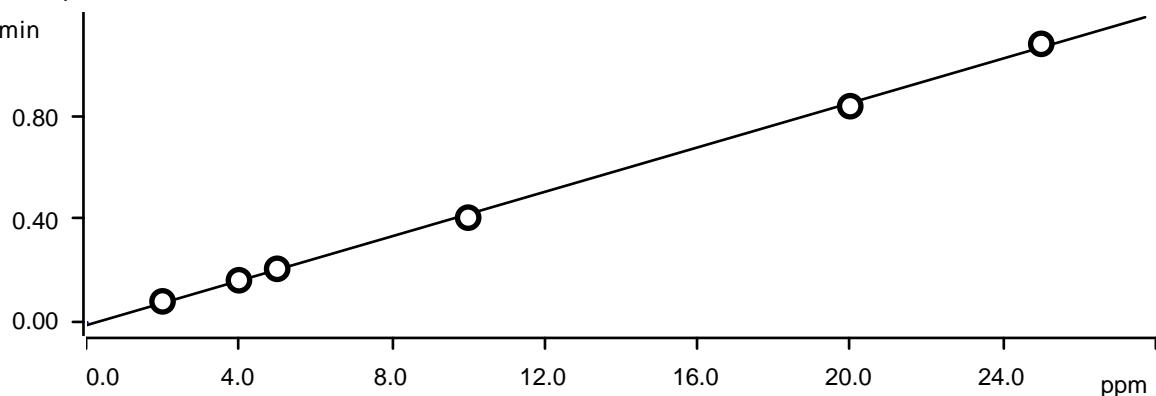
PM

Inst Id :IC-2

LB :LB135005

Bromide (Anions)

(μS/cm) x min

Function: $A = -0.0113202 + 4.30364E-3 \times Q$

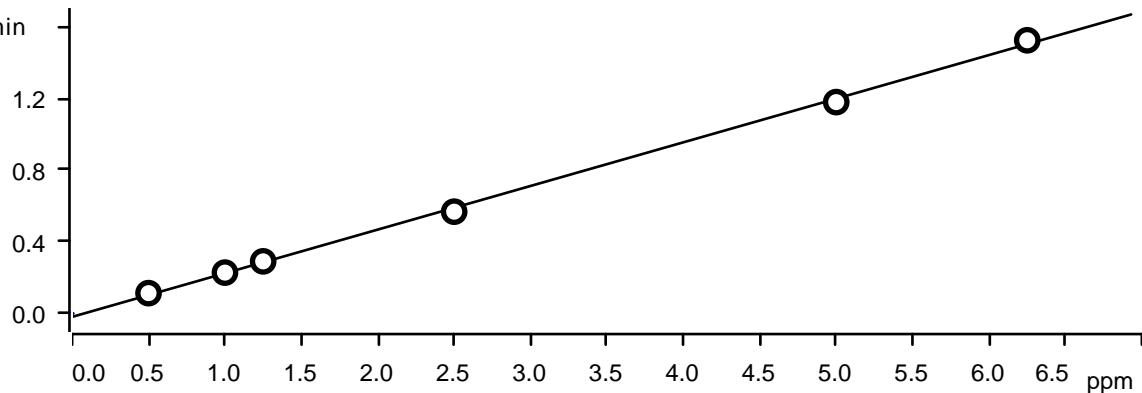
Relative standard deviation 2.628989 %

Correlation coefficient 0.999641

Sample type	Index	Conc.	Volume	Dilution	Sample amount	Area	Ident	Date	Used
Standard 1	1	0.000	10.0	1.0	1.0	n. d.	STD1	2025-02-21 11:05:25 UTC-5	used
Standard 2	1	2.000	10.0	1.0	1.0	0.081	STD2	2025-02-21 11:26:47 UTC-5	used
Standard 3	1	4.000	10.0	1.0	1.0	0.163	STD3	2025-02-21 11:48:11 UTC-5	used
Standard 4	1	5.000	10.0	1.0	1.0	0.207	STD4	2025-02-21 12:09:35 UTC-5	used
Standard 5	1	10.000	10.0	1.0	1.0	0.405	STD5	2025-02-21 12:31:01 UTC-5	used
Standard 6	1	20.000	10.0	1.0	1.0	0.837	STD6	2025-02-21 12:52:27 UTC-5	used
Standard 7	1	25.000	10.0	1.0	1.0	1.078	STD7	2025-02-21 13:13:53 UTC-5	used

Nitrate (Anions)

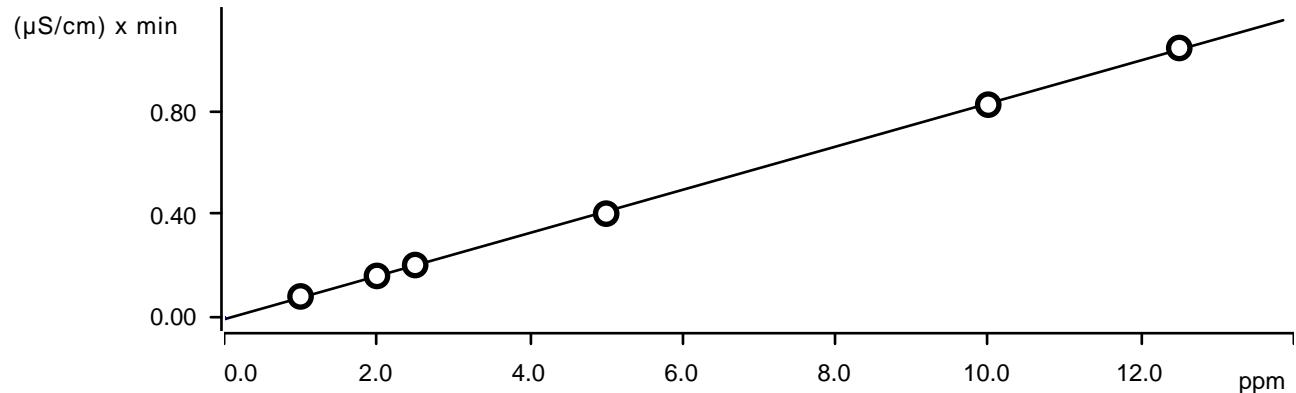
(μS/cm) x min

Function: $A = -0.0190446 + 0.0243327 \times Q$

Relative standard deviation 2.936394 %

Correlation coefficient 0.999557

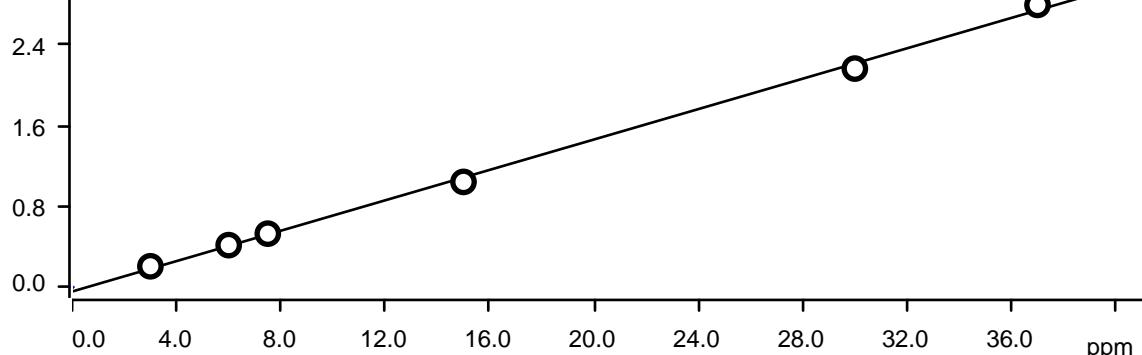
Sample type	Index	Conc.	Volume	Dilution	Sample amount	Area	Ident	Date	Used
Standard 1	1	0.000	10.0	1.0	1.0	n. d.	STD1	2025-02-21 11:05:25 UTC-5	used
Standard 2	1	0.500	10.0	1.0	1.0	0.113	STD2	2025-02-21 11:26:47 UTC-5	used
Standard 3	1	1.000	10.0	1.0	1.0	0.228	STD3	2025-02-21 11:48:11 UTC-5	used
Standard 4	1	1.250	10.0	1.0	1.0	0.290	STD4	2025-02-21 12:09:35 UTC-5	used
Standard 5	1	2.500	10.0	1.0	1.0	0.568	STD5	2025-02-21 12:31:01 UTC-5	used
Standard 6	1	5.000	10.0	1.0	1.0	1.178	STD6	2025-02-21 12:52:27 UTC-5	used
Standard 7	1	6.250	10.0	1.0	1.0	1.523	STD7	2025-02-21 13:13:53 UTC-5	used

Phosphate (Anions)Function: $A = -6.44326E-3 + 8.35469E-3 \times Q$

Relative standard deviation 1.393773 %

Correlation coefficient 0.999897

Sample type	Index	Conc.	Volume	Dilution	Sample amount	Area	Ident	Date	Used
Standard 1	1	0.000	10.0	1.0	1.0	n. d.	STD1	2025-02-21 11:05:25 UTC-5	used
Standard 2	1	1.000	10.0	1.0	1.0	0.082	STD2	2025-02-21 11:26:47 UTC-5	used
Standard 3	1	2.000	10.0	1.0	1.0	0.161	STD3	2025-02-21 11:48:11 UTC-5	used
Standard 4	1	2.500	10.0	1.0	1.0	0.204	STD4	2025-02-21 12:09:35 UTC-5	used
Standard 5	1	5.000	10.0	1.0	1.0	0.403	STD5	2025-02-21 12:31:01 UTC-5	used
Standard 6	1	10.000	10.0	1.0	1.0	0.825	STD6	2025-02-21 12:52:27 UTC-5	used
Standard 7	1	12.500	10.0	1.0	1.0	1.044	STD7	2025-02-21 13:13:53 UTC-5	used

Sulfate (Anions) $(\mu\text{S}/\text{cm}) \times \text{min}$ Function: $A = -0.0430107 + 7.53437E-3 \times Q$

Relative standard deviation 3.742757 %

Correlation coefficient 0.9999282

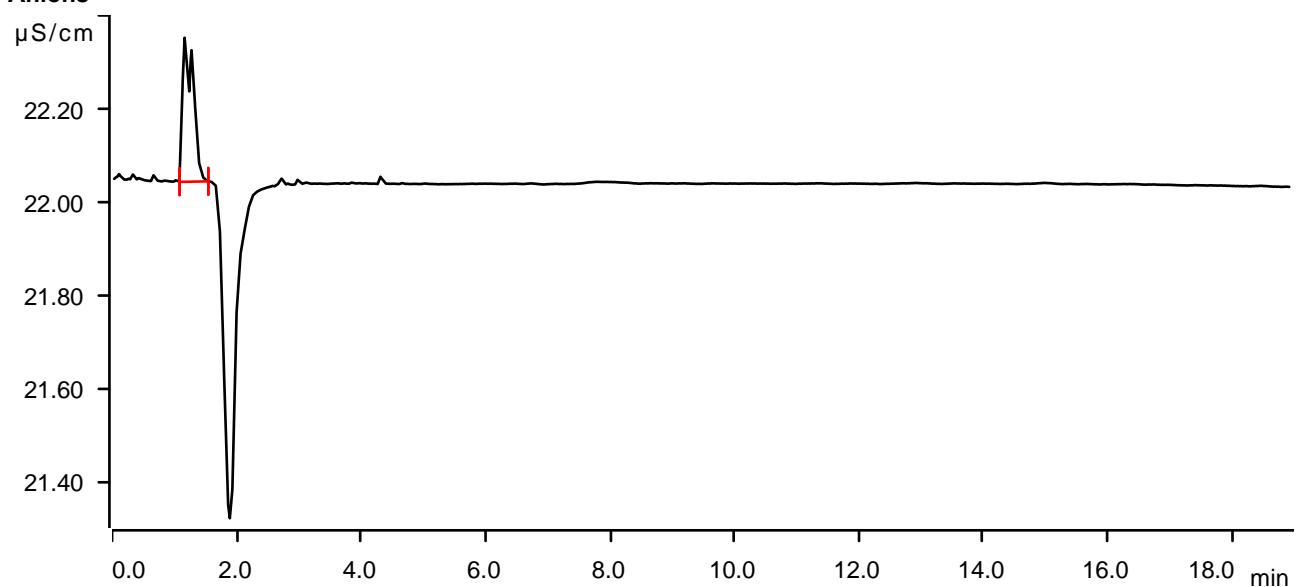
Sample type	Index	Conc.	Volume	Dilution	Sample amount	Area	Ident	Date	Used
Standard 1	1	0.000	10.0	1.0	1.0	n. d.	STD1	2025-02-21 11:05:25 UTC-5	used
Standard 2	1	3.000	10.0	1.0	1.0	0.207	STD2	2025-02-21 11:26:47 UTC-5	used
Standard 3	1	6.000	10.0	1.0	1.0	0.417	STD3	2025-02-21 11:48:11 UTC-5	used
Standard 4	1	7.500	10.0	1.0	1.0	0.531	STD4	2025-02-21 12:09:35 UTC-5	used
Standard 5	1	15.000	10.0	1.0	1.0	1.044	STD5	2025-02-21 12:31:01 UTC-5	used
Standard 6	1	30.000	10.0	1.0	1.0	2.167	STD6	2025-02-21 12:52:27 UTC-5	used
Standard 7	1	37.000	10.0	1.0	1.0	2.798	STD7	2025-02-21 13:13:53 UTC-5	used

Sample data

Ident STD1
Sample type Standard 1
Determination start 2025-02-21 11:05:25 UTC-5
Method IC1-022125
Operator

Anions

Data source Conductivity detector 1 (Eco IC 1)
Channel Conductivity
Recording time 19.0 min
Integration Automatically
Column type Metrosep A Supp 19 - 150/4.0
Eluent composition not defined
Flow 0.700 mL/min
Maximum flow monitored yes
Pressure 12.05 MPa
Maximum pressure monitored yes
Temperature ---- °C

Anions

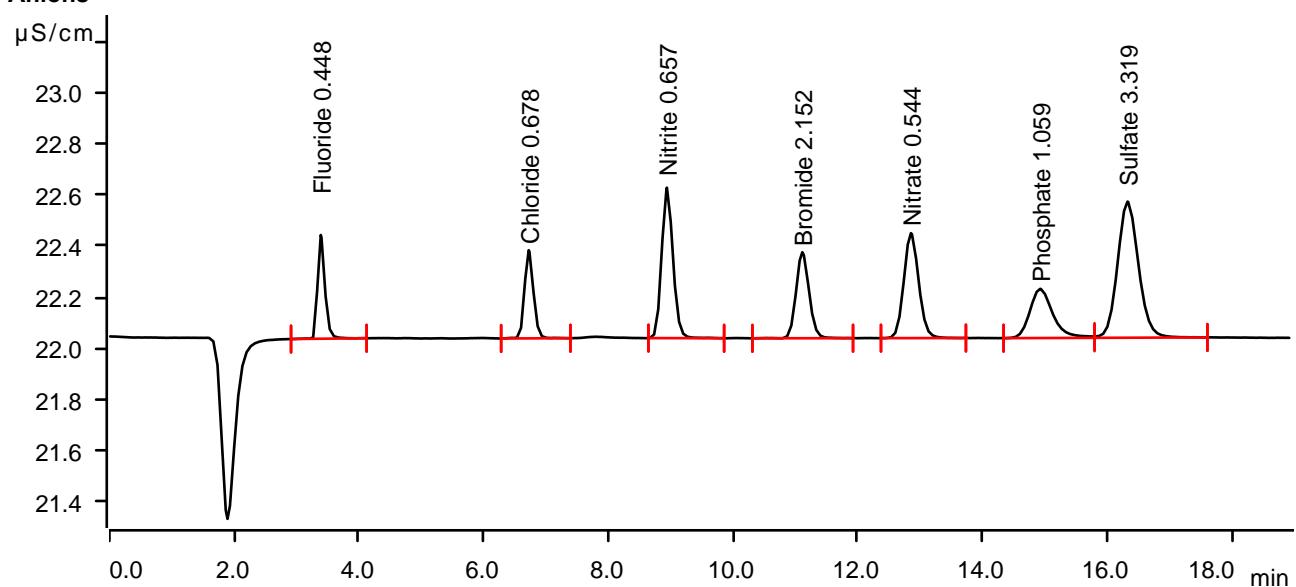
Peak number	Retention time min	Area (μS/cm) x min	Height μS/cm	Concentration ppm	Component name
1	1.167	0.0607	0.309	invalid	

Sample data

Ident STD2
 Sample type Standard 2
 Determination start 2025-02-21 11:26:47 UTC-5
 Method IC1-022125
 Operator

Anions

Data source Conductivity detector 1 (Eco IC 1)
 Channel Conductivity
 Recording time 19.0 min
 Integration Automatically
 Column type Metrosep A Supp 19 - 150/4.0
 Eluent composition not defined
 Flow 0.700 mL/min
 Maximum flow monitored yes
 Pressure 12.11 MPa
 Maximum pressure monitored yes
 Temperature ---- °C

Anions

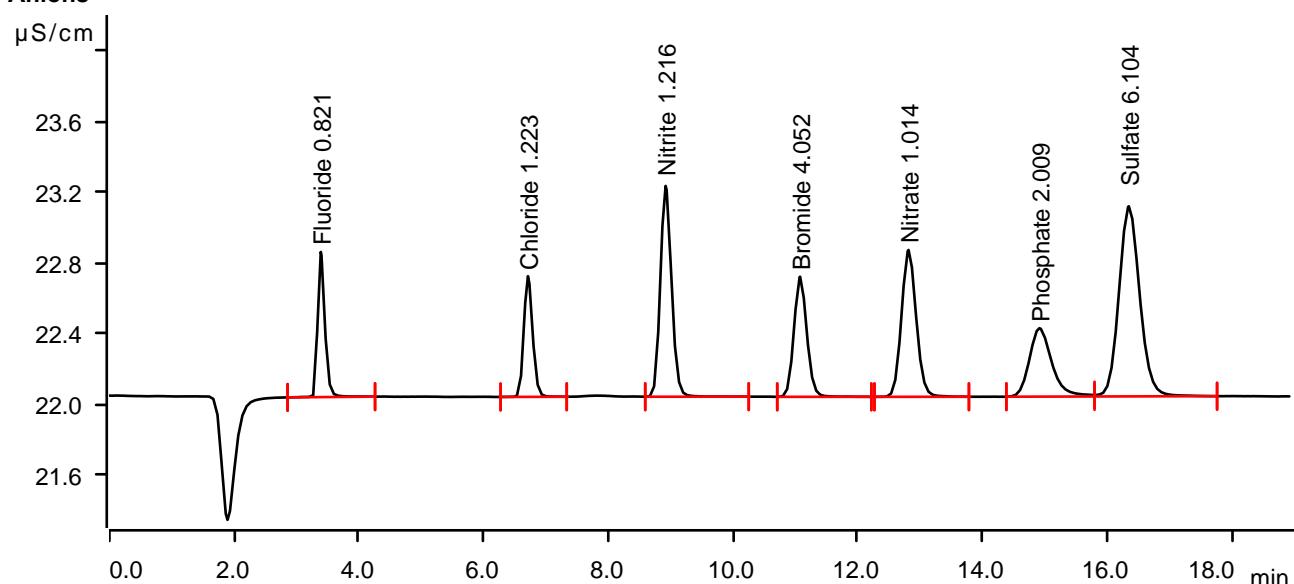
Peak number	Retention time min	Area $(\mu\text{S}/\text{cm}) \times \text{min}$	Height $\mu\text{S}/\text{cm}$	Concentration ppm	Component name
1	3.390	0.0550	0.405	0.448	Fluoride
2	6.723	0.0574	0.344	0.678	Chloride
3	8.940	0.1238	0.587	0.657	Nitrite
4	11.110	0.0813	0.336	2.152	Bromide
5	12.852	0.1132	0.410	0.544	Nitrate
6	14.923	0.0820	0.192	1.059	Phosphate
7	16.323	0.2071	0.531	3.319	Sulfate

Sample data

Ident STD3
 Sample type Standard 3
 Determination start 2025-02-21 11:48:11 UTC-5
 Method IC1-022125
 Operator

Anions

Data source Conductivity detector 1 (Eco IC 1)
 Channel Conductivity
 Recording time 19.0 min
 Integration Automatically
 Column type Metrosep A Supp 19 - 150/4.0
 Eluent composition not defined
 Flow 0.700 mL/min
 Maximum flow monitored yes
 Pressure 11.94 MPa
 Maximum pressure monitored yes
 Temperature ---- °C

Anions

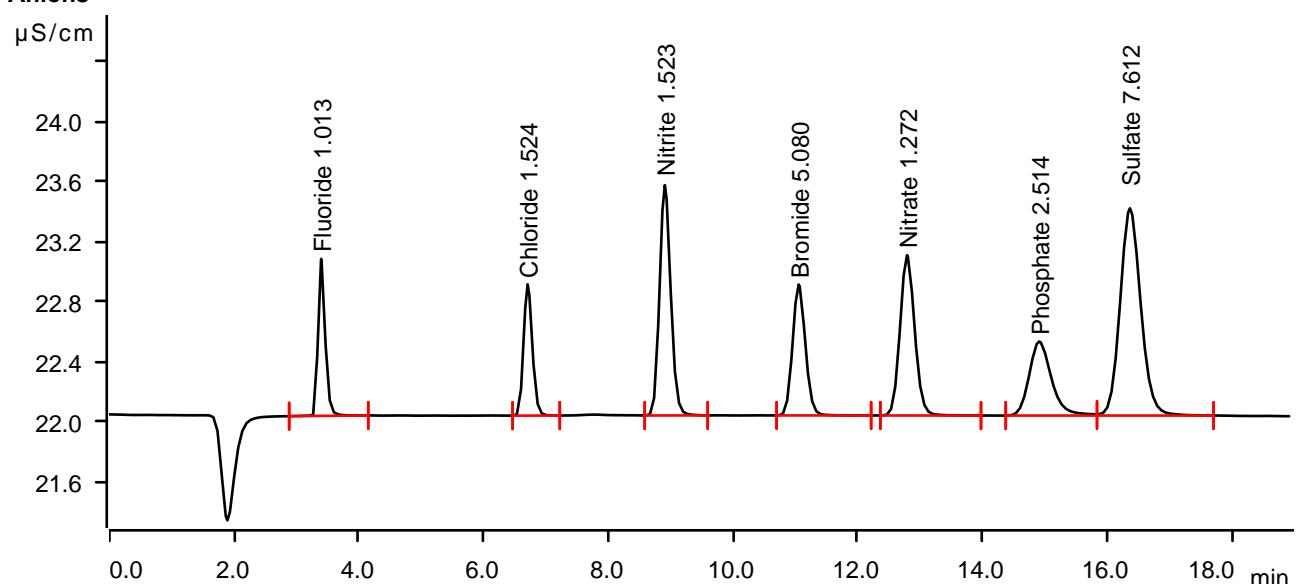
Peak number	Retention time min	Area $(\mu\text{S}/\text{cm}) \times \text{min}$	Height $\mu\text{S}/\text{cm}$	Concentration ppm	Component name
1	3.390	0.1102	0.822	0.821	Fluoride
2	6.712	0.1120	0.683	1.223	Chloride
3	8.918	0.2491	1.193	1.216	Nitrite
4	11.075	0.1631	0.680	4.052	Bromide
5	12.813	0.2277	0.831	1.014	Nitrate
6	14.912	0.1614	0.387	2.009	Phosphate
7	16.345	0.4169	1.076	6.104	Sulfate

Sample data

Ident STD4
 Sample type Standard 4
 Determination start 2025-02-21 12:09:35 UTC-5
 Method IC1-022125
 Operator

Anions

Data source Conductivity detector 1 (Eco IC 1)
 Channel Conductivity
 Recording time 19.0 min
 Integration Automatically
 Column type Metrosep A Supp 19 - 150/4.0
 Eluent composition not defined
 Flow 0.700 mL/min
 Maximum flow monitored yes
 Pressure 11.94 MPa
 Maximum pressure monitored yes
 Temperature ---- °C

Anions

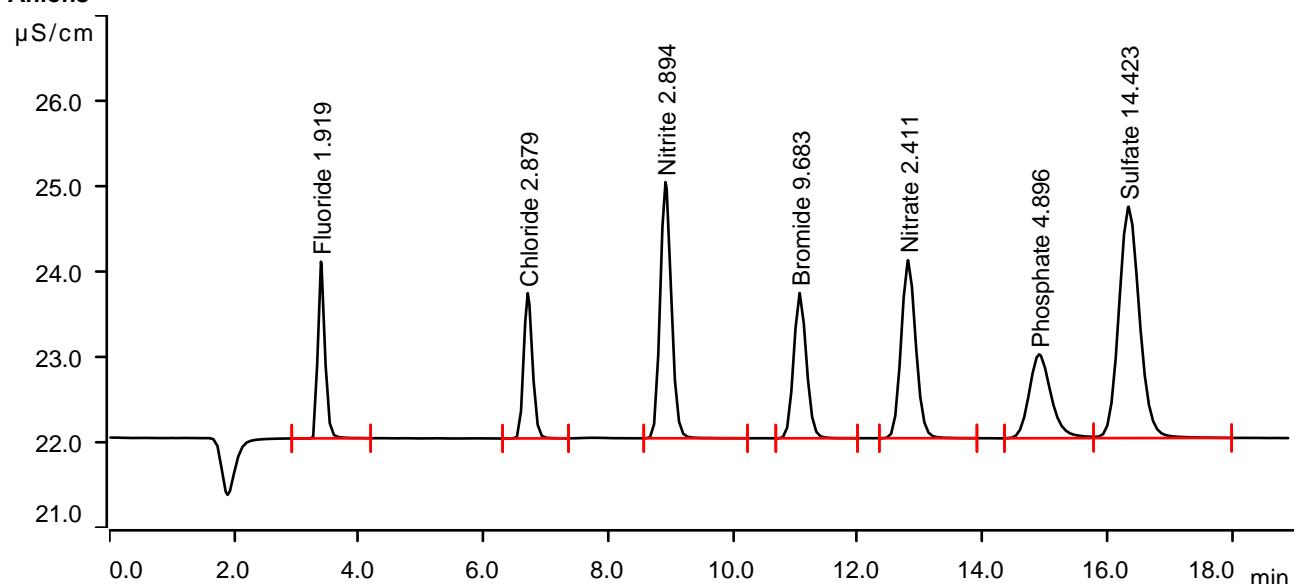
Peak number	Retention time min	Area ($\mu\text{S}/\text{cm}$) x min	Height $\mu\text{S}/\text{cm}$	Concentration ppm	Component name
1	3.395	0.1386	1.042	1.013	Fluoride
2	6.707	0.1422	0.872	1.524	Chloride
3	8.907	0.3178	1.529	1.523	Nitrite
4	11.052	0.2073	0.870	5.080	Bromide
5	12.788	0.2904	1.064	1.272	Nitrate
6	14.908	0.2036	0.492	2.514	Phosphate
7	16.363	0.5305	1.376	7.612	Sulfate

Sample data

Ident STD5
 Sample type Standard 5
 Determination start 2025-02-21 12:31:01 UTC-5
 Method IC1-022125
 Operator

Anions

Data source Conductivity detector 1 (Eco IC 1)
 Channel Conductivity
 Recording time 19.0 min
 Integration Automatically
 Column type Metrosep A Supp 19 - 150/4.0
 Eluent composition not defined
 Flow 0.700 mL/min
 Maximum flow monitored yes
 Pressure 11.88 MPa
 Maximum pressure monitored yes
 Temperature ---- °C

Anions

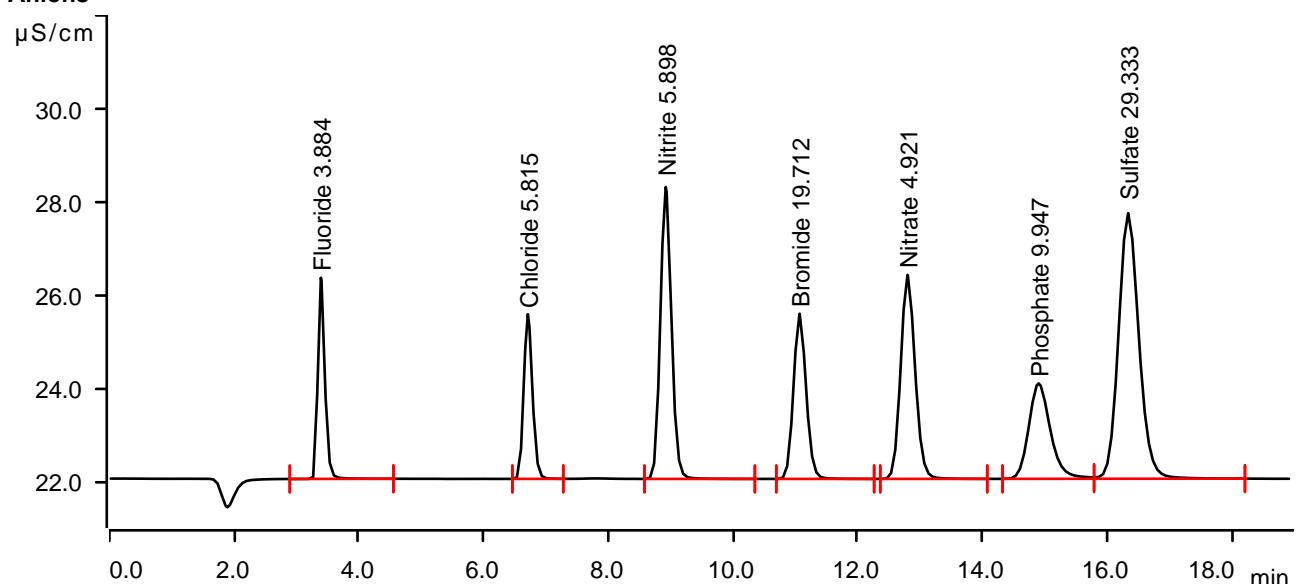
Peak number	Retention time min	Area ($\mu\text{S}/\text{cm}$) x min	Height $\mu\text{S}/\text{cm}$	Concentration ppm	Component name
1	3.393	0.2728	2.069	1.919	Fluoride
2	6.708	0.2780	1.702	2.879	Chloride
3	8.917	0.6246	3.000	2.894	Nitrite
4	11.068	0.4054	1.702	9.683	Bromide
5	12.807	0.5675	2.085	2.411	Nitrate
6	14.907	0.4026	0.982	4.896	Phosphate
7	16.342	1.0436	2.711	14.423	Sulfate

Sample data

Ident STD6
Sample type Standard 6
Determination start 2025-02-21 12:52:27 UTC-5
Method IC1-022125
Operator

Anions

Data source Conductivity detector 1 (Eco IC 1)
Channel Conductivity
Recording time 19.0 min
Integration Automatically
Column type Metrosep A Supp 19 - 150/4.0
Eluent composition not defined
Flow 0.700 mL/min
Maximum flow monitored yes
Pressure 11.94 MPa
Maximum pressure monitored yes
Temperature ---- °C

Anions

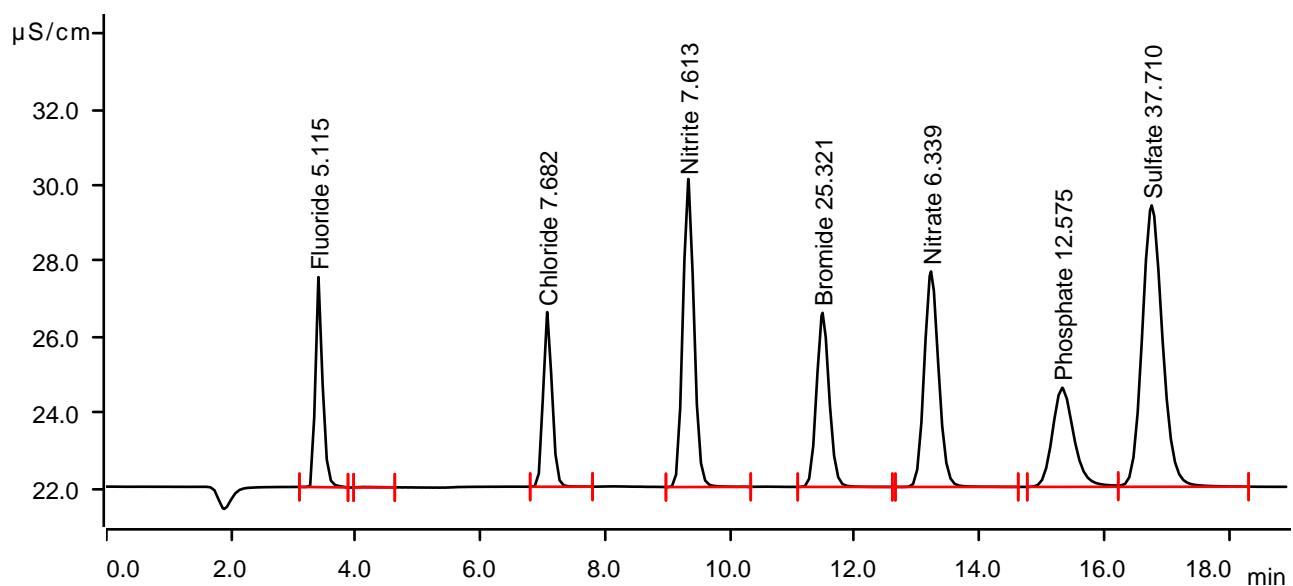
Peak number	Retention time min	Area ($\mu\text{S}/\text{cm}$) x min	Height $\mu\text{S}/\text{cm}$	Concentration ppm	Component name
1	3.392	0.5636	4.320	3.884	Fluoride
2	6.710	0.5722	3.536	5.815	Chloride
3	8.920	1.2971	6.268	5.898	Nitrite
4	11.065	0.8370	3.548	19.712	Bromide
5	12.797	1.1784	4.381	4.921	Nitrate
6	14.898	0.8246	2.050	9.947	Phosphate
7	16.333	2.1670	5.703	29.333	Sulfate

Sample data

Ident STD7
Sample type Standard 7
Determination start 2025-02-21 13:13:53 UTC-5
Method IC1-022125
Operator

Anions

Data source Conductivity detector 1 (Eco IC 1)
Channel Conductivity
Recording time 19.0 min
Integration Automatically
Column type Metrosep A Supp 19 - 150/4.0
Eluent composition not defined
Flow 0.700 mL/min
Maximum flow monitored yes
Pressure 11.88 MPa
Maximum pressure monitored yes
Temperature ---- °C

Anions

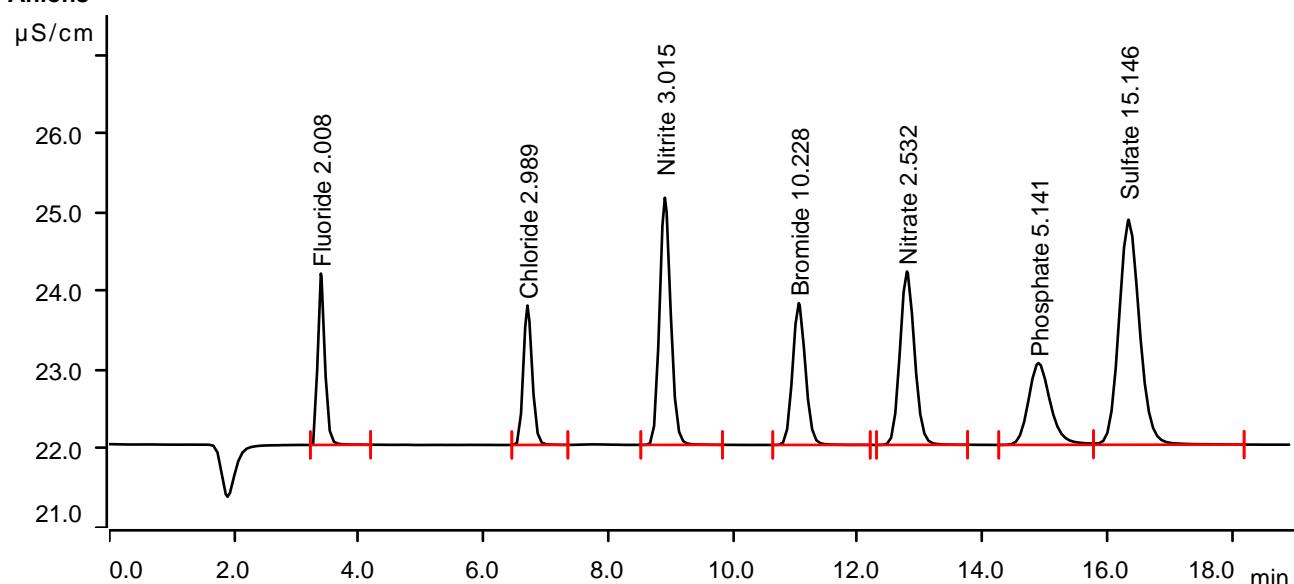
Peak number	Retention time min	Area ($\mu\text{S}/\text{cm}$) x min	Height $\mu\text{S}/\text{cm}$	Concentration ppm	Component name
1	3.400	0.7457	5.535	5.115	Fluoride
2	4.197	0.0046	0.012	invalid	
3	7.070	0.7592	4.602	7.682	Chloride
4	9.330	1.6810	8.120	7.613	Nitrite
5	11.483	1.0784	4.588	25.321	Bromide
6	13.222	1.5233	5.678	6.339	Nitrate
7	15.325	1.0441	2.611	12.575	Phosphate
8	16.760	2.7982	7.416	37.710	Sulfate

Sample data

Ident ICV
 Sample type Check standard 1
 Determination start 2025-02-21 13:35:21 UTC-5
 Method IC1-022125
 Operator

Anions

Data source Conductivity detector 1 (Eco IC 1)
 Channel Conductivity
 Recording time 19.0 min
 Integration Automatically
 Column type Metrosep A Supp 19 - 150/4.0
 Eluent composition not defined
 Flow 0.700 mL/min
 Maximum flow monitored yes
 Pressure 11.94 MPa
 Maximum pressure monitored yes
 Temperature ---- °C

Anions

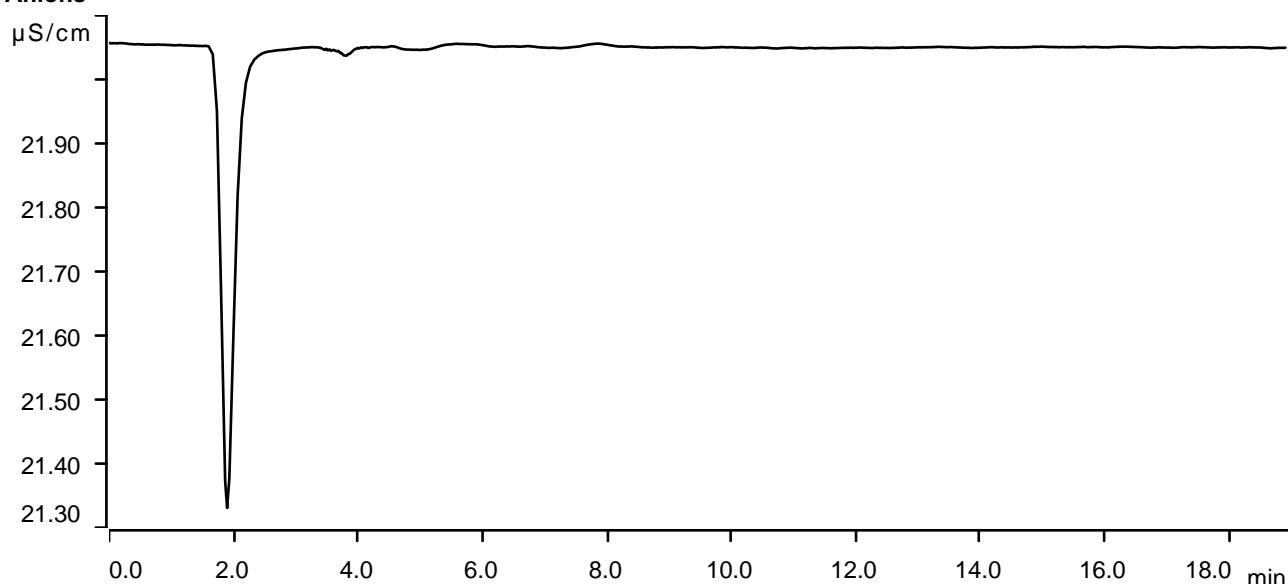
Peak number	Retention time min	Area $(\mu\text{S}/\text{cm}) \times \text{min}$	Height $\mu\text{S}/\text{cm}$	Concentration ppm	Component name
1	3.392	0.2859	2.174	2.008	Fluoride
2	6.703	0.2890	1.769	2.989	Chloride
3	8.907	0.6518	3.137	3.015	Nitrite
4	11.053	0.4289	1.799	10.228	Bromide
5	12.787	0.5971	2.200	2.532	Nitrate
6	14.897	0.4230	1.038	5.141	Phosphate
7	16.342	1.0982	2.855	15.146	Sulfate

Sample data

Ident ICB
Sample type Sample
Determination start 2025-02-21 13:56:49 UTC-5
Method IC1-022125
Operator

Anions

Data source Conductivity detector 1 (Eco IC 1)
Channel Conductivity
Recording time 19.0 min
Integration Automatically
Column type Metrosep A Supp 19 - 150/4.0
Eluent composition not defined
Flow 0.700 mL/min
Maximum flow monitored yes
Pressure 11.88 MPa
Maximum pressure monitored yes
Temperature ---- °C

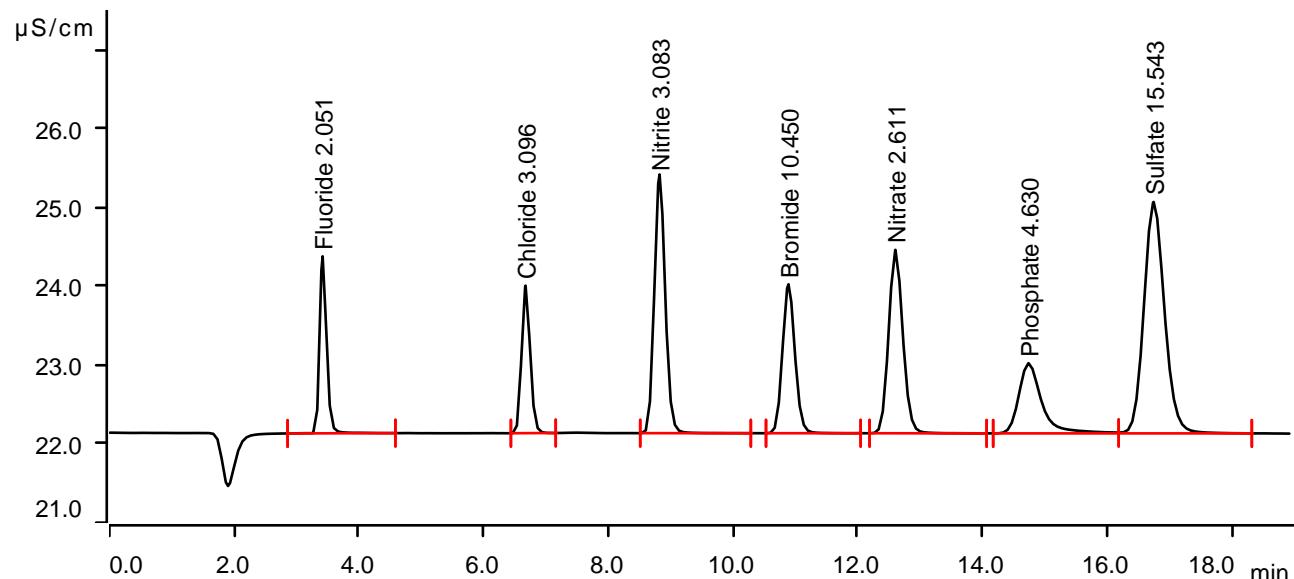
Anions

Sample data

Ident CCV
 Sample type Check standard 1
 Determination start 2025-03-11 10:41:14 UTC-4
 Method IC1-022125
 Operator

Anions

Data source Conductivity detector 1 (Eco IC 1)
 Channel Conductivity
 Recording time 19.0 min
 Integration Automatically
 Column type Metrosep A Supp 19 - 150/4.0
 Eluent composition not defined
 Flow 0.700 mL/min
 Maximum flow monitored yes
 Pressure 11.37 MPa
 Maximum pressure monitored yes
 Temperature ---- °C

Anions

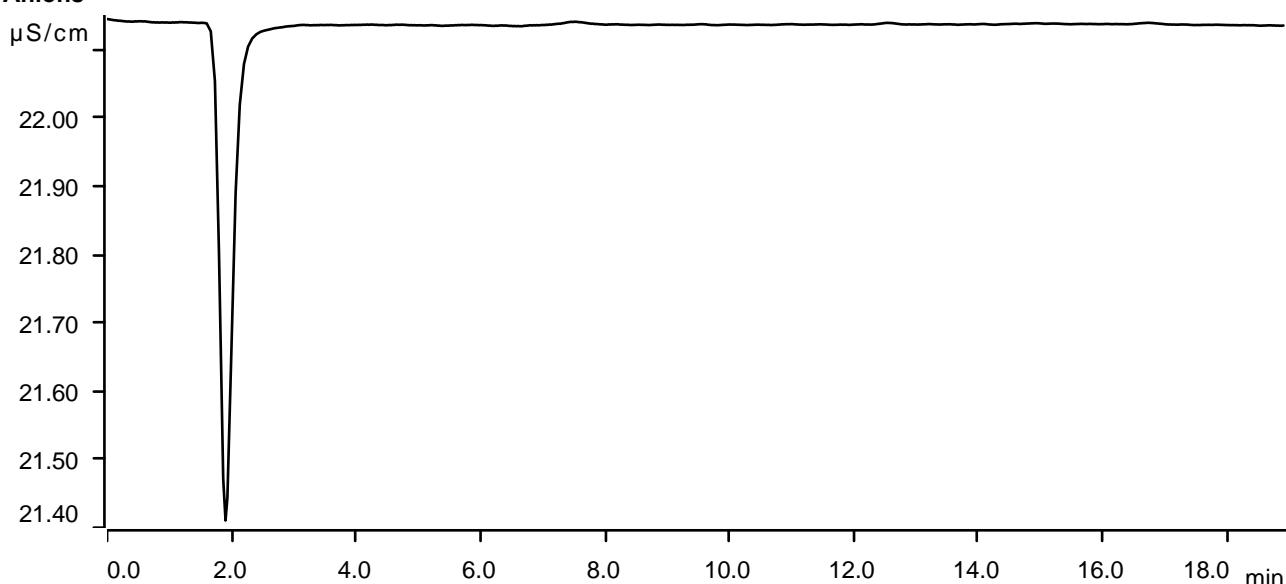
Peak number	Retention time min	Area (μS/cm) x min	Height μS/cm	Concentration ppm	Component name
1	3.420	0.2923	2.246	2.051	Fluoride
2	6.673	0.2997	1.872	3.096	Chloride
3	8.822	0.6669	3.283	3.083	Nitrite
4	10.888	0.4384	1.890	10.450	Bromide
5	12.603	0.6162	2.328	2.611	Nitrate
6	14.738	0.3804	0.891	4.630	Phosphate
7	16.743	1.1281	2.937	15.543	Sulfate

Sample data

Ident CCB
Sample type Sample
Determination start 2025-03-11 11:02:44 UTC-4
Method IC1-022125
Operator

Anions

Data source Conductivity detector 1 (Eco IC 1)
Channel Conductivity
Recording time 19.0 min
Integration Automatically
Column type Metrosep A Supp 19 - 150/4.0
Eluent composition not defined
Flow 0.700 mL/min
Maximum flow monitored yes
Pressure 11.32 MPa
Maximum pressure monitored yes
Temperature ---- °C

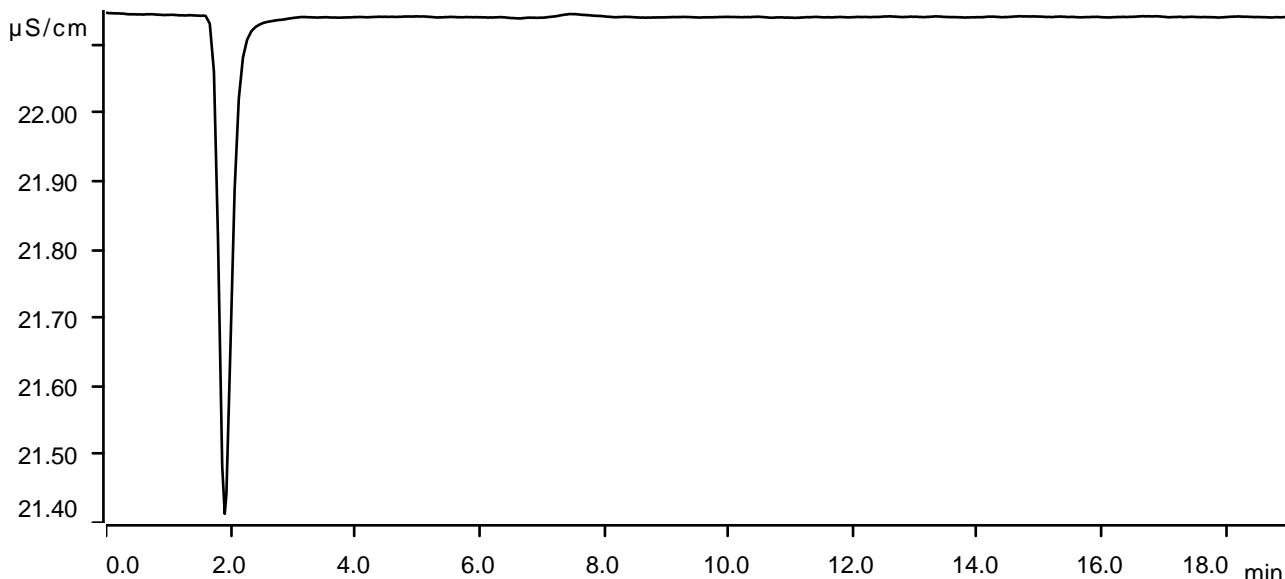
Anions

Sample data

Ident LB135005BLW
Sample type Sample
Determination start 2025-03-11 11:24:14 UTC-4
Method IC1-022125
Operator

Anions

Data source Conductivity detector 1 (Eco IC 1)
Channel Conductivity
Recording time 19.0 min
Integration Automatically
Column type Metrosep A Supp 19 - 150/4.0
Eluent composition not defined
Flow 0.700 mL/min
Maximum flow monitored yes
Pressure 11.49 MPa
Maximum pressure monitored yes
Temperature ---- °C

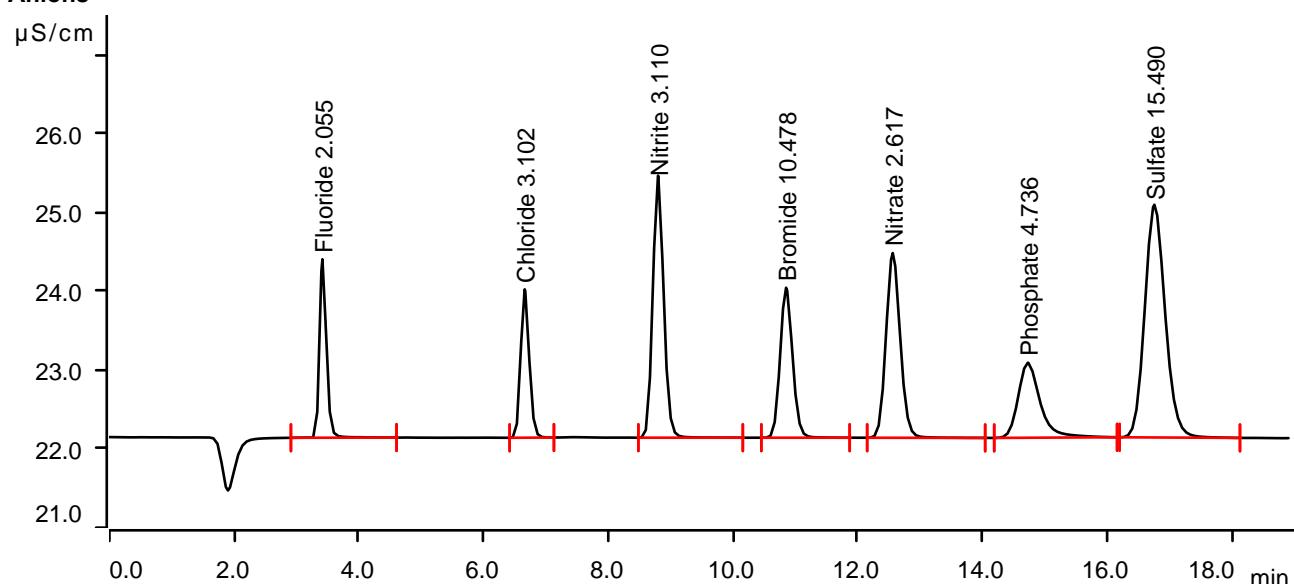
Anions

Sample data

Ident LB135005BSW
 Sample type Check standard 1
 Determination start 2025-03-11 11:45:46 UTC-4
 Method IC1-022125
 Operator

Anions

Data source Conductivity detector 1 (Eco IC 1)
 Channel Conductivity
 Recording time 19.0 min
 Integration Automatically
 Column type Metrosep A Supp 19 - 150/4.0
 Eluent composition not defined
 Flow 0.700 mL/min
 Maximum flow monitored yes
 Pressure 11.32 MPa
 Maximum pressure monitored yes
 Temperature ---- °C

Anions

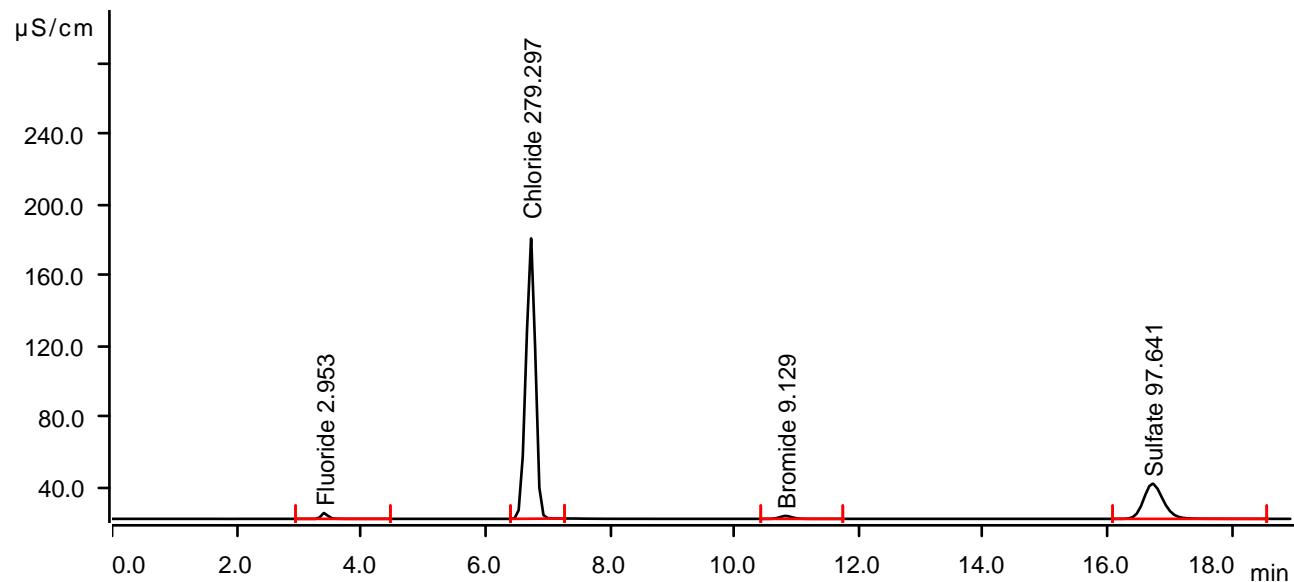
Peak number	Retention time min	Area (μS/cm) x min	Height μS/cm	Concentration ppm	Component name
1	3.417	0.2928	2.264	2.055	Fluoride
2	6.658	0.3003	1.883	3.102	Chloride
3	8.797	0.6730	3.325	3.110	Nitrite
4	10.850	0.4396	1.904	10.478	Bromide
5	12.560	0.6178	2.344	2.617	Nitrate
6	14.725	0.3893	0.952	4.736	Phosphate
7	16.755	1.1241	2.954	15.490	Sulfate

Sample data

Ident Q1505-06
Sample type Sample
Determination start 2025-03-11 12:10:32 UTC-4
Method IC1-022125
Operator

Anions

Data source Conductivity detector 1 (Eco IC 1)
Channel Conductivity
Recording time 19.0 min
Integration Automatically
Column type Metrosep A Supp 19 - 150/4.0
Eluent composition not defined
Flow 0.700 mL/min
Maximum flow monitored yes
Pressure 11.15 MPa
Maximum pressure monitored yes
Temperature ---- °C

Anions

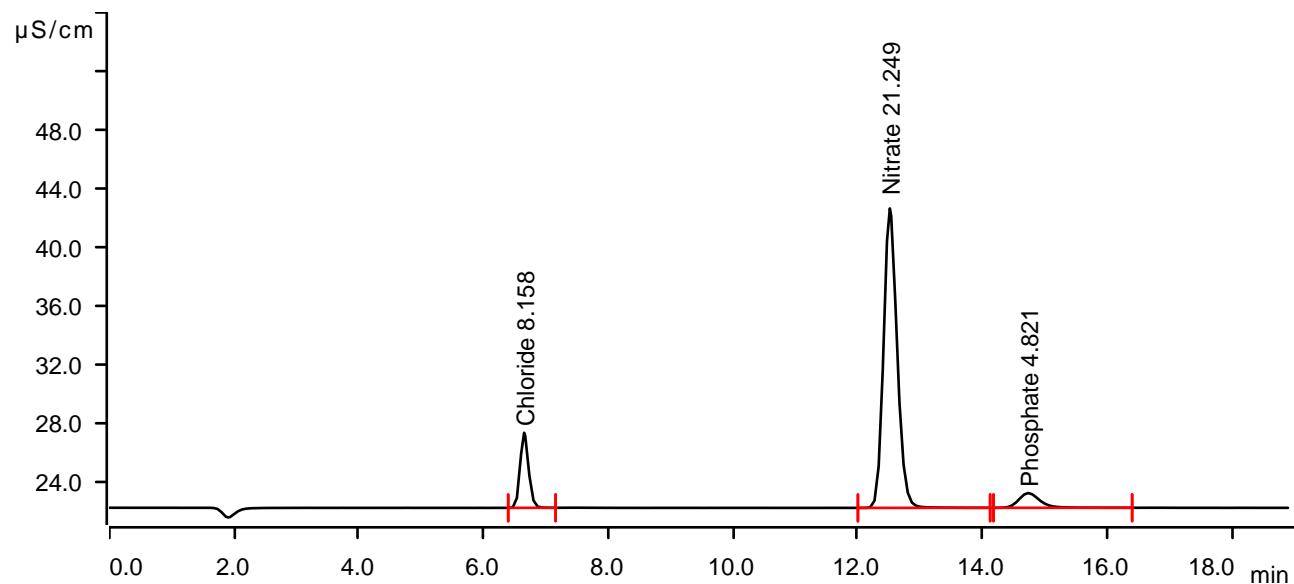
Peak number	Retention time min	Area $(\mu\text{S}/\text{cm}) \times \text{min}$	Height $\mu\text{S}/\text{cm}$	Concentration ppm	Component name
1	3.408	0.4258	3.278	2.953	Fluoride
2	6.737	27.9770	158.699	279.297	Chloride
3	10.823	0.3815	1.659	9.129	Bromide
4	16.720	7.3136	19.897	97.641	Sulfate

Sample data

Ident Q1505-12
Sample type Sample
Determination start 2025-03-11 12:32:05 UTC-4
Method IC1-022125
Operator

Anions

Data source Conductivity detector 1 (Eco IC 1)
Channel Conductivity
Recording time 19.0 min
Integration Automatically
Column type Metrosep A Supp 19 - 150/4.0
Eluent composition not defined
Flow 0.700 mL/min
Maximum flow monitored yes
Pressure 11.26 MPa
Maximum pressure monitored yes
Temperature ---- °C

Anions

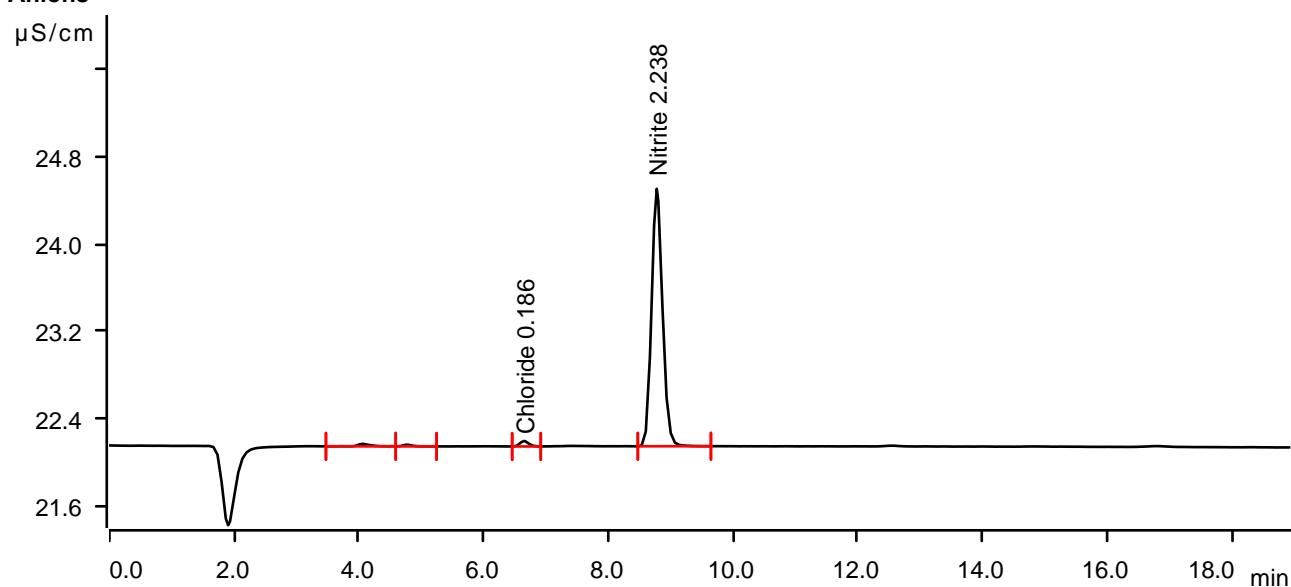
Peak number	Retention time min	Area ($\mu\text{S}/\text{cm}$) x min	Height $\mu\text{S}/\text{cm}$	Concentration ppm	Component name
1	6.650	0.8069	5.132	8.158	Chloride
2	12.513	5.1514	20.463	21.249	Nitrate
3	14.733	0.3963	1.010	4.821	Phosphate

Sample data

Ident Q1505-16
Sample type Sample
Determination start 2025-03-11 12:53:39 UTC-4
Method IC1-022125
Operator

Anions

Data source Conductivity detector 1 (Eco IC 1)
Channel Conductivity
Recording time 19.0 min
Integration Automatically
Column type Metrosep A Supp 19 - 150/4.0
Eluent composition not defined
Flow 0.700 mL/min
Maximum flow monitored yes
Pressure 11.15 MPa
Maximum pressure monitored yes
Temperature ---- °C

Anions

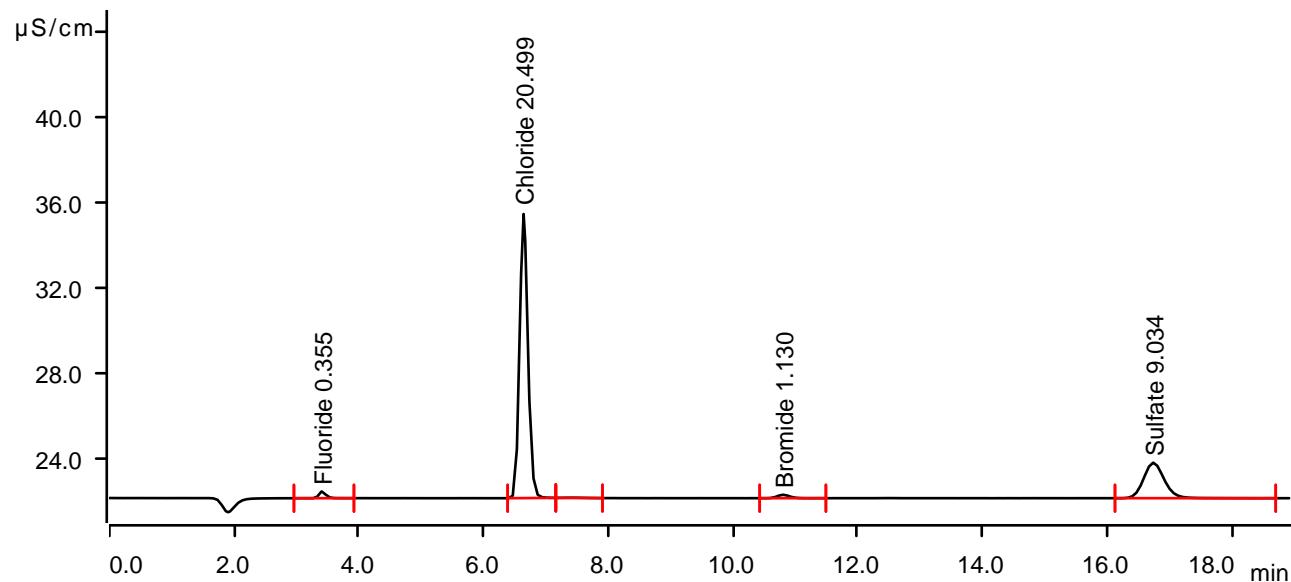
Peak number	Retention time min	Area (μS/cm) x min	Height μS/cm	Concentration ppm	Component name
1	4.058	0.0057	0.023	invalid	
2	4.770	0.0027	0.016	invalid	
3	6.648	0.0081	0.050	0.186	Chloride
4	8.777	0.4778	2.362	2.238	Nitrite

Sample data

Ident Q1505-06DLX10
Sample type Sample
Determination start 2025-03-11 13:15:13 UTC-4
Method IC1-022125
Operator

Anions

Data source Conductivity detector 1 (Eco IC 1)
Channel Conductivity
Recording time 19.0 min
Integration Automatically
Column type Metrosep A Supp 19 - 150/4.0
Eluent composition not defined
Flow 0.700 mL/min
Maximum flow monitored yes
Pressure 11.54 MPa
Maximum pressure monitored yes
Temperature ---- °C

Anions

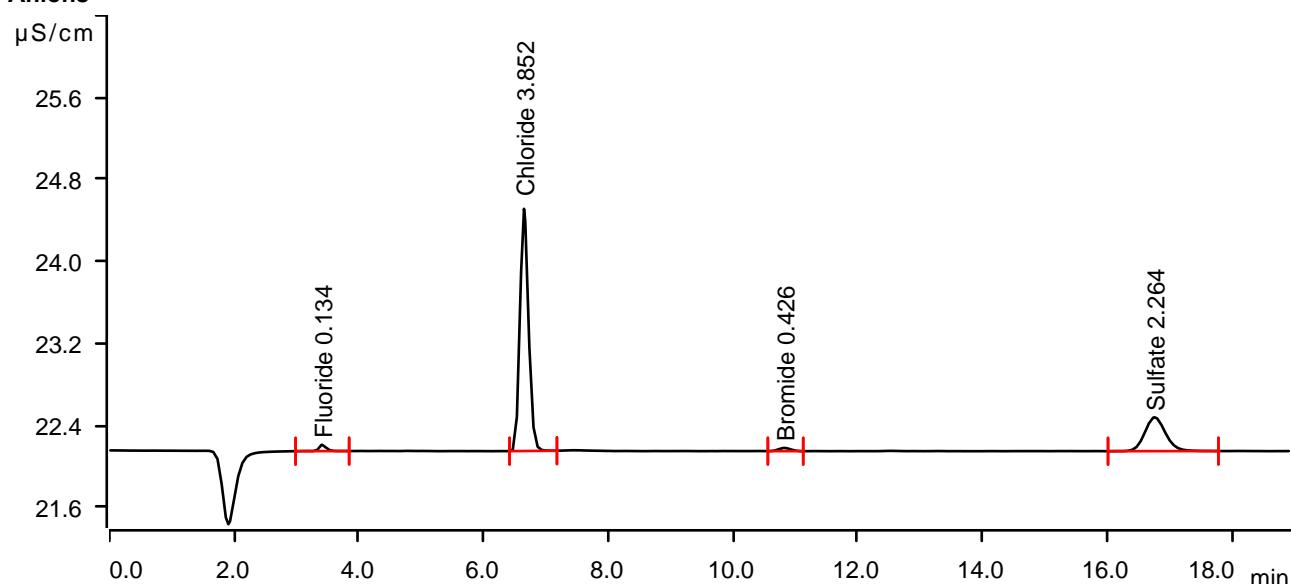
Peak number	Retention time min	Area ($\mu\text{S}/\text{cm}$) x min	Height $\mu\text{S}/\text{cm}$	Concentration ppm	Component name
1	3.407	0.0413	0.313	0.355	Fluoride
2	6.642	2.0437	13.309	20.499	Chloride
3	7.420	0.0040	0.011	invalid	
4	10.802	0.0373	0.161	1.130	Bromide
5	16.738	0.6376	1.661	9.034	Sulfate

Sample data

Ident Q1505-06DL2X50
Sample type Sample
Determination start 2025-03-11 13:36:48 UTC-4
Method IC1-022125
Operator

Anions

Data source Conductivity detector 1 (Eco IC 1)
Channel Conductivity
Recording time 19.0 min
Integration Automatically
Column type Metrosep A Supp 19 - 150/4.0
Eluent composition not defined
Flow 0.700 mL/min
Maximum flow monitored yes
Pressure 11.32 MPa
Maximum pressure monitored yes
Temperature ---- °C

Anions

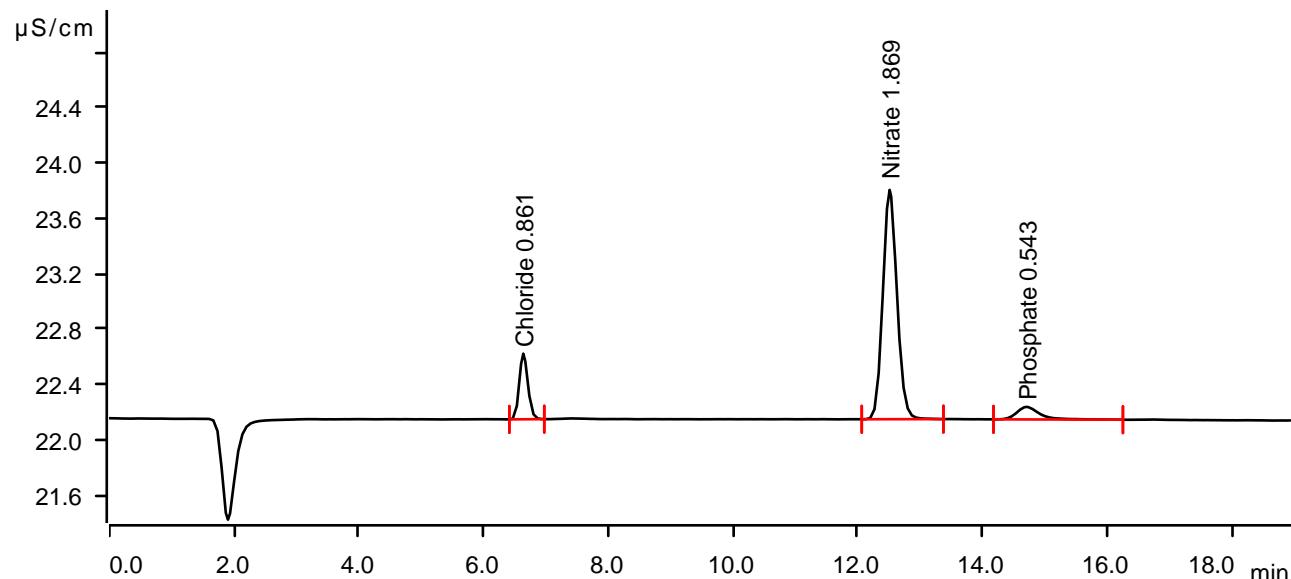
Peak number	Retention time min	Area ($\mu\text{S}/\text{cm}$) x min	Height $\mu\text{S}/\text{cm}$	Concentration ppm	Component name
1	3.412	0.0085	0.062	0.134	Fluoride
2	6.648	0.3755	2.364	3.852	Chloride
3	10.827	0.0070	0.031	0.426	Bromide
4	16.758	0.1276	0.330	2.264	Sulfate

Sample data

Ident Q1505-12DLX10
Sample type Sample
Determination start 2025-03-11 13:58:22 UTC-4
Method IC1-022125
Operator

Anions

Data source Conductivity detector 1 (Eco IC 1)
Channel Conductivity
Recording time 19.0 min
Integration Automatically
Column type Metrosep A Supp 19 - 150/4.0
Eluent composition not defined
Flow 0.700 mL/min
Maximum flow monitored yes
Pressure 11.71 MPa
Maximum pressure monitored yes
Temperature ---- °C

Anions

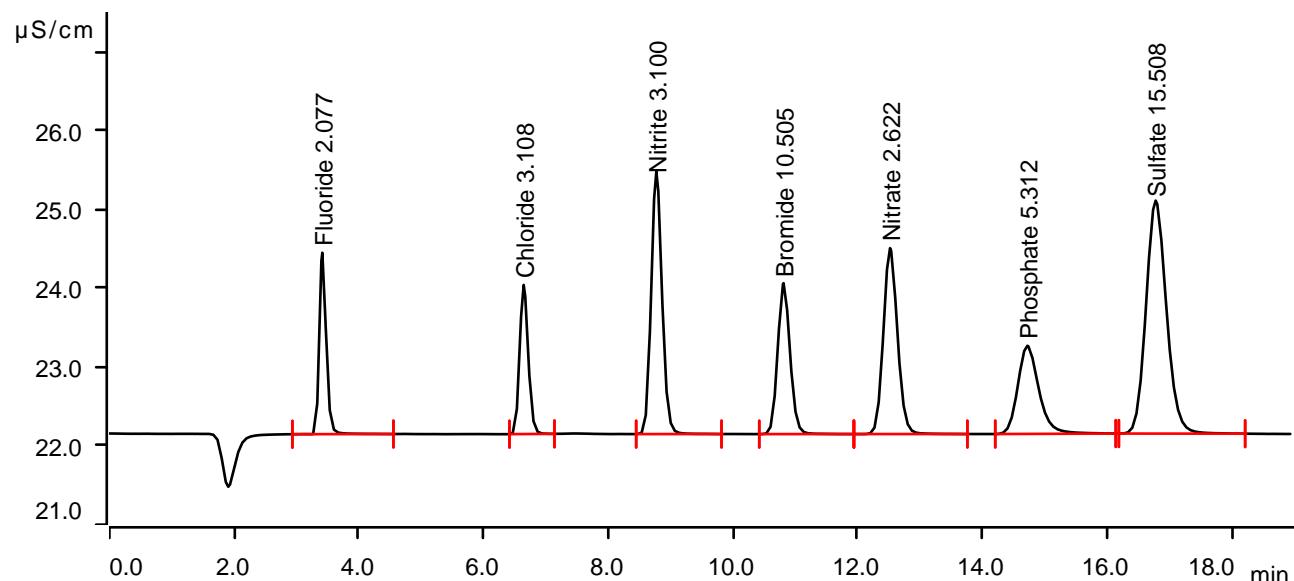
Peak number	Retention time min	Area (μS/cm) x min	Height μS/cm	Concentration ppm	Component name
1	6.637	0.0757	0.474	0.861	Chloride
2	12.510	0.4357	1.657	1.869	Nitrate
3	14.705	0.0389	0.091	0.543	Phosphate

Sample data

Ident CCV
 Sample type Check standard 1
 Determination start 2025-03-11 14:19:55 UTC-4
 Method IC1-022125
 Operator

Anions

Data source Conductivity detector 1 (Eco IC 1)
 Channel Conductivity
 Recording time 19.0 min
 Integration Automatically
 Column type Metrosep A Supp 19 - 150/4.0
 Eluent composition not defined
 Flow 0.700 mL/min
 Maximum flow monitored yes
 Pressure 11.37 MPa
 Maximum pressure monitored yes
 Temperature ---- °C

Anions

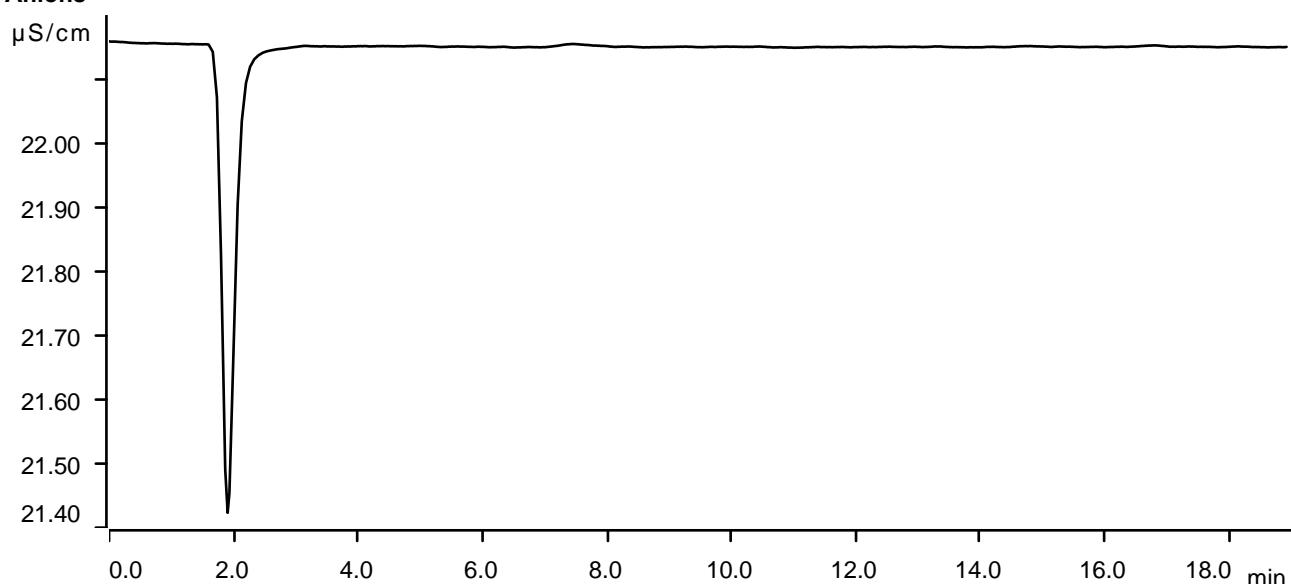
Peak number	Retention time min	Area (μS/cm) x min	Height μS/cm	Concentration ppm	Component name
1	3.415	0.2961	2.301	2.077	Fluoride
2	6.643	0.3009	1.893	3.108	Chloride
3	8.770	0.6708	3.331	3.100	Nitrite
4	10.810	0.4408	1.915	10.505	Bromide
5	12.517	0.6190	2.360	2.622	Nitrate
6	14.718	0.4374	1.118	5.312	Phosphate
7	16.775	1.1254	2.957	15.508	Sulfate

Sample data

Ident CCB
Sample type Sample
Determination start 2025-03-11 14:41:25 UTC-4
Method IC1-022125
Operator

Anions

Data source Conductivity detector 1 (Eco IC 1)
Channel Conductivity
Recording time 19.0 min
Integration Automatically
Column type Metrosep A Supp 19 - 150/4.0
Eluent composition not defined
Flow 0.700 mL/min
Maximum flow monitored yes
Pressure 11.43 MPa
Maximum pressure monitored yes
Temperature ---- °C

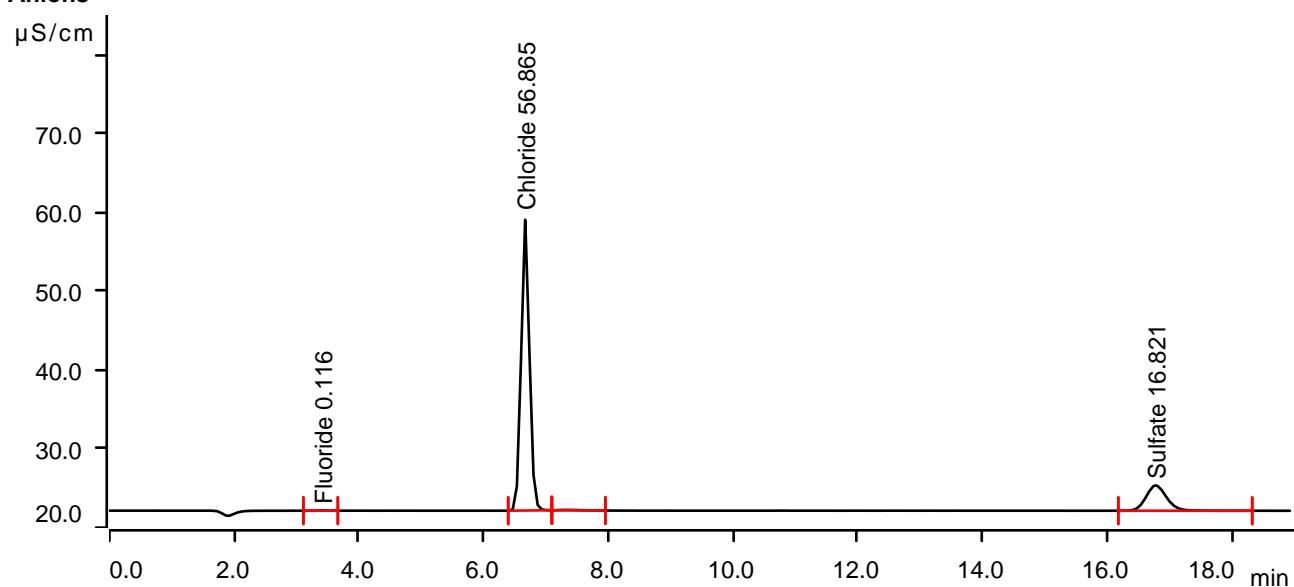
Anions

Sample data

Ident Q1539-01
Sample type Sample
Determination start 2025-03-11 15:02:56 UTC-4
Method IC1-022125
Operator

Anions

Data source Conductivity detector 1 (Eco IC 1)
Channel Conductivity
Recording time 19.0 min
Integration Automatically
Column type Metrosep A Supp 19 - 150/4.0
Eluent composition not defined
Flow 0.700 mL/min
Maximum flow monitored yes
Pressure 11.26 MPa
Maximum pressure monitored yes
Temperature ---- °C

Anions

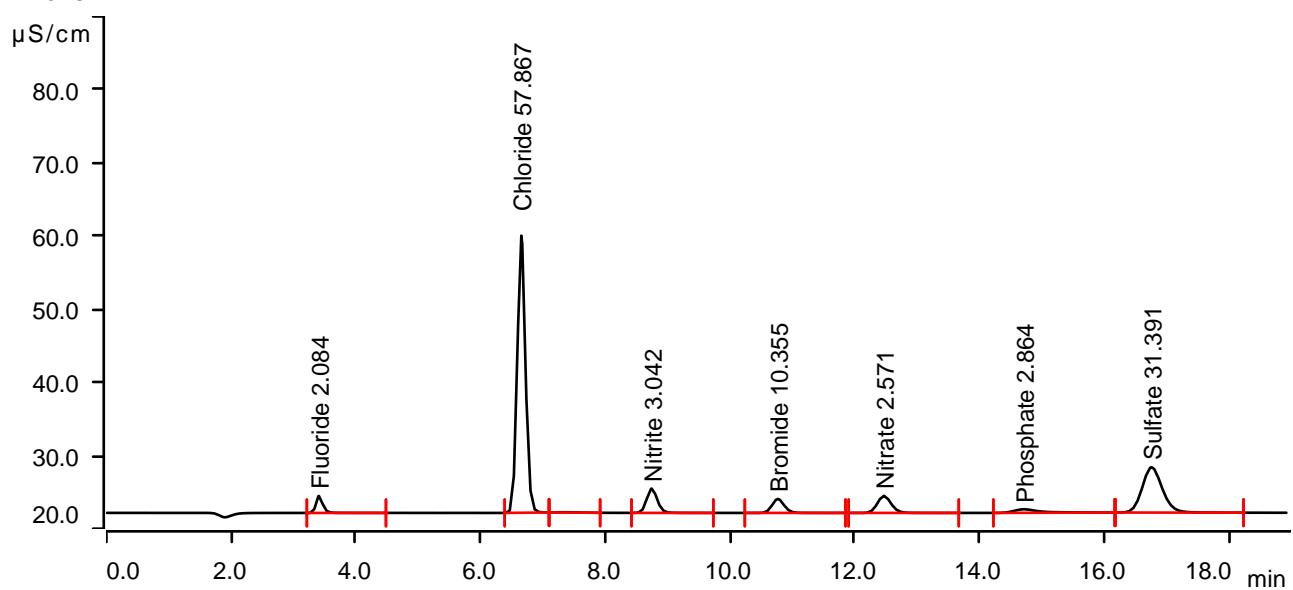
Peak number	Retention time min	Area (μS/cm) x min	Height μS/cm	Concentration ppm	Component name
1	3.413	0.0059	0.045	0.116	Fluoride
2	6.668	5.6877	36.893	56.865	Chloride
3	7.338	0.0203	0.053	invalid	
4	16.775	1.2243	3.220	16.821	Sulfate

Sample data

Ident Q1539-01MS
Sample type Sample
Determination start 2025-03-11 15:24:29 UTC-4
Method IC1-022125
Operator

Anions

Data source Conductivity detector 1 (Eco IC 1)
Channel Conductivity
Recording time 19.0 min
Integration Automatically
Column type Metrosep A Supp 19 - 150/4.0
Eluent composition not defined
Flow 0.700 mL/min
Maximum flow monitored yes
Pressure 12.05 MPa
Maximum pressure monitored yes
Temperature ---- °C

Anions

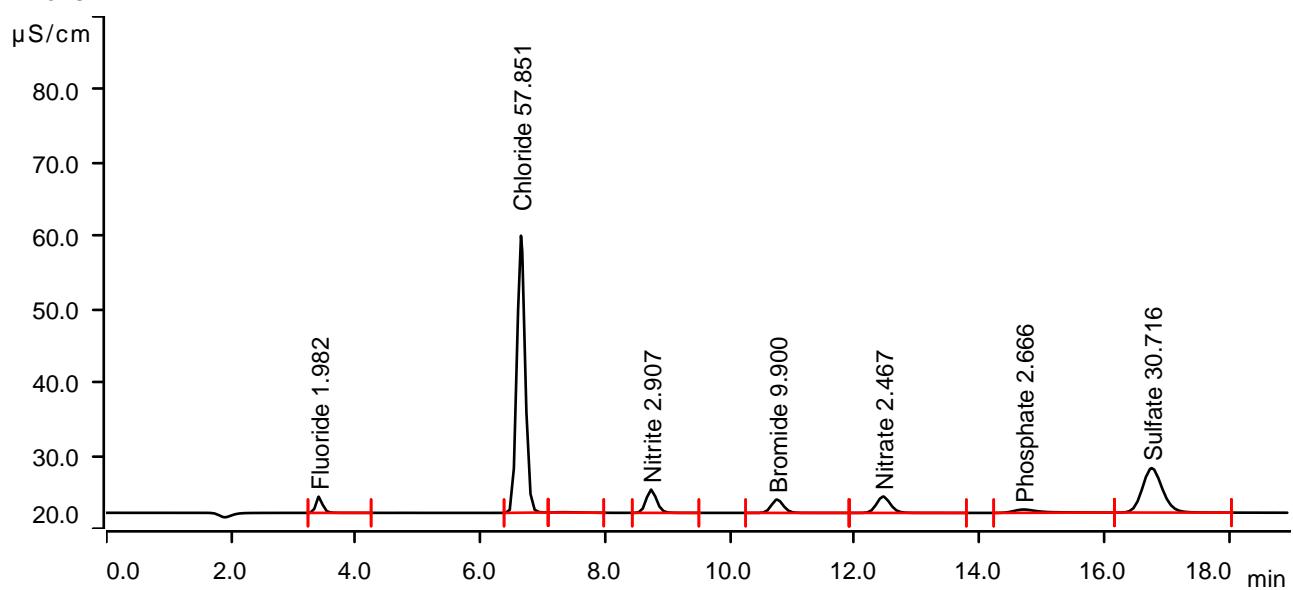
Peak number	Retention time min	Area ($\mu\text{S}/\text{cm}$) x min	Height $\mu\text{S}/\text{cm}$	Concentration ppm	Component name
1	3.408	0.2971	2.317	2.084	Fluoride
2	6.653	5.7881	37.867	57.867	Chloride
3	7.333	0.0171	0.045	invalid	
4	8.743	0.6578	3.320	3.042	Nitrite
5	10.767	0.4343	1.909	10.355	Bromide
6	12.467	0.6065	2.335	2.571	Nitrate
7	14.712	0.2328	0.483	2.864	Phosphate
8	16.758	2.3221	6.207	31.391	Sulfate

Sample data

Ident Q1539-01MSD
Sample type Sample
Determination start 2025-03-11 15:46:01 UTC-4
Method IC1-022125
Operator

Anions

Data source Conductivity detector 1 (Eco IC 1)
Channel Conductivity
Recording time 19.0 min
Integration Automatically
Column type Metrosep A Supp 19 - 150/4.0
Eluent composition not defined
Flow 0.700 mL/min
Maximum flow monitored yes
Pressure 11.09 MPa
Maximum pressure monitored yes
Temperature ---- °C

Anions

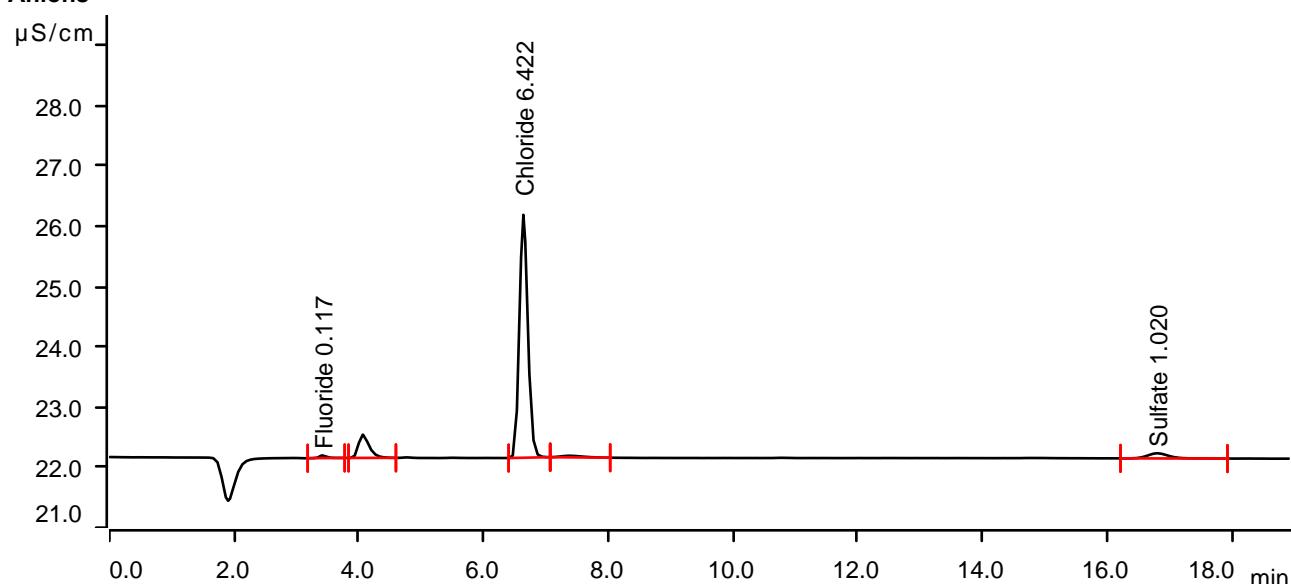
Peak number	Retention time min	Area ($\mu\text{S}/\text{cm}$) x min	Height $\mu\text{S}/\text{cm}$	Concentration ppm	Component name
1	3.405	0.2821	2.210	1.982	Fluoride
2	6.648	5.7866	37.850	57.851	Chloride
3	7.325	0.0177	0.047	invalid	
4	8.735	0.6277	3.176	2.907	Nitrite
5	10.753	0.4147	1.827	9.900	Bromide
6	12.453	0.5813	2.240	2.467	Nitrate
7	14.708	0.2163	0.448	2.666	Phosphate
8	16.760	2.2712	6.084	30.716	Sulfate

Sample data

Ident Q1539-02
Sample type Sample
Determination start 2025-03-11 16:07:33 UTC-4
Method IC1-022125
Operator

Anions

Data source Conductivity detector 1 (Eco IC 1)
Channel Conductivity
Recording time 19.0 min
Integration Automatically
Column type Metrosep A Supp 19 - 150/4.0
Eluent composition not defined
Flow 0.700 mL/min
Maximum flow monitored yes
Pressure 11.71 MPa
Maximum pressure monitored yes
Temperature ---- °C

Anions

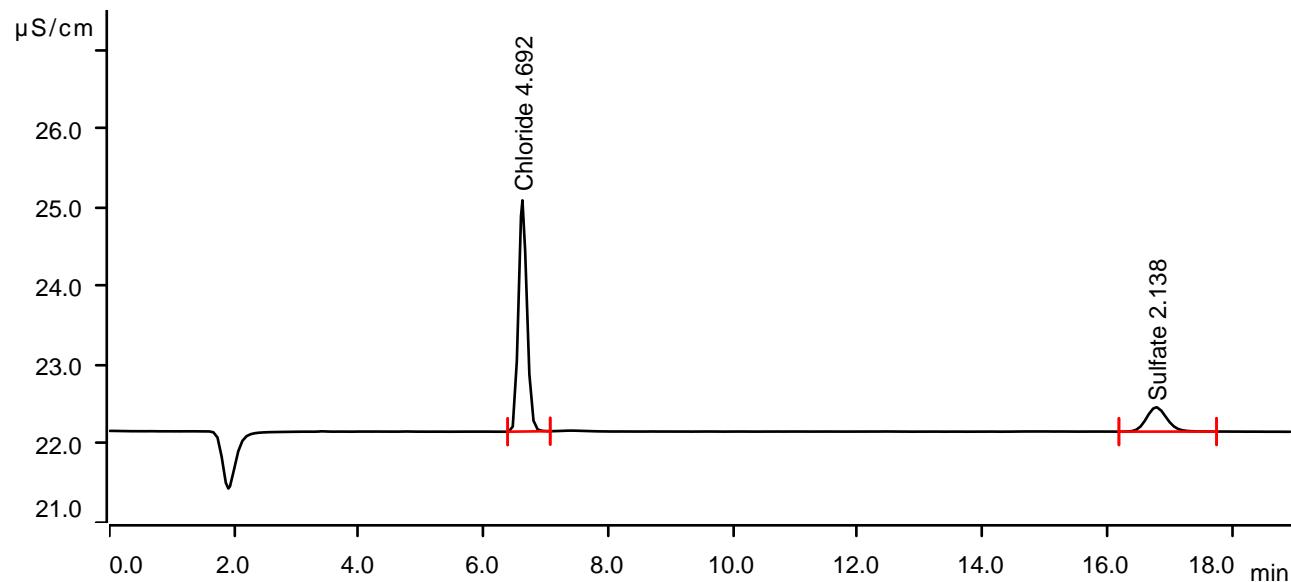
Peak number	Retention time min	Area ($\mu\text{S}/\text{cm}$) x min	Height $\mu\text{S}/\text{cm}$	Concentration ppm	Component name
1	3.417	0.0061	0.044	0.117	Fluoride
2	4.063	0.0775	0.385	invalid	
3	6.638	0.6330	4.030	6.422	Chloride
4	7.388	0.0107	0.026	invalid	
5	16.798	0.0338	0.086	1.020	Sulfate

Sample data

Ident Q1539-01DLX10
Sample type Sample
Determination start 2025-03-11 16:29:04 UTC-4
Method IC1-022125
Operator

Anions

Data source Conductivity detector 1 (Eco IC 1)
Channel Conductivity
Recording time 19.0 min
Integration Automatically
Column type Metrosep A Supp 19 - 150/4.0
Eluent composition not defined
Flow 0.700 mL/min
Maximum flow monitored yes
Pressure 11.43 MPa
Maximum pressure monitored yes
Temperature ---- °C

Anions

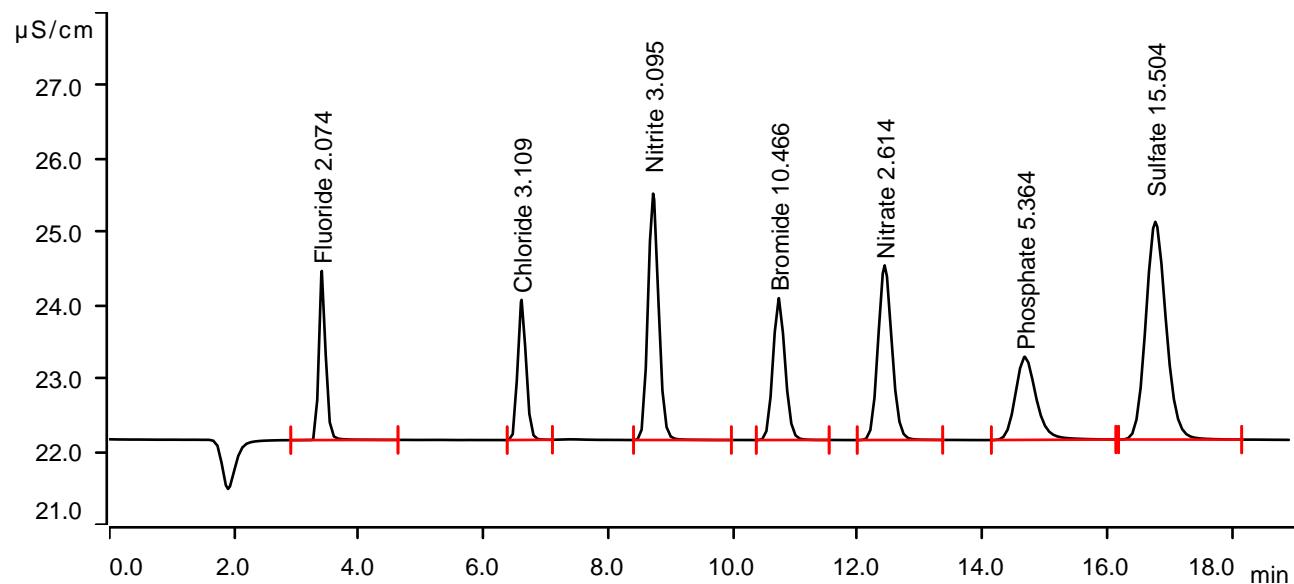
Peak number	Retention time min	Area (μS/cm) x min	Height μS/cm	Concentration ppm	Component name
1	6.623	0.4597	2.933	4.692	Chloride
2	16.783	0.1180	0.308	2.138	Sulfate

Sample data

Ident CCV
 Sample type Check standard 1
 Determination start 2025-03-11 16:50:29 UTC-4
 Method IC1-022125
 Operator

Anions

Data source Conductivity detector 1 (Eco IC 1)
 Channel Conductivity
 Recording time 19.0 min
 Integration Automatically
 Column type Metrosep A Supp 19 - 150/4.0
 Eluent composition not defined
 Flow 0.700 mL/min
 Maximum flow monitored yes
 Pressure 11.26 MPa
 Maximum pressure monitored yes
 Temperature ---- °C

Anions

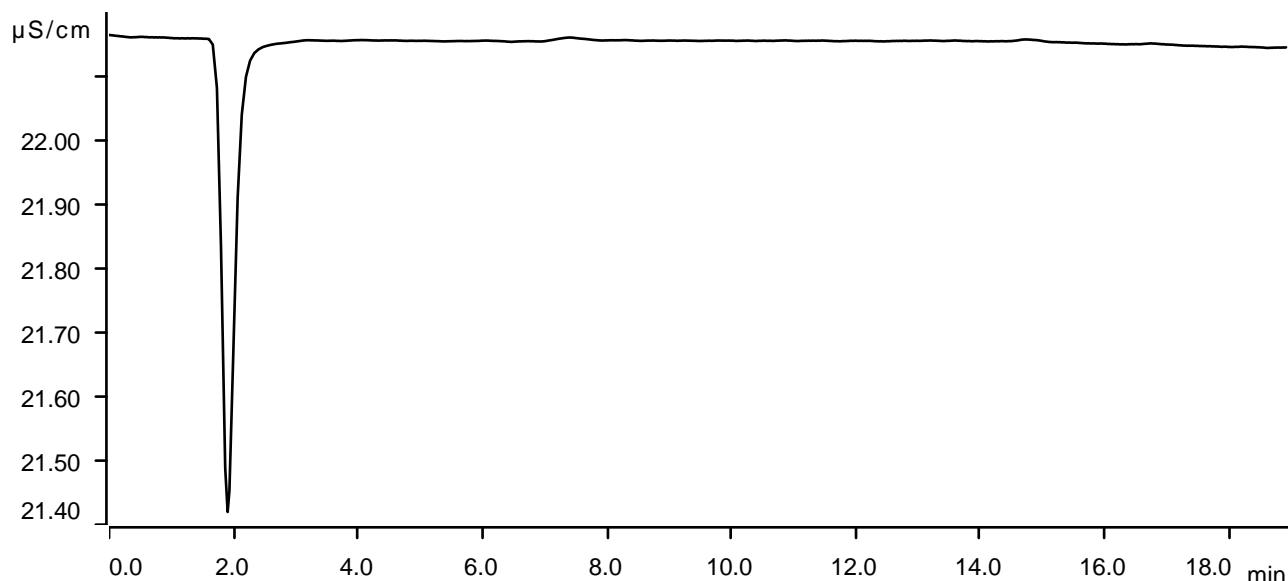
Peak number	Retention time min	Area (μS/cm) x min	Height μS/cm	Concentration ppm	Component name
1	3.407	0.2956	2.311	2.074	Fluoride
2	6.610	0.3010	1.914	3.109	Chloride
3	8.718	0.6696	3.367	3.095	Nitrite
4	10.732	0.4391	1.939	10.466	Bromide
5	12.430	0.6171	2.387	2.614	Nitrate
6	14.678	0.4417	1.136	5.364	Phosphate
7	16.770	1.1251	2.975	15.504	Sulfate

Sample data

Ident CCB
Sample type Sample
Determination start 2025-03-11 17:11:44 UTC-4
Method IC1-022125
Operator

Anions

Data source Conductivity detector 1 (Eco IC 1)
Channel Conductivity
Recording time 19.0 min
Integration Automatically
Column type Metrosep A Supp 19 - 150/4.0
Eluent composition not defined
Flow 0.700 mL/min
Maximum flow monitored yes
Pressure 11.26 MPa
Maximum pressure monitored yes
Temperature ---- °C

Anions

LB13501

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Test results

Aquakem 7.2AQ1

Page:

3/12/2025 16:35

Reviewed by : RM

Instrument ID : Konelab

Test: Ammonia-N

Sample Id	Result	Dil. 1 +	Response	Errors
ICV1	1.006	0.0	0.172	
ICB1	0.022	0.0	0.016	
CCV1	0.946	0.0	0.162	
CCB1	0.019	0.0	0.015	
RL CHECK	0.108	0.0	0.029	108% (50-150)
PB167063BL	0.013	0.0	0.014	03/12/2025
PB167063BS	0.980	0.0	0.168	
Q1505-11	3.069	0.0	0.499	RM
Q1519-01	0.827	0.0	0.143	Test limit high
Q1539-01	0.004	0.0	0.013	
Q1539-02	0.231	0.0	0.049	
Q1539-02DUP	0.227	0.0	0.048	
Q1539-02MS	1.169	0.0	0.198	
Q1539-02MSD	1.184	0.0	0.200	
CCV2	0.971	0.0	0.166	
CCB2	0.022	0.0	0.016	
Q1505-11DLX2	1.454	0.0	0.243	
CCV3	0.951	0.0	0.163	
CCB3	0.017	0.0	0.015	

N	19
Mean	0.696
SD	0.7680
CV%	110.39

Aquakem v. 7.2AQ1

Results from time period:

Wed Mar 12 13:43:22 2025

Wed Mar 12 16:29:03 2025

Sample Id	Sam/Ctr/cf	Test short r	Test type	Result	Result unit	Result date and time	Stat
0.0PPM	A		Ammonia-N P	0.0196	mg/l	3/12/2025 14:51:16	1
0.1PPM	A		Ammonia-N P	0.1113	mg/l	3/12/2025 14:51:17	2
0.2PPM	A		Ammonia-N P	0.1995	mg/l	3/12/2025 14:51:18	3
0.4PPM	A		Ammonia-N P	0.3937	mg/l	3/12/2025 14:51:19	4
1.0PPM	A		Ammonia-N P	0.9734	mg/l	3/12/2025 14:51:20	5
1.3PPM	A		Ammonia-N P	1.2989	mg/l	3/12/2025 14:51:21	6
2.0PPM	A		Ammonia-N P	2.0371	mg/l	3/12/2025 14:51:22	7
ICV1	S		Ammonia-N P	1.0064	mg/l	3/12/2025 15:25:16	8
ICB1	S		Ammonia-N P	0.0224	mg/l	3/12/2025 15:25:19	9
CCV1	S		Ammonia-N P	0.9457	mg/l	3/12/2025 15:25:21	10
CCB1	S		Ammonia-N P	0.0187	mg/l	3/12/2025 15:25:23	11
RL CHECK	S		Ammonia-N P	0.1082	mg/l	3/12/2025 15:25:24	12
PB167063BL	S		Ammonia-N P	0.0134	mg/l	3/12/2025 15:25:27	13
PB167063BS	S		Ammonia-N P	0.98	mg/l	3/12/2025 15:36:01	
Q1505-11	S		Ammonia-N P	3.0686	mg/l	3/12/2025 15:36:02	
Q1519-01	S		Ammonia-N P	0.8268	mg/l	3/12/2025 15:46:44	
Q1539-01	S		Ammonia-N P	0.0037	mg/l	3/12/2025 15:46:50	
Q1539-02	S		Ammonia-N P	0.2312	mg/l	3/12/2025 15:46:52	
Q1539-02DUP	S		Ammonia-N P	0.2274	mg/l	3/12/2025 15:46:53	
Q1539-02MS	S		Ammonia-N P	1.169	mg/l	3/12/2025 15:55:42	
Q1539-02MSD	S		Ammonia-N P	1.1836	mg/l	3/12/2025 15:55:43	
CCV2	S		Ammonia-N P	0.9708	mg/l	3/12/2025 15:55:44	
CCB2	S		Ammonia-N P	0.0218	mg/l	3/12/2025 15:55:48	
Q1505-11DLX2	S		Ammonia-N P	1.4544	mg/l	3/12/2025 16:25:51	
CCV3	S		Ammonia-N P	0.951	mg/l	3/12/2025 16:25:57	
CCB3	S		Ammonia-N P	0.0165	mg/l	3/12/2025 16:29:03	

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Calibration results

Aquakem 7.2AQ1

Page: 1

CHEMTECH CONSULTING GROUP INC
284 Sheffield Street, Mountainside, NJ 07092

3/12/2025 14:51

Reviewed by : RM Instrument ID : Konelab

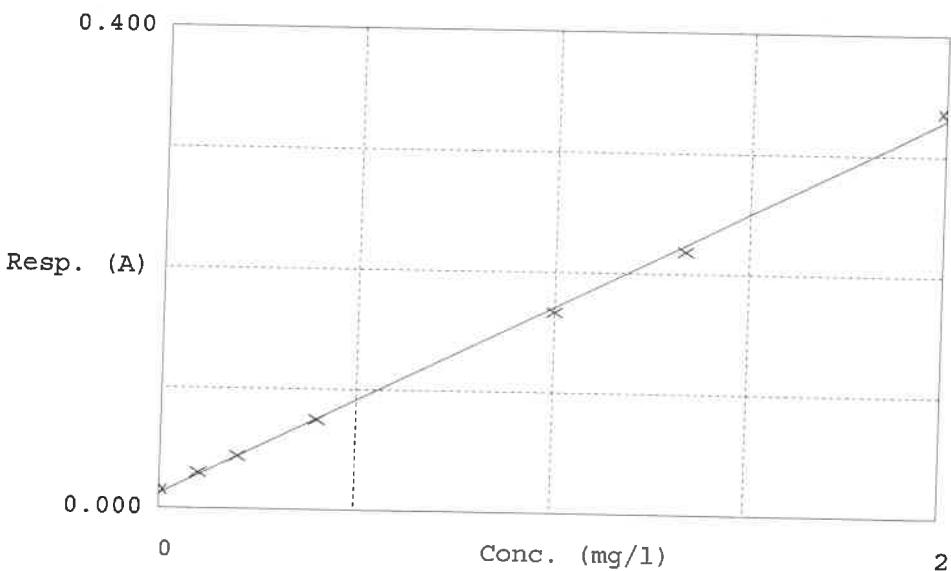
Test Ammonia-N

Accepted 3/12/2025 14:51

Factor 6.3
Bias 0.012

Coeff. of det. 0.998866

Errors



Calibrator	Response	Calc. con.	Conc.	Re Errors
1 0.00PPM	0.015	0.0196	0.0000	-
2 NH3-2PPM	0.030	0.1113	0.1000	11.3
3 NH3-2PPM	0.044	0.1995	0.2000	-0.3
4 NH3-2PPM	0.075	0.3937	0.4000	-1.6
5 NH3-2PPM	0.167	0.9734	1.0000	-2.7
6 NH3-2PPM	0.218	1.2989	1.3333	-0.1
7 NH3-2PPM	0.336	2.0371	2.0000	1.9

03/12/2025
RM



Extraction and Analytical Summary Report

Analysis Method: 1664A
Test: Oil and Grease
Run Number: LB135027
Analysis Date: 03/14/2025
BalanceID: WC SC-6
OvenID: EXT OVEN-3

ANALYST: jignesh
REVIEWED BY: Iwona
Extraction Date: 03/14/2025
Extraction IN Time: 08:30
Extraction OUT Time: 09:20
Thermometer ID: EXT OVEN#3

Dish #	Lab ID	Client ID	Matrix	pH	Sample Vol (ml)	Final Volume (ml)	Empty Dish Weight (g)	Final Empty Dish Weight(g)	Silica Gel Weight(g)	Weight After Drying(g)	Final Weight After Drying(g)	Change Weight (g)	Result in ppm
1	LB135027BL	LB135027BL	WATER	1.3	1000	100	2.4893	2.4893	0	2.4894	2.4894	0.0001	0.1
2	LB135027BS	LB135027BS	WATER	1.3	1000	100	2.7403	2.7403	0	2.7572	2.7572	0.0169	16.9
3	Q1505-17	PT-ORG1L-WP	WATER	1.3	880	100	3.0095	3.0095	0	3.0277	3.0277	0.0182	20.68
4	Q1539-01	TAPIAL3-MW03D-031025-0	WATER	1.3	1000	100	3.0349	3.0349	0	3.0355	3.0355	0.0006	0.6
5	Q1539-02	TAPFTA-MW01I-031025-00	WATER	1.3	1000	100	3.1041	3.1041	0	3.1045	3.1045	0.0004	0.4
6	Q1567-01	EFFLUENT	WATER	1.3	1000	100	3.0634	3.0634	0	3.0761	3.0761	0.0127	12.7
7	Q1567-02	Q1567-01MS	WATER	1.6	1000	100	2.8963	2.8963	0	2.9292	2.9292	0.0329	32.9
8	Q1567-03	Q1567-01MSD	WATER	1.6	1000	100	3.0147	3.0147	0	3.0476	3.0476	0.0329	32.9



QC Batch# LB135027

Test: Oil and Grease

Analysis Date: 03/14/2025

Chemicals Used:

Chemical Name	Chemical Lot #
HEXANE	W3177
pH Paper 0-14	M6069
Sodium Sulfate	EP2593
1:1 HCL	WP110826
Silica Gel	NA
Sand	NA

Standards Used:

Standard Name	Amount Used	Standard Lot #
LCSW	2.5 ML	WP100827
LCSWD	NA	NA
MS/MSD	2.5 ML	WP100828

BALANCE CALIBRATION / OVEN Dessicator Data

Analytical Balance ID # : WC SC-6Before Analysis

0.0020 gram Balance: 0.0019 (0.0018-0.0022) In OVEN TEMP1 : 71 °C Dessicator Time In1 : 11:26
1.0000 gram Balance: 1.0004 (0.9950-1.0050) In Time1: 10:00
Bal Check Time: 08:40 Out OVEN TEMP1: 71 °C Dessicator Time Out1: 12:00
Out Time1: 11:25

After Analysis

0.0020 gram Balance: 0.0021 (0.0018-0.0022) In OVEN TEMP2 : 70 °C Dessicator Time In2 : 13:01
1.0000 gram Balance: 1.0003 (0.9950-1.0050) In Time2: 12:30
Bal Check Time: 13:40 Out OVEN TEMP2: 71 °C Dessicator Time Out2: 13:35
Out Time2: 13:00

WORKLIST(Hardcopy Internal Chain)

WorkList Name :	oil & grease q1505	WorkList ID :	188266	Department :	Wet-Chemistry	Date :	03-14-2025 08:15:48	
Sample	Customer Sample	Matrix	Test	Preservative	Customer	Raw Sample Storage Location	Collect Date	Method
Q1505-17	PT-ORG1L-WP	Water	Oil and Grease	Conc H ₂ SO ₄ to pH < 2	ALLI03	QA Of	03/03/2025	1664A
Q1539-01	TAPIAL3-MW03D-031025-00-T	Water	Oil and Grease	Conc H ₂ SO ₄ to pH < 2	WEST04	I31	03/10/2025	1664A
Q1539-02	TAPFTA-MW01I-031025-00-T2	Water	Oil and Grease	Conc H ₂ SO ₄ to pH < 2	WEST04	I31	03/10/2025	1664A
Q1567-01	EFFLUENT	Water	Oil and Grease	Conc H ₂ SO ₄ to pH < 2	HOLL01	F11	03/13/2025	1664A
Q1567-02	Q1567-01MS	Water	Oil and Grease	Conc H ₂ SO ₄ to pH < 2	HOLL01	F11	03/13/2025	1664A
Q1567-03	Q1567-01MSD	Water	Oil and Grease	Conc H ₂ SO ₄ to pH < 2	HOLL01	F11	03/13/2025	1664A

03/14/25 08:45
 Date/Time
 Raw Sample Received by: Iwona
 Raw Sample Relinquished by: Iwona

03/14/25
 Date/Time
 Raw Sample Received by:
 Raw Sample Relinquished by:

SOP ID : MSM4500-NH3 B,G-Ammonia-17
SDG No : N/A **Start Digest Date:** 03/12/2025 **Time :** 10:05 **Temp :** 150 °C
Matrix : WATER **End Digest Date:** 03/12/2025 **Time :** 11:05 **Temp :** 158 °C
Pipette ID : WC
Balance ID : N/A
Hood ID : HOOD#2 **Digestion tube ID :** M5595 **Block Thermometer ID :** WC CYANIDE
Block ID : WC-DIST-BLOCK-1 **Filter paper ID :** N/A **Prep Technician Signature:** RM
Weigh By : N/A **pH Meter ID :** N/A **Supervisor Signature:** JZ

Standardized Name	MLS USED	STD REF. # FROM LOG
LCSW	1.0ML	WP111947
MS/MSD SPIKE SOL.	1.0ML	WP111946
PBW	50.0ML	W3112
RL CHECK	N/A	AS PER PB167083
N/A	N/A	N/A

Chemical Used	ML/SAMPLE USED	Lot Number
BORATE BUFFER	2.5ML	WP111325
NAOH 6N	0.5-2.0ML	WP111318
H2SO4 0.04N	5.0ML	WP110335
pH strip-Ammonia	N/A	W3133
KI-starch paper	N/A	W3155
N/A	N/A	N/A

Extraction Conformance/Non-Conformance Comments:

ALL GLASSWARE ARE STEAMED OUT AND THERE WERE NO TRACE OF AMMONIA USING NESLER REAGENT
WP111604,

Date / Time	Prepped Sample Relinquished By/Location	Received By/Location
03/12/2025 11:15	RM (CWL)	RM (CWL)
Q1539-GENCHEM	Preparation Group	Analysis Group

Lab Sample ID	Client Sample ID	Initial Vol (ml)	Final Vol (ml)	pH	Sulfide	Oxidizing	Nitrate/Nitrite	Comment	Prep Pos
PB167063BL	PBW063	50	50	<2	N/A	Negative	N/A	AFTER ADDING 6N NAOH PH IS 9.5	N/A
PB167063BS	LCS063	50	50	<2	N/A	Negative	N/A	AFTER ADDING 6N NAOH PH IS 9.5	N/A
Q1505-11	PT-NUT1-WP	50	50	<2	N/A	Negative	N/A	AFTER ADDING 6N NAOH PH IS 9.5	N/A
Q1519-01	WATER TREATMENT DISCHARGE	50	50	<2	N/A	Negative	N/A	AFTER ADDING 6N NAOH PH IS 9.5	N/A
Q1539-01	TAPIAL3-MW03D-031025-00-T1	50	50	<2	N/A	Negative	N/A	AFTER ADDING 6N NAOH PH IS 9.5	N/A
Q1539-02	TAPFTA-MW01I-031025-00-T2	50	50	<2	N/A	Negative	N/A	AFTER ADDING 6N NAOH PH IS 9.5	N/A
Q1539-02DUP	TAPFTA-MW01I-031025-00-T2DUP	50	50	<2	N/A	Negative	N/A	AFTER ADDING 6N NAOH PH IS 9.5	N/A
Q1539-02MS	TAPFTA-MW01I-031025-00-T2MS	50	50	<2	N/A	Negative	N/A	AFTER ADDING 6N NAOH PH IS 9.5	N/A
Q1539-02MSD	TAPFTA-MW01I-031025-00-T2MSD	50	50	<2	N/A	Negative	N/A	AFTER ADDING 6N NAOH PH IS 9.5	N/A

Instrument ID: SPECTROPHOTOMETER-1

Daily Analysis Runlog For Sequence/QCBatch ID # LB134983

Review By	rubina	Review On	3/11/2025 2:26:19 PM
Supervise By	Iwona	Supervise On	3/11/2025 3:44:37 PM
SubDirectory	LB134983	Test	Hexavalent Chromium
STD. NAME	STD REF.#		
ICAL Standard	N/A		
ICV Standard	N/A		
CCV Standard	N/A		
ICSA Standard	N/A		
CRI Standard	N/A		
LCS Standard	N/A		
Chk Standard	WP112250,WP112249,WP112247,WP112246,WP112185,WP110380,WP112248,WP112253,WP112251,WP112252		

Sr#	SampleId	ClientID	QcType	Date	Comment	Operator	Status
1	CAL1	CAL1	CAL	03/11/25 11:15		rubina	OK
2	CAL2	CAL2	CAL	03/11/25 11:16		rubina	OK
3	CAL3	CAL3	CAL	03/11/25 11:17		rubina	OK
4	CAL4	CAL4	CAL	03/11/25 11:18		rubina	OK
5	CAL5	CAL5	CAL	03/11/25 11:19		rubina	OK
6	CAL6	CAL6	CAL	03/11/25 11:20		rubina	OK
7	CAL7	CAL7	CAL	03/11/25 11:21		rubina	OK
8	ICV	ICV	ICV	03/11/25 11:22		rubina	OK
9	ICB	ICB	ICB	03/11/25 11:23		rubina	OK
10	CCV1	CCV1	CCV	03/11/25 11:24		rubina	OK
11	CCB1	CCB1	CCB	03/11/25 11:25		rubina	OK
12	RL Check	RL Check	SAM	03/11/25 11:26		rubina	OK
13	lb134983BL	lb134983BL	MB	03/11/25 11:27		rubina	OK
14	lb134983BS	lb134983BS	LCS	03/11/25 11:28		rubina	OK
15	Q1539-01	TAPIAL3-MW03D-031	SAM	03/11/25 11:29		rubina	OK
16	Q1539-02	TAPFTA-MW01I-0310	SAM	03/11/25 11:30		rubina	OK
17	Q1539-02DUP	TAPFTA-MW01I-0310	DUP	03/11/25 11:31		rubina	OK
18	Q1539-02MS	TAPFTA-MW01I-0310	MS	03/11/25 11:32	1ML WP111315+99.0ML SAMPLE	rubina	OK

Instrument ID: SPECTROPHOTOMETER-1

Daily Analysis Runlog For Sequence/QCBatch ID # LB134983

Review By	rubina	Review On	3/11/2025 2:26:19 PM
Supervise By	Iwona	Supervise On	3/11/2025 3:44:37 PM
SubDirectory	LB134983	Test	Hexavalent Chromium
STD. NAME	STD REF.#		
ICAL Standard	N/A		
ICV Standard	N/A		
CCV Standard	N/A		
ICSA Standard	N/A		
CRI Standard	N/A		
LCS Standard	N/A		
Chk Standard	WP112250,WP112249,WP112247,WP112246,WP112185,WP110380,WP112248,WP112253,WP112251,WP112252		

19	Q1539-02MSD	TAPFTA-MW01I-0310	MSD	03/11/25 11:33	1ML WP111315+99.0ML SAMPLE	rubina	OK
20	CCV2	CCV2	CCV	03/11/25 11:34		rubina	OK
21	CCB2	CCB2	CCB	03/11/25 11:35		rubina	OK

Instrument ID: TOC

Daily Analysis Runlog For Sequence/QCBatch ID # LB134995

Review By	Niha	Review On	3/13/2025 1:19:56 PM
Supervise By	Iwona	Supervise On	3/13/2025 1:51:36 PM
SubDirectory	LB134995	Test	TOC
STD. NAME	STD REF.#		
ICAL Standard	WP112286,WP112287,WP112288,WP112289,WP112290,WP112291,WP112292		
ICV Standard	WP112293		
CCV Standard	WP112291		
ICSA Standard	N/A		
CRI Standard	N/A		
LCS Standard	WP112293		
Chk Standard	WP112294,WP112295,WP109953		

Sr#	SampleId	ClientID	QcType	Date	Comment	Operator	Status
1	0.0PPM	0.0PPM	CAL1	03/11/25 10:00		NF IZ	OK
2	0.5PPM	0.5PPM	CAL2	03/11/25 10:23		NF IZ	OK
3	1.0PPM	1.0PPM	CAL3	03/11/25 10:46		NF IZ	OK
4	2.0PPM	2.0PPM	CAL4	03/11/25 11:10		NF IZ	OK
5	5.0PPM	5.0PPM	CAL5	03/11/25 11:33		NF IZ	OK
6	10.0PPM	10.0PPM	CAL6	03/11/25 11:58		NF IZ	OK
7	20.0PPM	20.0PPM	CAL7	03/11/25 12:24		NF IZ	OK
8	ICV1	ICV1	ICV	03/11/25 12:48		NF IZ	OK
9	ICB1	ICB1	ICB	03/11/25 13:11		NF IZ	OK
10	IC-20	IC-20	SAM	03/11/25 13:34		NF IZ	OK
11	IC-R	IC-R	SAM	03/11/25 13:58		NF IZ	OK
12	CCV1	CCV1	CCV	03/12/25 08:29		NF IZ	OK
13	CCB1	CCB1	CCB	03/12/25 08:52		NF IZ	OK
14	LB134995BLW	LB134995BLW	MB	03/12/25 09:15		NF IZ	OK
15	LB134995BSW	LB134995BSW	LCS	03/12/25 09:39		NF IZ	OK
16	Q1539-01	TAPIAL3-MW03D-031	SAM	03/12/25 12:23		NF IZ	OK
17	Q1539-01MS	TAPIAL3-MW03D-031	MS	03/12/25 12:48	2.0ml WP112284+38.0ml Sample	NF IZ	OK
18	Q1539-01MSD	TAPIAL3-MW03D-031	MSD	03/12/25 13:13	2.0ml WP112284+38.0ml Sample	NF IZ	OK

Instrument ID: TOC

Daily Analysis Runlog For Sequence/QCBatch ID # LB134995

Review By	Niha	Review On	3/13/2025 1:19:56 PM
Supervise By	Iwona	Supervise On	3/13/2025 1:51:36 PM
SubDirectory	LB134995	Test	TOC
STD. NAME	STD REF.#		
ICAL Standard	WP112286,WP112287,WP112288,WP112289,WP112290,WP112291,WP112292		
ICV Standard	WP112293		
CCV Standard	WP112291		
ICSA Standard	N/A		
CRI Standard	N/A		
LCS Standard	WP112293		
Chk Standard	WP112294,WP112295,WP109953		

19	Q1539-02	TAPFTA-MW01I-0310	SAM	03/12/25 14:08		NF IZ	OK
20	CCV2	CCV2	CCV	03/12/25 14:33		NF IZ	OK
21	CCB2	CCB2	CCB	03/12/25 14:56		NF IZ	OK

Instrument ID: IC-2

Daily Analysis Runlog For Sequence/QCBatch ID # LB135005

Review By	Niha	Review On	3/13/2025 1:48:08 PM
Supervise By	Iwona	Supervise On	3/13/2025 1:56:00 PM
SubDirectory	LB135005	Test	Anions
STD. NAME	STD REF.#		
ICAL Standard	WP112016,WP112017,WP112018,WP112019,WP112020,WP112021,WP112022		
ICV Standard	WP112023		
CCV Standard	WP112265		
ICSA Standard	N/A		
CRI Standard	N/A		
LCS Standard	WP112266		
Chk Standard	WP112024,WP112025		

Sr#	SampleId	ClientID	QcType	Date	Comment	Operator	Status
1	STD1	STD1	CAL1	02/21/25 11:05	All standards, samples, and	NF/IZ	OK
2	STD2	STD2	CAL2	02/21/25 11:26	QC are filtered through	NF/IZ	OK
3	STD3	STD3	CAL3	02/21/25 11:48	0.45um, filter lot W3160	NF/IZ	OK
4	STD4	STD4	CAL4	02/21/25 12:09		NF/IZ	OK
5	STD5	STD5	CAL5	02/21/25 12:31		NF/IZ	OK
6	STD6	STD6	CAL6	02/21/25 12:52		NF/IZ	OK
7	STD7	STD7	CAL7	02/21/25 13:13		NF/IZ	OK
8	ICV1	ICV1	ICV	02/21/25 13:35		NF/IZ	OK
9	ICB1	ICB1	ICB	02/21/25 13:56		NF/IZ	OK
10	CCV1	CCV1	CCV	03/11/25 10:41		NF/IZ	OK
11	CCB1	CCB1	CCB	03/11/25 11:02		NF/IZ	OK
12	LB135005BLW	LB135005BLW	MB	03/11/25 11:24		NF/IZ	OK
13	LB135005BSW	LB135005BSW	LCS	03/11/25 11:45		NF/IZ	OK
14	Q1505-06	PT-MIN1-WP	SAM	03/11/25 12:10	CL,SO4 high	NF/IZ	Dilution
15	Q1505-12	PT-NUT1-WP	SAM	03/11/25 12:32	NO3 high	NF/IZ	Dilution
16	Q1505-16	PT-NUT3-WP	SAM	03/11/25 12:53		NF/IZ	OK
17	Q1505-06DL	PT-MIN1-WPDL	SAM	03/11/25 13:15	10X for CL,SO4, Still CL high	NF/IZ	Dilution
18	Q1505-06DL2	PT-MIN1-WPDL2	SAM	03/11/25 13:36	50X for CL	NF/IZ	Confirms

Instrument ID: IC-2

Daily Analysis Runlog For Sequence/QCBatch ID # LB135005

Review By	Niha	Review On	3/13/2025 1:48:08 PM
Supervise By	Iwona	Supervise On	3/13/2025 1:56:00 PM
SubDirectory	LB135005	Test	Anions
STD. NAME	STD REF.#		
ICAL Standard	WP112016,WP112017,WP112018,WP112019,WP112020,WP112021,WP112022		
ICV Standard	WP112023		
CCV Standard	WP112265		
ICSA Standard	N/A		
CRI Standard	N/A		
LCS Standard	WP112266		
Chk Standard	WP112024,WP112025		

19	Q1505-12DL	PT-NUT1-WPDL	SAM	03/11/25 13:58	10X for NO3	NF/IZ	Confirms
20	CCV2	CCV2	CCV	03/11/25 14:19		NF/IZ	OK
21	CCB2	CCB2	CCB	03/11/25 14:41		NF/IZ	OK
22	Q1539-01	TAPIAL3-MW03D-031	SAM	03/11/25 15:02	CL high	NF/IZ	Dilution
23	Q1539-01MS	TAPIAL3-MW03D-031	MS	03/11/25 15:24	Water - 9.5ml of sample, 0.5mL W3092	NF/IZ	OK
24	Q1539-01MSD	TAPIAL3-MW03D-031	MSD	03/11/25 15:46	Water - 9.5ml of sample, 0.5mL W3092	NF/IZ	OK
25	Q1539-02	TAPFTA-MW01I-0310	SAM	03/11/25 16:07		NF/IZ	OK
26	Q1539-01DL	TAPIAL3-MW03D-031	SAM	03/11/25 16:29	10X for CL	NF/IZ	Confirms
27	CCV3	CCV3	CCV	03/11/25 16:50		NF/IZ	OK
28	CCB3	CCB3	CCB	03/11/25 17:11		NF/IZ	OK

Instrument ID: KONELAB

Daily Analysis Runlog For Sequence/QCBatch ID # LB135012

Review By	rubina	Review On	3/13/2025 1:18:04 PM
Supervise By	Iwona	Supervise On	3/13/2025 1:50:26 PM
SubDirectory	LB135012	Test	Ammonia
STD. NAME	STD REF.#		
ICAL Standard	WP112278		
ICV Standard	WP112280		
CCV Standard	WP112279		
ICSA Standard	N/A		
CRI Standard	N/A		
LCS Standard	WP111947		
Chk Standard	WP112163,WP111745,WP111385,WP111660		

Sr#	SampleId	ClientID	QcType	Date	Comment	Operator	Status
1	0.0PPM	0.0PPM	CAL1	03/12/25 14:51		rubina	OK
2	0.1PPM	0.1PPM	CAL2	03/12/25 14:51		rubina	OK
3	0.2PPM	0.2PPM	CAL3	03/12/25 14:51		rubina	OK
4	0.4PPM	0.4PPM	CAL4	03/12/25 14:51		rubina	OK
5	1.0PPM	1.0PPM	CAL5	03/12/25 14:51		rubina	OK
6	1.3PPM	1.3PPM	CAL6	03/12/25 14:51		rubina	OK
7	2.0PPM	2.0PPM	CAL7	03/12/25 14:51		rubina	OK
8	ICV1	ICV1	ICV	03/12/25 15:25		rubina	OK
9	ICB1	ICB1	ICB	03/12/25 15:25		rubina	OK
10	CCV1	CCV1	CCV	03/12/25 15:25		rubina	OK
11	CCB1	CCB1	CCB	03/12/25 15:25		rubina	OK
12	RL	RL	SAM	03/12/25 15:25		rubina	OK
13	PB167063BL	PB167063BL	MB	03/12/25 15:25		rubina	OK
14	PB167063BS	PB167063BS	LCS	03/12/25 15:36		rubina	OK
15	Q1505-11	PT-NUT1-WP	SAM	03/12/25 15:36	High	rubina	Dilution
16	Q1519-01	WATER TREATMENT	SAM	03/12/25 15:46		rubina	OK
17	Q1539-01	TAPIAL3-MW03D-031	SAM	03/12/25 15:46		rubina	OK
18	Q1539-02	TAPFTA-MW01I-0310	SAM	03/12/25 15:46		rubina	OK

Instrument ID: KONELAB

Daily Analysis Runlog For Sequence/QCBatch ID # LB135012

Review By	rubina	Review On	3/13/2025 1:18:04 PM
Supervise By	Iwona	Supervise On	3/13/2025 1:50:26 PM
SubDirectory	LB135012	Test	Ammonia
STD. NAME	STD REF.#		
ICAL Standard	WP112278		
ICV Standard	WP112280		
CCV Standard	WP112279		
ICSA Standard	N/A		
CRI Standard	N/A		
LCS Standard	WP111947		
Chk Standard	WP112163,WP111745,WP111385,WP111660		

19	Q1539-02DUP	TAPFTA-MW01I-0310	DUP	03/12/25 15:46		rubina	OK
20	Q1539-02MS	TAPFTA-MW01I-0310	MS	03/12/25 15:55		rubina	OK
21	Q1539-02MSD	TAPFTA-MW01I-0310	MSD	03/12/25 15:55		rubina	OK
22	CCV2	CCV2	CCV	03/12/25 15:55		rubina	OK
23	CCB2	CCB2	CCB	03/12/25 15:55		rubina	OK
24	Q1505-11DL	PT-NUT1-WPDL	SAM	03/12/25 16:25	Report 2X	rubina	Confirms
25	CCV3	CCV3	CCV	03/12/25 16:25		rubina	OK
26	CCB3	CCB3	CCB	03/12/25 16:29		rubina	OK

Instrument ID: WC SC-3

Daily Analysis Runlog For Sequence/QCBatch ID # LB135027

Review By	jignesh	Review On	3/14/2025 10:47:19 AM
Supervise By	Iwona	Supervise On	3/14/2025 1:47:18 PM
SubDirectory	LB135027	Test	Oil and Grease
STD. NAME	STD REF.#		
ICAL Standard	N/A		
ICV Standard	N/A		
CCV Standard	N/A		
ICSA Standard	N/A		
CRI Standard	N/A		
LCS Standard	N/A		
Chk Standard	W3177,M6069,EP2593,WP110826,NA,NA,WP100827,NA,WP100828		

Sr#	SampleId	ClientID	QcType	Date	Comment	Operator	Status
1	LB135027BL	LB135027BL	MB	03/14/25 10:00		jignesh	OK
2	LB135027BS	LB135027BS	LCS	03/14/25 10:00		jignesh	OK
3	Q1505-17	PT-ORG1L-WP	SAM	03/14/25 10:00		jignesh	OK
4	Q1539-01	TAPIAL3-MW03D-031	SAM	03/14/25 10:00		jignesh	OK
5	Q1539-02	TAPFTA-MW01I-0310	SAM	03/14/25 10:00		jignesh	OK
6	Q1567-01	EFFLUENT	SAM	03/14/25 10:00		jignesh	OK
7	Q1567-02	Q1567-01MS	MS	03/14/25 10:00		jignesh	OK
8	Q1567-03	Q1567-01MSD	MSD	03/14/25 10:00		jignesh	OK

Prep Standard - Chemical Standard Summary

Order ID : Q1539
Test : Ammonia,Anions Group5,Hexavalent Chromium,Oil and Grease,TOC

Prepbatch ID : PB167063,
Sequence ID/Qc Batch ID: LB134983,LB134995,LB135005,LB135012,LB135027,

Standard ID :
EP2593,WP100827,WP100828,WP109953,WP110149,WP110150,WP110259,WP110335,WP110380,WP110767,WP110826,WP111315,WP111316,WP111317,WP111318,WP111325,WP111385,WP111436,WP111437,WP111449,WP111450,WP111451,WP111452,WP111660,WP111745,WP111946,WP111947,WP112016,WP112017,WP112018,WP112019,WP112020,WP112021,WP112022,WP112023,WP112024,WP112025,WP112163,WP112185,WP112245,WP112246,WP112247,WP112248,WP112249,WP112250,WP112251,WP112252,WP112253,WP112265,WP112266,WP112278,WP112279,WP112280,WP112284,WP112285,WP112286,WP112287,WP112288,WP112289,WP112290,WP112291,WP112292,WP112293,WP112294,WP112295,WP99896,

Chemical ID :
AS PER
PB167083,E3551,E3876,M5501,M5673,M6041,M6069,M6121,W1992,W1993,W2606,W2647,W2651,W2652,W2666,W2700,W2783,W2784,W2800,W2845,W2858,W2860,W2898,W2979,W3016,W3017,W3020,W3022,W3058,W3063,W3112,W3113,W3132,W3133,W3155,W3167,W3169,W3174,W3177,W3180,

Extractions STANDARD PREPARATION LOG

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
3923	Baked Sodium Sulfate	EP2593	03/07/2025	07/01/2025	RUPESHKUMA R SHAH	Extraction_SC ALE_2 (EX-SC-2)	None	Riteshkumar Patel 03/07/2025

FROM 4000.00000gram of E3551 = Final Quantity: 4000.000 gram

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
114	hexavalent chromium color reagent	WP100827	02/02/2023	02/09/2023	Rubina Mughal	WETCHEM_SCALE_5 (WC SC-5)	None	Iwona Zarych 02/02/2023

FROM 0.25000gram of W2979 + 50.00000ml of W2783 = Final Quantity: 50.000 ml

Wet Chemistry STANDARD PREPARATION LOG

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
3456	Cyanide Intermediate Working Std, 5PPM	WP100828	02/02/2023	02/03/2023	Iwona Zarych	None	WETCHEM_PIPETTE_3 (WC)	Sohil Jodhani 02/07/2023

FROM 0.25000ml of W2898 + 49.75000ml of WP99896 = Final Quantity: 50.000 ml

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
613	Phosphoric acid reagent	WP109953	09/25/2024	03/25/2025	Niha Farheen Shaik	None	None	Iwona Zarych 09/27/2024

FROM 150.00000ml of W3112 + 50.00000ml of W2860 = Final Quantity: 200.000 ml

Wet Chemistry STANDARD PREPARATION LOG

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
153	Ammonia Stock Std. (1000 ppm)	WP110149	10/11/2024	04/08/2025	Rubina Mughal	WETCHEM_SCALE_5 (WC SC-5)	None	Iwona Zarych 10/14/2024

FROM 3.81900gram of W1993 + 996.18100ml of W3112 = Final Quantity: 1000.000 ml

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
1895	Ammonia Stock Std, 1000PPM-SS	WP110150	10/11/2024	04/08/2025	Rubina Mughal	WETCHEM_SCALE_5 (WC SC-5)	None	Iwona Zarych 10/14/2024

FROM 3.81900gram of W1992 + 996.18100ml of W3112 = Final Quantity: 1000.000 ml

Wet Chemistry STANDARD PREPARATION LOG

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
4035	IC ELUENT CONCENTRATE FOR IC-1	WP110259	10/16/2024	04/16/2025	Iwona Zarych	WETCHEM_SCALE_5 (WC SC-5)	None	Jignesh Parikh 10/17/2024

FROM 2.10000gram of W2647 + 84.75000gram of W3058 + 913.15000ml of W3112 = Final Quantity: 1000.000 ml

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
1597	0.04 N H2SO4	WP110335	10/22/2024	04/22/2025	Rubina Mughal	None	WETCHEM_PIPETTE_3 (WC)	Iwona Zarych 10/22/2024

FROM 1.00000ml of M5673 + 999.00000ml of W3112 = Final Quantity: 1000.000 ml

Wet Chemistry STANDARD PREPARATION LOG

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
126	5N sulfuric acid	WP110380	10/24/2024	04/24/2025	Rubina Mughal	None	None	Iwona Zarych 10/24/2024

FROM 140.00000ml of M5673 + 860.00000ml of W3112 = Final Quantity: 1.000 L

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
3886	Inorganic carbon stock solution, 1000ppm	WP110767	11/20/2024	05/20/2025	Niha Farheen Shaik	WETCHEM_SCALE_5 (WC SC-5)	None	Mohan Bera 11/21/2024

FROM 3.49700gram of W2647 + 4.41220gram of W3058 + 993.00000ml of W3112 = Final Quantity: 1000.000 ml

Wet Chemistry STANDARD PREPARATION LOG

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
229	1:1 HCL	WP110826	11/22/2024	05/13/2025	Jignesh Parikh	None	None	Iwona Zarych 11/22/2024

FROM 500.00000ml of M6121 + 500.00000ml of W3112 = Final Quantity: 1.000 L

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
1993	HEXAVALENTCHROMIUM STOCK STD 1, 50PPM	WP111315	01/09/2025	07/09/2025	Rubina Mughal	WETCHEM_SCALE_5 (WC SC-5)	None	Iwona Zarych 01/09/2025

FROM 0.14140gram of W2651 + 1000.00000ml of W3112 = Final Quantity: 1000.000 ml

Wet Chemistry STANDARD PREPARATION LOG

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
1994	HEXAVALENTCHROMIUM STOCK STD 2, 50PPM	WP111316	01/09/2025	07/09/2025	Rubina Mughal	WETCHEM_SCALE_5 (WC SC-5)	None	Iwona Zarych 01/09/2025

FROM 0.14140gram of W2652 + 1000.00000ml of W3112 = Final Quantity: 1000.000 ml

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
1796	NaOH, 0.1N	WP111317	01/09/2025	07/09/2025	Rubina Mughal	WETCHEM_SCALE_7 (WC SC-6)	None	Iwona Zarych 01/09/2025

FROM 4.00000gram of W3113 + 996.00000ml of W3112 = Final Quantity: 1000.000 ml

Wet Chemistry STANDARD PREPARATION LOG

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
1471	NaOH Solution, 6N	WP111318	01/09/2025	07/09/2025	Rubina Mughal	WETCHEM_SCALE_7 (WC SC-6)	None	Iwona Zarych 01/09/2025

FROM 240.00000gram of W3113 + 760.00000ml of W3112 = Final Quantity: 1000.000 ml

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
1494	BORATE BUFFER	WP111325	01/09/2025	07/09/2025	Rubina Mughal	None	None	Iwona Zarych 01/09/2025

FROM 100.00000L of W3112 + 9.50000gram of W2700 + 88.00000ml of WP111317 = Final Quantity: 100.000 L

Wet Chemistry STANDARD PREPARATION LOG

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
290	Phenol reagent for Ammonia	WP111385	01/13/2025	07/13/2025	Rubina Mughal	WETCHEM_SCALE_8 (WC SC-7)	None	Iwona Zarych 01/13/2025

FROM 3.20000gram of W3113 + 8.30000gram of W2858 + 88.80000ml of W3112 = Final Quantity: 100.000 ml

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
2050	TOC STOCK STD, 4000PPM	WP111436	01/15/2025	07/15/2025	Niha Farheen Shaik	WETCHEM_SCALE_5 (WC SC-5)	WETCHEM_PIPETTE_3 (WC)	Iwona Zarych 01/16/2025

FROM 5.00000ml of W2860 + 8.51200gram of W3169 + 990.00000ml of W3112 = Final Quantity: 1000.000 ml

Wet Chemistry STANDARD PREPARATION LOG

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
2051	TOC STOCK STD-SS, 4000PPM	WP111437	01/15/2025	06/30/2025	Niha Farheen Shaik	WETCHEM_SCALE_5 (WC SC-5)	WETCHEM_PIPETTE_3 (WC)	Iwona Zarych 01/16/2025
<u>FROM</u>	5.00000ml of W2860 + 8.51200gram of W2784 + 990.00000ml of W3112 = Final Quantity: 1000.000 ml							

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
4003	Solution A	WP111449	01/15/2025	07/15/2025	Niha Farheen Shaik	WETCHEM_SCALE_5 (WC SC-5)	None	Iwona Zarych 01/16/2025
<u>FROM</u>	1000.00000ml of W3112 + 2.56500gram of W3167 = Final Quantity: 1000.000 ml							

Wet Chemistry STANDARD PREPARATION LOG

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
4004	Solution B	WP111450	01/15/2025	07/15/2025	Niha Farheen Shaik	WETCHEM_SCALE_5 (WC SC-5)	None	Iwona Zarych 01/16/2025

FROM 0.24800gram of W3020 + 0.28100gram of M5501 + 0.28300gram of W2800 + 0.59400gram of W1992 + 1000.00000ml of W3112 + 2.05000gram of W3017 = Final Quantity: 1000.000 ml

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
4005	Solution C	WP111451	01/15/2025	07/15/2025	Niha Farheen Shaik	WETCHEM_SCALE_5 (WC SC-5)	None	Iwona Zarych 01/16/2025

FROM 0.70500gram of W3016 + 1000.00000ml of W3112 + 2.80600gram of W2647 = Final Quantity: 1000.000 ml

Wet Chemistry STANDARD PREPARATION LOG

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
4006	Solution D	WP111452	01/15/2025	07/15/2025	Niha Farheen Shaik	WETCHEM_SCALE_5 (WC SC-5)	None	Iwona Zarych 01/16/2025

FROM 1.86200gram of W3022 + 1000.00000ml of W3112 = Final Quantity: 1000.000 ml

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
635	EDTA BUFFER FOR AMMONIA	WP111660	01/28/2025	07/28/2025	Rubina Mughal	WETCHEM_SCALE_8 (WC SC-7)	None	Iwona Zarych 01/28/2025

FROM 5.50000gram of W3113 + 50.00000gram of W3132 + 950.00000ml of W3112 = Final Quantity: 1000.000 ml

Wet Chemistry STANDARD PREPARATION LOG

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
289	Sodium Hypochlorite for Ammonia	WP111745	02/03/2025	07/31/2025	Rubina Mughal	None	None	Iwona Zarych 02/03/2025

FROM 50.00000ml of W3112 + 50.00000ml of W3174 = Final Quantity: 100.000 ml

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
1322	Ammonia Intermediate Std, 50PPM	WP111946	02/17/2025	03/17/2025	Rubina Mughal	None	WETCHEM_PIPETTE_3 (WC)	Iwona Zarych 02/19/2025

FROM 95.00000ml of W3112 + 5.00000ml of WP110149 = Final Quantity: 100.000 ml

Wet Chemistry STANDARD PREPARATION LOG

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
1639	Ammonia Intermediate Std-Second source, 50PPM	WP111947	02/17/2025	03/17/2025	Rubina Mughal	None	WETCHEM_PIPETTE_3 (WC)	Iwona Zarych 02/19/2025

FROM 95.00000ml of W3112 + 5.00000ml of WP110150 = Final Quantity: 100.000 ml

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
2487	Anions 300/9056 calibration standard 1	WP112016	02/21/2025	02/22/2025	Iwona Zarych	None	None	Jignesh Parikh 02/24/2025

FROM 10.00000ml of W3112 = Final Quantity: 10.000 ml

Wet Chemistry STANDARD PREPARATION LOG

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
24	Anions 300/9056 calibration standard 2	WP112017	02/21/2025	02/22/2025	Iwona Zarych	None	WETCHEM_PIPETTE_3 (WC)	Jignesh Parikh 02/24/2025

FROM 0.20000ml of W3180 + 9.80000ml of W3112 = Final Quantity: 10.000 ml

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
25	Anions 300/9056 calibration standard 3	WP112018	02/21/2025	02/22/2025	Iwona Zarych	None	WETCHEM_PIPETTE_3 (WC)	Jignesh Parikh 02/24/2025

FROM 0.40000ml of W3180 + 9.60000ml of W3112 = Final Quantity: 10.000 ml

Wet Chemistry STANDARD PREPARATION LOG

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
26	Anions 300/9056 calibration standard 4	WP112019	02/21/2025	02/22/2025	Iwona Zarych	None	WETCHEM_PIPETTE_3	Jignesh Parikh 02/24/2025 (WC)

FROM 0.50000ml of W3180 + 9.50000ml of W3112 = Final Quantity: 10.000 ml

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
3680	Anions 300/9056 calibration standard 5-CCV	WP112020	02/21/2025	02/22/2025	Iwona Zarych	None	WETCHEM_PIPETTE_3	Jignesh Parikh 02/24/2025 (WC)

FROM 45.00000ml of W3112 + 5.00000ml of W3180 = Final Quantity: 50.000 ml

Wet Chemistry STANDARD PREPARATION LOG

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
3679	Anions 300/9056 calibration standard 6	WP112021	02/21/2025	02/22/2025	Iwona Zarych	None	WETCHEM_PIPETTE_3 (WC)	Jignesh Parikh 02/24/2025

FROM 2.00000ml of W3180 + 8.00000ml of W3112 = Final Quantity: 10.000 ml

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
3681	Anions 300/9056 calibration standard 7	WP112022	02/21/2025	02/22/2025	Iwona Zarych	None	WETCHEM_PIPETTE_3 (WC)	Jignesh Parikh 02/24/2025

FROM 2.50000ml of W3180 + 7.50000ml of W3112 = Final Quantity: 10.000 ml

Wet Chemistry STANDARD PREPARATION LOG

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
3233	Anions 300/9056 ICV-LCS std	WP112023	02/21/2025	02/22/2025	Iwona Zarych	None	WETCHEM_PIPETTE_3 (WC)	Jignesh Parikh 02/24/2025

FROM 45.00000ml of W3112 + 5.00000ml of W3063 = Final Quantity: 50.000 ml

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
4036	IC ELUENT FOR IC-1	WP112024	02/21/2025	03/21/2025	Iwona Zarych	None	None	Jignesh Parikh 02/24/2025

FROM 1980.00000ml of W3112 + 20.00000ml of WP110259 = Final Quantity: 2000.000 ml

Wet Chemistry STANDARD PREPARATION LOG

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
4037	IC H2SO4 FOR IC-1	WP112025	02/21/2025	03/21/2025	Iwona Zarych	None	Glass Pipette-A	Jignesh Parikh 02/24/2025

FROM 5.60000ml of M6041 + 994.40000ml of W3112 = Final Quantity: 1000.000 ml

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
740	sodium nitroferricyanide for ammonia	WP112163	02/27/2025	03/27/2025	Rubina Mughal	WETCHEM_SCALE_5 (WC SC-5)	None	Iwona Zarych 03/04/2025

FROM 0.05000gram of W2666 + 99.95000ml of W3112 = Final Quantity: 100.000 ml

Wet Chemistry STANDARD PREPARATION LOG

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
114	hexavalent chromium color reagent	WP112185	03/05/2025	03/12/2025	Rubina Mughal	WETCHEM_SCALE_5 (WC SC-5)	None	Iwona Zarych 03/11/2025

FROM 0.25000gram of W2979 + 50.00000ml of E3876 = Final Quantity: 50.000 ml

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
1103	HEX CHROME INTERMEDIATE STD SOURCE 1 (5PPM)	WP112245	03/11/2025	03/12/2025	Rubina Mughal	None	WETCHEM_PIPETTE_3 (WC)	Iwona Zarych 03/11/2025

FROM 9.00000ml of W3112 + 1.00000ml of WP111315 = Final Quantity: 10.000 ml

Wet Chemistry STANDARD PREPARATION LOG

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
110	calibration std. hexchrome 0 ppm	WP112246	03/11/2025	03/12/2025	Rubina Mughal	None	None	Iwona Zarych 03/11/2025

FROM 100.00000ml of W3112 = Final Quantity: 100.000 ml

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
109	calibration std. hexchrome 0.01 ppm	WP112247	03/11/2025	03/12/2025	Rubina Mughal	None	WETCHEM_PIPETTE_3 (WC)	Iwona Zarych 03/11/2025

FROM 99.80000ml of W3112 + 0.20000ml of WP112245 = Final Quantity: 100.000 ml

Wet Chemistry STANDARD PREPARATION LOG

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
3800	Calibration Std Hexachrome 0.025 ppm	WP112248	03/11/2025	03/12/2025	Rubina Mughal	None	WETCHEM_PIPETTE_3	Iwona Zarych 03/11/2025 (WC)

FROM 99.50000ml of W3112 + 0.50000ml of WP112245 = Final Quantity: 100.000 ml

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
108	Calibration Std. hexchrome 0.05 ppm	WP112249	03/11/2025	03/12/2025	Rubina Mughal	None	WETCHEM_PIPETTE_3	Iwona Zarych 03/11/2025 (WC)

FROM 99.00000ml of W3112 + 1.00000ml of WP112245 = Final Quantity: 100.000 ml

Wet Chemistry STANDARD PREPARATION LOG

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
107	Calibration Std. hexchrome 0.1 ppm	WP112250	03/11/2025	03/12/2025	Rubina Mughal	None	WETCHEM_PIPETTE_3	Iwona Zarych 03/11/2025 (WC)

FROM 99.80000ml of W3112 + 0.20000ml of WP111315 = Final Quantity: 100.000 ml

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
3808	Calibration and CCV std HexChrome 0.5PPM	WP112251	03/11/2025	03/12/2025	Rubina Mughal	None	WETCHEM_PIPETTE_3	Iwona Zarych 03/11/2025 (WC)

FROM 99.00000ml of W3112 + 1.00000ml of WP111315 = Final Quantity: 100.000 ml

Wet Chemistry STANDARD PREPARATION LOG

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
3809	Calibration std HexChrome 1.0PPM	WP112252	03/11/2025	03/12/2025	Rubina Mughal	None	WETCHEM_PIPETTE_3 (WC)	Iwona Zarych 03/11/2025

FROM 98.00000ml of W3112 + 2.00000ml of WP111315 = Final Quantity: 100.000 ml

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
3804	Hexavalent Chromium ICV-LCS Std	WP112253	03/11/2025	03/12/2025	Rubina Mughal	None	WETCHEM_PIPETTE_3 (WC)	Iwona Zarych 03/11/2025

FROM 99.00000ml of W3112 + 1.00000ml of WP111316 = Final Quantity: 100.000 ml

Wet Chemistry STANDARD PREPARATION LOG

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
3680	Anions 300/9056 calibration standard 5-CCV	WP112265	03/11/2025	03/12/2025	Niha Farheen Shaik	None	Glass Pipette-A	Iwona Zarych 03/13/2025

FROM 45.00000ml of W3112 + 5.00000ml of W3180 = Final Quantity: 50.000 ml

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
3233	Anions 300/9056 ICV-LCS std	WP112266	03/11/2025	03/12/2025	Niha Farheen Shaik	None	Glass Pipette-A	Iwona Zarych 03/13/2025

FROM 45.00000ml of W3112 + 5.00000ml of W3063 = Final Quantity: 50.000 ml

Wet Chemistry STANDARD PREPARATION LOG

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
275	Ammonia Calibration Std. (2 ppm)	WP112278	03/12/2025	03/13/2025	Rubina Mughal	None	WETCHEM_PIPETTE_3	Iwona Zarych 03/13/2025 (WC)

FROM 48.00000ml of W3112 + 2.00000ml of WP111946 = Final Quantity: 50.000 ml

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
285	Ammonia CCV Std. (1 ppm)	WP112279	03/12/2025	03/13/2025	Rubina Mughal	None	WETCHEM_PIPETTE_3	Iwona Zarych 03/13/2025 (WC)

FROM 49.00000ml of W3112 + 1.00000ml of WP111946 = Final Quantity: 50.000 ml

Wet Chemistry STANDARD PREPARATION LOG

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
286	Ammonia ICV Std. (1 ppm)	WP112280	03/12/2025	03/13/2025	Rubina Mughal	None	WETCHEM_PIPETTE_3	Iwona Zarych 03/13/2025 (WC)

FROM 49.00000ml of W3112 + 1.00000ml of WP111947 = Final Quantity: 50.000 ml

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
3888	TOC Water Intermediate std-200ppm	WP112284	03/11/2025	03/18/2025	Niha Farheen Shaik	None	None	Iwona Zarych 03/13/2025

FROM 95.00000ml of W3112 + 5.00000ml of WP111436 = Final Quantity: 100.000 ml

Wet Chemistry STANDARD PREPARATION LOG

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
3889	TOC Water Intermediate std SS-200ppm	WP112285	03/11/2025	03/18/2025	Niha Farheen Shaik	None	None	Iwona Zarych 03/13/2025

FROM 95.00000ml of W3112 + 5.00000ml of WP111437 = Final Quantity: 100.000 ml

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
304	TOC CAL 0.00ppm	WP112286	03/11/2025	03/18/2025	Niha Farheen Shaik	None	None	Iwona Zarych 03/13/2025

FROM 100.00000ml of W3112 = Final Quantity: 100.000 ml

Wet Chemistry STANDARD PREPARATION LOG

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
305	TOC CAL 0.5ppm	WP112287	03/11/2025	03/18/2025	Niha Farheen Shaik	None	WETCHEM_PIPETTE_3	Iwona Zarych 03/13/2025 (WC)

FROM 99.75000ml of W3112 + 0.25000ml of WP112284 = Final Quantity: 100.000 ml

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
306	TOC CAL 1.0PPM	WP112288	03/11/2025	03/18/2025	Niha Farheen Shaik	None	WETCHEM_PIPETTE_3	Iwona Zarych 03/13/2025 (WC)

FROM 99.50000ml of W3112 + 0.50000ml of WP112284 = Final Quantity: 100.000 ml

Wet Chemistry STANDARD PREPARATION LOG

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
307	TOC CAL 2.0PPM	WP112289	03/11/2025	03/18/2025	Niha Farheen Shaik	None	WETCHEM_PIPETTE_3 (WC)	Iwona Zarych 03/13/2025

FROM 99.00000ml of W3112 + 1.00000ml of WP112284 = Final Quantity: 100.000 ml

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
308	TOC CAL 5.0PPM	WP112290	03/11/2025	03/18/2025	Niha Farheen Shaik	None	WETCHEM_PIPETTE_3 (WC)	Iwona Zarych 03/13/2025

FROM 97.50000ml of W3112 + 2.50000ml of WP112284 = Final Quantity: 100.000 ml

Wet Chemistry STANDARD PREPARATION LOG

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
3331	TOC CAL-CCV std, 10PPM	WP112291	03/11/2025	03/18/2025	Niha Farheen Shaik	None	Glass Pipette-A	Iwona Zarych 03/13/2025

FROM 190.00000ml of W3112 + 10.00000ml of WP112284 = Final Quantity: 200.000 ml

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
310	TOC CAL 20.0PPM	WP112292	03/11/2025	03/18/2025	Niha Farheen Shaik	None	Glass Pipette-A	Iwona Zarych 03/13/2025

FROM 90.00000ml of W3112 + 10.00000ml of WP112284 = Final Quantity: 100.000 ml

Wet Chemistry STANDARD PREPARATION LOG

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
1650	TOC ICV/LCS STD. 10PPM	WP112293	03/11/2025	03/18/2025	Niha Farheen Shaik	None	Glass Pipette-A	Iwona Zarych 03/13/2025

FROM 190.00000ml of W3112 + 10.00000ml of WP112285 = Final Quantity: 200.000 ml

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
3887	Inorganic carbon solution, 20ppm	WP112294	03/11/2025	03/18/2025	Niha Farheen Shaik	None	WETCHEM_PIPETTE_3 (WC)	Iwona Zarych 03/13/2025

FROM 49.00000ml of W3112 + 1.00000ml of WP110767 = Final Quantity: 50.000 ml

Wet Chemistry STANDARD PREPARATION LOG

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
4007	IC-removal check solution	WP112295	03/11/2025	03/18/2025	Niha Farheen Shaik	None	WETCHEM_PIPETTE_3	Iwona Zarych (WC) 03/13/2025
FROM 0.04000ml of M6041 + 10.00000ml of WP111449 + 10.00000ml of WP111450 + 10.00000ml of WP111451 + 10.00000ml of WP111452 = Final Quantity: 40.000 ml								

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
11	Sodium hydroxide absorbing solution 0.25 N	WP99896	11/15/2022	05/15/2023	Jignesh Parikh	WETCHEM_SCALE_4 (WC SC-4)	None	Iwona Zarych 11/15/2022
FROM 21.00000L of W2606 + 210.00000gram of W2845 = Final Quantity: 21.000 L								

CHEMICAL RECEIPT LOG BOOK

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
PCI Scientific Supply, Inc.	PC19631-100 / SODIUM SULFATE, ANHYDROUS, PEST GRADE, 1	313201	07/01/2025	01/03/2024 / Rajesh	07/20/2023 / Rajesh	E3551
Seidler Chemical	BA-9254-03 / Acetone, Ultra Resi (cs/4x4L)	24H2762008	08/25/2025	02/25/2025 / Rajesh	02/12/2025 / Rajesh	E3876
Seidler Chemical	BA-3624-05 / Sodium Chloride, Crystal (cs/4x2.5kg)	0000281938	07/06/2026	07/24/2023 / mohan	04/14/2023 / mohan	M5501
Seidler Chemical	BA-9673-33 / Sulfuric Acid, Instra-Analyzed (cs/6c2.5L)	23D2462010	03/20/2028	09/21/2023 / mohan	09/05/2023 / mohan	M5673
Seidler Chemical	BA-9673-33 / Sulfuric Acid, Instra-Analyzed (cs/6c2.5L)	23D2462010	03/20/2028	08/16/2024 / mohan	08/16/2024 / mohan	M6041
PCI Scientific Supply, Inc.	140440 / TEST PAPERS,PH,0-2.5,.2SENSI, 100PK	80A0441	02/29/2028	09/03/2024 / jignesh	08/19/2024 / Jaswal	M6069

CHEMICAL RECEIPT LOG BOOK

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Seidler Chemical	BA-9530-33 / Hydrochloric Acid, Instra-Analyzed (cs/6x2.5L)	0000275677	05/13/2025	11/13/2024 / Eman	10/13/2024 / Eman	M6121
PCI Scientific Supply, Inc.	J0660-1 / AMMONIUM CHLORIDE, ACS, 500G	WL13B	04/08/2025	04/08/2015 / apatel	04/08/2015 / apatel	W1992
PCI Scientific Supply, Inc.	J0660-1 / AMMONIUM CHLORIDE, ACS, 500G	XE09B	04/08/2025	04/08/2015 / apatel	04/08/2015 / apatel	W1993
Seidler Chemical	DIW / DI Water	Daily Lab-Certified	10/24/2024	10/24/2019 / apatel	10/24/2019 / apatel	W2606
PCI Scientific Supply, Inc.	J3506-5 / SODIUM BICARBONATE, PWD, ACS, 2.5KG	0000240594	06/03/2026	02/24/2020 / AMANDEEP	01/20/2020 / apatel	W2647
PCI Scientific Supply, Inc.	AA13450-36 / Potassium Dichromate, 500g(NEW)	T15F019	01/24/2030	01/24/2020 / apatel	01/24/2020 / apatel	W2651

CHEMICAL RECEIPT LOG BOOK

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
PCI Scientific Supply, Inc.	P188-500 / Potassium Dichromate, 500g(new-2nd lot)	194664	01/24/2030	01/24/2020 / apatel	01/24/2020 / apatel	W2652
PCI Scientific Supply, Inc.	87683 / Sodium Nitroferricyanide 250g	W12F013	02/10/2030	02/10/2020 / apatel	02/10/2020 / apatel	W2666
PCI Scientific Supply, Inc.	J3568-1 / Sodium Borate, 500 gms	2019111354	04/23/2025	04/23/2020 / apatel	03/11/2020 / apatel	W2700
Seidler Chemical	BA-9254-03 / Acetone, Ultra Resi (cs/4x4L)	0000263246	06/17/2023	12/23/2020 / ketankumar	12/23/2020 / ketankumar	W2783
PCI Scientific Supply, Inc.	P243-500 / Potassium Hydrogen Phthalate, 500 gms	201089	06/30/2025	12/23/2020 / apatel	12/16/2020 / apatel	W2784
PCI Scientific Supply, Inc.	J3040-1 / POTASSIUM CHLORIDE, CRYSTALS, ACS, 500G	198947	09/30/2025	03/08/2021 / apatel	03/08/2021 / apatel	W2800

CHEMICAL RECEIPT LOG BOOK

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
PCI Scientific Supply, Inc.	PC19510-7 / Sodium Hydroxide Pellets 12 Kg	21C2456604	01/31/2024	03/30/2022 / JIGNESH	06/24/2021 / apatel	W2845
PCI Scientific Supply, Inc.	P1060-10 / PHENOL, ACS, 500G	M13H048	01/07/2026	07/07/2021 / apatel	07/07/2021 / apatel	W2858
PCI Scientific Supply, Inc.	J0260-3 / Phosphoric Acid, 2.5 L	0000278313	01/31/2026	07/12/2021 / apatel	07/12/2021 / apatel	W2860
Supelco	90157 / Cyanide Standard, 1000ppm from Supelco	HC03107133	06/30/2023	01/24/2022 / apatel	01/24/2022 / apatel	W2898
PCI Scientific Supply, Inc.	31390 / 1,5-Diphenylcarbazide	MKCR6636	12/09/2027	12/09/2022 / Iwona	12/09/2022 / Iwona	W2979
SIGMA ALDRICH	S9390-100G / Sodium phosphate dibasic heptahydrate	SLCP6576	11/30/2025	04/03/2023 / Iwona	04/03/2023 / Iwona	W3016

CHEMICAL RECEIPT LOG BOOK

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
SIGMA ALDRICH	C7902-500G / Calcium chloride dihydrate - 500G	SLCP4280	08/31/2025	04/03/2023 / Iwona	04/03/2023 / Iwona	W3017
Thermo Fisher Scientific	012364.36 / Calcium nitrate tetrahydrate, ACS, 99.0-103.0%	MKCS4612	09/30/2025	04/03/2023 / Iwona	04/03/2023 / Iwona	W3020
SIGMA ALDRICH	S4392-250G / Sodium metasilicate nonahydrate	SLCM8472	03/31/2025	04/05/2023 / Iwona	04/05/2023 / Iwona	W3022
PCI Scientific Supply, Inc.	EM-SX0395-3 / SODIUM CARBONATE ANHYDR 2.5KG	2023012653	10/19/2028	09/03/2024 / jignesh	10/19/2023 / Iwona	W3058
Inorganic Ventures	300-CAL-A-500ML / 300.0 Calibration Standard, 500 ml	U2-MEB735684	04/09/2025	04/09/2024 / Iwona	11/16/2023 / Iwona	W3063
Seidler Chemical	DIW / DI Water	Daily Lab-Certified	07/03/2029	07/03/2024 / Iwona	07/03/2024 / Iwona	W3112

CHEMICAL RECEIPT LOG BOOK

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
PCI Scientific Supply, Inc.	PC19510-7 / Sodium Hydroxide Pellets 12 Kg	23B1556310	12/31/2025	07/08/2024 / Iwona	07/08/2024 / Iwona	W3113
PCI Scientific Supply, Inc.	PC05050-1 / EDTA, disodium salt, dihydrate 1 lb	2ND0156	07/10/2026	07/26/2024 / Iwona	07/26/2024 / Iwona	W3132
PCI Scientific Supply, Inc.	140476 / Test Paper,PH Short Range 9.0/10.0	L23	08/22/2029	08/22/2024 / Iwona	08/22/2024 / Iwona	W3133
PCI Scientific Supply, Inc.	140730 / TEST PAPER,POT.IOD-STRCH,P K100,CS12	14-860	12/02/2029	12/02/2024 / Iwona	12/02/2024 / Iwona	W3155
PCI Scientific Supply, Inc.	J2500-1 / MAGNESIUM SULFATE 7-HYDRATE CRYSTALS 500G	24J2856877	05/29/2027	01/03/2025 / Iwona	01/03/2025 / Iwona	W3167
PCI Scientific Supply, Inc.	P243-500 / Potassium Hydrogen Phthalate, 500 gms	24H0956262	04/28/2026	01/03/2025 / Iwona	01/03/2025 / Iwona	W3169

CHEMICAL RECEIPT LOG BOOK

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
PCI Scientific Supply, Inc.	J9416-1 / Sodium Hypochlorite 500 ml	2501J28	07/31/2025	01/24/2025 / Iwona	01/24/2025 / Iwona	W3174
Seidler Chemical	BA-9262-03 / Hexane, Ultra-Resi (cs/4x4L)	24G1962003	08/22/2025	02/03/2025 / jignesh	01/31/2025 / jignesh	W3177
Inorganic Ventures	300-CAL-A-500ML / 300.0 Calibration Standard, 500 ml	V2-MEB742616	02/19/2026	02/19/2025 / Iwona	01/27/2025 / Iwona	W3180

Certificate of Analysis



Date of Release: 12/18/2013

Product: Ammonium Chloride GR ACS

Catalog No.: AX1270 all size codes

Grade: Meets ACS Specifications

CAS #: 12125-02-9

Country of Origin: India

FW: 53.49

Lot No.: WL13B

ClH_4N

Characteristic	Requirement			UOM
	Minimum	Maximum	Results	
Assay (argentometric)	99.5		99.9	%
Calcium (Ca)		0.001	0.0001	%
Form	White crystals		White crystals	
Heavy metals (as Pb)		5	5	ppm
Identification	To pass test		Passes	
Insoluble matter		0.005	0.002	%
Iron (Fe)		2	2	ppm
Loss on drying (105 C)		0.5	0.21	%
Magnesium (Mg)		5	0.6	ppm
pH of a 5% solution at 25 C	4.5	5.5	4.76	
Phosphate (PO4)		2	2	ppm
Residue after ignition		0.01	0.002	%
Sulfate (SO4)		0.002	0.002	%

Joe Schoellkopff

Quality Control Manager

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Certificate of Analysis



Date of Release: 5/12/2014

Product: Ammonium Chloride GR ACS

Catalog No.: AX1270 all size codes

Grade: Meets ACS Specifications

CAS #: 12125-02-9

Country of Origin: India

FW: 53.49

Lot No.: XE09B

ClH_4N

Characteristic	Requirement			UOM
	Minimum	Maximum	Results	
Assay (argentometric)	99.5		99.8	%
Calcium (Ca)		0.001	0.0001	%
Form	White crystals		White crystals	
Heavy metals (as Pb)		5	5	ppm
Identification	To pass test		Passes	
Insoluble matter		0.005	0.002	%
Iron (Fe)		2	2	ppm
Loss on drying (105 C)		0.5	0.22	%
Magnesium (Mg)		5	0.7	ppm
pH of a 5% solution at 25 C	4.5	5.5	4.95	
Phosphate (PO4)		2	2	ppm
Residue after ignition		0.01	0.002	%
Sulfate (SO4)		0.002	0.002	%

Joe Schoellkopff

Quality Control Manager

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Certificate of Analysis

1.19533.0500 Cyanide standard solution traceable to SRM from NIST K₂[Zn(CN)₄] in H₂O
 1000 mg/l CN Certipur®

Batch HC03107133

Batch Values

Concentration	β (CN ⁻)	1002	mg/l
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Determination method: Argentometric titration.

The content of this solution was determined with silver nitrate standard solution (article number 1.09081) standardized against volumetric standard sodium chloride (article number 1.02406). The expanded measurement uncertainty is $\pm 0.7\%$ ($k=2$ coverage factor for 95% coverage probability). The certified value is traceable to primary standard NIST SRM 999c (NIST: National Institute of Standards and Technology, USA) by means of volumetric standard sodium chloride, measured in the accredited calibration laboratory of Merck KGaA, Darmstadt, Germany in accordance to DIN EN ISO/IEC 17025.

Date of release (DD.MM.YYYY) 02.07.2020

Minimum shelf life (DD.MM.YYYY) 30.06.2023

Ayfer Yildirim

Responsible laboratory manager quality control

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Certificate of Analysis

Product No.: 13450

Product: Potassium dichromate, ACS, 99.0% min

Lot No.: T15F019

Test	Limits	Results
Appearance	Orange-red crystals	Orange-red crystals
Identification	To Pass	Passes
Purity	99.0 % min	99.67 %
Insoluble matter	0.005 % max	0.004 %
Loss on drying	0.05 % max	0.03 %
Chloride	0.001 % max	< 0.001 %
Sulfate	0.005 % max	< 0.005 %
Iron	0.001 % max	< 0.001 %
Calcium	0.003 % max	0.0012 %
Sodium	0.02 % max	0.0047 %

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Sodium Bicarbonate, Powder
BAKER ANALYZED® A.C.S. Reagent
(sodium hydrogen carbonate)



Material No.: 3506-05
Batch No.: 0000240594
Manufactured Date: 2019/06/05
Retest Date: 2026/06/03
Revision No: 1

Certificate of Analysis

Meets ACS Reagent Chemical Requirements,

Test	Specification	Result
Assay (NaHCO ₃) (dried basis)	99.7 – 100.3 %	100.1
Insoluble Matter	<= 0.015 %	< 0.002
Chloride (Cl)	<= 0.003 %	0.003
Phosphate (PO ₄)	<= 0.001 %	0.001
Sulfur Compounds (as SO ₄)	<= 0.003 %	0.003
Calcium (Ca)	<= 0.02 %	0.02
Trace Impurities – Iron (Fe)	<= 0.001 %	0.001
Magnesium (Mg)	<= 0.005 %	0.005
Potassium (K)	<= 0.005 %	0.005
Ammonium (NH ₄)	<= 5 ppm	5
Trace Impurities – ACS – Heavy Metals (as Pb)	<= 5 ppm	5

For Laboratory, Research or Manufacturing Use

Meets Reagent Specifications for testing USP/NF monographs

Country of Origin: US

Packaging Site: Paris Mfg Ctr & DC

James Ethier
Jamie Ethier
Vice President Global Quality

For questions on this Certificate of Analysis please contact Technical Services at 855.282.6867 or +1.610.386.1700

Avantor Performance Materials, LLC

100 Matsonford Rd, Suite 200, Radnor, PA 19087. U.S.A. Phone: 610.386.1700

Acetone
ULTRA RESI-ANALYZED
For Organic Residue Analysis



Material No.: 9254-03
Batch No.: 0000263246
Manufactured Date: 2020/06/17
Expiration Date: 2023/06/17
Revision No: 1

Certificate of Analysis

Test	Specification	Result
Assay ((CH ₃) ₂ CO) (by GC, corrected for water)	>= 99.4 %	99.7
Color (APHA)	<= 10	5
Residue after Evaporation	<= 1.0000 ppm	0.1000
Substances Reducing Permanganate	Passes Test	PT
Titrable Acid (μeq/g)	<= 0.3	0.1
Titrable Base (μeq/g)	<= 0.6	< 0.1
Water (H ₂ O)	<= 0.5 %	0.3
FID-Sensitive Impurities (as 2-Octanol) Single Impurity Peak (ng/mL)	<= 5	< 1
ECD Sensitive Impurities (as Heptachlor Epoxide) Single Peak (pg/mL)	<= 10	5

For Laboratory, Research or Manufacturing Use
MEETS SPECIFICATIONS WITHIN THE EXPIRATION PERIOD

Country of Origin: US
Packaging Site: Phillipsburg Mfg Ctr & DC

James Ethier
Jamie Ethier
Vice President Global Quality

For questions on this Certificate of Analysis please contact Technical Services at 855.282.6867 or +1.610.386.1700

Avantor Performance Materials, LLC
100 Matsonford Rd, Suite 200, Radnor, PA 19087. U.S.A. Phone: 610.386.1700

W2858 Received by AP on 07/07/2021

Product No.: 33213

Product: Phenol, ACS, 99+%, stab.

Lot No.: M13H048

Test	Limits	Results
Assay	99.0 % min	99.8 %
Freezing point	40.5°C min	40.5 °C
Clarity of solution	To pass test	Passes
Residue after evaporation	0.05 % max	< 0.05 %
Water	0.5 % max	0.2 %

Retest date: January 7, 2026

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Phosphoric Acid
BAKER ANALYZED® A.C.S. Reagent
(orthophosphoric acid)



Material No.: 0260-03
Batch No.: 0000278313
Manufactured Date: 2021/02/01
Retest Date: 2026/01/31
Revision No: 2

Certificate of Analysis

Meets ACS Reagent Chemical Requirements,

Test	Specification	Result
Assay (H_3PO_4) (by acidimetry)	85.0 – 87.0 %	85.8
Calcium (Ca)	<= 0.002 %	< 0.001
Color (APHA)	<= 10	5
Insoluble Matter	<= 0.001 %	< 0.001
ACS – Magnesium (Mg)	<= 0.002 %	< 0.002
Sulfate (SO_4)	<= 12 ppm	< 4
Volatile Acids (as CH_3COOH)	<= 0.001 %	0.001
Reducing Substances	Passes Test	PT
Chloride (Cl)	<= 3 ppm	< 1
Nitrate (NO_3)	<= 5 ppm	< 2
Trace Impurities – Antimony (Sb)	<= 20.000 ppm	0.007
Trace Impurities – Arsenic (As)	<= 0.500 ppm	< 0.001
Trace Impurities – Iron (Fe)	<= 10.000 ppm	< 1.000
Heavy Metals (as Pb)	<= 8 ppm	< 3
Trace Impurities – Manganese (Mn)	<= 0.500 ppm	0.005
Trace Impurities – Potassium (K)	<= 40.000 ppm	< 0.001
Trace Impurities – Sodium (Na)	<= 200.000 ppm	0.082

For Laboratory, Research or Manufacturing Use

Exceeds A.C.S. Specifications

Meets Reagent Specifications for testing USP/NF monographs

Country of Origin: US

Packaging Site: Phillipsburg Mfg Ctr & DC



James Ethier
Jamie Ethier
Vice President Global Quality

For questions on this Certificate of Analysis please contact Technical Services at 855.282.6867 or +1.610.386.1700

Avantor Performance Materials, LLC

100 Matsonford Rd, Suite 200, Radnor, PA 19087. U.S.A. Phone: 610.386.1700

W2666 Recived on 02/10/2020 by AP

Product No.: 87683

Product: Sodium pentacyanonitrosylferrate(III) dihydrate, ACS,
99.0-102.0%

Lot No.: W12F013

Test	Limits	Results
Assay	99.0 - 102.0 %	99.67 %
Insoluble	0.01 % max	0.0079 %
Chloride	0.02 % max	Not detected
Sulfate	To pass test	Passes test
Aqueous solubility	To pass test	Passes test
Limit on Ferricyanide	To pass test	Passes test
Limit on Ferrocyanide	To pass test	Passes test

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W3016
Rec 04/03/23 12

3050 Spruce Street, Saint Louis, MO 63103, USA

Website: www.sigmaaldrich.com

Email USA: techserv@sial.com

Outside USA: eurtechserv@sial.com

Product Name:
Sodium phosphate dibasic heptahydrate - ACS reagent, 98.0-102.0%

Certificate of Analysis

Product Number:	S9390	$\text{Na}_2\text{HPO}_4 \cdot 7\text{H}_2\text{O}$
Batch Number:	SLCP6576	
Brand:	SIGALD	
CAS Number:	7782-85-6	
MDL Number:	MFCD00149180	
Formula:	$\text{HNa}_2\text{O}_4\text{P} \cdot 7\text{H}_2\text{O}$	
Formula Weight:	268.07 g/mol	
Quality Release Date:	02 NOV 2022	
Recommended Retest Date:	NOV 2025	

Test	Specification	Result
Appearance (Color)	White	White
Appearance (Form)	Powder	Powder
Assay	98.0 - 102.0 %	99.8 %
Insoluble Matter	$\leq 0.005\%$	0.003 %
Chloride (Cl) < or = 0.001%	Pass	Pass
Sulfate < or = 0.005%	Pass	Pass
Iron (Fe) < or = 0.001%	Pass	Pass
Heavy Metals by ICP	< = 0.001%	< 0.001%
pH of 5% solution at 25 deg C	8.7 - 9.3	9.2
Note	_____	_____
ACS Tests	_____	_____



Brian Dulle, Supervisor
Quality Assurance
St. Louis, Missouri US

Sigma-Aldrich warrants, that at the time of the quality release or subsequent retest date this product conformed to the information contained in this publication. The current Specification sheet may be available at Sigma-Aldrich.com. For further inquiries, please contact Technical Service. Purchaser must determine the suitability of the product for its particular use. See reverse side of invoice or packing slip for additional terms and conditions of sale.



W3017
Rec 4/3/23 12

3050 Spruce Street, Saint Louis, MO 63103, USA
 Website: www.sigmaaldrich.com
 Email USA: techserv@sial.com
 Outside USA: eurtechserv@sial.com

Product Name:

Certificate of Analysis

Calcium chloride dihydrate - BioReagent, suitable for cell culture, suitable for insect cell culture, suitable for plant cell culture, ≥99.0%

Product Number:

C7902



Batch Number:

SLCP4280

Brand:

SIGMA

CAS Number:

10035-04-8

MDL Number:

MFCD00149613

Formula:

 $\text{CaCl}_2 \cdot 2\text{H}_2\text{O}$

Formula Weight:

147.01 g/mol

Quality Release Date:

14 NOV 2022

Recommended Retest Date:

AUG 2025

Test**Specification****Result**

Appearance (Color)	White	White
Appearance (Form)	Powder	Powder
Solubility (Color)	Colorless	Colorless
Solubility (Turbidity)	Clear	Clear
294 mg/mL, H ₂ O		
Titration with EDTA	99.0 - 105.0 %	103.3 %
Cell Culture Test	Pass	Pass
Insect Cell Test	Pass	Pass
Plant Cell Culture Test	Pass	Pass



Brian Dulle, Supervisor
 Quality Assurance
 St. Louis, Missouri US

Sigma-Aldrich warrants, that at the time of the quality release or subsequent retest date this product conformed to the information contained in this publication. The current Specification sheet may be available at Sigma-Aldrich.com. For further inquiries, please contact Technical Service. Purchaser must determine the suitability of the product for its particular use. See reverse side of invoice or packing slip for additional terms and conditions of sale.



W 3020

Rec. 4/3/23

12

3050 Spruce Street, Saint Louis, MO 63103, USA

Website: www.sigmaaldrich.comEmail USA: techserv@sial.comOutside USA: eurtechserv@sial.com

Product Name:

Calcium nitrate tetrahydrate - ACS reagent, 99%**Certificate of Analysis**

Product Number:	237124	$\text{Ca}(\text{NO}_3)_2 \cdot 4\text{H}_2\text{O}$
Batch Number:	MKCS4612	
Brand:	SIGALD	
CAS Number:	13477-34-4	
MDL Number:	MFCD00149604	
Formula:	$\text{CaN}_2\text{O}_6 \cdot 4\text{H}_2\text{O}$	
Formula Weight:	236.15 g/mol	
Quality Release Date:	27 FEB 2023	
Recommended Retest Date:	SEP 2025	

Test	Specification	Result
Appearance (Color)	White	White
Appearance (Form)	Conforms to Requirements	Crystals
Granular Powder or Crystals or Flakes		
Complexometric EDTA	99.0 - 103.0 %	99.6 %
X-Ray Diffraction	Conforms to Structure	Conforms
pH	5.0 - 7.0	5.4
c = 5%, Water, 25 Deg C		
Insoluble Matter	≤ 0.005 %	< 0.001 %
c = 10%, Water		
Chloride Content	≤ 0.005 %	< 0.005 %
Nitrite (NO ₂)	≤ 0.001 %	< 0.001 %
Sulfate (SO ₄)	≤ 0.002 %	< 0.002 %
Barium	≤ 0.005 %	< 0.001 %
Heavy Metals by ICP-OES	≤ 5.0 ppm	< 1.0 ppm
Iron (Fe)	≤ 5.0 ppm	< 1.0 ppm
Magnesium (Mg)	≤ 0.05 %	< 0.01 %
Potassium (K)	≤ 0.005 %	< 0.001 %
Sodium (Na)	≤ 0.01 %	< 0.01 %
Strontium (Sr)	≤ 0.05 %	< 0.01 %
Meets ACS Requirements	Current ACS Specification	Conforms

Sigma-Aldrich warrants, that at the time of the quality release or subsequent retest date this product conformed to the information contained in this publication. The current Specification sheet may be available at Sigma-Aldrich.com. For further inquiries, please contact Technical Service. Purchaser must determine the suitability of the product for its particular use. See reverse side of invoice or packing slip for additional terms and conditions of sale.



W3020

Sigma-Aldrich

3050 Spruce Street, Saint Louis, MO 63103, USA

Website: www.sigmaaldrich.com

Email USA: techserv@sial.com

Outside USA: eurtechserv@sial.com

Certificate of Analysis

Product Number: 237124

Batch Number: MKCS4612

Test	Specification	Result
Recommended Retest Period 3 Years	_____	_____


Larry Coers, Director
Quality Control
Milwaukee, WI US

Sigma-Aldrich warrants, that at the time of the quality release or subsequent retest date this product conformed to the information contained in this publication. The current Specification sheet may be available at Sigma-Aldrich.com. For further inquiries, please contact Technical Service. Purchaser must determine the suitability of the product for its particular use. See reverse side of invoice or packing slip for additional terms and conditions of sale.

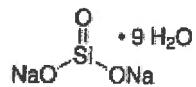


W 3022
Rec. 4/5/23 12

3050 Spruce Street, Saint Louis, MO 63103, USA
Website: www.sigmaaldrich.com
Email USA: techserv@sial.com
Outside USA: eurtechserv@sial.com

Product Name:
Sodium metasilicate nonahydrate - ≥98%

Product Number: **S4392**
Batch Number: **SLCM8472**
Brand: **ALDRICH**
CAS Number: **13517-24-3**
MDL Number: **MFCD00149175**
Formula: **Na₂O₃Si · 9H₂O**
Formula Weight: **284.20 g/mol**
Quality Release Date: **14 MAR 2022**
Recommended Retest Date: **MAR 2025**



Test	Specification	Result
Appearance (Color)	White	White
Appearance (Form)	Powder	Powder
Solubility (Color)	Colorless	Colorless
Solubility (Turbidity) 50 mg/ml, H ₂ O	Clear	Clear
Titration with HCl	≥ 98 %	100 %

Brian Dulle, Supervisor
Quality Assurance
St. Louis, Missouri US

Sigma-Aldrich warrants, that at the time of the quality release or subsequent retest date this product conformed to the information contained in this publication. The current Specification sheet may be available at Sigma-Aldrich.com. For further inquiries, please contact Technical Service. Purchaser must determine the suitability of the product for its particular use. See reverse side of invoice or packing slip for additional terms and conditions of sale.



Certificate Of Analysis



N 3058

Rev. 10/19/23

12

Date of Release: 1/27/2023

Name: **Sodium Carbonate, Anhydrous**

Powder, ACS

Item No: **SX0395 All Sizes**

Lot / Batch No: **2023012653**

Country of Origin: **India**

Item	Specifications	Analysis
Assay (calculated on dried substance)	99.5% min.	100.2%
Calcium (Ca)	0.03% max.	0.004%
Chloride (Cl)	0.001% max.	<0.001%
Color	White	Passes Test
Form	Powder	Passes Test
Heavy metals (by ICP-OES)	5 ppm max.	<5 ppm
Insoluble Matter	0.01% max.	0.003%
Iron (Fe)	5 ppm max.	<5 ppm
Loss on heating at 285C	1.0% max.	0.1%
Magnesium (Mg)	0.005% max.	0.0008%
Phosphate (PO4)	0.001% max.	<0.001%
Potassium (K)	0.005% max.	0.003%
Silica (SiO2)	0.005% max.	<0.005%
Sulfur compounds (as SO4)	0.003% max.	<0.003%

Joe Schoellkopff

Quality Control Manager

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EMD Millipore is a division of Merck KGaA, Darmstadt, Germany

EMD Millipore Corporation

400 Summit Drive
Burlington, MA 01803
U.S.A.

Form number: 00005624CA, Rev. 2.0

Certificate of Analysis

300 Technology Drive
 Christiansburg, VA 24073 USA
inorganicventures.com

W3063
 rec. 11/16/23 12

P: 800-669-6799/540-585-3030
 F: 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).



2.0 PRODUCT DESCRIPTION

Product Code: Multi Analyte Ion Chromatography Solution
 Catalog Number: 300-CAL-A
 Lot Number: U2-MEB735684
 Matrix: H₂O
 Value / Analyte(s):
 150 µg/mL ea:
 Sulfate,
 100 µg/mL ea:
 Bromide,
 50 µg/mL ea:
 o-Phosphate as P,
 30 µg/mL ea:
 Chloride, Nitrite as N,
 25 µg/mL ea:
 Nitrate as N,
 20 µg/mL ea:
 Fluoride

3.0 CERTIFIED VALUES AND UNCERTAINTIES

ANALYTE	CERTIFIED VALUE	ANALYTE	CERTIFIED VALUE
Bromide, Br	100.0 ± 0.5 µg/mL	Chloride, Cl	30.00 ± 0.14 µg/mL
Fluoride, F-	20.00 ± 0.06 µg/mL	Nitrate as N, NNO ₃ -	25.00 ± 0.09 µg/mL
Nitrite as N, NNO ₂ -	30.00 ± 0.15 µg/mL	o-Phosphate as P, PPO ₄	50.00 ± 0.18 µg/mL
Sulfate, SO ₄	150.0 ± 0.8 µg/mL		
Density:	0.999 g/mL (measured at 20 ± 4 °C)		

Assay Information:

ANALYTE	METHOD	NIST SRM#	SRM LOT#
Br	IC Assay	3184	151130
Br	Fajans	999c	999c
Cl	IC Assay	3182	190830
Cl	Fajans	999c	999c
F-	IC Assay	3183	140203
NNO3-	IC Assay	3185	170309
NNO2-	IC Assay		traceable to 40h
PPO4	IC Assay	3186	170606
SO4	IC Assay	3181	080603

- 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:

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

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:

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

$$CRM/RM Expanded Uncertainty (\pm) = U_{CRM/RM} = k(u_{char}^2 + u_{bb}^2 + u_{ts}^2 + u_{ts}^2)^{1/2}$$

k = coverage factor = 2

$u_{char} = [\sum((w_i)^2 (u_{char\ i})^2)]^{1/2}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{ts} = 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

$$CRM/RM Expanded Uncertainty (\pm) = U_{CRM/RM} = k(u_{char\ a}^2 + u_{bb}^2 + u_{ts}^2 + u_{ts}^2)^{1/2}$$

k = coverage factor = 2

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

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{ts} = 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

N/A

6.0 INTENDED USE

6.1 This standard is intended for the calibration of analytical instruments and validation of analytical methods as appropriate. This CRM may be used in connection with EPA Methods 6010, 6020 (all versions), Standard Methods 3120 B and USP <232> / ICH Q3D.

6.2 For products attaining traceability through Inorganic Ventures' Primary Certified Reference Materials (PCRM™) see the Limited License to Use PCRM™ in the Inorganic Ventures Terms and Conditions of Sale, <https://www.inorganicventures.com/terms-and-conditions-sale>. The Terms and Conditions contain information on the use of materials traceable to PCRM™ certified reference materials. This Limited License agreement is especially pertinent for laboratories accredited under ISO:17034.

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](mailto:info@inorganicventures.com); info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

August 10, 2023

- 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

- August 10, 2028

- 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:

Justin Dirico
Stock Processing Supervisor



Certificate Approved By:

Nicholas Plymale
Custom VSM Coordinator



Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director



Certificate Of Analysis



Date of Release: 11/14/2019

W2700 Received by AP on 3/11/2020

Name: **Sodium Borate, Decahydrate**

ACS

Item No: **SX0355 All Sizes**

Lot / Batch No: **2019111354**

Country of Origin: **India**

Item	Specifications	Analysis
Assay ($\text{Na}_2\text{B}_4\text{O}_7 \cdot 10\text{H}_2\text{O}$)	99.5 - 105.0%	101.7%
Calcium (Ca)	0.005% max.	0.003%
Chloride (Cl)	0.001% max.	<0.001%
Color	White	Passes Test
Form	Crystals	Passes Test
Heavy Metals (as Pb)	0.001% max.	<0.001%
Insoluble Matter	0.005% max.	0.002%
Iron (Fe)	5 ppm max.	<5 ppm
pH of a 0.01 M solution at 25C	9.15 - 9.20	9.17
Phosphate (PO_4)	0.001% max.	<0.001%
Sulfate (SO_4)	0.005% max.	<0.005%

Joe Schoellkopff

Quality Control Manager

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EMD Millipore Corporation

400 Summit Drive
Burlington, MA 01803
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Form number: 00005624CA, Rev. 2.0



Certificate of Analysis

1 Reagent Lane
 Fair Lawn, NJ 07410
 201.796.7100 tel
 201.796.1329 fax

Thermo Fisher Scientific's Quality System has been found to conform to Quality Management System Standard ISO9001:2015 by SAI Global Certificate Number CERT – 0120632

This is to certify that units of the lot number below were tested and found to comply with the specifications of the grade listed. Certain data have been supplied by third parties. Thermo Fisher Scientific expressly disclaims all warranties, expressed or implied, including the implied warranties of merchantability and fitness for a particular purpose. Products are for research use or further manufacturing. Not for direct administration to humans or animals. It is the responsibility of the final formulator and end user to determine suitability based upon the intended use of the end product. Products are tested to meet the analytical requirements of the noted grade. The following information is the actual analytical results obtained.

Catalog Number	P217	Quality Test / Release Date	09/03/2020
Lot Number	198947		
Description	POTASSIUM CHLORIDE, A.C.S.		
Country of Origin	United States	Suggested Retest Date	Sep/2025
Chemical Origin	Inorganic-non animal		
BSE/TSE Comment	No animal products are used as starting raw material ingredients, or used in processing, including lubricants, processing aids, or any other material that might migrate to the finished product.		

N/A			
Result Name	Units	Specifications	Test Value
APPEARANCE		REPORT	White crystals
ASSAY	%	Inclusive Between 99.0 - 100.5	99.7
BARIUM (Ba)	PASS/FAIL	= P.T. (ABOUT 0.001%)	P.T. (ABOUT 0.001%)
BROMIDE	%	<= 0.01	<0.01
CALCIUM	%	<= 0.002	<0.002
CHLORATE & NITRATE	%	<= 0.003	<0.001
HEAVY METALS (as Pb)	ppm	<= 5	<5
IDENTIFICATION	PASS/FAIL	= PASS TEST	PASS TEST
INSOLUBLE MATTER	%	<= 0.005	<0.005
IODIDE	%	<= 0.002	<0.002
IRON (Fe)	ppm	<= 2	<1
MAGNESIUM	%	<= 0.001	<0.0005
PH 5% SOLUTION @ 25 DEG C		Inclusive Between 5.4 - 8.6	6.0
PHOSPHATE (PO4)	ppm	<= 5	<5
SODIUM (Na)	%	<= 0.005	<0.005
SULFATE (SO4)	%	<= 0.001	<0.001

Julian Burton - Quality Control Manager – Fair Lawn

Note: The data listed is valid for all package sizes of this lot of this product, expressed as an extension of this catalog number listed above.

If there are any questions with this certificate, please call at (800) 227-6701.

*Based on suggested storage condition.



Certificate of Analysis

1 Reagent Lane
 Fair Lawn, NJ 07410
 201.796.7100 tel
 201.796.1329 fax

3 Thermo Fisher Scientific's Quality System has been found to conform to Quality Management System
 4 Standard ISO9001:2015 by SAI Global Certificate Number CERT – 0120632

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 8 animals. It is the responsibility of the final formulator and end user to determine suitability based upon the intended use of the end product. Products are
 9 tested to meet the analytical requirements of the noted grade. The following information is the actual analytical results obtained.

Catalog Number	P188	Quality Test / Release Date	08/12/2019
Lot Number	194664		
Description	POTASSIUM DICHROMATE, A.C.S.		
Country of Origin	United States	Suggested Retest Date	Aug/2024
Chemical Origin	Inorganic-non animal		
BSE/TSE Comment	No animal products are used as starting raw material ingredients, or used in processing, including lubricants, processing aids, or any other material that might migrate to the finished product.		
Chemical Comment			

N/A			
Result Name	Units	Specifications	Test Value
APPEARANCE		REPORT	Fine, orange-red crystals
ASSAY	%	>= 99	99.2
CALCIUM	%	<= 0.003	<0.003
CHLORIDE	%	<= 0.001	<0.001
LOSS ON DRYING @ 105 C	%	<= 0.05	<0.05
SULFATE (SO4)	%	<= 0.005	<0.005
INSOLUBLE MATTER	%	<= 0.005	0.003
IRON (Fe)	%	<= 0.001	<0.001
SODIUM (Na)	%	<= 0.02	<0.02
IDENTIFICATION	PASS/FAIL	= PASS TEST	PASS TEST

Jerusa Bailey-Wyche

Quality Assurance Specialist - Certificate of Analysis Fair Lawn

Note: The data listed is valid for all package sizes of this lot of this product, expressed as an extension of this catalog number listed above.
 If there are any questions with this certificate, please call at (800) 227-6701.

*Based on suggested storage condition.

Certificate of Analysis



Certificate of Analysis

1 Reagent Lane
 Fair Lawn, NJ 07410
 201.796.7100 tel
 201.796.1329 fax

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This is to certify that units of the lot number below were tested and found to comply with the specifications of the grade listed. Certain data have been supplied by third parties. Thermo Fisher Scientific expressly disclaims all warranties, expressed or implied, including the implied warranties of merchantability and fitness for a particular purpose. Products are for research use or further manufacturing. Not for direct administration to humans or animals. It is the responsibility of the final formulator and end user to determine suitability based upon the intended use of the end product. Products are tested to meet the analytical requirements of the noted grade. The following information is the actual analytical results obtained.

Catalog Number	P243	Quality Test / Release Date	06/19/2020
Lot Number	201089		
Description	POTASSIUM HYDROGEN PHTHALATE,ACIDIMETRIC STANDARD, A.C.S.		
Country of Origin	Spain	Suggested Retest Date	Jun/2025
Chemical Origin	Organic - non animal		
BSE/TSE Comment	No animal products are used as starting raw material ingredients, or used in processing, including lubricants, processing aids, or any other material that might migrate to the finished product.		

N/A			
Result Name	Units	Specifications	Test Value
APPEARANCE		REPORT	WHITE CRYSTALS
ASSAY POTASSIUM HYDROGEN PHTHALATE	%	Inclusive Between 99.95 - 100.05	100.03
CHLORINE COMPOUNDS	%	<= 0.003	<0.003
HEAVY METALS (as Pb)	ppm	<= 5	<5
IDENTIFICATION	PASS/FAIL	= PASS TEST	PASS TEST
INSOLUBLE MATTER	%	<= 0.005	<0.005
IRON (Fe)	ppm	<= 5	<5
PH OF 0.05M SOLUTION		Inclusive Between 4.00 - 4.02	4.00
SODIUM (Na)	%	<= 0.005	<0.005
SULFUR COMPOUNDS	%	<= 0.002	<0.002%
TRACEABLE TO NIST	SOD CARBONATE	= LOT 351a	351a
TRACEABLE TO NIST KHP STD	POT. ACID PHTHALATE	= LOT 84L	84L

Julian Burton - Quality Control Manager – Fair Lawn

Note: The data listed is valid for all package sizes of this lot of this product, expressed as an extension of this catalog number listed above.

If there are any questions with this certificate, please call at (800) 227-6701.

*Based on suggested storage condition.



PRODUCTOS
QUÍMICOS
MONTERREY, S.A. DE C.V.

MIRADOR 201, COL. MIRADOR
MONTERREY, N.L. MEXICO
CP 64070
TEL +52 81 13 52 57 57
www.pqm.com.mx

CERTIFICATE OF ANALYSIS

PRODUCT :	SODIUM SULFATE CRYSTALS ANHYDROUS		
QUALITY :	ACS (CODE RMB3375)	FORMULA :	Na ₂ SO ₄
SPECIFICATION NUMBER :	6399	RELEASE DATE:	ABR/21/2023
LOT NUMBER :	313201		

TEST	SPECIFICATIONS	LOT VALUES
Assay (Na ₂ SO ₄)	Min. 99.0%	99.7 %
pH of a 5% solution at 25°C	5.2 - 9.2	6.1
Insoluble matter	Max. 0.01%	0.005 %
Loss on ignition	Max. 0.5%	0.1 %
Chloride (Cl)	Max. 0.001%	<0.001 %
Nitrogen compounds (as N)	Max. 5 ppm	<5 ppm
Phosphate (PO ₄)	Max. 0.001%	<0.001 %
Heavy metals (as Pb)	Max. 5 ppm	<5 ppm
Iron (Fe)	Max. 0.001%	<0.001 %
Calcium (Ca)	Max. 0.01%	0.002 %
Magnesium (Mg)	Max. 0.005%	0.001 %
Potassium (K)	Max. 0.008%	0.003 %
Extraction-concentration suitability	Passes test	Passes test
Appearance	Passes test	Passes test
Identification	Passes test	Passes test
Solubility and foreing matter	Passes test	Passes test
Retained on US Standard No. 10 sieve	Max. 1%	0.1 %
Retained on US Standard No. 60 sieve	Min. 94%	97.3 %
Through US Standard No. 60 sieve	Max. 5%	2.5 %
Through US Standard No. 100 sieve	Max. 10%	0.1 %

COMMENTS

QC: PhC Irma Belmares

If you need further details, please call our factory or contact our local distributor.

Recd. by R3 on 7/29/23 [E 3551]

RC-02-01, Ed. 3

Acetone
BAKER RESI-ANALYZED® Reagent
For Organic Residue Analysis



Material No.: 9254-03
Batch No.: 24H2762008
Manufactured Date: 2024-04-18
Expiration Date: 2027-04-18
Revision No.: 0

Certificate of Analysis

Test	Specification	Result
Assay ((CH ₃) ₂ CO) (by GC, corrected for water)	>= 99.4 %	100.0 %
Color (APHA)	<= 10	5
Residue after Evaporation	<= 1.0 ppm	0.0 ppm
Substances Reducing Permanganate	Passes Test	Passes Test
Titrable Acid (μeq/g)	<= 0.3	0.2
Titrable Base (μeq/g)	<= 0.6	<0.1
Water (H ₂ O)	<= 0.5 %	<0.1 %
FID-Sensitive Impurities (as 2-Octanol) Single Impurity Peak (ng/mL)	<= 5	1
ECD Sensitive Impurities (as HeptachlorEpoxide) Single Peak (pg/mL)	<= 10	1

For Laboratory, Research, or Manufacturing Use

MEETS SPECIFICATIONS WITHIN THE EXPIRATION PERIOD

Country of Origin: United States

Packaging Site: Phillipsburg Mfg Ctr & DC

Recd. by RP on 2/12/25

E 3876

A handwritten signature in black ink, appearing to read 'Jamie Croak'.

Jamie Croak
Director Quality Operations, Bioscience Production

For questions on this Certificate of Analysis please contact Technical Services at 855.282.6867 or +1.610.386.1700

Sodium Chloride, Crystal
BAKER ANALYZED® A.C.S. Reagent

M5493 - M5493
Radnor 5/16/23
only



Material No.: 3624-01

Batch No.: 0000281938

Manufactured Date: 2021-06-07

Retest Date: 2026-06-07

Revision No.: 2

Certificate of Analysis

Test	Specification	Result
Assay (NaCl) (by Ag titrn)	≥ 99.0 %	100.0 %
pH of 5% Solution at 25°C	5.0 - 9.0	6.3
Insoluble Matter	≤ 0.005 %	0.003 %
Iodide (I)	≤ 0.002 %	< 0.002 %
Bromide (Br)	≤ 0.01 %	< 0.01 %
Chlorate and Nitrate (as NO ₃)	≤ 0.003 %	< 0.001 %
ACS - Phosphate (PO ₄)	≤ 5 ppm	< 5 ppm
Sulfate (SO ₄)	≤ 0.004 %	< 0.004 %
Barium (Ba)	Passes Test	Passes Test
ACS - Heavy Metals (as Pb)	≤ 5 ppm	< 5 ppm
Iron (Fe)	≤ 2 ppm	< 1 ppm
Calcium (Ca)	≤ 0.002 %	< 0.001 %
Magnesium (Mg)	≤ 0.001 %	< 0.001 %
Potassium (K)	≤ 0.005 %	0.001 %

For Laboratory, Research, or Manufacturing Use

Meets Reagent Specifications for testing USP/NF monographs

Country of Origin: USA

Packaging Site: Paris Mfg Ctr & DC

Jamie Ethier
Vice President Global Quality

For questions on this Certificate of Analysis please contact Technical Services at 855.282.6867 or +1.610.386.1700

Avantor Performance Materials, LLC

100 Matsonford Rd, Suite 200, Radnor, PA 19087. U.S.A. Phone 610.386.1700

Sulfuric Acid
BAKER INSTRA-ANALYZED® Reagent
For Trace Metal Analysis
Low Selenium

M5873-
AB



Material No.: 9673-33
Batch No.: 23D2462010
Manufactured Date: 2023-03-22
Retest Date: 2028-03-20
Revision No.: 0

Certificate of Analysis

Test	Specification	Result
ACS – Assay (H ₂ SO ₄)	95.0 – 98.0 %	96.1 %
Appearance	Passes Test	Passes Test
ACS – Color (APHA)	≤ 10	5
ACS – Residue after Ignition	≤ 3 ppm	< 1 ppm
ACS – Substances Reducing Permanganate (as SO ₂)	≤ 2 ppm	< 2 ppm
Ammonium (NH ₄)	≤ 1 ppm	1 ppm
Chloride (Cl)	≤ 0.1 ppm	< 0.1 ppm
Nitrate (NO ₃)	≤ 0.2 ppm	< 0.1 ppm
Phosphate (PO ₄)	≤ 0.5 ppm	< 0.1 ppm
Trace Impurities – Aluminum (Al)	≤ 30.0 ppb	< 5.0 ppb
Arsenic and Antimony (as As)	≤ 4.0 ppb	< 2.0 ppb
Trace Impurities – Boron (B)	≤ 10.0 ppb	8.5 ppb
Trace Impurities – Cadmium (Cd)	≤ 2.0 ppb	< 0.3 ppb
Trace Impurities – Chromium (Cr)	≤ 6.0 ppb	< 0.4 ppb
Trace Impurities – Cobalt (Co)	≤ 0.5 ppb	< 0.3 ppb
Trace Impurities – Copper (Cu)	≤ 1.0 ppb	< 0.1 ppb
Trace Impurities – Gold (Au)	≤ 10.0 ppb	0.5 ppb
Heavy Metals (as Pb)	≤ 500.0 ppb	< 100.0 ppb
Trace Impurities – Iron (Fe)	≤ 50.0 ppb	1.3 ppb
Trace Impurities – Lead (Pb)	≤ 0.5 ppb	< 0.5 ppb
Trace Impurities – Magnesium (Mg)	≤ 7.0 ppb	0.8 ppb
Trace Impurities – Manganese (Mn)	≤ 1.0 ppb	< 0.4 ppb
Trace Impurities – Mercury (Hg)	≤ 0.5 ppb	< 0.1 ppb
Trace Impurities – Nickel (Ni)	≤ 2.0 ppb	0.3 ppb
Trace Impurities – Potassium (K)	≤ 500.0 ppb	< 2.0 ppb
Trace Impurities – Selenium (Se)	≤ 50.0 ppb	< 0.1 ppb
Trace Impurities – Silicon (Si)	≤ 100.0 ppb	31.5 ppb
Trace Impurities – Silver (Ag)	≤ 1.0 ppb	< 0.3 ppb

>>> Continued on page 2 >>>

Sulfuric Acid
BAKER INSTRA-ANALYZED® Reagent
For Trace Metal Analysis
Low Selenium

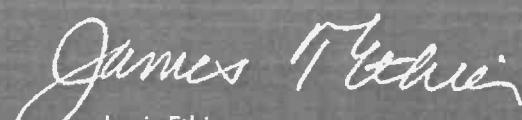


Material No.: 9673-33
Batch No.: 23D2462010

Test	Specification	Result
Trace Impurities – Sodium (Na)	≤ 500.0 ppb	5.4 ppb
Trace Impurities – Strontium (Sr)	≤ 5.0 ppb	< 0.2 ppb
Trace Impurities – Tin (Sn)	≤ 5.0 ppb	< 0.8 ppb
Trace Impurities – Zinc (Zn)	≤ 5.0 ppb	0.4 ppb

For Laboratory, Research, or Manufacturing Use

Country of Origin: USA
Packaging Site: Phillipsburg Mfg Ctr & DC


Jamie Ethier
Vice President Global Quality

Sulfuric Acid
BAKER INSTRA-ANALYZED® Reagent
For Trace Metal Analysis
Low Selenium

M 6041-#b
M



Material No.: 9673-33
Batch No.: 23D2462010
Manufactured Date: 2023-03-22
Retest Date: 2028-03-20
Revision No.: 0

Certificate of Analysis

Test	Specification	Result
ACS - Assay (H ₂ SO ₄)	95.0 – 98.0 %	96.1 %
Appearance	Passes Test	Passes Test
ACS - Color (APHA)	≤ 10	5
ACS - Residue after Ignition	≤ 3 ppm	< 1 ppm
ACS - Substances Reducing Permanganate (as SO ₂)	≤ 2 ppm	< 2 ppm
Ammonium (NH ₄)	≤ 1 ppm	1 ppm
Chloride (Cl)	≤ 0.1 ppm	< 0.1 ppm
Nitrate (NO ₃)	≤ 0.2 ppm	< 0.1 ppm
Phosphate (PO ₄)	≤ 0.5 ppm	< 0.1 ppm
Trace Impurities - Aluminum (Al)	≤ 30.0 ppb	< 5.0 ppb
Arsenic and Antimony (as As)	≤ 4.0 ppb	< 2.0 ppb
Trace Impurities - Boron (B)	≤ 10.0 ppb	8.5 ppb
Trace Impurities - Cadmium (Cd)	≤ 2.0 ppb	< 0.3 ppb
Trace Impurities - Chromium (Cr)	≤ 6.0 ppb	< 0.4 ppb
Trace Impurities - Cobalt (Co)	≤ 0.5 ppb	< 0.3 ppb
Trace Impurities - Copper (Cu)	≤ 1.0 ppb	< 0.1 ppb
Trace Impurities - Gold (Au)	≤ 10.0 ppb	0.5 ppb
Heavy Metals (as Pb)	≤ 500.0 ppb	< 100.0 ppb
Trace Impurities - Iron (Fe)	≤ 50.0 ppb	1.3 ppb
Trace Impurities - Lead (Pb)	≤ 0.5 ppb	< 0.5 ppb
Trace Impurities - Magnesium (Mg)	≤ 7.0 ppb	0.8 ppb
Trace Impurities - Manganese (Mn)	≤ 1.0 ppb	< 0.4 ppb
Trace Impurities - Mercury (Hg)	≤ 0.5 ppb	< 0.1 ppb
Trace Impurities - Nickel (Ni)	≤ 2.0 ppb	0.3 ppb
Trace Impurities - Potassium (K)	≤ 500.0 ppb	< 2.0 ppb
Trace Impurities - Selenium (Se)	≤ 50.0 ppb	< 0.1 ppb
Trace Impurities - Silicon (Si)	≤ 100.0 ppb	31.5 ppb
Trace Impurities - Silver (Ag)	≤ 1.0 ppb	< 0.3 ppb

>>> Continued on page 2 >>>

Sulfuric Acid
BAKER INSTRA-ANALYZED® Reagent
For Trace Metal Analysis
Low Selenium



Material No.: 9673-33
Batch No.: 23D2462010

Test	Specification	Result
Trace Impurities – Sodium (Na)	≤ 500.0 ppb	5.4 ppb
Trace Impurities – Strontium (Sr)	≤ 5.0 ppb	< 0.2 ppb
Trace Impurities – Tin (Sn)	≤ 5.0 ppb	< 0.8 ppb
Trace Impurities – Zinc (Zn)	≤ 5.0 ppb	0.4 ppb

For Laboratory, Research, or Manufacturing Use

Country of Origin: USA
Packaging Site: Phillipsburg Mfg Ctr & DC

A handwritten signature in black ink, appearing to read "James T. Ethier". Below the signature, the name "Jamie Ethier" is printed in a smaller, standard font, followed by the title "Vice President Global Quality".

Certificate of Analysis

Product information

Product pH-Fix 0.3-2.3
 REF 92180
 LOT 80A0441
 Expiration date: 29.02.2028
 Date of examination: 23.01.2024
 Gradation: pH 0.3-0.7-1.0-1.3-1.6-1.9-2.3

Confirmation

Hereby we confirm, that the above mentioned product has successfully passed our quality control system in accordance with ISO 9001 and meets the specific quality criteria.

This document has been produced electronically and is valid without a signature.



MACHEREY-NAGEL GmbH & Co. KG
 Management System
 EN ISO 13485:2016
 ISO 9001:2015
 Valenciennes Str. 11
 52355 Düren · Germany
www.mn-net.com

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 FR Tel.: +33 388 68 22 68 sales-fr@mn-net.com
 US Tel.: +1 888 321 62 24 sales-us@mn-net.com

Hydrochloric Acid, 36.5-38.0%
BAKER INSTRA-ANALYZED® Reagent
For Trace Metal Analysis

avantor™



R → 16|13|25

Method

M 6|21

Material No.: 9530-33
Batch No.: 0000275677
Manufactured Date: 2020/12/16
Retest Date: 2025/12/15
Revision No: 1

Certificate of Analysis

Test	Specification	Result
ACS - Assay (as HCl) (by acid-base titrn)	36.5 – 38.0 %	37.6
ACS - Color (APHA)	<= 10	5
ACS - Residue after Ignition	<= 3 ppm	1
ACS - Specific Gravity at 60°/60°F	1.185 – 1.192	1.190
ACS - Bromide (Br)	<= 0.005 %	< 0.005
ACS - Extractable Organic Substances	<= 5 ppm	1
ACS - Free Chlorine (as Cl ₂)	<= 0.5 ppm	< 0.5
Phosphate (PO ₄)	<= 0.05 ppm	< 0.03
Sulfate (SO ₄)	<= 0.5 ppm	< 0.3
Sulfite (SO ₃)	<= 0.8 ppm	0.3
Ammonium (NH ₄)	<= 3 ppm	< 1
Trace Impurities - Arsenic (As)	<= 0.010 ppm	< 0.003
Trace Impurities - Aluminum (Al)	<= 10.0 ppb	< 0.2
Arsenic and Antimony (as As)	<= 5 ppb	< 3
Trace Impurities - Barium (Ba)	<= 1.0 ppb	< 0.2
Trace Impurities - Beryllium (Be)	<= 1.0 ppb	< 0.2
Trace Impurities - Bismuth (Bi)	<= 10.0 ppb	< 1.0
Trace Impurities - Boron (B)	<= 20.0 ppb	< 5.0
Trace Impurities - Cadmium (Cd)	<= 1.0 ppb	< 0.3
Trace Impurities - Calcium (Ca)	<= 50.0 ppb	29.7
Trace Impurities - Chromium (Cr)	<= 1.0 ppb	< 0.4
Trace Impurities - Cobalt (Co)	<= 1.0 ppb	< 0.3
Trace Impurities - Copper (Cu)	<= 1.0 ppb	< 0.1
Trace Impurities - Gallium (Ga)	<= 1.0 ppb	< 0.2

For questions on this Certificate of Analysis please contact Technical Services at 855.282.6867 or +1.610.386.1700

Avantor Performance Materials, LLC

100 Matsonford Rd, Suite 200, Radnor, PA 19087. U.S.A. Phone: 610.386.1700

Test	Specification	Result
Trace Impurities – Germanium (Ge)	<= 3.0 ppb	< 2.0
Trace Impurities – Gold (Au)	<= 4.0 ppb	< 0.2
Heavy Metals (as Pb)	<= 100 ppb	< 50
Trace Impurities – Iron (Fe)	<= 15.0 ppb	< 1
Trace Impurities – Lead (Pb)	<= 1.0 ppb	< 0.5
Trace Impurities – Lithium (Li)	<= 1.0 ppb	0.2
Trace Impurities – Magnesium (Mg)	<= 10.0 ppb	0.4
Trace Impurities – Manganese (Mn)	<= 1.0 ppb	< 0.4
Trace Impurities – Mercury (Hg)	<= 0.5 ppb	0.1
Trace Impurities – Molybdenum (Mo)	<= 10.0 ppb	< 5.0
Trace Impurities – Nickel (Ni)	<= 4.0 ppb	< 0.3
Trace Impurities – Niobium (Nb)	<= 1.0 ppb	< 0.2
Trace Impurities – Potassium (K)	<= 9.0 ppb	< 2.0
Trace Impurities – Selenium (Se), For Information Only	ppb	1.0
Trace Impurities – Silicon (Si)	<= 100.0 ppb	< 10.0
Trace Impurities – Silver (Ag)	<= 1.0 ppb	< 0.3
Trace Impurities – Sodium (Na)	<= 100.0 ppb	< 5.0
Trace Impurities – Strontium (Sr)	<= 1.0 ppb	< 0.2
Trace Impurities – Tantalum (Ta)	<= 1.0 ppb	< 0.9
Trace Impurities – Thallium (Tl)	<= 5.0 ppb	< 2.0
Trace Impurities – Tin (Sn)	<= 5.0 ppb	< 0.8
Trace Impurities – Titanium (Ti)	<= 1.0 ppb	0.2
Trace Impurities – Vanadium (V)	<= 1.0 ppb	< 0.2
Trace Impurities – Zinc (Zn)	<= 5.0 ppb	0.3
Trace Impurities – Zirconium (Zr)	<= 1.0 ppb	< 0.1

For Laboratory, Research or Manufacturing Use

Product Information (not specifications):

Appearance (clear, fuming liquid)

Meets ACS Specifications

Country of Origin: US

Packaging Site: Phillipsburg Mfg Ctr & DC



Jamie Ethier
Vice President Global Quality

For questions on this Certificate of Analysis please contact Technical Services at 855.282.6867 or +1.610.386.1700

Avantor Performance Materials, LLC

100 Matsonford Rd, Suite 200, Radnor, PA 19087. U.S.A. Phone: 610.386.1700

W 2979

Rec: 12/09/22

Exp: 12/09/27

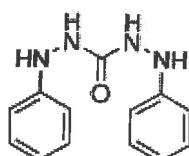
3050 Spruce Street, Saint Louis, MO 63103, USA

Website: www.sigmaaldrich.comEmail USA: techserv@sial.comOutside USA: eurtechserv@sial.com**Certificate of Analysis**

Product Name:

1,5-Diphenylcarbazide - ACS reagent

Product Number:	259225
Batch Number:	MKCR6636
Brand:	SIAL
CAS Number:	140-22-7
MDL Number:	MFCD00003013
Formula:	C13H14N4O
Formula Weight:	242.28 g/mol
Quality Release Date:	02 JUN 2022



Test	Specification	Result
Appearance (Color) Off-White to Pink, Light Purple or Tan	Conforms to Requirements	Pink
Appearance (Form)	Powder or Chunks	Powder
Melting Point	173.0 - 176.0 °C	173.0 °C
Infrared Spectrum	Conforms to Structure	Conforms
Residue on ignition (Ash) 15 minutes, 800 Degrees Celsius	≤ 0.05 %	0.01 %
Solubility	Pass	Pass
Sensitivity Test	Pass	Pass
Meets ACS Requirements	Current ACS Specification	Conforms


 Larry Coers, Director
 Quality Control
 Milwaukee, WI US

Sigma-Aldrich warrants, that at the time of the quality release or subsequent retest date this product conformed to the information contained in this publication. The current Specification sheet may be available at Sigma-Aldrich.com. For further inquiries, please contact Technical Service. Purchaser must determine the suitability of the product for its particular use. See reverse side of invoice or packing slip for additional terms and conditions of sale.





Certificate of Analysis



Sodium Hydroxide (Pellets)

Material: 0583
Grade: ACS GRADE
Batch Number: 23B1556310

Chemical Formula: NaOH
Molecular Weight: 40
CAS #: 1310-73-2
Appearance: Pellets

Manufacture Date: 12/14/2022
Expiration Date: 12/31/2025
Storage: Room Temperature

TEST	SPECIFICATION	ANALYSIS	DISPOSITION
Calcium	<= 0.005 %	<0.005 %	PASS
Chloride	<= 0.005 %	0.002 %	PASS
Heavy Metals	<= 0.002 %	<0.002 %	PASS
Iron	<= 0.001 %	<0.001 %	PASS
Magnesium	<= 0.002 %	<0.002 %	PASS
Mercury	<= 0.1 ppm	<0.1 ppm	PASS
Nickel	<= 0.001 %	<0.001 %	PASS
Nitrogen Compounds	<= 0.001 %	<0.001 %	PASS
Phosphate	<= 0.001 %	<0.001 %	PASS
Potassium	<= 0.02 %	<0.02 %	PASS
Purity	>= 97.0 %	99.2 %	PASS
Sodium Carbonate	<= 1.0 %	0.5 %	PASS
Sulfate	<= 0.003 %	<0.003 %	PASS

Internal ID #: 710

Signature

Additional Information

We certify that this batch conforms to the specifications listed.

This document has been electronically produced and is valid without a signature.

Leona Edwardson, Quality Control Sr. Manager - Solon
VWR Chemicals, LLC.
28600 Fountain Parkway, Solon OH 44139 USA

Analysis may have been rounded to significant digits in specification limits.

Product meets analytical specifications of the grades listed.



Certificate of Analysis



Sodium Hydroxide (Pellets)

Material: 0583

Grade: ACS GRADE

Batch Number: 23B1556310

Chemical Formula: NaOH

Molecular Weight: 40

CAS #: 1310-73-2

Appearance:

Manufacture Date: 12/14/2022

Expiration Date: 12/31/2025

Storage: Room Temperature

Pellets

Spec Set: 0583ACS

Internal ID #: 710

Signature

Additional Information

We certify that this batch conforms to the specifications listed.

Analysis may have been rounded to significant digits in specification limits.

This document has been electronically produced and is valid without a signature.

Product meets analytical specifications of the grades listed.

Leona Edwardson, Quality Control Sr. Manager - Solon

VWR Chemicals, LLC.

28600 Fountain Parkway, Solon OH 44139 USA



Certificate Of Analysis

Item Number	ED150	Lot Number	2ND0156
Item	Edetate Disodium, Dihydrate, USP	CAS Number	6381-92-6
Molecular Formula	C ₁₀ H ₁₄ N ₂ Na ₂ O ₈ •2H ₂ O	Molecular Weight	372.24

TEST	SPECIFICATION		RESULT
	MIN	MAX	
ASSAY (DRIED BASIS)	99.0	101.0 %	99.5 %
pH OF A 5% SOLUTION @ 25°C	4.0	6.0	4.6
LOSS ON DRYING	8.7	11.4 %	8.90 %
CALCIUM (Ca)	NO PRECIPITATE IS FORMED		NO PRECIPITATE IS FORMED
ELEMENTAL IMPURITIES:			.
NICKEL (Ni)	AS REPORTED		<0.3 ppm
CHROMIUM (Cr)	AS REPORTED		<0.3 ppm
NITRILOTRIACETIC ACID[n[(HOCOCH ₂) ₃ N]		0.1 %	<0.10 %
IDENTIFICATION A	MATCHES REFERENCE		MATCHES REFERENCE
IDENTIFICATION B	RED COLOR IS DISCHARGED, LEAVING A YELLOWISH SOLUTION		RED COLOR IS DISCHARGED, LEAVING A YELLOWISH SOLUTION
IDENTIFICATION C	MEETS THE REQUIREMENTS FOR SODIUM		MEETS THE REQUIREMENTS FOR SODIUM
CERTIFIED HALAL			CERTIFIED HALAL
EXPIRATION DATE			10-JUL-2026
DATE OF MANUFACTURE			11-JUL-2023
APPEARANCE			WHITE CRYSTALLINE POWDER
RESIDUAL SOLVENTS	AS REPORTED		NO RESIDUAL SOLVENTS PRESENT
MONOGRAPH EDITION			USP 2024

Certificate of Analysis Results Entered By:

CACEVEDO
Charmian Acevedo
22-MAY-24 08:12:30

Certificate of Analysis Results Approved By:

GHERRERA
Genaro Herrera
22-MAY-24 12:32:01

Spectrum Chemical Mfg Corp
755 Jersey Avenue
New Brunswick 08901 NJ



All pharmaceutical ingredients are tested using current edition of applicable pharmacopeia.

Read and understand label and SDS before handling any chemicals. All Spectrum's chemicals are for manufacturing, processing, repacking or research purposes by experienced personnel only. It is the customer's responsibility to provide adequate hazardous material training and ensure that appropriate Personal Protective Equipment (PPE) is used before handling any chemical.

The Elemental Impurities standards implemented by USP and other Pharmaceutical Compendia reflect a growing understanding of the toxicology of trace levels of elemental impurities that can remain in drug substances originating from either raw materials or manufacturing processes. Identifying and quantifying impurities can be critical to predicting the best possible patient outcomes. Elemental Impurities has been a requirement of all products meeting USP/NF, EP and BP monographs since January 1, 2018. More information can be found in USP sections <232> Elemental Impurities – Limits and <233> Elemental Impurities – Procedures. Data for drug substances furnished by Spectrum Chemical Mfg. Corp can be used to ensure that patient daily exposures by oral administration to the selected elements are not exceeded in the formulation of pharmaceutical products.



Certificate of Analysis



Magnesium Sulfate Heptahydrate

Material: 0662

Grade: ACS GRADE

Batch Number: 24J2856877

Chemical Formula: MgSO₄.7H₂O

Molecular Weight: 246.48

CAS #: 10034-99-8

Appearance:

White powder

Manufacture Date: 05/29/2023

Reassay Date: 05/29/2027

Storage: Room Temperature

TEST	SPECIFICATION	ANALYSIS	DISPOSITION
Ammonium	<= 0.002 %	<0.001 %	PASS
Calcium	<= 0.02 %	<0.0005 %	PASS
Chloride	<= 0.0005 %	0.0001 %	PASS
Heavy Metals (as Pb)	<= 0.0005 %	<0.0001 %	PASS
Insolubles	<= 0.005 %	<0.0002 %	PASS
Iron	<= 0.0005 %	<0.00001 %	PASS
Manganese	<= 0.0005 %	<0.0001 %	PASS
Nitrate	<= 0.002 %	<0.001 %	PASS
pH (5%, Water) @25C	5.0 - 8.2	6.3	PASS
Potassium	<= 0.005 %	<0.001 %	PASS
Purity	98.0 - 102.0 %	100.1 %	PASS
Sodium	<= 0.005 %	<0.001 %	PASS
Strontium	<= 0.005 %	<0.00001 %	PASS

Internal ID #: 793

Signature

Additional Information

We certify that this batch conforms to the specifications listed.

This document has been electronically produced and is valid without a signature.

Leona Edwardson, Quality Control Sr. Manager - Solon
VWR Chemicals, LLC.
28600 Fountain Parkway, Solon OH 44139 USA

Analysis may have been rounded to significant digits in specification limits.

Product meets analytical specifications of the grades listed.



Certificate of Analysis



Magnesium Sulfate Heptahydrate

Material: 0662

Grade: ACS GRADE

Batch Number: 24J2856877

Chemical Formula: MgSO₄.7H₂O

Molecular Weight: 246.48

CAS #: 10034-99-8

Appearance:

White powder

Manufacture Date: 05/29/2023

Reassay Date: 05/29/2027

Storage: Room Temperature

Spec Set: 0662ACS

Internal ID #: 793

Signature

Additional Information

We certify that this batch conforms to the specifications listed.

Analysis may have been rounded to significant digits in specification limits.

This document has been electronically produced and is valid without a signature.

Product meets analytical specifications of the grades listed.

Leona Edwardson, Quality Control Sr. Manager - Solon

VWR Chemicals, LLC.

28600 Fountain Parkway, Solon OH 44139 USA



Certificate of Analysis

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Material	BDH9260-500G
Material Description	BDH POTASS HYDRGN PHTHLTE 500G
Grade	ACS GRADE
Batch	24H0956262
Reassay Date	04/28/2026
CAS Number	877-24-7
Molecular Formula	HOOCC6H4COOK
Molecular Mass	204.22
Date of Manufacture	04/29/2023
Storage	Room Temperature

Characteristics	Specifications	Measured Values
Appearance	White crystals.	White crystals.
Assay (dried basis)	99.95 - 100.05 %	99.98 %
Chlorine Compounds	<= 0.003 %	<0.003 %
Heavy Metals (as Pb)	<= 5 ppm	<5 ppm
Insoluble Matter	<= 0.005 %	0.003 %
Iron	<= 5 ppm	<5 ppm
pH (0.05M, Water) @25C	4.00 - 4.02	4.00
Sodium	<= 0.005 %	<0.005 %
Sulfur Compounds	<= 0.002 %	<0.002 %

Internal ID #: 322

Signature	Additional Information
We certify that this batch conforms to the specifications listed above. This document has been electronically produced and is valid without a signature. Leona Edwardson, Quality Control Sr. Manager - Solon VWR Chemicals, LLC. 28600 Fountain Parkway, Solon OH 44139 USA	Analysis may have been rounded to significant digits in specification limits Product meets analytical specifications of the grades listed.



Certificate of Analysis

Sodium Hypochlorite Solution, 5% available Chlorine

Lot Number: 2501J28

Product Number: 7495.5

Manufacture Date: JAN 17, 2025

Expiration Date: JUL 2025

This solution is subject to slow decomposition upon exposure to air. Keep container tightly capped. Refrigeration may improve stability.
When used in the Phenate method for Ammonia, APHA recommends replacing this solution about every 2 months.

Name	CAS#	Grade
Water	7732-18-5	Commercial
Sodium Hypochlorite	7681-52-9	Commercial

Test	Specification	Result	NIST SRM#
Appearance	Colorless to greenish-yellow liquid	Passed	
Assay (vs. Sodium Thiosulfate/Starch)	4.75-5.25 % (w/w) Cl ₂	5.17 % (w/w) Cl ₂	136

Specification	Reference
Sodium Hypochlorite, 5%	APHA (4500-NH3 F)
Sodium Hypochlorite	ASTM (D 4785)

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)
7495.5-1	4 L black poly	6 months
7495.5-16	500 mL amber poly	6 months
7495.5-32	1 L amber poly	6 months
7495.5-8	250 mL amber poly	6 months

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

Jose Pena (01/17/2025)
Operations Manager

This test report shall not be reproduced, except in full, without the written approval of Ricca Chemical Company.

n-Hexane 95%
ULTRA RESI-ANALYZED
For Organic Residue Analysis



Material No.: 9262-03
Batch No.: 24G1962003
Manufactured Date: 2024-05-23
Expiration Date: 2025-08-22
Revision No.: 0

W314X
W314Y
CPLTE. 02/03/2023
SP

Certificate of Analysis

Test	Specification	Result
FID-Sensitive Impurities (as 2-Octanol) Single Impurity Peak (ng/mL)	≤ 5	3
ECD Sensitive Impurities (as Heptachlor Epoxide) Single Peak (pg/mL)	≤ 10	1
ECD-Sensitive Impurities (as Ethylene Dibromide) - Single Impurity Peak (ng/mL)	≤ 5	1
Assay (Total Saturated C ₆ Isomers) (by GC, corrected for water)	≥ 99.5 %	99.7 %
Assay (as n-Hexane) (by GC, corrected for water)	≥ 95 %	98 %
Color (APHA)	≤ 10	5
Residue after Evaporation	≤ 1.0 ppm	0.1 ppm
Substances Darkened by H ₂ SO ₄	Passes Test	Passes Test
Water (by KF, coulometric)	≤ 0.05 %	< 0.01 %

For Laboratory, Research, or Manufacturing Use
MEETS SPECIFICATIONS WITHIN THE EXPIRATION PERIOD

Country of Origin: USA
Packaging Site: Phillipsburg Mfg Ctr & DC

A handwritten signature of the name "Jamie Croak".

Jamie Croak
Director Quality Operations, Biosciences Division
193 of 201



Certificate of Analysis

300 Technology Drive
Christiansburg, VA 24073 USA
inorganicventures.com

P: 800-669-6799/540-585-3030
F: 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).



2.0 PRODUCT DESCRIPTION

Product Code: Multi Analyte Ion Chromatography Solution
Catalog Number: 300-CAL-A
Lot Number: V2-MEB742616
Matrix: H₂O
Value / Analyte(s):
 150 µg/mL ea:
 Sulfate,
 100 µg/mL ea:
 Bromide,
 50 µg/mL ea:
 o-Phosphate as P,
 30 µg/mL ea:
 Chloride, Nitrite as N,
 25 µg/mL ea:
 Nitrate as N,
 20 µg/mL ea:
 Fluoride

3.0 CERTIFIED VALUES AND UNCERTAINTIES

ANALYTE	CERTIFIED VALUE	ANALYTE	CERTIFIED VALUE
Bromide, Br	100.0 ± 0.5 µg/mL	Chloride, Cl	30.01 ± 0.13 µg/mL
Fluoride, F-	20.00 ± 0.07 µg/mL	Nitrate as N, NNO ₃ -	25.00 ± 0.10 µg/mL
Nitrite as N, NNO ₂ -	30.00 ± 0.10 µg/mL	o-Phosphate as P, PPO ₄	50.00 ± 0.18 µg/mL
Sulfate, SO ₄	150.0 ± 0.8 µg/mL		

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

Assay Information:

ANALYTE	METHOD	NIST SRM#	SRM LOT#
Br	IC Assay	3184	151130
Br	Fajans	999c	999c
Cl	IC Assay	3182	190830
Cl	Fajans	999c	999c
F-	IC Assay	3183	140203
NNO3-	IC Assay	3185	170309
NNO2-	IC Assay	Traceable to 40H	08228TH-H2
NNO2-	Calculated	40h	40h
PPO4	IC Assay	3186	170606
SO4	IC Assay	3181	080603

- 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:

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

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:

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

$$CRM/RM Expanded Uncertainty (\pm) = U_{CRM/RM} = k (u_{char}^2 + u_{bb}^2 + u_{ts}^2 + u_{ts}^2)^{1/2}$$

k = coverage factor = 2

$$u_{char} = [\sum((w_i)^2 (u_{char\ i})^2)]^{1/2} \text{ where } u_{char\ i} \text{ are the errors from each characterization method}$$

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{ts} = 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

$$CRM/RM Expanded Uncertainty (\pm) = U_{CRM/RM} = k (u_{char\ a}^2 + u_{bb}^2 + u_{ts}^2 + u_{ts}^2)^{1/2}$$

k = coverage factor = 2

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

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{ts} = 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

N/A

6.0 INTENDED USE

6.1 This standard is intended for the calibration of analytical instruments and validation of analytical methods as appropriate. This CRM may be used in connection with EPA Methods 6010, 6020 (all versions), Standard Methods 3120 B and USP <232> / ICH Q3D.

6.2 For products attaining traceability through Inorganic Ventures' Primary Certified Reference Materials (PCRM™) see the Limited License to Use PCRM™ in the Inorganic Ventures [Terms and Conditions of Sale](#), <https://www.inorganicventures.com/terms-and-conditions-sale>. The Terms and Conditions contain information on the use of materials traceable to PCRM™ certified reference materials. This Limited License agreement is especially pertinent for laboratories accredited under ISO:17034.

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

April 02, 2024

- 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

- April 02, 2029

- 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
Custom Processing Supervisor



Certificate Approved By:

Thomas Kozikowski
Stock VS Manager



Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director





SHIPPING DOCUMENTS

Q1539

Weston COC ID
Weston_20250310_1451

Chain of Custody Record/Lab Work Request

Page 1 of 1



Client:	Weston Solutions, Inc.		
Project Manager:	David Sembrot		
Street Address:	1400 Weston Way	City:	West Chester
Phone:	610-314-5456	ST, ZIP:	PA, 19038
e-mail:	david.sembrot@westonsolutions.com		
Sampled By:	Cheyenne Harrington		

Lab Use Only		
Temperature of cooler when received (°C)		
COC Tape was present and unbroken on outer package?	Y	N
Samples received in good condition?	Y	N
Labels indicate properly preserved?	Y	N
Received within holding times?	Y	N
Discrepancies between sample labels and COC record?	Y	N

Analyses Requested:	DRO by EPA 8015D	Pesticides by EPA 8081B	SVOCs by EPA 8270E	O&G by EPA 1654A	Hardness by EPA 200.7 & SM2340B	Anions by EPA 9056A	TOC by EPA 9060A/Lloyd Kahn	GRO by EPA 8015D	VOCs by EPA 8260D	Hex Cr by EPA 7196A	Ammonia by SM4500-NH3 B P	Metals w Hg by EPA 6020B/7470A
	Amber	Amber	Amber	Glass	Plastic	Plastic	Vial	Vial	Vial	Plastic	Plastic	Plastic
	1 L	1 L	1 L	1 L	1 L	1 L	40 mL	40 mL	40 mL	500 mL	500 mL	500 mL
	Ice to 0 6 deg C	Ice to 0-6 deg C	Ice to 0 6 deg	H2SO4 to < 2	HNO3 to pH	Ice to 0-6	H2SO4 to < 2	HCl to PH < 2	HCl to PH < 2	Ammonium H2SO4; Ice to 0-6	HNO3 to pH <	
#	Sample ID	G/C	Matrix	# Cont	MS/MSD	Date Collected	Time Collected					
1	TAPIAL3-MW03D-031025-00-T1	g	GW	19	no	3/10/2025	11:50	X	X	X	X	X
2	TAPFTA-MW01I-031025-00-T2	g	GW	19	no	3/10/2025	15:10	X	X	X	X	X
3	TAP-TB-03-031025-11	g	W	2	no	3/10/2025	11:50					
4	TAP-TB-04-031025-T2	g	W	2	no	3/10/25	16:55					
5												
6												
7												
8												
9												
10												
11												
12												

Shipping Airbill Number:	772613513150		Cooler Number:	1	of 2
Relinquished By	Date	Time	Received By	Date	Time
1.) Cheyenne Harrington	3/10/25	17:00	FedEx		
2.)			CD	3-11-25	9:56
3.)					

QSM 6.0 Compliant
Deliverable Requirements: DoD Level IV report, EnviroData EDD, and ERIS-compatible EDD

Matrix Codes
SS - Soil
SE - Sediment
SO - Solid
SL - Sludge
GW - Groundwater
W - Water
SB - Soil Boring
A - Air
DS - Drum Solids
DL - Drum Liquids
L - EP/TCLP Leachate
WI - Wipe
X - Other
F - Fish

Special Instructions/Comments

pH 1.9
pH 1.9

Air in VOCs

Laboratory Certification

Certified By	License No.
CAS EPA CLP Contract	68HERH20D0011
Connecticut	PH-0830
DOD ELAP (ANAB)	L2219
Maine	2024021
Maryland	296
New Hampshire	255424 Rev 1
New Jersey	20012
New York	11376
Pennsylvania	68-00548
Soil Permit	525-24-234-08441
Texas	T104704488

LOGIN REPORT/SAMPLE TRANSFER

Order ID : Q1539 **WEST04**

Order Date : 3/11/2025 10:36:00 AM

Project Mgr : YAZMEEN

Client Name : Weston Solutions

Project Name : Ft Meade Tipton Airfield Pa

Report Type : Level 4

Client Contact : Nathan Fretz

Receive DateTime : 3/11/2025 9:56:00 AM

EDD Type : SEDD 2A

Invoice Name : Weston Solutions

Purchase Order :

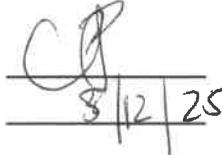
Hard Copy Date :

Invoice Contact : Nathan Fretz

Date Signoff : 3/11/2025 11:38:51 AM

LAB ID	CLIENT ID	MATRIX	SAMPLE DATE	SAMPLE TIME	TEST	TEST GROUP	METHOD	FAX DATE	DUE DATES
Q1539-01	TAPIAL3-MW03D-031025-00-T1	Water	03/10/2025	11:50	VOC-TCLVOA-10		8260D	10 Bus. Days	
Q1539-02	TAPFTA-MW01I-031025-00-T2	Water	03/10/2025	15:10	VOC-TCLVOA-10		8260D	10 Bus. Days	
Q1539-03	TAP-TB-03-031025	Water	03/10/2025	11:50	VOC-TCLVOA-10		8260D	10 Bus. Days	
Q1539-04	TAP-TB-04-031025-T2	Water	03/10/2025	16:55	VOC-TCLVOA-10		8260D	10 Bus. Days	

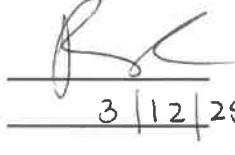
Relinquished By :



Date / Time :

3/12/25

Received By :



Date / Time :

3/12/25

Storage Area : VOA Refrigerator Room