284 Sheffield Street, Mountainside, New Jersey 07092, Phone : 908 789 8900,
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DATA PACKAGE

GENERAL CHEMISTRY

PROJECT NAME : NWIRP BETHPAGE 112G08005-WE13

TETRA TECH NUS, INC.

661 Andersen Drive

Suite 200

Pittsburgh, PA - 15220-2745

Phone No: 412-921-7090

ORDER ID : Q1120

ATTENTION : Ernie Wu

Laboratory Certification ID # 20012

Table Of Contents for Q1120

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Cover Page

Order ID : Q1120

Project ID : NWIRP Bethpage 112G08005-WE13

Client : Tetra Tech NUS, Inc.

Lab Sample Number	Client Sample Number
Q1120-01	RW10A-20250116

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 10:05 am, Jan 27, 2025

Date: 1/24/2025

NYDOH CERTIFICATION NO - 11376

NJDEP CERTIFICATION NO - 20012

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CASE NARRATIVE

Tetra Tech NUS, Inc.
Project Name: NWIRP Bethpage 112G08005-WE13
Project Manager: Ernie Wu
Chemtech Project # Q1120
Test Name: Anions Group2,Cyanide,TOC,Ammonia,COD,BOD5,Sulfide

A. Number of Samples and Date of Receipt:
1 Water sample was received on 01/16/2025.

B. Parameters:
According to the Chain of Custody document, the following analyses were requested: Ammonia, Anions Group2, Anions Group3, BOD5, Bromide, Chloride, COD, Cyanide, Fluoride, Nitrate, Nitrite, Phosphorus-Ortho, Sulfate, Sulfide and TOC. This data package contains results for Anions Group2,Cyanide,TOC,Ammonia,COD,BOD5,Sulfide.

C. Analytical Techniques:
The analysis of Anions Group2 was based on method 300.0, The analysis of Sulfide was based on method 9034, The analysis of TOC was based on method 9060A, The analysis of Cyanide was based on method SM4500-CN C,E, The analysis of Ammonia was based on method SM4500-NH3, The analysis of BOD5 was based on method SM5210 B and The analysis of COD was based on method SM5220 D.

D. QA/ QC Samples:
The Holding Times were met for all analysis.
Sample RW10A-20250116 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 (RW10A-20250116MS) analysis met criteria for all samples except for Chloride due to matrix interference.
The Matrix Spike Duplicate (DSN002MSD) analysis met criteria for all samples except for Ammonia due to matrix interference.
The Matrix Spike Duplicate (RW10A-20250116MSD) analysis met criteria for all samples except for Chloride due to matrix interference.
The Blank analysis did not indicate the presence of lab contamination.
The Calibration met the requirements.

E. Additional Comments:
The laboratory certifies that the all-electronic diskette deliverable exactly match the data summary forms (i.e. Form Is).

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 10:05 am, Jan 27, 2025

284 Sheffield Street, Mountainside NJ 07092
Tel. 908-789-8900 Fax: 908-789-8922

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

GENERAL CHEMISTRY CONFORMANCE/NON-CONFORMANCE SUMMARY

CHEMTECH PROJECT NUMBER: Q1120 MATRIX: Water

METHOD: 300.0,9034,9060A,SM4500-CN C,E,SM4500-NH3,SM5210 B,SM5220 D

		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 (RW10A-20250116MS) analysis met criteria for all samples except for Chloride due to matrix interference. The Matrix Spike Duplicate (DSN002MSD) analysis met criteria for all samples except for Ammonia due to matrix interference. The Matrix Spike Duplicate (RW10A-20250116MSD) analysis met criteria for all samples except for Chloride due to matrix interference.			
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: The laboratory certifies that the all-electronic diskette deliverable exactly match the data summary forms (i.e. Form Is).

QA REVIEW

REVIEWED
By Sohil Jodhani, QA/QC Director at 9:56 am, Jan 27, 2025

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APPENDIX A

QA REVIEW GENERAL DOCUMENTATION

Project #: Q1120

	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: SOHIL JODHANI **Date:** 01/24/2025

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LAB CHRONICLE

OrderID:	Q1120	**OrderDate:**	1/16/2025 4:25:00 PM
Client:	Tetra Tech NUS, Inc.	**Project:**	NWIRP Bethpage 112G08005-WE13
Contact:	Ernie Wu	**Location:**	M11

LabID	ClientID	Matrix	Test	Method	Sample Date	Prep Date	Anal Date	Received
Q1120-01	**RW10A-20250116**	**WATER**			**01/16/25 10:40**			**01/16/25**
			Ammonia	SM4500-NH3		01/17/25	01/17/25 11:53	
			Anions Group2	300.0			01/17/25 10:09	
			BOD5	SM5210 B			01/16/25 18:50	
			COD	SM5220 D			01/22/25 13:39	
			Cyanide	SM4500-CN C,E		01/17/25	01/17/25 15:20	
			Sulfide	9034		01/21/25	01/21/25 14:36	
			TOC	9060A			01/17/25 12:24	
Q1120-01DL	**RW10A-20250116DL**	**WATER**			**01/16/25 10:40**			**01/16/25**
			Anions Group2	300.0			01/17/25 11:13	

SAMPLE DATA

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	01/16/25 10:40
Project:	NWIRP Bethpage 112G08005-WE13	Date Received:	01/16/25
Client Sample ID:	RW10A-20250116	SDG No.:	Q1120
Lab Sample ID:	Q1120-01	Matrix:	WATER
		% Solid:	0

Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
Ammonia as N	0.061	J	1	0.045	0.080	0.10	mg/L	01/17/25 08:45	01/17/25 11:53	SM 4500-NH3 B plus G-11
Chloride	128	OR	1	0.011	0.30	0.60	mg/L		01/17/25 10:09	300.0
Nitrite	0.30	U	1	0.011	0.30	0.60	mg/L		01/17/25 10:09	300.0
Nitrate	0.19	J	1	0.0034	0.25	0.50	mg/L		01/17/25 10:09	300.0
Sulfate	29.8		1	0.032	1.50	3.00	mg/L		01/17/25 10:09	300.0
Nitrate+Nitrite	0.19	J	1	0.010	0.55	1.10	mg/L		01/17/25 10:09	300.0
BOD5	18.8		1	0.17	2.00	2.00	mg/L		01/16/25 18:50	SM 5210 B-16
COD	5.00	U	1	2.35	5.00	10.0	mg/L		01/22/25 13:39	SM 5220 D-11
Cyanide	0.0011	J	1	0.00093	0.0025	0.0050	mg/L	01/17/25 12:15	01/17/25 15:20	SM 4500-CN C-16 plus E-16
Sulfide	0.50	U	1	0.43	0.50	1.00	mg/L	01/21/25 10:45	01/21/25 14:36	9034
TOC	0.77	J	1	0.19	0.50	1.00	mg/L		01/17/25 12:24	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

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	01/16/25 10:40
Project:	NWIRP Bethpage 112G08005-WE13	Date Received:	01/16/25
Client Sample ID:	RW10A-20250116DL	SDG No.:	Q1120
Lab Sample ID:	Q1120-01DL	Matrix:	WATER
		% Solid:	0

Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
Chloride	100	D	50	0.55	15.0	30.0	mg/L		01/17/25 11:13	300.0

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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Initial and Continuing Calibration Verification

Client: Tetra Tech NUS, Inc. **SDG No.:** Q1120

Project: NWIRP Bethpage 112G08005-WE13 **RunNo.:** LB134317

Analyte		Units	Result	True Value	% Recovery	Acceptance Window (%R)	Analysis Date
Sample ID:	ICV1						
TOC		mg/L	10.4	10	104	90-110	01/15/2025
Sample ID:	CCV1						
TOC		mg/L	10.2	10	102	90-110	01/17/2025
Sample ID:	CCV2						
TOC		mg/L	10.2	10	102	90-110	01/17/2025

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Initial and Continuing Calibration Verification

Client: Tetra Tech NUS, Inc. **SDG No.:** Q1120

Project: NWIRP Bethpage 112G08005-WE13 **RunNo.:** LB134320

Analyte	Units	Result	True Value	% Recovery	Acceptance Window (%R)	Analysis Date
Sample ID: CCV1						
Bromide	mg/L	10.4	10	104	90-110	01/17/2025
Chloride	mg/L	3.1	3	103	90-110	01/17/2025
Fluoride	mg/L	2.1	2	105	90-110	01/17/2025
Nitrite	mg/L	3.1	3	103	90-110	01/17/2025
Nitrate	mg/L	2.6	2.5	104	90-110	01/17/2025
Sulfate	mg/L	15.5	15	103	90-110	01/17/2025
Orthophosphate as P	mg/L	5.2	5	104	90-110	01/17/2025
Sample ID: CCV2						
Bromide	mg/L	10.5	10	105	90-110	01/17/2025
Chloride	mg/L	3.1	3	103	90-110	01/17/2025
Fluoride	mg/L	2.1	2	105	90-110	01/17/2025
Nitrite	mg/L	3.1	3	103	90-110	01/17/2025
Nitrate	mg/L	2.6	2.5	104	90-110	01/17/2025
Sulfate	mg/L	15.6	15	104	90-110	01/17/2025
Orthophosphate as P	mg/L	5.4	5	108	90-110	01/17/2025
Sample ID: ICV1						
Bromide	mg/L	10.3	10	103	90-110	12/18/2024
Chloride	mg/L	3.1	3	103	90-110	12/18/2024
Fluoride	mg/L	2	2	100	90-110	12/18/2024
Nitrite	mg/L	3.1	3	103	90-110	12/18/2024
Nitrate	mg/L	2.6	2.5	104	90-110	12/18/2024
Sulfate	mg/L	15.3	15	102	90-110	12/18/2024
Orthophosphate as P	mg/L	5.1	5	102	90-110	12/18/2024

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Initial and Continuing Calibration Verification

Client: Tetra Tech NUS, Inc. **SDG No.:** Q1120

Project: NWIRP Bethpage 112G08005-WE13 **RunNo.:** LB134325

Analyte	Units	Result	True Value	% Recovery	Acceptance Window (%R)	Analysis Date
Sample ID: **ICV1**						
Ammonia as N	mg/L	1	1	100	90-110	01/17/2025
Sample ID: **CCV1**						
Ammonia as N	mg/L	1	1	100	90-110	01/17/2025
Sample ID: **CCV2**						
Ammonia as N	mg/L	1	1	100	90-110	01/17/2025
Sample ID: **CCV3**						
Ammonia as N	mg/L	1.1	1	110	90-110	01/17/2025
Sample ID: **CCV4**						
Ammonia as N	mg/L	1	1	100	90-110	01/17/2025

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Initial and Continuing Calibration Verification

Client:	Tetra Tech NUS, Inc.	**SDG No.:**	Q1120
Project:	NWIRP Bethpage 112G08005-WE13	**RunNo.:**	LB134333

Analyte		Units	Result	True Value	% Recovery	Acceptance Window (%R)	Analysis Date
Sample ID:	**ICV1**						
Cyanide		mg/L	0.098	0.099	99	85-115	01/17/2025
Sample ID:	**CCV1**						
Cyanide		mg/L	0.25	0.25	100	90-110	01/17/2025
Sample ID:	**CCV2**						
Cyanide		mg/L	0.27	0.25	108	90-110	01/17/2025

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Initial and Continuing Calibration Verification

Client:	Tetra Tech NUS, Inc.	**SDG No.:**	Q1120
Project:	NWIRP Bethpage 112G08005-WE13	**RunNo.:**	LB134365

Analyte		Units	Result	True Value	% Recovery	Acceptance Window (%R)	Analysis Date
Sample ID:	**ICV**						
COD		mg/L	49.329	50	99	95-105	01/22/2025
Sample ID:	**CCV1**						
COD		mg/L	50.319	50	101	95-105	01/22/2025
Sample ID:	**CCV2**						
COD		mg/L	49.329	50	99	95-105	01/22/2025
Sample ID:	**CCV3**						
COD		mg/L	49.329	50	99	95-105	01/22/2025

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Initial and Continuing Calibration Blank Summary

Client:	Tetra Tech NUS, Inc.	**SDG No.:**	Q1120
Project:	NWIRP Bethpage 112G08005-WE13	**RunNo.:**	LB134317

Analyte		Units	Result	Acceptance Limits	Conc Qual	MDL	RDL	Analysis Date
Sample ID:	ICB1							
TOC		mg/L	0.2	0.5000	J	0.19	1	01/15/2025
Sample ID:	CCB1							
TOC		mg/L	< 0.5000	0.5000	U	0.19	1	01/17/2025
Sample ID:	CCB2							
TOC		mg/L	0.24	0.5000	J	0.19	1	01/17/2025

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Initial and Continuing Calibration Blank Summary

Client: Tetra Tech NUS, Inc. **SDG No.:** Q1120

Project: NWIRP Bethpage 112G08005-WE13 **RunNo.:** LB134320

Analyte	Units	Result	Acceptance Limits	Conc Qual	MDL	RDL	Analysis Date
Sample ID: CCB1							
Bromide	mg/L	< 1.0000	1.0000	U	0.034	2	01/17/2025
Chloride	mg/L	< 0.3000	0.3000	U	0.011	0.6	01/17/2025
Fluoride	mg/L	< 0.2000	0.2000	U	0.057	0.4	01/17/2025
Nitrite	mg/L	< 0.3000	0.3000	U	0.011	0.6	01/17/2025
Nitrate	mg/L	< 0.2500	0.2500	U	0.0034	0.5	01/17/2025
Sulfate	mg/L	< 1.5000	1.5000	U	0.032	3	01/17/2025
Orthophosphate as P	mg/L	< 0.5000	0.5000	U	0.079	1	01/17/2025
Sample ID: CCB2							
Bromide	mg/L	< 1.0000	1.0000	U	0.034	2	01/17/2025
Chloride	mg/L	< 0.3000	0.3000	U	0.011	0.6	01/17/2025
Fluoride	mg/L	< 0.2000	0.2000	U	0.057	0.4	01/17/2025
Nitrite	mg/L	< 0.3000	0.3000	U	0.011	0.6	01/17/2025
Nitrate	mg/L	< 0.2500	0.2500	U	0.0034	0.5	01/17/2025
Sulfate	mg/L	< 1.5000	1.5000	U	0.032	3	01/17/2025
Orthophosphate as P	mg/L	< 0.5000	0.5000	U	0.079	1	01/17/2025
Sample ID: ICB1							
Bromide	mg/L	< 1.0000	1.0000	U	0.034	2	12/18/2024
Chloride	mg/L	< 0.3000	0.3000	U	0.011	0.6	12/18/2024
Fluoride	mg/L	< 0.2000	0.2000	U	0.057	0.4	12/18/2024
Nitrite	mg/L	< 0.3000	0.3000	U	0.011	0.6	12/18/2024
Nitrate	mg/L	< 0.2500	0.2500	U	0.0034	0.5	12/18/2024
Sulfate	mg/L	< 1.5000	1.5000	U	0.032	3	12/18/2024
Orthophosphate as P	mg/L	< 0.5000	0.5000	U	0.079	1	12/18/2024

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Initial and Continuing Calibration Blank Summary

Client:	Tetra Tech NUS, Inc.	**SDG No.:**	Q1120
Project:	NWIRP Bethpage 112G08005-WE13	**RunNo.:**	LB134325

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	01/17/2025
Sample ID: CCB1							
Ammonia as N	mg/L	< 0.0500	0.0500	U	0.045	0.1	01/17/2025
Sample ID: CCB2							
Ammonia as N	mg/L	< 0.0500	0.0500	U	0.045	0.1	01/17/2025
Sample ID: CCB3							
Ammonia as N	mg/L	< 0.0500	0.0500	U	0.045	0.1	01/17/2025
Sample ID: CCB4							
Ammonia as N	mg/L	< 0.0500	0.0500	U	0.045	0.1	01/17/2025

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Initial and Continuing Calibration Blank Summary

Client:	Tetra Tech NUS, Inc.	**SDG No.:**	Q1120
Project:	NWIRP Bethpage 112G08005-WE13	**RunNo.:**	LB134333

Analyte		Units	Result	Acceptance Limits	Conc Qual	MDL	RDL	Analysis Date
Sample ID:	ICB1							
Cyanide		mg/L	< 0.0025	0.0025	U	0.00093	0.005	01/17/2025
Sample ID:	CCB1							
Cyanide		mg/L	< 0.0025	0.0025	U	0.00093	0.005	01/17/2025
Sample ID:	CCB2							
Cyanide		mg/L	< 0.0025	0.0025	U	0.00093	0.005	01/17/2025

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Initial and Continuing Calibration Blank Summary

Client:	Tetra Tech NUS, Inc.	**SDG No.:**	Q1120
Project:	NWIRP Bethpage 112G08005-WE13	**RunNo.:**	LB134365

Analyte		Units	Result	Acceptance Limits	Conc Qual	MDL	RDL	Analysis Date
Sample ID:	ICB							
COD		mg/L	< 5.0000	5.0000	U	2.35	10	01/22/2025
Sample ID:	CCB1							
COD		mg/L	< 5.0000	5.0000	U	2.35	10	01/22/2025
Sample ID:	CCB2							
COD		mg/L	< 5.0000	5.0000	U	2.35	10	01/22/2025
Sample ID:	CCB3							
COD		mg/L	< 5.0000	5.0000	U	2.35	10	01/22/2025

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Preparation Blank Summary

Client: Tetra Tech NUS, Inc. **SDG No.:** Q1120

Project: NWIRP Bethpage 112G08005-WE13

Analyte	Units	Result	Acceptance Limits	Conc Qual	MDL	RDL	Analysis Date
Sample ID: LB134317BLW							
TOC	mg/L	0.19	0.5000	J	0.19	1	01/17/2025
Sample ID: LB134320BLW							
Bromide	mg/L	< 1.0000	1.0000	U	0.034	2	01/17/2025
Chloride	mg/L	< 0.3000	0.3000	U	0.011	0.6	01/17/2025
Fluoride	mg/L	< 0.2000	0.2000	U	0.057	0.4	01/17/2025
Nitrite	mg/L	< 0.3000	0.3000	U	0.011	0.6	01/17/2025
Nitrate	mg/L	< 0.2500	0.2500	U	0.0034	0.5	01/17/2025
Sulfate	mg/L	< 1.5000	1.5000	U	0.032	3	01/17/2025
Orthophosphate as P	mg/L	< 0.5000	0.5000	U	0.079	1	01/17/2025
Sample ID: LB134322BL							
BOD5	mg/L	< 0.2000	0.2000	U	0.17	2.0	01/16/2025
Sample ID: LB134365BL							
COD	mg/L	< 5.0000	5.0000	U	2.35	10.0	01/22/2025
Sample ID: PB166092BL							
Ammonia as N	mg/L	< 0.0500	0.0500	U	0.045	0.1	01/17/2025
Sample ID: PB166125BL							
Cyanide	mg/L	< 0.0025	0.0025	U	0.00093	0.005	01/17/2025
Sample ID: PB166159BL							
Sulfide	mg/L	< 0.5000	0.5000	U	0.43	1.0	01/21/2025

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Matrix Spike Summary

Client: Tetra Tech NUS, Inc.
SDG No.: Q1120
Project: NWIRP Bethpage 112G08005-WE13
Sample ID: Q1109-01
Client ID: TAPIAL1-MW04I-011525-00-T3MS
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		0.98	J	10	1	95		01/17/2025

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Matrix Spike Summary

Client: Tetra Tech NUS, Inc.
SDG No.: Q1120
Project: NWIRP Bethpage 112G08005-WE13
Sample ID: Q1109-01
Client ID: TAPIAL1-MW04I-011525-00-T3MSD
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		0.98	J	10	1	96		01/17/2025

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Matrix Spike Summary

Client: Tetra Tech NUS, Inc.
SDG No.: Q1120
Project: NWIRP Bethpage 112G08005-WE13
Sample ID: Q1113-01
Client ID: DSN002MS
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	4.30	OR	3.40	OR	1	1	90		01/17/2025
COD	mg/L	75-125	102		54.3		50.0	1	95		01/22/2025

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Matrix Spike Summary

Client: Tetra Tech NUS, Inc.
SDG No.: Q1120
Project: NWIRP Bethpage 112G08005-WE13
Sample ID: Q1113-01
Client ID: DSN002MSD
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	4.10	OR	3.40	OR	1	1	70	*	01/17/2025
COD	mg/L	75-125	101		54.3		50.0	1	93		01/22/2025

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Matrix Spike Summary

Client: Tetra Tech NUS, Inc.
SDG No.: Q1120
Project: NWIRP Bethpage 112G08005-WE13
Sample ID: Q1120-01
Client ID: RW10A-20250116MS
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
Bromide	mg/L	80-120	10.2		0.69	J	10	1	95		01/17/2025
Sulfide	mg/L	75-125	24.0		0.43	U	25.0	1	96		01/21/2025
Cyanide	mg/L	75-125	0.045		0.0011	J	0.04	1	110		01/17/2025
Chloride	mg/L	80-120	127	OR	128	OR	3	1	-33	*	01/17/2025
Fluoride	mg/L	80-120	2.10		0.15	J	2	1	98		01/17/2025
Nitrite	mg/L	80-120	3.00		0.011	U	3	1	100		01/17/2025
Nitrate	mg/L	80-120	2.60		0.19	J	2.5	1	96		01/17/2025
Sulfate	mg/L	80-120	43.2	OR	29.8		15	1	89		01/17/2025
Orthophosphate as P	mg/L	80-120	5.60		0.079	U	5	1	112		01/17/2025

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Matrix Spike Summary

Client: Tetra Tech NUS, Inc.
SDG No.: Q1120
Project: NWIRP Bethpage 112G08005-WE13
Sample ID: Q1120-01
Client ID: RW10A-20250116MSD
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
Bromide	mg/L	80-120	10.2		0.69	J	10	1	95		01/17/2025
Sulfide	mg/L	75-125	24.2		0.43	U	25.0	1	97		01/21/2025
Cyanide	mg/L	75-125	0.044		0.0011	J	0.04	1	107		01/17/2025
Chloride	mg/L	80-120	127	OR	128	OR	3	1	-33	*	01/17/2025
Fluoride	mg/L	80-120	2.10		0.15	J	2	1	98		01/17/2025
Nitrite	mg/L	80-120	3.00		0.011	U	3	1	100		01/17/2025
Nitrate	mg/L	80-120	2.60		0.19	J	2.5	1	96		01/17/2025
Sulfate	mg/L	80-120	43.4	OR	29.8		15	1	91		01/17/2025
Orthophosphate as P	mg/L	80-120	5.50		0.079	U	5	1	110		01/17/2025

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Duplicate Sample Summary

Client: Tetra Tech NUS, Inc.
SDG No.: Q1120
Project: NWIRP Bethpage 112G08005-WE13
Sample ID: Q1109-01
Client ID: TAPIAL1-MW04I-011525-00-T3MSD
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	10.5		10.6		1	1		01/17/2025

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Duplicate Sample Summary

Client: Tetra Tech NUS, Inc.
SDG No.: Q1120
Project: NWIRP Bethpage 112G08005-WE13
Sample ID: Q1113-01
Client ID: DSN002DUP
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
Ammonia as N	mg/L	+/-20	3.40	OR	3.30	OR	1	3		01/17/2025
COD	mg/L	+/-20	54.3		55.3		1	1.82		01/22/2025

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Duplicate Sample Summary

Client: Tetra Tech NUS, Inc.
SDG No.: Q1120
Project: NWIRP Bethpage 112G08005-WE13
Sample ID: Q1113-01
Client ID: DSN002MSD
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
Ammonia as N	mg/L	+/-20	4.30	OR	4.10	OR	1	5		01/17/2025
COD	mg/L	+/-20	102		101		1	0.99		01/22/2025

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Duplicate Sample Summary

Client: Tetra Tech NUS, Inc.
SDG No.: Q1120
Project: NWIRP Bethpage 112G08005-WE13
Sample ID: Q1120-01
Client ID: RW10A-20250116DUP
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
BOD5	mg/L	+/-20	18.8		18.8		1	0.32		01/16/2025
Cyanide	mg/L	+/-20	0.0011	J	0.0010	J	1	10		01/17/2025
Sulfide	mg/L	+/-20	0.43	U	0.43	U	1	0		01/21/2025

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Duplicate Sample Summary

Client: Tetra Tech NUS, Inc.
SDG No.: Q1120
Project: NWIRP Bethpage 112G08005-WE13
Sample ID: Q1120-01
Client ID: RW10A-20250116MSD
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
Bromide	mg/L	+/-20	10.2		10.2		1	0		01/17/2025
Fluoride	mg/L	+/-20	2.10		2.10		1	0		01/17/2025
Nitrate	mg/L	+/-20	2.60		2.60		1	0		01/17/2025
Nitrite	mg/L	+/-20	3.00		3.00		1	0		01/17/2025
Chloride	mg/L	+/-20	127	OR	127	OR	1	0		01/17/2025
Sulfate	mg/L	+/-20	43.2	OR	43.4	OR	1	0		01/17/2025
Orthophosphate as P	mg/L	+/-20	5.60		5.50		1	2		01/17/2025
Cyanide	mg/L	+/-20	0.045		0.044		1	2		01/17/2025
Sulfide	mg/L	+/-20	24.0		24.2		1	0.83		01/21/2025

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Laboratory Control Sample Summary

Client:	Tetra Tech NUS, Inc.	**SDG No.:**	Q1120
Project:	NWIRP Bethpage 112G08005-WE13	**Run No.:**	LB134317

Analyte	Units	True Value	Result	Conc. Qualifier	% Recovery	Dilution Factor	Acceptance Limit %R	Analysis Date
Sample ID LB134317BSW								
TOC	mg/L	10	10.3		103	1	90-110	01/17/2025

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Laboratory Control Sample Summary

Client: Tetra Tech NUS, Inc. **SDG No.:** Q1120

Project: NWIRP Bethpage 112G08005-WE13 **Run No.:** LB134320

Analyte	Units	True Value	Result	Conc. Qualifier	% Recovery	Dilution Factor	Acceptance Limit %R	Analysis Date
Sample ID LB134320BSW								
Bromide	mg/L	10	10.4		104	1	90-110	01/17/2025
Chloride	mg/L	3	3.10		103	1	90-110	01/17/2025
Fluoride	mg/L	2	2.10		105	1	90-110	01/17/2025
Nitrite	mg/L	3	3.10		103	1	90-110	01/17/2025
Nitrate	mg/L	2.5	2.60		104	1	90-110	01/17/2025
Sulfate	mg/L	15	15.5		103	1	90-110	01/17/2025
Orthophosphate as P	mg/L	5	5.40		108	1	90-110	01/17/2025

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Laboratory Control Sample Summary

Client:	Tetra Tech NUS, Inc.	**SDG No.:**	Q1120
Project:	NWIRP Bethpage 112G08005-WE13	**Run No.:**	LB134322

Analyte	Units	True Value	Result	Conc. Qualifier	% Recovery	Dilution Factor	Acceptance Limit %R	Analysis Date
Sample ID LB134322BS								
BOD5	mg/L	198	192		97	1	84.6-115.4	01/16/2025

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Laboratory Control Sample Summary

Client:	Tetra Tech NUS, Inc.	**SDG No.:**	Q1120
Project:	NWIRP Bethpage 112G08005-WE13	**Run No.:**	LB134365

Analyte	Units	True Value	Result	Conc. Qualifier	% Recovery	Dilution Factor	Acceptance Limit %R	Analysis Date
Sample ID LB134365BS								
COD	mg/L	50	50.3		101	1	90-110	01/22/2025

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Laboratory Control Sample Summary

Client:	Tetra Tech NUS, Inc.	**SDG No.:**	Q1120
Project:	NWIRP Bethpage 112G08005-WE13	**Run No.:**	LB134325

Analyte	Units	True Value	Result	Conc. Qualifier	% Recovery	Dilution Factor	Acceptance Limit %R	Analysis Date
Sample ID PB166092BS								
Ammonia as N	mg/L	1	0.99		99	1	90-110	01/17/2025

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Laboratory Control Sample Summary

Client:	Tetra Tech NUS, Inc.	**SDG No.:**	Q1120
Project:	NWIRP Bethpage 112G08005-WE13	**Run No.:**	LB134333

Analyte	Units	True Value	Result	Conc. Qualifier	% Recovery	Dilution Factor	Acceptance Limit %R	Analysis Date
Sample ID **PB166125BS**								
Cyanide	mg/L	0.1	0.099		99	1	85-115	01/17/2025

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Laboratory Control Sample Summary

Client:	Tetra Tech NUS, Inc.	**SDG No.:**	Q1120
Project:	NWIRP Bethpage 112G08005-WE13	**Run No.:**	LB134363

Analyte	Units	True Value	Result	Conc. Qualifier	% Recovery	Dilution Factor	Acceptance Limit %R	Analysis Date
Sample ID **PB166159BS**								
Sulfide	mg/L	25	24.2		97	1	80-120	01/21/2025

RAW DATA

Sample Results Report Print Date/Time: 2025/01/17 14:26:54

Sample ID	Result	Std. Dev.	RSD	Mode	ALT
CCV1	10.2496	0.0371	0.36	TOC	
CCB1	0.1792	0.0574	32.06	TOC	
LB134317BLW	0.1883	0.0578	30.68	TOC	
LB134317BSW.....	10.3433...	0.0667..	0.64...	TOC	..
Q1109-01	0.9801	0.1059	10.81	TOC	
Q1109-01MS	10.4809	0.1385	1.32	TOC	
Q1109-01MSD.....	10.6472...	0.1628..	1.53...	TOC	..
Q1109-02	1.2067	0.1076	8.92	TOC	
Q1120-01	0.7710	0.0976	12.66	TOC	
CCV2.....	10.1667...	0.0427..	0.42...	TOC	..
CCB2	0.2416	0.0130	5.38	TOC	

Sample Results Report Print Date/Time: 2025/01/17 14:26:54

Method ID	Sample Type	Vial	Timestamp	Message
TOC 0 - 20 ppmC	Sample	11	2025/01/17 09:00	
TOC 0 - 20 ppmC	Sample	12	2025/01/17 09:24	Low Sample Detected
TOC 0 - 20 ppmC	Sample	13	2025/01/17 09:48	Low Sample Detected
TOC 0 - 20 ppmC	...Sample	.. 14..	2025/01/17 10:14	..
TOC 0 - 20 ppmC	Sample	15	2025/01/17 10:39	
TOC 0 - 20 ppmC	Sample	16	2025/01/17 11:06	
TOC 0 - 20 ppmC	...Sample	.. 16..	2025/01/17 11:33	..
TOC 0 - 20 ppmC	Sample	17	2025/01/17 11:58	
TOC 0 - 20 ppmC	Sample	18	2025/01/17 12:24	
TOC 0 - 20 ppmC	...Sample	.. 11..	2025/01/17 12:50	..
TOC 0 - 20 ppmC	Sample	12	2025/01/17 13:14	Low Sample Detected

Detailed Analysis Report Print Date/Time: 2025/01/17 14:27:57

Sample ID: CCV1 Mode: TOC
Method: TOC 0 - 20 ppmC Filename: 01170748
Cal. Curve: TOC WATER 0-20PPM Timestamp: 2025/01/17 09:00
Operator ID: NF IZ Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	10.2391	5.1195	414528	-3.083	-2.884	162
2	10.2080	5.1040	413272	-3.043	-2.844	161
3	10.2541	5.1271	415138	-3.074	-2.877	157
4	10.2973	5.1487	416888	-3.119	-2.921	161

<<<Statistics>>> Mean: 10.2496 Std Dev: 0.0371 RSD: 0.36

Sample ID: CCB1 Mode: TOC
Method: TOC 0 - 20 ppmC Filename: 01170748
Cal. Curve: TOC WATER 0-20PPM Timestamp: 2025/01/17 09:24
Operator ID: NF IZ Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	0.1126	0.0563	4560	-3.242	-3.190	120
2	0.1510	0.0755	6113	-3.284	-3.188	120
3	0.2172	0.1086	8793	-3.285	-3.151	120
4	0.2360	0.1180	9554	-3.272	-3.167	120

Last Message: Low Sample Detected
<<<Statistics>>> Mean: 0.1792 Std Dev: 0.0574 RSD: 32.06

Sample ID: LB134317BLW Mode: TOC
Method: TOC 0 - 20 ppmC Filename: 01170748
Cal. Curve: TOC WATER 0-20PPM Timestamp: 2025/01/17 09:48
Operator ID: NF IZ Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	0.1321	0.0661	5350	-3.332	-3.304	120
2	0.1971	0.0985	7979	-3.344	-3.305	120
3	0.1589	0.0794	6432	-3.358	-3.313	120
4	0.2652	0.1326	10738	-3.368	-3.281	120

Last Message: Low Sample Detected
<<<Statistics>>> Mean: 0.1883 Std Dev: 0.0578 RSD: 30.68

Sample ID: LB134317BSW Mode: TOC
Method: TOC 0 - 20 ppmC Filename: 01170748
Cal. Curve: TOC WATER 0-20PPM Timestamp: 2025/01/17 10:14
Operator ID: NF IZ Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	10.2472	5.1236	414857	-3.316	-3.117	161
2	10.3552	5.1776	419231	-3.288	-3.089	157
3	10.3997	5.1999	421033	-3.301	-3.102	162
4	10.3711	5.1855	419872	-3.304	-3.107	161

<<<Statistics>>> Mean: 10.3433 Std Dev: 0.0667 RSD: 0.64

Sample ID: Q1109-01 Mode: TOC
Method: TOC 0 - 20 ppmC Filename: 01170748
Cal. Curve: TOC WATER 0-20PPM Timestamp: 2025/01/17 10:39
Operator ID: NF IZ Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	1.0698	0.5349	43309	-3.349	-3.150	148
2	0.9881	0.4940	40001	-3.360	-3.161	147
3	1.0332	0.5166	41828	-3.388	-3.188	147
4	0.8293	0.4146	33574	-3.346	-3.146	146

<<<Statistics>>> Mean: 0.9801 Std Dev: 0.1059 RSD: 10.81

Sample ID: Q1109-01MS Mode: TOC
Method: TOC 0 - 20 ppmC Filename: 01170748
Cal. Curve: TOC WATER 0-20PPM Timestamp: 2025/01/17 11:06
Operator ID: NF IZ Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	10.6558	5.3279	431401	-3.392	-3.193	170
2	10.3447	5.1724	418807	-3.322	-3.124	162
3	10.3998	5.1999	421034	-3.357	-3.160	163
4	10.5233	5.2616	426034	-3.359	-3.160	164

<<<Statistics>>> Mean: 10.4809 Std Dev: 0.1385 RSD: 1.32

Sample ID: Q1109-01MSD Mode: TOC
Method: TOC 0 - 20 ppmC Filename: 01170748
Cal. Curve: TOC WATER 0-20PPM Timestamp: 2025/01/17 11:33
Operator ID: NF IZ Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	10.8470	5.4235	439139	-3.352	-3.152	180
2	10.7098	5.3549	433587	-3.292	-3.094	164
3	10.4915	5.2457	424747	-3.296	-3.098	162
4	10.5405	5.2703	426734	-3.292	-3.093	162

<<<Statistics>>> Mean: 10.6472 Std Dev: 0.1628 RSD: 1.53

Sample ID: Q1109-02 Mode: TOC
Method: TOC 0 - 20 ppmC Filename: 01170748
Cal. Curve: TOC WATER 0-20PPM Timestamp: 2025/01/17 11:58
Operator ID: NF IZ Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	1.3662	0.6831	55310	-3.360	-3.163	151
2	1.1458	0.5729	46388	-3.337	-3.138	146
3	1.1766	0.5883	47636	-3.372	-3.176	147
4	1.1382	0.5691	46080	-3.364	-3.165	147

<<<Statistics>>> Mean: 1.2067 Std Dev: 0.1076 RSD: 8.92

Sample ID: Q1120-01 Mode: TOC
Method: TOC 0 - 20 ppmC Filename: 01170748
Cal. Curve: TOC WATER 0-20PPM Timestamp: 2025/01/17 12:24

Operator ID: NF IZ Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	0.8750	0.4375	35423	-3.371	-3.172	142
2	0.7127	0.3563	28852	-3.420	-3.220	143
3	0.6665	0.3332	26982	-3.454	-3.256	142
4	0.8297	0.4148	33590	-3.499	-3.300	146

<<<Statistics>>> Mean: 0.7710 Std Dev: 0.0976 RSD: 12.66

Sample ID: CCV2 Mode: TOC
Method: TOC 0 - 20 ppmC Filename: 01170748
Cal. Curve: TOC WATER 0-20PPM Timestamp: 2025/01/17 12:50
Operator ID: NF IZ Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	10.1530	5.0765	411045	-3.443	-3.244	162
2	10.1211	5.0605	409752	-3.412	-3.214	165
3	10.2231	5.1115	413881	-3.408	-3.208	160
4	10.1698	5.0849	411724	-3.368	-3.168	157

<<<Statistics>>> Mean: 10.1667 Std Dev: 0.0427 RSD: 0.42

Sample ID: CCB2 Mode: TOC
Method: TOC 0 - 20 ppmC Filename: 01170748
Cal. Curve: TOC
WATER 0-20PPM Timestamp: 2025/01/17 13:14
Operator ID: NF IZ Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	0.2307	0.1154	9341	-3.405	-3.290	120
2	0.2326	0.1163	9416	-3.401	-3.315	120
3	0.2443	0.1221	9889	-3.397	-3.290	120
4	0.2589	0.1294	10481	-3.390	-3.282	120

Last Message: Low Sample Detected
<<<Statistics>>> Mean: 0.2416 Std Dev: 0.0130 RSD: 5.38

Sample Results Report Print Date/Time: 2025/01/16 9:01:38

Sample ID	Result	Std. Dev.	RSD	Mode	ALT
0.0PPM	6185	3006	48.60	TOC	
0.5PPM	27483	1110	4.04	TOC	
1.0PPM	48542	2267	4.67	TOC	
2.0PPM.....	88813...	1411..	1.59...	TOC	..
5.0PPM	211496	3458	1.64	TOC	
10.0PPM	411122	7732	1.88	TOC	
20.0PPM.....	817303...	2573..	0.31...	TOC	..
ICV1	10.3687	0.1121	1.08	TOC	
ICB1	0.2017	0.0756	37.49	TOC	
IC-20.....	0.1397...	0.0636..	45.51...	TOC	..
IC-R	0.1587	0.0461	29.04	TOC	

Sample Results Report Print Date/Time: 2025/01/16 9:01:38

Method ID	Sample Type	Vial	Timestamp	Message
TOC 0 - 20 ppmC	TOC Standard	1	2025/01/15 12:17	Low Sample Detected
TOC 0 - 20 ppmC	TOC Standard	2	2025/01/15 12:42	
TOC 0 - 20 ppmC	TOC Standard	3	2025/01/15 13:07	
TOC 0 - 20 ppmC	...TOC Standard ..	4..	2025/01/15 13:33 ..	
TOC 0 - 20 ppmC	TOC Standard	5	2025/01/15 13:59	
TOC 0 - 20 ppmC	TOC Standard	6	2025/01/15 14:26	
TOC 0 - 20 ppmC	...TOC Standard ..	7..	2025/01/15 14:53 ..	
TOC 0 - 20 ppmC	Sample	6	2025/01/15 15:19	
TOC 0 - 20 ppmC	Sample	12	2025/01/15 15:43	Low Sample Detected
TOC 0 - 20 ppmC	...Sample ..	13..	2025/01/15 16:07	..Low Sample Detected
TOC 0 - 20 ppmC	Sample	12	2025/01/15 16:30	Low Sample Detected

Detailed Analysis Report Print Date/Time: 2025/01/16 9:02:33

Sample ID: 0.0PPM Mode: TOC
Method: TOC 0 - 20 ppmC Filename: 01151155
Cal. Curve: TOC WATER 0-20PPM Timestamp: 2025/01/15 12:17
Operator ID: NF IZ Sample Type: TOC Standard

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1			1841	-2.962	-2.971	120
2			7628	-3.026	-2.981	120
3			6649	-3.024	-2.958	120
4			8622	-3.018	-2.947	120

Last Message: Low Sample Detected
<<<Statistics>>> Mean: 6185 Std Dev: 3006 RSD: 48.60

Sample ID: 0.5PPM Mode: TOC
Method: TOC 0 - 20 ppmC Filename: 01151155
Cal. Curve: TOC WATER 0-20PPM Timestamp: 2025/01/15 12:42
Operator ID: NF IZ Sample Type: TOC Standard

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1			27356	-3.041	-2.843	139
2			28982	-3.039	-2.840	141
3			26302	-3.017	-2.820	138
4			27292	-3.026	-2.827	139

<<<Statistics>>> Mean: 27483 Std Dev: 1110 RSD: 4.04

Sample ID: 1.0PPM Mode: TOC
Method: TOC 0 - 20 ppmC Filename: 01151155
Cal. Curve: TOC WATER 0-20PPM Timestamp: 2025/01/15 13:07
Operator ID: NF IZ Sample Type: TOC Standard

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1			46164	-3.002	-2.807	143
2			51286	-3.017	-2.818	145
3			47317	-2.991	-2.795	143
4			49400	-2.987	-2.788	144

<<<Statistics>>> Mean: 48542 Std Dev: 2267 RSD: 4.67

Sample ID: 2.0PPM Mode: TOC
Method: TOC 0 - 20 ppmC Filename: 01151309
Cal. Curve: TOC WATER 0-20PPM Timestamp: 2025/01/15 13:33
Operator ID: NF IZ Sample Type: TOC Standard

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1			89840	-2.974	-2.774	150
2			88187	-2.938	-2.739	145
3			87121	-2.925	-2.728	148
4			90103	-2.943	-2.745	150

<<<Statistics>>> Mean: 88813 Std Dev: 1411 RSD: 1.59

Sample ID: 5.0PPM Mode: TOC
Method: TOC 0 - 20 ppmC Filename: 01151309
Cal. Curve: TOC WATER 0-20PPM Timestamp: 2025/01/15 13:59
Operator ID: NF IZ Sample Type: TOC Standard

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1			213032	-2.923	-2.726	159
2			206481	-2.832	-2.632	155
3			214311	-2.864	-2.669	157
4			212162	-2.841	-2.642	156

<<<Statistics>>> Mean: 211496 Std Dev: 3458 RSD: 1.64

Sample ID: 10.0PPM Mode: TOC
Method: TOC 0 - 20 ppmC Filename: 01151309
Cal. Curve: TOC WATER 0-20PPM Timestamp: 2025/01/15 14:26
Operator ID: NF IZ Sample Type: TOC Standard

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1			400085	-2.807	-2.610	142
2			415561	-2.803	-2.603	162
3			411583	-2.777	-2.577	163
4			417257	-2.811	-2.611	164

<<<Statistics>>> Mean: 411122 Std Dev: 7732 RSD: 1.88

Sample ID: 20.0PPM Mode: TOC
Method: TOC 0 - 20 ppmC Filename: 01151309
Cal. Curve: TOC WATER 0-20PPM Timestamp: 2025/01/15 14:53
Operator ID: NF IZ Sample Type: TOC Standard

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1			813925	-2.829	-2.632	177
2			819370	-2.836	-2.639	186
3			816671	-2.784	-2.585	170
4			819245	-2.792	-2.592	167

<<<Statistics>>> Mean: 817303 Std Dev: 2573 RSD: 0.31

Sample ID: ICV1 Mode: TOC
Method: TOC 0 - 20 ppmC Filename: 01151309
Cal. Curve: TOC WATER 0-20PPM Timestamp: 2025/01/15 15:19
Operator ID: NF IZ Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	10.3813	5.1906	420285	-2.799	-2.599	166
2	10.2898	5.1449	416583	-2.760	-2.560	165
3	10.2812	5.1406	416233	-2.764	-2.566	161
4	10.5226	5.2613	426009	-2.781	-2.584	161

<<<Statistics>>> Mean: 10.3687 Std Dev: 0.1121 RSD: 1.08

Sample ID: ICB1 Mode: TOC
Method: TOC 0 - 20 ppmC Filename: 01151309
Cal. Curve: TOC WATER 0-20PPM Timestamp: 2025/01/15 15:43
Operator ID: NF IZ Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	0.1020	0.0510	4131	-2.785	-2.738	120
2	0.2012	0.1006	8145	-2.809	-2.743	120
3	0.2187	0.1094	8855	-2.803	-2.725	120
4	0.2849	0.1425	11535	-2.810	-2.721	120

Last Message: Low Sample Detected
<<<Statistics>>> Mean: 0.2017 Std Dev: 0.0756 RSD: 37.49

Sample ID: IC-20 Mode: TOC
Method: TOC 0 - 20 ppmC Filename: 01151309
Cal. Curve: TOC WATER 0-20PPM Timestamp: 2025/01/15 16:07
Operator ID: NF IZ Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	0.0727	0.0364	2944	-2.769	-2.766	120
2	0.1400	0.0700	5666	-2.789	-2.763	120
3	0.2250	0.1125	9108	-2.792	-2.701	120
4	0.1209	0.0605	4896	-2.763	-2.755	120

Last Message: Low Sample Detected
<<<Statistics>>> Mean: 0.1397 Std Dev: 0.0636 RSD: 45.51

Sample ID: IC-R Mode: TOC
Method:
TOC 0 - 20 ppmC Filename: 01151309
Cal. Curve: TOC WATER 0-20PPM Timestamp: 2025/01/15 16:30
Operator ID: NF IZ Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	0.0924	0.0462	3742	-2.733	-2.739	120
2	0.1992	0.0996	8064	-2.788	-2.739	120
3	0.1732	0.0866	7014	-2.775	-2.722	120
4	0.1700	0.0850	6884	-2.758	-2.719	120

Last Message: Low Sample Detected
<<<Statistics>>> Mean: 0.1587 Std Dev: 0.0461 RSD: 29.04

Calibration Report Print Date/Time: 2025/01/15 14:57:01

Cal. Curve ID: TOC WATER 0-20PPM
Created: 2025/01/15 14:54
Calibration Factor (m): 8.097e+04
Y Intercept (b): 7467
r-squared: 0.99999

Re

Standard ID	Y Raw Data	X Expected ug C	Measured ug C	Message	Date & Time
0.0PPM	6185	0.000	-0.016		2025/01/15 12:17
0.5PPM	27483	0.250	0.247	-1.2	2025/01/15 12:42
1.0PPM	48542	0.500	0.507	1.4	2025/01/15 13:07
2.0PPM	88813	1.000	1.005	0.5	2025/01/15 13:33
5.0PPM	211497	2.500	2.520	0.8	2025/01/15 13:59
10.0PPM	411122	5.000	4.985	-0.3	2025/01/15 14:26
20.0PPM	817303	10.000	10.002	0.0	2025/01/15 14:53

NF
01.15.2025

LB134317

WORKLIST(Hardcopy Internal Chain)

WorkList Name : TOC W-01172025 **WorkList ID :** 186970 **Department :** Wet-Chemistry **Date :** 01-17-2025 08:00:16

Sample	Customer Sample	Matrix	Test	Preservative	Customer	Raw Sample Storage Location	Collect Date	Method
Q1109-01	TAPIAL1-MW04I-011525-00-T3	Water	TOC	Conc H2SO4 to pH < 2	WEST04	M11	01/15/2025	9060A

Date/Time 01.17.2025 09:30

Raw Sample Received by: NF (LW C)

Raw Sample Relinquished by: [signature]

Date/Time 01.17.2025 12:3

Raw Sample Received by: [signature]

Raw Sample Relinquished by: NF LW C

Instrument IC-1 Analyst : NF Method: 300.0 / 9056A

Ident	Con F-	Con CL-	Con NO2	Con BR-	Con NO3	Con HPO4	Con SO4	Method name	date time	Initial wt/Fi
STD1	0	0	0	0	0	0	0	IC1-121824	12/18/2024 10:39	10
STD2	0.319	0.475	0.485	1.586	0.405	0.794	2.525	IC1-121824	12/18/2024 11:00	10
STD3	0.867	1.29	1.286	4.307	1.073	2.153	6.454	IC1-121824	12/18/2024 11:22	10
STD4	1.065	1.59	1.587	5.29	1.327	2.68	7.947	IC1-121824	12/18/2024 11:43	10
STD5	1.968	2.98	2.975	9.935	2.472	4.928	14.761	IC1-121824	12/18/2024 12:04	10
STD6	3.929	5.897	5.891	19.654	4.906	9.805	29.16	IC1-121824	12/18/2024 12:26	10
STD7	5.052	7.568	7.575	25.229	6.317	12.641	37.652	IC1-121824	12/18/2024 12:47	10
ICV	2.021	3.088	3.087	10.28	2.565	5.117	15.271	IC1-121824	12/18/2024 13:09	10
ICB	0	0	0	0	0	0	0	IC1-121824	12/18/2024 13:30	10
CCV	2.077	3.111	3.113	10.419	2.587	5.226	15.523	IC1-121824	1/17/2025 8:43	10
CCB	0	0	0	0	0	0	0	IC1-121824	1/17/2025 9:04	10
LB134320BLW	0	0	0	0	0	0	0	IC1-121824	1/17/2025 9:26	10
LB134320BSW	2.073	3.111	3.12	10.432	2.585	5.433	15.544	IC1-121824	1/17/2025 9:47	10
Q1120-01	0.148	128.178	0	0.693	0.194	0	29.758	IC1-121824	1/17/2025 10:09	10
Q1120-01MS	2.113	126.6	3.027	10.219	2.555	5.561	43.215	IC1-121824	1/17/2025 10:30	10
Q1120-01MSD	2.086	126.747	3.039	10.236	2.558	5.53	43.352	IC1-121824	1/17/2025 10:52	10
Q1120-01DLX50	0	2.002	0	0	0	0	1.708	IC1-121824	1/17/2025 11:13	10
CCV	2.108	3.115	3.123	10.457	2.597	5.441	15.572	IC1-121824	1/17/2025 11:35	10
CCB	0	0	0	0	0	0	0	IC1-121824	1/17/2025 11:56	10

Clear table

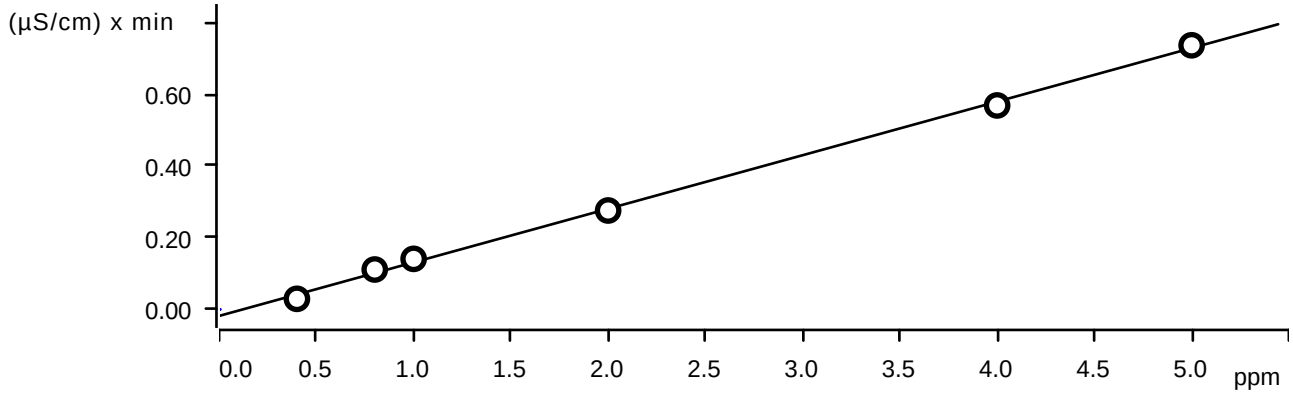
Instrument ID: IC-2 Analyst : IZ Method: 300.0 / 9056A

ident	concentration F-	concentration CL-	concentration NO2	concentration BR-	concentration NO3	concentration HPO4	concentration SO4	file name	date time	Initial wt/ Final	Analyst
STD1	0	0	0	0	0	0	0	IC1-121824	12/18/2024 10:39	10	NF/IZ
STD2	0.319	0.475	0.485	1.586	0.405	0.794	2.525	IC1-121824	12/18/2024 11:00	10	NF/IZ
STD3	0.867	1.29	1.286	4.307	1.073	2.153	6.454	IC1-121824	12/18/2024 11:22	10	NF/IZ
STD4	1.065	1.59	1.587	5.29	1.327	2.68	7.947	IC1-121824	12/18/2024 11:43	10	NF/IZ
STD5	1.968	2.98	2.975	9.935	2.472	4.928	14.761	IC1-121824	12/18/2024 12:04	10	NF/IZ
STD6	3.929	5.897	5.891	19.654	4.906	9.805	29.16	IC1-121824	12/18/2024 12:26	10	NF/IZ
STD7	5.052	7.568	7.575	25.229	6.317	12.641	37.652	IC1-121824	12/18/2024 12:47	10	NF/IZ

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	-20.2500	-20.8333	-19.1667	-20.7000	-19.0000	-20.6000	-15.8333
STD3	8.3750	7.5000	7.1667	7.6750	7.3000	7.6500	7.5667
STD4	6.5000	6.0000	5.8000	5.8000	6.1600	7.2000	5.9600
STD5	-1.6000	-0.6667	-0.8333	-0.6500	-1.1200	-1.4400	-1.5933
STD6	-1.7750	-1.7167	-1.8167	-1.7300	-1.8800	-1.9500	-2.8000
STD7	1.0400	0.9067	1.0000	0.9160	1.0720	1.1280	1.7622

Fluoride (Anions)



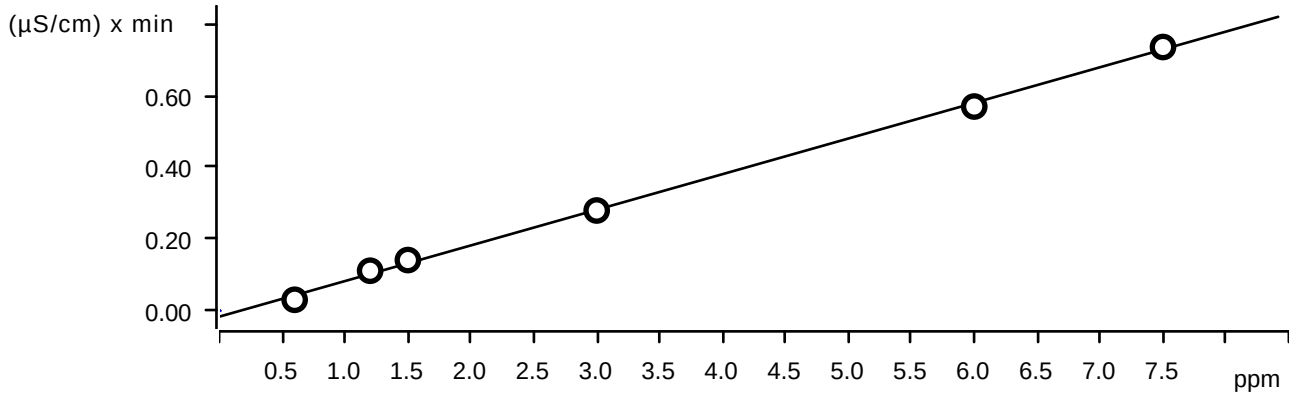
Function: . . . . . *A = - 0.0183596 + 0.0149351× Q*

Relative standard deviation . . . . . *3.731557 %*

Correlation coefficient *0.999324*

Sample type	Index	Conc.	Volume	Dilution	Sample amount	Area	Ident	Date	Used
Standard 2	1	0.400	10.0	1.0	1.0	0.029	STD2	2024-12-18 11:00:37 UTC-5	used
Standard 3	1	0.800	10.0	1.0	1.0	0.111	STD3	2024-12-18 11:22:01 UTC-5	used
Standard 4	1	1.000	10.0	1.0	1.0	0.141	STD4	2024-12-18 11:43:26 UTC-5	used
Standard 5	1	2.000	10.0	1.0	1.0	0.276	STD5	2024-12-18 12:04:52 UTC-5	used
Standard 6	1	4.000	10.0	1.0	1.0	0.568	STD6	2024-12-18 12:26:18 UTC-5	used
Standard 7	1	5.000	10.0	1.0	1.0	0.736	STD7	2024-12-18 12:47:45 UTC-5	used

Chloride (Anions)



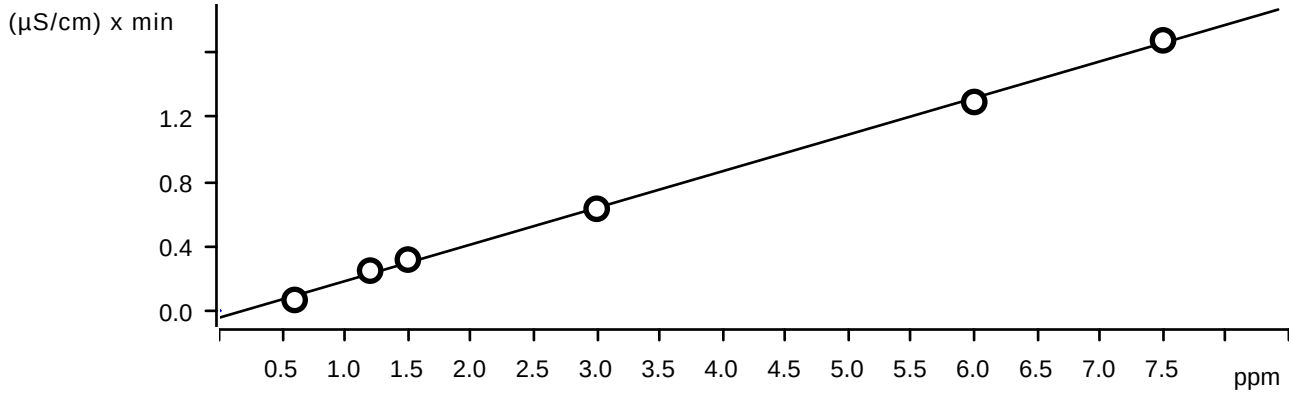
Function: . . . . . *A = - 0.0165562 + 9.93613E-3× Q*

Relative standard deviation . . . . . *3.466087 %*

Correlation coefficient *0.999410*

Sample type	Index	Conc.	Volume	Dilution	Sample amount	Area	Ident	Date	Used
Standard 2	1	0.600	10.0	1.0	1.0	0.031	STD2	2024-12-18 11:00:37 UTC-5	used
Standard 3	1	1.200	10.0	1.0	1.0	0.112	STD3	2024-12-18 11:22:01 UTC-5	used
Standard 4	1	1.500	10.0	1.0	1.0	0.141	STD4	2024-12-18 11:43:26 UTC-5	used
Standard 5	1	3.000	10.0	1.0	1.0	0.280	STD5	2024-12-18 12:04:52 UTC-5	used
Standard 6	1	6.000	10.0	1.0	1.0	0.569	STD6	2024-12-18 12:26:18 UTC-5	used
Standard 7	1	7.500	10.0	1.0	1.0	0.735	STD7	2024-12-18 12:47:45 UTC-5	used

Nitrite (Anions)



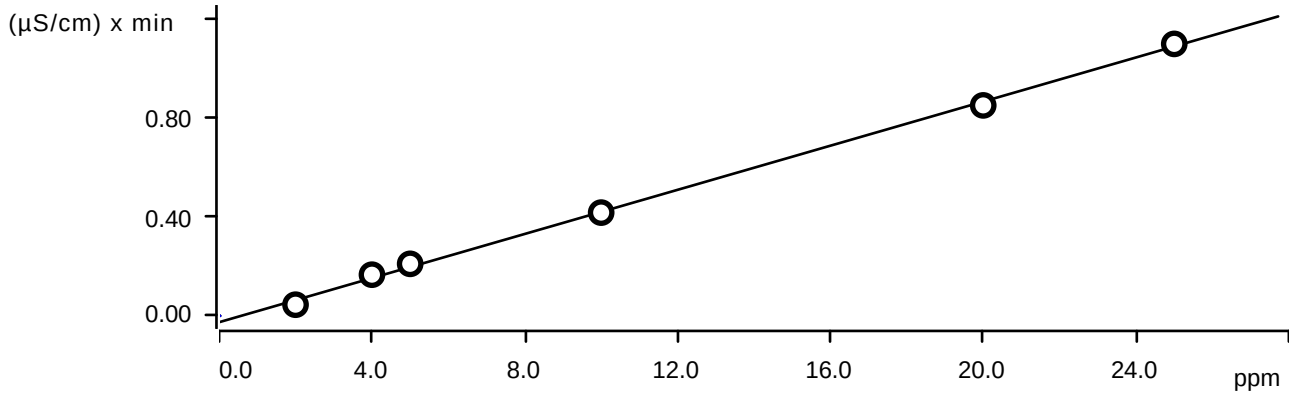
Function: . . . . . *A = - 0.0434679 + 0.0226901× Q*

Relative standard deviation . . . . . *3.455351 %*

Correlation coefficient *0.999423*

Sample type	Index	Conc.	Volume	Dilution	Sample amount	Area	Ident	Date	Used
Standard 2	1	0.600	10.0	1.0	1.0	0.067	STD2	2024-12-18 11:00:37 UTC-5	used
Standard 3	1	1.200	10.0	1.0	1.0	0.248	STD3	2024-12-18 11:22:01 UTC-5	used
Standard 4	1	1.500	10.0	1.0	1.0	0.317	STD4	2024-12-18 11:43:26 UTC-5	used
Standard 5	1	3.000	10.0	1.0	1.0	0.632	STD5	2024-12-18 12:04:52 UTC-5	used
Standard 6	1	6.000	10.0	1.0	1.0	1.293	STD6	2024-12-18 12:26:18 UTC-5	used
Standard 7	1	7.500	10.0	1.0	1.0	1.675	STD7	2024-12-18 12:47:45 UTC-5	used

Bromide (Anions)



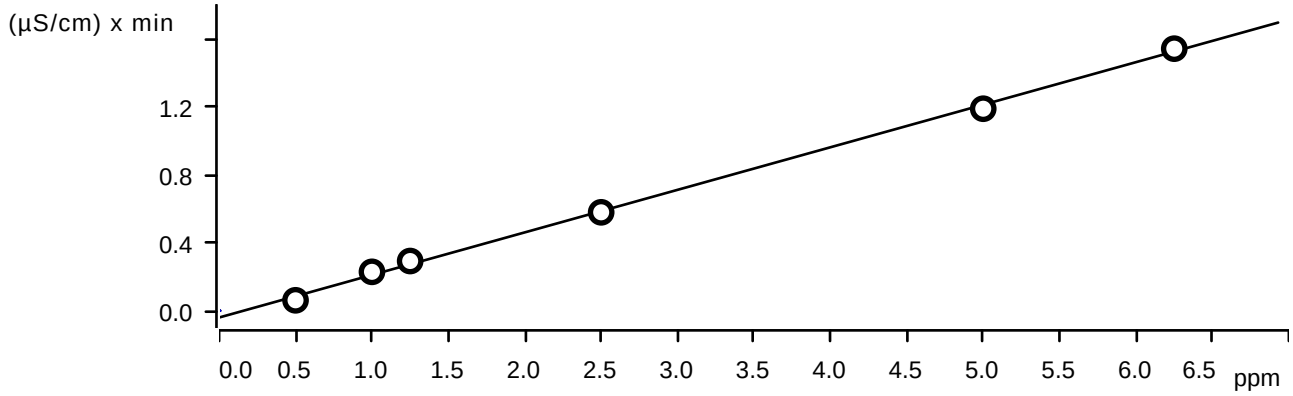
Function: . . . . . *A = - 0.0255661 + 4.44233E-3× Q*

Relative standard deviation . . . . . *3.478545 %*

Correlation coefficient *0.999408*

Sample type	Index	Conc.	Volume	Dilution	Sample amount	Area	Ident	Date	Used
Standard 2	1	2.000	10.0	1.0	1.0	0.045	STD2	2024-12-18 11:00:37 UTC-5	used
Standard 3	1	4.000	10.0	1.0	1.0	0.166	STD3	2024-12-18 11:22:01 UTC-5	used
Standard 4	1	5.000	10.0	1.0	1.0	0.209	STD4	2024-12-18 11:43:26 UTC-5	used
Standard 5	1	10.000	10.0	1.0	1.0	0.416	STD5	2024-12-18 12:04:52 UTC-5	used
Standard 6	1	20.000	10.0	1.0	1.0	0.848	STD6	2024-12-18 12:26:18 UTC-5	used
Standard 7	1	25.000	10.0	1.0	1.0	1.095	STD7	2024-12-18 12:47:45 UTC-5	used

Nitrate (Anions)



Function: . . . . . *A = - 0.0400484 + 0.0250507× Q*

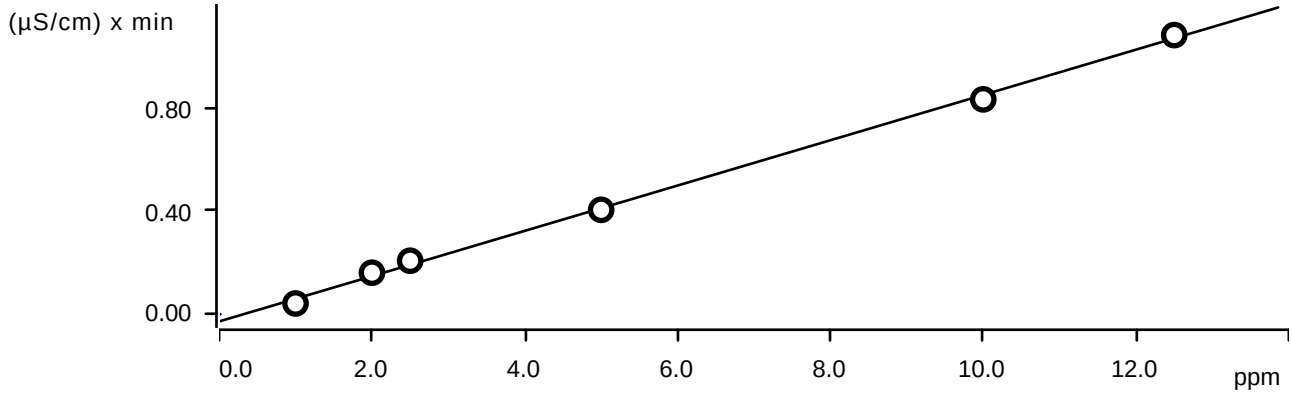
Relative standard deviation . . . . . *3.586984 %*

Correlation coefficient *0.999378*

Sample type	Index	Conc.	Volume	Dilution	Sample amount	Area	Ident	Date	Used
Standard 2	1	0.500	10.0	1.0	1.0	0.061	STD2	2024-12-18 11:00:37 UTC-5	used

Sample type	Index	Conc.	Volume	Dilution	Sample amount	Area	Ident	Date	Used
Standard 3	1	1.000	10.0	1.0	1.0	0.229	STD3	2024-12-18 11:22:01 UTC-5	used
Standard 4	1	1.250	10.0	1.0	1.0	0.292	STD4	2024-12-18 11:43:26 UTC-5	used
Standard 5	1	2.500	10.0	1.0	1.0	0.579	STD5	2024-12-18 12:04:52 UTC-5	used
Standard 6	1	5.000	10.0	1.0	1.0	1.189	STD6	2024-12-18 12:26:18 UTC-5	used
Standard 7	1	6.250	10.0	1.0	1.0	1.542	STD7	2024-12-18 12:47:45 UTC-5	used

Phosphate (Anions)



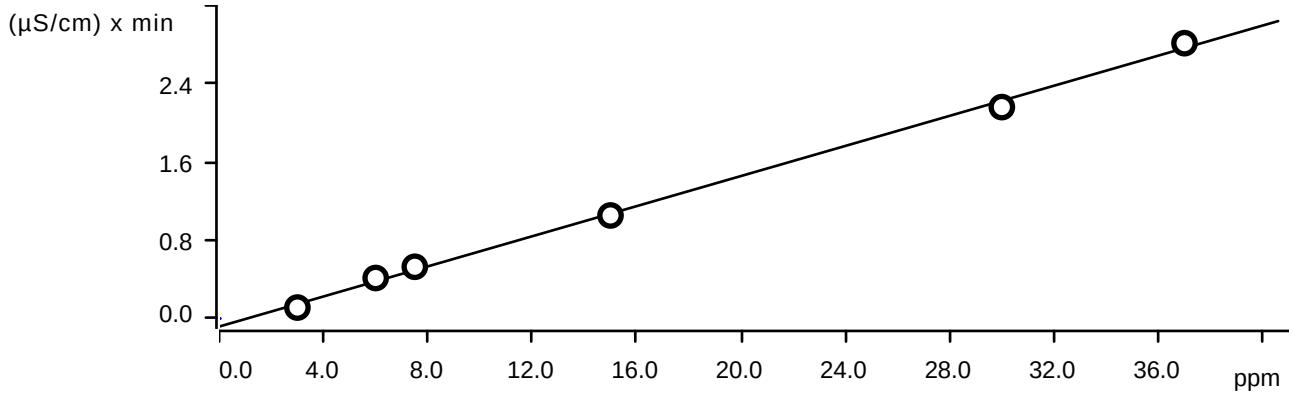
Function: . . . . . *A = - 0.0282076 + 8.77175E-3× Q*

Relative standard deviation . . . . . *3.880200 %*

Correlation coefficient *0.999273*

Sample type	Index	Conc.	Volume	Dilution	Sample amount	Area	Ident	Date	Used
Standard 2	1	1.000	10.0	1.0	1.0	0.041	STD2	2024-12-18 11:00:37 UTC-5	used
Standard 3	1	2.000	10.0	1.0	1.0	0.161	STD3	2024-12-18 11:22:01 UTC-5	used
Standard 4	1	2.500	10.0	1.0	1.0	0.207	STD4	2024-12-18 11:43:26 UTC-5	used
Standard 5	1	5.000	10.0	1.0	1.0	0.404	STD5	2024-12-18 12:04:52 UTC-5	used
Standard 6	1	10.000	10.0	1.0	1.0	0.832	STD6	2024-12-18 12:26:18 UTC-5	used
Standard 7	1	12.500	10.0	1.0	1.0	1.081	STD7	2024-12-18 12:47:45 UTC-5	used

Sulfate (Anions)



Function: . . . . . *A = - 0.0827937 + 7.69466E-3× Q*

Relative standard deviation . . . . . *4.394299 %*

Correlation coefficient *0.999072*

Sample type	Index	Conc.	Volume	Dilution	Sample amount	Area	Ident	Date	Used
Standard 2	1	3.000	10.0	1.0	1.0	0.112	STD2	2024-12-18 11:00:37 UTC-5	used
Standard 3	1	6.000	10.0	1.0	1.0	0.414	STD3	2024-12-18 11:22:01 UTC-5	used
Standard 4	1	7.500	10.0	1.0	1.0	0.529	STD4	2024-12-18 11:43:26 UTC-5	used
Standard 5	1	15.000	10.0	1.0	1.0	1.053	STD5	2024-12-18 12:04:52 UTC-5	used
Standard 6	1	30.000	10.0	1.0	1.0	2.161	STD6	2024-12-18 12:26:18 UTC-5	used
Standard 7	1	37.000	10.0	1.0	1.0	2.814	STD7	2024-12-18 12:47:45 UTC-5	used

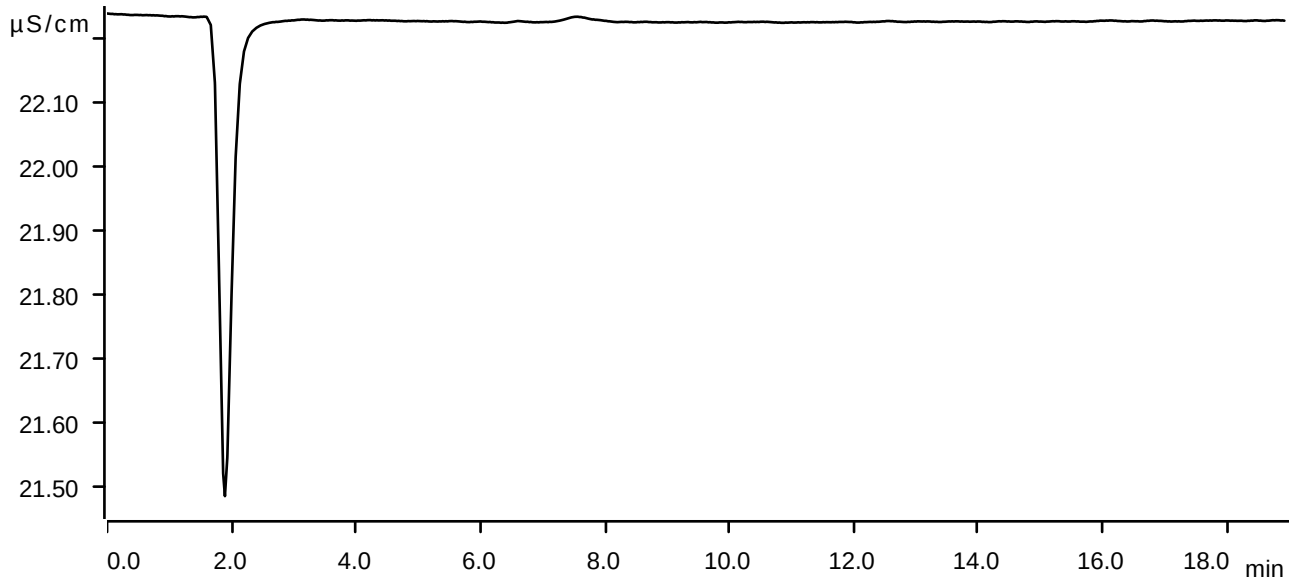
Sample data

Ident	STD1
Sample type	Standard 1
Determination start	2024-12-18 10:39:14 UTC-5
Method	IC1-121824
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



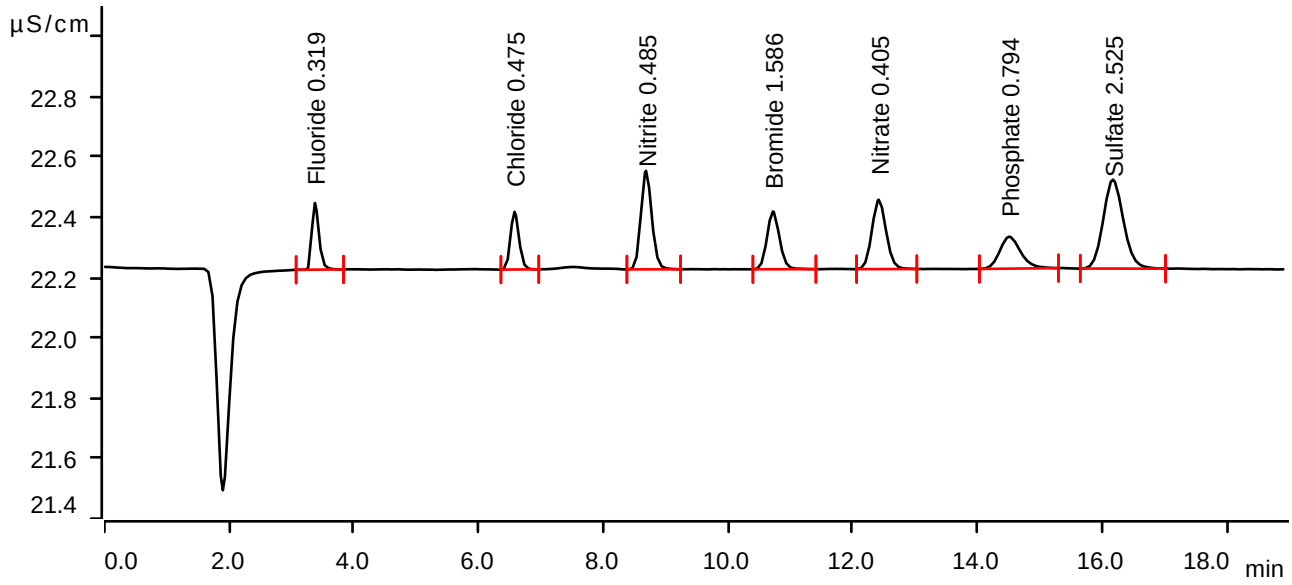
Sample data

Ident	STD2
Sample type	Standard 2
Determination start	2024-12-18 11:00:37 UTC-5
Method	IC1-121824
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	3.377	0.0293	0.221	0.319	Fluoride
2	6.577	0.0307	0.191	0.475	Chloride
3	8.685	0.0666	0.327	0.485	Nitrite
4	10.720	0.0449	0.192	1.586	Bromide
5	12.415	0.0613	0.230	0.405	Nitrate
6	14.510	0.0414	0.106	0.794	Phosphate
7	16.170	0.1115	0.295	2.525	Sulfate

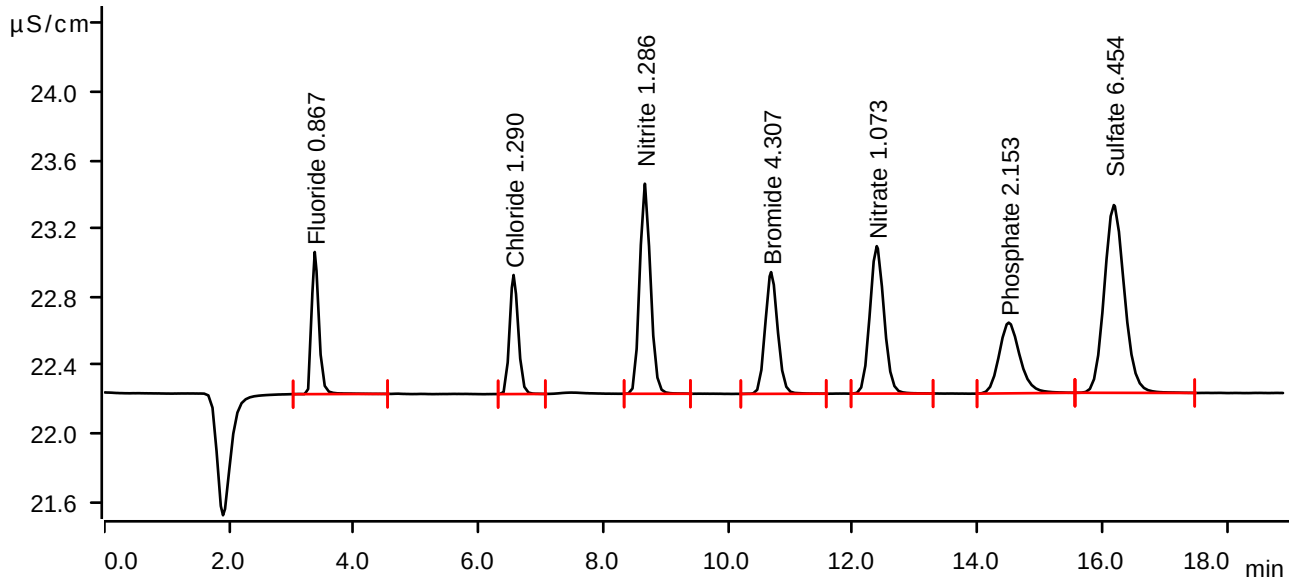
Sample data

Ident	STD3
Sample type	Standard 3
Determination start	2024-12-18 11:22:01 UTC-5
Method	IC1-121824
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 (µS/cm) x min	Height µS/cm	Concentration ppm	Component name
1	3.373	0.1111	0.832	0.867	Fluoride
2	6.562	0.1116	0.697	1.290	Chloride
3	8.665	0.2483	1.230	1.286	Nitrite
4	10.690	0.1658	0.713	4.307	Bromide
5	12.383	0.2288	0.864	1.073	Nitrate
6	14.500	0.1606	0.414	2.153	Phosphate
7	16.185	0.4138	1.100	6.454	Sulfate

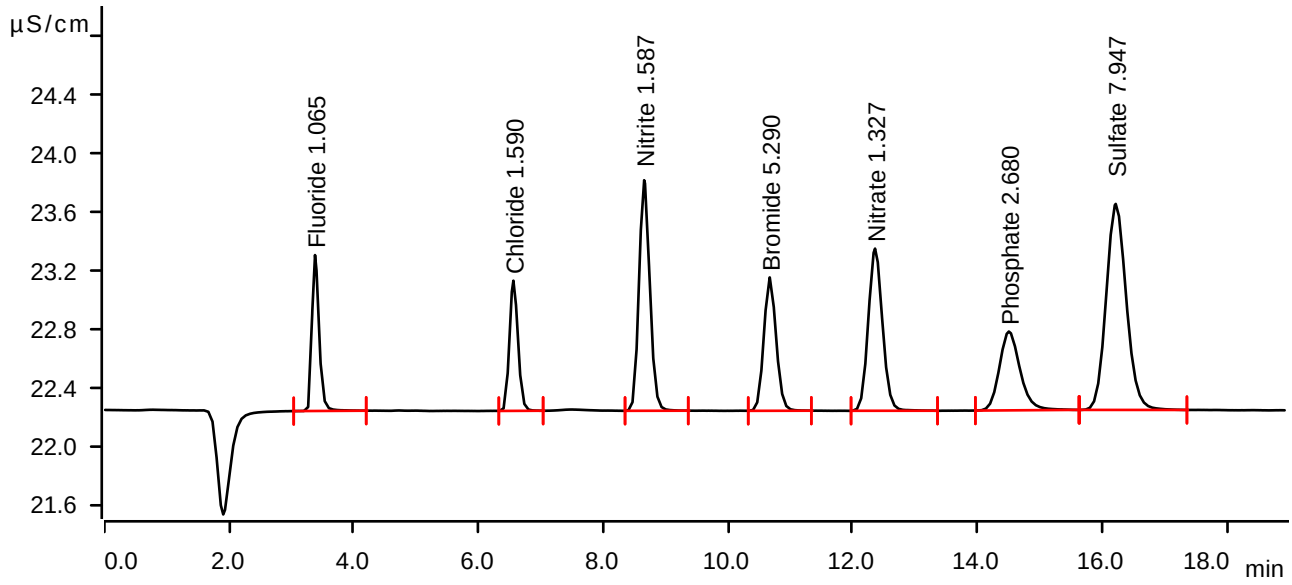
Sample data

Ident	STD4
Sample type	Standard 4
Determination start	2024-12-18 11:43:26 UTC-5
Method	IC1-121824
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	10.87	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	3.378	0.1407	1.065	1.065	Fluoride
2	6.558	0.1414	0.890	1.590	Chloride
3	8.655	0.3167	1.575	1.587	Nitrite
4	10.668	0.2094	0.911	5.290	Bromide
5	12.357	0.2924	1.108	1.327	Nitrate
6	14.502	0.2069	0.539	2.680	Phosphate
7	16.215	0.5287	1.408	7.947	Sulfate

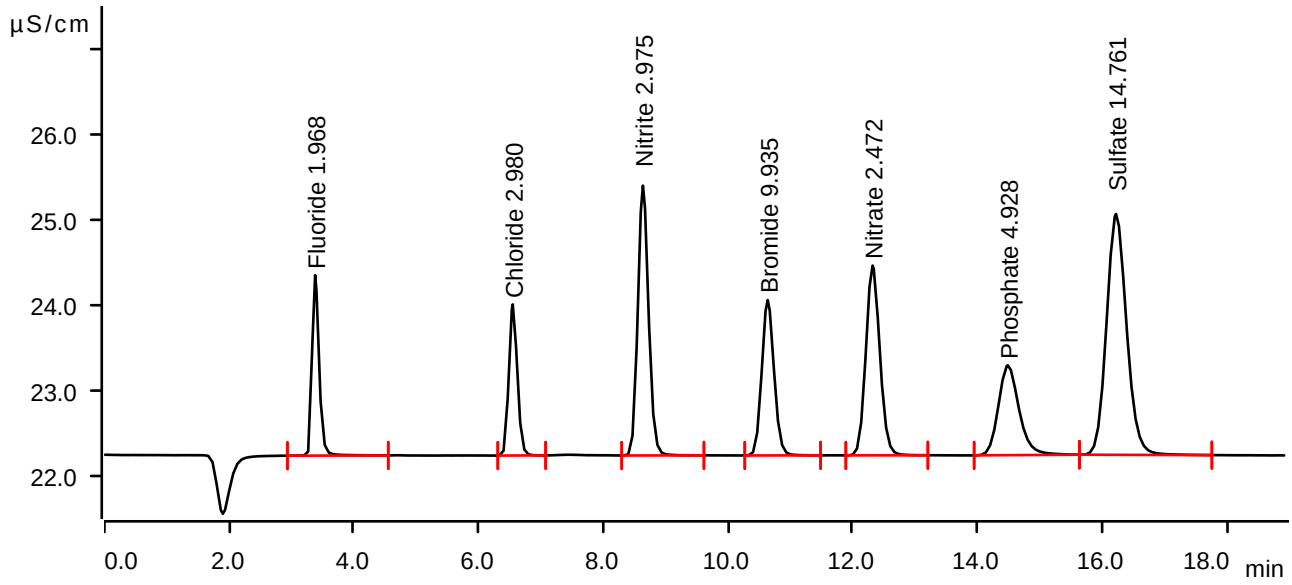
Sample data

Ident	STD5
Sample type	Standard 5
Determination start	2024-12-18 12:04:52 UTC-5
Method	IC1-121824
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	11.04	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	3.380	0.2755	2.114	1.968	Fluoride
2	6.548	0.2796	1.770	2.980	Chloride
3	8.635	0.6316	3.161	2.975	Nitrite
4	10.635	0.4158	1.820	9.935	Bromide
5	12.317	0.5791	2.223	2.472	Nitrate
6	14.485	0.4040	1.052	4.928	Phosphate
7	16.220	1.0530	2.822	14.761	Sulfate

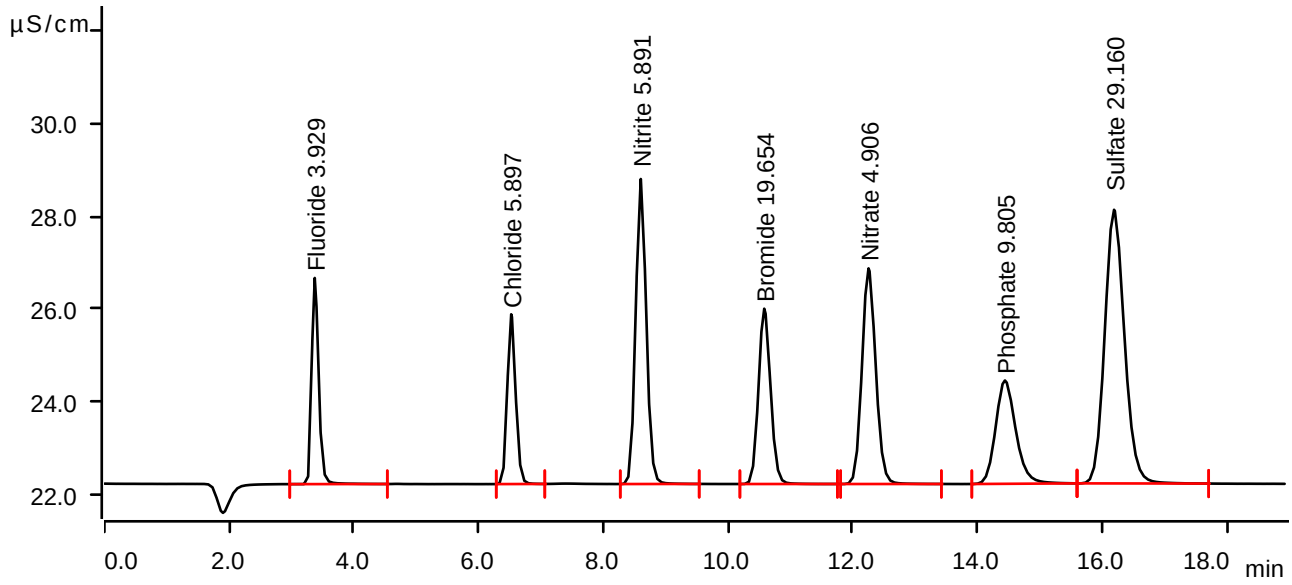
Sample data

Ident	STD6
Sample type	Standard 6
Determination start	2024-12-18 12:26:18 UTC-5
Method	IC1-121824
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	10.98	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	3.373	0.5685	4.427	3.929	Fluoride
2	6.523	0.5694	3.646	5.897	Chloride
3	8.602	1.2933	6.549	5.891	Nitrite
4	10.580	0.8475	3.765	19.654	Bromide
5	12.252	1.1889	4.631	4.906	Nitrate
6	14.438	0.8318	2.220	9.805	Phosphate
7	16.188	2.1610	5.877	29.160	Sulfate

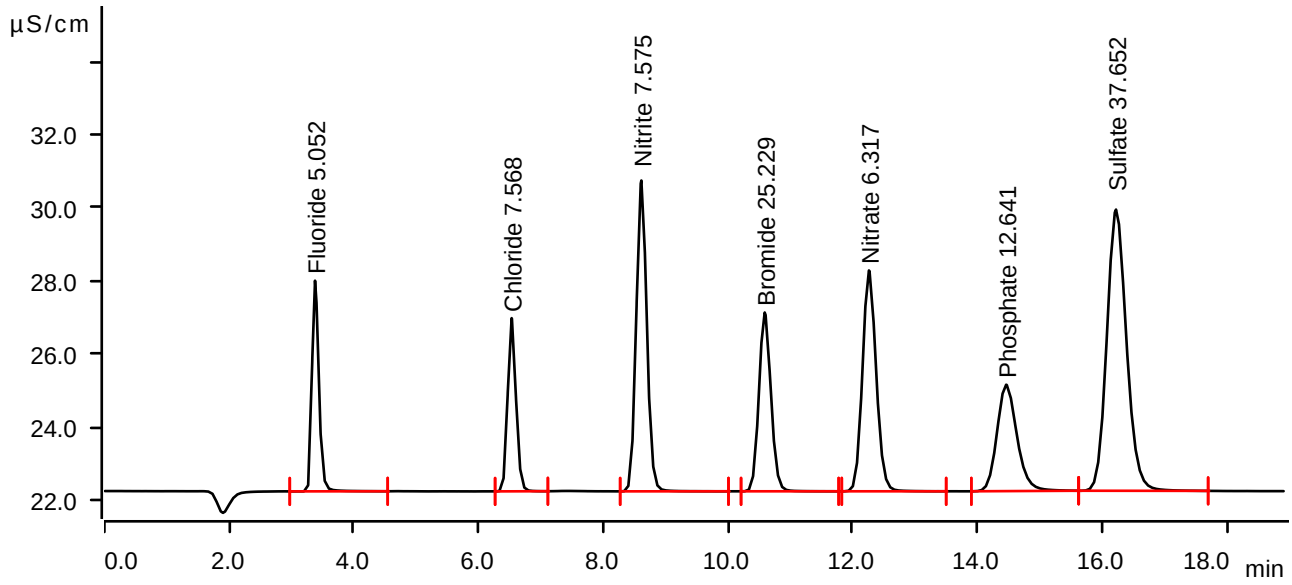
Sample data

Ident	STD7
Sample type	Standard 7
Determination start	2024-12-18 12:47:45 UTC-5
Method	IC1-121824
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	10.75	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	3.378	0.7362	5.758	5.052	Fluoride
2	6.530	0.7354	4.734	7.568	Chloride
3	8.610	1.6752	8.496	7.575	Nitrite
4	10.587	1.0952	4.888	25.229	Bromide
5	12.258	1.5424	6.037	6.317	Nitrate
6	14.458	1.0806	2.908	12.641	Phosphate
7	16.220	2.8144	7.686	37.652	Sulfate

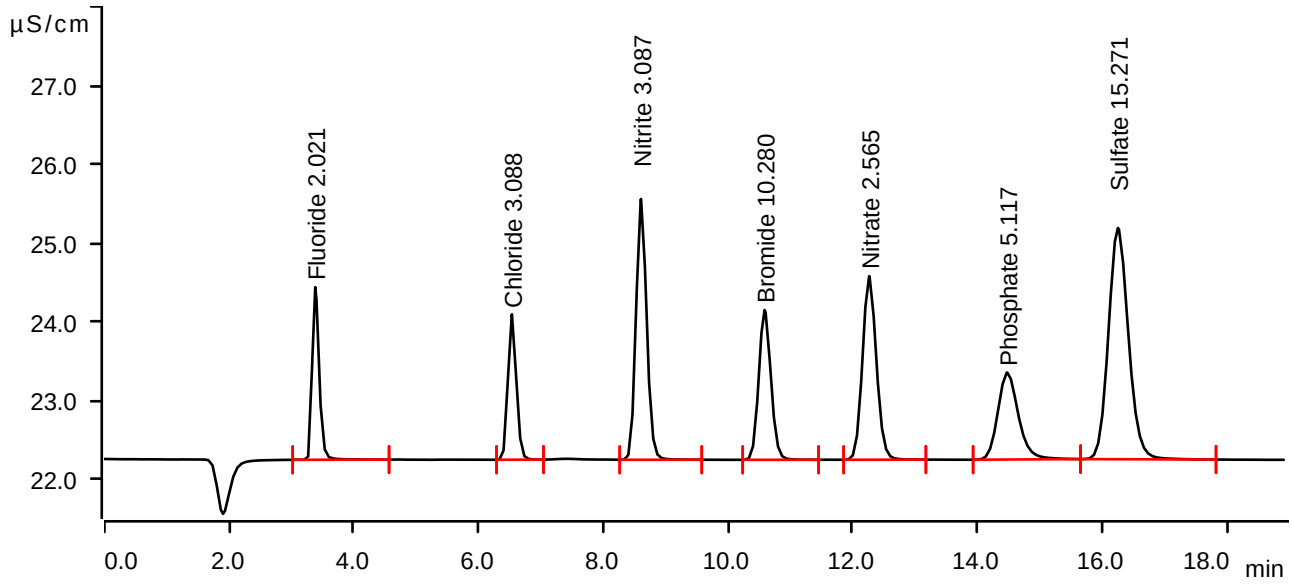
Sample data

Ident	ICV
Sample type	Check standard 1
Determination start	2024-12-18 13:09:13 UTC-5
Method	IC1-121824
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	10.87	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	3.382	0.2835	2.190	2.021	Fluoride
2	6.533	0.2903	1.845	3.088	Chloride
3	8.605	0.6571	3.309	3.087	Nitrite
4	10.585	0.4311	1.902	10.280	Bromide
5	12.262	0.6024	2.329	2.565	Nitrate
6	14.477	0.4207	1.104	5.117	Phosphate
7	16.250	1.0923	2.934	15.271	Sulfate

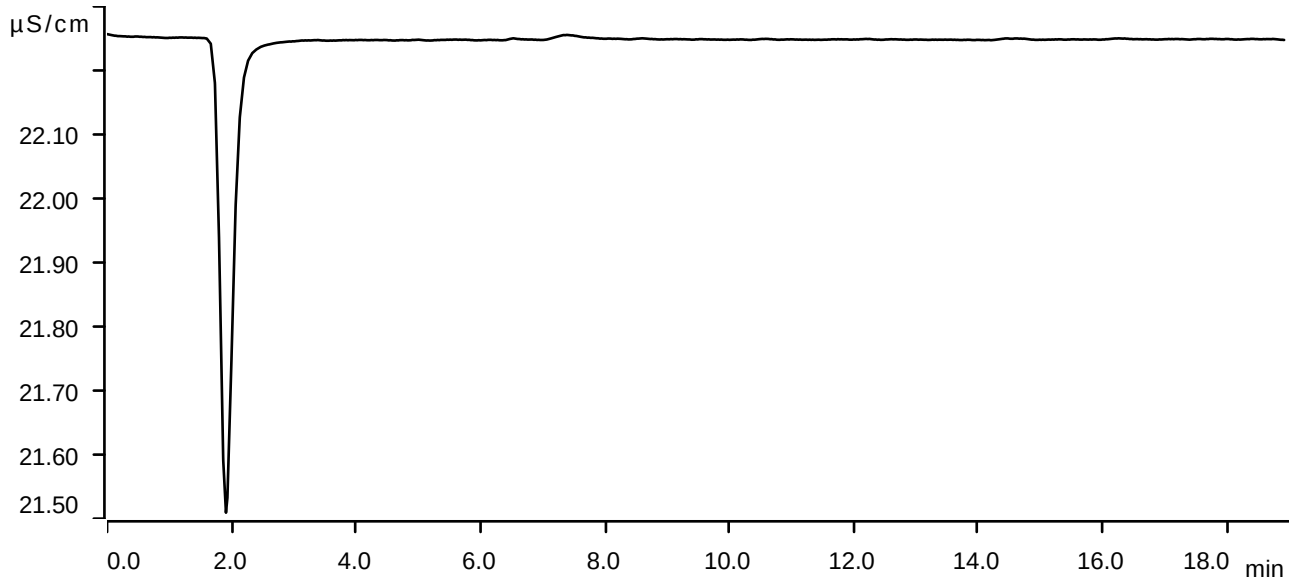
Sample data

Ident	ICB
Sample type	Sample
Determination start	2024-12-18 13:30:41 UTC-5
Method	IC1-121824
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	10.64	MPa
Maximum pressure monitored	yes	
Temperature	-----	°C

Anions



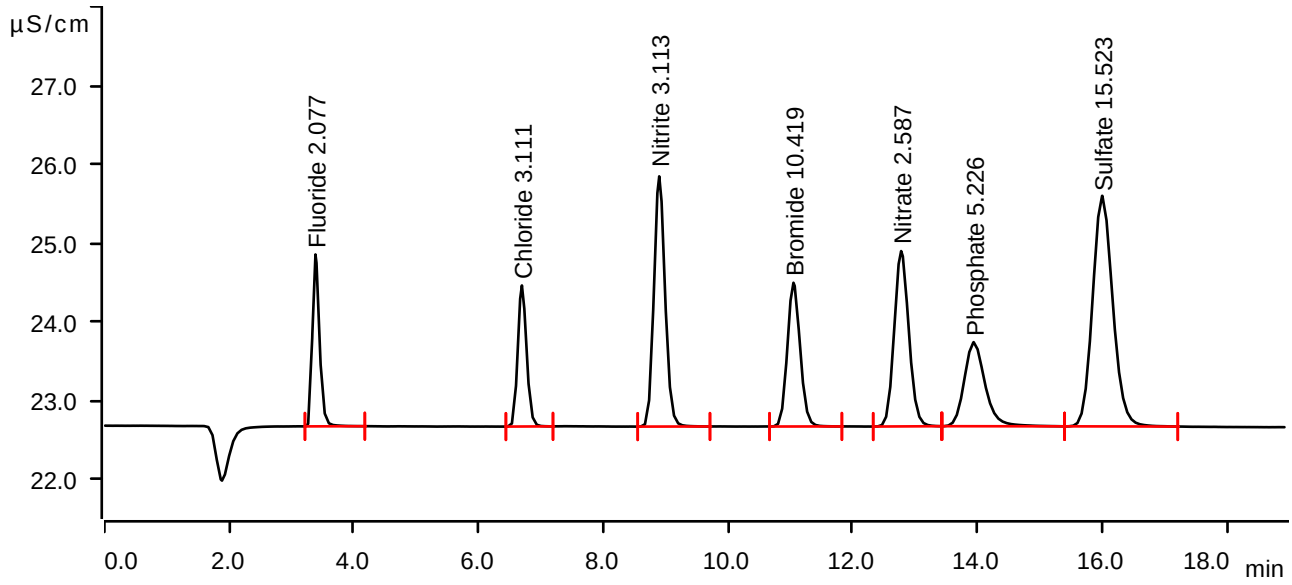
Sample data

Ident	CCV
Sample type	Check standard 1
Determination start	2025-01-17 08:43:10 UTC-5
Method	IC1-121824
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	12.22	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	3.385	0.2869	2.181	2.077	Fluoride
2	6.695	0.2916	1.790	3.111	Chloride
3	8.897	0.6593	3.175	3.113	Nitrite
4	11.048	0.4339	1.824	10.419	Bromide
5	12.775	0.6034	2.225	2.587	Nitrate
6	13.938	0.4123	1.067	5.226	Phosphate
7	15.997	1.0999	2.926	15.523	Sulfate

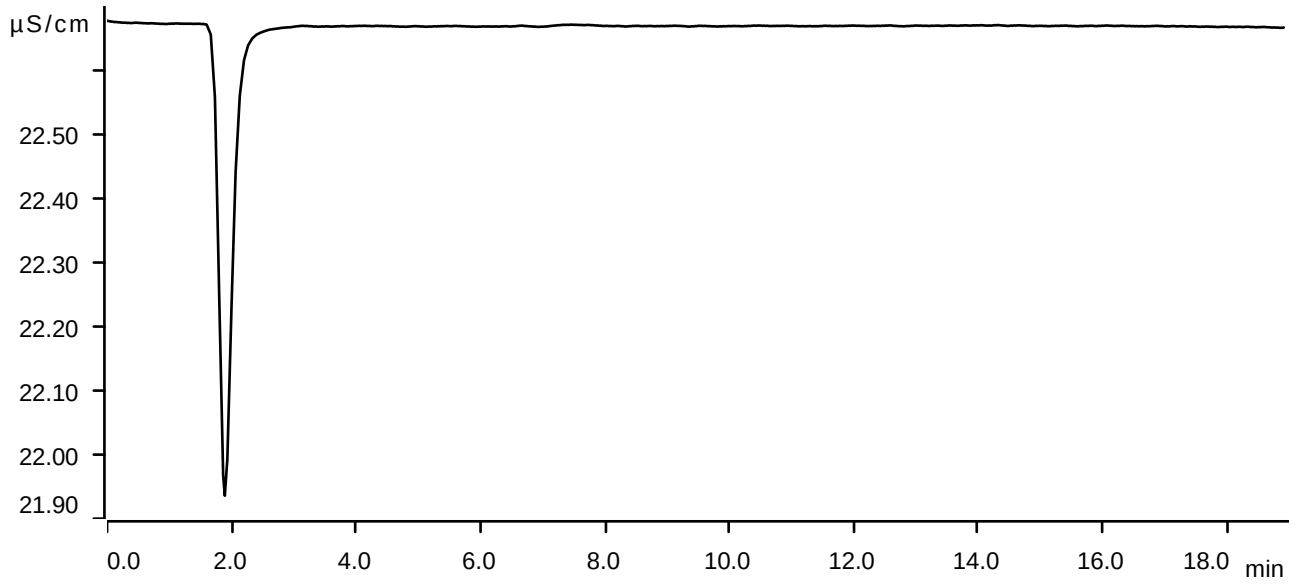
Sample data

Ident	CCB
Sample type	Sample
Determination start	2025-01-17 09:04:40 UTC-5
Method	IC1-121824
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



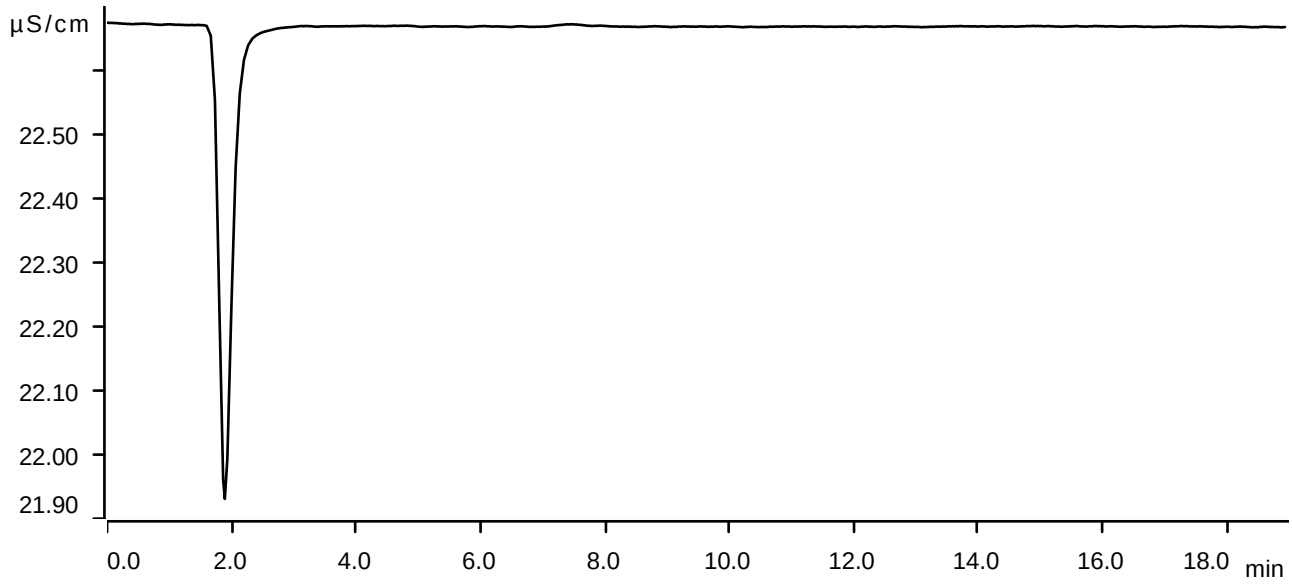
Sample data

Ident	LB134320BLW
Sample type	Sample
Determination start	2025-01-17 09:26:10 UTC-5
Method	IC1-121824
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



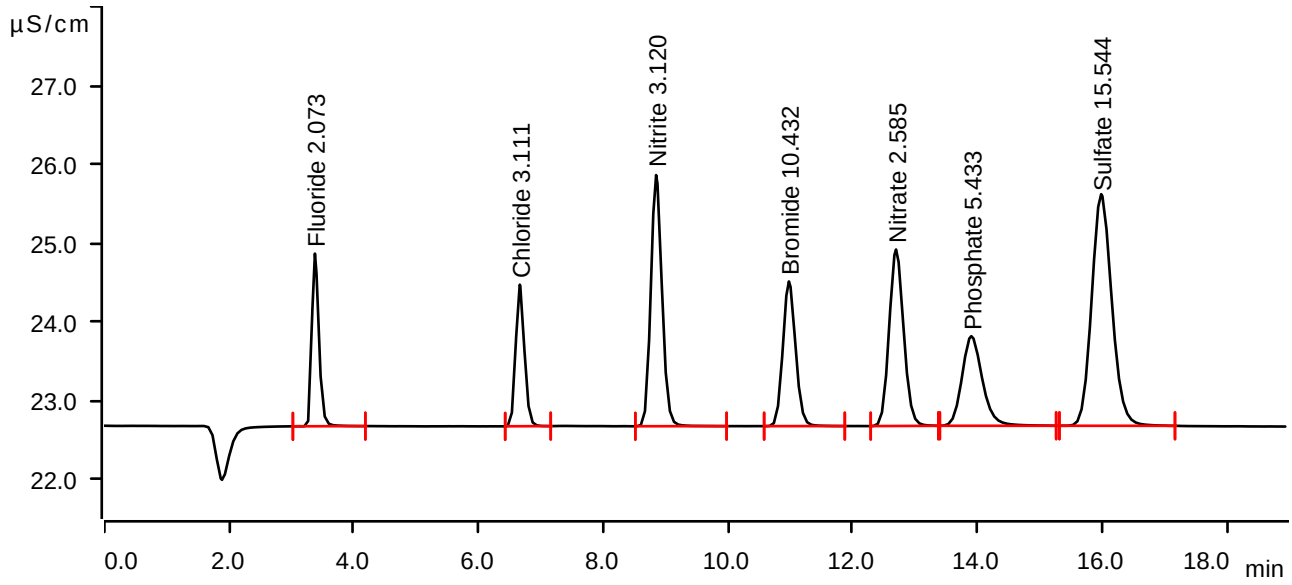
Sample data

Ident	LB134320BSW
Sample type	Sample
Determination start	2025-01-17 09:47:41 UTC-5
Method	IC1-121824
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	11.99	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	3.377	0.2863	2.191	2.073	Fluoride
2	6.660	0.2916	1.797	3.111	Chloride
3	8.847	0.6608	3.187	3.120	Nitrite
4	10.975	0.4344	1.836	10.432	Bromide
5	12.693	0.6029	2.240	2.585	Nitrate
6	13.900	0.4304	1.138	5.433	Phosphate
7	15.982	1.1015	2.939	15.544	Sulfate

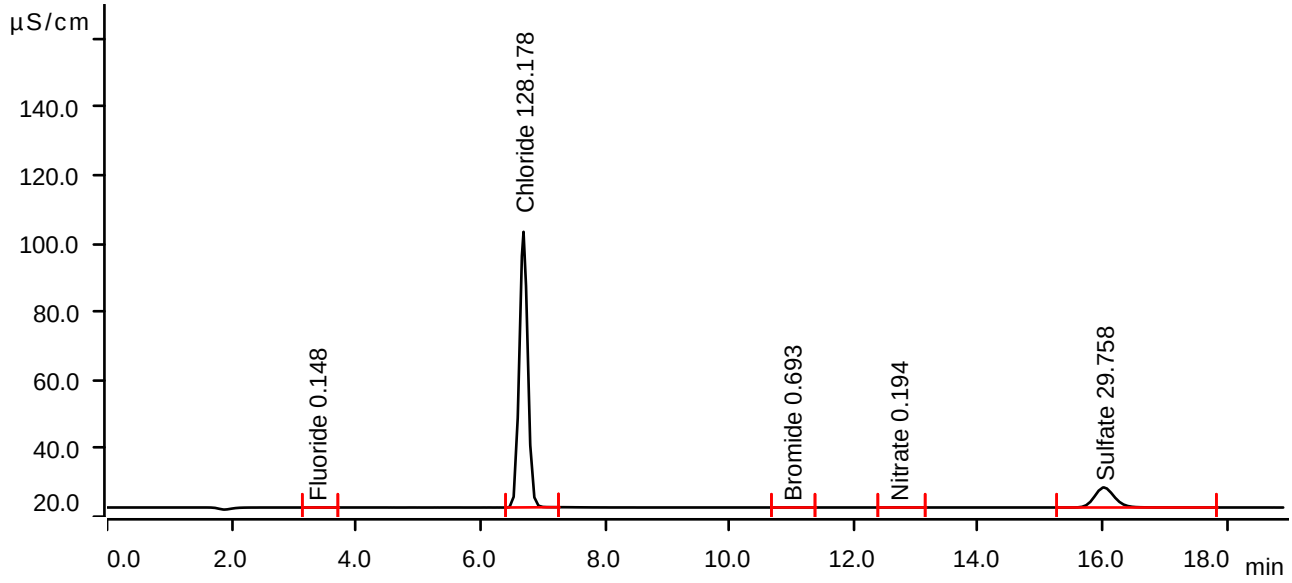
Sample data

Ident	Q1120-01
Sample type	Sample
Determination start	2025-01-17 10:09:13 UTC-5
Method	IC1-121824
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 (µS/cm) x min	Height µS/cm	Concentration ppm	Component name
1	3.367	0.0021	0.013	0.148	Fluoride
2	6.693	12.6839	80.698	128.178	Chloride
3	10.997	0.0038	0.015	0.693	Bromide
4	12.712	0.0074	0.027	0.194	Nitrate
5	16.018	2.1896	5.878	29.758	Sulfate

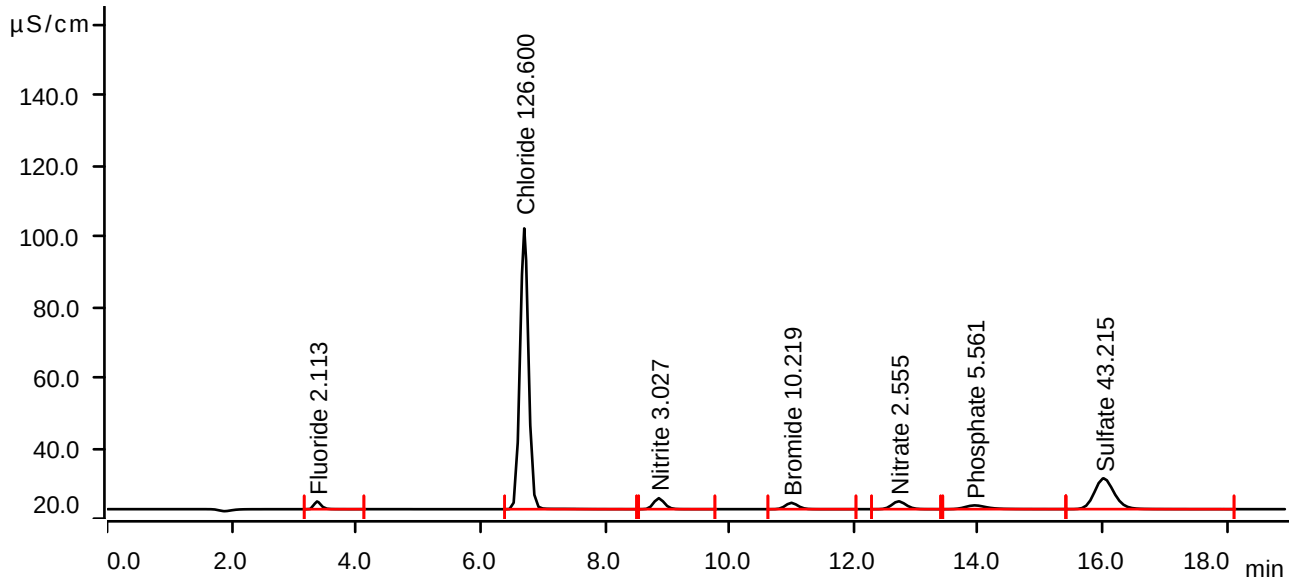
Sample data

Ident	Q1120-01MS
Sample type	Sample
Determination start	2025-01-17 10:30:46 UTC-5
Method	IC1-121824
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	11.99	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	3.375	0.2922	2.192	2.113	Fluoride
2	6.705	12.5276	79.486	126.600	Chloride
3	8.867	0.6398	3.103	3.027	Nitrite
4	10.997	0.4250	1.792	10.219	Bromide
5	12.720	0.5955	2.208	2.555	Nitrate
6	13.942	0.4417	1.066	5.561	Phosphate
7	16.015	3.2197	8.721	43.215	Sulfate

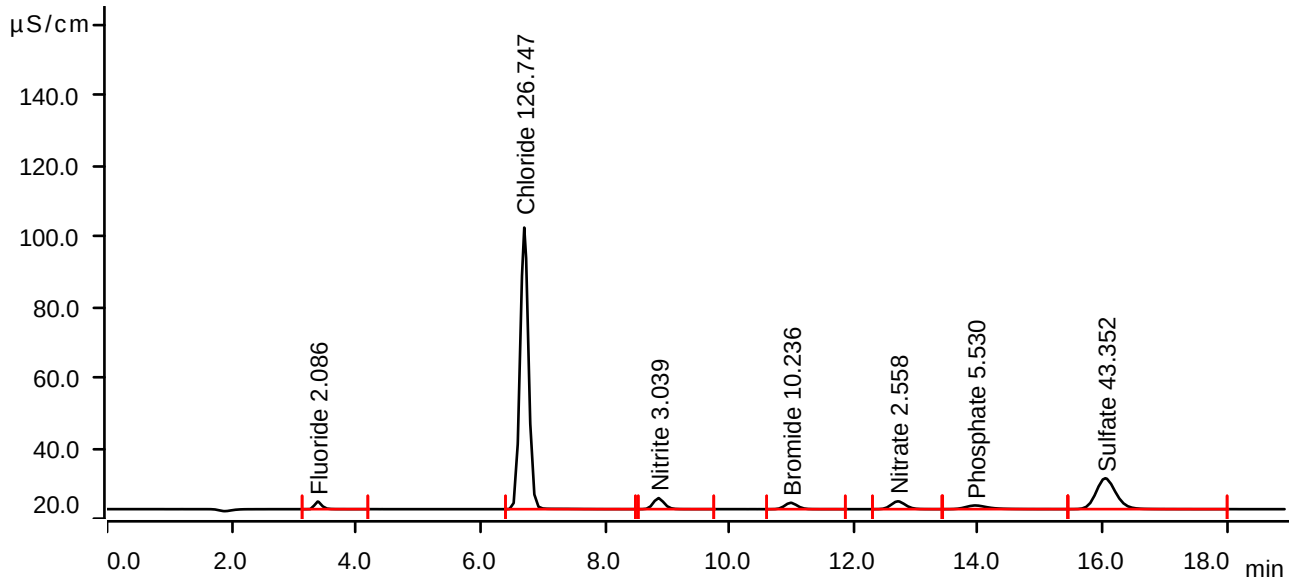
Sample data

Ident	Q1120-01MSD
Sample type	Sample
Determination start	2025-01-17 10:52:19 UTC-5
Method	IC1-121824
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	11.99	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	3.385	0.2883	2.158	2.086	Fluoride
2	6.705	12.5422	79.706	126.747	Chloride
3	8.862	0.6425	3.118	3.039	Nitrite
4	10.987	0.4258	1.801	10.236	Bromide
5	12.708	0.5963	2.215	2.558	Nitrate
6	13.952	0.4389	1.044	5.530	Phosphate
7	16.042	3.2301	8.738	43.352	Sulfate

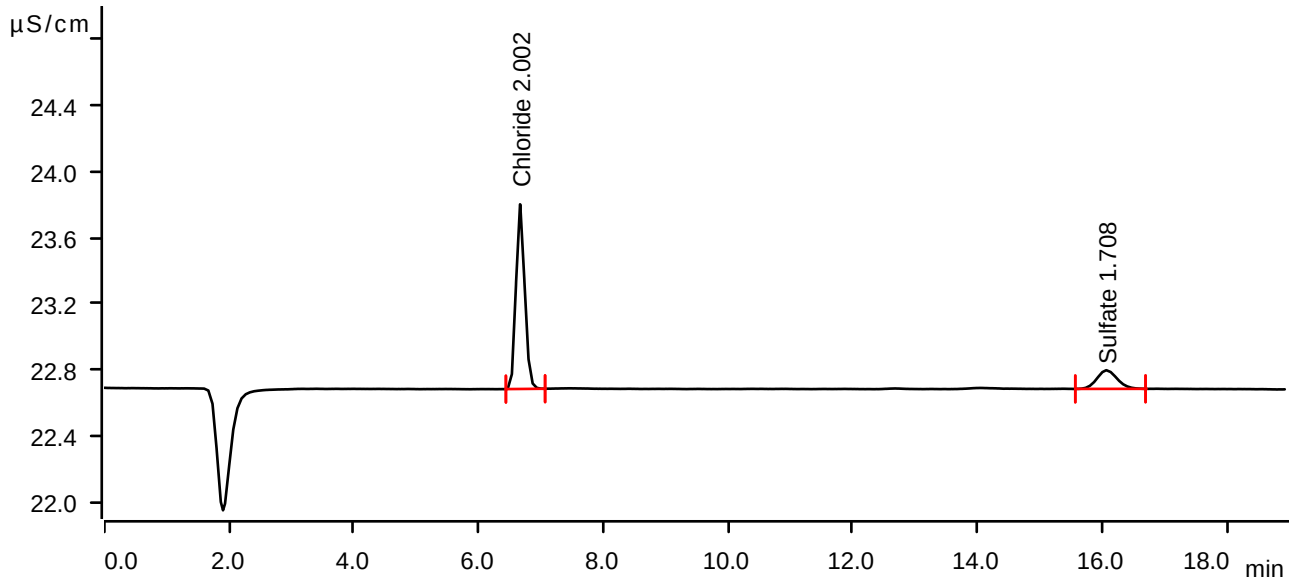
Sample data

Ident	Q1120-01DLX50
Sample type	Sample
Determination start	2025-01-17 11:13:53 UTC-5
Method	IC1-121824
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 (µS/cm) x min	Height µS/cm	Concentration ppm	Component name
1	6.665	0.1816	1.118	2.002	Chloride
2	16.062	0.0424	0.113	1.708	Sulfate

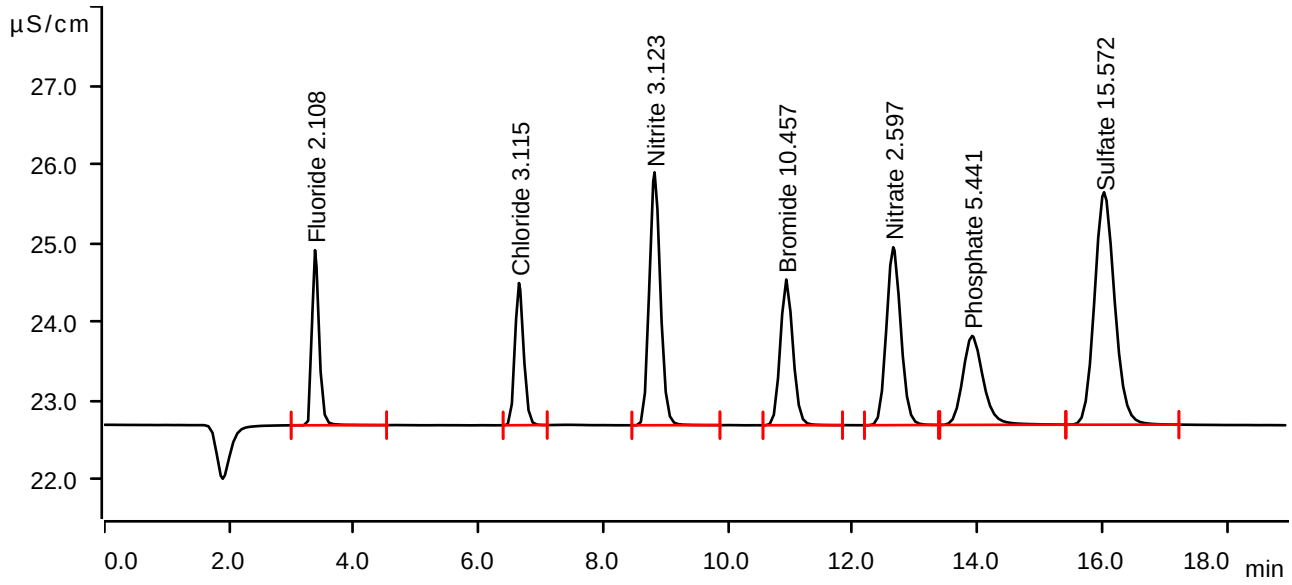
Sample data

Ident	CCV
Sample type	Check standard 1
Determination start	2025-01-17 11:35:28 UTC-5
Method	IC1-121824
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	11.82	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	3.378	0.2916	2.222	2.108	Fluoride
2	6.648	0.2919	1.804	3.115	Chloride
3	8.822	0.6616	3.210	3.123	Nitrite
4	10.933	0.4355	1.849	10.457	Bromide
5	12.648	0.6059	2.257	2.597	Nitrate
6	13.913	0.4311	1.129	5.441	Phosphate
7	16.028	1.1037	2.950	15.572	Sulfate

Reviewed By:Iwon
On:1/20/2025 10:1
AM
Inst Id :IC-2
LB :LB134320

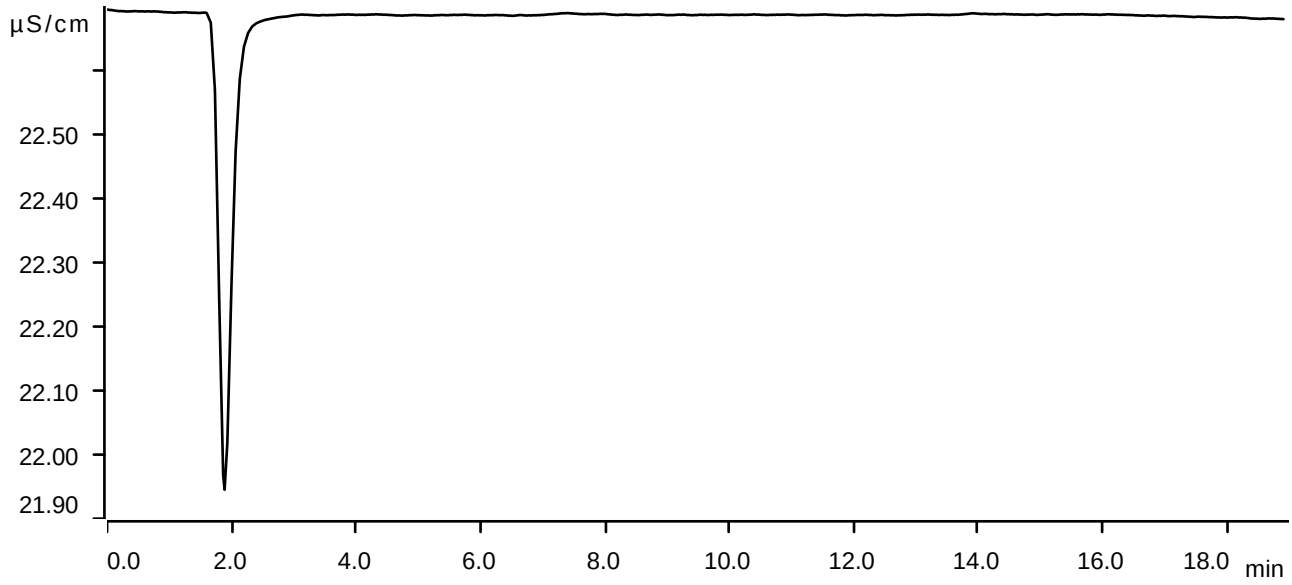
Sample data

Ident	CCB
Sample type	Sample
Determination start	2025-01-17 11:56:58 UTC-5
Method	IC1-121824
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	11.82	MPa
Maximum pressure monitored	yes	
Temperature	-----	°C

Anions



LB134320

WORKLIST(Hardcopy Internal Chain)

WorkList Name : ANIONS-01172025 **WorkList ID :** 186969 **Department :** Wet-Chemistry **Date :** 01-17-2025 08:00:06

Sample	Customer Sample	Matrix	Test	Preservative	Customer	Raw Sample Storage Location	Collect Date	Method
Q1120-01	RW10A-20250116	Water	Anions Group2		TETR06	M11	01/16/2025	300.0

Date/Time 01·17·2025, 09:00

Raw Sample Received by: NF(WC)

Raw Sample Relinquished by: (illegible)

Date/Time 01·17·2025, 11:15

Raw Sample Received by: (illegible)

Raw Sample Relinquished by: NF(WC)

Reviewed By:Iwona
On:1/21/2025 4:07:29 PM
Inst Id :DO METER
LB :LB134322

BOD5 LOG

ANALYST: Niha
SUPERVISOR: Iwona

QC BATCH ID: LB134322
Analysis Date: 01/16/2025
BOD Water: WP111426
MANGANOUS SULFATE SOLUTION: W3103
Starch: W3149
Alkaline Iodide Azide: W3109
Sulfuric acid, 1N: WP110386
Sodium Thiosulfate, 0.025N: W3105
POLYSEED: WP111428
NaOH, 1N: WP111323
GGA: WP111427
IncubatorID: INCUBATOR #3
Chlorine Strips: W3155
GuageID: 0511064
pH Strips: W3140
Zero DO: WP111324

Lab SampleID	Client ID	Bottle No.	VOL. ML	Initial Reading(ML)	Final Reading(ML)	Difference	Average
WINKLER 1	WINKLER 1	1	300	0.0	9.9	9.9	9.9
WINKLER 2	WINKLER 2	2	300	9.8	19.7	9.9	9.9

Meter Calibration1: 9.85 Zero DO Reading1: 0.12 mg/L (<=0.2 Criteria)

Barometric Pressure1: 760 mmHg DO Meter BOD fluid reading for winkler comparison: 9.94

After Incubation

Meter Calibration2: 9.92 Zero DO Reading2: 0.13 mg/L (<=0.2 Criteria)

Barometric Pressure2: 765 mmHg

Alliance TECHNICAL GROUP

QC BATCH ID: LB134322

INCUBATOR TEMP IN(C): 19.8

INCUBATOR TEMP OUT(C): 20.3

TIME IN: 18:50

TIME OUT: 15:00

DATE IN: 01/16/2025

DATE OUT: 01/21/2025

Lab SampleID	Bottle No.	Check CL	Initial PH	Final PH	Temp °C	Sam Vol. (mL)	D.O.1 Initial	D.O.2 Final	Depletion	BOD Result (mg/L)	Avg Result (mg/L)	Comment
LB134322BL	1	No	6.57	N/A	20.70	300	9.93	9.92	0.01	0.01	0.01	
POLYSEED	1					10	9.90	6.97	2.93	0.59	0.74	
POLYSEED	2					15	9.87	4.06	5.81	0.77		
POLYSEED	3					20	9.82	1.16	8.66	0.87		
GGA	1					6	9.90	5.80	4.1	168	191.5	
GGA	2					6	9.87	5.70	4.17	171.5		
GGA	3					6	9.86	4.42	5.44	235		
Q1120-01	1	No	4.35	6.72	20.00	5	9.91	8.18	-	0	18.83	pH Adjuste
Q1120-01	2					20	9.84	7.97	-	0		
Q1120-01	3					50	9.78	4.52	5.26	27.12		
Q1120-01	4					150	9.09	3.08	6.01	10.54		
Q1120-01DUP	1	No	4.35	6.72	20.00	5	9.91	8.20	-	0	18.77	pH Adjuste
Q1120-01DUP	2					20	9.83	7.99	-	0		
Q1120-01DUP	3					50	9.78	4.54	5.24	27		
Q1120-01DUP	4					150	9.11	3.10	6.01	10.54		

NOTE: 2ml POLYSEED added to GGA and all the Samples, but not in Blank.

NOTE (For, CBOD5): 0.16 g Nitrification Inhibitor added to GGA and all the Samples, but not in Blank.

WORKLIST(Hardcopy Internal Chain)

LB134322

WorkList Name : bod5-1-16-25 **WorkList ID :** 186965 **Department :** Wet-Chemistry **Date :** 01-16-2025 16:32:10

Sample	Customer Sample	Matrix	Test	Preservative	Customer	Raw Sample Storage Location	Collect Date	Method
Q1120-01	RW10A-20250116	Water	BOD5		TETR06	M11	01/16/2025	SM5210 B

Date/Time 01/16/2025 18.20
Raw Sample Received by: RM (WC)
Raw Sample Relinquished by: [signature] (WC)

Date/Time 01/16/2025 18.45
Raw Sample Received by: [signature] (WC)
Raw Sample Relinquished by: RM (WC)

LB134325

Test results — Aquakem 7.2AQ1 —

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

1/17/2025 12:19 — Reviewed by : RM — Instrument ID : Konelab

Test: Ammonia-N

Sample Id	Result	Dil.	1 +	Response	Errors
ICV1	1.009	0.0		0.148	
ICB1	0.014	0.0		0.018	
CCV1	0.998	0.0		0.147	
CCB1	0.013	0.0		0.018	
RL CHECK	0.107	0.0		0.030	107% (50—150) 01/17/2025 RM
PB166092BL	0.010	0.0		0.017	
PB166092BS	0.986	0.0		0.145	
Q1109-02	0.015	0.0		0.018	
Q1113-01	3.361	0.0		0.457	Test limit high
Q1113-01DUP	3.287	0.0		0.447	Test limit high
Q1113-01MS	4.325	0.0		0.583	Test limit high
Q1113-01MSD	4.091	0.0		0.553	Test limit high
Q1113-03	1.602	0.0		0.226	
Q1113-05	3.321	0.0		0.452	Test limit high
CCV2	1.006	0.0		0.148	
CCB2	0.011	0.0		0.017	
Q1120-01	0.061	0.0		0.024	
CCV3	1.056	0.0		0.155	
CCB3	0.009	0.0		0.017	
Q1113-01DLX2	1.662	0.0		0.234	
Q1113-05DLX2	1.726	0.0		0.242	
CCV4	1.020	0.0		0.150	
CCB4	0.014	0.0		0.018	

N	23
Mean	1.291
SD	1.4252
CV%	110.35

Aquakem v. 7.2AQ1
Results from time period:
Fri Jan 17 10:42:26 2025
Fri Jan 17 12:14:23 2025

Sample Id	Sam/Ctr/cA	Test short r	Test type	Result	Result unit	Result date and time	Stat
0.0PPM	A		Ammonia-N P	-0.0052	mg/l	1/17/2025 10:42:26	
0.1PPM	A		Ammonia-N P	0.1122	mg/l	1/17/2025 10:42:27	
0.2PPM	A		Ammonia-N P	0.197	mg/l	1/17/2025 10:42:28	
0.4PPM	A		Ammonia-N P	0.4025	mg/l	1/17/2025 10:42:29	
1.0PPM	A		Ammonia-N P	1.0228	mg/l	1/17/2025 10:42:30	
1.3PPM	A		Ammonia-N P	1.2819	mg/l	1/17/2025 10:42:31	
2.0PPM	A		Ammonia-N P	2.022	mg/l	1/17/2025 10:42:32	
ICV1	S		Ammonia-N P	1.0088	mg/l	1/17/2025 11:34:05	
ICB1	S		Ammonia-N P	0.0144	mg/l	1/17/2025 11:34:06	
CCV1	S		Ammonia-N P	0.9983	mg/l	1/17/2025 11:34:09	
CCB1	S		Ammonia-N P	0.0129	mg/l	1/17/2025 11:34:11	
RL CHECK	S		Ammonia-N P	0.1066	mg/l	1/17/2025 11:34:13	
PB166092BL	S		Ammonia-N P	0.0099	mg/l	1/17/2025 11:34:15	
PB166092BS	S		Ammonia-N P	0.9863	mg/l	1/17/2025 11:44:45	
Q1109-02	S		Ammonia-N P	0.015	mg/l	1/17/2025 11:44:47	
Q1113-01	S		Ammonia-N P	3.3605	mg/l	1/17/2025 11:44:50	
Q1113-01DUP	S		Ammonia-N P	3.2866	mg/l	1/17/2025 11:44:51	
Q1113-01MS	S		Ammonia-N P	4.3251	mg/l	1/17/2025 11:44:52	
Q1113-01MSD	S		Ammonia-N P	4.0912	mg/l	1/17/2025 11:44:53	
Q1113-03	S		Ammonia-N P	1.6025	mg/l	1/17/2025 11:44:54	
Q1113-05	S		Ammonia-N P	3.3212	mg/l	1/17/2025 11:44:55	
CCV2	S		Ammonia-N P	1.0058	mg/l	1/17/2025 11:44:56	
CCB2	S		Ammonia-N P	0.0114	mg/l	1/17/2025 11:53:11	
Q1120-01	S		Ammonia-N P	0.0613	mg/l	1/17/2025 11:53:12	
CCV3	S		Ammonia-N P	1.0562	mg/l	1/17/2025 11:53:13	
CCB3	S		Ammonia-N P	0.0086	mg/l	1/17/2025 11:53:16	
Q1113-01DLX2	S		Ammonia-N P	1.6618	mg/l	1/17/2025 12:14:17	
Q1113-05DLX2	S		Ammonia-N P	1.7262	mg/l	1/17/2025 12:14:19	
CCV4	S		Ammonia-N P	1.0196	mg/l	1/17/2025 12:14:20	
CCB4	S		Ammonia-N P	0.0143	mg/l	1/17/2025 12:14:23	

Calibration results Aquakem 7.2AQ1 Page: 1

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

1/17/2025 10:55 Reviewed by : RM Instrument ID : Konelab

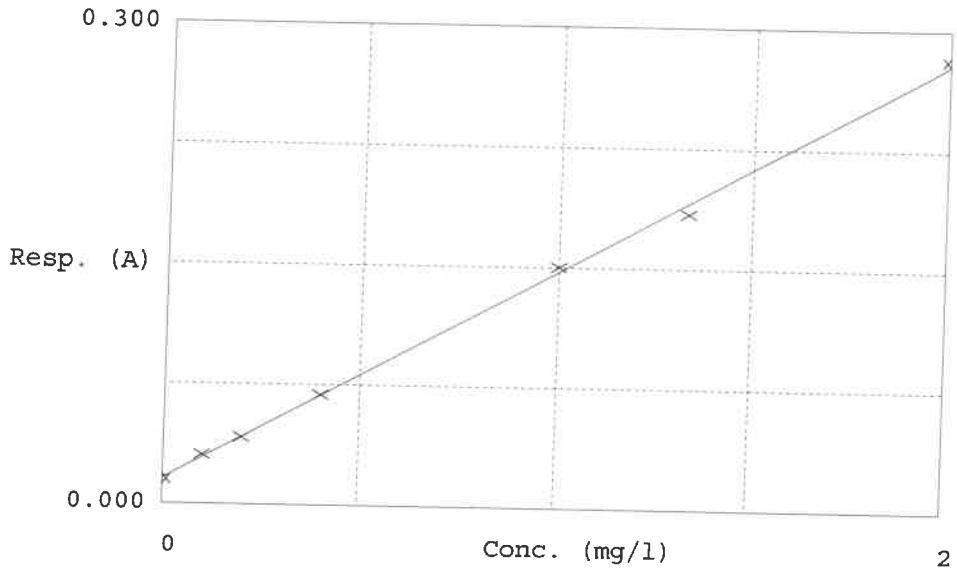
Test Ammonia-N

Accepted 1/17/2025 10:55

Factor 7.622
Bias 0.016

Coeff. of det. 0.998861

Errors



	Calibrator	Response	Calc. con.	Conc.	Errors
1	0.00PPM	0.015	-0.0052	0.0000	-
2	NH3-2PPM	0.031	0.1122	0.1000	12.2
3	NH3-2PPM	0.042	0.1970	0.2000	-1.5
4	NH3-2PPM	0.069	0.4025	0.4000	0.6
5	NH3-2PPM	0.150	1.0228	1.0000	2.3
6	NH3-2PPM	0.184	1.2819	1.3333	-1.4
7	NH3-2PPM	0.281	2.0220	2.0000	1.1

01/17/2025
RM

LB

Test results — Aquakem 7.2AQ1 —

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

1/17/2025 15:33 — Reviewed by : NF — Instrument ID : Konelab

Test: Total CN

Sample Id	Result	Dil. 1 +	Response	Errors
ICV1	98.434	0.0	0.072	
ICB1	0.170	0.0	0.002	
CCV1	246.830	0.0	0.178	
CCB1	0.001	0.0	0.002	
RL CHECK	4.616	0.0	0.005	92 % (50-150)
PB166125BL	-0.138	0.0	0.002	
PB166125BS	98.983	0.0	0.072	
MIDPB166125	243.435	0.0	0.175	97 % (90-110)
Q1120-01	1.079	0.0	0.003	
Q1120-01DUP	1.003	0.0	0.003	
Q1120-01MS	44.610	0.0	0.034	
Q1120-01MSD	44.102	0.0	0.033	
CCV2	265.651	0.0	0.191	
CCB2	-0.237	0.0	0.002	

NF
01.17.2025

N	14
Mean	74.896
SD	102.1576
CV%	136.40

Aquakem v. 7.2AQ1
Results from time period:
Fri Jan 17 15:12:25 2025
Fri Jan 17 15:23:24 2025

Sample Id	Sam/Ctr/cA	Test short r	Test type	Result	Result unit	Result date and time	Stat
0.0PPBCN	A	Total CN	P	-0.263	µg/l	1/17/2025 12:52:03	
5.0PPBCN	A	Total CN	P	4.4405	µg/l	1/17/2025 12:52:04	
10PPBCN	A	Total CN	P	9.2502	µg/l	1/17/2025 12:52:05	
50PPBCN	A	Total CN	P	49.7107	µg/l	1/17/2025 12:52:06	
100PPBCN	A	Total CN	P	101.3716	µg/l	1/17/2025 12:52:07	
250PPBCN	A	Total CN	P	251.4298	µg/l	1/17/2025 12:52:08	
500PPBCN	A	Total CN	P	499.0603	µg/l	1/17/2025 12:52:09	
ICV1	S	Total CN	P	98.4343	µg/l	1/17/2025 15:12:26	
ICB1	S	Total CN	P	0.1702	µg/l	1/17/2025 15:12:28	
CCV1	S	Total CN	P	246.8295	µg/l	1/17/2025 15:12:30	
CCB1	S	Total CN	P	0.0012	µg/l	1/17/2025 15:12:32	
RL CHECK	S	Total CN	P	4.6163	µg/l	1/17/2025 15:12:33	
PB166125BL	S	Total CN	P	-0.1377	µg/l	1/17/2025 15:12:35	
PB166125BS	S	Total CN	P	98.983	µg/l	1/17/2025 15:20:01	
MIDPB166125	S	Total CN	P	243.4349	µg/l	1/17/2025 15:20:03	
Q1120-01	S	Total CN	P	1.0794	µg/l	1/17/2025 15:20:05	
Q1120-01DUP	S	Total CN	P	1.0028	µg/l	1/17/2025 15:20:06	
Q1120-01MS	S	Total CN	P	44.6104	µg/l	1/17/2025 15:20:07	
Q1120-01MSD	S	Total CN	P	44.1022	µg/l	1/17/2025 15:20:08	
CCV2	S	Total CN	P	265.651	µg/l	1/17/2025 15:23:23	
CCB2	S	Total CN	P	-0.2372	µg/l	1/17/2025 15:23:24	

Calibration results Aquakem 7.2AQ1 Page:

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

Reviewed by : NF Instrument ID : Konelab

1/17/2025 12:56

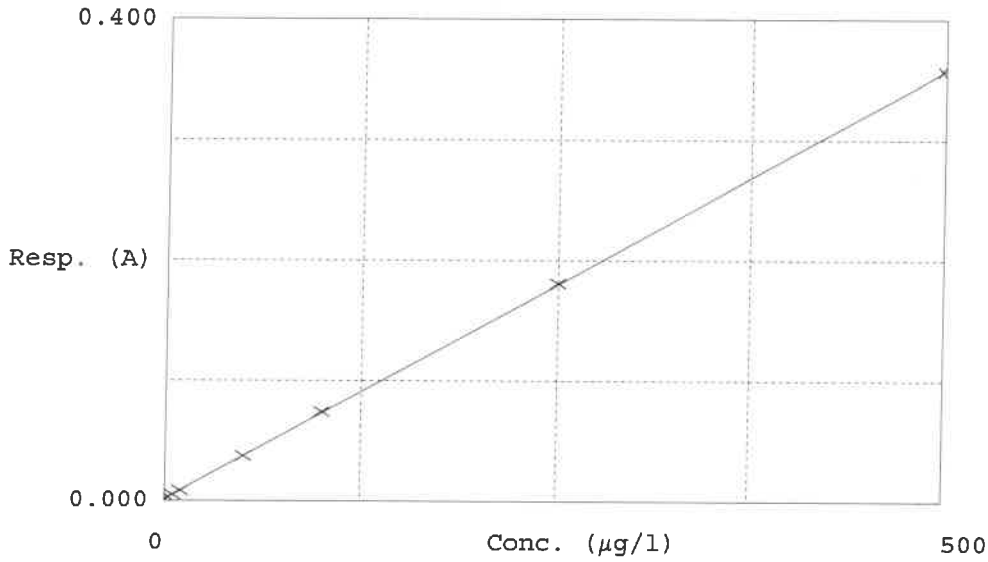
Test Total CN

Accepted 1/17/2025 12:56

Factor 1405
Bias 0.002

Coeff. of det. 0.999972

Errors



	Calibrator	Response	Calc. con.	Conc.	Errors (Re)
1	0.0PPBCN	0.002	-0.2630	0.0000	-
2	5.0PPBCN	0.005	4.4405	5.0000	-11.2
3	10PPBCN	0.009	9.2502	10.0000	-7.5
4	50PPBCN	0.037	49.7107	50.0000	-0.6
5	100PPBCN	0.074	101.3716	100.0000	1.4
6	250PPBCN	0.181	251.4298	250.0000	0.6
7	500PPBCN	0.357	499.0603	500.0000	-0.2

NF
01.17.2025

Alliance TECHNICAL GROUP

Analytical Summary Report

Analysis Method: 9034
Parameter: Sulfide
Run Number: LB134363

ANALYST: Niha
SUPERVISOR REVIEW BY: Iwona
Constant: 16000
Normality1: 0.025
Normality2: 0.025

Reagent/Standard	Lot/Log #
SODIUM THIOSULFATE,0.025N,4LITRE	W3105
IODINE SOLUTION .025N 1L	W3114
Starch Solution, 4L	W3149

Seq	Lab ID	True Value (mg/L)	DF	Initial Volume (mL)	Final Volume (mL)	T1 (mL)	T2 Initial	T2 Final	T2 Diff. (mL)	T1 - T2 Diff (mL)	Value Corrected With Blank	Result (ppm)	AnalDate	Anal Time
1	PB166159BL		1	50	50	5.00	0.00	4.94	4.94	0.06	0.00	0.00	01/21/2025	14:30
2	PB166159BS	25	1	50	50	5.00	0.00	1.92	1.92	3.08	3.02	24.16	01/21/2025	14:33
3	Q1120-01		1	50	50	5.00	0.00	4.92	4.92	0.08	0.02	0.16	01/21/2025	14:36
4	Q1120-01DUP		1	50	50	5.00	0.00	4.92	4.92	0.08	0.02	0.16	01/21/2025	14:40
5	Q1120-01MS	25	1	50	50	5.00	0.00	1.94	1.94	3.06	3.00	24.00	01/21/2025	14:43
6	Q1120-01MSD	25	1	50	50	5.00	0.00	1.92	1.92	3.08	3.02	24.16	01/21/2025	14:46

T1 = Titrant1

T2 = Titrant2

T2 Diff = T2 Final - T2 Initial

Value Corrected With Blank = ((T1 - T2 Diff) - Blank Correction(BL))

Result = ((T1 * Normality1) - ((T1 - Value Corrected With Blank) * Normality2)) * Constant / Initial Volume

Analytical Summary Report

Analysis Method: SM5220 D
Parameter: COD
Run Number: LB134365

ANALYST: Niha
SUPERVISOR REVIEW BY: Iwona

Reagent/Standard	Lot/Log #
COD Digestion Vials Low Level 0-150Mg/L	W3125
COD ICV-LCS std, 50ppm	WP111522
COD calibration std. 100 ppm	WP111519
COD calibration std. 10 ppm	WP111517
COD calibration std. 150 ppm	WP111520
COD calibration std. 50 ppm	WP111518
COD calibration std. 0 ppm	WP111516
COD CCV std, 50ppm	WP111521

Temp In(C): 148	**Date In:** 01/22/2025	**Time In:** 09:15
Temp Out(C): 150	**Date Out:** 01/22/2025	**Time Out:** 11:15

Intercept: 0.1675 **Slope:** 1.0102 **Regression:** 1

Seq	Lab ID	TrueValue (mg/l)	DF	MATRIX	Reading	Result (mg/l)	%D	Anal Date	Anal Time
1	CAL1	0	1	Water	0.000	-0.166		01/22/2025	13:30
2	CAL2	10	1	Water	11.000	10.723	7.2	01/22/2025	13:30
3	CAL3	50	1	Water	50.000	49.329	-1.3	01/22/2025	13:31
4	CAL4	100	1	Water	101.000	99.814	-0.2	01/22/2025	13:31
5	CAL5	150	1	Water	152.000	150.299	0.2	01/22/2025	13:32

Analytical Summary Report

Analysis Method: SM5220 D

ANALYST: Niha

Parameter: COD

SUPERVISOR REVIEW BY: Iwona

Run Number: LB134365

Seq	Lab ID	True Value (mg/l)	Initial Weight (g)	Final Vol (ml)	DF	MATRIX	Reading	Result	AnalDate	AnalTime
1	ICV	50	NA	NA	1	Water	50.000	49.329	01/22/2025	13:32
2	ICB		NA	NA	1	Water	0.000	-0.166	01/22/2025	13:33
3	CCV1	50	NA	NA	1	Water	51.000	50.319	01/22/2025	13:33
4	CCB1		NA	NA	1	Water	0.000	-0.166	01/22/2025	13:34
5	LB134365BL		NA	NA	1	Water	0.000	-0.166	01/22/2025	13:34
6	LB134365BS	50	NA	NA	1	Water	51.000	50.319	01/22/2025	13:35
7	Q1113-01		NA	NA	1	Water	55.000	54.279	01/22/2025	13:35
8	Q1113-01DUP		NA	NA	1	Water	56.000	55.269	01/22/2025	13:36
9	Q1113-01MS	50	NA	NA	1	Water	103.000	101.794	01/22/2025	13:36
10	Q1113-01MSD	50	NA	NA	1	Water	102.000	100.804	01/22/2025	13:37
11	Q1113-03		NA	NA	1	Water	74.000	73.087	01/22/2025	13:37
12	Q1113-04		NA	NA	1	Water	63.000	62.198	01/22/2025	13:38
13	Q1113-05		NA	NA	1	Water	26.000	25.572	01/22/2025	13:38
14	Q1120-01		NA	NA	1	Water	2.000	1.814	01/22/2025	13:39
15	CCV2	50	NA	NA	1	Water	50.000	49.329	01/22/2025	13:39
16	CCB2		NA	NA	1	Water	0.000	-0.166	01/22/2025	13:40
17	Q1140-01		NA	NA	1	Water	128.000	126.542	01/22/2025	13:40
18	CCV3	50	NA	NA	1	Water	50.000	49.329	01/22/2025	13:41
19	CCB3		NA	NA	1	Water	0.000	-0.166	01/22/2025	13:41

LB134365

WORKLIST(Hardcopy Internal Chain)

WorkList Name : COD-01212025 **WorkList ID :** 187034 **Department :** Wet-Chemistry **Date :** 01-21-2025 09:11:07

Sample	Customer Sample	Matrix	Test	Preservative	Customer	Raw Sample Storage Location	Collect Date	Method
Q1113-01	DSN002	Water	COD	Conc H2SO4 to pH < 2	PSEG04	M11	01/16/2025	SM5220 D
Q1113-03	DSN001	Water	COD	Conc H2SO4 to pH < 2	PSEG04	M11	01/16/2025	SM5220 D
Q1113-04	DSN001	Water	COD	Conc H2SO4 to pH < 2	PSEG04	M11	01/16/2025	SM5220 D
Q1113-05	DSN003	Water	COD	Conc H2SO4 to pH < 2	PSEG04	M11	01/16/2025	SM5220 D
Q1120-01	RW10A-20250116	Water	COD		TETR06	M11	01/16/2025	SM5220 D
Q1140-01	FRAC-TANK-F06078	Water	COD	Conc H2SO4 to pH < 2	PSEG03	E11	01/21/2025	SM5220 D

Date/Time 01.22.2025, 08:50
Raw Sample Received by: NF(WC)
Raw Sample Relinquished by: [signature]

Date/Time 01.22.2025, 11:00
Raw Sample Received by: [signature]
Raw Sample Relinquished by: NF(WC)

Alliance TECHNICAL GROUP

Water Ammonia Preparation Sheet

PB166092

SOP ID : MSM4500-NH3 B,G-Ammonia-17

SDG No : N/A

Matrix : WATER

Pippete ID : WC

Balance ID : N/A

Hood ID : HOOD#2

Block ID : WC-DIST-BLOCK-1

Weigh By : N/A

Start Digest Date: 01/17/2025 **Time :** 08:45 **Temp :** 150 °C

End Digest Date: 01/17/2025 **Time :** 09:45 **Temp :** 160 °C

II batch 01/17/2025 10:00 150 C } RM
01/17/2025 11:00 160 C

Digestion tube ID : M5595

Filter paper ID : N/A

pH Meter ID : N/A

Block Thermometer ID : WC CYANIDE

Prep Technician Signature: RM

Supervisor Signature: JR

Standared Name	MLS USED	STD REF. # FROM LOG
LCSW	1.0ML	WP111420
MS/MSD SPIKE SOL.	1.0ML	WP111419
PBW	50.0ML	W3112
RL CHECK	0.1ML	WP111419
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
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A

Extraction Conformance/Non-Conformance Comments:

ALL GLASSWEAR ARE STEAMED OUT AND THERE WERE NO TRACE OF AMMONIA USING NESLER REAGENT WP108814,

Date / Time	Prepped Sample Relinquished By/Location	Received By/Location
01-17-2025 11:10	RM CWC	RM CWC
	Preparation Group	Analysis Group

Alliance TECHNICAL GROUP

Water Ammonia Preparation Sheet

PB166092

Lab Sample ID	Client Sample ID	Initial Vol (ml)	Final Vol (ml)	pH	Sulfide	Oxidizing	Nitrate/ Nitrite	Comment	Prep Pos
PB166092BL	PBW092	50	50	<2	N/A	Negative	N/A	AFTER ADDING 6N NAOH PH IS 9.5	N/A
PB166092BS	LCS092	50	50	<2	N/A	Negative	N/A	AFTER ADDING 6N NAOH PH IS 9.5	N/A
Q1109-02	TAPIAL1-MW04S-011525-00-T2	50	50	<2	N/A	Negative	N/A	AFTER ADDING 6N NAOH PH IS 9.5	N/A
Q1113-01	DSN002	50	50	<2	N/A	Negative	N/A	AFTER ADDING 6N NAOH PH IS 9.5	N/A
Q1113-01DUP	DSN002DUP	50	50	<2	N/A	Negative	N/A	AFTER ADDING 6N NAOH PH IS 9.5	N/A
Q1113-01MS	DSN002MS	50	50	<2	N/A	Negative	N/A	AFTER ADDING 6N NAOH PH IS 9.5	N/A
Q1113-01MSD	DSN002MSD	50	50	<2	N/A	Negative	N/A	AFTER ADDING 6N NAOH PH IS 9.5	N/A
Q1113-03	DSN001	50	50	<2	N/A	Negative	N/A	AFTER ADDING 6N NAOH PH IS 9.5	N/A
Q1113-05	DSN003	50	50	<2	N/A	Negative	N/A	AFTER ADDING 6N NAOH PH IS 9.5	N/A
Q1120-01	RW10A-20250116	50	50	<2	N/A	Negative	N/A	AFTER ADDING 6N NAOH PH IS 9.5	N/A

WORKLIST(Hardcopy Internal Chain)

WorkList Name : ammonia-1-16 **WorkList ID :** 186962 **Department :** Distillation **Date :** 01-16-2025 16:37:23

Sample	Customer Sample	Matrix	Test	Preservative	Customer	Raw Sample Storage Location	Collect Date	Method
Q1120-01	RW10A-20250116	Water	Ammonia		TETR06	M11	01/16/2025	SM4500-NH3
Q1109-02	TAPIAL1-MW04S-011525-00-T2	Water	Ammonia	Conc H2SO4 to pH < 2	WEST04	M11	01/15/2025	SM4500-NH3
Q1113-01	DSN002	Water	Ammonia	Conc H2SO4 to pH < 2	PSEG04	M11	01/16/2025	SM4500-NH3
Q1113-03	DSN001	Water	Ammonia	Conc H2SO4 to pH < 2	PSEG04	M11	01/16/2025	SM4500-NH3
Q1113-05	DSN003	Water	Ammonia	Conc H2SO4 to pH < 2	PSEG04	M11	01/16/2025	SM4500-NH3

Date/Time 01/17/2025 08.16

Raw Sample Received by: RM CWC1

Raw Sample Relinquished by: [signature]

Date/Time 01/17/2025 10.10

Raw Sample Received by: [signature]

Raw Sample Relinquished by: RM CWC1

Alliance TECHNICAL GROUP

Water Cyanide Preparation Sheet

PB166125

SOP ID : MSM4500-CN C,E-Cyanide-12

SDG No : N/A

Matrix : WATER

Pippete ID : WC

Balance ID : N/A

Hood ID : HOOD#1

Block ID : MC-1,MC-2

Weigh By : N/A

Start Digest Date: 01/17/2025 **Time :** 12:15 **Temp :** 123 °C

End Digest Date: 01/17/2025 **Time :** 13:45 **Temp :** 126 °C

Digestion tube ID : M5595

Filter paper ID : N/A

pH Meter ID : N/A

Block Thermometer ID : WC CYANIDE

Prep Technician Signature:

Supervisor Signature: 12

Standared Name	MLS USED	STD REF. # FROM LOG
LCSW	1.0ML	WP111296
MS/MSD SPIKE SOL.	0.4ML	WP111295
PBW	50.0ML	W3112
RL CHECK	50.0ML	WP111480
N/A	N/A	N/A

Chemical Used	ML/SAMPLE USED	Lot Number
0.25N NaOH	50.0ML	WP111294
50% v/v H2SO4	5.0ML	WP110391
51% w/v MgCL2	2.0ML	WP110390
pH Paper 0-14	N/A	W3140
Nitrate/Nitrite Strip	N/A	W3101
Lead Acetate strip	N/A	W3134
KI-starch paper	N/A	W3155
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A

LAB SAMPLE ID	CLIENT SAMPLE ID	Wt(g)/Vol(ml)	Comment
S0	S0	N/A	N/A
S5.0	S5.0	N/A	N/A
S10.0	S10.0	N/A	N/A
S100.0	S100.0	N/A	N/A
S250.0	S250.0	N/A	N/A
S500.0	S500.0	N/A	N/A
ICV	ICV	0.5ML	W3012
ICB	ICB	N/A	N/A
CCV	CCV	N/A	N/A
CCB	CCB	N/A	N/A
Midrange	Midrange	2.5ML	WP111295
HIGHSTD	HIGHSTD	N/A	N/A
LOWSTD	LOWSTD	N/A	N/A

Extraction Conformance/Non-Conformance Comments:

N/A

Date / Time	Prepped Sample Relinquished By/Location	Received By/Location
01.17.2025, 13:55		NFCWC
	Preparation Group	Analysis Group

Alliance TECHNICAL GROUP

Water Cyanide Preparation Sheet

PB166125

Lab Sample ID	Client Sample ID	Initial Vol (ml)	Final Vol (ml)	pH	Sulfide	Oxidizing	Nitrate/ Nitrite	Comment	Prep Pos
PB166125BL	PBW125	50	50	>12	Negative	Negative	Negative	N/A	N/A
PB166125BS	LCS125	50	50	>12	Negative	Negative	Negative	N/A	N/A
Q1120-01DUP	RW10A-20250116DUP	50	50	>12	Negative	Negative	Negative	N/A	N/A
Q1120-01MS	RW10A-20250116MS	50	50	>12	Negative	Negative	Negative	N/A	N/A
Q1120-01MSD	RW10A-20250116MSD	50	50	>12	Negative	Negative	Negative	N/A	N/A
Q1120-01	RW10A-20250116	50	50	>12	Negative	Negative	Negative	N/A	N/A

WORKLIST(Hardcopy Internal Chain)

WorkList Name : cn w q1120 **WorkList ID :** 186988 **Department :** Distillation **Date :** 01-17-2025 10:09:30

Sample	Customer Sample	Matrix	Test	Preservative	Customer	Raw Sample Storage Location	Collect Date	Method
Q1120-01 -C	RW10A-20250116	Water	Cyanide		TETR06	M11	01/16/2025	SM4500-CN C

Date/Time 01.19.2025, 11:30
Raw Sample Received by: JD WDC
Raw Sample Relinquished by: CP SM

Date/Time 01.17.2025, 13:30
Raw Sample Received by: CP SM
Raw Sample Relinquished by:

Alliance TECHNICAL GROUP

Water Sulfide Preparation Sheet

PB166159

SOP ID : M9034-SM4500 S F-Sulfide-15

SDG No : N/A

Start Digest Date: 01/21/2025 **Time :** 10:45 **Temp :** 70 °C

Matrix : WATER

End Digest Date: 01/21/2025 **Time :** 12:15 **Temp :** 70 °C

Pippete ID : WC

Balance ID : N/A

Hood ID : HOOD#1

Digestion tube ID : M5595

Block Thermometer ID : WC CYANIDE

Block ID : MC-1,MC-2

Filter paper ID : N/A

Prep Technician Signature: NP

Weigh By : N/A

pH Meter ID : N/A

Supervisor Signature: IR

Standared Name	MLS USED	STD REF. # FROM LOG
PBW	50.0ML	W3112
LCSW	1.25ML	WP111503
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A

Chemical Used	ML/SAMPLE USED	Lot Number
0.5M ZINC ACETATE	5.0ML	WP111004
FORMALDEHYDE	2.0ML	W2725
CONC H2SO4	N/A	M6041
pH Paper 0-14	N/A	W3140
KI-starch paper	N/A	W3155
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A

Extraction Conformance/Non-Conformance Comments:

N/A

Date / Time	Prepped Sample Relinquished By/Location	Received By/Location
	Preparation Group	Analysis Group

NP

 01/21/25

Alliance TECHNICAL GROUP

Water Sulfide Preparation Sheet

PB166159

Lab Sample ID	Client Sample ID	Initial Vol (ml)	Final Vol (ml)	pH	Sulfide	Oxidizing	Nitrate/ Nitrite	Comment	Prep Pos
PB166159BL	PBW159	50	50	>12	N/A	Negative	N/A	N/A	N/A
PB166159BS	LCS159	50	50	>12	N/A	Negative	N/A	N/A	N/A
Q1120-01	RW10A-20250116	50	50	>12	N/A	Negative	N/A	N/A	N/A
Q1120-01DUP	RW10A-20250116DUP	50	50	>12	N/A	Negative	N/A	N/A	N/A
Q1120-01MS	RW10A-20250116MS	50	50	>12	N/A	Negative	N/A	N/A	N/A
Q1120-01MSD	RW10A-20250116MSD	50	50	>12	N/A	Negative	N/A	N/A	N/A

WORKLIST(Hardcopy Internal Chain)

WorkList Name : SULFIDE-01212025 **WorkList ID :** 187039 **Department :** Wet-Chemistry **Date :** 01-21-2025 10:17:56

Sample	Customer Sample	Matrix	Test	Preservative	Customer	Raw Sample Storage Location	Collect Date	Method
Q1120-01	RW10A-20250116	Water	Sulfide		TETR06	M11	01/16/2025	9034

Date/Time 01/21/25 10:25

Raw Sample Received by: NFCWC)

Raw Sample Relinquished by: TRWRC)

Date/Time 01/21/25 11:20

Raw Sample Received by: TRWRC)

Raw Sample Relinquished by: NFCWC)

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

Instrument ID: TOC

Daily Analysis Runlog For Sequence/QCBatch ID # LB134317

Review By	Niha	Review On	1/20/2025 9:53:15 AM
Supervise By	Iwona	Supervise On	1/20/2025 10:13:53 AM
SubDirectory	LB134317	Test	TOC

STD. NAME	STD REF.#
ICAL Standard	WP111441,WP111442,WP111443,WP111444,WP111445,WP111446
ICV Standard	WP111448
CCV Standard	WP111447
ICSA Standard	N/A
CRI Standard	N/A
LCS Standard	WP111448
Chk Standard	WP111453,WP111454,WP109953

Sr#	SampleId	ClientID	QcType	Date	Comment	Operator	Status
1	0.0PPM	0.0PPM	CAL1	01/15/25 12:17		NF IZ	OK
2	0.5PPM	0.5PPM	CAL2	01/15/25 12:42		NF IZ	OK
3	1.0PPM	1.0PPM	CAL3	01/15/25 13:07		NF IZ	OK
4	2.0PPM	2.0PPM	CAL4	01/15/25 13:33		NF IZ	OK
5	5.0PPM	5.0PPM	CAL5	01/15/25 13:59		NF IZ	OK
6	10.0PPM	10.0PPM	CAL6	01/15/25 14:26		NF IZ	OK
7	20.0PPM	20.0PPM	CAL7	01/15/25 14:53		NF IZ	OK
8	ICV1	ICV1	ICV	01/15/25 15:19		NF IZ	OK
9	ICB1	ICB1	ICB	01/15/25 15:43		NF IZ	OK
10	IC-20	IC-20	SAM	01/15/25 16:07		NF IZ	OK
11	IC-R	IC-R	SAM	01/15/25 16:30		NF IZ	OK
12	CCV1	CCV1	CCV	01/17/25 09:00		NF IZ	OK
13	CCB1	CCB1	CCB	01/17/25 09:24		NF IZ	OK
14	LB134317BLW	LB134317BLW	MB	01/17/25 09:48		NF IZ	OK
15	LB134317BSW	LB134317BSW	LCS	01/17/25 10:14		NF IZ	OK
16	Q1109-01	TAPIAL1-MW04I-0115	SAM	01/17/25 10:39		NF IZ	OK
17	Q1109-01MS	TAPIAL1-MW04I-0115	MS	01/17/25 11:06	2.0ml WP111439 +38.0ml Sample	NF IZ	OK
18	Q1109-01MSD	TAPIAL1-MW04I-0115	MSD	01/17/25 11:33	2.0ml WP111439 +38.0ml Sample	NF IZ	OK

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

Instrument ID: TOC

Daily Analysis Runlog For Sequence/QCBatch ID # LB134317

Review By	Niha	Review On	1/20/2025 9:53:15 AM
Supervise By	Iwona	Supervise On	1/20/2025 10:13:53 AM
SubDirectory	LB134317	Test	TOC

STD. NAME	STD REF.#
ICAL Standard	WP111441,WP111442,WP111443,WP111444,WP111445,WP111446
ICV Standard	WP111448
CCV Standard	WP111447
ICSA Standard	N/A
CRI Standard	N/A
LCS Standard	WP111448
Chk Standard	WP111453,WP111454,WP109953

19	Q1109-02	TAPIAL1-MW04S-011	SAM	01/17/25 11:58		NF IZ	OK
20	Q1120-01	RW10A-20250116	SAM	01/17/25 12:24		NF IZ	OK
21	CCV2	CCV2	CCV	01/17/25 12:50		NF IZ	OK
22	CCB2	CCB2	CCB	01/17/25 13:14		NF IZ	OK

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

Instrument ID: IC-2

Daily Analysis Runlog For Sequence/QCBatch ID # LB134320

Review By	Niha	Review On	1/20/2025 9:48:48 AM
Supervise By	Iwona	Supervise On	1/20/2025 10:13:15 AM
SubDirectory	LB134320	Test	Anions

STD. NAME	STD REF.#
ICAL Standard	WP111131,WP111132,WP111133,WP111134,WP111135,WP111136,WP111137
ICV Standard	WP111138
CCV Standard	WP111467
ICSA Standard	N/A
CRI Standard	N/A
LCS Standard	WP111468
Chk Standard	WP111129,WP111130

Sr#	SampleId	ClientID	QcType	Date	Comment	Operator	Status
1	STD1	STD1	CAL1	12/18/24 10:39	All standards, samples, and	NF/IZ	OK
2	STD2	STD2	CAL2	12/18/24 11:00	QC are filtered through	NF/IZ	OK
3	STD3	STD3	CAL3	12/18/24 11:22	0.45um, filter lot W3160	NF/IZ	OK
4	STD4	STD4	CAL4	12/18/24 11:43		NF/IZ	OK
5	STD5	STD5	CAL5	12/18/24 12:04		NF/IZ	OK
6	STD6	STD6	CAL6	12/18/24 12:26		NF/IZ	OK
7	STD7	STD7	CAL7	12/18/24 12:47		NF/IZ	OK
8	ICV1	ICV1	ICV	12/18/24 13:09		NF/IZ	OK
9	ICB1	ICB1	ICB	12/18/24 13:30		NF/IZ	OK
10	CCV1	CCV1	CCV	01/17/25 08:43		NF/IZ	OK
11	CCB1	CCB1	CCB	01/17/25 09:04		NF/IZ	OK
12	LB134320BLW	LB134320BLW	MB	01/17/25 09:26		NF/IZ	OK
13	LB134320BSW	LB134320BSW	LCS	01/17/25 09:47		NF/IZ	OK
14	Q1120-01	RW10A-20250116	SAM	01/17/25 10:09	Cl high	NF/IZ	Dilution
15	Q1120-01MS	RW10A-20250116MS	MS	01/17/25 10:30	9.5ml of sample, 0.5mL W3091	NF/IZ	OK
16	Q1120-01MSD	RW10A-20250116MS	MSD	01/17/25 10:52	9.5ml of sample, 0.5mL W3091	NF/IZ	OK
17	Q1120-01DL	RW10A-20250116DL	SAM	01/17/25 11:13	50X for Cl	NF/IZ	Confirms
18	CCV2	CCV2	CCV	01/17/25 11:35		NF/IZ	OK

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

Instrument ID: IC-2

Daily Analysis Runlog For Sequence/QCBatch ID # LB134320

Review By	Niha	Review On	1/20/2025 9:48:48 AM
Supervise By	Iwona	Supervise On	1/20/2025 10:13:15 AM
SubDirectory	LB134320	Test	Anions

STD. NAME	STD REF.#
ICAL Standard	WP111131,WP111132,WP111133,WP111134,WP111135,WP111136,WP111137
ICV Standard	WP111138
CCV Standard	WP111467
ICSA Standard	N/A
CRI Standard	N/A
LCS Standard	WP111468
Chk Standard	WP111129,WP111130

19	CCB2	CCB2	CCB	01/17/25 11:56		NF/IZ	OK

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Fax : 908 789 8922

Instrument ID: DO METER

Daily Analysis Runlog For Sequence/QCBatch ID # LB134322

Review By	Niha	Review On	1/21/2025 2:49:03 PM
Supervise By	Iwona	Supervise On	1/21/2025 4:07:29 PM
SubDirectory	LB134322	Test	BOD5

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	WP111426,W3149,WP110386,W3103,W3109,W3105,WP111428,WP111427,WP111323

Sr#	SampleId	ClientID	QcType	Date	Comment	Operator	Status
1	LB134322BL	LB134322BL	MB	01/16/25 18:50		rubina	OK
2	LB134322BS	LB134322BS	LCS	01/16/25 18:50		rubina	OK
3	Q1120-01	RW10A-20250116	SAM	01/16/25 18:50		rubina	OK
4	Q1120-01DUP	RW10A-20250116DUI	DUP	01/16/25 18:50		rubina	OK

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

Instrument ID: KONELAB

Daily Analysis Runlog For Sequence/QCBatch ID # LB134325

Review By	Niha	Review On	1/20/2025 9:49:35 AM
Supervise By	Iwona	Supervise On	1/20/2025 10:12:40 AM
SubDirectory	LB134325	Test	Ammonia

STD. NAME	STD REF.#
ICAL Standard	WP111470
ICV Standard	WP111472
CCV Standard	WP111471
ICSA Standard	N/A
CRI Standard	N/A
LCS Standard	WP111420
Chk Standard	WP110416,WP110019,WP111385,WP108840

Sr#	SampleId	ClientID	QcType	Date	Comment	Operator	Status
1	0.0PPM	0.0PPM	CAL1	01/17/25 10:42		rubina	OK
2	0.1PPM	0.1PPM	CAL2	01/17/25 10:42		rubina	OK
3	0.2PPM	0.2PPM	CAL3	01/17/25 10:42		rubina	OK
4	0.4PPM	0.4PPM	CAL4	01/17/25 10:42		rubina	OK
5	1.0PPM	1.0PPM	CAL5	01/17/25 10:42		rubina	OK
6	1.3PPM	1.3PPM	CAL6	01/17/25 10:42		rubina	OK
7	2.0PPM	2.0PPM	CAL7	01/17/25 10:42		rubina	OK
8	ICV1	ICV1	ICV	01/17/25 11:34		rubina	OK
9	ICB1	ICB1	ICB	01/17/25 11:34		rubina	OK
10	CCV1	CCV1	CCV	01/17/25 11:34		rubina	OK
11	CCB1	CCB1	CCB	01/17/25 11:34		rubina	OK
12	RL	RL	SAM	01/17/25 11:34		rubina	OK
13	PB166092BL	PB166092BL	MB	01/17/25 11:34		rubina	OK
14	PB166092BS	PB166092BS	LCS	01/17/25 11:44		rubina	OK
15	Q1109-02	TAPIAL1-MW04S-011	SAM	01/17/25 11:44		rubina	OK
16	Q1113-01	DSN002	SAM	01/17/25 11:44	High	rubina	Dilution
17	Q1113-01DUP	DSN002DUP	DUP	01/17/25 11:44		rubina	OK
18	Q1113-01MS	DSN002MS	MS	01/17/25 11:44		rubina	OK

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Instrument ID: KONELAB

Daily Analysis Runlog For Sequence/QCBatch ID # LB134325

Review By	Niha	Review On	1/20/2025 9:49:35 AM
Supervise By	Iwona	Supervise On	1/20/2025 10:12:40 AM
SubDirectory	LB134325	Test	Ammonia

STD. NAME	STD REF.#
ICAL Standard	WP111470
ICV Standard	WP111472
CCV Standard	WP111471
ICSA Standard	N/A
CRI Standard	N/A
LCS Standard	WP111420
Chk Standard	WP110416,WP110019,WP111385,WP108840

19	Q1113-01MSD	DSN002MSD	MSD	01/17/25 11:44		rubina	OK
20	Q1113-03	DSN001	SAM	01/17/25 11:44		rubina	OK
21	Q1113-05	DSN003	SAM	01/17/25 11:44	High	rubina	Dilution
22	CCV2	CCV2	CCV	01/17/25 11:44		rubina	OK
23	CCB2	CCB2	CCB	01/17/25 11:53		rubina	OK
24	Q1120-01	RW10A-20250116	SAM	01/17/25 11:53		rubina	OK
25	CCV3	CCV3	CCV	01/17/25 11:53		rubina	OK
26	CCB3	CCB3	CCB	01/17/25 11:53		rubina	OK
27	Q1113-01DL	DSN002DL	SAM	01/17/25 12:14	Report 2X	rubina	Confirms
28	Q1113-05DL	DSN003DL	SAM	01/17/25 12:14	Report 2X	rubina	Confirms
29	CCV4	CCV4	CCV	01/17/25 12:14		rubina	OK
30	CCB4	CCB4	CCB	01/17/25 12:14		rubina	OK

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Instrument ID: KONELAB

Daily Analysis Runlog For Sequence/QCBatch ID # LB134333

Review By	Niha	Review On	1/20/2025 4:25:35 PM
Supervise By	Iwona	Supervise On	1/21/2025 9:28:05 AM
SubDirectory	LB134333	Test	Cyanide

STD. NAME	STD REF.#
ICAL Standard	WP111474,WP111475,WP111476,WP111477,WP111478,WP111479,WP111480
ICV Standard	W3012
CCV Standard	WP111475
ICSA Standard	N/A
CRI Standard	N/A
LCS Standard	WP111296
Chk Standard	WP111035,WP110103,WP111481

Sr#	SampleId	ClientID	QcType	Date	Comment	Operator	Status
1	0.0PPBCN	0.0PPBCN	CAL1	01/17/25 12:52		Niha	OK
2	5.0PPBCN	5.0PPBCN	CAL2	01/17/25 12:52		Niha	OK
3	10PPBCN	10PPBCN	CAL3	01/17/25 12:52		Niha	OK
4	50PPBCN	50PPBCN	CAL4	01/17/25 12:52		Niha	OK
5	100PPBCN	100PPBCN	CAL5	01/17/25 12:52		Niha	OK
6	250PPBCN	250PPBCN	CAL6	01/17/25 12:52		Niha	OK
7	500PPBCN	500PPBCN	CAL7	01/17/25 12:52		Niha	OK
8	ICV1	ICV1	ICV	01/17/25 15:12		Niha	OK
9	ICB1	ICB1	ICB	01/17/25 15:12		Niha	OK
10	CCV1	CCV1	CCV	01/17/25 15:12		Niha	OK
11	CCB1	CCB1	CCB	01/17/25 15:12		Niha	OK
12	RL	RL	SAM	01/17/25 15:12		Niha	OK
13	PB166125BL	PB166125BL	MB	01/17/25 15:12		Niha	OK
14	PB166125BS	PB166125BS	LCS	01/17/25 15:20		Niha	OK
15	MIDPB166125	MIDPB166125	SAM	01/17/25 15:20		Niha	OK
16	Q1120-01	RW10A-20250116	SAM	01/17/25 15:20		Niha	OK
17	Q1120-01DUP	RW10A-20250116DUI	DUP	01/17/25 15:20		Niha	OK
18	Q1120-01MS	RW10A-20250116MS	MS	01/17/25 15:20		Niha	OK

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Instrument ID: KONELAB

Daily Analysis Runlog For Sequence/QCBatch ID # LB134333

Review By	Niha	Review On	1/20/2025 4:25:35 PM
Supervise By	Iwona	Supervise On	1/21/2025 9:28:05 AM
SubDirectory	LB134333	Test	Cyanide

STD. NAME	STD REF.#
ICAL Standard	WP111474,WP111475,WP111476,WP111477,WP111478,WP111479,WP111480
ICV Standard	W3012
CCV Standard	WP111475
ICSA Standard	N/A
CRI Standard	N/A
LCS Standard	WP111296
Chk Standard	WP111035,WP110103,WP111481

19	Q1120-01MSD	RW10A-20250116MS	MSD	01/17/25 15:20		Niha	OK
20	CCV2	CCV2	CCV	01/17/25 15:23		Niha	OK
21	CCB2	CCB2	CCB	01/17/25 15:23		Niha	OK

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Instrument ID: TITRAMETRIC

Daily Analysis Runlog For Sequence/QCBatch ID # LB134363

Review By	Niha	Review On	1/21/2025 4:26:52 PM
Supervise By	Iwona	Supervise On	1/21/2025 4:27:47 PM
SubDirectory	LB134363	Test	Sulfide

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	W3105,W3114,W3149

Sr#	SampleId	ClientID	QcType	Date	Comment	Operator	Status
1	PB166159BL	PB166159BL	MB	01/21/25 14:30		Iwona	OK
2	PB166159BS	PB166159BS	LCS	01/21/25 14:33		Iwona	OK
3	Q1120-01	RW10A-20250116	SAM	01/21/25 14:36		Iwona	OK
4	Q1120-01DUP	RW10A-20250116DUI	DUP	01/21/25 14:40		Iwona	OK
5	Q1120-01MS	RW10A-20250116MS	MS	01/21/25 14:43		Iwona	OK
6	Q1120-01MSD	RW10A-20250116MS	MSD	01/21/25 14:46		Iwona	OK

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Instrument ID: SPECTROPHOTOMETER-2

Daily Analysis Runlog For Sequence/QCBatch ID # LB134365

Review By	Niha	Review On	1/22/2025 4:09:05 PM
Supervise By	Iwona	Supervise On	1/22/2025 4:10:18 PM
SubDirectory	LB134365	Test	COD

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	W3125,WP111522,WP111519,WP111517,WP111520,WP111518,WP111516,WP111521

Sr#	SampleId	ClientID	QcType	Date	Comment	Operator	Status
1	CAL1	CAL1	CAL	01/22/25 13:30		Niha	OK
2	CAL2	CAL2	CAL	01/22/25 13:30		Niha	OK
3	CAL3	CAL3	CAL	01/22/25 13:31		Niha	OK
4	CAL4	CAL4	CAL	01/22/25 13:31		Niha	OK
5	CAL5	CAL5	CAL	01/22/25 13:32		Niha	OK
6	ICV	ICV	ICV	01/22/25 13:32		Niha	OK
7	ICB	ICB	ICB	01/22/25 13:33		Niha	OK
8	CCV1	CCV1	CCV	01/22/25 13:33		Niha	OK
9	CCB1	CCB1	CCB	01/22/25 13:34		Niha	OK
10	LB134365BL	LB134365BL	MB	01/22/25 13:34		Niha	OK
11	LB134365BS	LB134365BS	LCS	01/22/25 13:35		Niha	OK
12	Q1113-01	DSN002	SAM	01/22/25 13:35		Niha	OK
13	Q1113-01DUP	DSN002DUP	DUP	01/22/25 13:36		Niha	OK
14	Q1113-01MS	DSN002MS	MS	01/22/25 13:36		Niha	OK
15	Q1113-01MSD	DSN002MSD	MSD	01/22/25 13:37		Niha	OK
16	Q1113-03	DSN001	SAM	01/22/25 13:37		Niha	OK
17	Q1113-04	DSN001	SAM	01/22/25 13:38		Niha	OK
18	Q1113-05	DSN003	SAM	01/22/25 13:38		Niha	OK

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Instrument ID: SPECTROPHOTOMETER-2

Daily Analysis Runlog For Sequence/QCBatch ID # LB134365

Review By	Niha	Review On	1/22/2025 4:09:05 PM
Supervise By	Iwona	Supervise On	1/22/2025 4:10:18 PM
SubDirectory	LB134365	Test	COD

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	W3125,WP111522,WP111519,WP111517,WP111520,WP111518,WP111516,WP111521

19	Q1120-01	RW10A-20250116	SAM	01/22/25 13:39		Niha	OK
20	CCV2	CCV2	CCV	01/22/25 13:39		Niha	OK
21	CCB2	CCB2	CCB	01/22/25 13:40		Niha	OK
22	Q1140-01	FRAC-TANK-F06078	SAM	01/22/25 13:40		Niha	OK
23	CCV3	CCV3	CCV	01/22/25 13:41		Niha	OK
24	CCB3	CCB3	CCB	01/22/25 13:41		Niha	OK

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Prep Standard - Chemical Standard Summary

Order ID : Q1120

Test : Ammonia,Anions Group2,BOD5,COD,Cyanide,Sulfide,TOC

Prepbatch ID : PB166092,PB166125,PB166159,

Sequence ID/Qc Batch ID: LB134317,LB134320,LB134322,LB134325,LB134333,LB134363,LB134365,

Standard ID :
WP108840,WP109953,WP110019,WP110103,WP110149,WP110150,WP110259,WP110335,WP110386,WP110390,WP110391,WP110416,WP110767,WP111004,WP111035,WP111129,WP111130,WP111131,WP111132,WP111133,WP111134,WP111135,WP111136,WP111137,WP111138,WP111294,WP111295,WP111296,WP111317,WP111318,WP111323,WP111325,WP111385,WP111419,WP111420,WP111426,WP111427,WP111428,WP111436,WP111437,WP111439,WP111441,WP111442,WP111443,WP111444,WP111445,WP111446,WP111447,WP111448,WP111449,WP111450,WP111451,WP111452,WP111453,WP111454,WP111467,WP111468,WP111470,WP111471,WP111472,WP111473,WP111474,WP111475,WP111476,WP111477,WP111478,WP111479,WP111480,WP111481,WP111503,WP111514,WP111515,WP111516,WP111517,WP111518,WP111519,WP111520,WP111521,WP111522,

Chemical ID :
M5501,M5673,M6041,M6121,W1992,W1993,W1994,W2647,W2653,W2654,W2666,W2668,W2700,W2725,W2784,W2800,W2858,W2860,W2882,W2926,W3001,W3012,W3016,W3017,W3019,W3020,W3022,W3058,W3059,W3062,W3063,W3101,W3103,W3105,W3109,W3112,W3113,W3114,W3125,W3132,W3133,W3138,W3139,W3140,W3143,W3144,W3149,W3154,W3155,W3167,W3169,

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Wet Chemistry STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
635	EDTA BUFFER FOR AMMONIA	WP108840	07/26/2024	01/26/2025	Rubina Mughal	WETCHEM_SCALE_5 (WCSC-5)	None	Iwona Zarych 07/26/2024

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

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
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

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Wet Chemistry STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
289	Sodium Hypochlorite for Ammonia	WP110019	10/02/2024	01/31/2025	Rubina Mughal	None	None	Iwona Zarych 10/04/2024

FROM 50.00000ml of W3112 + 50.00000ml of W3143 = Final Quantity: 100.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
539	CN BUFFER	WP110103	10/08/2024	04/08/2025	Rubina Mughal	WETCHEM_SCALE_5 (WCSC-5)	None	Iwona Zarych 10/08/2024

FROM 138.00000gram of W2668 + 862.00000ml of W3112 = Final Quantity: 1000.000 ml

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Wet Chemistry STANDARD PREPARATION LOG

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

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

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

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

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Wet Chemistry STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
4035	IC ELUENT CONCENTRATE FOR IC-1	WP110259	10/16/2024	04/16/2025	Iwona Zarych	WETCHEM_SCALE_5 (WCSC-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

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
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

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Wet Chemistry STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
1841	Sulfuric Acid, 1N	WP110386	10/24/2024	04/24/2025	Rubina Mughal	None	WETCHEM_PIPETTE_3 (WC)	Iwona Zarych 10/24/2024

FROM 2.80000ml of M5673 + 97.20000ml of W3112 = Final Quantity: 100.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
3214	Magnesium Chloride For Cyanide 2.5M(51%W/V)	WP110390	10/24/2024	04/24/2025	Niha Farheen Shaik	WETCHEM_SCALE_5 (WCSC-5)	None	Iwona Zarych 10/24/2024

FROM 500.00000ml of W3112 + 510.00000gram of W3001 = Final Quantity: 1000.000 ml

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Wet Chemistry STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
1714	Sulfuric Acid, 50% (v/v)	WP110391	10/24/2024	04/24/2025	Niha Farheen Shaik	None	None	Iwona Zarych 10/24/2024

FROM 1000.00000ml of M5673 + 1000.00000ml of W3112 = Final Quantity: 2000.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
740	sodium nitroferricyanide for ammonia	WP110416	10/25/2024	04/25/2025	Rubina Mughal	WETCHEM_SCALE_5 (WCSC-5)	None	Iwona Zarych 10/25/2024

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

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Wet Chemistry STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
3886	Inorganic carbon stock solution, 1000ppm	WP110767	11/20/2024	05/20/2025	Niha Farheen Shaik	WETCHEM_SCALE_5 (WCSC-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

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
160	0.5M ZINC ACETATE	WP111004	12/09/2024	05/13/2025	Rubina Mughal	WETCHEM_SCALE_8 (WCSC-7)	WETCHEM_PIPETTE_3 (WC)	Iwona Zarych 12/09/2024

FROM 0.88900L of W3112 + 1.00000ml of M6121 + 110.00000gram of W2926 = Final Quantity: 1000.000 ml

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Wet Chemistry STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
607	PYRIDINE-BARBITURIC ACID	WP111035	12/09/2024	04/30/2025	Niha Farheen Shaik	WETCHEM_SCALE_5 (WCSC-5)	Glass Pipette-A	Iwona Zarych 12/10/2024

FROM 145.00000ml of W3112 + 15.00000gram of W2882 + 15.00000ml of M6121 + 75.00000ml of W3019 = Final Quantity: 250.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
4036	IC ELUENT FOR IC-1	WP111129	12/18/2024	01/18/2025	Niha Farheen Shaik	None	None	Iwona Zarych 12/18/2024

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

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Wet Chemistry STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
4037	IC H2SO4 FOR IC-1	WP111130	12/18/2024	01/18/2025	Niha Farheen Shaik	None	Glass Pipette-A	Iwona Zarych 12/18/2024

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

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
2487	Anions 300/9056 calibration standard 1	WP111131	12/18/2024	12/19/2024	Niha Farheen Shaik	None	None	Iwona Zarych 12/18/2024

FROM 10.00000ml of W3112 = Final Quantity: 10.000 ml

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Wet Chemistry STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
24	Anions 300/9056 calibration standard 2	WP111132	12/18/2024	12/19/2024	Niha Farheen Shaik	None	WETCHEM_PIPETTE_3 (WC)	Iwona Zarych 12/18/2024

FROM 0.20000ml of W3063 + 9.80000ml of W3112 = Final Quantity: 10.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
25	Anions 300/9056 calibration standard 3	WP111133	12/18/2024	12/19/2024	Niha Farheen Shaik	None	WETCHEM_PIPETTE_3 (WC)	Iwona Zarych 12/18/2024

FROM 0.40000ml of W3063 + 9.60000ml of W3112 = Final Quantity: 10.000 ml

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Wet Chemistry STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
26	Anions 300/9056 calibration standard 4	WP111134	12/18/2024	12/19/2024	Niha Farheen Shaik	None	WETCHEM_PIPETTE_3 (WC)	Iwona Zarych 12/18/2024

FROM 0.50000ml of W3063 + 9.50000ml of W3112 = Final Quantity: 10.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
3680	Anions 300/9056 calibration standard 5-CCV	WP111135	12/18/2024	12/19/2024	Niha Farheen Shaik	None	WETCHEM_PIPETTE_3 (WC)	Iwona Zarych 12/18/2024

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

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Wet Chemistry STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
3679	Anions 300/9056 calibration standard 6	WP111136	12/18/2024	12/19/2024	Niha Farheen Shaik	None	WETCHEM_PIPETTE_3 (WC)	Iwona Zarych 12/18/2024

FROM 2.00000ml of W3063 + 8.00000ml of W3112 = Final Quantity: 10.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
3681	Anions 300/9056 calibration standard 7	WP111137	12/18/2024	12/19/2024	Niha Farheen Shaik	None	WETCHEM_PIPETTE_3 (WC)	Iwona Zarych 12/18/2024

FROM 2.50000ml of W3063 + 7.50000ml of W3112 = Final Quantity: 10.000 ml

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Wet Chemistry STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
3233	Anions 300/9056 ICV-LCS std	WP111138	12/18/2024	12/19/2024	Niha Farheen Shaik	None	Glass Pipette-A	Iwona Zarych 12/18/2024

FROM 45.00000ml of W3112 + 5.00000ml of W3062 = Final Quantity: 50.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
11	Sodium hydroxide absorbing solution 0.25 N	WP111294	01/07/2025	07/07/2025	Niha Farheen Shaik	WETCHEM_SCALE_5 (WCSC-5)	None	Iwona Zarych 01/07/2025

FROM 21.00000L of W3112 + 210.00000gram of W3113 = Final Quantity: 21.000 L

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Wet Chemistry STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
3850	Cyanide MS-MSD spiking solution, 5PPM	WP111295	01/07/2025	07/07/2025	Niha Farheen Shaik	None	WETCHEM_PIPETTE_3 (WC)	Iwona Zarych 01/07/2025

FROM 1.00000ml of W3154 + 199.00000ml of WP111294 = Final Quantity: 200.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
3371	Cyanide LCS Spike Solution, 5PPM	WP111296	01/07/2025	07/07/2025	Niha Farheen Shaik	None	WETCHEM_PIPETTE_3 (WC)	Iwona Zarych 01/07/2025

FROM 1.00000ml of W3138 + 199.00000ml of WP111294 = Final Quantity: 200.000 ml

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Wet Chemistry STANDARD PREPARATION LOG

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

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

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

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

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Wet Chemistry STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
1571	Sodium hydroxide, 1N	WP111323	01/09/2025	07/09/2025	Rubina Mughal	WETCHEM_SCALE_8 (WCSC-7)	None	Iwona Zarych 01/09/2025

FROM 4.00000gram of W3113 + 96.00000ml of W3112 = Final Quantity: 100.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
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

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Wet Chemistry STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
290	Phenol reagent for Ammonia	WP111385	01/13/2025	07/13/2025	Rubina Mughal	WETCHEM_SCALE_8 (WCSC-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

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
1322	Ammonia Intermediate Std, 50PPM	WP111419	01/16/2025	02/16/2025	Rubina Mughal	None	WETCHEM_PIPETTE_3 (WC)	Iwona Zarych 01/16/2025

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

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Wet Chemistry STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
1639	Ammonia Intermediate Std-Second source, 50PPM	WP111420	01/16/2025	02/16/2025	Rubina Mughal	None	WETCHEM_PIPETTE_3 (WC)	Iwona Zarych 01/16/2025

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

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
127	BOD Dilution fluid	WP111426	01/16/2025	01/17/2025	Rubina Mughal	None	None	Iwona Zarych 01/16/2025

FROM 18.00000L of W3112 + 3.00000PILLOW of W3144 = Final Quantity: 18.000 L

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Wet Chemistry STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
129	Glutamic acid-glucose mix for BOD	WP111427	01/16/2025	01/17/2025	Rubina Mughal	WETCHEM_SCALE_7 (WCSC-6)	None	Iwona Zarych 01/16/2025

FROM 0.15000gram of W2653 + 0.15000gram of W2654 + 1000.00000ml of W3112 = Final Quantity: 1000.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
128	polyseed seed control	WP111428	01/16/2025	01/17/2025	Rubina Mughal	None	None	Iwona Zarych 01/16/2025

FROM 1.00000PILLOW of W3059 + 300.00000ml of WP111426 = Final Quantity: 300.000 ml

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Wet Chemistry STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
2050	TOC STOCK STD, 4000PPM	WP111436	01/15/2025	07/15/2025	Niha Farheen Shaik	WETCHEM_SCALE_5 (WCSC-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

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
2051	TOC STOCK STD-SS, 4000PPM	WP111437	01/15/2025	06/30/2025	Niha Farheen Shaik	WETCHEM_SCALE_5 (WCSC-5)	WETCHEM_PIPETTE_3 (WC)	Iwona Zarych 01/16/2025

FROM 5.00000ml of W2860 + 8.51200gram of W2784 + 990.00000ml of W3112 = Final Quantity: 1000.000 ml

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Wet Chemistry STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
3888	TOC Water Intermediate std-200ppm	WP111439	01/15/2025	01/22/2025	Niha Farheen Shaik	None	None	Iwona Zarych 01/16/2025

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

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
304	TOC CAL 0.00ppm	WP111441	01/15/2025	01/22/2025	Niha Farheen Shaik	None	None	Iwona Zarych 01/16/2025

FROM 100.00000ml of W3112 = Final Quantity: 100.000 ml

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Wet Chemistry STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
305	TOC CAL 0.5ppm	WP111442	01/15/2025	01/22/2025	Niha Farheen Shaik	None	WETCHEM_PIPETTE_3 (WC)	Iwona Zarych 01/16/2025

FROM 99.75000ml of W3112 + 0.25000ml of WP111439 = Final Quantity: 100.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
306	TOC CAL 1.0PPM	WP111443	01/15/2025	01/22/2025	Niha Farheen Shaik	None	WETCHEM_PIPETTE_3 (WC)	Iwona Zarych 01/16/2025

FROM 99.50000ml of W3112 + 0.50000ml of WP111439 = Final Quantity: 100.000 ml

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Wet Chemistry STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
307	TOC CAL 2.0PPM	WP111444	01/15/2025	01/22/2025	Niha Farheen Shaik	None	WETCHEM_PIPETTE_3 (WC)	Iwona Zarych 01/16/2025

FROM 99.00000ml of W3112 + 1.00000ml of WP111439 = Final Quantity: 100.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
308	TOC CAL 5.0PPM	WP111445	01/15/2025	01/22/2025	Niha Farheen Shaik	None	WETCHEM_PIPETTE_3 (WC)	Iwona Zarych 01/16/2025

FROM 97.50000ml of W3112 + 2.50000ml of WP111439 = Final Quantity: 100.000 ml

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Wet Chemistry STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
310	TOC CAL 20.0PPM	WP111446	01/15/2025	01/22/2025	Niha Farheen Shaik	None	Glass Pipette-A	Iwona Zarych 01/16/2025

FROM 90.00000ml of W3112 + 10.00000ml of WP111439 = Final Quantity: 100.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
3331	TOC CAL-CCV std, 10PPM	WP111447	01/15/2025	01/22/2025	Niha Farheen Shaik	None	Glass Pipette-A	Iwona Zarych 01/16/2025

FROM 190.00000ml of W3112 + 10.00000ml of WP111439 = Final Quantity: 200.000 ml

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Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
2819	TOC ICV-LCSS, 1000PPM	WP111448	01/15/2025	01/22/2025	Niha Farheen Shaik	None	Glass Pipette-A	Iwona Zarych 01/16/2025

FROM 15.00000ml of W3112 + 5.00000ml of WP111437 = Final Quantity: 20.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
4003	Solution A	WP111449	01/15/2025	07/15/2025	Niha Farheen Shaik	WETCHEM_SCALE_5 (WCSC-5)	None	Iwona Zarych 01/16/2025

FROM 1000.00000ml of W3112 + 2.56500gram of W3167 = Final Quantity: 1000.000 ml

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Wet Chemistry STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
4004	Solution B	WP111450	01/15/2025	07/15/2025	Niha Farheen Shaik	WETCHEM_SCALE_5 (WCSC-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

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
4005	Solution C	WP111451	01/15/2025	07/15/2025	Niha Farheen Shaik	WETCHEM_SCALE_5 (WCSC-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

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Wet Chemistry STANDARD PREPARATION LOG

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

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

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
4007	IC-removal check solution	WP111453	01/15/2025	01/22/2025	Niha Farheen Shaik	None	WETCHEM_PIPETTE_3 (WC)	Iwona Zarych 01/16/2025

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

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Wet Chemistry STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
3887	Inorganic carbon solution, 20ppm	WP111454	01/15/2025	01/22/2025	Niha Farheen Shaik	None	WETCHEM_PIPETTE_3 (WC)	Iwona Zarych 01/16/2025

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

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
3680	Anions 300/9056 calibration standard 5-CCV	WP111467	01/17/2025	01/18/2025	Niha Farheen Shaik	None	Glass Pipette-A	Iwona Zarych 01/20/2025

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

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Wet Chemistry STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
3233	Anions 300/9056 ICV-LCS std	WP111468	01/17/2025	01/18/2025	Niha Farheen Shaik	None	Glass Pipette-A	Iwona Zarych 01/20/2025

FROM 45.00000ml of W3112 + 5.00000ml of W3062 = Final Quantity: 50.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
275	Ammonia Calibration Std. (2 ppm)	WP111470	01/17/2025	01/18/2025	Rubina Mughal	None	WETCHEM_PIPETTE_3 (WC)	Iwona Zarych 01/20/2025

FROM 48.00000ml of W3112 + 2.00000ml of WP111419 = Final Quantity: 50.000 ml

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Wet Chemistry STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
285	Ammonia CCV Std. (1 ppm)	WP111471	01/17/2025	01/18/2025	Rubina Mughal	None	WETCHEM_PIPETTE_3 (WC)	Iwona Zarych 01/20/2025

FROM 49.00000ml of W3112 + 1.00000ml of WP111419 = Final Quantity: 50.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
286	Ammonia ICV Std. (1 ppm)	WP111472	01/17/2025	01/18/2025	Rubina Mughal	None	WETCHEM_PIPETTE_3 (WC)	Iwona Zarych 01/20/2025

FROM 49.00000ml of W3112 + 1.00000ml of WP111420 = Final Quantity: 50.000 ml

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Wet Chemistry STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
3456	Cyanide Intermediate Working Std, 5PPM	WP111473	01/17/2025	01/18/2025	Niha Farheen Shaik	None	WETCHEM_PIPETTE_3 (WC)	Iwona Zarych 01/20/2025

FROM 0.25000ml of W3154 + 49.75000ml of WP111294 = Final Quantity: 50.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
167	0 ppb CN calibration std	WP111474	01/17/2025	01/18/2025	Niha Farheen Shaik	None	None	Iwona Zarych 01/20/2025

FROM 50.00000ml of WP111294 = Final Quantity: 50.000 ml

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Wet Chemistry STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
3761	Calibration-CCV CN Standard 250 ppb	WP111475	01/17/2025	01/18/2025	Niha Farheen Shaik	None	None	Iwona Zarych 01/20/2025

FROM 2.50000ml of WP111473 + 47.50000ml of WP111294 = Final Quantity: 50.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
6	Calibration Standard 100 ppb	WP111476	01/17/2025	01/18/2025	Niha Farheen Shaik	None	WETCHEM_PIPETTE_3 (WC)	Iwona Zarych 01/20/2025

FROM 1.00000ml of WP111473 + 49.00000ml of WP111294 = Final Quantity: 50.000 ml

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Wet Chemistry STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
7	Calibration Standard 50 ppb	WP111477	01/17/2025	01/18/2025	Niha Farheen Shaik	None	WETCHEM_PIPETTE_3 (WC)	Iwona Zarych 01/20/2025

FROM 0.50000ml of WP111473 + 49.50000ml of WP111294 = Final Quantity: 50.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
4	Calibation standard 500 ppb	WP111478	01/17/2025	01/18/2025	Niha Farheen Shaik	None	Glass Pipette-A	Iwona Zarych 01/20/2025

FROM 45.00000ml of WP111294 + 5.00000ml of WP111473 = Final Quantity: 50.000 ml

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Wet Chemistry STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
8	Calibration Standard 10 ppb	WP111479	01/17/2025	01/18/2025	Niha Farheen Shaik	None	Glass Pipette-A	Iwona Zarych 01/20/2025

FROM 1.00000ml of WP111478 + 49.00000ml of WP111294 = Final Quantity: 50.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
9	Calibration Standard 5 ppb	WP111480	01/17/2025	01/18/2025	Niha Farheen Shaik	None	Glass Pipette-A	Iwona Zarych 01/20/2025

FROM 0.50000ml of WP111478 + 49.50000ml of WP111294 = Final Quantity: 50.000 ml

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Wet Chemistry STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
1582	Chloramine T solution, 0.014M	WP111481	01/17/2025	01/18/2025	Niha Farheen Shaik	WETCHEM_SCALE_5 (WCSC-5)	None	Iwona Zarych 01/20/2025

FROM 0.08000gram of W3139 + 20.00000ml of W3112 = Final Quantity: 20.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
3311	Sulfide Int std, 1000PPM	WP111503	01/21/2025	01/22/2025	Iwona Zarych	WETCHEM_SCALE_7 (WCSC-6)	None	Jignesh Parikh 01/22/2025

FROM 0.75000gram of W1994 + 99.00000ml of W3112 = Final Quantity: 100.000 ml

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Wet Chemistry STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
2456	COD Stock std, 1000ppm	WP111514	01/22/2025	01/29/2025	Niha Farheen Shaik	WETCHEM_SCALE_5 (WCSC-5)	None	Iwona Zarych 01/22/2025

FROM 0.08500gram of W3169 + 100.00000ml of W3112 = Final Quantity: 100.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
2457	COD Stock std-SS, 1000ppm	WP111515	01/22/2025	01/29/2025	Niha Farheen Shaik	WETCHEM_SCALE_5 (WCSC-5)	None	Iwona Zarych 01/22/2025

FROM 0.08500gram of W2784 + 100.00000ml of W3112 = Final Quantity: 100.000 ml

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Wet Chemistry STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
139	COD calibration std. 0 ppm	WP111516	01/22/2025	01/29/2025	Niha Farheen Shaik	None	None	Iwona Zarych 01/22/2025

FROM 10.00000ml of W3112 = Final Quantity: 10.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
138	COD calibration std. 10 ppm	WP111517	01/22/2025	01/29/2025	Niha Farheen Shaik	None	WETCHEM_PIPETTE_3 (WC)	Iwona Zarych 01/22/2025

FROM 9.90000ml of W3112 + 0.10000ml of WP111514 = Final Quantity: 10.000 ml

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Wet Chemistry STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
137	COD calibration std. 50 ppm	WP111518	01/22/2025	01/29/2025	Niha Farheen Shaik	None	WETCHEM_PIPETTE_3 (WC)	Iwona Zarych 01/22/2025

FROM 9.50000ml of W3112 + 0.50000ml of WP111514 = Final Quantity: 10.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
136	COD calibration std. 100 ppm	WP111519	01/22/2025	01/29/2025	Niha Farheen Shaik	None	WETCHEM_PIPETTE_3 (WC)	Iwona Zarych 01/22/2025

FROM 9.00000ml of W3112 + 1.00000ml of WP111514 = Final Quantity: 10.000 ml

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Wet Chemistry STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
135	COD calibration std. 150 ppm	WP111520	01/22/2025	01/29/2025	Niha Farheen Shaik	None	WETCHEM_PIPETTE_3 (WC)	Iwona Zarych 01/22/2025

FROM 8.50000ml of W3112 + 1.50000ml of WP111514 = Final Quantity: 10.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
2458	COD CCV std, 50ppm	WP111521	01/22/2025	01/29/2025	Niha Farheen Shaik	None	WETCHEM_PIPETTE_3 (WC)	Iwona Zarych 01/22/2025

FROM 9.50000ml of W3112 + 0.50000ml of WP111514 = Final Quantity: 10.000 ml

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Wet Chemistry STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
2459	COD ICV-LCS std, 50ppm	WP111522	01/22/2025	01/29/2025	Niha Farheen Shaik	None	WETCHEM_PIPETTE_3 (WC)	Iwona Zarych 01/22/2025

FROM 9.50000ml of W3112 + 0.50000ml of WP111515 = Final Quantity: 10.000 ml

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CHEMICAL RECEIPT LOG BOOK

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Seidler Chemical	BA-3624-05 / Sodium Chloride, Crystal (cs/4x2.5kg)	0000281938	07/06/2026	07/24/2023 / mohan	04/14/2023 / mohan	M5501

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
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

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
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

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

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
PCI Scientific Supply, Inc.	J0660-1 / AMMONIUM CHLORIDE, ACS, 500G	WL13B	04/08/2025	04/08/2015 / apatel	04/08/2015 / apatel	W1992

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
PCI Scientific Supply, Inc.	J0660-1 / AMMONIUM CHLORIDE, ACS, 500G	XE09B	04/08/2025	04/08/2015 / apatel	04/08/2015 / apatel	W1993

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CHEMICAL RECEIPT LOG BOOK

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
PCI Scientific Supply, Inc.	J3910-1 / Sodium Sulfide, 500 g	WK21A	04/09/2025	04/09/2015 / apatel	04/09/2015 / apatel	W1994

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
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

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
PCI Scientific Supply, Inc.	AC156212500 / GLUTAMIC ACID BIOCHEM REG, 250G	A0405990	01/24/2030	01/24/2020 / apatel	01/24/2020 / apatel	W2653

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
PCI Scientific Supply, Inc.	D16-500 / DEXTROSE ANHYDROUS ACS REAGENT, 500G(New)	186122A	01/24/2030	01/24/2020 / apatel	01/24/2020 / apatel	W2654

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
PCI Scientific Supply, Inc.	87683 / Sodium Nitroferricyanide 250g	W12F013	02/10/2030	02/10/2020 / apatel	02/10/2020 / apatel	W2666

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
PCI Scientific Supply, Inc.	J3818-5 / SODIUM PHOSPHATE, MONOBAS/HYD, CRYS, ACS, 2.5 KG	0000225799	12/03/2025	04/05/2021 / Alexander	02/10/2020 / apatel	W2668

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CHEMICAL RECEIPT LOG BOOK

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
PCI Scientific Supply, Inc.	J3568-1 / Sodium Borate, 500 gms	2019111354	04/23/2025	04/23/2020 / apatel	03/11/2020 / apatel	W2700

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
PCI Scientific Supply, Inc.	EMD-FX0410-5 / FORMALDEHYDE SOLUTION 450ML	60045	06/22/2025	08/19/2024 / Iwona	06/22/2020 / apatel	W2725

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
PCI Scientific Supply, Inc.	P243-500 / Potassium Hydrogen Phthalate, 500 gms	201089	06/30/2025	12/23/2020 / apatel	12/16/2020 / apatel	W2784

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
PCI Scientific Supply, Inc.	J3040-1 / POTASSIUM CHLORIDE, CRYS, ACS, 500G	198947	09/30/2025	03/08/2021 / apatel	03/08/2021 / apatel	W2800

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
PCI Scientific Supply, Inc.	P1060-10 / PHENOL, ACS, 500G	M13H048	01/07/2026	07/07/2021 / apatel	07/07/2021 / apatel	W2858

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
PCI Scientific Supply, Inc.	J0260-3 / Phosphoric Acid, 2.5 L	0000278313	01/31/2026	07/12/2021 / apatel	07/12/2021 / apatel	W2860

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CHEMICAL RECEIPT LOG BOOK

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
PCI Scientific Supply, Inc.	EM-BX0035-3 / Barbituric Acid, 100 gms	1.00132.0100	04/30/2025	12/07/2021 /	11/30/2021 / apatel	W2882

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
PCI Scientific Supply, Inc.	J4296-1 / ZINC ACETATE,DIHYD,CRYS,ACS,500G	383058	07/05/2027	07/05/2022 / ketankumar	07/05/2022 / ketankumar	W2926

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
PCI Scientific Supply, Inc.	01237-10KG / Megnasium Chloride Hexahydrate ACS 10KG	002251-03319	06/06/2027	01/23/2023 / Iwona	06/06/2022 / Iwona	W3001

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
EPA	/ ICV-CN	ICV6-400	12/31/2025	01/08/2025 / Iwona	02/20/2020 / Iwona	W3012

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
SIGMA ALDRICH	S9390-100G / Sodium phosphate dibasic heptahydrate	SLCP6576	11/30/2025	04/03/2023 / Iwona	04/03/2023 / Iwona	W3016

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

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CHEMICAL RECEIPT LOG BOOK

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
SIGMA ALDRICH	270970-1L / Pyridine 1L	SHBQ2113	04/03/2028	04/03/2023 / Iwona	04/03/2023 / Iwona	W3019

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
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

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
SIGMA ALDRICH	S4392-250G / Sodium metasilicate nonahydrate	SLCM8472	03/31/2025	04/05/2023 / Iwona	04/05/2023 / Iwona	W3022

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
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

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
PCI Scientific Supply, Inc.	136742-80 / POLYSEED	152305	05/30/2025	02/15/2024 / Rubina	10/18/2023 / Iwona	W3059

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Inorganic Ventures	300-CAL-A-500ML / 300.0 Calibration Standard, 500 ml	T2-MEB716667	02/12/2025	02/12/2024 / Iwona	10/30/2023 / Iwona	W3062

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Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
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

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
PCI Scientific Supply, Inc.	470112-662 / TEST STRIPES, NITRATE/NITRITE, PK50	402403	04/30/2026	05/02/2024 / Iwona	04/10/2024 / Iwona	W3101

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
PCI Scientific Supply, Inc.	4620-32 / MANGANOUS SULFATE SOLUTION-364	2403J02	03/31/2026	04/22/2024 / Iwona	04/22/2024 / Iwona	W3103

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
PCI Scientific Supply, Inc.	AL69870-8 / SODIUM THIOSULFATE,0.025N,4LITRE	4403S13	09/30/2025	04/22/2024 / Iwona	04/22/2024 / Iwona	W3105

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
PCI Scientific Supply, Inc.	AL04100-4 / Alkaline Iodide Azide, 1 L	1405D67	04/30/2026	05/23/2024 / Iwona	05/23/2024 / Iwona	W3109

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Seidler Chemical	DIW / DI Water	Daily Lab-Certified	07/03/2029	07/03/2024 / Iwona	07/03/2024 / Iwona	W3112

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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

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
PCI Scientific Supply, Inc.	AL35830-4 / IODINE SOLUTION .025N 1L	2405D89	05/31/2025	07/10/2024 / Iwona	07/10/2024 / Iwona	W3114

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Environmental Express LTD	B1010 / COD Digestion Vials Low Level 0-150Mg/L	13798	09/30/2027	12/06/2024 / Iwona	07/25/2024 / Iwona	W3125

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
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

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
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

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
PCI Scientific Supply, Inc.	LC135457 / Cyanide Standard, 1000 PPM, Second Source	44080060	01/30/2025	09/06/2024 / Iwona	08/28/2024 / Iwona	W3138

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CHEMICAL RECEIPT LOG BOOK

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
PCI Scientific Supply, Inc.	JTE494-6 / CHLORAMINE-T BAKER 250GM	10239484	09/09/2029	09/09/2024 / Iwona	09/09/2024 / Iwona	W3139

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
PCI Scientific Supply, Inc.	140444 / TEST PAPERS,PH 0-14,.5 SENSI,100PK	10D0142	09/17/2029	09/17/2024 / Iwona	09/17/2024 / Iwona	W3140

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	2407F34	01/31/2025	09/30/2024 / Iwona	09/30/2024 / Iwona	W3143

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
HACH	1486266 / BOD Nutrient Buffer Pillows, 6 mL concentrate to make 6 L, 50/pk	A4169	06/30/2029	11/20/2024 / rubina	10/01/2024 / Iwona	W3144

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
PCI Scientific Supply, Inc.	AL70850-8 / Starch Solution, 4L	4408P62	08/31/2026	10/16/2024 / Iwona	10/16/2024 / Iwona	W3149

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
PCI Scientific Supply, Inc.	RC2543-4 / CYANIDE STD 1000PPM 4OZ	1411J58	05/31/2025	12/02/2024 / Iwona	12/02/2024 / Iwona	W3154

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CHEMICAL RECEIPT LOG BOOK

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
PCI Scientific Supply, Inc.	140730 / TEST PAPER,POT.IOD-STRCH,PK100,CS12	14-860	12/02/2029	12/02/2024 / Iwona	12/02/2024 / Iwona	W3155

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
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

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
PCI Scientific Supply, Inc.	P243-500 / Potassium Hydrogen Phthalate, 500 gms	24H0956262	04/28/2026	01/03/2025 / Iwona	01/03/2025 / Iwona	W3169

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

	Requirement			
Characteristic	**Minimum**	**Maximum**	**Results**	**UOM**
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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EMD Millipore Corporation
290 Concord Road
Billerica, MA 01821

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 Minimum	Maximum	Results	UOM
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	%

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Quality Control Manager

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EMD Millipore Corporation
290 Concord Road
Billerica, MA 01821

Certificate of Analysis

Date of Release: ***12/6/2013***

Product:	***Sodium Sulfide, Nonahydrate GR ACS, Crystals***	***Catalog No.:***	***SX0770 all size codes***
Grade:	***Meets ACS Specifications, Meets Reagent Specifications for testing USP/NF monographs***	***CAS #:***	***1313-84-4***
Country of Origin:	***USA***	***FW:***	***240.18***
Lot No.:	***WK21A***		

$Na_2S \cdot 9H_2O$

	Requirement			
Characteristic	**Minimum**	**Maximum**	**Results**	**UOM**
Assay (iodometric)	98.0		101.1	%
Ammonium (NH4)		0.005	0.003	%
Appearance	Crystals, colorless or only slight yellow color		Crystals, colorless	
Iron	To pass test		Passes	
Sulfite and thiosulfate (as SO2)		0.1	0.003	%

Joe Schoellkopff

Quality Control Manager

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EMD Millipore Corporation
290 Concord Road
Billerica, MA 01821

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

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

ThermoFisher SCIENTIFIC

Certificate of Analysis

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	40.5ºC min	40.5 ºC
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

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

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

ThermoFisher SCIENTIFIC

Certificate of Analysis

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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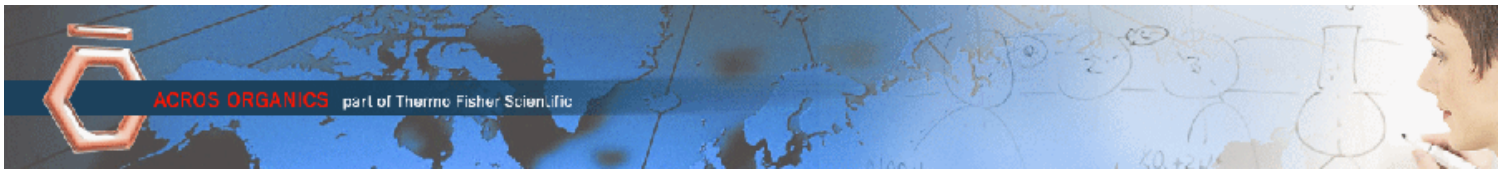
This is to certify that units of the lot number above were tested and found to comply with the specifications of the grade listed. Certain data have been supplied by third parties. Thermo Fisher Scientific expressly disclaims all warranties, expressed or implied, including the implied warranties of merchantability 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 purchaser, formulator or those performing further manufacturing 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 above information is the actual analytical results obtained.



ACROS ORGANICS

Version	0
Molecular weight	147.13
Molecular formula	C5 H9 N O4
CAS No	56-86-0
Linear formula	HO2CCH2CH2CH(NH2)CO2H
Flash point (°C)	

Certificate of Analysis

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Catalog Number	15621	**Quality Test / Release Date**	13 March 2019
Lot Number	A0405990	**Suggested Retest Date**	March 2022

Description	L(+)-Glutamic acid,99%
Country of Origin	CHINA
Declaration of Origin	plant

Origin Comment	The product is made by fermentation of sugar molasses

Result Name	Specifications	Test Value
Appearance (Color)	White	White
Appearance (Form)	Powder	Powder
Infrared spectrum	Conforms	Conforms
Titration with NaOH	98.5 to 100.5 % (On dried substance)	99.32 % (On dried substance)
Loss on drying	=<0.5 % (105°C, 3 hrs)	0.002 % (105°C, 3 hrs)
Heavy metals (as Pb)	=<10 ppm	=<10 ppm
Sulfated ash	=<0.1 %	0.08 %
Other amino acids	not detectable	not detectable
Specific optical rotation	+30.5° to +32.5° (20°C, 589 nm) (on dried substance)	+32° (20°C, 589 nm) (on dried substance)
Specific optical rotation	(c=10, 2N HCl)	(c=10, 2N HCl)
Chloride (Cl)	=<200 ppm	=<200 ppm
Iron (Fe)	=<30 ppm	=<10 ppm
Sulfate (SO4)	=<300 ppm	=<200 ppm
Ammonium (NH4)	=<200 ppm	=<200 ppm
Arsenic oxide (As2O3)	=<1 ppm	=<1 ppm

L. Van den Broek, QA Manager Issued: 24 January 2020

Acros Organics
ENA23, zone 1, nr 1350, Janssen Pharmaceuticalaan 3a, B-2440 Geel, Belgium
Tel +32 14/57.52.11 - Fax +32 14/59.34.34 Internet: http://www.acros.com
1 Reagent Lane, Fair Lawn, NJ 07410,USA Fax 201-796-1329

~~W2918~~ W3001 rec. 06/06/22 exp. 06/06/27

Chem-Impex International, Inc.

Tel: (630) 766-2112
E-mail: sales@chemimpex.com
Shipping and Correspondence:
935 Dillon Drive
Wood Dale, IL 60191

Fax: (630) 766-2218
Web site: www.chemimpex.com
Manufacturing site:
825 Dillon Drive
Wood Dale, IL 60191

Certificate of Analysis

Catalogue Number	01237
Product	**Magnesium chloride hexahydrate**
Lot Number	002251-03319
	Magnesium chloride•$6H_2O$
CAS Number	7791-18-6
Molecular Formula	$MgCl_2$•$6H_2O$
Molecular Weight	203.3

Appearance	Colorless crystals, very deliquescent
Heavy Metals	< 5 ppm
Anion	Nitrate : < 0.001% Phosphate : < 5 ppm Sulfate : < 0.002%
Cation	Ammonium : < 0.002% Barium : < 0.005% Calcium : 0.0006% Iron : < 5 ppm Manganese : 1.8 ppm Potassium : 0.0006% Sodium : 0.0008% Strontium : 0.0015%
Insoluble material	0.0025%
Assay by titration	100.29%
Grade	ACS reagent
Storage	Store at RT
Country of Origin	India

Certificate of Analysis

Catalog Number: 01237 **Lot Number: 002251-03319**

Remarks	See material safety data sheet for additional information
	For laboratory use only

The foregoing is a copy of the Certificate of Analysis as provided by our supplier

Bala Kumar
Quality Control Manager

Sigma-Aldrich.

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

Certificate of Analysis

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

$Na_2HPO_4 \cdot 7H_2O$

Product Number:	**S9390**
Batch Number:	**SLCP6576**
Brand:	SIGALD
CAS Number:	7782-85-6
MDL Number:	MFCD00149180
Formula:	HNa2O4P · 7H2O
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	≤ 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

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

Certificate of Analysis

Product Name:

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

$CaCl_2 \cdot 2H_2O$

Product Number:	**C7902**
Batch Number:	**SLCP4280**
Brand:	SIGMA
CAS Number:	10035-04-8
MDL Number:	MFCD00149613
Formula:	CaCl2 · 2H2O
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) 294 mg/mL, H2O	Clear	Clear
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.

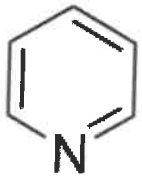
W3019
Rec 4/3/23

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 Name:
Pyridine - anhydrous, 99.8%

Product Number:	**270970**
Batch Number:	**SHBQ2113**
Brand:	SIAL
CAS Number:	110-86-1
MDL Number:	MFCD00011732
Formula:	C5H5N
Formula Weight:	79.10 g/mol
Quality Release Date:	15 DEC 2022



Test	Specification	Result
Appearance (Color)	Colorless	Colorless
Appearance (Form)	Liquid	Liquid
Infrared Spectrum	Conforms to Structure	Conforms
Purity (GC)	≥ 99.75 %	99.99 %
Water (by Karl Fischer)	≤ 0.003 %	0.002 %
Residue on Evaporation	≤ 0.0005 %	< 0.0001 %

Larry Coers, Director
Quality Control
Sheboygan Falls, WI US

Sigma-Aldrich.

W 3020
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

Certificate of Analysis

Product Name:
Calcium nitrate tetrahydrate - ACS reagent, 99%

$Ca(NO_3)_2 \cdot 4H_2O$

Product Number:	**237124**
Batch Number:	**MKCS4612**
Brand:	SIGALD
CAS Number:	13477-34-4
MDL Number:	MFCD00149604
Formula:	CaN2O6 · 4H2O
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) Granular Powder or Crystals or Flakes	Conforms to Requirements	Crystals
Complexometric EDTA	99.0 - 103.0 %	99.6 %
X-Ray Diffraction	Conforms to Structure	Conforms
pH c = 5%, Water, 25 Deg C	5.0 - 7.0	5.4
Insoluble Matter c = 10%, Water	≤ 0.005 %	< 0.001 %
Chloride Content	≤ 0.005 %	< 0.005 %
Nitrite (NO2)	≤ 0.001 %	< 0.001 %
Sulfate (SO4)	≤ 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

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.

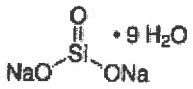
W 3022
Rec. 4/5/23 12

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

Certificate of Analysis

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) 50 mg/ml, H2O	Colorless	Colorless
Solubility (Turbidity) 50 mg/ml, H2O	Clear	Clear
Titration with HCl	≥ 98 %	100 %

Brian Dulle

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

Certificate Of Analysis

W 3058

Rec. 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

W 3059
REC. 10/18/23 12

POLYSEED®

CERTIFICATE OF ANALYSIS

PO BOX 130549 Spring, TX 77393
Phone: (281) 298-9410 Fax: (281) 298-9411

FINISHED PRODUCT, LOT NUMBER, MFG. /EXP DATE:
PolySeed® • Part No. P-110 • Lot 152305 • Mfg. Date: 05/2023 • Exp. Date: 05/2025

FORMULATION:
The formulation for this product contains a range of naturally occurring microorganisms, which are known to be non-pathogenic to man or animals.

VIABLE COUNT, FINAL TEST RESULT:
The product has been fully tested in accordance with Finished Product Specifications and contains a minimum viable count of 4.00 x10^9 cfu/g.

GLUCOSE/GLUTAMIC-ACID RESULTS:
Tested results within acceptable range 198 +/- 30.5 mg/L (167.5 - 228.5 mg/L). GGA Lot# L257-09 – Average Test Result: 203.4

See www.polyseed.com for details.

SEED CONTROL FACTOR:
Tested results within acceptable range 0.6 – 1.0 see www.polyseed.com for details

SALMONELLA TEST RESULT:
The product has been shown to be Salmonella negative using procedures recommended in the Microbiology Laboratory Guidebook, published by the USDA Food Safety and Inspection Service.

The purpose of this document is to assure that the Finished Product conforms to the above specification.

Signature: _____ Date: 05/15/2023
Quality Control Department

POLYSEED.Ref.1.19 Revised Jan 23

InterLab®
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INORGANIC VENTURES
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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

N 3062
NEC on 10/30/23
12

1.0 ACCREDITATION / REGISTRATION

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

ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Multi Analyte Ion Chromatography Solution
Catalog Number:	300-CAL-A
Lot Number:	T2-MEB716667
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 ± 0.13 µg/mL
Fluoride, F-	20.00 ± 0.06 µg/mL	Nitrate as N, NNO3-	25.00 ± 0.09 µg/mL
Nitrite as N, NNO2-	30.00 ± 0.15 µg/mL	o-Phosphate as P, PPO4	50.00 ± 0.30 µg/mL
Sulfate, SO4	150.0 ± 0.9 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	060925
Cl	Fajans	999c	999c
Cl	Calculated		See Sec. 4.2
F-	IC Assay	3183	140203
NNO3-	IC Assay	3185	050517
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:

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

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

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

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

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

k = coverage factor = 2

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

u_{bb} = bottle to bottle homogeneity standard uncertainty

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

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

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

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

X_a = mean of Assay Method A with

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

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

k = coverage factor = 2

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

u_{bb} = bottle to bottle homogeneity standard uncertainty

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

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

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

4.1 Thermometer Calibration

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

4.2 Balance Calibration

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

4.3 Glassware Calibration

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

5.0 CHROMATOGRAM

N/A

6.0 INTENDED USE

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

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

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

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

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

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

8.0 HAZARDOUS INFORMATION

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

9.0 HOMOGENEITY

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

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

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

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

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

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

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

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

March 17, 2022

- 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

- March 17, 2027

- 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 Approved By:

Thomas Kozikowski
Manager, Quality Control

Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director

INORGANIC VENTURES
Refine your results. Redefine your industry.

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

W3063
rec. 11/16/23 12

1.0 ACCREDITATION / REGISTRATION

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

ACCREDITED Testing Laboratory Certificate 863.01
ACCREDITED Reference Material Producer Certificate 883.02

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, NNO3-	25.00 ± 0.09 µg/mL
Nitrite as N, NNO2-	30.00 ± 0.15 µg/mL	o-Phosphate as P, PPO4	50.00 ± 0.18 µg/mL
Sulfate, SO4	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:

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

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

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

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

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

k = coverage factor = 2

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

u_{bb} = bottle to bottle homogeneity standard uncertainty

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

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

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

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

X_a = mean of Assay Method A with

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

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

k = coverage factor = 2

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

u_{bb} = bottle to bottle homogeneity standard uncertainty

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

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

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

4.1 Thermometer Calibration

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

4.2 Balance Calibration

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

4.3 Glassware Calibration

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

5.0 CHROMATOGRAM

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

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

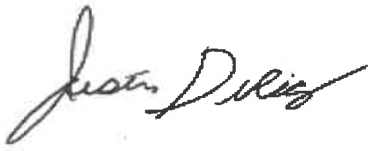
- Sealed TCT Bag Open Date: _____

- 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:	2/26/2020
Name:	Formaldehyde Solution GR ACS Meets ACS Specifications
Item No:	FX0410 all size codes
Lot / Batch No:	60045
Country of Origin:	USA

Characteristic	Requirement		Results	Units
	Min.	Max.		
Assay	36.5	38.0	36.71	%
Chloride (Cl)		5	<5	ppm
Color (APHA)		10	<10	
Form			Passes test	
Heavy metals (as Pb)		5	<5	ppm
Iron (Fe)		5	0.6	ppm
Residue after ignition		0.005	<0.0050	%
Sulfate (SO4)		0.002	<0.0020	%
Titrable acid		0.006	<0.0060	meq/g

Heather Sinn,
_____
Quality Control Manager
This document has been produced electronically and is valid without a signature.

EMD Millipore Corporation, an affiliate of Merck KGaA, Darmstadt, Germany
290 Concord Road
Billerica, MA 01821
U.S.A

Certificate Of Analysis

Date of Release: 11/14/2019

W2700 Recived 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 (Na2B4O7 • 10H2O)	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 (PO4)	0.001% max.	<0.001%
Sulfate (SO4)	0.005% max.	<0.005%

Joe Schoellkopff

Quality Control Manager

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

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

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.

ThermoFisher SCIENTIFIC

Certificate of Analysis

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

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Catalog Number	D16	Quality Test / Release Date	03/19/2019
Lot Number	186122A		
Description	DEXTROSE, ANHYDROUS, A.C.S.		
Country of Origin	United States	Suggested Retest Date	Mar/2022
Chemical Origin	Organic - Plant		
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	White, granular powder
TITRATABLE ACID	MEQ/G	<= 0.002	<0.002
STARCH		= PASS TEST	pass test
SPECIFIC ROTATION @ 25 C	DEGREES (+ OR -)	Inclusive Between +52.5 - +53.0	53.0
SULFATE & SULFITE	%	<= 0.005	<0.005
IRON (Fe)	ppm	<= 5	<5
CHLORIDE	%	<= 0.01	<0.01
IGNITION RESIDUE	%	<= 0.02	<0.02
IDENTIFICATION	PASS/FAIL	= PASS TEST	pass test
HEAVY METALS (as Pb)	ppm	<= 5	<5
LOSS ON DRYING @ 105 C	%	<= 0.2	<0.2
INSOLUBLE MATTER	%	<= 0.005	0.002

Teresa 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.

ThermoFisher SCIENTIFIC

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Fair Lawn, NJ 07410
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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

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.

For ICP-MS use: dilute the ICV1 concentrate 50-fold with 1% (v/v) nitric acid; pipet 2 mL of the concentrate into a 100 mL volumetric flask and dilute to volume with 1% (v/v) nitric acid.

W3011
W3012
W3013
W3014
W3015

ICV5-0415 For the cold vapor analysis of mercury by AA: dilute the ICV5 concentrate 100-fold with 2% (v/v) nitric acid; pipet 1 mL of the concentrate into a 100 mL volumetric flask and dilute to volume with 2% (v/v) nitric acid. The ICV5 concentrate is prepared in 0.05% (w/v) $K_2Cr_2O_7$ and 5% (v/v) nitric acid.

ICV6-0400 For the analysis of cyanide: dilute the ICV6 concentrate 100-fold with Type II water; pipet 1 mL of the concentrate into a 100 mL volumetric flask and dilute to volume with Type II water. Distill this solution along with the samples before analysis. The cyanide concentrate is prepared from $K_3Fe(CN)_6$, Type II water, and 0.1 % sodium hydroxide, and will decompose rapidly if exposed to light.

NOTE: USE TYPE II WATER AND HIGH-PURITY ACIDS FOR ALL DILUTIONS.

(D) *CERTIFIED CONCENTRATIONS OF QATS ICV1, ICV5, AND ICV6 SOLUTIONS*

ICV1-1014		
Element	**Concentration (µg/L) (after 10-fold dilution)**	**Concentration (µg/L) (after 50-fold dilution)**
Al	2520	504
Sb	1010	202
As	997	199
Ba	518	104
Be	514	103
Cd	514	103
Ca	10000	2000
Cr	517	103
Co	521	104
Cu	505	101
Fe	10100	2020
Pb	1030	206
Mg	5990	1198
Mn	524	105
Ni	525	105
K	9940	1988
Se	1030	206
Ag	252	50
Na	10100	2020
Tl	1040	208
V	504	101
Zn	1010	202

ICV5-0415		ICV6-0400	
Element	**Concentration (µg/L) (after 100-fold dilution)**	**Analyte**	**Concentration (µg/L) (after 100-fold dilution)**
Hg	4.0	**CN^-**	99

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

M5493 – M5308
Rad on 4/14/23
MG

avantor™ | J.T.Baker®

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

James T 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

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

A15673-78
A-3

avantor™ | J.T.Baker®

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_2SO_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 SO2)	≤ 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

avantor™ | J.T.Baker®

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

James T Ethier

Jamie Ethier
Vice President Global Quality

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

M 6041-46
MS

avantor™ | J.T.Baker®

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_2SO_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 SO2)	≤ 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

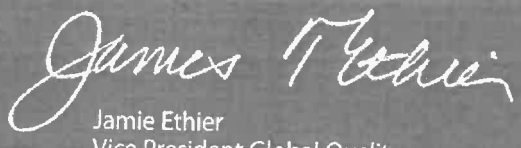
avantor™ | J.T.Baker®

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

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

avantor™ | J.T.Baker®

R → 10/13/24
Met dig

M 6121

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

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

Certificate of Analysis

1.00132.0000 Barbituric acid for analysis EMSURE®
Batch N020065932

	Spec. Values		Batch Values	
Assay (acidimetric)	≥ 99	%	99.6	%
Identity (IR-spectrum)	passes test		passes test	
Chloride (Cl)	≤ 40	ppm	≤ 40	ppm
Heavy metals (as Pb)	≤ 50	ppm	≤ 50	ppm
Fe (Iron)	≤ 10	ppm	≤ 10	ppm
Sulfated ash	≤ 0.1	%	≤ 0.1	%
Loss on Drying (105 °C)	≤ 0.1	%	≤ 0.1	%
Suitability as reagent (for cyanide determination)	passes test		passes test	

Date of release (DD.MM.YYYY) 17.04.2020
Minimum shelf life (DD.MM.YYYY) 30.04.2025

Ioannis Chartomatsidis
Responsible laboratory manager quality control

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

Sodium Phosphate, Monobasic, Monohydrate, Crystal
BAKER ANALYZED® A.C.S. Reagent

(sodium dihydrogen phosphate, monohydrate)

Material No.: 3818-05
Batch No.: 0000225799
Manufactured Date: 2018/12/05
Retest Date: 2025/12/03
Revision No: 1

Certificate of Analysis

Meets ACS Reagent Chemical Requirements,

Test	Specification	Result
Assay ($NaH_2PO_4 \cdot H_2O$)	98.0 - 102.0 %	99.5
pH of 5% Solution at 25°C	4.1 - 4.5	4.3
Insoluble Matter	<= 0.01 %	< 0.01
Chloride (Cl)	<= 5 ppm	< 5
ACS - Sulfate (SO_4)	<= 0.003 %	< 0.003
Calcium (Ca)	<= 0.005 %	<0.005
Potassium (K)	<= 0.01 %	< 0.01
Heavy Metals (as Pb)	<= 0.001 %	< 0.001
Trace Impurities - Iron (Fe)	<= 0.001 %	< 0.001

For Laboratory, Research or Manufacturing Use
Meets Reagent Specifications for testing USP/NF monographs

Country of Origin: IN
Packaging Site: Paris Mfg Ctr & DC

Jamie Ethier
Vice President Global Quality

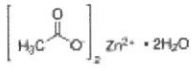
For questions on this Certificate of Analysis please contact Technical Services at 855.282.6867 or +1.610.386.1700
Avantor Performance Materials, LLC
100 Matsonford Rd, Suite 200, Radnor, PA 19087. U.S.A. Phone: 610.386.1700

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

W2926
open 7/5/22
received
on
7/5/22

Certificate of Analysis

Product Name:
Zinc acetate dihydrate - ACS reagent, ≥98%



Product Number:	**383058**
Batch Number:	**MKCQ9159**
Brand:	SIGALD
CAS Number:	5970-45-6
MDL Number:	MFCD00066961
Formula:	C4H6O4Zn · 2H2O
Formula Weight:	219.51 g/mol
Quality Release Date:	06 JAN 2022

Test	Specification	Result
Appearance (Color)	White	White
Appearance (Form)	Powder or Crystal or Chunk(s)	Powder
Infrared Spectrum	Conforms to Structure	Conforms
Insoluble Matter	≤ 0.005 %	0.003 %
Calcium (Ca)	≤ 0.005 %	0.003 %
Chloride (Cl)	≤ 5 ppm	< 5 ppm
Iron (Fe)	≤ 5 ppm	< 5 ppm
Potassium (K)	≤ 0.01 %	0.00 %
Magnesium (Mg)	≤ 0.005 %	0.003 %
Sodium (Na)	≤ 0.05 %	0.03 %
Lead (Pb)	≤ 0.002 %	< 0.001 %
pH	6.0 - 7.0	6.1
Sulfate (SO4)	≤ 0.005 %	< 0.005 %
Complexometric EDTA	98.0 - 101.0 %	100.3 %
Meets ACS Requirements	Meets Requirements	Meets Requirements

Larry Coers, Director
Quality Control
Milwaukee, WI US

RICCA CHEMICAL COMPANY®
1841 Broad Street
Pocomoke City, MD 21851
http://www.riccachemical.com
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customerservice@riccachemical.com

W3103 Received on 4/22/24 by IZ

Certificate of Analysis

Manganous Sulfate Solution, 364 g/L

Lot Number: 2403J02 **Product Number:** 4620

Manufacture Date: MAR 15, 2024
Expiration Date: MAR 2026

Name	CAS#	Grade
Water	7732-18-5	ACS/ASTM/USP/EP
Manganous Sulfate Monohydrate	10034-96-5	Reagent
Sulfuric Acid	7664-93-9	ACS

Test	Specification	Result
Appearance	Pink liquid	Passed
Assay (by Refractive Index)	360-368 g/L	367 g/L

Specification	Reference
Manganous Sulfate Solution	ASTM (D 888 A)
Manganous Sulfate Solution	ASTM (D 888 A)
Manganous Sulfate Solution	APHA (4500-O E)
Manganous Sulfate Solution	APHA (4500-O F)
Manganous Sulfate Solution	APHA (4500-O D)
Manganous Sulfate Solution	APHA (4500-O E)
Manganous Sulfate Solution	APHA (4500-O F)
Manganous Sulfate Solution	APHA (4500-O D)
Manganous Sulfate Solution	APHA (4500-O C)
Manganous Sulfate Solution	APHA (4500-O C)
Manganous Sulfate Solution	EPA (360.2)
Manganous Sulfate Solution	EPA (360.2)

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)
4620-32	1 L natural poly	24 months

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

Jose Pena (03/15/2024)
Operations Manager
This document is designed to comply with ISO Guide 31 "Reference Materials -- Contents of Certificates and Labels."

RICCA CHEMICAL COMPANY®

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W3105 Received on 4/22/24 by IZ

Certificate of Analysis

Sodium Thiosulfate, 0.0250 Normal (N/40)

Lot Number: 4403S13 **Product Number:** 7900

Manufacture Date: MAR 29, 2024
Expiration Date: SEP 2025

This product is specially formulated to increase its stability. A preservative is added to prevent bacterial contamination. However, all Sodium Thiosulfate solutions are subject to slow chemical deterioration and should be restandardized periodically.

Name	CAS#	Grade
Water	7732-18-5	ACS/ASTM/USP/EP
Sodium Thiosulfate Pentahydrate	10102-17-7	ACS
Organic Preservative	Proprietary	
Sodium Carbonate	497-19-8	ACS

Test	Specification	Result	NIST SRM#
Appearance	Colorless liquid	Passed	
Assay (vs. Potassium Iodate/Starch)	0.02499-0.02501 N at 20°C	0.02501 N at 20°C	136

Specification	Reference
Standard Sodium Thiosulfate Solution, 0.0250 N	APHA (4500-S2- F)
Standard Sodium Thiosulfate Titrant	APHA (4500-O D)
Standard Sodium Thiosulfate Titrant	APHA (4500-O E)
Standard Sodium Thiosulfate Titrant	APHA (4500-O F)
Standard Sodium Thiosulfate Titrant, 0.025 N	APHA (4500-Cl B)
Standard Sodium Thiosulfate Titrant	APHA (4500-O C)
Standard Sodium Thiosulfate Titrant, 0.025 M	APHA (5530 C)
Standard Sodium Thiosulfate Solution (0.025 N)	EPA (SW-846) (9031)
Standard Sodium Thiosulfate solution (0.025 N)	EPA (SW-846) (9034)

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)
7900-1	4 L natural poly	18 months
7900-16	500 mL natural poly	18 months
7900-1CT	4 L Cubitainer®	18 months
7900-32	1 L natural poly	18 months

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

Paul Brandon (03/29/2024)
Production Manager
This document is designed to comply with ISO Guide 31 "Reference Materials -- Contents of Certificates and Labels."

RICCA CHEMICAL COMPANY®

448 West Fork Dr
Arlington, TX 76012
http://www.riccachemical.com
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Certificate of Analysis

Alkaline-Iodide-Azide, Pomeroy Formulation for Dissolved Oxygen (DO) Analysis

Lot Number: 1405D67 **Product Number:** 535

Manufacture Date: APR 05, 2024
Expiration Date: APR 2026

This solution is intended for use with samples with high Dissolved Oxygen content (above 15 mg/L) and for samples with high concentrations of organic material.

Name	CAS#	Grade
Water	7732-18-5	ACS/ASTM/USP/EP
Sodium Iodide	7681-82-5	ACS
Sodium Hydroxide	1310-73-2	ACS
Sodium Azide	26628-22-8	Reagent

Test	Specification	Result
Appearance	Colorless liquid	Passed
Free Iodine	To Pass Test	Passed

Specification	Reference
Alkaline Iodide-Sodium Azide Solution II	ASTM (D 888 A)

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)
535-32	1 L natural poly	24 months

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

Heidi J Green (04/05/2024)
Operations Manager

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

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

Additional Information

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	Manufacture Date:	12/14/2022
Molecular Weight:	40	Expiration Date:	12/31/2025
CAS #:	1310-73-2		
Appearance:		Storage:	Room Temperature

Pellets

Spec Set: 0583ACS

Internal ID #: 710

Signature

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

Additional Information

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

Product meets analytical specifications of the grades listed.

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Certificate of Analysis

Iodine (Iodine-Iodide), 0.0250 Normal (N/40), 1 mL = 0.4008 mg S^{2-}

Lot Number: 2405D89 **Product Number:** 3975

Manufacture Date: MAY 10, 2024
Expiration Date: MAY 2025

Name	CAS#	Grade
Water	7732-18-5	ACS/ASTM/USP/EP
Potassium Iodide	7681-11-0	ACS
Iodine	7553-56-2	ACS

Test	Specification	Result	NIST SRM#
Appearance	Dark brown liquid	Passed	
Assay (vs. Sodium Thiosulfate/Starch)	0.02498-0.02502 N at 20°C	0.02502 N at 20°C	136

Specification	Reference
Standard Iodine Solution, 0.0250 N	APHA (4500-S2- F)
Iodine Solution (approximately 0.025 N)	EPA (SW-846) (9031)
Standard Iodine Solution, 0.0250 N	EPA (376.1)
Iodine Solution (approximately 0.025 N)	EPA (SW-846) (9034)

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)
3975-1	4 L amber glass	12 months
3975-16	500 mL amber glass	12 months
3975-32	1 L amber glass	12 months

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

Jose Pena (05/10/2024)
Operations Manager

W3122
W3123
W3124
W3125
W3126

Rec. 7/25/24

12

Exp. 9/30/27

ENVIRONMENTAL EXPRESS
Charleston, SC USA
www.envexp.com
(800) 343-5319

October 20, 2022

CERTIFICATE OF ANALYSIS

Environmental Express certifies that the following COD Reagent Vials have been rigorously checked against NIST Traceable standards and also compared for conformance to another major brand name product. Environmental Express COD Vial performance is evaluated using bench top spectrophotometers. Acceptance guidelines are strict and ensure dependable, quality results.

Environmental Express further certifies that the COD products listed below are recognized by the United States Environmental Protection Agency (USEPA) as equivalent to an approved Water Pollutant Testing Procedure for COD (Federal Register, Vol. 45, No. 78, Monday, April 20th, 1980, page 26811) and as such can be used for National Pollution Discharge Elimination System (NPDES) reporting.

Cat. No.	Lot No.	Product Description
B1010	13798	COD Reagent Vials, 0 - 150 ppm

Certificate Of Analysis

Item Number	ED150	Lot Number	2ND0156
Item	Edetate Disodium, Dihydrate, USP	CAS Number	6381-92-6
Molecular Formula	$C_{10}H_{14}N_2Na_2O_8 \cdot 2H_2O$	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[$n[(HOCOCH_2)_3N]$]		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.

LabChem
Part of TCP Analytical Group
Jackson's Pointe Commerce Park- Building 1000
1010 Jackson's Pointe Court, Zelienople, PA 16063

Certificate of Analysis

Cyanide Standard 1000 ppm (1ml = 1mg CN)

Product Code: **LC13545**

Manufacture Date: August 01, 2024

Lot Number: **44080060**

Expiration Date: January 30, 2025

Test	Specification	Result
Appearance (clarity)	clear solution	clear solution
Appearance (color)	colorless	colorless
Concentration (CN)	0.990 - 1.010mg/mL	1.008mg/mL
Concentration (CN)	990 - 1,010ppm	1,008ppm
Traceable to NIST SRM	Report	999b

Intended Use *- Product is intended for use in manufacturing procedures and laboratory procedures and protocols.*

Storage Information *- Unless noted on the product label, store the product under normal lab conditions in its tightly closed, original container. Do not pipet directly from the container or return unused portions to the container.*

Instructions for Handling and Use - *Please refer to the associated product label and Safety Data Sheet (SDS) for information regarding safety and handling of this product.*

Preparation - *All products are manufactured and tested according to established, documented procedures and methodology. Production documentation records manufacturing data, raw material traceability and testing history on a per lot basis. Balances, thermometers, and glassware are calibrated before first use and on a regular schedule with references traceable to NIST standards.*

The suffix of the product code may differ from what is on your product label. The suffix will designate the size and be associated with a numeric digit(s). Visit LabChem.com for more information

Suffix	1	2	3/3S/36/36S	4/4C	5	6	7	8	9	20	44	200	246	486
Size	500mL or g	1L or 1kg	2.5L/2.5L Coated/6x2.5L/6x2.5L Coated	4L	20L	10L	125mL	25g	100g	20x20mL	4x4L	200L	24x6mL	48x6mL

Michael Monteleone

Michael Monteleone
Chemistry Supervisor - Quality Control

ISO9001:2015 Registration #0306-01

ThermoFisher SCIENTIFIC

Certificate of Analysis

W3139 Received on 9/9/24 by IZ

Product No.:	A12044
Product:	Chloramine-T trihydrate, 98%
Lot No.:	10239484

Appearance:	White powder
Melting Point:	166°C(dec)
Assay (Iodometric titration):	100.5%
Identification (FTIR):	Conforms

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Pocomoke City, MD 21851
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customerservice@riccachemical.com

Certificate of Analysis

Sodium Hypochlorite Solution, 5% available Chlorine

Lot Number: 2407F34 **Product Number:** 7495.5

Manufacture Date: JUL 12, 2024
Expiration Date: JAN 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	5.05 % (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 (07/12/2024)
Operations Manager

Loveland, CO 80539
(970) 669-3050

An ISO 9001 Certified Company

Certificate of Analysis

This is a Component of 1486266 / LOT A4169

PRODUCT: BOD Nutrient Buffer Pillows

PRODUCT NUMBER: 1486227

LOT NUMBER: A4169

MANUFACTURE DATE: 06/24/2024

DATE OF ANALYSIS: 07/03/2024

TEST	SPECIFICATIONS	RESULTS
Calcium Concentration of a diluted pillow	0.93 to 1.29 ppm	0.960 ppm
Magnesium Concentration of a diluted pillow	0.35 to 0.48 ppm	0.390 ppm
pH in a 6 L of DI water	7.1 to 7.6	7.37
Ammonia Concentration of a diluted pillow	0.57 to 0.79 ppm	0.593 ppm
Iron Concentration of a diluted pillow	0.27 to 0.36 ppm	0.311 ppm
Sterility	To Pass	Passed
Phosphorus Concentration of a diluted pillow	7.6 to 10.3 ppm	8.32 ppm
Five Day Change in Dissolved Oxygen Concentration	-0.2 to 0.2 ppm	0.03 ppm

The expiration date is Jun 2029

Certified by: Scott Als

Analytical Services Chemist

RICCA CHEMICAL COMPANY®
1490 Lammers Pike
Batesville, IN 47006
http://www.riccachemical.com
1-888-GO-RICCA
customerservice@riccachemical.com

Certificate of Analysis

Starch Indicator, 0.5% (w/v), Mercury Free, for Iodometric Titrations

Lot Number: 4408P62 **Product Number:** 8000

Manufacture Date: AUG 28, 2024
Expiration Date: AUG 2026

This product is Mercury-free.

Name	CAS#	Grade
Water	7732-18-5	ACS/ASTM/USP/EP
Starch, soluble	9005-84-9	ACS
Salicylic Acid	69-72-7	ACS

Test	Specification	Result
Appearance	White translucent liquid	Passed
Suitability for Use	Colorless (Iodine absent) - Blue (Iodine present)	Passed

Specification	Reference
Starch Solution	APHA (4500-S2- F)
Starch Indicator Solution	APHA (4500-Cl B)
Starch Indicator	APHA (4500-SO32- B)
Starch indicator solution	APHA (2350 B)
Starch indicator solution	APHA (2350 E)
Starch Solution	APHA (510 B)
Starch Solution	APHA (5530 C)
Starch Indicator	APHA (4500-Cl C)
Starch Indicator	EPA (345.1)

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)
8000-1	4 L natural poly	24 months
8000-16	500 mL natural poly	24 months
8000-32	1 L natural poly	24 months

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

Paul Brandon (08/28/2024)
Production Manager

RICCA CHEMICAL COMPANY®
W3154 Rec. on 12/2/24 by IZ

448 West Fork Dr
Arlington, TX 76012
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Certificate of Analysis

Cyanide Standard, 1000 ppm CN^-

Lot Number: 1411J58 **Product Number:** 2543

Manufacture Date: NOV 22, 2024
Expiration Date: MAY 2025

This standard is prepared using accurate volumetric techniques from material that has been assayed against Silver Nitrate solution certifiec traceable to NIST Standard Reference Material 999. The certified value reported is the prepared value based upon the method of preparation of the material. The uncertainty in the prepared value is the combined uncertainty based on the stability of the assayed Potassium Cyanide, and the uncertainty in the mass and volume measurements.
Use 0.16% (w/v) (0.04 N) Sodium Hydroxide or 0.225 % (w/v) (0.04 N) Potassium Hydroxide to make dilutions of this standard. Restandardize weekly if extreme accuracy is required.

Name	CAS#	Grade
Water	7732-18-5	ACS/ASTM/USP/EP
Potassium Cyanide	151-50-8	ACS
Sodium Hydroxide	1310-73-2	Reagent

Test	Specification	Result
Appearance	Colorless liquid	Passed
Cyanide (CN^-)	995-1005 ppm	1000 ppm

Specification	Reference
Stock Standard Cyanide Solution	APHA (4500-CN- F)
Stock Cyanide Solution	APHA (4500-CN- E)
Stock Cyanide Solution	APHA (4500-CN- K)
Stock Cyanide Solution	APHA (4500-CN- H)
Cyanide Reference Solution (1000 mg/L)	EPA (SW-846) (7.3.3.2)
Cyanide Calibration Stock Solution (1,000 mg/L CN-)	EPA (SW-846) (9213)
Stock Cyanide Solution	EPA (335.3)
Stock Cyanide Solution	EPA (335.2)
Cyanide Solution Stock	ASTM (D 4282)
Simple Cyanide Solution, Stock (1.0 g/L CN)	ASTM (D 4374)

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)
2543-16	500 mL amber poly	6 months
2543-32	1 L amber poly	6 months
2543-4	120 mL amber poly	6 months

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

Luis Briceno (11/22/2024)
Operations Supervisor

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

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

Additional Information

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	Manufacture Date:	05/29/2023
Molecular Weight:	246.48	Reassay Date:	05/29/2027
CAS #:	10034-99-8		
Appearance:		Storage:	Room Temperature

White powder

Spec Set: 0662ACS

Internal ID #: 793

Signature

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

Additional Information

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

Product meets analytical specifications of the grades listed.

Certificate of Analysis

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

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

Additional Information

Analysis may have been rounded to significant digits in specification limits

Product meets analytical specifications of the grades listed.

SHIPPING DOCUMENTS

CHEMTECH
CHAIN OF CUSTODY RECORD

284 Sheffield Street, Mountainside, NJ 07092
(908) 789-8900 • Fax (908) 789-8922
www.chemtech.net

CHEMTECH PROJECT NO. Q1120
QUOTE NO.
COC Number 2031337

CLIENT INFORMATION

REPORT TO BE SENT TO:
COMPANY: Tetra Tech Inc.
ADDRESS: 4133 Corporation Lane Suite 300
CITY Virginia Beach STATE: VA ZIP: 23462
ATTENTION: Ernie Wu
PHONE: 757-466-4901 FAX:

CLIENT PROJECT INFORMATION

PROJECT NAME: NWIRP Bethpage
PROJECT NO.: 112G0805-WE13 LOCATION: Bethpage, NY
PROJECT MANAGER: Ernie Wu
e-mail: ernie.wu@tetratech.com
PHONE: 757-466-4901 FAX:

CLIENT BILLING INFORMATION

BILL TO: See Contract PO#:
ADDRESS:
CITY STATE: ZIP:
ATTENTION: PHONE:

DATA TURNAROUND INFORMATION

FAX (RUSH) DAYS*
HARDCOPY (DATA PACKAGE): Standard TAT DAYS*
EDD: Standard TAT DAYS*
*TO BE APPROVED BY CHEMTECH
STANDARD HARDCOPY TURNAROUND TIME IS 10 BUSINESS DAYS

DATA DELIVERABLE INFORMATION

- ☐ Level 1 (Results Only)
- ☐ Level 2 (Results + QC)
- ☐ Level 3 (Results + QC + Raw Data)
- ☐ Level 4 (QC + Full Raw Data)
- ☐ NJ Reduced ☐ US EPA CLP
- ☐ NYS ASP A ☐ NYS ASP B
- ☒ Other See Contract
- ☐ EDD FORMAT

ANALYSIS

1 Sulfate, 2 BOD, 3 COD, 4 Chloride, 5 Cyanide, 6 Sulfide, 7 TOC, 8 Ammonia, 9 Anions (Nitrate/Nitrite)

CHEMTECH SAMPLE ID	PROJECT SAMPLE IDENTIFICATION	SAMPLE MATRIX	SAMPLE TYPE COMP	SAMPLE TYPE GRAB	SAMPLE COLLECTION DATE	SAMPLE COLLECTION TIME	# OF BOTTLES	PRESERVATIVES 1	2	3	4	5	6	7	8	9	COMMENTS
1.	RW10A-20250116	GW		X	1-16-25	1040	10	E	E	C/E	E	E	E/F	C/E	C/E	B/E	
2.								1	1	1	1	1	1	2	1	1	
3.																	
4.																	
5.																	
6.																	
7.																	
8.																	
9.																	
10.																	

← Specify Preservatives
A-HCl D-NaOH
B-HN03 E-ICE
C-H2SO4 F-OTHER

SAMPLE CUSTODY MUST BE DOCUMENTED BELOW EACH TIME SAMPLES CHANGE POSSESSION INCLUDING COURIER DELIVERY

RELINQUISHED BY SAMPLER:	DATE/TIME:	RECEIVED BY:
1.	1-16-25/1530	1. 1530 1-16-25
2.		2.
3.	1810 1-16-25	3.

Conditions of bottles or coolers at receipt: ☐ COMPLIANT ☐ NON COMPLIANT ☐ COOLER TEMP 2.7 °C
Comments:

Page 2 of 2

CLIENT: ☐ Hand Delivered ☐ Other
CHEMTECH: ☒ Picked Up ☐ Field Sampling

Shipment Complete ☐ YES ☐ NO

WHITE - CHEMTECH COPY FOR RETURN TO CLIENT YELLOW - CHEMTECH COPY PINK - SAMPLER COPY

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