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

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 : Q2536

ATTENTION : Ernie Wu

Laboratory Certification ID # 20012

Table Of Contents for Q2536

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Cover Page

Order ID : Q2536

Project ID : NWIRP Bethpage 112G08005-WE13

Client : Tetra Tech NUS, Inc.

Lab Sample Number	Client Sample Number
Q2536-01	RW5-SP100-20250708
Q2536-02	RW7-SP100-20250708
Q2536-03	RW8-SP100-20250708

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 : _____

Date: 7/18/2025

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
Order ID # Q2536
Test Name: Alkalinity,Ammonia,Anions Group1,BOD5,COD,Cyanide,Phosphorus-Total,Sulfide,TOC

A. Number of Samples and Date of Receipt:
3 Water samples were received on 07/09/2025.

B. Parameters:
According to the Chain of Custody document, the following analyses were requested: Alkalinity, Ammonia, Anions Group1, BOD5, COD, Cyanide, Phosphorus-Total, Sulfide, TOC. This data package contains results for Alkalinity, Ammonia, Anions Group1, BOD5, COD, Cyanide, Phosphorus-Total, Sulfide, and TOC.

C. Analytical Techniques:
The analysis of Anions Group1 was based on method 300.0, The analysis of Phosphorus-Total was based on method 365.3, The analysis of Cyanide was based on method 9012B, The analysis of Sulfide was based on method 9034, The analysis of TOC was based on method 9060A, The analysis of Alkalinity was based on method SM2320 B, 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 RW5-SP100-20250708 was diluted due to high concentrations for Chloride &
Sample RW8-SP100-20250708 was diluted due to high concentrations for Chloride.
The Blank Spike met requirements for all compounds.
The Duplicate analysis met criteria for all compounds.
The Matrix Spike analysis met criteria for all compounds.
The Matrix Spike Duplicate analysis met criteria for all compounds.
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_____

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

ORDER ID: Q2536 MATRIX: Water

METHOD: 300.0,365.3,9012B,9034,9060A,SM2320 B,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 compounds.			
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 Date

284 Sheffield Street, Mountainside, New Jersey 07092, Phone : 908 789 8900,
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APPENDIX A

QA REVIEW GENERAL DOCUMENTATION

Project #: Q2536

	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:** 07/18/2025

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

LAB CHRONICLE

OrderID:	Q2536	**OrderDate:**	7/9/2025 10:41:00 AM
Client:	Tetra Tech NUS, Inc.	**Project:**	NWIRP Bethpage 112G08005-WE13
Contact:	Ernie Wu	**Location:**	O21

LabID	ClientID	Matrix	Test	Method	Sample Date	Prep Date	Anal Date	Received
Q2536-01	**RW5-SP100-20250708**	**Water**			**07/08/25 10:45**			**07/09/25**
			Alkalinity	SM2320 B			07/10/25 13:20	
			Ammonia	SM4500-NH3		07/14/25	07/14/25 12:03	
			Anions Group1	300.0			07/09/25 13:09	
			BOD5	SM5210 B			07/09/25 16:40	
			COD	SM5220 D			07/15/25 12:13	
			Cyanide	9012B		07/10/25	07/11/25 09:54	
			Phosphorus-Total	365.3		07/09/25	07/09/25 14:24	
			Sulfide	9034		07/10/25	07/10/25 13:26	
			TOC	9060A			07/10/25 12:12	
Q2536-01DL	**RW5-SP100-20250708DL**	**WATER**			**07/08/25 10:45**			**07/09/25**
			Anions Group1	300.0			07/09/25 14:57	
Q2536-02	**RW7-SP100-20250708**	**Water**			**07/08/25 12:15**			**07/09/25**
			Alkalinity	SM2320 B			07/10/25 13:30	
			Ammonia	SM4500-NH3		07/14/25	07/14/25 12:03	

LAB CHRONICLE

			Anions Group1	300.0			07/09/25 13:31
			BOD5	SM5210 B			07/09/25 16:40
			COD	SM5220 D			07/15/25 12:13
			Cyanide	9012B		07/10/25	07/11/25 10:00
			Phosphorus-Total	365.3		07/09/25	07/09/25 14:25
			Sulfide	9034		07/10/25	07/10/25 13:38
			TOC	9060A			07/10/25 13:24
Q2536-03	**RW8-SP100-20250708**	**Water**			**07/08/25 13:05**		**07/09/25**
			Alkalinity	SM2320 B			07/10/25 13:35
			Ammonia	SM4500-NH3		07/14/25	07/14/25 12:03
			Anions Group1	300.0			07/09/25 13:52
			BOD5	SM5210 B			07/09/25 16:40
			COD	SM5220 D			07/15/25 12:14
			Cyanide	9012B		07/10/25	07/11/25 10:00
			Phosphorus-Total	365.3		07/09/25	07/09/25 14:26
			Sulfide	9034		07/10/25	07/10/25 13:41
			TOC	9060A			07/10/25 13:48
Q2536-03DL	**RW8-SP100-20250708DL**	**WATER**			**07/08/25 13:05**		**07/09/25**
			Anions Group1	300.0			07/09/25 15:19

SAMPLE DATA

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	07/08/25 10:45
Project:	NWIRP Bethpage 112G08005-WE13	Date Received:	07/09/25
Client Sample ID:	RW5-SP100-20250708	SDG No.:	Q2536
Lab Sample ID:	Q2536-01	Matrix:	Water
		% Solid:	0

Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
Alkalinity	4.40		1	1.00	1.00	2.00	mg/L		07/10/25 13:20	SM 2320 B-21
Ammonia as N	0.080	U	1	0.030	0.080	0.10	mg/L	07/14/25 08:45	07/14/25 12:03	SM 4500-NH3 B plus G-21
Chloride	10.4	OR	1	0.19	0.30	0.60	mg/L		07/09/25 13:09	300.0
Sulfate	2.40	J	1	0.46	1.50	3.00	mg/L		07/09/25 13:09	300.0
BOD5	2.00	U	1	0.20	2.00	2.00	mg/L		07/09/25 16:40	SM 5210 B-16
COD	5.00	U	1	1.50	5.00	10.0	mg/L		07/15/25 12:13	SM 5220 D-11
Cyanide	0.0025	U	1	0.00096	0.0025	0.0050	mg/L	07/10/25 15:00	07/11/25 09:54	9012B
Phosphorus, Total	0.013	J	1	0.0050	0.025	0.050	mg/L	07/09/25 11:30	07/09/25 14:24	365.3
Sulfide	0.50	U	1	0.43	0.50	1.00	mg/L	07/10/25 08:40	07/10/25 13:26	9034
TOC	0.54	J	1	0.40	0.50	1.00	mg/L		07/10/25 12:12	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:	07/08/25 10:45
Project:	NWIRP Bethpage 112G08005-WE13	Date Received:	07/09/25
Client Sample ID:	RW5-SP100-20250708DL	SDG No.:	Q2536
Lab Sample ID:	Q2536-01DL	Matrix:	WATER
		% Solid:	0

Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
Chloride	10.0	D	5	0.95	1.50	3.00	mg/L		07/09/25 14:57	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

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Fax : 908 789 8922

Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	07/08/25 12:15
Project:	NWIRP Bethpage 112G08005-WE13	Date Received:	07/09/25
Client Sample ID:	RW7-SP100-20250708	SDG No.:	Q2536
Lab Sample ID:	Q2536-02	Matrix:	Water
		% Solid:	0

Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
Alkalinity	1.80	J	1	1.00	1.00	2.00	mg/L		07/10/25 13:30	SM 2320 B-21
Ammonia as N	0.080	U	1	0.030	0.080	0.10	mg/L	07/14/25 08:45	07/14/25 12:03	SM 4500-NH3 B plus G-21
Chloride	7.40		1	0.19	0.30	0.60	mg/L		07/09/25 13:31	300.0
Sulfate	1.40	J	1	0.46	1.50	3.00	mg/L		07/09/25 13:31	300.0
BOD5	2.00	U	1	0.20	2.00	2.00	mg/L		07/09/25 16:40	SM 5210 B-16
COD	5.00	U	1	1.50	5.00	10.0	mg/L		07/15/25 12:13	SM 5220 D-11
Cyanide	0.0025	U	1	0.00096	0.0025	0.0050	mg/L	07/10/25 15:00	07/11/25 10:00	9012B
Phosphorus, Total	0.010	J	1	0.0050	0.025	0.050	mg/L	07/09/25 11:30	07/09/25 14:25	365.3
Sulfide	0.50	U	1	0.43	0.50	1.00	mg/L	07/10/25 08:40	07/10/25 13:38	9034
TOC	0.45	J	1	0.40	0.50	1.00	mg/L		07/10/25 13:24	9060A

Comments:

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
D = Dilution
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H = Sample Analysis Out Of Hold Time

J = Estimated Value
B = Analyte Found in Associated Method Blank
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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:	07/08/25 13:05
Project:	NWIRP Bethpage 112G08005-WE13	Date Received:	07/09/25
Client Sample ID:	RW8-SP100-20250708	SDG No.:	Q2536
Lab Sample ID:	Q2536-03	Matrix:	Water
		% Solid:	0

Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
Alkalinity	1.00	U	1	1.00	1.00	2.00	mg/L		07/10/25 13:35	SM 2320 B-21
Ammonia as N	0.080	U	1	0.030	0.080	0.10	mg/L	07/14/25 08:45	07/14/25 12:03	SM 4500-NH3 B plus G-21
Chloride	11.5	OR	1	0.19	0.30	0.60	mg/L		07/09/25 13:52	300.0
Sulfate	8.70		1	0.46	1.50	3.00	mg/L		07/09/25 13:52	300.0
BOD5	2.00	U	1	0.20	2.00	2.00	mg/L		07/09/25 16:40	SM 5210 B-16
COD	5.00	U	1	1.50	5.00	10.0	mg/L		07/15/25 12:14	SM 5220 D-11
Cyanide	0.0025	U	1	0.00096	0.0025	0.0050	mg/L	07/10/25 15:00	07/11/25 10:00	9012B
Phosphorus, Total	0.010	J	1	0.0050	0.025	0.050	mg/L	07/09/25 11:30	07/09/25 14:26	365.3
Sulfide	0.50	U	1	0.43	0.50	1.00	mg/L	07/10/25 08:40	07/10/25 13:41	9034
TOC	0.45	J	1	0.40	0.50	1.00	mg/L		07/10/25 13:48	9060A

Comments:

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
D = Dilution
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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:	07/08/25 13:05
Project:	NWIRP Bethpage 112G08005-WE13	Date Received:	07/09/25
Client Sample ID:	RW8-SP100-20250708DL	SDG No.:	Q2536
Lab Sample ID:	Q2536-03DL	Matrix:	WATER
		% Solid:	0

Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
Chloride	11.0	D	5	0.95	1.50	3.00	mg/L		07/09/25 15:19	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

284 Sheffield Street, Mountainside, New Jersey 07092, Phone : 908 789 8900,
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Initial and Continuing Calibration Verification

Client: Tetra Tech NUS, Inc. **SDG No.:** Q2536

Project: NWIRP Bethpage 112G08005-WE13 **RunNo.:** LB136410

Analyte	Units	Result	True Value	% Recovery	Acceptance Window (%R)	Analysis Date
Sample ID: **ICV1**						
Bromide	mg/L	9.7	10	97	90-110	06/23/2025
Chloride	mg/L	2.9	3	97	90-110	06/23/2025
Fluoride	mg/L	2	2	100	90-110	06/23/2025
Nitrite	mg/L	2.9	3	97	90-110	06/23/2025
Nitrate	mg/L	2.4	2.5	96	90-110	06/23/2025
Sulfate	mg/L	14.3	15	95	90-110	06/23/2025
Orthophosphate as P	mg/L	4.9	5	98	90-110	06/23/2025
Sample ID: **CCV1**						
Bromide	mg/L	10	10	100	90-110	07/09/2025
Chloride	mg/L	3	3	100	90-110	07/09/2025
Fluoride	mg/L	2	2	100	90-110	07/09/2025
Nitrite	mg/L	3	3	100	90-110	07/09/2025
Nitrate	mg/L	2.5	2.5	100	90-110	07/09/2025
Sulfate	mg/L	14.8	15	99	90-110	07/09/2025
Orthophosphate as P	mg/L	5.1	5	102	90-110	07/09/2025
Sample ID: **CCV2**						
Bromide	mg/L	10	10	100	90-110	07/09/2025
Chloride	mg/L	3	3	100	90-110	07/09/2025
Fluoride	mg/L	2	2	100	90-110	07/09/2025
Nitrite	mg/L	3	3	100	90-110	07/09/2025
Nitrate	mg/L	2.5	2.5	100	90-110	07/09/2025
Sulfate	mg/L	14.9	15	99	90-110	07/09/2025
Orthophosphate as P	mg/L	5.1	5	102	90-110	07/09/2025

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Initial and Continuing Calibration Verification

Client: Tetra Tech NUS, Inc. **SDG No.:** Q2536

Project: NWIRP Bethpage 112G08005-WE13 **RunNo.:** LB136411

Analyte	Units	Result	True Value	% Recovery	Acceptance Window (%R)	Analysis Date
Sample ID: ICV						
Phosphorus, Total	mg/L	0.531	0.50	106	90-110	07/09/2025
Sample ID: CCV1						
Phosphorus, Total	mg/L	0.490	0.50	98	90-110	07/09/2025
Sample ID: CCV2						
Phosphorus, Total	mg/L	0.507	0.50	101	90-110	07/09/2025
Sample ID: CCV3						
Phosphorus, Total	mg/L	0.499	0.50	100	90-110	07/09/2025

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Initial and Continuing Calibration Verification

Client:	Tetra Tech NUS, Inc.	**SDG No.:**	Q2536
Project:	NWIRP Bethpage 112G08005-WE13	**RunNo.:**	LB136416

Analyte		Units	Result	True Value	% Recovery	Acceptance Window (%R)	Analysis Date
Sample ID:	**ICV1**						
TOC		mg/L	10.2	10	102	90-110	07/03/2025
Sample ID:	**CCV1**						
TOC		mg/L	9.5	10	95	90-110	07/10/2025
Sample ID:	**CCV2**						
TOC		mg/L	10.2	10	102	90-110	07/10/2025
Sample ID:	**CCV3**						
TOC		mg/L	10.2	10	102	90-110	07/10/2025

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Initial and Continuing Calibration Verification

Client:	Tetra Tech NUS, Inc.	**SDG No.:**	Q2536
Project:	NWIRP Bethpage 112G08005-WE13	**RunNo.:**	LB136436

Analyte		Units	Result	True Value	% Recovery	Acceptance Window (%R)	Analysis Date
Sample ID:	**ICV1**						
Cyanide		mg/L	0.096	0.099	97	90-110	07/11/2025
Sample ID:	**CCV1**						
Cyanide		mg/L	0.24	0.25	96	90-110	07/11/2025
Sample ID:	**CCV2**						
Cyanide		mg/L	0.24	0.25	96	90-110	07/11/2025
Sample ID:	**CCV3**						
Cyanide		mg/L	0.25	0.25	100	90-110	07/11/2025

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Initial and Continuing Calibration Verification

Client: Tetra Tech NUS, Inc. **SDG No.:** Q2536

Project: NWIRP Bethpage 112G08005-WE13 **RunNo.:** LB136459

Analyte	Units	Result	True Value	% Recovery	Acceptance Window (%R)	Analysis Date
Sample ID: **ICV1**						
Ammonia as N	mg/L	0.99	1	99	90-110	07/14/2025
Sample ID: **CCV1**						
Ammonia as N	mg/L	1	1	100	90-110	07/14/2025
Sample ID: **CCV2**						
Ammonia as N	mg/L	0.98	1	98	90-110	07/14/2025
Sample ID: **CCV3**						
Ammonia as N	mg/L	1	1	100	90-110	07/14/2025
Sample ID: **CCV4**						
Ammonia as N	mg/L	1	1	100	90-110	07/14/2025

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Initial and Continuing Calibration Verification

Client:	Tetra Tech NUS, Inc.	**SDG No.:**	Q2536
Project:	NWIRP Bethpage 112G08005-WE13	**RunNo.:**	LB136477

Analyte		Units	Result	True Value	% Recovery	Acceptance Window (%R)	Analysis Date
Sample ID:	**ICV**						
COD		mg/L	50.962	50	102	95-105	05/28/2025
Sample ID:	**CCV1**						
COD		mg/L	47.915	50	96	95-105	07/15/2025
Sample ID:	**CCV2**						
COD		mg/L	48.931	50	98	95-105	07/15/2025
Sample ID:	**CCV3**						
COD		mg/L	49.946	50	100	95-105	07/15/2025

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Initial and Continuing Calibration Blank Summary

Client: Tetra Tech NUS, Inc. **SDG No.:** Q2536

Project: NWIRP Bethpage 112G08005-WE13 **RunNo.:** LB136410

Analyte	Units	Result	Acceptance Limits	Conc Qual	MDL	RDL	Analysis Date
Sample ID: ICB1							
Bromide	mg/L	< 1.0000	1.0000	U	0.37	2	06/23/2025
Chloride	mg/L	< 0.3000	0.3000	U	0.19	0.6	06/23/2025
Fluoride	mg/L	< 0.2000	0.2000	U	0.11	0.4	06/23/2025
Nitrite	mg/L	< 0.3000	0.3000	U	0.074	0.6	06/23/2025
Nitrate	mg/L	< 0.2500	0.2500	U	0.095	0.5	06/23/2025
Sulfate	mg/L	< 1.5000	1.5000	U	0.46	3	06/23/2025
Orthophosphate as P	mg/L	< 0.5000	0.5000	U	0.34	1	06/23/2025
Sample ID: CCB1							
Bromide	mg/L	< 1.0000	1.0000	U	0.37	2	07/09/2025
Chloride	mg/L	< 0.3000	0.3000	U	0.19	0.6	07/09/2025
Fluoride	mg/L	< 0.2000	0.2000	U	0.11	0.4	07/09/2025
Nitrite	mg/L	< 0.3000	0.3000	U	0.074	0.6	07/09/2025
Nitrate	mg/L	< 0.2500	0.2500	U	0.095	0.5	07/09/2025
Sulfate	mg/L	< 1.5000	1.5000	U	0.46	3	07/09/2025
Orthophosphate as P	mg/L	< 0.5000	0.5000	U	0.34	1	07/09/2025
Sample ID: CCB2							
Bromide	mg/L	< 1.0000	1.0000	U	0.37	2	07/09/2025
Chloride	mg/L	< 0.3000	0.3000	U	0.19	0.6	07/09/2025
Fluoride	mg/L	< 0.2000	0.2000	U	0.11	0.4	07/09/2025
Nitrite	mg/L	< 0.3000	0.3000	U	0.074	0.6	07/09/2025
Nitrate	mg/L	< 0.2500	0.2500	U	0.095	0.5	07/09/2025
Sulfate	mg/L	< 1.5000	1.5000	U	0.46	3	07/09/2025
Orthophosphate as P	mg/L	< 0.5000	0.5000	U	0.34	1	07/09/2025

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Initial and Continuing Calibration Blank Summary

Client: Tetra Tech NUS, Inc. **SDG No.:** Q2536

Project: NWIRP Bethpage 112G08005-WE13 **RunNo.:** LB136411

Analyte	Units	Result	Acceptance Limits	Conc Qual	MDL	RDL	Analysis Date
Sample ID: ICB							
Phosphorus, Total	mg/L	0.007	0.0250	J	0.0045	0.05	07/09/2025
Sample ID: CCB1							
Phosphorus, Total	mg/L	0.008	0.0250	J	0.0045	0.05	07/09/2025
Sample ID: CCB2							
Phosphorus, Total	mg/L	0.007	0.0250	J	0.0045	0.05	07/09/2025
Sample ID: CCB3							
Phosphorus, Total	mg/L	0.008	0.0250	J	0.0045	0.05	07/09/2025

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Initial and Continuing Calibration Blank Summary

Client:	Tetra Tech NUS, Inc.	**SDG No.:**	Q2536
Project:	NWIRP Bethpage 112G08005-WE13	**RunNo.:**	LB136416

Analyte		Units	Result	Acceptance Limits	Conc Qual	MDL	RDL	Analysis Date
Sample ID:	ICB1							
TOC		mg/L	< 0.5000	0.5000	U	0.40	1	07/03/2025
Sample ID:	CCB1							
TOC		mg/L	< 0.5000	0.5000	U	0.40	1	07/10/2025
Sample ID:	CCB2							
TOC		mg/L	< 0.5000	0.5000	U	0.40	1	07/10/2025
Sample ID:	CCB3							
TOC		mg/L	< 0.5000	0.5000	U	0.40	1	07/10/2025

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Initial and Continuing Calibration Blank Summary

Client:	Tetra Tech NUS, Inc.	**SDG No.:**	Q2536
Project:	NWIRP Bethpage 112G08005-WE13	**RunNo.:**	LB136436

Analyte		Units	Result	Acceptance Limits	Conc Qual	MDL	RDL	Analysis Date
Sample ID:	ICB1							
Cyanide		mg/L	< 0.0025	0.0025	U	0.00096	0.005	07/11/2025
Sample ID:	CCB1							
Cyanide		mg/L	< 0.0025	0.0025	U	0.00096	0.005	07/11/2025
Sample ID:	CCB2							
Cyanide		mg/L	< 0.0025	0.0025	U	0.00096	0.005	07/11/2025
Sample ID:	CCB3							
Cyanide		mg/L	< 0.0025	0.0025	U	0.00096	0.005	07/11/2025

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Initial and Continuing Calibration Blank Summary

Client:	Tetra Tech NUS, Inc.	**SDG No.:**	Q2536
Project:	NWIRP Bethpage 112G08005-WE13	**RunNo.:**	LB136459

Analyte	Units	Result	Acceptance Limits	Conc Qual	MDL	RDL	Analysis Date
Sample ID: ICB1							
Ammonia as N	mg/L	< 0.0500	0.0500	U	0.030	0.1	07/14/2025
Sample ID: CCB1							
Ammonia as N	mg/L	< 0.0500	0.0500	U	0.030	0.1	07/14/2025
Sample ID: CCB2							
Ammonia as N	mg/L	< 0.0500	0.0500	U	0.030	0.1	07/14/2025
Sample ID: CCB3							
Ammonia as N	mg/L	< 0.0500	0.0500	U	0.030	0.1	07/14/2025
Sample ID: CCB4							
Ammonia as N	mg/L	< 0.0500	0.0500	U	0.030	0.1	07/14/2025

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Initial and Continuing Calibration Blank Summary

Client:	Tetra Tech NUS, Inc.	**SDG No.:**	Q2536
Project:	NWIRP Bethpage 112G08005-WE13	**RunNo.:**	LB136477

Analyte		Units	Result	Acceptance Limits	Conc Qual	MDL	RDL	Analysis Date
Sample ID:	**ICB**							
COD		mg/L	< 5.0000	5.0000	U	1.50	10	05/28/2025
Sample ID:	**CCB1**							
COD		mg/L	< 5.0000	5.0000	U	1.50	10	07/15/2025
Sample ID:	**CCB2**							
COD		mg/L	< 5.0000	5.0000	U	1.50	10	07/15/2025
Sample ID:	**CCB3**							
COD		mg/L	< 5.0000	5.0000	U	1.50	10	07/15/2025

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Preparation Blank Summary

Client: Tetra Tech NUS, Inc. **SDG No.:** Q2536

Project: NWIRP Bethpage 112G08005-WE13

Analyte	Units	Result	Acceptance Limits	Conc Qual	MDL	RDL	Analysis Date
Sample ID: LB136410BLW							
Bromide	mg/L	< 1.0000	1.0000	U	0.37	2	07/09/2025
Chloride	mg/L	< 0.3000	0.3000	U	0.19	0.6	07/09/2025
Fluoride	mg/L	< 0.2000	0.2000	U	0.11	0.4	07/09/2025
Nitrite	mg/L	< 0.3000	0.3000	U	0.074	0.6	07/09/2025
Nitrate	mg/L	< 0.2500	0.2500	U	0.095	0.5	07/09/2025
Sulfate	mg/L	< 1.5000	1.5000	U	0.46	3	07/09/2025
Orthophosphate as P	mg/L	< 0.5000	0.5000	U	0.34	1	07/09/2025
Sample ID: LB136413BL							
BOD5	mg/L	< 0.2000	0.2000	U	0.20	2.0	07/09/2025
Sample ID: LB136416BLW							
TOC	mg/L	< 0.5000	0.5000	U	0.4	1	07/10/2025
Sample ID: LB136420BL							
Alkalinity	mg/L	< 1.0000	1.0000	U	1	2	07/10/2025
Sample ID: LB136477BL							
COD	mg/L	< 5.0000	5.0000	U	1.5	10.0	07/15/2025
Sample ID: PB168769BL							
Phosphorus, Total	mg/L	0.005	0.0250	J	0.005	0.05	07/09/2025
Sample ID: PB168778BL							
Sulfide	mg/L	< 0.5000	0.5000	U	0.43	1.0	07/10/2025
Sample ID: PB168782BL							
Cyanide	mg/L	< 0.0025	0.0025	U	0.00096	0.005	07/11/2025
Sample ID: PB168835BL							
Ammonia as N	mg/L	< 0.0500	0.0500	U	0.03	0.1	07/14/2025

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Matrix Spike Summary

Client: Tetra Tech NUS, Inc.
SDG No.: Q2536
Project: NWIRP Bethpage 112G08005-WE13
Sample ID: Q2470-01
Client ID: SW-1MS
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
Phosphorus, Total	mg/L	90-110	0.66		0.18		0.5	1	95		07/09/2025

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Matrix Spike Summary

Client: Tetra Tech NUS, Inc.
SDG No.: Q2536
Project: NWIRP Bethpage 112G08005-WE13
Sample ID: Q2470-01
Client ID: SW-1MSD
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
Phosphorus, Total	mg/L	90-110	0.66		0.18		0.5	1	95		07/09/2025

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Matrix Spike Summary

Client: Tetra Tech NUS, Inc.
SDG No.: Q2536
Project: NWIRP Bethpage 112G08005-WE13
Sample ID: Q2536-01
Client ID: RW5-SP100-20250708MS
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	9.90		0.54	J	10	1	94		07/10/2025
Ammonia as N	mg/L	75-125	0.99		0.030	U	1	1	99		07/14/2025
Sulfide	mg/L	75-125	24.2		0.43	U	25.0	1	97		07/10/2025
Cyanide	mg/L	75-125	0.040		0.00096	U	0.04	1	100		07/11/2025

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Matrix Spike Summary

Client: Tetra Tech NUS, Inc.
SDG No.: Q2536
Project: NWIRP Bethpage 112G08005-WE13
Sample ID: Q2536-01
Client ID: RW5-SP100-20250708MSD
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	9.90		0.54	J	10	1	94		07/10/2025
Ammonia as N	mg/L	75-125	1.00		0.030	U	1	1	100		07/14/2025
Sulfide	mg/L	75-125	24.3		0.43	U	25.0	1	97		07/10/2025
Cyanide	mg/L	75-125	0.039		0.00096	U	0.04	1	98		07/11/2025

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Matrix Spike Summary

Client: Tetra Tech NUS, Inc.
SDG No.: Q2536
Project: NWIRP Bethpage 112G08005-WE13
Sample ID: Q2536-03
Client ID: RW8-SP100-20250708MS
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		0.37	U	10	1	102		07/09/2025
Chloride	mg/L	80-120	14.3	OR	11.5	OR	3	1	93		07/09/2025
Fluoride	mg/L	80-120	2.00		0.11	U	2	1	100		07/09/2025
Nitrite	mg/L	80-120	3.00		0.074	U	3	1	100		07/09/2025
Nitrate	mg/L	80-120	2.60		0.15	J	2.5	1	98		07/09/2025
Sulfate	mg/L	80-120	23.2		8.70		15	1	97		07/09/2025
Orthophosphate as P	mg/L	80-120	4.60		0.34	U	5	1	92		07/09/2025

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Matrix Spike Summary

Client: Tetra Tech NUS, Inc.
SDG No.: Q2536
Project: NWIRP Bethpage 112G08005-WE13
Sample ID: Q2536-03
Client ID: RW8-SP100-20250708MSD
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	9.90		0.37	U	10	1	99		07/09/2025
Chloride	mg/L	80-120	14.2	OR	11.5	OR	3	1	90		07/09/2025
Fluoride	mg/L	80-120	2.00		0.11	U	2	1	100		07/09/2025
Nitrite	mg/L	80-120	2.90		0.074	U	3	1	97		07/09/2025
Nitrate	mg/L	80-120	2.50		0.15	J	2.5	1	94		07/09/2025
Sulfate	mg/L	80-120	22.7		8.70		15	1	93		07/09/2025
Orthophosphate as P	mg/L	80-120	4.80		0.34	U	5	1	96		07/09/2025

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Matrix Spike Summary

Client: Tetra Tech NUS, Inc.
SDG No.: Q2536
Project: NWIRP Bethpage 112G08005-WE13
Sample ID: Q2602-01
Client ID: FRAC-TANK-266380MS
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
COD	mg/L	75-125	46.9		1.50	U	50.0	1	94		07/15/2025

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Matrix Spike Summary

Client: Tetra Tech NUS, Inc.
SDG No.: Q2536
Project: NWIRP Bethpage 112G08005-WE13
Sample ID: Q2602-01
Client ID: FRAC-TANK-266380MSD
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
COD	mg/L	75-125	47.9		1.50	U	50.0	1	96		07/15/2025

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Duplicate Sample Summary

Client: Tetra Tech NUS, Inc.
SDG No.: Q2536
Project: NWIRP Bethpage 112G08005-WE13
Sample ID: Q2470-01
Client ID: SW-1DUP
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
Phosphorus, Total	mg/L	+/-20	0.18		0.19		1	1.63		07/09/2025

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Duplicate Sample Summary

Client: Tetra Tech NUS, Inc.
SDG No.: Q2536
Project: NWIRP Bethpage 112G08005-WE13
Sample ID: Q2470-01
Client ID: SW-1MSD
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
Phosphorus, Total	mg/L	+/-20	0.66		0.66		1	0.46		07/09/2025

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Duplicate Sample Summary

Client: Tetra Tech NUS, Inc.
SDG No.: Q2536
Project: NWIRP Bethpage 112G08005-WE13
Sample ID: Q2536-01
Client ID: RW5-SP100-20250708DUP
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
Alkalinity	mg/L	+/-20	4.40		4.00		1	9.52		07/10/2025
Sulfide	mg/L	+/-20	0.43	U	0.43	U	1	0		07/10/2025
Cyanide	mg/L	+/-20	0.00096	U	0.00096	U	1	0		07/11/2025
Ammonia as N	mg/L	+/-20	0.030	U	0.030	U	1	0		07/14/2025

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Duplicate Sample Summary

Client: Tetra Tech NUS, Inc.
SDG No.: Q2536
Project: NWIRP Bethpage 112G08005-WE13
Sample ID: Q2536-01
Client ID: RW5-SP100-20250708MSD
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	9.90		9.90		1	0		07/10/2025
Sulfide	mg/L	+/-20	24.2		24.3		1	0.41		07/10/2025
Cyanide	mg/L	+/-20	0.040		0.039		1	3		07/11/2025
Ammonia as N	mg/L	+/-20	0.99		1.00		1	1		07/14/2025

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Duplicate Sample Summary

Client: Tetra Tech NUS, Inc.
SDG No.: Q2536
Project: NWIRP Bethpage 112G08005-WE13
Sample ID: Q2536-03
Client ID: RW8-SP100-20250708MSD
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
Fluoride	mg/L	+/-20	2.00		2.00		1	0		07/09/2025
Chloride	mg/L	+/-20	14.3	OR	14.2	OR	1	1		07/09/2025
Sulfate	mg/L	+/-20	23.2		22.7		1	2		07/09/2025
Bromide	mg/L	+/-20	10.2		9.90		1	3		07/09/2025
Nitrite	mg/L	+/-20	3.00		2.90		1	3		07/09/2025
Nitrate	mg/L	+/-20	2.60		2.50		1	4		07/09/2025
Orthophosphate as P	mg/L	+/-20	4.60		4.80		1	4		07/09/2025

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Duplicate Sample Summary

Client: Tetra Tech NUS, Inc.
SDG No.: Q2536
Project: NWIRP Bethpage 112G08005-WE13
Sample ID: Q2548-02
Client ID: COMPDUP
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	682		709		1	3.88		07/09/2025

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Duplicate Sample Summary

Client: Tetra Tech NUS, Inc.
SDG No.: Q2536
Project: NWIRP Bethpage 112G08005-WE13
Sample ID: Q2602-01
Client ID: FRAC-TANK-266380DUP
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
COD	mg/L	+/-20	1.50	U	1.50	U	1	0		07/15/2025

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Duplicate Sample Summary

Client: Tetra Tech NUS, Inc.
SDG No.: Q2536
Project: NWIRP Bethpage 112G08005-WE13
Sample ID: Q2602-01
Client ID: FRAC-TANK-266380MSD
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
COD	mg/L	+/-20	46.9		47.9		1	2.11		07/15/2025

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Laboratory Control Sample Summary

Client:	Tetra Tech NUS, Inc.	**SDG No.:**	Q2536
Project:	NWIRP Bethpage 112G08005-WE13	**Run No.:**	LB136410

Analyte	Units	True Value	Result	Conc. Qualifier	% Recovery	Dilution Factor	Acceptance Limit %R	Analysis Date
Sample ID LB136410BSW								
Bromide	mg/L	10	10.1		101	1	90-110	07/09/2025
Chloride	mg/L	3	3.00		100	1	90-110	07/09/2025
Fluoride	mg/L	2	2.00		100	1	90-110	07/09/2025
Nitrite	mg/L	3	3.00		100	1	90-110	07/09/2025
Nitrate	mg/L	2.5	2.50		100	1	90-110	07/09/2025
Sulfate	mg/L	15	14.9		99	1	90-110	07/09/2025
Orthophosphate as P	mg/L	5	5.10		102	1	90-110	07/09/2025

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Laboratory Control Sample Summary

Client:	Tetra Tech NUS, Inc.	**SDG No.:**	Q2536
Project:	NWIRP Bethpage 112G08005-WE13	**Run No.:**	LB136413

Analyte	Units	True Value	Result	Conc. Qualifier	% Recovery	Dilution Factor	Acceptance Limit %R	Analysis Date
Sample ID LB136413BS								
BOD5	mg/L	198	212		107	1	84.6-115.4	07/09/2025

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Laboratory Control Sample Summary

Client:	Tetra Tech NUS, Inc.	**SDG No.:**	Q2536
Project:	NWIRP Bethpage 112G08005-WE13	**Run No.:**	LB136416

Analyte	Units	True Value	Result	Conc. Qualifier	% Recovery	Dilution Factor	Acceptance Limit %R	Analysis Date
Sample ID LB136416BSW								
TOC	mg/L	10	9.50		95	1	90-110	07/10/2025

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Laboratory Control Sample Summary

Client:	Tetra Tech NUS, Inc.	**SDG No.:**	Q2536
Project:	NWIRP Bethpage 112G08005-WE13	**Run No.:**	LB136420

Analyte	Units	True Value	Result	Conc. Qualifier	% Recovery	Dilution Factor	Acceptance Limit %R	Analysis Date
Sample ID LB136420BS								
Alkalinity	mg/L	50	44.2		88	1	80-120	07/10/2025

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Laboratory Control Sample Summary

Client:	Tetra Tech NUS, Inc.	**SDG No.:**	Q2536
Project:	NWIRP Bethpage 112G08005-WE13	**Run No.:**	LB136477

Analyte	Units	True Value	Result	Conc. Qualifier	% Recovery	Dilution Factor	Acceptance Limit %R	Analysis Date
Sample ID LB136477BS								
COD	mg/L	50	51.0		102	1	90-110	07/15/2025

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Laboratory Control Sample Summary

Client:	Tetra Tech NUS, Inc.	**SDG No.:**	Q2536
Project:	NWIRP Bethpage 112G08005-WE13	**Run No.:**	LB136411

Analyte	Units	True Value	Result	Conc. Qualifier	% Recovery	Dilution Factor	Acceptance Limit %R	Analysis Date
Sample ID PB168769BS								
Phosphorus, Total	**mg/L**	**0.50**	**0.50**		**100**	**1**	**90-110**	**07/09/2025**

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Laboratory Control Sample Summary

Client:	Tetra Tech NUS, Inc.	**SDG No.:**	Q2536
Project:	NWIRP Bethpage 112G08005-WE13	**Run No.:**	LB136421

Analyte	Units	True Value	Result	Conc. Qualifier	% Recovery	Dilution Factor	Acceptance Limit %R	Analysis Date
Sample ID **PB168778BS**								
Sulfide	mg/L	25	24.0		96	1	80-120	07/10/2025

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Laboratory Control Sample Summary

Client:	Tetra Tech NUS, Inc.	**SDG No.:**	Q2536
Project:	NWIRP Bethpage 112G08005-WE13	**Run No.:**	LB136436

Analyte	Units	True Value	Result	Conc. Qualifier	% Recovery	Dilution Factor	Acceptance Limit %R	Analysis Date
Sample ID PB168782BS								
Cyanide	mg/L	0.1	0.097		97	1	85-115	07/11/2025

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Laboratory Control Sample Summary

Client:	Tetra Tech NUS, Inc.	**SDG No.:**	Q2536
Project:	NWIRP Bethpage 112G08005-WE13	**Run No.:**	LB136459

Analyte	Units	True Value	Result	Conc. Qualifier	% Recovery	Dilution Factor	Acceptance Limit %R	Analysis Date
Sample ID PB168835BS								
Ammonia as N	mg/L	1	0.96		96	1	90-110	07/14/2025

RAW DATA

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	Initia	Analyst
STD1	0.000	0.000	0.000	0.000	0.000	0.000	0.000	IC1-062325	6/23/2025 15:17	10	RM/IZ
STD2	0.431	0.634	0.643	2.127	0.534	1.052	3.234	IC1-062325	6/23/2025 15:38	10	RM/IZ
STD3	0.795	1.195	1.199	3.978	0.997	1.935	6.037	IC1-062325	6/23/2025 16:00	10	RM/IZ
STD4	0.988	1.476	1.470	4.916	1.230	2.551	7.422	IC1-062325	6/23/2025 16:21	10	RM/IZ
STD5	2.004	3.017	3.004	10.045	2.505	5.076	14.865	IC1-062325	6/23/2025 16:43	10	RM/IZ
STD6	3.915	5.912	5.914	19.709	4.925	9.602	29.454	IC1-062325	6/23/2025 17:04	10	RM/IZ
STD7	5.068	7.566	7.570	25.225	6.310	12.784	37.488	IC1-062325	6/23/2025 17:25	10	RM/IZ
ICV	1.966	2.881	2.907	9.725	2.361	4.906	14.334	IC1-062325	6/23/2025 17:47	10	RM/IZ
ICB	0.000	0.000	0.000	0.000	0.000	0.000	0.000	IC1-062325	6/23/2025 18:08	10	RM/IZ
CCV	2.025	3.008	2.999	10.016	2.487	5.061	14.844	IC1-062325	7/9/2025 11:43	10	RM/IZ
CCB	0.000	0.000	0.000	0.000	0.000	0.000	0.000	IC1-062325	7/9/2025 12:05	10	RM/IZ
LB136410BLW	0.000	0.000	0.000	0.000	0.000	0.000	0.000	IC1-062325	7/9/2025 12:26	10	RM/IZ
LB136410BSW	2.039	3.018	3.007	10.075	2.502	5.140	14.902	IC1-062325	7/9/2025 12:48	10	RM/IZ
Q2536-01	0.000	10.391	0.000	0.260	3.750	0.000	2.410	IC1-062325	7/9/2025 13:09	10	RM/IZ
Q2536-02	0.000	7.356	0.000	0.240	2.952	0.000	1.411	IC1-062325	7/9/2025 13:31	10	RM/IZ
Q2536-03	0.000	11.540	0.000	0.249	0.151	0.000	8.655	IC1-062325	7/9/2025 13:52	10	RM/IZ
Q2536-03MS	2.044	14.327	3.010	10.205	2.562	4.556	23.161	IC1-062325	7/9/2025 14:14	10	RM/IZ
Q2536-03MSD	1.997	14.191	2.914	9.914	2.494	4.788	22.742	IC1-062325	7/9/2025 14:35	10	RM/IZ
Q2536-01DLX5	0.000	2.008	0.000	0.000	0.762	0.000	0.819	IC1-062325	7/9/2025 14:57	10	RM/IZ
Q2536-03DLX5	0.000	2.195	0.000	0.000	0.069	0.000	2.043	IC1-062325	7/9/2025 15:19	10	RM/IZ
CCV	2.038	3.024	3.010	10.042	2.490	5.108	14.870	IC1-062325	7/9/2025 15:40	10	RM/IZ
CCB	0.000	0.000	0.000	0.000	0.000	0.000	0.000	IC1-062325	7/9/2025 16:25	10	RM/IZ

Clear table

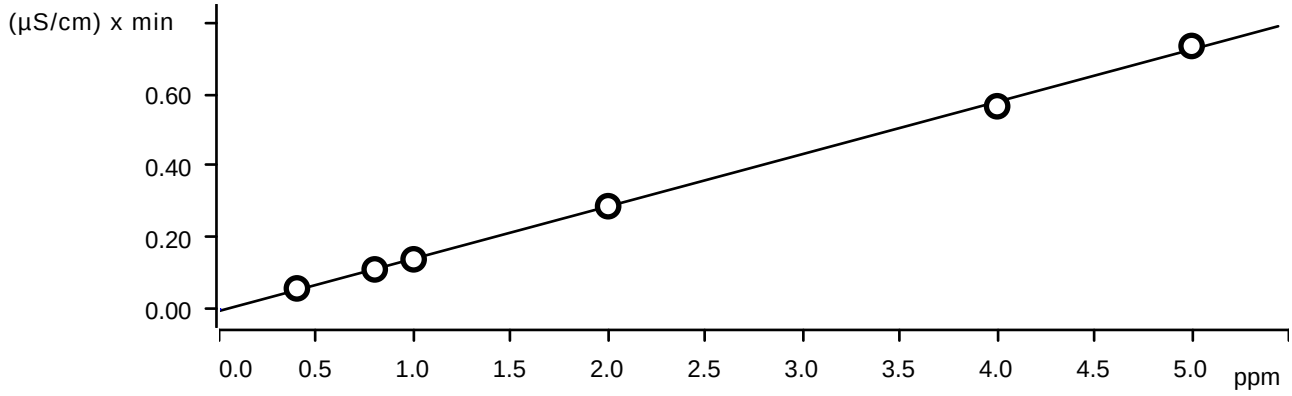
Instrument ID: IC-2 Analyst : IZ Method: 300.0 / 9056A

ident	concentration F-	concentration CL-	concentration NO2	concentration BR-	concentration NO3	concentration HPO4	concentration SO4	file name	date time	Initial wt/ Final	Analyst
STD1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	IC1-062325	6/23/2025 15:17	10	RM/IZ
STD2	0.4310	0.6340	0.6430	2.1270	0.5340	1.0520	3.2340	IC1-062325	6/23/2025 15:38	10	RM/IZ
STD3	0.7950	1.1950	1.1990	3.9780	0.9970	1.9350	6.0370	IC1-062325	6/23/2025 16:00	10	RM/IZ
STD4	0.9880	1.4760	1.4700	4.9160	1.2300	2.5510	7.4220	IC1-062325	6/23/2025 16:21	10	RM/IZ
STD5	2.0040	3.0170	3.0040	10.0450	2.5050	5.0760	14.8650	IC1-062325	6/23/2025 16:43	10	RM/IZ
STD6	3.9150	5.9120	5.9140	19.7090	4.9250	9.6020	29.4540	IC1-062325	6/23/2025 17:04	10	RM/IZ
STD7	5.0680	7.5660	7.5700	25.2250	6.3100	12.7840	37.4880	IC1-062325	6/23/2025 17:25	10	RM/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	7.7500	5.6667	7.1667	6.3500	6.8000	5.2000	7.8000
STD3	-0.6250	-0.4167	-0.0833	-0.5500	-0.3000	-3.2500	0.6167
STD4	-1.2000	-1.6000	-2.0000	-1.6800	-1.6000	2.0400	-1.0400
STD5	0.2000	0.5667	0.1333	0.4500	0.2000	1.5200	-0.9000
STD6	-2.1250	-1.4667	-1.4333	-1.4550	-1.5000	-3.9800	-1.8200
STD7	1.3600	0.8800	0.9333	0.9000	0.9600	2.2720	1.3189

Fluoride (Anions)



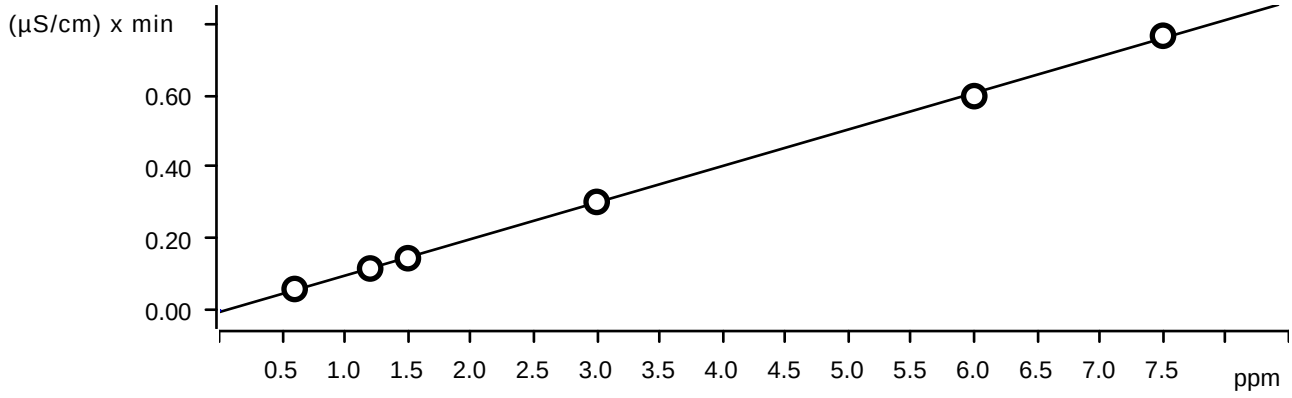
Function: . . . . . *A = - 4.55276E-3 + 0.0145788× Q*

Relative standard deviation . . . . . *2.633289 %*

Correlation coefficient *0.999633*

Sample type	Index	Conc.	Volume	Dilution	Sample amount	Area	Ident	Date	Used
Standard 1	1	0.000	10.0	1.0	1.0	n. d.	STD1	2025-06-23 15:17:36 UTC-4	used
Standard 2	1	0.400	10.0	1.0	1.0	0.058	STD2	2025-06-23 15:38:59 UTC-4	used
Standard 3	1	0.800	10.0	1.0	1.0	0.111	STD3	2025-06-23 16:00:23 UTC-4	used
Standard 4	1	1.000	10.0	1.0	1.0	0.139	STD4	2025-06-23 16:21:47 UTC-4	used
Standard 5	1	2.000	10.0	1.0	1.0	0.288	STD5	2025-06-23 16:43:01 UTC-4	used
Standard 6	1	4.000	10.0	1.0	1.0	0.566	STD6	2025-06-23 17:04:27 UTC-4	used
Standard 7	1	5.000	10.0	1.0	1.0	0.734	STD7	2025-06-23 17:25:53 UTC-4	used

Chloride (Anions)



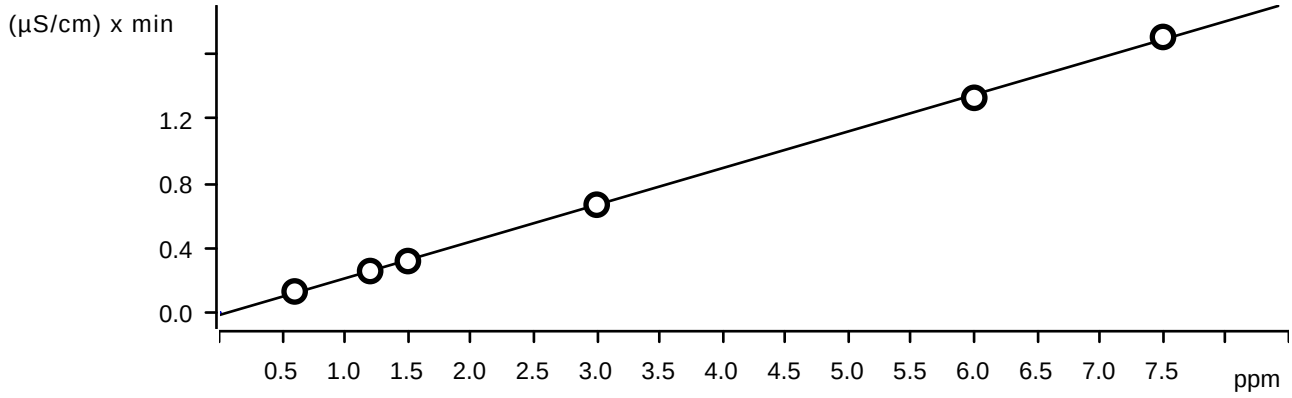
Function: . . . . . *A = - 4.66825E-3 + 0.0101843× Q*

Relative standard deviation . . . . . *1.824872 %*

Correlation coefficient *0.999824*

Sample type	Index	Conc.	Volume	Dilution	Sample amount	Area	Ident	Date	Used
Standard 1	1	0.000	10.0	1.0	1.0	n. d.	STD1	2025-06-23 15:17:36 UTC-4	used
Standard 2	1	0.600	10.0	1.0	1.0	0.060	STD2	2025-06-23 15:38:59 UTC-4	used
Standard 3	1	1.200	10.0	1.0	1.0	0.117	STD3	2025-06-23 16:00:23 UTC-4	used
Standard 4	1	1.500	10.0	1.0	1.0	0.146	STD4	2025-06-23 16:21:47 UTC-4	used
Standard 5	1	3.000	10.0	1.0	1.0	0.303	STD5	2025-06-23 16:43:01 UTC-4	used
Standard 6	1	6.000	10.0	1.0	1.0	0.597	STD6	2025-06-23 17:04:27 UTC-4	used
Standard 7	1	7.500	10.0	1.0	1.0	0.766	STD7	2025-06-23 17:25:53 UTC-4	used

Nitrite (Anions)



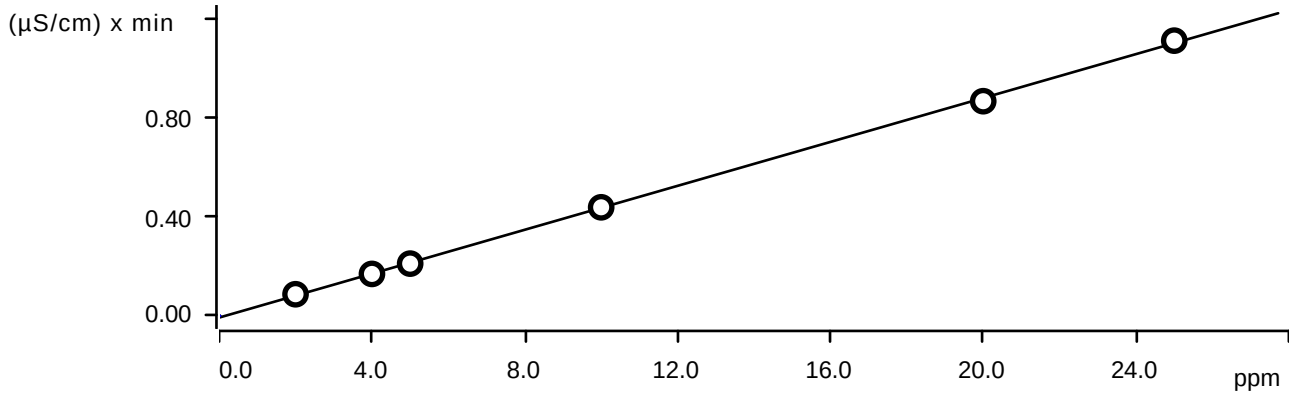
Function: . . . . . *A = - 0.0166933 + 0.0227623× Q*

Relative standard deviation . . . . . *1.905382 %*

Correlation coefficient *0.999811*

Sample type	Index	Conc.	Volume	Dilution	Sample amount	Area	Ident	Date	Used
Standard 1	1	0.000	10.0	1.0	1.0	n. d.	STD1	2025-06-23 15:17:36 UTC-4	used
Standard 2	1	0.600	10.0	1.0	1.0	0.130	STD2	2025-06-23 15:38:59 UTC-4	used
Standard 3	1	1.200	10.0	1.0	1.0	0.256	STD3	2025-06-23 16:00:23 UTC-4	used
Standard 4	1	1.500	10.0	1.0	1.0	0.318	STD4	2025-06-23 16:21:47 UTC-4	used
Standard 5	1	3.000	10.0	1.0	1.0	0.667	STD5	2025-06-23 16:43:01 UTC-4	used
Standard 6	1	6.000	10.0	1.0	1.0	1.329	STD6	2025-06-23 17:04:27 UTC-4	used
Standard 7	1	7.500	10.0	1.0	1.0	1.706	STD7	2025-06-23 17:25:53 UTC-4	used

Bromide (Anions)



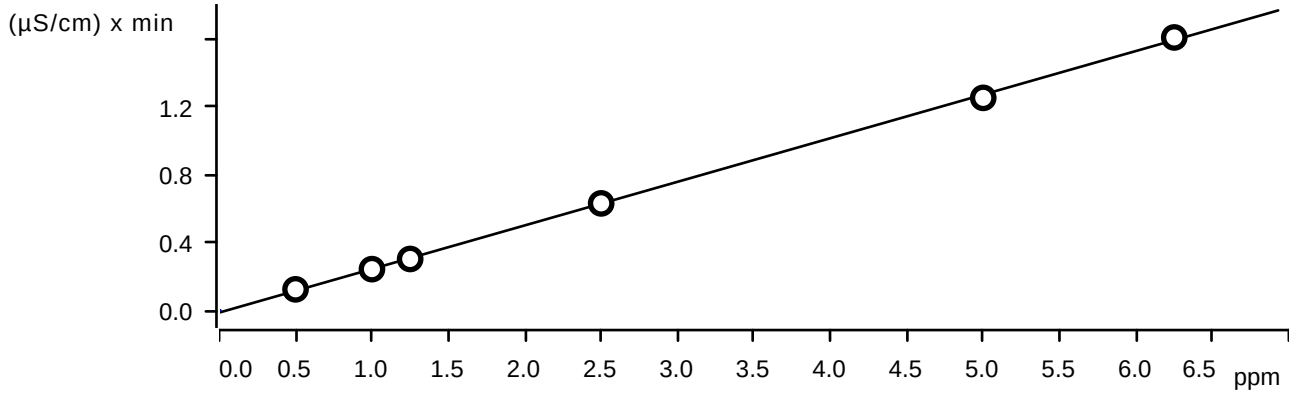
Function: . . . . . *A = - 7.05131E-3 + 4.42168E-3× Q*

Relative standard deviation . . . . . *1.851347 %*

Correlation coefficient *0.999819*

Sample type	Index	Conc.	Volume	Dilution	Sample amount	Area	Ident	Date	Used
Standard 1	1	0.000	10.0	1.0	1.0	n. d.	STD1	2025-06-23 15:17:36 UTC-4	used
Standard 2	1	2.000	10.0	1.0	1.0	0.087	STD2	2025-06-23 15:38:59 UTC-4	used
Standard 3	1	4.000	10.0	1.0	1.0	0.169	STD3	2025-06-23 16:00:23 UTC-4	used
Standard 4	1	5.000	10.0	1.0	1.0	0.210	STD4	2025-06-23 16:21:47 UTC-4	used
Standard 5	1	10.000	10.0	1.0	1.0	0.437	STD5	2025-06-23 16:43:01 UTC-4	used
Standard 6	1	20.000	10.0	1.0	1.0	0.864	STD6	2025-06-23 17:04:27 UTC-4	used
Standard 7	1	25.000	10.0	1.0	1.0	1.108	STD7	2025-06-23 17:25:53 UTC-4	used

Nitrate (Anions)



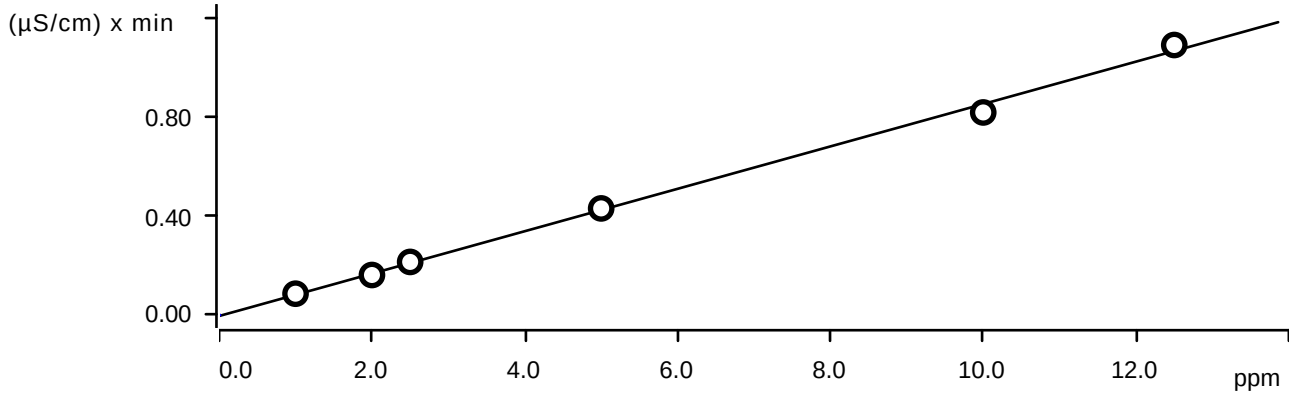
Function: . . . . . *A = - 0.0130270 + 0.0256654× Q*

Relative standard deviation . . . . . *1.929849 %*

Correlation coefficient *0.999804*

Sample type	Index	Conc.	Volume	Dilution	Sample amount	Area	Ident	Date	Used
Standard 1	1	0.000	10.0	1.0	1.0	n. d.	STD1	2025-06-23 15:17:36 UTC-4	used
Standard 2	1	0.500	10.0	1.0	1.0	0.124	STD2	2025-06-23 15:38:59 UTC-4	used
Standard 3	1	1.000	10.0	1.0	1.0	0.243	STD3	2025-06-23 16:00:23 UTC-4	used
Standard 4	1	1.250	10.0	1.0	1.0	0.303	STD4	2025-06-23 16:21:47 UTC-4	used
Standard 5	1	2.500	10.0	1.0	1.0	0.630	STD5	2025-06-23 16:43:01 UTC-4	used
Standard 6	1	5.000	10.0	1.0	1.0	1.251	STD6	2025-06-23 17:04:27 UTC-4	used
Standard 7	1	6.250	10.0	1.0	1.0	1.606	STD7	2025-06-23 17:25:53 UTC-4	used

Phosphate (Anions)



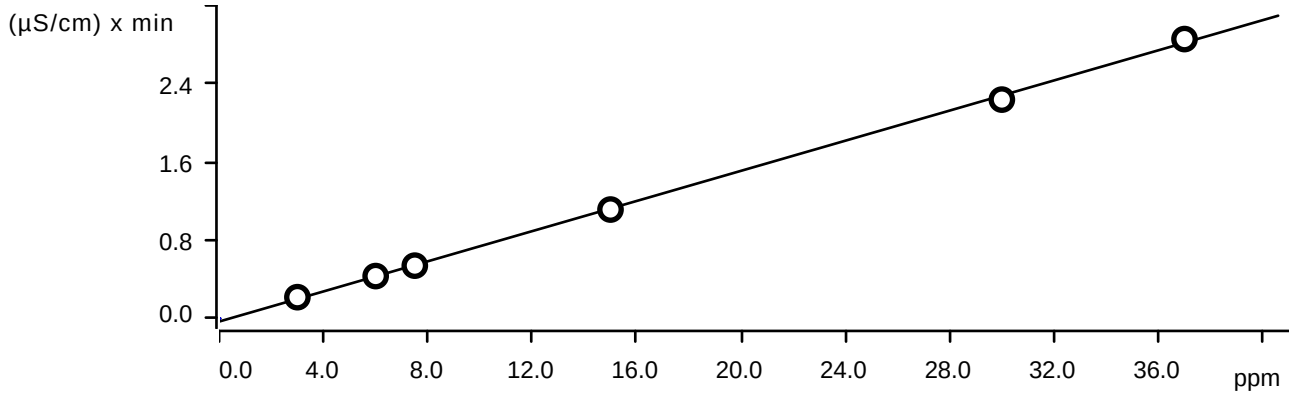
Function: . . . . . *A = - 3.61656E-3 + 8.53718E-3× Q*

Relative standard deviation . . . . . *4.618615 %*

Correlation coefficient *0.998857*

Sample type	Index	Conc.	Volume	Dilution	Sample amount	Area	Ident	Date	Used
Standard 1	1	0.000	10.0	1.0	1.0	n. d.	STD1	2025-06-23 15:17:36 UTC-4	used
Standard 2	1	1.000	10.0	1.0	1.0	0.086	STD2	2025-06-23 15:38:59 UTC-4	used
Standard 3	1	2.000	10.0	1.0	1.0	0.162	STD3	2025-06-23 16:00:23 UTC-4	used
Standard 4	1	2.500	10.0	1.0	1.0	0.214	STD4	2025-06-23 16:21:47 UTC-4	used
Standard 5	1	5.000	10.0	1.0	1.0	0.430	STD5	2025-06-23 16:43:01 UTC-4	used
Standard 6	1	10.000	10.0	1.0	1.0	0.816	STD6	2025-06-23 17:04:27 UTC-4	used
Standard 7	1	12.500	10.0	1.0	1.0	1.088	STD7	2025-06-23 17:25:53 UTC-4	used

Sulfate (Anions)



Function: . . . . . *A = - 0.0315238 + 7.70359E-3× Q*

Relative standard deviation . . . . . *2.454303 %*

Correlation coefficient *0.999685*

Sample type	Index	Conc.	Volume	Dilution	Sample amount	Area	Ident	Date	Used
Standard 1	1	0.000	10.0	1.0	1.0	n. d.	STD1	2025-06-23 15:17:36 UTC-4	used
Standard 2	1	3.000	10.0	1.0	1.0	0.218	STD2	2025-06-23 15:38:59 UTC-4	used
Standard 3	1	6.000	10.0	1.0	1.0	0.434	STD3	2025-06-23 16:00:23 UTC-4	used
Standard 4	1	7.500	10.0	1.0	1.0	0.540	STD4	2025-06-23 16:21:47 UTC-4	used
Standard 5	1	15.000	10.0	1.0	1.0	1.114	STD5	2025-06-23 16:43:01 UTC-4	used
Standard 6	1	30.000	10.0	1.0	1.0	2.237	STD6	2025-06-23 17:04:27 UTC-4	used
Standard 7	1	37.000	10.0	1.0	1.0	2.856	STD7	2025-06-23 17:25:53 UTC-4	used

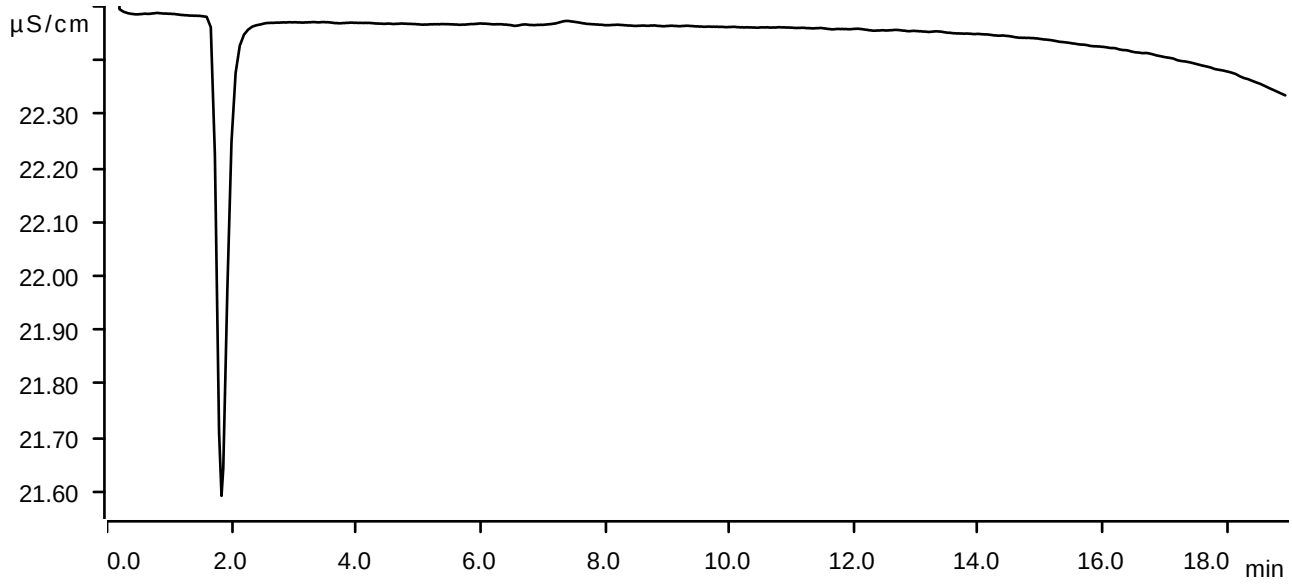
Sample data

Ident	STD1
Sample type	Standard 1
Determination start	2025-06-23 15:17:36 UTC-4
Method	IC1-062325
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



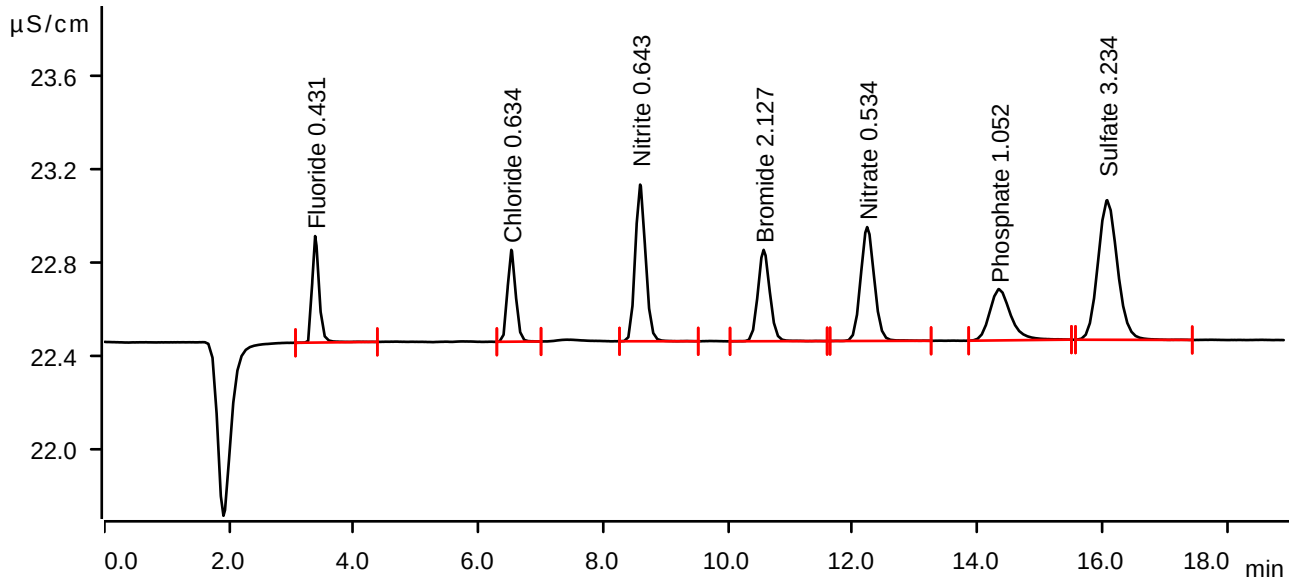
Sample data

Ident	STD2
Sample type	Standard 2
Determination start	2025-06-23 15:38:59 UTC-4
Method	IC1-062325
Operator	

Anions

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

Anions



Peak number	Retention time min	Area (µS/cm) x min	Height µS/cm	Concentration ppm	Component name
1	3.380	0.0584	0.457	0.431	Fluoride
2	6.525	0.0599	0.394	0.634	Chloride
3	8.590	0.1297	0.673	0.643	Nitrite
4	10.570	0.0870	0.392	2.127	Bromide
5	12.230	0.1239	0.489	0.534	Nitrate
6	14.343	0.0862	0.220	1.052	Phosphate
7	16.078	0.2176	0.600	3.234	Sulfate

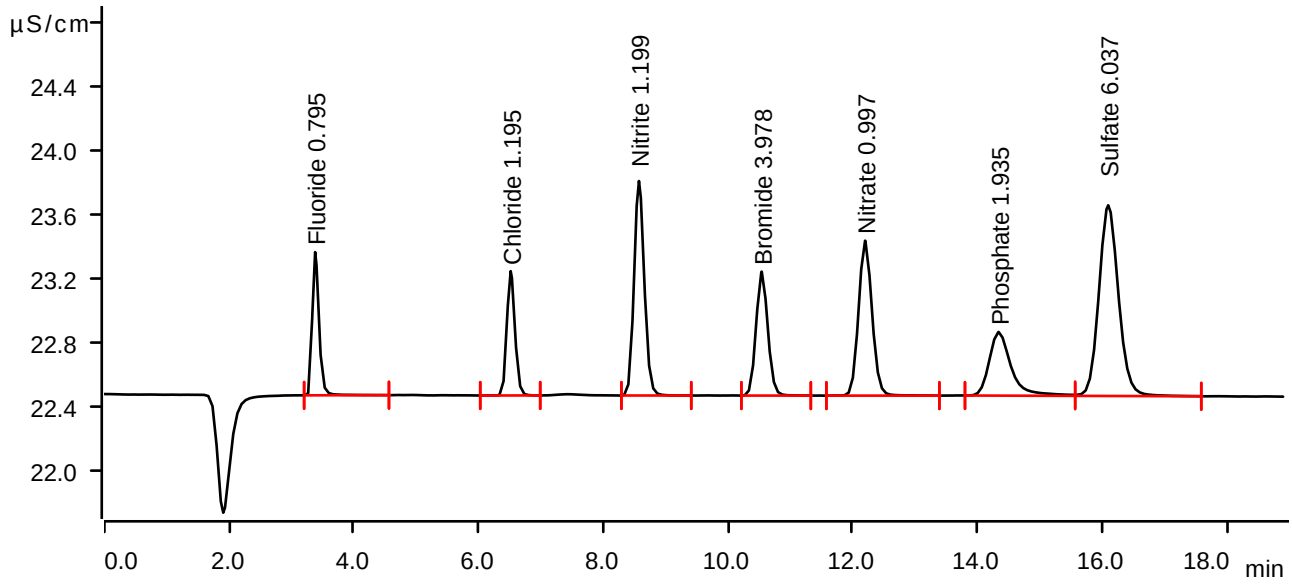
Sample data

Ident	STD3
Sample type	Standard 3
Determination start	2025-06-23 16:00:23 UTC-4
Method	IC1-062325
Operator	

Anions

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

Anions



Peak number	Retention time min	Area (µS/cm) x min	Height µS/cm	Concentration ppm	Component name
1	3.380	0.1114	0.894	0.795	Fluoride
2	6.515	0.1170	0.776	1.195	Chloride
3	8.572	0.2561	1.340	1.199	Nitrite
4	10.540	0.1688	0.774	3.978	Bromide
5	12.197	0.2428	0.968	0.997	Nitrate
6	14.338	0.1616	0.398	1.935	Phosphate
7	16.095	0.4335	1.191	6.037	Sulfate

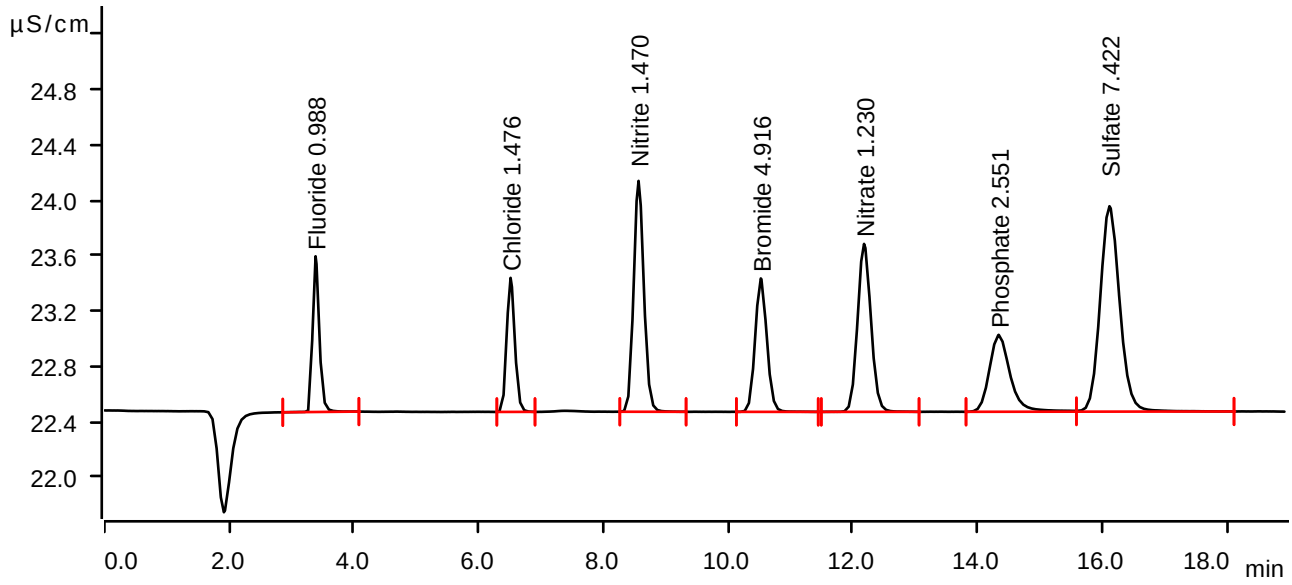
Sample data

Ident	STD4
Sample type	Standard 4
Determination start	2025-06-23 16:21:47 UTC-4
Method	IC1-062325
Operator	

Anions

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

Anions



Peak number	Retention time min	Area (µS/cm) x min	Height µS/cm	Concentration ppm	Component name
1	3.387	0.1394	1.124	0.988	Fluoride
2	6.513	0.1456	0.968	1.476	Chloride
3	8.565	0.3180	1.668	1.470	Nitrite
4	10.525	0.2103	0.964	4.916	Bromide
5	12.180	0.3026	1.213	1.230	Nitrate
6	14.340	0.2142	0.555	2.551	Phosphate
7	16.115	0.5402	1.484	7.422	Sulfate

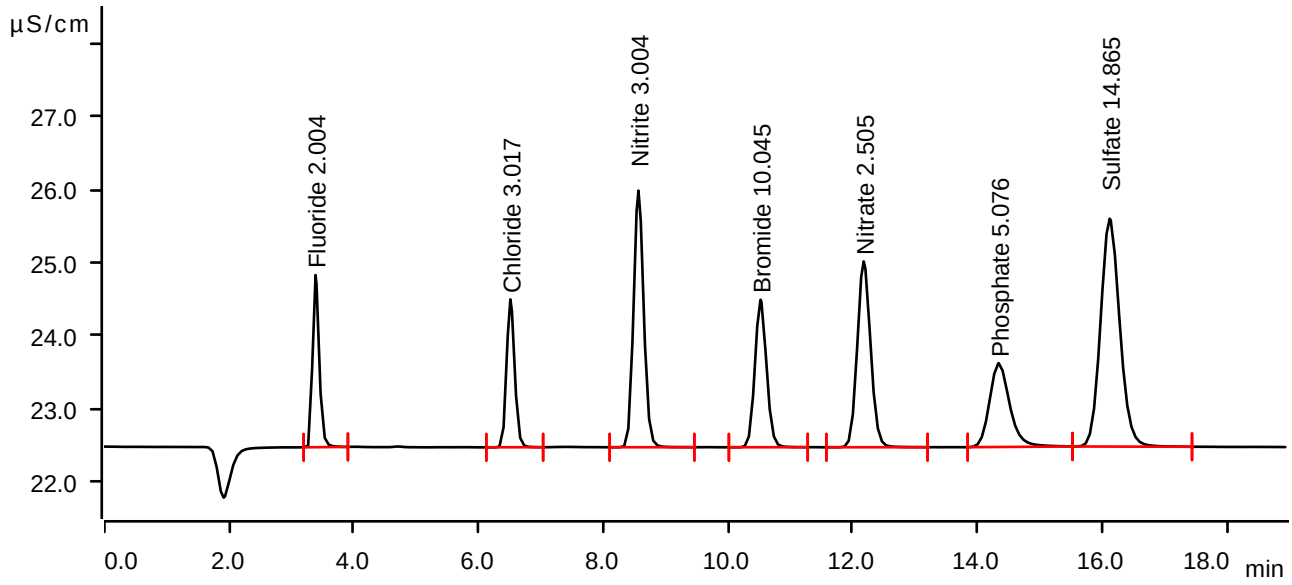
Sample data

Ident	STD5
Sample type	Standard 5
Determination start	2025-06-23 16:43:01 UTC-4
Method	IC1-062325
Operator	

Anions

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

Anions



Peak number	Retention time min	Area (µS/cm) x min	Height µS/cm	Concentration ppm	Component name
1	3.387	0.2876	2.353	2.004	Fluoride
2	6.510	0.3026	2.021	3.017	Chloride
3	8.563	0.6671	3.507	3.004	Nitrite
4	10.520	0.4371	2.016	10.045	Bromide
5	12.175	0.6299	2.540	2.505	Nitrate
6	14.338	0.4297	1.146	5.076	Phosphate
7	16.118	1.1136	3.114	14.865	Sulfate

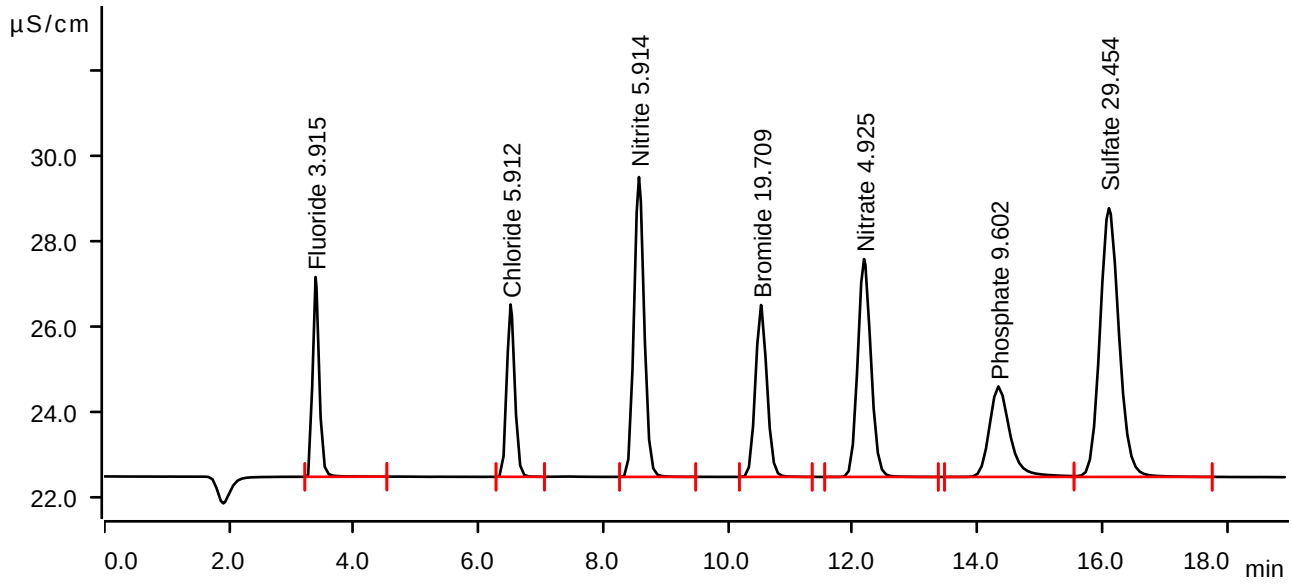
Sample data

Ident	STD6
Sample type	Standard 6
Determination start	2025-06-23 17:04:27 UTC-4
Method	IC1-062325
Operator	

Anions

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

Anions



Peak number	Retention time min	Area (µS/cm) x min	Height µS/cm	Concentration ppm	Component name
1	3.387	0.5661	4.679	3.915	Fluoride
2	6.513	0.5975	4.037	5.912	Chloride
3	8.572	1.3294	7.024	5.914	Nitrite
4	10.528	0.8644	4.027	19.709	Bromide
5	12.180	1.2509	5.103	4.925	Nitrate
6	14.335	0.8161	2.118	9.602	Phosphate
7	16.107	2.2375	6.295	29.454	Sulfate

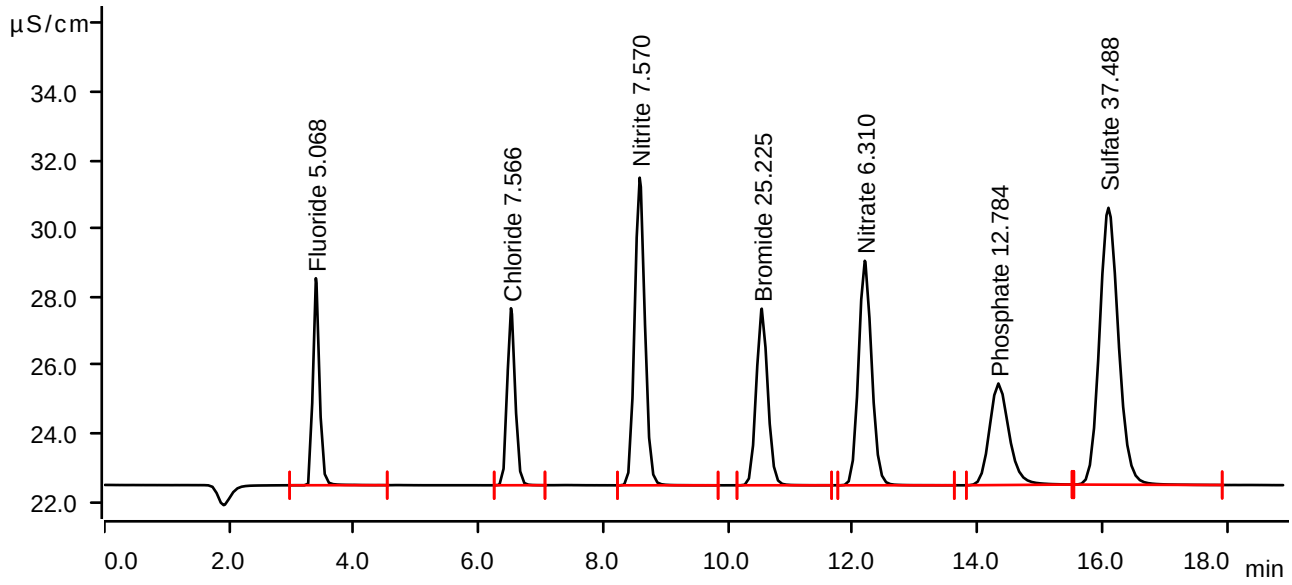
Sample data

Ident	STD7
Sample type	Standard 7
Determination start	2025-06-23 17:25:53 UTC-4
Method	IC1-062325
Operator	

Anions

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

Anions



Peak number	Retention time min	Area (µS/cm) x min	Height µS/cm	Concentration ppm	Component name
1	3.392	0.7342	6.060	5.068	Fluoride
2	6.520	0.7659	5.183	7.566	Chloride
3	8.583	1.7064	9.009	7.570	Nitrite
4	10.540	1.1083	5.172	25.225	Bromide
5	12.192	1.6065	6.575	6.310	Nitrate
6	14.333	1.0878	2.972	12.784	Phosphate
7	16.098	2.8564	8.108	37.488	Sulfate

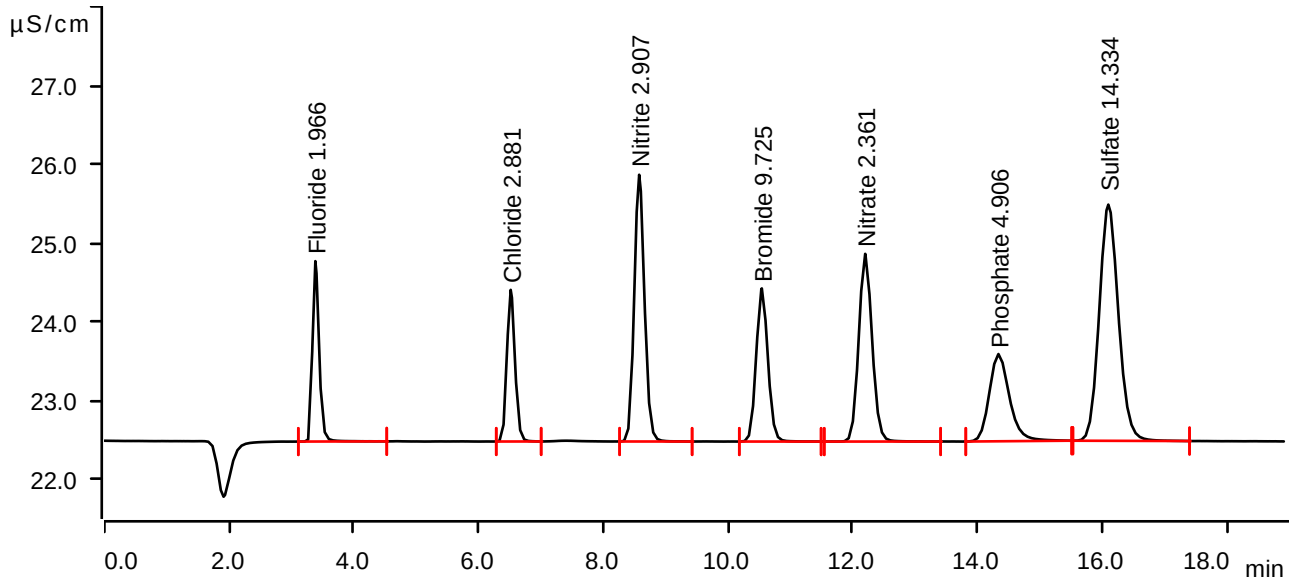
Sample data

Ident	ICV
Sample type	Check standard 1
Determination start	2025-06-23 17:47:21 UTC-4
Method	IC1-062325
Operator	

Anions

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

Anions



Peak number	Retention time min	Area (µS/cm) x min	Height µS/cm	Concentration ppm	Component name
1	3.383	0.2821	2.288	1.966	Fluoride
2	6.515	0.2887	1.924	2.881	Chloride
3	8.575	0.6450	3.385	2.907	Nitrite
4	10.542	0.4229	1.943	9.725	Bromide
5	12.198	0.5928	2.382	2.361	Nitrate
6	14.335	0.4152	1.107	4.906	Phosphate
7	16.097	1.0727	2.998	14.334	Sulfate

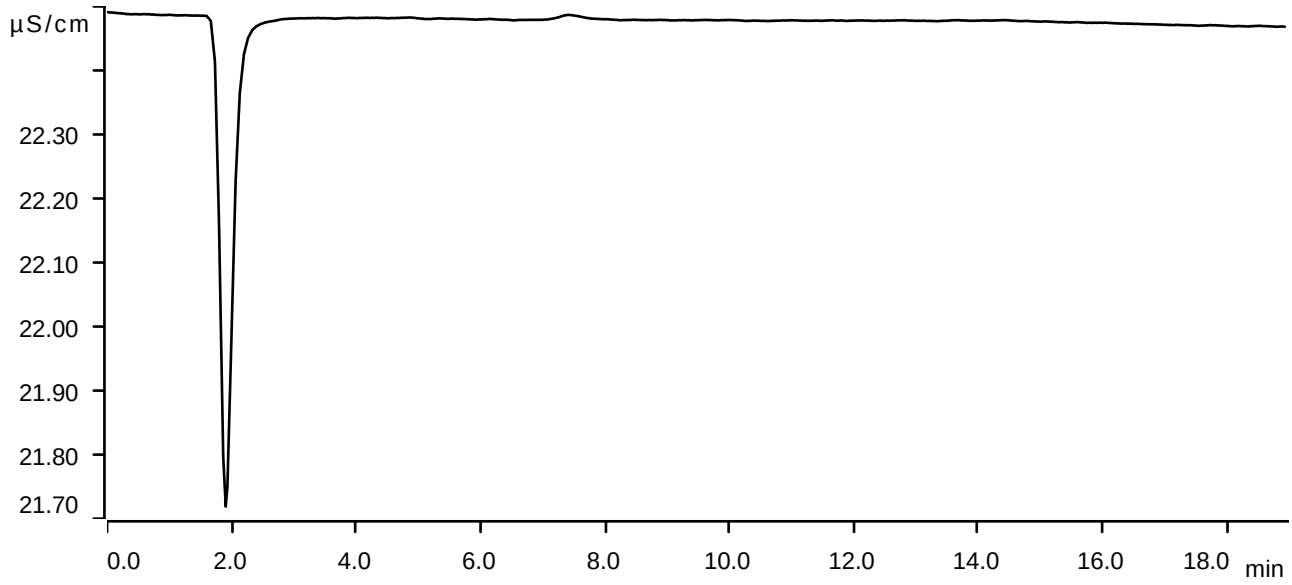
Sample data

Ident	ICB
Sample type	Sample
Determination start	2025-06-23 18:08:49 UTC-4
Method	IC1-062325
Operator	

Anions

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

Anions



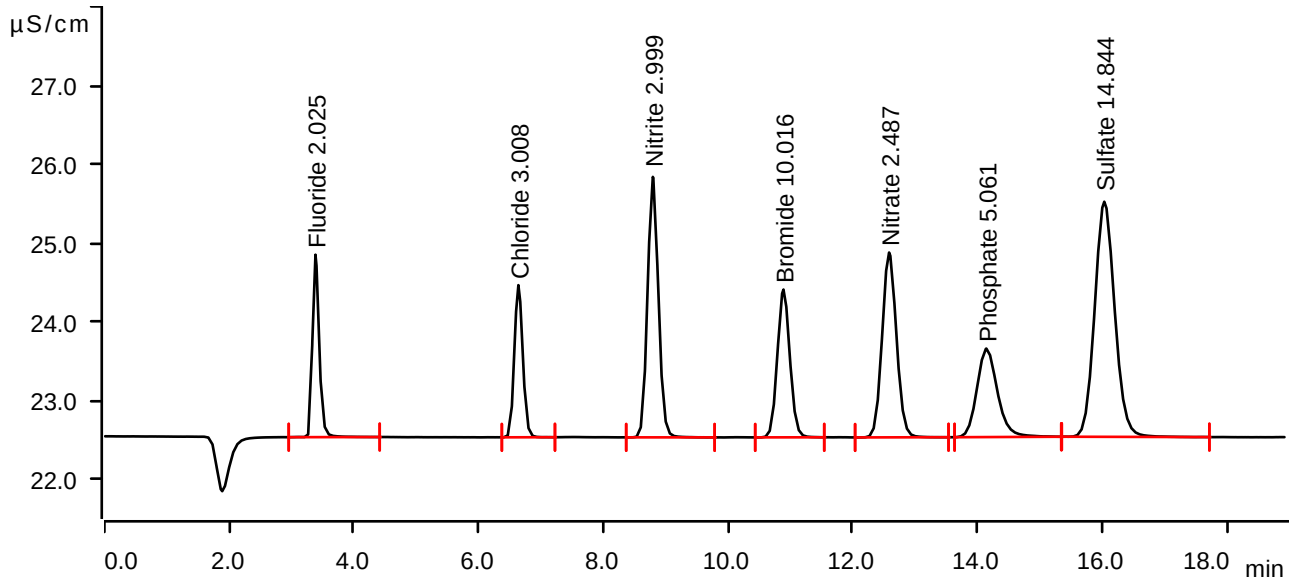
Sample data

Ident	CCV
Sample type	Check standard 1
Determination start	2025-07-09 11:43:38 UTC-4
Method	IC1-062325
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	12.73	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	0.2906	2.314	2.025	Fluoride
2	6.638	0.3017	1.931	3.008	Chloride
3	8.793	0.6661	3.306	2.999	Nitrite
4	10.888	0.4358	1.876	10.016	Bromide
5	12.582	0.6252	2.346	2.487	Nitrate
6	14.143	0.4284	1.123	5.061	Phosphate
7	16.032	1.1120	2.984	14.844	Sulfate

Reviewed By:Iwon
On:7/10/2025 12:5
PM
Inst Id :IC-1
LB :LB136410

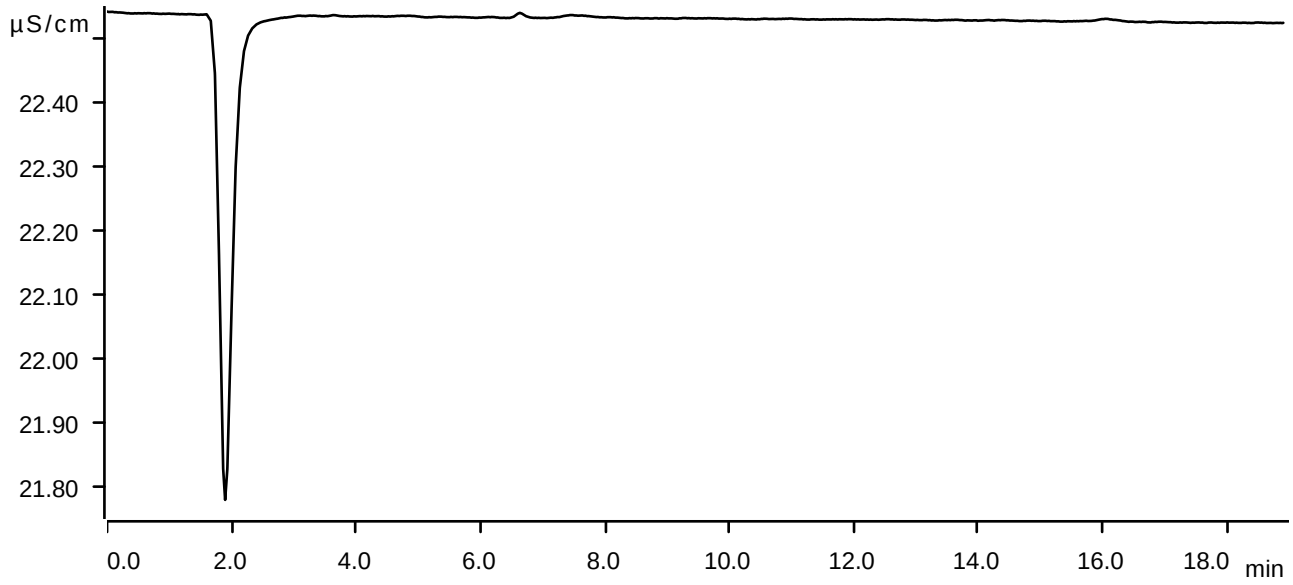
Sample data

Ident	CCB
Sample type	Sample
Determination start	2025-07-09 12:05:07 UTC-4
Method	IC1-062325
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	12.50	MPa
Maximum pressure monitored	yes	
Temperature	-----	°C

Anions



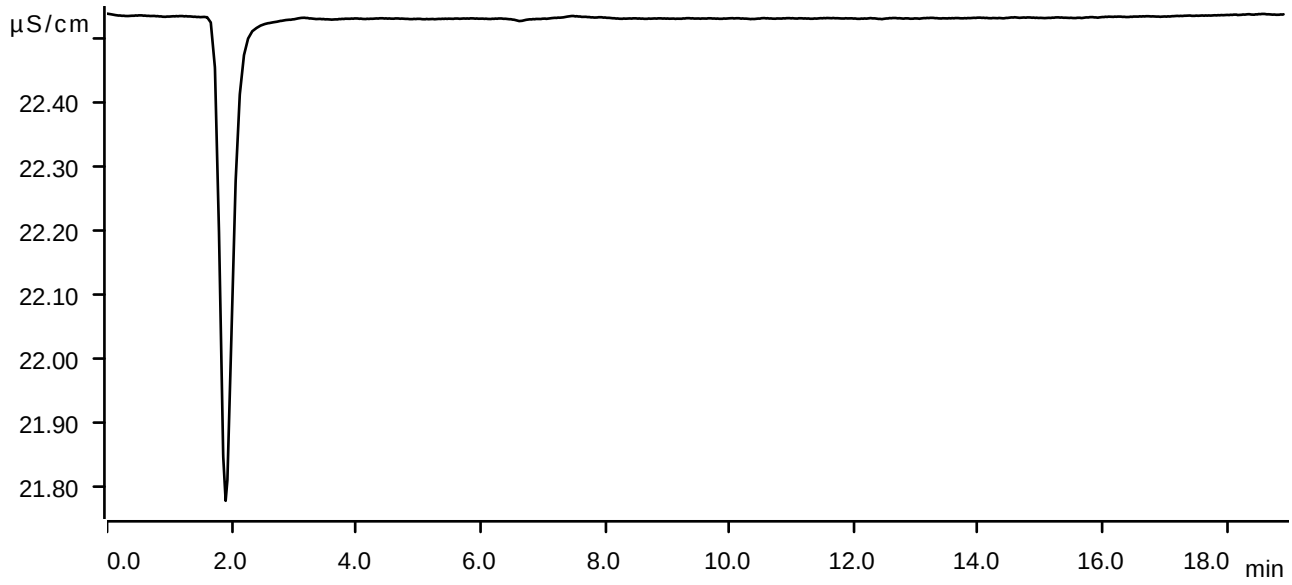
Sample data

Ident	LB136410BLW
Sample type	Sample
Determination start	2025-07-09 12:26:37 UTC-4
Method	IC1-062325
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	12.44	MPa
Maximum pressure monitored	yes	
Temperature	-----	°C

Anions



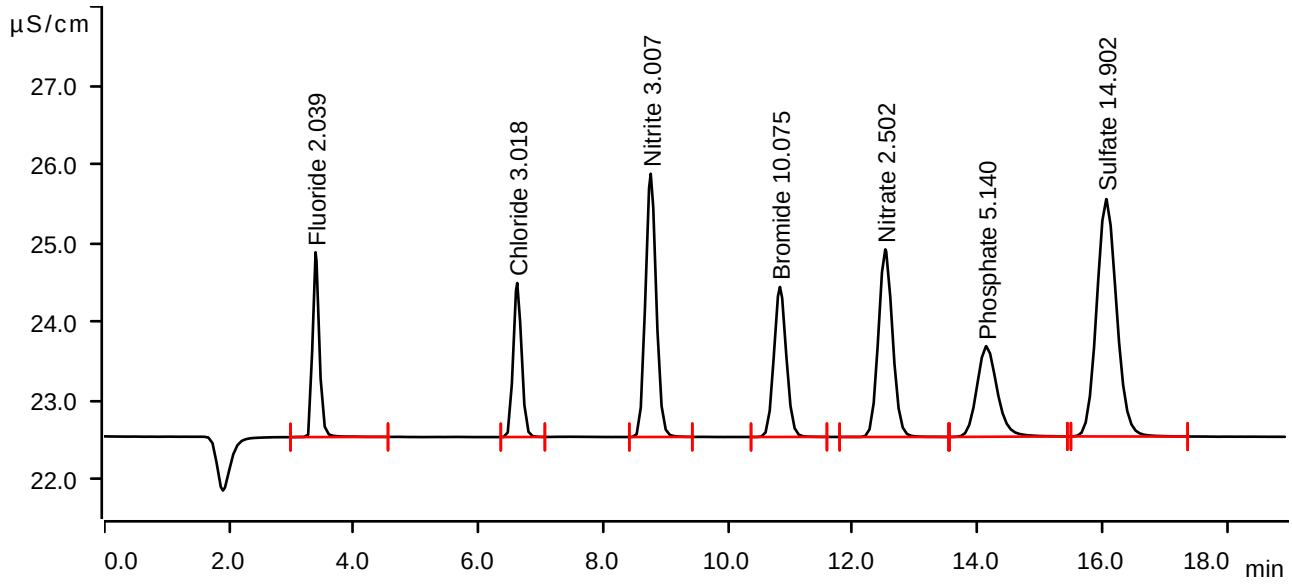
Sample data

Ident	LB136410BSW
Sample type	Check standard 1
Determination start	2025-07-09 12:48:08 UTC-4
Method	IC1-062325
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	12.78	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	3.387	0.2928	2.344	2.039	Fluoride
2	6.620	0.3027	1.954	3.018	Chloride
3	8.760	0.6678	3.341	3.007	Nitrite
4	10.832	0.4384	1.904	10.075	Bromide
5	12.520	0.6291	2.380	2.502	Nitrate
6	14.140	0.4352	1.149	5.140	Phosphate
7	16.063	1.1165	3.012	14.902	Sulfate

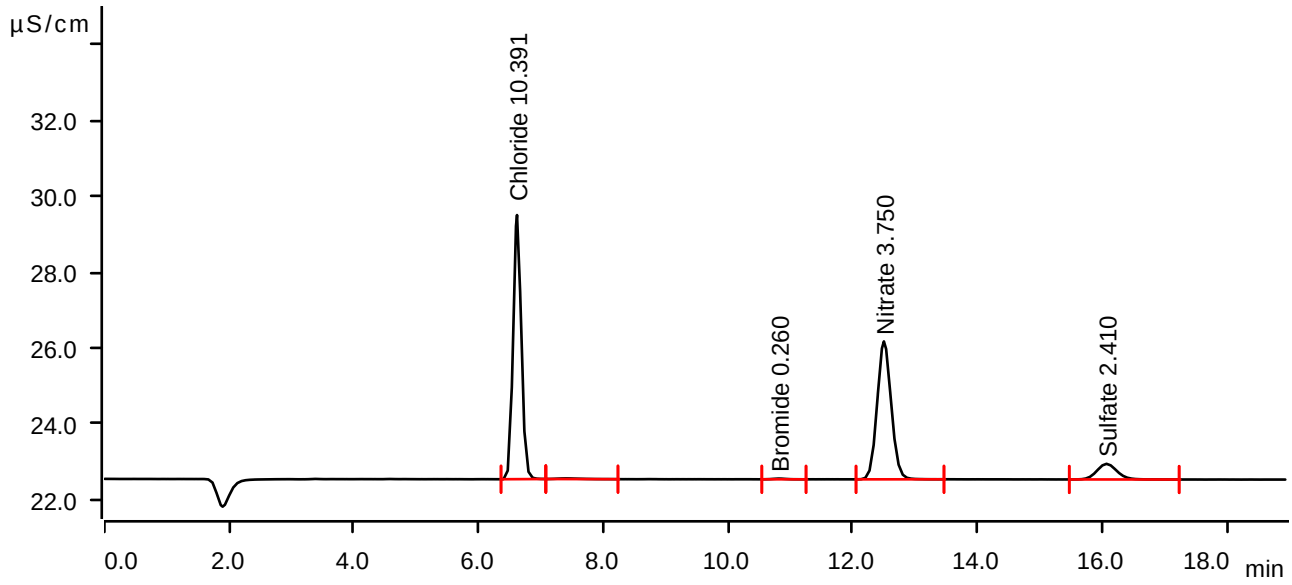
Sample data

Ident	Q2536-01
Sample type	Sample
Determination start	2025-07-09 13:09:41 UTC-4
Method	IC1-062325
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	12.33	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	6.617	1.0536	6.960	10.391	Chloride
2	7.398	0.0075	0.017	invalid	
3	10.815	0.0045	0.019	0.260	Bromide
4	12.500	0.9494	3.636	3.750	Nitrate
5	16.067	0.1541	0.412	2.410	Sulfate

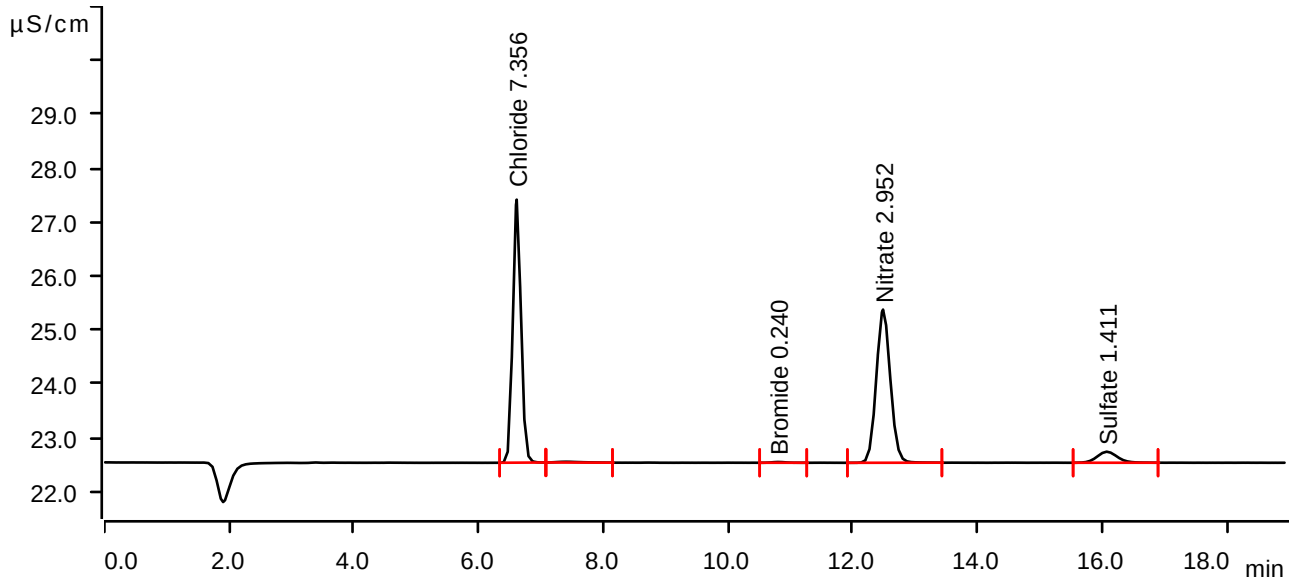
Sample data

Ident	Q2536-02
Sample type	Sample
Determination start	2025-07-09 13:31:13 UTC-4
Method	IC1-062325
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	12.27	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	6.612	0.7444	4.878	7.356	Chloride
2	7.410	0.0069	0.015	invalid	
3	10.798	0.0036	0.015	0.240	Bromide
4	12.485	0.7446	2.841	2.952	Nitrate
5	16.072	0.0771	0.204	1.411	Sulfate

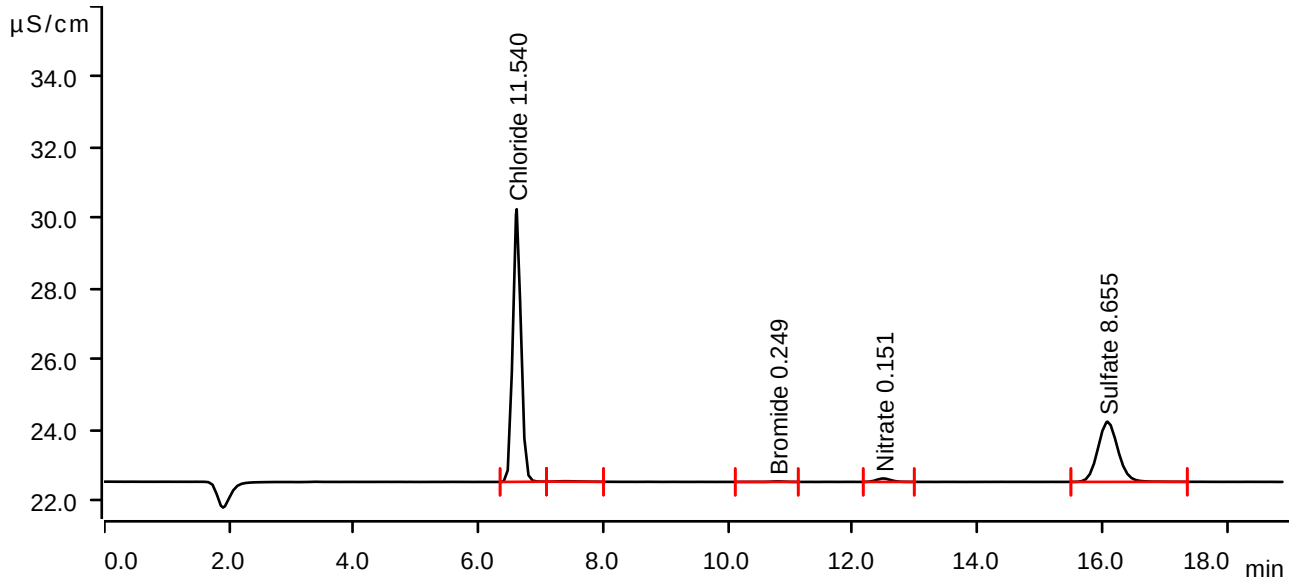
Sample data

Ident	Q2536-03
Sample type	Sample
Determination start	2025-07-09 13:52:46 UTC-4
Method	IC1-062325
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	12.27	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	6.612	1.1706	7.718	11.540	Chloride
2	7.387	0.0061	0.014	invalid	
3	10.793	0.0040	0.015	0.249	Bromide
4	12.492	0.0258	0.097	0.151	Nitrate
5	16.083	0.6352	1.704	8.655	Sulfate

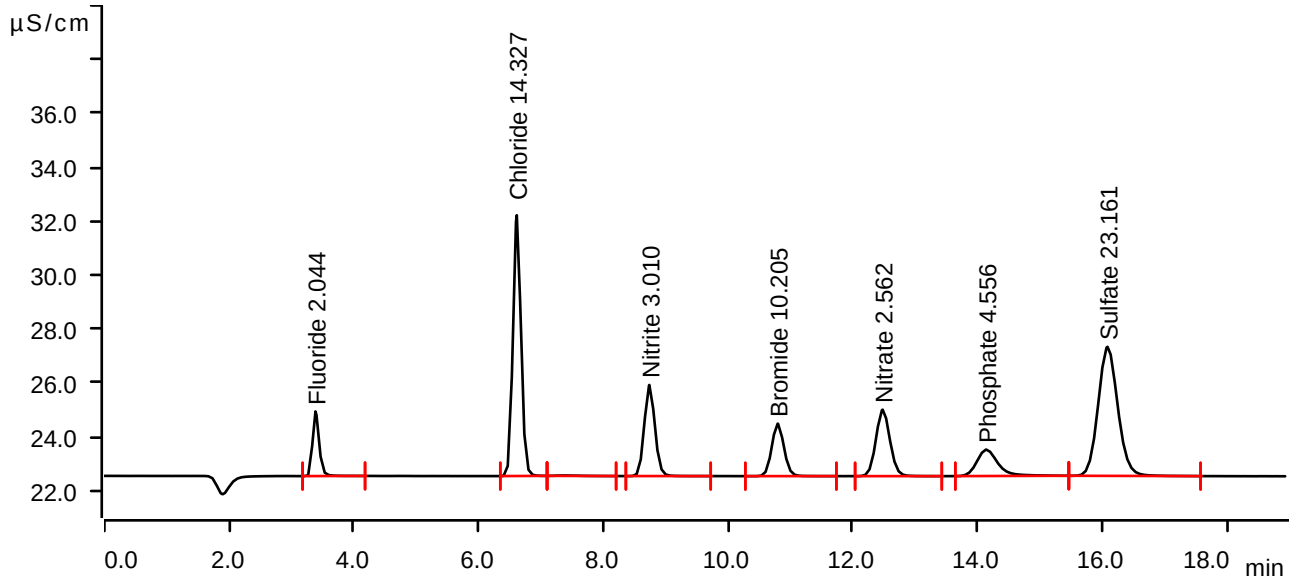
Sample data

Ident	Q2536-03MS
Sample type	Sample
Determination start	2025-07-09 14:14:20 UTC-4
Method	IC1-062325
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	12.39	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	0.2934	2.397	2.044	Fluoride
2	6.613	1.4545	9.672	14.327	Chloride
3	7.377	0.0069	0.016	invalid	
4	8.738	0.6685	3.379	3.010	Nitrite
5	10.795	0.4442	1.947	10.205	Bromide
6	12.478	0.6446	2.466	2.562	Nitrate
7	14.140	0.3853	0.980	4.556	Phosphate
8	16.083	1.7527	4.787	23.161	Sulfate

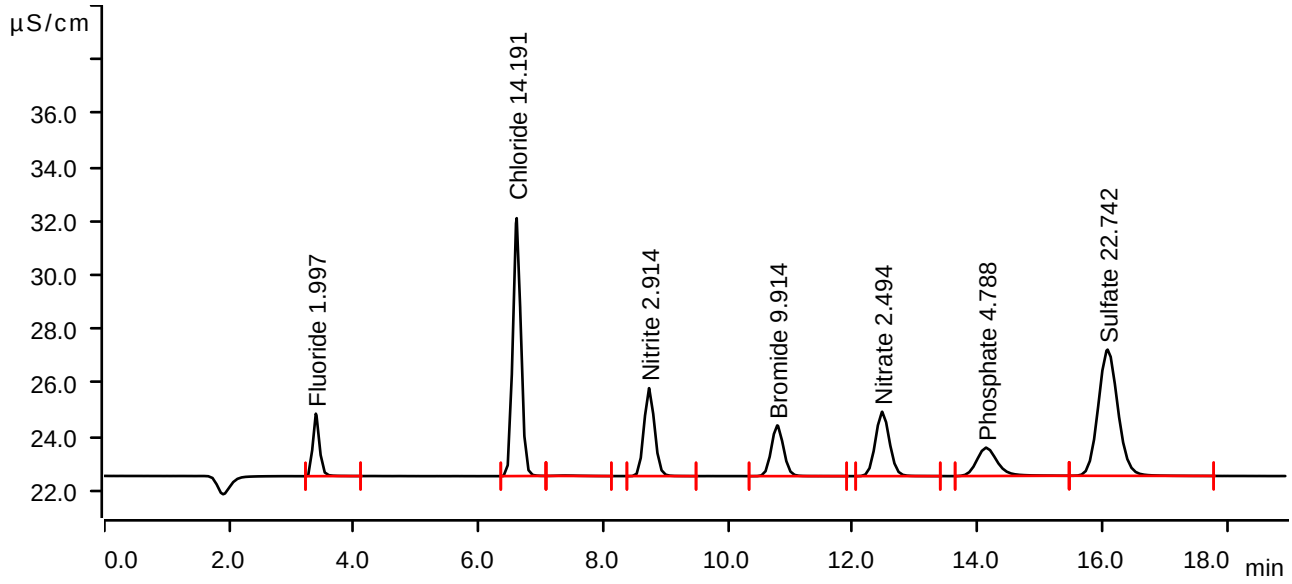
Sample data

Ident	Q2536-03MSD
Sample type	Sample
Determination start	2025-07-09 14:35:55 UTC-4
Method	IC1-062325
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	3.390	0.2865	2.318	1.997	Fluoride
2	6.612	1.4406	9.565	14.191	Chloride
3	7.390	0.0067	0.015	invalid	
4	8.735	0.6467	3.262	2.914	Nitrite
5	10.788	0.4313	1.882	9.914	Bromide
6	12.472	0.6271	2.388	2.494	Nitrate
7	14.138	0.4051	1.051	4.788	Phosphate
8	16.085	1.7204	4.680	22.742	Sulfate

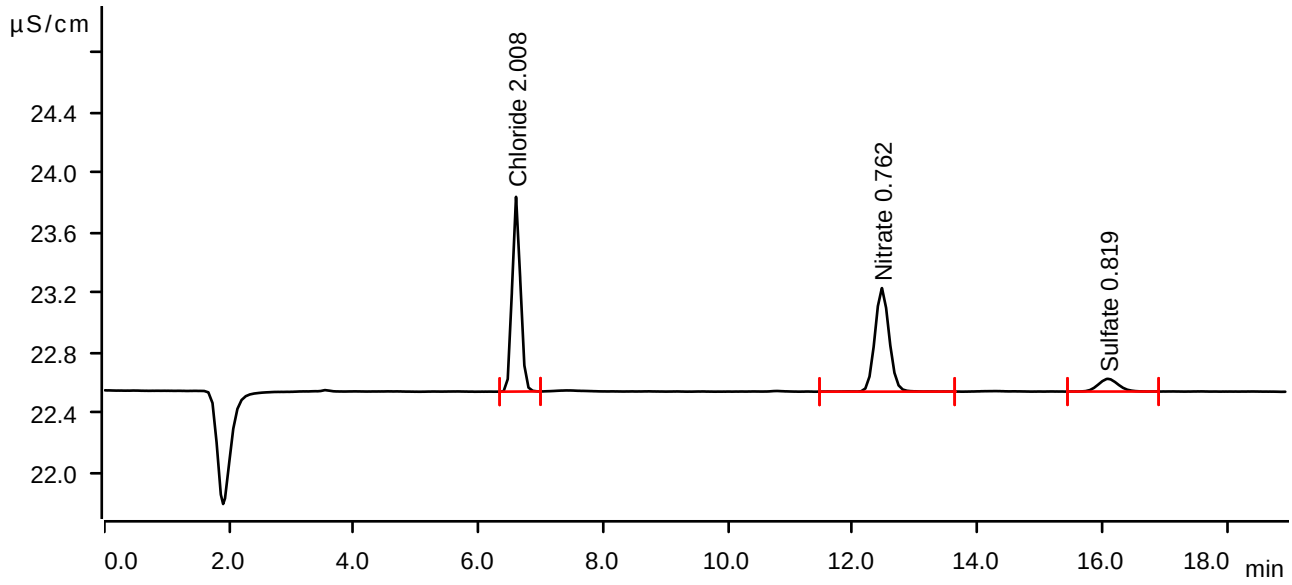
Sample data

Ident	Q2536-01DLX5
Sample type	Sample
Determination start	2025-07-09 14:57:29 UTC-4
Method	IC1-062325
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	12.27	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	6.602	0.1998	1.292	2.008	Chloride
2	12.465	0.1825	0.687	0.762	Nitrate
3	16.088	0.0316	0.084	0.819	Sulfate

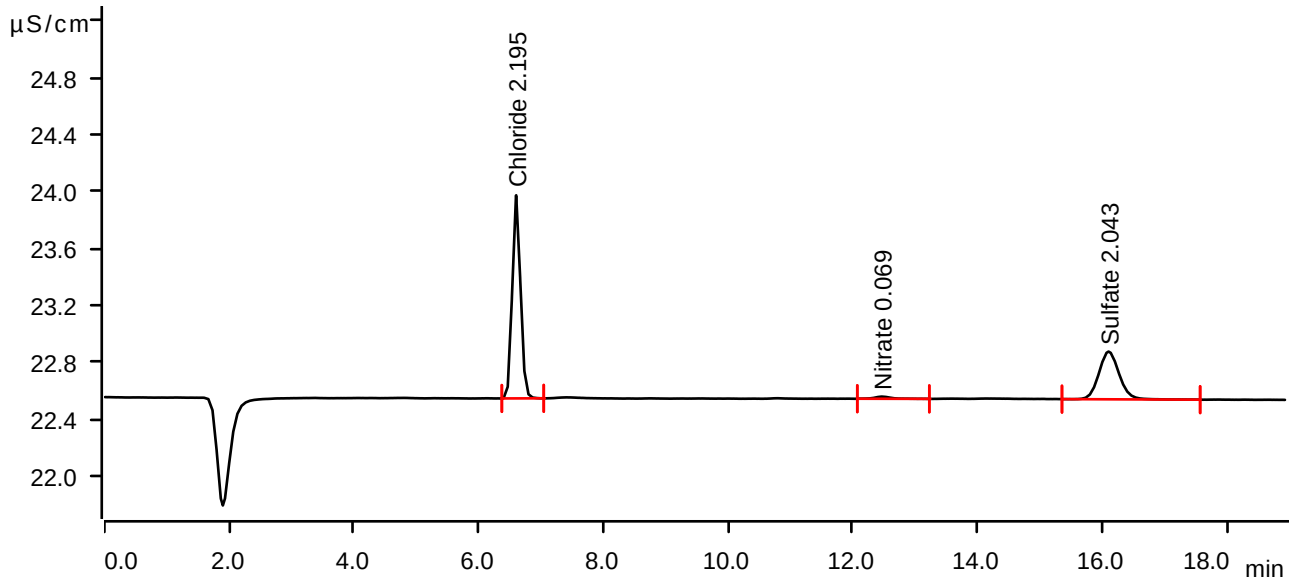
Sample data

Ident	Q2536-03DLX5
Sample type	Sample
Determination start	2025-07-09 15:19:02 UTC-4
Method	IC1-062325
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	6.603	0.2189	1.427	2.195	Chloride
2	12.462	0.0046	0.015	0.069	Nitrate
3	16.100	0.1258	0.335	2.043	Sulfate

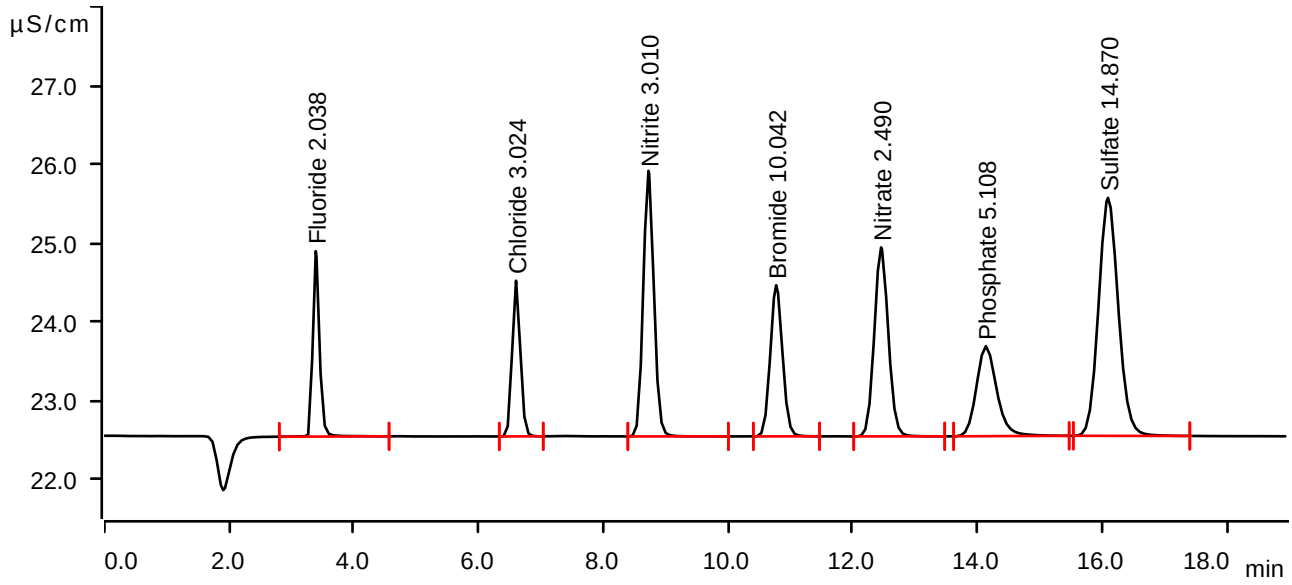
Sample data

Ident	CCV
Sample type	Check standard 1
Determination start	2025-07-09 15:40:35 UTC-4
Method	IC1-062325
Operator	

Anions

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

Anions



Peak number	Retention time min	Area (µS/cm) x min	Height µS/cm	Concentration ppm	Component name
1	3.390	0.2926	2.353	2.038	Fluoride
2	6.602	0.3034	1.975	3.024	Chloride
3	8.723	0.6684	3.371	3.010	Nitrite
4	10.772	0.4370	1.918	10.042	Bromide
5	12.453	0.6261	2.398	2.490	Nitrate
6	14.133	0.4325	1.143	5.108	Phosphate
7	16.092	1.1140	3.021	14.870	Sulfate

Reviewed By:Iwon
On:7/10/2025 12:5
PM
Inst Id :IC-1
LB :LB136410

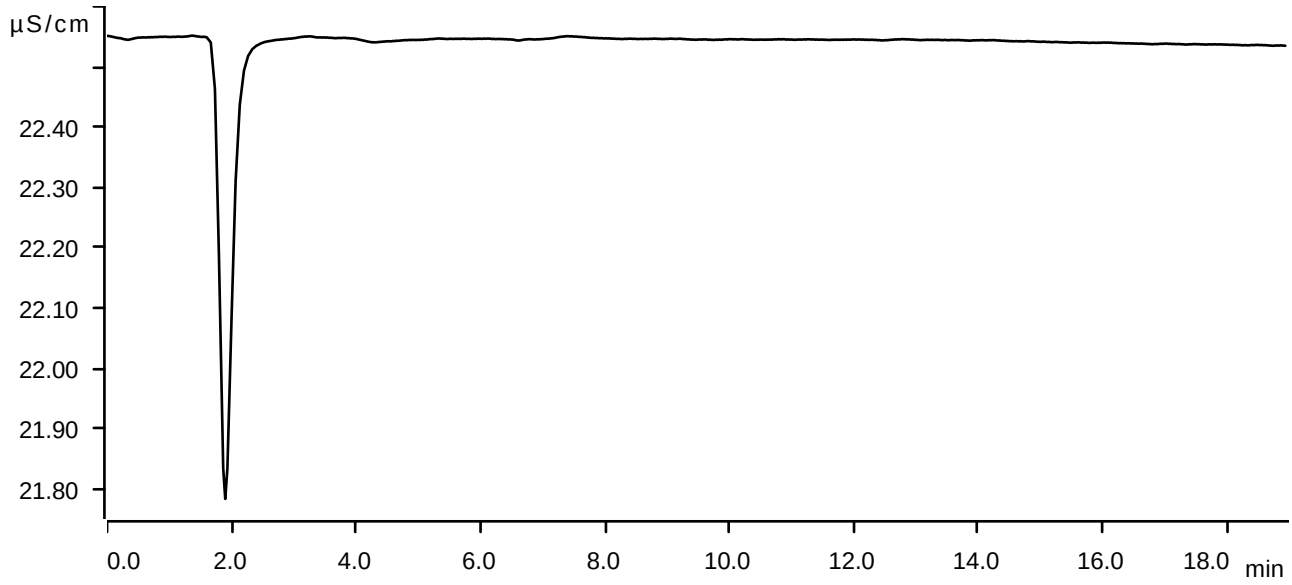
Sample data

Ident	CCB
Sample type	Sample
Determination start	2025-07-09 16:25:10 UTC-4
Method	IC1-062325
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	12.16	MPa
Maximum pressure monitored	yes	
Temperature	-----	°C

Anions



WORKLIST(Hardcopy Internal Chain)

LB 136410

WorkList Name : Anions-070925 **WorkList ID :** 190613 **Department :** Wet-Chemistry **Date :** 07-09-2025 12:10:25

Sample	Customer Sample	Matrix	Test	Preservative	Customer	Raw Sample Storage Location	Collect Date	Method
Q2536-01	RW5-SP100-20250708	Water	Anions Group1	Cool 4 deg C	TETR06	O21	07/08/2025	300.0
Q2536-02	RW7-SP100-20250708	Water	Anions Group1	Cool 4 deg C	TETR06	O21	07/08/2025	300.0
Q2536-03	RW8-SP100-20250708	Water	Anions Group1	Cool 4 deg C	TETR06	O21	07/08/2025	300.0

Date/Time 07/09/25 12:40

Raw Sample Received by: [signature]

Raw Sample Relinquished by: [signature]

Date/Time 07/09/25 13:15

Raw Sample Received by: [signature]

Raw Sample Relinquished by: [signature]

Analytical Summary Report

Analysis Method: 365.3

Parameter: Phosphorus-Total

Run Number: LB136411

ANALYST: Iwona

SUPERVISOR REVIEW BY: jignesh

Reagent/Standard	Lot/Log #
calibration std. phosphate 1 ppm	WP113871
calibration std. phosphate 0.5 ppm	WP113870
calibration std. phosphate 0.3 ppm	WP113869
calibration std. phosphate 0.1 ppm	WP113868
calibration std. phosphate 0.05 ppm	WP113867
calibration std. 0 ppm	WP113866
phosphate CCV std.	WP113872
5N sulfuric acid	WP112831
Combined reagent	WP113877
Phenolphthalein indicator	WP113378
Sodium hydroxide, 1N	WP113878
Phosphate ICV-LCS Std	WP113873

Intercept: -0.0024 **Slope:** 0.6576 **Regression:** 0.999619

Seq	Lab ID	True Value (mg/L)	DF	Initial Volume (mL)	Final Volume (mL)	Absorbance Reading at 880nm	Result (mg/L)	%D	AnalDate	AnalTime
1	CAL1	0.00	1	50	50	0.000	0.004		07/09/2025	14:15
2	CAL2	0.05	1	50	50	0.033	0.054	8	07/09/2025	14:15
3	CAL3	0.10	1	50	50	0.068	0.107	7	07/09/2025	14:16
4	CAL4	0.30	1	50	50	0.181	0.279	-7	07/09/2025	14:16
5	CAL5	0.50	1	50	50	0.328	0.502	0.4	07/09/2025	14:17
6	CAL6	1.00	1	50	50	0.658	1.004	0.4	07/09/2025	14:17

Analytical Summary Report

Analysis Method: 365.3
ANALYST: Iwona
Parameter: Phosphorus-Total
SUPERVISOR REVIEW BY: jignesh
Run Number: LB136411

Seq	Lab ID	True Value (mg/l)	DF	Initial Volume (mL)	Final Volume (mL)	Absorbance Reading at 880nm	Result (mg/L)	AnalDate	AnalTime
1	ICV	0.50	1	50	50	0.347	0.531	07/09/2025	14:18
2	ICB		1	50	50	0.002	0.007	07/09/2025	14:18
3	CCV1	0.50	1	50	50	0.320	0.490	07/09/2025	14:19
4	CCB1		1	50	50	0.003	0.008	07/09/2025	14:19
5	RL Check		1	50	50	0.030	0.049	07/09/2025	14:20
6	PB168769BL		1	50	50	0.001	0.005	07/09/2025	14:20
7	PB168769BS	0.50	1	50	50	0.327	0.501	07/09/2025	14:21
8	Q2470-01		1	50	50	0.117	0.182	07/09/2025	14:21
9	Q2470-01DUP		1	50	50	0.119	0.185	07/09/2025	14:22
10	Q2470-01MS	0.50	1	50	50	0.431	0.659	07/09/2025	14:22
11	Q2470-01MSD	0.50	1	50	50	0.429	0.656	07/09/2025	14:23
12	Q2471-01		1	50	50	0.135	0.209	07/09/2025	14:23
13	Q2525-01		1	50	50	1.224	1.865	07/09/2025	14:24
14	Q2536-01		1	50	50	0.006	0.013	07/09/2025	14:24
15	Q2536-02		1	50	50	0.004	0.010	07/09/2025	14:25
16	CCV2	0.50	1	50	50	0.331	0.507	07/09/2025	14:25
17	CCB2		1	50	50	0.002	0.007	07/09/2025	14:26
18	Q2536-03		1	50	50	0.004	0.010	07/09/2025	14:26
19	Q2525-01		10	50	50	0.462	0.706	07/09/2025	14:27
20	CCV3	0.50	1	50	50	0.326	0.499	07/09/2025	14:27
21	CCB3		1	50	50	0.003	0.008	07/09/2025	14:28

Reviewed By:Iwona
On:7/15/2025 10:36:00 AM
Inst Id :DO METER
LB :LB136413

BOD5 LOG

ANALYST: rubir
SUPERVISOR: Iwona

QC BATCH ID: LB136413
Analysis Date: 07/09/2025
BOD Water: WP113846
MANGANOUS SULFATE SOLUTION: W3103
Starch: W3149
Alkaline Iodide Azide: W3109
Sulfuric acid, 1N: WP112832
Sodium Thiosulfate, 0.025N: W3105
POLYSEED: WP113848
NaOH, 1N: WP111323
GGA: WP113847
IncubatorID: INCUBATOR #3
Chlorine Strips: W3155
GuageID: 0511064
pH Strips: W3215
Zero DO: WP113605

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

Meter Calibration1: 8.86 Zero DO Reading1: 0.15 mg/L (<=0.2 Criteria)

Barometric Pressure1: 760 mmHg DO Meter BOD fluid reading for winkler comparison: 9.83

After Incubation

Meter Calibration2: 8.74 Zero DO Reading2: 0.15 mg/L (<=0.2 Criteria)

Barometric Pressure2: 760 mmHg

Alliance TECHNICAL GROUP

QC BATCH ID: LB136413

INCUBATOR TEMP IN(C): 20.1

INCUBATOR TEMP OUT(C): 20.2

TIME IN: 16:40

TIME OUT: 11:00

DATE IN: 07/09/2025

DATE OUT: 07/14/2025

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
LB136413BL	1	No	6.57	N/A	20.90	300	9.82	9.81	0.01	0.01	0.01	
POLYSEED	1					10	9.73	6.19	3.54	0.71	0.69	
POLYSEED	2					15	9.69	4.59	5.1	0.68		
POLYSEED	3					20	9.64	2.94	6.7	0.67		
GGA	1					6	9.76	5.01	4.75	203	211.83	
GGA	2					6	9.75	4.84	4.91	211		
GGA	3					6	9.74	4.62	5.12	221.5		
Q2522-01	1	No	5.09	7.14	20.40	5	9.74	7.79	-	0	8032.5	pH Adjuste
Q2522-01	2					10	9.73	6.51	3.22	7590		
Q2522-01	3					20	9.71	3.37	6.34	8475		
Q2522-01	4					50	9.56	0.30	-	0		
Q2522-01	5					100	9.26	0.14	-	0		
Q2525-01	1	No	7.87	7.23	20.70	2	9.74	8.14	-	0	87.6	pH Adjuste
Q2525-01	2					10	9.72	6.11	3.61	87.6		
Q2525-01	3					50	9.09	0.21	-	0		
Q2525-01	4					100	8.10	0.17	-	0		
Q2536-01	1	No	5.11	6.70	20.00	5	9.77	8.41	-	0		pH Adjuste
Q2536-01	2					20	9.76	8.21	-	0		
Q2536-01	3					50	9.74	8.11	-	0		
Q2536-01	4					150	9.71	8.02	-	0		
Q2536-02	1	No	5.05	6.99	20.00	5	9.78	8.88	-	0		pH Adjuste
Q2536-02	2					20	9.77	8.20	-	0		
Q2536-02	3					50	9.75	8.01	-	0		
Q2536-02	4					150	9.74	7.90	-	0		
Q2536-03	1	No	4.99	6.67	20.00	5	9.77	8.77	-	0		pH Adjuste
Q2536-03	2					20	9.76	8.51	-	0		
Q2536-03	3					50	9.75	7.86	-	0		
Q2536-03	4					150	9.72	7.76	-	0		
Q2548-02	1	No	6.45	6.77	20.80	5	9.62	7.39	2.23	924	682.13	pH Adjuste
Q2548-02	2					10	9.60	7.16	2.44	525		
Q2548-02	3					20	9.50	4.30	5.2	676.5		
Q2548-02	4					30	9.41	2.69	6.72	603		
Q2548-02DUP	1	No	6.45	6.77	20.80	5	9.64	7.29	2.35	996	709.13	pH Adjuste
Q2548-02DUP	2					10	9.60	7.13	2.47	534		
Q2548-02DUP	3					20	9.51	4.17	5.34	697.5		
Q2548-02DUP	4					30	9.40	2.62	6.78	609		

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)

LB136413

WorkList Name : BOD5-07-09 **WorkList ID :** 190616 **Department :** Wet-Chemistry **Date :** 07-09-2025 13:54:37

Sample	Customer Sample	Matrix	Test	Preservative	Customer	Raw Sample Storage Location	Collect Date	Method
Q2522-01	DRAIN-WATER-TANK-1	Water	BOD5	Cool 4 deg C	MAJO01	O11	07/08/2025	SM5210 B
Q2525-01G	EFFLUENT-COMPOSITE	Water	BOD5	Cool 4 deg C	M&MM01	O33	07/08/2025	SM5210 B
Q2536-01 G	RW5-SP100-20250708	Water	BOD5	Cool 4 deg C	TETR06	O21	07/08/2025	SM5210 B
Q2536-02G	RW7-SP100-20250708	Water	BOD5	Cool 4 deg C	TETR06	O21	07/08/2025	SM5210 B
Q2536-03 E	RW8-SP100-20250708	Water	BOD5	Cool 4 deg C	TETR06	O21	07/08/2025	SM5210 B
Q2548-02 A	COMP	Water	BOD5	Cool 4 deg C	ARAM01	O43	07/09/2025	SM5210 B

Date/Time 07/09/2025 14.00

Raw Sample Received by: RM (COC)

Raw Sample Relinquished by: MP(COC)

Date/Time 07/09/2025 16.50

Raw Sample Received by: JP(COC)

Raw Sample Relinquished by: RM (COC)

Sample Results Report Print Date/Time: 2025/07/11 11:30:05

Sample ID	Result	Std. Dev.	RSD	Mode	ALT
CCV1	9.4780	0.1569	1.66	TOC	
CCB1	0.3751	0.0398	10.61	TOC	
LB136416BLW	0.2189	0.0633	28.92	TOC	
LB136416BSW.....	9.4557...	0.2676..	2.83...	TOC	..
Q2536-01	0.5409	0.0510	9.43	TOC	
Q2536-01MS	9.8578	0.3111	3.16	TOC	
Q2536-01MSD.....	9.8874...	0.1638..	1.66...	TOC	..
Q2536-02	0.4472	0.1724	38.55	TOC	
Q2536-03	0.4456	0.0839	18.83	TOC	
CCV2.....	10.2097...	0.6363..	6.23...	TOC	..
CCB2	0.3656	0.0853	23.34	TOC	
Q2565-01	136.7428	2.8605	2.09	TOC	
Q2565-01DLX200.....	10.3780...	0.4089..	3.94...	TOC	..
CCV3	10.2430	0.1820	1.78	TOC	
CCB3	0.3110	0.0735	23.65	TOC	

Sample Results Report Print Date/Time: 2025/07/11 11:30:05

Method ID	Sample Type	Vial	Timestamp	Message
TOC 0 - 20 ppmC	Sample	11	2025/07/10 09:57	
TOC 0 - 20 ppmC	Sample	12	2025/07/10 10:20	Low Sample Detected
TOC 0 - 20 ppmC	Sample	13	2025/07/10 11:24	Low Sample Detected
TOC 0 - 20 ppmC	...Sample	.. 14..	2025/07/10 11:49	..
TOC 0 - 20 ppmC	Sample	15	2025/07/10 12:12	
TOC 0 - 20 ppmC	Sample	16	2025/07/10 12:37	
TOC 0 - 20 ppmC	...Sample	.. 16..	2025/07/10 13:01	..
TOC 0 - 20 ppmC	Sample	17	2025/07/10 13:24	
TOC 0 - 20 ppmC	Sample	18	2025/07/10 13:48	Low Sample Detected
TOC 0 - 20 ppmC	...Sample	.. 11..	2025/07/10 14:13	..
TOC 0 - 20 ppmC	Sample	12	2025/07/10 14:36	Low Sample Detected
TOC 0 - 20 ppmC	Sample	19	2025/07/10 15:49	Max Integration Time Reached
TOC 0 - 20 ppmC	...Sample	.. 22..	2025/07/10 17:07	..
TOC 0 - 20 ppmC	Sample	14	2025/07/10 18:21	
TOC 0 - 20 ppmC	Sample	13	2025/07/10 19:08	Low Sample Detected

Detailed Analysis Report Print Date/Time: 2025/06/12 9:22:24

Sample ID: BLANK Mode: TOC
Method: TOC 0 - 20 ppmC Filename: 06111634
Cal. Curve: TOC WATER 0-20PPM Timestamp: 2025/06/11 16:57
Operator ID: NF IZ Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	2.3381	1.1691	27879	0.057	0.256	135
2	1.7892	0.8946	21335	0.156	0.355	126
3	1.4724	0.7362	17557	0.193	0.389	123
4	1.7972	0.8986	21429	0.173	0.370	125

<<<Statistics>>> Mean: 1.8492 Std Dev: 0.3593 RSD: 19.43

Sample ID: bl Mode: TOC
Method: TOC 0 - 20 ppmC Filename: 06111634
Cal. Curve: TOC WATER 0-20PPM Timestamp: 2025/06/11 17:20
Operator ID: NF IZ Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	1.5117	0.7559	18025	-0.012	0.188	126
2	1.3022	0.6511	15527	0.042	0.242	123
3	1.3463	0.6731	16053	0.033	0.232	123
4	1.2073	0.6036	14395	0.057	0.256	120

<<<Statistics>>> Mean: 1.3419 Std Dev: 0.1272 RSD: 9.48

Sample ID: 0.0PPM Mode: TOC
Method: TOC 0 - 20 ppmC Filename: 06111634
Cal. Curve: TOC WATER 0-20PPM Timestamp: 2025/06/11 17:44
Operator ID: NF IZ Sample Type: TOC Standard

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1			12155	-0.079	0.121	117
2			12445	-0.022	0.178	115
3			10749	-0.023	0.177	112
4			14283	-0.044	0.155	114

<<<Statistics>>> Mean: 12408 Std Dev: 1453 RSD: 11.71

Sample ID: 0.5PPM Mode: TOC
Method: TOC 0 - 20 ppmC Filename: 06111634
Cal. Curve: TOC WATER 0-20PPM Timestamp: 2025/06/11 18:08
Operator ID: NF IZ Sample Type: TOC Standard

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1			13737	-0.172	0.024	125
2			14017	-0.163	0.036	124
3			14600	-0.163	0.037	126
4			15430	-0.165	0.035	127

<<<Statistics>>> Mean: 14446 Std Dev: 748 RSD: 5.18

Sample ID: 1.0PPM Mode: TOC

Method: TOC 0 - 20 ppmC Filename: 06111634
Cal. Curve: TOC WATER 0-20PPM Timestamp: 2025/06/11 18:32
Operator ID: NF IZ Sample Type: TOC Standard

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1			15677	-0.305	-0.106	127
2			16180	-0.286	-0.087	128
3			17212	-0.276	-0.078	128
4			12945	-0.261	-0.063	126

<<<Statistics>>> Mean: 15504 Std Dev: 1821 RSD: 11.75

Sample ID: 2.0PPM Mode: TOC
Method: TOC 0 - 20 ppmC Filename: 06111634
Cal. Curve: TOC WATER 0-20PPM Timestamp: 2025/06/11 18:56
Operator ID: NF IZ Sample Type: TOC Standard

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1			22672	-0.337	-0.140	130
2			18872	-0.275	-0.079	126
3			20254	-0.299	-0.100	128
4			24591	-0.310	-0.112	129

<<<Statistics>>> Mean: 21597 Std Dev: 2540 RSD: 11.76

Sample ID: 5.0PPM Mode: TOC
Method: TOC 0 - 20 ppmC Filename: 06111634
Cal. Curve: TOC WATER 0-20PPM Timestamp: 2025/06/11 19:21
Operator ID: NF IZ Sample Type: TOC Standard

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1			55402	-0.369	-0.169	140
2			56769	-0.341	-0.142	138
3			60697	-0.348	-0.149	139
4			60345	-0.336	-0.138	136

<<<Statistics>>> Mean: 58303 Std Dev: 2625 RSD: 4.50

Sample ID: 10.0PPM Mode: TOC
Method: TOC 0 - 20 ppmC Filename: 06111634
Cal. Curve: TOC WATER 0-20PPM Timestamp: 2025/06/11 19:46
Operator ID: NF IZ Sample Type: TOC Standard

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1			107194	-0.410	-0.212	145
2			112253	-0.382	-0.183	142
3			124956	-0.397	-0.197	148
4			114392	-0.313	-0.113	142

<<<Statistics>>> Mean: 114699 Std Dev: 7475 RSD: 6.52

Sample ID: 20.0PPM Mode: TOC
Method: TOC 0 - 20 ppmC Filename: 06111634
Cal. Curve: TOC WATER 0-20PPM Timestamp: 2025/06/11 20:12
Operator ID: NF IZ Sample Type: TOC Standard

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1			216621	-0.409	-0.209	157
2			229749	-0.348	-0.149	157
3			228390	-0.311	-0.112	154
4			235393	-0.314	-0.114	152

<<<Statistics>>> Mean: 227538 Std Dev: 7885 RSD: 3.47

Sample ID: ICV1 Mode: TOC
Method: TOC 0 - 20 ppmC Filename: 06111634
Cal. Curve: TOC WATER 0-20PPM Timestamp: 2025/06/11 20:38
Operator ID: NF IZ Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	9.5953	4.7977	114412	-0.424	-0.226	144
2	9.8504	4.9252	117454	-0.419	-0.220	145
3	10.2755	5.1378	122523	-0.409	-0.209	146
4	9.9293	4.9646	118394	-0.419	-0.221	145

<<<Statistics>>> Mean: 9.9126 Std Dev: 0.2808 RSD: 2.83

Sample ID: ICB1 Mode: TOC
Method: TOC 0 - 20 ppmC Filename: 06111634
Cal. Curve: TOC WATER 0-20PPM
Timestamp: 2025/06/11 21:01
Operator ID: NF IZ Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	0.6857	0.3428	8176	-0.480	-0.335	120
2	0.8963	0.4482	10687	-0.480	-0.311	120
3	0.4881	0.2440	5820	-0.439	-0.320	120
4	0.7343	0.3671	8755	-0.475	-0.353	120

Last Message: Low Sample Detected
<<<Statistics>>> Mean: 0.7011 Std Dev: 0.1681 RSD: 23.98

Sample ID: IC-20 Mode: TOC
Method: TOC 0 - 20 ppmC Filename: 06111634
Cal. Curve: TOC WATER 0-20PPM Timestamp: 2025/06/11 21:25
Operator ID: NF IZ Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	0.5425	0.2712	6469	-0.510	-0.438	120
2	0.6476	0.3238	7722	-0.537	-0.441	120
3	0.7935	0.3968	9462	-0.548	-0.445	120
4	0.5430	0.2715	6475	-0.534	-0.442	120

Last Message: Low Sample Detected
<<<Statistics>>> Mean: 0.6316 Std Dev: 0.1187 RSD: 18.79

Sample ID: IC-R Mode: TOC
Method: TOC 0 - 20 ppmC Filename: 06111634
Cal. Curve: TOC WATER 0-20PPM Timestamp: 2025/06/11 21:48
Operator ID: NF IZ Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning	Ending	Integration

				Baseline	Baseline	Time
1	0.3607	0.1804	4301	-0.554	-0.487	120
2	0.6326	0.3163	7543	-0.575	-0.497	120
3	0.6700	0.3350	7989	-0.592	-0.499	120
4	0.6617	0.3309	7890	-0.596	-0.519	120

Last Message: Low Sample Detected
<<<Statistics>>> Mean: 0.5813 Std Dev: 0.1479 RSD: 25.45

Sample ID: BL
Method: TOC 0 - 20 ppmC
Cal. Curve: TOC WATER 0-20PPM
Operator ID: NF IZ
Mode: TOC
Filename: 06111634
Timestamp: 2025/06/11 22:12
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	0.6563	0.3282	7826	-0.621	-0.538	120
2	0.6462	0.3231	7705	-0.640	-0.534	120
3	0.4980	0.2490	5938	-0.617	-0.537	120
4	0.7114	0.3557	8483	-0.614	-0.522	120

Last Message: Low Sample Detected
<<<Statistics>>> Mean: 0.6280 Std Dev: 0.0913 RSD: 14.53

Sample ID: BL
Method: TOC 0 - 20 ppmC
Cal. Curve: TOC WATER 0-20PPM
Operator ID: NF IZ
Mode: TOC
Filename: 06111634
Timestamp: 2025/06/11 22:36
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	0.4210	0.2105	5020	-0.624	-0.557	120
2	0.6339	0.3169	7558	-0.621	-0.543	120
3	0.5826	0.2913	6947	-0.630	-0.555	120
4	0.5421	0.2710	6463	-0.622	-0.566	120

Last Message: Low Sample Detected
<<<Statistics>>> Mean: 0.5449 Std Dev: 0.0907 RSD: 16.65

Sample ID: bl
Method: TOC 0 - 20 ppmC
Cal. Curve: TOC WATER 0-20PPM
Operator ID: NF IZ
Mode: TOC
Filename: 06111634
Timestamp: 2025/06/11 22:59
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	0.6746	0.3373	8043	-0.674	-0.582	120
2	0.5804	0.2902	6920	-0.654	-0.576	120
3	0.4778	0.2389	5698	-0.650	-0.587	120
4	0.4307	0.2154	5136	-0.659	-0.614	120

Last Message: Low Sample Detected
<<<Statistics>>> Mean: 0.5409 Std Dev: 0.1089 RSD: 20.13

Sample ID: ICV CHECK
Method: TOC 0 - 20 ppmC
Cal. Curve: TOC WATER 0-20PPM
Operator ID: NF IZ
Mode: TOC
Filename: 06111634
Timestamp: 2025/06/11 23:25
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning	Ending	Integration

				Baseline	Baseline	Time
1	9.0620	4.5310	108052	-0.639	-0.440	147
2	10.0139	5.0069	119403	-0.607	-0.408	143
3	10.1346	5.0673	120843	-0.612	-0.412	143
4	10.8715	5.4357	129629	-0.617	-0.418	147

<<<Statistics>>> Mean: 10.0205 Std Dev: 0.7430 RSD: 7.41

Sample Results Report Print Date/Time: 2025/07/07 11:05:31

Sample ID	Result	Std. Dev.	RSD	Mode	ALT
0.0PPM	7450	1575	21.13	TOC	
0.5PPM	21128	2451	11.60	TOC	
1.0PPM	32596	1146	3.52	TOC	
2.0PPM.....	60764...	3547..	5.84...	TOC	..
5.0PPM	150029	3222	2.15	TOC	
10.0PPM	292550	2033	0.70	TOC	
20.0PPM.....	571087...	6551..	1.15...	TOC	..
ICV1	10.2358	0.1815	1.77	TOC	
ICB1	0.3370	0.0688	20.42	TOC	
IC-20.....	0.2230...	0.0201..	9.02...	TOC	..
IC-R	0.1938	0.0312	16.09	TOC	

Sample Results Report Print Date/Time: 2025/07/07 11:05:31

Method ID	Sample Type	Vial	Timestamp	Message
TOC 0 - 20 ppmC	TOC Standard	15	2025/07/03 13:19	Low Sample Detected
TOC 0 - 20 ppmC	TOC Standard	2	2025/07/03 13:42	
TOC 0 - 20 ppmC	TOC Standard	3	2025/07/03 14:06	
TOC 0 - 20 ppmC	...TOC Standard ..	4..	2025/07/03 14:30 ..	
TOC 0 - 20 ppmC	TOC Standard	5	2025/07/03 14:55	
TOC 0 - 20 ppmC	TOC Standard	6	2025/07/03 15:21	
TOC 0 - 20 ppmC	...TOC Standard ..	7..	2025/07/03 15:47 ..	
TOC 0 - 20 ppmC	Sample	11	2025/07/03 16:12	
TOC 0 - 20 ppmC	Sample	12	2025/07/03 16:36	Low Sample Detected
TOC 0 - 20 ppmC	...Sample ..	13..	2025/07/03 17:00	..Low Sample Detected
TOC 0 - 20 ppmC	Sample	12	2025/07/03 17:23	Low Sample Detected

Detailed Analysis Report Print Date/Time: 2025/07/07 11:05:59

Sample ID: 0.0PPM Mode: TOC
Method: TOC 0 - 20 ppmC Filename: 07031233
Cal. Curve: TOC WATER 0-20PPM Timestamp: 2025/07/03 13:19
Operator ID: RM IZ Sample Type: TOC Standard

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1			5735	-1.922	-1.869	120
2			6492	-1.892	-1.869	120
3			8764	-1.907	-1.859	120
4			8811	-1.910	-1.881	120

Last Message: Low Sample Detected
<<<Statistics>>> Mean: 7450 Std Dev: 1575 RSD: 21.13

Sample ID: 0.5PPM Mode: TOC
Method: TOC 0 - 20 ppmC Filename: 07031233
Cal. Curve: TOC WATER 0-20PPM Timestamp: 2025/07/03 13:42
Operator ID: RM IZ Sample Type: TOC Standard

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1			17882	-1.950	-1.752	112
2			22928	-1.968	-1.769	117
3			23117	-1.939	-1.740	118
4			20584	-1.939	-1.740	119

<<<Statistics>>> Mean: 21128 Std Dev: 2451 RSD: 11.60

Sample ID: 1.0PPM Mode: TOC
Method: TOC 0 - 20 ppmC Filename: 07031233
Cal. Curve: TOC WATER 0-20PPM Timestamp: 2025/07/03 14:06
Operator ID: RM IZ Sample Type: TOC Standard

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1			31117	-1.886	-1.686	119
2			32274	-1.887	-1.690	124
3			33377	-1.882	-1.682	125
4			33616	-1.869	-1.670	123

<<<Statistics>>> Mean: 32596 Std Dev: 1146 RSD: 3.52

Sample ID: 2.0PPM Mode: TOC
Method: TOC 0 - 20 ppmC Filename: 07031233
Cal. Curve: TOC WATER 0-20PPM Timestamp: 2025/07/03 14:30
Operator ID: RM IZ Sample Type: TOC Standard

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1			62668	-1.847	-1.650	128
2			62029	-1.828	-1.629	125
3			55472	-1.828	-1.630	126
4			62887	-1.882	-1.683	129

<<<Statistics>>> Mean: 60764 Std Dev: 3547 RSD: 5.84

Sample ID: 5.0PPM Mode: TOC
Method: TOC 0 - 20 ppmC Filename: 07031233
Cal. Curve: TOC WATER 0-20PPM Timestamp: 2025/07/03 14:55
Operator ID: RM IZ Sample Type: TOC Standard

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1			150663	-1.857	-1.657	139
2			150525	-1.803	-1.606	138
3			153328	-1.846	-1.647	137
4			145600	-1.797	-1.599	138

<<<Statistics>>> Mean: 150029 Std Dev: 3222 RSD: 2.15

Sample ID: 10.0PPM Mode: TOC
Method: TOC 0 - 20 ppmC Filename: 07031233
Cal. Curve: TOC WATER 0-20PPM Timestamp: 2025/07/03 15:21
Operator ID: RM IZ Sample Type: TOC Standard

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1			295070	-1.804	-1.604	151
2			293173	-1.802	-1.603	148
3			291585	-1.767	-1.568	145
4			290374	-1.756	-1.560	147

<<<Statistics>>> Mean: 292550 Std Dev: 2033 RSD: 0.70

Sample ID: 20.0PPM Mode: TOC
Method: TOC 0 - 20 ppmC Filename: 07031233
Cal. Curve: TOC WATER 0-20PPM Timestamp: 2025/07/03 15:47
Operator ID: RM IZ Sample Type: TOC Standard

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1			573738	-1.739	-1.539	156
2			578298	-1.720	-1.524	159
3			569405	-1.779	-1.579	153
4			562908	-1.743	-1.544	169

<<<Statistics>>> Mean: 571087 Std Dev: 6551 RSD: 1.15

Sample ID: ICV1 Mode: TOC
Method: TOC 0 - 20 ppmC Filename: 07031233
Cal. Curve: TOC WATER 0-20PPM Timestamp: 2025/07/03 16:12
Operator ID: RM IZ Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	10.4799	5.2399	296670	-1.724	-1.525	152
2	10.2011	5.1005	288777	-1.669	-1.470	146
3	10.0413	5.0206	284254	-1.659	-1.459	140
4	10.2208	5.1104	289335	-1.705	-1.506	149

<<<Statistics>>> Mean: 10.2358 Std Dev: 0.1815 RSD: 1.77

Sample ID: ICB1 Mode: TOC
Method: TOC 0 - 20 ppmC Filename: 07031233
Cal. Curve: TOC WATER 0-20PPM Timestamp: 2025/07/03 16:36
Operator ID: RM IZ Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	0.3070	0.1535	8691	-1.724	-1.565	120
2	0.2558	0.1279	7241	-1.706	-1.670	120
3	0.4089	0.2045	11576	-1.753	-1.705	120
4	0.3763	0.1881	10652	-1.756	-1.682	120

Last Message: Low Sample Detected
<<<Statistics>>> Mean: 0.3370 Std Dev: 0.0688 RSD: 20.42

Sample ID: IC-20 Mode: TOC
Method: TOC 0 - 20 ppmC Filename: 07031233
Cal. Curve: TOC WATER 0-20PPM Timestamp: 2025/07/03 17:00
Operator ID: RM IZ Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	0.2423	0.1212	6860	-1.759	-1.722	120
2	0.2321	0.1160	6570	-1.744	-1.711	120
3	0.2220	0.1110	6284	-1.760	-1.708	120
4	0.1955	0.0977	5534	-1.774	-1.751	120

Last Message: Low Sample Detected
<<<Statistics>>> Mean: 0.2230 Std Dev: 0.0201 RSD: 9.02

Sample ID: IC-R Mode: TOC
Method:
TOC 0 - 20 ppmC Filename: 07031233
Cal. Curve: TOC WATER 0-20PPM Timestamp: 2025/07/03 17:23
Operator ID: RM IZ Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	0.1793	0.0896	5076	-1.751	-1.719	120
2	0.2345	0.1173	6639	-1.769	-1.766	120
3	0.1996	0.0998	5651	-1.782	-1.755	120
4	0.1619	0.0809	4582	-1.779	-1.765	120

Last Message: Low Sample Detected
<<<Statistics>>> Mean: 0.1938 Std Dev: 0.0312 RSD: 16.09

Calibration Report Print Date/Time: 2025/07/03 15:47:50

Cal. Curve ID: TOC WATER 0-20PPM
Created: 2025/07/03 15:47
Calibration Factor (m): 5.662e+04
Y Intercept (b): 6533
r-squared: 0.99990

Standard ID	Y Raw Data	X Expected ug C	Measured ug C	Re Message	Date & Time
0.0PPM	7451	0.000	0.016	—	2025/07/03 13:19
0.5PPM	21128	0.250	0.258	3.2	2025/07/03 13:42
1.0PPM	32596	0.500	0.460	-8.0	2025/07/03 14:06
2.0PPM	60764	1.000	0.958	-4.2	2025/07/03 14:30
5.0PPM	150029	2.500	2.535	1.4	2025/07/03 14:55
10.0PPM	292551	5.000	5.052	1.0	2025/07/03 15:21
20.0PPM	571087	10.000	9.971	-0.3	2025/07/03 15:47

12
07/03/25

WORKLIST(Hardcopy Internal Chain)

LB136416

WorkList Name : toc-2536 **WorkList ID :** 190624 **Department :** Wet-Chemistry **Date :** 07-10-2025 08:11:23

Sample	Customer Sample	Matrix	Test	Preservative	Customer	Raw Sample Storage Location	Collect Date	Method
Q2536-01	RW5-SP100-20250708	Water	TOC	Conc H2SO4 to pH < 2	TETR06	O21	07/08/2025	9060A
Q2536-02	RW7-SP100-20250708	Water	TOC	Conc H2SO4 to pH < 2	TETR06	O21	07/08/2025	9060A
Q2536-03	RW8-SP100-20250708	Water	TOC	Conc H2SO4 to pH < 2	TETR06	O21	07/08/2025	9060A

Date/Time 07/10/25 09:15

Raw Sample Received by: [signature]

Raw Sample Relinquished by: [signature]

Date/Time 07/10/25 14:20

Raw Sample Received by: [signature]

Raw Sample Relinquished by: [signature]

1b136416

WORKLIST(Hardcopy Internal Chain)

WorkList Name : toc-071025 **WorkList ID :** 190682 **Department :** Wet-Chemistry **Date :** 07-10-2025 15:10:07

Sample	Customer Sample	Matrix	Test	Preservative	Customer	Raw Sample Storage Location	Collect Date	Method
Q2565-01	MOO-25-0192-0193	Water	TOC	Conc H2SO4 to pH < 2	PSEG03		07/10/2025	9060A

Date/Time 07/10/25 15:35
Raw Sample Received by: 12(JC)
Raw Sample Relinquished by: [illegible]

Date/Time 07/10/25 16:30
Raw Sample Received by: [illegible]
Raw Sample Relinquished by: 12(JC)

Analytical Summary Report

Analysis Method: SM2320 B
Parameter: Alkalinity
Run Number: LB136420
Constant: 50,000

Reviewed By: Eman
Supervisor Review By: Iwona
Normality: 0.02
pH Meter ID: WC pH meter-1

Reagent/Standard	Lot/Log #
alkalinity LCSW 50 ppm	WP113893
SULFURIC ACID, 0.02N, 4L	W3150

Seq	LabID	ClientID	TV (mg/L)	DL	Sample Vol (mL)	Initial pH	pH(4.3-4.7)	Final pH	0.02N H2SO4				Alkalinity	Anal Date	Anal Time
									A	B	C	D			
									Initial(ml)	ml at pH(4.3-4.7)	Final(ml)	Diff(ml)			
1	LB136420BL	LB136420BL		1	100	5.05	4.61	4.31	0.0	0.08	0.16	0.00	0.00	07/10/2025	13:10
2	LB136420BS	LB136420BS	50	1	100	10.01	4.47	4.17	0	5.22	6.02	4.42	44.20	07/10/2025	13:15
3	Q2536-01	RW5-SP100-20250		1	100	5.09	4.54	4.24	0	0.52	0.60	0.44	4.40	07/10/2025	13:20
4	Q2536-01DUP	RW5-SP100-20250		1	100	5.10	4.66	4.36	0	0.50	0.60	0.40	4.00	07/10/2025	13:25
5	Q2536-02	RW7-SP100-20250		1	100	5.04	4.58	4.28	0	0.26	0.34	0.18	1.80	07/10/2025	13:30
6	Q2536-03	RW8-SP100-20250		1	100	5.01	4.68	4.28	0	0.18	0.30	0.06	0.60	07/10/2025	13:35

D = 2(B-A)-(C-A)

Alkalinity = (D * Normality * Constant) / Sample Volume(ml)

WORKLIST(Hardcopy Internal Chain)

1b136420

WorkList Name : ALKALINITY-071025 **WorkList ID :** 190637 **Department :** Wet-Chemistry **Date :** 07-10-2025 11:58:11

Sample	Customer Sample	Matrix	Test	Preservative	Customer	Raw Sample Storage Location	Collect Date	Method
Q2536-01	RW5-SP100-20250708	Water	Alkalinity	Cool 4 deg C	TETR06	O21	07/08/2025	SM2320 B
Q2536-02	RW7-SP100-20250708	Water	Alkalinity	Cool 4 deg C	TETR06	O21	07/08/2025	SM2320 B
Q2536-03	RW8-SP100-20250708	Water	Alkalinity	Cool 4 deg C	TETR06	O21	07/08/2025	SM2320 B

Date/Time 07/10/25 12:40
Raw Sample Received by: EM(WC)
Raw Sample Relinquished by: MP(CA)

Date/Time 07/10/25 13:45
Raw Sample Received by: JR(CA)
Raw Sample Relinquished by: EM(WC)

Alliance TECHNICAL GROUP

Analytical Summary Report

Analysis Method: 9034
Parameter: Sulfide
Run Number: LB136421

ANALYST: rubina
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	W3213
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	PB168778BL		1	50	50	5.00	0.00	4.96	4.96	0.04	0.00	0.00	07/10/2025	13:20
2	PB168778BS	25	1	50	50	5.00	0.00	1.96	1.96	3.04	3.00	24.00	07/10/2025	13:23
3	Q2536-01		1	50	50	5.00	0.00	4.92	4.92	0.08	0.04	0.32	07/10/2025	13:26
4	Q2536-01DUP		1	50	50	5.00	0.00	4.92	4.92	0.08	0.04	0.32	07/10/2025	13:29
5	Q2536-01MS	25	1	50	50	5.00	0.00	1.94	1.94	3.06	3.02	24.16	07/10/2025	13:32
6	Q2536-01MSD	25	1	50	50	5.00	0.00	1.92	1.92	3.08	3.04	24.32	07/10/2025	13:35
7	Q2536-02		1	50	50	5.00	0.00	4.94	4.94	0.06	0.02	0.16	07/10/2025	13:38
8	Q2536-03		1	50	50	5.00	0.00	4.92	4.92	0.08	0.04	0.32	07/10/2025	13:41

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

LB136436

Test results | Aquakem 7.2AQ1 | Page:

Alliance Technical Group
284 Sheffield Street, Mountainside, NJ 07092

7/11/2025 10:11 | Reviewed by : RM | Instrument ID : Konelab

Test: Total CN

Sample Id	Result	Dil. 1 +	Response	Errors
ICV1	96.026	0.0	0.078	
ICB1	-0.381	0.0	0.001	
CCV1	243.856	0.0	0.195	
CCB1	-0.390	0.0	0.001	
PB168805BL	-0.556	0.0	0.001	
PB168805BS	98.100	0.0	0.079	
LOWPB168805	9.747	0.0	0.009	97% (90-110) 07/11/2025 RM
HIGHPB168805	489.748	0.0	0.390	
Q2555-01	1.917	0.0	0.003	
Q2555-01DUP	1.635	0.0	0.003	97% (90-110)
Q2555-01MS	37.976	0.0	0.032	
Q2555-01MSD	38.152	0.0	0.032	
Q2555-03	1.199	0.0	0.002	
Q2558-01	1.590	0.0	0.003	
CCV2	244.923	0.0	0.196	
CCB2	-0.441	0.0	0.001	
Q2558-03	6.160	0.0	0.006	
Q2560-01	0.681	0.0	0.002	
PB168782BL	-0.592	0.0	0.001	
PB168782BS	96.868	0.0	0.078	
Q2536-01	-0.482	0.0	0.001	
Q2536-01DUP	-0.260	0.0	0.001	
Q2536-01MS	39.602	0.0	0.033	
Q2536-01MSD	39.349	0.0	0.033	
Q2536-02	-0.755	0.0	0.001	
Q2536-03	-0.769	0.0	0.001	
CCV3	248.793	0.0	0.199	
CCB3	-0.360	0.0	0.001	

N	28
Mean	60.405
SD	114.4113
CV%	189.41

Aquakem v. 7.2AQ1
Results from time period:
Fri Jul 11 08:37:48 2025
Fri Jul 11 10:11:01 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	-0.9536	µg/l	7/11/2025 8:54:36	
5.0PPBCN	A	Total CN	P	4.1163	µg/l	7/11/2025 8:54:37	
10PPBCN	A	Total CN	P	9.0972	µg/l	7/11/2025 8:54:38	
50PPBCN	A	Total CN	P	49.9481	µg/l	7/11/2025 8:54:39	
100PPBCN	A	Total CN	P	100.6483	µg/l	7/11/2025 8:54:40	
250PPBCN	A	Total CN	P	254.4826	µg/l	7/11/2025 8:54:41	
500PPBCN	A	Total CN	P	497.6612	µg/l	7/11/2025 8:54:42	
ICV1	S	Total CN	P	96.0265	µg/l	7/11/2025 9:31:25	
ICB1	S	Total CN	P	-0.3811	µg/l	7/11/2025 9:31:26	
CCV1	S	Total CN	P	243.856	µg/l	7/11/2025 9:31:28	
CCB1	S	Total CN	P	-0.3899	µg/l	7/11/2025 9:31:30	
PB168805BL	S	Total CN	P	-0.556	µg/l	7/11/2025 9:31:32	
PB168805BS	S	Total CN	P	98.1004	µg/l	7/11/2025 9:31:34	
LOWPB168805	S	Total CN	P	9.7474	µg/l	7/11/2025 9:39:04	
HIGHPB168805	S	Total CN	P	489.7482	µg/l	7/11/2025 9:39:06	
Q2555-01	S	Total CN	P	1.9174	µg/l	7/11/2025 9:39:07	
Q2555-01DUP	S	Total CN	P	1.6354	µg/l	7/11/2025 9:39:08	
Q2555-01MS	S	Total CN	P	37.9758	µg/l	7/11/2025 9:46:34	
Q2555-01MSD	S	Total CN	P	38.1525	µg/l	7/11/2025 9:46:35	
Q2555-03	S	Total CN	P	1.1985	µg/l	7/11/2025 9:46:36	
Q2558-01	S	Total CN	P	1.5896	µg/l	7/11/2025 9:46:37	
CCV2	S	Total CN	P	244.9234	µg/l	7/11/2025 9:46:41	
CCB2	S	Total CN	P	-0.4413	µg/l	7/11/2025 9:46:42	
Q2558-03	S	Total CN	P	6.1598	µg/l	7/11/2025 9:46:44	
Q2560-01	S	Total CN	P	0.6812	µg/l	7/11/2025 9:54:06	
PB168782BL	S	Total CN	P	-0.592	µg/l	7/11/2025 9:54:08	
PB168782BS	S	Total CN	P	96.868	µg/l	7/11/2025 9:54:10	
Q2536-01	S	Total CN	P	-0.4818	µg/l	7/11/2025 9:54:11	
Q2536-01DUP	S	Total CN	P	-0.2599	µg/l	7/11/2025 9:54:12	
Q2536-01MS	S	Total CN	P	39.6018	µg/l	7/11/2025 9:54:15	
Q2536-01MSD	S	Total CN	P	39.3488	µg/l	7/11/2025 9:54:16	
Q2536-02	S	Total CN	P	-0.755	µg/l	7/11/2025 10:00:45	
Q2536-03	S	Total CN	P	-0.7685	µg/l	7/11/2025 10:00:46	
CCV3	S	Total CN	P	248.7928	µg/l	7/11/2025 10:00:51	
CCB3	S	Total CN	P	-0.36	µg/l	7/11/2025 10:00:52	

Calibration results Aquakem 7.2AQ1 Page:

Alliance Technical Group
284 Sheffield Street, Mountainside, NJ 07092

7/11/2025 8:55 Reviewed by : RM Instrument ID : Konelab

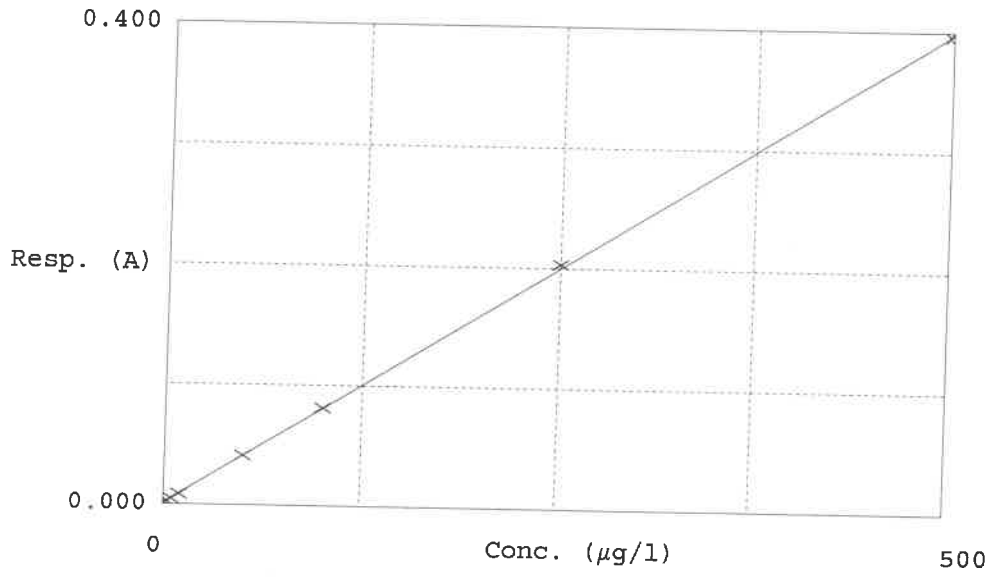
Test Total CN

Accepted 7/11/2025 8:55

Factor 1261
Bias 0.001

Coeff. of det. 0.999861

Errors



	Calibrator	Response	Calc. con.	Conc.	Errors
1	0.0PPBCN	0.001	-0.9536	0.0000	—
2	5.0PPBCN	0.005	4.1163	5.0000	-17.7
3	10PPBCN	0.009	9.0972	10.0000	-9.0
4	50PPBCN	0.041	49.9481	50.0000	-0.1
5	100PPBCN	0.081	100.6483	100.0000	0.6
6	250PPBCN	0.203	254.4826	250.0000	1.8
7	500PPBCN	0.396	497.6612	500.0000	-0.5

07/11/2025
RM

LB136459

Test results | Aquakem 7.2AQ1 | Page:

Alliance Technical Group
284 Sheffield Street, Mountainside, NJ 07092

Reviewed by : RM | Instrument ID : Konelab

7/14/2025 12:41

Test: Ammonia-N

Sample Id	Result	Dil. 1 +	Response	Errors
ICV1	0.993	0.0	0.210	
ICB1	0.008	0.0	0.019	
CCV1	1.017	0.0	0.215	
CCB1	0.008	0.0	0.019	
RL CHECK	0.093	0.0	0.035	
PB168835BL	0.001	0.0	0.017	
PB168835BS	0.962	0.0	0.204	93% (50-150) 07/14/2025 RM
Q2536-01	0.003	0.0	0.018	
Q2536-01DUP	0.008	0.0	0.019	
Q2536-01MS	0.993	0.0	0.210	
Q2536-01MSD	1.027	0.0	0.217	
Q2536-02	0.009	0.0	0.019	
Q2536-03	0.005	0.0	0.018	
Q2565-01	-0.059	0.0	0.006	
CCV2	0.980	0.0	0.208	
CCB2	0.004	0.0	0.018	
Q2570-03	10.428	0.0	2.046	Test limit high
Q2570-07	8.777	0.0	1.724	Test limit high
CCV3	1.030	0.0	0.217	
CCB3	0.004	0.0	0.018	
Q2570-03DLX10	0.965	0.0	0.205	
Q2570-07DLX10	0.799	0.0	0.173	
CCV4	1.002	0.0	0.212	
CCB4	-0.003	0.0	0.017	

N	24
Mean	1.211
SD	2.6390
CV%	217.99

Aquakem v. 7.2AQ1
Results from time period:
Mon Jul 14 10:59:54 2025
Mon Jul 14 12:39:05 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	0.0074	mg/l	7/14/2025 10:59:54	
0.1PPM	A		Ammonia-N P	0.1037	mg/l	7/14/2025 10:59:55	
0.2PPM	A		Ammonia-N P	0.1989	mg/l	7/14/2025 10:59:56	
0.4PPM	A		Ammonia-N P	0.3879	mg/l	7/14/2025 10:59:57	
1.0PPM	A		Ammonia-N P	0.9878	mg/l	7/14/2025 10:59:58	
1.3PPM	A		Ammonia-N P	1.3509	mg/l	7/14/2025 10:59:59	
2.0PPM	A		Ammonia-N P	1.9967	mg/l	7/14/2025 11:00:00	
ICV1	S		Ammonia-N P	0.9934	mg/l	7/14/2025 11:52:22	
ICB1	S		Ammonia-N P	0.0077	mg/l	7/14/2025 11:52:23	
CCV1	S		Ammonia-N P	1.0169	mg/l	7/14/2025 11:52:25	
CCB1	S		Ammonia-N P	0.0084	mg/l	7/14/2025 11:52:27	
RL CHECK	S		Ammonia-N P	0.0928	mg/l	7/14/2025 11:52:29	
PB168835BL	S		Ammonia-N P	0.0014	mg/l	7/14/2025 12:03:05	
PB168835BS	S		Ammonia-N P	0.9616	mg/l	7/14/2025 12:03:08	
Q2536-01	S		Ammonia-N P	0.0027	mg/l	7/14/2025 12:03:09	
Q2536-01DUP	S		Ammonia-N P	0.0082	mg/l	7/14/2025 12:03:10	
Q2536-01MS	S		Ammonia-N P	0.9932	mg/l	7/14/2025 12:03:12	
Q2536-01MSD	S		Ammonia-N P	1.0271	mg/l	7/14/2025 12:03:13	
Q2536-02	S		Ammonia-N P	0.0093	mg/l	7/14/2025 12:03:15	
Q2536-03	S		Ammonia-N P	0.0051	mg/l	7/14/2025 12:03:16	
Q2565-01	S		Ammonia-N P	-0.0587	mg/l	7/14/2025 12:13:46	
CCV2	S		Ammonia-N P	0.9803	mg/l	7/14/2025 12:13:47	
CCB2	S		Ammonia-N P	0.0043	mg/l	7/14/2025 12:13:49	
Q2570-03	S		Ammonia-N P	10.4277	mg/l	7/14/2025 12:13:51	
Q2570-07	S		Ammonia-N P	8.7765	mg/l	7/14/2025 12:13:52	
CCV3	S		Ammonia-N P	1.0296	mg/l	7/14/2025 12:13:53	
CCB3	S		Ammonia-N P	0.0036	mg/l	7/14/2025 12:13:56	
Q2570-03DLX10	S		Ammonia-N P	0.9654	mg/l	7/14/2025 12:38:59	
Q2570-07DLX10	S		Ammonia-N P	0.799	mg/l	7/14/2025 12:39:01	
CCV4	S		Ammonia-N P	1.0024	mg/l	7/14/2025 12:39:02	
CCB4	S		Ammonia-N P	-0.0026	mg/l	7/14/2025 12:39:05	

Calibration results — Aquakem 7.2AQ1 —

Alliance Technical Group
284 Sheffield Street, Mountainside, NJ 07092

7/14/2025 11:07 — Reviewed by : RM — Instrument ID : Konelab

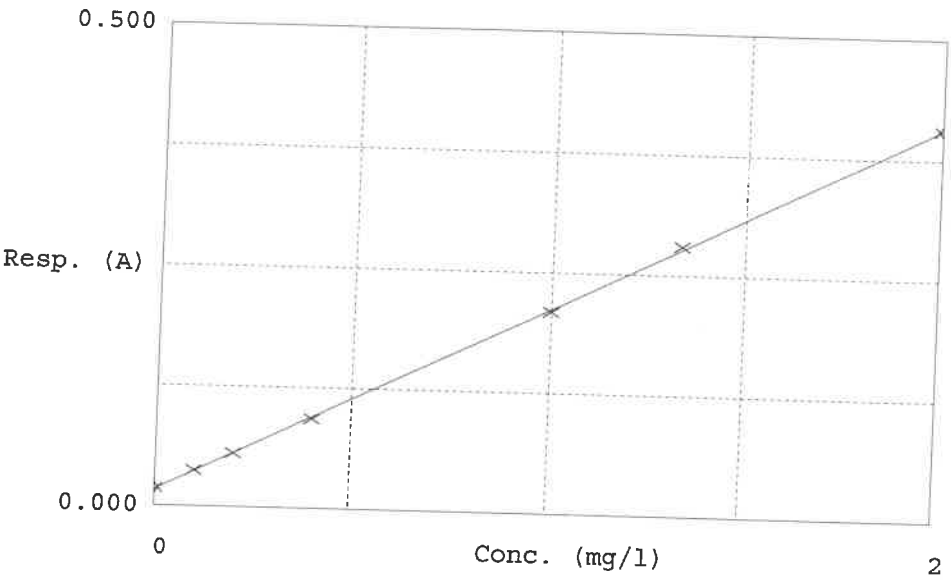
Test Ammonia-N

Accepted 7/14/2025 11:07

Factor 5.141
Bias 0.017

Coeff. of det. 0.999798

Errors



	Calibrator	Response	Calc. con.	Conc.	Errors
1	0.00PPM	0.019	0.0074	0.0000	-
2	NH3-2PPM	0.037	0.1037	0.1000	3.7
3	NH3-2PPM	0.056	0.1989	0.2000	-0.6
4	NH3-2PPM	0.093	0.3879	0.4000	-3.0
5	NH3-2PPM	0.209	0.9878	1.0000	-1.2
6	NH3-2PPM	0.280	1.3509	1.3333	3.9
7	NH3-2PPM	0.406	1.9967	2.0000	-0.2

07/14/2025
RM

Analytical Summary Report

Analysis Method: SM5220 D
ANALYST: Iwona
Parameter: COD
SUPERVISOR REVIEW BY: jignesh
Run Number: LB136477

Reagent/Standard	Lot/Log #
COD calibration std. 150 ppm	WP113238
COD calibration std. 100 ppm	WP113237
COD calibration std. 50 ppm	WP113235
COD calibration std. 10 ppm	WP113234
COD calibration std. 0 ppm	WP113233
COD ICV-LCS std, 50ppm	WP113240
COD calibration std. 75 ppm	WP113236
COD Digestion Vials Low Level 0-150Mg/L	W3129
COD CCV std, 50ppm	WP113940
COD ICV-LCS std, 50ppm	WP113941
RL CHECK	WP113942

Temp In(C): 148	**Date In:** 07/15/2025	**Time In:** 09:05
Temp Out(C): 151	**Date Out:** 07/15/2025	**Time Out:** 11:05

Intercept: 0.8179 **Slope:** 0.9847 **Regression:** 0.9995

Seq	Lab ID	TrueValue (mg/l)	DF	MATRIX	Reading	Result (mg/l)	%D	Anal Date	Anal Time
1	CAL1	0	1	Water	0.000	-0.831		05/28/2025	13:10
2	CAL2	10	1	Water	9.000	8.309	-16.9	05/28/2025	13:10
3	CAL3	50	1	Water	52.000	51.977	4	05/28/2025	13:11
4	CAL4	75	1	Water	77.000	77.366	3.2	05/28/2025	13:11
5	CAL5	100	1	Water	99.000	99.708	-0.3	05/28/2025	13:12
6	CAL6	150	1	Water	147.000	148.453	-1	05/28/2025	13:12

Analytical Summary Report

Analysis Method: SM5220 D

ANALYST: Iwona

Parameter: COD

SUPERVISOR REVIEW BY: jignesh

Run Number: LB136477

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	51.000	50.962	05/28/2025	13:13
2	ICB		NA	NA	1	Water	0.000	-0.831	05/28/2025	13:13
3	CCV1	50	NA	NA	1	Water	48.000	47.915	07/15/2025	12:10
4	CCB1		NA	NA	1	Water	1.000	0.185	07/15/2025	12:10
5	RL Check	10	NA	NA	1	Water	8.000	7.294	07/15/2025	12:11
6	LB136477BL		NA	NA	1	Water	0.000	-0.831	07/15/2025	12:11
7	LB136477BS	50	NA	NA	1	Water	51.000	50.962	07/15/2025	12:12
8	Q2525-01		NA	NA	1	Water	122.000	123.065	07/15/2025	12:12
9	Q2536-01		NA	NA	1	Water	0.000	-0.831	07/15/2025	12:13
10	Q2536-02		NA	NA	1	Water	0.000	-0.831	07/15/2025	12:13
11	Q2536-03		NA	NA	1	Water	0.000	-0.831	07/15/2025	12:14
12	Q2565-01		NA	NA	50	Water	102.000	102.754	07/15/2025	12:14
13	Q2588-01		NA	NA	50	Water	48.000	47.915	07/15/2025	12:15
14	Q2602-01		NA	NA	1	Water	1.000	0.185	07/15/2025	12:15
15	Q2602-01DUP		NA	NA	1	Water	1.000	0.185	07/15/2025	12:16
16	CCV2	50	NA	NA	1	Water	49.000	48.931	07/15/2025	12:16
17	CCB2		NA	NA	1	Water	0.000	-0.831	07/15/2025	12:17
18	Q2602-01MS	50	NA	NA	1	Water	47.000	46.900	07/15/2025	12:17
19	Q2602-01MSD	50	NA	NA	1	Water	48.000	47.915	07/15/2025	12:18
20	CCV3	50	NA	NA	1	Water	50.000	49.946	07/15/2025	12:18
21	CCB3		NA	NA	1	Water	1.000	0.185	07/15/2025	12:19

WORKLIST(Hardcopy Internal Chain)

LB 136477

WorkList Name : COD-071425 **WorkList ID :** 190690 **Department :** Wet-Chemistry **Date :** 07-14-2025 08:54:55

Sample	Customer Sample	Matrix	Test	Preservative	Customer	Raw Sample Storage Location	Collect Date	Method
Q2588-01	MH-7112025	Water	COD	Conc H2SO4 to pH < 2	EURO03	D41	07/11/2025	SM5220 D
Q2536-01	RW5-SP100-20250708	Water	COD	Conc H2SO4 to pH < 2	TETR06	O21	07/08/2025	SM5220 D
Q2536-02	RW7-SP100-20250708	Water	COD	Conc H2SO4 to pH < 2	TETR06	O21	07/08/2025	SM5220 D
Q2536-03	RW8-SP100-20250708	Water	COD	Conc H2SO4 to pH < 2	TETR06	O21	07/08/2025	SM5220 D
Q2525-01	EFFLUENT-COMPOSITE	Water	COD	Conc H2SO4 to pH < 2	TETR06	O21	07/08/2025	SM5220 D
Q2565-01	MOO-25-0192-0193	Water	COD	Conc H2SO4 to pH < 2	M&MM01	O33	07/08/2025	SM5220 D
Q2602-01	FRAC-TANK-266380	Water	COD	Conc H2SO4 to pH < 2	PSEG03		07/10/2025	SM5220 D
		Water	COD	Conc H2SO4 to pH < 2	PSEG03	D31	07/14/2025	SM5220 D

Date/Time 07/15/25 08:40
Raw Sample Received by: 12(JC)
Raw Sample Relinquished by: [signature]

Date/Time 07/15/25 09:20
Raw Sample Received by: [signature]
Raw Sample Relinquished by: 12(JC)

Reviewed By:jignesh On:7/15/2025 12:21:51 PM Inst Id :SPECTROPHOTOME

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

Alliance TECHNICAL GROUP

Water Phosphorus-Total Preparation Sheet

PB168769

SOP ID : M365.3 & SM4500-P E-18

SDG No : N/A

Matrix : WATER

Pippete ID : WC

Balance ID : N/A

Hood ID : HOOD#3

Block ID : WC S-1, WC S-2

Weigh By : IZ

Start Digest Date: 07/09/2025 **Time :** 09:50 **Temp :** 95 °C

End Digest Date: 07/09/2025 **Time :** 10:55 **Temp :** 96 °C

End boleh 07/09/2025 11:30 95°C
07/09/2025 12:30 97°C

Digestion tube ID : M5595

Filter paper ID : 400213

pH Meter ID : N/A

Block Thermometer ID : WC-BLOCK#1

Prep Technician Signature: IZ

Supervisor Signature:

Standared Name	MLS USED	STD REF. # FROM LOG
LCSW	0.5ML	WP112914
MS/MSD SPIKE SOL.	0.5ML	WP112913
PBW	50.ML	W3112
N/A	N/A	N/A
N/A	N/A	N/A

Chemical Used	ML/SAMPLE USED	Lot Number
11N H2SO4	1ML	WP112615
AMMONIUM PERSULFATE	0.4g	W3035
pH Paper 0-14	N/A	W3215
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
N/A	N/A	N/A
N/A	N/A	N/A

LAB SAMPLE ID	CLIENT SAMPLE ID	Wt(g)/Vol(ml)	Comment
CAL1	CAL1	50.0ML	WP113866
CAL2	CAL2	50.0ML	WP113867
CAL3	CAL3	50.0ML	WP113868
CAL4	CAL4	50.0ML	WP113869
CAL5	CAL5	50.0ML	WP113870
CAL6	CAL6	50.0ML	WP113871
ICV	ICV	50.0ML	WP113873
ICB	ICB	50.0ML	W3112
CCV	CCV	50.0ML	WP113872
CCB	CCB	50.0ML	W3112

Extraction Conformance/Non-Conformance Comments:

N/A

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

12

Alliance TECHNICAL GROUP

Water Phosphorus-Total Preparation Sheet

PB168769

Lab Sample ID	Client Sample ID	Initial Vol (ml)	Final Vol (ml)	pH	Sulfide	Oxidizing	Nitrate/ Nitrite	Comment	Prep Pos
PB168769BL	PBW769	50	50	<2	N/A	N/A	N/A	N/A	N/A
PB168769BS	LCS769	50	50	<2	N/A	N/A	N/A	N/A	N/A
Q2470-01DUP	SW-1DUP	50	50	<2	N/A	N/A	N/A	N/A	N/A
Q2470-01MS	SW-1MS	50	50	<2	N/A	N/A	N/A	N/A	N/A
Q2470-01MSD	SW-1MSD	50	50	<2	N/A	N/A	N/A	N/A	N/A
Q2470-01	SW-1	50	50	<2	N/A	N/A	N/A	N/A	N/A
Q2471-01	SW-1	50	50	<2	N/A	N/A	N/A	N/A	N/A
Q2525-01	EFFLUENT-COMPOSITE	50	50	<2	N/A	N/A	N/A	N/A	N/A
Q2536-01	RW5-SP100-20250708	50	50	<2	N/A	N/A	N/A	N/A	N/A
Q2536-02	RW7-SP100-20250708	50	50	<2	N/A	N/A	N/A	N/A	N/A
Q2536-03	RW8-SP100-20250708	50	50	<2	N/A	N/A	N/A	N/A	N/A

WORKLIST(Hardcopy Internal Chain)

WorkList Name : TotalPhos-070925 **WorkList ID :** 190603 **Department :** Distillation **Date :** 07-09-2025 09:03:21

Sample	Customer Sample	Matrix	Test	Preservative	Customer	Raw Sample Storage Location	Collect Date	Method
Q2470-01	SW-1	Water	Phosphorus-Total	Conc H2SO4 to pH < 2	ATGG01	A52	06/27/2025	365.3
Q2471-01	SW-1	Water	Phosphorus-Total	Conc H2SO4 to pH < 2	ATGG01	A33	07/27/2025	365.3
Q2525-01	EFFLUENT-COMPOSITE	Water	Phosphorus-Total	Conc H2SO4 to pH < 2	M&MM01	O33	07/08/2025	365.3

Date/Time 07/09/25 09:10

Raw Sample Received by: [signature]

Raw Sample Relinquished by: [signature]

Date/Time 07/09/25 10:15

Raw Sample Received by: [signature]

Raw Sample Relinquished by: [signature]

WORKLIST(Hardcopy Internal Chain)

WorkList Name : TotalPhos-070925-2 **WorkList ID :** 190614 **Department :** Distillation **Date :** 07-09-2025 10:52:35

Sample	Customer Sample	Matrix	Test	Preservative	Customer	Raw Sample Storage Location	Collect Date	Method
Q2536-01	RW5-SP100-20250708	Water	Phosphorus-Total	Conc H2SO4 to pH < 2	TETR06	O21	07/08/2025	365.3
Q2536-02	RW7-SP100-20250708	Water	Phosphorus-Total	Conc H2SO4 to pH < 2	TETR06	O21	07/08/2025	365.3
Q2536-03	RW8-SP100-20250708	Water	Phosphorus-Total	Conc H2SO4 to pH < 2	TETR06	O21	07/08/2025	365.3

Date/Time 07/09/25 11:15
Raw Sample Received by: 12(UC)
Raw Sample Relinquished by: [illegible](COC)

Date/Time 07/09/25 11:50
Raw Sample Received by: [illegible]
Raw Sample Relinquished by: 12(UC)

Alliance TECHNICAL GROUP

Water Sulfide Preparation Sheet

PB168778

SOP ID : M9030B-Sulfide-13

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: 07/10/2025 **Time :** 08:40 **Temp :** 70 °C

End Digest Date: 07/10/2025 **Time :** 10:10 **Temp :** 70 °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: 12

Standared Name	MLS USED	STD REF. # FROM LOG
LCSW	1.25ML	WP113879
PBW	50.0ML	W3112
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	W3215
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:

07/10/2025 RM

N/A

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

Alliance TECHNICAL GROUP

Water Sulfide Preparation Sheet

PB168778

Lab Sample ID	Client Sample ID	Initial Vol (ml)	Final Vol (ml)	pH	Sulfide	Oxidizing	Nitrate/ Nitrite	Comment	Prep Pos
PB168778BL	PBW778	50	50	>12	N/A	Negative	N/A	N/A	N/A
PB168778BS	LCS778	50	50	>12	N/A	Negative	N/A	N/A	N/A
Q2536-01DUP	RW5-SP100-20250708DUP	50	50	>12	N/A	Negative	N/A	N/A	N/A
Q2536-01MS	RW5-SP100-20250708MS	50	50	>12	N/A	Negative	N/A	N/A	N/A
Q2536-01MSD	RW5-SP100-20250708MSD	50	50	>12	N/A	Negative	N/A	N/A	N/A
Q2536-01	RW5-SP100-20250708	50	50	>12	N/A	Negative	N/A	N/A	N/A
Q2536-02	RW7-SP100-20250708	50	50	>12	N/A	Negative	N/A	N/A	N/A
Q2536-03	RW8-SP100-20250708	50	50	>12	N/A	Negative	N/A	N/A	N/A

WORKLIST(Hardcopy Internal Chain)

WorkList Name : SULFIDE-2536 **WorkList ID :** 190621 **Department :** Wet-Chemistry **Date :** 07-09-2025 16:35:08

Sample	Customer Sample	Matrix	Test	Preservative	Customer	Raw Sample Storage Location	Collect Date	Method
Q2536-01	RW5-SP100-20250708	Water	Sulfide	Zinc acetate and 6N NaOH tTETR06		O21	07/08/2025	9034
Q2536-02	RW7-SP100-20250708	Water	Sulfide	Zinc acetate and 6N NaOH tTETR06		O21	07/08/2025	9034
Q2536-03	RW8-SP100-20250708	Water	Sulfide	Zinc acetate and 6N NaOH tTETR06		O21	07/08/2025	9034

Date/Time 07/10/2025 08.10

Raw Sample Received by: RM (WC)

Raw Sample Relinquished by: PL(WC)

Date/Time 07/10/2025 09.00

Raw Sample Received by: PL(WC)

Raw Sample Relinquished by: RM (WC)

Alliance TECHNICAL GROUP

Water Cyanide Preparation Sheet

PB168782

SOP ID : M9012B-Total, Amenable and Reactive Cyanide-21

SDG No : N/A

Start Digest Date: 07/10/2025 **Time :** 15:00 **Temp :** 124 °C

Matrix : WATER

End Digest Date: 07/10/2025 **Time :** 16:30 **Temp :** 126 °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:** JP

Weigh By : N/A **pH Meter ID :** N/A **Supervisor Signature:** 12

Standared Name	MLS USED	STD REF. # FROM LOG
LCSW	1.0ML	WP113838
MS/MSD SPIKE SOL.	0.40ML	WP113837
PBW	50.0ML	W3112
N/A	N/A	N/A
N/A	N/A	N/A

Chemical Used	ML/SAMPLE USED	Lot Number
0.25N NaOH	50.0ML	WP113836
50% v/v H2SO4	5.0ML	WP112826
51% w/v MgCL2	2.0ML	WP112827
pH Paper 0-14	N/A	W3215
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	N/A	AS PER PB168805
ICB	ICB	N/A	N/A
CCV	CCV	N/A	N/A
CCB	CCB	N/A	N/A
Midrange	Midrange	N/A	N/A
HIGHSTD	HIGHSTD	N/A	AS PER PB168805
LOWSTD	LOWSTD	N/A	AS PER PB168805

Extraction Conformance/Non-Conformance Comments:

N/A

Date / Time	Prepped Sample Relinquished By/Location	Received By/Location
07/10/2025 16:40	JP / WC	RM (WC)
	Preparation Group	Analysis Group

Alliance TECHNICAL GROUP

Water Cyanide Preparation Sheet

PB168782

Lab Sample ID	Client Sample ID	Initial Vol (ml)	Final Vol (ml)	pH	Sulfide	Oxidizing	Nitrate/ Nitrite	Comment	Prep Pos
PB168782BL	PBW782	50	50	>12	Negative	Negative	Negative	N/A	N/A
PB168782BS	LCS782	50	50	>12	Negative	Negative	Negative	N/A	N/A
Q2536-01DUP	RW5-SP100-20250708DUP	50	50	>12	Negative	Negative	Negative	N/A	N/A
Q2536-01MS	RW5-SP100-20250708MS	50	50	>12	Negative	Negative	Negative	N/A	N/A
Q2536-01MSD	RW5-SP100-20250708MSD	50	50	>12	Negative	Negative	Negative	N/A	N/A
Q2536-01	RW5-SP100-20250708	50	50	>12	Negative	Negative	Negative	N/A	N/A
Q2536-02	RW7-SP100-20250708	50	50	>12	Negative	Negative	Negative	N/A	N/A
Q2536-03	RW8-SP100-20250708	50	50	>12	Negative	Negative	Negative	N/A	N/A

WORKLIST(Hardcopy Internal Chain)

WorkList Name : cn w q2536 **WorkList ID :** 190626 **Department :** Distillation **Date :** 07-10-2025 08:28:55

Sample	Customer Sample	Matrix	Test	Preservative	Customer	Raw Sample Storage Location	Collect Date	Method
Q2536-01 D	RW5-SP100-20250708	Water	Cyanide	1:1 NaOH to pH >12	TETR06	O21	07/08/2025	9012B
Q2536-02 D	RW7-SP100-20250708	Water	Cyanide	1:1 NaOH to pH >12	TETR06	O21	07/08/2025	9012B
Q2536-03 D	RW8-SP100-20250708	Water	Cyanide	1:1 NaOH to pH >12	TETR06	O21	07/08/2025	9012B

Date/Time 07/10/2025 14:10

Raw Sample Received by: YP (WC)

Raw Sample Relinquished by: CP

Date/Time 07/10/2025 15:20

Raw Sample Received by: CP

Raw Sample Relinquished by: YP (WC)

Alliance TECHNICAL GROUP

Water Ammonia Preparation Sheet

PB168835

SOP ID : MSM4500-NH3 B,G-Ammonia-18

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 : RM

Start Digest Date: 07/14/2025 **Time :** 08:45 **Temp :** 150 °C

End Digest Date: 07/14/2025 **Time :** 09:45 **Temp :** 158 °C

Tibeten 07/14/2025 10-10 150 C
07/14/2025 11-10 160 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: 12

Standared Name	MLS USED	STD REF. # FROM LOG
LCSW	1.0ML	WP113889
MS/MSD SPIKE SOL.	1.0ML	WP113888
PBW	50.0ML	W3112
RL CHECK	0.1ML	WP113888
N/A	N/A	N/A

Chemical Used	ML/SAMPLE USED	Lot Number
BORATE BUFFER	2.5ML	WP113886
NAOH 6N	0.5-2.0ML	WP113887
H2SO4 0.04N	5.0ML	WP112828
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
WP111604.Due to bad matrix and client history 1ML was taken as an initial volume for Q2570-03,07

Date / Time	Prepped Sample Relinquished By/Location	Received By/Location
07/14/2025 11:20	RM (WC)	RM (WC)
	Preparation Group	Analysis Group

Alliance TECHNICAL GROUP

Water Ammonia Preparation Sheet

PB168835

Lab Sample ID	Client Sample ID	Initial Vol (ml)	Final Vol (ml)	pH	Sulfide	Oxidizing	Nitrate/ Nitrite	Comment	Prep Pos
PB168835BL	PBW835	50	50	<2	N/A	Negative	N/A	AFTER ADDING 6N NAOH PH IS 9.5	N/A
PB168835BS	LCS835	50	50	<2	N/A	Negative	N/A	AFTER ADDING 6N NAOH PH IS 9.5	N/A
Q2536-01DUP	RW5-SP100-20250708DUP	50	50	<2	N/A	Negative	N/A	AFTER ADDING 6N NAOH PH IS 9.5	N/A
Q2536-01MS	RW5-SP100-20250708MS	50	50	<2	N/A	Negative	N/A	AFTER ADDING 6N NAOH PH IS 9.5	N/A
Q2536-01MSD	RW5-SP100-20250708MSD	50	50	<2	N/A	Negative	N/A	AFTER ADDING 6N NAOH PH IS 9.5	N/A
Q2536-01	RW5-SP100-20250708	50	50	<2	N/A	Negative	N/A	AFTER ADDING 6N NAOH PH IS 9.5	N/A
Q2536-02	RW7-SP100-20250708	50	50	<2	N/A	Negative	N/A	AFTER ADDING 6N NAOH PH IS 9.5	N/A
Q2536-03	RW8-SP100-20250708	50	50	<2	N/A	Negative	N/A	AFTER ADDING 6N NAOH PH IS 9.5	N/A
Q2565-01	MOO-25-0192-0193	50	50	<2	N/A	Negative	N/A	AFTER ADDING 6N NAOH PH IS 9.5	N/A
Q2570-03	INFLUENT	1	50	<2	N/A	Negative	N/A	AFTER ADDING 6N NAOH PH IS 9.5	N/A
Q2570-07	EFFLUENT	1	50	<2	N/A	Negative	N/A	AFTER ADDING 6N NAOH PH IS 9.5	N/A

WORKLIST(Hardcopy Internal Chain)

WorkList Name : ammonia-0714 **WorkList ID :** 190698 **Department :** Distillation **Date :** 07-14-2025 08:03:13

Sample	Customer Sample	Matrix	Test	Preservative	Customer	Raw Sample Storage Location	Collect Date	Method
Q2536-01	RW5-SP100-20250708	Water	Ammonia	Conc H2SO4 to pH < 2	TETR06	O21	07/08/2025	SM4500-NH3
Q2536-02	RW7-SP100-20250708	Water	Ammonia	Conc H2SO4 to pH < 2	TETR06	O21	07/08/2025	SM4500-NH3
Q2536-03	RW8-SP100-20250708	Water	Ammonia	Conc H2SO4 to pH < 2	TETR06	O21	07/08/2025	SM4500-NH3
Q2565-01	MOO-25-0192-0193	Water	Ammonia	Conc H2SO4 to pH < 2	PSEG03		07/10/2025	SM4500-NH3
Q2570-03	INFLUENT	Water	Ammonia	Conc H2SO4 to pH < 2	HOLL01	O31	07/10/2025	SM4500-NH3
Q2570-07	EFFLUENT	Water	Ammonia	Conc H2SO4 to pH < 2	HOLL01	O31	07/10/2025	SM4500-NH3

Date/Time 07/14/2025 08.10
Raw Sample Received by: RM (WC)
Raw Sample Relinquished by: JP (GSC)

Date/Time 07/14/2025 10.30
Raw Sample Received by: JP (GSC)
Raw Sample Relinquished by: RM (WC)

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

Instrument ID: IC-1

Daily Analysis Runlog For Sequence/QCBatch ID # LB136410

Review By	rubina	Review On	7/10/2025 12:58:41 PM
Supervise By	Iwona	Supervise On	7/10/2025 12:59:01 PM
SubDirectory	LB136410	Test	Anions

STD. NAME	STD REF.#
ICAL Standard	WP113629,WP113630,WP113631,WP113632,WP113633,WP113634,WP113635
ICV Standard	WP113636
CCV Standard	WP113874
ICSA Standard	N/A
CRI Standard	N/A
LCS Standard	WP113875
Chk Standard	WP113637,WP113638

Sr#	SampleId	ClientID	QcType	Date	Comment	Operator	Status
1	STD1	STD1	CAL1	06/23/25 15:17	All standards, samples, and	RM/IZ	OK
2	STD2	STD2	CAL2	06/23/25 15:38	QC are filtered through	RM/IZ	OK
3	STD3	STD3	CAL3	06/23/25 16:00	0.45um, filter lot W3160	RM/IZ	OK
4	STD4	STD4	CAL4	06/23/25 16:21		RM/IZ	OK
5	STD5	STD5	CAL5	06/23/25 16:43		RM/IZ	OK
6	STD6	STD6	CAL6	06/23/25 17:04		RM/IZ	OK
7	STD7	STD7	CAL7	06/23/25 17:25		RM/IZ	OK
8	ICV1	ICV1	ICV	06/23/25 17:47		RM/IZ	OK
9	ICB1	ICB1	ICB	06/23/25 18:08		RM/IZ	OK
10	CCV1	CCV1	CCV	07/09/25 11:43		RM/IZ	OK
11	CCB1	CCB1	CCB	07/09/25 12:05		RM/IZ	OK
12	LB136410BLW	LB136410BLW	MB	07/09/25 12:26		RM/IZ	OK
13	LB136410BSW	LB136410BSW	LCS	07/09/25 12:48		RM/IZ	OK
14	Q2536-01	RW5-SP100-2025070	SAM	07/09/25 13:09	Cl is high	RM/IZ	Dilution
15	Q2536-02	RW7-SP100-2025070	SAM	07/09/25 13:31		RM/IZ	OK
16	Q2536-03	RW8-SP100-2025070	SAM	07/09/25 13:52	Cl is high	RM/IZ	Dilution
17	Q2536-03MS	RW8-SP100-2025070	MS	07/09/25 14:14	9.5ml of sample, 0.5mL W3092	RM/IZ	OK
18	Q2536-03MSD	RW8-SP100-2025070	MSD	07/09/25 14:35	9.5ml of sample, 0.5mL W3092	RM/IZ	OK

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Fax : 908 789 8922

Instrument ID: IC-1

Daily Analysis Runlog For Sequence/QCBatch ID # LB136410

Review By	rubina	Review On	7/10/2025 12:58:41 PM
Supervise By	lwona	Supervise On	7/10/2025 12:59:01 PM
SubDirectory	LB136410	Test	Anions

STD. NAME	STD REF.#
ICAL Standard	WP113629,WP113630,WP113631,WP113632,WP113633,WP113634,WP113635
ICV Standard	WP113636
CCV Standard	WP113874
ICSA Standard	N/A
CRI Standard	N/A
LCS Standard	WP113875
Chk Standard	WP113637,WP113638

19	Q2536-01DL	RW5-SP100-2025070	SAM	07/09/25 14:57	5X For Cl	RM/IZ	Confirms
20	Q2536-03DL	RW8-SP100-2025070	SAM	07/09/25 15:19	5X For Cl	RM/IZ	Confirms
21	CCV2	CCV2	CCV	07/09/25 15:40		RM/IZ	OK
22	CCB2	CCB2	CCB	07/09/25 16:25		RM/IZ	OK

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Instrument ID: SPECTROPHOTOMETER-1

Daily Analysis Runlog For Sequence/QCBatch ID # LB136411

Review By	Iwona	Review On	7/9/2025 2:53:52 PM
Supervise By	jignesh	Supervise On	7/9/2025 2:58:08 PM
SubDirectory	LB136411	Test	Phosphorus-Total

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	WP113871,WP113870,WP113869,WP113868,WP113867,WP113866,WP113872,WP112831,WP113877,WP113378,\

Sr#	SampleId	ClientID	QcType	Date	Comment	Operator	Status
1	CAL1	CAL1	CAL	07/09/25 14:15		Iwona	OK
2	CAL2	CAL2	CAL	07/09/25 14:15		Iwona	OK
3	CAL3	CAL3	CAL	07/09/25 14:16		Iwona	OK
4	CAL4	CAL4	CAL	07/09/25 14:16		Iwona	OK
5	CAL5	CAL5	CAL	07/09/25 14:17		Iwona	OK
6	CAL6	CAL6	CAL	07/09/25 14:17		Iwona	OK
7	ICV	ICV	ICV	07/09/25 14:18		Iwona	OK
8	ICB	ICB	ICB	07/09/25 14:18		Iwona	OK
9	CCV1	CCV1	CCV	07/09/25 14:19		Iwona	OK
10	CCB1	CCB1	CCB	07/09/25 14:19		Iwona	OK
11	RL Check	RL Check	RL	07/09/25 14:20		Iwona	OK
12	PB168769BL	PB168769BL	MB	07/09/25 14:20		Iwona	OK
13	PB168769BS	PB168769BS	LCS	07/09/25 14:21		Iwona	OK
14	Q2470-01	SW-1	SAM	07/09/25 14:21		Iwona	OK
15	Q2470-01DUP	SW-1DUP	DUP	07/09/25 14:22		Iwona	OK
16	Q2470-01MS	SW-1MS	MS	07/09/25 14:22		Iwona	OK
17	Q2470-01MSD	SW-1MSD	MSD	07/09/25 14:23		Iwona	OK
18	Q2471-01	SW-1	SAM	07/09/25 14:23		Iwona	OK

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Instrument ID: SPECTROPHOTOMETER-1

Daily Analysis Runlog For Sequence/QCBatch ID # LB136411

Review By	Iwona	Review On	7/9/2025 2:53:52 PM
Supervise By	jignesh	Supervise On	7/9/2025 2:58:08 PM
SubDirectory	LB136411	Test	Phosphorus-Total

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	WP113871,WP113870,WP113869,WP113868,WP113867,WP113866,WP113872,WP112831,WP113877,WP113378,\

19	Q2525-01	EFFLUENT-COMPOS	SAM	07/09/25 14:24		Iwona	OK
20	Q2536-01	RW5-SP100-2025070	SAM	07/09/25 14:24		Iwona	OK
21	Q2536-02	RW7-SP100-2025070	SAM	07/09/25 14:25		Iwona	OK
22	CCV2	CCV2	CCV	07/09/25 14:25		Iwona	OK
23	CCB2	CCB2	CCB	07/09/25 14:26		Iwona	OK
24	Q2536-03	RW8-SP100-2025070	SAM	07/09/25 14:26		Iwona	OK
25	Q2525-01DL	EFFLUENT-COMPOS	SAM	07/09/25 14:27		Iwona	OK
26	CCV3	CCV3	CCV	07/09/25 14:27		Iwona	OK
27	CCB3	CCB3	CCB	07/09/25 14:28		Iwona	OK

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Fax : 908 789 8922

Instrument ID: DO METER

Daily Analysis Runlog For Sequence/QCBatch ID # LB136413

Review By	rubina	Review On	7/15/2025 10:31:39 AM
Supervise By	Iwona	Supervise On	7/15/2025 10:36:00 AM
SubDirectory	LB136413	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	WP113846,W3149,WP112832,W3103,W3109,W3105,WP113848,WP113847,WP111323

Sr#	SampleId	ClientID	QcType	Date	Comment	Operator	Status
1	LB136413BL	LB136413BL	MB	07/09/25 16:40		rubina	OK
2	LB136413BS	LB136413BS	LCS	07/09/25 16:40		rubina	OK
3	Q2522-01	DRAIN-WATER-TANK	SAM	07/09/25 16:40		rubina	OK
4	Q2525-01	EFFLUENT-COMPOS	SAM	07/09/25 16:40		rubina	OK
5	Q2536-01	RW5-SP100-2025070	SAM	07/09/25 16:40		rubina	OK
6	Q2536-02	RW7-SP100-2025070	SAM	07/09/25 16:40		rubina	OK
7	Q2536-03	RW8-SP100-2025070	SAM	07/09/25 16:40		rubina	OK
8	Q2548-02	COMP	SAM	07/09/25 16:40	Due to bad matrix difference between highest and lowest results is >30% for	rubina	OK
9	Q2548-02DUP	COMPDUP	DUP	07/09/25 16:40	Due to bad matrix difference between highest and lowest results is >30% for	rubina	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 # LB136416

Review By	rubina	Review On	7/11/2025 4:17:43 PM
Supervise By	Iwona	Supervise On	7/14/2025 10:37:47 AM
SubDirectory	LB136416	Test	TOC

STD. NAME	STD REF.#
ICAL Standard	WP113812,WP113813,WP113814,WP113815,WP113816,WP113817,WP113818
ICV Standard	WP113819
CCV Standard	WP113817
ICSA Standard	N/A
CRI Standard	N/A
LCS Standard	WP113819
Chk Standard	WP113820,WP113821,WP112446

Sr#	SampleId	ClientID	QcType	Date	Comment	Operator	Status
1	0.0PPM	0.0PPM	CAL1	07/03/25 13:19		RM IZ	OK
2	0.5PPM	0.5PPM	CAL2	07/03/25 13:42		RM IZ	OK
3	1.0PPM	1.0PPM	CAL3	07/03/25 14:06		RM IZ	OK
4	2.0PPM	2.0PPM	CAL4	07/03/25 14:30		RM IZ	OK
5	5.0PPM	5.0PPM	CAL5	07/03/25 14:55		RM IZ	OK
6	10.0PPM	10.0PPM	CAL6	07/03/25 15:21		RM IZ	OK
7	20.0PPM	20.0PPM	CAL7	07/03/25 15:47		RM IZ	OK
8	ICV1	ICV1	ICV	07/03/25 16:12		RM IZ	OK
9	ICB1	ICB1	ICB	07/03/25 16:36		RM IZ	OK
10	IC-20	IC-20	SAM	07/03/25 17:00		RM IZ	OK
11	IC-R	IC-R	SAM	07/03/25 17:23		RM IZ	OK
12	CCV1	CCV1	CCV	07/10/25 09:57		RM IZ	OK
13	CCB1	CCB1	CCB	07/10/25 10:20		RM IZ	OK
14	LB136416BLW	LB136416BLW	MB	07/10/25 11:24		RM IZ	OK
15	LB136416BSW	LB136416BSW	LCS	07/10/25 11:49		RM IZ	OK
16	Q2536-01	RW5-SP100-2025070	SAM	07/10/25 12:12		RM IZ	OK
17	Q2536-01MS	RW5-SP100-2025070	MS	07/10/25 12:37	2.0ml WP113810 +38.0ml Sample	RM IZ	OK
18	Q2536-01MSD	RW5-SP100-2025070	MSD	07/10/25 13:01	2.0ml WP113810 +38.0ml Sample	RM IZ	OK

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Instrument ID: TOC

Daily Analysis Runlog For Sequence/QCBatch ID # LB136416

Review By	rubina	Review On	7/11/2025 4:17:43 PM
Supervise By	Iwona	Supervise On	7/14/2025 10:37:47 AM
SubDirectory	LB136416	Test	TOC

STD. NAME	STD REF.#
ICAL Standard	WP113812,WP113813,WP113814,WP113815,WP113816,WP113817,WP113818
ICV Standard	WP113819
CCV Standard	WP113817
ICSA Standard	N/A
CRI Standard	N/A
LCS Standard	WP113819
Chk Standard	WP113820,WP113821,WP112446

19	Q2536-02	RW7-SP100-2025070	SAM	07/10/25 13:24		RM IZ	OK
20	Q2536-03	RW8-SP100-2025070	SAM	07/10/25 13:48		RM IZ	OK
21	CCV2	CCV2	CCV	07/10/25 14:13		RM IZ	OK
22	CCB2	CCB2	CCB	07/10/25 14:36		RM IZ	OK
23	Q2565-01	MOO-25-0192-0193	SAM	07/10/25 15:49	10X for TOC Still High	RM IZ	Dilution
24	Q2565-01DL	MOO-25-0192-0193D	SAM	07/10/25 17:07	200X for TOC	RM IZ	Confirms
25	CCV3	CCV3	CCV	07/10/25 18:21		RM IZ	OK
26	CCB3	CCB3	CCB	07/10/25 19:08		RM IZ	OK

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Instrument ID: TITRATOR

Daily Analysis Runlog For Sequence/QCBatch ID # LB136420

Review By	Eman	Review On	7/10/2025 2:50:28 PM
Supervise By	Iwona	Supervise On	7/10/2025 2:52:37 PM
SubDirectory	LB136420	Test	Alkalinity

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	WP113893,W3150

Sr#	SampleId	ClientID	QcType	Date	Comment	Operator	Status
1	LB136420BL	LB136420BL	MB	07/10/25 13:10		Iwona	OK
2	LB136420BS	LB136420BS	LCS	07/10/25 13:15		Iwona	OK
3	Q2536-01	RW5-SP100-2025070	SAM	07/10/25 13:20		Iwona	OK
4	Q2536-01DUP	RW5-SP100-2025070	DUP	07/10/25 13:25		Iwona	OK
5	Q2536-02	RW7-SP100-2025070	SAM	07/10/25 13:30		Iwona	OK
6	Q2536-03	RW8-SP100-2025070	SAM	07/10/25 13:35		Iwona	OK

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Instrument ID: TITRAMETRIC

Daily Analysis Runlog For Sequence/QCBatch ID # LB136421

Review By	rubina	Review On	7/10/2025 2:06:38 PM
Supervise By	Iwona	Supervise On	7/10/2025 2:06:58 PM
SubDirectory	LB136421	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,W3213,W3149

Sr#	SampleId	ClientID	QcType	Date	Comment	Operator	Status
1	PB168778BL	PB168778BL	MB	07/10/25 13:20		rubina	OK
2	PB168778BS	PB168778BS	LCS	07/10/25 13:23		rubina	OK
3	Q2536-01	RW5-SP100-2025070	SAM	07/10/25 13:26		rubina	OK
4	Q2536-01DUP	RW5-SP100-2025070	DUP	07/10/25 13:29		rubina	OK
5	Q2536-01MS	RW5-SP100-2025070	MS	07/10/25 13:32		rubina	OK
6	Q2536-01MSD	RW5-SP100-2025070	MSD	07/10/25 13:35		rubina	OK
7	Q2536-02	RW7-SP100-2025070	SAM	07/10/25 13:38		rubina	OK
8	Q2536-03	RW8-SP100-2025070	SAM	07/10/25 13:41		rubina	OK

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Instrument ID: KONELAB

Daily Analysis Runlog For Sequence/QCBatch ID # LB136436

Review By	rubina	Review On	7/14/2025 10:28:05 AM
Supervise By	Iwona	Supervise On	7/14/2025 10:33:53 AM
SubDirectory	LB136436	Test	Cyanide

STD. NAME	STD REF.#
ICAL Standard	WP113905,WP113906,WP113907,WP113908,WP113909,WP113910,WP113911
ICV Standard	W3012
CCV Standard	WP113906
ICSA Standard	N/A
CRI Standard	N/A
LCS Standard	WP113838
Chk Standard	WP112643,WP112900,WP113913

Sr#	SampleId	ClientID	QcType	Date	Comment	Operator	Status
1	0.0PPBCN	0.0PPBCN	CAL1	07/11/25 08:54		rubina	OK
2	5.0PPBCN	5.0PPBCN	CAL2	07/11/25 08:54		rubina	OK
3	10PPBCN	10PPBCN	CAL3	07/11/25 08:54		rubina	OK
4	50PPBCN	50PPBCN	CAL4	07/11/25 08:54		rubina	OK
5	100PPBCN	100PPBCN	CAL5	07/11/25 08:54		rubina	OK
6	250PPBCN	250PPBCN	CAL6	07/11/25 08:54		rubina	OK
7	500PPBCN	500PPBCN	CAL7	07/11/25 08:54		rubina	OK
8	ICV1	ICV1	ICV	07/11/25 09:31		rubina	OK
9	ICB1	ICB1	ICB	07/11/25 09:31		rubina	OK
10	CCV1	CCV1	CCV	07/11/25 09:31		rubina	OK
11	CCB1	CCB1	CCB	07/11/25 09:31		rubina	OK
12	PB168805BL	PB168805BL	MB	07/11/25 09:31		rubina	OK
13	PB168805BS	PB168805BS	LCS	07/11/25 09:31		rubina	OK
14	LOWPB168805	LOWPB168805	SAM	07/11/25 09:39		rubina	OK
15	HIGHPB168805	HIGHPB168805	SAM	07/11/25 09:39		rubina	OK
16	Q2555-01	OU4-TS-29-070925	SAM	07/11/25 09:39		rubina	OK
17	Q2555-01DUP	OU4-TS-29-070925DU	DUP	07/11/25 09:39		rubina	OK
18	Q2555-01MS	OU4-TS-29-070925MS	MS	07/11/25 09:46		rubina	OK

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Instrument ID: KONELAB

Daily Analysis Runlog For Sequence/QCBatch ID # LB136436

Review By	rubina	Review On	7/14/2025 10:28:05 AM
Supervise By	Iwona	Supervise On	7/14/2025 10:33:53 AM
SubDirectory	LB136436	Test	Cyanide

STD. NAME	STD REF.#
ICAL Standard	WP113905,WP113906,WP113907,WP113908,WP113909,WP113910,WP113911
ICV Standard	W3012
CCV Standard	WP113906
ICSA Standard	N/A
CRI Standard	N/A
LCS Standard	WP113838
Chk Standard	WP112643,WP112900,WP113913

19	Q2555-01MSD	OU4-TS-29-070925MS	MSD	07/11/25 09:46		rubina	OK
20	Q2555-03	OU4-TS-30-070925	SAM	07/11/25 09:46		rubina	OK
21	Q2558-01	OU4-TS-Denali-07092	SAM	07/11/25 09:46		rubina	OK
22	CCV2	CCV2	CCV	07/11/25 09:46		rubina	OK
23	CCB2	CCB2	CCB	07/11/25 09:46		rubina	OK
24	Q2558-03	OU4-TS-Grillo-OG-07	SAM	07/11/25 09:46		rubina	OK
25	Q2560-01	LP-7102025	SAM	07/11/25 09:54		rubina	OK
26	PB168782BL	PB168782BL	MB	07/11/25 09:54		rubina	OK
27	PB168782BS	PB168782BS	LCS	07/11/25 09:54		rubina	OK
28	Q2536-01	RW5-SP100-2025070	SAM	07/11/25 09:54		rubina	OK
29	Q2536-01DUP	RW5-SP100-2025070	DUP	07/11/25 09:54		rubina	OK
30	Q2536-01MS	RW5-SP100-2025070	MS	07/11/25 09:54		rubina	OK
31	Q2536-01MSD	RW5-SP100-2025070	MSD	07/11/25 09:54		rubina	OK
32	Q2536-02	RW7-SP100-2025070	SAM	07/11/25 10:00		rubina	OK
33	Q2536-03	RW8-SP100-2025070	SAM	07/11/25 10:00		rubina	OK
34	CCV3	CCV3	CCV	07/11/25 10:00		rubina	OK
35	CCB3	CCB3	CCB	07/11/25 10:00		rubina	OK

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Instrument ID: KONELAB

Daily Analysis Runlog For Sequence/QCBatch ID # LB136459

Review By	rubina	Review On	7/15/2025 3:40:06 PM
Supervise By	Iwona	Supervise On	7/16/2025 11:47:16 AM
SubDirectory	LB136459	Test	Ammonia

STD. NAME	STD REF.#
ICAL Standard	WP113926
ICV Standard	WP113928
CCV Standard	WP113927
ICSA Standard	N/A
CRI Standard	N/A
LCS Standard	WP113889
Chk Standard	WP113852,WP111745,WP113929,WP111660

Sr#	SampleId	ClientID	QcType	Date	Comment	Operator	Status
1	0.0PPM	0.0PPM	CAL1	07/14/25 10:59		rubina	OK
2	0.1PPM	0.1PPM	CAL2	07/14/25 10:59		rubina	OK
3	0.2PPM	0.2PPM	CAL3	07/14/25 10:59		rubina	OK
4	0.4PPM	0.4PPM	CAL4	07/14/25 10:59		rubina	OK
5	1.0PPM	1.0PPM	CAL5	07/14/25 10:59		rubina	OK
6	1.3PPM	1.3PPM	CAL6	07/14/25 10:59		rubina	OK
7	2.0PPM	2.0PPM	CAL7	07/14/25 11:00		rubina	OK
8	ICV1	ICV1	ICV	07/14/25 11:52		rubina	OK
9	ICB1	ICB1	ICB	07/14/25 11:52		rubina	OK
10	CCV1	CCV1	CCV	07/14/25 11:52		rubina	OK
11	CCB1	CCB1	CCB	07/14/25 11:52		rubina	OK
12	RL	RL	LOQ	07/14/25 11:52		rubina	OK
13	PB168835BL	PB168835BL	MB	07/14/25 12:03		rubina	OK
14	PB168835BS	PB168835BS	LCS	07/14/25 12:03		rubina	OK
15	Q2536-01	RW5-SP100-2025070	SAM	07/14/25 12:03		rubina	OK
16	Q2536-01DUP	RW5-SP100-2025070	DUP	07/14/25 12:03		rubina	OK
17	Q2536-01MS	RW5-SP100-2025070	MS	07/14/25 12:03		rubina	OK
18	Q2536-01MSD	RW5-SP100-2025070	MSD	07/14/25 12:03		rubina	OK

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Instrument ID: KONELAB

Daily Analysis Runlog For Sequence/QCBatch ID # LB136459

Review By	rubina	Review On	7/15/2025 3:40:06 PM
Supervise By	Iwona	Supervise On	7/16/2025 11:47:16 AM
SubDirectory	LB136459	Test	Ammonia

STD. NAME	STD REF.#
ICAL Standard	WP113926
ICV Standard	WP113928
CCV Standard	WP113927
ICSA Standard	N/A
CRI Standard	N/A
LCS Standard	WP113889
Chk Standard	WP113852,WP111745,WP113929,WP111660

19	Q2536-02	RW7-SP100-2025070	SAM	07/14/25 12:03		rubina	OK
20	Q2536-03	RW8-SP100-2025070	SAM	07/14/25 12:03		rubina	OK
21	Q2565-01	MOO-25-0192-0193	SAM	07/14/25 12:13		rubina	OK
22	CCV2	CCV2	CCV	07/14/25 12:13		rubina	OK
23	CCB2	CCB2	CCB	07/14/25 12:13		rubina	OK
24	Q2570-03	INFLUENT	SAM	07/14/25 12:13	NH3 is High	rubina	Dilution
25	Q2570-07	EFFLUENT	SAM	07/14/25 12:13	NH3 is High	rubina	Dilution
26	CCV3	CCV3	CCV	07/14/25 12:13		rubina	OK
27	CCB3	CCB3	CCB	07/14/25 12:13		rubina	OK
28	Q2570-03DL	INFLUENTDL	SAM	07/14/25 12:38	10X for NH3	rubina	Confirms
29	Q2570-07DL	EFFLUENTDL	SAM	07/14/25 12:39	10X for NH3	rubina	Confirms
30	CCV4	CCV4	CCV	07/14/25 12:39		rubina	OK
31	CCB4	CCB4	CCB	07/14/25 12:39		rubina	OK

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Instrument ID: SPECTROPHOTOMETER-2

Daily Analysis Runlog For Sequence/QCBatch ID # LB136477

Review By	lwona	Review On	7/15/2025 12:21:07 PM
Supervise By	jignesh	Supervise On	7/15/2025 12:21:51 PM
SubDirectory	LB136477	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	WP113238,WP113237,WP113235,WP113234,WP113233,WP113240,WP113236,W3129,WP113940,WP113941,WP1

Sr#	SampleId	ClientID	QcType	Date	Comment	Operator	Status
1	CAL1	CAL1	CAL	05/28/25 13:10		lwona	OK
2	CAL2	CAL2	CAL	05/28/25 13:10		lwona	OK
3	CAL3	CAL3	CAL	05/28/25 13:11		lwona	OK
4	CAL4	CAL4	CAL	05/28/25 13:11		lwona	OK
5	CAL5	CAL5	CAL	05/28/25 13:12		lwona	OK
6	CAL6	CAL6	CAL	05/28/25 13:12		lwona	OK
7	ICV	ICV	ICV	05/28/25 13:13		lwona	OK
8	ICB	ICB	ICB	05/28/25 13:13		lwona	OK
9	CCV1	CCV1	CCV	07/15/25 12:10		lwona	OK
10	CCB1	CCB1	CCB	07/15/25 12:10		lwona	OK
11	RL Check	RL Check	RL	07/15/25 12:11		lwona	OK
12	LB136477BL	LB136477BL	MB	07/15/25 12:11		lwona	OK
13	LB136477BS	LB136477BS	LCS	07/15/25 12:12		lwona	OK
14	Q2525-01	EFFLUENT-COMPOS	SAM	07/15/25 12:12		lwona	OK
15	Q2536-01	RW5-SP100-2025070	SAM	07/15/25 12:13		lwona	OK
16	Q2536-02	RW7-SP100-2025070	SAM	07/15/25 12:13		lwona	OK
17	Q2536-03	RW8-SP100-2025070	SAM	07/15/25 12:14		lwona	OK
18	Q2565-01	MOO-25-0192-0193	SAM	07/15/25 12:14		lwona	OK

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Instrument ID: SPECTROPHOTOMETER-2

Daily Analysis Runlog For Sequence/QCBatch ID # LB136477

Review By	Iwona	Review On	7/15/2025 12:21:07 PM
Supervise By	jignesh	Supervise On	7/15/2025 12:21:51 PM
SubDirectory	LB136477	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	WP113238,WP113237,WP113235,WP113234,WP113233,WP113240,WP113236,W3129,WP113940,WP113941,WP1

19	Q2588-01	MH-7112025	SAM	07/15/25 12:15		Iwona	OK
20	Q2602-01	FRAC-TANK-266380	SAM	07/15/25 12:15		Iwona	OK
21	Q2602-01DUP	FRAC-TANK-266380D	DUP	07/15/25 12:16		Iwona	OK
22	CCV2	CCV2	CCV	07/15/25 12:16		Iwona	OK
23	CCB2	CCB2	CCB	07/15/25 12:17		Iwona	OK
24	Q2602-01MS	FRAC-TANK-266380M	MS	07/15/25 12:17		Iwona	OK
25	Q2602-01MSD	FRAC-TANK-266380M	MSD	07/15/25 12:18		Iwona	OK
26	CCV3	CCV3	CCV	07/15/25 12:18		Iwona	OK
27	CCB3	CCB3	CCB	07/15/25 12:19		Iwona	OK

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Prep Standard - Chemical Standard Summary

Order ID : Q2536

Test : Alkalinity,Ammonia,Anions Group1,BOD5,COD,Cyanide,Phosphorus-Total,Sulfide,TOC

Prepbatch ID : PB168769,PB168778,PB168782,PB168835,

Sequence ID/Qc Batch ID: LB136410,LB136411,LB136413,LB136416,LB136420,LB136421,LB136436,LB136459,LB136477,

Standard ID :
WP111004,WP111323,WP111436,WP111449,WP111450,WP111451,WP111452,WP111660,WP111745,WP112446,WP112611,WP112612,WP112615,WP112643,WP112796,WP112826,WP112827,WP112828,WP112831,WP112832,WP112900,WP112913,WP112914,WP113112,WP113113,WP113231,WP113232,WP113233,WP113234,WP113235,WP113236,WP113237,WP113238,WP113240,WP113378,WP113500,WP113629,WP113630,WP113631,WP113632,WP113633,WP113634,WP113635,WP113636,WP113637,WP113638,WP113780,WP113810,WP113811,WP113812,WP113813,WP113814,WP113815,WP113816,WP113817,WP113818,WP113819,WP113820,WP113821,WP113836,WP113837,WP113838,WP113846,WP113847,WP113848,WP113852,WP113866,WP113867,WP113868,WP113869,WP113870,WP113871,WP113872,WP113873,WP113874,WP113875,WP113876,WP113877,WP113878,WP113879,WP113885,WP113886,WP113887,WP113888,WP113889,WP113892,WP113893,WP113904,WP113905,WP113906,WP113907,WP113908,WP113909,WP113910,WP113911,WP113913,WP113926,WP113927,WP113928,WP113929,WP113938,WP113939,WP113940,WP113941,WP113942,

Chemical ID :
M5501,M6041,M6121,M6151,W1992,W2306,W2647,W2650,W2653,W2654,W2663,W2664,W2666,W2668,W2725,W2784,W2788,W2800,W2860,W2926,W3012,W3016,W3017,W3019,W3020,W3022,W3035,W3058,W3074,W3101,W3103,W3105,W3109,W3112,W3113,W3129,W3132,W3133,W3139,W3144,W3149,W3150,W3152,W3155,W3156,W3163,W3167,W3169,W3174,W3180,W3195,W3196,W3197,W3198,W3201,W3203,W3206,W3212,W3213,W3214,W3215,W3219,W3224,

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Wet Chemistry STANDARD PREPARATION LOG

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 (WC SC-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

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 (WC SC-7)	None	Iwona Zarych 01/09/2025

FROM 4.00000gram of W3113 + 96.00000ml 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
2050	TOC STOCK STD, 4000PPM	WP111436	01/15/2025	07/15/2025	Niha Farheen Shaik	WETCHEM_SCALE_5 (WC SC-5)	WETCHEM_PIPETTE_3 (WC)	Iwona Zarych 01/16/2025

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

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 (WC SC-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
635	EDTA BUFFER FOR AMMONIA	WP111660	01/28/2025	07/28/2025	Rubina Mughal	WETCHEM_SCALE_8 (WCSC-7)	None	Iwona Zarych 01/28/2025

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

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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	WP111745	02/03/2025	07/31/2025	Rubina Mughal	None	None	Iwona Zarych 02/03/2025

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

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
613	Phosphoric acid reagent	WP112446	03/25/2025	09/25/2025	Niha Farheen Shaik	None	None	Iwona Zarych 03/26/2025

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
153	Ammonia Stock Std. (1000 ppm)	WP112611	04/07/2025	10/07/2025	Rubina Mughal	WETCHEM_SCALE_8 (WCSC-7)	None	Iwona Zarych 04/07/2025

FROM 3.81900gram of W3196 + 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	WP112612	04/07/2025	10/07/2025	Rubina Mughal	WETCHEM_SCALE_8 (WCSC-7)	None	Iwona Zarych 04/07/2025

FROM 3.81900gram of W3195 + 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
1211	11 N sulfuric acid	WP112615	04/03/2025	10/07/2025	Niha Farheen Shaik	None	None	Iwona Zarych 04/07/2025

FROM 306.00000ml of M6041 + 694.00000ml of W3112 = Final Quantity: 1000.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
539	CN BUFFER	WP112643	04/09/2025	10/09/2025	Niha Farheen Shaik	WETCHEM_SCALE_5 (WCSC-5)	None	Iwona Zarych 04/09/2025

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
4035	IC ELUENT CONCENTRATE FOR IC-1	WP112796	04/22/2025	10/22/2025	Iwona Zarych	WETCHEM_SCALE_5 (WCSC-5)	None	Jignesh Parikh 04/22/2025

FROM 2.10000gram of W2647 + 84.75000gram of W3163 + 913.15000ml of W3112 = Final Quantity: 1000.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
1714	Sulfuric Acid, 50% (v/v)	WP112826	04/25/2025	10/25/2025	Rubina Mughal	None	None	Iwona Zarych 04/25/2025

FROM 1000.00000ml of M6041 + 1000.00000ml of W3112 = 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
3214	Magnesium Chloride For Cyanide 2.5M(51%W/V)	WP112827	04/25/2025	10/25/2025	Rubina Mughal	WETCHEM_SCALE_8 (WCSC-7)	None	Iwona Zarych 04/25/2025

FROM 500.00000ml of W3112 + 510.00000gram of W3152 = Final Quantity: 1000.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
1597	0.04 N H2SO4	WP112828	04/25/2025	10/25/2025	Rubina Mughal	None	WETCHEM_PIPETTE_3 (WC)	Iwona Zarych 04/25/2025

FROM 1.00000ml of M6041 + 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
126	5N sulfuric acid	WP112831	04/25/2025	10/25/2025	Rubina Mughal	None	None	Iwona Zarych 04/25/2025

FROM 140.00000ml of M6041 + 860.00000ml of W3112 = Final Quantity: 1.000 L

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
1841	Sulfuric Acid, 1N	WP112832	04/25/2025	10/25/2025	Rubina Mughal	None	WETCHEM_PIPETTE_3 (WC)	Iwona Zarych 04/25/2025

FROM 2.80000ml of M6041 + 97.20000ml 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
607	PYRIDINE-BARBITURIC ACID	WP112900	05/01/2025	08/18/2025	Rubina Mughal	WETCHEM_SCALE_8 (WCSC-7)	Glass Pipette-A	Iwona Zarych 05/01/2025

FROM 145.00000ml of W3112 + 15.00000gram of W3203 + 15.00000ml of M6151 + 75.00000ml of W3019 = Final Quantity: 250.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
115	Phosphate Stock Std. (50 ppm)	WP112913	05/01/2025	11/01/2025	Iwona Zarych	WETCHEM_SCALE_5 (WCSC-5)	None	Jignesh Parikh 05/06/2025

FROM 0.11000gram of W3198 + 500.00000ml of W3112 = Final Quantity: 500.000 ml

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Wet Chemistry STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
2790	Phosphate Stock std, 50PPM-SS	WP112914	05/01/2025	11/01/2025	Iwona Zarych	WETCHEM_SCALE_5 (WCSC-5)	None	Jignesh Parikh 05/06/2025

FROM 0.11000gram of W3206 + 500.00000ml of W3112 = Final Quantity: 500.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
648	Ammonium molybdate solution	WP113112	05/16/2025	11/16/2025	Iwona Zarych	WETCHEM_SCALE_5 (WCSC-5)	None	Jignesh Parikh 05/16/2025

FROM 20.00000gram of W2664 + 480.00000ml of W3112 = Final Quantity: 500.000 ml

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Wet Chemistry STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
588	Potassium Antimonyl Tartrate	WP113113	05/16/2025	11/16/2025	Iwona Zarych	WETCHEM_SCALE_5 (WCSC-5)	None	Jignesh Parikh 05/16/2025

FROM 1.37150gram of W2306 + 500.00000ml of W3112 = Final Quantity: 500.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
2456	COD Stock std, 1000ppm	WP113231	05/28/2025	06/04/2025	Iwona Zarych	WETCHEM_SCALE_5 (WCSC-5)	None	Jignesh Parikh 05/28/2025

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
2457	COD Stock std-SS, 1000ppm	WP113232	05/28/2025	06/04/2025	Iwona Zarych	WETCHEM_SCALE_5 (WCSC-5)	None	Jignesh Parikh 05/28/2025

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
139	COD calibration std. 0 ppm	WP113233	05/28/2025	06/04/2025	Iwona Zarych	None	None	Jignesh Parikh 05/28/2025

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
138	COD calibration std. 10 ppm	WP113234	05/28/2025	06/04/2025	Iwona Zarych	None	WETCHEM_PIPETTE_3 (WC)	Jignesh Parikh 05/28/2025

FROM 9.90000ml of W3112 + 0.10000ml of WP113231 = Final Quantity: 10.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
137	COD calibration std. 50 ppm	WP113235	05/28/2025	06/04/2025	Iwona Zarych	None	WETCHEM_PIPETTE_3 (WC)	Jignesh Parikh 05/28/2025

FROM 9.50000ml of W3112 + 0.50000ml of WP113231 = 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
4161	COD calibration std. 75 ppm	WP113236	05/28/2025	06/04/2025	Iwona Zarych	None	WETCHEM_PIPETTE_3 (WC)	Jignesh Parikh 05/28/2025

FROM 9.25000ml of W3112 + 0.75000ml of WP113231 = 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	WP113237	05/28/2025	06/04/2025	Iwona Zarych	None	WETCHEM_PIPETTE_3 (WC)	Jignesh Parikh 05/28/2025

FROM 9.00000ml of W3112 + 1.00000ml of WP113231 = 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	WP113238	05/28/2025	06/04/2025	Iwona Zarych	None	WETCHEM_PIPETTE_3 (WC)	Jignesh Parikh 05/28/2025

FROM 8.50000ml of W3112 + 1.50000ml of WP113231 = Final Quantity: 10.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
2459	COD ICV-LCS std, 50ppm	WP113240	05/28/2025	06/04/2025	Iwona Zarych	None	WETCHEM_PIPETTE_3 (WC)	Jignesh Parikh 05/28/2025

FROM 9.50000ml of W3112 + 0.50000ml of WP113232 = 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
1213	Phenolphthalein indicator	WP113378	06/04/2025	12/04/2025	Iwona Zarych	WETCHEM_SCALE_5 (WCSC-5)	None	Jignesh Parikh 06/05/2025

FROM 0.10000gram of W2650 + 50.00000ml of W2788 + 50.00000ml of W3112 = Final Quantity: 100.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
3886	Inorganic carbon stock solution, 1000ppm	WP113500	06/10/2025	12/10/2025	Iwona Zarych	None	Glass Pipette-A	Jignesh Parikh 06/13/2025

FROM 3.49700gram of W2647 + 4.41220gram of W3058 + 993.00000ml 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
2487	Anions 300/9056 calibration standard 1	WP113629	06/23/2025	06/24/2025	Iwona Zarych	None	None	Jignesh Parikh 06/23/2025

FROM 10.00000ml of W3112 = Final Quantity: 10.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
24	Anions 300/9056 calibration standard 2	WP113630	06/23/2025	06/24/2025	Iwona Zarych	None	WETCHEM_PIPETTE_3 (WC)	Jignesh Parikh 06/23/2025

FROM 0.20000ml of W3180 + 9.80000ml 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
25	Anions 300/9056 calibration standard 3	WP113631	06/23/2025	06/24/2025	Iwona Zarych	None	WETCHEM_PIPETTE_3 (WC)	Jignesh Parikh 06/23/2025

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

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
26	Anions 300/9056 calibration standard 4	WP113632	06/23/2025	06/24/2025	Iwona Zarych	None	WETCHEM_PIPETTE_3 (WC)	Jignesh Parikh 06/23/2025

FROM 0.50000ml of W3180 + 9.50000ml 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
3680	Anions 300/9056 calibration standard 5-CCV	WP113633	06/23/2025	06/24/2025	Iwona Zarych	None	WETCHEM_PIPETTE_3 (WC)	Jignesh Parikh 06/23/2025

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

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
3679	Anions 300/9056 calibration standard 6	WP113634	06/23/2025	06/24/2025	Iwona Zarych	None	WETCHEM_PIPETTE_3 (WC)	Jignesh Parikh 06/23/2025

FROM 2.00000ml of W3180 + 8.00000ml 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
3681	Anions 300/9056 calibration standard 7	WP113635	06/23/2025	06/24/2025	Iwona Zarych	None	WETCHEM_PIPETTE_3 (WC)	Jignesh Parikh 06/23/2025

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

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
3233	Anions 300/9056 ICV-LCS std	WP113636	06/23/2025	06/24/2025	Iwona Zarych	None	WETCHEM_PIPETTE_3 (WC)	Jignesh Parikh 06/23/2025

FROM 45.00000ml of W3112 + 5.00000ml of W3197 = 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
4036	IC ELUENT FOR IC-1	WP113637	06/23/2025	07/23/2025	Iwona Zarych	None	Glass Pipette-A	Jignesh Parikh 06/23/2025

FROM 1980.00000ml of W3112 + 20.00000ml of WP112796 = Final Quantity: 2000.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
4037	IC H2SO4 FOR IC-1	WP113638	06/23/2025	07/23/2025	Iwona Zarych	None	Glass Pipette-A	Jignesh Parikh 06/23/2025

FROM 5.60000ml of M6041 + 999.40000ml 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
2051	TOC STOCK STD-SS, 4000PPM	WP113780	07/01/2025	01/01/2026	Iwona Zarych	WETCHEM_SCALE_5 (WCSC-5)	WETCHEM_PIPETTE_3 (WC)	Jignesh Parikh 07/02/2025

FROM 2.50000ml of W2860 + 4.25600gram of W3219 + 495.00000ml of W3112 = Final Quantity: 500.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
3888	TOC Water Intermediate std-200ppm	WP113810	07/03/2025	07/10/2025	Iwona Zarych	None	Glass Pipette-A	Jignesh Parikh 07/09/2025

FROM 95.00000ml of W3112 + 5.00000ml of WP111436 = 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
3889	TOC Water Intermediate std SS-200ppm	WP113811	07/03/2025	07/10/2025	Iwona Zarych	None	Glass Pipette-A	Jignesh Parikh 07/09/2025

FROM 95.00000ml of W3112 + 5.00000ml of WP113780 = Final Quantity: 100.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
304	TOC CAL 0.00ppm	WP113812	07/03/2025	07/10/2025	Iwona Zarych	None	None	Jignesh Parikh 07/09/2025

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	WP113813	07/03/2025	07/10/2025	Iwona Zarych	None	WETCHEM_PIPETTE_3 (WC)	Jignesh Parikh 07/09/2025

FROM 99.75000ml of W3112 + 0.25000ml of WP113810 = Final Quantity: 100.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
306	TOC CAL 1.0PPM	WP113814	07/03/2025	07/10/2025	Iwona Zarych	None	WETCHEM_PIPETTE_3 (WC)	Jignesh Parikh 07/09/2025

FROM 99.50000ml of W3112 + 0.50000ml of WP113810 = 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	WP113815	07/03/2025	07/10/2025	Iwona Zarych	None	WETCHEM_PIPETTE_3 (WC)	Jignesh Parikh 07/09/2025

FROM 99.00000ml of W3112 + 1.00000ml of WP113810 = Final Quantity: 100.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
308	TOC CAL 5.0PPM	WP113816	07/03/2025	07/10/2025	Iwona Zarych	None	WETCHEM_PIPETTE_3 (WC)	Jignesh Parikh 07/09/2025

FROM 97.50000ml of W3112 + 2.50000ml of WP113810 = 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
3331	TOC CAL-CCV std, 10PPM	WP113817	07/03/2025	07/10/2025	Iwona Zarych	None	Glass Pipette-A	Jignesh Parikh 07/09/2025

FROM 190.00000ml of W3112 + 10.00000ml of WP113810 = Final Quantity: 200.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
310	TOC CAL 20.0PPM	WP113818	07/03/2025	07/10/2025	Iwona Zarych	None	Glass Pipette-A	Jignesh Parikh 07/09/2025

FROM 90.00000ml of W3112 + 10.00000ml of WP113810 = 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
1650	TOC ICV/LCS STD. 10PPM	WP113819	07/03/2025	07/10/2025	Iwona Zarych	None	Glass Pipette-A	Jignesh Parikh 07/09/2025

FROM 190.00000ml of W3112 + 10.00000ml of WP113811 = Final Quantity: 200.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
3887	Inorganic carbon solution, 20ppm	WP113820	07/03/2025	07/10/2025	Iwona Zarych	None	WETCHEM_PIPETTE_3 (WC)	Jignesh Parikh 07/09/2025

FROM 49.00000ml of W3112 + 1.00000ml of WP113500 = 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
4007	IC-removal check solution	WP113821	07/03/2025	07/10/2025	Iwona Zarych	None	WETCHEM_PIPETTE_3 (WC)	Jignesh Parikh 07/09/2025

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

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
11	Sodium hydroxide absorbing solution 0.25 N	WP113836	07/08/2025	12/31/2025	Rubina Mughal	WETCHEM_SCALE_8 (WCSC-7)	None	Iwona Zarych 07/08/2025

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	WP113837	07/08/2025	11/30/2025	Rubina Mughal	None	WETCHEM_PIPETTE_3 (WC)	Iwona Zarych 07/08/2025

FROM 1.00000ml of W3214 + 199.00000ml of WP113836 = 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	WP113838	07/08/2025	12/24/2025	Rubina Mughal	None	WETCHEM_PIPETTE_3 (WC)	Iwona Zarych 07/08/2025

FROM 1.00000ml of W3224 + 199.00000ml of WP113836 = 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
127	BOD Dilution fluid	WP113846	07/09/2025	07/10/2025	Rubina Mughal	None	None	Iwona Zarych 07/09/2025

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

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
129	Glutamic acid-glucose mix for BOD	WP113847	07/09/2025	07/10/2025	Rubina Mughal	WETCHEM_SCALE_7 (WCSC-6)	None	Iwona Zarych 07/09/2025

FROM 0.15000gram of W2653 + 0.15000gram of W2654 + 1000.00000ml 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
128	polyseed seed control	WP113848	07/09/2025	07/10/2025	Rubina Mughal	None	None	Iwona Zarych 07/09/2025

FROM 1.00000PILLOW of W3212 + 300.00000ml of WP113846 = Final Quantity: 300.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
740	sodium nitroferricyanide for ammonia	WP113852	07/09/2025	08/09/2025	Rubina Mughal	WETCHEM_SCALE_5 (WCSC-5)	None	Iwona Zarych 07/09/2025

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
122	calibration std. 0 ppm	WP113866	07/09/2025	07/16/2025	Iwona Zarych	None	None	Jignesh Parikh 07/09/2025

FROM 100.00000ml of W3112 = Final Quantity: 100.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
121	calibration std. phosphate 0.05 ppm	WP113867	07/09/2025	07/16/2025	Iwona Zarych	None	WETCHEM_PIPETTE_3 (WC)	Jignesh Parikh 07/09/2025

FROM 99.90000ml of W3112 + 0.10000ml of WP112913 = 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
120	calibration std. phosphate 0.1 ppm	WP113868	07/09/2025	07/16/2025	Iwona Zarych	None	WETCHEM_PIPETTE_3 (WC)	Jignesh Parikh 07/09/2025

FROM 99.80000ml of W3112 + 0.20000ml of WP112913 = Final Quantity: 100.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
119	calibration std. phosphate 0.3 ppm	WP113869	07/09/2025	07/16/2025	Iwona Zarych	None	WETCHEM_PIPETTE_3 (WC)	Jignesh Parikh 07/09/2025

FROM 99.40000ml of W3112 + 0.60000ml of WP112913 = 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
118	calibration std. phosphate 0.5 ppm	WP113870	07/09/2025	07/16/2025	Iwona Zarych	None	WETCHEM_PIPETTE_3 (WC)	Jignesh Parikh 07/09/2025

FROM 99.00000ml of W3112 + 1.00000ml of WP112913 = Final Quantity: 100.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
117	calibration std. phosphate 1 ppm	WP113871	07/09/2025	07/16/2025	Iwona Zarych	None	WETCHEM_PIPETTE_3 (WC)	Jignesh Parikh 07/09/2025

FROM 98.00000ml of W3112 + 2.00000ml of WP112913 = 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
124	phosphate CCV std.	WP113872	07/09/2025	07/16/2025	Iwona Zarych	None	WETCHEM_PIPETTE_3 (WC)	Jignesh Parikh 07/09/2025

FROM 99.00000ml of W3112 + 1.00000ml of WP112913 = Final Quantity: 100.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
3805	Phosphate ICV-LCS Std	WP113873	07/09/2025	07/16/2025	Iwona Zarych	None	WETCHEM_PIPETTE_3 (WC)	Jignesh Parikh 07/09/2025

FROM 99.00000ml of W3112 + 1.00000ml of WP112914 = 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
3680	Anions 300/9056 calibration standard 5-CCV	WP113874	07/09/2025	07/10/2025	Iwona Zarych	None	WETCHEM_PIPETTE_3 (WC)	Jignesh Parikh 07/09/2025

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

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
3233	Anions 300/9056 ICV-LCS std	WP113875	07/09/2025	07/10/2025	Iwona Zarych	None	WETCHEM_PIPETTE_3 (WC)	Jignesh Parikh 07/09/2025

FROM 45.00000ml of W3112 + 5.00000ml of W3197 = 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
590	Ascorbic Acid	WP113876	07/09/2025	07/10/2025	Iwona Zarych	WETCHEM_SCALE_7 (WCSC-6)	None	Jignesh Parikh 07/09/2025

FROM 0.52800gram of W3074 + 30.00000ml of W3112 = Final Quantity: 30.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
658	Combined reagent	WP113877	07/09/2025	07/10/2025	Iwona Zarych	WETCHEM_SCALE_7 (WCSC-6)	None	Jignesh Parikh 07/09/2025

FROM 15.00000ml of WP113112 + 30.00000ml of WP113876 + 5.00000ml of WP113113 + 50.00000ml of WP112831 = 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
1571	Sodium hydroxide, 1N	WP113878	07/09/2025	12/31/2025	Iwona Zarych	WETCHEM_SCALE_7 (WCSC-6)	None	Jignesh Parikh 07/09/2025

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
3311	Sulfide Int std, 1000PPM	WP113879	07/10/2025	07/11/2025	Rubina Mughal	WETCHEM_SCALE_5 (WCSC-5)	None	Iwona Zarych 07/10/2025

FROM 0.75000gram of W3156 + 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
1796	NaOH, 0.1N	WP113885	07/10/2025	12/31/2025	Rubina Mughal	WETCHEM_SCALE_8 (WCSC-7)	None	Iwona Zarych 07/10/2025

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
1494	BORATE BUFFER	WP113886	07/10/2025	12/31/2025	Rubina Mughal	WETCHEM_SCALE_8 (WCSC-7)	None	Iwona Zarych 07/10/2025

FROM 0.90250L of W3112 + 9.50000gram of W3201 + 88.00000ml of WP113885 = Final Quantity: 1.000 L

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Wet Chemistry STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
1471	NaOH Solution, 6N	WP113887	07/10/2025	12/31/2025	Rubina Mughal	WETCHEM_SCALE_8 (WCSC-7)	None	Iwona Zarych 07/10/2025

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

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
1322	Ammonia Intermediate Std, 50PPM	WP113888	07/10/2025	08/10/2025	Rubina Mughal	None	WETCHEM_PIPETTE_3 (WC)	Iwona Zarych 07/10/2025

FROM 95.00000ml of W3112 + 5.00000ml of WP112611 = 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	WP113889	07/10/2025	08/10/2025	Rubina Mughal	None	WETCHEM_PIPETTE_3 (WC)	Iwona Zarych 07/10/2025

FROM 95.00000ml of W3112 + 5.00000ml of WP112612 = Final Quantity: 100.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
3407	Acidity-Alkalinity Stock Std(-+2500PPM)	WP113892	07/10/2025	07/17/2025	Eman Mughal	WETCHEM_SCALE_5 (WCSC-5)	WETCHEM_PIPETTE_3 (WC)	Iwona Zarych 07/10/2025

FROM 0.62500gram of W3163 + 249.40000ml of W3112 = Final Quantity: 250.000 ml

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Wet Chemistry STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
293	alkalinity LCSW 50 ppm	WP113893	07/10/2025	07/17/2025	Eman Mughal	None	WETCHEM_PIPETTE_3 (WC)	Iwona Zarych 07/10/2025

FROM 196.00000ml of W3112 + 4.00000ml of WP113892 = Final Quantity: 200.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
3456	Cyanide Intermediate Working Std, 5PPM	WP113904	07/11/2025	07/12/2025	Rubina Mughal	None	WETCHEM_PIPETTE_3 (WC)	Iwona Zarych 07/11/2025

FROM 0.25000ml of W3214 + 49.75000ml of WP113836 = 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
4	Calibation standard 500 ppb	WP113905	07/11/2025	07/12/2025	Rubina Mughal	None	WETCHEM_PIPETTE_3 (WC)	Iwona Zarych 07/11/2025

FROM 45.00000ml of WP113836 + 5.00000ml of WP113904 = Final Quantity: 50.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
3761	Calibration-CCV CN Standard 250 ppb	WP113906	07/11/2025	07/12/2025	Rubina Mughal	None	WETCHEM_PIPETTE_3 (WC)	Iwona Zarych 07/11/2025

FROM 2.50000ml of WP113904 + 47.50000ml of WP113836 = 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
6	Calibration Standard 100 ppb	WP113907	07/11/2025	07/12/2025	Rubina Mughal	None	WETCHEM_PIPETTE_3 (WC)	Iwona Zarych 07/11/2025

FROM 1.00000ml of WP113904 + 49.00000ml of WP113836 = Final Quantity: 50.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
7	Calibration Standard 50 ppb	WP113908	07/11/2025	07/12/2025	Rubina Mughal	None	WETCHEM_PIPETTE_3 (WC)	Iwona Zarych 07/11/2025

FROM 0.50000ml of WP113904 + 49.50000ml of WP113836 = 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	WP113909	07/11/2025	07/12/2025	Rubina Mughal	None	WETCHEM_PIPETTE_3 (WC)	Iwona Zarych 07/11/2025

FROM 1.00000ml of WP113905 + 49.00000ml of WP113836 = Final Quantity: 50.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
9	Calibration Standard 5 ppb	WP113910	07/11/2025	07/12/2025	Rubina Mughal	None	WETCHEM_PIPETTE_3 (WC)	Iwona Zarych 07/11/2025

FROM 0.50000ml of WP113905 + 49.50000ml of WP113836 = 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
167	0 ppb CN calibration std	WP113911	07/11/2025	07/12/2025	Rubina Mughal	None	None	Iwona Zarych 07/11/2025

FROM 50.00000ml of WP113836 = Final Quantity: 50.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
1582	Chloramine T solution, 0.014M	WP113913	07/11/2025	07/12/2025	Rubina Mughal	WETCHEM_SCALE_5 (WCSC-5)	Glass Pipette-A	Iwona Zarych 07/11/2025

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

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Wet Chemistry STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
275	Ammonia Calibration Std. (2 ppm)	WP113926	07/14/2025	07/15/2025	Rubina Mughal	None	WETCHEM_PIPETTE_3 (WC)	Iwona Zarych 07/15/2025

FROM 48.00000ml of W3112 + 2.00000ml of WP113888 = Final Quantity: 50.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
285	Ammonia CCV Std. (1 ppm)	WP113927	07/14/2025	07/15/2025	Rubina Mughal	None	WETCHEM_PIPETTE_3 (WC)	Iwona Zarych 07/15/2025

FROM 49.00000ml of W3112 + 1.00000ml of WP113888 = 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
286	Ammonia ICV Std. (1 ppm)	WP113928	07/14/2025	07/15/2025	Rubina Mughal	None	WETCHEM_PIPETTE_3 (WC)	Iwona Zarych 07/15/2025

FROM 49.00000ml of W3112 + 1.00000ml of WP113889 = Final Quantity: 50.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
290	Phenol reagent for Ammonia	WP113929	07/14/2025	12/31/2025	Rubina Mughal	WETCHEM_SCALE_8 (WCSC-7)	None	Iwona Zarych 07/15/2025

FROM 3.20000gram of W3113 + 8.30000gram of W2663 + 88.80000ml 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	WP113938	07/15/2025	07/22/2025	Iwona Zarych	WETCHEM_SCALE_7 (WCSC-6)	None	Jignesh Parikh 07/15/2025

FROM 0.08500gram of W3219 + 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	WP113939	07/15/2025	07/22/2025	Iwona Zarych	WETCHEM_SCALE_7 (WCSC-6)	None	Jignesh Parikh 07/15/2025

FROM 0.08500gram of W3169 + 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
2458	COD CCV std, 50ppm	WP113940	07/15/2025	07/22/2025	Iwona Zarych	None	WETCHEM_PIPETTE_3 (WC)	Jignesh Parikh 07/15/2025

FROM 9.50000ml of W3112 + 0.50000ml of WP113938 = Final Quantity: 10.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
2459	COD ICV-LCS std, 50ppm	WP113941	07/15/2025	07/22/2025	Iwona Zarych	None	WETCHEM_PIPETTE_3 (WC)	Jignesh Parikh 07/15/2025

FROM 9.50000ml of W3112 + 0.50000ml of WP113939 = 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
4162	RL CHECK	WP113942	07/15/2025	07/22/2025	Iwona Zarych	None	WETCHEM_PIPETTE_3 (WC)	Jignesh Parikh 07/15/2025

FROM 9.90000ml of W3112 + 0.10000ml of WP113938 = 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	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 #
Seidler Chemical	BA-9530-33 / Hydrochloric Acid, Instra-Analyzed (cs/6x2.5L)	22G2862015	08/18/2025	02/18/2025 / Sagar	01/15/2025 / Sagar	M6151

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.	A1561-500GM / POTASSIUM ANTIMONY TARTRATE TRIHYDRATE, 500G	2GH0057	12/11/2027	12/11/2017 / apatel	12/11/2017 / apatel	W2306

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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.	J2870-1 / PHENOLPHTHALEIN, INDICATOR F/TITRATION, 500G	0000235350	06/04/2025	01/31/2020 / AMANDEEP	01/20/2020 / apatel	W2650

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.	P1060-10 / PHENOL, ACS, 500G	2HD0179	01/27/2030	01/27/2020 / apatel	01/27/2020 / apatel	W2663

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
PCI Scientific Supply, Inc.	J07716-1 / Ammonium Molybdate 500G	0000234410	02/11/2026	02/10/2020 / AMANDEEP	01/31/2020 / apatel	W2664

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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

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	06/30/2025	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.	PC16721-3 / Isopropanol, 99%	C20F23007	06/30/2025	12/30/2020 / apatel	12/30/2020 / apatel	W2788

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

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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

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 #
EPA	/ ICV-CN	ICV6-400	12/31/2025	01/08/2025 / lwona	02/20/2020 / lwona	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 / lwona	04/03/2023 / lwona	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 / lwona	04/03/2023 / lwona	W3017

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 / lwona	04/03/2023 / lwona	W3019

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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.	BDH0214-500G / Ammonium Persulfate Crystal, 500g	MKCR9319	06/30/2028	03/05/2024 / Iwona	06/06/2023 / Iwona	W3035

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.	J0938-7 / Ascorbic Acid, 500 gms	MKCS4627	09/30/2025	01/16/2024 / Iwona	01/16/2024 / Iwona	W3074

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

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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.	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

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 #
Environmental Express LTD	B1010 / COD Digestion Vials Low Level 0-150Mg/L	13821	10/31/2027	06/16/2025 / Iwona	07/25/2024 / Iwona	W3129

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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.	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 #
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.	AL74050-8 / SULFURIC ACID, 0.02N, 4L	235420	03/31/2029	11/04/2024 / Iwona	11/04/2024 / Iwona	W3150

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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	002126-2019-201	11/25/2029	11/25/2024 / Iwona	11/25/2024 / Iwona	W3152

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.	J3910-1 / Sodium Sulfide, 500 g	241836	11/30/2025	12/03/2024 / Iwona	12/03/2024 / Iwona	W3156

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	24E3156178	09/30/2027	12/10/2024 / Iwona	12/10/2024 / Iwona	W3163

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

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Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
PCI Scientific Supply, Inc.	J9416-1 / Sodium Hypochlorite 500 ml	2501J28	07/31/2025	01/24/2025 / Iwona	01/24/2025 / Iwona	W3174

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	V2-MEB742616	02/19/2026	02/19/2025 / Iwona	01/27/2025 / Iwona	W3180

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	24L0356561	08/31/2027	03/19/2025 / Iwona	03/19/2025 / Iwona	W3195

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	MKCV1009	09/30/2026	03/19/2025 / Iwona	03/19/2025 / Iwona	W3196

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	040525	04/05/2027	04/08/2025 / Iwona	04/08/2025 / Iwona	W3197

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
PCI Scientific Supply, Inc.	J3246-1 / POTAS PHOSPHATE, MONO, CRYS, ACS, 500G	MKCW6723	10/31/2028	04/11/2025 / Iwona	04/11/2025 / Iwona	W3198

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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	BCCL9613	05/31/2029	04/16/2025 / Iwona	04/16/2025 / Iwona	W3201

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	WXBF3271V	05/16/2029	04/21/2025 / Iwona	04/21/2025 / Iwona	W3203

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
PCI Scientific Supply, Inc.	J3246-1 / POTAS PHOSPHATE, MONO, CRYS, ACS, 500G	MKCX1379	01/31/2029	04/29/2025 / Iwona	04/29/2025 / Iwona	W3206

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
PCI Scientific Supply, Inc.	136742-80 / POLYSEED	132409	09/30/2026	05/21/2025 / Iwona	05/21/2025 / Iwona	W3212

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	MK25A21527	01/20/2029	05/21/2025 / Iwona	05/21/2025 / Iwona	W3213

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	1505H73	11/30/2025	05/21/2025 / Iwona	05/21/2025 / Iwona	W3214

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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	10D3242	12/31/2028	06/09/2025 / Iwona	06/09/2025 / Iwona	W3215

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	2025040493	06/30/2030	06/26/2025 / Iwona	06/26/2025 / Iwona	W3219

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	45060288	12/24/2025	07/07/2025 / Iwona	07/07/2025 / Iwona	W3224

CERTIFICATE OF ANALYSIS

Printed: 12/8/2017

Customer No : 30017 **Customer :** PCI SCIENTIFIC **Customer PO :** 6035343
Order Number : 3008126 **Delivery # :** 58495347
Catalog : A1561 Potassium Antimony Tartrate Trihydrate, Reagent, ACS **Lot :** 2GH0057

W2306
Received
12/11/17
RP

Chemical Formula : $C_8H_4K_2O_{12}Sb_2.3H_2O$ **Formula Weight :** 667.87
CAS# : 28300-74-5

Test	Limit Min.	Limit Max.	Results
ASSAY ($C_8H_4K_2O_{12}Sb_2.3HO$)	99.0	103.0 %	101.0 %
TITRATABLE ACID OR BASE	--	0.020 meq/g	<0.020 meq/g
LOSS ON DRYING	--	2.7 %	<2.7 %
ARSENIC (As)	--	0.015 %	<0.015 %
APPEARANCE			WHITE POWDER
DATE OF MANUFACTURE			29-DEC-2015

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

Read and understand label and MSDS/SDS before handling any chemical. All Spectrum's chemicals are for manufacturing, processing, repacking or research purposes by experienced personnel only. The customer must ensure to provide its users adequate hazardous material training and appropriate protective gears before handling our chemicals.

Certificate of Analysis Results Certified By:

Ibad Tirmizi
Director, Quality Assurance, Quality Control
New Brunswick, NJ 08901

spectrum CHEMICAL MFG CORP
SpectrumChemical.com

Corporate Office:
755-769 Jersey Ave.
New Brunswick, NJ 08901
(732) 214-1300

West Coast Plant:
14422 S. San Pedro St.
Gardena, CA 90248
(310) 516-8000

Certificate of Analysis

Date of Release: ***12/18/2013***

Product: ***Ammonium Chloride GR ACS***

Catalog No.: ***AX1270 all size codes***

Grade: ***Meets ACS Specifications***

CAS #: ***12125-02-9***

Country of Origin: ***India***

FW: ***53.49***

Lot No.: ***WL13B***

ClH_4N

Characteristic	Requirement 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

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

EMD Millipore Corporation
290 Concord Road
Billerica, MA 01821

Ammonium Molybdate, 4-Hydrate, Crystal
BAKER ANALYZED® A.C.S. Reagent

(ammonium heptamolybdate, tetrahydrate)

Material No.: 0716-01
Batch No.: 0000234410
Manufactured Date: 2019/02/13
Retest Date: 2026/02/11
Revision No: 1

Certificate of Analysis

Meets ACS Reagent Chemical Requirements,

Test	Specification	Result
Assay (as MoO_3)	81.0 - 83.0 %	81.4
ACS - Insoluble Matter	<= 0.005 %	< 0.001
Chloride (Cl)	<= 0.002 %	< 0.002
Nitrate (NO_3)	Passes Test	PT
Arsenate, Phosphate and Silicate (as SiO_2)	<= 0.001 %	< 0.001
ACS - Phosphate (PO_4)	<= 5 ppm	< 5
Sulfate (SO_4)	<= 0.02 %	< 0.02
Heavy Metals (as Pb)	<= 0.001 %	< 0.001
Magnesium (Mg)	<= 0.005 %	< 0.001
Potassium (K)	<= 0.01 %	< 0.01
Sodium (Na)	<= 0.01 %	<0.001

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

Phenolphthalein, Powder
BAKER ANALYZED® A.C.S. Reagent

Material No.: 2870-01
Batch No.: 0000235350
Manufactured Date: 2018/06/06
Retest Date: 2025/06/04
Revision No: 1

Certificate of Analysis

Meets ACS Reagent Chemical Requirements,

Test	Specification	Result
ACS - Clarity of Solution	Passes Test	PT
Visual Transition Interval - pH...8.0 (Colorless)	Passes Test	PT
Visual Transition Interval - pH...10.0 (Red)	Passes Test	PT

For Laboratory, Research or Manufacturing Use

Country of Origin: CN
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

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

spectrum® CHEMICAL MFG CORP

Certificate Of Analysis

Item Number	P1060	Lot Number	2HD0179
Item	Phenol, Loose Crystal, Reagent, ACS		
CAS Number	108-95-2		
Molecular Formula	C_6H_6O	Molecular Weight	94.11

Test	Specification		Result
	min	max	
ASSAY (C_6H_5OH)	99.0 %		100.02 %
FREEZING POINT (DRY)	40.5 C		40.5°C
CLARITY OF SOLUTION	TO PASS TEST		PASSES TEST
RESIDUE AFTER EVAPORATION		0.05 %	<0.05 %
WATER		0.5 %	0.0087 %
DATE OF MANUFACTURE			06-MAR-2018

Spectrum Chemical Mfg Corp
755 Jersey Avenue
New Brunswick 08901 NJ

Certificate Of Analysis Results Certified by

Ibad Tirmizi
Director of Quality
Spectrum Chemical Mfg. Corp.

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.

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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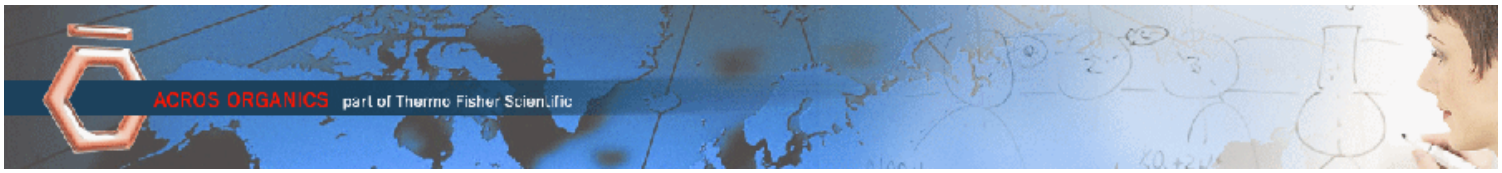

ACROS ORGANICS

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

CERTIFICATE OF ANALYSIS

Product Name	ISOPROPYL ALCOHOL, 99%
Grade	Meets ACS/USP/NF Monographs
Catalog #	231000099, zp231000099
Lot #	C20F23007
Date of Manufacture:	06/23/20
Recommended Retest Date:	Five Years from Date of Manufacture

W2788 Received on 12/30/2020 by AP

TEST	MONO GRAPH	SPECIFICATION	RESULT
Assay (corrected for water)	USP	99.0% min	99.92%
Assay (corrected for water)	ACS	99.5% min	
Solubility in water	ACS+	To Pass Test	Pass
Appearance	ACS+	Clear, colorless liquid	Pass
Color, APHA	ACS	10 max	1
Limit of Nonvolatile Residue	USP+	NMT 2.5 mg (0.005%)	0.1 mg
Residue after Evaporation	ACS+	0.001% max	< 0.001%
Specific Gravity	USP	0.783 - 0.787 @25°C	0.783
Identification A - Infrared Absorption	USP	To Pass Test	Pass
Identification B	USP	To Pass Test	Pass
Refractive Index @ 20°C	USP	1.376-1.378	1.377
Acidity	USP+	NMT 0.70 ml of 0.020N NaOH is required	0.30 mL
Titrable Acid or Base	ACS+	0.0001 meq/g max	0.0001 meq/g
Carbonyl Compounds	ACS	Propionaldehyde 0.002% max	< 0.002%
		Acetone 0.002% max	None Detected
Limit of Volatile Impurities	USP	Diethyl Ether NMT 0.1%	< 0.1%
		Acetone NMT 0.1%	None Detected
		Diisopropyl Ether NMT 0.1%	< 0.1%
		n-Propyl Alcohol NMT 0.1%	< 0.1%
		2-Butanol NMT 0.1%	< 0.1%
		Total NMT 1.0%	< 0.1%
Water, wt%	ACS	NMT 0.2%	0.05%
Water Determination	USP	NMT 0.5%	

+ This test is performed quarterly

58 Vale Road, Brookfield, Connecticut, 06804, USA | P. 800.243.5360
www.pharmco.com | www.greenfield.com

Certification and Compliance Statements

This lot of Isopropyl Alcohol complies with all of the current requirements listed in the United States Pharmacopeia, American Chemical Society monographs and the National Formulary.
No chemicals whatsoever are used as solvents at any point in the manufacture, processing or packaging of Isopropyl Alcohol. Only Class 2 and Class 3 residual solvents may appear as impurities / related substances / low level contaminants in IPA Concentration of Class 2 Option 1 and Class 3 residual solvents is below limits in the current USP/NF General Chapter <467>.
This product is not derived, nor does it come in contact with, any materials derived from bovine or other animal sources.
This product is for further commercial manufacturing, laboratory or research use, and may be used as an excipient or a process solvent for pharmaceutical purposes. It is not intended for use as an active ingredient in drug manufacturing nor as a medical device or disinfectant. Appropriate/legal use of this product is the responsibility of the user.

Approved by: D. Simoncelli, Quality Control Chemist

Date of Approval: 06/23/2020

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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.

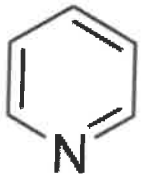
W3019
Rec 4/3/23

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)	Conforms to Requirements	Crystals
Granular Powder or Crystals or Flakes		
Complexometric EDTA	99.0 - 103.0 %	99.6 %
X-Ray Diffraction	Conforms to Structure	Conforms
pH	5.0 - 7.0	5.4
c = 5%, Water, 25 Deg C		
Insoluble Matter	≤ 0.005 %	< 0.001 %
c = 10%, Water		
Chloride Content	≤ 0.005 %	< 0.005 %
Nitrite (NO2)	≤ 0.001 %	< 0.001 %
Sulfate (SO4)	≤ 0.002 %	< 0.002 %
Barium	≤ 0.005 %	< 0.001 %
Heavy Metals	≤ 5.0 ppm	< 1.0 ppm
by ICP-OES		
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.

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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.

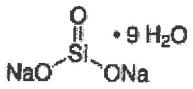
W 3022
Rec. 4/5/23 12

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

Sigma-Aldrich.

W 3035
12
Lec. 6/6/23

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:
Ammonium persulfate - ACS reagent, ≥98.0%

$(NH_4)_2S_2O_8$

Product Number:	**248614**
Batch Number:	**MKCR9319**
Brand:	SIGALD
CAS Number:	7727-54-0
MDL Number:	MFCD00003390
Formula Weight:	228.20 g/mol
Quality Release Date:	13 OCT 2022

Test	Specification	Result
Appearance (Color)	White to Off White	White
Appearance (Form)	Powder or Crystals or Granules or Chunks	Crystals
ICP Major Analysis Confirms Sulfur Component	Confirmed	Confirmed
Titration by KMNO4	≥ 98.0 %	100.0 %
Residue on ignition (Ash)	≤ 0.05 %	< 0.05 %
Insoluble Matter c = 10 %; In Water	≤ 0.005 %	0.002 %
Chloride and Chlorate (as Cl)	≤ 0.001 %	< 0.001 %
Iron (Fe)	≤ 0.001 %	< 0.001 %
Heavy Metal as Lead	≤ 0.005 %	< 0.001 %
Manganese (Mn)	≤ 0.5 ppm	< 0.1 ppm
Titratable Acid (meq/g)	≤ 0.04	< 0.04
Meets ACS Requirements	Current ACS Specification	Conforms

Larry Coers, Director
Quality Control
Milwaukee, WI 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

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

Certificate of Analysis

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

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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

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

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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

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	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.

QATS LABORATORY INORGANIC REFERENCE MATERIAL INITIAL CALIBRATION VERIFICATION SOLUTIONS (ICV1, ICV5, AND ICV6)

NOTE: These instructions are for advisory purposes only. If any apparent conflict exists between these instructions and the analytical protocol or your contract, disregard these instructions.

APPLICATION: For use with the CLP SFAM01.0 SOW and revisions.

CAUTION: Read instructions carefully before opening bottle(s) and proceeding with the analyses.

Contains Metals in Dilute Acidic or Cyanide in Basic Aqueous Solutions
HAZARDOUS MATERIAL

Safety Data Sheets Available Upon Request

W2160, W2161, W2162, W2163, W2164 Receive by AP on 9/2/2016

(A) *SAMPLE DESCRIPTION*

Enclosed is a set of one (1) or more Aqueous Inorganic Reference Materials containing various analyte concentrations. ICV1 and ICV5 are in a matrix of dilute nitric acid. ICV6 is in a matrix of dilute basic solution. **For the reference material source in reporting ICVs use "USEPA". For the reference material lot number for the ICV1, ICV5, and ICV6 solutions use "ICV1-1014", "ICV5-0415", and "ICV6-0400", respectively.**

(B) *BREAKAGE OR MISSING ITEMS*

Check the contents of the shipment carefully for any broken, leaking, or missing items. Check that the seal is intact on each bottle. Refer to the enclosed chain of custody record. Report any problems to Mr. Keith Strout, APTIM Federal Services, LLC, at (702) 895-8722. If requested, return the chain-of-custody record with appropriate annotations and signatures to the address provided below.

QUALITY ASSURANCE TECHNICAL SUPPORT LABORATORY
APTIM Federal Services, LLC
2700 Chandler Avenue - Building C
Las Vegas, NV 89120

(C) *ANALYSIS OF SAMPLES*

The Initial Calibration Verification Solutions (ICVs) are to be used to evaluate the accuracy of the initial calibrations of ICP, AA, and Cyanide colorimetric instruments, and are to be used with the CLP SOWs and revisions. The values for each element in the ICVs are listed below in µg/L (ppb) for the resulting solution(s) after the dilution of the concentrate(s) according to the following instructions. Use Class 'A' glassware to prepare the solution(s).

ICV1-1014 For ICP-AES analysis, use a 10-fold dilution by pipetting 10 mL of the ICV1 concentrate into a 100 mL volumetric flask and dilute to volume with 2% (v/v) nitric acid.

ICV1-1014 For ICP-MS analysis, use a 50-fold dilution by pipetting 2 mL of the ICV1 concentrate into a 100 mL volumetric flask and dilute to volume with 1% (v/v) nitric acid.

ICV5-0415 For the cold vapor analysis of mercury by AA, use a 100-fold dilution by pipetting 1 mL of the ICV5 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, use a 100-fold dilution by pipetting 1 mL of the ICV6 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	2500	500
Sb	1000	200
As	1000	200
Ba	520	100
Be	510	100
Cd	510	100
Ca	10000	2000
Cr	520	100
Co	520	100
Cu	510	100
Fe	10000	2000
Pb	1000	200
Mg	6000	1200
Mn	520	100
Ni	530	110
K	9900	2000
Se	1000	200
Ag	250	50
Na	10000	2000
Tl	1000	210
V	500	100
Zn	1000	200

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

M5497 – M5508
Recd on 4/14/23
DB

Material No.: 3624-01
Batch No.: 0000281938
Manufactured Date: 2021-06-07
Retest Date: 2026-06-07
Revision No.: 2

Certificate of Analysis

Test	Specification	Result
Assay (NaCl) (by Ag titrn)	≥ 99.0 %	100.0 %
pH of 5% Solution at 25°C	5.0 - 9.0	6.3
Insoluble Matter	≤ 0.005 %	0.003 %
Iodide (I)	≤ 0.002 %	< 0.002 %
Bromide (Br)	≤ 0.01 %	< 0.01 %
Chlorate and Nitrate (as NO_3)	≤ 0.003 %	< 0.001 %
ACS - Phosphate (PO_4)	≤ 5 ppm	< 5 ppm
Sulfate (SO_4)	≤ 0.004 %	< 0.004 %
Barium (Ba)	Passes Test	Passes Test
ACS - Heavy Metals (as Pb)	≤ 5 ppm	< 5 ppm
Iron (Fe)	≤ 2 ppm	< 1 ppm
Calcium (Ca)	≤ 0.002 %	< 0.001 %
Magnesium (Mg)	≤ 0.001 %	< 0.001 %
Potassium (K)	≤ 0.005 %	0.001 %

For Laboratory,Research,or Manufacturing Use
Meets Reagent Specifications for testing USP/NF monographs
Country of Origin: USA
Packaging Site: Paris Mfg Ctr & DC

Jamie Ethier
Vice President Global Quality

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

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

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

James T Ethier

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

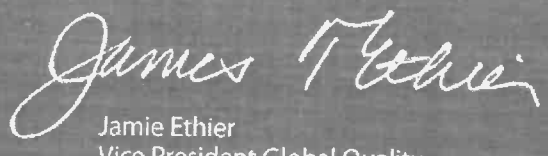
For questions on this Certificate of Analysis please contact Technical Services at 855.282.6867 or +1.610.386.1700
Avantor Performance Materials, LLC
100 Matsonford Rd, Suite 200, Radnor, PA 19087. U.S.A. Phone: 610.386.1700

Material No.: 9530-33
Batch No.: 0000275677

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

For Laboratory, Research or Manufacturing Use
Product Information (not specifications):
Appearance (clear, fuming liquid)
Meets ACS Specifications

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



Jamie Ethier
Vice President Global Quality

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

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

avantor™ | J.T.Baker®

M6151

R-> 1/15/25

Material No.: 9530-33
Batch No.: 22G2862015
Manufactured Date: 2022-06-15
Retest Date: 2027-06-14
Revision No.: 0

Certificate of Analysis

Test	Specification	Result
ACS – Assay (as HCl) (by acid-base titrn)	36.5 – 38.0 %	37.9 %
ACS – Color (APHA)	≤ 10	5
ACS – Residue after Ignition	≤ 3 ppm	< 1 ppm
ACS – Specific Gravity at 60°/60°F	1.185 – 1.192	1.191
ACS – Bromide (Br)	≤ 0.005 %	< 0.005 %
ACS – Extractable Organic Substances	≤ 5 ppm	< 1 ppm
ACS – Free Chlorine (as Cl_2)	≤ 0.5 ppm	< 0.5 ppm
Phosphate (PO_4)	≤ 0.05 ppm	< 0.03 ppm
Sulfate (SO_4)	≤ 0.5 ppm	< 0.3 ppm
Sulfite (SO_3)	≤ 0.8 ppm	0.3 ppm
Ammonium (NH_4)	≤ 3 ppm	< 1 ppm
Trace Impurities – Arsenic (As)	≤ 0.010 ppm	< 0.003 ppm
Trace Impurities – Aluminum (Al)	≤ 10.0 ppb	1.3 ppb
Arsenic and Antimony (as As)	≤ 5.0 ppb	< 3.0 ppb
Trace Impurities – Barium (Ba)	≤ 1.0 ppb	0.2 ppb
Trace Impurities – Beryllium (Be)	≤ 1.0 ppb	< 0.2 ppb
Trace Impurities – Bismuth (Bi)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities – Boron (B)	≤ 20.0 ppb	< 5.0 ppb
Trace Impurities – Cadmium (Cd)	≤ 1.0 ppb	< 0.3 ppb
Trace Impurities – Calcium (Ca)	≤ 50.0 ppb	163.0 ppb
Trace Impurities – Chromium (Cr)	≤ 1.0 ppb	0.7 ppb
Trace Impurities – Cobalt (Co)	≤ 1.0 ppb	< 0.3 ppb
Trace Impurities – Copper (Cu)	≤ 1.0 ppb	< 0.1 ppb
Trace Impurities – Gallium (Ga)	≤ 1.0 ppb	< 0.2 ppb
Trace Impurities – Germanium (Ge)	≤ 3.0 ppb	< 2.0 ppb
Trace Impurities – Gold (Au)	≤ 4.0 ppb	0.6 ppb
Heavy Metals (as Pb)	≤ 100 ppb	< 50 ppb
Trace Impurities – Iron (Fe)	≤ 15 ppb	6 ppb

>>> Continued on page 2 >>>

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

avantor™ | J.T.Baker®

Material No.: 9530-33
Batch No.: 22G2862015

Test	Specification	Result
Trace Impurities – Lead (Pb)	≤ 1.0 ppb	< 0.5 ppb
Trace Impurities – Lithium (Li)	≤ 1.0 ppb	< 0.2 ppb
Trace Impurities – Magnesium (Mg)	≤ 10.0 ppb	2.9 ppb
Trace Impurities – Manganese (Mn)	≤ 1.0 ppb	< 0.4 ppb
Trace Impurities – Mercury (Hg)	≤ 0.5 ppb	0.1 ppb
Trace Impurities – Molybdenum (Mo)	≤ 10.0 ppb	< 3.0 ppb
Trace Impurities – Nickel (Ni)	≤ 4.0 ppb	< 0.3 ppb
Trace Impurities – Niobium (Nb)	≤ 1.0 ppb	0.8 ppb
Trace Impurities – Potassium (K)	≤ 9.0 ppb	< 2.0 ppb
Trace Impurities – Selenium (Se), For Information Only		< 1.0 ppb
Trace Impurities – Silicon (Si)	≤ 100.0 ppb	< 10.0 ppb
Trace Impurities – Silver (Ag)	≤ 1.0 ppb	0.5 ppb
Trace Impurities – Sodium (Na)	≤ 100.0 ppb	2.3 ppb
Trace Impurities – Strontium (Sr)	≤ 1.0 ppb	< 0.2 ppb
Trace Impurities – Tantalum (Ta)	≤ 1.0 ppb	1.6 ppb
Trace Impurities – Thallium (Tl)	≤ 5.0 ppb	< 2.0 ppb
Trace Impurities – Tin (Sn)	≤ 5.0 ppb	4.0 ppb
Trace Impurities – Titanium (Ti)	≤ 1.0 ppb	1.5 ppb
Trace Impurities – Vanadium (V)	≤ 1.0 ppb	< 0.2 ppb
Trace Impurities – Zinc (Zn)	≤ 5.0 ppb	0.8 ppb
Trace Impurities – Zirconium (Zr)	≤ 1.0 ppb	0.3 ppb

>>> Continued on page 3 >>>

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

avantor™ | J.T.Baker®

Material No.: 9530-33
Batch No.: 22G2862015

Test	Specification	Result

For Laboratory,Research,or Manufacturing Use
Product Information (not specifications):
Appearance (clear, fuming liquid)
Meets ACS Specifications
Storage Condition: Store below 25 °C.

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

James T Ethier

Jamie Ethier
Vice President Global Quality

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

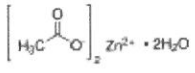
For questions on this Certificate of Analysis please contact Technical Services at 855.282.6867 or +1.610.386.1700
Avantor Performance Materials, LLC
100 Matsonford Rd, Suite 200, Radnor, PA 19087. U.S.A. Phone: 610.386.1700

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

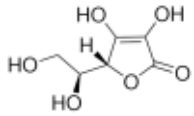
Larry Coers, Director
Quality Control
Milwaukee, WI US

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

W3074 Rec. on 01/16/24 by IZ

Certificate of Analysis

Product Name:
L-Ascorbic acid - ACS reagent, ≥99%



Product Number:	**255564**
Batch Number:	**MKCS4627**
Brand:	SIAL
CAS Number:	50-81-7
MDL Number:	MFCD00064328
Formula:	C6H8O6
Formula Weight:	176.12 g/mol
Quality Release Date:	21 NOV 2022
Recommended Retest Date:	SEP 2025

Test	Specification	Result
Appearance (Color)	White	White
Appearance (Form) Powder, Crystals, Crystalline Powder, Granules and/or Chunks	Conforms to Requirements	Powder
Infrared Spectrum	Conforms to Structure	Conforms
Optical Rotation (+); c = 10%; Water	20.5 - 21.5 deg	20.7 deg
Titration by Iodine	≥ 99.0 %	99.4 %
Residue on Ignition	≤ 0.10 %	0.03 %
Iron (Fe)	≤ 0.001 %	< 0.001 %
Heavy Metals by ICP-OES	≤ 0.002 %	0.001 %
Recommended Retest Period 3 Years	----------	----------
Meets ACS Requirements	Current ACS Specification	Conforms

Larry Coers, Director
Quality Control
Milwaukee, WI US

RICCA CHEMICAL COMPANY®
W3103 Received on 4/22/24 by IZ

1841 Broad Street
Pocomoke City, MD 21851
http://www.riccachemical.com
1-888-GO-RICCA
customerservice@riccachemical.com

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®

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

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
1-888-GO-RICCA
customerservice@riccachemical.com

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.

W3127 rec. 7/25/24 12
W3128 exp. 10/31/27
W3129

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

October 27, 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	13821	COD Reagent Vials, 0 - 150 ppm

spectrum® CHEMICAL MFG CORP

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.

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

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

Certificate of Analysis

ThermoFisher SCIENTIFIC

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 – 0120633

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	SA226	Quality Test / Release Date	03/18/2024
Lot Number	235420		
Description	SULFURIC ACID, 0.02N, CERTIFIED		
Country of Origin	United States	Suggested Retest Date	Mar/2029

N/A			
Result Name	Units	Specifications	Test Value
APPEARANCE		REPORT	Clear, colorless liquid
COLOR	APHA	<= 5	<5
IDENTIFICATION	PASS/FAIL	= PASS TEST	PASS TEST
NORMALITY		Inclusive Between 0.0198 - 0.0202	0.0200
TRACEABLE TO NIST KHP STD	POT. ACID PHTHALATE	= LOT 84L	SRM 84l

Harout Sahagian - 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.

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
Lot Number	002126-2019-201
Product	**Magnesium chloride hexahydrate**
	Magnesium chloride•$6H_2O$
CAS Number	7791-18-6
Molecular Formula	$MgCl_2$•$6H_2O$
Molecular Weight	203.3

Appearance	White crystals
Solubility	167 g in 100 mL water
Melting Point	~ 115 °C
Heavy Metals	4.393 ppm
Anion	Nitrate (NO_3) : < 0.001% Phosphate (PO_4) : < 5 ppm Sulfate (SO_4) : < 0.002%
Cation	Ammonium (NH_4) : < 0.002% Barium (Ba) : 0.005% Calcium (Ca) : 0.01% Iron (Fe) : 4.5 ppm Manganese (Mn) : 0.624 ppm Potassium (K) : 0.004% Sodium (Na) : 0.000003% Strontium (Sr) : 0.005%
Insoluble material	0.0021%
Assay by titration	100.83%
Grade	ACS reagent
Storage	Store at RT

Certificate of Analysis

Catalog Number: 01237 **Lot Number: 002126-2019-201**

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

Certificate of Analysis

Item Number	Product Description	Lot Number
SX0770-1	Sodium Sulfide Nonahydrate, ACS Grade, 500GM	241836
Formula	**Molecular Weight**	**CAS Number**
$Na_2S \bullet 9H_2O$	240.18 g/mol	1313-84-4

QC TEST/RELEASE DATE: 10/09/2024 **SUGGESTED RETEST DATE:** 11/30/2025

S.No	Test	Unit	Specifications	Test Value
1	Appearance (Color)		Colorless to Very Faint Yellow and White to Faint Yellow	White
2	Appearance (Form)		Crystals or Chunks	Crystals
3	Titration by $Na_2S_2O_3$	%	≥ 98.0	98.1
4	Ammonium (NH_4)	%	≤ 0.005	< 0.005
5	Assay (Sulfite and Thiosulfate)	%	≤ 0.1	0.08
6	Iron (Fe)		Pass	passed
7	BSE/TSE Free		BSE/TSE Free	passed
8	Grade		Meets ACS Specifications	passed
9	Country of Origin		Ukraine	Ukraine

Intended for laboratory and manufacturing use only. Not for drug, food, or household use.
This is an electronically generated document and does not require signatures.

Certified By : Joe Schoellkopff,
Quality Control Manager

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

EMD Millipore Corporation
400 Summit Drive
Burlington, MA 01803
U.S.A

W3163 Rec. on 12/10/24 by IZ

Certificate of Analysis

Material	BDH9284-2.5KG
Material Description	BDH SODIUM CARB ANHYD ACS 2.5KG
Grade	U S P REAGENT (ACS GRADE)
Batch	24E3156178
Reassay Date	09/30/2027
CAS Number	497-19-8
Molecular Formula	Na2CO3
Molecular Mass	105.99
Date of Manufacture	09/01/2023
Storage	Room Temperature

Material is hygroscopic. Protect from Moisture.
Additional Product Description:

Characteristics	Specifications	Measured Values
Appearance	Fine white granular powder	Fine white granular powder
Calcium	<= 0.03 %	0.003 %
Chloride	<= 0.001 %	0.0003 %
Heavy Metals (as Pb)	<= 0.0005 %	0.0001 %
Insolubles	<= 0.01 %	0.001 %
Iron	<= 0.0005 %	0.0001 %
Loss on Heating	<= 1.0 %	0.03 %
Magnesium	<= 0.005 %	0.001 %
Phosphate	<= 0.001 %	0.001 %
Potassium	<= 0.005 %	0.003 %
Purity	>= 99.5 %	100.0 %
Silica	<= 0.005 %	0.001 %
Sulfur Compounds	<= 0.003 %	0.002 %

Extra Description: Meets Reagent Specifications for testing USP/NF monographs

Internal ID #: 710

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.

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.

RICCA CHEMICAL COMPANY®

1841 Broad Street
Pocomoke City, MD 21851
http://www.riccachemical.com
1-888-GO-RICCA
customerservice@riccachemical.com

Certificate of Analysis

Sodium Hypochlorite Solution, 5% available Chlorine

Lot Number: 2501J28 **Product Number:** 7495.5

Manufacture Date: JAN 17, 2025
Expiration Date: JUL 2025

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

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

Test	Specification	Result	NIST SRM#
Appearance	Colorless to greenish-yellow liquid	Passed	
Assay (vs. Sodium Thiosulfate/Starch)	4.75-5.25 % (w/w) Cl_2	5.17 % (w/w) Cl_2	136

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

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

Part Number	Size / Package Type	Shelf Life (Unopened Container)
7495.5-1	4 L black poly	6 months
7495.5-16	500 mL amber poly	6 months
7495.5-32	1 L amber poly	6 months
7495.5-8	250 mL amber poly	6 months

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

Jose Pena (01/17/2025)
Operations Manager

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

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:	V2-MEB742616
Matrix:	H2O
Value / Analyte(s):	150 µg/mL ea: Sulfate, 100 µg/mL ea: Bromide, 50 µg/mL ea: o-Phosphate as P, 30 µg/mL ea: Chloride, Nitrite as N, 25 µg/mL ea: Nitrate as N, 20 µg/mL ea: Fluoride

3.0 CERTIFIED VALUES AND UNCERTAINTIES

ANALYTE	CERTIFIED VALUE	ANALYTE	CERTIFIED VALUE
Bromide, Br	100.0 ± 0.5 µg/mL	Chloride, Cl	30.01 ± 0.13 µg/mL
Fluoride, F-	20.00 ± 0.07 µg/mL	Nitrate as N, NNO3-	25.00 ± 0.10 µg/mL
Nitrite as N, NNO2-	30.00 ± 0.10 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 ºC)

Assay Information:

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

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

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

Characterization of CRM/RM by Two or More Methods

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

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

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

April 02, 2024

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

11.2 Lot Expiration Date

- April 02, 2029

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

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

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

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

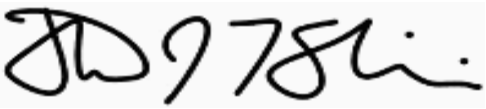
12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Prepared By:

Uyen Truong
Custom Processing Supervisor

Certificate Approved By:

Thomas Kozikowski
Stock VS Manager



Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director

W3195 Received on 03/19/2025 by IZ

Certificate of Analysis

Material	BDH9208-500G
Material Description	BDH AMMONIUM CHLORIDE ACS 500G
Grade	U S P REAGENT (ACS GRADE)
Batch	24L0356561
Reassay Date	08/31/2027
CAS Number	12125-02-9
Molecular Formula	NH4Cl
Molecular Mass	53.49
Date of Manufacture	08/01/2024
Storage	Room Temperature

Characteristics	Specifications	Measured Values
Appearance	White granular powder	White granular powder
Calcium	<= 0.001 %	0.001 %
Heavy Metals (as Pb)	<= 0.0005 %	<0.0002 %
Insolubles	<= 0.005 %	0.001 %
Iron	<= 0.0002 %	<0.0002 %
Magnesium	<= 0.0005 %	0.0001 %
pH (5%, Water) @25C	4.5 - 5.5	4.8
Phosphate	<= 0.0002 %	<0.0002 %
Purity	>= 99.5 %	99.8 %
Residue on Ignition	<= 0.01 %	0.003 %
Sulfate	<= 0.002 %	<0.002 %

Extra Description: Meets Reagent Specifications for testing USP/NF monographs

Internal ID #: 710

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

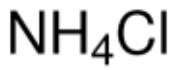
Product meets analytical specifications of the grades listed.

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

W3196 Received on 03/19/2025 by IZ

Certificate of Analysis

Product Name:
Ammonium chloride - ACS reagent, ≥99.5%



Product Number:	**213330**
Batch Number:	**MKCV1009**
Brand:	SIGALD
CAS Number:	12125-02-9
MDL Number:	MFCD00011420
Formula:	H4ClN
Formula Weight:	53.49 g/mol
Quality Release Date:	23 OCT 2023
Recommended Retest Date:	SEP 2026

Test	Specification	Result
Appearance (Color)	White	White
Appearance (Form)	Powder or Crystals or Chunk(s)	Crystals
Titration by AgNO3	≥ 99.5 %	100.2 %
pH @ 25 Deg c (5% Solution)	4.5 - 5.5	4.9
Insoluble Matter 10%, H2O	≤ 0.005 %	0.001 %
Residue on ignition (Ash)	≤ 0.01 %	< 0.01 %
Calcium (Ca)	≤ 0.001 %	< 0.001 %
Magnesium (Mg)	≤ 5 ppm	1 ppm
Heavy Metals by ICP	≤ 5 ppm	< 1 ppm
Iron (Fe)	≤ 2 ppm	< 1 ppm
Phosphate (PO4)	≤ 2 ppm	< 2 ppm
Sulfate (SO4)	≤ 0.002 %	< 0.002 %
Meets ACS Requirements	Current ACS Specification	Conforms
Recommended Retest Period 3 Years	----------	----------

Larry Coers, Director

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: **213330**
Batch Number: **MKCV1009**

Quality Control
Milwaukee, WI US

W3198 Received on 4/11/2025 by IZ

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:
Potassium phosphate monobasic - ACS reagent, ≥99.0%

KH_2PO_4

Product Number:	**P0662**
Batch Number:	**MKCW6723**
Brand:	SIGALD
CAS Number:	7778-77-0
MDL Number:	MFCD00011401
Formula:	H2KO4P
Formula Weight:	136.09 g/mol
Quality Release Date:	16 OCT 2024
Recommended Retest Date:	OCT 2028

Test	Specification	Result
Appearance (Color)	White	White
Appearance (Form)	Powder or Crystals	Crystals
Assay	≥ 99.0 %	99.8 %
Insoluble Matter	≤ 0.01 %	< 0.01 %
Loss on Drying At 105ºC	≤ 0.2 %	< 0.1 %
pH (c = 5%, 25 deg C)	4.1 - 4.5	4.5
Chloride Content	≤ 0.001 %	< 0.001 %
Sulfate (SO4)	≤ 0.003 %	< 0.003 %
Heavy Metals by ICP	≤ 0.001 %	< 0.001 %
Iron (Fe)	≤ 0.002 %	< 0.001 %
Sodium (Na)	≤ 0.005 %	< 0.001 %
Recommended Retest Period 4 Years	----------	----------

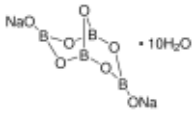
Larry Coers, Director
Quality Control
Milwaukee, WI US

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

W3201 Received on 4/16/25 by IZ

Certificate of Analysis

Product Name:
Sodium tetraborate decahydrate - ACS reagent, ≥99.5%



Product Number:	**S9640**
Batch Number:	**BCCL9613**
Brand:	SIGALD
CAS Number:	1303-96-4
Formula:	B4Na2O7 · 10H2O
Formula Weight:	381,37 g/mol
Quality Release Date:	05 JUL 2024
Recommended Retest Date:	MAY 2029

Test	Specification	Result
Appearance (Color)	White	White
Appearance (Form)	Powder or Crystals	Powder
Titration with NaOH	99.5 - 105.0 %	100.7 %
pH	9.15 - 9.20	9.20
0.01 m Solution at 25 Deg C		
Meets ACS Requirements	Corresponds to Requirements	Corresponds
ACS Specifications	Corresponds to Requirements	Corresponds
Insoluble Matter <= 0.005% / Heavy		
Metals (As Pb) <= 0.001%		
Calcium (Ca)	≤ 50 mg/kg	< 50 mg/kg
Iron (Fe)	≤ 5 mg/kg	< 5 mg/kg
Total Sulfur	≤ 50 mg/kg	< 50 mg/kg
as SO4 (ICP)		
Chloride (Cl)	≤ 10 mg/kg	< 10 mg/kg
Phosphate (PO4)	≤ 10 mg/kg	< 10 mg/kg

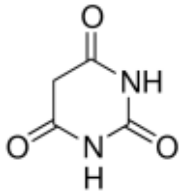
Dr.Reinhold Schwenninger
Quality Assurance
Buchs,Switzerland CH

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:
Barbituric acid - ReagentPlus® , 99%

Product Number:	**185698**
Batch Number:	**WXBF3271V**
Brand:	SIAL
CAS Number:	67-52-7
Formula:	C4H4N2O3
Formula Weight:	128,09 g/mol
Quality Release Date:	16 MAY 2024



Test	Specification	Result
Appearance (Colour)	White to Off-White	White
Appearance (Form)	Powder	Powder
Infrared spectrum	Conforms to Structure	Conforms
Purity (Titration by NaOH)	98.5 - 101.5 %	100.4 %
GC (area %) VPCT	≥ 98 %	100 %

Kang Chen
Quality Manager
Wuxi , China CN

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:
Potassium phosphate monobasic - ACS reagent, ≥99.0%

KH_2PO_4

Product Number:	**P0662**
Batch Number:	**MKCX1379**
Brand:	SIGALD
CAS Number:	7778-77-0
MDL Number:	MFCD00011401
Formula:	H2KO4P
Formula Weight:	136.09 g/mol
Quality Release Date:	27 JAN 2025
Recommended Retest Date:	JAN 2029

Test	Specification	Result
Appearance (Color)	White	White
Appearance (Form)	Powder or Crystals	Crystals
Assay	≥ 99.0 %	99.9 %
Insoluble Matter	≤ 0.01 %	< 0.01 %
Loss on Drying At 105ºC	≤ 0.2 %	< 0.1 %
pH (c = 5%, 25 deg C)	4.1 - 4.5	4.5
Chloride Content	≤ 0.001 %	< 0.001 %
Sulfate (SO4)	≤ 0.003 %	< 0.003 %
Heavy Metals by ICP	≤ 0.001 %	< 0.001 %
Iron (Fe)	≤ 0.002 %	< 0.001 %
Sodium (Na)	≤ 0.005 %	< 0.001 %
Recommended Retest Period 4 Years	----------	----------

Larry Coers, Director
Quality Control
Milwaukee, WI US

N3212 Received on 5/21/25 by 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 132409 • Mfg. Date: 09/2024 • Exp. Date: 09/2026

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 4.00×10^9 cfu/g.

GLUCOSE/GLUTAMIC-ACID RESULTS:
Tested results within acceptable range 198 +/- 30.5 mg/L (167.5 - 228.5 mg/L). GGA Lot# 43100020 – Average Test Result: 202.1

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 ensure that the Finished Product conforms to the above specification.

Signature: _____ **Date**: 09/13/2024
Quality Control Department

POLYSEED.Ref.1.19 Revised Jan 24

InterLab®
International Laboratory Supply

ISO 9002 DNV DNV Certification, Inc. REGISTERED FIRM

N3213 Received on 5/21/25 by 12

Certificate of Analysis

[redacted]

Material	BDHVBDH7206-1
Material Description	IODINE SOLUTION 0.025N
Lot	25A2461008
Expires end of	2029-Jan-20
Molecular mass	0
Last Quality Control	2025-Jan-24
Date of manufacture	2025-Jan-21
Made in	United States
Manufacturer Source Batch	MK25A21527

Additional infomation

Characteristics	Specifications	Measured values
Prepared to formulation on file	Confirmed	Confirmed
Appearance	Passes Test	Passes Test
Normality, N	0.0200 - 0.0300	0.0268

Signature

We certify that this batch conforms to the specifications listed above.

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

Michelle Bales - Sr. Manager Quality Assurance
Avantor Performance Materials, LLC

RICCA CHEMICAL COMPANY®

448 West Fork Dr
Arlington, TX 76012
http://www.riccachemical.com
1-888-GO-RICCA
customerservice@riccachemical.com

Certificate of Analysis

Cyanide Standard, 1000 ppm CN^-

Lot Number: 1505H73 **Product Number:** 2543

Manufacture Date: MAY 08, 2025
Expiration Date: NOV 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 (from ACS)

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)

Ernest Mahan (05/08/2025)
Plant Manager

Certificate Of Analysis

Date of Release: 4/8/2025

Name: **Potassium Hydrogen Phthalate**
ACS

Item No: **PX1476 All Sizes**
Lot / Batch No: **2025040493**
Country of Origin: **USA**

Item	Specifications	Analysis
Assay (Dried Basis)	99.95-100.05%	99.98%
Chlorine compounds (as Cl)	0.003% max.	<0.003%
Color	White	Passes Test
Form	Crystals	Passes Test
Heavy metals (by ICP-OES)	5 ppm max.	<5 ppm
Insoluble Matter	0.005% max.	<0.005%
Iron (Fe)	5 ppm max.	<5 ppm
pH of a 0.05m solution @ 25.0C	4.00-4.02	4.00
Sodium (Na)	0.005% max.	<0.005%
Sulfur compounds (as S)	0.002% max.	<0.002%

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

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: June 25, 2025

Lot Number: **45060288**

Expiration Date: December 24, 2025

Test	Specification	Result
Appearance (clarity)	clear solution	clear solution
Appearance (color)	colorless	colorless
Concentration (CN)	0.990 - 1.010mg/mL	1.000mg/mL
Concentration (CN)	990 - 1,010ppm	1,000ppm
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*

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

2025070315:30:45ahoffman-0-0

SHIPPING DOCUMENTS

CHEMTECH
CHAIN OF CUSTODY RECORD

284 Sheffield Street, Mountainside, NJ 07092
(908) 789-8900 Fax: (908) 78-8922
www.chemtech.net

Chemtech Project Number: Q2536

COC Number:

CLIENT INFORMATION

COMPANY: Tetra Tech
ADDRESS: 4433 Corporation Ln, Suite 300
CITY: Virginia Beach STATE: VA ZIP: 23462
ATTENTION: Ernie Wu
PHONE: 757-466-4901 FAX: 757-461-4148

PROJECT INFORMATION

PROJECT NAME: NWIRP Bethpage
PROJECT #: 112G08005-WE13 LOCATION: RW5B
PROJECT MANAGER: Ernie Wu
E-MAIL: ernie,wu@tetratech.com
PHONE: 757-466-4901 FAX: 757-461-4148

BILLING INFORMATION

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

DATA TURNAROUND INFORMATION

FAX: 10 DAYS*
HARD COPY: 10 DAYS*
EDD 10 DAYS*
* TO BE APPROVED BY CHEMTECH
STANDARD TURNAROUND TIME IS 10 BUSINESS DAYS

DATA DELIVERABLE INFORMATION

- ☐ RESULTS ONLY
- ☐ RESULTS + QC
- ☐ New Jersey REDUCED
- ☐ New Jersey CLP
- ☐ EDD Format
- ☐ USEPA CLP
- ☐ New York State ASP "B"
- ☐ New York State ASP "A"
- ☐ Other

ANALYSIS

1	2	3	4	5	6	7	8	9
Total Phosphorus	Chloride, Anions, Sulfate	Alkalinity	BOD	COD	Sulfide	Cyanide	Ammonia	TOC

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
								C				C	F	D	C	C	<-- Specify Preservatives A-HCl B-HNO3 C-H2SO4 D-NaOH E-ICE F-Other
1.	RW5-SP100-20250708	GW		x	7/8/25	10:45	9	x	x	x	x	x	x	x	x	x	pH 1.3
2.																	
3.																	
4.																	
5.																	
6.																	
7.																	
8.																	
9.																	
10.																	

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

	DATE/TIME		
1. RELINQUISHED BY SAMPLER	7/8/25-1400	1. RECEIVED BY 1008	**Conditions of bottles or coolers at receipt:** ☐ Compliant ☐ Non Compliant ☐ Cooler Temp 2.3 °C
2. RELINQUISHED BY	DATE/TIME	2. RECEIVED BY 7-9-25	MeOH extraction requires an additional 4oz. Jar for percent solid ☐ Ice in Cooler?: **Comments:**
3. RELINQUISHED BY	DATE/TIME	3. RECEIVED FOR LAB BY	Page of

SHIPPED VIA: CLIENT: ☐ Hand Delivered ☐ Overnight
CHEMTECH: ☐ Picked Up ☐ Overnight

Shipment Complete ☐ YES ☐ NO

WHITE - CHEMTECH COPYFOR RETURN TO CLIENT **YELLOW** - CHEMTECH COPY **PINK** - SAMPLER COPY

CHEMTECH
CHAIN OF CUSTODY RECORD

284 Sheffield Street, Mountainside, NJ 07092
(908) 789-8900 Fax: (908) 78-8922
www.chemtech.net

Chemtech Project Number: Q2536

COC Number:

CLIENT INFORMATION

COMPANY: Tetra Tech
ADDRESS: 4433 Corporation Ln, Suite 300
CITY: Virginia Beach STATE: VA ZIP: 23462
ATTENTION: Ernie Wu
PHONE: 757-466-4901 FAX: 757-461-4148

PROJECT INFORMATION

PROJECT NAME: NWIRP Bethpage
PROJECT #: 112G08005-WE13 LOCATION: RW7B
PROJECT MANAGER: Ernie Wu
E-MAIL: ernie,wu@tetratech.com
PHONE: 757-466-4901 FAX: 757-461-4148

BILLING INFORMATION

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

DATA TURNAROUND INFORMATION

FAX: 10 DAYS*
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- ☐ New Jersey CLP
- ☐ USEPA CLP
- ☐ New York State ASP "B"
- ☐ New York State ASP "A"
- ☐ Other
- ☐ EDD Format

ANALYSIS

1	2	3	4	5	6	7	8	9
Total Phosphorus	Chloride, Anions, Sulfate	Alkalinity	BOD	COD	Sulfide	Cyanide	Ammonia	TOC

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
								C				C	F	D	C	C	<-- Specify Preservatives A-HCl B-HNO3 C-H2SO4 D-NaOH E-ICE F-Other
1.	RW7-SP100-20250708	GW		X	7/8/25	12:15	9	X	X	X	X	X	X	X	X	X	pH 1.3
2.																	
3.																	
4.																	
5.																	
6.																	
7.																	
8.																	
9.																	
10.																	

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

RELINQUISHED BY SAMPLER	DATE/TIME	RECEIVED BY
1.	7/8/25 1400	1. 1008 7-9-25
RELINQUISHED BY	DATE/TIME	RECEIVED BY
2.		2.
RELINQUISHED BY	DATE/TIME	RECEIVED FOR LAB BY
3.		3.

Conditions of bottles or coolers at receipt: ☐ Compliant ☐ Non Compliant ☐ Cooler Temp 2.3°
MeOH extraction requires an additional 4oz. Jar for percent solid ☐ Ice in Cooler?:
Comments:

Page of

SHIPPED VIA: CLIENT: ☐ Hand Delivered ☐ Overnight
CHEMTECH: ☐ Picked Up ☐ Overnight

Shipment Complete ☐ YES ☐ NO

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CHEMTECH

CHAIN OF CUSTODY RECORD

284 Sheffield Street, Mountainside, NJ 07092
(908) 789-8900 Fax: (908) 78-8922
www.chemtech.net

Chemtech Project Number: Q 2536

COC Number:

CLIENT INFORMATION

COMPANY: Tetra Tech
ADDRESS: 4433 Corporation Ln, Suite 300
CITY: Virginia Beach STATE: VA ZIP: 23462
ATTENTION: Ernie Wu
PHONE: 757-466-4901 FAX: 757-461-4148

PROJECT INFORMATION

PROJECT NAME: NWIRP Bethpage
PROJECT #: 112G08005-WE13 LOCATION: RW8
PROJECT MANAGER: Ernie Wu
E-MAIL: ernie,wu@tetratech.com
PHONE: 757-466-4901 FAX: 757-461-4148

BILLING INFORMATION

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

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Total Phosphorus	Chloride, Anions, Sulfate	Alkalinity	BOD	COD	Sulfide	Cyanide	Ammonia	TOC

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
								C				C	F	D	C	C	<-- Specify Preservatives A-HCl B-HNO3 C-H2SO4 D-NaOH E-ICE F-Other
1.	RW8-SP100-20250708	GW		X	7/8/25	13:05	9	X	X	X	X	X	X	X	X	X	pH ≤ 3
2.																	
3.																	
4.																	
5.																	
6.																	
7.																	
8.																	
9.																	
10.																	

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

RELINQUISHED BY SAMPLER	DATE/TIME	RECEIVED BY
1.	7/8/25 1400	1.
RELINQUISHED BY	DATE/TIME	RECEIVED BY
2.	7/9/25 1008	2.
RELINQUISHED BY	DATE/TIME	RECEIVED FOR LAB BY
3.		3.

Conditions of bottles or coolers at receipt: ☐ Compliant ☐ Non Compliant ☐ Cooler Temp 23.1°C
MeOH extraction requires an additional 4oz. Jar for percent solid ☐ Ice in Cooler?: Yes
Comments:

Page ____ of ____

SHIPPED VIA: CLIENT: ☐ Hand Delivered ☐ Overnight
CHEMTECH: ☐ Picked Up ☐ Overnight

Shipment Complete ☐ YES ☐ NO

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284 Sheffield Street, Mountainside NJ 07092 (908)-789-8900 Fax : 908 789 8922

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