

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

LAB CHRONICLE

OrderID:	Q2470	OrderDate:	6/30/2025 4:22:39 PM
Client:	ATG-GREENVILLE AEC	Project:	AEC-2025-0013-CSC 4155 Birdsboro
Contact:	Daniel Maalouf	Location:	A52

LabID	ClientID	Matrix	Test	Method	Sample Date	Prep Date	Anal Date	Received
Q2470-01	SW-1	WATER			06/27/25 12:03			06/30/25
			Anions Group1	300.0			07/01/25 10:31	
			Oil and Grease	1664A			07/02/25 09:00	
			Phosphorus-Total	365.3		07/09/25	07/09/25 14:21	
			TKN	SM4500-N Org C-11 plus NH3 B plus G-11		07/07/25	07/09/25 12:50	
			TSS	SM2540 D			07/02/25 09:30	



SAMPLE DATA

Report of Analysis

Client:	ATG-GREENVILLE AEC	Date Collected:	06/27/25 12:03
Project:	AEC-2025-0013-CSC 4155 Birdsboro	Date Received:	06/30/25
Client Sample ID:	SW-1	SDG No.:	Q2470
Lab Sample ID:	Q2470-01	Matrix:	WATER
		% Solid:	0

Parameter	Conc.	Qua.	DF	MDL	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
Nitrite	0.086	HJ	1	0.074	0.60	mg/L		07/01/25 10:31	300.0
Nitrate	0.62	H	1	0.095	0.50	mg/L		07/01/25 10:31	300.0
Nitrate+Nitrite	0.71	J	1	0.17	1.10	mg/L		07/01/25 10:31	300.0
Oil and Grease	7.60		1	0.29	5.00	mg/L		07/02/25 09:00	1664A
Phosphorus, Total	0.18		1	0.0050	0.050	mg/L	07/09/25 09:50	07/09/25 14:21	365.3
TKN	0.40	J	1	0.11	0.50	mg/L	07/07/25 10:45	07/09/25 12:50	SM4500-N Org C-21 plus NH3 B plus G-21
TSS	183		1	1.00	4.00	mg/L		07/02/25 09:30	SM 2540 D-20

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

Initial and Continuing Calibration Verification

Client: ATG-GREENVILLE AEC

SDG No.: Q2470

Project: AEC-2025-0013-CSC 4155 Birdsboro

RunNo.: LB136336

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	9.7	10	97	90-110	07/01/2025
Chloride	mg/L	2.9	3	97	90-110	07/01/2025
Fluoride	mg/L	2	2	100	90-110	07/01/2025
Nitrite	mg/L	2.9	3	97	90-110	07/01/2025
Nitrate	mg/L	2.4	2.5	96	90-110	07/01/2025
Sulfate	mg/L	14.4	15	96	90-110	07/01/2025
Orthophosphate as P	mg/L	4.9	5	98	90-110	07/01/2025
Sample ID: CCV2						
Bromide	mg/L	9.7	10	97	90-110	07/01/2025
Chloride	mg/L	2.9	3	97	90-110	07/01/2025
Fluoride	mg/L	2	2	100	90-110	07/01/2025
Nitrite	mg/L	2.9	3	97	90-110	07/01/2025
Nitrate	mg/L	2.4	2.5	96	90-110	07/01/2025
Sulfate	mg/L	14.4	15	96	90-110	07/01/2025
Orthophosphate as P	mg/L	5	5	100	90-110	07/01/2025

Initial and Continuing Calibration Verification

Client: ATG-GREENVILLE AEC

SDG No.: Q2470

Project: AEC-2025-0013-CSC 4155 Birdsboro

RunNo.: LB136408

Analyte	Units	Result	True Value	% Recovery	Acceptance Window (%R)	Analysis Date
Sample ID: ICV1 TKN	mg/L	4.9	5	98	90-110	07/09/2025
Sample ID: CCV1 TKN	mg/L	4.9	5	98	90-110	07/09/2025
Sample ID: CCV2 TKN	mg/L	4.9	5	98	90-110	07/09/2025
Sample ID: CCV3 TKN	mg/L	4.9	5	98	90-110	07/09/2025
Sample ID: CCV4 TKN	mg/L	4.9	5	98	90-110	07/09/2025
Sample ID: CCV5 TKN	mg/L	4.9	5	98	90-110	07/09/2025

Initial and Continuing Calibration Verification

Client: ATG-GREENVILLE AEC

SDG No.: Q2470

Project: AEC-2025-0013-CSC 4155 Birdsboro

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

Initial and Continuing Calibration Blank Summary

Client: ATG-GREENVILLE AEC

SDG No.: Q2470

Project: AEC-2025-0013-CSC 4155 Birdsboro

RunNo.: LB136336

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	07/01/2025
Chloride	mg/L	< 0.3000	0.3000	U	0.19	0.6	07/01/2025
Fluoride	mg/L	< 0.2000	0.2000	U	0.11	0.4	07/01/2025
Nitrite	mg/L	< 0.3000	0.3000	U	0.074	0.6	07/01/2025
Nitrate	mg/L	< 0.2500	0.2500	U	0.095	0.5	07/01/2025
Sulfate	mg/L	< 1.5000	1.5000	U	0.46	3	07/01/2025
Orthophosphate as P	mg/L	< 0.5000	0.5000	U	0.34	1	07/01/2025
Sample ID: CCB2							
Bromide	mg/L	< 1.0000	1.0000	U	0.37	2	07/01/2025
Chloride	mg/L	< 0.3000	0.3000	U	0.19	0.6	07/01/2025
Fluoride	mg/L	< 0.2000	0.2000	U	0.11	0.4	07/01/2025
Nitrite	mg/L	< 0.3000	0.3000	U	0.074	0.6	07/01/2025
Nitrate	mg/L	< 0.2500	0.2500	U	0.095	0.5	07/01/2025
Sulfate	mg/L	< 1.5000	1.5000	U	0.46	3	07/01/2025
Orthophosphate as P	mg/L	< 0.5000	0.5000	U	0.34	1	07/01/2025

Initial and Continuing Calibration Blank Summary

Client: ATG-GREENVILLE AEC

SDG No.: Q2470

Project: AEC-2025-0013-CSC 4155 Birdsboro

RunNo.: LB136408

Analyte	Units	Result	Acceptance Limits	Conc Qual	MDL	RDL	Analysis Date
Sample ID: ICB1 TKN	mg/L	< 0.2500	0.2500	U	0.11	0.5	07/09/2025
Sample ID: CCB1 TKN	mg/L	< 0.2500	0.2500	U	0.11	0.5	07/09/2025
Sample ID: CCB2 TKN	mg/L	< 0.2500	0.2500	U	0.11	0.5	07/09/2025
Sample ID: CCB3 TKN	mg/L	< 0.2500	0.2500	U	0.11	0.5	07/09/2025
Sample ID: CCB4 TKN	mg/L	< 0.2500	0.2500	U	0.11	0.5	07/09/2025
Sample ID: CCB5 TKN	mg/L	< 0.2500	0.2500	U	0.11	0.5	07/09/2025

Initial and Continuing Calibration Blank Summary

Client: ATG-GREENVILLE AEC

SDG No.: Q2470

Project: AEC-2025-0013-CSC 4155 Birdsboro

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

Preparation Blank Summary

Client: ATG-GREENVILLE AEC

SDG No.: Q2470

Project: AEC-2025-0013-CSC 4155 Birdsboro

Analyte	Units	Result	Acceptance Limits	Conc Qual	MDL	RDL	Analysis Date
Sample ID: LB136336BLW							
Bromide	mg/L	< 1.0000	1.0000	U	0.37	2	07/01/2025
Chloride	mg/L	< 0.3000	0.3000	U	0.19	0.6	07/01/2025
Fluoride	mg/L	< 0.2000	0.2000	U	0.11	0.4	07/01/2025
Nitrite	mg/L	< 0.3000	0.3000	U	0.074	0.6	07/01/2025
Nitrate	mg/L	< 0.2500	0.2500	U	0.095	0.5	07/01/2025
Sulfate	mg/L	< 1.5000	1.5000	U	0.46	3	07/01/2025
Orthophosphate as P	mg/L	< 0.5000	0.5000	U	0.34	1	07/01/2025
Sample ID: LB136346BL							
TSS	mg/L	1	2.0000	J	1	4	07/02/2025
Sample ID: LB136347BL							
Oil and Grease	mg/L	< 2.5000	2.5000	U	0.29	5.0	07/02/2025
Sample ID: PB168699BL							
TKN	mg/L	< 0.2500	0.2500	U	0.11	0.5	07/09/2025
Sample ID: PB168769BL							
Phosphorus, Total	mg/L	0.005	0.0250	J	0.005	0.05	07/09/2025

Matrix Spike Summary

Client:	ATG-GREENVILLE AEC	SDG No.:	Q2470
Project:	AEC-2025-0013-CSC 4155 Birdsboro	Sample ID:	Q2441-01
Client ID:	MH-6272025MS	Percent Solids for Spike Sample:	0

Analyte	Units	Acceptance Limit %R	Spiked Result	Conc. Qualifier	Sample Result	Conc. Qualifier	Spike Added	Dilution Factor	% Rec	Qual	Analysis Date
Oil and Grease	mg/L	78-114	668		648		20.0	1	100		07/02/2025

Matrix Spike Summary

Client:	ATG-GREENVILLE AEC	SDG No.:	Q2470
Project:	AEC-2025-0013-CSC 4155 Birdsboro	Sample ID:	Q2441-01
Client ID:	MH-6272025MSD	Percent Solids for Spike Sample:	0

Analyte	Units	Acceptance Limit %R	Spiked Result	Conc. Qualifier	Sample Result	Conc. Qualifier	Spike Added	Dilution Factor	% Rec	Qual	Analysis Date
Oil and Grease	mg/L	78-114	668		648		20.0	1	101		07/02/2025

Matrix Spike Summary

Client:	ATG-GREENVILLE AEC	SDG No.:	Q2470
Project:	AEC-2025-0013-CSC 4155 Birdsboro	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
Bromide	mg/L	80-120	9.80		0.37	U	10	1	98		07/01/2025
Phosphorus, Total	mg/L	90-110	0.66		0.18		0.5	1	95		07/09/2025
Chloride	mg/L	80-120	26.3	OR	24.0	OR	3	1	77	*	07/01/2025
Fluoride	mg/L	80-120	2.00		0.11	U	2	1	100		07/01/2025
TKN	mg/L	75-125	5.10		0.40	J	5	1	94		07/09/2025
Nitrite	mg/L	80-120	2.90		0.086	J	3	1	94		07/01/2025
Nitrate	mg/L	80-120	2.90		0.62		2.5	1	91		07/01/2025
Sulfate	mg/L	80-120	16.0		2.10	J	15	1	93		07/01/2025
Orthophosphate as P	mg/L	80-120	5.00		0.34	U	5	1	100		07/01/2025

Matrix Spike Summary

Client:	ATG-GREENVILLE AEC	SDG No.:	Q2470
Project:	AEC-2025-0013-CSC 4155 Birdsboro	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
Bromide	mg/L	80-120	9.90		0.37	U	10	1	99		07/01/2025
Phosphorus, Total	mg/L	90-110	0.66		0.18		0.5	1	95		07/09/2025
Chloride	mg/L	80-120	26.3	OR	24.0	OR	3	1	77	*	07/01/2025
Fluoride	mg/L	80-120	2.00		0.11	U	2	1	100		07/01/2025
TKN	mg/L	75-125	5.00		0.40	J	5	1	92		07/09/2025
Nitrite	mg/L	80-120	3.00		0.086	J	3	1	97		07/01/2025
Nitrate	mg/L	80-120	3.00		0.62		2.5	1	95		07/01/2025
Sulfate	mg/L	80-120	16.2		2.10	J	15	1	94		07/01/2025
Orthophosphate as P	mg/L	80-120	5.10		0.34	U	5	1	102		07/01/2025

Duplicate Sample Summary

Client:	ATG-GREENVILLE AEC	SDG No.:	Q2470
Project:	AEC-2025-0013-CSC 4155 Birdsboro	Sample ID:	Q2441-01
Client ID:	MH-6272025MSD	Percent Solids for Spike Sample:	0

Analyte	Units	Acceptance Limit	Sample Result	Conc. Qualifier	Duplicate Result	Conc. Qualifier	Dilution Factor	RPD/ AD	Qual	Analysis Date
Oil and Grease	mg/L	+/-18	668		668		1	0.03		07/02/2025

Duplicate Sample Summary

Client:	ATG-GREENVILLE AEC	SDG No.:	Q2470
Project:	AEC-2025-0013-CSC 4155 Birdsboro	Sample ID:	Q2463-01
Client ID:	TW-WTS-11DUP	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
TSS	mg/L	+/-5	120		120		1	0.25		07/02/2025

Duplicate Sample Summary

Client: ATG-GREENVILLE AEC	SDG No.: Q2470
Project: AEC-2025-0013-CSC 4155 Birdsboro	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
TKN	mg/L	+/-20	0.40	J	0.42	J	1	5		07/09/2025
Phosphorus, Total	mg/L	+/-20	0.18		0.19		1	1.63		07/09/2025

Duplicate Sample Summary

Client: ATG-GREENVILLE AEC	SDG No.: Q2470
Project: AEC-2025-0013-CSC 4155 Birdsboro	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
Fluoride	mg/L	+/-20	2.00	OR	2.00	OR	1	0		07/01/2025
Chloride	mg/L	+/-20	26.3		26.3		1	0		07/01/2025
Bromide	mg/L	+/-20	9.80		9.90		1	1		07/01/2025
Sulfate	mg/L	+/-20	16.0		16.2		1	1		07/01/2025
Orthophosphate as P	mg/L	+/-20	5.00		5.10		1	2		07/01/2025
Nitrate	mg/L	+/-20	2.90		3.00		1	3		07/01/2025
Nitrite	mg/L	+/-20	2.90		3.00		1	3		07/01/2025
TKN	mg/L	+/-20	5.10		5.00		1	2		07/09/2025
Phosphorus, Total	mg/L	+/-20	0.66		0.66		1	0.46		07/09/2025

Laboratory Control Sample Summary

Client: ATG-GREENVILLE AEC

SDG No.: Q2470

Project: AEC-2025-0013-CSC 4155 Birdsboro

Run No.: LB136336

Analyte	Units	True Value	Result	Conc. Qualifier	% Recovery	Dilution Factor	Acceptance Limit %R	Analysis Date
Sample ID	LB136336BSW							
Bromide	mg/L	10	9.70		97	1	90-110	07/01/2025
Chloride	mg/L	3	2.90		97	1	90-110	07/01/2025
Fluoride	mg/L	2	2.00		100	1	90-110	07/01/2025
Nitrite	mg/L	3	2.90		97	1	90-110	07/01/2025
Nitrate	mg/L	2.5	2.40		96	1	90-110	07/01/2025
Sulfate	mg/L	15	14.4		96	1	90-110	07/01/2025
Orthophosphate as P	mg/L	5	5.00		100	1	90-110	07/01/2025

Laboratory Control Sample Summary

Client: ATG-GREENVILLE AEC

SDG No.: Q2470

Project: AEC-2025-0013-CSC 4155 Birdsboro

Run No.: LB136346

Analyte	Units	True Value	Result	Conc. Qualifier	% Recovery	Dilution Factor	Acceptance Limit %R	Analysis Date
Sample ID	LB136346BS							
TSS	mg/L	550	532		97	1	90-110	07/02/2025

Laboratory Control Sample Summary

Client: ATG-GREENVILLE AEC

SDG No.: Q2470

Project: AEC-2025-0013-CSC 4155 Birdsboro

Run No.: LB136347

Analyte	Units	True Value	Result	Conc. Qualifier	% Recovery	Dilution Factor	Acceptance Limit %R	Analysis Date
Sample ID	LB136347BS							
Oil and Grease	mg/L	20.0	16.9		84	1	78-114	07/02/2025

Laboratory Control Sample Summary

Client: ATG-GREENVILLE AEC

SDG No.: Q2470

Project: AEC-2025-0013-CSC 4155 Birdsboro

Run No.: LB136408

Analyte	Units	True Value	Result	Conc. Qualifier	% Recovery	Dilution Factor	Acceptance Limit %R	Analysis Date
Sample ID	PB168699BS							
TKN	mg/L	5	4.80		96	1	90-110	07/09/2025

Laboratory Control Sample Summary

Client: ATG-GREENVILLE AEC

SDG No.: Q2470

Project: AEC-2025-0013-CSC 4155 Birdsboro

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



RAW DATA

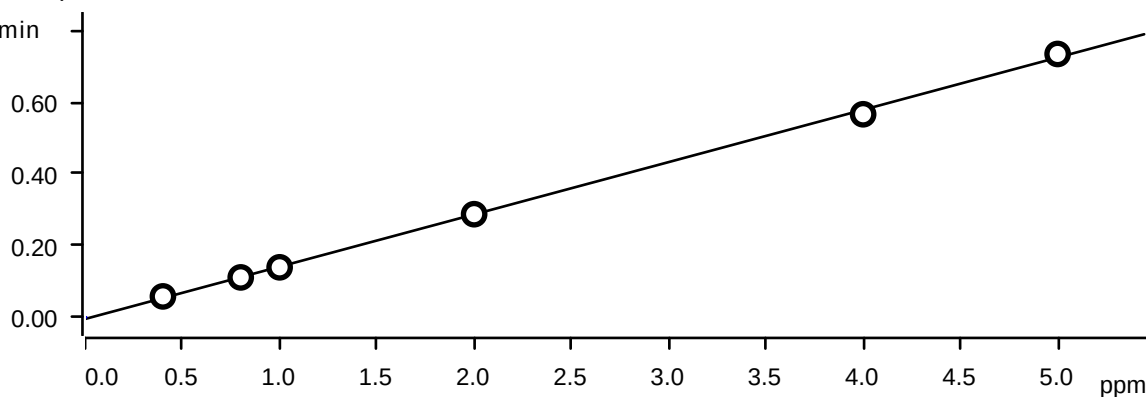
Ident	Instrument IC-1				Analyst: NF		Method: 300.0 / 9056A		date time	Initial wt Analyst	
	Con F-	Con CL-	Con NO2	Con BR-	Con NO3	Con HPO4	Con SO4	Method name			
STD1	0	0	0	0	0	0	0	0	IC1-062325	6/23/2025 15:17	10 RM/IZ
STD2	0.431	0.634	0.643	2.127	0.534	1.052	3.234	IC1-062325	6/23/2025 15:38	10 RM/IZ	
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	1.47	4.916	1.23	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	7.57	25.225	6.31	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	0	0	0	0	0	0	IC1-062325	6/23/2025 18:08	10 RM/IZ	
CCV	1.984	2.886	2.897	9.739	2.363	4.912	14.395	IC1-062325	7/1/2025 9:05	10 RM/IZ	
CCB	0	0	0	0	0	0	0	IC1-062325	7/1/2025 9:26	10 RM/IZ	
LB136336BLW	0	0	0	0	0	0	0	IC1-062325	7/1/2025 9:48	10 RM/IZ	
LB136336BSW	1.973	2.871	2.889	9.691	2.35	4.951	14.364	IC1-062325	7/1/2025 10:09	10 RM/IZ	
Q2470-01	0.049	24.047	0.086	0	0.621	0	2.063	IC1-062325	7/1/2025 10:31	10 RM/IZ	
Q2470-01MS	1.999	26.318	2.907	9.762	2.934	4.971	16.016	IC1-062325	7/1/2025 10:52	10 RM/IZ	
Q2470-01MSD	2.036	26.319	2.954	9.905	2.97	5.104	16.244	IC1-062325	7/1/2025 11:14	10 RM/IZ	
Q2471-01	0.059	2.712	0.093	0	0.409	0	3.378	IC1-062325	7/1/2025 11:35	10 RM/IZ	
CCV	1.974	2.88	2.903	9.712	2.366	4.951	14.437	IC1-062325	7/1/2025 11:57	10 RM/IZ	
CCB	0	0	0	0	0	0	0	IC1-062325	7/1/2025 12:19	10 RM/IZ	

Clear table

Instrument ID: IC-2 Analyst : Method: 300.0 / 9056A													
IZ													
ident	concentrat ion F-	concentratio n CL-	concentrati on NO2	concentrati on BR-	True Value NO2	True Value BR-	True Value NO3	concentratio n HPO4	concentrati on SO4	file name	date time	Initial wt/ Final	Analyst
STD1	0.0000	0.0000	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	0.5340	0.5000	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	0.9970	1.0000	1.9350	6.0370	IC1-062325	6/23/2025 16:00	10	RM/IZ
STD4	0.9880	1.4760	1.4700	4.9160	1.4700	1.4700	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	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	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	7.5700	25.2250	6.3100	12.7840	37.4880	IC1-062325	6/23/2025 17:25	10	RM/IZ
True Value CL-													
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	0.5000	3.0000						
STD3	0.8000	1.2000	1.2000	4.0000	1.0000	1.0000	6.0000						
STD4	1.0000	1.5000	1.5000	5.0000	1.2500	1.2500	7.5000						
STD5	2.0000	3.0000	3.0000	10.0000	2.5000	2.5000	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						
Relative Error CL-													
ident	Relative Error F-	Relative Error CL-	Relative Error NO2	Relative Error BR-	Relative Error NO3	Relative Error HPO4	Relative Error SO4						
STD1		5.6667	7.1667	6.3500	6.8000	5.2000	7.8000						
STD2	7.7500	-0.4167	-0.0833	-0.5500	-0.3000	-3.2500	0.6167						
STD3	-0.6250	-1.6000	-2.0000	-1.6800	-1.6000	2.0400	-1.0400						
STD4	-1.2000	0.5667	0.1333	0.4500	0.2000	1.5200	-0.9000						
STD5	0.2000	-1.4667	-1.4333	-1.4550	-1.5000	-3.9800	-1.8200						
STD6	-2.1250	0.8800	0.9333	0.9000	0.9600	2.2720	1.3189						
STD7	1.3600												

Fluoride (Anions)

($\mu\text{S}/\text{cm}$) x min



Function: $A = -4.55276\text{E-}3 + 0.0145788 \times Q$

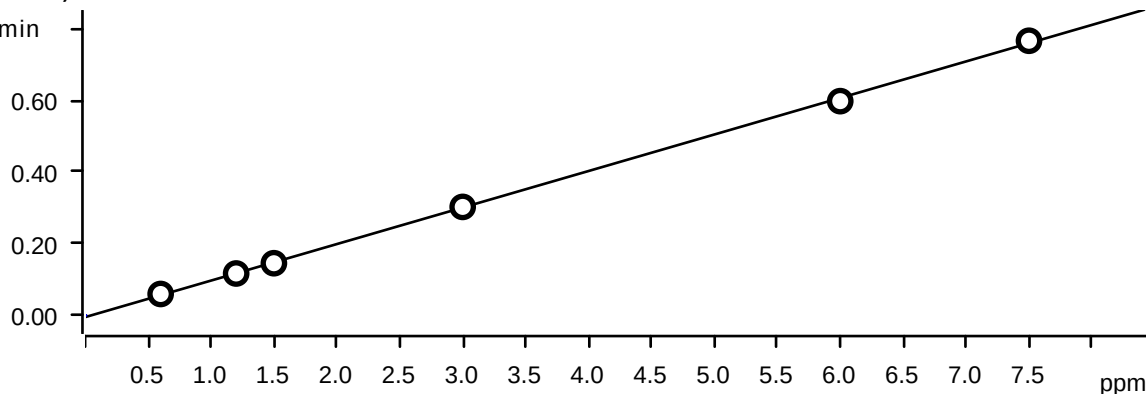
Relative standard deviation 2.633289 %

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)

($\mu\text{S}/\text{cm}$) x min



Function: $A = -4.66825\text{E-}3 + 0.0101843 \times Q$

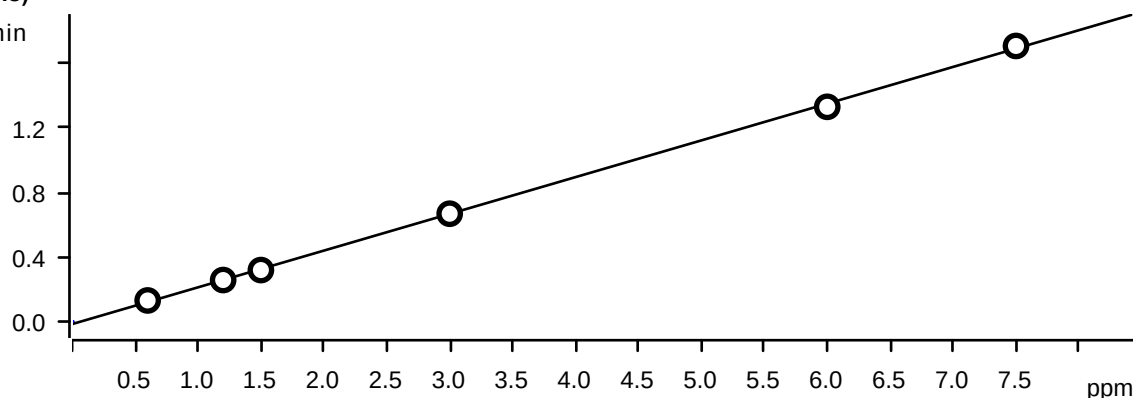
Relative standard deviation 1.824872 %

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)

(μS/cm) x min

Function: $A = -0.0166933 + 0.0227623 \times Q$

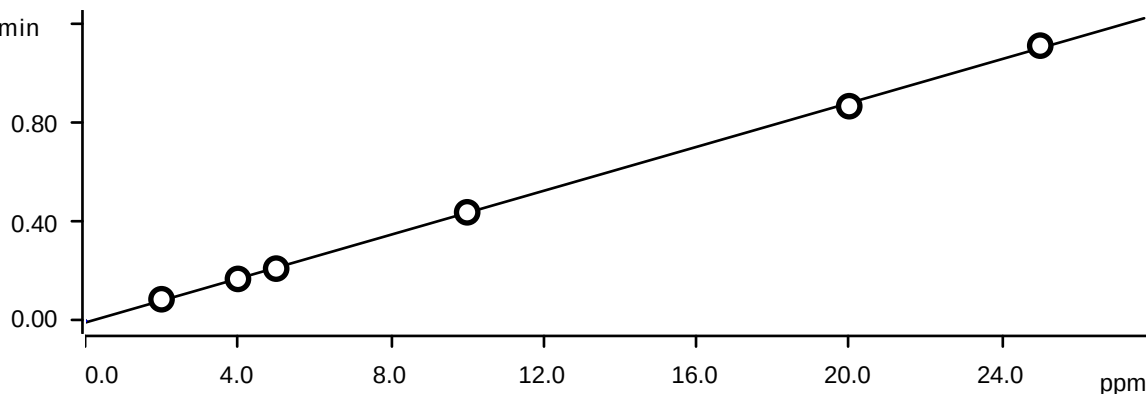
Relative standard deviation 1.905382 %

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)

($\mu\text{S}/\text{cm}$) $\times$ min



Function: $A = -7.05131E-3 + 4.42168E-3 \times Q$

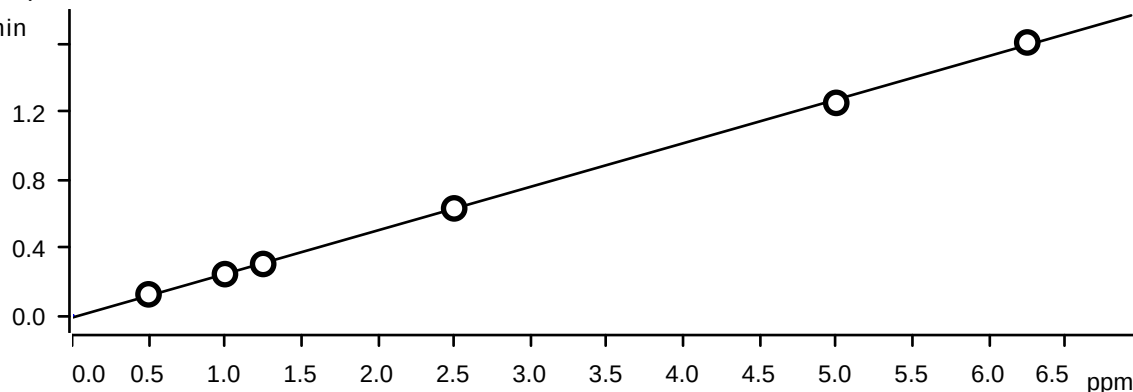
Relative standard deviation: 1.851347 %

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)

($\mu\text{S}/\text{cm}$) $\times$ min

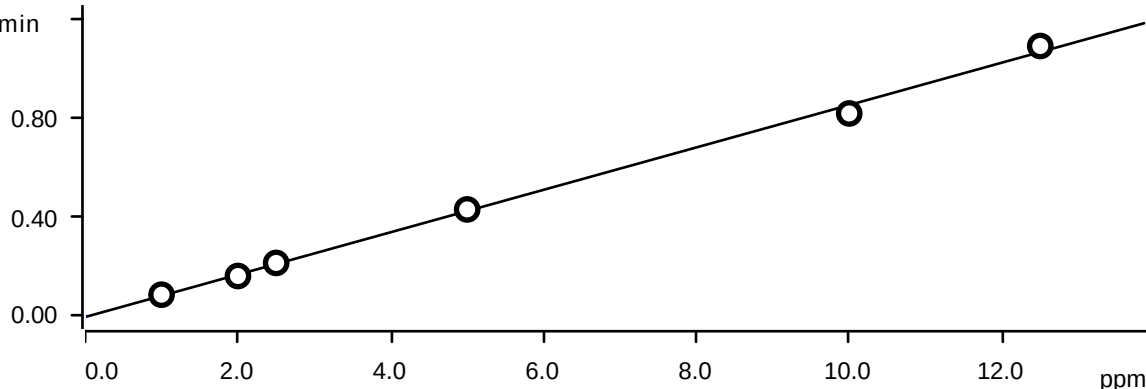


Function: $A = -0.0130270 + 0.0256654 \times Q$

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) $(\mu\text{S}/\text{cm}) \times \text{min}$ Function: $A = -3.61656E-3 + 8.53718E-3 \times Q$

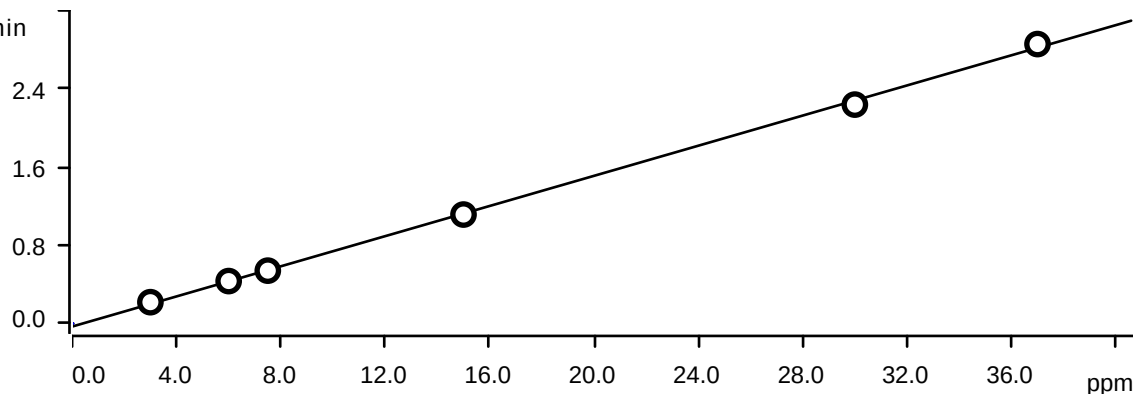
Relative standard deviation 4.618615 %

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)

($\mu\text{S}/\text{cm}$) x min



Function: $A = -0.0315238 + 7.70359E-3 \times Q$

Relative standard deviation 2.454303 %

Correlation coefficient 0.999685

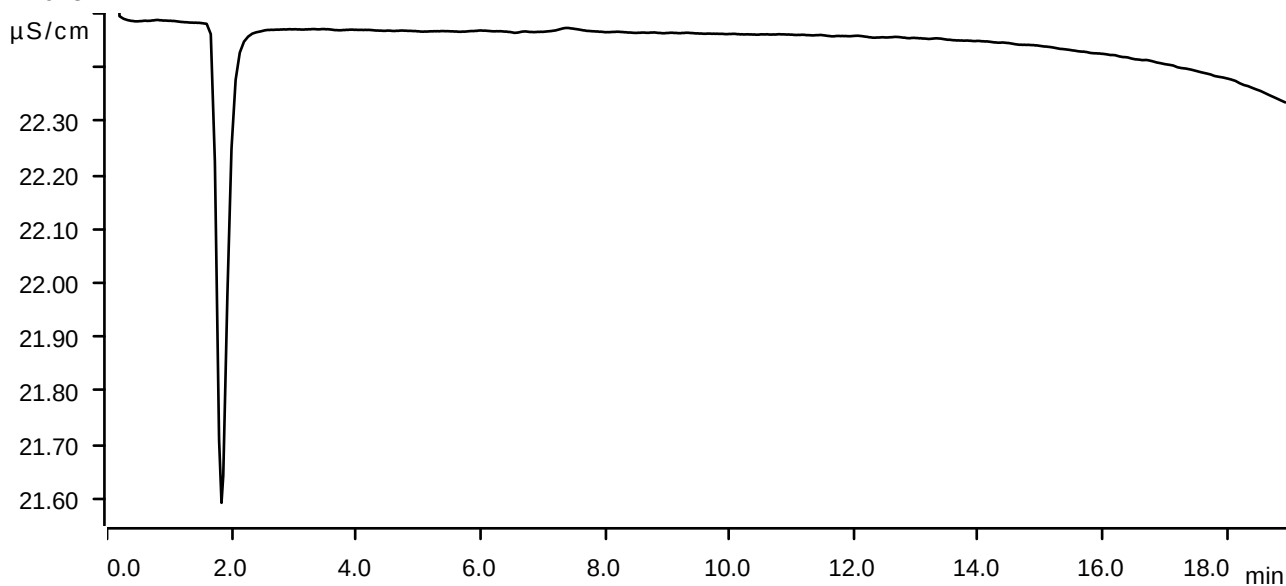
Sample type	Index	Conc.	Volume	Dilution	Sample amount	Area	Ident	Date	Used
Standard 1	1	0.000	10.0	1.0	1.0	n. d.	STD1	2025-06-23 15:17:36 UTC-4	used
Standard 2	1	3.000	10.0	1.0	1.0	0.218	STD2	2025-06-23 15:38:59 UTC-4	used
Standard 3	1	6.000	10.0	1.0	1.0	0.434	STD3	2025-06-23 16:00:23 UTC-4	used
Standard 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

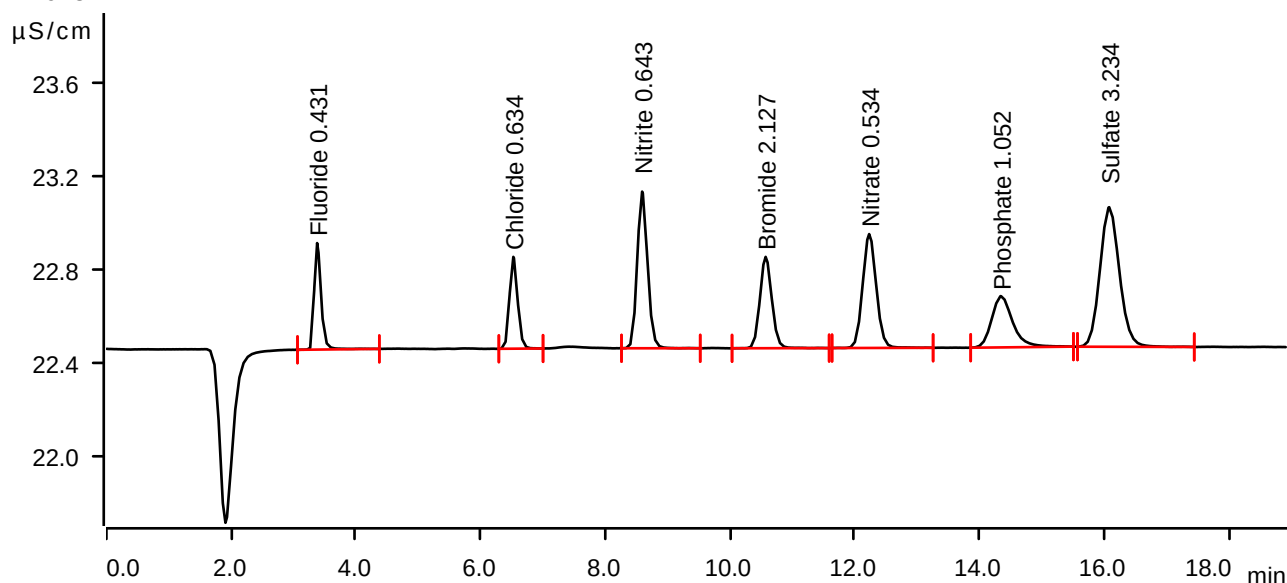
Sample data

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

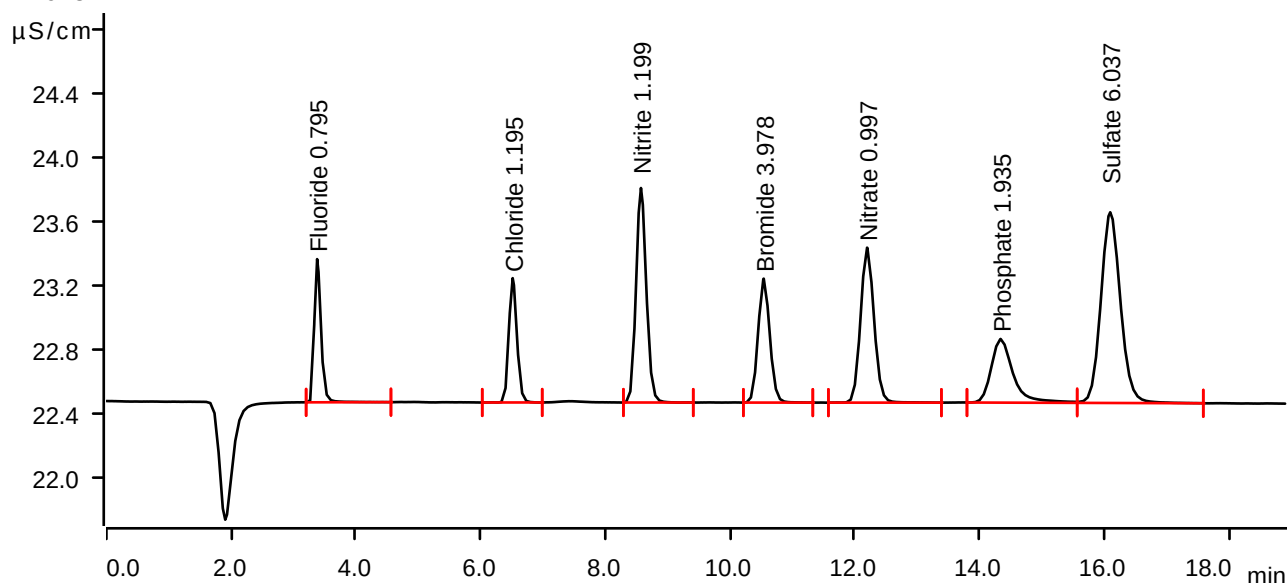
Sample data

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

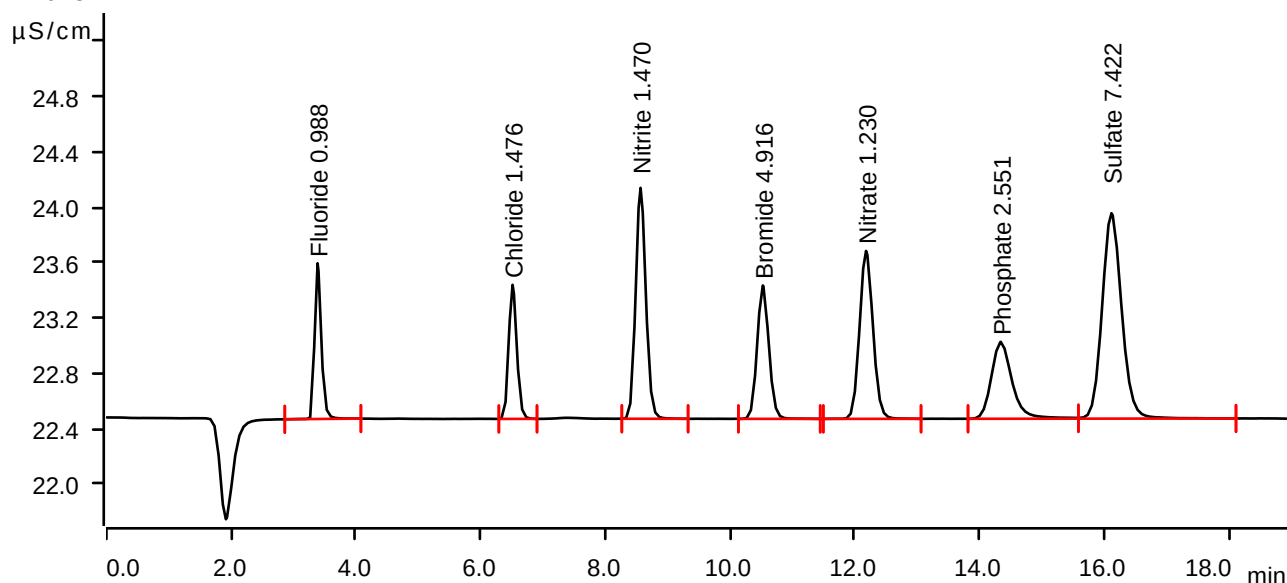
Sample data

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

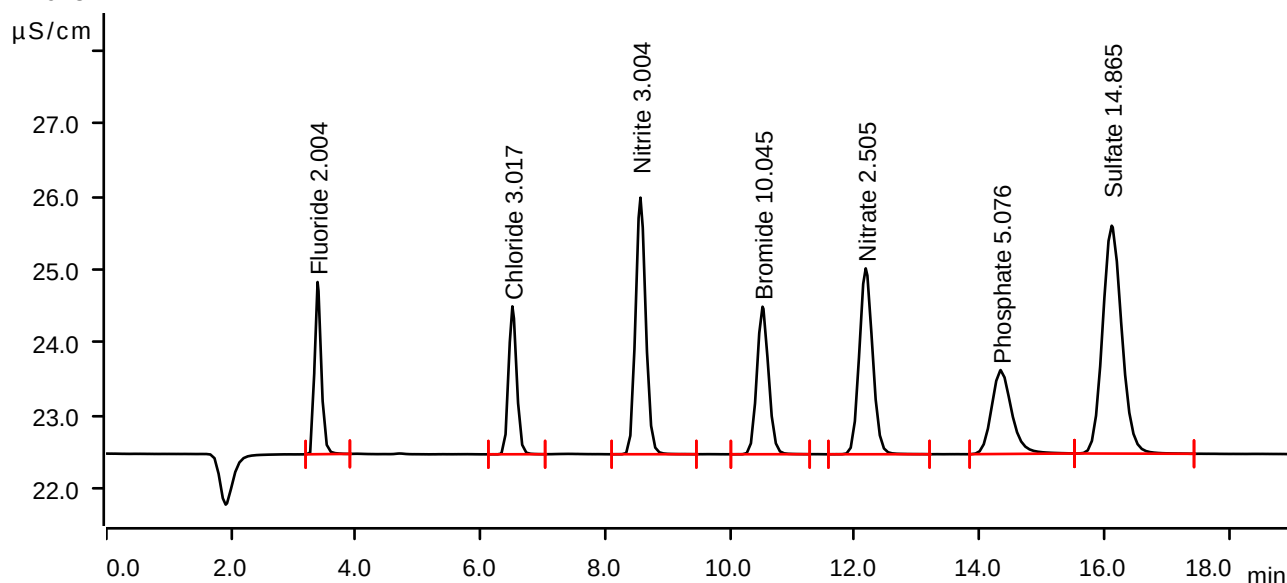
Sample data

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

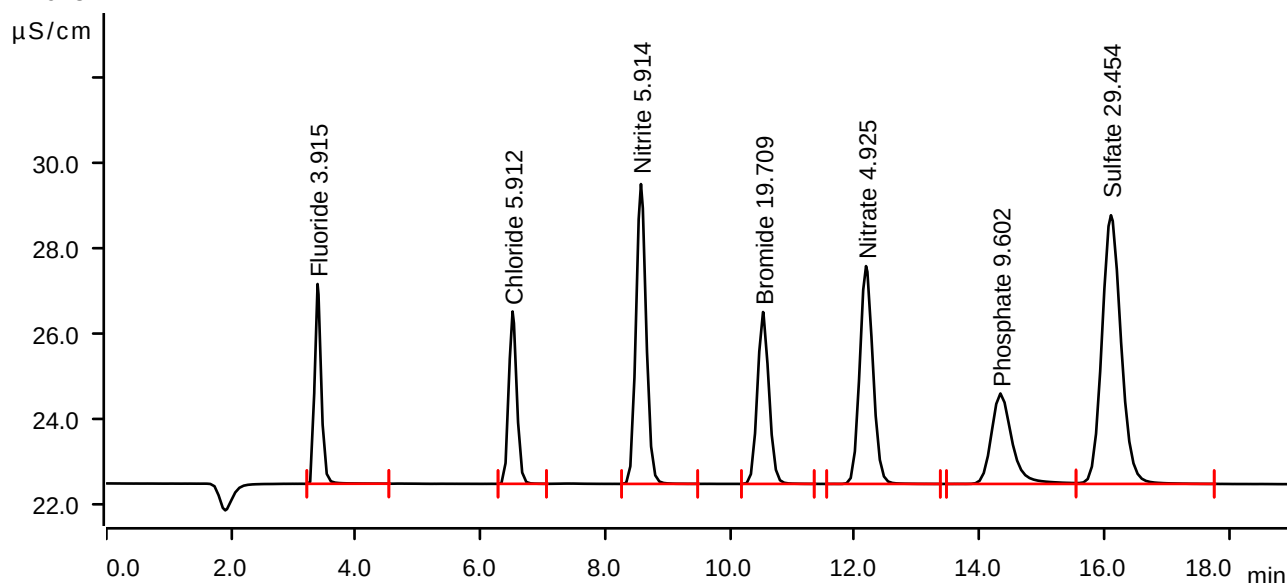
Sample data

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

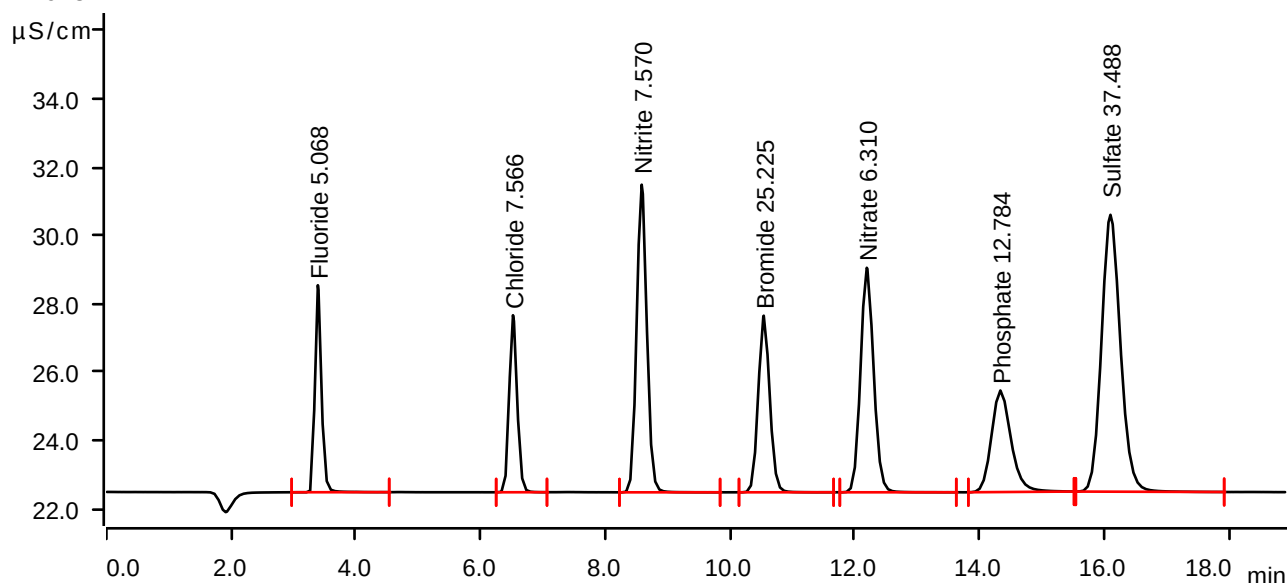
Sample data

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

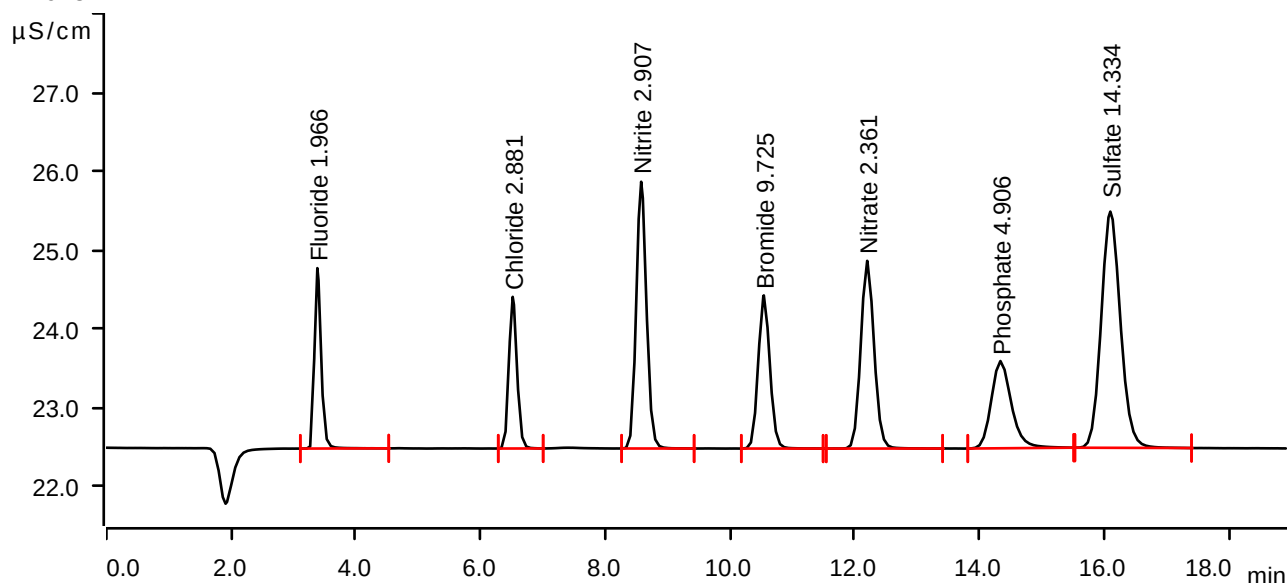
Sample data

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



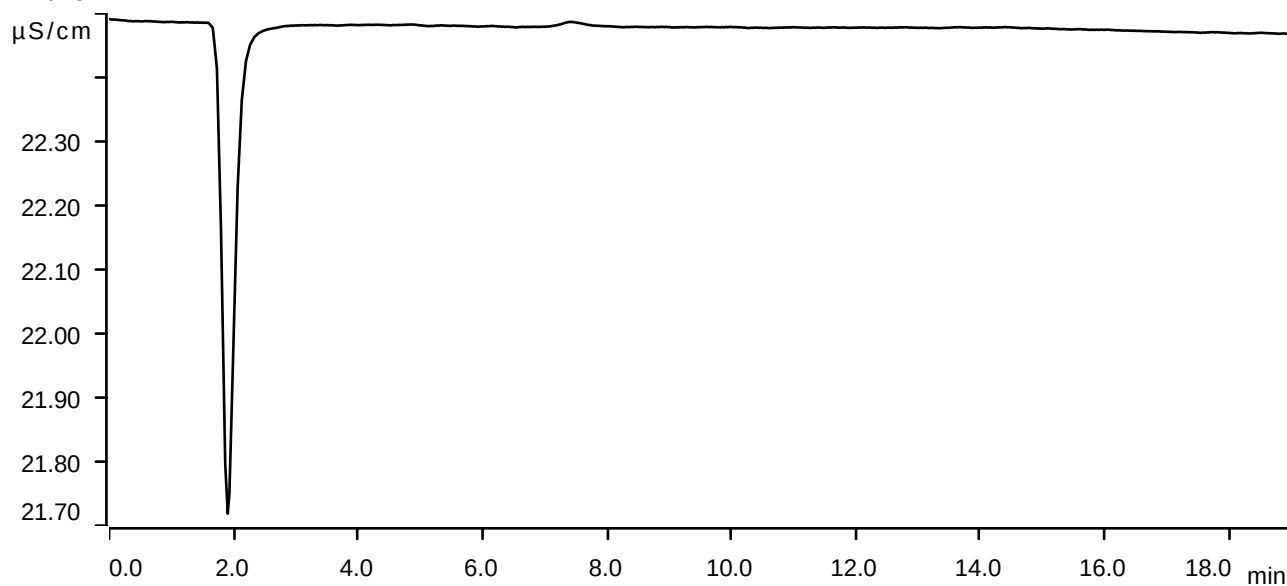
Peak number	Retention time min	Area (µS/cm) x min	Height µS/cm	Concentration ppm	Component name
1	3.383	0.2821	2.288	1.966	Fluoride
2	6.515	0.2887	1.924	2.881	Chloride
3	8.575	0.6450	3.385	2.907	Nitrite
4	10.542	0.4229	1.943	9.725	Bromide
5	12.198	0.5928	2.382	2.361	Nitrate
6	14.335	0.4152	1.107	4.906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

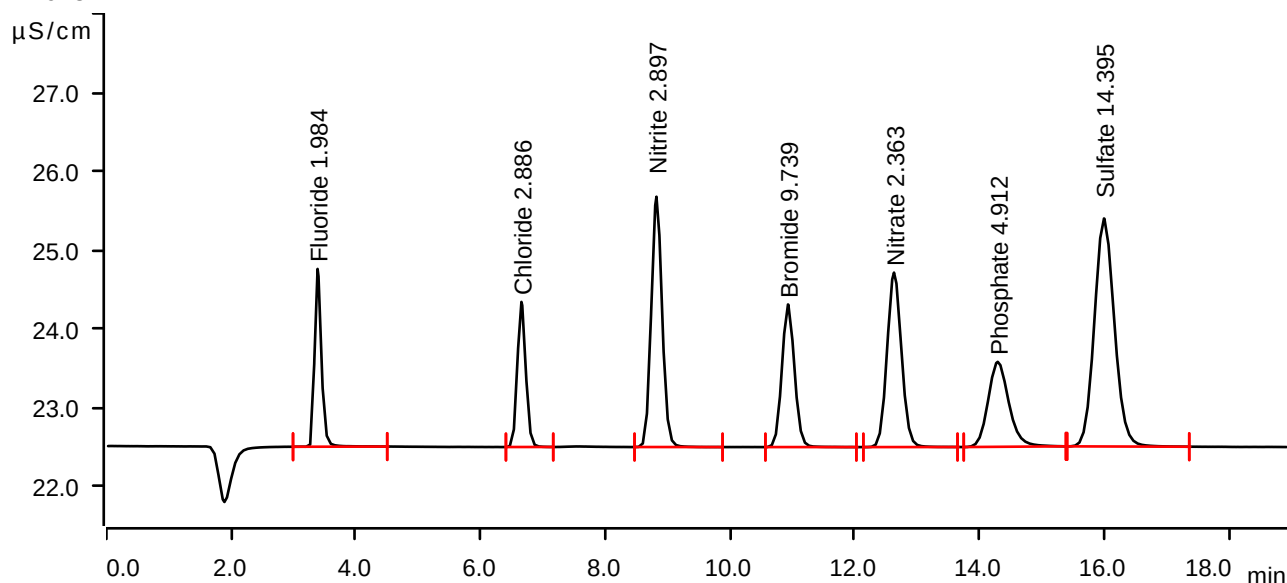
Sample data

Ident CCV
Sample type Check standard 1
Determination start 2025-07-01 09:05:10 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 12.56 MPa
Maximum pressure monitored yes
Temperature ---- °C

Anions



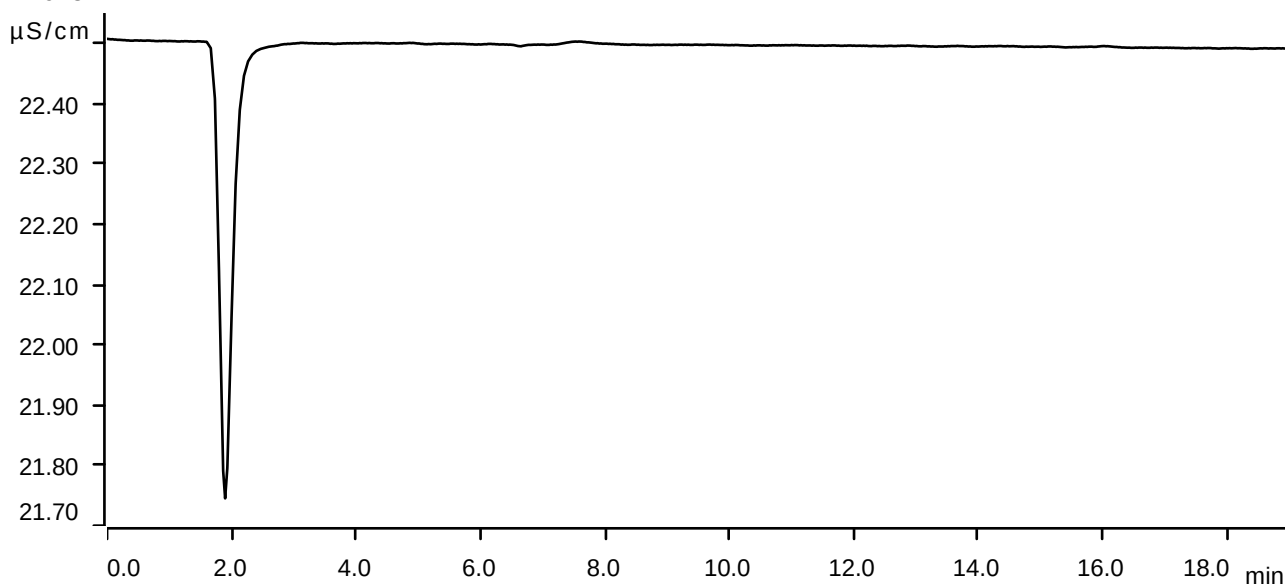
Peak number	Retention time min	Area (µS/cm) x min	Height µS/cm	Concentration ppm	Component name
1	3.387	0.2847	2.255	1.984	Fluoride
2	6.655	0.2892	1.841	2.886	Chloride
3	8.820	0.6427	3.177	2.897	Nitrite
4	10.928	0.4236	1.810	9.739	Bromide
5	12.628	0.5934	2.214	2.363	Nitrate
6	14.292	0.4157	1.078	4.912	Phosphate
7	15.995	1.0774	2.893	14.395	Sulfate

Sample data

Ident CCB
Sample type Sample
Determination start 2025-07-01 09:26:41 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 12.44 MPa
Maximum pressure monitored yes
Temperature ---- °C

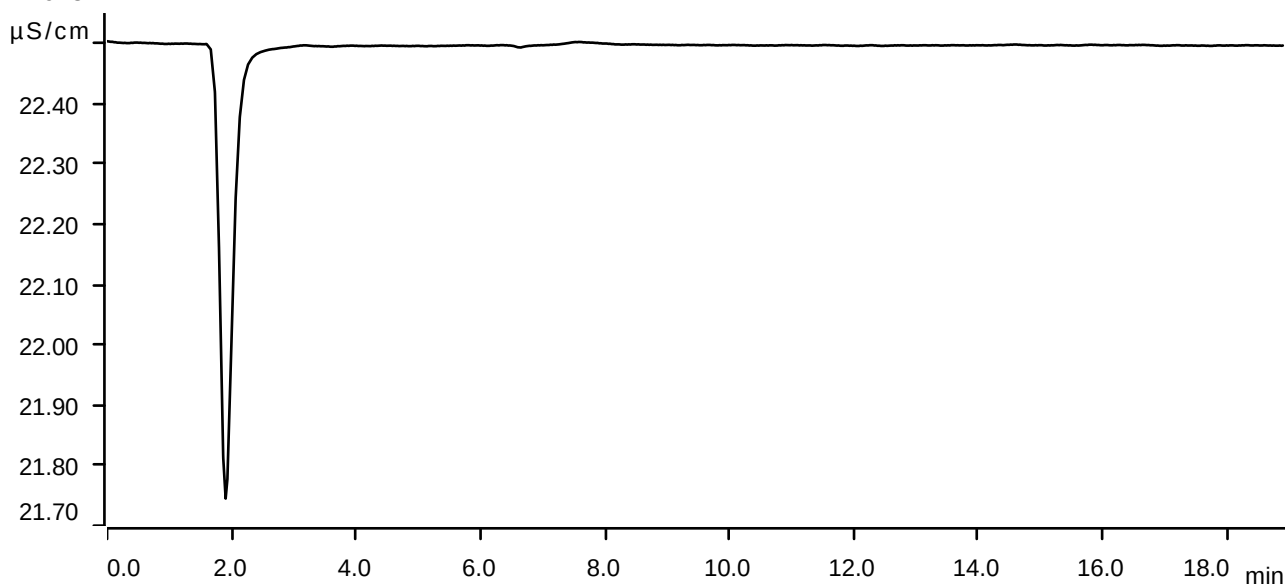
Anions

Sample data

Ident LB136336BLW
Sample type Sample
Determination start 2025-07-01 09:48:11 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

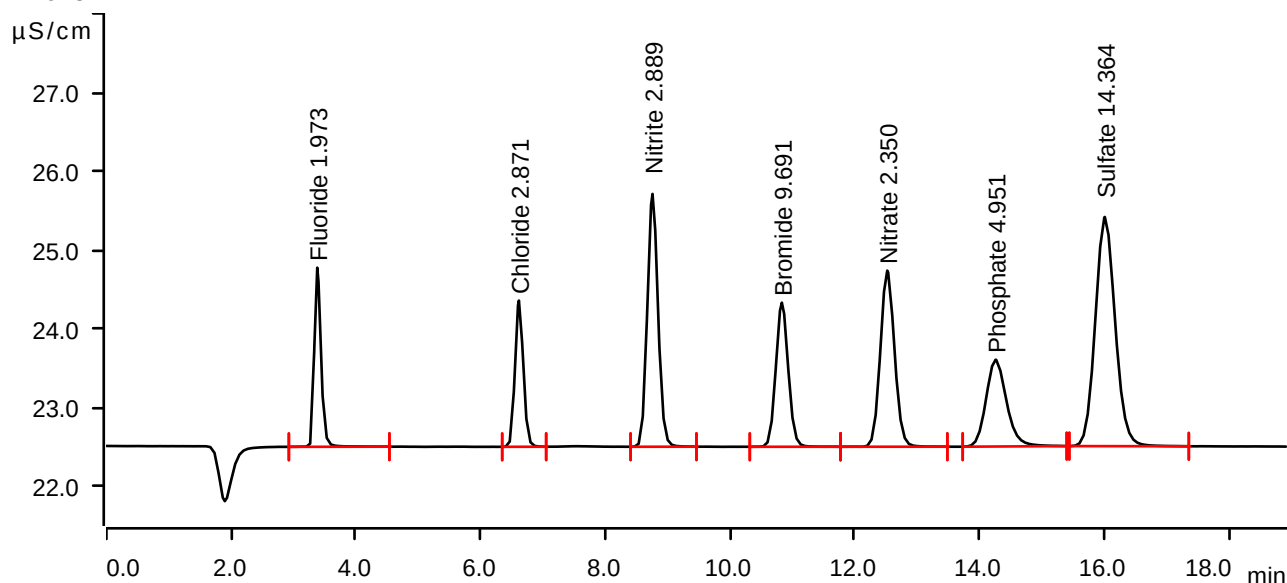
Sample data

Ident LB136336BSW
Sample type Check standard 1
Determination start 2025-07-01 10:09:42 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	3.382	0.2830	2.273	1.973	Fluoride
2	6.615	0.2878	1.855	2.871	Chloride
3	8.757	0.6409	3.208	2.889	Nitrite
4	10.830	0.4214	1.829	9.691	Bromide
5	12.520	0.5901	2.235	2.350	Nitrate
6	14.257	0.4190	1.101	4.951	Phosphate
7	16.008	1.0750	2.908	14.364	Sulfate

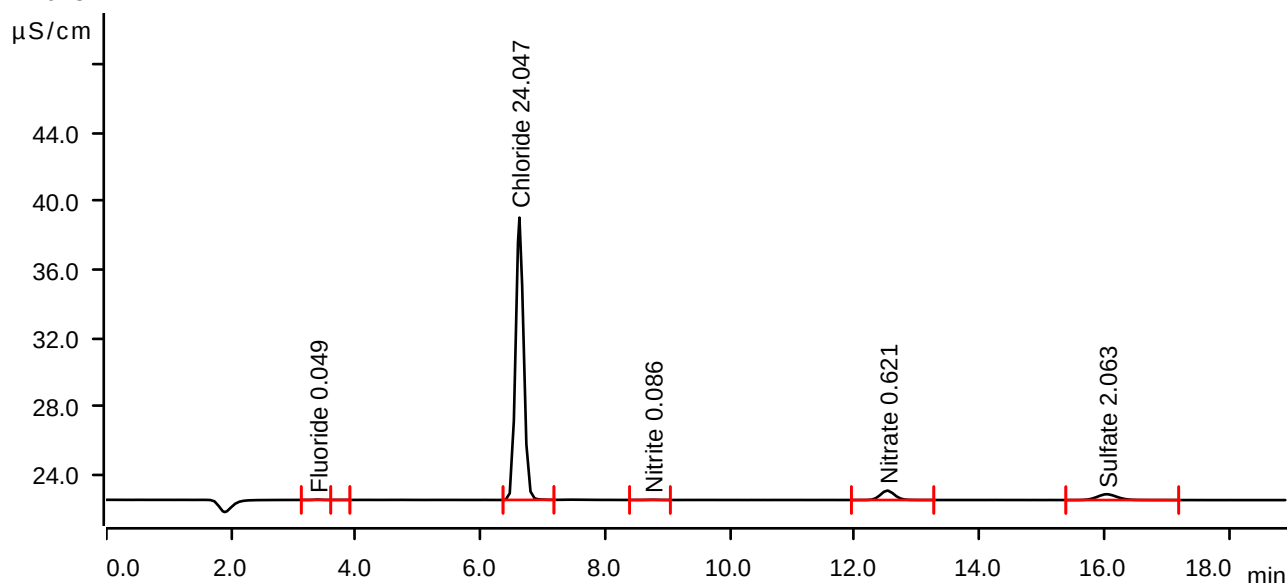
Sample data

Ident Q2470-01
Sample type Sample
Determination start 2025-07-01 10:31:14 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	3.383	0.0025	0.021	0.049	Fluoride
2	3.723	0.0002	0.001	invalid	
3	6.623	2.4444	16.532	24.047	Chloride
4	8.755	0.0028	0.014	0.086	Nitrite
5	12.522	0.1464	0.551	0.621	Nitrate
6	16.042	0.1274	0.340	2.063	Sulfate

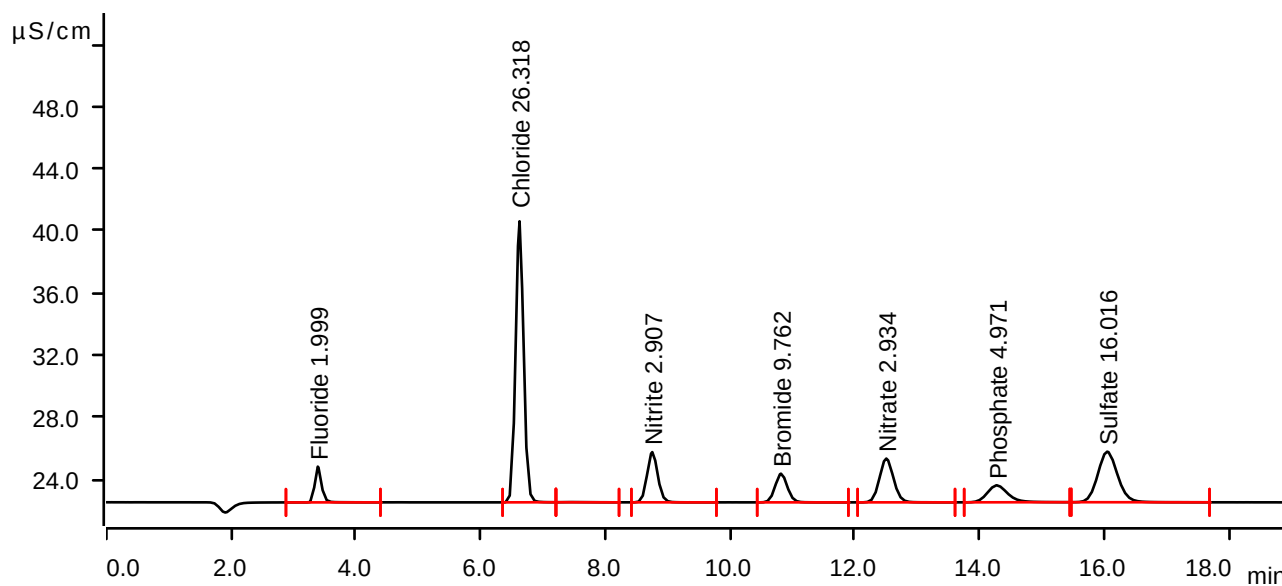
Sample data

Ident Q2470-01MS
Sample type Sample
Determination start 2025-07-01 10:52:47 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 12.22 MPa
Maximum pressure monitored yes
Temperature ---- °C

Anions



Peak number	Retention time min	Area ($\mu\text{S/cm}$) x min	Height $\mu\text{S/cm}$	Concentration ppm	Component name
1	3.390	0.2868	2.303	1.999	Fluoride
2	6.625	2.6756	18.103	26.318	Chloride
3	7.483	0.0047	0.011	invalid	
4	8.753	0.6450	3.238	2.907	Nitrite
5	10.817	0.4246	1.847	9.762	Bromide
6	12.505	0.7400	2.822	2.934	Nitrate
7	14.277	0.4208	1.094	4.971	Phosphate
8	16.047	1.2023	3.260	16.016	Sulfate

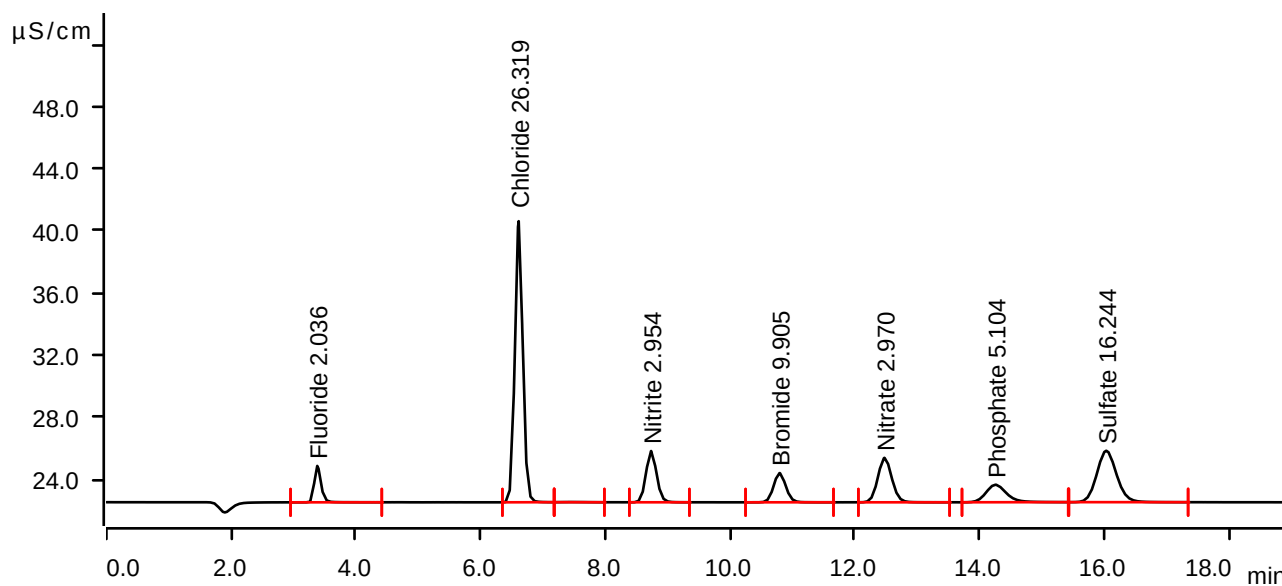
Sample data

Ident Q2470-01MSD
Sample type Sample
Determination start 2025-07-01 11:14:21 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 12.22 MPa
Maximum pressure monitored yes
Temperature ---- °C

Anions



Peak number	Retention time min	Area ($\mu\text{S/cm}$) x min	Height $\mu\text{S/cm}$	Concentration ppm	Component name
1	3.382	0.2922	2.345	2.036	Fluoride
2	6.612	2.6757	18.108	26.319	Chloride
3	7.452	0.0043	0.011	invalid	
4	8.735	0.6556	3.301	2.954	Nitrite
5	10.793	0.4309	1.882	9.905	Bromide
6	12.477	0.7491	2.862	2.970	Nitrate
7	14.255	0.4321	1.129	5.104	Phosphate
8	16.032	1.2199	3.314	16.244	Sulfate

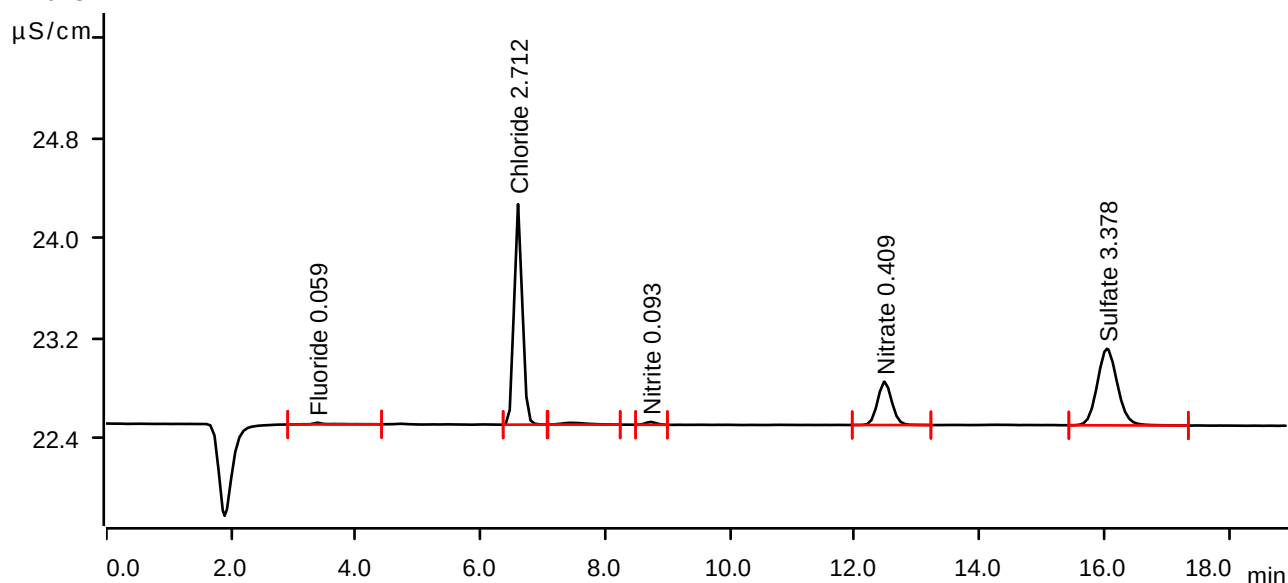
Sample data

Ident Q2471-01
Sample type Sample
Determination start 2025-07-01 11:35:55 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 12.16 MPa
Maximum pressure monitored yes
Temperature ---- °C

Anions



Peak number	Retention time min	Area (µS/cm) x min	Height µS/cm	Concentration ppm	Component name
1	3.378	0.0041	0.014	0.059	Fluoride
2	6.600	0.2715	1.764	2.712	Chloride
3	7.452	0.0070	0.014	invalid	
4	8.725	0.0045	0.023	0.093	Nitrite
5	12.477	0.0919	0.347	0.409	Nitrate
6	16.043	0.2287	0.613	3.378	Sulfate

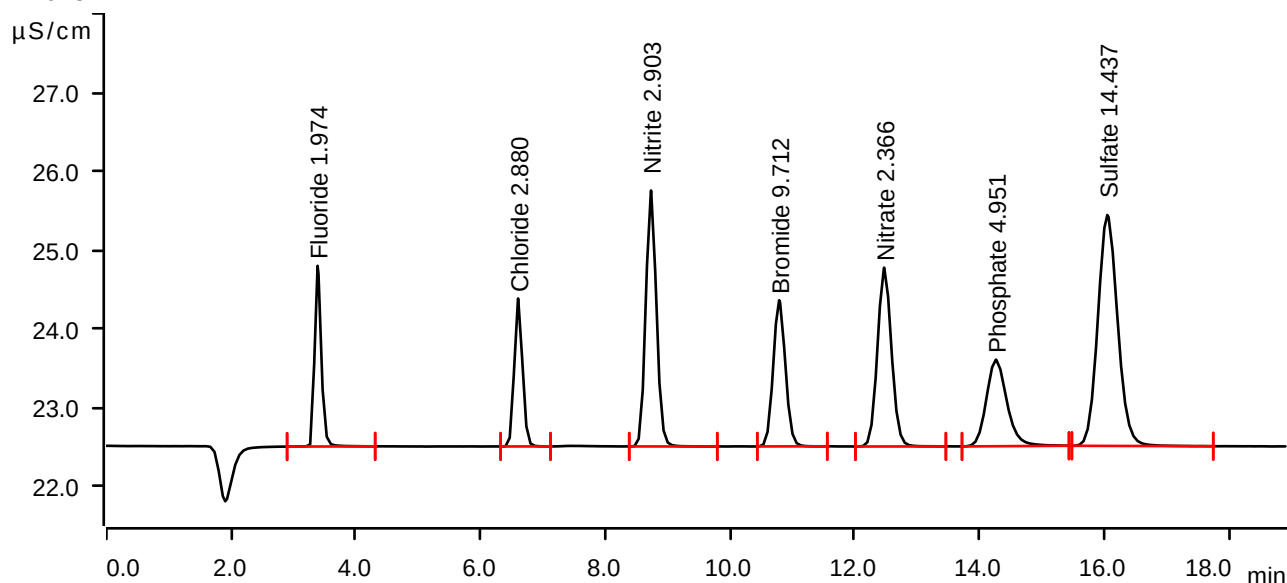
Sample data

Ident CCV
Sample type Check standard 1
Determination start 2025-07-01 11:57:30 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



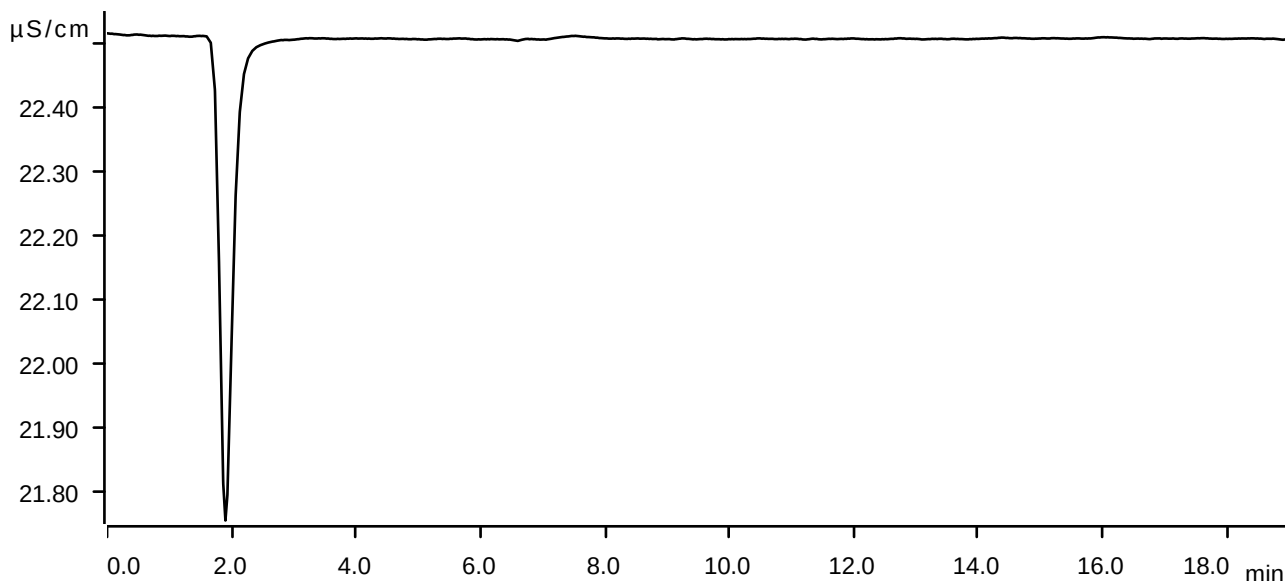
Peak number	Retention time min	Area (µS/cm) x min	Height µS/cm	Concentration ppm	Component name
1	3.387	0.2833	2.292	1.974	Fluoride
2	6.603	0.2887	1.877	2.880	Chloride
3	8.732	0.6440	3.248	2.903	Nitrite
4	10.787	0.4224	1.855	9.712	Bromide
5	12.472	0.5942	2.269	2.366	Nitrate
6	14.262	0.4190	1.099	4.951	Phosphate
7	16.048	1.0807	2.930	14.437	Sulfate

Sample data

Ident CCB
Sample type Sample
Determination start 2025-07-01 12:19:00 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

TOTAL SUSPENDED SOLIDS - SM2540D

SUPERVISOR: Iwona

ANALYST: jignesh

Date: 07/01/2025

Run Number: LB136346

BalanceID: WC SC-6

OvenID: WC OVEN-1

FilterID: 17416528

ThermometerID: WET OVEN#1

TEMP1 IN: 103 °C 07/01/2025 14:00 **TEMP1 OUT:** 103 °C 07/01/2025 15:00
TEMP2 IN: 104 °C 07/01/2025 15:30 **TEMP2 OUT:** 103 °C 07/01/2025 16:30
TEMP3 IN: 104 °C 07/02/2025 09:30 **TEMP3 OUT:** 103 °C 07/02/2025 11:00
TEMP4 IN: 104 °C 07/02/2025 11:30 **TEMP4 OUT:** 104 °C 07/02/2025 13:00

Dish #	Lab ID	Client ID	Empty Dish Weight (g)	Final Empty Dish Weight (g)	Sample Volume (ml)	1st Empty Dish+Sample weight after 1.5hr drying @103-@105°C (g)	2nd Empty Dish+Sample weight after 1.5hr drying @103-@105°C (g)	Final Empty Dish+Sample weight after 1.5hr drying @103-@105°C (g)	Weight (g)	Result mg/L
1	LB136346BL	LB136346BL	1.5896	1.5896	100	1.5897	1.5897	1.5897	0.0001	1
2	LB136346BS	LB136346BS	1.6703	1.6703	100	1.7235	1.7235	1.7235	0.0532	532
3	Q2439-02	RW8-SP303-20250626	1.4897	1.4897	900	1.4901	1.4901	1.4901	0.0004	0.4
4	Q2463-01	TW-WTS-11	1.4761	1.4761	750	1.5661	1.5661	1.5661	0.0900	120
5	Q2463-01DUP	TW-WTS-11DUP	1.3523	1.3523	750	1.4425	1.4425	1.4425	0.0902	120.3
6	Q2470-01	SW-1	1.4990	1.4990	950	1.6729	1.6729	1.6729	0.1739	183.1
7	Q2471-01	SW-1	1.4763	1.4763	950	1.5023	1.5023	1.5023	0.0260	27.4

A = Sample Volume (ml)

B = Final Empty Dish Weight (g)

C = Final Empty Dish + Sample weight after 1.5 hr drying @105°C(g)

D = Weight (g)

Weight (g) = C - B

Result mg/L = $\frac{D}{A} \times 1000 \times 1000$

13136346

WORKLIST(Hardcopy Internal Chain)

WorkList Name : tss q2476

WorkList ID : 190498

Department : Wet-Chemistry

Date : 07-02-2025 07:43:13

Sample	Customer Sample	Matrix	Test	Preservative	Customer	Raw Sample Storage Location	Collect Date	Method
Q2439-02 C.B	RW8-SP303-20250626	Water	TSS	Cool 4 deg C	TETR06	A33	06/26/2025	SM2540 D
Q2463-01 E.D	TW-WTS-11	Water	TSS	Cool 4 deg C	ENTA05	A53	06/27/2025	SM2540 D
Q2470-01 B	SW-1	Water	TSS	Cool 4 deg C	ATGG01	A52	06/27/2025	SM2540 D
Q2471-01 B	SW-1	Water	TSS	Cool 4 deg C	ATGG01	A33	07/27/2025	SM2540 D

Date/Time 07/02/25 07:55

Raw Sample Received by: SA WCC

Raw Sample Relinquished by: SA WCC

Date/Time 07/02/25 14:30

Raw Sample Received by: SA WCC

Raw Sample Relinquished by: SA WCC

Extraction and Analytical Summary Report

Analysis Method: 1664A
Test: Oil and Grease
Run Number: LB136347
Analysis Date: 07/02/2025
BalanceID: WC SC-6
OvenID: EXT OVEN-3

ANALYST: jignesh
REVIEWED BY: Iwona
Extraction Date: 07/02/2025
Extraction IN Time: 08:05
Extraction OUT Time: 08:25
Thermometer ID: EXT OVEN#3

Dish #	Lab ID	Client ID	Matrix	pH	Sample Vol (ml)	Final Volume (ml)	Empty Dish Weight (g)	Final Empty Dish Weight (g)	Silica Gel Weight (g)	Weight After Drying (g)	Final Weight After Drying (g)	Change Weight (g)	Result in ppm
1	LB136347BL	LB136347BL	WATER	1.3	1000	100	2.7453	2.7453	0	2.7454	2.7454	0.0001	0.1
2	LB136347BS	LB136347BS	WATER	1.3	1000	100	2.9303	2.9303	0	2.9472	2.9472	0.0169	16.9
3	Q2441-01	MH-6272025	WATER	1.6	1000	100	3.0371	3.0371	0	3.6849	3.6849	0.6478	647.8
4	Q2441-02	Q2441-01MS	WATER	1.6	1000	100	2.7413	2.7413	0	3.4091	3.4091	0.6678	667.8
5	Q2441-03	Q2441-01MSD	WATER	1.6	1000	100	2.9633	2.9633	0	3.6313	3.6313	0.6680	668
6	Q2460-01	SW-1	WATER	1.6	1000	100	3.0642	3.0642	0	3.0688	3.0688	0.0046	4.6
7	Q2461-01	SW-3	WATER	1.6	1000	100	3.0060	3.0060	0	3.0118	3.0118	0.0058	5.8
8	Q2470-01	SW-1	WATER	1.3	1000	100	3.0099	3.0099	0	3.0175	3.0175	0.0076	7.6
9	Q2471-01	SW-1	WATER	1.3	1000	100	3.0313	3.0313	0	3.0331	3.0331	0.0018	1.8

QC Batch# LB136347

Test: Oil and Grease

Analysis Date: 07/02/2025

Chemicals Used:

Chemical Name	Chemical Lot #
HEXANE	W3204
pH Paper 0-14	M6069
Sodium Sulfate	EP2624
1:1 HCL	WP112782
Silica Gel	NA
Sand	NA

Standards Used:

Standard Name	Amount Used	Standard Lot #
LCSW	2.5 ML	WP112783
LCSWD	NA	NA
MS/MSD	2.5 ML	W0112784

BALANCE CALIBRATION / OVEN Dessicator Data

Analytical Balance ID # : WC SC-6

Before Analysis

0.0020 gram Balance: 0.0018 (0.0018-0.0022) In OVEN TEMP1 : 70 °C Dessicator Time In1 : 10:26

1.0000 gram Balance: 1.0004 (0.9950-1.0050) In Time1: 09:00

Bal Check Time: 08:14 Out OVEN TEMP1: 70 °C Dessicator Time Out1: 11:00

Out Time1: 10:25

After Analysis

0.0020 gram Balance: 0.0021 (0.0018-0.0022) In OVEN TEMP2 : 71 °C Dessicator Time In2 : 12:01

1.0000 gram Balance: 1.0005 (0.9950-1.0050) In Time2: 11:30

Bal Check Time: 12:40 Out OVEN TEMP2: 71 °C Dessicator Time Out2: 12:36

Out Time2: 12:00

WORKLIST(Hardcopy Internal Chain)

136347

WorkList Name : OIL & GREASE Q2476

WorkList ID : 190496

Department : Wet-Chemistry

Date : 07-02-2025 07:41:42

Sample	Customer Sample	Matrix	Test	Preservative	Customer	Raw Sample Storage Location	Collect Date	Method
Q2441-01	A MH-6272025	Water	Oil and Grease	Conc H2SO4 to pH < 2	EURO03	D41	06/27/2025	1664A
Q2441-02	Q2441-01MS	Water	Oil and Grease	Conc H2SO4 to pH < 2	EURO03	D41	06/27/2025	1664A
Q2441-03	Q2441-01MSD	Water	Oil and Grease	Conc H2SO4 to pH < 2	EURO03	D41	06/27/2025	1664A
Q2460-01	E SW-1	Water	Oil and Grease	Conc H2SO4 to pH < 2	ATGG01	A32	06/26/2025	1664A
Q2461-01	E SW-3	Water	Oil and Grease	Conc H2SO4 to pH < 2	ATGG01	A52	06/26/2025	1664A
Q2470-01	C SW-1	Water	Oil and Grease	Conc H2SO4 to pH < 2	ATGG01	A52	06/27/2025	1664A
Q2471-01	C SW-1	Water	Oil and Grease	Conc H2SO4 to pH < 2	ATGG01	A33	07/27/2025	1664A

Date/Time 07/02/25 08:00

Raw Sample Received by: [Signature]

Raw Sample Relinquished by: [Signature]

Date/Time 07/02/25 13:30

Raw Sample Received by: [Signature]

Raw Sample Relinquished by: [Signature]

LB136408

Test results

Aquakem 7.2AQ1

Page: 1

Alliance Technical Group
284 Sheffield Street, Mountainside, NJ 07092

Reviewed by : RM Instrument ID : Konelab

7/9/2025 13:32

Test: TKN-NH3

Sample Id	Result	Dil. 1 +	Response	Errors
ICV1	4.865	0.0	1.055	
ICB1	0.087	0.0	0.021	
CCV1	4.872	0.0	1.057	
CCB1	0.082	0.0	0.019	
RL CHECK	0.601	0.0	0.132	
PB168731BL	0.078	0.0	0.019	
PB168731BS	4.890	0.0	1.061	
Q2487-09	4.343	0.0	0.942	
Q2487-09DUP	4.162	0.0	0.903	
Q2487-09MS	8.890	0.0	1.927	
Q2487-09MSD	8.662	0.0	1.878	
Q2487-10	46.341	0.0	10.038	Abs. high, Init abs., Tes
Q2487-11	3.212	0.0	0.697	
Q2487-12	18.497	0.0	4.008	Init abs., Test limit hig
CCV2	4.872	0.0	1.057	
CCB2	0.090	0.0	0.021	
Q2487-13	4.390	0.0	0.953	
Q2487-14	14.272	0.0	3.093	Init abs., Test limit hig
Q2487-15	7.815	0.0	1.694	
Q2487-16	3.644	0.0	0.791	
PB168699BL	0.086	0.0	0.020	
PB168699BS	4.836	0.0	1.049	
Q2470-01	0.398	0.0	0.088	
Q2470-01DUP	0.421	0.0	0.093	
Q2470-01MS	5.068	0.0	1.099	
Q2470-01MSD	4.953	0.0	1.074	
CCV3	4.858	0.0	1.054	
CCB3	0.079	0.0	0.019	
Q2471-01	1.513	0.0	0.329	
CCV4	4.948	0.0	1.073	
CCB4	0.088	0.0	0.021	
Q2487-10DLX10	2.886	0.0	0.627	
Q2487-12DLX5	3.939	0.0	0.855	
Q2487-14DLX2	6.894	0.0	1.495	
CCV5	4.948	0.0	1.073	
CCB5	0.081	0.0	0.019	
N	36			
Mean	5.296			
SD	8.0948			
CV%	152.84			

120! (50-150)
07/09/2025
RM

Aquakem v. 7.2AQ1

Results from time period:

Wed Jul 09 11:35:35 2025

Wed Jul 09 13:32:11 2025

Sample Id	Sam/Ctr/c/	Test short name	Test type	Result	Result unit	Result date and time	Stat
0.0PPM	A	TKN-NH3	P	0.0877	mg/l	7/9/2025 11:35:35	
0.5PPM	A	TKN-NH3	P	0.5239	mg/l	7/9/2025 11:35:36	
1.0PPM	A	TKN-NH3	P	0.9953	mg/l	7/9/2025 11:35:37	
2.5PPM	A	TKN-NH3	P	2.3921	mg/l	7/9/2025 11:35:38	
5.0PPM	A	TKN-NH3	P	4.9369	mg/l	7/9/2025 11:35:39	
6.7PPM	A	TKN-NH3	P	6.6856	mg/l	7/9/2025 11:35:40	
10.0PPM	A	TKN-NH3	P	10.0451	mg/l	7/9/2025 11:35:41	
ICV1	S	TKN-NH3	P	4.865	mg/l	7/9/2025 12:18:27	
ICB1	S	TKN-NH3	P	0.0869	mg/l	7/9/2025 12:18:30	
CCV1	S	TKN-NH3	P	4.8715	mg/l	7/9/2025 12:18:32	
CCB1	S	TKN-NH3	P	0.0816	mg/l	7/9/2025 12:18:33	
RL CHECK	S	TKN-NH3	P	0.6009	mg/l	7/9/2025 12:18:36	
PB168731BL	S	TKN-NH3	P	0.0777	mg/l	7/9/2025 12:18:37	
PB168731BS	S	TKN-NH3	P	4.8901	mg/l	7/9/2025 12:29:11	
Q2487-09	S	TKN-NH3	P	4.3427	mg/l	7/9/2025 12:29:13	
Q2487-09DUP	S	TKN-NH3	P	4.1622	mg/l	7/9/2025 12:29:14	
Q2487-09MS	S	TKN-NH3	P	8.8905	mg/l	7/9/2025 12:29:15	
Q2487-09MSD	S	TKN-NH3	P	8.662	mg/l	7/9/2025 12:29:16	
Q2487-10	S	TKN-NH3	P	46.341	mg/l	7/9/2025 12:29:19	
Q2487-11	S	TKN-NH3	P	3.2122	mg/l	7/9/2025 12:29:20	
Q2487-12	S	TKN-NH3	P	18.4967	mg/l	7/9/2025 12:29:21	
CCV2	S	TKN-NH3	P	4.8715	mg/l	7/9/2025 12:39:57	
CCB2	S	TKN-NH3	P	0.0896	mg/l	7/9/2025 12:39:58	
Q2487-13	S	TKN-NH3	P	4.3904	mg/l	7/9/2025 12:40:00	
Q2487-14	S	TKN-NH3	P	14.2724	mg/l	7/9/2025 12:40:01	
Q2487-15	S	TKN-NH3	P	7.8147	mg/l	7/9/2025 12:40:02	
Q2487-16	S	TKN-NH3	P	3.6441	mg/l	7/9/2025 12:40:03	
PB168699BL	S	TKN-NH3	P	0.0861	mg/l	7/9/2025 12:40:05	
PB168699BS	S	TKN-NH3	P	4.8355	mg/l	7/9/2025 12:50:37	
Q2470-01	S	TKN-NH3	P	0.3981	mg/l	7/9/2025 12:50:38	
Q2470-01DUP	S	TKN-NH3	P	0.4206	mg/l	7/9/2025 12:50:39	
Q2470-01MS	S	TKN-NH3	P	5.0676	mg/l	7/9/2025 12:50:40	
Q2470-01MSD	S	TKN-NH3	P	4.9528	mg/l	7/9/2025 12:50:41	
CCV3	S	TKN-NH3	P	4.8583	mg/l	7/9/2025 12:50:44	
CCB3	S	TKN-NH3	P	0.0787	mg/l	7/9/2025 12:50:47	
Q2471-01	S	TKN-NH3	P	1.5128	mg/l	7/9/2025 12:50:48	
CCV4	S	TKN-NH3	P	4.9483	mg/l	7/9/2025 12:57:17	
CCB4	S	TKN-NH3	P	0.088	mg/l	7/9/2025 12:57:20	
Q2487-10DLX10	S	TKN-NH3	P	2.886	mg/l	7/9/2025 13:32:03	
Q2487-12DLX5	S	TKN-NH3	P	3.9394	mg/l	7/9/2025 13:32:05	
Q2487-14DLX2	S	TKN-NH3	P	6.8944	mg/l	7/9/2025 13:32:06	
CCV5	S	TKN-NH3	P	4.9482	mg/l	7/9/2025 13:32:09	
CCB5	S	TKN-NH3	P	0.0808	mg/l	7/9/2025 13:32:11	

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Calibration results	Aquakem 7.2AQ1	Page:	1
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Alliance Technical Group
 284 Sheffield Street, Mountainside, NJ 07092

Reviewed by : RM Instrument ID : Konelab

7/9/2025 11:38

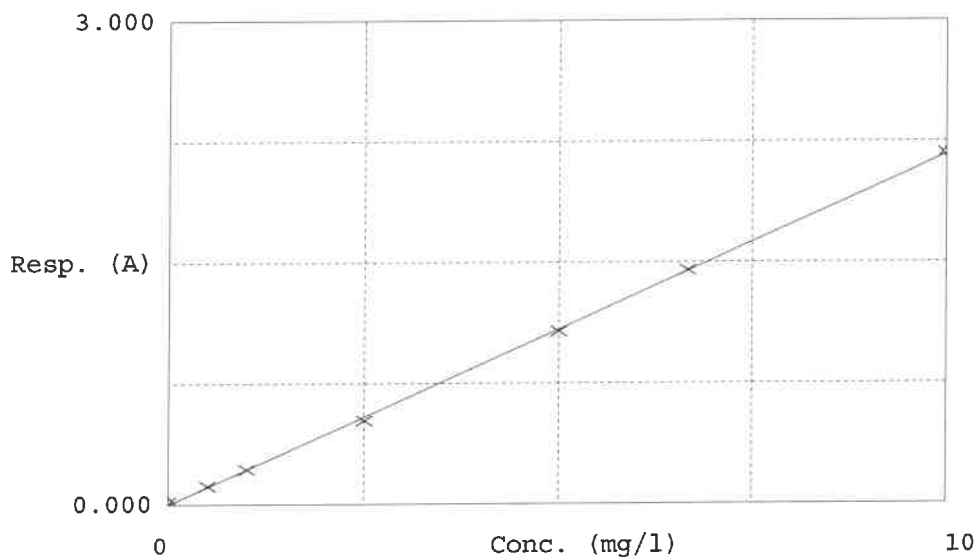
Test TKN-NH3

Accepted 7/9/2025 11:38

Factor 4.617
 Bias 0.002

Coeff. of det. 0.999683

Errors



	Calibrator	Response	Calc. con.	Conc.	Errors
1	0.00PPM	0.021	0.0877	0.0000	4.8
2	TKN-10	0.115	0.5239	0.5000	-0.5
3	TKN-10	0.217	0.9953	1.0000	-4.3
4	TKN-10	0.520	2.3921	2.5000	-1.3
5	TKN-10	1.071	4.9369	5.0000	-0.2
6	TKN-10	1.450	6.6856	6.6667	0.5
7	TKN-10	2.177	10.0451	10.0000	

07/09/2025
 RM

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

SOP ID : MSM4500-N Org C-TKN-11

SDG No : N/A

Matrix : WATER

Pipette ID : WC

Balance ID : N/A

Hood ID : HOOD#2&3

Block ID : WC-DIST-BLOCK-1

Weigh By : N/A

Start Digest Date: 07/07/2025 Time : 10:45 Temp : 380 °C

End Digest Date: 07/07/2025 Time : 12:15 Temp : 385 °C

Start Distillation Date: 07/07/2025 Time : 15:40 Temp : 150 °C

End Distillation Date: 07/07/2025 Time : 16:40 Temp : 157 °C

Digestion tube ID : M5595

Block Thermometer ID : Therm#2(2179)

Filter paper ID : N/A

Prep Technician Signature: RM

pH Meter ID : N/A

Supervisor Signature: 12

Standard Name	MLS USED	STD REF. # FROM LOG
TKN CAL STD	50.0ML	WP113832
TKN CCV STD	50.0ML	WP113833
TKN ICV STD	50.0ML	WP113834
TKN LCS STD	50.0ML	WP113835
MS/MSD SPIKE SOL.	0.25ML	WP112611

Chemical Used	ML/SAMPLE USED	Lot Number
TKN DIGESTION FLUID	10.0ML	WP113135
TKN DISTILLATION BUFFER	10.0ML	WP112079
H2SO4 0.04N	5.0ML	WP112828
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

Extraction Conformance/Non-Conformance Comments:

RL CHECK AS PR PB168731 FROM , ALL GLASSWEAR ARE STEAMED OUT AND THERE WERE NO TRACE OF AMMONIA USING NESLER REAGENT WP111604.

Date / Time	Prepped Sample Relinquished By/Location	Received By/Location
07/07/2025 16.50	RM (WC)	RM (WC)
	Preparation Group	Analysis Group

Lab Sample ID	Client Sample ID	Initial Vol (ml)	Final Vol (ml)	pH	Sulfide	Oxidizing	Nitrate/ Nitrite	Comment	Prep Pos
PB168699BL	PBW699	50	50	<2	N/A	N/A	N/A	PH AFTER ADDING DIST BUFFER>11	N/A
PB168699BS	LCS699	50	50	<2	N/A	N/A	N/A	PH AFTER ADDING DIST BUFFER>11	N/A
Q2470-01DUP	SW-1DUP	50	50	<2	N/A	N/A	N/A	PH AFTER ADDING DIST BUFFER>11	N/A
Q2470-01MS	SW-1MS	50	50	<2	N/A	N/A	N/A	PH AFTER ADDING DIST BUFFER>11	N/A
Q2470-01MSD	SW-1MSD	50	50	<2	N/A	N/A	N/A	PH AFTER ADDING DIST BUFFER>11	N/A
Q2470-01	SW-1	50	50	<2	N/A	N/A	N/A	PH AFTER ADDING DIST BUFFER>11	N/A
Q2471-01	SW-1	50	50	<2	N/A	N/A	N/A	PH AFTER ADDING DIST BUFFER>11	N/A

WORKLIST(Hardcopy Internal Chain)

WorkList Name : tkn-07-07

WorkList ID : 190488

Department : Distillation

Date : 07-07-2025 07:53:40

Sample	Customer Sample	Matrix	Test	Preservative	Customer	Raw Sample Storage Location	Collect Date	Method
Q2470-01	SW-1	Water	TKN	Conc H2SO4 to pH < 2	ATGG01	A52	06/27/2025	SM4500 N Org
Q2471-01	SW-1	Water	TKN	Conc H2SO4 to pH < 2	ATGG01	A33	07/27/2025	SM4500 N Org

Date/Time 07/07/2025 14:00
 Raw Sample Received by: RM 16:00
 Raw Sample Relinquished by: RM 16:00

Date/Time 07/07/2025 16:00
 Raw Sample Received by: RM
 Raw Sample Relinquished by: RM

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

SDG No : N/A

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

Matrix : WATER

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

Pipette ID : WC

Il not boleh 07/09/2025 11:30 95°C
07/09/2025 12:30 97°C

Balance ID : N/A

Hood ID : HOOD#3

Digestion tube ID : M5595

Block Thermometer ID : WC-BLOCK#1

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

Filter paper ID : 400213

Prep Technician Signature: 12

Weigh By : IZ

pH Meter ID : N/A

Supervisor Signature: *[Signature]*

Standard 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
07/09/25

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: 12(wc)
 Raw Sample Relinquished by: 28(wc)

Date/Time 07/09/25 10:15
 Raw Sample Received by: 28(wc)
 Raw Sample Relinquished by: 12(wc)

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(50)
 Raw Sample Relinquished by: 28(000)

Date/Time 07/09/25 11:50
 Raw Sample Received by: 28(000)
 Raw Sample Relinquished by: 12(50)

Instrument ID: IC-1

Daily Analysis Runlog For Sequence/QC Batch ID # LB136336

Review By	rubina	Review On	7/2/2025 8:53:01 AM
Supervise By	Iwona	Supervise On	7/2/2025 10:02:33 AM
SubDirectory	LB136336	Test	Anions
STD. NAME	STD REF.#		
ICAL Standard	WP113629,WP113630,WP113631,WP113632,WP113633,WP113634,WP113635		
ICV Standard	WP113636		
CCV Standard	WP113757		
ICSA Standard	N/A		
CRI Standard	N/A		
LCS Standard	WP113758		
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	07/01/25 09:05		RM/IZ	OK
11	CCB1	CCB1	CCB	07/01/25 09:26		RM/IZ	OK
12	LB136336BLW	LB136336BLW	MB	07/01/25 09:48		RM/IZ	OK
13	LB136336BSW	LB136336BSW	LCS	07/01/25 10:09		RM/IZ	OK
14	Q2470-01	SW-1	SAM	07/01/25 10:31	Cl is high	RM/IZ	OK
15	Q2470-01MS	SW-1MS	MS	07/01/25 10:52	9.5ml of sample, 0.5mL W3092,Cl is high	RM/IZ	OK
16	Q2470-01MSD	SW-1MSD	MSD	07/01/25 11:14	9.5ml of sample, 0.5mL W3092,Cl is high	RM/IZ	OK
17	Q2471-01	SW-1	SAM	07/01/25 11:35		RM/IZ	OK
18	CCV2	CCV2	CCV	07/01/25 11:57		RM/IZ	OK

Instrument ID: IC-1

Daily Analysis Runlog For Sequence/QC Batch ID # LB136336

Review By	rubina	Review On	7/2/2025 8:53:01 AM
Supervise By	Iwona	Supervise On	7/2/2025 10:02:33 AM
SubDirectory	LB136336	Test	Anions
STD. NAME	STD REF.#		
ICAL Standard	WP113629,WP113630,WP113631,WP113632,WP113633,WP113634,WP113635		
ICV Standard	WP113636		
CCV Standard	WP113757		
ICSA Standard	N/A		
CRI Standard	N/A		
LCS Standard	WP113758		
Chk Standard	WP113637,WP113638		

19	CCB2	CCB2	CCB	07/01/25 12:19		RM/IZ	OK
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Instrument ID: WC SC-3

Daily Analysis Runlog For Sequence/QC Batch ID # LB136346

Review By	jignesh	Review On	7/2/2025 11:31:21 AM
Supervise By	Iwona	Supervise On	7/2/2025 11:40:52 AM
SubDirectory	LB136346	Test	TSS
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	N/A		

Sr#	SampleID	ClientID	QcType	Date	Comment	Operator	Status
1	LB136346BL	LB136346BL	MB	07/02/25 09:30		jignesh	OK
2	LB136346BS	LB136346BS	LCS	07/02/25 09:30	55 mg w3186 + 100 ml w3112	jignesh	OK
3	Q2439-02	RW8-SP303-2025062	SAM	07/02/25 09:30		jignesh	OK
4	Q2463-01	TW-WTS-11	SAM	07/02/25 09:30		jignesh	OK
5	Q2463-01DUP	TW-WTS-11DUP	DUP	07/02/25 09:30		jignesh	OK
6	Q2470-01	SW-1	SAM	07/02/25 09:30		jignesh	OK
7	Q2471-01	SW-1	SAM	07/02/25 09:30		jignesh	OK

Instrument ID: WC SC-3

Daily Analysis Runlog For Sequence/QC Batch ID # LB136347

Review By	jignesh	Review On	7/2/2025 9:11:01 AM
Supervise By	Iwona	Supervise On	7/2/2025 11:12:01 AM
SubDirectory	LB136347	Test	Oil and Grease
STD. NAME	STD REF.#		
ICAL Standard	N/A		
ICV Standard	N/A		
CCV Standard	N/A		
ICSA Standard	N/A		
CRI Standard	N/A		
LCS Standard	N/A		
Chk Standard	W3204,M6069,EP2624,WP112782,NA,NA,WP112783,NA,WO112784		

Sr#	SampleId	ClientID	QcType	Date	Comment	Operator	Status
1	LB136347BL	LB136347BL	MB	07/02/25 09:00		jignesh	OK
2	LB136347BS	LB136347BS	LCS	07/02/25 09:00		jignesh	OK
3	Q2441-01	MH-6272025	SAM	07/02/25 09:00		jignesh	OK
4	Q2441-02	Q2441-01MS	MS	07/02/25 09:00		jignesh	OK
5	Q2441-03	Q2441-01MSD	MSD	07/02/25 09:00		jignesh	OK
6	Q2460-01	SW-1	SAM	07/02/25 09:00		jignesh	OK
7	Q2461-01	SW-3	SAM	07/02/25 09:00		jignesh	OK
8	Q2470-01	SW-1	SAM	07/02/25 09:00		jignesh	OK
9	Q2471-01	SW-1	SAM	07/02/25 09:00		jignesh	OK

Instrument ID: KONELAB

Daily Analysis Runlog For Sequence/QC Batch ID # LB136408

Review By	rubina	Review On	7/9/2025 3:52:38 PM
Supervise By	Iwona	Supervise On	7/9/2025 4:17:54 PM
SubDirectory	LB136408	Test	TKN
STD. NAME	STD REF.#		
ICAL Standard	WP113832		
ICV Standard	WP113834		
CCV Standard	WP113833		
ICSA Standard	N/A		
CRI Standard	N/A		
LCS Standard	WP113835		
Chk Standard	WP113852,WP111745,WP111385,WP111660		

Sr#	SampleId	ClientID	QcType	Date	Comment	Operator	Status
1	0.0PPM	0.0PPM	CAL1	07/09/25 11:35		rubina	OK
2	0.5PPM	0.5PPM	CAL2	07/09/25 11:35		rubina	OK
3	1.0PPM	1.0PPM	CAL3	07/09/25 11:35		rubina	OK
4	2.5PPM	2.5PPM	CAL4	07/09/25 11:35		rubina	OK
5	5.0PPM	5.0PPM	CAL5	07/09/25 11:35		rubina	OK
6	6.7PPM	6.7PPM	CAL6	07/09/25 11:35		rubina	OK
7	10.0PPM	10.0PPM	CAL7	07/09/25 11:35		rubina	OK
8	ICV1	ICV1	ICV	07/09/25 12:18		rubina	OK
9	ICB1	ICB1	ICB	07/09/25 12:18		rubina	OK
10	CCV1	CCV1	CCV	07/09/25 12:18		rubina	OK
11	CCB1	CCB1	CCB	07/09/25 12:18		rubina	OK
12	RL	RL	LOQ	07/09/25 12:18		rubina	OK
13	PB168731BL	PB168731BL	MB	07/09/25 12:18		rubina	OK
14	PB168731BS	PB168731BS	LCS	07/09/25 12:29		rubina	OK
15	Q2487-09	G4(0-6)	SAM	07/09/25 12:29		rubina	OK
16	Q2487-09DUP	G4(0-6)DUP	DUP	07/09/25 12:29		rubina	OK
17	Q2487-09MS	G4(0-6)MS	MS	07/09/25 12:29		rubina	OK
18	Q2487-09MSD	G4(0-6)MSD	MSD	07/09/25 12:29		rubina	OK

Instrument ID: KONELAB

Daily Analysis Runlog For Sequence/QC Batch ID # LB136408

Review By	rubina	Review On	7/9/2025 3:52:38 PM
Supervise By	Iwona	Supervise On	7/9/2025 4:17:54 PM
SubDirectory	LB136408	Test	TKN
STD. NAME	STD REF.#		
ICAL Standard	WP113832		
ICV Standard	WP113834		
CCV Standard	WP113833		
ICSA Standard	N/A		
CRI Standard	N/A		
LCS Standard	WP113835		
Chk Standard	WP113852,WP111745,WP111385,WP111660		

19	Q2487-10	G4(6-12)	SAM	07/09/25 12:29	TKN is high	rubina	Dilution
20	Q2487-11	G3(0-6)	SAM	07/09/25 12:29		rubina	OK
21	Q2487-12	G3(6-12)	SAM	07/09/25 12:29	TKN is high	rubina	Dilution
22	CCV2	CCV2	CCV	07/09/25 12:39		rubina	OK
23	CCB2	CCB2	CCB	07/09/25 12:39		rubina	OK
24	Q2487-13	G2(0-6)	SAM	07/09/25 12:40		rubina	OK
25	Q2487-14	G2(6-12)	SAM	07/09/25 12:40	TKN is high	rubina	Dilution
26	Q2487-15	G1(0-6)	SAM	07/09/25 12:40		rubina	OK
27	Q2487-16	G1(6-12)	SAM	07/09/25 12:40		rubina	OK
28	PB168699BL	PB168699BL	MB	07/09/25 12:40		rubina	OK
29	PB168699BS	PB168699BS	LCS	07/09/25 12:50		rubina	OK
30	Q2470-01	SW-1	SAM	07/09/25 12:50		rubina	OK
31	Q2470-01DUP	SW-1DUP	DUP	07/09/25 12:50		rubina	OK
32	Q2470-01MS	SW-1MS	MS	07/09/25 12:50		rubina	OK
33	Q2470-01MSD	SW-1MSD	MSD	07/09/25 12:50		rubina	OK
34	CCV3	CCV3	CCV	07/09/25 12:50		rubina	OK
35	CCB3	CCB3	CCB	07/09/25 12:50		rubina	OK
36	Q2471-01	SW-1	SAM	07/09/25 12:50		rubina	OK
37	CCV4	CCV4	CCV	07/09/25 12:57		rubina	OK
38	CCB4	CCB4	CCB	07/09/25 12:57		rubina	OK

Instrument ID: KONELAB

Daily Analysis Runlog For Sequence/QC Batch ID # LB136408

Review By	rubina	Review On	7/9/2025 3:52:38 PM
Supervise By	Iwona	Supervise On	7/9/2025 4:17:54 PM
SubDirectory	LB136408	Test	TKN
STD. NAME	STD REF.#		
ICAL Standard	WP113832		
ICV Standard	WP113834		
CCV Standard	WP113833		
ICSA Standard	N/A		
CRI Standard	N/A		
LCS Standard	WP113835		
Chk Standard	WP113852,WP111745,WP111385,WP111660		

39	Q2487-10DL	G4(6-12)DL	SAM	07/09/25 13:32	10X For TKN	rubina	Confirms
40	Q2487-12DL	G3(6-12)DL	SAM	07/09/25 13:32	5X For TKN	rubina	Confirms
41	Q2487-14DL	G2(6-12)DL	SAM	07/09/25 13:32	2X For TKN	rubina	Confirms
42	CCV5	CCV5	CCV	07/09/25 13:32		rubina	OK
43	CCB5	CCB5	CCB	07/09/25 13:32		rubina	OK

Instrument ID: SPECTROPHOTOMETER-1

Daily Analysis Runlog For Sequence/QC Batch 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,V		

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

Instrument ID: SPECTROPHOTOMETER-1

Daily Analysis Runlog For Sequence/QC Batch 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,V		

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

Prep Standard - Chemical Standard Summary

Order ID : Q2470

Test : Anions Group1,Oil and Grease,Phosphorus-Total,TKN,TSS

Prepbatch ID : PB168699,PB168769,

Sequence ID/Qc Batch ID: LB136336,LB136346,LB136347,LB136408,LB136411,

Standard ID :

EP2624,WP111385,WP111660,WP111745,WP112079,WP112611,WP112612,WP112615,WP112782,WP112783,WP112796,WP112828,WP112831,WP112913,WP112914,WP113112,WP113113,WP113135,WP113378,WP113629,WP113630,WP113631,WP113632,WP113633,WP113634,WP113635,WP113636,WP113637,WP113638,WP113757,WP113758,WP113832,WP113833,WP113834,WP113835,WP113852,WP113866,WP113867,WP113868,WP113869,WP113870,WP113871,WP113872,WP113873,WP113876,WP113877,WP113878,

Chemical ID :

E3551,E3917,M6041,M6069,M6151,W2306,W2647,W2650,W2664,W2666,W2788,W2817,W2858,W2871,W2983,W3035,W3074,W3112,W3113,W3132,W3148,W3163,W3174,W3180,W3195,W3196,W3197,W3198,W3199,W3204,W3206,W3215,WO112784,



<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
3923	Baked Sodium Sulfate	EP2624	06/26/2025	12/04/2025	RUPESHKUMAR SHAH	Extraction_SCALE_2 (EX-SC-2)	None	Riteshkumar Patel 06/26/2025
FROM 4000.00000gram of E3551 = Final Quantity: 4000.000 gram								

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
290	Phenol reagent for Ammonia	WP111385	01/13/2025	07/13/2025	Rubina Mughal	WETCHEM_S CALE_8 (WC SC-7)	None	Iwona Zarych 01/13/2025
<u>FROM</u> 3.20000gram of W3113 + 8.30000gram of W2858 + 88.80000ml of W3112 = Final Quantity: 100.000 ml								



<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
635	EDTA BUFFER FOR AMMONIA	WP111660	01/28/2025	07/28/2025	Rubina Mughal	WETCHEM_SCALE_8 (WC-SC-7)	None	Iwona Zarych 01/28/2025
<u>FROM</u> 5.50000gram of W3113 + 50.00000gram of W3132 + 950.00000ml of W3112 = Final Quantity: 1000.000 ml								

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
289	Sodium Hypochlorite for Ammonia	WP111745	02/03/2025	07/31/2025	Rubina Mughal	None	None	Iwona Zarych 02/03/2025
<u>FROM</u> 50.00000ml of W3112 + 50.00000ml of W3174 = Final Quantity: 100.000 ml								



<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
1338	TKN DISTILLING BUFFER	WP112079	02/27/2025	08/27/2025	Rubina Mughal	WETCHEM_SCALE_8 (WCS-7)	None	Iwona Zarych 02/27/2025
<u>FROM</u> 0.47500L of W3112 + 25.00000gram of W3148 + 500.00000gram of W3113 = Final Quantity: 1.000 L								

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
153	Ammonia Stock Std. (1000 ppm)	WP112611	04/07/2025	10/07/2025	Rubina Mughal	WETCHEM_SCALE_8 (WC SC-7)	None	Iwona Zarych 04/07/2025
<u>FROM</u> 3.81900gram of W3196 + 996.18100ml of W3112 = Final Quantity: 1000.000 ml								

Wet Chemistry STANDARD PREPARATION LOG

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
1895	Ammonia Stock Std, 1000PPM-SS	WP112612	04/07/2025	10/07/2025	Rubina Mughal	WETCHEM_S CALE_8 (WC SC-7)	None	Iwona Zarych 04/07/2025

FROM 3.81900gram of W3195 + 996.18100ml of W3112 = Final Quantity: 1000.000 ml

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
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

Wet Chemistry STANDARD PREPARATION LOG

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
229	1:1 HCL	WP112782	04/22/2025	08/18/2025	Jignesh Parikh	None	None	Iwona Zarych
								04/22/2025

FROM 500.00000ml of M6151 + 500.00000ml of W3112 = Final Quantity: 1.000 L

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
2470	1664A SPIKING SOLN	WP112783	04/22/2025	10/03/2025	Jignesh Parikh	WETCHEM_S CALE_8 (WC SC-7)	None	Iwona Zarych
								04/22/2025

FROM 1000.00000ml of E3917 + 4.00000gram of W2817 + 4.00000gram of W2871 = Final Quantity: 1000.000 ml



<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
4035	IC ELUENT CONCENTRATE FOR IC-1	WP112796	04/22/2025	10/22/2025	Iwona Zarych	WETCHEM_SCALE_5 (WCS-5)	None	Jignesh Parikh 04/22/2025
<u>FROM</u> 2.10000gram of W2647 + 84.75000gram of W3163 + 913.15000ml of W3112 = Final Quantity: 1000.000 ml								

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
1597	0.04 N H2SO4	WP112828	04/25/2025	10/25/2025	Rubina Mughal	None	WETCHEM_PIPETTE_3 (WC)	Iwona Zarych 04/25/2025
<u>FROM</u> 1.00000ml of M6041 + 999.00000ml of W3112 = Final Quantity: 1000.000 ml								

Wet Chemistry STANDARD PREPARATION LOG

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
126	5N sulfuric acid	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

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

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



<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
2790	Phosphate Stock std, 50PPM-SS	WP112914	05/01/2025	11/01/2025	Iwona Zarych	WETCHEM_S CALE_5 (WC SC-5)	None	Jignesh Parikh 05/06/2025
<u>FROM</u>	0.11000gram of W3206 + 500.00000ml of W3112 = Final Quantity: 500.000 ml							

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
648	Ammonium molybdate solution	WP113112	05/16/2025	11/16/2025	Iwona Zarych	WETCHEM_SCALE_5 (WCS-5)	None	Jignesh Parikh
<u>FROM</u> 20.00000gram of W2664 + 480.00000ml of W3112 = Final Quantity: 500.000 ml								



<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
588	Potassium Antimonyl Tartrate	WP113113	05/16/2025	11/16/2025	Iwona Zarych	WETCHEM_SCALE_5 (WCS-5)	None	Jignesh Parikh 05/16/2025
<u>FROM</u>	1.37150gram of W2306 + 500.00000ml of W3112 = Final Quantity: 500.000 ml							

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
619	TKN digestion solution	WP113135	05/20/2025	11/20/2025	Rubina Mughal	WETCHEM_SCALE_8 (WC SC-7)	None	Iwona Zarych 05/20/2025
<u>FROM</u>	134.00000gram of W2983 + 134.00000ml of M6041 + 7.30000gram of W3199 + 725.00000ml of W3112 = Final Quantity: 1000.000 ml							



<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
1213	Phenolphthalein indicator	WP113378	06/04/2025	12/04/2025	Iwona Zarych	WETCHEM_SCALE_5 (WCS)	None	Jignesh Parikh
FROM 0.10000gram of W2650 + 50.00000ml of W2788 + 50.00000ml of W3112 = Final Quantity: 100.000 ml								

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
2487	Anions 300/9056 calibration standard 1	WP113629	06/23/2025	06/24/2025	Iwona Zarych	None	None	Jignesh Parikh 06/23/2025
<u>FROM</u> 10.00000ml of W3112 = Final Quantity: 10.000 ml								



<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
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
<u>FROM</u> 0.20000ml of W3180 + 9.80000ml of W3112 = Final Quantity: 10.000 ml								

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
25	Anions 300/9056 calibration standard 3	WP113631	06/23/2025	06/24/2025	Iwona Zarych	None	WETCHEM_PIPETTE_3 (WC)	Jignesh Parikh 06/23/2025
<u>FROM</u> 0.40000ml of W3180 + 9.60000ml of W3112 = Final Quantity: 10.000 ml								

Wet Chemistry STANDARD PREPARATION LOG

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
26	Anions 300/9056 calibration standard 4	WP113632	06/23/2025	06/24/2025	Iwona Zarych	None	WETCHEM_F IPETTE_3 (WC)	Jignesh Parikh 06/23/2025
FROM 0.50000ml of W3180 + 9.50000ml of W3112 = Final Quantity: 10.000 ml								

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
3680	Anions 300/9056 calibration standard 5-CCV	WP113633	06/23/2025	06/24/2025	Iwona Zarych	None	WETCHEM_F IPETTE_3 (WC)	Jignesh Parikh 06/23/2025
FROM 45.00000ml of W3112 + 5.00000ml of W3180 = Final Quantity: 50.000 ml								

Wet Chemistry STANDARD PREPARATION LOG

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
3679	Anions 300/9056 calibration standard 6	WP113634	06/23/2025	06/24/2025	Iwona Zarych	None	WETCHEM_F IPETTE_3 (WC)	Jignesh Parikh 06/23/2025
FROM 2.00000ml of W3180 + 8.00000ml of W3112 = Final Quantity: 10.000 ml								

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
3681	Anions 300/9056 calibration standard 7	WP113635	06/23/2025	06/24/2025	Iwona Zarych	None	WETCHEM_F IPETTE_3 (WC)	Jignesh Parikh 06/23/2025
FROM 2.50000ml of W3180 + 7.50000ml of W3112 = Final Quantity: 10.000 ml								



<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
3233	Anions 300/9056 ICV-LCS std	WP113636	06/23/2025	06/24/2025	Iwona Zarych	None	WETCHEM_PIPETTE_3	Jignesh Parikh
(WC)								
<u>FROM</u>	45.00000ml of W3112 + 5.00000ml of W3197 = Final Quantity: 50.000 ml							

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
4036	IC ELUENT FOR IC-1	WP113637	06/23/2025	07/23/2025	Iwona Zarych	None	Glass Pipette-A	Jignesh Parikh 06/23/2025
<u>FROM</u> 1980.00000ml of W3112 + 20.00000ml of WP112796 = Final Quantity: 2000.000 ml								

Wet Chemistry STANDARD PREPARATION LOG

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
4037	IC H2SO4 FOR IC-1	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

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
3680	Anions 300/9056 calibration standard 5-CCV	WP113757	07/01/2025	07/02/2025	Iwona Zarych	None	WETCHEM_F IPETTE_3 (WC)	Jignesh Parikh 07/02/2025

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

Wet Chemistry STANDARD PREPARATION LOG

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
3233	Anions 300/9056 ICV-LCS std	WP113758	07/01/2025	07/02/2025	Iwona Zarych	None	WETCHEM_F IPETTE_3 (WC)	Jignesh Parikh 07/02/2025

FROM 45.00000ml of W3112 + 5.00000ml of W3197 = Final Quantity: 50.000 ml

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
295	TKN Calibration Std (10 ppm)	WP113832	07/07/2025	07/14/2025	Rubina Mughal	None	WETCHEM_F IPETTE_3 (WC)	Iwona Zarych 07/07/2025

FROM 49.50000ml of W3112 + 0.50000ml of WP112611 = Final Quantity: 50.000 ml

Wet Chemistry STANDARD PREPARATION LOG

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
297	TKN CCV STD 5 ppm	WP113833	07/07/2025	07/14/2025	Rubina Mughal	None	WETCHEM_F IPETTE_3 (WC)	Iwona Zarych 07/07/2025
FROM 49.75000ml of W3112 + 0.25000ml of WP112611 = Final Quantity: 50.000 ml								

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
296	TKN ICV STD 5 ppm	WP113834	07/07/2025	07/14/2025	Rubina Mughal	None	WETCHEM_F IPETTE_3 (WC)	Iwona Zarych 07/07/2025
FROM 49.75000ml of W3112 + 0.25000ml of WP112612 = Final Quantity: 50.000 ml								

Wet Chemistry STANDARD PREPARATION LOG

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
298	TKN LCS STD 5 ppm	WP113835	07/07/2025	07/14/2025	Rubina Mughal	None	WETCHEM_FIPETTE_3 (WC)	Iwona Zarych 07/07/2025

FROM 49.75000ml of W3112 + 0.25000ml of WP112612 = Final Quantity: 50.000 ml

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

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

Wet Chemistry STANDARD PREPARATION LOG

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
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

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
121	calibration std. phosphate 0.05 ppm	WP113867	07/09/2025	07/16/2025	Iwona Zarych	None	WETCHEM_FIPETTE_3 (WC)	Jignesh Parikh
								07/09/2025

FROM 99.90000ml of W3112 + 0.10000ml of WP112913 = Final Quantity: 100.000 ml

Wet Chemistry STANDARD PREPARATION LOG

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
120	calibration std. phosphate 0.1 ppm	WP113868	07/09/2025	07/16/2025	Iwona Zarych	None	WETCHEM_F IPETTE_3 (WC)	Jignesh Parikh 07/09/2025
FROM 99.80000ml of W3112 + 0.20000ml of WP112913 = Final Quantity: 100.000 ml								

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
119	calibration std. phosphate 0.3 ppm	WP113869	07/09/2025	07/16/2025	Iwona Zarych	None	WETCHEM_F IPETTE_3 (WC)	Jignesh Parikh 07/09/2025
FROM 99.40000ml of W3112 + 0.60000ml of WP112913 = Final Quantity: 100.000 ml								

Wet Chemistry STANDARD PREPARATION LOG

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
118	calibration std. phosphate 0.5 ppm	WP113870	07/09/2025	07/16/2025	Iwona Zarych	None	WETCHEM_F IPETTE_3 (WC)	Jignesh Parikh 07/09/2025
FROM 99.00000ml of W3112 + 1.00000ml of WP112913 = Final Quantity: 100.000 ml								

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
117	calibration std. phosphate 1 ppm	WP113871	07/09/2025	07/16/2025	Iwona Zarych	None	WETCHEM_F IPETTE_3 (WC)	Jignesh Parikh 07/09/2025
FROM 98.00000ml of W3112 + 2.00000ml of WP112913 = Final Quantity: 100.000 ml								

Wet Chemistry STANDARD PREPARATION LOG

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
124	phosphate CCV std.	WP113872	07/09/2025	07/16/2025	Iwona Zarych	None	WETCHEM_F IPETTE_3 (WC)	Jignesh Parikh 07/09/2025
FROM 99.00000ml of W3112 + 1.00000ml of WP112913 = Final Quantity: 100.000 ml								

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
3805	Phosphate ICV-LCS Std	WP113873	07/09/2025	07/16/2025	Iwona Zarych	None	WETCHEM_F IPETTE_3 (WC)	Jignesh Parikh 07/09/2025
FROM 99.00000ml of W3112 + 1.00000ml of WP112914 = Final Quantity: 100.000 ml								



<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
590	Ascorbic Acid	WP113876	07/09/2025	07/10/2025	Iwona Zarych	WETCHEM_SCALE_7 (WCS-6)	None	Jignesh Parikh
FROM 0.52800gram of W3074 + 30.00000ml of W3112 = Final Quantity: 30.000 ml								

[illegible]



<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
1571	Sodium hydroxide, 1N	WP113878	07/09/2025	12/31/2025	Iwona Zarych	WETCHEM_SCALE_7 (WC-6)	None	Jignesh Parikh
<u>FROM</u> 4.00000gram of W3113 + 96.00000ml of W3112 = Final Quantity: 100.000 ml								

CHEMICAL RECEIPT LOG BOOK

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
PCI Scientific Supply, Inc.	PC19631-100 / SODIUM SULFATE, ANHYDROUS, PEST GRADE, 1	313201	12/04/2025	01/03/2024 / Rajesh	07/20/2023 / Rajesh	E3551

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Seidler Chemical	BA-9254-03 / Acetone, Ultra Resi (cs/4x4L)	24H2762008	10/03/2025	04/03/2025 / Rajesh	03/31/2025 / Rajesh	E3917

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 #
PCI Scientific Supply, Inc.	140440 / TEST PAPERS,PH,0-2.5,.2SENSI, 100PK	80A0441	02/29/2028	09/03/2024 / jignesh	08/19/2024 / Jaswal	M6069

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

CHEMICAL RECEIPT LOG BOOK

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.	J07716-1 / Ammonium Molybdate 500G	0000234410	02/11/2026	02/10/2020 / AMANDEEP	01/31/2020 / apatel	W2664

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.	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.	A12244 / Stearic acid, 98%, 100 g	U20E006	04/02/2026	04/02/2021 / apatel	04/02/2021 / apatel	W2817

CHEMICAL RECEIPT LOG BOOK

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

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Seidler Chemical	H223-57 / Hexadecane, 99.0%	0000266903	05/04/2027	09/07/2021 / apatel	08/26/2021 / apatel	W2871

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
PCI Scientific Supply, Inc.	J3278-5 / Potassium Sulfate, 2.5 Kgs	SLCM9788	11/21/2027	11/21/2022 / lwona	11/21/2022 / lwona	W2983

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 / lwona	06/06/2023 / lwona	W3035

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 / lwona	01/16/2024 / lwona	W3074

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 / lwona	07/03/2024 / lwona	W3112

CHEMICAL RECEIPT LOG BOOK

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
PCI Scientific Supply, Inc.	PC19510-7 / Sodium Hydroxide Pellets 12 Kg	23B1556310	12/31/2025	07/08/2024 / lwona	07/08/2024 / lwona	W3113

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 / lwona	07/26/2024 / lwona	W3132

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
PCI Scientific Supply, Inc.	J3946-1 / Sodium Thiosulfate Pentahydrate, 500 gms	MKCW3077	07/31/2029	10/07/2024 / lwona	10/07/2024 / lwona	W3148

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 / lwona	12/10/2024 / lwona	W3163

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 / lwona	01/24/2025 / lwona	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 / lwona	01/27/2025 / lwona	W3180

CHEMICAL RECEIPT LOG BOOK

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 / lwona	03/19/2025 / lwona	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 / lwona	03/19/2025 / lwona	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 / lwona	04/08/2025 / lwona	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, CRYST, ACS, 500G	MKCV6723	10/31/2028	04/11/2025 / lwona	04/11/2025 / lwona	W3198

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
PCI Scientific Supply, Inc.	0330-500G / Cupric Sulfate Pentahydrate	24H0956271	05/31/2027	04/11/2025 / lwona	04/11/2025 / lwona	W3199

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Seidler Chemical	BA-9262-03 / Hexane, Ultra-Resi (cs/4x4L)	25c0362005	04/30/2026	04/22/2025 / jignesh	04/18/2025 / jignesh	W3204

CHEMICAL RECEIPT LOG BOOK

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, CRYST, ACS, 500G	MKCX1379	01/31/2029	04/29/2025 / lwona	04/29/2025 / lwona	W3206

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 SENS,100PK	10D3242	12/31/2028	06/09/2025 / lwona	06/09/2025 / lwona	W3215



CERTIFICATE OF ANALYSIS

Printed: 12/8/2017

Page 1 of 1

Customer No : 30017
Order Number : 3008126
Catalog : A1561

Customer : PCI SCIENTIFIC
Delivery # : 58495347
Potassium Antimony Tartrate Trihydrate,
Reagent, ACS

Customer PO : 6035343

Lot : 2GH0057

Chemical Formula : $C_8H_4K_2O_{12}Sb_2 \cdot 3H_2O$
CAS# : 28300-74-5

Formula Weight : 667.87

W2306
received
12/11/17
AB

Test

Limit
Min. Max.

Results

ASSAY ($C_8H_4K_2O_{12}Sb_2 \cdot 3HO$)	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:

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

James Ethier
Jamie Ethier
Vice President Global Quality

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

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

James Ethier
Jamie Ethier
Vice President Global Quality

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

Hexadecane, 99.0%



Material No.: H223-57
Batch No.: 0000266903
Manufactured Date: 2020/05/05
Retest Date: 2027/05/04
Revision No: 1

Certificate of Analysis

Test	Specification	Result
Assay (CH ₃ (CH ₂) ₁₄ CH ₃) (by GC)	>= 99.0 %	99.3
Infrared Spectrum	Passes Test	PT

For Laboratory, Research or Manufacturing Use

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

W2858 Received by AP on 07/07/2021

Product No.: 33213
Product: Phenol, ACS, 99+%, stab.
Lot No.: M13H048

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

Retest date: January 7, 2026

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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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Product Name: Stearic acid, 98%, Thermo Scientific Chemicals
Catalog Number: A12244.14

CAS Number: 57-11-4
Molecular Formula: C₁₈H₃₆O₂
Molecular Weight: 284.48
InChI Key: QIQXTHQIDYTRH-UHFFFAOYSA-N
SMILES: CCCCCCCCCCCCCCCC(O)=O
Synonym: stearic acid acide stearique hydrofol acid 1855 hydrofol acid 1655 industrene 5016
stearic acid, ion(1-) (8Cl) glycon TP glycon DP acidum stearinicum hydrofol acid 150

Product Specification

Appearance (Color): White
Form: Crystals or powder or crystalline powder or flakes or waxy solid
Assay (Silylated GC): ≥97.5%
Melting Point (clear melt): 67.0-74.0°C

Date Of Print: 11/30/2023

Product Specifications are subject to amendment and may change over time. Data contained is accurate as of the date printed.



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 **W2788 Received on 12/30/2020 by AP**
Recommended Retest Date: Five Years from Date of Manufacture

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
Titration 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

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



~~112778~~ W2983
Rec. 11/21/22 12

Product Name:

Certificate of Analysis**Potassium sulfate - ReagentPlus® , ≥99.0%**

Product Number: P0772
Batch Number: SLCM9788
Brand: SIGALD
CAS Number: 7778-80-5
MDL Number: MFCD00011388
Formula: K₂O₄S
Formula Weight: 174.26 g/mol
Quality Release Date: 03 MAR 2022



Test	Specification	Result
Appearance (Color)	White	White
Appearance (Form)	Powder	Powder
Solubility (Color)	Colorless	Colorless
Solubility (Turbidity)	Clear	Clear
10 g plus 150 mL, H ₂ O		
Titration with NaOH	≥ 99.0 %	99.2 %



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

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



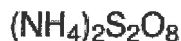
W 3035
rec. 6/6/23 12

Product Name:

Certificate of Analysis

Ammonium persulfate - ACS reagent, $\geq 98.0\%$

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	Confirmed	Confirmed
Confirms Sulfur Component		
Titration by KMNO ₄	$\geq 98.0 \%$	100.0 %
Residue on ignition (Ash)	$\leq 0.05 \%$	$< 0.05 \%$
Insoluble Matter	$\leq 0.005 \%$	0.002 %
c = 10 %; In Water		
Chloride and Chlorate (as Cl)	$\leq 0.001 \%$	$< 0.001 \%$
Iron (Fe)	$\leq 0.001 \%$	$< 0.001 \%$
Heavy Metal	$\leq 0.005 \%$	$< 0.001 \%$
as Lead		
Manganese (Mn)	$\leq 0.5 \text{ ppm}$	$< 0.1 \text{ ppm}$
Titrateable Acid (meq/g)	≤ 0.04	< 0.04
Meets ACS Requirements	Current ACS Specification	Conforms


Larry Coers, Director
Quality Control
Milwaukee, WI US

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





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CP 64070
TEL +52 81 13 52 57 57
www.pqm.com.mx

CERTIFICATE OF ANALYSIS

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

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

COMMENTS

QC: PhC Irma Belmares

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

Recd. by R3 on 7/24/23 E 3551

RC-02-01, Ed. 3

Acetone

BAKER RESI-ANALYZED® Reagent
For Organic Residue Analysis

avantor™



Material No.: 9254-03

Batch No.: 24H2762008

Manufactured Date: 2024-04-18

Expiration Date: 2027-04-18

Revision No.: 0

Certificate of Analysis

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

For Laboratory, Research, or Manufacturing Use

MEETS SPECIFICATIONS WITHIN THE EXPIRATION PERIOD

Country of Origin: United States

Packaging Site: Phillipsburg Mfg Ctr & DC

Recd by RP on 03/31/25

E3917

Jamie Croak
Director Quality Operations, Bioscience Production

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

Avantor Performance Materials LLC

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

avantor™



M 6041-4b
MS

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

Certificate of Analysis

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

>>> Continued on page 2 >>>

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

 **avantorsm**

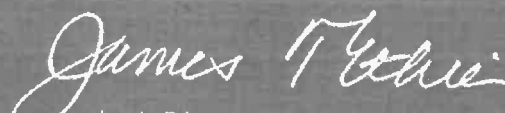


Material No.: 9673-33
Batch No.: 23D2462010

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

For Laboratory, Research, or Manufacturing Use

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


Jamie Ethier
Vice President Global Quality



Certificate of Analysis

Product information

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

Confirmation

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

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



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US Tel.: +1 888 321 62 24 sales-us@mn-net.com

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

 **avantor™**



M6151

R → 11/15/25

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

 **avantorsm**



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



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

A handwritten signature in cursive script that reads 'Jamie Ethier'.
Jamie Ethier
Vice President Global Quality

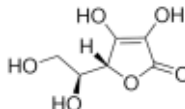
W3074 Rec. on 01/16/24 by IZ

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)	Conforms to Requirements	Powder
Powder, Crystals, Crystalline Powder, Granules and/or Chunks		
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

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





Sodium Hydroxide (Pellets)

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

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

Manufacture Date: 12/14/2022
Expiration Date: 12/31/2025

Storage: Room Temperature

Pellets

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.



Sodium Hydroxide (Pellets)

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

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

Manufacture Date: 12/14/2022
Expiration Date: 12/31/2025

Storage: Room Temperature

Pellets

Spec Set: 0583ACS

Internal ID #: 710

Signature

We certify that this batch conforms to the specifications listed.

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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.

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) ₃ N]		0.1 %	<0.10 %
IDENTIFICATION A	MATCHES REFERENCE		MATCHES REFERENCE
IDENTIFICATION B	RED COLOR IS DISCHARGED, LEAVING A YELLOWISH SOLUTION		RED COLOR IS DISCHARGED, LEAVING A YELLOWISH SOLUTION
IDENTIFICATION C	MEETS THE REQUIREMENTS FOR SODIUM		MEETS THE REQUIREMENTS FOR SODIUM
CERTIFIED HALAL			CERTIFIED HALAL
EXPIRATION DATE			10-JUL-2026
DATE OF MANUFACTURE			11-JUL-2023
APPEARANCE			WHITE CRYSTALLINE POWDER
RESIDUAL SOLVENTS		AS REPORTED	NO RESIDUAL SOLVENTS PRESENT
MONOGRAPH EDITION			USP 2024

Certificate of Analysis Results Entered By:

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

Certificate of Analysis Results Approved By:

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

Spectrum Chemical Mfg Corp
755 Jersey Avenue
New Brunswick 08901 NJ



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

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

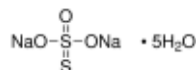
The Elemental Impurities standards implemented by USP and other Pharmaceutical Compendia reflect a growing understanding of the toxicology of trace levels of elemental impurities that can remain in drug substances originating from either raw materials or manufacturing processes. Identifying and quantifying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

Certificate of Analysis

Product Name:

Sodium thiosulfate pentahydrate - ACS reagent, ≥99.5%

Product Number: 217247
Batch Number: MKCW3077
Brand: SIGALD
CAS Number: 10102-17-7
MDL Number: MFCD00149186
Formula: Na₂O₃S₂ · 5H₂O
Formula Weight: 248.18 g/mol
Quality Release Date: 12 JUL 2024
Recommended Retest Date: JUL 2029



Test	Specification	Result
Appearance (Color)	Colorless or White	White
Appearance (Form)	Powder or Crystals or Pellets	Crystals
ICP Major Analysis	Confirmed	Confirmed
Confirms Sodium and Sulfur Components		
Titration by Iodine	99.5 - 101.0 %	100.2 %
pH	6.0 - 8.4	6.1
c = 5%; Water; At 25 Deg C		
Insoluble Matter	≤ 0.005 %	< 0.001 %
c = 10%; Water		
Nitrogen Compounds	≤ 0.002 %	< 0.002 %
Sulfate & Sulfite (as SO ₄)	≤ 0.1 %	< 0.1 %
Sulfide	Pass	Pass
Meets ACS Requirements	Current ACS Specification	Conforms
Recommended Retest Period	-----	-----
5 Years		



Larry Coers, Director
Quality Control
Milwaukee, WI US

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





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

Certificate of Analysis

Sodium Hypochlorite Solution, 5% available Chlorine

Lot Number: 2501J28**Product Number:** 7495.5**Manufacture Date:** JAN 17, 2025**Expiration Date:** JUL 2025

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

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

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

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

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

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

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

Jose Pena (01/17/2025)
Operations Manager

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



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).



2.0 PRODUCT DESCRIPTION

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

3.0 CERTIFIED VALUES AND UNCERTAINTIES

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

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

Assay Information:

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

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

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

Characterization of CRM/RM by Two or More Methods

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

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

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

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

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

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

k = coverage factor = 2

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

u_{bb} = bottle to bottle homogeneity standard uncertainty

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

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

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

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

X_a = mean of Assay Method A with

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

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

k = coverage factor = 2

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

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{Its} = 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



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	NH ₄ Cl
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

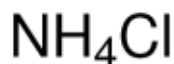
Signature	Additional Information
We certify that this batch conforms to the specifications listed above. This document has been electronically produced and is valid without a signature. Leona Edwardson, Quality Control Sr. Manager - Solon VWR Chemicals, LLC. 28600 Fountain Parkway, Solon OH 44139 USA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

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 AgNO ₃	≥ 99.5 %	100.2 %
pH	4.5 - 5.5	4.9
@ 25 Deg c (5% Solution)		
Insoluble Matter	≤ 0.005 %	0.001 %
10%, H ₂ O		
Residue on ignition (Ash)	≤ 0.01 %	< 0.01 %
Calcium (Ca)	≤ 0.001 %	< 0.001 %
Magnesium (Mg)	≤ 5 ppm	1 ppm
Heavy Metals	≤ 5 ppm	< 1 ppm
by ICP		
Iron (Fe)	≤ 2 ppm	< 1 ppm
Phosphate (PO ₄)	≤ 2 ppm	< 2 ppm
Sulfate (SO ₄)	≤ 0.002 %	< 0.002 %
Meets ACS Requirements	Current ACS Specification	Conforms
Recommended Retest Period	-----	-----
3 Years		



Larry Coers, Director

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



Certificate of Analysis

Product Number: 213330
Batch Number: MKCV1009

Quality Control
Milwaukee, WI US

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



Instrument IC-1			Analyst: NF		Method: 300.0 / 9056A				Initial Analyst
Ident	Con F-	Con CL-	Con NO2	Con BR-	Con NO3	Con HPO4	Con SO4	Method name date time	
STD1	0	0	0	0	0	0	0	IC1-032125 3/21/2025 10:45	10 NF/IZ
STD2	0.421	0.619	0.631	2.075	0.523	1.052	3.247	IC1-032125 3/21/2025 11:07	10 NF/IZ
STD3	0.795	1.199	1.203	3.994	1.001	1.993	5.998	IC1-032125 3/21/2025 11:28	10 NF/IZ
STD4	0.977	1.475	1.468	4.904	1.226	2.407	7.216	IC1-032125 3/21/2025 11:50	10 NF/IZ
STD5	1.993	3.009	2.995	10.03	2.493	4.968	14.842	IC1-032125 3/21/2025 12:11	10 NF/IZ
STD6	4.034	5.988	5.986	19.975	5.011	10.256	30.502	IC1-032125 3/21/2025 12:32	10 NF/IZ
STD7	4.979	7.51	7.517	25.022	6.247	12.323	36.695	IC1-032125 3/21/2025 12:54	10 NF/IZ
ICV	2.031	3.038	3.08	10.364	2.568	5.199	15.269	IC1-032125 3/21/2025 13:37	10 NF/IZ
ICB	0	0.122	0.08	0	0	0	0	IC1-032125 3/21/2025 13:58	10 NF/IZ
CCV	2.034	3.119	3.093	10.383	2.559	5.188	15.179	IC1-032125 4/3/2025 9:38	10 NF/IZ
CCB	0	0	0	0	0	0	0	IC1-032125 4/3/2025 9:59	10 NF/IZ
LB135296BSW	2.028	3.121	3.103	10.387	2.561	5.226	15.185	IC1-032125 4/3/2025 10:43	10 NF/IZ
LB135296BLW	0	0	0	0	0	0	0	IC1-032125 4/3/2025 11:04	10 NF/IZ
Q1711-01	0.332	26.59	0	0.215	0	2.108	10.666	IC1-032125 4/3/2025 12:29	10 NF/IZ
Q1711-02MS	2.301	28.881	3.076	10.43	2.571	2.367	24.892	IC1-032125 4/3/2025 12:50	10 NF/IZ
Q1711-03MSD	2.172	28.857	2.983	10.101	2.479	1.573	24.485	IC1-032125 4/3/2025 13:12	10 NF/IZ
Q1711-04	0.275	20.1	0	0.221	0	0	4.529	IC1-032125 4/3/2025 13:55	10 NF/IZ
Q1711-08	0	0.047	0	0	0	0	0	IC1-032125 4/3/2025 14:16	10 NF/IZ
Q1716-01	0.433	427.687	0	0.63	0.296	0	54.697	IC1-032125 4/3/2025 14:38	10 NF/IZ
Q1711-01DLX10	0.054	2.364	0	0	0	0	1.413	IC1-032125 4/3/2025 14:59	10 NF/IZ
Q1711-04DLX5	0.071	3.687	0	0	0	0	1.238	IC1-032125 4/3/2025 15:21	10 NF/IZ
CCV	2.072	3.107	3.112	10.418	2.589	5.237	15.386	IC1-032125 4/3/2025 15:43	10 NF/IZ
CCB	0	0	0	0	0	0	0	IC1-032125 4/3/2025 17:16	10 NF/IZ

W3198 Received on 4/11/2025 by IZ

3050 Spruce Street, Saint Louis, MO 63103, USA

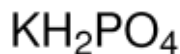
Website: www.sigmaaldrich.comEmail USA: techserv@sial.comOutside USA: eurtechserv@sial.com

Certificate of Analysis

Product Name:

Potassium phosphate monobasic - ACS reagent, ≥99.0%

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	≤ 0.2 %	< 0.1 %
At 105°C		
pH	4.1 - 4.5	4.5
(c = 5%, 25 deg C)		
Chloride Content	≤ 0.001 %	< 0.001 %
Sulfate (SO ₄)	≤ 0.003 %	< 0.003 %
Heavy Metals	≤ 0.001 %	< 0.001 %
by ICP		
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

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





Material: BDH9312-2.5KG
 Material Description: COPPER SULFATE CRYST 2500GM
 Grade: U S P REAGENT (ACS GRADE)

Batch: 24H0956271
 Reassay Date: 05/31/2027
 CAS Number: 7758-99-8
 Molecular Formula: CuSO4.5H2O
 Molecular Mass: 249.68

Date of Manufacture: 05/01/2024
 Storage: Room Temperature

Characteristics	Specifications	Measured Values
Appearance	Blue crystals	Blue crystals
Calcium	<= 0.005 %	0.003 %
Chloride	<= 0.001 %	0.0001 %
Insolubles	<= 0.005 %	0.001 %
Iron	<= 0.003 %	0.001 %
Nickel	<= 0.005 %	0.003 %
Nitrogen Compounds (as N)	<= 0.002 %	0.001 %
Potassium	<= 0.01 %	0.0004 %
Purity	98.0 - 102.0 %	99.7 %
Sodium	<= 0.02 %	0.003 %

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

CUSTOMER PART# BDH9312-2.5KG

Internal ID #: 793

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

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

avantor™



W3204
084K: 09/22/2025
38

Material No.: 9262-03
Batch No.: 25C0362005
Manufactured Date: 2025-01-29
Expiration Date: 2026-04-30
Revision No.: 0

Certificate of Analysis

Test	Specification	Result
FID-Sensitive Impurities (as 2-Octanol) Single Impurity Peak (ng/mL)	≤ 5	1
ECD Sensitive Impurities (as HeptachlorEpoxide) Single Peak (pg/mL)	≤ 10	6
ECD-Sensitive Impurities (as EthyleneDibromide) - Single Impurity Peak (ng/mL)	≤ 5	5
Assay (Total Saturated C ₆ Isomers) (by GC, corrected for water)	$\geq 99.5 \%$	100.0 %
Assay (as n-Hexane) (by GC, corrected for water)	$\geq 95 \%$	100 %
Color (APHA)	≤ 10	10
Residue after Evaporation	$\leq 1.0 \text{ ppm}$	0.1 ppm
Substances Darkened by H ₂ SO ₄	Passes Test	Passes Test
Water (by KF, coulometric)	$\leq 0.05 \%$	$< 0.01 \%$

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

Country of Origin: United States
Packaging Site: Phillipsburg Mfg Ctr & DC

J. Croak

Jamie Croak
Director Quality Operations, Bioscience Production

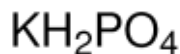
For questions on this Certificate of Analysis please contact Technical Services at 855.282.6867 or +1.610.386.1700

Certificate of Analysis

Product Name:

Potassium phosphate monobasic - ACS reagent, ≥99.0%

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	≤ 0.2 %	< 0.1 %
At 105°C		
pH	4.1 - 4.5	4.5
(c = 5%, 25 deg C)		
Chloride Content	≤ 0.001 %	< 0.001 %
Sulfate (SO ₄)	≤ 0.003 %	< 0.003 %
Heavy Metals	≤ 0.001 %	< 0.001 %
by ICP		
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

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





SHIPPING DOCUMENTS



284 Sheffield Street, Mountainside, NJ 07092
(908) 789-8900 Fax: (908) 788-9222
www.chemtech.net

CHAIN OF CUSTODY RECORD

Alliance Project Number: AEC-2025-0013 Q2470

COC Number:

CLIENT INFORMATION

COMPANY: Durham School Services
ADDRESS: 2 East Pointe Dr,
CITY Birdsboro STATE:PA ZIP:
ATTENTION: daniel.maalouf@alliancetg.com
PHONE: FAX:

PROJECT INFORMATION

PROJECT NAME: CSC 4155 Birdsboro
PROJECT #:AEC-2025-0013 LOCATION: Birdsboro
PROJECT MANAGER:
E-MAIL:
PHONE:864-704-7984 FAX:

BILLING INFORMATION

BILL TO:candice.caviness@alliancetg.com PO#
ADDRESS:
CITY: STATE: ZIP:
ATTENTION: PHONE:

DATA TURNAROUND INFORMATION

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

DATA DELIVERABLE INFORMATION

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

ANALYSIS

OG	Total Phos	Total Nitrogen	TSS						
1	2	3	4	5	6	7	8	9	

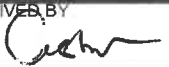
PRESERVATIVES

COMMENTS

<-- Specify Preservatives
A-HCl B-HNO3
C-H2SO4 D-NaOH
E-ICE F-Other

CHEMTECH SAMPLE ID	PROJECT SAMPLE IDENTIFICATION	SAMPLE MATRIX	SAMPLE TYPE		SAMPLE COLLECTION		# of Bottles										
			COMP	GRAB	DATE	TIME		1	2	3	4	5	6	7	8	9	
1.	SW-1	SW		X	6/27/25	12:03	3	1	1	1	1						Shipped via Fedex
2.																	
3.																	
4.																	
5.																	
6.																	
7.																	
8.																	
9.																	
10.																	

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

RELINQUISHED BY SAMPLER	DATE/TIME	RECEIVED BY	Conditions of bottles or coolers at receipt: ☐ Compliant ☐ Non Compliant ☐ Cooler Temp 25.3
1. Daniel Maalouf ATG	6/27/25 14:30	1.  6/30/25 10:10	MeOH extraction requires an additional 4oz. Jar for percent solid
RELINQUISHED BY	DATE/TIME	RECEIVED BY	Comments:
2.		2.	
RELINQUISHED BY	DATE/TIME	RECEIVED FOR LAB BY	
3.		3.	

Page _____ of _____

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

Shipment Complete
☐ YES ☐ NO

WHITE - ALLIANCE COPYFOR RETURN TO CLIENT YELLOW - ALLIANCE COPY PINK - SAMPLER COPY

Laboratory Certification

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