

Cover Page

Order ID : Q2512

Project ID : Rotor Clip NJ WTD - 2025

Client : VERINA CONSULTING GROUP, LLC

Lab Sample Number

Q2512-01

Client Sample Number

WATER-TREATMENT DISCHARGE

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

Signature : _____

Date: 7/10/2025

NYDOH CERTIFICATION NO - 11376

NJDEP CERTIFICATION NO - 20012



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

CASE NARRATIVE

VERINA CONSULTING GROUP, LLC

Project Name: Rotor Clip NJ WTD - 2025

Project # N/A

Order ID # Q2512

Test Name: Ammonia,Residual Chlorine

A. Number of Samples and Date of Receipt:

1 Water sample was received on 07/03/2025.

B. Parameters:

According to the Chain of Custody document, the following analyses were requested: Ammonia, Metals Group4 and Residual Chlorine. This data package contains results for Ammonia,Residual Chlorine.

C. Analytical Techniques:

The analysis of Residual Chlorine was based on method SM4500 Cl G and The analysis of Ammonia was based on method SM4500-NH3.

D. QA/ QC Samples:

The Holding Times were met for all samples except for WATER-TREATMENT DISCHARGE of Residual Chlorine as Sample was received out of holding time. Sample WATER-TREATMENT DISCHARGE was diluted due to high concentrations for Ammonia as N.

The Blank Spike met requirements for all parameters.

The Duplicate analysis met criteria for all parameters.

The Matrix Spike analysis met criteria for all parameters.

The Matrix Spike Duplicate analysis met criteria for all parameters.

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

The Calibration met the requirements.

E. Additional Comments:

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

Signature_____

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

APPENDIX A

QA REVIEW GENERAL DOCUMENTATION

Project #: Q2512

Completed

For thorough review, the report must have the following:

GENERAL:

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

✓

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

✓

Is the chain of custody signed and complete

✓

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

✓

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

✓

COVER PAGE:

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

✓

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

✓

CHAIN OF CUSTODY:

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

✓

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

✓

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

✓

Were the samples received within hold time

✓

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

✓

ANALYTICAL:

Was method requirement followed?

✓

Was client requirement followed?

✓

Does the case narrative summarize all QC failure?

✓

All runlogs and manual integration are reviewed for requirements

✓

All manual calculations and /or hand notations verified

✓

QA Review Signature: KETAN PATEL

Date: 07/10/2025

LAB CHRONICLE

OrderID:	Q2512	OrderDate:	7/3/2025 1:17:00 PM
Client:	VERINA CONSULTING GROUP, LLC	Project:	Rotor Clip NJ WTD - 2025
Contact:	Michael Valenzi	Location:	O13

LabID	ClientID	Matrix	Test	Method	Sample Date	Prep Date	Anal Date	Received
Q2512-01	WATER-TREATMENT DISCHARGE	WATER			07/03/25 10:10			07/03/25
			Ammonia	SM4500-NH3		07/08/25	07/09/25 10:36	
			Residual Chlorine	SM4500 Cl G			07/03/25 15:21	
Q2512-01DL	WATER-TREATMENT DISCHARGEDL	WATER			07/03/25 10:10			07/03/25
			Ammonia	SM4500-NH3		07/08/25	07/09/25 11:04	



SAMPLE DATA

Report of Analysis

Client:	VERINA CONSULTING GROUP, LLC	Date Collected:	07/03/25 10:10
Project:	Rotor Clip NJ WTD - 2025	Date Received:	07/03/25
Client Sample ID:	WATER-TREATMENT DISCHARGE	SDG No.:	Q2512
Lab Sample ID:	Q2512-01	Matrix:	WATER
		% Solid:	0

Parameter	Conc.	Qua.	DF	MDL	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
Ammonia as N	2.20	OR	1	0.030	0.10	mg/L	07/08/25 15:50	07/09/25 10:36	SM 4500-NH3 B plus G-21
Residual Chlorine	0.023	HU	1	0.023	0.10	mg/L		07/03/25 15:21	SM 4500-Cl G-11

Comments: _____

U = Not Detected

LOQ = Limit of Quantitation

MDL = Method Detection Limit

LOD = Limit of Detection

D = Dilution

Q = indicates LCS control criteria did not meet requirements

H = Sample Analysis Out Of Hold Time

J = Estimated Value

B = Analyte Found in Associated Method Blank

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

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

OR = Over Range

N = Spiked sample recovery not within control limits

Report of Analysis

Client:	VERINA CONSULTING GROUP, LLC	Date Collected:	07/03/25 10:10
Project:	Rotor Clip NJ WTD - 2025	Date Received:	07/03/25
Client Sample ID:	WATER-TREATMENT DISCHARGEDL	SDG No.:	Q2512
Lab Sample ID:	Q2512-01DL	Matrix:	WATER
		% Solid:	0

Parameter	Conc.	Qua.	DF	MDL	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
Ammonia as N	2.40	D	2	0.060	0.20	mg/L	07/08/25 15:50	07/09/25 11:04	SM 4500-NH3 B plus G-21

Comments:

U = Not Detected

LOQ = Limit of Quantitation

MDL = Method Detection Limit

LOD = Limit of Detection

D = Dilution

Q = indicates LCS control criteria did not meet requirements

H = Sample Analysis Out Of Hold Time

J = Estimated Value

B = Analyte Found in Associated Method Blank

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

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

OR = Over Range

N = Spiked sample recovery not within control limits



QC RESULT SUMMARY



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

Initial and Continuing Calibration Verification

Client: VERINA CONSULTING GROUP, LLC

SDG No.: Q2512

Project: Rotor Clip NJ WTD - 2025

RunNo.: LB136370

Analyte	Units	Result	True Value	% Recovery	Acceptance Window (%R)	Analysis Date
Sample ID: ICV Residual Chlorine	mg/L	0.419	0.4	105	90-110	07/03/2025
Sample ID: CCV1 Residual Chlorine	mg/L	0.378	0.4	94	90-110	07/03/2025
Sample ID: CCV2 Residual Chlorine	mg/L	0.388	0.4	97	90-110	07/03/2025

Initial and Continuing Calibration Verification

Client: VERINA CONSULTING GROUP, LLC

SDG No.: Q2512

Project: Rotor Clip NJ WTD - 2025

RunNo.: LB136405

Analyte	Units	Result	True Value	% Recovery	Acceptance Window (%R)	Analysis Date
Sample ID: ICV1 Ammonia as N	mg/L	0.99	1	99	90-110	07/09/2025
Sample ID: CCV1 Ammonia as N	mg/L	0.94	1	94	90-110	07/09/2025
Sample ID: CCV2 Ammonia as N	mg/L	0.96	1	96	90-110	07/09/2025
Sample ID: CCV3 Ammonia as N	mg/L	1	1	100	90-110	07/09/2025
Sample ID: CCV4 Ammonia as N	mg/L	0.96	1	96	90-110	07/09/2025
Sample ID: CCV5 Ammonia as N	mg/L	0.99	1	99	90-110	07/09/2025



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

Initial and Continuing Calibration Blank Summary

Client: VERINA CONSULTING GROUP, LLC

SDG No.: Q2512

Project: Rotor Clip NJ WTD - 2025

RunNo.: LB136370

Analyte	Units	Result	Acceptance Limits	Conc Qual	MDL	RDL	Analysis Date
Sample ID: ICB Residual Chlorine	mg/L	< 0.0500	0.0500	U	0.023	0.1	07/03/2025
Sample ID: CCB1 Residual Chlorine	mg/L	< 0.0500	0.0500	U	0.023	0.1	07/03/2025
Sample ID: CCB2 Residual Chlorine	mg/L	< 0.0500	0.0500	U	0.023	0.1	07/03/2025

Initial and Continuing Calibration Blank Summary

Client: VERINA CONSULTING GROUP, LLC

SDG No.: Q2512

Project: Rotor Clip NJ WTD - 2025

RunNo.: LB136405

Analyte	Units	Result	Acceptance Limits	Conc Qual	MDL	RDL	Analysis Date
Sample ID: ICB1 Ammonia as N	mg/L	< 0.0500	0.0500	U	0.030	0.1	07/09/2025
Sample ID: CCB1 Ammonia as N	mg/L	< 0.0500	0.0500	U	0.030	0.1	07/09/2025
Sample ID: CCB2 Ammonia as N	mg/L	< 0.0500	0.0500	U	0.030	0.1	07/09/2025
Sample ID: CCB3 Ammonia as N	mg/L	< 0.0500	0.0500	U	0.030	0.1	07/09/2025
Sample ID: CCB4 Ammonia as N	mg/L	< 0.0500	0.0500	U	0.030	0.1	07/09/2025
Sample ID: CCB5 Ammonia as N	mg/L	< 0.0500	0.0500	U	0.030	0.1	07/09/2025

Preparation Blank Summary

Client: VERINA CONSULTING GROUP, LLC

SDG No.: Q2512

Project: Rotor Clip NJ WTD - 2025

Analyte	Units	Result	Acceptance Limits	Conc Qual	MDL	RDL	Analysis Date
Sample ID: LB136370BL							
Residual Chlorine	mg/L	< 0.0500	0.0500	U	0.023	0.1	07/03/2025
Sample ID: PB168758BL							
Ammonia as N	mg/L	< 0.0500	0.0500	U	0.03	0.1	07/09/2025

Matrix Spike Summary

Client:	VERINA CONSULTING GROUP, LLC	SDG No.:	Q2512
Project:	Rotor Clip NJ WTD - 2025	Sample ID:	Q2512-01
Client ID:	WATER-TREATMENT DISCHARGEMS	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
Residual Chlorine	mg/L	71-148	0.37		0.023	U	0.4	1	92		07/03/2025
Ammonia as N	mg/L	75-125	3.20	OR	2.20	OR	1	1	100		07/09/2025

Matrix Spike Summary

Client:	VERINA CONSULTING GROUP, LLC	SDG No.:	Q2512
Project:	Rotor Clip NJ WTD - 2025	Sample ID:	Q2512-01
Client ID:	WATER-TREATMENT DISCHARGEMSD	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
Residual Chlorine	mg/L	71-148	0.38		0.023	U	0.4	1	94		07/03/2025
Ammonia as N	mg/L	75-125	3.10	OR	2.20	OR	1	1	90		07/09/2025

Duplicate Sample Summary

Client:	VERINA CONSULTING GROUP, LLC	SDG No.:	Q2512
Project:	Rotor Clip NJ WTD - 2025	Sample ID:	Q2512-01
Client ID:	WATER-TREATMENT DISCHARGEDUP	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
Residual Chlorine	mg/L	+/-20	0.023	U	0.023	U	1	0		07/03/2025
Ammonia as N	mg/L	+/-20	2.20	OR	2.30	OR	1	4		07/09/2025
Ammonia as N	mg/L	+/-20	2.40	D	2.40	D	2	0		07/09/2025

Duplicate Sample Summary

Client: VERINA CONSULTING GROUP, LLC	SDG No.: Q2512
Project: Rotor Clip NJ WTD - 2025	Sample ID: Q2512-01
Client ID: WATER-TREATMENT DISCHARGEMSD	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
Residual Chlorine	mg/L	+/-20	0.37		0.38		1	2.68		07/03/2025
Ammonia as N	mg/L	+/-20	3.20	OR	3.10	OR	1	3		07/09/2025

Laboratory Control Sample Summary

Client:	VERINA CONSULTING GROUP, LLC	SDG No.:	Q2512
Project:	Rotor Clip NJ WTD - 2025	Run No.:	LB136370

Analyte	Units	True Value	Result	Conc. Qualifier	% Recovery	Dilution Factor	Acceptance Limit %R	Analysis Date
Sample ID	LB136370BS							
Residual Chlorine	mg/L	0.4	0.41		102	1	90-110	07/03/2025

Laboratory Control Sample Summary

Client:	VERINA CONSULTING GROUP, LLC	SDG No.:	Q2512
Project:	Rotor Clip NJ WTD - 2025	Run No.:	LB136405

Analyte	Units	True Value	Result	Conc. Qualifier	% Recovery	Dilution Factor	Acceptance Limit %R	Analysis Date
Sample ID	PB168758BS							
Ammonia as N	mg/L	1	0.99		99	1	90-110	07/09/2025



RAW DATA

Analytical Summary Report

Analysis Method: SM4500 Cl G

ANALYST: Iwona

Parameter: Residual Chlorine

SUPERVISOR REVIEW BY: jignesh

Run Number: LB136370

Reagent/Standard	Lot/Log #
Residual chlorine ICV-LCS, 0.4PPM	WP113800
Chlorine Calibration std, 0.1ppm	WP113795
Chlorine Calibration std, 0.2ppm	WP113796
Chlorine Calibration std, 0.8ppm	WP113798
Chlorine Calibration std, 0.0ppm	WP113794
Chlorine Calibration std, 1.6ppm	WP113799
Residual Chlorine Calibration and CCV std, 0	WP113797
Total Chlorine Powder Pillows	W3147

Intercept: 0.0074

Slope: 0.9856

Regression: 0.999537

Seq	Lab ID	True Val (mg/l)	DF	Initial Reading	Final Reading	Difference	Result (mg/l)	%D	AnalDate	Anal Time
1	CAL1	0	1	0.000	0.000	0.000	-0.01		07/03/2025	14:45
2	CAL2	0.1	1	0.000	0.100	0.100	0.09	-6	07/03/2025	14:48
3	CAL3	0.2	1	0.000	0.210	0.210	0.21	3	07/03/2025	14:51
4	CAL4	0.4	1	0.000	0.390	0.390	0.39	-3	07/03/2025	14:54
5	CAL5	0.8	1	0.000	0.830	0.830	0.84	4.4	07/03/2025	14:57
6	CAL6	1.6	1	0.000	1.570	1.570	1.59	-0.9	07/03/2025	15:00

Analytical Summary Report

Analysis Method: SM4500 Cl G

ANALYST: Iwona

Parameter: Residual Chlorine

SUPERVISOR REVIEW BY: jignesh

Run Number: LB136370

Seq	Lab ID	Initial Weight	Final Vol	True Value (mg/L)	DF	Initial Reading	Final Reading	Diff.	Result (mg/L)	Anal Date	Anal Time
1	ICV			0.4	1	0.0000	0.4200	0.4200	0.4190	07/03/2025	15:03
2	ICB				1	0.0000	0.0010	0.0010	-0.0060	07/03/2025	15:06
3	CCV1			0.4	1	0.0000	0.3800	0.3800	0.3780	07/03/2025	15:09
4	CCB1				1	0.0000	0.0000	0.0000	-0.0080	07/03/2025	15:12
5	LB136370BL	50	50		1	0.0000	0.0000	0.0000	-0.0080	07/03/2025	15:15
6	LB136370BS	50	50	0.4	1	0.0000	0.4100	0.4100	0.4080	07/03/2025	15:18
7	Q2512-01	50	50		1	0.0000	0.0200	0.0200	0.0130	07/03/2025	15:21
8	Q2512-01DUP	50	50		1	0.0000	0.0200	0.0200	0.0130	07/03/2025	15:24
9	Q2512-01MS	50	50	0.4	1	0.0000	0.3700	0.3700	0.3680	07/03/2025	15:27
10	Q2512-01MSD	50	50	0.4	1	0.0000	0.3800	0.3800	0.3780	07/03/2025	15:30
11	CCV2			0.4	1	0.0000	0.3900	0.3900	0.3880	07/03/2025	15:33
12	CCB2				1	0.0000	0.0010	0.0010	-0.0060	07/03/2025	15:37

WORKLIST(Hardcopy Internal Chain)

LB136370

WorkList Name : RESCHLORINE-070325

WorkList ID : 190549

Department : Wet-Chemistry

Date : 07-03-2025 13:44:45

Sample	Customer Sample	Matrix	Test	Preservative	Customer	Raw Sample Storage Location	Collect Date	Method
Q2512-01	WATER-TREATMEN DISCHAR	Water	Residual Chlorine	Cool 4 deg C	VERI01	O13	07/03/2025	SM4500 Cl G

Date/Time 07/03/25 14:25
Raw Sample Received by: 121-207
Raw Sample Relinquished by: JSAK

Date/Time 07/03/25 15:45
Raw Sample Received by: JSAK
Raw Sample Relinquished by: 121-207

LB136405

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 11:06

Test: Ammonia-N

Sample Id	Result	Dil. 1 +	Response	Errors
ICV1	0.987	0.0	0.219	
ICB1	0.025	0.0	0.022	
CCV1	0.943	0.0	0.210	
CCB1	0.019	0.0	0.021	
RL CHECK	0.099	0.0	0.037	
PB168757BL	0.013	0.0	0.019	
PB168757BS	0.983	0.0	0.218	
Q2487-09	0.033	0.0	0.023	
Q2487-09DUP	0.035	0.0	0.024	
Q2487-09MS	0.989	0.0	0.220	
Q2487-09MSD	0.960	0.0	0.214	
Q2487-10	0.188	0.0	0.055	
Q2487-11	0.007	0.0	0.018	
Q2487-12	0.706	0.0	0.161	
CCV2	0.959	0.0	0.213	
CCB2	0.010	0.0	0.019	
Q2487-13	0.012	0.0	0.019	
Q2487-14	0.148	0.0	0.047	
Q2487-15	0.028	0.0	0.023	
Q2487-16	0.050	0.0	0.027	
PB168758BL	0.012	0.0	0.019	
PB168758BS	0.987	0.0	0.219	
Q2512-01	2.201	0.0	0.468	Test limit high
Q2512-01DUP	2.337	0.0	0.496	Test limit high
Q2512-01MS	3.225	0.0	0.678	Test limit high
Q2512-01MSD	3.117	0.0	0.656	Test limit high
CCV3	1.000	0.0	0.222	
CCB3	0.013	0.0	0.019	
Q2525-01	0.855	0.0	0.192	
CCV4	0.957	0.0	0.213	
CCB4	0.016	0.0	0.020	
Q2512-01DLX2	1.194	0.0	0.262	
Q2512-01DUPDLX2	1.198	0.0	0.262	
CCV5	0.995	0.0	0.221	
CCB5	0.011	0.0	0.019	
N	35			
Mean	0.723			
SD	0.8713			
CV%	120.48			

99% (50-150)
07/09/2025
RM

Aquakem v. 7.2AQ1

Results from time period:

Wed Jul 09 08:36:02 2025

Wed Jul 09 11:04:20 2025

Sample Id	Sam/Ct	Test short name	Test t	Result	Result unit	Result date and time	Stat
0.0PPM	A	Ammonia-N	P	0.019	mg/l	7/9/2025 9:20:57	
0.1PPM	A	Ammonia-N	P	0.1126	mg/l	7/9/2025 9:20:58	
0.2PPM	A	Ammonia-N	P	0.1993	mg/l	7/9/2025 9:20:59	
0.4PPM	A	Ammonia-N	P	0.3945	mg/l	7/9/2025 9:21:00	
1.0PPM	A	Ammonia-N	P	0.942	mg/l	7/9/2025 9:21:01	
1.3PPM	A	Ammonia-N	P	1.3424	mg/l	7/9/2025 9:21:02	
2.0PPM	A	Ammonia-N	P	2.0235	mg/l	7/9/2025 9:21:03	
ICV1	S	Ammonia-N	P	0.9872	mg/l	7/9/2025 10:03:49	
ICB1	S	Ammonia-N	P	0.0251	mg/l	7/9/2025 10:03:52	
CCV1	S	Ammonia-N	P	0.9429	mg/l	7/9/2025 10:03:53	
CCB1	S	Ammonia-N	P	0.0185	mg/l	7/9/2025 10:03:56	
RL CHECK	S	Ammonia-N	P	0.0986	mg/l	7/9/2025 10:03:58	
PB168757BL	S	Ammonia-N	P	0.0125	mg/l	7/9/2025 10:14:34	
PB168757BS	S	Ammonia-N	P	0.9825	mg/l	7/9/2025 10:14:35	
Q2487-09	S	Ammonia-N	P	0.033	mg/l	7/9/2025 10:14:37	
Q2487-09DUP	S	Ammonia-N	P	0.0355	mg/l	7/9/2025 10:14:38	
Q2487-09MS	S	Ammonia-N	P	0.9893	mg/l	7/9/2025 10:14:39	
Q2487-09MSD	S	Ammonia-N	P	0.9599	mg/l	7/9/2025 10:14:40	
Q2487-10	S	Ammonia-N	P	0.1884	mg/l	7/9/2025 10:14:43	
Q2487-11	S	Ammonia-N	P	0.0069	mg/l	7/9/2025 10:14:44	
Q2487-12	S	Ammonia-N	P	0.7058	mg/l	7/9/2025 10:25:17	
CCV2	S	Ammonia-N	P	0.9595	mg/l	7/9/2025 10:25:20	
CCB2	S	Ammonia-N	P	0.0096	mg/l	7/9/2025 10:25:23	
Q2487-13	S	Ammonia-N	P	0.0117	mg/l	7/9/2025 10:25:24	
Q2487-14	S	Ammonia-N	P	0.148	mg/l	7/9/2025 10:25:25	
Q2487-15	S	Ammonia-N	P	0.0284	mg/l	7/9/2025 10:25:26	
Q2487-16	S	Ammonia-N	P	0.0501	mg/l	7/9/2025 10:25:27	
PB168758BL	S	Ammonia-N	P	0.0123	mg/l	7/9/2025 10:25:28	
PB168758BS	S	Ammonia-N	P	0.987	mg/l	7/9/2025 10:36:01	
Q2512-01	S	Ammonia-N	P	2.2009	mg/l	7/9/2025 10:36:02	
Q2512-01DUP	S	Ammonia-N	P	2.3374	mg/l	7/9/2025 10:36:03	
Q2512-01MS	S	Ammonia-N	P	3.2246	mg/l	7/9/2025 10:36:04	
Q2512-01MSD	S	Ammonia-N	P	3.1169	mg/l	7/9/2025 10:36:05	
CCV3	S	Ammonia-N	P	0.9999	mg/l	7/9/2025 10:36:09	
CCB3	S	Ammonia-N	P	0.0127	mg/l	7/9/2025 10:36:10	
Q2525-01	S	Ammonia-N	P	0.8555	mg/l	7/9/2025 10:43:14	
CCV4	S	Ammonia-N	P	0.9574	mg/l	7/9/2025 10:43:15	
CCB4	S	Ammonia-N	P	0.0159	mg/l	7/9/2025 10:43:17	
Q2512-01DLX2	S	Ammonia-N	P	1.1943	mg/l	7/9/2025 11:04:14	
Q2512-01DUPDLX	S	Ammonia-N	P	1.1982	mg/l	7/9/2025 11:04:16	
CCV5	S	Ammonia-N	P	0.9947	mg/l	7/9/2025 11:04:18	
CCB5	S	Ammonia-N	P	0.011	mg/l	7/9/2025 11:04:20	

Calibration results

Aquakem 7.2AQ1

Page:

1

Alliance Technical Group

284 Sheffield Street, Mountainside, NJ 07092

Reviewed by : RM

Instrument ID : Konelab

7/9/2025 9:25

Test Ammonia-N

Accepted

7/9/2025 9:25

Factor

4.877

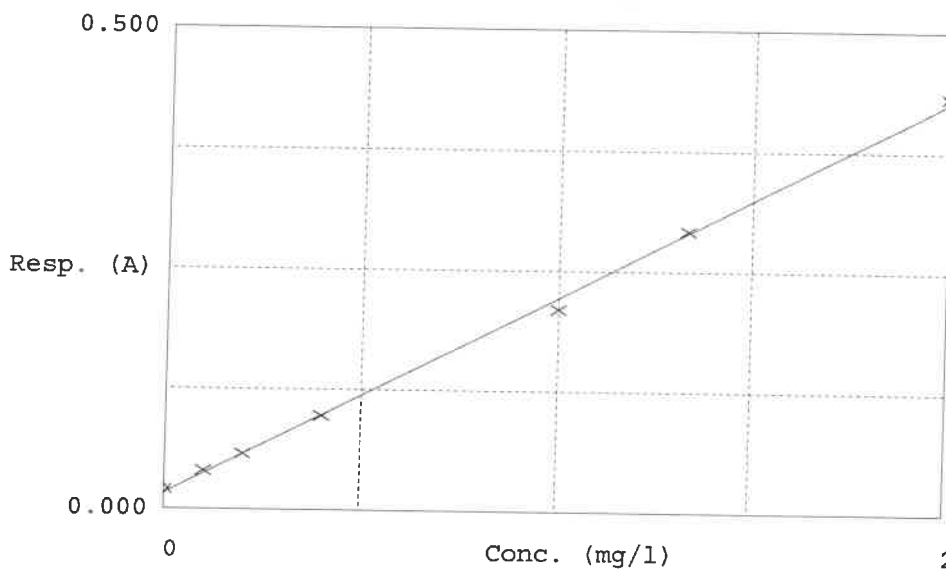
Bias

0.017

Coeff. of det.

0.998651

Errors



	Calibrator	Response	Calc. con.	Conc.	^{Re} Errors
1	0.00PPM	0.021	0.0190	0.0000	-
2	NH3-2PPM	0.040	0.1126	0.1000	12.6
3	NH3-2PPM	0.058	0.1993	0.2000	-0.4
4	NH3-2PPM	0.098	0.3945	0.4000	-1.4
5	NH3-2PPM	0.210	0.9420	1.0000	-5.8
6	NH3-2PPM	0.292	1.3424	1.3333	3.3
7	NH3-2PPM	0.432	2.0235	2.0000	1.2

07/09/2025
RM

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

SDG No : N/A

Start Digest Date: 07/08/2025 Time : 15:50 Temp : 150 °C

Matrix : WATER

End Digest Date: 07/08/2025 Time : 16:50 Temp : 158 °C

Pipette ID : WC

Balance ID : N/A

Hood ID : HOOD#2

Digestion tube ID : M5595

Block Thermometer ID : WC CYANIDE

Block ID : WC-DIST-BLOCK-1

Filter paper ID : N/A

Prep Technician Signature: RM

Weigh By : RM

pH Meter ID : N/A

Supervisor Signature: 12

Standard Name	MLS USED	STD REF. # FROM LOG
LCSW	1.0ML	WP113449
MS/MSD SPIKE SOL.	1.0ML	WP113450
PBW	50.0ML	W3112
RL CHECK	N/A	AS PER PB168757
N/A	N/A	N/A

Chemical Used	ML/SAMPLE USED	Lot Number
BORATE BUFFER	2.5ML	WP111325
NAOH 6N	0.5-2.0ML	WP111318
H2SO4 0.04N	5.0ML	WP112828
pH strip-Ammonia	N/A	W3133
KI-starch paper	N/A	W3155
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A

Extraction Conformance/Non-Conformance Comments:

ALL GLASSWEAR ARE STEAMED OUT AND THERE WERE NO TRACE OF AMMONIA USING NESLER REAGENT WP111604. Due to bad matrix and client history 1ML was taken as an initial volume for Q2525-01

Date / Time	Prepped Sample Relinquished By/Location	Received By/Location
07/08/2025 17:00	RM cwc	RM cwc
	Preparation Group	Analysis Group

Lab Sample ID	Client Sample ID	Initial Vol (ml)	Final Vol (ml)	pH	Sulfide	Oxidizing	Nitrate/ Nitrite	Comment	Prep Pos
PB168758BL	PBW758	50	50	<2	N/A	Negative	N/A	AFTER ADDING 6N NAOH PH IS 9.5	N/A
PB168758BS	LCS758	50	50	<2	N/A	Negative	N/A	AFTER ADDING 6N NAOH PH IS 9.5	N/A
Q2512-01	WATER-TREATMENT DISCHARGE	50	50	<2	N/A	Negative	N/A	AFTER ADDING 6N NAOH PH IS 9.5	N/A
Q2512-01DUP	WATER-TREATMENT DISCHARGEDUP	50	50	<2	N/A	Negative	N/A	AFTER ADDING 6N NAOH PH IS 9.5	N/A
Q2512-01MS	WATER-TREATMENT DISCHARGEMS	50	50	<2	N/A	Negative	N/A	AFTER ADDING 6N NAOH PH IS 9.5	N/A
Q2512-01MSD	WATER-TREATMENT DISCHARGEMSD	50	50	<2	N/A	Negative	N/A	AFTER ADDING 6N NAOH PH IS 9.5	N/A
Q2525-01	EFFLUENT-COMPOSITE	1	50	<2	N/A	Negative	N/A	AFTER ADDING 6N NAOH PH IS 9.5	N/A

WORKLIST(Hardcopy Internal Chain)

WorkList Name : ammonia-water-7-7

WorkList ID : 190561

Department : Distillation

Date : 07-07-2025 08:22:28

Sample	Customer Sample	Matrix	Test	Preservative	Customer	Raw Sample Storage Location	Collect Date	Method
Q2512-01	WATER-TREATMEN DISCHAR	Water	Ammonia	Conc H2SO4 to pH < 2	VERI01	O13	07/03/2025	SM4500-NH3
Q2525-01	EFFLUENT-COMPOSITE	Water	Ammonia	Conc H2SO4 to pH < 2	M&MM01	O33	07/08/2025	SM4500-NH3

Date/Time 07/08/2025 15:25
 Raw Sample Received by: RMW
 Raw Sample Relinquished by: RMW

Date/Time 07/08/2025 16:10
 Raw Sample Received by: RMW
 Raw Sample Relinquished by: RMW

Instrument ID: SPECTROPHOTOMETER-1

Daily Analysis Runlog For Sequence/QC Batch ID # LB136370

Review By	Iwona	Review On	7/3/2025 3:54:57 PM
Supervise By	jignesh	Supervise On	7/3/2025 3:56:09 PM
SubDirectory	LB136370	Test	Residual Chlorine
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	WP113800,WP113795,WP113796,WP113798,WP113794,WP113799,WP113797,W3147		

Sr#	SampleId	ClientID	QcType	Date	Comment	Operator	Status
1	CAL1	CAL1	CAL	07/03/25 14:45		Iwona	OK
2	CAL2	CAL2	CAL	07/03/25 14:48		Iwona	OK
3	CAL3	CAL3	CAL	07/03/25 14:51		Iwona	OK
4	CAL4	CAL4	CAL	07/03/25 14:54		Iwona	OK
5	CAL5	CAL5	CAL	07/03/25 14:57		Iwona	OK
6	CAL6	CAL6	CAL	07/03/25 15:00		Iwona	OK
7	ICV	ICV	ICV	07/03/25 15:03		Iwona	OK
8	ICB	ICB	ICB	07/03/25 15:06		Iwona	OK
9	CCV1	CCV1	CCV	07/03/25 15:09		Iwona	OK
10	CCB1	CCB1	CCB	07/03/25 15:12		Iwona	OK
11	LB136370BL	LB136370BL	MB	07/03/25 15:15		Iwona	OK
12	LB136370BS	LB136370BS	LCS	07/03/25 15:18		Iwona	OK
13	Q2512-01	WATER TREATMENT	SAM	07/03/25 15:21		Iwona	OK
14	Q2512-01DUP	WATER TREATMENT	DUP	07/03/25 15:24		Iwona	OK
15	Q2512-01MS	WATER TREATMENT	MS	07/03/25 15:27		Iwona	OK
16	Q2512-01MSD	WATER TREATMENT	MSD	07/03/25 15:30		Iwona	OK
17	CCV2	CCV2	CCV	07/03/25 15:33		Iwona	OK
18	CCB2	CCB2	CCB	07/03/25 15:37		Iwona	OK

Instrument ID: KONELAB

Daily Analysis Runlog For Sequence/QC Batch ID # LB136405

Review By	rubina	Review On	7/10/2025 12:27:55 PM
Supervise By	Iwona	Supervise On	7/10/2025 12:57:25 PM
SubDirectory	LB136405	Test	Ammonia
STD. NAME	STD REF.#		
ICAL Standard	WP113849		
ICV Standard	WP113850		
CCV Standard	WP113850		
ICSA Standard	N/A		
CRI Standard	N/A		
LCS Standard	WP113449		
Chk Standard	WP113852,WP111745,WP111385,WP111660		

Sr#	SampleId	ClientID	QcType	Date	Comment	Operator	Status
1	0.0PPM	0.0PPM	CAL1	07/09/25 09:20		rubina	OK
2	0.1PPM	0.1PPM	CAL2	07/09/25 09:20		rubina	OK
3	0.2PPM	0.2PPM	CAL3	07/09/25 09:20		rubina	OK
4	0.4PPM	0.4PPM	CAL4	07/09/25 09:21		rubina	OK
5	1.0PPM	1.0PPM	CAL5	07/09/25 09:21		rubina	OK
6	1.3PPM	1.3PPM	CAL6	07/09/25 09:21		rubina	OK
7	2.0PPM	2.0PPM	CAL7	07/09/25 09:21		rubina	OK
8	ICV1	ICV1	ICV	07/09/25 10:03		rubina	OK
9	ICB1	ICB1	ICB	07/09/25 10:03		rubina	OK
10	CCV1	CCV1	CCV	07/09/25 10:03		rubina	OK
11	CCB1	CCB1	CCB	07/09/25 10:03		rubina	OK
12	RL	RL	SAM	07/09/25 10:03		rubina	OK
13	PB168757BL	PB168757BL	MB	07/09/25 10:14		rubina	OK
14	PB168757BS	PB168757BS	LCS	07/09/25 10:14		rubina	OK
15	Q2487-09	G4(0-6)	SAM	07/09/25 10:14		rubina	OK
16	Q2487-09DUP	G4(0-6)DUP	DUP	07/09/25 10:14		rubina	OK
17	Q2487-09MS	G4(0-6)MS	MS	07/09/25 10:14		rubina	OK
18	Q2487-09MSD	G4(0-6)MSD	MSD	07/09/25 10:14		rubina	OK

Instrument ID: KONELAB

Daily Analysis Runlog For Sequence/QC Batch ID # LB136405

Review By	rubina	Review On	7/10/2025 12:27:55 PM
Supervise By	Iwona	Supervise On	7/10/2025 12:57:25 PM
SubDirectory	LB136405	Test	Ammonia
STD. NAME	STD REF.#		
ICAL Standard	WP113849		
ICV Standard	WP113850		
CCV Standard	WP113850		
ICSA Standard	N/A		
CRI Standard	N/A		
LCS Standard	WP113449		
Chk Standard	WP113852,WP111745,WP111385,WP111660		

19	Q2487-10	G4(6-12)	SAM	07/09/25 10:14		rubina	OK
20	Q2487-11	G3(0-6)	SAM	07/09/25 10:14		rubina	OK
21	Q2487-12	G3(6-12)	SAM	07/09/25 10:25		rubina	OK
22	CCV2	CCV2	CCV	07/09/25 10:25		rubina	OK
23	CCB2	CCB2	CCB	07/09/25 10:25		rubina	OK
24	Q2487-13	G2(0-6)	SAM	07/09/25 10:25		rubina	OK
25	Q2487-14	G2(6-12)	SAM	07/09/25 10:25		rubina	OK
26	Q2487-15	G1(0-6)	SAM	07/09/25 10:25		rubina	OK
27	Q2487-16	G1(6-12)	SAM	07/09/25 10:25		rubina	OK
28	PB168758BL	PB168758BL	MB	07/09/25 10:25		rubina	OK
29	PB168758BS	PB168758BS	LCS	07/09/25 10:36		rubina	OK
30	Q2512-01	WATER TREATMENT	SAM	07/09/25 10:36	High	rubina	Dilution
31	Q2512-01DUP	WATER TREATMENT	DUP	07/09/25 10:36	High	rubina	Dilution
32	Q2512-01MS	WATER TREATMENT	MS	07/09/25 10:36		rubina	OK
33	Q2512-01MSD	WATER TREATMENT	MSD	07/09/25 10:36		rubina	OK
34	CCV3	CCV3	CCV	07/09/25 10:36		rubina	OK
35	CCB3	CCB3	CCB	07/09/25 10:36		rubina	OK
36	Q2525-01	EFFLUENT-COMPOS	SAM	07/09/25 10:43		rubina	OK
37	CCV4	CCV4	CCV	07/09/25 10:43		rubina	OK
38	CCB4	CCB4	CCB	07/09/25 10:43		rubina	OK

Instrument ID: KONELAB

Daily Analysis Runlog For Sequence/QC Batch ID # LB136405

Review By	rubina	Review On	7/10/2025 12:27:55 PM
Supervise By	Iwona	Supervise On	7/10/2025 12:57:25 PM
SubDirectory	LB136405	Test	Ammonia
STD. NAME	STD REF.#		
ICAL Standard	WP113849		
ICV Standard	WP113850		
CCV Standard	WP113850		
ICSA Standard	N/A		
CRI Standard	N/A		
LCS Standard	WP113449		
Chk Standard	WP113852,WP111745,WP111385,WP111660		

39	Q2512-01DL	WATER TREATMENT	SAM	07/09/25 11:04	Report 2X	rubina	Confirms
40	Q2512-01DUPDL	WATER TREATMENT	DUP	07/09/25 11:04	Report 2X	rubina	Confirms
41	CCV5	CCV5	CCV	07/09/25 11:04		rubina	OK
42	CCB5	CCB5	CCB	07/09/25 11:04		rubina	OK

Prep Standard - Chemical Standard Summary

Order ID : Q2512

Test : Ammonia,Residual Chlorine

Prepbatch ID : PB168758,

Sequence ID/Qc Batch ID: LB136370, LB136405,

Standard ID :

WP111317, WP111318, WP111325, WP111385, WP111660, WP111745, WP112611, WP112612, WP112828, WP113449, WP113450, WP113792, WP113793, WP113794, WP113795, WP113796, WP113797, WP113798, WP113799, WP113800, WP113849, WP113850, WP113852,

Chemical ID :

AS PER

PB168757, M6041, W2666, W2700, W2858, W3112, W3113, W3130, W3131, W3132, W3133, W3147, W3155, W3174, W3195, W3196,



<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
1796	NaOH, 0.1N	WP111317	01/09/2025	07/09/2025	Rubina Mughal	WETCHEM_SCALE_7 (WCS-6)	None	Iwona Zarych 01/09/2025
<u>FROM</u> 4.00000gram of W3113 + 996.00000ml 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>
1471	NaOH Solution, 6N	WP111318	01/09/2025	07/09/2025	Rubina Mughal	WETCHEM_SCALE_7 (WCS-6)	None	Iwona Zarych 01/09/2025
<u>FROM</u> 240.00000gram of W3113 + 760.00000ml of W3112 = Final Quantity: 1000.000 ml								



<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
1494	BORATE BUFFER	WP111325	01/09/2025	07/09/2025	Rubina Mughal	WETCHEM_SCALE_5 (WC SC-5)	None	Iwona Zarych 01/09/2025
<u>FROM</u> 100.00000L of W3112 + 9.50000gram of W2700 + 88.00000ml of WP111317 = Final Quantity: 100.000 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>
290	Phenol reagent for Ammonia	WP111385	01/13/2025	07/13/2025	Rubina Mughal	WETCHEM_SCALE_8 (WC SC-7)	None	Iwona Zarych 01/13/2025
FROM 3.20000gram of W3113 + 8.30000gram of W2858 + 88.80000ml of W3112 = Final Quantity: 100.000 ml								



<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
635	EDTA BUFFER FOR AMMONIA	WP111660	01/28/2025	07/28/2025	Rubina Mughal	WETCHEM_SCALE_8 (WCS-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>
153	Ammonia Stock Std. (1000 ppm)	WP112611	04/07/2025	10/07/2025	Rubina Mughal	WETCHEM_S CALE_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								

<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
<u>FROM</u>	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>
1597	0.04 N H2SO4	WP112828	04/25/2025	10/25/2025	Rubina Mughal	None	WETCHEM_PIPETTE_3	Iwona Zarych
<p>(WC)</p> <p>FROM 1.00000ml of M6041 + 999.00000ml of W3112 = Final Quantity: 1000.000 ml</p>								

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
1639	Ammonia Intermediate Std-Second source, 50PPM	WP113449	06/09/2025	07/09/2025	Rubina Mughal	None	WETCHEM_PIPETTE_3 (WC)	Iwona Zarych 06/10/2025
<u>FROM</u>	95.00000ml of W3112 + 5.00000ml of WP112612 = 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>
1322	Ammonia Intermediate Std, 50PPM	WP113450	06/09/2025	07/09/2025	Rubina Mughal	None	WETCHEM_FIPETTE_3 (WC)	Iwona Zarych 06/10/2025

FROM 95.00000ml of W3112 + 5.00000ml of WP112611 = 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>
3443	Residual chlorine std, Intermediate 10PPM	WP113792	07/03/2025	07/04/2025	Iwona Zarych	None	Glass Pipette-A	Jignesh Parikh 07/09/2025

FROM 42.75000ml of W3112 + 7.25000ml of W3130 = 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>
3444	Residual chlorine std, Intermediate-SS 10PPM	WP113793	07/03/2025	02/28/2026	Iwona Zarych	None	Glass Pipette-A	Jignesh Parikh 07/09/2025

FROM 42.50000ml of W3112 + 7.50000ml of W3131 = 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>
3710	Chlorine Calibration std, 0.0ppm	WP113794	07/03/2025	07/04/2025	Iwona Zarych	None	None	Jignesh Parikh 07/09/2025

FROM 50.00000ml of W3112 = 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>
3707	Chlorine Calibration std, 0.1ppm	WP113795	07/03/2025	07/04/2025	Iwona Zarych	None	WETCHEM_F IPETTE_3 (WC)	Jignesh Parikh 07/09/2025
FROM 49.50000ml of W3112 + 0.50000ml of WP113792 = 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>
3708	Chlorine Calibration std, 0.2ppm	WP113796	07/03/2025	07/04/2025	Iwona Zarych	None	WETCHEM_F IPETTE_3 (WC)	Jignesh Parikh 07/09/2025
FROM 49.00000ml of W3112 + 1.00000ml of WP113792 = 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>
3799	Residual Chlorine Calibration and CCV std, 0.4PPM	WP113797	07/03/2025	07/04/2025	Iwona Zarych	None	WETCHEM_PIPETTE_3 (WC)	Jignesh Parikh 07/09/2025
<u>FROM</u> 96.00000ml of W3112 + 4.00000ml of WP113792 = 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>
3709	Chlorine Calibration std, 0.8ppm	WP113798	07/03/2025	07/04/2025	Iwona Zarych	None	WETCHEM_PIPETTE_3 (WC)	Jignesh Parikh 07/09/2025
<u>FROM</u> 46.00000ml of W3112 + 4.00000ml of WP113792 = 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>
3711	Chlorine Calibration std, 1.6ppm	WP113799	07/03/2025	07/04/2025	Iwona Zarych	None	Glass Pipette-A	Jignesh Parikh 07/09/2025

FROM 42.00000ml of W3112 + 8.00000ml of WP113792 = 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>
3452	Residual chlorine ICV-LCS, 0.4PPM	WP113800	07/03/2025	07/04/2025	Iwona Zarych	None	WETCHEM_F IPETTE_3 (WC)	Jignesh Parikh 07/09/2025

FROM 48.00000ml of W3112 + 2.00000ml of WP113793 = 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>
275	Ammonia Calibration Std. (2 ppm)	WP113849	07/09/2025	07/09/2025	Rubina Mughal	None	WETCHEM_PIPETTE_3	Iwona Zarych
<p>(WC)</p> <p>FROM 48.00000ml of W3112 + 2.00000ml of WP113450 = Final Quantity: 50.000 ml</p>								

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
285	Ammonia CCV Std. (1 ppm)	WP113850	07/09/2025	07/09/2025	Rubina Mughal	None	WETCHEM_FIPETTE_3 (WC)	Iwona Zarych 07/09/2025
<u>FROM</u>	49.00000ml of W3112 + 1.00000ml of WP113450 = 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 (WCS-5)	None	Iwona Zarych 07/09/2025
<u>FROM</u> 0.05000gram of W2666 + 99.95000ml 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 #
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.	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.	J3568-1 / Sodium Borate, 500 gms	2019111354	04/23/2025	04/23/2020 / apatel	03/11/2020 / apatel	W2700

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
PCI Scientific Supply, Inc.	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	DIW / DI Water	Daily Lab-Certified	07/03/2029	07/03/2024 / lwona	07/03/2024 / lwona	W3112

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

CHEMICAL RECEIPT LOG BOOK

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
HACH	14268-10 / Chlorine Std, Pk of 16	A4144	01/31/2026	07/25/2024 / lwona	07/25/2024 / lwona	W3130

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
HACH	14268-10 / Chlorine Std, Pk of 16	A4166	02/28/2026	07/25/2024 / lwona	07/25/2024 / lwona	W3131

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.	140476 / Test Paper,PH Short Range 9.0/10.0	L23	08/22/2029	08/22/2024 / lwona	08/22/2024 / lwona	W3133

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
HACH	14064-99 / Total Chlorine Powder Pillows	A4230	08/31/2029	10/01/2024 / lwona	10/01/2024 / lwona	W3147

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
PCI Scientific Supply, Inc.	140730 / TEST PAPER,POT.IOD-STRCH,P K100,CS12	14-860	12/02/2029	12/02/2024 / lwona	12/02/2024 / lwona	W3155

CHEMICAL RECEIPT LOG BOOK

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

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
PCI Scientific Supply, Inc.	J0660-1 / AMMONIUM CHLORIDE, ACS, 500G	24L0356561	08/31/2027	03/19/2025 / Iwona	03/19/2025 / Iwona	W3195

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
PCI Scientific Supply, Inc.	J0660-1 / AMMONIUM CHLORIDE, ACS, 500G	MKCV1009	09/30/2026	03/19/2025 / Iwona	03/19/2025 / Iwona	W3196

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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Certificate Of Analysis



Date of Release: 11/14/2019

W2700 Recived by AP on 3/11/2020

Name: **Sodium Borate, Decahydrate**
ACS

Item No: **SX0355 All Sizes**

Lot / Batch No: **2019111354**

Country of Origin: **India**

Item	Specifications	Analysis
Assay (Na ₂ B ₄ O ₇ • 10H ₂ O)	99.5 - 105.0%	101.7%
Calcium (Ca)	0.005% max.	0.003%
Chloride (Cl)	0.001% max.	<0.001%
Color	White	Passes Test
Form	Crystals	Passes Test
Heavy Metals (as Pb)	0.001% max.	<0.001%
Insoluble Matter	0.005% max.	0.002%
Iron (Fe)	5 ppm max.	<5 ppm
pH of a 0.01 M solution at 25C	9.15 - 9.20	9.17
Phosphate (PO ₄)	0.001% max.	<0.001%
Sulfate (SO ₄)	0.005% max.	<0.005%

Joe Schoellkopf

Quality Control Manager

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

EMD Millipore Corporation

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

Form number: 00005624CA, Rev. 2.0

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

 **avantor™**

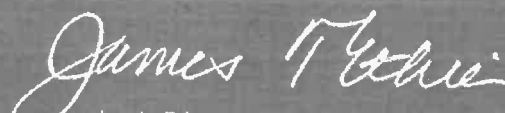


Material No.: 9673-33
Batch No.: 23D2462010

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



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

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

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

Product meets analytical specifications of the grades listed.



An ISO 9001 Certified Company

Loveland, CO 80539

(970) 669-3050

Certificate of Analysis

PRODUCT: Chlorine Solution Ampule 50-75 mg/l

PRODUCT NUMBER: 1426810

LOT NUMBER: A4144

MANUFACTURE DATE: 05/28/2024

DATE OF ANALYSIS: 05/30/2024

TEST	SPECIFICATIONS	RESULTS
Standard Deviation for the ampules sampled	0 to 0.4 mg/L	0.10 mg/L
Mean Chlorine Concentration ampules sampled.	50 to 75 mg/L	60.9 mg/L

The expiration date is Jan 2026

Certified by: *Scott Als*

Analytical Services Chemist



An ISO 9001 Certified Company

Loveland, CO 80539

(970) 669-3050

Certificate of Analysis

PRODUCT: Chlorine Solution Ampule 50-75 mg/l

PRODUCT NUMBER: 1426810

LOT NUMBER: A4166

MANUFACTURE DATE: 06/24/2024

DATE OF ANALYSIS: 06/25/2024

TEST	SPECIFICATIONS	RESULTS
Standard Deviation for the ampules sampled	0 to 0.4 mg/L	0.10 mg/L
Mean Chlorine Concentration ampules sampled.	50 to 75 mg/L	61.9 mg/L

The expiration date is Feb 2026

Certified by: *Scott Als*

Analytical Services Chemist

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.

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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.



An ISO 9001 Certified Company

Loveland, CO 80539

(970) 669-3050

Certificate of Analysis

PRODUCT: DPD Total Chlorine Reagent

PRODUCT NUMBER: 1406499

LOT NUMBER: A4230

MANUFACTURE DATE: 08/27/2024

DATE OF ANALYSIS: 08/28/2024

TEST	SPECIFICATIONS	RESULTS
Percent Recovery for a 2.5 ppm Standard. Chlorine concentration determined using DPD compared to the actual concentration.	93 to 107 %	95.7 %
pH of reagent in 50 mL of DI water.	6.2 to 6.5	6.40
Percent Recovery for a 5.0 ppm Standard. Chlorine concentration determined using DPD compared to the actual concentration.	93 to 107 %	96.2 %
Hardness Blank: 1000 ppm as Calcium Carbonate Hardness standard vs DI water measured at 530 nm in 1 cm cells.	0 to 0.009 abs	0.0020 abs

The expiration date is Aug 2029

Certified by: *Scott Als*

Analytical Services Chemist

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.



W3195 Received on 03/19/2025 by IZ

Certificate of Analysis



Material	BDH9208-500G
Material Description	BDH AMMONIUM CHLORIDE ACS 500G
Grade	U S P REAGENT (ACS GRADE)
Batch	24L0356561
Reassay Date	08/31/2027
CAS Number	12125-02-9
Molecular Formula	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

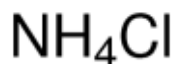
Signature	Additional Information
We certify that this batch conforms to the specifications listed above. This document has been electronically produced and is valid without a signature. Leona Edwardson, Quality Control Sr. Manager - Solon VWR Chemicals, LLC. 28600 Fountain Parkway, Solon OH 44139 USA	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.





SHIPPING DOCUMENTS

CLIENT INFORMATION

REPORT TO BE SENT TO:

COMPANY: VERINA CONSULTING GROUP

ADDRESS: 1011 US HIGHWAY 22 SUITE 302

CITY: BRIDGEWATER STATE: NJ ZIP: 08807

ATTENTION: MICHAEL VALENZI

PHONE: 908 8644400 FAX:

CLIENT PROJECT INFORMATION

PROJECT NAME: ROTOR CLIP

PROJECT NO.: 5183 0001 LOCATION: NJ

PROJECT MANAGER: MICHAEL VALENZI

e-mail: MVALENZI@VCG-LLC.COM
SMACARTER@VCG-LLC.COM

PHONE: 908 8644400 FAX: 908 8644401

CLIENT BILLING INFORMATION

BILL TO: SEE LEFT

PO#:

ADDRESS:

CITY

STATE:

ZIP:

ATTENTION:

PHONE:

ANALYSIS

DATA TURNAROUND INFORMATION

FAX (RUSH) 5 DAYS*

HARDCOPY (DATA PACKAGE): 5 DAYS*

EDD: 5 DAYS*

*TO BE APPROVED BY CHEMTECH

STANDARD HARDCOPY TURNAROUND TIME IS 10 BUSINESS

DATA DELIVERABLE INFORMATION

☐ Level 1 (Results Only) ☐ Level 4 (QC + Full Raw Data)

☐ Level 2 (Results + QC) ☐ NJ Reduced ☐ US EPA CLP

☐ Level 3 (Results + QC) ☐ NYS ASP A ☐ NYS ASP B

+ Raw Data ☐ Other

☐ EDD FORMAT

1. CHLORINE
2. AMMONIA
3. CHLORINE
4. AMMONIA
5. CHLORINE
6. AMMONIA
7. CHLORINE
8. AMMONIA
9. CHLORINE
10. AMMONIA

PRESERVATIVES

COMMENTS

← Specify Preservatives

A-HCl

D-NaOH

B-HNO3

E-ICE

C-H2SO4

F-OTHER

ALLIANCE SAMPLE ID	PROJECT SAMPLE IDENTIFICATION	SAMPLE MATRIX	SAMPLE TYPE		SAMPLE COLLECTION		# OF BOTTLES	PRESERVATIVES									COMMENTS
			COMP	GRAB	DATE	TIME		B	E	C							
1.	WATER TREATMENT DISCHARGE	WNX			7/3	10:10	3	X	X	X							
2.																	
3.																	
4.																	
5.																	
6.																	
7.																	
8.																	
9.																	
10.																	

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

RELINQUISHED BY SAMPLER:	DATE/TIME: 1233	RECEIVED BY:	Conditions of bottles or coolers at receipt: <input type="checkbox"/> COMPLIANT <input type="checkbox"/> NON COMPLIANT <input type="checkbox"/> COOLER TEMP 2.8 °C
1. <i>Mahmudi</i>	7/3/25	<i>[Signature]</i> 7-3-25	Comments: FLOW RATE - 41
RELINQUISHED BY SAMPLER:	DATE/TIME:	RECEIVED BY:	PH RATE - 9.7
2.		2.	TEMPERATURE - 77.9
RELINQUISHED BY SAMPLER:	DATE/TIME: 1412	RECEIVED BY:	METALS GROUP 4 - Cr Cu Ni Zn
3. <i>[Signature]</i>	7-3-25	3.	Page ____ of
			CLIENT: <input type="checkbox"/> Hand Delivered <input type="checkbox"/> Other
			Shipment Complete <input type="checkbox"/> YES <input type="checkbox"/> NO

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