

## Cover Page

**Order ID :** Q1715

**Project ID :** Rotor Clip NJ WTD - 2025

**Client :** VERINA CONSULTING GROUP, LLC

**Lab Sample Number**

Q1715-01

**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: 4/10/2025

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**

**Chemtech Project # Q1715**

**Test Name: Ammonia, Residual Chlorine**

### **A. Number of Samples and Date of Receipt:**

1 Water sample was received on 04/03/2025.

### **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 receive out of holding time.

The Blank Spike met requirements for all samples.

The Duplicate analysis met criteria for all samples.

The Matrix Spike analysis met criteria for all samples.

The Matrix Spike Duplicate analysis met criteria for all samples.

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

The Calibration met the requirements.

### **E. Additional Comments:**

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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:

<b>J</b>	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).
<b>U</b>	Indicates the analyte was analyzed for, but not detected.
<b>ND</b>	Indicates the analyte was analyzed for, but not detected
<b>E</b>	Indicates the reported value is estimated because of the presence of interference
<b>M</b>	Indicates Duplicate injection precision not met.
<b>N</b>	Indicates the spiked sample recovery is not within control limits.
<b>S</b>	Indicates the reported value was determined by the Method of Standard Addition (MSA).
<b>*</b>	Indicates that the duplicate analysis is not within control limits.
<b>+</b>	Indicates the correlation coefficient for the MSA is less than 0.995.
<b>D</b>	Indicates the reported value is from a secondary analysis with a dilution factor. The original analysis exceeded the calibration range.
<b>M</b>	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
<b>OR</b>	Indicates the analyte’s concentration exceeds the calibrated range of the instrument for that specific analysis.
<b>Q</b>	Indicates the LCS did not meet the control limits requirements
<b>H</b>	Sample Analysis Out Of Hold Time

## APPENDIX A

### QA REVIEW GENERAL DOCUMENTATION

Project #: Q1715

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 Custody

✓

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: 04/10/2025

## LAB CHRONICLE

<b>OrderID:</b>	Q1715	<b>OrderDate:</b>	4/3/2025 12:01:00 PM
<b>Client:</b>	VERINA CONSULTING GROUP, LLC	<b>Project:</b>	Rotor Clip NJ WTD - 2025
<b>Contact:</b>	Michael Valenzi	<b>Location:</b>	F11

LabID	ClientID	Matrix	Test	Method	Sample Date	Prep Date	Anal Date	Received
Q1715-01	WATER TREATMENT DISCHARGE	WATER			04/03/25 10:32			04/03/25
			Ammonia	SM4500-NH3		04/09/25	04/09/25 11:46	
			Residual Chlorine	SM4500 Cl G			04/04/25 09:36	



# SAMPLE DATA

## Report of Analysis

Client:	VERINA CONSULTING GROUP, LLC	Date Collected:	04/03/25 10:32
Project:	Rotor Clip NJ WTD - 2025	Date Received:	04/03/25
Client Sample ID:	WATER TREATMENT DISCHARGE	SDG No.:	Q1715
Lab Sample ID:	Q1715-01	Matrix:	WATER
		% Solid:	0

Parameter	Conc.	Qua.	DF	MDL	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
Ammonia as N	0.040	J	1	0.030	0.10	mg/L	04/09/25 10:00	04/09/25 11:46	SM 4500-NH3 B plus G-11
Residual Chlorine	0.052	HJ	1	0.023	0.10	mg/L		04/04/25 09:36	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



# 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.:** Q1715

**Project:** Rotor Clip NJ WTD - 2025

**RunNo.:** LB135301

Analyte	Units	Result	True Value	% Recovery	Acceptance Window (%R)	Analysis Date
Sample ID: <b>ICV</b> Residual Chlorine	mg/L	0.395	0.4	99	90-110	04/04/2025
Sample ID: <b>CCV1</b> Residual Chlorine	mg/L	0.405	0.4	101	90-110	04/04/2025
Sample ID: <b>CCV2</b> Residual Chlorine	mg/L	0.395	0.4	99	90-110	04/04/2025

## Initial and Continuing Calibration Verification

**Client:** VERINA CONSULTING GROUP, LLC

**SDG No.:** Q1715

**Project:** Rotor Clip NJ WTD - 2025

**RunNo.:** LB135357

Analyte	Units	Result	True Value	% Recovery	Acceptance Window (%R)	Analysis Date
Sample ID: <b>ICV1</b> Ammonia as N	mg/L	0.95	1	95	90-110	04/09/2025
Sample ID: <b>CCV1</b> Ammonia as N	mg/L	0.96	1	96	90-110	04/09/2025
Sample ID: <b>CCV2</b> Ammonia as N	mg/L	1	1	100	90-110	04/09/2025
Sample ID: <b>CCV3</b> Ammonia as N	mg/L	0.99	1	99	90-110	04/09/2025



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.:** Q1715

**Project:** Rotor Clip NJ WTD - 2025

**RunNo.:** LB135301

Analyte	Units	Result	Acceptance Limits	Conc Qual	MDL	RDL	Analysis Date
Sample ID: <b>ICB</b> Residual Chlorine	mg/L	< 0.0500	0.0500	U	0.023	0.1	04/04/2025
Sample ID: <b>CCB1</b> Residual Chlorine	mg/L	< 0.0500	0.0500	U	0.023	0.1	04/04/2025
Sample ID: <b>CCB2</b> Residual Chlorine	mg/L	< 0.0500	0.0500	U	0.023	0.1	04/04/2025

### Initial and Continuing Calibration Blank Summary

**Client:** VERINA CONSULTING GROUP, LLC

**SDG No.:** Q1715

**Project:** Rotor Clip NJ WTD - 2025

**RunNo.:** LB135357

Analyte	Units	Result	Acceptance Limits	Conc Qual	MDL	RDL	Analysis Date
Sample ID: <b>ICB1</b> Ammonia as N	mg/L	< 0.0500	0.0500	U	0.030	0.1	04/09/2025
Sample ID: <b>CCB1</b> Ammonia as N	mg/L	< 0.0500	0.0500	U	0.030	0.1	04/09/2025
Sample ID: <b>CCB2</b> Ammonia as N	mg/L	< 0.0500	0.0500	U	0.030	0.1	04/09/2025
Sample ID: <b>CCB3</b> Ammonia as N	mg/L	< 0.0500	0.0500	U	0.030	0.1	04/09/2025

### Preparation Blank Summary

**Client:** VERINA CONSULTING GROUP, LLC

**SDG No.:** Q1715

**Project:** Rotor Clip NJ WTD - 2025

Analyte	Units	Result	Acceptance Limits	Conc Qual	MDL	RDL	Analysis Date
Sample ID: <b>LB135301BL</b>							
Residual Chlorine	mg/L	< 0.0500	0.0500	U	0.023	0.1	04/04/2025
Sample ID: <b>PB167481BL</b>							
Ammonia as N	mg/L	< 0.0500	0.0500	U	0.03	0.1	04/09/2025

## Matrix Spike Summary

<b>Client:</b>	VERINA CONSULTING GROUP, LLC	<b>SDG No.:</b>	Q1715
<b>Project:</b>	Rotor Clip NJ WTD - 2025	<b>Sample ID:</b>	Q1715-01
<b>Client ID:</b>	WATER TREATMENT DISCHARGEMS	<b>Percent Solids for Spike Sample:</b>	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	0.41		0.052	J	0.4	1	88		04/04/2025
Ammonia as N	mg/L	75-125	0.96		0.040	J	1	1	92		04/09/2025

## Matrix Spike Summary

<b>Client:</b>	VERINA CONSULTING GROUP, LLC	<b>SDG No.:</b>	Q1715
<b>Project:</b>	Rotor Clip NJ WTD - 2025	<b>Sample ID:</b>	Q1715-01
<b>Client ID:</b>	WATER TREATMENT DISCHARGEMSD	<b>Percent Solids for Spike Sample:</b>	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	0.41		0.052	J	0.4	1	88		04/04/2025
Ammonia as N	mg/L	75-125	0.96		0.040	J	1	1	92		04/09/2025

## Duplicate Sample Summary

<b>Client:</b>	VERINA CONSULTING GROUP, LLC	<b>SDG No.:</b>	Q1715
<b>Project:</b>	Rotor Clip NJ WTD - 2025	<b>Sample ID:</b>	Q1715-01
<b>Client ID:</b>	WATER TREATMENT DISCHARGEDUP	<b>Percent Solids for Spike Sample:</b>	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	0.052	J	0.052	J	1	0		04/04/2025
Ammonia as N	mg/L	+/-20	0.040	J	0.038	J	1	5		04/09/2025



## Duplicate Sample Summary

<b>Client:</b>	VERINA CONSULTING GROUP, LLC	<b>SDG No.:</b>	Q1715
<b>Project:</b>	Rotor Clip NJ WTD - 2025	<b>Sample ID:</b>	Q1715-01
<b>Client ID:</b>	WATER TREATMENT DISCHARGEMSD	<b>Percent Solids for Spike Sample:</b>	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	0.41		0.41		1	0		04/04/2025
Ammonia as N	mg/L	+/-20	0.96		0.96		1	0		04/09/2025

### Laboratory Control Sample Summary

<b>Client:</b>	VERINA CONSULTING GROUP, LLC	<b>SDG No.:</b>	Q1715
<b>Project:</b>	Rotor Clip NJ WTD - 2025	<b>Run No.:</b>	LB135301

Analyte	Units	True Value	Result	Conc. Qualifier	% Recovery	Dilution Factor	Acceptance Limit %R	Analysis Date
Sample ID	LB135301BS							
Residual Chlorine	mg/L	0.4	0.40		99	1	90-110	04/04/2025

### Laboratory Control Sample Summary

<b>Client:</b>	VERINA CONSULTING GROUP, LLC	<b>SDG No.:</b>	Q1715
<b>Project:</b>	Rotor Clip NJ WTD - 2025	<b>Run No.:</b>	LB135357

Analyte	Units	True Value	Result	Conc. Qualifier	% Recovery	Dilution Factor	Acceptance Limit %R	Analysis Date
Sample ID	PB167481BS							
Ammonia as N	mg/L	1	0.96		96	1	90-110	04/09/2025



# RAW DATA

## Analytical Summary Report

Analysis Method: SM4500 Cl G

ANALYST: Niha

Parameter: Residual Chlorine

SUPERVISOR REVIEW BY: Iwona

Run Number: LB135301

Reagent/Standard	Lot/Log #
Residual chlorine ICV-LCS, 0.4PPM	WP112595
Chlorine Calibration std, 0.1ppm	WP112589
Chlorine Calibration std, 0.2ppm	WP112590
Chlorine Calibration std, 0.8ppm	WP112591
Chlorine Calibration std, 0.0ppm	WP112588
Chlorine Calibration std, 1.6ppm	WP112592
Residual Chlorine Calibration and CCV std, 0	WP112593
Total Chlorine Powder Pillows	W3147

Intercept: 0.0057

Slope: 0.9922

Regression: 0.999839

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		04/04/2025	09:00
2	CAL2	0.1	1	0.000	0.110	0.110	0.11	5	04/04/2025	09:03
3	CAL3	0.2	1	0.000	0.210	0.210	0.21	3	04/04/2025	09:06
4	CAL4	0.4	1	0.000	0.410	0.410	0.41	1.7	04/04/2025	09:09
5	CAL5	0.8	1	0.000	0.780	0.780	0.78	-2.5	04/04/2025	09:12
6	CAL6	1.6	1	0.000	1.600	1.600	1.61	0.4	04/04/2025	09:15

## Analytical Summary Report

Analysis Method: SM4500 Cl G

ANALYST: Niha

Parameter: Residual Chlorine

SUPERVISOR REVIEW BY: Iwona

Run Number: LB135301

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	0.4000	0.4000	0.3950	04/04/2025	09:18
2	ICB				1	0.0000	0.0000	0.0000	-0.0090	04/04/2025	09:21
3	CCV1			0.4	1	0.0000	0.4100	0.4100	0.4050	04/04/2025	09:24
4	CCB1				1	0.0000	0.0000	0.0000	-0.0090	04/04/2025	09:27
5	LB135301BL	50	50		1	0.0000	0.0000	0.0000	-0.0090	04/04/2025	09:30
6	LB135301BS	50	50	0.4	1	0.0000	0.4000	0.4000	0.3950	04/04/2025	09:33
7	Q1715-01	50	50		1	0.0000	0.0600	0.0600	0.0520	04/04/2025	09:36
8	Q1715-01DUP	50	50		1	0.0000	0.0600	0.0600	0.0520	04/04/2025	09:39
9	Q1715-01MS	50	50	0.4	1	0.0000	0.4100	0.4100	0.4050	04/04/2025	09:42
10	Q1715-01MSD	50	50	0.4	1	0.0000	0.4100	0.4100	0.4050	04/04/2025	09:45
11	CCV2			0.4	1	0.0000	0.4000	0.4000	0.3950	04/04/2025	09:48
12	CCB2				1	0.0000	0.0000	0.0000	-0.0090	04/04/2025	09:51

WORKLIST(Hardcopy Internal Chain)

LB135301

WorkList Name : RESID CHLOR-0404202:

WorkList ID : 188728

Department : Wet-Chemistry

Date : 04-04-2025 08:17:31

Sample	Customer Sample	Matrix	Test	Preservative	Customer	Raw Sample Storage Location	Collect Date	Method
Q1715-01 ~ C	WATER TREATMENT DISCHARGE	Water	Residual Chlorine	Cool 4 deg C	VERI01	F11	04/03/2025	SM4500 Cl G

Date/Time 04.04.2025 , 08:35

Raw Sample Received by: NF(WQ)

Raw Sample Relinquished by: AGDC

Date/Time 04.04.2025 , 11:00

Raw Sample Received by: NF(WQ)

Raw Sample Relinquished by: NF(WQ)

LB135357

Test results

Aquakem 7.2AQ1

Page:

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

4/9/2025 12:31

Reviewed by : RM

Instrument ID : Konelab

Test: Ammonia-N

Sample Id	Result	Dil. 1 +	Response	Errors
ICV1	0.951	0.0	0.190	
ICB1	0.011	0.0	0.017	
CCV1	0.959	0.0	0.191	
CCB1	0.011	0.0	0.017	
RL CHECK	0.099	0.0	0.034	99%, (50-150)
PB167481BL	0.012	0.0	0.017	04/09/2025
PB167481BS	0.958	0.0	0.191	RM
Q1715-01	0.039	0.0	0.023	
Q1715-01DUP	0.038	0.0	0.022	
Q1715-01MS	0.958	0.0	0.191	
Q1715-01MSD	0.961	0.0	0.192	
Q1717-01	17.370	0.0	3.203	Init abs., Test limit hig
Q1717-05	3.162	0.0	0.596	Test limit high
CCV2	1.014	0.0	0.201	
CCB2	0.012	0.0	0.017	
Q1717-01DLX10	1.642	0.0	0.317	
Q1717-05DLX2	1.439	0.0	0.279	
CCV3	0.986	0.0	0.196	
CCB3	0.011	0.0	0.017	
N	19			
Mean	1.612			
SD	3.8993			
CV%	241.85			



Aquakem v. 7.2AQ1

Results from time period:

Wed Apr 09 11:04:09 2025

Wed Apr 09 12:21:17 2025

Sample Id	Sam/Ctr/c	Test short r	Test type	Result	Result unit	Result date and time	Stat
0.0PPM	A	Ammonia-1	P	0.0216	mg/l	4/9/2025 11:04:09	
0.1PPM	A	Ammonia-1	P	0.1122	mg/l	4/9/2025 11:04:10	
0.2PPM	A	Ammonia-1	P	0.2082	mg/l	4/9/2025 11:04:11	
0.4PPM	A	Ammonia-1	P	0.3911	mg/l	4/9/2025 11:04:12	
1.0PPM	A	Ammonia-1	P	0.9562	mg/l	4/9/2025 11:04:13	
1.3PPM	A	Ammonia-1	P	1.2982	mg/l	4/9/2025 11:04:14	
2.0PPM	A	Ammonia-1	P	2.0456	mg/l	4/9/2025 11:04:15	
ICV1	S	Ammonia-1	P	0.9507	mg/l	4/9/2025 11:35:50	
ICB1	S	Ammonia-1	P	0.0113	mg/l	4/9/2025 11:35:51	
CCV1	S	Ammonia-1	P	0.9586	mg/l	4/9/2025 11:35:53	
CCB1	S	Ammonia-1	P	0.0105	mg/l	4/9/2025 11:35:55	
RL CHECK	S	Ammonia-1	P	0.0994	mg/l	4/9/2025 11:35:57	
PB167481BL	S	Ammonia-1	P	0.0121	mg/l	4/9/2025 11:35:59	
PB167481BS	S	Ammonia-1	P	0.9577	mg/l	4/9/2025 11:46:31	
Q1715-01	S	Ammonia-1	P	0.0395	mg/l	4/9/2025 11:46:34	
Q1715-01DUP	S	Ammonia-1	P	0.0382	mg/l	4/9/2025 11:46:35	
Q1715-01MS	S	Ammonia-1	P	0.9579	mg/l	4/9/2025 11:46:37	
Q1715-01MSD	S	Ammonia-1	P	0.9611	mg/l	4/9/2025 11:46:40	
Q1717-01	S	Ammonia-1	P	17.3697	mg/l	4/9/2025 11:46:41	
Q1717-05	S	Ammonia-1	P	3.1619	mg/l	4/9/2025 11:53:46	
CCV2	S	Ammonia-1	P	1.0144	mg/l	4/9/2025 11:53:47	
CCB2	S	Ammonia-1	P	0.0119	mg/l	4/9/2025 11:53:49	
Q1717-01DLX10	S	Ammonia-1	P	1.6424	mg/l	4/9/2025 12:21:11	
Q1717-05DLX2	S	Ammonia-1	P	1.4394	mg/l	4/9/2025 12:21:13	
CCV3	S	Ammonia-1	P	0.9858	mg/l	4/9/2025 12:21:15	
CCB3	S	Ammonia-1	P	0.0109	mg/l	4/9/2025 12:21:16	

Calibration results

Aquakem 7.2AQ1

Page: 1

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

4/9/2025 11:07

Reviewed by : RM Instrument ID : Konelab

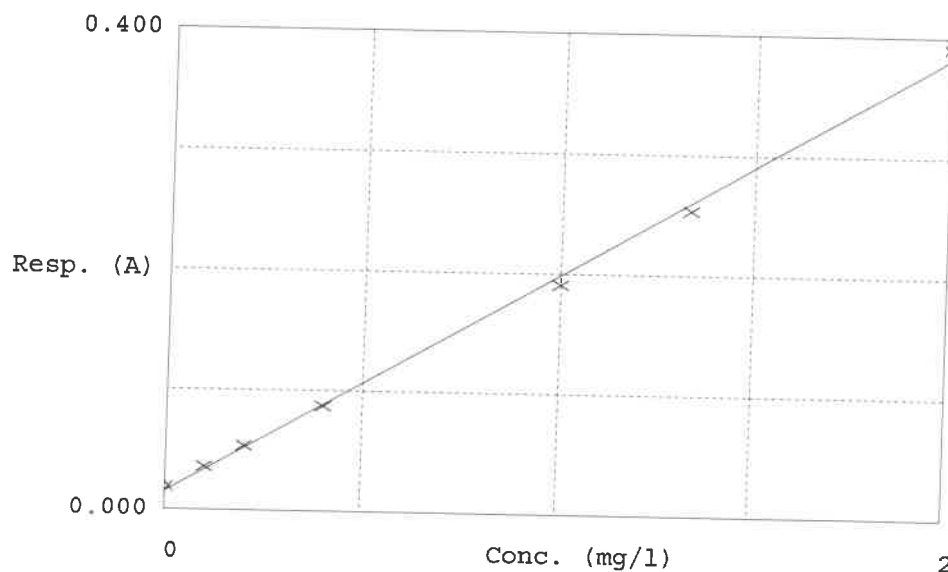
Test Ammonia-N

Accepted 4/9/2025 11:06

Factor 5.448  
Bias 0.015

Coeff. of det. 0.998225

Errors



	Calibrator	Response	Calc. con.	Conc.	Errors
1	0.00PPM	0.019	0.0216	0.0000	-
2	NH3-2PPM	0.036	0.1122	0.1000	12.2
3	NH3-2PPM	0.054	0.2082	0.2000	4.1
4	NH3-2PPM	0.087	0.3911	0.4000	-2.2
5	NH3-2PPM	0.191	0.9562	1.0000	-4.4
6	NH3-2PPM	0.254	1.2982	1.3333	-0.1
7	NH3-2PPM	0.391	2.0456	2.0000	2.3

04/09/2025  
RM

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

SDG No : N/A

Start Digest Date: 04/09/2025 Time : 10:00 Temp : 150 °C

Matrix : WATER

End Digest Date: 04/09/2025 Time : 11:00 Temp : 160 °C

Pipette ID : WC

Balance ID : N/A

Hood ID : HOOD#2

Digestion tube ID : M5595

Block Thermometer ID : WC CYANIDE

Block ID : WC-DIST-BLOCK-1

Filter paper ID : N/A

Prep Technician Signature: RM

Weigh By : N/A

pH Meter ID : N/A

Supervisor Signature: 12

Standardized Name	MLS USED	STD REF. # FROM LOG
LCSW	1.0ML	WP112614
MS/MSD SPIKE SOL.	1.0ML	WP112613
PBW	50.0ML	W3112
RL CHECK	0.1ML	WP112613
N/A	N/A	N/A

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

## Extraction Conformance/Non-Conformance Comments:

ALL GLASSWEAR ARE STEAMED OUT AND THERE WERE NO TRACE OF AMMONIA USING NESLER REAGENT WP111604. Due to bad matrix and client history 1ML was taken as an initial volume for P1717-01 and P1717-05.

Date / Time	Prepped Sample Relinquished By/Location	Received By/Location
04/09/2025 11:10	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
PB167481BL	PBW481	50	50	N/A	N/A	Negative	N/A	AFTER ADDING 6N NAOH PH IS 9.5	N/A
PB167481BS	LCS481	50	50	N/A	N/A	Negative	N/A	AFTER ADDING 6N NAOH PH IS 9.5	N/A
Q1715-01DUP	WATER TREATMENT DISCHARGEDUP	50	50	N/A	N/A	Negative	N/A	AFTER ADDING 6N NAOH PH IS 9.5	N/A
Q1715-01MS	WATER TREATMENT DISCHARGEMS	50	50	N/A	N/A	Negative	N/A	AFTER ADDING 6N NAOH PH IS 9.5	N/A
Q1715-01MSD	WATER TREATMENT DISCHARGEMSD	50	50	N/A	N/A	Negative	N/A	AFTER ADDING 6N NAOH PH IS 9.5	N/A
Q1715-01	WATER TREATMENT DISCHARGE	50	50	N/A	N/A	Negative	N/A	AFTER ADDING 6N NAOH PH IS 9.5	N/A
Q1717-01	EFFLUENT	1	50	N/A	N/A	Negative	N/A	AFTER ADDING 6N NAOH PH IS 9.5	N/A
Q1717-05	INFLUENT	1	50	N/A	N/A	Negative	N/A	AFTER ADDING 6N NAOH PH IS 9.5	N/A

# WORKLIST(Hardcopy Internal Chain)

WorkList Name : ammonia-4-07

WorkList ID : 188767

Department : Distillation

Date : 04-07-2025 08:10:47

Sample	Customer Sample	Matrix	Test	Preservative	Customer	Raw Sample Storage Location	Collect Date	Method
Q1715-01 B	WATER TREATMENT DISCHARGE	Water	Ammonia	Conc H2SO4 to pH < 2	VERI01	F11	04/03/2025	SM4500-NH3
Q1717-01 A	EFFLUENT	Water	Ammonia	Conc H2SO4 to pH < 2	HOLL01	L21	04/03/2025	SM4500-NH3
Q1717-05 B	INFLUENT	Water	Ammonia	Conc H2SO4 to pH < 2	HOLL01	L21	04/03/2025	SM4500-NH3

Date/Time 04/09/2025 08:15  
 Raw Sample Received by: RM (wL)  
 Raw Sample Relinquished by: JRC

Date/Time 04/09/2025 10:30  
 Raw Sample Received by: JRC  
 Raw Sample Relinquished by: RM (wL)

**Instrument ID:** SPECTROPHOTOMETER-1

**Daily Analysis Runlog For Sequence/QC Batch ID # LB135301**

Review By	Niha	Review On	4/4/2025 12:55:28 PM
Supervise By	Iwona	Supervise On	4/4/2025 1:30:18 PM
SubDirectory	LB135301	Test	Residual Chlorine
<b>STD. NAME</b>	<b>STD REF.#</b>		
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	WP112595,WP112589,WP112590,WP112591,WP112588,WP112592,WP112593,W3147		

Sr#	SampleId	ClientID	QcType	Date	Comment	Operator	Status
1	CAL1	CAL1	CAL	04/04/25 09:00		Niha	OK
2	CAL2	CAL2	CAL	04/04/25 09:03		Niha	OK
3	CAL3	CAL3	CAL	04/04/25 09:06		Niha	OK
4	CAL4	CAL4	CAL	04/04/25 09:09		Niha	OK
5	CAL5	CAL5	CAL	04/04/25 09:12		Niha	OK
6	CAL6	CAL6	CAL	04/04/25 09:15		Niha	OK
7	ICV	ICV	ICV	04/04/25 09:18		Niha	OK
8	ICB	ICB	ICB	04/04/25 09:21		Niha	OK
9	CCV1	CCV1	CCV	04/04/25 09:24		Niha	OK
10	CCB1	CCB1	CCB	04/04/25 09:27		Niha	OK
11	LB135301BL	LB135301BL	MB	04/04/25 09:30		Niha	OK
12	LB135301BS	LB135301BS	LCS	04/04/25 09:33		Niha	OK
13	Q1715-01	WATER TREATMENT	SAM	04/04/25 09:36		Niha	OK
14	Q1715-01DUP	WATER TREATMENT	DUP	04/04/25 09:39		Niha	OK
15	Q1715-01MS	WATER TREATMENT	MS	04/04/25 09:42		Niha	OK
16	Q1715-01MSD	WATER TREATMENT	MSD	04/04/25 09:45		Niha	OK
17	CCV2	CCV2	CCV	04/04/25 09:48		Niha	OK
18	CCB2	CCB2	CCB	04/04/25 09:51		Niha	OK

**Instrument ID:** KONELAB

**Daily Analysis Runlog For Sequence/QC Batch ID # LB135357**

Review By	rubina	Review On	4/9/2025 3:10:34 PM
Supervise By	Iwona	Supervise On	4/9/2025 3:11:38 PM
SubDirectory	LB135357	Test	Ammonia
<b>STD. NAME</b>	<b>STD REF.#</b>		
ICAL Standard	WP112644		
ICV Standard	WP112646		
CCV Standard	WP112645		
ICSA Standard	N/A		
CRI Standard	N/A		
LCS Standard	WP112614		
Chk Standard	WP112537,WP111745,WP111385,WP111660		

Sr#	SampleId	ClientID	QcType	Date	Comment	Operator	Status
1	0.0PPM	0.0PPM	CAL1	04/09/25 11:04		rubina	OK
2	0.1PPM	0.1PPM	CAL2	04/09/25 11:04		rubina	OK
3	0.2PPM	0.2PPM	CAL3	04/09/25 11:04		rubina	OK
4	0.4PPM	0.4PPM	CAL4	04/09/25 11:04		rubina	OK
5	1.0PPM	1.0PPM	CAL5	04/09/25 11:04		rubina	OK
6	1.3PPM	1.3PPM	CAL6	04/09/25 11:04		rubina	OK
7	2.0PPM	2.0PPM	CAL7	04/09/25 11:04		rubina	OK
8	ICV1	ICV1	ICV	04/09/25 11:35		rubina	OK
9	ICB1	ICB1	ICB	04/09/25 11:35		rubina	OK
10	CCV1	CCV1	CCV	04/09/25 11:35		rubina	OK
11	CCB1	CCB1	CCB	04/09/25 11:35		rubina	OK
12	RL	RL	SAM	04/09/25 11:35		rubina	OK
13	PB167481BL	PB167481BL	MB	04/09/25 11:35		rubina	OK
14	PB167481BS	PB167481BS	LCS	04/09/25 11:46		rubina	OK
15	Q1715-01	WATER TREATMENT	SAM	04/09/25 11:46		rubina	OK
16	Q1715-01DUP	WATER TREATMENT	DUP	04/09/25 11:46		rubina	OK
17	Q1715-01MS	WATER TREATMENT	MS	04/09/25 11:46		rubina	OK
18	Q1715-01MSD	WATER TREATMENT	MSD	04/09/25 11:46		rubina	OK

Instrument ID: KONELAB

**Daily Analysis Runlog For Sequence/QC Batch ID # LB135357**

Review By	rubina	Review On	4/9/2025 3:10:34 PM
Supervise By	Iwona	Supervise On	4/9/2025 3:11:38 PM
SubDirectory	LB135357	Test	Ammonia
<b>STD. NAME</b>	<b>STD REF.#</b>		
ICAL Standard	WP112644		
ICV Standard	WP112646		
CCV Standard	WP112645		
ICSA Standard	N/A		
CRI Standard	N/A		
LCS Standard	WP112614		
Chk Standard	WP112537,WP111745,WP111385,WP111660		

19	Q1717-01	EFFLUENT	SAM	04/09/25 11:46	High	rubina	Dilution
20	Q1717-05	INFLUENT	SAM	04/09/25 11:53	High	rubina	Dilution
21	CCV2	CCV2	CCV	04/09/25 11:53		rubina	OK
22	CCB2	CCB2	CCB	04/09/25 11:53		rubina	OK
23	Q1717-01DL	EFFLUENTDL	SAM	04/09/25 12:21	Report 10X	rubina	Confirms
24	Q1717-05DL	INFLUENTDL	SAM	04/09/25 12:21	Report 2X	rubina	Confirms
25	CCV3	CCV3	CCV	04/09/25 12:21		rubina	OK
26	CCB3	CCB3	CCB	04/09/25 12:21		rubina	OK



## Prep Standard - Chemical Standard Summary

**Order ID :** Q1715

**Test :** Ammonia,Residual Chlorine

**Prepbatch ID :** PB167481,

**Sequence ID/Qc Batch ID:** LB135301, LB135357,

**Standard ID :**

WP110335, WP111317, WP111318, WP111325, WP111385, WP111660, WP111745, WP112537, WP112586, WP112587, WP112588, WP112589, WP112590, WP112591, WP112592, WP112593, WP112595, WP112611, WP112612, WP112613, WP112614, WP112644, WP112645, WP112646,

**Chemical ID :**

M5673, W2666, W2700, W2858, W3112, W3113, W3130, W3131, W3132, W3133, W3147, W3155, W3174, W3195, W3196,

## 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>
1597	0.04 N H2SO4	<a href="#">WP110335</a>	10/22/2024	04/22/2025	Rubina Mughal	None	WETCHEM_F IPETTE_3 (WC)	Iwona Zarych  10/22/2024

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

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
1796	NaOH, 0.1N	<a href="#">WP111317</a>	01/09/2025	07/09/2025	Rubina Mughal	WETCHEM_S CALE_7 (WC SC-6)	None	Iwona Zarych  01/09/2025

**FROM** 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	<a href="#">WP111318</a>	01/09/2025	07/09/2025	Rubina Mughal	WETCHEM_SCALE_7 (WC	None	Iwona Zarych 01/09/2025

<b>FROM</b>	240.00000gram of W3113 + 760.00000ml of W3112 = Final Quantity: 1000.000 ml	SC-6)
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<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	<a href="#">WP111325</a>	01/09/2025	07/09/2025	Rubina Mughal	None	None	Iwona Zarych 01/09/2025

<b><u>FROM</u></b>	100.00000L of W3112 + 9.50000gram of W2700 + 88.00000ml of WP111317 = Final Quantity: 100.000 L
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<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	<a href="#">WP111385</a>	01/13/2025	07/13/2025	Rubina Mughal	WETCHEM_SCALE_8 (WCS-7)	None	Iwona Zarych 01/13/2025
<b><u>FROM</u></b> 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	<a href="#">WP111660</a>	01/28/2025	07/28/2025	Rubina Mughal	WETCHEM_SCALE_8 (WC SC-7)	None	Iwona Zarych 01/28/2025
<b><u>FROM</u></b> 5.50000gram of W3113 + 50.00000gram of W3132 + 950.00000ml of W3112 = Final Quantity: 1000.000 ml								

## Wet Chemistry STANDARD PREPARATION LOG

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

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

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
740	sodium nitroferrocyanide for ammonia	<a href="#">WP112537</a>	03/28/2025	04/28/2025	Rubina Mughal	WETCHEM_SCALE_5 (WC SC-5)	None	Iwona Zarych
								03/28/2025

**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>
3443	Residual chlorine std, Intermediate 10PPM	<a href="#">WP112586</a>	04/04/2025	04/05/2025	Niha Farheen Shaik	None	None	Iwona Zarych
								04/04/2025

**FROM** 42.75000ml of W3112 + 7.25000ml 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>
3444	Residual chlorine std, Intermediate-SS 10PPM	<a href="#">WP112587</a>	04/04/2025	04/05/2025	Niha Farheen Shaik	None	None	Iwona Zarych
								04/04/2025

**FROM** 42.50000ml of W3112 + 7.50000ml 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>
3710	Chlorine Calibration std, 0.0ppm	<a href="#">WP112588</a>	04/04/2025	04/05/2025	Niha Farheen Shaik	None	None	Iwona Zarych
								04/04/2025

**FROM** 50.00000ml of W3112 = 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>
3707	Chlorine Calibration std, 0.1ppm	<a href="#">WP112589</a>	04/04/2025	04/05/2025	Niha Farheen Shaik	None	WETCHEM_FIPETTE_3	Iwona Zarych
							(WC)	04/04/2025

**FROM** 49.50000ml of W3112 + 0.50000ml of WP112586 = 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>
3708	Chlorine Calibration std, 0.2ppm	<a href="#">WP112590</a>	04/04/2025	04/05/2025	Niha Farheen Shaik	None	WETCHEM_FIPETTE_3 (WC)	Iwona Zarych 04/04/2025

**FROM** 49.00000ml of W3112 + 1.00000ml of WP112586 = 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>
3709	Chlorine Calibration std, 0.8ppm	<a href="#">WP112591</a>	04/04/2025	04/05/2025	Niha Farheen Shaik	None	Glass Pipette-A	Iwona Zarych 04/04/2025

**FROM** 46.00000ml of W3112 + 4.00000ml of WP112586 = 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	<a href="#">WP112592</a>	04/04/2025	04/05/2025	Niha Farheen Shaik	None	Glass Pipette-A	Iwona Zarych 04/04/2025

**FROM** 42.00000ml of W3112 + 8.00000ml of WP112586 = 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	<a href="#">WP112593</a>	04/04/2025	04/05/2025	Niha Farheen Shaik	None	Glass Pipette-A	Iwona Zarych 04/04/2025

**FROM** 96.00000ml of W3112 + 4.00000ml of WP112586 = 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>
3452	Residual chlorine ICV-LCS, 0.4PPM	<a href="#">WP112595</a>	04/04/2025	04/05/2025	Niha Farheen Shaik	None	Glass Pipette-A	Iwona Zarych 04/04/2025

**FROM** 48.00000ml of W3112 + 2.00000ml of WP112587 = 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>
153	Ammonia Stock Std. (1000 ppm)	<a href="#">WP112611</a>	04/07/2025	10/07/2025	Rubina Mughal	WETCHEM_SCALE_8 (WC SC-7)	None	Iwona Zarych 04/07/2025

**FROM** 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	<a href="#">WP112612</a>	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>
1322	Ammonia Intermediate Std, 50PPM	<a href="#">WP112613</a>	04/07/2025	05/07/2025	Rubina Mughal	None	WETCHEM_F IPETTE_3 (WC)	Iwona Zarych  04/07/2025
<b><u>FROM</u></b> 95.00000ml of W3112 + 5.00000ml of WP112611 = Final Quantity: 100.000 ml								

## Wet Chemistry STANDARD PREPARATION LOG

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
1639	Ammonia Intermediate Std-Second source, 50PPM	<a href="#">WP112614</a>	04/07/2025	05/07/2025	Rubina Mughal	None	WETCHEM_F IPETTE_3 (WC)	Iwona Zarych  04/07/2025
<b>FROM</b> 95.00000ml of W3112 + 5.00000ml of WP112612 = 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>
275	Ammonia Calibration Std. (2 ppm)	<a href="#">WP112644</a>	04/09/2025	04/10/2025	Rubina Mughal	None	WETCHEM_F IPETTE_3 (WC)	Iwona Zarych  04/09/2025
<b>FROM</b> 48.00000ml of W3112 + 2.00000ml of WP112613 = Final Quantity: 50.000 ml								



<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
285	Ammonia CCV Std. (1 ppm)	<a href="#">WP112645</a>	04/09/2025	04/10/2025	Rubina Mughal	None	WETCHEM_PIPETTE_3 (WC)	Iwona Zarych 04/09/2025
<b>FROM</b> 49.00000ml of W3112 + 1.00000ml of WP112613 = 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>
286	Ammonia ICV Std. (1 ppm)	<a href="#">WP112646</a>	04/09/2025	04/10/2025	Rubina Mughal	None	WETCHEM_PIPETTE_3 (WC)	Iwona Zarych 04/09/2025
<b><u>FROM</u></b> 49.00000ml of W3112 + 1.00000ml of WP112614 = Final Quantity: 50.000 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	09/21/2023 / mohan	09/05/2023 / mohan	M5673

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
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 <sub>2</sub> B <sub>4</sub> O <sub>7</sub> • 10H <sub>2</sub> 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 <sub>4</sub> )	0.001% max.	<0.001%
Sulfate (SO <sub>4</sub> )	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**™



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 <sub>2</sub> SO <sub>4</sub> )	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 <sub>2</sub> )	≤ 2 ppm	< 2 ppm
Ammonium (NH <sub>4</sub> )	≤ 1 ppm	1 ppm
Chloride (Cl)	≤ 0.1 ppm	< 0.1 ppm
Nitrate (NO <sub>3</sub> )	≤ 0.2 ppm	< 0.1 ppm
Phosphate (PO <sub>4</sub> )	≤ 0.5 ppm	< 0.1 ppm
Trace Impurities – Aluminum (Al)	≤ 30.0 ppb	< 5.0 ppb
Arsenic and Antimony (as As)	≤ 4.0 ppb	< 2.0 ppb
Trace Impurities – Boron (B)	≤ 10.0 ppb	8.5 ppb
Trace Impurities – Cadmium (Cd)	≤ 2.0 ppb	< 0.3 ppb
Trace Impurities – Chromium (Cr)	≤ 6.0 ppb	< 0.4 ppb
Trace Impurities – Cobalt (Co)	≤ 0.5 ppb	< 0.3 ppb
Trace Impurities – Copper (Cu)	≤ 1.0 ppb	< 0.1 ppb
Trace Impurities – Gold (Au)	≤ 10.0 ppb	0.5 ppb
Heavy Metals (as Pb)	≤ 500.0 ppb	< 100.0 ppb
Trace Impurities – Iron (Fe)	≤ 50.0 ppb	1.3 ppb
Trace Impurities – Lead (Pb)	≤ 0.5 ppb	< 0.5 ppb
Trace Impurities – Magnesium (Mg)	≤ 7.0 ppb	0.8 ppb
Trace Impurities – Manganese (Mn)	≤ 1.0 ppb	< 0.4 ppb
Trace Impurities – Mercury (Hg)	≤ 0.5 ppb	< 0.1 ppb
Trace Impurities – Nickel (Ni)	≤ 2.0 ppb	0.3 ppb
Trace Impurities – Potassium (K)	≤ 500.0 ppb	< 2.0 ppb
Trace Impurities – Selenium (Se)	≤ 50.0 ppb	< 0.1 ppb
Trace Impurities – Silicon (Si)	≤ 100.0 ppb	31.5 ppb
Trace Impurities – Silver (Ag)	≤ 1.0 ppb	< 0.3 ppb

>>> Continued on page 2 >>>

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



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

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



## 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.

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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.



## 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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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.



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 <sub>2</sub> ) <sub>3</sub> 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.



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## 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 <sub>2</sub>	5.17 % (w/w) Cl <sub>2</sub>	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.

# 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 <sub>4</sub> 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

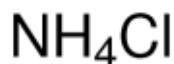
Signature	Additional Information
<p>We certify that this batch conforms to the specifications listed above.</p> <p>This document has been electronically produced and is valid without a signature.</p> <p>Leona Edwardson, Quality Control Sr. Manager - Solon VWR Chemicals, LLC. 28600 Fountain Parkway, Solon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

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 <sub>3</sub>	≥ 99.5 %	100.2 %
pH	4.5 - 5.5	4.9
@ 25 Deg c (5% Solution)		
Insoluble Matter	≤ 0.005 %	0.001 %
10%, H <sub>2</sub> 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 <sub>4</sub> )	≤ 2 ppm	< 2 ppm
Sulfate (SO <sub>4</sub> )	≤ 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](http://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

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# 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 Vauenzi  
PHONE: 908-864-4400 FAX: 908-864-4401

CLIENT PROJECT INFORMATION

PROJECT NAME: Rotor Clip  
PROJECT NO.: 5183.0001 LOCATION: NJ  
PROJECT MANAGER: Michael Vauenzi  
e-mail: mvauenzi@vcg-llc.com  
PHONE: 908-864-4400 FAX: 908-864-4401

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 \_\_\_\_\_

*Cr, Cu, Ni, Zn*  
*Chlorine Demand*  
*Ammonia*

ALLIANCE SAMPLE ID	PROJECT SAMPLE IDENTIFICATION	SAMPLE MATRIX	SAMPLE TYPE		SAMPLE COLLECTION		# OF BOTTLES	PRESERVATIVES									COMMENTS
			COMB	GRAB	DATE	TIME		B	E	C							
1.	<u>Water Treatment Discharge</u>	<u>WW</u>	<u>X</u>		<u>4/3/25</u>	<u>10:32</u>	<u>3</u>	<u>X</u>	<u>X</u>	<u>X</u>							<u>PH 1.3</u>
2.																	<u>Lot # 80A0441</u>
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: 1. <u>Tim Valin</u>	DATE/TIME: <u>1200</u> <u>4-3-25</u>	RECEIVED BY: <u>[Signature]</u> <u>1200</u> <u>4-3-25</u>	Conditions of bottles or coolers at receipt: <input type="checkbox"/> COMPLIANT <input type="checkbox"/> NON COMPLIANT <input type="checkbox"/> COOLER TEMP <u>5.7</u> °C
RELINQUISHED BY SAMPLER: 2. <u>[Signature]</u>	DATE/TIME:	RECEIVED BY: <u>[Signature]</u>	Comments: <u>Flow Rate = 50</u> <u>PH = 9.1</u> <u>Temperature = 68.7</u> <u>Metals Group 4 = Cr, Cu, Ni, Zn</u>
RELINQUISHED BY SAMPLER: 3. <u>[Signature]</u>	DATE/TIME: <u>820</u> <u>4-3-25</u>	RECEIVED BY: 3. <u>[Signature]</u>	Page <u>1</u> of <u>1</u> CLIENT: <input type="checkbox"/> Hand Delivered <input type="checkbox"/> Other <u>Shipment Complete</u> <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