Alliance TECHNICAL GROUP

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

DATA REPORTING QUALIFIERS- INORGANIC

For reporting results, the following " Results Qualifiers" are used:

J	Indicates the reported value was obtained from a reading that was less than the Contract Required Detection Limit (CRDL), but greater than or equal to the Instrument Detection Limit (IDL).
U	Indicates the analyte was analyzed for, but not detected.
ND	Indicates the analyte was analyzed for, but not detected
E	Indicates the reported value is estimated because of the presence of interference
M	Indicates Duplicate injection precision not met.
N	Indicates the spiked sample recovery is not within control limits.
S	Indicates the reported value was determined by the Method of Standard Addition (MSA).
*	Indicates that the duplicate analysis is not within control limits.
+	Indicates the correlation coefficient for the MSA is less than 0.995.
D	Indicates the reported value is from a secondary analysis with a dilution factor. The original analysis exceeded the calibration range.
M	Method qualifiers **"P"** for ICP instrument **"PM"** for ICP when Microwave Digestion is used **"CV"** for Manual Cold Vapor AA **"AV"** for automated Cold Vapor AA **"CA"** for MIDI-Distillation Spectrophotometric **"AS"** for Semi –Automated Spectrophotometric **"C"** for Manual Spectrophotometric **"T"** for Titrimetric **"NR"** for analyte not required to be analyzed
OR	Indicates the analyte's concentration exceeds the calibrated range of the instrument for that specific analysis.
Q	Indicates the LCS did not meet the control limits requirements
H	Sample Analysis Out Of Hold Time

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

LAB CHRONICLE

OrderID:	Q1930	**OrderDate:**	5/1/2025 12:36:00 PM
Client:	VERINA CONSULTING GROUP, LLC	**Project:**	Rotor Clip NJ WTD - 2025
Contact:	Michael Valenzi	**Location:**	L41

LabID	ClientID	Matrix	Test	Method	Sample Date	Prep Date	Anal Date	Received
Q1930-01	**WATER-TREATMENT-DISCHARGE**	**WATER**			**05/01/25 10:23**			**05/01/25**
			Ammonia	SM4500-NH3		05/05/25	05/05/25 11:55	
			Residual Chlorine	SM4500 Cl G			05/01/25 15:40	
Q1930-01DL	**WATER-TREATMENT-DISCHARGEDL**	**WATER**			**05/01/25 10:23**			**05/01/25**
			Ammonia	SM4500-NH3		05/05/25	05/05/25 12:36	

Alliance
TECHNICAL GROUP

SAMPLE DATA

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

Report of Analysis

Client:	VERINA CONSULTING GROUP, LLC	Date Collected:	05/01/25 10:23
Project:	Rotor Clip NJ WTD - 2025	Date Received:	05/01/25
Client Sample ID:	WATER-TREATMENT-DISCHARGE	SDG No.:	Q1930
Lab Sample ID:	Q1930-01	Matrix:	WATER
		% Solid:	0

Parameter	Conc.	Qua.	DF	MDL	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
Ammonia as N	2.30	OR	1	0.030	0.10	mg/L	05/05/25 08:45	05/05/25 11:55	SM 4500-NH3 B plus G-11
Residual Chlorine	0.068	HJ	1	0.023	0.10	mg/L		05/01/25 15:40	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

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

Report of Analysis

Client:	VERINA CONSULTING GROUP, LLC	Date Collected:	05/01/25 10:23
Project:	Rotor Clip NJ WTD - 2025	Date Received:	05/01/25
Client Sample ID:	WATER-TREATMENT-DISCHARGEDL	SDG No.:	Q1930
Lab Sample ID:	Q1930-01DL	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	05/05/25 08:45	05/05/25 12:36	SM 4500-NH3 B plus 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.:** Q1930

Project: Rotor Clip NJ WTD - 2025 **RunNo.:** LB135627

Analyte	Units	Result	True Value	% Recovery	Acceptance Window (%R)	Analysis Date
Sample ID: ICV						
Residual Chlorine	mg/L	0.416	0.4	104	90-110	05/01/2025
Sample ID: CCV1						
Residual Chlorine	mg/L	0.406	0.4	102	90-110	05/01/2025
Sample ID: CCV2						
Residual Chlorine	mg/L	0.395	0.4	99	90-110	05/01/2025

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.:** Q1930

Project: Rotor Clip NJ WTD - 2025 **RunNo.:** LB135665

Analyte	Units	Result	True Value	% Recovery	Acceptance Window (%R)	Analysis Date
Sample ID: **ICV1**						
Ammonia as N	mg/L	0.95	1	95	90-110	05/05/2025
Sample ID: **CCV1**						
Ammonia as N	mg/L	0.96	1	96	90-110	05/05/2025
Sample ID: **CCV2**						
Ammonia as N	mg/L	0.98	1	98	90-110	05/05/2025
Sample ID: **CCV3**						
Ammonia as N	mg/L	0.99	1	99	90-110	05/05/2025
Sample ID: **CCV4**						
Ammonia as N	mg/L	0.98	1	98	90-110	05/05/2025

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.:**	Q1930
Project:	Rotor Clip NJ WTD - 2025	**RunNo.:**	LB135665

Analyte	Units	Result	True Value	% Recovery	Acceptance Window (%R)	Analysis Date

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.:** Q1930

Project: Rotor Clip NJ WTD - 2025 **RunNo.:** LB135627

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	05/01/2025
Sample ID: CCB1							
Residual Chlorine	mg/L	< 0.0500	0.0500	U	0.023	0.1	05/01/2025
Sample ID: CCB2							
Residual Chlorine	mg/L	< 0.0500	0.0500	U	0.023	0.1	05/01/2025

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.:** Q1930

Project: Rotor Clip NJ WTD - 2025 **RunNo.:** LB135665

Analyte	Units	Result	Acceptance Limits	Conc Qual	MDL	RDL	Analysis Date
Sample ID: ICB1							
Ammonia as N	mg/L	0.034	0.0500	J	0.030	0.1	05/05/2025
Sample ID: CCB1							
Ammonia as N	mg/L	0.036	0.0500	J	0.030	0.1	05/05/2025
Sample ID: CCB2							
Ammonia as N	mg/L	0.039	0.0500	J	0.030	0.1	05/05/2025
Sample ID: CCB3							
Ammonia as N	mg/L	0.043	0.0500	J	0.030	0.1	05/05/2025
Sample ID: CCB4							
Ammonia as N	mg/L	< 0.0500	0.0500	U	0.030	0.1	05/05/2025

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

Preparation Blank Summary

Client: VERINA CONSULTING GROUP, LLC **SDG No.:** Q1930

Project: Rotor Clip NJ WTD - 2025

Analyte	Units	Result	Acceptance Limits	Conc Qual	MDL	RDL	Analysis Date
Sample ID: LB135627BL							
Residual Chlorine	mg/L	< 0.0500	0.0500	U	0.023	0.1	05/01/2025
Sample ID: PB167844BL							
Ammonia as N	mg/L	0.038	0.0500	J	0.03	0.1	05/05/2025

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

Matrix Spike Summary

Client: VERINA CONSULTING GROUP, LLC
SDG No.: Q1930
Project: Rotor Clip NJ WTD - 2025
Sample ID: Q1930-01
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
Ammonia as N	mg/L	75-125	2.90	OR	2.30	OR	1	1	60	*	05/05/2025
Residual Chlorine	mg/L	71-148	0.41		0.068	J	0.4	1	84		05/01/2025

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

Matrix Spike Summary

Client: VERINA CONSULTING GROUP, LLC
SDG No.: Q1930
Project: Rotor Clip NJ WTD - 2025
Sample ID: Q1930-01
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
Ammonia as N	mg/L	75-125	3.20	OR	2.30	OR	1	1	90		05/05/2025
Residual Chlorine	mg/L	71-148	0.39		0.068	J	0.4	1	79		05/01/2025

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

Duplicate Sample Summary

Client: VERINA CONSULTING GROUP, LLC
SDG No.: Q1930
Project: Rotor Clip NJ WTD - 2025
Sample ID: Q1930-01
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	0.068	J	0.068	J	1	0		05/01/2025
Ammonia as N	mg/L	+/-20	2.30	OR	2.20	OR	1	4		05/05/2025

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

Duplicate Sample Summary

Client: VERINA CONSULTING GROUP, LLC
SDG No.: Q1930
Project: Rotor Clip NJ WTD - 2025
Sample ID: Q1930-01
Client ID: WATER-TREATMENT-DISCHARGEDUPDL
Percent Solids for Spike Sample: 0

Analyte	Units	Acceptance Limit	Sample Result	Conc. Qualifier	Duplicate Result	Conc. Qualifier	Dilution Factor	RPD/ AD	Qual	Analysis Date
Ammonia as N	mg/L	+/-20	2.40	D	2.50	D	2	4		05/05/2025

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

Duplicate Sample Summary

Client: VERINA CONSULTING GROUP, LLC
SDG No.: Q1930
Project: Rotor Clip NJ WTD - 2025
Sample ID: Q1930-01
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	0.41		0.39		1	5.31		05/01/2025
Ammonia as N	mg/L	+/-20	2.90	OR	3.20	OR	1	10		05/05/2025

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

Laboratory Control Sample Summary

Client:	VERINA CONSULTING GROUP, LLC	**SDG No.:**	Q1930
Project:	Rotor Clip NJ WTD - 2025	**Run No.:**	LB135627

Analyte	Units	True Value	Result	Conc. Qualifier	% Recovery	Dilution Factor	Acceptance Limit %R	Analysis Date
Sample ID LB135627BS								
Residual Chlorine	**mg/L**	**0.4**	**0.37**		**91**	**1**	**90-110**	**05/01/2025**

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

Laboratory Control Sample Summary

Client:	VERINA CONSULTING GROUP, LLC	**SDG No.:**	Q1930
Project:	Rotor Clip NJ WTD - 2025	**Run No.:**	LB135665

Analyte	Units	True Value	Result	Conc. Qualifier	% Recovery	Dilution Factor	Acceptance Limit %R	Analysis Date
Sample ID PB167844BS								
Ammonia as N	**mg/L**	**1**	**0.96**		**96**	**1**	**90-110**	**05/05/2025**

RAW DATA

Analytical Summary Report

Analysis Method: SM4500 Cl G
ANALYST: Iwona
Parameter: Residual Chlorine
SUPERVISOR REVIEW BY: jignesh
Run Number: LB135627

Reagent/Standard	Lot/Log #
Residual chlorine ICV-LCS, 0.4PPM	WP112912
Chlorine Calibration std, 0.1ppm	WP112907
Chlorine Calibration std, 0.2ppm	WP112908
Chlorine Calibration std, 0.8ppm	WP112910
Chlorine Calibration std, 0.0ppm	WP112906
Chlorine Calibration std, 1.6ppm	WP112911
Residual Chlorine Calibration and CCV std, 0	WP112909
Color Std Solution	W3145

Intercept: 0.0140 **Slope:** 0.9761 **Regression:** 0.999753

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		05/01/2025	15:00
2	CAL2	0.1	1	0.000	0.120	0.120	0.11	9	05/01/2025	15:04
3	CAL3	0.2	1	0.000	0.220	0.220	0.21	5.5	05/01/2025	15:07
4	CAL4	0.4	1	0.000	0.390	0.390	0.39	-3.8	05/01/2025	15:10
5	CAL5	0.8	1	0.000	0.810	0.810	0.82	1.9	05/01/2025	15:13
6	CAL6	1.6	1	0.000	1.570	1.570	1.59	-0.4	05/01/2025	15:16

Analytical Summary Report

Analysis Method: SM4500 Cl G
ANALYST: Iwona
Parameter: Residual Chlorine
SUPERVISOR REVIEW BY: jignesh
Run Number: LB135627

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	0.4160	05/01/2025	15:20
2	ICB				1	0.0000	0.0000	0.0000	-0.0140	05/01/2025	15:23
3	CCV1			0.4	1	0.0000	0.4100	0.4100	0.4060	05/01/2025	15:27
4	CCB1				1	0.0000	0.0100	0.0100	-0.0040	05/01/2025	15:30
5	LB135627BL	50	50		1	0.0000	0.0100	0.0100	-0.0040	05/01/2025	15:33
6	LB135627BS	50	50	0.4	1	0.0000	0.3700	0.3700	0.3650	05/01/2025	15:37
7	Q1930-01	50	50		1	0.0000	0.0800	0.0800	0.0680	05/01/2025	15:40
8	Q1930-01DUP	50	50		1	0.0000	0.0800	0.0800	0.0680	05/01/2025	15:43
9	Q1930-01MS	50	50	0.4	1	0.0000	0.4100	0.4100	0.4060	05/01/2025	15:47
10	Q1930-01MSD	50	50	0.4	1	0.0000	0.3900	0.3900	0.3850	05/01/2025	15:50
11	CCV2			0.4	1	0.0000	0.4000	0.4000	0.3950	05/01/2025	15:53
12	CCB2				1	0.0000	0.0100	0.0100	-0.0040	05/01/2025	15:56

WORKLIST(Hardcopy Internal Chain)

LB 135627

WorkList Name : RESCHLORINE-050125 **WorkList ID :** 189264 **Department :** Wet-Chemistry **Date :** 05-01-2025 12:20:10

Sample	Customer Sample	Matrix	Test	Preservative	Customer	Raw Sample Storage Location	Collect Date	Method
Q1930-01	WATER-TREATMENT-DISCHA	Water	Residual Chlorine	Cool 4 deg C	VERI01	L41	05/01/2025	SM4500 Cl G

Date/Time 05/01/25 14:40

Raw Sample Received by: RJ(VC)

Raw Sample Relinquished by: JP(VC)

Date/Time 05/01/25 16:10

Raw Sample Received by: JP(VC)

Raw Sample Relinquished by: RJ(VC)

LB135665

Test results | Aquakem 7.2AQ1 | Page: 1

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

Reviewed by : RM | Instrument ID : Konelab

5/5/2025 12:41

Test: Ammonia-N

Sample Id	Result	Dil. 1 +	Response	Errors
ICV1	0.955	0.0	0.191	
ICB1	0.034	0.0	0.019	
CCV1	0.964	0.0	0.193	
CCB1	0.036	0.0	0.020	
RL CHECK	0.115	0.0	0.035	115% (50–150) 05/05/2025 RM
PB167844BL	0.038	0.0	0.020	
PB167844BS	0.958	0.0	0.192	
Q1930-01	2.253	0.0	0.433	Test limit high
Q1930-01DUP	2.222	0.0	0.427	Test limit high
Q1930-01MS	2.949	0.0	0.563	Test limit high
Q1930-01MSD	3.159	0.0	0.602	Test limit high
Q1934-01	0.324	0.0	0.073	
Q1934-02	0.508	0.0	0.108	
Q1941-01	10.381	0.0	1.948	Test limit high
CCV2	0.978	0.0	0.195	
CCB2	0.039	0.0	0.020	
Q1944-02	0.040	0.0	0.021	
Q1944-03	0.200	0.0	0.050	
Q1949-01	0.279	0.0	0.065	
Q1949-04	1.913	0.0	0.370	
CCV3	0.987	0.0	0.197	
CCB3	0.043	0.0	0.021	
Q1930-01DLX2	1.198	0.0	0.236	
Q1930-01DUPDLX2	1.239	0.0	0.244	
Q1941-01DLX10	0.934	0.0	0.187	
CCV4	0.975	0.0	0.195	
CCB4	0.023	0.0	0.017	

N	27
Mean	1.250
SD	2.0374
CV%	163.02

Aquakem v. 7.2AQ1
Results from time period:
Mon May 05 10:36:33 2025
Mon May 05 12:36:25 2025

Sample Id	Sam/Ctr/cA	Test short r	Test type	Result	Result unit	Result date and time	Stat
0.0PPM	A	Ammonia-N	P	0.0223	mg/l	5/5/2025 10:36:33	
0.1PPM	A	Ammonia-N	P	0.1077	mg/l	5/5/2025 10:36:34	
0.2PPM	A	Ammonia-N	P	0.1975	mg/l	5/5/2025 10:36:35	
0.4PPM	A	Ammonia-N	P	0.3948	mg/l	5/5/2025 10:36:36	
1.0PPM	A	Ammonia-N	P	0.991	mg/l	5/5/2025 10:36:37	
1.3PPM	A	Ammonia-N	P	1.2771	mg/l	5/5/2025 10:36:38	
2.0PPM	A	Ammonia-N	P	2.0429	mg/l	5/5/2025 10:36:39	
ICV1	S	Ammonia-N	P	0.9546	mg/l	5/5/2025 11:44:51	
ICB1	S	Ammonia-N	P	0.0339	mg/l	5/5/2025 11:44:54	
CCV1	S	Ammonia-N	P	0.9638	mg/l	5/5/2025 11:44:56	
CCB1	S	Ammonia-N	P	0.036	mg/l	5/5/2025 11:44:58	
RL CHECK	S	Ammonia-N	P	0.1153	mg/l	5/5/2025 11:45:02	
PB167844BL	S	Ammonia-N	P	0.0384	mg/l	5/5/2025 11:55:35	
PB167844BS	S	Ammonia-N	P	0.9582	mg/l	5/5/2025 11:55:37	
Q1930-01	S	Ammonia-N	P	2.2526	mg/l	5/5/2025 11:55:40	
Q1930-01DUP	S	Ammonia-N	P	2.2222	mg/l	5/5/2025 11:55:42	
Q1930-01MS	S	Ammonia-N	P	2.9495	mg/l	5/5/2025 11:55:43	
Q1930-01MSD	S	Ammonia-N	P	3.1591	mg/l	5/5/2025 11:55:44	
Q1934-01	S	Ammonia-N	P	0.3236	mg/l	5/5/2025 12:06:17	
Q1934-02	S	Ammonia-N	P	0.5084	mg/l	5/5/2025 12:06:18	
Q1941-01	S	Ammonia-N	P	10.381	mg/l	5/5/2025 12:06:19	
CCV2	S	Ammonia-N	P	0.9783	mg/l	5/5/2025 12:06:20	
CCB2	S	Ammonia-N	P	0.0385	mg/l	5/5/2025 12:06:23	
Q1944-02	S	Ammonia-N	P	0.0404	mg/l	5/5/2025 12:06:24	
Q1944-03	S	Ammonia-N	P	0.2005	mg/l	5/5/2025 12:06:25	
Q1949-01	S	Ammonia-N	P	0.279	mg/l	5/5/2025 12:06:26	
Q1949-04	S	Ammonia-N	P	1.9134	mg/l	5/5/2025 12:06:27	
CCV3	S	Ammonia-N	P	0.9867	mg/l	5/5/2025 12:06:28	
CCB3	S	Ammonia-N	P	0.0429	mg/l	5/5/2025 12:11:48	
Q1930-01DLX2	S	Ammonia-N	P	1.1978	mg/l	5/5/2025 12:36:17	
Q1930-01DUPDLX2	S	Ammonia-N	P	1.2395	mg/l	5/5/2025 12:36:18	
Q1941-01DLX10	S	Ammonia-N	P	0.934	mg/l	5/5/2025 12:36:20	
CCV4	S	Ammonia-N	P	0.9752	mg/l	5/5/2025 12:36:22	
CCB4	S	Ammonia-N	P	0.0227	mg/l	5/5/2025 12:36:25	

Calibration results Aquakem 7.2AQ1

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

Reviewed by : RM Instrument ID : Konelab

5/5/2025 10:48

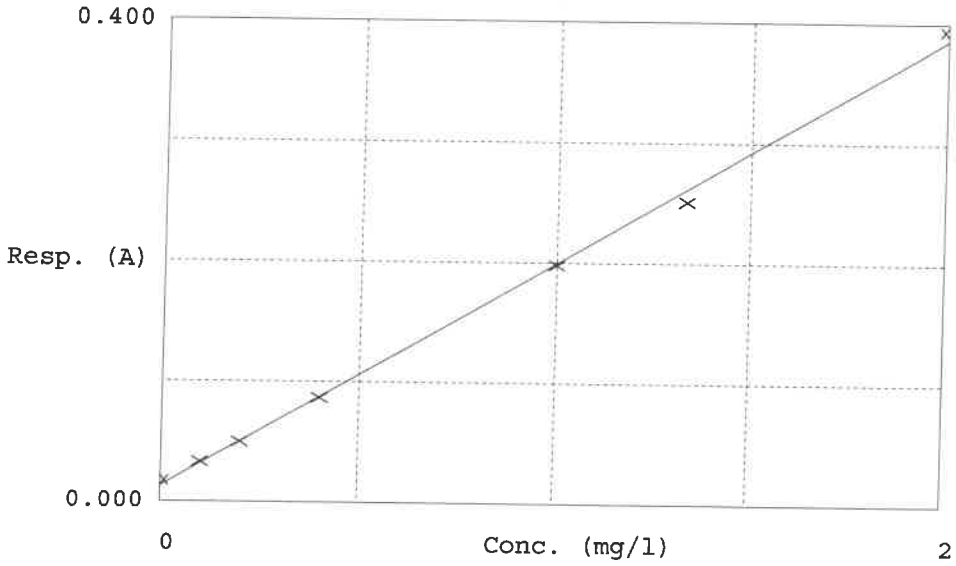
Test Ammonia-N

Accepted 5/5/2025 10:48

Factor 5.366
Bias 0.013

Coeff. of det. 0.998321

Errors



	Calibrator	Response	Calc. con.	Conc.	Errors
1	0.00PPM	0.017	0.0223	0.0000	
2	NH3-2PPM	0.033	0.1077	0.1000	7.7
3	NH3-2PPM	0.050	0.1975	0.2000	-1.3
4	NH3-2PPM	0.087	0.3948	0.4000	-1.3
5	NH3-2PPM	0.198	0.9910	1.0000	-0.9
6	NH3-2PPM	0.251	1.2771	1.3333	-1.8
7	NH3-2PPM	0.394	2.0429	2.0000	2.1

05/05/2025
RM

Alliance TECHNICAL GROUP

Water Ammonia Preparation Sheet

PB167844

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

SDG No : N/A

Matrix : WATER

Pippete ID : WC

Balance ID : N/A

Hood ID : HOOD#2

Block ID : WC-DIST-BLOCK-1

Weigh By : N/A

Start Digest Date: 05/05/2025 **Time :** 08:45 **Temp :** 150 °C

End Digest Date: 05/05/2025 **Time :** 09:45 **Temp :** 160 °C

D beteh 05/05/2025 10:05 150 C RH
05/05/2025 11:05 160 C

Digestion tube ID : M5595

Filter paper ID : N/A

pH Meter ID : N/A

Block Thermometer ID : WC CYANIDE

Prep Technician Signature: RH

Supervisor Signature: 12

Standared 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	1.0ML-5.0ML	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 Q1941-01

Date / Time	Prepped Sample Relinquished By/Location	Received By/Location
05/05/2025 11:36	RM (WC)	RM (WC)
	Preparation Group	Analysis Group

Alliance TECHNICAL GROUP

Water Ammonia Preparation Sheet

PB167844

Lab Sample ID	Client Sample ID	Initial Vol (ml)	Final Vol (ml)	pH	Sulfide	Oxidizing	Nitrate/ Nitrite	Comment	Prep Pos
PB167844BL	PB167844BL	50	50	<2	N/A	Negative	N/A	AFTER ADDING 6N NAOH PH IS 9.5	N/A
PB167844BS	LCS844	50	50	<2	N/A	Negative	N/A	AFTER ADDING 6N NAOH PH IS 9.5	N/A
Q1930-01DUP	WATER-TREATMENT-DISCHARGEDUP	50	50	<2	N/A	Negative	N/A	AFTER ADDING 6N NAOH PH IS 9.5	N/A
Q1930-01MS	WATER-TREATMENT-DISCHARGEMS	50	50	<2	N/A	Negative	N/A	AFTER ADDING 6N NAOH PH IS 9.5	N/A
Q1930-01MSD	WATER-TREATMENT-DISCHARGEMSD	50	50	<2	N/A	Negative	N/A	AFTER ADDING 6N NAOH PH IS 9.5	N/A
Q1930-01	WATER-TREATMENT-DISCHARGE	50	50	<2	N/A	Negative	N/A	AFTER ADDING 6N NAOH PH IS 9.5	N/A
Q1934-01	001-WILLETS-PT-BLVD(APR)	50	50	<2	N/A	Negative	N/A	AFTER ADDING 6N NAOH PH IS 9.5	N/A
Q1934-02	002-35TH-AVE(APR)	50	50	<2	N/A	Negative	N/A	AFTER ADDING 6N NAOH PH IS 9.5	N/A
Q1941-01	EFFLUENT	1	50	<2	N/A	Negative	N/A	AFTER ADDING 6N NAOH PH IS 9.5	N/A
Q1944-02	CITY-WATER	50	50	<2	N/A	Negative	N/A	AFTER ADDING 6N NAOH PH IS 9.5	N/A
Q1944-03	CHILLER-WATER	50	50	<2	N/A	Negative	N/A	PH AFTER ADDING DIST BUFFER>11	N/A
Q1949-01	001-WILLETS-PT-BLVD(MAY)	50	50	<2	N/A	Negative	N/A	PH AFTER ADDING DIST BUFFER>11	N/A
Q1949-04	002-35TH-AVE(MAY)	50	50	<2	N/A	Negative	N/A	PH AFTER ADDING DIST BUFFER>11	N/A

WORKLIST(Hardcopy Internal Chain)

WorkList Name : AMMOia w-5-5 **WorkList ID :** 189313 **Department :** Distillation **Date :** 05-05-2025 08:08:01

Sample	Customer Sample	Matrix	Test	Preservative	Customer	Raw Sample Storage Location	Collect Date	Method
Q1930-01	WATER-TREATMENT-DISCHAI	Water	Ammonia	Conc H2SO4 to pH < 2	VERI01	L41	05/01/2025	SM4500-NH3
Q1934-01	001-WILLETS-PT-BLVD(APR)	Water	Ammonia	Conc H2SO4 to pH < 2	TULL01	L61	04/10/2025	SM4500-NH3
Q1934-02	002-35TH-AVE(APR)	Water	Ammonia	Conc H2SO4 to pH < 2	TULL01	L61	04/10/2025	SM4500-NH3
Q1941-01	EFFLUENT	Water	Ammonia	Conc H2SO4 to pH < 2	TULL01	L61	04/10/2025	SM4500-NH3
Q1944-02	CITY-WATER	Water	Ammonia	Cool 4 deg C	HOLL01	L41	05/01/2025	SM4500-NH3
Q1944-03	CHILLER-WATER	Water	Ammonia	Cool 4 deg C	METE01	L41	05/01/2025	SM4500-NH3
Q1949-01	001-WILLETS-PT-BLVD(MAY)	Water	Ammonia	Conc H2SO4 to pH < 2	METE01	L41	05/01/2025	SM4500-NH3
Q1949-04	002-35TH-AVE(MAY)	Water	Ammonia	Conc H2SO4 to pH < 2	TULL01	L21	05/01/2025	SM4500-NH3
					TULL01	L21	05/01/2025	SM4500-NH3

Date/Time 05/05/2025 08.15
Raw Sample Received by: RM (WC)
Raw Sample Relinquished by:

Date/Time 05/05/2025 14.20
Raw Sample Received by:
Raw Sample Relinquished by: RM (WC)

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

Instrument ID: SPECTROPHOTOMETER-1

Daily Analysis Runlog For Sequence/QCBatch ID # LB135627

Review By	Iwona	Review On	5/6/2025 10:37:19 AM
Supervise By	jignesh	Supervise On	5/6/2025 10:37:59 AM
SubDirectory	LB135627	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	WP112912,WP112907,WP112908,WP112910,WP112906,WP112911,WP112909,W3145

Sr#	SampleId	ClientID	QcType	Date	Comment	Operator	Status
1	CAL1	CAL1	CAL	05/01/25 15:00		Iwona	OK
2	CAL2	CAL2	CAL	05/01/25 15:04		Iwona	OK
3	CAL3	CAL3	CAL	05/01/25 15:07		Iwona	OK
4	CAL4	CAL4	CAL	05/01/25 15:10		Iwona	OK
5	CAL5	CAL5	CAL	05/01/25 15:13		Iwona	OK
6	CAL6	CAL6	CAL	05/01/25 15:16		Iwona	OK
7	ICV	ICV	ICV	05/01/25 15:20		Iwona	OK
8	ICB	ICB	ICB	05/01/25 15:23		Iwona	OK
9	CCV1	CCV1	CCV	05/01/25 15:27		Iwona	OK
10	CCB1	CCB1	CCB	05/01/25 15:30		Iwona	OK
11	LB135627BL	LB135627BL	MB	05/01/25 15:33		Iwona	OK
12	LB135627BS	LB135627BS	LCS	05/01/25 15:37		Iwona	OK
13	Q1930-01	WATER-TREATMENT	SAM	05/01/25 15:40		Iwona	OK
14	Q1930-01DUP	WATER-TREATMENT	DUP	05/01/25 15:43		Iwona	OK
15	Q1930-01MS	WATER-TREATMENT	MS	05/01/25 15:47		Iwona	OK
16	Q1930-01MSD	WATER-TREATMENT	MSD	05/01/25 15:50		Iwona	OK
17	CCV2	CCV2	CCV	05/01/25 15:53		Iwona	OK
18	CCB2	CCB2	CCB	05/01/25 15:56		Iwona	OK

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

Instrument ID: KONELAB

Daily Analysis Runlog For Sequence/QCBatch ID # LB135665

Review By	rubina	Review On	5/5/2025 2:45:01 PM
Supervise By	Iwona	Supervise On	5/5/2025 4:40:09 PM
SubDirectory	LB135665	Test	Ammonia

STD. NAME	STD REF.#
ICAL Standard	WP112946
ICV Standard	WP112948
CCV Standard	WP112947
ICSA Standard	N/A
CRI Standard	N/A
LCS Standard	WP112614
Chk Standard	WP112897,WP111745,WP111385,WP111660

Sr#	SampleId	ClientID	QcType	Date	Comment	Operator	Status
1	0.0PPM	0.0PPM	CAL1	05/05/25 10:36		rubina	OK
2	0.1PPM	0.1PPM	CAL2	05/05/25 10:36		rubina	OK
3	0.2PPM	0.2PPM	CAL3	05/05/25 10:36		rubina	OK
4	0.4PPM	0.4PPM	CAL4	05/05/25 10:36		rubina	OK
5	1.0PPM	1.0PPM	CAL5	05/05/25 10:36		rubina	OK
6	1.3PPM	1.3PPM	CAL6	05/05/25 10:36		rubina	OK
7	2.0PPM	2.0PPM	CAL7	05/05/25 10:36		rubina	OK
8	ICV1	ICV1	ICV	05/05/25 11:44		rubina	OK
9	ICB1	ICB1	ICB	05/05/25 11:44		rubina	OK
10	CCV1	CCV1	CCV	05/05/25 11:44		rubina	OK
11	CCB1	CCB1	CCB	05/05/25 11:44		rubina	OK
12	RL	RL	SAM	05/05/25 11:45		rubina	OK
13	PB167844BL	PB167844BL	MB	05/05/25 11:55		rubina	OK
14	PB167844BS	PB167844BS	LCS	05/05/25 11:55		rubina	OK
15	Q1930-01	WATER-TREATMENT	SAM	05/05/25 11:55	NH3 is High	rubina	Dilution
16	Q1930-01DUP	WATER-TREATMENT	DUP	05/05/25 11:55	NH3 is High	rubina	Dilution
17	Q1930-01MS	WATER-TREATMENT	MS	05/05/25 11:55		rubina	OK
18	Q1930-01MSD	WATER-TREATMENT	MSD	05/05/25 11:55		rubina	OK

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

Instrument ID: KONELAB

Daily Analysis Runlog For Sequence/QCBatch ID # LB135665

Review By	rubina	Review On	5/5/2025 2:45:01 PM
Supervise By	Iwona	Supervise On	5/5/2025 4:40:09 PM
SubDirectory	LB135665	Test	Ammonia

STD. NAME	STD REF.#
ICAL Standard	WP112946
ICV Standard	WP112948
CCV Standard	WP112947
ICSA Standard	N/A
CRI Standard	N/A
LCS Standard	WP112614
Chk Standard	WP112897,WP111745,WP111385,WP111660

19	Q1934-01	001-WILLETS-PT-BL	SAM	05/05/25 12:06		rubina	OK
20	Q1934-02	002-35TH-AVE(APR)	SAM	05/05/25 12:06		rubina	OK
21	Q1941-01	EFFLUENT	SAM	05/05/25 12:06	NH3 is High	rubina	Dilution
22	CCV2	CCV2	CCV	05/05/25 12:06		rubina	OK
23	CCB2	CCB2	CCB	05/05/25 12:06		rubina	OK
24	Q1944-02	CITY-WATER	SAM	05/05/25 12:06		rubina	OK
25	Q1944-03	CHILLER-WATER	SAM	05/05/25 12:06		rubina	OK
26	Q1949-01	001-WILLETS-PT-BL	SAM	05/05/25 12:06		rubina	OK
27	Q1949-04	002-35TH-AVE(MAY)	SAM	05/05/25 12:06		rubina	OK
28	CCV3	CCV3	CCV	05/05/25 12:06		rubina	OK
29	CCB3	CCB3	CCB	05/05/25 12:11		rubina	OK
30	Q1930-01DL	WATER-TREATMENT	SAM	05/05/25 12:36	2x For NH3	rubina	Confirms
31	Q1930-01DUPDL	WATER-TREATMENT	DUP	05/05/25 12:36	2x For NH3	rubina	Confirms
32	Q1941-01DL	EFFLUENTDL	SAM	05/05/25 12:36	10X For NH3	rubina	Confirms
33	CCV4	CCV4	CCV	05/05/25 12:36		rubina	OK
34	CCB4	CCB4	CCB	05/05/25 12:36		rubina	OK

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

Prep Standard - Chemical Standard Summary

Order ID : Q1930

Test : Ammonia,Residual Chlorine

Prepbatch ID : PB167844,

Sequence ID/Qc Batch ID: LB135627,LB135665,

Standard ID :
WP111317,WP111318,WP111325,WP111385,WP111660,WP111745,WP112611,WP112612,WP112613,WP112614,WP112828,WP112897,WP112904,WP112905,WP112906,WP112907,WP112908,WP112909,WP112910,WP112911,WP112912,WP112946,WP112947,WP112948,

Chemical ID :
M6041,W2666,W2700,W2858,W3112,W3113,W3130,W3131,W3132,W3133,W3145,W3155,W3174,W3195,W3196,

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

Wet Chemistry STANDARD PREPARATION LOG

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

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

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

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

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

Wet Chemistry STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
1494	BORATE BUFFER	WP111325	01/09/2025	07/09/2025	Rubina Mughal	WETCHEM_SCALE_5 (WCSC-5)	None	Iwona Zarych 01/09/2025

FROM 100.00000L of W3112 + 9.50000gram of W2700 + 88.00000ml of WP111317 = Final Quantity: 100.000 L

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
290	Phenol reagent for Ammonia	WP111385	01/13/2025	07/13/2025	Rubina Mughal	WETCHEM_SCALE_8 (WCSC-7)	None	Iwona Zarych 01/13/2025

FROM 3.20000gram of W3113 + 8.30000gram of W2858 + 88.80000ml of W3112 = Final Quantity: 100.000 ml

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

Wet Chemistry STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
635	EDTA BUFFER FOR AMMONIA	WP111660	01/28/2025	07/28/2025	Rubina Mughal	WETCHEM_SCALE_8 (WCSC-7)	None	Iwona Zarych 01/28/2025

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

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
289	Sodium Hypochlorite for Ammonia	WP111745	02/03/2025	07/31/2025	Rubina Mughal	None	None	Iwona Zarych 02/03/2025

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

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

Wet Chemistry STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
153	Ammonia Stock Std. (1000 ppm)	WP112611	04/07/2025	10/07/2025	Rubina Mughal	WETCHEM_SCALE_8 (WCSC-7)	None	Iwona Zarych 04/07/2025

FROM 3.81900gram of W3196 + 996.18100ml of W3112 = Final Quantity: 1000.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
1895	Ammonia Stock Std, 1000PPM-SS	WP112612	04/07/2025	10/07/2025	Rubina Mughal	WETCHEM_SCALE_8 (WCSC-7)	None	Iwona Zarych 04/07/2025

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

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

Wet Chemistry STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
1322	Ammonia Intermediate Std, 50PPM	WP112613	04/07/2025	05/07/2025	Rubina Mughal	None	WETCHEM_PIPETTE_3 (WC)	Iwona Zarych 04/07/2025

FROM 95.00000ml of W3112 + 5.00000ml of WP112611 = Final Quantity: 100.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
1639	Ammonia Intermediate Std-Second source, 50PPM	WP112614	04/07/2025	05/07/2025	Rubina Mughal	None	WETCHEM_PIPETTE_3 (WC)	Iwona Zarych 04/07/2025

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

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

Wet Chemistry STANDARD PREPARATION LOG

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

FROM 1.00000ml of M6041 + 999.00000ml of W3112 = Final Quantity: 1000.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
740	sodium nitroferricyanide for ammonia	WP112897	04/30/2025	05/30/2025	Rubina Mughal	WETCHEM_SCALE_5 (WCSC-5)	None	Iwona Zarych 05/01/2025

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

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

Wet Chemistry STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
3443	Residual chlorine std, Intermediate 10PPM	WP112904	05/01/2025	05/02/2025	Iwona Zarych	None	Glass Pipette-A	Jignesh Parikh 05/06/2025

FROM 42.75000ml of W3112 + 7.25000ml of W3130 = Final Quantity: 50.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
3444	Residual chlorine std, Intermediate-SS 10PPM	WP112905	05/01/2025	05/02/2025	Iwona Zarych	None	Glass Pipette-A	Jignesh Parikh 05/06/2025

FROM 7.50000ml of W3131 + 72.50000ml of W3112 = Final Quantity: 50.000 ml

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

Wet Chemistry STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
3710	Chlorine Calibration std, 0.0ppm	WP112906	05/01/2025	05/02/2025	Iwona Zarych	None	None	Jignesh Parikh 05/06/2025

FROM 50.00000ml of W3112 = Final Quantity: 50.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
3707	Chlorine Calibration std, 0.1ppm	WP112907	05/01/2025	05/02/2025	Iwona Zarych	None	WETCHEM_PIPETTE_3 (WC)	Jignesh Parikh 05/06/2025

FROM 49.50000ml of W3112 + 0.50000ml of WP112904 = Final Quantity: 50.000 ml

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

Wet Chemistry STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
3708	Chlorine Calibration std, 0.2ppm	WP112908	05/01/2025	05/02/2025	Iwona Zarych	None	WETCHEM_PIPETTE_3 (WC)	Jignesh Parikh 05/06/2025

FROM 49.00000ml of W3112 + 1.00000ml of WP112904 = Final Quantity: 50.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
3799	Residual Chlorine Calibration and CCV std, 0.4PPM	WP112909	05/01/2025	05/02/2025	Iwona Zarych	None	WETCHEM_PIPETTE_3 (WC)	Jignesh Parikh 05/06/2025

FROM 96.00000ml of W3112 + 4.00000ml of WP112904 = Final Quantity: 100.000 ml

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

Wet Chemistry STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
3709	Chlorine Calibration std, 0.8ppm	WP112910	05/01/2025	05/02/2025	Iwona Zarych	None	Glass Pipette-A	Jignesh Parikh 05/06/2025

FROM 46.00000ml of W3112 + 4.00000ml of WP112904 = Final Quantity: 50.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
3711	Chlorine Calibration std, 1.6ppm	WP112911	05/01/2025	05/02/2025	Iwona Zarych	None	Glass Pipette-A	Jignesh Parikh 05/06/2025

FROM 42.00000ml of W3112 + 8.00000ml of WP112904 = Final Quantity: 50.000 ml

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

Wet Chemistry STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
3452	Residual chlorine ICV-LCS, 0.4PPM	WP112912	05/01/2025	05/02/2025	Iwona Zarych	None	WETCHEM_PIPETTE_3 (WC)	Jignesh Parikh 05/06/2025

FROM 48.00000ml of W3112 + 2.00000ml of WP112905 = Final Quantity: 50.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
275	Ammonia Calibration Std. (2 ppm)	WP112946	05/05/2025	05/06/2025	Rubina Mughal	None	WETCHEM_PIPETTE_3 (WC)	Iwona Zarych 05/05/2025

FROM 48.00000ml of W3112 + 2.00000ml of WP112613 = Final Quantity: 50.000 ml

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

Wet Chemistry STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
285	Ammonia CCV Std. (1 ppm)	WP112947	05/05/2025	05/06/2025	Rubina Mughal	None	WETCHEM_PIPETTE_3 (WC)	Iwona Zarych 05/05/2025

FROM 49.00000ml of W3112 + 1.00000ml of WP112613 = Final Quantity: 50.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
286	Ammonia ICV Std. (1 ppm)	WP112948	05/05/2025	05/06/2025	Rubina Mughal	None	WETCHEM_PIPETTE_3 (WC)	Iwona Zarych 05/05/2025

FROM 49.00000ml of W3112 + 1.00000ml of WP112614 = Final Quantity: 50.000 ml

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

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 / Iwona	07/03/2024 / Iwona	W3112

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

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

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 / Iwona	07/25/2024 / Iwona	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 / Iwona	07/25/2024 / Iwona	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 / Iwona	07/26/2024 / Iwona	W3132

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
PCI Scientific Supply, Inc.	140476 / Test Paper,PH Short Range 9.0/10.0	L23	08/22/2029	08/22/2024 / Iwona	08/22/2024 / Iwona	W3133

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
HACH	141453 / Color Std Solution	A4219	08/31/2029	10/01/2024 / Iwona	10/01/2024 / Iwona	W3145

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

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

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

ThermoFisher SCIENTIFIC

Certificate of Analysis

W2858 Received by AP on 07/07/2021

Product No.: 33213

Product: Phenol, ACS, 99+%, stab.

Lot No.: M13H048

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

Retest date: January 7, 2026

ThermoFisher SCIENTIFIC

Certificate of Analysis

W2666 Recived on 02/10/2020 by AP

Product No.: 87683

Product: Sodium pentacyanonitrosylferrate(III) dihydrate, ACS, 99.0-102.0%

Lot No.: W12F013

Test	Limits	Results
Assay	99.0 - 102.0 %	99.67 %
Insoluble	0.01 % max	0.0079 %
Chloride	0.02 % max	Not detected
Sulfate	To pass test	Passes test
Aqueous solubility	To pass test	Passes test
Limit on Ferricyanide	To pass test	Passes test
Limit on Ferrocyanide	To pass test	Passes test

This document has been electronically generated and does not require a signature.

This is to certify that units of the lot number above were tested and found to comply with the specifications of the grade listed. Certain data have been supplied by third parties. Thermo Fisher Scientific expressly disclaims all warranties, expressed or implied, including the implied warranties of merchantability and fitness for a particular purpose. Products are for research use or further manufacturing. Not for direct administration to humans or animals. It is the responsibility of the purchaser, formulator or those performing further manufacturing to determine suitability based upon the intended use of the end product. Products are tested to meet the analytical requirements of the noted grade. The above information is the actual analytical results obtained.

Certificate Of Analysis

Date of Release: 11/14/2019

W2700 Recived by AP on 3/11/2020

Name: **Sodium Borate, Decahydrate**
ACS

Item No: **SX0355 All Sizes**
Lot / Batch No: **2019111354**
Country of Origin: **India**

Item	Specifications	Analysis
Assay (Na2B4O7 • 10H2O)	99.5 - 105.0%	101.7%
Calcium (Ca)	0.005% max.	0.003%
Chloride (Cl)	0.001% max.	<0.001%
Color	White	Passes Test
Form	Crystals	Passes Test
Heavy Metals (as Pb)	0.001% max.	<0.001%
Insoluble Matter	0.005% max.	0.002%
Iron (Fe)	5 ppm max.	<5 ppm
pH of a 0.01 M solution at 25C	9.15 - 9.20	9.17
Phosphate (PO4)	0.001% max.	<0.001%
Sulfate (SO4)	0.005% max.	<0.005%

Joe Schoellkopff

Quality Control Manager

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

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

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

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

M 6041-46
MS

avantor™ | J.T.Baker®

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

Certificate of Analysis

Test	Specification	Result
ACS – Assay (H_2SO_4)	95.0 – 98.0 %	96.1 %
Appearance	Passes Test	Passes Test
ACS – Color (APHA)	≤ 10	5
ACS – Residue after Ignition	≤ 3 ppm	< 1 ppm
ACS – Substances Reducing Permanganate (as SO2)	≤ 2 ppm	< 2 ppm
Ammonium (NH_4)	≤ 1 ppm	1 ppm
Chloride (Cl)	≤ 0.1 ppm	< 0.1 ppm
Nitrate (NO_3)	≤ 0.2 ppm	< 0.1 ppm
Phosphate (PO_4)	≤ 0.5 ppm	< 0.1 ppm
Trace Impurities – Aluminum (Al)	≤ 30.0 ppb	< 5.0 ppb
Arsenic and Antimony (as As)	≤ 4.0 ppb	< 2.0 ppb
Trace Impurities – Boron (B)	≤ 10.0 ppb	8.5 ppb
Trace Impurities – Cadmium (Cd)	≤ 2.0 ppb	< 0.3 ppb
Trace Impurities – Chromium (Cr)	≤ 6.0 ppb	< 0.4 ppb
Trace Impurities – Cobalt (Co)	≤ 0.5 ppb	< 0.3 ppb
Trace Impurities – Copper (Cu)	≤ 1.0 ppb	< 0.1 ppb
Trace Impurities – Gold (Au)	≤ 10.0 ppb	0.5 ppb
Heavy Metals (as Pb)	≤ 500.0 ppb	< 100.0 ppb
Trace Impurities – Iron (Fe)	≤ 50.0 ppb	1.3 ppb
Trace Impurities – Lead (Pb)	≤ 0.5 ppb	< 0.5 ppb
Trace Impurities – Magnesium (Mg)	≤ 7.0 ppb	0.8 ppb
Trace Impurities – Manganese (Mn)	≤ 1.0 ppb	< 0.4 ppb
Trace Impurities – Mercury (Hg)	≤ 0.5 ppb	< 0.1 ppb
Trace Impurities – Nickel (Ni)	≤ 2.0 ppb	0.3 ppb
Trace Impurities – Potassium (K)	≤ 500.0 ppb	< 2.0 ppb
Trace Impurities – Selenium (Se)	≤ 50.0 ppb	< 0.1 ppb
Trace Impurities – Silicon (Si)	≤ 100.0 ppb	31.5 ppb
Trace Impurities – Silver (Ag)	≤ 1.0 ppb	< 0.3 ppb

>>> Continued on page 2 >>>

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

avantor™ | J.T.Baker®

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

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

For Laboratory,Research,or Manufacturing Use

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

James T Ethier

Jamie Ethier
Vice President Global Quality

Certificate of Analysis

Sodium Hydroxide (Pellets)

Material: 0583

Grade: ACS GRADE

Batch Number: 23B1556310

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

Pellets

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

Storage: Room Temperature

TEST	SPECIFICATION	ANALYSIS	DISPOSITION
Calcium	<= 0.005 %	<0.005 %	PASS
Chloride	<= 0.005 %	0.002 %	PASS
Heavy Metals	<= 0.002 %	<0.002 %	PASS
Iron	<= 0.001 %	<0.001 %	PASS
Magnesium	<= 0.002 %	<0.002 %	PASS
Mercury	<= 0.1 ppm	<0.1 ppm	PASS
Nickel	<= 0.001 %	<0.001 %	PASS
Nitrogen Compounds	<= 0.001 %	<0.001 %	PASS
Phosphate	<= 0.001 %	<0.001 %	PASS
Potassium	<= 0.02 %	<0.02 %	PASS
Purity	>= 97.0 %	99.2 %	PASS
Sodium Carbonate	<= 1.0 %	0.5 %	PASS
Sulfate	<= 0.003 %	<0.003 %	PASS

Internal ID #: 710

Signature

We certify that this batch conforms to the specifications listed.

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

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

Additional Information

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

Product meets analytical specifications of the grades listed.

Certificate of Analysis

Sodium Hydroxide (Pellets)

Material: **0583**

Grade: **ACS GRADE**

Batch Number: **23B1556310**

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

Pellets

Spec Set: 0583ACS

Internal ID #: 710

Signature

We certify that this batch conforms to the specifications listed.

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

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

Additional Information

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

Product meets analytical specifications of the grades listed.

Loveland, CO 80539
(970) 669-3050

An ISO 9001 Certified Company

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

Loveland, CO 80539
(970) 669-3050

An ISO 9001 Certified Company

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

spectrum® CHEMICAL MFG CORP

Certificate Of Analysis

Item Number	ED150	Lot Number	2ND0156
Item	Edetate Disodium, Dihydrate, USP	CAS Number	6381-92-6
Molecular Formula	$C_{10}H_{14}N_2Na_2O_8 \cdot 2H_2O$	Molecular Weight	372.24

TEST	SPECIFICATION		RESULT
	MIN	MAX	
ASSAY (DRIED BASIS)	99.0	101.0 %	99.5 %
pH OF A 5% SOLUTION @ 25°C	4.0	6.0	4.6
LOSS ON DRYING	8.7	11.4 %	8.90 %
CALCIUM (Ca)	NO PRECIPITATE IS FORMED		NO PRECIPITATE IS FORMED
ELEMENTAL IMPURITIES:			.
NICKEL (Ni)	AS REPORTED		<0.3 ppm
CHROMIUM (Cr)	AS REPORTED		<0.3 ppm
NITRILOTRIACETIC ACID[$n[(HOCOCH_2)_3N]$]		0.1 %	<0.10 %
IDENTIFICATION A	MATCHES REFERENCE		MATCHES REFERENCE
IDENTIFICATION B	RED COLOR IS DISCHARGED, LEAVING A YELLOWISH SOLUTION		RED COLOR IS DISCHARGED, LEAVING A YELLOWISH SOLUTION
IDENTIFICATION C	MEETS THE REQUIREMENTS FOR SODIUM		MEETS THE REQUIREMENTS FOR SODIUM
CERTIFIED HALAL			CERTIFIED HALAL
EXPIRATION DATE			10-JUL-2026
DATE OF MANUFACTURE			11-JUL-2023
APPEARANCE			WHITE CRYSTALLINE POWDER
RESIDUAL SOLVENTS		AS REPORTED	NO RESIDUAL SOLVENTS PRESENT
MONOGRAPH EDITION			USP 2024

Certificate of Analysis Results Entered By:

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

Certificate of Analysis Results Approved By:

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

Spectrum Chemical Mfg Corp
755 Jersey Avenue
New Brunswick 08901 NJ

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

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

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

Loveland, CO 80539
(970) 669-3050

An ISO 9001 Certified Company

Certificate of Analysis

PRODUCT: Color Standard Solution 500 Platinum Cobalt Units

PRODUCT NUMBER: 141453

LOT NUMBER: A4219

MANUFACTURE DATE: 08/21/2024

DATE OF ANALYSIS: 08/22/2024

TEST	SPECIFICATIONS	RESULTS
Units of Color	480 to 520	482.0

The expiration date is Aug 2029

Certified by: Scott Abs

Analytical Services Chemist

RICCA CHEMICAL COMPANY®

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

Certificate of Analysis

Sodium Hypochlorite Solution, 5% available Chlorine

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

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

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

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

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

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

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

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

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

Jose Pena (01/17/2025)
Operations Manager

W3195 Received on 03/19/2025 by IZ

Certificate of Analysis

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

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

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

Internal ID #: 710

Signature

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

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

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

Additional Information

Analysis may have been rounded to significant digits in specification limits

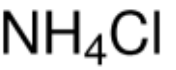
Product meets analytical specifications of the grades listed.

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

W3196 Received on 03/19/2025 by IZ

Certificate of Analysis

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



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

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

Larry Coers, Director

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

Certificate of Analysis

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

Quality Control
Milwaukee, WI US

SHIPPING DOCUMENTS

Alliance TECHNICAL GROUP
284 Sheffield Street, Mountainside, NJ 07092
(908) 789-8900 · Fax (908) 789-8922
www.chemtech.net

ALLIANCE PROJECT NO.
QUOTE NO. 01930
COC Number 2046749

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: 908-864-4400 FAX:

CLIENT PROJECT INFORMATION

PROJECT NAME: Rotor Clip
PROJECT NO.: 5183.0001 LOCATION: NJ
PROJECT MANAGER: Michael Valenzi
e-mail: mvalenzi@vcg-llc.com
smaccarter@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:

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 + Raw Data) ☐ NYS ASP A ☐ NYS ASP B
☐ Other
☐ EDD FORMAT

ANALYSIS

1: Cr, Cu, Ni, Zn
2: Chlorine Demand
3: Ammonia
4
5
6
7
8
9

ALLIANCE SAMPLE ID	PROJECT SAMPLE IDENTIFICATION	SAMPLE MATRIX	SAMPLE TYPE COMP	SAMPLE TYPE GRAB	SAMPLE COLLECTION DATE	SAMPLE COLLECTION TIME	# OF BOTTLES	PRESERVATIVES 1	2	3	4	5	6	7	8	9	COMMENTS
								B	E	C							← Specify Preservatives A-HCl D-NaOH B-HN03 E-ICE C-H2SO4 F-OTHER
1.	Water Treatment Discharge	WW	X		5/11/25	10:23	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:	RECEIVED BY:
1.	5/11/25 1140	1.
2.		2.
3.	5/11/25 1250	3.

Conditions of bottles or coolers at receipt: ☐ COMPLIANT ☐ NON COMPLIANT ☐ COOLER TEMP 5.3°C Adjust Factor °C+1
Comments: Flow Rate = pH = Temperature = Metals Group 4 = Cr, Cu, Ni, Zn
Please email all reporting items and invoice to mvalenzi@vcg-llc.com and Smaccarter@vcg-llc.com

Page 1 of 1
CLIENT: ☐ Hand Delivered ☐ Other
Shipment Complete ☐ YES ☐ NO

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

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

Laboratory Certification

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

QA Control Code: A2070148