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

Cover Page

Order ID : P5139

Project ID : Transfer Station-SPDES

Client : Tully Environmental, Inc

Lab Sample Number	Client Sample Number
P5139-01	001-WILLETS-PT-BLVD(DEC)
P5139-02	002-35TH-AVE(DEC)

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: 12/12/2024

NYDOH CERTIFICATION NO - 11376

NJDEP CERTIFICATION NO - 20012

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

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APPENDIX A

QA REVIEW GENERAL DOCUMENTATION

Project #: **P5139**

	Completed
For thorough review, the report must have the following:	
GENERAL:	
Are all original paperwork present (chain of custody, record of communication,airbill, sample management lab chronicle, login page)	✓
Check chain-of-custody for proper relinquish/return of samples	✓
Is the chain of custody signed and complete	✓
Check internal chain-of-custody for proper relinquish/return of samples /sample extracts	✓
Collect information for each project id from server. Were all requirements followed	✓
COVER PAGE:	
Do numbers of samples correspond to the number of samples in the Chain of Custody on login page	✓
Do lab numbers and client Ids on cover page agree with the Chain of Custody	✓
CHAIN OF CUSTODY:	
Do requested analyses on Chain of Custody agree with form I results	✓
Do requested analyses on Chain of Custody agree with the log-in page	✓
Were the correct method log-in for analysis according to the Analytical Request and Chain of Castody	✓
Were the samples received within hold time	✓
Were any problems found with the samples at arrival recorded in the Sample Management Laboratory Chronicle	✓
ANALYTICAL:	
Was method requirement followed?	✓
Was client requirement followed?	✓
Does the case narrative summarize all QC failure?	✓
All runlogs and manual integration are reviewed for requirements	✓
All manual calculations and /or hand notations verified	✓

QA Review Signature: **PRADIP PRAJAPATI** **Date:** **12/12/2024**

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LAB CHRONICLE

OrderID:	P5139	**OrderDate:**	12/5/2024 12:25:00 PM
Client:	Tully Environmental, Inc	**Project:**	Transfer Station-SPDES
Contact:	Dean Devoe	**Location:**	L51,VOA Ref. #3 Water

LabID	ClientID	Matrix	Test	Method	Sample Date	Prep Date	Anal Date	Received
P5139-01	**001-WILLETS-PT-BLVD(DEC)**	**WATER**			**12/04/24 14:00**			**12/05/24**
			Ammonia	SM4500-NH3		12/09/24	12/09/24 14:17	
			BOD5	SM5210 B			12/05/24 17:40	
			Oil and Grease	1664A			12/06/24 10:30	
			TSS	SM2540 D			12/09/24 11:00	
P5139-02	**002-35TH-AVE(DEC)**	**WATER**			**12/04/24 14:00**			**12/05/24**
			Ammonia	SM4500-NH3		12/09/24	12/09/24 14:17	
			BOD5	SM5210 B			12/05/24 17:40	
			Oil and Grease	1664A			12/06/24 10:30	
			TSS	SM2540 D			12/09/24 11:00	

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SAMPLE DATA

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Report of Analysis

Client:	Tully Environmental, Inc	Date Collected:	12/04/24 14:00
Project:	Transfer Station-SPDES	Date Received:	12/05/24
Client Sample ID:	001-WILLETS-PT-BLVD(DEC)	SDG No.:	P5139
Lab Sample ID:	P5139-01	Matrix:	WATER
		% Solid:	0

Parameter	Conc.	Qua.	DF	MDL	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
Ammonia as N	1.80		1	0.045	0.10	mg/L	12/09/24 08:50	12/09/24 14:17	SM 4500-NH3 B plus G-11
BOD5	176		1	0.17	2.00	mg/L		12/05/24 17:40	SM 5210 B-16
Oil and Grease	6.40		1	0.40	5.00	mg/L		12/06/24 10:30	1664A
TSS	83.5		1	1.00	4.00	mg/L		12/09/24 11:00	SM 2540 D-15

Comments:

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
D = Dilution
Q = indicates LCS control criteria did not meet requirements
H = Sample Analysis Out Of Hold Time

J = Estimated Value
B = Analyte Found in Associated Method Blank
* = indicates the duplicate analysis is not within control limits.
E = Indicates the reported value is estimated because of the presence of interference.
OR = Over Range
N =Spiked sample recovery not within control limits

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Report of Analysis

Client:	Tully Environmental, Inc	Date Collected:	12/04/24 14:00
Project:	Transfer Station-SPDES	Date Received:	12/05/24
Client Sample ID:	002-35TH-AVE(DEC)	SDG No.:	P5139
Lab Sample ID:	P5139-02	Matrix:	WATER
		% Solid:	0

Parameter	Conc.	Qua.	DF	MDL	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
Ammonia as N	1.90		1	0.045	0.10	mg/L	12/09/24 08:50	12/09/24 14:17	SM 4500-NH3 B plus G-11
BOD5	92.8		1	0.17	2.00	mg/L		12/05/24 17:40	SM 5210 B-16
Oil and Grease	7.40		1	0.40	5.00	mg/L		12/06/24 10:30	1664A
TSS	90.0		1	1.00	4.00	mg/L		12/09/24 11:00	SM 2540 D-15

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

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Initial and Continuing Calibration Verification

Client: Tully Environmental, Inc **SDG No.:** P5139

Project: Transfer Station-SPDES **RunNo.:** LB133842

Analyte		Units	Result	True Value	% Recovery	Acceptance Window (%R)	Analysis Date
Sample ID:	ICV1						
Ammonia as N		mg/L	1	1	100	90-110	12/09/2024
Sample ID:	CCV1						
Ammonia as N		mg/L	1.1	1	110	90-110	12/09/2024
Sample ID:	CCV2						
Ammonia as N		mg/L	1	1	100	90-110	12/09/2024
Sample ID:	CCV3						
Ammonia as N		mg/L	1	1	100	90-110	12/09/2024
Sample ID:	CCV4						
Ammonia as N		mg/L	1	1	100	90-110	12/09/2024

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Initial and Continuing Calibration Verification

Client:	Tully Environmental, Inc	**SDG No.:**	P5139
Project:	Transfer Station-SPDES	**RunNo.:**	LB133842

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

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Initial and Continuing Calibration Blank Summary

Client: Tully Environmental, Inc **SDG No.:** P5139

Project: Transfer Station-SPDES **RunNo.:** LB133842

Analyte	Units	Result	Acceptance Limits	Conc Qual	MDL	RDL	Analysis Date
Sample ID: ICB1							
Ammonia as N	mg/L	< 0.0500	0.0500	U	0.045	0.1	12/09/2024
Sample ID: CCB1							
Ammonia as N	mg/L	< 0.0500	0.0500	U	0.045	0.1	12/09/2024
Sample ID: CCB2							
Ammonia as N	mg/L	< 0.0500	0.0500	U	0.045	0.1	12/09/2024
Sample ID: CCB3							
Ammonia as N	mg/L	< 0.0500	0.0500	U	0.045	0.1	12/09/2024
Sample ID: CCB4							
Ammonia as N	mg/L	< 0.0500	0.0500	U	0.045	0.1	12/09/2024

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Initial and Continuing Calibration Blank Summary

Client:	Tully Environmental, Inc	**SDG No.:**	P5139
Project:	Transfer Station-SPDES	**RunNo.:**	LB133842

Analyte	Units	Result	Acceptance Limits	Conc Qual	MDL	RDL	Analysis Date

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Preparation Blank Summary

Client: Tully Environmental, Inc **SDG No.:** P5139

Project: Transfer Station-SPDES

Analyte	Units	Result	Acceptance Limits	Conc Qual	MDL	RDL	Analysis Date
Sample ID: LB133770BL							
BOD5	mg/L	< 0.2000	0.2000	U	0.17	2.0	12/05/2024
Sample ID: LB133785BL							
Oil and Grease	mg/L	< 2.5000	2.5000	U	0.4	5.0	12/06/2024
Sample ID: LB133838BL							
TSS	mg/L	< 2.0000	2.0000	U	1	4	12/09/2024
Sample ID: PB165461BL							
Ammonia as N	mg/L	< 0.0500	0.0500	U	0.045	0.1	12/09/2024

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Matrix Spike Summary

Client: Tully Environmental, Inc
SDG No.: P5139
Project: Transfer Station-SPDES
Sample ID: P5139-01
Client ID: 001-WILLETS-PT-BLVD(DEC)MS
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	2.80	OR	1.80		1	1	100		12/09/2024

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Matrix Spike Summary

Client: Tully Environmental, Inc
SDG No.: P5139
Project: Transfer Station-SPDES
Sample ID: P5139-01
Client ID: 001-WILLETS-PT-BLVD(DEC)MSD
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	1.80		1	1	110		12/09/2024

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Matrix Spike Summary

Client: Tully Environmental, Inc
SDG No.: P5139
Project: Transfer Station-SPDES
Sample ID: P5141-02
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
Oil and Grease	mg/L	78-114	21.3		1.10	J	20.0	1	101		12/06/2024

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Matrix Spike Summary

Client: Tully Environmental, Inc
SDG No.: P5139
Project: Transfer Station-SPDES
Sample ID: P5141-02
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
Oil and Grease	mg/L	78-114	21.7		1.10	J	20.0	1	103		12/06/2024

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Matrix Spike Summary

Client: Tully Environmental, Inc
SDG No.: P5139
Project: Transfer Station-SPDES
Sample ID: P5146-01
Client ID: EFFLUENTMS
Percent Solids for Spike Sample: 0

Analyte	Units	Acceptance Limit %R	Spiked Result	Conc. Qualifier	Sample Result	Conc. Qualifier	Spike Added	Dilution Factor	% Rec	Qual	Analysis Date
Oil and Grease	mg/L	78-114	46.6		26.3		20.0	1	102		12/06/2024

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Matrix Spike Summary

Client: Tully Environmental, Inc
SDG No.: P5139
Project: Transfer Station-SPDES
Sample ID: P5146-01
Client ID: EFFLUENTMSD
Percent Solids for Spike Sample: 0

Analyte	Units	Acceptance Limit %R	Spiked Result	Conc. Qualifier	Sample Result	Conc. Qualifier	Spike Added	Dilution Factor	% Rec	Qual	Analysis Date
Oil and Grease	mg/L	78-114	45.9		26.3		20.0	1	98		12/06/2024

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Duplicate Sample Summary

Client: Tully Environmental, Inc
SDG No.: P5139
Project: Transfer Station-SPDES
Sample ID: P5068-01
Client ID: 14B-1DUP
Percent Solids for Spike Sample: 0

Analyte	Units	Acceptance Limit	Sample Result	Conc. Qualifier	Duplicate Result	Conc. Qualifier	Dilution Factor	RPD/ AD	Qual	Analysis Date
TSS	mg/L	+/-5	4500		4530		1	0.66		12/09/2024

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Duplicate Sample Summary

Client: Tully Environmental, Inc
SDG No.: P5139
Project: Transfer Station-SPDES
Sample ID: P5074-02
Client ID: COMPDUP
Percent Solids for Spike Sample: 0

Analyte	Units	Acceptance Limit	Sample Result	Conc. Qualifier	Duplicate Result	Conc. Qualifier	Dilution Factor	RPD/ AD	Qual	Analysis Date
BOD5	mg/L	+/-20	1250		1210		1	3.02		12/05/2024

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Duplicate Sample Summary

Client: Tully Environmental, Inc
SDG No.: P5139
Project: Transfer Station-SPDES
Sample ID: P5139-01
Client ID: 001-WILLETS-PT-BLVD(DEC)DUP
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	1.80		1.80		1	0		12/09/2024

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Duplicate Sample Summary

Client: Tully Environmental, Inc
SDG No.: P5139
Project: Transfer Station-SPDES
Sample ID: P5139-01
Client ID: 001-WILLETS-PT-BLVD(DEC)MSD
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	2.80	OR	2.90	OR	1	4		12/09/2024

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Duplicate Sample Summary

Client: Tully Environmental, Inc
SDG No.: P5139
Project: Transfer Station-SPDES
Sample ID: P5141-02
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
Oil and Grease	mg/L	+/-18	21.3		21.7		1	1.86		12/06/2024

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Duplicate Sample Summary

Client: Tully Environmental, Inc
SDG No.: P5139
Project: Transfer Station-SPDES
Sample ID: P5146-01
Client ID: EFFLUENTMSD
Percent Solids for Spike Sample: 0

Analyte	Units	Acceptance Limit	Sample Result	Conc. Qualifier	Duplicate Result	Conc. Qualifier	Dilution Factor	RPD/ AD	Qual	Analysis Date
Oil and Grease	mg/L	+/-18	46.6		45.9		1	1.51		12/06/2024

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Laboratory Control Sample Summary

Client:	Tully Environmental, Inc	**SDG No.:**	P5139
Project:	Transfer Station-SPDES	**Run No.:**	LB133770

Analyte	Units	True Value	Result	Conc. Qualifier	% Recovery	Dilution Factor	Acceptance Limit %R	Analysis Date
Sample ID **LB133770BS**								
BOD5	**mg/L**	**198**	**212**		**107**	**1**	**84.6-115.4**	**12/05/2024**

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Laboratory Control Sample Summary

Client: Tully Environmental, Inc **SDG No.:** P5139

Project: Transfer Station-SPDES **Run No.:** LB133785

Analyte	Units	True Value	Result	Conc. Qualifier	% Recovery	Dilution Factor	Acceptance Limit %R	Analysis Date
Sample ID LB133785BS								
Oil and Grease	mg/L	20.0	16.8		84	1	78-114	12/06/2024

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Laboratory Control Sample Summary

Client:	Tully Environmental, Inc	**SDG No.:**	P5139
Project:	Transfer Station-SPDES	**Run No.:**	LB133838

Analyte	Units	True Value	Result	Conc. Qualifier	% Recovery	Dilution Factor	Acceptance Limit %R	Analysis Date
Sample ID **LB133838BS**								
TSS	**mg/L**	**550**	**530**		**96**	**1**	**90-110**	**12/09/2024**

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Laboratory Control Sample Summary

Client:	Tully Environmental, Inc	**SDG No.:**	P5139
Project:	Transfer Station-SPDES	**Run No.:**	LB133842

Analyte	Units	True Value	Result	Conc. Qualifier	% Recovery	Dilution Factor	Acceptance Limit %R	Analysis Date
Sample ID PB165461BS								
Ammonia as N	**mg/L**	**1**	**1.00**		**100**	**1**	**90-110**	**12/09/2024**

RAW DATA

Reviewed By:Iwona
On:12/12/2024 9:48:12 AM
Inst Id :DO METER
LB :LB133770

BOD5 LOG

ANALYST: rubir
SUPERVISOR: Iwona

QC BATCH ID: LB133770
Analysis Date: 12/05/2024
BOD Water: WP110974
MANGANOUS SULFATE SOLUTION: W3103
Starch: W3149
Alkaline Iodide Azide: W3109
Sulfuric acid, 1N: WP110386
Sodium Thiosulfate, 0.025N: W3105
POLYSEED: WP110976
NaOH, 1N: WP108662
GGA: WP110975
IncubatorID: INCUBATOR #3
Chlorine Strips: W3155
GuageID: 0511062
pH Strips: W3140
Zero DO: WP110595

Lab SampleID	Client ID	Bottle No.	VOL. ML	Initial Reading(ML)	Final Reading(ML)	Difference	Average
WINKLER 1	WINKLER 1	1	300	0.0	9.8	9.8	9.8
WINKLER 2	WINKLER 2	2	300	9.4	19.2	9.8	9.8

Meter Calibration1: 9.30 Zero DO Reading1: 0.08 mg/L (<=0.2 Criteria)

Barometric Pressure1: 755 mmHg DO Meter BOD fluid reading for winkler comparison: 9.83

After Incubation

Meter Calibration2: 8.95 Zero DO Reading2: 0.14 mg/L (<=0.2 Criteria)

Barometric Pressure2: 765 mmHg

Reviewed By:Iwona
On:12/12/2024 9:48:12 AM
Inst Id :DO METER
LB :LB133770

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QC BATCH ID: LB133770

INCUBATOR TEMP IN(C): 19.9 **INCUBATOR TEMP OUT(C):** 20.0

TIME IN: 17:40 **TIME OUT:** 13:45

DATE IN: 12/05/2024 **DATE OUT:** 12/10/2024

Lab SampleID	Bottle No.	Check CL	Initial PH	Final PH	Temp °C	Sam Vol. (mL)	D.O.1 Initial	D.O.2 Final	Depletion	BOD Result (mg/L)	Avg Result (mg/L)	Comment
LB133770BL	1	No	6.65	N/A	20.40	300	9.82	9.80	0.02	0.02	0.02	
POLYSEED	1					10	9.74	7.40	2.34	0.47	0.58	
POLYSEED	2					15	9.72	5.12	4.6	0.61		
POLYSEED	3					20	9.65	3.01	6.64	0.66		
GGA	1					6	9.76	5.05	4.71	206.5	211.5	
GGA	2					6	9.72	4.89	4.83	212.5		
GGA	3					6	9.70	4.81	4.89	215.5		
P5074-02	1	No	5.29	6.92	20.20	0.5	9.79	7.17	2.62	1224	1245	pH Adjuste
P5074-02	2					1	9.74	4.65	5.09	1353		
P5074-02	3					2	9.69	1.39	8.3	1158		
P5074-02	4					3	9.58	0.56	-	0		
P5074-02DUP	1	No	5.29	6.92	20.20	0.5	9.79	7.28	2.51	1158	1208	pH Adjuste
P5074-02DUP	2					1	9.74	4.73	5.01	1329		
P5074-02DUP	3					2	9.67	1.51	8.16	1137		
P5074-02DUP	4					3	9.60	0.57	-	0		
P5139-01	1	No	6.22	6.79	20.00	5	9.64	4.36	5.28	282	175.5	pH Adjuste
P5139-01	2					20	9.35	4.17	5.18	69		
P5139-01	3					50	7.98	0.58	-	0		
P5139-01	4					150	4.28	0.46	-	0		
P5139-02	1	No	6.31	6.84	20.00	5	9.65	7.35	2.3	103.2	92.85	pH Adjuste
P5139-02	2					20	9.34	3.26	6.08	82.5		
P5139-02	3					50	8.42	0.57	-	0		
P5139-02	4					150	4.56	0.45	-	0		
P5141-01	1	No	9.61	7.19	20.00	5	9.79	8.84	-	0	30.98	pH Adjuste
P5141-01	2					20	9.76	7.45	2.31	25.95		
P5141-01	3					50	9.70	3.12	6.58	36		
P5141-01	4					150	9.65	0.55	-	0		
P5143-01	1	No	7.11	N/A	20.00	5	9.63	9.00	-	0		
P5143-01	2					20	9.58	8.60	-	0		
P5143-01	3					50	9.52	8.20	-	0		
P5143-01	4					150	8.78	8.00	-	0		
P5143-03	1	No	7.14	N/A	20.00	5	9.68	9.01	-	0		
P5143-03	2					20	9.65	8.91	-	0		
P5143-03	3					50	9.62	8.40	-	0		
P5143-03	4					150	9.60	7.99	-	0		
P5143-05	1	No	6.91	N/A	20.00	5	9.70	8.90	-	0		
P5143-05	2					20	9.68	8.47	-	0		
P5143-05	3					50	9.65	8.38	-	0		
P5143-05	4					150	9.60	7.96	-	0		
P5145-01	1	No	7.17	N/A	20.00	5	9.80	8.43	-	0	22.35	
P5145-01	2					20	9.78	7.79	-	0		

Reviewed By:Iwona
On:12/12/2024 9:48:12 AM
Inst Id :DO METER
LB :LB133770

P5145-01	3					50	9.75	3.68	6.07	32.94		
P5145-01	4					150	9.74	3.28	6.46	11.76		
P5146-01	1	No	8.66	7.19	20.00	0.5	9.80	1.01	8.79	4926	4926	pH Adjuste
P5146-01	2					1	9.72	0.31	-	0		
P5146-01	3					2	9.53	0.20	-	0		
P5146-01	4					5	9.18	0.19	-	0		
P5146-01	5					10	8.60	0.15	-	0		
P5146-05	1	No	4.47	6.80	20.00	0.01	9.72	7.24	2.48	57000	32320	pH Adjuste
P5146-05	2					0.05	9.66	5.07	4.59	24060		
P5146-05	3					0.1	9.64	3.76	5.88	15900		
P5146-05	4					0.5	9.22	0.16	-	0		
P5146-05	5					1	8.51	0.11	-	0		

NOTE: 2ml POLYSEED added to GGA and all the Samples, but not in Blank.

NOTE (For, CBOD5): 0.16 g Nitrification Inhibitor added to GGA and all the Samples, but not in Blank.

WORKLIST(Hardcopy Internal Chain)

LB133770

WorkList Name : bod-12-05 **WorkList ID :** 186023 **Department :** Wet-Chemistry **Date :** 12-05-2024 15:34:08

Sample	Customer Sample	Matrix	Test	Preservative	Customer	Raw Sample Storage Location	Collect Date	Method
P5141-01	WATER TREATMENT DISCHAI	Water	BOD5	Cool 4 deg C	VERI01	M11	12/05/2024	SM5210 B
P5143-01	DSN002	Water	BOD5	Cool 4 deg C	PSEG04	L51	12/05/2024	SM5210 B
P5143-03	DSN001	Water	BOD5	Cool 4 deg C	PSEG04	L51	12/05/2024	SM5210 B
P5143-05	DSN003	Water	BOD5	Cool 4 deg C	PSEG04	L51	12/05/2024	SM5210 B
P5145-01	286085	Water	BOD5	Cool 4 deg C	PSEG03	L51	12/05/2024	SM5210 B

Date/Time 12/05/2024 16:10

Raw Sample Received by: RM (WG)

Raw Sample Relinquished by: AWC

Date/Time 12/05/2024 17:00

Raw Sample Received by: AWC

Raw Sample Relinquished by: RM (WG)

Reviewed By:lwona
On:12/12/2024 9:48:12 AM
Inst Id :DO METER
LB :LB133770

WORKLIST(Hardcopy Internal Chain)

LB133770

WorkList Name : bod5-12-5 **WorkList ID :** 185986 **Department :** Wet-Chemistry **Date :** 12-05-2024 08:13:17

Sample	Customer Sample	Matrix	Test	Preservative	Customer	Raw Sample Storage Location	Collect Date	Method
P5074-02	COMP	Water	BOD5	Cool 4 deg C	ARAM01	M11	12/04/2024	SM5210 B
P5139-01	001-WILLETS-PT-BLVD(DEC)	Water	BOD5	Cool 4 deg C	TULL01	L51	12/04/2024	SM5210 B
P5139-02	002-35TH-AVE(DEC)	Water	BOD5	Cool 4 deg C	TULL01	L51	12/04/2024	SM5210 B
P5146-01	EFFLUENT	Water	BOD5	Cool 4 deg C	HOLL01	M11	12/05/2024	SM5210 B
P5146-05	INFLUENT	Water	BOD5	Cool 4 deg C	HOLL01	M11	12/05/2024	SM5210 B

Date/Time 12/05/2024 15:25

Raw Sample Received by: RM (WC)

Raw Sample Relinquished by: MCC

Date/Time 12/05/2024 17:00

Raw Sample Received by: MCC

Raw Sample Relinquished by: RM (WC)

Reviewed By:lwona
On:12/12/2024 9:48:12 AM
Inst Id :DO METER
LB :LB133770

Extraction and Analytical Summary Report

Analysis Method: 1664A
Test: Oil and Grease
Run Number: LB133785
Analysis Date: 12/06/2024
BalanceID: WC SC-6
OvenID: EXT OVEN-3

ANALYST: jignesh
REVIEWED BY: Iwona
Extraction Date: 12/06/2024
Extration IN Time: 09:25
Extration OUT Time: 09:48
Thermometer ID: EXT OVEN#3

Dish #	Lab ID	Client ID	Matrix	pH	Sample Vol (ml)	Final Volume (ml)	Empty Dish Weight (g)	Final Empty Dish Weight(g)	Silica Gel Weight(g)	Weight After Drying(g)	Final Weight After Drying(g)	Change Weight (g)	Result in ppm
1	LB133785BL	LB133785BL	WATER	1.3	1000	100	3.2556	3.2556	0	3.2556	3.2556	0.0000	0
2	LB133785BS	LB133785BS	WATER	1.3	1000	100	2.7413	2.7413	0	2.7581	2.7581	0.0168	16.8
3	P5138-01	001-WILLETS-PT-BLVD(NO	WATER	1.6	1000	100	3.0604	3.0604	0	3.0876	3.0876	0.0272	27.2
4	P5138-02	002-35TH-AVE(NOV)	WATER	1.6	1000	100	3.0684	3.0684	0	3.0942	3.0942	0.0258	25.8
5	P5139-01	001-WILLETS-PT-BLVD(DE	WATER	1.6	1000	100	3.0681	3.0681	0	3.0745	3.0745	0.0064	6.4
6	P5139-02	002-35TH-AVE(DEC)	WATER	1.6	1000	100	3.0997	3.0997	0	3.1071	3.1071	0.0074	7.4
7	P5141-02	WATER TREATMENT DISCHA	WATER	1.3	1000	100	3.0837	3.0837	0	3.0848	3.0848	0.0011	1.1
8	P5141-03	P5141-02MS	WATER	1.3	1000	100	3.1156	3.1156	0	3.1369	3.1369	0.0213	21.3
9	P5141-04	P5141-02MSD	WATER	1.3	1000	100	3.1967	3.1967	0	3.2184	3.2184	0.0217	21.7
10	P5146-01	EFFLUENT	WATER	1.6	1000	100	3.1151	3.1151	0	3.1414	3.1414	0.0263	26.3
11	P5146-02	P5146-01MS	WATER	1.6	1000	100	2.8633	2.8633	0	2.9099	2.9099	0.0466	46.6
12	P5146-03	P5146-01MSD	WATER	1.6	1000	100	3.0521	3.0521	0	3.0980	3.0980	0.0459	45.9

QC Batch# LB133785 **Test:** Oil and Grease **Analysis Date:** 12/06/2024

Chemicals Used:

Chemical Name	Chemical Lot #
HEXANE	W3153
pH Paper 0-14	M6069
Sodium Sulfate	EP2570
1:1 HCL	WP110826
Silica Gel	NA
Sand	NA

Standards Used:

Standard Name	Amount Used	Standard Lot #
LCSW	2.5 ML	WP100827
LCSWD	NA	NA
MS/MSD	2.5 ML	WP100828

BALANCE CALIBRATION / OVEN Dessicator Data

Analytical Balance ID # : WC SC-6

Before Analysis

0.0020 gram Balance: 0.0019 **(0.0018-0.0022)**
1.0000 gram Balance: 1.0004 **(0.9950-1.0050)**
Bal Check Time: 09:30

In OVEN TEMP1 : 70 °C **Dessicator Time In1 :** 11:36
In Time1: 10:30
Out OVEN TEMP1: 70 °C **Dessicator Time Out1:** 12:15
Out Time1: 11:35

After Analysis

0.0020 gram Balance: 0.0021 **(0.0018-0.0022)**
1.0000 gram Balance: 1.0005 **(0.9950-1.0050)**
Bal Check Time: 14:02

In OVEN TEMP2 : 71 °C **Dessicator Time In2 :** 13:26
In Time2: 12:45
Out OVEN TEMP2: 71 °C **Dessicator Time Out2:** 14:00
Out Time2: 13:25

WORKLIST(Hardcopy Internal Chain)

LB 133785

WorkList Name : oil & grease p5138 **WorkList ID :** 186059 **Department :** Wet-Chemistry **Date :** 12-06-2024 09:11:30

Sample	Customer Sample	Matrix	Test	Preservative	Customer	Raw Sample Storage Location	Collect Date	Method
P5138-01 C	001-WILLETS-PT-BLVD(NOV)	Water	Oil and Grease	Conc H2SO4 to pH < 2	TULL01	L51	12/04/2024	1664A
P5138-02 C	002-35TH-AVE(NOV)	Water	Oil and Grease	Conc H2SO4 to pH < 2	TULL01	L51	12/04/2024	1664A
P5139-01 F	001-WILLETS-PT-BLVD(DEC)	Water	Oil and Grease	Conc H2SO4 to pH < 2	TULL01	L51	12/04/2024	1664A
P5139-02 F	002-35TH-AVE(DEC)	Water	Oil and Grease	Conc H2SO4 to pH < 2	TULL01	L51	12/04/2024	1664A
P5141-02 B	WATER TREATMENT DISCHAI	Water	Oil and Grease	Conc H2SO4 to pH < 2	TULL01	L51	12/04/2024	1664A
P5141-03	P5141-02MS	Water	Oil and Grease	Conc H2SO4 to pH < 2	VERI01	M11	12/05/2024	1664A
P5141-04	P5141-02MSD	Water	Oil and Grease	Conc H2SO4 to pH < 2	VERI01	M11	12/05/2024	1664A
P5146-01 E	EFFLUENT	Water	Oil and Grease	Conc H2SO4 to pH < 2	HOLL01	M11	12/05/2024	1664A
P5146-02	P5146-01MS	Water	Oil and Grease	Conc H2SO4 to pH < 2	HOLL01	M11	12/05/2024	1664A
P5146-03	P5146-01MSD	Water	Oil and Grease	Conc H2SO4 to pH < 2	HOLL01	M11	12/05/2024	1664A

Date/Time 12/06/24 09:15

Raw Sample Received by: [signature]

Raw Sample Relinquished by: JD (SM)

Date/Time 12/06/24 13:00

Raw Sample Received by: JD (SM)

Raw Sample Relinquished by: [signature]

Reviewed By:Iwona
On:12/12/2024
11:50:38 AM
Inst Id :WC SC-3
LB :LB133785

TOTAL SUSPENDED SOLIDS - SM2540D

SUPERVISOR: Iwona
ANALYST: Niha
Date: 12/06/2024
Run Number: LB133838
BalanceID: WC SC-6
OvenID: WC OVEN-1
FilterID: 17416528
ThermometerID: WET OVEN#1

TEMP1 IN:	103 °C	12/06/2024 11:00	**TEMP1 OUT:**	104 °C	12/06/2024 12:00
TEMP2 IN:	104 °C	12/06/2024 12:30	**TEMP2 OUT:**	103 °C	12/06/2024 13:30
TEMP3 IN:	104 °C	12/09/2024 11:00	**TEMP3 OUT:**	103 °C	12/09/2024 12:30
TEMP4 IN:	104 °C	12/09/2024 13:00	**TEMP4 OUT:**	103 °C	12/09/2024 14:30

Dish #	Lab ID	Client ID	Empty Dish Weight (g)	Final Empty Dish Weight (g)	Sample Volume (ml)	1st Empty Dish+Sample weight after 1.5hr drying @103-@105°C (g)	2nd Empty Dish+Sample weight after 1.5hr drying @103-@105°C (g)	Final Empty Dish+Sample weight after 1.5hr drying @103-@105°C (g)	Weight (g)	Result mg/L
1	LB133838BL	LB133838BL	1.4235	1.4235	100	1.4235	1.4235	1.4235	0.0000	0
2	LB133838BS	LB133838BS	1.3952	1.3952	100	1.4482	1.4482	1.4482	0.0530	530
3	P5068-01	14B-1	1.4036	1.4036	10	1.4486	1.4486	1.4486	0.0450	4500
4	P5068-01DUP	14B-1DUP	1.4102	1.4102	10	1.4555	1.4555	1.4555	0.0453	4530
5	P5068-02	14B-2	1.4080	1.4080	10	1.4658	1.4658	1.4658	0.0578	5780
6	P5068-03	14B-3	1.3592	1.3592	10	1.4088	1.4088	1.4088	0.0496	4960
7	P5068-04	14B-4	1.3586	1.3586	10	1.4205	1.4205	1.4205	0.0619	6190
8	P5074-02	COMP	1.3585	1.3585	100	1.4460	1.4460	1.4460	0.0875	875
9	P5138-01	001-WILLETS-PT-BLVD(NOV)	1.3616	1.3616	150	1.3768	1.3768	1.3768	0.0152	101.3
10	P5138-02	002-35TH-AVE(NOV)	1.3882	1.3882	150	1.4046	1.4046	1.4046	0.0164	109.3
11	P5139-01	001-WILLETS-PT-BLVD(DEC)	1.3945	1.3945	200	1.4112	1.4112	1.4112	0.0167	83.5
12	P5139-02	002-35TH-AVE(DEC)	1.3662	1.3662	200	1.3842	1.3842	1.3842	0.0180	90
13	P5141-01	WATER TREATMENT DISCHARGE	1.3633	1.3633	500	1.3673	1.3673	1.3673	0.0040	8
14	P5142-01	TOWERS-1	1.4019	1.4019	2000	1.4123	1.4123	1.4123	0.0104	5.2
15	P5142-03	TOWERS-2	1.3938	1.3938	1000	1.4007	1.4007	1.4007	0.0069	6.9

TOTAL SUSPENDED SOLIDS - SM2540D

SUPERVISOR: Iwona
ANALYST: Niha
Date: 12/06/2024
Run Number: LB133838
BalanceID: WC SC-6
OvenID: WC OVEN-1
FilterID: 17416528
ThermometerID: WET OVEN#1

TEMP1 IN:	103 °C	12/06/2024 11:00	**TEMP1 OUT:**	104 °C	12/06/2024 12:00
TEMP2 IN:	104 °C	12/06/2024 12:30	**TEMP2 OUT:**	103 °C	12/06/2024 13:30
TEMP3 IN:	104 °C	12/09/2024 11:00	**TEMP3 OUT:**	103 °C	12/09/2024 12:30
TEMP4 IN:	104 °C	12/09/2024 13:00	**TEMP4 OUT:**	103 °C	12/09/2024 14:30

Dish #	Lab ID	Client ID	Empty Dish Weight (g)	Final Empty Dish Weight (g)	Sample Volume (ml)	1st Empty Dish+Sample weight after 1.5hr drying @103-@105°C (g)	2nd Empty Dish+Sample weight after 1.5hr drying @103-@105°C (g)	Final Empty Dish+Sample weight after 1.5hr drying @103-@105°C (g)	Weight (g)	Result mg/L
16	P5143-01	DSN002	1.3569	1.3569	1000	1.3747	1.3747	1.3747	0.0178	17.8
17	P5143-03	DSN001	1.3967	1.3967	1000	1.4128	1.4128	1.4128	0.0161	16.1
18	P5143-05	DSN003	1.3983	1.3983	2000	1.4073	1.4073	1.4073	0.0090	4.5
19	P5145-01	286085	1.3954	1.3954	300	1.6235	1.6235	1.6235	0.2281	760.3
20	P5146-01	EFFLUENT	1.4009	1.4009	10	1.4173	1.4173	1.4173	0.0164	1640
21	P5146-04	AERATION TK 1	1.4004	1.4004	10	1.4273	1.4273	1.4273	0.0269	2690
22	P5192-02	EFF-WASTE WATER	1.4120	1.4120	500	1.4276	1.4276	1.4276	0.0156	31.2

A = Sample Volume (ml)
B = Final Empty Dish Weight (g)
C = Final Empty Dish + Sample weight after 1.5 hr drying @105°C(g)
D = Weight (g)

Weight (g) = C - B

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

LB133838

WORKLIST(Hardcopy Internal Chain)

WorkList Name : TSS-12052024 **WorkList ID :** 186012 **Department :** Wet-Chemistry **Date :** 12-05-2024 12:33:29

Sample	Customer Sample	Matrix	Test	Preservative	Customer	Raw Sample Storage Location	Collect Date	Method
P5074-02	COMP	Water	TSS	Cool 4 deg C	ARAM01	M11	12/04/2024	SM2540 D
P5068-01	14B-1	Water	TSS	Cool 4 deg C	NEWY17	L61	12/03/2024	SM2540 D
P5068-02	14B-2	Water	TSS	Cool 4 deg C	NEWY17	L61	12/03/2024	SM2540 D
P5068-03	14B-3	Water	TSS	Cool 4 deg C	NEWY17	L61	12/03/2024	SM2540 D
P5068-04	14B-4	Water	TSS	Cool 4 deg C	NEWY17	L61	12/03/2024	SM2540 D
P5145-01	286085	Water	TSS	Cool 4 deg C	PSEG03	L51	12/05/2024	SM2540 D
P5142-01	TOWERS-1	Water	TSS	Cool 4 deg C	PSEG04	L61	12/05/2024	SM2540 D
P5142-03	TOWERS-2	Water	TSS	Cool 4 deg C	PSEG04	L61	12/05/2024	SM2540 D
P5143-01	DSN002	Water	TSS	Cool 4 deg C	PSEG04	L51	12/05/2024	SM2540 D
P5143-03	DSN001	Water	TSS	Cool 4 deg C	PSEG04	L51	12/05/2024	SM2540 D
P5143-05	DSN003	Water	TSS	Cool 4 deg C	PSEG04	L51	12/05/2024	SM2540 D
P5141-01	WATER TREATMENT DISCHAI	Water	TSS	Cool 4 deg C	VERI01	M11	12/05/2024	SM2540 D
P5192-02	EFF-WASTE WATER	Water	TSS	Cool 4 deg C	ARDM01	M11	12/06/2024	SM2540 D
P5146-01	EFFLUENT	Water	TSS	Cool 4 deg C	HOLL01	M11	12/05/2024	SM2540 D
P5146-04	AERATION TK 1	Water	TSS	Cool 4 deg C	HOLL01	M11	12/05/2024	SM2540 D
P5138-01	001-WILLETS-PT-BLVD(NOV)	Water	TSS	Cool 4 deg C	TULL01	L51	12/04/2024	SM2540 D
P5138-02	002-35TH-AVE(NOV)	Water	TSS	Cool 4 deg C	TULL01	L51	12/04/2024	SM2540 D
P5139-01	001-WILLETS-PT-BLVD(DEC)	Water	TSS	Cool 4 deg C	TULL01	L51	12/04/2024	SM2540 D
P5139-02	002-35TH-AVE(DEC)	Water	TSS	Cool 4 deg C	TULL01	L51	12/04/2024	SM2540 D

Date/Time 12.09.2024 10:00
Raw Sample Received by: NP (WC)
Raw Sample Relinquished by:

Date/Time 12.09.2024 12:00
Raw Sample Received by:
Raw Sample Relinquished by: NP (WC)

Reviewed By:Iwona
On:12/9/2024 4:07:11 PM
Inst Id :WC SC-3
LB :LB133838

Reviewed By:Iwona
On:12/10/2024
12:31:39 PM
Inst Id :Konelab 20
LB :LB133842

L61338

Test results | Aquakem 7.2AQ1 | Page: 1

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

12/9/2024 14:55 | Reviewed by : RM | Instrument ID : Konelab

Test: Ammonia-N

Sample Id	Result	Dil. 1 +	Response	Errors
ICV1	1.044	0.0	0.141	
ICB1	-0.007	0.0	0.029	
CCV1	1.062	0.0	0.143	
CCB1	-0.008	0.0	0.029	
RL CHECK	0.089	0.0	0.040	89% (50–150) 12/09/2024 RM
PB165461BL	-0.013	0.0	0.029	
PB165461BS	1.038	0.0	0.140	
P5139-01	1.782	0.0	0.219	
P5139-01DUP	1.790	0.0	0.220	
P5139-01MS	2.839	0.0	0.331	Test limit high
P5139-01MSD	2.852	0.0	0.333	Test limit high
P5139-02	1.918	0.0	0.233	
P5141-01	0.695	0.0	0.104	
P5145-01	-0.023	0.0	0.028	
CCV2	1.027	0.0	0.139	
CCB2	0.003	0.0	0.030	
P5146-01	10.410	0.0	1.134	Test limit high
P5146-05	3.526	0.0	0.404	Test limit high
CCV3	1.022	0.0	0.138	
CCB3	-0.003	0.0	0.030	
P5146-01DLX10	1.050	0.0	0.141	
P5146-05DLX2	1.722	0.0	0.213	
CCV4	1.048	0.0	0.141	
CCB4	-0.001	0.0	0.030	

N	24
Mean	1.453
SD	2.1616
CV%	148.82

Reviewed By:Iwona
On:12/10/2024
12:31:39 PM
Inst Id :Konelab 20
LB :LB133842

Aquakem v. 7.2AQ1
Results from time period:
Mon Dec 09 13:33:57 2024
Mon Dec 09 14:54:49 2024

Sample Id	Sam/Ctr/cA	Test short r	Test type	Result	Result unit	Result date and time	Stat
0.0PPM	A	Ammonia-N	P	-0.0238	mg/l	12/9/2024 13:33:57	
0.1PPM	A	Ammonia-N	P	0.1062	mg/l	12/9/2024 13:33:58	
0.2PPM	A	Ammonia-N	P	0.1973	mg/l	12/9/2024 13:33:59	
0.4PPM	A	Ammonia-N	P	0.3879	mg/l	12/9/2024 13:34:00	
1.0PPM	A	Ammonia-N	P	1.0493	mg/l	12/9/2024 13:34:01	
1.3PPM	A	Ammonia-N	P	1.3494	mg/l	12/9/2024 13:34:02	
2.0PPM	A	Ammonia-N	P	1.967	mg/l	12/9/2024 13:34:03	
ICV1	S	Ammonia-N	P	1.0438	mg/l	12/9/2024 14:06:34	
ICB1	S	Ammonia-N	P	-0.0073	mg/l	12/9/2024 14:06:35	
CCV1	S	Ammonia-N	P	1.0617	mg/l	12/9/2024 14:06:38	
CCB1	S	Ammonia-N	P	-0.008	mg/l	12/9/2024 14:06:39	
RL CHECK	S	Ammonia-N	P	0.0893	mg/l	12/9/2024 14:06:41	
PB165461BL	S	Ammonia-N	P	-0.0128	mg/l	12/9/2024 14:06:44	
PB165461BS	S	Ammonia-N	P	1.0378	mg/l	12/9/2024 14:17:18	
P5139-01	S	Ammonia-N	P	1.7815	mg/l	12/9/2024 14:17:19	
P5139-01DUP	S	Ammonia-N	P	1.7899	mg/l	12/9/2024 14:17:21	
P5139-01MS	S	Ammonia-N	P	2.8389	mg/l	12/9/2024 14:17:23	
P5139-01MSD	S	Ammonia-N	P	2.8523	mg/l	12/9/2024 14:17:24	
P5139-02	S	Ammonia-N	P	1.9176	mg/l	12/9/2024 14:17:27	
P5141-01	S	Ammonia-N	P	0.6952	mg/l	12/9/2024 14:17:28	
P5145-01	S	Ammonia-N	P	-0.0232	mg/l	12/9/2024 14:27:24	
CCV2	S	Ammonia-N	P	1.0268	mg/l	12/9/2024 14:27:25	
CCB2	S	Ammonia-N	P	0.0029	mg/l	12/9/2024 14:27:28	
P5146-01	S	Ammonia-N	P	10.4104	mg/l	12/9/2024 14:27:29	
P5146-05	S	Ammonia-N	P	3.5257	mg/l	12/9/2024 14:27:30	
CCV3	S	Ammonia-N	P	1.0221	mg/l	12/9/2024 14:27:32	
CCB3	S	Ammonia-N	P	-0.0032	mg/l	12/9/2024 14:27:34	
P5146-01DLX10	S	Ammonia-N	P	1.0503	mg/l	12/9/2024 14:54:42	
P5146-05DLX2	S	Ammonia-N	P	1.7223	mg/l	12/9/2024 14:54:45	
CCV4	S	Ammonia-N	P	1.0482	mg/l	12/9/2024 14:54:47	
CCB4	S	Ammonia-N	P	-0.0009	mg/l	12/9/2024 14:54:48	

Reviewed By:Iwona
On:12/10/2024
12:31:39 PM
Inst Id :Konelab 20
LB :LB133842

Calibration results Aquakem 7.2AQ1

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

Reviewed by : RM Instrument ID : Konelab

12/9/2024 13:35

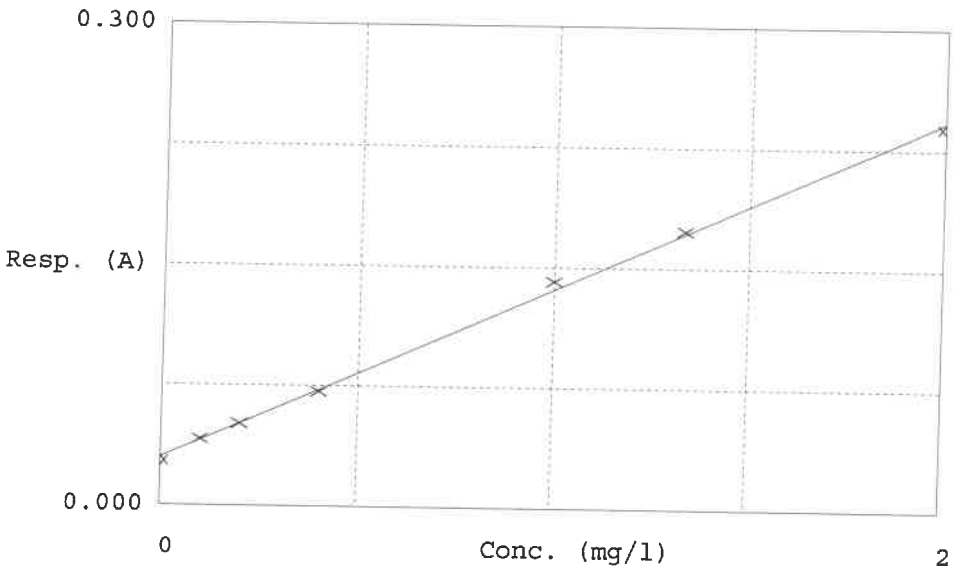
Test Ammonia-N

Accepted 12/9/2024 13:35

Factor 9.431
Bias 0.030

Coeff. of det. 0.998655

Errors



	Calibrator	Response	Calc. con.	Conc.	Errors
1	0.00PPM	0.028	-0.0238	0.0000	-
2	NH3-2PPM	0.041	0.1062	0.1000	6.2
3	NH3-2PPM	0.051	0.1973	0.2000	-1.4
4	NH3-2PPM	0.071	0.3879	0.4000	-3.0
5	NH3-2PPM	0.141	1.0493	1.0000	4.9
6	NH3-2PPM	0.173	1.3494	1.3333	3.8
7	NH3-2PPM	0.239	1.9670	2.0000	-1.7

12/09/2024
RM

Alliance TECHNICAL GROUP

Water Ammonia Preparation Sheet

PB165461

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: 12/09/2024 **Time :** 08:50 **Temp :** 150 °C

End Digest Date: 12/09/2024 **Time :** 09:50 **Temp :** 160 °C

11 batch 12/09/2024 10:10 150 C
12/09/2024 11:10 160 C } RM

Digestion tube ID : M5595

Filter paper ID : N/A

pH Meter ID : N/A

Block Thermometer ID : WC CYANIDE

Prep Technician Signature: RM

Supervisor Signature: 12

Standared Name	MLS USED	STD REF. # FROM LOG
LCSW	1.0ML	WP110715
MS/MSD SPIKE SOL.	1.0ML	WP110714
PBW	50.0ML	W3112
RL CHECK	0.1ML	WP110714
N/A	N/A	N/A

Chemical Used	ML/SAMPLE USED	Lot Number
BORATE BUFFER	2.5ML	WP108708
NAOH 6N	0.5-2.0ML	WP108660
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
WP108814,Due to bad matrix and client history 1ML was taken as an initial volume for P5146-01 and P5146-05.

Date / Time	Prepped Sample Relinquished By/Location	Received By/Location
12/09/2024 11.30	RM CWC	RM CWC
	Preparation Group	Analysis Group

Alliance TECHNICAL GROUP

Water Ammonia Preparation Sheet

PB165461

Lab Sample ID	Client Sample ID	Initial Vol (ml)	Final Vol (ml)	pH	Sulfide	Oxidizing	Nitrate/ Nitrite	Comment	Prep Pos
P5139-01	001-WILLETS-PT-BLVD(DEC)	50	50	<2	N/A	Negative	N/A	AFTER ADDING 6N NAOH PH IS 9.5	N/A
P5139-01DUP	001-WILLETS-PT-BLVD(DEC) DUP	50	50	<2	N/A	Negative	N/A	AFTER ADDING 6N NAOH PH IS 9.5	N/A
P5139-01MS	001-WILLETS-PT-BLVD(DEC) MS	50	50	<2	N/A	Negative	N/A	AFTER ADDING 6N NAOH PH IS 9.5	N/A
P5139-01MSD	001-WILLETS-PT-BLVD(DEC) MSD	50	50	<2	N/A	Negative	N/A	AFTER ADDING 6N NAOH PH IS 9.5	N/A
P5139-02	002-35TH-AVE(DEC)	50	50	<2	N/A	Negative	N/A	AFTER ADDING 6N NAOH PH IS 9.5	N/A
P5141-01	WATER TREATMENT DISCHARGE	50	50	<2	N/A	Negative	N/A	AFTER ADDING 6N NAOH PH IS 9.5	N/A
P5145-01	286085	50	50	<2	N/A	Negative	N/A	AFTER ADDING 6N NAOH PH IS 9.5	N/A
P5146-01	EFFLUENT	1	50	<2	N/A	Negative	N/A	AFTER ADDING 6N NAOH PH IS 9.5	N/A
P5146-05	INFLUENT	1	50	<2	N/A	Negative	N/A	AFTER ADDING 6N NAOH PH IS 9.5	N/A
PB165461BL	PBW461	50	50	<2	N/A	Negative	N/A	AFTER ADDING 6N NAOH PH IS 9.5	N/A
PB165461BS	LCS461	50	50	<2	N/A	Negative	N/A	AFTER ADDING 6N NAOH PH IS 9.5	N/A

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Instrument ID: DO METER

Daily Analysis Runlog For Sequence/QCBatch ID # LB133770

Review By	rubina	Review On	12/10/2024 2:37:16 PM
Supervise By	Iwona	Supervise On	12/12/2024 9:48:12 AM
SubDirectory	LB133770	Test	BOD5

STD. NAME	STD REF.#
ICAL Standard	N/A
ICV Standard	N/A
CCV Standard	N/A
ICSA Standard	N/A
CRI Standard	N/A
LCS Standard	N/A
Chk Standard	WP110974,W3149,WP110386,W3103,W3109,W3105,WP110976,WP110975,WP108662

Sr#	SampleId	ClientID	QcType	Date	Comment	Operator	Status
1	LB133770BL	LB133770BL	MB	12/05/24 17:40		rubina	OK
2	LB133770BS	LB133770BS	LCS	12/05/24 17:40		rubina	OK
3	P5074-02	COMP	SAM	12/05/24 17:40	Intermediate dilution	rubina	OK
4	P5074-02DUP	COMPDUP	DUP	12/05/24 17:40	Intermediate dilution	rubina	OK
5	P5139-01	001-WILLETS-PT-BL	SAM	12/05/24 17:40		rubina	OK
6	P5139-02	002-35TH-AVE(DEC)	SAM	12/05/24 17:40		rubina	OK
7	P5141-01	WATER TREATMENT	SAM	12/05/24 17:40		rubina	OK
8	P5143-01	DSN002	SAM	12/05/24 17:40		rubina	OK
9	P5143-03	DSN001	SAM	12/05/24 17:40		rubina	OK
10	P5143-05	DSN003	SAM	12/05/24 17:40		rubina	OK
11	P5145-01	286085	SAM	12/05/24 17:40		rubina	OK
12	P5146-01	EFFLUENT	SAM	12/05/24 17:40	Intermediate dilution	rubina	OK
13	P5146-05	INFLUENT	SAM	12/05/24 17:40	Intermediate dilution	rubina	OK

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Instrument ID: WC SC-3

Daily Analysis Runlog For Sequence/QCBatch ID # LB133785

Review By	jignesh	Review On	12/6/2024 2:34:01 PM
Supervise By	Iwona	Supervise On	12/12/2024 11:50:38 AM
SubDirectory	LB133785	Test	Oil and Grease

STD. NAME	STD REF.#
ICAL Standard	N/A
ICV Standard	N/A
CCV Standard	N/A
ICSA Standard	N/A
CRI Standard	N/A
LCS Standard	N/A
Chk Standard	W3153,M6069,EP2570,WP110826,NA,NA,WP100827,NA,WP100828

Sr#	SampleId	ClientID	QcType	Date	Comment	Operator	Status
1	LB133785BL	LB133785BL	MB	12/06/24 10:30		jignesh	OK
2	LB133785BS	LB133785BS	LCS	12/06/24 10:30		jignesh	OK
3	P5138-01	001-WILLETS-PT-BL	SAM	12/06/24 10:30		jignesh	OK
4	P5138-02	002-35TH-AVE(NOV)	SAM	12/06/24 10:30		jignesh	OK
5	P5139-01	001-WILLETS-PT-BL	SAM	12/06/24 10:30		jignesh	OK
6	P5139-02	002-35TH-AVE(DEC)	SAM	12/06/24 10:30		jignesh	OK
7	P5141-02	WATER TREATMENT	SAM	12/06/24 10:30		jignesh	OK
8	P5141-03	P5141-02MS	MS	12/06/24 10:30		jignesh	OK
9	P5141-04	P5141-02MSD	MSD	12/06/24 10:30		jignesh	OK
10	P5146-01	EFFLUENT	SAM	12/06/24 10:30		jignesh	OK
11	P5146-02	P5146-01MS	MS	12/06/24 10:30		jignesh	OK
12	P5146-03	P5146-01MSD	MSD	12/06/24 10:30		jignesh	OK

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Instrument ID: WC SC-3

Daily Analysis Runlog For Sequence/QCBatch ID # LB133838

Review By	Niha	Review On	12/9/2024 3:58:06 PM
Supervise By	Iwona	Supervise On	12/9/2024 4:07:11 PM
SubDirectory	LB133838	Test	TSS

STD. NAME	STD REF.#
ICAL Standard	N/A
ICV Standard	N/A
CCV Standard	N/A
ICSA Standard	N/A
CRI Standard	N/A
LCS Standard	N/A
Chk Standard	N/A

Sr#	SampleId	ClientID	QcType	Date	Comment	Operator	Status
1	LB133838BL	LB133838BL	MB	12/09/24 11:00		Niha	OK
2	LB133838BS	LB133838BS	LCS	12/09/24 11:00		Niha	OK
3	P5068-01	14B-1	SAM	12/09/24 11:00		Niha	OK
4	P5068-01DUP	14B-1DUP	DUP	12/09/24 11:00		Niha	OK
5	P5068-02	14B-2	SAM	12/09/24 11:00		Niha	OK
6	P5068-03	14B-3	SAM	12/09/24 11:00		Niha	OK
7	P5068-04	14B-4	SAM	12/09/24 11:00		Niha	OK
8	P5074-02	COMP	SAM	12/09/24 11:00		Niha	OK
9	P5138-01	001-WILLETS-PT-BL	SAM	12/09/24 11:00		Niha	OK
10	P5138-02	002-35TH-AVE(NOV)	SAM	12/09/24 11:00		Niha	OK
11	P5139-01	001-WILLETS-PT-BL	SAM	12/09/24 11:00		Niha	OK
12	P5139-02	002-35TH-AVE(DEC)	SAM	12/09/24 11:00		Niha	OK
13	P5141-01	WATER TREATMENT	SAM	12/09/24 11:00		Niha	OK
14	P5142-01	TOWER-1	SAM	12/09/24 11:00		Niha	OK
15	P5142-03	TOWER-2	SAM	12/09/24 11:00		Niha	OK
16	P5143-01	DSN002	SAM	12/09/24 11:00		Niha	OK
17	P5143-03	DSN001	SAM	12/09/24 11:00		Niha	OK
18	P5143-05	DSN003	SAM	12/09/24 11:00		Niha	OK

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Instrument ID: WC SC-3

Daily Analysis Runlog For Sequence/QCBatch ID # LB133838

Review By	Niha	Review On	12/9/2024 3:58:06 PM
Supervise By	Iwona	Supervise On	12/9/2024 4:07:11 PM
SubDirectory	LB133838	Test	TSS

STD. NAME	STD REF.#
ICAL Standard	N/A
ICV Standard	N/A
CCV Standard	N/A
ICSA Standard	N/A
CRI Standard	N/A
LCS Standard	N/A
Chk Standard	N/A

19	P5145-01	286085	SAM	12/09/24 11:00		Niha	OK
20	P5146-01	EFFLUENT	SAM	12/09/24 11:00		Niha	OK
21	P5146-04	AERATION TK 1	SAM	12/09/24 11:00		Niha	OK
22	P5192-02	EFF-WASTE WATER	SAM	12/09/24 11:00		Niha	OK

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Instrument ID: KONELAB

Daily Analysis Runlog For Sequence/QCBatch ID # LB133842

Review By	rubina	Review On	12/10/2024 12:27:41 PM
Supervise By	Iwona	Supervise On	12/10/2024 12:31:39 PM
SubDirectory	LB133842	Test	Ammonia

STD. NAME	STD REF.#
ICAL Standard	WP111021
ICV Standard	WP111023
CCV Standard	WP111022
ICSA Standard	N/A
CRI Standard	N/A
LCS Standard	WP110715
Chk Standard	WP110416,WP110019,WP108709,WP108840

Sr#	SampleId	ClientID	QcType	Date	Comment	Operator	Status
1	0.0PPM	0.0PPM	CAL1	12/09/24 13:33		rubina	
2	0.1PPM	0.1PPM	CAL2	12/09/24 13:33		rubina	
3	0.2PPM	0.2PPM	CAL3	12/09/24 13:33		rubina	
4	0.4PPM	0.4PPM	CAL4	12/09/24 13:34		rubina	
5	1.0PPM	1.0PPM	CAL5	12/09/24 13:34		rubina	
6	1.3PPM	1.3PPM	CAL6	12/09/24 13:34		rubina	
7	2.0PPM	2.0PPM	CAL7	12/09/24 13:34		rubina	
8	ICV1	ICV1	ICV	12/09/24 14:06		rubina	
9	ICB1	ICB1	ICB	12/09/24 14:06		rubina	
10	CCV1	CCV1	CCV	12/09/24 14:06		rubina	
11	CCB1	CCB1	CCB	12/09/24 14:06		rubina	
12	RL	RL	SAM	12/09/24 14:06		rubina	
13	PB165461BL	PB165461BL	MB	12/09/24 14:06		rubina	
14	PB165461BS	PB165461BS	LCS	12/09/24 14:17		rubina	
15	P5139-01	001-WILLETS-PT-BL\	SAM	12/09/24 14:17		rubina	
16	P5139-01DUP	001-WILLETS-PT-BL\	DUP	12/09/24 14:17		rubina	
17	P5139-01MS	001-WILLETS-PT-BL\	MS	12/09/24 14:17		rubina	
18	P5139-01MSD	001-WILLETS-PT-BL\	MSD	12/09/24 14:17		rubina	

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Instrument ID: KONELAB

Daily Analysis Runlog For Sequence/QCBatch ID # LB133842

Review By	rubina	Review On	12/10/2024 12:27:41 PM
Supervise By	Iwona	Supervise On	12/10/2024 12:31:39 PM
SubDirectory	LB133842	Test	Ammonia

STD. NAME	STD REF.#
ICAL Standard	WP111021
ICV Standard	WP111023
CCV Standard	WP111022
ICSA Standard	N/A
CRI Standard	N/A
LCS Standard	WP110715
Chk Standard	WP110416,WP110019,WP108709,WP108840

19	P5139-02	002-35TH-AVE(DEC)	SAM	12/09/24 14:17		rubina	
20	P5141-01	WATER TREATMENT	SAM	12/09/24 14:17		rubina	
21	P5145-01	286085	SAM	12/09/24 14:27		rubina	
22	CCV2	CCV2	CCV	12/09/24 14:27		rubina	
23	CCB2	CCB2	CCB	12/09/24 14:27		rubina	
24	P5146-01	EFFLUENT	SAM	12/09/24 14:27		rubina	
25	P5146-05	INFLUENT	SAM	12/09/24 14:27		rubina	
26	CCV3	CCV3	CCV	12/09/24 14:27		rubina	
27	CCB3	CCB3	CCB	12/09/24 14:27		rubina	
28	P5146-01DL	EFFLUENTDL	SAM	12/09/24 14:54		rubina	
29	P5146-05DL	INFLUENTDL	SAM	12/09/24 14:54		rubina	
30	CCV4	CCV4	CCV	12/09/24 14:54		rubina	
31	CCB4	CCB4	CCB	12/09/24 14:54		rubina	

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Prep Standard - Chemical Standard Summary

Order ID : P5139

Test : Ammonia,BOD5,Oil and Grease,TSS

Prepbatch ID : PB165461,

Sequence ID/Qc Batch ID: LB133770,LB133785,LB133838,LB133842,

Standard ID :
EP2570,WP100827,WP100828,WP108660,WP108661,WP108662,WP108708,WP108709,WP108840,WP 110019,WP1 10149,WP110150,WP110335,WP110386,WP110416,WP110714,WP110715,WP110826,WP110974,WP110975,WP1109 76,WP111021,WP111022,WP111023,WP99896,

Chemical ID :
E3551,M5673,M6069,M6121,W1992,W1993,W2606,W2653,W2654,W2666,W2700,W2783,W2845,W2858,W2898,W29 79,W3059,W3103,W3105,W3109,W3112,W3113,W3132,W3133,W3143,W3144,W3149,W3153,W3155,

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Extractions STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
3923	Baked Sodium Sulfate	EP2570	12/02/2024	01/03/2025	Rajesh Parikh	Extraction_SCALE_2 (EX-SC-2)	None	RUPESHKUMAR SHAH 12/02/2024

FROM 4000.00000gram of E3551 = Final Quantity: 4000.000 gram

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
114	hexavalent chromium color reagent	WP100827	02/02/2023	02/09/2023	Rubina Mughal	WETCHEM_SCALE_5 (WC SC-5)	None	Iwona Zarych 02/02/2023

FROM 0.25000gram of W2979 + 50.00000ml of W2783 = Final Quantity: 50.000 ml

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Wet Chemistry STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
3456	Cyanide Intermediate Working Std, 5PPM	WP100828	02/02/2023	02/03/2023	Iwona Zarych	None	WETCHEM_PIPETTE_3 (WC)	Sohil Jodhani 02/07/2023

FROM 0.25000ml of W2898 + 49.75000ml of WP99896 = Final Quantity: 50.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
1471	NaOH Solution, 6N	WP108660	07/09/2024	01/09/2025	Rubina Mughal	WETCHEM_SCALE_5 (WCSC-5)	None	Iwona Zarych 07/09/2024

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

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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	WP108661	07/09/2024	01/09/2025	Rubina Mughal	WETCHEM_SCALE_5 (WCSC-5)	None	Iwona Zarych 07/09/2024

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
1571	Sodium hydroxide, 1N	WP108662	07/09/2024	01/09/2025	Rubina Mughal	WETCHEM_SCALE_5 (WCSC-5)	None	Iwona Zarych 07/11/2024

FROM 4.00000gram of W3113 + 96.00000ml of W3112 = Final Quantity: 100.000 ml

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Wet Chemistry STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
1494	BORATE BUFFER	WP108708	07/11/2024	01/09/2025	Rubina Mughal	WETCHEM_SCALE_5 (WCSC-5)	None	Mohan Bera 07/17/2024

FROM 0.90250L of W3112 + 9.50000gram of W2700 + 88.00000ml of WP108661 = Final Quantity: 1.000 L

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
290	Phenol reagent for Ammonia	WP108709	07/11/2024	01/11/2025	Rubina Mughal	WETCHEM_SCALE_5 (WCSC-5)	None	Mohan Bera 07/17/2024

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

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Wet Chemistry STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
635	EDTA BUFFER FOR AMMONIA	WP108840	07/26/2024	01/26/2025	Rubina Mughal	WETCHEM_SCALE_5 (WCSC-5)	None	Iwona Zarych 07/26/2024

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	WP110019	10/02/2024	01/31/2025	Rubina Mughal	None	None	Iwona Zarych 10/04/2024

FROM 50.00000ml of W3112 + 50.00000ml of W3143 = Final Quantity: 100.000 ml

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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)	WP110149	10/11/2024	04/08/2025	Rubina Mughal	WETCHEM_SCALE_5 (WCSC-5)	None	Iwona Zarych 10/14/2024

FROM 3.81900gram of W1993 + 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	WP110150	10/11/2024	04/08/2025	Rubina Mughal	WETCHEM_SCALE_5 (WCSC-5)	None	Iwona Zarych 10/14/2024

FROM 3.81900gram of W1992 + 996.18100ml of W3112 = Final Quantity: 1000.000 ml

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Wet Chemistry STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
1597	0.04 N H2SO4	WP110335	10/22/2024	04/22/2025	Rubina Mughal	None	WETCHEM_PIPETTE_3 (WC)	Iwona Zarych 10/22/2024

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

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
1841	Sulfuric Acid, 1N	WP110386	10/24/2024	04/24/2025	Rubina Mughal	None	WETCHEM_PIPETTE_3 (WC)	Iwona Zarych 10/24/2024

FROM 2.80000ml of M5673 + 97.20000ml of W3112 = Final Quantity: 100.000 ml

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Wet Chemistry STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
740	sodium nitroferricyanide for ammonia	WP110416	10/25/2024	04/25/2025	Rubina Mughal	WETCHEM_SCALE_5 (WCSC-5)	None	Iwona Zarych 10/25/2024

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

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
1322	Ammonia Intermediate Std, 50PPM	WP110714	11/15/2024	12/15/2024	Rubina Mughal	None	WETCHEM_PIPETTE_3 (WC)	Iwona Zarych 11/18/2024

FROM 95.00000ml of W3112 + 5.00000ml of WP110149 = Final Quantity: 100.000 ml

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Wet Chemistry STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
1639	Ammonia Intermediate Std-Second source, 50PPM	WP110715	11/15/2024	12/15/2024	Rubina Mughal	None	WETCHEM_PIPETTE_3 (WC)	Iwona Zarych 11/18/2024

FROM 95.00000ml of W3112 + 5.00000ml of WP110150 = Final Quantity: 100.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
229	1:1 HCL	WP110826	11/22/2024	05/13/2025	Jignesh Parikh	None	None	Iwona Zarych 11/22/2024

FROM 500.00000ml of M6121 + 500.00000ml of W3112 = Final Quantity: 1.000 L

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Wet Chemistry STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
127	BOD Dilution fluid	WP110974	12/05/2024	12/06/2024	Rubina Mughal	None	None	Iwona Zarych 12/06/2024

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

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
129	Glutamic acid-glucose mix for BOD	WP110975	12/05/2024	12/06/2024	Rubina Mughal	WETCHEM_SCALE_7 (WCSC-6)	None	Iwona Zarych 12/06/2024

FROM 0.15000gram of W2653 + 0.15000gram of W2654 + 1000.00000ml of W3112 = Final Quantity: 1000.000 ml

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Wet Chemistry STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
128	polyseed seed control	WP110976	12/05/2024	12/06/2024	Rubina Mughal	None	None	Iwona Zarych 12/06/2024

FROM 1.00000PILLOW of W3059 + 300.00000ml of WP110974 = Final Quantity: 300.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
275	Ammonia Calibration Std. (2 ppm)	WP111021	12/09/2024	12/10/2024	Rubina Mughal	None	WETCHEM_PIPETTE_3 (WC)	Iwona Zarych 12/10/2024

FROM 48.00000ml of W3112 + 2.00000ml of WP110714 = Final Quantity: 50.000 ml

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Wet Chemistry STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
285	Ammonia CCV Std. (1 ppm)	WP111022	12/09/2024	12/10/2024	Rubina Mughal	None	WETCHEM_PIPETTE_3 (WC)	Iwona Zarych 12/10/2024

FROM 49.00000ml of W3112 + 1.00000ml of WP110714 = 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)	WP111023	12/09/2024	12/10/2024	Rubina Mughal	None	WETCHEM_PIPETTE_3 (WC)	Iwona Zarych 12/10/2024

FROM 49.00000ml of W3112 + 1.00000ml of WP110715 = Final Quantity: 50.000 ml

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Wet Chemistry STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
11	Sodium hydroxide absorbing solution 0.25 N	WP99896	11/15/2022	05/15/2023	Jignesh Parikh	WETCHEM_SCALE_4 (WCSC-4)	None	Iwona Zarych 11/15/2022

FROM 21.00000L of W2606 + 210.00000gram of W2845 = Final Quantity: 21.000 L

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CHEMICAL RECEIPT LOG BOOK

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

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Seidler Chemical	BA-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.	140440 / TEST PAPERS,PH,0-2.5,.2SENSI, 100PK	80A0441	02/29/2028	09/03/2024 / jignesh	08/19/2024 / Jaswal	M6069

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Seidler Chemical	BA-9530-33 / Hydrochloric Acid, Instra-Analyzed (cs/6x2.5L)	0000275677	05/13/2025	11/13/2024 / Eman	10/13/2024 / Eman	M6121

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
PCI Scientific Supply, Inc.	J0660-1 / AMMONIUM CHLORIDE, ACS, 500G	WL13B	04/08/2025	04/08/2015 / apatel	04/08/2015 / apatel	W1992

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
PCI Scientific Supply, Inc.	J0660-1 / AMMONIUM CHLORIDE, ACS, 500G	XE09B	04/08/2025	04/08/2015 / apatel	04/08/2015 / apatel	W1993

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CHEMICAL RECEIPT LOG BOOK

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Seidler Chemical	DIW / DI Water	Daily Lab-Certified	10/24/2024	10/24/2019 / apatel	10/24/2019 / apatel	W2606

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
PCI Scientific Supply, Inc.	AC156212500 / GLUTAMIC ACID BIOCHEM REG, 250G	A0405990	01/24/2030	01/24/2020 / apatel	01/24/2020 / apatel	W2653

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
PCI Scientific Supply, Inc.	D16-500 / DEXTROSE ANHYDROUS ACS REAGENT, 500G(New)	186122A	01/24/2030	01/24/2020 / apatel	01/24/2020 / apatel	W2654

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
PCI Scientific Supply, Inc.	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 #
Seidler Chemical	BA-9254-03 / Acetone, Ultra Resi (cs/4x4L)	0000263246	06/17/2023	12/23/2020 / ketankumar	12/23/2020 / ketankumar	W2783

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CHEMICAL RECEIPT LOG BOOK

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
PCI Scientific Supply, Inc.	PC19510-7 / Sodium Hydroxide Pellets 12 Kg	21C2456604	01/31/2024	03/30/2022 / JIGNESH	06/24/2021 / apatel	W2845

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 #
Supelco	90157 / Cyanide Standard, 1000ppm from Supelco	HC03107133	06/30/2023	01/24/2022 / apatel	01/24/2022 / apatel	W2898

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
PCI Scientific Supply, Inc.	31390 / 1,5-Diphenylcarbazide	MKCR6636	12/09/2027	12/09/2022 / Iwona	12/09/2022 / Iwona	W2979

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
PCI Scientific Supply, Inc.	136742-80 / POLYSEED	152305	05/30/2025	02/15/2024 / Rubina	10/18/2023 / Iwona	W3059

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
PCI Scientific Supply, Inc.	4620-32 / MANGANOUS SULFATE SOLUTION-364	2403J02	03/31/2026	04/22/2024 / Iwona	04/22/2024 / Iwona	W3103

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CHEMICAL RECEIPT LOG BOOK

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
PCI Scientific Supply, Inc.	AL69870-8 / SODIUM THIOSULFATE,0.025N,4LITRE	4403S13	09/30/2025	04/22/2024 / Iwona	04/22/2024 / Iwona	W3105

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
PCI Scientific Supply, Inc.	AL04100-4 / Alkaline Iodide Azide, 1 L	1405D67	04/30/2026	05/23/2024 / Iwona	05/23/2024 / Iwona	W3109

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Seidler Chemical	DIW / DI Water	Daily Lab-Certified	07/03/2029	07/03/2024 / Iwona	07/03/2024 / Iwona	W3112

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

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
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

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CHEMICAL RECEIPT LOG BOOK

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
PCI Scientific Supply, Inc.	J9416-1 / Sodium Hypochlorite 500 ml	2407F34	01/31/2025	09/30/2024 / Iwona	09/30/2024 / Iwona	W3143

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
HACH	1486266 / BOD Nutrient Buffer Pillows, 6 mL concentrate to make 6 L, 50/pk	A4169	06/30/2029	11/20/2024 / rubina	10/01/2024 / Iwona	W3144

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
PCI Scientific Supply, Inc.	AL70850-8 / Starch Solution, 4L	4408P62	08/31/2026	10/16/2024 / Iwona	10/16/2024 / Iwona	W3149

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Seidler Chemical	BA-9262-03 / Hexane, Ultra-Resi (cs/4x4L)	24G1962003	08/22/2025	11/25/2024 / jignesh	11/21/2024 / jignesh	W3153

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

Certificate of Analysis

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

Product: ***Ammonium Chloride GR ACS*** ***Catalog No.:*** ***AX1270 all size codes***

Grade: ***Meets ACS Specifications*** ***CAS #:*** ***12125-02-9***

Country of Origin: ***India*** ***FW:*** ***53.49***

Lot No.: ***WL13B*** ClH_4N

	Requirement			
Characteristic	**Minimum**	**Maximum**	**Results**	**UOM**
Assay (argentometric)	99.5		99.9	%
Calcium (Ca)		0.001	0.0001	%
Form	White crystals		White crystals	
Heavy metals (as Pb)		5	5	ppm
Identification	To pass test		Passes	
Insoluble matter		0.005	0.002	%
Iron (Fe)		2	2	ppm
Loss on drying (105 C)		0.5	0.21	%
Magnesium (Mg)		5	0.6	ppm
pH of a 5% solution at 25 C	4.5	5.5	4.76	
Phosphate (PO4)		2	2	ppm
Residue after ignition		0.01	0.002	%
Sulfate (SO4)		0.002	0.002	%

Joe Schoellkopff

Quality Control Manager

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EMD Millipore Corporation
290 Concord Road
Billerica, MA 01821

Certificate of Analysis

Date of Release: ***5/12/2014***

Product: ***Ammonium Chloride GR ACS*** ***Catalog No.:*** ***AX1270 all size codes***

Grade: ***Meets ACS Specifications*** ***CAS #:*** ***12125-02-9***

Country of Origin: ***India*** ***FW:*** ***53.49***

Lot No.: ***XE09B*** ClH_4N

Characteristic	Requirement Minimum	Maximum	Results	UOM
Assay (argentometric)	99.5		99.8	%
Calcium (Ca)		0.001	0.0001	%
Form	White crystals		White crystals	
Heavy metals (as Pb)		5	5	ppm
Identification	To pass test		Passes	
Insoluble matter		0.005	0.002	%
Iron (Fe)		2	2	ppm
Loss on drying (105 C)		0.5	0.22	%
Magnesium (Mg)		5	0.7	ppm
pH of a 5% solution at 25 C	4.5	5.5	4.95	
Phosphate (PO4)		2	2	ppm
Residue after ignition		0.01	0.002	%
Sulfate (SO4)		0.002	0.002	%

Joe Schoellkopff

Quality Control Manager

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290 Concord Road
Billerica, MA 01821

W2898 Received by AP on 01/24/2022

Certificate of Analysis

1.19533.0500 Cyanide standard solution traceable to SRM from NIST $K_2[Zn(CN)_4]$ in H_2O 1000 mg/l CN Certipur®

Batch HC03107133

		Batch Values	
Concentration	β (CN^-)	1002	mg/l

Determination method: Argentometric titration.
The content of this solution was determined with silver nitrate standard solution (article number 1.09081) standardized against volumetric standard sodium chloride (article number 1.02406). The expanded measurement uncertainty is ± 0.7 % (k=2 coverage factor for 95% coverage probability). The certified value is traceable to primary standard NIST SRM 999c (NIST: National Institute of Standards and Technology, USA) by means of volumetric standard sodium chloride, measured in the accredited calibration laboratory of Merck KGaA, Darmstadt, Germany in accordance to DIN EN ISO/IEC 17025.

Date of release (DD.MM.YYYY) 02.07.2020
Minimum shelf life (DD.MM.YYYY) 30.06.2023

Ayfer Yildirim
Responsible laboratory manager quality control

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W2783 Receiveived by AP on 12/23/2020

Acetone
ULTRA RESI-ANALYZED
For Organic Residue Analysis

Material No.: 9254-03
Batch No.: 0000263246
Manufactured Date: 2020/06/17
Expiration Date: 2023/06/17
Revision No: 1

Certificate of Analysis

Test	Specification	Result
Assay ($(CH_3)_2CO$) (by GC, corrected for water)	>= 99.4 %	99.7
Color (APHA)	<= 10	5
Residue after Evaporation	<= 1.0000 ppm	0.1000
Substances Reducing Permanganate	Passes Test	PT
Titrable Acid (µeq/g)	<= 0.3	0.1
Titrable Base (µeq/g)	<= 0.6	< 0.1
Water (H_2O)	<= 0.5 %	0.3
FID-Sensitive Impurities (as 2-Octanol) Single Impurity Peak (ng/mL)	<= 5	< 1
ECD Sensitive Impurities (as Heptachlor Epoxide) Single Peak (pg/mL)	<= 10	5

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

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

Jamie Ethier
Vice President Global Quality

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

ThermoFisher SCIENTIFIC

Certificate of Analysis

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

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ThermoFisher SCIENTIFIC

Certificate of Analysis

W2666 Recived on 02/10/2020 by AP

Product No.: 87683

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

Lot No.: W12F013

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

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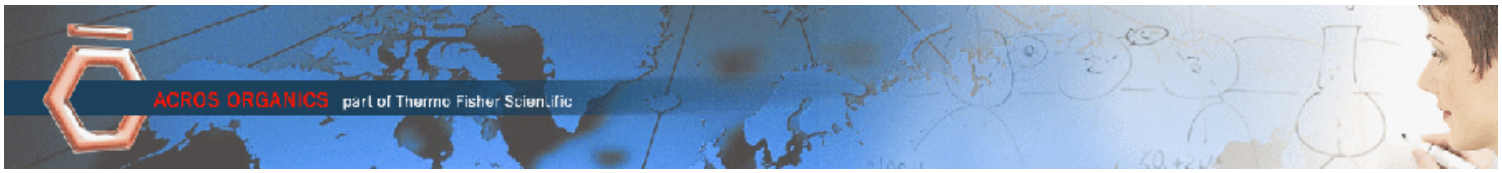
W2653 Received on 1/24/2020 by AP



ACROS ORGANICS

Version	0
Molecular weight	147.13
Molecular formula	C5 H9 N O4
CAS No	56-86-0
Linear formula	HO2CCH2CH2CH(NH2)CO2H
Flash point (°C)	

Certificate of Analysis

This is to certify that units of the lot number below were tested and found to comply with the specifications of the grade listed. Certain data have been supplied by third parties. Acros Organics 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 human or animals. It is the responsiblity 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 following information is the actual analytical results obtained.

Catalog Number	15621	**Quality Test / Release Date**	13 March 2019
Lot Number	A0405990	**Suggested Retest Date**	March 2022

Description	L(+)-Glutamic acid,99%
Country of Origin	CHINA
Declaration of Origin	plant

Origin Comment	The product is made by fermentation of sugar molasses

Result Name	Specifications	Test Value
Appearance (Color)	White	White
Appearance (Form)	Powder	Powder
Infrared spectrum	Conforms	Conforms
Titration with NaOH	98.5 to 100.5 % (On dried substance)	99.32 % (On dried substance)
Loss on drying	=<0.5 % (105°C, 3 hrs)	0.002 % (105°C, 3 hrs)
Heavy metals (as Pb)	=<10 ppm	=<10 ppm
Sulfated ash	=<0.1 %	0.08 %
Other amino acids	not detectable	not detectable
Specific optical rotation	+30.5° to +32.5° (20°C, 589 nm) (on dried substance)	+32° (20°C, 589 nm) (on dried substance)
Specific optical rotation	(c=10, 2N HCl)	(c=10, 2N HCl)
Chloride (Cl)	=<200 ppm	=<200 ppm
Iron (Fe)	=<30 ppm	=<10 ppm
Sulfate (SO4)	=<300 ppm	=<200 ppm
Ammonium (NH4)	=<200 ppm	=<200 ppm
Arsenic oxide (As2O3)	=<1 ppm	=<1 ppm

L. Van den Broek, QA Manager Issued: 24 January 2020

Acros Organics
ENA23, zone 1, nr 1350, Janssen Pharmaceuticalaan 3a, B-2440 Geel, Belgium
Tel +32 14/57.52.11 - Fax +32 14/59.34.34 Internet: http://www.acros.com
1 Reagent Lane, Fair Lawn, NJ 07410,USA Fax 201-796-1329

W 3059
rec. 10/18/23 12

POLYSEED®

CERTIFICATE OF ANALYSIS

PO BOX 130549 Spring, TX 77393
Phone: (281) 298-9410 Fax: (281) 298-9411

FINISHED PRODUCT, LOT NUMBER, MFG. /EXP DATE:
PolySeed® • Part No. P-110 • Lot 152305 • Mfg. Date: 05/2023 • Exp. Date: 05/2025

FORMULATION:
The formulation for this product contains a range of naturally occurring microorganisms, which are known to be non-pathogenic to man or animals.

VIABLE COUNT, FINAL TEST RESULT:
The product has been fully tested in accordance with Finished Product Specifications and contains a minimum viable count of 4.00 x10^9 cfu/g.

GLUCOSE/GLUTAMIC-ACID RESULTS:
Tested results within acceptable range 198 +/- 30.5 mg/L (167.5 - 228.5 mg/L). GGA Lot# L257-09 – Average Test Result: 203.4

See www.polyseed.com for details.

SEED CONTROL FACTOR:
Tested results within acceptable range 0.6 – 1.0 see www.polyseed.com for details

SALMONELLA TEST RESULT:
The product has been shown to be Salmonella negative using procedures recommended in the Microbiology Laboratory Guidebook, published by the USDA Food Safety and Inspection Service.

The purpose of this document is to assure that the Finished Product conforms to the above specification.

Signature: _____ Date: 05/15/2023
Quality Control Department

POLYSEED.Ref.1.19 Revised Jan 23

InterLab®
International Laboratory Supply

ISO 9002
DNV
DNV Certification, Inc.
REGISTERED FIRM

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.

W2654 Received on 1/24/2020 by AP

ThermoFisher SCIENTIFIC

Certificate of Analysis

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

Thermo Fisher Scientific's Quality System has been found to conform to Quality Management System Standard ISO9001:2015 by SAI Global Certificate Number CERT – 0120632

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

Catalog Number	D16	Quality Test / Release Date	03/19/2019
Lot Number	186122A		
Description	DEXTROSE, ANHYDROUS, A.C.S.		
Country of Origin	United States	Suggested Retest Date	Mar/2022
Chemical Origin	Organic - Plant		
BSE/TSE Comment	No animal products are used as starting raw material ingredients, or used in processing, including lubricants, processing aids, or any other material that might migrate to the finished product.		
Chemical Comment			

N/A			
Result Name	Units	Specifications	Test Value
APPEARANCE		REPORT	White, granular powder
TITRATABLE ACID	MEQ/G	<= 0.002	<0.002
STARCH		= PASS TEST	pass test
SPECIFIC ROTATION @ 25 C	DEGREES (+ OR -)	Inclusive Between +52.5 - +53.0	53.0
SULFATE & SULFITE	%	<= 0.005	<0.005
IRON (Fe)	ppm	<= 5	<5
CHLORIDE	%	<= 0.01	<0.01
IGNITION RESIDUE	%	<= 0.02	<0.02
IDENTIFICATION	PASS/FAIL	= PASS TEST	pass test
HEAVY METALS (as Pb)	ppm	<= 5	<5
LOSS ON DRYING @ 105 C	%	<= 0.2	<0.2
INSOLUBLE MATTER	%	<= 0.005	0.002

Teresa Bailey-Wyche

Quality Assurance Specialist - Certificate of Analysis Fair Lawn

Note: The data listed is valid for all package sizes of this lot of this product, expressed as an extension of this catalog number listed above.
If there are any questions with this certificate, please call at (800) 227-6701.
*Based on suggested storage condition.

PRODUCTOS QUIMICOS MONTERREY, S.A. DE C.V.

MIRADOR 201, COL. MIRADOR
MONTERREY, N.L. MEXICO
CP 64070
TEL +52 81 13 52 57 57
www.pqm.com.mx

CERTIFICATE OF ANALYSIS

PRODUCT :	SODIUM SULFATE CRYSTALS ANHYDROUS		
QUALITY :	ACS (CODE RMB3375)	FORMULA :	Na_2SO_4
SPECIFICATION NUMBER :	6399	RELEASE DATE:	ABR/21/2023
LOT NUMBER :	313201		

TEST	SPECIFICATIONS	LOT VALUES
Assay (Na_2SO_4)	Min. 99.0%	99.7 %
pH of a 5% solution at 25°C	5.2 - 9.2	6.1
Insoluble matter	Max. 0.01%	0.005 %
Loss on ignition	Max. 0.5%	0.1 %
Chloride (Cl)	Max. 0.001%	<0.001 %
Nitrogen compounds (as N)	Max. 5 ppm	<5 ppm
Phosphate (PO_4)	Max. 0.001%	<0.001 %
Heavy metals (as Pb)	Max. 5 ppm	<5 ppm
Iron (Fe)	Max. 0.001%	<0.001 %
Calcium (Ca)	Max. 0.01%	0.002 %
Magnesium (Mg)	Max. 0.005%	0.001 %
Potassium (K)	Max. 0.008%	0.003 %
Extraction-concentration suitability	Passes test	Passes test
Appearance	Passes test	Passes test
Identification	Passes test	Passes test
Solubility and foreing matter	Passes test	Passes test
Retained on US Standard No. 10 sieve	Max. 1%	0.1 %
Retained on US Standard No. 60 sieve	Min. 94%	97.3 %
Through US Standard No. 60 sieve	Max. 5%	2.5 %
Through US Standard No. 100 sieve	Max. 10%	0.1 %

COMMENTS

QC: PhC Irma Belmares

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

Recd. by RB on 7/24/23 E3551

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

9673- 33

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

R: 8/19/24 M6069

MACHEREY-NAGEL

Certificate of Analysis

Product information

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

Confirmation

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

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

MACHEREY-NAGEL GmbH & Co. KG
Valencienner Str. 11
52355 Düren · Germany
www.mn-net.com

DE Tel.: +49 24 21 969-0 info@mn-net.com
CH Tel.: +41 62 388 55 00 sales-ch@mn-net.com
FR Tel.: +33 388 68 22 68 sales-fr@mn-net.com
US Tel.: +1 888 321 62 24 sales-us@mn-net.com

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

avantor™ | J.T.Baker®

R → 10/13/24
Met dig

M 6121

Material No.: 9530-33
Batch No.: 0000275677
Manufactured Date: 2020/12/16
Retest Date: 2025/12/15
Revision No: 1

Certificate of Analysis

Test	Specification	Result
ACS - Assay (as HCl) (by acid-base titrn)	36.5 - 38.0 %	37.6
ACS - Color (APHA)	<= 10	5
ACS - Residue after Ignition	<= 3 ppm	1
ACS - Specific Gravity at 60°/60°F	1.185 - 1.192	1.190
ACS - Bromide (Br)	<= 0.005 %	< 0.005
ACS - Extractable Organic Substances	<= 5 ppm	1
ACS - Free Chlorine (as Cl_2)	<= 0.5 ppm	< 0.5
Phosphate (PO_4)	<= 0.05 ppm	< 0.03
Sulfate (SO_4)	<= 0.5 ppm	< 0.3
Sulfite (SO_3)	<= 0.8 ppm	0.3
Ammonium (NH_4)	<= 3 ppm	< 1
Trace Impurities - Arsenic (As)	<= 0.010 ppm	< 0.003
Trace Impurities - Aluminum (Al)	<= 10.0 ppb	< 0.2
Arsenic and Antimony (as As)	<= 5 ppb	< 3
Trace Impurities - Barium (Ba)	<= 1.0 ppb	< 0.2
Trace Impurities - Beryllium (Be)	<= 1.0 ppb	< 0.2
Trace Impurities - Bismuth (Bi)	<= 10.0 ppb	< 1.0
Trace Impurities - Boron (B)	<= 20.0 ppb	< 5.0
Trace Impurities - Cadmium (Cd)	<= 1.0 ppb	< 0.3
Trace Impurities - Calcium (Ca)	<= 50.0 ppb	29.7
Trace Impurities - Chromium (Cr)	<= 1.0 ppb	< 0.4
Trace Impurities - Cobalt (Co)	<= 1.0 ppb	< 0.3
Trace Impurities - Copper (Cu)	<= 1.0 ppb	< 0.1
Trace Impurities - Gallium (Ga)	<= 1.0 ppb	< 0.2

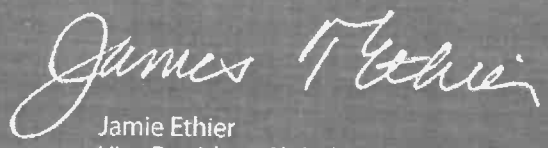
For questions on this Certificate of Analysis please contact Technical Services at 855.282.6867 or +1.610.386.1700
Avantor Performance Materials, LLC
100 Matsonford Rd, Suite 200, Radnor, PA 19087. U.S.A. Phone: 610.386.1700

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

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

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

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



Jamie Ethier
Vice President Global Quality

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

Sigma-Aldrich.

W 2979

Rec: 12/08/22

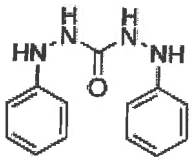
exp. 12/08/27

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

Certificate of Analysis

Product Name:
1,5-Diphenylcarbazide - ACS reagent

Product Number:	**259225**
Batch Number:	**MKCR6636**
Brand:	SIAL
CAS Number:	140-22-7
MDL Number:	MFCD00003013
Formula:	C13H14N4O
Formula Weight:	242.28 g/mol
Quality Release Date:	02 JUN 2022



Test	Specification	Result
Appearance (Color) Off-White to Pink, Light Purple or Tan	Conforms to Requirements	Pink
Appearance (Form)	Powder or Chunks	Powder
Melting Point	173.0 - 176.0 °C	173.0 °C
Infrared Spectrum	Conforms to Structure	Conforms
Residue on ignition (Ash) 15 minutes, 800 Degrees Celsius	≤ 0.05 %	0.01 %
Solubility	Pass	Pass
Sensitivity Test	Pass	Pass
Meets ACS Requirements	Current ACS Specification	Conforms

Larry Coers, Director
Quality Control
Milwaukee, WI US

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

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

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

Certificate of Analysis

Manganous Sulfate Solution, 364 g/L

Lot Number: 2403J02 **Product Number:** 4620

Manufacture Date: MAR 15, 2024
Expiration Date: MAR 2026

Name	CAS#	Grade
Water	7732-18-5	ACS/ASTM/USP/EP
Manganous Sulfate Monohydrate	10034-96-5	Reagent
Sulfuric Acid	7664-93-9	ACS

Test	Specification	Result
Appearance	Pink liquid	Passed
Assay (by Refractive Index)	360-368 g/L	367 g/L

Specification	Reference
Manganous Sulfate Solution	ASTM (D 888 A)
Manganous Sulfate Solution	ASTM (D 888 A)
Manganous Sulfate Solution	APHA (4500-O E)
Manganous Sulfate Solution	APHA (4500-O F)
Manganous Sulfate Solution	APHA (4500-O D)
Manganous Sulfate Solution	APHA (4500-O E)
Manganous Sulfate Solution	APHA (4500-O F)
Manganous Sulfate Solution	APHA (4500-O D)
Manganous Sulfate Solution	APHA (4500-O C)
Manganous Sulfate Solution	APHA (4500-O C)
Manganous Sulfate Solution	EPA (360.2)
Manganous Sulfate Solution	EPA (360.2)

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

Part Number	Size / Package Type	Shelf Life (Unopened Container)
4620-32	1 L natural poly	24 months

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

Jose Pena (03/15/2024)

Operations Manager

This document is designed to comply with ISO Guide 31 "Reference Materials -- Contents of Certificates and Labels."

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RICCA CHEMICAL COMPANY®

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

W3105 Received on 4/22/24 by IZ

Certificate of Analysis

Sodium Thiosulfate, 0.0250 Normal (N/40)

Lot Number: 4403S13 **Product Number:** 7900

Manufacture Date: MAR 29, 2024
Expiration Date: SEP 2025

This product is specially formulated to increase its stability. A preservative is added to prevent bacterial contamination. However, all Sodium Thiosulfate solutions are subject to slow chemical deterioration and should be restandardized periodically.

Name	CAS#	Grade
Water	7732-18-5	ACS/ASTM/USP/EP
Sodium Thiosulfate Pentahydrate	10102-17-7	ACS
Organic Preservative	Proprietary	
Sodium Carbonate	497-19-8	ACS

Test	Specification	Result	NIST SRM#
Appearance	Colorless liquid	Passed	
Assay (vs. Potassium Iodate/Starch)	0.02499-0.02501 N at 20°C	0.02501 N at 20°C	136

Specification	Reference
Standard Sodium Thiosulfate Solution, 0.0250 N	APHA (4500-S2- F)
Standard Sodium Thiosulfate Titrant	APHA (4500-O D)
Standard Sodium Thiosulfate Titrant	APHA (4500-O E)
Standard Sodium Thiosulfate Titrant	APHA (4500-O F)
Standard Sodium Thiosulfate Titrant, 0.025 N	APHA (4500-Cl B)
Standard Sodium Thiosulfate Titrant	APHA (4500-O C)
Standard Sodium Thiosulfate Titrant, 0.025 M	APHA (5530 C)
Standard Sodium Thiosulfate Solution (0.025 N)	EPA (SW-846) (9031)
Standard Sodium Thiosulfate solution (0.025 N)	EPA (SW-846) (9034)

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

Part Number	Size / Package Type	Shelf Life (Unopened Container)
7900-1	4 L natural poly	18 months
7900-16	500 mL natural poly	18 months
7900-1CT	4 L Cubitainer®	18 months
7900-32	1 L natural poly	18 months

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

Paul Brandon (03/29/2024)
Production Manager
This document is designed to comply with ISO Guide 31 "Reference Materials -- Contents of Certificates and Labels."

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RICCA CHEMICAL COMPANY®

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

Certificate of Analysis

Alkaline-Iodide-Azide, Pomeroy Formulation for Dissolved Oxygen (DO) Analysis

Lot Number: 1405D67 **Product Number:** 535

Manufacture Date: APR 05, 2024
Expiration Date: APR 2026

This solution is intended for use with samples with high Dissolved Oxygen content (above 15 mg/L) and for samples with high concentrations of organic material.

Name	CAS#	Grade
Water	7732-18-5	ACS/ASTM/USP/EP
Sodium Iodide	7681-82-5	ACS
Sodium Hydroxide	1310-73-2	ACS
Sodium Azide	26628-22-8	Reagent

Test	Specification	Result
Appearance	Colorless liquid	Passed
Free Iodine	To Pass Test	Passed

Specification	Reference
Alkaline Iodide-Sodium Azide Solution II	ASTM (D 888 A)

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

Part Number	Size / Package Type	Shelf Life (Unopened Container)
535-32	1 L natural poly	24 months

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

Heidi J Green (04/05/2024)
Operations Manager

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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.

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.

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: 2407F34 **Product Number:** 7495.5

Manufacture Date: JUL 12, 2024
Expiration Date: JAN 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	5.05 % (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 (07/12/2024)
Operations Manager

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Loveland, CO 80539
(970) 669-3050

An ISO 9001 Certified Company

Certificate of Analysis

This is a Component of 1486266 / LOT A4169

PRODUCT: BOD Nutrient Buffer Pillows

PRODUCT NUMBER: 1486227

LOT NUMBER: A4169

MANUFACTURE DATE: 06/24/2024

DATE OF ANALYSIS: 07/03/2024

TEST	SPECIFICATIONS	RESULTS
Calcium Concentration of a diluted pillow	0.93 to 1.29 ppm	0.960 ppm
Magnesium Concentration of a diluted pillow	0.35 to 0.48 ppm	0.390 ppm
pH in a 6 L of DI water	7.1 to 7.6	7.37
Ammonia Concentration of a diluted pillow	0.57 to 0.79 ppm	0.593 ppm
Iron Concentration of a diluted pillow	0.27 to 0.36 ppm	0.311 ppm
Sterility	To Pass	Passed
Phosphorus Concentration of a diluted pillow	7.6 to 10.3 ppm	8.32 ppm
Five Day Change in Dissolved Oxygen Concentration	-0.2 to 0.2 ppm	0.03 ppm

The expiration date is Jun 2029

Certified by: Scott Als

Analytical Services Chemist

RICCA CHEMICAL COMPANY®

W3149 Received on 10/16/24 by IZ

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

Certificate of Analysis

Starch Indicator, 0.5% (w/v), Mercury Free, for Iodometric Titrations

Lot Number: 4408P62 **Product Number:** 8000

Manufacture Date: AUG 28, 2024
Expiration Date: AUG 2026

This product is Mercury-free.

Name	CAS#	Grade
Water	7732-18-5	ACS/ASTM/USP/EP
Starch, soluble	9005-84-9	ACS
Salicylic Acid	69-72-7	ACS

Test	Specification	Result
Appearance	White translucent liquid	Passed
Suitability for Use	Colorless (Iodine absent) - Blue (Iodine present)	Passed

Specification	Reference
Starch Solution	APHA (4500-S2- F)
Starch Indicator Solution	APHA (4500-Cl B)
Starch Indicator	APHA (4500-SO32- B)
Starch indicator solution	APHA (2350 B)
Starch indicator solution	APHA (2350 E)
Starch Solution	APHA (510 B)
Starch Solution	APHA (5530 C)
Starch Indicator	APHA (4500-Cl C)
Starch Indicator	EPA (345.1)

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

Part Number	Size / Package Type	Shelf Life (Unopened Container)
8000-1	4 L natural poly	24 months
8000-16	500 mL natural poly	24 months
8000-32	1 L natural poly	24 months

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

Paul Brandon (08/28/2024)
Production Manager

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

avantor™ | J.T.Baker®

W3153 11/25/2024
08472a

Material No.: 9262-03
Batch No.: 24G1962003
Manufactured Date: 2024-05-23
Expiration Date: 2025-08-22
Revision No.: 0

Certificate of Analysis

Test	Specification	Result
FID-Sensitive Impurities (as 2-Octanol) Single Impurity Peak (ng/mL)	≤ 5	3
ECD Sensitive Impurities (as Heptachlor Epoxide) Single Peak (pg/mL)	≤ 10	1
ECD-Sensitive Impurities (as Ethylene Dibromide) - Single Impurity Peak (ng/mL)	≤ 5	1
Assay (Total Saturated C_6 Isomers) (by GC, corrected for water)	≥ 99.5 %	99.7 %
Assay (as n-Hexane) (by GC, corrected for water)	≥ 95 %	98 %
Color (APHA)	≤ 10	5
Residue after Evaporation	≤ 1.0 ppm	0.1 ppm
Substances Darkened by H_2SO_4	Passes Test	Passes Test
Water (by KF, coulometric)	≤ 0.05 %	< 0.01 %

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

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

JCroak
Jamie Croak
Director Quality Operations, Bioscience Production

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

SHIPPING DOCUMENTS

CHEMTECH
CHAIN OF CUSTODY RECORD

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

CHEMTECH PROJECT NO. P5139/40
QUOTE NO.
COC Number 2041878

CLIENT INFORMATION

REPORT TO BE SENT TO:
COMPANY: Tully Environmental Inc
ADDRESS: 57 Seaview Blvd
CITY Pt Washington STATE: NY ZIP: 11050
ATTENTION: D Deroe
PHONE: 718 4462000 FAX: 718 458 5199

CLIENT PROJECT INFORMATION

PROJECT NAME: Transfer Station SPDES
PROJECT NO.: 242113 LOCATION:
PROJECT MANAGER:
e-mail:
PHONE: FAX:

CLIENT BILLING INFORMATION

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

DATA TURNAROUND INFORMATION

FAX (RUSH) _____ DAYS*
HARDCOPY (DATA PACKAGE): _____ DAYS*
EDD: _____ DAYS*
*TO BE APPROVED BY CHEMTECH
STANDARD HARDCOPY TURNAROUND TIME IS 10 BUSINESS DAYS

DATA DELIVERABLE INFORMATION

- ☐ Level 1 (Results Only)
- ☐ Level 2 (Results + QC)
- ☐ Level 3 (Results + QC + Raw Data)
- ☐ Level 4 (QC + Full Raw Data)
- ☐ NJ Reduced ☐ US EPA CLP
- ☐ NYS ASP A ☐ NYS ASP B
- ☐ Other _____
- ☐ EDD FORMAT _____

ANALYSIS

1	2	3	4	5	6	7	8	9
Cu Fe Pb	BOD 5	TSS	Hg 1631 LL	BTEX	O&G	Ammonia		

CHEMTECH SAMPLE ID	PROJECT SAMPLE IDENTIFICATION	SAMPLE MATRIX	SAMPLE TYPE COMP	SAMPLE TYPE GRAB	SAMPLE COLLECTION DATE	SAMPLE COLLECTION TIME	# OF BOTTLES	PRESERVATIVES 1	2	3	4	5	6	7	8	9	COMMENTS
1.	001 Willets Pt Blvd (Dec)	W		X	12/4	2PD		X	X	X	X	X	X				
2.	002 35th Ave (Dec)	W		X	12/4	2PD		X	X	X	X	X	X				
3.																	
4.																	
5.																	
6.																	
7.																	
8.																	
9.																	
10.																	

← Specify Preservatives
A-HCl D-NaOH
B-HN03 E-ICE
C-H2SO4 F-OTHER

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

RELINQUISHED BY SAMPLER:	DATE/TIME:	RECEIVED BY:
1. D Deroe	12/4/24	1.
2. FedEx	12-5-24 1210	2.
3.		3.

Conditions of bottles or coolers at receipt: ☐ COMPLIANT ☐ NON COMPLIANT ☐ COOLER TEMP 3-3 °C
Comments:

Page ____ of ____

CLIENT: ☐ Hand Delivered ☐ Other _____
CHEMTECH: ☐ Picked Up ☐ Field Sampling

Shipment Complete ☐ YES ☐ NO

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

CHEMTECH 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

Alliance TECHNICAL GROUP

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

LOGIN REPORT/SAMPLE TRANSFER

Order ID : P5139 TULL01
Client Name : Tully Environmental, Inc
Client Contact : Dean Devoe
Invoice Name : Tully Environmental, Inc
Invoice Contact : Dean Devoe

Order Date : 12/5/2024 12:25:00 PM
Project Name : Transfer Station-SPDES
Receive DateTime : 12/5/2024 12:10:00 PM
Purchase Order :

Project Mgr :
Report Type : Results Only
EDD Type : EXCEL NOCLEANUP
Hard Copy Date :
Date Signoff :

LAB ID	CLIENT ID	MATRIX	SAMPLE DATE	SAMPLE TIME	TEST	TEST GROUP	METHOD	FAX DATE	DUE DATES
P5139-01	001-WILLETS-PT-BLVD(DEC)	Water	12/04/2024	14:00					
					VOC-BTEX		624.1		5 Bus. Days
P5139-02	002-35TH-AVE(DEC)	Water	12/04/2024	14:00					
					VOC-BTEX		624.1		5 Bus. Days

Relinguished By :
Date / Time : 12/5/24 1320

Received By :
Date / Time : 12-5-24 13:20

Storage Area : VOA Refridgerator Room