

DATA REPORTING QUALIFIERS- INORGANIC

For reporting results, the following “ Results Qualifiers” are used:

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

LAB CHRONICLE

OrderID:	Q2570	OrderDate:	7/10/2025 2:36:00 PM
Client:	Holland Manufacturing Co.	Project:	Pre Treatment Plant 2025
Contact:	Todd Holland	Location:	O31

LabID	ClientID	Matrix	Test	Method	Sample Date	Prep Date	Anal Date	Received
Q2570-02	AERATION	WATER			07/10/25 11:30			07/10/25
			TSS	SM2540 D			07/15/25 10:00	
Q2570-03	INFLUENT	WATER			07/10/25 11:30			07/10/25
			Ammonia	SM4500-NH3		07/14/25	07/14/25 12:13	
			BOD5	SM5210 B			07/11/25 14:40	
Q2570-03DL	INFLUENTDL	WATER			07/10/25 11:30			07/10/25
			Ammonia	SM4500-NH3		07/14/25	07/14/25 12:38	
Q2570-07	EFFLUENT	WATER			07/10/25 11:30			07/10/25
			Ammonia	SM4500-NH3		07/14/25	07/14/25 12:13	
			BOD5	SM5210 B			07/11/25 14:40	
			Oil and Grease	1664A			07/16/25 09:30	
			Phosphorus-Ortho	SM4500-P E			07/11/25 12:06	
			Phosphorus-Total	365.3		07/11/25	07/11/25 13:52	
			TSS	SM2540 D			07/15/25 10:00	

LAB CHRONICLE

Q2570-07DL

EFFLUENTDL

WATER

**07/10/25
11:30**

07/10/25

Ammonia

SM4500-NH3

07/14/25

07/14/25
12:39



SAMPLE DATA

Report of Analysis

Client:	Holland Manufacturing Co.	Date Collected:	07/10/25 11:30
Project:	Pre Treatment Plant 2025	Date Received:	07/10/25
Client Sample ID:	AERATION	SDG No.:	Q2570
Lab Sample ID:	Q2570-02	Matrix:	WATER
		% Solid:	0

Parameter	Conc.	Qua.	DF	MDL	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
TSS	299		1	1.00	4.00	mg/L		07/15/25 10:00	SM 2540 D-20

Comments: _____

U = Not Detected

LOQ = Limit of Quantitation

MDL = Method Detection Limit

LOD = Limit of Detection

D = Dilution

Q = indicates LCS control criteria did not meet requirements

H = Sample Analysis Out Of Hold Time

J = Estimated Value

B = Analyte Found in Associated Method Blank

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

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

OR = Over Range

N =Spiked sample recovery not within control limits

Report of Analysis

Client:	Holland Manufacturing Co.	Date Collected:	07/10/25 11:30
Project:	Pre Treatment Plant 2025	Date Received:	07/10/25
Client Sample ID:	INFLUENT	SDG No.:	Q2570
Lab Sample ID:	Q2570-03	Matrix:	WATER
		% Solid:	0

Parameter	Conc.	Qua.	DF	MDL	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
Ammonia as N	521	OR	1	1.50	5.00	mg/L	07/14/25 08:45	07/14/25 12:13	SM 4500-NH3 B plus G-21
BOD5	17800		1	0.20	2.00	mg/L		07/11/25 14:40	SM 5210 B-16

Comments: _____

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

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

Report of Analysis

Client:	Holland Manufacturing Co.	Date Collected:	07/10/25 11:30
Project:	Pre Treatment Plant 2025	Date Received:	07/10/25
Client Sample ID:	INFLUENTDL	SDG No.:	Q2570
Lab Sample ID:	Q2570-03DL	Matrix:	WATER
		% Solid:	0

Parameter	Conc.	Qua.	DF	MDL	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
Ammonia as N	483	D	10	15.0	50.0	mg/L	07/14/25 08:45	07/14/25 12:38	SM 4500-NH3 B plus G-21

Comments: _____

U = Not Detected

LOQ = Limit of Quantitation

MDL = Method Detection Limit

LOD = Limit of Detection

D = Dilution

Q = indicates LCS control criteria did not meet requirements

H = Sample Analysis Out Of Hold Time

J = Estimated Value

B = Analyte Found in Associated Method Blank

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

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

OR = Over Range

N = Spiked sample recovery not within control limits

Report of Analysis

Client:	Holland Manufacturing Co.	Date Collected:	07/10/25 11:30
Project:	Pre Treatment Plant 2025	Date Received:	07/10/25
Client Sample ID:	EFFLUENT	SDG No.:	Q2570
Lab Sample ID:	Q2570-07	Matrix:	WATER
		% Solid:	0

Parameter	Conc.	Qua.	DF	MDL	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
Ammonia as N	439	OR	1	1.50	5.00	mg/L	07/14/25 08:45	07/14/25 12:13	SM 4500-NH3 B plus G-21
BOD5	2090		1	0.20	2.00	mg/L		07/11/25 14:40	SM 5210 B-16
Oil and Grease	33.6		1	0.29	5.00	mg/L		07/16/25 09:30	1664A
Orthophosphate as P	0.14		1	0.0040	0.050	mg/L		07/11/25 12:06	SM 4500-P E-21
Phosphorus, Total	0.70		1	0.0050	0.050	mg/L	07/11/25 11:35	07/11/25 13:52	365.3
TSS	549		1	1.00	4.00	mg/L		07/15/25 10:00	SM 2540 D-20

Comments:

U = Not Detected

LOQ = Limit of Quantitation

MDL = Method Detection Limit

LOD = Limit of Detection

D = Dilution

Q = indicates LCS control criteria did not meet requirements

H = Sample Analysis Out Of Hold Time

J = Estimated Value

B = Analyte Found in Associated Method Blank

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

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

OR = Over Range

N = Spiked sample recovery not within control limits

Report of Analysis

Client:	Holland Manufacturing Co.	Date Collected:	07/10/25 11:30
Project:	Pre Treatment Plant 2025	Date Received:	07/10/25
Client Sample ID:	EFFLUENTDL	SDG No.:	Q2570
Lab Sample ID:	Q2570-07DL	Matrix:	WATER
		% Solid:	0

Parameter	Conc.	Qua.	DF	MDL	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
Ammonia as N	400	D	10	15.0	50.0	mg/L	07/14/25 08:45	07/14/25 12:39	SM 4500-NH3 B plus G-21

Comments: _____

U = Not Detected

LOQ = Limit of Quantitation

MDL = Method Detection Limit

LOD = Limit of Detection

D = Dilution

Q = indicates LCS control criteria did not meet requirements

H = Sample Analysis Out Of Hold Time

J = Estimated Value

B = Analyte Found in Associated Method Blank

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

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

OR = Over Range

N =Spiked sample recovery not within control limits



QC RESULT SUMMARY

Initial and Continuing Calibration Verification

Client: Holland Manufacturing Co.

SDG No.: Q2570

Project: Pre Treatment Plant 2025

RunNo.: LB136445

Analyte	Units	Result	True Value	% Recovery	Acceptance Window (%R)	Analysis Date
Sample ID: ICV Orthophosphate as P	mg/L	0.490	0.50	98	90-110	07/11/2025
Sample ID: CCV1 Orthophosphate as P	mg/L	0.502	0.5	100	90-110	07/11/2025
Sample ID: CCV2 Orthophosphate as P	mg/L	0.492	0.5	98	90-110	07/11/2025

Initial and Continuing Calibration Verification

Client: Holland Manufacturing Co.

SDG No.: Q2570

Project: Pre Treatment Plant 2025

RunNo.: LB136450

Analyte	Units	Result	True Value	% Recovery	Acceptance Window (%R)	Analysis Date
Sample ID: ICV Phosphorus, Total	mg/L	0.504	0.50	101	90-110	07/11/2025
Sample ID: CCV1 Phosphorus, Total	mg/L	0.493	0.50	99	90-110	07/11/2025
Sample ID: CCV2 Phosphorus, Total	mg/L	0.495	0.50	99	90-110	07/11/2025

Initial and Continuing Calibration Verification

Client: Holland Manufacturing Co.

SDG No.: Q2570

Project: Pre Treatment Plant 2025

RunNo.: LB136459

Analyte	Units	Result	True Value	% Recovery	Acceptance Window (%R)	Analysis Date
Sample ID: ICV1 Ammonia as N	mg/L	0.99	1	99	90-110	07/14/2025
Sample ID: CCV1 Ammonia as N	mg/L	1	1	100	90-110	07/14/2025
Sample ID: CCV2 Ammonia as N	mg/L	0.98	1	98	90-110	07/14/2025
Sample ID: CCV3 Ammonia as N	mg/L	1	1	100	90-110	07/14/2025
Sample ID: CCV4 Ammonia as N	mg/L	1	1	100	90-110	07/14/2025

Initial and Continuing Calibration Blank Summary

Client: Holland Manufacturing Co.

SDG No.: Q2570

Project: Pre Treatment Plant 2025

RunNo.: LB136445

Analyte	Units	Result	Acceptance Limits	Conc Qual	MDL	RDL	Analysis Date
Sample ID: ICB Orthophosphate as P	mg/L	< 0.0250	0.0250	U	0.0038	0.05	07/11/2025
Sample ID: CCB1 Orthophosphate as P	mg/L	< 0.0250	0.0250	U	0.0038	0.05	07/11/2025
Sample ID: CCB2 Orthophosphate as P	mg/L	< 0.0250	0.0250	U	0.0038	0.05	07/11/2025

Initial and Continuing Calibration Blank Summary

Client: Holland Manufacturing Co.

SDG No.: Q2570

Project: Pre Treatment Plant 2025

RunNo.: LB136450

Analyte	Units	Result	Acceptance Limits	Conc Qual	MDL	RDL	Analysis Date
Sample ID: ICB Phosphorus, Total	mg/L	0.007	0.0250	J	0.0045	0.05	07/11/2025
Sample ID: CCB1 Phosphorus, Total	mg/L	0.008	0.0250	J	0.0045	0.05	07/11/2025
Sample ID: CCB2 Phosphorus, Total	mg/L	0.007	0.0250	J	0.0045	0.05	07/11/2025

Initial and Continuing Calibration Blank Summary

Client: Holland Manufacturing Co.

SDG No.: Q2570

Project: Pre Treatment Plant 2025

RunNo.: LB136459

Analyte	Units	Result	Acceptance Limits	Conc Qual	MDL	RDL	Analysis Date
Sample ID: ICB1 Ammonia as N	mg/L	< 0.0500	0.0500	U	0.030	0.1	07/14/2025
Sample ID: CCB1 Ammonia as N	mg/L	< 0.0500	0.0500	U	0.030	0.1	07/14/2025
Sample ID: CCB2 Ammonia as N	mg/L	< 0.0500	0.0500	U	0.030	0.1	07/14/2025
Sample ID: CCB3 Ammonia as N	mg/L	< 0.0500	0.0500	U	0.030	0.1	07/14/2025
Sample ID: CCB4 Ammonia as N	mg/L	< 0.0500	0.0500	U	0.030	0.1	07/14/2025

Preparation Blank Summary

Client: Holland Manufacturing Co.

SDG No.: Q2570

Project: Pre Treatment Plant 2025

Analyte	Units	Result	Acceptance Limits	Conc Qual	MDL	RDL	Analysis Date
Sample ID: LB136441BL BOD5	mg/L	< 0.2000	0.2000	U	0.20	2.0	07/11/2025
Sample ID: LB136445BL Orthophosphate as P	mg/L	0.005	0.0250	J	0.004	0.05	07/11/2025
Sample ID: LB136471BL TSS	mg/L	1	2.0000	J	1	4	07/15/2025
Sample ID: LB136493BL Oil and Grease	mg/L	< 2.5000	2.5000	U	0.29	5.0	07/16/2025
Sample ID: PB168824BL Phosphorus, Total	mg/L	0.01	0.0250	J	0.005	0.05	07/11/2025
Sample ID: PB168835BL Ammonia as N	mg/L	< 0.0500	0.0500	U	0.03	0.1	07/14/2025

Matrix Spike Summary

Client:	Holland Manufacturing Co.	SDG No.:	Q2570
Project:	Pre Treatment Plant 2025	Sample ID:	Q2536-01
Client ID:	RW5-SP100-20250708MS	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	0.99		0.030	U	1	1	99		07/14/2025

Matrix Spike Summary

Client:	Holland Manufacturing Co.	SDG No.:	Q2570
Project:	Pre Treatment Plant 2025	Sample ID:	Q2536-01
Client ID:	RW5-SP100-20250708MSD	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	1.00		0.030	U	1	1	100		07/14/2025

Matrix Spike Summary

Client:	Holland Manufacturing Co.	SDG No.:	Q2570
Project:	Pre Treatment Plant 2025	Sample ID:	Q2570-07
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
Orthophosphate as P	mg/L	90-110	0.61		0.14		0.5	1	95		07/11/2025
Phosphorus, Total	mg/L	90-110	1.17	D	0.70		0.5	2	93		07/11/2025

Matrix Spike Summary

Client:	Holland Manufacturing Co.	SDG No.:	Q2570
Project:	Pre Treatment Plant 2025	Sample ID:	Q2570-07
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
Orthophosphate as P	mg/L	90-110	0.62		0.14		0.5	1	96		07/11/2025
Phosphorus, Total	mg/L	90-110	1.18	D	0.70		0.5	2	95		07/11/2025

Matrix Spike Summary

Client:	Holland Manufacturing Co.	SDG No.:	Q2570
Project:	Pre Treatment Plant 2025	Sample ID:	Q2570-07
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	53.7		33.6		20.0	1	101		07/16/2025

Matrix Spike Summary

Client:	Holland Manufacturing Co.	SDG No.:	Q2570
Project:	Pre Treatment Plant 2025	Sample ID:	Q2570-07
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	53.8		33.6		20.0	1	101		07/16/2025

Duplicate Sample Summary

Client:	Holland Manufacturing Co.	SDG No.:	Q2570
Project:	Pre Treatment Plant 2025	Sample ID:	Q2536-01
Client ID:	RW5-SP100-20250708DUP	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	0.030	U	0.030	U	1	0		07/14/2025

Duplicate Sample Summary

Client:	Holland Manufacturing Co.	SDG No.:	Q2570
Project:	Pre Treatment Plant 2025	Sample ID:	Q2536-01
Client ID:	RW5-SP100-20250708MSD	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	0.99		1.00		1	1		07/14/2025

Duplicate Sample Summary

Client: Holland Manufacturing Co.	SDG No.: Q2570
Project: Pre Treatment Plant 2025	Sample ID: Q2565-01
Client ID: MOO-25-0192-0193DUP	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	6620		6630		1	0.09		07/15/2025

Duplicate Sample Summary

Client: Holland Manufacturing Co.	SDG No.: Q2570
Project: Pre Treatment Plant 2025	Sample ID: Q2570-07
Client ID: EFFLUENTDUP	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
Orthophosphate as P	mg/L	+/-20	0.14		0.14		1	1.46		07/11/2025
Phosphorus, Total	mg/L	+/-20	0.70		0.70		1	0.57		07/11/2025

Duplicate Sample Summary

Client: Holland Manufacturing Co.	SDG No.: Q2570
Project: Pre Treatment Plant 2025	Sample ID: Q2570-07
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
Orthophosphate as P	mg/L	+/-20	0.61		0.62		1	0.49		07/11/2025
Phosphorus, Total	mg/L	+/-20	1.17	D	1.18	D	2	0.85		07/11/2025

Duplicate Sample Summary

Client:	Holland Manufacturing Co.	SDG No.:	Q2570
Project:	Pre Treatment Plant 2025	Sample ID:	Q2570-07
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	53.7		53.8		1	0.19		07/16/2025

Duplicate Sample Summary

Client:	Holland Manufacturing Co.	SDG No.:	Q2570
Project:	Pre Treatment Plant 2025	Sample ID:	Q2585-04
Client ID:	EFF-WWDUP	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	422		443		1	4.86		07/11/2025

Laboratory Control Sample Summary

Client: Holland Manufacturing Co.

SDG No.: Q2570

Project: Pre Treatment Plant 2025

Run No.: LB136441

Analyte	Units	True Value	Result	Conc. Qualifier	% Recovery	Dilution Factor	Acceptance Limit %R	Analysis Date
Sample ID	LB136441BS							
BOD5	mg/L	198	181		91	1	84.6-115.4	07/11/2025

Laboratory Control Sample Summary

Client: Holland Manufacturing Co.

SDG No.: Q2570

Project: Pre Treatment Plant 2025

Run No.: LB136445

Analyte	Units	True Value	Result	Conc. Qualifier	% Recovery	Dilution Factor	Acceptance Limit %R	Analysis Date
Sample ID	LB136445BS							
Orthophosphate as P	mg/L	0.5	0.49		98	1	90-110	07/11/2025

Laboratory Control Sample Summary

Client: Holland Manufacturing Co.

SDG No.: Q2570

Project: Pre Treatment Plant 2025

Run No.: LB136471

Analyte	Units	True Value	Result	Conc. Qualifier	% Recovery	Dilution Factor	Acceptance Limit %R	Analysis Date
Sample ID	LB136471BS							
TSS	mg/L	550	533		97	1	90-110	07/15/2025

Laboratory Control Sample Summary

Client: Holland Manufacturing Co.

SDG No.: Q2570

Project: Pre Treatment Plant 2025

Run No.: LB136493

Analyte	Units	True Value	Result	Conc. Qualifier	% Recovery	Dilution Factor	Acceptance Limit %R	Analysis Date
Sample ID	LB136493BS							
Oil and Grease	mg/L	20.0	16.8		84	1	78-114	07/16/2025

Laboratory Control Sample Summary

Client: Holland Manufacturing Co.

SDG No.: Q2570

Project: Pre Treatment Plant 2025

Run No.: LB136450

Analyte	Units	True Value	Result	Conc. Qualifier	% Recovery	Dilution Factor	Acceptance Limit %R	Analysis Date
Sample ID	PB168824BS							
Phosphorus, Total	mg/L	0.50	0.50		100	1	90-110	07/11/2025

Laboratory Control Sample Summary

Client: Holland Manufacturing Co.

SDG No.: Q2570

Project: Pre Treatment Plant 2025

Run No.: LB136459

Analyte	Units	True Value	Result	Conc. Qualifier	% Recovery	Dilution Factor	Acceptance Limit %R	Analysis Date
Sample ID	PB168835BS							
Ammonia as N	mg/L	1	0.96		96	1	90-110	07/14/2025



RAW DATA

BOD5 LOG

ANALYST: rubin
Inst Id :DO METER
LB :LB136441

Reviewed By:Iwona
On:7/16/2025 4:30:40
PM

SUPERVISOR: Iwona

QC BATCH ID: LB136441

Analysis Date: 07/11/2025

BOD Water: WP113918

MANGANOUS SULFATE SOLUTION: W3103

Starch: W3149

Alkaline Iodide Azide: W3109

Sulfuric acid, 1N: WP112832

Sodium Thiosulfate, 0.025N: W3105

POLYSEED: WP113920

NaOH, 1N: WP113878

GGA: WP113919

IncubatorID: INCUBATOR #3

Chlorine Strips: W3155

GuageID: 0511064

pH Strips: W3215

Zero DO: WP113605

Lab SampleID	Client ID	Bottle No.	VOL. ML	Initial Reading (ML)	Final Reading (ML)	Difference	Average
WINKLER 1	WINKLER 1	1	300	0.0	9.6	9.6	9.6
WINKLER 2	WINKLER 2	2	300	9.8	19.4	9.6	9.6

Meter Calibration1: 9.14

Zero DO Reading1: 0.15 mg/L (<=0.2 Criteria)

Barometric Pressure1: 760 mmHg DO Meter BOD fluid reading for winkler comparison: 9.64

After Incubation

Meter Calibration2: 8.74

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

Barometric Pressure2: 760 mmHg

QC BATCH ID: LB136441

INCUBATOR TEMP IN(C): 20.0

INCUBATOR TEMP OUT(C): 20.5

TIME IN: 14:40

TIME OUT: 13:10

DATE IN: 07/11/2025

DATE OUT: 07/16/2025

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
LB136441BL	1	No	6.64	N/A	20.90	300	9.64	9.62	0.02	0.02	0.02	
POLYSEED	1					10	9.56	6.79	2.77	0.55	0.61	
POLYSEED	2					15	9.54	4.65	4.89	0.65		
POLYSEED	3					20	9.50	3.19	6.31	0.63		
GGA	1					6	9.55	5.39	4.16	177.5	181	
GGA	2					6	9.52	5.30	4.22	180.5		
GGA	3					6	9.52	5.21	4.31	185		
Q2565-01	1	No	6.86	N/A	20.70	5	9.45	1.00	8.45	470.4	470.4	
Q2565-01	2					20	8.78	0.15	-	0		
Q2565-01	3					50	7.28	0.12	-	0		
Q2565-01	4					150	2.50	0.07	-	0		
Q2570-03	1	No	4.79	7.01	20.80	1	9.55	7.99	-	0	17820	pH Adjuster
Q2570-03	2					5	9.52	6.15	3.37	16560		
Q2570-03	3					10	9.40	2.43	6.97	19080		
Q2570-03	4					50	9.38	0.23	-	0		
Q2570-03	5					100	9.21	0.17	-	0		
Q2570-07	1	No	8.25	7.24	20.80	1	9.60	8.80	-	0	2092.5	pH Adjuster
Q2570-07	2					5	9.55	8.47	-	0		
Q2570-07	3					10	9.52	8.07	-	0		
Q2570-07	4					50	9.43	4.93	4.5	2334		
Q2570-07	5					100	9.23	2.45	6.78	1851		
Q2585-04	1	No	7.10	N/A	20.80	5	9.47	8.83	-	0	422	
Q2585-04	2					10	9.43	8.02	-	0		
Q2585-04	3					20	9.40	7.79	-	0		
Q2585-04	4					30	9.36	4.53	4.83	422		
Q2585-04DUP	1	No	7.10	N/A	20.80	5	9.48	8.70	-	0	443	
Q2585-04DUP	2					10	9.42	8.18	-	0		
Q2585-04DUP	3					20	9.40	7.60	-	0		
Q2585-04DUP	4					30	9.34	4.30	5.04	443		
Q2588-01	1	No	4.73	6.89	20.80	5	9.54	1.00	8.54	475.8	475.8	pH Adjuster
Q2588-01	2					20	8.98	0.18	-	0		
Q2588-01	3					50	8.30	0.16	-	0		
Q2588-01	4					150	5.70	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.

Analytical Summary Report

Analysis Method: SM4500-P E

ANALYST: Eman

Parameter: Phosphorus-Ortho

SUPERVISOR REVIEW BY: Iwona

Run Number: LB136445

Reagent/Standard	Lot/Log #
calibration std. phosphate 1 ppm	WP113871
calibration std. phosphate 0.5 ppm	WP113870
calibration std. phosphate 0.3 ppm	WP113869
calibration std. phosphate 0.1 ppm	WP113868
calibration std. phosphate 0.05 ppm	WP113867
calibration std. 0 ppm	WP113866
phosphate CCV std.	WP113872
5N sulfuric acid	WP112831
Combined reagent	WP113917
Phenolphthalein indicator	WP113378
Sodium hydroxide, 1N	WP113878
Phosphate ICV-LCS Std	WP113873

Intercept: -0.0001

Slope: 0.6552

Regression: 0.999927

Seq	Lab ID	True Value (mg/L)	DF	Initial Volume (mL)	Final Volume (mL)	Absorbance Reading at 880nm	Result (mg/L)	%D	AnalDate	AnalTime
1	CAL1	0.00	1	50	50	0.000	0		07/11/2025	12:00
2	CAL2	0.05	1	50	50	0.037	0.057	14	07/11/2025	12:00
3	CAL3	0.10	1	50	50	0.065	0.099	-1	07/11/2025	12:01
4	CAL4	0.30	1	50	50	0.192	0.293	-2.3	07/11/2025	12:01
5	CAL5	0.50	1	50	50	0.326	0.498	-0.4	07/11/2025	12:02
6	CAL6	1.00	1	50	50	0.657	1.003	0.3	07/11/2025	12:02

Analysis Method: SM4500-P E

ANALYST: Eman

Parameter: Phosphorus-Ortho

SUPERVISOR REVIEW BY: Iwona

Run Number: LB136445

Seq	Lab ID	True Value (mg/l)	DF	Initial Volume (mL)	Final Volume (mL)	Absorbance Reading at 880nm	Result (mg/L)	AnalDate	AnalTime
1	ICV	0.50	1	50	50	0.321	0.490	07/11/2025	12:03
2	ICB		1	50	50	0.002	0.003	07/11/2025	12:03
3	CCV1	0.5	1	50	50	0.329	0.502	07/11/2025	12:04
4	CCB1		1	50	50	0.001	0.002	07/11/2025	12:04
5	RL Check	0.05	1	50	50	0.034	0.052	07/11/2025	12:05
6	LB136445BL		1	50	50	0.003	0.005	07/11/2025	12:05
7	LB136445BS	0.5	1	50	50	0.322	0.492	07/11/2025	12:06
8	Q2570-07		1	50	50	0.089	0.136	07/11/2025	12:06
9	Q2570-07DUP		1	50	50	0.090	0.138	07/11/2025	12:07
10	Q2570-07MS	0.5	1	50	50	0.401	0.612	07/11/2025	12:07
11	Q2570-07MSD	0.5	1	50	50	0.403	0.615	07/11/2025	12:08
12	CCV2	0.5	1	50	50	0.322	0.492	07/11/2025	12:08
13	CCB2		1	50	50	0.002	0.003	07/11/2025	12:09

WORKLIST(Hardcopy Internal Chain)

LB136445

WorkList Name : ORTHO PH- 071125

WorkList ID : 190666

Department : Wet-Chemistry

Date : 07-11-2025 10:44:15

Sample	Customer Sample	Matrix	Test	Preservative	Customer	Raw Sample Storage Location	Collect Date	Method
Q2570-07	EFFLUENT	Water	Phosphorus-Ortho	Cool 4 deg C	HOLL01	O31	07/10/2025	SM4500-P E

Date/Time 07/11/25 10:55
 Raw Sample Received by: EM(woc)
 Raw Sample Relinquished by: JP(woc)

Date/Time 07/11/25 11:50
 Raw Sample Received by: JP(woc)
 Raw Sample Relinquished by: EM(woc)

Analytical Summary Report

Analysis Method: 365.3
Parameter: Phosphorus-Total
Run Number: LB136450

ANALYST: Eman
SUPERVISOR REVIEW BY: Iwona

Reagent/Standard	Lot/Log #
calibration std. phosphate 1 ppm	WP113871
calibration std. phosphate 0.5 ppm	WP113870
calibration std. phosphate 0.3 ppm	WP113869
calibration std. phosphate 0.1 ppm	WP113868
calibration std. phosphate 0.05 ppm	WP113867
calibration std. 0 ppm	WP113866
phosphate CCV std.	WP113872
5N sulfuric acid	WP112831
Combined reagent	WP113917
Phenolphthalein indicator	WP113378
Sodium hydroxide, 1N	WP113878
Phosphate ICV-LCS Std	WP113873

Intercept: -0.0024 Slope: 0.6534 Regression: 0.999791

Seq	Lab ID	True Value (mg/L)	DF	Initial Volume (mL)	Final Volume (mL)	Absorbance Reading at 880nm	Result (mg/L)	%D	AnalDate	AnalTime
1	CAL1	0.00	1	50	50	0.000	0.004		07/11/2025	13:45
2	CAL2	0.05	1	50	50	0.035	0.057	14	07/11/2025	13:45
3	CAL3	0.10	1	50	50	0.062	0.099	-1	07/11/2025	13:46
4	CAL4	0.30	1	50	50	0.184	0.285	-5	07/11/2025	13:46
5	CAL5	0.50	1	50	50	0.326	0.503	0.6	07/11/2025	13:47
6	CAL6	1.00	1	50	50	0.653	1.003	0.3	07/11/2025	13:47

Analytical Summary Report

Analysis Method: 365.3

ANALYST: Eman

Parameter: Phosphorus-Total

SUPERVISOR REVIEW BY: Iwona

Run Number: LB136450

Seq	Lab ID	True Value (mg/l)	DF	Initial Volume (mL)	Final Volume (mL)	Absorbance Reading at 880nm	Result (mg/L)	AnalDate	AnalTime
1	ICV	0.50	1	50	50	0.327	0.504	07/11/2025	13:48
2	ICB		1	50	50	0.002	0.007	07/11/2025	13:48
3	CCV1	0.50	1	50	50	0.320	0.493	07/11/2025	13:49
4	CCB1		1	50	50	0.003	0.008	07/11/2025	13:50
5	RL Check		1	50	50	0.033	0.054	07/11/2025	13:50
6	PB168824BL		1	50	50	0.004	0.010	07/11/2025	13:51
7	PB168824BS	0.50	1	50	50	0.324	0.500	07/11/2025	13:51
8	Q2570-07		1	50	50	0.457	0.703	07/11/2025	13:52
9	Q2570-07DUP		1	50	50	0.454	0.699	07/11/2025	13:52
10	Q2570-07MS	0.50	1	50	50	0.724	1.112	07/11/2025	13:53
11	Q2570-07MSD	0.50	1	50	50	0.744	1.142	07/11/2025	13:53
12	Q2570-07MS	0.50	2	50	50	0.381	0.587	07/11/2025	13:54
13	Q2570-07MSD	0.50	2	50	50	0.383	0.590	07/11/2025	13:55
14	CCV2	0.50	1	50	50	0.321	0.495	07/11/2025	13:55
15	CCB2		1	50	50	0.002	0.007	07/11/2025	13:56

LB136459

Test results

Aquakem 7.2AQ1

Page:

Alliance Technical Group
284 Sheffield Street, Mountainside, NJ 07092

7/14/2025 12:41

Reviewed by : RM Instrument ID : Konelab

Test: Ammonia-N

Sample Id	Result	Dil. 1 +	Response	Errors
ICV1	0.993	0.0	0.210	
ICB1	0.008	0.0	0.019	
CCV1	1.017	0.0	0.215	
CCB1	0.008	0.0	0.019	
RL CHECK	0.093	0.0	0.035	
PB168835BL	0.001	0.0	0.017	
PB168835BS	0.962	0.0	0.204	
Q2536-01	0.003	0.0	0.018	
Q2536-01DUP	0.008	0.0	0.019	
Q2536-01MS	0.993	0.0	0.210	
Q2536-01MSD	1.027	0.0	0.217	
Q2536-02	0.009	0.0	0.019	
Q2536-03	0.005	0.0	0.018	
Q2565-01	-0.059	0.0	0.006	
CCV2	0.980	0.0	0.208	
CCB2	0.004	0.0	0.018	
Q2570-03	10.428	0.0	2.046	Test limit high
Q2570-07	8.777	0.0	1.724	Test limit high
CCV3	1.030	0.0	0.217	
CCB3	0.004	0.0	0.018	
Q2570-03DLX10	0.965	0.0	0.205	
Q2570-07DLX10	0.799	0.0	0.173	
CCV4	1.002	0.0	0.212	
CCB4	-0.003	0.0	0.017	
N	24			
Mean	1.211			
SD	2.6390			
CV%	217.99			

93% (50-150)

07/14/2025

RM

Aquakem v. 7.2AQ1

Results from time period:

Mon Jul 14 10:59:54 2025

Mon Jul 14 12:39:05 2025

Sample Id	Sam/Ctr/c/	Test short r	Test type	Result	Result unit	Result date and time	Stat
0.0PPM	A	Ammonia-† P		0.0074	mg/l	7/14/2025 10:59:54	
0.1PPM	A	Ammonia-† P		0.1037	mg/l	7/14/2025 10:59:55	
0.2PPM	A	Ammonia-† P		0.1989	mg/l	7/14/2025 10:59:56	
0.4PPM	A	Ammonia-† P		0.3879	mg/l	7/14/2025 10:59:57	
1.0PPM	A	Ammonia-† P		0.9878	mg/l	7/14/2025 10:59:58	
1.3PPM	A	Ammonia-† P		1.3509	mg/l	7/14/2025 10:59:59	
2.0PPM	A	Ammonia-† P		1.9967	mg/l	7/14/2025 11:00:00	
ICV1	S	Ammonia-† P		0.9934	mg/l	7/14/2025 11:52:22	
ICB1	S	Ammonia-† P		0.0077	mg/l	7/14/2025 11:52:23	
CCV1	S	Ammonia-† P		1.0169	mg/l	7/14/2025 11:52:25	
CCB1	S	Ammonia-† P		0.0084	mg/l	7/14/2025 11:52:27	
RL CHECK	S	Ammonia-† P		0.0928	mg/l	7/14/2025 11:52:29	
PB168835BL	S	Ammonia-† P		0.0014	mg/l	7/14/2025 12:03:05	
PB168835BS	S	Ammonia-† P		0.9616	mg/l	7/14/2025 12:03:08	
Q2536-01	S	Ammonia-† P		0.0027	mg/l	7/14/2025 12:03:09	
Q2536-01DUP	S	Ammonia-† P		0.0082	mg/l	7/14/2025 12:03:10	
Q2536-01MS	S	Ammonia-† P		0.9932	mg/l	7/14/2025 12:03:12	
Q2536-01MSD	S	Ammonia-† P		1.0271	mg/l	7/14/2025 12:03:13	
Q2536-02	S	Ammonia-† P		0.0093	mg/l	7/14/2025 12:03:15	
Q2536-03	S	Ammonia-† P		0.0051	mg/l	7/14/2025 12:03:16	
Q2565-01	S	Ammonia-† P		-0.0587	mg/l	7/14/2025 12:13:46	
CCV2	S	Ammonia-† P		0.9803	mg/l	7/14/2025 12:13:47	
CCB2	S	Ammonia-† P		0.0043	mg/l	7/14/2025 12:13:49	
Q2570-03	S	Ammonia-† P		10.4277	mg/l	7/14/2025 12:13:51	
Q2570-07	S	Ammonia-† P		8.7765	mg/l	7/14/2025 12:13:52	
CCV3	S	Ammonia-† P		1.0296	mg/l	7/14/2025 12:13:53	
CCB3	S	Ammonia-† P		0.0036	mg/l	7/14/2025 12:13:56	
Q2570-03DLX10	S	Ammonia-† P		0.9654	mg/l	7/14/2025 12:38:59	
Q2570-07DLX10	S	Ammonia-† P		0.799	mg/l	7/14/2025 12:39:01	
CCV4	S	Ammonia-† P		1.0024	mg/l	7/14/2025 12:39:02	
CCB4	S	Ammonia-† P		-0.0026	mg/l	7/14/2025 12:39:05	

Calibration results

Aquakem 7.2AQ1

Page: 1

Alliance Technical Group
284 Sheffield Street, Mountainside, NJ 07092

7/14/2025 11:07

Reviewed by : RM

Instrument ID : Konelab

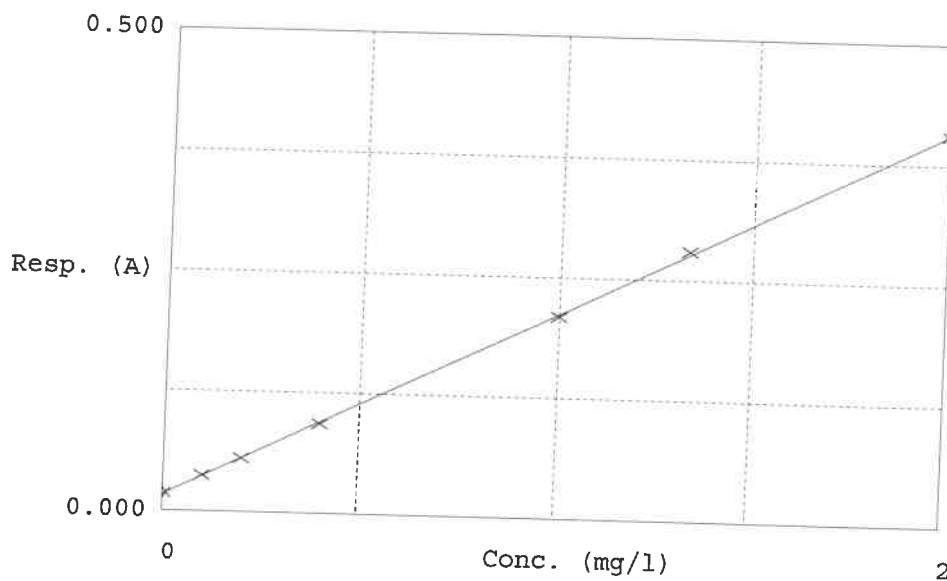
Test Ammonia-N

Accepted 7/14/2025 11:07

Factor 5.141
Bias 0.017

Coeff. of det. 0.999798

Errors



	Calibrator	Response	Calc. con.	Conc.	Errors
1	0.00PPM	0.019	0.0074	0.0000	-
2	NH3-2PPM	0.037	0.1037	0.1000	3.7
3	NH3-2PPM	0.056	0.1989	0.2000	-0.6
4	NH3-2PPM	0.093	0.3879	0.4000	-3.0
5	NH3-2PPM	0.209	0.9878	1.0000	-1.2
6	NH3-2PPM	0.280	1.3509	1.3333	3.9
7	NH3-2PPM	0.406	1.9967	2.0000	-0.2

07/14/2025
RM

TOTAL SUSPENDED SOLIDS - SM2540D

SUPERVISOR: Iwona

ANALYST: jignesh

Date: 07/14/2025

Run Number: LB136471

BalanceID: WC SC-6

OvenID: WC OVEN-1

FilterID: 17416528

ThermometerID: WET OVEN#1

TEMP1 IN: 104 °C 07/14/2025 14:00 TEMP1 OUT: 104 °C 07/14/2025 15:00
 TEMP2 IN: 104 °C 07/14/2025 15:30 TEMP2 OUT: 104 °C 07/14/2025 16:30
 TEMP3 IN: 103 °C 07/15/2025 10:00 TEMP3 OUT: 103 °C 07/15/2025 11:35
 TEMP4 IN: 104 °C 07/15/2025 12:10 TEMP4 OUT: 103 °C 07/15/2025 13:40

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	LB136471BL	LB136471BL	1.3562	1.3562	100	1.3563	1.3563	1.3563	0.0001	1
2	LB136471BS	LB136471BS	1.5896	1.5896	100	1.6429	1.6429	1.6429	0.0533	533
3	Q2565-01	MOO-25-0192-0193	1.4965	1.4965	50	1.8276	1.8276	1.8276	0.3311	6622
4	Q2565-01DUP	MOO-25-0192-0193DUP	1.5000	1.5000	50	1.8314	1.8314	1.8314	0.3314	6628
5	Q2570-02	AERATION	1.4951	1.4951	100	1.5250	1.5250	1.5250	0.0299	299
6	Q2570-07	EFFLUENT	1.4801	1.4801	100	1.5350	1.5350	1.5350	0.0549	549
7	Q2585-04	EFF-WW	1.4810	1.4810	800	1.4914	1.4914	1.4914	0.0104	13
8	Q2588-01	MH-7112025	1.4912	1.4912	600	1.5637	1.5637	1.5637	0.0725	120.8
9	Q2593-01	001 WILLETS PT BLVD (MAY)	1.4944	1.4944	200	1.5076	1.5076	1.5076	0.0132	66
10	Q2593-02	002 35th AVE (MAY)	1.4747	1.4747	500	1.5030	1.5030	1.5030	0.0283	56.6
11	Q2602-01	FRAC-TANK-266380	1.4765	1.4765	2000	1.4822	1.4822	1.4822	0.0057	2.9

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

Weight (g) = C - B

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

WORKLIST(Hardcopy Internal Chain)

136471

WorkList Name : tss q2602

WorkList ID : 190718

Department : Wet-Chemistry

Date : 07-15-2025 08:21:10

Sample	Customer Sample	Matrix	Test	Preservative	Customer	Raw Sample Storage Location	Collect Date	Method
Q2565-01	MOO-25-0192-0193	Water	TSS	Cool 4 deg C	PSEG03		07/10/2025	SM2540 D
Q2570-02	AERATION	Water	TSS	Cool 4 deg C	HOLL01	O31	07/10/2025	SM2540 D
Q2570-07	EFFLUENT	Water	TSS	Cool 4 deg C	HOLL01	O31	07/10/2025	SM2540 D
Q2585-04	EFF-WW	Water	TSS	Cool 4 deg C	ARDM01	D41	07/11/2025	SM2540 D
Q2588-01	MH-7112025	Water	TSS	Cool 4 deg C	EURO03	D41	07/11/2025	SM2540 D
Q2593-01	001 WILLETS PT BLVD ()	Water	TSS	Cool 4 deg C	TULL01	O11	07/11/2025	SM2540 D
Q2593-02	002 35th Ave (May	Water	TSS	Cool 4 deg C	TULL01	O11	07/11/2025	SM2540 D
Q2602-01	FRAC-TANK-266380	Water	TSS	Cool 4 deg C	PSEG03	D31	07/14/2025	SM2540 D

Date/Time 07/15/25 08:30

Raw Sample Received by: [Signature]

Raw Sample Relinquished by: [Signature]

Date/Time 07/15/25

Raw Sample Received by: [Signature]

Raw Sample Relinquished by: [Signature]

15.00

Extraction and Analytical Summary Report

Analysis Method: 1664A
Test: Oil and Grease
Run Number: LB136493
Analysis Date: 07/16/2025
BalanceID: WC SC-6
OvenID: EXT OVEN-3

ANALYST: jignesh
REVIEWED BY: Iwona
Extraction Date: 07/16/2025
Extraction IN Time: 08:00
Extraction OUT Time: 08:35
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	LB136493BL	LB136493BL	WATER	1.3	1000	100	2.8563	2.8563	0	2.8564	2.8564	0.0001	0.1
2	LB136493BS	LB136493BS	WATER	1.3	1000	100	2.9103	2.9103	0	2.9271	2.9271	0.0168	16.8
3	Q2570-07	EFFLUENT	WATER	1.6	1000	100	3.0366	3.0366	0	3.0702	3.0702	0.0336	33.6
4	Q2570-08	Q2570-07MS	WATER	1.6	1000	100	2.7411	2.7411	0	2.7948	2.7948	0.0537	53.7
5	Q2570-09	Q2570-07MSD	WATER	1.6	1000	100	2.9633	2.9633	0	3.0171	3.0171	0.0538	53.8
6	Q2588-01	MH-7112025	WATER	1.6	1000	100	3.0796	3.0796	0	3.9088	3.9088	0.8292	829.2
7	Q2588-02	Q2588-01MS	WATER	1.6	1000	100	3.1105	3.1105	0	3.9598	3.9598	0.8493	849.3
8	Q2588-03	Q2588-01MSD	WATER	1.6	1000	100	3.1963	3.1963	0	4.0460	4.0460	0.8497	849.7

QC Batch# LB136493

Test: Oil and Grease

Analysis Date: 07/16/2025

Chemicals Used:

Chemical Name	Chemical Lot #
HEXANE	W3204
pH Paper 0-14	M6069
Sodium Sulfate	EP2625
1:1 HCL	WP112782
Silica Gel	NA
Sand	NA

Standards Used:

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

BALANCE CALIBRATION / OVEN Dessicator Data

Analytical Balance ID # : WC SC-6

Before Analysis

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

1.0000 gram Balance: 1.0004 (0.9950-1.0050) In Time1: 09:30

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

Out Time1: 10:25

After Analysis

0.0020 gram Balance: 0.0019 (0.0018-0.0022) In OVEN TEMP2 : 71 °C Dessicator Time In2 : 12:01

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

Bal Check Time: 12:37 Out OVEN TEMP2: 71 °C Dessicator Time Out2: 12:35

Out Time2: 12:00

WORKLIST(Hardcopy Internal Chain)

JB 136493

WorkList Name : OIL & GREASE Q2572 WorkList ID : 190747 Department : Wet-Chemistry Date : 07-16-2025 07:31:45

Sample	Customer Sample	Matrix	Test	Preservative	Customer	Raw Sample Storage Location	Collect Date	Method
Q2570-07 E	EFFLUENT	Water	Oil and Grease	Conc H2SO4 to pH < 2	HOLL01	O31	07/10/2025	1664A
Q2570-08	Q2570-07MS	Water	Oil and Grease	Conc H2SO4 to pH < 2	HOLL01	O31	07/10/2025	1664A
Q2570-09	Q2570-07MSD	Water	Oil and Grease	Conc H2SO4 to pH < 2	HOLL01	O31	07/10/2025	1664A
Q2588-01 G	MH-7112025	Water	Oil and Grease	Conc H2SO4 to pH < 2	EURO03	D41	07/11/2025	1664A
Q2588-02	Q2588-01MS	Water	Oil and Grease	Conc H2SO4 to pH < 2	EURO03	D41	07/11/2025	1664A
Q2588-03	Q2588-01MSD	Water	Oil and Grease	Conc H2SO4 to pH < 2	EURO03	D41	07/11/2025	1664A

07/11/25

07/11/25

Date/Time

Raw Sample Received by:

Raw Sample Relinquished by:

JB 136493

JB 136493

Date/Time 07/11/25

Raw Sample Received by:

Raw Sample Relinquished by:

13:30

JB 136493

JB 136493

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

SDG No : N/A

Start Digest Date: 07/11/2025 Time : 11:35 Temp : 95 °C

Matrix : WATER

End Digest Date: 07/11/2025 Time : 12:40 Temp : 96 °C

Pippete ID : WC

Balance ID : N/A

Hood ID : HOOD#3

Digestion tube ID : M5595

Block Thermometer ID : WC-BLOCK#1

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

Filter paper ID : 400213

Prep Technician Signature: EM

Weigh By : N/A

pH Meter ID : N/A

Supervisor Signature: 12

Standard Name	MLS USED	STD REF. # FROM LOG
LCSW	0.5ML	WP112914
MS/MSD SPIKE SOL.	0.5ML	WP112913
PBW	50.ML	W3112
N/A	N/A	N/A
N/A	N/A	N/A

Chemical Used	ML/SAMPLE USED	Lot Number
11N H2SO4	1ML	WP112615
AMMONIUM PERSULFATE	0.4g	W3035
pH Paper 0-14	N/A	W3215
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A

LAB SAMPLE ID	CLIENT SAMPLE ID	Wt(g)/Vol(ml)	Comment
CAL1	CAL1	50.0ML	WP113866
CAL2	CAL2	50.0ML	WP113867
CAL3	CAL3	50.0ML	WP113868
CAL4	CAL4	50.0ML	WP113869
CAL5	CAL5	50.0ML	WP113870
CAL6	CAL6	50.0ML	WP113871
ICV	ICV	50.0ML	WP113873
ICB	ICB	50.0ML	W3112
CCV	CCV	50.0ML	WP113872
CCB	CCB	50.0ML	W3112

Extraction Conformance/Non-Conformance Comments:

N/A

Date / Time	Prepped Sample Relinquished By/Location	Received By/Location
6	Preparation Group	Analysis Group EM/WC

07/11/25

Lab Sample ID	Client Sample ID	Initial Vol (ml)	Final Vol (ml)	pH	Sulfide	Oxidizing	Nitrate/ Nitrite	Comment	Prep Pos
PB168824BL	PBW824	50	50	<2	N/A	N/A	N/A	N/A	N/A
PB168824BS	LCS824	50	50	<2	N/A	N/A	N/A	N/A	N/A
Q2570-07	EFFLUENT	50	50	<2	N/A	N/A	N/A	N/A	N/A
Q2570-07DUP	EFFLUENTDUP	50	50	<2	N/A	N/A	N/A	N/A	N/A
Q2570-07MS	EFFLUENTMS	50	50	<2	N/A	N/A	N/A	N/A	N/A
Q2570-07MSD	EFFLUENTMSD	50	50	<2	N/A	N/A	N/A	N/A	N/A

WORKLIST(Hardcopy Internal Chain)

WorkList Name : TotalPhos-071125

WorkList ID : 190667

Department : Distillation

Date : 07-11-2025 10:44:27

Sample	Customer Sample	Matrix	Test	Preservative	Customer	Raw Sample Storage Location	Collect Date	Method
Q2570-07	EFFLUENT	Water	Phosphorus-Total	Conc H2SO4 to pH < 2	HOLL01	O31	07/10/2025	365.3

Date/Time 07/11/25 10:55
 Raw Sample Received by: EM(wcj)
 Raw Sample Relinquished by: [Signature]

Date/Time 07/11/25 11:50
 Raw Sample Received by: [Signature]
 Raw Sample Relinquished by: EM(wcj)

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

SDG No : N/A

Matrix : WATER

Pipette ID : WC

Balance ID : N/A

Hood ID : HOOD#2

Block ID : WC-DIST-BLOCK-1

Weigh By : RM

Start Digest Date: 07/14/2025 Time : 08:45 Temp : 150 °C

End Digest Date: 07/14/2025 Time : 09:45 Temp : 158 °C

it betch 07/14/2025 10:10 150 °C
07/14/2025 11:10 160 °C

Digestion tube ID : M5595

Block Thermometer ID : WC CYANIDE

Filter paper ID : N/A

Prep Technician Signature: *RM*

pH Meter ID : N/A

Supervisor Signature: *12*

Standardized Name	MLS USED	STD REF. # FROM LOG
LCSW	1.0ML	WP113889
MS/MSD SPIKE SOL.	1.0ML	WP113888
PBW	50.0ML	W3112
RL CHECK	0.1ML	WP113888
N/A	N/A	N/A

Chemical Used	ML/SAMPLE USED	Lot Number
BORATE BUFFER	2.5ML	WP113886
NAOH 6N	0.5-2.0ML	WP113887
H2SO4 0.04N	5.0ML	WP112828
pH strip-Ammonia	N/A	W3133
KI-starch paper	N/A	W3155
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A

Extraction Conformance/Non-Conformance Comments:

ALL GLASSWEAR ARE STEAMED OUT AND THERE WERE NO TRACE OF AMMONIA USING NESLER REAGENT WP111604.Due to bad matrix and client history 1ML was taken as an initial volume for Q2570-03,07

Date / Time	Prepped Sample Relinquished By/Location	Received By/Location
07/14/2025 11:20	<i>RM WC</i>	<i>RM WC</i>
	Preparation Group	Analysis Group

Lab Sample ID	Client Sample ID	Initial Vol (ml)	Final Vol (ml)	pH	Sulfide	Oxidizing	Nitrate/ Nitrite	Comment	Prep Pos
PB168835BL	PBW835	50	50	<2	N/A	Negative	N/A	AFTER ADDING 6N NAOH PH IS 9.5	N/A
PB168835BS	LCS835	50	50	<2	N/A	Negative	N/A	AFTER ADDING 6N NAOH PH IS 9.5	N/A
Q2536-01DUP	RW5-SP100-20250708DUP	50	50	<2	N/A	Negative	N/A	AFTER ADDING 6N NAOH PH IS 9.5	N/A
Q2536-01MS	RW5-SP100-20250708MS	50	50	<2	N/A	Negative	N/A	AFTER ADDING 6N NAOH PH IS 9.5	N/A
Q2536-01MSD	RW5-SP100-20250708MSD	50	50	<2	N/A	Negative	N/A	AFTER ADDING 6N NAOH PH IS 9.5	N/A
Q2536-01	RW5-SP100-20250708	50	50	<2	N/A	Negative	N/A	AFTER ADDING 6N NAOH PH IS 9.5	N/A
Q2536-02	RW7-SP100-20250708	50	50	<2	N/A	Negative	N/A	AFTER ADDING 6N NAOH PH IS 9.5	N/A
Q2536-03	RW8-SP100-20250708	50	50	<2	N/A	Negative	N/A	AFTER ADDING 6N NAOH PH IS 9.5	N/A
Q2565-01	MOO-25-0192-0193	50	50	<2	N/A	Negative	N/A	AFTER ADDING 6N NAOH PH IS 9.5	N/A
Q2570-03	INFLUENT	1	50	<2	N/A	Negative	N/A	AFTER ADDING 6N NAOH PH IS 9.5	N/A
Q2570-07	EFFLUENT	1	50	<2	N/A	Negative	N/A	AFTER ADDING 6N NAOH PH IS 9.5	N/A

WORKLIST(Hardcopy Internal Chain)

WorkList Name : ammonia-0714

WorkList ID : 190698

Department : Distillation

Date : 07-14-2025 08:03:13

Sample	Customer Sample	Matrix	Test	Preservative	Customer	Raw Sample Storage Location	Collect Date	Method
Q2536-01	RW5-SP100-20250708	Water	Ammonia	Conc H2SO4 to pH < 2	TETR06	O21	07/08/2025	SM4500-NH3
Q2536-02	RW7-SP100-20250708	Water	Ammonia	Conc H2SO4 to pH < 2	TETR06	O21	07/08/2025	SM4500-NH3
Q2536-03	RW8-SP100-20250708	Water	Ammonia	Conc H2SO4 to pH < 2	TETR06	O21	07/08/2025	SM4500-NH3
Q2565-01	MOO-25-0192-0193	Water	Ammonia	Conc H2SO4 to pH < 2	PSEG03		07/10/2025	SM4500-NH3
Q2570-03	INFLUENT	Water	Ammonia	Conc H2SO4 to pH < 2	HOLL01	O31	07/10/2025	SM4500-NH3
Q2570-07	EFFLUENT	Water	Ammonia	Conc H2SO4 to pH < 2	HOLL01	O31	07/10/2025	SM4500-NH3

Date/Time 07/14/2025 08.10
 Raw Sample Received by: RM Lowy
 Raw Sample Relinquished by: JPLow

Date/Time 07/14/2025 10.30
 Raw Sample Received by: JPLow
 Raw Sample Relinquished by: RM Lowy

Instrument ID: WC SC-3

Daily Analysis Runlog For Sequence/QC Batch ID # LB136432

Review By	jignesh	Review On	7/11/2025 1:47:04 PM
Supervise By	Iwona	Supervise On	7/16/2025 1:35:51 PM
SubDirectory	LB136432	Test	Oil and Grease
STD. NAME	STD REF.#		
ICAL Standard	N/A		
ICV Standard	N/A		
CCV Standard	N/A		
ICSA Standard	N/A		
CRI Standard	N/A		
LCS Standard	N/A		
Chk Standard	W3204,M6069,EP2624,WP112782,NA,NA,WP112783,NA,WO112784		

Sr#	SampleId	ClientID	QcType	Date	Comment	Operator	Status
1	LB136432BL	LB136432BL	MB	07/11/25 09:25		jignesh	OK
2	LB136432BS	LB136432BS	LCS	07/11/25 09:25		jignesh	OK
3	Q2525-02	EFFLUENT-GRAB	SAM	07/11/25 09:25		jignesh	OK
4	Q2570-01	EFFLUENT	SAM	07/11/25 09:25		jignesh	OK
5	Q2570-04	Q2570-01MS	MS	07/11/25 09:25		jignesh	OK
6	Q2570-05	Q2570-01MSD	MSD	07/11/25 09:25		jignesh	OK

Instrument ID: DO METER

Daily Analysis Runlog For Sequence/QC Batch ID # LB136441

Review By	rubina	Review On	7/16/2025 4:18:43 PM
Supervise By	Iwona	Supervise On	7/16/2025 4:30:40 PM
SubDirectory	LB136441	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	WP113918,W3149,WP112832,W3103,W3109,W3105,WP113920,WP113919,WP113878		

Sr#	SampleId	ClientID	QcType	Date	Comment	Operator	Status
1	LB136441BL	LB136441BL	MB	07/11/25 14:40		rubina	OK
2	LB136441BS	LB136441BS	LCS	07/11/25 14:40		rubina	OK
3	Q2565-01	MOO-25-0192-0193	SAM	07/11/25 14:40		rubina	OK
4	Q2570-03	INFLUENT	SAM	07/11/25 14:40		rubina	OK
5	Q2570-07	EFFLUENT	SAM	07/11/25 14:40		rubina	OK
6	Q2585-04	EFF-WW	SAM	07/11/25 14:40		rubina	OK
7	Q2585-04DUP	EFF-WWDUP	DUP	07/11/25 14:40		rubina	OK
8	Q2588-01	MH-7112025	SAM	07/11/25 14:40		rubina	OK

Instrument ID: SPECTROPHOTOMETER-1

Daily Analysis Runlog For Sequence/QC Batch ID # LB136445

Review By	Eman	Review On	7/11/2025 4:03:19 PM
Supervise By	Iwona	Supervise On	7/11/2025 4:06:24 PM
SubDirectory	LB136445	Test	Phosphorus-Ortho
STD. NAME	STD REF.#		
ICAL Standard	N/A		
ICV Standard	N/A		
CCV Standard	N/A		
ICSA Standard	N/A		
CRI Standard	N/A		
LCS Standard	N/A		
Chk Standard	WP113871,WP113870,WP113869,WP113868,WP113867,WP113866,WP113872,WP112831,WP113917,WP113378,V		

Sr#	SampleId	ClientID	QcType	Date	Comment	Operator	Status
1	CAL1	CAL1	CAL	07/11/25 12:00			OK
2	CAL2	CAL2	CAL	07/11/25 12:00			OK
3	CAL3	CAL3	CAL	07/11/25 12:01			OK
4	CAL4	CAL4	CAL	07/11/25 12:01			OK
5	CAL5	CAL5	CAL	07/11/25 12:02			OK
6	CAL6	CAL6	CAL	07/11/25 12:02			OK
7	ICV	ICV	ICV	07/11/25 12:03			OK
8	ICB	ICB	ICB	07/11/25 12:03			OK
9	CCV1	CCV1	CCV	07/11/25 12:04			OK
10	CCB1	CCB1	CCB	07/11/25 12:04			OK
11	RL Check	RL Check	RL	07/11/25 12:05			OK
12	LB136445BL	LB136445BL	MB	07/11/25 12:05			OK
13	LB136445BS	LB136445BS	LCS	07/11/25 12:06			OK
14	Q2570-07	EFFLUENT	SAM	07/11/25 12:06			OK
15	Q2570-07DUP	EFFLUENTDUP	DUP	07/11/25 12:07			OK
16	Q2570-07MS	EFFLUENTMS	MS	07/11/25 12:07			OK
17	Q2570-07MSD	EFFLUENTMSD	MSD	07/11/25 12:08			OK
18	CCV2	CCV2	CCV	07/11/25 12:08			OK

Instrument ID: SPECTROPHOTOMETER-1

Daily Analysis Runlog For Sequence/QC Batch ID # LB136445

Review By	Eman	Review On	7/11/2025 4:03:19 PM
Supervise By	Iwona	Supervise On	7/11/2025 4:06:24 PM
SubDirectory	LB136445	Test	Phosphorus-Ortho
STD. NAME	STD REF.#		
ICAL Standard	N/A		
ICV Standard	N/A		
CCV Standard	N/A		
ICSA Standard	N/A		
CRI Standard	N/A		
LCS Standard	N/A		
Chk Standard	WP113871,WP113870,WP113869,WP113868,WP113867,WP113866,WP113872,WP112831,WP113917,WP113378,V		

19	CCB2	CCB2	CCB	07/11/25 12:09			OK
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Instrument ID: SPECTROPHOTOMETER-1

Daily Analysis Runlog For Sequence/QC Batch ID # LB136450

Review By	Eman	Review On	7/11/2025 4:21:04 PM
Supervise By	Iwona	Supervise On	7/11/2025 4:22:45 PM
SubDirectory	LB136450	Test	Phosphorus-Total
STD. NAME	STD REF.#		
ICAL Standard	N/A		
ICV Standard	N/A		
CCV Standard	N/A		
ICSA Standard	N/A		
CRI Standard	N/A		
LCS Standard	N/A		
Chk Standard	WP113871,WP113870,WP113869,WP113868,WP113867,WP113866,WP113872,WP112831,WP113917,WP113378,V		

Sr#	SampleId	ClientID	QcType	Date	Comment	Operator	Status
1	CAL1	CAL1	CAL	07/11/25 13:45			OK
2	CAL2	CAL2	CAL	07/11/25 13:45			OK
3	CAL3	CAL3	CAL	07/11/25 13:46			OK
4	CAL4	CAL4	CAL	07/11/25 13:46			OK
5	CAL5	CAL5	CAL	07/11/25 13:47			OK
6	CAL6	CAL6	CAL	07/11/25 13:47			OK
7	ICV	ICV	ICV	07/11/25 13:48			OK
8	ICB	ICB	ICB	07/11/25 13:48			OK
9	CCV1	CCV1	CCV	07/11/25 13:49			OK
10	CCB1	CCB1	CCB	07/11/25 13:50			OK
11	RL Check	RL Check	RL	07/11/25 13:50			OK
12	PB168824BL	PB168824BL	MB	07/11/25 13:51			OK
13	PB168824BS	PB168824BS	LCS	07/11/25 13:51			OK
14	Q2570-07	EFFLUENT	SAM	07/11/25 13:52			OK
15	Q2570-07DUP	EFFLUENTDUP	DUP	07/11/25 13:52			OK
16	Q2570-07MS	EFFLUENTMS	MS	07/11/25 13:53			OK
17	Q2570-07MSD	EFFLUENTMSD	MSD	07/11/25 13:53			OK
18	Q2570-07MS	EFFLUENTMS	MS	07/11/25 13:54			OK

Instrument ID: SPECTROPHOTOMETER-1

Daily Analysis Runlog For Sequence/QC Batch ID # LB136450

Review By	Eman	Review On	7/11/2025 4:21:04 PM
Supervise By	Iwona	Supervise On	7/11/2025 4:22:45 PM
SubDirectory	LB136450	Test	Phosphorus-Total
STD. NAME	STD REF.#		
ICAL Standard	N/A		
ICV Standard	N/A		
CCV Standard	N/A		
ICSA Standard	N/A		
CRI Standard	N/A		
LCS Standard	N/A		
Chk Standard	WP113871,WP113870,WP113869,WP113868,WP113867,WP113866,WP113872,WP112831,WP113917,WP113378,V		

19	Q2570-07MSD	EFFLUENTMSD	MSD	07/11/25 13:55			OK
20	CCV2	CCV2	CCV	07/11/25 13:55			OK
21	CCB2	CCB2	CCB	07/11/25 13:56			OK

Instrument ID: KONELAB

Daily Analysis Runlog For Sequence/QC Batch ID # LB136459

Review By	rubina	Review On	7/15/2025 3:40:06 PM
Supervise By	Iwona	Supervise On	7/16/2025 11:47:16 AM
SubDirectory	LB136459	Test	Ammonia
STD. NAME	STD REF.#		
ICAL Standard	WP113926		
ICV Standard	WP113928		
CCV Standard	WP113927		
ICSA Standard	N/A		
CRI Standard	N/A		
LCS Standard	WP113889		
Chk Standard	WP113852,WP111745,WP113929,WP111660		

Sr#	SampleId	ClientID	QcType	Date	Comment	Operator	Status
1	0.0PPM	0.0PPM	CAL1	07/14/25 10:59		rubina	OK
2	0.1PPM	0.1PPM	CAL2	07/14/25 10:59		rubina	OK
3	0.2PPM	0.2PPM	CAL3	07/14/25 10:59		rubina	OK
4	0.4PPM	0.4PPM	CAL4	07/14/25 10:59		rubina	OK
5	1.0PPM	1.0PPM	CAL5	07/14/25 10:59		rubina	OK
6	1.3PPM	1.3PPM	CAL6	07/14/25 10:59		rubina	OK
7	2.0PPM	2.0PPM	CAL7	07/14/25 11:00		rubina	OK
8	ICV1	ICV1	ICV	07/14/25 11:52		rubina	OK
9	ICB1	ICB1	ICB	07/14/25 11:52		rubina	OK
10	CCV1	CCV1	CCV	07/14/25 11:52		rubina	OK
11	CCB1	CCB1	CCB	07/14/25 11:52		rubina	OK
12	RL	RL	LOQ	07/14/25 11:52		rubina	OK
13	PB168835BL	PB168835BL	MB	07/14/25 12:03		rubina	OK
14	PB168835BS	PB168835BS	LCS	07/14/25 12:03		rubina	OK
15	Q2536-01	RW5-SP100-2025070	SAM	07/14/25 12:03		rubina	OK
16	Q2536-01DUP	RW5-SP100-2025070	DUP	07/14/25 12:03		rubina	OK
17	Q2536-01MS	RW5-SP100-2025070	MS	07/14/25 12:03		rubina	OK
18	Q2536-01MSD	RW5-SP100-2025070	MSD	07/14/25 12:03		rubina	OK

Instrument ID: KONELAB

Daily Analysis Runlog For Sequence/QC Batch ID # LB136459

Review By	rubina	Review On	7/15/2025 3:40:06 PM
Supervise By	Iwona	Supervise On	7/16/2025 11:47:16 AM
SubDirectory	LB136459	Test	Ammonia
STD. NAME	STD REF.#		
ICAL Standard	WP113926		
ICV Standard	WP113928		
CCV Standard	WP113927		
ICSA Standard	N/A		
CRI Standard	N/A		
LCS Standard	WP113889		
Chk Standard	WP113852,WP111745,WP113929,WP111660		

19	Q2536-02	RW7-SP100-2025070	SAM	07/14/25 12:03		rubina	OK
20	Q2536-03	RW8-SP100-2025070	SAM	07/14/25 12:03		rubina	OK
21	Q2565-01	MOO-25-0192-0193	SAM	07/14/25 12:13		rubina	OK
22	CCV2	CCV2	CCV	07/14/25 12:13		rubina	OK
23	CCB2	CCB2	CCB	07/14/25 12:13		rubina	OK
24	Q2570-03	INFLUENT	SAM	07/14/25 12:13	NH3 is High	rubina	Dilution
25	Q2570-07	EFFLUENT	SAM	07/14/25 12:13	NH3 is High	rubina	Dilution
26	CCV3	CCV3	CCV	07/14/25 12:13		rubina	OK
27	CCB3	CCB3	CCB	07/14/25 12:13		rubina	OK
28	Q2570-03DL	INFLUENTDL	SAM	07/14/25 12:38	10X for NH3	rubina	Confirms
29	Q2570-07DL	EFFLUENTDL	SAM	07/14/25 12:39	10X for NH3	rubina	Confirms
30	CCV4	CCV4	CCV	07/14/25 12:39		rubina	OK
31	CCB4	CCB4	CCB	07/14/25 12:39		rubina	OK

Instrument ID: WC SC-3

Daily Analysis Runlog For Sequence/QC Batch ID # LB136471

Review By	jignesh	Review On	7/15/2025 11:55:23 AM
Supervise By	Iwona	Supervise On	7/15/2025 1:21:25 PM
SubDirectory	LB136471	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	LB136471BL	LB136471BL	MB	07/15/25 10:00		jignesh	OK
2	LB136471BS	LB136471BS	LCS	07/15/25 10:00	55 mg w3186+ 100ml w3112	jignesh	OK
3	Q2565-01	MOO-25-0192-0193	SAM	07/15/25 10:00		jignesh	OK
4	Q2565-01DUP	MOO-25-0192-0193D	DUP	07/15/25 10:00		jignesh	OK
5	Q2570-02	AERATION	SAM	07/15/25 10:00		jignesh	OK
6	Q2570-07	EFFLUENT	SAM	07/15/25 10:00		jignesh	OK
7	Q2585-04	EFF-WW	SAM	07/15/25 10:00		jignesh	OK
8	Q2588-01	MH-7112025	SAM	07/15/25 10:00		jignesh	OK
9	Q2593-01	001 WILLETS PT BLV	SAM	07/15/25 10:00		jignesh	OK
10	Q2593-02	002 35th AVE (MAY)	SAM	07/15/25 10:00		jignesh	OK
11	Q2602-01	FRAC-TANK-266380	SAM	07/15/25 10:00		jignesh	OK

Instrument ID: WC SC-3

Daily Analysis Runlog For Sequence/QC Batch ID # LB136493

Review By	jignesh	Review On	7/16/2025 10:26:47 AM
Supervise By	Iwona	Supervise On	7/16/2025 1:08:19 PM
SubDirectory	LB136493	Test	Oil and Grease
STD. NAME	STD REF.#		
ICAL Standard	N/A		
ICV Standard	N/A		
CCV Standard	N/A		
ICSA Standard	N/A		
CRI Standard	N/A		
LCS Standard	N/A		
Chk Standard	W3204,M6069,EP2625,WP112782,NA,NA,WP112783,NA,WO112784		

Sr#	SampleId	ClientID	QcType	Date	Comment	Operator	Status
1	LB136493BL	LB136493BL	MB	07/16/25 09:30		jignesh	OK
2	LB136493BS	LB136493BS	LCS	07/16/25 09:30		jignesh	OK
3	Q2570-07	EFFLUENT	SAM	07/16/25 09:30		jignesh	OK
4	Q2570-08	Q2570-07MS	MS	07/16/25 09:30		jignesh	OK
5	Q2570-09	Q2570-07MSD	MSD	07/16/25 09:30		jignesh	OK
6	Q2588-01	MH-7112025	SAM	07/16/25 09:30		jignesh	OK
7	Q2588-02	Q2588-01MS	MS	07/16/25 09:30		jignesh	OK
8	Q2588-03	Q2588-01MSD	MSD	07/16/25 09:30		jignesh	OK

Prep Standard - Chemical Standard Summary

Order ID : Q2570

Test : Ammonia,BOD5,Oil and Grease,Phosphorus-Ortho,Phosphorus-Total,TSS

Prepbatch ID : PB168819,PB168824,PB168835,

Sequence ID/Qc Batch ID: LB136432,LB136441,LB136445,LB136450,LB136459,LB136471,LB136493,

Standard ID :

EP2624,EP2625,WP111660,WP111745,WP112611,WP112612,WP112615,WP112782,WP112783,WP112828,WP112831,WP112832,WP112913,WP112914,WP113112,WP113113,WP113378,WP113852,WP113866,WP113867,WP113868,W
P113869,WP113870,WP113871,WP113872,WP113873,WP113878,WP113885,WP113886,WP113887,WP113888,WP11
3889,WP113916,WP113917,WP113918,WP113919,WP113920,WP113926,WP113927,WP113928,WP113929,

Chemical ID :

E3551,E3917,M6041,M6069,M6151,W2306,W2650,W2653,W2654,W2663,W2664,W2666,W2788,W2817,W2871,W30
35,W3074,W3103,W3105,W3109,W3112,W3113,W3132,W3133,W3144,W3149,W3155,W3174,W3195,W3196,W3198,
W3201,W3204,W3206,W3212,W3215,WO112784,



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

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
3923	Baked Sodium Sulfate	EP2625	07/15/2025	12/04/2025	RUPESHKUMAR SHAH	Extraction_SCALE_2 (EX-SC-2)	None	Riteshkumar Patel 07/15/2025
<u>FROM</u> 4000.00000gram of E3551 = Final Quantity: 4000.000 gram								



<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
635	EDTA BUFFER FOR AMMONIA	WP111660	01/28/2025	07/28/2025	Rubina Mughal	WETCHEM_S CALE_8 (WC SC-7)	None	Iwona Zarych 01/28/2025
<u>FROM</u> 5.50000gram of W3113 + 50.00000gram of W3132 + 950.00000ml of W3112 = Final Quantity: 1000.000 ml								

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



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

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
1895	Ammonia Stock Std, 1000PPM-SS	WP112612	04/07/2025	10/07/2025	Rubina Mughal	WETCHEM_S CALE_8 (WC SC-7)	None	Iwona Zarych 04/07/2025
<u>FROM</u>	3.81900gram of W3195 + 996.18100ml of W3112 = Final Quantity: 1000.000 ml							

Wet Chemistry STANDARD PREPARATION LOG

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
1211	11 N sulfuric acid	WP112615	04/03/2025	10/07/2025	Niha Farheen Shaik	None	None	Iwona Zarych
								04/07/2025

FROM 306.00000ml of M6041 + 694.00000ml of W3112 = Final Quantity: 1000.000 ml

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

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



<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
2470	1664A SPIKING SOLN	WP112783	04/22/2025	10/03/2025	Jignesh Parikh	WETCHEM_SCALE_8 (WCS-7)	None	Iwona Zarych 04/22/2025
<u>FROM</u>	1000.00000ml of E3917 + 4.00000gram of W2817 + 4.00000gram of W2871 = Final Quantity: 1000.000 ml							

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

Wet Chemistry STANDARD PREPARATION LOG

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
126	5N sulfuric acid	WP112831	04/25/2025	10/25/2025	Rubina Mughal	None	None	Iwona Zarych
								04/25/2025

FROM 140.00000ml of M6041 + 860.00000ml of W3112 = Final Quantity: 1.000 L

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
1841	Sulfuric Acid, 1N	WP112832	04/25/2025	10/25/2025	Rubina Mughal	None	WETCHEM_FIPETTE_3	Iwona Zarych
							(WC)	04/25/2025

FROM 2.80000ml of M6041 + 97.20000ml of W3112 = Final Quantity: 100.000 ml



<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
115	Phosphate Stock Std. (50 ppm)	WP112913	05/01/2025	11/01/2025	Iwona Zarych	WETCHEM_SCALE_5 (WC SC-5)	None	Jignesh Parikh 05/06/2025
<u>FROM</u> 0.11000gram of W3198 + 500.00000ml of W3112 = Final Quantity: 500.000 ml								

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
2790	Phosphate Stock std, 50PPM-SS	WP112914	05/01/2025	11/01/2025	Iwona Zarych	WETCHEM_SCALE_5 (WC SC-5)	None	Jignesh Parikh 05/06/2025
<u>FROM</u> 0.11000gram of W3206 + 500.00000ml of W3112 = Final Quantity: 500.000 ml								



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

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



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

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
740	sodium nitroferricyanide for ammonia	WP113852	07/09/2025	08/09/2025	Rubina Mughal	WETCHEM_SCALE_5 (WC-5)	None	Iwona Zarych 07/09/2025
<u>FROM</u> 0.05000gram of W2666 + 99.95000ml of W3112 = Final Quantity: 100.000 ml								

Wet Chemistry STANDARD PREPARATION LOG

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
122	calibration std. 0 ppm	WP113866	07/09/2025	07/16/2025	Iwona Zarych	None	None	Jignesh Parikh
								07/09/2025

FROM 100.00000ml of W3112 = Final Quantity: 100.000 ml

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

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

Wet Chemistry STANDARD PREPARATION LOG

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

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

Wet Chemistry STANDARD PREPARATION LOG

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

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

Wet Chemistry STANDARD PREPARATION LOG

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

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



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

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
1796	NaOH, 0.1N	WP113885	07/10/2025	12/31/2025	Rubina Mughal	WETCHEM_S CALE_8 (WC SC-7)	None	Iwona Zarych 07/10/2025
<u>FROM</u> 4.00000gram of W3113 + 996.00000ml of W3112 = Final Quantity: 1000.000 ml								



<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
1494	BORATE BUFFER	WP113886	07/10/2025	12/31/2025	Rubina Mughal	WETCHEM_SCALE_8 (WCS-7)	None	Iwona Zarych
FROM 0.90250L of W3112 + 9.50000gram of W3201 + 88.00000ml of WP113885 = Final Quantity: 1.000 L								

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
1471	NaOH Solution, 6N	WP113887	07/10/2025	12/31/2025	Rubina Mughal	WETCHEM_S CALE_8 (WC SC-7)	None	Iwona Zarych 07/10/2025
<u>FROM</u> 240.00000gram of W3113 + 760.00000ml of W3112 = Final Quantity: 1000.000 ml								



<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
1322	Ammonia Intermediate Std, 50PPM	WP113888	07/10/2025	08/10/2025	Rubina Mughal	None	WETCHEM_PIPETTE_3 (WC)	Iwona Zarych 07/10/2025
<u>FROM</u> 95.00000ml of W3112 + 5.00000ml of WP112611 = Final Quantity: 100.000 ml								

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
1639	Ammonia Intermediate Std-Second source, 50PPM	WP113889	07/10/2025	08/10/2025	Rubina Mughal	None	WETCHEM_PIPETTE_3 (WC)	Iwona Zarych 07/10/2025
<u>FROM</u> 95.00000ml of W3112 + 5.00000ml of WP112612 = Final Quantity: 100.000 ml								

Wet Chemistry STANDARD PREPARATION LOG

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
590	Ascorbic Acid	WP113916	07/11/2025	07/12/2025	Iwona Zarych	WETCHEM_SCALE_7 (WC SC-6)	None	Jignesh Parikh
								07/15/2025

FROM 0.52800gram of W3074 + 30.00000ml of W3112 = Final Quantity: 30.000 ml

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
658	Combined reagent	WP113917	07/11/2025	07/12/2025	Iwona Zarych	None	Glass Pipette-A	Jignesh Parikh
								07/15/2025

FROM 15.00000ml of WP113112 + 30.00000ml of WP113916 + 5.00000ml of WP113113 + 50.00000ml of WP112831 = Final Quantity: 100.000 ml

Wet Chemistry STANDARD PREPARATION LOG

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
127	BOD Dilution fluid	WP113918	07/11/2025	07/12/2025	Rubina Mughal	None	None	Iwona Zarych
								07/15/2025

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

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
129	Glutamic acid-glucose mix for BOD	WP113919	07/11/2025	07/12/2025	Rubina Mughal	WETCHEM_SCALE_7 (WC SC-6)	None	Iwona Zarych
								07/15/2025

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

Wet Chemistry STANDARD PREPARATION LOG

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
128	polyseed seed control	WP113920	07/11/2025	07/12/2025	Rubina Mughal	None	None	Iwona Zarych
								07/15/2025

FROM 1.00000PILLOW of W3212 + 300.00000ml of WP113918 = Final Quantity: 300.000 ml

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
275	Ammonia Calibration Std. (2 ppm)	WP113926	07/14/2025	07/15/2025	Rubina Mughal	None	WETCHEM_FIPETTE_3	Iwona Zarych
							(WC)	07/15/2025

FROM 48.00000ml of W3112 + 2.00000ml of WP113888 = Final Quantity: 50.000 ml



<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
285	Ammonia CCV Std. (1 ppm)	WP113927	07/14/2025	07/15/2025	Rubina Mughal	None	WETCHEM_PIPETTE_3	Iwona Zarych
<p>(WC)</p> <p>FROM 49.00000ml of W3112 + 1.00000ml of WP113888 = Final Quantity: 50.000 ml</p>								

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
286	Ammonia ICV Std. (1 ppm)	WP113928	07/14/2025	07/15/2025	Rubina Mughal	None	WETCHEM_PIPETTE_3 (WC)	Iwona Zarych 07/15/2025
<u>FROM</u> 49.00000ml of W3112 + 1.00000ml of WP113889 = Final Quantity: 50.000 ml								



<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
290	Phenol reagent for Ammonia	WP113929	07/14/2025	12/31/2025	Rubina Mughal	WETCHEM_SCALE_8 (WC SC-7)	None	Iwona Zarych 07/15/2025
<u>FROM</u> 3.20000gram of W3113 + 8.30000gram of W2663 + 88.80000ml of W3112 = Final Quantity: 100.000 ml								

CHEMICAL RECEIPT LOG BOOK

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

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

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Seidler Chemical	BA-9673-33 / Sulfuric Acid, Instra-Analyzed (cs/6c2.5L)	23D2462010	03/20/2028	08/16/2024 / mohan	08/16/2024 / mohan	M6041

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

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Seidler Chemical	BA-9530-33 / Hydrochloric Acid, Instra-Analyzed (cs/6x2.5L)	22G2862015	08/18/2025	02/18/2025 / Sagar	01/15/2025 / Sagar	M6151

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
PCI Scientific Supply, Inc.	A1561-500GM / POTASSIUM ANTIMONY TARTRATE TRIHYDRATE, 500G	2GH0057	12/11/2027	12/11/2017 / apatel	12/11/2017 / apatel	W2306

CHEMICAL RECEIPT LOG BOOK

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
PCI Scientific Supply, Inc.	J2870-1 / PHENOLPHTHALEIN, INDICATOR F/TITRATION, 500G	0000235350	06/04/2025	01/31/2020 / AMANDEEP	01/20/2020 / apatel	W2650

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
PCI Scientific Supply, Inc.	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.	P1060-10 / PHENOL, ACS, 500G	2HD0179	01/27/2030	01/27/2020 / apatel	01/27/2020 / apatel	W2663

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
PCI Scientific Supply, Inc.	J07716-1 / Ammonium Molybdate 500G	0000234410	02/11/2026	02/10/2020 / AMANDEEP	01/31/2020 / apatel	W2664

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
PCI Scientific Supply, Inc.	87683 / Sodium Nitroferricyanide 250g	W12F013	02/10/2030	02/10/2020 / apatel	02/10/2020 / apatel	W2666

CHEMICAL RECEIPT LOG BOOK

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
PCI Scientific Supply, Inc.	PC16721-3 / Isopropanol, 99%	C20F23007	06/30/2025	12/30/2020 / apatel	12/30/2020 / apatel	W2788

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
PCI Scientific Supply, Inc.	A12244 / Stearic acid, 98%, 100 g	U20E006	04/02/2026	04/02/2021 / apatel	04/02/2021 / apatel	W2817

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

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
PCI Scientific Supply, Inc.	BDH0214-500G / Ammonium Persulfate Crystal, 500g	MKCR9319	06/30/2028	03/05/2024 / lwona	06/06/2023 / lwona	W3035

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
PCI Scientific Supply, Inc.	J0938-7 / Ascorbic Acid, 500 gms	MKCS4627	09/30/2025	01/16/2024 / lwona	01/16/2024 / lwona	W3074

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

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,4LIT RE	4403S13	09/30/2025	04/22/2024 / lwona	04/22/2024 / lwona	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 / lwona	05/23/2024 / lwona	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 / lwona	07/03/2024 / lwona	W3112

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

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
PCI Scientific Supply, Inc.	PC05050-1 / EDTA, disodium salt, dihydrate 1 lb	2ND0156	07/10/2026	07/26/2024 / lwona	07/26/2024 / lwona	W3132

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

CHEMICAL RECEIPT LOG BOOK

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 / lwona	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 / lwona	10/16/2024 / lwona	W3149

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

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

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

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

CHEMICAL RECEIPT LOG BOOK

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
PCI Scientific Supply, Inc.	J3246-1 / POTAS PHOSPHATE, MONO, CRYST, ACS, 500G	MKWCW6723	10/31/2028	04/11/2025 / lwona	04/11/2025 / lwona	W3198

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
PCI Scientific Supply, Inc.	J3568-1 / Sodium Borate, 500 gms	BCCL9613	05/31/2029	04/16/2025 / lwona	04/16/2025 / lwona	W3201

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

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
PCI Scientific Supply, Inc.	J3246-1 / POTAS PHOSPHATE, MONO, CRYST, ACS, 500G	MKXCX1379	01/31/2029	04/29/2025 / lwona	04/29/2025 / lwona	W3206

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
PCI Scientific Supply, Inc.	136742-80 / POLYSEED	132409	09/30/2026	05/21/2025 / lwona	05/21/2025 / lwona	W3212

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
PCI Scientific Supply, Inc.	140444 / TEST PAPERS,PH 0-14,.5 SENS,100PK	10D3242	12/31/2028	06/09/2025 / lwona	06/09/2025 / lwona	W3215



CERTIFICATE OF ANALYSIS

Printed: 12/8/2017

Page 1 of 1

Customer No : 30017
Order Number : 3008126
Catalog : A1561

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

Customer PO : 6035343

Lot : 2GH0057

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

Formula Weight : 667.87

W2306
received
12/11/17
AB

Test

Limit
Min. Max.

Results

ASSAY ($C_8H_4K_2O_{12}Sb_2 \cdot 3HO$)	99.0 - 103.0 %	101.0 %
TITRATABLE ACID OR BASE	-- 0.020 meq/g	<0.020 meq/g
LOSS ON DRYING	-- 2.7 %	<2.7 %
ARSENIC (As)	-- 0.015 %	<0.015 %
APPEARANCE		WHITE POWDER
DATE OF MANUFACTURE		29-DEC-2015

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

Read and understand label and MSDS/SDS before handling any chemical. All Spectrum's chemicals are for manufacturing, processing, repacking or research purposes by experienced personnel only. The customer must ensure to provide its users adequate hazardous material training and appropriate protective gears before handling our chemicals.

Certificate of Analysis Results Certified By:

Ammonium Molybdate, 4-Hydrate, Crystal
BAKER ANALYZED® A.C.S. Reagent

(ammonium heptamolybdate, tetrahydrate)



Material No.: 0716-01
Batch No.: 0000234410
Manufactured Date: 2019/02/13
Retest Date: 2026/02/11
Revision No: 1

Certificate of Analysis

Meets ACS Reagent Chemical Requirements,

Test	Specification	Result
Assay (as MoO ₃)	81.0 – 83.0 %	81.4
ACS – Insoluble Matter	<= 0.005 %	< 0.001
Chloride (Cl)	<= 0.002 %	< 0.002
Nitrate (NO ₃)	Passes Test	PT
Arsenate, Phosphate and Silicate (as SiO ₂)	<= 0.001 %	< 0.001
ACS – Phosphate (PO ₄)	<= 5 ppm	< 5
Sulfate (SO ₄)	<= 0.02 %	< 0.02
Heavy Metals (as Pb)	<= 0.001 %	< 0.001
Magnesium (Mg)	<= 0.005 %	< 0.001
Potassium (K)	<= 0.01 %	< 0.01
Sodium (Na)	<= 0.01 %	<0.001

For Laboratory, Research or Manufacturing Use
Meets Reagent Specifications for testing USP/NF monographs

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

James Ethier
Jamie Ethier
Vice President Global Quality

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

Phenolphthalein, Powder
BAKER ANALYZED® A.C.S. Reagent



Material No.: 2870-01
Batch No.: 0000235350
Manufactured Date: 2018/06/06
Retest Date: 2025/06/04
Revision No: 1

Certificate of Analysis

Meets ACS Reagent Chemical Requirements,

Test	Specification	Result
ACS – Clarity of Solution	Passes Test	PT
Visual Transition Interval – pH...8.0 (Colorless)	Passes Test	PT
Visual Transition Interval – pH...10.0 (Red)	Passes Test	PT

For Laboratory, Research or Manufacturing Use

Country of Origin: CN
Packaging Site: Paris Mfg Ctr & DC


Jamie Ethier
Vice President Global Quality

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



Certificate Of Analysis

Item Number	P1060	Lot Number	2HD0179
Item	Phenol, Loose Crystal, Reagent, ACS		
CAS Number	108-95-2		
Molecular Formula	C ₆ H ₆ O	Molecular Weight	94.11

Test	Specification		Result
	min	max	
ASSAY (C ₆ H ₅ OH)	99.0 %		100.02 %
FREEZING POINT (DRY)	40.5 C		40.5°C
CLARITY OF SOLUTION	TO PASS TEST		PASSES TEST
RESIDUE AFTER EVAPORATION		0.05 %	<0.05 %
WATER		0.5 %	0.0087 %
DATE OF MANUFACTURE			06-MAR-2018

Spectrum Chemical Mfg Corp
755 Jersey Avenue
New Brunswick 08901 NJ



Certificate Of Analysis Results Certified by

Ibad Tirmizi
Director of Quality
Spectrum Chemical Mfg. Corp.

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.

Hexadecane, 99.0%



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

Certificate of Analysis

Test	Specification	Result
Assay ($\text{CH}_3(\text{CH}_2)_{14}\text{CH}_3$) (by GC)	$\geq 99.0 \%$	99.3
Infrared Spectrum	Passes Test	PT

For Laboratory, Research or Manufacturing Use

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


Jamie Ethier
Vice President Global Quality

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

W2666 Recived on 02/10/2020 by AP

Product No.: 87683


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

Lot No.: W12F013

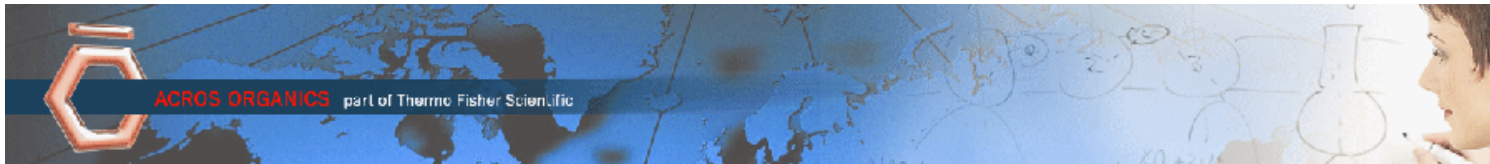
Test	Limits	Results
Assay	99.0 - 102.0 %	99.67 %
Insoluble	0.01 % max	0.0079 %
Chloride	0.02 % max	Not detected
Sulfate	To pass test	Passes test
Aqueous solubility	To pass test	Passes test
Limit on Ferricyanide	To pass test	Passes test
Limit on Ferrocyanide	To pass test	Passes test


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



ACROS ORGANICS part of Thermo Fisher Scientific





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)

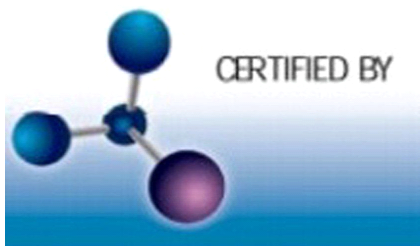
Certificate of Analysis

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 responsibility of the purchaser, formulator or those performing further manufacturing to determine suitability based upon the intended use of the end product. Products are tested to meet the analytical requirements of the noted grade. The 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



A handwritten signature in black ink, which appears to read "L. Van den Broek".

L. Van den Broek, QA Manager

Issued: 24 January 2020

Acros Organics

ENA23, zone 1, nr 1350, Janssen Pharmaceuticaaan 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

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

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

Product Specification

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

Date Of Print: 11/30/2023

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



CERTIFICATE OF ANALYSIS

Product Name ISOPROPYL ALCOHOL, 99%
Grade Meets ACS/USP/NF Monographs
Catalog # 231000099, zp231000099
Lot # C20F23007
Date of Manufacture: 06/23/20 **W2788 Received on 12/30/2020 by AP**
Recommended Retest Date: Five Years from Date of Manufacture

TEST	MONO GRAPH	SPECIFICATION	RESULT
Assay (corrected for water)	USP	99.0% min	99.92%
Assay (corrected for water)	ACS	99.5% min	
Solubility in water	ACS ⁺	To Pass Test	Pass
Appearance	ACS ⁺	Clear, colorless liquid	Pass
Color, APHA	ACS	10 max	1
Limit of Nonvolatile Residue	USP ⁺	NMT 2.5 mg (0.005%)	0.1 mg
Residue after Evaporation	ACS ⁺	0.001% max	< 0.001%
Specific Gravity	USP	0.783 - 0.787 @25°C	0.783
Identification A - Infrared Absorption	USP	To Pass Test	Pass
Identification B	USP	To Pass Test	Pass
Refractive Index @ 20°C	USP	1.376-1.378	1.377
Acidity	USP ⁺	NMT 0.70 ml of 0.020N NaOH is required	0.30 mL
Titration Acid or Base	ACS ⁺	0.0001 meq/g max	0.0001 meq/g
Carbonyl Compounds	ACS	Propionaldehyde 0.002% max	< 0.002%
		Acetone 0.002% max	None Detected
Limit of Volatile Impurities	USP	Diethyl Ether NMT 0.1%	< 0.1%
		Acetone NMT 0.1%	None Detected
		Diisopropyl Ether NMT 0.1%	< 0.1%
		n-Propyl Alcohol NMT 0.1%	< 0.1%
		2-Butanol NMT 0.1%	< 0.1%
		Total NMT 1.0%	< 0.1%
Water, wt%	ACS	NMT 0.2%	0.05%
Water Determination	USP	NMT 0.5%	

⁺This test is performed quarterly

Certification and Compliance Statements

This lot of Isopropyl Alcohol complies with all of the current requirements listed in the United States Pharmacopeia, American Chemical Society monographs and the National Formulary.

No chemicals whatsoever are used as solvents at any point in the manufacture, processing or packaging of Isopropyl Alcohol. Only Class 2 and Class 3 residual solvents may appear as impurities / related substances / low level contaminants in IPA. Concentration of Class 2 Option 1 and Class 3 residual solvents is below limits in the current USP/NF General Chapter <467>.

This product is not derived, nor does it come in contact with, any materials derived from bovine or other animal sources.

This product is for further commercial manufacturing, laboratory or research use, and may be used as an excipient or a process solvent for pharmaceutical purposes. It is not intended for use as an active ingredient in drug manufacturing nor as a medical device or disinfectant. Appropriate/legal use of this product is the responsibility of the user.

Approved by: D. Simoncelli, Quality Control Chemist

Date of Approval: 06/23/2020



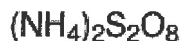
W 3035
rec. 6/6/23 12

Product Name:


Certificate of Analysis

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

Product Number: 248614
Batch Number: MKCR9319
Brand: SIGALD
CAS Number: 7727-54-0
MDL Number: MFCD00003390
Formula Weight: 228.20 g/mol
Quality Release Date: 13 OCT 2022



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


Larry Coers, Director
Quality Control
Milwaukee, WI US

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





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

Jerisa 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
QUÍMICOS
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 ₂ SO ₄
SPECIFICATION NUMBER :	6399	RELEASE DATE:	ABR/21/2023
LOT NUMBER :	313201		

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

COMMENTS

QC: PhC Irma Belmares

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

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

RC-02-01, Ed. 3

Acetone

BAKER RESI-ANALYZED® Reagent
For Organic Residue Analysis

avantor™



Material No.: 9254-03

Batch No.: 24H2762008

Manufactured Date: 2024-04-18

Expiration Date: 2027-04-18

Revision No.: 0

Certificate of Analysis

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

For Laboratory, Research, or Manufacturing Use

MEETS SPECIFICATIONS WITHIN THE EXPIRATION PERIOD

Country of Origin: United States

Packaging Site: Phillipsburg Mfg Ctr & DC

Recd by RP on 03/31/25

E3917

Jamie Croak
Director Quality Operations, Bioscience Production

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

Avantor Performance Materials LLC

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

avantor™



M 6041-4b
MS

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

Certificate of Analysis

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

>>> Continued on page 2 >>>

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

 **avantor™**



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

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

For Laboratory, Research, or Manufacturing Use

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


Jamie Ethier
Vice President Global Quality



Certificate of Analysis

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.



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

 **avantor™**



M6151

R → 11/15/25

Material No.: 9530-33
Batch No.: 22G2862015
Manufactured Date: 2022-06-15
Retest Date: 2027-06-14
Revision No.: 0

Certificate of Analysis

Test	Specification	Result
ACS – Assay (as HCl) (by acid–base titrn)	36.5 – 38.0 %	37.9 %
ACS – Color (APHA)	≤ 10	5
ACS – Residue after Ignition	≤ 3 ppm	< 1 ppm
ACS – Specific Gravity at 60°/60°F	1.185 – 1.192	1.191
ACS – Bromide (Br)	≤ 0.005 %	< 0.005 %
ACS – Extractable Organic Substances	≤ 5 ppm	< 1 ppm
ACS – Free Chlorine (as Cl ₂)	≤ 0.5 ppm	< 0.5 ppm
Phosphate (PO ₄)	≤ 0.05 ppm	< 0.03 ppm
Sulfate (SO ₄)	≤ 0.5 ppm	< 0.3 ppm
Sulfite (SO ₃)	≤ 0.8 ppm	0.3 ppm
Ammonium (NH ₄)	≤ 3 ppm	< 1 ppm
Trace Impurities – Arsenic (As)	≤ 0.010 ppm	< 0.003 ppm
Trace Impurities – Aluminum (Al)	≤ 10.0 ppb	1.3 ppb
Arsenic and Antimony (as As)	≤ 5.0 ppb	< 3.0 ppb
Trace Impurities – Barium (Ba)	≤ 1.0 ppb	0.2 ppb
Trace Impurities – Beryllium (Be)	≤ 1.0 ppb	< 0.2 ppb
Trace Impurities – Bismuth (Bi)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities – Boron (B)	≤ 20.0 ppb	< 5.0 ppb
Trace Impurities – Cadmium (Cd)	≤ 1.0 ppb	< 0.3 ppb
Trace Impurities – Calcium (Ca)	≤ 50.0 ppb	163.0 ppb
Trace Impurities – Chromium (Cr)	≤ 1.0 ppb	0.7 ppb
Trace Impurities – Cobalt (Co)	≤ 1.0 ppb	< 0.3 ppb
Trace Impurities – Copper (Cu)	≤ 1.0 ppb	< 0.1 ppb
Trace Impurities – Gallium (Ga)	≤ 1.0 ppb	< 0.2 ppb
Trace Impurities – Germanium (Ge)	≤ 3.0 ppb	< 2.0 ppb
Trace Impurities – Gold (Au)	≤ 4.0 ppb	0.6 ppb
Heavy Metals (as Pb)	≤ 100 ppb	< 50 ppb
Trace Impurities – Iron (Fe)	≤ 15 ppb	6 ppb

>>> Continued on page 2 >>>

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

 **avantorsm**



Material No.: 9530-33
Batch No.: 22G2862015

Test	Specification	Result
Trace Impurities – Lead (Pb)	≤ 1.0 ppb	< 0.5 ppb
Trace Impurities – Lithium (Li)	≤ 1.0 ppb	< 0.2 ppb
Trace Impurities – Magnesium (Mg)	≤ 10.0 ppb	2.9 ppb
Trace Impurities – Manganese (Mn)	≤ 1.0 ppb	< 0.4 ppb
Trace Impurities – Mercury (Hg)	≤ 0.5 ppb	0.1 ppb
Trace Impurities – Molybdenum (Mo)	≤ 10.0 ppb	< 3.0 ppb
Trace Impurities – Nickel (Ni)	≤ 4.0 ppb	< 0.3 ppb
Trace Impurities – Niobium (Nb)	≤ 1.0 ppb	0.8 ppb
Trace Impurities – Potassium (K)	≤ 9.0 ppb	< 2.0 ppb
Trace Impurities – Selenium (Se), For Information Only		< 1.0 ppb
Trace Impurities – Silicon (Si)	≤ 100.0 ppb	< 10.0 ppb
Trace Impurities – Silver (Ag)	≤ 1.0 ppb	0.5 ppb
Trace Impurities – Sodium (Na)	≤ 100.0 ppb	2.3 ppb
Trace Impurities – Strontium (Sr)	≤ 1.0 ppb	< 0.2 ppb
Trace Impurities – Tantalum (Ta)	≤ 1.0 ppb	1.6 ppb
Trace Impurities – Thallium (Tl)	≤ 5.0 ppb	< 2.0 ppb
Trace Impurities – Tin (Sn)	≤ 5.0 ppb	4.0 ppb
Trace Impurities – Titanium (Ti)	≤ 1.0 ppb	1.5 ppb
Trace Impurities – Vanadium (V)	≤ 1.0 ppb	< 0.2 ppb
Trace Impurities – Zinc (Zn)	≤ 5.0 ppb	0.8 ppb
Trace Impurities – Zirconium (Zr)	≤ 1.0 ppb	0.3 ppb

>>> Continued on page 3 >>>

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

 **avantor**™

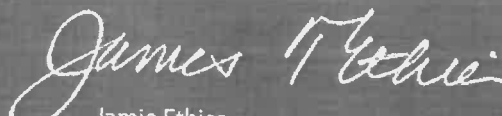


Material No.: 9530-33
Batch No.: 22G2862015

Test	Specification	Result
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For Laboratory, Research, or Manufacturing Use
Product Information (not specifications):
Appearance (clear, fuming liquid)
Meets ACS Specifications
Storage Condition: Store below 25 °C.

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


Jamie Ethier
Vice President Global Quality

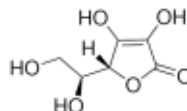
W3074 Rec. on 01/16/24 by IZ

Certificate of Analysis

Product Name:

L-Ascorbic acid - ACS reagent, ≥99%

Product Number: 255564
Batch Number: MKCS4627
Brand: SIAL
CAS Number: 50-81-7
MDL Number: MFCD00064328
Formula: C₆H₈O₆
Formula Weight: 176.12 g/mol
Quality Release Date: 21 NOV 2022
Recommended Retest Date: SEP 2025



Test	Specification	Result
Appearance (Color)	White	White
Appearance (Form)	Conforms to Requirements	Powder
Powder, Crystals, Crystalline Powder, Granules and/or Chunks		
Infrared Spectrum	Conforms to Structure	Conforms
Optical Rotation (+); c = 10%; Water	20.5 - 21.5 deg	20.7 deg
Titration by Iodine	≥ 99.0 %	99.4 %
Residue on Ignition	≤ 0.10 %	0.03 %
Iron (Fe)	≤ 0.001 %	< 0.001 %
Heavy Metals by ICP-OES	≤ 0.002 %	0.001 %
Recommended Retest Period 3 Years	-----	-----
Meets ACS Requirements	Current ACS Specification	Conforms

Larry Coers, Director
Quality Control
Milwaukee, WI US

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





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."

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

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-CI 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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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

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



Certificate of Analysis



Sodium Hydroxide (Pellets)

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

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

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

Storage: Room Temperature

Pellets

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

Internal ID #: 710

Signature

We certify that this batch conforms to the specifications listed.

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

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

Additional Information

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

Product meets analytical specifications of the grades listed.



Sodium Hydroxide (Pellets)

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

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

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

Storage: Room Temperature

Pellets

Spec Set: 0583ACS

Internal ID #: 710

Signature

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.

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

TEST	SPECIFICATION		RESULT
	MIN	MAX	
ASSAY (DRIED BASIS)	99.0	101.0 %	99.5 %
pH OF A 5% SOLUTION @ 25°C	4.0	6.0	4.6
LOSS ON DRYING	8.7	11.4 %	8.90 %
CALCIUM (Ca)	NO PRECIPITATE IS FORMED		NO PRECIPITATE IS FORMED
ELEMENTAL IMPURITIES:			.
NICKEL (Ni)	AS REPORTED		<0.3 ppm
CHROMIUM (Cr)	AS REPORTED		<0.3 ppm
NITRILOTRIACETIC ACID[n[(HOCOCH ₂) ₃ N]		0.1 %	<0.10 %
IDENTIFICATION A	MATCHES REFERENCE		MATCHES REFERENCE
IDENTIFICATION B	RED COLOR IS DISCHARGED, LEAVING A YELLOWISH SOLUTION		RED COLOR IS DISCHARGED, LEAVING A YELLOWISH SOLUTION
IDENTIFICATION C	MEETS THE REQUIREMENTS FOR SODIUM		MEETS THE REQUIREMENTS FOR SODIUM
CERTIFIED HALAL			CERTIFIED HALAL
EXPIRATION DATE			10-JUL-2026
DATE OF MANUFACTURE			11-JUL-2023
APPEARANCE			WHITE CRYSTALLINE POWDER
RESIDUAL SOLVENTS		AS REPORTED	NO RESIDUAL SOLVENTS PRESENT
MONOGRAPH EDITION			USP 2024

Certificate of Analysis Results Entered By:

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

Certificate of Analysis Results Approved By:

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

Spectrum Chemical Mfg Corp
755 Jersey Avenue
New Brunswick 08901 NJ



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

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

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



An ISO 9001 Certified Company

Loveland, CO 80539

(970) 669-3050

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



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-CI 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-CI 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)

A handwritten signature in blue ink that reads "Paul Brandon". The signature is fluid and cursive, with the first name "Paul" and last name "Brandon" clearly distinguishable.

Paul Brandon (08/28/2024)
Production Manager

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

Certificate of Analysis

Sodium Hypochlorite Solution, 5% available Chlorine

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

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

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

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

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

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

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

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

Jose Pena (01/17/2025)
Operations Manager

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W3195 Received on 03/19/2025 by IZ

Certificate of Analysis



Material	BDH9208-500G
Material Description	BDH AMMONIUM CHLORIDE ACS 500G
Grade	U S P REAGENT (ACS GRADE)
Batch	24L0356561
Reassay Date	08/31/2027
CAS Number	12125-02-9
Molecular Formula	NH ₄ Cl
Molecular Mass	53.49
Date of Manufacture	08/01/2024
Storage	Room Temperature

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

Internal ID #: 710

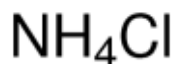
Signature	Additional Information
We certify that this batch conforms to the specifications listed above. This document has been electronically produced and is valid without a signature. Leona Edwardson, Quality Control Sr. Manager - Solon VWR Chemicals, LLC. 28600 Fountain Parkway, Solon OH 44139 USA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

W3196 Received on 03/19/2025 by IZ

Certificate of Analysis

Product Name:

Ammonium chloride - ACS reagent, ≥99.5%



Product Number: 213330
Batch Number: MKCV1009
Brand: SIGALD
CAS Number: 12125-02-9
MDL Number: MFCD00011420
Formula: H4CIN
Formula Weight: 53.49 g/mol
Quality Release Date: 23 OCT 2023
Recommended Retest Date: SEP 2026

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



Larry Coers, Director

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



Certificate of Analysis

Product Number: 213330
Batch Number: MKCV1009

Quality Control
Milwaukee, WI US

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W3198 Received on 4/11/2025 by IZ

3050 Spruce Street, Saint Louis, MO 63103, USA

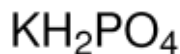
Website: www.sigmaaldrich.comEmail USA: techserv@sial.comOutside USA: eurtechserv@sial.com

Certificate of Analysis

Product Name:

Potassium phosphate monobasic - ACS reagent, ≥99.0%

Product Number: P0662
Batch Number: MKCW6723
Brand: SIGALD
CAS Number: 7778-77-0
MDL Number: MFCD00011401
Formula: H₂KO₄P
Formula Weight: 136.09 g/mol
Quality Release Date: 16 OCT 2024
Recommended Retest Date: OCT 2028



Test	Specification	Result
Appearance (Color)	White	White
Appearance (Form)	Powder or Crystals	Crystals
Assay	≥ 99.0 %	99.8 %
Insoluble Matter	≤ 0.01 %	< 0.01 %
Loss on Drying	≤ 0.2 %	< 0.1 %
At 105°C		
pH	4.1 - 4.5	4.5
(c = 5%, 25 deg C)		
Chloride Content	≤ 0.001 %	< 0.001 %
Sulfate (SO ₄)	≤ 0.003 %	< 0.003 %
Heavy Metals	≤ 0.001 %	< 0.001 %
by ICP		
Iron (Fe)	≤ 0.002 %	< 0.001 %
Sodium (Na)	≤ 0.005 %	< 0.001 %
Recommended Retest Period	-----	-----
4 Years		



Larry Coers, Director
Quality Control
Milwaukee, WI US

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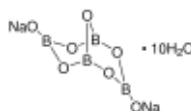
W3201 Received on 4/16/25 by IZ

Certificate of Analysis

Product Name:

Sodium tetraborate decahydrate - ACS reagent, ≥99.5%

Product Number: S9640
Batch Number: BCCL9613
Brand: SIGALD
CAS Number: 1303-96-4
Formula: B₄Na₂O₇ · 10H₂O
Formula Weight: 381,37 g/mol
Quality Release Date: 05 JUL 2024
Recommended Retest Date: MAY 2029



Test	Specification	Result
Appearance (Color)	White	White
Appearance (Form)	Powder or Crystals	Powder
Titration with NaOH	99.5 - 105.0 %	100.7 %
pH	9.15 - 9.20	9.20
0.01 m Solution at 25 Deg C		
Meets ACS Requirements	Corresponds to Requirements	Corresponds
ACS Specifications	Corresponds to Requirements	Corresponds
Insoluble Matter ≤ 0.005% / Heavy		
Metals (As Pb) ≤ 0.001%		
Calcium (Ca)	≤ 50 mg/kg	< 50 mg/kg
Iron (Fe)	≤ 5 mg/kg	< 5 mg/kg
Total Sulfur	≤ 50 mg/kg	< 50 mg/kg
as SO ₄ (ICP)		
Chloride (Cl)	≤ 10 mg/kg	< 10 mg/kg
Phosphate (PO ₄)	≤ 10 mg/kg	< 10 mg/kg

Dr. Reinhold Schwenninger
Quality Assurance
Buchs, Switzerland CH

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

avantor™



W3204
084K: 09/22/2025
38

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

Certificate of Analysis

Test	Specification	Result
FID-Sensitive Impurities (as 2-Octanol) Single Impurity Peak (ng/mL)	<= 5	1
ECD Sensitive Impurities (as HeptachlorEpoxide) Single Peak (pg/mL)	<= 10	6
ECD-Sensitive Impurities (as EthyleneDibromide) - Single Impurity Peak (ng/mL)	<= 5	5
Assay (Total Saturated C ₆ Isomers) (by GC, corrected for water)	>= 99.5 %	100.0 %
Assay (as n-Hexane) (by GC, corrected for water)	>= 95 %	100 %
Color (APHA)	<= 10	10
Residue after Evaporation	<= 1.0 ppm	0.1 ppm
Substances Darkened by H ₂ SO 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: United States
Packaging Site: Phillipsburg Mfg Ctr & DC

J. Croak

Jamie Croak
Director Quality Operations, Bioscience Production

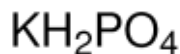
For questions on this Certificate of Analysis please contact Technical Services at 855.282.6867 or +1.610.386.1700

Certificate of Analysis

Product Name:

Potassium phosphate monobasic - ACS reagent, ≥99.0%

Product Number: P0662
Batch Number: MKCX1379
Brand: SIGALD
CAS Number: 7778-77-0
MDL Number: MFCD00011401
Formula: H₂KO₄P
Formula Weight: 136.09 g/mol
Quality Release Date: 27 JAN 2025
Recommended Retest Date: JAN 2029



Test	Specification	Result
Appearance (Color)	White	White
Appearance (Form)	Powder or Crystals	Crystals
Assay	≥ 99.0 %	99.9 %
Insoluble Matter	≤ 0.01 %	< 0.01 %
Loss on Drying	≤ 0.2 %	< 0.1 %
At 105°C		
pH	4.1 - 4.5	4.5
(c = 5%, 25 deg C)		
Chloride Content	≤ 0.001 %	< 0.001 %
Sulfate (SO ₄)	≤ 0.003 %	< 0.003 %
Heavy Metals	≤ 0.001 %	< 0.001 %
by ICP		
Iron (Fe)	≤ 0.002 %	< 0.001 %
Sodium (Na)	≤ 0.005 %	< 0.001 %
Recommended Retest Period	-----	-----
4 Years		



Larry Coers, Director
Quality Control
Milwaukee, WI US

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



N3212 Received on 5/21/25 by 12



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 132409 • Mfg. Date: 09/2024 • Exp. Date: 09/2026

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 4.00×10^9 cfu/g.

GLUCOSE/GLUTAMIC-ACID RESULTS:

Tested results within acceptable range 198 ± 30.5 mg/L (167.5 - 228.5 mg/L). GGA Lot# 43100020 – Average Test Result: 202.1

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 ensure that the Finished Product conforms to the above specification.

Signature: _____

Quality Control Department

Date: 09/13/2024

POLYSEED.Ref.1.19

Revised Jan 24



SHIPPING DOCUMENTS

CLIENT INFORMATION

CLIENT PROJECT INFORMATION

CLIENT BILLING INFORMATION

REPORT TO BE SENT TO:

COMPANY: **HOLLAND MFG CO.**

ADDRESS: **15 MAIN ST**

CITY: **SOCALUSUNNA** STATE: **NJ** ZIP: **07846**

ATTENTION:

PHONE: FAX:

PROJECT NAME:

PROJECT NO.: LOCATION:

PROJECT MANAGER: **TODD HOLLAND**

e-mail:

PHONE: FAX:

BILL TO: **SAME**

PO#:

ADDRESS:

CITY STATE: ZIP:

ATTENTION: PHONE:

ANALYSIS

DATA TURNAROUND INFORMATION

DATA DELIVERABLE INFORMATION

FAX (RUSH) DAYS*

HARDCOPY (DATA PACKAGE): DAYS*

EDD: DAYS*

*TO BE APPROVED BY CHEMTECH

STANDARD HARDCOPY TURNAROUND TIME IS 10 BUSINESS

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

BOD5
TSS
D+G
PO4
TOTAL P
NH4-NH2

ALLIANCE SAMPLE ID	PROJECT SAMPLE IDENTIFICATION	SAMPLE MATRIX	SAMPLE TYPE		SAMPLE COLLECTION		# OF BOTTLES	PRESERVATIVES									COMMENTS
			COMP	GRAB	DATE	TIME		1	2	3	4	5	6	7	8	9	
1.	EFFLUENT	W		✓	7/10	1130	6	X	X	X	X	X	X				
2.	AERATION	W		✓	7/10	1130	1		X								
3.	INFLUENT	W		✓	7/10	1130	2	X					X				
4.																	
5.																	
6.																	
7.																	
8.																	
9.																	
10.																	

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

RELINQUISHED BY SAMPLER:	DATE/TIME: 14:10	RECEIVED BY:	Conditions of bottles or coolers at receipt: <input type="checkbox"/> COMPLIANT <input type="checkbox"/> NON COMPLIANT <input type="checkbox"/> COOLER TEMP 4.8 °C
1. EMARTINEZ	6/7/10/25	1. CL	Comments: LAB TO FILTER
RELINQUISHED BY SAMPLER:	DATE/TIME:	RECEIVED BY:	
2.		2.	
RELINQUISHED BY SAMPLER:	DATE/TIME:	RECEIVED BY:	
3.		3.	

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

Laboratory Certification

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