

## DATA REPORTING QUALIFIERS- INORGANIC

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

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

## LAB CHRONICLE

<b>OrderID:</b>	Q1424	<b>OrderDate:</b>	2/25/2025 12:03:00 PM
<b>Client:</b>	American Wax	<b>Project:</b>	Semi Annual 2025
<b>Contact:</b>	Steve Pollack	<b>Location:</b>	D11

LabID	ClientID	Matrix	Test	Method	Sample Date	Prep Date	Anal Date	Received
<b>Q1424-01</b>	<b>NON POLAR MATERIAL</b>	<b>WATER</b>			<b>02/25/25 10:00</b>			<b>02/25/25</b>
			Non-Polar Material	1664A			02/27/25 10:25	
<b>Q1424-02</b>	<b>NON POLAR MATERIAL</b>	<b>WATER</b>			<b>02/25/25 10:30</b>			<b>02/25/25</b>
			Non-Polar Material	1664A			02/27/25 10:25	
<b>Q1424-03</b>	<b>NON POLAR MATERIAL</b>	<b>WATER</b>			<b>02/25/25 11:00</b>			<b>02/25/25</b>
			Non-Polar Material	1664A			02/27/25 10:25	
<b>Q1424-04</b>	<b>NON POLAR MATERIAL</b>	<b>WATER</b>			<b>02/25/25 11:30</b>			<b>02/25/25</b>
			Non-Polar Material	1664A			02/27/25 10:25	
<b>Q1424-05</b>	<b>BOD</b>	<b>WATER</b>			<b>02/25/25 11:30</b>			<b>02/25/25</b>
			BOD_7	SM5210 B			02/26/25 17:20	
<b>Q1424-06</b>	<b>COD</b>	<b>Water</b>			<b>02/25/25 11:30</b>			<b>02/25/25</b>
			COD	SM5220 D			02/28/25 14:02	



# SAMPLE DATA

## Report of Analysis

Client:	American Wax	Date Collected:	02/25/25 10:00
Project:	Semi Annual 2025	Date Received:	02/25/25
Client Sample ID:	NON POLAR MATERIAL	SDG No.:	Q1424
Lab Sample ID:	Q1424-01	Matrix:	WATER
		% Solid:	0

Parameter	Conc.	Qua.	DF	MDL	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
Non-Polar Material	1.00	J	1	0.40	5.00	mg/L		02/27/25 10:25	1664A

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:	American Wax	Date Collected:	02/25/25 10:30
Project:	Semi Annual 2025	Date Received:	02/25/25
Client Sample ID:	NON POLAR MATERIAL	SDG No.:	Q1424
Lab Sample ID:	Q1424-02	Matrix:	WATER
		% Solid:	0

Parameter	Conc.	Qua.	DF	MDL	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
Non-Polar Material	0.90	J	1	0.40	5.00	mg/L		02/27/25 10:25	1664A

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:	American Wax	Date Collected:	02/25/25 11:00
Project:	Semi Annual 2025	Date Received:	02/25/25
Client Sample ID:	NON POLAR MATERIAL	SDG No.:	Q1424
Lab Sample ID:	Q1424-03	Matrix:	WATER
		% Solid:	0

Parameter	Conc.	Qua.	DF	MDL	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
Non-Polar Material	1.20	J	1	0.40	5.00	mg/L		02/27/25 10:25	1664A

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:	American Wax	Date Collected:	02/25/25 11:30
Project:	Semi Annual 2025	Date Received:	02/25/25
Client Sample ID:	NON POLAR MATERIAL	SDG No.:	Q1424
Lab Sample ID:	Q1424-04	Matrix:	WATER
		% Solid:	0

Parameter	Conc.	Qua.	DF	MDL	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
Non-Polar Material	1.10	J	1	0.40	5.00	mg/L		02/27/25 10:25	1664A

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:	American Wax	Date Collected:	02/25/25 11:30
Project:	Semi Annual 2025	Date Received:	02/25/25
Client Sample ID:	BOD	SDG No.:	Q1424
Lab Sample ID:	Q1424-05	Matrix:	WATER
		% Solid:	0

Parameter	Conc.	Qua.	DF	MDL	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
BOD_7	3470		1	0.17	2.00	mg/L		02/26/25 17:20	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:	American Wax	Date Collected:	02/25/25 11:30
Project:	Semi Annual 2025	Date Received:	02/25/25
Client Sample ID:	COD	SDG No.:	Q1424
Lab Sample ID:	Q1424-06	Matrix:	Water
		% Solid:	0

Parameter	Conc.	Qua.	DF	MDL	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
COD	5930	D	50	118	500	mg/L		02/28/25 14:02	SM 5220 D-11

Comments: \_\_\_\_\_

U = Not Detected

LOQ = Limit of Quantitation

MDL = Method Detection Limit

LOD = Limit of Detection

D = Dilution

Q = indicates LCS control criteria did not meet requirements

H = Sample Analysis Out Of Hold Time

J = Estimated Value

B = Analyte Found in Associated Method Blank

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

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

OR = Over Range

N =Spiked sample recovery not within control limits



# QC RESULT SUMMARY

## Initial and Continuing Calibration Verification

**Client:** American Wax

**SDG No.:** Q1424

**Project:** Semi Annual 2025

**RunNo.:** LB134856

Analyte	Units	Result	True Value	% Recovery	Acceptance Window (%R)	Analysis Date
Sample ID: <b>ICV</b> COD	mg/L	49.329	50	99	95-105	01/22/2025
Sample ID: <b>CCV1</b> COD	mg/L	50.319	50	101	95-105	02/28/2025
Sample ID: <b>CCV2</b> COD	mg/L	50.319	50	101	95-105	02/28/2025
Sample ID: <b>CCV3</b> COD	mg/L	50.319	50	101	95-105	02/28/2025

### Initial and Continuing Calibration Blank Summary

**Client:** American Wax

**SDG No.:** Q1424

**Project:** Semi Annual 2025

**RunNo.:** LB134856

Analyte	Units	Result	Acceptance Limits	Conc Qual	MDL	RDL	Analysis Date
Sample ID: <b>ICB</b> COD	mg/L	< 5.0000	5.0000	U	2.35	10	01/22/2025
Sample ID: <b>CCB1</b> COD	mg/L	< 5.0000	5.0000	U	2.35	10	02/28/2025
Sample ID: <b>CCB2</b> COD	mg/L	< 5.0000	5.0000	U	2.35	10	02/28/2025
Sample ID: <b>CCB3</b> COD	mg/L	< 5.0000	5.0000	U	2.35	10	02/28/2025

## Preparation Blank Summary

**Client:** American Wax

**SDG No.:** Q1424

**Project:** Semi Annual 2025

Analyte	Units	Result	Acceptance Limits	Conc Qual	MDL	RDL	Analysis Date
Sample ID: <b>LB134820BL</b> BOD_7	mg/L	< 1.0000	1.0000	U	0.17	2	02/26/2025
Sample ID: <b>LB134829BL</b> Non-Polar Material	mg/L	< 2.5000	2.5000	U	0.4	5.0	02/27/2025
Sample ID: <b>LB134856BL</b> COD	mg/L	< 5.0000	5.0000	U	2.35	10.0	02/28/2025

## Matrix Spike Summary

<b>Client:</b>	American Wax	<b>SDG No.:</b>	Q1424
<b>Project:</b>	Semi Annual 2025	<b>Sample ID:</b>	Q1439-01
<b>Client ID:</b>	LRSA-MODMS	<b>Percent Solids for Spike Sample:</b>	0

Analyte	Units	Acceptance Limit %R	Spiked Result	Conc. Qualifier	Sample Result	Conc. Qualifier	Spike Added	Dilution Factor	% Rec	Qual	Analysis Date
COD	mg/L	75-125	51.3		3.79	J	50.0	1	95		02/28/2025

## Matrix Spike Summary

<b>Client:</b>	American Wax	<b>SDG No.:</b>	Q1424
<b>Project:</b>	Semi Annual 2025	<b>Sample ID:</b>	Q1439-01
<b>Client ID:</b>	LRSA-MODMSD	<b>Percent Solids for Spike Sample:</b>	0

Analyte	Units	Acceptance Limit %R	Spiked Result	Conc. Qualifier	Sample Result	Conc. Qualifier	Spike Added	Dilution Factor	% Rec	Qual	Analysis Date
COD	mg/L	75-125	52.3		3.79	J	50.0	1	97		02/28/2025

### Duplicate Sample Summary

<b>Client:</b>	American Wax	<b>SDG No.:</b>	Q1424
<b>Project:</b>	Semi Annual 2025	<b>Sample ID:</b>	Q1424-05
<b>Client ID:</b>	BODDUP	<b>Percent Solids for Spike Sample:</b>	0

Analyte	Units	Acceptance Limit	Sample Result	Conc. Qualifier	Duplicate Result	Conc. Qualifier	Dilution Factor	RPD/ AD	Qual	Analysis Date
BOD_7	mg/L	+/-20	3470		3370		1	2.81		02/26/2025



### Duplicate Sample Summary

<b>Client:</b>	American Wax	<b>SDG No.:</b>	Q1424
<b>Project:</b>	Semi Annual 2025	<b>Sample ID:</b>	Q1439-01
<b>Client ID:</b>	LRSA-MODDUP	<b>Percent Solids for Spike Sample:</b>	0

Analyte	Units	Acceptance Limit	Sample Result	Conc. Qualifier	Duplicate Result	Conc. Qualifier	Dilution Factor	RPD/ AD	Qual	Analysis Date
COD	mg/L	+/-20	3.79	J	3.79	J	1	0		02/28/2025

### Duplicate Sample Summary

<b>Client:</b>	American Wax	<b>SDG No.:</b>	Q1424
<b>Project:</b>	Semi Annual 2025	<b>Sample ID:</b>	Q1439-01
<b>Client ID:</b>	LRSA-MODMSD	<b>Percent Solids for Spike Sample:</b>	0

Analyte	Units	Acceptance Limit	Sample Result	Conc. Qualifier	Duplicate Result	Conc. Qualifier	Dilution Factor	RPD/ AD	Qual	Analysis Date
COD	mg/L	+/-20	51.3		52.3		1	1.93		02/28/2025

### Laboratory Control Sample Summary

**Client:** American Wax

**SDG No.:** Q1424

**Project:** Semi Annual 2025

**Run No.:** LB134820

Analyte	Units	True Value	Result	Conc. Qualifier	% Recovery	Dilution Factor	Acceptance Limit %R	Analysis Date
Sample ID	LB134820BS							
BOD_7	mg/L	198	204		103	1	84.6-115.4	02/26/2025

### Laboratory Control Sample Summary

**Client:** American Wax

**SDG No.:** Q1424

**Project:** Semi Annual 2025

**Run No.:** LB134829

Analyte	Units	True Value	Result	Conc. Qualifier	% Recovery	Dilution Factor	Acceptance Limit %R	Analysis Date
Sample ID	LB134829BS							
Non-Polar Material	mg/L	20.0	16.7		84	1	78-114	02/27/2025

### Laboratory Control Sample Summary

**Client:** American Wax

**SDG No.:** Q1424

**Project:** Semi Annual 2025

**Run No.:** LB134856

Analyte	Units	True Value	Result	Conc. Qualifier	% Recovery	Dilution Factor	Acceptance Limit %R	Analysis Date
Sample ID	LB134856BS							
COD	mg/L	50	49.3		99	1	90-110	02/28/2025



# RAW DATA

# BOD 7 LOG

ANALYST: rubin  
Inst Id :DO METER  
LB :LB134820

Reviewed By:Iwona  
On:3/6/2025 11:42:59  
AM

SUPERVISOR: Iwona

QC BATCH ID: LB134820

Analysis Date: 02/26/2025

BOD Water: WP112062

MANGANOUS SULFATE SOLUTION: W3103

Starch: W3149

Alkaline Iodide Azide: W3109

Sulfuric acid, 1N: WP110386

Sodium Thiosulfate, 0.025N: W3105

POLYSEED: WP112064

NaOH, 1N: WP111323

GGA: WP112063

IncubatorID: INCUBATOR #3

Chlorine Strips: W3155

GuageID: 0511062

pH Strips: W3140

Zero DO: WP111875

Lab SampleID	Client ID	Bottle No.	VOL. ML	Initial Reading (ML)	Final Reading (ML)	Difference	Average
WINKLER 1	WINKLER 1	1	300	0.0	9.5	9.5	9.5
WINKLER 2	WINKLER 2	2	300	9.6	19.1	9.5	9.5

Meter Calibration1: 9.41 Zero DO Reading1: 0.14 mg/L (<=0.2 Criteria)

Barometric Pressure1: 760 mmHg DO Meter BOD fluid reading for winkler comparison: 9.53

## After Incubation

Meter Calibration2: 9.28 Zero DO Reading2: 0.14 mg/L (<=0.2 Criteria)

Barometric Pressure2: 755 mmHg

QC BATCH ID: LB134820

INCUBATOR TEMP IN(C): 20.0

INCUBATOR TEMP OUT(C): 20.1

TIME IN: 17:20

TIME OUT: 13:30

DATE IN: 02/26/2025

DATE OUT: 03/05/2025

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
LB134820BL	1	No	6.59	N/A	20.80	300	9.53	9.51	0.02	0.02	0.02	
POLYSEED	1					10	9.51	7.02	2.49	0.5	0.53	
POLYSEED	2					15	9.46	5.63	3.83	0.51		
POLYSEED	3					20	9.42	3.67	5.75	0.57		
GGA	1					6	9.41	5.01	4.4	193.5	203.5	
GGA	2					6	9.41	4.57	4.84	215.5		
GGA	3					6	9.43	4.87	4.56	201.5		
Q1424-05	1	No	7.00	N/A	20.20	0.1	9.50	7.72	-	0	3468	
Q1424-05	2					0.5	9.40	3.09	6.31	3468		
Q1424-05	3					1	9.39	0.19	-	0		
Q1424-05	4					5	9.15	0.10	-	0		
Q1424-05DUP	1	No	7.00	N/A	20.20	0.1	9.50	8.59	-	0	3372	
Q1424-05DUP	2					0.5	9.42	3.27	6.15	3372		
Q1424-05DUP	3					1	9.39	0.14	-	0		
Q1424-05DUP	4					5	9.13	0.09	-	0		
Q1432-05	1	No	6.87	N/A	20.60	0.1	9.31	8.29	-	0	1809	
Q1432-05	2					0.5	9.28	5.58	3.7	1902		
Q1432-05	3					1	9.14	2.89	6.25	1716		
Q1432-05	4					5	8.96	0.62	-	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.



## Extraction and Analytical Summary Report

**Analysis Method:** 1664A  
**Test:** Non-Polar Material  
**Run Number:** LB134829  
**Analysis Date:** 02/27/2025  
**BalanceID:** WC SC-6  
**OvenID:** EXT OVEN-3

**ANALYST:** jignesh  
**REVIEWED BY:** Iwona  
**Extraction Date:** 02/27/2025  
**Extraction IN Time:** 08:25  
**Extraction OUT Time:** 09:40  
**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	LB134829BL	LB134829BL	WATER	1.3	1000	100	2.5631	2.5631	3.01	2.5632	2.5632	0.0001	0.1
2	LB134829BS	LB134829BS	WATER	1.3	1000	100	2.9637	2.9637	3.02	2.9804	2.9804	0.0167	16.7
3	Q1424-01	NON POLAR MATERIAL	WATER	1.6	1000	100	3.0774	3.0774	3.03	3.0784	3.0784	0.0010	1
4	Q1424-02	NON POLAR MATERIAL	WATER	1.6	1000	100	3.1482	3.1482	3.04	3.1491	3.1491	0.0009	0.9
5	Q1424-03	NON POLAR MATERIAL	WATER	1.6	1000	100	3.0420	3.0420	303.00	3.0432	3.0432	0.0012	1.2
6	Q1424-04	NON POLAR MATERIAL	WATER	1.6	1000	100	3.0155	3.0155	3.02	3.0166	3.0166	0.0011	1.1
7	Q1429-01	OUTFALL-DSN-001	WATER	1.3	1000	100	3.0501	3.0501	3.04	3.0504	3.0504	0.0003	0.3
8	Q1429-02	OUTFALL-DSN-002	WATER	1.3	1000	100	3.0324	3.0324	3.05	3.0332	3.0332	0.0008	0.8
9	Q1432-01	NON POLAR MATERIAL	WATER	1.6	1000	100	3.1603	3.1603	3.02	3.1606	3.1606	0.0003	0.3
10	Q1432-02	NON POLAR MATERIAL	WATER	1.6	1000	100	2.9903	2.9903	3.04	2.9907	2.9907	0.0004	0.4
11	Q1432-03	NON POLAR MATERIAL	WATER	1.6	1000	100	3.0484	3.0484	3.03	3.0488	3.0488	0.0004	0.4
12	Q1432-04	NON POLAR MATERIAL	WATER	1.6	1000	100	3.1201	3.1201	3.01	3.1207	3.1207	0.0006	0.6

QC Batch# LB134829

**Test:** Non-Polar Material

**Analysis Date:** 02/27/2025

### Chemicals Used:

Chemical Name	Chemical Lot #
HEXANE	W3177
pH Paper 0-14	M6069
Sodium Sulfate	EP2590
1:1 HCL	WP110826
Silica Gel	W3079
Sand	NA

### Standards Used:

Standard Name	Amount Used	Standard Lot #
LCSW	5.00 ML	WP100827
LCSWD	5.00 ML	WP100828
MS/MSD	NA	NA

### 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 : 11:01

1.0000 gram Balance: 1.0003 (0.9950-1.0050) In Time1: 10:25

Bal Check Time: 08:30 Out OVEN TEMP1: 70 °C Dessicator Time Out1: 11:35

Out Time1: 11:00

## After Analysis

0.0020 gram Balance: 0.0019 (0.0018-0.0022) In OVEN TEMP2 : 71 °C Dessicator Time In2 : 13:01

1.0000 gram Balance: 1.0005 (0.9950-1.0050) In Time2: 12:10

Bal Check Time: 13:45 Out OVEN TEMP2: 71 °C Dessicator Time Out2: 13:40

Out Time2: 13:00

# WORKLIST(Hardcopy Internal Chain)

134829

WorkList Name : non poplar p1424      WorkList ID : 187914      Department : Wet-Chemistry      Date : 02-27-2025 08:13:33

Sample	Customer Sample	Matrix	Test	Preservative	Customer	Raw Sample Storage Location	Collect Date	Method
Q1424-01	NON POLAR MATERIAL	Water	Non-Polar Material	Conc H2SO4 to pH < 2	AMER08	D11	02/25/2025	1664A
Q1424-02	NON POLAR MATERIAL	Water	Non-Polar Material	Conc H2SO4 to pH < 2	AMER08	D11	02/25/2025	1664A
Q1424-03	NON POLAR MATERIAL	Water	Non-Polar Material	Conc H2SO4 to pH < 2	AMER08	D11	02/25/2025	1664A
Q1424-04	NON POLAR MATERIAL	Water	Non-Polar Material	Conc H2SO4 to pH < 2	AMER08	D11	02/25/2025	1664A
Q1429-01	OUTFALL-DSN-001	Water	Non-Polar Material	Conc H2SO4 to pH < 2	TRIS02	D11	02/25/2025	1664A
Q1429-02	OUTFALL-DSN-002	Water	Non-Polar Material	Conc H2SO4 to pH < 2	TRIS02	D11	02/25/2025	1664A
Q1432-01	NON POLAR MATERIAL	Water	Non-Polar Material	Conc H2SO4 to pH < 2	AMER08	H11	02/26/2025	1664A
Q1432-02	NON POLAR MATERIAL	Water	Non-Polar Material	Conc H2SO4 to pH < 2	AMER08	H11	02/26/2025	1664A
Q1432-03	NON POLAR MATERIAL	Water	Non-Polar Material	Conc H2SO4 to pH < 2	AMER08	H11	02/26/2025	1664A
Q1432-04	NON POLAR MATERIAL	Water	Non-Polar Material	Conc H2SO4 to pH < 2	AMER08	H11	02/26/2025	1664A

Date/Time 02/27/25 08:20  
 Raw Sample Received by: [Signature]  
 Raw Sample Relinquished by: [Signature]

Date/Time 02/27/25  
 Raw Sample Received by: [Signature]  
 Raw Sample Relinquished by: [Signature]

## Analytical Summary Report

Analysis Method: SM5220 D

ANALYST: Niha

Parameter: COD

SUPERVISOR REVIEW BY: Iwona

Run Number: LB134856

Reagent/Standard	Lot/Log #
COD ICV-LCS std, 50ppm	WP111522
COD calibration std. 100 ppm	WP111519
COD calibration std. 10 ppm	WP111517
COD calibration std. 150 ppm	WP111520
COD calibration std. 50 ppm	WP111518
COD calibration std. 0 ppm	WP111516
COD Digestion Vials Low Level 0-150Mg/L	W3126
COD ICV-LCS std, 50ppm	WP112005
COD CCV std, 50ppm	WP112004

Temp In (C): 148	Date In: 02/28/2025	Time In: 09:30
Temp Out (C): 150	Date Out: 02/28/2025	Time Out: 11:30

Intercept: 0.1675

Slope: 1.0102

Regression: 1

Seq	Lab ID	TrueValue (mg/l)	DF	MATRIX	Reading	Result (mg/l)	%D	Anal Date	Anal Time
1	CAL1	0	1	Water	0.000	-0.166		01/22/2025	13:30
2	CAL2	10	1	Water	11.000	10.723	7.2	01/22/2025	13:30
3	CAL3	50	1	Water	50.000	49.329	-1.3	01/22/2025	13:31
4	CAL4	100	1	Water	101.000	99.814	-0.2	01/22/2025	13:31
5	CAL5	150	1	Water	152.000	150.299	0.2	01/22/2025	13:32

## Analytical Summary Report

Analysis Method: SM5220 D

ANALYST: Niha

Parameter: COD

SUPERVISOR REVIEW BY: Iwona

Run Number: LB134856

Seq	Lab ID	True Value (mg/l)	Initial Weight (g)	Final Vol (ml)	DF	MATRIX	Reading	Result	AnalDate	AnalTime
1	ICV	50	NA	NA	1	Water	50.000	49.329	01/22/2025	13:32
2	ICB		NA	NA	1	Water	0.000	-0.166	01/22/2025	13:33
3	CCV1	50	NA	NA	1	Water	51.000	50.319	02/28/2025	14:00
4	CCB1		NA	NA	1	Water	0.000	-0.166	02/28/2025	14:00
5	LB134856BL		NA	NA	1	Water	0.000	-0.166	02/28/2025	14:01
6	LB134856BS	50	NA	NA	1	Water	50.000	49.329	02/28/2025	14:01
7	Q1424-06		NA	NA	50	Water	120.000	118.623	02/28/2025	14:02
8	Q1429-01		NA	NA	1	Water	36.000	35.471	02/28/2025	14:02
9	Q1429-02		NA	NA	20	Water	19.000	18.642	02/28/2025	14:03
10	Q1432-06		NA	NA	50	Water	91.000	89.915	02/28/2025	14:03
11	Q1435-01		NA	NA	1	Water	3.000	2.804	02/28/2025	14:04
12	Q1439-01		NA	NA	1	Water	4.000	3.794	02/28/2025	14:04
13	Q1439-01DUP		NA	NA	1	Water	4.000	3.794	02/28/2025	14:05
14	Q1439-01MS	50	NA	NA	1	Water	52.000	51.309	02/28/2025	14:05
15	CCV2	50	NA	NA	1	Water	51.000	50.319	02/28/2025	14:06
16	CCB2		NA	NA	1	Water	0.000	-0.166	02/28/2025	14:06
17	Q1439-01MSD	50	NA	NA	1	Water	53.000	52.299	02/28/2025	14:07
18	CCV3	50	NA	NA	1	Water	51.000	50.319	02/28/2025	14:07
19	CCB3		NA	NA	1	Water	0.000	-0.166	02/28/2025	14:08

LB134856

WORKLIST(Hardcopy Internal Chain)

Worklist Name : COD-02282025

Worklist ID : 187971

Department : Wet-Chemistry

Date : 02-28-2025 08:43:07

Sample	Customer Sample	Matrix	Test	Preservative	Customer	Raw Sample Storage Location	Collect Date	Method
Q1424-06	COD	Water	COD	Conc H2SO4 to pH < 2	AMER08	D11	02/25/2025	SM5220 D
Q1429-01 - D	OUTFALL-DSN-001	Water	COD	Conc H2SO4 to pH < 2	TRIS02	D11	02/25/2025	SM5220 D
Q1429-02 - D	OUTFALL-DSN-002	Water	COD	Conc H2SO4 to pH < 2	TRIS02	D11	02/25/2025	SM5220 D
Q1432-06	COD	Water	COD	Conc H2SO4 to pH < 2	AMER08	H11	02/26/2025	SM5220 D
Q1435-01 - L	286107	Water	COD	Conc H2SO4 to pH < 2	PSEG03	H21	02/26/2025	SM5220 D
Q1439-01 - B	LRSA-MOD	Water	COD	Conc H2SO4 to pH < 2	PSEG04	H31	02/26/2025	SM5220 D

Date/Time 02.28.2025, 09:00  
Raw Sample Received by: NF(wc)  
Raw Sample Relinquished by: JJC(wc)

Date/Time 02.28.2025, 12:00  
Raw Sample Received by: JJC(wc)  
Raw Sample Relinquished by: NF(wc)

**Instrument ID:** DO METER

**Daily Analysis Runlog For Sequence/QC Batch ID # LB134820**

Review By	rubina	Review On	3/6/2025 11:41:53 AM
Supervise By	Iwona	Supervise On	3/6/2025 11:42:59 AM
SubDirectory	LB134820	Test	BOD_7
<b>STD. NAME</b>	<b>STD REF.#</b>		
ICAL Standard	N/A		
ICV Standard	N/A		
CCV Standard	N/A		
ICSA Standard	N/A		
CRI Standard	N/A		
LCS Standard	N/A		
Chk Standard	WP112062,W3149,WP110386,W3103,W3109,W3105,WP112064,WP112063,WP111323		

Sr#	SampleId	ClientID	QcType	Date	Comment	Operator	Status
1	LB134820BL	LB134820BL	MB	02/26/25 17:20		rubina	OK
2	LB134820BS	LB134820BS	LCS	02/26/25 17:20		rubina	OK
3	LB134820BSD1	LB134820BSD1	LCS	02/26/25 17:20		rubina	OK
4	LB134820BSD2	LB134820BSD2	LCS	02/26/25 17:20		rubina	OK
5	Q1424-05	BOD	SAM	02/26/25 17:20		rubina	OK
6	Q1424-05DUP	BODDUP	DUP	02/26/25 17:20		rubina	OK
7	Q1432-05	BOD	SAM	02/26/25 17:20		rubina	OK

**Instrument ID:** WC SC-3

**Daily Analysis Runlog For Sequence/QC Batch ID # LB134829**

Review By	jignesh	Review On	2/27/2025 3:04:45 PM
Supervise By	Iwona	Supervise On	2/27/2025 4:56:21 PM
SubDirectory	LB134829	Test	Non-Polar Material
<b>STD. NAME</b>	<b>STD REF.#</b>		
ICAL Standard	N/A		
ICV Standard	N/A		
CCV Standard	N/A		
ICSA Standard	N/A		
CRI Standard	N/A		
LCS Standard	N/A		
Chk Standard	W3177,M6069,EP2590,WP110826,W3079,NA,WP100827,WP100828,NA		

Sr#	SampleID	ClientID	QcType	Date	Comment	Operator	Status
1	LB134829BL	LB134829BL	MB	02/27/25 10:25		jignesh	OK
2	LB134829BS	LB134829BS	LCS	02/27/25 10:25		jignesh	OK
3	Q1424-01	NON POLAR MATER	SAM	02/27/25 10:25		jignesh	OK
4	Q1424-02	NON POLAR MATER	SAM	02/27/25 10:25		jignesh	OK
5	Q1424-03	NON POLAR MATER	SAM	02/27/25 10:25		jignesh	OK
6	Q1424-04	NON POLAR MATER	SAM	02/27/25 10:25		jignesh	OK
7	Q1429-01	OUTFALL-DSN-001	SAM	02/27/25 10:25		jignesh	OK
8	Q1429-02	OUTFALL-DSN-002	SAM	02/27/25 10:25		jignesh	OK
9	Q1432-01	NON POLAR MATER	SAM	02/27/25 10:25		jignesh	OK
10	Q1432-02	NON POLAR MATER	SAM	02/27/25 10:25		jignesh	OK
11	Q1432-03	NON POLAR MATER	SAM	02/27/25 10:25		jignesh	OK
12	Q1432-04	NON POLAR MATER	SAM	02/27/25 10:25		jignesh	OK



**Instrument ID:** SPECTROPHOTOMETER-2

**Daily Analysis Runlog For Sequence/QC Batch ID # LB134856**

Review By	Niha	Review On	2/28/2025 2:27:42 PM
Supervise By	Iwona	Supervise On	2/28/2025 2:31:32 PM
SubDirectory	LB134856	Test	COD
<b>STD. NAME</b>	<b>STD REF.#</b>		
ICAL Standard	N/A		
ICV Standard	N/A		
CCV Standard	N/A		
ICSA Standard	N/A		
CRI Standard	N/A		
LCS Standard	N/A		
Chk Standard	WP111522,WP111519,WP111517,WP111520,WP111518,WP111516,W3126,WP112005,WP112004		

Sr#	SampleId	ClientID	QcType	Date	Comment	Operator	Status
1	CAL1	CAL1	CAL	01/22/25 13:30		Niha	OK
2	CAL2	CAL2	CAL	01/22/25 13:30		Niha	OK
3	CAL3	CAL3	CAL	01/22/25 13:31		Niha	OK
4	CAL4	CAL4	CAL	01/22/25 13:31		Niha	OK
5	CAL5	CAL5	CAL	01/22/25 13:32		Niha	OK
6	ICV	ICV	ICV	01/22/25 13:32		Niha	OK
7	ICB	ICB	ICB	01/22/25 13:33		Niha	OK
8	CCV1	CCV1	CCV	02/28/25 14:00		Niha	OK
9	CCB1	CCB1	CCB	02/28/25 14:00		Niha	OK
10	LB134856BL	LB134856BL	MB	02/28/25 14:01		Niha	OK
11	LB134856BS	LB134856BS	LCS	02/28/25 14:01		Niha	OK
12	Q1424-06	COD	SAM	02/28/25 14:02		Niha	OK
13	Q1429-01	OUTFALL-DSN-001	SAM	02/28/25 14:02		Niha	OK
14	Q1429-02	OUTFALL-DSN-002	SAM	02/28/25 14:03		Niha	OK
15	Q1432-06	COD	SAM	02/28/25 14:03		Niha	OK
16	Q1435-01	286107	SAM	02/28/25 14:04		Niha	OK
17	Q1439-01	LRSA-MOD	SAM	02/28/25 14:04		Niha	OK
18	Q1439-01DUP	LRSA-MODDUP	DUP	02/28/25 14:05		Niha	OK

**Instrument ID:** SPECTROPHOTOMETER-2

**Daily Analysis Runlog For Sequence/QC Batch ID # LB134856**

Review By	Niha	Review On	2/28/2025 2:27:42 PM
Supervise By	Iwona	Supervise On	2/28/2025 2:31:32 PM
SubDirectory	LB134856	Test	COD
<b>STD. NAME</b>	<b>STD REF.#</b>		
ICAL Standard	N/A		
ICV Standard	N/A		
CCV Standard	N/A		
ICSA Standard	N/A		
CRI Standard	N/A		
LCS Standard	N/A		
Chk Standard	WP111522,WP111519,WP111517,WP111520,WP111518,WP111516,W3126,WP112005,WP112004		

19	Q1439-01MS	LRSA-MODMS	MS	02/28/25 14:05	0.5ml WP112002 + 9.5ml Sample	Niha	OK
20	CCV2	CCV2	CCV	02/28/25 14:06		Niha	OK
21	CCB2	CCB2	CCB	02/28/25 14:06		Niha	OK
22	Q1439-01MSD	LRSA-MODMSD	MSD	02/28/25 14:07	0.5ml WP112002 + 9.5ml Sample	Niha	OK
23	CCV3	CCV3	CCV	02/28/25 14:07		Niha	OK
24	CCB3	CCB3	CCB	02/28/25 14:08		Niha	OK

## Prep Standard - Chemical Standard Summary

**Order ID :** Q1424

**Test :** BOD\_7,COD,Non-Polar Material

**Prepbatch ID :**

**Sequence ID/Qc Batch ID:** LB134820, LB134829, LB134856,

**Standard ID :**

EP2590, WP100827, WP100828, WP110386, WP110826, WP111323, WP111514, WP111515, WP111516, WP111517, WP111518, WP111519, WP111520, WP111522, WP112002, WP112003, WP112004, WP112005, WP112062, WP112063, WP112064, WP99896,

**Chemical ID :**

E3551, M5673, M6069, M6121, W2606, W2653, W2654, W2783, W2784, W2845, W2898, W2979, W3059, W3079, W3103, W3105, W3109, W3112, W3113, W3126, W3144, W3149, W3169, W3177,



<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	<a href="#">EP2590</a>	02/26/2025	07/01/2025	RUPESHKUMAR SHAH	Extraction_SC ALE_2 (EX-SC-2)	None	Riteshkumar Patel  02/26/2025
<b><u>FROM</u></b> 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>
114	hexavalent chromium color reagent	<a href="#">WP100827</a>	02/02/2023	02/09/2023	Rubina Mughal	WETCHEM_S CALE_5 (WC SC-5)	None	Iwona Zarych  02/02/2023
<b><u>FROM</u></b> 0.25000gram of W2979 + 50.00000ml of W2783 = 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>
3456	Cyanide Intermediate Working Std, 5PPM	<a href="#">WP100828</a>	02/02/2023	02/03/2023	Iwona Zarych	None	WETCHEM_PIPETTE_3 (WC)	Sohil Jodhani 02/07/2023
<u>FROM</u>	0.25000ml of W2898 + 49.75000ml of WP99896 = 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>
1841	Sulfuric Acid, 1N	<a href="#">WP110386</a>	10/24/2024	04/24/2025	Rubina Mughal	None	WETCHEM_FIPETTE_3 (WC)	Iwona Zarych 10/24/2024
<b><u>FROM</u></b> 2.80000ml of M5673 + 97.20000ml 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>
229	1:1 HCL	<a href="#">WP110826</a>	11/22/2024	05/13/2025	Jignesh Parikh	None	None	Iwona Zarych
								11/22/2024

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

<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	<a href="#">WP111323</a>	01/09/2025	07/09/2025	Rubina Mughal	WETCHEM_S CALE_8 (WC SC-7)	None	Iwona Zarych
								01/09/2025

**FROM** 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>
2456	COD Stock std, 1000ppm	<a href="#">WP111514</a>	01/22/2025	01/29/2025	Niha Farheen Shaik	WETCHEM_SCALE_5 (WCS-5)	None	Iwona Zarych 01/22/2025
<u>FROM</u>	0.08500gram of W3169 + 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>
2457	COD Stock std-SS, 1000ppm	<a href="#">WP111515</a>	01/22/2025	01/29/2025	Niha Farheen Shaik	WETCHEM_SCALE_5 (WC SC-5)	None	Iwona Zarych 01/22/2025
<b><u>FROM</u></b> 0.08500gram of W2784 + 100.00000ml 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>
139	COD calibration std. 0 ppm	<a href="#">WP111516</a>	01/22/2025	01/29/2025	Niha Farheen Shaik	None	None	Iwona Zarych
								01/22/2025

**FROM** 10.00000ml of W3112 = Final Quantity: 10.000 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>
138	COD calibration std. 10 ppm	<a href="#">WP111517</a>	01/22/2025	01/29/2025	Niha Farheen Shaik	None	WETCHEM_FIPETTE_3	Iwona Zarych
							(WC)	01/22/2025

**FROM** 9.90000ml of W3112 + 0.10000ml of WP111514 = Final Quantity: 10.000 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>
137	COD calibration std. 50 ppm	<a href="#">WP111518</a>	01/22/2025	01/29/2025	Niha Farheen Shaik	None	WETCHEM_PIPETTE_3	Iwona Zarych 01/22/2025
<b><u>FROM</u></b> 9.50000ml of W3112 + 0.50000ml of WP111514 = Final Quantity: 10.000 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>
136	COD calibration std. 100 ppm	<a href="#">WP111519</a>	01/22/2025	01/29/2025	Niha Farheen Shaik	None	WETCHEM_PIPETTE_3	Iwona Zarych
<p><b><u>FROM</u></b> 9.00000ml of W3112 + 1.00000ml of WP111514 = Final Quantity: 10.000 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>
135	COD calibration std. 150 ppm	<a href="#">WP111520</a>	01/22/2025	01/29/2025	Niha Farheen Shaik	None	WETCHEM_PIPETTE_3	Iwona Zarych 01/22/2025
<b>FROM</b> 8.50000ml of W3112 + 1.50000ml of WP111514 = Final Quantity: 10.000 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>
2459	COD ICV-LCS std, 50ppm	<a href="#">WP111522</a>	01/22/2025	01/29/2025	Niha Farheen Shaik	None	WETCHEM_PIPETTE_3 (WC)	Iwona Zarych 01/22/2025
<b><u>FROM</u></b> 9.50000ml of W3112 + 0.50000ml of WP111515 = Final Quantity: 10.000 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>
2456	COD Stock std, 1000ppm	<a href="#">WP112002</a>	02/21/2025	02/28/2025	Niha Farheen Shaik	WETCHEM_SCALE_5 (WCS-5)	None	Iwona Zarych 02/21/2025
<u>FROM</u>	0.08500gram of W3169 + 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>
2457	COD Stock std-SS, 1000ppm	<a href="#">WP112003</a>	02/21/2025	02/28/2025	Niha Farheen Shaik	WETCHEM_SCALE_5 (WC SC-5)	None	Iwona Zarych 02/21/2025
<u>FROM</u>	0.08500gram of W2784 + 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>
2458	COD CCV std, 50ppm	<a href="#">WP112004</a>	02/21/2025	02/28/2025	Niha Farheen Shaik	None	WETCHEM_PIPETTE_3	Iwona Zarych
(WC) <b>FROM</b> 9.50000ml of W3112 + 0.50000ml of WP112002 = Final Quantity: 10.000 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>
2459	COD ICV-LCS std, 50ppm	<a href="#">WP112005</a>	02/21/2025	02/28/2025	Niha Farheen Shaik	None	WETCHEM_FIPETTE_3 (WC)	Iwona Zarych 02/21/2025
<b><u>FROM</u></b> 9.50000ml of W3112 + 0.50000ml of WP112003 = Final Quantity: 10.000 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	<a href="#">WP112062</a>	02/26/2025	02/27/2025	Rubina Mughal	None	None	Iwona Zarych
								02/27/2025

**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	<a href="#">WP112063</a>	02/26/2025	02/27/2025	Rubina Mughal	WETCHEM_SCALE_6 (M SC-4)	None	Iwona Zarych
								02/27/2025

**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	<a href="#">WP112064</a>	02/26/2025	02/27/2025	Rubina Mughal	None	None	Iwona Zarych
								02/27/2025

**FROM** 1.00000PILLOW of W3059 + 300.00000ml of WP112062 = 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>
11	Sodium hydroxide absorbing solution 0.25 N	<a href="#">WP99896</a>	11/15/2022	05/15/2023	Jignesh Parikh	WETCHEM_SCALE_4 (WC SC-4)	None	Iwona Zarych
								11/15/2022

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

## 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	07/01/2025	01/03/2024 / Rajesh	07/20/2023 / Rajesh	E3551

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Seidler Chemical	BA-9673-33 / Sulfuric Acid, Instra-Analyzed (cs/6c2.5L)	23D2462010	03/20/2028	09/21/2023 / mohan	09/05/2023 / mohan	M5673

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

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

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

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

## CHEMICAL RECEIPT LOG BOOK

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 #
Seidler Chemical	BA-9254-03 / Acetone, Ultra Resi (cs/4x4L)	0000263246	06/17/2023	12/23/2020 / ketankumar	12/23/2020 / ketankumar	W2783

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
PCI Scientific Supply, Inc.	P243-500 / Potassium Hydrogen Phthalate, 500 gms	201089	06/30/2025	12/23/2020 / apatel	12/16/2020 / apatel	W2784

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

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Supelco	90157 / Cyanide Standard, 1000ppm from Supelco	HC03107133	06/30/2023	01/24/2022 / apatel	01/24/2022 / apatel	W2898

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



## CHEMICAL RECEIPT LOG BOOK

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

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
PCI Scientific Supply, Inc.	04667-2.5 / Silica Gel (60-200 mesh), 2.5 KG	072154301	01/30/2029	05/07/2024 / jignesh	01/30/2024 / jignesh	W3079

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

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 / Iwona	04/22/2024 / Iwona	W3105

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

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

## CHEMICAL RECEIPT LOG BOOK

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

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Environmental Express LTD	B1010 / COD Digestion Vials Low Level 0-150Mg/L	13798	09/30/2027	02/17/2025 / Niha	07/25/2024 / Iwona	W3126

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

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

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
PCI Scientific Supply, Inc.	P243-500 / Potassium Hydrogen Phthalate, 500 gms	24H0956262	04/28/2026	01/03/2025 / Iwona	01/03/2025 / Iwona	W3169

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Seidler Chemical	BA-9262-03 / Hexane, Ultra-Resi (cs/4x4L)	24G1962003	08/22/2025	02/03/2025 / jignesh	01/31/2025 / jignesh	W3177



# Certificate of Analysis

1.19533.0500 Cyanide standard solution traceable to SRM from NIST  $K_2[Zn(CN)_4]$  in  $H_2O$   
1000 mg/l CN Certipur®  
Batch HC03107133

## Batch Values

Concentration	$\beta$ (CN <sup>-</sup> )	1002	mg/l
---------------	----------------------------	------	------

Determination method: Argentometric titration.

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

Date of release (DD.MM.YYYY) 02.07.2020

Minimum shelf life (DD.MM.YYYY) 30.06.2023

Ayfer Yildirim

Responsible laboratory manager quality control

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

Acetone  
ULTRA RESI-ANALYZED  
For Organic Residue Analysis



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

## Certificate of Analysis

Test	Specification	Result
Assay ((CH <sub>3</sub> ) <sub>2</sub> CO) (by GC, corrected for water)	>= 99.4 %	99.7
Color (APHA)	<= 10	5
Residue after Evaporation	<= 1.0000 ppm	0.1000
Substances Reducing Permanganate	Passes Test	PT
Titration Acid (µeq/g)	<= 0.3	0.1
Titration Base (µeq/g)	<= 0.6	< 0.1
Water (H <sub>2</sub> O)	<= 0.5 %	0.3
FID-Sensitive Impurities (as 2-Octanol) Single Impurity Peak (ng/mL)	<= 5	< 1
ECD Sensitive Impurities (as Heptachlor Epoxide) Single Peak (pg/mL)	<= 10	5

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

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

  
Jamie Ethier  
Vice President Global Quality

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



**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.

<b>Catalog Number</b>	15621	<b>Quality Test / Release Date</b>	13 March 2019
<b>Lot Number</b>	A0405990	<b>Suggested Retest Date</b>	March 2022
<b>Description</b>	L(+)-Glutamic acid, 99%		
<b>Country of Origin</b>	CHINA		
<b>Declaration of Origin</b>	plant		

<b>Origin Comment</b>	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



## CERTIFICATE OF ANALYSIS

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

W 3059  
REC. 10/18/23 12

**FINISHED PRODUCT, LOT NUMBER, MFG. /EXP DATE:**

PolySeed® • Part No. P-110 • Lot 152305 • Mfg. Date: 05/2023 • Exp. Date: 05/2025

**FORMULATION:**

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

**VIABLE COUNT, FINAL TEST RESULT:**

The product has been fully tested in accordance with Finished Product Specifications and contains a minimum viable count of  $4.00 \times 10^9$  cfu/g.

**GLUCOSE/GLUTAMIC-ACID RESULTS:**

Tested results within acceptable range  $198 \pm 30.5$  mg/L (167.5 - 228.5 mg/L). GGA Lot# L257-09 – Average Test Result: 203.4

See [www.polyseed.com](http://www.polyseed.com) for details.

**SEED CONTROL FACTOR:**

Tested results within acceptable range 0.6 – 1.0 see [www.polyseed.com](http://www.polyseed.com) for details

**SALMONELLA TEST RESULT:**

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

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

Signature: \_\_\_\_\_

*Quality Control Department*

Date: 05/15/2023

POLYSEED.Ref.1.19

Revised Jan 23

**InterLab®**  
International Laboratory Supply





## 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.



Certificate of Analysis

**ThermoFisher**  
SCIENTIFIC

## Certificate of Analysis

1 Reagent Lane

Fair Lawn, NJ 07410

201.796.7100 tel

201.796.1329 fax

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

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

Catalog Number	P243	Quality Test / Release Date	06/19/2020
Lot Number	201089		
Description	POTASSIUM HYDROGEN PHTHALATE, ACIDIMETRIC STANDARD, A.C.S.		
Country of Origin	Spain	Suggested Retest Date	Jun/2025
Chemical Origin	Organic - non animal		
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.		

N/A			
Result Name	Units	Specifications	Test Value
APPEARANCE		REPORT	WHITE CRYSTALS
ASSAY POTASSIUM HYDROGEN PHTHALATE	%	Inclusive Between 99.95 - 100.05	100.03
CHLORINE COMPOUNDS	%	<= 0.003	<0.003
HEAVY METALS (as Pb)	ppm	<= 5	<5
IDENTIFICATION	PASS/FAIL	= PASS TEST	PASS TEST
INSOLUBLE MATTER	%	<= 0.005	<0.005
IRON (Fe)	ppm	<= 5	<5
PH OF 0.05M SOLUTION		Inclusive Between 4.00 - 4.02	4.00
SODIUM (Na)	%	<= 0.005	<0.005
SULFUR COMPOUNDS	%	<= 0.002	<0.002%
TRACEABLE TO NIST	SOD CARBONATE	= LOT 351a	351a
TRACEABLE TO NIST KHP STD	POT. ACID PHTHALATE	= LOT 84L	84L



Julian Burton - Quality Control Manager – 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 <sub>2</sub> SO <sub>4</sub>
SPECIFICATION NUMBER :	6399	RELEASE DATE:	ABR/21/2023
LOT NUMBER :	313201		

TEST	SPECIFICATIONS	LOT VALUES
Assay (Na <sub>2</sub> SO <sub>4</sub> )	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 <sub>4</sub> )	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

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

 **avantor**™



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

## Certificate of Analysis

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

>>> Continued on page 2 >>>

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



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

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

For Laboratory, Research, or Manufacturing Use

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

A handwritten signature in cursive script that reads 'James Ethier'.  
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™



R → 16/13/24  
Met dig

M 6121

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

## Certificate of Analysis

Test	Specification	Result
ACS - Assay (as HCl) (by acid-base titrn)	36.5 - 38.0 %	37.6
ACS - Color (APHA)	<= 10	5
ACS - Residue after Ignition	<= 3 ppm	1
ACS - Specific Gravity at 60°/60°F	1.185 - 1.192	1.190
ACS - Bromide (Br)	<= 0.005 %	< 0.005
ACS - Extractable Organic Substances	<= 5 ppm	1
ACS - Free Chlorine (as Cl <sub>2</sub> )	<= 0.5 ppm	< 0.5
Phosphate (PO <sub>4</sub> )	<= 0.05 ppm	< 0.03
Sulfate (SO <sub>4</sub> )	<= 0.5 ppm	< 0.3
Sulfite (SO <sub>3</sub> )	<= 0.8 ppm	0.3
Ammonium (NH <sub>4</sub> )	<= 3 ppm	< 1
Trace Impurities - Arsenic (As)	<= 0.010 ppm	< 0.003
Trace Impurities - Aluminum (Al)	<= 10.0 ppb	< 0.2
Arsenic and Antimony (as As)	<= 5 ppb	< 3
Trace Impurities - Barium (Ba)	<= 1.0 ppb	< 0.2
Trace Impurities - Beryllium (Be)	<= 1.0 ppb	< 0.2
Trace Impurities - Bismuth (Bi)	<= 10.0 ppb	< 1.0
Trace Impurities - Boron (B)	<= 20.0 ppb	< 5.0
Trace Impurities - Cadmium (Cd)	<= 1.0 ppb	< 0.3
Trace Impurities - Calcium (Ca)	<= 50.0 ppb	29.7
Trace Impurities - Chromium (Cr)	<= 1.0 ppb	< 0.4
Trace Impurities - Cobalt (Co)	<= 1.0 ppb	< 0.3
Trace Impurities - Copper (Cu)	<= 1.0 ppb	< 0.1
Trace Impurities - Gallium (Ga)	<= 1.0 ppb	< 0.2

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

Avantor Performance Materials, LLC

100 Matsonford Rd, Suite 200, Radnor, PA 19087. U.S.A. Phone: 610.386.1700

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

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

For Laboratory, Research or Manufacturing Use

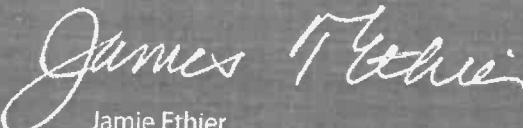
Product Information (not specifications):

Appearance (clear, fuming liquid)

Meets ACS Specifications

Country of Origin: US

Packaging Site: Phillipsburg Mfg Ctr & DC

  
Jamie Ethier

Vice President Global Quality

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

Avantor Performance Materials, LLC

100 Matsonford Rd, Suite 200, Radnor, PA 19087. U.S.A. Phone: 610.386.1700

W 2979

Rec: 12/09/22

exp. 12/09/27

Product Name:

1,5-Diphenylcarbazide - ACS reagent

Product Number:

259225

Batch Number:

MKCR6636

Brand:

SIAL

CAS Number:

140-22-7

MDL Number:

MFCD00003013

Formula:

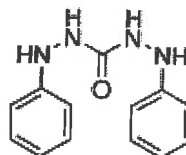
C<sub>13</sub>H<sub>14</sub>N<sub>4</sub>O

Formula Weight:

242.28 g/mol


Quality Release Date:

02 JUN 2022



## Certificate of Analysis

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



Larry Coers, Director  
Quality Control  
Milwaukee, WI US

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





# Certificate of Analysis

## Product information

Product: Silica 60, 0.063 - 0.200 mm  
REF: 815330.25  
LOT: 072154301

W 3049  
SP

## Technical data

Material: Synthetic amorphous silica (irregular shaped)  
Description: White powder

Parameter	Specifications	Result
Specific surface (m <sup>2</sup> /g, N2 adsorption) :	450 - 550	537
Particle size distribution (screen analysis) :	< 63 µm max. 5 %	0.3
	> 200 µm max. 5 %	0.1
pH value :	6.0 - 7.5	7
Water content (%) :	< 7	3.6
Pore volume (mL/g, N2 adsorption) :	0.65 - 0.85	0.82
Mean pore size (Å, N2 adsorption) :	50 - 70	62

## Expiry

This product has no stated expiration date or shelf life.

We recommend to use the product within a time period of 5 years after date of QC release.

This time period is valid only if the product is stored under dry and frost-free conditions.

After 5 years we recommend retesting the adsorbent to make sure that the expected performance is still given.

## 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.

Date of measurement: 16.02.2023 22:00



# 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

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# Certificate of Analysis



## Sodium Hydroxide (Pellets)

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

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

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.



W 3122 . fee. 7/25/24  
W 3123 12  
W 3124  
W 3125 Exp. 9/30/27  
W 3126

**ENVIRONMENTAL EXPRESS**  
Charleston, SC USA  
[www.envexp.com](http://www.envexp.com)  
(800) 343-5319

October 20, 2022

**CERTIFICATE OF ANALYSIS**

Environmental Express certifies that the following COD Reagent Vials have been rigorously checked against NIST Traceable standards and also compared for conformance to another major brand name product. Environmental Express COD Vial performance is evaluated using bench top spectrophotometers. Acceptance guidelines are strict and ensure dependable, quality results.

Environmental Express further certifies that the COD products listed below are recognized by the United States Environmental Protection Agency (USEPA) as equivalent to an approved Water Pollutant Testing Procedure for COD (Federal Register, Vol. 45, No. 78, Monday, April 20<sup>th</sup>, 1980, page 26811) and as such can be used for National Pollution Discharge Elimination System (NPDES) reporting.

<u>Cat. No.</u>	<u>Lot No.</u>	<u>Product Description</u>
B1010	13798	COD Reagent Vials, 0 - 150 ppm



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

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Material	BDH9260-500G
Material Description	BDH POTASS HYDRGN PHTHLTE 500G
Grade	ACS GRADE
Batch	24H0956262
Reassay Date	04/28/2026
CAS Number	877-24-7
Molecular Formula	HOCC6H4COOK
Molecular Mass	204.22
Date of Manufacture	04/29/2023
Storage	Room Temperature

Characteristics	Specifications	Measured Values
Appearance	White crystals.	White crystals.
Assay (dried basis)	99.95 - 100.05 %	99.98 %
Chlorine Compounds	<= 0.003 %	<0.003 %
Heavy Metals (as Pb)	<= 5 ppm	<5 ppm
Insoluble Matter	<= 0.005 %	0.003 %
Iron	<= 5 ppm	<5 ppm
pH (0.05M, Water) @25C	4.00 - 4.02	4.00
Sodium	<= 0.005 %	<0.005 %
Sulfur Compounds	<= 0.002 %	<0.002 %

Internal ID #: 322

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

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



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

## Certificate of Analysis

Test	Specification	Result
FID-Sensitive Impurities (as 2-Octanol) Single Impurity Peak (ng/mL)	$\leq 5$	3
ECD Sensitive Impurities (as Heptachlor Epoxide) Single Peak (pg/mL)	$\leq 10$	1
ECD-Sensitive Impurities (as Ethylene Dibromide) - Single Impurity Peak (ng/mL)	$\leq 5$	1
Assay (Total Saturated C <sub>6</sub> Isomers) (by GC, corrected for water)	$\geq 99.5 \%$	99.7 %
Assay (as n-Hexane) (by GC, corrected for water)	$\geq 95 \%$	98 %
Color (APHA)	$\leq 10$	5
Residue after Evaporation	$\leq 1.0$ ppm	0.1 ppm
Substances Darkened by H <sub>2</sub> SO <sub>4</sub>	Passes Test	Passes Test
Water (by KF, coulometric)	$\leq 0.05 \%$	< 0.01 %

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

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

Jamie Croak  
Director Quality Operations, Bioscience Production



# SHIPPING DOCUMENTS

CLIENT INFORMATION

REPORT TO BE SENT TO:

COMPANY: American WAX  
ADDRESS: 39-30 Review Av,  
CITY: Long Island City STATE: NY ZIP: 11101  
ATTENTION: Rev/Steve,  
PHONE: 718-392-8080 FAX:

CLIENT PROJECT INFORMATION

PROJECT NAME: W. H. Testing  
PROJECT NO.: LOCATION:  
PROJECT MANAGER:  
e-mail:  
PHONE: FAX:

CLIENT BILLING INFORMATION

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

ANALYSIS

DATA TURNAROUND INFORMATION

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

DATA DELIVERABLE INFORMATION

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

*Non Polar Material*  
*BOD*  
*COD*  
1 2 3 4 5 6 7 8 9

PRESERVATIVES

COMMENTS

ALLIANCE SAMPLE ID	PROJECT SAMPLE IDENTIFICATION	SAMPLE MATRIX	SAMPLE TYPE		SAMPLE COLLECTION		# OF BOTTLES	PRESERVATIVES									COMMENTS
			COMP	GRAB	DATE	TIME		C	ONE	C							
1.	Non Polar Material			X	2-25-25	10 AM	1	X									
2.	Non Polar Material			X	2-25-25	10:30	1	X									
3.	Non Polar Material			X	2-25-25	11 AM	1	X									
4.	Non Polar Material			X	2-25-25	11:30	1	X									
5.	BOD	X			2-25-25	11:30	1		X								
6.	COD	X			2-25-25	11:30	1			X							
7.																	
8.																	
9.																	
10.																	

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

RELINQUISHED BY SAMPLER: 1. <u>Steven Pollack</u>	DATE/TIME: <u>11:35</u> <u>2-25-25</u>	RECEIVED BY: <u>[Signature]</u> <u>11:35</u> <u>2-25-25</u>	Conditions of bottles or coolers at receipt: <input type="checkbox"/> COMPLIANT <input type="checkbox"/> NON COMPLIANT <input type="checkbox"/> COOLER TEMP <u>3.1</u> °C
RELINQUISHED BY SAMPLER: 2. <u>[Signature]</u>	DATE/TIME: <u>14:55</u>	RECEIVED BY: <u>[Signature]</u>	Comments: _____
RELINQUISHED BY SAMPLER: 3. <u>[Signature]</u>	DATE/TIME: <u>2.25-25</u>	RECEIVED BY: <u>[Signature]</u>	Page _____ of _____

CLIENT: ☐ Hand Delivered ☐ Other

Shipment Complete  
☐ YES ☐ NO





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

### Laboratory Certification

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