

## 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> P4931	<b>OrderDate:</b> 11/20/2024 8:56:00 AM
<b>Client:</b> Aramark Uniforms	<b>Project:</b> Monthly 2024
<b>Contact:</b> Jose Liceaga	<b>Location:</b> M11

LabID	ClientID	Matrix	Test	Method	Sample Date	Prep Date	Anal Date	Received
P4931-01	GRAB	WATER			11/20/24 08:18			11/20/24
			TPH	1664A			11/22/24 09:20	
P4931-02	COMP	WATER			11/20/24 08:22			11/20/24
			BOD5	SM5210 B			11/21/24 17:20	
			TSS	SM2540 D			11/25/24 10:00	



# SAMPLE DATA

## Report of Analysis

Client:	Aramark Uniforms	Date Collected:	11/20/24 08:18
Project:	Monthly 2024	Date Received:	11/20/24
Client Sample ID:	GRAB	SDG No.:	P4931
Lab Sample ID:	P4931-01	Matrix:	WATER
		% Solid:	0

Parameter	Conc.	Qua.	DF	MDL	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
TPH	75.3		1	0.40	5.00	mg/L		11/22/24 09:20	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:	Aramark Uniforms	Date Collected:	11/20/24 08:22
Project:	Monthly 2024	Date Received:	11/20/24
Client Sample ID:	COMP	SDG No.:	P4931
Lab Sample ID:	P4931-02	Matrix:	WATER
		% Solid:	0

Parameter	Conc.	Qua.	DF	MDL	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
BOD5	425		1	0.17	2.00	mg/L		11/21/24 17:20	SM 5210 B-16
TSS	394		1	1.00	4.00	mg/L		11/25/24 10:00	SM 2540 D-15

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

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

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



# QC RESULT SUMMARY

### Preparation Blank Summary

**Client:** Aramark Uniforms

**SDG No.:** P4931

**Project:** Monthly 2024

Analyte	Units	Result	Acceptance Limits	Conc Qual	MDL	RDL	Analysis Date
Sample ID: BOD5	<b>LB133547BL</b> mg/L	< 0.2000	0.2000	U	0.17	2.0	11/21/2024
Sample ID: TPH	<b>LB133572BL</b> mg/L	< 2.5000	2.5000	U	0.4	5.0	11/22/2024
Sample ID: TSS	<b>LB133608BL</b> mg/L	< 2.0000	2.0000	U	1	4	11/25/2024

## Duplicate Sample Summary

<b>Client:</b>	Aramark Uniforms	<b>SDG No.:</b>	P4931
<b>Project:</b>	Monthly 2024	<b>Sample ID:</b>	LB133572BS
<b>Client ID:</b>	LB133572BSD	<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
TPH	mg/L	+/-18	17.0		17.1		1	0.59		11/22/2024



### Duplicate Sample Summary

<b>Client:</b>	Aramark Uniforms	<b>SDG No.:</b>	P4931
<b>Project:</b>	Monthly 2024	<b>Sample ID:</b>	P4931-02
<b>Client ID:</b>	COMPDUP	<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
BOD5	mg/L	+/-20	425		443		1	4.15		11/21/2024

### Duplicate Sample Summary

<b>Client:</b>	Aramark Uniforms	<b>SDG No.:</b>	P4931
<b>Project:</b>	Monthly 2024	<b>Sample ID:</b>	P4967-01
<b>Client ID:</b>	001-WILLETS-PT-BLVDDUP	<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
TSS	mg/L	+/-5	38.8		40.0		1	3.05		11/25/2024

### Laboratory Control Sample Summary

**Client:** Aramark Uniforms

**SDG No.:** P4931

**Project:** Monthly 2024

**Run No.:** LB133547

Analyte	Units	True Value	Result	Conc. Qualifier	% Recovery	Dilution Factor	Acceptance Limit %R	Analysis Date
Sample ID	LB133547BS							
BOD5	mg/L	198	194		98	1	84.6-115.4	11/21/2024

### Laboratory Control Sample Summary

**Client:** Aramark Uniforms

**SDG No.:** P4931

**Project:** Monthly 2024

**Run No.:** LB133572

Analyte	Units	True Value	Result	Conc. Qualifier	% Recovery	Dilution Factor	Acceptance Limit %R	Analysis Date
Sample ID	LB133572BS							
TPH	mg/L	20.0	17.0		85	1	78-114	11/22/2024

### Laboratory Control Sample Summary

**Client:** Aramark Uniforms

**SDG No.:** P4931

**Project:** Monthly 2024

**Run No.:** LB133572

Analyte	Units	True Value	Result	Conc. Qualifier	% Recovery	Dilution Factor	Acceptance Limit %R	Analysis Date
Sample ID	LB133572BSD							
TPH	mg/L	20.0	17.1		86	1	78-114	11/22/2024

### Laboratory Control Sample Summary

**Client:** Aramark Uniforms

**SDG No.:** P4931

**Project:** Monthly 2024

**Run No.:** LB133608

Analyte	Units	True Value	Result	Conc. Qualifier	% Recovery	Dilution Factor	Acceptance Limit %R	Analysis Date
Sample ID	LB133608BS							
TSS	mg/L	550	536		98	1	90-110	11/25/2024



# RAW DATA

# BOD5 LOG

ANALYST: rubin  
SUPERVISOR: Iwona

Reviewed By:Iwona  
On:11/26/2024 2:57:36 PM  
Inst Id :DO METER  
LB :LB133547

QC BATCH ID: LB133547  
BOD Water: WP110798  
Starch: W3149  
Sulfuric acid, 1N: WP110386  
POLYSEED: WP110800  
GGA: WP110799  
Chlorine Strips: W2965  
pH Strips: W3104

Analysis Date: 11/21/2024  
MANGANOUS SULFATE SOLUTION: W3103  
Alkaline Iodide Azide: W3109  
Sodium Thiosulfate, 0.025N: W3105  
NaOH, 1N: WP108662  
IncubatorID: INCUBATOR #3  
GuageID: 0511062  
Zero DO: WP110595

Lab SampleID	Client ID	Bottle No.	VOL. ML	Initial Reading (ML)	Final Reading (ML)	Difference	Average
WINKLER 1	WINKLER 1	1	300	0.0	9.4	9.4	9.4
WINKLER 2	WINKLER 2	2	300	9.2	18.6	9.4	9.4

Meter Calibration1: 8.86      Zero DO Reading1: 0.10 mg/L (<=0.2 Criteria)  
Barometric Pressure1: 755 mmHg      DO Meter BOD fluid reading for winkler comparison: 9.45

## After Incubation

Meter Calibration2: 8.89      Zero DO Reading2: 0.12 mg/L (<=0.2 Criteria)  
Barometric Pressure2: 760 mmHg



QC BATCH ID: LB133547

INCUBATOR TEMP IN(C): 20.3

INCUBATOR TEMP OUT(C): 20.3

TIME IN: 17:20

TIME OUT: 11:50

DATE IN: 11/21/2024

DATE OUT: 11/26/2024

Lab SampleID	Bottle No.	Check CL	Initial PH	Final PH	Temp °C	Sam Vol. (mL)	D.O.1 Initial	D.O.2 Final	Depletion	BOD Result (mg/L)	Avg Result (mg/L)	Comment
LB133547BL	1	No	6.64	N/A	20.40	300	9.44	9.42	0.02	0.02	0.02	
POLYSEED	1					10	9.30	6.98	2.32	0.46	0.48	
POLYSEED	2					15	9.28	5.53	3.75	0.5		
POLYSEED	3					20	9.25	4.59	4.66	0.47		
GGA	1					6	9.29	5.07	4.22	187	194	
GGA	2					6	9.25	4.97	4.28	190		
GGA	3					6	9.25	4.67	4.58	205		
P4931-02	1	No	7.02	N/A	20.40	0.5	9.20	7.80	-	0	424.5	
P4931-02	2					1	9.09	7.36	-	0		
P4931-02	3					2	8.82	5.51	3.31	424.5		
P4931-02	4					3	8.68	0.90	-	0		
P4931-02DUP	1	No	7.02	N/A	20.40	0.5	9.18	7.67	-	0	442.5	
P4931-02DUP	2					1	9.07	7.40	-	0		
P4931-02DUP	3					2	8.82	5.39	3.43	442.5		
P4931-02DUP	4					3	8.66	0.91	-	0		
P4937-01	1	No	8.64	7.08	20.20	0.5	9.20	6.57	2.63	1290	556.86	pH Adjusted
P4937-01	2					1	9.15	6.08	3.07	777		
P4937-01	3					2	8.93	5.82	3.11	394.5		
P4937-01	4					5	8.25	5.24	3.01	151.8		
P4937-01	5					10	7.33	1.15	6.18	171		
P4937-05	1	No	4.60	6.89	20.30	0.01	9.21	6.73	2.48	60000	30220	pH Adjusted
P4937-05	2					0.05	9.12	5.68	3.44	17760		
P4937-05	3					0.1	8.95	4.17	4.78	12900		
P4937-05	4					0.5	8.45	0.28	-	0		
P4937-05	5					1	8.23	0.07	-	0		
P4947-01	1	No	9.06	7.22	20.00	5	9.20	8.82	-	0		pH Adjusted
P4947-01	2					20	9.08	8.62	-	0		
P4947-01	3					50	9.04	8.32	-	0		
P4947-01	4					150	9.01	8.02	-	0		

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

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

WORKLIST(Hardcopy Internal Chain)

16133547

WorkList Name : bod5-11-21

WorkList ID : 185630

Department : Wet-Chemistry

Date : 11-21-2024 08:38:37

Sample	Customer Sample	Matrix	Test	Preservative	Customer	Raw Sample Storage Location	Collect Date	Method
P4931-02	COMP	Water	BOD5	Cool 4 deg C	ARAM01	M11	11/20/2024	SM5210 B
P4937-01	EFFLUENT	Water	BOD5	Cool 4 deg C	HOLL01	M11	11/20/2024	SM5210 B
P4937-05	INFLUENT	Water	BOD5	Cool 4 deg C	HOLL01	M11	11/20/2024	SM5210 B

Date/Time 11/21/2024 14:50  
Raw Sample Received by: RM CWL  
Raw Sample Relinquished by: Avelof

Date/Time 11/21/2024  
Raw Sample Received by: JPEC  
Raw Sample Relinquished by: RM CWL

WORKLIST(Hardcopy Internal Chain)

6133547

WorkList Name : BOD5-11-21- WorkList ID : 185660 Department : Wet-Chemistry Date : 11-21-2024 14:25:00

Sample	Customer Sample	Matrix	Test	Preservative	Customer	Raw Sample Storage Location	Collect Date	Method
P4947-01	A3988	Water	BOD5	Cool 4 deg C	PSEG03	L61	11/21/2024	SM5210 B

Date/Time 11/21/2024 16:30  
Raw Sample Received by: RM CWC  
Raw Sample Relinquished by: JLC

Date/Time 11/21/2024 17:00  
Raw Sample Received by: RM CWC  
Raw Sample Relinquished by: RM CWC

## Extraction and Analytical Summary Report

**Analysis Method:** 1664A  
**Test:** TPH  
**Run Number:** LB133572  
**Analysis Date:** 11/22/2024  
**BalanceID:** WC SC-6  
**OvenID:** EXT OVEN-3

**ANALYST:** jignesh  
**REVIEWED BY:** Iwona  
**Extraction Date:** 11/22/2024  
**Extraction IN Time:** 08:11  
**Extraction OUT Time:** 09:00  
**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	LB133572BL	LB133572BL	WATER	1.3	1000	100	3.2896	3.2896	3.02	3.2897	3.2897	0.0001	0.1
2	LB133572BS	LB133572BS	WATER	1.3	1000	100	2.8743	2.8743	3.03	2.8913	2.8913	0.0170	17
3	LB133572BSD	LB133572BSD	WATER	1.3	1000	100	3.1157	3.1157	3.04	3.1328	3.1328	0.0171	17.1
4	P4931-01	GRAB	WATER	1.6	1000	100	3.0797	3.0797	3.03	3.1550	3.1550	0.0753	75.3
5	P4947-01	A3988	WATER	1.6	1000	100	3.0706	3.0706	3.05	3.0766	3.0766	0.0060	6

QC Batch# LB133572

**Test:** TPH

**Analysis Date:** 11/22/2024

### Chemicals Used:

Chemical Name	Chemical Lot #
HEXANE	W3110
pH Paper 0-14	M6069
Sodium Sulfate	EP2562
1:1 HCL	WP108566
Silica Gel	W3079
Sand	NA

### Standards Used:

Standard Name	Amount Used	Standard Lot #
LCSW	5.00 ML	WP108567
LCSWD	5.00 ML	WP108568
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 : 10:01

1.0000 gram Balance: 1.0004 (0.9950-1.0050) In Time1: 09:20

Bal Check Time: 08:19 Out OVEN TEMP1: 70 °C Dessicator Time Out1: 10:37

Out Time1: 10:00

## After Analysis

0.0020 gram Balance: 0.0019 (0.0018-0.0022) In OVEN TEMP2 : 71 °C Dessicator Time In2 : 12:11

1.0000 gram Balance: 1.0005 (0.9950-1.0050) In Time2: 11:20

Bal Check Time: 12:41 Out OVEN TEMP2: 71 °C Dessicator Time Out2: 12:39

Out Time2: 12:10

WORKLIST(Hardcopy Internal Chain)

LB 133572

WorkList Name : tph p4947

WorkList ID : 185666

Department : Wet-Chemistry

Date : 11-22-2024 07:47:49

Sample	Customer Sample	Matrix	Test	Preservative	Customer	Raw Sample Storage Location	Collect Date	Method
P4931-01	GRAB	Water	TPH	Conc H2SO4 to pH < 2	ARAM01	M11	11/20/2024	1664A
P4947-01	A3988	Water	TPH	Conc H2SO4 to pH < 2	PSEG03	L61	11/21/2024	1664A

Date/Time 11-22-24 08:00

Raw Sample Received by: JH CWC

Raw Sample Relinquished by: JH CWC

Date/Time 11-22-24

Raw Sample Received by: JH CWC

Raw Sample Relinquished by: JH CWC

# TOTAL SUSPENDED SOLIDS - SM2540D

SUPERVISOR: Iwona

ANALYST: Niha

Date: 11/22/2024

Run Number: LB133608

BalanceID: WC SC-6

OvenID: WC OVEN-1

FilterID: 17416528

ThermometerID: WET OVEN#1

TEMP1 IN: 103 °C 11/22/2024 14:00 TEMP1 OUT: 104 °C 11/22/2024 15:00  
 TEMP2 IN: 103 °C 11/22/2024 15:30 TEMP2 OUT: 104 °C 11/22/2024 16:30  
 TEMP3 IN: 104 °C 11/25/2024 10:00 TEMP3 OUT: 103 °C 11/25/2024 11:30  
 TEMP4 IN: 104 °C 11/25/2024 12:00 TEMP4 OUT: 103 °C 11/25/2024 13:30

Dish #	Lab ID	Client ID	Empty Dish Weight (g)	Final Empty Dish Weight (g)	Sample Volume (ml)	1st Empty Dish+Sample weight after 1.5hr drying @103-@105°C (g)	2nd Empty Dish+Sample weight after 1.5hr drying @103-@105°C (g)	Final Empty Dish+Sample weight after 1.5hr drying @103-@105°C (g)	Weight (g)	Result mg/L
1	LB133608BL	LB133608BL	1.3786	1.3786	100	1.3786	1.3786	1.3786	0.0000	0
2	LB133608BS	LB133608BS	1.4025	1.4025	100	1.4561	1.4561	1.4561	0.0536	536
3	P4931-02	COMP	1.3987	1.3987	50	1.4184	1.4184	1.4184	0.0197	394
4	P4937-01	EFFLUENT	1.4033	1.4033	20	1.5300	1.5300	1.5300	0.1267	6335
5	P4937-04	AERATION TK 1	1.3991	1.3991	20	1.5060	1.5060	1.5060	0.1069	5345
6	P4947-01	A3988	1.3876	1.3876	750	1.4323	1.4323	1.4323	0.0447	59.6
7	P4967-01	001-WILLETTS-PT-BLVD	1.4068	1.4068	250	1.4165	1.4165	1.4165	0.0097	38.8
8	P4967-01DUP	001-WILLETTS-PT-BLVD DUP	1.4124	1.4124	250	1.4224	1.4224	1.4224	0.0100	40
9	P4967-02	002-35TH-AVE	1.4063	1.4063	250	1.4207	1.4207	1.4207	0.0144	57.6
10	P4969-01	TOWER-1	1.3946	1.3946	1750	1.4030	1.4030	1.4030	0.0084	4.8
11	P4969-03	TOWER-2	1.4004	1.4004	3000	1.4087	1.4087	1.4087	0.0083	2.8

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)

$$\text{Weight (g)} = C - B$$

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

# WORKLIST(Hardcopy Internal Chain)

LB133608

WorkList Name : TSS-11212024      WorkList ID : 185656      Department : Wet-Chemistry      Date : 11-21-2024 14:38:29

Sample	Customer Sample	Matrix	Test	Preservative	Customer	Raw Sample Storage Location	Collect Date	Method
P4931-02	COMP	Water	TSS	Cool 4 deg C	ARAM01	M11	11/20/2024	SM2540 D
P4947-01	A3988	Water	TSS	Cool 4 deg C	PSEG03	L61	11/21/2024	SM2540 D
P4969-01	TOWER-1	Water	TSS	Cool 4 deg C	PSEG04	L61	11/22/2024	SM2540 D
P4969-03	TOWER-2	Water	TSS	Cool 4 deg C	PSEG04	L61	11/22/2024	SM2540 D
P4937-01	EFFLUENT	Water	TSS	Cool 4 deg C	HOLL01	M11	11/20/2024	SM2540 D
P4937-04	AERATION TK 1	Water	TSS	Cool 4 deg C	HOLL01	M11	11/20/2024	SM2540 D
P4967-01	001-WILLETS-PT-BLVD	Water	TSS	Cool 4 deg C	TULL01	L51	11/21/2024	SM2540 D
P4967-02	002-35TH-AVE	Water	TSS	Cool 4 deg C	TULL01	L51	11/21/2024	SM2540 D

Date/Time 11-25-2024, 08:30  
 Raw Sample Received by: NFWCJ  
 Raw Sample Relinquished by: [Signature]

Date/Time 11-25-2024, 11:0  
 Raw Sample Received by: [Signature]  
 Raw Sample Relinquished by: NFWCJ



**Instrument ID:** DO METER

**Daily Analysis Runlog For Sequence/QC Batch ID # LB133547**

Review By	rubina	Review On	11/26/2024 2:57:18 PM
Supervise By	Iwona	Supervise On	11/26/2024 2:57:36 PM
SubDirectory	LB133547	Test	BOD5
<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	WP110798,W3149,WP110386,W3103,W3109,W3105,WP110800,WP110799,WP108662		

Sr#	SampleId	ClientID	QcType	Date	Comment	Operator	Status
1	LB133547BL	LB133547BL	MB	11/21/24 17:20		rubina	OK
2	LB133547BS	LB133547BS	LCS	11/21/24 17:20		rubina	OK
3	P4931-02	COMP	SAM	11/21/24 17:20	Intermediate dilution	rubina	OK
4	P4931-02DUP	COMPDUP	DUP	11/21/24 17:20	Intermediate dilution	rubina	OK
5	P4937-01	EFFLUENT	SAM	11/21/24 17:20	Intermediate dilution	rubina	OK
6	P4937-05	INFLUENT	SAM	11/21/24 17:20	Intermediate dilution	rubina	OK
7	P4947-01	A3988	SAM	11/21/24 17:20		rubina	OK

**Instrument ID:** WC SC-3

**Daily Analysis Runlog For Sequence/QC Batch ID # LB133572**

Review By	jignesh	Review On	11/22/2024 9:12:30 AM
Supervise By	Iwona	Supervise On	11/22/2024 9:37:21 AM
SubDirectory	LB133572	Test	TPH
<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	W3110,M6069,EP2562,WP108566,W3079,NA,WP108567,WP108568,NA		

Sr#	SampleId	ClientID	QcType	Date	Comment	Operator	Status
1	LB133572BL	LB133572BL	MB	11/22/24 09:20		jignesh	OK
2	LB133572BS	LB133572BS	LCS	11/22/24 09:20		jignesh	OK
3	LB133572BSD	LB133572BSD	LCSD	11/22/24 09:20		jignesh	OK
4	P4931-01	GRAB	SAM	11/22/24 09:20		jignesh	OK
5	P4947-01	A3988	SAM	11/22/24 09:20		jignesh	OK

**Instrument ID:** WC SC-3

**Daily Analysis Runlog For Sequence/QC Batch ID # LB133608**

Review By	Niha	Review On	11/25/2024 1:38:03 PM
Supervise By	Iwona	Supervise On	11/25/2024 1:46:47 PM
SubDirectory	LB133608	Test	TSS
<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	N/A		

Sr#	SampleId	ClientID	QcType	Date	Comment	Operator	Status
1	LB133608BL	LB133608BL	MB	11/25/24 10:00		Niha	OK
2	LB133608BS	LB133608BS	LCS	11/25/24 10:00		Niha	OK
3	P4931-02	COMP	SAM	11/25/24 10:00		Niha	OK
4	P4937-01	EFFLUENT	SAM	11/25/24 10:00		Niha	OK
5	P4937-04	AERATION TK 1	SAM	11/25/24 10:00		Niha	OK
6	P4947-01	A3988	SAM	11/25/24 10:00		Niha	OK
7	P4967-01	001-WILLETS-PT-BLV	SAM	11/25/24 10:00		Niha	OK
8	P4967-01DUP	001-WILLETS-PT-BLV	DUP	11/25/24 10:00		Niha	OK
9	P4967-02	002-35TH-AVE	SAM	11/25/24 10:00		Niha	OK
10	P4969-01	TOWER-1	SAM	11/25/24 10:00		Niha	OK
11	P4969-03	TOWER-2	SAM	11/25/24 10:00		Niha	OK

## Prep Standard - Chemical Standard Summary

**Order ID :** P4931

**Test :** BOD5,TPH,TSS

**Prepbatch ID :**

**Sequence ID/Qc Batch ID:** LB133547, LB133572, LB133608,

**Standard ID :**

EP2562, WP108566, WP108567, WP108568, WP108662, WP110386, WP110798, WP110799, WP110800,

**Chemical ID :**

E3551, E3726, M5673, M5943, M6069, W2606, W2653, W2654, W2817, W2871, W3009, W3030, W3079, W3082, W3103, W3105, W3109, W3110, W3112, W3113, W3144, W3149,



<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="#">EP2562</a>	11/14/2024	01/03/2025	Rajesh Parikh	Extraction_SC ALE_2 (EX-SC-2)	None	RUPESHKUMAR SHAH 11/14/2024
<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>
229	1:1 HCL	<a href="#">WP108566</a>	06/27/2024	10/24/2024	Jignesh Parikh	None	None	Iwona Zarych 06/27/2024
<b><u>FROM</u></b> 500.00000ml of M5943 + 500.00000ml of W2606 = Final Quantity: 1.000 L								

## 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>
2470	1664A SPIKING SOLN	<a href="#">WP108567</a>	06/27/2024	12/25/2024	Jignesh Parikh	None	None	Iwona Zarych
								06/27/2024

**FROM** 1000.00000ml of E3726 + 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>
3374	1664A QCS spiking solution-SS	<a href="#">WP108568</a>	06/27/2024	12/25/2024	Jignesh Parikh	WETCHEM_S CALE_4 (WC SC-4)	None	Iwona Zarych
								06/27/2024

**FROM** 1000.00000ml of E3726 + 4.00000gram of W3009 + 4.00000gram of W3082 = 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>
1571	Sodium hydroxide, 1N	<a href="#">WP108662</a>	07/09/2024	01/09/2025	Rubina Mughal	WETCHEM_SCALE_5 (WCS-5)	None	Iwona Zarych 07/11/2024
<b><u>FROM</u></b> 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>
1841	Sulfuric Acid, 1N	<a href="#">WP110386</a>	10/24/2024	04/24/2025	Rubina Mughal	None	WETCHEM_PIPETTE_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>
127	BOD Dilution fluid	<a href="#">WP110798</a>	11/21/2024	11/22/2024	Rubina Mughal	None	None	Iwona Zarych
								11/21/2024

**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="#">WP110799</a>	11/21/2024	11/21/2024	Rubina Mughal	WETCHEM_SCALE_7 (WC SC-6)	None	Iwona Zarych
								11/21/2024

**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="#">WP110800</a>	11/21/2024	11/22/2024	Rubina Mughal	None	None	Iwona Zarych 11/21/2024
<p><b>FROM</b> 1.00000PILLOW of W3030 + 300.00000ml of WP110798 = Final Quantity: 300.000 ml</p>								

## CHEMICAL RECEIPT LOG BOOK

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

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Seidler Chemical	BA-9254-03 / Acetone, Ultra Resi (cs/4x4L)	1234	12/25/2024	02/26/2024 / Rajesh	02/23/2024 / Rajesh	E3726

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 #
Seidler Chemical	BA-9530-33 / Hydrochloric Acid, Instra-Analyzed (cs/6x2.5L)	22G2862015	12/24/2024	06/24/2024 / Al-Terek	06/21/2024 / Al-Terek	M5943

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	DIW / DI Water	Daily Lab-Certified	10/24/2024	10/24/2019 / apatel	10/24/2019 / apatel	W2606

## CHEMICAL RECEIPT LOG BOOK

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.	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 #
Seidler Chemical	H223-57 / Hexadecane, 99.0%	SHBP8192	02/27/2028	02/27/2023 / lwona	02/27/2023 / lwona	W3009

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
PCI Scientific Supply, Inc.	136742-80 / POLYSEED	282211	11/30/2024	10/30/2024 / lwona	05/10/2023 / lwona	W3030

## CHEMICAL RECEIPT LOG BOOK

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.	A12244 / Stearic acid, 98%, 100 g	U23E020	02/26/2029	02/26/2024 / lwona	02/26/2024 / lwona	W3082

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

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	BA-9262-03 / Hexane, Ultra-Resi (cs/4x4L)	235898	02/28/2029	06/27/2024 / jignesh	06/26/2024 / jignesh	W3110

## CHEMICAL RECEIPT LOG BOOK

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Seidler Chemical	DIW / DI Water	Daily Lab-Certified	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 #
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

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 (CH <sub>3</sub> (CH <sub>2</sub> ) <sub>14</sub> CH <sub>3</sub> ) (by GC)	>= 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



**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



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

**CAS Number:** 57-11-4  
**Molecular Formula:** C<sub>18</sub>H<sub>36</sub>O<sub>2</sub>  
**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.*

W3009  
rec. 2/27/2023 12

Product Name:

Hexadecane - ReagentPlus®, 99%

## Certificate of Analysis

Product Number:

H6703

Batch Number:

SHBP8192

 $\text{CH}_3(\text{CH}_2)_{14}\text{CH}_3$ 

Brand:

SIAL

CAS Number:

544-76-3

MDL Number:

MFCD00008998

Formula:

C16H34


Formula Weight:

226.44 g/mol

Quality Release Date:

04 AUG 2022

Test	Specification	Result
Appearance (Color)	Colorless or White	Colorless
Appearance (Form)	Liquid or Solid	Liquid
Infrared Spectrum	Conforms to Structure	Conforms
Refractive index at 20 ° C	1.432 - 1.436	1.435
Purity (GC)	≥ 98.5 %	99.3 %
Color Test	≤ 20 APHA	< 5 APHA

  
Larry Coers, Director  
Quality Control  
Sheboygan Falls, 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.



W 3029

W 3030

Rec. 05/11/23

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 282211 • Mfg. Date: 11/2022 • Exp. Date: 11/2024

**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# J317-19 – Average Test Result: 205.3

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: 11/28/2022

POLYSEED.Ref.1.19

Revised Jan 22



## 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 <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

  
Jamie Ethier  
Vice President Global Quality

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

avantor™



MS943 MS944  
MS945 MS946

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 <sub>2</sub> )	≤ 0.5 ppm	< 0.5 ppm
Phosphate (PO <sub>4</sub> )	≤ 0.05 ppm	< 0.03 ppm
Sulfate (SO <sub>4</sub> )	≤ 0.5 ppm	< 0.3 ppm
Sulfite (SO <sub>3</sub> )	≤ 0.8 ppm	0.3 ppm
Ammonium (NH <sub>4</sub> )	≤ 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

 **avantorsm**

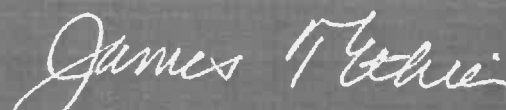


Material No.: 9530-33  
Batch No.: 22G2862015

Test	Specification	Result
------	---------------	--------

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

R: 8/19/24

M6069

**MACHEREY-NAGEL**

## Certificate of Analysis

### Product information

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

### Confirmation

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

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



MACHEREY-NAGEL GmbH & Co. KG  
Valencienner Str. 11  
52355 Düren · Germany  
[www.mn-net.com](http://www.mn-net.com)

DE	Tel.: +49 24 21 969-0	<a href="mailto:info@mn-net.com">info@mn-net.com</a>
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FR	Tel.: +33 388 68 22 68	<a href="mailto:sales-fr@mn-net.com">sales-fr@mn-net.com</a>
US	Tel.: +1 888 321 62 24	<a href="mailto:sales-us@mn-net.com">sales-us@mn-net.com</a>

# 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, N <sub>2</sub> 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, N <sub>2</sub> adsorption) :	0.65 - 0.85	0.82
Mean pore size (Å, N <sub>2</sub> 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

W3082 Received on 2/26/2026 by IZ

Product No.: A12244  
Product: Stearic acid, 98%  
Lot No.: U23E020

Appearance White flakes  
Assay 98.7 %

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

Order our products online [www.alfa.com](http://www.alfa.com)

**ThermoFisher**  
S C I E N T I F I C



# Certificate of Analysis

**Manganous Sulfate Solution, 364 g/L****Lot Number:** 2403J02**Product Number:** 4620**Manufacture Date:** MAR 15, 2024**Expiration Date:** MAR 2026

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

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

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

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

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

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



Jose Pena (03/15/2024)

Operations Manager

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

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# 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 --  
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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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*W3110*  
*58*  
*operate!*  
*06/27/2024*

## 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 - 0120633

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	H303	Quality Test / Release Date	02/23/2024
Lot Number	235898		
Description	HEXANES - OPTIMA		
Country of Origin	United States	Suggested Retest Date	Feb/2029
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	Clear, colorless liquid
ASSAY (N-HEXANE)	%	>= 60	73
ASSAY (SUM C6 HYDROCARBONS)	%	>= 99.9	>99.9
COLOR	APHA	<= 5	<5
DENSITY AT 25 DEGREES C	GM/ML	Inclusive Between 0.653 - 0.673	0.670
EVAPORATION RESIDUE	ppm	<= 1	0.3
FLUORESCENCE BACKGROUND	ppb	<= 1	<1
IDENTIFICATION	PASS/FAIL	= PASS TEST	PASS TEST
OPTICAL ABS AT 195 NM	ABS. UNITS	<= 1	0.64
OPTICAL ABS AT 210 NM	ABS. UNITS	<= 0.25	0.16
OPTICAL ABS AT 220 NM	ABS. UNITS	<= 0.07	0.06
OPTICAL ABS AT 254 NM	ABS. UNITS	<= 0.005	0.002
PESTICIDE RESIDUE ANALYSIS	NG/L	<= 10	<10
REFRACTIVE INDEX @ 25 DEG C		Inclusive Between 1.375 - 1.385	1.380
SUITABILITY FOR GC/MS		= PASS TEST	PASS TEST
SULFUR COMPOUNDS	%	<= 0.005	<0.005
THIOPHENE	PASS/FAIL	= PASS TEST	PASS TEST
WATER (H2O)	%	<= 0.01	<0.01
WATER-SOLUBLE TITRABLE ACID	MEQ/G	<= 0.0003	0.0001

*Harout Sahagian*

Harout Sahagian - 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.



# 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.



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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.





# SHIPPING DOCUMENTS

# CHEMTECH

## CHAIN OF CUSTODY RECORD

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

CHEMTECH PROJECT NO. **P4931**  
QUOTE NO.  
COC Number **2042243**

### CLIENT INFORMATION

REPORT TO BE SENT TO:

COMPANY: **Aramark Uniforms**  
ADDRESS: **740 Frelinghuysen Ave.**  
CITY: **Newark** STATE: **NJ** ZIP: **07114**  
ATTENTION: **Jarrod Mills**  
PHONE: **973-824-1101** FAX:

### CLIENT PROJECT INFORMATION

PROJECT NAME: **Monthly**  
PROJECT NO.: LOCATION:  
PROJECT MANAGER:  
e-mail:  
PHONE: FAX:

### CLIENT BILLING INFORMATION

BILL TO: 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 DAYS

### 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 \_\_\_\_\_

**TPH DOBS TSS**

1	2	3	4	5	6	7	8	9
---	---	---	---	---	---	---	---	---

CHEMTECH SAMPLE ID	PROJECT SAMPLE IDENTIFICATION	SAMPLE MATRIX	SAMPLE TYPE		SAMPLE COLLECTION		# OF BOTTLES	PRESERVATIVES									COMMENTS	
			COMP	GRAB	DATE	TIME		C	E	E								← Specify Preservatives A-HCl                      D-NaOH B-HNO3                  E-ICE C-H2SO4                F-OTHER
								1	2	3	4	5	6	7	8	9		
1.	Grab Comp	W		✓	11-20-24	0818	1	✓										
2.		W	✓		11-20-24	0822	2		✓	✓								
3.																		
4.																		
5.																		
6.																		
7.																		
8.																		
9.																		
10.																		

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

RELINQUISHED BY SAMPLER: 1. <b>[Signature]</b>	DATE/TIME: <b>11-20-24 0825</b>	RECEIVED BY: 1. <b>[Signature]</b>	DATE/TIME: <b>11-20-24 0825</b>	Conditions of bottles or coolers at receipt: <input type="checkbox"/> COMPLIANT <input type="checkbox"/> NON COMPLIANT <input type="checkbox"/> COOLER TEMP <b>28°C</b>
RELINQUISHED BY SAMPLER: 2. <b>[Signature]</b>	DATE/TIME:	RECEIVED BY: 2. <b>[Signature]</b>	DATE/TIME:	Comments:
RELINQUISHED BY SAMPLER: 3. <b>[Signature]</b>	DATE/TIME: <b>11-20-24 1451</b>	RECEIVED BY: 3. <b>[Signature]</b>	DATE/TIME:	

Page \_\_\_\_ of \_\_\_\_

CLIENT: ☐ Hand Delivered ☐ Other \_\_\_\_\_  
CHEMTECH: ☐ Picked Up ☐ Field Sampling

Shipment Complete  
☐ YES ☐ NO

WHITE - CHEMTECH COPY FOR RETURN TO CLIENT

YELLOW - CHEMTECH COPY

PINK - SAMPLER COPY



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

### Laboratory Certification

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