

DATA REPORTING QUALIFIERS- INORGANIC

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

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

LAB CHRONICLE

OrderID:	P5409	OrderDate:	12/31/2024 10:48:00 AM
Client:	Summit Environmental Technologies, LLC	Project:	24120833
Contact:	Jennifer Woolf	Location:	K11

LabID	ClientID	Matrix	Test	Method	Sample Date	Prep Date	Anal Date	Received
P5409-01	244758	WATER	TOC	SM5310B	12/02/24 00:00		12/31/24 13:54	12/31/24



SAMPLE DATA

Report of Analysis

Client:	Summit Environmental Technologies, LLC	Date Collected:	12/02/24 00:00
Project:	24120833	Date Received:	12/31/24
Client Sample ID:	244758	SDG No.:	P5409
Lab Sample ID:	P5409-01	Matrix:	WATER
		% Solid:	0

Parameter	Conc.	Qua.	DF	MDL	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
TOC	3.40	H	1	0.19	1.00	mg/L		12/31/24 13:54	SM 5310 B-14

Comments: _____

U = Not Detected

LOQ = Limit of Quantitation

MDL = Method Detection Limit

LOD = Limit of Detection

D = Dilution

Q = indicates LCS control criteria did not meet requirements

H = Sample Analysis Out Of Hold Time

J = Estimated Value

B = Analyte Found in Associated Method Blank

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

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

OR = Over Range

N =Spiked sample recovery not within control limits



QC RESULT SUMMARY



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

Initial and Continuing Calibration Verification

Client: Summit Environmental Technologies, LLC

SDG No.: P5409

Project: 24120833

RunNo.: LB134135

Analyte		Units	Result	True Value	% Recovery	Acceptance Window (%R)	Analysis Date
Sample ID:	ICV1						
TOC		mg/L	10.2	10	102	90-110	12/27/2024
Sample ID:	CCV1						
TOC		mg/L	0.73	1	73	50-150	12/31/2024
Sample ID:	CCV2						
TOC		mg/L	9.7	10	97	90-110	12/31/2024



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

Initial and Continuing Calibration Blank Summary

Client: Summit Environmental Technologies, LLC

SDG No.: P5409

Project: 24120833

RunNo.: LB134135

Analyte	Units	Result	Acceptance Limits	Conc Qual	MDL	RDL	Analysis Date
Sample ID: ICB1 TOC	mg/L	< 0.5000	0.5000	U	0.19	1	12/27/2024
Sample ID: CCB1 TOC	mg/L	0.24	0.5000	J	0.19	1	12/31/2024
Sample ID: CCB2 TOC	mg/L	0.3	0.5000	J	0.19	1	12/31/2024

Preparation Blank Summary

Client: Summit Environmental Technologies, LLC

SDG No.: P5409

Project: 24120833

Analyte	Units	Result	Acceptance Limits	Conc Qual	MDL	RDL	Analysis Date
Sample ID:	LB134135BLW						
TOC	mg/L	0.21	0.5000	J	0.19	1	12/31/2024

Matrix Spike Summary

Client:	Summit Environmental Technologies, LLC	SDG No.:	P5409
Project:	24120833	Sample ID:	P5409-01
Client ID:	244758MS	Percent Solids for Spike Sample:	0

Analyte	Units	Acceptance Limit %R	Spiked Result	Conc. Qualifier	Sample Result	Conc. Qualifier	Spike Added	Dilution Factor	% Rec	Qual	Analysis Date
TOC	mg/L	85-115	12.0		3.40		10	1	86		12/31/2024

Matrix Spike Summary

Client:	Summit Environmental Technologies, LLC	SDG No.:	P5409
Project:	24120833	Sample ID:	P5409-01
Client ID:	244758MSD	Percent Solids for Spike Sample:	0

Analyte	Units	Acceptance Limit %R	Spiked Result	Conc. Qualifier	Sample Result	Conc. Qualifier	Spike Added	Dilution Factor	% Rec	Qual	Analysis Date
TOC	mg/L	85-115	12.3		3.40		10	1	89		12/31/2024

Duplicate Sample Summary

Client:	Summit Environmental Technologies, LLC	SDG No.:	P5409
Project:	24120833	Sample ID:	P5409-01
Client ID:	244758MSD	Percent Solids for Spike Sample:	0

Analyte	Units	Acceptance Limit	Sample Result	Conc. Qualifier	Duplicate Result	Conc. Qualifier	Dilution Factor	RPD/ AD	Qual	Analysis Date
TOC	mg/L	+/-15	12.0		12.3		1	2		12/31/2024

Laboratory Control Sample Summary

Client: Summit Environmental Technologies, LLC

SDG No.: P5409

Project: 24120833

Run No.: LB134135

Analyte	Units	True Value	Result	Conc. Qualifier	% Recovery	Dilution Factor	Acceptance Limit %R	Analysis Date
Sample ID	LB134135BSW							
TOC	mg/L	10	10.4		104	1	90-110	12/31/2024



RAW DATA

Sample ID	Result	Std. Dev.	RSD	Mode	ALT
=====	=====	=====	=====	=====	=====
CCV1	0.7312	0.1880	25.71	TOC	
CCB1	0.2395	0.0397	16.57	TOC	
LB	0.2059	0.0554	26.92	TOC	
LB134135BSW.....	10.4153...	0.2792..	2.68...	TOC	..
P5403-01	30.3248	0.5005	1.65	TOC	
P5409-01	3.3504	0.3116	9.30	TOC	
P5409-01MS.....	12.0098...	0.3343..	2.78...	TOC	..
P5409-01MSD	12.2969	0.4715	3.83	TOC	
P5403-01DLX4	8.3887	0.3913	4.67	TOC	
CCV2.....	9.7176...	0.3271..	3.37...	TOC	..
CCB2	0.3016	0.0351	11.64	TOC	

Method ID		Sample Type	Vial Timestamp			Message	
=====							
TOC 0 - 20 ppmC		Sample	10	2024/12/31	11:43		
TOC 0 - 20 ppmC		Sample	12	2024/12/31	12:06	Low Sample Detected	
TOC 0 - 20 ppmC		Sample	13	2024/12/31	12:30	Low Sample Detected	
TOC 0 - 20 ppmC		...Sample	.. 14..	2024/12/31	12:59	..	
TOC 0 - 20 ppmC		Sample	15	2024/12/31	13:28		
TOC 0 - 20 ppmC		Sample	16	2024/12/31	13:54		
TOC 0 - 20 ppmC		...Sample	.. 17..	2024/12/31	14:22	..	
TOC 0 - 20 ppmC		Sample	17	2024/12/31	14:50		
TOC 0 - 20 ppmC		Sample	18	2024/12/31	15:17		
TOC 0 - 20 ppmC		...Sample	.. 11..	2024/12/31	15:45	..	
TOC 0 - 20 ppmC		Sample	12	2024/12/31	16:07		

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	0.9989	0.4994	34963	-2.276	-2.078	116
2	0.7045	0.3522	24658	-2.165	-1.965	108
3	0.5627	0.2813	19696	-2.158	-1.961	106
4	0.6587	0.3293	23056	-2.209	-2.012	109

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	0.1801	0.0900	6303	-2.531	-2.561	120
2	0.2564	0.1282	8974	-2.569	-2.372	99
3	0.2601	0.1301	9105	-2.588	-2.391	99
4	0.2616	0.1308	9158	-2.597	-2.603	120

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	0.2294	0.1147	8029	-2.694	-2.682	120
2	0.2652	0.1326	9284	-2.696	-2.675	120
3	0.1937	0.0968	6780	-2.684	-2.685	120
4	0.1352	0.0676	4733	-2.683	-2.712	120

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	10.4541	5.2271	365922	-2.749	-2.550	217
2	10.1177	5.0588	354146	-2.734	-2.536	192
3	10.7795	5.3897	377311	-2.728	-2.531	227
4	10.3099	5.1549	360873	-2.746	-2.548	207

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<<<Statistics>>>      Mean:   10.4153      Std Dev:   0.2792      RSD: 2.68
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Sample ID: P5403-01 Mode: TOC
Method: TOC 0 - 20 ppmC Filename: 12311059
Cal. Curve: TOC WATER 0-20PPM Timestamp: 2024/12/31 13:28
Operator ID: NF IZ Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	30.2698	15.1349	1059524	-2.725	-2.528	214
2	30.9306	15.4653	1082653	-2.692	-2.492	209
3	29.7105	14.8553	1039947	-2.676	-2.477	194
4	30.3882	15.1941	1063667	-2.670	-2.472	197

<<<Statistics>>> Mean: 30.3248 Std Dev: 0.5005 RSD: 1.65

Sample ID: P5409-01 Mode: TOC
Method: TOC 0 - 20 ppmC Filename: 12311059
Cal. Curve: TOC WATER 0-20PPM Timestamp: 2024/12/31 13:54
Operator ID: NF IZ Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	3.8003	1.9001	133021	-2.815	-2.615	148
2	3.3197	1.6598	116197	-2.828	-2.630	139
3	3.1471	1.5735	110157	-2.802	-2.603	146
4	3.1344	1.5672	109712	-2.811	-2.614	151

<<<Statistics>>> Mean: 3.3504 Std Dev: 0.3116 RSD: 9.30

Sample ID: P5409-01MS Mode: TOC
Method: TOC 0 - 20 ppmC Filename: 12311059
Cal. Curve: TOC WATER 0-20PPM Timestamp: 2024/12/31 14:22
Operator ID: NF IZ Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	11.6809	5.8404	408862	-2.847	-2.648	188
2	11.7855	5.8928	412525	-2.840	-2.643	185
3	12.1777	6.0888	426251	-2.873	-2.674	189
4	12.3953	6.1976	433868	-2.883	-2.684	187

<<<Statistics>>> Mean: 12.0098 Std Dev: 0.3343 RSD: 2.78

Sample ID: P5409-01MSD Mode: TOC
Method: TOC 0 - 20 ppmC Filename: 12311059
Cal. Curve: TOC WATER 0-20PPM Timestamp: 2024/12/31 14:50
Operator ID: NF IZ Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	12.3047	6.1524	430699	-2.816	-2.616	184
2	11.7048	5.8524	409699	-2.761	-2.562	180
3	12.3195	6.1598	431216	-2.778	-2.579	187
4	12.8588	6.4294	450092	-2.792	-2.593	195

<<<Statistics>>> Mean: 12.2969 Std Dev: 0.4715 RSD: 3.83

Sample ID: P5403-01DLX4 Mode: TOC
Method: TOC 0 - 20 ppmC Filename: 12311059
Cal. Curve: TOC WATER 0-20PPM Timestamp: 2024/12/31 15:17

Operator ID: NF IZ

Sample Type: Sample

Reviewed By:Iwona
On:1/3/2025 3:46:33
PM
Inst Id :Appolo-9000
LB :LB134135

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	8.9396	4.4698	312911	-2.808	-2.609	171
2	8.3768	4.1884	293210	-2.765	-2.566	160
3	8.0463	4.0231	281642	-2.781	-2.581	162
4	8.1923	4.0962	286754	-2.788	-2.589	150

<<<Statistics>>> Mean: 8.3887 Std Dev: 0.3913 RSD: 4.67

Sample ID: CCV2

Mode: TOC

Method: TOC 0 - 20 ppmC

Filename: 12311059

Cal. Curve: TOC WATER 0-20PPM

Timestamp: 2024/12/31 15:45

Operator ID: NF IZ

Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	10.0929	5.0465	353280	-2.822	-2.624	199
2	9.3106	4.6553	325896	-2.784	-2.589	185
3	9.8169	4.9085	343619	-2.760	-2.562	178
4	9.6502	4.8251	337781	-2.781	-2.584	180

<<<Statistics>>> Mean: 9.7176 Std Dev: 0.3271 RSD: 3.37

Sample ID: CCB2

Mode: TOC

Method: TOC 0 - 20 ppmC

Filename: 12311059

Cal. Curve: TOC

WATER 0-20PPM

Timestamp: 2024/12/31 16:07

Operator ID: NF IZ

Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	0.3483	0.1741	12191	-2.887	-2.688	103
2	0.2755	0.1378	9645	-2.868	-2.671	100
3	0.3088	0.1544	10807	-2.878	-2.680	102
4	0.2736	0.1368	9576	-2.867	-2.668	101

<<<Statistics>>> Mean: 0.3016 Std Dev: 0.0351 RSD: 11.64

Sample ID	Result	Std. Dev.	RSD	Mode	ALT
=====	=====	=====	=====	=====	=====
0.0PPM	6236	5833	93.53	TOC	
0.5PPM	29722	16922	56.93	TOC	
1.0PPM	51322	2525	4.92	TOC	
2.0PPM.....	81698...	3837..	4.70...	TOC	..
5.0PPM	187097	8217	4.39	TOC	
10.0PPM	346620	16682	4.81	TOC	
20.0PPM.....	715994...	6561..	0.92...	TOC	..
ICV1	10.2420	0.1770	1.73	TOC	
ICB1	0.1702	0.0360	21.14	TOC	
IC-20.....	0.1397...	0.0264..	18.89...	TOC	..
IC-R	0.1956	0.0474	24.23	TOC	

Method ID		Sample Type		Vial		Timestamp		Message	
=====									
TOC 0 - 20 ppmC		TOC Standard		1	2024/12/27	12:55		Low Sample Detected	
TOC 0 - 20 ppmC		TOC Standard		2	2024/12/27	13:20			
TOC 0 - 20 ppmC		TOC Standard		1	2024/12/27	14:34			
TOC 0 - 20 ppmC	...	TOC Standard	..	1..	2024/12/27	15:29		..	
TOC 0 - 20 ppmC		TOC Standard		5	2024/12/27	15:58			
TOC 0 - 20 ppmC		TOC Standard		6	2024/12/27	16:28			
TOC 0 - 20 ppmC	...	TOC Standard	..	7..	2024/12/27	16:59		..	
TOC 0 - 20 ppmC		Sample		1	2024/12/27	17:29			
TOC 0 - 20 ppmC		Sample		13	2024/12/27	18:17		Low Sample Detected	
TOC 0 - 20 ppmC	...	Sample	..	13..	2024/12/27	18:40		..Low Sample Detected	
TOC 0 - 20 ppmC		Sample		8	2024/12/27	19:04		Low Sample Detected	

=====

Sample ID:	0.0PPM	Mode:	TOC
Method:	TOC 0 - 20 ppmC	Filename:	12271233
Cal. Curve:	TOC WATER 0-20PPM	Timestamp:	2024/12/27 12:55
Operator ID:	NF IZ	Sample Type:	TOC Standard

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1			11836	-3.572	-3.385	120
2			367	-3.366	-3.270	120
3			2115	-3.367	-3.248	120
4			10628	-3.392	-3.107	120

Last Message: Low Sample Detected

<<<Statistics>>> Mean: 6236 Std Dev: 5833 RSD: 93.53

=====

Sample ID:	0.5PPM	Mode:	TOC
Method:	TOC 0 - 20 ppmC	Filename:	12271233
Cal. Curve:	TOC WATER 0-20PPM	Timestamp:	2024/12/27 13:20
Operator ID:	NF IZ	Sample Type:	TOC Standard

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1			44013	-3.562	-3.364	179
2			42817	-3.502	-3.304	172
3			23394	-3.459	-3.260	114
4			8666	-3.281	-3.082	103

<<<Statistics>>> Mean: 29722 Std Dev: 16922 RSD: 56.93

=====

Sample ID:	1.0PPM	Mode:	TOC
Method:	TOC 0 - 20 ppmC	Filename:	12271233
Cal. Curve:	TOC WATER 0-20PPM	Timestamp:	2024/12/27 14:34
Operator ID:	NF IZ	Sample Type:	TOC Standard

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1			48442	-3.429	-3.229	158
2			50032	-3.418	-3.220	175
3			52912	-3.419	-3.220	172
4			53900	-3.418	-3.218	162

<<<Statistics>>> Mean: 51322 Std Dev: 2525 RSD: 4.92

=====

Sample ID:	2.0PPM	Mode:	TOC
Method:	TOC 0 - 20 ppmC	Filename:	12271233
Cal. Curve:	TOC WATER 0-20PPM	Timestamp:	2024/12/27 15:29
Operator ID:	NF IZ	Sample Type:	TOC Standard

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1			80734	-3.530	-3.330	180
2			76967	-3.475	-3.278	195
3			86069	-3.478	-3.279	198
4			83023	-3.463	-3.263	182

<<<Statistics>>> Mean: 81698 Std Dev: 3837 RSD: 4.70

Sample ID: 5.0PPM

Method: TOC 0 - 20 ppmC

Cal. Curve: TOC WATER 0-20PPM

Operator ID: NF IZ

Mode: TOC

Filename: 12271233

Timestamp: 2024/12/27 15:58

Sample Type: TOC Standard

Reviewed By:Iwona

On:1/3/2025 3:46:33 PM

Inst Id :Appolo-9000

LB :LB134135

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1			194761	-3.459	-3.259	199
2			188462	-3.479	-3.280	190
3			175469	-3.460	-3.261	185
4			189695	-3.478	-3.280	200

<<<Statistics>>>

Mean: 187097

Std Dev: 8217

RSD: 4.39

Sample ID: 10.0PPM

Method: TOC 0 - 20 ppmC

Cal. Curve: TOC WATER 0-20PPM

Operator ID: NF IZ

Mode: TOC

Filename: 12271233

Timestamp: 2024/12/27 16:28

Sample Type: TOC Standard

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1			333314	-3.418	-3.221	198
2			332531	-3.412	-3.213	220
3			366803	-3.410	-3.212	205
4			353830	-3.336	-3.138	222

<<<Statistics>>>

Mean: 346620

Std Dev: 16682

RSD: 4.81

Sample ID: 20.0PPM

Method: TOC 0 - 20 ppmC

Cal. Curve: TOC WATER 0-20PPM

Operator ID: NF IZ

Mode: TOC

Filename: 12271233

Timestamp: 2024/12/27 16:59

Sample Type: TOC Standard

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1			719345	-3.351	-3.151	233
2			707132	-3.283	-3.084	219
3			715272	-3.283	-3.084	232
4			722228	-3.300	-3.100	240

<<<Statistics>>>

Mean: 715994

Std Dev: 6561

RSD: 0.92

Sample ID: ICV1

Method: TOC 0 - 20 ppmC

Cal. Curve: TOC WATER 0-20PPM

Operator ID: NF IZ

Mode: TOC

Filename: 12271233

Timestamp: 2024/12/27 17:29

Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	10.0872	5.0436	353078	-3.263	-3.063	218
2	10.4896	5.2448	367165	-3.214	-3.017	221
3	10.1484	5.0742	355220	-3.212	-3.013	226
4	10.2428	5.1214	358527	-3.230	-3.032	220

<<<Statistics>>>

Mean: 10.2420

Std Dev: 0.1770

RSD: 1.73

Sample ID: ICB1

Method: TOC 0 - 20 ppmC

Cal. Curve: TOC WATER 0-20PPM

Operator ID: NF IZ

Mode: TOC

Filename: 12271233

Timestamp: 2024/12/27 18:17

Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	0.2082	0.1041	7289	-3.295	-3.267	120
2	0.1933	0.0966	6765	-3.284	-3.263	120
3	0.1353	0.0676	4735	-3.268	-3.250	120
4	0.1440	0.0720	5040	-3.275	-3.270	120

Last Message: Low Sample Detected

<<<Statistics>>> Mean: 0.1702 Std Dev: 0.0360 RSD: 21.14

Sample ID: IC-20 Mode: TOC
Method: TOC 0 - 20 ppmC Filename: 12271233
Cal. Curve: TOC WATER 0-20PPM Timestamp: 2024/12/27 18:40
Operator ID: NF IZ Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	0.1255	0.0628	4394	-3.303	-3.272	120
2	0.1195	0.0598	4184	-3.286	-3.283	120
3	0.1359	0.0679	4755	-3.272	-3.270	120
4	0.1780	0.0890	6229	-3.270	-3.274	120

Last Message: Low Sample Detected

<<<Statistics>>> Mean: 0.1397 Std Dev: 0.0264 RSD: 18.89

Sample ID: IC-R Mode: TOC
Method: TOC 0 - 20 ppmC Filename: 12271233
Cal. Curve: TOC WATER 0-20PPM Timestamp: 2024/12/27 19:04
Operator ID: NF IZ Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	0.1980	0.0990	6930	-3.302	-3.268	120
2	0.2356	0.1178	8246	-3.301	-3.252	120
3	0.2204	0.1102	7716	-3.292	-3.266	120
4	0.1284	0.0642	4494	-3.279	-3.298	120

Last Message: Low Sample Detected

<<<Statistics>>> Mean: 0.1956 Std Dev: 0.0474 RSD: 24.23

Calibration Report Print Date/Time: 2024/12/30 10:20:39

Cal. Curve ID: TOC WATER 0-20PPM
Created: 2024/12/30 10:20
Calibration Factor (m): 7.001e+04
Y Intercept (b): 10155
r-squared: 0.99928

Standard ID	Y	X Expected	Measured	^{Re} Message	Date & Time
	Raw Data	ug C	ug C		
0.0PPM	6237	0.000	-0.056	-	2024/12/27 12:55
0.5PPM	29723	0.250	0.280	12.0	2024/12/27 13:20
1.0PPM	51322	0.500	0.588	17.6	2024/12/27 14:34
2.0PPM	81698	1.000	1.022	2.2	2024/12/27 15:29
5.0PPM	187097	2.500	2.528	1.1	2024/12/27 15:58
10.0PPM	346619	5.000	4.806	-3.9	2024/12/27 16:28
20.0PPM	715994	10.000	10.083	0.8	2024/12/27 16:59

12
12/30/24

Instrument ID: TOC

Daily Analysis Runlog For Sequence/QC Batch ID # LB134135

Review By	Niha	Review On	1/3/2025 3:45:50 PM
Supervise By	Iwona	Supervise On	1/3/2025 3:46:33 PM
SubDirectory	LB134135	Test	TOC
STD. NAME	STD REF.#		
ICAL Standard	WP111255,WP111256,WP111257,WP111258,WP111259,WP111260		
ICV Standard	WP111262		
CCV Standard	WP111261		
ICSA Standard	N/A		
CRI Standard	N/A		
LCS Standard	WP111262		
Chk Standard	WP109953,WP111267,WP111268		

Sr#	SampleId	ClientID	QcType	Date	Comment	Operator	Status
1	0.0PPM	0.0PPM	CAL1	12/27/24 12:55		NF IZ	OK
2	0.5PPM	0.5PPM	CAL2	12/27/24 13:20		NF IZ	OK
3	1.0PPM	1.0PPM	CAL3	12/27/24 14:34		NF IZ	OK
4	2.0PPM	2.0PPM	CAL4	12/27/24 15:01		NF IZ	OK
5	5.0PPM	5.0PPM	CAL5	12/27/24 15:58		NF IZ	OK
6	10.0PPM	10.0PPM	CAL6	12/27/24 16:28		NF IZ	OK
7	20.0PPM	20.0PPM	CAL7	12/27/24 16:59		NF IZ	OK
8	ICV1	ICV1	ICV	12/27/24 17:29		NF IZ	OK
9	ICB1	ICB1	ICB	12/27/24 17:53		NF IZ	OK
10	IC-20	IC-20	SAM	12/27/24 18:40		NF IZ	OK
11	IC-R	IC-R	SAM	12/27/24 19:04		NF IZ	OK
12	CCV1	CCV1	CCV	12/31/24 11:43		NF IZ	OK
13	CCB1	CCB1	CCB	12/31/24 12:06		NF IZ	OK
14	LB134135BLW	LB134135BLW	MB	12/31/24 12:30		NF IZ	OK
15	LB134135BSW	LB134135BSW	LCS	12/31/24 12:59		NF IZ	OK
16	P5403-01	PW-1	SAM	12/31/24 13:28		NF IZ	OK
17	P5409-01	244758	SAM	12/31/24 13:54		NF IZ	OK
18	P5409-01MS	244758MS	MS	12/31/24 14:22	2.0ml WP111253 +38.0ml Sample	NF IZ	OK

Instrument ID: TOC

Daily Analysis Runlog For Sequence/QC Batch ID # LB134135

Review By	Niha	Review On	1/3/2025 3:45:50 PM
Supervise By	Iwona	Supervise On	1/3/2025 3:46:33 PM
SubDirectory	LB134135	Test	TOC
STD. NAME	STD REF.#		
ICAL Standard	WP111255,WP111256,WP111257,WP111258,WP111259,WP111260		
ICV Standard	WP111262		
CCV Standard	WP111261		
ICSA Standard	N/A		
CRI Standard	N/A		
LCS Standard	WP111262		
Chk Standard	WP109953,WP111267,WP111268		

19	P5409-01MSD	244758MSD	MSD	12/31/24 14:50	2.0ml WP111253 +38.0ml Sample	NF IZ	OK
20	P5403-01DL	PW-1DL	SAM	12/31/24 15:17		NF IZ	OK
21	CCV2	CCV2	CCV	12/31/24 15:45		NF IZ	OK
22	CCB2	CCB2	CCB	12/31/24 16:07		NF IZ	OK

Prep Standard - Chemical Standard Summary

Order ID : P5409

Test : TOC

Prepbatch ID :

Sequence ID/Qc Batch ID: LB134135,

Standard ID :

WP109217,WP109218,WP109953,WP110767,WP111253,WP111254,WP111255,WP111256,WP111257,WP111258,WP
111259,WP111260,WP111261,WP111262,WP111263,WP111264,WP111265,WP111266,WP111267,WP111268,

Chemical ID :

M5501,M6041,W1993,W2647,W2784,W2800,W2860,W3016,W3017,W3018,W3020,W3022,W3058,W3111,W3112,



<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>
2050	TOC STOCK STD, 4000PPM	WP109217	08/07/2024	01/18/2025	Iwona Zarych	WETCHEM_SCALE_5 (WC)	WETCHEM_PIPETTE_3 (WC)	Mohan Bera 08/16/2024
FROM 5.00000ml of W2860 + 8.51200gram of W3111 + 990.00000ml of W3112 = Final Quantity: 1000.000 ml								

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
2051	TOC STOCK STD-SS, 4000PPM	WP109218	08/07/2024	02/07/2025	Iwona Zarych	WETCHEM_SCALE_5 (WC)	WETCHEM_PIPETTE_3 (WC)	Mohan Bera 08/16/2024
<u>FROM</u>	5.00000ml of W2860 + 8.51200gram of W2784 + 990.00000ml 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>
613	Phosphoric acid reagent	WP109953	09/25/2024	03/25/2025	Niha Farheen Shaik	None	None	Iwona Zarych
								09/27/2024

FROM 150.00000ml of W3112 + 50.00000ml of W2860 = Final Quantity: 200.000 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>
3886	Inorganic carbon stock solution, 1000ppm	WP110767	11/20/2024	05/20/2025	Niha Farheen Shaik	WETCHEM_SCALE_5 (WC SC-5)	None	Mohan Bera
								11/21/2024

FROM 3.49700gram of W2647 + 4.41220gram of W3058 + 993.00000ml 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>
3888	TOC Water Intermediate std-200ppm	WP111253	12/27/2024	01/03/2025	Niha Farheen Shaik	None	None	Iwona Zarych
								01/02/2025

FROM 95.00000ml of W3112 + 5.00000ml of WP109217 = 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>
3889	TOC Water Intermediate std SS-200ppm	WP111254	12/27/2024	01/03/2025	Niha Farheen Shaik	None	None	Iwona Zarych
								01/02/2025

FROM 95.00000ml of W3112 + 5.00000ml of WP109218 = 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>
304	TOC CAL 0.00ppm	WP111255	12/27/2024	01/03/2025	Niha Farheen Shaik	None	None	Iwona Zarych
								01/02/2025

FROM 100.00000ml of W3112 = Final Quantity: 100.000 ml

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
305	TOC CAL 0.5ppm	WP111256	12/27/2024	01/03/2025	Niha Farheen Shaik	None	WETCHEM_FIPETTE_3	Iwona Zarych
							(WC)	01/02/2025

FROM 99.75000ml of W3112 + 0.25000ml of WP111253 = 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>
306	TOC CAL 1.0PPM	WP111257	12/27/2024	01/03/2025	Niha Farheen Shaik	None	WETCHEM_PIPETTE_3 (WC)	Iwona Zarych 01/02/2025
<u>FROM</u> 99.50000ml of W3112 + 0.50000ml of WP111253 = 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>
307	TOC CAL 2.0PPM	WP111258	12/27/2024	01/03/2025	Niha Farheen Shaik	None	WETCHEM_FIPETTE_3 (WC)	Iwona Zarych 01/02/2025
<u>FROM</u> 99.00000ml of W3112 + 1.00000ml of WP111253 = 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>
308	TOC CAL 5.0PPM	WP111259	12/27/2024	01/03/2025	Niha Farheen Shaik	None	WETCHEM_PIPETTE_3 (WC)	Iwona Zarych 01/02/2025
<u>FROM</u> 97.50000ml of W3112 + 2.50000ml of WP111253 = 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>
310	TOC CAL 20.0PPM	WP111260	12/27/2024	01/03/2025	Niha Farheen Shaik	None	None	Iwona Zarych 01/02/2025
<u>FROM</u> 90.00000ml of W3112 + 10.00000ml of WP111253 = 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>
3331	TOC CAL-CCV std, 10PPM	WP111261	12/27/2024	01/03/2025	Niha Farheen Shaik	None	None	Iwona Zarych
								01/02/2025

FROM 190.00000ml of W3112 + 10.00000ml of WP111253 = Final Quantity: 200.000 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>
1650	TOC ICV/LCS STD. 10PPM	WP111262	12/27/2024	01/03/2025	Niha Farheen Shaik	None	None	Iwona Zarych
								01/02/2025

FROM 190.00000ml of W3112 + 10.00000ml of WP111254 = Final Quantity: 200.000 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>
4003	Solution A	WP111263	12/27/2024	12/31/2024	Niha Farheen Shaik	WETCHEM_S CALE_5 (WC SC-5)	None	Iwona Zarych 01/02/2025
<u>FROM</u>	1000.00000ml of W3112 + 2.56500gram of W3018 = 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>
4004	Solution B	WP111264	12/27/2024	01/03/2025	Niha Farheen Shaik	WETCHEM_SCALE_5 (WC SC-5)	None	Iwona Zarych 01/02/2025
<u>FROM</u>	0.24800gram of W3020 + 0.28100gram of M5501 + 0.28300gram of W2800 + 0.59400gram of W1993 + 1000.00000ml of W3112 + 2.05000gram of W3017 = 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>
4005	Solution C	WP111265	12/27/2024	01/03/2025	Niha Farheen Shaik	WETCHEM_SCALE_5 (WCS-5)	None	Iwona Zarych 01/02/2025
FROM 0.70500gram of W3016 + 1000.00000ml of W3112 + 2.80600gram of W2647 = 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>
4006	Solution D	WP111266	12/27/2024	01/03/2025	Niha Farheen Shaik	WETCHEM_SCALE_5 (WCS-5)	None	Iwona Zarych 01/02/2025
<u>FROM</u>	1.86200gram of W3022 + 1000.00000ml of W3112 = Final Quantity: 1000.000 ml							



<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
4007	IC-removal check solution	WP111267	12/27/2024	12/31/2024	Niha Farheen Shaik	None	WETCHEM_FIPETTE_3 (WC)	Iwona Zarych 01/02/2025
<u>FROM</u> 0.04000ml of M6041 + 10.00000ml of WP111263 + 10.00000ml of WP111264 + 10.00000ml of WP111265 + 10.00000ml of WP111266 = Final Quantity: 40.000 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>
3887	Inorganic carbon solution, 20ppm	WP111268	12/27/2024	01/03/2025	Niha Farheen Shaik	None	WETCHEM_PIPETTE_3 (WC)	Iwona Zarych 01/02/2025
<u>FROM</u> 49.00000ml of W3112 + 1.00000ml of WP110767 = Final Quantity: 50.000 ml								

CHEMICAL RECEIPT LOG BOOK

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Seidler Chemical	BA-3624-05 / Sodium Chloride, Crystal (cs/4x2.5kg)	0000281938	07/06/2026	07/24/2023 / mohan	04/14/2023 / mohan	M5501

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

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

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
PCI Scientific Supply, Inc.	J3506-5 / SODIUM BICARBONATE, PWD, ACS, 2.5KG	0000240594	06/03/2026	02/24/2020 / AMANDEEP	01/20/2020 / apatel	W2647

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.	J3040-1 / POTASSIUM CHLORIDE, CRYST, ACS, 500G	198947	09/30/2025	03/08/2021 / apatel	03/08/2021 / apatel	W2800

CHEMICAL RECEIPT LOG BOOK

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
PCI Scientific Supply, Inc.	J0260-3 / Phosphoric Acid, 2.5 L	0000278313	01/31/2026	07/12/2021 / apatel	07/12/2021 / apatel	W2860

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
SIGMA ALDRICH	S9390-100G / Sodium phosphate dibasic heptahydrate	SLCP6576	11/30/2025	04/03/2023 / lwona	04/03/2023 / lwona	W3016

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
SIGMA ALDRICH	C7902-500G / Calcium chloride dihydrate - 500G	SLCP4280	08/31/2025	04/03/2023 / lwona	04/03/2023 / lwona	W3017

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
PCI Scientific Supply, Inc.	J2500-1 / MAGNESIUM SULFATE 7-HYDRATE CRYSTALS 500G	SLCN3621	12/31/2024	04/03/2023 / lwona	04/03/2023 / lwona	W3018

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Thermo Fisher Scientific	012364.36 / Calcium nitrate tetrahydrate, ACS, 99.0-103.0%	MKCS4612	09/30/2025	04/03/2023 / lwona	04/03/2023 / lwona	W3020

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
SIGMA ALDRICH	S4392-250G / Sodium metasilicate nonahydrate	SLCM8472	03/31/2025	04/05/2023 / lwona	04/05/2023 / lwona	W3022

CHEMICAL RECEIPT LOG BOOK

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
PCI Scientific Supply, Inc.	EM-SX0395-3 / SODIUM CARBONATE ANHYDR 2.5KG	2023012653	10/19/2028	09/03/2024 / jignesh	10/19/2023 / lwona	W3058

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	24A1956910	01/18/2025	06/26/2024 / lwona	06/26/2024 / lwona	W3111

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

Certificate of Analysis



Date of Release: 5/12/2014

Product: Ammonium Chloride GR ACS

Catalog No.: AX1270 all
size codes

Grade: Meets ACS Specifications

CAS #: 12125-02-9

Country of Origin: India

FW: 53.49

Lot No.: XE09B



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

Joe Schoellkopf

Quality Control Manager

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

Sodium Bicarbonate, Powder
BAKER ANALYZED® A.C.S. Reagent

(sodium hydrogen carbonate)



Material No.: 3506-05
Batch No.: 0000240594
Manufactured Date: 2019/06/05
Retest Date: 2026/06/03
Revision No: 1

Certificate of Analysis

Meets ACS Reagent Chemical Requirements,

Test	Specification	Result
Assay (NaHCO ₃) (dried basis)	99.7 – 100.3 %	100.1
Insoluble Matter	<= 0.015 %	< 0.002
Chloride (Cl)	<= 0.003 %	0.003
Phosphate (PO ₄)	<= 0.001 %	0.001
Sulfur Compounds (as SO ₄)	<= 0.003 %	0.003
Calcium (Ca)	<= 0.02 %	0.02
Trace Impurities – Iron (Fe)	<= 0.001 %	0.001
Magnesium (Mg)	<= 0.005 %	0.005
Potassium (K)	<= 0.005 %	0.005
Ammonium (NH ₄)	<= 5 ppm	5
Trace Impurities – ACS – Heavy Metals (as Pb)	<= 5 ppm	5

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

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

James Ethier
Jamie Ethier
Vice President Global Quality

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

Phosphoric Acid
BAKER ANALYZED® A.C.S. Reagent

(orthophosphoric acid)



Material No.: 0260-03
Batch No.: 0000278313
Manufactured Date: 2021/02/01
Retest Date: 2026/01/31
Revision No: 2

Certificate of Analysis

Meets ACS Reagent Chemical Requirements,

Test	Specification	Result
Assay (H ₃ PO ₄) (by acidimetry)	85.0 – 87.0 %	85.8
Calcium (Ca)	<= 0.002 %	< 0.001
Color (APHA)	<= 10	5
Insoluble Matter	<= 0.001 %	< 0.001
ACS – Magnesium (Mg)	<= 0.002 %	< 0.002
Sulfate (SO ₄)	<= 12 ppm	< 4
Volatile Acids (as CH ₃ COOH)	<= 0.001 %	0.001
Reducing Substances	Passes Test	PT
Chloride (Cl)	<= 3 ppm	< 1
Nitrate (NO ₃)	<= 5 ppm	< 2
Trace Impurities – Antimony (Sb)	<= 20.000 ppm	0.007
Trace Impurities – Arsenic (As)	<= 0.500 ppm	< 0.001
Trace Impurities – Iron (Fe)	<= 10.000 ppm	< 1.000
Heavy Metals (as Pb)	<= 8 ppm	< 3
Trace Impurities – Manganese (Mn)	<= 0.500 ppm	0.005
Trace Impurities – Potassium (K)	<= 40.000 ppm	< 0.001
Trace Impurities – Sodium (Na)	<= 200.000 ppm	0.082

For Laboratory, Research or Manufacturing Use
Exceeds A.C.S. Specifications
Meets Reagent Specifications for testing USP/NF monographs

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 3016
Rec 04/03/23 12

3050 Spruce Street, Saint Louis, MO 63103, USA

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

Certificate of Analysis

Product Name:

Sodium phosphate dibasic heptahydrate - ACS reagent, 98.0-102.0%

Product Number:

S9390

 $\text{Na}_2\text{HPO}_4 \cdot 7\text{H}_2\text{O}$

Batch Number:

SLCP6576

Brand:

SIGALD

CAS Number:

7782-85-6

MDL Number:

MFCD00149180

Formula:

 $\text{HNa}_2\text{O}_4\text{P} \cdot 7\text{H}_2\text{O}$

Formula Weight:

268.07 g/mol

Quality Release Date:

02 NOV 2022

Recommended Retest Date:

NOV 2025

Test	Specification	Result
Appearance (Color)	White	White
Appearance (Form)	Powder	Powder
Assay	98.0 - 102.0 %	99.8 %
Insoluble Matter	≤ 0.005 %	0.003 %
Chloride (Cl)	Pass	Pass
< or = 0.001%		
Sulfate	Pass	Pass
< or = 0.005%		
Iron (Fe)	Pass	Pass
< or = 0.001%		
Heavy Metals	< = 0.001%	< 0.001%
by ICP		
pH	8.7 - 9.3	9.2
of 5% solution at 25 deg C		
Note		
ACS Tests		



Brian Dulle, Supervisor

Quality Assurance

St. Louis, Missouri US

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



W 3017
Rec 4/3/23 12

3050 Spruce Street, Saint Louis, MO 63103, USA

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

Certificate of Analysis

Product Name:

Calcium chloride dihydrate - BioReagent, suitable for cell culture, suitable for insect cell culture, suitable for plant cell culture, $\geq 99.0\%$

Product Number: C7902

Batch Number: SLCP4280

 $\text{CaCl}_2 \cdot 2\text{H}_2\text{O}$

Brand: SIGMA

CAS Number: 10035-04-8

MDL Number: MFCD00149613

Formula: $\text{CaCl}_2 \cdot 2\text{H}_2\text{O}$

Formula Weight: 147.01 g/mol

Quality Release Date: 14 NOV 2022

Recommended Retest Date: AUG 2025

Test	Specification	Result
Appearance (Color)	White	White
Appearance (Form)	Powder	Powder
Solubility (Color)	Colorless	Colorless
Solubility (Turbidity)	Clear	Clear
294 mg/mL, H ₂ O		
Titration with EDTA	99.0 - 105.0 %	103.3 %
Cell Culture Test	Pass	Pass
Insect Cell Test	Pass	Pass
Plant Cell Culture Test	Pass	Pass



Brian Dulle, Supervisor
Quality Assurance
St. Louis, Missouri US

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



W3018
Rec. 4/3/23

3050 Spruce Street, Saint Louis, MO 63103, USA

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

Certificate of Analysis

Product Name:

Magnesium sulfate heptahydrate - ReagentPlus®, ≥99.0%

Product Number: M1880
Batch Number: SLCN3621
Brand: SIGALD
CAS Number: 10034-99-8
MDL Number: MFCD00149785
Formula: MgO4S · 7H2O
Formula Weight: 246.47 g/mol
Quality Release Date: 04 MAY 2022
Recommended Retest Date: DEC 2024

MgSO₄ · 7H₂O

Test	Specification	Result
Appearance (Color)	White	White
Appearance (Form)	Powder or Crystals	Crystals
Solubility (Color)	Colorless	Colorless
Solubility (Turbidity)	Clear	Clear
100 mg/mL, H2O		
Titration with EDTA	≥ 99.0 %	100.6 %



Brian Dulle, Supervisor
Quality Assurance
St. Louis, Missouri US

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



W 3020
Rec. 4/3/23

12

3050 Spruce Street, Saint Louis, MO 63103, USA

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

Product Name:

Certificate of Analysis**Calcium nitrate tetrahydrate - ACS reagent, 99%**

Product Number: 237124
Batch Number: MKCS4612
Brand: SIGALD
CAS Number: 13477-34-4
MDL Number: MFCD00149604
Formula: $\text{CaN}_2\text{O}_6 \cdot 4\text{H}_2\text{O}$
Formula Weight: 236.15 g/mol
Quality Release Date: 27 FEB 2023
Recommended Retest Date: SEP 2025



Test	Specification	Result
Appearance (Color)	White	White
Appearance (Form)	Conforms to Requirements	Crystals
Granular Powder or Crystals or Flakes		
Complexometric EDTA	99.0 - 103.0 %	99.6 %
X-Ray Diffraction	Conforms to Structure	Conforms
pH	5.0 - 7.0	5.4
c = 5%, Water, 25 Deg C		
Insoluble Matter	$\leq 0.005 \%$	$< 0.001 \%$
c = 10%, Water		
Chloride Content	$\leq 0.005 \%$	$< 0.005 \%$
Nitrite (NO_2)	$\leq 0.001 \%$	$< 0.001 \%$
Sulfate (SO_4)	$\leq 0.002 \%$	$< 0.002 \%$
Barium	$\leq 0.005 \%$	$< 0.001 \%$
Heavy Metals	$\leq 5.0 \text{ ppm}$	$< 1.0 \text{ ppm}$
by ICP-OES		
Iron (Fe)	$\leq 5.0 \text{ ppm}$	$< 1.0 \text{ ppm}$
Magnesium (Mg)	$\leq 0.05 \%$	$< 0.01 \%$
Potassium (K)	$\leq 0.005 \%$	$< 0.001 \%$
Sodium (Na)	$\leq 0.01 \%$	$< 0.01 \%$
Strontium (Sr)	$\leq 0.05 \%$	$< 0.01 \%$
Meets ACS Requirements	Current ACS Specification	Conforms

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



W3020

Sigma-Aldrich

3050 Spruce Street, Saint Louis, MO 63103, USA

Website: www.sigmaaldrich.com

Email USA: techserv@sial.com

Outside USA: eurtechserv@sial.com

Certificate of Analysis

Product Number: 237124
Batch Number: MKCS4612

Test	Specification	Result
Recommended Retest Period 3 Years		



Larry Coers, Director
Quality Control
Milwaukee, WI US

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



W 3022

Rec. 4/5/23 12

3050 Spruce Street, Saint Louis, MO 63103, USA

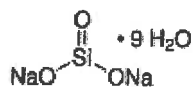
Website: www.sigmaaldrich.comEmail USA: techserv@sial.comOutside USA: eurtechserv@sial.com

Certificate of Analysis

Product Name:

Sodium metasilicate nonahydrate - $\geq 98\%$

Product Number: S4392
Batch Number: SLCM8472
Brand: ALDRICH
CAS Number: 13517-24-3
MDL Number: MFCD00149175
Formula: $\text{Na}_2\text{O}_3\text{Si} \cdot 9\text{H}_2\text{O}$
Formula Weight: 284.20 g/mol
Quality Release Date: 14 MAR 2022
Recommended Retest Date: MAR 2025



Test	Specification	Result
Appearance (Color)	White	White
Appearance (Form)	Powder	Powder
Solubility (Color)	Colorless	Colorless
Solubility (Turbidity)	Clear	Clear
50 mg/ml, H ₂ O		
Titration with HCl	$\geq 98\%$	100 %



Brian Dulle, Supervisor
Quality Assurance
St. Louis, Missouri US

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



Certificate Of Analysis



W 3058

Re. 10/19/23 12

Date of Release: 1/27/2023

Name: **Sodium Carbonate, Anhydrous**

Powder, ACS

Item No: **SX0395 All Sizes**

Lot / Batch No: **2023012653**

Country of Origin: **India**

Item	Specifications	Analysis
Assay (calculated on dried substance)	99.5% min.	100.2%
Calcium (Ca)	0.03% max.	0.004%
Chloride (Cl)	0.001% max.	<0.001%
Color	White	Passes Test
Form	Powder	Passes Test
Heavy metals (by ICP-OES)	5 ppm max.	<5 ppm
Insoluble Matter	0.01% max.	0.003%
Iron (Fe)	5 ppm max.	<5 ppm
Loss on heating at 285C	1.0% max.	0.1%
Magnesium (Mg)	0.005% max.	0.0008%
Phosphate (PO ₄)	0.001% max.	<0.001%
Potassium (K)	0.005% max.	0.003%
Silica (SiO ₂)	0.005% max.	<0.005%
Sulfur compounds (as SO ₄)	0.003% max.	<0.003%

Joe Schoellkopf

Quality Control Manager

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

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

EMD Millipore Corporation

400 Summit Drive
Burlington, MA 01803
U.S.A.

Form number: 00005624CA, Rev. 2.0

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	P217	Quality Test / Release Date	09/03/2020
Lot Number	198947		
Description	POTASSIUM CHLORIDE, A.C.S.		
Country of Origin	United States	Suggested Retest Date	Sep/2025
Chemical Origin	Inorganic-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	%	Inclusive Between 99.0 - 100.5	99.7
BARIUM (Ba)	PASS/FAIL	= P.T. (ABOUT 0.001%)	P.T. (ABOUT 0.001%)
BROMIDE	%	<= 0.01	<0.01
CALCIUM	%	<= 0.002	<0.002
CHLORATE & NITRATE	%	<= 0.003	<0.001
HEAVY METALS (as Pb)	ppm	<= 5	<5
IDENTIFICATION	PASS/FAIL	= PASS TEST	PASS TEST
INSOLUBLE MATTER	%	<= 0.005	<0.005
IODIDE	%	<= 0.002	<0.002
IRON (Fe)	ppm	<= 2	<1
MAGNESIUM	%	<= 0.001	<0.0005
PH 5% SOLUTION @ 25 DEG C		Inclusive Between 5.4 - 8.6	6.0
PHOSPHATE (PO4)	ppm	<= 5	<5
SODIUM (Na)	%	<= 0.005	<0.005
SULFATE (SO4)	%	<= 0.001	<0.001



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.

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.

Sodium Chloride, Crystal
BAKER ANALYZED® A.C.S. Reagent



M5497 - M5508
And on 4/14/23
063

Material No.: 3624-01

Batch No.: 0000281938

Manufactured Date: 2021-06-07

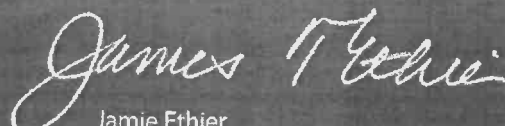
Retest Date: 2026-06-07

Revision No.: 2

Certificate of Analysis

Test	Specification	Result
Assay (NaCl) (by Ag titrn)	≥ 99.0 %	100.0 %
pH of 5% Solution at 25°C	5.0 - 9.0	6.3
Insoluble Matter	≤ 0.005 %	0.003 %
Iodide (I)	≤ 0.002 %	< 0.002 %
Bromide (Br)	≤ 0.01 %	< 0.01 %
Chlorate and Nitrate (as NO ₃)	≤ 0.003 %	< 0.001 %
ACS - Phosphate (PO ₄)	≤ 5 ppm	< 5 ppm
Sulfate (SO ₄)	≤ 0.004 %	< 0.004 %
Barium (Ba)	Passes Test	Passes Test
ACS - Heavy Metals (as Pb)	≤ 5 ppm	< 5 ppm
Iron (Fe)	≤ 2 ppm	< 1 ppm
Calcium (Ca)	≤ 0.002 %	< 0.001 %
Magnesium (Mg)	≤ 0.001 %	< 0.001 %
Potassium (K)	≤ 0.005 %	0.001 %

For Laboratory, Research, or Manufacturing Use
Meets Reagent Specifications for testing USP/NF monographs
Country of Origin: USA
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

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

 **avantorsm**



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

Certificate of Analysis

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

>>> Continued on page 2 >>>

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

 **avantor™**

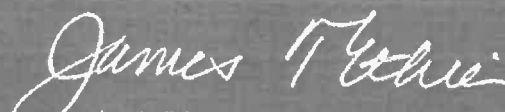


Material No.: 9673-33
Batch No.: 23D2462010

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

For Laboratory, Research, or Manufacturing Use

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


Jamie Ethier
Vice President Global Quality



POTASSIUM HYDROGEN PHTHALATE

Material: N983
Grade: ACS GRADE
Batch Number: 24A1956910

Chemical Formula: HOCC6H4COOK
Molecular Weight: 204.22
CAS #: 877-24-7
Appearance:

Manufacture Date: 01/19/2022
Reassay Date: 01/18/2025

Storage: Room Temperature

White crystals.

TEST	SPECIFICATION	ANALYSIS	DISPOSITION
Assay (dried basis)	99.95 - 100.05 %	99.97 %	PASS
Chlorine Compounds	<= 0.003 %	<0.003 %	PASS
Heavy Metals (as Pb)	<= 5 ppm	<5 ppm	PASS
Insoluble Matter	<= 0.005 %	0.003 %	PASS
Iron	<= 5 ppm	<5 ppm	PASS
pH (0.05M, Water) @25C	4.00 - 4.02	4.00	PASS
Sodium	<= 0.005 %	<0.005 %	PASS
Sulfur Compounds	<= 0.002 %	<0.002 %	PASS

Spec Set: N983ACS

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.



SHIPPING DOCUMENTS



CHAIN OF CUSTODY RECORD

Omega COCID 3831

PAGE: 1 OF: 1

ADDRESS

Summit Environmental
Technologies, Inc.
3310 Win St.
Cuyahoga Falls, Ohio 44223
TEL: (330) 253-8211
FAX: (330) 253-4489
Website: <http://www.settek.com>

P5409

SUB CONTRACTOR: Chemtech NJ		COMPANY: Chemtech	
ADDRESS: 284 Sheffield St., Ste 1			
CITY, STATE, ZIP: Mountainside, NJ 07092			
PHONE: (908) 789-8900	FAX:	EMAIL:	
ACCOUNT #:			

SPECIAL INSTRUCTIONS / COMMENTS:

Report to Holly Florea.
PO 24120833

ANALYTICAL PARAMETERS

ITEM #	SAMPLE ID	Client Sample ID	Bottle Type	MATRIX	DATE COLLECTED	NUMBER OF CONTAINERS
1	24120833-00	244758	P-250_H2SO	Non-Potabl	12/2/2024	1

TOC (SM5310)

COMMENTS
Methanol Preserved Weights
HOT Sample Notation
Additional Sample Description,
etc.

Relinquished By:	Date: 12/31/24	Time: 1040	Received By:	Date: 12-31-24	Time: 9:46
Relinquished By:	Date:	Time:	Received By:	Date:	Time:
Relinquished By:	Date:	Time:	Received By:	Date:	Time:
TAT:	Standard	RUSH	Next BD <input type="checkbox"/>	2nd BD <input type="checkbox"/>	3rd BD <input type="checkbox"/>
Note: RUSH requests will incur surcharges!					

REPORT TRANSMITTAL DESIRED:

☐ HARDCOPY (extra cost) ☐ FAX ☐ EMAIL ☐ ONLINE

FOR LAB USE ONLY

Temp of samples 1.9 °C Attempt to Cool?

Comments:

From: Holly Florea <hflorea@settek.com>
Sent: Thursday, January 02, 2025 2:33 PM
Subject: RE: TOC from Summit coming
Attachments: SubCOC_24120422_24120422_v1.pdf; P5410-TR (1).pdf; P5407-TR.pdf; P5406-TR.pdf

See revised COCs. I only checked the collection dates for the COCs you attached to the original email. It would be best if you included our sample IDs or job numbers as we won't be able to cross reference them with your numbers in our system. I appreciate all your help and you can proceed with the expired samples.

Please note, in the near future my email address will be updated to Holly.Florea@AllianceTG.com. Please ask your IT department to whitelist the following domain from which you could receive email contact from Alliance to ensure emails do not go into your SPAM file: AllianceTG.com.



SUMMIT
ENVIRONMENTAL TECHNOLOGIES, INC.
An Alliance Technical Group Company

Holly Florea
Senior Project Manager
Mobile: 937-409-3646
Address: 3310 Win Street, Cuyahoga Falls, Ohio 44223
www.settek.com

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Please let us know how we are doing by participating in an online survey at <https://www.surveymonkey.com/r/S25XFKG>

From: Kiran Saleem <Kiran.Saleem@alliancetg.com>
Sent: Thursday, January 2, 2025 2:17 PM
To: Holly Florea <hflorea@settek.com>; Christina Gemma <CGemma@settek.com>
Cc: Yazmeen Gomez <Yazmeen.Gomez@alliancetg.com>; Jennifer Woolf <jwoolf@settek.com>
Subject: Re: TOC from Summit coming

Holly & Christina,

The holding time for TOC is 28 days. If the collection date falls in December, the sample remains within the holding time. However, the Chain of Custody (COC) forms show varying collection dates. For example, in P5404, Sample 3 has a collection date of **4/29/2024**, Sample 6 has a collection date of **5/3/2024**, and Sample 8 has a collection date of **5/8/2024**. This indicates that these samples are outside the required holding time.

Please let me know, should we update the collection dates, if yes:

- To what date?
- And for all Projects?

Please let me know, Thanks!



CHAIN OF CUSTODY RECORD

Omega COCID 3828

SUB CONTRACTOR: Chemtech NJ		COMPANY: Chemtech		SPECIAL INSTRUCTIONS / COMMENTS: Report to Holly Florea (hflorea@) PO: 24120422	
ADDRESS: 284 Sheffield St., Ste 1					
CITY, STATE, ZIP: Mountainside, NJ 07092					
PHONE: (908) 789-8900		FAX:		EMAIL:	
ACCOUNT #:					
ANALYTICAL PARAMETERS					
TOC (SM5310)					
ITEM #	SAMPLE ID	Client Sample ID	Bottle Type	MATRIX	DATE COLLECTED
1	24120422-00	244661	40ML-AMB-	Non-Potabl	4/26/2024 11:15:00 AM
2	24120422-00	244662	40ML-AMB-	Non-Potabl	4/26/2024 11:15:00 AM
3	24120422-00	244663	40ML-AMB-	Non-Potabl	4/29/2024 3:52:00 PM
4	24120422-00	244664	40ML-AMB-	Non-Potabl	4/29/2024 4:22:00 PM
5	24120422-00	244665	40ML-AMB-	Non-Potabl	5/3/2024 8:57:00 AM
6	24120422-00	244666	40ML-AMB-	Non-Potabl	5/3/2024 9:07:00 AM
7	24120422-00	244667	40ML-AMB-	Non-Potabl	5/8/2024 2:18:00 PM
8	24120422-00	244668	40ML-AMB-	Non-Potabl	5/8/2024 2:37:00 PM
9	24120422-00	244669	40ML-AMB-	Non-Potabl	6/7/2024 10:55:00 AM
10	24120422-01	244670	40ML-AMB-	Non-Potabl	6/7/2024 11:15:00 AM
11	24120422-01	244671	40ML-AMB-	Non-Potabl	7/3/2024 9:35:00 AM
12	24120422-01	244672	40ML-AMB-	Non-Potabl	7/3/2024 10:04:00 AM
NUMBER OF CONTAINERS					
TAT: Standard RUSH					
Next BD <input type="checkbox"/> 2nd BD <input type="checkbox"/> 3rd BD <input type="checkbox"/>					
Note: RUSH requests will incur surcharges!					
Relinquished By: Date: 7/30/24 Time: 10:40					
Received By: Date: 12-31-24 Time: 9:46					
Relinquished By: Date: Time:					
Received By: Date: Time:					
Relinquished By: Date: Time:					
Received By: Date: Time:					
Temp: Comm:					

Thank you!

NOTE: Chemtech is now an Alliance Technical Group company. Please add AllianceTG.com to your safe senders list to ensure receipt of important emails.

Regards,



Kiran Saleem
Project Manager
Alliance Technical Group
Main: 908-789-8900
Direct: 908-728-3148
Address: 284 Sheffield St, Ste 1, Mountainside, NJ 07092
www.alliancetg.com

From: Christina Gemma <CGemma@settek.com>
Sent: Thursday, January 2, 2025 1:22 PM
To: Kiran Saleem <Kiran.Saleem@alliancetg.com>; Jennifer Woolf <jwoolf@settek.com>
Cc: Yazmeen Gomez <Yazmeen.Gomez@alliancetg.com>
Subject: Re: TOC from Summit coming

Hello Kiran,

The collection month for all of the samples is December.

From: Kiran Saleem <Kiran.Saleem@alliancetg.com>
Sent: Thursday, January 2, 2025 12:54 PM
To: Christina Gemma <CGemma@settek.com>; Jennifer Woolf <jwoolf@settek.com>
Cc: Yazmeen Gomez <Yazmeen.Gomez@alliancetg.com>
Subject: Re: TOC from Summit coming

Good Afternoon Christina,

I am reaching out regarding the followings:

- Can you please confirm the Sample Collection Dates for the above mentioned COCs, they are not clear.
- The samples for these projects were out of holding time - P5404 ; P5406 ; P5407 ;P5408 ; P5409 ; P5410. It's a standard procedure to inform the client.

Happy New Year to you & your team - Thank you!

NOTE: Chemtech is now an Alliance Technical Group company. Please add AllianceTG.com to your safe senders list to ensure receipt of important emails.

Regards,



Kiran Saleem
Project Manager
Alliance Technical Group
Main: 908-789-8900
Direct: 908-728-3148
Address: 284 Sheffield St, Ste 1, Mountainside, NJ 07092
www.alliancetg.com

From: Christina Gemma <CGemma@settek.com>
Sent: Tuesday, December 31, 2024 1:00 PM
To: Kiran Saleem <Kiran.Saleem@alliancetg.com>; Jennifer Woolf <jwoolf@settek.com>
Subject: Re: TOC from Summit coming

Kiran,

Sorry for that! Collection date for all of those samples is 12/10. Please let me know if you need anything else.

From: Kiran Saleem <Kiran.Saleem@alliancetg.com>
Sent: Tuesday, December 31, 2024 12:38 PM
To: Christina Gemma <CGemma@settek.com>; Jennifer Woolf <jwoolf@settek.com>
Subject: Re: TOC from Summit coming

Christina, thank you! Can you please let me the collection dates of the above-mentioned, it's not visible.

Our office will be **CLOSED** on the following dates:

January 1st for the Holiday

NOTE: Chemtech is now an Alliance Technical Group company. Please add AllianceTG.com to your safe senders list to ensure receipt of important emails.

Regards,



Kiran Saleem
Project Manager
Alliance Technical Group
Main: 908-789-8900
Direct: 908-728-3148
Address: 284 Sheffield St, Ste 1, Mountainside, NJ 07092
www.alliancetg.com

From: Christina Gemma <CGemma@settek.com>
Sent: Tuesday, December 31, 2024 11:06 AM
To: Kiran Saleem <Kiran.Saleem@alliancetg.com>; Jennifer Woolf <jwoolf@settek.com>

Cc: jordan <jordan@chemtech.net>; Mohammad Ahmed <mohammad.ahmed@alliancetg.com>

Subject: Re: TOC from Summit coming

Hi Kiran,

I apologize for the confusion. We did not have enough residual volume to send for those samples - they can be disregarded on the COC.

From: Kiran Saleem <Kiran.Saleem@alliancetg.com>

Sent: Tuesday, December 31, 2024 10:43 AM

To: Jennifer Woolf <jwoolf@settek.com>

Cc: jordan <jordan@chemtech.net>; Christina Gemma <CGemma@settek.com>; Mohammad Ahmed <mohammad.ahmed@alliancetg.com>

Subject: Re: TOC from Summit coming

Hello Jennifer,

We received the samples. Writing to let you know; sample management just informed me that for the attached COC, sample number 16, 18 and 19 are missing.

Our office will be **CLOSED** on the following dates:

January 1st for the Holiday

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Regards,



Kiran Saleem
Project Manager
Alliance Technical Group

Main: 908-789-8900

Direct: 908-728-3148

Address: 284 Sheffield St, Ste 1, Mountainside, NJ 07092

www.alliancetg.com

From: Jennifer Woolf <jwoolf@settek.com>

Sent: Monday, December 30, 2024 10:57 AM

To: yazmeen <yazmeen@chemtech.net>; Kiran Saleem <Kiran.Saleem@alliancetg.com>

Cc: jordan <jordan@chemtech.net>; Christina Gemma <CGemma@settek.com>

Subject: TOC from Summit coming

We have more TOCs coming tomorrow. Just wanted to check on your receiving hours for tomorrow. My shipping department is trying to figure out what shipping priority to use to get them there while you are still open. (One of the samples is rush.)

Thanks,

jen



SUMMIT
ENVIRONMENTAL TECHNOLOGIES, INC.
An Alliance Technical Group Company

Jennifer Woolf
Project Manager
Office: 330.253.8211
Address: 3310 Win Street, Cuyahoga Falls, Ohio 44223
www.settek.com

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Please note, my new email address will be jennifer.woolf@alliancetg.com. Please ask your IT department to whitelist the following domain from which you could receive email contact from Alliance to ensure emails do not go into the SPAM file: AllianceTG.com

Please let us know how we are doing by participating in an online survey at <https://www.surveymonkey.com/r/S25XFKG>.



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