

DATA PACKAGE GENERAL CHEMISTRY

PROJECT NAME: FORMER SCHLUMBERGER SITE PRINCETON NJ

JACOBS ENGINEERING GROUP, INC.

412 Mt. Kemble Ave

Downtown Building

Morristown, NJ - 07960

Phone No: 9732670555

ORDER ID: P3426

ATTENTION: Mary I. Murphy





46

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

Client Sample Number

Cover Page

P3426 Order ID:

Project ID: Former Schlumberger Site Princeton NJ

Client: JACOBS Engineering Group, Inc.

Lab Sample Number

P3426-01 927-K1-WS-073124 P3426-02 927-K1-WS-073124-FD

I certify that the data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hard copy data package has been authorized by the laboratory manager or his designee, as verified by the following signature.

Signature:

APPROVED

By Nimisha Pandya QA/QC Supervisor at 1:49 pm, Aug 16, 2024

NYDOH CERTIFICATION NO - 11376

NJDEP CERTIFICATION NO - 20012

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CASE NARRATIVE

JACOBS Engineering Group, Inc.

Project Name: Former Schlumberger Site Princeton NJ

Project # N/A

Chemtech Project # P3426

Test Name: Hexavalent Chromium

A. Number of Samples and Date of Receipt:

2 Water samples were received on 07/31/2024.

B. Parameters:

According to the Chain of Custody document, the following analyses were requested: Hexavalent Chromium, Metals Group4, SVOC-SIMGroup1, SVOCMS Group3, SVOCMS Group6, VOCMS Group3 and VOCMS Group6. This data package contains results for Hexavalent Chromium.

C. Analytical Techniques:

The analysis of Hexavalent Chromium was based on method 7196A.

D. QA/ QC Samples:

The Holding Times were met for all analysis.

The Blank Spike met requirements for all samples.

The Duplicate analysis met criteria for all samples.

The Matrix Spike analysis met criteria for all samples.

The Matrix Spike Duplicate analysis met criteria for all samples.

The Blank analysis did not indicate the presence of lab contamination.

The Calibration met the requirements.

E. Additional Comments:

I certify that the data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. The laboratory manager or his designee, as verified by the following signature has authorized release of the data contained in this hard copy data package.

Signature

N. N. Pandya

APPROVED

By Nimisha Pandya QA/QC Supervisor at 1:49 pm, Aug 16, 2024

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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

Q Indicates the LCS did not meet the control limits requirements

instrument for that specific analysis.

H Sample Analysis Out Of Hold Time

QA Control # A3040961

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ALLIANCE 284 Sheffield Street, Mountainside New Jersey 07092

NEW JERSEY LAB ID#: 20012: NEW YORK LAB ID#: 11376

GENERAL CHEMISTRY CONFORMANCE/NON-CONFORMANCE SUMMARY

CHEMTECH PROJECT NUMBER: P3426 MATRIX: Water METHOD: 7196A NA NO YES 1. Blank Contamination - If yes, list compounds and concentrations in each blank: 2. Matrix Spike Duplicate Recoveries Met Criteria If not met, list those compounds and their recoveries which fall outside the acceptable range. The Blank Spike met requirements for all samples. 3. Sample Duplicate Analysis Met QC Criteria If not met, list those compounds and their recoveries which fall outside the acceptable range. 8. Digestion Holding Time Met If not met, list number of days exceeded for each sample: ADDITIONAL COMMENTS: 5. M. Jodhemi
QA REVIEW **REVIEWED**

By Sohil Jodhani, QA/QC Director at 10:33 am, Aug 16, 2024

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APPENDIX A

QA REVIEW GENERAL DOCUMENTATION

Project #: P3426

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

1st Level QA Review Signature:

2nd Level QA Review Signature:

SOHIL JODHANI

N. N. Pandya

Date: 08/02/2024

APPROVED

By Nimisha Pandya QA/QC Supervisor at 1:49 pm, Aug 16, 2024

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LAB CHRONICLE

OrderID: P3426 OrderDate: 7/31/2024 2:33:00 PM

Client: JACOBS Engineering Group, Inc. Project: Former Schlumberger Site Princeton NJ

Contact: Mary I. Murphy Location: E21,VOA Ref. #3 Water

LabID	ClientID	Matrix	Test	Method	Sample Date	Prep Date	Anal Date	Received
P3426-01	927-K1-WS-073124	WATER			07/31/24 10:50			07/31/24
			Hexavalent Chromium	7196A	10.50		07/31/24 15:46	
P3426-02	927-K1-WS-073124- FD	WATER			07/31/24 10:55			07/31/24
			Hexavalent Chromium	7196A			07/31/24 15:50	

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SAMPLE DATA



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

Report of Analysis

Client: JACOBS Engineering Group, Inc. Date Collected: 07/31/24 10:50

Project: Former Schlumberger Site Princeton NJ Date Received: 07/31/24

Client Sample ID: 927-K1-WS-073124 SDG No.: P3426

Lab Sample ID: P3426-01 Matrix: WATER

% Solid: 0

Parameter	Conc. Qua	DF MDL	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
Dissolved Hexavalent	0.0030 U	1 0.0030	0.010	mg/L		07/31/24 15:46	7196A
Chromium							

Comments:

U = Not Detected

LOQ = Limit of Quantitation

MDL = Method Detection Limit

LOD = Limit of Detection

D = Dilution

Q = indicates LCS control criteria did not meet requirements

H = Sample Analysis Out Of Hold Time

J = Estimated Value

B = Analyte Found in Associated Method Blank

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

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

OR = Over Range

N =Spiked sample recovery not within control limits

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P3426-02

Lab Sample ID:

Chromium

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Matrix:

WATER

Report of Analysis

Client: JACOBS Engineering Group, Inc. Date Collected: 07/31/24 10:55

Project: Former Schlumberger Site Princeton NJ Date Received: 07/31/24

Client Sample ID: 927-K1-WS-073124-FD SDG No.: P3426

% Solid: 0

Parameter	Conc. Qua.	DF MDL	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
Dissolved Hexavalent	0.0030 II	1 0.0030	0.010	mg/L		07/31/24 15:50	7196A

Comments:

U = Not Detected

LOQ = Limit of Quantitation

MDL = Method Detection Limit

LOD = Limit of Detection

D = Dilution

Q = indicates LCS control criteria did not meet requirements

H = Sample Analysis Out Of Hold Time

J = Estimated Value

B = Analyte Found in Associated Method Blank

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

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

OR = Over Range

N =Spiked sample recovery not within control limits

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QC RESULT SUMMARY



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Initial and Continuing Calibration Verification

Client: JACOBS Engineering Group, Inc. SDG No.: P3426

Project: Former Schlumberger Site Princeton NJ RunNo.: LB131811

Analyte		Units	Result	True Value	% Recovery	Acceptance Window (%R)	Analysis Date
Sample ID: Hexavalent	ICV Chromium	mg/L	0.499	0.5	100	90-110	07/31/2024
Sample ID: Hexavalent	CCV1 Chromium	mg/L	0.501	0.5	100	90-110	07/31/2024
Sample ID: Hexavalent	CCV2 Chromium	mg/L	0.501	0.5	100	90-110	07/31/2024

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Fax: 908 789 8922

Initial and Continuing Calibration Blank Summary

Client:	JACOBS Engineering Group, Inc.	SDG No.:	P3426
Project:	Former Schlumberger Site Princeton NJ	RunNo.:	LB131811

Analyte	Units	Result	Acceptance Limits	Conc Qual	MDL	RDL	Analysis Date
Sample ID: ICB Hexavalent Chromium	mg/L	< 0.0050	0.0050	U	0.0027	0.01	07/31/2024
Sample ID: CCB1 Hexavalent Chromium	mg/L	< 0.0050	0.0050	U	0.0027	0.01	07/31/2024
Sample ID: CCB2 Hexavalent Chromium	mg/L	< 0.0050	0.0050	U	0.0027	0.01	07/31/2024

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Preparation Blank Summary

Client: JACOBS Engineering Group, Inc. SDG No.: P3426

Project: Former Schlumberger Site Princeton NJ

Analyte	Units	Result	Acceptance Limits	Conc Qual	MDL	RDL.	Analysis Date
Sample ID: lb13181 Hexavalent Chromium		< 0.0050	0.0050	U	0.003	0.01	07/31/2024

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Matrix Spike Summary

Client: JACOBS Engineering Group, Inc. SDG No.: P3426

Project: Former Schlumberger Site Princeton NJ **Sample ID:** P3426-01

Client ID: 927-K1-WS-073124MS Percent Solids for Spike Sample: 0

		Acceptance	Spiked	Conc.	Sample	Conc.	Spike	Dilution	%		Analysis
Analyte	Units	Limit %R	Result	Qualifier	Result	Qualifier	Added	Factor	Rec	Qual	Date
Hexavalent Chromium	mg/L	90-111	0.92		0.0030	U	1.0	2	92		07/31/2024

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Fax: 908 789 8922

Matrix Spike Summary

Client: JACOBS Engineering Group, Inc. SDG No.: P3426

Project: Former Schlumberger Site Princeton NJ **Sample ID:** P3426-01

Client ID: 927-K1-WS-073124MSD Percent Solids for Spike Sample: 0

		Acceptance	Spiked	Conc.	Sample	Conc.	Spike	Dilution	%		Analysis
Analyte	Units	Limit %R	Result	Qualifier	Result	Qualifier	Added	Factor	Rec	Qual	Date
Hexavalent Chromium	mg/L	90-111	0.92		0.0030	U	1.0	2	92		07/31/2024

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Duplicate Sample Summary

Client: JACOBS Engineering Group, Inc. SDG No.: P3426

Project: Former Schlumberger Site Princeton NJ **Sample ID:** P3426-01

Client ID: 927-K1-WS-073124DUP Percent Solids for Spike Sample: 0

		Acceptance	Sample	Conc.	Duplicate	Conc.	Dilution	RPD/		Analysis	
Analyte	Units	Limit	Result	Qualifie	Result	Qualifie	Factor	AD	Qual	Date	
Hexavalent Chromium	mg/L	+/-20	0.0030	U	0.0030	U	1	0		07/31/2024	

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Client: JACOBS Engineering Group, Inc. SDG No.: P3426

Project: Former Schlumberger Site Princeton NJ **Sample ID:** P3426-01

Client ID: 927-K1-WS-073124MSD Percent Solids for Spike Sample: 0

		Acceptance	Sample	Conc.	Duplicate	Conc.	Dilution	RPD/		Analysis	
Analyte	Units	Limit	Result	Qualifie	Result	Qualifie	Factor	AD	Qual	Date	
Hexavalent Chromium	mg/L	+/-20	0.92		0.92		2	0		07/31/2024	

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Laboratory Control Sample Summary

Client: JACOBS Engineering Group, Inc. SDG No.: P3426

Project: Former Schlumberger Site Princeton NJ Run No.: LB131811

		True		Conc.	%	Dilution	Acceptance	Analysis
Analyte	Units	Value	Result	Qualifier	Recovery	Factor	Limit %R	Date
Sample ID lb131811BS								
Hexavalent Chromium	mg/L	0.5	0.51		101	1	90-111	07/31/2024

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RAW DATA



Analytical Summary Report

Reviewed By: Iwona On:8/1/2024 10:49:01 AM Inst Id :SPECTROPHOTOME

Analysis Method: 7196A ANALYST: Niha

Parameter: Hexavalent Chromium SUPERVISOR REVIEW BY: Iwona

Run Number: LB131811 pH Meter ID: ph Meter-1

Reagent/Standard	Lot/Log #
Calibration Std. hexchrome 0.1 ppm	WP108932
Calibration Std. hexchrome 0.05 ppm	WP108931
calibration std. hexchrome 0.01 ppm	WP108929
calibration std. hexchrome 0 ppm	WP108928
hexavalent chromium color reagent	WP108907
5N sulfuric acid	WP107791
HEX LOD STD, 0.005PPM	WP108935
Hex LOQ Std, 0.01PPM	WP108936
Calibration Std Hexachrome 0.025 ppm	WP108930
Hexavalent Chromium ICV-LCS Std	WP108934
Calibration and CCV std HexChrome 0.5PPM	WP108933
Calibration std HexChrome 1.0PPM	

Intercept: -0.0002 Slope: 0.7844 Regression: 0.9999996

		True Value		Initial Vol	Final Vol	рН	pН	Absorb.at	540nm	Absorbance	Result	%D	Anal	Anal
Seq	Lab ID	(mg/1)	DF	(ml)	(ml)	HN03	H2SO4	Backgrnd	Color	Difference	(mg/L)		Date	Time
1	CAL1	0	1	100	100		2.33	0.000	0.000	0.000	0.000		07/31/2024	15:30
2	CAL2	0.01	1	100	100		2.04	0.000	0.007	0.007	0.009	-10	07/31/2024	15:31
3	CAL3	0.025	1	100	100		2.41	0.000	0.018	0.018	0.023	-8	07/31/2024	15:32
4	CAL4	0.05	1	100	100		2.22	0.000	0.040	0.040	0.051	2	07/31/2024	15:33
5	CAL5	0.1	1	100	100		2.08	0.000	0.079	0.079	0.100	0	07/31/2024	15:34
6	CAL6	0.5	1	100	100		1.87	0.000	0.392	0.392	0.5	0	07/31/2024	15:35
7	CAL7	1	1	100	100		1.74	0.000	0.784	0.784	0.999	-0.1	07/31/2024	15:36



Analytical Summary Report



Analysis Method: 7196A ANALYST: Niha

Parameter: Hexavalent Chromium SUPERVISOR REVIEW BY: Iwona

Run Number: LB131811 pH Meter ID:ph Meter-1

		True Value		Initial Vol	Final Vol	Нq	Hq	Absorb.a	t540nm	Absorbance	Intermediate	Anal	Anal		
Seq	Lab ID		DF	(ml/gm)	(ml)	HN03	H2SO4	Backgrnd	Color	Difference	Result (mg/L)	Date	Time		
1	ICV	0.5	1	100	100		1.88	0.000	0.391	0.391	0.499	07/31/2024	15:37		
2	ICB		1	100	100		2.08	0.000	0.000	0.000	0.000	07/31/2024	15:38		
3	CCV1	0.5	1	100	100		2.37	0.000	0.393	0.393	0.501	07/31/2024	15:39		
4	CCB1		1	100	100		1.87	0.000	0.001	0.001	0.002	07/31/2024	15:40		
5	RL Check	0.01	1	100	100		2.09	0.000	0.006	0.006	0.008	07/31/2024	15:41		
6	lb131811BL		1	100	100		1.80	0.000	0.001	0.001	0.002	07/31/2024	15:42		
7	lb131811BS	0.5	1	100	100		2.11	0.000	0.396	0.396	0.505	07/31/2024	15:43		
8	P3390-07		1	100	100		2.41	0.000	0.004	0.004	0.005	07/31/2024	15:44		
9	P3390-08		1	100	100		2.17	0.000	0.008	0.008	0.010	07/31/2024	15:45		
10	P3426-01		1	100	100		1.85	0.001	0.002	0.001	0.002	07/31/2024	15:46		
11	P3426-01DU		1	100	100		1.74	0.002	0.002	0.000	0.000	07/31/2024	15:47		
12	P3426-01MS	1	2	100	100		2.18	0.002	0.361	0.359	0.458	07/31/2024	15:48		
13	P3426-01MS	1	2	100	100		2.22	0.002	0.361	0.359	0.458	07/31/2024	15:49		
14	P3426-02		1	100	100		1.84	0.001	0.002	0.001	0.002	07/31/2024	15:50		
15	CCV2	0.5	1	100	100		1.96	0.000	0.393	0.393	0.501	07/31/2024	15:51		
16	CCB2		1	100	100		2.33	0.000	0.000	0.000	0.000	07/31/2024	15:52		

Bate/Time
Raw Sample Received by:

Raw Sample Received by:

Raw Sample Received by:

Raw Sample Received by:

Raw Sample Relinquished by:

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Collect Date Method 07/29/2024 7196A 07/29/2024 7196A 07/31/2024 7196A

> QAO QAOf E21 E21

Cool 4 deg C Cool 4 deg C

Hexavalent Chromium Hexavalent Chromium Hexavalent Chromium Hexavalent Chromium

Water

LOD-MDL-WATER-01-QT3-202

LOQ-WATER-02-QT3-2024

Water Water

Water

927-K1-WS-072124-FD

927-K1-WS-072124

CHEM02 CHEM02

JACO05 JACO05

Ammonium sulfate buffer Ammonium sulfate buffer

07/31/2024 7196A

Department: Wet-Chemistry

WorkList ID: 182242

HEX-073124

11812181

WORKLIST(Hardcopy Internal Chain)

Date: 07-31-2024 15:03:21

Raw Sample Storage Location

Customer

Preservative

Test

Matrix

Page 1 of 1

WorkList Name: P3390-07 P3390-08 P3426-01 P3426-02 Sample P3426-GENCHEM

Customer Sample

Date/Time

07/3/124 14:50

NF(wc)

Raw Sample Relinquished by: Raw Sample Received by:

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Instrument ID: SPECTE

SPECTROPHOTOMETER-1

Daily Analysis Runlog For Sequence/QCBatch ID # LB131811

Review By	Nih	na	Review On	8/1/2024 10:48:40 AM					
Supervise By	lwona		Supervise On	8/1/2024 10:49:01 AM					
SubDirectory	LB	131811	Test	Hexavalent Chromium					
STD. NAME		STD REF.#							
ICAL Standard		N/A							
ICV Standard		N/A							
CCV Standard		N/A							
ICSA Standard		N/A							
CRI Standard		N/A							
LCS Standard		N/A	I/A						
Chk Standard		WP108932,WP108931,WP108929,WP108928,WP108907,WP107791,WP108935,WP108936,WP108930,WP108934							

Sr#	SampleId	ClientID	QcType	Date	Comment	Operator	Status
1	CAL1	CAL1	CAL	07/31/24 15:30		Iwona	ОК
2	CAL2	CAL2	CAL	07/31/24 15:31		Iwona	ок
3	CAL3	CAL3	CAL	07/31/24 15:32		Iwona	ОК
4	CAL4	CAL4	CAL	07/31/24 15:33		Iwona	ОК
5	CAL5	CAL5	CAL	07/31/24 15:34		Iwona	ОК
6	CAL6	CAL6	CAL	07/31/24 15:35		Iwona	ОК
7	CAL7	CAL7	CAL	07/31/24 15:36		Iwona	ОК
8	ICV	ICV	ICV	07/31/24 15:37		Iwona	ОК
9	ICB	ICB	ICB	07/31/24 15:38		Iwona	ок
10	CCV1	CCV1	CCV	07/31/24 15:39		Iwona	ОК
11	CCB1	CCB1	ССВ	07/31/24 15:40		Iwona	ОК
12	RL Check	RL Check	SAM	07/31/24 15:41		Iwona	ОК
13	lb131811BL	lb131811BL	MB	07/31/24 15:42		Iwona	ОК
14	lb131811BS	lb131811BS	LCS	07/31/24 15:43		Iwona	ОК
15	P3390-07	LOD-MDL-WATER-01	SAM	07/31/24 15:44		Iwona	ок
16	P3390-08	LOQ-WATER-02-QT3	SAM	07/31/24 15:45		Iwona	ОК
17	P3426-01	927-K1-WS-073124	SAM	07/31/24 15:46		Iwona	ОК
18	P3426-01DUP	927-K1-WS-073124DI	DUP	07/31/24 15:47		lwona	ОК

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Fax: 908 789 8922

Instrument ID: SPECTROPHOTOMETER-1

Daily Analysis Runlog For Sequence/QCBatch ID # LB131811

Review By	Niha	Review On	8/1/2024 10:48:40 AM
Supervise By	Iwona	Supervise On	8/1/2024 10:49:01 AM
SubDirectory	LB13181	Test	Hexavalent Chromium
STD. NAME	STD	REF.#	
ICAL Standard	N/A		
ICV Standard	N/A		
CCV Standard	N/A		
ICSA Standard	N/A		
CRI Standard	N/A		
LCS Standard	N/A		
Chk Standard	WP108	932,WP108931,WP108929,WP108928,WP108	8907,WP107791,WP108935,WP108936,WP108930,WP108934

19	P3426-01MS	927-K1-WS-073124M	MS	07/31/24 15:48	lwona	ОК
20	P3426-01MSD	927-K1-WS-073124M	MSD	07/31/24 15:49	lwona	ОК
21	P3426-02	927-K1-WS-073124-F	SAM	07/31/24 15:50	lwona	ОК
22	CCV2	CCV2	CCV	07/31/24 15:51	lwona	ОК
23	CCB2	CCB2	ССВ	07/31/24 15:52	Iwona	ОК

P3426-GENCHEM **26 of 46**





Prep Standard - Chemical Standard Summary

Order ID: P3426

Test: Hexavalent Chromium

Prepbatch ID:

Sequence ID/Qc Batch ID: LB131811,

Standard ID:

WP107791,WP108658,WP108659,WP108907,WP108927,WP108928,WP108929,WP108930,WP108931,WP108932,WP108933,WP108934,WP108935,WP108936,

Chemical ID:

E3769,M5211,W2606,W2651,W2652,W2979,W3112,

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Wet Chemistry STANDARD PREPARATION LOG

Recipe				Expiration	<u>Prepared</u>	0 . 10	D: # ID	Supervised By
<u>ID</u>	<u>NAME</u>	NO.	Prep Date	<u>Date</u>	<u>By</u>	<u>ScaleID</u>	<u>PipetteID</u>	Iwona Zarych
126	5N sulfuric acid	WP107791	05/07/2024	10/24/2024	Niha Farheen	None	None	
					Shaik			05/07/2024
					Shaik			05/07/

FROM	140.00000ml of M5211 + 860.00000ml of W2606 = Final Quantity: 1.000 L
------	---

Recipe ID	<u>NAME</u>	<u>NO.</u>	Prep Date	Expiration Date	Prepared By	<u>ScaleID</u>	<u>PipetteID</u>	Supervised By Iwona Zarych
1993	HEXAVALENTCHROMIUM STOCK	WP108658	07/09/2024	01/09/2025	Rubina Mughal	WETCHEM_S	None	
	STD 1, 50PPM					CALE_5 (WC		07/09/2024
	SC-5)							

0.14140 gram of W2651 + 1000.00000 ml of W3112 = Final Quantity: 1000.000 ml**FROM**

P3426-GENCHEM 28 of 46

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Wet Chemistry STANDARD PREPARATION LOG

Recipe ID	NAME_	NO.	Prep Date	Expiration Date	Prepared By	<u>ScaleID</u>	<u>PipetteID</u>	Supervised By Iwona Zarych
1994	HEXAVALENTCHROMIUM STOCK STD 2. 50PPM	WP108659	07/09/2024	01/09/2025	Rubina Mughal	WETCHEM_S CALE 5 (WC		07/09/2024
	SC-5)							

FROM 0.14140gram of W2652 + 1000.00000ml of W3112 = Final Quantity: 1000.000 ml

Recipe ID	NAME_	NO.	Prep Date	Expiration Date	Prepared By	<u>ScaleID</u>	<u>PipetteID</u>	Supervised By Mohan Bera
114	hexavalent chromium color	WP108907	07/30/2024	08/06/2024	Iwona Zarych	WETCHEM_S	None	
	reagent					CALE_5 (WC		08/02/2024
	SC-5)							

FROM 0.25000gram of W2979 + 50.00000ml of E3769 = Final Quantity: 50.000 ml

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Wet Chemistry STANDARD PREPARATION LOG

Recipe ID	NAME_	NO.	Prep Date	Expiration Date	Prepared By	<u>ScaleID</u>	<u>PipetteID</u>	Supervised By Mohan Bera
1103	HEX CHROME INTERMEDIATE STD SOURCE 1 (5PPM)	WP108927	07/31/2024	08/01/2024	lwona Zarych	None	WETCHEM_P PETTE_3	l 08/02/2024
FDOM	0.00000ml of W2112 + 1.00000ml of	\\/D100650	- Final Ouan	etitu: 10 000 m			(WC)	_

FROM 9.00000ml of W3112 + 1.00000ml of WP108658 = Final Quantity: 10.000	ml
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Recipe ID	NAME	<u>NO.</u>	Prep Date	Expiration Date	Prepared By	<u>ScaleID</u>	<u>PipetteID</u>	Supervised By Mohan Bera
110	calibration std. hexchrome 0 ppm	<u>WP108928</u>	07/31/2024	08/01/2024	lwona Zarych	None	None	08/02/2024
								08/02

FROM 100.0000ml of W3112 = Final Quantity: 100.000 ml

P3426-GENCHEM **30 of 46**



Wet Chemistry STANDARD PREPARATION LOG

Recipe ID	NAME	<u>NO.</u>	Prep Date	Expiration Date	Prepared By	<u>ScaleID</u>	<u>PipetteID</u>	Supervised By Mohan Bera
109	calibration std. hexchrome 0.01	<u>WP108929</u>	07/31/2024	08/01/2024	lwona Zarych	None	WETCHEM_P PETTE 3	I 08/02/2024
FROM	00 90000ml of W2112 ± 0 20000ml of	f \\/D10002	7	ntitu: 100 000	ml		(WC)	

<u>FROM</u>	99.80000ml of $\sqrt{3112} + 0.20000ml$ of $\sqrt{27} = 10000ml$ of $\sqrt{27} = 10000ml$	JUU MI

	Recipe ID	NAME	<u>NO.</u>	Prep Date	Expiration Date	Prepared By	<u>ScaleID</u>	<u>PipetteID</u>	Supervised By Mohan Bera
	3800	Calibration Std Hexachrome	WP108930	07/31/2024	08/01/2024	Iwona Zarych	None	WETCHEM_P	I
		0.025 ppm						PETTE_3	08/02/2024
ſ								(WC)	

FROM 99.50000ml of W3112 + 0.50000ml of WP108927 = Final Quantity: 100.000 ml

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Wet Chemistry STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	<u>ScaleID</u>	<u>PipetteID</u>	Supervised By Mohan Bera
108	Calibration Std. hexchrome 0.05	WP108931	07/31/2024	08/01/2024	Iwona Zarych	None	WETCHEM_P	I
	ppm						PETTE_3	08/02/2024

FROM	99.00000ml of W3112 + 1.00000ml of WP108927 = Final Quantity: 100.000 ml
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Recipe ID	NAME	<u>NO.</u>	Prep Date	Expiration Date	Prepared By	<u>ScaleID</u>	<u>PipetteID</u>	Supervised By Mohan Bera	
107	Calibration Std. hexchrome 0.1	WP108932	07/31/2024	08/01/2024	lwona Zarych	None	WETCHEM_P		
	Phin						(WC)	00/02/2024	ł

FROM 99.80000ml of W3112 + 0.20000ml of WP108658 = Final Quantity: 100.000 ml

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Wet Chemistry STANDARD PREPARATION LOG

Recipe ID	<u>NAME</u>	<u>NO.</u>	Prep Date	Expiration Date	Prepared By	<u>ScaleID</u>	<u>PipetteID</u>	Supervised By Mohan Bera
3808	Calibration and CCV std HexChrome 0.5PPM	WP108933	07/31/2024	08/01/2024	lwona Zarych	None	WETCHEM_P PETTE_3	I 08/02/2024
FDOM	00 00000ml of W2112 ± 1 00000ml o	f \\\D10065	P = Final Oua	entity: 100 000	ml		(WC)	

FROM	99.00000ml of W3112 + 1.00000ml of WP108658 = Final Quantity: 100.000 ml	
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Recipe ID	<u>NAME</u>	NO.	Prep Date	Expiration Date	<u>Prepared</u> <u>By</u>	<u>ScaleID</u>	<u>PipetteID</u>	Supervised By Mohan Bera	
3804		WP108934	07/31/2024	08/01/2024	Iwona Zarych	None	WETCHEM_P		
	Std						PETTE_3 (WC)	08/02/2024	l

FROM 99.00000ml of W3112 + 1.00000ml of WP108659 = Final Quantity: 100.000 ml

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Wet Chemistry STANDARD PREPARATION LOG

1986 HEX LOD STD, 0.005PPM WP108935 07/31/2024 08/01/2024 Iwona Zarych None WETCHEM_PI PETTE_3 08/02/2024	Recipe ID	<u>NAME</u>	NO.	Prep Date	Expiration Date	Prepared By	<u>ScaleID</u>	<u>PipetteID</u>	Supervised By Mohan Bera
	1986	HEX LOD STD, 0.005PPM	<u>WP108935</u>	07/31/2024	08/01/2024	Iwona Zarych	None	_	

FROM 99.90000ml of W3112 + 0.10000ml of WP108927 = Final Quantity: 100.000 ml

Recipe ID	<u>NAME</u>	NO.	Prep Date	Expiration Date	Prepared By	<u>ScaleID</u>	<u>PipettelD</u>	Supervised By Mohan Bera
3731	Hex LOQ Std, 0.01PPM	WP108936	07/31/2024	08/01/2024	Iwona Zarych	None	WETCHEM_P	I
							PETTE_3	08/02/2024
	00 00000 L-f W0440 + 0 00000 L-	£ \\/\D40000	7 Fire 1 Over		1		(WC)	

FROM 99.80000ml of W3112 + 0.20000ml of WP108927 = Final Quantity: 100.000 ml

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CHEMICAL RECEIPT LOG BOOK

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Seidler Chemical	BA-9254-03 / Acetone, Ultra Resi (cs/4x4L)	23H1462005	01/12/2025	07/12/2024 / Rajesh	07/02/2024 / Rajesh	E3769
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)	22D0862014	01/20/2025	08/22/2022 / mohan	04/26/2022 / mohan	M5211
Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Seidler Chemical	DIW / DI Water	Daily Lab-Certified	10/24/2024	10/24/2019 / apatel	10/24/2019 / apatel	W2606
Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
PCI Scientific Supply, Inc.	AA13450-36 / Potassium Dichromate, 500g(NEW)	T15F019	01/24/2030	01/24/2020 / apatel	01/24/2020 / apatel	W2651
Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date /	Chemtech Lot #
PCI Scientific Supply, Inc.	P188-500 / Potassium Dichromate, 500g(new-2nd lot)	194664	01/24/2030	01/24/2020 / apatel	01/24/2020 / apatel	W2652
Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
PCI Scientific Supply, Inc.	31390 / 1,5-Diphenylcarbazide	MKCR6636	12/09/2027	12/09/2022 / Iwona	12/09/2022 / Iwona	W2979

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CHEMICAL RECEIPT LOG BOOK

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

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Certificate of Analysis

Product No.: 13450

Product: Potassium dichromate, ACS, 99.0% min

Lot No.: T15F019

Test	Limits	Results
Appearance Identification Purity	Orange-red crystals To Pass 99.0 % min	Orange-red crystals Passes 99.67 %
Insoluble matter	0.005 % max	0.004 %
Loss on drying	0.05 % max	0.03 %
Chloride	0.001 % max	< 0.001 %
Sulfate	0.005 % max	< 0.005 %
Iron	0.001 % max	< 0.001 %
Calcium	0.003 % max	0.0012 %
Sodium	0.02 % max	0.0047 %

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

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Certificate of Analysis Page 1 of 1



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	P188	Quality Test / Release Date	08/12/2019
Lot Number	194664		
Description	POTASSIUM DICHROMATE, A.C.S.		
Country of Origin	United States	Suggested Retest Date	Aug/2024
Chemical Origin	Inorganic-non animal		
BSE/TSE Comment	No animal products are used as starting in processing aids, or any other material that	•	
Chemical Comment			

N/A			
Result Name	Units	Specifications	Test Value
APPEARANCE		REPORT	Fine, orange-red crystals
ASSAY	%	>= 99	99.2
CALCIUM	%	<= 0.003	<0.003
CHLORIDE	%	<= 0.001	<0.001
LOSS ON DRYING @ 105 C	%	<= 0.05	<0.05
SULFATE (SO4)	%	<= 0.005	<0.005
INSOLUBLE MATTER	%	<= 0.005	0.003
IRON (Fe)	%	<= 0.001	<0.001
SODIUM (Na)	%	<= 0.02	<0.02
IDENTIFICATION	PASS/FAIL	= PASS TEST	PASS TEST

Derisa 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.

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^{*}Based on suggested storage condition.

Acetone

BAKER RESI-ANALYZED® Reagent
For Organic Residue Analysis





Material No.: 9254-03

Batch No.: 23H1462005

Manufactured Date: 2023-07-26 Expiration Date: 2026-07-25

Revision No.: 0

Certificate of Analysis

Test	Specification	Result
Assay ((CH ₃) ₂ CO) (by GC, corrected for water)	≥ 99.4 %	99.7 %
Color (APHA)	≤ 10	5
Residue after Evaporation	≤ 1.0 ppm	0.3 ppm
Substances Reducing Permanganate	Passes Test	Passes Test
Titrable Acid (µeq/g)	≤ 0.3	0.1
Titrable Base (µeq/g)	≤ 0.6	< 0.1
Water (H ₂ O)	≤ 0.5 %	0.3 %
FID-Sensitive Impurities (as 2-Octanol) Single Impurity Peak (ng/mL)	≤ 5	< 1
ECD Sensitive Impurities (as Heptachlor EpoxIde) Single Peak (pg/mL)	≤ 10	1

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

Country of Origin: USA

Packaging Site: Phillipsburg Mfg Ctr & DC

Reed. by RP on 7/2124

E 3769

Ken Koehnlein

Sr. Manager, Quality Assurance

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P3426-GENCHEM

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





Material No.: 9673-33 Batch No.: 22D0862014

Manufactured Date: 2022-02-23 Retest Date: 2027-02-22

Revision No.: 0

Certificate of Analysis

Appearance Passes Test Passes Test $ACS - Color (APHA)$ ≤ 10 5 $\leq 3 \text{ ppm}$ $\leq 1 \text{ ppm}$	Test	Specification	Result
ACS - Color (APHA)	ACS - Assay (H2SO4)	95.0 - 98.0 %	96.5 %
ACS - Residue after Ignition	Appearance	Passes Test	Passes Test
ACS - Substances Reducing Permanganate (as SO2) ACS - Substances Reducing Permanganate (as SO2) \$ 1 ppm	ACS – Color (APHA)	≤ 10	5
Ammonium (NH4) \$ 1 ppm	ACS - Residue after Ignition	≤ 3 ppm	< 1 ppm
Chloride (Cl)	ACS - Substances Reducing Permanganate (as SO2)	≤ 2 ppm	< 2 ppm
Nitrate (NO₃)	Ammonium (NH ₄)	≤ 1 ppm	< 1 ppm
Phosphate (PO₄) ≤ 0.5 ppm < 0.1 ppm	Chloride (Cl)	≤ 0.1 ppm	< 0.1 ppm
Trace Impurities - Aluminum (AI) Arsenic and Antimony (as As) Frace Impurities - Boron (B) Frace Impurities - Cadmium (Cd) Frace Impurities - Cadmium (Cd) Frace Impurities - Chromium (Cr) Frace Impurities - Chromium (Cr) Frace Impurities - Cobalt (Co) Frace Impurities - Cobalt (Co) Frace Impurities - Copper (Cu) Frace Impurities - Copper (Cu) Frace Impurities - Gold (Au) Frace Impurities - Gold (Au) Frace Impurities - Fron (Fe) Frace Impurities - Iron (Fe) Frace Impurities - Lead (Pb) Frace Impurities - Magnesium (Mg) Frace Impurities - Magnesium (Mg) Frace Impurities - Manganese (Mn) Frace Impurities - Mercury (Hg) Frace Impurities - Nickel (Ni) Frace Impurities - Potassium (K) Frace Impurities - Selenium (Se) Frace Impurities - Selenium (Se) Frace Impurities - Silicon (Si)	Nitrate (NO ₃)	$\leq 0.2 ppm$	< 0.1 ppm
Arsenic and Antimony (as As) Frace Impurities – Boron (B) Frace Impurities – Cadmium (Cd) Frace Impurities – Chromium (Cr) Frace Impurities – Chromium (Cr) Frace Impurities – Chromium (Cr) Frace Impurities – Cobalt (Co) Frace Impurities – Copper (Cu) Frace Impurities – Copper (Cu) Frace Impurities – Copper (Cu) Frace Impurities – Gold (Au) Frace Impurities – Gold (Au) Frace Impurities – Frace Impurities – Iron (Fe) Frace Impurities – Iron (Fe) Frace Impurities – Lead (Pb) Frace Impurities – Magnesium (Mg) Frace Impurities – Magnesium (Mg) Frace Impurities – Manganese (Mn) Frace Impurities – Marcury (Hg) Frace Impurities – Nickel (Ni) Frace Impurities – Nickel (Ni) Frace Impurities – Potassium (K) Frace Impurities – Potassium (K) Frace Impurities – Selenium (Se) Frace Impurities – Selenium (Se) Frace Impurities – Silicon (Si)	Phosphate (PO ₄)	≤ 0.5 ppm	< 0.1 ppm
Trace Impurities – Boron (B) ≤ 10.0 ppb < 5.0 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 < 0.2 ppb Heavy Metals (as Pb) ≤ 500.0 ppb < 100.0 ppb Trace Impurities – Iron (Fe) ≤ 50.0 ppb < 2.0 ppb Trace Impurities – Lead (Pb) ≤ 0.5 ppb < 0.5 ppb Trace Impurities – Magnesium (Mg) ≤ 7.0 ppb Trace Impurities – Magnese (Mn) ≤ 1.0 ppb < 0.4 ppb Trace Impurities – Mercury (Hg) ≤ 0.5 ppb < 0.1 ppb Trace Impurities – Mercury (Hg) ≤ 0.5 ppb < 0.1 ppb Trace Impurities – Nickel (Ni) ≤ 2.0 ppb < 0.3 ppb Trace Impurities – Nickel (Ni) ≤ 2.0 ppb < 0.3 ppb Trace Impurities – Potassium (K) ≤ 500.0 ppb	Trace Impurities - Aluminum (Al)	≤ 30.0 ppb	1.7 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 < 0.2 ppb Heavy Metals (as Pb) < 500.0 ppb < 100.0 ppb Trace Impurities - Iron (Fe) ≤ 50.0 ppb < 2.0 ppb Trace Impurities - Lead (Pb) ≤ 0.5 ppb < 0.5 ppb Trace Impurities - Magnesium (Mg) ≤ 7.0 ppb 0.6 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 - 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 12.1 ppb Trace Impurities - Selenium (Se) ≤ 100.0 ppb 4.4 ppb	Arsenic and Antimony (as As)	≤ 4.0 ppb	< 2.0 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 < 0.2 ppb Heavy Metals (as Pb) ≤ 500.0 ppb < 100.0 ppb Trace Impurities - Iron (Fe) ≤ 50.0 ppb < 2.0 ppb Trace Impurities - Lead (Pb) ≤ 0.5 ppb < 0.5 ppb Trace Impurities - Magnesium (Mg) ≤ 7.0 ppb < 0.6 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 - Nickel (Nii) ≤ 2.0 ppb < 0.3 ppb Trace Impurities - Potassium (K) ≤ 500.0 ppb	Trace Impurities – Boron (B)	≤ 10.0 ppb	< 5.0 ppb
Trace Impurities - Cobalt (Co) \[\begin{array}{c} \leq 0.5 \text{ ppb} \\ \leq 0.1 \text{ ppb} \\ \end{array} \] Trace Impurities - Copper (Cu) \[\begin{array}{c} \leq 1.0 \text{ ppb} \\ \leq 0.1 \text{ ppb} \\ \end{array} \] Trace Impurities - Gold (Au) \[\begin{array}{c} \leq 10.0 \text{ ppb} \\ \end{array} \] Trace Impurities - Iron (Fe) \[\begin{array}{c} \leq 50.0 \text{ ppb} \\ \end{array} \] Trace Impurities - Lead (Pb) Trace Impurities - Magnesium (Mg) Trace Impurities - Manganese (Mn) Trace Impurities - Mercury (Hg) Trace Impurities - Nickel (Ni) Trace Impurities - Nickel (Ni) Trace Impurities - Potassium (K) Trace Impurities - Selenium (Se) Trace Impurities - Selenium (Se) Trace Impurities - Silicon (Si) \end{array} \tag{0.5 \text{ ppb}} \tag{0.1 \text{ ppb}} \tag{0.2 \text{ ppb}} \tag{0.2 \text{ ppb}} \tag{0.3 \text{ ppb}} \tag{0.4 \text{ ppb}} \tag{0.4 \text{ ppb}} \tag{0.5 \text{ ppb}} \tag{0.6 \text{ ppb}} \tag{0.7 \text{ ppb}} 0.7	Trace Impurities - Cadmium (Cd)	≤ 2.0 ppb	< 0.3 ppb
Trace Impurities - Copper (Cu)	Trace Impurities - Chromium (Cr)	≤ 6.0 ppb	< 0.4 ppb
Trace Impurities - Gold (Au)	Trace Impurities - Cobalt (Co)	≤ 0.5 ppb	< 0.3 ppb
Heavy Metals (as Pb) ≤ 500.0 ppb < 100.0 ppb Trace Impurities – Iron (Fe) ≤ 50.0 ppb	Trace Impurities - Copper (Cu)	≤ 1.0 ppb	< 0.1 ppb
Trace Impurities – Iron (Fe) ≤ 50.0 ppb 2.0 ppb Trace Impurities – Lead (Pb) ≤ 0.5 ppb	Trace Impurities - Gold (Au)	≤ 10.0 ppb	< 0.2 ppb
Trace Impurities - Lead (Pb) ≤ 0.5 ppb < 0.5 ppb	Heavy Metals (as Pb)	≤ 500.0 ppb	< 100.0 ppb
Trace Impurities - Magnesium (Mg) Frace Impurities - Manganese (Mn) Frace Impurities - Manganese (Mn) Frace Impurities - Mercury (Hg) Frace Impurities - Nickel (Ni) Frace Impurities - Potassium (K) Frace Impurities - Selenium (Se) Frace Impurities - Selenium (Se) Frace Impurities - Silicon (Si) Frace Impurities - Silicon (Si)	Trace Impurities – Iron (Fe)	≤ 50.0 ppb	2.0 ppb
Trace Impurities - Manganese (Mn) ≤ 1.0 ppb < 0.4 ppb	Trace Impurities – Lead (Pb)	≤ 0.5 ppb	< 0.5 ppb
Trace Impurities – Mercury (Hg) $\leq 0.5 \text{ ppb}$ $< 0.1 \text{ ppb}$ Trace Impurities – Nickel (Ni) $\leq 2.0 \text{ ppb}$ $< 0.3 \text{ ppb}$ Trace Impurities – Potassium (K) $\leq 500.0 \text{ ppb}$ $< 2.0 \text{ ppb}$ Trace Impurities – Selenium (Se) $\leq 50.0 \text{ ppb}$ 12.1 ppb Trace Impurities – Silicon (Si) $\leq 100.0 \text{ ppb}$ 4.4 ppb	Trace Impurities – Magnesium (Mg)	≤ 7.0 ppb	0.6 ppb
Trace Impurities – Nickel (Ni) $\leq 2.0 \text{ ppb}$ $< 0.3 \text{ ppb}$ Trace Impurities – Potassium (K) $\leq 500.0 \text{ ppb}$ $< 2.0 \text{ ppb}$ Trace Impurities – Selenium (Se) $\leq 50.0 \text{ ppb}$ 12.1 ppb Trace Impurities – Silicon (Si) $\leq 100.0 \text{ ppb}$ 4.4 ppb	Trace Impurities – Manganese (Mn)	≤ 1.0 ppb	< 0.4 ppb
Trace Impurities – Potassium (K) $\leq 500.0 \text{ ppb}$ $< 2.0 \text{ ppb}$ Trace Impurities – Selenium (Se) $\leq 50.0 \text{ ppb}$ 12.1 ppb Trace Impurities – Silicon (Si) $\leq 100.0 \text{ ppb}$ 4.4 ppb	Trace Impurities – Mercury (Hg)	≤ 0.5 ppb	< 0.1 ppb
Trace Impurities – Selenium (Se) ≤ 50.0 ppb 12.1 ppb Trace Impurities – Silicon (Si) ≤ 100.0 ppb 4.4 ppb	Trace Impurities - Nickel (Ni)	≤ 2.0 ppb	< 0.3 ppb
Trace Impurities – Silicon (Si) ≤ 100.0 ppb 4.4 ppb	Trace Impurities – Potassium (K)	≤ 500.0 ppb	< 2.0 ppb
	Trace Impurities - Selenium (Se)	≤ 50.0 ppb	12.1 ppb
Trace Impurities – Silver (Ag) $\leq 1.0 \text{ ppb}$ $< 0.3 \text{ ppb}$	Trace Impurities – Silicon (Si)	≤ 100.0 ppb	4.4 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.: 22D0862014

Specification	Result
≤ 500.0 ppb	6.2 ppb
≤ 5.0 ppb	< 0.2 ppb
≤ 5.0 ppb	< 0.8 ppb
≤ 5.0 ppb	0.6 ppb
	≤ 500.0 ppb ≤ 5.0 ppb ≤ 5.0 ppb

For Laboratory, Research, or Manufacturing Use

Country of Origin: USA

Packaging Site: Phillipsburg Mfg Ctr & DC

Jamie Ethier
Vice President Global Quality

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W 2979

3050 Spruce Street, Saint Louis, MO 63103, USA

Website: www.sigmaaldrich.com

Email USA:

techserv@sial.com

Outside USA: eurtechserv@sial.com

lec: 12/08/22

exp. 12/08/27

Certificate of Analysis

1,5-Diphenylcarbazide - ACS reagent

Product Number:

259225

Batch Number:

MKCR6636

Brand:

SIAL

CAS Number:

140-22-7

MDL Number:

MFCD00003013

Formula:

Formula Weight:

Quality Release Date:

C13H14N4O 242.28 g/mol 02 JUN 2022

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

Larry Coers, Director Quality Control Milwaukee, WI US

Sigma-Aldrich warrants, that at the time of the quality release or subsequent retest date this product conformed to the information contained in this publication. The current Specification sheet may be available at Sigma-Aldrich.com. 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.



SHIPPING DOCUMENTS

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

CHEMTECH PROJECT NO.

QUOTE NO.

COC Number 20/11303

350 0	OLICAT BEODMATION									10.00		121	-	01			T 202	
	CLIENT INFORMATION REPORT TO BE SENT TO:	CLIENT PROJECT INFORMATION								CLIENT BILLING INFORMATION								
COMPANY: J	Tarobs	PROJECT NAME: STC PTC BILL						BILLT	ILLTO: Mary Murphy PO#:									
ADDRESS: 4	112 Mt Kemble Ave Suik 4/00	PROJEC	T NC	D.: D	D3779972 LOCATION: Prince for Tunction					ADDRESS:								
CITY More	IShun STATE: NJ ZIP: 07460	PROJEC	JECT MANAGER: Mary Morphy					CITY			STATE:			E:	ZIP:			
ATTENTION:	John Ynfante	e-mail:	ii: Mary. Murphy@ Jacobs.com					ATTENTION: PHONE:										
PHONE:	FAX:	PHONE:											ANA	ALYSIS				
	DATA TURNAROUND INFORMATION			ATA	DELIVE	RABLE IN	FORM.	ATION		5 3			1	981	,			
TO BE APPRO	Shandard TAT DAYS ATA PACKAGE): DAYS* VED BY CHEMTECH RDCOPY TURNAROUND TIME IS 10 BUSINESS DAYS	□ Level ¼ Level + Ra	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 ANYS ASP BHARW Data) + Raw Data) Other EDD FORMAT SAMPLE SAMPLE								/8	8 9 COMMENTS						
СНЕМТЕСН	PROJECT	SAMPLE	SAM TY			APLE ECTION	TLES	A/E	E	8/5		DETIVA	IIVEO		-		← Specif	y Preservatives
SAMPLE ID	SAMPLE IDENTIFICATION	MATRIX	COMP	GRAB	DATE	TIME	# OF BOTTLES	生	2	7 E	E 4	5	6	7	8	9	A-HCI B-HN03 C-H2SO4	D-NaOH E-ICE F-OTHER
1.	927-KI-WS-07312	ws		×	7/31/21	1050	6	2	2	1	Ī			,		9	- 24	
2.	927- KI-WS-073124-FD	WS		200	7/31/24	1055	5	2	1	j							360 - 410	ahad table hiv
3.					11.													
4.																		
5.																		
6.																		
7.																		
8.																		
9.																		
10.																		
	SAMPLE CUSTODY MUST BE DOCK	JMENTED	BEL	.OW	EACH TII	VE SAMP	LES C	HANGE	POSS	SESSIO	N INCL	UDING	COUR	IER DE	LIVER	Υ		
RELINQUISHED BY 1. RELINQUISHED BY 2.	Y SAMPLER: DATE/TIME: RECEIVED BY:	Di		1-2	Commer Sc	ons of bottles tts: FAU Co M	preser	vertive	12	N03	7 9	1 .	s) of				Co - SVX	ÿ
RELINOVISHED BY	7-31-2y 3.				Page	of_		CLIENT CHEMT		Hand D		□ Of	ther	oling		-		Complete
P3426-GENO		211 00 011 501	D. D.ETI	IDNITO	0.1515	VELLO			2001								44 of 46	



Laboratory Certification

Certified By	License No.
CAS EPA CLP Contract	68HERH20D0011
Connecticut	PH-0830
DOD ELAP (L-A-B)	L2219
Maine	2022022
Maryland	296
New Hampshire	255423
New Jersey	20012
New York	11376
Pennsylvania	68-00548
Soil Permit	P330-21-00137
Texas	T104704488

QA Control Code: A2070148 **P3426-GENCHEM** 45 of 46



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

Fax: 908 789 8922

LOGIN REPORT/SAMPLE TRANSFER

Order ID: P3426

JACO05

Order Date: 7/31/2024 2:33:00 PM

Project Mgr:

Client Name: JACOBS Engineering Grou

Project Name: Former Schlumberger Site I

Report Type: Level 4

Client Contact: Mary I. Murphy

Invoice Contact: Mary I. Murphy

Receive DateTime: 7/31/2024 2:30:00 PM

EDD Type: CH2MHILL

Invoice Name: JACOBS Engineering Grou

Purchase Order:

Hard Copy Date:

15/01 Ng# 4

Date Signoff:

LAB ID	CLIENT ID	MATRIX SAMPLE DATE	SAMPLE TIME	TEST	TEST GROUP	METHOD		FAX DATE	DUE DATES
P3426-01	927-K1-WS- 072124 073124	Water 07/31/2024	10:50						
	0,6121			VOCMS Group6		8260-Low	5 Bus. Days		
P3426-02	927-K1-WS- 072124 -FD 073124	Water 07/31/2024	10:55				10Bus		
	0/3124			VOCMS Group6		8260-Low	5 Bus. Days		
							10		

Relinguished By: Date / Time: Received By:

Date / Time:

Storage Area: VOA Refridgerator Room

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