

SDG COVER PAGE

Lab Name: Alliance Technical Group, LLC Contract: 68HERH20D0011
 Lab Code: ACE Case No.: 51810 MA No.: _____ SDG No.: MC0VD4
 SOW No. : SFAM01.1

EPA Sample No.	Lab Sample Id	Analysis Method			
		ICP-AES	ICP-MS	Mercury	Cyanide
<u>MC0VD4</u>	<u>P4650-01</u>	<u> </u>	<u> </u>	<u>X</u>	<u> </u>
<u>MC0VD7</u>	<u>P4650-02</u>	<u> </u>	<u> </u>	<u>X</u>	<u> </u>
<u>MC0VD8</u>	<u>P4650-03</u>	<u> </u>	<u> </u>	<u>X</u>	<u> </u>
<u>MC0VD9</u>	<u>P4650-04</u>	<u> </u>	<u> </u>	<u>X</u>	<u> </u>
<u>MC0VE3</u>	<u>P4650-05</u>	<u> </u>	<u> </u>	<u>X</u>	<u> </u>
<u>MC0VE4</u>	<u>P4650-06</u>	<u> </u>	<u> </u>	<u>X</u>	<u> </u>
<u>MC0VE5</u>	<u>P4650-07</u>	<u> </u>	<u> </u>	<u>X</u>	<u> </u>
<u>MC0VE6</u>	<u>P4650-08</u>	<u> </u>	<u> </u>	<u>X</u>	<u> </u>
<u>MC0VF2</u>	<u>P4650-09</u>	<u> </u>	<u> </u>	<u>X</u>	<u> </u>
<u>MC0VF3</u>	<u>P4650-10</u>	<u> </u>	<u> </u>	<u>X</u>	<u> </u>
<u>MC0VF4</u>	<u>P4650-11</u>	<u> </u>	<u> </u>	<u>X</u>	<u> </u>
<u>MC0VF7</u>	<u>P4650-12</u>	<u> </u>	<u> </u>	<u>X</u>	<u> </u>
<u>MC0VF8</u>	<u>P4650-13</u>	<u> </u>	<u> </u>	<u>X</u>	<u> </u>
<u>MC0VF9</u>	<u>P4650-14</u>	<u> </u>	<u> </u>	<u>X</u>	<u> </u>
<u>MC0VG0</u>	<u>P4650-15</u>	<u> </u>	<u> </u>	<u>X</u>	<u> </u>
<u>MC0VG1</u>	<u>P4650-16</u>	<u> </u>	<u> </u>	<u>X</u>	<u> </u>
<u>MC0VG2</u>	<u>P4650-17</u>	<u> </u>	<u> </u>	<u>X</u>	<u> </u>
<u>MC0VG3</u>	<u>P4650-18</u>	<u> </u>	<u> </u>	<u>X</u>	<u> </u>
<u>MC0VG4</u>	<u>P4650-19</u>	<u> </u>	<u> </u>	<u>X</u>	<u> </u>
<u>MC0VH6</u>	<u>P4650-20</u>	<u> </u>	<u> </u>	<u>X</u>	<u> </u>
<u>MC0VH6D</u>	<u>P4650-21</u>	<u> </u>	<u> </u>	<u>X</u>	<u> </u>
<u>MC0VH6S</u>	<u>P4650-22</u>	<u> </u>	<u> </u>	<u>X</u>	<u> </u>

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed in the SDG Narrative. All edits and manual integrations have been peer-reviewed. Release of the data contained in this hardcopy Complete SDG File and in the electronic data submitted has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signature.

Signature: _____ Name: _____
 Date: _____ Title: _____

USEPA CLP COC (LAB COPY)

Date Shipped: 10/30/2024

Carrier Name: *Fedex*

Airbill No: 779632145128

68HERH20D0011

SDG # MC0VD4

CHAIN OF CUSTODY RECORD

Case #: 51810

Cooler #:

No: 3-102924-161112-0004

Lab: Alliance Technical Group LLC

Lab Contact: Mohammad Ahmed

Lab Phone: 908-789-8900

Sample Identifier	CLP Sample No.	Matrix/Sampler	Coll. Method	Analysis/Turnaround (Days)	Tag/Preservative/Bottles	Location	Collection Date/Time	For Lab Use Only
EA0005-EY 5	MC0VD4	Soil/ START	Composite	Hg(21)	1006 (<6C) (1)	0005	10/29/2024 12:35	-
EA0003-EY 6	MC0VD7	Soil/ START	Composite	Hg(21)	1020 (<6C) (1)	0003	10/29/2024 11:00	-
EA0007-EY 7	MC0VD8	Soil/ START	Composite	Hg(21)	1024 (<6C) (1)	0007	10/29/2024 14:36	-
EA0007-EY-DUP*	MC0VD9	Soil/ START	Composite	Hg(21)	1028 (<6C) (1)	0007	10/29/2024 14:36	-
EA0001-EY 8	MC0VE3	Soil/ START	Composite	Hg(21)	1040 (<6C) (1)	0001	10/29/2024 09:15	-
EA0002-EY 9	MC0VE4	Soil/ START	Composite	Hg(21)	1044 (<6C) (1)	0002	10/29/2024 10:15	-
EA0004-EY 10	MC0VE5	Soil/ START	Composite	Hg(21)	1048 (<6C) (1)	0004	10/29/2024 11:30	-
EA0009-EY 11	MC0VE6	Soil/ START	Composite	Hg(21)	1052 (<6C) (1)	0009	10/29/2024 13:45	-
EA0008-EY 12	MC0VF2	Soil/ START	Composite	Hg(21)	1066 (<6C) (1)	0008	10/29/2024 15:52	-
EA0010-EY 13	MC0VF3	Soil/ START	Composite	Hg(21)	1070 (<6C) (1)	0010	10/29/2024 15:00	-
EA0012-EY 14	MC0VF4	Soil/ START	Composite	Hg(21)	1074 (<6C) (1)	0012	10/29/2024 15:55	-
EA0011-EY 15	MC0VF7	Soil/ START	Composite	Hg(21)	1082 (<6C) (1)	0011	10/30/2024 09:09	-
EA0013-EY 16	MC0VF8	Soil/ START	Composite	Hg(21)	1086 (<6C) (1)	0013	10/30/2024 10:37	-
EA0017-EY 17	MC0VF9	Soil/ START	Composite	Hg(21)	1090 (<6C) (1)	0017	10/30/2024 13:18	-
EA0006-EY 18	MC0VG0	Soil/ START	Composite	Hg(21)	1094 (<6C) (1)	0006	10/30/2024 08:55	-
EA0014-EY 19	MC0VG1	Soil/ START	Composite	Hg(21)	1098 (<6C) (1)	0014	10/30/2024 09:40	-
EA0016-EY 20	MC0VG2	Soil/ START	Composite	Hg(21)	1102 (<6C) (1)	0016	10/30/2024 11:00	-
EA0018-EY 21	MC0VG3	Soil/ START	Composite	Hg(21)	1106 (<6C) (1)	0018	10/30/2024 11:57	-
EA0015-EY 22	MC0VG4	Soil/ START	Composite	Hg(21)	1110 (<6C) (1)	0015	10/30/2024 11:46	-

Special Instructions: Alliance Mercury + Metals 1

Shipment for Case Complete? N
 Samples Transferred From Chain of Custody #

Analysis Key: Hg=CLP Mercury

Items/Reason	Relinquished by (Signature and Organization)	Date/Time	Received by (Signature and Organization)	Date/Time	Sample Condition Upon Receipt
	<i>Wynette L. L. - IT</i>	10/31/24 16:30	<i>OR</i>	10-31-24 945	Intact #1 24°C
					Custody Seal Intact
					Tag Blt pres

No: 3-102924-161112-0004

101112-0004

Medical Director: Richard L. Loo, MD

THE UNIVERSITY OF MICHIGAN

Cooler #:

[illegible]

Sample(s) to be used for Lab QC: EA0019-EV Tag 1141, EA0019-EV Tag 1152, EA0019-GB Tag 1145, EA0019-GB Tag 1146 - Special Instructions: Alliance Mercury + Metals 1

Shipment for Case Complete? N
Samples Transferred From Chain of Custody #

Analysis Key: Hg=CLP Mercury, ICP-AES=CLP ICP-AES Metals + Hg

Items/Reason	Relinquished by (Signature and Organization)	Date/Time	Received by (Signature and Organization)	Date/Time	Sample Condition Upon Receipt
		10/30/24 10:00		9/45 10-31-24	SE Coat 1 2.4.11
					Costly Seed Area
					Top Black Area

FORM DC-1
SAMPLE LOG-IN SHEET

Lab Name : Alliance Technical Group, LLC		Page <u>1</u> of <u>1</u>
Received By (Print Name) <u>Gregory Reese</u>		Log-in Date 10/31/2024
Received By (Signature) <u>[Signature]</u>		
Case Number 51810	SDG No. MC0VD4	MA No. N/A

Remarks:	
1. Custody Seal (s)	Present, Intact
2. Custody Seal Nos.	<u>n/a</u>
3. Traffic Reports/Chain Of Custody Records	Present
4. Airbill	Present
5. Airbill No. and Shipping Container ID No.	<u>779632145128</u> <u>1</u>
6. Shipping Container Temperature Indicator Bottle	Present
7. Shipping Container Temperature	<u>2.4</u> Degree C
8. Sample Condition	Intact
9. Sample Tags Sample Tag Numbers	Absent Listed on Traffic Report
10. Does information on Traffic Reports/Chain of Custody Records and Sample Tags agree ?	Yes
11. Date Received at Lab	<u>10/31/2024</u>
12. Time Received	<u>09:45</u>

	EPA Sample #	Aqueous/ Water Sample pH	Corresponding		Remarks: Condition of Sample Shipment, etc.
			Sample Tag #	Assigned Lab #	
1	MC0VD4	N/A	1006	P4650-01	Intact
2	MC0VD7	N/A	1020	P4650-02	Intact
3	MC0VD8	N/A	1024	P4650-03	Intact
4	MC0VD9	N/A	1028	P4650-04	Intact
5	MC0VE3	N/A	1040	P4650-05	Intact
6	MC0VE4	N/A	1044	P4650-06	Intact
7	MC0VE5	N/A	1048	P4650-07	Intact
8	MC0VE6	N/A	1052	P4650-08	Intact
9	MC0VF2	N/A	1066	P4650-09	Intact
10	MC0VF3	N/A	1070	P4650-10	Intact
11	MC0VF4	N/A	1074	P4650-11	Intact
12	MC0VF7	N/A	1082	P4650-12	Intact
13	MC0VF8	N/A	1086	P4650-13	Intact
14	MC0VF9	N/A	1090	P4650-14	Intact
15	MC0VG0	N/A	1094	P4650-15	Intact
16	MC0VG1	N/A	1098	P4650-16	Intact
17	MC0VG2	N/A	1102	P4650-17	Intact
18	MC0VG3	N/A	1106	P4650-18	Intact
19	MC0VG4	N/A	1110	P4650-19	Intact
20	MC0VH6	N/A	1141,52	P4650-20	Intact
21	MC0VH6D	N/A	1141,52	P4650-21	Intact
22	MC0VH6S	N/A	1141,52	P4650-22	Intact
23	N/A	N/A	N/A	N/A	N/A

* Contact SMO and attach record of resolution

Reviewed By <u>[Signature]</u>	Logbook No. N/A
Date <u>10/31/24</u>	Logbook Page No. N/A

FORM DC-2
COMPLETE SDG FILE (CSF) INVENTORY SHEET

LAB NAME	Alliance Technical Group, LLC		
LAB CODE	ACE		
CONTRACT NO.	68HERH20D0011		
CASE NO.	51810	SDG NO.	MC0VD4
MA NO.		SOW NO.	SFAM01.1

All documents delivered in the Complete SDG File must be original documents where possible.
(Reference - Exhibit B Section 2.4)

	PAGE NOS:		CHECK	
	FROM	TO	LAB	REGION
1. SDG Cover Page	1	1	✓	
2. Traffic Report/Chain of Custody Record(s)	2	3	✓	
3. Sample Log-In Sheet (DC-1)	4	4	✓	
4. CSF Inventory Sheet (DC-2)	5	7	✓	
5. SDG Narrative	8	9	✓	
6. Communication Logs	NA	NA	✓	
7. Percent Solids Log	10	12	✓	

Analysis Forms and Data (ICP-AES)

8. Sample Analysis Data Forms (1A-OR, 1B-OR, and 1-IN) for each sample or sample analysis, laboratory QC as applicable	NA	NA	✓	
9. Instrument raw data by instrument in analysis order	NA	NA	✓	

Other Data

10. Standard and Reagent Preparation Logs	NA	NA	✓	
11. Original Preparation and Cleanup forms or copies of Preparation and Cleanup Logbooks	NA	NA	✓	
12. Original Analysis or Instrument Run forms or copies of Analysis or Instrument Logbooks	NA	NA	✓	
13. Performance Evaluation (PE)/Proficiency Testing (PT) Sample Instructions	NA	NA	✓	
14. Extraction Logs for TCLP and SPLP	NA	NA	✓	
15. Raw GPC Data	NA	NA	✓	
16. Raw Florisil Data	NA	NA	✓	

Analysis Forms and Data (ICP-MS)

17. Sample Analysis Data Forms (1A-OR, 1B-OR, and 1-IN) for each sample or sample analysis, laboratory QC as applicable	NA	NA	✓	
18. Instrument raw data by instrument in analysis order	NA	NA	✓	

Other Data

19. Standard and Reagent Preparation Logs	NA	NA	✓	
20. Original Preparation and Cleanup forms or copies of Preparation and Cleanup Logbooks	NA	NA	✓	
21. Original Analysis or Instrument Run forms or copies of Analysis or Instrument Logbooks	NA	NA	✓	
22. Performance Evaluation (PE)/Proficiency Testing (PT) Sample Instructions	NA	NA	✓	

	PAGE NOS:		CHECK	
	FROM	TO	LAB	REGION
23 . Extraction Logs for TCLP and SPLP	NA	NA	✓	
24 . Raw GPC Data	NA	NA	✓	
25 . Raw Florisil Data	NA	NA	✓	

Analysis Forms and Data (Mercury)

26 . Sample Analysis Data Forms (1A-OR, 1B-OR, and 1-IN) for each sample or sample analysis, laboratory QC as applicable	13	32	✓	
27 . Instrument raw data by instrument in analysis order	33	35	✓	

Other Data

28 . Standard and Reagent Preparation Logs	36	61	✓	
29 . Original Preparation and Cleanup forms or copies of Preparation and Cleanup Logbooks	62	63	✓	
30 . Original Analysis or Instrument Run forms or copies of Analysis or Instrument Logbooks	64	67	✓	
31 . Performance Evaluation (PE)/Proficiency Testing (PT) Sample Instructions	NA	NA	✓	
32 . Extraction Logs for TCLP and SPLP	NA	NA	✓	
33 . Raw GPC Data	NA	NA	✓	
34 . Raw Florisil Data	NA	NA	✓	

Analysis Forms and Data (Cyanide)

35 . Sample Analysis Data Forms (1A-OR, 1B-OR, and 1-IN) for each sample or sample analysis, laboratory QC as applicable	NA	NA	✓	
36 . Instrument raw data by instrument in analysis order	NA	NA	✓	

Other Data

37 . Standard and Reagent Preparation Logs	NA	NA	✓	
38 . Original Preparation and Cleanup forms or copies of Preparation and Cleanup Logbooks	NA	NA	✓	
39 . Original Analysis or Instrument Run forms or copies of Analysis or Instrument Logbooks	NA	NA	✓	
40 . Performance Evaluation (PE)/Proficiency Testing (PT) Sample Instructions	NA	NA	✓	
41 . Extraction Logs for TCLP and SPLP	NA	NA	✓	
42 . Raw GPC Data	NA	NA	✓	
43 . Raw Florisil Data	NA	NA	✓	

Additional

44. EPA Shipping/Receiving Documents

Airbill (No. of Shipments 1)

Sample Tags

Sample Log-In Sheet (Lab)

45. Misc. Shipping/Receiving Records (list all individual records)

46. Internal Lab Sample Transfer Records and Tracking Sheets
(describe or list)47. Other Records and related Communication Logs
(describe or list)

48. Comments:

Completed by:
(CLP Lab)Audited by:
(EPA)

Nimisha Pandya, Document Control Officer



**284 Sheffield Street
Mountainside, NJ 07092**

SDG NARRATIVE

USEPA

SDG # MC0VD4

CASE # 51810

CONTRACT # 68HERH20D0011

SOW# SFAM01.1

LAB NAME: Alliance Technical Group, LLC

LAB CODE: ACE

LAB ORDER ID # P4650

A. Number of Samples and Date of Receipt

20 Soil samples were delivered to the laboratory intact on 10/31/2024

B. Parameters

Test requested for Mercury.

C. Cooler Temp

Indicator Bottle: Presence/Absence

Cooler: 2.4°C

D. Detail Documentation (related to Sample Handling Shipping, Analytical Problem, Temp of Cooler etc):

Issue 1 : A "P" or "M" prefix was listed at the beginning of a CLP sample ID.

E. Corrective Action taken for above:

Resolution 1 : To maintain COC integrity, ASB requests no changes to the Sample IDs. The laboratory will note the issue in the SDG Narrative and proceed with the analysis of the samples.

F. Analytical Techniques:

All analyses were based on CLP Methodology by method SFAM01.1.

G. Calculation:

Calculation for Hg Soil Sample:

Conversion of Results from µg /L or ppb to mg/kg :



**284 Sheffield Street
Mountainside, NJ 07092**

$$\text{Concentration (mg/kg)} = C \times \frac{V_f}{W \times S} \times DF / 1000$$

Where,

C = Instrument response in $\mu\text{g/L}$ from the calibration curve.

Vf = Final prepared (absorbing solution) volume (mL)

W = Initial aliquot amount (g) (Fraction of Sample amount taken in prep)

S = % Solids / 100 (Fraction of Percent Solids)

DF = Dilution Factor

Example Calculation For Sample MC0VD4 :

If C = 0.67 ppb

Vf = 100 mL

W = 0.52g

S = 0.843(84.3/100)

DF = 1

$$\text{Concentration (mg/kg)} = 0.67 \times \frac{100}{0.52 \times 0.843} \times 1 / 1000$$

$$= 0.1528424 \text{ mg/kg}$$

$$= 0.15 \text{ mg/kg (Reported Result with Signification)}$$

H. QA/ QC

Calibrations met requirements. Blank analyses did not indicate any presence of contamination. Spike sample did meet requirements. Duplicate sample did meet requirements.

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 Director or his designee, as verified by the following signature.

Signature_____

Name: Nimisha Pandya

Date _____

Title: Document Control Officer

PERCENT SOLID

Supervisor: sohil
Analyst: jignesh
Date: 11/8/2024

OVENTEMP IN Celsius(°C): 107
Time IN: 13:50
In Date: 11/07/2024
Weight Check 1.0g: 1.00
Weight Check 10g: 10.00
OvenID: M OVEN#1

OVENTEMP OUT Celsius(°C): 103
Time OUT: 07:40
Out Date: 11/08/2024
Weight Check 1.0g: 1.00
Weight Check 10g: 10.00
BalanceID: M SC-4
Thermometer ID: % SOLID- OVEN

QC:LB133333

Lab ID	Client SampleID	Dish #	Dish Wt(g) (A)	Sample Wt(g)	Dish + Sample Wt(g) (B)	Dish+Dry Sample Wt(g) (C)	% Solid	Comments
P4650-01	MC0VD4	1	1.15	8.53	9.68	8.34	84.3	
P4650-02	MC0VD7	2	1.12	8.70	9.82	8.35	83.1	
P4650-03	MC0VD8	3	1.15	8.81	9.96	8.81	86.9	
P4650-04	MC0VD9	4	1.19	8.62	9.81	8.64	86.4	
P4650-05	MC0VE3	5	1.19	8.49	9.68	7.76	77.4	
P4650-06	MC0VE4	6	1.18	8.72	9.9	8.55	84.5	
P4650-07	MC0VE5	7	1.15	8.79	9.94	8.91	88.3	
P4650-08	MC0VE6	8	1.19	8.49	9.68	7.64	76.0	
P4650-09	MC0VF2	9	1.14	8.79	9.93	8.18	80.1	
P4650-10	MC0VF3	10	1.12	8.63	9.75	7.91	78.7	
P4650-11	MC0VF4	11	1.12	8.56	9.68	8.48	86.0	
P4650-12	MC0VF7	12	1.15	8.82	9.97	8.95	88.4	
P4650-13	MC0VF8	13	1.17	8.79	9.96	7.63	73.5	
P4650-14	MC0VF9	14	1.19	8.64	9.83	8.41	83.6	
P4650-15	MC0VG0	15	1.17	8.54	9.71	8.57	86.7	
P4650-16	MC0VG1	16	1.16	8.50	9.66	8.68	88.5	
P4650-17	MC0VG2	17	1.17	8.40	9.57	8.39	86.0	
P4650-18	MC0VG3	18	1.18	8.79	9.97	8.64	84.9	
P4650-19	MC0VG4	19	1.15	8.83	9.98	8.86	87.3	
P4650-20	MC0VH6	20	1.14	8.55	9.69	8.14	81.9	
P4650-21	MC0VH6D	21	1.14	8.55	9.69	8.14	81.9	
P4650-22	MC0VH6S	22	1.14	8.55	9.69	8.14	81.9	

$$\% \text{ Solid} = \frac{(C-A) * 100}{(B-A)}$$

WORKLIST(Hardcopy Internal Chain)

JB 133333

WorkList Name : %1-p4650

WorkList ID : 185214

Department : Wet-Chemistry

Date : 11-07-2024 12:49:01

Sample	Customer Sample	Matrix	Test	Preservative	Customer	Raw Sample Storage Location	Collect Date	Method
P4650-01	MC0VD4	Solid	Percent Solids	Cool 4 deg C	USEP01	Q21	10/29/2024	Chemtech -SO
P4650-02	MC0VD7	Solid	Percent Solids	Cool 4 deg C	USEP01	Q21	10/29/2024	Chemtech -SO
P4650-03	MC0VD8	Solid	Percent Solids	Cool 4 deg C	USEP01	Q21	10/29/2024	Chemtech -SO
P4650-04	MC0VD9	Solid	Percent Solids	Cool 4 deg C	USEP01	Q21	10/29/2024	Chemtech -SO
P4650-05	MC0VE3	Solid	Percent Solids	Cool 4 deg C	USEP01	Q21	10/29/2024	Chemtech -SO
P4650-06	MC0VE4	Solid	Percent Solids	Cool 4 deg C	USEP01	Q21	10/29/2024	Chemtech -SO
P4650-07	MC0VE5	Solid	Percent Solids	Cool 4 deg C	USEP01	Q21	10/29/2024	Chemtech -SO
P4650-08	MC0VE6	Solid	Percent Solids	Cool 4 deg C	USEP01	Q21	10/29/2024	Chemtech -SO
P4650-09	MC0VF2	Solid	Percent Solids	Cool 4 deg C	USEP01	Q21	10/29/2024	Chemtech -SO
P4650-10	MC0VF3	Solid	Percent Solids	Cool 4 deg C	USEP01	Q21	10/29/2024	Chemtech -SO
P4650-11	MC0VF4	Solid	Percent Solids	Cool 4 deg C	USEP01	Q21	10/29/2024	Chemtech -SO
P4650-12	MC0VF7	Solid	Percent Solids	Cool 4 deg C	USEP01	Q21	10/29/2024	Chemtech -SO
P4650-13	MC0VF8	Solid	Percent Solids	Cool 4 deg C	USEP01	Q21	10/30/2024	Chemtech -SO
P4650-14	MC0VF9	Solid	Percent Solids	Cool 4 deg C	USEP01	Q21	10/30/2024	Chemtech -SO
P4650-15	MC0VG0	Solid	Percent Solids	Cool 4 deg C	USEP01	Q21	10/30/2024	Chemtech -SO
P4650-16	MC0VG1	Solid	Percent Solids	Cool 4 deg C	USEP01	Q21	10/30/2024	Chemtech -SO
P4650-17	MC0VG2	Solid	Percent Solids	Cool 4 deg C	USEP01	Q21	10/30/2024	Chemtech -SO
P4650-18	MC0VG3	Solid	Percent Solids	Cool 4 deg C	USEP01	Q21	10/30/2024	Chemtech -SO
P4650-19	MC0VG4	Solid	Percent Solids	Cool 4 deg C	USEP01	Q21	10/30/2024	Chemtech -SO
P4650-20	MC0VH6	Solid	Percent Solids	Cool 4 deg C	USEP01	Q21	10/30/2024	Chemtech -SO
P4650-21	MC0VH6D	Solid	Percent Solids	Cool 4 deg C	USEP01	Q21	10/30/2024	Chemtech -SO

Date/Time 11/07/24 12:55
 Raw Sample Received by: JB 133333
 Raw Sample Relinquished by: JB 133333

Date/Time 11/07/24 12:55
 Raw Sample Received by: JB 133333
 Raw Sample Relinquished by: JB 133333

VB 133333

WORKLIST(Hardcopy Internal Chain)

WorkList Name : %1-p4650 WorkList ID : 185214 Department : Wet-Chemistry Date : 11-07-2024 12:49:01

Sample	Customer Sample	Matrix	Test	Preservative	Customer	Raw Sample Storage Location	Collect Date	Method
P4650-22	MC0VH6S	Solid	Percent Solids	Cool 4 deg C	USEP01	Q21	10/30/2024	Chemtech -SO

12

Date/Time 11/07/24 12:55
Raw Sample Received by: SO 6001
Raw Sample Relinquished by: RM 50M

Date/Time 11/07/24 13:55
Raw Sample Received by: RM 50M
Raw Sample Relinquished by: SO 6001

FORM 1 - IN
INORGANIC ANALYSIS DATA SHEET

MC0VD4

Lab Name: Alliance Technical Group, LLC Contract: 68HERH20D0011
Lab Code: ACE Case No.: 51810 MA No. : SDG No.: MC0VD4
Matrix: SOIL Lab Sample ID: P4650-01
% Solids: 84.3 Date Received: 10/31/2024

Analytical Method: HgConcentration Units ($\mu\text{g/L}$, mg/L , mg/kg dry weight, μg , or $\mu\text{g/cm}^2$): mg/kg

CAS No.	Analyte	Concentration	Q	Date Analyzed	Time Analyzed
7439-97-6	Mercury	0.15		11/19/2024	1804

NOTE: Hardness (total) is reported in mg/L Comments:

FORM 1 - IN
INORGANIC ANALYSIS DATA SHEET

MC0VD7

Lab Name: Alliance Technical Group, LLC Contract: 68HERH20D0011
Lab Code: ACE Case No.: 51810 MA No. : SDG No.: MC0VD4
Matrix: SOIL Lab Sample ID: P4650-02
% Solids: 83.1 Date Received: 10/31/2024

Analytical Method: HgConcentration Units ($\mu\text{g/L}$, mg/L , mg/kg dry weight, μg , or $\mu\text{g/cm}^2$): mg/kg

CAS No.	Analyte	Concentration	Q	Date Analyzed	Time Analyzed
7439-97-6	Mercury	0.25		11/19/2024	1807

NOTE: Hardness (total) is reported in mg/L Comments:

FORM 1 - IN
INORGANIC ANALYSIS DATA SHEET

MC0VD8

Lab Name: Alliance Technical Group, LLC Contract: 68HERH20D0011
Lab Code: ACE Case No.: 51810 MA No. : SDG No.: MC0VD4
Matrix: SOIL Lab Sample ID: P4650-03
% Solids: 86.9 Date Received: 10/31/2024

Analytical Method: HgConcentration Units ($\mu\text{g/L}$, mg/L , mg/kg dry weight, μg , or $\mu\text{g/cm}^2$): mg/kg

CAS No.	Analyte	Concentration	Q	Date Analyzed	Time Analyzed
7439-97-6	Mercury	0.11		11/19/2024	1809

NOTE: Hardness (total) is reported in mg/L Comments:

FORM 1 - IN
INORGANIC ANALYSIS DATA SHEET

MC0VD9

Lab Name: Alliance Technical Group, LLC Contract: 68HERH20D0011
Lab Code: ACE Case No.: 51810 MA No. : SDG No.: MC0VD4
Matrix: SOIL Lab Sample ID: P4650-04
% Solids: 86.4 Date Received: 10/31/2024
Analytical Method: Hg
Concentration Units ($\mu\text{g/L}$, mg/L , mg/kg dry weight, μg , or $\mu\text{g/cm}^2$): mg/kg

CAS No.	Analyte	Concentration	Q	Date Analyzed	Time Analyzed
7439-97-6	Mercury	0.12		11/19/2024	1811

NOTE: Hardness (total) is reported in mg/L

Comments:

FORM 1 - IN
INORGANIC ANALYSIS DATA SHEET

MC0VE3

Lab Name: Alliance Technical Group, LLC Contract: 68HERH20D0011
Lab Code: ACE Case No.: 51810 MA No. : SDG No.: MC0VD4
Matrix: SOIL Lab Sample ID: P4650-05
% Solids: 77.4 Date Received: 10/31/2024

Analytical Method: HgConcentration Units ($\mu\text{g/L}$, mg/L , mg/kg dry weight, μg , or $\mu\text{g/cm}^2$): mg/kg

CAS No.	Analyte	Concentration	Q	Date Analyzed	Time Analyzed
7439-97-6	Mercury	0.43		11/19/2024	1813

NOTE: Hardness (total) is reported in mg/L Comments:

FORM 1 - IN
INORGANIC ANALYSIS DATA SHEET

MC0VE4

Lab Name: Alliance Technical Group, LLC Contract: 68HERH20D0011
Lab Code: ACE Case No.: 51810 MA No. : SDG No.: MC0VD4
Matrix: SOIL Lab Sample ID: P4650-06
% Solids: 84.5 Date Received: 10/31/2024
Analytical Method: Hg
Concentration Units ($\mu\text{g/L}$, mg/L , mg/kg dry weight, μg , or $\mu\text{g/cm}^2$): mg/kg

CAS No.	Analyte	Concentration	Q	Date Analyzed	Time Analyzed
7439-97-6	Mercury	0.30		11/19/2024	1816

NOTE: Hardness (total) is reported in mg/L

Comments:

FORM 1 - IN
INORGANIC ANALYSIS DATA SHEET

MC0VE5

Lab Name: Alliance Technical Group, LLC Contract: 68HERH20D0011
Lab Code: ACE Case No.: 51810 MA No. : SDG No.: MC0VD4
Matrix: SOIL Lab Sample ID: P4650-07
% Solids: 88.3 Date Received: 10/31/2024
Analytical Method: Hg
Concentration Units ($\mu\text{g/L}$, mg/L , mg/kg dry weight, μg , or $\mu\text{g/cm}^2$): mg/kg

CAS No.	Analyte	Concentration	Q	Date Analyzed	Time Analyzed
7439-97-6	Mercury	0.33		11/19/2024	1818

NOTE: Hardness (total) is reported in mg/L

Comments:

FORM 1 - IN
INORGANIC ANALYSIS DATA SHEET

MC0VE6

Lab Name: Alliance Technical Group, LLC Contract: 68HERH20D0011
Lab Code: ACE Case No.: 51810 MA No. : SDG No.: MC0VD4
Matrix: SOIL Lab Sample ID: P4650-08
% Solids: 76 Date Received: 10/31/2024

Analytical Method: HgConcentration Units ($\mu\text{g/L}$, mg/L , mg/kg dry weight, μg , or $\mu\text{g/cm}^2$): mg/kg

CAS No.	Analyte	Concentration	Q	Date Analyzed	Time Analyzed
7439-97-6	Mercury	0.20		11/19/2024	1820

NOTE: Hardness (total) is reported in mg/L Comments:

FORM 1 - IN
INORGANIC ANALYSIS DATA SHEET

MC0VF2

Lab Name: Alliance Technical Group, LLC Contract: 68HERH20D0011
Lab Code: ACE Case No.: 51810 MA No. : SDG No.: MC0VD4
Matrix: SOIL Lab Sample ID: P4650-09
% Solids: 80.1 Date Received: 10/31/2024

Analytical Method: HgConcentration Units ($\mu\text{g/L}$, mg/L , mg/kg dry weight, μg , or $\mu\text{g/cm}^2$): mg/kg

CAS No.	Analyte	Concentration	Q	Date Analyzed	Time Analyzed
7439-97-6	Mercury	0.10	J	11/19/2024	1823

NOTE: Hardness (total) is reported in mg/L Comments:

FORM 1 - IN
INORGANIC ANALYSIS DATA SHEET

MC0VF3

Lab Name: Alliance Technical Group, LLC Contract: 68HERH20D0011
Lab Code: ACE Case No.: 51810 MA No. : SDG No.: MC0VD4
Matrix: SOIL Lab Sample ID: P4650-10
% Solids: 78.7 Date Received: 10/31/2024

Analytical Method: HgConcentration Units ($\mu\text{g/L}$, mg/L , mg/kg dry weight, μg , or $\mu\text{g/cm}^2$): mg/kg

CAS No.	Analyte	Concentration	Q	Date Analyzed	Time Analyzed
7439-97-6	Mercury	0.21		11/19/2024	1825

NOTE: Hardness (total) is reported in mg/L Comments:

FORM 1 - IN
INORGANIC ANALYSIS DATA SHEET

MC0VF4

Lab Name: Alliance Technical Group, LLC Contract: 68HERH20D0011
Lab Code: ACE Case No.: 51810 MA No. : SDG No.: MC0VD4
Matrix: SOIL Lab Sample ID: P4650-11
% Solids: 86 Date Received: 10/31/2024

Analytical Method: HgConcentration Units ($\mu\text{g/L}$, mg/L , mg/kg dry weight, μg , or $\mu\text{g/cm}^2$): mg/kg

CAS No.	Analyte	Concentration	Q	Date Analyzed	Time Analyzed
7439-97-6	Mercury	0.26		11/19/2024	1827

NOTE: Hardness (total) is reported in mg/L Comments:

FORM 1 - IN
INORGANIC ANALYSIS DATA SHEET

MC0VF7

Lab Name: Alliance Technical Group, LLC Contract: 68HERH20D0011
Lab Code: ACE Case No.: 51810 MA No. : SDG No.: MC0VD4
Matrix: SOIL Lab Sample ID: P4650-12
% Solids: 88.4 Date Received: 10/31/2024

Analytical Method: HgConcentration Units ($\mu\text{g/L}$, mg/L , mg/kg dry weight, μg , or $\mu\text{g/cm}^2$): mg/kg

CAS No.	Analyte	Concentration	Q	Date Analyzed	Time Analyzed
7439-97-6	Mercury	0.056	J	11/19/2024	1829

NOTE: Hardness (total) is reported in mg/L Comments:

FORM 1 - IN
INORGANIC ANALYSIS DATA SHEET

MC0VF8

Lab Name: Alliance Technical Group, LLC Contract: 68HERH20D0011
Lab Code: ACE Case No.: 51810 MA No. : SDG No.: MC0VD4
Matrix: SOIL Lab Sample ID: P4650-13
% Solids: 73.5 Date Received: 10/31/2024
Analytical Method: Hg
Concentration Units ($\mu\text{g/L}$, mg/L , mg/kg dry weight, μg , or $\mu\text{g/cm}^2$): mg/kg

CAS No.	Analyte	Concentration	Q	Date Analyzed	Time Analyzed
7439-97-6	Mercury	0.21		11/19/2024	1832

NOTE: Hardness (total) is reported in mg/L

Comments:

FORM 1 - IN
INORGANIC ANALYSIS DATA SHEET

MC0VF9

Lab Name: Alliance Technical Group, LLC Contract: 68HERH20D0011
Lab Code: ACE Case No.: 51810 MA No. : SDG No.: MC0VD4
Matrix: SOIL Lab Sample ID: P4650-14
% Solids: 83.6 Date Received: 10/31/2024

Analytical Method: HgConcentration Units ($\mu\text{g/L}$, mg/L , mg/kg dry weight, μg , or $\mu\text{g/cm}^2$): mg/kg

CAS No.	Analyte	Concentration	Q	Date Analyzed	Time Analyzed
7439-97-6	Mercury	0.20		11/19/2024	1834

NOTE: Hardness (total) is reported in mg/L Comments:

FORM 1 - IN
INORGANIC ANALYSIS DATA SHEET

MC0VG0

Lab Name: Alliance Technical Group, LLC Contract: 68HERH20D0011
Lab Code: ACE Case No.: 51810 MA No. : SDG No.: MC0VD4
Matrix: SOIL Lab Sample ID: P4650-15
% Solids: 86.7 Date Received: 10/31/2024
Analytical Method: Hg
Concentration Units ($\mu\text{g/L}$, mg/L , mg/kg dry weight, μg , or $\mu\text{g/cm}^2$): mg/kg

CAS No.	Analyte	Concentration	Q	Date Analyzed	Time Analyzed
7439-97-6	Mercury	0.11		11/19/2024	1836

NOTE: Hardness (total) is reported in mg/L

Comments:

FORM 1 - IN
INORGANIC ANALYSIS DATA SHEET

MC0VG1

Lab Name: Alliance Technical Group, LLC Contract: 68HERH20D0011
Lab Code: ACE Case No.: 51810 MA No. : SDG No.: MC0VD4
Matrix: SOIL Lab Sample ID: P4650-16
% Solids: 88.5 Date Received: 10/31/2024
Analytical Method: Hg
Concentration Units ($\mu\text{g/L}$, mg/L , mg/kg dry weight, μg , or $\mu\text{g/cm}^2$): mg/kg

CAS No.	Analyte	Concentration	Q	Date Analyzed	Time Analyzed
7439-97-6	Mercury	0.13		11/19/2024	1838

NOTE: Hardness (total) is reported in mg/L

Comments:

FORM 1 - IN
INORGANIC ANALYSIS DATA SHEET

MC0VG2

Lab Name: Alliance Technical Group, LLC Contract: 68HERH20D0011
Lab Code: ACE Case No.: 51810 MA No. : SDG No.: MC0VD4
Matrix: SOIL Lab Sample ID: P4650-17
% Solids: 86 Date Received: 10/31/2024

Analytical Method: HgConcentration Units ($\mu\text{g/L}$, mg/L , mg/kg dry weight, μg , or $\mu\text{g/cm}^2$): mg/kg

CAS No.	Analyte	Concentration	Q	Date Analyzed	Time Analyzed
7439-97-6	Mercury	0.14		11/19/2024	1841

NOTE: Hardness (total) is reported in mg/L Comments:

FORM 1 - IN
INORGANIC ANALYSIS DATA SHEET

MC0VG3

Lab Name: Alliance Technical Group, LLC Contract: 68HERH20D0011
Lab Code: ACE Case No.: 51810 MA No. : SDG No.: MC0VD4
Matrix: SOIL Lab Sample ID: P4650-18
% Solids: 84.9 Date Received: 10/31/2024

Analytical Method: HgConcentration Units ($\mu\text{g/L}$, mg/L , mg/kg dry weight, μg , or $\mu\text{g/cm}^2$): mg/kg

CAS No.	Analyte	Concentration	Q	Date Analyzed	Time Analyzed
7439-97-6	Mercury	0.15		11/19/2024	1843

NOTE: Hardness (total) is reported in mg/L Comments:

FORM 1 - IN
INORGANIC ANALYSIS DATA SHEET

MC0VG4

Lab Name: Alliance Technical Group, LLC Contract: 68HERH20D0011
Lab Code: ACE Case No.: 51810 MA No. : SDG No.: MC0VD4
Matrix: SOIL Lab Sample ID: P4650-19
% Solids: 87.3 Date Received: 10/31/2024

Analytical Method: HgConcentration Units ($\mu\text{g/L}$, mg/L , mg/kg dry weight, μg , or $\mu\text{g/cm}^2$): mg/kg

CAS No.	Analyte	Concentration	Q	Date Analyzed	Time Analyzed
7439-97-6	Mercury	0.36		11/19/2024	1845

NOTE: Hardness (total) is reported in mg/L Comments:

FORM 1 - IN
INORGANIC ANALYSIS DATA SHEET

MC0VH6

Lab Name: Alliance Technical Group, LLC Contract: 68HERH20D0011
Lab Code: ACE Case No.: 51810 MA No. : SDG No.: MC0VD4
Matrix: SOIL Lab Sample ID: P4650-20
% Solids: 81.9 Date Received: 10/31/2024
Analytical Method: Hg
Concentration Units ($\mu\text{g/L}$, mg/L , mg/kg dry weight, μg , or $\mu\text{g/cm}^2$): mg/kg

CAS No.	Analyte	Concentration	Q	Date Analyzed	Time Analyzed
7439-97-6	Mercury	0.13		11/19/2024	1852

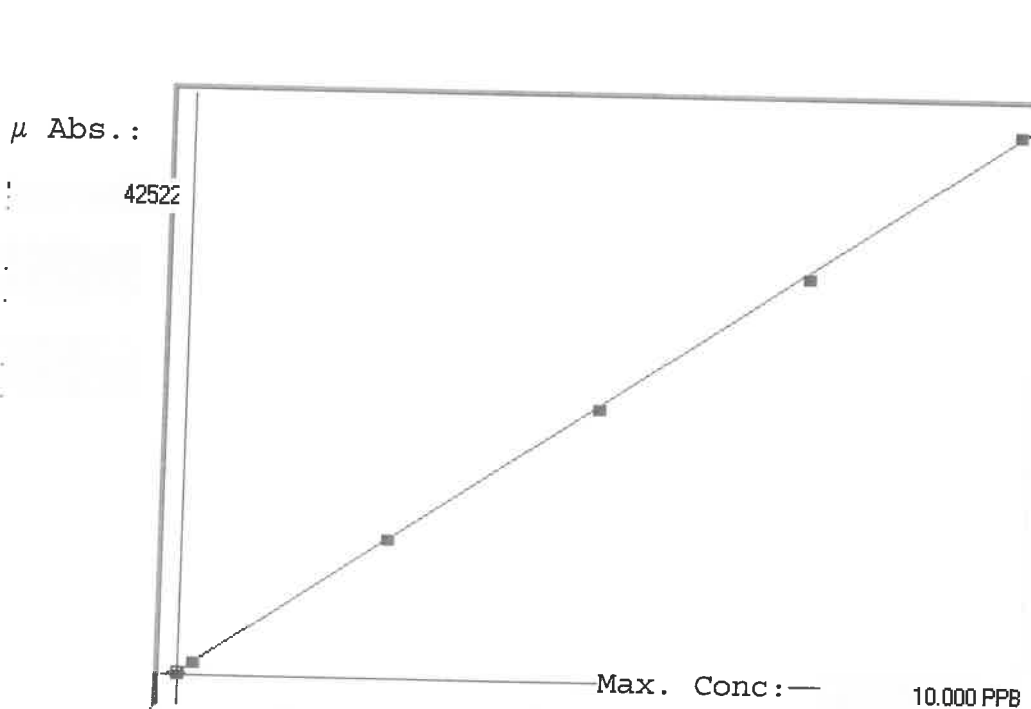
NOTE: Hardness (total) is reported in mg/L

Comments:

LB133521

SFAM01.1

INSTRUMENT ID: CV1



A= 0.0000e+000

B= 2.3766e-004 slope

C= -4.1308e-002 y-intercept

Rho= 0.9999221

Accept=Accepted

Std ID	Conc.	Calc.	Dev.	Mean	SD or %RSD	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	% D
0.00	0.000	-0.003	-0.003	163	0.000	163					
0.05	0.050					442					
0.20	0.200	0.213	0.013	1072	0.0 %	1072	0				
2.50	2.500	2.532	0.032	10828	0.0 %	10828					
5.00	5.000	4.974	-0.026	21102	0.0 %	21102					
7.50	7.500	7.418	-0.082	31388	0.0 %	31388					
10.0	10.000	10.065	0.065	42522	0.0 %	42522					

LB133521

INSTRUMENT ID : CV1

Sample ID	Extended ID	μ Abs.	Conc.	Std Conc	Method	Units	Date	Type
	0 S0	163	-		0 SFAM01.1	PPB	11/19/2024 17:34	Std
	0.2 S01	1072	-		0.2 SFAM01.1	PPB	11/19/2024 17:37	Std
	2.5 S02	10828	-		2.5 SFAM01.1	PPB	11/19/2024 17:41	Std
	5 S03	21102	-		5 SFAM01.1	PPB	11/19/2024 17:43	Std
	7.5 S04	31388	-		7.5 SFAM01.1	PPB	11/19/2024 17:45	Std
	10 S05	42522	-		10 SFAM01.1	PPB	11/19/2024 17:48	Std
ICV092	ICV092	16241	3.8186 -		SFAM01.1	PPB	11/19/2024 17:53	SMPL
ICB092	ICB092	30	-0.0342 -		SFAM01.1	PPB	11/19/2024 17:55	SMPL
CCV014	CCV014	21709	5.1181 -		SFAM01.1	PPB	11/19/2024 17:57	SMPL
CCB014	CCB014	-25	-0.0472 -		SFAM01.1	PPB	11/19/2024 18:00	SMPL
PB165119BL	PBS119	173	-0.0002 -		SFAM01.1	PPB	11/19/2024 18:02	SMPL
P4650-01	MC0VD4	2993	0.67 -		SFAM01.1	PPB	11/19/2024 18:04	SMPL
P4650-02	MC0VD7	5417	1.2461 -		SFAM01.1	PPB	11/19/2024 18:07	SMPL
P4650-03	MC0VD8	2271	0.4984 -		SFAM01.1	PPB	11/19/2024 18:09	SMPL
P4650-04	MC0VD9	2564	0.5681 -		SFAM01.1	PPB	11/19/2024 18:11	SMPL
P4650-05	MC0VE3	7722	1.7939 -		SFAM01.1	PPB	11/19/2024 18:13	SMPL
P4650-06	MC0VE4	5687	1.3103 -		SFAM01.1	PPB	11/19/2024 18:16	SMPL
P4650-07	MC0VE5	7092	1.6442 -		SFAM01.1	PPB	11/19/2024 18:18	SMPL
P4650-08	MC0VE6	3671	0.8312 -		SFAM01.1	PPB	11/19/2024 18:20	SMPL
P4650-09	MC0VF2	2056	0.4473 -		SFAM01.1	PPB	11/19/2024 18:23	SMPL
P4650-10	MC0VF3	3990	0.907 -		SFAM01.1	PPB	11/19/2024 18:25	SMPL
P4650-11	MC0VF4	4890	1.1209 -		SFAM01.1	PPB	11/19/2024 18:27	SMPL
P4650-12	MC0VF7	1407	0.2931 -		SFAM01.1	PPB	11/19/2024 18:29	SMPL
P4650-13	MC0VF8	3948	0.897 -		SFAM01.1	PPB	11/19/2024 18:32	SMPL
P4650-14	MC0VF9	3897	0.8849 -		SFAM01.1	PPB	11/19/2024 18:34	SMPL
P4650-15	MC0VG0	2201	0.4818 -		SFAM01.1	PPB	11/19/2024 18:36	SMPL
P4650-16	MC0VG1	2913	0.651 -		SFAM01.1	PPB	11/19/2024 18:38	SMPL
P4650-17	MC0VG2	2961	0.6624 -		SFAM01.1	PPB	11/19/2024 18:41	SMPL
P4650-18	MC0VG3	3415	0.7703 -		SFAM01.1	PPB	11/19/2024 18:43	SMPL
P4650-19	MC0VG4	7091	1.644 -		SFAM01.1	PPB	11/19/2024 18:45	SMPL
CCV015	CCV015	21773	5.1333 -		SFAM01.1	PPB	11/19/2024 18:47	SMPL
CCB015	CCB015	61	-0.0268 -		SFAM01.1	PPB	11/19/2024 18:50	SMPL
P4650-20	MC0VH6	2462	0.5438 -		SFAM01.1	PPB	11/19/2024 18:52	SMPL
P4650-21	MC0VH6D	2477	0.5474 -		SFAM01.1	PPB	11/19/2024 18:54	SMPL
P4650-22	MC0VH6S	15181	3.5667 -		SFAM01.1	PPB	11/19/2024 18:57	SMPL
PB165120BL	PBS120	63	-0.0263 -		SFAM01.1	PPB	11/19/2024 18:59	SMPL
P4655-01	MC0VD3	9318	2.1732 -		SFAM01.1	PPB	11/19/2024 19:01	SMPL
P4655-02	MC0VE1	2571	0.5697 -		SFAM01.1	PPB	11/19/2024 19:03	SMPL
P4655-03	MC0VE2	5288	1.2155 -		SFAM01.1	PPB	11/19/2024 19:06	SMPL
P4655-04	MC0VE7	2428	0.5357 -		SFAM01.1	PPB	11/19/2024 19:08	SMPL
P4655-05	MC0VE8	3423	0.7722 -		SFAM01.1	PPB	11/19/2024 19:10	SMPL
P4655-06	MC0VE9	1573	0.3325 -		SFAM01.1	PPB	11/19/2024 19:12	SMPL
P4655-07	MC0VF0	2125	0.4637 -		SFAM01.1	PPB	11/19/2024 19:15	SMPL
P4655-08	MC0VF1	2674	0.5942 -		SFAM01.1	PPB	11/19/2024 19:17	SMPL
P4655-09	MC0VF5	5542	1.2758 -		SFAM01.1	PPB	11/19/2024 19:19	SMPL
P4655-10	MC0VF6	3627	0.8207 -		SFAM01.1	PPB	11/19/2024 19:21	SMPL

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INSTRUMENT ID : CV1

P4655-11	MCOVG6	8553	1.9914 -	SFAM01.1	PPB	11/19/2024 19:24	SMPL
P4655-12	MCOVG7	2099	0.4575 -	SFAM01.1	PPB	11/19/2024 19:26	SMPL
P4655-13	MCOVG8	2019	0.4385 -	SFAM01.1	PPB	11/19/2024 19:28	SMPL
P4655-14	MCOVG9	1300	0.2677 -	SFAM01.1	PPB	11/19/2024 19:30	SMPL
P4655-15	MCOVH0	4585	1.0484 -	SFAM01.1	PPB	11/19/2024 19:33	SMPL
P4655-16	MCOVJ1	1861	0.401 -	SFAM01.1	PPB	11/19/2024 19:35	SMPL
CCV016	CCV016	22064	5.2025 -	SFAM01.1	PPB	11/19/2024 19:37	SMPL
CCB016	CCB016	49	-0.0297 -	SFAM01.1	PPB	11/19/2024 19:40	SMPL
P4655-17	MCOVH1	1455	0.3045 -	SFAM01.1	PPB	11/19/2024 19:42	SMPL
P4655-18	MCOVH2	2819	0.6287 -	SFAM01.1	PPB	11/19/2024 19:44	SMPL
P4655-19	MCOVH3	2374	0.5229 -	SFAM01.1	PPB	11/19/2024 19:46	SMPL
P4655-20	MCOVH7	3192	0.7173 -	SFAM01.1	PPB	11/19/2024 19:49	SMPL
P4655-21	MCOVH7D	2739	0.6097 -	SFAM01.1	PPB	11/19/2024 19:51	SMPL
P4655-22	MCOVH7S	13811	3.2411 -	SFAM01.1	PPB	11/19/2024 19:53	SMPL
CCV017	CCV017	21861	5.1543 -	SFAM01.1	PPB	11/19/2024 19:55	SMPL
CCB017	CCB017	32	-0.0337 -	SFAM01.1	PPB	11/19/2024 19:58	SMPL

Prep Standard - Chemical Standard Summary

Order ID : P4650

Test : Mercury

Prepbatch ID : PB165119,

Sequence ID/Qc Batch ID: LB133521,

Standard ID :

MP83208,MP83210,MP83280,MP83281,MP83282,MP83283,MP83284,MP83285,MP83286,MP83287,MP83288,MP83289,MP83290,MP83293,MP83310,

Chemical ID :

M4371,M4916,M5062,M5882,M5884,M5953,M6120,M6121,W3112,

Metals 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>
65	POTASSIUM PERMANGANATE SOLUTION 5 %	MP83208	11/11/2024	05/11/2025	Mohan Bera	METALS_SCALE_3 (M SC-3)	None	Sarabjit Jaswal
FROM 100.00000gram of M4916 + 2000.00000ml of W3112 = Final Quantity: 2000.000 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>
67	SODIUM CHLORIDE - HYDROXYL- CHLORIDE SOLUTION	MP83210	11/11/2024	05/11/2025	Mohan Bera	METALS_SCALE_3 (M SC-3)	None	Sarabjit Jaswal
FROM 2000.00000ml of W3112 + 240.00000gram of M4371 + 240.00000gram of M5884 = Final Quantity: 2000.000 ml								

Metals 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>
871	MERCURY INTERMEDIATE B 250PPB WORKING STD.	MP83280	11/18/2024	11/19/2024	Mohan Bera	None	METALS_PIP ETTE_5 (HG A)	Sarabjit Jaswal 11/18/2024
FROM 1.00000ml of M6120 + 2.50000ml of M5062 + 96.50000ml 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>
1340	Hg 0.00 PPB STD	MP83281	11/18/2024	11/19/2024	Mohan Bera	None	METALS_PIP ETTE_5 (HG A)	Sarabjit Jaswal 11/18/2024
FROM 2.50000ml of M6120 + 247.50000ml of W3112 = Final Quantity: 250.000 ml								

Metals 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>
1341	Hg 0.2 PPB STD	MP83282	11/18/2024	11/19/2024	Mohan Bera	None	METALS_PIPETTE_5 (HGA)	Sarabjit Jaswal
FROM 2.50000ml of M6120 + 247.30000ml of W3112 + 0.20000ml of MP83280 = Final Quantity: 250.000 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>
1342	Hg 2.5 PPB STD	MP83283	11/18/2024	11/19/2024	Mohan Bera	None	METALS_PIPETTE_5 (HGA)	Sarabjit Jaswal
FROM 2.50000ml of M6120 + 245.00000ml of W3112 + 2.50000ml of MP83280 = Final Quantity: 250.000 ml								

Metals 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>
1343	Hg 5.0 PPB STD	MP83284	11/18/2024	11/19/2024	Mohan Bera	None	METALS_PIPETTE_5 (HGA)	Sarabjit Jaswal 11/18/2024
FROM 2.50000ml of M6120 + 242.50000ml of W3112 + 5.00000ml of MP83280 = Final Quantity: 250.000 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>
1344	Hg 7.5 PPB STD	MP83285	11/18/2024	11/19/2024	Mohan Bera	None	METALS_PIPETTE_5 (HGA)	Sarabjit Jaswal 11/18/2024
FROM 2.50000ml of M6120 + 240.00000ml of W3112 + 7.50000ml of MP83280 = Final Quantity: 250.000 ml								

Metals 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>
1345	Hg 10.0 PPB STD	MP83286	11/18/2024	11/19/2024	Mohan Bera	None	METALS_PIPETTE_5 (HGA)	Sarabjit Jaswal 11/18/2024
FROM 2.50000ml of M6120 + 237.50000ml of W3112 + 10.00000ml of MP83280 = Final Quantity: 250.000 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>
1346	Hg ICV SOLUTION	MP83287	11/18/2024	11/19/2024	Mohan Bera	None	METALS_PIPETTE_5 (HGA)	Sarabjit Jaswal 11/18/2024
FROM 2.50000ml of M5953 + 2.50000ml of M6120 + 245.00000ml of W3112 = Final Quantity: 250.000 ml								

Metals 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>
1351	ICB (Hg 0.00 PPB SOLUTION)	MP83288	11/18/2024	11/19/2024	Mohan Bera	None	METALS_PIPETTE_5 (HGA)	Sarabjit Jaswal 11/18/2024
FROM 2.50000ml of M6120 + 247.50000ml of W3112 = Final Quantity: 250.000 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>
1358	CCV (Hg 5.0 PPB SOLUTION)	MP83289	11/18/2024	11/19/2024	Mohan Bera	None	METALS_PIPETTE_5 (HGA)	Sarabjit Jaswal 11/18/2024
FROM 485.00000ml of W3112 + 5.00000ml of M6120 + 10.00000ml of MP83280 = Final Quantity: 500.000 ml								

Metals 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>
1352	CCB (Hg 0.00 PPB SOLUTION)	MP83290	11/18/2024	11/19/2024	Mohan Bera	None	METALS_PIPETTE_5 (HGA)	Sarabjit Jaswal 11/18/2024
FROM 485.00000ml of W3112 + 5.00000ml of M6120 = Final Quantity: 500.000 ml								

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
887	AQUA REGIA FOR HG ON 7471A	MP83293	11/18/2024	11/19/2024	Mohan Bera	None	None	Sarabjit Jaswal 11/18/2024
FROM 150.00000ml of M6121 + 50.00000ml of M6120 = Final Quantity: 200.000 ml								

Metals 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>
68	STANNOUS CHLORIDE SOLUTION	MP83310	11/19/2024	11/20/2024	Mohan Bera	METALS_SCALE_3 (M SC-3)	None	Sarabjit Jaswal
FROM 450.00000ml of W3112 + 50.00000gram of M5882 + 50.00000ml of M6121 = Final Quantity: 500.000 ml								

CHEMICAL RECEIPT LOG BOOK

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Seidler Chemical	BA-2196-01 / Hydroxylamine Hydrochloride, Crystal (cs/4x500g)	0000215387	06/25/2025	07/01/2019 / RICHARD	06/07/2019 / RICHARD	M4371

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Seidler Chemical	BA-3227-05 / Potassium Permanganate (2.5kg)	210800	03/31/2026	11/30/2022 / mohan	07/28/2021 / mohan	M4916

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Inorganic Ventures	MSHG-10PPM / MERCURY HCl 125mL 10ug/mL	S2-HG709270	09/22/2026	05/28/2022 / mohan	01/27/2022 / mohan	M5062

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Seidler Chemical	BA-3980-01 / Stannous Chloride (cs/4x500g)	232820	08/31/2028	04/30/2024 / mohan	04/25/2024 / mohan	M5882

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	04/30/2024 / mohan	04/25/2024 / mohan	M5884

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
EPA	ICV-5 / ICV (HG) STOCK SOLN	ICV5-0415	01/01/2025	07/01/2024 / mohan	03/30/2023 / mohan	M5953

CHEMICAL RECEIPT LOG BOOK

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Seidler Chemical	BA-9598-34 / Nitric Acid, Instra-Analyzed (cs/4x2.5L)	2310662003	05/13/2025	11/13/2024 / Eman	10/13/2024 / Eman	M6120

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

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

M5882
 M3

Certificate of Analysis

1 Reagent Lane
 Fair Lawn, NJ 07410
 201.796.7100 tel
 201.796.1329 fax

Thermo Fisher Scientific's Quality System has been found to conform to Quality Management System
 Standard ISO9001:2015 by SAI Global Certificate Number CERT – 0120633

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

Catalog Number	T142	Quality Test / Release Date	08/17/2023
Lot Number	232820		
Description	STANNOUS CHLORIDE, DIHYDRATE CERTIFIED ACS (Suitable for Mercury Determination)		
Country of Origin	United States	Suggested Retest Date	Aug/2028
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	Clear crystals
ASSAY	%	Inclusive Between 98 - 103	100.65
CALCIUM	%	<= 0.005	0.0017
IDENTIFICATION	PASS/FAIL	= PASS TEST	PASS TEST
IRON (Fe)	%	<= 0.003	0.0011
LEAD (Pb)	%	<= 0.01	0.0006
MERCURY (Hg)	ppm	<= 0.05	<0.05
POTASSIUM (K)	%	<= 0.005	0.0001
SODIUM (Na)	%	<= 0.01	<0.01
SOLUBILITY IN HCL	PASS/FAIL	= PASS TEST	PASS TEST
SULFATE (SO4)	PASS/FAIL	= P.T. (ABOUT 0.003%)	P.T. (ABOUT 0.003%)



Harout Sahagian - Quality Control Supervisor - 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.

M4371

Hydroxylamine Hydrochloride, Crystal
BAKER ANALYZED® A.C.S. Reagent
Suitable for Mercury Determination
(hydroxylammonium chloride)

Rec - 06.07.19



avantortm

Material No.: 2196-01
Batch No.: 0000215387
Manufactured Date: 2018/06/27
Retest Date: 2025/06/25
Revision No: 1

Certificate of Analysis

Meets ACS Reagent Chemical Requirements,

Test	Specification	Result
Assay (NH ₂ OH · HCl) (by KMnO ₄ titrn)	>= 96.0 %	99.1
Clarity of Alcohol Solution	Passes Test	PT
Residue after Ignition	<= 0.050 %	0.017
Titrate Free Acid (meq/g)	<= 0.25	0.19
Ammonium (NH ₄)	Passes Test	PT
Sulfur Compounds (as SO ₄)	<= 0.005 %	< 0.003
Trace Impurities - ACS - Heavy Metals (as Pb)	<= 5 ppm	4
Trace Impurities - Iron (Fe)	<= 5 ppm	< 3
Trace Impurities - Mercury (Hg)	<= 0.050 ppm	< 0.005

For Laboratory, Research or Manufacturing Use

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

ISO

Phillipsburg, NJ 9001:2015, FSSC22000
Paris, KY 9001:2008
Mexico City, Mexico 9001:2008
Gliwice, Poland 9001:2015, 13485:2012
Selangor, Malaysia 9001:2008
Dehradun, India, 9001:2008, 14001:2004, 13485:2003
Mumbai, India, 9001:2015, 17025:2005
Panoli, India 9001:2015

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

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M4913-16

MS

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	P279	Quality Test / Release Date	01/12/2021
Lot Number	210306		
Description	POTASSIUM PERMANGANATE, A.C.S.		
Country of Origin	United States	Suggested Retest Date	Jan/2026

N/A			
Result Name	Units	Specifications	Test Value
APPEARANCE		REPORT	Dark purple to purple green crystals
ASSAY	%	>= 99	99.3
CHLORIDE & CHLORATE	%	<= 0.005	<0.005
IDENTIFICATION	PASS/FAIL	= PASS TEST	pass test
INSOLUBLE MATTER	%	<= 0.2	<0.2
MERCURY (Hg)	ppm	<= 0.05	<0.004
SULFATE (SO4)	%	<= 0.02	<0.02

Julian Burton

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.

300 Technology Drive
 Christiansburg, VA 24073 USA
 inorganicventures.com

P: 800-669-6799/540-585-3030
 F: 540-585-3012
 info@inorganicventures.com

MS062
 MS063
 MB

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).



2.0 PRODUCT DESCRIPTION

Product Code: Single Analyte Mass Spec Solution
 Catalog Number: MSHG-10PPM
 Lot Number: S2-HG709270
 Matrix: 10% (v/v) HCl
 Value / Analyte(s): 10 µg/mL ea:
 Mercury
 Starting Material: Hg metal
 Starting Material Lot#: 1959
 Starting Material Purity: 99.9994%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 10.001 ± 0.053 µg/mL
Density: 1.020 g/mL (measured at 20 ± 4 °C)

Assay Information:

ANALYTE	METHOD	NIST SRM#	SRM LOT#
Hg	ICP Assay	3133	160921
Hg	EDTA	928	928
Hg	Calculated		See Sec. 4.2

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$$X_{CRM/RM} = \sum (w_i) (X_i)$$

X_i = mean of Assay Method i with standard uncertainty $u_{char i}$
 w_i = the weighting factors for each method calculated using the inverse square of the variance.
 $w_i = (1/u_{char i}^2) / (\sum (1/u_{char i}^2))$

$$CRM/RM \text{ Expanded Uncertainty } (z) = U_{CRM/RM} = k (u_{char}^2 + u_{bb}^2 + u_{lts}^2 + u_{ts}^2)^{1/2}$$

k = coverage factor = 2

$u_{char} = [\sum ((w_i)^2 (u_{char i})^2)]^{1/2}$ where $u_{char i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$$X_{CRM/RM} = (X_a) (u_{char a})$$

X_a = mean of Assay Method A with

$u_{char a}$ = the standard uncertainty of characterization Method A

$$CRM/RM \text{ Expanded Uncertainty } (z) = U_{CRM/RM} = k (u_{char a}^2 + u_{bb}^2 + u_{lts}^2 + u_{ts}^2)^{1/2}$$

k = coverage factor = 2

$u_{char a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

O	Ag	0.000011	M	Eu	<	0.000201	O	Na	0.000004	M	Se	<	0.015915	O	Zn	<	0.001510
O	Al	0.000001	O	Fe	0.000001	M	Nb	<	0.000201	O	Si	0.000005	M	Zr	<	0.000201	
M	As	<	0.000402	M	Ga	<	0.000201	M	Nd	<	0.000201	M	Sm	<	0.000201		
M	Au	<	0.003631	M	Gd	<	0.000201	M	Ni	<	0.000402	M	Sn	<	0.001007		
M	B	<	0.001208	M	Ge	<	0.000201	M	Os	<	0.000605	M	Sr	<	0.000201		
M	Ba	<	0.000201	M	Hf	<	0.000201	O	P	<	0.032370	M	Ta	<	0.000201		
M	Be	<	0.000201	s	Hg	<		M	Pb	<	0.000201	M	Tb	<	0.000201		
M	Bi	<	0.000201	M	Ho	<	0.000201	M	Pd	<	0.000403	M	Te	<	0.002216		
O	Ca	0.000007	M	In	<	0.000201	M	Pr	<	0.000201	M	Th	<	0.000201			
M	Cd	<	0.000201	M	Ir	<	0.000201	M	Pt	<	0.000402	M	Ti	<	0.000402		
M	Ce	<	0.000201	O	K	0.000020	M	Rb	<	0.000201	O	Tl	<	0.016508			
M	Co	<	0.000201	M	La	<	0.000201	M	Re	<	0.000201	M	Tm	<	0.000201		
O	Cr	<	0.003021	O	Li	<	0.000107	M	Rh	<	0.000201	M	U	<	0.008058		
M	Cs	<	0.001208	M	Lu	<	0.000201	M	Ru	<	0.000201	M	V	<	0.000201		
M	Cu	<	0.000402	O	Mg	0.000001	O	S	<	0.053950	M	W	<	0.000604			
M	Dy	<	0.000201	M	Mn	<	0.000604	M	Sb	<	0.001208	M	Y	<	0.000201		
M	Er	<	0.000201	M	Mo	0.000009	M	Sc	<	0.000201	M	Yb	<	0.000201			

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit www.inorganicventures.com/TCT

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 200.59 +2 4 Hg(OH)(aq) 1+

Chemical Compatibility - Stable in HNO₃. Avoid basic media forming insoluble carbonate. The sulfide, basic carbonate, oxalate, phosphate, arsenite, arsenate and iodide are insoluble in water.

Stability - 2-100 ppb levels not stable in 1% HNO₃ / LDPE container, stable in 10% HNO₃ packaged in borosilicate glass. 1-100 ppm levels stable in 7% HNO₃ packaged in borosilicate glass. 1000-10,000 ppm solutions are chemically stable for years in 5-10% HNO₃ / LDPE container.

Hg Containing Samples (Preparation and Solution) - Metal (soluble in HNO₃); Oxide (Soluble in HNO₃); Ores and Organic based (The literature has more references to the preparation of Hg containing samples than any other element. Please consult the literature for your specific sample type, since such preparations are prone to error. Or e-mail our technical staff and we will contact you to discuss your particular sample preparation questions in further detail.).

Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	Estimated D.L.	Order	Interferences (underlined indicates severe)
ICP-MS 202 amu	9 ppt	n/a	186W16O
ICP-OES 184.950 nm	0.03 / 0.005 µg/mL	1	
ICP-OES 194.227 nm	0.03 / 0.005 µg/mL	1	V
ICP-OES 253.652 nm	0.1 / 0.03 µg/mL	1	Ta, Co, Th ,Rh , Fe, U

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va, 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

September 22, 2021

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **September 22, 2026**

- The date after which this CRM/RM should not be used.
- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Prepared By:

Uyen Truong
Supervisor, Product Documentation



Certificate Approved By:

Michael Booth
Director, Quality Control



Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director



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



MS824
MB

Material No.: 3624-01

Batch No.: 0000281938

Manufactured Date: 2021-06-07

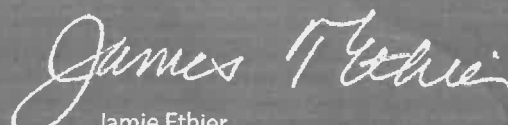
Retest Date: 2026-06-07

Revision No.: 1

Certificate of Analysis

Test	Specification	Result
Assay (NaCl) (by Ag titrn)	$\geq 99.0 \%$	100.0 %
pH of 5% Solution at 25°C	5.0 - 9.0	6.3
Insoluble Matter	$\leq 0.005 \%$	0.003 %
Iodide (I)	$\leq 0.002 \%$	< 0.002 %
Bromide (Br)	$\leq 0.01 \%$	< 0.01 %
Chlorate and Nitrate (as NO ₃)	$\leq 0.003 \%$	< 0.001 %
ACS - Phosphate (PO ₄)	≤ 5 ppm	< 5 ppm
Sulfate (SO ₄)	$\leq 0.004 \%$	< 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)	$\leq 0.002 \%$	< 0.001 %
Magnesium (Mg)	$\leq 0.001 \%$	< 0.001 %
Potassium (K)	$\leq 0.005 \%$	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 Mansford Rd, Suite 200, Radnor, PA 19087. U.S.A. Phone 610.386.1700

54



QUALITY ASSURANCE TECHNICAL SUPPORT LABORATORY
"An ISO 9001:2015 Certified Program"

Instructions for QATS Reference Material: *Inorganic ICV Solutions*

QATS LABORATORY INORGANIC REFERENCE MATERIAL
INITIAL CALIBRATION VERIFICATION SOLUTIONS
(ICV1, ICV5, AND ICV6)

NOTE: These instructions are for advisory purposes only. If any apparent conflict exists between these instructions and the analytical protocol or your contract, disregard these instructions.

APPLICATION: For use with the CLP SFAM01.0 SOW and revisions.

CAUTION: Read instructions carefully before opening bottle(s) and proceeding with the analyses.



M5528-32
M5953
3/30/23

(A) **SAMPLE DESCRIPTION**

Enclosed is a set of one (1) or more Aqueous Inorganic Reference Materials containing various analyte concentrations. ICV1 and ICV5 are in a matrix of dilute nitric acid. ICV6 is in a matrix of dilute basic solution. **For the reference material source in reporting ICVs use "USEPA". For the reference material lot number for the ICV1, ICV5, and ICV6 solutions use "ICV1-1014", "ICV5-0415", and "ICV6-0400", respectively.**

(B) **BREAKAGE OR MISSING ITEMS**

Check the contents of the shipment carefully for any broken, leaking, or missing items. Check that the seal is intact on each bottle. Refer to the enclosed chain of custody record. Report any problems to Mr. Keith Strout, APTIM Federal Services, LLC, at (702) 895-8722. If requested, return the chain-of-custody record with appropriate annotations and signatures to the address provided below.

QUALITY ASSURANCE TECHNICAL SUPPORT LABORATORY
APTIM Federal Services, LLC
2700 Chandler Avenue - Building C
Las Vegas, NV 89120

(C) **ANALYSIS OF SAMPLES**

The Initial Calibration Verification Solutions (ICVs) are to be used to evaluate the accuracy of the initial calibrations of ICP, AA, and Cyanide colorimetric instruments, and are to be used with the CLP SOWs and revisions. The values for each element in the ICVs are listed below in µg/L (ppb) for the resulting solution(s) after the dilution of the concentrate(s) according to the following instructions. Use Class 'A' glassware to prepare the solution(s).

ICV1-1014 For ICP-AES analysis, use a 10-fold dilution by pipetting 10 mL of the ICV1 concentrate into a 100 mL volumetric flask and dilute to volume with 2% (v/v) nitric acid.





QUALITY ASSURANCE TECHNICAL SUPPORT LABORATORY
"An ISO 9001:2015 Certified Program"

Instructions for QATS Reference Material: *Inorganic ICV Solutions*

ICV1-1014

For ICP-MS analysis, use a 50-fold dilution by pipetting 2 mL of the ICV1 concentrate into a 100 mL volumetric flask and dilute to volume with 1% (v/v) nitric acid.

ICV5-0415

For the cold vapor analysis of mercury by AA, use a 100-fold dilution by pipetting 1 mL of the ICV5 concentrate into a 100 mL volumetric flask and dilute to volume with 2% (v/v) nitric acid. The ICV5 concentrate is prepared in 0.05% (w/v) $K_2Cr_2O_7$ and 5% (v/v) nitric acid.

ICV6-0400

For the analysis of cyanide, use a 100-fold dilution by pipetting 1 mL of the ICV6 concentrate into a 100 mL volumetric flask and dilute to volume with Type II water. Distill this solution along with the samples before analysis. The cyanide concentrate is prepared from $K_3Fe(CN)_6$, Type II water, and 0.1 % sodium hydroxide, and will decompose rapidly if exposed to light.

NOTE: USE TYPE II WATER AND HIGH-PURITY ACIDS FOR ALL DILUTIONS.

(D) CERTIFIED CONCENTRATIONS OF QATS ICV1, ICV5, AND ICV6 SOLUTIONS

ICV1-1014		
Element	Concentration (µg/L) (after 10-fold dilution)	Concentration (µg/L) (after 50-fold dilution)
Al	2500	500
Sb	1000	200
As	1000	200
Ba	520	100
Be	510	100
Cd	510	100
Ca	10000	2000
Cr	520	100
Co	520	100
Cu	510	100
Fe	10000	2000
Pb	1000	200
Mg	6000	1200
Mn	520	100
Ni	530	110
K	9900	2000
Se	1000	200
Ag	250	50
Na	10000	2000
Tl	1000	210
V	500	100
Zn	1000	200

ICV5-0415		ICV6-0400	
Element	Concentration (µg/L) (after 100-fold dilution)	Analyte	Concentration (µg/L) (after 100-fold dilution)
Hg	4.0	CN ⁻	99

Nitric Acid 69%
CMOS

avantor™



R -> 10/13/24
Metali g

Material No.: 9606-03
Batch No.: 2310662003
Manufactured Date: 2023-08-21
Retest Date: 2028-08-19
Revision No.: 0

M 6120

Certificate of Analysis

Test	Specification	Result
Assay (HNO ₃)	69.0 – 70.0 %	69.5 %
Appearance	Passes Test	Passes Test
Color (APHA)	≤ 10	10
Residue after Ignition	≤ 2 ppm	< 2 ppm
Chloride (Cl)	≤ 0.08 ppm	< 0.08 ppm
Phosphate (PO ₄)	≤ 0.10 ppm	< 0.10 ppm
Sulfate (SO ₄)	≤ 0.2 ppm	0.2 ppm
Trace Impurities – Aluminum (Al)	≤ 40.0 ppb	< 40.0 ppb
Arsenic and Antimony (as As)	≤ 5.0 ppb	< 5.0 ppb
Trace Impurities – Barium (Ba)	≤ 10.0 ppb	< 10.0 ppb
Trace Impurities – Beryllium (Be)	≤ 10.0 ppb	< 10.0 ppb
Trace Impurities – Bismuth (Bi)	≤ 20.0 ppb	< 20.0 ppb
Trace Impurities – Boron (B)	≤ 10.0 ppb	< 10.0 ppb
Trace Impurities – Cadmium (Cd)	≤ 50 ppb	< 50 ppb
Trace Impurities – Calcium (Ca)	≤ 50.0 ppb	< 50.0 ppb
Trace Impurities – Chromium (Cr)	≤ 30.0 ppb	30.0 ppb
Trace Impurities – Cobalt (Co)	≤ 10.0 ppb	< 10.0 ppb
Trace Impurities – Copper (Cu)	≤ 10.0 ppb	< 10.0 ppb
Trace Impurities – Gallium (Ga)	≤ 10.0 ppb	< 10.0 ppb
Trace Impurities – Germanium (Ge)	≤ 20 ppb	< 20 ppb
Trace Impurities – Gold (Au)	≤ 20 ppb	< 20 ppb
Heavy Metals (as Pb)	≤ 100 ppb	< 100 ppb
Trace Impurities – Iron (Fe)	≤ 40.0 ppb	< 40.0 ppb
Trace Impurities – Lead (Pb)	≤ 20.0 ppb	< 20.0 ppb
Trace Impurities – Lithium (Li)	≤ 10.0 ppb	< 10.0 ppb
Trace Impurities – Magnesium (Mg)	≤ 20 ppb	< 20 ppb
Trace Impurities – Manganese (Mn)	≤ 10.0 ppb	< 10.0 ppb
Trace Impurities – Nickel (Ni)	≤ 20.0 ppb	< 20.0 ppb

>>> Continued on page 2 >>>

Nitric Acid 69%
CMOS



Material No.: 9606-03
Batch No.: 2310662003

Test	Specification	Result
Trace Impurities – Niobium (Nb)	≤ 50.0 ppb	< 50.0 ppb
Trace Impurities – Potassium (K)	≤ 50 ppb	< 50 ppb
Trace Impurities – Silicon (Si)	≤ 50 ppb	< 50 ppb
Trace Impurities – Silver (Ag)	≤ 20.0 ppb	< 20.0 ppb
Trace Impurities – Sodium (Na)	≤ 150.0 ppb	< 150.0 ppb
Trace Impurities – Strontium (Sr)	≤ 30.0 ppb	< 30.0 ppb
Trace Impurities – Tantalum (Ta)	≤ 10.0 ppb	< 10.0 ppb
Trace Impurities – Thallium (Tl)	≤ 10.0 ppb	< 10.0 ppb
Trace Impurities – Tin (Sn)	≤ 20.0 ppb	< 20.0 ppb
Trace Impurities – Titanium (Ti)	≤ 10.0 ppb	< 10.0 ppb
Trace Impurities – Vanadium (V)	≤ 10.0 ppb	< 10.0 ppb
Trace Impurities – Zinc (Zn)	≤ 20.0 ppb	< 20.0 ppb
Trace Impurities – Zirconium (Zr)	≤ 10.0 ppb	< 10.0 ppb
Particle Count – 0.5 µm and greater	≤ 60 par/ml	60 par/ml
Particle Count – 1.0 µm and greater	≤ 10 par/ml	10 par/ml

>>> Continued on page 3 >>>

Nitric Acid 69%
CMOS

 **avantor™**

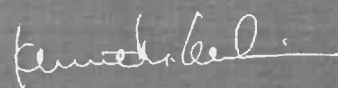


Material No.: 9606-03
Batch No.: 2310662003

Test	Specification	Result
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For Microelectronic Use

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



Ken Koehnlein
Sr. Manager, Quality Assurance

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

avantor™



R → 16/13/24
Met dig

M 6121

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

Certificate of Analysis

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

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

Avantor Performance Materials, LLC

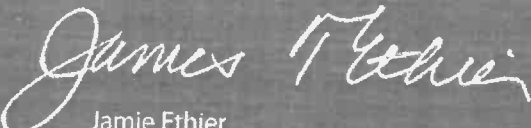
100 Matsonford Rd, Suite 200, Radnor, PA 19087. U.S.A. Phone: 610.386.1700

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

For Laboratory, Research or Manufacturing Use
Product Information (not specifications):
Appearance (clear, fuming liquid)
Meets ACS Specifications

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


Jamie Ethier
Vice President Global Quality

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

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

SOP ID : M7471B-Mercury-18, MSFAM01.1-Mercury in Soil-2

SDG No : MC0VD4

Start Digest Date: 11/18/2024 Time : 15:40 Temp : 95 °C

Matrix : SOIL

End Digest Date: 11/18/2024 Time : 16:10 Temp : 94 °C

Pipette ID: HG A

Digestion tube ID: M6054

Balance ID : M SC-3

Block thermometer ID: HG-DIG#1

Filter paper ID : NA

Dig Technician Signature: MB

pH Strip ID : NA

Supervisor Signature: 12

Hood ID : #1

Temp : 1. 95°C 2. N/A

Block ID: 1. HG HOT BLOCK#1 2. N/A

Standardized Name	MLS USED	STD REF. # FROM LOG
ICV	100mL	MP83287
CCV	100mL	MP83289
Matrix Spike	1.0mL	MP83280
N/A	N/A	N/A
N/A	N/A	N/A

Chemical Used	ML/SAMPLE USED	Lot Number
AQUA REGIA	5.0mL	MP83293
KMnO4 (5%)	15.0mL	MP83208
Hydroxylamine HCL (12%)	6.0mL	MP83210
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A

LAB SAMPLE ID	CLIENT SAMPLE ID	Wt(g)/Vol(ml)	Comment
0.0 ppb	S0	100mL	MP83281
0.05 ppb	S0.05	N/A	N/A
0.2 ppb	S0.2	100mL	MP83282
2.5 ppb	S2.5	100mL	MP83283
5.0 ppb	S5.0	100mL	MP83284
7.5 ppb	S7.5	100mL	MP83285
10.0 ppb	S10.0	100mL	MP83286
ICV	ICV	100mL	MP83287
ICB	ICB	100mL	MP83288
CCV	CCV	100mL	MP83289
CCB	CCB	100mL	MP83290
CRI	CRI	N/A	N/A
CHK STD	CHK STD	N/A	N/A

Extraction Conformance/Non-Conformance Comments:

N/A

Date / Time	Prepped Sample Relinquished By/Location	Received By/Location
11/18/24 @ 17:10	MB - Dig. Lab	MB - Metals Lab
	Preparation Group	Analysis Group

Lab Sample ID	Client Sample ID	Initial Weight (g)	Final Vol (ml)	pH	Comment	Prep Pos
P4650-01	MC0VD4	0.52	100	NA	N/A	1-1
P4650-02	MC0VD7	0.59	100	NA	N/A	2
P4650-03	MC0VD8	0.53	100	NA	N/A	3
P4650-04	MC0VD9	0.55	100	NA	N/A	4
P4650-05	MC0VE3	0.54	100	NA	N/A	5
P4650-06	MC0VE4	0.51	100	NA	N/A	6
P4650-07	MC0VE5	0.57	100	NA	N/A	7
P4650-08	MC0VE6	0.56	100	NA	N/A	8
P4650-09	MC0VF2	0.56	100	NA	N/A	9
P4650-10	MC0VF3	0.55	100	NA	N/A	10
P4650-11	MC0VF4	0.51	100	NA	N/A	11
P4650-12	MC0VF7	0.59	100	NA	N/A	12
P4650-13	MC0VF8	0.57	100	NA	N/A	13
P4650-14	MC0VF9	0.53	100	NA	N/A	14
P4650-15	MC0VG0	0.52	100	NA	N/A	15
P4650-16	MC0VG1	0.57	100	NA	N/A	16
P4650-17	MC0VG2	0.56	100	NA	N/A	17
P4650-18	MC0VG3	0.59	100	NA	N/A	18
P4650-19	MC0VG4	0.52	100	NA	N/A	19
P4650-20	MC0VH6	0.52	100	NA	N/A	20
P4650-21	MC0VH6D	0.54	100	NA	N/A	21
P4650-22	MC0VH6S	0.55	100	NA	MP83280	22
PB165119BL	PBS119	0.50	100	NA	N/A	23

Instrument ID: CV1

Daily Analysis Runlog For Sequence/QC Batch ID # LB133521

Review By	Mohan Bera	Review On	11/19/2024 10:33:07 PM
Supervise By	Sarabjit Jaswal	Supervise On	11/19/2024 10:54:06 PM

STD. NAME	STD REF.#
ICAL Standard	MP83281,MP83282,MP83283,MP83284,MP83285,MP83286
ICV Standard	MP83287
CCV Standard	MP83289
ICSA Standard	
CRI Standard	
LCS Standard	
Chk Standard	MP83288,MP83290,MP83310

Sr#	SampleId	ClientID	QcType	Date	Comment	Operator	Status
1	S0	S0	CAL1	11/19/24 17:34		Mohan	OK
2	S0.2	S01	CAL2	11/19/24 17:37		Mohan	OK
3	S2.5	S02	CAL3	11/19/24 17:41		Mohan	OK
4	S5	S03	CAL4	11/19/24 17:43		Mohan	OK
5	S7.5	S04	CAL5	11/19/24 17:45		Mohan	OK
6	S10	S05	CAL6	11/19/24 17:48		Mohan	OK
7	ICV092	ICV092	ICV	11/19/24 17:53		Mohan	OK
8	ICB092	ICB092	ICB	11/19/24 17:55		Mohan	OK
9	CCV014	CCV014	CCV	11/19/24 17:57		Mohan	OK
10	CCB014	CCB014	CCB	11/19/24 18:00		Mohan	OK
11	PB165119BL	PBS119	MB	11/19/24 18:02		Mohan	OK
12	P4650-01	MC0VD4	SAM	11/19/24 18:04		Mohan	OK
13	P4650-02	MC0VD7	SAM	11/19/24 18:07		Mohan	OK
14	P4650-03	MC0VD8	SAM	11/19/24 18:09		Mohan	OK
15	P4650-04	MC0VD9	SAM	11/19/24 18:11		Mohan	OK
16	P4650-05	MC0VE3	SAM	11/19/24 18:13		Mohan	OK
17	P4650-06	MC0VE4	SAM	11/19/24 18:16		Mohan	OK
18	P4650-07	MC0VE5	SAM	11/19/24 18:18		Mohan	OK

Instrument ID: CV1

Daily Analysis Runlog For Sequence/QC Batch ID # LB133521

Review By	Mohan Bera	Review On	11/19/2024 10:33:07 PM
Supervise By	Sarabjit Jaswal	Supervise On	11/19/2024 10:54:06 PM
STD. NAME	STD REF.#		
ICAL Standard	MP83281,MP83282,MP83283,MP83284,MP83285,MP83286		
ICV Standard	MP83287		
CCV Standard	MP83289		
ICSA Standard			
CRI Standard			
LCS Standard			
Chk Standard	MP83288,MP83290,MP83310		

19	P4650-08	MC0VE6	SAM	11/19/24 18:20		Mohan	OK
20	P4650-09	MC0VF2	SAM	11/19/24 18:23		Mohan	OK
21	P4650-10	MC0VF3	SAM	11/19/24 18:25		Mohan	OK
22	P4650-11	MC0VF4	SAM	11/19/24 18:27		Mohan	OK
23	P4650-12	MC0VF7	SAM	11/19/24 18:29		Mohan	OK
24	P4650-13	MC0VF8	SAM	11/19/24 18:32		Mohan	OK
25	P4650-14	MC0VF9	SAM	11/19/24 18:34		Mohan	OK
26	P4650-15	MC0VG0	SAM	11/19/24 18:36		Mohan	OK
27	P4650-16	MC0VG1	SAM	11/19/24 18:38		Mohan	OK
28	P4650-17	MC0VG2	SAM	11/19/24 18:41		Mohan	OK
29	P4650-18	MC0VG3	SAM	11/19/24 18:43		Mohan	OK
30	P4650-19	MC0VG4	SAM	11/19/24 18:45		Mohan	OK
31	CCV015	CCV015	CCV	11/19/24 18:47		Mohan	OK
32	CCB015	CCB015	CCB	11/19/24 18:50		Mohan	OK
33	P4650-20	MC0VH6	SAM	11/19/24 18:52		Mohan	OK
34	P4650-21	MC0VH6D	DUP	11/19/24 18:54		Mohan	OK
35	P4650-22	MC0VH6S	MS	11/19/24 18:57		Mohan	OK
36	PB165120BL	PBS120	MB	11/19/24 18:59		Mohan	OK
37	P4655-01	MC0VD3	SAM	11/19/24 19:01		Mohan	OK
38	P4655-02	MC0VE1	SAM	11/19/24 19:03		Mohan	OK

Instrument ID: CV1

Daily Analysis Runlog For Sequence/QC Batch ID # LB133521

Review By	Mohan Bera	Review On	11/19/2024 10:33:07 PM
Supervise By	Sarabjit Jaswal	Supervise On	11/19/2024 10:54:06 PM
STD. NAME	STD REF.#		
ICAL Standard	MP83281,MP83282,MP83283,MP83284,MP83285,MP83286		
ICV Standard	MP83287		
CCV Standard	MP83289		
ICSA Standard			
CRI Standard			
LCS Standard			
Chk Standard	MP83288,MP83290,MP83310		

39	P4655-03	MC0VE2	SAM	11/19/24 19:06		Mohan	OK
40	P4655-04	MC0VE7	SAM	11/19/24 19:08		Mohan	OK
41	P4655-05	MC0VE8	SAM	11/19/24 19:10		Mohan	OK
42	P4655-06	MC0VE9	SAM	11/19/24 19:12		Mohan	OK
43	P4655-07	MC0VF0	SAM	11/19/24 19:15		Mohan	OK
44	P4655-08	MC0VF1	SAM	11/19/24 19:17		Mohan	OK
45	P4655-09	MC0VF5	SAM	11/19/24 19:19		Mohan	OK
46	P4655-10	MC0VF6	SAM	11/19/24 19:21		Mohan	OK
47	P4655-11	MC0VG6	SAM	11/19/24 19:24		Mohan	OK
48	P4655-12	MC0VG7	SAM	11/19/24 19:26		Mohan	OK
49	P4655-13	MC0VG8	SAM	11/19/24 19:28		Mohan	OK
50	P4655-14	MC0VG9	SAM	11/19/24 19:30		Mohan	OK
51	P4655-15	MC0VH0	SAM	11/19/24 19:33		Mohan	OK
52	P4655-16	MC0VJ1	SAM	11/19/24 19:35		Mohan	OK
53	CCV016	CCV016	CCV	11/19/24 19:37		Mohan	OK
54	CCB016	CCB016	CCB	11/19/24 19:40		Mohan	OK
55	P4655-17	MC0VH1	SAM	11/19/24 19:42		Mohan	OK
56	P4655-18	MC0VH2	SAM	11/19/24 19:44		Mohan	OK
57	P4655-19	MC0VH3	SAM	11/19/24 19:46		Mohan	OK
58	P4655-20	MC0VH7	SAM	11/19/24 19:49	Need to Conform % Soil	Mohan	OK

Instrument ID: CV1

Daily Analysis Runlog For Sequence/QC Batch ID # LB133521

Review By	Mohan Bera	Review On	11/19/2024 10:33:07 PM
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STD. NAME	STD REF.#		
ICAL Standard	MP83281,MP83282,MP83283,MP83284,MP83285,MP83286		
ICV Standard	MP83287		
CCV Standard	MP83289		
ICSA Standard			
CRI Standard			
LCS Standard			
Chk Standard	MP83288,MP83290,MP83310		

59	P4655-21	MC0VH7D	DUP	11/19/24 19:51	Need to Conform % Soil	Mohan	OK
60	P4655-22	MC0VH7S	MS	11/19/24 19:53	Need to Conform % Soil	Mohan	OK
61	CCV017	CCV017	CCV	11/19/24 19:55		Mohan	OK
62	CCB017	CCB017	CCB	11/19/24 19:58		Mohan	OK

(412) 921-8353

ORIGIN ID: PITA
CONNOR MARTIN
TETRA TECH INC.
661 ANDERSEN DR
STE 200
PITTSBURGH, PA 15220
UNITED STATES US

SHIP DATE: 30OCT24
ACTWGT: 45.00 LB
CAD: 7709497/NET 47/60
DIMS: 12x12x24 IN

BILL SENDER

0004

TO **MOHAMMAD AHMED**

ALLIANCE TECHNICAL GROUP LLC
284 SHEFFIELD STREET

MOUNTAINSIDE NJ 07092

(908) 789-8900

REF: 103X9034032403001 00200C

INV:

DEPT:

10-31-24
945
Z-4

58CJ6/2D2B/C5C4



J244824051061us

2 of 2

MPs# **7796 3214 5128**

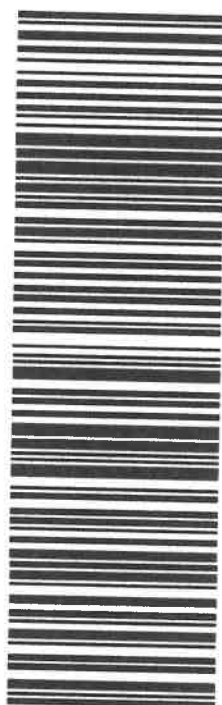
Mst# **7796 3214 5584**

0201

THU - 31 OCT 10:30A
PRIORITY OVERNIGHT

NFKBCA

07092
NJ-US EWR



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Login Summary Report

Order ID :	P4650	Order Date :	10/31/2024 9:45:00 AM	Project Mgr :	Deepak
Client :	USEPA CLP SMO	Project :	51810	Report Type :	USEPA CLP
Contact :	Anita Kapadia	Receive Date :	10/31/2024 9:45:00 AM	EDD Type :	EPA CLP
Date Sign Off :	11/6/2024 2:34:37 PM				

Sample ID	Client ID	Matrix	Sampling Date	Test	Test Group	Method	TAT Days	Fax Due Date	HC Due Date
P4650-07	MC0VE5	Solid	10/29/2024						
				Percent Solids		Chemtech -SOP	15	11/21/2024	11/21/2024
P4650-08	MC0VE6	Solid	10/29/2024						
				Mercury		SFAM_HG	15	11/21/2024	11/21/2024
				Percent Solids		Chemtech -SOP	15	11/21/2024	11/21/2024
P4650-09	MC0VF2	Solid	10/29/2024						
				Mercury		SFAM_HG	15	11/21/2024	11/21/2024
				Percent Solids		Chemtech -SOP	15	11/21/2024	11/21/2024
P4650-10	MC0VF3	Solid	10/29/2024						
				Mercury		SFAM_HG	15	11/21/2024	11/21/2024
				Percent Solids		Chemtech -SOP	15	11/21/2024	11/21/2024
P4650-11	MC0VF4	Solid	10/29/2024						
				Mercury		SFAM_HG	15	11/21/2024	11/21/2024
				Percent Solids		Chemtech -SOP	15	11/21/2024	11/21/2024
P4650-12	MC0VF7	Solid	10/30/2024						
				Mercury		SFAM_HG	15	11/21/2024	11/21/2024
				Percent Solids		Chemtech -SOP	15	11/21/2024	11/21/2024
P4650-13	MC0VF8	Solid	10/30/2024						
				Mercury		SFAM_HG	15	11/21/2024	11/21/2024
				Percent Solids		Chemtech -SOP	15	11/21/2024	11/21/2024
P4650-14	MC0VF9	Solid	10/30/2024						
				Mercury		SFAM_HG	15	11/21/2024	11/21/2024
				Percent Solids		Chemtech -SOP	15	11/21/2024	11/21/2024
P4650-15	MC0VG0	Solid	10/30/2024						
				Mercury		SFAM_HG	15	11/21/2024	11/21/2024
				Percent Solids		Chemtech -SOP	15	11/21/2024	11/21/2024
P4650-16	MC0VG1	Solid	10/30/2024						
				Mercury		SFAM_HG	15	11/21/2024	11/21/2024
				Percent Solids		Chemtech -SOP	15	11/21/2024	11/21/2024
P4650-17	MC0VG2	Solid	10/30/2024						

					Mercury	SFAM_HG	15	11/21/2024	11/21/2024
					Percent Solids	Chemtech -SOP	15	11/21/2024	11/21/2024
P4650-18	MC0VG3	Solid	10/30/2024						
					Mercury	SFAM_HG	15	11/21/2024	11/21/2024
					Percent Solids	Chemtech -SOP	15	11/21/2024	11/21/2024
P4650-19	MC0VG4	Solid	10/30/2024						
					Mercury	SFAM_HG	15	11/21/2024	11/21/2024
					Percent Solids	Chemtech -SOP	15	11/21/2024	11/21/2024
P4650-20	MC0VH6	Solid	10/30/2024						
					Mercury	SFAM_HG	15	11/21/2024	11/21/2024
					Percent Solids	Chemtech -SOP	15	11/21/2024	11/21/2024
P4650-21	MC0VH6D	Solid	10/30/2024						
					Mercury	SFAM_HG	15	11/21/2024	11/21/2024
					Percent Solids	Chemtech -SOP	15	11/21/2024	11/21/2024
P4650-22	MC0VH6S	Solid	10/30/2024						
					Mercury	SFAM_HG	15	11/21/2024	11/21/2024
					Percent Solids	Chemtech -SOP	15	11/21/2024	11/21/2024
P4650-07	MC0VE5	Solid	10/29/2024						
					Mercury	SFAM_HG	15	11/21/2024	11/21/2024
					Percent Solids	Chemtech -SOP	15	11/21/2024	11/21/2024
P4650-06	MC0VE4	Solid	10/29/2024						
					Mercury	SFAM_HG	15	11/21/2024	11/21/2024
					Percent Solids	Chemtech -SOP	15	11/21/2024	11/21/2024
P4650-05	MC0VE3	Solid	10/29/2024						
					Mercury	SFAM_HG	15	11/21/2024	11/21/2024
					Percent Solids	Chemtech -SOP	15	11/21/2024	11/21/2024
P4650-04	MC0VD9	Solid	10/29/2024		DUP				
					Mercury	SFAM_HG	15	11/21/2024	11/21/2024
					Percent Solids	Chemtech -SOP	15	11/21/2024	11/21/2024
P4650-03	MC0VD8	Solid	10/29/2024						
					Mercury	SFAM_HG	15	11/21/2024	11/21/2024
					Percent Solids	Chemtech -SOP	15	11/21/2024	11/21/2024
P4650-02	MC0VD7	Solid	10/29/2024						
					Mercury	SFAM_HG	15	11/21/2024	11/21/2024
					Percent Solids	Chemtech -SOP	15	11/21/2024	11/21/2024
P4650-01	MC0VD4	Solid	10/29/2024						
					Mercury	SFAM_HG	15	11/21/2024	11/21/2024
					Percent Solids	Chemtech -SOP	15	11/21/2024	11/21/2024

WORKLIST(Hardcopy Internal Chain)

WorkList Name : P4650_HgS WorkList ID : 185528 Department : Digestion Date : 11-18-2024 11:34:35

Sample	Customer Sample	Matrix	Test	Preservative	Customer	Raw Sample Storage Location	Collect Date	Method
P4650-01	MC0VD4	Solid	Mercury	Cool 4 deg C	USEP01	Q21	10/29/2024	SFAM_HG
P4650-02	MC0VD7	Solid	Mercury	Cool 4 deg C	USEP01	Q21	10/29/2024	SFAM_HG
P4650-03	MC0VD8	Solid	Mercury	Cool 4 deg C	USEP01	Q21	10/29/2024	SFAM_HG
P4650-04	MC0VD9	Solid	Mercury	Cool 4 deg C	USEP01	Q21	10/29/2024	SFAM_HG
P4650-05	MC0VE3	Solid	Mercury	Cool 4 deg C	USEP01	Q21	10/29/2024	SFAM_HG
P4650-06	MC0VE4	Solid	Mercury	Cool 4 deg C	USEP01	Q21	10/29/2024	SFAM_HG
P4650-19	MC0VG4	Solid	Mercury	Cool 4 deg C	USEP01	Q21	10/29/2024	SFAM_HG
P4650-20	MC0VH6	Solid	Mercury	Cool 4 deg C	USEP01	Q21	10/30/2024	SFAM_HG
P4650-21	MC0VH6D	Solid	Mercury	Cool 4 deg C	USEP01	Q21	10/30/2024	SFAM_HG
P4650-22	MC0VH6S	Solid	Mercury	Cool 4 deg C	USEP01	Q21	10/30/2024	SFAM_HG
P4650-13	MC0VF8	Solid	Mercury	Cool 4 deg C	USEP01	Q21	10/30/2024	SFAM_HG
P4650-14	MC0VF9	Solid	Mercury	Cool 4 deg C	USEP01	Q21	10/30/2024	SFAM_HG
P4650-15	MC0VG0	Solid	Mercury	Cool 4 deg C	USEP01	Q21	10/30/2024	SFAM_HG
P4650-16	MC0VG1	Solid	Mercury	Cool 4 deg C	USEP01	Q21	10/30/2024	SFAM_HG
P4650-17	MC0VG2	Solid	Mercury	Cool 4 deg C	USEP01	Q21	10/30/2024	SFAM_HG
P4650-18	MC0VG3	Solid	Mercury	Cool 4 deg C	USEP01	Q21	10/30/2024	SFAM_HG
P4650-07	MC0VE5	Solid	Mercury	Cool 4 deg C	USEP01	Q21	10/30/2024	SFAM_HG
P4650-08	MC0VE6	Solid	Mercury	Cool 4 deg C	USEP01	Q21	10/29/2024	SFAM_HG
P4650-09	MC0VF2	Solid	Mercury	Cool 4 deg C	USEP01	Q21	10/29/2024	SFAM_HG
P4650-10	MC0VF3	Solid	Mercury	Cool 4 deg C	USEP01	Q21	10/29/2024	SFAM_HG
P4650-11	MC0VF4	Solid	Mercury	Cool 4 deg C	USEP01	Q21	10/29/2024	SFAM_HG

Date/Time 11/18/24 @ 15:10
 Raw Sample Received by: AB - Dig Lab
 Raw Sample Relinquished by: AB - Dig Lab

WORKLIST(Hardcopy Internal Chain)

WorkList Name : P4650_HgS

WorkList ID : 185528

Department : Digestion

Date : 11-18-2024 11:34:35

Sample	Customer Sample	Matrix	Test	Preservative	Customer	Raw Sample Storage Location	Collect Date	Method
P4650-12	MC0VF7	Solid	Mercury	Cool 4 deg C	USEP01	Q21	10/30/2024	SFAM_HG

72

Date/Time 11/18/24 15:10

Raw Sample Received by: [Signature]

Raw Sample Relinquished by: [Signature]

Date/Time 11/18/24 15:10

Raw Sample Received by: [Signature]

Raw Sample Relinquished by: [Signature]

Page 2 of 2